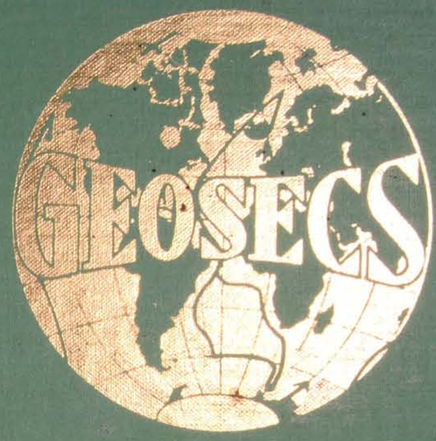


ATLANTIC, PACIFIC, AND INDIAN OCEAN EXPEDITIONS

Volume 7

Shorebased Data and Graphics

National Science Foundation • Washington, D.C.

B 250189

GEOSECS ATLANTIC, PACIFIC, AND INDIAN OCEAN EXPEDITIONS

Volume 7

SHOREBASED DATA and GRAPHICS

By

GEOSECS Executive Committee
H. Gote Ostlund, Harmon Craig,
Wallace S. Broecker, and Derek Spencer

Institut für Meereskunde an der Universität Kiel

Sponsored by

International Decade of Ocean Exploration
National Science Foundation

May 1987

SCIENTISTS ON GEOSECS ATLANTIC EXPEDITION

Leg 1 *Derek W. Spencer, Woods Hole Oceanographic Institution
Arnold E. Bainbridge, Scripps Institution of Oceanography, GEOSECS Operations Group
John M. Edmond, Massachusetts Institute of Technology

Leg 2 *Derek W. Spencer, Woods Hole Oceangraphic Institution
John M. Edmond, Massachusetts Institute of Technology
Ray F. Weiss, Scripps Institution of Oceanography

Leg 3 *Wallace S. Broecker, Lamont-Doherty Geological Observatory
Arnold E. Bainbridge, Scripps Institution of Oceanography, GEOSECS Operations Group
Peter M. Kroopnick, University of Hawaii

Leg 4 *Harmon Craig, Scripps Institution of Oceanography
P. Kilho Park, Oregon State University
Ray F. Weiss, Scripps Institution of Oceanography

Leg 5 *Wallace S. Broecker, Lamont-Doherty Geological Observatory
Arnold W. Mantyla, Scripps Institution of Oceanography, GEOSECS Operations Group
Taro Takahashi, City University of New York

Leg 6 *P. Kilho Park, Oregon State University
Peter G. Brewer, Woods Hole Oceanographic Institution
Derek W. Spencer, Woods Hole Oceanographic Institution
Norberto Bienati, Argentina

Leg 7 *Harmon Craig, Scripps Institution of Oceanography
John M. Edmond, Massachusetts Institute of Technology
Antonio Longinelli, University of Pisa

Leg 8 *Joseph L. Reid, Scripps Institution of Oceanography
Peter G. Brewer, Woods Hole Oceanographic Institution
Louis I. Gordon, Oregon State University

Leg 9 *Taro Takahashi, City University of New York
Yu-Chia Chung, Scripps Institution of Oceanography
Arnold W. Mantyla, Scripps Institution of Oceanography, GEOSECS Operations Group

*Chief Scientist

SCIENTISTS ON GEOSESCS PACIFIC EXPEDITION

Leg 1 *Harmon Craig, Scripps Institution of Oceanography
Arnold E. Bainbridge, Scripps Institution of Oceanography, GEOSECS Operations Group
Karl K. Turekian, Klein Geological Laboratory

Leg 2 *Wallace S. Broecker, Lamont-Doherty Geological Observatory
Herbert Feely, Lamont-Doherty Geological Observatory
P. Kilho Park, Oregon State University

Leg 3 *Taro Takahashi, City University of New York
Wallace S. Broecker, Lamont-Doherty Geological Observatory
P. Kilho Park, Oregon State University

Leg 4 *Derek W. Spencer, Woods Hole Oceanographic Institution
Yu-Chia Chung, Scripps Institution of Oceanography
Louis I. Gordon, Oregon State University
Arnold W. Mantyla, Scripps Institution of Oceanography, GEOSECS Operations Group

Leg 5 *Ray F. Weiss, Scripps Institution of Oceanography
Manuel Fiadeiro, Scripps Institution of Oceanography
Peter M. Kroopnick, University of Hawaii
Arnold W. Mantyla, Scripps Institution of Oceanography, GEOSECS Operations Group

Leg 6 *Pierre E. Biscaye, Lamont-Doherty Geological Observatory
Charles Culberson, Oregon State University
Willard S. Moore, United States Naval Oceanographic Office
Robert T. Williams, Scripps Institution of Oceanography, GEOSECS Operations Group

Leg 7 *John M. Edmond, Massachusetts Institute of Technology
Antonio Longinelli, University of Pisa

Leg 8 *Harmon Craig, Scripps Institution of Oceanography
Manuel Fiadeiro, Scripps Institution of Oceanography
Arnold W. Mantyla, Scripps Institution of Oceanography, GEOSECS Operations Group

Leg 9 *Peter G. Brewer, Woods Hole Oceanographic Institution
William C. Patzert, Scripps Institution of Oceanography
Robert T. Williams, Scripps Institution of Oceanography, GEOSECS Operations Group

Leg 10 *Wallace S. Broecker, Lamont-Doherty Geological Observatory
Arnold W. Mantyla, Scripps Institution of Oceanography, GEOSECS Operations Group

*Chief Scientist

SCIENTISTS ON GEOSECS INDIAN OCEAN EXPEDITION

Leg 3 *Robert T. Williams, Scripps Institution of Oceanography, GEOSECS Operations Group
Pierre E. Biscaye, Lamont-Doherty Geological Observatory

Leg 4 *Harmon Craig, Scripps Institution of Oceanography
Yu-Chia Chung, Scripps Institution of Oceanography
Peter M. Kroopnick, University of Hawaii
Willard S. Moore, University of South Carolina
B. L. K. Somayajulu, Physical Research Laboratory, India

Leg 5 *Ray F. Weiss, Scripps Institution of Oceanography
Robert C. Finkel, Scripps Institution of Oceanography
John E. Lupton, Scripps Institution of Oceanography

Leg 6 *Wallace S. Broecker, Lamont-Doherty Geological Observatory
Taro Takahashi, Lamont-Doherty Geological Observatory

Leg 7 *Derek W. Spencer, Woods Hole Oceanographic Institution

*Chief Scientist

GEOSECS SCIENTIFIC ADVISORY COMMITTEE

Arnold E. Bainbridge, Scripps Institution of Oceanography, GEOSECS Operations Group, Ex Officio

Arnold E. Bainbridge, Scripps Institution of Oceanography, GEOSECS Operations Group, Ex Officio

[4]Pierre E. Biscaye, Lamont-Doherty Geological Observatory
[4]Peter G. Brewer, Woods Hole Oceanographic Institution
[1]Wallace S. Broecker, Lamont-Doherty Geological Observatory
[1]Harmon Craig, Scripps Institution of Oceanography
John M. Edmond, Massachusettes Institute of Technology
Arnold Gordon, Lamont-Doherty Geological Observatory
[2]H. Gote Ostlund, University of Miami
[3]P. Kilho Park, Oregon State University
Joseph L. Reid, Scripps Institution of Oceanography
[1]Derek W. Spencer, Woods Hole Oceanographic Institution
Henry M. Stommel, Massachusetts Institute of Technology
Taro Takahashi, Lamont-Doherty Geological Observatory
Karl K. Turekian, Yale University
[3]Herbert L. Volchok, Atomic Energy Commission
[4]Ray F. Weiss, Scripps Institution of Oceanography
Klaus Wyrtki, University of Hawaii

[1]GEOSECS Executive Committee—Atlantic, Pacific, and Indian Oceans
[2]GEOSECS Executive Committee—Pacific and Indian Oceans
[3]Atlantic and Pacific Oceans
[4]Indian Ocean

COMPILATION OF ATLAS MATERIAL BY

Robert T. Williams
Kristin M. Sanborn
Marie-Claude Beaupre

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Contents

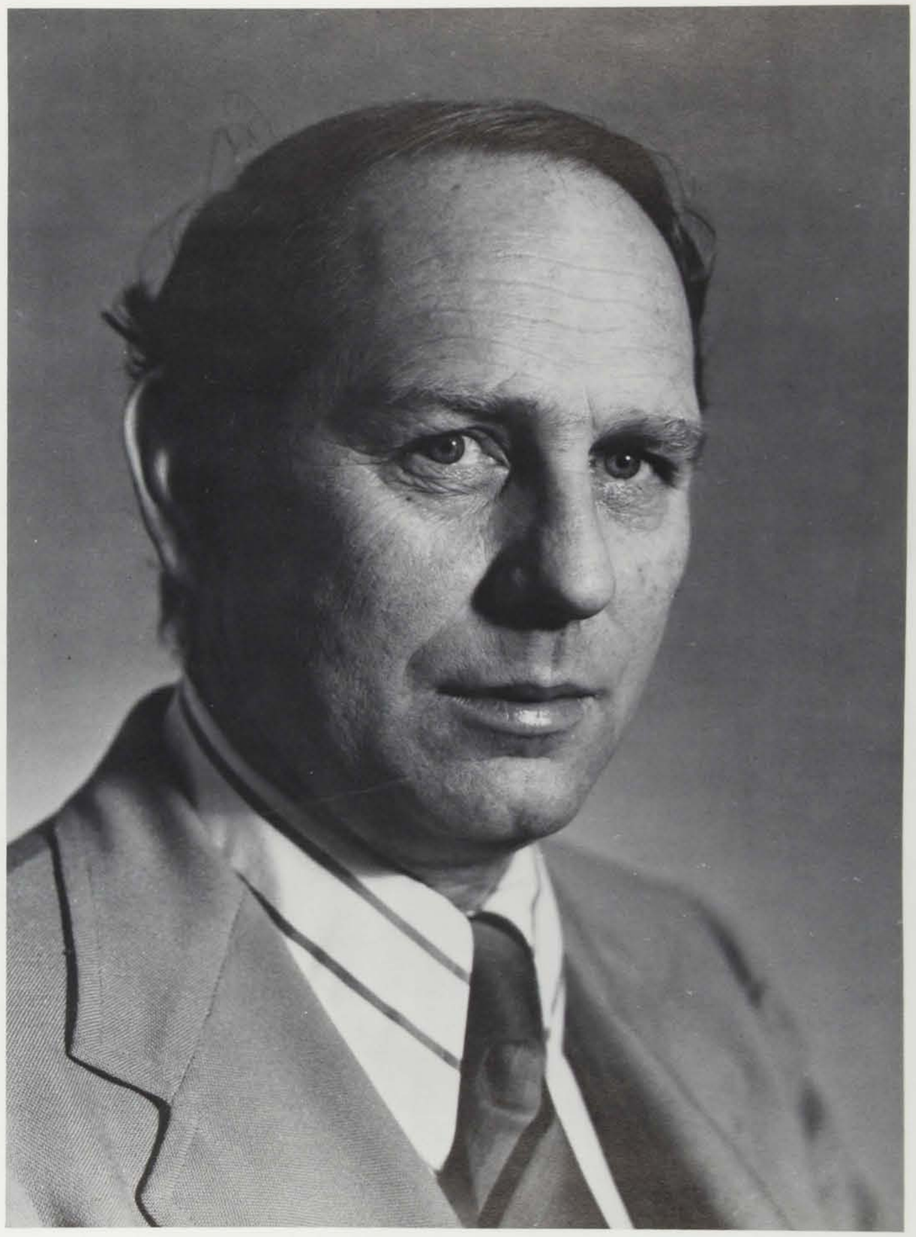
	Page
Foreword	v
Acknowledgements	vii
Introduction	ix
Expedition Tracks	xv
Station and Cast Descriptions	xxi
Chapter 1—Description of Sampling and Measurement Methods	1
Chapter 2—Shorebased Data	23
Chapter 3—Vertical Sections	183

ARNOLD E. BAINBRIDGE

December 16, 1930—February 27, 1979

In memory of friendship and the pleasure of his company, in recognition of his many contributions to the GEOSECS program:

This book, which is primarily the result of his efforts, is gratefully and affectionately dedicated by his colleagues and shipmates.



Foreword

The GEOSECS Program was conceived by a handful of far-sighted geochemists and physical oceanographers in 1967. They successfully organized their scientific colleagues, developed a solid scientific and logistics plan, and carried out preliminary field work so that the Program was ready to begin simultaneously with the initiation of the International Decade of Ocean Exploration in 1970.

The members of that original GEOSECS panel were as follows:

Wallace S. Broecker, *Lamont-Doherty Geological Observatory*
Harmon Craig, *Scripps Institution of Oceanography*
H. Gote Ostlund, *University of Miami*
P. Kilho Park, *Oregon State University*
Joseph L. Reid, *Scripps Institution of Oceanography*
Derek W. Spencer, *Woods Hole Oceanographic Institution*
Henry M. Stommel, *Massachusetts Institute of Technology*
Taro Takahashi, *Lamont-Doherty Geological Observatory*
Karl K. Turekian, *Yale University*
Herbert L. Volchok, *Atomic Energy Commission*

The objective of the program was "the study of the geochemical properties of the ocean with respect to large-scale circulation problems." The goals for measurement accuracies, which the scientists set for themselves, were so rigorous that each shipboard and shoreside laboratory measurement was at the very forefront of the technology. Nevertheless, within the eighteen months between the start of the program in January 1971 and the start of the Atlantic transect in July 1972, the shipboard sampling and analytical tools were designed, constructed, and installed, and the shoreside laboratory construction and improvements were completed. The analytical goals were met or exceeded in all cases.

The responsibilities for upgrading the shoreside laboratories were assumed by the individual scientist at each institution. But, the responsibility for the shipboard equipment rested entirely with one man, Mr. Arnold E. Bainbridge of the Scripps Institution of Oceanography. The oceanographic community owes Mr. Bainbridge and his highly skilled technicians who formed GEOSECS Operations Group a debt of gratitude for their heroic efforts in preparation of the ships for the work to be done at sea, and for the excellence of the shipboard sampling and analyses.

These Atlas volumes were compiled by Mr. Bainbridge and the other GEOSECS scientists with the same care that typifies the collection and analyses of samples. They are now ready to take their place in oceanographic literature along with the volumes of the CHALLENGER and METEOR.

The National Science Foundation and, in particular, the International Decade of Ocean Exploration, is privileged to have played a role in this historic venture.

Feenan D. Jennings
Head, International Decade
of Ocean Exploration
National Science Foundation
Washington, D.C.
May 1976

Acknowledgements

The idea of carrying out a cooperative ocean-wide survey of radioisotopes and geochemical tracers in the sea originated with Henry Stommel; he, George Veronis, and Klaus Wyrtki have provided advice, encouragement, and strong support throughout the GEOSECS program.

With the exception of some early planning grants, funding for the program has been provided by the National Science Foundation Office of International Decade of Ocean Exploration. Feenan Jennings, head of the NSF-IDOE office from 1971 to 1978, provided leadership, wisdom and advice that played a crucial role in the success of GEOSECS. During the formative years of the program, funds were provided for planning by the National Science Foundation (Oceanography Section) and the U.S. Atomic Energy Commission (now Department of Energy). The assistance of Drs. Hugh McClellan and Charles Osterberg of these agencies is acknowledged with many thanks.

Three test and calibration cruises were a very important part of the development of GEOSECS. During these early preparations, the GEOSECS Operations Group was ably assisted by John Goddard of LDGO, and Susan Kadar and Peter Sachs of WHOI. Shale Niskin of General Oceanics, Inc. provided designs, equipment, and cheerful assistance at sea on three cruises. Credit for the development of the equipment used on the test cruises and the major expeditions goes to many people. The principal role was taken by Arnold Bainbridge, Project Director of the GEOSECS Operations Group. He personally supervised many aspects of instrument development and data flow from acquisition to final corrected and calibrated results. In all this work he was assisted by Rick Ackermann, electronics engineer; Tom Digre and Jack Spiegelberg, computer programmers, Bob Williams and Arnold Mantyla, chief analysts, Len Cunningham, chief marine technician, and Fred Dixon, development technician. These individuals, together with the other GOG staff members, developed the most modern, versatile and efficient seagoing data and sampling system ever used for geochemical and hydrographic studies of the ocean.

The GEOSECS Atlantic Expedition was carried out on R/V KNORR with Captains Emerson Hiller and Mike Palmieri. Jerry Cotter, the KNORR's boatswain, deserves special mention for this cheerful endurance of long hours and little sleep. Assistance with the logistics of the Atlantic expedition was provided by Bill Jouris of WHOI. The GEOSECS Pacific and Indian Oceans Expeditons took place on R/V MELVILLE with Captain Alan W. Phinney, and Captains Albert Arsenault and Geoffrey C. Clark, respectively. The GEOSECS Indian Ocean Expedition occurred as a segment (Legs 3-7) of R/V MELVILLE Indomed Expedition, which was coordinated by Arnold E. Bainbridge. The officers and crews of the KNORR and the MELVILLE contributed significantly to all aspects of the seagoing operation. Major credit for the shipboard data belongs to the technicians and analysts of GOG (listed below) who worked with great skill and dedication throughout this voyage.

During the Atlantic and Pacific expeditions, Phyllis Laking of WHOI served as Administrative Assistant to the Executive Committee. She handled proposals, organized meetings, filed the quarterly reports, and shouldered the most onerous burdens of the administrative program. For the Indian Ocean expedition, these responsibilities were assumed by Barbara Stickney of RSMAS. Ms. Laking and Ms. Stickney were aided in their efforts by Ellen Coxe of LDGO; Sandra Tacoma, Kris Stewart, and Cathy Carrol of SIO: and Bruna Williams and Harry Grow of GOG.

Drs. P. M. Fye and W. Nierenberg, Directors of WHOI and SIO respectively, strongly encouraged the development of the GEOSECS proposal and contributed to the solution of many problems in planning and execution. Special praise goes to the staffs of Nimitz Marine Facilities at SIO and the Port Office and Shop Facilities at WHOI. Without the efforts and dedication of all these people and many others at both institutions, the GEOSECS shipboard work would have been much more difficult.

W. S. Broecker, LDGO
H. Craig, SIO
D. W. Spencer, WHOI
H. G. Ostlund, RSMAS
Executive Committee,
Geochemical Ocean Sections Study

GEOSECS Operations Group—Analysts and Technicians

Richard Ackermann
George C. Anderson
Maire-Claude Beaupre
David L. Bos
David G. Brader
Charles H. Breeze
Matthew B. Christiansen
Jacob C. Colbert
Leonard M. Cunningham
Thomas J. Digre
Fred S. Dixon
Wayne B. Evans
Timothy J. Field
Robert W. Fong
Anne M. Gilbert
Dagmar Gobat
Arthur W. Hester
Anne Marie Horowitz
Ross M. Horowitz
Edward J. Jaeger
John K. Jain
Brian J. James
Kenneth P. LeVeille
Donald E. Lingle
Arnold W. Mantyla
Norma L. Mantyla
Michael T. Morrione
James D. Nash
Alan C. Osgood
William H. Price
Randall M. Ragan
Robert L. Renner
Walter A. Richter
Marston D. Robertson
Alden S. Rollins
Frank Sanchez
Kristin M. Sanborn
Edward J. Slater
Andrew Smith
Martin V. Smith
Jack W. Spiegelberg
Joan W. Spiegelberg
Steven W. Tavan
Charles R. Toy
Alan H. Trist
Romeo J. Vadnais
W. Bruce Waldorf
James A. Wells
Arnold A. Whitehouse
Robert T. Williams
Frederick A. Van Woy
V. Grant Wyborney
Robert E. Yates

Introduction

These atlas volumes contain the record of the oceanographic measurements made during the Geochemical Ocean Sections Study (GEOSECS), a program of the International Decade of Ocean Exploration (IDOE), 1970-1980. The Geochemical Ocean Sections Study, or "GEOSECS" as the program has become known, was conceived as a cooperative multi-national and multi-institutional study of the oceans, based on the concept of a global survey of radioisotopes and other geochemical tracers accompanied by high-precision measurements of temperature, salinity, and density in both continuous and discrete-sample profiles.

The work reported in these atlas volumes includes the shipboard measurements made on the United States expeditions in the Atlantic, Pacific, and Indian Oceans, and the laboratory measurements performed on samples collected by these expeditions of scientists from the United States and other countries. The U.S. shipboard program was carried out on the Woods Hole Oceanographic Institution ship R/V KNORR and the Scripps Institution of Oceanography ship R/V MELVILLE, during three expeditions which were at sea for a total of 24 months. The Atlantic field work was done on R/V KNORR during the nine-month period from July 1972, to April 1973. Shortly afterwards, the Pacific expedition was carried out on R/V MELVILLE during the ten months from August 1973 to June 1974, and the five-month Indian Ocean expedition was carried out on the MELVILLE from December 1977 to April 1978.

In addition to the U.S. Atlantic, Pacific, and Indian Ocean expeditions, scientists from West Germany and Japan have carried out associated GEOSECS studies aboard the German vessel METEOR in the Atlantic and the Japanese ship HAKUHÓ-MARU in the Pacific and Indian Oceans. The results of these allied investigations are being published separately and are not included in these volumes.

The GEOSECS program began with the recognition by Henry Stommel that the full potential of geochemical tracers for the study of circulation and mixing processes in the world oceans could only be realized by a large-scale collaborative effort in which simultaneous studies of the most significant properties were made over large sections of the oceans. A preliminary meeting involving Dr. Stommel, Drs. W.S. Broecker, H. Craig, and K. K. Turekian was held at Woods Hole in July of 1968 for the purpose of planning such a program. Shortly afterwards, P. Kilho Park, J. L. Reid, and H. G. Ostlund were added to this group and an initial proposal for a geochemical expedition was prepared. In the following year, the group was enlarged to a formal Scientific Advisory Committee by the addition of Drs. D. W. Spencer, T. Takahashi, and H. Volchok. Arnold Bainbridge was selected as Project Director of the GEOSECS Operations Group with the responsibility for shipboard operations and data processing.

During this initial phase of the program, the National Science Foundation and the Office of Naval Research supported several testing and intercalibration seagoing efforts in order to establish the feasibility of the proposed program. The "GEOSECS I" station in the Pacific off Baja California was occupied for a week of testing and equipment trials in September 1969 on Scripps R/V WASHINGTON; and "GEOSECS II", an Atlantic station off Bermuda, was occupied by R/V KNORR in August 1970. A full-scale dress rehearsal was then run on Leg 15 of SIO's Antipode Expedition in the southwest Pacific, aboard R/V MELVILLE in August 1971. On this expedition, the deep-water CTD developed by Neil Brown of WHOI was used successfully for the first time to depths of 5000 meters, and the combination of precise geochemical and hydrographic data with continuous CTD profiling resulted in the discovery of a major oceanographic feature—the benthic front, or density discontinuity, between the Pacific Deep Water and the Antarctic Bottom Water.

Antipode Expedition Leg 15, and two further trials—the GOGO I and GOGO II reoccupations of the GEOSECS I station in November 1971 and April 1972—set the basic style of the GEOSECS shipboard sampling and hydrographic program for the future expeditions. For hydrographic measurements and "normal-sized" water samples, Shale Niskin of General Oceanics had developed the rosette sampler, which holds 12 thirty-liter nonmetallic sampling bottles with reversing thermometers. The rosettes were equipped by A.E. Bainbridge and the GEOSECS Operations Group (GOG) with modified versions of the Neil Brown CTD, new dissolved-oxygen probes and nephelometers. A new hydrographic winch with conducting wire for CTD, rosette triggering, and other signals, was constructed and used with the rosettes.

For large volume water samples, required for the measurements of ^{14}C, ^{226}Ra, and other radionuclides, nine 270-liter Gerard-Ewing samplers, developed at LDGO, were constructed from stainless steel and used as multiple sampling devices on the trawl wire. During the Atlantic and Pacific expeditions, large-volume near-surface water sampling was also done with a "seasucker", a pumping system designed for obtaining large quantities of water from depths down to about 350 meters. During 1971 and early 1972,

necessary improvements were made to the shorebased laboratory facilities needed for the analysis of the expedition samples.

The final selection of tracers and of participating laboratories was made by the Scientific Advisory Committee, and was based on three criteria established at the inception of the GEOSECS program:

1) Demonstration of a significant and reliably measurable variability in the oceanic concentration of a proposed tracer, a variability which would be correlated with circulation, mixing, and non-conservative processes.
2) Selection of a target sampling and analytical precision for each proposed tracer, and demonstration that such precision could be routinely achieved.
3) In almost all cases, the participation of more than one laboratory for the analysis of each tracer, with intercalibrations at selected stations as a continuing control on the quality of the data.

A list of the components selected as tracers which met the above criteria follows.

1) *Long-lived radioisotopes*

The three nuclides in this category are the oceanic "timekeepers": ^{14}C (radiocarbon), ^{226}Ra, and ^{32}Si. Two of these components, ^{14}C and ^{32}Si, have naturally-occurring stable isotopic species for calibration of non-conservative effects, but ^{226}Ra does not. Hence barium was included as a trace element component for analysis because of its possible role as a chemical analogue for radium.

2) *Short-lived radioisotopes*

The initial selection of tracers in this category included ^{3}H (tritium), ^{228}Ra, and ^{222}Rn, the latter extracted from surface and bottom waters, and measured at sea because of its short half-life. The fission-product isotopes, ^{90}Sr and ^{137}Cs, were included for study at selected depths and locations in order to compare the distribution of these tracers to tritium. Later additions to this list included ^{210}Pb, after the discovery of the large disequilibrium between ^{210}Pb, and ^{226}Ra in deep waters, and ^{210}Po and ^{228}Th for further studies of the effects of particulate scavenging.

3) *Stable isotopes*

These tracers included D/H and $^{18}O/^{16}O$ ratios in seawater, ^{18}O in dissolved oxygen, phosphate, and sulphate, ^{13}C in dissolved inorganic carbon, and ^{13}C and ^{18}O in atmospheric CO_2.

4) *Dissolved gases*

Primary emphasis in this program was on the distribution of ^{3}He in seawater, because the injection of "excess ^{3}He" into deep water on oceanic rises provides a unique deep-sea tracer for circulation and mixing. ^{4}He and Ne concentrations were also measured, for calibration of the atmospheric ^{3}He component. In near-surface waters, the association of ^{3}H and ^{3}He provided a unique new parent-daughter isotopic pair for circulation studies. During the Atlantic and Pacific expeditions, a shipboard measurement program for dissolved N_2 and Ar was also included in the program for further control on the atmospheric "air-injection" component in deep water.

5) *Trace elements*

As noted above, the most important of these is barium, which can be measured mass spectrometrically with very high precision. Other trace elements included Sr, Cu, Ni, and other heavy metals.

6) *Particulates*

In addition to mineralogical and chemical studies on particulate material filtered from surface and deep water, thorium isotopes, ^{210}Pb, ^{226}Ra, ^{239}Pu, and ^{14}C in particulates, were analyzed in order to provide information on rates of settling of suspended material and on the chemistry of the scavenging processes associated with particles.

A complete list of the institutions participating in the analytical programs and the components studied by each is included in Table 1.

The regular GEOSECS expedition work began with the departure of R/V KNORR from Woods Hole on July 18, 1972, for the nine-leg Atlantic expedition. At this time, the program was directed by an Executive Committee consisting of W. S. Broecker, H. Craig, D. W. Spencer (appointed

Table 1—Major Participating Institutions, Principal Investigators, and Scientific Programs (Atlantic and Pacific Expeditions)

INSTITUTION	PRINCIPAL INVESTIGATORS	SCIENTIFIC PROGRAMS
Atomic Energy Commission (from 1975 Health & Safety Laboratory, ERDA)	H. Volchok	Fallout studies
Centre des Faibles Radioactivités Gif-sur-Yvette, France	R. Chesselet	Particulate analysis (trace elements)
Lamont-Doherty Geological Observatory of Columbia University	W. S. Broecker, P. E. Biscaye, H. W. Feely	^{222}Rn, ^{226}Ra, ^{228}Ra, ^{228}Th; Particulate studies
Louisiana State University	L. H. Chan	Ba
Massachusetts Institute of Technology	J. M. Edmond	Ba; Trace elements
McMaster University Hamilton, Ontario, Canada	W. B. Clarke	^{3}He, He, Ne
Oregon State University	P. K. Park, L. I. Gordon	Nutrients, pH
Queens College, City University of New York	T. Takahashi	Atmospheric CO_2, pCO_2
Scripps Institution of Oceanography University of California at San Diego	H. Craig, Y. Chung, J. E. Lupton, R. F. Weiss	^{2}H and ^{18}O (H_2O); ^{13}C (CO_2); ^{3}He, He, Ne; ^{226}Ra, ^{210}Pb; N_2O, N_2, Ar; ΣCO_2 (gas chromatography)
Scripps Institution of Oceanography University of California at San Diego GEOSECS Operations Group	A. E. Bainbridge, A. W. Mantyla, R. T. Williams	Salinity, nutrients, O_2, CTD, ΣCO_2 (titration), alkalinity
Tata Institute Bombay, India (from 1973 Physical Research Laboratory) Ahmedabad, India	D. Lal, B.L.K. Somayajulu, S. Krishnaswami	^{32}Si; Particulate studies; ^{14}C, Th isotopes, ^{210}Pb, ^{226}Ra, and ^{239}Pu in particulates
U.S. Naval Oceanographic Office (from 1976 University of South Carolina)	W. S. Moore	^{228}Ra
Universita di Pisa, Pisa, Italy Laboratorio di Geologia Nucleare	A. Longinelli	^{18}O (SO_4, PO_4)
Université Libre de Bruxelles Bruxelles, Belgium	J. Jedwab	Particulate analysis (trace elements)
University of Hawaii	P. Kroopnick	^{13}C (ΣCO_2); ^{18}O (dissolved O_2)
University of Miami	H. G. Ostlund	^{3}H, ^{14}C
University of Southern California	T-L. Ku	^{226}Ra
University of Washington	M. Stuiver	^{14}C
Woods Hole Oceanographic Institution	D. W. Spencer, P. G. Brewer, V. Bowen	Particulate studies; I; ^{90}Sr, ^{137}Cs
Yale University	K. K. Turekian	Sr; ^{210}Pb, ^{210}Po

Table 1 (continued)—Major Participating Institutions, Principal Investigators, and Scientific Programs (Indian Ocean Expedition)

INSTITUTION	PRINCIPAL INVESTIGATORS	SCIENTIFIC PROGRAMS
Lamont-Doherty Geological Observatory of Columbia University	P. Biscaye,	Suspended particulates
	P. Santschi, W. S. Broecker,	^{222}Rn, ^{228}Ra
	T. Takahashi	Carbonate Chemistry
Louisiana State University	L.-H. Chan, J.S. Hanor	Ba
Massachusetts Institute of Technology	J. M. Edmond	Trace elements
McMaster University Hamilton, Ontario, Canada	W. B. Clarke	^{3}He, He, Ne
Physical Research Laboratory Ahmedabad, India	S. Krishnaswami, D. Lal, B. L. K. Somayajulu	^{32}Si, J-Underway, Deep Pump
Scripps Institution of Oceanography	J. Lupton, H. Craig	^{3}He, rare gases, stable isotopes
University of California, San Diego	Y.-C. Chung, H. Craig, R. Finkel	^{226}Ra, particulate ^{210}Pb, soluble & particulate ^{210}Po, ^{222}Rn
	C. D. Keeling	$pCO_2/\Sigma CO_2$
Scripps Institution of Oceanography University of California, San Diego GEOSECS Operations Group	A. E. Bainbridge, R. T. Williams	Salinity, nutrients, O_2, CTD, ΣCO_2 (titration), alkalinity
University of Hawaii	P. Kroopnick	^{13}C (ΣCO_2), ^{18}O (dissolved O_2)
University of Miami	H. G. Ostlund	^{14}C, ^{3}H
University of South Carolina	W. S. Moore	^{228}Ra
University of Southern California	T.-L. Ku	^{226}Ra
University of Washington	M. Stuiver	^{14}C
Woods Hole Oceanographic Institution	D. W. Spencer, P. G. Brewer	^{210}Pb, ^{210}Po tracers
	W. Jenkins	He isotopes, Ne
Yale	K. Turekian	^{210}Pb, ^{210}Po

in 1970), together with a Scientific Advisory Committee consisting of these three together with A. Gordon, H. G. Ostlund, P. K. Park, J. L. Reid, H. Stommel, T. Takahashi, K. K. Turekian, H. Volchok, and K. Wyrtki. The Atlantic expedition, coordinated by D. W. Spencer of Woods Hole, lasted nine months. The KNORR returned to WHOI on April 4, 1973, after having occupied 116 Atlantic stations from 75°N in the Greenland Sea to 61°S in the Drake Passage. More than 10,000 water samples, ranging in size from small glass ampoules to 100-liter plastic drums, were stored in the Woods Hole "GEOSECS Water Library" facility, and winch, vans, computer, and the complete inventory of deck gear and analytical equipment were immediately transferred to the Scripps Institution of Oceanography for the Pacific expedition work on R/V MELVILLE.

The Pacific expedition work began at Scripps on August 22, 1973. Administrative changes at this time included the addition of H. G. Ostlund to the GEOSECS Executive Committee, and of J. Edmond to the Scientific Advisory Committee. H. Craig was the Expedition Coordinator for the ten-leg Pacific expedition, which ended on June 10, 1974, after occupying 147 Pacific stations.

Following the Pacific work, there was a three and one-half year delay in seagoing work while the shorebased laboratories in the U.S. and other countries concentrated on the analysis of Atlantic and Pacific samples. In 1974, P. E. Biscaye, P. G. Brewer, and R. F. Weiss joined the Scientific Advisory Committee to help prepare the Indian Ocean program. The Indian Ocean expedition work began with R/V MELVILLE leaving Alexandria, Egypt, on 15 December 1977 following a short test leg from Rota, Spain. A. E. Bainbridge acted as Expedition Coordinator for this expedition which ended in Mauritius on 24 April 1978.

The scientific program on the GEOSECS expeditions changed only slightly from its inception on the Atlantic legs in 1972-73. The shipboard analytical program included the standard hydrographic parameters, temperature, salinity, oxygen, and nutrients (nitrate, phosphate, and silica), together with total dissolved inorganic carbon measured by two techniques: titration (which also gave alkalinity), and during the Atlantic and Pacific expeditions, shipboard gas chromatography. Ancillary shipboard programs included the measurement of radon activity in surface mixed layer and bottom water profiles, and measurement of atmospheric and surface water CO_2 partial pressure using an infrared analyzer. In addition to these discrete parameters, continuous profiles of temperature, salinity, dissolved oxygen, and particulate concentration by nephelometry,

were obtained on station in real time, using the probes mounted on the sampling rosette.

Particulate samples were collected in several ways. Water samples from the thirty-liter rosette samplers were filtered to provide small particulate sample profiles for U.S. investigators. Continuous filtration of surface water (the "J-underway program") was carried out to provide large-volume surface particulate samples throughout the oceans. In the Pacific and Indian Oceans, deep-water particulate profiles were obtained by pumping up to 5000 liters of water through battery-operated filtration units suspended on the wire. These large-scale particulate sampling programs were instituted by the Physical Research Laboratory of Ahmedabad, India. Additional particulate profiles were also obtained for ^{210}Pb analysis in the Pacific and Indian Oceans, by filtering water aboard ship.

The GEOSECS station plan in the Atlantic and Pacific consisted of both "large volume" and "small volume" stations. At both types of stations, profiles of discrete water samples were collected in thirty-liter nonmetallic sampling bottles, using a pair of sampling rosettes on the conducting hydrographic wire for each rosette cast. At "large volume" stations, additional sampling included use of the 270-liter Gerard barrels to collect the large volume water samples for ^{14}C, ^{228}Ra, and other radioisotope studies. Some stations included shallow Niskin bottle casts with bottles attached to the wire at predetermined intervals, and additional CTD casts were made at a few supplementary station locations in areas of special interest. In the Atlantic work, the rosette casts were supplemented by metal Nansen bottle casts for duplicate temperature and salinity profiles, but this practice was discontinued at the end of the Atlantic expedition.

For the Indian Ocean expedition, the station plan was modified to include "large volume" sampling at most stations, and the number of casts at "large volume" stations was reduced. Each of these "large volume" stations typically consisted of a "deep rosette" cast which occasionally included a bottom radon profile, a "shallow rosette" cast, and three 9-bottle Gerard barrel casts. Thus, the "large volume" stations typically provided profiles of 44 thirty-liter samples and 27 270-liter samples. The number of casts at "small volume" stations was also reduced for the Indian Ocean, and the fraction of "small volume" stations was reduced from roughly one-half to roughly one-fifth of the total. These "small volume" stations consisted of a single "deep rosette" cast which provided a CTD profile and a profile of 22 thirty-liter samples.

In general, the first cast made at a station was a "bottom rosette" or "deep rosette" cast, so that the actual hydrographic structure of the entire water column could be displayed by the shipboard computer system at the beginning of station work. The scientist at the data console controlled the lowering rate of the rosette package by voice communication with the winch operator, while observing a set of profiles and plots on the four CRT displays in the control room. Thus the temperature, salinity, dissolved oxygen, density, and light scattering profiles, together with plots such as potential temperature vs. salinity, could be studied as the sensor package was lowered. During this time, the discrete sampling scheme relative to the various significant features of the water mass structure was laid out. Discrete sampling was then carried out during the ascent of the rosette system by manual triggering of rosette bottles at the desired depths. For the Pacific and Indian Ocean expeditions, the exact position of the rosette package on each profile or property plot was continually indicated on the displays. In this way, it was possible to obtain accurate core properties and precise gradients for the geochemical parameters being mapped, and at the same time, to adust the sampling density according to the gradients in temperature, salinity, density, dissolved oxygen or particulate concentration, as desired. This "real-time" sampling system has been a major benefit to the GEOSECS program, and has allowed sharp discontinuities and other local features within the water column to be sampled in great detail.

"An ocean is forever asking questions," wrote Edwin Arlington Robinson, "and writing them aloud along the shore." The data presented in these volumes may answer some old questions, and pose new ones yet unasked, but they will surely contribute new dimensions to our understanding of the intricate chemical and physical processes which govern the distribution of geochemical parameters in the sea.

Harmon Craig
for GEOSECS Executive Committee

Itinerary of R/V KNORR

	DEPART	ARRIVE
LEG 1	Woods Hole, Massachusetts 18 July 1972	Reykjavik, Iceland 1 August 1972
LEG 2	Reykjavik, Iceland 12 August 1972	Reykjavik, Iceland 30 August 1972
LEG 3	Reykjavik, Iceland 4 September 1972	Bridgetown, Barbados 1 October 1972
LEG 4	Bridgetown, Barbados 9 October 1972	Recife, Brazil 31 October 1972
LEG 5	Recife, Brazil 4 November 1972	Buenos Aires, Argentina 28 November 1972
LEG 6	Buenos Aires, Argentina 2 December 1972	Ushuaia, Argentina 22 December 1972
LEG 7	Ushuaia, Argentina 30 December 1972	Capetown, Republic of South Africa 5 February 1973
LEG 8	Capetown, Republic of South Africa 10 February 1973	Dakar, Senegal 7 March 1973
LEG 9	Dakar, Senegal 10 March 1973	New York, New York 1 April 1973

TRACK OF R/V KNORR, GEOSECS ATLANTIC EXPEDITION, 1972-73

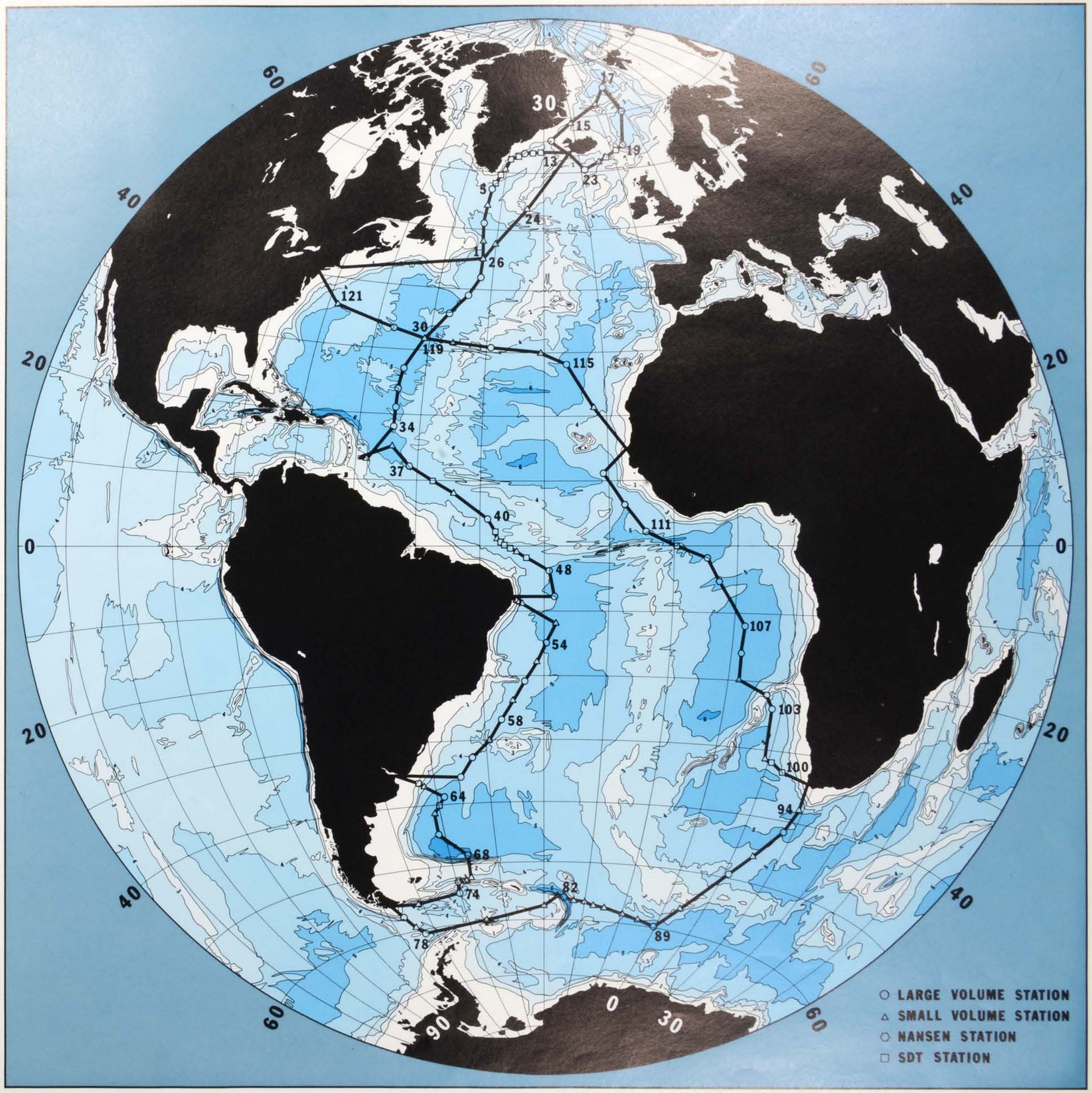


PLATE 1

Bathymetry of the Atlantic Ocean. The isobaths shown on this Lambert equal area projection were taken primarily from the Mercator projection of Chase (1). The Arctic bathymetry north of 75°N was simplified from Pinther (2); Antarctic details south of 70°S were taken from Heezen and Bentley (3). Shuran (4) was used to augment the bathymetry of the Mediterranean Sea. Only those features needed to illustrate the major topography of the Atlantic Ocean are reproduced on this chart. Changes in color intensity occur at the 1 kilometer isobath, and at 1 kilometer intervals from 3 to 6 kilometers. The 2 kilometer isobath is omitted except in areas where features of interest are not adequately described by the 1 or 3 kilometer contours. Prepared by GEOSECS Operations Group.

REFERENCES

1. T. E. Chase, *Topography of the Oceans,* IMR Technical Report Series TR57, Scripps Institution of Oceanography, University of California, San Diego, (1975).
2. M. Pinther, Chief Cartographer, *Map of the Arctic Region,* American Geographical Society, Sheet 14 of the Series.
3. B. Heezen and C. Bentley, *Antarctic Map Folio Series,* Plate 1, Folio 16, American Geographical Society, (1972).
4. E. M. Shuran, Editor, *Mediterranean Sea,* Central Administration of Geodesic and Cartographic Ministry of Geology, Moscow, U.S.S.R.

Itinerary of R/V MELVILLE

	DEPART	ARRIVE
LEG 1	San Diego, California 22 August 1973	Honolulu, Hawaii 10 September 1973
LEG 2	Honolulu, Hawaii 15 September 1973	Adak, Alaska 6 October 1973
LEG 3	Adak, Alaska 7 October 1973	Tokyo, Japan 26 October 1973
LEG 4	Tokyo, Japan 31 October 1973	Honolulu, Hawaii 29 November 1973
LEG 5	Honolulu, Hawaii 4 December 1973	Pago Pago, American Samoa 29 December 1973
LEG 6	Pago Pago, American Samoa 2 January 1974	Wellington, New Zealand 29 January 1974
LEG 7	Wellington, New Zealand 5 February 1974	Wellington, New Zealand 9 March 1974
LEG 8	Wellington, New Zealand 13 March 1974	Papeete, Tahiti 8 April 1974
LEG 9	Papeete, Tahiti 12 April 1974	Papeete, Tahiti 9 May 1974
LEG 10	Papeete, Tahiti 13 May 1974	San Diego, California 10 June 1974

TRACK OF R/V MELVILLE, GEOSECS PACIFIC EXPEDITION, 1973-74

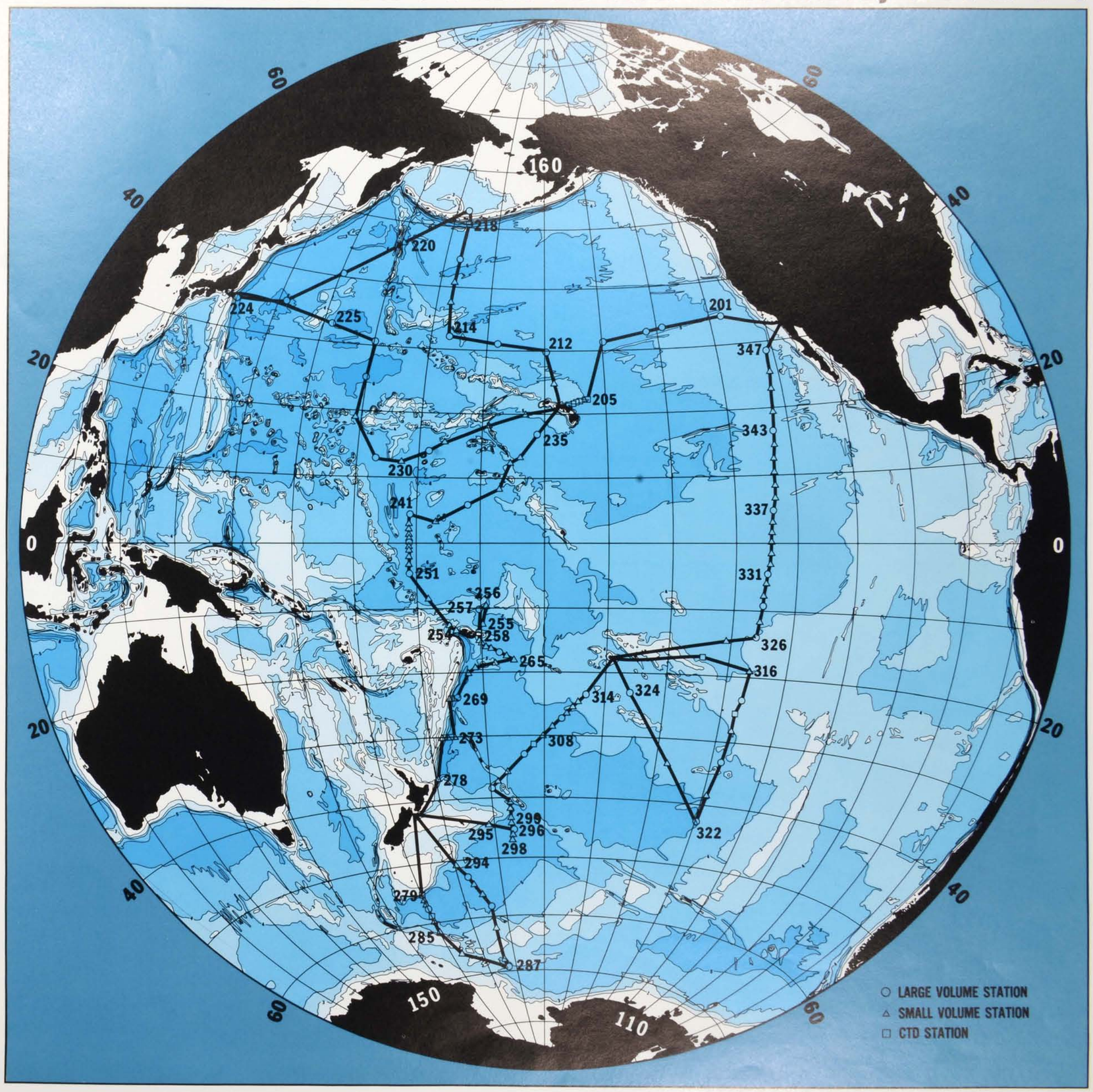


PLATE 2

Bathymetry of the Pacific Ocean. The isobaths shown on this Lambert equal area projection were taken primarily from the Mercator projection of Chase (1). The Arctic bathymetry north of 75°N was simplified from Pinther (2); Antarctic details south of 70°S were taken from Heezen and Bentley (3). Mammerickx *et al.* (4) was used to augment the bathymetry of the Phillipine Sea. Only those features needed to illustrate the major topography of the Pacific Ocean are reproduced on this chart. Changes in color intensity occur at the 1 kilometer isobath, and at 1 kilometer intervals from 3 to 6 kilometers. The 2 kilometer isobath is omitted except in areas where features of interest are not adequately described by the 1 or 3 kilometer contours. Prepared by GEOSECS Operations Group.

REFERENCES

1. T. E. Chase, *Topography of the Oceans,* IMR Technical Report Series TR57, Scripps Institution of Oceanography, University of California, San Diego, (1975).
2. M. Pinther, Chief Cartographer, *Map of the Arctic Region,* American Geographical Society, Sheet 14 of the Series.
3. B. Heezen and C. Bentley, *Antarctic Map Folio Series,* Plate 1, Folio 16, American Geographical Society, (1972).
4. R. L. Mammerickx, R. L. Fisher, E. J. Emmel, and S. M. Smith, *Bathymetry of the East and Southeast Asian Seas,* Map and Chart Series MC-17, Geological Society of America, Inc., (1976).

Itinerary of R/V MELVILLE

	DEPART	ARRIVE
LEG 3	Rota, Spain 4 December 1977	Alexandria, Egypt 12 December 1977
LEG 4	Alexandria, Egypt 16 December 1977	Port Louis, Mauritius 23 January 1978
LEG 5	Port Louis, Mauritius 28 January 1978	Fremantle, Australia 25 February 1978
LEG 6	Fremantle, Australia 7 March 1978	Colombo, Sri Lanka 31 March 1978
LEG 7	Colombo, Sri Lanka 4 April 1978	Port Louis, Mauritius 24 April 1978

The GEOSECS Indian Ocean Expedition was part of an 18 leg oceanographic expedition, INDOMED, organized by Scripps Institution of Oceanography and carried out aboard R/V Melville. For ease of reference, the GEOSECS Indian Ocean leg numbers are consistent with those of the major expedition.

TRACK OF R/V MELVILLE, GEOSECS INDIAN OCEAN EXPEDITION, 1977-78

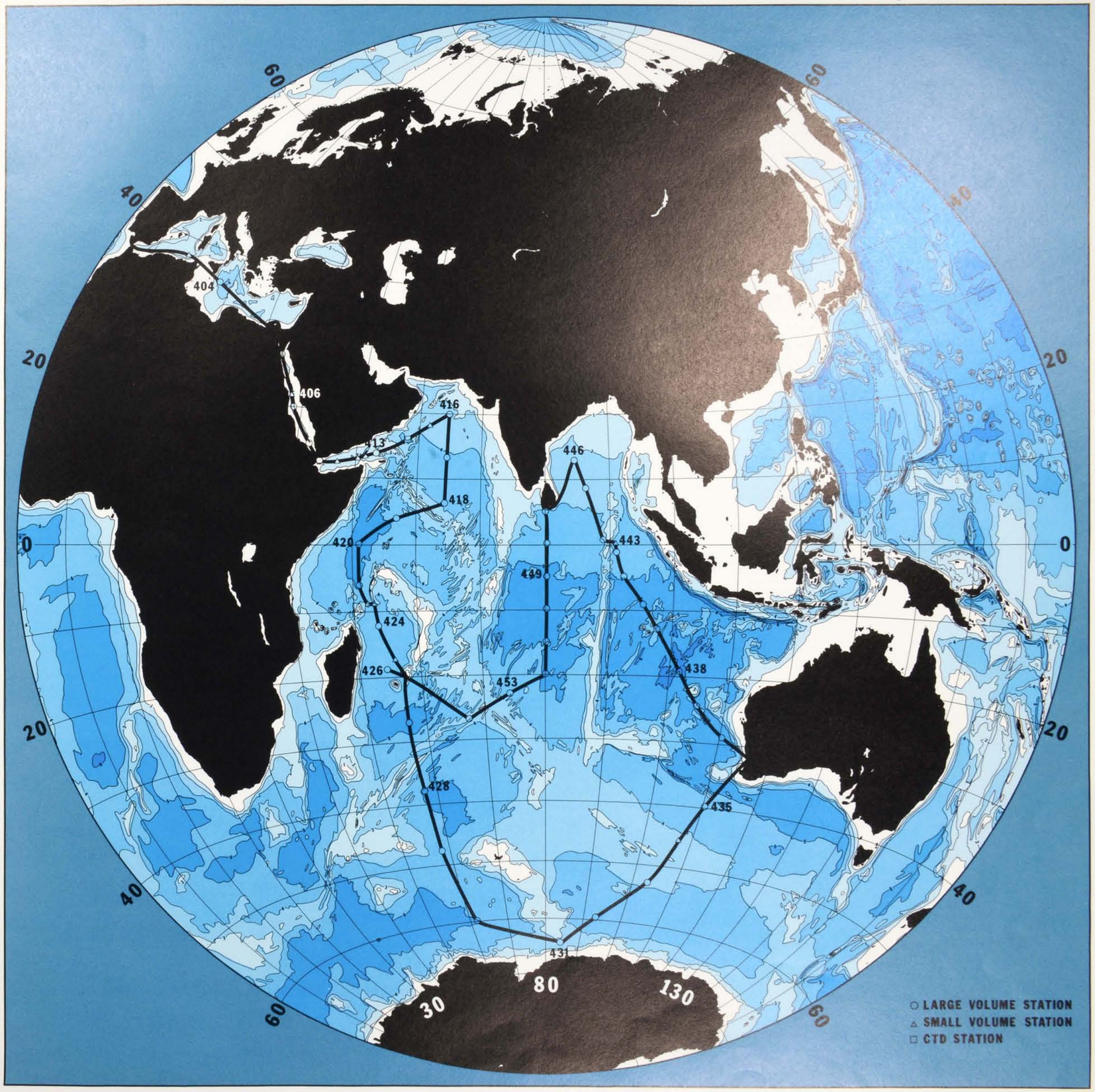


PLATE 3

Bathymetry of the Indian Ocean. The isobaths on this Lambert equal area projection were taken primarily from the Mercator projection of Udintsev (1). The Atlantic and Pacific Oceans bathymetry were taken from Volumes 2 and 4 of the GEOSECS Atlas series (2,3).

REFERENCES

1. G.B. Udintsev, Chief Editor, *Geological-Geophysical Atlas of the Indian Ocean*, Pergamon Press, Library of Congress Catalog No. 76-436.
2. A. E. Bainbridge, *GEOSECS Atlantic Expedition: Sections and Profiles*, U.S. Government Printing Office, Washington, D.C.,2, (1980), xv.
3. H. Craig, W. S. Broecker, and D. W. Spencer, *GEOSECS Pacific Expedition: Sections and Profiles*, U.S. Government Printing Office, Washington, D.C.,4, (1981), xv.

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC R/V KNORR

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
1	1	1	24 JUL 72	ROS	44° 57.0' N	42° 0.2' W	0911	4696	4603	* DEEP ROSETTE
1	1	2	24 JUL 72	NAN	44° 59.0' N	42° 0.0' W	1328		4627	* DEEP NANSEN
1	1	3	24 JUL 72	ROS	44° 56.0' N	41° 59.0' W	1828		1942	* SHALLOW ROSETTE
1	1	4	24 JUL 72	NAN	44° 59.4' N	42° 0.7' W	2334	4718	1652	* SHALLOW NANSEN
1	1	5	25 JUL 72	PMP	44° 58.0' N	42° 1.5' W	0119		100	* SURFACE PUMP, RADON
1	2	1	25 JUL 72	NAN	48° 0.0' N	42° 30.5' W	2247	4059	4027	* DEEP NANSEN
1	2	2	26 JUL 72	PMP	47° 57.3' N	42° 28.3' W	0027		70	* SURFACE PUMP, RADON
1	2	3	26 JUL 72	NAN	47° 58.8' N	42° 28.5' W	0619	4071	1796	* SHALLOW NANSEN
1	2	4	26 JUL 72	ROS	47° 58.0' N	42° 32.0' W	0954	4071	1834	* SHALLOW ROSETTE
1	2	5	26 JUL 72	NIS	47° 58.3' N	42° 31.0' W	1500	4061	4054	* BOTTOM NISKIN, RADON
1	2	6	26 JUL 72	ROS	47° 54.0' N	42° 39.5' W	2202	3839	3644	* DEEP ROSETTE
1	2	7	27 JUL 72	ROS	47° 58.5' N	42° 32.0' W	0342	3967	463	* SHAL SINGLE ROSETTE (REPEAT)
1	3	1	27 JUL 72	PMP	51° 1.5' N	43° 1.0' W	2127		100	* SURFACE PUMP, RADON
1	3	2	28 JUL 72	BAG	50° 57.5' N	43° 7.6' W	0230			* SI-32 BAG (ABORTED)
1	3	3	28 JUL 72	ROS	51° 1.1' N	43° 7.0' W	0822	4212	2036	* SHALLOW ROSETTE
1	3	4	28 JUL 72	GER	51° 1.2' N	43° 10.0' W	1240		467	* SHALLOW GERARD, C-14
1	3	5	28 JUL 72	NAN	51° 3.8' N	43° 0.7' W	1705	4310	4268	* DEEP NANSEN
1	3	6	28 JUL 72	GER	51° 0.7' N	42° 57.6' W	2207	4266	1826	* INTERMEDIATE GERARD, C-14
1	3	7	29 JUL 72	ROS	51° 0.7' N	42° 58.7' W	0314	4293	4144	* DEEP ROSETTE
1	3	8	29 JUL 72	NAN	51° 1.4' N	43° 0.0' W	0741		2219	* SHALLOW NANSEN
1	3	9	29 JUL 72	PMP	51° 1.6' N	43° 0.0' W	0935		350	* SURFACE PUMP, RA-228
1	3	10	29 JUL 72	ROS	51° 0.0' N	42° 59.3' W	1618	4252	4244	* BOTTOM SINGLE ROSETTE, RADON
1	3	11	29 JUL 72	GER	50° 59.7' N	43° 0.0' W	2031		4306	* DEEP GERARD, C-14
1	3	12	29 JUL 72	ESS	50° 59.9' N	42° 59.9' W	2209		0	* ESSO, BUCKET
1	4	1	30 JUL 72	ROS	54° 5.5' N	42° 57.8' W	1545	3528	3520	* DEEP & BOTTOM ROSETTE, RADON
1	4	2	30 JUL 72	PMP	54° 5.5' N	42° 57.8' W	1553		130	* SURFACE PUMP, RADON
1	4	3	30 JUL 72	NAN	54° 6.7' N	42° 57.0' W	1854		1361	* SHALLOW NANSEN
1	4	4	30 JUL 72	NAN	54° 7.4' N	42° 56.0' W	2057	3495	3466	* DEEP NANSEN
1	4	5	30 JUL 72	ROS	54° 8.0' N	42° 57.0' W	2324	3447	1993	* SHALLOW ROSETTE
1	4	6	31 JUL 72	ROS	54° 9.0' N	42° 58.9' W	0117	3447	626	* SHALLOW ROSETTE (REPEAT)
1	5	1	31 JUL 72	ROS	56° 56.7' N	42° 33.5' W	1938	3388	3381	* DEEP & BOTTOM ROSETTE, RADON
1	5	2	31 JUL 72	PMP	56° 56.1' N	42° 33.4' W	2249		45	* SURFACE PUMP, RADON
1	5	3	31 JUL 72	GER	56° 56.0' N	42° 33.4' W	2321		2462	* INTERMED. GERARD, C-14, RA228
1	5	4	1 AUG 72	NAN	56° 55.2' N	42° 33.5' W	0159		1310	* SHALLOW NANSEN
1	5	5	1 AUG 72	ROS	56° 54.4' N	42° 34.0' W	0345		2009	* SHALLOW ROSETTE
1	5	6	1 AUG 72	GER	56° 52.5' N	42° 36.0' W	0723		3287	* DEEP GERARD, C-14
1	5	7	1 AUG 72	NAN	56° 57.0' N	42° 36.2' W	1051	3385	3296	* DEEP NANSEN
1	5	8	1 AUG 72	PMP	56° 55.0' N	42° 39.8' W	1354		350	* SURFACE PUMP, C-14, RA-228
1	5	9	1 AUG 72	BAG	56° 55.5' N	42° 40.8' W	2025			* SI-32 BAG (ABORTED)
1	5	10	1 AUG 72	ESS	56° 56.0' N	42° 41.0' W	2232			* ESSO, BUCKET- LOST PAIL
1	6	1	2 AUG 72	SDT	58° 0.0' N	41° 58.0' W	0726	3179	3114	* SDT WITH 3 CHECK SAMPLES
1	7	1	2 AUG 72	SDT	59° 30.0' N	40° 56.5' W	2210	2478	2455	* SDT WITH 3 CHECK SAMPLES
1	8	1	3 AUG 72	ROS	60° 30.0' N	40° 1.0' W	1108	2583	2551	* DEEP ROSETTE
1	8	2	3 AUG 72	NAN	60° 30.8' N	40° 1.6' W	1403	2586	2546	* DEEP NANSEN
1	8	3	3 AUG 72	ROS	60° 32.5' N	40° 1.0' W	1633	2516	645	* SHALLOW SINGLE ROSETTE
1	8	4	3 AUG 72	NAN	60° 32.7' N	40° 1.0' W	1803	2490	1110	* SHALLOW NANSEN
1	8	5	3 AUG 72	NIS	60° 33.5' N	40° 1.0' W	1957	2486	2475	* DEEP NISKIN, RADON
1	9	1	4 AUG 72	SDT	62° 25.4' N	39° 4.9' W	1618	1891	1886	* SDT
1	10	1	5 AUG 72	SDT	63° 0.0' N	36° 50.0' W	0122	2325	2314	* SDT WITH 4 CHECK SAMPLES
1	11	1	5 AUG 72	ROS	63° 31.9' N	35° 13.8' W	0757	2400	2393	* DEEP & BOTTOM ROSETTE, RADON
1	11	2	5 AUG 72	GER	63° 31.9' N	35° 12.2' W	1035	2430	408	* SHALLOW GERARD, C-14
1	11	3	5 AUG 72	NAN	63° 31.7' N	35° 11.2' W	1230	2404	2399	* DEEP NANSEN
1	11	4	5 AUG 72	ROS	63° 30.5' N	35° 11.3' W	1616		1098	* SHALLOW ROSETTE
1	11	5	5 AUG 72	GER	63° 29.9' N	35° 11.2' W	2013		1695	* INTERMED. GERARD, C-14, RA228
1	11	6	5 AUG 72	NAN	63° 29.9' N	35° 11.0' W	2151		1110	* SHALLOW NANSEN
1	11	7	5 AUG 72	PMP	63° 29.9' N	35° 11.1' W	2304		350	* SURFACE PUMP, RA-228
1	11	8	6 AUG 72	GER	63° 28.9' N	35° 10.5' W	0420	2444	2418	* DEEP GERARD, C-14
1	11	9	6 AUG 72	ESS	63° 29.0' N	35° 10.5' W	0540		0	* ESSO, BUCKET
1	12	1	6 AUG 72	SDT	63° 37.5' N	32° 52.0' W	1241	2766	2754	* SDT WITH 2 CHECK SAMPLES
1	13	1	6 AUG 72	SDT	63° 43.5' N	30° 31.0' W	2035	2347	2338	* SDT WITH 2 CHECK SAMPLES
2	14	1	13 AUG 72	ROS	65° 55.7' N	27° 27.0' W	0624	646		* ROSETTE FAILURE, SDT ONLY
2	14	2	13 AUG 72	ROS	65° 56.0' N	27° 32.0' W	1024	637	605	* DP & SHALLOW ROSETTE (REPEAT)
2	14	3	13 AUG 72	GER	65° 56.5' N	27° 33.0' W	1400		604	* DEEP GERARD, C-14
2	14	4	13 AUG 72	NAN	65° 55.8' N	27° 22.9' W	1605	646	571	* DEEP NANSEN
2	14	5	13 AUG 72	ROS	65° 54.6' N	27° 23.1' W	1752	653	645	* BOTTOM SINGLE ROSETTE, RADON
2	15	1	15 AUG 72	NIS	69° 0.9' N	20° 1.7' W	0422	1534	1526	* BOTTOM NISKIN, RADON
2	15	2	15 AUG 72	ROS	69° 1.0' N	20° 6.0' W	0643	1516	1495	* DEEP ROSETTE
2	15	3	15 AUG 72	PMP	69° 0.5' N	20° 12.0' W	0855		3	* BOW PUMP, RADON, SR-90
2	15	4	15 AUG 72	NAN	69° 0.9' N	20° 4.2' W	1133	1537	1513	* DEEP & SHALLOW NANSEN
2	15	5	15 AUG 72	ROS	69° 0.2' N	20° 6.4' W	1254	1528	225	* SHALLOW SINGLE ROSETTE, RADON
2	16	1	16 AUG 72	ROS	72° 2.5' N	8° 26.5' W	2146	2542	2537	* BOTTOM ROSETTE, RADON
2	16	2	16 AUG 72	NAN	72° 2.0' N	8° 26.5' W	2341	2550	2523	* DEEP NANSEN
2	16	3	17 AUG 72	ROS	72° 1.0' N	8° 25.2' W	0236	2568		* DEEP ROSETTE (ABORTED)
2	16	4	17 AUG 72	NAN	72° 0.3' N	8° 26.3' W	0437		903	* SHALLOW NANSEN
2	16	5	17 AUG 72	ROS	71° 59.7' N	8° 24.6' W	0618	2530	2515	* DEEP ROSETTE (REPEAT)
2	16	6	17 AUG 72	ROS	72° 1.0' N	8° 26.5' W	1154		749	* SHALLOW ROSETTE, RADON
2	16	7	17 AUG 72	PMP	71° 59.7' N	8° 24.6' W	0640		1	* BOW PUMP, RADON, SR-90
2	17	1	18 AUG 72	ROS	74° 56.0' N	1° 7.3' W	1112	3688	3681	* BOTTOM SINGLE ROSETTE, RADON
2	17	2	18 AUG 72	NAN	74° 56.0' N	1° 10.0' W	1426	3707	3680	* DEEP NANSEN
2	17	3	18 AUG 72	GER	74° 56.4' N	1° 12.0' W	1633	3652	306	* SHALLOW GERARD, C-14
2	17	4	18 AUG 72	ROS	74° 56.0' N	1° 20.0' W	2009	3686	3679	* DEEP ROSETTE
2	17	5	18 AUG 72	GER	74° 56.0' N	1° 5.1' W	2350	3696	3552	* DEEP GERARD, C-14
2	17	6	19 AUG 72	ROS	74° 54.0' N	1° 12.0' W	0646		1593	* SHALLOW ROSETTE
2	17	7	19 AUG 72	NAN	74° 55.9' N	1° 2.0' W	1008		1303	* SHALLOW NANSEN
2	17	8	19 AUG 72	PMP	74° 54.8' N	1° 2.9' W	1134		350	* SURFACE PUMP, RA-228
2	17	9	19 AUG 72	BAG	74° 54.5' N	1° 4.2' W	1655			* SI-32 BAG (ABORTED)
2	17	10	20 AUG 72	GER	74° 56.0' N	1° 14.0' W	0924	3692	1836	* INTERMEDIATE GERARD, C-14
2	17	11	20 AUG 72	GER	74° 55.3' N	1° 16.4' W	1125		3550	* 1000 LITER GERARD, RA-228
2	17	12	20 AUG 72	ESS	74° 56.5' N	1° 15.4' W	1730		2200	* ESSO ROSETTE
2	17	13	20 AUG 72	GER	74° 58.2' N	1° 12.5' W	2046	3654	3416	* DEEP GERARD C-14 (REPEAT)
2	17	14	21 AUG 72	NAN	74° 59.5' N	1° 13.7' W	0030	3652	3575	* DEEP NANSEN (REPEAT)
2	18	1	22 AUG 72	ROS	70° 0.0' N	0° 0.5' W	1019	3249	3242	* BOTTOM SINGLE ROSETTE, RADON
2	18	2	22 AUG 72	GER	69° 59.8' N	0° 0.0' W	1315	3270	1213	* DP GER C-14 (PART. POSTTRIP)
2	18	3	22 AUG 72	GER	69° 59.8' N	0° 1.8' W	1612		1972	* DP GER C-14 (PART. POSTTRIP)
2	18	4	22 AUG 72	ROS	69° 58.8' N	0° 2.9' W	2024	3231	3219	* DEEP ROSETTE
2	18	5	22 AUG 72	NAN	69° 58.9' N	0° 6.0' W	2317	3287	3215	* DEEP NANSEN
2	18	6	23 AUG 72	PMP	69° 58.9' N	0° 6.8' W	0030		250	* SURFACE PUMP, RA-228
2	18	7	23 AUG 72	ROS	69° 59.0' N	0° 8.0' W	0254	3237	1196	* SHALLOW ROSETTE
2	18	8	23 AUG 72	NAN	69° 58.9' N	0° 8.3' W	0506	3287	1005	* SHALLOW NANSEN
2	18	9	23 AUG 72	GER	69° 59.9' N	0° 9.5' W	0705	3231	3198	* DEEP GERARD C-14 (REPEAT)
2	18	10	23 AUG 72	ROS	70° 0.0' N	0° 4.5' W	1034		80	* SURFACE RADON
2	19	1	24 AUG 72	ROS	64° 12.0' N	5° 34.2' W	2345	3195	3188	* BOTTOM ROSETTE, RADON
2	19	2	25 AUG 72	GER	64° 11.5' N	5° 36.0' W	0151	3473	349	* SHALLOW GERARD, C-14
2	19	3	25 AUG 72	ROS	64° 8.8' N	5° 43.0' W	0458	3484	3457	* DEEP ROSETTE
2	19	4	25 AUG 72	GER	64° 10.4' N	5° 40.2' W	0837	3278		* DEEP GERARD, C-14
2	19	5	25 AUG 72	NAN	64° 11.4' N	5° 38.9' W	1057	3234	3219	* DEEP NANSEN
2	19	6	25 AUG 72	ROS	64° 10.7' N	5° 35.6' W	1354	1004		* SHALLOW ROSETTE
2	19	7	25 AUG 72	PMP	64° 10.7' N	5° 35.6' W	1419		350	* SURFACE PUMP, RA-228
2	19	8	25 AUG 72	BAG	64° 9.9' N	5° 37.5' W	2010			* RA-228 BAG (PRETRIP)
2	19	9	25 AUG 72	GER	64° 9.1' N	5° 39.0' W	2325		969	* INTERMEDIATE GERARD, C-14
2	19	10	26 AUG 72	NAN	64° 8.3' N	5° 36.7' W	0104		822	* SHALLOW NANSEN
2	19	11	26 AUG 72	ESS	64° 7.8' N	5° 36.5' W	0130		0	* ESSO, BUCKET

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC **R/V KNORR**

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
2	20	1	26 AUG 72	SDT	63° 24.7' N	8° 23.0' W	1209	630	621	* SDT WITH 3 CHECK SAMPLES
2	21	1	27 AUG 72	SDT	62° 24.1' N	11° 53.4' W	0358	859	837	* SDT WITH 3 CHECK SAMPLES
2	22	1	27 AUG 72	ROS	61° 39.4' N	14° 17.6' W	1845	1848	1828	* DEEP ROSETTE, SURFACE RADON
2	23	1	28 AUG 72	ROS	60° 24.9' N	18° 37.0' W	1402	2523	2516	* BOTTOM SINGLE ROSETTE, RADON
2	23	2	28 AUG 72	GER	60° 24.9' N	18° 37.5' W	1604		440	* SHALLOW GERARD, C-14
2	23	3	28 AUG 72	NAN	60° 24.7' N	18° 37.5' W	1745			* DEEP NANSEN (ABORTED)
2	23	4	28 AUG 72	ROS	60° 24.5' N	18° 34.5' W	2245	2534	2516	* DEEP ROSETTE
2	23	5	29 AUG 72	GER	60° 23.0' N	18° 38.2' W	0220	2509	2499	* DEEP GERARD, C-14
2	23	6	29 AUG 72	NAN	60° 23.0' N	18° 39.7' W	0423	2527	2512	* DEEP NANSEN (REPEAT)
2	23	7	29 AUG 72	ROS	60° 23.1' N	18° 40.0' W	0643	2523	1198	* SHALLOW ROSETTE
2	23	8	29 AUG 72	NAN	60° 24.0' N	18° 40.0' W	0850		896	* SHALLOW NANSEN
2	23	9	29 AUG 72	PMP	60° 24.5' N	18° 38.6' W	0957		350	* SURFACE PUMP, RA-228
2	23	10	29 AUG 72	GER	60° 24.5' N	18° 38.7' W	1057	2527	1438	* INTERMEDIATE GERARD, C-14
3	24	1	7 SEP 72	ROS	53° 45.6' N	33° 37.6' W	2227	2549	2532	* BOTTOM SINGLE ROSETTE, RADON
3	24	2	8 SEP 72	NAN	53° 47.0' N	33° 37.0' W	0130	2527	2520	* DEEP NANSEN
3	24	3	8 SEP 72	ROS	53° 49.7' N	33° 36.0' W	0455	2519	2461	* INTERMEDIATE ROSETTE
3	24	4	8 SEP 72	NAN	53° 50.6' N	33° 32.5' W	0801		630	* SHALLOW NANSEN
3	24	5	8 SEP 72	PMP	53° 50.1' N	33° 33.0' W	0934		350	* SURFACE PUMP, RA-228
3	24	6	8 SEP 72	ROS	53° 50.0' N	33° 34.0' W	1503		353	* SURFACE RADON
3	24	7	8 SEP 72	ESS	53° 49.8' N	33° 33.6' W	1536		0	* ESSO, BUCKET
3	25	1	10 SEP 72	ROS	47° 36.5' N	39° 53.6' W	1127	4559	4540	* BOT SINGLE ROSETTE,SURF RADON
3	26	1	11 SEP 72	ROS	44° 57.6' N	42° 4.6' W	0932	4708	3987	* DEEP ROSETTE
3	26	2	11 SEP 72	PMP	44° 57.6' N	42° 4.9' W	0952		350	* SURFACE PUMP, RA-228
3	26	3	11 SEP 72	ROS	45° 0.8' N	42° 5.6' W	1743	4708	297	* SURFACE RADON
3	27	1	12 SEP 72	ROS	42° 0.0' N	42° 2.0' W	1554	4885	4867	* BOTTOM SINGLE ROSETTE, RADON
3	27	2	12 SEP 72	GER	41° 59.0' N	42° 0.0' W	1854		970	* SHALLOW GERARD, C-14
3	27	3	12 SEP 72	NAN	41° 58.4' N	41° 59.5' W	2038			* SHALLOW NANSEN (ABORTED)
3	27	4	12 SEP 72	ROS	41° 57.0' N	41° 59.0' W	2344	4892	4854	* DEEP ROSETTE
3	27	5	13 SEP 72	NAN	42° 0.0' N	42° 1.0' W	0425		963	* SHALLOW NANSEN (REPEAT)
3	27	6	13 SEP 72	GER	42° 0.0' N	42° 0.0' W	0630	4893	4859	* DEEP GERARD, C-14
3	27	7	13 SEP 72	NAN	42° 0.0' N	41° 57.5' W	0930	4888	3902	* DEEP NANSEN
3	27	8	13 SEP 72	ROS	41° 59.5' N	41° 58.0' W	1226		1268	* SHALLOW ROSETTE
3	27	9	13 SEP 72	GER	41° 59.4' N	41° 56.4' W	1515		1893	* INTERMEDIATE GERARD, C-14
3	27	10	13 SEP 72	PMP	41° 59.7' N	41° 56.5' W	1624		320	* SURFACE PUMP, RA-228, C-14
3	27	11	13 SEP 72	NAN	42° 2.0' N	42° 2.0' W	2304	4899	4874	* DEEP NANSEN
3	27	12	14 SEP 72	ESS	42° 2.0' N	42° 2.0' W	0204		3500	* ESSO ROSETTE
3	28	1	15 SEP 72	ROS	39° 0.0' N	43° 59.0' W	0150	4897	4878	* BOTTOM SINGLE ROSETTE, RADON
3	28	2	15 SEP 72	NAN	39° 2.0' N	43° 58.0' W	0334		127	* SURFACE NANSEN
3	28	3	15 SEP 72	NAN	39° 2.0' N	43° 58.0' W	0412		1358	* SHALLOW NANSEN
3	28	4	15 SEP 72	ROS	39° 0.0' N	43° 57.4' W	0739	4903	4831	* DEEP ROSETTE
3	28	5	15 SEP 72	PMP	38° 59.3' N	43° 57.3' W	0950		5	* SURFACE PUMP, RA-228
3	28	6	15 SEP 72	NAN	38° 59.3' N	43° 57.1' W	1057	4903	4882	* DEEP NANSEN
3	28	7	15 SEP 72	ROS	38° 58.0' N	43° 57.0' W	1326		300	* SURFACE SINGLE ROSETTE, RADON
3	28	8	15 SEP 72	ROS	38° 59.7' N	44° 0.0' W	1627		1302	* SHALLOW ROSETTE
3	28	9	15 SEP 72	GER	38° 57.9' N	44° 3.0' W	2027	4825	3878	* DEEP GERARD (SPECIAL), RA-228
3	28	10	16 SEP 72	GER	38° 58.0' N	44° 3.0' W	0027		4201	* DEEP GERARD (SPECIAL), RA-228
3	28	11	16 SEP 72	GER	38° 59.0' N	44° 0.0' W	0502		1531	* DEEP GERARD (SPECIAL), RA-228
3	28	12	16 SEP 72	GER	38° 58.0' N	44° 0.0' W	0950		4800	* DEEP GERARD (SPECIAL), RA-228
3	29	1	17 SEP 72	ROS	35° 58.5' N	47° 0.5' W	1234	4995	4977	* BOTTOM ROSETTE, RADON
3	29	2	17 SEP 72	NAN	35° 57.5' N	47° 1.0' W	1440		92	* SURFACE NANSEN
3	29	3	17 SEP 72	NAN	35° 57.5' N	47° 1.0' W	1533		1212	* SHALLOW NANSEN
3	29	4	17 SEP 72	GER	35° 57.0' N	47° 1.0' W	1658		787	* SHALLOW GERARD, C-14
3	29	5	17 SEP 72	ROS	35° 59.0' N	47° 0.0' W	2157	4996	4908	* DEEP ROSETTE
3	29	6	18 SEP 72	GER	35° 56.1' N	46° 59.8' W	0255	4993	4772	* DEEP GERARD, C-14
3	29	7	18 SEP 72	ROS	35° 57.0' N	47° 0.0' W	0717		2703	* INTERMEDIATE ROSETTE
3	29	8	18 SEP 72	NAN	36° 0.0' N	47° 0.0' W	1053	5021	5012	* DEEP NANSEN
3	29	9	18 SEP 72	PMP	36° 0.0' N	47° 0.0' W	1224		250	* SURFACE PUMP, C-14, RA-228
3	29	10	18 SEP 72	ROS	35° 56.0' N	47° 0.0' W	1724		503	* SURFACE SINGLE ROSETTE, RADON
3	29	11	18 SEP 72	GER	35° 55.0' N	47° 0.0' W	1939	4813	4639	* INTERMEDIATE GERARD, C-14
3	29	12	18 SEP 72	ESS	35° 54.7' N	47° 0.5' W	2130		0	* ESSO, BUCKET
3	30	1	20 SEP 72	ROS	31° 48.0' N	50° 46.0' W	0422	5850	5831	* BOTTOM SINGLE ROSETTE, RADON
3	30	2	20 SEP 72	NAN	31° 48.0' N	50° 45.4' W	0619		77	* SURFACE NANSEN
3	30	3	20 SEP 72	NAN	31° 48.0' N	50° 44.0' W	0658		1506	* SHALLOW NANSEN
3	30	4	20 SEP 72	ROS	31° 48.0' N	50° 43.5' W	1015	5846	5787	* DEEP ROSETTE
3	30	5	20 SEP 72	NAN	31° 48.0' N	50° 42.6' W	1416	5828	5816	* DEEP NANSEN
3	30	6	20 SEP 72	SDT	31° 47.5' N	50° 47.5' W	1710			* SDT TEST (ABORTED)
3	30	7	20 SEP 72	ROS	31° 48.5' N	50° 46.5' W	1941		1403	* SHALLOW ROSETTE
3	30	8	20 SEP 72	ESS	31° 49.0' N	50° 46.0' W	2234		2954	* ESSO ROSETTE
3	30	9	21 SEP 72	ROS	31° 47.0' N	50° 43.0' W	0022		299	* SURFACE ROSETTE, RADON
3	30	10	21 SEP 72	ESS	31° 47.0' N	50° 43.0' W	0115		0	* ESSO, BUCKET
3	31	1	22 SEP 72	ROS	27° 0.0' N	53° 32.0' W	0755	6055	6037	* BOTTOM SINGLE ROSETTE, RADON
3	31	2	22 SEP 72	GER	27° 0.0' N	53° 34.0' W	1138	5590	5508	* DEEP GERARD, C-14
3	31	3	22 SEP 72	ROS	27° 0.3' N	53° 30.0' W	1705		5510	* DEEP ROSETTE
3	31	4	22 SEP 72	GER	27° 0.5' N	53° 30.6' W	2022		2882	* INTERMEDIATE GERARD, C-14
3	31	5	22 SEP 72	NAN	27° 0.6' N	53° 31.0' W	2319	6035	5975	* DEEP NANSEN
3	31	6	23 SEP 72	ROS	27° 0.0' N	53° 31.0' W	0316	6039	6012	* SHALLOW ROSETTE, RADON
3	31	7	23 SEP 72	NAN	27° 0.0' N	53° 31.0' W	0558		82	* SURFACE NANSEN
3	31	8	23 SEP 72	NAN	26° 59.6' N	53° 30.7' W	0632		1507	* SHALLOW NANSEN
3	31	9	23 SEP 72	PMP	26° 59.5' N	53° 30.7' W	0758		320	* SURFACE PUMP, C-14, RA-228
3	31	10	23 SEP 72	GER	27° 0.0' N	53° 31.0' W	1204		1261	* SHALLOW GERARD, C-14
3	31	11	23 SEP 72	ESS	26° 59.6' N	53° 31.1' W	1305		0	* ESSO, BUCKET
3	32	1	24 SEP 72	ROS	23° 50.5' N	53° 59.5' W	0834	5847	5834	* BOTTOM SINGLE ROSETTE, RADON
3	32	2	24 SEP 72	NAN	23° 51.0' N	53° 59.0' W	1052		93	* SURFACE NANSEN
3	32	3	24 SEP 72	NAN	23° 51.0' N	53° 59.0' W	1129		1662	* SHALLOW NANSEN
3	32	4	24 SEP 72	ROS	23° 51.0' N	54° 1.0' W	1451	5730	5651	* DEEP ROSETTE
3	32	5	24 SEP 72	NAN	23° 51.0' N	54° 0.4' W	1906	5720	5666	* DEEP NANSEN
3	32	6	24 SEP 72	ROS	23° 51.0' N	53° 59.7' W	2156		1801	* SHALLOW ROSETTE
3	32	7	25 SEP 72	ROS	23° 52.0' N	54° 2.4' W	1659		76	* SURFACE SINGLE ROSETTE, RADON
3	32	8	25 SEP 72	GER	23° 49.7' N	54° 0.0' W	0158	5795	5737	* DEEP GERARD A, RA-228
3	32	9	25 SEP 72	GER	23° 50.0' N	54° 1.2' W	0604		5327	* DEEP GERARD B, RA-228
3	32	10	25 SEP 72	GER	23° 51.0' N	54° 2.2' W	0925		4916	* DEEP GERARD C, RA-228
3	32	11	25 SEP 72	GER	23° 51.0' N	54° 2.0' W	1300		4516	* DEEP GERARD D, RA-228
3	32	12	25 SEP 72	ESS	23° 52.0' N	54° 2.0' W	1725		0	* ESSO, BUCKET
3	33	1	26 SEP 72	ROS	21° 0.0' N	54° 0.0' W	1033	5241	5223	* BOTTOM SINGLE ROSETTE, RADON
3	33	2	26 SEP 72	GER	21° 0.0' N	54° 0.0' W	1345	5232	5191	* DEEP GERARD, C-14
3	33	3	26 SEP 72	ROS	20° 59.0' N	54° 2.0' W	1715	5098	4992	* DEEP ROSETTE
3	33	4	26 SEP 72	GER	20° 59.6' N	54° 2.0' W	2032		2238	* INTERMEDIATE GERARD, C-14
3	33	5	26 SEP 72	NAN	21° 0.0' N	54° 2.0' W	2156		118	* SURFACE NANSEN
3	33	6	26 SEP 72	NAN	21° 0.7' N	54° 3.0' W	2249		1713	* SHALLOW NANSEN
3	33	7	27 SEP 72	ROS	21° 0.7' N	54° 4.0' W	0053		1611	* SHALLOW ROSETTE
3	33	8	27 SEP 72	NAN	21° 0.0' N	53° 59.0' W	0404	5195	5183	* DEEP NANSEN
3	33	9	27 SEP 72	PMP	21° 0.6' N	53° 59.4' W	0603		320	* SURFACE PUMP, RA-228
3	33	10	27 SEP 72	GER	21° 0.8' N	53° 59.7' W	0952		763	* SHALLOW GERARD, C-14
3	33	11	27 SEP 72	PMP	21° 0.8' N	53° 59.7' W	1050		320	* SURFACE PUMP, C-14
3	34	1	28 SEP 72	GER	18° 1.0' N	54° 0.4' W	0719	4741	4687	* SHALLOW GERARD A, RA-228
3	34	2	28 SEP 72	GER	17° 59.0' N	54° 1.0' W	1032		4091	* SHALLOW GERARD B, RA-228
3	34	3	28 SEP 72	GER	17° 59.3' N	54° 1.0' W	1333	4581	3473	* SHALLOW GERARD C, RA-228
3	34	4	28 SEP 72	GER	18° 1.0' N	54° 0.0' W	1805		2484	* SHALLOW GERARD D, RA-228
3	34	5	28 SEP 72	ROS	18° 1.0' N	53° 59.0' W	2131	4724	4704	* BOTTOM ROSETTE, RADON
3	34	6	28 SEP 72	NAN	18° 1.5' N	53° 58.0' W	2322		89	* SURFACE NANSEN
3	34	7	29 SEP 72	NAN	18° 0.0' N	53° 58.0' W	0026		1410	* SHALLOW NANSEN
3	34	8	29 SEP 72	ROS	18° 2.0' N	53° 58.0' W	0305	4731	4691	* DEEP ROSETTE
3	34	9	29 SEP 72	NAN	18° 2.4' N	53° 57.6' W	0603	4716	4711	* DEEP NANSEN
3	34	10	29 SEP 72	ROS	18° 2.0' N	53° 57.0' W	0810		1497	* SHALLOW ROSETTE
3	34	11	29 SEP 72	ESS	18° 2.0' N	53° 56.0' W	1124		3500	* ESSO ROSETTE
3	34	12	29 SEP 72	ROS	18° 2.0' N	53° 57.0' W	1401		98	* SURFACE ROSETTE, RADON
3	34	13	29 SEP 72	GER	18° 3.0' N	53° 57.5' W	1551		2896	* SHALLOW GERARD (REPEAT)

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC R/V KNORR

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
3	34	14	28 SEP 72	NAN	18° 1.5' N	53° 58.0' W	2350		177	* SURFACE NANSEN
3	34	15	29 SEP 72	ESS	18° 4.7' N	53° 57.3' W	1710		0	* ESSO, BUCKET
3	35	1	1 OCT 72	SDT	13° 1.0' N	58° 0.5' W	0400			* SDT (MALFUNCTION)
3	35	2	1 OCT 72	NAN	13° 2.0' N	58° 1.0' W	0458	3149		* NANSEN (Q TEST)
3	35	3	1 OCT 72	PMP	13° 2.0' N	58° 1.0' W	0455		250	* SURFACE PUMP, RA-228
3	35	4	1 OCT 72	SDT	13° 2.5' N	58° 1.0' W	0640			* SDT (TEST)
3	35	5	1 OCT 72	NAN	13° 2.2' N	58° 1.6' W	0852	3168		* NANSEN (Q TEST)
4	36	1	11 OCT 72	ROS	15° 0.0' N	53° 56.5' W	1034	5449	5439	* BOTTOM SINGLE ROSETTE, RADON
4	36	2	11 OCT 72	NAN	15° 1.5' N	53° 56.5' W	1330		1205	* SHALLOW NANSEN
4	36	3	11 OCT 72	PMP	15° 2.0' N	53° 57.0' W	1516		300	* SURFACE PUMP, RA-228
4	36	4	11 OCT 72	ROS	15° 1.4' N	53° 58.0' W	2016	5440	1607	* SHALLOW ROSETTE
4	36	5	11 OCT 72	NAN	15° 2.0' N	53° 58.5' W	2330	5440	5395	* DEEP NANSEN
4	36	6	12 OCT 72	ROS	14° 59.5' N	53° 58.2' W	0348		100	* SURFACE RADON
4	36	7	12 OCT 72	ROS	14° 59.3' N	53° 57.0' W	1003	5440	4007	* DEEP ROSETTE
4	37	1	13 OCT 72	ROS	12° 1.8' N	50° 59.8' W	1140	5073	5065	* BOTTOM SINGLE ROSETTE, RADON
4	37	2	13 OCT 72	GER	12° 2.3' N	51° 0.8' W	1550	5044	5014	* DEEP GERARD, C-14
4	37	3	13 OCT 72	ROS	11° 59.5' N	51° 0.6' W	1926	5039	5021	* DEEP ROSETTE
4	37	4	14 OCT 72	NAN	12° 1.1' N	51° 1.0' W	0059	5043	5023	* DEEP NANSEN
4	37	5	14 OCT 72	GER	12° 1.1' N	51° 1.2' W	0330		1983	* INTERMEDIATE GERARD, C-14
4	37	6	14 OCT 72	ROS	12° 1.2' N	51° 2.0' W	0706	5050	1848	* SHALLOW ROSETTE
4	37	7	14 OCT 72	NAN	12° 1.5' N	51° 2.0' W	1047	5046	1201	* SHALLOW NANSEN
4	37	8	14 OCT 72	PMP	12° 2.4' N	51° 2.2' W	1506		320	* SURFACE PUMP, C-14, RA-228
4	37	9	14 OCT 72	BAG	12° 2.5' N	51° 2.5' W	1545			* SI-32 BAG (ABORTED)
4	37	10	14 OCT 72	GER	12° 3.0' N	51° 3.0' W	2007	5031	712	* SHALLOW GERARD, C-14
4	38	1	15 OCT 72	SDT	9° 45.4' N	47° 10.5' W	2353	4834	4827	* SDT W/11 CHECK SAMPLES, RADON
4	38	2	16 OCT 72	NAN	9° 45.4' N	47° 12.0' W	0400	4824		* DEEP NANSEN (ABORTED)
4	38	3	16 OCT 72	PMP	9° 45.5' N	47° 11.5' W	0323		5	* BOW PUMP, RA-228
4	39	1	17 OCT 72	ROS	7° 57.5' N	43° 51.3' W	0212	4793	4724	* DEEP ROSETTE
4	39	2	17 OCT 72	NAN	7° 57.5' N	43° 51.3' W	0502		1199	* SHALLOW NANSEN
4	39	3	17 OCT 72	ROS	7° 57.6' N	43° 51.8' W	0832	4797	4788	* BOTTOM ROSETTE, RADON
4	39	4	17 OCT 72	NAN	7° 54.6' N	43° 50.0' W	1423	4781	4766	* DEEP NANSEN
4	39	5	17 OCT 72	ROS	7° 55.2' N	43° 50.5' W	1739	4777	1688	* SHALLOW ROSETTE
4	39	6	17 OCT 72	NIS	7° 55.0' N	43° 51.0' W	2011	4777	100	* SURFACE RADON
4	40	1	19 OCT 72	ROS	3° 56.8' N	38° 31.0' W	0848	4273	4243	* DEEP ROSETTE
4	40	2	19 OCT 72	GER	3° 55.6' N	38° 30.0' W	1236	4323	3467	* DEEP GERARD, C-14
4	40	3	19 OCT 72	GER	3° 54.5' N	38° 30.0' W	1429	4323	4170	* DEEP GERARD, C-14 (REPEAT)
4	40	4	19 OCT 72	NAN	3° 54.2' N	38° 29.5' W	1718	4325	4316	* DEEP NANSEN
4	40	5	19 OCT 72	GER	3° 54.0' N	38° 31.5' W	2115		1685	* INTERMEDIATE GERARD, C-14
4	40	6	20 OCT 72	NAN	3° 53.5' N	38° 32.7' W	0006	4637	1184	* SHALLOW NANSEN
4	40	7	20 OCT 72	ROS	3° 53.0' N	38° 32.0' W	0159	4824	1346	* SHALLOW ROSETTE
4	40	8	20 OCT 72	PMP	3° 51.5' N	38° 31.0' W	0456		300	* SURFACE PUMP, C-14, RA-228
4	40	9	20 OCT 72	NIS	3° 47.0' N	38° 27.0' W	0823	4199	200	* SURFACE RADON
4	40	10	20 OCT 72	GER	3° 47.0' N	38° 27.0' W	1033	4199	685	* SHALLOW GERARD, C-14
4	41	1	21 OCT 72	SDT	2° 0.0' N	37° 21.6' W	0011	4368	4343	* SDT W/10 CHECK SAMPLES, RADON
4	41	2	21 OCT 72	NIS	1° 59.7' N	37° 21.6' W	0238	4359	225	* SURFACE RADON
4	42	1	21 OCT 72	ROS	0° 58.0' N	37° 4.0' W	1207	4535	4499	* DEEP ROSETTE
4	42	2	21 OCT 72	NAN	0° 58.3' N	37° 3.5' W	1605	4524	4513	* DEEP NANSEN
4	42	3	21 OCT 72	ROS	0° 58.3' N	37° 3.5' W	1847	4534	4526	* BOTTOM SINGLE ROSETTE, RADON
4	42	4	21 OCT 72	NAN	0° 58.0' N	37° 3.0' W	2111	4522	1207	* SHALLOW NANSEN
4	42	5	21 OCT 72	ROS	0° 58.0' N	37° 3.0' W	2314	4522	1563	* SHALLOW ROSETTE
4	42	6	22 OCT 72	NIS	0° 57.8' N	37° 3.1' W	0115		120	* SURFACE RADON
4	42	7	22 OCT 72	PMP	0° 57.8' N	37° 3.1' W	0120		5	* BOW PUMP, RA-228
4	43	1	22 OCT 72	SDT	0° 31.6' N	36° 31.0' W	0756	4536	4528	* SDT W/10 CHECK SAMPLES
4	44	1	22 OCT 72	SDT	0° 1.0' N	35° 58.6' W	1546	4534	4525	* SDT W/10 CHECK SAMPLES
4	44	2	22 OCT 72	PMP	0° 1.0' N	35° 58.6' W	1505		5	* BOW PUMP, RA-228

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
4	45	1	23 OCT 72	SDT	0° 30.3' S	34° 59.8' W	0148	4499	4491	* SDT W/10 CHECK SAMPLES
4	45	2	23 OCT 72	PMP	0° 30.3' S	34° 59.8' W	0215		5	* BOW PUMP, RA-228
4	46	1	23 OCT 72	ROS	0° 59.3' S	34° 2.2' W	1151	4440	4425	* DEEP ROSETTE
4	46	2	23 OCT 72	NAN	0° 59.5' S	34° 2.3' W	1552	4436	4424	* DEEP NANSEN
4	46	3	23 OCT 72	ROS	0° 59.7' S	34° 2.2' W	1815	4444	4436	* BOTTOM SINGLE ROSETTE, RADON
4	46	4	23 OCT 72	NAN	0° 59.8' S	34° 1.5' W	2022	4357	1198	* SHALLOW NANSEN
4	46	5	23 OCT 72	ROS	0° 59.9' S	34° 0.5' W	2227	4306	1363	* SHALLOW ROSETTE
4	46	6	24 OCT 72	NIS	0° 59.5' S	34° 0.1' W	0112	4306	300	* SURFACE RADON
4	47	1	24 OCT 72	SDT	1° 58.4' S	32° 31.8' W	1345	4506	4498	* SDT W/10 CHECK SAMPLES
4	48	1	25 OCT 72	ROS	4° 0.0' S	29° 0.0' W	2103	5079	5073	* DEEP ROSETTE
4	48	2	26 OCT 72	GER	3° 59.9' S	28° 59.0' W	0142	5063	5040	* DEEP GERARD,C-14,PB-210,RADON
4	48	3	26 OCT 72	NAN	3° 59.5' S	28° 58.5' W	0520	5067	5059	* DEEP NANSEN
4	48	4	26 OCT 72	GER	4° 0.0' S	28° 57.0' W	1031	5063	2652	* INT. GERARD,C-14,PB-210,RADON
4	48	5	26 OCT 72	NAN	3° 58.8' S	29° 0.2' W	1505	5069	1200	* SHALLOW NANSEN
4	48	6	26 OCT 72	PMP	3° 58.7' S	28° 58.0' W	1753		350	* SURFACE PUMP, C-14, RA-228
4	48	7	27 OCT 72	BAG	4° 0.7' S	28° 57.1' W	0221	5070	4479	* SI-32 BAG
4	48	8	27 OCT 72	NIS	3° 58.5' S	29° 2.2' W	1600		250	* SURFACE RADON
4	48	9	27 OCT 72	ROS	3° 59.0' S	29° 1.0' W	1747	5032	1446	* SHALLOW ROSETTE
4	48	10	28 OCT 72	ROS	3° 58.8' S	29° 4.0' W	0053	5038	5031	* BOTTOM ROSETTE, RADON
4	48	11	27 OCT 72	GER	3° 58.4' S	28° 59.7' W	2014	5028	990	* SHALLOW GERARD, C-14, PB-210
4	49	1	29 OCT 72	ROS	7° 56.0' S	28° 12.0' W	0405	5536	5518	* DEEP ROSETTE
4	49	2	29 OCT 72	GER	7° 55.0' S	28° 10.8' W	0830	4983	4995	* DEEP GERARD, C-14, PB-210
4	49	3	29 OCT 72	GER	7° 55.3' S	28° 13.0' W	1249		2087	* INTERMEDIATE GERARD, C-14
4	49	4	29 OCT 72	NIS	7° 55.4' S	28° 13.4' W	1425	5574	250	* SURFACE RADON
4	49	5	29 OCT 72	ROS	7° 55.5' S	28° 14.5' W	1553		1403	* SHALLOW ROSETTE
4	49	6	29 OCT 72	PMP	7° 55.8' S	28° 14.6' W	1748		105	* SURFACE PUMP, RA-228
4	49	7	29 OCT 72	GER	7° 55.8' S	28° 14.6' W	1949	5590	742	* SHALLOW GERARD, C-14
5	50	1	5 NOV 72	ROS	8° 26.0' S	34° 11.0' W	0130	1859	1839	* DEEP SINGLE ROSETTE
5	50	2	5 NOV 72	NIS	8° 25.4' S	34° 10.0' W	0259		200	* SURFACE RADON
5	51	1	5 NOV 72	ROS	8° 38.0' S	33° 47.0' W	0751	3336	3307	* DEEP SINGLE ROSETTE
5	51	2	5 NOV 72	PMP	8° 38.0' S	33° 47.0' W	0615		5	* BOW PUMP, RA-228
5	52	1	5 NOV 72	ROS	8° 54.8' S	33° 17.6' W	1355	4776	4719	* DEEP SINGLE ROSETTE
5	52	2	5 NOV 72	NIS	8° 54.8' S	33° 17.4' W	1617		120	* SURFACE RADON
5	53	1	7 NOV 72	NIS	11° 59.0' S	27° 59.0' W	0430	5495	100	* SURFACE RADON
5	53	2	7 NOV 72	ROS	11° 57.7' S	27° 58.7' W	0701	5537	5531	* DEEP ROSETTE, RADON
5	53	3	7 NOV 72	NAN	11° 57.0' S	27° 58.0' W	1002	5496	1204	* SHALLOW NANSEN
5	53	4	7 NOV 72	SAT	12° 0.0' S	28° 1.0' W	1315	5525	808	* SATUROMETER
5	53	5	7 NOV 72	ROS	11° 59.7' S	28° 1.0' W	1431	5525	1699	* SHALLOW ROSETTE
5	53	6	7 NOV 72	NAN	11° 59.6' S	28° 1.0' W	1710	5533	5206	* DEEP NANSEN
5	53	7	7 NOV 72	ROS	11° 59.0' S	28° 1.5' W	2038	5531	5525	* BOTTOM SINGLE ROSETTE, RADON
5	54	1	8 NOV 72	SAT	15° 3.3' S	29° 31.2' W	2025		804	* SATUROMETER
5	54	2	8 NOV 72	ROS	15° 2.5' S	29° 32.0' W	2246	5102	5087	* DEEP ROSETTE
5	54	3	9 NOV 72	GER	15° 0.7' S	29° 32.0' W	0326	5053	5034	* DEEP GERARD, C-14
5	54	4	9 NOV 72	NAN	15° 0.0' S	29° 32.0' W	0641	5168	5158	* DEEP NANSEN
5	54	5	9 NOV 72	ROS	15° 2.5' S	29° 31.0' W	1101		1698	* SHALLOW ROSETTE
5	54	6	9 NOV 72	GER	15° 2.5' S	29° 31.0' W	1346		2739	* INTERMEDIATE GERARD, C-14
5	54	7	9 NOV 72	NAN	15° 2.0' S	29° 30.5' W	1557		1201	* SHALLOW NANSEN
5	54	8	9 NOV 72	ROS	15° 1.2' S	29° 30.5' W	1918	5091	5081	* BOTTOM SINGLE ROSETTE, RADON
5	54	9	9 NOV 72	NIS	15° 1.0' S	29° 30.5' W	2021	5028	70	* SURFACE RADON
5	54	10	9 NOV 72	GER	15° 0.8' S	29° 30.7' W	2248	5093	1036	* SHALLOW GERARD, C-14
5	54	11	10 NOV 72	PMP	15° 0.7' S	29° 30.7' W	0000	300		* SURFACE PUMP, C-14, RA-228
5	54	12	9 NOV 72	SPE	15° 2.0' S	29° 31.0' W	1600		14	* LANGMUIR CELL STUDY
5	55	1	11 NOV 72	ROS	18° 0.0' S	31° 0.5' W	0132	4694	4685	* DEEP ROSETTE, RADON
5	55	2	11 NOV 72	SAT	18° 0.0' S	31° 1.8' W	0845	4693	4643	* SATUROMETER
5	55	3	11 NOV 72	ROS	17° 59.5' S	31° 2.0' W	1123	4693	1697	* SHALLOW ROSETTE

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC R/V KNORR

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
5	55	4	11 NOV 72	NIS	17° 59.0' S	31° 1.5' W	1324		50	* SURFACE RADON
5	55	5	11 NOV 72	NAN	17° 58.6' S	31° 1.5' W	1423		1204	* SHALLOW NANSEN
5	55	6	11 NOV 72	NAN	17° 58.7' S	31° 1.5' W	1616	4714	4685	* DEEP NANSEN
5	55	7	11 NOV 72	ROS	17° 58.5' S	31° 2.0' W	1912	4718	4703	* BOTTOM ROSETTE, RADON
5	55	8	11 NOV 72	ESS	18° 0.2' S	31° 3.0' W	2255		3485	* ESSO ROSETTE
5	55	9	11 NOV 72	PMP	17° 58.5' S	31° 2.5' W	1850		5	* BOW PUMP, RA-228
5	55	10	12 NOV 72	ESS	18° 0.6' S	31° 2.5' W	0012		0	* ESSO, BUCKET
5	56	1	12 NOV 72	ROS	21° 0.5' S	33° 0.0' W	2219	4323	4312	* DEEP ROSETTE
5	56	2	13 NOV 72	GER	21° 1.0' S	33° 0.0' W	0205	4311	4277	* DEEP GERARD, C-14
5	56	3	13 NOV 72	NAN	21° 1.7' S	32° 59.7' W	0426	4313	1202	* SHALLOW NANSEN
5	56	4	13 NOV 72	NAN	21° 2.0' S	32° 59.7' W	0552	4313	4301	* DEEP NANSEN
5	56	5	13 NOV 72	ROS	21° 2.0' S	33° 0.3' W	0824	4311	1393	* SHALLOW ROSETTE
5	56	6	13 NOV 72	GER	21° 1.0' S	33° 0.7' W	1045	4308	2370	* INTERMEDIATE GERARD, C-14
5	56	7	13 NOV 72	ROS	20° 59.2' S	33° 0.0' W	1430	4322	4315	* BOTTOM ROSETTE, RADON
5	56	8	13 NOV 72	GER	20° 59.2' S	32° 59.8' W	1722	4311	1087	* SHALLOW GERARD, C-14
5	56	9	13 NOV 72	PMP	20° 59.1' S	32° 59.6' W	1909		230	* SURFACE PUMP, C-14, RA-228
5	57	1	15 NOV 72	SAT	23° 59.1' S	35° 1.3' W	0007	4225	2824	* SATUROMETER
5	57	2	15 NOV 72	ROS	23° 59.3' S	35° 0.0' W	0350	4234	4225	* DEEP ROSETTE, RADON
5	57	3	15 NOV 72	NIS	23° 58.7' S	35° 0.0' W	0611	4225	80	* SURFACE RADON
5	57	4	15 NOV 72	NAN	23° 58.6' S	35° 0.0' W	0651		1204	* SHALLOW NANSEN
5	57	5	15 NOV 72	NAN	23° 58.0' S	35° 1.0' W	0814	4212	4207	* DEEP NANSEN
5	57	6	15 NOV 72	ROS	23° 58.0' S	35° 0.3' W	1013	4224	1196	* SHALLOW ROSETTE
5	57	7	15 NOV 72	SAT	23° 56.1' S	35° 2.1' W	1545	4234	318	* SATUROMETER
5	57	8	15 NOV 72	ROS	23° 55.5' S	35° 3.0' W	1811	4236	4221	* BOTTOM SINGLE ROSETTE, RADON
5	57	9	15 NOV 72	PMP	23° 58.0' S	35° 0.0' W	1050		5	* BOW PUMP, RA-228
5	57	10	15 NOV 72	ESS	23° 55.5' S	35° 2.6' W	1930		0	* ESSO, BUCKET
5	58	1	16 NOV 72	ROS	27° 0.0' S	37° 1.4' W	1731	4592	4582	* BOTTOM SINGLE ROSETTE, RADON
5	58	2	16 NOV 72	PMP	27° 0.0' S	37° 2.0' W	2030		340	* SURFACE PUMP, C-14, RA-228
5	58	3	17 NOV 72	GER	26° 59.0' S	37° 2.0' W	0018		514	* SHALLOW GERARD A, RA-228
5	58	4	17 NOV 72	BAG	27° 0.4' S	37° 1.4' W	0607	4583	4464	* SI-32 BAG
5	58	5	17 NOV 72	GER	27° 1.0' S	36° 58.0' W	1811	4594	583	* SHALLOW GERARD, C-14
5	58	6	17 NOV 72	ROS	27° 0.0' S	37° 0.0' W	2145		4580	* DEEP ROSETTE
5	58	7	18 NOV 72	GER	26° 59.5' S	37° 0.0' W	0056		1102	* SHALLOW GERARD, C-14, RA-228
5	58	8	18 NOV 72	NIS	26° 59.0' S	36° 59.0' W	0220		100	* SURFACE RADON
5	58	9	18 NOV 72	ROS	27° 0.0' S	37° 1.0' W	0711		1156	* SHALLOW ROSETTE
5	58	10	18 NOV 72	NAN	26° 59.0' S	36° 59.0' W	0307	1203		* SHALLOW NANSEN
5	58	11	18 NOV 72	NAN	26° 59.0' S	36° 59.0' W	0449	4586	4563	* DEEP NANSEN
5	58	12	18 NOV 72	GER	27° 0.0' S	37° 1.0' W	0928	4594	2177	* INTERMEDIATE GERARD, C-14
5	58	13	18 NOV 72	GER	27° 0.0' S	37° 3.0' W	1234		4567	* SHALLOW GERARD B, RA-228
5	58	14	18 NOV 72	GER	27° 0.0' S	37° 3.0' W	1659		4170	* SHALLOW GERARD C, RA-228
5	58	15	18 NOV 72	GER	27° 0.0' S	37° 2.0' W	2125	4602	3564	* SHALLOW GERARD D, RA-228
5	58	16	19 NOV 72	GER	27° 0.0' S	37° 2.0' W	0125	4586	4491	* DEEP GERARD, C-14
5	58	17	18 NOV 72	SPE	27° 0.0' S	37° 3.0' W	1600		14	* LANGMUIR CELL STUDY
5	59	1	20 NOV 72	ROS	30° 12.5' S	39° 18.0' W	0335	4826	4805	* DEEP ROSETTE, RADON
5	59	2	20 NOV 72	NIS	30° 12.0' S	39° 24.0' W	0619		120	* SURFACE RADON
5	59	3	20 NOV 72	SAT	30° 10.5' S	39° 30.0' W	1304		3021	* SATUROMETER
5	59	4	20 NOV 72	ROS	30° 10.5' S	39° 23.0' W	1635	4816	1492	* SHALLOW ROSETTE
5	59	5	20 NOV 72	NAN	30° 10.0' S	39° 24.0' W	1836	4825	1202	* SHALLOW NANSEN
5	59	6	20 NOV 72	NAN	30° 10.0' S	39° 24.0' W	2007	4779	4759	* DEEP NANSEN
5	59	7	20 NOV 72	ROS	30° 12.0' S	39° 24.0' W	2329	4827	4800	* BOTTOM SINGLE ROSETTE, RADON
5	59	8	21 NOV 72	ESS	30° 12.0' S	39° 24.0' W	0249	4818	3510	* ESSO ROSETTE
5	59	9	21 NOV 72	SAT	30° 12.0' S	39° 25.0' W	0745	4827	3026	* SATUROMETER
5	59	10	20 NOV 72	PMP	30° 10.5' S	39° 22.5' W	1735		5	* BOW PUMP, RA-228
5	59	11	21 NOV 72	ESS	30° 12.1' S	39° 25.6' W	0850		0	* ESSO, BUCKET
5	60	1	22 NOV 72	ROS	32° 58.0' S	42° 30.5' W	1510	4425	4415	* DEEP ROSETTE
5	60	2	22 NOV 72	NIS	32° 57.0' S	42° 32.0' W	1720		75	* SURFACE RADON
5	60	3	22 NOV 72	GER	32° 56.4' S	42° 31.0' W	1911	4402	4358	* DEEP GERARD, C-14
5	60	4	22 NOV 72	ROS	32° 57.0' S	42° 31.0' W	2150		1486	* SHALLOW ROSETTE
5	60	5	23 NOV 72	NAN	32° 58.0' S	42° 31.0' W	0001	4398	1205	* SHALLOW NANSEN
5	60	6	23 NOV 72	NAN	32° 58.0' S	42° 30.0' W	0242	4415	4380	* DEEP NANSEN
5	60	7	23 NOV 72	GER	32° 57.0' S	42° 29.0' W	0527	4401	2584	* INTERMEDIATE GERARD, C-14
5	60	8	23 NOV 72	ROS	32° 57.0' S	42° 28.0' W	0810	4416	4406	* BOTTOM SINGLE ROSETTE, RADON
5	60	9	23 NOV 72	GER	32° 56.4' S	42° 28.0' W	1013	4396	892	* SHALLOW GERARD, C-14
5	60	10	23 NOV 72	PMP	32° 56.4' S	42° 28.0' W	1215		350	* SURFACE PUMP, C-14, RA-228
5	61	1	24 NOV 72	ROS	36° 0.0' S	45° 0.0' W	1622	4943	4924	* DEEP ROSETTE, RADON
5	61	2	24 NOV 72	NIS	36° 0.0' S	45° 0.0' W	1650	4732	90	* SURFACE RADON
5	61	3	24 NOV 72	NAN	36° 0.0' S	44° 58.9' W	1910	4924	1204	* SHALLOW NANSEN
5	61	4	24 NOV 72	NAN	36° 0.0' S	44° 58.0' W	2331	4916	4892	* DEEP NANSEN, SATUROMETER LOST
5	61	5	25 NOV 72	ROS	36° 0.4' S	44° 55.0' W	0412		1309	* SHALLOW ROSETTE
5	61	6	25 NOV 72	GER	36° 1.0' S	44° 55.0' W	0703	4930	4897	* SHALLOW GERARD A, RA-228
5	61	7	25 NOV 72	GER	36° 1.0' S	44° 59.0' W	1050	4933	4226	* SHALLOW GERARD B, RA-228
5	61	8	25 NOV 72	ROS	36° 1.0' S	44° 59.4' W	1415	4934	4926	* BOTTOM SINGLE ROSETTE, RADON
5	61	9	24 NOV 72	PMP	36° 0.1' S	44° 59.9' W	1625		3	* BOW PUMP, RA-228
6	62	1	4 DEC 72	SDT	36° 40.0' S	52° 55.0' W	0149	2619		* SDT (ABORTED)
6	63	1	4 DEC 72	ROS	37° 14.5' S	52° 0.0' W	1213	3908	3872	* BOTTOM ROSETTE, RADON
6	64	1	5 DEC 72	NAN	39° 3.5' S	48° 33.0' W	1554	5343	5301	* DEEP NANSEN
6	64	2	5 DEC 72	PMP	39° 6.5' S	48° 31.0' W	1755			* SURFACE PUMP (ABORTED)
6	64	3	5 DEC 72	NAN	39° 8.0' S	48° 30.0' W	2059	5336	1191	* SHALLOW NANSEN
6	64	4	6 DEC 72	ROS	39° 5.0' S	48° 33.0' W	0035			* DEEP ROSETTE (ABORTED)
6	64	5	6 DEC 72	GER	39° 11.0' S	48° 34.0' W	0630	5341	2475	* DEEP GERARD, C-14
6	64	6	6 DEC 72	ROS	39° 8.0' S	48° 35.0' W	1100			* DEEP ROSETTE (ABORTED)
6	64	7	6 DEC 72	ROS	39° 11.0' S	48° 36.0' W	1514	5353	5313	* DEEP ROSETTE
6	64	8	6 DEC 72	GER	39° 9.0' S	48° 34.0' W	2009		1935	* INTERMEDIATE GERARD, C-14
6	64	9	6 DEC 72	ROS	39° 11.0' S	48° 32.0' W	2344		1612	* SHALLOW ROSETTE
6	64	10	7 DEC 72	GER	39° 14.0' S	48° 32.0' W	0349	5363	5195	* DEEP GERARD, C-14 (REPEAT)
6	64	11	7 DEC 72	ROS	39° 11.0' S	48° 35.5' W	0922	5350	5341	* BOTTOM ROSETTE, RADON
6	64	12	7 DEC 72	GER	39° 12.0' S	48° 33.0' W	1250		1012	* SHALLOW GERARD, C-14
6	65	1	7 DEC 72	SDT	40° 21.0' S	49° 42.0' W	2140			* SDT (ABORTED)
6	66	1	8 DEC 72	ROS	41° 32.5' S	50° 57.0' W	0951	5742	5719	* DEEP ROSETTE
6	**66**	**2**	**8 DEC 72**	**NIS**	**41° 34.0' S**	**50° 54.0' W**	**1325**		**130**	*** SURFACE RADON**
6	66	3	8 DEC 72	NAN	41° 34.0' S	50° 52.0' W	1420		945	* SHALLOW NANSEN
6	66	4	8 DEC 72	ROS	41° 31.0' S	50° 55.5' W	1655		1629	* SHALLOW ROSETTE
6	66	5	8 DEC 72	NAN	41° 32.0' S	50° 53.0' W	1956	5746	5673	* DEEP NANSEN
6	66	6	8 DEC 72	ROS	41° 33.0' S	50° 51.5' W	2331	5791	5785	* BOTTOM ROSETTE, RADON
6	67	1	9 DEC 72	ROS	44° 58.0' S	51° 3.5' W	2150	5813	5797	* DEEP ROSETTE
6	67	2	10 DEC 72	GER	44° 58.0' S	51° 6.0' W	0222	5812	5746	* DEEP GERARD, C-14
6	67	3	10 DEC 72	NAN	45° 0.0' S	51° 2.0' W	0558		1199	* SHALLOW NANSEN
6	67	4	10 DEC 72	ROS	44° 59.5' S	51° 5.0' W	0827		1589	* SHALLOW ROSETTE
6	67	5	10 DEC 72	GER	44° 58.5' S	51° 7.0' W	1110		1721	* INTERMEDIATE GERARD, C-14
6	67	6	10 DEC 72	NAN	44° 58.0' S	51° 10.0' W	1335	5830	5788	* DEEP NANSEN
6	67	7	10 DEC 72	ROS	44° 58.9' S	51° 0.6' W	1818	5824	5814	* BOTTOM ROSETTE, RADON
6	67	8	10 DEC 72	GER	44° 59.0' S	51° 2.7' W	2159		1870	* SHALLOW GERARD, C-14
6	67	9	11 DEC 72	PMP	44° 57.5' S	51° 5.0' W	0304		60	* SURFACE PUMP, C-14, RA-228
6	67	10	11 DEC 72	BAG	44° 57.0' S	51° 7.1' W	0400		5385	* SI-32 BAG
6	67	11	11 DEC 72	ESS	44° 57.0' S	51° 19.0' W	2215		0	* ESSO, BUCKET
6	68	1	13 DEC 72	ROS	48° 39.0' S	45° 59.2' W	0321	5970	5957	* DEEP ROSETTE
6	68	2	13 DEC 72	NAN	48° 38.5' S	45° 57.4' W	0620		1201	* SHALLOW NANSEN
6	68	3	13 DEC 72	GER	48° 38.7' S	45° 56.0' W	0855	5965	5897	* DEEP GERARD, C-14
6	68	4	13 DEC 72	NAN	48° 37.0' S	45° 56.5' W	1316	5942	4667	* DEEP NANSEN
6	68	5	13 DEC 72	ROS	48° 41.5' S	46° 0.5' W	1809		1532	* SHALLOW ROSETTE
6	68	6	13 DEC 72	GER	48° 43.0' S	45° 59.5' W	2207			* DEEP GERARD, RA-228 (ABORTED)
6	68	7	14 DEC 72	ROS	48° 43.0' S	45° 57.3' W	0246	5907	5897	* BOTTOM SINGLE ROSETTE, RADON
6	68	8	14 DEC 72	GER	48° 43.0' S	45° 56.0' W	0735			* SHALLOW GER, RA-228 (ABORTED)
6	68	9	14 DEC 72	GER	48° 40.5' S	45° 57.0' W	1134		530	* SHALLOW GERARD, C-14
6	68	10	14 DEC 72	GER	48° 40.5' S	45° 57.0' W	1244		62	* SHALLOW GERARD, C-14
6	68	11	14 DEC 72	NIS	48° 40.5' S	45° 58.5' W	1351		61	* SURFACE RADON
6	69	1	15 DEC 72	ROS	52° 31.0' S	46° 22.5' W	1838	3429	3424	* DEEP & BOTTOM ROSETTE, RADON
6	69	2	15 DEC 72	NAN	52° 32.5' S	46° 22.0' W	2120		902	* SHALLOW NANSEN

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC R/V KNORR

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
6	69	3	15 DEC 72	NAN	52° 33.5' S	46° 22.5' W	2218		3250	* DEEP NANSEN
6	69	4	16 DEC 72	ROS	52° 35.0' S	46° 22.5' W	0114		1396	* SHALLOW ROSETTE
6	69	5	16 DEC 72	NIS	52° 37.5' S	46° 23.0' W	0324		80	* SURFACE RADON
6	70	1	16 DEC 72	ROS	53° 3.5' S	47° 43.5' W	1223	2711	2675	* DEEP ROSETTE
6	71	1	16 DEC 72	ROS	53° 7.5' S	48° 24.0' W	1752	2950	2936	* DEEP ROSETTE
6	72	1	16 DEC 72	ROS	53° 4.0' S	48° 50.5' W	2234	3200	3149	* DEEP ROSETTE
6	73	1	17 DEC 72	ROS	53° 2.5' S	49° 31.5' W	0340	2676	2664	* DEEP SINGLE ROSETTE
6	73	2	17 DEC 72	GER	53° 1.0' S	49° 31.0' W	0545		637	* SHALLOW GERARD, C-14
6	74	1	17 DEC 72	ROS	55° 0.5' S	50° 4.5' W	1817	4134	4103	* DEEP ROSETTE
6	74	2	17 DEC 72	NIS	55° 0.0' S	50° 5.5' W	2105		40	* SURFACE RADON
6	74	3	17 DEC 72	GER	54° 59.0' S	50° 7.0' W	2319		3881	* DEEP GERARD, C-14
6	74	4	18 DEC 72	NAN	54° 58.5' S	50° 8.5' W	0220		906	* SHALLOW NANSEN
6	74	5	18 DEC 72	ROS	54° 58.5' S	50° 9.0' W	0446		987	* SHALLOW ROSETTE
6	74	6	18 DEC 72	NAN	54° 58.5' S	50° 14.5' W	0707	4147	4129	* DEEP NANSEN
6	74	7	18 DEC 72	GER	55° 1.0' S	50° 3.5' W	1102		777	* SHALLOW GERARD, C-14
6	74	8	18 DEC 72	ROS	55° 1.0' S	50° 2.5' W	1345	4063	4058	* BOTTOM ROSETTE, RADON
6	74	9	18 DEC 72	ESS	55° 1.5' S	50° 2.0' W	1632		1200	* ESSO ROSETTE
6	74	10	18 DEC 72	GER	55° 2.0' S	49° 58.0' W	2040		3980	* DEEP GERARD, RA-228
6	74	11	19 DEC 72	GER	55° 2.5' S	49° 53.5' W	0019		3294	* SHALLOW GERARD, RA-228
6	74	12	19 DEC 72	ESS	55° 2.6' S	49° 52.1' W	0200		0	* ESSO, BUCKET
6	75	1	20 DEC 72	ROS	56° 2.0' S	61° 2.0' W	1744	4153	4120	* DEEP ROSETTE
6	75	2	20 DEC 72	NAN	56° 4.0' S	61° 3.5' W	2010		728	* SHALLOW NANSEN
6	75	3	20 DEC 72	NAN	56° 5.0' S	61° 3.0' W	2136	4189	4180	* DEEP NANSEN
6	75	4	20 DEC 72	ROS	56° 6.0' S	61° 3.0' W	2330		997	* SHALLOW ROSETTE
7	76	1	31 DEC 72	ROS	57° 44.0' S	66° 8.0' W	1554	4598	4593	* BOTTOM ROSETTE, RADON
7	76	2	31 DEC 72	GER	57° 42.0' S	66° 12.0' W	2055	4602	4510	* DEEP GERARD, C-14
7	76	3	1 JAN 73	ROS	57° 43.0' S	66° 12.0' W	0110	4596	4490	* DEEP ROSETTE
7	76	4	1 JAN 73	NAN	57° 42.0' S	66° 14.7' W	0515			* DEEP NANSEN (PRETRIPPED)
7	76	5	1 JAN 73	GER	57° 42.0' S	66° 11.0' W	0900			* INT. GERARD,PB-210 (PRETRIP)
7	76	6	1 JAN 73	NAN	57° 43.5' S	66° 6.0' W	1220	3790	1200	* SHALLOW NANSEN
7	76	7	1 JAN 73	ROS	57° 44.0' S	66° 3.0' W	1425	3790	1198	* SHALLOW ROSETTE
7	76	8	1 JAN 73	GER	57° 43.0' S	66° 9.0' W	1830	3866	988	* INTERMEDIATE GERARD, C-14
7	76	9	1 JAN 73	NAN	57° 42.5' S	66° 5.5' W	2043	3942	3902	* DEEP NANSEN
7	76	10	1 JAN 73	GER	57° 42.8' S	66° 4.2' W	2322	3904	1401	* SHALLOW GERARD, C-14
7	76	11	1 JAN 73	PMP	57° 40.0' S	66° 4.0' W	2050		3	* BOW PUMP, C-14, RA-228
7	77	1	2 JAN 73	ROS	59° 39.5' S	64° 30.0' W	1403	3591	3549	* DEEP ROSETTE
7	77	2	2 JAN 73	PMP	59° 39.1' S	64° 29.9' W	1600		5	* BOW PUMP, C-14, RA-228
7	78	1	3 JAN 73	ROS	61° 3.0' S	62° 58.0' W	0323	3696	3615	* DEEP ROSETTE
7	78	2	3 JAN 73	NAN	61° 2.3' S	62° 56.5' W	0646	3713	3700	* DEEP NANSEN
7	78	3	3 JAN 73	GER	61° 1.5' S	62° 56.0' W	0928	3699	3478	* DEEP GERARD, C-14
7	78	4	3 JAN 73	NAN	61° 0.9' S	62° 56.0' W	1137	3680	1206	* SHALLOW NANSEN
7	78	5	3 JAN 73	ROS	61° 0.7' S	62° 59.0' W	1329	3672	1489	* SHALLOW ROSETTE
7	78	6	3 JAN 73	GER	61° 0.8' S	62° 59.3' W	1624	3678	889	* INTERMEDIATE GERARD, C-14
7	78	7	3 JAN 73	ROS	60° 59.0' S	63° 0.0' W	2039	3816	3805	* BOTTOM ROSETTE, RADON
7	78	8	3 JAN 73	GER	60° 58.0' S	62° 58.0' W	2343	3676	189	* SHALLOW GERARD, C-14
7	78	9	3 JAN 73	PMP	60° 58.5' S	62° 58.4' W	2220		3	* BOW PUMP, C-14, RA-228
7	79	1	6 JAN 73	ROS	59° 56.5' S	45° 2.0' W	1448	5027	1591	* SHALLOW ROSETTE
7	79	2	6 JAN 73	NAN	59° 56.0' S	44° 57.3' W	1700	5027	1200	* SHALLOW NANSEN
7	79	3	6 JAN 73	ROS	59° 56.5' S	44° 54.0' W	2026	4860	4845	* BOTTOM ROSETTE, RADON
7	79	4	7 JAN 73	NAN	59° 59.1' S	45° 9.9' W	0049	5377	5323	* DEEP NANSEN
7	79	5	7 JAN 73	ROS	59° 57.0' S	45° 8.0' W	0453	5182	5062	* DEEP ROSETTE
7	79	6	6 JAN 73	PMP	59° 56.2' S	44° 56.2' W	1810		5	* BOW PUMP, C-14, RA-228
7	80	1	10 JAN 73	ROS	57° 47.8' S	29° 44.3' W	0136	3391	3363	* DEEP ROSETTE
7	80	2	10 JAN 73	NIS	57° 48.0' S	29° 44.3' W	0359		98	* SURFACE RADON
7	80	3	10 JAN 73	PMP	57° 47.8' S	29° 44.5' W	0140		5	* BOW PUMP, C-14, RA-228

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
7	81	1	11 JAN 73	ROS	55°58.7' S	26° 26.4' W	1117	4587	4482	* DEEP SINGLE ROSETTE
7	82	1	11 JAN 73	ROS	56° 15.7' S	24° 55.2' W	2315	7873		* WIRE PARTED, ROSETTE LOST
7	82	2	12 JAN 73	NAN	56° 14.7' S	24° 58.0' W	0955	7833	1645	* SHALLOW NANSEN
7	82	3	12 JAN 73	NAN	56° 15.0' S	24° 59.5' W	1806	7835	7025	* DEEP NANSEN
7	82	4	13 JAN 73	ROS	56° 17.0' S	24° 55.5' W	0518	7820	1776	* SHALLOW ROSETTE (MALFUNCTION)
7	82	5	13 JAN 73	GER	56° 15.6' S	24° 55.0' W	0823	7899	1585	* INTERMEDIATE GERARD, C-14
7	82	6	13 JAN 73	ROS	56° 15.7' S	24° 54.5' W	1058	7869	286	* SHALLOW ROSETTE (REPEAT)
7	82	7	13 JAN 73	GER	56° 16.0' S	24° 55.0' W	1515	7908	7808	* BOTTOM GERARD, C-14
7	82	8	14 JAN 73	ROS	56° 14.3' S	24° 50.5' W	0150	7771		* DEEP ROSETTE (ABORTED)
7	82	9	14 JAN 73	GER	56° 15.0' S	24° 49.0' W	0623	7899	4657	* DEEP GERARD, C-14
7	82	10	14 JAN 73	NAN	56° 15.4' S	24° 54.8' W	1007	7889	7693	* DEEP NANSEN
7	82	11	14 JAN 73	GER	56° 15.6' S	24° 55.5' W	1328	7885	395	* SHALLOW GERARD
7	82	12	14 JAN 73	ROS	56° 16.2' S	24° 56.0' W	1629	7885	96	* SURFACE RADON
7	82	13	14 JAN 73	ROS	56° 17.0' S	24° 58.2' W	2333			* DEEP SINGLE ROSETTE (ABORTED)
7	82	14	15 JAN 73	NIS	56° 18.3' S	24° 58.7' W	0657	7810	6509	* DEEP NISKIN
7	82	15	14 JAN 73	PMP	56° 14.7' S	24° 49.8' W	0440		3	* BOW PUMP, RA-228
7	83	1	17 JAN 73	ROS	56° 48.6' S	22° 22.0' W	0237	4702	1308	* SHALLOW ROSETTE
7	83	2	17 JAN 73	ROS	56° 49.3' S	22° 27.0' W	0947	4636	4602	* DEEP ROS, 14 NISKINS ON WIRE
7	83	3	17 JAN 73	PMP	56° 48.6' S	22° 22.4' W	0432		5	* BOW PUMP, C-14, RA-228
7	84	1	18 JAN 73	ROS	56° 55.4' S	19° 49.8' W	0123	5132	5097	* ROS TEST, 21 NISKINS ON WIRE
7	84	2	18 JAN 73	PMP	56° 55.4' S	19° 49.9' W	0114		5	* BOW PUMP, C-14, RA-228
7	85	1	18 JAN 73	NIS	57° 30.8' S	17° 23.1' W	1442		97	* SURFACE RADON
7	85	2	18 JAN 73	ROS	57° 32.0' S	17° 26.0' W	1709	4758	4722	* DEEP ROS, 11 NISKINS ON WIRE
7	85	3	18 JAN 73	ROS	57° 29.2' S	17° 22.7' W	2310		1296	* SHAL ROS, 5 NISKINS ON WIRE
7	85	4	18 JAN 73	PMP	57° 31.8' S	17° 26.7' W	1906		5	* BOW PUMP, C-14, RA-228
7	86	1	19 JAN 73	ROS	57° 52.0' S	14° 32.0' W	1349	4523	4472	* DEEP ROS, 11 NISKINS ON WIRE
7	86	2	19 JAN 73	PMP	57° 51.6' S	14° 32.0' W	1400		5	* BOW PUMP, C-14, RA-228
7	87	1	20 JAN 73	ROS	58° 38.0' S	9° 26.0' W	1237	4196	4178	* DEEP ROSETTE
7	87	2	20 JAN 73	PMP	58° 38.3' S	9° 25.9' W	1406		5	* BOW PUMP, C-14, RA-228
7	88	1	21 JAN 73	ROS	59° 20.0' S	4° 51.0' W	1028	5240		* DEEP ROSETTE (MALFUNCTION)
7	88	2	21 JAN 73	ROS	59° 22.3' S	4° 44.0' W	1855	5526	5497	* DEEP ROS, 12 NISKINS ON WIRE
7	88	3	21 JAN 73	PMP	59° 22.4' S	4° 42.8' W	1010		5	* BOW PUMP, C-14, RA-228
7	89	1	22 JAN 73	GER	60° 0.9' S	0° 2.0' E	1354	5296	5268	* DEEP GERARD, C-14, PB-210
7	89	2	22 JAN 73	ROS	60° 1.5' S	0° 1.5' E	1840	5363	5308	* DEEP ROS, 10 NISKINS ON WIRE
7	89	3	23 JAN 73	PMP	60° 2.4' S	0° 0.6' W	0500		175	* SURFACE PUMP, RA-228
7	89	4	23 JAN 73	ROS	60° 2.2' S	0° 0.2' E	0930		2096	* SHALLOW ROSETTE
7	89	5	23 JAN 73	GER	60° 1.4' S	0° 0.2' E	1345		4770	* INT. GERARD, C-14, PB-210
7	89	6	23 JAN 73	BAG	60° 0.0' S	0° 1.0' E	2010		4803	* SI-32 BAG
7	89	7	24 JAN 73	GER	59° 58.5' S	0° 7.6' W	1128		3550	* SHALLOW GERARD, C-14, PB-210
7	89	8	24 JAN 73	ROS	59° 58.1' S	0° 9.5' W	1413		82	* SURFACE ROSETTE, RADON
7	89	9	24 JAN 73	GER	59° 59.0' S	0° 1.0' W	1650		1792	* SURFACE GERARD, C-14, PB-210
7	89	10	24 JAN 73	ROS	59° 57.1' S	0° 4.6' W	2025	5367	5351	* BOTTOM ROSETTE, RADON
7	89	11	24 JAN 73	PMP	59° 57.1' S	0° 4.6' W	2020		3	* BOW PUMP, C-14
7	89	12	24 JAN 73	ESS	59° 56.3' S	0° 7.0' W	2340		0	* ESSO, BUCKET
7	90	1	26 JAN 73	ROS	56° 25.7' S	4° 30.7' E	0704	4339	4324	* DEEP ROSETTE
7	90	2	26 JAN 73	PMP	56° 25.0' S	4° 30.0' E	1040		176	* SURFACE PUMP, C-14, RA-228
7	90	3	26 JAN 73	ROS	56° 25.1' S	4° 27.0' E	1626		1969	* SHALLOW ROSETTE
7	91	1	29 JAN 73	ROS	49° 34.3' S	11° 28.0' E	0453	4192	4168	* DEEP ROSETTE
7	91	2	29 JAN 73	GER	49° 34.2' S	11° 30.8' E	1022	4115	4085	* DEEP GERARD, C-14
7	91	3	29 JAN 73	PMP	49° 34.5' S	11° 30.8' E	1220		175	* SURFACE PUMP, RA-228
7	91	4	29 JAN 73	ROS	49° 34.5' S	11° 33.0' E	1611		2002	* SHALLOW ROSETTE
7	91	5	29 JAN 73	GER	49° 35.2' S	11° 35.0' E	2005		2384	* INTERMEDIATE GERARD, C-14
7	91	6	29 JAN 73	ROS	49° 35.4' S	11° 36.3' E	2211		108	* SURFACE SINGLE ROSETTE, RADON
7	91	7	30 JAN 73	GER	49° 36.8' S	11° 37.8' E	0010		746	* SHALLOW GERARD, C-14
7	91	8	30 JAN 73	ESS	49° 37.1' S	11° 38.2' E	0035		0	* ESSO BUCKET

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC R/V KNORR

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
7	92	1	31 JAN 73	ROS	46° 11.0' S	14° 36.8' E	0004	4553	4506	* DEEP ROSETTE
7	92	2	31 JAN 73	PMP	46° 13.0' S	14° 36.0' E	0420		176	* SURFACE PUMP, C-14, RA-228
7	92	3	31 JAN 73	ROS	46° 14.0' S	14° 35.4' E	0731		2002	* SHALLOW ROSETTE
7	93	1	2 FEB 73	ROS	41° 46.1' S	18° 27.2' E	0054	4953	4506	* DEEP ROSETTE
7	93	2	2 FEB 73	PMP	41° 46.2' S	18° 27.2' E	0300		176	* SURFACE PUMP, C-14, RA-228
7	93	3	2 FEB 73	GER	41° 46.1' S	18° 25.9' E	0846	4923	4625	* DEEP GERARD, C-14
7	93	4	2 FEB 73	ROS	41° 46.4' S	18° 26.0' E	1200		2196	* SHALLOW ROSETTE
7	93	5	2 FEB 73	GER	41° 47.2' S	18° 26.0' E	1544		2277	* SHALLOW GERARD, C-14
7	93	6	2 FEB 73	NIS	41° 49.7' S	18° 23.8' E	1930		797	* SHALLOW NISKIN
7	93	7	2 FEB 73	ESS	41° 49.7' S	18° 23.8' E	2010		0	* ESSO, BUCKET
7	94	1	3 FEB 73	ROS	38° 18.0' S	19° 23.8' E	1855	4796	1622	* ROS TRIPPED IN TOP 1600M ONLY
7	94	2	3 FEB 73	PMP	38° 23.0' S	19° 24.0' E	2235		175	* SURFACE PUMP, C-14, RA-228
8	100	1	11 FEB 73	NAN	33° 12.5' S	13° 19.4' E	1450	4017		* NANSEN Q CAST
8	100	2	11 FEB 73	NAN	33° 11.8' S	13° 19.0' E	1626	3996		* NANSEN Q CAST
8	100	3	11 FEB 73	NAN	33° 11.9' S	13° 18.9' E	1900	4000		* NANSEN Q CAST
8	100	4	11 FEB 73	NAN	33° 11.9' S	13° 18.9' E	1914	4008		* NANSEN Q CAST
8	100	5	11 FEB 73	NAN	33° 11.0' S	13° 18.5' E	2042	3990		* NANSEN Q CAST
8	100	6	11 FEB 73	ROS	33° 9.0' S	13° 17.5' E	2314	4014	3978	* DEEP ROSETTE (ABORTED)
8	101	1	12 FEB 73	SDT	31° 58.0' S	10° 48.0' E	1441	4849	1002	* SDT WITH 5 CHECK SAMPLES
8	102	1	12 FEB 73	ROS	31° 31.3' S	9° 26.4' E	2311	4884		* SHALLOW ROSETTE (ABORTED)
8	102	2	13 FEB 73	NIS	31° 31.0' S	9° 24.9' E	0105	4669	110	* SURFACE RADON
8	102	3	13 FEB 73	NAN	31° 31.1' S	9° 24.5' E	0153	4669	505	* SHALLOW NANSEN
8	102	4	13 FEB 73	SDT	31° 31.2' S	9° 24.3' E	0250			* STD TEST; WINCH FAILED
8	102	5	13 FEB 73	NIS	31° 35.5' S	9° 15.0' E	1127	4940	4927	* DEEP NISKIN, BOTTOM RADON
8	102	6	13 FEB 73	NIS	31° 33.4' S	9° 17.6' E	1613		2000	* SHALLOW NISKIN
8	102	7	13 FEB 73	PMP	31° 33.6' S	9° 17.1' E	1636		5	* BOW PUMP, RA-228
8	103	1	17 FEB 73	ROS	23° 59.8' S	8° 30.3' E	0327	4634		* SHALLOW ROSETTE (ABORTED)
8	103	2	17 FEB 73	GER	23° 59.9' S	8° 30.1' E	0643	4650	4546	* DEEP GERARD, C-14
8	103	3	17 FEB 73	NIS	23° 59.9' S	8° 29.4' E	1051	4660	4586	* DEEP NISKIN
8	103	4	17 FEB 73	NIS	24° 0.0' S	8° 29.1' E	1400		102	* SURFACE RADON
8	103	5	17 FEB 73	PMP	24° 0.0' S	8° 29.1' E	1445		120	* SURFACE PUMP, C-14, RA-228
8	103	6	17 FEB 73	ROS	24° 0.0' S	8° 27.7' E	2215	4634	2317	* SHALLOW NISKIN & DEEP SDT
8	103	7	18 FEB 73	GER	23° 59.0' S	8° 27.0' E	0258	4676	1088	* SHALLOW GERARD, C-14
8	104	1	18 FEB 73	NAN	22° 0.0' S	7° 14.5' E	1609		345	* SHALLOW NANSEN
8	104	2	18 FEB 73	NAN	22° 0.0' S	7° 14.5' E	1719	2963	2960	* DEEP NANSEN
8	105	1	20 FEB 73	NIS	20° 0.3' S	2° 0.0' E	0452	5508	5498	* DEEP NISKIN, BOTTOM RADON
8	105	2	20 FEB 73	SDT	20° 0.1' S	1° 58.6' E	0820			* SDT (MALFUNCTION)
8	105	3	20 FEB 73	NIS	20° 0.2' S	1° 58.0' E	1047	5479	1292	* SHALLOW NISKIN
8	105	4	20 FEB 73	NIS	20° 0.3' S	1° 57.6' E	1223	5504	101	* SURFACE RADON
8	105	5	20 FEB 73	NIS	20° 0.0' S	1° 57.4' E	1320	5471	181	* SURFACE NISKIN
8	106	1	21 FEB 73	NAN	15° 59.9' S	1° 58.3' E	1135	5512	1088	* SHALLOW NANSEN
8	106	2	21 FEB 73	SDT	15° 59.9' S	1° 58.3' E	1140			* STD TEST
8	106	3	21 FEB 73	NAN	15° 59.4' S	1° 58.0' E	1345	5471	2734	* DEEP NANSEN
8	106	4	21 FEB 73	NAN	15° 59.3' S	1° 57.8' E	1631	5550	5518	* DEEP NANSEN (REPEAT)
8	107	1	22 FEB 73	NIS	12° 0.0' S	2° 0.0' E	1520		100	* SURFACE RADON
8	107	2	22 FEB 73	GER	12° 0.0' S	1° 59.2' E	1723	5573	5551	* DEEP GERARD, C-14
8	107	3	22 FEB 73	ROS	12° 0.6' S	1° 59.0' E	2245		1889	* SHAL NIS (ABORTED ESSO ROS)
8	107	4	22 FEB 73	PMP	12° 0.0' S	1° 58.0' E	2330		150	* SURFACE PUMP, C-14, RA-228
8	107	5	23 FEB 73	NIS	12° 0.0' S	1° 58.0' E	0608	5581	5571	* DP NISKIN,3ESSO, BOTTOM RADON
8	107	6	23 FEB 73	GER	12° 0.3' S	1° 57.9' E	1004	5618	1390	* SHALLOW GERARD, C-14
8	107	7	23 FEB 73	ESS	12° 0.3' S	1° 57.9' E	1100		0	* ESSO, BUCKET
8	108	1	25 FEB 73	NAN	5° 20.7' S	2° 25.4' W	0553	4523	1100	* SHALLOW NANSEN
8	108	2	25 FEB 73	NAN	5° 20.5' S	2° 25.2' W	0725	4552	4539	* DEEP NANSEN
8	109	1	26 FEB 73	NIS	2° 0.0' S	4° 30.0' W	0545	5080	121	* SURFACE RADON
8	109	2	26 FEB 73	GER	1° 59.7' S	4° 31.5' W	0757	5059	5041	* BOTTOM GERARD, RA-228
8	109	3	26 FEB 73	SDT	1° 59.5' S	4° 32.0' W	1030		75	* SDT
8	109	4	26 FEB 73	NIS	1° 59.8' S	4° 33.0' W	1326	5171	2007	* SHALLOW NISKIN
8	109	5	26 FEB 73	GER	1° 59.8' S	4° 33.3' W	1655	5261	4574	* DEEP GERARD, RA-228
8	109	6	26 FEB 73	NIS	2° 0.0' S	4° 33.0' W	2106	5148	5136	* DEEP NISKIN, BOTTOM RADON
8	109	7	26 FEB 73	PMP	2° 0.0' S	4° 33.0' W	2346		5	* BOW PUMP, RA-228
8	110	1	28 FEB 73	NAN	0° 0.5' S	9° 11.4' W	0135	5012	884	* SHALLOW NANSEN
8	110	2	28 FEB 73	NAN	0° 1.0' N	9° 10.8' W	0355	5047	5039	* DEEP NANSEN
8	111	1	1 MAR 73	GER	2° 0.5' N	14° 1.6' W	0836	5178	5158	* DEEP GERARD, C-14
8	111	2	1 MAR 73	NIS	2° 0.0' N	14° 1.3' W	1206	5160	5150	* DEEP NISKIN, BOTTOM RADON
8	111	3	1 MAR 73	PMP	2° 0.0' N	14° 1.0' W	1355		300	* SURFACE PUMP, C-14, RA-228
8	111	4	1 MAR 73	SDT	2° 0.0' N	14° 0.6' W	1730		151	* SDT
8	111	5	1 MAR 73	NIS	2° 0.5' N	13° 59.8' W	2015		1811	* SHALLOW NISKIN
8	111	6	1 MAR 73	GER	1° 59.7' N	13° 59.8' W	2230		2062	* SHALLOW GERARD, C-14
8	111	7	1 MAR 73	NIS	2° 0.5' N	13° 59.6' W	2355		115	* SURFACE RADON
8	112	1	3 MAR 73	NAN	6° 20.5' N	17° 16.0' W	0730		897	* SHALLOW NANSEN
8	112	2	3 MAR 73	NAN	6° 20.5' N	17° 15.9' W	0920	4955	4942	* DEEP NANSEN
8	112	3	3 MAR 73	SDT	6° 20.4' N	17° 16.0' W	1055			* SDT TEST
8	113	1	5 MAR 73	GER	10° 59.1' N	20° 31.0' W	0018	4954	3158	* BOTTOM GERARD, C-14
8	113	2	5 MAR 73	GER	10° 59.0' N	20° 31.1' W	0332	4954	4741	* DEEP GERARD, C-14
8	113	3	5 MAR 73	NIS	10° 59.4' N	20° 32.4' W	0740	4950	4914	* DEEP NISKIN
8	113	4	5 MAR 73	PMP	11° 0.0' N	20° 33.0' W	1005		250	* SURFACE PUMP, C-14, RA-228
8	113	5	5 MAR 73	SDT	11° 0.0' N	20° 35.0' W	1255			* SDT TEST
8	113	6	5 MAR 73	NIS	11° 0.8' N	20° 35.5' W	1650		1552	* SHALLOW NISKIN (MALFUNCTION)
8	113	7	5 MAR 73	GER	11° 1.3' N	20° 35.7' W	1837		1751	* SHALLOW GERARD, C-14
8	113	8	5 MAR 73	NIS	11° 1.0' N	20° 36.0' W	1953		100	* SURFACE RADON
8	113	9	5 MAR 73	NIS	11° 1.0' N	20° 36.0' W	2102		1197	* SHALLOW NISKIN (REPEAT)
9	114	1	12 MAR 73	ROS	21° 10.5' N	21° 46.5' W	2022	4343	1194	* SHALLOW ROSETTE
9	114	2	12 MAR 73	NIS	21° 10.5' N	21° 46.5' W	2217		81	* SURFACE RADON
9	114	3	12 MAR 73	NIS	21° 10.5' N	21° 46.5' W	2247		156	* SURFACE RADON
9	114	4	12 MAR 73	NAN	21° 9.7' N	21° 46.2' W	2349		1204	* SHALLOW NANSEN
9	114	5	13 MAR 73	ROS	21° 10.0' N	21° 46.0' W	0220	4359	4341	* DEEP ROSETTE
9	114	6	13 MAR 73	NAN	21° 10.0' N	21° 46.0' W	0600		3576	* DEEP NANSEN
9	114	7	13 MAR 73	NIS	21° 10.0' N	21° 46.0' W	0909	4368	4352	* DEEP NISKIN, BOTTOM RADON
9	115	1	15 MAR 73	NIS	28° 1.5' N	26° 0.0' W	0757	5266	230	* SURFACE RADON
9	115	2	15 MAR 73	GER	28° 2.5' N	26° 0.0' W	0919	5266	1191	* INTERMEDIATE GERARD, C-14
9	115	3	15 MAR 73	ROS	28° 2.0' N	26° 1.0' W	1407	5266	1491	* SHALLOW ROSETTE
9	115	4	15 MAR 73	PMP	28° 2.0' N	26° 0.0' W	1130		300	* SURFACE PUMP, RA-228
9	115	5	15 MAR 73	NAN	28° 5.0' N	25° 56.5' W	1822	5297	5284	* DEEP NANSEN
9	115	6	15 MAR 73	ROS	28° 6.0' N	25° 55.0' W	1945			* DEEP ROSETTE (ABORTED)
9	115	7	16 MAR 73	GER	28° 6.0' N	25° 54.0' W	0010	5308	5281	* BOTTOM GERARD, RA-228
9	115	8	16 MAR 73	NIS	28° 6.0' N	25° 53.0' W	0215			* DEEP NISKIN (ABORTED)
9	115	9	16 MAR 73	NIS	28° 6.0' N	25° 46.0' W	0907	5313	5306	* DEEP NISKIN, BOTTOM RADON
9	115	10	16 MAR 73	GER	28° 6.0' N	25° 46.0' W	1233	5248	4456	* DEEP GERARD, RA-228
9	115	11	16 MAR 73	NAN	28° 6.5' N	25° 44.0' W	1520	5189	1407	* SHALLOW NANSEN
9	115	12	16 MAR 73	GER	28° 6.5' N	25° 42.7' W	1742	5285	5175	* DEEP GERARD, C-14
9	116	1	18 MAR 73	NIS	29° 56.0' N	30° 24.0' W	0043		300	* SURFACE RADON
9	116	2	18 MAR 73	ROS	29° 56.0' N	30° 24.0' W	0140		1485	* SHALLOW ROSETTE
9	116	3	18 MAR 73	NIS	29° 54.0' N	30° 22.0' W	0445	4682	4671	* BOTTOM NISKIN, RADON
9	116	4	18 MAR 73	PMP	29° 53.0' N	30° 22.0' W	0800		150	* SURFACE PUMP, C-14
9	116	5	18 MAR 73	ROS	29° 51.0' N	30° 21.0' W	1043			* DEEP ROSETTE AND STD (FAILED)
9	116	6	18 MAR 73	NIS	29° 51.0' N	30° 20.0' W	1540	4617	4501	* DEEP NISKIN
9	116	7	18 MAR 73	ESS	29° 50.0' N	30° 20.2' W	1730		0	* ESSO, BUCKET
9	117	1	20 MAR 73	NIS	30° 40.5' N	38° 58.0' W	2043	3645	300	* SURFACE RADON
9	117	2	20 MAR 73	GER	30° 40.0' N	38° 56.0' W	2222	3644	3425	* DEEP GERARD, C-14
9	117	3	21 MAR 73	ROS	30° 39.0' N	38° 57.0' W	0100		1503	* SHALLOW ROSETTE
9	117	4	21 MAR 73	PMP	30° 39.0' N	38° 57.0' W	0000		300	* SURFACE PUMP, RA-228
9	117	5	21 MAR 73	NAN	30° 44.5' N	38° 58.0' W	0755	3643	3623	* DEEP NANSEN
9	117	6	21 MAR 73	NAN	30° 44.5' N	38° 58.4' W	0938	3622	1204	* SHALLOW NANSEN

STATION AND CAST DESCRIPTION

GEOSECS ATLANTIC R/V KNORR

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	* REMARKS
9	117	7	21 MAR 73	GER	30° 46.0' N	38°58.0' W	1200	3646	1954	* SHALLOW GERARD, C-14
9	117	8	21 MAR 73	ROS	30° 49.0' N	38°56.0' W	1500	3582	3564	* DEEP AND BOTTOM ROSETTE,RADON
9	117	9	21 MAR 73	ESS	30° 49.6' N	38°53.7' W	1720		0	* ESSO, BUCKET
9	118	1	23 MAR 73	NIS	31° 18.1' N	45°38.9' W	0532	4565	300	* SURFACE RADON
9	118	2	23 MAR 73	ROS	31° 18.2' N	45°38.2' W	0720	4565	1999	* SHALLOW ROSETTE
9	118	3	23 MAR 73	NAN	31° 18.0' N	45°37.0' W	1010	4567	4545	* DEEP NANSEN
9	118	4	23 MAR 73	NAN	31° 18.3' N	45°36.6' W	1220	4567	1186	* SHALLOW NANSEN
9	118	5	23 MAR 73	ROS	31° 18.0' N	45°34.7' W	1445	4563		* DEEP ROSETTE, SDT CHECKS ONLY
9	118	6	23 MAR 73	NIS	31° 16.9' N	45° 33.2' W	2002	4573	4529	* DEEP NISKIN, BOTTOM RADON
9	118	7	23 MAR 73	PMP	31° 16.7' N	45° 33.3' W	1914		5	* BOW PUMP, RA-228
9	118	8	23 MAR 73	ESS	31° 16.7' N	45° 33.3' W	2300		0	* ESSO, BUCKET
9	119	1	25 MAR 73	NIS	31° 49.0' N	50° 53.0' W	1018		1392	* SHALLOW NISKIN
9	119	2	25 MAR 73	NIS	31° 48.8' N	50° 53.5' W	1621	5805	5794	* DEEP NISKIN, BOTTOM RADON
9	119	3	25 MAR 73	PMP	31° 48.7' N	50° 52.8' W	1822		5	* BOW PUMP, RA-228
9	120	1	27 MAR 73	NIS	33° 16.0' N	56° 33.0' W	0511	5574	5567	* DEEP NISKIN, BOTTOM RADON
9	120	2	27 MAR 73	GER	33° 15.0' N	56° 33.1' W	0807		1293	* SHALLOW GERARD, C-14
9	120	3	27 MAR 73	PMP	33° 14.0' N	56° 34.0' W			300	* SURFACE PUMP, RA-228
9	120	4	27 MAR 73	NIS	33° 14.2' N	56° 34.8' W	1352		1802	* SHALLOW NISKIN
9	120	5	27 MAR 73	GER	33° 13.8' N	56° 34.2' W	1642	5553	5535	* DEEP GERARD, C-14
9	120	6	27 MAR 73	ROS	33° 12.5' N	56° 32.7' W	2228	5554	250	* SURFACE RADON
9	120	7	27 MAR 73	ESS	33° 12.5' N	56° 32.7' W	2315		0	* ESSO, BUCKET
9	121	1	30 MAR 73	ROS	35° 59.4' N	67° 59.0' W	1849	4800	302	* SURFACE RADON
9	121	2	30 MAR 73	NIS	35° 59.7' N	67° 59.4' W	2050	4802	1861	* SHALLOW NISKIN
9	121	3	31 MAR 73	NIS	35° 59.3' N	68° 0.8' W	0200	4933	4918	* DEEP NISKIN, BOTTOM RADON
9	121	4	31 MAR 73	PMP	36° 0.9' N	68° 1.0' W	0001		5	* BOW PUMP, RA-228
9	121	5	31 MAR 73	ESS	36° 0.9' N	68° 1.8' W	0402		0	* ESSO, BUCKET

STATION AND CAST DESCRIPTION

GEOSECS PACIFIC R/V MELVILLE

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
1	201	1	25 AUG 73 ROS		34DEG 10.5MIN N	127DEG 53.8MIN W	1636	4825	4804	*	DEEP ROSETTE,3 BTLS TRIPPED
1	201	2	26 AUG 73 GER		34DEG 10.4MIN N	127DEG 54.2MIN W	0045	4784	2413	*	DEEP GERARD,3 BOTTLES,C-14
1	201	3	26 AUG 73 GER		34DEG 10.0MIN N	127DEG 55.0MIN W	0434	4738	4707	*	DEEP GERARD, C-14
1	201	4	26 AUG 73 ROS		34DEG 8.2MIN N	127DEG 53.1MIN W	0902	4654	2696	*	INTERMEDIATE ROSETTE
1	201	5	26 AUG 73 GER		34DEG 3.8MIN N	127DEG 59.5MIN W	1446	4680	1535	*	INTERMEDIATE GERARD, C-14
1	201	6	26 AUG 73 ROS		34DEG 3.5MIN N	127DEG 58.0MIN W	2002	4717	4695	*	DEEP ROSETTE, BOTTOM RADON
1	201	7	27 AUG 73 GER		34DEG 4.3MIN N	128DEG 57.1MIN W	0207	4688	4681	*	DEEP GERARD, PB-210
1	201	8	27 AUG 73 ROS		34DEG 5.6MIN N	128DEG 0.0MIN W	0705	4716		*	SHALLOW ROSETTE (ABORTED)
1	201	9	27 AUG 73 ROS		34DEG 7.5MIN N	128DEG 0.0MIN W				*	SHALLOW ROSETTE (TEST)
1	201	10	27 AUG 73 NIS		34DEG 7.5MIN N	128DEG 0.0MIN W	1441	4688	964	*	SHALLOW NISKIN,20 BOTTLES
1	201	11	27 AUG 73 GER		34DEG 8.3MIN N	128DEG 0.0MIN W	1728	4688	1183	*	SHALLOW GERARD, C-14, PB-210
1	201	12	27 AUG 73 ESS		34DEG 8.0MIN N	128DEG 0.0MIN W	1930		0	*	ESSO BUCKET, POLONIUM-210
1	202	1	30 AUG 73 ROS		33DEG 6.0MIN N	139DEG 34.4MIN W	0645	4999	4984	*	DEEP ROSETTE, BOTTOM RADON
1	202	2	30 AUG 73 GER		33DEG 8.6MIN N	139DEG 33.2MIN W	1217	5137	2437	*	DEEP GERARD, 2 BOTTLES, C-14
1	202	3	30 AUG 73 GER		33DEG 11.2MIN N	139DEG 32.0MIN W	1644	5038	4524	*	DEEP GERARD, C-14
1	202	4	31 AUG 73 ROS		33DEG 9.7MIN N	139DEG 36.4MIN W	0413	5137	3046	*	INTERMEDIATE ROSETTE
1	202	5	31 AUG 73 PMP		33DEG 7.2MIN N	139DEG 38.0MIN W	0845	5044	4000	*	DEEP LAL PUMP
1	202	6	31 AUG 73 GER		33DEG 4.8MIN N	139DEG 37.1MIN W	2018	4994	1847	*	INTERMEDIATE GERARD, C-14
1	202	7	31 AUG 73 ROS		33DEG 5.4MIN N	139DEG 37.4MIN W	2321	4994	947	*	SHALLOW ROSETTE
1	202	8	1 SEP 73 GER		33DEG 8.8MIN N	139DEG 38.4MIN W	0225		240	*	SHALLOW GERARD, C-14
1	202	9	1 SEP 73 BAG		33DEG 11.0MIN N	139DEG 39.0MIN W	1700	4994	4592	*	S1-32 BAG
1	202	10	1 SEP 73 NIS		33DEG 9.5MIN N	139DEG 36.3MIN W	2349	4994	3187	*	0 CAST ON WIRE
1	202	11	1 SEP 73 PMP		33DEG 13.5MIN N	139DEG 38.8MIN W	1035		5	*	BOW PUMP, BE-7
1	202	12	2 SEP 73 ESS		33DEG 9.0MIN N	139DEG 36.0MIN W	0117		0	*	ESSO BUCKET, POLONIUM-210
1	203	1	2 SEP 73 GER		32DEG 43.0MIN N	142DEG 5.9MIN W	2127	5215	5191	*	DEEP GERARD, RA-228
1	203	2	3 SEP 73 GER		32DEG 42.4MIN N	142DEG 14.5MIN W	0239	5247	4507	*	INTERMEDIATE GERARD, RA-228
1	204	1	5 SEP 73 ROS		31DEG 22.8MIN N	150DEG 2.1MIN W	0058	5410	5382	*	DEEP ROSETTE, BOTTOM RADON
1	204	2	5 SEP 73 GER		31DEG 22.0MIN N	150DEG 1.4MIN W	0659	5365	5292	*	DEEP GERARD, C-14
1	204	3	5 SEP 73 ROS		31DEG 22.6MIN N	150DEG 0.4MIN W	1122	5354	3447	*	INTERMEDIATE ROSETTE
1	204	4	5 SEP 73 GER		31DEG 22.7MIN N	150DEG 0.3MIN W	1546	5369	2090	*	INTERMEDIATE GERARD, C-14
1	204	5	5 SEP 73 ROS		31DEG 23.1MIN N	150DEG 0.0MIN W	2005	5324	1315	*	SHALLOW ROSETTE
1	204	6	5 SEP 73 GER		31DEG 20.5MIN N	150DEG 0.1MIN W	2319	5324	304	*	SHALLOW GERARD, C-14
1	204	7	5 SEP 73 GER		31DEG 20.5MIN N	150DEG 0.1MIN W	2400	5324	430	*	SHALLOW GERARD,1 BOTTLE,C-14
1	204	8	5 SEP 73 PMP		31DEG 21.5MIN N	150DEG 1.4MIN W	2300		5	*	BOW PUMP, BE-7
1	204	9	7 SEP 73 ROS		27DEG 31.9MIN N	151DEG 2.0MIN W	0103	5356		*	SPECIAL Q CAST,CTD TO 1500M
1	204	10	6 SEP 73 ESS		31DEG 20.0MIN N	150DEG 0.0MIN W	0020		0	*	ESSO BUCKET, POLONIUM-210
1	205	1	8 SEP 73 CTD		22DEG 22.2MIN N	152DEG 57.0MIN W	1234	5109	5071	*	CTD WITH 1 CHECK SAMPLE
1	206	1	8 SEP 73 ROS		22DEG 9.7MIN N	153DEG 50.7MIN W	2249	4634	4615	*	DEEP ROSETTE
1	206	2	9 SEP 73 ESS		22DEG 10.0MIN N	153DEG 51.0MIN W	0300		0	*	ESSO BUCKET, POLONIUM-210
1	207	1	9 SEP 73 CTD		22DEG 1.9MIN N	154DEG 31.3MIN W	0900	4631	4593	*	CTD WITH 1 CHECK SAMPLE
1	207	2	9 SEP 73 PMP		22DEG 1.0MIN N	154DEG 33.0MIN W	0845		5	*	BOW PUMP, BE-7
1	208	1	9 SEP 73 CTD		21DEG 51.2MIN N	155DEG 2.0MIN W	1512	4802	4774	*	CTD WITH 1 CHECK SAMPLE
1	209	1	9 SEP 73 CTD		21DEG 41.3MIN N	155DEG 30.0MIN W	2139	5256	5217	*	CTD WITH 1 CHECK SAMPLE
1	210	1	10 SEP 73 CTD		21DEG 30.2MIN N	156DEG 4.2MIN W	0452	3751	5660	*	CTD WITH 1 CHECK SAMPLE
2	211	1	17 SEP 73 NIS		24DEG 16.8MIN N	158DEG 19.2MIN W	0129	4574	85	*	SURFACE RADON
2	211	2	17 SEP 73 NIS		24DEG 16.8MIN N	158DEG 19.2MIN W	0210	4574	85	*	SURFACE RADON
2	212	1	18 SEP 73 ROS		30DEG 0.0MIN N	159DEG 50.5MIN W	1848	5733	5714	*	DEEP ROSETTE, BOTTOM RADON
2	212	2	19 SEP 73 GER		29DEG 59.8MIN N	159DEG 47.6MIN W	0037	5728	5638	*	DEEP GERARD, C-14
2	212	3	19 SEP 73 ROS		30DEG 0.3MIN N	159DEG 52.6MIN W	0436	5791	2993	*	INTERMEDIATE ROSETTE
2	212	4	19 SEP 73 GER		29DEG 57.7MIN N	159DEG 55.0MIN W	0819	5877	956	*	INT. GERARD,C-14(MALFUNCTION)
2	212	5	19 SEP 73 GER		29DEG 58.1MIN N	159DEG 55.7MIN W	0931	5850	2090	*	INT. GERARD, C-14 (REPEAT)
2	212	6	19 SEP 73 ROS		29DEG 58.3MIN N	159DEG 56.5MIN W	1143	5830	605	*	SHALLOW ROSETTE
2	212	7	19 SEP 73 PMP		29DEG 57.9MIN N	159DEG 57.8MIN W	1330		330	*	SURFACE PUMP,BE-7,C-14,RA-228
2	212	8	19 SEP 73 ESS		29DEG 58.2MIN N	159DEG 58.5MIN W	1640	5830		*	ESSO (MALFUNCTION)
2	212	9	19 SEP 73 PMP		29DEG 59.3MIN N	159DEG 58.8MIN W	2050	5801	4000	*	DEEP LAL PUMP
2	212	10	20 SEP 73 ESS		29DEG 58.9MIN N	160DEG 0.9MIN W	0645	5781	420	*	ESSO ROSETTE (REPEAT)
2	212	11	20 SEP 73 ROS		29DEG 57.3MIN N	160DEG 1.9MIN W	0742	5781	100	*	SURFACE RADON
2	212	12	20 SEP 73 ESS		29DEG 57.0MIN N	160DEG 2.0MIN W	0835		0	*	ESSO BUCKET, POLONIUM-210
2	213	1	22 SEP 73 GER		30DEG 58.1MIN N	168DEG 28.5MIN W	0625	5733	5614	*	DEEP GERARD, C-14
2	213	2	22 SEP 73 ROS		31DEG 0.3MIN N	168DEG 27.5MIN W	1132	5683	5675	*	DEEP ROSETTE, BOTTOM RADON
2	213	3	22 SEP 73 GER		31DEG 1.2MIN N	168DEG 27.0MIN W	1744	5672	5629	*	INTER. GERARD, C-14, PB-210
2	213	4	22 SEP 73 ROS		31DEG 1.3MIN N	168DEG 27.0MIN W	2211	5671	3005	*	INTERMEDIATE ROSETTE
2	213	5	23 SEP 73 GER		31DEG 2.9MIN N	168DEG 27.0MIN W	0305	5677	1197	*	SHALLOW GERARD, C-14
2	213	6	23 SEP 73 ROS		31DEG 4.6MIN N	168DEG 25.0MIN W	0510	5671	760	*	SHALLOW ROSETTE
2	213	7	23 SEP 73 GER		31DEG 5.8MIN N	168DEG 24.6MIN W	0904	5731	1984	*	SHALLOW GERARD, C-14, PB-210
2	213	8	23 SEP 73 PMP		31DEG 6.0MIN N	168DEG 24.0MIN W	1120		60	*	SURFACE PUMP, C-14
2	213	9	23 SEP 73 NIS		31DEG 6.3MIN N	168DEG 23.6MIN W	1109	5733	100	*	SURFACE RADON
2	213	10	23 SEP 73 ESS		31DEG 6.0MIN N	168DEG 24.0MIN W	1145	5733	0	*	ESSO BUCKET
2	213	11	21 SEP 73 PMP		31DEG 0.0MIN N	168DEG 30.0MIN W	1530		5	*	SURFACE PUMP, BE-7, RA-228
2	214	1	25 SEP 73 ROS		32DEG 1.5MIN N	176DEG 59.9MIN W	1440	5306	5298	*	DEEP ROSETTE, BOTTOM RADON
2	214	2	25 SEP 73 GER		32DEG 2.1MIN N	176DEG 59.0MIN W	2005	5377	5335	*	DEEP GERARD, C-14
2	214	3	26 SEP 73 GER		32DEG 1.0MIN N	177DEG 0.0MIN W	0448	5291	5261	*	DEEP GERARD, MOORE RA-228
2	214	4	26 SEP 73 ROS		32DEG 1.5MIN N	177DEG 4.5MIN W	0946	5364	3005	*	INTERMEDIATE ROSETTE
2	214	5	26 SEP 73 GER		32DEG 3.3MIN N	177DEG 6.6MIN W	1351	5352	1840	*	INTER. GERARD, C-14, RA-228
2	214	6	26 SEP 73 ROS		32DEG 4.1MIN N	177DEG 7.6MIN W	1615	5089	610	*	SHALLOW ROSETTE
2	214	7	26 SEP 73 GER		32DEG 4.7MIN N	177DEG 8.4MIN W	2019	5179	4657	*	DEEP GERARD, RA-228
2	214	8	27 SEP 73 GER		32DEG 6.1MIN N	177DEG 11.4MIN W	0005		633	*	SHALLOW GERARD, C-14, RA-228
2	214	9	27 SEP 73 PMP		32DEG 7.3MIN N	177DEG 10.8MIN W	0130		60	*	SURFACE PUMP,BE-7,C-14,RA-228
2	214	10	27 SEP 73 NIS		32DEG 8.0MIN N	177DEG 11.0MIN W	0150		101	*	SURFACE RADON
2	214	11	27 SEP 73 ESS		32DEG 8.0MIN N	177DEG 11.0MIN W	0214		0	*	ESSO BUCKET
2	215	1	28 SEP 73 ROS		37DEG 28.6MIN N	177DEG 19.4MIN W	1329	5539	5525	*	DEEP ROSETTE, BOTTOM RADON
2	215	2	28 SEP 73 PMP		37DEG 27.6MIN N	177DEG 20.9MIN W	1040	5523	150	*	SURFACE PUMP, BE-7, RA-228
2	215	3	28 SEP 73 ROS		37DEG 26.5MIN N	177DEG 21.4MIN W	2251	5523	2556	*	INTERMEDIATE ROSETTE
2	215	4	29 SEP 73 NIS		37DEG 24.8MIN N	177DEG 23.6MIN W	0750		100	*	SURFACE RADON
2	215	5	29 SEP 73 ROS		37DEG 22.2MIN N	177DEG 26.8MIN W	0939	5489	1604	*	SHALLOW & INTER. ROSETTE
2	215	6	29 SEP 73 ESS		37DEG 22.0MIN N	177DEG 27.0MIN W	1225		0	*	ESSO BUCKET, POLONIUM-210
2	216	1	30 SEP 73 ROS		40DEG 46.3MIN N	176DEG 58.3MIN W	1022	5899	5846	*	DEEP ROSETTE, INTERMED. RADON
2	217	1	1 OCT 73 GER		44DEG 36.8MIN N	176DEG 50.2MIN W	1421	6092	5717	*	DEEP GERARD, PB-210
2	217	2	1 OCT 73 BAG		44DEG 36.7MIN N	176DEG 49.9MIN W	2002	5983	5185	*	S1-32 BAG
2	217	3	2 OCT 73 PMP		44DEG 38.1MIN N	176DEG 53.8MIN W	0715	5726	210	*	SURFACE PUMP,BE-7,C-14,RA-228
2	217	4	2 OCT 73 GER		44DEG 39.9MIN N	177DEG 1.4MIN W	0941	5600	5534	*	DEEP GERARD, C-14
2	217	5	2 OCT 73 ROS		44DEG 40.1MIN N	177DEG 3.1MIN W	1426	5762	5496	*	DEEP ROSETTE, INTERMED. RADON
2	217	6	2 OCT 73 GER		44DEG 40.8MIN N	177DEG 1.2MIN W	2035	5436	4987	*	DEEP GERARD, SPENCER FILTERS
2	217	7	3 OCT 73 ROS		44DEG 40.1MIN N	177DEG 0.8MIN W	0013	5768	2306	*	INTERMEDIATE ROSETTE
2	217	8	3 OCT 73 GER		44DEG 39.6MIN N	177DEG 1.5MIN W	0358	5475	2085	*	INTERMEDIATE GERARD, C-14
2	217	9	3 OCT 73 ROS		44DEG 39.4MIN N	177DEG 2.8MIN W	0613	5553	275	*	SHALLOW ROSETTE,SURFACE RADON
2	217	10	3 OCT 73 GER		44DEG 38.5MIN N	177DEG 4.6MIN W	0845	5638	356	*	SHALLOW GERARD, C-14, PB-210
2	217	11	3 OCT 73 ESS		44DEG 38.5MIN N	177DEG 4.6MIN W	1045		0	*	ESSO BUCKET, POLONIUM-210
2	218	1	4 OCT 73 ROS		50DEG 26.8MIN N	176DEG 35.0MIN W	2248	7295	6000	*	DEEP ROSETTE, INTERMED. RADON
2	218	2	4 OCT 73 PMP		50DEG 27.4MIN N	176DEG 30.8MIN W	2340		180	*	SURFACE PUMP,BE-7,C-14,RA-228
2	218	3	5 OCT 73 GER		50DEG 26.2MIN N	176DEG 29.9MIN W	0431	7293	5378	*	DEEP GERARD, C-14
2	218	4	5 OCT 73 ROS		50DEG 26.0MIN N	176DEG 28.6MIN W	0839	7301	2351	*	SHALLOW & INTER. ROSETTE
2	218	5	5 OCT 73 GER		50DEG 27.9MIN N	176DEG 26.1MIN W	1244	7293	1888	*	INTERMEDIATE GERARD, C-14
2	218	6	5 OCT 73 ESS		50DEG 28.2MIN N	176DEG 22.2MIN W	1650	7293	2777	*	ESSO ROSETTE (MALFUNCTION)
2	218	7	5 OCT 73 ESS		50DEG 25.9MIN N	176DEG 21.5MIN W	2015	7293	1299	*	ESSO ROSETTE (REPEAT)
2	218	8	6 OCT 73 GER		50DEG 26.0MIN N	176DEG 20.6MIN W	0225	7302	7233	*	DP GERARD,NISKIN,C-14,BTM RN
2	218	9	6 OCT 73 NIS		50DEG 26.9MIN N	176DEG 20.9MIN W	0809		88	*	SURFACE NISKIN
2	218	10	6 OCT 73 ESS		50DEG 27.0MIN N	176DEG 21.0MIN W	0835		0	*	ESSO BUCKET
3	219	1	8 OCT 73 PMP		53DEG 6.4MIN N	177DEG 18.4MIN W	1120	3723	250	*	SURFACE PUMP,BE-7,C-14,RA-228
3	219	2	8 OCT 73 ROS		53DEG 6.6MIN N	177DEG 17.5MIN W	1511	3727	3711	*	DEEP ROSETTE, BOTTOM RADON
3	219	3	8 OCT 73 GER		53DEG 7.1MIN N	177DEG 16.4MIN W	2030	3724	3702	*	DEEP GERARD, C-14
3	219	4	9 OCT 73 ROS		53DEG 7.4MIN N	177DEG 15.1MIN W	0036	3723	725	*	SHALLOW ROSETTE,SURFACE RADON
3	219	5	9 OCT 73 ESS		53DEG 6.4MIN N	177DEG 18.4MIN W	1100	3721	0	*	ESSO BUCKET
3	220	1	13 OCT 73 ROS		46DEG 22.6MIN N	170DEG 27.2MIN E	1545	6298	6282	*	DEEP ROSETTE, BOTTOM RADON
3	221	1	14 OCT 73 ROS		45DEG 13.8MIN N	169DEG 25.5MIN E	0538	6060	6047	*	DEEP ROSETTE, BOTTOM RADON
3	221	2	14 OCT 73 PMP		45DEG 13.7MIN N	169DEG 24.0MIN E	0420	6043	300	*	SURFACE PUMP, BE-7, RA-228
3	221	3	14 OCT 73 ROS		45DEG 13.3MIN N	169DEG 23.5MIN E	1328	5654		*	INTERMEDIATE ROSETTE,LOST
3	221	4	14 OCT 73 NIS		45DEG 17.5MIN N	169DEG 22.9MIN E	2312	5640	3554	*	INTERMEDIATE NISKIN
3	221	5	14 OCT 73 NIS		45DEG 17.4MIN N	169DEG 23.3MIN E	0235	5645	74	*	SHALLOW NISKIN, SURFACE RADON
3	221	6	14 OCT 73 ESS		45DEG 17.0MIN N	169DEG 23.0MIN E	0250		0	*	ESSO BUCKET, POLONIUM-210
3	222	1	16 OCT 73 GER		40DEG 10.0MIN N	160DEG 30.0MIN E	1120	5542	3095	*	DEEP GERARD,C-14(MALFUNCTION)
3	222	2	16 OCT 73 GER		40DEG 10.0MIN N	160DEG 30.0MIN E	1349	5542	2640	*	DEEP GERARD, C-14, PB-210
3	222	3	16 OCT 73 ROS		40DEG 10.0MIN N	160DEG 30.0MIN E	1825	5579	5528	*	DEEP ROSETTE, BOTTOM RADON
3	222	4	16 OCT 73 PMP		40DEG 10.0MIN N	160DEG 30.0MIN E	1510		330	*	SURFACE PUMP,BE-7,C-14,RA-228
3	222	5	17 OCT 73 GER		40DEG 10.0MIN N	160DEG 30.0MIN E	0122	5569	1990	*	SHALLOW GERARD, C-14, PB-210
3	222	6	17 OCT 73 NIS		40DEG 10.0MIN N	160DEG 30.0MIN E	0616	5570	5449	*	DEEP NISKIN
3	222	7	17 OCT 73 GER		40DEG 10.0MIN N	160DEG 30.0MIN E	1218	5622	4760	*	DP GERARD,C-14,PB-210(MALF)
3	222	8	17 OCT 73 NIS		40DEG 10.0MIN N	160DEG 30.0MIN E	1730	5594	1882	*	INTERMEDIATE NISKIN
3	222	9	17 OCT 73 ROS		40DEG 10.0MIN N	160DEG 30.0MIN E	2229	5647	656	*	SHALLOW ROSETTE,SURFACE RADON
3	222	10	18 OCT 73 ESS		40DEG 18.8MIN N	160DEG 40.5MIN E	0024		0	*	ESSO BUCKET
3	223	1	20 OCT 73 GER		34DEG 58.4MIN N	151DEG 50.6MIN E	1010	6141	5618	*	DEEP GERARD, C-14
3	223	2	20 OCT 73 ROS		34DEG 58.4MIN N	151DEG 50.6MIN E	1520	6131	6094	*	DEEP ROSETTE, BOTTOM RADON
3	223	3	20 OCT 73 PMP		34DEG 58.4MIN N	151DEG 50.6MIN E	1310		300	*	SURFACE PUMP, BE-7, C-14
3	223	4	20 OCT 73 GER		35DEG 0.3MIN N	151DEG 43.4MIN E	2016	6134	2091	*	INTERMEDIATE GERARD, C-14
3	223	5	20 OCT 73 ROS		35DEG 0.0MIN N	151DEG 45.0MIN E	2310	6128	3001	*	INTERMEDIATE ROSETTE
3	223	6	21 OCT 73 GER		34DEG 58.4MIN N	151DEG 48.1MIN E	0549	6133	6103	*	BOTTOM GERARD, RA-228
3	223	7	21 OCT 73 GER		34DEG 58.4MIN N	151DEG 48.1MIN E	1225	6060	5452	*	DEEP GERARD, RA-228
3	223	8	21 OCT 73 ROS		34DEG 58.4MIN N	151DEG 48.1MIN E	1624	6112	440	*	SHALLOW ROSETTE,SURFACE RADON
3	223	9	24 OCT 73 ESS		34DEG 58.4MIN N	151DEG 48.1MIN E	0430	6124	0	*	ESSO BUCKET, ZODIAC SAMPLES
3	224	1	24 OCT 73 ROS		34DEG 15.6MIN N	141DEG 58.0MIN E	0611	9739	6000	*	DEEP ROSETTE, INTERMED. RADON
3	224	2	24 OCT 73 GER		34DEG 18.2MIN N	142DEG 4.3MIN E	1215	9102	5950	*	DEEP & INTER. GERARD, C-14
3	224	3	24 OCT 73 GER		34DEG 13.4MIN N	141DEG 57.2MIN E	2119	9180	800	*	TRENCH GERARD, NISKIN, C-14
3	224	4	25 OCT 73 PMP		34DEG 14.8MIN N	142DEG 0.0MIN E	0430		250	*	SURFACE PUMP,BE-7,C-14,RA-228
3	224	5	25 OCT 73 ROS		34DEG 15.3MIN N	142DEG 0.5MIN E	0446		1303	*	SHALLOW,& INTER. ROSETTE
3	224	6	25 OCT 73 ESS		34DEG 15.0MIN N	142DEG 0.0MIN E	0620		0	*	ESSO BUCKET, POLONIUM-210
4	225	1	5 NOV 73 PMP		32DEG 37.0MIN N	161DEG 55.5MIN E	2320		350	*	SURFACE PUMP, C-14, RA-228
4	225	2	6 NOV 73 NIS		32DEG 37.0MIN N	161DEG 55.0MIN E	0633	5948	5935	*	DEEP NISKIN, BOTTOM RADON
4	225	3	6 NOV 73 GER		32DEG 38.5MIN N	161DEG 53.0MIN E	1325	5942	5608	*	DEEP GERARD, C-14
4	225	4	6 NOV 73 CTD		32DEG 39.5MIN N	161DEG 50.5MIN E	1800			*	ABORTED AT 900 METERS
4	225	5	6 NOV 73 NIS		32DEG 39.5MIN N	161DEG 49.5MIN E	2104	5958	2218	*	INTERMEDIATE NISKIN
4	225	6	6 NOV 73 NIS		32DEG 39.5MIN N	161DEG 48.0MIN E	2303	5955	3218	*	INTERMEDIATE NISKIN
4	225	7	7 NOV 73 GER		32DEG 39.5MIN N	161DEG 47.0MIN E	0126	5945	2487	*	INTERMEDIATE GERARD, C-14
4	225	8	7 NOV 73 NIS		32DEG 40.0MIN N	161DEG 47.0MIN E	0432	5939	644	*	SHALLOW NISKIN
4	225	9	7 NOV 73 CTD		32DEG 40.0MIN N	161DEG 47.0MIN E	0725	5917		*	CTD (TEST)
4	225	10	7 NOV 73 ESS		32DEG 40.0MIN N	161DEG 47.0MIN E	1010		0	*	ESSO BUCKET

STATION AND CAST DESCRIPTION

GEOSECS PACIFIC R/V MELVILLE

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
4	226	1	9 NOV 73	PMP	30DEG 34.0MIN N	170DEG 38.5MIN E	0845		350	*	SURFACE PUMP, C-14, RA-228
4	226	2	9 NOV 73	ROS	30DEG 34.0MIN N	170DEG 36.5MIN E	1328	5491	5478	*	DEEP ROSETTE, BOTTOM RADON
4	226	3	9 NOV 73	GER	30DEG 35.0MIN N	170DEG 36.5MIN E	1857	5485	1542	*	INTERMEDIATE GERARD, C-14
4	226	4	9 NOV 73	NIS	30DEG 36.0MIN N	170DEG 36.5MIN E	2229	5485	4784	*	INTERMEDIATE NISKIN
4	226	5	10 NOV 73	GER	30DEG 37.0MIN N	170DEG 40.5MIN E	0355	5467	5434	*	DEEP GERARD, C-14, RA-228
4	226	6	10 NOV 73	SPE	30DEG 40.0MIN N	170DEG 40.0MIN E	1400	5603	3995	*	LAL PUMP
4	226	7	10 NOV 73	NIS	30DEG 42.0MIN N	170DEG 38.0MIN E	2104	5603	653	*	SHALLOW NISKIN, SURFACE RADON
4	226	8	10 NOV 73	GER	30DEG 41.0MIN N	170DEG 38.0MIN E	2309	5591	4020	*	INTERMEDIATE GERARD, C-14
4	226	9	11 NOV 73	ESS	30DEG 40.5MIN N	170DEG 38.0MIN E	0120		0	*	ESSO BUCKET
4	227	1	12 NOV 73	PMP	24DEG 59.5MIN N	170DEG 5.0MIN E	0930		350	*	SURFACE PUMP, C-14, RA-228
4	227	2	12 NOV 73	ROS	25DEG 0.0MIN N	170DEG 5.0MIN E	1212	5900	5886	*	DEEP ROSETTE, BOTTOM RADON
4	227	3	12 NOV 73	GER	25DEG 4.5MIN N	170DEG 4.0MIN E	1837	5956	2490	*	INTERMEDIATE GERARD, C-14
4	227	4	12 NOV 73	ROS	25DEG 4.5MIN N	170DEG 3.0MIN E	2142	5964	3274	*	INTERMEDIATE ROSETTE
4	227	5	13 NOV 73	GER	25DEG 5.0MIN N	170DEG 3.0MIN E	0307	6059	5957	*	DEEP GERARD, C-14
4	227	6	13 NOV 73	BAG	25DEG 7.0MIN N	170DEG 3.0MIN E	1308	5964	5744	*	SI-32 BAG
4	227	7	14 NOV 73	NIS	25DEG 12.0MIN N	170DEG 6.5MIN E	0225	5964	548	*	SHALLOW NISKIN, SURFACE RADON
4	227	8	14 NOV 73	ESS	25DEG 12.0MIN N	170DEG 6.5MIN E	0315		0	*	ESSO BUCKET
4	228	1	15 NOV 73	PMP	19DEG 1.0MIN N	169DEG 21.0MIN E	1545		350	*	SURFACE PUMP, RA-228
4	228	2	15 NOV 73	ROS	19DEG 1.0MIN N	169DEG 21.0MIN E	1833	5307	5294	*	DEEP ROSETTE, BOTTOM RADON
4	228	3	16 NOV 73	ROS	19DEG 4.0MIN N	169DEG 24.0MIN E	0302	5299	2887	*	INTERMEDIATE ROSETTE
4	228	4	16 NOV 73	ESS	19DEG 4.0MIN N	169DEG 25.0MIN E	0537	5297	1489	*	ESSO ROSETTE
4	228	5	16 NOV 73	NIS	19DEG 4.0MIN N	169DEG 25.0MIN E	0754	5297	1610	*	SHALLOW NISKIN
4	228	6	16 NOV 73	ESS	19DEG 4.0MIN N	169DEG 25.0MIN E	0915		0	*	ESSO BUCKET
4	229	1	18 NOV 73	PMP	12DEG 53.0MIN N	173DEG 28.0MIN E	1110		50	*	SURFACE PUMP, C-14, RA-228
4	229	2	18 NOV 73	GER	12DEG 53.0MIN N	173DEG 28.0MIN E	1258	5721	345	*	SHALLOW GERARD, C-14
4	229	3	18 NOV 73	ROS	12DEG 53.0MIN N	173DEG 28.0MIN E	1615	5730	5721	*	DEEP ROSETTE, BOTTOM RADON
4	229	4	18 NOV 73	GER	12DEG 54.5MIN N	173DEG 28.0MIN E	2033	5719	2286	*	INTERMEDIATE GERARD, C-14
4	229	5	18 NOV 73	ROS	12DEG 55.5MIN N	173DEG 28.0MIN E	2313	5715	3134	*	INTERMEDIATE ROSETTE
4	229	6	19 NOV 73	GER	12DEG 56.0MIN N	173DEG 25.0MIN E	0259	5719	5689	*	DEEP GERARD, C-14
4	229	7	19 NOV 73	NIS	12DEG 56.0MIN N	173DEG 23.0MIN E	0641	5729	1683	*	SHALLOW NISKIN, SURFACE RADON
4	229	8	19 NOV 73	ESS	12DEG 56.0MIN N	173DEG 23.0MIN E	0745		0	*	ESSO BUCKET, POLONIUM-210
4	230	1	20 NOV 73	ROS	12DEG 29.5MIN N	177DEG 26.2MIN E	1235	5751	5742	*	DEEP ROSETTE, PB-210
4	231	1	21 NOV 73	PMP	14DEG 6.5MIN N	178DEG 38.0MIN W	2115		140	*	SURFACE PUMP, C-14, RA-228
4	231	2	21 NOV 73	GER	14DEG 6.5MIN N	178DEG 38.0MIN W	2329	5695	5620	*	DEEP GERARD, PB-210
4	231	3	22 NOV 73	ROS	14DEG 7.0MIN N	178DEG 34.0MIN W	0505	5616		*	DEEP ROSETTE (MALFUNCTION)
4	231	4	22 NOV 73	GER	14DEG 8.0MIN N	178DEG 36.0MIN W	1036	5270	2574	*	INTER. GERARD, C-14, RA-228
4	231	5	22 NOV 73	NIS	14DEG 9.0MIN N	178DEG 35.0MIN W	1517	5663	5651	*	DEEP NISKIN, BOTTOM RADON
4	231	6	22 NOV 73	GER	14DEG 9.5MIN N	178DEG 34.0MIN W	1958	5671	5596	*	DEEP GERARD, C-14
4	231	7	23 NOV 73	NIS	14DEG 11.0MIN N	178DEG 34.5MIN W	0010	5699	3871	*	SHALLOW NISKIN
4	231	8	23 NOV 73	GER	14DEG 11.5MIN N	178DEG 34.0MIN W	0308	5675	2775	*	SHALLOW GERARD, C-14
4	231	9	23 NOV 73	NIS	14DEG 11.0MIN N	178DEG 36.0MIN W	0453	5675	552	*	SURFACE RADON
4	231	10	23 NOV 73	GER	14DEG 10.0MIN N	178DEG 37.5MIN W	0615		803	*	SHALLOW GERARD, PB-210
4	231	11	23 NOV 73	ESS	14DEG 10.0MIN N	178DEG 37.0MIN W	0715		0	*	ESSO BUCKET
4	232	1	24 NOV 73	ROS	15DEG 24.0MIN N	176DEG 13.0MIN W	0224	5661	5646	*	DEEP ROSETTE
4	233	1	26 NOV 73	PMP	18DEG 13.0MIN N	169DEG 8.0MIN W	0500		350	*	SURFACE PUMP, RA-228
4	233	2	26 NOV 73	ROS	18DEG 14.0MIN N	169DEG 8.0MIN W	0810	5004	88	*	DEEP ROS FAILED,ONLY SURF RN
4	233	3	26 NOV 73	ROS	18DEG 14.0MIN N	169DEG 8.0MIN W	1138	4977	4969	*	DEEP ROSETTE
4	233	4	26 NOV 73	NIS	18DEG 14.0MIN N	169DEG 8.0MIN W	1636	4903	1382	*	SHALLOW & INTERMEDIATE NISKIN
4	233	5	26 NOV 73	ESS	18DEG 14.0MIN N	169DEG 8.0MIN W	1740		0	*	ESSO BUCKET
4	234	1	28 NOV 73	ROS	19DEG 52.0MIN N	163DEG 14.8MIN W	0627	5051	5029	*	DEEP ROSETTE
5	235	1	6 DEC 73	PMP	16DEG 45.6MIN N	161DEG 19.8MIN W	0245	5564	130	*	SURFACE PUMP,BE-7,C-14,RA-228
5	235	2	6 DEC 73	ROS	16DEG 45.4MIN N	161DEG 23.7MIN W	0503	5564		*	DEEP ROSETTE (MALFUNCTION)
5	235	3	6 DEC 73	GER	16DEG 45.6MIN N	161DEG 19.8MIN W	0948	5557	5510	*	DEEP GERARD, C-14
5	235	4	6 DEC 73	NIS	16DEG 45.4MIN N	161DEG 23.7MIN W	1432	5539	5530	*	DEEP NISKIN, BOTTOM RADON
5	235	5	6 DEC 73	GER	16DEG 47.3MIN N	161DEG 23.2MIN W	1846	5481	2690	*	INTERMEDIATE GERARD,BE-7,C-14
5	235	6	6 DEC 73	ROS	16DEG 47.3MIN N	161DEG 23.2MIN W	2119	5564	1006	*	SHALLOW ROSETTE
5	235	7	6 DEC 73	GER	16DEG 47.0MIN N	161DEG 23.0MIN W	2347	5584	592	*	SHALLOW GERARD, C-14
5	235	8	7 DEC 73	ROS	16DEG 47.4MIN N	161DEG 22.9MIN W	0259	5481	4096	*	INTERMEDIATE ROSETTE
5	235	9	7 DEC 73	ESS	16DEG 47.4MIN N	161DEG 22.9MIN W	0520		0	*	ESSO BUCKET
5	236	1	8 DEC 73	ROS	13DEG 16.4MIN N	163DEG 58.2MIN W	0803	5348	5331	*	DEEP ROSETTE
5	237	1	8 DEC 73	ROS	12DEG 30.3MIN N	165DEG 25.8MIN W	2240	5036	5021	*	DEEP ROSETTE, BOTTOM RADON
5	237	2	9 DEC 73	NIS	12DEG 28.7MIN N	165DEG 25.3MIN W	0308	5163	2372	*	SHALLOW & INTERMEDIATE NISKIN
5	237	3	9 DEC 73	ESS	12DEG 29.7MIN N	165DEG 25.3MIN W	0420		0	*	ESSO BUCKET
5	238	1	10 DEC 73	PMP	8DEG 11.9MIN N	167DEG 4.5MIN W	0700		300	*	SURF PUMP,RA-228 GLASS FILTER
5	238	2	10 DEC 73	ROS	8DEG 11.9MIN N	167DEG 4.5MIN W	1004	5205	5188	*	DEEP ROSETTE, BOTTOM RADON
5	238	3	10 DEC 73	ROS	8DEG 11.9MIN N	167DEG 4.5MIN W	1724	5193	4841	*	SHALLOW & INTER. ROSETTE
5	238	4	10 DEC 73	NIS	8DEG 11.9MIN N	167DEG 4.5MIN W	2120	5189	3303	*	INTERMEDIATE NISKIN
5	238	5	10 DEC 73	NIS	8DEG 11.9MIN N	167DEG 4.5MIN W	2312	5191	242	*	SHALLOW NISKIN, SURFACE RADON
5	238	6	11 DEC 73	ESS	8DEG 11.9MIN N	167DEG 4.5MIN W	0001		0	*	ESSO BUCKET
5	239	1	12 DEC 73	ROS	5DEG 53.0MIN N	172DEG 0.9MIN W	1249	5613	5605	*	DEEP ROSETTE, BOTTOM RADON
5	239	2	12 DEC 73	GER	5DEG 53.0MIN N	171DEG 59.8MIN W	1801	5636	5491	*	DEEP GERARD, C-14
5	239	3	12 DEC 73	ROS	5DEG 54.8MIN N	172DEG 0.8MIN W	2237	5774	5755	*	INTERMEDIATE ROSETTE
5	239	4	13 DEC 73	GER	5DEG 55.5MIN N	172DEG 1.4MIN W	0305	5779	3839	*	INTERMEDIATE GERARD, C-14
5	239	5	13 DEC 73	NIS	5DEG 53.3MIN N	172DEG 2.2MIN W	0548	5779	1038	*	SHALLOW NISKIN
5	239	6	13 DEC 73	GER	5DEG 55.6MIN N	172DEG 0.9MIN W	0754	5868	1044	*	SHALLOW GERARD, C-14
5	239	7	13 DEC 73	PMP	5DEG 58.2MIN N	172DEG 1.5MIN W	1139	5789	5494	*	LAL PUMP
5	239	8	13 DEC 73	PMP	5DEG 58.4MIN N	172DEG 1.2MIN W	1502		50	*	SURFACE PUMP,BE-7,C-14,RA-228
5	239	9	14 DEC 73	BAG	5DEG 59.1MIN N	172DEG 0.0MIN W	0103	5789	5422	*	SI-32 BAG
5	239	10	14 DEC 73	ESS	6DEG 4.6MIN N	171DEG 55.8MIN W	1150		0	*	ESSO BUCKET
5	240	1	15 DEC 73	PMP	3DEG 23.2MIN N	177DEG 11.1MIN W	2130		300	*	SURF PUMP,RA-228 GLASS FILTER
5	240	2	15 DEC 73	ROS	3DEG 22.3MIN N	177DEG 13.3MIN W	2358	5178	5170	*	DEEP ROSETTE
5	240	3	16 DEC 73	NIS	3DEG 20.9MIN N	177DEG 15.2MIN W	0449		230	*	SURFACE NISKIN, SURFACE RADON
5	240	4	16 DEC 73	NIS	3DEG 21.1MIN N	177DEG 13.3MIN W	0642	5317	2412	*	INTERMEDIATE NISKIN
5	240	5	16 DEC 73	ESS	3DEG 21.1MIN N	177DEG 13.3MIN W	0750		0	*	ESSO BUCKET
5	241	1	17 DEC 73	ROS	4DEG 33.8MIN N	179DEG 0.2MIN E	0800	5738	5728	*	DEEP ROSETTE, BOTTOM RADON
5	241	2	17 DEC 73	GER	4DEG 33.5MIN N	178DEG 59.5MIN E	1547	5695	5670	*	DEEP GERARD, C-14
5	241	3	17 DEC 73	ROS	4DEG 32.9MIN N	178DEG 59.1MIN E	2100	5691		*	INTERMEDIATE ROSETTE (FAILED)
5	241	4	17 DEC 73	NIS	4DEG 32.7MIN N	178DEG 59.3MIN E	2249	5707	1076	*	SHALLOW NISKIN
5	241	5	18 DEC 73	GER	4DEG 32.3MIN N	178DEG 59.5MIN E	0208	5679		*	DP GERARD,RA-228 (PRETRIPPED)
5	241	6	18 DEC 73	GER	4DEG 32.4MIN N	179DEG 0.6MIN E	0740	5683	2990	*	INTER. GERARD, C-14, PB-210
5	241	7	18 DEC 73	ROS	4DEG 32.2MIN N	179DEG 0.0MIN E	1008	5685	4092	*	INTERMEDIATE ROSETTE
5	241	8	18 DEC 73	GER	4DEG 31.4MIN N	179DEG 0.0MIN E	1456	5594	947	*	SHALLOW GERARD, C-14
5	241	9	18 DEC 73	GER	4DEG 30.5MIN N	179DEG 0.1MIN E	1836	5654	5596	*	DEEP GERARD, PB-210
5	241	10	18 DEC 73	ESS	4DEG 30.6MIN N	179DEG 0.0MIN E	2115		0	*	ESSO BUCKET
5	241	11	17 DEC 73	PMP	4DEG 34.0MIN N	179DEG 0.0MIN E	0800		5	*	BOW PUMP, BE-7
5	242	1	19 DEC 73	ROS	3DEG 4.8MIN N	178DEG 55.8MIN E	0811	5447	5437	*	DEEP ROSETTE
5	243	1	19 DEC 73	ROS	2DEG 0.5MIN N	178DEG 56.1MIN E	2210	5529	5517	*	DEEP ROSETTE
5	244	1	20 DEC 73	ROS	1DEG 1.5MIN N	178DEG 55.8MIN E	1100	5708	5685	*	DEEP ROSETTE
5	244	2	20 DEC 73	NIS	1DEG 1.5MIN N	178DEG 56.0MIN E	1424	5642	691	*	SHALLOW NISKIN, SURFACE RADON
5	244	3	20 DEC 73	ROS	1DEG 1.6MIN N	178DEG 52.0MIN E	1607	5575	2594	*	INTERMEDIATE ROSETTE
5	245	1	21 DEC 73	ROS	0DEG 31.5MIN N	178DEG 59.6MIN E	0101	5419	5404	*	DEEP ROSETTE
5	246	1	21 DEC 73	PMP	0DEG 0.0MIN S	179DEG 0.0MIN E	0720		350	*	SURFACE PUMP,BE-7,C-14,RA-228
5	246	2	21 DEC 73	ROS	0DEG 0.0MIN S	178DEG 59.0MIN E	1025	5412	5403	*	DEEP ROSETTE, BOTTOM RADON
5	246	3	21 DEC 73	NIS	0DEG 1.5MIN S	178DEG 54.4MIN E	1833	5416	3479	*	INTERMEDIATE NISKIN
5	246	4	21 DEC 73	GER	0DEG 0.7MIN S	178DEG 53.0MIN E	2143	5422	2981	*	INTERMEDIATE GERARD, C-14
5	246	5	22 DEC 73	ROS	0DEG 0.9MIN S	178DEG 53.0MIN E	0023	5404	651	*	SHALLOW ROSETTE,SURFACE RADON
5	246	6	22 DEC 73	ESS	0DEG 1.5MIN S	178DEG 52.3MIN E	0210		0	*	ESSO BUCKET
5	247	1	22 DEC 73	ROS	0DEG 28.7MIN S	178DEG 59.0MIN E	0821	5445	5420	*	DEEP ROSETTE
5	248	1	22 DEC 73	ROS	1DEG 2.0MIN S	179DEG 2.0MIN E	1620	5447	5435	*	DEEP ROSETTE
5	248	2	22 DEC 73	NIS	1DEG 2.0MIN S	179DEG 2.0MIN E	1858	5431	274	*	SURFACE NISKIN, SURFACE RADON
5	248	3	22 DEC 73	ROS	1DEG 0.1MIN S	178DEG 58.8MIN E	2054	5429	2519	*	INTERMEDIATE ROSETTE
5	248	4	22 DEC 73	ESS	1DEG 0.1MIN S	178DEG 58.8MIN E	2315		0	*	ESSO BUCKET
5	249	1	23 DEC 73	ROS	2DEG 1.8MIN S	179DEG 1.2MIN E	0753	5469	5458	*	DEEP ROSETTE
5	250	1	23 DEC 73	ROS	2DEG 59.0MIN S	178DEG 59.0MIN E	1826	5453	5436	*	DEEP ROSETTE
5	251	1	24 DEC 73	GER	4DEG 34.0MIN S	179DEG 0.0MIN E	0904	5554	5537	*	DEEP GERARD, C-14, RA-228
5	251	2	24 DEC 73	PMP	4DEG 32.0MIN S	178DEG 58.0MIN E	0830		185	*	SURFACE PUMP,BE-7,C-14,RA-228
5	251	3	24 DEC 73	GER	4DEG 31.0MIN S	178DEG 57.5MIN E	1420	5475	5462	*	DEEP GERARD, C-14, RA-228
5	251	4	24 DEC 73	ROS	4DEG 34.0MIN S	178DEG 57.0MIN E	1920	5376	5357	*	DEEP ROSETTE
5	251	5	25 DEC 73	GER	4DEG 33.0MIN S	178DEG 55.0MIN E	0159	5214	4541	*	DEEP GERARD, C-14
5	251	6	25 DEC 73	ROS	4DEG 34.0MIN S	178DEG 53.0MIN E	0538	5300	2018	*	INTERMEDIATE ROSETTE
5	251	7	25 DEC 73	GER	4DEG 33.4MIN S	178DEG 51.7MIN E	0849	5309	2186	*	INTERMEDIATE GERARD, C-14
5	251	8	25 DEC 73	ESS	4DEG 33.4MIN S	178DEG 51.7MIN E	1015		0	*	ESSO BUCKET, POLONIUM-210
5	252	1	26 DEC 73	ROS	8DEG 29.1MIN S	178DEG 5.8MIN W	1826	5369	5357	*	DEEP ROSETTE
5	252	2	26 DEC 73	NIS	8DEG 29.1MIN S	178DEG 5.8MIN W	2152	5353	1673	*	INTERMEDIATE NISKIN,SURF RN
5	252	3	26 DEC 73	ESS	8DEG 29.1MIN S	178DEG 5.8MIN W	2245		0	*	ESSO BUCKET
5	253	1	28 DEC 73	ROS	12DEG 40.9MIN S	175DEG 3.0MIN W	0636	4664	4651	*	DEEP ROSETTE, BOTTOM RADON
5	254	1	28 DEC 73	ROS	13DEG 14.5MIN S	173DEG 48.5MIN W	1917	4736	4717	*	DEEP ROSETTE, BOTTOM RADON
6	255	1	3 JAN 74	ROS	12DEG 11.1MIN S	169DEG 54.0MIN W	2145	5057	5032	*	DEEP ROSETTE
6	255	2	3 JAN 74	PMP	12DEG 11.1MIN S	169DEG 54.0MIN W	2010		10	*	SURFACE PUMP, RA-228
6	256	1	5 JAN 74	ROS	9DEG 11.5MIN S	169DEG 0.5MIN W	0345	5073	5054	*	DEEP ROSETTE, BOTTOM RADON
6	256	2	5 JAN 74	NIS	9DEG 11.5MIN S	169DEG 0.5MIN W	0815	5122	2623	*	INTERMEDIATE NISKIN
6	256	3	5 JAN 74	PMP	9DEG 11.5MIN S	169DEG 0.5MIN W	0549		5	*	BOW PUMP, RA-228
6	257	1	5 JAN 74	ROS	10DEG 10.5MIN S	169DEG 58.6MIN W	1956	5180	5166	*	DEEP ROSETTE, BOTTOM RADON
6	257	2	6 JAN 74	PMP	10DEG 10.0MIN S	170DEG 0.0MIN W	0115		100	*	BOW PUMP, C-14, RA-228
6	257	3	6 JAN 74	GER	10DEG 10.2MIN S	169DEG 55.0MIN W	0042	5180	5073	*	DEEP GERARD, C-14
6	257	4	6 JAN 74	ROS	10DEG 10.0MIN S	170DEG 0.0MIN W	0521	5138	3340	*	INTERMEDIATE ROSETTE
6	257	5	6 JAN 74	GER	10DEG 7.0MIN S	169DEG 58.9MIN W	0903	4962	2095	*	INTERMEDIATE GERARD, C-14
6	257	6	6 JAN 74	NIS	10DEG 7.2MIN S	169DEG 59.0MIN W	1037	5156	251	*	SHALLOW NISKIN
6	257	7	6 JAN 74	GER	10DEG 5.8MIN S	169DEG 59.3MIN W	1200	5156	397	*	SHALLOW GERARD, C-14
6	257	8	6 JAN 74	ESS	10DEG 5.0MIN S	169DEG 59.0MIN W	1315		0	*	ESSO BUCKET, POLONIUM-210
6	258	1	7 JAN 74	CTD	13DEG 38.4MIN S	170DEG 21.2MIN W	1219	4656	4629	*	CTD WITH 10 CHECK SAMPLES
6	259	1	8 JAN 74	ROS	15DEG 3.7MIN S	170DEG 22.7MIN W	0350	4715	4700	*	DEEP ROSETTE, BOTTOM RADON
6	259	2	8 JAN 74	NIS	15DEG 3.6MIN S	170DEG 20.8MIN W	0709	4705	1481	*	SHALLOW NISKIN

xxx

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
6	260	1	8 JAN 74	PMP	15DEG 13.0MIN S	170DEG 2.0MIN W	1130		200	*	SURFACE PUMP, RA-228
6	260	2	8 JAN 74	ROS	15DEG 16.3MIN S	169DEG 54.4MIN W	1316	5036	5022	*	BOTTOM ROSETTE, RADON
6	260	3	8 JAN 74	ROS	15DEG 16.5MIN S	170DEG 0.0MIN W	1914	5010	3374	*	INTERMEDIATE ROSETTE
6	260	4	8 JAN 74	NIS	15DEG 14.1MIN S	170DEG 1.9MIN W	2250	4999	616	*	SHALLOW NISKIN, SURFACE RADON
6	260	5	8 JAN 74	ESS	15DEG 13.8MIN S	170DEG 2.4MIN W	2335		0	*	ESSO BUCKET, POLONIUM-210
6	261	1	9 JAN 74	ROS	15DEG 46.5MIN S	169DEG 11.0MIN W	0812	5237	5219	*	DEEP ROSETTE
6	261	2	9 JAN 74	NIS	15DEG 45.6MIN S	169DEG 9.7MIN W	1206	5206	689	*	SHALLOW NISKIN
6	262	1	9 JAN 74	ROS	16DEG 1.5MIN S	168DEG 28.8MIN W	1926	5208	5185	*	DEEP ROSETTE
6	263	1	10 JAN 74	PMP	16DEG 41.9MIN S	167DEG 3.7MIN W	0040		250	*	SURFACE PUMP,BE-7,C-14,RA-228
6	263	2	10 JAN 74	GER	16DEG 40.9MIN S	167DEG 3.9MIN W	1018	5734	5693	*	DEEP GERARD, PB-210
6	263	3	10 JAN 74	ROS	16DEG 39.8MIN S	167DEG 4.6MIN W	1455	5713	5698	*	DEEP ROSETTE, BOTTOM RADON
6	263	4	10 JAN 74	GER	16DEG 38.8MIN S	167DEG 6.1MIN W	2029	5716	5676	*	DEEP GERARD, C-14
6	263	5	11 JAN 74	ROS	16DEG 38.7MIN S	167DEG 7.8MIN W	0019	5555	3529	*	INTERMEDIATE ROSETTE
6	263	6	11 JAN 74	GER	16DEG 38.1MIN S	167DEG 8.8MIN W	0330	5623	1242	*	SHALLOW GERARD, C-14
6	263	7	11 JAN 74	NIS	16DEG 37.3MIN S	167DEG 7.8MIN W	0537	5600	787	*	SHALLOW NISKIN
6	263	8	11 JAN 74	GER	16DEG 37.7MIN S	167DEG 7.9MIN W	0712	5600	2193	*	INTERMEDIATE GERARD, PB-210
6	263	9	11 JAN 74	BAG	16DEG 36.3MIN S	167DEG 4.6MIN W	1229	5648	5390	*	S1-32 BAG
6	263	10	12 JAN 74	GER	16DEG 39.1MIN S	167DEG 6.3MIN W	0641	5677	4921	*	DP GER,C-14,RA-228,FIBER NISK
6	263	11	12 JAN 74	GER	16DEG 38.2MIN S	167DEG 6.5MIN W	1232	5536	5486	*	DP GER,C-14,RA-228,FIBER NISK
6	263	12	12 JAN 74	GER	16DEG 37.9MIN S	167DEG 7.6MIN W	2047	5673	5638	*	DEEP GER,RA-228, FIBER NISKIN
6	263	13	13 JAN 74	ROS	16DEG 36.3MIN S	167DEG 11.0MIN W	0018	5654	162	*	SURFACE RADON
6	263	14	13 JAN 74	GER	16DEG 36.8MIN S	167DEG 11.1MIN W	0212	5550	3275	*	INTERMEDIATE GERARD, C-14
6	263	15	13 JAN 74	ESS	16DEG 37.0MIN S	167DEG 11.0MIN W	0355		0	*	ESSO BUCKET, POLONIUM-210
6	264	1	13 JAN 74	ROS	17DEG 16.4MIN S	166DEG 0.3MIN W	1457	5474	5443	*	DEEP ROSETTE
6	265	1	14 JAN 74	PMP	17DEG 46.5MIN S	164DEG 59.7MIN W	1229		300	*	SURFACE PUMP, RA-228
6	265	2	14 JAN 74	ROS	17DEG 48.0MIN S	164DEG 58.8MIN W	0234	5420	5404	*	DEEP ROSETTE, BOTTOM RADON
6	265	3	14 JAN 74	ROS	17DEG 47.4MIN S	164DEG 59.4MIN W	0936	5368	3431	*	INTERMEDIATE ROSETTE
6	265	4	14 JAN 74	NIS	17DEG 46.9MIN S	164DEG 59.7MIN W	1213	5418	91	*	SURFACE RADON
6	265	5	14 JAN 74	ESS	17DEG 46.5MIN S	164DEG 59.7MIN W	1250		0	*	ESSO BUCKET, POLONIUM-210
6	266	1	15 JAN 74	ROS	18DEG 29.0MIN S	168DEG 3.0MIN W	0710	5372	5339	*	DEEP ROSETTE
6	267	1	16 JAN 74	PMP	19DEG 15.4MIN S	171DEG 24.7MIN W	2000		350	*	SURFACE PUMP, RA-228
6	267	2	16 JAN 74	ESS	19DEG 15.0MIN S	171DEG 24.0MIN W	0901	5479	1981	*	ESSO ROSETTE
6	267	3	16 JAN 74	NIS	19DEG 15.3MIN S	171DEG 25.5MIN W	1243	5488	689	*	SHALLOW NISKIN, SURFACE RADON
6	267	4	16 JAN 74	NIS	19DEG 15.5MIN S	171DEG 27.6MIN W	1535		3388	*	INTERMEDIATE NISKIN
6	267	5	16 JAN 74	ROS	19DEG 15.0MIN S	171DEG 27.9MIN W	2118	5499	5482	*	DEEP ROSETTE, BOTTOM RADON
6	267	6	17 JAN 74	ESS	19DEG 15.0MIN S	171DEG 28.0MIN W	0010		0	*	ESSO, BUCKET, POLONIUM-210
6	268	1	17 JAN 74	ROS	20DEG 30.6MIN S	172DEG 48.4MIN W	1300	6286	5971	*	DEEP ROSETTE
6	268	2	17 JAN 74	NIS	20DEG 28.9MIN S	172DEG 48.6MIN W	1721	6305	2786	*	INTERMEDIATE NISKIN
6	269	1	18 JAN 74	PMP	23DEG 57.9MIN S	174DEG 31.3MIN W	1809		150	*	SURFACE PUMP,BE-7,C-14,RA-228
6	269	2	18 JAN 74	GER	23DEG 58.0MIN S	174DEG 28.5MIN W	1915	5939	1798	*	INTERMEDIATE GERARD, PB-210
6	269	3	18 JAN 74	ROS	23DEG 59.0MIN S	174DEG 26.0MIN W	2332	5999	5986	*	DEEP ROSETTE, BOTTOM RADON
6	269	4	19 JAN 74	GER	23DEG 59.6MIN S	174DEG 24.9MIN W	0457	5958	5902	*	DEEP GERARD,MOORE NISKIN,C-14
6	269	5	19 JAN 74	NIS	24DEG 0.1MIN S	174DEG 24.5MIN W	0834	5966	1292	*	SHALLOW NISKIN
6	269	6	19 JAN 74	GER	23DEG 59.8MIN S	174DEG 24.2MIN W	1110	5950	5911	*	DEEP GERARD, PB-210
6	269	7	19 JAN 74	ROS	23DEG 59.2MIN S	174DEG 26.9MIN W	1603	6371	4155	*	INTERMEDIATE ROSETTE
6	269	8	19 JAN 74	GER	23DEG 59.3MIN S	174DEG 29.0MIN W	1935	6145	3350	*	INTERMEDIATE GERARD, C-14
6	269	9	20 JAN 74	PMP	24DEG 0.5MIN S	174DEG 26.0MIN W	0723		5514	*	LAL PUMP
6	269	10	20 JAN 74	GER	23DEG 57.2MIN S	174DEG 33.0MIN W	1008	6294	1153	*	SHALLOW GERARD, C-14
6	269	11	20 JAN 74	ESS	23DEG 58.0MIN S	174DEG 31.6MIN W	0320		0	*	ESSO ZODIAC, POLONIUM-210
6	270	1	20 JAN 74	ROS	23DEG 58.7MIN S	175DEG 15.3MIN W	1727	7674	4777	*	DEEP ROSETTE
6	271	1	20 JAN 74	CTD	24DEG 1.9MIN S	175DEG 29.1MIN W	2255	5986	5930	*	CTD WITH 2 CHECK SAMPLES
6	272	1	21 JAN 74	ROS	24DEG 2.6MIN S	175DEG 43.1MIN W	0341	3707	3692	*	DEEP ROSETTE, BOTTOM RADON
6	273	1	22 JAN 74	PMP	29DEG 57.2MIN S	175DEG 43.9MIN W	1845		80	*	SURFACE PUMP, BE-7, RA-228
6	273	2	22 JAN 74	ROS	29DEG 57.0MIN S	175DEG 42.7MIN W	2045	5812	5797	*	DEEP ROSETTE, BOTTOM RADON
6	273	3	23 JAN 74	NIS	29DEG 56.0MIN S	175DEG 41.2MIN W	0057	5349	3587	*	INTERMEDIATE NISKIN
6	273	4	23 JAN 74	NIS	29DEG 56.1MIN S	175DEG 41.1MIN W	0233		51	*	SURFACE RADON
6	273	5	23 JAN 74	ESS	29DEG 56.1MIN S	175DEG 41.1MIN W	0310		0	*	ESSO BUCKET, POLONIUM-210
6	274	1	23 JAN 74	CTD	29DEG 59.5MIN S	176DEG 18.5MIN W	0811	8320	5998	*	CTD WITH 2 CHECK SAMPLES
6	275	1	23 JAN 74	ROS	30DEG 1.5MIN S	176DEG 54.5MIN W	1502	5564	5551	*	DEEP ROSETTE
6	276	1	23 JAN 74	CTD	29DEG 58.5MIN S	177DEG 11.3MIN W	2103	4678	4661	*	CTD WITH 2 CHECK SAMPLES
6	277	1	24 JAN 74	ROS	30DEG 7.1MIN S	177DEG 34.9MIN W	0201	3680	3665	*	DEEP ROSETTE, BOTTOM RADON
6	278	1	26 JAN 74	ROS	36DEG 31.3MIN S	179DEG 36.0MIN W	1314	4061	4038	*	DEEP ROSETTE
6	278	2	26 JAN 74	ESS	36DEG 31.3MIN S	179DEG 36.0MIN W	1605		0	*	ESSO BUCKET, POLONIUM-210
7	279	1	8 FEB 74	CTD	55DEG 6.1MIN S	170DEG 6.5MIN E	0924	3718	3705	*	CTD WITH 5 CHECK SAMPLES
7	280	1	8 FEB 74	ROS	56DEG 1.0MIN S	170DEG 3.0MIN E	2033	5235	5222	*	DEEP ROSETTE (MALFUNCTION)
7	280	2	9 FEB 74	ESS	55DEG 59.9MIN S	170DEG 6.1MIN E	0145			*	ESSO ROSETTE (ABORTED)
7	280	3	9 FEB 74	NIS	56DEG 0.0MIN S	170DEG 6.0MIN E	0426	5257	3788	*	INTERMEDIATE NISKIN
7	280	4	9 FEB 74	NIS	56DEG 0.0MIN S	170DEG 6.0MIN E	0650	5257	154	*	SHALLOW NISKIN, SURFACE RADON
7	280	5	9 FEB 74	ESS	56DEG 0.0MIN S	170DEG 6.0MIN E			0	*	ESSO BUCKET, POLONIUM-210
7	281	1	9 FEB 74	ROS	56DEG 45.0MIN S	170DEG 5.0MIN E	1707	5211	5196	*	DEEP ROSETTE
7	282	1	10 FEB 74	PMP	57DEG 31.0MIN S	169DEG 47.0MIN E	2000		10	*	SURFACE PUMP, C-14, RA-228
7	282	2	10 FEB 74	GER	57DEG 31.0MIN S	169DEG 47.0MIN E	0505	5502		*	DEEP GERARD (PRETRIPPED)
7	282	3	10 FEB 74	NIS	57DEG 35.0MIN S	169DEG 36.0MIN E	1914		665	*	SHALLOW NISKIN
7	282	4	10 FEB 74	GER	57DEG 40.8MIN S	169DEG 35.8MIN E	2259	5341	4750	*	DEEP GERARD,C-14(PART. PTRIP)
7	282	5	11 FEB 74	GER	57DEG 41.0MIN S	169DEG 35.0MIN E	0231	5341		*	DEEP GERARD, C-14 (ABORTED)
7	282	6	11 FEB 74	NIS	57DEG 41.0MIN S	169DEG 35.0MIN E	0455	5430	1927	*	INTERMEDIATE NISKIN
7	282	7	11 FEB 74	NIS	57DEG 41.5MIN S	169DEG 35.0MIN E	0700	5430	3459	*	INTERMEDIATE NISKIN
7	282	8	11 FEB 74	GER	57DEG 41.5MIN S	169DEG 35.0MIN E	0958	4579	824	*	SHALLOW GERARD, C-14
7	282	9	11 FEB 74	ROS	57DEG 42.0MIN S	169DEG 35.0MIN E	1300			*	DEEP ROSETTE (ABORTED)
7	282	10	11 FEB 74	GER	57DEG 42.5MIN S	169DEG 35.0MIN E	1851	4976	2405	*	SHALLOW GERARD, PB-210
7	282	11	12 FEB 74	BAG	57DEG 43.0MIN S	169DEG 35.0MIN E	0040	5283	4664	*	S1-32 BAG
7	282	12	12 FEB 74	GER	57DEG 47.0MIN S	169DEG 30.0MIN E	1534	5078	4721	*	INTERMEDIATE GERARD, C-14
7	282	13	12 FEB 74	NIS	57DEG 50.0MIN S	169DEG 23.0MIN E	2036	5213	5191	*	DEEP NISKIN
7	282	14	13 FEB 74	GER	57DEG 52.0MIN S	169DEG 20.0MIN E	0150	5227	5194	*	DEEP GERARD, C-14, PB-210
7	282	15	13 FEB 74	NIS	57DEG 54.5MIN S	169DEG 20.0MIN E	0604	5159	139	*	SURFACE RADON
7	282	16	13 FEB 74	GER	57DEG 55.5MIN S	169DEG 20.0MIN E	0756	5159	1784	*	INTERMEDIATE GERARD, C-14
7	282	17	13 FEB 74	ESS	57DEG 56.0MIN S	169DEG 20.0MIN E	0920		0	*	ESSO BUCKET
7	283	1	13 FEB 74	CTD	58DEG 45.0MIN S	170DEG 6.0MIN E	1652	5236	5223	*	CTD WITH 2 CHECK SAMPLES
7	284	1	14 FEB 74	ROS	59DEG 31.0MIN S	170DEG 0.0MIN E	0231	5096	5084	*	DEEP ROSETTE
7	285	1	14 FEB 74	NIS	61DEG 29.1MIN S	169DEG 58.0MIN E	2242	3885	3867	*	DEEP NISKIN
7	285	2	15 FEB 74	NIS	61DEG 29.5MIN S	170DEG 5.0MIN E	0245	4038	1591	*	INTERMEDIATE NISKIN
7	285	3	15 FEB 74	NIS	61DEG 29.7MIN S	170DEG 10.0MIN E	0642	4061	85	*	SHALLOW NISKIN, SURFACE RADON
7	285	4	15 FEB 74	ESS	61DEG 29.7MIN S	170DEG 10.0MIN E	0730		0	*	ESSO BUCKET
7	285	5	15 FEB 74	PMP	61DEG 29.7MIN S	170DEG 10.0MIN E	0430		5	*	SURFACE PUMP, RA-228
7	286	1	17 FEB 74	NIS	66DEG 5.0MIN S	173DEG 40.0MIN E	1803	3408	3345	*	DEEP NISKIN
7	286	2	17 FEB 74	NIS	66DEG 5.0MIN S	173DEG 45.0MIN E	2353	3431	784	*	SHALLOW NISKIN, SURFACE RADON
7	286	3	18 FEB 74	NIS	66DEG 5.0MIN S	173DEG 45.0MIN E	0120	3431	1642	*	SHALLOW NISKIN, INTER. RADON
7	286	4	18 FEB 74	ESS	66DEG 6.0MIN S	173DEG 45.0MIN E	0200		0	*	ESSO BUCKET
7	286	5	18 FEB 74	PMP	66DEG 6.0MIN S	173DEG 45.0MIN E	0116		5	*	SURFACE PUMP, RA-228
7	287	1	19 FEB 74	PMP	69DEG 18.0MIN S	173DEG 30.0MIN W	1835		80	*	SURFACE PUMP,BE-7,C-14,RA-228
7	287	2	19 FEB 74	GER	69DEG 8.0MIN S	173DEG 30.5MIN W	2028	4115	3893	*	DEEP GERARD, PB-210
7	287	3	20 FEB 74	ROS	69DEG 5.0MIN S	173DEG 30.0MIN W	0141	4116	4100	*	DEEP ROSETTE, BOTTOM RADON
7	287	4	20 FEB 74	GER	69DEG 2.0MIN S	173DEG 34.5MIN W	0607	4126	4107	*	DEEP GERARD, C-14
7	287	5	20 FEB 74	NIS	69DEG 5.0MIN S	173DEG 15.0MIN W	1009	4115	352	*	SHALLOW NISKIN
7	287	6	20 FEB 74	GER	69DEG 6.2MIN S	173DEG 15.7MIN W	1804	4125	3228	*	INTERMEDIATE GERARD, C-14
7	287	7	21 FEB 74	NIS	69DEG 5.0MIN S	173DEG 10.0MIN W	0132	4132	3083	*	INTERMEDIATE NISKIN
7	287	8	21 FEB 74	GER	69DEG 5.0MIN S	173DEG 14.0MIN W	0419	4132	1004	*	INTERMEDIATE GERARD, C-14
7	287	9	21 FEB 74	NIS	69DEG 4.0MIN S	173DEG 18.0MIN W	0552	4132	77	*	SURFACE RADON
7	287	10	21 FEB 74	GER	69DEG 4.1MIN S	173DEG 0.0MIN W	0845	4149	1888	*	SHALLOW GERARD, PB-210
7	287	11	21 FEB 74	GER	69DEG 2.0MIN S	173DEG 4.0MIN W	1647	4154	4121	*	DEEP GERARD, C-14, PB-210
7	287	12	21 FEB 74	ESS	69DEG 0.0MIN S	173DEG 6.0MIN W	1910		0	*	ESSO BUCKET, POLONIUM-210
7	288	1	22 FEB 74	NIS	67DEG 42.5MIN S	173DEG 59.0MIN W	0720	3820	3762	*	DEEP NISKIN
7	289	1	24 FEB 74	NIS	61DEG 59.2MIN S	174DEG 0.0MIN W	0217	4079	3741	*	DEEP NISKIN
7	289	2	24 FEB 74	NIS	61DEG 55.0MIN S	173DEG 55.0MIN E	0411	4060	185	*	SHALLOW NISKIN, SURFACE RADON
7	290	1	25 FEB 74	GER	58DEG 1.0MIN S	174DEG 0.0MIN W	1426	4833	4793	*	DEEP GERARD, C-14
7	290	2	25 FEB 74	NIS	58DEG 0.0MIN S	174DEG 0.0MIN W	1855	5316	5287	*	DEEP NISKIN, BOTTOM RADON
7	290	3	25 FEB 74	GER	57DEG 59.0MIN S	174DEG 0.0MIN W	2244	5116	1791	*	INTERMEDIATE GERARD, C-14
7	290	4	26 FEB 74	NIS	57DEG 58.0MIN S	174DEG 0.0MIN W	0136	5116	1010	*	SHALLOW NISKIN
7	290	5	26 FEB 74	GER	57DEG 57.0MIN S	174DEG 0.0MIN W	0408	5002	596	*	SHALLOW GERARD, C-14
7	290	6	26 FEB 74	NIS	57DEG 56.0MIN S	174DEG 0.0MIN W	0613	4968	4038	*	INTERMEDIATE NISKIN
7	290	7	26 FEB 74	NIS	57DEG 56.0MIN S	174DEG 0.0MIN W	0819	4968	195	*	SURFACE RADON
7	290	8	26 FEB 74	PMP	57DEG 56.0MIN S	174DEG 0.0MIN W	0740		10	*	SURFACE PUMP, C-14, RA-228
7	290	9	26 FEB 74	ESS	57DEG 55.0MIN S	174DEG 0.0MIN W	0845		0	*	ESSO BUCKET, POLONIUM-210
7	291	1	27 FEB 74	NIS	56DEG 0.0MIN S	175DEG 35.0MIN W	0536	5114	5097	*	DEEP NISKIN, BOTTOM RADON
7	291	2	27 FEB 74	NIS	55DEG 59.0MIN S	175DEG 35.0MIN W	1118	5005	2829	*	SHALLOW NISKIN
7	291	3	27 FEB 74	ESS	55DEG 59.0MIN S	175DEG 35.0MIN W	1235		0	*	ESSO BUCKET, POLONIUM-210
7	292	1	28 FEB 74	NIS	54DEG 5.0MIN S	176DEG 58.0MIN W	1759	5428	5060	*	DEEP NISKIN
7	293	1	1 MAR 74	GER	52DEG 35.0MIN S	178DEG 2.0MIN W	1106	5256	2778	*	INTERMEDIATE GERARD, C-14
7	293	2	1 MAR 74	NIS	52DEG 40.0MIN S	178DEG 5.0MIN W	1436	5335	5318	*	DEEP NISKIN
7	293	3	1 MAR 74	GER	52DEG 45.0MIN S	178DEG 10.5MIN W	1849	5313	5168	*	DEEP GERARD, C-14
7	293	4	1 MAR 74	NIS	52DEG 49.3MIN S	178DEG 10.1MIN W	2226	5291	1262	*	SHALLOW NISKIN
7	293	5	2 MAR 74	GER	52DEG 54.0MIN S	178DEG 11.0MIN W	0327		695	*	SHALLOW GERARD, C-14
7	293	6	2 MAR 74	NIS	52DEG 56.0MIN S	178DEG 11.0MIN W	0601	5308	3868	*	INTERMEDIATE NISKIN
7	293	7	2 MAR 74	NIS	52DEG 58.0MIN S	178DEG 12.0MIN W	0817	5312	101	*	SURFACE NISKIN, SURFACE RADON
7	293	8	2 MAR 74	GER	53DEG 4.0MIN S	178DEG 13.0MIN W	1508	5318		*	DEEP GERARD, RA-228 (PRETRIP)
7	293	9	2 MAR 74	GER	53DEG 8.0MIN S	178DEG 14.0MIN W	2043	5454	5427	*	DEEP GERARD, RA-228
7	293	10	2 MAR 74	PMP	52DEG 59.0MIN S	178DEG 12.0MIN W	1007		50	*	SURFACE PUMP, C-14, RA-228
7	293	11	3 MAR 74	GER	53DEG 10.0MIN S	178DEG 12.0MIN W	0148	5319	4750	*	DEEP GERARD, RA-228
7	293	12	3 MAR 74	ESS	53DEG 12.0MIN S	178DEG 11.0MIN W	0425		0	*	ESSO BUCKET, POLONIUM-210
7	294	1	4 MAR 74	NIS	50DEG 38.0MIN S	179DEG 59.0MIN W	0035	4505	2588	*	SHALLOW NISKIN
7	294	2	4 MAR 74	ESS	50DEG 38.0MIN S	179DEG 59.0MIN W	0240		0	*	ESSO BUCKET, POLONIUM-210
8	295	1	15 MAR 74	ROS	44DEG 11.1MIN S	171DEG 29.5MIN W	1608	3508	3285	*	DEEP SINGLE ROSETTE
8	296	1	16 MAR 74	GER	44DEG 56.9MIN S	166DEG 39.5MIN W	1724	5325	5284	*	DEEP GERARD, C-14, PB-210
8	296	2	16 MAR 74	ROS	44DEG 59.0MIN S	166DEG 42.0MIN W	2215	5342	5325	*	DEEP ROSETTE, BOTTOM RADON
8	296	3	17 MAR 74	GER	45DEG 0.8MIN S	166DEG 48.0MIN W	0233	5334	3591	*	INTER. GERARD, C-14, PB-210

STATION AND CAST DESCRIPTION

GEOSECS PACIFIC R/V MELVILLE

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
8	296	4	17 MAR 74	ROS	45DEG 2.0MIN S	166DEG 48.3MIN W	0623	5338	3383	*	INTERMEDIATE ROSETTE
8	296	5	17 MAR 74	GER	45DEG 2.1MIN S	166DEG 49.3MIN W	1138	5340	2254	*	INTER. GERARD, C-14, PB-210
8	296	6	17 MAR 74	NIS	45DEG 1.1MIN S	166DEG 50.2MIN W	1439	5336	1138	*	SHALLOW NISKIN
8	296	7	17 MAR 74	NIS	45DEG 1.0MIN S	166DEG 50.0MIN W	1615	5336	1346	*	SHALLOW NISKIN
8	296	8	17 MAR 74	GER	45DEG 1.0MIN S	166DEG 50.0MIN W	1752	5330	803	*	SHALLOW GERARD, C-14, PB-210
8	296	9	17 MAR 74	ESS	45DEG 1.0MIN S	166DEG 50.0MIN W	1900		0	*	ESSO BUCKET
8	297	1	18 MAR 74	ROS	46DEG 0.0MIN S	166DEG 45.0MIN W	0427	5428	4123	*	DEEP SINGLE ROSETTE
8	298	1	18 MAR 74	SPE	46DEG 43.0MIN S	166DEG 56.0MIN W	1530			*	SDT WIRE TEST, WT ONLY TO 5KM
8	298	2	18 MAR 74	ROS	46DEG 41.3MIN S	166DEG 50.3MIN W	1852	5434	5326	*	DEEP SINGLE ROSETTE
8	298	3	18 MAR 74	NIS	46DEG 40.2MIN S	166DEG 51.0MIN W	2252	5339	2723	*	SHALLOW NISKIN, SURFACE RADON
8	299	1	19 MAR 74	ROS	44DEG 13.0MIN S	166DEG 46.0MIN W	2309	5332	5287	*	DEEP SINGLE ROSETTE
8	299	2	20 MAR 74	CTD	44DEG 13.0MIN S	166DEG 46.0MIN W	1410	5334		*	CTD (TEST)
8	300	1	20 MAR 74	NIS	43DEG 15.0MIN S	166DEG 46.0MIN W	1319	5265	2486	*	SHALLOW NISKIN
8	300	2	20 MAR 74	NIS	43DEG 15.0MIN S	166DEG 46.0MIN W	1848	5247	5182	*	DEEP NISKIN
8	301	1	21 MAR 74	NIS	41DEG 33.5MIN S	166DEG 50.0MIN W	1155	4838	1982	*	SHALLOW NISKIN
8	301	2	21 MAR 74	CTD	41DEG 35.0MIN S	166DEG 54.0MIN W	1439	4811		*	CTD (TEST)
8	301	3	21 MAR 74	NIS	41DEG 36.5MIN S	166DEG 55.5MIN W	1830	4723	4674	*	DEEP NISKIN
8	301	4	21 MAR 74	ESS	41DEG 36.0MIN S	166DEG 55.0MIN W	2045		0	*	ESSO BUCKET
8	302	1	22 MAR 74	ROS	40DEG 30.5MIN S	166DEG 42.0MIN W	0613	5030	5002	*	DEEP ROSETTE
8	302	2	22 MAR 74	NIS	40DEG 30.5MIN S	166DEG 42.0MIN W	0942	5028	966	*	SHALLOW NISKIN, SURFACE RADON
8	303	1	23 MAR 74	ROS	38DEG 22.9MIN S	170DEG 4.3MIN W	1750	4841	4820	*	DEEP ROSETTE, BOTTOM RADON
8	303	2	23 MAR 74	GER	38DEG 19.7MIN S	170DEG 3.3MIN W	2321	4867	2508	*	INTERMEDIATE GERARD, C-14
8	303	3	24 MAR 74	ROS	38DEG 19.5MIN S	170DEG 2.8MIN W	0236	4868	3229	*	INTERMEDIATE ROSETTE
8	303	4	24 MAR 74	GER	38DEG 19.9MIN S	170DEG 2.0MIN W	0658	4871	4800	*	DEEP GERARD, C-14
8	303	5	24 MAR 74	NIS	38DEG 20.1MIN S	170DEG 1.2MIN W	0954	4870	1088	*	SHALLOW NISKIN
8	303	6	24 MAR 74	GER	38DEG 20.0MIN S	170DEG 1.0MIN W	1138	4870	702	*	SHALLOW GERARD, C-14
8	303	7	24 MAR 74	ESS	38DEG 20.0MIN S	170DEG 1.0MIN W	1245		0	*	ESSO BUCKET
8	304	1	25 MAR 74	ROS	37DEG 3.8MIN S	168DEG 36.2MIN W	0256	4897	4853	*	INTERMEDIATE ROSETTE
8	304	2	25 MAR 74	ROS	37DEG 5.6MIN S	168DEG 34.4MIN W	0837	4893	4476	*	DEEP ROSETTE
8	305	1	26 MAR 74	NIS	35DEG 40.0MIN S	166DEG 47.0MIN W	1128	4886	1190	*	SHALLOW NISKIN
8	305	2	26 MAR 74	ROS	35DEG 40.0MIN S	166DEG 47.0MIN W	1433	5277	5244	*	DEEP ROSETTE
8	305	3	26 MAR 74	NIS	35DEG 40.0MIN S	166DEG 47.0MIN W	1834	5275	2577	*	INTERMEDIATE NISKIN
8	305	4	26 MAR 74	ESS	35DEG 40.0MIN S	166DEG 47.0MIN W	1945		0	*	ESSO BUCKET
8	306	1	27 MAR 74	ROS	32DEG 50.0MIN S	163DEG 38.0MIN W	2023	5624	5605	*	DEEP ROSETTE, BOTTOM RADON
8	306	2	28 MAR 74	GER	32DEG 49.0MIN S	163DEG 35.5MIN W	0128	5648	4122	*	INT. GERARD, C-14, PB-210
8	306	3	28 MAR 74	PMP	32DEG 49.0MIN S	163DEG 35.0MIN W	0000		5	*	BOW PUMP, BE-7, RA-228
8	306	4	28 MAR 74	ROS	32DEG 49.1MIN S	163DEG 32.2MIN W	0455	5364	3823	*	INTERMEDIATE ROSETTE
8	306	5	28 MAR 74	GER	32DEG 49.7MIN S	163DEG 33.5MIN W	0950	5643	5601	*	DEEP GERARD C-14, PB-210
8	306	6	28 MAR 74	ROS	32DEG 47.2MIN S	163DEG 33.8MIN W	1321	5707	1340	*	SHALLOW ROSETTE
8	306	7	28 MAR 74	SPE	32DEG 50.0MIN S	163DEG 42.7MIN W	1930	5648	5512	*	LAL PUMP
8	306	8	29 MAR 74	GER	32DEG 51.0MIN S	163DEG 42.4MIN W	0556	5469	2956	*	INTER. GERARD, C-14, PB-210
8	306	9	29 MAR 74	SPE	32DEG 55.0MIN S	163DEG 40.8MIN W	1100		5330	*	MOORE FIBERS (FAILED)
8	306	10	29 MAR 74	NIS	32DEG 56.7MIN S	163DEG 39.6MIN W	1546	5321	203	*	SURFACE RADON
8	306	11	29 MAR 74	GER	32DEG 51.0MIN S	163DEG 42.0MIN W	1710	5321	1661	*	SHALLOW GERARD, C-14, PB-210
8	306	12	30 MAR 74	BAG	32DEG 55.8MIN S	163DEG 40.0MIN W	0543	5527	4868	*	SI-32 BAG
8	306	13	30 MAR 74	GER	32DEG 58.0MIN S	163DEG 35.5MIN W	1123	5671	612	*	SHALLOW GERARD, C-14, PB-210
8	306	14	30 MAR 74	PMP	32DEG 58.0MIN S	163DEG 35.5MIN W	1136		5	*	BOW PUMP, RA-228
8	306	15	30 MAR 74	ESS	32DEG 58.0MIN S	163DEG 35.5MIN W	1310		0	*	ESSO BUCKET
8	307	1	31 MAR 74	CTD	31DEG 26.0MIN S	161DEG 58.0MIN W	0540	5402		*	CTD WITH 1 CHECK SAMPLE
8	307	2	31 MAR 74	PMP	31DEG 26.0MIN S	161DEG 58.0MIN W	0630		5	*	BOW PUMP,RA-228
8	308	1	31 MAR 74	NIS	29DEG 59.5MIN S	160DEG 20.9MIN W	2210	5286	1793	*	SHALLOW NISKIN
8	308	2	1 APR 74	CTD	29DEG 59.2MIN S	160DEG 20.2MIN W	0210	5280		*	CTD WITH 1 CHECK SAMPLE
8	308	3	1 APR 74	NIS	29DEG 59.2MIN S	160DEG 20.2MIN W	0524	5280	5121	*	DEEP NISKIN
8	308	4	1 APR 74	ESS	29DEG 59.0MIN S	160DEG 20.0MIN W	0848		0	*	ESSO BUCKET
8	309	1	2 APR 74	ROS	28DEG 29.0MIN S	158DEG 48.1MIN W	0127	5370	5312	*	DEEP SINGLE ROSETTE
8	309	2	2 APR 74	NIS	28DEG 29.0MIN S	158DEG 48.1MIN W	0444	5349	2583	*	SHALLOW NISKIN
8	310	1	3 APR 74	ROS	26DEG 57.5MIN S	157DEG 9.5MIN W	0030	5393	5109	*	DEEP ROSETTE
8	310	2	3 APR 74	GER	26DEG 55.8MIN S	157DEG 11.1MIN W	0624	5454	5379	*	DEEP GERARD, C-14
8	310	3	3 APR 74	ROS	26DEG 56.0MIN S	157DEG 11.4MIN W	1030	5450	3036	*	INTERMEDIATE ROSETTE
8	310	4	3 APR 74	GER	26DEG 55.4MIN S	157DEG 11.5MIN W	1351	5448	2447	*	INTERMEDIATE GERARD, C-14
8	310	5	3 APR 74	ROS	26DEG 55.1MIN S	157DEG 11.3MIN W	1723	5442	999	*	SHALLOW ROSETTE,SURFACE RADON
8	310	6	3 APR 74	GER	26DEG 55.1MIN S	157DEG 11.6MIN W	1930	5437	750	*	SHALLOW GERARD, C-14
8	310	7	3 APR 74	PMP	26DEG 54.8MIN S	157DEG 11.5MIN W	1950		5	*	BOW PUMP, RA-228
8	310	8	3 APR 74	ESS	26DEG 54.8MIN S	157DEG 11.5MIN W	2040		0	*	ESSO BUCKET
8	311	1	4 APR 74	ROS	26DEG 17.6MIN S	156DEG 24.8MIN W	0435	5188	5121	*	DEEP ROSETTE
8	312	1	4 APR 74	ROS	25DEG 28.4MIN S	155DEG 38.6MIN W	1807	4796	4786	*	DEEP ROSETTE
8	313	1	5 APR 74	ROS	24DEG 24.6MIN S	154DEG 25.8MIN W	0719	5064	5022	*	DEEP ROSETTE
8	314	1	5 APR 74	GER	23DEG 44.0MIN S	153DEG 37.0MIN W	1900	4585	4547	*	DEEP GERARD, PB-210, RA-228
8	314	2	5 APR 74	ROS	23DEG 44.0MIN S	153DEG 37.0MIN W	2250	4608	4570	*	DEEP ROSETTE, BOTTOM RADON
8	314	3	6 APR 74	GER	23DEG 43.0MIN S	153DEG 35.0MIN W	0402	4410	1901	*	SHALLOW GERARD,PB-210,RA-228
8	314	4	6 APR 74	NIS	23DEG 43.6MIN S	153DEG 33.0MIN W	0618	4410	360	*	SHALLOW NISKIN
8	314	5	6 APR 74	NIS	23DEG 43.7MIN S	153DEG 30.5MIN W	0804	4410	2131	*	INTERMEDIATE NISKIN
8	314	6	6 APR 74	PMP	23DEG 43.7MIN S	153DEG 30.5MIN W	0150	4410	5	*	BOW PUMP, BE-7, RA-228
8	314	7	6 APR 74	ESS	23DEG 43.0MIN S	153DEG 30.5MIN W	0900		0	*	ESSO BUCKET
9	315	1	16 APR 74	CTD	17DEG 0.3MIN S	134DEG 52.3MIN W	2048	4482	4442	*	CTD (Q CAST)
9	316	1	19 APR 74	ROS	18DEG 51.8MIN S	126DEG 36.0MIN W	0304	4121	4092	*	DEEP ROSETTE
9	316	2	19 APR 74	NIS	18DEG 51.9MIN S	126DEG 35.9MIN W	0610	4121	946	*	SHALLOW NISKIN, SURFACE RADON
9	316	3	19 APR 74	PMP	18DEG 51.8MIN S	126DEG 36.0MIN W	0530		5	*	BOW PUMP, RA-228
9	316	4	19 APR 74	ESS	18DEG 51.9MIN S	126DEG 35.9MIN W	0655		0	*	ESSO BUCKET, POLONIUM-210
9	317	1	20 APR 74	GER	23DEG 38.0MIN S	127DEG 9.3MIN W	1318	3664	1794	*	INTERMEDIATE GERARD, C-14
9	317	2	20 APR 74	ROS	23DEG 37.3MIN S	127DEG 11.3MIN W	1740	3589	3572	*	DEEP ROSETTE, BOTTOM RADON
9	317	3	20 APR 74	GER	23DEG 35.6MIN S	127DEG 12.2MIN W	2204	3480	3436	*	DEEP GERARD, C-14
9	317	4	21 APR 74	NIS	23DEG 35.1MIN S	127DEG 12.5MIN W	0100	3404	1736	*	SHALLOW NISKIN
9	317	5	21 APR 74	GER	23DEG 35.2MIN S	127DEG 13.0MIN W	0411	3421	703	*	SHALLOW GERARD, C-14
9	317	6	21 APR 74	BAG	23DEG 37.9MIN S	127DEG 12.6MIN W	0826	3519	3340	*	SI-32 BAG
9	317	7	21 APR 74	PMP	23DEG 39.7MIN S	127DEG 10.6MIN W	1300		5	*	BOW PUMP, BE-7, RA-228
9	317	8	21 APR 74	ESS	23DEG 45.5MIN S	127DEG 7.0MIN W	2020		0	*	ESSO BUCKET, POLONIUM-210
9	318	1	22 APR 74	CTD	25DEG 33.4MIN S	127DEG 49.9MIN W	1126	3744	3729	*	CTD WITH 6 CHECK SAMPLES
9	319	1	23 APR 74	ROS	28DEG 30.0MIN S	127DEG 47.1MIN W	1113	4043	3997	*	DEEP ROSETTE
9	319	2	23 APR 74	NIS	28DEG 30.8MIN S	127DEG 48.9MIN W	1531	4100	1043	*	SHALLOW NISKIN, SURFACE RADON
9	319	3	23 APR 74	PMP	28DEG 30.8MIN S	127DEG 48.9MIN W			5	*	SURFACE PUMP, RA-228
9	319	4	23 APR 74	ESS	28DEG 30.8MIN S	127DEG 48.9MIN W	1635		0	*	ESSO BUCKET, POLONIUM-210
9	320	1	24 APR 74	GER	33DEG 20.7MIN S	128DEG 24.2MIN W	2253	4123	2000	*	INTERMEDIATE GERARD, C-14
9	320	2	25 APR 74	ROS	33DEG 20.9MIN S	128DEG 24.2MIN W	0142	4142	4131	*	DEEP ROSETTE, BOTTOM RADON
9	320	3	25 APR 74	PMP	33DEG 21.0MIN S	128DEG 24.2MIN W	0100		125	*	SURFACE PUMP, BE-7, RA-228
9	320	4	25 APR 74	GER	33DEG 20.5MIN S	128DEG 24.4MIN W	0541	4158	4098	*	DEEP GERARD, C-14
9	320	5	25 APR 74	NIS	33DEG 20.7MIN S	128DEG 24.6MIN W	0826	4166	1736	*	SHALLOW NISKIN
9	320	6	25 APR 74	GER	33DEG 20.6MIN S	128DEG 24.6MIN W	1113	4160	4107	*	DEEP GERARD, PB-210
9	320	7	25 APR 74	PMP	33DEG 20.0MIN S	128DEG 24.3MIN W	1440	4118	4007	*	LAL PUMP
9	320	8	26 APR 74	GER	33DEG 20.6MIN S	128DEG 23.0MIN W	0041		504	*	SHALLOW GERARD, C-14
9	320	9	26 APR 74	ESS	33DEG 20.1MIN S	128DEG 23.2MIN W	0455	4044	3946	*	ESSO ROSETTE
9	320	10	26 APR 74	NIS	33DEG 19.2MIN S	128DEG 23.6MIN W	0726	4114	353	*	SURFACE RADON
9	320	11	26 APR 74	GER	33DEG 19.5MIN S	128DEG 23.8MIN W	0906	4110	1002	*	SHALLOW GERARD, PB-210
9	320	12	26 APR 74	ESS	33DEG 19.5MIN S	128DEG 23.8MIN W	1020		0	*	ESSO BUCKET, POLONIUM-210
9	321	1	27 APR 74	ROS	38DEG 48.0MIN S	129DEG 22.0MIN W	2156	4854	4842	*	DEEP ROSETTE, BOTTOM RADON
9	321	2	28 APR 74	NIS	38DEG 49.3MIN S	129DEG 23.0MIN W	0120	4960	2625	*	SHALLOW NISKIN
9	321	3	28 APR 74	PMP	38DEG 49.5MIN S	129DEG 25.2MIN W	0255		50	*	SURFACE PUMP, RA-228
9	321	4	28 APR 74	ROS	38DEG 48.7MIN S	129DEG 25.5MIN W	0509			*	ROSETTE (ABORTED)
9	321	5	28 APR 74	ESS	38DEG 45.2MIN S	129DEG 26.0MIN W	0805		0	*	ESSO BUCKET, POLONIUM-210
9	322	1	29 APR 74	GER	43DEG 0.5MIN S	129DEG 56.9MIN W	2024	4387	4367	*	DEEP GERARD, RA-228
9	322	2	29 APR 74	GER	43DEG 0.2MIN S	129DEG 56.8MIN W	2340	4397	1800	*	INTERMEDIATE GERARD, C-14
9	322	3	30 APR 74	ROS	43DEG 0.8MIN S	129DEG 56.5MIN W	0227	4407	4397	*	DEEP ROSETTE, BOTTOM RADON
9	322	4	30 APR 74	GER	43DEG 1.6MIN S	129DEG 55.4MIN W	0629	4568	2799	*	DEEP GERARD,C-14(MALFUNCTION)
9	322	5	30 APR 74	GER	43DEG 2.3MIN S	129DEG 55.8MIN W	0842	4863	4307	*	DEEP GERARD, C-14 (REPEAT)
9	322	6	30 APR 74	ROS	43DEG 0.7MIN S	129DEG 55.6MIN W	1218	4279	2187	*	SHALLOW ROSETTE
9	322	7	30 APR 74	GER	43DEG 0.5MIN S	129DEG 55.0MIN W	1612	4231		*	DEEP GERARD (ABORTED)
9	322	8	30 APR 74	GER	43DEG 1.7MIN S	129DEG 54.6MIN W	1957	4403	3695	*	DEEP GERARD, RA-228 (REPEAT)
9	322	9	30 APR 74	NIS	43DEG 1.9MIN S	129DEG 54.3MIN W	2154	4845	148	*	SURFACE RADON
9	322	10	30 APR 74	GER	43DEG 1.9MIN S	129DEG 54.3MIN W	2245	4828	503	*	SHALLOW GERARD, C-14
9	322	11	30 APR 74	PMP	43DEG 1.7MIN S	129DEG 54.6MIN W	1910		5	*	BOW PUMP, RA-228
9	322	12	30 APR 74	ESS	43DEG 2.1MIN S	129DEG 53.6MIN W	2325		0	*	ESSO BUCKET, POLONIUM-210
9	323	1	4 MAY 74	ROS	33DEG 43.4MIN S	138DEG 8.0MIN W	0244	4742	4721	*	DEEP ROSETTE
9	323	2	4 MAY 74	NIS	33DEG 43.2MIN S	138DEG 8.2MIN W	0528	4740	150	*	SURFACE RADON
9	323	3	4 MAY 74	PMP	33DEG 43.2MIN S	138DEG 8.2MIN W	0540		5	*	SURFACE PUMP, RA-228
9	324	1	7 MAY 74	GER	23DEG 0.6MIN S	146DEG 4.5MIN W	1420	5033	4982	*	DEEP GERARD, C-14
9	324	2	7 MAY 74	PMP	23DEG 0.6MIN S	146DEG 4.5MIN W	1300		150	*	SURFACE PUMP, RA-228
9	324	3	7 MAY 74	ROS	22DEG 58.9MIN S	146DEG 4.3MIN W	1824	5064	5033	*	DEEP ROSETTE
9	324	4	7 MAY 74	GER	22DEG 58.3MIN S	146DEG 3.9MIN W	2148	5074	826	*	SHALLOW GERARD, C-14
9	324	5	7 MAY 74	NIS	22DEG 58.3MIN S	146DEG 3.9MIN W	2321	5058	1114	*	SHALLOW NISKIN
9	324	6	8 MAY 74	ESS	22DEG 58.3MIN S	146DEG 3.9MIN W	0005		0	*	ESSO BUCKET, POLONIUM-210
10	325	1	18 MAY 74	ROS	14DEG 40.0MIN S	130DEG 55.4MIN W	1537	4050	4031	*	SHALLOW & DEEP ROSETTE
10	326	1	20 MAY 74	ROS	14DEG 3.3MIN S	126DEG 15.7MIN W	0036	3737	3718	*	DEEP ROSETTE, BOTTOM RADON
10	326	2	20 MAY 74	GER	14DEG 3.0MIN S	126DEG 16.0MIN W	0423	3792	1546	*	SHALLOW GERARD, C-14
10	326	3	20 MAY 74	ROS	14DEG 3.0MIN S	126DEG 16.0MIN W	0815	3823	1917	*	SHALLOW & INTER. ROSETTE
10	326	4	20 MAY 74	NIS	14DEG 3.0MIN S	126DEG 16.0MIN W	1132	3792	93	*	SURFACE RADON
10	326	5	20 MAY 74	PMP	14DEG 3.0MIN S	126DEG 16.0MIN W	0755		300	*	SURF PMP,BE-7,C-14,RA-228,RN
10	326	6	20 MAY 74	ESS	14DEG 3.0MIN S	126DEG 16.0MIN W	1210		0	*	ESSO BUCKET, POLONIUM-210
10	327	1	21 MAY 74	ROS	11DEG 40.6MIN S	125DEG 54.9MIN W	0401	3913	3882	*	SHALLOW & DEEP ROSETTE
10	328	1	21 MAY 74	ROS	9DEG 16.9MIN S	125DEG 32.5MIN W	2240	3896	3850	*	DEEP ROSETTE, INTER. RADON
10	328	2	22 MAY 74	GER	9DEG 15.6MIN S	125DEG 34.4MIN W	0307	3879	3829	*	DEEP GERARD, C-14
10	328	3	22 MAY 74	ROS	9DEG 14.7MIN S	125DEG 34.5MIN W	0633	4089	1089	*	SHALLOW ROSETTE
10	328	4	22 MAY 74	ESS	9DEG 14.0MIN S	125DEG 34.0MIN W	0800		0	*	ESSO BUCKET, POLONIUM-210
10	328	5	22 MAY 74	PMP	9DEG 14.0MIN S	125DEG 34.0MIN W	0600		5	*	BOW PUMP, RA-228
10	329	1	22 MAY 74	ROS	7DEG 41.2MIN S	125DEG 27.9MIN W	1826	4504	4462	*	SHALLOW & DEEP ROSETTE
10	329	2	22 MAY 74	ESS	7DEG 41.0MIN S	125DEG 27.0MIN W	2140		0	*	ESSO BUCKET

STATION AND CAST DESCRIPTION

GEOSECS PACIFIC R/V MELVILLE

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
10	330	1	23 MAY 74	ROS	6DEG 4.3MIN S	125DEG 17.2MIN W	0859	4592	4556	*	SHALLOW & DEEP ROSETTE
10	330	2	23 MAY 74	ESS	6DEG 4.0MIN S	125DEG 17.0MIN W	1130		0	*	ESSO BUCKET
10	331	1	23 MAY 74	GER	4DEG 38.0MIN S	125DEG 8.0MIN W	2103	4511	4467	*	DEEP GERARD, C-14, PB-210
10	331	2	24 MAY 74	PMP	4DEG 37.5MIN S	125DEG 8.0MIN W	0040		240	*	SURFACE PUMP,BE-7,C-14,RA-228
10	331	3	24 MAY 74	ROS	4DEG 36.6MIN S	125DEG 8.5MIN W	0205	4332	4311	*	DEEP ROSETTE, BOTTOM RADON
10	331	4	24 MAY 74	GER	4DEG 37.5MIN S	125DEG 7.0MIN W	0555	4391	899	*	INTER. GERARD, C-14, PB-210
10	331	5	24 MAY 74	ROS	4DEG 34.5MIN S	125DEG 10.0MIN W	0842	4137	1376	*	SHALLOW ROSETTE
10	331	6	24 MAY 74	GER	4DEG 33.7MIN S	125DEG 11.3MIN W	1251	4436	4388	*	DEEP GERARD, RA-228
10	331	7	24 MAY 74	GER	4DEG 33.6MIN S	125DEG 12.7MIN W	1712	4470	3787	*	INTERMEDIATE GERARD, RA-228
10	331	8	24 MAY 74	GER	4DEG 33.8MIN S	125DEG 13.1MIN W	2045	4490	3000	*	SHALLOW GERARD, C-14
10	331	9	25 MAY 74	SPE	4DEG 36.8MIN S	125DEG 15.4MIN W	0640		4109	*	MOORE FIBER, RA-228
10	331	10	25 MAY 74	ESS	4DEG 36.8MIN S	125DEG 15.4MIN W	0740		0	*	ESSO BUCKET, POLONIUM-210
10	332	1	25 MAY 74	NIS	3DEG 1.0MIN S	124DEG 48.0MIN W	1845		301	*	SHALLOW NISKIN, SURFACE RADON
10	332	2	25 MAY 74	ROS	3DEG 1.0MIN S	124DEG 48.0MIN W	2210	4720	4678	*	DEEP ROSETTE
10	333	1	26 MAY 74	ROS	1DEG 30.0MIN S	124DEG 40.0MIN W	1200	4554	4521	*	SHALLOW & DEEP ROSETTE
10	333	2	26 MAY 74	ESS	1DEG 30.0MIN S	124DEG 40.0MIN W	1415		0	*	ESSO BUCKET
10	334	1	27 MAY 74	ROS	0DEG 3.9MIN N	124DEG 34.0MIN W	0141	4848	4815	*	DEEP ROSETTE, BOTTOM RADON
10	334	2	27 MAY 74	PMP	0DEG 8.1MIN N	124DEG 20.4MIN W	1000		195	*	SURFACE PUMP, C-14, RA-228
10	334	3	27 MAY 74	ROS	0DEG 8.1MIN N	124DEG 20.4MIN W	1013	4569	2117	*	SHALLOW ROSETTE
10	334	4	27 MAY 74	ESS	0DEG 8.3MIN N	124DEG 20.5MIN W	1140		0	*	ESSO BUCKET, POLONIUM-210
10	335	1	27 MAY 74	ROS	1DEG 32.5MIN N	124DEG 32.2MIN W	2102	4639	4604	*	DEEP ROSETTE
10	335	2	27 MAY 74	ESS	1DEG 32.8MIN N	124DEG 32.8MIN W	2305		0	*	ESSO BUCKET
10	336	1	28 MAY 74	ROS	3DEG 1.5MIN N	124DEG 22.1MIN W	0921	4619	4586	*	DEEP ROSETTE
10	336	2	28 MAY 74	NIS	3DEG 2.5MIN N	124DEG 22.3MIN W	1209		397	*	SHALLOW NISKIN, SURFACE RADON
10	336	3	28 MAY 74	ESS	3DEG 2.5MIN N	124DEG 22.3MIN W	1240		0	*	ESSO BUCKET
10	337	1	29 MAY 74	ROS	4DEG 50.9MIN N	124DEG 5.0MIN W	0140	4277	4260	*	DEEP ROSETTE, BOTTOM RADON
10	337	2	29 MAY 74	GER	4DEG 50.9MIN N	124DEG 4.7MIN W	0430	4336	4178	*	DEEP GERARD, C-14
10	337	3	29 MAY 74	ROS	4DEG 52.9MIN N	124DEG 1.7MIN W	0903	4156	2057	*	INTERMEDIATE ROSETTE
10	337	4	29 MAY 74	NIS	4DEG 53.8MIN N	124DEG 1.0MIN W	1055		300	*	SHALLOW NISKIN
10	337	5	29 MAY 74	GER	4DEG 54.8MIN N	123DEG 59.6MIN W	1229	4224	1047	*	INTERMEDIATE GERARD, C-14
10	337	6	29 MAY 74	BAG	4DEG 54.7MIN N	123DEG 55.8MIN W	1655		4450	*	51-32 BAG & LAL PUMP
10	337	7	30 MAY 74	PMP	4DEG 47.7MIN N	123DEG 52.9MIN W	0500		5	*	BOW PUMP, BE-7, C-14, RA-228
10	337	8	30 MAY 74	ESS	4DEG 47.7MIN N	123DEG 52.8MIN W	0615		0	*	ESSO BUCKET, POLONIUM-210
10	338	1	31 MAY 74	ROS	6DEG 39.0MIN N	123DEG 42.0MIN W	0249	4239	4164	*	SHALLOW & DEEP ROSETTE
10	338	2	30 MAY 74	PMP	6DEG 37.5MIN N	123DEG 44.0MIN W	2155		300	*	SURFACE PUMP, RA-228
10	338	3	31 MAY 74	ESS	6DEG 39.0MIN N	123DEG 42.0MIN W	0510		0	*	ESSO BUCKET
10	339	1	31 MAY 74	ROS	8DEG 33.5MIN N	123DEG 37.8MIN W	1739	4595	4576	*	DEEP ROSETTE
10	339	2	31 MAY 74	NIS	8DEG 33.5MIN N	123DEG 37.8MIN W	1959	4606	298	*	SHALLOW NISKIN, SURFACE RADON
10	339	3	31 MAY 74	ESS	8DEG 33.5MIN N	123DEG 37.8MIN W	2035		0	*	ESSO BUCKET
10	340	1	1 JUN 74	ROS	10DEG 28.7MIN N	123DEG 38.5MIN W	0943	4536	4525	*	DEEP ROSETTE, BOTTOM RADON
10	340	2	1 JUN 74	NIS	10DEG 28.0MIN N	123DEG 39.2MIN W	1304		2285	*	SHALLOW NISKIN
10	340	3	1 JUN 74	ESS	10DEG 28.0MIN N	123DEG 39.0MIN W	1415		0	*	ESSO BUCKET, POLONIUM-210
10	341	1	2 JUN 74	ROS	12DEG 32.0MIN N	123DEG 29.0MIN W	0630	4599	4570	*	SHALLOW & DEEP ROSETTE
10	341	2	2 JUN 74	ESS	12DEG 32.0MIN N	123DEG 29.0MIN W	0830		0	*	ESSO BUCKET
10	342	1	2 JUN 74	ROS	14DEG 29.6MIN N	123DEG 8.9MIN W	2313	4428	4380	*	SHAL & DP ROSETTE,INTER. RN
10	342	2	3 JUN 74	ESS	14DEG 30.2MIN N	123DEG 7.8MIN W	0120		0	*	ESSO BUCKET
10	343	1	3 JUN 74	GER	16DEG 31.3MIN N	122DEG 59.5MIN W	1603	4196	4153	*	DEEP GERARD, C-14, PB-210
10	343	2	3 JUN 74	ROS	16DEG 31.6MIN N	123DEG 1.4MIN W	2126	4226	4198	*	DEEP ROSETTE, BOTTOM RADON
10	343	3	3 JUN 74	PMP	16DEG 31.3MIN N	122DEG 59.5MIN W	1610		300	*	SURFACE PUMP,BE-7,C-14,RA-228
10	343	4	4 JUN 74	GER	16DEG 31.8MIN N	123DEG 3.8MIN W	0118	4168	1195	*	SHALLOW GERARD, C-14, PB-210
10	343	5	4 JUN 74	ROS	16DEG 32.0MIN N	123DEG 7.0MIN W	0458	4262	1672	*	SHALLOW ROSETTE
10	343	6	4 JUN 74	GER	16DEG 32.0MIN N	123DEG 8.0MIN W	0737	4227	3241	*	INTERMEDIATE GERARD, C-14
10	343	7	4 JUN 74	ESS	16DEG 32.0MIN N	123DEG 9.0MIN W	0835		0	*	ESSO BUCKET, POLONIUM-210
10	344	1	5 JUN 74	ROS	19DEG 30.3MIN N	122DEG 43.2MIN W	0734	4272	4253	*	DEEP ROSETTE, BOTTOM RADON
10	344	2	5 JUN 74	ESS	19DEG 30.0MIN N	122DEG 43.0MIN W	0940		0	*	ESSO BUCKET
10	345	1	6 JUN 74	ROS	22DEG 31.5MIN N	122DEG 12.8MIN W	0844	4225	4215	*	DEEP ROSETTE, BOTTOM RADON
10	345	2	6 JUN 74	PMP	22DEG 30.6MIN N	122DEG 14.0MIN W	1420		300	*	SURFACE PUMP, RA-228
10	345	3	6 JUN 74	ROS	22DEG 30.0MIN N	122DEG 14.0MIN W	1514	4125	1888	*	SHALLOW ROSETTE
10	345	4	6 JUN 74	ROS	22DEG 30.0MIN N	122DEG 14.0MIN W	1635		0	*	ESSO BUCKET, POLONIUM-210
10	346	1	7 JUN 74	ROS	25DEG 28.9MIN N	121DEG 50.8MIN W	1515	4229	4210	*	DEEP ROSETTE, BOTTOM RADON
10	346	2	7 JUN 74	ESS	25DEG 29.0MIN N	121DEG 51.0MIN W	1805		0	*	ESSO BUCKET
10	347	1	8 JUN 74	ROS	28DEG 30.8MIN N	121DEG 29.2MIN W	1704	4287	4257	*	DEEP ROSETTE, BOTTOM RADON
10	347	2	8 JUN 74	GER	28DEG 31.3MIN N	121DEG 28.9MIN W	2043	4265	4001	*	DEEP GERARD, C-14
10	347	3	8 JUN 74	ROS	28DEG 31.4MIN N	121DEG 28.7MIN W	2335		990	*	SHALLOW ROSETTE
10	347	4	8 JUN 74	PMP	28DEG 31.0MIN N	121DEG 28.0MIN W	1625		5	*	BOW PUMP, C-14, RA-228
10	347	5	9 JUN 74	ESS	28DEG 31.4MIN N	121DEG 28.6MIN W	0040		0	*	ESSO BUCKET, POLONIUM-210

STATION AND CAST DESCRIPTION

GEOSECS INDIAN OCEAN R/V MELVILLE

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
3	402	1	6 DEC 77	SPE	37DEG 7.9MIN N	3DEG 5.0MIN E	1155	2710		*	TEST OF MARKEY WINCH
3	403	1	7 DEC 77	ROS	37DEG 41.6MIN N	8DEG 5.5MIN E	1238	2757	1992	*	SINGLE ROSETTE O CAST
3	404	1	9 DEC 77	ROS	35DEG 35.9MIN N	17DEG 15.2MIN E	0737	4030	4019	*	DOUBLE ROSETTE
3	404	2	9 DEC 77	GER	35DEG 36.6MIN N	17DEG 19.2MIN E	1420	4051	3917	*	9 BARREL C14
3	404	3	9 DEC 77	PMP	35DEG 36.6MIN N	17DEG 19.9MIN E	1700		5	*	BOW PUMP C14 SAMPLE
4	405	1	19 DEC 77	ROS	27DEG 16.0MIN N	34DEG 31.0MIN E	1340	1171	1038	*	DEEP ROSETTE
4	405	2	19 DEC 77	GER	27DEG 14.0MIN N	34DEG 28.6MIN E	1845	1181	996	*	DEEP GERARD
4	405	3	19 DEC 77	PMP	27DEG 15.0MIN N	34DEG 28.6MIN E	1845		5	*	BOW PUMP, PCO2
4	405	4	19 DEC 77	SPE	27DEG 16.0MIN N	34DEG 31.0MIN E	1433		0	*	PLANKTON NET TOW
4	406	1	21 DEC 77	NIS	21DEG 21.4MIN N	38DEG 7.2MIN E				*	1 NISKIN, PINGER (ABORTED)
4	406	2	21 DEC 77	NIS	21DEG 21.0MIN N	38DEG 5.1MIN E	1249			*	WEIGHT TEST, PINGER, 1 NISKIN
4	406	3	21 DEC 77	NIS	21DEG 20.8MIN N	38DEG 5.0MIN E	1615	2159	2127	*	DEEP NISKIN ATLANTIS II BRINE
4	407	1	22 DEC 77	ROS	19DEG 55.5MIN N	38DEG 29.9MIN E	0504	1719	1665	*	DEEP ROSETTE
4	407	2	22 DEC 77	GER	19DEG 57.1MIN N	38DEG 29.7MIN E	1040	1957	1788	*	DEEP GERARD, C-14, RA-228
4	407	3	22 DEC 77	GER	19DEG 57.3MIN N	38DEG 28.7MIN E	1315	1957	242	*	SHALLOW GERARD, C-14, RA-228
4	407	4	22 DEC 77	SPE	19DEG 55.5MIN N	38DEG 29.9MIN E	0515		0	*	PLANKTON NET TOW
4	408	1	24 DEC 77	ROS	14DEG 42.7MIN N	42DEG 10.3MIN E	0627	590	587	*	DEEP SINGLE ROSETTE, RADON
4	408	2	24 DEC 77	GER	14DEG 42.3MIN N	42DEG 10.5MIN E	0923	597	578	*	DEEP GERARD, C-14, RA-228
4	408	3	24 DEC 77	SPE	14DEG 42.3MIN N	42DEG 10.5MIN E	0950		0	*	PLANKTON NET TOW
4	409	1	25 DEC 77	ROS	12DEG 10.2MIN N	43DEG 57.1MIN E	0427	516	501	*	DEEP SINGLE ROSETTE
4	409	2	25 DEC 77	GER	12DEG 7.3MIN N	43DEG 55.5MIN E	0756	687	580	*	DEEP GERARD, C-14, RA-228
4	409	3	25 DEC 77	SPE	12DEG 7.3MIN N	43DEG 55.5MIN E	0745		0	*	PLANKTON NET TOW
4	410	1	26 DEC 77	NSD	12DEG 18.4MIN N	46DEG 58.8MIN E	0209	2358	2342	*	CTD + 7 NISKINS
4	410	2	26 DEC 77	SPE	12DEG 18.4MIN N	46DEG 58.8MIN E			0	*	BUCKET TRITIUM
4	411	1	26 DEC 77	NSD	12DEG 45.3MIN N	50DEG 3.2MIN E	2129	2452	2392	*	CTD + 11 NISKINS
4	411	2	26 DEC 77	SPE	12DEG 45.3MIN N	50DEG 3.2MIN E	2230		0	*	PLANKTON NET TOW
4	412	1	27 DEC 77	NSD	13DEG 12.7MIN N	51DEG 7.5MIN E	0852	3276	3204	*	CTD + 11 NISKINS
4	412	2	27 DEC 77	SPE	13DEG 12.7MIN N	51DEG 7.5MIN E	0755		0	*	PLANKTON NET TOW
4	412	3	27 DEC 77	SPE	13DEG 12.7MIN N	51DEG 7.5MIN E			0	*	BUCKET TRITIUM
4	413	1	27 DEC 77	ROS	13DEG 21.9MIN N	53DEG 16.0MIN E	2318	2815	2793	*	DEEP ROSETTE
4	413	2	28 DEC 77	GER	13DEG 21.4MIN N	53DEG 16.3MIN E	0356	2809	2715	*	DEEP GERARD, C-14, RA-228
4	413	3	28 DEC 77	ROS	13DEG 21.7MIN N	53DEG 16.9MIN E	0735			*	DEEP ROSETTE (ABORTED)
4	413	4	28 DEC 77	GER	13DEG 21.8MIN N	53DEG 17.0MIN E	1019	2789	448	*	SHALLOW GERARD, C-14, RA-228
4	413	5	28 DEC 77	NIS	13DEG 21.1MIN N	53DEG 17.8MIN E	1219	2786	2753	*	DEEP NISKIN
4	413	6	28 DEC 77	SPE	13DEG 21.9MIN N	53DEG 16.0MIN E	0000		0	*	PLANKTON NET TOW
4	414	1	29 DEC 77	CTD	15DEG 45.0MIN N	58DEG 4.9MIN E	2058	3744	2476	*	CTD, NO CHECK SAMPLES
4	414	2	29 DEC 77	SPE	15DEG 45.0MIN N	58DEG 4.9MIN E	2050		0	*	PLANKTON NET TOW
4	415	1	30 DEC 77	ROS	17DEG 14.5MIN N	60DEG 41.2MIN E	1646	3948	3933	*	Q CAST + RADON
4	415	2	30 DEC 77	SPE	17DEG 14.5MIN N	60DEG 41.2MIN E	1900		0	*	SURFACE RA-228 FIBER
4	415	3	30 DEC 77	SPE	17DEG 14.5MIN N	60DEG 41.2MIN E	1625		0	*	PLANKTON NET TOW
4	416	1	31 DEC 77	ROS	19DEG 45.5MIN N	64DEG 37.0MIN E	2016	3208	3156	*	DEEP ROSETTE
4	416	2	1 JAN 78	GER	19DEG 43.3MIN N	64DEG 37.1MIN E	0116	3208	3140	*	DEEP GERARD, C-14
4	416	3	1 JAN 78	GER	19DEG 42.9MIN N	64DEG 36.5MIN E	0429	3209	823	*	SHALLOW GERARD, C-14, RA-228
4	416	4	1 JAN 78	SPE	19DEG 42.7MIN N	64DEG 35.7MIN E	0600		0	*	SURFACE RA-228 FIBER
4	416	5	1 JAN 78	GER	19DEG 42.7MIN N	64DEG 35.2MIN E	0554	3209	475	*	SHALLOW GERARD (REPEAT)
4	416	6	31 DEC 77	SPE	19DEG 45.5MIN N	64DEG 37.0MIN E	2110		0	*	PLANKTON NET TOW
4	417	1	2 JAN 78	ROS	12DEG 58.3MIN N	64DEG 28.8MIN E	1928	4117	4102	*	DEEP ROSETTE, RADON
4	417	2	3 JAN 78	GER	12DEG 58.8MIN N	64DEG 27.8MIN E	0031	4108	4035	*	DEEP GERARD, C-14
4	417	3	3 JAN 78	ROS	12DEG 59.0MIN N	64DEG 26.9MIN E	0353	4117	1838	*	SHALLOW ROSETTE
4	417	4	3 JAN 78	GER	12DEG 59.2MIN N	64DEG 25.4MIN E	0748	4117	1045	*	SHALLOW GERARD, C-14
4	417	5	2 JAN 78	SPE	12DEG 59.4MIN N	64DEG 25.3MIN E	2230		0	*	SURFACE RA-228 FIBER
4	417	6	3 JAN 78	GER	12DEG 59.2MIN N	64DEG 25.5MIN E	1049	4114	4072	*	DEEP GERARD, RA-228
4	417	7	2 JAN 78	SPE	12DEG 58.3MIN N	64DEG 28.8MIN E	1815		0	*	PLANKTON NET TOW
4	418	1	5 JAN 78	ROS	6DEG 11.2MIN N	64DEG 25.3MIN E	0309	4695	4640	*	DEEP ROSETTE
4	418	2	5 JAN 78	GER	6DEG 11.5MIN N	64DEG 23.5MIN E	0801	4698	4634	*	DEEP GERARD, C-14
4	418	3	5 JAN 78	ROS	6DEG 12.6MIN N	64DEG 23.6MIN E	1147	4438	1589	*	SHALLOW ROSETTE
4	418	4	5 JAN 78	SPE	6DEG 12.8MIN N	64DEG 24.0MIN E	1800	4687	0	*	SURFACE RA-228 FIBER
4	418	5	5 JAN 78	GER	6DEG 13.2MIN N	64DEG 23.6MIN E	1522	4687	1941	*	SHALLOW GERARD, C-14, RA-228
4	418	6	5 JAN 78	GER	6DEG 13.0MIN N	64DEG 23.0MIN E	1745	4706	198	*	SHALLOW GERARD, C-14
4	418	7	5 JAN 78	PMP	6DEG 13.0MIN N	64DEG 23.0MIN E	2127	4682	3805	*	DEEP PUMP
4	418	8	5 JAN 78	SPE	6DEG 11.5MIN N	64DEG 23.5MIN E	0940		0	*	PLANKTON NET TOW
4	419	1	8 JAN 78	ROS	3DEG 57.1MIN N	56DEG 48.2MIN E	0015	4645	4626	*	DEEP ROSETTE
4	419	2	8 JAN 78	GER	3DEG 56.0MIN N	56DEG 50.4MIN E	0644	4658	4584	*	DEEP GERARD, C-14
4	419	3	8 JAN 78	ROS	3DEG 56.2MIN N	56DEG 49.4MIN E	1040	4648	1487	*	SHALLOW ROSETTE
4	419	4	8 JAN 78	GER	3DEG 56.4MIN N	56DEG 48.0MIN E	1444	4648	1295	*	SHALLOW GERARD, C-14, RA-228
4	419	5	8 JAN 78	GER	3DEG 57.6MIN N	56DEG 48.0MIN E	1805	4620	4554	*	DEEP GERARD, RA-228
4	419	6	8 JAN 78	SPE	3DEG 56.0MIN N	56DEG 50.4MIN E	0350		0	*	PLANKTON NET TOW
4	419	7	8 JAN 78	SPE	3DEG 57.1MIN N	56DEG 48.2MIN E			0	*	SURFACE RA-228 FIBER

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
4	420	1	10 JAN 78	ROS	0DEG 3.0MIN S	50DEG 55.8MIN E	0740			*	DEEP ROSETTE (ABORTED)
4	420	2	10 JAN 78	ROS	0DEG 3.4MIN S	50DEG 55.6MIN E	1005	5102	5070	*	DEEP ROSETTE, RADON
4	420	3	10 JAN 78	GER	0DEG 3.9MIN S	50DEG 52.6MIN E	1552	5058	5035	*	DEEP GERARD, C-14, RA-228
4	420	4	10 JAN 78	ROS	0DEG 3.0MIN S	50DEG 52.8MIN E	1942	5057	2086	*	SHALLOW ROSETTE
4	420	5	11 JAN 78	GER	0DEG 3.0MIN S	50DEG 50.8MIN E	0025	5090	1541	*	SHALLOW GERARD, C-14, RA-228
4	420	6	11 JAN 78	GER	0DEG 2.6MIN S	50DEG 48.8MIN E	0421	4847	4807	*	DEEP GERARD, RA-228
4	420	7	11 JAN 78	BAG	0DEG 5.0MIN S	50DEG 45.9MIN E	0945		4795	*	BAG, SI-32
4	420	8	10 JAN 78	SPE	0DEG 3.6MIN S	50DEG 52.6MIN E	1400		0	*	SURFACE RA-228 FIBER
4	420	9	11 JAN 78	SPE	0DEG 2.6MIN S	50DEG 48.8MIN E	0720		0	*	PLANKTON NET TOW
4	421	1	13 JAN 78	ROS	6DEG 9.2MIN S	50DEG 54.7MIN E	1120	4875	4837	*	DEEP ROSETTE
4	421	2	13 JAN 78	GER	6DEG 8.9MIN S	50DEG 54.9MIN E	1624	4799	4752	*	DEEP GERARD, C-14
4	421	3	13 JAN 78	ROS	6DEG 10.7MIN S	50DEG 54.3MIN E	2100		1835	*	SHALLOW ROSETTE
4	421	4	14 JAN 78	GER	6DEG 11.3MIN S	50DEG 53.7MIN E	0105	4812	1694	*	SHALLOW GERARD, C-14
4	421	5	14 JAN 78	GER	6DEG 11.9MIN S	50DEG 53.5MIN E	0225	4812	19	*	SURFACE GERARD, C-14
4	421	6	14 JAN 78	GER	6DEG 13.1MIN S	50DEG 53.2MIN E	0421	4732	4689	*	DEEP GERARD, RA-228
4	421	7	14 JAN 78	SPE	6DEG 13.1MIN S	50DEG 53.2MIN E	0650		0	*	SURFACE RA-228 FIBER
4	421	8	13 JAN 78	SPE	6DEG 9.2MIN S	50DEG 54.7MIN E	1050		0	*	PLANKTON NET TOW
4	422	1	15 JAN 78	ROS	8DEG 49.9MIN S	52DEG 14.4MIN E	0006	4165	4144	*	DEEP ROSETTE, BOTTOM RADON
4	422	2	15 JAN 78	SPE	8DEG 49.9MIN S	52DEG 14.4MIN E	0310		0	*	SURFACE RA-228 FIBER
4	423	1	15 JAN 78	ROS	9DEG 1.6MIN S	53DEG 15.2MIN E	1101	5159	5136	*	DEEP ROSETTE, RADON
4	423	2	15 JAN 78	SPE	9DEG 1.6MIN S	53DEG 15.2MIN E	0900		0	*	SURFACE RA-228 FIBER
4	423	3	15 JAN 78	SPE	9DEG 1.6MIN S	53DEG 15.2MIN E	1035		0	*	PLANKTON NET TOW
4	424	1	16 JAN 78	ROS	12DEG 18.4MIN S	53DEG 41.4MIN E	1038	4676	4659	*	DEEP ROSETTE, RADON
4	424	2	16 JAN 78	GER	12DEG 17.1MIN S	53DEG 38.9MIN E	1514	4662	4581	*	DEEP GERARD, C-14, RA-228
4	424	3	16 JAN 78	ROS	12DEG 18.1MIN S	53DEG 39.6MIN E	1841	4302	2090	*	SHALLOW ROSETTE
4	424	4	16 JAN 78	GER	12DEG 18.3MIN S	53DEG 40.0MIN E	2208	4302	1392	*	SHALLOW GERARD, C-14
4	424	5	17 JAN 78	GER	12DEG 18.3MIN S	53DEG 40.7MIN E	0113	4478	4443	*	DEEP GERARD, RA-228
4	424	6	17 JAN 78	SPE	12DEG 18.3MIN S	53DEG 40.7MIN E	0400		0	*	SURFACE RA-228 FIBER
4	424	7	17 JAN 78	SPE	12DEG 18.4MIN S	53DEG 41.4MIN E	1145		0	*	PLANKTON NET TOW
4	425	1	18 JAN 78	ROS	17DEG 18.0MIN S	55DEG 51.0MIN E	1244	4535	4459	*	DEEP ROSETTE
4	425	2	18 JAN 78	NIS	17DEG 16.3MIN S	55DEG 51.9MIN E	1612		597	*	SHALLOW NISKIN
4	425	3	18 JAN 78	SPE	17DEG 19.0MIN S	55DEG 51.0MIN E			0	*	SURFACE RA-228 FIBER
4	426	1	20 JAN 78	CTD	18DEG 54.4MIN S	54DEG 47.5MIN E	1800	4760	4694	*	CTD, 4 NISKIN CHECKS
4	426	2	20 JAN 78	GER	18DEG 54.6MIN S	54DEG 47.8MIN E	2255	4728	4585	*	DEEP GERARD, C-14
4	426	3	21 JAN 78	GER	18DEG 54.0MIN S	54DEG 47.0MIN E	0317	4737	1437	*	SHALLOW GERARD, C-14
4	426	4	21 JAN 78	SPE	18DEG 54.0MIN S	54DEG 47.5MIN E	0425		0	*	SURFACE RA-228 FIBER
5	427	1	30 JAN 78	ROS	27DEG 4.2MIN S	56DEG 58.1MIN E	0312	5101	5043	*	DEEP ROSETTE
5	427	2	30 JAN 78	GER	27DEG 5.5MIN S	56DEG 56.4MIN E	0835	5099	5066	*	DEEP GERARD, C-14
5	427	3	30 JAN 78	ROS	27DEG 5.0MIN S	56DEG 59.0MIN E	1240	5051	1665	*	SHALLOW ROSETTE
5	427	4	30 JAN 78	GER	27DEG 5.5MIN S	56DEG 59.3MIN E	1620	5065	1747	*	SHALLOW GERARD, C-14
5	427	5	30 JAN 78	GER	27DEG 4.7MIN S	57DEG 1.0MIN E	1958	5169	5036	*	DEEP GERARD, RA-228
5	427	6	30 JAN 78	SPE	27DEG 4.7MIN S	57DEG 1.0MIN E	2350		0	*	SURFACE RA-228 FIBER
5	428	1	2 FEB 78	ROS	37DEG 45.5MIN S	57DEG 37.7MIN E	1030			*	DEEP ROSETTE (ABORTED)
5	428	2	2 FEB 78	CTD	37DEG 45.5MIN S	57DEG 37.7MIN E	1330			*	CTD W/3 CHECK SAMPLES(ABORT)
5	428	3	2 FEB 78	GER	37DEG 46.5MIN S	57DEG 37.4MIN E	1707		1739	*	SHALLOW GERARD, C-14
5	428	4	2 FEB 78	ROS	37DEG 46.3MIN S	57DEG 35.9MIN E	2118	5340	5323	*	DEEP ROSETTE, RADON
5	428	5	3 FEB 78	GER	37DEG 47.7MIN S	57DEG 35.2MIN E	0316	5383	5325	*	DEEP GERARD, C-14
5	428	6	3 FEB 78	ROS	37DEG 49.7MIN S	57DEG 36.8MIN E	0745	5232	1728	*	SHALLOW ROSETTE
5	428	7	3 FEB 78	BAG	37DEG 53.1MIN S	57DEG 41.0MIN E	1615		5236	*	SI-32 BAGS
5	428	8	3 FEB 78	SPE	37DEG 52.6MIN S	57DEG 39.7MIN E	1410		0	*	SURFACE RA-228 FIBERS
5	428	9	2 FEB 78	SPE	37DEG 45.5MIN S	57DEG 37.7MIN E	1025		0	*	PLANKTON NET TOW
5	429	1	6 FEB 78	ROS	47DEG 40.1MIN S	57DEG 51.7MIN E	1142	4586	4563	*	DEEP ROSETTE, RADON
5	429	2	6 FEB 78	GER	47DEG 39.9MIN S	57DEG 52.2MIN E	1625	4578	4562	*	DEEP GERARD, C-14
5	429	3	6 FEB 78	ROS	47DEG 39.7MIN S	57DEG 53.6MIN E	2022	4435	1759	*	SHALLOW ROSETTE
5	429	4	6 FEB 78	GER	47DEG 38.5MIN S	57DEG 54.2MIN E	2352		1765	*	SHALLOW GERARD, C-14
5	429	5	7 FEB 78	SPE	47DEG 38.5MIN S	57DEG 54.2MIN E	0115		0	*	SURFACE RA-228 FIBERS
5	429	6	6 FEB 78	SPE	47DEG 40.1MIN S	57DEG 51.7MIN E	1010		0	*	PLANKTON NET TOW
5	430	1	10 FEB 78	ROS	59DEG 59.1MIN S	60DEG 58.6MIN E	0004	4737	4709	*	DEEP ROSETTE, RADON
5	430	2	10 FEB 78	GER	59DEG 59.0MIN S	60DEG 59.2MIN E	0517	4726	4695	*	DEEP GERARD, C-14
5	430	3	10 FEB 78	ROS	59DEG 59.1MIN S	61DEG 0.8MIN E	0918	4732	1813	*	SHALLOW ROSETTE
5	430	4	10 FEB 78	GER	59DEG 58.8MIN S	61DEG 1.1MIN E	1221	4730	1814	*	SHALLOW GERARD, C-14
5	430	5	10 FEB 78	GER	59DEG 58.5MIN S	61DEG 3.9MIN E	1538	4715	4673	*	DEEP GERARD, RA-228
5	430	6	10 FEB 78	PMP	59DEG 58.7MIN S	61DEG 5.4MIN E	2032	4738	4517	*	DEEP PUMP
5	430	7	10 FEB 78	SPE	60DEG 0.0MIN S	61DEG 1.8MIN E	2300			*	SURFACE RA-228 FIBER-LOST
5	430	8	11 FEB 78	SPE	60DEG 0.0MIN S	61DEG 2.0MIN E	0300		0	*	SURFACE RA-228 FIBER
5	430	9	10 FEB 78	SPE	59DEG 59.1MIN S	61DEG 0.8MIN E	0925		0	*	PLANKTON NET TOW
5	431	1	13 FEB 78	ROS	64DEG 11.4MIN S	83DEG 58.8MIN E	2106	3624	3605	*	DEEP ROSETTE
5	431	2	14 FEB 78	GER	64DEG 10.7MIN S	83DEG 59.2MIN E	0054	3619	1392	*	SHALLOW GERARD, C-14
5	431	3	14 FEB 78	GER	64DEG 10.1MIN S	83DEG 59.0MIN E	0315	3612	3580	*	DEEP GERARD, C-14
5	431	4	14 FEB 78	SPE	64DEG 10.0MIN S	83DEG 59.0MIN E	0515		0	*	SURFACE RA-228 FIBERS
5	431	5	14 FEB 78	SPE	64DEG 10.0MIN S	83DEG 59.0MIN E	0210		0	*	PLANKTON NET TOW
5	432	1	15 FEB 78	ROS	59DEG 19.3MIN S	92DEG 38.4MIN E	2006	4468	4452	*	DEEP ROSETTE, RADON
5	432	2	16 FEB 78	GER	59DEG 20.5MIN S	92DEG 38.9MIN E	0041	4452	4427	*	DEEP GERARD, C-14
5	432	3	16 FEB 78	ROS	59DEG 19.8MIN S	92DEG 41.1MIN E	0403	4475	1844	*	SHALLOW ROSETTE
5	432	4	16 FEB 78	GER	59DEG 19.7MIN S	92DEG 41.1MIN E	0712	4490	1693	*	SHALLOW GERARD, C-14

STATION AND CAST DESCRIPTION

GEOSECS INDIAN OCEAN **R/V MELVILLE**

LEG	STATION	CAST	DATE	CAST TYPE	LATITUDE	LONGITUDE	TIME GMT	BOTTOM DEPTH	MAX DEPTH	*	REMARKS
5	432	5	16 FEB 78	GER	59DEG 19.0MIN S	92DEG 41.9MIN E	1010	4221	4193	*	DEEP GERARD, C-14, RA-228
5	432	6	16 FEB 78	SPE	59DEG 19.0MIN S	92DEG 42.0MIN E	1245		0	*	SURFACE RA-228 FIBERS
5	432	7	16 FEB 78	SPE	59DEG 20.5MIN S	92DEG 38.9MIN E	0100		0	*	PLANKTON NET TOW
5	433	1	18 FEB 78	ROS	53DEG 0.9MIN S	103DEG 1.5MIN E	1151	3808	3770	*	DEEP ROSETTE
5	433	2	18 FEB 78	GER	53DEG 1.3MIN S	103DEG 2.0MIN E	1606	3898	2182	*	DEEP GERARD, C-14
5	433	3	18 FEB 78	GER	53DEG 1.5MIN S	103DEG 4.3MIN E	1826	3942	3749	*	DEEP GERARD (REPEAT)
5	433	4	18 FEB 78	ROS	53DEG 1.6MIN S	103DEG 6.4MIN E	2103		1650	*	SHALLOW ROSETTE
5	433	5	18 FEB 78	GER	53DEG 1.1MIN S	103DEG 6.8MIN E	2340	3820	1867	*	SHALLOW GERARD, C-14
5	433	6	18 FEB 78	SPE	53DEG 0.9MIN S	103DEG 1.5MIN E	1120		0	*	PLANKTON NET TOW
5	433	7	18 FEB 78	SPE	53DEG 0.9MIN S	103DEG 1.5MIN E	1250		0	*	SURFACE RA-228 FIBERS
5	434	1	20 FEB 78	ROS	45DEG 38.3MIN S	107DEG 15.4MIN E	1901	3924	3894	*	DEEP ROSETTE
5	434	2	20 FEB 78	SPE	45DEG 38.3MIN S	107DEG 15.4MIN E	1850		0	*	PLANKTON NET TOW
5	435	1	22 FEB 78	ROS	39DEG 57.2MIN S	109DEG 58.3MIN E	0840	4636	4621	*	DEEP ROSETTE, RADON
5	435	2	22 FEB 78	GER	39DEG 58.1MIN S	109DEG 59.0MIN E	1250	4699	4611	*	DEEP GERARD, C-14, RA-228
5	435	3	22 FEB 78	ROS	39DEG 58.6MIN S	109DEG 59.6MIN E	1615	4665	1768	*	SHALLOW ROSETTE
5	435	4	22 FEB 78	GER	39DEG 57.8MIN S	108DEG 59.4MIN E	1901	4646	1672	*	SHALLOW GERARD, C-14
5	435	5	22 FEB 78	GER	39DEG 57.2MIN S	110DEG 1.2MIN E	2201	4699	4556	*	DEEP GERARD, RA-228
5	435	6	22 FEB 78	SPE	39DEG 57.2MIN S	109DEG 58.3MIN E	0920		0	*	PLANKTON NET TOW
5	435	7	23 FEB 78	SPE	39DEG 57.2MIN S	110DEG 1.2MIN E	0015		0	*	SURFACE RA-228 FIBERS
6	436	1	8 MAR 78	ROS	29DEG 15.0MIN S	109DEG 58.1MIN E	1531	5572	5556	*	DEEP ROSETTE, RADON
6	436	2	8 MAR 78	GER	29DEG 15.1MIN S	109DEG 57.8MIN E	2101	5560	5485	*	DEEP GERARD, C-14
6	436	3	9 MAR 78	ROS	29DEG 14.3MIN S	109DEG 58.1MIN E	0051	5560	2032	*	SHALLOW ROSETTE
6	436	4	9 MAR 78	GER	29DEG 14.1MIN S	109DEG 59.9MIN E	0409	5560	1492	*	SHALLOW GERARD, C-14
6	436	5	9 MAR 78	GER	29DEG 13.7MIN S	110DEG 1.7MIN E	0710	5560	3415	*	DEEP GERARD (SPECIAL)
6	436	6	9 MAR 78	GER	29DEG 13.2MIN S	110DEG 3.7MIN E	1215	5560	5527	*	DEEP GERARD, RA-228
6	436	7	9 MAR 78	SPE	29DEG 13.6MIN S	110DEG 1.8MIN E	0830		0	*	SURFACE RA-228 FIBERS
6	436	8	9 MAR 78	SPE	29DEG 14.3MIN S	109DEG 58.1MIN E	0050		0	*	PLANKTON NET TOW
6	437	1	11 MAR 78	ROS	24DEG 28.5MIN S	104DEG 55.8MIN E	0148	5698	1587	*	SHALLOW ROSETTE
6	437	2	11 MAR 78	GER	24DEG 28.4MIN S	104DEG 56.9MIN E	0429		719	*	SHALLOW GERARD, C-14
6	437	3	11 MAR 78	ROS	24DEG 30.3MIN S	104DEG 58.5MIN E	0633		95	*	SHALLOW ROSETTE,SURFACE RADON
6	437	4	11 MAR 78	SPE	24DEG 30.3MIN S	104DEG 58.5MIN E	0700		0	*	SURFACE RA-228 FIBERS
6	437	5	11 MAR 78	SPE	24DEG 28.4MIN S	104DEG 56.9MIN E	0415		0	*	PLANKTON NET TOW
6	438	1	12 MAR 78	ROS	19DEG 29.3MIN S	101DEG 17.5MIN E	1927	5842	5825	*	DEEP ROSETTE, RADON
6	438	2	13 MAR 78	GER	19DEG 28.0MIN S	101DEG 16.3MIN E	0126	5891	5717	*	DEEP GERARD, C-14
6	438	3	13 MAR 78	ROS	19DEG 26.9MIN S	101DEG 15.1MIN E	0522		2378	*	SHALLOW ROSETTE
6	438	4	13 MAR 78	GER	19DEG 26.1MIN S	101DEG 12.0MIN E	0841		1498	*	SHALLOW GERARD, C-14
6	438	5	13 MAR 78	GER	19DEG 25.4MIN S	101DEG 13.3MIN E	1158	5965	5787	*	DEEP GERARD, RA-228
6	438	6	13 MAR 78	SPE	19DEG 25.4MIN S	101DEG 13.3MIN E	1442		0	*	SURFACE RA-228 FIBERS
6	438	7	13 MAR 78	SPE	19DEG 28.0MIN S	101DEG 16.3MIN E	0300		0	*	PLANKTON NET TOW
6	439	1	15 MAR 78	ROS	13DEG 2.2MIN S	97DEG 8.9MIN E	1904	4699	1487	*	SHALLOW ROSETTE
6	439	2	15 MAR 78	GER	13DEG 2.7MIN S	97DEG 7.5MIN E	2200	4699	1495	*	SHALLOW GERARD, C-14
6	439	3	15 MAR 78	SPE	13DEG 2.7MIN S	97DEG 7.5MIN E	2230		0	*	PLANKTON NET TOW
6	440	1	17 MAR 78	ROS	9DEG 21.8MIN S	95DEG 1.7MIN E	0612	5255	5238	*	DEEP ROSETTE, RADON
6	440	2	17 MAR 78	GER	9DEG 20.4MIN S	94DEG 59.4MIN E	1057	5091	5063	*	DEEP GERARD, C-14
6	440	3	17 MAR 78	ROS	9DEG 19.3MIN S	95DEG 0.3MIN E	1548		2081	*	SHALLOW ROSETTE
6	440	4	17 MAR 78	GER	9DEG 18.0MIN S	95DEG 1.1MIN E	1906		1822	*	SHALLOW GERARD, C-14
6	440	5	18 MAR 78	PMP	9DEG 19.6MIN S	94DEG 53.7MIN E	0859		4500	*	DEEP PUMP
6	440	6	18 MAR 78	GER	9DEG 20.1MIN S	94DEG 54.1MIN E	1246	4912	4883	*	DEEP GERARD, RA-228
6	440	7	18 MAR 78	ROS	9DEG 20.5MIN S	94DEG 53.2MIN E	1553		57	*	SHALLOW ROSETTE,SURFACE RADON
6	440	8	17 MAR 78	SPE	9DEG 18.0MIN S	95DEG 1.1MIN E	1833		0	*	SURFACE RA-228 FIBERS
6	440	9	17 MAR 78	SPE	9DEG 21.8MIN S	95DEG 1.7MIN E	0500		0	*	PLANKTON NET TOW
6	440	10	18 MAR 78	PMP	9DEG 20.0MIN S	94DEG 53.0MIN E	1659		0	*	SURFACE PUMP, C-14, RA-226
6	441	1	20 MAR 78	ROS	5DEG 1.7MIN S	91DEG 46.8MIN E	0158	4942	4927	*	DEEP ROSETTE, RADON
6	441	2	20 MAR 78	GER	5DEG 2.2MIN S	91DEG 43.4MIN E	0627	4936	4881	*	DEEP GERARD, C-14
6	441	3	20 MAR 78	ROS	5DEG 2.5MIN S	91DEG 43.9MIN E	1014	4956	1984	*	SHALLOW ROSETTE
6	441	4	20 MAR 78	GER	5DEG 2.2MIN S	91DEG 45.6MIN E	1327		1594	*	SHALLOW GERARD, C-14
6	441	5	20 MAR 78	GER	5DEG 1.8MIN S	91DEG 46.3MIN E	1627	4942	4912	*	DEEP GERARD, RA-228
6	441	6	20 MAR 78	SPE	5DEG 1.8MIN S	91DEG 46.2MIN E	1659		0	*	SURFACE RA-228 FIBERS
6	441	7	20 MAR 78	SPE	5DEG 2.2MIN S	91DEG 43.4MIN E	0545		0	*	PLANKTON NET TOW
6	442	1	22 MAR 78	ROS	1DEG 12.1MIN S	90DEG 45.3MIN E	0142	4619	4606	*	DEEP ROSETTE, RADON
6	442	2	22 MAR 78	GER	1DEG 11.4MIN S	90DEG 45.1MIN E	0535	4619	4582	*	DEEP GERARD, C-14
6	442	3	22 MAR 78	GER	1DEG 10.3MIN S	90DEG 44.9MIN E	0819		101	*	SHALLOW GERARD, C-14
6	442	4	22 MAR 78	ROS	1DEG 9.8MIN S	90DEG 44.6MIN E	0952		1799	*	SHALLOW ROSETTE
6	442	5	22 MAR 78	GER	1DEG 9.0MIN S	90DEG 43.8MIN E	1717	4956	1790	*	SHALLOW GERARD, C-14
6	442	6	22 MAR 78	GER	1DEG 7.0MIN S	90DEG 44.8MIN E	2036	4604	3367	*	DEEP GERARD, RA-228
6	442	7	22 MAR 78	GER	1DEG 6.5MIN S	90DEG 44.5MIN E	2319	4600	4572	*	DEEP GERARD (REPEAT-RA-228)
6	442	8	22 MAR 78	SPE	1DEG 7.0MIN S	90DEG 44.8MIN E	2016		0	*	SURFACE RA-228 FIBERS
6	442	9	22 MAR 78	SPE	1DEG 10.3MIN S	90DEG 44.9MIN E	0735		0	*	PLANKTON NET TOW
6	443	1	23 MAR 78	ROS	0DEG 1.5MIN N	90DEG 28.5MIN E	1303	4540	4527	*	DEEP SINGLE ROSETTE, RADON
6	443	2	23 MAR 78	SPE	0DEG 1.5MIN N	90DEG 28.5MIN E	0900		0	*	PLANKTON NET TOW
6	444	1	24 MAR 78	GER	0DEG 36.1MIN N	88DEG 36.1MIN E	0235	4495	4448	*	DEEP GERARD, C-14
6	444	2	24 MAR 78	ROS	0DEG 35.2MIN N	88DEG 38.9MIN E	0827	4464	4453	*	DEEP ROSETTE, RADON
6	444	3	24 MAR 78	GER	0DEG 35.8MIN N	88DEG 38.6MIN E	1455	4457	4206	*	DEEP GERARD, RA-228, RADON
6	444	4	24 MAR 78	SPE	0DEG 35.8MIN N	88DEG 38.6MIN E	1735		0	*	SURFACE RA-228 FIBERS
6	444	5	24 MAR 78	SPE	0DEG 35.2MIN N	88DEG 38.9MIN E	0610		0	*	PLANKTON NET TOW
6	445	1	26 MAR 78	ROS	8DEG 31.4MIN N	86DEG 2.5MIN E	1400	3659	3642	*	DEEP ROSETTE, RADON
6	445	2	26 MAR 78	GER	8DEG 33.6MIN N	86DEG 2.1MIN E	1743	3641	3617	*	DEEP GERARD, C-14
6	445	3	26 MAR 78	ROS	8DEG 33.8MIN N	86DEG 3.1MIN E	2023	3659	1525	*	SHALLOW ROSETTE
6	445	4	26 MAR 78	GER	8DEG 36.1MIN N	86DEG 3.0MIN E	2302	3659	1245	*	SHALLOW GERARD, C-14
6	445	5	27 MAR 78	GER	8DEG 36.2MIN N	86DEG 3.0MIN E	0141	3648	3625	*	DEEP GERARD, RA-228, RADON
6	445	6	26 MAR 78	SPE	8DEG 36.1MIN N	86DEG 3.0MIN E	2240		0	*	PLANKTON NET TOW
6	445	7	27 MAR 78	SPE	8DEG 36.2MIN N	86DEG 3.0MIN E	0220		0	*	SURFACE RA-228 FIBERS
6	446	1	28 MAR 78	GER	12DEG 31.5MIN N	84DEG 30.7MIN E	0258	3316	3286	*	DEEP GERARD, C-14, RADON
6	446	2	28 MAR 78	ROS	12DEG 29.9MIN N	84DEG 29.4MIN E	0608	3321	3308	*	DEEP ROSETTE, RADON
6	446	3	28 MAR 78	GER	12DEG 28.6MIN N	84DEG 29.5MIN E	0856	3334	995	*	SHALLOW GERARD, C-14
6	446	4	28 MAR 78	ROS	12DEG 26.2MIN N	84DEG 28.3MIN E	1214	3338	1190	*	SHALLOW ROSETTE
6	446	5	28 MAR 78	GER	12DEG 25.1MIN N	84DEG 28.2MIN E	1519	3340	2596	*	DEEP GERARD, RA-228
6	446	6	28 MAR 78	GER	12DEG 24.6MIN N	84DEG 28.2MIN E	1710	3330	3297	*	DEEP GERARD (REPEAT-RA-228)
6	446	7	28 MAR 78	ROS	12DEG 23.6MIN N	84DEG 27.2MIN E	2210		1993	*	SHALLOW SINGLE ROSETTE, RADON
6	446	8	28 MAR 78	SPE	12DEG 28.6MIN N	84DEG 29.5MIN E	0845		0	*	PLANKTON NET TOW
6	446	9	28 MAR 78	SPE	12DEG 23.6MIN N	84DEG 27.2MIN E	2130		0	*	SURFACE RA-228 FIBERS
7	447	1	5 APR 78	ROS	4DEG 59.8MIN N	79DEG 57.2MIN E	0239	4198	4187	*	DEEP ROSETTE, RADON
7	447	2	5 APR 78	GER	4DEG 58.1MIN N	79DEG 55.9MIN E	0719	4197	4158	*	DEEP GERARD, C-14
7	447	3	5 APR 78	ROS	4DEG 56.5MIN N	79DEG 55.7MIN E	1048	4209	1498	*	SHALLOW ROSETTE
7	447	4	5 APR 78	GER	4DEG 56.7MIN N	79DEG 55.0MIN E	1341	4214	1196	*	SHALLOW GERARD, C-14
7	447	5	5 APR 78	GER	4DEG 56.7MIN N	79DEG 55.0MIN E	1634	4194	4170	*	DEEP GERARD, RA-228
7	447	6	5 APR 78	SPE	4DEG 56.7MIN N	79DEG 55.0MIN E	1838		0	*	SURFACE RA-228 FIBERS
7	447	7	5 APR 78	SPE	4DEG 59.8MIN N	79DEG 57.2MIN E	0330		0	*	PLANKTON NET TOW
7	448	1	6 APR 78	ROS	0DEG 1.1MIN N	80DEG 3.3MIN E	2157	4651	4640	*	DEEP ROSETTE, RADON
7	448	2	7 APR 78	GER	0DEG 1.4MIN N	80DEG 4.2MIN E	0220	4644	4597	*	DEEP GERARD, C-14, RADON
7	448	3	7 APR 78	ROS	0DEG 1.6MIN N	80DEG 4.6MIN E	0535		1884	*	SHALLOW ROSETTE
7	448	4	7 APR 78	GER	0DEG 1.3MIN N	80DEG 4.5MIN E	0816	4273	1590	*	SHALLOW GERARD, C-14
7	448	5	7 APR 78	GER	0DEG 1.4MIN N	80DEG 4.8MIN E	0949	4273	1	*	SURFACE GERARD, C-14
7	448	6	7 APR 78	ROS	0DEG 2.2MIN N	80DEG 5.5MIN E	1044	4273	220	*	SHALLOW ROSETTE,SURFACE RADON
7	448	7	7 APR 78	SPE	0DEG 1.1MIN N	80DEG 3.3MIN E	1135		0	*	SURFACE RA-228 FIBERS
7	448	8	7 APR 78	SPE	0DEG 1.4MIN N	80DEG 4.2MIN E	0315		0	*	PLANKTON NET TOW
7	449	1	8 APR 78	ROS	5DEG 0.4MIN S	79DEG 59.8MIN E	1511	5122	5107	*	DEEP ROSETTE, RADON
7	449	2	8 APR 78	GER	5DEG 0.4MIN S	80DEG 0.4MIN E	1936	5115	5089	*	DEEP GERARD, C-14, RADON
7	449	3	8 APR 78	ROS	4DEG 59.7MIN S	80DEG 0.7MIN E	2249	5124	1836	*	SHALLOW ROSETTE
7	449	4	9 APR 78	GER	4DEG 59.4MIN S	80DEG 1.6MIN E	0209	5124	1741	*	SHALLOW GERARD, C-14
7	449	5	9 APR 78	GER	4DEG 59.3MIN S	80DEG 1.0MIN E	0530	4878	4853	*	DEEP GERARD, RA-228
7	449	6	9 APR 78	GER	4DEG 59.0MIN S	80DEG 1.1MIN E	0922	5110	5082	*	DEEP GERARD (REPEAT-RA-228)
7	449	7	9 APR 78	SPE	4DEG 59.0MIN S	80DEG 1.1MIN E	1000		0	*	SURFACE RA-228 FIBERS
7	449	8	8 APR 78	SPE	5DEG 0.4MIN S	79DEG 59.8MIN E	1510		0	*	PLANKTON NET TOW
7	450	1	10 APR 78	ROS	10DEG 0.5MIN S	79DEG 59.2MIN E	1551	5347	5334	*	DEEP ROSETTE, RADON
7	450	2	10 APR 78	GER	9DEG 58.1MIN S	79DEG 59.5MIN E	2028	5362	5325	*	DEEP GERARD, C-14, RADON
7	450	3	10 APR 78	ROS	9DEG 57.6MIN S	79DEG 59.7MIN E	2359		1836	*	SHALLOW ROSETTE
7	450	4	11 APR 78	GER	9DEG 56.9MIN S	79DEG 58.7MIN E	0256		1446	*	SHALLOW GERARD, C-14
7	450	5	11 APR 78	GER	9DEG 56.9MIN S	79DEG 58.7MIN E	0417		1746	*	SHALLOW GERARD(REPEAT-C-14)
7	450	6	11 APR 78	GER	9DEG 57.9MIN S	79DEG 59.2MIN E	0708	5359	5336	*	DEEP GERARD, RA-228
7	450	7	11 APR 78	PMP	9DEG 59.8MIN S	80DEG 5.7MIN E	1956		4920	*	DEEP PUMP
7	450	8	11 APR 78	SPE	9DEG 57.9MIN S	79DEG 59.2MIN E	1015		0	*	SURFACE RA-228 FIBERS
7	450	9	10 APR 78	SPE	9DEG 59.8MIN S	80DEG 5.7MIN E	1800		0	*	PLANKTON NET TOW
7	451	1	13 APR 78	ROS	14DEG 59.2MIN S	79DEG 57.6MIN E	0320	5016	5001	*	DEEP ROSETTE, RADON
7	451	2	13 APR 78	GER	14DEG 59.3MIN S	79DEG 56.5MIN E	0738	4905	4874	*	DEEP GERARD, C-14
7	451	3	13 APR 78	ROS	14DEG 59.0MIN S	79DEG 54.8MIN E	1104		1848	*	SHALLOW ROSETTE
7	451	4	13 APR 78	GER	14DEG 59.0MIN S	79DEG 53.5MIN E	1400		1595	*	SHALLOW GERARD, C-14
7	451	5	13 APR 78	GER	14DEG 59.5MIN S	79DEG 54.2MIN E	1730	4989	4929	*	DEEP GERARD, RA-228
7	451	6	13 APR 78	SPE	14DEG 59.2MIN S	79DEG 57.6MIN E	0320		0	*	SURFACE RA-228 FIBERS
7	451	7	13 APR 78	SPE	14DEG 59.3MIN S	79DEG 56.5MIN E	0650		0	*	PLANKTON NET TOW
7	452	1	15 APR 78	ROS	20DEG 5.7MIN S	79DEG 59.1MIN E	0444	4821	4791	*	DEEP ROSETTE, RADON
7	452	2	15 APR 78	GER	20DEG 6.3MIN S	79DEG 58.6MIN E	0856	4822	4681	*	DEEP GERARD, C-14, RA-228
7	452	3	15 APR 78	ROS	20DEG 5.7MIN S	79DEG 57.5MIN E	1219	4772	1839	*	SHALLOW ROSETTE
7	452	4	15 APR 78	GER	20DEG 5.9MIN S	79DEG 56.7MIN E	1451		1492	*	SHALLOW GERARD, C-14
7	452	5	15 APR 78	GER	20DEG 5.6MIN S	79DEG 55.4MIN E	1759	4830	4236	*	DEEP GERARD, RA-228
7	452	6	15 APR 78	BAG	20DEG 3.8MIN S	80DEG 2.5MIN E	2312		3701	*	SI-32 BAGS
7	452	7	15 APR 78	SPE	20DEG 5.6MIN S	79DEG 55.4MIN E	2140		0	*	SURFACE RA-228 FIBERS
7	452	8	15 APR 78	SPE	20DEG 5.7MIN S	79DEG 59.1MIN E	0430		0	*	PLANKTON NET TOW
7	453	1	18 APR 78	ROS	23DEG 0.1MIN S	74DEG 1.0MIN E	0008	4161	4153	*	DEEP ROSETTE, RADON
7	453	2	18 APR 78	GER	22DEG 59.8MIN S	74DEG 3.1MIN E	0409	4142	4116	*	DEEP GERARD, C-14, RADON
7	453	3	18 APR 78	ROS	23DEG 1.5MIN S	73DEG 59.6MIN E	0709		1811	*	SHALLOW ROSETTE
7	453	4	18 APR 78	GER	23DEG 1.5MIN S	73DEG 59.6MIN E	1010		1228	*	SHALLOW GERARD, C-14
7	453	5	18 APR 78	ROS	23DEG 1.0MIN S	74DEG 2.0MIN E	1201		594	*	SHALLOW ROSETTE (REPEAT)
7	453	6	18 APR 78	GER	23DEG 0.9MIN S	74DEG 3.6MIN E	1435	4272	4210	*	DEEP GERARD, C-14 RA-228
7	453	7	19 APR 78	PMP	23DEG 2.3MIN S	73DEG 59.9MIN E	0230		3668	*	DEEP PUMP
7	453	8	19 APR 78	ROS	23DEG 2.3MIN S	73DEG 59.9MIN E	0430		246	*	SHALLOW ROSETTE, RADON
7	453	9	18 APR 78	SPE	23DEG 0.9MIN S	74DEG 3.6MIN E	1723		0	*	SURFACE RA-228 FIBERS
7	453	10	18 APR 78	SPE	22DEG 59.8MIN S	74DEG 3.1MIN E	0400		0	*	PLANKTON NET TOW
7	454	1	21 APR 78	ROS	26DEG 59.7MIN S	67DEG 5.9MIN E	0006	4973	4834	*	DEEP ROSETTE, RADON
7	454	2	21 APR 78	GER	27DEG 1.0MIN S	67DEG 5.6MIN E	0434	5195	4688	*	DEEP GERARD, C-14, RADON
7	454	3	21 APR 78	ROS	27DEG 2.0MIN S	67DEG 5.5MIN E	0741	5114	1784	*	SHALLOW ROSETTE
7	454	4	21 APR 78	GER	27DEG 2.6MIN S	67DEG 5.4MIN E	1000		1415	*	SHALLOW GERARD, C-14
7	454	5	20 APR 78	SPE	26DEG 59.7MIN S	67DEG 5.9MIN E	2218		0	*	SURFACE RA-228 FIBERS
7	454	6	21 APR 78	SPE	27DEG 1.0MIN S	67DEG 5.6MIN E	0330		0	*	PLANKTON NET TOW

Chapter 1

DESCRIPTION OF SAMPLING AND MEASUREMENT METHODS

OXYGEN 18 IN DISSOLVED OXYGEN

P.M. Kroopnick[1]

Department of Oceanography
Hawaii Institute of Geophysics
University of Hawaii

Seawater samples were collected with 30-liter PVC Niskin bottles to insure that no reaction of O_2 with metal occurred. Concentrations of dissolved O_2 and ΣCO_2 were measured at sea on the same samples. The water samples were transferred immediately to 1-liter glass reagent bottles, which were filled from the bottom and allowed to overflow for at least half of their volume to exclude air. Saturated $HgCl_2$ solution (0.5 ml) was added to suppress bacterial growth, but most of the samples were extracted within 24 hours of collection. Figure 1 shows the portable tandem vacuum system used for the large-volume total gas extraction. The reagent bottle was attached via the siphon tube and air was flushed from the line through the three-way valve. The water was forced through a removable glass frit into the previously evacuated extraction flask. At modest flow rates equilibration of the gas between the water and the air space occurred instantaneously. When the lower bulb was full, the flow of water was stopped and the extracted gases were isolated by closing the stopcock between the two bulbs. The accumulated gases were then adsorbed at −183°C by type 5A molecular sieve placed in the bottom of the evacuated breakseal tube. The extraction efficiency was monitored by collecting the water from the lower bulb and comparing its dissolved O_2 content with that in the original sample; 92-98% of the dissolved O_2 was extracted in this manner. The equilibrium isotope fractionation between the dissolved and gaseous O_2 is known [2], and a mass balance calculation indicates that for an extraction yield of 95%, a correction of only 0.04‰ must be added to the measured $\delta^{18}O$ value.

In the laboratory, CO_2 and any water present in the breakseal tube are separated by passage through two U-traps at −196°C. Oxygen is then converted to CO_2 for isotopic analysis by combustion on a carbon rod [2]. The CO_2 samples are analyzed on a Nuclide 3''-60° or 6''-60° double collection mass spectrometer [3]. The data are corrected for instrumental effects and mass spectral cross terms [4]. Results are reported in the delta nomenclature relative to atmospheric O_2:

$$\delta^{18}O = [(R/R_{std}) - 1] \times 10^3$$

where $R = {}^{18}O/{}^{16}O$ and R_{std} refers to atmospheric O_2. Atmospheric O_2 has a $\delta^{18}O$ value of approximately 23.5‰ relative to the SMOW isotopic standard [2].

Due to uncertainties in sample collection, extraction at sea, and combustion to CO_2, the precision for the dissolved O_2 $\delta^{18}O$ data is ±0.1‰. However, individual samples within a profile frequently exhibit variations much greater than 0.1‰ due either to the leakage of air into the samples causing a decrease in the $\delta^{18}O$, or to inadequate poisoning upon collection, which would allow respiration to continue in the bottle and cause an increase in the measured $\delta^{18}O$ [5].

References

1. Now at Exxon Production Research Company, P.O. Box 2189, Houston, Texas.
2. P. Kroopnick and H. Craig, Atmospheric oxygen: isotopic composition and solubility fractionation, Science 175 (1972) 54-56.
3. D.E. Goodney and P. Kroopnick, Current techniques for the collection and processing of stable isotope data, in: Stable Isotopes in the Earth Sciences, B.W. Robinson ed., DSIR Bull. 220 (Science Information Bulletin, Wellington, N.Z., 1973) 223-229.
4. P.M. Kroopnick, The distribution of C-13 of TCO_2 in the world oceans, Deep-Sea Research 32 (1985).
5. P. Kroopnick, Isotopic fractionations during oxygen consumption and carbonate dissolution within the North Atlantic deep water, Earth and Planetary Science Letters 49 (1980) 485-498.

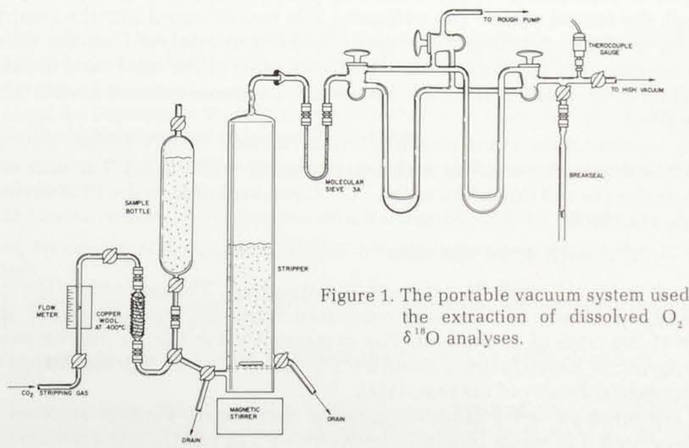


Figure 1. The portable vacuum system used for the extraction of dissolved O_2 for $\delta^{18}O$ analyses.

CARBON 13 IN DISSOLVED CARBON DIOXIDE (ΣCO_2)

P.M. Kroopnick [1]

Department of Oceanography
Hawaii Institute of Geophysics
University of Hawaii

The stripping system consists of a glass tube 10 mm in diameter and 55cm high (Figure 1). Normally it is filled with 50 ml of liquid sample added from the constant volume pipette. A coarse glass frit, through which the sample and stripping gas enter, is fitted into the bottom, and a side arm is attached just above the frit for draining. At the top, a stainless steel fitting allows injection of acid into the stripper through a silicone rubber septum. The acid is prepared by diluting 85% reagent grade phosphoric acid 1:3 with distilled water. A side arm of 1/8" stainless steel tubing conducts the gas out of the stripper. The emerging gases are dried by passage through a 6" long U-tube containing silica gel (60-80 mesh).

Generally a 50 ml water sample is stripped for 15 minutes, during which time approximately 300 ml (STP) of nitrogen flows through the stripper, carrying the CO_2 into an evacuated Horibe trap immersed in liquid nitrogen to condense the CO_2. The Horibe trap is a large diameter U-tube with impacting surfaces and a frit on the outflow end to prevent loss of ice particles that may form in a cooled gas stream. After the stripping is completed and all the CO_2 is condensed in the Horibe trap, the nitrogen is pumped away through the fritted outlet. The extracted CO_2 is condensed into the sample tube by cooling with liquid nitrogen, dried, and analyzed on the mass spectrometer. The silica gel U-tube removes most of the water and usually lasts for 6 to 10 samples. It is then removed for regeneration and fresh tube is installed.

The isotopic data were obtained on a Nuclide 6"-60° sector, double collection mass spectrometer with a precision of $\pm 0.03‰$ [2]. The data are given as the per mil deviation of the $^{13}C:^{12}C$ ratio relative to the PDB carbon isotope standard:

$$\delta^{13}C = [(R/R^*) - 1] \times 1000$$

where $R = {}^{13}C/{}^{12}C$ and R^* refers to the standard. The correction for the $\delta^{18}O$ of the extracted CO_2 was computed from the temperature of the water at the time of extraction. The combined error due to instrumental and laboratory procedures is about $\pm 0.1‰$ which is a fair representation of the absolute accuracy of the results [3].

Where attempts were made to prepare north-south vertical sections it was observed that major offsets of between -0.2 to $+0.7‰$ were occurring between stations. Efforts to find errors in the analytical and mass spectrometric procedures that would account for these offsets were unsuccessful. Other possible sources of such offsets could be improper poisoning of the samples or leaky bottles. Analyses of about 50 randomly selected samples showed varying levels of dissolved mercury, but only station 212 had no mercury in any of the samples. In analyzing the data it was observed that a plot of apparent oxygen utilization (AOU) vs $\delta^{13}C$ of the ΣCO_2 was linear at each station and over the entire world ocean. Deviations from linearity at a given station were usually reflected only in the measured $\delta^{13}C$ and not in any of the physical or nutrient properties (T,S,O_2, or PO_4). On a station to station comparison, most of the sites plotted along the world wide trend line. Accordingly Kroopnick recommends correcting the apparent inconsistencies in the data by applying offset correction factors derived from an AOU - $\delta^{13}C$ plot [3]. The data presented here are the uncorrected (raw) data.

References

1. Now at Exxon Production Research Company, P.O. Box 2189, Houston, Texas.
2. D.E. Goodney and P. Kroopnick, Current techniques for the collection and processing of stable isotope data, in: Stable Isotopes in the Earth Sciences, B.W. Robinson ed., DSIR Bulletin 220 (Science Information Bulletin, Wellington, N.Z., 1973) 223-229.
3. P.M. Kroopnick, The distribution of C-13 of TCO_2 in the world oceans, Deep-Sea Research 32 (1985).

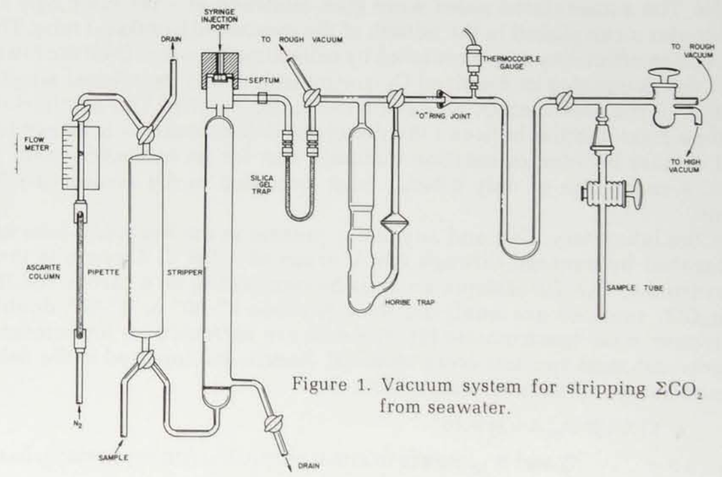


Figure 1. Vacuum system for stripping ΣCO_2 from seawater.

RADIOCARBON

H. Gote Ostlund

Rosenstiel School of Marine and Atmospheric Science
University of Miami

and

Minze Stuiver

Quaternary Isotope Laboratory
University of Washington

General

The techniques for sampling and measurement of oceanic radiocarbon have been described elsewhere [1,2], as has the ^{14}C scale. Thus we will present only a summary here.

Sampling for ^{14}C was performed with 250-liter Gerard barrels. On board the ship, CO_2 was extracted from 200 liters of seawater by acidifying and purging with inert gas; the released CO_2 was absorbed in 450 ml of 4N NaOH. This amount of water yielded about 9 lit atm of CO_2 (0.4 moles) which was needed to achieve desirable accuracy. In the laboratories, the CO_2 was released from the NaOH solution by means of acid, purified, and ^{14}C measured by internal gas counting by the classical, low-level counting techniques. Each sample was measured at least twice, each time 20 hours, in two different counters in Miami and usually once for at least two days in the Washington laboratory. In the tables, the lab signatures are noted in the heading; in this summary, ML stands for Miami and QL for Washington.

The extraction on board the ship gave yields of around 97%, so some minor isotopic fractionation may occur. Therefore, from each CO_2 gas sample ready for counting, an aliquot was taken and $\delta^{13}C$ determined. Most of the ^{13}C ratios were measured at Washington on a Nuclide isotope ratio mass spectrometer with a precision of $\pm 0.1‰$. Some of the early ML samples were measured by Woods Hole (Deuser) and Lamont (Lawrence). The $\delta^{13}C$ numbers are not reported since they are only valid for our CO_2 gas samples and may be slightly different from the original isotope ratio of the CO_2 in the ocean. The applications of the measured $\delta^{14}C$ value yields $\Delta^{14}C$ that are indeed on the internationally adopted NBS scale.

The NaOH solution used for CO_2 absorption contained a small amount of CO_2 with some ^{14}C. This amount of contamination was determined in the following way: Batches of 6 bottles of unused NaOH were extracted and the amount of CO_2 measured. The samples were then diluted with dead CO_2 and counted. The NaOH solutions used on the Pacific Expedition typically contained 1.0 μmoles of CO_2 with $\Delta^{14}C = +400‰$. The appropriate blank correction has been applied to the data; it typically amounts to around $-5‰$ for the older samples.

The ^{14}C Scale

The ^{14}C data are expressed in $\Delta^{14}C$, which is the deviation, in ‰, relative to an internationally adopted activity standard of oxalic acid, as of 1950 AD [3]. The ^{14}C values are decay converted to time of sampling and the scale itself does not change by time. To obtain the total amount of ^{14}C in 1 kg of seawater the following sequence was deduced by Stuiver [4]:

$$\Sigma^{14}C = 1.176\ 10^{-12}\ (1+\frac{\Delta^{14}C}{1000})\ \Sigma C$$

where ΣC is in moles of total CO_2 per kg seawater. Note that the obtained value is adjusted to a standard state of isotopic fractionation corresponding to a $\delta^{13}C$ value of $-25‰$. Oceanic carbonate is close to 0‰ with slight variations ($\pm 2‰$) so a precise, true mass inventory of ^{14}C requires knowledge of the $\delta^{13}C$ value of the oceanic carbonate.

Tabulations of the ^{14}C data and their interpretation can be found in Stuiver and Ostlund [5,6], Ostlund and Stuiver [7], and Stuiver et al. [8].

References

1. H.G. Ostlund, H.G. Dorsey and C.G. Rooth, GEOSECS North Atlantic radiocarbon and tritium results, Earth and Planetary Science Letters 23 (1974) 69-86.
2. M. Stuiver, S.W. Robinson, H.G. Ostlund and H.G. Dorsey, Carbon-14 calibration between the University of Washington and the University of Miami GEOSECS laboratories, Earth and Planetary Science Letters 23 (1974) 65-68.
3. M. Stuiver and H.A. Polach, Discussion: reporting of ^{14}C data, Radiocarbon 19 (1977) 253-258.
4. M. Stuiver, Workshop on ^{14}C data reporting, Radiocarbon 22 (1980) 964-966.
5. M. Stuiver and H.G. Ostlund, GEOSECS Atlantic radiocarbon, Radiocarbon 22 (1980) 1-24.
6. M. Stuiver and H.G. Ostlund, GEOSECS Indian Ocean and Mediterranean radiocarbon, Radiocarbon 25 (1983) 1-20.
7. H.G. Ostlund and M. Stuiver, GEOSECS Pacific radiocarbon, Radiocarbon 22 (1980) 25-53.
8. M. Stuiver, H.G. Ostlund and T.A. McConnaughy, GEOSECS Atlantic and Pacific ^{14}C distribution, 201-221, in: Carbon Cycle Modelling, Scope 16, B. Bolin ed., John Wiley and Sons, New York (1981) 390 pp.

STABLE ISOTOPES OF WATER: ^{2}H (=D) AND ^{18}O

H. Craig

Scripps Institution of Oceanography
University of California, San Diego

The isotopic water molecules HDO and $H_2{}^{18}O$ make up respectively about 320 and 2000 molecular parts per million in mean ocean water, the remainder being almost entirely $H_2{}^{16}O$ with very small concentrations of $H_2{}^{17}O$ and "mixed molecules" containing D, ^{17}O, and ^{18}O. During the GEOSECS Expeditions isotopic analyses were made on water vapor collected along the track, on surface waters from all Atlantic and Pacific stations, and on subsurface waters at selected stations. The water vapor data are not included in this volume, but all ocean waters analyzed to date are tabulated.

The isotopic data are reported as delta values in per mil; i.e., the deviations of the measured isotope ratios from those of a defined isotopic standard. Thus

$$\delta\ (‰) = [(R/R_{std}) - 1] \times 1000$$

where R = HDO/H_2O or $H_2{}^{18}O/H_2{}^{16}O$ and the standard for both isotopes is "Standard Mean Ocean Water" (SMOW), the international isotopic water standard [1]. The laboratory standard at La Jolla is a closed steel tank of SMOW taken when the original SMOW standard was made at La Jolla; it is cross-checked with the main body of SMOW stored at the International Atomic Energy Agency, Vienna, Austria, at regular intervals.

A summary of the major features of the pre-GEOSECS isotopic data is available in a general reference [2].

Sampling Methods

The samples were collected by GEOSECS technicians in glass ampoules of the type used for storage of Copenhagen water for salinity standards. These ampoules are open-ended at both ends, so that *each* end had to be dried and sealed with a torch. The Atlantic samples were returned to WHOI, where it was originally mandated that the ampoules be opened and 120 cc samples in glass bottles with polyseal caps be sent to SIO. Although this policy was finally reversed, samples from 11 Atlantic stations (Stations 37, 56, 67, 78, 79, 82, 85, 89, 91, 107, and 115) were received in bottles, and as noted below, suffered loss of some integrity. Stations 37 and 56 were affected the most by this problem (improper bottle closure). All Pacific and Indian Ocean samples were shipped in ampoules.

Measurement Methods

The isotopic analyses were made on the SIO Isotope Laboratory mass spectrometers using H_2 and CO_2 gas samples prepared from the water samples as described below.

1. Deuterium analyses:

The D/H measurements were made by conversion of H_2O to H_2 over uranium metal at 790°C. The seawater samples (7 μL) were injected through a narrow-bore stopcock into a small Ar-flushed finger below a swab of glass wool, using a syringe which fit through the stopcock bore. The glass wool served to prevent salt from spraying to the top of the finger during distillation of water to the vacuum system. (If this occurs, the dried salt re-absorbs some of the evaporated water, causing significant fractionation). The distillation was done at 250°C; incomplete yields and isotope fractionation result from distillation at lower temperatures. The water was distilled into a vacuum line, condensed in a CO_2 slush trap, and non-condensibles were pumped away. The water was passed over hot uranium turnings in a quartz U-tube and converted quantitatively to H_2, which was Toeplered through a liquid N_2 trap to a 50 cc bulb. The trap was removed and any residual water was passed back through the uranium and Toeplered to the bulb; the total sample was then pushed into a sample tube. Collection in a bulb, rather than the sample tube, was done (1) to allow a manometric volume check of yield, and (2) to insure *total* mixing of the H_2, since the *last* H_2 comes out of solution from the uranium turnings and is different in isotopic composition.

The H_2 samples were analyzed on a split-tube 60° sector Nier-type mass spectrometer (DELILAH) constructed at SIO. The "balance peaks" (deviations from nulling mass 3 by a fraction of mass 2) were integrated and counted electronically. The $H_3{}^+$ ion correction to mass 3 ($HD + H_3{}^+$) was always less than 3%. Check standards (SMOW) are run on the *sample* side of the double-inlet mass spectrometer, and the running average of the check standards was used as the actual machine standard. The preparation and analytical precision (one sigma) is ± 0.2 per mil in the ratio, or ± 0.5% of δ D, whichever is greater, for a given set of samples.

2. Oxygen 18 analyses:

The $^{18}O/^{16}O$ ratio measurements were made by equilibrating 7 cc STP of CO_2 with 1 ml of the seawater sample, after adjustment of pH to ~ 3 - 4 (originally with HCl, later with H_2SO_4). The water samples were frozen twice at CO_2 slush temperature to pump away trace gases (N_2O, NO_2, H_2S)

prior to equilibration with CO_2. The CO_2 was analyzed on a Nier-type 60° sector mass spectrometer (SAMSON) constructed at La Jolla. The balance peaks were integrated electronically. The machine standard is CO_2 in isotopic equilibrium with SMOW at 25°C; the samples are actually measured against "check standards" of SMOW-CO_2 used in the sample inlet side. The measurements are corrected for mass spectrometer valve mixing and background, mass 44 tail, mass spectral cross-terms in ^{13}C and ^{17}O, and for the ^{18}O content of the CO_2 used for equilibration [3]. The preparation and analytical precision (one sigma) is ±0.02 per mil for normal samples of seawater.

The general techniques used at La Jolla are described by Craig and Gordon [4]. However, the "fictive" standard called "SMOW" by Craig and Gordon (based on other waters used before the SMOW water standard was prepared) has an actual $\delta\ ^{18}O$ value of + 0.10 per mil vs. *true* SMOW, the present standard. Thus + 0.10 should be added to the 1965 pre-GEOSECS data to make them comparable to the data recorded here.

Comments

The precision of stable isotope data depends very critically upon the collection and storage of samples, because of isotopic fractionation effects from evaporation, exchange with vapor, etc. These effects become very important for seawater because of the very small variations encountered in ocean samples (about 4 ‰ in D/H ratio and 0.5 ‰ in $^{18}O/^{16}O$ ratio). In this respect the GEOSECS samples showed considerably more "scatter" than seawater samples collected by us on other expeditions. The *overall* precision of these data is at least a factor of two less than the "preparation and analytical precision" figures cited above. Often it is considerably less. Part of this is probably attributable to effects during sealing the ampoules. A major contribution was the transfer and shipping of samples in bottles, since the transfer was generally done by inexperienced personnel, and the caps on the bottles were often loose. About half the bottle samples had loose caps, and in a number of instances water could actually be shaken from the bottles as received. Salt on bottle caps was also observed and probably indicated some evaporation and vapor exchange. (Vapor exchange, rather than evaporation, is the major effect.) Under these circumstances, a certain amount of data editing was necessary, based on plots vs. depth and salinity, and personal judgment, based on experience rather than clearly defined criteria, had to be used. Thus in some cases fine structure in these data has probably not survived the relatively incautious handling and rather cursory screening. Overall, however, the data give a true picture of the D and ^{18}O variations throughout the world oceans.

The isotopic analyses were carried out primarily by Beatrice Hom Wilson, who with Lesley Wetherell, was responsible for the earlier part of the program, and Ellen Toby, who with Phil Stillwell, was responsible for the later part of the work. These four people devoted great care and skill to all phases of the analytical work and deserve maximum credit for the results.

References

1. H. Craig, Standard for reporting concentrations of deuterium and oxygen-18 in natural waters, Science 133 (1961) 1833-1834.
2. H. Craig, Ocean water: (1) Interchange between sea and atmosphere—Isotopic relationships; (2) Distribution of properties—Isotopic variations. *McGraw Hill Encyclopedia of Science and Technology*, 3rd Edition (1971) 129-130, 143-145.
3. H. Craig, Isotopic standards for carbon and oxygen and correction factors for mass-spectrometric analysis of carbon dioxide, Geochimica et Cosmochimica Acta 12 (1957) 133-149.
4. H. Craig and L. I. Gordon, Deuterium and oxygen 18 variations in the ocean and the marine atmosphere, *Stable Isotopes in Oceanographic Studies and Paleotemperatures*, Proceedings of the Third Spoleto Conference, Spoleto, Italy, E. Tongiorgi ed. (V. Lischi & Figli, Pisa) (1965) 9-130.

TRITIUM

H. Gote Ostlund

Rosenstiel School of Marine and Atmospheric Science
University of Miami

Background Information

The radioactive hydrogen isotope tritium is constantly being produced by the interaction between the cosmic radiation and the atoms in the atmosphere. It is a beta emitter with a half-life of 12.3 years (see below) and maximum energy of 18 keV. The pre-nuclear era saw a total global steady state tritium inventory of between 0.5 and 5 kg of tritium, most of it in the form of HTO. In the mid-50's, the first large test series of US and

USSR produced approximately 60 kg of tritium, in the form of HTO, most of it injected into the stratosphere. After a lull in the testing activity between 1958 and 1961, the second period of intensive testing produced approximately 600 kg of tritium before the implementation of the atmospheric test ban in 1962 by US and USSR. Later atmospheric tests by the Peoples Republic of China and France have added relatively little to this amount.

After injection into the stratosphere, the HTO was transferred to the troposphere with time scales reflecting the residence time of water vapor at various heights in the stratosphere. Thus, most of the tritium in the lower stratosphere was transferred through the troposphere to the surface of the earth, including the top of the oceans, in a few years following the injections. The history of tritium concentrations in precipitation is illustrated in Figure 1 from Ostlund [1]. The vertical scale is tritium units, TU, which expresses the molar fraction $T/H \times 10^{18}$. The TU values in rain and vapor at any given time vary geographically in such a way that the lowest values are found over the ocean and equatorward, and the highest numbers around 60°N and farthest inland on the large continents. Usually, though, the general shape of the time function is similar for all locations, i.e., there is a multiplier specific for any station (cf. Ostlund [1]). In the Southern Hemisphere, the amount of tritium in precipitation was considerably smaller, and seasonal variation not that well developed. The source function for tritium in surface ocean waters has been evaluated for the North Atlantic Ocean by Dreisigacker and Roether [2] and for the Pacific Ocean by Fine and Ostlund [3].

Sampling

The measurement of tritium by counting requires a starting volume of about 0.3 lit. It is thus desirable to collect 1 liter of water to allow for remeasurements. Factory fresh glass bottles to be used for sample storage were prepared ashore and filled with argon, replacing the air.

After the Niskin bottles had been removed from the sampling gear on board the ship, the upper vent of a sampler was opened, and on the lower spigot a piece of rubber tubing was attached. The tubing was lowered into the storage bottle and the water transferred. This way the water actually never got in contact with the surrounding atmosphere. Special care was taken to maintain low tritium levels in the air during sampling in that the operators were not allowed to wear wristwatches with luminescent dials, most of which do contain and emit tritium. Also most transfers were made on deck.

Analysis

The analysis procedure consists of distillation, enrichment of tritium by electrolysis, and measurement by gas counting. These procedures have been described by Ostlund and Dorsey [4].

About 300 ml of the sample were distilled with special precautions taken to avoid fine droplets of salty water to be carried with the vapor. This is important since even a very small amount of electrolyte in the water will ruin the electrolysis procedure. Furthermore, the distillation system was vented to the air through a drying agent to assure that no water vapor from the laboratory atmosphere was sucked back into the sample.

Of the distilled water, 275 ml were used for the enrichment. The electrolysis typically ended at 3.25 ml of remaining water which was extracted by vacuum distillation and the yield weighed, containing 80% of the initial amount of tritium. The efficiency of this procedure was checked by interspersing the samples with samples of known activity prepared in the laboratory.

The activity of the enriched samples was measured by gas proportional counting with the samples transformed to hydrogen. The needed amount was about 3 g of water yielding approximately 4 lit atm of hydrogen gas.

The efficiency of each of the counters was determined regularly, at least once a week, by counting of standards prepared from dilutions of the US National Bureau of Standards (NBS) Standard Reference Material (SRM) #4926.

Accuracy and Sensitivity of Tritium Measurements

The uncertainty of a final TU number is dependent on error contributions from background and Poisson error of the activity measurement itself. It will also include contributions from quantity measurements (pressure, temperature), and the variations in the enrichment procedure, expressed as an error in β, the fractionation factor. The fractionation process can be easiest described by the equation[1]

$$R = (V/V_0)^{1/\beta} \tag{1}$$

where R is the fractional recovery of tritium after enriching V_0 ml of sample to the final value V. R is also expressed by

$$R = TV/T_0V_0 \tag{2}$$

[1]This equation is an approximation, good enough for the error discussion here. The correct equation and further discussion are available in Ostlund and Dorsey [4]

where T_0 and T are the TU value at beginning and end of the enrichment process. For further details cf. Ostlund and Dorsey [4].

The value of β was routinely checked twice per week. For this purpose, NBS SRM #4926 was diluted with tritium-free water by weighing. This solution of about 14000 TU was used weekly to standardize each of the counters (counting efficiency), and further dilutions to 140 TU were used for β measurement. The results on measurements of β are furnished in Table 2. The error in β itself is actually uninteresting; it is the corresponding error in R that is important. The latter error varies with R itself at constant β, which can be seen in the complete differentials of (1) and (2). To make a fair display of the errors, we used standard (and typical) values of 275 ml and 3.75 ml for V_0 and V, and calculated the R value corresponding to each experimental β value. The distribution of these R results gives a measure of the reproducibility of our system. These measurements carry with them all the errors of an unknown sample (electrolytic process, weighings, H_2 preparation, counter fill quantity, counting efficiency, etc.), except that the Poisson counting error is only 1% due to the available high activity, about 100 cpm, in the enriched check sample. For an uncertainty in R of 2.2% (Table 2), a measurement of an oceanic surface sample counted to ±2% Poisson error would thus carry a total relative error of $(2.2^2 - 1^2 + 2^2)^{1/2} = 2.8\%$, which is rather typical for the shallow samples. For those counts, above 2 cpm, equivalent to 3 TU, the error in the counter background is of minor weight.

Table 2—Measurements of the Enrichment Factor

Year and number of measurements	Fractionation factor: Average value	Fractionation factor: Standard deviation	For a sample 275 to 3.75 ml: Recovery of tritium, R	For a sample 275 to 3.75 ml: Relative error in R
1976: 74 of 75 runs	22.46	± 1.94	0.787 ± 0.016	± 2.1%
1977: 105 of 108 runs	23.42	± 2.32	0.795 ± 0.18	± 2.3%
1978: 45 of 53 runs	22.81	± 2.72	0.789 ± 0.022	± 2.7%
1979 Jan-June: 54 of 57 runs	24.27	± 2.10	0.801 ± 0.015	± 1.9%
1979 July-Dec: 41 of 45 runs	23.87	± 2.51	0.798 ± 0.019	± 2.4%

Samples from greater depths usually contain less tritium, and the fractionation and quantity errors become less dominant, while the errors in the counting itself and in the counter background take over. A realistic measure of the sensitivity (detection limit) and contamination level of our tritium measurement system can be obtained by assembling all results on samples with zero tritium content. Deep well water from the Floridan Aquifer, collected at Arcadia, Florida, served as "tritium-free" water. This aquifer underlies most of Florida and is under artesian pressure; the water is estimated to be more than 20,000 years old [5]. We regularly ran two such samples weekly and the result for the years 1976 through 1979 is listed in Table 3. Obviously, *no* correction for unknown contamination is to be applied here, so the TU values are calculated from the count rates by the following equation

$$TU = F \cdot (C_e - B)/E \qquad (3)$$

where C_e is measured count rate, cpm, of enriched sample in the tritium channel; B is the counting "background," typically 0.3 cpm (mainly a product of mesons) in the same channel with unenriched sample; E (= RV_0/V) is the enrichment factor, approximately 60; and F is the counting efficiency factor, typically 100 TU/cpm.

Table 3—Results on "Zero-TU" Samples

No blank subtraction applied

Sample category and # of samples	Avg Tu value	Standard deviation	Standard error
Deep Well Blanks 1976 100 of 102 samples	-0.011	± 0.054	± 0.005
Deep Well Blanks 1977 96 of 96 samples	0.018	± 0.051	± 0.005
Deep Well Blanks 1978 104 of 104 samples	0.028	± 0.053	± 0.005
Deep Well Blanks 1979 98 of 100 samples	0.022	± 0.056	± 0.006
All Deep Pacific 76-77 156 of 156 samples	0.004	± 0.067	± 0.005

We furthermore selected "zero-tritium" Pacific samples by the following criteria: All samples were measured from depths below the shallowest sample with less than 0.1 TU *and* at least 200 m below the 0.2 TU isotrit. These constitute the last category of samples in Table 3, and show that there is *no* detectable amount of tritium in the bulk of the Pacific Ocean. This comes as no surprise considering the long residence times of water there. Table 3 also shows that no measurable amount of tritium was introduced during the measurement procedure. Thus, the blank correction was zero from 1973 through 1977 when most Atlantic and Pacific samples were measured, and about 0.02 TU for Indian Ocean samples.

Typical Poisson error resulting from counting was 0.04 to 0.06 TU, which make 0.05 to 0.07 TU reasonable estimates for the composite standard error of near-zero TU oceanic tritium results.

In some cases, negative TU values are listed. Such numbers can occur because the net tritium count rate is a difference between the count rate of the sample and that of a tritium-free sample, background count or blank sample, cf. equation (3). Given a set of "unknown" samples with no tritium, the distribution of net results should become symmetrical around 0 TU The negative values are reported for the benefit of allowing the user unbiased statistical treatment of sets of the data. For physical interpretations, 0 TU should be used.

Note on Tritium Scales

As described above, the tritium concentrations are expressed in TU, where 1 TU indicates a T/H ratio of 10^{-18}. The values refer to the old, internationally adopted scale of U.S. National Bureau of Standards (NBS), which is based on its tritium water standard #4926 as measured on 1961/09/03, and age-corrected with the old half-life of 12.26 years, i.e., $\lambda = 5.65\%$ year^{-1}. In this scale, 1 TU is 7.186 dpm/kg H_2O, or 3.237 pCi/kg H_2O. In this atlas TU values are calculated for date of sample collection. The stated errors are one standard deviation (1 sigma) including all conceivable contributions.

It has been found lately that a better value for the half-life is 12.43 years, i.e., $\lambda = 5.576\%$ year^{-1}. This will cause a change in the TU scale, which is still based on the same NBS standard (#4926) as of the same date, 1961/09/03 [6]. In the new scale, 1 TU(N) is 7.088 dpm/kg H_2O, 3.193 pCi/kg H_2O.

The TU values in this atlas can be converted to the new scale by multiplying by the factors in Table 4 below. To age correct to another time, a reference date like 1981/01/01, the usual equation for radioactive decay will have to be used

$$f = \exp(-\lambda \cdot \Delta t) \quad (4)$$

where Δt is time interval from date of collection to the reference date.

Table 4—Factor for Converting Tritium Values from Old to New Scale, TU to TU(N) as of 1 January of the Year

Year of collection	Multiply by
1972	1.023
1973	1.024
1974	1.025
1975	1.026
1976	1.027
1977	1.0275
1978	1.028
1979	1.029
1980	1.030
1981	1.031

References

1. H. G. Ostlund, The residence time of the freshwater component in the Arctic Ocean, Journal of Geophysical Research 87 (C3) (1982) 2035-2043.
2. E. Dreisigacker and W. Roether, Tritium and strontium-90 in North Atlantic surface water, Earth and Planetary Science Letters 38 (1978) 301-312.
3. R. A. Fine and H.G. Ostlund, Source function for tritium transport models in the Pacific, Geophysical Research Letters 4 (1977) 461-464.
4. H. G. Ostlund and H.G. Dorsey, Rapid electrolytic enrichment and hydrogen gas proportional counting of tritium, in: P. Povinec and S. Usacev eds. Low-Radioactivity Measurements and Applications, Proceedings of the International Conference, The High Tatras, CSSR, 6-10 October 1975, Slovrnske Pedagogicke Nakladate'stvo, Bratislave (1977) 542 pp.
5. B. B. Hanshaw, W. Back and M. Rubin, Radiocarbon determinations for estimating groundwater flow velocities in Central Florida, Science 148 (1965).
6. W. B. Mann, M. P. Unterweger and B. M. Coursey, Comments on the NBS tritiated water standards and their use, Int. J. Appl. Radiat. Isot. 33 (1982) 383-386.

EXPERIMENTAL METHODS AND SOURCES OF ERROR IN SIO DETERMINATIONS OF ^{3}He, ^{4}He AND Ne IN GEOSECS SEAWATER SAMPLES

John Lupton and Harmon Craig

Scripps Institution of Oceanography
University of California, San Diego

For determination of ^{3}He, ^{4}He, and Ne, seawater samples of 40 g volume were sealed into copper tubing with steel pinch clamps aboard ship. The dissolved gases were extracted in a high vacuum line constructed of stainless steel and Corning type 1720 glass by cavitating the water sample with an ultrasonic vibrator. Water vapor and CO_2 were condensed in traps at −78°C and −195°C, and the remaining gases were pumped into a calibrated gas splitter using a mercury Toepler pump in series with a mercury diffusion pump. In the splitter the gas sample was divided into known fractions and sealed into breakseal ampoules (constructed of Corning 1720 glass) for storage. This procedure yields >99.9% of the He, Ne and Ar in 15 minutes.

^{3}He/^{4}He ratios were measured on a 25-cm radius, split-tube, double-collecting mass spectrometer (GAD) designed specifically for helium isotope determinations. The flight tube and bending magnet of the SIO instrument were designed by Dr. W.B. Clarke and constructed at McMaster University, Hamilton, Ontario. The tube is of Shields-type construction which permits a low internal volume of ~500 cc resulting in high sensitivity. The detection limit for ^{3}He, which is cleanly separated from HD + H_3 at a resolving power of $m/\Delta m = 650$, is better than 10^5 atoms. The helium peaks were measured in the static mode with ^{3}He registered on a Johnston electron multiplier and ^{4}He on a Faraday cup. Routine helium isotope measurements were performed on 50% splits of the seawater samples containing ~10^{-6} cc STP He.

For helium isotope determinations, the sample was introduced into an all metal line and then cleaned over hot Ti and charcoal at −195°C, thereby removing all gases except He and Ne. The He - Ne fraction was then admitted to the mass spectrometer through a charcoal U-trap chilled to −195°C. Sample runs were interspersed with air aliquots of known amount which served as standards for the ^{3}He/^{4}He ratio and for a rough determination of the absolute He amount by peak height comparison. The ^{3}He/^{4}He results are reported in units of $\delta(^3\text{He})\%$, defined as

$$\delta(^3\text{He}) = [(R_{sample}/R_{air}) - 1] \times 100$$

where $R = {}^3\text{He}/{}^4\text{He}$. For the SIO spectrometer the ^{3}He/^{4}He precision based on the reproducibility of air standards is about $1\sigma = 0.7\%$. Because the determination of $\delta(^3\text{He})\%$ for a seawater sample includes measurement errors for both the sample itself and for the air standards, we are reporting a precision of ±1.0% for $\delta(^3\text{He})$, which we believe is a conservative estimate of the overall error.

After the helium isotope measurements on the Atlantic and Pacific Ocean samples were completed, the inlet system on the SIO ^{3}He spectrometer was modified to include an ultra-low temperature charcoal trap. This trap, patterned after a design by Reynolds et al. [4], made it possible to remove all of the Ne from the sample by adsorption on charcoal chilled to −232°C (40°Kelvin). It was found that removing the Ne during ^{3}He/^{4}He measurements eliminates a troublesome He-Ne interference effect which introduces a small error in the apparent ^{3}He/^{4}He ratio in the seawater samples as compared to the air standards. All of the Indian Ocean samples analyzed at SIO were processed with this low temperature charcoal trap and thus have not been affected by this interference effect. However, the majority of the SIO Atlantic and Pacific samples were analyzed without the trap. Unfortunately the effect of this He-Ne interference on the $\delta(^3\text{He})$ values is not constant but rather depends on the "tuning" of the mass spectrometer. In order to correct the data, we remeasured ~90 selected Atlantic and Pacific samples using the low temperature trap to remove all of the Ne. A comparison of these new results with the old numbers allowed us to estimate the magnitude of the interference effect for each of the Atlantic and Pacific stations already analyzed. On the basis of this comparison, a small correction (typically <1.0% in $\delta(^3\text{He})$) was applied to all the Atlantic and Pacific ^{3}He/^{4}He numbers generated without the low temperature trap.

It was also necessary to apply a correction to the measured $\delta(^3\text{He})$ values due to the production of ^{3}He by the decay of tritium during storage in the copper pinch-clamp samplers. Thus the measured ^{3}He/^{4}He ratio in waters shallower than 1000 m depth is higher than the actual ratio in the sample at the time of collection. This correction is straightforward providing one knows the initial tritium concentration in the sample, the storage time, $\delta(^3\text{He})$, and the absolute He concentration. In some cases a tritium value was not available for the specific sample in question, and we then used a linear interpolation of tritium versus depth to estimate the tritium value.

The absolute concentrations of He and Ne were measured on a separate 15-cm radius single-collector mass spectrometer (MICAH) using isotope dilution. Breakseal ampoules containing a 25% split of the extracted gases were mixed with a "spike" containing a precisely known quantity of ^{3}He and ^{22}Ne aliquoted from a large stainless steel reservoir. The measurements were standardized using a synthetic standard containing ^{3}He/^{4}He = 1 and

$^{20}Ne/^{22}Ne$ = 1. The precision of the absolute He and Ne concentrations determined by this technique is ~±0.3%. The He/Ne ratios, which are immune to errors in sample weight, etc., are accurate to ~0.2%. The He/Ne ratios are reported in this atlas in units of Δ(He/Ne), defined as

$$\Delta(He/Ne) = \{[C(He) \cdot S(Ne)/S(He) \cdot C(Ne)] - 1\} \cdot 100$$

where C(He) and C(Ne) are the measured concentrations of He and Ne in the sample, and S(He) and S(Ne) are the equilibrium solubilities of He and Ne in seawater at the potential temperature and salinity of the sample. We have used the solubility data of Weiss [5] in this calculation. We believe these Δ(He/Ne) values are more useful for estimating the relative He enrichment in a sample than the absolute concentrations.

A certain fraction of the copper tubing pinch-clamp samples developed cross-seat leaks resulting in loss of sample integrity during the storage period between collection and extraction. Samples which have suffered leakage can be identified by a variety of techniques, including leakage of water from the pinched ends prior to extraction, and anomalous He and Ne absolute concentrations. We have excluded all results from the data set which we believe have been seriously compromised by leakage. In a few cases we have reported δ(^{3}He) values for samples which have suffered a very small amount of leakage as indicated by anomalies in the absolute He and Ne concentrations. This was only done when the leakage was too small to have any appreciable effect on the $^3He/^4He$ ratio.

References

1. W.B. Clark, M.A. Beg and H. Craig, Excess ^{3}He in the sea: evidence for terrestrial primordial helium, Earth and Planetary Science Letters 6 (1969) 213-220.
2. J.E. Lupton and H. Craig, Excess ^{3}He in oceanic basalts: evidence for terrestrial primordial helium, Earth and Planetary Science Letters 26 (1975) 133-139.
3. J.E. Lupton, The ^{3}He distribution in deep water over the Mid-Atlantic Ridge, Earth and Planetary Science Letters 32 (1976) 371-374.
4. J.H. Reynolds, P.M. Jeffery, G.A. McCrory and P.M. Varga, Improved charcoal trap for rare gas mass spectrometry, Review of Scientific Instruments 49 (1978) 547-548.
5. R.F. Weiss, Solubility of helium and neon in water and seawater, Journal of Chemical Engineer Data 16 (1971) 235-241.

HELIUM

W.J. Jenkins

Woods Hole Oceanographic Institution

Samples were stored in the standard GEOSECS style copper-tube samplers. Extraction was performed using the water vapour pump technique [1] in an all metal vacuum manifold. Those samples which exhibited bad vacuum characteristics; i.e., passage of water through the seal before opening or leakage from the outside through the upper or lower seals, were not processed further, as it was assumed that they were compromised during storage. The samples were volumetrically split on a metal vacuum line into two aluminosilicate sample tubes.

Analysis was performed on an all metal dual collection helium isotope mass spectrometer using atmospheric helium as an operating standard. He and Ne were separated by a timed inlet procedure through an activated charcoal column held at 78°K, introducing about 60% of the He and 2% of the Ne. Isotopic fractionation during inlet was accounted for by processing the standards in an identical fashion. A slight dependence of measured isotopic ratio on the sample size was corrected for by generation of a standard curve, and using parabolic interpolation. The magnitude of the correction was always less than 2σ. Measurement precision was estimated by the observed scatter of standard results about a smoothed curve for the day's analyses, and was observed to be 0.24±0.1% for the isotopic ratio, and 0.92±.24% for the size (as determined by ^{4}He peak height manometry). Adopted precisions are 0.25 and 1.0% respectively. Two pairs of duplicates (453-5-14/13 and 454-3-1/2) agreed within these uncertainties, although it is felt that the He concentration results may suffer additional uncertainties associated with sampling and storage. These, however, are difficult to assess.

Reference

1. W.J. Jenkins, Proc. Cons. Group on Low Level Tritium Measurement, IAEA-Tecdoc. (1979) 246.

BARIUM

L. H. Chan

Louisiana State University

Barium is determined by isotope dilution mass spectrometry. The isotopic composition of natural barium is constant and well characterized, ^{138}Ba being the major isotope. In the measuring technique, a known amount of the rare isotope ^{135}Ba is added to a sample and the resulting isotopic ratio of $^{135}Ba/^{138}Ba$ is redetermined on a mass spectrometer. The amount of barium is calculated from the following equations:

$$(^{138}Ba)_w = \frac{(^{135}Ba/^{138}Ba)_m - (^{135}Ba/^{138}Ba)_s}{(^{135}Ba/^{138}Ba)_w - (^{135}Ba/^{138}Ba)_m} (^{138}Ba)_s$$

$$(\text{Total Ba})_w = (^{138}Ba)_w / \text{atomic abundance of } ^{138}Ba$$

where ^{135}Ba and ^{138}Ba are isotopic abundances in moles and the subscripts w, s and m denote water, spike and mixture, respectively.

Samples for barium analysis were collected from large-volume stations. Approximately 500 ml of seawater were drawn from rosette Niskin samplers into acid-leached polyethylene bottles. The samples were spiked on board ship within 24 hours of collection. The spike solutions were prepared from ^{135}Ba as $Ba(NO_3)_2$ dissolved in 6N Vycor distilled HCl and delivered from a micrometer burette.

Barium analyses were carried out at Louisiana State University (LSU) and Massachusetts Institute of Technology (MIT). At both laboratories a standard procedure for the mass spectrometric isotope dilution was followed. Barium was separated from other sea salts by ion exchange chromatography. Approximately 200 g of sample was passed through a column packed with AG50WX8 cation exchange resin (200-400 mesh). Column dimensions were 2.1 cm diameter x 18 cm height and 2.5 cm diameter x 20 cm at MIT and LSU respectively. At MIT, 600 ml 2N HCl (Vycor) was used to elute all other major ions and barium was recovered with 200 ml of 6N HCl. At LSU, 3N HCl (Vycor) was used as effluent. The first 600 ml of the effluent was discarded and barium was collected in the next 140 ml fraction.

The barium fraction was evaporated to dryness and fumed with $HClO_4$ and HNO_3 to destroy any resin present. The residue was then taken up in a drop of 1:1 HNO_3 (Vycor) and deposited on a pre-baked tantalum filament. The isotopic analyses were performed on a 12" radius, 90° sector mass spectrometer at LSU and a 6" radius, 60° sector instrument at MIT.

Sample bottles were weighed immediately before analysis and a correction for evaporative loss of 2 mg/day was applied based on long term experiments. The magnitude of the correction was always less than 0.5%.

Blanks from the entire chemical procedure averaged 0.25 and 0.15 nm Ba at MIT and LSU respectively.

The overall error estimated from the uncertainties in spike calibration, blank determination and isotopic ratio measurements is 0.7% or better. Replicate determinations of a single sample agree within 0.7% (n=10). The interlaboratory comparison yielded an agreement of ±1% (n=15). The uncertainty in the absolute accuracy of the data is therefore estimated at about ±1%.

^{226}Ra

W. S. Broecker

Lamont-Doherty Geological Observatory

and

T. L. Ku

University of Southern California

Samples for ^{14}C and ^{226}Ra were collected using 280-liter Gerard barrels. The acidified water was stripped of CO_2 for ^{14}C analysis and a 60-liter aliquot was then transferred to a polyethylene Deldrum for shipment to the shore-based labs for ^{226}Ra determination. Additional 60-liter ^{226}Ra samples were collected as surface and bottom "composites" by combining the stripped water (after processing for ^{222}Rn on board ship) from three 20-liter radon samples collected as part of an 8 or 10 Niskin bottle surface or bottom radon profile.

^{226}Ra was measured using the gas emanation method. At L-DGO, Deldrums of known blank were used as the extraction vessel and the modified extraction procedure is described in Broecker et al. [1]. At USC about 20 liters of water was transferred to a flint glass bottle for extraction. The water in the extraction container is then purged free of radon using helium as a carrier gas. The container is then sealed for 7-14 days after which the accumulated radon is again stripped and counted. The purified radon is quantitatively transferred to a Zn(Ag)S scintillation cell which is then placed in a photomultiplier tube alpha counting system. A detailed description of the extraction system, transfer procedure and counting system is found in Mathieu et al. [2]. The uncertainties quoted are either the average standard deviation [1]

based on counting statistics or standard deviation from the mean of the replicate analyses, whichever is larger.

References

1. W.S. Broecker, J. Goddard and J. Sarmiento, The distribution of ^{226}Ra in the Atlantic Ocean, Earth and Planetary Science Letters 32 (1976) 220.
2. G. Mathieu, A.E. Bainbridge, W.S. Broecker, J.G. Goddard and J.L. Sarmiento, GEOSECS Radon-222 Analysis, GOG Publication No. 199 (1980) Scripps Institution of Oceanography, Internal Report.

^{226}Ra

Y. C. Chung and H. Craig

Scripps Institution of Oceanography
University of California, San Diego

The shipboard collection and sampling techniques for radium and radiocarbon (collected from the same Gerard barrels) have been described in Broecker et al. [1] for the Atlantic work. The Pacific and Indian Ocean collections and extractions were carried out in the same fashion, and reference is therefore made to [1] for the details. Additional samples were collected from Niskin bottles and stored in 20-liter plastic containers at most of the Indian Ocean stations.

Briefly, after shipboard extraction for ^{14}C, the Gerard samples were transferred to 60-liter Deldrums and returned to the shore-based laboratory for ^{226}Ra analysis. In the laboratory, the Deldrum samples and the Niskin samples were transferred to 20-liter flint-glass bottles from which the ^{222}Rn regenerated by ^{226}Ra decay was stripped, purified and counted with a conventional alpha-scintillation counter.

All the samples were extracted using helium as carrier gas, and the radon was trapped in a 13X molecular-sieve trap at dry ice temperature except for those of station 89 in the Atlantic and of stations 204 and 347 in the Pacific. For these samples, a hollow U-tube was used to trap radon at liquid nitrogen temperature. The molecular-sieve trap replaced the U-tube in March 1975 after a series of tests had been made. At stations 212 and 314, both techniques were used; no significant or systematic differences were observed. The adoption of a molecular-sieve trap has improved stripping efficiency and consistency significantly: 99.5% in 30 minutes.

During extraction, water vapor was removed by a Horibe trap at dry ice temperature, and CO_2 was absorbed by a soda-lime column. The purified radon was quantitatively transferred into a counting cell which was coated with Ag-activated ZnS scintillator. The cell was placed in front of a photomultiplier tube of a counting system for counting radon and its two alpha-emitting daughters, ^{218}Po and ^{214}Po. The cell was periodically calibrated against an NBS standard with the same extraction procedure. The precision based on repeated measurements was estimated at about ±3% (one sigma) in general and at ±10% for surface waters where concentrations are much lower. Comparisons of ^{226}Ra profiles measured at stations 89 (Atlantic) and 204 (Pacific) by both the SIO and USC groups indicate no significant or systematic differences [2]. In the Indian Ocean, station 452 was measured by both groups, and the results were in good agreement. Detailed description and discussion of radon extraction, counting, data reduction and precision estimates were given by Chung [3] and Chung and Craig [4].

References

1. W. S. Broecker, J. Goddard and J. Sarmiento, The distribution of ^{226}Ra in the Atlantic Ocean, Earth and Planetary Science Letters 32 (1976) 220.
2. T. L. Ku and M.C. Lin, ^{226}Ra distribution in the Antarctic Ocean, Earth and Planetary Science Letters 32 (1976) 236.
3. Y. Chung, Pacific Deep and Bottom Water studies based on temperature, radium and excess-radon measurements, Ph.D. Thesis (1971), University of California, San Diego.
4. Y. Chung and H. Craig, Radium-226 in the eastern equatorial Pacific, Earth and Planetary Science Letters 17 (1973) 306.

^{228}Ra AND ^{228}Th

Y. H. Li, H. W. Feely, and J. R. Toggweiler

Lamont-Doherty Geological Observatory

Li et al. [1] have described the methods used to analyze ^{228}Th and ^{228}Ra in GEOSECS seawater samples. Surface water samples were collected by means of a pump mounted on the bow of the ship, at a depth of 5 m. A submersible pump was used to collect samples between the surface and 350 m, and deep samples were collected using 270-liter Gerard barrels. The water was transferred to a 900-liter polyethylene tank and was acidified, iron-barium carrier and a spike of ^{230}Th were added, and then NH_4OH was added to produce a mixed precipitate of iron hydroxide with coprecipitated thorium, and barium sulfate with coprecipitated radium and thorium. The

supernatant solution was discarded, and the precipitate was returned to the laboratory for analysis.

The iron hydroxide, with its coprecipitated thorium, was dissolved in HCl to separate it from the insoluble barium sulfate residue. The thorium was purified [1], and was deposited on a stainless steel disk, creating a thin source for alpha counting. The measured ratio of ^{228}Th to ^{230}Th and the knowledge of the amount of ^{230}Th spike added per unit of seawater permitted the calculation of the ^{228}Th concentration in the seawater.

The barium sulfate was fused using a carbonate flux, and was freed of all thorium. A ^{230}Th spike was added, and the solution was stored for about a year to permit the ingrowth of ^{228}Th from its ^{228}Ra parent. During this storage period the ^{226}Ra concentration of the solution was measured by alpha scintillation counting of its radon daughter. Combined with the results of the GEOSECS measurements of the ^{226}Ra concentration in the original seawater sample, this gave the effective volume of seawater represented by the stored solution. Finally the thorium was separated, purified, mounted and counted [1]. The measured ratio of ^{228}Th to ^{230}Th, the knowledge of the amount of ^{230}Th spike added to the solution, and the calculated fractional growth of the ^{228}Th into equilibrium with the ^{228}Ra gave the ^{228}Ra content of the solution. Combined with the calculated effective volume of seawater represented by the stored solution, this gave the ^{228}Ra concentration of the original seawater sample.

Reference

1. Y. H. Li, H. W. Feely and J. R. Toggweiler, ^{228}Ra and ^{228}Th concentrations in GEOSECS Atlantic surface water, Deep-Sea Research 27A (1980) 545.

^{228}Ra

W. S. Moore

University of South Carolina

Experimental Procedures for ^{228}Ra

Water samples were collected in 270 liter Gerard barrels and 200 liters were transferred to a polyethylene tank for ^{14}C extraction. Hydrochloric acid was used to lower the pH and liberate CO_2. The sample was transferred back to the Gerard barrel and the pH was raised to 7 by the addition of NH_4OH. A 30-liter split of the original sample was reserved for ^{226}Ra measurement. The sample was drained through a column containing a cartridge of acrylic fiber impregnated with MnO_2. These cartridges were prepared by soaking wound acrylic cartridges in saturated $KMnO_4$ for 3 to 5 days at 30°C [1]. This extended mild treatment was necessary to distribute the MnO_2 throughout the cartridge without breaking the outer strands and causing the fiber to unwind.

The MnO_2 cartridges were returned to the laboratory where the fiber was cut away from the polypropylene core and soaked in 6N HCl to remove Mn and Ra. The fiber was rinsed well and the solution was filtered. Ra was removed by coprecipitation with $BaSO_4$. The $BaSO_4$ was washed in concentrated HCl and water, dried and fused with a mixture of K- and Na-carbonate in a platinum dish. Purification of Ra and the extraction of ^{228}Th produced by ^{228}Ra decay followed the procedure of Moore [2]. ^{226}Ra was used as a natural tracer of the volume of water from which ^{228}Ra was recovered. The large volume sample extracted on the MnO_2 cartridge was used only to obtain the ^{228}Ra/^{226}Ra activity ratio. This A.R. was multiplied by absolute ^{226}Ra concentrations reported by T.-L. Ku and Y. Chung to obtain absolute ^{228}Ra activities.

Samples from stations 417-435 and 451-453 were measured at the University of South Carolina. Samples from stations 436-450 were measured at the Lamont-Doherty Geological Observatory.

A problem encountered in these measurements was the ^{228}Ra blank associated with the acrylic cartridges. Our best estimate of this blank was 1.3 ± 0.2 dpm/sample. This high blank caused considerable scatter in the data and uncertainty in the samples of lower activity.

References

1. W. S. Moore, Sampling ^{228}Ra in the deep ocean, Deep-Sea Research 23 (1976) 647-651.
2. W. S. Moore, The measurement of ^{228}Ra and ^{228}Th in sea water, Journal of Geophysical Research 74 (1969) 694-704.

MEASUREMENTS OF CONCENTRATION OF SUSPENDED PARTICULATE MATTER

Peter G. Brewer and Derek W. Spencer
Woods Hole Oceanographic Institution
and
Pierre E. Biscaye
Lamont-Doherty Geological Observatory of Columbia University

The analysis of suspended particulate matter (SPM) was done in the Woods Hole Oceanographic Institution (WHOI) and Lamont Doherty Geological Observatory (LDGO) geochemistry laboratories. The WHOI samples were taken throughout the water column and the LDGO samples, on which shipboard measurements for near-bottom excess Rn were also made, were concentrated near the bottom of the water column, generally within several hundred meters of the sediment-water interface.

Although sampling and initial treatment of both sets of samples on shipboard was done by the same GEOSECS technician on any one GEOSECS leg, sampling and analytical procedures differed. All samples were obtained in 30-liter PVC Niskin bottles mounted on a rosette tripping mechanism at the end of a stainless-steel-armoured conducting cable.

In the case of samples taken for analysis at WHOI, approximately 1 liter of water was drawn from the Niskin bottle into a clean 10-liter polyethylene container which was shaken vigorously to rinse the container. The rinse water was discarded and a full 10-liter sample was then drawn. This container was taken to a clean portable laboratory and the water forced through a pre-weighed 37-mm diameter, 0.6 μm pore size Nuclepore filter contained in a plexiglass holder, by air pressure through polyethylene lines. (The rationale for use of Nuclepore filters is given in Biscaye and Eittreim [1].) Incoming air was pre-filtered to eliminate contamination. The filtered water was stored in clean, pre-weighed 10-liter polyethylene bottles which were retained for weighing and later analysis. Total filtration time varied from 30 minutes to several hours. The volume of water passed through the filter varied from 4 liters for surface samples, rich in material that would clog the filters, to 10 liters. On completion of filtration, the filter was carefully removed from the filter holder by means of forceps, and rinsed seven times with distilled deionized water, under suction, to remove residual sea salts. The filter was then transferred to a clean plastic box for storage and returned to WHOI. Filters were then kept in the balance room where they were originally weighed for several days to equilibrate with the balance room atmosphere. Weighing was carried out on a Mettler M5 microbalance. Unused filters weighed approximately 12 mg; used filters weighed from 12.1 to 13 mg.

The eight to twelve samples taken from bottom casts for analysis at LDGO consisted of approximately 20 liters of water filtered directly from the Niskin bottles under vacuum. Pre-weighed 47-mm diameter, 0.4 μm pore size Nuclepore filters, mounted in all-plastic Millipore in-line filter holders were connected by tygon tubing between the Niskin and the evacuated 20-liter bottle to be used for Rn extraction. After filtration, which took on the order of one hour but was not allowed to exceed two hours, the filters were washed in their individual filter holders to remove sea salt with a series of ten aliquots of distilled deionized water. One aliquot was introduced into the tygon intake tube before opening the filter holder; two aliquots carefully squirted on the filter before removing the retaining O-ring, and seven aliquots after removal of the O-ring. Washing under the O-ring is necessary to completely remove sea salt which would otherwise be retained around the perimeter of the filter. A blank filter was loaded on one of the filter holders, carried on deck and returned to the filter van for the same wash treatment received by sample filters. Filter holders were rotated so as to vary their relative height above bottom in successive casts and to vary the filter holder in which the blank filter was contained. After washing, the filter was replaced in its own individual clean plastic box for return to LDGO where it was allowed to dry and equilibrate with balance room air before reweighing. All handling of the filters and weighing both before and after sampling was done with forceps in ultra-filtered air in a laminar flow hood. Weighing was done on a Mettler H64 semi-microbalance. Unused filters weighed approximately 17-22 mg; used filters weighed approximately 17-28 mg. Net weights on blank filters averaged 0.005 mg.

The precision of the entire experimental process is quite difficult to define. We have attempted to examine this in three different ways: by repeated weighing of a filter set, by tripping two or more bottles at the same time and depth, and by re-occupation of a station. The precision of the weighing procedure is better than ± 5 μg which, for a 10-liter sample is $\sim \pm 0.5$ μg/kg and for a 20-liter sample is $\sim \pm 0.25$ μg/kg. The data for these and the other two estimates of precision are given in Brewer et al. [2]. As to duplicate sampling, replicate samples were obtained at various times during the expedition by tripping bottles at the same depth and within a few minutes of each other. The sample drawing, filtering and weighing processes are done blind to the replicate nature of the samples. The standard deviation of 25 such pairs of samples from throughout the water column was 5.2 μg/kg. Details of the station re-occupation are given and results shown in Figure 1 of Brewer et al. [2]. These indicate remarkably good agreement, particularly

in mid-water, between the two sets of results in which the WHOI procedures were used in the first GEOSECS occupation, and the LDGO procedures used in the re-occupation 1½ years later.

References

1. P. E. Biscaye and S. L. Eittreim, Variations in benthic boundary layer phenomena: nepheloid layer in the North American Basin, Suspended Solids in Water (1974) 227-260.
2. P. G. Brewer, D. W. Spencer, P. E. Biscaye, A. Hanley, P. L. Sachs, C. L. Smith, S. Kadar and J. Fredericks, The distribution of particulate matter in the Atlantic Ocean, Earth and Planetary Science Letters 32 (1976) 393-402.

^{210}Pb

Y. C. Chung, H. Craig, and R. Finkel

Scripps Institution of Oceanography
University of California, San Diego

Atlantic and Pacific samples were collected from Gerard barrels and filtered for both particulate and dissolved ^{210}Pb measurements except for a few stations where samples were collected for total ^{210}Pb measurements. Both filtered and unfiltered samples were analyzed at station 89 in the Atlantic, unfiltered samples were measured at stations 204 and 347 in the Pacific. Samples from station 230 were collected from Niskin bottles unfiltered. Duplicate dissolved ^{210}Pb samples were collected for reproducibility check at stations 282 and 287. Duplicate samples were also collected at station 320 for intercalibration with the WHOI group. All the Indian Ocean samples were collected from Niskin bottles and filtered for both particulate and dissolved ^{210}Pb.

Dissolved ^{210}Pb samples from the Pacific were each spiked at sea with an acidic carrier solution containing a known amount of Pb and were allowed to equilibrate at pH about 1.5 for a few days before precipitating as $Fe(OH)_3$ at pH about 8.5. The samples in the form of $Fe(OH)_3$ slurries after decanting were shipped back for laboratory analysis. Particulate samples on the filters were returned in zip-lock bags and stored in refrigerator until analyzed. Particulate samples were digested in HNO_3 and Pb carrier solution was added for equilibration for 18 or more hours before the precipitation of $Fe(OH)_3$. The $Fe(OH)_3$ slurries were dissolved in acetic acid, and Na_2CrO_4 was added to separate iron by precipitating $PbCrO_4$. An anion exchange column with AG1-X8 resin was preconditioned with 1.5 M HCl for each sample. The $PbCrO_4$ dissolved in 1.5 M HCl was loaded onto the column to separate Ra, Ac and Th nuclides from Pb. The Pb eluted from the column was dissolved in distilled water and then reacted with fuming HNO_3 to precipitate as $Pb(NO_3)_2$ which was converted to $PbSO_4$ for plating and counting. The chemical procedure adopted for the Atlantic and Pacific samples was the same as that described by Applequist [1], Craig et al. [2] and Somayajulu and Craig [3]. Each of the Atlantic and Pacific ^{210}Pb samples (dissolved, particulate and total) was counted in a 2π gas-flowing anti-coincidence beta counter for the activity of its daughter ^{210}Bi after radioactive equilibrium had been established. The calibrations of counters and the reductions of data were given in detail by Applequist [1].

For the filtered Niskin water samples collected from the Indian Ocean, the extraction of Pb was accomplished by precipitation of Co-APDC chelate rather than $Fe(OH)_3$. The Co-APDC chelate was collected on the 0.45μm Millipore filter by filtration at sea. In the laboratory the sample was digested in a mixture of HNO_3 and $HClO_4$ and heated to dryness. The Pb was dissolved in ammonium acetate and precipitated as $PbCrO_4$ with Na_2CrO_4. The chemical purification procedure from $PbCrO_4$ to $PbSO_4$ is the same as that just described for the $Fe(OH)_3$ scavenging technique. Controlled experiments conducted at SIO indicate no significant differences between the two Pb scavenging techniques. This assessment is further supported by measurements made on station 500 samples [4]. The Indian Ocean particulate ^{210}Pb samples were measured on the ^{210}Po grown in from ^{210}Pb after purification. The technique was modified from Flynn's [5] and was essentially the same as that described by Bacon et al. [6]. The overall precision is estimated at about ±5% based on analyses of replicate samples and repeated counting.

References

1. M.D. Applequist, Lead-210 in the deep sea: Pacific Ocean investigations, M.S. Thesis, University of California, San Diego (1975).
2. H. Craig, S. Krishnaswami and B.L.K. Somayajulu, ^{210}Pb-^{226}Ra: radioactive disequilibrium in the deep sea, Earth and Planetary Science Letters 17 (1973) 295.
3. B.L.K. Somayajulu and H. Craig, Particulate and soluble ^{210}Pb activities in the deep sea, Earth and Planetary Science Letters 32 (1976) 268.
4. Y. Chung, R. Finkel, M.P. Bacon, J.K. Cochran and S. Krishnaswami, Intercomparison of ^{210}Pb measurement at GEOSECS station 500 in the northeast Pacific, Earth and Planetary Science Letters 65 (1983) 393.
5. W.W. Flynn, The determination of low levels of polonium-210 in environmental samples, Analytica Chimica Acta 43 (1968) 221.
6. M.P. Bacon, D.W. Spencer and P.G. Brewer, ^{210}Pb/^{226}Ra and ^{210}Po/^{210}Pb disequilibria in seawater and suspended particulate matter, Earth and Planetary Science Letters 32 (1976) 277.

^{210}Po

R. Finkel, Y. C. Chung, and H. Craig

Scripps Institution of Oceanography
University of California, San Diego

Polonium-210 was measured only at a few stations selected from the ^{210}Pb stations in the Indian Ocean. Both the particulate and dissolved ^{210}Po concentrations were determined using respectively the particulate and dissolved ^{210}Pb samples. A ^{208}Po spike was added to the filtered water sample together with the Pb carrier and $Co(NO_3)_2$ solutions for scavenging of both Po and Pb by precipitation of Co-APDC chelate. The CO-APDC chelate filtered onto a Millipore filter was digested in a mixture of HNO_3 and $HClO_4$, and Po was autoplated for ^{210}Po determination by alpha spectrometry as described by Flynn [1] and Bacon et al. [2]. Particulate ^{210}Po and ^{210}Pb samples collected on Nuclepore filters were dissolved in a mixture of HNO_3 and $HClO_4$ while ^{208}Po spike and Pb carrier were added for equilibration. Polonium was then autoplated onto a silver disk using Flynn's [1] technique and assayed for in situ particulate ^{210}Po by alpha counting using Ortec silicon surface barrier detectors. The uncertainty of measurements is estimated to be about ±5% in general and much larger for particulate samples.

^{208}Po spike activities were calibrated against the Hohndorf ^{210}Pb standard so that ^{210}Po activities can be compared with ^{210}Pb activities for the assessment of radioactive disequilibrium between the two nuclides.

References

1. W.W. Flynn, The determination of low levels of polonium-210 in environmental samples, Analytica Chimica Acta 43 (1968) 221.

2. M.P. Bacon, D.W. Spencer and P.G. Brewer, ^{210}Pb/^{226}Ra and ^{210}Po/^{210}Pb disequilibria in seawater and suspended particulate matter, Earth and Planetary Science Letters 32 (1976) 277.

^{210}Pb AND ^{210}Po

M. P. Bacon

Woods Hole Oceanographic Institution

WHOI participated in the determination of dissolved ^{210}Pb and ^{210}Po in samples collected during the Indian Ocean Expedition.

Sample collection procedures have been described in detail by Chung et al. [1] but will be briefly summarized here. Samples of ~20 kg were filtered from Niskin bottles through 0.4-μm Nuclepore filters into evacuated PVC holding tanks. The volume of sample collected was measured to ~0.1 liter by graduations on the PVC containers. The holding tanks were re-used from station to station and were rinsed with dilute HCl approximately twice on each leg. In retrospect, it appears that this may not have been a good procedure. During Leg 4 two samples of the acid rinse were saved for analysis at WHOI. The results indicated that some uptake of ^{210}Pb and ^{210}Po by the walls of the containers had occurred. From the number of samples that had been processed since the previous acid rinse, it can be estimated that the amounts taken up correspond to about 0.9 dpm/100 kg for ^{210}Po and 1.4 dpm/100 kg ^{210}Pb, indicating preferential uptake of ^{210}Pb from the samples during the holding period. It is possible that the effect was greater for samples that immediately followed one of the rinsing operations, when the inner surfaces of the PVC containers had been stripped of absorbed material, and less for samples taken later, when the surfaces had approached equilibrium with seawater, but we have no data for evaluating this possibility. Because of this uncertainty, no correction was applied to the data. Thus the reported concentrations of dissolved ^{210}Pb and ^{210}Po may be somewhat too low and the ^{210}Po/^{210}Pb ratios somewhat too high [2].

After filtration the samples were drained into cubitainers, acidified, and ^{208}Po tracer and stable Pb carrier were added. Following equilibration periods of 1-3 days, Co-APDC was precipitated and collected by filtering the sample through 0.45μm Millipore filters [3]. Millipore filters containing the Co-APDC precipitates were returned to WHOI for analysis.

Procedures followed at WHOI were those described by Fleer and Bacon [4]. Following dissolution with a mixture of HNO_3 and $HClO_4$, the samples were taken up in 2N HCl, and the Po was allowed to autoplate onto silver disks [5]. Polonium-210 was determined directly by alpha spectrometry with silicon surface-barrier detectors. Determination of ^{210}Pb was by ingrowth of ^{210}Po. Atomic absorption spectrometry was used to monitor the yield of the added stable Pb.

On the basis of intercalibration studies [1,2] and the estimated reliability of the ^{210}Po standards used at WHOI, the accuracy of the ^{210}Pb and ^{210}Po measurements is estimated to be ±10% [4]. Analytical precision is well represented by the counting errors reported in the data list, averaging about ±5% [4]. A detailed discussion of the data has been given by Cochran et al. [2].

References

1. Y. Chung, R. Finkel, M. P. Bacon, J. K. Cochran and S. Krishnaswami, Intercomparison of ^{210}Pb measurements at GEOSECS Station 500 in the northeast Pacific, Earth and Planetary Science Letters 65 (1983) 393.
2. J. K. Cochran, M. P. Bacon, S. Krishnaswami and K. K. Turekian, ^{210}Po and ^{210}Pb distributions in the central and eastern Indian Ocean, Earth and Planetary Science Letters 65 (1983) 433.
3. E. A. Boyle and J. M. Edmond, Determination of transition metals in aqueous solution by APDC chelate co-precipitation, Analytical Methods in Oceanography, T. R. P. Gibb ed., ACS Advanced Chemistry Series No. 147 (1975) 44.
4. A. P. Fleer and M. P. Bacon, Determination of lead-210 and polonium-210 in seawater and marine particulate matter, Nuclear Instruments and Methods in Physics Research 223 (1984) 243.
5. W. W. Flynn, The determination of low levels of polonium-210 in environmental samples, Analytica Chimica Acta 43 (1968) 221.

^{210}Pb AND ^{210}Po PROCEDURES FOR DISSOLVED AND PARTICULATE SAMPLES

K. K. Turekian

Department of Geology and Geophysics
Yale University

The collection methods for particulate ^{210}Po and ^{210}Pb and dissolved ^{210}Po and ^{210}Pb are described in Chung et al. [1]. The samples were returned to the laboratory where the following procedures were used: The Co-APDC precipitate containing ^{210}Po, ^{210}Pb, ^{208}Po tracer and Pb carrier was dissolved and polonium autoplated on a silver disc for α-spectrometric assay. The remaining solution was purified of residual polonium by anion exchange and ^{210}Po was allowed to grow in from ^{210}Pb. ^{208}Po was added and equilibrated with ^{210}Po and polonium was autoplated on a silver disc for α-spectrometric assay.

The Nuclepore filter containing particulate ^{210}Pb and ^{210}Po was totally dissolved in HNO_3 and $HClO_4$ in the presence of ^{208}Po tracer and Pb carrier. The subsequent procedure followed that for a water sample. The blank for the water samples, representing parallel sampling of a distilled water sample aboard ship with the seawater, was 0.089 ±0.047 dpm ^{210}Po and for particle analysis, 0.006 ±0.003 dpm ^{210}Po.

Reference

1. Y. Chung, R. Finkel, M. P. Bacon, J.K. Cochran and S. Krishnaswami, Intercomparison of ^{210}Pb measurements at GEOSECS Station 500 in the northeast Pacific, Earth and Planetary Science Letters 65 (1983) 393.

FALLOUT NUCLIDES IN ATLANTIC AND PACIFIC WATER COLUMNS: GEOSECS DATA

H. D. Livingston, V. T. Bowen, and S. A. Casso

Woods Hole Oceanographic Institution

H. L. Volchok

Environmental Measurements Laboratory
U.S. Department of Energy

V. E. Noshkin and K. M. Wong

Lawrence Livermore Laboratory
University of California

and

T. M. Beasley

School of Oceanography
Oregon State University

The GEOSECS (Geochemical Ocean Sections) program, which began to be funded by the National Science Foundation in 1971, was the first really large-scale, multi-ocean, multi-laboratory and multi-discipline attempt to combine high quality physical oceanographic measurements with chemical measurements of both natural and anthropogenic chemical substances, both stable and radioactive, in the world's oceans. Broadly stated, it had a goal of trying to understand the physical and biogeochemical controls which determine the properties and behavior of chemical substances in the ocean. Through 1979, the program produced five volumes of collected papers

published in Earth and Planetary Science Letters [1] and hydrographic data tables and atlases published by the National Science Foundation [2]. A further series of data reports and atlases devoted to the shore-based chemical measurements is planned for the near future.

This report has been prepared to tabulate the results obtained by the various laboratories of the concentrations and distributions in the Atlantic and Pacific Oceans of some of the bomb-derived fallout radionuclides introduced to the oceans subsequent to atmospheric nuclear weapons tests. This report contains data obtained on samples collected as part of the GEOSECS program in these oceans and is part of the continuing study of these substances in the world ocean and of their use as tracers to study a variety of physical and biogeochemical oceanic processes.

The radionuclides for which data are reported include the fission product radionuclides ^{137}Cs and ^{90}Sr and the transuranic element Pu. Some ^{241}Am data are available [4], but had to be excluded from this report. This suite of radioelements encompasses a range of chemical reactivities with respect to particle scavenging—ranging from the soluble end (^{137}Cs and ^{90}Sr), where the processes controlling the nuclide distributions are primarily physical, to the reactive end (^{241}Am), where uptake and transport on settling particles becomes an important process. Plutonium appears to lie somewhere in the middle of the range. Initially it was believed to exhibit relatively high particle reactivity but recent studies are beginning to point to a lower degree of particle reactivity than was originally postulated. As chemical analogues, ^{137}Cs and ^{90}Sr would be hard to distinguish from ^{3}H, based on their observed oceanic distribution patterns, while ^{241}Am appears likely to have a chemical reactivity approaching that of Th.

A discussion of distribution patterns of fallout radionuclide patterns in the Pacific, based primarily on GEOSECS data, provided a first large-scale review, in a single ocean, of the fate of these fallout radionuclides [3]. It was stated in this paper that the individual data upon which the paper was based would be published in a forthcoming report. Partly, then, this report is intended to complete the plan. In addition, it includes the available data set for fallout nuclides measured in Atlantic GEOSECS samples.

One comment may be appropriate at this point in respect to the quality of the reported data, although this is discussed later. As would be expected, data quality deteriorates as ambient concentrations approach sensitivity limits. As the input of fallout has varied to the oceanic areas for which data are reported here, the uncertainties in the data, especially in the deeper samples, increase as the level of the fallout input decreases. The fallout input decreased in the order North Pacific > North Atlantic > South Atlantic. An additional factor which resulted in the quality of the transuranic data in the Pacific samples being higher than that of the Atlantic samples is the fact that the Pacific samples were generally analyzed at a later time than were the Atlantic ones. Improved chemical recoveries, increased detector availability, and hence counting times, all worked to produce a Pacific transuranic data set of significantly higher precision than that obtained for the Atlantic samples.

Sampling, Methods and Quality Control

A fairly detailed account of the techniques used in collection and fallout radionuclide analyses of the large volume water samples from the Atlantic and Pacific GEOSECS cruises appeared in a paper discussing the Pacific data set [3]. This account, though directed at the samples collected on the Pacific GEOSECS cruises, is also generally relevant to the collection and analyses of Atlantic GEOSECS samples. We therefore include here an abbreviated outline of these procedures, supplemented by remarks which are relevant to the fuller data set presented in this report. A slightly more detailed version of our GEOSECS data appears in a recent report [4].

In both Atlantic and Pacific GEOSECS cruises, large volume sample collection for fallout nuclide analysis was made primarily by the 260 liter Gerard samplers. After ^{14}C extraction, 60-liter samples were returned to shore-based laboratories for fallout nuclide analyses—in some cases, following Rn extraction for ^{226}Ra analysis. Fallout radionuclide analyses were subsequently completed in a variety of combinations of radionuclides analyzed by a given laboratory. Four different laboratories performed or contracted the various radiochemical analyses.

(1) Some samples were analyzed by commercial laboratories, under contract to the (now) U.S. Dept. of Energy, Environmental Measurements Laboratory in New York City, NY. H. L. Volchok, of that laboratory, supervised the contracting and reporting. These analyses were restricted to measurement of ^{90}Sr alone or for ^{137}Cs and ^{90}Sr.

(2) Some samples were analyzed by V. E. Noshkin's group at Lawrence Livermore Laboratories (LLL). Mostly ^{137}Cs and Pu isotopes were determined by LLL although a few sample series were processed for ^{137}Cs and ^{90}Sr by a contractor laboratory after LLL isolated a Pu fraction.

(3) Some samples were analyzed by V. T. Bowen and H. D. Livingston's group at Woods Hole Oceanographic Institution (WHOI). These analyses typically included ^{137}Cs, ^{90}Sr, Pu isotopes and, for a subset, ^{241}Am.

(4) A number of samples, from the Atlantic GEOSECS sample suite, were analyzed for Pu and ^{241}Am by T. M. Beasley's laboratory at Oregon State University (OSU). A small number of these samples were, in addition,

processed to isolate a Cs fraction at OSU, and then the radiochemistry and sample counting completed at WHOI.

The analytical methods used by these various laboratories have been described in detail elsewhere (if not proprietary) and are referenced in Bowen et al. [3]. The methods used by the OSU laboratory were generally similar to those used by WHOI or LLL with the exception of a solvent extraction based radiochemical procedure for ^{241}Am.

Throughout the analytical program for these GEOSECS samples, a considerable analytical effort was devoted to activities which provided assurance of data quality. These efforts are again described in detail by Bowen et al. [3] and include the analyses of known 'blind' samples, duplicates, environmental blanks, reagent blanks and interlaboratory intercomparison exercise samples. In addition, both Atlantic and Pacific data sets have been subjected to a "deep ocean blank" procedure for blank correcting measured values for ^{137}Cs and ^{90}Sr obtained both by different laboratories and at different times. Details of this procedure have been reported for Atlantic samples by Kupferman and Livingston [5] and essentially the same approach was followed for blank correction to the GEOSECS Pacific data set.

Results

Concentrations of ^{137}Cs, ^{90}Sr and ^{239,240}Pu are tabulated where measured in units of disintegrations per 100 kg of seawater as of date of collection. One sigma counting uncertainties are listed in the right-hand column for each nuclide data pair. ^{239,240}Pu concentrations are tabulated and are conventionally the sum of ^{239}Pu and ^{240}Pu concentrations—unresolvable by state-of-the-art alpha spectrometry. In a few cases no uncertainty is listed with a value for a radionuclide. For a variety of reasons no estimate of the counting uncertainty was obtained and the value listed should be regarded as an upper limit (or a less than value) for the actual concentration in the sample.

References

1. H. Craig and K. K. Turekian, The GEOSECS Program: 1976-1979, Earth and Planetary Science Letters 49 (1980) 263-265.

2. A. E. Bainbridge, GEOSECS Atlantic Expedition Hydrographic Data Volume 1, National Science Foundation, Washington, D.C. (1981).

   A. E. Bainbridge, GEOSECS Atlantic Expedition Sections and Profiles Volume 2, National Science Foundation, Washington, D.C. (1980).

   W. S. Broecker, D. W. Spencer and H. Craig, GEOSECS Pacific Expedition Hydrographic Data Volume 3, National Science Foundation, Washington, D.C. (1982).

   H. Craig, W. S. Broecker and D.W. Spencer, GEOSECS Pacific Expedition Sections and Profiles Volume 4, National Science Foundation, Washington, D.C. (1981).

3. V. T. Bowen, V. E. Noshkin, H. D. Livingston and H. L. Volchok, Fallout radionuclides in the Pacific Ocean: vertical and horizontal distributions, largely from GEOSECS stations, Earth and Planetary Science Letters 49 (1980) 411-434.

4. H. D. Livingston, V. T. Bowen, S. A. Casso, H. L. Volchok, V. E. Noshkin, K. M. Wong and T. M. Beasley, Fallout Nuclides in Atlantic and Pacific Water Columns: GEOSECS Data, Woods Hole Oceanographic Institution Technical Report WHOI-85-19 (1985) 73 pp.

5. S. L. Kupferman and H. D. Livingston, A procedure for independently estimating blanks and uncertainties for measured values of ^{90}Sr and ^{137}Cs concentrations in the Atlantic Ocean, Journal of Marine Research 37 (1979) 141-156.

Chapter 2

DATA TABLES

The following tables include all shorebased data submitted to GEOSECS Operations Group (now Physical and Chemical Oceanographic Data Facility) with the following exceptions:

Total Organic Carbon—Oregon State University
Trace Elements—Woods Hole Oceanographic Institution
Trace Elements—Centre des Faibles Radioactivites/CNRS

The three items above have been submitted to the National Oceanographic Data Center.

Consistency in the format from one ocean to the next was one of the criteria used in designing the tables. The Atlantic and Pacific tables are identical. The Indian Ocean format differs to the right of the second depth column. In that ocean ^{90}Sr, ^{137}Cs, and $^{239,240}Pu$ were not sampled; ^{210}Pb and ^{210}Po are therefore reported in those columns.

With few exceptions, the precisions of the helium and neon data are the same for each sample and are therefore reported at the bottom of the data columns. The precisions for other parameters are tabulated with the measured values. The plus sign preceding the precision estimate is to be interpreted as plus or minus.

The institution responsible for a given parameter is indicated by an abbreviation in the column heading. If more than one institution has reported data for a particular station and parameter, the additional institutions are also indicated in the column heading, and the data are flagged appropriately.

Institution abbreviations appearing in the headings are defined as follows:

LSU	Louisiana State University
MIT	Massachusetts Institute of Technology
MCM	McMasters University
SIO	Scripps Institution of Oceanography
UH	University of Hawaii
UM	University of Miami
UW	University of Washington
WHOI	Woods Hole Oceanographic Institution
YALE	Yale University

Principal investigators are listed in Table 1. (See page xi and xii.)

Depth was calculated by integration of the hydrostatic equation [1]. Salinities were calculated using the subroutine of Tollios et al. [2]. The equations of Helland-Hansen [3] were used in the calculation of potential temperature. The specific gravity equations of Cox et al. [4] and compressibility of Ekman [5] were used to calculate sigma theta and sigma 4, the potential density anomalies at 0 and 4000 db, respectively. It is recognized that with the exception of depth, these methods are generally considered obsolete, but they are used in this volume for consistency with the volumes of GEOSECS shipboard data published earlier.

References

1. P.M. Saunders, Practical conversion of pressure to depth, Journal of Physical Oceanography 11 No. 4 (1981) 573-574.
2. C.D. Tollios, G.H. Power and D.J. Ekstrand, Computer Program for Real Time Data Acquisition, WHOI Technical Memorandum No. 4-71 (1971).
3. B. Helland-Hansen, The Ocean Waters, Intern. Rev. Ges. Hydrobiol. Hydrog., Suppl. to Bd. III, Ser. 1, H.2 (1912) 1-84.
4. R.A. Cox, M.J. McCartney and F. Culkin, The specific gravity/salinity/temperature relationship in natural seawater, Deep Sea Research 17 (1970) 679-689.
5. V.W. Ekman, Die Zusammendruckbarkeit des Meerwassers nebst einigen Werten fur Wasser und Quecksilber, Publications de Circonstance, Conseil Permanent international pour l'exploration de la Mer 43 (1908) 1-47.

Atlantic Ocean Data Tables

STATION 1 — **POSITION: 44°57'N 42°0'W** — **DATE: 24 JUL 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
								UH																			
303	188	10.47	35.166	27.039	44.247			0.81													188						
304	286	9.45	35.117	27.177	44.470			0.97													286						
305	380	7.880	34.973	27.311	44.744			0.65													380						
306	451	6.95	34.914	27.399	44.918			0.51													451						
307	500	6.779	34.977	27.472	45.004			0.71													500						
308	578	5.848	34.924	27.552	45.173			0.51													578						
309	662	5.63	34.990	27.631	45.271			0.77													662						
310	702	5.651	35.105	27.719	45.354			0.65													702						
312	827	5.155	35.013	27.706	45.391			0.92													827						
314	953	4.64	34.993	27.749	45.485			0.44													953						
315	1010	4.554	35.010	27.772	45.516			0.83													1010						
316	1126	4.357	34.984	27.773	45.537			0.68													1126						
317	1234	4.152	34.968	27.782	45.568			0.74													1234						
318	1335	4.014	34.957	27.788	45.587			0.72													1335						
319	1449	3.919	34.960	27.800	45.609			0.84													1449						
320	1520	3.864	34.958	27.804	45.619			0.91													1520						
321	1606	3.788	34.952	27.807	45.629			0.92													1606						
322	1746	3.664	34.955	27.822	45.657			0.94													1746						
101	1993	3.512	34.963	27.843	45.693			0.79													1993						
102	2104	3.444	34.96	27.847	45.704			0.98													2104						
103	2204	3.332	34.96	27.858	45.727			0.94													2204						
104	2406	3.168	34.948	27.864	45.750			0.92													2406						
105	2495	3.089	34.946	27.869	45.764			1.02													2495						
106	2577	3.026	34.941	27.871	45.772			0.80													2577						
107	2779	2.891	34.944	27.886	45.801			0.85													2779						
108	2779	2.891	34.943	27.885	45.800			0.90													2779						
109	2888	2.820	34.938	27.887	45.810			0.93													2888						
110	2988	2.746	34.942	27.897	45.827			0.95													2988						
111	3065	2.674	34.939	27.901	45.839			0.97													3065						
112	3177	2.578	34.934	27.905	45.853			1.04													3177						
113	3187	2.569	34.936	27.907	45.856			0.79													3187						
115	3589	2.234	34.918	27.921	45.906			1.01													3589						
116	3697	2.135	34.915	27.926	45.922			0.91													3697						
117	3809	2.068	34.913	27.930	45.933			1.00													3809						
118	4006	1.966	34.903	27.930	45.944			0.79													4006						
119	4102	1.921	34.900	27.931	45.950			0.83													4102						
120	4203	1.886	34.90	27.934	45.957			0.93													4203						
122	4420	1.847	34.90	27.934	45.962			0.92													4420						
123	4512	1.834	34.90	27.938	45.966			0.94													4512						
124	4604	1.822	34.904	27.942	45.972			0.90													4604						

STATION 2 — **POSITION: 48°0'N 42°30'W** — **DATE: 25 JUL 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
																				LDGO							
525	3944	1.788	34.920	27.957	45.990															108 +2.4	3944						
526	3984		34.916																	312 +3.6	3984						
527	4004	1.71	34.915	27.959	46.001															156 +2.2	4004						
528	4014		34.921																	135 +2.1	4014						
529	4024	1.706	34.916	27.960	46.002															158 +2.2	4024						
530	4034		34.918																	145 +2.1	4034						
531	4044		34.920																	140 +2.1	4044						
532	4055	1.710	34.914	27.958	46.000															170 +2.6	4055						

STATION 3 — **POSITION: 51°1'N 43°1'W** — **DATE: 27 JUL 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
						UH		UH	UM			UM	----------MCM----------			MIT		LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
487	0		34.347						63.6												0	22.2+0.3	30.6+0.6	0.120+0.030			
935	15		34.267																0.70+0.06		15						
301	18	12.509	34.334	26.012	43.081			1.39				14.50+0.40				39.6				215*	18						
302	28	12.320	34.464	26.149	43.230	-0.1						10.94+0.30	0.1			40.0				174*	28						
936	45		34.871															2.22 +0.34	0.72+0.10		45						
303	59	9.366	34.861	26.990	44.298			0.82				10.84+0.30				43.8				28*	59						
488	71		35.062						7.9												71	16.2+0.9	13.8+1.0				
937	95		34.940															1.70 +0.27	0.98+0.08		95						
304	104	9.278	35.008	27.120	44.431	2.4						9.47+0.18	0.3							20*	104						
938	125		35.036															1.40 +0.23	1.00+0.08		125						
305	136	9.171	35.044	27.165	44.484			1.10				8.48+0.17				44.0				21*	136						
306	182	6.788	34.738	27.282	44.821	1.6						8.16+0.15	1.7			46.2				22*	182						
939	225		34.878															1.07 +0.16	0.68+0.06		225						
489	225	7.38	34.884	27.315	44.775				-28.2												225	10.4+0.5	14.3+0.6	0.160+0.030			
307	232	7.434	34.885	27.308	44.783			0.49				5.76+0.18				47.7				15*	232						
308	274	7.617	34.990	27.364	44.820	1.6						8.43+0.25	-0.1	3.92	17.11	45.9				11*	274						

CONTINUED

STATION 3 — *CONTINUED*

POSITION: 51°1'N 43°1'W

DATE: 27 JUL 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	MCM				MIT		LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
491	303	6.98	34.923	27.401	44.897				3.8													303	13.0+1.1	18.0+1.1				
309	329	7.067	34.944	27.406	44.913			0.30				7.65+0.21					46.2				17*	329						
940	350		34.929																0.70 +0.11	0.73+0.06		350						
310	377	6.043	34.822	27.447	45.053							7.74+0.26	-2.4	4.02	17.52		46.6				15*	377						
311	437	5.743	34.886	27.535	45.167			0.50				4.69+0.19									12*	437						
312	464	5.128	34.831	27.565	45.259	1.4						5.54+0.18	2.4				47.1				16*	464						
686	511	5.23	34.866	27.582	45.245				-27.5													511	10.6+0.2	12.5+0.6	0.140+0.030			
313	516	4.935	34.857	27.608	45.319			0.64				5.38+0.17									17*	516						
314	575	4.769	34.896	27.658	45.384	1.5						4.93+0.19	2.7	3.84	16.91		47.1				17*	575						
315	636	4.836	34.957	27.699	45.416			0.80				4.02+0.16					46.1				18*	636						
687	661		34.965						-28.0													661	7.9+1.2	13.6+0.9				
316	812	4.156	34.904	27.731	45.518	3.9						4.77+0.14	3.7				44.9				7*	812						
688	814		34.930						-17.1													814	11.1+0.4	16.2+0.6	0.220+0.040			
317	958	4.113	34.925	27.752	45.543			0.64				4.87+0.19					44.7				13*	958						
318	1082	4.164	34.961	27.775	45.560	1.6						3.12+0.13	3.8	4.03	17.60						15*	1082						
689	1117	4.03	34.948	27.779	45.561				-25.7													1117	11.6+1.4	16.0+1.0				
319	1176	4.015	34.944	27.777	45.577			1.00				3.14+0.14					45.9				13*	1176						
691	1321		34.945						-33.3													1321	8.7+0.2	13.7+0.8	0.200+0.040			
320	1374	3.798	34.941	27.797	45.619	-0.2						2.77+0.12	7.9	4.15	18.16		45.3				21*	1374						
321	1571	3.690	34.936	27.804	45.637			0.76				1.51+0.09									19*	1571						
702	1573	3.686	34.945	27.812	45.645	2.4							6.4				45.0				21*	1573						
701	1575	3.686	34.943	27.810	45.643			0.98									47.7				27*	1575						
322	1723	3.571	34.945	27.823	45.668	0.3						1.30+0.10	2.7	4.45	19.28						16*	1723						
703	1759	3.533	34.944	27.826	45.675			0.78									46.7				12*	1759						
704	1873	3.486	34.943	27.829	45.683								3.1	4.01	17.70						13*	1873						
323	1918	3.465	34.940	27.829	45.685			1.08				1.15+0.09									19*	1918						
705	1985	3.419	34.941	27.834	45.695												47.2				25*	1985						
324	2036	3.370	34.943	27.841	45.706							1.48+0.09	1.2	4.05	17.85						17*	2036						
1186	2048	3.40	34.953	27.846	45.693				-50.9													2048	2.9+0.6	5.0+0.9	0.060+0.020			
706	2158	3.289	34.945	27.850	45.724												48.6				15*	2158						
708	2353	3.142	34.948	27.866	45.755	-1.5							1.0	4.10			48.2				15*	2353						
707	2353	3.142	34.948	27.866	45.755	1.3		1.06				0.92+0.09	0.8								15*	2353						
709	2476	3.038	34.944	27.872	45.772			0.54									49.2				15*	2476						
710	2592	2.928	34.949	27.886	45.797	1.1							1.0	4.05	17.93						12*	2592						
711	2693	2.853	34.944	27.889	45.808	3.0		1.04				0.74+0.09	1.4	4.06	17.88		50.2				13*	2693						
1187	2766		34.946						-53.4													2766	2.3+0.9	4.7+0.9				
713	2886	2.671	34.946	27.906	45.845												49.0				10*	2886						
714	2985	2.580	34.944	27.913	45.860			0.68				0.97+0.24									15*	2985						
715	3085	2.474	34.939	27.918	45.877	2.5		1.02					4.8	4.32	18.10		50.7				13*	3085						
716	3264	2.316	34.932	27.925	45.901	2.7							11.0	4.39	18.26		52.0				14*	3264						
717	3265	2.315	34.936	27.929	45.905			0.89				0.84+0.24									13*	3265						
1188	3279	2.33	34.936	27.927	45.889				-60.7													3279	3.8+0.1	4.9+1.0	0.170+0.050			
718	3364	2.204	34.931	27.933	45.922	0.9							13.5	4.04			51.5				22*	3364						
719	3482	2.123	34.926	27.936	45.933			1.04									50.0				15*	3482						
720	3625	2.015	34.927	27.945	45.954	-1.1							7.1	4.24	18.37		50.8				24*	3625						
721	3725	1.937	34.925	27.950	45.967			0.90				2.25+0.24					49.8				17*	3725						
1189	3792		34.919						-40.3													3792	4.4+0.2	8.3+0.6	0.100+0.020			
722	3891	1.848	34.915	27.948	45.975	2.6							4.7	4.10	18.07		50.8				20*	3891						
723	4043	1.756	34.926	27.964	46.001			0.59				2.72+0.25					51.9				30*	4043						
1016	4059	1.741	34.914	27.956	45.994																19 +1.6	4059						
1017	4105	1.705	34.911	27.956	45.998																42 +1.6	4105						
1018	4144	1.690	34.919	27.963	46.007																39 +1.6	4144						
724	4145	1.676	34.911	27.958	46.004							2.99+0.26	6.1	4.11	18.13						45*	4145						
1019	4185	1.672	34.914	27.961	46.007																45 +1.7	4185						
1020	4205	1.651	34.911	27.960	46.008																64 +1.7	4205						
1021	4214	1.644	34.918	27.966	46.015																123 +2.0	4214						
1022	4225	1.637	34.913	27.963	46.013																63 +1.7	4225						
1023	4236	1.634	34.910	27.960	46.010																73 +1.8	4236						
1024	4245	1.634	34.919	27.968	46.017																79 +1.8	4245						
1191	4306	1.63	34.920	27.968	46.007				-25.7													4306	8.9+0.4	12.1+1.1	0.190+0.070			
												PRECISION:	0.5	0.04	0.05													

STATION 4

POSITION: 54°5'N 42°57'W

DATE: 30 JUL 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
													MCM								LDGO								
614	18	7.430	34.625	27.104	44.588								-3.1	3.96	17.23							18							
618	270	3.845	34.851	27.721	45.541								1.7	4.10	18.06							270							
621	426	3.775	34.872	27.745	45.571								4.5									426							
501	748	3.669	34.890	27.769	45.606								4.3	4.10	17.97							748							
504	1103	3.648	34.910	27.787	45.625								4.9	4.10	18.04							1103							
509	1599	3.464	34.938	27.828	45.684								1.0	4.10	18.07							1599							
103	1839	3.316	34.945	27.847	45.718								0.8	4.05	17.95							1839							
105	2086	3.150	34.956	27.872	45.759								-0.8	4.09	18.05							2086							
106	2298	2.993	34.964	27.892	45.796								0.4	4.15	18.27							2298							
110	2697	2.812	34.972	27.915	45.838								2.2	4.14	18.26							2697							
111	2794	2.780	34.974	27.919	45.845								-0.6	4.09	18.13							2794							
112	2899	2.721	34.972	27.923	45.855								-0.8	4.16	18.39							2899							
113	3009	2.616	34.968	27.929	45.872								-0.2	4.10	18.12							3009							
116	3208	2.386	34.943	27.928	45.897								0.7	4.15	18.35							3208							
117	3309	2.302	34.937	27.930	45.908																	3309							
118	3414	2.242	34.932	27.931	45.915								0.9	4.07	17.78							3414							
119	3452	2.236	34.933	27.933	45.917																	3452							
120	3472	2.233	34.932	27.932	45.917																	3472							
121	3491	2.232	34.932	27.932	45.917																	3491							
122	3501	2.226	34.927	27.928	45.914																	3501							
123	3510	2.219	34.933	27.934	45.920																	3510							
124	3520	2.217	34.931	27.932	45.919																	3520							
												PRECISION:	0.5	0.04	0.05														

STATION 5 | POSITION: 56°56'N 42°33'W | DATE: 31 JUL 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic µg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM UW*			UM	----------MCM----------					LDGO	LDGO	LDGO WHOI*		WHOI	WHOI					
835	5								49.3									1.03 +0.17	0.23+0.03		5	15.7+0.9	18.4+1.0					
501	7	7.156	34.435	26.993	44.507	0.0		1.60				8.51+0.23								128*	7							
836	20	4.01		27.727	45.513													0.90 +0.11	0.23+0.04		20							
502	21	6.885	34.636	27.189	44.722							7.92+0.19	-2.5	4.02						118*	21							
837	50																	0.70 +0.09	0.39+0.04		50							
503	59	5.245	34.843	27.561	45.242	0.6		1.32				7.08+0.20								30*	59							
838	100		34.747															0.52 +0.07	0.45+0.05		100	12.6+0.5						
504	109	4.736	34.849	27.625	45.355							4.15+0.14	-0.8	3.99						38*	109							
505	159	4.463	34.877	27.677	45.434	1.3		1.16				5.09+0.16								27*	159							
839	200		34.837																0.40+0.03		200	12.4+0.3	25.8+1.2					
506	209	4.359	34.892	27.700	45.467							5.17+0.16	0.9	4.12						22*	209							
507	282	3.961	34.878	27.730	45.538			1.09				5.30+0.16								22*	282							
840	300		34.845															0.47 +0.06	0.39+0.04		300							
386	307		34.879						-4.1												307	11.8+0.7	24.4+1.3					
									-3.1*																			
841	350		34.849						7.9												350	13.7+0.6						
508	361	3.754	34.897	27.767	45.594	1.2		0.92				5.23+0.16								21*	361							
509	459	3.611	34.864	27.754	45.598							5.04+0.15	2.1							25*	459							
510	559	3.674	34.889	27.768	45.604			1.17				4.90+0.16								33*	559							
387	615		34.860																		615	14.8+0.7						
511	661	3.458	34.864	27.769	45.628							5.06+0.16	1.8	4.17						23*	661							
512	760	3.396	34.850	27.764	45.630			1.07				5.49+0.16								20*	760							
513	860	3.353	34.853	27.771	45.641							5.15+0.16	1.7	4.15						20*	860							
388	922	3.43	34.866	27.773	45.620				-14.3												922	9.2+0.4	11.2+0.7					
514	925	3.367	34.855	27.771	45.640							5.00+0.16								16*	925							
515	987	3.361	34.857	27.773	45.642			1.12				4.60+0.12	2.6	4.09						18*	987							
516	1080	3.495	34.911	27.803	45.657							4.05+0.12								12*	1080							
517	1189	3.628	34.940	27.813	45.653			0.85				2.44+0.11	2.9	4.10						16*	1189							
389	1230		34.933						-45.3												1230	7.6+0.4						
									-42.4*																			
518	1289	3.647	34.934	27.807	45.644	2.4		0.97				1.80+0.09								21*	1289							
519	1408	3.597	34.934	27.811	45.654							1.46+0.09	2.0	4.15						24*	1408							
520	1537	3.496	34.945	27.830	45.683			0.65				0.99+0.09								12*	1537							
521	1636	3.415	34.947	27.839	45.700							0.89+0.09	1.1	4.00						15*	1636							
390	1643		34.940						-59.6												1643	2.0+0.3	3.6+0.4					
522	1736	3.401	34.956	27.848	45.710			0.84				1.03+0.09								14*	1736							
101	1808	3.327	34.963	27.861	45.730			0.89				1.08+0.09	0.5	4.12						11*	1808							
523	1860	3.299	34.963	27.863	45.735							0.84+0.09	1.1	4.04							1860							
102	2007	3.208	34.965	27.873	45.755															10*	2007							
524	2009	3.186	34.957	27.869	45.753			0.76				0.82+0.09								12*	2009							
391	2052	3.20	34.955	27.866	45.734				-59.9												2052	3.2+0.2						
									-58.4*																			
103	2082	3.111	34.958	27.877	45.769								1.4	4.13						15*	2082							
104	2157	3.047	34.956	27.881	45.780	1.6						0.78+0.09								13*	2157							
105	2257	2.967	34.957	27.889	45.796								1.1	4.10						12*	2257							
106	2359	2.903	34.958	27.896	45.809	2.3							1.5	4.13						11*	2359							
107	2459	2.825	34.954	27.899	45.821			0.77												10*	2459							
399	2462		34.947															0.25 +0.08	0.25+0.04		2462							
109	2633	2.737	34.962	27.914	45.844			0.79												14*	2633							
108	2633	2.737	34.960	27.912	45.843	2.0														11*	2633							
687	2672	2.75	34.962	27.912	45.827				-52.2*												2672	3.3+0.4	4.1+0.5					
110	2723	2.679	34.960	27.917	45.854	2.5							1.6	4.15						11*	2723							
111	2814	2.621	34.958	27.920	45.863			1.05				1.02+0.09	2.5	4.17						14*	2814							
688	2877		34.943						-56.1*												2877	3.7+0.4						
112	2923	2.496	34.955	27.929	45.885	2.2														13*	2923							
113	3005	2.364	34.940	27.928	45.898			0.82					1.1	4.06						11*	3005							
115	3005	2.364	34.941	27.928	45.899								1.2	4.07						7*	3005							
116	3058	2.253	34.935	27.933	45.915	2.4		1.03												12*	3058							
689	3082								-43.2*												3082	4.6+0.4	6.2+0.4					
117	3148	2.055	34.925	27.940	45.945								2.0	4.10						17*	3148							
118	3271	1.932	34.924	27.949	45.967															18 +1.6	3271							
690	3287		34.924						-36.0*												3287	6.0+0.3						
119	3313	1.876	34.923	27.953	45.976															22 +1.6	3313							
120	3332	1.817	34.921	27.956	45.986															54 +1.7	3332							
121	3352	1.802	34.915	27.952	45.984															78 +1.8	3352							
122	3362	1.797	34.925	27.960	45.992															70 +1.7	3362							
123	3371	1.789	34.913	27.951	45.985															57 +1.9	3371							
124	3381	1.786	34.918	27.956	45.989			0.99				3.14+0.12								68 +1.7	3381							
												PRECISION:	0.4	0.04														

Institut für Meereskunde an der Universität Kiel

STATION 8 — **POSITION: 60°30'N 40°1'W** — **DATE: 3 AUG 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH												LDGO								
314	27	8.080	34.917	27.237	44.654			1.81													27							
316	152	4.280	34.913	27.725	45.499			0.95													152							
317	225	4.289	34.916	27.726	45.500			1.07													225							
319	324	4.197	34.930	27.747	45.529			0.93													324							
321	447	4.108	34.925	27.753	45.544			0.83													447							
323	595	3.938	34.920	27.766	45.574			0.96													595							
324	645	3.898	34.922	27.772	45.584			0.98													645							
104	849	3.770	34.924	27.786	45.612			0.95													849							
106	948	3.718	34.930	27.796	45.627			1.11													948							
107	1051	3.692	34.945	27.811	45.643			1.02													1051							
109	1245	3.562	34.957	27.833	45.678			0.95													1245							
111	1447	3.418	34.952	27.843	45.704			0.79													1447							
112	1556	3.354	34.959	27.855	45.722			0.92													1556							
116	1897	3.079	34.964	27.885	45.779			0.99													1897							
118	2091	2.873	34.963	27.902	45.819			0.96													2091							
119	2158	2.810	34.957	27.903	45.826			0.95													2158							
525	2334	1.955	34.909	27.936	45.951															54 +1.7	2334							
121	2356	2.488	34.945	27.921	45.879			0.98													2356							
526	2375		34.905																	55 +1.7	2375							
527	2404		34.904																	49 +1.6	2404							
528	2425		34.906																	76 +1.8	2425							
122	2429	2.279	34.930	27.927	45.907			1.07													2429							
529	2445		34.901																	115 +2.0	2445							
530	2455	1.53	34.905	27.964	46.026															96 +2.1	2455							
531	2465		34.900																	187 +2.5	2465							
532	2476		34.898																	221 +2.8	2476							
124	2551	1.527	34.916	27.973	46.035			0.94													2551							

STATION 11 — **POSITION: 63°31'N 35°13'W** — **DATE: 5 AUG 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM	SIO	SIO	UM	----------MCM---------- SIO*			MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
735	5		34.967																		5							
401	7	8.91	34.955	27.138	44.482	-0.3		1.75		0.6	0.21	6.73+0.13				43.9		0.70 +0.09	0.36+0.05	330*	7							
286	8		34.958						35.0								7.4 +0.4				8	13.9+0.4	20.5+0.6	0.210+0.030				
736	20		34.983															0.67 +0.08	0.36+0.04		20							
287	28		34.966						29.9								8.1 +0.3				28	10.2+1.1	21.1+1.0	0.080+0.010				
402	31	7.649	34.966	27.340	44.794							6.83+0.13	-1.3 -1.6*	3.70	16.01	43.7				136*	31							
737	50		35.049															0.75 +0.09	0.34+0.04		50							
403	56	7.19	35.042	27.465	44.958	1.1		1.36				6.27+0.13				44.8					56							
738	75		35.053															0.70 +0.08	0.54+0.04		75							
404	83	6.77	35.045	27.526	45.057						0.28	4.61+0.16	-0.4 2.2*	3.84	16.94	43.6				22*	83							
288	100		35.035						12.2												100	12.7+0.7	18.9+0.6	0.120+0.040				
405	118	6.245	35.033	27.587	45.167	1.9		1.01				4.53+0.16				43.6				20*	118							
739	150		35.025															0.61 +0.08	0.51+0.07		150							
406	167	5.991	35.019	27.609	45.213							5.49+0.19	-0.4 0.7*	3.76	16.67					20*	167							
289	203	5.83	35.034	27.641	45.241				10.1								8.2 +0.4				203	10.5+1.2	18.7+1.1	0.160+0.010				
407	209	5.650	34.999	27.636	45.273	1.8		1.07				5.72+0.15				43.6				19*	209							
408	257	5.364	34.987	27.661	45.326					0.9	0.29	4.66+0.15	0.3 1.6*	3.98	17.40						257							
290	305		34.957						3.7												305	12.3+0.8	18.3+0.5	1.030+0.050				
409	308	5.037	34.960	27.678	45.376	1.6		0.76				4.79+0.17				44.9				16*	308							
740	350		34.962															0.51 +0.07	0.69+0.06		350							
410	357	4.827	34.943	27.689	45.408							5.44+0.17	-0.9 1.3*	3.99	17.46					18*	357							
291	408	4.60	34.935	27.708	45.432				5.2								8.4 +0.8				408	14.2+0.8	17.4+0.9					
411	410	4.709	34.944	27.703	45.433	1.6		1.14				5.66+0.23								15*	410							
412	456	4.552	34.931	27.710	45.456			1.05				5.02+0.18	0.6 1.4*	4.00	17.57	44.2				17*	456							
413	509	4.419	34.929	27.723	45.483	1.7		0.62		0.9	0.25	5.19+0.18								22*	509							
414	558	4.294	34.924	27.732	45.505							5.48+0.22	-0.5 2.5*	4.03	17.69					20*	558							
415	607	4.197	34.920	27.739	45.522	1.8		1.06				4.55+0.13				45.7				17*	607							
586	612		34.922						-4.7								8.0 +0.6				612	12.4+0.5	18.3+0.6	0.090+0.030				
416	658	4.126	34.924	27.750	45.539							4.79+0.19	0.9 1.7*	3.98	17.54					16*	658							
417	708	4.067	34.917	27.751	45.546	1.4		1.00				5.01+0.18				44.9				12*	708							
418	758	4.003	34.913	27.754	45.556							4.51+0.18	0.1 2.9*	4.00	17.67	45.3				9*	758							
419	808	3.916	34.909	27.760	45.571	1.8		0.53				4.47+0.15				48.0				6*	808							
587	819		34.915						-7.8								8.0 +0.1				819	11.2+0.9	13.0+3.0	0.220+0.050				
420	859	3.878	34.911	27.765	45.580							4.17+0.17	1.2 2.9*	4.02	17.76					11*	859							
421	859	3.886	34.911	27.764	45.578	2.0		0.89				4.61+0.12				45.2				12*	859							
101	904	3.811	34.906	27.768	45.590			0.07		0.6	0.20	4.29+0.11	1.4	4.03	17.80	44.9				11*	904							
422	959	3.783	34.909	27.773	45.598			0.94				3.83+0.12	0.0 3.1*	4.01	17.63					14*	959							

STATION 11 — *CONTINUED* | **POSITION: 63°31'N 35°13'W** | **DATE: 5 AUG 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM	SIO	SIO	UM	MCM / SIO*				MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
102	1003	3.736	34.905	27.775	45.604	1.9															9*	1003							
103	1003	3.736	34.901	27.772	45.601			1.04		1.0	0.20		0.2	4.01	17.62		44.3				11*	1003							
423	1009	3.774	34.913	27.777	45.602			1.03				3.78+0.16									11*	1009							
588	1026		34.911						-15.6													1026	10.6+0.3	14.7+0.8	0.230+0.050				
424	1098	3.704	34.913	27.784	45.616							3.28+0.14						8.2 +0.3				1098							
104	1102	3.725	34.914	27.783	45.613	2.0											46.5				12*	1102							
105	1201	3.687	34.920	27.792	45.625			0.01		0.9	0.21	2.54+0.10	3.4	4.04			45.7				15*	1201							
589	1232	3.69	34.923	27.793	45.611				-36.5									7.5 +0.3				1232	8.5+0.8	12.8+0.9	0.160+0.010				
106	1305	3.685	34.931	27.800	45.634	2.4						2.30+0.25									14*	1305							
107	1402	3.680	34.944	27.811	45.645			0.57				1.52+0.25	2.2	4.04	17.67		45.6				10*	1402							
590	1440		34.953						-47.2									9.5 +0.6				1440	5.6+0.3	7.9+0.6	0.110+0.030				
108	1504	3.632	34.946	27.818	45.656	2.6											47.4				15*	1504							
109	1607	3.551	34.951	27.830	45.676			0.99		1.1	0.19	1.47+0.09	2.2	4.01			47.3				8*	1607							
591	1646	3.48	34.948	27.834	45.673				-50.1													1646	4.1+1.2	7.0+0.9					
599	1695																		0.42 +0.07	0.23+0.04		1695							
110	1752	3.402	34.943	27.838	45.700	2.5											47.9				17*	1752							
111	1802	3.374	34.949	27.845	45.710			1.02				1.19+0.26	2.9	4.06	17.75		47.3				12*	1802							
886	1822		34.966						-48.9													1822	4.1+0.4	6.0+0.7	0.090+0.030				
112	1857	3.253	34.943	27.852	45.729	2.5		0.99				2.10+0.26									13*	1857							
113	1949	2.966	34.922	27.861	45.769								2.2 2.3*	4.04	17.83		46.9				18*	1949							
887	2027		34.936						-39.0													2027	7.4+0.9	8.6+1.1	0.130+0.010				
115	2047	2.567	34.902	27.880	45.831			0.90				3.63+0.11	1.1 2.4*	4.07	17.95		46.1				16*	2047							
888	2130		34.920						-35.9													2130	7.9+0.3	9.9+1.0	0.110+0.020				
116	2148	2.169	34.911	27.920	45.913	2.6											46.2				14*	2148							
117	2205	1.764	34.900	27.943	45.979			1.11				3.31+0.26	-0.2 2.3*	4.00	17.93		45.9				22*	2205							
889	2233		34.915						-27.2													2233	10.5+1.7	13.7+1.1					
118	2285	1.445	34.883	27.952	46.024													10.6 +0.3			31 +1.6	2285							
119	2323	1.125	34.877	27.969	46.076																36 +1.6	2323							
120	2344	1.089	34.876	27.971	46.082	1.6						4.09+0.25									35 +1.6	2344							
121	2363	1.075	34.870	27.967	46.080												44.3				39 +1.6	2363							
122	2374	1.084	34.875	27.970	46.082								1.6 3.3+	4.09	18.19						91 +1.9	2374							
123	2385	1.095	34.878	27.972	46.082																46 +1.7	2385							
124	2393	1.094	34.878	27.972	46.082			1.06			0.21						44.7				48 +1.7	2393							
												PRECISION:	0.5 1.0 *	0.02	0.05														

STATION 14 | **POSITION: 65°55'N 27°27'W** | **DATE: 13 AUG 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM	SIO	SIO	UM									LDGO		WHOI	WHOI	WHOI				
201	6	1.052	30.020	24.078	42.354					-17.8	-2.23	62.74+1.00										6							
386	7	5.99	30.054	23.694	41.450				67.6													7	51.1+2.3	64.5+0.9	0.180+0.060				
202	18	0.769	31.573	25.338	43.594					-17.2	-2.19	70.29+1.00										18							
203	43	-0.844	32.571	26.210	44.620							63.24+1.00										43							
204	67	-1.234	32.866	26.460	44.907					-14.2	-1.82	58.54+1.10										67							
387	83		33.102						45.3													83	46.8+0.2	55.9+0.9	0.130+0.030				
205	93	-0.389	33.312	26.791	45.123							48.34+0.90										93							
206	117	0.933	33.783	27.103	45.268					-7.8	-0.88	39.56+0.70										117							
207	140	0.933	33.964	27.249	45.407							31.04+0.60										140							
208	191	1.395	34.389	27.560	45.653							18.34+0.80										191							
388	214		34.538						19.4													214	20.5+0.8	27.5+0.5	0.200+0.050				
209	215	2.214	34.535	27.616	45.616					-0.9	0.01	15.24+0.80										215							
210	241	1.530	34.516	27.652	45.727							12.64+0.30										241							
211	267	1.237	34.571	27.716	45.821					-0.6	0.09	10.84+0.90										267							
212	310	-0.396	34.593	27.825	46.114					-0.6	0.12	10.04+0.90										310							
389	316	0.74	34.626	27.792	45.951				16.7													316	14.2+0.2	23.7+0.6	0.250+0.060				
215	321	-0.365	34.616	27.842	46.127							9.16+0.21										321							
216	358	-0.389	34.731	27.936	46.220					0.5	0.19											358							
217	396	0.252	34.825	27.980	46.187							6.29+0.16										396							
390	417		34.866						-4.1													417	12.2+0.4	18.2+0.5	0.220+0.030				
218	439	0.323	34.880	28.021	46.217					1.0	0.24											439							
219	476	-0.006	34.896	28.051	46.285							3.79+0.14										476							
221	554	-0.206	34.929	28.087	46.343					1.2	0.28	2.65+0.10										554							
517	568	-0.508	34.910	28.086	46.377																57 +1.7	568							
518	585	-0.508	34.922	28.096	46.387																62 +1.7	585							
519	597	-0.509	34.916	28.091	46.382																48 +1.7	597							
391	604	-0.20	34.926	28.085	46.340				-28.4													604	6.5+0.4	13.0+0.4	0.130+0.090				
223	605	-0.217	34.928	28.087	46.344							2.75+0.14										605							
224	605	-0.217	34.924	28.084	46.341					1.1	0.34	2.47+0.11										605							
520	620	-0.507	34.922	28.096	46.386																44 +1.6	620							
521	629	-0.507	34.922	28.096	46.386																54 +1.7	629							
522	637	-0.505	34.923	28.097	46.387																47 +1.7	637							
523	638	-0.507	34.918	28.093	46.383																47 +1.7	638							
524	645	-0.512	34.920	28.094	46.386																104 +1.9	645							

STATION 15

POSITION: 69°0'N 20°1'W

DATE: 15 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH				UM								LDGO								
515	28	1.96	33.651	26.929	44.985			2.23				24.74+1.00									28							
520	65	-1.526	34.266	27.602	46.036			0.97				15.64+0.80									65							
522	126	-0.542	34.585	27.825	46.131			1.15				8.92+0.98									126							
201	144	-0.285	34.611	27.835	46.110							6.84+0.69									144							
524	225	1.065	34.912	28.001	46.114			1.20				4.80+0.85									225							
203	241	1.067	34.924	28.011	46.123							4.87+0.72									241							
204	289	1.060	34.934	28.019	46.132			1.16													289							
207	430	0.840	34.966	28.059	46.195			1.02													430							
211	675	0.165	34.957	28.091	46.303			1.08													675							
215	901	-0.354	34.937	28.101	46.373			1.24													901							
217	1076	-0.569	34.926	28.102	46.399			0.96													1076							
219	1284	-0.739	34.918	28.103	46.420			1.19													1284							
125	1393		34.918																	39 +1.6	1393							
126	1435	-0.83	34.917	28.106	46.435															32 +1.6	1435							
127	1455		34.919																	37 +1.6	1455							
128	1475	-0.890	34.915	28.106	46.442															38 +1.6	1475							
129	1495		34.914																	40 +1.6	1495							
224	1496	-0.936	34.918	28.110	46.451			1.06													1496							
130	1505		34.914																	46 +1.6	1505							
131	1515		34.914																	51 +1.7	1515							
132	1526	-0.93	34.915	28.108	46.447															52 +1.7	1526							

STATION 16

POSITION: 72°2'N 8°26'W

DATE: 16 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH		SIO	SIO	UM						LDGO		LDGO								
601	1	4.11	33.271	26.439	44.282					-2.1	-0.23										1							
602	5	4.10	33.272	26.441	44.285			2.24													5							
603	5	4.10	33.277	26.445	44.289							22.74+0.90									5							
604	15	3.45	33.756	26.888	44.783							15.04+0.80									15							
606	41	-1.473	34.464	27.761	46.181			1.16		0.2	0.18									9.9 +0.4	41							
607	51	-1.450	34.545	27.826	46.241							5.31+3.10									51							
609	104	0.164	34.825	27.985	46.201			1.25				6.45+0.99									104							
610	129	0.712	34.903	28.016	46.169			0.70			0.30										129							
611	153	0.895	34.933	28.029	46.160			1.05													153							
612	178	0.865	34.947	28.042	46.176			1.14													178							
613	203	0.808	34.950	28.048	46.188			0.92													203							
614	252	0.677	34.954	28.060	46.214			1.05		1.4	0.34										252							
615	303	0.498	34.951	28.068	46.242			1.13													303							
616	352	0.332	34.950	28.076	46.270			1.00													352							
617	402	0.151	34.939	28.077	46.292			1.14													402							
618	476	-0.091	34.935	28.087	46.329			0.97													476							
619	551	-0.247	34.926	28.087	46.347			0.62		1.3	0.28										551							
621	626	-0.390	34.929	28.096	46.373			0.76													626							
501	667	-0.435	34.923	28.093	46.376			1.20													667							
502	740	-0.580	34.922	28.099	46.398			1.14													740							
624	749	-0.567	34.926	28.102	46.399					1.7	0.26										749							
504	889	-0.676	34.921	28.102	46.413			1.12													889							
505	998	-0.760	34.919	28.104	46.424			1.07													998							
507	1187	-0.870	34.913	28.104	46.437			1.15													1187							
509	1385	-0.960	34.912	28.106	46.450			1.13													1385							
510	1483	-0.986	34.92	28.114	46.461					1.4	0.27										1483							
512	1583	-1.009	34.92	28.115	46.464			1.13													1583							
516	1815	-1.062	34.914	28.112	46.468			1.10													1815							
518	2014	-1.124	34.913	28.113	46.477					1.0	0.25										2014							
519	2090	-1.156	34.912	28.114	46.481			1.14													2090							
521	2262	-1.230	34.900	28.107	46.483			1.15													2262							
115	2344	-1.251	34.901	28.108	46.487															22 +1.6	2344							
116	2412	-1.267	34.897	28.105	46.486															17 +1.6	2412							
117	2451	-1.279	34.898	28.107	46.489															24 +1.6	2451							
118	2471	-1.268	34.900	28.108	46.489															24 +1.6	2471							
119	2490	-1.270	34.893	28.102	46.483															25 +1.6	2490							
120	2510	-1.273	34.901	28.109	46.490															30 +1.6	2510							
524	2516	-1.290	34.895	28.105	46.488			1.19		0.8	0.24										2516							
121	2518	-1.273	34.895	28.104	46.485															22 +1.6	2518							
122	2528	-1.273	34.890	28.100	46.482															21 +1.6	2528							
123	2537	-1.273	34.897	28.106	46.487															15 +1.6	2537							
124	2537	-1.273	34.893	28.102	46.484															35 +1.6	2537							

STATION 17 | POSITION: 74°56'N 1°7'W | DATE: 18 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	^{239,240}Pu DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	T^{210}Pb DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM	SIO	SIO	UM	SIO				MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
601	1	4.57	34.500	27.366	45.124	0.2		2.15		0.4	0.13	4.36+0.17					41.4				27*	1							
835	3		34.488																0.48 +0.09	0.18+0.02		3							
386	4	4.70	34.479	27.335	45.081				33.9									6.6 +0.5				4	12.1+0.5	20.5+0.3	0.130+0.050				
387	40	-0.93	34.750	27.974	46.320				8.8									7.4 +0.4				40	11.6+0.4	16.1+0.4	0.050+0.020				
836	40		34.772																0.46 +0.08	0.37+0.04		40							
602	41	-0.907	34.774	27.993	46.335			1.54				5.50+0.26	-0.9	4.15	18.64	-0.5	41.9				28*	41							
603	75	-1.683	34.825	28.060	46.493	0.6		1.30				5.37+0.16					41.1				58*	75							
388	76	-1.72	34.81	28.049	46.487				10.2									8.4 +0.6				76	10.9+0.2	19.1+0.4	0.180+0.040				
837	85		34.833																0.47 +0.07	0.68+0.07		85							
604	101	-1.716	34.842	28.075	46.511			-0.11		0.3	0.16	4.64+0.14									83*	101							
605	152	-1.601	34.840	28.070	46.492			1.24				4.63+0.14	0.5	4.23	18.79	1.1	41.0					152							
389	153	-1.66	34.831	28.064	46.495													7.7 +0.6				153	10.9+0.3	18.5+0.5	0.170+0.020				
838	180		34.861																0.71 +0.09	0.45+0.06		180							
606	202	-1.526	34.852	28.077	46.490			1.19				4.38+0.12										202							
390	230	-1.32	34.855	28.073	46.461				-11.6									6.9 +0.6				230	9.8+0.1	16.3+0.5	0.140+0.030				
839	250		34.878																0.59 +0.10	0.61+0.06		250							
607	254	-1.324	34.868	28.084	46.472							3.96+0.12	0.6	4.14	18.68	-0.7	42.7				24*	254							
608	303	-1.223	34.869	28.081	46.458	1.9						3.23+0.10					43.4				22*	303							
391	306	-1.11	34.873	28.080	46.443				-29.3									7.2 +0.4				306	9.2+0.2	12.0+0.4	0.190+0.030				
840	350		34.886																0.32 +0.05	0.58+0.05		350							
609	351	-1.128	34.878	28.085	46.450							3.62+0.12	0.3	4.16	18.53	0.6					27*	351							
610	394	-1.129	34.879	28.086	46.451			0.92				2.94+0.11									28*	394							
611	465	-1.087	34.886	28.090	46.450							2.82+0.11	0.2	4.12	18.28	0.8					25*	465							
1086	511		34.906						-22.7									8.4 +0.6				511	7.0+0.2	10.4+0.4	0.190+0.040				
612	548	-1.082	34.895	28.097	46.456	1.9						2.45+0.09					44.2				30*	548							
614	621	-1.084	34.886	28.090	46.450							1.73+0.09	1.9	4.19	18.64	0.7					22*	621							
615	696	-1.072	34.896	28.098	46.455							1.90+0.09									15*	696							
616	784	-1.086	34.891	28.094	46.454			1.12		1.2	0.30	1.43+0.09	0.9	4.15	18.44	0.6	45.5				115*	784							
1087	820	-1.21	34.900	28.106	46.479				-49.2									9.2 +0.0				820	4.1+0.2	4.5+0.2	0.090+0.020				
618	989	-1.134	34.903	28.106	46.470							1.34+0.09	1.3	4.16	18.52	0.6	45.5				14*	989							
1088	1025	-1.14	34.902	28.104	46.469				-57.9									9.2 +0.4				1025	3.3+0.2	6.0+0.4	0.040+0.020				
619	1097	-1.136	34.898	28.102	46.467							1.19+0.09									19*	1097							
620	1195	-1.154	34.896	28.101	46.468							1.22+0.09	1.4	4.30	18.98	1.3					31*	1195							
621	1293	-1.166	34.901	28.105	46.474	2.0						0.99+0.09					45.9				15*	1293							
1198	1300		34.892																0.21 +0.05	0.38+0.04		1300							
1089	1332	-1.20	34.901	28.106	46.479				-48.1									8.1 +0.7				1332	2.8+0.1	3.7+0.6					
622	1392	-1.178	34.894	28.100	46.470			1.17				1.10+0.09	2.4	4.20	19.63	0.9					13*	1392							
401	1400	-1.183	34.904	28.108	46.479			1.17				0.88+0.09									22*	1400							
623	1492	-1.195	34.897	28.103	46.475							0.91+0.09									21*	1492							
402	1499	-1.202	34.895	28.102	46.475								1.7	4.24	18.82	1.0	45.7				27*	1499							
624	1593	-1.221	34.893	28.101	46.476			1.17				0.86+0.09									16*	1593							
403	1596	-1.217	34.896	28.103	46.478	2.1		1.20				1.31+0.09									44*	1596							
404	1695	-1.229	34.897	28.104	46.480								0.9	4.17	18.53	0.7	45.6				22*	1695							
405	1793	-1.242	34.889	28.098	46.476			1.21				1.16+0.09					45.0				17*	1793							
1091	1836																					1836	3.5+0.2	6.6+0.5	0.080+0.030				
406	1892	-1.253	34.889	28.098	46.478								1.5	4.19	18.66	0.6					36*	1892							
407	2034	-1.268	34.891	28.101	46.481			1.19		1.1	0.26	1.31+0.09					44.0				13*	2034							
1386	2079		34.896						-45.2									8.2 +0.6				2079	4.1+0.2	3.7+0.3	0.090+0.010				
408	2182	-1.280	34.894	28.103	46.486																38*	2182							
586	2185		34.890															8.4 +0.4				2185							
409	2289	-1.286	34.888	28.099	46.482			1.22				1.51+0.09									32*	2289							
1387	2386		34.891						-54.4									8.2 +0.7				2386	3.7+0.4	6.2+0.4	0.090+0.030				
410	2393	-1.290	34.893	28.103	46.487								2.4	4.19	18.58	1.0	44.5				222*	2393							
411	2493	-1.295	34.888	28.099	46.484	1.9		1.20				1.40+0.09									15*	2493							
588	2538		34.89						-55.3													2538							
412	2589	-1.299	34.890	28.101	46.486								2.9	4.15	18.43	0.9	44.9				21*	2589							
1388	2592	-1.32	34.890	28.101	46.488				-50.4									9.2 +0.1				2592	4.0+0.2	4.3+0.3	0.060+0.010				
415	2702	-1.304	34.891	28.102	46.487	0.8		1.08				1.30+0.09									14*	2702							
416	2797	-1.305	34.888	28.099	46.485								2.5	4.18	18.60	0.8	45.2				11*	2797							
417	2896	-1.309	34.888	28.099	46.486			1.22				1.11+0.09									18*	2896							
418	2995	-1.312	34.891	28.102	46.488						0.21		1.5	4.16	18.46	0.9	46.0				11*	2995							
1389	3055	-1.31	34.886	28.098	46.485				-55.5									8.5 +0.9				3055	3.5+0.1	5.7+0.6	0.040+0.030				
589	3070		34.887						-49.6									8.1 +0.2				3070	6.4+0.5	3.4+0.5					
419	3091	-1.312	34.889	28.100	46.487	1.7		1.09				1.12+0.09					45.7				14*	3091							
420	3186	-1.313	34.889	28.100	46.487																19*	3186							
1390	3261	-1.32	34.883	28.096	46.483				-47.6									9.0 +0.8				3261	4.5+0.2	5.8+0.8	0.020+0.020				
421	3284	-1.313	34.891	28.102	46.489			0.99				1.38+0.09					45.4				12*	3284							
590	3352		34.89						-52.9													3352							
115	3410	-1.312	34.898	28.108	46.494																18 +1.6	3410							
1391	3416	-1.32	34.891	28.102	46.490				-50.4									8.6 +0.5				3416	3.3+0.2	5.8+0.4	0.060+0.010				
422	3427	-1.313	34.886	28.098	46.485								3.2	4.20	18.72	0.6	45.7				11*	3427							
116	3516	-1.313	34.891	28.102	46.488																8 +1.8	3516							
1199	3550		34.894																0.31 +0.16	0.33+0.03		3550							
591	3552		34.89						-48.4													3552							
117	3556	-1.312	34.895	28.105	46.492																13 +1.6	3556							
423	3572	-1.313	34.886	28.098	46.485	1.7		0.99				1.70+0.09					45.8				17*	3572							
118	3597	-1.312	34.892	28.103	46.489																14 +2.1	3597							
119	3618	-1.312	34.894	28.104	46.491																18 +1.6	3618							
120	3641	-1.311	34.894	28.104	46.490																18 +1.6	3641							
121	3652	-1.312	34.893	28.104	46.490																15 +1.6	3652							
122	3662	-1.312	34.897	28.107	46.493																14 +1.6	3662							
123	3673	-1.312	34.894	28.104	46.491																15 +1.6	3673							
424	3680	-1.311	34.891	28.102	46.488			0.74		1.3	0.15		1.2	4.16	18.55	0.4	45.2				14+	3680							
124	3682	-1.312	34.894	28.104	46.491												46.0				15 +1.6	3682							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 18 | **POSITION: 70°0'N 0°0'W** | **DATE: 22 AUG 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM	SIO	SIO	UM				MIT				LDGO WHOI*		WHOI	WHOI					
639	4		35.079						67.3												4	14.2+0.5	24.9+1.2					
701	5	9.42	35.083	27.155	44.452			1.81		2.1	0.33	7.67+0.21									5							
702	18	9.42	35.079	27.152	44.449							7.41+0.19								101*	18							
638	30		35.082						65.6												30							
703	44	7.23	35.148	27.544	45.031			1.50				7.21+0.20				43.1				48*	44							
704	67	6.33	35.151	27.668	45.237					1.4	0.32	6.73+0.20				43.6					67							
637	75		35.153						37.6												75	21.4+1.1	26.7+0.7					
705	94	5.93	35.136	27.709	45.315			1.18				7.00+0.21								36*	94							
706	118	5.76	35.132	27.727	45.350					1.4	0.32	7.11+0.20				42.6				19*	118							
707	143	5.47	35.131	27.762	45.413			1.13				6.67+0.20									143							
636	150		35.122						49.3												150	18.3+1.3						
708	167	5.28	35.118	27.775	45.445							6.94+0.20				42.8				24*	167							
709	193	5.03	35.103	27.792	45.485			1.24		1.9	0.31	6.88+0.19								23*	193							
710	242	4.78	35.118	27.833	45.551							6.90+0.20				42.6				26*	242							
635	250		35.116						49.2												250	15.4+0.5	21.8+1.2					
711	340	4.21	35.117	27.894	45.668							6.54+0.19				41.7					340							
286	341		35.130						47.9												341	18.1+0.8						
712	440	3.87	35.115	27.928	45.738					1.8	0.33	6.79+0.21				42.3				24*	440							
715	551	3.47	35.107	27.962	45.811							6.72+0.20				40.6				18*	551							
716	648	3.10	35.100	27.991	45.880							6.68+0.19				41.9					648							
717	749	2.61	35.076	28.016	45.956					1.4	0.38	6.69+0.19				41.7				15*	749							
718	799	2.32	35.061	28.028	46.000							6.89+0.18									799							
719	848	1.99	35.024	28.025	46.033							5.86+0.18								13*	848							
720	898	1.56	34.997	28.036	46.091					1.1	0.30	5.92+0.18				43.1					898							
721	947	1.13	34.980	28.052	46.155							4.71+0.15								12*	947							
722	1023	0.528	34.942	28.059	46.230							3.54+0.13									1023							
401	1030	0.541	34.945	28.060	46.230			1.14		1.0	0.27										1030							
402	1079	0.147	34.926	28.067	46.282							2.69+0.11				43.9				27*	1079							
723	1097	0.121	34.926	28.069	46.287							2.56+0.12									1097							
403	1129	-0.051	34.924	28.076	46.314			1.12		1.2	0.25										1129							
404	1181	-0.212	34.917	28.078	46.335							1.95+0.10								12*	1181							
724	1197	-0.263	34.921	28.084	46.346							1.71+0.10				44.2					1197							
287	1213		34.918						-36.0												1213	4.2+0.4	6.1+0.6					
405	1280	-0.409	34.909	28.081	46.360			1.18		0.8	0.28					43.5					1280							
406	1379	-0.549	34.916	28.093	46.389							0.76+0.09				46.8				15*	1379							
407	1479	-0.655	34.911	28.093	46.402			1.05								45.1					1479							
408	1579	-0.732	34.916	28.101	46.418					1.0	0.29	0.50+0.09				47.4				23*	1579							
409	1680	-0.799	34.912	28.100	46.425			1.16								47.2					1680							
986	1685	-0.79	34.912	28.100	46.424				-57.9												1685	-0.5+0.8						
410	1777	-0.849	34.914	28.104	46.435							0.39+0.09								16*	1777							
411	1876	-0.887	34.913	28.104	46.440			0.78								49.1					1876							
387	1972		34.915						-64.2												1972	1.0+0.2						
412	1977	-0.920	34.913	28.106	46.445					0.9	0.26	0.28+0.09				48.3				9*	1977							
415	2086	-0.948	34.908	28.103	46.445			1.04								49.1				13*	2086							
416	2183	-0.968	34.911	28.106	46.451							-0.06+0.09				49.2					2183							
417	2282	-0.987	34.912	28.107	46.455			1.09								51.3				15*	2282							
418	2431	-1.008	34.911	28.107	46.457							0.07+0.09				49.2				15*	2431							
988	2486	-1.00	34.915	28.111	46.460				-60.1												2486	0.0+0.7						
419	2580	-1.023	34.912	28.109	46.460			1.14		0.4	0.30					51.4				18*	2580							
989	2693	-1.04	34.909	28.107	46.460				-63.2												2693	2.6+0.7						
420	2728	-1.033	34.911	28.108	46.461							0.06+0.09				49.6				15*	2728							
421	2879	-1.042	34.909	28.107	46.461			1.01								50.9				18*	2879							
990	2897	-1.05	34.909	28.107	46.461				-68.1												2897	-0.4+0.3	-1.6+0.3					
115	2902	-1.043	34.915	28.112	46.466															14 +1.6	2902							
422	3003	-1.045	34.911	28.109	46.463					0.8		0.00+0.09				50.2				18*	3003							
116	3004	-1.046	34.915	28.112	46.466															17 +1.6	3004							
117	3107	-1.049	34.910	28.108	46.463															40 +1.6	3107							
118	3149	-1.052	34.912	28.110	46.465															47 +1.7	3149							
423	3153	-1.052	34.913	28.111	46.466			1.09								51.1				34*	3153							
119	3169	-1.054	34.912	28.110	46.465															36 +1.6	3169							
991	3182	-1.06	34.910	28.109	46.464				-68.4												3182	0.9+0.8						
120	3188	-1.056	34.910	28.108	46.464															54 +1.7	3188							
987	3198	-1.05	34.910	28.103	46.458																3198	1.6+0.9						
121	3210	-1.056	34.911	28.109	46.465															59 +1.7	3210							
424	3220	-1.056	34.913	28.111	46.466					0.8		0.31+0.09									3220							
122	3220	-1.056	34.910	28.108	46.464															63 +1.7	3220							
123	3232	-1.054	34.914	28.112	46.466															67 +1.7	3232							
124	3243	-1.055	34.910	28.108	46.463											50.5				73 +1.8	3243							

STATION 19 — POSITION: 64°12'N 5°34'W — DATE: 24 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{238,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM	SIO	SIO	UM	SIO			LSU		LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
602	3	10.41	35.053	26.962	44.177	-0.8				1.8	0.36	7.38+0.31				41.5				147*	3							
286	4	10.31	35.045	26.973	44.197				47.3												4	14.7+0.5	21.9+0.6	0.100+0.020				
735	5		35.047															0.77 +0.10	0.16+0.02		5							
287	31	9.82	35.052	27.064	44.328				54.7												31							
736	40		35.054															1.05 +0.14	0.18+0.02		40							
603	42	10.25	35.053	26.989	44.217			1.76				7.55+0.32				41.6				98*	42							
288	66	6.82	35.146	27.599	45.122				26.9												66	13.8+0.3	25.5+0.9	0.190+0.030				
737	75		35.151															0.83 +0.10	0.44+0.04		75							
604	77	7.29	35.141	27.529	45.010	1.9				1.4	0.38	6.60+0.17				42.4				33*	77							
605	112	6.22	35.113	27.653	45.234			1.10				6.49+0.15	-0.7			43.1				30*	112							
289	144	4.75	34.990	27.735	45.460				43.7												144	19.2+1.2	23.0+1.0					
738	150		34.995															0.30 +0.06	0.42+0.04		150							
606	153	4.88	34.986	27.717	45.430							6.47+0.17				42.1				30*	153							
607	202	4.10	34.931	27.759	45.551			1.00				7.07+0.17	0.3	4.02	17.54 0.3	41.7				40*	202							
608	241	3.71	34.910	27.781	45.612	1.5						7.27+0.17				41.4				32*	241							
290	247	3.63	34.918	27.795	45.635				41.3												247	17.6+0.4	26.3+0.9	0.330+0.040				
740	275		34.929															0.93 +0.11	0.41+0.05		275							
609	290	2.66	34.881	27.855	45.797			1.00		1.0	0.29	6.95+0.17				42.0				28*	290							
610	349	2.00	34.929	27.948	45.958							6.75+0.18	2.0			41.7				29*	349							
291	349	2.02	34.931	27.948	45.956				38.3												349	16.3+2.1	27.3+1.4					
741	350		34.924															0.40 +0.08	0.56+0.05		350							
611	400	1.94	34.978	27.992	46.007	0.6		1.06				6.51+0.18				41.6				29*	400							
612	449	1.90	35.010	28.020	46.038							6.81+0.17				41.4				22*	449							
986	458	1.87	35.014	28.026	46.046				28.4												458	17.4+0.3	27.6+1.0	0.230+0.030				
615	510	1.706	35.010	28.035	46.074			0.97		1.2	0.33	5.66+0.14	3.8			41.8				22*	510							
987	558	1.44	34.997	28.044	46.113				25.4												558	17.9+0.8	26.2+1.1					
616	559	1.501	34.998	28.040	46.102	0.2						5.86+0.14				41.8				21*	559							
617	632	1.157	34.978	28.048	46.148			1.09				5.32+0.13	4.1			41.3					632							
988	663	0.84	34.963	28.057	46.193				4.7												663	13.6+0.3	22.4+0.4	0.220+0.050				
618	707	0.689	34.952	28.057	46.210					1.6	0.25	3.65+0.10				42.2				13*	707							
619	754	0.410	34.936	28.061	46.246	2.5		0.98				3.89+0.12				42.2				17*	754							
989	765		34.930						-12.8												765	11.8+1.1	17.4+0.9					
620	805	0.247	34.930	28.065	46.268							3.81+0.11	3.8	4.17	18.38 0.9	42.3				20*	805							
621	854	0.082	34.927	28.071	46.294			1.04				3.20+0.10				42.7				15*	854							
990	866	-0.10	34.919	28.074	46.317				-30.8												866	7.4+0.2	12.7+0.5	0.110+0.030				
622	905	-0.068	34.921	28.074	46.314					1.4	0.29	2.68+0.10				42.9				17*	905							
301	933	-0.289	34.919	28.083	46.349			0.84				2.10+0.09				43.5				18*	933							
623	954	-0.189	34.915	28.075	46.329			1.12				2.10+0.10				42.9				20*	954							
991	969	-0.36	34.913	28.082	46.356				-37.4												969	4.2+0.9						
624	1004	-0.338	34.913	28.081	46.352							1.50+0.09				43.6				15*	1004							
302	1044	-0.490	34.912	28.087	46.376								1.1			43.8				15*	1044							
486	1113	-0.55	34.918	28.095	46.390				-54.6												1113	0.4+0.3	1.6+0.6	0.010+0.010				
303	1144	-0.616	34.913	28.093	46.397	2.9		1.02			0.26					44.3				13*	1144							
304	1238	-0.693	34.913	28.097	46.409								1.2	4.18	18.45 1.2	44.8				16*	1238							
305	1376	-0.783	34.913	28.100	46.423			1.10				0.29+0.09				45.6				54*	1376							
306	1523	-0.853	34.912	28.102	46.434											46.0				10*	1523							
487	1532	-0.86	34.917	28.107	46.439				-62.9												1532	0.7+1.2	1.3+0.9					
307	1669	-0.911	34.913	28.105	46.443			1.09								46.6				8*	1669							
308	1818	-0.948	34.912	28.106	46.448								1.7	4.19	18.49 1.3	46.9				13*	1818							
309	1970	-0.982	34.913	28.108	46.455			1.05				0.09+0.09				47.4				14*	1970							
488	2046	-0.99	34.918	28.113	46.460				-68.3												2046							
310	2070	-0.996	34.913	28.109	46.457					1.2	0.26		1.1			47.6				15*	2070							
311	2167	-1.008	34.912	28.108	46.458	2.5		1.01								48.1				14*	2167							
312	2167	-1.008	34.910	28.107	46.456											48.4				15*	2167							
315	2275	-1.019	34.911	28.108	46.459			1.04				0.06+0.09				48.5				14*	2275							
316	2367	-1.025	34.911	28.108	46.460								0.3	4.18	18.46 1.2	48.6				13*	2367							
489	2455	-1.05	34.918	28.115	46.469				-67.0												2455	1.8+1.6	0.4+1.0					
317	2516	-1.035	34.911	28.108	46.461	2.8		1.05			0.26					48.7				17*	2516							
318	2663	-1.043	34.909	28.107	46.461								2.0			49.0				17*	2663							
319	2807	-1.043	34.911	28.109	46.462			1.03				0.13+0.09				49.7				12*	2807							
490	2866	-1.05	34.914	28.112	46.466				-68.2												2866	1.0+0.6	0.6+0.4	0.030				
115	2939	-1.043	34.912	28.110	46.463																28 +1.6	2939						
320	2956	-1.043	34.913	28.110	46.464					1.2	0.23		0.7	4.24	18.71 1.4	49.3					11*	2956						
116	3021	-1.043	34.909	28.107	46.461																34 +1.6	3021						
117	3060	-1.043	34.909	28.107	46.461																24 +1.6	3060						
118	3102	-1.043	34.913	28.110	46.464																20 +1.6	3102						
321	3106	-1.042	34.912	28.110	46.463			0.98								49.6					16*	3106						
119	3121	-1.042	34.910	28.108	46.462																30 +1.6	3121						
120	3140	-1.042	34.913	28.110	46.464																24 +1.9	3140						
121	3157	-1.044	34.907	28.106	46.459																27 +1.6	3157						
122	3168	-1.042	34.909	28.107	46.461																24 +1.6	3168						
123	3179	-1.042	34.910	28.108	46.462																26 +1.6	3179						
124	3189	-1.042	34.909	28.107	46.461											49.9					20 +1.8	3189						
322	3256	-1.042	34.914	28.111	46.465								1.3			49.6					12*	3256						
491	3278	-1.06	34.915	28.113	46.468				-68.4												3278	1.9+0.9	0.0+1.0					
323	3403	-1.043	34.913	28.110	46.464	3.0		1.11								49.6					16*	3403						
324	3458	-1.043	34.913	28.110	46.464					1.6	0.28	0.17+0.09	1.6	4.22	18.69 1.0	49.3					17*	3458						
												PRECISION:	1.0	0.01	0.06 0.2													

STATION 22

POSITION: 61°39'N 14°17'W

DATE: 27 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg			WHOI		DPM/100kg				DPM/100kg		
104	26	11.37	35.149	26.862	43.999															211	26							
109	98	8.79	35.216	27.361	44.708															59	98							
112	580	7.80	35.187	27.491	44.926															32	580							
116	914	5.80	35.087	27.686	45.306															25	914							
120	1529	3.84	34.962	27.809	45.626															24	1529							
124	1829	2.74	34.982	27.929	45.859															63	1829							

STATION 23

POSITION: 60°24'N 18°37'W

DATE: 28 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg					DPM/100kg				DPM/100kg		
						UH		UH	UM	SIO	SIO	UM	----------SIO----------			MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI					
701	1	11.02	35.128	26.910	44.074	3.7		1.58		1.6	0.31	7.71+0.22				38.6				132*	1							
935	5		35.129															1.81 +0.27	0.31+0.03		5							
286	7	10.84	35.104	26.924	44.104				47.5												7	18.4+1.7	25.2+0.9					
702	27	11.01	35.127	26.912	44.077							6.79+0.18	-0.9	3.94	16.61	0.7	39.1			173*	27							
936	30		35.127															1.75 +0.27	0.24+0.04		30							
287	53	10.83	35.102	26.924	44.104				54.6												53	15.6+0.6						
937	60		35.115															1.84 +0.26	0.33+0.03		60							
703	70	10.25	35.117	27.039	44.266	1.1		1.45				8.03+0.23				40.9				125*	70							
938	100		35.175															0.95 +0.14	0.75+0.06		100							
704	101	9.42	35.160	27.215	44.510							7.27+0.21	-1.0			42.9				42*	101							
288	105	10.98	35.175	26.954	44.121				29.5												105	18.0+2.0	24.7+1.1					
705	149	9.07	35.205	27.307	44.630			1.00		2.2	0.36	7.26+0.19				43.0				39*	149							
939	150		35.231															0.92 +0.15	0.94+0.09		150							
289	182	9.58	35.205	27.223	44.503				35.6												182	18.0+1.1	27.2+1.3					
706	220	8.96	35.228	27.344	44.676							7.35+0.21	-0.2	3.91	16.64	0.5	42.9			28*	220							
940	250		35.227															1.00 +0.15	1.06+0.08		250							
707	271	8.91	35.234	27.356	44.692			1.18				7.03+0.20								70*	271							
708	322	8.83	35.235	27.369	44.711							7.18+0.20	-0.2							69*	322							
941	350		35.232															0.92 +0.14	1.10+0.08		350							
942	350		35.232															0.90 +0.14	1.01+0.08		350							
290	362	8.92	35.236	27.356	44.691				34.1												362	18.4+1.5	22.8+1.6					
709	400	8.74	35.236	27.386	44.737	1.5		1.13			0.43	6.74+0.20				43.5				22*	400							
291	440	8.82	35.213	27.354	44.698				41.9												440	13.8+0.7						
710	474	8.42	35.197	27.405	44.785							6.72+0.20	0.7	3.97	16.92	0.7	43.8			17*	474							
1086	517	7.92	35.130	27.428	44.853				9.3												517	13.6+1.6	21.2+1.0					
711	546	7.91	35.129	27.429	44.855			1.05				6.26+0.18				44.5				18*	546							
1087	616	7.53	35.114	27.474	44.935				-5.9												616	13.4+1.0						
712	623	7.61	35.133	27.476	44.928							4.80+0.15	3.7			44.1				16*	623							
715	673	7.26	35.094	27.497	44.982	2.8		1.06				5.35+0.16				45.7				16*	673							
716	725	7.07	35.102	27.530	45.033						0.30	3.40+0.13	4.6	4.05	17.32	0.9				12*	725							
717	777	6.63	35.072	27.566	45.109			0.92				3.61+0.12				46.4				15*	777							
1088	822	6.32	35.086	27.619	45.191				-35.0												822	3.4+0.7	11.5+1.0					
718	825	6.49	35.098	27.606	45.162							3.49+0.12	4.4							58*	825							
719	886	6.01	35.070	27.647	45.249	3.8		0.91				3.41+0.14				47.0				15*	886							
720	964	5.55	35.059	27.695	45.340							2.81+0.12	4.7	4.04	17.41	0.9	46.7			14*	964							
401	979	5.38	35.046	27.706	45.368	3.7		0.93		0.9	0.28	3.22+0.14								17*	979							
1089	1028	5.26	35.056	27.728	45.402				-44.5												1028	5.8+0.5						
402	1036	5.09	35.020	27.720	45.411								4.4							28*	1036							
721	1046	5.16	35.038	27.726	45.410	3.7						2.56+0.14								16*	1046							
722	1096	4.98	35.020	27.732	45.433							2.62+0.11	5.3	4.14	17.82	1.1	47.2			14*	1096							
403	1119	4.72	34.998	27.744	45.472	3.2		0.85				2.55+0.11								19*	1119							
723	1142	4.62	34.985	27.745	45.483			0.90				2.74+0.11								20*	1142							
404	1198	4.43	34.968	27.753	45.510								4.3							31*	1198							
724	1198	4.45	34.976	27.757	45.512					0.8	0.25	2.72+0.12	4.0			46.8				12*	1198							
1090	1233	4.31	34.966	27.764	45.534				-45.1												1233	9.5+1.1	11.3+1.0					
405	1273	4.17	34.952	27.767	45.551			0.97				2.37+0.11								24*	1273							
406	1344	4.03	34.942	27.774	45.573								4.4	4.13	17.91	0.8	47.1			20*	1344							
407	1420	3.91	34.937	27.782	45.593	2.5		0.88												23*	1420							
1091	1438	3.93	34.947	27.788	45.597				-41.7												1438	4.8+1.2						
408	1502	3.81	34.932	27.789	45.611							1.90+0.10				45.9				22*	1502							
586	1572	3.78	34.937	27.796	45.620				-51.2												1572	5.3+1.2	7.8+0.9					
409	1580	3.74	34.930	27.794	45.622			1.03		0.6	0.23									17*	1580							
410	1580	3.74	34.932	27.796	45.624	2.5						1.50+0.09								12*	1580							
411	1653	3.68	34.931	27.801	45.634			0.97					1.8			47.2				22*	1653							
412	1726	3.63	34.930	27.805	45.645							0.98+0.09								16*	1726							
587	1776	3.58	34.933	27.812	45.656				-48.1												1776	3.4+1.2						
415	1840	3.54	34.936	27.819	45.668			1.01		0.4	0.22		0.8	4.06	17.66	0.7	47.4			25*	1840							
416	1936	3.51	34.949	27.832	45.683	2.3						0.92+0.09				48.1				20*	1936							
588	1984	3.44	34.950	27.839	45.697				-63.0												1984	3.2+0.9	4.2+0.9					
417	2013	3.42	34.947	27.839	45.699			1.05					0.1			48.3				30*	2013							
418	2090	3.35	34.955	27.852	45.718	2.6						0.71+0.09				49.0				16*	2090							
419	2167	3.29	34.961	27.863	45.736			0.98		1.3	0.28		0.6	4.16	18.04	1.1	48.9			15*	2167							
589	2190	3.26	34.971	27.874	45.750				-53.0												2190	2.6+1.1						
115	2198	3.30	34.976	27.873	45.744															14 +1.6	2198							
420	2241	3.18	34.967	27.877	45.762							0.98+0.09				49.8				16*	2241							
421	2306	3.10	34.981	27.896	45.789	2.6		1.04		1.3	0.29					50.8				20*	2306							
116	2346	3.07	34.996	27.911	45.805															18 +1.6	2346							

STATION 23 — *CONTINUED*

POSITION: 60°24'N 18°37'W

DATE: 28 AUG 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg				
						UH		UH	UM	SIO	SIO	UM	SIO			MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI					
117	2385	2.99	35.002	27.923	45.826															14 +1.6	2385						
590	2396	2.92	34.994	27.923	45.833				-43.5												2396	-1.4+1.0	7.8+1.0				
422	2407	2.89	34.987	27.920	45.834								1.1			53.2				27*	2407						
118	2423	2.84	35.001	27.936	45.854															18 +1.6	2423						
119	2443	2.75	35.001	27.944	45.872															26 +1.6	2443						
120	2464	2.61	35.000	27.955	45.898															37 +1.6	2464						
423	2477	2.69	34.997	27.946	45.881	2.7		0.99				2.17+0.11				48.7				43*	2477						
121	2487	2.34	34.995	27.973	45.945															60 +1.7	2487						
591	2499	2.77	34.998	27.957	45.904				-37.7												2499	7.4+0.9					
122	2500	2.16	34.993	27.986	45.976												8.4 +0.4			111 +2.0	2500						
123	2508	2.13	34.990	27.986	45.980															77 +1.8	2508						
424	2516	2.16	34.995	27.988	45.978					1.2	0.31		2.3	4.07	17.81	0.7	49.0			119*	2516						
124	2516	2.09	34.991	27.990	45.988												47.8			129 +2.2	2516						
												PRECISION:	1.0	0.01	0.06	0.2											

STATION 24

POSITION: 53°45'N 33°37'W

DATE: 7 SEP 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg				
						UH		UH									LDGO	LDGO	LDGO	LDGO								
615	5	11.250	34.686	26.524	43.682		2104	2.02									8.2 +0.6				5						
535	5		34.653				2104(I)											1.38 +0.16	0.46+0.05		5						
616	16	10.609	34.687	26.641	43.851	2.9	2105	1.68													16						
617	24	10.408	34.695	26.683	43.909	3.1	2102	1.84													24						
536	60		34.852				2122(I)											1.68 +0.19	0.55+0.04		60						
618	64	7.762	34.583	27.023	44.478	2.5	2125(I)	0.90													64						
537	85		34.873				2137(I)											1.64 +0.19	0.75+0.06		85						
619	89	7.124	34.871	27.341	44.845	2.8	2139	1.11													89						
538	110		34.868				2164(I)											1.64 +0.20	0.81+0.06		110						
620	113	6.417	34.869	27.435	45.005		2167	0.97													113						
539	150		34.899				2168(I)											1.74 +0.20	0.95+0.08		150						
540	200		34.943				2173(I)											1.65 +0.20	0.79+0.07		200						
541	275		34.971				2176(I)											1.30 +0.15	0.77+0.06		275						
623	277	6.150	34.983	27.560	45.151		2176(I)	1.05													277						
301	301	6.013	34.949	27.551	45.155		2177	0.98													301						
542	350		34.978				2179(I)											1.20 +0.67	0.75+0.06		350						
302	365	5.860	34.963	27.581	45.200		2179	1.13													365						
304	426	5.685	34.981	27.617	45.252		2184	0.91													426						
306	501	5.414	34.999	27.664	45.325		2189	0.81													501						
309	613	4.908	34.985	27.713	45.423		2191	0.87													613						
311	701	4.449	34.962	27.746	45.501		2183	0.88													701						
315	798	4.230	34.951	27.760	45.538		2188	1.03													798						
316	909	3.987	34.939	27.776	45.579		2184	1.10													909						
317	1103	3.753	34.936	27.798	45.624		2187	1.16													1103						
318	1296	3.601	34.951	27.825	45.666		2181	1.20													1296						
319	1501	3.434	34.962	27.850	45.708		2162	1.00													1501						
320	1714	3.229	34.973	27.878	45.757		2187	1.05													1714						
115	1788	3.252	34.978	27.880	45.756		2184(I)													17 +1.5	1788						
321	1908	3.098	34.993	27.906	45.798	-3.2	2177	1.13													1908						
322	2083	2.955	34.999	27.924	45.830	1.6	2189	1.14													2083						
323	2263	2.853	34.997	27.931	45.849	2.0	2192	1.17													2263						
116	2326	2.829	34.997	27.933	45.853		2191(I)													28 +1.8	2326						
117	2380	2.813	34.998	27.936	45.857		2189(I)													30 +1.6	2380						
118	2399	2.815	35.002	27.939	45.860		2188(I)													35 +1.6	2399						
119	2419	2.811	35.002	27.939	45.861		2187(I)													33 +1.6	2419						
120	2443	2.811	35.001	27.938	45.860		2185(I)													30 +1.6	2443						
324	2462	2.809	34.997	27.935	45.857	2.5	2184	1.00													2462						
121	2465	2.810	35.000	27.937	45.859															42 +1.6	2465						
122	2486	2.810	35.000	27.937	45.859												10.2 +0.4			38 +1.7	2486						
123	2509	2.812	35.001	27.938	45.860															33 +1.7	2509						
124	2532	2.809	35.001	27.938	45.860															43 +1.6	2532						

(I) INTERPOLATED FROM NISKIN DATA

STATION 26 — **POSITION: 44°57'N 42°4'W** — **DATE: 11 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH									LDGO	LDGO	LDGO									
315	4	21.811	35.754	24.865	41.287	0.1	2085										8.9 +0.5				4							
316	9	21.811	35.753	24.864	41.286	0.0	2088	1.31													9							
235	10		35.735				2088(I)											2.20 +0.23	0.74+0.06		10							
318	18	21.806	35.768	24.877	41.299	-0.1	2084	1.57													18							
319	29	19.734	36.036	25.643	42.180	-0.2	2124														29							
320	47	17.832	36.251	26.295	42.945	0.9	2142	1.40									8.6 +0.6				47							
236	50		35.840				2142(I)											1.82 +0.19	0.78+0.06		50							
321	68	17.268	36.327	26.492	43.176	1.7	2145														68							
322	97	16.544	36.231	26.593	43.327	2.9	2148	0.80													97							
237	130		36.084				2159(I)											1.46 +0.16	1.17+0.09		130							
238	200		35.947				2177(I)											1.53 +0.18	1.26+0.10		200							
239	250		35.927				2168(I)											1.34 +0.14	1.27+0.10		250							
324	297	14.225	35.900	26.866	43.768		2155	0.68													297							
240	300		35.905				2155(I)											1.41 +0.16	1.19+0.09		300							
241	350		35.867				2157(I)											1.78 +0.20	1.29+0.09		350							
101	1218	4.370	34.954	27.748	45.512		2194	0.32													1218							
103	1598	3.983	34.966	27.798	45.601		2197	0.59													1598							
105	1983	3.619	34.954	27.825	45.665		2190	0.69													1983							
107	2488	3.250	34.952	27.859	45.737		2190	0.63													2488							
115	2675	3.077	34.954	27.877	45.772		2200	0.66													2675							
119	2675	3.077	34.952	27.875	45.771	1.1	2189														2675							
109	2968	2.808	34.944	27.893	45.817		2191	0.51													2968							
111	3577	2.263	34.911	27.913	45.895	-1.8	2207	0.51													3577							

STATION 27 — **POSITION: 42°0'N 42°2'W** — **DATE: 12 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	----------MCM----------							LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI		
801	7	22.43	36.062	24.924	41.305		2096					8.46+0.18								35*	7							
1035	10		36.034				2081(I)		123.2												10	22.3+0.4	32.2+0.6	0.360+0.080				
803	27	22.12	36.106	25.044	41.440		2020						-1.8	3.79	15.22					39*	27							
1036	70		36.231				2070(I)											2.95 +0.32	0.70+0.07		70	24.2+1.1						
804	73	17.60	36.362	26.438	43.100		2074													28*	73							
805	102	17.09	36.382	26.577	43.271		2083(I)						1.6	3.91	16.07					31*	102							
1037	120		36.347				2089(I)		104.6									2.80 +0.36	1.49+0.12		120	24.8+0.5	33.4+0.5	0.480+0.140				
806	141	16.40	36.215	26.616	43.360		2095													23*	141							
802	182	15.82	36.124	26.681	43.466		2097					6.88+0.19	2.0	3.88	16.13					21*	182							
1038	225		36.079				2096(I)		67.3									1.67 +0.25	1.27+0.10		225	19.3+1.2						
807	252	15.17	36.005	26.738	43.571		2095													13*	252							
286	260	14.98	35.967	26.752	43.598		2095(I)		56.3												260	21.6+1.6						
808	320	14.36	35.874	26.817	43.709		2093					6.40+0.17	1.7	3.94	16.34					14*	320							
1039	320		35.945				2093(I)		50.0									2.35 +0.35	1.52+0.12		320	19.7+0.3	27.2+0.7					
809	391	14.05	35.883	26.891	43.805		2100													11*	391							
287	400	13.64	35.715	26.848	43.797		2109(I)		12.5												400	14.4+0.4	23.1+0.4	0.410+0.080				
810	462	13.45	35.783	26.940	43.901		2171					5.83+0.17	3.3	4.08	16.92					14*	462							
811	531	12.25	35.608	27.050	44.105		2164													10*	531							
288	585		35.518				2176(I)		-3.8												585	14.2+0.8						
812	599	11.254	35.462	27.126	44.263		2180					4.78+0.17	3.2	4.02	17.02					14*	599							
815	673	9.927	35.298	27.237	44.485		2199					2.95+0.11								16*	673							
289	695	9.71	35.253	27.239	44.508		2208(I)		-47.9												695	5.4+0.1	8.3+0.5	0.120+0.050				
290	735	9.00	34.889	27.071	44.409		2219(I)		-42.5												735	7.1+0.9						
816	743	8.687	35.190	27.357	44.714		2221					2.35+0.09	2.7	4.31	18.21					17*	743							
817	771	7.969	35.073	27.377	44.799		2215(I)					3.07+0.11								10*	771							
818	801	7.456	35.037	27.424	44.893		2206					2.81+0.11	3.0							15*	801							
819	832	6.681	34.941	27.457	44.999		2199					3.96+0.14								13*	832							
820	880	6.151	34.946	27.531	45.123		2203					3.87+0.13	3.6	4.06	17.54					15*	880							
821	933	6.517	35.111	27.613	45.165		2207					2.13+0.10								16*	933							
291	970	6.16	35.074	27.642	45.238		2206(I)														970	6.4+0.2	8.3+0.5	0.120+0.050				
822	1001	6.026	35.103	27.671	45.269		2204					2.15+0.10	4.0	4.15	17.92					12*	1001							
986	1096	5.18	35.040	27.725	45.406		2197(I)		-41.0												1096	7.7+0.8						
823	1151	4.975	35.027	27.738	45.440		2195													20*	1151							
401	1244	4.907	35.061	27.773	45.481		2205					2.23+0.10								10*	1244							
987	1245	4.68	35.021	27.767	45.498		2205(I)		-40.7												1245	6.1+0.3	10.1+0.6	0.260+0.070				
824	1269	4.594	35.010	27.768	45.508		2199						3.4	4.05	17.49					16*	1269							
988	1394	4.48	35.036	27.801	45.552		2188(I)		-50.2												1394	5.2+0.7						
402	1440	4.383	35.036	27.812	45.572		2184					1.17+0.09	2.7	4.07	17.73					22*	1440							
989	1543	4.16	34.994	27.802	45.586		2194(I)															3.5+0.5	8.3+0.7	0.080+0.030				
403	1643	4.077	34.990	27.808	45.600		2205													16*	1643							
990	1693	3.99	34.992	27.818	45.618		2201(I)		-57.7												1693	3.5+1.2						
404	1832	3.816	34.971	27.819	45.638		2193					0.65+0.09	1.7	4.08	17.98					13*	1832							
991	1893	3.77	34.981	27.832	45.656		2203(I)		-57.4												1893	1.5+0.2	3.0+0.7	0.110+0.020				
405	2029	3.606	34.960	27.831	45.672		2224													12*	2029							
406	2231	3.453	34.958	27.845	45.701		2198						1.1	4.07	17.92					25*	2231							
407	2435	3.290	34.954	27.857	45.730		2190					0.12+0.09								12*	2435							
686	2543	3.23	34.958	27.866	45.745		2189(I)		-74.8												2543	1.8+1.1						
408	2629	3.112	34.950	27.870	45.762		2188						0.8	4.16	18.17					9*	2629							
409	2839	2.950	34.949	27.884	45.793		2197													19*	2839							
410	3036	2.761	34.943	27.896	45.825		2191					0.30+0.09	1.1	4.12	18.27					11*	3036							
687	3162	2.69	34.941	27.901	45.837		2202(I)		-77.9												3162	0.3+0.4	1.1+0.5	0.080				
411	3238	2.609	34.937	27.905	45.850		2206													12*	3238							
412	3441	2.428	34.930	27.914	45.879		2163						1.0	4.10	18.14					34*	3441							
415	3653	2.251	34.922	27.922	45.906		2174													13*	3653							
688	3778	2.19	34.919	27.925	45.914		2183(I)		-84.												3778	0.3+1.0						
416	3853	2.113	34.913	27.926	45.925		2189						1.2	4.12	18.14					12*	3853							
417	4054	1.995	34.906	27.930	45.941		2213(I)													7*	4054							

(I) INTERPOLATED FROM NISKIN DATA

STATION 27 — *CONTINUED*

POSITION: 42°0'N 42°2'W

DATE: 12 SEP 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	----------MCM----------						LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
115	4203	1.946	34.903	27.931	45.948		2230(I)														18 +1.6	4203							
418	4254	1.927	34.902	27.932	45.951		2236					0.12+0.09	1.9	4.14	18.27						18*	4254							
419	4386	1.893	34.900	27.933	45.956		2205														17*	4386							
689	4396	1.89	34.901	27.934	45.956		2204(I)		-86.9													4396	0.8+0.5	0.9+0.7	0.090+0.030				
420	4484	1.871	34.899	27.934	45.959		2199						1.0	4.20	18.41						60*	4484							
421	4574	1.860	34.898	27.934	45.960		2212					0.26+0.09									17*	4574							
116	4622	1.855	34.900	27.936	45.962		2207(I)														10 +1.7	4622							
690	4653	1.84	34.902	27.938	45.966		2203(I)		-82.4													4653	2.2+0.8						
422	4676	1.849	34.900	27.936	45.964		2200						2.0	4.12	18.18						12*	4676							
117	4692	1.847	34.900	27.937	45.964		2201(I)														15 +1.6	4692							
118	4714	1.846	34.902	27.938	45.966		2203(I)														18 +1.6	4714							
119	4738	1.841	34.902	27.939	45.967		2204(I)														18 +1.6	4738							
423	4764	1.840	34.903	27.939	45.968		2206					0.69+0.09									14*	4764							
120	4770	1.835	34.901	27.938	45.967		2206(I)														14 +1.6	4770							
121	4793	1.834	34.902	27.939	45.968		2204(I)														19 +1.6	4793							
122	4815	1.830	34.902	27.939	45.969		2201(I)														27 +1.7	4815							
123	4842	1.826	34.904	27.941	45.971		2195(I)														36 +1.6	4842							
424	4855	1.831	34.906	27.943	45.972		2192					0.98+0.09	2.5	4.12	18.25						25*	4855							
691	4859	1.82	34.907	27.944	45.973				-66.2													4859	4.5+0.3	4.4+0.8	0.050+0.020				
124	4868	1.813	34.908	27.945	45.976																32 +1.6	4868							
												PRECISION:	0.2	0.01	0.05														

STATION 28

POSITION: 39°0'N 43°59'W

DATE: 15 SEP 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI				
535	5		36.378																2.01 +0.22	0.78+0.06		5							
720	51	21.99	36.424	25.323	41.719		2058(I)											8.6 +0.6				51							
1099	800		35.106				2181(I)												0.15 +0.07	0.38+0.10		800							
999	1350		35.065				2177(I)												0.17 +0.06	0.27+0.04		1350							
1186	1379	8.20	35.092	27.356	44.758		2176(I)												0.26 +0.07	0.26+0.03		1379							
1189	1510		35.045				2174(I)												0.26 +0.05	0.29+0.04		1510							
986	3755	2.13	34.914	27.926	45.923		2181(I)												0.17 +0.03	0.20+0.04		3755							
989	3856	2.06	34.912	27.930	45.934		2185(I)												0.25 +0.04	0.28+0.03		3856	3.5+0.5	8.3+0.7	0.080+0.030				
1086	4078	1.93	34.895	27.926	45.944		2193(I)												0.28 +0.06	0.41+0.04		4078							
1089	4180	1.91	34.896	27.928	45.949		2194(I)												0.43 +0.07	0.37+0.04		4180							
115	4469	1.847	34.891	27.929	45.957		2190(I)														9 +1.6	4469							
1286	4574	1.85	34.897	27.934	45.961		2190(I)												0.53 +0.09	0.48+0.05		4574							
116	4696	1.819	34.889	27.930	45.961		2192(I)														21 +1.6	4696							
117	4732	1.814	34.890	27.931	45.962		2189(I)														36 +1.6	4732							
118	4761	1.810	34.889	27.931	45.962		2186(I)														28 +1.6	4761							
119	4790	1.806	34.890	27.932	45.964		2182(I)														43 +1.6	4790							
120	4813	1.803	34.892	27.933	45.966		2178(I)														100 +1.9	4813							
121	4832	1.801	34.892	27.934	45.966		2174(I)														57 +1.7	4832							
122	4848	1.799	34.892	27.934	45.967													12.8 +0.9			57 +1.7	4848							
123	4864	1.805	34.896	27.936	45.969																54 +1.7	4864							
124	4879	1.808	34.903	27.942	45.973																54 +1.7	4879							

(I) INTERPOLATED FROM NISKIN DATA

STATION 29 | **POSITION: 35°58'N 47°0'W** | **DATE: 17 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM UW+	SIO	SIO	UM				LSU	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
1014	4	25.22	36.033	24.084	40.314		2024	1.77				7.31+0.17				44.1	7.7 +0.2				4							
935	10		36.006				2020(I)		150.0									4.04 +0.44	1.18+0.03		10	18.8+1.2	27.2+1.6	0.360+0.020				
1015	19	24.89	36.020	24.175	40.423		2016									44.0					19							
1016	60	22.90	36.375	25.028	41.375		2049	1.58								43.6					60							
936	70		36.424				2059(I)		126.9									1.83 +0.19	1.02+0.04		70	24.0+1.5	27.6+0.8	0.210+0.010				
1017	101	19.72	36.485	25.988	42.516		2087					6.77+0.20				43.2					101							
937	140		36.517				2090(I)		108.5									1.49 +0.16	1.25+0.05		140	21.8+1.6	35.0+1.9	0.300+0.020				
1018	150	18.49	36.446	26.278	42.881		2091	1.32								43.0				28*	150							
1019	180	18.11	36.449	26.377	43.005		2086			7.5	1.13					42.7				23*	180							
938	190		36.449				2086(I)		93.7									1.47 +0.16	1.34+0.11		190	22.8+1.8		0.330+0.020				
1020	240	17.64	36.430	26.480	43.138		2092			7.2		6.95+0.20				44.3				18*	240							
939	250		36.434				2093(I)		83.1									1.71 +0.19	1.72+0.12		250	26.2+0.9	37.0+1.7	0.380+0.020				
1021	300	17.28	36.407	26.551	43.232		2101(I)	1.37		6.9	1.08					41.6				16*	300							
1022	361	16.78	36.317	26.603	43.319		2109					6.19+0.09				42.3				19*	361							
486	373		36.251				2110(I)		54.3								7.4 +0.3				373	21.7+0.8	36.9+0.4	0.300+0.040				
1023	431	15.88	36.147	26.685	43.465		2115(I)	1.02		5.9	0.97					42.1				24*	431							
701	442	15.64	36.088	26.696	43.494		2116			5.2		6.91+0.18				42.9				24*	442							
487	469	15.53	36.095	26.725	43.530		2115(I)		17.1								9.6 +0.5				469	21.4+0.8	26.6+1.6					
702	492	15.18	36.040	26.763	43.593		2115	0.69								42.1				25*	492							
1024	503	15.24	36.059	26.764	43.590		2114			5.4	0.91	6.25+0.17				42.6				19*	503							
703	540	14.63	35.955	26.821	43.693		2129					5.25+0.16				41.8				25*	540							
488	554	14.19	35.862	26.843	43.748		2134(I)		-5.3								8.7 +0.3				554	13.2+0.8	20.1+0.4	0.280+0.030				
489	638	12.94	35.696	26.979	43.980		2158(I)		-3.3								7.7 +0.2				638	13.4+1.1	17.4+0.3	0.240+0.020				
704	641	12.91	35.687	26.978	43.982		2159	0.79		3.6		3.99+0.13				43.0				20*	641							
490	723	11.45	35.490	27.111	44.231		2178(I)		-31.9								9.6 +0.5				723	9.2+0.8						
705	746	10.74	35.392	27.166	44.345		2183			2.3	0.54	2.04+0.11				44.7					746							
491	787	9.39	35.217	27.265	44.561		2196(I)		-60.5								10.4 +0.4				787	4.4+0.4	5.9+0.3	0.090+0.010				
706	795	9.24	35.219	27.291	44.600		2198	0.84		1.4		1.63+0.09				45.7				18*	795							
707	844	7.69	34.980	27.345	44.795		2192					3.63+0.12				46.9				13*	844							
708	899	7.46	35.070	27.449	44.916		2207	0.75		1.4	0.32	1.91+0.09				47.6					899							
1186	905						2206(I)		-61.6								10.9 +0.3				905	4.3+0.8	4.9+0.3	0.110+0.020				
709	944	6.71	35.064	27.549	45.085		2195			1.0		1.29+0.10				48.6				55*	944							
710	992	6.13	35.024	27.594	45.185		2198			0.8	0.26	1.87+0.10				47.5				12*	992							
711	1042	5.54	34.999	27.649	45.297		2193	0.93		0.6		3.09+0.11				49.5				14*	1042							
1187	1052	5.54	35.010	27.658	45.305		2190(I)		-44.4								9.8 +0.4				1052	8.1+1.1	12.2+1.1	0.100+0.010				
712	1092	5.24	35.021	27.702	45.379		2180			0.8	0.26	2.49+0.10				47.2				14*	1092							
714	1204	4.736	34.995	27.740	45.467		2185	0.87		0.8	0.25					46.7				14*	1204							
715	1303	4.533	34.997	27.764	45.511		2179			0.7	0.28	1.82+0.11				46.3				10*	1303							
1188	1346	4.44	35.001	27.777	45.532		2176(I)		-44.1								8.6 +0.5				1346	7.6+0.8	11.1+0.9					
716	1402	4.362	34.993	27.780	45.543		2172	0.93			0.24					47.0				13*	1402							
717	1507	4.231	34.985	27.787	45.564		2167			0.8	0.26	1.32+0.10				47.1					1507							
718	1604	4.047	34.984	27.806	45.601		2173	1.05			0.26					47.1				9*	1604							
1189	1637	4.02	34.991	27.814	45.612		2173(I)										9.4 +0.4				1637	3.5+0.8	6.2+0.4	0.080+0.010				
719	1704	3.914	34.977	27.814	45.623		2172					0.61+0.09				47.5				10*	1704							
720	1901	3.719	34.972	27.830	45.659		2177	0.92		0.7	0.24					48.6				10*	1901							
1190	1925		35.098				2177(I)		-54.2								8.6 +0.4				1925	1.4+0.9	2.0+0.4	0.110+0.030				
721	2106	3.548	34.968	27.843	45.690		2177					0.65+0.14				50.2				19*	2106							
686	2123	3.54	34.972	27.848	45.695		2177(I)		-62.7*								9.8 +0.6				2123	1.4+1.0	1.4+0.2					
722	2308	3.378	34.968	27.860	45.724		2175	0.96		0.8						51.5				6*	2308							
723	2505	3.188	34.962	27.873	45.756		2183	1.01				0.35+0.09				52.7				21*	2505							
687	2653	3.00	34.959	27.888	45.791		2178(I)		-76.4*								10.0 +0.4				2653	-0.3+0.9	0.9	0.020+0.004				
501	2698	2.956	34.952	27.886	45.794		2177			0.8	0.28	0.11+0.09				54.0				17*	2698							
724	2703	2.973	34.952	27.885	45.791		2183	1.18								54.0				9*	2703							
502	2908	2.689	34.941	27.901	45.837		2187	0.94								56.1				32*	2908							
503	3096	2.581	34.935	27.905	45.853		2188					0.27+0.09				56.9				21*	3096							
688	3182	2.50	34.938	27.914	45.870		2184(I)		-79.2*								11.2 +0.6				3182	4.0+1.1	1.0+0.9	0.040+0.006				
504	3296	2.413	34.928	27.914	45.880		2180	1.05		0.8	0.24					57.7				23*	3296							
505	3495	2.204	34.920	27.925	45.913		2183					-0.09+0.09				59.3				15*	3495							
506	3694	2.069	34.906	27.924	45.928		2187	1.15								60.8				22*	3694							
689	3712	2.04	34.908	27.928	45.935		2187(I)		-86.5*								12.0 +0.6				3712	0.5+0.8	0.9+0.3	0.060+0.007				
507	3892	1.945	34.898	27.927	45.944		2185					0.11+0.09				62.8				26*	3892							
508	4089	1.887	34.895	27.929	45.953		2191(I)	1.00		0.4	0.24					64.2				29*	4089							
515	4092	1.887	34.893	27.928	45.951		2192(I)										11.4 +0.7			22*	4092							
690	4241	1.88	34.898	27.933	45.957		2197(I)		-84.3*												4241	1.4+0.9	0.8+0.9	0.070+0.009				
509	4288	1.852	34.891	27.929	45.956		2199									65.3				31*	4288							
510	4488	1.842	34.891	27.930	45.958		2200	0.90								65.5				33*	4488							
115	4570	1.831	34.887	27.927	45.957		2200(I)														39 +1.7	4570						
1191	4639		34.905				2201(I)		-88.2*								13.7 +0.5				4639	0.6+0.8	3.6+0.5	0.050+0.006				
511	4688	1.829	34.890	27.930	45.960		2201	1.01				0.31+0.09				65.3				33*	4688							
116	4771	1.823	34.886	27.927	45.958		2201(I)									65.3				47 +1.7	4771							
117	4830	1.820	34.885	27.927	45.957		2202(I)										14.5 +0.5			45 +1.7	4830							
118	4873	1.819	34.884	27.926	45.957		2202(I)													43 +1.6	4873							
119	4894	1.818	34.887	27.928	45.959		2202(I)													42 +1.7	4894							
512	4909	1.818	34.888	27.929	45.960		2202	1.09		0.4	0.27					65.7				36*	4909							
120	4914	1.817	34.886	27.928	45.959															39 +1.6	4914							
121	4936	1.816	34.887	27.928	45.960															33 +1.7	4936							
122	4957	1.816	34.887	27.928	45.960															47 +1.7	4957							
123	4967	1.817	34.887	27.928	45.959											65.7				45 +1.7	4967							
124	4978	1.816	34.886	27.928	45.959											65.4				45 +1.7	4978							

(I) INTERPOLATED FROM NISKIN DATA

STATION 30 | POSITION: 31°48'N 50°46'W | DATE: 20 SEP 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He / Ne 10^{-4}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH				UM		MCM / SIO+			LDGO			LDGO								
701	2	26.64	36.595	24.072	40.216		2040	1.84				6.39+0.16									2							
702	50	21.74	36.540	25.481	41.889		2039	0.94						0.1 3.94 15.85							50							
														-0.8* 3.83* 15.35*	0.7*													
917	61	21.67	36.550	25.509	41.921		2045(I)					7.21+0.22					6.7 +0.4				61							
920	150	18.06	36.449	26.389	43.019		2087(I)					7.25+0.23									150							
703	151	18.04	36.448	26.393	43.024		2087	1.32													151							
704	202	17.71	36.434	26.464	43.117		2079	1.27						2.3 3.93 16.28							202							
														1.1* 3.84* 15.67*	0.8*													
705	252	17.55	36.427	26.501	43.164		2085	0.77				6.30+0.18									252							
706	301	17.34	36.421	26.547	43.224		2111	0.83						3.5 3.90 16.05							301							
														5.6* 3.85* 15.68*	1.1*													
707	352	17.00	36.376	26.595	43.295		2128	1.07				6.42+0.14									352							
708	402	16.49	36.282	26.645	43.381		2130	0.94						4.9 3.93 16.27							402							
														8.2* 3.94* 16.14*	1.0*													
709	451	15.77	36.141	26.707	43.495		2139	1.10													451							
710	500	15.06	36.033	26.784	43.624		2140	0.76				4.49+0.16	4.9	3.89 16.16							500							
711	550	14.27	35.901	26.856	43.754		2134					4.55+0.16									550							
712	590	13.46	35.789	26.943	43.902		2140(I)	0.75				4.07+0.16	6.0	3.95 16.58							590							
													6.2*	3.88* 16.16*	0.7*													
714	652	12.22	35.611	27.057	44.115		2150					2.97+0.13									652							
715	702	11.54	35.510	27.109	44.221		2187	0.78				2.20+0.12	2.2	3.93 16.66							702							
													4.2*	4.05* 17.03*	0.5*													
716	802	9.412	35.298	27.324	44.615		2193	0.71				0.98+0.09									802							
717	904	7.614	35.162	27.499	44.950		2211					0.66+0.09	1.4	4.00 17.49							904							
													1.2*	3.98* 16.92*	1.4*													
718	956	7.111	35.145	27.558	45.055		2203					0.35+0.09									956							
719	1005	6.715	35.150	27.617	45.150		2208	0.84					1.1	4.03 17.45							1005							
													1.4*															
720	1055	6.478	35.170	27.664	45.219		2202					1.02+0.09									1055							
721	1105	5.787	35.106	27.703	45.325		2196(I)						2.1	4.12 17.84							1105							
													2.6*	4.00* 17.26*	0.7*													
722	1204	5.168	35.072	27.751	45.433		2188	0.92				1.59+0.11									1204							
723	1304	4.919	35.082	27.788	45.494		2193						1.1	4.04 17.65							1304							
													0.9*	4.14* 17.93*	0.5*													
401	1394	4.738	35.082	27.809	45.532		2195						1.7	4.06 17.80							1394							
													1.2*	4.02* 17.43*	0.6*													
724	1403	4.547	35.050	27.805	45.548		2184					0.85+0.09									1403							
402	1596	4.426	35.077	27.839	45.594		2188	1.01				0.24+0.09									1596							
403	1796	3.817	35.005	27.846	45.664		2185						1.3	4.07 17.93							1796							
404	1995	3.583	34.993	27.860	45.702		2179	0.92													1995							
405	2195	3.396	34.995	27.880	45.741		2187						0.7	4.08 17.99							2195							
													0.2*	4.09* 17.70*	1.5*													
406	2394	3.172	34.982	27.890	45.775		2189	0.95				0.03+0.09									2394							
407	2596	2.993	34.970	27.897	45.801		2200						1.7	4.11 18.05							2596							
													0.9*	4.03* 17.57*	0.8*													
408	2795	2.839	34.959	27.902	45.822		2197	0.88													2795							
409	2994	2.681	34.947	27.906	45.843		2189						1.4	4.14 18.24							2994							
410	3194	2.534	34.936	27.910	45.863		2200	0.98													3194							
411	3395	2.362	34.924	27.915	45.886		2199(I)						1.0	4.17 18.28							3395							
414	3786	2.102	34.903	27.919	45.919		2192	0.94					1.7	4.15 18.37							3786							
415	3985	1.988	34.899	27.925	45.937		2206					-0.03+0.09									3985							
416	4187	1.906	34.887	27.922	45.943		2204	0.93					1.9	4.20 18.48							4187							
													1.6*	4.06* 17.76*	0.9*													
418	4586	1.739	34.871	27.921	45.961		2213						2.7	4.18 18.38							4586							
419	4787	1.681	34.866	27.922	45.968		2224	0.92													4787							
420	4987	1.646	34.861	27.920	45.971		2221						2.2	4.14 18.26							4987							
													2.3*	4.13* 18.01*	1.5*													
421	5188	1.633	34.861	27.921	45.973		2227	0.79													5188							
114	5340	1.626	34.859	27.920	45.973		2225(I)														5340	23	+1.6					
422	5388	1.626	34.860	27.921	45.974		2223						1.5	4.19 18.50							5388							
													2.3*	4.12* 18.01*	1.2*													
116	5537	1.623	34.860	27.921	45.974		2216(I)														5537	4	+1.8					
423	5588	1.624	34.860	27.921	45.974		2215					0.15+0.09									5588							
117	5635	1.622	34.859	27.920	45.974		2217(I)														5635	16	+1.6					
118	5690	1.622	34.858	27.920	45.973		2219(I)														5690	62	+1.7					
119	5733	1.622	34.858	27.920	45.973		2221(I)														5733	6	+1.6					
120	5763	1.622	34.857	27.919	45.972		2222(I)														5763	19	+1.6					
121	5787	1.621	34.858	27.920	45.973		2223(I)														5787	15	+1.6					
424	5788	1.622	34.859	27.920	45.974		2223	0.84					1.7	4.15 18.22							5788							
													2.5*	4.13* 17.97*	1.6*													
122	5808	1.621	34.858	27.920	45.973													17.3 +0.8				22	+1.6					
123	5822	1.622	34.859	27.920	45.974																	24	+1.6					
124	5833	1.621	34.857	27.919	45.972																	11	+1.6					
												PRECISION:	0.2	0.01 0.05														
													1.0 *	0.01* 0.06*	0.2*													

(I) INTERPOLATED FROM NISKIN DATA

STATION 31 | POSITION: 27°0'N 53°32'W | DATE: 22 SEP 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10⁻⁵cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM					LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
601	1	27.442	36.901	24.050	40.148		2041	1.78				7.66+0.24								38*	1							
935	10		36.831				2046(I)		185.7									2.47 +0.27	1.48+0.13		10	20.8+0.8	31.9+0.6	0.260+0.030				
602	29	26.985	36.923	24.211	40.331		2057					7.21+0.22								41*	29							
603	61	22.908	36.790	25.339	41.676		2078	1.78				8.20+0.22								31*	61							
936	70		36.775				2084(I)		159.7									2.03 +0.22	1.37+0.11		70	21.1+0.7		0.240+0.002				
937	100		36.988				2098(I)		158.4									1.52 +0.17	1.42+0.11		100	26.6+0.8	39.3+0.4	0.430+0.030				
604	101	21.194	36.943	25.939	42.368		2098					7.98+0.19								24*	101							
605	152	19.541	36.710	26.207	42.740		2070	1.41				7.55+0.19								26*	152							
938	160		36.681				2073(I)											1.71 +0.19	1.42+0.11		160	25.4+1.4		0.310+0.020				
606	203	18.154	36.470	26.382	43.005		2098					7.23+0.18								25*	203							
939	240		36.418				2103(I)		110.2									2.36 +0.28	1.75+0.16		240	22.4+0.3	35.0+0.8	0.400+0.040				
607	253	17.606	36.433	26.490	43.150		2105(I)	1.34				6.41+0.19								15*	253							
608	302	17.071	36.403	26.599	43.293		2112					6.34+0.16								10*	302							
940	320		36.396				2107(I)		85.3									1.38 +0.16	1.53+0.23		320	19.8+0.7	30.6+0.4	0.340+0.020				
609	404	16.870	36.375	26.626	43.334		2088	1.48				6.37+0.16								12*	404							
1086	422	16.94	36.301	26.553	43.259		2095(I)		91.7								7.4 +0.3				422	21.4+0.5	35.1+0.3	0.400+0.040				
610	504	15.734	36.157	26.726	43.516		2135					5.26+0.13								8*	504							
611	604	13.724	35.831	26.920	43.860		2154	1.04				3.62+0.13								9*	604							
1087	618	13.75	35.845	26.926	43.863		2155(I)		-12.5								7.9 +0.3				618	13.5+0.7	20.5+0.4	0.360+0.060				
612	704	11.693	35.561	27.120	44.220		2159					1.71+0.09								10*	704							
614	802	9.746	35.331	27.293	44.556		2205	0.51				0.54+0.09								9*	802							
1088	816	9.74	35.359	27.613	44.578		2205(I)		-65.2								9.4 +0.2				816	-0.4+0.4						
615	856	8.823	35.261	27.391	44.734		2204					0.39+0.09								11*	856							
616	904	8.112	35.195	27.451	44.857		2210(I)	0.74				0.20+0.09								9*	904							
1089	914	8.25	35.227	27.455	44.848		2211(I)		-80.7								11.4 +1.1				914	1.0+0.2	1.7+0.6	0.100+0.020				
617	953	7.487	35.146	27.505	44.968		2215					0.24+0.09								9*	953							
618	1005	6.995	35.123	27.557	45.065		2211	0.53				0.27+0.09								7*	1005							
1090	1013		35.156				2211(I)		-80.5								9.8 +0.4				1013	0.0+0.6		0.044+0.007				
619	1055	6.503	35.115	27.618	45.171		2209					0.35+0.09								7*	1055							
620	1105	6.192	35.121	27.663	45.246		2210	0.76				0.20+0.09								8*	1105							
621	1205	5.735	35.125	27.725	45.350		2190					0.23+0.09								7*	1205							
1091	1261	5.55	35.159	27.774	45.417		2196(I)		-72.4								10.3 +0.3				1261	1.5+0.9	0.8+1.1					
622	1305	5.336	35.128	27.776	45.440		2202	0.92				0.33+0.09								12*	1305							
623	1405	4.948	35.112	27.809	45.511		2199					0.22+0.09								11*	1405							
486	1486	4.67	35.096	27.828	45.558		2197(I)		-78.1								10.4 +0.4				1486	1.9+0.2		0.034+0.006				
301	1508	4.643	35.095	27.830	45.562		2197	0.92				0.17+0.09								14*	1508							
302	1709	4.162	35.071	27.863	45.644		2195(I)					0.05+0.09								12*	1709							
487	1735	4.10	35.064	27.864	45.652		2195(I)		-84.4								10.8 +0.6				1735	-0.1+0.7	0.6+0.8	0.020+0.004				
303	1910	3.724	35.032	27.877	45.703		2193	0.88				0.04+0.09								13*	1910							
488	1985	3.56	35.025	27.887	45.731		2194(I)		-85.2								11.4 +0.7				1985	0.8+0.3						
304	2110	3.337	35.003	27.892	45.758		2196(I)													15*	2110							
489	2234	3.16	34.986	27.894	45.780		2198(I)		-86.9								13.0 +0.2				2234							
305	2310	3.106	34.984	27.898	45.790		2199	0.73												12*	2310							
490	2484	2.92	34.972	27.905	45.816		2208(I)		-97.1								12.6 +0.2				2484	-0.4+0.3		0.007+0.002				
306	2511	2.912	34.965	27.900	45.813		2209					-0.05+0.09								10*	2511							
307	2709	2.763	34.952	27.903	45.831		2205	0.71												14*	2709							
491	2882	2.60	34.966	27.929	45.874		2208(I)		-99.0								13.9 +0.5				2882	0.4+0.8	0.5+0.9	0.020+0.004				
308	2909	2.627	34.942	27.907	45.850		2208					-0.02+0.09								12*	2909							
286	3013	2.54	34.943	27.915	45.867		2207(I)		-101.5								14.3 +0.2				3013							
309	3109	2.519	34.935	27.911	45.865		2205	0.95												10*	3109							
310	3300	2.339	34.920	27.914	45.888		2205					-0.03+0.09								8*	3300							
311	3509	2.198	34.912	27.919	45.908		2206	0.92												9*	3509							
287	3512	2.16	34.914	27.924	45.917		2206(I)		-99.3								13.8 +0.2				3512	0.5+0.7	-0.2+0.7	0.003				
312	3610	2.137	34.907	27.920	45.916		2205													7*	3610							
314	3710	2.082	34.901	27.919	45.921		2207	1.01				-0.01+0.09								10*	3710							
315	3911	1.956	34.888	27.919	45.935		2215													7*	3911							
288	4011	1.91	34.893	27.926	45.946		2217(I)		-105.0								13.9 +0.5				4011	0.1+0.3						
316	4111	1.857	34.880	27.920	45.947		2219	1.02												4*	4111							
317	4211	1.815	34.876	27.920	45.951		2203					-0.02+0.09								12*	4211							
318	4311	1.781	34.873	27.920	45.955		2219	0.93												10*	4311							
289	4509	1.72	34.869	27.921	45.964		2221(I)		-108.6								16.4 +0.6				4509	0.5+0.2	0.0+0.4	0.060+0.020				
319	4510	1.724	34.869	27.921	45.963		2221													9*	4510							
320	4712	1.679	34.865	27.921	45.968		2221	0.89				0.03+0.09									4712							
321	4911	1.647	34.864	27.923	45.973		2229	0.79												11*	4911							
290	5008		34.873				2226(I)		-114.0								18.0 +0.5				5008	0.8+0.4						
322	5111	1.623	34.860	27.921	45.974		2222	0.89												7*	5111							
323	5311	1.608	34.856	27.919	45.974		2223													19*	5311							
291	5508						2226(I)		-120.8												5508	1.4+0.9	0.1+0.2	0.013+0.003				
324	5512	1.589	34.860	27.924	45.980		2226	0.60				-0.03+0.09								12*	5512							
115	5637	1.580	34.855	27.920	45.978		2227(I)													10 +1.6	5637							
116	5738	1.576	34.852	27.918	45.977		2228(I)													5 +1.6	5738							
117	5839	1.572	34.854	27.920	45.979		2229(I)													8 +1.6	5839							
118	5883	1.570	34.854	27.920	45.979		2229(I)													8 +1.6	5883							
119	5924	1.568	34.851	27.918	45.977		2230(I)													3 +1.6	5924							
120	5964	1.567	34.854	27.920	45.980		2230(I)													2 +1.7	5964							
121	5994	1.567	34.851	27.918	45.977		2230(I)													5 +1.6	5994							
122	6014	1.566	34.850	27.917	45.977		2230(I)										17.4 +0.7				6014							
624	6014	1.567	34.856	27.922	45.981		2230	0.86												8 +1.6	6014							
123	6028	1.566	34.851	27.918	45.977															9 +1.7	6028							
124	6039	1.566	34.852	27.919	45.978															12 +1.6	6039							

(I) INTERPOLATED FROM NISKIN DATA

STATION 32 — **POSITION: 23°50'N 53°59'W** — **DATE: 24 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO	LDGO	LDGO	LDGO								
715	2	27.62	36.012	23.325	39.433												8.7 +0.5				2							
601	6	27.54	36.039	23.371	39.483		2009(I)					5.45+0.14									6							
720	25	27.64	36.956	24.028	40.114		2027(I)										8.3 +0.3				25							
606	276	17.46	36.467	26.552	43.220		2120(I)					6.44+0.18									276							
609	478	14.69	36.022	26.857	43.722		2135(I)					4.34+0.15									478							
611	627	11.77	35.614	27.146	44.237		2169(I)					1.24+0.09									627							
612	702	10.74	35.482	27.236	44.413		2192					0.62+0.09									702							
614	776	9.482	35.326	27.334	44.619		2191					0.48+0.13									776							
616	928	7.265	35.097	27.498	44.983		2221					0.02+0.09									928							
618	1103	6.069	35.048	27.622	45.218		2214(I)					-0.03+0.09									1103							
619	1202	5.494	35.041	27.688	45.339		2209(I)					0.07+0.09									1202							
620	1303	5.079	35.049	27.744	45.435		2205					0.26+0.09									1303							
622	1501	4.497	35.054	27.813	45.562		2179					0.21+0.09									1501							
401	1854	3.790	35.032	27.870	45.690		2187(I)					0.05+0.09									1854							
402	2054	3.441	35.004	27.882	45.739		2192					0.09+0.09									2054							
407	3055	2.449	34.928	27.911	45.873		2209(I)					0.04+0.09									3055							
1186	4095	1.91	34.886	27.920	45.941		2206(I)											0.34 +0.07	0.13+0.03		4095							
415	4155	1.903	34.889	27.923	45.945		2200(I)					0.04+0.09									4155							
1189	4296	1.84	34.890	27.929	45.958		2196(I)											0.41 +0.08	0.20+0.03		4296							
418	4455	1.771	34.870	27.918	45.955		2213					0.07+0.09									4455							
1192	4495		34.868				2216(I)											0.56 +0.11	1.00+1.00		4495							
1086	4690	1.66	34.869	27.925	45.973		2225(I)											0.87 +0.13	0.50+0.05		4690							
1089	4895	1.61	34.857	27.920	45.974		2227(I)											1.33 +0.20	1.00+1.00		4895							
986	5101	1.57	34.858	27.923	45.982		2224(I)											1.21 +0.20	0.69+0.06		5101							
989	5306	1.54	34.855	27.923	45.984		2221(I)											1.37 +0.24	0.78+0.06		5306							
115	5441	1.527	34.851	27.921	45.985		2223(I)														10 +1.6	5441						
886	5511	1.52	34.897	27.958	46.020		2225(I)											1.43 +0.24	0.69+0.09			5511						
116	5541	1.520	34.849	27.920	45.984		2225(I)														5 +1.6	5541						
117	5642	1.517	34.849	27.920	45.985		2229(I)														5 +1.6	5642						
424	5653	1.515	34.843	27.915	45.981		2229					0.00+0.09										5653						
118	5701	1.516	34.848	27.919	45.984																9 +1.6	5701						
889	5716	1.53	34.859	27.927	45.991													1.78 +0.50	0.82+0.09			5716						
119	5741	1.516	34.849	27.920	45.985																10 +1.6	5741						
120	5771	1.516	34.849	27.920	45.985																9 +1.6	5771						
121	5795	1.515	34.848	27.919	45.984																6 +1.6	5795						
122	5813	1.514	34.849	27.920	45.985																5 +1.6	5813						
123	5828	1.514	34.849	27.920	45.985																9 +1.6	5828						
124	5836	1.514	34.848	27.919	45.985																6 +1.6	5836						

STATION 33 — **POSITION: 21°0'N 54°0'W** — **DATE: 26 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM UW*			UM				MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
701	13	27.208	35.971	23.424	39.554			1.34				5.02+0.14								46*	13							
935	15		35.910															7.89 +1.20	1.73+0.12		15							
1135	15		36.364						164.7												15	15.0+1.6	23.5+1.5	0.130+0.010				
702	38	26.886	37.114	24.386	40.506											42.9				23*	38							
703	70	24.886	37.294	25.136	41.356		2086	2.13								40.8				33*	70							
936	70		37.295				2086(I)											2.46 +0.35	0.89+0.06		70							
1136	70		37.307				2086(I)		148.7*												70	25.2+1.7						
704	96	23.229	37.313	25.642	41.949		2113	1.43								39.8				20*	96							
937	100		37.296				2112(I)											2.20 +0.32	0.89+0.08		100							
1137	100		37.287				2112(I)		159.0*												100	28.4+1.7	37.3+2.1	0.450+0.020				
705	158	21.055	37.081	26.082	42.516		2105	1.28												17*	158							
938	160		37.063				2106(I)											2.05 +0.30	0.97+0.07		160							
1138	160		37.045				2106(I)		114.9*												160	25.2+0.9		0.320+0.020				
706	217	18.588	36.659	26.416	43.008		2139	0.37				5.69+0.16				40.6				14*	217							
939	240		36.475				2142(I)											0.76 +0.11	1.03+0.08		240							
1139	240		36.598				2142(I)		63.2*												240	26.8+1.8	44.1+1.9	0.140+0.010				
707	297	16.811	36.360	26.628	43.341		2150	0.35				6.12+0.22				42.8				11*	297							
940	320		36.310				2151(I)											1.37 +0.20	1.09+0.12		320							
1140	320		36.312				2151(I)		36.4*												320	25.7+0.8						
708	396	15.038	36.049	26.802	43.642		2155	0.78				4.20+0.16				43.4				7*	396							
1086	396	15.04	36.065	26.814	43.654		2155(I)		10.2*								7.9 +0.3				396	20.0+1.0	30.8+3.3	0.370+0.030				
1087	451	13.62	35.846	26.953	43.899		2168(I)		-23.2*								8.6 +0.5				451	15.3+1.1						
709	496	13.240	35.786	26.987	43.960		2180	0.47				3.16+0.13				43.5				8*	496							
1088	531	12.40	35.649	27.052	44.095		2184(I)		-44.9*								7.8 +0.2				531	7.3+1.3	13.0+1.0	0.210+0.010				
710	593	11.567	35.563	27.146	44.255		2192	0.57				0.75+0.09				45.4				7*	593							
1089	606	11.09	35.505	27.190	44.339		2196(I)		-62.1*								8.6 +0.4				606	2.0+0.8						
1090	688		35.200				2217(I)		-73.6*								8.9 +0.3				688	1.2+2.1	2.8+1.1	0.059+0.007				
711	692	9.588	35.307	27.301	44.578		2218	0.69				0.02+0.09								10*	692							
1091	763		35.113				2222(I)		-85.7*								10.2 +0.4				763	-0.4+0.8						
712	792	7.975	35.128	27.419	44.839		2223	0.63				-0.03+0.09				50.2				11*	792							
714	841	7.320	35.058	27.460	44.941		2246									51.8				11*	841							
486	892	6.79	35.024	27.507	45.037		2237(I)		-92.2*								10.5 +0.4				892	0.5+1.0	1.5+0.9	0.019+0.004				
715	893	6.768	35.014	27.502	45.035		2237	0.46				0.03+0.09				53.8				7*	893							
716	943	6.378	34.985	27.532	45.101		2237					0.05+0.06				53.3				9*	943							
717	992	5.894	34.942	27.560	45.176		2239	0.73				0.13+0.09								10*	992							
487	995	5.93	34.956	27.567	45.180		2238(I)		-98.2*								11.3 +0.5				995	1.4+0.9						
718	1043	5.632	34.936	27.588	45.230		2222					-0.01+0.06				54.7				10*	1043							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 33 — *CONTINUED* **POSITION: 21°0'N 54°0'W** **DATE: 26 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM UW*			UM				MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
719	1093	5.431	34.945	27.620	45.280		2224(I)					0.29+0.10				55.7				11*	1093							
488	1093	5.50	34.959	27.623	45.276		2224(I)		-93.3*								10.8 +0.3				1093	4.0+1.2		0.016+0.004				
720	1199	5.049	34.990	27.701	45.396		2229	0.75				0.06+0.06				52.0				10*	1199							
721	1298	4.840	35.002	27.734	45.450		2215					0.04+0.07								8*	1298							
722	1397	4.566	35.016	27.776	45.518		2200	0.81				-0.01+0.06				50.2				10*	1397							
489	1493	4.40	35.031	27.806	45.564		2202(I)		-80.6*								10.8 +0.1				1493	-1.2+0.9						
723	1497	4.316	35.014	27.801	45.569		2202					-0.02+0.06								11*	1497							
301	1502	4.348	35.014	27.798	45.562		2197					0.11+0.09				52.2				12*	1502							
302	1602	4.143	35.012	27.818	45.603		2201	0.97								51.9				9*	1602							
724	1612	4.054	35.013	27.828	45.622		2201(I)					-0.03+0.07				52.2				8*	1612							
303	1803	3.826	35.019	27.856	45.673		2198	0.91												6*	1803							
490	1842	3.70	35.019	27.869	45.697		2202(I)		-84.4*								9.9 +0.5				1842	-0.9+0.7	-1.6+1.3	0.020+0.005				
304	2002	3.503	34.998	27.872	45.722		2213					0.00+0.06				58.4				15*	2002							
305	2201	3.212	34.984	27.888	45.769		2192	1.01								59.3				11*	2201							
491	2238	3.08	34.978	27.895	45.789		2194(I)		-94.1*								12.0 +0.1				2238	0.5+1.6						
306	2400	2.940	34.965	27.898	45.807		2207													12*	2400							
307	2599	2.745	34.951	27.904	45.834		2211	0.87				0.00+0.06				65.5				8*	2599							
286	2702	2.62	34.946	27.910	45.854		2207(I)		-105.9								13.1 +0.3				2702	1.3+1.8						
308	2798	2.608	34.940	27.907	45.852		2204									67.3				13*	2798							
309	2997	2.488	34.933	27.912	45.869		2211	0.96								68.1				4*	2997							
310	3097	2.429	34.927	27.912	45.876		2204					-0.02+0.09								9*	3097							
311	3195	2.376	34.924	27.914	45.884		2206													10*	3195							
287	3200	2.33	34.922	27.916	45.891		2207(I)		-96.3*								14.6 +0.4				3200	-0.5+0.8						
312	3293	2.322	34.923	27.918	45.893		2216									66.9				6*	3293							
314	3402	2.269	34.915	27.915	45.897		2201	0.94								70.4				6*	3402							
315	3598	2.155	34.911	27.921	45.915		2217									68.1				5*	3598							
288	3697	2.08	34.908	27.925	45.928		2221(I)		-99.0*								13.4 +0.6				3697	-0.7+1.1	1.8+0.8					
316	3796	2.039	34.902	27.923	45.930		2224	1.00								69.2				8*	3796							
317	3996	1.946	34.895	27.925	45.942		2204									67.9				7*	3996							
318	4096	1.908	34.892	27.925	45.947		2212									67.6				13*	4096							
319	4195	1.868	34.890	27.927	45.952		2218	1.02								69.2				9*	4195							
289	4195	1.87	34.896	27.931	45.956		2218(I)		-97.7*								14.3 +0.4				4195	1.0+1.1						
320	4293	1.816	34.882	27.925	45.956		2221					0.09+0.09				68.3				9*	4293							
321	4393	1.772	34.878	27.925	45.961		2219													8*	4393							
322	4593	1.672	34.867	27.923	45.971		2236	0.37								73.4				5*	4593							
290	4682	1.61	34.862	27.924	45.979		2237(I)		-113.6*								16.1 +0.5				4682	0.0+1.5	-1.0+0.9					
323	4794	1.550	34.847	27.916	45.977		2239									75.3				8*	4794							
115	4824	1.536	34.850	27.919	45.982		2238(I)													16 +1.6	4824							
116	4924	1.522	34.845	27.916	45.981		2234(I)													7 +1.6	4924							
324	4993	1.511	34.846	27.918	45.984		2230	0.54				0.30+0.09				75.2				7*	4993							
117	5029	1.509	34.846	27.918	45.984											78.3				10 +1.6	5029							
118	5079	1.508	34.848	27.920	45.986															12 +1.6	5079							
119	5121	1.506	34.846	27.918	45.985															8 +1.6	5121							
120	5152	1.504	34.848	27.920	45.986															16 +1.6	5152							
121	5177	1.501	34.848	27.920	45.987															8 +1.6	5177							
291	5191	1.49	34.849	27.922	45.989				-113.7*								15.8 +0.5				5191	0.1+0.9						
122	5198	1.499	34.844	27.917	45.984												16.6 +0.2			15 +1.6	5198							
123	5211	1.498	34.843	27.916	45.984															11 +1.6	5211							
124	5224	1.496	34.848	27.921	45.988											76.6				5 +1.6	5224							

STATION 34 **POSITION: 18°1'N 54°0'W** **DATE: 28 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH						UM					LDGO	LDGO	LDGO	LDGO								
1214	2	27.673	34.841	22.428	38.558												7.6 +0.5				2							
1001	5	27.551	34.884	22.499	38.635	0.8	1941					4.48+0.12									5							
1002	46	26.909	36.659	24.036	40.165		2061					5.55+0.20									46							
1003	73	25.424	37.037	24.779	40.977		2046					6.54+0.16									73							
1004	99	23.743	37.078	25.313	41.598		2092					8.24+0.21									99							
1005	150	22.023	37.097	25.824	42.203		2097					7.23+0.16									150							
1007	242	17.778	36.526	26.519	43.165		2105					6.49+0.16									242							
1008	319	16.667	36.338	26.646	43.369		2131					5.74+0.16									319							
1009	392	14.819	36.026	26.833	43.689		2128					4.00+0.12									392							
1010	494	12.463	35.642	27.033	44.071		2184					1.31+0.09									494							
1011	593	10.625	35.40	27.193	44.382	7.3	2208					0.53+0.09									593							
1012	641	9.642	35.249	27.247	44.521		2223					0.25+0.09									641							
1014	702	8.388	35.086	27.323	44.708		2222(I)					0.22+0.09									702							
1015	750	7.313	34.941	27.369	44.854	-0.2	2221					0.03+0.09									750							
1016	800	6.534	34.841	27.398	44.957		2237					-0.10+0.09									800							
1017	852	6.151	34.809	27.423	45.019		2223					0.09+0.09									852							
1018	902	5.880	34.819	27.465	45.086	7.1	2236					0.07+0.09									902							
1019	952	5.622	34.825	27.502	45.147		2237					0.03+0.09									952							
1020	1002	5.535	34.865	27.544	45.197		2224					0.00+0.06									1002							
1021	1101	5.289	34.874	27.580	45.257		2227					0.16+0.09									1101							
1022	1201	5.129	34.982	27.685	45.373		2211					0.11+0.09									1201							
1023	1348	4.687	35.011	27.758	45.489		2203					-0.06+0.07									1348							
801	1495	4.339	35.013	27.798	45.563	3.6	2189														1495							
1024	1497	4.345	35.013	27.797	45.562		2191					0.01+0.06									1497							
802	1646	3.970	35.002	27.828	45.630		2188					-0.07+0.09									1646							
803	1795	3.696	34.998	27.853	45.683		2191					0.01+0.07									1795							
804	1945	3.495	34.994	27.869	45.720		2187					0.09+0.13									1945							
487	2062	3.17	34.978	27.887	45.772		2193(I)											0.02 +0.05	0.07+0.03		2062							
489	2197	3.01	34.968	27.894	45.796		2194(I)											0.01 +0.16	0.04+0.02		2197							
492	2335		34.956				2196(I)											0.06 +0.02	0.07+0.02		2335							
1386	2475	2.81	34.961	27.906	45.828		2200(I)											0.06 +0.05	0.02+0.03		2475							
1389	2675	2.66	34.949	27.910	45.849		2202(I)											0.02 +0.02			2675							

(I) INTERPOLATED FROM NISKIN DATA

STATION 34 — *CONTINUED* **POSITION: 18°1'N 54°0'W** **DATE: 28 SEP 72**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH						UM					LDGO	DPM/100kg	LDGO	LDGO			DPM/100kg			DPM/100kg		
810	2848	2.541	34.939	27.912	45.864		2204					-0.03+0.09									2848							
1392	2876		34.941				2204(I)											0.49 +0.12			2876							
1393	2886	2.513	34.942	27.917	45.872		2204(I)										11.7 +0.3				2886							
811	3001	2.460	34.932	27.913	45.874	4.9	2205														3001							
386	3051	2.41	34.931	27.917	45.882		2204(I)												0.16+0.07		3051							
389	3254	2.30	34.918	27.915	45.893		2203(I)												0.13+0.02		3254							
392	3452		34.909				2209(I)											0.17 +0.04	0.12+0.03		3452							
816	3595	2.110	34.908	27.923	45.921	3.3	2206														3595							
286	3671	2.06	34.905	27.924	45.929		2209(I)											0.07 +0.03	0.18+0.03		3671							
817	3745	2.010	34.900	27.924	45.934		2212					0.02+0.09									3745							
289	3871	1.95	34.892	27.922	45.939		2212(I)											0.26 +0.06	0.24+0.03		3871							
292	4073		34.881				2218(I)												0.37+0.04		4073							
293	4083	1.81	34.882	27.925	45.957		2217(I)											0.47 +0.08	0.35+0.05		4083							
820	4197	1.784	34.879	27.924	45.959	3.3	2215					0.07+0.13									4197							
515	4258	1.753	34.872	27.921	45.960		2217(I)													17 +1.8	4258							
186	4276	1.75	34.875	27.924	45.963		2217(I)											0.28 +0.07	0.50+0.05		4276							
516	4356	1.708	34.870	27.923	45.966		2220(I)													13 +1.6	4356							
517	4456	1.686	34.868	27.923	45.969		2221(I)													10 +1.6	4456							
189	4477	1.66	34.864	27.921	45.970		2221(I)											0.60 +0.10	0.58+0.06		4477							
190	4487	1.65	34.905	27.955	46.003		2221(I)										16.1 +0.5				4487							
518	4518	1.665	34.864	27.921	45.970		2221(I)													9 +1.6	4518							
519	4565	1.637	34.859	27.919	45.971		2223(I)													6 +1.6	4565							
520	4607	1.623	34.858	27.920	45.973		2224(I)													2 +1.6	4607							
521	4639	1.617	34.856	27.918	45.972		2225(I)													11 +1.6	4639							
522	4669	1.604	34.857	27.920	45.975	3.2	2225(I)										15.9 +0.8			11 +1.6	4669							
192	4677		34.859				2226(I)											0.78 +0.96	0.52+0.06		4677							
523	4689	1.603	34.852	27.916	45.972		2226(I)													8 +1.6	4689							
823	4692	1.603	34.857	27.920	45.975		2226					0.10+0.09									4692							
824	4692	1.601	34.861	27.923	45.979	3.2	2220														4692							
524	4705	1.599	34.854	27.918	45.974															6 +1.6	4705							

STATION 35 **POSITION: 13°1'N 58°0'W** **DATE: 1 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		LDGO	LDGO									
335	5		34.212															18.90 +2.00	0.71+0.07		5							
336	55		35.993															7.41 +0.80	0.40+0.07		55							
337	105		36.853															3.88 +0.57	0.86+0.08		105							
338	130		36.578															3.20 +0.42	0.68+0.06		130							
339	145		36.724															3.37 +0.47	0.77+0.06		145							
340	250		35.509															0.63 +0.11	0.46+0.05		250							

STATION 36 **POSITION: 15°0'N 53°56'W** **DATE: 11 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH									LDGO	LDGO	LDGO	LDGO			DPM/100kg			DPM/100kg		
615	1		35.483														7.6 +0.2				1							
401	4	27.82	35.367	22.778	38.889		1964	1.57													4							
835	5						1964(I)												1.22+0.04		5							
1035	5						1964(I)												1.27+0.04		5							
1135	5						1964(I)												1.06+0.03		5							
335	5		35.451				1964(I)											3.05 +0.35	0.98+0.09		5							
336	50		36.344				1994(I)											2.60 +0.38	1.25+0.09		50							
403	83	25.08	37.037	24.883	41.098		2039	1.99													83							
337	125		37.201				2085(I)											1.57 +0.18	1.03+0.08		125							
405	220	17.43	36.485	26.573	43.242		2156	1.19													220							
338	300		35.698				2168(I)											0.46 +0.06	0.53+0.08		300							
407	360	12.68	35.545	26.915	43.939		2172	0.75													360							
412	711	6.591	34.783	27.344	44.900		2235	0.39													711							
415	779	5.929	34.720	27.381	45.000		2227	0.52													779							
417	918	5.456	34.738	27.453	45.117		2240	0.55													918							
419	1109	5.106	34.857	27.589	45.283		2224	0.61													1109							
421	1307	4.857	34.972	27.708	45.424		2207	0.82													1307							
423	1506	4.304	34.990	27.784	45.553		2193	0.74													1506							
701	1799	3.549	34.983	27.855	45.701		2179	0.72													1799							
705	2210	3.07	34.959	27.881	45.777		2181	1.04													2210							
710	2601	2.716	34.942	27.899	45.833		2188	1.12													2601							
715	3007	2.480	34.929	27.909	45.868		2183	1.02													3007							
719	3508	2.213	34.913	27.918	45.906		2194	1.03													3508							
724	4008	1.96	34.893	27.922	45.908			1.05													4008							
115	5250	1.421	34.837	27.917	45.993															15 +1.6	5250							
116	5291	1.411	34.829	27.911	45.989															10 +1.6	5291							
117	5320	1.404	34.828	27.911	45.989															12 +1.6	5320							
118	5351	1.395	34.825	27.909	45.988															17 +1.6	5351							
119	5370	1.390	34.827	27.911	45.991															14 +1.6	5370							
120	5391	1.378	34.825	27.910	45.991															9 +1.6	5391							
121	5406	1.374	34.828	27.913	45.994															15 +1.6	5406							
122	5421	1.373	34.825	27.911	45.992															16 +1.6	5421							
123	5433	1.374	34.825	27.911	45.992															15 +1.6	5433							
124	5440	1.374	34.828	27.913	45.995															14 +1.6	5440							

(I) INTERPOLATED FROM NISKIN DATA

STATION 37 | POSITION: 12°1'N 50°59'W | DATE: 13 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He 10⁻⁵cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		SIO	UM UW*	SIO	SIO	UM	MCM	MCM	MCM		LSU MIT*	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
835	5		35.984						132.3										1.45 +0.15	0.43+0.03		5	11.9+1.4	27.5+1.3	0.067+0.008				
601	15	27.829	35.953	23.215	39.313	-3.9	1992	2.20		6.1	0.96	3.96+0.12					38.8				26*	15							
602	39	26.245	36.456	24.090	40.257	-5.8	2028	2.28		7.0	1.06		-1.6	3.81	14.75		39.7				20*	39							
603	59	25.477	36.458	24.326	40.533		2031	2.31									38.6				34*	59							
836	75		36.601				2050(I)		136.6										1.83 +0.20	0.62+0.04		75	10.7+0.3	19.6+0.4	0.050+0.010				
837	100		36.764				2086(I)												1.32 +0.15	0.69+0.03		100							
1086	101	22.13	36.773	25.550	41.930		2088(I)		91.7									7.1 +0.4				101	16.8+2.2	26.5+0.4	0.092+0.013				
604	115	21.084	36.751	25.823	42.264	-1.2	2113	1.79		6.8	1.07	4.72+0.13	2.4	3.82			38.3				30*	115							
838	150		36.169				2161(I)												0.50 +0.07	0.65+0.07		150							
1087	162	17.44	36.349	26.466	43.138		2174(I)		35.2									7.0 +0.2				162	18.3+0.4	32.0+0.4	0.270+0.030				
605	177	14.783	35.920	26.759	43.621		2188	0.87									38.0				20*	177							
839	220		35.426				2197(I)												0.23 +0.04	0.41+0.07		220							
606	227	12.371	35.479	26.925	43.975	7.4	2198	0.44		3.0	0.60		2.8	3.92			40.5				15*	227							
607	278	10.541	35.232	27.077	44.277	5.2	2206	0.78				1.29+0.09					42.0				15*	278							
1088	306	10.72	35.168	26.995	44.182		2202(I)		-59.0									8.6 +0.5				306	3.0+0.9	7.3+0.9					
840	320		35.112				2201(I)												0.13 +0.04	0.26+0.07		320							
608	352	9.788	35.109	27.113	44.378		2196	0.76					1.1	3.95	16.84		43.5				21*	352							
1089	408	9.26	34.983	27.102	44.415		2206(I)		-71.2									10.3 +0.5				408	2.3+0.4	2.4+0.4	0.080+0.020				
609	453	8.411	34.900	27.173	44.562		2218	0.87				0.22+0.09					46.4				23*	453							
1090	510		34.778				2226(I)		-90.2									10.3 +0.3				510	1.0+2.9						
610	552	7.211	34.743	27.228	44.728		2230	0.74		0.9	0.19		0.6	4.00*			49.0				24*	552							
611	651	6.436	34.670	27.276	44.849	7.2	2237	0.52				0.00+0.09					51.2				13*	651							
1091	712	6.18	34.661	27.310	44.914		2234(I)		-110.7									11.6 +0.6				712	-0.6+0.5	-0.1+0.3	0.006+0.002				
612	751	5.998	34.668	27.331	44.945		2233	0.69			0.18		1.3	4.04*			52.8				19*	751							
																	52.9*												
615	850	5.316	34.643	27.395	45.075	5.8	2243			0.1	0.14	0.06+0.09					55.4				16*	850							
586	894	5.07	34.625	27.408	45.113		2239(I)		-110.3									12.8 +0.1				894							
616	950	5.004	34.666	27.449	45.159		2233	0.60		-0.1	0.13		1.8	4.01	17.50		56.4				15*	950							
587	993	5.16	34.742	27.491	45.183		2232(I)		-109.4									10.7 +0.4				993	0.1+0.3	0.0+0.4	0.007				
617	1074	5.060	34.821	27.565	45.265		2231			0.5	0.16	0.12+0.09					54.8				14*	1074							
588	1094	4.98	34.815	27.569	45.277		2227(I)		-94.7									11.3 +0.3				1094	1.3+0.9	0.8+0.9					
618	1199	4.897	34.903	27.649	45.362		2208	0.89					1.4	4.07*			54.1				47*	1199							
619	1299	4.762	34.959	27.709	45.434	3.1	2209	1.06		0.9		-0.07+0.09					53.1				15*	1299							
589	1392	4.50	34.974	27.748	45.498		2192(I)		-90.6									10.2 +0.1				1392							
620	1400	4.466	34.978	27.757	45.510		2190	0.91				-0.02+0.09	0.2	4.04*			51.6				16*	1400							
621	1499	4.263	34.992	27.789	45.563		2188	1.02		1.2		0.04+0.10					50.8				14*	1499							
622	1599	4.018	34.989	27.813	45.611		2181			1.2	0.25	-0.04+0.09	-0.1	4.06*			50.0				15*	1599							
590	1690		34.980				2177(I)		-78.3									9.6 +0.5				1690	0.8+1.5						
623	1699	3.676	34.986	27.845	45.678		2177	1.04		1.2		0.06+0.09					49.8				13*	1699							
301	1792	3.598	34.981	27.849	45.690		2177	1.08									50.4				13*	1792							
624	1848	3.548	34.978	27.851	45.697		2173	0.74		1.6	0.25	-0.02+0.09	-0.1	4.09*			50.6				15*	1848							
																	50.3*												
302	1941	3.369	34.969	27.861	45.726		2175	1.07					-0.1	4.07*			52.0				12*	1941							
591	1983	3.30	34.964	27.863	45.735		2177(I)		-80.4									10.5 +0.4				1983	0.2+0.5	0.4+0.4	0.030+0.020				
303	2091	3.160	34.963	27.876	45.763		2182	0.83				-0.06+0.09					52.9				12*	2091							
304	2241	3.006	34.956	27.885	45.788		2177	1.08		1.0	0.24		1.5	4.06	17.67		54.7				13*	2241							
305	2392	2.888	34.949	27.890	45.805		2184	1.15									57.3				10*	2392							
289	2441	2.850	34.950	27.894	45.813		2183(I)		-91.6*									12.6 +0.5				2441	0.9+0.8	0.7+0.8					
306	2540	2.773	34.942	27.894	45.822		2180	1.03					1.7	4.10*			59.3				16*	2540							
307	2691	2.660	34.937	27.900	45.840		2187	1.06		0.8	0.19						60.4				13*	2691							
308	2841	2.549	34.928	27.903	45.854	1.1	2193				0.17		2.7	4.13*			64.4				15*	2841							
290	2959	2.476	34.924	27.905	45.864		2198(I)		-101.6*									15.0 +0.5				2959							
309	3041	2.425	34.921	27.907	45.872		2201	1.11		1.0	0.19	0.05+0.09					65.1				16*	3041							
310	3241	2.322	34.915	27.911	45.887	1.8	2200	1.10					2.5	4.12*			67.7				13*	3241							
311	3443	2.220	34.906	27.912	45.899		2201	1.15									67.7				20*	3443							
312	3443	2.220	34.908	27.914	45.901		2196	1.06		0.9	0.16		1.4	4.22			66.6				13*	3443							
291	3472	2.196	34.906	27.914	45.903				-105.9*									13.3 +0.7				3472	0.3+0.8						
315	3603	2.138	34.908	27.920	45.916	1.9	2198	1.11									65.7				6*	3603							
316	3703	2.078	34.900	27.919	45.921		2199(I)	1.11			0.14		1.7				64.2				15*	3703							
317	3879	2.008	34.895	27.920	45.930		2202	1.09									65.7				11*	3879							
292	3985		34.895				2196(I)		-90.2*									12.9 +0.6				3985	-0.5+0.1	-0.2+0.3					
318	4054	1.932	34.891	27.923	45.941		2193	1.10			0.15		0.8	4.09	18.04		66.8				9*	4054							
319	4203	1.893	34.889	27.924	45.947	0.7	2195	0.90				0.09+0.09					66.8				16*	4203							
320	4373	1.845	34.884	27.924	45.952		2199	0.98		0.7	0.11		2.4		17.99		68.4				10*	4373							
293	4499	1.76	34.873	27.921	45.958		2207(I)		-104.1*									15.6 +0.2				4499	-0.4+1.1	0.5+0.9					
321	4554	1.751	34.873	27.922	45.961		2210(I)	0.98									71.9				11*	4554							
322	4755	1.430	34.841	27.920	45.994	-0.5	2225	0.97					3.4	4.08	18.18		80.7				11*	4755							
115	4778	1.469	34.839	27.915	45.986		2227(I)														14 +1.6	4778							
116	4854	1.332	34.820	27.910	45.996		2231(I)														16 +1.6	4854							
323	4905	1.234	34.810	27.908	46.006		2234	0.80		-0.4		0.07+0.09					84.1				15*	4905							
117	4919	1.257	34.813	27.909	46.004		2234(I)														22 +1.6	4919							
118	4957	1.221	34.809	27.908	46.007		2235(I)														21 +1.6	4957							
119	4988	1.197	34.804	27.906	46.008		2235(I)														22 +1.6	4988							
294	5014	1.179	34.808	27.910	46.013		2236(I)		-125.3*									17.6 +0.2				5014		1.5+0.2	0.016+0.006				
120	5017	1.191	34.804	27.906	46.008		2236(I)														19 +1.6	5017							
324	5022	1.187	34.805	27.907	46.010	2.5	2236	0.88		0.1	0.04		3.9		18.41		84.7				15*	5022							
121	5032	1.183	34.804	27.907	46.010																23 +1.6	5032							
122	5048	1.169	34.801	27.905	46.010																24 +1.6	5048							
123	5057	1.165	34.801	27.906	46.011																16 +1.6	5057							
124	5066	1.167	34.804	27.908	46.013																18 +1.6	5066							

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.3 | 0.01 0.04* | 0.20

STATION 38

POSITION: 9°45'N 47°10'W

DATE: 15 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO	DPM/100kg		LDGO			DPM/100kg			DPM/100kg		
335	5		33.47															2.43 +0.26	1.50+0.38		5							
119	4745	1.364	34.825	27.911	45.994															17 +1.6	4745							
120	4766	1.361	34.825	27.912	45.995															21 +1.6	4766							
121	4785	1.353	34.826	27.913	45.997															21 +1.6	4785							
122	4804	1.347	34.823	27.911	45.995												17.8 +0.5			26 +1.6	4804							
123	4818	1.343	34.823	27.911	45.996															16 +1.6	4818							
124	4828	1.319	34.823	27.913	46.000															22 +1.6	4828							

STATION 39

POSITION: 7°57'N 43°51'W

DATE: 17 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH				UM					LDGO	DPM/100kg		LDGO			DPM/100kg			DPM/100kg		
501	1	28.656	35.482	22.597	38.664		1961	1.90													1							
625	3	28.659	35.474	22.590	38.657		1961(I)										7.3 +0.7				3							
503	63	20.786	36.202	25.488	41.958		2104	1.33													63							
505	203	9.990	34.968	26.969	44.221		2194	0.49													203							
507	388	8.204	34.764	27.099	44.509		2215	0.50													388							
509	512	7.687	34.771	27.181	44.638		2236	0.18													512							
510	574	7.139	34.733	27.230	44.737		2239	0.46													574							
511	657	6.347	34.678	27.294	44.876		2241	0.41													657							
515	859	5.406	34.651	27.390	45.062		2236	0.58													859							
517	1042	4.809	34.706	27.503	45.231		2231	0.48													1042							
518	1120	4.725	34.751	27.548	45.283		2221	0.59													1120							
519	1201	4.738	34.814	27.597	45.328		2221	0.46													1201							
521	1400	4.529	34.966	27.740	45.488		2194	0.85				0.02+0.06									1400							
522	1499	4.256	34.983	27.783	45.557		2177					0.06+0.06									1499							
523	1594	4.038	34.984	27.807	45.603		2181	0.93													1594							
102	1792	3.605	34.973	27.842	45.682		2169	0.96				-0.05+0.06									1792							
103	1940	3.366	34.964	27.858	45.723		2181	0.75				-0.03+0.06									1940							
104	2093	3.233	34.961	27.868	45.747		2170	0.60													2093							
107	2541	2.825	34.944	27.891	45.813		2180	0.77													2541							
108	2691	2.747	34.941	27.896	45.826		2177	0.75													2691							
109	2838	2.627	34.931	27.898	45.842		2182	0.92													2838							
111	3131	2.411	34.920	27.908	45.874		2190	0.89													3131							
112	3282	2.318	34.915	27.911	45.888		2187	0.99													3282							
115	3440	2.219	34.912	27.917	45.904		2191	0.82													3440							
117	3745	2.015	34.896	27.920	45.930		2191	0.92													3745							
118	3894	1.962	34.898	27.926	45.941		2180	0.61													3894							
119	4043	1.910	34.894	27.927	45.948		2187	0.80													4043							
120	4188	1.847	34.886	27.925	45.953		2191	0.68													4188							
121	4336	1.733	34.872	27.923	45.963		2200	0.86													4336							
122	4485	1.382	34.833	27.917	45.997		2210	0.61													4485							
315	4498	1.297	34.820	27.912	46.002		2213(I)													17 +1.6	4498							
316	4571	1.230	34.810	27.909	46.006		2226(I)													13 +1.6	4571							
123	4607	1.228	34.811	27.909	46.007		2231	0.61													4607							
317	4636	1.176	34.801	27.905	46.009		2230(I)													15 +1.6	4636							
318	4676	1.164	34.805	27.909	46.014		2227(I)													10 +1.6	4676							
319	4705	1.162	34.804	27.908	46.014		2226(I)													14 +1.6	4705							
124	4725	1.161	34.806	27.910	46.015		2225	0.42													4725							
320	4735	1.157	34.803	27.908	46.014															8 +1.6	4735							
321	4750	1.155	34.804	27.909	46.015															14 +1.6	4750							
322	4767	1.155	34.804	27.909	46.015															16 +1.6	4767							
323	4778	1.154	34.803	27.908	46.014															11 +1.6	4778							
324	4789	1.152	34.803	27.908	46.015															12 +1.6	4789							

(I) INTERPOLATED FROM NISKIN DATA

STATION 40 — **POSITION: 3°56'N 38°31'W** — **DATE: 19 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								SIO UH*	UM UW*			UM	MCM			MIT	LDGO	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
701	1	27.637	35.986	23.300	39.408		2006	2.06				2.53+0.10				41.0				32	1							
835	5		36.004				2006(I)		107.8									1.09 +0.13	0.33+0.03		5	10.0+1.1	13.7+1.0	0.050+0.010				
925	25	27.564	36.019	23.348	39.459		2005(I)										7.5 +0.3				25							
702	36	27.554	35.993	23.332	39.443		2005						-1.0	3.72	14.84	39.3				28	36							
703	80	27.511	36.032	23.375	39.487		2011	2.11								38.4				20	80							
836	80		36.083				2011(I)		105.6									1.27 +0.14	0.35+0.04		80	8.0+2.2		0.038+0.005				
837	100		36.151				2039(I)		96.7									1.48 +0.18	0.35+0.04		100	14.5+1.3	18.2+1.1	0.045+0.005				
704	135	21.247	36.304	25.439	41.880		2096	1.34*					1.3	3.80	15.56	39.5				22	135							
838	140		35.608				2102(I)											0.36 +0.05	0.33+0.05		140							
1086	149	13.83	35.398	26.561	43.504		2111(I)		9.9								9.1 +0.5				149	5.7+0.8	8.9+0.5	0.070+0.010				
1087	197	11.13	35.054	26.831	43.988		2151(I)		-40.6								8.4 +0.4				197	3.3+0.9	4.5+0.5	0.110+0.150				
839	200		35.118				2153(I)											0.23 +0.05			200							
705	214	10.682	35.006	26.876	44.071		2160					0.39+0.09				45.4				15	214							
706	296	9.447	34.872	26.986	44.286		2184						-0.4	3.92	16.89	45.7				43	296							
1088	296	9.81	34.896	26.942	44.211		2184(I)		-58.2								9.2 +0.4				296	1.9+0.9	5.1+0.9					
840	300		34.965				2185(I)											0.15 +0.04	0.22+0.03		300							
707	375	8.281	34.754	27.079	44.483		2203	0.77*				0.06+0.09				47.7				11	375							
1089	392	8.50	34.779	27.063	44.447		2200(I)		-80.6								9.7 +0.6				392	0.2+0.8	2.0+0.4	0.040+0.005				
708	444	7.537	34.662	27.118	44.591		2193	0.87*					1.3	3.93	17.06					12	444							
1090	496		34.712				2212(I)		-88.6								10.8 +0.5				496	-0.2+0.8	0.0+0.9	0.030+0.005				
709	519	6.843	34.638	27.196	44.733		2222					0.18+0.09				51.2				19	519							
710	592	6.095	34.589	27.256	44.864		2224	0.69*					1.1	4.23	18.31	54.8				13	592							
711	667	5.416	34.548	27.308	44.982		2225					-0.02+0.09								14	667							
1091	685	5.45	34.549	27.304	44.975		2224(I)		-101.7												685	0.4+0.9						
712	743	4.995	34.543	27.353	45.068		2221	0.61*					1.8	4.01	17.39	57.3				13	743							
589	790	4.83	34.554	27.379	45.110		2227(I)		-110.9								11.9 +0.5				790	0.2+1.0	0.8+0.9					
715	811	4.777	34.564	27.394	45.130		2230					0.10+0.09								14	811							
716	883	4.637	34.594	27.433	45.182		2227	0.19*					1.9	3.98	17.49	60.1				18	883							
590	889	4.64	34.604	27.440	45.187		2227(I)		-109.5								12.3 +0.8				889	0.0+0.9	1.1+0.7	0.011+0.003				
717	940	4.540	34.617	27.462	45.220		2226					0.04+0.09								33	940							
591	988	4.47	34.650	27.495	45.257		2223(I)		-108.1								12.0 +0.5				988	-0.5+0.8	0.5+0.3	0.060+0.008				
718	999	4.482	34.655	27.499	45.261		2223	0.62*					2.0	4.01	17.44	58.8				25	999							
719	1058	4.524	34.713	27.540	45.296		2227									57.8				12	1058							
592	1086	4.44	34.728	27.560	45.323		2221(I)		-107.7								13.2 +0.6				1086	0.5+1.0						
720	1123	4.450	34.733	27.564	45.327		2214	0.61*				-0.04+0.09	1.7	4.02*						15	1123							
721	1174	4.483	34.792	27.607	45.365		2217													10	1174							
722	1221	4.485	34.826	27.634	45.390		2201	0.76*					0.4	4.04	17.69	56.5				9	1221							
723	1285	4.498	34.885	27.679	45.433		2202					0.02+0.09								14	1285							
101	1301	4.491	34.895	27.688	45.442		2196													12	1301							
724	1346	4.394	34.913	27.713	45.476		2186	0.76*								55.3				8	1346							
593	1386	4.30	34.927	27.733	45.505		2188(I)		-92.3								10.9 +0.5				1386	1.3+1.4	0.9	-0.010+0.010				
102	1401	4.295	34.932	27.739	45.511		2189					-0.01+0.09	1.0							10	1401							
103	1552	4.128	34.971	27.787	45.575		2180	0.66								52.4				12	1552							
594	1685		34.972				2173(I)		-78.1								9.0 +0.3				1685		0.9	0.020+0.006				
104	1703	3.877	34.976	27.817	45.630		2172	0.90				-0.02+0.09	0.3	4.04*		52.0				11	1703							
105	1851	3.626	34.969	27.837	45.675		2172	0.98				-0.18+0.09				53.1				14	1851							
289	1979	3.459	34.968	27.851	45.707		2168(I)		-85.7*								10.6 +0.6				1979	0.5+0.9	1.5+0.4	0.007+0.005				
106	1992	3.437	34.964	27.851	45.709		2168	0.74				0.05+0.09	0.7	4.07	17.92	52.9					1992							
107	2140	3.210	34.958	27.868	45.749		2172	0.36								55.4				9	2140							
								0.94*																				
108	2290	3.011	34.949	27.879	45.781		2170	1.03					2.0			58.8				13	2290							
109	2440	2.871	34.943	27.887	45.804		2176	0.86								61.8				8	2440							
290	2477	2.826	34.941	27.888	45.811		2176(I)		-89.1*								11.6 +0.6				2477	0.5+1.0	0.9	0.007+0.002				
110	2589	2.729	34.937	27.894	45.827		2176	0.92					2.3	4.05		61.0					2589							
111	2741	2.604	34.930	27.900	45.845		2183	1.08												13	2741							
112	2890	2.504	34.921	27.901	45.857		2199	1.06					3.5	4.17	18.38	64.1					2890							
291	2970	2.436	34.920	27.905	45.869		2196(I)		-88.2*								12.8 +0.7				2970	-0.6+0.8	1.6+0.6	0.030+0.005				
115	3053	2.395	34.919	27.908	45.877		2189	0.87				0.10+0.09				65.8				15	3053							
116	3202	2.336	34.915	27.910	45.885		2182	0.92					2.4	4.07	17.95	64.7				13	3202							
117	3352	2.265	34.912	27.913	45.895		2185	1.08								62.1				16	3352							
292	3467		34.909				2174(I)		-100.2+								14.0 +0.7				3467	0.3+0.9	3.6+1.5	-0.007+0.002				
118	3503	2.192	34.913	27.920	45.910		2171	0.98					1.6	4.05	17.96	64.6				9	3503							
119	3655	2.065	34.901	27.920	45.924		2183	1.06								63.0				12	3655							
120	3805	1.968	34.892	27.921	45.936		2178	1.02					1.0	4.11	18.22	66.7				16	3805							
121	3956	1.850	34.884	27.924	45.951		2191	1.05								68.5				11	3956							
393	3974	1.861	34.885	27.923	45.950		2191(I)		-96.3*								14.1 +0.4				3974	0.1+0.8	1.3+0.4	0.034+0.008				
122	4056	1.694	34.864	27.919	45.964		2192	0.88					1.9	4.11	18.28	70.2				10	4056							
123	4156	1.490	34.841	27.915	45.984		2210	0.85								76.7				12	4156							
394	4170	1.361	34.828	27.914	45.996		2210(I)		-119.4*								15.0 +0.5				4170	2.4+1.4	1.1+0.3	0.016+0.007				
124	4244	1.291	34.823	27.915	46.005		2213	0.52*				0.02+0.09	2.8			79.7					4244							
												PRECISION:	0.2	0.01	0.05													
														0.04*														

STATION 41 — **POSITION: 2°0'N 37°21'W** — **DATE: 21 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																	LDGO											
225	5	27.69	36.045	23.328	39.431												7.1 +0.3			5								

(I) INTERPOLATED FROM NISKIN DATA

STATION 42 — **POSITION: 0°58'N 37°4'W** — **DATE: 21 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH									LDGO	LDGO	LDGO	LDGO								
735	5		33.98																									
501	7	27.297	35.933	23.368	39.493		2009	1.98										1.53 +0.17	0.40+0.03		5							
503	82	27.197	35.973	23.429	39.559		2013	2.08													7							
506	194	12.214	35.185	26.728	43.798		2142	1.08													82							
508	347	10.613	34.990	26.876	44.078		2164	0.94													194							
510	496	7.255	34.641	27.141	44.640		2202	0.74													347							
511	577	6.413	34.570	27.200	44.779		2208	0.74													496							
515	744	5.063	34.514	27.322	45.031		2225	0.69													577							
518	975	4.423	34.634	27.488	45.257		2211	0.64													744							
521	1257	4.353	34.897	27.705	45.472		2196	0.72													975							
524	1563	4.066	34.967	27.790	45.584		2170	0.81													1257							
102	1646	3.893	34.968	27.809	45.620		2169	0.82													1563							
103	1799	3.654	34.971	27.835	45.671		2178	0.92													1646							
105	2099	3.321	34.966	27.864	45.733		2173	0.86													1799							
107	2378	2.906	34.949	27.888	45.802		2179	0.78													2099							
109	2719	2.647	34.931	27.897	45.838		2178	0.80													2378							
111	2998	2.452	34.920	27.904	45.866		2190	0.89													2719							
115	3307	2.307	34.918	27.915	45.892		2187	0.83													2998							
117	3604	2.119	34.906	27.920	45.918		2176	0.92													3307							
119	3963	1.865	34.886	27.924	45.950		2194	0.91													3604							
121	4210	0.901	34.777	27.903	46.039		2248	0.63													3963							
315	4239	0.821	34.770	27.903	46.047		2248(I)														4210							
316	4314	0.694	34.751	27.895	46.055		2250(I)														13 +1.6	4239						
123	4367	0.671	34.750	27.896	46.058		2253	0.54													7 +1.6	4314						
317	4380	0.675	34.752	27.897	46.059		2253(I)														4367							
318	4419	0.670	34.749	27.895	46.057		2252(I)														9 +1.6	4380						
319	4449	0.660	34.745	27.893	46.056		2251(I)														3 +1.6	4419						
320	4479	0.658	34.746	27.893	46.057		2250(I)														8 +1.6	4449						
321	4494	0.655	34.750	27.897	46.061		2250(I)														12 +1.6	4479						
322	4507	0.651	34.747	27.895	46.059		2250(I)										19.5 +0.5				11 +1.6	4494						
323	4519	0.652	34.745	27.893	46.057		2250(I)														14 +1.6	4507						
324	4527	0.649	34.745	27.893	46.058		2249(I)														13 +1.6	4519						
																					16 +1.6	4527						

STATION 44 — **POSITION: 0°1'N 35°58'W** — **DATE: 22 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	LDGO									
235	5		36.02															1.66 +0.18	0.31+0.07		5							

STATION 45 — **POSITION: 0°30'S 34°59'W** — **DATE: 23 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	LDGO									
235	5		36.02															1.26 +0.15	0.37+0.03		5							

STATION 46 — **POSITION: 0°59'S 34°2'W** — **DATE: 23 OCT 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH									LDGO			LDGO								
625	5	27.01	36.054	23.550	39.688												7.7 +0.2				5							
501	9	26.66	36.056	23.660	39.816		1998	0.67													9							
502	73	26.21	36.094	23.827	40.004		2021	2.06													73							
504	153	13.00	35.296	26.657	43.665		2156	0.98													153							
632	200	12.29	35.196	26.722	43.785		2181(I)										8.7 +0.2				200							
506	282	11.06	35.054	26.844	44.007		2186	0.68													282							
508	411	7.45	34.652	27.123	44.604		2204	0.75													411							
510	540	6.46	34.575	27.198	44.772		2206	0.70													540							
512	684	5.21	34.494	27.289	44.984		2212	0.71													684							
516	793	4.504	34.505	27.369	45.125		2218	0.72													793							
518	966	4.307	34.627	27.495	45.276		2223(I)	0.63													966							
520	1107	4.383	34.809	27.631	45.398		2207	0.72													1107							
522	1254	4.321	34.884	27.698	45.469		2190	0.80													1254							
524	1363	4.197	34.922	27.741	45.523		2190(I)	0.80													1363							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 46 — *CONTINUED*

POSITION: 0°59'S 34°2'W

DATE: 23 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{228}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH									LDGO			LDGO								
102	1395	4.190	34.923	27.742	45.525		2188	0.89													1395							
105	1695	3.942	34.973	27.808	45.614		2175	1.01													1695							
106	1844	3.628	34.966	27.834	45.672		2165	1.03													1844							
107	1992	3.427	34.963	27.851	45.710		2175	1.03													1992							
108	2283	3.107	34.958	27.877	45.769		2160	1.01													2283							
109	2494	2.822	34.937	27.886	45.809		2180	1.04													2494							
110	2643	2.730	34.934	27.892	45.824		2177	0.97													2643							
111	2793	2.621	34.929	27.897	45.841		2183	0.94													2793							
112	2993	2.518	34.928	27.905	45.860		2173	0.97													2993							
116	3401	2.229	34.907	27.912	45.899		2174	0.99													3401							
118	3824	2.020	34.897	27.921	45.930		2173	1.03													3824							
119	3938	1.911	34.888	27.922	45.943		2189	0.84													3938							
120	3986	1.885	34.885	27.922	45.945		2177	0.72													3986							
121	4038	1.690	34.861	27.917	45.963		2203	0.90													4038							
122	4143	1.232	34.803	27.903	46.001		2222	0.60													4143							
315	4235	0.975	34.784	27.904	46.031		2238(I)													17 +1.5	4235							
123	4283	0.867	34.765	27.896	46.035		2244	0.59													4283							
316	4294	0.792	34.759	27.896	46.044		2245(I)													5 +1.6	4294							
317	4320	0.746	34.754	27.895	46.048		2246(I)													12 +1.6	4320							
318	4346	0.712	34.754	27.897	46.054		2247(I)													12 +1.6	4346							
319	4367	0.661	34.749	27.896	46.059		2248(I)													11 +1.6	4367							
320	4388	0.567	34.736	27.891	46.065		2249(I)													15 +1.6	4388							
321	4404	0.556	34.737	27.892	46.067		2250(I)													17 +1.6	4404							
322	4419	0.553	34.735	27.891	46.066		2251(I)													18 +1.6	4419							
124	4427	0.548	34.738	27.894	46.070		2251	0.42										21.8 +0.1			4427							
323	4429	0.554	34.734	27.890	46.065															11 +1.6	4429							
324	4437	0.553	34.736	27.892	46.067															20 +1.6	4437							

STATION 48

POSITION: 4°0'S 29°0'W

DATE: 25 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{228}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH		SIO	UM UW*			UM	----------MCM----------			MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	SIO	SIO		
814	5																7.8 +0.4				5							
635	5		36.092						83.0*									1.03 +0.15	0.20+0.10		5							
901	11	26.15	36.08	23.836	40.017		2038	2.06				2.22+0.10								13*	11							
902	30	26.06	36.08	23.862	40.048	-0.8	2025						-2.7	3.76	15.02					26*	30							
1186	44	26.07	36.080	23.857	40.041		2030(I)														44					11.6 +1.2	0.20 +0.02	
903	61	26.01	36.08	23.880	40.068		2035					2.15+0.10								24*	61							
636	70		36.715				2038(I)		72.5*									1.22 +0.14	0.18+0.03		70	9.8+0.9						
904	82	24.88	36.05	24.199	40.446	-0.2	2043	1.96					-1.3	3.80	15.09					46*	82							
637	100		36.487				2099(I)		84.6*												100							
905	119	17.10	35.80	26.130	42.838		2159													14*	119							
906	154	13.72	35.38	26.573	43.525	5.0	2150	1.25				0.71+0.09	-0.3	4.19	17.37					14*	154							
638	160		35.237				2155(I)		-34.9*									0.21 +0.04	0.39+0.04		160	5.6+0.9						
830	175	12.961	35.266	26.642	43.653		2169(I)										8.4 +0.1				175							
907	193	11.37	35.09	26.815	43.952		2187													8*	193							
1187	195	11.21	35.049	26.812	43.963		2187(I)		-63.2*												195	1.8+0.3	3.1+0.4	0.200+0.040				
639	250		34.938				2171(I)											0.05 +0.04	0.18+0.04		250							
908	274	9.84	34.89	26.934	44.201	7.7	2160					0.23+0.09	-0.6	4.14	17.63					11*	274							
1003	288	9.57	34.85	26.948	44.240		2168(I)													16 +1.6	288							
1188	295	8.94	34.781	26.996	44.341		2173(I)		-79.3*												295	0.6+1.1						
640	350		34.737				2213(I)											0.06 +0.04	0.28+0.03		350							
909	353	8.28	34.72	27.052	44.457		2215													8*	353							
1189	395	7.54	34.649	27.107	44.580		2221(I)		-91.5*												395							
910	433	7.15	34.63	27.148	44.657		2226	0.60				0.05+0.09	0.2	3.98	17.25					14*	433							
1190	495		34.538				2227(I)		-98.5*												495	-1.0+1.0						
911	512	6.06	34.53	27.214	44.826		2227													12*	512							
912	594	5.29	34.48	27.269	44.957	7.1	2210	0.77				0.07+0.09	0.5	4.00	17.47					8*	594							
1191	673	4.65	34.467	27.330	45.081		2226(I)		-114.2*												673							
915	681	4.659	34.46	27.325	45.075		2228					0.31+0.20								14*	681							
1192	692		34.446				2228(I)														692							
916	760	4.379	34.47	27.363	45.141	5.4	2224					0.19+0.09	1.7	4.08	17.76					13*	760					8.7 +0.9	0.38 +0.04	
1193	840	4.21	34.495	27.400	45.194		2230(I)		-113.2*												840	0.6+1.2						
917	842	4.229	34.50	27.403	45.195		2230	0.77				-0.08+0.09								9*	842							
918	920	4.177	34.54	27.440	45.236		2227(I)						2.4	4.04						13*	920							
1194	990		34.553				2224(I)														990							
919	1001	4.174	34.60	27.488	45.282		2224													8*	1001						0.39 +0.04	
486	1070	4.16	34.683	27.554	45.347		2216(I)		-112.3*												1070	1.2+0.9						
920	1090	4.123	34.67	27.549	45.346	5.5	2214	0.82					2.4	4.09	17.83					18*	1090							
921	1179	4.257	34.78	27.622	45.402		2216	0.88												9*	1179							
487	1217	4.31	34.832	27.656	45.429		2210(I)		-100.3*												1217							
922	1268	4.294	34.85	27.674	45.448		2202	0.92					1.4	4.07	17.75					8*	1268							
923	1358	4.245	34.88	27.702	45.481	4.5	2204	0.95												11*	1358							
488	1367	4.27	34.917	27.728	45.503		2203(I)		-93.4*								10.8 +0.3				1367							
489	1388	4.22	34.921	27.737	45.517		2199(I)														1388							
101	1402	4.233	34.915	27.732	45.510		2196													16*	1402					7.3 +0.7	0.33 +0.03	
924	1447	4.185	34.92	27.741	45.524		2186	1.01												8*	1447							
102	1577	3.931	34.947	27.788	45.597	3.0	2180						0.6	4.06	17.77					9*	1577							
103	1753	3.652	34.959	27.826	45.662		2181	1.08												13*	1753							
490	1804	3.587	34.959	27.832	45.675		2178(I)		-88.7												1804	1.1+1.1						
491	1823	3.54	34.959	27.836	45.682		2176(I)														1823							
104	1952	3.391	34.955	27.848	45.711		2170						1.0	4.13	18.12					11*	1952					6.4 +0.6	0.25 +0.03	
105	2152	3.170	34.947	27.863	45.749	2.9	2185	1.06												11*	2152							
492	2259		34.941				2181(I)		-90.4								10.9 +0.5				2259							

(I) INTERPOLATED FROM NISKIN DATA

POSITION: 4°0'S 29°0'W

DATE: 25 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{16}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		SIO	UM UW*			UM	----------MCM----------			MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	SIO	SIO		
106	2351	2.954	34.932	27.870	45.779		2178						2.5	4.06	17.98					8*	2351							
493	2359	2.939	34.934	27.873	45.783		2179(I)														2359				6.9 +0.7	0.50 +0.05		
107	2551	2.756	34.921	27.879	45.809		2196	1.04												10*	2551							
494	2652	2.662	34.922	27.888	45.828		2192(I)		-93.4												2652	0.9+0.9						
108	2752	2.607	34.921	27.892	45.838	2.2	2187						0.2							9*	2752							
109	2952	2.467	34.918	27.902	45.862		2192	1.10												10*	2952							
286	3002	2.44	34.908	27.895	45.858		2189(I)														3002				5.7 +0.6	0.76 +0.08		
287	3009	2.44	34.915	27.900	45.863		2189(I)		-96.5*								13.9 +0.4				3009							
110	3152	2.377	34.915	27.907	45.877		2181						1.9	4.13	18.29					10*	3152							
111	3352	2.296	34.913	27.912	45.890	2.4	2192	1.05												6*	3352							
288	3408	2.29	34.902	27.903	45.882		2190(I)		-99.1*								12.0 +0.6				3408							
112	3552	2.216	34.906	27.913	45.900		2186						1.9	4.09	18.22					10*	3552							
289	3705	2.11	34.894	27.911	45.909		2192(I)		-95.8*								12.6 +0.7				3705				5.8 +0.6			
115	3752	2.058	34.898	27.919	45.924		2194	1.11												10*	3752							
116	3901	1.792	34.865	27.913	45.947	1.3	2192						1.9	4.07	18.15	73.1				15*	3901							
117	4052	1.370	34.822	27.909	45.990		2227	0.85								80.9				8*	4052							
290	4101	1.20	34.797	27.899	46.000		2231(I)		-129.4*								19.4 +0.9				4101	1.9+1.8						
118	4201	0.974	34.783	27.904	46.031		2237						5.1	4.18	18.49	88.9				20*	4201							
119	4350	0.716	34.752	27.895	46.052	3.8	2257	0.75								94.6				7*	4350							
291	4399	0.64	34.740	27.889	46.053		2256(I)														4399				7.9 +0.8	1.44 +0.14		
292	4497	0.58	34.730	27.885	46.058		2253(I)		-147.9*								22.1 +0.6				4497							
120	4498	0.590	34.741	27.893	46.064		2253	0.82					5.6	4.17		100.6				10*	4498							
121	4649	0.479	34.729	27.890	46.074		2272	0.66												11*	4649							
122	4797	0.339	34.710	27.883	46.083	2.5	2269	0.61					6.4	4.20	18.55					9*	4797							
1004	4812	0.319	34.710	27.884	46.087		2270(I)													4 +1.6	4812							
1005	4862	0.298	34.707	27.883	46.088		2272(I)													6 +1.5	4862							
1006	4912	0.274	34.705	27.882	46.090		2273(I)														4912				7.7 +0.8			
123	4944	0.249	34.703	27.882	46.093		2275	0.60												16*	4944							
1008	4960	0.251	34.703	27.882	46.093		2275(I)													6 +1.6	4960							
1009	4960	0.251	34.703	27.882	46.093		2275(I)													4 +1.6	4960							
1007	4961	0.250	34.703	27.882	46.093		2275(I)														4961				8.7 +0.9			
1010	4978	0.227	34.701	27.882	46.095		2275(I)														4978				8.2 +0.8			
1012	4995	0.224	34.700	27.881	46.095		2274(I)													5 +1.5	4995							
1011	4996	0.224	34.699	27.880	46.094		2274(I)														4996				7.8 +0.8			
1017	5007	0.223	34.699	27.880	46.094		2274(I)													12 +1.6	5007							
1020	5016	0.219	34.699	27.880	46.095		2274(I)													2 +1.6	5016							
1019	5018	0.218	34.699	27.881	46.095		2274(I)														5018				7.6 +0.8			
1018	5020	0.217	34.699	27.881	46.095		2274(I)														5020				6.7 +0.7			
1021	5026	0.214	34.698	27.880	46.095		2274(I)													20 +1.6	5026							
293	5031	0.21	34.692	27.874	46.090		2274(I)		-155.1*								21.8 +0.9				5031	1.3+1.0						
1022	5033	0.210	34.699	27.881	46.096		2274(I)														5033				7.3 +0.7			
1023	5033	0.210	34.699	27.881	46.096		2274(I)														5033				7.1 +0.7			
294	5040	0.208	34.699	27.881	46.096		2274(I)														5040					1.07 +0.11		
124	5075	0.212	34.695	27.878	46.093	4.7	2273	0.58					6.5	4.21	18.15					8*	5075							

PRECISION: 0.2 0.02 0.05

STATION 49

POSITION: 7°56'S 28°12'W

DATE: 29 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{16}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM				MIT	LDGO	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
501	2	26.11	36.282	24.000	40.179		2029	1.97				2.15+0.10								27	2							
415	5		36.280				2027(I)										7.9 +0.4				5							
635	5		36.279				2027(I)											1.09 +0.13	0.21+0.01		5							
786	6	26.18	36.281	23.974	40.149		2026(I)		94.3												6	9.5+0.2	12.8+0.4	0.340+0.030				
502	32	26.06	36.275	24.009	40.190		2015													19	32							
636	40		36.273				2017(I)											1.32 +0.16	0.37+0.04		40							
503	64	26.04	36.274	24.014	40.196		2027	1.86				2.32+0.09								25	64							
787	66	26.06	36.272	24.006	40.187		2028(I)		91.3												66	8.1+0.9	13.6+0.9					
637	70		36.271				2029(I)											1.32 +0.15	0.40+0.05		70							
504	90	25.45	36.533	24.392	40.598		2035													23	90							
638	105		36.621				2065(I)											1.07 +0.12	0.32+0.04		105							
505	116	22.49	36.493	25.235	41.602		2088	1.61												29	116							
788	116	22.42	36.449	25.223	41.595		2088(I)		74.2												116	8.2+0.3	8.0+0.4	0.240+0.020				
506	144	19.11	36.159	25.899	42.471		2112					1.31+0.09								14	144							
789	166	16.41	35.741	26.248	43.003		2154(I)		5.5												166	5.4+0.9	6.7+1.1					
507	170	16.06	35.697	26.297	43.076		2160	1.06												12	170							
430	175		36.648				2159(I)										8.2 +0.1				175							
508	195	13.64	35.414	26.616	43.572		2147					0.53+0.09								10	195							
509	256	11.27	35.100	26.843	43.988		2194	0.49												11	256							
790	256		35.033				2194(I)		-70.3												256	0.0+0.3	-0.8+0.2	0.040+0.020				
510	302	9.47	34.869	26.978	44.277		2193					0.12+0.09									302							
511	349	7.72	34.662	27.090	44.546		2198	0.72													349							
791	375	7.123	34.603	27.130	44.642		2197(I)		-80.9												375	1.5+0.9	-0.5+1.0					
512	394	7.13	34.609	27.134	44.645		2197					-0.05+0.09									394							
792	445		34.584				2222(I)		-93.5												445		0.2+0.2	0.010+0.020				
515	459	6.69	34.587	27.177	44.730		2229	0.59													459							
516	508	6.37	34.562	27.199	44.782		2221					-0.05+0.09								8	508							
793	598	5.612	34.509	27.253	44.909		2227(I)		-103.8												598	0.1+0.8	-0.3+0.9					
517	610	5.73	34.516	27.245	44.890		2228	0.69				0.00+0.09								5	610							
518	711	5.02	34.475	27.296	45.011		2223					0.03+0.09								11	711							
794	742		34.469				2226(I)		-110.7												742		1.2+0.2	0.010+0.006				
519	810	4.562	34.466	27.340	45.100		2231	0.51				-0.06+0.09								19	810							
391	844	4.35	34.479	27.372	45.153		2225(I)		-120.4												844	0.2+0.9	-1.0+0.7					
520	909	4.129	34.495	27.409	45.211		2216					0.06+0.09								7	909							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 49 — *CONTINUED*

POSITION: 7°56'S 28°12'W

DATE: 29 OCT 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UW			UM				MIT	LDGO	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
390	994		34.561				2230(I)		-120.1																			
521	1009	3.945	34.556	27.476	45.295		2232	0.14													994							
522	1106	3.899	34.630	27.540	45.361		2214	0.55													1009							
523	1205	4.035	34.737	27.611	45.415		2217	0.77													1106							
389	1245	4.04	34.774	27.638	45.440		2210(I)		-110.1												1205							
101	1285	4.058	34.801	27.659	45.459		2202	0.41													1245	0.2+0.8	-0.7+1.1					
388	1292	4.05	34.809	27.666	45.466		2201(I)		-113.4												1285							
524	1403	4.103	34.878	27.716	45.509		2187														1292	1.5+0.4	1.7+0.3	0.030+0.070				
102	1484	3.980	34.924	27.765	45.569		2163	0.94													1403							
103	1686	3.664	34.953	27.820	45.655		2178	0.84													1484							
387	1688	3.67	34.959	27.824	45.658		2178(I)		-92.4												1686							
104	1888	3.337	34.947	27.847	45.716		2172														1688	-0.5+0.9	-0.8+1.1					
105	2085	3.102	34.939	27.863	45.756		2180	0.91													1888							
386	2087	3.07	34.943	27.868	45.765		2180(I)		-97.2												2085							
106	2281	2.849	34.922	27.872	45.792		2182														2087	0.5+0.3	-0.2+0.2	0.000+0.010				
286	2370		34.920				2189(I)		-105.1												2281							
107	2481	2.681	34.915	27.881	45.819		2193	0.90													2370	0.1+0.4	0.1+0.9					
108	2680	2.562	34.910	27.887	45.838		2164														2481							
287	2866	2.49	34.913	27.895	45.853		2191(I)		-105.4												2680							
109	2880	2.481	34.911	27.895	45.854		2193	0.98													2866							
110	3080	2.398	34.911	27.902	45.870		2162														2880							
111	3280	2.308	34.910	27.908	45.886		2191	0.99													3080							
288	3363	2.27	34.907	27.908	45.890		2185(I)		-100.7												3280							
112	3480	2.197	34.904	27.912	45.902		2176														3363	-0.3+0.8	-1.0+0.9					
115	3693	1.988	34.888	27.916	45.929		2196	0.98													3480							
116	3896	1.638	34.843	27.910	45.962		2197	0.47													3693							
289	3959	1.54	34.839	27.910	45.972		2208(I)		-124.4												3896							
117	4096	1.199	34.803	27.905	46.006		2231	0.78													3959							
118	4297	0.787	34.762	27.899	46.047		2221	0.39								92.9					4096							
290	4457	0.61	34.743	27.893	46.062		2248(I)		-151.2												4297							
119	4501	0.550	34.737	27.893	46.068		2256	0.46								97.3					4457	0.7+0.9	-0.8+1.2					
120	4702	0.434	34.724	27.889	46.078		2257	0.52								96.1					4501							
121	4903	0.339	34.714	27.886	46.087		2269	0.27								99.1					4702							
291	4935		34.714				2268(I)		-156.0												4903							
294	4995	0.718	34.722	27.894	46.099		2263(I)														4935							
122	5104	0.239	34.708	27.887	46.099		2261	0.40													4995	-0.1+0.8	0.3+1.5					
123	5304	0.188	34.697	27.881	46.099		2270	0.38													5104							
124	5519	0.138	34.699	27.885	46.108		2246	0.45													5304							
																					5519							

STATION 50

POSITION: 8°26'S 34°11'W

DATE: 5 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO											
230	100	24.497	37.051	25.069	41.315												8.0 +0.3				100							

STATION 52

POSITION: 8°54'S 33°17'W

DATE: 5 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO											
230	85	25.360	36.612	24.478	40.688												7.4 +0.4				85							

(I) INTERPOLATED FROM NISKIN DATA

STATION 53

POSITION: 11°59'S 27°59'W

DATE: 7 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH									LDGO			LDGO								
114	3	25.919	36.597	24.296	40.477																							
501	7	26.03	36.620	24.280	40.455		2027	2.07									7.8 +0.5				3							
130	50	25.448	36.872	24.647	40.847		2049(I)														7							
503	95	24.13	36.901	25.066	41.334		2065	2.03									7.1 +0.2				50							
505	199	15.28	35.610	26.410	43.245		2120	1.25													95							
509	541	6.02	34.523	27.214	44.830		2205	0.65													199							
511	799	4.38	34.432	27.333	45.113		2216	0.65													541							
512	898	4.00	34.447	27.384	45.201		2210	0.60													799							
515	997	3.85	34.511	27.450	45.280		2222	0.74													898							
516	1071	3.75	34.565	27.503	45.342		2220	0.57													997							
517	1147	3.77	34.636	27.557	45.392		2214	0.66													1071							
518	1222	3.81	34.715	27.616	45.443		2207	0.85													1147							
519	1296	3.886	34.774	27.655	45.474		2199(I)	0.66													1222							
520	1372	3.907	34.832	27.699	45.514		2195	0.69													1296							
521	1445	3.914	34.877	27.735	45.547		2199	0.82													1372							
522	1522	3.824	34.902	27.763	45.584		2185	0.92													1445							
523	1597	3.690	34.913	27.786	45.619		2179	0.62													1522							
202	1864	3.302	34.935	27.841	45.714		2165	0.92													1597							
204	2267	2.840	34.922	27.873	45.794		2179	0.87													1864							
206	2668	2.556	34.905	27.884	45.835		2188	0.92													2267							
208	3072	2.389	34.900	27.894	45.863		2191	0.97													2668							
210	3476	2.192	34.894	27.905	45.895		2188	0.92													3072							
212	3782	1.866	34.870	27.911	45.937		2205	0.87													3476							
215	3894	1.673	34.848	27.908	45.956		2209	0.84													3782							
216	3992	1.479	34.826	27.904	45.974		2219	0.73													3894							
217	4144	1.110	34.789	27.900	46.011		2229	0.70													3992							
219	4494	0.595	34.740	27.892	46.063		2246	0.64													4144							
220	4693	0.450	34.724	27.888	46.075		2252	0.55													4494							
221	4895	0.351	34.718	27.889	46.088		2257	0.56													4693							
222	5093	0.280	34.706	27.883	46.090		2264	0.47													4895							
223	5294	0.197	34.698	27.881	46.098		2265	0.49													5093							
716	5294	0.197	34.697	27.880	46.097		2265(I)														5294							
717	5386	0.148	34.696	27.882	46.105		2265(I)														5294							
718	5438	0.130	34.695	27.882	46.107		2266(I)														5294							
719	5467	0.122	34.692	27.880	46.106		2266(I)														5294							
720	5488	0.113	34.691	27.880	46.106		2266(I)														5294							
721	5494	0.112	34.692	27.881	46.108		2266(I)														5294							
722	5506	0.104	34.690	27.879	46.107		2266(I)										22.0 +1.0				5294							
723	5517	0.099	34.691	27.880	46.109		2266(I)														5294							
724	5526	0.095	34.695	27.884	46.113		2266(I)														5294							
224	5532	0.098	34.695	27.884	46.112		2266	0.22													5294							
																					5532							

STATION 54

POSITION: 15°3'S 29°31'W

DATE: 8 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	----------MCM----------			MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
1140	3		36.783																									
914	5	26.069	36.844	24.436	40.604													0.43 +0.07	0.60+0.07		3							
501	8	26.32	36.825	24.345	40.501		2041					2.37+0.10				41.8	7.6 +0.1				5							
1141	20		36.830				2048(I)		111.1											19*	8							
502	67	25.20	37.038	24.847	41.055		2064					2.17+0.09									20	9.7+0.5	14.5+0.6	0.030+0.010				
1135	80		37.019				2063(I)		120.1											33*	67							
503	139	22.88	36.831	25.378	41.715		2061									41.1		1.00 +0.12	0.95+0.09		80	8.5+0.4	14.6+0.3	0.050+0.010				
1136	150		36.813				2067(I)		99.6											12*	139							
504	189	19.00	36.157	25.926	42.504		2092					1.44+0.09	-1.6					0.98 +0.12	0.85+0.09		150	9.7+0.6	14.9+0.3	0.040				
1137	200		35.967				2096(I)		55.8											10*	189							
505	239	15.58	35.619	26.348	43.162		2109									38.9		0.76 +0.08	0.68+0.06		200	4.8+0.3	7.0+0.4	0.100+0.020				
1138	250		35.465				2112(I)		6.3											12*	239							
506	299	13.07	35.252	26.609	43.613		2135					0.56+0.09						0.51 +0.15	0.58+0.06		250	7.1+0.4	10.2+0.6	0.070+0.010				
1139	300		35.279				2136(I)		-17.6											8*	299							
507	326	12.12	35.148	26.719	43.797		2156									40.1		1.01 +0.11	0.47+0.04		300	9.1+0.4	13.5+0.5	0.050+0.010				
508	365	10.61	34.950	26.845	44.047		2169									39.7				6*	326							
1086	394		34.852				2170(I)		-63.7											2*	365							
509	441	8.15	34.674	27.036	44.454		2172									45.4	9.8 +0.8				394	1.3+0.9	4.5+0.9					
510	492	6.85	34.557	27.131	44.670		2181					-0.03+0.09	0.3	3.91	17.13	52.3				9*	441							
1087	494		34.577				2181(I)		-92.0											6*	492							
511	591	5.23	34.427	27.234	44.930		2194					-0.08+0.09				59.1	11.0 +0.4				494	0.3+0.5	0.6+0.4	0.030+0.010				
1088	593		34.440				2194(I)		-96.6											3*	591							
512	691	4.31	34.395	27.311	45.099		2195					0.14+0.09	2.4	3.98	17.51	62.1	11.8 +0.5				593							
1089	742	9.94	34.399	26.886	44.146		2201(I)													23*	691							
515	800	3.82	34.419	27.380	45.216		2208									66.0	14.6 +0.4				742	-0.2+0.3	0.0+0.3	0.010				
1090	889	7.13	34.459	27.108	44.620		2216(I)		-122.6												800							
516	901	3.65	34.468	27.435	45.287		2217						3.6			66.9	14.2 +0.8				889							
517	1001	3.60	34.533	27.492	45.346		2218									73.8				7*	901							
1091	1036	5.39	34.566	27.224	44.903		2218(I)		-124.4											4*	1001							
518	1100	3.68	34.631	27.563	45.407		2216									66.3	13.9 +0.3				1036	0.1+0.5	-0.1+0.4	0.010				
689	1192	3.75	34.708	27.616	45.449		2210(I)		-118.8				3.0	4.04	17.75					14*	1100							
519	1200	3.77	34.715	27.621	45.453		2209									66.0	12.3 +0.2				1192	0.7	0.5+0.4	0.000+0.010				
520	1300	3.80	34.801	27.686	45.512		2201						1.8	3.99	17.67	59.0				2*	1200							
690	1391	3.80	34.852	27.725	45.549		2190(I)		-110.0											2*	1300							
521	1399	3.77	34.860	27.736	45.563		2189									57.1	11.6 +0.5				1391	0.4+0.2	0.2+0.4	0.004				
522	1499	3.63	34.890	27.773	45.614		2189									57.4					1399							
691	1592		34.915				2182(I)		-102.8								10.9 +0.6				1499							
																					1592	0.7+0.4	0.0+0.2	0.005+0.010				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 54 — *CONTINUED* | **POSITION: 15°3'S 29°31'W** | **DATE: 8 NOV 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UW			UM		10^{-5}cc/kg	MCM		MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI			
523	1599	3.48	34.906	27.800	45.656		2182										58.6				7*	1599						
201	1685	3.36	34.925	27.828	45.695		2182						2.7	3.98	17.77						8*	1685						
524	1698	3.36	34.924	27.826	45.693		2175														5*	1698						
692	1841		34.934				2173(I)		-94.0													1841	-0.1+0.5	-0.4+0.6	0.006			
202	1883	3.11	34.928	27.853	45.746		2172						2.3	4.14	17.97		60.1												
203	2081	2.89	34.918	27.865	45.780		2181										64.0				14*	1883						
693	2188	2.82	34.921	27.873	45.796		2185(I)		-108.7												13*	2081						
204	2282	2.74	34.914	27.875	45.808		2187(I)						3.4				67.5	12.8 +0.5				2188	0.5+0.2	0.0+0.2	0.020+0.010			
205	2483	2.63	34.907	27.879	45.823		2190										68.6				11*	2282						
206	2684	2.55	34.905	27.884	45.836		2190										69.1				8*	2483						
694	2739	2.53	34.910	27.889	45.843		2189(I)		-109.2												5*	2684						
207	2886	2.47	34.904	27.890	45.851		2185										70.0	14.4 +0.3				2739	0.9+0.6	0.2+0.3	0.008			
208	3086	2.380	34.904	27.898	45.868		2187						3.9	4.16	18.13		68.3				12*	2886						
209	3286	2.330	34.909	27.906	45.881		2183										69.1				9*	3086						
389	3348	2.30	34.910	27.908	45.887		2183(I)														7*	3286						
210	3488	2.191	34.900	27.910	45.900		2186										68.4	13.2 +0.5				3348	-0.3+0.1	0.1+0.2	0.000+0.010			
211	3686	2.023	34.887	27.913	45.922		2191										70.4				13*	3488						
390	3841	1.82	34.866	27.910	45.941		2196(I)		-117.5												6*	3686						
212	3884	1.704	34.857	27.913	45.957		2198						3.8				77.2	15.5 +0.5				3841	-0.5+0.3	-0.4+0.4	0.005+0.009			
215	3994	1.491	34.836	27.911	45.980		2209										78.0				9*	3884						
216	4093	1.292	34.813	27.907	45.997		2218										84.9				7*	3994						
391	4137	1.26	34.809	27.905	45.998		2222(I)		-136.4												7*	4093						
217	4294	0.964	34.785	27.906	46.034		2233										90.3	18.1 +1.6				4137	1.0+0.1	-0.1+0.1	0.000+0.020			
218	4396	0.799	34.763	27.899	46.046		2236						5.9	4.25	18.34		93.8				6*	4294						
392	4435	0.80	34.749	27.886	46.033		2240(I)		-141.5												7*	4396						
219	4493	0.685	34.750	27.895	46.055		2246										93.0	21.2 +0.7				4435	-1.0+0.8	0.2+0.3	0.016+0.009			
220	4595	0.577	34.740	27.893	46.066		2249										99.5				13*	4493						
221	4685	0.486	34.731	27.891	46.075		2253										98.3				9*	4595						
393	4734	0.46	34.718	27.882	46.068		2253(I)		-151.9												10*	4685						
222	4794	0.380	34.719	27.888	46.083		2253						6.3	4.26	18.48		101.1	21.6 +0.5				4734	1.0+1.0	0.1+0.1	0.010+0.010			
815	4874	0.222	34.711	27.890	46.104		2260(I)														6*	4794						
223	4890	0.207	34.701	27.883	46.099		2262										101.5				12 +1.6	4874						
816	4945	0.127	34.693	27.881	46.106		2264(I)														9*	4890						
817	4985	0.091	34.695	27.884	46.113		2265(I)														7 +1.6	4945						
818	5014	0.060	34.691	27.882	46.115		2266(I)														12 +1.6	4985						
819	5034	0.055	34.689	27.881	46.115		2266(I)														12 +1.6	5014						
394	5034	0.05	34.694	27.885	46.118		2266(I)		-157.3									21.2 +0.3			11 +1.6	5034						
820	5049	0.056	34.690	27.882	46.115		2267(I)															5034	-0.2+0.3	-0.2+0.4	0.010+0.010			
821	5059	0.054	34.691	27.883	46.116		2267(I)														7 +1.5	5049						
822	5068	0.050	34.690	27.882	46.116		2267(I)														9 +1.6	5059						
823	5080	0.046	34.689	27.881	46.116		2268(I)														11 +1.6	5068						
824	5083	0.044	34.691	27.883	46.118		2268(I)														8 +1.6	5080						
224	5089	0.033	34.691	27.884	46.120		2268														12 +1.6	5083						
													6.6	4.25	18.55		105.8				11*	5089						
												PRECISION:	0.3	0.02	0.05													

STATION 55 | **POSITION: 18°0'S 31°0'W** | **DATE: 11 NOV 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH										LDGO	LDGO	LDGO	LDGO			DPM/100kg			DPM/100kg		
425	3	25.829	37.268	24.829	41.001		2074(I)											9.9 +0.7				3							
301	3	25.72	37.255	24.853	41.031		2074	1.91														3							
935	5		37.13				2075(I)												0.88 +0.13	0.51+0.07		5							
430	30	25.413	37.242	24.937	41.131		2079(I)											9.4 +0.7				30							
303	48	24.71	37.187	25.109	41.340		2076	1.97														48							
307	265	15.29	35.516	26.336	43.172		2084	1.38														265							
309	436	10.04	34.842	26.862	44.114		2143	1.02														436							
311	632	5.42	34.424	27.210	44.887		2183	0.93														632							
315	783	3.99	34.400	27.348	45.167		2197	0.75														783							
317	982	3.508	34.514	27.486	45.351		2218	0.55														982							
318	1085	3.561	34.607	27.555	45.411		2205	0.70														1085							
321	1397	3.776	34.848	27.725	45.552		2188	0.72														1397							
323	1597	3.517	34.897	27.790	45.642		2180	0.76														1597							
101	1641	3.408	34.905	27.807	45.670		2172	0.80														1641							
102	1787	3.206	34.911	27.831	45.714		2180	0.90														1787							
103	1935	3.129	34.932	27.854	45.745		2174	0.96														1935							
105	2239	2.858	34.923	27.872	45.791		2174	0.85														2239							
107	2538	2.677	34.920	27.885	45.824		2177	0.80														2538							
109	2837	2.530	34.914	27.893	45.847		2180	0.79														2837							
111	3136	2.413	34.911	27.900	45.867		2184	0.75														3136							
115	3446	2.246	34.910	27.913	45.898		2181	0.81														3446							
117	3743	1.932	34.877	27.912	45.931		2188	0.80														3743							
119	3993	1.492	34.831	27.907	45.976		2208	0.82														3993							
120	4095	1.236	34.802	27.902	45.999		2225	0.77														4095							
121	4196	0.973	34.778	27.900	46.027		2228	0.66														4196							
122	4346	0.683	34.746	27.892	46.052		2246	0.50														4346							
123	4495	0.316	34.712	27.886	46.089		2256	0.45														4495							
716	4499	0.362	34.714	27.885	46.083		2256(I)														6 +1.5	4499							
717	4565	0.151	34.699	27.884	46.106		2256(I)														12 +1.6	4565							
718	4598	0.059	34.684	27.877	46.110		2257(I)														24 +1.6	4598							
719	4623	0.048	34.680	27.874	46.109		2257(I)														21 +1.6	4623							
720	4647	0.039	34.683	27.877	46.113		2257(I)														20 +1.6	4647							
721	4672	0.011	34.683	27.878	46.117		2257(I)														15 +1.6	4672							
124	4686	0.011	34.683	27.878	46.117		2257	0.50														4686							
722	4691	0.011	34.681	27.877	46.116													22.4 +0.7			23 +1.6	4691							
723	4702	0.010	34.682	27.878	46.117																17 +1.6	4702							
724	4704	0.010	34.684	27.879	46.118																22 +1.6	4704							

(I) INTERPOLATED FROM NISKIN DATA

STATION 56 | POSITION: 21°0'S 33°0'W | DATE: 12 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW		SIO	UM				MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
501	14	24.704	37.069	25.021	41.255		2056				1.08					39.2				19*	14							
935	25		37.061				2056(I)		137.7									1.10 +0.13	0.49+0.06		25	11.8+0.9	18.5+0.4	0.040+0.010				
502	77	23.680	37.069	25.325	41.614		2057				1.11	2.20+0.09								38*	77							
936	90		37.068				2058(I)		148.8									0.82 +0.09	0.53+0.05		90	12.4+0.9						
937	110		36.989				2059(I)		142.9									0.93 +0.10	0.53+0.06		110	16.0+0.5	20.9+0.4					
503	117	22.640	36.881	25.485	41.834		2059					2.02+0.10									117							
504	137	20.924	36.573	25.731	42.185		2079													17*	137							
938	150		36.508				2072(I)		117.8									0.94 +0.12	0.54+0.06		150							
505	156	19.949	36.382	25.850	42.366		2067				0.89	1.90+0.10								27*	156							
506	177	18.892	36.183	25.975	42.559		2068													16*	177							
939	190		36.004				2069(I)		95.7												190							
507	198	17.636	35.904	26.078	42.749		2070													14*	198							
508	217	16.872	35.788	26.175	42.899		2079													17*	217							
940	230		35.667				2072(I)		71.4									0.71 +0.08	0.74+0.07		230	13.9+1.0						
509	236	16.091	35.660	26.262	43.040		2068				0.61									16*	236							
886	299		35.339				2080(I)		29.0								8.0 +0.3				299	9.4+0.3	15.7+0.3	0.080+0.020				
510	302	14.164	35.356	26.460	43.380		2081					1.10+0.09								15*	302							
511	357	12.782	35.175	26.608	43.634		2089				0.40									3*	357							
512	417	11.635	35.036	26.724	43.842		2108													3*	417							
887	418		34.979				2108(I)		-37.9								8.7 +0.3				418	3.9+0.9						
514	473	10.418	34.893	26.836	44.055		2123				0.26										473							
888	517		34.705				2131(I)		-66.4								10.5 +0.5				517	1.9+0.1	3.3+0.5	0.050+0.020				
515	525	9.057	34.723	26.933	44.271		2132					0.17+0.09								45*	525							
516	606	7.078	34.531	27.080	44.598		2156													6*	606							
889	687	14.04	34.408	26.472	43.401		2181(I)		-101.6								12.3 +0.2				687	0.6+0.5						
517	694	5.421	34.418	27.204	44.882		2183				-0.03	0.19+0.09								9*	694							
518	795	4.189	34.374	27.307	45.107		2183				-0.05	0.00+0.09								13*	795							
519	894	3.614	34.407	27.391	45.248		2209				-0.08	0.04+0.09									894							
890	987	11.16	34.470	26.767	43.924		2217(I)		-129.1												987	0.2+0.4	0.0+0.3	0.020+0.010				
520	993	3.338	34.475	27.471	45.354		2217				-0.06									8*	993							
891	1087	8.80	34.566	26 959	44.320		2211(I)		-126.7								14.4 +0.5				1087	1.1+1.7						
521	1094	3.431	34.576	27.543	45.413		2210				0.00									20*	1094							
689	1185	3.68	34.695	27.612	45.453		2205(I)		-107.4								14.1 +0.6				1185							
522	1194	3.630	34.680	27.606	45.453		2204													8*	1194							
101	1240	3.745	34.741	27.643	45.477		2197													7*	1240							
690	1283		34.783				2190(I)		-106.1								12.6 +0.2				1283	-1.1+0.9						
523	1295	3.881	34.805	27.681	45.498		2188				0.06									4*	1295							
102	1389	3.924	34.888	27.742	45.553		2180													5*	1389							
524	1393	3.931	34.888	27.741	45.551		2180(I)													13*	1393							
691	1474	3.89	34.931	27.779	45.591		2178(I)		-89.0								10.7 +0.2				1474	-0.2+0.3	0.4+0.3	0.020+0.010				
103	1539	3.811	34.924	27.782	45.603		2177(I)													5*	1539							
104	1693	3.637	34.952	27.822	45.660		2173				0.18									12*	1693							
105	1842	3.434	34.952	27.842	45.700		2158													8*	1842							
692	1874		34.956				2159(I)		-85.9								11.8 +0.4				1874	-0.4+1.1						
106	1968	3.267	34.950	27.856	45.732		2161				0.27									7*	1968							
693	2072	3.15	34.950	27.866	45.754		2162(I)		-82.5								11.9 +0.4				2072							
107	2140	3.100	34.945	27.867	45.761		2163				0.24									6*	2140							
108	2142	3.100	34.945	27.867	45.761		2168				0.23									5*	2142							
109	2291	2.950	34.937	27.875	45.784		2160				0.19									13*	2291							
694	2370	2.88	34.937	27.880	45.796		2165(I)		-92.4								12.7 +0.2				2370	-0.5+0.8						
110	2434	2.832	34.933	27.882	45.804		2170				0.24									7*	2434							
111	2586	2.732	34.927	27.886	45.818		2163				0.23									6*	2586							
112	2733	2.640	34.923	27.891	45.833		2177				0.21									11*	2733							
115	2891	2.547	34.920	27.896	45.848		2174				0.23									10*	2891							
289	2895	2.55	34.919	27.894	45.846		2174(I)		-99.9								13.8 +0.4				2895							
116	3032	2.470	34.915	27.899	45.859		2173				0.23									27*	3032							
117	3176	2.355	34.910	27.904	45.877		2173				0.18									11*	3176							
118	3326	2.189	34.899	27.909	45.900		2179													11*	3326							
290	3340		34.892				2179(I)		-109.5								14.2 +0.3				3340	0.4+0.9						
119	3478	1.942	34.876	27.910	45.928		2181				0.15									12*	3478							
291	3486	1.91	34.873	27.909	45.930		2182(I)		-103.5								15.3 +0.2				3486	-0.2+0.6	-0.1+0.4	0.004				
716	3612	1.633	34.845	27.908	45.961		2197(I)													10 +1.6	3612							
120	3635	1.602	34.840	27.907	45.963		2200				0.11									8*	3635							
292	3733		34.811				2212(I)		-126.3								18.2 +0.5				3733	-0.1+0.7						
121	3783	1.278	34.809	27.904	45.997		2218				-0.02									10*	3783							
122	3959	0.954	34.772	27.896	46.026		2230									89.9				11*	3959							
293	3977	0.90	34.767	27.895	46.031		2231(I)		-146.6								20.6 +0.5				3977	-0.1+0.5	0.5+0.3					
721	4003	0.845	34.764	27.897	46.038		2232(I)									88.8					4003							
722	4086	0.691	34.745	27.891	46.050		2236(I)													13 +1.6	4086							
123	4135	0.671	34.744	27.891	46.053		2239				-0.10					94.3				16*	4135							
723	4189	0.575	34.739	27.893	46.066		2243(I)													18 +1.6	4189							
294	4277		34.726				2251(I)		-150.7								21.3 +0.6				4277							
724	4303	0.400	34.720	27.887	46.081		2254(I)									99.8				39 +1.6	4303							
124	4313	0.387	34.718	27.887	46.081		2255				-0.18					98.7					4313							
714	4316	0.399	34.720	27.888	46.081											98.3				42 +1.6	4316							

(I) INTERPOLATED FROM NISKIN DATA

STATION 57

POSITION: 23°59'S 35°1'W

DATE: 15 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								SIO									LDGO	LDGO	LDGO	LDGO								
325	3	23.56	36.678	25.065	41.369												7.4 +0.4				3							
935	5		36.65															0.85 +0.10	0.46+0.04		5							
601	12	23.573	36.699	25.077	41.379		2047	2.18													12							
603	78	21.781	36.665	25.564	41.967		2054	2.18													78							
605	168	17.846	35.990	26.092	42.747		2080	1.88													168							
607	288	14.642	35.470	26.444	43.327		2085	1.72													288							
609	386	13.059	35.271	26.626	43.629		2093	1.39													386							
611	517	9.852	34.835	26.889	44.156		2145(I)	1.41													517							
615	645	6.695	34.488	27.098	44.653		2159	1.20													645							
617	744	4.952	34.343	27.199	44.925		2176	1.10													744							
619	843	3.964	34.327	27.292	45.117		2190(I)	1.08													843							
621	944	3.554	34.378	27.373	45.238		2208	0.92													944							
623	1095	3.158	34.488	27.498	45.400		2224	0.55													1095							
203	1329	3.317	34.707	27.658	45.536		2216	0.57													1329							
205	1629	3.329	34.893	27.805	45.676		2185	0.85													1629							
207	1932	3.307	34.949	27.851	45.723		2174	0.87													1932							
209	2232	3.016	34.943	27.874	45.776		2178	1.00													2232							
211	2527	2.786	34.936	27.888	45.815		2180	0.82													2527							
215	2841	2.581	34.925	27.897	45.846		2184	0.81													2841							
217	3138	2.389	34.918	27.908	45.877		2184	0.74													3138							
219	3437	2.060	34.892	27.914	45.918		2192	0.53													3437							
815	3532	1.949	34.874	27.908	45.925		2201(I)													12 +1.6	3532							
816	3675	1.551	34.831	27.903	45.965		2220(I)													7 +1.6	3675							
221	3731	1.333	34.812	27.903	45.989		2228	0.48													3731							
817	3827	1.112	34.787	27.898	46.009		2234(I)													7 +1.6	3827							
818	3981	0.758	34.746	27.887	46.040		2245(I)													4 +1.5	3981							
223	4053	0.494	34.729	27.889	46.072		2252	0.45													4053							
819	4133	0.219	34.688	27.872	46.087		2257(I)													16 +1.6	4133							
820	4184	0.030	34.686	27.880	46.116		2259(I)													22 +1.6	4184							
821	4198	-0.062	34.675	27.876	46.123		2260(I)													27 +1.6	4198							
822	4211	-0.063	34.674	27.875	46.123		2260(I)										21.4 +1.1			37 +1.6	4211							
824	4221	-0.063	34.677	27.877	46.125		2261(I)													24 +1.6	4221							
823	4222	-0.063	34.680	27.880	46.127		2261(I)													32 +1.6	4222							

STATION 58

POSITION: 27°0'S 37°1'W

DATE: 16 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH					UM	----------MCM----------			LDGO	LDGO	LDGO	LDGO WHOI*			WHOI	WHOI				
825	3	22.23	36.452	25.276	41.659									-0.7			7.8 +0.4				3							
901	13	21.823	36.406	25.356	41.762	-2.9	2044						2.20+0.09							21*	13							
235	15		36.705				2045(I)		148.4									1.13 +0.13	0.30+0.06		15	13.0+2.0		18.2+1.2				
902	58	20.807	36.583	25.771	42.232		2057						2.28+0.09	-1.6	3.79	15.35				22*	58							
236	60		36.613				2057(I)		150.0									1.10 +0.13	0.49+0.05		60	13.3+1.7						
903	87	18.636	36.124	25.995	42.597		2059(I)													20*	87							
904	118	17.337	35.898	26.147	42.837		2061							-0.8	3.68	14.97				24*	118							
237	140		35.840				2068(I)		92.9									0.77 +0.10	0.67+0.05		140	18.2+2.2		23.6+2.7				
905	158	16.215	35.715	26.275	43.044	-0.7	2074						1.73+0.11							13*	158							
906	198	15.457	35.614	26.373	43.195		2074(I)													10*	198							
238	210		35.558				2073(I)		73.0									0.80 +0.10	0.81+0.09		210	11.2+1.5						
907	238	14.821	35.541	26.459	43.328		2073													10*	238							
908	279	14.265	35.465	26.522	43.432		2081(I)							-0.7						9*	279							
239	280		35.470				2081(I)		56.7									0.94 +0.11	0.61+0.09		280	8.9+1.7		13.9+1.7				
909	324	13.453	35.329	26.590	43.562	1.6	2091(I)						1.10+0.09							10*	324							
240	340		35.336				2095(I)		23.9									0.70 +0.09	0.74+0.11		340	9.3+1.4						
910	378	12.315	35.159	26.688	43.751		2106							-0.4	4.03	16.42				6*	378							
911	428	11.313	35.011	26.765	43.909		2118(I)						0.43+0.09							15*	428							
586	430		35.063				2118(I)		-10.9								8.6 +0.3				430	8.4+1.2		7.0+1.1				
912	467	10.486	34.930	26.852	44.065		2125							-0.1	3.85	16.26				9*	467							
587	498		34.832				2127(I)		-45.8								9.6 +0.3				498	3.3+1.0						
915	529	8.961	34.719	26.945	44.291	3.9	2128													8*	529							
588	583		34.584				2137(I)		-63.1								9.7 +0.7				583	2.2+1.0		1.6+0.9				
916	596	7.692	34.562	27.017	44.479		2139(I)						0.27+0.09	-0.2						7*	596							
917	669	6.289	34.440	27.114	44.708		2154													8*	669							
786	685		34.418				2155(I)		-78.2								10.9 +0.6				685	2.1+0.8						
918	737	5.244	34.353	27.174	44.870		2161(I)						0.14+0.09	0.2	4.00	17.38				7*	737							
787	795		34.337				2170(I)		-101.8								12.4 +0.3				795	0.1+0.8		2.9+1.6				
788	803						2172(I)												0.07+0.02		803							
919	807	4.465	34.320	27.235	45.009	1.6	2173						0.11+0.09							6*	807							
920	876	3.967	34.334	27.298	45.121		2202							1.5	4.02	17.59				10*	876							
791	893		34.342				2199(I)		-111.5								13.5 +0.5				893	0.8+1.0						
921	947	3.681	34.352	27.340	45.193		2189						0.06+0.09								947							
1289	986		34.369				2198(I)		-124.3								14.6 +0.4				986	0.6+1.1		2.3+1.7				
922	1017	3.376	34.377	27.389	45.272		2207							3.7	4.13	17.97				6*	1017							
792	1080						2213(I)												0.00+0.04		1080							
1290	1084		34.426				2214(I)		-123.6								14.3 +0.3				1084	0.2+1.9						
923	1087	3.222	34.423	27.440	45.338		2214(I)													7*	1087							
924	1156	3.095	34.480	27.497	45.406		2217(I)							4.3						8*	1156							
1291	1182		34.504				2218(I)		-134.2								15.0 +0.4				1182	-0.7+0.8		1.0+0.8				
601	1190	3.062	34.500	27.516	45.428		2218													11*	1190							

(I) INTERPOLATED FROM NISKIN DATA

STATION 58 — CONTINUED

POSITION: 27°0'S 37°1'W

DATE: 16 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH			UW			UM		10^{-5}cc/kg	MCM			LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI					
602	1338	2.901	34.595	27.606	45.532	1.7	2233						5.1	4.10	17.92						8*	1338							
603	1464	2.996	34.714	27.693	45.604		2213														12*	1464							
1292	1482		34.722				2211(I)		-127.1									13.8 +0.3				1482	1.3+0.9						
604	1635	3.107	34.810	27.759	45.656	5.5	2194						3.9	4.16	18.08						7*	1635							
1293	1780		34.892				2180(I)		-103.9									11.8 +0.5				1780	0.6+1.7	0.3+1.1					
605	1788	3.231	34.889	27.811	45.692		2179														6*	1788							
606	1937	3.206	34.922	27.839	45.722	-2.8	2177						1.6	4.08	17.94						8*	1937							
607	2088	3.072	34.925	27.854	45.751		2175														13*	2088							
1294	2177		34.927				2174(I)		-101.0									13.8 +1.4				2177	1.3+0.9						
608	2238	2.981	34.930	27.866	45.772	1.3	2173						2.0	4.08	17.95						12*	2238							
609	2392	2.900	34.935	27.878	45.792		2171														5*	2392							
610	2565	2.770	34.929	27.884	45.813		2173														4*	2565							
1689	2597		34.929				2174(I)		-102.5									12.9 +0.4				2597	0.7+1.1	2.6+1.2					
611	2739	2.625	34.917	27.887	45.831		2178														4*	2739							
612	2915	2.539	34.920	27.897	45.850	-0.1	2174						2.1	3.83	16.93						5*	2915							
1690	2997		34.914				2173(I)		-102.3									13.3 +0.4				2997	-1.7+1.1						
615	3100	2.408	34.911	27.901	45.868		2171														5*	3100							
1586	3144		34.911				2176(I)												0.17+0.04			3144							
616	3276	2.250	34.900	27.905	45.889		2191						2.1									3276							
1691	3396		34.890				2187(I)		-114.9									13.9 +0.4				3396	1.2+2.1	-0.6+0.9					
617	3449	1.998	34.879	27.908	45.920		2186														5*	3449							
1592	3544		34.861				2203(I)												0.09+0.02			3544							
618	3623	1.521	34.830	27.904	45.969		2218						3.2	4.22	18.50						4*	3623							
1486	3749		34.803				2223(I)												0.18+0.03			3749							
1692	3795		34.781				2224(I)		-141.1									19.1 +0.9				3795	-2.0+1.4						
619	3801	1.097	34.785	27.897	46.011		2224														22*	3801							
620	3947	0.780	34.749	27.889	46.038	1.5	2244						6.3	3.90	17.21						7*	3947							
1489	3959		34.751				2245(I)												0.26+0.04			3959							
621	4101	0.401	34.714	27.883	46.076		2251														11*	4101							
1693	4141		34.681				2255(I)		-162.7									21.5 +0.7				4141	-2.7+1.0	-0.9+0.9					
1492	4148		34.707				2255(I)												0.21+0.03			4148							
622	4252	-0.044	34.677	27.876	46.122	1.7	2263						6.1	4.15	18.34						31*	4252							
623	4426	-0.111	34.673	27.876	46.130		2260														24*	4426							
1389	4445						2260(I)												0.39+0.06			4445							
1694	4491		34.683				2261(I)		-158.3									20.0 +1.4				4491	2.1+0.9						
115	4496	-0.120	34.672	27.876	46.130		2261(I)														76 +1.7	4496							
116	4507	-0.127	34.670	27.875	46.130		2261(I)														29 +1.6	4507							
117	4517	-0.134	34.670	27.875	46.131		2262(I)														35 +1.6	4517							
118	4529	-0.134	34.671	27.876	46.132		2262(I)														27 +1.6	4529							
119	4539	-0.136	34.669	27.874	46.131		2262(I)														39 +1.6	4539							
1392	4548						2263(I)												0.37+0.03			4548							
120	4550	-0.136	34.668	27.874	46.130		2263(I)														34 +1.6	4550							
121	4563	-0.136	34.672	27.877	46.133		2263(I)														37 +1.6	4563							
122	4573	-0.136	34.670	27.875	46.131		2264(I)											20.5 +0.2			35 +1.6	4573							
624	4581	-0.136	34.672	27.877	46.133	2.1	2264						7.1	4.19	18.66						31*	4581							
124	4582	-0.136	34.672	27.877	46.133																38 +1.6	4582							
123	4583	-0.135	34.670	27.875	46.131																32 +1.6	4583							
												PRECISION:	0.3	0.02	0.05														

STATION 59

POSITION: 30°12'S 39°18'W

DATE: 20 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-5}cc/kg	MCM			LDGO	LDGO	LDGO	LDGO							
232	3	20.78	36.279	25.548	42.017													8.0 +0.5				3							
1035	5		36.11																0.89 +0.52	0.58+0.07		5							
225	75	19.32	36.208	25.384	42.442		2043(I)											7.1 +0.6				75							
715	4345	-0.101	34.679	27.881	46.133		2270(I)														9 +1.6	4345							
716	4395	-0.130	34.673	27.877	46.133		2270(I)														19 +1.6	4395							
717	4446	-0.157	34.672	27.878	46.136		2269(I)														19 +1.6	4446							
718	4500	-0.164	34.674	27.880	46.139		2267(I)														19 +1.6	4500							
122	4511	-0.168	34.670	27.877	46.136		2267						6.9									4511							
719	4550	-0.169	34.671	27.878	46.137		2267(I)														32 +1.6	4550							
720	4600	-0.172	34.673	27.879	46.140		2268(I)														23 +1.6	4600							
721	4648	-0.177	34.675	27.881	46.142		2268(I)														34 +1.6	4648							
722	4702	-0.175	34.674	27.880	46.141		2268(I)														27 +1.6	4702							
723	4751	-0.174	34.675	27.881	46.142		2267(I)														29 +1.6	4751							
724	4801	-0.178	34.676	27.882	46.143		2265(I)														25 +1.6	4801							
124	4806	-0.180	34.673	27.880	46.141		2265						6.8									4806							
												PRECISION:	0.3																

(I) INTERPOLATED FROM NISKIN DATA

STATION 60 | **POSITION: 32°58'S 42°30'W** | **DATE: 22 NOV 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								SIO	UW			UM				LSU	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
401	3	18.496	35.990	25.929	42.543		2045					2.27+0.09								39*	3							
225	3	18.50	35.991	25.929	42.542		2045(I)										8.2 +0.3				3							
1035	20		36.000				2040(I)		133.2								8.3 +0.4	0.98 +0.12	0.53+0.06		20	13.4+0.5	19.6+0.5	0.090+0.030				
402	23	18.402	35.985	25.949	42.569		2040									38.9				39*	23							
403	66	17.576	36.005	26.170	42.842		2047					2.13+0.10								23*	66							
1036	80		35.979				2051(I)		130.2									0.89 +0.11	0.73+0.06		80	14.8+1.3						
404	95	16.852	35.912	26.275	42.997		2055													43*	95							
1037	150		35.764				2071(I)		99.5								8.5 +0.6	1.08 +0.13	0.87+0.07		150	12.1+0.4	17.0+0.6	0.080+0.030				
407	167	15.803	35.716	26.372	43.168		2076					1.64+0.09				38.7					167							
1038	220		35.622				2075(I)										8.2 +0.5	0.94 +0.11	0.90+0.08		220	9.6+0.9	13.5+0.6	0.080+0.020				
409	245	14.972	35.631	26.495	43.351		2070					1.66+0.09								103*	245							
410	282	14.549	35.564	26.537	43.424		2086									39.5				60*	282							
1039	300		35.531				2086(I)		62.4								7.6 +0.3	0.78 +0.10	0.86+0.07		300	9.2+0.3	13.6+0.4	0.090+0.020				
1040	350		35.407				2087(I)		35.2									0.61 +0.08	0.88+0.07		350	8.4+1.2						
411	354	13.489	35.379	26.621	43.589		2087					0.90+0.09								45*	354							
986	412		35.235				2100(I)		10.7								8.0 +0.4				412	6.2+0.3	10.0+0.5	0.090+0.020				
412	434	12.127	35.147	26.716	43.793		2105									41.6				49*	434							
987	493		34.904				2113(I)		-17.0								8.3 +0.3				493	-0.4+0.7	5.3+0.6	0.120+0.015				
415	534	9.373	34.755	26.906	44.217		2118					0.39+0.09				44.8				11*	534							
988	593		34.577				2127(I)		-47.1								10.5 +0.3				593	2.5+0.1	4.0+0.4	0.060+0.010				
416	630	7.027	34.467	27.036	44.561		2132	1.40				0.31+0.06				49.9				19*	630							
989	693	12.72	34.341	26.666	43.695		2134(I)		-45.6								11.7 +0.3				693	2.4+0.3						
417	731	5.287	34.302	27.128	44.822		2136					0.32+0.06				53.7				9*	731							
990	793		34.299				2146(I)		-62.5								10.9 +0.3				793	1.4+0.4	2.2+0.4	0.030				
418	830	4.536	34.263	27.182	44.951		2152	1.18				0.18+0.06				57.9				11*	830							
991	892	7.92	34.270	26.993	44.434		2160(I)		-80.9								13.1 +0.5				892							
419	930	3.954	34.272	27.250	45.077		2165					0.13+0.06				61.0				17*	930							
789	992	3.66	34.269	27.275	45.132		2178(I)		-96.0								13.4 +0.1				992	0.6+1.0		0.018+0.005				
420	1039	3.420	34.271	27.301	45.183		2187	1.19				0.01+0.09				63.9				11*	1039							
421	1148	2.977	34.309	27.372	45.298		2201					0.03+0.09				68.1				12*	1148							
790	1189	2.97	34.342	27.398	45.323		2205(I)		-116.1								14.9 +0.4				1189	-0.1+0.1	0.6+0.4	0.030+0.010				
422	1264	2.850	34.378	27.438	45.375		2213	0.85												9*	1264							
423	1376	2.715	34.431	27.492	45.442		2225					0.07+0.09				72.5				9*	1376							
791	1386	2.72	34.468	27.520	45.469		2225(I)		-134.4								15.8 +0.2				1386	0.2+0.8	0.5+0.4	0.011+0.005				
424	1486	2.686	34.518	27.564	45.514		2228	0.64												11*	1486							
102	1579	2.707	34.574	27.607	45.553		2227	0.67								75.0				16*	1579							
103	1726	2.722	34.655	27.670	45.612		2224													20*	1726							
792	1783		34.696				2222(I)		-131.0								15.3 +0.3				1783	-0.7+0.6	0.2+0.3	0.005				
104	1875	2.855	34.743	27.729	45.654		2216	0.78								72.6				13*	1875							
105	2073	2.974	34.833	27.790	45.700		2194									66.0					2073							
793	2181	2.98	34.868	27.816	45.724		2184(I)		-104.5								14.7 +0.9				2181	-0.6+1.1		0.007+0.007				
106	2273	3.018	34.890	27.831	45.735		2178	0.98								62.8				15*	2273							
107	2466	3.002	34.919	27.856	45.760		2170													7*	2466							
794	2584	2.89	34.917	27.864	45.779		2172(I)		-101.2								12.7 +0.5				2584	0.2+0.2	0.1+0.6	0.020				
108	2669	2.878	34.930	27.876	45.792		2176	1.06								60.2				10*	2669							
109	2870	2.684	34.918	27.883	45.821		2184									63.2				20*	2870							
110	3069	2.503	34.906	27.889	45.846		2183	0.97												10*	3069							
389	3167	2.43	34.912	27.899	45.863		2182(I)		-103.9								13.8 +0.6				3167		1.1	0.016+0.003				
111	3215	2.335	34.898	27.897	45.872		2181									67.1				7*	3215							
112	3313	2.184	34.883	27.897	45.888		2187	0.98												5*	3313							
115	3422	1.797	34.829	27.883	45.919		2215									77.7				8*	3422							
390	3464	1.74	34.838	27.894	45.935		2214(I)		-126.4								16.4 +0.7				3464	0.6+0.2	-0.5+0.6	0.005				
815	3525	1.503	34.814	27.893	45.961		2213									81.0					3525							
116	3628	1.108	34.769	27.884	45.996		2238									88.5					3628							
117	3728	0.803	34.739	27.879	46.026		2241									93.2					3728							
391	3762	0.71	34.741	27.886	46.043		2247(I)		-156.1								18.9 +0.5				3762	-0.1+0.8		0.005+0.002				
118	3826	0.464	34.711	27.877	46.063		2258	0.57								97.2					3826							
119	3930	0.169	34.694	27.879	46.100		2254									101.1					3930							
392	3961		34.688				2254(I)		-161.0								22.9 +1.3				3961	0.9+0.2	0.3+0.4	0.010				
120	4019	0.009	34.678	27.874	46.114		2254	0.57								102.6				16*	4019							
121	4128	-0.124	34.672	27.876	46.131		2257									102.3				50*	4128							
393	4159	-0.15	34.676	27.880	46.139		2260(I)		-161.9								22.5 +0.7				4159	0.5+0.8	0.1+0.1					
816	4200	-0.186	34.669	27.877	46.139		2264(I)													42 +1.6	4200							
122	4225	-0.184	34.670	27.878	46.139		2267	0.48								103.6				20*	4225							
818	4270	-0.213	34.669	27.878	46.143		2269(I)													69 +1.7	4270							
819	4299	-0.219	34.669	27.878	46.144		2270(I)													77 +1.7	4299							
820	4326	-0.225	34.666	27.876	46.143		2271(I)													86 +1.8	4326							
123	4327	-0.223	34.668	27.878	46.144		2271													37*	4327							
821	4349	-0.224	34.669	27.879	46.145		2270(I)													92 +1.9	4349							
394	4358	-0.22	34.681	27.888	46.154		2270(I)		-157.5								23.1 +1.0				4358	0.1+0.2	-0.6+0.4	0.010				
822	4369	-0.226	34.669	27.879	46.145		2269(I)													78 +1.8	4369							
823	4391	-0.225	34.666	27.876	46.143		2267(I)													88 +1.8	4391							
824	4407	-0.224	34.667	27.877	46.143		2265(I)													84 +1.8	4407							
124	4416	-0.223	34.667	27.877	46.143		2264	0.56								105.3				36*	4416							

(I) INTERPOLATED FROM NISKIN DATA

STATION 61

POSITION: 36°0'S 45°0'W

DATE: 24 NOV 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{238,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg					DPM/100kg						
																	LDGO	LDGO	LDGO	LDGO		WHOI						
225	3	17.50	35.769	26.009	42.691												8.3 +0.2				3							
935	3		35.9															2.01 +0.25			3							
815	3498	1.204	34.760	27.870	45.972		2241(I)													17	3498						
786	3806	0.61	34.719	27.874	46.042		2251(I)												0.16+0.03		3806						
789	4005	0.26	34.695	27.874	46.083		2258(I)												0.13+0.08		4005	0.6+1.0					
793	4216	0.048	34.681	27.874	46.109		2261(I)												0.16+0.03		4216						
687	4489	-0.13	34.672	27.876	46.132		2267(I)											0.08 +0.08	0.33+0.04		4489						
689	4677	-0.19	34.674	27.881	46.143		2270(I)											0.30 +0.09	0.39+0.05		4677						
816	4705	-0.211	34.667	27.876	46.141		2270(I)													34 +1.6	4705						
817	4753	-0.218	34.665	27.875	46.141		2271(I)													23 +1.6	4753						
818	4805	-0.227	34.667	27.877	46.144		2272(I)													53 +1.6	4805						
819	4828	-0.226	34.665	27.876	46.142		2272(I)													38 +1.6	4828						
820	4844	-0.228	34.666	27.876	46.143		2270(I)													25 +1.6	4844						
821	4865	-0.230	34.667	27.877	46.144		2268(I)													60 +1.7	4865						
692	4876	-0.210	34.673	27.881	46.145		2266(I)											0.75 +0.13	0.72+0.08		4876						
822	4884	-0.234	34.668	27.878	46.146		2265(I)													63 +1.7	4884						
823	4905	-0.234	34.668	27.878	46.146		2262(I)													59 +1.7	4905						
824	4927	-0.234	34.668	27.878	46.146															12 +1.6	4927						

STATION 64

POSITION: 39°3'S 48°33'W

DATE: 5 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{238,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg					DPM/100kg						
						UH		UH	UW			UM								LDGO		WHOI	WHOI					
1287	2	14.38	34.443	25.710	43.638				91.9												2	9.9+0.9	13.2+0.9				
901	12	14.105	34.374	25.716	42.666		2008					1.90+0.09									12						
902	38	12.392	34.468	26.138	43.213		2026	2.15													38						
1288	51	12.64	34.883	26.409	43.454		2039(I)		80.0												51	8.9+0.9					
903	70	9.405	34.418	26.638	43.955		2060					1.22+0.09									70						
1289	101	12.59	34.918	26.446	43.493		2089(I)		50.9												101	7.6+0.8	8.8+1.1				
904	110	7.033	34.301	26.905	44.434		2096	1.12													110						
905	159	6.727	34.361	26.994	44.549		2102					0.80+0.09									159						
906	208	5.838	34.250	27.021	44.663	0.8	2109	1.62													208						
1290	250		34.590				2116(I)		-45.7												250	3.8+1.1					
908	365	4.514	34.191	27.127	44.901		2128(I)	1.00				0.52+0.09									365						
1291	397		34.226				2131(I)		-25.8												397	1.6+0.8	3.7+1.0				
910	515	4.010	34.191	27.180	45.004		2144	1.23				0.48+0.09									515						
1292	594		34.197				2145(I)		-40.9												594	1.7+0.9					
912	663	3.429	34.211	27.252	45.135	2.7	2158	0.85				0.43+0.09									663						
1293	793	3.12	34.246	27.308	45.221		2178(I)		-82.6												793	0.0+0.8	1.5+0.9				
916	818	3.168	34.264	27.319	45.227		2182	0.45				0.22+0.09									818						
917	893	2.921	34.275	27.350	45.283		2187					0.10+0.09									893						
918	989	2.793	34.327	27.402	45.347		2204	0.52				0.06+0.09									989						
1294	1012	2.76	34.338	27.413	45.361		2205(I)		-107.4												1012	1.5+0.8					
919	1097	2.690	34.386	27.458	45.412		2209					0.11+0.09									1097						
920	1201	2.575	34.417	27.492	45.458		2229	0.56													1201						
922	1402	2.456	34.514	27.580	45.554		2232	0.50													1402						
888	1453		34.516				2231(I)		-137.4												1453	1.5+1.0	0.2+0.9				
701	1481	2.467	34.553	27.610	45.582		2230(I)	0.43													1481						
923	1504	2.488	34.563	27.616	45.586	5.2	2230														1504						
893	1575	2.46	34.586	27.636	45.607		2237(I)		-146.4												1575	-0.3+0.8					
924	1612	2.487	34.613	27.656	45.624		2242	0.58													1612						
703	1829	2.609	34.702	27.717	45.670		2228	0.50													1829						
894	1935		34.707				2218(I)														1935	-0.7+0.9	-0.5+0.9				
1089	1940		34.743				2216(I)		-136.2												1940						
705	2149	2.563	34.772	27.777	45.732		2219	0.59													2149						
589	2475		34.840				2194(I)		-124.5												2475	1.7+0.8	-0.6+1.0				
707	2501	2.631	34.863	27.844	45.789		2191	0.00													2501						
708	2651	2.535	34.868	27.856	45.811	3.1	2193														2651						
709	2830	2.230	34.834	27.854	45.842		2206	0.55													2830						
1090	2980		34.816				2214(I)		-128.9												2980	-0.5+0.9					
711	3083	1.942	34.817	27.863	45.883		2209	0.62													3083						
715	3441	1.270	34.752	27.859	45.955		2240	0.50													3441						
1091	3460		34.743				2241(I)		-151.0												3460	0.9+0.9	-0.9+0.9				
717	3932	0.526	34.702	27.866	46.045		2248	0.21													3932						
1092	3948		34.706				2249(I)		-162.8												3948	0.0+0.8	-0.7+0.9				
1093	4446	0.04	34.678	27.872	46.107		2258(I)		-170.1												4446	0.7+1.1					
719	4471	-0.021	34.675	27.874	46.116	4.8	2258	0.42													4471						
721	4894	-0.169	34.670	27.877	46.137		2256	0.51													4894						
1115	4943	-0.184	34.672	27.879	46.141		2256(I)														4943						
1116	5078	-0.212	34.669	27.878	46.143		2256(I)														5078						
1117	5151	-0.222	34.668	27.878	46.144		2256(I)														5151						
723	5191	-0.230	34.668	27.878	46.145	2.6	2256	0.40													5191						
1094	5195		34.668				2256(I)		-158.9												5195	0.5+0.8	-0.3+0.9				
1118	5204	-0.231	34.668	27.878	46.145		2256(I)														5204						
1119	5242	-0.238	34.667	27.878	46.146		2256(I)														5242						
1120	5273	-0.244	34.668	27.879	46.147		2256(I)														5273						
1121	5294	-0.245	34.667	27.878	46.147		2256(I)														5294						
1122	5314	-0.247	34.666	27.877	46.146		2256(I)														5314						
1123	5326	-0.246	34.667	27.878	46.147																5326						
1124	5342	-0.247	34.667	27.878	46.147																5342						

(I) INTERPOLATED FROM NISKIN DATA

STATION 66 — **POSITION: 41°32'S 50°57'W** — **DATE: 8 DEC 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO										
225	1	17.5	35.72	25.971	42.655													7.5 +0.2										
615	5490	-0.193	34.671	27.879	46.141		2268(I)																					
616	5568	-0.197	34.669	27.877	46.141		2266(I)																					
617	5632	-0.202	34.671	27.879	46.143		2264(I)																					
618	5673	-0.205	34.670	27.879	46.143		2263(I)																					
619	5706	-0.207	34.670	27.879	46.143		2262(I)																					
620	5736	-0.208	34.670	27.879	46.143																							
621	5750	-0.210	34.670	27.879	46.143																							
622	5764	-0.211	34.669	27.878	46.143																							
623	5777	-0.214	34.670	27.879	46.144																							
624	5787	-0.215	34.670	27.879	46.144																							
																				LDGO								
																				1								
																				46 +1.6	5490							
																				28 +1.6	5568							
																				48 +1.6	5632							
																				50 +1.7	5673							
																				54 +1.7	5706							
																				52 +1.6	5736							
																				57 +1.7	5750							
																				55 +1.7	5764							
																				53 +1.7	5777							
																				63 +1.7	5787							

STATION 67 — **POSITION: 44°58'S 51°3'W** — **DATE: 9 DEC 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH			UW	SIO	SIO	UM	----------MCM----------					LDGO	LDGO	LDGO		WHOI	WHOI	WHOI				
935	2		34.645						72.1									2.26 +0.89	0.26+0.05		2							
889	5	8.25	34.601	26.962	44.373				53.1												5	6.4+0.4	9.3+0.4	0.040+0.010				
401	10	11.981	34.561	26.290	43.394	-3.2	2038			-0.2	0.14	1.32+0.09									10							
936	15		34.614				2034(I)		69.3									0.29 +0.15	0.20+0.04		15							
402	42	9.945	34.593	26.684	43.951		2015						-0.7	3.93	16.86						42							
937	45		34.589				2022(I)		65.8									3.14 +0.77			45							
938	60		34.593				2060(I)		63.7									0.49 +0.07			60							
403	62	9.470	34.625	26.789	44.095		2065			0.4	0.15	1.41+0.09									62							
890	95	8.89	34.675	26.922	44.275		2065(I)		58.2												95	8.9+1.1						
404	101	9.252	34.631	26.829	44.153		2065			0.0	0.16		-0.6	3.95	16.82						101							
405	151	8.598	34.631	26.934	44.314	-1.9	2092			0.2	0.12	1.19+0.09									151							
891	180	7.85	34.595	27.019	44.465		2089(I)		49.9												180	5.7+0.5	9.3+0.4	0.040+0.010				
406	199	7.845	34.579	27.008	44.455		2088			-0.2	0.13										199							
407	251	5.801	34.311	27.074	44.718	0.1	2120			-0.8	-0.01										251							
892	295	5.36	34.292	27.111	44.797		2127(I)		1.9												295	5.8+0.9						
408	300	5.028	34.223	27.096	44.817		2128			-1.4	-0.06	0.53+0.09	0.0	4.02	17.50						300							
409	353	4.502	34.185	27.124	44.899		2122			-1.8	-0.04										353							
893	391	4.44	34.196	27.139	44.919		2122(I)		-9.7												391	4.4+0.2	4.9+0.3	0.050+0.020				
410	405	4.254	34.183	27.148	44.948	0.8	2122						0.0	4.03	17.62						405							
411	445	4.100	34.178	27.160	44.976		2145			-1.2	-0.12									2.0	445							
412	445	4.100	34.178	27.160	44.976		2138													1.8	3.99	17.50	445						
888	543		34.196						-33.0												543							
415	559	3.646	34.184	27.210	45.071	-1.8	2156			-1.2	-0.12	0.39+0.09									559							
416	658	3.358	34.194	27.246	45.136	2.7	2158			-2.3	-0.08										658							
886	700	3.22	34.217	27.276	45.180		2168(I)		-63.9												700	1.6+0.6	2.5+0.4	0.040+0.010				
417	760	3.096	34.229	27.297	45.214		2183			-1.8		0.35+0.09	3.1								760							
589	840		34.275				2186(I)														840	1.3+0.4	1.6+0.3	0.060+0.020				
418	857	2.908	34.271	27.348	45.282		2187			-1.8	-0.09	0.24+0.09									857							
419	954	2.800	34.311	27.389	45.334		2211			-1.2		-0.03+0.09									954							
590	1022		34.334				2204(I)		-110.0												1022	0.5+0.4	1.2+0.3	0.020+0.010				
420	1054	2.543	34.337	27.431	45.402		2201			-1.4	-0.05										1054							
421	1127	2.607	34.390	27.468	45.431		2224					0.04+0.09	5.2	3.98	17.71						1127							
591	1173	2.56	34.417	27.493	45.460		2226(I)		-125.2												1173	0.0+0.7						
422	1316	2.482	34.481	27.551	45.524		2232			-1.5	0.01	0.10+0.09									1316							
592	1378	2.48	34.513	27.576	45.548		2241(I)		-138.6												1378	1.2+0.2	0.3+0.3	0.020+0.020				
423	1438	2.514	34.545	27.600	45.567	3.3	2247						7.7								1438							
101	1499	2.466	34.565	27.620	45.592		2245			-1.0			8.7								1499							
593	1721	2.44	34.640	27.681	45.653		2238(I)		-142.9												1721	-0.2+5.1						
102	1741	2.421	34.642	27.685	45.659	6.2	2239			-0.8	0.02		9.1	4.08	17.89						1741							
894	1870	2.44	34.717	27.743	45.712		2242(I)		-132.0												1870	-0.2+0.0	-0.1+0.4	0.020+0.010				
103	1959	2.402	34.699	27.732	45.706		2244			-0.1											1959							
104	2192	2.580	34.788	27.788	45.741		2221			-0.4	0.11		6.3	3.98	17.43						2192							
105	2392	2.570	34.825	27.819	45.771		2217			0.2	0.14										2392							
289	2437	2.53	34.830	27.825	45.781		2215(I)		-124.4												2437	0.0+0.8						
106	2573	2.393	34.830	27.837	45.809		2211			-0.3	0.15										2573							
107	2758	2.257	34.829	27.848	45.833	2.1	2218			-0.4	0.10										2758							
108	2980	1.954	34.802	27.850	45.869	2.8	2221			0.0	0.05										2980							
109	3190	1.665	34.779	27.853	45.904		2240			-0.8			7.4								3190							
291	3203	1.66	34.781	27.854	45.905		2240(I)		-140.5												3203	0.3+0.8						
110	3442	1.321	34.751	27.855	45.945	2.7	2236			-0.7	0.02										3442							
111	3599	1.094	34.729	27.853	45.968		2262			-1.5			9.0	4.14	18.25						3599							
115	3838	0.859	34.717	27.858	46.000		2265			-1.2	0.00										3838							
292	3933	0.78	34.716	27.861	46.011		2258(I)		-161.5												3933							
117	4219	0.418	34.696	27.867	46.059		2269			-1.4	-0.09		9.1	4.22	18.56						4219							
118	4421	0.229	34.687	27.870	46.084	3.7	2248														4421							
119	4630	0.050	34.676	27.871	46.106		2273			-2.4			7.3								4630							
293	4759	0.00	34.676	27.873	46.113		2262(I)		-155.5												4759	0.7+1.0						

(I) INTERPOLATED FROM NISKIN DATA

STATION 67 — CONTINUED

POSITION: 44°58'S 51°3'W

DATE: 9 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH			UW	SIO	SIO	UM	MCM					LDGO	LDGO	LDGO		WHOI	WHOI	WHOI				
120	4836	-0.063	34.673	27.874	46.122	2.7	2255														4836							
121	5047	-0.143	34.669	27.875	46.132		2277			-2.4	-0.14										5047							
122	5298	-0.174	34.667	27.875	46.135		2255						6.2								5298							
715	5521	-0.216	34.671	27.880	46.145		2266(I)														124 +2.0 5521							
716	5593	-0.224	34.667	27.877	46.143		2269(I)														0 +1.6 5593							
123	5630	-0.228	34.665	27.876	46.142		2271			-2.3											5630							
717	5661	-0.234	34.665	27.876	46.144		2270(I)														106 +1.9 5661							
718	5696	-0.235	34.668	27.878	46.146		2269(I)														137 +2.1 5696							
288	5746	-0.22	34.669	27.878	46.145		2265(I)		-157.7												5746							
720	5759	-0.235	34.668	27.878	46.146		2264(I)														134 +2.0 5759							
721	5774	-0.234	34.667	27.878	46.145		2263(I)														153 +2.2 5774							
722	5793	-0.235	34.666	27.877	46.144		2261(I)														137 +2.0 5793							
124	5798	-0.241	34.666	27.877	46.145	2.7	2261			-2.4	-0.14										5798							
723	5804	-0.235	34.669	27.879	46.147																129 +2.0 5804							
724	5816	-0.235	34.667	27.878	46.145																137 +2.1 5816							
												PRECISION:	0.3	0.02	0.05													

STATION 68

POSITION: 48°39'S 45°59'W

DATE: 13 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM						USC		LDGO								
501	10	9.077	34.260	26.568	43 917			2.27				0.91+0.09									10							
1089	11	8.31	34.245	26.674	44.090				35.4									10.2 +0.9			11							
502	40	6.451	34.222	26.921	44.506							0.71+0.09									40							
1090	62	6.35	34.257	26.961	44.554				26.5									12.6 +0.4			62							
503	89	4.927	34.178	27.072	44.804							0.78+0.09									89							
504	139	4.279	34.169	27.135	44.932			1.63				0.74+0.09									139							
505	189	3.922	34.162	27.166	44.999							0.72+0.09									189							
506	238	3.631	34.161	27.193	45.057			1.15				0.72+0.09									238							
507	288	3.385	34.170	27.224	45.112							0.47+0.09									288							
993	340	3.47	34.180	27.223	45.101				-26.6									13.6 +0.5			340							
508	386	3.100	34.199	27.273	45.190			1.20				0.42+0.09									386							
509	486	2.886	34.243	27.327	45.265							0.25+0.09									486							
994	530	3.08	34.286	27.343	45.259				-84.2									14.8 +0.3			530							
510	585	2.656	34.290	27.384	45.345			0.79				0.37+0.09									585							
511	631	2.649	34.313	27.403	45.364							0.14+0.09									631							
512	681	2.623	34.345	27.431	45.393			0.57				0.14+0.09									681							
515	789	2.454	34.390	27.481	45.460							0.12+0.06									789							
516	888	2.400	34.458	27.540	45.522			0.45				-0.05+0.09									888							
517	987	2.423	34.522	27.589	45.567							-0.11+0.09									987							
518	1036	2.362	34.536	27.605	45.589			0.42				0.00+0.09									1036							
519	1086	2.308	34.545	27.617	45.606							0.01+0.09									1086							
520	1186	2.443	34.606	27.654	45.627			0.36				0.10+0.06									1186							
521	1282	2.412	34.628	27.674	45.650							0.11+0.09									1282							
522	1380	2.442	34.674	27.709	45.680			0.18				0.00+0.06									1380							
389	1450	2.28	34.669	27.717	45.706				-138.6									17.8 +0.3			1450							
523	1482	2.506	34.711	27.733	45.696							0.07+0.06									1482							
524	1532	2.521	34.728	27.745	45.706			0.02				0.05+0.09									1532							
102	1533	2.325	34.694	27.734	45.717		2245	0.09													1533							
104	1931	2.205	34.761	27.797	45.791		2227	-0.35													1931							
390	2041	2.18	34.780	27.814	45.810		2232(I)		-136.5									17.3 +0.3			2041							
105	2134	2.138	34.783	27.820	45.820		2237					0.01+0.09									2134							
108	2486	1.758	34.769	27.838	45.880		2230	0.26													2486							
391	2632	1.53	34.752	27.840	45.906		2244(I)		-147.0									19.3 +0.4			2632							
110	2888	1.253	34.737	27.848	45.946		2246(I)	0.29				0.16+0.09									2888							
112	3384	0.779	34.713	27.860	46.011		2235	0.28													3384							
116	3993	0.273	34.687	27.868	46.077		2253(I)	0.52				-0.03+0.09									3993							
393	4664	-0.10	34.671	27.874	46.127		2264(I)		-161.7												4664							
120	4886	-0.153	34.670	27.876	46.134		2257	0.20													4886							
122	5485	-0.230	34.665	27.876	46.143		2262(I)	0.52													5485							
715	5583	-0.238	34.666	27.877	46.145		2263(I)											22.9 +0.4			55 +1.7 5583							
716	5674	-0.245	34.666	27.877	46.146		2264(I)														65 +1.9 5674							
717	5743	-0.248	34.664	27.876	46.145		2265(I)														80 +1.8 5743							
123	5785	-0.248	34.665	27.877	46.146		2265					0.10+0.09									5785							
718	5789	-0.253	34.667	27.878	46.148																83 +1.8 5789							
719	5823	-0.254	34.666	27.878	46.148																74 +1.8 5823							
720	5855	-0.254	34.664	27.876	46.146																88 +1.8 5855							
721	5871	-0.255	34.667	27.879	46.148																87 +1.8 5871							
722	5888	-0.256	34.665	27.877	46.147																79 +1.8 5888							
723	5893	-0.255	34.665	27.877	46.147																78 +1.8 5893							
394	5897	-0.25	34.668	27.879	46.149				-155.4									22.2 +0.4			5897							
724	5899	-0.256	34.666	27.878	46.148																85 +1.8 5899							
124	5959	-0.258	34.667	27.879	46.149			0.50													5959							

(I) INTERPOLATED FROM NISKIN DATA

STATION 69

POSITION: 52°31'S 46°22'W

DATE: 15 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH											LDGO			LDGO								
																	13.8 +0.6											
525	1	4.7	33.99	26.948	44.709																1							
401	11	4.329	34.052	27.037	44.833	-0.2															11							
404	91	1.923	34.065	27.263	45.309	-0.5															91							
411	390	2.599	34.361	27.446	45.410	4.4															390							
103	1655	1.571	34.714	27.808	45.871	5.3															1655							
115	3245	0.235	34.686	27.869	46.082															41 +1.6	3245							
116	3298	0.227	34.685	27.869	46.083	3.9															3298							
117	3298	0.227	34.683	27.867	46.081															45 +1.6	3298							
118	3343	0.208	34.684	27.869	46.085															41 +1.6	3343							
119	3367	0.168	34.681	27.869	46.090															72 +1.7	3367							
120	3384	0.146	34.680	27.869	46.093															87 +1.8	3384							
121	3400	0.110	34.679	27.870	46.098															105 +1.9	3400							
122	3415	0.109	34.679	27.870	46.098	4.3															3415							
123	3415	0.109	34.679	27.870	46.098															104 +1.9	3415							
124	3424	0.110	34.680	27.871	46.099															107 +1.9	3424							

STATION 73

POSITION: 53°2'S 49°31'W

DATE: 17 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UW													WHOI	WHOI	WHOI				
291	2	5.79	34.170	26.963	44.613				4.7												2	3.2+0.5	5.1+0.4	0.024+0.008				
292	240	3.21	34.188	27.253	45.159				37.0												240	1.8+0.4	3.2+0.5	0.038+0.011				
293	488	2.49	34.242	27.359	45.339				-75.2												488	0.5+1.8	1.6+0.6	0.016+0.004				
294	637		34.354						-112.2												637	1.0+0.6	1.0+0.4	0.028+0.008				

STATION 74

POSITION: 55°0'S 50°4'W

DATE: 17 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH		UH	UW		UM	----------MCM----------			MIT	LDGO USC*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
225	1	4.8	34.03	26.969	44.718											13.3**0.6				1							
501	8	3.367	33.99	27.082	44.978	-0.6		1.54			0.65+0.09								178*	8							
789	19	4.67	34.109	27.044	44.893				3.7							11.4 +1.0				19	3.1+0.6	4.2+0.5	0.030+0.020				
																11.3**0.2											
502	26	2.714	33.95	27.108	45.073						0.87+0.09	10.6	4.04	18.04	68.8					26							
229	30	4.5	34.05	27.017	44.796											12.7**0.3				30							
503	58	2.015	33.97	27.180	45.219			1.38							68.4				139*	58							
504	91	0.994	34.01	27.282	45.432						0.74+0.09	9.6	4.31	19.08	66.7					91							
505	126	0.838	34.05	27.323	45.490	1.0		1.52							65.7				42*	126							
790	145	1.05	34.013	27.352	45.493				-14.2							14.9 +0.5				145	1.6+0.4	3.1+0.2	-0.010+0.010				
																14.9**0.6											
506	166	0.963	34.11	27.364	45.514						0.74+0.11	2.7	4.36	19.22	69.9					166							
507	208	1.352	34.18	27.396	45.503			0.66			0.45+0.09								18*	208							
791	241	1.56	34.149	27.355	45.437				-60.2							14.6 +0.4				241	2.4+1.0	2.5+0.5					
																16.3**0.4											
508	246	1.204	34.21	27.429	45.549							1.3	4.06	18.06	71.8					246							
509	308	1.665	34.30	27.470	45.536	3.7		0.71			0.31+0.09								16*	308							
510	341	1.913	34.35	27.491	45.529							5.8	4.05	17.91	74.7					341							
511	382	2.085	34.39	27.510	45.529			0.63											13*	382							
792	394	2.47	34.424	27.506	45.481				-136.2							17.0 +0.3				394	0.6+0.2	0.2+0.3	0.031+0.013				
																16.6**0.5											
512	416	2.117	34.41	27.524	45.538						0.13+0.09	8.6	4.09	18.11	76.4					416							
515	461	1.865	34.42	27.551	45.592	3.2		0.59											25*	461							
793	492	2.34	34.477	27.559	45.547				-134.9							17.7 +0.6				492	0.4+0.1	-0.3+0.8	0.020+0.012				
																17.9**0.4											
516	511	2.098	34.48	27.581	45.595							12.0	4.20	18.40	80.1					511							
517	556	2.133	34.51	27.603	45.612			0.41											15*	556							
518	602	2.123	34.54	27.627	45.637							8.0							18*	602							
519	602	2.123	34.54	27.627	45.637	6.5		0.51			0.14+0.09									602							
520	650	2.148	34.56	27.641	45.647										82.3				12*	650							
521	730	2.133	34.59	27.666	45.673	6.2		0.47				7.6			83.4					730							
794	777	2.11	34.602	27.677	45.686				-164.7							19.9 +0.9				777	-0.3+0.1	0.0+0.3	0.140+0.080				
																18.2**0.9											
522	830	2.090	34.62	27.694	45.704										86.7				13*	830							
101	872	2.066	34.630	27.704	45.716			0.37				9.7							18*	872							
102	918	2.024	34.641	27.716	45.732														17*	918							
523	986	1.990	34.65	27.726	45.746										87.5					986							
103	998	2.008	34.657	27.730	45.748															998							
389	1022	1.61	34.68	27.777	45.836				-161.7							19.0 +1.4				1022	-0.4+0.4	0.9+0.5	0.004				
																19.3**0.5											

STATION 74 — *CONTINUED*

POSITION: 55°0'S 50°4'W

DATE: 17 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UW			UM	MCM				MIT	LDGO USC*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
104	1062	1.999	34.671	27.742	45.760								9.6	4.15	18.13						12*	1062							
105	1204	1.903	34.686	27.761	45.789	6.6																1204							
106	1360	1.818	34.701	27.779	45.817																20*	1360							
107	1360	1.818	34.702	27.780	45.817			0.10									91.7					1360							
108	1674	1.595	34.720	27.811	45.872								10.3				93.9				16*	1674							
390	1685		34.72						-156.7									19.3 +0.8				1685							
1186	1972		34.716															19.9**1.0											
109	1986	1.356	34.721	27.829	45.915	6.5		0.36											0.02 +0.06	0.07+0.02		1972							
110	1986	1.356	34.721	27.829	45.915																	1986							
391	2292	1.07	34.72	27.846	45.963				-165.2				10.9				96.3	20.6 +0.5			13*	1986							
111	2354	1.092	34.719	27.845	45.961			0.37				-0.07+0.09					100.1	20.7**0.4				2292	0.5+0.2	0.0+0.6	0.020+0.020				
112	2354	1.092	34.718	27.844	45.960	5.8							10.4									2354							
115	2560	0.934	34.713	27.850	45.984			0.37													36*	2354							
116	2764	0.801	34.709	27.855	46.004																	2560							
392	2869	0.72	34.70	27.852	46.010				-163.5				9.7	4.00	17.84		99.7				13*	2764							
1189	2969	0.58	34.700	27.860	46.033													21.3 +1.7				2869	0.0+0.8						
117	2976	0.645	34.703	27.860	46.026			0.32										21.3**0.4		0.22+0.41		2969							
118	3179	0.511	34.696	27.862	46.044												98.5					2976							
1192	3274	0.41	34.690	27.862	46.055								9.4	4.24	18.22		102.3				15*	3179							
119	3340	0.457	34.692	27.862	46.049	5.1		0.43											0.07 +0.09	0.25+0.03		3274							
120	3490	0.363	34.690	27.865	46.064			0.35									98.1					3340							
1086	3513		34.686														99.0				23*	3490							
121	3637	0.255	34.685	27.867	46.078															0.12+0.06		3513							
393	3666		34.68						-155.7				9.0				97.3					3637							
1089	3760	0.17	34.679	27.866	46.086													19.3 +0.1				3666	-0.3+0.4	0.0+0.4	0.002				
815	3768	0.185	34.682	27.869	46.088													20.5**0.4											
122	3836	0.156	34.678	27.867	46.089			0.45				-0.17+0.09					101.3		0.11 +0.09	0.18+0.06		3760							
816	3843	0.172	34.680	27.868	46.088																16 +1.6	3768							
394	3881		34.68						-158.5									22.0 +0.4			23*	3836							
817	3905	0.167	34.680	27.868	46.089													20.9**0.6			25 +1.6	3843							
818	3945	0.155	34.681	27.869	46.092												99.0	18.7**0.4				3881	-0.2+1.4						
1092	3960	0.09	34.673	27.866	46.096																30 +1.6	3905							
819	3975	0.132	34.678	27.868	46.093																16 +1.6	3945							
123	3984	0.109	34.675	27.867	46.095	4.3							7.8						0.37 +0.09	0.30+0.04		3960							
820	4008	0.041	34.673	27.869	46.105																21 +1.6	3975							
821	4023	0.039	34.676	27.871	46.107																	3984							
822	4037	0.032	34.673	27.869	46.106																24 +1.6	4008							
823	4048	0.021	34.672	27.869	46.107																18 +1.6	4023							
824	4059	0.018	34.674	27.871	46.109													21.1**0.8			13 +1.6	4037							
124	4104	0.046	34.672	27.868	46.103			0.23				0.15+0.09	7.5				99.5				19 +1.9	4048							
																					12 +2.0	4059							
																					34*	4104							

PRECISION: 0.2 0.02 0.05

STATION 76

POSITION: 57°44'S 66°8'W

DATE: 31 DEC 72

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM UW*	SIO	SIO	UM	SIO				LSU MIT*	USC		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
1135	3		33.9						-19.4*									13.6 +0.6		0.05+0.02		3							
701	13	4.539	33.940	26.926	44.704		2097	1.07		-2.5	-0.25						66.8				472*	13							
702	27	4.516	33.937	26.926	44.707		2093					0.98+0.09	-1.9	3.98	17.39	0.0					460*	27							
703	53	3.914	33.904	26.961	44.804		2101	1.91									66.4				409*	53							
1087	64	1.53	33.813	27.088	45.185		2106(I)		26.1*									13.4 +0.3				64	4.4+0.2	4.3+0.4	0.027+0.007				
704	73	1.753	33.848	27.101	45.173		2111			-2.5	-0.25		-2.1								317*	73							
705	94	0.440	33.836	27.174	45.392		2118	1.65		-2.8	-0.26	0.96+0.09					69.7				142*	94							
706	119	-0.273	33.864	27.232	45.531		2126			-3.0	-0.30		-1.7				73.0				70*	119							
1088	125	-0.02	33.907	27.254	45.523		2125(I)		-13.4*													125							
707	144	-0.415	33.895	27.263	45.577		2123	1.57		-2.8	-0.26										34*	144							
708	159	-0.345	33.922	27.282	45.587		2141						-0.8	4.10	18.27	0.3	68.3				37*	159							
																	69.3*												
1089	176	-0.03	33.970	27.306	45.573		2137(I)		-21.1*									15.0 +0.7				176	4.3+0.3	3.7+0.3	0.020+0.010				
709	185	-0.224	33.952	27.300	45.591		2135	-0.18									68.9				22*	185							
710	235	0.241	34.016	27.329	45.564		2149			-2.4	-0.19	0.70+0.09	-0.9				69.7				22*	235							
1090	252	0.99	34.053	27.316	45.466		2152(I)		-24.7*									14.9 +0.6				252	2.9+0.8						
711	284	0.831	34.090	27.356	45.522		2158	0.70									71.0				15*	284							
1091	324	1.12	34.141	27.379	45.511		2172(I)		-54.9*									16.1 +0.3				324	1.5+0.1	2.8+0.3	0.040+0.020				
712	384	1.290	34.194	27.410	45.522		2195			-2.1	-0.12	0.35+0.09	2.0	4.01	17.70	0.4	73.2				14*	384							
1092	400		34.236				2198(I)		-79.7*									15.7 +0.6				400	1.1+0.8						
889	493	1.86	34.309	27.462	45.507		2214(I)		-107.6*									16.3 +0.5				493		0.8+0.4	0.020+0.005				
715	496	1.958	34.340	27.480	45.514		2214	0.30		-1.9	-0.14						76.3				14*	496							
716	597	2.154	34.424	27.532	45.542		2244						6.1	4.08	17.77	1.4	77.4				44*	597							
890	693		34.472				2234(I)		-133.9*									16.6 +0.3				693	1.8+0.8						
717	695	2.236	34.474	27.566	45.565		2234	0.10									79.4				14*	695							
718	798	2.216	34.527	27.610	45.609		2254			-1.4	-0.05		9.4				81.0				14*	798							
891	842	2.21	34.547	27.265	45.625		2255(I)		-138.8									16.9 +0.6				842	0.3+0.2	0.3+0.2	0.020+0.020				
719	898	2.224	34.573	27.646	45.643		2256	0.12													19*	898							
301	988	2.212	34.583	27.655	45.653		2251						9.6	4.19	18.09	2.1	82.8				18*	988							
892	988		34.602				2251(I)		-144.1*									17.5 +0.3				988	-0.7+0.9						

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 76 — *CONTINUED* | **POSITION: 57°44'S 66°8'W** | **DATE: 31 DEC 72**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM UW*	SIO	SIO	UM	SIO				LSU MIT*	USC		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
720	998	2.189	34.600	27.670	45.670		2258			-1.3	-0.01		8.7								20*	998						
721	1047	2.184	34.630	27.694	45.694		2254	0.05													20*	1047						
722	1097	2.152	34.634	27.700	45.703		2258						10.1								16*	1097						
302	1110	2.158	34.617	27.686	45.689		2263	0.33									84.5				13*	1110						
723	1145	2.118	34.648	27.714	45.721		2254	0.17		-1.1	0.03										24*	1145						
724	1198	2.099	34.658	27.724	45.732		2251			-0.8	0.02						85.2				13*	1198						
1093	1202	2.10	34.648	27.715	45.722		2251(I)		-148.9*									19.0 +0.4				1202		0.4+0.4				
303	1239	2.100	34.651	27.718	45.726		2248			-0.6	-0.03		10.9								10*	1239						
304	1375	2.019	34.684	27.751	45.766		2251	0.52		-1.0	0.00		11.0	4.14	17.83	2.6	87.7				14*	1375						
1094	1401		34.685				2252(I)		-158.4*													1401	-0.6+0.9					
305	1530	1.936	34.699	27.769	45.793		2256			-0.9	0.00						93.8				16*	1530						
306	1697	1.824	34.705	27.782	45.818		2268	0.49		-1.0	-0.02						94.3				12*	1697						
																	95.7*											
307	1704	1.814	34.709	27.786	45.823		2260														12*	1704						
308	1831	1.688	34.714	27.799	45.850		2255	0.50		-1.3	-0.01						97.6				13*	1831						
289	1848	1.68	34.717	27.802	45.853		2255(I)		-168.1*									21.2 +0.7				1848						
309	1969	1.634	34.720	27.808	45.864		2257			-0.9	0.00						95.9				8*	1969						
290	2090		34.722				2269(I)		-160.5*									20.2 +0.4				2090	-0.3+0.8					
310	2119	1.475	34.720	27.820	45.893		2272	0.42					11.5	4.18	18.04	2.5	98.5				12*	2119						
311	2374	1.267	34.721	27.835	45.931		2263			-1.2	-0.01						99.9				10*	2374						
312	2588	1.143	34.718	27.841	45.951		2266	0.35									100.3				8*	2588						
291	2624	1.12	34.716	27.840	45.953		2263(I)		-163.3*									21.2 +0.4				2624						
315	2801	1.005	34.719	27.850	45.976		2252			-1.4	-0.04						101.1					2801						
																	100.4*											
316	2971	0.842	34.714	27.857	46.000		2266	0.46					10.9	4.19	18.10	2.7	102.0				15*	2971						
317	3169	0.767	34.711	27.859	46.011		2268			-1.5	-0.10						101.3				10*	3169						
292	3218		34.714				2268(I)		-158.8*									23.1 +0.5				3218	0.1+0.8					
318	3367	0.707	34.711	27.862	46.021		2268	0.46		-1.5	-0.10	0.18+0.09					103.0				13*	3367						
319	3564	0.693	34.711	27.863	46.024		2254			-1.5	-0.08						103.7				6*	3564						
320	3761	0.677	34.709	27.863	46.025		2261	0.27		-1.9	-0.11		9.5	4.21	18.17	3.0	104.0				10*	3761						
																	102.6*											
293	3819	0.67	34.710	27.863	46.026		2262(I)		-159.6*									22.9 +0.4				3819						
321	3978	0.655	34.709	27.864	46.029		2263			-1.6	-0.08						104.0				11*	3978						
322	4183	0.639	34.710	27.866	46.032		2267	0.40				-0.03+0.09	9.8	4.20	18.18	2.7					41*	4183						
115	4267	0.625	34.709	27.866	46.034		2260(I)														11 +1.6	4267						
323	4315	0.628	34.709	27.865	46.033		2256			-1.5	-0.08						104.3					4315						
116	4355	0.618	34.709	27.866	46.035		2258(I)														18 +1.6	4355						
117	4428	0.617	34.709	27.866	46.035		2261(I)														16 +1.6	4428						
118	4485	0.617	34.711	27.868	46.037		2264(I)														31 +2.1	4485						
324	4491	0.623	34.709	27.866	46.034		2264	0.44		-1.7	-0.06	0.05+0.09					104.1				19*	4491						
294	4510		34.702						-160.9*									23.4 +1.1				4510	-0.6+0.8					
119	4521	0.617	34.709	27.866	46.035																15 +1.6	4521						
120	4556	0.616	34.709	27.866	46.036																16 +1.6	4556						
121	4579	0.617	34.711	27.868	46.037																17 +1.6	4579						
124	4591	0.616	34.711	27.868	46.037																11 +1.6	4591						

PRECISION: 1.0 0.01 0.06 0.2

STATION 77 | **POSITION: 59°39'S 64°30'W** | **DATE: 2 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																	
101	41	1.523	33.775	27.059	45.158							0.90+0.09										41							
104	107	-1.310	33.936	27.328	45.747							0.87+0.09										107							
106	182	0.576	34.193	27.454	45.645							0.38+0.09										182							
108	283	1.667	34.397	27.547	45.610							0.25+0.09										283							
110	483	2.057	34.560	27.648	45.664							0.01+0.09										483							
112	686	2.068	34.634	27.707	45.719							0.13+0.09										686							

(I) INTERPOLATED FROM NISKIN DATA

STATION 78 — **POSITION: 61°3'S 62°58'W** — **DATE: 3 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM UW*	SIO	SIO	UM	----------SIO----------				MIT			LDGO	LDGO WHOI*		WHOI	WHOI					
935	3		33.82																	0.02+0.02		3							
501	6	1.345	33.833	27.117	45.235		2132	1.43		-3.1	-0.32	0.91+0.09					71.1				50*	6							
502	41	1.346	33.832	27.116	45.233		2137					0.80+0.09	-1.4	4.07	18.05	-0.1	71.0				26*	41							
503	65	-0.508	33.888	27.261	45.587		2146	1.39		-3.3	-0.27										59*	65							
504	81	-0.949	33.925	27.308	45.684		2146	1.10					-1.4	4.10	18.30	0.3	71.6				54*	81							
892	95	-0.35	33.900	27.264	45.571		2150(I)		-18.6*													95	2.7+0.8	2.4+1.1				
505	96	-0.967	33.975	27.349	45.725	2.1	2151			-2.6	-0.23	0.69+0.09									42*	96							
506	126	0.003	34.094	27.404	45.664		2184	0.84					0.4	4.05	17.99	0.4	71.1				27*	126							
893	142	0.19	34.099	27.398	45.637		2195(I)		-62.1*													142							
507	151	0.758	34.184	27.436	45.607		2200					0.54+0.09					73.6				28*	151							
894	189	1.23	34.220	27.435	45.553		2213(I)		-97.0*													189	0.5+0.8	0.8+1.0				
508	200	1.418	34.300	27.487	45.581		2215	0.07		-2.2	-0.11		5.4	4.18	18.26	1.4	73.6				31*	200							
689	246	1.73	34.400	27.544	45.600		2223(I)		-125.3*													246							
509	251	1.677	34.360	27.517	45.580		2224			-1.8											16*	251							
510	301	1.871	34.431	27.559	45.600		2239	0.47		-1.2	-0.08	0.43+0.11	6.2	4.26	18.22	3.2	77.7				22*	301							
690	345	2.03	34.490	27.594	45.615		2247(I)		-132.2													345	-0.3+0.9	-0.2+1.0				
511	400	2.090	34.532	27.623	45.637		2252			-0.6	-0.01	0.15+0.09									9*	400							
512	440	2.097	34.552	27.639	45.651		2252	0.42		-0.9							86.3				20*	440							
691	445	2.09	34.565	27.649	45.662		2252(I)		-142.4*													445							
515	500	2.086	34.578	27.661	45.673		2254			-0.6	0.03		9.5	4.21	18.05	2.9					32*	500							
109	500	2.087	34.579	27.661	45.673	0.1	2254	0.20													27*	500							
692	545		34.604						-145.8*													545	-0.5+0.9	0.2+0.9				
516	600	2.066	34.619	27.695	45.708		2258	0.21		-0.9	0.03						83.9				17*	600							
693	671	2.03	34.654	27.725	45.741		2257(I)		-147.0*													671							
517	700	2.028	34.653	27.725	45.741	-0.3	2257	0.48		-0.8	0.02		14.1								14*	700							
518	799	1.988	34.684	27.753	45.772		2253	0.39									88.1				11*	799							
694	889	2.03	34.696	27.759	45.774		2254(I)		-155.4*													889	0.6+0.9	-0.1+1.1				
519	900	1.935	34.700	27.770	45.794		2254			-0.7	0.01		10.0	4.19	17.96	3.1					15*	900							
520	998	1.877	34.707	27.780	45.810		2256	0.09		-0.6	-0.02						89.4				12*	998							
521	1099	1.780	34.721	27.798	45.839		2251			-1.0	0.01										35*	1099							
389	1192	1.67	34.730	27.813	45.865		2253(I)		-161.9*													1192							
522	1222	1.678	34.723	27.807	45.859	-0.4	2254	0.42		-1.2	0.01						90.1				9*	1222							
523	1346	1.561	34.722	27.815	45.879		2264			-0.8	-0.02		14.2								7*	1346							
524	1489	1.433	34.730	27.830	45.908		2253	0.36		-0.8							97.0				15*	1489							
110	1506	1.377	34.730	27.834	45.919		2256						11.1	4.27	18.33	3.2	96.8				12*	1506							
390	1589	1.32	34.724	27.833	45.923		2258(I)		-160.6*													1589	-0.6+0.9	-1.0+0.8				
111	1706	1.225	34.727	27.842	45.943		2261			-1.4	-0.02										7*	1706							
112	1906	1.089	34.723	27.848	45.964		2264						13.5	4.24	18.18	3.4	97.2				13*	1906							
391	1985	1.01	34.717	27.848	45.972		2265(I)		-163.2*													1985							
115	2116	0.941	34.719	27.854	45.987	0.2	2266	0.35		-1.1	-0.04						98.4				57*	2116							
116	2315	0.795	34.713	27.859	46.008		2263						13.0	4.25	18.34	2.8	98.4				8*	2315							
117	2414	0.716	34.709	27.860	46.018		2263	0.33		-1.6	-0.05										19*	2414							
392	2481		34.715				2263(I)															2481	-0.7+1.0	-0.4+0.9				
118	2514	0.628	34.708	27.865	46.033		2263										101.5				11*	2514							
119	2714	0.492	34.703	27.869	46.052	0.1	2262	0.29		-1.8	-0.08						101.7				12*	2714							
120	2913	0.402	34.703	27.874	46.067		2262						10.0	4.22	18.23	2.9	103.7				13*	2913							
393	2978	0.40	34.711	27.880	46.074		2262(I)		-161.9*													2978							
121	3112	0.351	34.705	27.878	46.077		2264	0.55		-2.4	-0.16	0.02+0.09					104.5				12*	3112							
122	3309	0.289	34.697	27.875	46.082		2270						9.7	4.29	18.52	3.2	103.8				30*	3309							
394	3478	0.24	34.700	27.879	46.091		2266(I)		-163.3													3478	-0.4+0.8	-1.0+0.7				
715	3502	0.312	34.696	27.873	46.077		2265(I)														18	+1.6	3502						
123	3511	0.193	34.691	27.875	46.093		2265	0.49			-0.19	0.03+0.09					102.1				43*	3511							
716	3596	0.283	34.696	27.875	46.082		2267(I)														13	+1.8	3596						
124	3616	0.169	34.692	27.877	46.098		2267	0.21		-3.0	-0.18	0.07+0 09	12.5				102.6				26*	3616							
717	3668	0.224	34.691	27.874	46.088		2265(I)														34	+1.6	3668						
718	3725	0.230	34.691	27.873	46.087		2263(I)										103.0				39	+1.6	3725						
719	3755	0.199	34.688	27.873	46.090		2262(I)														43	+1.6	3755						
720	3783	0.192	34.689	27.874	46.092		2261(I)										103.0				69	+1.7	3783						
721	3785	0.191	34.688	27.873	46.091		2251														49	+1.7	3785						
722	3796	0.190	34.688	27.873	46.091		2265										104.6				38	+1.6	3796						
723	3801	0.190	34.691	27.876	46.094		2258										103.7				53	+1.7	3801						
724	3805	0.189	34.687	27.872	46.091		2267										103.2				51	+1.9	3805						
													PRECISION:	1.0	0.01	0.06	0.2												

STATION 79 — **POSITION: 59°56'S 45°2'W** — **DATE: 6 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
											SIO								LDGO	LDGO	LDGO								
101	4	1.783	34.061	27.270	45.331		2133				-0.30											4							
635	5		34.07				2132(I)												0.11	+0.40	0.07+0.02		5						
103	72	0.486	34.306	27.550	45.747		2201				-0.25												72						
105	182	-0.249	34.425	27.683	45.960		2223				-0.19												182						
108	339	-0.304	34.516	27.759	46.040		2231				-0.16												339						
110	536	-0.200	34.576	27.802	46.069		2243				-0.13												536						
111	630	-0.130	34.598	27.817	46.075		2252				-0.12												630						
115	741	0.052	34.631	27.834	46.070		2257				-0.09												741						
116	834	0.095	34.646	27.844	46.075		2253				-0.08												834						
117	930	0.088	34.654	27.851	46.082		2256				-0.09												930						

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 79 — *CONTINUED*

POSITION: 59°56'S 45°2'W

DATE: 6 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg					DPM/100kg			DPM/100kg		
											SIO								LDGO	LDGO	LDGO								
118	1020	0.082	34.655	27.852	46.084		2259				-0.09											1020						
119	1118	0.078	34.659	27.856	46.088		2263				-0.08											1118						
121	1321	0.025	34.658	27.858	46.096		2260				-0.11											1321						
124	1591	-0.074	34.658	27.863	46.112		2252				-0.12											1591						
503	1795	-0.161	34.663	27.871	46.130		2257				-0.12											1795						
507	2192	-0.273	34.653	27.868	46.141		2252				-0.18											2192						
510	2690	-0.405	34.653	27.874	46.162		2245(I)				-0.18											2690						
515	3270	-0.530	34.645	27.873	46.176		2250				-0.24											3270						
517	3594	-0.587	34.644	27.875	46.184		2234(I)				-0.24											3594						
518	3833	-0.615	34.642	27.874	46.187		2232				-0.23											3833						
521	4449	-0.649	34.646	27.879	46.196		2243(I)				-0.27											4449						
318	4513						2243(I)														24 +1.6	4513						
319	4617						2244(I)														34 +1.6	4617						
320	4703						2245(I)														39 +1.6	4703						
321	4761						2246(I)														27 +1.6	4761						
322	4795						2246(I)														43 +1.6	4795						
323	4818						2246(I)														30 +1.6	4818						
324	4846						2247(I)														40 +1.6	4846						
524	5063	-0.662	34.643	27.877	46.195		2247				-0.23											5063						

STATION 80

POSITION: 57°47'S 29°44'W

DATE: 10 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg					DPM/100kg			DPM/100kg		
																			LDGO		LDGO								
225	1	-0.575	32.953	26.509	44.874														16.2 +0.7			1						
335	5																				0.06+0.02	5						

STATION 82

POSITION: 56°15'S 24°55'W

DATE: 11 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg					DPM/100kg			DPM/100kg		
								UH	UM	SIO	SIO	UM	----------SIO----------				LSU MIT*	LDGO USC*	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI			
615	1	0.976	33.732	27.060	45.221		2130	1.48		-3.6	-0.48	0.99+0.09					72.6*				80	1						
1535	3		29.03				2130(I)												0.06 +0.42	0.03+0.02		3						
1201	4	1.297	33.727	27.036	45.161		2130(I)											16.2 +0.6				4						
1189	12	1.32	33.727	27.034	45.158		2132(I)		-62.5									17.0**+0.3				12	0.9+0.1	3.0+0.3	0.040+0.050			
616	28	0.802	33.753	27.087	45.267		2134			-4.1			-1.0	4.17	18.37	0.8					100	28						
617	47	0.318	33.819	27.167	45.399		2130	1.30		-3.5	-0.29						72.7				88	47						
1190	52	0.91	33.737	27.067	45.236		2139(I)											13.4**+0.3				52	1.6+1.1					
618	67	-0.621	33.912	27.285	45.623		2166			-3.0		0.72+0.09	-1.1	4.12	18.40	0.1					89	67						
619	82	-0.705	33.972	27.337	45.683		2169	0.98		-3.6							83.5				41	82						
1191	85	-0.71	33.931	27.303	45.651		2173(I)		-66.4									14.8**+0.3				85	2.6+0.2	2.4+0.4	0.010+0.020			
620	97	-0.728	34.042	27.394	45.740		2189			-3.6	-0.26		0.7	4.13	18.40	0.3					56	97						
621	118	-0.372	34.169	27.482	45.782		2195	0.82		-2.9		0.66+0.09									49	118						
1192	145	-0.36	34.211	27.515	45.812		2224(I)		-108.2									17.8**+0.4				145	0.8+0.8					
622	157	0.528	34.346	27.579	45.771		2237			-2.2	-0.15		4.6	4.16	18.26	1.3	81.7				29	157						
401	200	0.756	34.455	27.654	45.816		2231	0.57		-1.8	-0.16										33	200						
623	207	1.255	34.502	27.660	45.765		2239					0.13+0.09					85.1					207						
1193	234	0.59	34.469	27.674	45.854		2244(I)		-132.1									18.3**+0.5				234	1.3+0.3	1.1+0.5	0.190+0.030			
402	282	1.421	34.609	27.734	45.818		2253					0.09+0.09	8.7	4.21	18.00	3.5	86.0				35	282						
624	286	1.253	34.588	27.729	45.831		2255			-1.8	-0.07		7.8	4.14	18.01	1.9					36	286						
403	371	1.628	34.673	27.771	45.829		2248	0.52		-1.6	-0.03	0.06+0.09					89.2				31	371						
1194	395	0.75	34.604	27.773	45.930		2250(I)		-151.4									18.4**+0.8				395	0.2+1.0					
404	432	1.611	34.685	27.782	45.842		2253			-1.0	-0.01		10.7	4.27	10.02	4.9					26	432						
589	500	1.53	34.698	27.798	45.867		2251(I)		-154.0									18.8**+0.4				500	0.1+0.3	0.6+0.4				
405	582	1.497	34.711	27.811	45.882		2247	0.45		-0.7	-0.02						91.4				19	582						
590	647		34.697				2248(I)		-162.5									20.1**+0.4				647	0.3+0.8					
591	795	1.01	34.686	27.823	45.949		2253(I)		-161.0									20.4**+0.4				795	0.7+0.2	0.6+0.5	0.030+0.050			
406	832	1.106	34.708	27.835	45.950		2255			-1.2	-0.04	0.15+0.09	10.2				94.4				23	832						
407	981	0.877	34.706	27.848	45.988		2258	0.39		-1.5	-0.04						95.6				14	981						
592	991		34.707				2257(I)		-160.0									20.6**+0.4				991	-0.2+0.7					
408	1080	0.862	34.705	27.848	45.990		2253			-1.4	-0.05	0.06+0.09	9.4	4.16	18.03	2.5						1080						
409	1180	0.645	34.687	27.847	46.014		2260	0.54		-1.6							97.5				9	1180						
593	1285	0.66	34.694	27.851	46.016		2259(I)		-162.3									21.3**+0.4				1285						
410	1379	0.498	34.684	27.853	46.036		2259			-1.8		0.13+0.09					97.9				10	1379						
411	1577	0.363	34.682	27.859	46.058		2260	0.49		-1.8	-0.09						99.1				10	1577						
594	1585		34.665				2260(I)		-162.3									21.7**+0.4				1585	-0.8+0.7					
412	1776	0.265	34.679	27.862	46.072		2254			-1.8		0.12+0.09	7.8	4.17	18.16	2.2					17	1776						
1401	1787	0.186	34.672	27.861	46.080		2258										100.6				24	1787						
989	1874	0.16	34.677	27.865	46.087		2263(I)		-157.9									20.2**+0.3				1874						

(I) INTERPOLATED FROM NISKIN DATA

STATION 82 — *CONTINUED*

POSITION: 56°15'S 24°55'W

DATE: 11 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM	SIO	SIO	UM	SIO	SIO	SIO	LSU MIT* / LDGO USC*	LDGO	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
1402	1986		34.669				2270			-1.9	-0.13		8.1	4.21	18.32	2.4					11	1986							
1403	2186		34.667				2254	0.56		-2.4							100.2				9	2186							
990	2298	-0.04	34.664	27.865	46.111		2265(I)		-149.9									20.6*+0.6			2298	-0.5+0.8						
1404	2387	-0.06	34.665	27.868	46.115		2274										100.0				11	2387						
1405	2589		34.663				2258			-2.4	-0.16										17	2589						
1406	2791		34.661				2262										99.3				12	2791						
1407	2990	-0.268	34.660	27.873	46.145		2268	0.70		-2.5		-0.03+0.09	6.9	4.31	18.44	4.2					24	2990						
991	3168	-0.34	34.655	27.872	46.152		2260(I)		-150.4									20.8*+0.4				3168						
1408	3191		34.656				2259						7.5				99.2				18	3191						
1409	3392		34.653				2255			-2.4	-0.19										23	3392						
1410	3594	-0.518	34.651	27.877	46.178		2253						5.3	4.20	18.34	2.3	98.1				11	3594						
992	3664	-0.51	34.652	27.878	46.178		2251(I)		-152.4									20.7*+0.6				3664	-0.9+0.8					
1411	3786		34.647				2247	0.61		-3.0											7	3786						
1412	4000		34.646				2250						5.7	4.26	18.54	2.6	97.1				78	4000						
993	4158	-0.61	34.646	27.877	46.189		2244(I)		-146.4									21.0*+0.4				4158						
1415	4300	-0.652	34.647	27.880	46.197		2239	0.71		-2.5	-0.23						96.6				26	4300						
1416	4603		34.644				2256			-3.1			4.2	4.24	18.54	2.2	97.0				12	4603						
994	4657	-0.68	34.642	27.877	46.197		2253(I)		-153.3									21.3*+0.9				4657	-0.1+0.8					
1417	4906	-0.73	34.644	27.881	46.207		2239	0.74		-3.3	-0.24	0.01+0.06									26	4906						
1418	5208		34.646				2248			-2.8			4.9				96.5				22	5208						
789	5245	-0.53	34.649	27.876	46.178		2248(I)		-154.8									22.4*+0.6				5245						
1419	5509		34.644				2245	0.61		-2.8	-0.24										22	5509						
790	5760	-0.78	34.649	27.886	46.218		2250(I)		-145.1									21.6*+0.4				5760						
1420	5806	-0.784	34.645	27.884	46.216		2251										97.5				16	5806						
																	98.6*											
1421	6109		34.647				2249	0.62		-2.8	-0.25		4.8	4.26	18.56	2.7	98.4				18	6109						
																	98.8*											
791	6271	-0.80	34.647	27.885	46.219		2248(I)		-145.5									21.0*+0.4				6271						
1423	6412		34.646				2248			-3.1		0.19+0.06									23	6412						
1424	6511	-0.81	34.647	27.886	46.221		2251	0.56		-3.0	-0.25		4.6	4.20	18.39	2.2	97.4				19	6511						
																	100.3*											
792	6780	-0.80	34.654	27.891	46.225				-162.2									20.5*+0.4				6780	-0.2+0.9					
793	7291	-0.80	34.648	27.886	46.220				-157.0									20.3*+0.4				7291						
794	7808	-0.81	34.647	27.886	46.221				-150.1									20.9*+0.7				7808						
												PRECISION:	1.0	0.01	0.06	0.2												

STATION 83

POSITION: 56°48'S 22°22'W

DATE: 17 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																LDGO												
335	5		33.50													0.03+0.02					5							

STATION 84

POSITION: 56°55'S 19°49'W

DATE: 18 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																LDGO												
235	5		33.70													0.02+0.02					5							

(I) INTERPOLATED FROM NISKIN DATA

STATION 85 — **POSITION: 57°30'S 17°23'W** — **DATE: 18 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
											SIO	SIO					LDGO	LDGO										
101	5	1.320	33.646	26.969	45.095												13.0 +0.7				5							
435	5		33.55															0.03 +0.04			5							
311	15	1.092	33.564	26.918	45.072		2102				-3.7	-0.42									15							
312	69	0.233	33.618	27.009	45.259		2119				-3.8	-0.32									69							
315	147	-0.403	33.942	27.300	45.612		2168				-3.5										147							
316	205	1.015	34.329	27.537	45.674		2233				-1.8	-0.15									205							
317	274	1.454	34.491	27.637	45.721		2240				-2.1										274							
318	355	1.589	34.580	27.699	45.765		2264				-1.4	-0.07									355							
319	436	1.653	34.634	27.738	45.795		2256				-1.3	-0.02									436							
320	560	1.611	34.680	27.778	45.838		2251				-0.8	0.00									560							
322	758	1.420	34.702	27.809	45.889		2269				-1.3	-0.02									758							
306	945	1.167	34.707	27.830	45.938		2267				-0.9	-0.05									945							
324	957	1.177	34.706	27.829	45.936		2261				-1.4	-0.07									957							
308	1094	0.966	34.700	27.838	45.968		2271					-0.07									1094							
212	1273	0.936	34.705	27.843	45.977		2257				-1.3	-0.06									1273							
215	1391	0.756	34.698	27.849	46.003		2267(I)				-1.6										1391							
216	1527	0.640	34.692	27.851	46.018		2265				-2.0	-0.08									1527							
217	1700	0.477	34.685	27.855	46.041		2272(I)				-1.7										1700							
218	1899	0.341	34.681	27.859	46.061		2275				-2.1										1899							
219	2098	0.229	34.677	27.862	46.076		2258				-1.8	-0.12									2098							
221	2496	0.022	34.670	27.867	46.105		2258				-2.0	-0.14									2496							
202	2862	-0.139	34.664	27.871	46.127		2276				-2.4										2862							
204	3259	-0.308	34.660	27.875	46.152		2264				-2.4	-0.16									3259							
208	4066	-0.592	34.652	27.881	46.191		2261				-2.6	-0.21									4066							
210	4475	-0.62	34.651	27.882	46.195		2257				-2.9										4475							
224	4723	-0.630	34.649	27.881	46.195		2266				-2.8	-0.24									4723							

STATION 86 — **POSITION: 57°52'S 14°32'W** — **DATE: 19 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
																		LDGO	LDGO									
235	5		33.49															0.05 +0.05	0.19+0.06		5							

STATION 87 — **POSITION: 58°38'S 9°26'W** — **DATE: 20 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
																			LDGO									
235	5		33.57																0.02		5							

STATION 88 — **POSITION: 59°20'S 4°51'W** — **DATE: 21 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
																MIT			LDGO									
335	5		34.04																0.02		5							
222	4680	-0.851	34.643	27.885	46.225											99.3					4680							
223	5094	-0.863	34.643	27.885	46.227											99.9					5094							
224	5499	-0.865	34.642	27.884	46.226											99.7					5499							

(I) INTERPOLATED FROM NISKIN DATA

STATION 89 | **POSITION: 60°0'S 0°2'E** | **DATE 22 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM	SIO	SIO	UM	SIO				LSU MIT*	SIO USC*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	SIO	SIO	SIO	
401	1	0.965	34.103	27.358	45.509	1.2	2149	1.31		-3.5	-0.42	0.86+0.09					86.6*				241*	1							
815	2	1.751	34.080	27.287	45.352		2149(I)											19.4 +0.9				2						9.8 +1.0	
																		18.6**+0.5											
1135	5		29.74				2151(I)											18.2**+0.5				5							
987	21	0.64	34.087	27.364	45.551		2158(I)		-43.5													21				5.9 +0.4	4.20 +0.24		
402	24	0.190	34.101	27.400	45.638		2159			-3.3	-0.39						86.5*				285*	24							
336	35		34.097				2175(I)													0.00+0.02		35							
403	40	0.022	34.116	27.421	45.678	-0.1	2183(I)	1.33		-3.2	-0.34	0.88+0.09					88.6*				285*	40							
822	48	-0.387	34.162	27.477	45.779		2195(I)											19.5 +0.5				48						10.1 +0.4	
																		16.2**+0.3											
404	50	-1.140	34.279	27.601	45.988		2198			-3.2	-0.31		-0.6	4.17	18.54	0.7	88.0				135*	50							
																	88.8*												
988	52	-0.09	34.118	27.427	45.697		2199(I)		-59.7									19.0 +1.0				52	2.7+1.0	3.9+1.1				8.0 +0.4	
405	74	-1.830	34.383	27.705	46.171		2210	0.92				0.87+0.10					90.5*				60*	74							
406	95	-1.828	34.396	27.716	46.181	1.2	2219			-3.4	-0.31		0.8	4.10	18.17	1.3	89.2*				40*	95							
338	100		34.396				2221(I)												0.18 +0.05			100							
989	105	-1.81	34.403	27.720	46.183		2223(I)		-72.5									19.1 +0.8				105	3.0+0.5	4.5+0.4	0.050			12.4 +0.6	
																		19.4**+0.5											
990	120		34.401				2229(I)															120				10.5 +0.4	0.85 +0.07		
339	130		34.415				2234(I)													0.00+0.02		130							
786	137	-1.53	34.438	27.741	46.170		2237(I)		-74.7									16.6**+0.3				137	1.1+0.3						
340	140		34.468				2238(I)													0.34+0.05		140							
407	145	-0.533	34.543	27.791	46.097		2241	0.57		-2.8	-0.19	0.31+0.09					94.1*				26*	145							
341	160		34.601				2252(I)													0.02+0.03		160							
408	174	0.372	34.644	27.828	46.027		2261			-1.7	-0.12		13.4				93.8*					174							
342	175		34.652				2261(I)													0.05+0.02		175							
787	199	0.50	34.676	27.846	46.029		2269(I)		-158.8									20.4 +0.5				199	0.3+0.2	1.7+1.8	0.020+0.010			14.6 +0.5	
																		18.3**+0.2											
409	221	0.528	34.678	27.846	46.027		2272	0.26		-1.6	-0.09	-0.01+0.09					95.6*				28*	221							
410	336	0.481	34.687	27.856	46.042	7.4	2270(I)			-1.6	-0.10		15.2				98.0*				13*	336							
991	400	0.43	34.685	27.857	46.049		2270(I)															400				17.5 +0.4	0.35 +0.05		
788	400	0.44	34.687	27.858	46.048		2270(I)		-164.6									20.5 +0.6				400	-0.7+0.9					17.4 +0.8	
																		18.5**+0.5											
411	437	0.416	34.683	27.857	46.049		2269	0.29		-1.7	-0.11						95.7*					437							
412	537	0.363	34.683	27.860	46.059		2274				-0.14		8.0	4.20	18.19	2.5	98.6*				21*	537							
789	601	0.32	34.689	27.867	46.071		2275(I)		-164.5									20.3 +0.7				601						14.5 +0.5	
																		19.7**+0.5											
415	647	0.303	34.685	27.865	46.070	-1.0	2275	0.24		-1.7	-0.15	-0.04+0.09									24*	647							
416	748	0.250	34.680	27.864	46.075		2271						7.5	4.21	18.25	2.8	100.8*				14*	748							
790	797		34.685				2271(I)		-161.1									20.1 +0.6				797	0.4+0.9					12.7 +0.6	
																		20.3**+0.8											
992	847	0.19	34.681	27.867	46.085		2270(I)															847				17.1 +0.6	0.55 +0.05		
417	848	0.204	34.676	27.863	46.080		2270	0.38		-2.0	-0.15	-0.09+0.09									12*	848							
418	949	0.157	34.678	27.867	46.089		2272						7.6	4.24	18.34	3.0	101.4*				77*	949							
791	1095	0.07	34.679	27.871	46.103		2266(I)		-156.4									19.5 +0.7				1095		-0.1+0.5	0.030			14.5 +0.4	
																		21.0**+0.8											
419	1098	0.079	34.673	27.867	46.098		2266	0.34				-0.04+0.09					99.3				16*	1098							
																	103.8*												
420	1298	-0.010	34.670	27.869	46.111	5.1	2264			-2.0	-0.15						100.7*					1298							
993	1339	-0.040	34.667	27.868	46.113		2263(I)															1339				13.1 +0.5	0.54 +0.06		
586	1436	-0.08	34.670	27.872	46.121		2261(I)		-166.4									20.4 +0.5				1436	0.0+0.8	0.5+0.9				14.4 +0.5	
																		20.7**+0.3											
421	1499	-0.098	34.670	27.873	46.125		2260	0.40				-0.05+0.09					100.5*					1499							
422	1698	-0.183	34.664	27.873	46.134		2259			-2.2	-0.16						101.8*				24*	1698							
587	1788	-0.21	34.666	27.875	46.139		2249(I)		-166.8									21.1 +0.7				1788						12.8 +0.5	
																		20.6**+0.4											
994	1792	-0.215	34.663	27.873	46.139		2249(I)															1792				15.6 +0.6	0.35 +0.03		
211	1808	-0.230	34.663	27.874	46.141		2248	0.47									100.8*				16*	1808							
423	1897	-0.260	34.662	27.875	46.145		2259	0.44				0.02+0.09					103.8*					1897							
212	2012	-0.296	34.659	27.874	46.149	4.5	2255	0.37					7.1	4.24	18.48	2.4	102.0*				18*	2012							
424	2096	-0.321	34.661	27.877	46.154		2255										101.1*				22*	2056							
588	2134	-0.32	34.663	27.878	46.156		2258(I)		-161.1									20.5 +0.8				2134	0.3+0.9					13.3 +0.5	
																		20.3**+0.4											
201	2197	-0.364	34.661	27.879	46.162		2263			-2.4	-0.16						102.1*				27*	2197							
792	2235	-0.36	34.664	27.880	46.162		2262(I)															2235				15.0 +0.6	0.29 +0.04		
215	2402	-0.401	34.657	27.877	46.164	1.2	2254	0.46					5.0	4.25	18.53	2.3	100.4*				9*	2402							
589	2480	-0.41	34.662	27.881	46.169		2251(I)		-164.5									22.2 +0.5				2480						13.7 +0.4	
																		20.7**+0.3											
202	2595	-0.455	34.654	27.877	46.171		2249				-0.17	0.02+0.09					100.3*					2595							
793	2678	-0.468	34.657	27.880	46.175		2253(I)															2678				13.7 +0.6	0.43 +0.08		
216	2812	-0.492	34.654	27.879	46.177	1.8	2259	0.49					5.3	4.24	18.51	2.2					13*	2812							
590	2832		34.661				2258(I)		-163.9									20.8 +1.0				2832	2.1+0.9					15.7 +0.4	
203	2996	-0.532	34.654	27.881	46.183		2253			-2.6	-0.18						99.9*				17*	2996							
591	3133		34.653				2254(I)											21.0 +0.6				3133				13.2 +0.6	0.42 +0.03	10.2 +0.6	
592	3184	-0.569	34.659	27.886	46.192		2255(I)		-160.0									20.6 +0.8				3184						14.9 +0.7	
																		21.1**+0.8											
217	3214	-0.565	34.652	27.880	46.187	-4.8	2255	0.39					5.4	4.41	19.27	2.2	100.7				11*	3214							
																	100.2*												
204	3295	-0.59	34.651	27.881	46.190		2253										100.7*				14*	3295							
218	3414	-0.608	34.651	27.881	46.193	2.3	2252	0.46		-2.4	-0.21						102.5*				28*	3414							
205	3494	-0.63	34.651	27.882	46.197		2250					-0.02+0.09					102.4*				14*	3494							
186	3531	-0.638	34.656	27.886	46.201		2250(I)											20.9 +0.6				3531	0.8+0.9					9.8 +0.4	
																		21.0**+0.3											

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 89 — *CONTINUED* **POSITION: 60°0'S 0°2'E** **DATE: 22 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM	SIO	SIO	UM	SIO				LSU MIT*	SIO USC*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	SIO	SIO	SIO	
794	3550	-0.648	34.652	27.883	46.199		2250(I)															3550					0.49 +0.05		
187	3552	-0.65	34.653	27.884	46.200		2250(I)															3552				12.7 +0.5	0.56 +0.04		
219	3614	-0.650	34.651	27.883	46.199		2250						4.7	4.20	18.39	2.1	102.2*				9*	3614							
206	3696	-0.677	34.651	27.884	46.204		2248										101.5*				14*	3696							
220	3864	-0.706	34.651	27.885	46.208	-0.6	2249	0.57		-2.5	-0.21		4.2	4.24	18.54	2.3	100.6*				6*	3864							
188	3883	-0.73	34.654	27.888	46.214		2249(I)		-160.8									21.9 +1.4				3883						11.2 +0.5	
																		20.6*+0.6											
207	3995	-0.738	34.650	27.886	46.213		2249										100.8*				19*	3995							
221	4173	-0.784	34.650	27.888	46.220		2244	0.65									101.9*					4173							
189	4230	-0.764	34.653	27.889	46.219		2243(I)		-157.0									22.2*+0.4				4230	-0.3+0.9						
190	4282	-0.80	34.650	27.888	46.222		2243(I)															4282				11.6 +0.5	0.56 +0.04		
208	4299	-0.812	34.650	27.889	46.224		2243			-2.8	-0.24						100.6*				11*	4299							
222	4503	-0.842	34.649	27.889	46.228		2244	0.63					5.0	4.36	18.91	3.1	101.4*				14*	4503							
191	4579	-0.86	34.654	27.894	46.235		2247(I)		-150.1									19.5 +0.9				4579						11.0 +0.5	
209	4700	-0.87	34.648	27.890	46.232		2250			-2.8	-0.23	0.04+0.09					101.9*				19*	4700							
594	4770	-0.857	34.646	27.887	46.228		2249(I)															4770				10.3 +0.4	0.57 +0.05		
223	4924	-0.877	34.647	27.889	46.232		2245	0.69		-2.8	-0.26		3.6	4.33	18.89	2.6	100.4*				11*	4924							
192	4928	-0.87	34.651	27.892	46.234		2245(I)		-155.5													4928	0.7+0.8						
1015	5062	-0.883	34.648	27.890	46.234		2246(I)											20.8 +0.9			19 +1.6	5062						9.3 +0.4	
																		21.2*+0.4											
210	5103	-0.885	34.648	27.890	46.234		2247			-3.4	-0.23	0.01+0.09					101.5*				11*	5103							
1016	5137	-0.883	34.647	27.889	46.233		2247(I)														9 +1.6	5137							
1017	5202	-0.885	34.647	27.889	46.233		2246(I)														11 +1.6	5202							
1018	5242	-0.886	34.646	27.888	46.233		2246(I)														13 +1.6	5242							
193	5247	-0.88	34.649	27.890	46.234		2246(I)															5247				8.1 +0.4	0.50 +0.07		
194	5268	-0.88	34.654	27.894	46.237		2245(I)		-153.6									21.1 +0.6				5268						7.6 +0.5	
																		22.0*+0.5											
1019	5273	-0.886	34.647	27.889	46.234		2245(I)														13 +1.6	5273							
1020	5301	-0.887	34.647	27.889	46.234		2245(I)														8 +1.6	5301							
224	5309	-0.887	34.649	27.891	46.235	3.4	2245	0.56					3.2	4.25	18.61	2.2						5309							
1021	5316	-0.886	34.648	27.890	46.234																22 +1.6	5316							
1022	5331	-0.886	34.647	27.889	46.234													20.7 +0.6			18 +1.6	5331						8.1 +0.3	
																		23.1*+0.4											
1023	5342	-0.890	34.647	27.889	46.234																32 +3.0	5342							
1024	5353	-0.889	34.647	27.889	46.234																11 +1.6	5353							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 90 **POSITION: 56°25'S 4°30'E** **DATE: 26 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM										LDGO	LDGO									
235	3		33.808				2129(I)		-55.7													3							
236	50		33.853				2137(I)		-54.2											0.07+0.02		50							
237	100		34.008				2161(I)		-68.1											0.07+0.02		100							
238	130		34.133				2197(I)		-83.1											0.05+0.03		130							
239	176		34.338				2228(I)		-114.8										0.11 +0.05	0.15+0.08		176							

(I) INTERPOLATED FROM NISKIN DATA

STATION 91 — POSITION: 49°34'S 11°28'E — DATE: 29 JAN 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He 10^{-5}cc/kg	Ne 10^{-5}cc/kg	$\Delta(\frac{He}{Ne})$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}T' DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	^{239,240}Pu	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	T^{210}Pb	^{210}Po
								UH	UM		SIO	UM	SIO				MIT	USC		LDGO	WHOI		WHOI	WHOI					
401	2	4.302	33.841	26.872	44.677		2102	1.21			-0.30	0.98+0.09					71.7												
615	3	4.299	33.841	26.872	44.678		2102(I)														415	2						
335	3		33.846				2102(I)											14.9 +0.6				3						
789	19	4.20	33.853	26.891	44.706		2103(I)		18.6											0.04+0.02		3						
402	45	4.121	33.839	26.889	44.713		2105				-0.30	0.85+0.09	-1.1	3.97	17.39	0.0	72.4	15.1 +0.3				19	3.4+0.8	4.3+0.9					
336	50		33.839				2103(I)														250	45						
622	73	4.041	33.842	26.900	44.731		2098(I)													0.01+0.02		50						
403	78	4.047	33.842	26.899	44.730		2097										69.1	15.5 +0.5				73						
790	99	2.67	33.888	27.062	45.034		2116(I)		10.6												149	78						
337	105		33.889				2121(I)											16.2 +0.6				99	5.3+0.9					
404	130	2.037	33.896	27.119	45.159		2141				-0.29	0.88+0.09	-1.4	4.00	17.70	-0.2	72.0			0.03+0.02		105						
338	140		33.902				2136(I)													0.04+0.02		130						
791	153	1.45	33.921	27.181	45.283		2131(I)		2.1									14.3 +0.3				140						
405	155	1.751	33.906	27.148	45.218		2130										69.1					153	2.9+0.9	4.3+1.0				
339	175		33.944				2141(I)													0.07+0.02	160	155						
406	179	1.725	33.931	27.170	45.242		2144					0.83+0.09	8.6				70.3					175						
407	228	1.869	34.082	27.280	45.332		2172	1.24			-0.22						70.5				152	179						
408	314	1.915	34.269	27.426	45.467		2209					0.31+0.09	3.6	4.10	17.95	1.0	73.8				89	228						
792	346	1.92	34.333	27.477	45.515		2220(I)		-112.0													314						
409	388	1.995	34.367	27.499	45.527		2231				-0.07						77.6	16.6 +0.7				346	1.1+0.7					
410	487	2.057	34.447	27.558	45.578		2238					0.08+0.09	7.1	4.10	17.85	1.5					57	388						
793	545	2.00	34.500	27.604	45.268		2245(I)		-136.9												69	487						
411	589	1.991	34.498	27.604	45.629		2250	0.41			-0.04						82.2	16.9 +0.3				545	-0.4+0.8	0.3+1.0				
412	688	2.124	34.554	27.638	45.647		2249					-0.01+0.09	13.4									589						
794	746	2.12	34.611	27.684	45.692		2251(I)		-147.5												37	688						
415	747	2.124	34.582	27.661	45.669		2251										83.8	18.1 +0.3				746	0.0+0.7					
416	798	2.125	34.605	27.679	45.686		2257				0.01	0.06+0.09	10.5								74	747						
417	899	2.105	34.638	27.707	45.715		2245	0.25													48	798						
589	988	2.11	34.686	27.744	45.750		2245(I)		-142.5													899						
418	1099	2.083	34.694	27.754	45.762		2246				0.00	0.10+0.09	9.5	4.09	17.67	2.1	86.8	18.4 +0.3				988	-0.6+0.9	1.3+1.1					
590	1288	1.98	34.728	27.789	45.808		2243(I)		-147.5												32	1099						
419	1301	1.994	34.731	27.790	45.807		2243	0.31			0.02						86.2	18.5 +0.5				1288	-0.5+0.8					
420	1502	1.851	34.748	27.815	45.846		2234				0.01	0.04+0.09										1301						
421	1572	1.811	34.751	27.820	45.856		2234						8.6	4.30	18.49	2.8	88.7				47	1502						
591	1588	1.74	34.748	27.822	45.866		2237(I)		-151.3													1572						
101	1670	1.693	34.746	27.825	45.874		2248	0.41										18.8 +0.8				1588	-0.9+0.8	-0.5+0.9				
422	1701	1.634	34.739	27.823	45.879		2242					0.04+0.09									31	1670						
102	1775	1.577	34.741	27.829	45.891		2244				-0.02		10.5								30	1701						
592	1783	1.52	34.737	27.829	45.898		2246(I)		-152.5									17.9 +0.3				1775						
423	1801	1.510	34.736	27.830	45.899		2250										92.6					1783	-0.1+0.8					
103	1884	1.455	34.736	27.834	45.909		2246	0.41				-0.04+0.09									15	1801						
424	2002	1.305	34.726	27.836	45.928		2251				-0.04	-0.04+0.09									37	1884						
104	2037	1.282	34.727	27.838	45.933		2251						9.0	4.19	18.13	2.5	93 9				41	2002						
593	2084	1.200	34.723	27.840	45.944		2251(I)		-159.7									20.7 +0.3			49	2037						
105	2195	1.126	34.721	27.844	45.956		2254	0.45			-0.04											2084	1.6+0.9	-0.6+0.9				
106	2342	1.033	34.721	27.850	45.972		2263				0.00						97.7				27	2195						
594	2384	0.970	34.712	27.846	45.976		2260(I)		-157.1												25	2342						
107	2496	0.913	34.714	27.852	45.988		2252	0.37			0.04							20.8 +1.3				2384	0.2+0.8					
108	2643	0.797	34.710	27.856	46.005		2259						8.5	4.14	17.92	2.6	100.8				20	2496						
289	2685	0.76	34.705	27.854	46.007		2257(I)		-156.8													2643						
109	2793	0.670	34.699	27.855	46.019		2252	0.46				-0.04+0.09						20.9 +0.3				2685	0.6+0.9	-0.6+1.0				
110	2839	0.661	34.700	27.856	46.021		2259				-0.11						100.6				35	2793						
290	2884		34.701				2259(I)		-153.3									20.8 +1.3			200	2839						
112	3078	0.573	34.698	27.860	46.033		2259														30	2884						
291	3185		34.692				2254(I)		-155.4									21.7 +0.3				3078						
115	3189	0.527	34.693	27.859	46.038		2254	0.36			-0.09						100.7				87	3185	-0.7+1.1	0.3+0.9				
116	3283	0.471	34.690	27.859	46.046		2264						8.2	4.26	18.29	3.5					50	3189						
117	3376	0.439	34.689	27.860	46.050		2265														22	3283						
118	3473	0.398	34.686	27.860	46.055		2260						8.6	4.21	18.26	2.5	102.1				20	3376						
292	3486	0.39	34.689	27.863	46.058		2260(I)		-163.8									20.6 +1.0				3473						
119	3616	0.349	34.685	27.862	46.062		2264	0.41													118	3486	0.2+0.8					
120	3767	0.286	34.684	27.865	46.072		2262				-0.13		9.4	4.32	18.65	3.0	104.2					3616						
293	3785		34.680				2261(I)		-161.4									22.6 +0.4				3767						
121	3866	0.242	34.681	27.865	46.077		2257	0.53				0.01+0.09										3785	-0.3+0.8	0.2+0.9				
122	3968	0.216	34.681	27.866	46.082		2259						7.8	4.20	18.29	2.2					35	3866						
123	4066	0.201	34.679	27.865	46.083		2260	0.50				-0.05+0.09					104.2				50	3968						
294	4085		34.676				2260(I)		-165.7									22.2 +0.4				4066						
124	4169	0.189	34.678	27.865	46.084		2256				-0.11		7.5	4.20	18.32	2.0	106.0				84	4085						
												PRECISION:	1.0	0.01	0.06	0.2						4169						

(I) INTERPOLATED FROM NISKIN DATA

STATION 92 — **POSITION: 46°11'S 14°36'E** — **DATE: 31 JAN 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM										LDGO									
235	3		33.825				2074(I)		63.7										0.01+0.02		3							
236	55		33.823				2083(I)		59.4										0.02+0.02		55							
237	110		33.895				2103(I)		55.5										0.07+0.02		110							
238	176		34.055				2122(I)		26.4										0.06+0.03		176							

STATION 93 — **POSITION: 41°46'S 18°27'E** — **DATE: 2 FEB 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------SIO----------			MIT	USC	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
235	3		34.847						89.8								8.1 +0.3	0.56 +0.09	0.01+0.02		3							
409	11	13.668	34.853	26.177	43.146	0.9	2018	1.74				1.64+0.10				44.8				221	11							
236	30		34.854				2024(I)										8.4 +0.2	0.63 +0.09	0.30+0.04		30							
410	49	13.431	35.053	26.381	43.362	1.5	2030(I)					1.62+0.09	3.7			43.3				73	49							
586	86	13.45	35.16	26.457	43.435		2045(I)		77.2								8.9 +0.2				86	10.2+0.3	15.8+0.3	0.040+0.030				
237	91		35.026				2047(I)											0.69 +0.09	0.12+0.02		91							
411	144	11.999	34.984	26.614	43.706	-1.6	2073	1.00					-1.1	3.93	16.46	0.8	43.7			39	144							
238	176		34.952				2093(I)										9.3 +0.2	0.45 +0.11	0.56+0.05		176							
412	187	11.300	34.910	26.689	43.837		2098					1.13+0.09				44.8				30	187							
587	244	10.63	34.84	26.753	43.957		2087(I)		36.1								9.4 +0.2				244	10.0+0.2	10.1+0.3	0.030+0.020				
615	246	10.21	34.732	26.746	43.987		2086									45.5				31	246							
616	315	10.08	34.774	26.801	44.051		2109					0.69+0.09								28	315							
617	384	9.08	34.652	26.873	44.211	7.7	2104	0.87								48.0				29	384							
588	394	8.79	34.62	26.894	44.258		2107(I)		10.2								10.6 +0.2				394	1.0+0.3	1.7+0.2					
618	444	7.924	34.522	26.951	44.393		2129					0.51+0.09	-0.2	3.98	16.96	1.0				39	444							
619	494	7.34	34.508	27.025	44.521		2144(I)									50.8				32	494							
620	643	5.60	34.391	27.161	44.822		2166					0.05+0.09				58.2				28	643							
589	740		34.38				2167(I)		-86.2								15.7 +0.3				740	-0.5+0.4	2.1+0.7	0.000+0.040				
621	745	4.54	34.329	27.234	45.001	3.6	2167	1.04					11.1			63.5				24	745							
622	797		34.343				2188													23	797							
415	902	4.100	34.407	27.342	45.150		2197									70.3				20	902							
416	999	3.760	34.439	27.402	45.243		2225	0.76				0.03+0.09								23	999							
590	1036	3.57	34.45	27.430	45.290		2224(I)		-114.0								16.8 +0.5				1036							
417	1072	3.301	34.436	27.443	45.332		2222						5.9	4.10	17.69	1.7	75.7			19	1072							
418	1200	3.095	34.507	27.519	45.427	5.1	2244					-0.05+0.09				79.0				23	1200							
591	1283	2.99	34.56	27.569	45.486		2247(I)		-138.4								17.6 +0.4				1283							
419	1350	2.925	34.584	27.595	45.519		2249									80.9				27	1350							
420	1449	2.825	34.620	27.633	45.565	5.8	2251	0.24				0.07+0.09								32	1449							
592	1579	2.65	34.69	27.705	45.654		2245(I)		-142.8								18.2 +0.4				1579							
421	1602	2.652	34.679	27.695	45.644		2244									80.9				40	1602							
422	1748	2.595	34.730	27.741	45.694		2237					0.02+0.09								27	1748							
593	1878	2.543	34.77	27.779	45.736		2230(I)		-130.8								17.8 +0.6				1878							
423	1895	2.548	34.767	27.774	45.731		2229									77.9				38	1895							
101	1998	2.512	34.788	27.794	45.754		2230	0.02				-0.09+0.09								16	1998							
102	2148	2.450	34.803	27.811	45.777		2223						6.4	4.11	17.81	1.7				44	2148							
424	2196	2.430	34.808	27.817	45.785		2224					-0.06+0.09								35	2196							
594	2277	2.381	34.82	27.828	45.801		2219(I)		-131.2								16.8 +0.4				2277							
103	2297	2.384	34.812	27.824	45.797	4.0	2217	0.24								78.1				17	2297							
104	2449	2.291	34.820	27.838	45.820		2215						8.9								2449							
105	2597	2.201	34.821	27.846	45.838		2221	0.60								81.0				38	2597							
386	2681	2.15	34.820	27.849	45.846		2223(I)		-120.8								17.0 +0.4				2681							
106	2748	2.135	34.824	27.853	45.852		2225					-0.07+0.09	6.1	4.12	17.88	1.8	81.1			22	2748							
387	2884	2.09	34.826	27.858	45.862		2210(I)		-129.0								17.4 +0.3				2884							
107	2898	2.065	34.825	27.860	45.866	4.2	2209	0.17								82.2				33	2898							
388	3082	1.91	34.811	27.860	45.884		2225(I)		-132.5								18.6 +0.5				3082							
109	3134	1.870	34.810	27.863	45.891		2227	0.47								86.3				15	3134							
110	3148	1.876	34.813	27.865	45.892		2225(I)						6.2	4.10	17.77	2.0				25	3148							
111	3249	1.841	34.816	27.870	45.900		2217									88.2				12	3249							
389	3281	1.82	34.816	27.871	45.903		2227(I)		-134.5								18.6 +0.4				3281							
112	3349	1.748	34.810	27.872	45.913		2246						7.1	4.14	17.95	1.9				32	3349							
115	3457	1.633	34.800	27.872	45.926		2228	0.23				0.01+0.09				91.3					3457							
390	3484	1.62	34.800	27.873	45.929		2229(I)		-132.4								19.5 +0.2				3484							
116	3578	1.504	34.787	27.871	45.939		2236						6.5	4.16	18.03	2.0				19	3578							
117	3657	1.388	34.777	27.871	45.953		2238									91.8				49	3657							
391	3684	1.26	34.761	27.867	45.962		2241(I)		-141.9								21.1 +0.3				3684							
118	3717	1.281	34.763	27.867	45.961		2245													17	3717							
119	3806	1.172	34.753	27.867	45.973	4.9	2249	0.36												38	3806							
120	3957	0.988	34.740	27.868	45.995		2260									97.3				31	3957							
392	3980	0.97	34.743	27.872	46.001		2260(I)		-149.5								21.0 +0.9				3980							
121	4107	0.847	34.731	27.870	46.013		2256	0.11				0.06+0.09									4107							
122	4256	0.714	34.721	27.870	46.028		2260						6.9	4.16	18.08	2.3	103.4			23	4256							
393	4279	0.70	34.724	27.873	46.032		2257(I)		-151.6								21.1 +0.3				4279							
123	4407	0.578	34.711	27.870	46.044		2243	-0.24				-0.05+0.09				103.0					4407							
124	4507	0.497	34.708	27.872	46.055		2251						7.2	4.22	18.29	2.6	101.4			27	4507							
394	4625	0.38	34.707	27.878	46.074				-160.9								22.5 +0.3				4625							
												PRECISION:	1.0	0.01	0.06	0.2												

(I) INTERPOLATED FROM NISKIN DATA

STATION 94

POSITION: 38°18'S 19°23'E

DATE: 3 FEB 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UM									DPM/100kg								DPM/100kg		
																		LDGO	LDGO									
235	3								136.2									4.60 +0.51	0.92+0.07		3							
236	70		35.54						131.3									2.51 +0.30	0.86+0.07		70							
237	140		35.53						122.3									0.73 +0.10	1.09+0.07		140							
238	175		35.52						122.0									0.72 +0.09	1.28+0.09		175							

STATION 102

POSITION: 31°31'S 9°26'E

DATE: 12 FEB 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg								DPM/100kg		
																	LDGO	LDGO		LDGO							
225	1		35.786														7.2 +0.2				1						
735	5		35.73															1.97 +0.20			5						
515	4574	0.75	34.739	27.882	46.035		2262													148 +2.1	4574						
516	4624	0.74	34.737	27.881	46.036		2257													53 +1.7	4624						
517	4676	0.72	34.734	27.880	46.036		2258(I)													68 +1.7	4676						

STATION 103

POSITION: 23°59'S 8°30'E

DATE: 17 FEB 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg								DPM/100kg		
						UH		UH	UM UW+				----------SIO----------			LSU MIT+	USC	LDGO		WHOI		WHOI	WHOI	WHOI				
535	3		35.604						74.4*								9.2 +0.4	1.77 +0.19	0.57+0.07		3	10.9+0.7	16.7+0.4				
601	5	23.42	35.591	24.284	40.620	0.5	2037													44	5						
419	12	23.7	35.648	24.246	40.565		2032(I)										8.4 +0.3				12						
602	14	23.28	35.598	24.330	40.674		2031						-1.3	3.85	15.38	0.4	40.4*			49	14						
536	20		35.637				2030(I)											1.69 +0.19	0.34+0.04		20						
603	29	22.47	35.699	24.637	41.023	0.1	2029	1.79									40.4*			29	29						
537	40		35.705				2032(I)											1.93 +0.19	0.58+0.05		40						
538	54		35.619				2037(I)											1.51 +0.18	0.09+0.02		54						
604	55		35.606				2038(I)						-0.8	3.95	16.03	0.5	43.2*			80	55						
422	62	17.8	35.529	25.754	42.424		2041(I)											8.5 +0.4			62						
539	70		35.520				2044(I)												1.44 +0.24	0.12+0.02	70						
786	93	16.42	35.562	26.108	42.867		2056(I)		101.0*									8.9 +0.2			93	14.1+1.1	20.8+1.0				
606	103	15.83	35.484	26.187	42.987		2062						-0.1	3.98	16.25	1.5	40.5*			113	103						
540	120		35.492				2066(I)												1.74 +0.22		120						
607	132	15.40	35.464	26.271	43.101	1.8	2069	1.61									42.5*			28	132						
787	142		35.495				2071(I)		90.6*									8.5 +0.2			142	12.7+0.4	19.0+1.6	0.030+0.010			
608	174	13.75	35.221	26.443	43.396		2082						-0.4	3.88	16.25	0.2				91	174						
788	192	13.65	35.208	26.454	43.415		2094(I)		57.4*									9.4 +0.5			192						
609	225	12.37	35.069	26.608	43.669	5.0	2117	1.26									46.3*			16	225						
610	286	11.23	34.968	26.746	43.898		2148						-0.8	4.12	17.24	1.4	44.9*			26	286						
789	291	11.60	35.007	26.707	43.829		2151(I)		-6.7*									9.5 +0.3			291	5.1+0.2	10.6+0.8				
611	365	9.31	34.767	26.926	44.242	5.1	2187										46.1*			29	365						
790	391	9.40	34.777	26.918	44.225		2197(I)		-49.2*									9.9 +0.2			391	2.8+0.8	3.3+0.9				
612	453	7.76	34.628	27.058	44.512	6.7	2216						0.4	3.99	17.06	0.8				21	453						
791	489	7.48	34 606	27.081	44.561		2224(I)		-81.2*									11.8 +0.3			489	0.8+0.2	0.6+0.3	0.050+0.010			
615	613	5.72	34.499	27.233	44.879	7.3	2238	0.54									56.1*			24	613						
792	690		34.417				2231(I)		-108.5*									14.0 +0.3			690	0.3+0.7	0.2+0.9				
616	723	4.79	34.451	27.303	45.041		2230						2.0	4.14	17.80	1.4	59.2*			27	723						
617	751	4.59	34.445	27.321	45.078		2236													31	751						
618	803	4.31	34.450	27.355	45.141		2230						2.6	4.15	17.87	1.5	62.0*			30	803						
793	888	4.06	34.460	27.388	45.198		2231(I)		-120.0*									14.9 +0.6			888	0.5+0.3	0.1+0.7	0.050			
619	1055	3.54	34.542	27.505	45.366	6.1	2232	0.57									68.6*			32	1055						
794	1088		34.542				2232(I)		-125.9*									14.8 +0.8			1088	0.0+0.7	-0.5+0.9				
620	1307	3.30	34.689	27.645	45.526		2232						4.2	4.20	18.12	1.8	73.9*			41	1307						
286	1368	3.27	34.702	27.658	45.542		2228(I)		-126.5*									15.3 +0.3			1368	-0.1+0.2	-0.8+1.0	0.030+0.030			
621	1560	3.22	34.816	27.754	45.639	4.5	2214(I)	0.83									68.3*			131	1560						
287	1665		34.836				2206(I)											14.8 +0.3			1665	-0.9+0.7	-1.0+0.7				
622	1811	3.13	34.868	27.804	45.697		2194						4.0	4.15	18.00	1.4	65.2*			16	1811						
288	1964	2.99	34.884	27.828	45.735		2194(I)		-109.0*									14.7 +0.4			1964	0.0+0.2	2.6+1.5	0.040			
623	2064	2.953	34.897	27.843	45.753	3.6	2194(I)	0.77									67.9*			38	2064						
624	2317	2.79	34.898	27.858	45.784		2193						4.0	4.25	18.31	2.0	66.9*			36	2317						
289	2460	2.55	34.873	27.858	45.811		2200(I)											15.5 +0.3			2460	-0.4+0.9	-0.6+0.9				
301	2551	2.47	34.869	27.862	45.823	3.7	2205										74.2*			18	2551						
302	2749	2.36	34.866	27.869	45.843		2210	0.64					4.4	4.23	18.21	2.4				22	2749						
303	2943	2.25	34.862	27.875	45.860		2207										79.0*			11	2943						
290	2958	2.21	34.861	27.877	45.867		2208(I)		-125.5*									18.6 +0.3			2958	0.0+0.1	0.3+0.3	0.010+0.020			
304	3148	2.16	34.861	27.881	45.877		2224	0.68					5.1	4.18	18.07	2.0	81.1*			50	3148						
305	3348	2.08	34.854	27.882	45.886	3.7	2217													23	3348						
291	3454	2.00	34.860	27.893	45.905		2224(I)		-125.6									18.9 +0.3			3454	-0.1+0.8	-0.1+1.1				
306	3543	1.98	34.846	27.883	45.898		2230	0.59					4.9				84.9*				3543						
307	3847	1.57	34.819	27.892	45.951		2226										90.0			11	3847						
																	90.6*										
292	3949	1.35	34.809	27.899	45.984		2238(I)		-144.1									21.1 +0.7			3949	-0.5+0.3	0.2+0.3	0.010+0.008			
308	4047	1.29	34.776	27.877	45.969		2250	0.31					6.4	4.24	18.39	2.2	96.6*			20	4047						
309	4247	0.86	34.743	27.879	46.019		2254										104.1*			15	4247						
293	4248	0.83	34.752	27.887	46.031		2254(I)		-156.9*									25.5 +0.7			4248	0.1+0.8	-0.4+0.8				
310	4447	0.75	34.739	27.882	46.035	3.4	2275	0.49					7.4				105.2*			12	4447						

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 103 — *CONTINUED*

POSITION: 23°59'S 8°30'E **DATE: 17 FEB 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM UW*				----------SIO----------				LSU MIT*	USC	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
315	4527	0.73	34.739	27.883	46.039		2268(I)										104.5*					4527							
294	4546	0.74	34.747	27.889	46.043		2265(I)		-155.4									25.7 +0.7				4546							
316	4556	0.72	34.735	27.881	46.038		2263(I)										104.6*					4556							
317	4572	0.73	34.734	27.880	46.036	4.8	2260						6.7	4.22	18.28	2.4	104.9*				36	4572							
318	4587	0.72	34.735	27.881	46.037												102.4*					4587							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 105

POSITION: 20°0'S 2°0'E **DATE: 20 FEB 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
																		LDGO			LDGO								
423	2	25.6	35.919	23.883	40.095		2031(I)											7.1 +0.5				2							
119	5252	1.96	34.882	27.914	45.930		2224														10 +1.6	5252							
120	5311	1.98	34.882	27.912	45.926		2223(I)														13 +1.6	5311							
121	5359	1.96	34.881	27.913	45.928		2221(I)														7 +1.5	5359							
122	5401	1.961	34.882	27.913	45.929		2220(I)														8 +1.6	5401							
123	5430	1.956	34.882	27.914	45.930		2219														5 +1.6	5430							
124	5452	1.958	34.881	27.913	45.929																8 +1.6	5452							
125	5466	1.96	34.883	27.914	45.929																8 +1.6	5466							
126	5480	1.96	34.881	27.912	45.928																8 +1.6	5480							
127	5491	1.96	34.880	27.912	45.928																10 +1.6	5491							
128	5500	1.96	34.882	27.914	45.929																6 +1.6	5500							

STATION 107

POSITION: 12°0'S 2°0'E **DATE: 22 FEB 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UW	SIO			----------SIO----------				LSU MIT*	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI				
123	1	26.6	36.748	24.199	40.343													6.8 +0.7				1							
435	2		36.722						56.1													2							
440	2																	8.4 +1.1	13.02+17.51	0.33+0.04		2							
301	3	25.40	36.739	24.562	40.767		2079	1.67		0.98							37.1				36*	3							
302	12	25.31	36.735	24.587	40.797		2069						-1.3	3.77	14.88	0.5					53*	12							
441	20						2069(I)												1.75 +0.23	0.23+0.03		20							
303	32	25.05	36.732	24.662	40.885		2070	1.95									37.7				41*	32							
686	48	22.15	36.558	25.384	41.768		2064(I)		64.4									8.0 +0.6				48	7.6+0.9	9.9+1.1				
304	51	21.92	36.542	25.432	41.830		2064			0.93							37.5				47*	51							
305	82	18.41	36.075	26.017	42.634		2113	1.41									38.2				106*	82							
687	98	14.72	35.546	26.484	43.359		2161(I)		-10.2									8.8 +0.4				98							
306	111	13.70	35.387	26.582	43.534		2198										36.9				27*	111							
688	147	12.36	35.209	26.718	43.775		2214(I)		-56.2									8.6 +0.3				147	1.7+0.8	2.8+0.9				
307	151	12.35	35.207	26.719	43.777		2216	0.42		0.61							36.5				24*	151							
310	202	11.29	35.074	26.818	43.962		2235						1.0				39.8				29*	202							
689	217	10.93	35.040	26.857	44.031		2231(I)		-69.0									8.3 +0.5				217							
308	251	10.60	34.997	26.884	44.086		2218			0.34			-0.5				39.8*				34*	251							
309	301	10.09	34.939	26.928	44.173		2218	0.34														301							
690	346		34.867				2241(I)		-82.9									9.7 +0.6				346	-1.0+0.8	0.2+0.9				
311	351	9.36	34.850	26.983	44.291		2244										42.4				21*	351							
312	402	8.65	34.785	27.047	44.418		2254			0.21			-0.2	3.99	16.94	0.9					20*	402							
315	501	7.44	34.675	27.142	44.623		2174	0.40													21*	501							
316	580	6.19	34.571	27.230	44.830		2260			0.15			0.8				49.7				19*	580							
691	594	6.28	34.584	27.227	44.818		2263(I)		-105.9									13.2 +0.7				594							
317	700	5.28	34.513	27.296	44.984		2282			0.11							54.7				13*	700							
318	800	4.64	34.498	27.356	45.107		2254						1.7	4.04	17.41	1.3					15*	800							
692	893	4.31	34.520	27.410	45.193		2247(I)		-120.7									13.7 +0.8				893	-0.7+0.8	-1.4+1.0				
319	898	4.26	34.522	27.417	45.205		2247	0.62		0.06							62.9				16*	898							
320	1049	3.98	34.602	27.510	45.324		2241			0.07			2.5				62.3				19*	1049							
693	1092	3.92	34.640	27.545	45.363		2237(I)		-124.6									15.1 +0.3				1092							
321	1196	3.83	34.706	27.608	45.434		2228	0.51		0.15							63.2					1196							
694	1390	3.69	34.848	27.734	45.569		2218(I)		-110.8									12.8 +0.9				1390	-0.5+0.8	-0.1+0.9				

(I) INTERPOLATED FROM NISKIN DATA

STATION 107 — *CONTINUED* **POSITION: 12°0'S 2°0'E** **DATE: 22 FEB 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UW		SIO		----------	SIO	----------		LSU MIT*	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI					
322	1394		34.831				2218						3.6	4.10	17.69	1.4	69.0				35*	1394							
323	1590	3.533	34.893	27.785	45.635		2197	0.77			0.19						61.9				31*	1590							
286	1775	3.39	34.907	27.810	45.675		2195(I)		-101.1									12.9 +0.8				1775							
501	1885	3.25	34.919	27.833	45.712		2193(I)	0.84													43*	1885							
324	1889	3.238	34.920	27.835	45.714		2193										63.7				32*	1889							
287	2073	3.08	34.911	27.842	45.738		2196(I)		-107.4													2073	-0.6+0.8	-0.8+0.9					
502	2183	2.96	34.921	27.861	45.769		2198				0.21		2.9	4.10	17.78	1.3	66.7				22*	2183							
503	2481	2.72	34.913	27.876	45.811		2204(I)	0.89			0.22						79.0				35*	2481							
288	2571	2.65	34.901	27.872	45.814		2205(I)		-118.0									14.9 +0.2				2571							
504	2782	2.50	34.905	27.888	45.846		2209				0.27		4.4	4.19	18.12	1.9	74.0				27*	2782							
																	74.6*												
289	3069	2.28	34.894	27.897	45.878		2212(I)		-124.6									16.3 +0.6				3069	0.7+1.0						
505	3179	2.24	34.893	27.900	45.885		2214	0.73			0.19						81.2				23*	3179							
506	3478	2.13	34.890	27.907	45.904		2224				0.26		4.1	4.19	18.23	1.3	87.2					3478							
290	3565	2.05	34.889	27.911	45.917		2222(I)		-125.4									18.4 +0.7				3565							
507	3776	2.04	34.886	27.911	45.918		2217	0.58			0.16						85.9				23*	3776							
291	4061	2.00	34.884	27.911	45.922		2222(I)		-119.4									19.7 +0.6				4061	-0.6+0.8						
508	4076	2.01	34.885	27.912	45.922		2222				0.13		3.4	4.31	18.61	2.3	86.3				15*	4076							
509	4378	1.98	34.881	27.912	45.926		2214				0.14						86.0				22*	4378							
292	4557	1.98	34.882	27.911	45.925		2217(I)		-123.9									18.7 +0.7				4557							
510	4675	1.97	34.878	27.910	45.925		2219(I)				0.12						85.4				20*	4675							
511	4973	1.94	34.879	27.913	45.931		2223(I)				0.17										16*	4973							
293	5055	2.01	34.877	27.905	45.915		2225(I)		-118.2									17.9 +0.6				5055	-0.5+0.7						
512	5272	1.93	34.875	27.910	45.929		2228				0.17		3.8	4.23	18.30	2.0	85.6				12*	5272							
515	5324	1.92	34.874	27.910	45.931		2223(I)														17 +1.6	5324							
516	5406	1.914	34.875	27.911	45.932		2218(I)														6 +1.6	5406							
517	5457	1.904	34.875	27.912	45.934		2215(I)										86.0				10 +2.8	5457							
518	5473	1.919	34.875	27.911	45.932		2214														19*	5473							
519	5498	1.912	34.877	27.913	45.934		2215(I)														2 +1.9	5498							
520	5527	1.916	34.875	27.911	45.932		2215(I)														8 +1.6	5527							
521	5548	1.91	34.876	27.913	45.935		2216(I)														3 +1.6	5548							
294	5551		34.865				2216(I)		-117.9									19.3 +0.7				5551							
522	5563	1.913	34.877	27.913	45.934		2216(I)										86.2				10 +1.6	5563							
523	5568	1.908	34.876	27.913	45.934		2216				0.20		3.0	4.25	18.38	2.2					23*	5568							
524	5573	1.916	34.877	27.913	45.934						0.15										9 +1.6	5573							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 109 **POSITION: 2°0'S 4°30'W** **DATE: 26 FEB 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		LDGO	LDGO	LDGO									
586	4244	1.93	34.881	27.914	45.933		2199(I)											0.05 +0.07	0.27+0.04			4244							
590	4410		34.877				2203(I)											0.17 +0.08	0.30+0.04			4410							
592	4554	1.85	34.872	27.914	45.942		2205(I)											0.17 +0.08	0.28+0.04			4554							
289	4873	1.75	34.866	27.916	45.956		2212(I)											1.15 +0.14				4873							
618	4988	1.72	34.860	27.914	45.956		2214														20 +1.6	4988							
292	5021	1.73	34.865	27.917	45.959		2215(I)											0.43 +0.09	0.35+0.04			5021							
619	5037	1.72	34.860	27.914	45.957		2215(I)														11 +1.6	5037							
620	5063	1.72	34.859	27.913	45.955		2216(I)														13 +1.6	5063							
621	5088	1.72	34.861	27.915	45.957		2216(I)														12 +1.6	5088							
622	5102	1.74	34.858	27.911	45.952		2216(I)														11 +1.5	5102							
623	5118	1.72	34.858	27.913	45.956		2217(I)														11 +1.6	5118							
624	5127	1.717	34.858	27.913	45.956		2217(I)														14 +1.6	5127							
626	5137	1.716	34.859	27.914	45.956																7 +1.6	5137							

(I) INTERPOLATED FROM NISKIN DATA

STATION 111 — POSITION: 2°0'N 14°1'W — DATE: 1 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH			UW							MIT	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
701	1		35.455																		1							
335	1		35.460						87.0								7.3 +0.4				1							
501	2	29.12	35.456	22.428	38.473		1955											5.44 +8.42	0.59+0.06		1	7.9+0.2	14.7+0.2	0.030+0.009				
502	12	29.09	35.452	22.435	38.482		1951													39*	2							
503	32	28.87	35.446	22.500	38.558		1955(I)									36.1				83*	12							
504	42	28.74	35.480	22.569	38.632		1957									37.7				21*	32							
336	50		36.024				2036(I)		60.0							37.2				61*	42							
505	52	24.97	36.074	24.191	40.433		2056											1.28 +0.22			50	12.2+0.9						
506	76	17.28	35.735	26.037	42.735		2121									38.4					52							
337	100		35.532				2168(I)		-10.4											28*	76							
507	104	14.93	35.536	26.430	43.291	9.8	2174											0.59 +0.18	0.49+0.04		100	3.6+0.1	2.8+0.4	0.050+0.010				
338	150		35.410				2176(I)		-33.0							37.5				21*	104							
508	164	13.52	35.356	26.597	43.564		2177											0.30 +0.05	0.46+0.06		150	3.3+0.9						
339	200		35.249				2182(I)		-55.0							39.4				43*	164							
509	214	12.64	35.243	26.689	43.724		2184											0.42 +0.58	0.60+0.06		200	2.7+0.3	1.2+0.4	0.060+0.010				
686	262	11.80	35.147	26.777	43.879		2194(I)		-54.4											31*	214							
510	275	11.69	35.130	26.786	43.897		2197										8.8 +0.2				262	2.4+0.3	3.8+0.3	0.050+0.010				
340	300		35.069				2200(I)									38.4				24*	275							
687	313	10.86	35.037	26.868	44.048		2202(I)		-69.7									1.67 +0.26	0.27+0.04		300							
511	316	10.69	35.011	26.879	44.073	8.9	2202										9.1 +0.2				313	0.9+0.3	2.0+0.3	0.046+0.017				
512	365	9.25	34.854	27.004	44.322		2144													35*	316							
515	417	8.30	34.756	27.077	44.479		2201									44.8				37*	365							
516	506	6.51	34.593	27.205	44.774		2191									47.9				17*	417							
688	511	6.47	34.597	27.231	44.786		2192(I)		-97.7							52.9				27*	506							
517	628	5.47	34.527	27.285	44.955		2217										11.6 +0.4				511	0.3+0.9	0.7+0.3	0.020+0.010				
518	708	4.98	34.517	27.334	45.051		2203													49*	628							
689	726	4.99	34.524	27.338	45.054		2206(I)		-111.3							58.0				44*	708							
519	808	4.67	34.540	27.387	45.133		2226										12.4 +0.4				726	0.4+0.1	0.2+0.3	0.007				
690	931	4.32	34.594	27.467	45.246		2212(I)		-92.5							60.2				132*	808							
520	1007	4.38	34.615	27.478	45.252		2197										13.1 +0.7				931	0.0+0.3	0.7+0.3	0.030+0.010				
691	1137	4.37	34.742	27.579	45.349		2205(I)		-122.7							60.8				47*	1007							
521	1209	4.33	34.821	27.647	45.419		2208										12.2 +0.3				1137	-0.7+0.3	-0.3+0.3	0.010				
522	1411		34.951				2160									57.3				64*	1209							
692	1445	4.06	34.958	27.783	45.579		2162(I)		-82.2							53.7				85*	1411							
523	1612	3.82	34.961	27.811	45.631	0.8	2176										10.5 +0.2				1445	0.0+0.2	0.3+0.3	0.008+0.004				
693	1754	3.61	34.967	27.836	45.675		2149(I)		-82.4							53.6				87*	1612							
524	1811	3.54	34.963	27.840	45.688		2138										10.2 +0.6				1754	0.0+0.1	0.0+0.3	0.010+0.030				
201	1836	3.53	34.963	27.841	45.690		2176													35*	1811							
202	2035	3.23	34.954	27.862	45.742		2177									56.0				14*	1836							
694	2062	3.19	34.954	27.866	45.749		2178(I)		-92.0							59.4				20*	2035							
203	2287	2.90	34.938	27.880	45.794		2183										11.5 +0.4				2062	0.8+0.2	-0.5+0.3	0.010+0.010				
204	2537	2.71	34.930	27.890	45.825		2186									63.2				15*	2287							
186	2586	2.68	34.931	27.894	45.832		2187(I)		-103.2							64.5				18*	2537							
205	2787	2.57	34.920	27.895	45.844	2.8	2191										13.6 +0.8				2586	0.0+0.2	-0.1+0.4	0.030+0.030				
206	3040	2.40	34.910	27.900	45.868		2197									69.0				20*	2787							
187	3100	2.38	34.915	27.906	45.876		2189(I)		-105.6							73.2				17*	3040							
188	3203	2.17	34.898	27.909	45.902		2177(I)		-111.6								14.6 +0.5				3100	0.6+0.2	0.2+0.3	0.010+0.010				
207	3291	2.24	34.902	27.907	45.893		2168										14.8 +0.6				3203	-0.4+0.2	0.0+0.3	0.033+0.013				
208	3539	2.15	34.896	27.910	45.904		2200									73.3				18*	3291							
209	3841	2.06	34.890	27.912	45.917		2200(I)									74.0					3539							
189	4130	1.96	34.887	27.917	45.933		2200(I)		-105.1							79.7				7*	3841							
210	4144	1.99	34.884	27.913	45.926		2200										14.7 +0.2				4130	-0.1+0.2	0.2+0.3	0.010+0.010				
190	4336	1.86	34.880	27.919	45.945		2205(I)		-117.1							74.7				24*	4144							
211	4447	1.86	34.873	27.914	45.941	2.8	2207										15.9 +0.9				4336	-0.3+0.3	-0.3+0.3	0.003+0.005				
191	4541	1.81	34.873	27.917	45.950		2206(I)		-115.1							77.3				6*	4447							
212	4698	1.81	34.865	27.911	45.944		2205										16.8 +0.2				4541	0.4+0.6	-0.1+0.6	0.010+0.020				
192	4748	1.78	34.868	27.915	45.951		2206(I)		-117.2							77.3				9*	4698							
215	4950	1.74	34.862	27.914	45.955		2209										16.2 +0.4				4748	0.2+0.3	0.0+0.3	0.007+0.011				
193	4952	1.73	34.864	27.916	45.958		2209(I)		-120.6							76.5				37*	4950							
216	5001	1.71	34.859	27.914	45.958		2208(I)										16.5 +0.6				4952	1.3+0.3	0.4+0.3	0.020+0.010				
217	5052	1.71	34.860	27.915	45.959		2208(I)													6	+1.6	5001						
218	5077	1.71	34.860	27.915	45.958		2208(I)													9	+1.6	5052						
219	5102	1.71	34.860	27.915	45.959		2207(I)													6	+1.6	5077						
220	5127	1.70	34.860	27.915	45.959		2207(I)													3	+1.5	5102						
221	5132	1.70	34.860	27.915	45.960		2207(I)													8	+1.6	5127						
222	5142	1.704	34.858	27.914	45.958		2207(I)													8	+1.6	5132						
223	5147	1.702	34.858	27.914	45.958		2207													11	+1.6	5142						
224	5152	1.691	34.858	27.915	45.960											78.6				70*		5147						
194	5158	1.70	34.861	27.916	45.961				-115.8								16.5 +0.8			10	+1.6	5152						
																						5158	2.5+0.2	-0.3+0.3	0.006+0.008				

(I) INTERPOLATED FROM NISKIN DATA

STATION 113 — **POSITION: 10°59'N 20°31'W** — **DATE: 5 MAR 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UW								LDGO	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
823	1	24.8	35.783	24.022	40.279												9.0 +0.6				1							
435	1		35.774						81.3									1.59 +0.16	0.46+0.05		1	4.3+0.2	4.8+0.6	0.100+0.020				
601	3	24.11	35.778	24.223	40.518			1.91													3							
603	23	24.02	35.782	24.251	40.550		2004	2.17												62	23							
604	32	23.98	35.785	24.266	40.567		2005													63	32							
605	47	19.99	35.626	25.263	41.795		2086	1.53												50	47							
436	50		35.568				2095(I)		-22.4									1.21 +0.14	0.38+0.04		50							
606	62	16.23	35.583	26.171	42.941		2119													66	62							
607	94	14.27	35.432	26.497	43.407		2191	0.04												21	94							
437	100		35.408				2180(I)		-41.7									0.55 +0.07	0.47+0.05		100							
608	123	13.35	35.340	26.619	43.599		2135													73	123							
438	150		35.428				2177(I)		-59.3									0.48 +0.08	0.25+0.06		150	2.3+0.8	5.6+0.9					
609	161	12.45	35.249	26.732	43.782		2201	0.61												32	161							
439	200		35.176				2184(I)											0.28 +0.06	0.43+0.05		200							
786	208	11.50	35.182	26.862	43.986		2179(I)		-67.3												208							
610	224	11.61	35.183	26.843	43.959		2168													36	224							
440	250		35.138				2201(I)											0.36 +0.07	0.42+0.13		250							
611	272	11.03	35.140	26.918	44.082		2227	0.28												21	272							
787	310	10.47	35.128	27.009	44.217		2198(I)		-78.2												310	-0.3+1.1						
612	327	10.55	35.124	26.992	44.194		2184													102	327							
615	378	10.05	35.105	27.064	44.308		2243	0.22												37	378							
788	413	9.54	35.054	27.111	44.399		2216(I)		-85.1												413	1.0	1.0+0.2	0.020+0.010				
905	496	9.01	35.055	27.200	44.532		2246	0.22												43	496							
789	516	8.73	35.017	27.214	44.572		2247(I)		-83.9												516	1.1+0.8	1.6+0.8					
908	595	7.52	34.847	27.266	44.735		2249													23	595							
909	696	6.70	34.797	27.340	44.886		2246	0.25												40	696							
790	722	6.62	34.819	27.368	44.920		2247(I)		-100.3												722							
910	795	6.06	34.766	27.401	45.007		2248													26	795							
911	896	5.55	34.756	27.456	45.111		2237	0.40												17	896							
791	928	5.48	34.758	27.466	45.128		2233(I)		-105.3												928	-0.5+0.9						
912	996	5.24	34.801	27.528	45.211		2227													24	996							
301	1079	5.25	34.859	27.573	45.253		2226													131	1079							
915	1100	5.13	34.880	27.604	45.295		2224	0.58												25	1100							
792	1133	5.01	34.895	27.629	45.332		2218(I)		-105.1												1133							
916	1197	4.77	34.912	27.671	45.397		2207													32	1197							
302	1329	4.51	34.962	27.740	45.490		2203													13	1329							
793	1442	4.17	34.967	27.779	45.563		2197(I)		-101.9												1442	1.5+0.9	2.0+0.9					
303	1579	3.82	34.955	27.806	45.625		2189													11	1579							
794	1751		34.962				2180(I)		-97.4												1751							
304	1827	3.48	34.955	27.840	45.694		2177													16	1827							
305	2074	3.18	34.953	27.866	45.751		2183													43	2074							
186	2198	3.06	34.955	27.879	45.776		2191(I)		-98.6												2198	0.8+0.8						
306	2323	2.93	34.947	27.885	45.796		2197													14	2323							
307	2573	2.71	34.934	27.894	45.828		2191													18	2573							
187	2650	2.65	34.937	27.901	45.841		2190(I)		-113.9												2650							
308	2821	2.52	34.926	27.903	45.857		2189													11	2821							
309	3072	2.39	34.918	27.908	45.877		2196	0.95												14	3072							
188	3158		34.919				2197(I)		-113.6												3158	-0.4+1.0						
310	3323	2.28	34.909	27.910	45.891		2199													50	3323							
311	3575	2.160	34.902	27.914	45.908		2206	0.79												14	3575							
289	3624	2.14	34.904	27.916	45.912		2207(I)		-113.1												3624							
312	3829	2.08	34.895	27.914	45.917		2210													12	3829							
315	4086	1.999	34.891	27.918	45.929		2209	0.93												15	4086							
290	4145	1.92	34.893	27.925	45.945		2208(I)		-135.1												4145	-0.3+0.9						
316	4344	1.93	34.883	27.917	45.935		2206													9	4344							
291	4344	1.94	34.887	27.919	45.936		2206(I)		-114.2												4344							
292	4542	1.90	34.883	27.919	45.942		2215(I)		-113.9												4542	-0.4+0.8						
317	4550	1.88	34.879	27.918	45.943		2215	0.81												9	4550							
329	4737		34.879				2226													30	4737							
293	4741	1.88	34.884	27.921	45.945		2226(I)		-119.6												4741							
320	4826	1.87	34.877	27.916	45.942		2221	0.75													4826							
323	4911	1.86	34.879	27.919	45.945		2227	0.80												306	4911							

STATION 114 — **POSITION: 21°10'N 21°46'W** — **DATE: 12 MAR 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
																				LDGO								
723	4196	2.01	34.892	27.918	45.928		2201(I)													2 +1.6	4196							
724	4238		34.893				2201(I)													29 +1.6	4238							
725	4269	2.00	34.892	27.919	45.930		2201(I)													0 +1.5	4269							
726	4290	2.00	34.891	27.918	45.930		2202(I)													0 +1.6	4290							
727	4312	2.00	34.892	27.918	45.929		2202(I)													8 +1.5	4312							
728	4333	2.00	34.892	27.918	45.930		2202(I)													16 +1.6	4333							
729	4343	2.000	34.890	27.917	45.928															11 +1.6	4343							
730	4353	1.999	34.891	27.918	45.929															7 +1.6	4353							

(I) INTERPOLATED FROM NISKIN DATA

STATION 115 | POSITION: 28°1'N 26°0'W | DATE: 15 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg		$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
									UW		SIO	UM	----------SIO----------				LSU MIT*	LDGO	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
127	1	19.1	36.965	26.517	43.070													7.8 +0.3				1							
301	18	19.097	36.974	26.525	43.078		2098				1.08	7.18+0.25										18							
435	30		36.975				2094(I)		123.5										1.09 +0.12	0.71+0.06		30							
302	47	19.015	36.968	26.542	43.100		2091										38.7				51*	47							
303	88	18.922	36.960	26.560	43.124		2090				1.08	7.26+0.23	-1.6	3.93	15.86	1.4						88							
436	110		36.922				2093(I)		120.4										1.07 +0.12	0.52+0.04		110							
901	112	18.84	36.956	26.578	43.147		2093(I)														50*	112							
437	150		36.647				2103(I)		112.4										1.07 +0.12	1.09+0.08		160							
902	161	18.58	36.895	26.598	43.185		2103				1.08	7.30+0.16	-1.0				40.3				40*	161							
286	197	17.19	36.572	26.705	43.388		2110(I)		91.2									8.3 +0.8				197	21.8+0.1	38.7+0.4	0.310+0.030				
903	213	17.14	36.552	26.695	43.381		2113					6.78+0.16					40.3					213							
438	220		36.436				2110(I)		95.4										0.95 +0.11	1.09+0.08		220							
304	238	16.411	36.399	26.754	43.492		2101				0.96	6.37+0.20										238							
305	287	16.088	36.359	26.799	43.560		2113				0.95	6.56+0.24	3.1	3.89	15.93	1.3	40.5				24*	287							
287	296	15.86	36.318	26.820	43.597		2114(I)		67.8									8.1 +0.6				296	23.2+0.3	32.3+0.4	0.220+0.040				
439	300		36.342				2114(I)												0.71 +0.08	0.94+0.08		300							
306	388	14.088	35.968	26.948	43.858		2119				0.72	6.00+0.21					42.0				120*	388							
288	397		36.026				2122(I)		36.7									8.0 +0.6				397	19.9+0.3	32.1+0.3	0.300+0.030				
307	491	12.736	35.755	27.066	44.080		2147					4.80+0.18	7.2	3.92	16.31	1.0					37*	491							
308	589	11.605	35.608	27.173	44.279		2141				0.55	2.93+0.13					42.3					589							
289	596	11.47	35.583	27.179	44.296		2143(I)		-39.0									8.1 +0.2				596	8.6+0.2	15.1+0.4	0.240+0.030				
290	697	10.42	35.484	27.295	44.497		2175(I)		-67.0									8.9 +0.3				697	3.6+0.1	6.1+0.2	0.120+0.020				
309	738	9.963	35.440	27.341	44.583		2190					0.63+0.09	-0.1				46.2					738							
310	788	9.488	35.408	27.397	44.679		2197(I)				0.49	0.63+0.09									18*	788							
291	796	9.16	35.356	27.411	44.723		2198(I)		-76.8									10.3 +0.3				796	2.4+0.2	2.2+0.3	0.060+0.020				
311	863	8.628	35.345	27.488	44.845		2202					0.25+0.09	-0.7	3.98	16.88	1.1	48.6				35*	863							
292	896	8.24	35.290	27.505	44.897		2202(I)		-80.1									10.2 +0.8				896	0.1+0.3	1.3+0.3	0.060+0.010				
312	938	7.916	35.265	27.535	44.957		2201				0.45	0.03+0.09					49.7				27*	938							
315	997	7.688	35.282	27.582	45.023		2212				0.36	0.11+0.09										997							
293	1096	7.28	35.332	27.680	45.156		2200(I)		-81.7									11.2 +0.4				1096	1.3	1.5+0.2	0.030+0.010				
316	1098	7.272	35.308	27.663	45.141		2200										51.6				49*	1098							
317	1148	7.020	35.307	27.698	45.199		2217				0.38	0.13+0.09	-2.0								30*	1148							
294	1191	6.88	35.324	27.731	45.244		2192(I)		-84.3									10.4 +0.4				1191	0.7	1.2+0.2	0.020+0.010				
318	1199	7.215	35.399	27.743	45.223		2187				0.45	0.00+0.09					51.5				63*	1199							
1286	1291	6.65	35.346	27.760	45.314		2203(I)		-91.0									9.6 +0.6				1291							
319	1294	6.757	35.363	27.779	45.302		2204					0.03+0.09	-0.7	4.02	17.16	1.2	53.2				13*	1294							
321	1341	6.584	35.359	27.799	45.338		2201					0.10+0.09										1341							
322	1341	6.584	35.358	27.798	45.337		2199					0.13+0.09					53.8				16*	1341							
320	1341	6.584	35.355	27.796	45.335		2194					0.15+0.09									36*	1341							
323	1392		35.350				2202				0.45	0.18+0.09									16*	1392							
1287	1490	5.65	35.264	27.844	45.473		2189(I)		-101.3									10.1 +0.1				1490	1.6+0.2	1.4+0.3	0.030+0.010				
324	1491	5.87	35.290	27.838	45.445		2189					0.08+0.09					54.3				16*	1491							
904	1572	5.29	35.226	27.859	45.524		2189(I)				0.34	-0.06+0.09									23*	1572							
905	1773	4.61	35.158	27.884	45.618		2190														15*	1773							
906	1974	4.07	35.101	27.896	45.685		2178										57.1				86*	1974							
1288	1987	4.02	35.094	27.895	45.690		2178(I)		-91.5									10.7 +0.3				1987	2.3+0.9		0.042+0.006				
907	2172	3.60	35.042	27.897	45.736		2180(I)														18*	2172							
908	2375	3.16	35.001	27.907	45.792		2186(I)				0.30		0.0	4.10	17.73	1.5	61.9				29*	2375							
																	62.5*												
1289	2487	3.02	34.994	27.913	45.814		2190(I)		-96.7									12.1 +0.3				2487	2.3	2.8+0.2					
909	2577	2.92	34.976	27.908	45.819		2195										65.3					2577							
910	2779	2.73	34.957	27.910	45.841		2195(I)						1.4								13*	2779							
911	2978	2.54	34.942	27.915	45.867		2196(I)				0.22						71.3					2978							
1290	2985	2.49	34.941	27.918	45.875		2196(I)		-106.7									14.2 +0.2				2985	-0.4+0.8		0.022+0.004				
912	3234	2.38	34.927	27.916	45.885		2196						0.2	4.10	17.82	1.4					14*	3234							
915	3477	2.27	34.916	27.916	45.897		2208				0.24						74.6					3477							
1291	3484		34.920				2208(I)		-120.3									15.1 +0.3				3484	0.9	0.6+0.3	0.040+0.020				
916	3734	2.176	34.910	27.919	45.911		2205				0.25		0.3								11*	3734							
1292	3989	2.14	34.904	27.917	45.913		2209(I)		-117.3									16.6 +0.6				3989	0.2+0.8	0.9+0.2	0.012+0.003				
917	3990	2.13	34.902	27.916	45.913		2209					0.18+0.09					76.3				92*	3990							
918	4199	2.08	34.898	27.917	45.919		2211(I)				0.20		0.8	4.20	18.40	0.7					5*	4199							
1088	4256	2.03	34.905	27.926	45.934		2212(I)												0.26 +0.07	0.15+0.02		4256							
919	4401	2.04	34.901	27.923	45.929		2213										77.6				29*	4401							
1089	4436	2.02	34.898	27.921	45.929		2213(I)												0.08 +0.07			4436							
1293	4478	1.94	34.896	27.926	45.943		2214(I)		-114.6									18.2 +0.7				4478	0.7	0.7+0.3	0.010+0.010				
920	4606	1.98	34.889	27.917	45.930		2215(I)				0.22		1.6								182*	4606							
736	4771	1.96	34.889	27.918	45.934		2218(I)												0.31 +0.10	0.54+0.09		4771							
921	4812	1.96	34.888	27.919	45.934		2218				0.15						77.7				60*	4812							
922	5017	1.94	34.886	27.918	45.936		2206					0.01+0.09					78.7					5017							
789	5070	1.94	34.891	27.922	45.939		2206(I)												0.61 +0.18	0.42+0.05		5070							
923	5145		34.886				2207(I)														41*	5145							
924	5165	1.943	34.887	27.919	45.936		2207(I)														0 +1.6	5165							
																					57*								
1294	5175	1.96	34.915	27.940	45.955		2207(I)		-114.9									18.5 +0.3				5175	0.3+0.7						
925	5186		34.886				2207														6 +1.6	5186							
926	5206		34.886				2207(I)														8 +1.6	5206							
927	5216	1.940	34.885	27.917	45.936		2207(I)					-0.17+0.09	1.3	4.12	17.85	1.8	77.9					5216							
928	5226		34.884				2207(I)														0 +1.6	5226							
931	5247		34.886				2206(I)														2 +1.6	5247							
929	5267		34.886				2206(I)														0 +1.6	5267							
793	5271	1.94	34.889	27.920	45.938		2206(I)												0.96 +0.13	0.42+0.05		5271							
932	5286		34.886				2205(I)														9 +1.6	5286							
933	5297		34.886				2205(I)														7 +1.6	5297							
930	5303	1.934	34.886	27.919	45.937		2205				0.19	-0.10+0.09					78.0					5303							
935	5308		34.887																		3 +1.6	5308							

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0 0.01 0.06 0.2

STATION 116

POSITION: 29°56'N 30°24'W

DATE: 18 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																				LDGO								
334	4368		34.900				2194(I)													13 +1.6	4368							
335	4420		34.899				2188(I)													11 +1.6	4420							
336	4500		34.897				2205(I)													8 +1.6	4500							
327	4520	2.047	34.898	27.920	45.925		2206(I)													0 +1.6	4520							
328	4571	2.03	34.894	27.918	45.926		2209(I)													5 +1.6	4571							
331	4612		34.893				2212(I)													11 +1.6	4612							
329	4630	2.025	34.891	27.916	45.924		2213(I)													0 +1.6	4630							
332	4651		34.895				2214(I)													10 +1.6	4651							

STATION 117

POSITION: 30°40'N 38°58'W

DATE: 20 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	----------SIO----------				LDGO	LDGO	LDGO	WHOI		WHOI	WHOI	WHOI				
435	0		36.688																1.12+0.10		0							
125	1	19.5	36.723	26.228	42.763												8.1 +1.0				1							
786	2	19.59	36.732	26.215	42.744				138.9								7.1 +0.3				2	22.2+0.3	35.5+0.4					
301	8	19.359	36.692	26.241	42.785		2070					7.08+0.23								28	8							
302	21	19.369	36.690	26.237	42.781		2061													47	21							
437	50		36.677				2061(I)											1.99 +0.30	1.05+0.08		50							
303	89	19.247	36.678	26.260	42.811		2062					7.34+0.23									89							
438	100		36.675				2064(I)											1.85 +0.20	2.07+0.20		100							
787	100	19.36	36.726	26.272	42.815		2064(I)		136.0								8.0 +0.2				100	20.5+1.1						
304	138	18.927	36.659	26.329	42.900		2073													36	138							
305	158	18.757	36.621	26.344	42.926		2076					7.45+0.22								47	158							
306	188	18.059	36.528	26.450	43.078		2090						2.2	3.82	15.58	0.7				21	188							
440	200		36.520				2091(I)											1.60 +0.19	1.40+0.11		200							
307	259	17.390	36.450	26.557	43.229		2094					7.04+0.23									259							
788	295	17.01	36.403	26.613	43.312		2095(I)		79.8								7.6 +0.4				295	19.5+0.2	34.0+0.6	0.310+0.030				
442	300		36.365				2095(I)											1.10 +0.15	1.25+0.11		300							
308	340	16.547	36.336	26.673	43.404		2097					6.15+0.19	5.4	3.83	15.69	0.8					340							
789	393	15.68	36.176	26.754	43.547		2102(I)		48.9								7.8 +0.1				393	20.5+0.9						
801	423	15.798	36.166	26.718	43.504		2105(I)													11	423							
309	539	13.821	35.873	26.932	43.863		2120					4.90+0.17								16	539							
790	539	13.80	35.883	26.944	43.877		2120(I)		11.2								7.6 +0.0				539	15.0+0.2	26.0+0.3	0.250+0.040				
310	640	12.625	35.709	27.052	44.076		2132					4.04+0.15								28	640							
791	686	11.77	35.607	27.142	44.234		2148(I)		-32.2								8.4 +0.2				686	10.2+1.4						
311	690	11.810	35.605	27.132	44.221		2149													6	690							
312	741	10.993	35.511	27.213	44.369		2154					1.83+0.11	7.5	3.97	16.52	1.9				34	741							
315	800	10.220	35.424	27.284	44.505		2168													48	800							
316	851	9.724	35.385	27.339	44.602		2178					0.91+0.09								28	851							
317	902	8.898	35 307	27.415	44.750		2184													17	902							
318	952	8.347	35.278	27.480	44.863		2186					0.56+0.09	2.3	4.01	17.08	0.7				14	952							
319	1002	7.754	35.291	27.580	45.015		2187					0.72+0.09								20	1002							
320	1052	7.441	35.291	27.626	45.089		2188					0.29+0.09								36	1052							
793	1076	6.98	35.525	27.875	45.373		2188(I)		-67.9								10.2 +0.2				1076	2.1+0.1	3.1+0.3					
321	1152	6.852	35.263	27.687	45.204		2188					0.40+0.09									1152							
286	1215	6.20	35.231	27.749	45.328		2183(I)		-71.2								9.5 +0.3				1215	1.8+0.9						
322	1285	6.023	35.238	27.778	45.373		2177													16	1285							
287	1319	5.88	35.234	27.792	45.401		2176(I)		-75.3								9.3 +0.3				1319							
323	1403	5.419	35.193	27.817	45.471		2175					0.35+0.09								14	1403							
288	1474	5.22	35.197	27.844	45.517		2171(I)		-72.3								9.9 +0.4				1474	1.7+0.8						
324	1503	5.069	35.172	27.842	45.531		2170						0.3	4.06	17.57	0.7					10	1503							
802	1578	5.013	35.187	27.861	45.554		2178					0.53+0.09	0.3								16	1578						
289	1681	4.60	35.147	27.876	45.611		2174(I)		-78.0								10.2 +0.2				1681							
804	1687	4.496	35.134	27.877	45.623		2174					0.05+0.09									13	1687						
806	1889	3.995	35.075	27.884	45.681		2170					0.20+0.09	0.1	4.11	17.76	1.2					26	1889						
794	1954	3.94	35.095	27.905	45.708		2170(I)		-78.3								11.0 +0.3				1954	0.7+0.4	3.3+0.9	0.050+0.010				
809	2091	3.483	35.023	27.893	45.745		2172					0.04+0.09	0.0								24	2091						
812	2291	3.095	34.978	27.894	45.787		2172(I)						0.9	4.08	17.81	0.7					16	2291						
816	2495	2.917	34.965	27.900	45.812		2171					0.15+0.09	0.4									2495						
291	2506	2.97	34.972	27.900	45.807		2171(I)		-92.1								11.8 +0.5				2506	1.0+0.8						
818	2745	2.736	34.953	27.906	45.838		2181						1.7	4.09	17.86	0.8				10	2745							
819	2998	2.596	34.943	27.911	45.857		2193						2.8	4.09	17.87	0.9					2998							
292	3019	2.58	34.937	27.907	45.855		2193(I)		-104.0								16.0 +0.6				3019							
821	3246	2.491	34.935	27.913	45.871		2194						-0.1								3246							
293	3425	2.41	34.926	27.912	45.879		2193(I)		-105.0								16.3 +0.4				3425	-1.4+1.3						
822	3498	2.405	34.927	27.914	45.881		2193					0.05+0.09								20	3498							
824	3565	2.378	34.927	27.916	45.886		2191						2.5	4.11	17.91	1.0				21	3565							
PRECISION:													1.0	0.01	0.06	0.2												

(I) INTERPOLATED FROM NISKIN DATA

STATION 118

POSITION: 31°18'N 45°38'W

DATE: 23 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	LDGO	LDGO								
735	5																	1.81 +0.19	2.04+0.22		5							
620	4350	1.83	34.885	27.926	45.955		2197(I)														10 +1.6	4350						
621	4441	1.80	34.883	27.926	45.959		2191(I)														0 +1.6	4441						
623	4491	1.805	34.883	27.926	45.959		2185(I)														9 +1.6	4491						
624	4501		34.881				2184(I)														5 +1.6	4501						
625	4512	1.80	34.894	27.935	45.967		2183(I)														5 +1.6	4512						
626	4522		34.882				2182(I)														10 +1.6	4522						
628	4530		34.880																		70 +1.7	4530						

STATION 119

POSITION: 31°49'N 50°53'W

DATE: 25 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	LDGO	LDGO								
335	5						2058(I)											1.87 +0.21	1.26+0.11		5							
211	5284	1.67	34.864	27.921	45.968		2206(I)														6 +1.6	5284						
215	5489	1.66	34.864	27.921	45.970		2206(I)														11 +1.6	5489						
217	5592	1.65	34.861	27.920	45.970		2206(I)														14 +1.6	5592						
226	5679	1.65	34.864	27.923	45.973		2207(I)														13 +1.6	5679						
219	5721	1.65	34.866	27.924	45.974		2207(I)														19 +1.6	5721						
220	5752	1.64	34.864	27.923	45.975		2208(I)														12 +1.5	5752						
222	5774		34.869																		8 +1.6	5774						
223	5790	1.65	34.861	27.920	45.970																13 +1.6	5790						
225	5796	1.644	34.862	27.921	45.972																10 +1.6	5796						

STATION 120

POSITION: 33°16'N 56°33'W

DATE: 27 MAR 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
							UW	UM	----------SIO----------								LDGO	LDGO	LDGO	LDGO WHOI*								
335	0																			1.33+0.10		0						
615	1	18.0	36.430	26.390	43.024													7.1 +0.4				1						
401	3	18.04	36.417	26.370	43.002		2052	6.59+0.16	-0.8	3.80	15.51	0.6									66*	3						
286	3	18.04	36.392	26.350	42.983		2052(I)										127.8					3						
402	28	18.02	36.417	26.376	43.010		2054	6.48+0.14													42*	28						
337	50						2051(I)												3.52 +0.38	1.22+0.09		50						
403	79	18.01	36.417	26.378	43.013		2047	6.91+0.16	-2.0												32*	79						
338	100						2049(I)													1.34+0.11		100						
339	150						2054(I)												2.05 +0.22	1.54÷0.11		150						
404	153	17.95	36.403	26.381	43.019		2054	6.47+0.15													36*	153						
340	200						2066(I)												2.06 +0.23	1.12+0.08		200						
287	204	17.91	36.423	26.406	43.046		2067(I)										129.5					204						
405	228	17.49	36.381	26.479	43.147		2073	6.47+0.14	1.8	3.86	15.77	0.7										228						
341	250						2077(I)												1.99 +0.21	1.41+0.12		250						
342	300						2086(I)												1.35 +0.15	1.46+0.13		300						
406	302	17.05	36.356	26.568	43.265		2086	6.28+0.14														302						
407	402	15.95	36.170	26.686	43.460		2101	5.27+0.16														402						
288	403	15.93	36.168	26.688	43.464		2101(I)										45.6					403						
408	503	14.37	35.908	26.840	43.731		2115	4.81+0.15													15*	503						
289	601	13.01	35.710	26.974	43.969		2131(I)										-12.1					601						
409	602	12.65	35.649	27.000	44.024		2131	3.54+0.11	4.1	3.93	16.43	0.8									13*	602						
410	652	11.59	35.506	27.097	44.206		2151	2.98+0.11													8*	652						
290	700	10.80	35.410	27.169	44.344		2162(I)										-59.7					700						
411	703	10.52	35.361	27.182	44.380		2162	1.98+0.11	4.9												5*	703						
291	799	8.67	35.187	27.357	44.716		2174(I)										-66.0					799						
412	801	8.96	35.216	27.335	44.667		2174	1.32+0.12													21*	801						
292	899	7.14	35.099	27.518	45.014		2194(I)										-62.0					899						
415	900	7.16	35.094	27.511	45.006		2194		2.1												16*	900						
416	999	6.17	35.091	27.642	45.228		2192(I)	1.04+0.09													50*	999						
293	1096	5.54	35.089	27.720	45.366		2187(I)										-61.4					1096						
417	1150	5.33	35.082	27.740	45.405		2183(I)	1.08+0.09	2.4	4.00	17.26	0.8									9*	1150						
294	1293	4.81	35.078	27.796	45.513		2169(I)										-62.4					1293						
418	1346	4.78	35.059	27.786	45.506		2163	0.82+0.10													15*	1346						
419	1447	4.42	35.041	27.811	45.567		2169	0.56+0.09													6*	1447						
420	1599	4.14	35.022	27.826	45.611		2158(I)	0.44+0.09													2*	1599						
421	1650	4.081	35.020	27.831	45.622		2155		0.0													1650						
422	1701	4.031	35.018	27.835	45.630		2160														14*	1701						
423	1750	3.948	35.011	27.838	45.642		2154														8*	1750						
586	1757	3.95	34.998	27.827	45.631		2155(I)										-68.0					1757						
424	1802	3.90	35.012	27.844	45.653		2162														12*	1802						
																					8*	1887						

(I) INTERPOLATED FROM NISKIN DATA

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He 10^{-5}cc/kg	Ne	$\Delta(He/Ne)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	SIO					LDGO	LDGO	LDGO	LDGO WHOI*								
101	1887	3.77	35.003	27.849	45.672		2151					0.05+0.07	-0.2	4.04	17.57	0.6					8*	1887							
102	1987	3.64	34.992	27.853	45.690		2154(I)					0.11+0.07									15*	1987							
103	2188	3.47	34.986	27.865	45.719		2170														10*	2188							
587	2255	3.36	34.974	27.866	45.732		2169(I)		-75.8													2255							
104	2387	3.26	34.976	27.878	45.754		2165														11*	2387							
105	2588	3.05	34.963	27.887	45.785		2168(I)						4.9	4.17	18.07	1.4					12*	2588							
588	2754	2.90	34.969	27.904	45.817		2170(I)		-87.8													2754							
106	2789	2.84	34.952	27.896	45.817		2170														19*	2789							
107	2989	2.69	34.942	27.902	45.838		2164						0.0	4.05	17.75	0.5					12*	2989							
108	3191	2.52	34.931	27.907	45.861		2168														18*	3191							
589	3252	2.49	34.942	27.919	45.876		2168(I)		-91.6													3252							
109	3391	2.34	34.922	27.916	45.890		2168						0.7	4.10	17.86	1.1					9*	3391							
590	3550	2.17	34.922	27.928	45.921		2171(I)		-88.3													3550							
111	3792	2.08	34.904	27.922	45.925		2166														16*	3792							
112	4043	1.95	34.895	27.925	45.942		2182														18*	4043							
591	4048	1.99	34.908	27.932	45.944		2182(I)		-93.4													4048							
115	4297	1.88	34.891	27.927	45.951		2181														16*	4297							
116	4550	1.819	34.883	27.925	45.956		2188														19*	4550							
592	4793	1.77	34.884	27.929	45.966		2184(I)		-100.1													4793							
117	4806	1.75	34.874	27.923	45.963		2184						2.3	4.10	17.93	1.1					34*	4806							
118	5058	1.70	34.868	27.922	45.966		2192														50*	5058							
119	5314	1.66	34.866	27.923	45.972		2189						1.4								73*	5314							
120	5365	1.65	34.863	27.921	45.971		2193(I)														85 +1.8	5365							
121	5416	1.66	34.864	27.921	45.970		2196(I)														80 +1.8	5416							
122	5441	1.655	34.863	27.921	45.970		2197														32*	5441							
123	5468		34.862				2195(I)														117 +2.0	5468							
																					100*								
124	5492		34.864				2193(I)														99 +1.9	5492							
																					185*								
125	5500	1.65	34.862	27.921	45.970		2193						1.8									5500							
126	5522		34.861				2194(I)														155 +2.2	5522							
127	5533		34.863				2195(I)														157 +2.2	5533							
594	5535	1.63	34.889	27.944	45.995		2195(I)		-101.4													5535							
128	5539		34.862				2196(I)														117 +2.0	5539							
131	5547		34.862				2197(I)														154 +2.2	5547							
130	5554	1.648	34.863	27.922	45.972		2198						1.7	4.10	17.91	1.2						5554							
132	5561		34.865																		195 +2.5	5561							
133	5568		34.862																		195 +2.5	5568							
												PRECISION:	1.0	0.01	0.06	0.2													

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He 10^{-5}cc/kg	Ne	$\Delta(He/Ne)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM									LDGO								
118	22	19.093	36.427	26.109	42.675							6.05+0.14										22							
216	55	19.05	36.427	26.120	42.689		2059					5.71+0.14										55							
217	153	19.03	36.428	26.125	42.696		2051					5.82+0.14										153							
218	201	18.50	36.434	26.266	42.869		2067					6.22+0.14										201							
219	299	18.02	36.468	26.415	43.047		2117					6.34+0.14										299							
123	301	17.996	36.468	26.420	43.054		2116(I)					6.34+0.17										301							
202	400	17.45	36.438	26.533	43.202		2093(I)					5.98+0.16										400							
203	500	16.69	36.321	26.626	43.348		2087					5.11+0.15										500							
204	602	15.11	36.038	26.776	43.612		2130					4.33+0.13										602							
205	703	13.00	35.666	26.944	43.941		2159					2.09+0.09										703							
206	803	11.62	35.455	27.052	44.160		2172(I)					1.17+0.09										803							
208	904	9.44	35.249	27.281	44.571		2190					0.93+0.09										904							
210	1004	7.44	35.097	27.473	44.941		2189					0.96+0.09										1004							
211	1105	5.81	35.035	27.645	45.267		2181					1.07+0.09										1105							
212	1255	4.88	35.021	27.745	45.456		2175					1.26+0.09										1255							
225	1407	4.53	35.012	27.777	45.523		2172					1.39+0.09										1407							
226	1559	4.25	34.994	27.793	45.568		2170					0.95+0.09										1559							
326	1632	4.09	34.984	27.801	45.592		2164					0.81+0.09										1632							
228	1861		34.974				2164(I)					0.29+0.07										1861							
320	4615	1.84	34.889	27.928	45.957		2188(I)														33 +1.6	4615							
322	4717	1.822	34.891	27.931	45.962		2186(I)														72 +1.7	4717							
330	4777		34.886				2184(I)														93 +1.9	4777							
331	4838		34.883				2190(I)														188 +2.4	4838							
333	4879		34.886				2195(I)														55 +3.1	4879							
334	4898		34.888				2193(I)														67 +1.7	4898							
335	4912		34.888																		88 +1.8	4912							
336	4919		34.888																		77 +1.8	4919							

(I) INTERPOLATED FROM NISKIN DATA

Pacific Ocean Data Tables

STATION 201 — **POSITION: 34°10'N 127°53'W** — **DATE: 25 AUG 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------MCM----------				LDGO SIO*			LDGO WHOI*		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1247	0	17.44	33.09	23.975	40.728																0				12.3+*0.8			3.9 +0.3
1001	1	17.60	33.085	23.933	40.676	0.3	2000	2.10												24*	1							
1187	2	17.61	33.085	23.931	40.673		2000(I)		188.6								6.6*+0.4				2	39.4+0.8	52.2+1.5	0.091+0.010				
1188	12	17.63	33.086	23.927	40.668		2000(I)														12				11.2 +0.5	0.15 +0.04		
1002	16	17.61	33.085	23.931	40.673		2000(I)					14.44+0.50	-1.2	3.87	16.09	-1.0				20*	16							
1003	47	15.76	33.074	24.354	41.220		1999(I)					14.04+0.40								38*	47							
1189	67	13.81	33.045	24.753	41.760		1998(I)		190.6								7.6*+0.4				67	41.0+1.7	59.3+1.8					
1004	99	12.92	33.088	24.968	42.040		1997					14.24+0.40								24*	99							
1190	141	10.37	33.210	25.534	42.804		2052(I)		140.2								8.5*+0.6				141	43.8+0.9	57.5	0.087+0.012				
1005	149	9.76	33.291	25.700	43.019		2065					12.43+0.40								38*	149							
1006	200	8.75	33.786	26.249	43.641	4.4	2141	0.41				8.79+0.24	17.7	3.83	17.34	-5.2				13*	200							
1191	216	8.67	33.837	26.302	43.699		2155(I)		1.0								10.3*+0.4				216	33.0+1.4	47.3+1.9					
1007	262	7.84	33.968	26.529	43.994		2186					5.17+0.18								5*	262							
586	295	7.63	34.010	26.592	44.076		2215(I)		-75.4								9.2*+0.5				295	13.9+1.0	24.2+1.0	0.360+0.025				
1008	322	7.31	34.050	26.670	44.181		2237(I)					1.60+0.09								37*	322							
1009	384	6.49	34.051	26.781	44.367		2281	-0.30				0.60+0.09								15*	384							
1192	389	6.42	34.060	26.797	44.390		2283(I)														389				14.1 +0.5	0.37 +0.05		
587	394	6.23	34.044	26.809	44.420		2285(I)		-120.1								14.6*+0.5				394	4.3+0.5	5.7+0.6					
1010	444	5.96	34.108	26.894	44.529		2299					0.33+0.09	6.2		17.56					27*	444							
588	493	5.52	34.089	26.933	44.611		2315(I)		-138.0								14.6*+0.5				493	1.7+0.4	1.6+0.4	0.250+0.018				
1011	505	5.16	34.093	26.978	44.691		2319(I)													11*	505							
1012	555	5.03	34.152	27.039	44.762		2336					0.23+0.09									555							
589	592	5.10	34.205	27.073	44.788		2352(I)		-156.5								15.2*+0.4				592		0.2+0.4					
1013	616	4.83	34.223	27.118	44.859		2360	-0.57												23*	616							
1014	676	4.74	34.291	27.181	44.929		2361					0.04+0.09								14*	676							
1015	728	4.606	34.323	27.222	44.982		2368													25*	728							
590	741	4.59	34.323	27.224	44.985		2373(I)		-181.9								19.3*+1.0				741		0.4+0.8	0.110+0.020				
1016	758	4.46	34.335	27.247	45.022	7.5	2379	-0.52				-0.01+0.09								12*	758							
1193	786	4.37	34.359	27.276	45.059		2384(I)														786				13.9 +0.6	0.29 +0.02		
1017	788	4.340	34.350	27.272	45.058	7.9	2384													11*	788							
1018	860	4.13	34.395	27.329	45.134		2393	-0.50					15.6	3.91	18.09	-5.4				19*	860							
591	889	4.03	34.415	27.356	45.170		2395(I)		-198.4								18.1*+0.5				889	-1.0+0.5	-0.2+0.4					
402	893	4.108	34.407	27.341	45.149		2395													18*	893							
403	943	3.955	34.424	27.370	45.193		2381	-0.56												13*	943							
1020	964	3.82	34.437	27.395	45.231		2382(I)													9*	964							
404	992	3.783	34.442	27.402	45.241		2384(I)					0.07+0.09	18.5							22*	992							
405	1068	3.579	34.465	27.440	45.299		2388													11*	1068							
592	1087	3.44	34.481	27.466	45.339		2387(I)		-225.0								24.7*+0.7				1087		-0.2	0.098+0.013				
406	1141	3.364	34.486	27.477	45.358		2386(I)	-0.58												19*	1141							
1194	1183	3.16	34.499	27.506	45.407		2385(I)														1183				15.4 +0.6	0.38 +0.02		
407	1217	3.206	34.503	27.506	45.402		2385						17.3								1217							
593	1286	3.00	34.524	27.541	45.459		2394(I)		-234.6								24.4*+1.1				1286	0.1+0.6	-1.1+0.4					
408	1292	3.025	34.518	27.534	45.449		2395(I)													22*	1292							
409	1391	2.819	34.535	27.566	45.501		2408	-0.51												15*	1391							
410	1492	2.623	34.551	27.595	45.551		2408						22.9	4.22	18.33	1.5				38*	1492							
594	1535	2.50	34.545	27.601	45.570		2405(I)		-235.7								25.5*+0.4				1535		-0.2	0.078+0.012				
411	1592	2.422	34.563	27.622	45.599		2401(I)	-0.47													1592							
412	1643	2.320	34.570	27.636	45.623		2398						21.9	4.24	18.34	1.9				85*	1643							
787	1706						2400(I)														1706				17.5 +0.9	0.61 +0.07		
416	1801	2.095	34.587	27.667	45.678		2404	-0.37												27*	1801							
286	1816	2.02	34.595	27.679	45.697		2404(I)		-244.5								29.4*+0.8				1816	-0.9+0.5	-0.6+0.4					
417	1902	1.983	34.601	27.687	45.709		2402(I)													19*	1902							
418	1951	1.945	34.609	27.696	45.723		2400						22.4							27*	1951							
419	2001	1.912	34.615	27.704	45.733		2399(I)	-0.39												17*	2001							
287	2114	1.77	34.629	27.725	45.770		2398(I)		-250.2								30.4*+0.4				2114		-0.2	0.020+0.009				
788	2154						2399(I)														2154				17.1 +1.2	0.67 +0.07		
421	2250	1.700	34.630	27.731	45.783		2401	-0.27					21.0							17*	2250							
422	2399	1.614	34.638	27.744	45.805		2401													16*	2399							
288	2413	1.60	34.578	27.697	45.762		2401(I)														2413							
423	2549	1.535	34.645	27.755	45.825		2404						20.4				31.0*+0.6			16*	2549							
789	2603						2404(I)														2603				16.9 +0.5	0.70 +0.05		
424	2696	1.460	34.652	27.766	45.844		2403													26*	2696							
389	2724	1.47	34.651	27.765	45.841		2401(I)														2724		0.4+1.0					
601	2856	1.397	34.658	27.775	45.859	6.5	2390(I)	-0.09					18.5	4.27	18.46	2.5	32.2*+1.1				2856							
602	3023	1.346	34.661	27.781	45.871		2379(I)													6*	3023							
790	3051						2377(I)														3051				18.4 +1.4	0.51 +0.02		
390	3073	1.34	34.666	27.786	45.876		2375(I)		-252.1								31.8*+0.7				3073	0.4+0.7	-0.3+0.3					
603	3171	1.296	34.665	27.788	45.883	10.6	2369						17.0							12*	3171							
604	3320	1.254	34.670	27.795	45.894		2372													15*	3320							
791	3448						2379(I)														3448				19.0 +0.9	0.82 +0.06		
391	3471	1.24	34.671	27.797	45.898		2380(I)		-238.7								33.7*+1.1				3471	-0.6+0.2	1.6+0.4	0.030+0.010				
605	3472	1.220	34.674	27.800	45.903		2380	-0.13												13*	3472							
606	3623	1.193	34.676	27.804	45.910		2385(I)													2*	3623							
607	3772	1.172	34.680	27.808	45.916	7.2	2390(I)						15.7							25*	3772							
792	3844						2392(I)														3844				19.3 +1.0	0.92 +0.04		
392	3868	1.18	34.681	27.808	45.915		2393(I)		-230.9								39.3*+0.6				3868	0.2+0.6	-0.4+0.4					
608	3922	1.160	34.681	27.810	45.919		2395													51*	3922							
609	4073	1.152	34.682	27.811	45.922	12.3	2371													14*	4073							
610	4122	1.149	34.682	27.811	45.922	6.2	2357	-0.01												28*	4122							
793	4238						2358(I)														4238					1.22 +0.03		
393	4264	1.16	34.683	27.811	45.921		2358(I)		-231.2								41.8*+1.1				4264		-0.2	0.040+0.010				
611	4272	1.142	34.683	27.813	45.924		2359(I)													11*	4272							
612	4412	1.138	34.683	27.813	45.925	13.6	2360	-0.01					16.2							8*	4412							
615	4421	1.137	34.683	27.813	45.925		2260(I)										43.5 +0.8			10 +1.6	4421							
616	4521	1.134	34.684	27.814	45.926		2361(I)													8 +1.6	4521							
617	4570	1.133	34.684	27.814	45.926	9.5	2362(I)						16.9	4.22	18.22	2.7				9 +1.5	4570							
618	4570	1.133	34.684	27.814	45.926		2362(I)													7*	4570							
619	4617	1.130	34.684	27.814	45.927		2363(I)													7 +1.5	4617							
620	4649	1.130	34.684	27.814	45.927	9.4	2363(I)													13 +1.6	4649							
621	4670	1.130	34.685	27.815	45.928		2364(I)										41.3 +1.8			6 +1.6	4670							
794	4681						2364(I)														4681				20.4 +0.6	0.98 +0.05		
622	4683	1.129	34.684	27.814	45.927	9.1	2364(I)													11 +1.6	4683							
624	4695	1.128	34.684	27.814	45.927		2364(I)													10 +1.6	4695							
623	4695	1.128	34.684	27.814	45.927		2364	-0.13												19*	4695							
394	4707	1.12	34.667	27.801	45.915				-225.1				15.5	4.27	18.63	1.7	39.0*+0.8				4707	-0.3+0.4	-0.3+0.4					
												PRECISION:	0.3	0.01	0.06	0.2												

(I) INTERPOLATED FROM NISKIN DATA

STATION 202 — **POSITION: 33°6'N 139°34'W** — **DATE: 30 AUG 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{238,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM					LDGO SIO*			LDGO		WHOI	WHOI	WHOI	YALE		YALE	YALE
1247	0	21.74	34.58	23.995	40.448																0				23.7 +1.2			11.8 +0.5
701	7	21.750	34.646	24.042	40.493		2018	0.99				9.48+0.26									7							
886	15	21.63	34.651	24.080	40.538		2018(I)		205.7								6.8**0.5				15	44.8+0.7	54.7 7.0	0.040+0.020				
887	70	16.55	34.289	25.104	41.886		2017(I)		177.3								6.9**0.5				70	41.6+0.9	58.1+1.7					
703	77	17.116	34.564	25.180	41.918		2017	1.61				10.60+0.30									77							
704	102	16.322	34.572	25.374	42.164		2010	1.55				10.00+0.30									102							
705	127	15.644	34.542	25.507	42.344		2020(I)					9.45+0.26									127							
889	141	14.92	34.439	25.590	42.480		2027(I)		142.0								5.6**0.6				141	44.0+0.4	59.7+0.7	0.070+0.020				
706	151	14.633	34.414	25.633	42.544		2033(I)					9.76+0.27									151							
707	176	13.082	34.217	25.807	42.836		2050(I)					9.40+0.26									176							
708	202	11.602	34.149	26.042	43.188		2072	0.18				8.57+0.24									202				24.6			
709	227	10.943	34.160	26.172	43.369		2084(I)					8.18+0.23									227				24.5			
888	240	10.53	34.151	26.238	43.469		2090(I)		43.4												240	39.4+2.0	51.6+1.0					
710	277	9.878	34.118	26.325	43.611		2106(I)					8.02+0.26									277							
711	311	9.376	34.103	26.397	43.725		2119	0.37				7.86+0.22									311							
686	346	8.73	34.048	26.457	43.842		2133(I)		-8.4								9.0**0.6				346	29.8+0.9	37.8+1.0	0.450+0.030				
712	351	8.693	34.046	26.461	43.850		2135					7.54+0.22									351							
715	401	7.816	34.006	26.562	44.029		2174	-0.18				5.71+0.22									401				18.1			
687	496	6.07	33.969	26.771	44.400		2229(I)		-104.9								14.3**0.5				496	6.3+0.6						
716	502	5.572	33.968	26.831	44.507		2233	-0.07				1.13+0.07									502							
717	576	5.316	34.027	26.908	44.607		2297	-0.40				0.19+0.05									576							
718	628	4.677	34.054	27.001	44.762		2315	-0.57				0.11+0.05									628							
688	645	4.56	34.066	27.023	44.796		2332(I)		-150.7								20.8**1.0				645	1.1+0.2		0.300+0.200				
719	654	4.836	34.132	27.045	44.788		2341					-0.05+0.05									654							
720	697	4.645	34.188	27.111	44.871		2351(I)					-0.03+0.05									697							
721	745	4.437	34.231	27.167	44.947		2363					-0.02+0.05									745							
722	820	4.134	34.286	27.243	45.051		2375(I)					-0.05+0.05									820							
689	844	4.05	34.288	27.252	45.069		2379(I)		-191.1								19.8**0.4				844	0.5+0.3	2.4+0.4					
723	896	3.893	34.341	27.311	45.142		2388	-0.76				0.00+0.05									896							
401	938	3.626	34.347	27.342	45.200		2399	-0.64				-0.07+0.05									938							
402	1030	3.409	34.407	27.410	45.289		2398					-0.02+0.05									1030							
690	1045	3.63	34.415	27.395	45.251		2399(I)		-209.1								22.6**0.6				1045	-0.5+0.2	-0.8+0.9	0.080+0.030				
403	1127	3.228	34.455	27.465	45.361		2407					0.02+0.06									1127							
404	1217	3.040	34.482	27.504	45.418		2400	-0.58													1217							
691	1246	3.12	34.487	27.501	45.407		2404(I)		-225.3								23.4**0.5				1246	0.0+0.2						
692	1446	2.71	34.526	27.568	45.516		2407(I)		-236.7								26.4**0.7				1446	-0.3+0.5	-0.4+1.0	0.060+0.040				
407	1521	2.495	34.548	27.604	45.573		2409	-0.77													1521							
693	1646	2.34	34.560	27.626	45.611		2417(I)		-241.0								28.3**0.7				1646	-0.3+0.3	-0.2+0.4					
410	1822	2.019	34.592	27.677	45.696		2413	-0.50													1822				24.4			
694	1847	2.00	34.584	27.672	45.693		2422(I)		-246.2								26.8**0.6				1847	-0.4+0.5	0.0+0.5	0.080+0.010				
415	2135	1.726	34.621	27.722	45.772		2401	-0.40													2135							
286	2136	1.71	34.624	27.726	45.777		2401(I)		-256.9								30.0**0.8				2136	-0.1+0.8						
287	2437	1.56	34.644	27.753	45.820		2396(I)		-252.4								31.2**0.6				2437	-0.7+0.5	1.0+0.8	0.050+0.020				
418	2439	1.554	34.640	27.750	45.817		2396	-0.26													2439							
388	2736	1.41	34.570	27.704	45.790		2405(I)										28.0**0.6				2736	0.3+0.2	1.0+0.4					
421	2745	1.418	34.653	27.770	45.852		2405	-0.37													2745							
394	3000		34.671				2387(I)		-229.9								37.9**0.8				3000	-0.4+0.5	-0.3+0.9	0.050+0.010				
424	3046	1.313	34.663	27.785	45.878		2394	-0.73													3046							
101	3052	1.306	34.663	27.786	45.880		2386														3052							25.6
389	3084	1.32	34.654	27.778	45.871		2396(I)		-242.7								32.2**0.7				3084	0.4+0.4	-0.4+0.4					
103	3349	1.227	34.671	27.797	45.900		2379	-0.10													3349							
390	3431	1.21	34.673	27.800	45.904		2383(I)		-228.3								34.8**0.6				3431	-0.1+0.1	-0.3+0.6	0.010+0.010				
104	3498	1.20	34.675	27.802	45.907		2385														3498							29.5
391	3776	1.18	34.673	27.802	45.910		2364(I)		-234.8								36.8**0.5				3776	-0.4+0.3	-0.5+0.4					
106	3795	1.16	34.676	27.806	45.916		2363	-0.12													3795							32.5
392	4122	1.16	34.685	27.813	45.923		2360(I)		-230.6								42.0**0.6				4122	-0.8+0.5	-0.8+0.9	0.040+0.020				
109	4243	1.127	34.682	27.813	45.926		2375	0.05													4243							28.6
393	4524	1.12	34.681	27.813	45.927		2358(I)		-222.2								40.2**0.5				4524	-0.8+0.6	-0.3+0.3					
112	4688	1.110	34.683	27.815	45.930		2361	0.03													4688							28.1
115	4697	1.113	34.684	27.815	45.930		2361(I)										44.4 +0.6				4697	9 +1.6						
116	4812	1.106	34.685	27.816	45.932		2362(I)														4812	10 +1.6						
117	4847	1.107	34.684	27.816	45.931		2362	0.16													4847							25.8
118	4872	1.11	34.684	27.815	45.931		2362(I)														4872	10 +1.6						
119	4907	1.104	34.685	27.817	45.932		2363(I)														4907	9 +1.6						
120	4932	1.11	34.684	27.816	45.931		2364(I)														4932	5 +1.5						
121	4952	1.106	34.685	27.816	45.932		2364(I)														4952	7 +1.6						
122	4967	1.107	34.685	27.816	45.932		2365(I)														4967	10 +1.6						
123	4984		34.685				2365	-0.08													4984							
124	4984		34.685				2365(I)														4984	12 +1.6						25.6

STATION 203 — **POSITION: 32°43'N 142°5'W** — **DATE: 2 SEP 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{238,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	LDGO									
288	4117	1.14	34.669	27.802	45.914														0.31+0.07		4117							
291	4312	1.13	34.685	27.815	45.927													0.04 +0.20	0.30+0.06		4312							
186	4775	1.10	34.681	27.814	45.931													1.17 +0.40	0.75+0.07		4775							
189	4971	1.11	34.687	27.818	45.933													1.17 +0.40	1.02+0.08		4971							
192	5171	1.11	34.689	27.819	45.934													1.23 +0.41	1.09+0.11		5171							

(I) INTERPOLATED FROM NISKIN DATA

STATION 204 | POSITION: 31°22'N 150°2'W | DATE: 5 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH		UH	UM			UM	----------SIO----------			MIT	LDGO SIO* USC#	DPM/100kg			LDGO	WHOI	WHOI	WHOI	YALE	DPM/100kg	SIO	YALE
1047	0	23.56	34.88	23.706	40.051		2019(I)														0				23.5 +1.2			10.4 +0.5
501	2	23.56	34.881	23.706	40.051	0.6	2018	1.57				7.85+0.19				35.0					2							
690	13	23.53	35.233	23.982	40.320		2011(I)		178.4								6.1*+0.4				13	32.9+1.4	60.1+0.8	0.200+0.020			23.0 +0.6	
																	6.4#+0.4											
502	33	23.434	35.234	24.009	40.353		1999						0.3	4.08	16.45	-0.6					33							
691	55		34.760				2013(I)		145.6								18.8*+1.0				55	39.3+1.2					29.4 +0.7	
																	7.5#+0.2											
503	57	19.105	34.739	24.819	41.426	-0.4	2015	1.45				7.98+0.20				36.1					57							
504	99	15.798	34.675	25.574	42.397		2011					7.71+0.22	1.6	4.05	16.66	1.0					99							
505	148	13.958	34.449	25.805	42.763		2047					7.80+0.16									148							
692	154	13.79	34.442	25.835	42.807		2049(I)		98.2								6.9*+0.5				154	34.7+1.6	55.9+0.7	0.200+0.020			35.8 +0.6	
																	8.0#+0.7											
507	189	12.744	34.365	25.989	43.040	2.9	2064	1.04													189							
508	264	11.225	34.274	26.209	43.381		2093(I)					7.32+0.18									264							
693	304	10.60	34.238	26.293	43.516		2110(I)		20.3								8.3*+0.6				304	35.1+0.7	41.2+1.2				17.5 +1.0	
																	9.1#+0.3											
509	339	9.973	34.190	26.365	43.641		2125(I)					7.42+0.18	11.8			42.3					339							
510	415	8.578	34.080	26.506	43.904		2160(I)					6.23+0.17									415							
794	430	8.21	34.061	26.546	43.977		2168(I)		-52.5								10.7*+0.6				430	20.1+1.8	32.0+0.5	0.550+0.040			15.9 +0.5	
																	10.3#+0.6											
511	513	6.645	33.990	26.713	44.287	-0.1	2211	-0.87				1.83+0.10				55.3					513							
486	566	5.55	33.988	26.849	44.527		2249(I)		-132.7								13.4*+0.6				566	-0.5+0.1	-0.2+0.1				12.3 +0.4	
																	14.4#+0.7											
512	573	5.575	33.982	26.841	44.517	7.8	2254	-0.22				0.55+0.09	7.0								573							
514	624	5.077	34.015	26.926	44.649		2287					0.08+0.05				68.3					624							
515	698	4.517	34.069	27.030	44.807		2287(I)					0.08+0.09									698							
487	776	4.06	34.214	27.193	45.011		2287(I)		-183.6								18.9*+0.4				776	0.7+0.3	-0.5+0.4	0.120+0.030			15.4 +0.5	
																	19.3#+0.5											
516	778	4.165	34.173	27.150	44.958		2287(I)						9.4			80.5					778							
517	865	3.902	34.264	27.249	45.081		2286(I)					-0.09+0.09				89.1					865							
518	939	3.695	34.330	27.322	45.173		2286	-0.57													939							
519	988	3.561	34.367	27.364	45.228		2405	-0.56					13.6								988							
488	997	3.49	34.386	27.386	45.257		2405(I)		-203.8								20.5*+1.1				997	0.5+0.4					18.1 +0.5	
																	20.4#+0.7											
520	1040	3.462	34.399	27.399	45.272	5.0	2407(I)	-0.64				-0.06+0.09				99.9					1040							
521	1085	3.358	34.429	27.433	45.316	1.7	2409(I)														1085							
522	1163	3.190	34.464	27.476	45.375		2412(I)						15.5								1163							
489	1196	3.08	34.489	27.506	45.415		2414(I)		-224.5								24.4*+0.8				1196	0.6+0.7	-0.4+0.4	0.070+0.020			18.8 +0.6	
																	23.9#+0.8											
523	1242	3.050	34.489	27.509	45.422		2416(I)									111.0					1242							
524	1315	2.906	34.511	27.539	45.466		2417(I)	-0.60								114.1					1315							
303	1403	2.693	34.532	27.574	45.523	10.4	2411	-0.49					19.9			117.5					1403							
490	1405	2.66	34.541	27.584	45.537		2411(I)		-243.4								27.3*+0.6				1405	-0.3+0.3	0.3+0.8				22.4 +0.6	
																	25.3#+0.7											
305	1520	2.485	34.555	27.610	45.580		2404(I)									123.4					1520							
491	1544	2.43	34.562	27.620	45.596		2403(I)		-245.8								26.0*+0.7				1544	0.6+0.2	0.0+0.2	0.090+0.030			20.9 +1.2	
																	26.2#+0.5											
306	1601	2.352	34.567	27.631	45.615		2401	-0.28					22.8	4.36	18.29	5.2	126.1				1601							
307	1680	2.222	34.578	27.650	45.647		2403(I)										136.2				1680							
492	1713	2.17	34.585	27.660	45.663		2404(I)		-248.8								28.2*+0.5				1713	-0.2+0.3	-0.3+0.4				21.7 +1.0	
																	28.8#+0.7											
309	1841	1.992	34.599	27.685	45.706	11.1	2410(I)	-0.42					21.1	4.48	18.67	6.0	137.5				1841							
493	1902	1.94	34.607	27.695	45.722		2413(I)		-247.5								27.5*+0.4				1902	-0.2+0.3	-0.2+0.2	0.020+0.010			22.0 +0.5	
																	30.1#+1.7											
311	2000	1.823	34.614	27.709	45.749		2420(I)									140.1					2000							
494	2090	1.76	34.616	27.715	45.761		2422(I)		-247.8								29.2*+1.2				2090	-0.1+0.4	-0.8+0.7				21.4 +0.6	
																	30.9#+0.9											
314	2158	1.697	34.627	27.729	45.782	9.9	2417(I)	-0.20					23.2	4.42	18.44	5.9					2158							
315	2240	1.640	34.632	27.737	45.796		2410(I)										144.3				2240							
286	2398	1.54	34.641	27.752	45.821		2394(I)		-251.9								32.5*+0.6				2398	0.1+0.4	-0.2+0.0	0.040+0.020			23.5 +0.6	
																	31.5#+0.6											
317	2430	1.533	34.642	27.753	45.823		2390						17.1			148.9					2430							
318	2549	1.472	34.650	27.764	45.840		2390(I)									147.4					2549							
287	2698	1.40	34.656	27.773	45.857		2389(I)		-247.0								32.2*+0.4				2698	0.2+0.5						
																	33.1#+0.8											
319	2701	1.402	34.655	27.773	45.856	8.6	2389(I)	-0.40					16.1								2701							
320	2850	1.349	34.664	27.783	45.873		2389									149.2					2850							
321	2999	1.297	34.667	27.789	45.884	7.9	2388	-0.14					16.8	4.31	18.31	4.4					2999							
288	3048	1.27	34.652	27.779	45.877		2385(I)		-242.8								31.9*+0.9				3048	0.4+0.7	0.4+0.2	0.010+0.020			25.5 +1.1	
																	31.8#+0.6											
322	3147	1.259	34.671	27.795	45.894		2378									145.6					3147							
323	3296	1.227	34.674	27.800	45.902	7.5	2376(I)	-0.11					16.5								3296							
289	3397	1.21	34.674	27.801	45.906		2374(I)		-245.9								36.3*+0.6				3397	0.1+0.5	-1.5+0.8				27.4 +0.9	
																	35.8#+0.7											
101	3445		34.678			7.0	2373(I)	0.05				-0.08+0.09				150.7					3445							
102	3595	1.17	34.678	27.807	45.915		2371						15.2								3595							
290	3746	1.16	34.683	27.811	45.921		2372(I)		-237.0								37.4*+1.7				3746	0.8+0.3	1.0+0.3	0.057+0.014				
																	36.1#+0.7											
104	3894	1.138	34.682	27.812	45.924		2374					0.01+0.09	16.3			148.6					3894							
105	4044	1.127	34.684	27.814	45.927		2373(I)	0.08								149.9					4044							
291	4095		34.685				2373(I)		-230.0								39.7*+0.6				4095	-0.5+0.7					31.5 +0.8	
																	38.3#+0.7											
106	4194	1.119	34.683	27.814	45.928		2371(I)						15.9	4.41	18.65	4.7					4194							
107	4344	1.109	34.685	27.816	45.931		2368(I)					0.00+0.09									4344							
292	4492	1.10	34.687	27.818	45.934		2363(I)		-227.4								38.3*+0.6				4492	0.4+0.5		0.035+0.016			27.5 +1.0	
																	40.0#+1.9											
108	4494	1.100	34.687	27.818	45.934	6.5	2363	0.15					14.0			151.7					4494							
110	4794	1.088	34.688	27.820	45.937		2354(I)						15.3	4.33	18.47	4.0	151.2				4794							
293	4889	1.10	34.689	27.820	45.936		2352(I)		-224.4								45.0*+0.6				4889	0.1+0.5					26.2 +0.6	
																	41.7#+0.8											

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 204 — *CONTINUED*

POSITION: 31°22'N 150°2'W

DATE: 5 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-5}cc/kg				DPM/100kg					DPM/100kg						
						UH		UH	UM			UM	----------SIO----------				MIT	LDGO SIO* USC#			LDGO		WHOI	WHOI	WHOI	YALE		SIO	YALE
111	4945	1.085	34.689	27.821	45.939	6.3	2350(I)	0.14									150.1					4945							
112	5096	1.082	34.690	27.822	45.940		2347					-0.01+0.09	15.4				147.0					5096							
115	5105	1.081	34.689	27.821	45.939		2348(I)											45.8 +1.2			6 +1.6	5105							
116	5231	1.079	34.689	27.821	45.940		2358	0.01					15.4	4.38	18.61	4.3	146.2					5231							
117	5231	1.079	34.689	27.821	45.940		2358(I)														11 +1.6	5231						25.6 +1.0	
294	5292	1.08	34.680	27.814	45.933				-220.5									43.5*+1.3				5292	0.2+0.2	0.4+0.3	0.041+0.016				
																		45.9#+0.8											
119	5307	1.078	34.689	27.821	45.940																3 +1.6	5307							
120	5331	1.079	34.689	27.821	45.940																11 +1.6	5331							
121	5352	1.078	34.689	27.822	45.940													45.8 +0.6			3 +1.6	5352							
122	5367	1.078	34.689	27.822	45.940																4 +1.6	5367							
123	5382		34.689			6.3		0.12				0.03+0.09	15.5									5382							
124	5382		34.689																		7 +1.6	5382							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 206

POSITION: 22°9'N 153°50'W

DATE: 8 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-5}cc/kg				DPM/100kg					DPM/100kg						
												UM															YALE			YALE
247	0	25.5	35.17	23.348	39.583																	0				14.7 +0.7			8.5 +0.4
103	10	25.498	35.173	23.351	39.586		2001					6.47+0.21										10							
105	492	6.411	34.018	26.765	44.361		2245					0.61+0.07										492							
106	642	4.919	34.187	27.080	44.813		2318					0.18+0.05										642							

STATION 211

POSITION: 24°16'N 158°19'W

DATE: 17 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-5}cc/kg				DPM/100kg					DPM/100kg						
																		LDGO											
101	3		35.305															7.4 +0.3				3							

STATION 212

POSITION: 30°0'N 159°50'W

DATE: 18 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-5}cc/kg				DPM/100kg					DPM/100kg						
						UH			UM			UM					LSU	LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			YALE
1247	0	25.241	35.471	23.654	39.895		1988(I)															0				22.8 +1.0			9.6 +0.6
1117	7	25.302	35.477	23.640	39.878		1988(I)											7.8 +0.2				7							
601	7	25.239	35.471	23.654	39.896	-0.1	1988					7.29+0.21					33.4					7							
735	10		35.48				1988(I)											6.5**+0.8	0.07 +0.03	0.07+0.02		10	35.1+0.9	59.8+0.5	0.170+0.020				
736	30		35.48				1989(I)											11.7**+0.6	0.48 +0.06	0.11+0.02		30							
603	42	24.639	35.456	23.823	40.096	-0.2	1990					7.49+0.22										42							
605	57	22.379	35.214	24.296	40.699		1984					6.85+0.21										57							
737	60		35.29				1989(I)											5.8**+0.6	0.49 +0.12	0.11+0.03		60		55.5	0.200+0.030				
606	66	21.624	35.189	24.488	40.935	-0.2	2002															66							
607	86	19.412	35.167	25.066	41.643		2031					7.86+0.23										86							
608	102	18.911	35.149	25.181	41.790	1.1	2022															102							
738	120		34.99				2025(I)											6.5**+0.6	0.35 +0.08	0.18+0.02		120	29.0+0.3	53.5+0.5	0.110+0.020				
609	122	17.694	34.974	25.353	42.043		2025					7.72+0.22					34.1					122							
610	140	16.968	34.864	25.445	42.185	2.0	2023(I)															140							
611	161	16.065	34.768	25.584	42.387		2021					7.81+0.23										161							
739	190		34.66				2030(I)											7.6**+0.5	0.62 +0.09	0.33+0.04		190		54.9+1.0	0.210+0.008				
612	193	14.891	34.628	25.741	42.629		2031(I)										34.8					193							
615	222	14.474	34.569	25.787	42.705	3.4	2041(I)					7.28+0.21										222							
616	251	13.230	34.429	25.940	42.953		2053										35.7					251							
740	260		34.38				2054(I)		4.1									8.3**+0.6	0.90 +0.21	0.38+0.03		260	31.3+0.4	58.9+0.5	0.240+0.030				
617	277	12.579	34.349	26.009	43.073		2056					7.18+0.21										277							
618	317	11.614	34.303	26.159	43.299		2075(I)										38.1					317							
741	330		34.27				2082(I)												1.25 +0.15	0.49+0.05		330							
619	362	10.811	34.236	26.255	43.460		2102					5.66+0.17										362							
620	393	10.169	34.187	26.329	43.589		2117(I)															393							
486	426	9.07	34.128	26.465	43.819		2132(I)		-38.7									9.9**+0.4				426				19.9			
621	433	9.221	34.133	26.446	43.786	5.3	2135					4.24+0.14					43.5					433		30.5+0.3	0.730+0.060				
623	529	7.133	34.028	26.677	44.205	6.1	2199					2.78+0.11					52.7					529							
301	570	6.55	34.010	26.742	44.325		2207					1.52+0.08										570							
487	595	6.01	34.006	26.807	44.440		2229(I)		-124.8									13.2**+0.6				595	5.9+0.4	6.1+0.3	0.510+0.040				
624	605	5.839	34.004	26.827	44.477		2240(I)										61.6					605							
302	622	5.549	34.010	26.867	44.544	8.7	2258					0.33+0.07										622							
303	687	4.746	34.048	26.989	44.743		2304					0.11+0.06					69.1					687							
304	769	4.285	34.155	27.123	44.920	12.7	2346					0.01+0.05					77.2					769							
488	771	4.39	34.153	27.110	44.896		2347(I)		-152.5									15.7**+0.6				771							
305	868	3.909	34.239	27.228	45.061		2374					0.11+0.06										868							
489	956	3.65	34.321	27.318	45.174				-222.9									18.6**+0.5				956	0.2+0.5	-0.1+0.3	0.100+0.020	18.7			
306	966	3.594	34.325	27.327	45.189		2380					0.06+0.05					91.0					966							

(I) INTERPOLATED FROM NISKIN DATA

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UM				UM				LSU	LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			YALE
308	1099	3.299	34.420	27.431	45.320		2383									103.0					1099							
590	1192	3.14	34.456	27.474	45.379		2384(I)		-216.8								23.3**0.5				1192							
309	1245	2.969	34.489	27.516	45.437		2384									110.5					1245				21.3			
591	1391	2.76	34.520	27.559	45.501		2394(I)		-232.2								23.4**0.5				1391	0.4+0.4	0.1+0.2	0.050+0.040				
310	1394	2.684	34.529	27.573	45.523	11.3	2394									116.9					1394							
311	1543	2.418	34.558	27.618	45.595		2378									123.5					1543				23.7			
592	1590	2.40	34.562	27.623	45.602		2382(I)		-240.5								26.6**0.6				1590							
312	1691	2.226	34.576	27.648	45.645	10.5	2391									127.5					1691							
593	1790	2.14	34.585	27.662	45.668		2377(I)		-244.6								27.0**0.5				1790	-0.1+0.4	-0.3+0.3	0.040+0.040				
315	1841	2.036	34.595	27.678	45.695		2369									131.4					1841				26.3			
317	1985	1.893	34.607	27.699	45.731	9.5	2387														1985							
594	2090	1.84	34.606	27.702	45.739				-243.2								28.5**1.1				2090							
318	2126	1.773	34.619	27.717	45.762		2413									136.2					2126				24.5			
320	2428	1.555	34.639	27.749	45.817		2377									141.7					2428				28.2			
286	2442	1.54	34.630	27.743	45.812		2378(I)		-241.4								30.1**0.7				2442	0.6+0.5	0.9+0.3	0.050+0.020				
321	2578	1.489	34.647	27.760	45.835	8.7	2390									142.8					2578							
322	2731	1.412	34.652	27.769	45.852		2370														2731				29.4			
287	2841	1.39	34.655	27.773	45.858		2369(I)		-246.2								31.3**0.6				2841							
323	2892	1.367	34.659	27.778	45.866		2369									147.3					2892							
101	3004	1.334	34.660	27.781	45.872		2364														3004				31.5			
103	3238	1.27	34.668	27.792	45.889		2368									147.1					3238							
288	3241	1.27	34.655	27.781	45.879		2368(I)		-233.6								33.3**0.7				3241	0.8+0.3	0.8+0.3					
104	3471	1.224	34.672	27.798	45.901	7.3	2356									148.0					3471				32.8			
289	3640	1.20	34.676	27.803	45.909		2353(I)		-242.6								33.7**0.5				3640							
105	3702	1.186	34.675	27.803	45.910		2352									147.9					3702							
106	3934	1.151	34.676	27.806	45.917	7.2	2336									148.2					3934				34.0			
290	4039	1.16	34.656	27.789	45.900		2343(I)		-223.6								37.0**0.6				4039	1.2+0.2	1.0+0.3	0.080+0.040				
108	4396	1.11	34.682	27.814	45.928		2350									146.1					4396				29.0			
291	4438	1.12	34.682	27.813	45.927		2349(I)		-226.0								37.1**1.1				4438							
292	4836	1.09	34.686	27.819	45.936		2339(I)		-223.2								38.1**0.5				4836	0.1+0.4	-0.2+0.2	0.050				
110	4854	1.081	34.685	27.818	45.936		2338									144.3					4854				31.3			
293	5238	1.08	34.687	27.820	45.938		2335(I)		-217.5								39.3**0.8				5238		-0.3+0.2	0.086+0.014				
112	5310	1.063	34.687	27.821	45.941	6.4	2335									144.2					5310							
115	5532	1.05	34.688	27.822	45.943		2341									144.2					5532				26.8			
116	5532		34.687				2341(I)													5 +1.6	5532							
117	5571	1.07	34.688	27.821	45.941															7 +1.5	5571							
118	5600		34.687																	7 +1.6	5600							
294	5638	1.08	34.674	27.810	45.929				-220.7								38.2**0.8				5638	0.0+0.7	0.4+0.2	0.140+0.030				
119	5640		34.687																	9 +1.6	5640							
120	5669	1.057	34.688	27.822	45.943															9 +1.9	5669							
121	5693		34.688														40.9 +1.0			22 +1.9	5693							
122	5693	1.05	34.687	27.822	45.943															9 +1.7	5693							
123	5714		34.689																	13 +1.6	5714				23.7			
124	5714		34.688			6.4										141.4					5714							

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM					LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1047	0	25.65	35.3	23.363	39.588																0				21.3**1.0			9.2 +0.5
1137	5		34.49															1.07 +0.26	0.14+0.02		5							
786	15	26.79	35.508	23.206	39.366																15				22.1 +0.7	0.14 +0.01		
835	20		35.51				1991(I)		186.6								6.0**0.7				20	34.4+1.8	50.3+0.5					
601	21	26.788	35.515	23.213	39.373		1991	1.86				6.55+0.16									21							
602	37	26.751	35.532	23.237	39.399		1986					6.80+0.16									37							
603	47	26.166	35.520	23.409	39.601		1977					6.68+0.14									47							
604	57	21.407	34.939	24.359	40.823		1980(I)	1.61				7.26+0.16									57							
836	60		34.87				1981(I)		141.0								6.5**0.4				60	34.6+0.5	50.3+0.4	0.080+0.010				
606	78	18.497	34.808	25.027	41.669		1995					6.81+0.16									78							
594	95	17.62	34.770	25.216	41.916		2003(I)		126.8								5.3**0.5				95	29.1+1.3	48.3+0.4	0.070+0.010				
608	99	16.673	34.738	25.419	42.181		2004	1.40				7.11+0.16									99							
609	118	15.865	34.720	25.593	42.410		2011					7.40+0.15									118							
588	176	14.66	34.604	25.774	42.678		2028(I)		83.9								7.1**0.6				176	36.6+0.8	53.5+0.5					
610	183	14.258	34.570	25.834	42.768		2030(I)					6.84+0.14									183							
611	208	13.771	34.523	25.901	42.871		2038	1.07													208							
589	257	13.06	34.457	25.997	43.022		2061(I)		63.9								7.1**0.4				257	29.9+0.2	48.2+0.5	0.380+0.030				
612	259	12.965	34.456	26.015	43.047		2062					6.64+0.18									259							
615	317	12.062	34.388	26.140	43.243		2079	0.83													317							
787	319	11.96	34.379	26.153	43.264		2079(I)														319				14.4 +0.7	0.43 +0.04		
590	337	11.84	34.363	26.164	43.285		2083(I)		24.7								8.2**0.5				337		48.2+1.0					
616	384	10.510	34.269	26.334	43.563		2092(I)					5.70+0.15									384							
617	430	9.843	34.193	26.390	43.676		2103	0.65													430							
591	448	9.46	34.170	26.435	43.755		2109(I)		-25.1								9.8**0.4				448	22.7+0.6	36.1+0.4	0.820+0.080				
618	479	8.845	34.131	26.504	43.877		2122					4.63+0.13									479							
619	518	8.240	34.094	26.568	43.995		2145	0.45													518							
620	580	7.105	34.047	26.695	44.226		2184(I)					2.33+0.10									580							
789	618	6.41	34.030	26.775	44.370		2208(I)														618				11.4 +0.3	0.21 +0.01		
592	626	6.27	34.033	26.796	44.405		2213(I)		-117.2								13.2**0.5				626	7.9+1.0	11.9+0.7					
401	639	6.053	34.035	26.825	44.453		2221	0.10													639							
621	641	6.046	34.026	26.818	44.448		2231	-0.28				1.52+0.08									641							
623	710	5.099	34.048	26.949	44.669		2264(I)					0.43+0.06									710							
402	719	5.091	34.048	26.950	44.671		2268					0.54+0.07									719							
791	743	4.78	34.069	27.001	44.752		2280(I)														743				13.1 +0.6	0.17 +0.01		
403	800	4.539	34.113	27.063	44.836		2307(I)					0.10+0.06									800							
593	831	4.34	34.153	27.116	44.908		2321(I)		-172.1								16.6**0.8				831	-0.5+0.2	-0.5+0.4	0.230+0.020				
404	880	4.094	34.178	27.161	44.977		2342	-0.60				0.00+0.06									880							
405	959	3.761	34.253	27.254	45.101		2367(I)					-0.03+0.06									959							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 213 — *CONTINUED*

POSITION: 30°58'N 168°28'W

DATE: 22 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM					LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
406	1040	3.547	34.328	27.334	45.201		2385	-0.64													1040							
587	1044		34.336				2386(I)		-202.9								20.5**+0.5				1044	-0.4+0.3						
586	1197	3.18	34.426	27.446	45.348		2402(I)		-219.7								19.9**+0.9				1197	0.5+0.3	0.2+0.3	0.090+0.020				
408	1211	3.135	34.430	27.454	45.360		2403	-0.53													1211							
788	1391	2.82	34.499	27.537	45.474		2399(I)		-226.2												1391	0.6+0.3						
792	1441	2.72	34.519	27.561	45.508		2398(I)														1441				18.7 +0.8			
790	1590	2.46	34.544	27.604	45.577		2401(I)		-230.7								23.9**+1.2				1590	0.0+0.3	0.9+0.4	0.070+0.010				
412	1598	2.379	34.547	27.612	45.594		2402	-0.47													1598							
794	1787	2.14	34.573	27.653	45.659		2393(I)		-240.9								26.0**+0.9				1787	0.4+0.5						
793	1984	1.93	34.574	27.669	45.698		2390(I)														1984				18.7 +1.1	0.32 +0.01		
417	2050	1.844	34.607	27.702	45.740		2374	-0.35													2050							
386	2136	1.72	34.617	27.719	45.769		2376(I)		-244.2								26.1**+0.5				2136	-0.2+0.4	-0.6+0.4					
394	2434	1.58	34.634	27.743	45.807		2388(I)		-251.0								27.1**+0.6				2434	-0.2+0.4						
420	2502	1.534	34.635	27.747	45.817		2382	-0.27													2502							
388	2634	1.46	34.635	27.753	45.831		2365(I)														2634				19.1 +0.4	0.38 +0.01		
423	2800	1.419	34.653	27.770	45.852		2372(I)	-0.34													2800							
389	2823	1.41	34.651	27.769	45.852		2379(I)		-243.9								30.1**+0.5				2823	-0.2+0.1	0.2+0.3					
188	3224	1.28	34.652	27.778	45.875		2361(I)										31.9**+0.5				3224							
390	3230	1.28	34.654	27.780	45.877		2361(I)														3230				22.3 +0.7	0.43 +0.02		
203	3309	1.268	34.668	27.792	45.890		2356(I)	-0.25													3309							
189	3622	1.22	34.674	27.800	45.903		2351(I)										34.0**+0.7				3622	0.3+0.2	-0.2+0.2					
391	3828	1.18	34.678	27.806	45.914		2359(I)														3828				23.0 +0.7	0.46 +0.02		
206	4008	1.149	34.679	27.809	45.920		2361	-0.08													4008							
190	4020	1.15	34.663	27.796	45.906		2360(I)										33.6**+0.8				4020							
191	4418	1.13	34.683	27.813	45.926		2342(I)										36.1**+0.9				4418	0.1+0.4	-0.4+0.2					
392	4427	1.12	34.684	27.815	45.929		2342(I)														4427				15.6 +0.6			
209	4759	1.096	34.684	27.816	45.933		2361	0.02													4759							
192	4817	1.10	34.686	27.817	45.933		2355(I)										36.2**+0.6				4817	-0.5+0.4						
393	5026	1.10	34.685	27.817	45.932		2332(I)														5026				15.2 +0.4	0.48 +0.02		
193	5216	1.09	34.683	27.816	45.934		2337(I)										37.7**+1.1				5216	-0.4+0.2	-0.1+0.2	0.120+0.040				
212	5410	1.061	34.688	27.822	45.942		2347	0.15													5410							
215	5506	1.053	34.689	27.823	45.944		2346(I)													9 +1.6	5506							
216	5530	1.049	34.688	27.823	45.944		2345(I)													6 +1.6	5530							
217	5555	1.046	34.688	27.823	45.945		2345(I)													10 +1.6	5555							
218	5579	1.041	34.689	27.824	45.946		2344(I)													4 +1.6	5579							
219	5604	1.037	34.690	27.825	45.948		2344	0.16													5604							
220	5604	1.037	34.692	27.827	45.949		2344(I)													9 +1.6	5604							
194	5614	1.04	34.683	27.819	45.941		2341(I)		-218.7								36.4**+1.0				5614	-1.1+0.1						
221	5629	1.037	34.690	27.825	45.948		2336(I)										36.5 +0.9			5 +1.6	5629				17.1 +0.9	2.10 +0.06		
387	5629	1.03	34.690	27.825	45.949		2336(I)														5629							
223	5675	1.036	34.691	27.826	45.949		2318(I)													8 +1.6	5675							
224	5675	1.036	34.690	27.825	45.948		2318	0.17													5675							

STATION 214

POSITION: 32°1'N 176°59'W

DATE: 25 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM					LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			YALE
1147	0	25.759	34.746	22.950	39.181																0				21.8 +0.9			8.9 +0.4
601	8	25.76	34.746	22.951	39.181		1972					6.90+0.17									8							
602	16	25.76	34.752	22.954	39.184		1957	0.96													16							
935	20		34.56				1958(I)		145.2								6.0**+0.5				20	34.4+1.5	50.8+1.0	0.104+0.013				
603	28	25.47	34.749	23.041	39.286		1964(I)					7.05+0.18									28							
604	32	24.23	34.756	23.415	39.726		1969	1.49													32							
605	38	21.99	34.734	24.041	40.476		1966(I)					6.45+0.17									38							
607	47	20.23	34.654	24.461	41.001		1971					6.28+0.16									47							
608	53	19.393	34.711	24.723	41.313		1973	1.60													53							
609	58	18.525	34.722	24.954	41.597		1978(I)					6.77+0.17									58							
936	60		34.70				1980(I)		105.4								6.3**+0.7				60	35.6+1.4	53.2+1.1					
886	105	15.80	34.676	25.573	42.396		2028(I)		99.1								6.2**+0.9				105	29.0+0.8	54.2+0.4	0.240+0.060				
611	116	15.438	34.651	25.637	42.486		2035	0.82				6.47+0.16									116							
887	155	14.46	34.571	25.791	42.711		2036(I)		84.7								6.7**+1.1				155	32.8+2.0						
612	159	14.422	34.572	25.800	42.723		2037(I)					6.41+0.16									159							
615	202	13.659	34.507	25.912	42.891		2038	1.07				6.02+0.16									202				23.7			
888	216	13.19	34.463	25.975	42.991		2040(I)										9.4**+0.9				216	29.6+0.5	41.3+0.4	0.275+0.021				
889	276	12.31	34.403	26.103	43.186		2054(I)		57.1								7.2**+0.5				276	31.0+0.4	44.9+0.4	0.390+0.070				
617	312	11.865	34.378	26.170	43.288		2067(I)	0.64				5.65+0.14									312							
890	345	11.29	34.324	26.237	43.402		2081(I)		40.2								9.0**+0.5				345	26.5+1.2	38.6+0.4	0.400+0.030				
618	358	11.010	34.322	26.286	43.473		2087(I)					5.72+0.16									358							
619	399	9.885	34.244	26.422	43.704		2107	0.47				5.47+0.15									399							
621	472	8.489	34.134	26.562	43.966		2121					5.48+0.14									472				19.1			
891	474	9.04	34.174	26.506	43.862		2122(I)		-19.2								11.1**+0.6				474	21.0+0.2	32.1+0.4	0.500+0.100				
622	509	7.642	34.078	26.644	44.125		2143(I)					5.04+0.15									509							
401	540	7.982	34.099	26.611	44.061		2165	0.20				3.81+0.12									540							
623	550	6.969	34.037	26.706	44.249		2169	0.08				4.33+0.13									550							
892	613	6.26	34.006	26.775	44.385		2238(I)											0.66 +0.24	0.63+0.11		613							
586	628	6.33	34.034	26.789	44.392		2228(I)		-102.7								13.3**+0.6				628	10.6+0.3	12.9+0.3	0.520+0.040				
403	651	6.100	34.039	26.822	44.446		2214	-0.23				2.04+0.09									651							
404	762	4.724	34.101	27.033	44.788		2291														762				14.7			
587	777	4.62	34.110	27.052	44.818		2297(I)		-156.5								15.6**+0.7				777	2.5+0.2	2.4+0.5	0.210+0.050				
406	892	3.983	34.202	27.191	45.017		2357	-0.82				0.03+0.09									892							
588	896	3.94	34.222	27.211	45.041		2357(I)		-174.1								19.1**+0.7				896	2.1+0.5	4.7+0.5					
407	981	3.511	34.275	27.296	45.168		2359														981				16.4			
408	1081	3.289	34.346	27.373	45.266		2385	-0.91				0.00+0.09									1081							
589	1132	3.15	34.380	27.412	45.318													0.35 +0.14	0.02+0.04		1132							
409	1182	3.100	34.395	27.429	45.340		2391														1182				19.1			
592	1191	3.04	34.412	27.449	45.365		2408(I)		-216.0								23.1**+1.1				1191	0.9+0.2	0.8+0.3	0.160+0.030				
411	1284	2.898	34.440	27.483	45.413		2392	-0.62													1284							
415	1481	2.522	34.499	27.562	45.530		2415	-0.55													1481				26.1			
593	1591	2.29	34.538	27.612	45.603		2398(I)		-240.3								24.1**+0.6				1591							
417	1702	2.169	34.552	27.633	45.637		2378	-0.56													1702							
594	1840	1.99	34.569	27.661	45.684		2382(I)		-244.2								26.0**+1.1				1840	-0.1+0.2	0.2+0.4	0.094+0.022				

(I) INTERPOLATED FROM NISKIN DATA

STATION 214 — *CONTINUED*

POSITION: 32°1'N 176°59'W

DATE: 25 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10⁻⁵cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM					LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			YALE
419	2005	1.818	34.595	27.695	45.735		2387	-0.40													2005							
286	2143	1.70	34.612	27.717	45.770		2382(I)		-246.6								28.1+0.8				2143							
421	2405	1.547	34.631	27.743	45.812		2372	-0.31													2405				27.0			
287	2542	1.48	34.631	27.748	45.824		2375(I)		-237.4								27.8+0.5				2542	0.3+0.2	0.0+0.3	0.080+0.010				
423	2804	1.377	34.653	27.773	45.859		2378	-0.41													2804							
288	2942	1.32	34.626	27.755	45.849		2371(I)		-221.1								28.4+0.6				2942							
102	3095	1.275	34.664	27.788	45.886		2363	-0.08													3095				26.2			
104	3295	1.230	34.671	27.797	45.899		2369(I)														3295				26.4			
289	3341	1.22	34.663	27.791	45.894		2370(I)		-221.3								30.6+0.5				3341			0.060+0.060				
105	3494	1.195	34.674	27.802	45.908		2377														3494				23.1			
290	3739	1.16	34.671	27.802	45.912		2376(I)		-228.1								31.6+0.7				3739	0.3+0.3						
106	3746	1.161	34.676	27.806	45.915		2376	-0.34													3746				25.3			
107	3993	1.135	34.678	27.809	45.921		2366(I)														3993				25.6			
291	4136		34.685				2360(I)		-220.4								34.8+0.6				4136	0.2+0.3	0.3+0.5	0.100+0.030				
109	4242	1.118	34.682	27.813	45.928		2354														4242				26.0			
786	4242	1.10	34.681	27.814	45.930		2354(I)											0.19 +0.03	0.06+0.07		4242							
789	4441	1.10	34.688	27.819	45.935		2346(I)											0.30 +0.03	0.14+0.04		4441							
110	4493	1.098	34.685	27.817	45.933		2345														4493				22.1			
292	4538	1.10	34.685	27.817	45.932		2346(I)		-222.6								33.6+0.8				4538							
792	4637	1.08	34.687	27.820	45.938		2347(I)											0.57 +0.10	0.26+0.04		4637							
111	4790	1.070	34.687	27.820	45.940		2351														4790				19.5			
386	4839	1.06	34.701	27.833	45.953		2351(I)											0.34 +0.07	0.27+0.04		4839							
293	4936	1.07	34.688	27.821	45.941		2350(I)		-211.8								34.4+0.8				4936	-0.3+0.3	-0.3+0.5	0.140+0.040				
389	5036	1.07	34.685	27.819	45.937		2350(I)											0.61 +0.10	0.40+0.04		5036							
112	5093	1.050	34.688	27.823	45.944		2350(I)														5093				21.5			
115	5103	1.049	34.690	27.824	45.946		2349(I)													8 +1.6	5103							
116	5149	1.049	34.689	27.823	45.945		2349(I)													8 +1.6	5149							
117	5174	1.047	34.689	27.824	45.945		2349(I)													7 +1.6	5174							
118	5207	1.042	34.687	27.822	45.945		2349	-0.27													5207							
119	5207	1.042	34.690	27.825	45.947		2349(I)													12 +1.6	5207							
392	5231	1.05	34.691	27.825	45.947		2350(I)											0.59 +0.10	0.32+0.06		5231							
120	5232	1.041	34.690	27.825	45.947		2350(I)													13 +1.6	5232							
121	5251	1.041	34.689	27.824	45.946		2352(I)										35.0 +0.7			9 +1.6	5251							
122	5273	1.039	34.691	27.826	45.949		2353(I)													6 +1.6	5273							
123	5298	1.039	34.691	27.826	45.948		2355(I)													18 +1.6	5298							
124	5298	1.039	34.689	27.824	45.947		2355	0.07													5298							
294	5335	1.46	34.678	27.787	45.864				-211.1								32.4+0.7				5335	0.9+0.4	1.1+0.2	0.190+0.020				

STATION 215

POSITION: 37°28'N 177°19'W

DATE: 28 SEP 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10⁻⁵cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
												UM				LSU	LDGO	LDGO	LDGO	LDGO					YALE			YALE
647	0	20.417	34.33	24.165	40.701																0				17.6 +0.8		9.3 +0.4	
235	10		34.35															0.85 +0.20	0.12+0.02		10							
501	18	20.414	34.328	24.164	40.701							6.73+0.15				36.2					18							
236	30		34.34															1.04 +0.20	0.07+0.02		30							
502	33	20.051	34.329	24.261	40.820		1960					6.86+0.17									33							
503	48	16.943	34.618	25.263	42.010		1991(I)					6.56+0.15									48							
237	50		34.61				1994(I)											1.45 +0.20	0.14+0.02		50							
504	60	16.143	34.675	25.494	42.294		2007					6.56+0.22									60							
238	70		34.63				2012(I)											0.94 +0.20	0.25+0.03		70							
505	72	16.087	34.671	25.504	42.308		2013(I)					6.35+0.18									72							
506	90	15.341	34.637	25.648	42.504		2017					6.28+0.18									90							
239	90		34.59				2017(I)											1.47 +0.28	0.37+0.06		90							
240	110		34.54				2029(I)											0.96 +2.37	0.39+0.05		110							
508	130	14.029	34.526	25.849	42.801		2042					6.04+0.16				37.9					130							
241	130		34.51				2042(I)											0.60 +0.15	0.43+0.05		130							
242	150		34.50				2049(I)											1.75 +0.68	0.59+0.07		150							
509	180	13.130	34.464	25.988	43.007		2054					6.18+0.16									180							
510	232	12.350	34.413	26.104	43.183		2067(I)					6.23+0.16									232							
511	280	11.386	34.336	26.228	43.385		2079					6.16+0.16				41.7					280							
513	403	9.583	34.198	26.437	43.745		2115					5.84+0.18									403							
512	460	8.20	34.122	26.596	44.026		2156(I)					6.06+0.15				49.4					460							
514	471	7.664	34.103	26.661	44.139		2163					5.96+0.18									471							
515	544	6.400	34.026	26.773	44.369		2157					5.73+0.15				57.8					544							
516	619	5.836	33.994	26.819	44.470		2197					4.27+0.13									619							
517	720	4.730	34.036	26.981	44.738		2275					2.81+0.10				72.5					720							
518	820	4.234	34.118	27.099	44.903		2322					1.39+0.08									820							
519	938	3.700	34.214	27.229	45.083		2362					0.25+0.06				88.4					938							
520	1062	3.318	34.302	27.335	45.226		2375					0.05+0.05									1062							
521	1184	2.991	34.360	27.411	45.334		2375					-0.02+0.05				101.7					1184							
523	1407	2.545	34.446	27.518	45.485		2375									111.1					1407							
317	1659	2.227	34.511	27.596	45.595		2378									121.0					1659							
320	1920	1.954	34.563	27.659	45.685		2407									128.7					1920							
322	2184	1.740	34.597	27.702	45.751		2384									134.5					2184							
101	2383	1.619	34.614	27.724	45.786		2389(I)									138.9					2383							
102	2636	1.476	34.637	27.753	45.829		2396(I)									141.2					2636							
103	2887	1.376	34.649	27.769	45.856		2389									143.3					2887							
104	3139	1.284	34.661	27.785	45.882		2358									142.5					3139							
105	3390	1.225	34.668	27.795	45.898		2339									141.3					3390							
106	3635	1.177	34.670	27.800	45.908		2337(I)									140.5					3635							
107	3888	1.141	34.676	27.807	45.919		2335									140.3					3888							
108	3888	1.141	34.678	27.809	45.920		2359									140.3					3888							
109	4176	1.114	34.680	27.812	45.927		2381									142.5					4176							
110	4480	1.098	34.682	27.815	45.931		2326									144.3					4480							
111	4776	1.090	34.685	27.817	45.935		2356									146.7					4776							
112	5071	1.087	34.683	27.816	45.934		2336									147.2					5071							
115	5335	1.086	34.683	27.816	45.934		2339(I)													13 +1.6	5335							
116	5367	1.085	34.684	27.817	45.935		2340(I)													8 +1.6	5367							
117	5407	1.086	34.684	27.817	45.935		2340									145.8					5407							
118	5407	1.086	34.681	27.815	45.932		2340(I)													8 +1.6	5407							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 215 — *CONTINUED* — **POSITION: 37°28'N 177°19'W** — **DATE: 28 SEP 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM				LSU	LDGO	LDGO	LDGO	LDGO				YALE			YALE
119	5434	1.085	34.685	27.818	45.936		2335(I)													14 +1.6	5434						
120	5468	1.085	34.681	27.815	45.933		2328(I)													12 +1.6	5468						
121	5488	1.085	34.684	27.817	45.935		2324(I)										33.5 +0.8			14 +1.8	5488						
122	5508	1.085	34.685	27.818	45.936		2319(I)													16 +1.6	5508						
123	5525	1.084	34.684	27.817	45.935		2314(I)													12 +1.6	5525						
124	5525	1.084	34.685	27.818	45.936		2314									145.9					5525						

STATION 216 — **POSITION: 40°46'N 176°58'W** — **DATE: 30 SEP 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																
101	16	16.467	33.602	24.597	41.402							7.32+0.17									16							
102	34	16.035	33.610	24.703	41.537							7.20+0.20									34							
103	49	13.279	34.232	25.778	42.793							6.31+0.18									49							
104	76	11.948	34.310	26.102	43.215							6.34+0.20									76							
105	138	10.424	34.250	26.334	43.571							6.18+0.18									138							
106	201	9.276	34.134	26.437	43.773							6.35+0.17									201							
107	242	8.256	33.986	26.481	43.910							6.84+0.18									242							
108	289	8.192	34.088	26.571	44.002							5.95+0.17									289							
109	361	6.945	34.016	26.693	44.239							6.00+0.17									361							
110	431	5.391	33.941	26.831	44.526							5.17+0.14									431							
111	570	4.421	34.035	27.014	44.801							2.55+0.07									570							
112	675	4.037	34.126	27.125	44.949							1.06+0.06									675							
115	837	3.499	34.242	27.270	45.145							0.36+0.07									837							
116	1059	3.011	34.353	27.404	45.325							0.15+0.08									1059							

STATION 217 — **POSITION: 44°36'N 176°50'W** — **DATE: 1 OCT 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM				LSU	SIO	LDGO	LDGO			WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1147	0	10.83	33.07	25.345	42.582																0				18.4**0.8			8.9 +0.4
335	5		33.05										79.2						0.11+0.02		5	19.8+0.2	37.5+0.3					
336	5		33.05										56.5								5							
903	15	11.034	33.055	25.297	42.518		2024	1.76				9.24+0.20				52.6					15							
1086	20	11.03	33.065	25.306	42.527		2021(I)														20				9.1 +0.5	8.10 +0.25		
338	25		33.05				2054(I)										9.4 +0.5				25	21.5+0.6	37.4+0.4	0.100+0.050				
340	30		33.05				2046(I)											0.80 +0.09	0.15+0.02		30							
341	45		33.23				2021(I)											0.99 +0.18	0.22+0.02		45							
908	46	10.396	33.069	25.420	42.693		2019	1.99				9.35+0.20									46							
342	56		33.43				2052(I)											1.10 +0.19	0.30+0.04		56							
910	63	6.647	33.311	26.178	43.773		2078	0.61				9.11+0.17									63							
339	65		33.37				2078(I)										9.4 +0.9				65							
343	66		33.37				2079(I)											1.71 +0.57	0.28+0.04		66							
344	75		33.53				2080(I)											0.76 +0.57	0.51+0.06		75							
348	75		33.58				2080(I)											1.43 +0.38	0.47+0.08		75							
912	81	6.405	33.560	26.406	44.015		2081									50.4					81							
1088	95	5.67	33.485	26.438	44.120		2092(I)						56.6				9.8 +0.8				95		33.2+0.5	0.180+0.020				
916	101	6.398	33.614	26.449	44.058		2096	0.85				7.78+0.20									101							
345	110		33.64				2095(I)											0.85 +0.31	0.54+0.08		110							
918	131	6.661	33.703	26.485	44.066		2092(I)									51.8					131							
919	147	6.785	33.749	26.505	44.073		2091	0.82				7.75+0.20									147							
346	150		33.66				2092(I)											1.76 +0.64	0.64+0.08		150							
1089	155	5.79	33.596	26.510	44.177		2093(I)						47.2				11.1 +0.4				155	20.5+0.4	32.7+0.5					
920	161	6.803	33.781	26.527	44.093		2095(I)									49.9					161							
921	178	6.490	33.786	26.573	44.167		2100	0.67				7.71+0.17									178							
347	210		33.89				2146(I)											1.29 +0.39	0.65+0.06		210							
1090	216	6.30	33.889	26.679	44.289		2156(I)														216				14.5 +0.6	0.36 +0.02		
923	222	5.993	33.893	26.720	44.359		2167	0.16				6.24+0.11				53.8					222				16.1*			
1091	236	6.05	33.904	26.721	44.354		2183(I)						-43.7				10.9 +0.5				236		26.7+0.5	0.330+0.030				
701	243	5.583	33.890	26.768	44.446		2191(I)	0.10				6.55+0.17									243							
702	295	4.662	33.844	26.836	44.605		2237(I)					6.33+0.17				62.4					295							
1092	296	5.01	33.863	26.813	44.548		2238(I)						-50.3				11.5 +0.5				296	16.4+0.8	24.0+0.3	0.430+0.060				
1093	336	4.58	33.867	26.863	44.640		2261(I)														336				15.1 +0.8	0.61 +0.04		
703	344	4.173	33.857	26.898	44.716		2264					5.33+0.16									344							
1094	356	4.44	33.873	26.882	44.672		2268(I)										14.6 +1.0				356		17.0+0.3	0.330+0.030				
704	395	4.161	33.929	26.956	44.773		2280(I)					3.94+0.13				69.4					395				18.1*			
705	445	4.069	33.983	27.009	44.833		2295					3.25+0.12									445							
706	496	3.962	34.037	27.062	44.896		2326					2.20+0.11				75.0					496							
886	500	3.96	34.045	27.069	44.903		2326(I)						-145.2				19.4 +0.6				500	5.6+0.1	8.5+0.3	0.190+0.050				
707	545	3.889	34.092	27.113	44.953		2327(I)	-0.50				1.23+0.09									545							
708	594	3.753	34.134	27.160	45.012		2328(I)					1.00+0.09									594							
887	645	3.70	34.182	27.203	45.058		2329(I)						-172.0				19.6 +0.5				645		3.7+0.3	0.210+0.030				
709	654	3.658	34.188	27.212	45.072		2329(I)									83.8					654				16.0*			
186	699	3.51	34.214	27.247	45.122		2330(I)														699				11.4 +0.5	0.34 +0.02		
710	716	3.484	34.227	27.260	45.136		2330(I)	-0.08				0.44+0.09									716							
711	774	3.327	34.258	27.299	45.191		2331(I)									93.0					774							
888	795	3.30	34.257	27.301	45.196		2331(I)						-193.9				22.0 +0.6				795	0.9+0.2	1.7+0.3	0.330+0.100				
712	836	3.207	34.289	27.335	45.238		2332					0.07+0.09									836							
715	904	3.073	34.322	27.374	45.289		2346(I)	-0.38								96.6					904				22.3*			

(I) INTERPOLATED FROM NISKIN DATA

STATION 217 — *CONTINUED*

POSITION: 44°36'N 176°50'W

DATE: 1 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg					DPM/100kg			DPM/100kg			
								UH	UM			UM				LSU	SIO	LDGO	LDGO			WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
889	994	2.92	34.357	27.415	45.345		2364(I)		-204.4								24.1 +0.8				994		-0.2+0.6	0.270+0.070				
716	1042	2.783	34.386	27.450	45.394		2374(I)	-0.70								104.9					1042							
890	1142	2.64	34.414	27.484	45.443		2393(I)		-214.3								25.3 +0.5				1142	-1.2+0.4	0.2+0.3					
717	1204	2.542	34.436	27.510	45.478		2405	-0.54				-0.03+0.09									1204				20.7*			
718	1204	2.541	34.436	27.510	45.479		2405(I)									109.3					1204							
891	1292		34.451				2407(I)		-223.5								25.1 +0.6				1292							
187	1302		34.466				2407(I)														1302				16.4 +0.5	0.82 +0.03		
719	1401	2.292	34.487	27.572	45.565		2408	-0.67													1401							
892	1490	2.22	34.509	27.595	45.595		2417(I)		-236.5								28.9 +0.6				1490	0.0+0.6	-0.8+0.3					
720	1533	2.153	34.514	27.604	45.611		2420									119.3					1533				22.4*			
721	1756	1.971	34.554	27.650	45.676		2386	-0.32								126.7					1756				25.1*			
893	1788	1.95	34.562	27.658	45.685		2386(I)		-244.0								27.7 +0.6				1788							
188	1900	1.85	34.549	27.655	45.693		2388(I)														1900				17.7 +1.7	0.26 +0.02		
722	1912	1.844	34.577	27.678	45.717		2388(I)									130.0					1912				24.5*			
894	2085	1.74	34.585	27.693	45.742		2390(I)		-236.5								29.1 +0.8				2085	-0.7+1.0	-0.4+0.3					
723	2156	1.710	34.600	27.707	45.758		2391	-0.49													2156							
506	2191	1.695	34.602	27.709	45.763		2391(I)									133.6					2191							
724	2306	1.627	34.615	27.725	45.785		2389(I)									135.6					2306				24.7*			
507	2389	1.585	34.620	27.732	45.797		2388(I)	-0.45													2389							
189	2497	1.54	34.606	27.724	45.794		2387(I)														2497				19.0 +0.5	0.65 +0.02		
486	2556	1.51	34.632	27.746	45.819		2386(I)		-248.1								29.1 +0.8				2556							
508	2591	1.493	34.634	27.749	45.824		2386									140.7					2591				28.2*			
509	2790	1.421	34.645	27.763	45.845		2368	-0.56								142.8					2790				28.9*			
487	2952	1.37	34.647	27.768	45.856		2370(I)		-235.1								32.8 +0.7				2952							
510	2990	1.354	34.655	27.776	45.865		2371(I)														2990				27.0*			
511	2990	1.354	34.653	27.774	45.864		2371									143.4					2990							
190	3097	1.31	34.656	27.780	45.873		2366(I)														3097					0.43 +0.03		
512	3282	1.274	34.664	27.788	45.886		2356(I)	-0.09													3282							
515	3299	1.270	34.664	27.789	45.887		2355									145.4					3299				32.3*			
488	3348	1.25	34.591	27.731	45.834		2356(I)		-222.3								30.2 +0.6				3348							
516	3599	1.205	34.674	27.801	45.906		2358	-0.01								144.0					3599				26.3*			
191	3700		34.671				2353(I)														3700				19.8 +0.7	0.45 +0.04		
489	3745	1.18	34.674	27.803	45.911		2350(I)		-226.8								32.3 +0.6				3745							
517	3899	1.156	34.678	27.808	45.918		2341									143.3					3899				27.4*			
490	4142	1.12	34.667	27.801	45.915		2344(I)		-224.7								32.9 +0.6				4142		0.2+0.2	0.027+0.009				
519	4299	1.112	34.682	27.814	45.928		2347(I)	-0.04								145.1					4299				24.5*			
192	4303	1.11	34.683	27.815	45.930		2347(I)														4303				11.6 +0.4			
491	4538	1.10	34.678	27.811	45.927		2354(I)		-218.0								36.8 +0.6				4538							
520	4598	1.100	34.685	27.817	45.933		2356									146.5					4598							
521	4895	1.096	34.685	27.817	45.934		2352	0.09								146.5					4895				18.3*			
492	4936	1.10	34.685	27.817	45.932		2354(I)		-218.4								36.4 +0.9				4936		0.4+0.5	0.130+0.030				
193	5009	1.11	34.687	27.818	45.932		2358(I)														5009				13.5 +0.6	0.88 +0.03		
493	5135	1.10	34.685	27.817	45.932		2363(I)		-217.6								35.7 +0.4				5135							
523	5196	1.093	34.685	27.817	45.934		2365									148.9					5196				16.1*			
524	5496	1.090	34.687	27.819	45.936		2344	-0.22								148.4					5496				19.4*			
494	5534	1.10	34.653	27.791	45.909				-212.2								32.3 +0.9				5534	0.5+1.2	-0.1+0.2	0.091+0.018				
194	5717	0.93	34.658	27.806	45.942																5717				11.4 +1.2	0.61 +0.03		

STATION 218

POSITION: 50°26'N 176°35'W

DATE: 4 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg					DPM/100kg			DPM/100kg			
								UH	UM			UM					SIO	LDGO	LDGO			WHOI	WHOI	WHOI	YALE			YALE
1047	0	8.197	32.64	25.436	42.909																0				12.4 +0.7			5.6 +0.3
235	5		32.73															3.54 +1.46	0.02+0.03		5							
236	5		32.65															0.49 +0.08	0.06+0.03		5							
237	5		32.72															0.66 +0.08			5							
238	5		32.66															0.49 +0.08			5	22.3+0.8	38.7+0.4	0.040+0.010				
239	5		32.64															0.57 +0.25			5							
241	10		32.63						62.5								10.2 +0.7				10							
908	27	8.247	32.649	25.436	42.904							10.70+0.30									27							
401	39	8.197	32.635	25.432	42.906		2013	0.96				10.24+0.30									39							
242	50		32.85				2026(I)											0.87 +0.17	0.06+0.03		50							
402	51	6.955	32.681	25.642	43.227		2027					10.60+0.40									51							
910	58	7.554	32.793	25.648	43.175		2066(I)					9.49+0.21									58							
243	60		33.03				2078(I)											1.28 +0.23	0.21+0.08		60							
403	65	3.821	33.037	26.282	44.161		2108	0.71				9.22+0.19									65							
404	80	3.460	33.062	26.335	44.251		2112(I)					9.49+0.21									80							
244	80		33.99				2112(I)		52.8								10.3 +0.7				80	18.1+0.9	34.2+0.4	0.100+0.010				
405	99	3.062	33.097	26.399	44.355		2117	0.95				9.33+0.18									99							
245	100		33.11				2117(I)											1.05 +0.13	0.31+0.06		100							
406	120	3.089	33.169	26.454	44.405		2115					8.20+0.19									120							
246	140		33.54				2147(I)											1.26 +0.16	0.44+0.08		140	12.6+0.5	22.2+0.6	0.230+0.020				
594	144	3.99	33.565	26.685	44.530		2154(I)		-63.2								15.7 +0.8				144							
407	160	3.782	33.584	26.720	44.586		2189	-0.28				6.22+0.14									160							
247	180		33.66				2221(I)												0.12		180							
590	195	3.58	33.717	26.846	44.729		2242(I)		-77.4								15.6 +0.6				195	13.1+0.2	21.6+0.6	0.250+0.020				
408	201	3.328	33.689	26.846	44.756		2250					6.31+0.15									201							
409	279	3.464	33.879	26.985	44.874		2280(I)	-1.25				3.73+0.12									279							
586	344	3.48	33.950	27.040	44.926		2305(I)		-139.7								14.4 +0.8				344	5.8+0.3		0.250+0.030				
410	358	3.494	33.983	27.065	44.948		2310					2.25+0.10									358							
411	429	3.510	34.060	27.125	45.003		2340	0.05				1.46+0.09									429							
412	508	3.404	34.132	27.192	45.080		2346					0.90+0.09									508							
587	543	3.34	34.165	27.224	45.117		2346(I)		-181.3								20.1 +0.6				543	3.0+0.3	4.3+0.8	0.200+0.020				
413	597	3.257	34.204	27.263	45.163		2346	-0.35				0.66+0.09									597							
414	683	3.142	34.262	27.319	45.230		2347(I)					0.37+0.09									683							
589	742	3.07	34.287	27.346	45.263		2348(I)		-191.0								22.1 +1.4				742		0.0+0.7	0.198+0.018				
415	759	3.055	34.294	27.353	45.272		2348	-0.68				0.20+0.09									759							
416	837	2.930	34.327	27.390	45.321		2355(I)					0.16+0.09									837							
417	916	2.799	34.358	27.426	45.370		2362	-1.20													916							
418	916	2.802	34.359	27.427	45.370		2362(I)					0.16+0.09									916							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 218 — *CONTINUED*

POSITION: 50°26'N 176°35'W

DATE: 4 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM					SIO	LDGO	LDGO			WHOI	WHOI	WHOI	YALE			YALE
420	916	2.805	34.358	27.426	45.369		2396	-0.66													916							
591	992		34.381				2396(I)		-216.4								23.5 +1.0				992	-0.1+0.3	-0.2+0.4					
421	1000	2.708	34.379	27.451	45.403		2397(I)					0.32+0.09									1000							
592	1290	2.34	34.467	27.552	45.540		2398(I)		-223.4								25.1 +1.1				1290		1.3+0.6	0.107+0.013				
103	1395	2.21	34.495	27.584	45.586		2398	-1.20													1395							
593	1589	2.06	34.531	27.625	45.641		2384(I)		-229.8								27.3 +0.5				1589	-0.4+0.3	-0.9+0.6					
588	1888		34.572				2399(I)		-234.7								28.5 +0.7				1888		2.5+0.5	0.058+0.009				
107	1945	1.797	34.581	27.685	45.728		2404	-0.53													1945							
892	2060	1.12	34.600	27.747	45.864		2401(I)		-240.2								31.1 +0.7				2060	-0.7+0.9						
394	2195	1.63	34.596	27.709	45.770		2397(I)		-234.6								28.7 +1.0				2195		-0.2	0.084+0.013				
390	2593	1.47	34.637	27.753	45.830		2374(I)		-240.0								29.1 +1.1				2593	0.5+0.4	0.5+0.6					
112	2696	1.414	34.643	27.762	45.845		2377	-0.53													2696							
386	2992	1.33	34.655	27.777	45.869		2370(I)		-232.3								30.0 +0.9				2992		0.4+0.6	0.055+0.009				
387	3390	1.24	34.668	27.794	45.896		2350(I)		-226.3								30.5 +0.8				3390	1.8+0.6	0.2+0.8					
117	3393	1.234	34.668	27.794	45.896		2350	0.03													3393							
389	3789	1.16	34.675	27.805	45.914		2329(I)		-222.3								32.1 +0.6				3789		-0.2	0.060+0.009				
391	4187		34.679				2340(I)		-221.9								31.7 +1.1				4187	-0.3+0.5	1.4+0.4					
119	4201	1.112	34.682	27.814	45.929		2341	-0.10													4201							
392	4585	1.09	34.685	27.817	45.934		2338(I)		-214.6								33.2 +0.7				4585		-0.2	0.053+0.007				
393	4982	1.08	34.688	27.821	45.939		2332(I)		-212.7								33.1 +0.6				4982	1.2+0.7	1.6+0.4	0.090+0.010				
122	5209	1.052	34.687	27.822	45.943		2329(I)	-0.62													5209							
388	5378	1.07	34.681	27.816	45.936		2327(I)		-210.8								32.4 +0.6				5378			0.130+0.040				
124	6000	1.045	34.689	27.824	45.946		2305	0.11													6000							
889	6031	1.06	34.687	27.821	45.941		2309(I)		-210.3								33.8 +1.5				6031	1.8+0.3	1.1+0.5	0.080+0.010				
802	6343	1.046	34.688	27.823	45.945		2329	-0.11													6343							
891	6433		34.685				2325(I)		-209.7								33.8 +0.6				6433		1.1+1.5	0.100+0.012				
804	6743	1.046	34.689	27.824	45.946		2336	-0.01													6743							
805	6950	1.047	34.689	27.823	45.945		2332(I)	-0.36													6950							
806	7146	1.041	34.689	27.824	45.946		2329	0.03													7146							
893	7233	1.04	34.688	27.823	45.946				-212.3								34.2 +0.7				7233	-0.2+0.6	0.1+0.2	0.130+0.020				

STATION 219

POSITION: 53°6'N 177°18'W

DATE: 8 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM		SIO	UM				MIT	LDGO SIO*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
401	5	7.107	33.069	25.927	43.486		2095	1.33			-0.67	7.32+0.18				57.1				69*	5							
402	5	7.107	33.067	25.925	43.484		2095(I)										11.9 +0.5				5							
135	5		33.08				2095(I)											0.34 +0.11	0.11+0.04		5							
136	20		33.07				2109(I)		13.7								9.6**0.6				20	20.5+0.9	30.3+1.2					
406	43	7.253	33.067	25.905	43.451		2130	1.35				7.40+0.23								82*	43							
408	51	7.220	33.067	25.910	43.458		2089	1.41			-0.56					56.1				63*	51							
137	70		33.34				2123(I)		-22.2								14.6**0.5		0.21+0.05		70	16.1+0.2	24.0+0.5	0.110+0.020				
411	89	4.133	33.354	26.503	44.340	2.2	2157	0.56				5.89+0.20				64.7				39*	89							
413	129	3.752	33.487	26.646	44.518	2.5	2204	0.20				5.42+0.19								33*	129							
138	150		33.49				2230(I)		-59.9								13.9**0.6	0.18 +0.09	0.22+0.04		150	16.7+0.9	23.5+0.7					
414	160	3.533	33.524	26.696	44.590		2240	0.18								67.8				43*	160							
415	190	3.599	33.592	26.744	44.629	3.6	2243				-0.40	5.06+0.18				68.8				32*	190							
139	200		33.63				2249(I)											0.11 +0.06	0.17+0.06		200							
416	219	3.600	33.651	26.791	44.673		2261				-0.38	4.63+0.14								45*	219							
140	250		33.74				2272(I)		-98.6								15.7**0.5		0.18+0.04		250	11.7+0.7	20.8+1.3	0.270+0.020				
417	258	3.549	33.737	26.864	44.749	5.9	2276(I)	-0.42				4.32+0.18									258							
418	299	3.571	33.813	26.922	44.803		2296				-0.36	3.34+0.12								45*	299							
394	343	3.51	33.909	27.005	44.889		2341(I)		-136.2								17.7**0.4				343	6.3+0.8	11.8+1.0					
419	348	3.548	33.886	26.983	44.863		2346	-0.91				2.87+0.12				75.3				68*	348							
420	400	3.487	33.959	27.046	44.931		2357(I)					2.27+0.15								52*	400							
421	459	3.417	34.027	27.107	44.997	10.3	2370	-0.67				1.52+0.07									459							
390	494	3.36	34.082	27.156	45.050		2375(I)		-163.0								17.4**0.6				494	4.8+0.2	7.1+0.3	0.200+0.020				
422	529	3.362	34.103	27.173	45.066		2378	-0.80				1.27+0.08				84.6				21*	529							
423	599	3.294	34.159	27.224	45.122	15.0	2379(I)					0.59+0.07								15*	599							
201	641	3.226	34.177	27.244	45.149		2380				-0.22	0.78+0.06								36*	641							
424	725	3.137	34.237	27.300	45.212		2398					0.45+0.06									725							
202	790	3.047	34.266	27.331	45.252		2406(I)	-0.89				0.37+0.06								8*	790							
386	895	2.87	34.321	27.391	45.328		2413(I)		-205.7							96.0					895	1.5+0.5	0.7+0.5					
203	942	2.834	34.337	27.407	45.347	17.8	2414					0.09+0.07					21.4**1.1			23*	942							
204	1188	2.531	34.413	27.493	45.463	16.4	2417	-1.73			-0.16					103.6				22*	1188							
387	1244	2.48	34.426	27.508	45.483		2416(I)		-219.8							112.4					1244	0.6+0.2	-0.2+0.3	0.090+0.010				
205	1439	2.249	34.480	27.569	45.567		2413(I)										24.9**0.7			13*	1439							
206	1676	1.983	34.536	27.635	45.660	15.5	2408	-1.32								122.0				12*	1676							
389	1742	1.89	34.550	27.653	45.688		2408(I)		-236.9							130.8					1742							
207	1987	1.741	34.585	27.692	45.741		2406(I)	-1.11									27.8**0.8			17*	1987							
391	2241	1.61	34.603	27.716	45.779		2404(I)		-230.6							144.6					2241							
208	2285	1.594	34.613	27.725	45.790	12.2	2404	-0.88									29.4**1.2			16*	2285							
209	2582	1.482	34.635	27.751	45.827		2400				-0.06					148.6				13*	2582							
392	2739	1.44	34.641	27.759	45.839		2406(I)		-241.8							154.2					2739	-0.2+0.5	0.0+0.7					
210	2883	1.394	34.650	27.769	45.854	9.9	2411	-0.52									35.7**0.6			13*	2883							
211	3182	1.342	34.658	27.779	45.869		2407	-0.55								160.4				20*	3182							
393	3236	1.36	34.658	27.778	45.867		2408(I)		-234.4							155.3					3236	0.0+0.2	-0.8+0.7	0.090+0.010				
212	3480	1.310	34.665	27.787	45.880	9.5	2415										33.8**0.7			27*	3480							
215	3527	1.305	34.666	27.788	45.882		2403(I)									162.2				8	+1.6 3527							
216	3571						2394(I)													10	+1.6 3571							
217	3602	1.298	34.667	27.789	45.884		2389(I)													8	+1.5 3602							
218	3602	1.298	34.667	27.789	45.884		2389				-0.06					165.3				12*	3602							
219	3631	1.292	34.669	27.791	45.887		2393(I)													8	+1.5 3631							
220	3655	1.285	34.668	27.791	45.887		2396(I)													22	+1.6 3655							
221	3677	1.282	34.669	27.792	45.889		2399(I)										34.9 +1.0			18	+1.6 3677							
222	3690	1.282	34.669	27.792	45.889		2401(I)													18	+1.6 3690							
388	3702	1.28	34.662	27.786	45.883		2403(I)		-232.7								35.8**0.8				3702	0.2+0.6	-0.2+0.4					
223	3711	1.281	34.669	27.792	45.889		2404(I)													26	+1.6 3711							
224	3711	1.281	34.669	27.792	45.889	8.5	2404	-0.32								160.8				20*	3711							

(I) INTERPOLATED FROM NISKIN DATA

STATION 220

POSITION: 46°22'N 170°27'E

DATE: 13 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
																	LDGO			LDGO								
116	6089	1.071	34.685	27.819	45.938															14 +1.6	6089							
117	6108	1.072	34.685	27.819	45.938															14 +1.6	6108							
118	6140	1.072	34.685	27.819	45.938															14 +1.6	6140							
119	6170	1.072	34.685	27.819	45.938															12 +1.6	6170							
120	6200	1.072	34.684	27.818	45.937															13 +1.6	6200							
121	6231	1.073	34.686	27.819	45.938												34.3 +0.5			11 +1.6	6231							
122	6263	1.072	34.685	27.819	45.938															12 +1.6	6263							
123	6282	1.072	34.685	27.819	45.938															12 +1.6	6282							

STATION 221

POSITION: 45°13'N 169°25'E

DATE: 14 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
												UM					LDGO	LDGO	LDGO	LDGO					YALE		YALE	
647	0	10.72	32.966	25.284	42.532																0				15.4 +1.0		8.7 +0.5	
401	5	10.72	32.966	25.283	42.531		2032					10.14+0.20									5							
235	10		33.71				2041(I)														10							
402	52	7.08	33.431	26.214	43.765		2097					8.56+0.19						0.92 +0.10	0.18+0.03		52							
236	70		33.68				2109(I)											1.82 +0.31	0.40+0.04		70							
237	100		32.98				2126(I)											0.85 +0.11	0.53+0.05		100							
403	101	5.67	33.712	26.617	44.293		2126					7.32+0.19									101							
238	150		33.71				2171(I)											2.19 +0.25	0.81+0.08		150							
404	151	4.95	33.732	26.716	44.460		2172					7.11+0.17									151							
405	200	4.46	33.782	26.809	44.600		2236					6.02+0.17									200							
239	200		33.77				2236(I)											1.07 +0.14	0.68+0.09		200							
240	250		33.83				2269(I)											0.70 +0.11			250							
406	299	3.65	33.835	26.932	44.804		2286					4.52+0.13									299							
241	300		33.84				2286(I)											0.59 +0.14	0.39+0.51		300							
407	397	3.61	33.950	27.028	44.901		2314					3.42+0.12									397							
408	495	3.57	34.079	27.134	45.007		2324					1.69+0.10									495							
409	594	3.42	34.170	27.221	45.106		2364					1.11+0.09									594							
410	692	3.26	34.241	27.232	45.191		2373					0.68+0.09									692							
411	790	3.10	34.302	27.355	45.269		2396					0.37+0.09									790							
412	889	2.94	34.344	27.403	45.332		2403					0.11+0.10									889							
413	988	2.76	34.387	27.453	45.400		2402					0.09+0.09									988							
414	1086	2.60	34.420	27.492	45.455		2405(I)					0.15+0.09									1086							
415	1283	2.34	34.471	27.555	45.543		2412(I)					0.00+0.09									1283							
416	1480	2.17	34.505	27.596	45.601		2421					0.07+0.09									1480							
115	5854	1.061	34.687	27.821	45.941		2349(I)													12 +1.6	5854							
116	5882	1.061	34.687	27.821	45.941		2349(I)													13 +1.6	5882							
118	5911	1.061	34.685	27.819	45.940		2349(I)													17 +1.6	5911							
119	5940	1.060	34.688	27.822	45.942		2350(I)													15 +1.6	5940							
120	5968	1.060	34.687	27.821	45.942		2352(I)													14 +1.6	5968							
121	5995	1.060	34.689	27.823	45.943		2353(I)										33.2 +0.3			14 +1.9	5995							
122	6024	1.059	34.689	27.823	45.943		2355(I)													25 +2.0	6024							
123	6047	1.060	34.687	27.821	45.942		2356(I)													11 +1.8	6047							

STATION 222

POSITION: 40°10'N 160°30'E

DATE: 16 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM	----------MCM----------				LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1047	0	15.58	32.93	24.284	41.167																0				22.2**1.1			4.7 +0.4
801	2	15.86	33.827	24.908	41.748		1968	0.65				7.32+0.18	-1.8								2							
913	5	15.715	33.827	24.942	41.793		1972(I)										9.0 +0.2				5							
435	5		34.10				1972(I)											1.32 +0.19	0.26+0.03		5							
286	7		34.029				1975(I)														7				13.2 +0.5	0.40 +0.02		
436	10		34.13				1979(I)		83.6								8.3**0.8	1.60 +0.49	0.60+0.07		10	28.4+0.7	33.3+0.4	0.092+0.014				
802	51	13.14	33.920	25.566	42.600		2039					7.43+0.19									51							
437	60		33.99				2053(I)											1.41 +0.29	0.60+0.07		60							
438	100		34.06				2115(I)		25.2								9.9**0.7	1.76 +0.26	0.66+0.13		100	22.6+0.6	27.4+0.3	0.392+0.026				
803	101	8.71	34.066	26.474	43.861		2116	-0.78				6.64+0.15									101							
439	140		33.96				2149(I)											1.71 +0.26	0.55+0.04		140							
594	145		33.946				2153(I)														145				13.7 +0.4	0.35 +0.03		
440	180		33.90				2176(I)		10.2								11.9**0.7	1.09 +0.14	0.86+0.10		180	22.1+0.4	28.9+0.7	0.370+0.050				
804	200	6.35	33.840	26.634	44.240		2186(I)					7.28+0.18	1.6								200							
441	220		33.84				2195(I)		-2.3								10.8**0.7		1.14+0.11		220	18.7+0.3	27.0+0.3	0.334+0.024				
909	252	5.830	33.860	26.714	44.369		2206(I)					7.06+0.22									252							
442	270		33.87				2210(I)										11.7**0.6		0.76+0.09		270	17.9+0.1	24.3+0.5	0.250+0.060				
590	295		33.905				2214(I)														295				15.2 7.2	0.42 +0.02		
805	300	5.18	33.867	26.797	44.514		2214	-0.32				5.77+0.16									300							
443	330		33.87				2227(I)												0.66+0.15		330							
910	352	4.392	33.871	26.886	44.682		2237(I)					5.29+0.15									352							
806	398	4.41	33.942	26.941	44.732		2257	-0.74				4.36+0.12	11.6								398							
911	424	4.165	33.958	26.979	44.794		2270(I)					3.84+0.13									424							
586	425		33.968				2271(I)		-120.6								16.9**1.3				425	8.6+0.7	11.6+0.2	0.252+0.021				
813	497	4.01	34.035	27.056	44.885		2307	-1.09				2.66+0.11									497							
314	515	4.022	34.069	27.082	44.908		2316(I)	-0.98													515							
287	560		34.108				2336(I)		-151.2								18.6**0.7				560	4.7+0.5	6.4+0.5	0.260+0.030				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 222 — *CONTINUED* **POSITION: 40°10'N 160°30'E** **DATE: 16 OCT 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM	MCM				LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
814	596	3.70	34.130	27.162	45.019		2349	-0.64				1.56+0.09									596							
289	610		34.131				2350(I)														610				9.3 +0.7	0.41 +0.02		
792	615		34.152				2350(I)														615				10.1 +0.5			
912	656	3.636	34.198	27.222	45.084		2353(I)					1.08+0.07									656							
816	695	3.48	34.211	27.248	45.125		2356	-0.62													695							
587	695		34.216				2356(I)		-175.8								21.7**0.5				695	2.0+0.2	2.3+0.6					
817	794	3.28	34.272	27.315	45.211		2364	-0.63				0.54+0.09	14.2								794							
589	845		34.294				2373(I)		-195.6								20.8**0.6				845	0.6+0.1	1.7+0.3	0.170+0.020				
818	893	3.055	34.335	27.385	45.303		2383					0.36+0.09									893							
819	992	2.82	34.372	27.436	45.376		2399	-0.55				0.61+0.09									992							
591	995		34.364				2400(I)		-203.6								24.3**1.2				995							
592	1050		34.390				2408(I)		-215.8								22.1**0.9				1050	-0.2+0.4	0.1+0.5					
820	1091	2.6	34.410	27.483	45.445		2412					0.16+0.06									1091							
291	1155		34.415				2405(I)		-216.8								26.8**0.6				1155	0.1+0.5	0.2+1.0	0.110+0.020				
821	1188	2.50	34.439	27.516	45.489		2402	-0.71				0.08+0.08	15.8								1188							
292	1205		34.438				2405(I)														1205				13.2 +1.1			
822	1287	2.37	34.471	27.553	45.538		2420					0.11+0.05									1287							
823	1385	2.27	34.491	27.577	45.572		2405	-0.67				0.08+0.07	16.7								1385							
825	1484	2.19	34.515	27.602	45.605		2412	-0.81				0.01+0.09									1484							
827	1683	2.02	34.548	27.642	45.663		2399	-0.90													1683							
593	1795		34.559				2409(I)														1795					0.04 +0.00		
794	1810		34.560				2414(I)		-237.5								27.1**0.9				1810	-0.1+0.4	1.1+0.5					
601	1812	1.92	34.567	27.664	45.694		2415	-1.27					18.5								1812							
602	1989	1.81	34.589	27.691	45.732		2398						18.0								1989							
588	1990		34.578				2398(I)		-237.4								25.8**0.8				1990	0.4+0.1	0.3+0.9	0.080+0.020				
603	2168	1.67	34.608	27.716	45.772		2402(I)	-0.99													2168							
793	2285		34.619				2404(I)										31.9**0.6				2285	-0.3+0.2	-0.8+0.2					
604	2347	1.59	34.625	27.736	45.800		2405						17.6								2347							
605	2524	1.50	34.636	27.750	45.823		2382	-0.70													2524							
293	2640		34.643				2384(I)		-242.3								31.5**0.9				2640	-0.1+0.5	-0.4+0.3	0.060+0.010				
606	2702	1.41	34.647	27.765	45.848		2387						17.3								2702							
194	2815		34.652				2383(I)										31.1**0.7				2815	-0.6+0.3	-0.4+0.6					
616	3060	1.30	34.661	27.784	45.879		2372(I)	-0.62					16.0								3060							
190	3095		34.642				2370(I)		-230.0								30.4**0.6				3095	0.6+0.1	0.1+0.4	0.050+0.010				
790	3260		34.667				2369(I)														3260				19.0 +1.0	0.66 +0.04		
316	3504	1.214	34.672	27.799	45.903		2373	-0.80													3504							
786	3760		34.647				2355(I)		-221.7								31.2**0.6				3760	0.5+0.3						
620	3874	1.15	34.679	27.809	45.920		2353(I)						15.8								3874							
317	4003	1.143	34.680	27.810	45.922		2351	-0.56													4003							
787	4010		34.638				2350(I)														4010				16.6 +0.8			
789	4360		34.682				2358(I)		-221.7								30.7**0.8				4360							
622	4372	1.10	34.684	27.816	45.933		2360						13.8								4372							
318	4504	1.095	34.687	27.819	45.936		2358(I)	-0.40													4504							
625	4730	1.07	34.688	27.821	45.940		2358						15.3								4730							
791	4760		34.651				2358(I)														4760	0.3+0.2	-0.4+0.3	0.080+0.020	15.4 +0.5	0.80 +0.07		
626	4910	1.07	34.687	27.820	45.940		2360	-0.41													4910							
628	5270	1.055	34.688	27.822	45.943		2348	-0.47													5270							
319	5411	1.051	34.686	27.821	45.942		2354(I)														5411				11 +1.6			
320	5438	1.051	34.687	27.822	45.943		2356(I)														5438				22 +1.2			
629	5449	1.05	34.688	27.823	45.945		2356	-0.32					14.3								5449							
321	5466	1.050	34.691	27.825	45.946		2344										30.5 +0.7				5466				19 +1.4			
322	5499	1.051	34.687	27.822	45.943		2349(I)														5499				21 +1.6			
323	5528	1.051	34.691	27.825	45.946		2353	-0.23													5528				41 +1.6			

PRECISION: 0.3

STATION 223 **POSITION: 34°58'N 151°50'E** **DATE: 20 OCT 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
									UM			UM	MCM				LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			
801	1	22.472	34.523	23.747	40.160		1941					6.14+0.18									1							
802	1	22.472	34.524	23.748	40.161		1941(I)										6.1 +0.3				1							
335	10						1943(I)		163.2								7.0**0.9				10	29.0+1.2	41.3+1.7					
805	19	22.469	34.525	23.749	40.162		1944					5.96+0.17	-2.0	3.82	15.76	-2.5					19							
809	65	20.788	34.774	24.402	40.906		1994					6.25+0.17									65							
336	70						1994(I)		140.3								5.6**0.7				70	26.5+1.0	43.3+0.6	0.220+0.030				
812	85	19.923	34.787	24.643	41.198		1995					6.07+0.17									85							
815	99	19.398	34.783	24.777	41.365		1997					6.12+0.17									99							
817	125	18.556	34.783	24.992	41.632		2017					6.75+0.19									125							
337	125		34.78				2017(I)		124.5								7.0**0.8				125	31.0+1.3	43.3+1.8					
818	165	17.705	34.772	25.196	41.890		2027					6.75+0.19									165					24.7		
338	200		34.77				2017(I)		122.9								5.4**0.5				200	27.2+0.2	46.5+0.5	0.320+0.030				
819	207	17.178	34.761	25.316	42.044		2014					6.51+0.18									207							
820	245	16.971	34.755	25.361	42.103		2023(I)					6.60+0.17	-0.4	3.96							245							
821	295	16.652	34.743	25.427	42.191		2035(I)					6.59+0.17									295							
339	300		34.74				2037(I)		111.3								7.1**0.8				300		48.3+1.0					
822	334	16.298	34.728	25.499	42.287		2045(I)					6.48+0.17									334							
823	366	15.824	34.696	25.584	42.405		2053(I)					6.50+0.20									366							
501	388	15.728	34.702	25.611	42.438		2058					6.38+0.16									388							
494	397	15.70	34.690	25.608	42.438		2061(I)		66.8								8.3**0.6				397	25.3+1.4	43.5+0.4	0.450+0.030				
502	469	14.168	34.590	25.869	42.809		2089					5.58+0.15	5.0	4.21	17.51	0.5					469					19.6		
490	547	11.90	34.424	26.199	43.313		2114(I)		-20.1								9.4**0.5				547		29.9+1.0	0.450+0.050				
503	551	11.797	34.423	26.218	43.340		2115					4.86+0.15									551							
504	630	9.618	34.242	26.465	43.769		2169(I)					4.61+0.14									630							
505	692	8.198	34.223	26.676	44.103		2210					3.04+0.11									692							
486	697	8.11	34.223	26.689	44.123		2212(I)		-86.4								12.7**1.0				697	13.5+0.4	18.5+0.3	0.410+0.040				
506	750	6.539	34.102	26.815	44.396		2228					3.42+0.11									750							
507	810	5.431	34.066	26.925	44.612		2255(I)					3.04+0.11									810							
508	869	4.479	34.060	27.027	44.808		2286					2.53+0.09									869					15.1		
487	897	4.35	34.076	27.053	44.847		2302(I)		-130.4								18.6**0.5				897		12.9+1.0	0.300+0.060				

(I) INTERPOLATED FROM NISKIN DATA

STATION 223 — *CONTINUED*

POSITION: 34°58'N 151°50'E

DATE: 20 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
									UM			UM		MCM				LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			
509	929	4.517	34.169	27.110	44.883		2318					1.53+0.08										929							
510	990	4.134	34.202	27.176	44.987		2337					1.02+0.08	13.2	4.27	18.94	-1.3						990							
511	1088	3.653	34.255	27.266	45.124		2362					0.57+0.08										1088							
489	1097	3.64	34.261	27.272	45.132		2364(I)		-184.8									19.6**0.8				1097	1.7+0.4	2.6+0.2	0.170+0.020				
512	1187	3.354	34.317	27.344	45.231		2381					0.25+0.07										1187				18.0			
514	1295	3.094	34.375	27.414	45.326		2390					0.29+0.07										1295							
491	1296	3.10	34.380	27.417	45.328		2390(I)		-204.3									22.6**0.6				1296							
515	1394	2.840	34.411	27.465	45.403		2400(I)					0.15+0.06										1394				21.1			
516	1492	2.653	34.444	27.507	45.464		2409(I)					0.09+0.08										1492							
493	1495	2.65	34.440	27.504	45.460		2409(I)		-217.2									22.9**0.4				1495		0.0+0.2	0.150+0.020				
517	1632	2.418	34.484	27.559	45.539		2418							4.29	18.76	0.9						1632				19.4			
495	1744	2.29	34.507	27.588	45.580		2415(I)		-232.7									28.5**0.5				1744							
519	1990	2.005	34.560	27.652	45.674		2408						18.9		18.75							1990				18.8			
492	2091	1.90	34.577	27.674	45.706		2399(I)		-241.1									29.2**0.8				2091		-0.4+0.2	0.071+0.010				
521	2391	1.675	34.614	27.720	45.776		2403						19.1	4.29	18.61	1.9						2391							
194	2405	1.68	34.611	27.718	45.773		2402(I)		-242.1									30.4**1.0				2405							
522	2592	1.571	34.630	27.741	45.807		2396(I)															2592				23.4			
192	2685		34.636				2392(I)											30.2**0.5				2685	0.7	0.3 0.2	0.071+0.17				
523	2790	1.473	34.643	27.758	45.834		2388(I)															2790				25.9			
190	2805	1.49	34.642	27.756	45.831		2388(I)		-242.0									32.7**0.4				2805							
201	2936	1.415	34.652	27.769	45.852		2383															2936				29.1			
186	3205	1.34	34.658	27.779	45.869		2367(I)		-242.4									33.3**1.1				3205	0.1+0.2	1.8+0.2	0.065+0.010				
203	3336	1.292	34.664	27.787	45.883		2366															3336				26.3			
187	3606	1.24	34.669	27.795	45.896		2367(I)		-231.1									31.4**0.8				3606							
205	3734	1.207	34.673	27.800	45.905		2369						17.7	4.22	18.51	1.2						3734							
206	3931	1.173	34.677	27.806	45.914		2365(I)															3931				28.6			
189	4107	1.16	34.677	27.807	45.916		2359(I)		-220.1									32.2**0.7				4107	-0.5+0.3	0.0+0.2	0.048+0.008				
207	4132	1.148	34.681	27.811	45.922		2358						15.7	4.21	18.39	1.4						4132							
208	4380	1.122	34.683	27.814	45.928		2354(I)															4380				20.4			
191	4610	1.11	34.682	27.814	45.929		2350(I)		-215.5									31.9**0.5				4610							
209	4632	1.101	34.684	27.816	45.932		2350(I)						15.5	4.22	18.51	1.1						4632				23.7			
210	4881	1.084	34.687	27.820	45.937		2347						15.9									4881							
786	5059	1.06	34.687	27.821	45.941		2345(I)												0.38 +0.13	0.12+0.04		5059							
193	5113	1.08	34.689	27.822	45.940		2344(I)		-211.1									33.5**0.7				5113	-0.8+0.3	-0.6+0.2	0.086+0.015				
211	5132	1.064	34.687	27.821	45.941		2344(I)															5132				18.9			
787	5236	1.064	34.681	27.816	45.936		2342(I)													0.19+0.05		5236							
212	5383	1.046	34.689	27.824	45.946		2340						15.5	4.25	18.66	0.9						5383							
792	5452	1.03	34.691	27.826	45.951		2339(I)												0.74 4.51	0.28+0.05		5452							
195	5618	1.05	34.685	27.820	45.943		2336(I)		-207.9									31.5**0.5				5618							
214	5643	1.033	34.691	27.826	45.949		2336						15.4	4.27	18.94	0.1						5643				16.4			
687	5884	1.024	34.693	27.828	45.953		2317(I)												0.03 +0.10	0.42+0.13		5884							
215	5892	1.020	34.691	27.827	45.952		2317															5892				15.8			
216	5951	1.018	34.691	27.827	45.952		2318(I)														11 +1.6	5951							
217	5971	1.018	34.693	27.829	45.954		2319(I)														15 +1.8	5971							
218	5991	1.017	34.693	27.829	45.954		2321(I)														13 +1.6	5991							
219	6010	1.016	34.692	27.828	45.953		2322(I)														13 +1.6	6010							
220	6033	1.016	34.693	27.829	45.954		2324(I)														15 +1.6	6033							
221	6052	1.015	34.692	27.828	45.953		2326(I)											30.4 +1.1			17 +1.6	6052							
222	6072	1.014	34.692	27.828	45.954		2328(I)														13 +1.6	6072							
223	6094	1.013	34.692	27.828	45.954		2331(I)														15 +1.6	6094							
692	6103	1.00	34.694	27.831	45.958														0.19 +0.13	0.42+0.14		6103							

PRECISION: 0.3 0.01 0.06 0.2

STATION 224

POSITION: 34°15'N 141°58'E

DATE: 24 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM			UM						LSU	SIO	LDGO	LDGO			WHOI	WHOI	WHOI	YALE			YALE
647	0	23.52	34.50	23.430	39.785																	0				15.8 +0.9			12.2 +0.5
501	1	23.846	34.505	23.339	39.676	0.4	1934	0.73				6.36+0.18						32.5				1							
502	14	23.844	34.502	23.337	39.675		1938					6.04+0.16						32.8				14							
435	20		34.50				1939(I)		131.7										7.1 +0.5	1.08 +0.15		20	29.5+0.5	39.5+0.3	0.120+0.020				
503	46	23.832	34.508	23.345	39.683		1945	0.53				5.90+0.17										46							
436	80		34.72				1951(I)		153.6										6.5 +0.5	0.81 +0.10	0.27+0.08	80							
504	94	20.562	34.781	24.468	40.986		1954(I)					5.56+0.16						33.1				94							
505	145	18.787	34.774	24.927	41.553		1964(I)	0.54				6.05+0.17						34.6				145							
437	150		34.78				1965(I)		134.5										7.8 +0.5	0.62 +0.14	0.37+0.04	150	27.7+1.3	41.8+0.3	0.240+0.030				
506	195	17.666	34.771	25.205	41.902		1975(I)					6.51+0.18										195							
507	245	17.098	34.762	25.336	42.070	2.3	1987(I)	0.31				5.91+0.17						33.5				245							
438	250		34.76				1988(I)		116.6										8.4 +0.5	1.21 +0.70	0.63+0.07	250	32.8+0.7						
508	296	16.858	34.756	25.389	42.138		2000(I)					6.13+0.16										296							
509	345	16.384	34.729	25.480	42.262	0.0	2014	0.87				6.41+0.18										345							
510	395	15.753	34.697	25.601	42.427		2032(I)					6.18+0.17						36.2				395							
391	400		34.692				2033(I)		64.1										7.9 +0.7			400	32.7+1.3	42.9+0.3	0.470+0.030				
511	446	14.988	34.635	25.725	42.606		2052	0.08				5.81+0.17										446							
512	495	13.805	34.556	25.919	42.886		2075(I)					5.59+0.16						38.6				495							
389	505		34.538				2080(I)		20.0										7.8 +0.6			505	28.9+0.9	40.0+2.0					
514	573	11.972	34.427	26.188	43.296	4.7	2117	0.35				4.58+0.15										573							
515	650	10.028	34.303	26.444	43.712		2163(I)					3.87+0.12						42.8				650							
516	721	8.277	34.201	26.647	44.067	5.4	2206(I)	-0.73				3.28+0.13						49.2				721							
517	761	7.633	34.223	26.759	44.236		2230					2.54+0.10										761							
393	800		34.202				2255(I)		-122.2										15.2 +0.7			800	7.9+0.5	9.7+0.2	0.340+0.030				
518	802	6.729	34.193	26.861	44.422	6.5	2256(I)	-0.26				2.18+0.11						60.7				802							
519	852	5.886	34.173	26.954	44.594		2277					2.05+0.09						65.2				852							
520	904	5.203	34.183	27.044	44.750		2273	-0.48				1.47+0.08										904							
101	941	4.775	34.197	27.104	44.851	6.9	2309	-0.58														941							
521	953	4.664	34.183	27.105	44.863		2310(I)					1.31+0.08						73.7				953							
294	997	4.27	34.223	27.179	44.976		2313(I)		-161.3										19.3 +0.9			997							
522	1004	4.250	34.211	27.171	44.970		2313	-0.45				1.23+0.09						78.0				1004							
102	1040	4.010	34.239	27.218	45.040		2328(I)					0.97+0.06										1040							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 224 — *CONTINUED*

POSITION: 34°15'N 141°58'E

DATE: 24 OCT 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM			UM				LSU	SIO	LDGO	LDGO			WHOI	WHOI	WHOI	YALE			YALE
103	1140	3.640	34.305	27.307	45.165	10.1	2373	-0.72				0.28+0.05				91.7					1140							
523	1199	3.401	34.346	27.362	45.244		2377(I)					0.23+0.06									1199							
104	1240	3.297	34.356	27.380	45.272		2379					0.24+0.07				97.0					1240							
524	1303	3.155	34.388	27.419	45.324		2377					0.29+0.07									1303							
105	1340	3.091	34.411	27.443	45.354	10.8	2375(I)	-0.73				0.02+0.05				102.5					1340							
290	1345	3.07	34.408	27.442	45.355		2374(I)		-210.6								22.1 +0.9				1345	0.5+0.2	0.7+0.2					
106	1439	2.857	34.442	27.488	45.423	10.7	2368	-0.52				0.12+0.05									1439							
107	1539	2.559	34.467	27.534	45.499		2408									108.8					1539							
108	1642	2.370	34.497	27.573	45.558	12.9	2410	-0.67													1642							
109	1737	2.244	34.517	27.599	45.596		2412(I)									117.0					1737							
286	1745	2.21	34.523	27.607	45.607		2412(I)		-232.5								26.6 +0.6				1745							
111	1936	2.016	34.561	27.652	45.673	11.6	2404	-0.60								121.5					1936							
287	2243	1.76	34.601	27.703	45.750		2399(I)		-241.8								31.7 +0.6				2243	-0.4+0.4	0.3+0.2	0.100+0.003				
114	2251	1.768	34.601	27.703	45.749	9.6	2399(I)	-0.54								129.2					2251							
115	2499	1.611	34.627	27.735	45.797		2392(I)									127.7					2499							
116	2740	1.483	34.645	27.759	45.834		2383									130.4					2740							
289	2988	1.38	34.654	27.773	45.860		2373(I)		-231.7								31.0 +0.5				2988							
117	2990	1.394	34.654	27.772	45.857	8.0	2373(I)	-0.42								133.1					2990							
118	3287	1.305	34.667	27.789	45.883		2361									136.0					3287							
119	3637	1.225	34.673	27.799	45.902	7.1	2350(I)	-0.12								136.1					3637							
291	3729	1.22	34.674	27.800	45.904		2348(I)		-225.0								32.2 +0.5				3729	0.7	-0.1+0.3	0.062+0.014				
120	3985	1.169	34.680	27.808	45.917		2343(I)									135.7					3985							
121	4384	1.118	34.685	27.816	45.930	6.8	2340	-0.07								136.2					4384							
293	4471	1.11	34.684	27.815	45.931		2342(I)		-216.7								33.3 +0.5				4471							
122	5036	1.070	34.688	27.821	45.941		2352									134.4					5036							
295	5211	1.08	34.685	27.818	45.937		2348(I)		-214.6								32.3 +0.6				5211		0.8+0.2	0.050+0.010				
123	5489	1.055	34.689	27.823	45.944	6.2	2340	-0.39								134.7					5489							
292	5950	1.05	34.692	27.826	45.947		2335(I)		-213.0								33.4 +0.5				5950							
124	6000	1.043	34.694	27.828	45.950	6.3	2335	-0.03								131.6					6000							

STATION 225

POSITION: 32°37'N 161°55'E

DATE: 5 NOV 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH			UM			UM					LDGO SIO*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE			YALE
1047	0	23.35	34.57	23.532	39.895																0				21.6 +1.1			12.9 +0.7
801	3	23.50	34.520	23.451	39.807															29+	3							
135	10		34.56																		10	19.9+1.0	42.0+1.3	0.055+0.010				
802	42	23.23	34.570	23.566	39.936		1933					6.58+0.22					5.9*+0.6		0.38+0.04		42							
136	50		34.59				1953(I)		150.4			6.15+0.21								39*	50	31.3+1.0					
803	62	20.98	34.674	24.275	40.770		1975					7.08+0.23					5.9*+0.7	1.28 +0.19	0.25+0.03		62							
804	81	18.74	34.744	24.917	41.547		1992					6.42+0.20								42*	81							
137	90		34.74				1997(I)		121.7			6.53+0.22								23*	90	28.1+1.7	42.9+2.2	0.280+0.030				
805	121	17.25	34.742	25.284	42.009		2006					6.57+0.18					6.8*+0.6	0.84 +0.11	0.43+0.05		121							
138	130		34.72				2008(I)		115.1			6.91+0.22								14*	130	30.9+1.9					
806	160	16.47	34.698	25.435	42.212	2.2	2014					6.64+0.21					7.2*+0.8		0.52+0.04		160							
139	180		34.70				2020(I)		114.1			6.48+0.19								18*	180	30.9+0.6	45.5+1.9	0.275+0.011				
807	200	16.21	34.694	25.494	42.289		2025					6.49+0.21					6.2*+0.6				200							
808	250	15.65	34.672	25.605	42.439		2032					6.77+0.21								20*	250							
140	250		34.68				2032(I)		93.9			7.01+0.23								15*	250	31.3+1.3					
814	347	13.92	34.544	25.886	42.846	1.4	2047					6.47+0.22					7.6*+0.6	0.53 +0.08	0.59+0.05		347							
141	350		34.56				2048(I)		31.4			6.06+0.20								20*	350	30.3+1.6	43.1+0.9	0.475+0.029				
825	397	13.07	34.486	26.016	43.039		2062					6.09+0.20					8.7*+0.9		0.65+0.05		397							
789	399	13.10	34.490	26.015	43.036		2063(I)		32.1			5.99+0.19								19*	399	27.5+1.4					
826	471	11.453	34.354	26.229	43.380		2090					6.02+0.20					9.7*+1.5				471							
827	546	9.77	34.233	26.432	43.723		2107													19*	546							
502	595	7.89	34.098	26.624	44.082		2160					5.68+0.18								22*	595							
790	599	8.17	34.114	26.594	44.026		2159(I)		-37.6			5.50+0.17					12.9*+1.0				599	18.8+1.2	27.5+0.9	0.424+0.025				
828	644	7.30	34.057	26.676	44.187		2150					5.03+0.15								27*	644							
503	696	5.60	34.005	26.857	44.529	5.7	2240					3.90+0.12								19*	696							
504	794	4.65	34.083	27.027	44.791		2304					1.39+0.08								18*	794							
505	894	4.05	34.168	27.157	44.978		2331					1.01+0.09								28*	894							
791	895	4.24	34.138	27.114	44.916		2331(I)		-158.3			1.14+0.09					17.5*+0.5				895	3.2+0.8						
506	992	3.66	34.248	27.260	45.118		2370					0.31+0.06								15*	992							
601	1081	3.38	34.305	27.332	45.216		2386					0.07+0.07									1081							
507	1188	3.06	34.370	27.413	45.328	12.2	2380					0.05+0.06								14*	1188							
792	1191	3.17	34.354	27.391	45.296		2379(I)		-203.3								20.8*+0.7				1191	1.2+0.5	0.2+0.5	0.160+0.027				
508	1334	2.69	34.431	27.494	45.447		2355													25*	1334							
509	1477	2.435	34.476	27.551	45.529	14.0	2401													21*	1477							
793	1488	2.49	34.471	27.543	45.516		2401(I)		-230.1								26.0*+0.6				1488	0.1+0.5						
514	1620	2.23	34.512	27.597	45.596		2401													27*	1620							
525	1772	2.07	34.546	27.636	45.652		2400													25*	1772							
526	1920	1.93	34.572	27.668	45.698		2405													19*	1920							
794	1989	1.84	34.586	27.686	45.724		2392(I)		-243.2								30.3*+0.6				1989		-0.2	0.091+0.009				
527	2069	1.776	34.595	27.698	45.743	11.1	2375													41*	2069							
528	2218	1.67	34.613	27.720	45.775		2365													15*	2218							
629	2367	1.586	34.625	27.736	45.800		2399													20*	2367							
795	2487	1.54	34.631	27.743	45.812		2361(I)		-239.1								31.1*+0.7				2487	0.2+0.4						
630	2515	1.50	34.634	27.749	45.823		2352													12*	2515							
631	2668	1.43	34.646	27.764	45.845	8.6	2377													14*	2668							
389	2692	1.44	34.648	27.764	45.844		2381(I)		-237.1								30.9*+0.6				2692		-0.2	0.102+0.030				
632	2815	1.405	34.651	27.769	45.853		2391													26*	2815							
633	2966	1.34	34.657	27.778	45.869		2360													33*	2966							
201	3157	1.30	34.662	27.785	45.880		2358													17*	3157							
390	3187	1.29	34.666	27.789	45.885		2359(I)		-230.7								31.0*+0.8				3187	-0.2+0.3						
634	3218	1.268	34.666	27.790	45.889		2360													24*	3218							
202	3355	1.25	34.668	27.793	45.893		2358(I)													28*	3355							
203	3552	1.22	34.671	27.798	45.901		2350													39*	3552							

(I) INTERPOLATED FROM NISKIN DATA

STATION 225 — *CONTINUED*

POSITION: 32°37'N 161°55'E

DATE: 5 NOV 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
						UH			UM			UM					LDGO SIO*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE			YALE
391	3684	1.19	34.673	27.801	45.907		2345(I)		-223.7								32.0**0.7				3684	-0.6+0.2		0.073+0.008				
204	3749	1.19	34.676	27.804	45.910		2343(I)																					
205	3946	1.153	34.678	27.808	45.918		2335(I)														13* 3749							
206	4145	1.13	34.681	27.811	45.924		2328														13* 3946							
392	4180	1.13	34.682	27.812	45.925		2334(I)		-222.1												11* 4145							
207	4339	1.11	34.683	27.815	45.930		2358										33.4**0.6				4180	0.1+0.2						
208	4538	1.11	34.685	27.816	45.932		2350(I)														11* 4339							
393	4679	1.08	34.687	27.820	45.938		2337(I)		-218.5												17* 4538							
209	4735	1.07	34.687	27.820	45.939		2330										32.6**0.6				4679	-0.1+0.2	-0.2	0.100+0.012				
214	4932	1.05	34.688	27.823	45.944		2330(I)														7* 4735							
225	5130	1.02	34.689	27.825	45.950		2331														31* 4932							
394	5177	1.03	34.681	27.818	45.942		2331(I)		-210.2												27* 5130							
226	5427	0.99	34.692	27.829	45.957		2332(I)										33.6**0.6				5177	1.7+0.4						
395	5608	0.99	34.689	27.827	45.955		2332(I)		-205.8												20* 5427							
227	5646		34.693				2332										35.1**0.9				5608	1.4+0.5	0.2+0.6	0.150+0.020				
228	5746		34.693				2327(I)														18 +1.6 5646							
229	5815	0.985	34.693	27.831	45.959		2322(I)														11 +2.0 5746							
230	5865		34.693				2318(I)														16 +1.6 5815							
231	5895		34.693				2316(I)														14 +1.6 5865							
232	5914		34.693				2314(I)														21 +1.6 5895							
233	5924		34.693				2313(I)										31.5 +0.6				21 +1.6 5914							
234	5935	0.98	34.693	27.831	45.960	5.6	2312														24 +1.6 5924							
																					19 +1.6 5935							

STATION 226

POSITION: 30°34'N 170°38'E

DATE: 9 NOV 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
								UH	UM			UM	----------SIO----------			MIT	LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			YALE
947	0	24.63	35.07	23.534	39.817																0				26.8 +1.4			14.3 +0.8
701	8	24.73	35.055	23.494	39.771		1952					6.82+0.17				34.1	6.7 +0.3				8							
135	10		35.03				1952(I)		160.4								6.4**0.6	2.17 +0.35	0.21+0.03		10	27.0+0.3	44.5+0.4	0.140+0.010				
702	20	24.74	35.056	23.492	39.770		1956					6.57+0.19	-0.2								20							
703	36	24.75	35.053	23.485	39.762		1968	1.60				6.18+0.15				33.8					36							
136	40		35.02				1965(I)		168.3								5.9**0.6	0.81 +0.17	0.25+0.03		40	32.5+0.7	46.4+1.0					
704	56	24.47	35.016	23.542	39.834		1948					6.95+0.21	-1.0								56							
137	80		34.85				1954(I)		135.6			6.77+0.17					6.7**0.6	0.47 +0.11	0.20+0.04		80	26.6+0.3	50.5+0.1	0.110+0.010				
705	82	23.58	35.005	23.793	40.134		1955	0.17				6.52+0.16				34.0					82							
714	106	17.98	34.759	25.118	41.795		1994						0.6								106							
138	150		34.73				2005(I)		100.9			6.49+0.17					6.9**0.5	0.92 +0.96	0.45+0.04		150	36.4+1.9	48.6+1.0					
725	157	16.02	34.697	25.539	42.346		2007					6.57+0.17	1.8								157							
726	207	15.19	34.627	25.675	42.542		2022						2.5	4.12	17.00	0.8	35.5				207							
139	250		34.58				2032(I)		54.2			5.53+0.15					6.5**0.5	1.08 +0.21	0.67+0.08		250	29.0+0.3	43.6+0.4	0.430+0.030				
727	257	14.35	34.565	25.810	42.738		2033(I)	0.28				6.15+0.16									257							
728	309	13.31	34.540	26.011	43.015		2045					6.06+0.10	3.6								309							17.4
140	350		34.43				2057(I)		11.9			5.16+0.10					8.3**0.6	0.77 +0.16	0.70+0.07		350	30.1+1.2	35.3+2.8	0.530+0.040				
729	382	12.01	34.396	26.157	43.263		2069	0.52								40.4					382							
389	452	10.46	34.292	26.360	43.593		2102(I)		-14.7			5.60+0.13					9.3**0.6				452	18.0+0.6	35.0+0.3	0.510+0.040				
730	457	10.33	34.277	26.371	43.614		2105					5.39+0.16	6.7	4.20	17.67	1.2	46.9				457							
390	533	8.56	34.147	26.560	43.957		2133(I)		-50.3			5.26+0.12					10.8**0.6				533	20.4+0.4	27.7+1.4	0.480+0.030				
731	555	7.92	34.103	26.623	44.078		2145	-0.58				4.65+0.12				53.5					555							
401	591	7.28	34.066	26.686	44.200		2179					4.41+0.14	7.8			56.1					591							
391	645	6.41	34.042	26.784	44.378		2208(I)		-95.7			3.88+0.13					13.6**0.5				645	8.9+0.5	17.2+0.3	0.480+0.030				
732	653	6.118	34.028	26.811	44.434		2212					2.92+0.12									653							17.2
402	688	5.62	34.031	26.875	44.545		2242	-0.63				2.15+0.09				66.2					688							
403	834	4.28	34.131	27.104	44.902		2308					0.84+0.09	12.3			79.3					834							
392	904	3.90	34.211	27.207	45.041		2328(I)		-182.8			0.06+0.09					19.4**0.6				904	0.3+0.6	0.6+0.4					
404	983	3.62	34.265	27.278	45.139		2347					0.10+0.06				88.8					983							13.8
405	1126	3.20	34.371	27.401	45.303		2379					-0.02+0.09	14.8	4.29	18.20	3.7	101.9				1126							
393	1192	3.06	34.403	27.439	45.354		2376(I)		-211.5								21.1**0.6				1192	-0.2+0.3	0.1+0.2	0.170+0.020				
414	1275	2.85	34.440	27.487	45.423		2373	-0.70								108.3					1275							
425	1422	2.53	34.488	27.553	45.521		2369						17.8	4.26	18.08	3.8	115.9				1422							20.0
394	1480	3.38	34.500	27.487	45.366		2377(I)		-225.7								25.1**0.8				1480	0.1+0.4	0.6+0.4					
395	1542	2.32	34.495	27.575	45.565		2384(I)										24.3**0.8				1542							
426	1617	2.30	34.531	27.606	45.597		2390	-0.80								120.9					1617							21.3
427	1713	2.06	34.560	27.648	45.663		2375						18.3	4.29	18.17	4.2	128.5				1713							
428	1859	1.89	34.581	27.678	45.711		2368	-0.58								130.8					1859							21.1
429	2004	1.741	34.600	27.704	45.753		2382						19.0			134.4					2004							22.5
430	2149	1.62	34.615	27.725	45.786		2378	-0.49								134.8					2149							
431	2293	1.55	34.626	27.739	45.808		2360						16.1								2293							23.6
432	2443	1.48	34.639	27.754	45.831		2365									138.7					2443							
589	2499	1.46	34.642	27.758	45.836		2366(I)		-238.8								30.7**0.5				2499	0.1+0.3						
202	2654	1.405	34.648	27.767	45.850		2367	-0.32								137.6					2654							23.7
203	2833	1.346	34.656	27.777	45.867		2361(I)						17.9	4.26	18.15	3.9					2833							
590	2999	1.28	34.665	27.789	45.886		2351(I)		-233.4								31.4**1.1				2999							
204	3031	1.286	34.663	27.787	45.883		2349	-0.23								140.6					3031							
205	3228	1.234	34.667	27.794	45.895		2336						12.3								3228							
206	3423	1.197	34.673	27.801	45.907		2347	-0.09								141.3					3423							27.9
591	3495	1.20	34.673	27.801	45.907		2344(I)		-220.8								34.9**0.5				3495		-0.2+0.3	0.031+0.015				
207	3625	1.165	34.677	27.806	45.915		2337						13.5								3625							29.2
208	3813	1.139	34.679	27.809	45.922		2344									139.9					3813							
893	3980	1.36	34.686	27.800	45.887		2328(I)		-217.4								36.4**0.5				3980							
209	4010	1.115	34.682	27.813	45.928		2325						14.2								4010							
210	4204	1.092	34.685	27.817	45.934		2336	0.38								139.6					4204							24.3
211	4390	1.073	34.684	27.818	45.937		2324						14.8	4.35	18.49	4.4	136.1				4390							22.1
593	4499	1.06	34.687	27.821	45.942		2323(I)		-211.5								34.9**0.6				4499	-0.1+0.5	-1.1+0.5					

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 226 — *CONTINUED* **POSITION: 30°34'N 170°38'E** **DATE: 9 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He 10⁻⁵cc/kg	Ne 10⁻⁵cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	SIO				MIT	LDGO SIO*	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	YALE			YALE
433	4589	1.04	34.689	27.824	45.946		2323(I)						14.8									4589							
434	4784	1.03	34.689	27.825	45.949		2322(I)										130.8					4784							
212	4801	1.023	34.689	27.825	45.950		2322	0.12														4801				24.3			
594	4901	1.03	34.678	27.816	45.940		2319(I)		-207.3									31.9*+0.4				4901							
215	4997	1.005	34.692	27.829	45.955		2315						11.4									4997							
216	5185	0.992	34.691	27.829	45.957		2300	-0.20					11.1	4.45	18.79	5.1						5185				24.5			
217	5287	0.985	34.692	27.830	45.959		2312														13 +1.6	5287							
218	5332	0.982	34.693	27.831	45.960		2302														11 +1.6	5332							
219	5379	0.978	34.692	27.830	45.960		2308														10 +1.6	5379							
220	5410	0.976	34.693	27.831	45.961		2309(I)														11 +1.6	5410							
595	5434	0.97	34.688	27.828	45.958		2310(I)		-203.7									32.7*+0.5				5434	0.0+0.3	-0.5+0.4					
221	5439	0.973	34.695	27.833	45.963		2310(I)														11 +1.6	5439							
222	5459	0.971	34.691	27.830	45.960		2311(I)											32.6 +1.0			13 +1.6	5459							
223	5468	0.969	34.694	27.832	45.963		2312(I)														17 +1.6	5468							
224	5478	0.969	34.695	27.833	45.964		2312	0.04									126.5				14 +2.0	5478							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 227 **POSITION: 24°59'N 170°5'E** **DATE: 12 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He 10⁻⁵cc/kg	Ne 10⁻⁵cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM	MCM				LSU	LDGO SIO*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE			YALE
847	0	26.51	35.22	23.077	39.258																	0				23.3 +1.2			15.2 +0.8
701	6	26.60	35.212	23.043	39.220													6.9 +0.2				6							
135	10		35.23						185.3									5.6**+0.4	0.46 +0.09	0.14+0.05		10	29.0+1.5	40.3+1.6	0.030+0.030				
702	11		35.212				1944					5.47+0.16	-1.8	3.84	15.39	-1.4	31.7				29*	11							
704	22		35.211				1938					5.59+0.17	-1.1	3.77	15.09	-1.3					21*	22							
136	50		35.24				1952(I)		173.4			6.09+0.20						6.6**+0.6		0.14+0.02		50	25.1+0.7	40.7+1.3	0.120+0.020				
137	75		35.13				1964(I)		161.0			6.90+0.23						6.2**+0.6	0.60 +0.14	0.22+0.03		75							
725	91	22.69	35.114	24.132	40.519		1972										32.6				23*	91							
727	121	20.51	35.075	24.707	41.220		1991					7.07+0.17	2.1	3.84	15.87	-1.6					18*	121				19.3			
138	150		34.87				1991(I)					7.25+0.23						7.0**+0.4		0.35+0.04		150	32.3+0.7	47.3+0.9	0.180+0.020				
729	200	16.63	34.732	25.425	42.191		1990					6.47+0.17	3.3	3.94	16.52	-1.2	34.6				21*	200							
139	250		34.65				2010(I)		69.3			6.60+0.22						7.4**+0.6		0.64+0.08		250	35.0+1.4	45.3+1.4	0.510+0.050				
731	300	14.40	34.581	25.811	42.734		2037					5.81+0.15	7.8								28*	300				16.1			
732	349	13.05	34.467	26.006	43.032		2058										37.1					349							
140	350		34.44				2058(I)		24.4			6.32+0.20						7.6**+0.8	0.59+0.09			350							
733	449	10.645	34.275	26.315	43.533		2072					5.18+0.13	8.7				42.5				16*	449							
392	450	10.69	34.276	26.307	43.522		2073(I)		-21.6			5.20+0.15						8.4**+0.5				450	31.0+1.3	36.9+0.8	0.600+0.020				
401	496	9.733	34.213	26.424	43.719		2122					4.62+0.13	7.4									496							
402	545	8.276	34.122	26.585	44.008		2130(I)														19*	545						16.7	
734	548	8.44	34.124	26.562	43.970		2130										49.4					548							
403	595	7.014	34.069	26.725	44.263		2181					2.59+0.11									20*	595							
394	619	6.80	34.079	26.762	44.319		2228(I)		-108.5			1.85+0.11						14.2**+0.7				619	7.7+1.6	9.7+0.9	0.450+0.020				
404	642	6.179	34.073	26.839	44.454		2250						10.3				60.5					642							
405	717	5.195	34.089	26.971	44.680		2305(I)					0.68+0.09					69.1				18*	717							
406	793	4.551	34.155	27.095	44.865		2326										76.0					793							
407	895	3.953	34.270	27.248	45.075		2338(I)					0.08+0.09					86.1				14*	895						18.1	
387	897	4.04	34.293	27.258	45.076		2338(I)		-185.7			-0.06+0.08						20.3**+0.9				897	0.6+0.8	0.8+0.5	0.150+0.040				
408	990	3.650	34.352	27.343	45.199		2343						13.9	4.18	17.94	2.1	92.6					990							
409	1094	3.292	34.413	27.426	45.316		2369					0.25+0.09					102.6				12*	1094						21.6	
410	1193	3.068	34.476	27.497	45.408		2360						15.5	4.19	17.91	2.9					13*	1193							
389	1196	3.10	34.467	27.487	45.395		2360(I)		-218.0			0.01+0.07						21.9**+0.9				1196	0.9	0.2+7.0	0.090+0.010				
411	1266	2.884	34.500	27.532	45.462		2366										109.8					1266							
412	1365	2.687	34.515	27.561	45.511		2359						15.5								11*	1365							
415	1484	2.490	34.547	27.603	45.573		2377										117.3					1484						26.0	
390	1593	2.33	34.561	27.627	45.614		2375(I)		-229.7									25.6**+0.9				1593	-0.2+0.6	-0.1+0.4	0.070+0.030				
416	1698	2.177	34.579	27.654	45.656		2369						16.9				122.9				14*	1698							
417	1895	1.961	34.601	27.689	45.713		2385															1895						22.4	
393	1991	1.84	34.616	27.710	45.747		2383(I)		-240.6									29.4**+1.1				1991	0.7	-0.6+1.6	0.050+0.010				
418	2092	1.771	34.623	27.720	45.765		2378						18.3		18.45		131.8				18*	2092						25.7	
419	2291	1.640	34.637	27.741	45.800		2369															2291						26.7	
420	2482	1.544	34.645	27.755	45.823		2378						18.0				136.5				17*	2482						23.7	
395	2490	1.53	34.645	27.756	45.826		2378(I)		-240.2									32.3**+0.6				2490	-0.6+0.5	-0.2+0.3	0.100+0.050				
422	2859	1.401	34.661	27.777	45.861		2369						17.0	4.13	18.43	-0.8	137.4				13*	2859						25.3	
423	3076	1.339	34.664	27.784	45.875		2360(I)										138.3					3076							
592	3137	1.32	34.667	27.788	45.880		2357(I)		-240.2									35.6**+0.6				3137	1.7+0.2	0.1+1.2	0.040+0.010				
201	3171	1.308	34.667	27.789	45.882		2356(I)						17.0								15*	3171						28.5	
424	3274	1.297	34.669	27.791	45.886		2351(I)						16.2				137.0					3274							
203	3579	1.229	34.675	27.800	45.902		2344						14.8									3579						37.8	
204	3580	1.228	34.674	27.800	45.902		2343										136.6				15*	3580							
594	3630	1.20	34.672	27.800	45.905		2341(I)		-230.5									33.9**+0.6				3630	0.7+0.6	0.1+0.4	0.080+0.030				
205	3779	1.184	34.679	27.807	45.914		2335										135.9					3779						31.5	
206	3981	1.153	34.682	27.811	45.921		2339						14.4	4.25							14*	3981						32.1	
587	4133	1.12	34.682	27.813	45.927		2334(I)		-214.0									31.7**+0.6				4133	2.0+0.2	0.2+0.2	0.070+0.010				
207	4181	1.119	34.684	27.815	45.929		2332										135.0					4181						27.7	
208	4382	1.085	34.688	27.820	45.938		2332						14.2	4.25	18.97	-0.7					18*	4382							
209	4582	1.055	34.690	27.824	45.945		2315(I)										131.7					4582						23.3	
589	4630	1.06	34.685	27.820	45.941		2311(I)		-212.7									31.5**+0.6				4630	-0.7+0.7	1.1+0.5	0.140+0.040				
210	4781	1.026	34.691	27.827	45.951		2300(I)						14.1	4.24	18.77		128.4				18*	4781							
211	4980	1.000	34.693	27.830	45.957		2288															4980						23.1	
590	5128	0.97	34.687	27.827	45.957		2300(I)		-205.5									30.5**+0.5				5128	1.8+0.2	0.8+0.2	0.100+0.010				
212	5179	0.980	34.694	27.832	45.961		2305(I)						13.5				123.4				18*	5179							
215	5390	0.962	34.696	27.835	45.966		2324						12.1	4.18			121.2					5390						23.7	
216	5590	0.947	34.697	27.836	45.969		2319(I)														8 +1.6	5590							
593	5629	0.95	34.705	27.842	45.974		2318(I)		-199.6									29.6**+0.7				5629	0.2+0.6	1.1+0.5					

(I) INTERPOLATED FROM NISKIN DATA

STATION 227 — *CONTINUED*

POSITION: 24°59'N 170°5'E **DATE: 12 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM	MCM			LSU	LDGO SIO*	LDGO	LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE			YALE
217	5718	0.941	34.698	27.837	45.971		2316(I)													8 +1.5	5718							
218	5780	0.938	34.696	27.836	45.970		2315(I)													8 +1.6	5780							
219	5820	0.937	34.697	27.837	45.971		2314(I)													3 +1.6	5820							
220	5849	0.935	34.698	27.838	45.972		2313(I)													5 +1.6	5849							
221	5870	0.934	34.697	27.837	45.971		2312(I)										28.4 +1.0			6 +1.6	5870							
222	5876	0.934	34.698	27.838	45.972		2312(I)													7 +1.6	5876							
224	5885	0.934	34.697	27.837	45.971		2312(I)													8 +1.6	5885							
223	5886	0.935	34.698	27.838	45.972		2312													28*	5886				21.4			
595	5957	0.92	34.692	27.834	45.970				-196.9				11.6			120.3	31.6*+0.5				5957	0.2+0.1	1.1+0.2	0.040+0.010				
												PRECISION:	0.3	0.01	0.06	0.2												

STATION 228

POSITION: 19°1'N 169°21'E **DATE: 15 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO	LDGO	LDGO	LDGO								
501	1	27.73	34.938	22.483	38.609		1927					5.40+0.19									1							
135	10		34.98				1928(I)											0.47 +0.09	0.07+0.06		10							
136	40		34.94				1933(I)											0.35 +0.10	0.15+0.02		40							
502	80	27.71	34.955	22.502	38.628		1939					5.01+0.14									80							
137	80		34.98				1939(I)												0.12+0.03		80							
503	111	25.02	35.146	23.474	39.734		1966(I)					5.93+0.14									111							
504	145	22.35	35.145	24.252	40.658		1997					6.82+0.18									145							
138	150		35.15				1999(I)												0.26+0.04		150							
505	170	20.74	35.076	24.645	41.146		2006(I)					7.39+0.19									170							
506	225	17.24	34.814	25.341	42.064		2021					7.66+0.16									225							
139	250		34.76				2033(I)												0.34+0.05		250							
507	278	15.41	34.623	25.623	42.474		2049(I)					7.48+0.20									278							
508	339	12.60	34.385	26.032	43.094		2089					6.03+0.15									339							
140	350		34.37				2097(I)												0.40+0.05		350							
509	398	10.46	34.250	26.328	43.561		2132(I)					4.76+0.15									398							
510	442	9.06	34.171	26.501	43.855		2166					2.57+0.10									442							
511	487	7.94	34.156	26.662	44.114		2200(I)					1.25+0.08									487							
514	547	6.91	34.193	26.837	44.382		2241					0.28+0.06									547							
525	620	6.09	34.268	27.003	44.621		2280(I)					-0.04+0.06									620							
526	693	5.340	34.320	27.136	44.824		2309					0.01+0.06									693							
527	793	4.81	34.414	27.271	45.008		2321(I)					-0.02+0.06									793							
528	892	4.424	34.472	27.360	45.133		2332					-0.06+0.06									892							
529	991	4.01	34.506	27.430	45.244		2333(I)					0.09+0.05									991							
215	4885	0.970	34.693	27.832	45.962		2292(I)													5 +1.6	4885							
217	5035	0.960	34.693	27.832	45.964		2293(I)													10 +1.6	5035							
218	5106	0.955	34.694	27.833	45.965															14 +1.6	5106							
219	5164	0.954	34.695	27.834	45.966															11 +1.6	5164							
220	5224	0.953	34.694	27.834	45.966															7 +1.6	5224							
221	5265	0.902	34.697	27.839	45.977												28.6 +0.8			8 +1.5	5265							
222	5285	0.901	34.698	27.840	45.978															12 +1.6	5285							
223	5294	0.901	34.697	27.839	45.977															7 +1.6	5294							

STATION 229

POSITION: 12°53'N 173°28'E **DATE: 18 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM				LDGO SIO*		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE			YALE
847	0	27.92	34.44	22.049	38.176																0				15.2 +0.9			8.4 +0.5
701	5	27.99	34.432	22.021	38.145												5.7 +0.2				5							
135	10		34.43						132.8			4.15+0.17					6.0*+0.6		0.11+0.05		10		27.9+1.2	0.049+0.007				
704	38	27.95	34.434	22.035	38.160		1918					4.14+0.18								26*	38							
136	50		34.58				1918(I)		130.8			3.95+0.10					5.2*+0.4				50	19.6+0.8						
289	70	27.87	34.621	22.200	38.325		1927(I)		129.2			4.07+0.11					6.9*+0.5				70		31.7+1.4	0.029+0.009				
290	96	26.82	34.857	22.707	38.880		1953(I)		142.3			4.94+0.12					6.4*+0.8				96							
714	143	23.95	35.035	23.709	40.029		1983					7.05+0.25								32*	143				19.1			
291	172	20.18	34.948	24.697	41.233		2017(I)		152.8			8.98+0.18					7.3*+0.8				172	41.2+1.7	64.2+1.3					
725	193	18.47	34.837	25.057	41.701		2046					9.43+0.24									193							
726	242	13.92	34.454	25.816	42.777		2117					6.64+0.18								19*	242							
293	249	13.65	35.005	26.299	43.266		2123(I)		26.0			6.68+0.19					7.1*+0.6				249		53.3+1.1	0.293+0.023				
727	301	10.33	34.292	26.383	43.626		2168					2.15+0.09								15*	301							
295	345	9.59	34.313	26.525	43.829		2232(I)		-87.9								10.3*+0.7				345	9.0+0.5						
728	350	9.02	34.338	26.638	43.990		2239					0.59+0.06								10*	350							
729	400	7.884	34.306	26.788	44.240		2255					0.14+0.06								10*	400				16.8			
492	444	7.31	34.348	26.903	44.405		2291(I)		-133.8			0.05+0.07									444		19.4+0.6	0.331+0.023				
730	458	6.97	34.353	26.955	44.489		2300					0.04+0.06								16*	458							
731	518	6.48	34.427	27.079	44.655		2282					0.04+0.06								10*	518							
503	589	5.980	34.467	27.175	44.797		2282	-0.13					11.1	4.06	17.52	0.5				18*	589							
732	597	5.98	34.469	27.177	44.800		2289													25*	597							
504	688	5.446	34.489	27.257	44.930		2328														688				15.7			
486	693	5.48	34.490	27.254	44.923		2328(I)		-163.4			0.00+0.06					16.0*+0.9				693	1.5+0.4	-1.0+0.7					
505	789	4.955	34.513	27.334	45.053		2332	0.04					15.2	4.10	17.83	0.2					789							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 229 — *CONTINUED*

POSITION: 12°53'N 173°28'E

DATE: 18 NOV 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	----------MCM----------				LDGO SIO*		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE		YALE	
507	986	4.236	34.542	27.435	45.226		2343	-0.31					18.3	4.11	17.80	0.0					17*	986					17.2	
489	993	4.16	34.546	27.446	45.244		2342(I)		-200.8			0.01+0.06						18.2*+0.5				993		-0.2	0.296+0.023			
508	1084	3.855	34.558	27.487	45.315		2335														17*	1084						
509	1183	3.560	34.565	27.522	45.379		2358	-0.14													14*	1183					18.0	
510	1184	3.558	34.565	27.522	45.380		2359														21*	1184						
511	1280	3.312	34.577	27.555	45.438		2356	-0.98														1280						
490	1291	3.23	34.579	27.564	45.455		2357(I)		-219.0									23.8*+1.1				1291	0.5+0.6				23.5	
512	1403	3.019	34.585	27.588	45.501		2369														15*	1403						
733	1534	2.607	34.600	27.636	45.592		2372														17*	1534						
491	1590	2.59	34.602	27.639	45.596		2373(I)		-230.6									26.5*+0.8				1590		-0.2	0.158+0.013			
734	1683	2.38	34.612	27.664	45.644		2375														11*	1683					23.9	
515	1835	2.231	34.620	27.683	45.678		2375	-1.45														1835						
493	1888	2.15	34.626	27.694	45.698		2358(I)		-242.2									28.6*+0.6				1888	0.1+0.2					
517	1984	2.053	34.632	27.706	45.720		2328	-1.08														1984					25.2	
518	2132	1.910	34.639	27.723	45.752		2340															2132						
519	2274	1.785	34.647	27.739	45.781		2368	-0.59					25.5	4.16	18.17	1.2					27*	2274						
495	2286	1.80	34.645	27.736	45.778		2367(I)		-240.9									31.6*+0.6				2286		-0.2	0.093+0.013			
520	2428	1.680	34.652	27.750	45.804		2354(I)															2428					26.4	
521	2579	1.609	34.656	27.759	45.820		2333	-0.22														2579						
692	2684	1.53	34.662	27.769	45.838		2348(I)		-232.2									32.6*+1.3				2684	0.2+0.7					
522	2732	1.525	34.660	27.768	45.838		2354(I)														21*	2732					24.4	
523	2884	1.465	34.664	27.775	45.852		2375	0.05													20*	2884						
301	3045	1.408	34.667	27.782	45.864		2365															3045					26.4	
524	3134	1.359	34.671	27.788	45.876		2360(I)														10*	3134						
687	3184	1.34	34.674	27.792	45.882		2358(I)		-229.3									36.1*+0.8				3184		-0.2	0.053+0.010			
302	3295	1.315	34.674	27.794	45.887		2355	-0.56														3295					26.1	
303	3543	1.232	34.677	27.802	45.904		2355															3543					26.5	
689	3684	1.17	34.682	27.810	45.918		2352(I)		-225.9									32.2*+0.7				3684	0.3+0.2	-1.6+0.8				
304	3795	1.158	34.680	27.809	45.919		2349	-0.09														3795					26.4	
305	4044	1.093	34.685	27.817	45.934		2341															4044					29.3	
690	4186	1.06	34.691	27.825	45.945		2288(I)		-214.6									31.4*+0.6				4186		2.0+0.8	0.029+0.006			
306	4244	1.041	34.689	27.824	45.946		2267(I)	0.03														4244						
307	4444	0.992	34.691	27.829	45.956		2193															4444					23.6	
308	4543	0.974	34.693	27.831	45.961		2326	0.17														4543						
691	4686	0.94	34.697	27.837	45.970		2320(I)		-197.8									31.3*+0.4				4686	-0.3+0.3					
310	4794	0.914	34.697	27.838	45.975		2310	0.18														4794					18.8	
693	5188	0.89	34.702	27.844	45.983		2308(I)		-193.5									29.5*+0.6				5188		-0.2	0.044+0.011			
312	5195	0.871	34.700	27.844	45.985		2307	0.40					13.0	4.14	18.32	0.4						5195					20.1	
315	5382	0.862	34.700	27.844	45.986		2289(I)														3 +1.6	5382						
316	5481	0.860	34.700	27.844	45.987		2285	0.55														5481					18.0	
317	5481	0.860	34.700	27.844	45.987		2285(I)														7 +1.6	5481						
318	5550	0.858	34.700	27.844	45.987		2290(I)														7 +1.6	5550						
319	5623	0.857	34.700	27.844	45.987		2299(I)														4 +1.6	5623						
320	5652	0.857	34.700	27.844	45.987		2304(I)														9 +1.6	5652						
695	5689	0.85	34.696	27.841	45.985		2312(I)		-183.2									29.3*+0.6				5689	0.0+0.3					
321	5691	0.857	34.700	27.844	45.987		2312(I)											27.3 +0.7			8 +1.6	5691						
322	5711	0.857	34.700	27.844	45.987		2317(I)														9 +1.6	5711						
323	5721	0.857	34.700	27.844	45.987		2319(I)														7 +1.6	5721					17.8	
324	5721	0.857	34.700	27.844	45.987		2319	0.13														5721						
												PRECISION:	0.3	0.01	0.06	0.2												

STATION 230

POSITION: 12°29'N 177°26'E

DATE: 20 NOV 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																											SIO	
101	22	27.632	34.488	22.176	38.316																22						15.9 +0.8	
102	78	25.930	34.908	23.020	39.238																78						17.2 +0.5	
103	119	22.858	35.051	24.037	40.416																119						23.5 +0.7	
104	197	14.986	34.545	25.657	42.540																197						17.3 +0.7	
105	246	11.237	34.310	26.235	43.404																246						22.6 +1.3	
106	297	9.840	34.401	26.552	43.833																297						12.4 +0.7	
107	371	8.878	34.531	26.812	44.170																371						13.7 +0.5	
109	798	5.162	34.520	27.315	45.015																798						15.0 +0.4	
110	1096	3.886	34.553	27.480	45.305																1096						16.1 +0.9	
112	2090	1.863	34.642	27.729	45.763																2090						26.6 +0.9	
115	2434	1.636	34.655	27.756	45.814																2434						25.3 +0.6	
116	2753	1.492	34.666	27.775	45.849																2753						26.1 +0.5	
117	2954	1.401	34.668	27.783	45.866																2954						28.8 +0.9	
118	3153	1.326	34.672	27.791	45.883																3153						27.7 +0.6	
120	3552	1.190	34.681	27.808	45.914																3552						25.9 +0.7	
121	3852	1.101	34.685	27.817	45.933																3852						26.8 +0.5	
122	4252	0.981	34.693	27.831	45.960																4252						23.4 +0.5	
123	4269	0.972	34.693	27.832	45.962																4269						21.9 +0.7	
124	4711	0.884	34.700	27.843	45.982																4711						19.8 +1.0	

(I) INTERPOLATED FROM NISKIN DATA

STATION 231 — **POSITION: 14°6'N 178°38'W** — **DATE: 21 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-8}cc/kg	Ne 10^{-8}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po DPM/100kg
									UM			UM	----------MCM----------					LDGO SIO*		LDGO	LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1147	0	27.22	34.63	22.412	38.570																	0				14.3+*0.8			9.2 +0.5
711	4	27.22	34.632	22.414	38.572		1921					4.78+0.19										4							
927	4						1921(I)											7.0 +0.3				4							
1086	9	27.21	34.633	22.418	38.576		1923(I)															9				7.3 +0.8	4.63 +0.40		
135	10		34.79				1923(I)		145.1			5.14+0.19						5.8*+0.7		0.11+0.03		10	23.5+0.4	31.1+0.3	0.046+0.009				
712	49	27.20	34.646	22.431	38.590		1938(I)					4.53+0.13	-2.0	3.88	16.48	-7.3						49							
136	50		34.87				1938(I)		144.9			4.59+0.14						5.6*+0.6		0.15+0.03		50							
715	89	27.11	34.936	22.677	38.834		1952(I)					4.96+0.16										89							
716	129	23.98	35.072	23.727	40.045		1967					6.61+0.17										129							
137	140		35.10				1978(I)		173.5			7.77+0.15						5.7*+0.4		0.14+0.03		140	34.5+0.5	50.5+1.5	0.097+0.015				
1092	149	22.08	35.134	24.319	40.740		1987(I)															149					0.43 +0.03		
890	195	18.99	34.911	24.981	41.590		2040(I)		161.6			9.45+0.18						6.3*+0.6				195							
717	199	18.33	34.871	25.115	41.767		2045					9.59+0.24										199							
1089	250	13.21	34.415	25.933	42.948		2111(I)															250				12.9 +0.4	0.28 +0.02		
718	277	11.60	34.347	26.195	43.335		2142(I)					4.03+0.11										277							
891	285	11.34	34.359	26.254	43.414		2151(I)		-41.4			3.52+0.09						6.7*+0.7				285	20.5+0.7	27.8+0.5	0.340+0.030				
893	345	9.38	34.410	26.636	43.955		2212(I)		-102.2			0.41+0.06						10.1*+0.6				345							
719	397	8.98	34.459	26.740	44.092		2256					0.14+0.06										397							
492	446	8.05	34.492	26.909	44.342		2258(I)		-121.3									10.3*+0.5				446	0.4+1.1	0.6+0.3	0.420+0.030				
1090	450	7.95	34.474	26.909	44.350		2258(I)															450				10.4 +0.6	0.20 +0.02		
920	552	6.86	34.482	27.072	44.612		2263					0.16+0.06										552							
721	693	5.90	34.506	27.216	44.845		2328					-0.10+0.06										693				17.7*			
487	796	5.21	34.518	27.308	45.003		2350(I)		-172.1									17.3*+0.5				796							
1091	803	5.27	34.507	27.292	44.981		2351(I)															803				12.6 +0.4	0.32 +0.04		
722	891	4.82	34.524	27.357	45.089		2358															891				23.6*			
723	1136	3.80	34.551	27.487	45.321		2342															1136				19.9*			
489	1141	3.54	34.560	27.519	45.379		2342(I)		-211.0									20.2*+0.6				1141	-0.8+0.3	-0.3+0.3	0.150+0.020				
292	1192	3.54	34.562	27.522	45.382		2342(I)															1192				14.0 +0.6	0.78 +0.04		
490	1589	2.57	34.597	27.636	45.596		2349(I)											25.1*+1.3				1589							
725	1630	2.50	34.602	27.646	45.613		2350(I)						23.1	4.28	18.80	0.2						1630							
287	1789	2.24	34.615	27.678	45.673		2356(I)															1789				16.7 +1.9			
726	1876		34.624				2359(I)															1876				28.2*			
491	1984	2.00	34.631	27.710	45.730		2365(I)		-242.4									29.0*+0.8				1984		1.2+0.3	0.130+0.020				
728	2369	1.69	34.647	27.746	45.798		2376															2369				27.1*			
493	2379	1.70	34.653	27.750	45.801		2375(I)		-241.7									31.5*+0.8				2379							
289	2485	1.66	34.655	27.755	45.811		2366(I)															2485				19.0 +0.6	0.51 +0.03		
495	2574	1.60	34.657	27.760	45.822		2358(I)		-237.2									31.6*+0.5				2574	0.1+0.6		0.040+0.010				
729	2617	1.56	34.656	27.762	45.829		2354(I)															2617				27.2*			
895	2775	1.48	34.662	27.772	45.847		2342(I)		-235.4									32.4*+0.8				2775							
730	2864	1.43	34.665	27.779	45.859		2336(I)															2864				34.3*			
731	3111	1.33	34.670	27.789	45.880		2321															3111				32.5*			
290	3182	1.33	34.666	27.786	45.877		2325(I)															3182				19.5 +0.6	0.89 +0.03		
692	3201	1.29	34.674	27.796	45.891		2326(I)											33.6*+0.6				3201	-0.2+0.9		0.080+0.020				
732	3362	1.24	34.675	27.800	45.900		2337															3362				31.5*			
687	3597	1.19	34.683	27.809	45.916		2347(I)		-232.2									33.4*+0.6				3597							
733	3612	1.18	34.678	27.806	45.913		2347(I)															3612				26.4*			
291	3978	1.12	34.672	27.805	45.920		2345(I)															3978				16.6 +0.8	1.55 +0.04		
689	3995	1.11	34.687	27.818	45.934		2344(I)		-218.8									34.0*+0.9				3995	1.0+0.1	-0.5+0.3	0.007+0.005				
520	4207	1.05	34.688	27.823	45.944		2330(I)						13.9	4.29	18.93	0.4						4207							
521	4356	0.98	34.692	27.830	45.959		2322(I)															4356				25.8*			
690	4393	0.96	34.694	27.833	45.964		2320(I)		-202.3									31.7*+0.7				4393							
523	4653	0.904	34.698	27.840	45.977		2309(I)															4653				23.5*			
293	4675	0.91	34.698	27.840	45.977		2308(I)															4675				15.3 +0.7	1.16 +0.06		
691	4795	0.89	34.699	27.842	45.981		2304(I)		-188.6									27.7*+0.4				4795	0.2+0.3	0.2+1.0	0.033+0.014				
525	5025	0.87	34.699	27.843	45.984		2297															5025				19.7*			
693	5194	0.87	34.701	27.844	45.986		2309(I)		-183.3									28.2*+0.5				5194							
527	5420	0.86	34.699	27.843	45.986		2306(I)														9 +1.6	5420							
528	5427	0.86	34.700	27.844	45.987		2306															5427				19.2*			
529	5511	0.87	34.700	27.844	45.985		2298(I)														12 +1.6	5511							
530	5562	0.85	34.700	27.845	45.988		2291(I)														5 +1.6	5562							
695	5596	0.85	34.698	27.843	45.987		2285(I)		-186.6									28.2*+0.7				5596	0.5+0.2	-0.3+0.3	0.049+0.013				
531	5611	0.85	34.700	27.845	45.988		2283(I)											27.3 +0.4			4 +1.6	5611							
295	5620	0.85	34.699	27.844	45.987		2281(I)															5620				17.2 +0.8	1.31 +0.03		
532	5642	0.84	34.700	27.845	45.990		2277(I)														5 +1.6	5642							
533	5647	0.84	34.699	27.845	45.989		2276						13.4	4.20	18.85	-1.2						5647				23.7*			
534	5651	0.85	34.698	27.843	45.987																4 +1.6	5651							
											PRECISION:		0.3	0.01	0.06	0.2														

STATION 233 — **POSITION: 18°13'N 169°8'W** — **DATE: 26 NOV 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-8}cc/kg	Ne 10^{-8}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po DPM/100kg
																		LDGO		LDGO			WHOI	WHOI	WHOI	YALE			YALE
547	0	26.52	34.66	22.652	38.845																	0				14.2 +0.7			10.0 +0.5
228	5						1944(I)											6.2 +0.1				5							
135	10		34.58				1944(I)													0.11+0.04		10							
136	60		34.77				1948(I)													0.05+0.03		60							
137	100		34.83				1969(I)													0.03+0.05		100							
138	150		35.02				2025(I)													0.11+0.04		150							
139	250		34.36				2089(I)													0.27+0.07		250							

(I) INTERPOLATED FROM NISKIN DATA

STATION 235 | **POSITION: 16°45'N 161°19'W** | **DATE: 6 DEC 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	MCM	MCM	MCM		USC		LDGO	LDGO		WHOI	WHOI	WHOI				
601	3	25.849	34.262	22.558	38.795	0.5	1932	0.33				4.87+0.19									3							
135	10		34.31				1928(I)		144.7			4.70+0.19					5.7 +0.3		0.07+0.02		10		32.9+1.0	0.060+0.020				
602	17	25.821	34.262	22.567	38.805		1925(I)					4.42+0.11									17							
603	33	25.837	34.273	22.570	38.807		1916	0.79				4.56+0.18									33							
136	40		34.398				1925(I)		149.3			4.83+0.11					7.3 +0.3				40	24.7+1.0	33.5+1.4					
604	63	25.904	34.771	22.925	39.147		1961					5.03+0.14									63							
137	70		34.61				1964(I)		151.0								7.0 +0.4				70		35.5+1.0	0.075+0.015				
605	93	24.692	34.792	23.306	39.592		1974(I)					5.61+0.17									93							
606	128	22.026	34.902	24.159	40.589	0.2	1990	0.18				7.90+0.19									128							
138	130		34.906				1993(I)		159.9			7.85+0.15					7.0 +0.2				130	37.1+1.9						
607	160	19.246	34.929	24.928	41.521		2042					10.60+0.30									160							
608	200	16.511	34.708	25.434	42.208		2063					10.30+0.30									200							
609	242	13.157	34.343	25.889	42.910		2111					9.11+0.23									242							
786	275	10.62	34.213	26.271	43.493		2129(I)		-43.4								8.4 +0.3				275		31.9+1.0	0.420+0.020				
610	284	10.888	34.215	26.224	43.425		2134	-0.13				4.95+0.13									284							
787	314	9.56	34.217	26.455	43.764		2173(I)		-81.8								10.4 +0.3				314	12.0+0.7						
611	324	9.793	34.213	26.414	43.704	6.7	2185					2.39+0.09									324							
793	354	8.23	34.188	26.644	44.069		2199(I)		-101.8			0.59+0.06					11.3 +0.4				354		5.6+1.0	0.430+0.040				
615	428	7.761	34.297	26.799	44.262		2243(I)					0.05+0.07									428							
616	463	7.512	34.358	26.883	44.367		2270					0.04+0.06									463							
794	495	6.84	34.389	27.001	44.545		2295(I)		-139.6			-0.04+0.08					14.9 +0.3				495	1.0+0.6						
617	503	6.961	34.387	26.983	44.516	12.4	2300	-0.33				0.00+0.06									503							
589	586	6.49	34.443	27.089	44.664		2312(I)		-144.6								15.7 +0.3				586							
795	592	6.19	34.445	27.131	44.734		2313(I)		-150.3			0.09+0.06					15.2 +0.4				592			0.460+0.060				
619	598	6.263	34.457	27.131	44.727		2314	-0.26				0.15+0.05									598							
620	673	5.855	34.459	27.184	44.818		2319					0.22+0.05									673							
590	696	5.81	34.464	27.193	44.831		2323(I)		-158.1								16.6 +0.6				696	1.6+0.4	-0.1+0.3					
621	750	5.357	34.476	27.258	44.939	11.1	2333	-0.52													750							
623	920	4.639	34.518	27.373	45.124		2354					0.07+0.05	13.7								920							
801	955	4.498	34.521	27.391	45.155	10.5	2351(I)														955							
624	1006	4.322	34.525	27.413	45.195	10.6	2347	-0.43				0.05+0.05									1006							
591	1080	4.04	34.534	27.449	45.258		2358(I)		-204.4								19.4 +0.6				1080			0.110+0.030				
802	1104	3.942	34.527	27.454	45.274		2362	-0.33													1104							
804	1400	3.070	34.571	27.572	45.480	10.8	2363(I)														1400							
592	1496	2.80	34.589	27.611	45.547		2366(I)		-234.7								24.4 +0.3				1496	0.8+0.2						
805	1549	2.699	34.591	27.621	45.567		2368	-0.72													1549							
807	1845	2.203	34.613	27.679	45.678	9.3	2377	-0.56													1845							
593	1894	2.08	34.623	27.697	45.708		2372(I)		-237.4								28.3 +0.3				1894			0.030+0.020				
594	2293	1.73	34.641	27.738	45.786		2368(I)		-243.1								29.8 +0.4				2293	0.2+0.3						
810	2296	1.725	34.646	27.742	45.791	8.5	2368	-0.85													2296							
595	2690	1.53	34.655	27.764	45.834		2367(I)		-250.2								33.6 +0.5				2690							
815	2748	1.484	34.661	27.772	45.846	6.7	2369	-0.61													2748							
816	2896	1.429	34.665	27.779	45.859		2368(I)						20.8								2896							
387	3105	1.33	34.672	27.791	45.883		2364(I)		-246.0								38.0 +1.4				3105	-1.2+0.2						
818	3197	1.321	34.671	27.791	45.883	7.6	2358	-0.56													3197							
389	3505	1.22	34.679	27.804	45.907		2356(I)		-231.5								38.0 +0.8				3505			0.020+0.020				
821	3644	1.202	34.678	27.804	45.910	6.7	2348(I)														3644							
401	3889	1.14	34.683	27.812	45.924	6.7	2349														3889							
390	3905	1.14	34.682	27.812	45.923		2349(I)		-221.2								36.7 +0.4				3905	0.3+0.4	0.6+0.6					
823	3945	1.138	34.683	27.813	45.925	6.5	2350	-0.06													3945							
402	4041	1.11	34.685	27.816	45.932		2347(I)	-0.43													4041							
391	4305	1.08	34.686	27.819	45.938		2333(I)		-211.3								38.4 +0.8				4305							
404	4343	1.06	34.687	27.821	45.941	6.3	2331	-0.82					13.6								4343							
406	4640	1.01	34.692	27.828	45.955		2320	-0.22													4640							
392	4707	1.00	34.692	27.829	45.955		2322(I)		-207.8								33.9 +0.5				4707	0.3+0.7						
407	4788	0.97	34.694	27.832	45.963	5.8	2325														4788							
408	4936	0.962	34.695	27.834	45.965		2326	-0.09													4936							
393	5108	0.96	34.696	27.835	45.967		2322(I)		-198.5								32.3 +0.6				5108			0.013+0.010				
414	5233	0.94	34.696	27.836	45.969	4.7	2316														5233							
425	5249	0.938	34.696	27.836	45.970		2315(I)														5249	8 +1.6						
426	5317	0.934	34.696	27.836	45.971		2312(I)														5317	11 +1.9						
427	5377	0.928	34.696	27.837	45.972		2309(I)														5377	10 +1.6						
429	5425	0.92	34.696	27.837	45.974		2309(I)														5425	12 +1.6						
430	5466	0.92	34.697	27.838	45.974		2308(I)														5466	10 +1.6						
431	5496	0.93	34.697	27.838	45.973		2308(I)														5496	13 +1.6						
394	5510	0.92	34.691	27.833	45.969		2308(I)		-200.3								35.0 +0.4				5510	0.8+0.3						
432	5516	0.924	34.696	27.837	45.972		2308(I)														5516	18 +1.6						
433	5525	0.927	34.698	27.838	45.973	5.9	2308	-0.07													5525							
434	5530	0.929	34.697	27.837	45.972																5530	8 +1.6						

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.3

STATION 237

POSITION: 12°30'N 165°25'W

DATE: 8 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM								LDGO								
201	3	26.41	34.203	22.343	38.551		2021					5.15+0.18									3							
202	33	26.39	34.204	22.349	38.558		1930					4.72+0.12									33							
203	52	24.46	34.640	23.261	39.562		1985					6.89+0.25									52							
204	92	20.41	34.868	24.575	41.099		2031					10.10+0.30									92							
205	126	15.51	34.537	25.533	42.380		2102					9.78+0.25									126							
206	152	12.70	34.357	25.992	43.046		2151					5.98+0.16									152							
207	200	10.86	34.494	26.445	43.640		2246					0.86+0.07									200							
208	250	9.84	34.556	26.673	43.949		2257					0.17+0.06									250							
209	300	9.41	34.616	26.792	44.104		2286					0.06+0.06									300							
210	373	8.51	34.582	26.909	44.299		2294					0.00+0.06									373							
211	448	7.90	34.561	26.985	44.428		2321					0.00+0.06									448							
115	4803	0.895	34.696	27.839	45.977		2322(I)													3 +1.6	4803							
116	4873	0.885	34.698	27.841	45.981		2317(I)													3 +1.6	4873							
118	4942	0.880	34.698	27.841	45.981		2313(I)													5 +1.6	4942							
119	4962	0.877	34.698	27.842	45.982		2313(I)													3 +1.6	4962							
120	4982	0.870	34.699	27.843	45.984		2313(I)													5 +1.6	4982							
121	4996	0.870	34.699	27.843	45.984		2313(I)													8 +1.6	4996							
123	5012	0.864	34.699	27.843	45.985		2313(I)													5 +1.6	5012							
124	5021	0.863	34.699	27.843	45.985															8 +1.6	5021							

STATION 238

POSITION: 8°11'N 167°4'W

DATE: 10 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO		LDGO	LDGO								
501	2	27.12	34.894	22.642	38.799												8.0 +0.6				2							
502	9	27.11	34.894	22.646	38.803		1951					3.46+0.14									9							
135	10		34.92				1951(I)												0.06+0.07		10							
506	73	26.74	34.971	22.818	38.992		1981					3.29+0.11									73							
136	75		34.91				1982(I)												0.03+0.12		75							
509	107	22.40	34.934	24.079	40.487		2002					8.27+0.15									107							
137	110		34.96				2008(I)												0.10+0.03		110							
512	145	17.17	34.723	25.290	42.020		2089(I)					10.00+0.25									145							
138	160		34.539				2128(I)												0.11+0.03		160							
514	176	13.80	34.527	25.897	42.865		2171					4.68+0.11									176							
525	209	11.518	34.639	26.438	43.576		2224(I)					0.94+0.08									209							
139	220		34.72				2238(I)												0.07+0.04		220							
526	242		34.722				2261					-0.02+0.06									242							
301	262	10.537	34.713	26.674	43.889		2276					0.00+0.06									262							
140	300		34.70				2274(I)												0.02+0.02		300							
302	303	10.004	34.698	26.756	44.015		2273(I)					0.09+0.06									303							
429	2706		34.665				2363					0.01+0.07									2706							
215	4936	0.854	34.703	27.847	45.990		2302(I)													7 +2.6	4936							
216	5001	0.850	34.701	27.846	45.989		2294(I)													4 +2.2	5001							
218	5056	0.847	34.701	27.846	45.990		2287(I)													5 +1.6	5056							
219	5098	0.845	34.701	27.846	45.990		2290(I)													5 +1.9	5098							
220	5137	0.843	34.700	27.845	45.989		2297(I)													13 +2.5	5137							
221	5161	0.841	34.701	27.846	45.991		2303(I)													3 +1.6	5161							
222	5180	0.838	34.701	27.846	45.991		2309(I)													8 +2.3	5180							
224	5188	0.838	34.702	27.847	45.992		2312(I)													20 +2.9	5188							

STATION 239

POSITION: 5°53'N 172°0'W

DATE: 12 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM	----------SIO----------				LDGO USC*		LDGO	LDGO		WHOI	WHOI	WHOI				
835	5		35.02																0.08+0.03		5							
836	10		35.03						83.9								7.7**+0.2				10	22.2+1.6	24.5+0.5	0.060+0.020				
501	11	25.95	35.021	23.100	39.315							3.70+0.14	-0.8	3.79	14.98	0.4					11							
502	50	25.56	35.039	23.232	39.466		2017					3.21+0.11									50							
837	50		35.03				2017(I)		78.8								6.6**+0.4				50	16.1+0.4	21.7+0.4	0.041+0.011				
689	80	25.41	35.158	23.368	39.607		2023(I)		70.0								10.2**+0.3				80	17.4+1.0	22.3+1.4	0.040+0.030				
503	85	25.25	35.119	23.386	39.634		2024					3.24+0.10									85							
690	125	25.47	35.330	23.479	39.711		2038(I)		74.7								9.0**+0.2				125	14.3+0.4	21.0+0.7	0.052+0.014				
504	131	25.45	35.319	23.476	39.710		2040					3.21+0.11	-1.8								131							
505	181	23.89	35.119	23.790	40.111		2061(I)					3.45+0.12									181							
691	205	19.86	34.836	24.696	41.254		2071(I)		52.8			4.72+0.14					9.2**+0.3				205	18.8+1.0	35.3+1.8	0.090+0.030				
506	210	21.17	34.897	24.392	40.872		2073					4.63+0.13									210							
525	245	14.04	34.600	25.903	42.852		2186					3.53+0.12									245							
692	293	10.42	34.649	26.645	43.871		2249(I)		-96.1			0.29+0.08					12.2**+0.2				293	2.8+0.5	4.6+0.3	0.172+0.005				
526	299	10.05	34.666	26.722	43.978		2252					0.05+0.06	2.7	4.19	17.45	2.3					299							
527	373	9.14	34.655	26.867	44.200		2263					0.03+0.05									373							
693	440	8.64	34.635	26.931	44.308		2266(I)		-101.3								13.8**+0.5				440	0.7+0.8	0.2+0.6	0.280+0.070				
528	446	8.41	34.621	26.955	44.352		2266					-0.02+0.06									446							
694	637	7.07	34.571	27.113	44.631		2311(I)		-136.9			-0.10+0.06					15.9**+0.8				637		-0.9+0.3	0.223+0.030				
530	642	6.87	34.568	27.138	44.674		2312						7.2								642							
532	859	5.06	34.549	27.351	45.059		2325						10.7								859							
489	865	5.23	34.545	27.327	45.019		2326(I)		-165.8								18.2**+0.4				865			0.240+0.040				
534	1038	4.23	34.562	27.452	45.243		2352						14.8	4.25	17.72	5.0					1038							
695	1044	4.28	34.560	27.445	45.231		2352(I)		-189.5								22.0**+0.4				1044	0.8	-0.3+0.2	0.106+0.015				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 239 — *CONTINUED*

POSITION: 5°53′N 172°0′W

DATE: 12 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM	----------SIO----------					LDGO USC*		LDGO	LDGO		WHOI	WHOI	WHOI			
490	1294	3.57	34.580	27.532	45.389		2349(I)											23.6**0.3				1294						
304	1354	3.380	34.586	27.555	45.431		2352						17.5									1354						
306	1649	2.689	34.608	27.635	45.582		2361						17.1									1649						
491	1693	2.59	34.616	27.650	45.607		2364(I)		-221.3									24.3**0.3				1693	1.9	-0.3+0.2	0.039+0.007			
308	1946	2.242	34.631	27.691	45.684		2380						21.0									1946						
492	2092	2.05	34.642	27.714	45.728		2368(I)		-237.8									28.6**0.7				2092						
310	2248	1.901	34.647	27.730	45.760		2374(I)						19.2									2248						
493	2491	1.69	34.658	27.754	45.806		2380(I)		-240.8									31.1**0.4				2491	1.1	0.4+0.3	0.033+0.009			
312	2540	1.701	34.658	27.754	45.805		2378						26.0									2540						
315	2852	1.555	34.665	27.770	45.837		2365(I)						21.6									2852						
494	2890	1.53	34.667	27.774	45.843		2365(I)		-236.5									31.4**0.5				2890						
317	3152	1.402	34.672	27.786	45.869		2367						20.0	4.34	18.26	5.3						3152						
289	3290	1.31	34.676	27.796	45.889		2356(I)		-228.9									31.7**0.4				3290	0.7	-0.6+0.2	0.045+0.011			
319	3402	1.301	34.677	27.797	45.891		2356(I)						19.4	4.47	18.71	5.8						3402						
290	3490	1.27	34.678	27.800	45.898		2357(I)		-227.4									31.7**0.7				3490						
320	3503	1.273	34.678	27.800	45.897		2357						15.6									3503						
321	3602	1.240	34.680	27.804	45.904		2354						17.9									3602						
291	3690	1.19	34.683	27.809	45.915		2368(I)		-217.7									30.9**0.9				3690	0.3+0.3		0.034+0.013			
322	3700	1.205	34.681	27.807	45.911		2370						16.3									3700						
102	3820	1.103	34.686	27.817	45.933		2334						15.3	4.39	18.64	4.6						3820						
495	3839	1.12	34.685	27.816	45.930		2334(I)		-203.6									31.6**0.4				3839						
104	4119	0.981	34.692	27.830	45.959		2328						11.2									4119						
292	4140	1.00	34.692	27.829	45.956		2327(I)		-202.7									31.7**0.6				4140	0.7+0.5		0.041+0.012			
106	4419	0.889	34.697	27.840	45.979		2314						12.1	4.44	18.89	4.4						4419						
293	4591	0.87	34.699	27.843	45.984		2333(I)		-192.5									29.6**0.8				4591						
108	4720	0.843	34.699	27.844	45.989		2333						11.0	4.38	18.67	4.1						4720						
110	5022	0.832	34.700	27.846	45.991		2312						9.3									5022						
294	5041	0.86	34.697	27.842	45.984		2312(I)		-187.2									29.1**0.5				5041			0.117+0.024			
112	5325	0.825	34.700	27.846	45.993		2300						10.4	4.31	18.40	4.1						5325						
115	5360	0.827	34.700	27.846	45.992		2302(I)														6 +1.6	5360						
116	5426	0.826	34.701	27.847	45.993		2307(I)														5 +1.6	5426						
118	5483	0.827	34.701	27.847	45.993		2312(I)														7 +1.6	5483						
295	5491	0.83	34.699	27.845	45.990		2312(I)		-176.9													5491						
119	5528	0.827	34.701	27.847	45.993		2312(I)														8 +1.6	5528						
120	5564	0.827	34.701	27.847	45.993		2313(I)														6 +1.6	5564						
121	5584	0.826	34.701	27.847	45.993		2313(I)											28.0 +0.8			10 +1.6	5584						
122	5594	0.827	34.701	27.847	45.993		2313						10.5									5594						
123	5594	0.826	34.701	27.847	45.993		2313(I)														7 +1.6	5594						
124	5605	0.826	34.701	27.847	45.993		2313(I)														8 +1.6	5605						
324	5755	0.819	34.702	27.848	45.995		2307						9.0								4 +1.6	5755						
												PRECISION:	1.0	0.01	0.06	0.2												

STATION 240

POSITION: 3°23′N 177°11′W

DATE: 15 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																				LDGO									
136	90		35.09																	0.10+0.03		90							
137	130		35.10																	0.08+0.03		130							
138	160		35.07				2024(I)													0.17+0.04		160							
139	230		34.58				2179(I)													0.10+0.03		230							
140	300		34.57				2209(I)													0.06+0.03		300							

STATION 241

POSITION: 4°33′N 179°0′E

DATE: 17 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM	----------MCM----------				LSU	SIO		LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1047	0	27.24	35.10	22.759	38.906																	0				11.1**0.7			4.5 +0.6
687	1	27.21	35.105	22.772	38.920																	1				7.8 +0.7	0.50 +0.04		
401	4	27.18	35.123	22.796	38.945		1996	0.57				3.48+0.15					34.1					4							
887	5	27.17	35.097	22.780	38.930		1996(I)		87.4									7.0 +0.9				5	20.0+1.3	26.5+1.1	0.100+0.050				
402	25	27.16	35.125	22.802	38.952		1999(I)					2.97+0.09	-1.5	3.83	15.08	0.1						25							
403	49	27.16	35.130	22.808	38.958		2002(I)	0.53				3.09+0.10					33.9					49							
889	50	27.16	35.114	22.794	38.944		2002(I)		89.2			3.14+0.11						6.0 +0.4				50	17.3+1.1						
404	99	26.77	35.181	22.968	39.137		2009					3.01+0.09										99							
405	149	26.08	35.220	23.208	39.411		2036	0.92				3.12+0.10					35.4					149							
890	150	26.31	35.230	23.147	39.338		2037(I)		81.8			2.93+0.11						5.0 +0.5				150	17.8+1.1	24.8+0.5	0.050+0.030				
406	188	25.36	35.187	23.405	39.646		2072(I)					3.40+0.10										188							
407	227	16.89	34.725	25.357	42.105		2107	0.16				4.70+0.12					36.1					227							
891	230	14.04	34.558	25.872	42.822		2118(I)		0.4									12.6 +0.5				230	22.5+0.5	29.5+0.9					
408	258	11.69	34.582	26.362	43.489		2218					1.59+0.07										258							
409	291	10.05	34.640	26.703	43.961		2252	-0.09				0.40+0.06	3.9				46.2					291							
689	293	9.63	34.647	26.780	44.071		2252(I)															293				9.5 +0.8	0.34 +0.05		
892	295	9.56	34.646	26.791	44.089		2252(I)		-102.7			0.25+0.07						12.5 +0.6				295	1.6+0.5	1.4+0.4	0.260+0.040				
414	355	8.95	34.640	26.885	44.235		2252(I)					0.04+0.06										355							
425	420	8.35	34.611	26.956	44.358		2252	-0.02				0.11+0.06					53.0					420							
893	425	8.15	34.608	26.985	44.405		2252(I)		-112.1									13.1 +0.7				425							

(I) INTERPOLATED FROM NISKIN DATA

STATION 241 — *CONTINUED*

POSITION: 4°33'N 179°0'E

DATE: 17 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UW			UM	MCM				LSU	SIO			LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
426	493	7.89	34.599	27.017	44.460		2262						6.6	4.04	17.40	-0.1						493							
894	549	7.31	34.583	27.088	44.584		2282(I)		-121.0									15.6 +0.9				549	0.5+0.8	0.5+0.4	0.210+0.050				
427	553	7.42	34.586	27.074	44.560		2283	-0.08									57.9					553							
429	665	6.57	34.564	27.175	44.740		2306	-0.15					9.2	4.07	17.45	1.0	63.6					665							
895	674	6.41	34.560	27.192	44.771		2306(I)		-134.3									16.1 +0.5				674	1.1+0.7						
430	762	5.95	34.550	27.244	44.867		2303										68.5					762							
432	933	5.00	34.543	27.352	45.067		2318	-0.06					13.1	4.11	17.72	1.0	80.5					933							
886	947	4.89	34.549	27.369	45.094		2317(I)		-164.4									18.7 +0.9				947							
690	952	4.93	34.544	27.361	45.083		2317(I)															952				11.7 +1.6	0.35 +0.02		
434	1076	4.391	34.554	27.428	45.202		2334	-0.20									89.5					1076							
691	1102	4.31	34.557	27.439	45.222		2342(I)		-189.8									21.6 +0.6				1102							
702	1152	4.132	34.560	27.460	45.260		2355(I)						15.3	4.24	18.17	2.1						1152							
703	1253	3.725	34.572	27.511	45.352		2373	-0.39									98.1					1253							
704	1401	3.225	34.589	27.572	45.464		2364						23.4				107.1					1401							
692	1501	2.91	34.601	27.611	45.535		2369(I)		-226.8									26.5 +0.8				1501							
986	1543	2.80	34.607	27.625	45.560		2372(I)															1543				13.7 +1.2	0.45 +0.05		
705	1549	2.821	34.604	27.621	45.554		2372(I)										114.2					1549							
706	1698	2.502	34.617	27.658	45.625		2380	-0.46					22.9	4.29	18.43	2.5						1698							
707	1846	2.270	34.627	27.685	45.676		2396										124.1					1846							
693	1898	2.27	34.628	27.686	45.678		2393(I)		-229.0									28.2 +0.8				1898							
708	1997	2.083	34.637	27.708	45.718		2387(I)						25.2	4.26	18.28	2.9	131.0					1997							
995	2044	2.04	34.641	27.715	45.730		2383(I)															2044				12.5 +0.8	0.56 +0.08		
709	2147	1.898	34.648	27.731	45.761		2375	-0.57														2147							
694	2247	1.84	34.649	27.736	45.772		2381(I)		-234.3									30.0 +0.6				2247							
710	2297	1.762	34.653	27.745	45.790		2385						25.7	4.31	18.49	3.1	135.2					2297							
711	2397	1.698	34.657	27.753	45.805		2384(I)	-0.30														2397							
712	2499	1.647	34.660	27.759	45.816		2382(I)						23.7	4.29	18.34	3.5	137.4					2499							
994	2544	1.63	34.659	27.759	45.818		2382(I)															2544				17.4 +0.5	0.47 +0.03		
695	2593	1.62	34.660	27.761	45.821		2381(I)											30.1 +0.8				2593							
713	2650	1.587	34.662	27.765	45.829		2380	-0.17														2650							
714	2799	1.527	34.665	27.772	45.842		2376										137.6					2799							
686	2990	1.437	34.668	27.780	45.860		2380(I)		-227.7									31.6 +0.6				2990							
993	3043	1.40	34.671	27.786	45.869		2382(I)															3043				17.4 +1.1	0.47 +0.05		
716	3098	1.385	34.671	27.786	45.872		2383	-0.27					20.2	4.28	18.48	2.7	136.7					3098							
286	3359	1.27	34.676	27.799	45.897		2360(I)		-222.9									34.1 +0.6				3359							
718	3397	1.278	34.676	27.798	45.895		2360(I)						17.6				135.7					3397							
992	3543	1.22	34.680	27.805	45.907		2364(I)															3543					0.97 +0.09		
719	3546	1.224	34.678	27.803	45.906		2364	-0.26														3546							
287	3658	1.18	34.682	27.809	45.917		2350(I)		-216.5									31.5 +0.6				3658							
720	3696	1.171	34.682	27.810	45.918		2346						16.8				134.3					3696							
101	3847	1.107	34.685	27.816	45.932		2352						15.0				132.6					3847							
289	3858	1.10	34.687	27.819	45.935		2351(I)		-216.8									32.9 +0.6				3858							
991	3943	1.074	34.687	27.820	45.939		2342(I)															3943				20.0 +1.9	0.92 +0.03		
103	4047	1.010	34.690	27.827	45.953		2337	-0.39					13.0	4.31	18.64	2.5	128.5					4047							
290	4058	1.00	34.691	27.828	45.955		2336(I)		-202.8									25.9 +0.5				4058							
105	4236	0.918	34.695	27.837	45.973		2330						13.0	4.25	18.58	1.5						4236							
291	4264	0.92	34.695	27.836	45.972		2330(I)		-194.6									31.4 +1.0				4264							
106	4395	0.874	34.698	27.842	45.982		2331										121.4					4395							
990	4494	0.89	34.698	27.841	45.980		2334(I)															4494					0.75 +0.03		
107	4545	0.853	34.698	27.843	45.986		2335						11.4									4545							
292	4563	0.854	34.698	27.843	45.986		2335(I)		-181.0									30.0 +0.6				4563							
108	4694	0.839	34.699	27.845	45.989		2330(I)										118.0					4694							
109	4843	0.831	34.700	27.846	45.991		2320						11.6	4.31	18.72	2.1						4843							
293	4958	0.84	34.699	27.845	45.989		2309(I)		-187.2									28.1 +1.1				4958							
110	4994	0.826	34.700	27.846	45.992		2306	-0.38									115.9					4994							
989	5045	0.85	34.699	27.844	45.988		2306(I)															5045					1.03 +0.03		
111	5145	0.820	34.700	27.847	45.993		2306(I)						11.8	4.26	18.64	1.6	115.6					5145							
294	5359	0.84	34.694	27.841	45.986		2306(I)		-187.5									28.4 +0.6				5359							
114	5442	0.815	34.701	27.848	45.995		2307	-0.34					10.8				114.4					5442							
115	5488	0.815	34.701	27.848	45.995		2308(I)														6 +1.6	5488							
116	5566	0.813	34.700	27.847	45.995		2312(I)														14 +1.6	5566							
117	5590	0.813	34.700	27.847	45.995		2313(I)	0.13									113.8					5590							
987	5596	0.82	34.702	27.848	45.994		2314(I)															5596				16.1 +0.9	1.19 +0.03		
118	5628	0.812	34.700	27.847	45.995		2316(I)														2 +1.6	5628							
119	5667	0.813	34.701	27.848	45.995		2319(I)														8 +1.6	5667							
295	5670	0.81	34.699	27.847	45.995		2319(I)		-185.0									29.0 +0.6				5670	-0.2+0.5	0.060+0.020					
120	5695	0.813	34.700	27.847	45.995		2321(I)														7 +1.6	5695							
121	5716	0.813	34.701	27.848	45.995		2323(I)														6 +1.6	5716							
122	5724	0.813	34.701	27.848	45.995		2324(I)														4 +1.6	5724							
123	5726	0.812	34.701	27.848	45.996		2324	0.20					11.9	4.20	18.30	2.0	114.0					5726							
124	5728	0.813	34.701	27.848	45.995																6 +1.6	5728							
												PRECISION:	0.3	0.01	0.06	0.2													

STATION 244

POSITION: 1°1'N 178°55'E

DATE: 20 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
												UM																	
301	5	25.945	35.112	23.169	39.382							3.31+0.14										5							
302	63	25.794	35.117	23.219	39.439		2034					3.05+0.10										63							
303	104	24.433	35.100	23.616	39.908		2052(I)					2.81+0.10										104							
304	167	22.961	35.283	24.183	40.551		2080(I)					2.75+0.12										167							
305	196	18.637	34.975	25.118	41.748		2093					3.85+0.12										196							
306	201	17.533	34.859	25.305	42.008		2099(I)					3.99+0.11										201							
307	242	14.295	34.929	26.103	43.025		2148					2.01+0.08										242							
308	275	12.540	34.830	26.389	43.443		2182(I)					1.14+0.09										275							
309	375	10.141	34.737	26.763	44.009		2253					0.16+0.06										375							
310	485	8.761	34.652	26.925	44.290		2278					0.01+0.06										485							

(I) INTERPOLATED FROM NISKIN DATA

STATION 246 — **POSITION: 0°0'S 179°0'E** — **DATE: 21 DEC 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UW			UM					LDGO SIO*		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI				
502	10	25.860	35.196	23.259	39.474	0.8	2010	1.30				2.97+0.12								44*	10							
135	10		35.21				2010(I)		71.9			2.99+0.12					5.8**0.6		0.03+0.02		10	19.5+1.0	26.5+1.4	0.100+0.040				
501	11	25.857	35.196	23.259	39.475		2012(I)										10.1 +0.7				11							
503	35	25.794	35.198	23.280	39.499		2035(I)													15*	35							
504	35	25.794	35.200	23.282	39.500		2035	1.01				2.76+0.09								13*	35							
506	54	25.755	35.209	23.300	39.521	0.9	2031	1.08				2.85+0.09								34*	54							
505	55	25.754	35.208	23.300	39.520		2031(I)													11*	55							
508	84	25.715	35.233	23.331	39.552	1.2	2039	1.37				2.93+0.11								25*	84							
136	90		35.25				2042(I)		72.1			2.82+0.11					5.7**0.4		0.04+0.03		90	14.7+0.4	25.0+0.9	0.060+0.010				
510	130	25.161	35.406	23.629	39.876	3.2	2064	1.10				2.25+0.09								17*	130							
511	150	24.303	35.482	23.942	40.233		2076	1.10				2.14+0.10								15*	150							
137	160		35.55				2084(I)		59.7			1.67+0.09					6.9**0.4				160	15.4+1.1	19.0+0.5	0.120+0.050				
513	175	21.596	35.626	24.827	41.265	8.4	2095(I)	1.03				1.14+0.07								26*	175							
514	205	18.310	35.317	25.462	42.104	7.3	2116	0.81				1.31+0.09								11*	205							
138	210		35.31				2118(I)		11.6								8.1**0.6				210	8.2+0.9	10.4+1.1	0.120+0.010				
516	242	15.101	35.113	26.068	42.928	7.4	2132	0.73				1.07+0.07								13*	242							
517	280	12.600	34.893	26.426	43.474	7.8	2177	0.46				0.78+0.07								16*	280							
139	280		35.95				2177(I)		-38.3								8.8**0.6				280	7.1+0.7	11.7+0.7	0.190+0.050				
519	344	10.599	34.769	26.707	43.915		2242	0.34				0.20+0.06								14*	344							
140	350		34.79				2245(I)		-72.2								11.0**0.6				350	3.2+0.6	3.6+0.2	0.200+0.020				
520	403	9.397	34.700	26.859	44.169		2257					0.06+0.06								11*	403							
487	438	8.50	34.643	26.958	44.346		2265(I)		-99.0								12.3**0.7				438	2.0+0.7	0.6+0.4	0.300+0.040				
521	462	8.144	34.629	27.002	44.422		2270													21*	462							
522	523	7.241	34.579	27.095	44.597		2285					0.05+0.06								17*	523							
489	547	6.94	34.575	27.133	44.663		2290(I)		-120.4								13.4**0.7				547	1.2+0.3	-0.4+0.5	0.130+0.020				
523	582	6.791	34.578	27.156	44.699	8.3	2296(I)	0.30												29*	582							
524	651	5.857	34.545	27.252	44.883		2309													11*	651							
302	656	5.85	34.542	27.250	44.882	7.8	2302	-0.17												11*	656							
490	658	5.85	34.545	27.252	44.884		2302(I)		-142.0								15.6**0.8				658	-1.8+1.0	0.5+0.5	0.110+0.030				
303	729	5.54	34.542	27.289	44.951	8.4	2314	-0.07													729							
491	778	5.25	34.544	27.324	45.013		2318(I)		-150.6								16.2**0.6				778	0.9+0.3	0.4+0.5	0.110+0.020				
305	949	4.595	34.546	27.400	45.154	8.4	2328	-0.20													949							
492	998	4.26	34.558	27.445	45.232		2334(I)		-175.5								18.9**0.6				998	-0.7+0.5	0.1+0.4	0.180+0.030				
306	1073	4.19	34.558	27.452	45.246		2343(I)													10*	1073							
307	1195	3.62	34.575	27.524	45.376	8.8	2356	-0.29												11*	1195							
308	1341	3.195	34.586	27.573	45.467		2356													15*	1341							
309	1489	2.83	34.604	27.620	45.552	8.7	2366(I)													20*	1489							
493	1497	2.85	34.606	27.620	45.550		2367(I)		-221.4								27.1**0.5				1497							
311	1785	2.388	34.623	27.672	45.651		2377(I)	-0.32													1785							
494	1994	2.10	34.638	27.708	45.717		2375(I)		-222.7								30.2**0.6				1994							
327	2376	1.738	34.656	27.749	45.797		2385	-0.27												10*	2376							
495	2488	1.68	34.660	27.757	45.811		2382(I)		-232.8								30.4**0.9				2488							
331	2969	1.43	34.669	27.782	45.863		2375(I)	-0.45												7*	2969							
486	2981		34.674				2374(I)		-223.4								34.5**0.7				2981							
201	3445	1.247	34.677	27.801	45.901		2370	-0.17												8*	3445							
205	4040	1.071	34.689	27.822	45.941		2342(I)	-0.30												10*	4040							
207	4341	0.908	34.698	27.840	45.977		2327	-0.25												8*	4341							
211	4927	0.810	34.704	27.850	45.998		2324(I)	-0.41												8*	4927							
215	5145	0.805	34.703	27.850	45.998		2311(I)													8	+1.6	5145						
216	5214	0.803	34.705	27.852	46.000		2311(I)													11	+1.6	5214						
217	5272	0.802	34.705	27.852	46.000		2311													14*		5272						
218	5273	0.802	34.704	27.851	46.000		2311(I)													7	+1.6	5273						
219	5320	0.801	34.704	27.851	46.000		2295(I)													7	+1.7	5320						
220	5358	0.801	34.704	27.851	46.000		2279(I)													6	+1.6	5358						
221	5387	0.801	34.704	27.851	46.000		2263(I)													5	+1.5	5387						
224	5402	0.801	34.704	27.851	46.000		2255(I)													11	+1.6	5402						
223	5403	0.800	34.704	27.851	46.000		2254	-0.41												6*		5403						
222	5403	0.800	34.704	27.851	46.000		2254(I)													10	+1.6	5403						

STATION 247 — **POSITION: 0°28'S 178°59'E** — **DATE: 22 DEC 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH																				
101	7	25.842	35.263	23.314	39.529			0.65													7							

STATION 248 — **POSITION: 1°2'S 179°2'E** — **DATE: 22 DEC 73**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH				UM																
301	25	26.080	35.391	23.338	39.538		2038	1.10				2.31+0.11									25							
302	100	26.056	35.408	23.358	39.558		2051(I)					2.67+0.11									100							
303	146	25.478	35.550	23.642	39.869		2059					2.13+0.11									146							
304	172	23.430	35.818	24.452	40.782		2091					1.62+0.09									172							
306	252	13.994	35.105	26.303	43.242		2148					0.72+0.06									252							
307	292	11.626	34.861	26.590	43.714		2191					0.44+0.06									292							
308	380	9.701	34.716	26.821	44.105		2242					0.07+0.06									380							
309	402	9.627	34.691	26.814	44.105		2242					-0.02+0.05									402							
310	505	7.732	34.609	27.048	44.505		2283					-0.12+0.06									505							

(I) INTERPOLATED FROM NISKIN DATA

STATION 249

POSITION: 2°1'S 179°1'E

DATE: 23 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH																					
101	9	26.690	35.449	23.193	39.360			0.83														9							

STATION 250

POSITION: 2°59'S 178°59'E

DATE: 23 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH																					
101	3	27.801	35.587	22.948	39.056			1.63														3							

STATION 251

POSITION: 4°34'S 179°0'E

DATE: 24 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UW			UM	----------MCM----------					SIO	LDGO	LDGO				WHOI	WHOI	YALE			YALE
847	0	27.63	35.64	23.043	39.158																	0				10.6 +0.6			4.7 +0.5
601	4	27.716	35.646	23.020	39.130	0.4	2017	1.86				2.53+0.12	0.1	3.65	14.95	-4.2						4							
239	5		35.69				2017(I)												0.35 +0.05			5							
235	10		35.64				2016(I)		85.5			2.36+0.09						6.3 +1.1				10		19.9+0.6	0.040+0.020				
602	54	27.622	35.653	23.055	39.170		2011(I)					2.22+0.09										54							
236	70		35.66				2010(I)		85.9			2.38+0.09						6.1 +0.5				70							
603	103	27.609	35.661	23.065	39.181		2006	1.20				2.63+0.12	-0.7	3.68	14.83	-2.6						103							
237	140		35.59				2019(I)		85.3			2.57+0.11						7.5 +0.8				140							
604	147	27.224	35.590	23.133	39.270	1.1	2022(I)	1.68				2.29+0.11										147							
605	162	26.273	35.600	23.436	39.621		2027					2.01+0.08										162							
238	185		35.63				2079(I)		79.7									6.4 +0.8				185							
606	194	24.005	35.955	24.388	40.684	4.2	2098	1.06				1.54+0.08	1.0	3.75	15.63	-4.2						194							
607	223	20.568	35.801	25.242	41.735		2107					1.09+0.08										223							
787	236	17.13	35.377	25.798	42.514		2124(I)		34.5									8.5 +0.9				236		11.1+0.6	0.070+0.020				
608	243	16.454	35.318	25.915	42.677		2133(I)	0.48				0.71+0.06										243							
609	274	13.096	35.026	26.429	43.436	10.3	2182					0.15+0.07										274							
789	296	10.88	34.828	26.702	43.885		2209(I)		-72.3			0.00+0.06						11.0 +0.5				296							
610	309	10.602	34.810	26.738	43.945		2221	0.58				0.06+0.05	2.0									309							
611	361	9.517	34.719	26.854	44.153	9.3	2228															361							
612	427	8.506	34.653	26.965	44.353		2219	1.10														427							
793	497	8.05	34.543	26.949	44.379		2158(I)		-108.0			0.10+0.05						11.8 +1.0				497		-0.7+0.3	0.100+0.020				
613	506	7.770	34.608	27 041	44.495		2152	0.42					3.6									506							
614	605	7.031	34.569	27.116	44.638	7.8	2255	0.43				0.04+0.05										605							
790	695	6.37	34.527	27.171	44.755		2266(I)		-123.1									13.7 +0.6				695							
615	705	6.240	34.541	27.200	44.796		2267						8.0	4.01	17.30	0.4						705							
791	895	4.95	34.561	27.372	45.092		2297(I)		-147.9									17.1 +0.6				895		0.2+0.6	0.040+0.010				
617	904	4.899	34.525	27.349	45.074	7.6	2299	0.50					12.6	4.13	18.10	-0.5						904							
792	1194	3.66	34.625	27.560	45.406		2330(I)		-183.0									20.4 +0.8				1194							
619	1201	3.621	34.561	27.512	45.364	8.2	2330(I)	0.11					19.7	4.17	18.04	1.5						1201							
794	1490	2.66	34.606	27.636	45.586		2347(I)		-191.0									24.1 +0.6				1490							
621	1498	2.732	34.599	27.624	45.567		2347						22.0	4.21								1498							
622	1645	2.425	34.616	27.664	45.638	7.9	2345(I)	-0.08										26.3 +1.5				1645							
795	1788	2.24	34.630	27.690	45.685		2343(I)		-220.5													1788							
623	1795	2.246	34.630	27.690	45.683		2343						22.9									1795							
401	1945	2.057	34.639	27.712	45.725	8.0	2370	-0.23										28.1 +1.5				1945							
786	2186	1.87	34.649	27.734	45.767		2367(I)		-232.7													2186							
403	2332	1.744	34.653	27.746	45.793		2359	-0.07					24.4	4.22	18.23	2.5						2332							
405	2533	1.614	34.662	27.763	45.824	7.4	2347	-0.25					24.2	4.23								2533							
587	2585	1.608	34.662	27.764	45.825		2352(I)		-232.5									29.7 +0.5				2585							
407	2835	1.445	34.672	27.783	45.862		2345						21.4									2835							
589	2985	1.39	34.673	27.788	45.872		2345(I)		-226.5									30.1 +0.6				2985							
409	3137	1.322	34.679	27.797	45.889	6.4	2344(I)	-0.19					19.7	4.23	18.60	0.7						3137							
593	3285	1.27	34.680	27.802	45.899		2344(I)		-219.5									31.4 +0.6				3285							
411	3439	1.221	34.682	27.806	45.909	6.7	2343	0.00					17.9									3439							
590	3593	1.17	34.687	27.814	45.922		2336(I)											33.2 +0.7				3593							
415	3739	1.130	34.686	27.816	45.928	6.4	2331(I)	0.11					16.7									3739							
591	3892	1.09	34.689	27.821	45.938		2328(I)		-208.5									31.8 +0.6				3892							
417	4033	1.042	34.691	27.825	45.948		2334	-0.18					15.8	4.22	18.45	1.5						4033							
592	4195	1.01	34.694	27.830	45.956		2326(I)		-198.9									30.5 +0.5				4195							
419	4332	0.933	34.700	27.840	45.974	5.9	2319(I)	0.06					14.1									4332							
595	4531	0.860	34.703	27.847	45.989		2303(I)												0.15+0.10			4531							
387	4533	0.89	34.701	27.843	45.983		2303(I)		-185.2									26.6 +0.7				4533							
421	4629	0.838	34.703	27.848	45.993	5.2	2288	-0.20					11.6									4629							
389	4685	0.81	34.705	27.851	45.998		2289(I)												0.08+0.04			4685							
187	4911	0.799	34.706	27.853	46.002		2292(I)		-178.8									24.8 +0.9				4911							
391	4941	0.799	34.706	27.853	46.002		2292(I)												0.25+0.31			4941							
423	5130	0.797	34.703	27.851	46.000	5.6	2295(I)	0.00					11.1	4.15	18.52	-0.6						5130							
189	5215	0.79	34.704	27.851	46.001		2296(I)		-176.2									24.0 +0.6				5215							
190	5274	0.793	34.705	27.852	46.002		2297(I)												0.06+0.04			5274							
424	5357	0.796	34.705	27.852	46.001		2298	0.34					10.1									5357							
193	5508	0.82	34.706	27.851	45.998				-172.6									25.8 +0.8				5508							
194	5518	0.81	34.705	27.851	45.999														0.09+0.03			5518							
PRECISION:													0.3	0.01	0.06	0.2													

(I) INTERPOLATED FROM NISKIN DATA

STATION 252

POSITION: 8°29'S 178°5'W

DATE: 26 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																				LDGO								
201	1	28.57	34.486	21.877	37.970		1912													31 +3.2	1							
202	27	28.62	34.518	21.884	37.974		1899													17 +3.6	27							
203	51	28.65	34.549	21.899	37.987		1918													23 +3.3	51							
204	61	28.73	34.901	22.136	38.212		1942													21 +3.5	61							
205	80	28.58	35.303	22.487	38.562		1992(I)													29 +3.6	80							
206	106	27.20	35.641	23.177	39.314		2049													22 +4.7	106							
207	170	24.64	36.096	24.305	40.564		2078													7 +2.2	170							

STATION 254

POSITION: 13°14'S 173°48'W

DATE: 28 DEC 73

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																				LDGO								
119	4397	0.714	34.710	27.861	46.020															6 +1.6	4397							
120	4548	0.677	34.709	27.863	46.025															0 +1.6	4548							
121	4629	0.665	34.708	27.862	46.026															9 +1.6	4629							
122	4670	0.664	34.708	27.863	46.027															7 +1.6	4670							
123	4701	0.663	34.710	27.864	46.028															5 +1.6	4701							
124	4717	0.664	34.709	27.863	46.027															11 +1.6	4717							

STATION 256

POSITION: 9°11'S 169°0'W

DATE: 5 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																	LDGO		LDGO	LDGO								
335	5		35.60																0.03+0.02		5							
110	4092	0.971	34.698	27.836	45.966												23.1 +0.8			4 +1.6	4092							
112	4291	0.779	34.707	27.855	46.006															2 +1.6	4291							
115	4470	0.691	34.706	27.859	46.020															5 +1.6	4470							
117	4718	0.660	34.706	27.861	46.026															0 +1.6	4718							
118	4830	0.656	34.705	27.861	46.026															6 +1.6	4830							
119	4897	0.656	34.706	27.861	46.026															5 +1.6	4897							
120	4957	0.656	34.706	27.861	46.026															3 +1.6	4957							
121	4994	0.656	34.705	27.861	46.026															5 +1.6	4994							
122	5025	0.656	34.706	27.861	46.026												21.4 +0.2			37 +1.6	5025							
123	5044	0.657	34.706	27.861	46.026															3 +1.6	5044							
124	5054	0.658	34.706	27.861	46.026															0 +1.6	5054							

STATION 257

POSITION: 10°10'S 169°58'W

DATE: 5 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM							LDGO USC*	NOOW	LDGO				YALE			YALE	
847	0	28.38	34.83	22.196	38.291																0				10.5 +0.6			7.0 +0.5
235	5		34.67																0.19		5							
627	6	28.33	34.771	22.168	38.267		1922					2.30+0.12									6							
236	10		35.11				1924(I)		102.0			2.11+0.08					6.6**0.2				10							
628	11	28.30	34.768	22.176	38.276		1925					2.20+0.10									11							
237	40		35.43				1950(I)		93.0			2.30+0.09					7.1**0.5				40							
629	51	28.00	35.410	22.753	38.855		1962					2.19+0.09									51							
238	100		35.80				2025(I)		84.6								8.2**0.2				100							
630	101	27.43	35.729	23.171	39.294		2026					2.11+0.10									101							
791	146	26.19	35.937	23.716	39.898		2066(I)		87.9								7.2**0.2				146							
631	152	25.34	36.164	24.145	40.366		2070					1.52+0.08									152							
632	180	23.80	36.191	24.626	40.928		2085					1.26+0.08									180							
792	197	22.59	36.105	24.910	41.280		2093(I)		94.1								7.1**0.3				197							
633	201	22.77	36.122	24.873	41.233		2095					1.30+0.08									201							
793	247		35.797				2108(I)		79.1								7.2**0.3				247							
634	251	20.70	35.857	25.248	41.732		2109					0.84+0.07									251							
402	252	20.10	35.853	25.406	41.925		2113					0.92+0.07									252							
403	301	16.27	35.352	25.985	42.759		2148					0.68+0.06									301							
794	322	15.13	35.139	26.081	42.938		2164(I)		-4.9								7.8**0.3				322							
404	377	12.03	34.879	26.526	43.617		2197					0.10+0.06									377							
795	397	11.03	34.778	26.636	43.810		2203(I)		-72.5								9.4**0.4				397							
589	497	8.09	34.599	26.986	44.412		2221(I)		-104.0								11.9**0.4				497							
590	646	5.92	34.513	27.219	44.845		2250(I)		-124.4								13.3**0.3				646							
407	751	5.24	34.513	27.300	44.992		2272					-0.04+0.05									751							
591	796	5.02	34.511	27.325	45.039		2277(I)		-149.4								15.8**0.3				796							
408	901	4.55	34.517	27.382	45.141		2285					-0.04+0.06									901							
409	1040	3.99	34.535	27.455	45.270		2295					0.03+0.05									1040							

(I) INTERPOLATED FROM NISKIN DATA

STATION 257 — *CONTINUED*

POSITION: 10°10′S 169°58′W

DATE: 5 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM					LDGO USC*	NOOW		LDGO				YALE				YALE
592	1044	3.99	34.536	27.456	45.272		2295(I)		-174.3								19.0**0.3				1044							
593	1293	3.27	34.568	27.551	45.438		2310(I)		-192.7								21.8**0.3				1293							
594	1592	2.66	34.599	27.630	45.581		2333(I)		-208.8								25.2**0.7				1592							
595	2095	1.98	34.638	27.717	45.738		2344(I)		-222.7								25.2**0.4				2095							
389	2576	1.60	34.662	27.764	45.826		2349(I)		-223.1								26.3**0.6				2576							
420	2640	1.59	34.664	27.766	45.829		2350					0.00+0.05									2640							
390	3074	1.41	34.677	27.790	45.872		2342(I)		-218.9								29.0**0.5				3074							
391	3624	1.19	34.686	27.811	45.917		2342(I)		-206.3								29.7**0.9				3624							
392	3974	1.02	34.699	27.833	45.957		2306(I)		-189.7								27.3**0.4				3974							
393	4174	0.91	34.712	27.851	45.987		2292(I)		-173.2								24.8**0.5				4174							
394	4574	0.70	34.708	27.861	46.021		2286(I)		-158.8								23.9**0.4				4574							
115	4920	0.653	34.707	27.862	46.028		2285(I)													4 +1.6	4920							
117	4999	0.652	34.707	27.862	46.028															0 +1.6	4999							
118	5055	0.651	34.707	27.863	46.028															9 +1.6	5055							
395	5073	0.65	34.708	27.863	46.029				-165.1								21.8**0.4				5073							
119	5095	0.648	34.707	27.863	46.028															0 +1.6	5095							
120	5125	0.646	34.707	27.863	46.029															2 +1.6	5125							
121	5145	0.647	34.707	27.863	46.029												21.3 +0.6			1 +1.6	5145							
123	5159	0.647	34.707	27.863	46.029															6 +1.6	5159							
124	5166	0.647	34.708	27.864	46.029															1 +1.6	5166							

STATION 259

POSITION: 15°3′S 170°22′W

DATE: 8 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																				LDGO								
115	4270	0.700	34.708	27.860	46.020															3 +1.6	4270							
117	4389	0.663	34.707	27.862	46.026															5 +1.6	4389							
116	4390	0.663	34.707	27.862	46.026															0 +1.6	4390							
118	4499	0.648	34.705	27.861	46.027															3 +1.6	4499							
119	4569	0.645	34.706	27.862	46.028															3 +1.6	4569							
120	4620	0.642	34.706	27.862	46.029															5 +1.6	4620							
121	4661	0.642	34.705	27.861	46.028															8 +1.6	4661							
122	4689	0.642	34.706	27.862	46.029															6 +1.6	4689							
123	4689	0.642	34.705	27.861	46.028															5 +1.6	4689							
124	4700	0.642	34.706	27.862	46.029															3 +1.6	4700							

STATION 260

POSITION: 15°13′S 170°2′W

DATE: 8 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																				LDGO	LDGO				YALE			YALE
547	0	28.78	34.94	22.150	38.223																0				14.7 +0.9			3.8 +0.7
135	5		34.94																	0.05+0.03	5							
136	30		35.14				1949(I)													0.07+0.02	30							
139	200		35.99				2069(I)													0.07+0.12	200							
215	4789	0.637	34.707	27.863	46.031		2284(I)														0 +1.6	4789						
217	4859	0.634	34.707	27.864	46.031		2278(I)														5 +1.6	4859						
218	4909	0.633	34.707	27.864	46.031		2280(I)														1 +1.6	4909						
219	4950	0.633	34.707	27.864	46.031		2282(I)														5 +1.6	4950						
220	4979	0.633	34.707	27.864	46.031		2283(I)														8 +1.6	4979						
221	4998	0.633	34.707	27.864	46.031		2284(I)														4 +1.7	4998						
223	5014	0.633	34.707	27.864	46.031																7 +1.6	5014						
224	5022	0.633	34.706	27.863	46.030																9 +1.6	5022						

(I) INTERPOLATED FROM NISKIN DATA

STATION 263 — **POSITION: 16°41'S 167°3'W** — **DATE: 10 JAN 74**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	$\delta(^3He)$ %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UW			UM	SIO				LSU	SIO	LDGO	LDGO	LDGO		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1547	0	28.71	34.64	21.947	38.030																	0				14.1**0.7			4.1 +0.6
712	2	28.60	34.640	21.983	38.071	0.5	1931	1.26				2.31+0.11	-1.6	3.78	14.73	0.3	31.6					2							
889	5	28.57	34.644	21.995	38.084		1931(I)															5				10.9 +0.4	2.06 +0.14		
135	5		34.66				1931(I)												0.30 +0.07	0.01+0.01		5							
136	10		34.67				1932(I)		137.5			2.59+0.10						6.5 +0.9				10							
711	37	28.34	34.793	22.181	38.278		1947					2.09+0.09										37							
137	40		34.67				1951(I)		126.5			2.02+0.10						6.0 +0.7				40	14.0+0.6	21.6+0.4	0.040+0.010				
725	77	26.43	35.680	23.447	39.622		1996	1.80				1.65+0.09										77							
138	100		35.81				2010(I)		139.3			1.89+0.09						5.8 +0.4				100							
726	117	24.51	35.754	24.085	40.359		2020					1.87+0.09					32.5					117							
139	150		35.85				2065(I)		133.6									6.5 +0.5				150	7.1+0.2	17.4+0.3	0.050+0.010				
727	177	22.30	35.884	24.825	41.216		2100	1.37				1.47+0.08					34.6					177							
728	245	20.19	35.744	25.299	41.816		2098	1.36				1.06+0.07	-0.8				36.7					245							
140	250		35.60				2099(I)		77.5									8.4 +0.7				250							
729	303	17.68	35.405	25.687	42.367		2104	0.95				0.71+0.07										303							
689	348	15.49	35.142	26.003	42.836		2128(I)		7.5			0.42+0.06						7.5 +0.6				348	6.0+1.2	15.1+0.6	0.120+0.020				
890	349	14.88	35.071	26.085	42.962		2129(I)															349				9.0 +0.7	2.85 +0.05		
730	431	11.27	34.724	26.549	43.705		2179					0.20+0.06					39.5					431							
690	474	9.98	34.626	26.704	43.967		2196(I)		-66.7									8.8 +0.8				474							
731	510	8.224	34.511	26.898	44.314		2204	0.92				0.03+0.05	-0.2	4.09	17.33	1.4						510							
732	588	6.373	34.371	27.049	44.637		2190	1.10				0.02+0.05					51.6					588							
501	590					5.0	2191(I)	0.84														590							
691	599	6.40	34.373	27.047	44.633		2195(I)		-85.3									12.6 +0.4				599	0.7	-0.6+0.3	0.030+0.010				
502	669	5.748	34.383	27.137	44.784		2232	0.71														669							
733	687	5.51	34.405	27.183	44.853		2238					0.07+0.05					59.5					687							
891	700	5.56	34.413	27.184	44.848		2242(I)															700					0.65 +0.04		
505	747					5.0	2253(I)	0.64					2.5									747							
734	787	4.85	34.427	27.277	45.009		2260	0.68				-0.09+0.05	7.1	4.15	17.64	2.7	66.2					787							
692	798	4.85	34.428	27.278	45.011		2260(I)		-135.9									15.1 +0.5				798							
506	897	4.250	34.458	27.367	45.159		2265										73.5					897							
892	899	4.24	34.460	27.370	45.162		2266(I)															899				10.7 +0.4	0.97 +0.09		
693	996	3.77	34.492	27.443	45.282		2294(I)		-155.3									17.5 +0.9				996							
507	1044	3.610	34.505	27.469	45.324	6.6	2309	0.39					14.2	4.32	18.21	3.9	83.7					1044							
508	1193	3.231	34.532	27.526	45.419		2323										90.7					1193							
694	1242	3.11	34.544	27.547	45.453		2328(I)		-181.0									21.4 +0.5				1242							
893	1296	2.98	34.552	27.565	45.484		2333(I)															1296				10.0 +0.5	1.41 +0.07		
509	1342	2.910	34.557	27.575	45.501		2338(I)						18.2	4.35	18.30	4.6	97.1					1342							
1186	1394	2.80	34.567	27.593	45.529		2342(I)		-190.1									21.2 +0.5				1394							
510	1488	2.632	34.580	27.618	45.572	6.9	2349(I)	-0.08					22.0				102.0					1488							
511	1637	2.443	34.596	27.646	45.620		2357(I)										105.3					1637							
1489	1751	2.28	34.613	27.673	45.664		2361(I)		-209.0									23.1 +0.5				1751							
512	1784	2.268	34.612	27.673	45.665	7.1	2362	0.12					21.7	4.44	18.53	5.8	110.1					1784							
894	1793	2.24	34.618	27.681	45.675		2362(I)															1793					0.62 +0.02		
514	1928	2.102	34.625	27.697	45.706		2358(I)										112.3					1928							
1490	2001	2.04	34.632	27.707	45.722		2356(I)		-218.1									22.3 +0.9				2001							
515	2094	1.955	34.637	27.718	45.742	6.6	2352	0.00					22.3									2094							
895	2193	1.88	34.611	27.703	45.736		2349(I)															2193				18.0 +0.4	0.51 +0.02		
1491	2251	1.82	34.646	27.735	45.773		2348(I)		-214.8									24.9 +1.2				2251							
516	2254	1.835	34.646	27.734	45.771		2348						25.0	4.31	18.06	5.5	117.8					2254							
517	2416	1.739	34.653	27.747	45.794		2345	0.04					20.8				119.4					2416							
1492	2500	1.67	34.658	27.756	45.810		2346(I)		-211.1									27.3 +0.6				2500							
519	2736	1.573	34.666	27.769	45.834	6.6	2350						22.0	4.40	18.42	5.6	122.6					2736							
1493	2745	1.57	34.668	27.771	45.837		2350(I)		-220.2									28.0 +0.8				2745							
290	2746	1.56	34.632	27.743	45.811		2350(I)															2746				18.2 +0.7	1.15 +0.02		
520	2896	1.503	34.669	27.777	45.849		2349(I)						19.4									2896							
1487	2988	1.42	34.673	27.786	45.867		2348(I)		-209.2									26.7 +0.7				2988							
521	3056	1.434	34.673	27.785	45.864		2347(I)										123.6					3056							
522	3213	1.372	34.678	27.793	45.879	6.4	2346						20.0	4.40	18.52	5.2	124.0					3213							
291	3245	1.34	34.677	27.794	45.884		2345(I)															3245				20.2 +0.8	0.78 +0.03		
1495	3275	1.33	34.680	27.797	45.888		2343(I)		-215.4									25.9 +0.6				3275							
301	3496	1.268	34.687	27.807	45.905		2334										117.8					3496							
524	3529	1.248	34.684	27.806	45.906		2341(I)						16.5				121.7					3529							
302	3596	1.222	34.688	27.811	45.914	6.4	2353						15.2	4.48	18.92	4.9						3596							
490	3666	1.20	34.688	27.813	45.918		2351(I)		-206.0									26.0 +0.5				3666	2.1	0.3+0.4	0.020+0.010				
303	3696	1.177	34.689	27.815	45.923		2350										116.9					3696							
292	3744	1.16	34.303	27.507	45.629		2349(I)															3744				18.5 +2.0	0.83 +0.03		
304	3796	1.127	34.691	27.820	45.933		2346						13.8									3796							
305	3896	1.079	34.696	27.827	45.945	6.0	2334	0.08									112.2					3896							
491	3965	1.05	34.699	27.831	45.953		2326(I)		-183.4									22.9 +0.5				3965							
306	4044	1.000	34.701	27.836	45.963		2318						13.3	4.30	18.38	3.7						4044							
307	4195	0.929	34.705	27.844	45.978		2312										121.5					4195							
492	4213	0.91	34.708	27.848	45.984		2312(I)		-177.7									21.2 +0.6				4213							
293	4293	0.86	34.642	27.797	45.941		2311(I)															4293				14.9 +0.8	0.59 +0.04		
308	4345	0.859	34.710	27.852	45.995	5.3	2311	0.15					10.1				103.4					4345							
1089	4412	0.81	34.710	27.855	46.002		2307(I)		-165.4									22.6 +0.9				4412							
493	4465	0.80	34.709	27.855	46.004		2305(I)											22.4 +0.7				4465	-0.5+0.6	-0.6+0.2	0.010				
309	4536	0.756	34.712	27.860	46.014		2303										102.9					4536							
1090	4611	0.734	34.710	27.860	46.016		2309(I)												0.16+0.05			4611							
294	4692	0.75	34.125	27.389	45.563		2316(I)															4692				13.4 +0.9	0.70 +0.02		
310	4720	0.697	34.709	27.861	46.022	5.7	2318						6.3	4.41	18.87	3.9						4720							
494	4774	0.71	34.709	27.861	46.019		2317(I)		-160.0									22.4 +0.7				4774							
1093	4809	0.69	34.710	27.863	46.024		2315(I)												0.22+0.08			4809							
311	4894	0.670	34.708	27.862	46.026		2310										101.9					4894							
1190	4902	0.668	34.709	27.863	46.027		2310(I)												0.33+0.04			4902							
312	5095	0.649	34.708	27.863	46.029	5.5	2304						6.7									5095							
1193	5102	0.646	34.710	27.865	46.031		2304(I)												0.09 +0.12	0.27+0.04		5102							
315	5370	0.636	34.707	27.863	46.031		2300(I)										102.3				6 +1.6	5370							
1290	5409	0.636	34.709	27.865	46.032		2299(I)												0.25 +0.12	0.35+0.07		5409							
316	5469	0.632	34.708	27.864	46.032		2298(I)														3 +1.6	5469							
317	5538	0.632	34.708	27.864	46.032		2297(I)														10 +1.6	5538							
318	5599	0.631	34.708	27.864	46.032		2296(I)														4 +1.6	5599							
319	5599	0.631	34.708	27.864	46.032	5.6	2296															5599							
1293	5606	0.625	34.710	27.866	46.035		2297(I)												0.60 +0.30	0.16+0.08		5606							
320	5637	0.631	34.708	27.865	46.032		2303(I)														4 +1.6	5637							
321	5668	0.630	34.708	27.865	46.032		2310(I)														7 +1.6	5668							
495	5676	0.64	34.709	27.865	46.032		2312(I)		-164.1									22.9 +0.9				5676	0.7	0.3+0.6	0.010				
323	5687	0.630	34.708	27.865	46.032		2315(I)														7 +1.6	5687							
322	5688	0.630	34.708	27.865	46.032	5.5	2315						7.5	4.34	18.63	3.4	102.6					5688							
295	5693	0.63	34.680	27.842	46.011																	5693				11.8 +0.9	1.16 +0.02		
324	5698	0.630	34.708	27.865	46.032																6 +1.6	5698							

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0 0.01 0.06 0.2

STATION 265

POSITION: 17°46'S 164°59'W

DATE: 14 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																			LDGO	LDGO						YALE		YALE
547	0	28.47	35.23	22.467	38.549																							
135	5		35.22				1966(I)														0					12.7 +0.7		6.3 +0.5
136	30		35.26				1974(I)												0.01+0.02		5							
137	80		35.89				2000(I)												0.04+0.02		30							
138	150		35.95				2059(I)												0.03+0.02		80							
139	300		35.34				2111(I)												0.03+0.02		150							
215	5090	0.654	34.707	27.862	46.028		2306(I)												0.04+0.05		300							
216	5213	0.649	34.709	27.864	46.030		2320(I)													4 +2.9	5090							
218	5273	0.648	34.707	27.863	46.028		2322(I)													2 +1.6	5213							
219	5323	0.648	34.708	27.864	46.029		2314(I)													3 +1.6	5273							
220	5354	0.647	34.707	27.863	46.029		2306(I)													3 +1.6	5323							
221	5375	0.647	34.707	27.863	46.029		2299(I)													2 +1.6	5354							
222	5390	0.647	34.707	27.863	46.029		2294(I)													1 +1.6	5375							
224	5404	0.646	34.708	27.864	46.030															1 +1.6	5390							
																				2 +1.6	5404							

STATION 267

POSITION: 19°15'S 171°24'W

DATE: 16 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO	NOOW	LDGO						YALE		YALE
647	0	28.54	34.96	22.242	38.327		1933(I)														0					11.9 +0.9		6.4 +0.7
315	3	28.35	34.933	22.283	38.377													5.5 +0.1			3							
135	5		34.93				1940(I)												0.23		5							
136	30		35.33				1970(I)												0.06		30							
137	60		35.75				1994(I)												0.08		60							
138	100		35.77				2005(I)												0.01		100							
139	150		35.89				2062(I)												0.06		150							
140	350		35.16				2105(I)												0.01		350							
501	5078	0.616	34.707	27.865	46.034		2302(I)													0 +1.6	5078							
502	5078	0.616	34.706	27.864	46.033		2302(I)													0 +1.6	5078							
503	5078	0.616	34.705	27.863	46.033		2302													3 +1.6	5078							
515	5087	0.615	34.706	27.864	46.033		2206(I)													0 +1.6	5087							
504	5290	0.608	34.705	27.863	46.034		2299													0 +1.6	5290							
505	5290	0.608	34.705	27.863	46.034		2302													3 +1.7	5290							
517	5300	0.607	34.706	27.864	46.035															9 +2.1	5300							
518	5399	0.605	34.706	27.864	46.035		2305(I)													8 +1.6	5399							
507	5417	0.604	34.706	27.865	46.035		2304													8 +2.5	5417							
519	5426	0.603	34.706	27.865	46.035		2296(I)													2 +1.6	5426							
508	5436	0.604	34.707	27.865	46.036		2284													1 +2.0	5436							
520	5446	0.604	34.706	27.865	46.035															4 +1.6	5446							
509	5452	0.603	34.706	27.865	46.036															5 +2.0	5452							
521	5461	0.603	34.706	27.865	46.035															3 +1.6	5461							
510	5464	0.604	34.706	27.864	46.035															3 +1.6	5464							
511	5464	0.604	34.706	27.864	46.035															3 +1.6	5464							
512	5472	0.604	34.707	27.865	46.036													22.2 +0.2		12 +1.6	5472							
523	5474	0.604	34.706	27.865	46.035															5 +1.6	5474							
524	5482	0.604	34.706	27.865	46.035															4 +1.6	5482							

(I) INTERPOLATED FROM NISKIN DATA

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UW			UM	SIO					LDGO SIO*	NOOW		LDGO WHOI*					SIO	SIO		
135	5		35.41						124.4										0.13			5							
507	6	27.26	35.418	22.993	39.131	0.8	1964	0.95				1.87+0.08									47*	6							
136	10		35.42				1967(I)		150.7									6.8**0.5				10							
290	31	26.23	35.217	23.160	39.355		1984(I)															31					0.56 +0.04		
508	41	25.87	35.511	23.493	39.700		1991(I)					1.95+0.10										41							
138	50		35.61				1996(I)											6.5**1.0	0.15			50							
509	72	23.37	35.636	24.331	40.668		2008(I)					1.97+0.09									53*	72							
140	100		35.62				2019(I)		125.9									6.8**0.9	0.15			100							
510	113	22.25	35.617	24.639	41.039		2023	1.20				1.68+0.08										113							
141	150		35.64				2028(I)		113.1			1.52+0.09						6.9**0.7	0.18			150							
511	153	21.06	35.640	24.986	41.454		2028					1.54+0.09									36*	153							
1089	201	19.67	35.647	25.363	41.914		2048(I)		101.4									8.2**1.2				201							
512	202	19.68	35.634	25.351	41.901	3.5	2048	1.12				1.42+0.08										202							
514	254	18.44	35.606	25.649	42.276		2057					1.42+0.07	-1.5								37*	254							
291	302	17.44	35.560	25.863	42.555		2060(I)															302				11.4 +1.1	0.44 +0.02		
1090	302	17.65	35.577	25.824	42.501		2060(I)		69.9									6.3**0.5				302							
525	304	17.52	35.577	25.858	42.544		2060	1.24				1.12+0.07										304							
526	355	16.26	35.471	26.077	42.849		2071					1.09+0.07									32*	355							
527	454	13.314	35.137	26.470	43.458	5.1	2117	1.24				0.61+0.06	-0.8	4.17	17.28	1.4						454							
1091	456	13.12	35.095	26.477	43.480		2118(I)		8.3									7.6**0.6				456							
292	503	11.52	34.778	26.546	43.681		2128(I)															503				7.7 +0.8	0.64 +0.04		
528	554	10.410	34.769	26.740	43.964		2135					0.33+0.06									21*	554							
1092	559	10.47	34.785	26.742	43.959		2136(I)		-29.5									8.7**0.9				559							
529	653	7.71	34.474	26.945	44.407	5.2	2152(I)	1.11				0.08+0.05	-0.2									653							
530	753	6.56	34.380	27.031	44.602		2170(I)					0.03+0.06									24*	753					0.27 +0.02		
293	753	6.44	34.319	26.999	44.583		2170(I)															753							
1093	758	6.46	34.379	27.043	44.623		2170(I)		-84.0									11.1**0.5				758							
531	861	5.636	34.339	27.116	44.775		2189	0.61				0.04+0.05	-0.4	4.13	17.65	1.8					29*	861							
1087	863	5.59	34.343	27.125	44.789		2189(I)		-99.7									12.7**0.8				863							
532	998	4.784	34.362	27.233	44.974		2216					0.05+0.05										998							
287	1101	4.01	34.273	27.245	45.066		2240(I)															1101					1.11 +0.05		
533	1146	3.83	34.425	27.384	45.219	6.1	2249(I)	0.32					5.5								39*	1146							
1095	1153	3.69	34.440	27.409	45.258		2251(I)		-150.2									16.8**0.9				1153							
889	1252	3.47	34.471	27.456	45.326		2271(I)		-153.7									17.2**0.8				1252							
534	1292	3.137	34.485	27.498	45.402		2275(I)														30*	1292							
702	1396	2.893	34.521	27.548	45.477		2285(I)						6.1									1396							
703	1545	2.683	34.560	27.597	45.547		2297	-0.22													12*	1545							
890	1551	2.65	34.569	27.607	45.560		2298(I)		-185.0									21.3**0.5				1551							
704	1692	2.508	34.584	27.631	45.598		2317						24.2	4.31	17.92	5.9						1692							
295	1798	2.39	34.580	27.638	45.617		2319(I)															1798					1.22 +0.02		
705	1843	2.338	34.603	27.660	45.645	6.8	2320	-0.18													14*	1843							
891	1852	2.34	34.605	27.662	45.646		2320(I)		-204.3									24.8**0.9				1852							
707	2143	2.111	34.624	27.695	45.703		2338	0.22													17*	2143							
892	2152	2.10	34.625	27.697	45.706		2338(I)		-209.8									23.5**0.6				2152							
708	2293	1.991	34.633	27.712	45.732		2341(I)						27.4	4.35	18.10	6.1						2293							
690	2443	1.90	34.638	27.723	45.753		2345(I)															2443				8.4 +0.8	1.71 +0.09		
709	2445	1.869	34.643	27.729	45.763	6.8	2345	-0.28													12*	2445							
893	2451	1.86	34.645	27.732	45.766		2344(I)		-215.5									26.3**0.6				2451							
710	2593	1.789	34.648	27.739	45.781		2327						22.9	4.48	18.74	5.8						2593							
711	2744	1.703	34.654	27.750	45.801		2357	-0.36													12*	2744							
712	2893	1.622	34.660	27.761	45.821		2349(I)						22.1	4.41	18.43	5.9						2893							
887	2900	1.66	34.661	27.759	45.815		2348(I)		-217.2									26.5**0.6				2900							
714	3041	1.570	34.663	27.767	45.832		2332														12*	3041							
715	3142	1.506	34.667	27.775	45.847		2336(I)						17.0									3142							
716	3239	1.457	34.673	27.783	45.860	6.6	2341(I)														15*	3239							
691	3247	1.46	34.671	27.781	45.859		2341(I)															3247					1.40 +0.09		
717	3339	1.403	34.676	27.789	45.872		2345	0.06					17.4	4.50	18.91	5.4						3339							
895	3350	1.39	34.678	27.792	45.876		2342(I)		-209.5									28.3**0.9				3350							
718	3435	1.339	34.688	27.803	45.893	5.6	2316														31*	3435							
720	3629	1.239	34.713	27.830	45.930		2301	0.39													21*	3629							
490	3678	1.19	34.717	27.837	45.942		2298(I)		-168.2									21.4**1.1				3678							
721	3727	1.160	34.717	27.839	45.947		2295(I)	0.06					9.1									3727							
722	3817	1.074	34.717	27.844	45.962	5.7	2291(I)														17*	3817							
692	3849	1.03	34.718	27.848	45.970		2290(I)															3849					0.92 +0.11		
723	3960	0.947	34.714	27.850	45.982		2287						6.6	4.54	19.27	4.5						3960							
491	4079	0.83	34.713	27.857	46.002		2286(I)		-163.3									21.3**0.9				4079							
301	4108	0.808	34.712	27.857	46.005	5.5	2285(I)	0.34					5.0								23*	4108							
302	4283	0.741	34.709	27.859	46.014		2283														22*	4283							
303	4460	0.707	34.707	27.859	46.018		2287	0.30					4.1									4460							
492	4482	0.69	34.711	27.863	46.024		2286(I)		-164.7									23.6**0.6				4482							
304	4637	0.667	34.707	27.862	46.025		2280														24*	4637							
693	4667	0.66	34.707	27.862	46.027		2278(I)															4667					0.79 +0.03		
305	4817	0.634	34.706	27.863	46.030	5.6	2272						7.4									4817							
493	4985	0.60	34.704	27.863	46.034		2280(I)		-162.9									21.4**0.7				4985							
306	4993	0.619	34.706	27.864	46.033		2281														21*	4993							
307	5170	0.605	34.705	27.864	46.034		2292	0.38					8.6	4.35	18.68	3.6						5170							
308	5347	0.600	34.705	27.864	46.035		2279														16*	5347							
687	5372	0.61	34.705	27.863	46.034		2282(I)															5372				9.4 +1.1	1.37 +0.03		
487	5487	0.60	34.704	27.863	46.035		2296(I)		-160.9									22.4**1.4				5487							
309	5520	0.594	34.705	27.864	46.036	5.4	2300						6.4									5520							
310	5612	0.591	34.703	27.863	46.035		2292(I)															5612	6 +1.6						
312	5692	0.591	34.704	27.864	46.036		2284(I)															5692	9 +1.6						
311	5693	0.590	34.704	27.864	46.036	7.7	2284	0.38					6.0									5693	31*						
315	5771	0.588	34.704	27.864	46.036		2286(I)															5771	6 +1.6						
316	5838	0.588	34.704	27.864	46.036		2291(I)															5838	7 +1.6						
318	5883	0.587	34.704	27.864	46.037		2294(I)															5883	7 +1.6						
495	5890	0.57	34.705	27.866	46.040		2294(I)		-158.4													5890							
695	5911	0.59	34.706	27.866	46.038		2296(I)															5911				5.0 +0.6	1.83 +0.08		
319	5922	0.586	34.704	27.864	46.037		2297(I)															5922	5 +1.6						
320	5952	0.585	34.704	27.864	46.037		2299(I)															5952	8 +1.6						
321	5971	0.586	34.704	27.864	46.037		2300(I)											22.0 +0.6				5971	10 +1.6						
322	5981	0.585	34.704	27.864	46.037		2301(I)															5981	10 +1.6						
323	5981	0.585	34.704	27.864	46.037	5.5	2301	0.31					7.9	4.47	19.15	3.7						5981	28*						
324	5986	0.584	34.704	27.864	46.037																	5986	11 +1.6						
												PRECISION:	1.0	0.01	0.06	0.2													

(I) INTERPOLATED FROM NISKIN DATA

STATION 272

POSITION: 24°2'S 175°43'W

DATE: 21 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO	DPM/100kg		LDGO			DPM/100kg				
119	3476	1.122	34.721	27.844	45.957															10 +1.6	3476							
120	3583	1.019	34.717	27.848	45.972															6 +1.6	3583							
121	3643	0.983	34.717	27.850	45.978															11 +1.6	3643							
122	3669	0.974	34.717	27.851	45.980												19.0 +0.7			14 +1.6	3669							
123	3683	0.973	34.717	27.851	45.980															7 +1.6	3683							
124	3692	0.970	34.717	27.851	45.980															6 +1.6	3692							

STATION 273

POSITION: 29°57'S 175°43'W

DATE: 22 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO	DPM/100kg		LDGO			DPM/100kg				
547	0	23.94	35.52	24.078	40.387																0				YALE			YALE
415	4		35.528																		4				10.1 +0.5			5.6 +0.5
135	10		35.54				2013(I)										6.5 +0.2				10							
215	5573	0.591	34.705	27.864	46.037		2286(I)											0.26		5 +1.6	5573							
217	5642	0.590	34.705	27.864	46.037		2286(I)													6 +1.6	5642							
218	5688	0.590	34.705	27.865	46.037		2287(I)													5 +1.6	5688							
219	5728	0.589	34.705	27.865	46.037		2288(I)													10 +1.6	5728							
220	5757	0.589	34.705	27.865	46.037		2288(I)													10 +1.6	5757							
221	5771	0.589	34.706	27.865	46.038		2289(I)										22.7 +0.2			8 +1.6	5771							
222	5788	0.588	34.705	27.865	46.037															12 +1.6	5788							
224	5797	0.588	34.705	27.865	46.037															6 +1.6	5797							

STATION 277

POSITION: 30°7'S 177°34'W

DATE: 24 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO	DPM/100kg		LDGO			DPM/100kg				
118	3511	1.039	34.720	27.849	45.971															8 +1.6	3511							
119	3562	0.995	34.720	27.852	45.978															11 +1.6	3562							
120	3592	0.970	34.718	27.852	45.981															7 +1.6	3592							
121	3615	0.947	34.718	27.853	45.985												21.5 +0.7			11 +1.6	3615							
122	3655	0.931	34.718	27.854	45.988															11 +1.6	3655							
124	3665	0.931	34.717	27.853	45.987															15 +1.6	3665							

STATION 278

POSITION: 36°31'S 179°36'W

DATE: 26 JAN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH		UH				UM	----------SIO----------					DPM/100kg					DPM/100kg				
247	0	19.83	35.67	25.339	41.879																0				YALE			YALE
101	7	19.811	35.666	25.341	41.883	0.6	2032					1.59+0.10	-0.8	3.89	15.79	0.4					7				7.1 +0.4			4.8 +0.4
102	188	15.974	35.497	26.164	42.954		2066	1.28				1.19+0.08									188							
103	368	12.906	35.166	26.559	43.571		2118	1.21				1.02+0.08	-0.4	3.98	16.56	1.1					368							
104	548	10.085	34.810	26.829	44.078		2143	1.12				0.38+0.06									548							
105	728	8.048	34.571	26.971	44.401	5.2	2155	1.18				0.12+0.05	0.4	4.01	17.03	1.3					728							
106	909	6.608	34.444	27.075	44.639		2182	1.27				-0.03+0.05									909							
107	1056	5.692	34.435	27.185	44.836		2189	0.84					3.7	4.10	17.49	1.9					1056							
108	1245	4.322	34.400	27.313	45.099	5.7	2246	0.99					5.4	4.18	17.83	2.5					1245							
109	1500	3.290	34.492	27.489	45.377	5.7	2264	0.21					10.6	4.18	17.84	2.8					1500							
110	1741	2.717	34.566	27.599	45.545		2317	0.18					16.8	4.20	17.85	3.5					1741							
111	1989	2.334	34.608	27.665	45.649		2299						18.4	4.43	18.55	5.6					1989							
112	2142	2.180	34.625	27.691	45.691		2330	0.08													2142							
114	2340	2.019	34.639	27.715	45.732		2400(I)	-0.08					19.2	4.43	18.36	6.6					2340							
121	2432	1.94	34.646	27.726	45.752	6.7	2433														2432							
115	2485	1.904	34.648	27.731	45.760	6.8	2337														2485							
116	2635	1.778	34.662	27.751	45.794		2324(I)	0.11					20.3	4.34	18.27	5.0					2635							
117	2783	1.660	34.685	27.778	45.833	6.4	2311	0.18													2783							
118	2937	1.552	34.703	27.800	45.866		2326	0.33					13.5	4.26	18.13	4.1					2937							
119	3089	1.406	34.718	27.823	45.904	5.9	2355	0.37													3089							
120	3240	1.230	34.724	27.840	45.940		2298	0.28					10.0	4.24	18.18	3.4					3240							
122	3533	0.992	34.720	27.852	45.979		2281(I)					-0.03+0.05	9.7	4.21	18.17	2.7					3533							
123	3790	0.882	34.716	27.856	45.995		2266					-0.02+0.05	8.6	4.23	18.00	4.3					3790							
124	4038	0.816	34.716	27.860	46.007	5.4						-0.05+0.05	8.9	4.23	18.24	2.9					4038							
							(I) INTERPOLATED FROM NISKIN DATA					PRECISION:	1.0	0.01	0.06	0.2												

STATION 280 — **POSITION: 56°1'S 170°3'E** — **DATE: 8 FEB 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{16}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM						LDGO							YALE			YALE
547	0	6.45	34.07	26.801	44.391																0				8.9 +0.6			4.6 +0.4
416	3		34.061				2124					0.98+0.07						13.9 +1.3			3							
419	32		34.060				2119					0.91+0.07									32							
422	81		34.110				2130					1.04+0.10									81							
423	100		34.114				2182					0.97+0.08									100							
424	154	5.85	34.153	26.943	44.588		2135					0.86+0.07									154							
302	199	5.30	34.172	27.024	44.720		2134					0.61+0.07									199							
303	249	5.18	34.191	27.053	44.761		2240					0.68+0.06									249							
304	299	5.25	34.242	27.086	44.785		2222(I)					0.65+0.07									299							
305	448	4.62	34.210	27.130	44.892		2168					0.62+0.08									448							
306	596	4.11	34.270	27.232	45.043		2191(I)					0.38+0.08									596							
307	745	3.31	34.307	27.340	45.232		2237					0.03+0.06									745							
308	894	2.84	34.361	27.425	45.364		2263(I)					-0.04+0.06									894							
312	1587	2.195	34.659	27.717	45.715		2277(I)					0.06+0.05									1587							
314	1784	2.07	34.697	27.757	45.766		2282					0.13+0.05									1784							
325	1983	1.94	34.722	27.787	45.810		2281(I)					0.08+0.06									1983							
327	2380	1.62	34.737	27.823	45.880		2289(I)					0.02+0.05									2380							
329	2781	1.27	34.730	27.842	45.938		2305(I)					-0.07+0.07									2781							
334	3788	0.657	34.707	27.862	46.027		2275(I)					-0.01+0.06									3788							

STATION 282 — **POSITION: 57°31'S 169°47'E** — **DATE: 10 FEB 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{16}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------MCM----------			MIT	LDGO SIO*		LDGO	WHOI					SIO YALE*	SIO		YALE
1747	0	5.58	33.88	26.760	44.439																0				8.2**0.6			4.8 +0.3
314	3	5.58	33.880	26.760	44.439		2113	2.03				0.89+0.08				65.5				32	3							
1527	4	5.17	33.831	26.769	44.489		2113(I)										16.7 +0.6				4							
135	5		33.82				2114(I)												0.03+0.04		5							
136	10		33.97				2115(I)		44.7								13.3**0.6				10							
1094	19	5.79	33.911	26.759	44.416		2118(I)														19				7.4 +0.3	0.16 +0.02		
317	44	5.59	33.883	26.762	44.440		2125(I)									64.7					44							
894	62	5.52	33.873	26.762	44.446		2128(I)		45.7								13.2**0.6				62							
318	83	5.59	33.883	26.761	44.438		2131									66.4				14	83							
319	124	5.41	34.027	26.897	44.587		2131(I)					0.90+0.07				60.9					124							
886	127	5.36	34.058	26.927	44.621		2131(I)		32.1								13.0**0.6				127							
320	156	4.97	34.043	26.960	44.693		2131									62.2				44	156							
889	204	4.75	34.090	27.021	44.774		2139(I)		7.4								15.7**0.6				204							
325	206	4.76	34.077	27.010	44.762	2.2	2140	1.73								59.4					206							
326	259	4.56	34.121	27.067	44.838		2159					0.62+0.07	0.0	3.77		59.8				24	259							
1086	263	4.84	34.193	27.094	44.835		2161(I)														263				7.7 +0.4	0.46 +0.10		
890	308	4.46	34.180	27.125	44.904		2176(I)		-24.5								14.1**0.9				308							
321	312	4.45	34.177	27.123	44.904		2177									62.0					312							
328	365	4.25	34.214	27.173	44.972		2184(I)					0.47+0.06				61.7					365							
891	412	3.94	34.222	27.212	45.042		2188(I)		-62.0								23.9**0.6				412							
329	415	3.99	34.226	27.210	45.034	4.2	2188	1.09								62.7				37	415							
330	466	3.761	34.243	27.246	45.094		2198					0.24+0.05	3.7			64.1					466							
331	516	3.523	34.262	27.284	45.155		2194									66.1				32	516							
1089	519	3.54	34.279	27.296	45.166		2195(I)														519				9.8 +0.4	0.22 +0.06		
332	566	3.21	34.279	27.327	45.230		2210					0.19+0.05				67.4					566							
614	610	3.00	34.284	27.350	45.275		2224									70.5				21	610							
333	615	3.07	34.298	27.355	45.272		2227(I)	0.91													615							
892	619	3.09	34.294	27.350	45.265		2230(I)		-95.2												619							
334	665	2.983	34.321	27.381	45.306		2257					0.19+0.05	4.4							32	665							
616	713	2.744	34.341	27.417	45.367	5.4	2253	0.76								73.8					713							
887	824	2.61	34.396	27.473	45.435		2258(I)		-120.2								18.0**0.4				824							
617	915	2.54	34.462	27.531	45.499		2262(I)						7.3			78.6				19	915							
1090	942	2.47	34.470	27.544	45.519		2264(I)														942				10.8 +0.3	0.24 +0.07		
1687	999	2.29	34.519	27.597	45.590		2266(I)		-139.3								16.5**0.5				999							
618	1119	2.36	34.551	27.618	45.602	6.9	2272	0.56								73.8					1119							
1694	1262	2.23	34.626	27.688	45.684		2279(I)		-142.7								18.0**0.6				1262							
1091	1266	2.29	34.612	27.672	45.661		2279(I)														1266				11.5 +0.6	0.50 +0.03		
619	1321	2.24	34.635	27.694	45.688		2281(I)									81.4				17	1321							
1686	1511	2.10	34.685	27.745	45.753		2287(I)		-149.7								16.5**0.5				1511							
620	1524	2.13	34.684	27.742	45.747	6.8	2287(I)	0.50					9.9			84.8					1524							
621	1726	2.01	34.711	27.773	45.789		2290													19	1726							
1689	1784	1.89	34.725	27.793	45.821		2289(I)		-153.1								18.0**0.6				1784							
1092	1786	2.02	34.713	27.774	45.789		2289(I)														1786				12.0 +0.3	0.32 +0.06		
622	1927	1.87	34.730	27.799	45.830	6.5	2286(I)									88.1					1927							
723	2030	1.80	34.734	27.807	45.846		2284						10.1	3.97						17	2030							
1294	2118	1.70	34.738	27.818	45.867		2262(I)		-149.7			-0.02+0.06					18.9**0.9				2118							
724	2131	1.705	34.738	27.817	45.866	6.1	2260	0.38								90.2					2131							
725	2233	1.64	34.739	27.823	45.878		2272													20	2233							
726	2335	1.55	34.739	27.829	45.894	6.1	2293	0.56					11.2	4.12	18.19	0.1	92.3				2335							
1087	2405	1.51	34.738	27.831	45.900		2285(I)														2405				11.5 +0.4	0.43 +0.03		
1286	2435	1.44	34.735	27.834	45.911		2281(I)		-157.4			0.00+0.07					19.2**0.5				2435							
727	2436	1.468	34.738	27.834	45.908		2281(I)													23	2436							
728	2537	1.371	34.735	27.839	45.923		2262	0.39					9.4		18.42		93.5				2537							
729	2640	1.31	34.733	27.841	45.933		2270(I)													30	2640							
1289	2653	1.25	34.731	27.844	45.942		2271(I)		-159.6			-0.04+0.06					20.2**0.5				2653							
730	2742	1.227	34.730	27.845	45.945	5.8	2280						10.1			96.5					2742							
1494	2751	1.15	34.729	27.849	45.957		2280(I)														2751				11.0 +0.3	0.69 +0.02		

(I) INTERPOLATED FROM NISKIN DATA

STATION 282 — *CONTINUED*

POSITION: 57°31'S 169°47'E

DATE: 10 FEB 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------MCM----------				MIT	LDGO SIO*		LDGO	WHOI						SIO YALE*	SIO		YALE
731	2845	1.157	34.728	27.848	45.956		2276																						
1301	3035	1.01	34.723	27.853	45.978		2283						11.1	4.16	18.33	0.8					25	2845							
732	3051	1.022	34.722	27.852	45.975	5.9	2283(I)	0.42					10.5		18.47		99.2				17	3035							
1290	3174	0.95	34.720	27.855	45.986		2283(I)		-162.7			0.07+0.07						20.4**+0.5				3051							
1486	3291	0.84	34.714	27.857	46.001		2283(I)															3174							
1302	3334	0.80	34.714	27.859	46.007	5.5	2283	0.55														3291				9.7 +0.3	0.77 +0.10		
734	3459	0.809	34.711	27.856	46.004	5.9	2273	0.05									99.1				16	3334							
1303	3534	0.72	34.710	27.861	46.019		2281					0.01+0.05	10.3								11	3459							
1291	3690	0.68	34.708	27.861	46.023		2284(I)		-163.8			-0.07+0.06						21.9**+0.6				3534							
1314	3732	0.63	34.707	27.864	46.032		2284(I)					-0.07+0.06					100.8					3690							
1489	3866	0.60	34.707	27.865	46.036		2287(I)															3732							
1325	3935	0.57	34.705	27.866	46.041		2288						9.0	4.13	18.28	0.4					9	3866				9.0 +0.3	0.84 +0.04		
489	4000	2.65	34.709	27.719	45.668		2284(I)		-165.9									20.9**+0.6				3935							
1326	4136	0.51	34.701	27.866	46.047	5.5	2276	0.51				-0.09+0.07					100.1					4000							
1292	4204	0.51	34.702	27.867	46.048		2275(I)		-160.3			0.02+0.06						20.7**+0.6				4136							
490	4250	2.29	34.705	27.746	45.732		2274(I)		-167.5									22.1**+1.4				4204							
1327	4336	0.463	34.700	27.868	46.055		2272					-0.01+0.05	8.3	4.13	18.57	-1.0					31	4250							
1490	4406	0.98	34.699	27.836	45.965		2274(I)															4336				8.6 +0.3	1.01 +0.07		
491	4500	1.97	34.699	27.766	45.787		2276(I)		-165.1									22.0**+0.7				4406							
1328	4539	0.44	34.699	27.868	46.058		2277										99.8					4500							
1287	4721	0.40	34.698	27.870	46.064		2303(I)					-0.07+0.06						20.9**+0.6				4539							
1329	4739	0.411	34.699	27.870	46.063		2303					0.16+0.07	8.5	4.12	18.77	-2.4					54	4721							
492	4750	4.96	34.700	27.481	45.195		2299(I)		-168.0									20.6**+0.7				4739							
1330	4838	0.40	34.698	27.870	46.063	5.4	2271	0.65				0.07+0.05					99.1					4750							
1491	4893	0.40	34.697	27.869	46.064		2274(I)															4838							
1331	4939	0.39	34.699	27.871	46.066		2277					0.18+0.07	11.1								26	4893				9.0 +0.5	1.77 +0.13		
1332	5040	0.37	34.699	27.872	46.070		2283					0.01+0.07	10.4				99.5					4939							
1333	5141	0.350	34.697	27.872	46.071	5.5	2285	0.59				0.13+0.07	10.8	4.10	18.60	-1.9					41	5040							
1492	5146	0.38	34.696	27.869	46.066		2284(I)															5141							
1334	5191	0.335	34.697	27.873	46.074	5.6	2272	0.52				0.01+0.05	9.5	4.12	18.45	-0.5	101.7					5146				8.7 +0.6	2.05 +0.04		
1487	5194	0.35	34.696	27.871	46.070				-163.3									20.6**+0.5				5191							
																						5194							
												PRECISION:	0.3	0.01	0.06	0.2													

STATION 285

POSITION: 61°29'S 169°58'E

DATE: 14 FEB 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO									YALE		YALE	
447	0	2.08	34.05	27.239	45.269																	0				8.8 +0.6		7.2 +0.4	
535	5		33.96														0.02+0.02					5							
314	9	2.24	33.963	27.157	45.173		2152					0.95+0.07										9							
325	20	2.25	33.964	27.157	45.172		2152(I)					0.77+0.06										20							
327	45	2.24	33.963	27.157	45.173		2162(I)					0.90+0.07										45							
329	66	2.252	33.963	27.156	45.170		2181(I)					0.99+0.07										66							
330	85	2.24	33.963	27.157	45.173		2200					0.71+0.07										85							
215	199	1.40	34.292	27.482	45.578		2220(I)					0.28+0.05										199							
217	299	1.66	34.449	27.589	45.651		2242(I)					0.18+0.07										299							
225	399	2.00	34.572	27.663	45.684		2255(I)					0.03+0.05										399							
129	3082	0.501	34.702	27.867	46.050		2277					-0.01+0.05										3082							
132	3671	0.36	34.699	27.873	46.071		2275(I)					0.01+0.05										3671							

(I) INTERPOLATED FROM NISKIN DATA

STATION 286 — **POSITION: 66°5'S 173°40'E** — **DATE: 17 FEB 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
										SIO	SIO	UM	----------SIO----------					LDGO		LDGO						YALE		YALE
447	0	0.29	33.90	27.233	45.467																	0				11.0 +0.7		7.2 +0.5
201	2	0.30	33.907	27.239	45.470		2175					0.74+0.09	-1.5	4.15	18.08	2.2		19.1 +0.9				2						
535	5		33.91				2175(I)													0.03+0.04		5						
203	60	-1.50	34.268	27.603	46.034		2208			-2.6		0.66+0.07										60						
204	64	-1.47	34.282	27.614	46.040		2213(I)						0.9									64						
205	69	-1.42	34.306	27.632	46.051		2219			-2.3	-0.19	0.50+0.06										69						
206	79	-1.07	34.371	27.673	46.048		2235(I)			-2.6	-0.20		1.9	4.24	18.47	2.7						79						
207	89	-0.40	34.447	27.708	46.002		2252					0.32+0.06										89						
208	99	0.18	34.520	27.739	45.964		2253(I)						4.8	4.20	18.30	2.3						99						
209	123	0.89	34.618	27.776	45.917		2255(I)			-1.7	-0.13	0.22+0.06										123						
210	148	1.22	34.664	27.792	45.895		2257(I)			-1.1	-0.04	0.04+0.05	6.5	4.39	18.73	3.8						148						
225	196	1.362	34.695	27.807	45.894		2260(I)			-1.2	-0.08	0.19+0.06										196						
226	270	1.405	34.713	27.819	45.900		2266(I)			-1.5	-0.04		7.2									270						
227	343	1.328	34.716	27.827	45.917		2272					0.03+0.07										343						
228	466	1.23	34.719	27.836	45.937		2278(I)			-1.4	-0.05		6.8	4.36	18.69	3.4						466						
229	589	1.12	34.717	27.841	45.954		2283			-0.9	-0.03											589						
230	784	0.99	34.716	27.849	45.976		2283(I)			-1.6	-0.06		8.3	4.32	18.53	3.5						784						
331	998	0.839	34.713	27.856	46.000		2283(I)			-1.4	-0.08											998						
332	1198	0.69	34.708	27.861	46.023		2283(I)			-2.0	-0.14		8.8	4.24	18.24	3.2						1198						
333	1421	0.55	34.705	27.867	46.043		2283				-0.15											1421						
334	1642	0.455	34.701	27.869	46.057		2277			-1.8	-0.15		9.1									1642						
116	2106	0.30	34.699	27.876	46.082					-1.9	-0.15											2106						
117	2254	0.26	34.699	27.878	46.089					-2.0		0.12+0.06	8.4	4.31	18.57	3.3						2254						
118	2404	0.19	34.700	27.883	46.101					-1.7	-0.18											2404						
125	2553	0.12	34.699	27.886	46.112					-2.1	-0.17		7.3									2553						
126	2701	0.047	34.699	27.889	46.124						-0.19	0.05+0.06										2701						
127	2850	-0.06	34.698	27.894	46.140						-0.21		7.2									2850						
128	2998	-0.14	34.701	27.900	46.156						-0.17	0.20+0.05										2998						
129	3097	-0.18	34.702	27.903	46.163							0.15+0.06	6.1	4.40	18.84	4.1						3097						
130	3196	-0.225	34.707	27.909	46.175							0.13+0.06										3196						
131	3246	-0.24	34.708	27.911	46.177							0.11+0.08	6.1									3246						
132	3295	-0.26	34.709	27.913	46.182							0.05+0.08										3295						
133	3345	-0.25	34.710	27.913	46.180							0.18+0.06	6.9	4.39	19.00	3.2						3345						
												PRECISION:	1.0	0.01	0.06	0.2												

STATION 287 — **POSITION: 69°18'S 173°30'W** — **DATE: 19 FEB 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------SIO----------			I.SU		LDGO USC*		LDGO WHOI*			SIO YALE*		SIO		YALE	
1247	0	-1.10	33.38	26.872	45.285																	0	10.4**+0.7				5.9 +0.4	
914	1	-1.04	33.369	26.861	45.268													19.0 +1.2				1						
501	2	-1.07	33.377	26.869	45.278	1.0	2137	1.11				1.06+0.08	-1.6	4.03	18.02	0.2	77.8					90*	2					
1193	3	-1.15	33.251	26.769	45.192		2137(I)															3	9.1 +0.4	1.68 +0.06				
135	5		33.25				2137(I)		-76.4									17.0**+0.3				5						
502	11	-1.38	33.379	26.879	45.326		2140(I)					0.93+0.09										114*	11					
503	21	-1.49	33.384	26.886	45.346		2149										77.0					102*	21					
504	32	-1.20	33.761	27.183	45.595		2168(I)					0.90+0.07										111*	32					
505	41	-1.40	34.114	27.475	45.899		2185					0.79+0.08					78.2						41						
506	51	-1.52	34.211	27.557	45.992	1.6	2190(I)	0.98					1.2									95*	51					
507	61	-1.58	34.264	27.602	46.042		2196(I)															72*	61					
894	66	-1.57	34.311	27.640	46.076		2198(I)		-93.6			0.51+0.09						17.4**+0.3					66					
508	71	-1.63	34.286	27.621	46.067	2.5	2201(I)	1.08				0.57+0.09										54*	71					
1093	73	-1.61	34.293	27.626	46.069		2202(I)																73	10.2 +0.3	0.36 +0.03			
509	81	-1.65	34.305	27.637	46.084		2206(I)						1.6	4.15	18.35	1.5	78.1					8*	81					
510	92	-1.62	34.304	27.636	46.079	2.6	2212(I)	0.82														20*	92					
525	101	-1.54	34.320	27.646	46.080		2217(I)					0.49+0.09										27*	101					
526	127	-1.14	34.364	27.670	46.054	3.3	2231(I)	1.05														28*	127					
527	151	-0.32	34.458	27.713	45.997		2244					0.42+0.05	4.2				79.8					23*	151					
528	176	0.41	34.551	27.751	45.948		2246(I)															18*	176					
886	183	0.73	34.596	27.769	45.929		2246(I)		-128.3			0.31+0.09						16.9**+0.3					183					
529	201	0.86	34.611	27.773	45.918	4.7	2248(I)	0.39				0.23+0.09					83.1					56*	201					
1087	213	1.12	34.637	27.777	45.893		2248(I)																213	13.4 +0.6	0.24 +0.03			
530	225	1.24	34.659	27.787	45.888		2249(I)					0.14+0.05	8.4	4.24	18.33	2.5						25*	225					
531	249	1.354	34.678	27.794	45.883		2251(I)					0.16+0.05										23*	249					
532	272	1.42	34.691	27.800	45.882	6.7	2253(I)	0.28									84.7					51*	272					
533	306	1.41	34.705	27.812	45.893		2255(I)					-0.02+0.09	8.8									40*	306					
890	318	1.40	34.711	27.817	45.899		2256(I)		-152.9			-0.03+0.09						17.4**+0.3					318					
701	349	1.41	34.712	27.817	45.898		2258(I)					0.09+0.05										16*	349					
534	352	1.412	34.717	27.822	45.902		2258(I)										85.7					20*	352					
702	399	1.40	34.720	27.825	45.907	6.2	2262(I)	0.23				0.16+0.09										7*	399					
703	449	1.35	34.723	27.831	45.918		2265(I)						8.5	4.27	18.44	2.6	92.6					19*	449					
704	499	1.31	34.725	27.835	45.926		2269(I)					-0.08+0.09										20*	499					
891	537	1.27	34.724	27.837	45.933		2272(I)		-159.0			0.15+0.09						19.5**+0.3					537					
1090	547	1.25	34.723	27.838	45.936		2272(I)																547	14.6 +0.8	0.17 +0.03			
705	598	1.24	34.726	27.841	45.940		2276										89.8					14*	598					
706	698	1.16	34.724	27.844	45.952	6.5	2277(I)	0.15				0.08+0.09										9*	698					
892	780	1.08	34.723	27.849	45.965		2278(I)		-156.1			0.10+0.09						20.6**+0.4					780					
707	797	1.08	34.724	27.850	45.967		2278(I)						9.5	4.23	18.25	2.9	92.0					12*	797					
1091	983	0.96	34.718	27.852	45.983		2279(I)																983	13.1 +0.4	0.52 +0.05			
709	996	0.92	34.718	27.855	45.990		2279(I)										94.5					8*	996					
889	1004	0.90	34.717	27.855	45.993		2280(I)		-161.6			0.13+0.09						20.3**+0.4					1004					
710	1095	0.86	34.715	27.856	45.998	6.1	2280(I)	0.47				-0.03+0.05										11*	1095					
687	1287	0.74	34.709	27.859	46.014		2282(I)											19.9**+0.4					1287					
725	1294	0.744	34.711	27.860	46.015		2282						10.3	4.26	18.35	3.0	97.0					12*	1294					
1092	1417	0.68	34.710	27.863	46.025		2282(I)																1417	14.2 +0.6	0.99 +0.03			

(I) INTERPOLATED FROM NISKIN DATA

STATION 287 — *CONTINUED*

POSITION: 69°18'S 173°30'W

DATE: 19 FEB 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	SIO				LSU	LDGO USC*			LDGO WHOI*					SIO YALE*	SIO		YALE
726	1494	0.61	34.706	27.864	46.035		2282(I)																						
694	1620	0.55	34.705	27.867	46.044		2282(I)		-162.6								97.3				9*	1494							
727	1692	0.51	34.704	27.869	46.051		2282											20.4**0.3				1620							
1089	1888	0.43	34.700	27.870	46.060		2282(I)										98.2				11*	1692							
728	1891	0.420	34.702	27.872	46.064	5.6	2282(I)	0.28														1888				9.9 +0.8	0.99 +0.03		
686	1951	0.39	34.700	27.872	46.067		2283(I)		-161.1								99.1				13*	1891							
287	2074	0.306	34.565	27.768	45.977		2283(I)											21.2**0.3				1951							
729	2090	0.326	34.700	27.875	46.078		2283(I)					0.09+0.09	9.1	4.22	18.26	2.7	99.6				14*	2074				10.6 +0.5	0.69 +0.03		
690	2282	0.25	34.698	27.878	46.090		2283(I)		-162.5									21.7**0.5				2090							
730	2288	0.234	34.698	27.879	46.092		2283(I)										99.3				17*	2282							
731	2488	0.15	34.700	27.885	46.107		2284(I)										99.5				15*	2288							
294	2504	0.13	34.702	27.887	46.111		2284(I)															2488							
691	2590	0.11	34.700	27.887	46.115		2284(I)		-163.5									21.1**0.3				2504				10.5 +0.2	0.69 +0.03		
732	2686	0.085	34.700	27.888	46.118	5.4	2284(I)	0.30									100.3				15*	2590							
302	2744		34.699				2285(I)														10*	2686							
301	2753	0.08	34.698	27.887	46.118		2285(I)	0.45					7.6	4.30	18.56	3.2					14*	2744							
733	2884	-0.00	34.698	27.891	46.131		2285(I)					0.06+0.07	7.6				98.2				14*	2753							
692	2908	-0.01	34.699	27.892	46.132		2285(I)		-159.9									21.2**0.4				2884							
286	2926	-0.03	34.688	27.885	46.128		2285(I)															2908							
303	2938	0.02	34.699	27.891	46.128	5.2	2285						7.6								11*	2926				8.1 +0.5	0.75 +0.04		
304	2940		34.698				2285(I)														14*	2938							
734	3083	-0.060	34.701	27.896	46.143		2279					0.16+0.09					97.8				19*	2940							
305	3140	-0.06	34.701	27.897	46.143	4.3	2273(I)	0.45					6.9	4.33	18.66	3.3					21*	3083							
306	3143		34.700				2273														13*	3140							
689	3228	-0.11	34.700	27.898	46.150		2273(I)		-155.5									20.9**0.3				3143							
1187	3233	-0.08	34.703	27.899	46.148		2273(I)		-148.6									20.7**0.4				3228							
487	3237	-0.09	34.697	27.895	46.145		2273(I)		-159.7									20.7**0.4				3233							
307	3346	-0.12	34.699	27.898	46.151	5.1	2273(I)	0.22				0.19+0.05	6.5				96.0				15*	3237							
308	3349		34.701				2274(I)														15*	3346							
290	3354	-0.13	34.651	27.860	46.116		2274(I)															3349							
494	3452	-0.15	34.701	27.901	46.158		2274(I)		-150.9									20.9**0.6				3354				8.5 +0.8	0.78 +0.03		
1186	3460	-0.15	34.704	27.903	46.159		2274(I)		-159.9			0.07+0.09						20.9**0.6				3452							
309	3554	-0.17	34.702	27.903	46.162	5.1	2274	0.53					6.0	4.35	18.69	3.7	95.4				18*	3460							
310	3557		34.701				2274(I)					0.18+0.05									18*	3554							
486	3614	-0.20	34.701	27.903	46.166		2274(I)		-155.0									20.5**0.4				3557							
291	3679	-0.18	34.691	27.894	46.155		2273(I)															3614							
1190	3681	-0.19	34.703	27.905	46.166		2273(I)		-154.2			0.11+0.09						20.2**0.4				3679				7.8 +0.5	1.03 +0.04		
312	3747		34.705				2273(I)														21 +2.1	3681							
311	3750		34.704			4.9	2273	0.47													12*	3747							
490	3774	-0.21	34.702	27.905	46.168		2274(I)		-144.6									20.4**0.4				3750							
314	3836		34.703			5.0	2278(I)	0.35				0.19+0.09	7.0	4.30	18.63	2.9	95.6				16*	3774							
315	3837		34.705				2278(I)														38 +3.2	3836							
292	3893	-0.21	34.678	27.885	46.149		2281(I)															3837							
1191	3902	-0.22	34.706	27.908	46.173		2282(I)		-160.1			0.22+0.09						19.9**0.5				3893				8.2 +0.6	0.95 +0.04		
316	3905		34.705				2282(I)					0.17+0.05									18 +2.2	3902							
491	3941	-0.24	34.704	27.908	46.174		2284(I)		-153.1									20.2**0.4				3905							
318	3956		34.702				2285														17 +2.2	3941							
317	3960	-0.21	34.703	27.905	46.169	5.0	2284(I)	0.54					7.1								17*	3956							
319	4002		34.705				2277					0.31+0.09									43 +3.8	3960							
320	4044	-0.225	34.702	27.905	46.171	4.9	2276(I)	0.33					6.6				96.4				60*	4002							
321	4045		34.706				2276(I)														32 +2.4	4044							
322	4077		34.705				2275(I)														23 +3.0	4045							
492	4080	-0.25	34.704	27.908	46.176		2275(I)		-151.0									20.8**0.4				4077							
1192	4093	-0.23	34.705	27.908	46.174		2274(I)		-151.7			0.14+0.09						21.3**0.5				4080							
323	4100		34.705				2274(I)										96.7				24*	4093							
324	4100		34.705				2274	0.53				0.18+0.06	7.1	4.28	18.52	3.0						4100							
1189	4121	-0.24	34.704	27.908	46.175																	4121				6.6 +0.3	1.34 +0.07		
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 289

POSITION: 61°59'S 174°0'W

DATE: 24 FEB 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																					LDGO								
201	2	2.47	33.853	27.051	45.045																15.7 +0.6	2							

(I) INTERPOLATED FROM NISKIN DATA

Institut für Meereskunde an der Universität Kiel

STATION 290 | **POSITION: 58°1'S 174°0'W** | **DATE: 25 FEB 74**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 µM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	$\delta(^3He)$ %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	----------SIO----------					LDGO USC*		LDGO	LDGO					YALE			YALE
947	0	4.53	33.96	26.942	44.721																	0				7.7 +0.6			6.3 +0.4
714	2	4.57	33.945	26.926	44.702													16.1 +0.5				2							
401	3	4.53	33.958	26.941	44.720			2.01				0.86+0.07	-1.6	4.16	17.95	1.2						3							
835	5		33.95																	0.00+0.04		5							
836	10		33.95						16.1			0.68+0.09						15.3*+0.3				10							
402	34	4.54	33.958	26.940	44.718							0.88+0.07										34							
403	63	4.50	33.962	26.948	44.730		2130	1.37				0.76+0.09										63							
404	93	4.49	33.964	26.950	44.732		2133					0.86+0.07	-2.0	4.14	17.91	1.1						93							
405	124	3.74	34.036	27.083	44.939		2157	1.24				0.75+0.07										124							
587	125	3.77	34.043	27.086	44.939		2157(I)		8.8			0.77+0.09						14.6*+0.4				125							
407	183	3.31	34.058	27.142	45.042		2158(I)					0.67+0.09										183							
594	200	3.21	34.067	27.158	45.068		2161(I)		-6.3			0.67+0.06						13.0*+0.3				200							
408	214	3.19	34.070	27.163	45.075		2163(I)	1.35				0.59+0.06	-0.3									214							
586	241	3.06	34.085	27.185	45.110		2167(I)		-14.4			0.89+0.09						14.4*+0.2				241							
409	244	3.09	34.079	27.178	45.099		2167					0.67+0.06										244							
410	284	3.30	34.157	27.221	45.119		2181					0.49+0.09										284							
590	321	3.29	34.187	27.246	45.144		2183(I)		-60.4			0.41+0.09						15.5*+0.3				321							
425	324	3.28	34.186	27.246	45.145		2183	1.12				0.50+0.07										324							
426	365	3.246	34.228	27.283	45.184		2206					0.25+0.09	1.1	4.13	17.88	1.5						365							
591	402	3.06	34.253	27.319	45.238		2212(I)		-85.6			0.29+0.09						15.0*+0.3				402							
427	404	3.05	34.244	27.313	45.233		2212					0.28+0.05										404							
428	455	2.93	34.276	27.349	45.282		2219	0.64				0.30+0.09										455							
592	500	2.85	34.303	27.378	45.318		2226(I)		-94.4			0.16+0.09						16.1*+0.3				500							
430	556	2.721	34.338	27.417	45.369		2234					0.27+0.09	4.1	4.10	17.77	1.5						556							
589	596	2.67	34.359	27.438	45.395		2238(I)		-114.1			0.10+0.05						16.3*+0.4				596							
431	656	2.56	34.392	27.474	45.442		2244(I)	0.76				0.21+0.05										656							
387	704	2.51	34.417	27.498	45.471		2249(I)		-131.3			0.11+0.09						17.1*+0.4				704							
432	757	2.43	34.448	27.529	45.508		2255					0.08+0.09										757							
394	905	2.38	34.529	27.598	45.580		2271(I)		-146.6			0.13+0.09						17.4*+0.3				905							
601	906	2.34	34.532	27.603	45.590		2270					0.01+0.06										906							
602	1007	2.29	34.573	27.640	45.630		2274(I)	0.19														1007							
434	1010	2.309	34.576	27.641	45.630		2274(I)	0.27				0.03+0.09	6.7									1010							
603	1108	2.25	34.620	27.681	45.675		2278						7.7	4.23	18.18	2.7						1108							
386	1203	2.22	34.643	27.702	45.698		2276(I)		-140.6									17.9*+0.3				1203							
605	1410	2.10	34.690	27.749	45.757		2259	0.31														1410							
390	1499	2.03	34.705	27.767	45.781		2268(I)		-153.1									18.5*+0.3				1499							
606	1561	2.00	34.712	27.774	45.791		2277						6.6									1561							
391	1791	1.84	34.729	27.800	45.834		2274(I)											18.6*+0.4				1791							
608	1862	1.77	34.735	27.810	45.851		2273	0.55					6.7	4.42	18.90	3.4						1862							
609	2014	1.67	34.738	27.820	45.872		2275					-0.07+0.09										2014							
187	2307	1.44	34.736	27.835	45.912		2264(I)		-156.6									20.2*+0.4				2307							
626	2468	1.28	34.733	27.844	45.938		2275(I)						6.2	4.36	18.55	4.2						2468							
194	2704	1.12	34.726	27.849	45.961		2279(I)		-163.3									20.4*+0.5				2704							
628	2822	1.03	34.724	27.853	45.975		2273	0.42														2822							
629	3024	0.90	34.719	27.857	45.994		2287					0.05+0.09	8.8	4.31	18.46	3.6						3024							
186	3202	0.80	34.714	27.859	46.008		2276(I)		-161.7									20.8*+0.4				3202							
631	3429	0.702	34.711	27.863	46.022		2280	0.28														3429							
632	3632	0.62	34.711	27.868	46.037		2282(I)						6.8	4.50	19.21	4.0						3632							
190	3699	0.58	34.705	27.865	46.038		2282(I)		-160.1									20.3*+0.4				3699							
633	3835	0.57	34.705	27.866	46.041		2283					0.02+0.06										3835							
634	4038	0.526	34.703	27.867	46.046		2297(I)	0.35				0.18+0.09										4038							
201	4125	0.51	34.703	27.868	46.050		2300	0.15				0.04+0.05	7.2									4125							
191	4197	0.51	34.703	27.868	46.049		2294(I)		-169.3									21.7*+0.3				4197							
203	4430	0.491	34.705	27.870	46.054		2295	0.34					7.5	4.33	18.62	3.4						4430							
204	4583	0.492	34.703	27.869	46.052		2291(I)					0.08+0.09										4583							
192	4594	0.49	34.702	27.868	46.052		2291(I)		-161.6			0.12+0.09						21.2*+0.3				4594							
205	4684	0.47	34.703	27.870	46.056		2288	0.11														4684							
206	4785	0.48	34.701	27.868	46.053		2289						6.9									4785							
189	4793	0.47	34.700	27.868	46.054		2288(I)		-164.5			0.10+0.09						22.6*+0.6				4793							
207	4888	0.472	34.702	27.869	46.055		2283	0.29														4888							
208	4939	0.47	34.702	27.869	46.055		2284(I)															4939				13 +1.6			
209	4989	0.46	34.702	27.870	46.057		2286	0.44					6.4	4.48	19.20	3.7						4989							
225	5091	0.47	34.702	27.869	46.055		2286(I)															5091				19 +1.6			
226	5159	0.45	34.702	27.870	46.059		2285(I)															5159				9 +1.6			
227	5189	0.46	34.702	27.869	46.056		2285	0.36				0.09+0.09	6.8									5189							
228	5209	0.46	34.702	27.869	46.056		2285(I)															5209				16 +1.6			
229	5238	0.45	34.702	27.870	46.059		2284(I)															5238				12 +1.6			
230	5247	0.46	34.702	27.870	46.057		2284(I)						7.8	4.31	18.59	3.0						5247							
231	5258	0.46	34.702	27.870	46.057		2284(I)											20.6 +0.4				5258				13 +1.6			
232	5273	0.456	34.702	27.870	46.057		2284(I)															5273				16 +1.6			
233	5280	0.46	34.702	27.869	46.056		2284	0.13					6.6									5280							
234	5287	0.471	34.701	27.868	46.054																	5287				19 +1.6			
PRECISION:								1.0	0.01	0.06	0.2																		

(I) INTERPOLATED FROM NISKIN DATA

STATION 291

POSITION: 56°0'S 175°35'W

DATE: 27 FEB 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO			LDGO					YALE			YALE
347	0	6.94	34.16	26.807	44.349																0				8.0 +0.6			6.2 +0.4
201	2	6.94	34.158	26.805	44.347		2100					0.91+0.07									2							
202	32	6.94	34.158	26.806	44.348		2115					0.89+0.07									32							
203	62	6.92	34.158	26.808	44.351		2146					0.78+0.07									62							
204	92	6.84	34.164	26.823	44.374		2103					0.92+0.07									92							
205	123	6.17	34.163	26.911	44.525		2120					0.88+0.06									123							
206	153	5.64	34.204	27.009	44.672		2127					0.85+0.06									153							
207	193	4.94	34.170	27.063	44.794		2128(I)					0.84+0.07									193							
208	234	4.82	34.187	27.090	44.833		2130					0.75+0.07									234							
209	274	4.66	34.176	27.100	44.859		2133					0.87+0.07									274							
210	355	4.35	34.159	27.119	44.909		2131					0.80+0.07									355							
225	456	3.88	34.131	27.145	44.985		2152					0.73+0.06									456							
226	557	3.887	34.213	27.210	45.045		2172					0.50+0.06									557							
227	707	3.28	34.288	27.328	45.223		2206					0.24+0.06									707							
228	910	2.67	34.376	27.452	45.408		2238					0.23+0.06									910							
229	1211	2.374	34.539	27.606	45.589		2250(I)					0.10+0.07									1211							
230	1515	2.216	34.646	27.705	45.701		2262					0.06+0.06									1515							
108	4568	0.47	34.701	27.868	46.054		2269(I)													8 +1.6	4568							
110	4719	0.48	34.701	27.868	46.053		2275(I)													12 +1.6	4719							
126	4845	0.45	34.700	27.869	46.057		2275(I)													8 +1.6	4845							
128	4945	0.45	34.700	27.869	46.057		2274(I)													14 +1.5	4945							
130	4995	0.43	34.700	27.870	46.060		2274(I)													16 +1.6	4995							
131	5037	0.44	34.699	27.869	46.058		2275(I)											22.4 +0.4		14 +1.6	5037							
132	5067	0.43	34.700	27.870	46.060		2275(I)													20 +1.6	5067							
134	5097	0.431	34.699	27.869	46.059															29 +1.6	5097							

STATION 293

POSITION: 52°35'S 178°2'W

DATE: 1 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM	SIO	SIO	UM	----------SIO----------			MIT	LDGO SIO*	LDGO	LDGO	LDGO					YALE			YALE
1247	0	11.47	34.43	26.285	43.433																0				5.6 +0.5			4.7 +0.3
714	2	11.47	34.426	26.282	43.430												8.8 +0.2				2							
401	3	11.328	34.419	26.303	43.462	0.9	2053	2.18		-0.3	0.04	0.90+0.06	-1.4	4.04	17.05	0.4	46.4				3							
1036	10		34.43				2057(I)		56.2								10.6*+0.7				10							
1037	50		34.48				2077(I)		56.9								10.4*+0.8				50							
402	54	9.95	34.472	26.588	43.858		2079(I)					1.08+0.09					47.5				54							
403	94	8.38	34.420	26.802	44.208		2094	1.72		-0.8	-0.03	0.96+0.07					50.7				94							
587	101	9.11	34.619	26.843	44.180		2095(I)		39.3			0.89+0.09								9.8*+0.6	101							
404	124	9.01	34.626	26.865	44.210	2.6	2097(I)			+0.2	0.09		-1.5								124							
405	155	8.27	34.518	26.895	44.307		2101(I)			-0.4		1.12+0.09									155							
406	185	8.08	34.509	26.918	44.346		2105(I)			+0.4	0.05										185							
589	200	7.77	34.471	26.934	44.391		2106(I)		26.6			0.75+0.09								9.4*+0.6	200							
407	215	7.65	34.419	26.911	44.381	2.4	2108	1.47		+0.1			-0.9	4.14	17.64	1.2	47.9				215							
408	246	7.36	34.459	26.984	44.479		2104(I)			+0.0	0.00	0.82+0.09									246							
409	286	7.20	34.408	26.966	44.477		2099			+0.4	-0.04	0.85+0.08									286							
590	302	7.18	34.409	26.969	44.482		2100(I)		24.9			1.12+0.09								9.8*+0.6	302							
410	336	7.189	34.417	26.975	44.486	2.0	2101(I)	1.46				0.95+0.09	-1.7				49.1				336							
425	387	6.94	34.387	26.985	44.520		2106(I)			-0.3	-0.02	0.83+0.07									387							
591	401	6.70	34.355	26.993	44.551		2107(I)		19.3			0.79+0.09								10.5*+0.4	401							
426	457	6.46	34.342	27.015	44.596	2.3	2115(I)	0.59				0.65+0.07					54.5				457							
592	501	6.54	34.369	27.025	44.598		2123(I)		-7.0			0.66+0.09								10.2*+0.7	501							
427	533	6.21	34.332	27.039	44.644		2129			-1.0	-0.05	0.67+0.08	-0.9	4.17	17.82	1.5					533							
593	599	6.03	34.334	27.064	44.686		2137(I)		-33.0			0.54+0.09								11.5*+0.6	599							
428	618	5.91	34.321	27.068	44.701	3.0	2139(I)	0.29				0.54+0.07									618							
429	684	5.27	34.268	27.103	44.800		2145			-1.2	-0.05	0.55+0.05					58.7				684							
594	695	5.49	34.303	27.105	44.779		2145(I)		-33.4			0.49+0.09								14.0*+0.5	695							
430	762	5.03	34.283	27.144	44.863		2147(I)			-1.7		0.41+0.09	-0.1								762							
187	793	4.71	34.282	27.178	44.929		2148(I)		-58.6			0.48+0.09								13.8*+0.6	793							
431	861	4.75	34.318	27.202	44.948	4.6	2150	0.77		-1.1	-0.10	0.23+0.05									861							
432	961	4.07	34.312	27.269	45.083		2159(I)					0.11+0.09	1.6	4.28	18.35	2.1	67.0				961							
194	992	3.74	34.319	27.309	45.157		2164(I)		-100.8			0.32+0.09								14.8*+0.5	992							
433	1112	3.440	34.342	27.356	45.233		2196	0.80		-1.2	-0.09	0.13+0.05									1112							
601	1142	3.30	34.347	27.373	45.265		2209										72.0				1142							
186	1191	3.08	34.381	27.420	45.333		2210(I)		-116.6			0.21+0.09								17.3*+0.6	1191							
434	1262	2.90	34.381	27.436	45.368		2212			-1.0	-0.12										1262							
602	1290	2.83	34.395	27.453	45.393		2214(I)										75.2				1290							
603	1438	2.62	34.459	27.522	45.482	6.2	2225	0.39		-1.2			5.5	4.30	18.39	2.9	78.4				1438							
604	1587	2.45	34.525	27.589	45.565		2230(I)				-0.06	0.03+0.09					81.4				1587							
190	1589	2.45	34.539	27.601	45.576		2231(I)		-144.0											17.5*+1.0	1589							
605	1733	2.37	34.577	27.638	45.620	6.6	2236(I)	0.44		-1.3	-0.07						82.5				1733							
606	1881	2.25	34.626	27.686	45.678		2241(I)			-1.0		0.03+0.05									1881							
191	1987	2.18	34.654	27.714	45.713		2245(I)		-164.3											18.4*+0.5	1987							
607	2030	2.19	34.659	27.717	45.715	6.7	2247(I)	0.30		-1.4	-0.05	-0.04+0.05					85.5				2030							
608	2176	2.11	34.687	27.746	45.752		2252						7.8	4.35	18.62	3.1					2176							
609	2327	2.018	34.708	27.770	45.785		2246	0.16		-0.9							85.2				2327							
192	2384	1.94	34.718	27.784	45.807		2247(I)		-154.1											19.0*+0.6	2384							
625	2623	1.78	34.732	27.807	45.847		2250					0.03+0.06					88.7				2623							
626	2772	1.65	34.736	27.820	45.874		2259(I)	-0.04									90.8				2772							
189	2778	1.64	34.736	27.821	45.876		2260(I)		-155.3											19.9*+0.9	2778							
627	2918	1.52	34.736	27.829	45.898		2269			-0.8	-0.06										2918							
628	3067	1.422	34.735	27.835	45.914		2270(I)			-1.1		0.14+0.09					94.0				3067							
629	3216	1.30	34.732	27.841	45.933		2271(I)	-0.22													3216							
387	3230	1.26	34.733	27.845	45.942		2271(I)		-166.2											20.7*+0.8	3230							
630	3364	1.14	34.727	27.848	45.958		2272(I)					0.07+0.06									3364							
631	3511	1.05	34.723	27.851	45.971		2273			-1.4	-0.12						98.0				3511							
632	3652	0.975	34.720	27.853	45.982		2270(I)	0.14													3652							
389	3726	0.91	34.719	27.856	45.992		2268(I)		-156.1											21.3*+1.2	3726							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 293 — *CONTINUED*

POSITION: 52°35'S 178°2'W

DATE: 1 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM	SIO	SIO	UM		SIO			MIT	LDGO SIO*	LDGO	LDGO	LDGO					YALE			YALE
201	3859	0.84	34.714	27.857	46.001		2266(I)					0.07+0.05										3859							
202	4009	0.77	34.711	27.859	46.010	5.4	2263(I)	0.49			-0.15	0.04+0.05	7.6				99.5					4009							
203	4158	0.70	34.710	27.862	46.023		2261(I)			-1.7	-0.09	-0.01+0.05										4158							
390	4223	0.650	34.709	27.864	46.030		2260(I)		-165.5									22.0*+0.9				4223							
204	4314	0.62	34.706	27.864	46.032	5.3	2258(I)	0.50														4314							
205	4463	0.586	34.705	27.865	46.038		2256(I)				-0.15	-0.04+0.09					99.6					4463							
1190	4539	0.53	34.703	27.867	46.046		2255(I)													0.15+0.09		4539							
206	4615	0.54	34.702	27.865	46.044		2255(I)	0.49					7.4	4.28	18.44	3.2						4615							
391	4620	0.53	34.700	27.864	46.043		2254(I)		-161.3									20.9*+0.5				4620							
1193	4730	0.49	34.702	27.868	46.052		2253(I)													0.02+0.04		4730							
207	4765	0.52	34.702	27.866	46.047		2253					0.05+0.07										4765							
208	4864	0.50	34.701	27.867	46.050		2254(I)														10 +1.6	4864							
209	4915	0.48	34.700	27.867	46.052	5.7	2255(I)				-0.12	0.05+0.09	7.2	4.32	18.66	2.9	101.5					4915							
392	4919	0.47	34.702	27.869	46.056		2255(I)		-164.4									23.1*+0.5				4919							
210	5017	0.459	34.700	27.868	46.055		2258(I)														14 +1.6	5017							
987	5041	0.44	34.702	27.870	46.059		2258(I)													0.07+0.06		5041							
225	5067	0.44	34.700	27.869	46.058		2259				-0.11	0.03+0.07										5067							
226	5117	0.46	34.699	27.867	46.055		2261(I)														20 +1.6	5117							
393	5168	0.443	34.701	27.870	46.059		2263(I)		-168.4									21.9*+0.8				5168							
227	5177	0.45	34.699	27.868	46.057	5.7	2264(I)	0.57		-1.5	-0.17	0.03+0.07	7.4									5177							
228	5198	0.443	34.700	27.869	46.058		2264(I)														21 +1.6	5198							
990	5224	0.44	34.700	27.869	46.058		2265(I)												0.00 +0.00	0.15+0.03		5224							
229	5239	0.43	34.699	27.869	46.059		2265(I)														35 +1.6	5239							
230	5259	0.446	34.699	27.868	46.057		2266					0.10+0.05					103.6					5259							
231	5269	0.44	34.700	27.869	46.059		2266(I)											22.5 +1.0			44 +1.6	5269							
232	5298	0.43	34.698	27.868	46.058		2266(I)														188 +2.4	5298							
233	5309	0.43	34.699	27.869	46.059	6.8	2266	0.46				-0.02+0.05	7.5				100.9					5309							
234	5318	0.444	34.699	27.868	46.057																156 +2.2	5318							
993	5417	0.42	34.700	27.870	46.061															0.07+0.03		5417							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 294

POSITION: 50°38'S 179°59'W

DATE: 4 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs DPM/100kg	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
												UM														YALE			YALE
247	0	10.16	34.23	26.364	43.624																	0				7.0 +1.5			5.2 +0.5
101	1	10.16	34.230	26.364	43.624							0.89+0.06										1							
102	153	6.33	34.287	26.988	44.584							0.81+0.08										153							
103	303	5.21	34.233	27.083	44.787							0.65+0.08										303							
104	451											0.12+0.05										451							
105	601	3.55	34.295	27.308	45.176							0.26+0.06										601							
106	751	2.96	34.353	27.408	45.335							0.15+0.06										751							
107	900	2.70	34.422	27.486	45.438							0.19+0.05										900							
108	1049	2.50	34.500	27.565	45.535							0.03+0.05										1049							
109	1198	2.36	34.560	27.624	45.608							0.05+0.05										1198							
110	1347	2.30	34.608	27.668	45.656							0.06+0.05										1347							
125	1495	2.21	34.648	27.707	45.704							0.08+0.05										1495							
126	1646	2.15	34.676	27.734	45.737							0.10+0.05										1646							
127	1794	2.05	34.700	27.761	45.772							-0.02+0.06										1794							
128	1944	1.95	34.716	27.781	45.803							-0.01+0.06										1944							
129	2092											0.09+0.05										2092							
130	2192	1.78	34.731	27.806	45.846							0.08+0.05										2192							
131	2291	1.706	34.735	27.815	45.863							0.12+0.05										2291							
132	2390	1.617	34.736	27.822	45.880							-0.03+0.06										2390							
133	2489	1.54	34.735	27.827	45.893							0.05+0.05										2489							
134	2588	1.459	34.736	27.833	45.908							-0.04+0.05										2588							

(I) INTERPOLATED FROM NISKIN DATA

STATION 296 — POSITION: 44°56'S 166°39'W — DATE: 16 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta(\frac{He}{Ne})$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UM			UM	SIO				LSU	LDGO USC*			LDGO WHOI*					SIO	SIO		
621	3	13.32	34.706	26.136	43.135			1.24				1.44+0.09					39.6				132*	3							
886	10	13.29	34.688	26.128	43.130				79.5									7.5*+0.3				10							
601	27	13.09	34.713	26.189	43.205		2053						-1.6	4.01	16.51	2.1					134*	27						
602	38	12.46	34.696	26.300	43.364		2071					1.30+0.09									114*	38						
603	53	12.43	34.697	26.307	43.373		2084(I)					1.12+0.09									85*	53						
604	82	11.46	34.941	26.683	43.818		2098	0.14				1.15+0.09									22*	82						
889	99	11.39	34.958	26.710	43.850		2108(I)		50.4									8.8*+0.2				99						
605	107	10.72	34.856	26.754	43.950		2112					1.06+0.09					41.0				16*	107						
606	152	10.19	34.799	26.802	44.043		2113(I)					1.05+0.09	-1.5	4.18	17.49	1.7					34*	152						
607	192	9.88	34.767	26.831	44.099		2113	-0.13				1.27+0.09										192						
890	200	9.87	34.760	26.828	44.096		2111(I)		47.6									9.0*+0.2				200						
891	219	9.74	34.736	26.830	44.109		2105(I)															219				6.6 +0.5	0.12 +0.05	
608	242	9.53	34.721	26.854	44.151		2099					0.91+0.09					42.6				33*	242						
609	302	9.08	34.663	26.883	44.221		2108(I)					0.77+0.09	-1.3									302						
610	375	8.56	34.598	26.914	44.299		2120	0.23				0.69+0.07									22*	375						
892	400	8.44	34.578	26.918	44.313		2128(I)		9.8									9.4*+0.2				400						
611	449	8.00	34.525	26.942	44.377		2143					0.67+0.07					47.4				23*	449						
612	548	7.56	34.492	26.980	44.456		2147(I)					0.31+0.09	-0.8				48.0				14*	548						
893	601	7.59	34.503	26.986	44.459		2149(I)		-56.9									10.9*+0.2				601						
894	622	7.54	34.510	26.999	44.476		2150(I)															622				6.4 +0.4	0.28 +0.04	
613	647	7.33	34.491	27.012	44.509		2151	0.39				0.23+0.07									14*	647						
614	745	6.72	34.428	27.048	44.603		2161					0.17+0.07									20*	745						
895	803		34.442				2174(I)		-81.4									12.7*+0.2				803						
615	843	6.26	34.416	27.099	44.696		2181(I)					0.13+0.05	0.2	4.36	18.26	3.5	54.9				13*	843						
616	941	5.661	34.395	27.157	44.812		2197	0.09				0.22+0.09					58.5				17*	941						
586	1002	5.29	34.368	27.180	44.872		2195(I)		-92.9									13.1*+0.2				1002						
587	1022	5.28	34.380	27.191	44.883		2194(I)															1022				6.8 +0.4		
617	1040	5.19	34.400	27.217	44.918		2193					0.07+0.06									23*	1040						
618	1138	4.52	34.381	27.277	45.043		2201(I)					0.13+0.06	1.9								20*	1138						
401	1186	4.510	34.410	27.301	45.068		2205	0.44													21*	1186						
719	1248	4.206	34.416	27.338	45.135		2222(I)										70.4				20*	1248						
589	1252	3.97	34.407	27.356	45.177		2223(I)		-126.6									14.8*+0.2				1252						
402	1289	3.880	34.411	27.368	45.198		2232					0.02+0.05									22*	1289						
720	1346	3.623	34.412	27.394	45.250		2237(I)					0.02+0.05					73.4				24*	1346						
403	1386	3.471	34.432	27.424	45.295		2239						4.4								6*	1386						
404	1485	3.182	34.463	27.476	45.376		2261(I)										78.8				18*	1485						
590	1503	3.15	34.474	27.488	45.392		2265(I)		-153.1									17.1*+0.3				1503						
591	1523	3.09	34.477	27.495	45.404		2270(I)															1523				8.6 +0.7	0.38 +0.06	
405	1586	2.934	34.497	27.525	45.450		2287	0.25					5.5				84.2				18*	1586						
406	1687	2.828	34.542	27.571	45.505		2306														13*	1687						
592	1754	2.67	34.561	27.599	45.550		2298(I)		-172.2									21.0*+0.3				1754						
407	1784	2.670	34.567	27.604	45.554		2295(I)	0.04					9.5				94.5				17*	1784						
408	1884	2.500	34.585	27.633	45.601		2282(I)					0.05+0.09										1884						
409	1986	2.357	34.605	27.661	45.643		2268	-0.93					9.9	4.50	18.80	5.7	101.5				17*	1986						
593	2004	2.36	34.606	27.661	45.643		2272(I)		-189.2									21.1*+0.3				2004						
594	2024	2.37	34.604	27.659	45.640		2276(I)															2024				9.7 +1.0	0.54 +0.06	
410	2085	2.267	34.618	27.678	45.670		2289(I)														42*	2085						
411	2183	2.167	34.632	27.697	45.699		2309	-0.40									105.9				15*	2183						
595	2254	2.12	34.633	27.702	45.708		2305(I)		-192.3									20.6*+0.5				2254						
412	2281	2.112	34.649	27.715	45.722		2303(I)						-0.01+0.09	12.2	4.42	18.56	5.1	99.3				2281						
415	2392	2.025	34.668	27.737	45.753		2291	-0.03						8.7								2392						
416	2473	1.992	34.682	27.751	45.770		2291										95.3				15*	2473						
386	2493	1.94	34.676	27.750	45.775		2287(I)		-175.0									20.1*+0.4				2493						
387	2513	1.93	34.677	27.752	45.777		2283(I)															2513				8.2 +0.3	0.60 +0.03	
417	2569	1.933	34.696	27.767	45.792		2272	-0.09						8.2			93.3				17*	2569						
418	2689	1.836	34.700	27.777	45.812		2278(I)						0.00+0.09				97.3				20*	2689						
389	2742	1.84	34.721	27.794	45.828		2284(I)		-156.6									19.7*+0.3				2742						
419	2783	1.763	34.709	27.790	45.833		2289	-0.27									95.5				15*	2783						
420	2882	1.674	34.715	27.801	45.853		2286							7.3			96.7				15*	2882						
421	2982	1.649	34.732	27.817	45.871		2264	-0.38									90.7					2982						
390	2991	1.62	34.728	27.816	45.874		2264(I)		-160.7									20.4*+0.6				2991						
391	3011	1.60	34.722	27.812	45.873		2264(I)															3011				10.5 +0.4		
422	3079	1.566	34.732	27.823	45.886		2266(I)														16*	3079						
423	3232	1.427	34.731	27.832	45.910		2268	-0.30						7.9			93.6				16*	3232						
392	3241	1.40	34.732	27.835	45.916		2268(I)		-160.0									20.6*+0.4				3241						
393	3260	1.38	34.724	27.830	45.914		2268(I)															3260				9.9 +1.7	0.44 +0.04	
202	3448	1.216	34.728	27.844	45.946		2270	-0.87									95.7				19*	3448						
394	3560	1.12	34.727	27.849	45.962		2276(I)		-166.0									21.5*+0.5				3560						
395	3591	1.08	34.719	27.846	45.963		2278(I)															3591				9.7 +0.9	0.55 +0.04	
203	3599	1.080	34.724	27.849	45.967		2278										96.5				15*	3599						
204	3748	0.975	34.720	27.853	45.982		2269(I)	-1.49						6.7							18*	3748						
205	3895	0.869	34.716	27.856	45.997		2264										99.2				23*	3895						
187	3959	0.82	34.723	27.865	46.010		2272(I)		-166.4									21.0*+0.4				3959						
206	4043						2285						0.09+0.09	7.7	4.25	18.12	4.2				15*	4043						
189	4285	0.65	34.709	27.864	46.029		2292(I)		-166.5									20.8*+0.3				4285						
207	4292	0.641	34.707	27.863	46.030		2293(I)										100.0					4292						
190	4344	0.64	34.703	27.860	46.027		2294(I)															4344				5.2 +0.3	0.54 +0.03	
208	4441	0.598	34.706	27.865	46.036		2297							7.9			99.1				30*	4441						
209	4589	0.564	34.704	27.865	46.041		2274										99.9				51*	4589						
191	4610	0.558	34.703	27.865	46.041		2274(I)		-169.0									21.1*+0.3				4610						
210	4736	0.543	34.703	27.866	46.043		2273(I)	0.21						4.3							18*	4736						
192	4813	0.53	34.640	27.816	45.997		2272(I)										99.8					4813				6.5 +0.5	0.89 +0.05	
211	4884	0.524	34.703	27.867	46.047		2272(I)														30*	4884						
193	4932	0.52	34.702	27.866	46.047		2271(I)		-167.5									21.1*+0.4				4932						
212	5031	0.514	34.703	27.867	46.048		2270(I)	-1.46					0.21+0.09	7.8			100.1				20*	5031						
215	5041	0.513	34.702	27.867	46.048		2270(I)														17 +1.6	5041						
216	5134	0.508	34.701	27.866	46.048		2269(I)														18 +1.6	5134						
218	5191	0.507	34.702	27.867	46.049		2269(I)														22 +1.6	5191						
217	5193	0.507	34.702	27.867	46.049		2269	-0.51									100.6				21*	5193						
219	5241	0.505	34.702	27.867	46.049		2259(I)														28 +1.6	5241						
194	5252	0.501	34.699	27.865	46.047		2256(I)		-163.2									21.8*+0.4				5252						
220	5271	0.506	34.702	27.867	46.049		2252(I)														27 +1.6	5271						
195	5284	0.50	34.695	27.862	46.044		2249(I)															5284				7.1 +0.3	1.37 +0.04	
221	5290	0.505	34.701	27.866	46.048		2247(I)														24 +1.6	5290						
222	5309						2242	-2.32													34*	5309						
223	5310	0.505	34.702	27.867	46.049																26 +1.6	5310						
224	5325	0.504	34.701	27.866	46.048																24 +1.6	5325						
													PRECISION:	1.0	0.01	0.06	0.2												

(I) INTERPOLATED FROM NISKIN DATA

STATION 298

POSITION: 46°43'S 166°56'W

DATE: 18 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg					DPM/100kg				DPM/100kg		
																		LDGO											
301	2	13.44	34.805	26.188	43.175													7.4 +0.3				2							

STATION 302

POSITION: 40°30'S 166°42'W

DATE: 22 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg					DPM/100kg				DPM/100kg		
																		LDGO											
202	3	17.17	34.999	25.500	42.223													7.2 +0.2				3							

STATION 303

POSITION: 38°22'S 170°4'W

DATE: 23 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg					DPM/100kg				DPM/100kg		
									UM		SIO	UM		SIO				LDGO SIO*				LDGO							
501	2	18.21	34.930	25.192	41.850		2035				0.34	1.25+0.08										2							
690	21	18.21	34.931	25.193	41.851		2058(I)		109.7									9.0**0.5				21							
502	22	18.25	34.930	25.183	41.838		2059(I)					1.49+0.07	-1.8	4.12	16.90	0.1						22							
503	43	18.22	34.930	25.189	41.846		2084				0.37	1.45+0.07										43							
504	62	14.82	35.033	26.068	42.950		2057					1.63+0.09										62							
505	82	13.43	35.055	26.383	43.365		2075(I)				0.48	1.22+0.09	-2.1									82							
691	100	13.20	35.053	26.429	43.428		2102(I)		73.4									7.6**0.6				100							
506	102	12.86	35.059	26.503	43.527		2106				0.45	1.21+0.07										102							
507	151	11.95	35.038	26.665	43.759		2107					1.13+0.08										151							
508	201	11.47	34.977	26.709	43.841		2121(I)					1.01+0.06	-1.9	4.09	17.21	0.6						201							
692	201	11.39	34.967	26.716	43.855		2121(I)		63.3									6.1**0.7				201							
509	250	10.96	34.902	26.746	43.921		2138					1.00+0.08										250							
510	300	10.50	34.845	26.783	43.997		2142(I)					1.05+0.09										300							
693	351	9.94	34.774	26.826	44.089		2146(I)		21.3									8.0**0.6				351							
511	399	9.37	34.694	26.859	44.170		2150(I)				0.22	0.67+0.06										399							
512	497	8.52	34.591	26.916	44.304		2159(I)				0.19	0.50+0.06	-0.4									497							
694	501	8.47	34.590	26.921	44.313		2159(I)		-8.0									9.7**0.5				501							
513	597	7.70	34.497	26.965	44.428		2167				0.11	0.29+0.06										597							
514	696	7.241	34.451	26.994	44.500		2172(I)				0.09	0.09+0.07										696							
695	702	7.12	34.449	27.010	44.526		2172(I)		-53.3									10.1**0.6				702							
516	892	6.40	34.400	27.067	44.652		2183(I)				0.04		-1.0									892							
287	898	6.16	34.398	27.097	44.704		2184(I)		-85.6									14.0**0.5				898							
301	1045	5.599	34.389	27.160	44.821		2203(I)						* 1.6	4.29	18.27	2.2						1045							
518	1088	5.30	34.387	27.194	44.884		2211(I)				0.01											1088							
289	1097	5.11	34.393	27.221	44.929		2212(I)		-111.0									14.8**0.6				1097							
303	1243	4.331	34.393	27.307	45.092		2232				0.01											1243							
290	1348	3.77	34.425	27.390	45.230		2242(I)		-143.4									14.8**0.3				1348							
306	1540	3.127	34.492	27.504	45.409		2282				0.02											1540							
291	1598	2.94	34.530	27.551	45.474		2303(I)		-164.6									19.9**0.4				1598							
309	1834	2.554	34.581	27.625	45.587		2303				0.04	0.08+0.06										1834							
292	1850	2.50	34.585	27.633	45.600		2303(I)		-192.0									22.4**0.6				1850							
310	1932	2.424	34.597	27.649	45.624		2305(I)						11.1									1932							
293	2102	2.26	34.617	27.678	45.670		2307(I)		-206.9									23.3**0.6				2102							
314	2238	2.166	34.626	27.693	45.695		2306				0.04	-0.03+0.06	15.2	4.47	18.58	6.1						2238							
294	2355	2.06	34.638	27.710	45.723		2316(I)		-204.9									23.5**0.4				2355							
295	2508		34.645				2336(I)		-201.4									25.2**0.5				2508							
317	2539	1.938	34.648	27.728	45.754		2327						19.1									2539							
318	2639	1.867	34.655	27.739	45.772		2324				0.00											2639							
487	2742	1.87	34.677	27.756	45.789		2329(I)		-185.1									23.2**0.7				2742							
320	2839	1.756	34.691	27.776	45.820		2319(I)						11.1									2839							
489	2993	1.68	34.705	27.793	45.845		2304(I)		-179.3									23.5**0.9				2993							
322	3032	1.631	34.709	27.800	45.857		2300(I)				0.03											3032							
101	3094	1.569	34.718	27.811	45.875		2294						7.1	4.50	19.02	4.6						3094							
323	3131	1.555	34.718	27.812	45.877		2303(I)				0.04											3131							
324	3229	1.498	34.729	27.825	45.896		2351(I)				0.06		7.0									3229							
490	3295	1.43	34.729	27.830	45.906		2379(I)		-162.4									21.0**0.5				3295							
103	3296	1.392	34.727	27.831	45.913		2379						6.9	4.39	18.75	3.8						3296							
104	3397	1.311	34.729	27.838	45.930		2272				0.04											3397							
105	3494	1.215	34.727	27.843	45.945		2279(I)				-0.01		6.6									3494							
491	3596	1.17	34.725	27.845	45.952		2287(I)		-166.6									20.1**0.5				3596							
107	3684	1.056	34.723	27.850	45.970		2294					-0.03+0.07										3684							
108	3784	0.969	34.720	27.853	45.983		2293(I)				-0.01		5.1									3784							
492	3898	0.91	34.718	27.856	45.992		2293(I)		-171.4									21.7**0.5				3898							
111	4167	0.716	34.710	27.861	46.019		2282						4.4	4.27	18.28	3.8						4167							
493	4198	0.72	34.710	27.861	46.018		2282(I)		-165.5									20.2**0.6				4198							
112	4317	0.634	34.707	27.864	46.031		2283				-0.04											4317							
494	4500	0.65	34.707	27.863	46.029		2311(I)		-165.5									22.1**0.5				4500							
115	4635	0.553	34.705	27.867	46.043		2296(I)					0.07+0.07	4.7									4635							
116	4635	0.553	34.704	27.866	46.042		2296(I)															13 +1.6	4635						
117	4661	0.543	34.703	27.866	46.043		2293(I)															18 +1.6	4661						
118	4689	0.529	34.703	27.866	46.046		2289(I)															25 +1.6	4689						
119	4714	0.523	34.703	27.867	46.047		2287(I)															23 +1.6	4714						
120	4740	0.520	34.702	27.866	46.046		2284(I)															28 +1.7	4740						
121	4759	0.520	34.702	27.866	46.046		2281(I)											22.9 +0.3				38 +1.6	4759						
122	4780	0.520	34.703	27.867	46.047		2279				0.03		6.6									4780							
123	4780	0.520	34.702	27.866	46.046		2279(I)															28 +1.6	4780						
495	4800	0.56	34.702	27.864	46.039				-163.6									20.5**0.8				4800							
124	4820	0.520	34.703	27.867	46.047																	35 +1.6	4820						
												PRECISION:	1.0	0.01	0.06	0.2													

(I) INTERPOLATED FROM NISKIN DATA

STATION 306 | POSITION: 32°50'S 163°38'W | DATE: 27 MAR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{14}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														MCM / SIO*				DPM/100kg					DPM/100kg						
									UM		SIO	UM						LDGO SIO*		LDGO	LDGO WHOI*					SIO	SIO		
1001	2		35.288															7.3 +0.2				2							
335	5		35.39																	0.01+0.02		5							
1435	5		35.38																	0.04+0.04		5							
1386	10	21.96	35.398	24.554	40.976				139.2									6.2**+0.6				10							
601	12	22.192	35.298	24.413	40.824		1987				0.52	1.96+0.07									35*	12							
1387	15	21.95	35.399	24.558	40.980		1989(I)															15				9.0 +0.8	0.25 +0.03		
602	41	22.166	35.331	24.445	40.857		2008					1.89+0.10	-1.2	3.69	15.18	-2.1						41							
													-1.7*	3.82*	15.28*	0.7*													
603	57	21.822	35.352	24.557	40.988		1998				0.57	1.80+0.07									20*	57							
604	87	16.351	35.394	25.997	42.765		2028(I)					1.38+0.07										87							
1389	101	15.94	35.379	26.081	42.876		2048(I)		101.4									6.6**+0.5				101							
605	112	15.225	35.392	26.254	43.099		2066				0.49	1.37+0.07									18*	112							
606	159	13.525	35.209	26.482	43.452		2087(I)					1.10+0.06	0.4									159							
													-1.2*	3.98*	16.63*	0.4*													
607	188	12.778	35.135	26.578	43.606		2092				0.42	0.94+0.07									10*	188							
1390	202	12.66	35.127	26.595	43.632		2096(I)		54.7									6.8**+0.6				202							
608	239	11.955	35.041	26.667	43.760		2106(I)					0.90+0.06										239							
609	287	11.195	34.934	26.727	43.883		2118(I)				0.36	0.69+0.07	0.9	3.67	15.89	-2.0					8*	287							
													-1.1*	4.07*	16.93*	2.0*													
1391	302	11.00	34.911	26.745	43.917		2121(I)		21.4									7.5**+0.4				302							
1392	313	10.85	34.891	26.757	43.941		2123(I)															313				6.4 +0.7	0.14 +0.04		
610	333	10.490	34.826	26.771	43.986		2127(I)					0.54+0.06										333							
611	416	8.913	34.645	26.895	44.248		2139					0.40+0.06									5*	416							
1393	454	8.69	34.607	26.901	44.274		2143(I)		-32.3									7.3**+0.6				454							
612	496	7.989	34.531	26.948	44.385		2147(I)				0.12	0.17+0.06	-0.6	3.70	16.18	-1.5						496							
													-0.1*	4.20*	17.63*	2.3*													
614	565	7.411	34.465	26.981	44.471		2150					0.18+0.05									9*	565							
1394	602	7.24	34.455	26.997	44.503		2148(I)		-60.4									8.4**+0.6				602							
1395	612	7.21	34.450	26.998	44.507		2147(I)															612				9.0 +0.4	0.14 +0.02		
615	645	6.957	34.428	27.015	44.548		2146(I)				0.04	0.15+0.06	0.1	3.85	17.21	-3.3						645							
616	714	6.626	34.401	27.039	44.603		2142					0.15+0.06									19*	714							
617	787	6.188	34.368	27.070	44.676		2127(I)				0.00	0.02+0.05	1.0	3.91	17.39	-2.4						787							
													-0.3*	4.22*	17.89*	2.2*													
1187	799	6.27	34.384	27.072	44.669		2125(I)		-91.4									10.1**+0.6				799							
618	838	5.886	34.360	27.102	44.737		2117					0.05+0.05									12*	838							
619	886	5.671	34.368	27.135	44.789		2146(I)				0.02	0.08+0.05										886							
620	937	5.311	34.364	27.175	44.864		2181					0.11+0.05	2.6	4.00	17.57	-0.8					9*	937							
													0.2*																
1189	999	5.04	34.363	27.205	44.921		2202(I)		-105.8									13.9**+0.8				999							
1190	1008	4.97	34.355	27.207	44.929		2204(I)															1008				9.5 +0.6	0.20 +0.05		
621	1012	4.863	34.357	27.220	44.954		2205					0.03+0.05										1012							
622	1085	4.502	34.358	27.261	45.030		2217						4.2									1085							
													1.8*	4.41*	18.65*	3.3*													
1191	1198		34.395				2260(I)		-132.2									15.8**+0.5				1198							
401	1277	3.357	34.422	27.427	45.310		2271				0.04		8.8	4.00	17.81	-1.3					22*	1277							
													5.1*	4.43*	18.67*	4.1*													
1192	1329	3.18	34.443	27.460	45.361		2246(I)															1329				11.0 +0.7	0.22 +0.04		
1193	1399	3.05	34.469	27.493	45.407		2297(I)		-154.1									17.7**+0.8				1399							
402	1421	2.879	34.489	27.524	45.455		2322				-0.01										13*	1421							
403	1582	2.622	34.539	27.586	45.542		2281				0.00		14.7	4.11	18.07	0.1						1582							
													11.8*	4.24*	17.97*	4.0*													
1194	1651	2.52	34.567	27.617	45.583		2283(I)		-185.2									22.3**+0.5				1651							
1195	1661	2.48	34.571	27.623	45.594		2283(I)															1661				14.2 +0.4	0.27 +0.03		
404	1717	2.409	34.579	27.636	45.613		2285				0.01										27*	1717							
405	1862	2.224	34.609	27.674	45.671		2297(I)						21.8									1862							
													14.0*																
887	1901	2.21	34.619	27.683	45.681		2301(I)		-207.3									24.4**+0.7				1901							
889	1949	2.12	34.624	27.695	45.702		2305(I)															1949				14.5 +0.6	0.43 +0.02		
406	2015	2.078	34.625	27.699	45.710		2312				0.05										25*	2015							
890	2150	1.97	34.639	27.718	45.740		2322(I)		-215.8									25.0**+0.8				2150							
407	2162	1.965	34.635	27.715	45.739		2323						27.7	4.23	18.20	2.6						2162							
													22.8*	4.32*	18.18*	5.0*													
408	2312	1.877	34.643	27.729	45.761		2385(I)				0.05										18*	2312							
891	2402		34.649				2417(I)		-214.5									26.8**+0.5				2402							
892	2452	1.79	34.650	27.741	45.783		2432(I)															2452				15.1 +0.5	0.83 +0.04		
409	2459	1.800	34.648	27.738	45.779		2434						28.2	4.23	18.32	2.1						2459							
													25.3*	4.33*	18.17*	5.5*													
410	2607	1.719	34.655	27.750	45.799		2387(I)				0.06										9*	2607							
893	2652	1.70	34.659	27.754	45.805		2370(I)		-217.7									28.9**+0.7				2652							
411	2744	1.663	34.659	27.757	45.812		2332						16.9*	4.45*	18.58*	6.0*						2744							
412	2899	1.599	34.663	27.765	45.827		2339(I)				0.06		25.8								14*	2899							
														4.42*	18.52*	5.7*													
894	2901	1.62	34.667	27.767	45.827		2339(I)		-222.4									28.9**+0.8				2901							
895	2956	1.57	34.665	27.768	45.833		2342(I)															2956				15.8 +0.5	0.84 +0.03		
414	3050	1.542	34.668	27.773	45.841		2346						24.5									3050							
													17.0*																
287	3141	1.49	34.674	27.782	45.856		2341(I)		-210.3									26.7**+0.5				3141							
415	3153	1.497	34.675	27.782	45.855		2340(I)														16*	3153							
417	3348	1.420	34.684	27.794	45.875		2327(I)						20.8	4.21	18.53	0.5					13*	3348							
													14.2*																
289	3392	1.39	34.689	27.800	45.884		2323(I)		-208.7									26.0**+0.5				3392							
290	3412	1.39	33.890	27.160	45.270		2322(I)															3412				15.0 +0.5	0.57 +0.02		
418	3445	1.382	34.691	27.803	45.888		2319(I)				0.06											3445							
419	3504	1.358	34.693	27.806	45.893		2314(I)														12*	3504							
421	3609	1.313	34.700	27.815	45.907		2304						17.0								10*	3609							
													11.8*																
291	3624	1.31	34.703	27.817	45.910		2304(I)		-187.5									24.1**+0.7				3624							
422	3694	1.266	34.705	27.822	45.919		2302(I)						15.1	4.15	18.55	-1.0						3694							
													10.7*																
292	3746	1.23	34.620	27.756	45.860		2301(I)															3746				13.7 +0.5	0.53 +0.02		
101	3777	1.211	34.710	27.830	45.933		2301(I)														43*	3777							
424	3823	1.184	34.712	27.833	45.939		2300(I)				0.03										19*	3823							
293	3868	1.16	34.714	27.837	45.946		2300(I)		-170.4									23.1**+0.6				3868							
102	3880	1.137	34.713	27.837	45.948		2300(I)						12.8									3880							
													10.5*	4.31*	18.42*	3.8*													
103	3980	1.079	34.713	27.841	45.956		2299(I)				-0.01										17*	3980							
104	4080	0.997	34.714	27.847	45.973		2298						12.6	4.20	18.48	0.9						4080							
													6.6*	4.46*	18.98*	4.3*													

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 306 — *CONTINUED* **POSITION: 32°50'S 163°38'W** **DATE: 27 MAR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM		SIO	UM	----------MCM---------- SIO*					LDGO SIO*		LDGO	LDGO WHOI*					SIO	SIO		
294	4102	1.01	34.714	27.846	45.971		2297(I)		-166.4									21.3**0.5				4102							
295	4122	0.97	34.665	27.809	45.940		2296(I)															4122				12.3 +0.5	0.52 +0.02		
105	4178	0.909	34.714	27.852	45.989		2294(I)														11*	4178							
106	4279	0.824	34.712	27.856	46.002		2291(I)				0.00		10.2	4.19	18.47	0.6						4279							
													6.6*																
587	4387	0.79	34.716	27.862	46.012		2286(I)		-159.8									21.3**0.6				4387							
107	4426	0.741	34.709	27.859	46.014		2285(I)				-0.03										13*	4426							
108	4573	0.691	34.709	27.862	46.023		2279				-0.01		10.7									4573							
													5.7*																
589	4587	0.68	34.719	27.870	46.031		2279(I)															4587				11.7 +0.8	0.96 +0.04		
590	4686	0.65	34.713	27.867	46.032		2278(I)		-166.1									22.9**0.6				4686							
109	4720	0.654	34.707	27.862	46.028		2278(I)														19*	4720							
110	4869	0.632	34.706	27.863	46.031		2276(I)						9.5	4.23	18.76	0.1						4869							
													8.0*	4.25*	18.38*	2.8*													
591	4985	0.63	34.706	27.863	46.031		2275(I)		-168.0									23.5**0.5				4985							
111	5021	0.617	34.706	27.864	46.033		2275(I)														16*	5021							
592	5084	0.61	34.707	27.865	46.034		2274(I)															5084				11.7 +0.4	0.54 +0.03		
112	5169	0.608	34.705	27.863	46.034		2273(I)				-0.01		10.3	4.22	18.69	0.4						5169							
593	5283	0.62	34.708	27.865	46.035		2272(I)		-172.1									24.3**1.0				5283							
114	5321	0.601	34.705	27.864	46.035		2272(I)														9*	5321							
115	5435	0.596	34.706	27.865	46.037		2270(I)														11 +2.0	5435							
116	5453	0.595	34.706	27.865	46.037		2270(I)														14 +2.1	5453							
117	5476	0.595	34.704	27.863	46.035		2270(I)														10 +1.6	5476							
118	5476	0.595	34.706	27.865	46.037		2270						8.6	4.23	18.66	0.7						5476							
													8.7*	4.23*	18.29*	2.8*													
119	5498	0.595	34.705	27.864	46.036																28 +2.6	5498							
120	5526	0.595	34.704	27.863	46.035																16 +1.8	5526							
121	5554	0.594	34.705	27.864	46.036													23.4 +0.4			17 +1.6	5554							
594	5581	0.62	34.707	27.865	46.034				-163.4									23.4**0.5				5581							
595	5601	0.59	34.704	27.863	46.035																	5601				9.9 +0.6	0.63 +0.03		
123	5605	0.594	34.705	27.864	46.036								10.8								13*	5605							
													5.6*																
124	5605	0.594	34.706	27.865	46.037																10 +1.6	5605							
												PRECISION:	0.3	0.01	0.06	0.2													
													1.0 *	0.01*	0.06*	0.2*													

STATION 307 **POSITION: 31°26'S 161°58'W** **DATE: 31 MAR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																					LDGO								
235	5		35.54																		0.02+0.06	5							

STATION 310 **POSITION: 26°57'S 157°9'W** **DATE: 3 APR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------SIO----------					LDGO USC*		LDGO									
735	5		35.52																		0.05+0.02	5							
687	10	24.85	35.511	23.800	40.061				159.3									7.1**0.6				10							
501	12	24.837	35.511	23.805	40.067	0.3	2004	1.05				1.91+0.08										12							
502	13	24.837	35.511	23.805	40.067		2004(I)											10.3 +1.0				13							
504	32	24.835	35.511	23.806	40.068		2010(I)					1.99+0.08	-1.7	3.96	15.74	0.2						32							
506	43	24.831	35.512	23.808	40.070		2014(I)					1.99+0.08										43							
508	75	21.865	35.657	24.776	41.198	0.5	2024(I)					1.85+0.07										75							
689	75	22.14	35.654	24.696	41.102		2024(I)		137.0									7.7**0.3				75							
510	102	20.726	35.632	25.071	41.558		2032(I)					1.85+0.07										102							
690	135	19.99	35.618	25.258	41.790		2042(I)		120.1									7.7**0.3				135							
512	148	19.335	35.596	25.413	41.984		2046(I)					1.65+0.07										148							
515	198	18.003	35.515	25.690	42.347		2061					1.83+0.08	-1.4									198							
691	230	17.35	35.478	25.823	42.522		2071(I)		88.9									7.4**0.2				230							
516	251	16.722	35.438	25.943	42.685	-0.3	2077(I)					1.87+0.10										251							
517	300	15.346	35.278	26.140	42.978		2090	0.45				0.96+0.07										300							
692	330	14.50	35.204	26.271	43.172		2095(I)		40.5									7.6**0.2				330							
518	401	12.310	35.005	26.570	43.637		2107					0.54+0.06	-1.1	4.05	16.83	1.4						401							
693	460	11.33	34.883	26.663	43.810		2126(I)		-17.5									8.1**0.4				460							
519	501	9.430	34.628	26.798	44.107	5.2	2140	0.32				0.20+0.06										501							
520	599	7.510	34.461	26.964	44.445		2148(I)					0.20+0.06	-1.1									599							
694	600	7.85	34.498	26.944	44.394		2148(I)		-56.8									10.5**0.4				600							
521	697	6.603	34.384	27.029	44.595	4.3	2156(I)					0.04+0.05										697							
695	750	6.35	34.367	27.049	44.640		2159(I)		-90.2									11.7**0.5				750							
522	798	5.866	34.341	27.089	44.726		2162					0.15+0.05	-1.5									798							
523	898	5.196	34.327	27.159	44.861		2191	0.72				0.11+0.05										898							
301	938	5.285	34.327	27.148	44.842		2184	0.99				0.03+0.05	0.4	4.28	18.19	2.6						938							
487	953	5.11	34.331	27.172	44.883		2188(I)		-101.6									13.5**0.4				953							
524	999	4.648	34.343	27.233	44.988	5.3	2207					-0.04+0.06										999							
303	1113	4.150	34.365	27.304	45.108		2220						1.8	4.22	17.96	2.8						1113							
489	1156	3.84	34.394	27.358	45.193		2227(I)		-139.4									16.6**0.4				1156							

(I) INTERPOLATED FROM NISKIN DATA

STATION 310 — *CONTINUED*

POSITION: 26°57'S 157°9'W

DATE: 3 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{16}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{238,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	SIO					LDGO USC*		LDGO									
490	1357	3.05	34.484	27.505	45.418		2266(I)		-164.8									19.0*+0.4				1357							
305	1363	3.029	34.482	27.505	45.420		2267	-0.03					6.9									1363							
306	1487	2.730	34.523	27.564	45.509	6.7	2290															1487							
491	1559	2.58	34.550	27.598	45.559		2293(I)		-175.9									20.2*+0.5				1559							
307	1610	2.499	34.560	27.613	45.581		2294	-0.26					13.6	4.35	18.59	3.1						1610							
308	1736	2.320	34.587	27.649	45.636	6.5	2311(I)															1736							
492	1759	2.26	34.598	27.663	45.655		2315(I)		-200.7									22.8*+0.5				1759							
309	1860	2.167	34.612	27.681	45.684		2332						17.5	4.48	18.82	5.0						1860							
493	1958	2.06	34.628	27.703	45.716		2345(I)		-208.1									23.2*+0.5				1958							
310	1986	2.052	34.624	27.700	45.714	6.8	2347															1986							
311	2108	1.955	34.636	27.717	45.741		2324	-0.27					19.5									2108							
494	2205	1.86	34.645	27.732	45.766		2333(I)		-217.8									26.1*+0.5				2205							
314	2345	1.807	34.647	27.737	45.777		2357	-0.36					24.9	4.35	18.22	5.4						2345							
315	2444	1.760	34.651	27.744	45.789	6.7	2355(I)															2444							
495	2447	1.73	34.655	27.749	45.796		2355(I)		-219.7									27.0*+0.6				2447							
316	2541	1.716	34.655	27.750	45.800		2351(I)						19.7									2541							
317	2643	1.671	34.658	27.756	45.810	6.9	2345(I)															2643							
286	2682	1.64	34.660	27.759	45.817		2342(I)		-221.2									26.8*+0.6				2682							
319	2840	1.590	34.663	27.766	45.829		2339(I)	-0.29					22.2	4.37	18.40	5.1						2840							
101	2972	1.543	34.667	27.772	45.840	6.7	2335(I)															2972							
287	2983	1.50	34.669	27.777	45.849		2333(I)		-213.1									27.5*+0.5				2983							
102	3062	1.509	34.671	27.778	45.849		2325	-1.08														3062							
103	3149	1.472	34.672	27.781	45.857	6.3	2334															3149							
104	3240	1.446	34.674	27.785	45.863		2328(I)	-0.55														3240							
289	3281	1.40	34.678	27.791	45.874		2325(I)		-219.0									28.3*+0.8				3281							
106	3323	1.416	34.678	27.790	45.871		2325(I)						15.4	4.36	18.37	5.0						3323							
109	3507	1.316	34.688	27.805	45.897		2313	-0.46														3507							
290	3580	1.28	34.691	27.810	45.906		2305(I)		-200.5									26.1*+0.5				3580							
110	3600	1.247	34.692	27.813	45.912		2303(I)						11.9									3600							
111	3675	1.215	34.695	27.817	45.920		2295	-0.25														3675							
115	3878	1.110	34.702	27.830	45.944		2293						12.1	4.36	18.56	4.3						3878							
291	3880	1.12	34.700	27.827	45.941		2293(I)		-180.2									25.1*+0.6				3880							
292	4179	0.952	34.710	27.846	45.978		2295(I)		-175.3									24.0*+1.1				4179							
118	4238	0.919	34.710	27.849	45.984		2288	-0.07					8.7									4238							
120	4504	0.779	34.711	27.858	46.009		2290	-0.37					9.1									4504							
293	4577	0.737	34.709	27.859	46.015		2294(I)		-166.8									23.7*+0.4				4577							
121	4652	0.727	34.709	27.860	46.016	5.4	2298															4652							
122	4804	0.693	34.709	27.862	46.022		2292(I)						7.3	4.48	19.09	4.2						4804							
123	4956	0.683	34.710	27.863	46.025	5.1	2287(I)															4956							
294	4976	0.69	34.708	27.861	46.023		2286(I)		-167.4									24.1*+0.5				4976							
124	5109	0.676	34.710	27.863	46.026		2281	-0.08					6.8	4.45	19.04	3.8						5109							
295	5379	0.673	34.706	27.860	46.023				-165.6									24.5*+1.2				5379							
												PRECISION:	1.0	0.01	0.06	0.2													

STATION 313

POSITION: 24°24'S 154°25'W

DATE: 5 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{16}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{238,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																		LDGO			LDGO								
121	4239	0.938	34.700	27.839	45.973																4 +1.5	4239							
122	4488	0.900	34.702	27.843	45.981													26.6 +0.6			4 +1.6	4488							
123	4738	0.877	34.702	27.845	45.985																8 +1.6	4738							
124	5022	0.863	34.704	27.847	45.989																5 +1.6	5022							

(I) INTERPOLATED FROM NISKIN DATA

STATION 314 — **POSITION: 23°44'S 153°37'W** — **DATE: 5 APR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																	SIO		LDGO	LDGO					SIO	SIO		
635	5		34.49																0.51+0.05	5								
386	10		35.671														5.7 +1.0			10					8.4 +0.4	1.12 +0.04		
387	200	19.06	35.592	25.480	42.068		2040(I)										6.2 +0.5			200					10.3 +0.6	1.38 +0.03		
389	401	13.31	35.066	26.416	43.406		2090(I)										8.1 +1.0			401					9.2 +0.3	0.16 +0.01		
390	602		34.391				2161(I)										9.6 +0.9			602					8.4 +0.6	0.60 +0.02		
391	852	5.05	34.354	27.197	44.913		2197(I)										13.7 +1.3			852					11.0 +0.5	0.13 +0.02		
392	1102	3.69	34.437	27.407	45.256		2224(I)										15.5 +0.6			1102					11.8 +0.5	0.19 +0.04		
393	1353	2.90	34.524	27.549	45.477		2252(I)										18.8 +0.5			1353					13.6 +0.5	0.77 +0.04		
394	1602	2.38	34.586	27.644	45.625		2280(I)										21.4 +0.5			1602					15.3 +0.4	0.48 +0.03		
395	1901		34.625				2313(I)										23.4 +0.5			1901					14.8 +0.9	0.60 +0.06		
186	2141	1.90	34.640	27.725	45.755		2330(I)										27.0 +0.5			2141					13.9 +0.5	0.84 +0.02		
187	2439	1.72	34.656	27.751	45.799		2311(I)										27.8 +0.5			2439					16.8 +0.4	0.75 +0.02		
189	2738	1.58	34.663	27.766	45.831		2331(I)										28.0 +0.9			2738					15.7 +0.5	0.78 +0.02		
190	3038	1.47	34.672	27.781	45.857		2340(I)										27.7 +0.5			3038					16.6 +0.4	0.75 +0.08		
191	3336	1.36	34.681	27.796	45.884		2334(I)										26.4 +0.5			3336					17.3 +0.8	0.54 +0.02		
192	3638	1.18	34.691	27.816	45.923		2335(I)										26.8 +0.9			3638					16.5 +0.9	0.59 +0.02		
218	3771	1.133	34.692	27.820	45.933		2329(I)													5 +1.5	3771							
219	3893	1.079	34.696	27.827	45.945		2295													4 +1.6	3893							
193	3940	1.04	34.697	27.830	45.952		2296(I)										25.2 +0.8				3940				15.9 +0.9	1.07 +0.03		
220	4019	1.018	34.698	27.833	45.957		2296(I)													5 +1.7	4019							
221	4158	0.968	34.700	27.837	45.968		2298(I)													5 +1.6	4158							
194	4244	0.94	34.700	27.839	45.972		2299(I)										25.8 +0.8				4244				14.3 +0.6	1.27 +0.06		
222	4268	0.946	34.700	27.839	45.972		2299(I)													6 +1.6	4268							
223	4390	0.930	34.700	27.840	45.974		2301(I)													20 7.3	4390							
195	4547	0.87	34.704	27.847	45.987		2303(I)										26.1 +0.5				4547				16.3 +1.0	1.03 +0.04		
224	4570	0.880	34.704	27.846	45.986		2303													16 +1.6	4570							

STATION 316 — **POSITION: 18°51'S 126°36'W** — **DATE: 19 APR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM						LDGO	LDGO						YALE		YALE	
447	0	25.53	36.53	24.365	40.567																0				9.7 +0.6		5.2 +0.6	
201	2	25.45	36.545	24.400	40.607		2053					1.67+0.08									2							
202	5	25.44	36.546	24.404	40.612		2052(I)										7.6 +0.3				5							
335	5		36.543				2052(I)												0.02+0.02		5							
207	52	25.41	36.625	24.473	40.681		2058					1.74+0.08									52							
208	77	25.36	36.659	24.513	40.722		2059(I)					1.54+0.07									77							
210	102	25.22	36.659	24.557	40.774		2061					1.69+0.08									102							
212	127	24.31	36.516	24.721	40.988		2067					1.54+0.07									127							
213	151	23.94	36.469	24.796	41.085		2103					1.78+0.09									151							
215	302	16.19	35.086	25.799	42.585		2074					0.89+0.08									302							
216	400	11.112	34.540	26.436	43.610		2140					0.19+0.07									400							
217	500	7.79	34.423	26.894	44.351		2379					0.06+0.07									500							
218	599	6.084	34.355	27.073	44.689		2199					0.17+0.06									599							
220	797	4.786	34.420	27.279	45.018		2237(I)					0.01+0.06									797							
221	946	4.34	34.504	27.394	45.174		2282					-0.02+0.07									946							

STATION 317 — **POSITION: 23°38'S 127°9'W** — **DATE: 20 APR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM				USC			LDGO WHOI*					YALE		YALE	
847	0	25.94	36.56	24.262	40.443																0				12.6 +0.6		14.2 +0.7	
401	3	25.94	36.557	24.260	40.441		2051	0.89				1.90+0.11	-2.1	3.75	15.13	-1.8				25*	3							
587	50	25.90	36.562	24.277	40.460		2051(I)		141.4								8.1 +0.2				50							
402	53	25.92	36.555	24.265	40.447		2051					1.75+0.10									53							
403	103	25.90	36.550	24.268	40.451		2065					1.70+0.09	-2.0	3.73	15.08	-2.0				23*	103							
404	122	24.24	36.192	24.496	40.775		2032	1.20				1.69+0.12								25*	122							
589	150	22.46	36.001	24.868	41.248		2043(I)		140.1								7.1 +0.2				150							
405	153	22.53	36.009	24.856	41.232		2044	1.33				1.80+0.10	-1.1	3.78	15.59	-2.5				45*	153							
406	201	20.17	35.695	25.268	41.787		2050					1.58+0.09	-0.9	3.82	15.82	-1.9				30*	201							
590	249		35.523				2058(I)		124.8								7.6 +0.2				249							
407	271	18.03	35.406	25.600	42.257		2062					1.50+0.09								42*	271							
408	350	15.61	35.153	25.983	42.807		2071	1.30				1.15+0.09	-0.6							16*	350							
591	350	14.76	35.052	26.096	42.982		2071(I)		49.6								7.7 0.3				350							
409	400	13.69	34.917	26.222	43.188		2118	0.46				1.08+0.09	-0.8	3.97	16.88	-1.5				19*	400							
410	449	11.20	34.644	26.501	43.664		2127					0.19+0.06	-0.6							48*	449							
592	452	10.27	34.559	26.601	43.842		2128(I)		-41.1								8.9 +0.2				452							
411	489	9.64	34.503	26.665	43.960		2141	0.62				0.24+0.06	-0.1								489							
412	537	8.36	34.418	26.804	44.211		2157(I)	0.84				0.12+0.06								29*	537							
593	543	7.30	34.375	26.927	44.430		2158(I)		-77.6								10.0 +0.2				543							
413	597	6.94	34.358	26.963	44.499		2170					0.26+0.07	-0.9							9*	597							
594	603	6.53	34.369	27.026	44.599		2170(I)		-80.5								11.2 +0.2				603							
414	666	6.181	34.330	27.041	44.649		2173	0.41				0.02+0.07	-1.2							23*	666							
595	703	5.74	34.335	27.100	44.749		2179(I)		-89.8								11.9 +0.2				703							
415	746	5.53	34.306	27.102	44.772		2186(I)					-0.01+0.09								39*	746							
187	804	5.16	34.308	27.148	44.854		2199(I)		-107.3								12.4 +0.7				804							

(I) INTERPOLATED FROM NISKIN DATA

STATION 317 — *CONTINUED*

POSITION: 23°38'S 127°9'W

DATE: 20 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM					USC			LDGO WHOI*		YALE						YALE
416	844	4.846	34.312	27.187	44.923		2210	0.50				0.12+0.07	0.8	4.07	18.10	-1.9					15*	844							
417	991	4.048	34.378	27.324	45.139		2247					0.20+0.09	4.6								51*	991							
189	1002	3.99	34.389	27.339	45.158		2250(I)		-135.9									15.3 +0.3				1002							
418	1139	3.39	34.468	27.460	45.338		2277(I)	-0.18				0.01+0.09										1139							
190	1202	3.19	34.498	27.503	45.402		2287(I)		-181.5									18.0 +0.2			22*	1202							
419	1289	2.916	34.530	27.553	45.479		2298	-0.35													30*	1289							
191	1400	2.65	34.560	27.601	45.554		2307(I)		-188.7									20.8 +0.3				1400							
420	1437	2.586	34.563	27.608	45.567		2309					-0.07+0.06	19.1	4.28	18.67	0.9					25*	1437							
421	1587	2.30	34.595	27.657	45.646		2323	-0.11					22.9								16*	1587							
192	1597	2.30	34.596	27.658	45.647		2323(I)		-204.7									22.2 +1.0				1597							
201	1626	2.241	34.602	27.667	45.662		2325(I)	0.15					25.0								14*	1626							
422	1736	2.124	34.614	27.686	45.693		2329					0.03+0.09	27.2								23*	1736							
202	1757	2.084	34.620	27.694	45.705		2330(I)						29.5								16*	1757							
193	1794	2.05	34.624	27.700	45.715		2333(I)		-209.5									24.2 +0.6				1794							
387	1898	1.97	34.634	27.714	45.737		2342(I)		-217.9									24.7 +0.4				1898							
203	1904	1.950	34.634	27.716	45.741		2343(I)														28*	1904							
204	2055	1.852	34.646	27.733	45.768		2362						31.0								20*	2055							
389	2096	1.82	34.651	27.739	45.778		2373(I)		-228.0									25.0 +1.3				2096							
205	2202	1.779	34.653	27.744	45.787		2388	-0.42				-0.04+0.09	30.7								27*	2202							
390	2295	1.73	34.659	27.752	45.799		2354(I)		-218.8									25.5 +0.4				2295							
206	2356	1.714	34.660	27.754	45.804		2327														30*	2356							
391	2492	1.66	34.667	27.764	45.818		2338(I)		-212.5									25.2 +0.3				2492							
207	2503	1.656	34.664	27.762	45.817		2339(I)	-0.39					28.6	4.25	18.88	-0.5					17*	2503							
208	2652	1.599	34.672	27.772	45.834		2352						26.1								27*	2652							
392	2790	1.54	34.672	27.777	45.845		2339(I)		-213.0									27.2 +0.5				2790							
209	2805	1.529	34.674	27.779	45.848		2337														18*	2805							
210	2960	1.492	34.673	27.781	45.854		2339(I)						24.4	4.22	18.31	2.2					18*	2960							
393	2988	1.48	34.675	27.783	45.859		2340(I)		-214.9									27.1 +0.7				2988							
211	3111	1.468	34.676	27.785	45.861		2342	-0.19					23.1	4.26	18.67	0.9					11*	3111							
394	3187	1.45	34.678	27.788	45.866		2334(I)											28.4 +0.3				3187							
212	3262	1.453	34.676	27.786	45.863		2329														31*	3262							
215	3372	1.445	34.676	27.786	45.865		2336(I)														10 +1.6	3372							
216	3414	1.443	34.678	27.788	45.867		2343					0.01+0.09									9*	3414							
217	3422	1.442	34.680	27.790	45.868																9 +1.6	3422							
395	3436		34.679						-209.4									29.3 +0.4				3436							
218	3475	1.436	34.678	27.789	45.868																8 +1.6	3475							
219	3495	1.432	34.679	27.790	45.869																12 +1.6	3495							
220	3522	1.428	34.680	27.791	45.871																11 +1.6	3522							
221	3545	1.421	34.680	27.791	45.872																16 +1.6	3545							
222	3564	1.419	34.680	27.791	45.873			-0.40					21.0								21*	3564							
223	3564	1.419	34.680	27.791	45.873																12 +1.6	3564							
224	3572	1.419	34.680	27.791	45.873																9 +1.6	3572							
												PRECISION:	0.3	0.01	0.06	0.2													

STATION 319

POSITION: 28°30'S 127°47'W

DATE: 23 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH						UM									LDGO					YALE			YALE
447	0	23.11	35.68	24.440	40.792																	0				13.1 +0.6			10.4 +0.5
335	5		35.710																		0.01+0.02	5							
202	10	23.14	35.671	24.425	40.775		2015					1.86+0.10										10							
206	54	23.10	35.668	24.435	40.787		2017					1.90+0.09										54							
209	81	18.79	35.379	25.389	42.000		2019					1.77+0.06										81							
212	181	15.29	35.141	26.047	42.893		2057					1.38+0.08										181							
213	262	13.58	35.014	26.319	43.291		2086					0.95+0.07										262							
214	320	11.42	34.778	26.565	43.707		2107					0.40+0.06										320							
215	391	8.54	34.462	26.811	44.201		2145					0.20+0.05										391							
216	461	7.36	34.409	26.944	44.440		2141					0.09+0.06										461							
217	571	6.47	34.357	27.025	44.605		2163					0.00+0.07										571							
218	651	6.01	34.328	27.061	44.685		2164					0.22+0.04										651							
220	846	4.86	34.303	27.178	44.914		2199					-0.03+0.06										846							
119	3032	1.402	34.678	27.791	45.874	6.8	2325															3032							

(I) INTERPOLATED FROM NISKIN DATA

STATION 320 POSITION: 33°20'S 128°24'W DATE: 24 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM			UM	SIO				LDGO USC*		LDGO	LDGO					SIO YALE*	SIO		YALE
1247	0	19.75	34.66	24.592	41.161																0				11.6**0.6			7.9 +0.4
501	2	19.65	34.648	24.609	41.184	0.8	2040	1.02				2.06+0.11	-2.2	3.99	16.20	0.4						2							
887	3	19.69	34.640	24.591	41.164		2040(I)		171.1								9.0**0.2					3							
335	5		34.634				2039(I)												0.00+0.02			5							
502	37	20.08	34.841	24.642	41.186		2026					1.70+0.08										37							
503	52	20.03	34.855	24.666	41.214		2017					2.03+0.09										52							
889	59	18.46	34.736	24.982	41.629		2029(I)		170.1								8.2**0.3					59							
504	73	16.73	34.676	25.358	42.119		2053					1.58+0.07										73							
1187	77	15.74	34.656	25.574	42.401		2051(I)															77				11.0 +0.9	1.83 +0.07		
505	98	14.91	34.757	25.835	42.718	0.6	2030	1.71				1.70+0.10										98							
890	103	14.90	34.769	25.847	42.730		2031(I)		151.9								7.4**0.2					103							
506	122	14.22	34.734	25.968	42.901		2037					1.68+0.08										122							
1189	128	13.81	34.693	26.023	42.986		2043(I)															128				9.6 +0.5	0.22 +0.02		
891	163	12.81	34.600	26.158	43.198		2080(I)		136.4								9.2**0.4					163							
507	173	12.60	34.629	26.222	43.278		2091	0.73				1.35+0.09	-1.4									173							
1190	204	12.14	34.641	26.321	43.411		2102(I)															204				9.5 +0.5	0.25 +0.01		
508	223	11.44	34.632	26.447	43.592	4.0	2105					1.57+0.09										223							
892	223	11.31	34.611	26.454	43.610		2105(I)		77.3								9.0**0.5					223							
1191	254	10.96	34.616	26.523	43.706		2112(I)															254				8.5 +0.3	0.07 +0.01		
893	303	9.12	34.520	26.765	44.103		2126(I)		-12.8								8.8**0.4					303							
509	322	8.97	34.514	26.783	44.134	4.9	2133	1.03				0.61+0.09	-0.3	3.95	16.77	0.8						322							
510	403	7.63	34.430	26.922	44.394		2180					0.15+0.09										403							
894	403	7.37	34.418	26.951	44.446		2180(I)		-54.8								9.3**0.2					403							
511	501	6.82	34.383	26.998	44.545		2166					0.14+0.09	-0.5									501							
895	504	6.63	34.375	27.018	44.581		2165(I)		-58.7								11.2**0.5					504							
1192	505	6.84	34.388	27.000	44.545		2165(I)															505				9.4 +0.5	0.37 +0.04		
512	601	6.36	34.353	27.036	44.625		2150					-0.04+0.06										601							
187	606	6.30	34.351	27.042	44.637		2150(I)		-76.3								11.2**0.2					606							
513	699	5.86	34.324	27.077	44.716		2155					-0.01+0.09	-1.0	3.97	17.18	0.3						699							
1193	704	5.82	34.324	27.081	44.723		2156(I)															704				8.8 +0.4	0.09 +0.02		
514	797	5.36	34.305	27.122	44.809		2178	1.09				-0.03+0.06										797							
1194	802	5.35	34.308	27.126	44.814		2178(I)															802				9.7 +0.7	0.26 +0.04		
189	804	5.43	34.310	27.117	44.797		2179(I)		-87.9								12.3**0.5					804							
515	896	4.79	34.308	27.189	44.931		2187						-0.2									896							
516	996	4.31	34.327	27.257	45.046	5.2	2211	0.69				0.19+0.09										996							
1195	1002	4.32	34.328	27.257	45.045		2213(I)															1002				11.0 +0.3	0.13 +0.02		
190	1002	4.32	34.330	27.258	45.047		2213(I)		-115.2								13.9**0.3					1002							
517	1143	3.59	34.376	27.368	45.229		2247						2.1									1143							
191	1201	3.36	34.403	27.412	45.295		2261(I)		-143.7								16.5**0.2					1201							
192	1398	2.74	34.502	27.546	45.491		2297(I)		-162.1								18.4**0.3					1398							
519	1440	2.64	34.516	27.566	45.522		2302					0.08+0.06	8.8	4.25	18.21	2.9						1440							
687	1504	2.51	34.550	27.604	45.572		2303(I)															1504				13.8 +1.3	0.33 +0.02		
520	1587	2.39	34.573	27.632	45.612		2304					-0.11+0.09										1587							
193	1598	2.35	34.585	27.645	45.629		2304(I)		-182.8								20.3**0.4					1598							
521	1736	2.181	34.611	27.680	45.680		2304	-0.42					16.9	4.22	17.93	3.8						1736							
194	1798	2.14	34.619	27.689	45.694		2309(I)		-192.2								22.8**0.3					1798							
201	1862	2.058	34.628	27.703	45.716	7.0	2313(I)	-0.38														1862							
195	2000	1.94	34.637	27.719	45.746		2323(I)		-208.7								22.5**0.5					2000							
202	2038	1.915	34.640	27.723	45.752		2326						20.3									2038							
689	2054	1.888	34.645	27.729	45.761		2326(I)															2054				17.2 +0.5	0.39 +0.02		
203	2210	1.761	34.655	27.747	45.791	6.6	2323					-0.06+0.09	17.9									2210							
487	2251	1.726	34.655	27.749	45.798		2323(I)		-217.2								25.8**0.3					2251							
690	2304	1.707	34.660	27.755	45.805		2324(I)															2304				17.2 +0.7	0.40 +0.02		
204	2386	1.655	34.662	27.760	45.816		2324(I)	-0.40					17.1									2386							
489	2502	1.58	34.665	27.768	45.833		2325(I)		-212.7								26.2**0.9					2502							
205	2558	1.569	34.668	27.771	45.836	6.5	2326															2558							
691	2605	1.54	34.668	27.773	45.842		2325(I)															2605				18.0 +1.0	0.39 +0.04		
206	2733	1.497	34.673	27.780	45.853		2324	-0.16				0.02+0.06	19.9	4.26	18.09	4.2						2733							
490	2753	1.49	34.673	27.780	45.854		2325(I)		-217.2								27.0**0.9					2753							
207	2906	1.433	34.678	27.789	45.868		2330						17.9									2906							
491	3002	1.40	34.677	27.790	45.873		2329(I)		-205.6								26.5**0.6					3002							
692	3004	1.414	34.678	27.790	45.872		2329(I)															3004				17.1 +0.8	0.54 +0.03		
208	3081	1.391	34.679	27.793	45.877		2328						18.5	4.25	18.07	4.1						3081							
492	3252	1.35	34.682	27.798	45.887		2316(I)		-212.3								28.1**0.5					3252							
209	3255	1.349	34.683	27.799	45.887		2316	-0.10				0.00+0.07	17.6									3255							
693	3502	1.30	34.686	27.804	45.898		2328(I)															3502				16.4 +0.4	0.75 +0.08		
493	3502	1.29	34.685	27.804	45.899		2328(I)		-207.5								27.0**0.5					3502							
211	3602	1.288	34.687	27.806	45.901		2326	-0.22					16.6	4.25	18.11	3.9						3602							
212	3777	1.272	34.689	27.809	45.906	6.2	2315						16.7									3777							
694	3805	1.26	34.688	27.809	45.908		2317(I)															3805				16.3 +0.6	1.21 +0.09		
215	3834	1.257	34.689	27.810	45.908		2320(I)															3834	7 +1.6						
216	3932	1.214	34.691	27.814	45.918		2327(I)															3932	4 +1.6						
494	3949	1.21	34.690	27.814	45.918		2328(I)		-199.3								27.4**0.4					3949							
217	3950	1.206	34.693	27.816	45.920		2328					-0.02+0.09	14.8	4.38	18.59	4.4						3950							
218	3982	1.191	34.693	27.817	45.923		2327(I)															3982	6 +1.6						
219	4032	1.173	34.693	27.818	45.926		2323(I)															4032	13 +1.6						
220	4082	1.165	34.695	27.821	45.929		2316(I)															4082	11 +1.6						
495	4098	1.16	34.691	27.818	45.927		2313(I)		-195.5								27.6**0.4					4098							
221	4106	1.161	34.695	27.821	45.930		2312(I)										28.4 +0.4					4106	9 +1.6						
695	4107	1.16	34.691	27.818	45.927		2311(I)															4107				16.9 +0.4	1.55 +0.04		
223	4123	1.160	34.695	27.821	45.930		2308(I)															4123	5 +1.6						
222	4124	1.159	34.695	27.821	45.930	6.0	2308	-0.20					14.9	4.22	18.12	3.3						4124							
224	4131	1.158	34.696	27.822	45.931																	4131	11 +1.6						
												PRECISION:	1.0	0.01	0.06	0.2													

(I) INTERPOLATED FROM NISKIN DATA

STATION 321

POSITION: 38°48'S 129°22'W

DATE: 27 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO		LDGO	LDGO						YALE		YALE
547	0	16.80	34.05	24.862	41.633																0					12.6 +0.7		5.0 +0.4
201	2	16.80	34.049	24.861	41.633		2007					1.62+0.07									2							
202	33	16.10	34.174	25.119	41.934		2020					1.55+0.09									33							
336	50		33.850				2026(I)												0.03+0.02		50							
203	82	13.09	34.398	25.945	42.969		2038					1.48+0.07									82							
204	121	11.71	34.386	26.205	43.335		2065(I)					1.34+0.09									121							
205	180	10.68	34.455	26.449	43.659		2105					1.15+0.07									180							
206	249	9.02	34.431	26.710	44.060		2125					0.63+0.06									249							
207	319	8.02	34.443	26.875	44.312		2134					0.25+0.06									319							
208	448	6.92	34.394	26.994	44.531		2142					0.10+0.08									448							
209	596	6.36	34.354	27.036	44.626		2147					0.11+0.06									596							
211	894	5.07	34.292	27.145	44.860		2161					0.02+0.06									894							
115	4541	0.911	34.710	27.849	45.985		2296(I)													7 +1.6	4541							
116	4643	0.901	34.711	27.850	45.988		2301(I)													6 +1.6	4643							
117	4665	0.899	34.710	27.850	45.987		2302					-0.03+0.05									4665							
118	4716	0.895	34.711	27.851	45.989		2302(I)													3 +1.6	4716							
119	4767	0.894	34.711	27.851	45.989		2302(I)													5 +1.6	4767							
120	4792	0.894	34.711	27.851	45.989		2302(I)													5 +1.6	4792							
121	4817	0.894	34.710	27.850	45.988		2302(I)													10 +1.6	4817							
122	4832	0.893	34.710	27.850	45.988		2302(I)										29.7 +1.6			11 +1.6	4832							
124	4842	0.893	34.713	27.853	45.991															3 +1.6	4842							

STATION 322

POSITION: 43°0'S 129°56'W

DATE: 29 APR 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM		SIO	UM	----------SIO----------			LSU	LDGO USC*	LDGO	LDGO	LDGO WHOI*						YALE		YALE
1247	0	12.53	34.20	25.904	42.975																0					6.3 +0.5		5.3 +0.3
601	2	12.800	34.202	25.852	42.903	1.1	2068	2.19			-0.03	0.97+0.09				41.7				40*	2							
1135	5		34.202				2065(I)											0.14 +0.11			5							
1087	10	12.37	34.217	25.948	43.032		2060(I)		110.3								9.7**+0.2				10							
602	25	12.787	34.203	25.855	42.907		2053					0.99+0.07	-1.0	3.93	16.39	0.9				52*	25							
603	49	11.868	34.204	26.035	43.158		2060				-0.01	1.06+0.09								34*	49							
604	80	10.905	34.258	26.255	43.453	1.4	2084					0.92+0.08	-1.9			43.0				28*	80							
1089	100	9.69	34.292	26.493	43.790		2091(I)		90.1								10.5**+0.6				100							
605	123	9.201	34.335	26.607	43.943		2098	1.63			0.06	1.15+0.09								17*	123							
1090	149	8.37	34.353	26.751	44.159		2114(I)		64.2								10.9**1.3				149							
606	155	8.419	34.334	26.729	44.133		2118					0.94+0.08	-0.7			42.5				8*	155							
1091	199	7.88	34.417	26.876	44.325		2137(I)		28.2								11.2**+0.7				199							
607	223	7.699	34.424	26.907	44.373	4.0	2142	1.39			0.05	0.49+0.09				43.3				14*	223							
608	271	7.315	34.425	26.963	44.463		2139					0.44+0.07	0.0	3.99	17.06	0.9				14*	271							
1092	274	7.24	34.422	26.971	44.477		2139(I)		9.7								11.2**0.3				274							
1093	349	7.002	34.406	26.992	44.521		2134(I)		-1.3								10.2**0.2				349							
609	352	6.986	34.407	26.995	44.525		2134				0.05	0.42+0.05				46.9				10*	352							
1094	451	6.71	34.385	27.015	44.572		2148(I)		-10.2								10.9**0.2				451							
610	467	6.623	34.377	27.020	44.585	3.0	2150					0.38+0.09	-1.8			49.5				12*	467							
1095	503	6.584	34.372	27.022	44.590		2144(I)		-12.4								11.4**0.2				503							
611	549	6.440	34.363	27.034	44.616		2136	1.03			0.03	0.40+0.06				50.2				10*	549							
287	604	6.30	34.354	27.044	44.640		2142(I)										11.3**0.2				604							
612	662	6.106	34.340	27.059	44.673		2153	1.11			0.01	0.41+0.09	0.9	4.06	17.39	1.3	52.2			16*	662							
289	804	5.53	34.305	27.102	44.772		2175(I)		-61.9								12.0**0.3				804							
586	816		34.302				2177(I)		-63.7								11.7**0.6				816							
613	826	5.401	34.303	27.116	44.798	3.8	2179(I)				-0.01	0.22+0.06				57.5				23*	826							
290	934	4.92	34.308	27.176	44.905		2196(I)		-88.7								13.2**0.2				934							
291	954	4.82	34.310	27.189	44.928		2199(I)		-87.7								14.1**0.6				954							
615	971	4.669	34.313	27.207	44.961		2202					0.07+0.09	0.7			61.6				14*	971							
616	1054	4.234	34.328	27.266	45.063		2215	0.90			-0.04	0.04+0.06								11*	1054							
617	1168	3.683	34.353	27.341	45.193		2223					-0.03+0.06	3.7	4.09	17.67	1.5	69.7			11*	1168							
292	1204	3.58	34.361	27.357	45.219		2225(I)		-122.7								15.7**0.2				1204							
618	1293	3.231	34.394	27.416	45.314	5.5	2234	0.57			-0.03					74.1				15*	1293							
293	1403	2.93	34.435	27.476	45.403		2261(I)		-142.6								16.9**0.5				1403							
619	1441	2.860	34.451	27.495	45.429		2270					-0.05+0.06	7.4	4.11	17.77	1.7	78.4				1441							
620	1592	2.589	34.518	27.572	45.532		2274	0.25			-0.03					83.5				8*	1592							
294	1601	2.56	34.524	27.579	45.542		2276(I)		-155.5								17.7**0.3				1601							
621	1739	2.422	34.572	27.629	45.605		2300(I)						11.3	4.14	17.75	2.7	88.2			9*	1739							
295	1800	2.35	34.592	27.651	45.635		2309(I)		-169.6								20.0**0.6				1800							
622	1889	2.270	34.611	27.672	45.664	6.8	2321	-0.03			-0.01		13.1	4.25	18.09	3.5	93.8			11*	1889							
487	1999	2.12	34.636	27.704	45.710		2312(I)		-192.3								20.9**0.6				1999							
623	2037	2.119	34.636	27.704	45.711		2309						14.9				101.1			15*	2037							
624	2187	1.971	34.651	27.728	45.750		2315	0.16			0.03		18.6	4.37	18.51	4.4	109.6				2187							
489	2248	1.90	34.655	27.736	45.766		2331(I)		-204.8								22.6**0.4				2248							
301	2329	1.876	34.658	27.741	45.773		2348(I)	0.18					19.1			113.1				11*	2329							
302	2474	1.784	34.665	27.753	45.795	6.8	2367				-0.04					114.5				13*	2474							
490	2498	1.74	34.666	27.757	45.804		2360(I)		-209.8								24.6**0.3				2498							
303	2646	1.682	34.671	27.765	45.818		2314	-0.05				0.09+0.09	20.4	4.33	18.25	4.9	117.8			9*	2646							
491	2799	1.59	34.675	27.776	45.839		2324(I)		-215.8								25.5**0.4				2799							
304	2818	1.593	34.676	27.776	45.838	6.7	2326	-0.03					18.4			117.8				13*	2818							
305	2993	1.515	34.683	27.787	45.858		2318						20.5	4.24	18.02	4.2	115.9			17*	2993							
592	3100	1.44	34.687	27.795	45.874		2327(I)		-209.7								25.3**0.4				3100							
306	3166	1.432	34.688	27.797	45.876		2332	0.09			-0.03		17.0			115.8				15*	3166							
889	3277		34.694				2328(I)												0.02+0.03		3277							
307	3344	1.355	34.693	27.806	45.894	6.2	2323						17.5	4.20	17.93	3.8	113.6			15*	3344							
308	3517	1.255	34.698	27.817	45.916		2312	0.27					14.8			112.9				9*	3517							
593	3599	1.23	34.700	27.820	45.922		2312(I)		-200.3								25.7**0.5				3599							

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 322 — *CONTINUED* **POSITION: 43°0'S 129°56'W** **DATE: 29 APR 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH		UH	UM		SIO	UM	----------SIO----------			LSU	LDGO USC*	LDGO	LDGO	LDGO WHOI*					YALE		YALE
894	3674	1.158	34.695	27.821	45.931		2312(I)												0.03+0.75		3674						
309	3690	1.160	34.702	27.827	45.935		2312						14.6	4.23	18.14	3.4	112.5				15*	3690						
310	3860	1.098	34.703	27.831	45.947		2292				-0.05	-0.02+0.09									13*	3860						
186	3955	1.04	34.705	27.837	45.959		2298(I)												0.32+0.09			3955						
311	4030	0.988	34.708	27.843	45.970		2302						11.8								18+	4030						
312	4030	0.988	34.708	27.843	45.970	5.7	2306	0.21					10.7	4.33	18.55	3.6	109.8				24*	4030						
594	4094	0.97	34.701	27.838	45.969		2308(I)		-181.0									25.6**+0.4				4094						
315	4098	0.958	34.708	27.844	45.976		2308(I)														8 +1.6	4098						
190	4151	0.96	34.709	27.845	45.976		2310(I)												0.05+0.04			4151						
316	4202	0.933	34.710	27.848	45.982		2312(I)														8 +1.6	4202						
317	4216	0.931	34.709	27.847	45.981		2313					-0.14+0.09	10.7				109.0				11*	4216						
318	4251	0.918	34.709	27.848	45.983		2314(I)														7 +1.6	4251						
319	4301	0.907	34.710	27.849	45.986		2315(I)														10 +1.6	4301						
595	4307	0.89	34.706	27.847	45.986		2315(I)		-180.2									26.4**+0.4				4307						
193	4347	0.88	34.710	27.851	45.991		2316(I)												0.01+0.03			4347						
320	4350	0.887	34.710	27.851	45.990		2316(I)														5 +1.6	4350						
321	4376	0.874	34.710	27.851	45.992		2316(I)											26.7 +0.2			15 +1.6	4376						
323	4390	0.867	34.710	27.852	45.993	5.8	2316	0.17			-0.06		10.6	4.25	18.31	3.1	109.8				16*	4390						
322	4391	0.867	34.710	27.852	45.993																8 +1.6	4391						
324	4397	0.867	34.711	27.853	45.994																7 +1.6	4397						
												PRECISION:	1.0	0.01	0.06	0.2												

STATION 323 **POSITION: 33°43'S 138°8'W** **DATE: 4 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	LDGO		LDGO									
211	3		34.962														7.0 +0.4				3							
335	5		35.010																0.04+0.03		5							

STATION 324 **POSITION: 23°0'S 146°4'W** **DATE: 7 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH		UM	UM	----------SIO----------						SIO	LDGO					YALE			YALE		
647	0	26.60	35.94	23.591	39.752																0		16.4 +0.7		14.8 +0.6		
301	6	26.555	35.948	23.611	39.774	0.7	1998			1.91+0.10											6						
236	10		35.950				1998(I)		155.2							7.2 +0.6	0.06+0.02				10						
506	11	26.58	35.941	23.599	39.761		1999(I)			2.00+0.08											11						
507	52	26.54	35.932	23.604	39.768		2004(I)			1.90+0.08											52						
237	100		35.930				2012(I)		134.2							7.0 +0.6					100						
508	103	23.02	35.945	24.667	41.018		2012(I)			1.86+0.09											103						
302	116	21.670	35.715	24.874	41.306		2015			1.71+0.10	-1.1	3.86	15.51	0.6							116						
238	150		35.680				2023(I)		132.7							7.2 +0.7					150						
509	154	20.76	35.679	25.097	41.582		2024(I)			1.84+0.08											154						
510	203	19.18	35.586	25.445	42.026		2038(I)			1.39+0.07											203						
490	240	18.37	35.520	25.602	42.236		2049(I)		98.1							7.1 +0.6					240						
511	253	17.96	35.474	25.668	42.328		2053(I)			1.45+0.08											253						
512	304	16.63	35.317	25.873	42.524		2070(I)			1.57+0.09											304						
303	336	14.607	35.144	26.201	43.095		2082			1.02+0.08	-1.0										336						
491	349	14.52	35.124	26.204	43.105		2088(I)		34.4							7.2 +0.7					349						
513	406	13.052	34.950	26.379	43.391		2112(I)			0.48+0.08											406						
492	448	10.21	34.668	26.696	43.939		2128(I)		-47.3							8.3 +0.6					448						
514	457	11.402	34.791	26.578	43.721		2131(I)			0.40+0.06											457						
515	507	9.225	34.569	26.785	44.114		2148(I)			0.17+0.06											507						
304	537	8.084	34.478	26.893	44.322	4.9	2158			0.00+0.06	-0.8										537						
493	547	7.93	34.458	26.900	44.344		2159(I)		-70.9							9.3 +0.7					547						
516	608	6.997	34.394	26.983	44.513		2164(I)			0.11+0.06											608						
305	687	6.055	34.342	27.067	44.686		2168			0.00+0.06	-0.7	4.18	17.90	1.3							687						
494	696	6.11	34.343	27.060	44.674		2170(I)		-86.5							11.0 +0.7					696						
306	825	5.192	34.318	27.152	44.855		2201				0.8										825						
495	826	5.20	34.326	27.157	44.858		2201(I)		-107.6							12.3 +0.7					826						
307	888	4.766	34.336	27.215	44.958	5.0	2220				2.0	4.17	17.84	2.0							888						
186	1085	3.70	34.433	27.403	45.250		2253(I)		-149.1							16.8 +0.5					1085						
308	1189	3.257	34.484	27.486	45.377		2265				10.4	4.18	17.84	2.9							1189						
309	1489	2.451	34.577	27.630	45.604	6.7	2320				19.4	4.27	18.09	4.1							1489						
187	1585	2.38	34.588	27.645	45.625		2320(I)		-196.7							21.5 +1.1					1585						
310	1880	2.071	34.625	27.699	45.712		2319				24.6	4.27	17.98	4.8							1880						
311	2081	1.928	34.638	27.721	45.748	6.5	2338				23.2										2081						
189	2083	1.914	34.639	27.723	45.751		2338(I)		-212.8							25.7 +0.5					2083						
312	2377	1.751	34.653	27.746	45.792		2336				23.7	4.29	18.08	4.9							2377						
315	2581	1.664	34.659	27.757	45.812		2339				23.2	4.29	18.12	4.6							2581						
190	2582	1.631	34.662	27.762	45.820		2339(I)		-223.2							28.4 +0.5					2582						
191	3081		34.676				2329(I)		-204.4							28.6 +0.7					3081						
317	3169	1.375	34.679	27.794	45.880	6.1	2327				18.7	4.28	18.22	4.0							3169						
318	3369	1.292	34.684	27.803	45.898		2329				18.4										3369						
192	3580	1.24	34.687	27.809	45.910		2326(I)		-202.2							27.6 +0.5					3580						
319	3665	1.194	34.691	27.815	45.921		2325				16.8	4.28	18.26	3.9							3665						
320	3967	1.119	34.695	27.824	45.937	6.0	2308														3967						

(I) INTERPOLATED FROM NISKIN DATA

STATION 324 — *CONTINUED*

POSITION: 23°0'S 146°4'W

DATE: 7 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH			UM			UM	----------SIO----------					SIO		LDGO						YALE		YALE
193	4082	1.09	34.697	27.827	45.944		2305(I)		-195.8								27.8 +0.4			4082								
321	4220	1.068	34.696	27.828	45.947		2301						14.2	4.21	18.13	3.0				4220								
322	4473	1.046	34.698	27.831	45.952		2326						14.1							4473								
194	4581	1.03	34.700	27.834	45.957		2319(I)		-197.4								28.0 +1.0			4581								
323	4772	1.036	34.697	27.831	45.953		2307						13.7	4.24	18.23	3.1				4772								
195	4982	1.03	34.699	27.833	45.956				-188.6								27.6 +0.6			4982								
324	5033	1.033	34.700	27.833	45.956								11.5							5033								
												PRECISION:	1.0	0.01	0.06	0.2												

STATION 325

POSITION: 14°40'S 130°55'W

DATE: 18 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																
102	118	24.786	36.504	24.570	40.812							1.61+0.08									118							
103	206	20.812	35.931	25.274	41.750							1.35+0.09									206							
104	254	17.855	35.346	25.597	42.268							1.05+0.08									254							
106	322	12.112	34.629	26.317	43.409							0.36+0.06									322							
107	353	10.743	34.582	26.536	43.738							0.11+0.06									353							
108	384	9.531	34.547	26.718	44.021							0.05+0.06									384							
109	410	8.855	34.559	26.837	44.197							0.02+0.06									410							
111	789	5.009	34.501	27.318	45.033							0.02+0.06									789							

STATION 326

POSITION: 14°3'S 126°15'W

DATE: 20 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------MCM----------					LDGO USC*		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	YALE		YALE
647	0	25.79	35.62	23.599	39.809																0				9.7 +0.6		4.5 +0.3
301	2	25.737	35.628	23.622	39.834		2039					1.61+0.11									2							
413	7	25.74	35.638	23.629	39.840		2039(I)										7.0 +0.1				7							
536	10		35.62				2039(I)		45.1								7.2+0.2				10	16.0+1.4						
302	36	25.752	35.956	23.864	40.068	0.6	2037	1.64				1.59+0.10	-2.2	3.69	15.14	-3.5					61*	36						
303	55	25.577	36.185	24.090	40.298		2044					1.66+0.10									55*	55						
304	84	25.102	36.384	24.384	40.613	0.3	2045	1.69				1.54+0.08	-1.4	3.74	15.14	-1.8						84						
537	110		36.43				2049(I)		131.8								6.6**+0.2		0.21+0.04			110	12.0+0.7		20.5+1.1			
305	120	23.952	36.438	24.768	41.056		2051					1.68+0.09									64*	120						
306	147	22.542	36.238	25.025	41.395	2.7	2068	1.65				1.46+0.08	-1.8	3.76	15.47	-2.3						147						
307	197	19.755	35.665	25.355	41.900		2085					1.41+0.07										197						
289	197	20.41	35.797	25.282	41.784		2085(I)		139.1								7.1**+0.2					197			19.4+0.6	0.320+0.040		
308	256	16.035	35.063	25.817	42.614		2091	1.40				0.98+0.07	0.0	3.87	16.14	-0.7					69*	256						
538	300		34.61				2160(I)		-13.4								7.9**+0.3		0.04+0.04			300						
309	316	11.407	34.600	26.429	43.577		2190					0.23+0.07									20*	316						
310	364	9.297	34.584	26.785	44.107	11.5	2252	-0.06				0.07+0.06	2.2	3.92	17.02	-1.6						364						
290	399	8.88	34.587	26.854	44.211		2252(I)		-95.4								10.3**+0.3					399						
311	464	7.490	34.555	27 040	44.521		2252					-0.08+0.06										464						
312	583	6.387	34.519	27.163	44.746	8.0	2249	0.48				-0.05+0.06	7.3	3.99	17.43	-0.7					30*	583						
291	599	6.26	34.520	27.180	44.774		2250(I)		-118.0								13.0**+0.2					599			0.3+0.5	0.070+0.030		
316	715	5.441	34.506	27.271	44.944	7.9	2264	0.40				0.11+0.06	11.3	3.94	17.83	-3.9						715						
292	799	5.01	34.508	27.323	45.038		2280(I)		-150.0								16.5**+0.3					799	-0.5+0.5		0.0+0.4			
317	823	4.921	34.507	27.333	45.056		2284														43*	823						
318	935	4.413	34.519	27.398	45.171	8.2	2292	0.21				-0.03+0.06	13.8	4.18	18.09	1.1					62*	935						
293	1047	4.00	34.531	27.451	45.264		2299(I)		-176.2								18.4**+0.4					1047	0.2+0.8		1.3+0.4	0.004+0.004		
319	1093	3.828	34.537	27.473	45.305		2302					0.08+0.06									37*	1093						
320	1242	3.353	34.557	27.535	45.414		2310(I)	0.10														1242						
294	1295	3.21	34.567	27.556	45.450		2312(I)		-202.2								20.4**+0.7					1295	-1.0+1.0		0.1+0.4			
321	1394	3.023	34.578	27.582	45.495		2316														30*	1394						
322	1543	2.675	34.594	27.625	45.574	7.6	2319	0.03					24.7	4.23	18.31	1.7					62*	1543						
295	1546	2.69	34.595	27.625	45.573		2319(I)		-212.2								21.2**+0.3					1546	-1.4+0.8		-0.4+0.4	0.000+0.020		
323	1693	2.382	34.612	27.664	45.644		2316														16*	1693						
101	1847	2.143	34.629	27.697	45.701		2334	0.16					29.5	4.20	18.40	0.6						1847						
324	1917	2.048	34.639	27.712	45.726	7.0	2326															1917						
102	1995	1.949	34.644	27.724	45.749		2330														7*	1995						
103	2147	1.822	34.656	27.743	45.781	6.8	2326	0.02					35.2	4.22	18.29	2.0						2147						
104	2295	1.741	34.662	27.754	45.801		2337														19*	2295						
105	2443	1.686	34.667	27.762	45.815		2341	0.12														2443						
106	2595	1.625	34.672	27.770	45.829		2334														17*	2595						
107	2746	1.579	34.675	27.776	45.840	6.5	2342	-0.17					33.6									2746						
108	2894	1.529	34.677	27.781	45.850		2336														13*	2894						
109	3043	1.470	34.679	27.787	45.863	7.1	2329	0.11					29.0	4.27	18.35	2.9						3043						
110	3197	1.391	34.681	27.794	45.878		2335														25*	3197						
111	3352	1.338	34.683	27.799	45.889		2333	0.07					24.7	4.20	18.58	0.1						3352						
112	3507	1.308	34.685	27.803	45.896		2328														7*	3507						
117	3567	1.307	34.685	27.803	45.896		2329(I)														16 +1.6	3567						
118	3618	1.302	34.686	27.804	45.898		2331(I)														15 +1.6	3618						
119	3647	1.302	34.686	27.804	45.898		2332(I)														15 +1.6	3647						
120	3678	1.299	34.687	27.805	45.899		2335(I)														14 +1.6	3678						
121	3699	1.295	34.688	27.806	45.901		2336(I)														20 +1.6	3699						
122	3708	1.295	34.686	27.805	45.899	6.2	2337	0.03									29.4 +0.4					3708						
123	3708	1.295	34.686	27.805	45.899		2337(I)														18 +1.6	3708						
124	3718	1.292	34.686	27.805	45.900																19 +1.6	3718						
												PRECISION:	0.3	0.01	0.06	0.2												

(I) INTERPOLATED FROM NISKIN DATA

STATION 327 — **POSITION: 11°40'S 125°54'W** — **DATE: 21 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																
101	19	26.161	35.047	23.054	39.257							1.83+0.10									19							
102	80	25.559	35.626	23.674	39.895							1.56+0.09									80							
103	130	22.226	36.096	25.008	41.398							1.58+0.09									130							
104	190	16.984	35.249	25.736	42.465							1.46+0.09									190							
105	247	12.469	34.752	26.343	43.404							0.29+0.09									247							
106	317	10.392	34.706	26.695	43.921							0.02+0.09									317							
107	467	7.677	34.611	27.057	44.519							0.17+0.09									467							
108	565	6.901	34.578	27.141	44.674							-0.06+0.09									565							
109	664	6.222	34.551	27.210	44.807							0.12+0.09									664							
110	785	5.424	34.527	27.290	44.964							-0.08+0.09									785							
111	936	4.512	34.527	27.394	45.157							-0.11+0.09									936							
112	1188	3.613	34.559	27.512	45.364							0.08+0.09									1188							

STATION 328 — **POSITION: 9°16'S 125°32'W** — **DATE: 21 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM							LDGO			WHOI	WHOI	WHOI	YALE		YALE	
447	0	26.34	35.29	23.182	39.370																0				10.0 +0.6		3.6 +0.3	
315	5	26.339	35.288	23.181	39.369		2027					1.48+0.08									5							
535	5		35.29				2027(I)												0.02+0.03		5							
301	135	22.091	36.072	25.027	41.426		2071					1.65+0.07									135							
302	165	18.639	35.494	25.514	42.131		2094					1.41+0.08									165							
303	214	13.171	34.790	26.231	43.239		2213					0.21+0.06									214							
304	265	10.651	34.756	26.688	43.892		2245					0.03+0.06									265							
305	305	9.895	34.741	26.808	44.075		2262					0.07+0.06									305							
306	345	9.527	34.720	26.854	44.152		2255					-0.03+0.06									345							
307	393	8.993	34.695	26.921	44.266		2246					0.03+0.06									393							
309	454	8.423	34.660	26.984	44.378		2267					0.06+0.06									454							
286	1830	2.33	34.626	27.680	45.665		2332(I)		-216.9												1830	0.1+0.5	-0.4+0.4					
287	2028	2.04	34.642	27.715	45.730		2339(I)		-224.1												2028	0.0+0.7	0.1+0.4	0.080+0.040				
289	2277	1.81	34.660	27.747	45.786		2340(I)		-233.2												2277	0.4+0.7	-0.4+0.4					
290	2527	1.66	34.670	27.766	45.822		2344(I)		-230.4												2527	1.9+1.0	0.9+0.5	0.000+0.020				
291	2776	1.59	34.675	27.775	45.838		2340(I)		-227.4												2776	-0.6+0.4	0.1+0.7					
292	3026	1.47	34.680	27.787	45.863		2335(I)		-221.3												3026			0.040+0.020				
293	3276	1.35	34.684	27.800	45.889		2338(I)		-209.4												3276	0.7+0.9	0.4+0.4					
294	3527	1.24	34.689	27.811	45.911		2336(I)		-211.4												3527			0.020+0.010				
295	3829	1.19	34.690	27.815	45.921		2330(I)		-211.0												3829	-0.5+0.8	0.3+0.4					

STATION 330 — **POSITION: 6°4'S 125°17'W** — **DATE: 23 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																
101	17	26.547	35.084	22.963	39.145							1.73+0.08									17							
102	124	17.216	35.250	25.681	42.395							0.92+0.06									124							
103	189	12.043	34.873	26.520	43.611							-0.05+0.06									189							
104	288	10.594	34.797	26.730	43.937							-0.06+0.06									288							
105	388	9.145	34.708	26.907	44.238							-0.03+0.06									388							
106	459	8.061	34.642	27.025	44.451							0.02+0.06									459							
107	533	7.193	34.595	27.114	44.620							-0.12+0.06									533							

(I) INTERPOLATED FROM NISKIN DATA

STATION 331 — POSITION: 4°38'S 125°8'W — DATE: 23 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH			UM			UM	MCM	MCM	MCM	MCM	LSU	LDGO USC*		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
1047	0	26.36	35.16	23.078	39.268																	0				10.4**0.6			4.8 +0.4
501	10	26.426	35.137	23.040	39.228		2018					2.61+0.12					33.9					10							
236	10		35.14				2018(I)		40.6												70*	10						
502	39	26.262	35.146	23.098	39.293	0.4	2018					1.82+0.09	-1.1	3.83	15.63	-3.1	35.1	7.1**0.3				10	11.2+0.6	16.5+0.9					
486	40		35.151				2018(I)														23*	39							
503	59	26.250	35.466	23.342	39.531		2022					1.69+0.07										40				9.4 +0.4	1.40 +0.12		
504	79	20.753	35.465	24.936	41.426	2.2	2094					1.34+0.09	-0.8	3.71	17.31						32*	59							
237	80		35.45				2096(I)		92.0												37*	79							
238	90		35.33				2116(I)		65.0									6.5**0.2				80		14.6+0.8	0.070+0.030				
505	100	16.586	35.284	25.857	42.612		2138					0.87+0.09						7.2**0.2				90	8.8+0.6	14.9+0.8					
239	100		35.20				2138(I)		22.5												54*	100							
506	116	14.508	35.027	26.132	43.036	8.7	2207					0.54+0.07	1.6	3.85	17.12			6.6**0.2				100		11.8+0.6	0.020+0.020				
507	138	13.166	34.954	26.359	43.363		2225					0.51+0.09					35.8					116							
508	178	12.543	34.916	26.455	43.507	9.5	2221						3.5		16.93						21*	138							
509	226	12.131	34.884	26.511	43.595		2248					0.12+0.09					36.2				18*	178							
240	240		34.88				2249(I)		-77.2												14*	226							
487	252	11.80	34.863	26.559	43.670		2251(I)											8.2**0.3				240	0.3+0.7	1.1+0.5					
510	273	11.554	34.850	26.595	43.725	13.7	2254					0.18+0.09	3.1									252				9.1 +0.6	0.27 +0.05		
489	302	10.98	34.816	26.675	43.852		2271(I)		-92.1												14*	273							
511	305	10.977	34.817	26.676	43.853		2273					0.28+0.09					40.9	9.6**0.2				302	0.1+1.0	1.0+0.4	0.130+0.030				
490	352	10.10	34.763	26.789	44.038		2266(I)														12*	305							
512	374	9.762	34.757	26.843	44.120		2260						4.1	3.88	17.07	-3.1						352				8.9 +1.0	0.11 +0.02		
491	382	9.58	34.729	26.852	44.146		2262(I)		-102.6									10.9**0.3				374							
516	423	9.151	34.701	26.901	44.231		2272					0.09+0.09					47.4					382	0.3+0.6	0.1+0.5					
517	494	8.094	34.636	27.015	44.439		2249					0.12+0.09	5.1	3.91	17.74		50.7				16*	423							
492	503	7.97	34.624	27.025	44.460		2250(I)		-108.5									12.3**0.2				494							
493	552	7.45	34.600	27.082	44.565		2257(I)															503	-0.2+1.3	0.0+0.5	0.080+0.030				
518	604	7.060	34.586	27.125	44.644		2265					0.01+0.09					56.7					552				8.1 +0.6	0.10 +0.02		
494	632	6.48	34.570	27.191	44.763		2272(I)		-130.0												13*	604							
519	694	5.920	34.552	27.249	44.875	9.5	2284					0.10+0.09	9.5	3.95	17.59	-2.5	64.0	14.0**0.4				632	-0.6+0.5						
520	793	5.215	34.540	27.325	45.019		2285					0.08+0.09					72.4				46*	694							
886	798	5.26	34.542	27.322	45.011		2285(I)		-156.1												20*	793							
495	899	4.64	34.551	27.399	45.148		2296(I)											16.9**0.3				798	1.1+0.7	-0.2+0.4	0.020+0.020				
521	941	4.653	34.551	27.397	45.146	9.7	2302					-0.05+0.09	14.2				81.6					899				13.0 +1.8	0.16 +0.04		
522	1089	4.145	34.560	27.459	45.258		2318										90.5				19*	941							
887	1099	4.09	34.564	27.468	45.272		2319(I)		-187.3												17*	1089							
523	1238	3.627	34.572	27.521	45.372	16.3	2324						20.5	4.17	18.02	1.6	96.6	19.6**0.3				1099	-0.3+0.4						
524	1376	3.272	34.585	27.565	45.452		2330										102.1				28*	1238							
889	1400	3.20	34.591	27.577	45.471		2334(I)		-211.0												20*	1376							
186	1468	3.06	34.656	27.641	45.547		2343(I)											21.8**0.3				1400	0.0+0.5	-0.7+0.4					
301	1543	2.837	34.604	27.619	45.551	8.7	2353						24.0	4.29	18.45	2.2	111.6					1468				15.3 +1.3			
890	1701	2.57	34.616	27.652	45.611		2347(I)		-228.5									25.1**0.6			21*	1543							
302	1762	2.419	34.622	27.669	45.644		2345						27.5	4.23	18.26	2.0	117.7					1701	1.5+0.8	1.0+0.5	0.000+0.020				
303	1986	2.128	34.638	27.705	45.711	8.0	2343										124.9				22*	1762							
891	2002	2.145	34.640	27.706	45.709		2343(I)		-235.8									26.9**0.3			24*	1986							
304	2207	1.899	34.651	27.733	45.763		2351						27.3	4.34	18.56	3.2	128.6					2002	1.1+2.1	0.1+0.4					
187	2216	1.91	34.709	27.779	45.805		2351(I)														16*	2207							
892	2252	1.910	34.653	27.734	45.763		2353(I)		-231.6									27.8**0.3				2216				16.1 +0.8	0.57 +0.04		
305	2433	1.719	34.661	27.755	45.804	7.6	2356										133.0				36*	2252							
893	2502	1.73	34.663	27.755	45.803		2354(I)		-241.7									29.0**0.4				2433							
306	2654	1.592	34.669	27.770	45.833		2350						29.2	4.32	18.46	3.5	133.9				16*	2502							
894	2702	1.592	34.672	27.773	45.835		2350(I)		-235.2									29.6**0.4				2654							
307	2878	1.481	34.673	27.781	45.856	8.4	2350										135.0				25*	2702							
895	3000	1.428	34.678	27.789	45.869		2345(I)		-229.9									32.4**0.4				2878							
308	3098	1.350	34.680	27.796	45.885		2341						22.9	4.29	18.51	2.6	134.4				35*	3000							
190	3265	1.27	34.686	27.806	45.904		2338(I)		-220.3									32.9**0.4				3098							
309	3324	1.252	34.684	27.806	45.905	6.8	2337										134.8					3265	0.4+0.9	0.0+0.4	0.030+0.030				
310	3546	1.154	34.688	27.816	45.926		2336						18.9	4.25	18.40	2.5	133.6				21*	3324							
191	3667	1.12	34.692	27.821	45.934		2335(I)		-213.6									34.7**0.4			30*	3546							
192	3716	1.12	34.693	27.822	45.936		2335(I)															3667	0.2+0.6						
311	3774	1.104	34.691	27.821	45.937	6.6	2335										133.2					3716				15.6 +0.5	0.93 +0.04		
686	3971	1.12	34.693	27.822	45.936		2326(I)														35*	3774							
312	3999	1.099	34.692	27.823	45.938		2325						17.9	4.21	18.46	1.0	132.9					3971						0.03+0.04	
316	4009	1.100	34.691	27.822	45.938		2325(I)														35*	3999							
193	4066	1.10	34.694	27.824	45.941		2327(I)		-209.8									34.4**0.4			15 +1.6	4009							
317	4109	1.099	34.690	27.821	45.937		2328(I)															4066	0.0+0.7	0.1+0.4					
318	4158	1.098	34.692	27.823	45.939		2329(I)														19 +2.0	4109							
319	4199	1.097	34.692	27.823	45.939		2330(I)														9 +1.6	4158							
320	4247	1.096	34.692	27.823	45.939		2332(I)														13 +1.6	4199							
321	4280	1.095	34.692	27.823	45.939		2332(I)											34.3 +1.0			16 +1.6	4247							
323	4301	1.094	34.691	27.822	45.939		2333(I)														19 +1.6	4280							
322	4302	1.094	34.691	27.822	45.939	6.3	2333					-0.02+0.09	17.0	4.20	18.38	1.3	132.3				15 +1.6	4301							
324	4311	1.093	34.693	27.824	45.941																31*	4302							
693	4368	1.10	34.695	27.825	45.941																21 +1.7	4311							
194	4416	1.10	34.693	27.823	45.940																	4368						0.03+0.03	
195	4467	1.10	34.692	27.822	45.938				-207.8									34.1**0.4				4416				14.0 +1.0	1.38 +0.03		
																						4467	-0.3+0.4	-0.2+0.4					
							(I) INTERPOLATED FROM NISKIN DATA					PRECISION:	0.3	0.01	0.06	0.2															

STATION 332 — **POSITION: 3°1'S 124°48'W** — **DATE: 25 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM						LDGO										
110	12	26.15	35.276	23.231	39.429							2.15+0.08						6.5 +0.2			12							
109	23	26.12	35.276	23.238	39.437							2.23+0.09									23							
111	34	26.12	35.276	23.239	39.438							2.16+0.10									34							
112	45	26.12	35.276	23.239	39.439							2.23+0.09									45							
113	61	25.30	35.260	23.478	39.721							2.15+0.09									61							
114	76	20.31	35.189	24.847	41.370							1.25+0.08									76							
115	96	15.91	35.081	25.859	42.664							0.61+0.06									96							
116	121	13.40	34.962	26.317	43.303							0.44+0.06									121							
117	152	12.67	34.917	26.431	43.473							0.34+0.06									152							
118	201	11.92	34.872	26.542	43.642							0.17+0.06									201							
119	251	11.41	34.839	26.614	43.756							0.10+0.06									251							
120	301	11.02	34.813	26.665	43.838							0.12+0.07									301							
201	439	10.193	34.758	26.770	44.011							0.14+0.06									439							
202	638	6.843	34.588	27.157	44.695							0.10+0.06									638							
203	837	5.395	34.546	27.309	44.984							-0.02+0.06									837							

STATION 333 — **POSITION: 1°30'S 124°40'W** — **DATE: 26 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																
101	28	25.728	35.298	23.376	39.595							2.41+0.08									28							
102	92	21.628	35.631	24.822	41.258							1.54+0.08									92							
103	164	13.160	34.994	26.391	43.394							0.28+0.06									164							
104	184	11.904	34.862	26.538	43.640							0.59+0.06									184							
105	218	11.855	34.857	26.543	43.649							0.40+0.06									218							
106	263	11.632	34.846	26.577	43.701							0.23+0.06									263							
107	313	11.328	34.822	26.615	43.764							0.19+0.06									313							
108	367	10.783	34.788	26.689	43.882							0.20+0.06									367							
110	497	8.471	34.661	26.977	44.367							-0.05+0.06									497							
112	638	7.159	34.590	27.115	44.624							0.04+0.08									638							

STATION 334 — **POSITION: 0°3'N 124°34'W** — **DATE: 27 MAY 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM						LDGO		LDGO						YALE			YALE
447	0	25.10	35.19	23.484	39.739																0							
301	4	24.884	35.182	23.543	39.810		2040					3.29+0.11									4							
236	10		35.18				2039(I)		72.6												10							
302	43	24.776	35.164	23.562	39.834		2031					2.85+0.10									43							
303	74	22.237	34.852	24.062	40.481		2058					4.11+0.11									74							
304	91	20.705	34.936	24.548	41.053		2078					3.73+0.10									91							
237	110		34.84				2092(I)		47.5										0.08+0.03		110							
305	111	18.931	34.838	24.939	41.554		2093					3.96+0.10									111							
306	137	14.629	34.745	25.889	42.792		2130					2.96+0.10									137							
238	160		34.92				2141(I)		-19.5										0.08+0.04		160							
307	180	13.488	34.746	26.132	43.117		2145					1.32+0.06									180							
239	195		34.92				2155(I)		-45.6										0.10+0.03		195							
309	282	11.994	34.864	26.522	43.617		2188					0.46+0.06									282							
310	366	11.075	34.802	26.647	43.816		2238					0.19+0.06									366							
311	394	10.645	34.784	26.711	43.915		2250					0.11+0.08									394							
312	479	8.750	34.671	26.941	44.307		2285					0.06+0.06									479							
316	587	7.134	34.603	27.128	44.640		2272					-0.06+0.06									587							
317	672	6.725	34.577	27.164	44.713		2288					0.14+0.06									672							
318	774	6.125	34.560	27.229	44.835		2289					0.05+0.06									774							
319	870	5.232	34.547	27.329	45.020		2286					0.02+0.06									870							
112	4596	1.097	34.692	27.823	45.939		2339(I)													16 +1.6	4596							
117	4634	1.097	34.692	27.823	45.939		2341(I)													30 +2.7	4634							
118	4690	1.096	34.692	27.823	45.939		2340(I)													28 +3.2	4690							
119	4725	1.097	34.691	27.822	45.938		2339(I)													35 +3.1	4725							
120	4749	1.096	34.693	27.824	45.940		2337(I)													15 +1.6	4749							
122	4773	1.096	34.692	27.823	45.939		2336(I)											37.0 +1.0		27 +1.6	4773							
123	4798	1.096	34.691	27.822	45.938															13 +1.6	4798							
124	4815	1.096	34.692	27.823	45.939															13 +1.6	4815							

(I) INTERPOLATED FROM NISKIN DATA

STATION 335

POSITION: 1°32'N 124°32'W

DATE: 27 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity °/oo	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/oo)	TCO_2 μM/kg	$\delta^{13}C$ °/oo	$\Delta^{14}C$ °/oo	δD °/oo	$\delta^{18}O$ °/oo	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																
101	20	25.240	35.100	23.374	39.624							2.88+0.09									20							
102	92	20.903	34.757	24.358	40.856							2.63+0.10									92							
103	141	13.010	34.850	26.310	43.328							1.31+0.07									141							
104	189	12.052	34.856	26.505	43.596							0.54+0.06									189							
105	292	11.517	34.832	26.588	43.721							0.32+0.06									292							
106	488	8.349	34.647	26.985	44.386							0.03+0.06									488							

STATION 336

POSITION: 3°1'N 124°22'W

DATE: 28 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity °/oo	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/oo)	TCO_2 μM/kg	$\delta^{13}C$ °/oo	$\Delta^{14}C$ °/oo	δD °/oo	$\delta^{18}O$ °/oo	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO											
207	6	25.82	35.060	23.169	39.389							2.79+0.09					6.8 +0.3				6							
208	20	25.82	35.060	23.170	39.390							2.77+0.09									20							
209	36	25.81	35.060	23.171	39.392							2.69+0.09									36							
210	51	25.80	35.060	23.175	39.396							3.06+0.10									51							
211	67	25.72	35.042	23.184	39.409							2.72+0.10									67							
212	81	22.75	34.717	23.814	40.207							2.41+0.10									81							
213	106	20.11	34.806	24.608	41.152							2.63+0.10									106							
214	132	14.69	34.940	26.026	42.919							1.05+0.06									132							
215	151	13.69	34.939	26.239	43.205							0.82+0.08									151							
216	177	13.07	34.913	26.348	43.360							0.65+0.06									177							
217	250	11.90	34.841	26.523	43.626							0.26+0.06									250							
218	310	11.29	34.799	26.605	43.757							0.17+0.06									310							
220	397	9.88	34.707	26.784	44.052							0.16+0.06									397							
101	491	8.653	34.651	26.941	44.316							0.02+0.06									491							
102	589	7.267	34.594	27.103	44.602							-0.09+0.08									589							

STATION 337

POSITION: 4°50'N 124°5'W

DATE: 29 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity °/oo	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/oo)	TCO_2 μM/kg	$\delta^{13}C$ °/oo	$\Delta^{14}C$ °/oo	δD °/oo	$\delta^{18}O$ °/oo	Tritium TU	δ (^{3}He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	----------MCM----------				LSU	LDGO USC*			LDGO WHOI*			WHOI	WHOI	YALE			YALE
847	0	27.01	34.55	22.418	38.588																	0				12.5 +0.6			5.8 +0.4
409	1	27.01	34.604	22.458	38.627		1973	1.37				3.00+0.11					33.7				50*	1						
735	5		34.52				1974(I)		61.2									6.7*+0.3				5		22.4+1.0	0.030+0.010				
410	51	27.04	34.646	22.481	38.648		1983(I)					2.92+0.12	-1.8	3.75	15.16	-2.4					45*	51						
411	67	26.52	34.742	22.713	38.904		1986					2.81+0.10									56*	67						
586	80	24.70	34.776	23.291	39.577		2007(I)		68.4									7.1*+0.2				80							
412	82	24.73	34.797	23.298	39.582		2012					3.19+0.10					33.6				44*	82						
413	101	20.05	34.784	24.607	41.155		2089	0.81				3.78+0.14									19*	101						
414	122	16.82	34.742	25.387	42.140		2157(I)					2.91+0.09									29*	122						
587	130	14.76	34.697	25.824	42.719		2175(I)		-30.2									8.5*+0.2				130		22.4+1.0	0.150+0.020				
415	147	13.04	34.657	26.155	43.176		2197	0.29				2.06+0.11					40.1				29*	147						
416	167	11.68	34.634	26.404	43.530		2184					1.41+0.07	6.8	3.95	16.78	-0.4					12*	167						
589	190	11.16	34.635	26.501	43.667		2189(I)		-75.5									10.8*+0.2				190							
417	197	10.92	34.630	26.542	43.729		2191					0.94+0.09					45.5				26*	197						
418	225	10.43	34.673	26.662	43.886		2200(I)					0.58+0.06	4.0								16*	225						
590	250	10.09	34.673	26.721	43.974		2211(I)		-94.8									11.1*+0.2				250		3.8+1.0	0.210+0.040				
419	260	9.92	34.673	26.751	44.017		2216	0.21				0.32+0.09					48.0				15*	260						
420	300	9.65	34.677	26.799	44.087		2241						4.4	3.91	17.08	-2.3					14*	300						
301	307	9.610	34.678	26.807	44.099		2247					0.16+0.07									14*	307						
302	355	9.206	34.667	26.865	44.192		2243					0.20+0.09	4.8				51.2				14*	355						
591	375	9.142	34.666	26.875	44.207		2244(I)		-103.6									12.3*+0.3				375							
303	405	8.946	34.656	26.898	44.248		2248					0.13+0.06									15*	405						
304	446	8.644	34.642	26.935	44.311		2258(I)					0.11+0.09	4.8	3.87	17.43	-4.7					18*	446						
306	482	8.271	34.630	26.984	44.392		2276					-0.05+0.06	5.6								15*	482						
305	486	8.238	34.629	26.988	44.400		2279	0.08				0.06+0.06					54.1				21*	486						
592	500	8.12	34.625	27.003	44.425		2288(I)		-117.2									13.3*+0.2				500		-1.1+0.4	0.200+0.030				
307	561	7.342	34.595	27.093	44.585		2311	-0.07				0.08+0.09					59.8				22*	561						
308	644	6.392	34.565	27.199	44.780		2313					-0.05+0.09	10.1				67.8				13*	644						
593	649	6.386	34.566	27.200	44.782		2313(I)		-148.5									16.3*+0.3				649							
309	722	5.807	34.552	27.263	44.899		2310														21*	722						
310	798	5.468	34.549	27.302	44.971		2315(I)						11.8				74.1				15*	798						
594	798	5.48	34.550	27.301	44.968		2315(I)		-153.9									17.0*+0.2				798			0.080+0.030				
311	889	5.015	34.553	27.359	45.071		2325	-0.03													12*	889						
312	979	4.678	34.553	27.356	45.142		2333						17.4	4.12	17.73	1.4	84.4				16*	979						
316	988	4.646	34.554	27.401	45.149		2333														2*	988						
595	1047	4.400	34.565	27.436	45.209		2337(I)		-184.8									20.8*+0.3				1047							
317	1083	4.238	34.568	27.456	45.245		2340										92.8				21*	1083						
318	1180	3.878	34.577	27.500	45.325		2349(I)														16*	1180						
286	1299	3.55	34.586	27.539	45.398		2357(I)		-206.3									22.5*+0.4				1299		-0.7+0.2	0.080+0.030				
319	1327	3.521	34.586	27.542	45.403		2358	-0.46									101.9				33*	1327						
320	1470	3.084	34.602	27.596	45.501		2352														19*	1470						
321	1470	3.085	34.602	27.596	45.501		2356	-0.25									111.8				20*	1470						
287	1596	2.87	34.612	27.623	45.551		2358(I)		-221.3									25.7*+0.4				1596							
322	1619	2.808	34.611	27.627	45.562		2358						25.7	4.20	18.10	2.2	116.6				31*	1619						
101	1788	2.527	34.623	27.661	45.624		2368														21*	1788						
323	1865	2.441	34.627	27.671	45.644		2366(I)										122.9				29*	1865						

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 337 — *CONTINUED*

POSITION: 4°50'N 124°5'W

DATE: 29 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM			LSU	LDGO USC*			LDGO WHOI*			WHOI	WHOI	YALE			YALE
289	1892	2.39	34.630	27.678	45.656		2366(I)		-232.5								27.8*+0.7				1892							
102	1982	2.227	34.637	27.697	45.692		2364													24*	1982							
324	2057	2.150	34.641	27.706	45.709		2362									129.5				19*	2057							
103	2181	1.988	34.649	27.725	45.745		2365	-0.10								132.0				17*	2181							
290	2188	1.98	34.648	27.725	45.746		2365(I)										29.1*+0.8				2188							
104	2382	1.828	34.657	27.743	45.781		2362(I)									139.1				16*	2382							
105	2580	1.703	34.663	27.757	45.808		2360	0.01								142.5				17*	2580							
291	2584	1.68	34.665	27.760	45.813		2360(I)		-233.4								30.1*+0.4				2584							
106	2778	1.628	34.667	27.766	45.825		2368						31.3	4.21		144.7				16*	2778							
107	2977	1.563	34.670	27.773	45.839		2377									145.1				17*	2977							
292	2980	1.56	34.672	27.775	45.841		2377(I)		-235.8								33.5*+0.5				2980							
108	3176	1.420	34.677	27.789	45.870		2350									146.6				12*	3176							
109	3375	1.301	34.682	27.801	45.895		2357	0.05								146.3				21*	3375							
293	3378	1.31	34.687	27.804	45.897		2357(I)		-228.8								38.7*+0.8				3378		-0.7	0.170+0.030				
110	3574	1.235	34.684	27.807	45.908		2370									145.1				13*	3574							
111	3775	1.167	34.687	27.814	45.923		2341									145.3				12*	3775							
294	3777	1.16	34.688	27.815	45.925		2341(I)		-218.6								38.9*+0.5				3777							
112	3957	1.138	34.688	27.817	45.929		2348						16.7	4.19	18.32	144.9					3957							
116	3965	1.137	34.689	27.818	45.930		2348(I)													15 +1.6	3965							
117	4065	1.131	34.689	27.818	45.931		2344(I)													14 +1.6	4065							
118	4115	1.131	34.689	27.818	45.931		2343(I)													15 +1.8	4115							
119	4165	1.131	34.687	27.816	45.929		2341(I)													11 +1.6	4165							
295	4178	1.13	34.688	27.817	45.930		2341(I)		-219.1								39.7*+0.5				4178			0.040+0.020				
120	4201	1.131	34.688	27.817	45.930		2340(I)													13 +1.6	4201							
121	4232	1.130	34.689	27.818	45.931		2339(I)										38.2 +0.1			14 +1.6	4232							
123	4251	1.130	34.689	27.818	45.931		2338(I)													12 +1.6	4251							
122	4252	1.130	34.689	27.818	45.931		2338									145.1					4252							
124	4260	1.130	34.689	27.818	45.931															13 +1.6	4260							
												PRECISION:	0.3	0.01	0.06	0.2												

STATION 338

POSITION: 6°39'N 123°42'W

DATE: 31 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM								LDGO								
101	20	27.076	33.694	21.754	37.939							2.69+0.09									20							
102	68	17.675	34.666	25.122	41.821							7.73+0.12									68							
236	100		34.70																	0.03+0.04	100							
103	149	11.201	34.716	26.557	43.718							0.31+0.06									149							
237	200		34.70																	0.07+0.04	200							
104	213	10.178	34.711	26.736	43.980							0.20+0.06									213							
105	338	9.228	34.673	26.866	44.191							0.01+0.06									338							
106	487	7.789	34.616	27.045	44.496							-0.05+0.08									487							

STATION 339

POSITION: 8°33'N 123°37'W

DATE: 31 MAY 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM					LDGO											
207	8	26.93	33.693	21.799	37.992							3.02+0.09									8							
208	15	26.90	33.936	21.991	38.181							2.95+0.09					6.3 +0.2				15							
209	23	26.92	33.982	22.017	38.204							3.17+0.10									23							
210	30	25.98	34.375	22.603	38.830							4.07+0.09									30							
211	36	20.19	34.627	24.450	40.993							9.02+0.18									36							
212	43	17.62	34.572	25.063	41.768							8.09+0.16									43							
213	51	16.01	34.617	25.480	42.290							5.23+0.15									51							
214	58	14.57	34.602	25.791	42.702							3.49+0.10									58							
215	82	12.47	34.747	26.339	43.401							0.49+0.07									82							
216	112	11.57	34.728	26.498	43.630							0.40+0.06									112							
217	137	10.91	34.718	26.611	43.795							0.23+0.07									137							
218	180	10.33	34.708	26.707	43.939							0.11+0.06									180							
219	239	9.92	34.698	26.770	44.036							0.08+0.09									239							
220	298	9.54	34.684	26.824	44.122							-0.09+0.06									298							
102	413	8.540	34.630	26.942	44.327							0.01+0.07									413							
103	488	7.678	34.586	27.037	44.500							0.03+0.06									488							
104	587	6.797	34.556	27.138	44.681							0.07+0.06									587							

(I) INTERPOLATED FROM NISKIN DATA

STATION 340 — **POSITION: 10°28'N 123°38'W** — **DATE: 1 JUN 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM	MCM				LDGO				LDGO					YALE			YALE
347	0	26.84	34.24	22.237	38.423		1924(I)																						
202	0	26.81	34.226	22.236	38.424		1924					3.27+0.12										0					15.4 +0.6		4.6 +0.4
203	41	16.88	34.654	25.305	42.055		2163					3.64+0.08										0							
204	77	13.39	34.720	26.132	43.126		2232					1.17+0.08										41							
205	102	12.46	34.787	26.372	43.434		2254					0.46+0.06										77							
206	141	11.59	34.765	26.522	43.651		2254					0.30+0.06										102							
207	194	11.00	34.739	26.612	43.789		2242					0.16+0.06										141							
208	256	10.44	34.723	26.700	43.922		2265					0.05+0.06	2.4	3.91	17.25	-3.5						194							
209	410	9.05	34.653	26.879	44.219		2296					-0.04+0.07										256							
213	820	5.37	34.542	27.309	44.987		2340						12.4	4.23	18.46	-0.3						410							
217	1431	3.183	34.593	27.579	45.475		2376						21.0	4.26	18.52	1.1						820							
101	2082	1.992	34.647	27.723	45.743		2370						28.3	4.31	18.45	3.2						1431							
105	2931	1.494	34.672	27.780	45.853		2362						29.1	4.28	18.43	2.8						2082							
109	3728	1.175	34.686	27.813	45.920		2348						16.9									2931							
112	4122	1.084	34.691	27.823	45.940		2334(I)															3728							
117	4330	1.076	34.691	27.823	45.942		2332(I)															16 +1.6 4122							
118	4374	1.075	34.691	27.823	45.942		2333(I)															12 +1.6 4330							
119	4430	1.074	34.690	27.823	45.941		2336(I)															16 +1.6 4374							
120	4469	1.073	34.690	27.823	45.942		2338(I)															11 +1.6 4430							
121	4498	1.072	34.691	27.823	45.943		2340(I)											40.3 +1.2				24 +1.6 4469							
122	4518	1.071	34.691	27.824	45.943		2342						15.1									14 +1.6 4498							
123	4518	1.071	34.691	27.824	45.943		2342(I)															4518							
124	4525	1.071	34.691	27.824	45.943																	21 +1.6 4518							
												PRECISION:	0.3	0.01	0.06	0.2						21 +1.6 4525							

STATION 341 — **POSITION: 12°32'N 123°29'W** — **DATE: 2 JUN 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																	
101	12	26.360	34.259	22.400	38.610							4.00+0.14										12							
102	138	12.266	34.788	26.410	43.486							0.20+0.07										138							
103	212	11.193	34.748	26.583	43.744							0.07+0.06										212							
104	337	10.001	34.695	26.754	44.013							0.03+0.06										337							
105	486	8.441	34.604	26.937	44.332							-0.01+0.06										486							
106	631	6.893	34.537	27.110	44.645							-0.07+0.08										631							
107	780	5.622	34.521	27.262	44.916							0.03+0.06										780							

STATION 342 — **POSITION: 14°29'N 123°8'W** — **DATE: 2 JUN 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM																	
101	18	25.676	34.325	22.659	38.903							3.99+0.10										18							
102	110	14.563	34.214	25.494	42.416							8.61+0.16										110							
103	159	12.126	34.663	26.341	43.431							0.72+0.07										159							
104	236	10.809	34.669	26.592	43.786							-0.02+0.06										236							
105	407	8.604	34.576	26.890	44.271							0.05+0.06										407							
106	533	7.011	34.514	27.076	44.600							0.11+0.06										533							
107	683	5.731	34.499	27.231	44.876							0.04+0.06										683							
108	782	5.132	34.515	27.315	45.017							-0.04+0.06										782							
109	980	4.242	34.543	27.435	45.225							0.08+0.06										980							

(I) INTERPOLATED FROM NISKIN DATA

STATION 343 | **POSITION: 16°31'N 122°59'W** | **DATE: 3 JUN 74**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
						UH		UH	UM		SIO	UM	MCM / SIO*				MIT	LDGO USC*		LDGO	LDGO WHOI*		WHOI	WHOI	WHOI	SIO YALE*	SIO		YALE
747	0																					0				16.3++0.7			10.4 +0.5
336	10		34.61						130.3									6.6++0.2		0.11+0.03		10	27.2+0.9	41.5+0.7	0.020+0.010				
501	13	22.457	34.612	23.818	40.230	0.6	1972	1.17									32.5					13							
486	20	22.50	34.611	23.805	40.215		1974(I)															20				11.8 +0.8	0.23 +0.16		
502	43	22.254	34.620	23.881	40.305		1981				0.21	7.04+0.21	-1.6	3.87	16.14	-3.4	32.6				26*	43							
													-1.5*																
503	73	20.405	34.634	24.399	40.929		1996				0.09	10.04+0.30					38.0				22*	73				18.6*			
504	103	17.413	34.270	24.883	41.609		2050				-0.03	11.04+0.30	3.0	3.95	17.11	-4.9	35.6				41*	103							
337	120		34.07				2076(I)		85.8									7.6++0.3		0.28+0.04		120	31.9+1.7	56.5+0.4	0.110+0.010				
505	143	12.530	33.970	25.726	42.804	5.9	2124	0.17				10.14+0.30									19*	143							
506	168	12.101	34.381	26.127	43.227		2215				0.05	3.47+0.14	9.6	4.05	18.23	-6.2	38.1				22*	168				14.3*			
													10.0*																
507	196	12.144	34.698	26.365	43.453		2254	-0.22				0.65+0.08					43.4					196							
338	200		34.70				2257(I)		-80.4									9.0++0.3		0.43+0.10		200	2.7	5.2+0.3	0.120+0.010				
508	226	11.689	34.717	26.466	43.589		2273				0.16	0.33+0.09	3.2	4.05	17.58	-2.5	45.1				14*	226							
487	250	10.97	34.692	26.581	43.762		2284(I)															250				7.2 +1.2	0.42 +0.04		
509	276	10.680	34.683	26.626	43.830		2292					0.29+0.08					49.3				31*	276				13.7*			
339	300		34.66				2296(I)		-97.8									11.4++0.3		0.13+0.03		300	0.7	1.9+0.2	0.110+0.010				
510	324	9.894	34.640	26.729	43.999		2298				0.06	-0.17+0.09	4.3	3.95	17.04	-1.1	52.3				19*	324							
													4.4*																
511	373	8.933	34.568	26.832	44.185		2301	-0.19													18*	373							
512	429	8.267	34.534	26.909	44.321		2312				0.04		5.8	3.99	18.20	-5.9	55.0				20*	429				12.2*			
489	450	7.79	34.522	26.971	44.426		2316(I)		-130.3									14.0++0.4				450	0.7	-0.3+0.4	0.150+0.010				
516	496	7.378	34.511	27.022	44.514		2326	-0.32				-0.06+0.09									17*	496							
490	499	7.21	34.509	27.043	44.550		2327(I)															499				8.5 +0.5	0.45 +0.05		
517	590	6.500	34.508	27.140	44.712		2342				0.03		10.9	4.03	17.46	-0.1	69.5				9*	590				14.4*			
													8.4*																
491	628	6.04	34.505	27.196	44.811		2347(I)		-164.8									17.8++0.3				628							
518	690	5.739	34.506	27.235	44.879		2351										75.7					690							
492	718	5.43	34.508	27.274	44.948		2349(I)															718				10.9 +0.3	0.32 +0.03		
519	791	5.119	34.514	27.316	45.019		2346				-0.02	-0.05+0.10	13.4								34*	791				19.7*			
493	797	5.01	34.518	27.332	45.046		2347(I)		-192.4									17.6++0.4				797	1.5	0.6+0.5	0.070+0.010				
520	884	4.683	34.524	27.373	45.119		2363	-0.51									86.7				39*	884				22.8*			
494	995	4.24	34.539	27.433	45.223		2364(I)		-209.8									20.6++0.4				995	1.3+0.3	0.2+0.2	0.070+0.010				
521	1033	4.066	34.544	27.454	45.262		2365				-0.07	0.09+0.09	20.7	4.19	18.92	-3.1	97.3				23*	1033				17.5*			
													18.4*																
522	1180	3.591	34.560	27.515	45.370		2371	-0.28									103.9				18*	1180				21.9*			
495	1195	3.63	34.562	27.512	45.363		2372(I)															1195				17.7 +1.1	0.45 +0.04		
686	1251	3.48	34.567	27.531	45.397		2375(I)		-224.0									21.2++0.4				1251	0.5+0.2		0.030+0.010				
523	1376	3.063	34.583	27.582	45.491		2380				-0.08						114.6				26*	1376				17.8*			
687	1499	2.83	34.595	27.612	45.544		2382(I)		-238.0									25.0++0.5				1499	1.7+0.5	0.5+0.2	0.050+0.010				
201	1577	2.731	34.598	27.624	45.566	12.1	2383	-0.36									126.4					1577							
524	1672	2.418	34.616	27.664	45.640		2381					-0.09+0.09					128.0				24*	1672				19.6*			
186	1705	2.43	34.625	27.671	45.645		2380(I)															1705				14.6 +0.6			
689	1746	2.37	34.620	27.672	45.652		2379(I)		-242.3									26.7++0.5				1746	0.4+0.3	0.4+0.5	0.060+0.010				
202	1774	2.314	34.621	27.677	45.663		2379						28.6	4.26	18.40	2.1					31*	1774				19.5*			
													19.1*																
203	1975	2.016	34.638	27.714	45.732	9.9	2381	-0.34									135.4					1975				22.3*			
690	1993	1.98	34.640	27.719	45.741		2382(I)		-249.8									28.9++0.6				1993							
204	2175	1.798	34.648	27.738	45.779		2390						28.0	4.27	18.29	3.1					17*	2175				22.1*			
691	2240	1.75	34.652	27.746	45.792		2384(I)		-250.8									30.4++0.6				2240	2.1	2.4+0.5	0.030+0.010				
187	2305	1.70	34.655	27.751	45.803		2378(I)															2305				20.0 +0.8			
205	2375	1.665	34.654	27.753	45.808	8.8	2371										144.6					2375							
692	2489	1.60	34.659	27.762	45.824		2372(I)		-244.3									32.4++0.6				2489							
206	2571	1.556	34.661	27.767	45.833		2373						21.3*								19*	2571				26.1*			
693	2738	1.49	34.669	27.778	45.852		2376(I)		-244.5									33.3++0.5				2738							
207	2771	1.459	34.667	27.778	45.855	8.0	2376										150.4				36*	2771				26.6*			
189	2904	1.42	34.671	27.784	45.866		2372(I)															2904				19.5 +1.3			
208	2969	1.383	34.671	27.787	45.872		2370						23.2	4.26	18.52	1.9					26*	2969				27.1*			
694	2989	1.40	34.672	27.786	45.869		2369(I)		-243.5									35.8++0.8				2989							
209	3220	1.308	34.676	27.796	45.889	7.7	2365	-0.13									154.6					3220							
695	3241	1.31	34.676	27.796	45.889		2366(I)		-236.1									37.7++0.5				3241							
190	3403	1.28	34.678	27.799	45.895		2373(I)		-235.1									40.1++0.6				3403	1.8	1.3+0.9	0.060+0.010				
191	3504	1.25	34.678	27.801	45.901		2378(I)															3504				20.4 +0.8	1.42 +0.06		
210	3514	1.251	34.678	27.801	45.901		2378						12.2*				156.4					3514							
192	3653	1.24	34.681	27.804	45.905		2375(I)		-236.0									41.3++0.6				3653	1.5	0.6+0.4	0.020+0.010				
211	3720	1.230	34.680	27.804	45.906		2373										154.8				15*	3720				24.5*			
193	3903	1.21	34.684	27.809	45.913		2374(I)		-226.8									42.4++0.6				3903							
212	3942	1.185	34.684	27.810	45.917		2374						16.7	4.21	18.48	1.0	151.9				27*	3942				27.0*			
													11.8*																
216	3953	1.186	34.682	27.809	45.916		2374(I)															8 +1.6	3953						
217	4003	1.177	34.683	27.810	45.918		2371(I)															10 +1.6	4003						
218	4052	1.170	34.686	27.813	45.921		2368(I)															7 +1.6	4052						
219	4101	1.165	34.685	27.813	45.922		2364(I)															7 +1.6	4101						
194	4103	1.15	34.685	27.813	45.923		2364(I)																4103				19.8 +0.5		
220	4140	1.160	34.684	27.812	45.922		2360(I)															14 +1.6	4140						
195	4153	1.17	34.684	27.812	45.920		2358(I)		-223.7									42.8++0.7				4153	1.5	1.1+0.2	0.050+0.010				
221	4170	1.158	34.686	27.814	45.924		2357(I)											39.9 +0.8				12 +1.6	4170						
222	4191	1.156	34.684	27.812	45.922	6.8	2354	0.12									150.9					4191							
223	4191	1.156	34.685	27.813	45.923		2354(I)															12 +1.6	4191						
224	4198	1.155	34.686	27.814	45.924																	10 +1.6	4198						

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.3 0.01 0.06 0.2

STATION 344

POSITION: 19°30'N 122°43'W

DATE: 5 JUN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
																	LDGO			LDGO							
117	4112	1.162	34.685	27.813	45.922															6 +1.6	4112							
118	4133	1.161	34.684	27.812	45.921															9 +1.6	4133							
119	4152	1.161	34.685	27.813	45.922															8 +1.6	4152							
120	4173	1.160	34.685	27.813	45.922															7 +1.6	4173							
121	4193	1.158	34.685	27.813	45.923															8 +1.6	4193							
122	4212	1.157	34.684	27.812	45.922												40.7 +0.6			7 +1.5	4212							
123	4233	1.155	34.685	27.813	45.923															7 +1.6	4233							
124	4253	1.154	34.685	27.813	45.923															7 +1.5	4253							

STATION 345

POSITION: 22°31'N 122°12'W

DATE: 6 JUN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
										SIO	SIO	UM	MCM				LDGO		LDGO	LDGO					YALE		YALE
447	0	18.55	34.17	24.527	41.182																0				10.9 +0.6		12.0 +0.4
301	11	18.418	34.157	24.550	41.214		2022					12.90+0.30									11						
236	20		34.22				2019(I)												0.04+0.02		20						
302	67	16.910	33.958	24.766	41.532		2013			-2.4	-0.16	13.90+0.30									67						
237	95		34.05				2017(I)												0.14+0.05		95						
303	117	14.317	33.856	25.272	42.220		2020				-0.11	12.90+0.20									117						
304	137	12.511	33.775	25.578	42.663		2044					12.00+0.30									137						
238	150		33.76				2067(I)												0.27+0.04		150						
305	186	10.702	33.885	26.001	43.226		2135			-1.2	-0.11	7.89+0.18									186						
306	274	9.590	34.296	26.512	43.817		2235					1.77+0.07									274						
239	300		34.31				2245(I)												0.24+0.08		300						
307	343	8.275	34.286	26.713	44.132		2257					0.28+0.06	5.5								343						
308	424	7.424	34.364	26.900	44.392		2305			-1.0		0.00+0.06									424						
309	505	6.364	34.328	27.016	44.606		2319			-1.0		0.00+0.06									505						
310	584	6.102	34.417	27.120	44.732		2335					0.01+0.06									584						
311	683	5.518	34.452	27.220	44.887		2356					-0.04+0.07	0.2								683						
312	786	4.997	34.469	27.294	45.011		2356			-0.9											786						
316	894	4.436	34.500	27.381	45.152		2367				-0.01										894						
317	995	4.114	34.511	27.423	45.227		2369				-0.04										995						
318	1092	3.769	34.529	27.472	45.310		2383						19.0								1092						
321	1388	3.019	34.578	27.582	45.496		2393			-0.9	-0.03										1388						
322	1489	2.802	34.589	27.610	45.546		2387						26.3	4.24	18.61	0.2					1489						
101	1784	2.207	34.619	27.684	45.682		2385			-1.0	-0.03										1784						
102	1984	1.986	34.633	27.712	45.733		2382				-0.02										1984						
103	2184	1.787	34.646	27.738	45.780		2385			-1.2	0.00		26.6	4.31	18.51	2.9					2184						
104	2384	1.644	34.655	27.755	45.813		2383				-0.01										2384						
105	2582	1.536	34.661	27.768	45.837		2376			-1.2	-0.01										2582						
106	2782	1.434	34.667	27.780	45.860		2369						22.4	4.31	18.78	1.7					2782						
108	3179	1.285	34.674	27.796	45.892		2366			-1.4	-0.05										3179						
109	3379	1.244	34.677	27.801	45.901		2364			-1.3	-0.06		14.2								3379						
110	3580	1.220	34.678	27.803	45.907		2366			-1.4	-0.01										3580						
111	3779	1.205	34.681	27.807	45.911		2363				-0.03										3779						
112	3978	1.197	34.681	27.807	45.913		2364			-1.3	0.03		14.2								3978						
116	4088	1.194	34.682	27.808	45.914		2365(I)													7 +1.5	4088						
117	4108	1.194	34.682	27.808	45.914		2365(I)													7 +1.6	4108						
118	4128	1.193	34.682	27.808	45.914		2365(I)													9 +1.5	4128						
119	4149	1.193	34.681	27.808	45.913		2365(I)													12 +1.6	4149						
120	4168	1.192	34.681	27.808	45.914		2366(I)													7 +1.6	4168						
121	4188	1.192	34.681	27.808	45.914		2366(I)										39.2 +0.5			12 +1.6	4188						
123	4208	1.193	34.682	27.808	45.914															6 +1.6	4208						
124	4215	1.192	34.681	27.808	45.914															10 +1.6	4215						
												PRECISION:	0.3	0.01	0.06	0.2											

STATION 346

POSITION: 25°28'N 121°50'W

DATE: 7 JUN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{90}Sr	^{137}Cs	$^{239,240}Pu$	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg			
												UM					LDGO			LDGO							
101	4	17.258	33.697	24.483	41.233							13.00+0.30									4						
102	86	16.601	33.917	24.807	41.595							13.70+0.30									86						
103	185	10.456	33.760	25.947	43.195							10.20+0.20									185						
104	337	7.349	34.103	26.706	44.212							0.70+0.06									337						
105	587	5.519	34.360	27.147	44.816							-0.11+0.07									587						
106	786	4.548	34.453	27.331	45.093							-0.01+0.06									786						
117	4015	1.201	34.685	27.810	45.915															8 +1.5	4015						
118	4094	1.199	34.687	27.812	45.917															6 +1.6	4094						
119	4135	1.198	34.685	27.810	45.916															8 +1.6	4135						
120	4155	1.197	34.685	27.810	45.916															11 +1.6	4155						
121	4173	1.197	34.685	27.810	45.916															10 +1.6	4173						
122	4194	1.197	34.684	27.810	45.915												39.0 +0.6			6 +1.6	4194						
123	4194	1.197	34.687	27.812	45.917															7 +1.6	4194						
124	4210	1.197	34.687	27.812	45.917															11 +1.6	4210						

(I) INTERPOLATED FROM NISKIN DATA

STATION 347 | POSITION: 28°30'N 121°29'W | DATE: 8 JUN 74

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-4}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{90}Sr DPM/100kg	^{137}Cs DPM/100kg	$^{239,240}Pu$ DPM/100kg	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM		SIO	UM					SIO USC*						WHOI	WHOI	YALE		SIO	YALE
547	0																				0				13.7 +0.6			7.8 +0.4
301	1	17.15	33.649	24.472	41.230							11.10+0.20									1							
435	5		33.65						194.6								5.7 +0.9 7.3**+0.2				5		57.3+1.0	0.030+0.010			13.0 +0.7	
302	20	17.00	33.651	24.510	41.278		2006					13.24+0.40									20							
303	50	16.61	33.653	24.602	41.396		2028(I)					13.14+0.40									50							
304	81	14.40	33.521	24.997	41.948		2052(I)					11.94+0.30									81							
305	105	12.94	33.560	25.329	42.387		2071(I)					11.84+0.30									105							
306	130	11.46	33.679	25.703	42.872		2091(I)					10.16+0.30									130							
307	149	10.60	33.773	25.932	43.168		2106(I)					9.59+0.30									149							
308	169	9.93	33.855	26.111	43.400		2123(I)					8.96+0.25									169							
309	189	9.53	33.925	26.233	43.554		2140					7.44+0.21									189							
310	209	9.11	33.993	26.355	43.709		2160(I)					5.63+0.17									209							
311	229	8.77	34.030	26.438	43.820		2179(I)					4.64+0.15									229							
312	249	8.56	34.085	26.512	43.911		2198(I)					3.21+0.12									249							
316	281	8.11	34.103	26.595	44.033		2227(I)					2.06+0.11									281							
317	310	7.59	34.123	26.687	44.171		2252(I)					0.76+0.09									310							
101	336	7.693	34.219	26.747	44.219		2274				-0.12	0.55+0.09									336							
102	589	5.958	34.391	27.117	44.744		2338				-0.04	0.23+0.09									589							
319	591	6.03	34.402	27.117	44.737		2338(I)					-0.05+0.06									591							
286	599	5.98	34.407	27.127	44.751		2340(I)		-159.2								16.0 +0.7 16.4**+0.4				599		-0.4+0.3	0.060+0.020			11.5 +0.3	
104	890	4.356	34.458	27.356	45.136		2362				-0.05										890							
320	989	4.01	34.487	27.415	45.229		2368(I)					0.01+0.09									989							
323	989	4.01	34.488	27.415	45.230		2368(I)					0.11+0.09									989							
105	1087	3.702	34.511	27.465	45.310		2376				-0.06										1087							
106	1288	3.231	34.544	27.536	45.428		2389				-0.06										1288							
107	1488	2.833	34.571	27.593	45.527		2393				-0.06										1488							
287	1501	2.82	34.581	27.602	45.536		2393(I)		-236.4								25.3 +0.7 25.1**+0.3				1501			0.040+0.020			15.7 +0.5	
108	1688	2.427	34.601	27.652	45.627		2392				-0.05										1688							
109	1886	2.131	34.622	27.692	45.698		2390				-0.06										1886							
289	2003	1.98	34.633	27.713	45.735		2385(I)		-239.2								28.3 +0.6 30.2**+0.4				2003		0.2+0.7	0.020+0.020			18.6 +0.5	
110	2085	1.898	34.638	27.723	45.753		2382				-0.08										2085							
112	2285	1.750	34.651	27.744	45.790		2383										31.3 +0.6				2285							
111	2287	1.748	34.651	27.745	45.791		2375										29.5 +0.5				2287							
290	2304	1.74	34.652	27.746	45.794		2376(I)		-247.2								32.0 +0.9 32.7**+0.4				2304						18.9 +0.5	
291	2505	1.62	34.660	27.761	45.822		2377(I)										33.8 +0.9 35.1**+0.5				2505						18.9 +0.5	
119	2694	1.512	34.666	27.774	45.845		2370										34.4 +0.8				2694							
292	2705	1.51	34.672	27.778	45.849		2370(I)		-244.6								35.2 +0.9 36.0**+1.0				2705						19.3 +0.5	
120	2892	1.446	34.670	27.781	45.860		2378										34.2 +0.8				2892							
293	3005	1.40	34.673	27.787	45.870		2375(I)		-236.1								37.0 +0.7 37.0**+0.5				3005						19.2 +0.5	
122	3194	1.350	34.676	27.793	45.882		2364				-0.06										3194							
294	3502	1.30	34.681	27.800	45.895		2363(I)		-241.0								38.1 +0.6 39.9**+0.5				3502						20.4 +0.4	
295	4001	1.24	34.682	27.805	45.906		2361(I)		-232.4								41.0 +0.4 40.4**+0.6				4001						20.0 +0.5	

(I) INTERPOLATED FROM NISKIN DATA

Indian Ocean Data Tables

STATION 404 — **POSITION: 35°35'N 17°15'E** — **DATE: 9 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UW			UM						SIO							
335	5								44.2									8.6 +0.4			5				
101	26	17.537	37.980	27.691	44.317		2211					6.86+0.20									26				
102	78	16.518	38.336	28.214	44.897		2250					8.26+0.23									78				
286	85	15.17	38.450	28.620	45.390		2265(I)		92.1									9.5 +0.4			85				
103	88	15.841	38.429	28.447	45.172		2272					8.25+0.23									88				
104	135	14.553	38.603	28.878	45.686		2309					9.06+0.24									135				
105	148	14.548	38.638	28.906	45.714		2315					9.15+0.25						12.5 +0.5			148				
106	164	15.041	38.880	28.980	45.748		2313					8.96+0.25									164				
287	169	14.70	38.800	28.996	45.788		2315(I)		80.1												169				
107	193	14.662	38.820	29.020	45.815		2328					8.69+0.26									193				
108	344	14.203	38.818	29.122	45.949		2336					7.33+0.21									344				
288	368	14.08	38.801	29.135	45.972		2335(I)		38.6									14.5 +0.5			368				
109	493	13.956	38.795	29.158	46.003		2328					5.56+0.17									493				
110	664	13.719	38.750	29.175	46.039		2332					3.81+0.13						15.1 +0.7			664				
290	665	13.69	38.742	29.175	46.040		2332(I)		-20.3												665				
111	841	13.598	38.731	29.187	46.059		2324					2.20+0.10									841				
112	1092	13.483	38.711	29.196	46.077		2326					1.25+0.07						12.0 +0.4			1092				
114	1101	13.481	38.710	29.196	46.077		2329					1.28+0.06									1101				
115	1333	13.427	38.701	29.200	46.086		2323					0.87+0.07						12.9 +1.0			1333				
291	1340	13.42	38.699	29.200	46.086		2323(I)		-58.2												1340				
116	1627	13.374	38.690	29.203	46.093		2329					0.77+0.06						13.3 +0.7			1627				
117	1965	13.324	38.680	29.206	46.100		2323					0.66+0.07						13.1 +0.8			1965				
292	1984	13.33	38.680	29.206	46.100		2323(I)		-60.5												1984				
118	2352	13.282	38.672	29.209	46.106		2332					0.80+0.07						14.2 +0.6			2352				
119	2740	13.253	38.667	29.211	46.110		2322					0.85+0.06						12.5 +0.5			2740				
293	2776	13.25	38.665	29.211	46.111		2323(I)		-60.0												2776				
120	3086	13.236	38.663	29.212	46.112		2330					0.85+0.07						13.3 +0.7			3086				
121	3286	13.235	38.663	29.212	46.112		2344					0.84+0.07						14.7 +0.7			3286				
294	3470	13.24	38.665	29.212	46.112		2329(I)		-59.0												3470				
122	3483	13.234	38.663	29.212	46.113		2328											14.5 +0.4			3483				
123	3782	13.233	38.663	29.212	46.113		2327					0.77+0.06						13.5 +0.6			3782				
295	3917	13.24	38.663	29.211	46.111		2334(I)		-45.4									12.7 +0.5			3917				
124	4019	13.232	38.664	29.213	46.114		2342					0.97+0.07									4019				

STATION 405 — **POSITION: 27°16'N 34°31'E** — **DATE: 19 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg			$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UM			UM	----------SIO----------					SIO							
101	7	23.371	40.402	27.940	44.170		2099					2.99+0.13										7	2.9 +0.6			
102	27	23.371	40.402	27.940	44.170		2099					2.85+0.13	-0.9	3.76	14.85	1.3						27				
286	29	23.36	40.400	27.942	44.173		2100(I)		98.9									12.6 +0.5				29				
103	77	22.518	40.365	28.162	44.438		2118					3.05+0.09	0.4	3.76	14.94	1.0						77				
287	84	22.59	40.370	28.144	44.417		2120(I)		88.8									9.1 +0.5				84				
104	97	22.069	40.378	28.301	44.602		2124					3.09+0.13	4.1	3.89	15.37	1.8						97				
105	148	21.848	40.411	28.390	44.702		2136					2.70+0.12	3.8	3.81	15.08	1.7						148	2.6 +0.6			
288	149	21.87	40.416	28.386	44.697		2136(I)		84.2									11.5 +0.4				149				
106	198	21.694	40.451	28.464	44.784		2156					2.60+0.11										198				
107	247	21.598	40.499	28.528	44.852		2176					2.40+0.11	5.7									247	2.3 +0.3			
290	249	21.61	40.497	28.523	44.847		2176(I)		35.1									11.8 +0.4				249				
109	346	21.572	40.540	28.566	44.891		2185					2.15+0.11	18.3	3.90	15.24	3.3						346				
110	398	21.574	40.549	28.572	44.897		2190															398	3.1 +0.4			
291	399	21.58	40.555	28.575	44.899		2190(I)		-3.6									13.0 +0.5				399				
111	446	21.577	40.571	28.588	44.912		2197					1.60+0.08	27.7	3.87	14.91	4.7						446				
114	547	21.570	40.583	28.599	44.924		2191					1.29+0.08	27.7	3.88	14.94	4.7						547	2.3 +0.5			
292	548	21.57	40.585	28.602	44.926		2191(I)		-30.9									13.8 +0.6				548				
116	646	21.556	40.588	28.607	44.932		2189					1.40+0.08	27.2	3.87	14.96	4.2						646				
117	695	21.546	40.589	28.611	44.936		2187															695	4.9 +0.4			
293	698	21.54	40.589	28.611	44.937		2187(I)		-12.8									13.6 +0.7				698				
118	744	21.529	40.589	28.616	44.942		2183					1.72+0.09	24.6	3.89	15.05	4.2						744				
120	843	21.494	40.587	28.624	44.952		2173					1.92+0.08	23.6	3.89	15.07	4.1						843	2.8 +0.3			
294	847	21.49	40.585	28.625	44.954		2173(I)		5.3									14.4 +0.9				847				
122	940	21.447	40.583	28.634	44.965		2168					1.99+0.10	19.5	3.86	15.01	3.8						940				
123	992	21.423	40.583	28.641	44.973		2169						15.2									992	2.7 +0.6			
295	996	21.43	40.580	28.636	44.967		2169(I)		25.7									13.0 +0.4				996				
124	1038	21.408	40.582	28.645	44.978		2160					2.22+0.10	13.2	3.92	15.30	3.5						1038				
												PRECISION:	1.0	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 407 — **POSITION: 19°55'N 38°29'E** — **DATE: 22 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-4}cc/kg				DPM/100kg					DPM/100kg			
						UH		UH	UM			UM		SIO			LSU	SIO					SIO	SIO		SIO
101	6	27.260	39.369	25.966	42.019		2069	2.04				2.37+0.11	2.2	3.86	14.89	1.8	44.8					6				
386	20	27.23	39.353	25.964	42.019		2067(I)		75.4													20				
102	29	27.265	39.359	25.957	42.010		2066	2.00				2.35+0.10	1.0	3.73	14.62	0.3						29	1.5 +0.7	1.53 +0.10		1.8
103	59	27.207	39.430	26.029	42.083	0.4	2067	1.95				2.97+0.12										59				
387	70	26.67	39.660	26.373	42.449		2074(I)		86.4									8.6 +0.6				70				
104	100	23.445	40.137	27.717	43.949		2096(I)	1.70				2.79+0.12	1.1	3.86	15.22	1.6	45.9					100	2.2 +0.5	0.50 +0.04		1.6 +0.7
388	119	22.86	40.284	28.000	44.260		2113(I)		86.4													119				
105	164	22.061	40.376	28.302	44.604		2158	1.37				2.70+0.10	9.8	3.78	14.95	1.9	46.7					164				
390	179	21.91	40.417	28.377	44.687		2170(I)		53.4									9.8 +0.5				179				
391	242	21.77	40.533	28.504	44.818		2208(I)		-0.7													242				
106	278	21.744	40.549	28.524	44.839		2222	0.91				1.71+0.09	26.4	4.01	15.47	4.4	54.1					278	2.2 +0.4	0.39 +0.03		2.1 +0.6
286	296	21.73	40.559	28.535	44.851		2221(I)		-18.8									10.6 +0.9				296				
107	377	21.666	40.586	28.574	44.893	1.2	2215	0.84				1.57+0.07	40.2	3.95	14.93	6.6	55.3					377				
287	445	21.65	40.590	28.583	44.903		2213(I)		-33.8									13.5 +0.5				445				
108	462	21.637	40.593	28.588	44.908		2212	0.99				1.13+0.06	43.9	3.97	14.95	7.1	56.6					462	1.6 +0.6	0.27 +0.03		2.5 +0.9
109	548	21.618	40.599	28.598	44.919		2201	0.99				1.09+0.07	43.0	3.99	15.02	7.1	60.2					548				
288	594	21.62	40.599	28.599	44.920		2199(I)		-39.0									12.6 +0.4				594				
110	630	21.605	40.606	28.607	44.929		2197	1.02				1.30+0.07	42.2	3.97	14.95	7.0	55.6					630	1.4 +0.3	0.40 +0.03		2.5 +0.5
111	720	21.591	40.606	28.611	44.933		2190	1.10					38.7	3.98	15.14	6.1	55.0					720				
290	794	21.57	40.600	28.613	44.937		2189(I)		-25.3									13.5 +0.5				794				
112	795	21.582	40.607	28.614	44.937		2189	1.16				1.32+0.07	39.5									795	2.3 +0.3	0.43 +0.03		1.5 +0.5
114	865	21.565	40.607	28.619	44.943		2187(I)	1.21					33.4	3.94	15.03	5.7	54.1					865	2.1 +0.5	0.45 +0.04		1.5 +0.7
291	893	21.58	40.605	28.614	44.938		2186(I)		-25.2									12.3 +0.7				893				
115	918	21.566	40.609	28.620	44.944		2185	1.22				1.40+0.07	35.1	3.96	15.15	5.4						918				
116	994	21.562	40.607	28.620	44.944		2182	1.25				1.49+0.08	38.6	3.92	14.93	6.0	53.9					994	1.6 +0.5	0.38 +0.03		2.0 +0.8
117	1068	21.560	40.613	28.625	44.949		2182	1.25				1.51+0.09	32.9	4.16	15.81	6.2						1068				
292	1093	21.55	40.608	28.624	44.948		2182(I)		-19.7									11.0 +0.5				1093				
118	1142	21.560	40.611	28.624	44.948		2182	1.27				1.46+0.08	38.1	4.08	15.47	6.5	53.5					1142	1.8 +0.4	0.79 +0.04		0.8 +0.6
119	1240	21.558	40.610	28.623	44.948		2172	1.21					37.4	3.96	15.08	5.9	53.8					1240				
293	1292	21.56	40.607	28.620	44.944		2175(I)		-18.0									10.8 +0.6				1292				
120	1338	21.552	40.610	28.625	44.949		2179	1.17				1.56+0.08					53.9					1338	1.8 +0.3	0.49 +0.04		1.7 +0.5
121	1436	21.546	40.607	28.624	44.949		2179	1.17									53.1					1436				
122	1488	21.544	40.607	28.625	44.950		2178	1.18				1.60+0.08	35.3	3.95	15.06	5.8						1488	1.4 +0.6	0.43 +0.03		1.1 +0.9
294	1540	21.54	40.604	28.624	44.949		2176(I)		-18.3									13.7 +0.4				1540				
123	1579	21.536	40.610	28.630	44.955		2175	1.24				1.56+0.08	34.9	4.01	15.31	5.6	54.2					1579				
124	1665	21.535	40.610	28.630	44.955		2174	1.23				1.66+0.08	36.8	3.95	15.00	6.2	53.1					1665	1.8 +0.5	0.83 +0.06		1.1 +0.8
295	1788	21.53	40.602	28.624	44.949				-13.4									10.8 +0.4				1788				
												PRECISION:	1.0	0.01	0.06	0.2										

STATION 408 — **POSITION: 14°42'N 42°10'E** — **DATE: 24 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
														10^{-4}cc/kg				DPM/100kg					DPM/100kg			
									UM			UM		SIO				SIO					SIO			
113	15	26.726	37.327	24.596	40.720							2.37+0.11	-1.1	3.84	14.87	1.8						15	2.0 +0.4			
286	18	26.72	37.328	24.598	40.723				46.2									8.7 +0.6				18				
287	57	26.70	37.431	24.683	40.807				40.8									8.1 +0.5				57				
114	60	26.612	37.464	24.735	40.862		2054					2.08+0.09	-1.7	3.86	15.13	0.7						60				
288	75	24.28	37.751	25.663	41.904		2142(I)		36.5									8.8 +0.6				75				
115	78	23.333	37.847	26.016	42.305		2153					1.98+0.09	2.4	4.01	15.83	1.5						78				
290	82	22.59	38.398	26.649	42.967		2165(I)		34.5									8.9 +0.6				82				
116	84	23.203	38.569	26.601	42.881		2169					2.05+0.10	4.5	3.82	15.17	0.9						84	1.3 +0.3			
291	102	23.14	39.887	27.617	43.871		2135(I)		72.3									10.4 +0.5				102				
117	103	23.200	40.015	27.697	43.945		2132					2.81+0.11	3.8									103	1.8 +0.3			
292	175	21.89	40.441	28.400	44.710		2180(I)		27.2									11.1 +0.7				175				
118	182	21.876	40.469	28.425	44.735		2185					2.24+0.10	20.6	3.83	14.99	2.9						182	1.9 +0.3			
119	241	21.773	40.528	28.500	44.814		2206					1.95+0.09	27.3	3.92	15.17	4.2						241				
293	308	21.70	40.571	28.552	44.869		2212(I)		-25.8									12.8 +0.9				308				
120	326	21.690	40.575	28.559	44.877		2214					1.48+0.08	39.0	3.94	14.94	6.3						326	1.4 +0.5			
121	375	21.676	40.584	28.570	44.888		2205					1.34+0.08	40.2	3.94	14.98	6.0						375				
122	434	21.658	40.595	28.584	44.903		2203					1.27+0.07	48.2	3.98	14.94	7.3						434	0.9 +0.5			
294	436	21.67	40.588	28.576	44.894		2203(I)		-41.2									12.8 +0.9				436				
123	494	21.646	40.598	28.589	44.909		2207					1.19+0.07	50.7	4.00	14.98	7.7						494				
295	578	21.66	40.603	28.590	44.909		2202(I)		-44.9									13.6 +0.8				578				
124	587	21.639	40.602	28.594	44.914		2202					1.12+0.06	49.1	4.04	15.22	7.1						587	1.9 +0.4			
												PRECISION:	1.0	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 409 — **POSITION: 12°10'N 43°57'E** — **DATE: 25 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM	SIO					SIO						SIO		
113	16	27.066	36.436	23.819	39.945		2025					1.99+0.09	-1.1	3.79	14.94	-0.1						16	3.8 +0.5			
286	18	27.07	36.445	23.825	39.951		2031(I)		46.6									7.4 +0.5				18				
114	49	23.334	35.728	24.412	40.750		2122					1.60+0.08	-0.4									49				
287	53	23.80	35.790	24.322	40.633		2135(I)		39.5									7.9 +0.7				53				
115	69	22.273	35.944	24.879	41.271		2183					1.45+0.07	1.1									69				
116	108	18.638	35.679	25.655	42.268		2230					1.29+0.08	2.4	3.89	15.74	1.2						108	4.0 +0.6			
288	147	16.13	35.636	26.235	43.011		2251(I)		-34.6									9.4 +0.7				147				
117	148	16.262	35.638	26.205	42.973		2251					1.04+0.07	4.5	3.9	15.93	1.4						148				
290	196	15.06	35.667	26.503	43.352		2253(I)		-48.7									9.7 +0.6				196				
118	208	14.968	35.643	26.505	43.361		2253					0.93+0.06	4.0	3.95	16.21	1.5						208				
291	246	14.89	35.878	26.703	43.558		2254(I)		-54.3									11.0 +0.5				246				
119	258	14.798	35.858	26.708	43.570		2254					0.69+0.06	4.7	3.95	16.23	1.4						258				
120	333	14.284	35.934	26.879	43.776		2265					0.69+0.06	5.4	3.98	16.31	1.9						333	4.3 +0.4			
292	336	14.84	36.092	26.878	43.731		2263(I)		-53.6									10.8 +0.7				336				
121	371	16.020	36.553	26.964	43.724		2233					1.00+0.06	5.6	3.96	16.16	1.6						371				
293	412	18.12	37.346	27.061	43.665		2218(I)		-14.1									10.4 +0.3				412				
122	416	17.834	37.275	27.077	43.702		2218						6.5	3.91	15.81	1.5						416	2.8 +0.3			
123	435	17.278	37.130	27.104	43.768		2222					1.30+0.07	7.2	3.92	15.85	1.8						435				
294	493	19.77	38.080	27.191	43.678		2204(I)		2.9									12.4 +0.8				493				
124	501	18.732	37.687	27.164	43.722		2201					1.54+0.08	8.3	3.87	15.49	2.1						501	2.7 +0.4			
295	580	18.73	37.839	27.280	43.835				-2.5									13.0 +0.5				580				
												PRECISION:	1.0	0.01	0.06	0.2										

STATION 410 — **POSITION: 12°18'N 46°58'E** — **DATE: 26 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH						UM	SIO													
245	0											1.98+0.11										0				
133	5	26.33	36.203	23.872	40.040							1.76+0.08										5				
134	168	15.06	35.581	26.436	43.287							0.76+0.06	3.6	3.97	16.34	1.2						168				
135	597	14.474	36.432	27.222	44.092	10.4						0.72+0.05	7.7	3.92	16.08	1.6						597				
136	607	14.387	36.424	27.235	44.111							0.75+0.05	8.1	4.01	16.49	1.5						607				
137	1193	8.769	35.576	27.646	44.984							0.15+0.04	13.0	4.15	17.11	4.0						1193				
138	1791	3.716	34.921	27.789	45.620							0.04+0.04	15.0									1791				
												PRECISION:	1.0	0.01	0.06	0.2										

STATION 411 — **POSITION: 12°45'N 50°3'E** — **DATE: 26 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH						UM	SIO													
126	148	14.75	35.486	26.432	43.307							0.97+0.07	3.0									148				
127	338	14.62	36.042	26.888	43.758							0.79+0.06										338				
128	448	14.49	36.238	27.068	43.942							0.80+0.06	7.5	3.92	16.09	1.7						448				
129	577	13.66	36.176	27.201	44.136	11.3						0.86+0.06	11.0	3.94	16.17	2.0						577				
130	796	12.107	36.035	27.408	44.462							0.32+0.06	9.5	4.00	16.49	2.4						796				
131	1095	9.039	35.548	27.581	44.897							0.13+0.04	11.2	4.09	17.00	2.9						1095				
132	1443	5.872	35.134	27.715	45.327							-0.01+0.04	13.8	4.21	17.51	4.4						1443				
133	1794	3.622	34.913	27.792	45.633							-0.03+0.04	15.7	4.28	17.79	5.6						1794				
134	2093	2.845	34.843	27.809	45.732								16.0	4.26	17.88	4.8						2093				
												PRECISION:	1.0	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 412 — **POSITION: 13°12'N 51°7'E** — **DATE: 27 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
						UH						UM		SIO				DPM/100kg						DPM/100kg	
345	0											2.02+0.09									0				
126	188	16.74	35.501	25.986	42.725							1.14+0.07	3.0	3.95 16.14	1.2						188				
127	496	12.85	35.724	27.019	44.026							0.54+0.05	3.9	4.06 16.80	1.7						496				
128	745	11.46	35.804	27.353	44.464							0.42+0.05	8.2	4.04 16.71	2.4						745				
129	874	11.37	35.967	27.498	44.612							0.46+0.05	12.8								874				
130	884	11.310	35.956	27.499	44.618	14.5						0.45+0.04	10.5	4.01 16.58	2.4						884				
131	1094	9.172	35.617	27.613	44.916							0.28+0.05	11.6	4.08 16.92	3.0						1094				
132	1392	6.113	35.173	27.715	45.303							0.06+0.05	14.1	4.16 17.27	4.4						1392				
133	1891	3.272	34.879	27.799	45.677							-0.01+0.04	17.4	4.29 17.96	4.9						1891				
134	2490	2.350	34.802	27.819	45.795								15.0	4.26 18.01	4.4						2490				
135	3140	2.185	34.789	27.821	45.816								15.2	4.27 18.03	4.5						3140				
												PRECISION:	1.0	0.01 0.06	0.2										

STATION 413 — **POSITION: 13°21'N 53°16'E** — **DATE: 27 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UM			UM		SIO				SIO						SIO	
101	8	26.073	36.035	23.825	40.011		2031	1.59				2.18+0.10									8				
486	28	26.06	36.053	23.842	40.028		2037(I)		72.0			2.13+0.10					8.9 +0.7				28				
102	44	25.973	36.034	23.855	40.046		2045	1.54				2.15+0.10	-1.7								44	8.6 +0.4			
103	108	23.388	35.714	24.386	40.721		2099	0.97				1.81+0.09									108				
487	118	23.08	35.602	24.390	40.744		2114(I)		49.6			1.75+0.09									118				
104	168	19.208	35.528	25.394	41.975		2194	0.49				1.35+0.09	1.7	3.89 15.78	0.7						168				
105	200	16.624	35.505	26.018	42.764		2239	0.28				1.15+0.07									200				
488	200	17.82	35.530	25.748	42.416		2239(I)		-6.3			1.05+0.08					8.8 +0.6				200				
106	250	15.008	35.504	26.389	43.246		2246	0.06				0.92+0.06	3.9	3.95 16.19	1.7						250	5.7 +0.5			
490	302	14.29	35.502	26.544	43.451		2255(I)		-47.7			0.67+0.07									302				
107	309	13.856	35.516	26.649	43.587		2257	0.14				0.75+0.06	4.2	4.05 16.68	1.6						309				
108	389	13.332	35.667	26.876	43.848		2285	0.10				0.49+0.06									389				
109	406	13.169	35.666	26.909	43.893		2282	0.04				0.40+0.07	3.7	4.21 17.24	2.5						406	4.9 +0.5			
491	448	13.13	35.672	26.921	43.908		2286(I)		-70.4			0.47+0.06					11.9 +0.7				448				
110	468	12.832	35.687	26.994	44.003		2288	0.06				0.46+0.05									468				
111	528	12.278	35.665	27.087	44.139		2295	0.12				0.37+0.05									528				
112	586	11.890	35.668	27.165	44.247		2286	0.03				0.31+0.06	5.5	4.02 16.60	2.2						586	4.6 +0.5			
286	593	11.77	35.668	27.189	44.280		2286(I)		-102.9								12.0 +0.6				593				
114	699	11.360	35.689	27.283	44.405		2296	0.00				0.32+0.05									699				
115	759	11.060	35.699	27.347	44.492		2296	0.09				0.18+0.06	7.3	4.09 16.89	2.7						759	4.9 +0.4			
287	791	10.72	35.666	27.382	44.556		2301(I)		-113.4								13.8 +0.6				791				
116	830	10.522	35.638	27.397	44.587		2309	0.03				0.29+0.04									830				
117	899	9.840	35.568	27.462	44.710		2320	0.02				0.14+0.05									899				
288	988	8.74	35.444	27.547	44.891		2326(I)		-136.0								16.0 +0.9				988				
118	1000	8.834	35.443	27.532	44.868		2341	-0.05				0.10+0.05	8.8	4.20 17.37	3.5						1000				
119	1098	7.805	35.327	27.600	45.030		2348	-0.10				0.01+0.05									1098	6.1 +0.3			
120	1194	6.879	35.217	27.647	45.163		2362	-0.22				-0.01+0.06	11.5	4.12 17.21	3.4						1194				
290	1235	6.61	35.189	27.661	45.203		2362(I)		-164.0								18.4 +0.5				1235				
529	1396	5.493	35.072	27.713	45.363		2362	-0.22				0.03+0.05	11.9	4.21 17.61	4.0						1396	6.7 +0.5			
291	1580	4.49	34.979	27.755	45.506		2368(I)		-183.1								23.0 +0.5				1580				
530	1646		34.944				2371	-0.21				-0.04+0.04	14.1	4.19 17.66	3.8						1646	7.0 +0.5			
292	1876	3.16	34.868	27.800	45.690		2383(I)		-189.9								23.6 +0.7				1876				
531	1898	3.100	34.861	27.801	45.696		2384	-0.07				0.01+0.04	15.4	4.32 18.11	4.9						1898	4.3 +0.6			
532	2149	2.458	34.810	27.816	45.781		2372	-0.07					16.1	4.23 17.83	4.5						2149	3.0 +0.8			
293	2171	2.33	34.804	27.821	45.800		2371(I)		-196.8								25.3 +1.0				2171				
533	2451	1.9891	4.776	27.826	45.843		2364	0.05					14.6								2451	2.6 +0.6			
294	2468	1.91	34.772	27.830	45.855		2365(I)		-195.0								26.5 +0.6				2468				
534	2603	1.851	34.767	27.830	45.861		2367	0.01					14.0	4.35 18.28	5.2						2603	2.2 +0.3			
295	2715	1.71	34.758	27.833	45.880		2360(I)		-198.3								26.4 +0.5				2715				
535	2753	1.650	34.755	27.835	45.889		2358	0.05					12.1								2753	3.3 +0.4			
												PRECISION:	1.0	0.01 0.06	0.2										

STATION 415 — **POSITION: 17°14'N 60°41'E** — **DATE: 30 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
												UM						DPM/100kg						DPM/100kg	
102	584	11.831	35.685	27.190	44.275							0.33+0.06									584				
103	2184	2.513	34.812	27.813	45.772							-0.02+0.04									2184				
112	3715	1.390	34.739	27.841	45.923							-0.05+0.05									3715				
114	3726	1.389	34.741	27.842	45.925							0.09+0.04									3726				

(I) INTERPOLATED FROM NISKIN DATA

STATION 416 | **POSITION: 19°45'N 64°37'E** | **DATE: 31 DEC 77**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM		SIO	UM	----------SIO----------				SIO								
101	3	26.345	36.487	24.082	40.244		2049	1.63			0.78	1.75+0.09									3				
102	39	26.325	36.488	24.089	40.252	0.3	2050					2.04+0.10	-1.5								39				
395	40	26.30	36.478	24.088	40.252		2054(I)		58.7								6.2 +0.7				40				
103	71	23.150	36.255	24.864	41.200	16.2	2184	0.22			0.74	2.21+0.09	-0.1								71				
104	114	20.673	36.052	25.404	41.885		2229				0.72	1.84+0.09	1.9								114				
394	120	21.91	36.161	25.147	41.554		2235(I)		32.3								7.7 +0.6				120				
105	132	19.901	35.984	25.559	42.088		2245	-0.09			0.68	1.79+0.08									132				
106	179	18.143	35.947	25.985	42.622		2259				0.54	1.57+0.07	3.1								179				
393	186	18.62	35.949	25.866	42.473		2267(I)		-8.7								8.5 +0.6				186				
107	187	17.852	35.936	26.049	42.705		2268	-0.13			0.61	1.57+0.09	4.4								187				
108	233	16.965	36.084	26.380	43.089		2275				0.64	1.44+0.08	4.4								233				
392	261	16.70	36.109	26.463	43.189		2283(I)		-35.9								9.0 +0.6				261				
109	279	15.571	36.002	26.645	43.450		2288	-0.13				1.24+0.06	2.9								279				
391	301	15.37	35.962	26.659	43.478		2288(I)		-59.6												301				
110	320	14.664	35.888	26.761	43.632		2288				0.56	0.87+0.07	3.6								320				
390	376	13.94	35.840	26.881	43.805		2293(I)		-74.5								10.8 +0.6				376				
111	433	13.212	35.777	26.985	43.964		2300	-0.03				0.56+0.05	4.4								433				
594	475	12.85	35.747	27.037	44.043		2302(I)		-90.4								11.3 +0.7				475				
387	576	11.75	35.636	27.168	44.261		2306(I)		-108.0								11.5 +1.0				576				
112	585	11.649	35.633	27.185	44.286		2306				0.44	0.19+0.05									585				
114	796	10.114	35.520	27.377	44.604		2324	-0.08				0.03+0.04	6.7								796				
386	823	9.97	35.508	27.393	44.631		2326(I)		-127.5								13.7 +0.6				823				
115	996	8.670	35.394	27.520	44.871		2339	-0.11			0.25		9.6								996				
286	1008	8.51	35.380	27.534	44.900		2340(I)		-147.8								15.0 +1.0				1008				
116	1197	7.295	35.247	27.612	45.089		2352				0 21		10.3								1197				
287	1271	6.77	35.205	27.653	45.180		2356(1)		-157.9								17.3 +1.0				1271				
117	1396	6.043	35.125	27.686	45.282		2361	-0.20					12.9								1396				
288	1534	5.08	35.065	27.756	45.446		2367(I)		-172.9								20.0 +0.6				1534				
118	1645	4.608	34.990	27.750	45.490		2370				0.15		13.0								1645				
290	1797	3.73	34.911	27.780	45.609		2369(I)		-193.1								22.1 +0.5				1797				
119	1895	3.491	34.889	27.786	45.641		2368	-0.21			0.05		14.2								1895				
291	2060	2.88	34.842	27.805	45.725		2375(I)		-193.4								22.4 +0.7				2060				
120	2143	2.743	34.828	27.806	45.740	9.6	2378				-0.02		13.2								2143				
292	2323	2.28	34.795	27.818	45.802		2375(I)		-201.0								24.8 +0.5				2323				
121	2391	2.238	34.794	27.821	45.810		2374	-0.09					13.4								2391				
293	2588	1.90	34.769	27.827	45.853		2378(I)		-204.2								26.8 +0.9				2588				
122	2634	1.884	34.767	27.827	45.855		2379				-0.09		12.9								2634				
294	2858	1.64	34.757	27.837	45.892		2388(I)		-200.3								28.2 +0.7				2858				
123	2885	1.648	34.754	27.834	45.888	7.9	2389	-0.08					12.5								2885				
295	3140	1.485	34.748	27.841	45.913		2398(I)		-188.6								30.6 +0.7				3140				
124	3156	1.471	34.743	27.838	45.912	7.7	2398						11.4								3156				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

STATION 417 POSITION: 12°58'N 64°28'E DATE: 2 JAN 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------SIO----------				SIO	NOOW				SIO			
301	9	26.616	36.410	23.940	40.089	0.5	2041	1.66				2.34+0.10									9				
302	34	26.597	36.408	23.944	40.095		2042					2.26+0.09	-1.5								34				
486	40	26.60	36.408	23.943	40.094		2040(I)		74.6								7.8 +0.4				40				
303	54	26.597	36.406	23.943	40.093	0.4	2036	1.50				2.21+0.10									54				
304	86	23.352	35.810	24.469	40.804	6.8	2127					1.74+0.07									86				
487	99	22.87	36.148	24.863	41.217		2188(I)		46.1												99				
305	104	21.833	36.161	25.167	41.579	6.4	2210	0.18				2.05+0.07	-0.3								104				
306	146	17.434	35.647	25.931	42.621		2243					1.27+0.07									146				
307	166	16.538	35.622	26.128	42.877		2263	-0.08				1.00+0.06	2.8								166				
488	174	16.04	35.643	26.260	43.042		2265(I)		-47.1								9.4 +0.4				174				
308	206	14.903	35.601	26.487	43.349		2272					0.65+0.06									206				
309	235	13.717	35.483	26.653	43.602		2274	0.01				0.59+0.05	3.1								235				
490	248	13.54	35.461	26.672	43.635		2274(I)		-76.3												248				
310	306	12.595	35.430	26.842	43.876		2274					0.25+0.05									306				
311	387	11.761	35.410	26.990	44.088	15.2	2281	0.06				0.30+0.05	3.1								387				
491	398	11.78	35.405	26.983	44.080		2281(I)		-91.5								11.0 +0.7				398				
312	466	11.483	35.452	27.076	44.194		2281					0.18+0.04	4.5								466				
492	497	11.24	35.432	27.106	44.244		2283(I)		-99.4												497				
313	567	10.965	35.448	27.169	44.329		2292	0.09				0.20+0.06	4.6								567				
314	622	10.548	35.410	27.215	44.410		2307					0.08+0.06	5.5								622				
493	647	10.45	35.430	27.247	44.449		2306(I)		-115.5								11.5 +0.5				647				
315	698	10.145	35.422	27.296	44.523		2302	0.05				0.12+0.07									698				
316	796	9.540	35.388	27.373	44.651	14.7	2316					0.04+0.05	7.7								796				
494	846	9.26	35.367	27.403	44.705		2320(I)		-128.8												846				
317	895	8.885	35.332	27.437	44.772		2323	-0.01													895				
318	994	8.139	35.264	27.500	44.902	14.3	2323						9.4								994				
495	1045	8.06	35.280	27.526	44.934		2329(I)		-147.9								14.6 +0.5				1045				
319	1096	7.595	35.223	27.550	45.001		2336	-0.06													1096				
320	1245	6.716	35.148	27.615	45.148	12.1	2337						12.6								1245				
286	1245	6.47	35.133	27.636	45.192		2337(I)		-152.9								16.6 +0.6				1245				
321	1394	5.871	35.070	27.664	45.279		2349	-0.06													1394				
322	1541	4.966	34.992	27.712	45.415	10.0	2353														1541				
287	1594	4.59	34.966	27.734	45.475		2354(I)		-181.1								20.9 +0.7				1594				
323	1689	4.182	34.925	27.745	45.528		2358	-0.07													1689				
101	1829	3.575	34.882	27.772	45.619		2369	-0.06					14.0								1829				
288	1942	3.06	34.876	27.816	45.715		2361(I)		-189.0								22.2 +0.6				1942				
102	1976	3.011	34.836	27.789	45.695	8.8	2362														1976	12.2 +0.4			
103	2124	2.607	34.809	27.803	45.752		2362	-0.01					12.6								2124				
104	2273	2.355	34.794	27.812	45.788	8.0	2360														2273	14.1 +0.5			
290	2291	2.34	34.792	27.811	45.789		2360(I)		-192.9								24.4 +0.6				2291				
105	2422	2.124	34.778	27.818	45.819		2363(I)	0.01					13.7								2422				
106	2572	1.921	34.765	27.823	45.847		2365														2572	15.3 +1.0			
291	2639	1.84	34.769	27.832	45.864		2361(I)		-194.9								25.7 +0.6				2639				
107	2719	1.753	34.757	27.829	45.871		2358	0.01					11.4								2719				
108	2869	1.762	34.623	27.831	45.888		2366														2869	16.2 +0.7			
695	2875	1.63	34.758	27.839	45.894		2366(I)												0.5		2875				
292	2987	1.57	34.748	27.835	45.897		2365(I)		-190.2								26.1 +1.3				2987				
109	3019	1.553	34.742	27.832	45.896		2365	0.05													3019				
694	3023	1.55	34.752	27.840	45.905		2365(I)										26.9 +1.1	0.6			3023				
110	3168	1.503	34.740	27.834	45.904		2364														3168	16.7 +0.5			
693	3171	1.50	34.746	27.839	45.909		2364(I)											0.7	+0.3		3171				
111	3316	1.463	34.743	27.839	45.913		2359	0.10					12.6								3316				
692	3320	1.45	34.740	27.837	45.913		2359(I)											0.5	+0.3		3320				
293	3336	1.46	34.746	27.842	45.916		2358(I)		-197.8								25.9 +0.6				3336				
112	3466	1.429	34.739	27.838	45.916	6.8	2350	0.13													3466	16.4 +0.7			
691	3469	1.43	34.739	27.838	45.916		2350(I)										25.8 +0.6	0.5			3469				
114	3616	1.405	34.736	27.837	45.918	6.5	2349						12.4								3616				
690	3619	1.40	34.739	27.840	45.921		2349(I)											0.5			3619				
294	3686	1.39	34.752	27.851	45.933		2345(I)		-190.7								25.3 +0.5				3686				
115	3766	1.382	34.737	27.840	45.923		2342	0.06													3766	18.0 +0.7			
688	3768	1.39	34.771	27.866	45.947		2342(I)										26.8 +1.1	0.7	+0.3		3768				
687	3920	1.36	34.736	27.840	45.926		2354(I)											0.4			3920				
116	3922	1.362	34.735	27.839	45.925		2354						11.3								3922	18.7 +0.6			
117	3974	1.360	34.734	27.839	45.925		2355(I)														3974	16.8 +0.5			
118	4013	1.359	34.736	27.840	45.926		2360(I)														4013	14.1 +0.5			
295	4035	1.36	34.753	27.854	45.938		2366(I)		-187.9								26.9 +0.6				4035				
119	4043	1.356	34.734	27.839	45.925		2366(I)														4043	11.4 +0.6			
686	4072	1.34	34.736	27.842	45.929		2371(I)											1.1	+0.3		4072				
121	4077	1.355	34.738	27.842	45.929		2372(I)														4077	10.7 +0.6			
122	4087	1.357	34.734	27.839	45.925		2373(I)														4087	11.2 +0.5			
123	4097	1.356	34.734	27.839	45.925		2373(I)														4097	11.4 +0.6			
124	4102	1.356	34.735	27.840	45.926		2375	-0.03					9.7								4102	11.8 +0.4			

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

STATION 418 | **POSITION: 6°11'N 64°25'E** | **DATE: 5 JAN 78**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	SIO			LSU	SIO					SIO			SIO
301	2	27.785	35.623	22.981	39.088	-0.2	1992	1.77				2.01+0.09				38.0					2				
302	22	27.793	35.617	22.973	39.081		1992	1.60				2.13+0.09	-1.4								22	15.7 +0.6			0.7 +1.3
688	30	27.82	35.642	22.982	39.088		1993(I)		75.1								7.6 +0.6				30				
303	42	27.788	35.625	22.981	39.089		1994	1.48				2.08+0.07									42				
304	63	27.619	35.787	23.156	39.269	0.0	2029	1.41				2.53+0.09	-0.8			39.4					63				
305	97	21.499	35.476	24.741	41.187		2120	0.77				1.73+0.10				42.3					97	9.6 +0.4			9.6 +0.9
306	135	18.515	35.265	25.371	42.001		2174	0.35				1.62+0.13	3.4								135				
307	146	17.515	35.236	25.597	42.292		2180	0.47				1.57+0.14									146				
687	150	17.95	35.252	25.501	42.168		2182(I)		6.8												150				
686	198	15.88	35.226	25.977	42.780		2195(I)		-17.2								7.7 +0.6				198				
308	210	15.186	35.234	26.142	42.993		2197	0.33				1.29+0.12	3.1			43.7					210	9.0 +0.4			5.9 +0.9
309	257	13.653	35.189	26.440	43.401		2206	0.50				0.90+0.09									257				
310	296	13.006	35.184	26.569	43.579	3.6	2214	0.47				0.58+0.07	2.7								296	8.5 +0.4			8.1 +0.9
586	299	13.14	35.187	26.544	43.544		2215(I)		-38.9												299				
311	346	11.846	35.150	26.772	43.871		2227	0.53				0.44+0.06									346				
312	396	11.399	35.148	26.855	43.989		2237	0.55				0.21+0.05	2.8			50.0					396				
587	398	11.46	35.139	26.837	43.967		2238(I)		-67.3								9.9 +0.7				398				
313	447	10.973	35.143	26.930	44.098	9.7	2252	0.42				0.21+0.06									447	9.8 +0.4			3.1 +0.9
588	497		35.159				2250(I)		-93.5								12.7 +0.5				497				
314	498	10.732	35.148	26.978	44.165		2250	0.36				0.15+0.04	2.7			52.8					498				
315	566	10.370	35.174	27.063	44.278		2272	0.34				0.11+0.05									566				
316	637	10.037	35.213	27.151	44.393		2289	0.16				0.03+0.04	4.0			59.8					637				
590	647	9.95	35.214	27.167	44.415		2291(I)		-107.7												647				
317	697	9.611	35.209	27.221	44.498		2301	0.16				0.10+0.05	5.8								697	9.1 +0.5			6.1 +1.1
591	797	8.90	35.182	27.317	44.654		2316(I)		-125.4								15.3 +0.5				797				
318	820	8.721	35.164	27.332	44.686		2319(I)	0.04				0.08+0.03				68.4					820				
319	948	7.726	35.114	27.445	44.887		2330	0.03				0.04+0.03									948	9.8 +0.3			7.3 +0.9
592	995	7.45	35.110	27.482	44.950		2333(I)		-144.2								18.6 +0.5				995				
320	997	7.416	35.103	27.481	44.952		2333(I)	-0.05					9.0			76.9					997				
321	1144	6.372	35.015	27.556	45.125		2337	0.02													1144				
593	1294	5.72	34.981	27.613	45.245		2336(I)		-166.6								18.0 +0.6				1294				
322	1295	5.699	34.977	27.612	45.246	10.7	2336	0.03					10.8			88.6					1295	12.3 +0.8			6.6 +1.8
323	1443	4.806	34.921	27.674	45.395		2343	0.01													1443				
324	1589	4.080	34.875	27.716	45.511		2340	-0.03								98.6					1589	12.2 +0.5			12.6 +1.2
594	1592	4.16	34.886	27.716	45.503		2343(I)		-178.0								22.3 +0.9				1592				
101	1596	4.016	34.884	27.730	45.531	8.8	2347	0.02					11.8								1596	13.1 +0.5			9.8 +1.2
102	1746	3.532	34.841	27.744	45.596		2347	0.07								103.7	23.0 +0.5				1746				
103	1895	3.019	34.810	27.767	45.673	7.7	2344	0.10					13.2			107.2					1895	13.1 +0.6			9.6 +1.4
595	1941	2.81	34.807	27.784	45.712		2344(I)		-185.3								22.7 +0.6				1941				
104	2046	2.616	34.794	27.790	45.739		2345	0.13								118.0					2046				
286	2191	2.40	34.783	27.799	45.771		2349(I)		-193.1								22.9 +0.6				2191				
105	2193	2.418	34.783	27.798	45.768	7.1	2349	0.13					13.1			111.7					2193	13.5 +0.4			9.1 +0.9
106	2338	2.173	34.772	27.809	45.805		2345	0.21								113.8	23.3 +0.6				2338				
107	2487	2.017	34.765	27.815	45.829	6.7	2349	0.11					12.4			114.4					2487	12.8 +0.4			9.6 +0.9
287	2489	1.96	34.764	27.819	45.838		2349(I)		-194.9								25.1 +0.7				2489				
108	2636	1.846	34.757	27.822	45.854		2361	0.19									24.8 +0.6				2636				
109	2790	1.711	34.749	27.826	45.873		2349	0.19					12.0			118.2					2790	13.0 +0.4			7.2 +0.9
288	2835	1.66	34.754	27.834	45.887		2345(I)		-192.7								28.1 +0.4				2835				
110	2938	1.601	34.745	27.831	45.890		2337	0.22									26.6 +0.6				2938				
290	3085	1.48	34.743	27.838	45.911		2338(I)		-192.8								24.8 +0.6				3085				
111	3094	1.524	34.740	27.832	45.900		2338	0.15					11.5			118.7					3094	12.6 +0.5			8.8 +1.1
112	3241	1.450	34.736	27.834	45.910		2348	0.19									25.7 +0.6				3241				
291	3384	1.40	34.740	27.841	45.923		2340(I)		-188.5								25.5 +0.5				3384				
114	3391	1.405	34.734	27.836	45.916		2340	0.24					12.3			119.9					3391	12.2 +0.5			6.2 +1.1
115	3538	1.364	34.735	27.839	45.925		2346	0.21								121.2	25.2 +0.7				3538				
292	3681	1.34	34.736	27.841	45.929		2338(I)		-180.7								25.2 +0.4				3681				
116	3684	1.347	34.731	27.837	45.925	6.1	2338	0.15					11.5			122.7					3684	11.6 +0.5			8.8 +1.2
117	3835	1.331	34.731	27.838	45.928		2340	0.18									26.4 +0.9				3835				
118	3984	1.322	34.734	27.841	45.931	6.1	2340	0.15					11.4			123.3					3984	11.0 +0.5			6.9 +1.2
293	4031	1.32	34.735	27.842	45.932		2342(I)		-189.3								25.7 +0.6				4031				
119	4180	1.313	34.731	27.840	45.931		2346	0.17								123.1	26.1 +0.7				4180				
120	4279	1.311	34.732	27.840	45.932	6.1	2341	0.24					10.2								4279	11.1 +0.5			6.2 +1.2
121	4379	1.308	34.732	27.841	45.932		2341	0.27								121.3					4379				
294	4383	1.30	34.738	27.846	45.939		2341(I)		-176.6								26.5 +0.5				4383				
122	4478	1.302	34.732	27.841	45.933		2339	0.29					10.1								4478	10.7 +0.5			7.6 +1.2
123	4579	1.299	34.731	27.841	45.933		2339	0.22								119.8					4579				
295	4634	1.30	34.741	27.848	45.940		2339(I)		-178.6								27.1 +0.5				4634				
124	4640	1.298	34.732	27.841	45.934		2339	0.15					11.7			120.2					4640	11.2 +0.5			

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH			UM			UM	----------SIO----------				SIO	NOOW				SIO	SIO		SIO
301	5	27.337	35.337	22.907	39.044	0.2	1975					2.57+0.11									5				
302	16	27.235	35.344	22.944	39.086		1977					2.50+0.11	-1.6								16		0.55 +0.07		7.0 +0.3
486	20	27.18	35.346	22.962	39.106		1981(I)		94.8								7.1 +0.6				20				
487	98	19.28	35.239	25.154	41.738		2085(I)		50.0								8.3 +0.6				98				
303	116	18.637	35.222	25.307	41.931	1.0	2115					1.90+0.09	2.7								116	9.8 +0.6	0.28 +0.09		
304	166	16.922	35.264	25.762	42.495		2156					1.29+0.07	3.3								166	8.3 +0.3	0.30 +0.04		9.8 +0.2
305	217	13.564	35.226	26.487	43.454		2205					0.59+0.05									217				
488	227	13.20	35.207	26.548	43.543		2207(I)		-41.0												227				
306	283	11.948	35.200	26.791	43.881		2217					0.43+0.05	2.2								283	7.2 +0.5	0.28 +0.06		7.6 +0.2
307	316	11.228	35.118	26.864	44.012		2212					0.31+0.05									316				
308	404	10.048	35.027	27.005	44.251		2227					0.33+0.05	2.9								404	8.0 +0.3	0.51 +0.07		8.8 +0.5
490	406	9.98	35.031	27.020	44.271		2227(I)		-88.2								11.0 +0.6				406				
309	475	9.897	35.061	27.057	44.315		2239					0.08+0.05									475				
310	525	9.878	35.134	27.117	44.374	1.2	2263					0.14+0.04	3.9								525	9.9 +0.4	0.10 +0.04		6.7 +0.3
491	546	9.78	35.144	27.142	44.407		2264(I)		-104.1								13.5 +0.5				546				
311	589	9.739	35.151	27.154	44.422		2266					0.06+0.05	4.4								589				
312	625	9.213	35.097	27.200	44.514		2273					-0.01+0.05	5.4								625	8.4 +0.4	0.38 +0.06		8.2 +0.5
313	655	9.205	35.140	27.235	44.548		2281						5.3				13.4 +0.6				655				
315	754	8.330	35.078	27.325	44.716	8.5	2293						6.3								754	9.5 +0.4	0.30 +0.06		8.0 +0.3
492	756	8.33	35.077	27.324	44.715		2293(I)		-131.7								13.9 +0.6				756				
317	845	8.451	35.159	27.370	44.748		2301						7.8								845	9.2 +0.3	0.43 +0.09		7.9 +0.2
493	845	8.33	35.155	27.385	44.773		2301(I)		-123.9								16.4 +0.4				845				
319	954	7.293	35.054	27.461	44.944		2317						9.6								954				
320	1048	6.741	35.037	27.524	45.058	11.4	2319														1048	10.0 +0.4	0.54 +0.07		9.6 +0.3
494	1094	6.67	35.027	27.526	45.068		2320(I)		-161.7								16.2 +0.7				1094				
321	1107	6.674	35.042	27.537	45.077		2320						10.5								1107				
322	1192	6.268	35.012	27.568	45.146		2333														1192	10.4 +0.3	0.68 +0.11		9.4 +0.3
495	1295	5.73	34.974	27.606	45.237		2334(I)		-163.6								18.3 +0.4				1295				
323	1339	5.379	34.956	27.635	45.300		2335						11.4								1339				
324	1487	4.523	34.905	27.692	45.443		2330														1487	11.0 +0.3	0.57 +0.08		11.6 +0.3
101	1507	4.510	34.905	27.694	45.445		2332						11.2								1507				
286	1593	3.89	34.859	27.723	45.538		2333(I)		-179.6								22.4 +0.6				1593				
102	1655	3.974	34.863	27.717	45.524		2334														1655	11.2 +0.6	0.54 +0.07		12.3 +0.9
103	1802	3.374	34.830	27.750	45.619		2340						12.5				22.0 +0.4				1802				
104	1950	2.836	34.803	27.778	45.703	7.4	2341														1950	13.3 +0.6	0.60 +0.05		12.0 +1.1
287	1992	2.81	34.802	27.779	45.708		2344(I)		-190.3								23.8 +0.6				1992				
105	2101	2.447	34.784	27.796	45.763		2349						13.3								2101	11.9 +0.5	0.75 +0.07		11.3 +0.7
106	2249	2.195	34.772	27.807	45.801		2340										24.4 +0.5				2249				
288	2389	1.97	34.765	27.819	45.837		2338(I)		-198.9								26.6 +0.5				2389				
107	2396	2.024	34.767	27.817	45.829		2338						13.0								2396	11.4 +0.6	0.99 +0.09		16.5 +1.1
108	2545	1.908	34.761	27.821	45.846		2334										25.6 +0.6				2545				
109	2693	1.795	34.754	27.824	45.861		2338						13.9								2693	11.4 +0.3	1.39 +0.08		11.7 +0.5
290	2787	1.64	34.747	27.829	45.884		2335(I)		-190.4								27.4 +0.7				2787				
110	2841	1.671	34.750	27.829	45.881		2333														2841	10.9 +0.4	1.02 +0.11		9.9 +0.7
111	2993	1.578	34.745	27.832	45.894		2334						13.2				26.3 +0.7				2993				
112	3139	1.484	34.740	27.835	45.907	6.0	2329														3139	11.8 +0.7	1.10 +0.08		11.3 +1.1
291	3185	1.48	34.738	27.833	45.906		2325(I)		-186.9								25.1 +0.5				3185				
114	3282	1.410	34.736	27.837	45.917		2319						12.3								3282	11.6 +0.3	1.00 +0.09		8.3 +0.6
115	3436	1.329	34.734	27.841	45.930		2321										25.3 +0.6				3436				
595	3441	1.32	34.745	27.850	45.940		2321(I)												0.4		3441				
116	3562	1.300	34.734	27.843	45.935		2320						12.0								3562	12.4 +0.6	1.00 +0.10		8.2 +0.9
594	3579	1.26	34.732	27.844	45.941		2320(I)												2.9 +0.5		3579				
292	3584	1.25	34.729	27.842	45.941		2320(I)		-184.2								26.4 +0.9				3584				
593	3736	1.20	34.730	27.847	45.950		2319(I)										26.1 +0.7		0.7		3736				
118	3884	1.179	34.729	27.847	45.953		2323						11.0								3884	11.6 +0.4	0.78 +0.06		10.5 +0.8
293	3884	1.17	34.727	27.846	45.952		2323(I)		-182.6								24.8 +0.6				3884				
592	3895	1.17	34.731	27.849	45.956		2323(I)												1.2 +0.4		3895				
591	4034	1.13	34.756	27.872	45.983		2318(I)										26.9 +1.1		0.6		4034				
120	4182	1.069	34.722	27.849	45.967		2314						9.7								4182	11.0 +0.4	0.89 +0.08		4.9 +0.8
294	4183	1.08	34.725	27.851	45.968		2314(I)		-178.6								26.0 +1.3				4183				
588	4293	1.02	34.735	27.862	45.986		2313(I)										25.6 +1.1		0.6		4293				
121	4329	1.030	34.724	27.853	45.975	5.7	2313														4329				
122	4430	0.999	34.722	27.853	45.979		2313						8.5								4430	9.6 +0.3	0.75 +0.11		8.0 +0.6
587	4432	1.00	34.727	27.857	45.983		2313(I)												1.2 +0.4		4432				
586	4554	0.98	34.724	27.856	45.984		2309(I)												1.8 +0.4		4554				
295	4584	0.95	34.722	27.856	45.987		2309(I)		-174.0								26.0 +0.5				4584				
124	4626	0.945	34.720	27.855	45.987		2306						8.8								4626	8.4 +0.6	0.47 +0.08		4.0 +1.0

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

STATION 420 — POSITION: 0°3'S 50°55'E — DATE: 10 JAN 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$\delta^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH	UM			UM	----------SIO----------			LSU	SIO	NOOW				SIO	SIO		SIO
401	1	27.120	35.230	22.895	39.044	-0.1	1993	1.64				2.39+0.12				38.2					1				
402	14	27.122	35.229	22.893	39.043		1991					2.29+0.11	-1.0								14	10.3 +0.3	0.28 +0.04		4.8 +0.2
586	20	27.04	35.230	22.920	39.074		1995(I)		93.1								7.4 +0.6				20				
403	53	26.065	35.311	23.282	39.484		2016	1.47				2.34+0.11									53				
404	75	21.633	35.200	24.494	40.940		2070					2.29+0.10	1.3								75				
587	98	19.52	35.212	25.072	41.641		2106(I)		49.1								7.1 +0.6				98				
405	120	17.501	35.201	25.574	42.270		2128	0.99				1.61+0.08				41.0					120	8.6 +0.3	0.30 +0.03		9.9 +0.3
406	187	14.489	35.188	26.260	43.162		2168					1.29+0.08	2.7								187				
588	197	13.91	35.164	26.367	43.311		2171(I)		-1.8												197				
407	245	12.405	35.096	26.622	43.679		2187	0.77				0.66+0.06									245				
590	296	11.76	35.079	26.734	43.842		2214(I)		-53.7								7.7 +0.6				296				
408	297	11.792	35.078	26.727	43.832		2214					0.39+0.06	2.7			47.0					297	11.8 +0.3	0.42 +0.04		6.9 +0.2
409	362	10.476	35.001	26.909	44.121		2225	0.57				0.12+0.06									362				
410	457	9.931	35.000	27.004	44.260		2246					0.15+0.05	2.7			54.4					457				
591	494	9.68	35.005	27.051	44.328		2255(I)		-104.5								10.4 +0.6				494				
411	523	9.579	35.009	27.070	44.356		2261	0.34				0.02+0.04									523	8.8 +0.3	0.30 +0.06		8.0 +0.3
412	596	9.244	35.002	27.120	44.434	2.4	2263					0.09+0.05	3.8			59.5					596				
413	668	8.971	35.013	27.173	44.510		2279(I)	0.32													668				
592	714	8.61	35.082	27.285	44.650		2290(I)		-124.2								14.0 +0.7				714				
414	716	8.892	35.099	27.253	44.595		2291						5.1			63.2					716	8.2 +0.4	0.38 +0.04		8.0 +0.3
415	779	8.228	35.035	27.307	44.708		2299(I)	0.15													779				
416	849	7.919	35.051	27.367	44.794	10.9	2308						7.6								849	9.8 +0.3	0.42 +0.05		8.4 +0.3
593	934	7.34	35.030	27.435	44.914		2325(I)		-145.6								15.8 +0.6				934				
417	938	7.451	35.077	27.456	44.924		2326	0.03								74.1					938	9.9 +0.3			10.0 +0.3
418	1098	6.217	34.965	27.537	45.122		2327						9.3			85.0					1098				
594	1243	5.34	34.906	27.600	45.270		2333(I)		-170.5								19.4 +0.7				1243				
419	1247	5.329	34.910	27.604	45.275		2333	0.02								87.3					1247	7.7 +0.3	0.31 +0.04		11.0 +0.3
420	1396	4.731	34.877	27.647	45.378		2338									91.9					1396				
595	1541	3.84	34.832	27.706	45.528		2338(I)		-179.0								21.8 +0.5				1541				
421	1546	3.839	34.833	27.707	45.528		2339(I)	0.01								99.6					1546	12.0 +0.3	0.68 +0.07		11.5 +0.3
422	1693	3.502	34.810	27.722	45.578		2339						12.0			101.4					1693				
423	1889	2.920	34.788	27.759	45.676		2340(I)	0.15								106.6					1889	11.4 +0.5	0.53 +0.07		12.2 +0.3
386	1939	2.71	34.781	27.772	45.712		2341(I)		-189.5								21.4 +0.6				1939				
201	2098	2.428	34.773	27.789	45.758		2340	0.16					12.5			110.0	25.9 +0.6				2098				
202	2297	2.142	34.759	27.801	45.801	6.8	2343									111.8					2297	13.1 +0.3	0.70 +0.06		11.6 +0.2
387	2338	2.00	34.757	27.810	45.825		2343(I)		-191.5								22.9 +0.6				2338				
203	2495	1.855	34.751	27.817	45.848		2343	0.24					14.5			116.4	27.1 +0.6				2495				
204	2695	1.728	34.745	27.821	45.867	6.4	2340(I)									116.8					2695	13.5 +0.4	0.53 +0.09		11.0 +0.2
388	2737	1.64	34.746	27.829	45.883		2339(I)		-190.1								25.5 +0.6				2737				
205	2935	1.572	34.738	27.827	45.890		2336	0.18					14.1			115.6	27.8 +0.6				2935				
390	3136	1.52	34.739	27.831	45.899		2335(I)		-186.2								27.1 +0.5				3136				
206	3159	1.520	34.736	27.829	45.897	6.2	2335									117.2					3159	13.1 +0.4	1.09 +0.14		9.7 +0.2
207	3361	1.375	34.733	27.837	45.921		2331	0.18					13.0			117.4	29.3 +0.5				3361				
208	3533	1.319	34.730	27.838	45.929	6.0	2330(I)									115.8					3533	12.4 +0.8	0.87 +0.20		10.8 +0.3
391	3535	1.31	34.734	27.842	45.934		2330(I)		-186.4								28.5 +0.6				3535				
209	3732	1.223	34.728	27.843	45.944		2330	0.26								119.8	27.2 +0.6				3732				
210	3932	1.164	34.726	27.846	45.953	5.8	2327(I)									118.4					3932	11.8 +0.5	0.82 +0.10		10.2 +0.2
392	3934	1.16	34.725	27.845	45.954		2327(I)		-185.8								27.3 +0.6				3934				
695	4074	1.12	34.726	27.849	45.962		2323(I)											3.1	+0.6		4074				
211	4121	1.094	34.722	27.847	45.963		2322	0.26					10.5			114.5	27.1 +0.6				4121				
694	4223	1.00	34.721	27.852	45.978		2319(I)											1.7	+0.6		4223				
212	4320	0.999	34.721	27.852	45.979		2316	0.24								111.7					4320	10.4 +0.3	0.58 +0.12		7.6 +0.2
693	4321	0.99	34.722	27.854	45.981		2316(I)											2.3	+0.6		4321				
393	4334	0.99	34.722	27.854	45.981		2316(I)		-179.9								27.1 +1.1	2.0	+0.5		4334				
692	4421	0.96	34.719	27.853	45.984		2314(I)											0.9	+0.3		4421				
691	4521	0.94	34.719	27.854	45.987		2312(I)											0.6			4521				
214	4531	0.928	34.717	27.854	45.988	5.4	2312	0.28					9.1			110.7	24.8 +0.8				4531				
690	4668	0.92	34.719	27.856	45.990		2312(I)											1.6	+0.7		4668				
215	4730	0.916	34.717	27.854	45.990		2312(I)									110.3					4730	8.4 +0.3	0.94 +0.07		6.2 +0.2
394	4734	0.91	34.722	27.858	45.994		2312(I)		-179.4								25.3 +0.8	1.3	+0.6		4734				
688	4807	0.90	34.719	27.857	45.994		2312(I)										25.6 +0.7	0.6	+0.3		4807				
216	4929	0.903	34.717	27.855	45.992		2312	0.37					9.3								4929	8.1 +0.3	0.95 +0.06		5.9 +0.2
217	4955	0.901	34.716	27.854	45.992		2316									111.0					4955	8.9 +0.3	1.16 +0.07		5.9 +0.2
218	4979	0.894	34.717	27.856	45.994	5.6	2315(I)														4979	8.1 +0.4	1.06 +0.07		6.7 +0.2
219	5005	0.889	34.717	27.856	45.995		2314	0.32					8.4								5005	8.1 +0.2	0.82 +0.07		5.7 +0.1
220	5026	0.886	34.716	27.855	45.994		2311(I)									110.5					5026	8.0 +0.4	0.87 +0.10		5.7 +0.2
395	5035	0.88	34.721	27.860	46.000		2311(I)		-180.0								26.1 +0.5	4.9	+1.2		5035				
221	5040	0.881	34.716	27.856	45.995		2310														5040	7.7 +0.3	0.90 +0.09		5.9 +0.2
222	5050	0.880	34.716	27.856	45.995		2310(I)														5050	8.1 +0.5	1.24 +0.12		6.2 +0.2
223	5060	0.880	34.716	27.856	45.995		2310(I)														5060	8.2 +0.2	1.05 +0.06		6.0 +0.2
224	5070	0.879	34.717	27.857	45.996		2310	0.24					8.0			110.3					5070		0.31 +0.05		6.5 +0.2

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

STATION 421 — **POSITION: 6°9'S 50°54'E** — **DATE: 13 JAN 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM		SIO			SIO	NOOW					SIO		
301	2	28.585	34.658	22.001	38.090		1941	1.74				3.15+0.14									2				
588	19	27.34	34.985	22.641	38.785		1956(I)		94.7								6.9 +0.6				19				
302	20	28.725	34.894	22.133	38.210		1957(I)					2.33+0.10	-1.3								20	11.9 +0.4			
303	43	26.662	35.017	22.877	39.055		1977	1.62				1.87+0.09									43				
304	94	16.046	35.164	25.892	42.686		2160					1.47+0.09	3.6								94	8.9 +0.4			
486	99	14.55	35.148	26.216	43.113		2160(I)		2.9								6.6 +0.7				99				
305	120	14.265	35.139	26.271	43.190		2163(I)	0.71				1.17+0.07									120				
306	146	13.677	35.157	26.410	43.371		2165					1.16+0.07	3.2								146				
307	170	12.659	35.096	26.571	43.609		2169(I)	0.79				0.83+0.06									170				
308	211	12.116	35.069	26.657	43.737		2176					0.59+0.06									211				
487	222	11.65	35.041	26.724	43.841		2177(I)		-39.3								10.9 +0.5				222				
309	245	11.666	35.046	26.726	43.842		2179(I)	0.97				0.44+0.07	1.5								245	8.4 +0.5			
310	307	11.030	34.991	26.802	43.969		2185					0.47+0.05									307				
490	346	10.30	34.917	26.874	44.102		2191(I)		-66.2								9.2 +0.5				346				
311	406	9.842	34.890	26.933	44.200		2202	0.77				0.21+0.05	2.1								406	8.3 +0.6			
312	486	9.018	34.838	27.029	44.367		2220(I)					0.09+0.05									486				
491	546	8.29	34.817	27.127	44.528		2233(I)		-105.6								13.9 +0.9				546				
313	597	8.118	34.806	27.145	44.562		2245(I)	0.54					4.3								597	9.6 +0.3			
315	746	7.329	34.838	27.286	44.772		2278(I)	0.30													746				
492	795	6.91	34.839	27.346	44.871		2288(I)		-145.2								15.7 +1.2				795				
316	796	7.064	34.842	27.326	44.837		2288						6.7								796	9.6 +0.4			
317	896	6.499	34.838	27.400	44.962		2302	0.25													896				
318	956	6.348	34.867	27.443	45.019		2306					0.05+0.04	8.1								956	10.3 +0.5			
319	1065	5.838	34.859	27.502	45.126		2314	0.17				-0.02+0.05	9.4								1065	10.3 +0.5			
493	1095	5.66	34.841	27.510	45.151		2316(I)		-155.9								17.8 +0.7				1095				
320	1264	4.869	34.828	27.593	45.311		2326					-0.02+0.04	11.3								1264	11.4 +0.6			
321	1363	4.265	34.797	27.635	45.414		2325(I)	0.21													1363				
494	1394	4.18	34.795	27.642	45.429		2324(I)		-173.5								19.3 +0.5				1394				
322	1489	3.835	34.783	27.668	45.491		2322						12.2								1489	12.5 +0.4			
323	1636	3.269	34.765	27.708	45.590		2323(I)	0.16													1636				
495	1694	3.15	34.767	27.721	45.614		2324(I)		-181.4								23.5 +1.1				1694				
101	1787	2.922	34.763	27.738	45.656		2325	0.19					12.3								1787	13.1 +0.5			
286	1957	2.55	34.762	27.770	45.727		2330(I)		-189.0								23.7 +0.6				1957				
103	2086	2.296	34.756	27.786	45.770		2333	0.24					11.3								2086	13.5 +0.4			
287	2256	2.12	34.756	27.801	45.804		2327(I)		-191.9								22.4 +0.4				2256				
105	2384	1.951	34.750	27.809	45.830		2331	0.24					12.6								2384	14.2 +0.5			
288	2555	1.78	34.749	27.821	45.860		2326(I)		-190.9								26.6 +0.6				2555				
107	2684	1.696	34.745	27.824	45.873		2332	0.22					13.0								2684	12.8 +0.7			
290	2854	1.58	34.742	27.829	45.891		2328(I)		-189.4								25.8 +0.6				2854				
109	2982	1.547	34.739	27.830	45.895		2332	0.22					12.1								2982	13.0 +0.5			
291	3153	1.46	34.742	27.838	45.912		2326(I)		-192.0								26.7 +0.5				3153				
111	3280	1.446	34.735	27.834	45.910		2320	0.26					12.1								3280	13.0 +0.5			
112	3430	1.401	34.734	27.836	45.917		2334	0.20													3430				
292	3451	1.39	34.734	27.837	45.919		2334(I)		-185.2								25.4 +0.6				3451				
114	3592	1.343	34.731	27.838	45.925		2331														3592	11.9 +0.4			
115	3741	1.275	34.730	27.841	45.937		2318	0.27									27.1 +0.6				3741				
686	3846	1.19	34.728	27.845	45.949		2321(I)											0.8			3846				
293	3852	1.22	34.730	27.845	45.946		2321(I)		-183.8								26.1 +0.6				3852				
116	3891	1.187	34.727	27.845	45.950		2323						10.4								3891	11.2 +0.5			
687	3947	1.12	34.724	27.847	45.959		2322(I)											0.8			3947				
688	4037	1.08	34.725	27.850	45.967		2318(I)											0.8			4037				
117	4063	1.031	34.722	27.851	45.974		2317	0.40									25.3 +0.9				4063				
690	4136	1.00	34.724	27.854	45.980		2314(I)											0.6			4136				
691	4238	0.97	34.719	27.852	45.981		2310(I)											1.5	+0.6		4238				
118	4239	0.962	34.721	27.855	45.985		2310						8.9								4239	10.9 +0.4			
294	4300	0.94	34.721	27.856	45.989		2310(I)		-172.3								24.5 +0.7				4300				
119	4413	0.918	34.719	27.856	45.991		2310	0.30									24.9 +0.9				4413				
693	4467	0.90	34.717	27.855	45.993		2307(I)											0.6			4467				
120	4539	0.890	34.719	27.858	45.996		2304						9.1								4539	10.2 +0.6			
694	4589	0.85	34.717	27.858	46.001		2303(I)											0.8			4589				
121	4627	0.876	34.717	27.857	45.997		2303	0.32									25.5 +0.5				4627				
695	4689	0.84	34.718	27.860	46.004		2301(I)											0.7			4689				
295	4752	0.83	34.719	27.861	46.006		2309(I)		-171.4								22.8 +0.5				4752				
123	4759	0.841	34.716	27.858	46.002		2310	0.34													4759				
124	4837	0.839	34.716	27.858	46.002		2299						9.3								4837	9.6 +0.4			
												PRECISION:	1.0												

STATION 422 — **POSITION: 8°49'S 52°14'E** — **DATE: 15 JAN 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
																	USC								
120	4109	0.718	34.713	27.863	46.021		2303										22.8 +0.4				4109				
124	4144	0.717	34.712	27.863	46.021		2301										24.0 +0.5				4144				

(I) INTERPOLATED FROM NISKIN DATA

STATION 423

POSITION: 9°1'S 53°15'E

DATE: 15 JAN 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg						DPM/100kg	
																	USC								
117	4942	0.753	34.714	27.862	46.016												24.3 +0.5				4942				
124	5136	0.732	34.714	27.863	46.019												23.5 +0.4				5136				

STATION 424

POSITION: 12°18'S 53°41'E

DATE: 16 JAN 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																		DPM/100kg						DPM/100kg	
						UH		UH	UM			UM	----------SIO----------			LSU	SIO	NOOW				SIO	SIO		SIO
301	1	29.149	35.033	22.101	38.154	0.5	1947	1.70				2.74+0.12				36.9					1				
302	10	29.127	35.032	22.107	38.161		1944					2.71+0.12	-1.2								10	13.1 +0.4	0.36 +0.09		6.3 +0.5
486	19	29.07	35.036	22.130	38.187		1949(I)		110.7								5.8 +0.4				19				
303	70	26.102	34.933	22.986	39.195	-0.6	1991(I)	1.66				2.86+0.12				38.8					70				
487	97	23.53	34.965	23.777	40.121		2023(I)		102.4												97				
304	122	20.778	35.008	24.583	41.082		2059					2.69+0.13	3.1								122	10.9 +0.4	0.37 +0.08		10.6 +0.5
305	145	17.943	35.213	25.474	42.142		2073(I)	0.91				2.26+0.10				41.0					145				
306	196	15.844	35.412	26.129	42.930		2101(I)					1.81+0.09	2.6			41.2					196	9.5 +0.3	0.49 +0.10		9.7 +0.4
488	205	15.31	35.355	26.208	43.048		2105(I)		60.4								9.0 +0.4				205				
490	270	12.63	35.139	26.610	43.649		2131(I)		25.3												270				
307	296	12.139	35.103	26.679	43.757		2139(I)	1.22				1.00+0.08									296				
491	343	10.93	34.962	26.798	43.975		2150(I)		-17.9								10.8 +0.6				343				
308	389	10.164	34.887	26.875	44.116		2156					0.49+0.05	2.6			47.1					389	9.4 +0.5	0.11 +0.04		6.0 +0.8
309	488	8.973	34.766	26.980	44.324	5.0	2179	0.93				0.20+0.05									488	8.5 +0.4	0.47 +0.08		8.6 +0.5
310	589	7.970	34.709	27.091	44.524		2205(I)					0.11+0.05				58.3					589		0.34 +0.10		
492	683	7.47	34.706	27.163	44.641		2233(I)		-111.6								15.3 +0.7				683				
311	686	7.021	34.688	27.211	44.730		2234	0.62				0.05+0.05	5.6			65.9					686	9.7 +0.5			7.6 +0.9
312	747	6.527	34.709	27.295	44.859	6.9	2256(I)					-0.09+0.06									747				
313	799	6.248	34.725	27.344	44.933		2272	0.45					7.7			74.7					799	10.5 +0.8	0.46 +0.08		10.2 +0.9
493	843	6.40	34.720	27.320	44.895		2280(I)		-135.4								13.4 +0.6				843				
314	901	5.840	34.751	27.416	45.043		2286					-0.09+0.07	7.9								901	11.5 +0.3	0.23 +0.07		8.4 +0.6
315	1000	5.354	34.752	27.476	45.150	7.5	2293	0.25					8.7			83.5					1000				
494	1043	5.45	34.755	27.467	45.131		2298(I)		-155.1								16.7 +0.5				1043				
316	1099	5.006	34.746	27.512	45.220		2302														1099	10.3 +0.4	0.63 +0.08		10.5 +0.6
317	1199	4.610	34.735	27.548	45.295		2299	0.26					10.2			87.6	17.8 +0.6				1199				
318	1298	4.219	34.727	27.584	45.370		2301(I)														1298	11.5 +0.4	0.40 +0.07		12.3 +0.7
495	1392	3.75	34.712	27.620	45.454		2303(I)		-163.6								19.4 +0.6				1392				
319	1419	3.690	34.712	27.626	45.466		2304	0.32					10.6			90.5					1419				
320	1522	3.321	34.723	27.670	45.547	6.7	2304(I)														1522	12.3 +0.4	0.53 +0.08		12.6 +0.5
321	1647	3.036	34.722	27.696	45.603		2304	0.33					12.1			98.1	21.9 +0.7				1647				
286	1745	2 55	34.734	27.748	45.705		2304(I)		-174.8								21.6 +0.5				1745				
322	1794	2.721	34.731	27.731	45.670		2304														1794	13.4 +0.6	0.72 +0.15		11.2 +1.0
323	1942	2.382	34.731	27.759	45.735		2312(I)	0.29					11.7			103.8	21.7 +0.5				1942				
287	2043	2.10	34.737	27.787	45.792		2317(I)		-181.4								21.9 +0.7				2043				
324	2090	2.161	34.738	27.783	45.781		2319						11.4								2090	13.5 +0.4	1.01 +0.13		12.7 +0.5
101	2284	1.956	34.740	27.800	45.821	5.8	2315	0.28								110.8	22.1 +0.5				2284				
102	2385	1.897	34.743	27.807	45.834		2328						11.1								2385	13.7 +0.4	0.71 +0.06		10.7 +0.7
288	2422	1.77	34.743	27.817	45.857		2327(I)		-184.0								25.4 +0.5				2422				
103	2533	1.795	34.743	27.815	45.853		2324(I)	0.19					11.4			113.9	22.9 +0.5				2533				
104	2678	1.712	34.741	27.819	45.866	6.2	2320						12.1								2678	13.2 +0.3	0.75 +0.09		12.4 +0.5
290	2721	1.65	34.742	27.825	45.879		2321(I)		-176.7								23.9 +0.5				2721				
105	2828	1.629	34.740	27.825	45.881		2322	0.25								117.9	24.4 +0.5				2828				
106	2979	1.542	34.737	27.828	45.894		2319(I)						11.0								2979	13.2 +0.5	0.76 +0.10		12.8 +0.8
107	3131	1.460	34.736	27.833	45.908	5.7	2316	0.21								115.6					3131				
291	3138	1.44	34.733	27.833	45.910		2316(I)		-182.7								24.3 +0.4				3138				
108	3281	1.401	34.734	27.836	45.917		2317(I)						11.8								3281	12.7 +0.6	0.96 +0.12		10.3 +0.9
109	3428	1.324	34.730	27.838	45.928		2317	0.25								116.3	23.1 +0.4				3428				
292	3566	1.29	34.728	27.839	45.933		2317(I)		-170.3								24.6 +0.5				3566				
110	3579	1.266	34.728	27.840	45.937	5.7	2317						10.5								3579	11.2 +0.4	0.63 +0.06		10.9 +0.7
595	3728	1.19	34.728	27.845	45.950		2325(I)											0.8			3728				
111	3731	1.225	34.727	27.842	45.943		2325	0.30								114.9	23.8 +0.5				3731				
594	3829	1.13	34.724	27.846	45.957		2310(I)											0.9			3829				
112	3877	1.110	34.723	27.847	45.961		2302	0.30					9.5								3877	10.3 +0.4	1.01 +0.13		12.5 +0.7
293	3884	1.11	34.725	27.848	45.962		2302(I)		-176.8								24.5 +1.5				3884				
593	3931		34.720				2303(I)											0.7			3931				
114	4036	1.020	34.719	27.849	45.973	5.4	2306									111.3	23.6 +0.6				4036				
592	4064	0.95	34.719	27.854	45.986		2304(I)											0.8	+0.4		4064				
115	4187	0.901	34.716	27.854	45.992		2295	0.31													4187	9.7 +0.6	0.84 +0.15		7.6 +1.1
590	4269	0.84	34.715	27.858	46.002		2290(I)											0.5			4269				
294	4281	0.86	34.716	27.857	45.999		2290(I)		-175.1								22.7 +1.2	1.2			4281				
116	4337	0.860	34.716	27.857	45.999	5.3	2288									109.4					4337				
588	4443	0.78	34.713	27.859	46.010		2291(I)											0.7			4443				
117	4487	0.801	34.713	27.858	46.007		2294						8.5			107.1					4487	9.1 +0.4	1.45 +0.12		7.0 +0.3
118	4528	0.793	34.714	27.860	46.009		2297	0.35													4528	8.8 +0.4	1.83 +0.16		7.3 +0.2
119	4561	0.791	34.713	27.859	46.008	5.1	2296														4561	8.6 +0.3	2.27 +0.22		7.7 +0.2
295	4581	0.78	34.714	27.860	46.011		2295(I)		-175.1								20.9 +0.5	1.1			4581				
120	4592	0.789	34.713	27.859	46.009		2295(I)														4592	8.5 +0.3	1.52 +0.12		6.4 +0.2
121	4617	0.783	34.713	27.859	46.010		2294(I)	0.41								106.7					4617		1.66 +0.13		
122	4634	0.781	34.713	27.860	46.010		2293(I)														4634		1.71 +0.18		6.0 +0.2
123	4649	0.777	34.714	27.861	46.012		2292(I)														4649		1.91 +0.20		6.4 +0.3
124	4659	0.777	34.714	27.861	46.012		2292						7.8			107.2					4659		2.00 +0.22		6.1 +0.2

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

STATION 425 — **POSITION: 17°18'S 55°51'E** — **DATE: 18 JAN 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
						UH		UH				UM	----------SIO----------							SIO					
225	13	28.19	35.111	22.466	38.565	0.8	1970	1.49				2.96+0.13	-1.1								13	11.6 +0.4			
226	95	24.77	35.110	23.522	39.797	0.0	1967					2.66+0.12					7.3 +0.5				95				
227	146	23.48	35.190	23.963	40.305		1986	1.37				2.88+0.12	-0.3								146	12.6 +0.5			
228	235	20.51	35.381	24.937	41.443		2053					2.67+0.11					7.9 +0.9				235				
229	323	16.44	35.415	25.992	42.752		2098	1.13				2.07+0.10	2.3								323	8.6 +0.7			
230	464	8.67	34.696	26.973	44.345		2153					0.25+0.06					9.8 +0.5				464				
231	597	6.713	34.597	27.182	44.731	5.9	2224	0.62				0.07+0.03	4.1								597	9.1 +0.3			
101	771	5.741	34.624	27.328	44.969		2266	0.48				0.05+0.04					15.0 +1.0				771				
102	946	4.868	34.664	27.463	45.187	7.2	2297					0.06+0.05	9.0								946	12.2 +0.3			
103	1086	4.109	34.650	27.534	45.334		2288	0.34									18.9 +0.7				1086				
104	1236	3.691	34.677	27.598	45.439	6.7	2305						9.7								1236	13.8 +0.4			
105	1368	3.253	34.672	27.636	45.522		2295	0.40									18.7 +0.7				1368				
106	1509	2.827	34.698	27.695	45.625		2300						10.0								1509	13.8 +0.4			
107	1686	2.416	34.709	27.739	45.712	6.2	2295	0.31									23.1 +0.7				1686				
108	1859	2.236	34.719	27.761	45.753		2301						11.8								1859	13.3 +0.4			
109	2033	2.057	34.728	27.783	45.793	5.3	2309	0.28									24.0 +0.6				2033				
110	2258	1.874	34.734	27.802	45.832		2317						10.9								2258	13.4 +0.4			
111	2381	1.814	34.736	27.808	45.844		2316	0.22					12.6				25.0 +0.5				2381				
112	2559	1.733	34.737	27.815	45.860	5.7	2317						11.5								2559	13.8 +0.5			
114	2742	1.632	34.736	27.821	45.877		2324	0.23									25.8 +0.9				2742				
115	2916	1.560	34.736	27.826	45.890		2322	0.18					11.3								2916	14.4 +0.3			
116	3088	1.484	34.736	27.832	45.904	4.6	2324										24.0 +0.9				3088				
117	3263	1.408	34.732	27.834	45.915		2317	0.28					10.5								3263	13.7 +0.6			
118	3340	1.370	34.730	27.835	45.920	5.9	2327										26.6 +0.8				3340				
119	3610	1.230	34.728	27 843	45.943		2314	0.35					11.4								3610	12.7 +0.4			
120	3778	1.128	34.724	27.846	45.958	5.6	2311	0.29									25.0 +0.5				3778				
121	3951	1.005	34.721	27.852	45.977		2308	0.35					8.3								3951	11.2 +0.3			
122	4118	0.880	34.720	27.859	45.998	5.0	2298										26.3 +0.6				4118				
123	4288	0.800	34.714	27.859	46.008		2296	0.35					7.8								4288	9.6 +0.5			
124	4459	0.726	34.711	27.861	46.018	5.1	2292						8.3				24.1 +0.9				4459				
												PRECISION:	1.0												

STATION 426 — **POSITION: 18°54'S 54°47'E** — **DATE: 20 JAN 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
												UM													
386	19	27.81	35.130	22.602	38.719							1972		123.8							19				
387	69	25.56	35.031	23.226	39.461							1966		126.5							69				
390	172	21.97	35.253	24.440	40.864							2018		116.7							172				
391	296	16.78	35.505	25.982	42.718							2094		99.1							296				
392	544	10.70	34.942	26.824	44.019							2129		7.4							544				
393	843	6.26	34.566	27.216	44.809							2228		-116.4							843				
395	1191	4.40	34.657	27.509	45.280							2291		-162.4							1191				
388	1437	3.51	34.673	27.613	45.473							2295		-166.6							1437				
286	1692	2.75	34.695	27.699	45.637							2302		-165.9							1692				
287	1941	2.36	34.716	27.749	45.728							2303		-177.8							1941				
290	2192	2.02	34.734	27.790	45.804							2312		-178.8							2192				
291	2491	1.84	34.739	27.808	45.841							2324		-185.5							2491				
292	2792	1.66	34.737	27.820	45.872							2320		-178.6							2792				
294	3689	1.22	34.729	27.844	45.946							2316		-174.7							3689				
295	4137	0.89	34.720	27.859	45.997							2310		-169.1							4137				
288	4585	0.68	34.712	27.865	46.028							2299		-167.4							4585				

(I) INTERPOLATED FROM NISKIN DATA

STATION 427 — POSITION: 27°4'S 56°58'E — DATE: 30 JAN 78

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ(^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	----------SIO----------				SIO	NOOW				SIO			
301	5	25.588	35.239	23.374	39.602		1974	1.68				2.82+0.11	-1.5												
486	5	25.52	35.241	23.397	39.629		1974(I)		129.7			2.77+0.10					7.8 +0.4				5	10.0 +0.5			
302	40	25.314	35.242	23.459	39.702		1974					2.82+0.12									40				
303	74	24.107	35.264	23.836	40.142		1997(I)	1.63				2.84+0.11									74				
304	111	20.403	35.431	25.005	41.516		2037					2.71+0.12									111				
305	129	19.101	35.481	25.386	41.975		2058	1.34				2.52+0.11	0.9								129	9.7 +0.5			
487	129	19.02	35.499	25.419	42.012		2058(I)		115.4			2.45+0.08					8.8 +0.7				129				
306	143	18.701	35.513	25.513	42.125		2058					2.37+0.11									143				
488	183	16.94	35.513	25.949	42.674		2083(I)		113.0			2.15+0.07					9.3 +0.4				183				
307	186	16.825	35.516	25.978	42.711		2085	1.25				2.30+0.10									186	9.5 +0.6			
308	286	14.504	35.397	26.418	43.313		2091(I)	1.37				1.64+0.08									286				
490	367	13.45	35.285	26.557	43.531		2097(I)		76.3								6.6 +0.5				367				
309	373	13.353	35.277	26.570	43.551		2097	1.40				1.38+0.07	1.2								373				
310	459	12.486	35.168	26.661	43.711		2116					1.16+0.07									459	8.7 +0.4			
491	542	11.77	35.071	26.726	43.832		2119(I)		34.2								9.1 +0.6				542				
311	548	11.676	35.059	26.734	43.849		2119(I)	1.47				0.72+0.06									548				
312	635	10.805	34.949	26.810	43.996		2121(I)					0.63+0.07									635				
492	717	10.13	34.865	26.863	44.107		2123(I)		-12.1								8.6 +0.3				717				
313	723	10.069	34.855	26.867	44.116		2123	1.55				0.46+0.05	0.5								723	7.7 +0.4			
314	873	8.030	34.615	27.008	44.438		2158(I)					0.17+0.04					9.6 +0.4				873				
315	896	7.751	34.592	27.032	44.487		2164	1.24													896	9.5 +0.4			
316	1003	6.008	34.483	27.184	44.803		2190(I)	1.12													1003				
317	1094	5.029	34.438	27.266	44.981		2215	0.91				0.01+0.04	3.0								1094	9.8 +0.7			
493	1096	4.95	34.442	27.278	45.000		2216(I)		-107.7								15.8 +0.6				1096				
318	1167	4.529	34.470	27.347	45.110		2238					0.01+0.04									1167				
319	1244	3.882	34.460	27.406	45.235		2255(I)	0.75									15.6 +0.6				1244				
320	1346	3.465	34.511	27.488	45.357		2266						7.7								1346	11.0 +0.5			
494	1349	3.43	34.521	27.499	45.372		2266(I)		-148.5								15.3 +0.6				1349				
321	1431	3.114	34.553	27.554	45.458		2267	0.58													1431				
322	1516	2.956	34.606	27.610	45.529		2271										17.8 +0.9				1516				
323	1595	2.793	34.629	27.643	45.578		2275	0.46					9.3								1595				
324	1665	2.643	34.645	27.669	45.619		2285	0.41													1665	11.8 +0.9			
101	1741	2.575	34.657	27.684	45.642		2278	0.42					11.0				17.6 +0.4				1741				
495	1747	2.50	34.668	27.700	45.665		2278(I)		-166.5												1747				
102	1900	2.366	34.697	27.733	45.712		2281						9.9								1900	13.5 +0.4			
103	2058	2.220	34.720	27.764	45.757		2290	0.45					10.7				19.4 +0.5				2058				
286	2068	2.18	34.721	27.767	45.765		2290(I)		-163.5												2068				
104	2217	2.124	34.736	27.784	45.787		2287														2217	12.9 +0.5			
105	2387	1.970	34.738	27.798	45.817		2302	0.37					9.9				19.9 +0.4				2387				
287	2470	1.89	34.743	27.807	45.835		2306(I)		-174.8												2470				
106	2537	1.867	34.742	27.809	45.839		2308						11.4								2537	13.5 +0.6			
107	2698	1.755	34.741	27.816	45.859		2316	0.36									24.8 +0.4				2698				
108	2858	1.644	34.738	27.822	45.877		2319						11.2								2858	13.9 +0.6			
109	3016	1.537	34.735	27.827	45.894		2308	0.24					11.6				23.0 +0.5				3016				
110	3172	1.426	34.731	27.832	45.910		2312						12.8								3172	13.0 +0.5			
290	3224	1.36	34.731	27.836	45.922		2311(I)		-178.1												3224				
111	3333	1.308	34.728	27.837	45.929		2309	0.34					11.1				23.0 +0.7				3333				
112	3493	1.191	34.726	27.844	45.949		2310														3493	13.2 +0.6			
291	3595	1.13	34.726	27.848	45.960		2307(I)		-179.5												3595				
114	3661	1.086	34.722	27.847	45.964		2305	0.35					9.8				22.7 +0.5				3661				
115	3821	0.988	34.720	27.852	45.980		2304	0.38					10.3								3821	13.0 +0.7			
116	3980	0.883	34.718	27.857	45.996		2291	0.34					8.4				23.0 +0.8				3980				
292	3984	0.88	34.719	27.859	45.999		2291(I)		-165.8												3984				
117	4140	0.797	34.715	27.860	46.009		2287	0.38													4140	11.6 +0.5			
118	4297	0.707	34.713	27.864	46.023		2291										22.8 +0.6				4297				
587	4328	0.68	34.710	27.863	46.026		2289(I)											0.6			4328				
293	4333	0.67	34.712	27.865	46.028		2289(I)		-165.4												4333				
588	4430	0.64	34.711	27.866	46.032		2283(I)											0.4			4430				
119	4456	0.628	34.712	27.868	46.036		2281	0.37													4456	9.5 +0.4			
590	4531	0.60	34.708	27.867	46.038		2283(I)											0.8	+0.3		4531				
120	4608	0.578	34.709	27.868	46.042		2286						6.7				20.6 +0.5				4608				
591	4633	0.57	34.706	27.867	46.041		2286(I)											0.6			4633				
294	4700	0.56	34.709	27.869	46.044		2285(I)		-161.5												4700				
592	4733	0.56	34.707	27.868	46.044		2285(I)											0.7	+0.3		4733				
121	4765	0.549	34.707	27.869	46.046		2285	0.46													4765	8.5 +0.5			
593	4834	0.52	34.707	27.870	46.050		2282(I)											0.6			4834				
122	4922	0.521	34.709	27.872	46.052		2279						5.6				22.4 +1.0				4922				
594	4935	0.52	34.704	27.868	46.048		2280(I)											0.7	+0.3		4935				
123	5031	0.518	34.707	27.870	46.051		2285	0.48													5031				
595	5036	0.51	34.706	27.870	46.051		2284(I)											0.8	+0.2		5036				
124	5043	0.518	34.707	27.870	46.051		2283						8.3								5043	8.4 +0.4			
295	5066	0.51	34.706	27.870	46.051				-161.4												5066				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 1.0

STATION 428 POSITION: 37°45'S 57°37'E DATE: 2 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM		SIO	UM		MCM / SIO*				SIO					SIO	SIO		SIO
601	1	18.747	35.334	25.364	41.979		2038	1.75			0.60	2.29+0.11	-1.5	3.84	16.01	-1.8						1				
													-1.2*	3.97*	16.17*	0.6*										
386	9	18.50	35.322	25.418	42.048		2032(I)		98.9									7.6 +0.6				9				
602	10	18.390	35.341	25.460	42.097		2032					2.16+0.10										10	6.6 +0.4	0.88 +0.25		5.7 +0.7
603	41	16.238	35.387	26.018	42.794		2050	1.68				2.13+0.10										41				
604	86	15.138	35.399	26.279	43.130		2079				0.61	2.05+0.11										86				
605	113	14.636	35.387	26.381	43.267		2083	1.36				2.05+0.10	-1.3	3.83	16.27	-1.8						113	4.5 +0.5	0.45 +0.07		16.9 +0.9
													-1.2*	4.08*	16.92*	0.6*										
387	119	14.24	35.339	26.430	43.345		2085(I)		91.2									7.3 +0.6				119				
606	145	14.165	35.318	26.430	43.351		2092(I)					1.89+0.09										145				
607	179	13.732	35.276	26.490	43.444		2099	1.35				1.76+0.09										179	8.6 +0.5	0.63 +0.07		10.9 +0.8
388	193	13.81	35.356	26.536	43.482		2097(I)		91.6									7.6 +0.6				193				
608	250	13.567	35.321	26.559	43.524		2085				0.60	1.77+0.09										250	8.9 +0.5	0.38 +0.06		9.2 +0.7
390	254	13.52	35.318	26.567	43.534		2085(I)		88.3									8.9 +0.6				254				
609	347	12.816	35.206	26.625	43.648		2095(I)	1.39				1.58+0.09	-0.1	3.91	16.63	-1.2						347				
													-0.6*	4.01*	16.74*	0.8*										
610	444	12.040	35.077	26.678	43.764		2115				0.41	1.26+0.08										444				
391	498	11.56	34.998	26.710	43.835		2119(I)		44.2									9.4 +0.6				498				
611	538	11.192	34.960	26.748	43.903		2122(I)	1.29				0.73+0.06										538	7.7 +0.5	0.12 +0.03		11.0 +0.8
612	634	9.957	34.819	26.858	44.117		2131					0.50+0.05						10.4 +0.7				634				
613	728	8.828	34.690	26.944	44.302		2149(I)	1.25			0.19	0.34+0.04	1.4	4.00	17.28	-0.7						728				
													-0.2*	4.18*	17.70*	1.2*										
392	797	8.14	34.631	27.005	44.425		2163(I)		-39.9									11.2 +0.6				797				
614	826	7.596	34.575	27.041	44.511		2169					0.30+0.05										826	7.9 +0.4	0.35 +0.05		8.5 +0.6
615	921	6.390	34.477	27.130	44.713		2185(I)	1.12			0.11	0.03+0.06						12.3 +0.7				921				
616	1014	5.303	34.403	27.206	44.896		2197				0.02	0.09+0.05										1014				
393	1096	4.42	34.369	27.278	45.056		2202(I)		-83.5									15.8 +0.5				1096				
617	1111	4.508	34.374	27.273	45.041		2203	0.91				0.20+0.06	2.6	3.96	17.49	-1.0						1111	8.9 +0.5	0.48 +0.07		8.4 +0.8
													2.6*	4.15*	17.90*	1.3*										
618	1205	3.923	34.398	27.353	45.179		2218(I)				-0.01	0.08+0.05										1205				
619	1296	3.467	34.412	27.409	45.281		2234	0.73				0.02+0.05						16.2 +0.6				1296				
620	1384	3.274	34.454	27.460	45.351		2243															1384	10.0 +0.5	1.64 +0.23		10.8 +0.8
394	1418	3.09	34.472	27.491	45.400		2247(I)		-130.6									13.8 +0.5				1418				
621	1472	2.944	34.476	27.508	45.432		2253	0.63			-0.13		6.2	4.07	17.91	-0.1						1472				
													6.5*	4.22*	18.20*	2.0*										
622	1557	2.809	34.519	27.554	45.491		2256(I)											18.4 +0.5				1557				
623	1647	2.676	34.566	27.603	45.553		2259	0.43														1647				
624	1728	2.585	34.602	27.639	45.598		2269				0.04		8.2	4.09	17.94	0.5						1728	10.9 +0.6	0.80 +0.11		12.1 +1.0
													8.3*	4.22*	18.16*	2.3*										
395	1739	2.56	34.603	27.642	45.602		2269(I)		-151.5													1739				
401	1808	2.530	34.628	27.665	45.628		2267	0.37					8.8	4.08	18.13	-0.8		16.1 +0.7				1808				
													7.6*	4.20*	18.11*	2.2*										
402	2033	2.359	34.700	27.736	45.715		2272				0.10		9.3	4.13	18.13	0.5						2033	11.5 +0.5	1.66 +0.29		10.9 +0.8
													7.7*	4.31*	18.47*	2.8*										
586	2042	2.36	34.710	27.744	45.723		2272(I)		-153.0									15.5 +0.7				2042				
403	2250	2.191	34.729	27.773	45.769		2264	0.45					14.4	4.13	18.09	0.6		17.0 +0.7				2250				
													8.9*	4.26*	18.27*	2.8*										
404	2464	2.042	34.753	27.804	45.815		2268(I)						17.7	4.29	18.68	1.4						2464	12.5 +0.5	1.16 +0.19		11.3 +0.8
													9.2*	4.18*	18.01*	2.6*										
587	2490	2.04	34.763	27.812	45.823		2268(I)		-160.9									18.8 +0.5				2490				
405	2684	1.863	34.758	27.822	45.852		2274	0.48			0.10		10.4	4.26	18.61	1.0		20.9 +0.6				2684				
													9.0*	4.34*	18.59*	3.2*										
406	2910	1.650	34.749	27.830	45.884		2272(I)						9.6*	4.28*	18.40*	2.9*						2910	11.9 +0.7	1.45 +0.27		11.6 +1.1
588	2939	1.65	34.757	27.836	45.889		2271(I)		-156.4									21.1 +0.8				2939				
407	3138	1.467	34.750	27.844	45.918		2269	0.51					10.8	4.29	18.66	1.8		21.9 +0.6				3138				
													8.8*	4.25*	18.30*	2.9*										
408	3368	1.220	34.742	27.855	45.956		2285						8.3	4.36	18.99	1.7						3368	11.4 +0.4	0.73 +0.10		10.0 +0.7
													8.1*	4.34*	18.64*	3.2*										
590	3387	1.20	34.747	27.860	45.962		2285(I)		-150.0									19.7 +0.4				3387				
409	3584	0.969	34.725	27.857	45.987		2277	0.44			0.04		9.2	4.27	18.60	1.8		20.3 +0.6				3584				
													8.1*	4.44*	19.00*	3.7*										
410	3801	0.656	34.712	27.866	46.031		2280(I)						7.0	4.26	18.53	2.0						3801	9.6 +0.6	0.64 +0.14		9.6 +0.9
													8.0*	4.28*	18.54*	2.5*										
591	3834	0.62	34.716	27.871	46.040		2281(I)		-156.0									22.8 +0.7				3834				
411	4023	0.376	34.700	27.873	46.069		2285	0.45					6.7	4.46	19.40	2.1		21.3 +0.5				4023				
													8.0*	4.28*	18.53*	2.8*										
412	4250	0.241	34.691	27.873	46.085		2281	0.47			-0.04		6.7	4.28	18.78	1.3						4250	7.8 +0.5	1.09 +0.12		7.3 +0.7
													6.3*	4.31*	18.58*	3.2*										
592	4282	0.23	34.696	27.877	46.091		2281(I)		-158.1									20.2 +0.4				4282				
414	4469	0.154	34.688	27.875	46.097		2279	0.47					7.9					23.0 +0.9				4469				
													7.2*	4.28*	18.56*	2.8*										
415	4690	0.097	34.688	27.878	46.107		2283(I)	0.45					7.6	4.24	18.79	0.4						4690	6.4 +0.4	1.66 +0.18		5.0 +0.6
													5.8*	4.38*	18.82*	3.7*										
593	4730	0.09	34.691	27.881	46.110		2283(I)		-154.3									22.8 +0.9				4730				
416	4918	0.068	34.684	27.876	46.109		2285				-0.12		7.6*	4.25*	18.46*	2.5*		21.5 +0.5				4918				
417	5144	0.040	34.682	27.876	46.112		2279(I)	0.54					6.0	4.40	19.31	1.5						5144	5.2 +0.4	0.80 +0.09		3.9 +0.6
													7.3*	4.30*	18.72*	2.4*										
594	5175	0.04	34.688	27.881	46.116		2278(I)		-162.9									21.1 +0.5				5175				
418	5184	0.035	34.682	27.876	46.112		2278															5184		1.85 +0.30		
419	5216	0.032	34.682	27.877	46.113		2282(I)	0.43														5216		3.35 +0.40		
420	5245	0.029	34.682	27.877	46.113		2285															5245	4.8 +0.5	3.01 +0.32		3.4 +0.8
421	5264	0.028	34.682	27.877	46.114		2280	0.45														5264		2.06 +0.13		
422	5281	0.028	34.681	27.876	46.113		2285															5281	4.5 +0.8	1.01 +0.12		4.7 +1.3
423	5310	0.027	34.681	27.876	46.113		2282	0.43														5310		1.94 +0.15		
424	5323	0.026	34.681	27.876	46.113		2278				-0.14		5.8	4.44	19.45	1.8						5323	5.4 +0.4	2.36 +0.21		2.7 +0.7
													6.6*	4.44*	19.11*	3.4*										
595	5325	0.03	34.688	27.881	46.117				-159.8													5325				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.3 0.01 0.06 0.2
1.0 * 0.01* 0.06* 0.2*

STATION 429 — POSITION: 47°40'S 57°51'E — DATE: 6 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	$\delta(^3He)$ %	He 10⁻⁵cc/kg	Ne 10⁻⁵cc/kg	$\Delta(He/Ne)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM	MCM	MCM	MCM	LSU	SIO					SIO			
301	4	6.492	33.726	26.525	44.122		2108	1.98				0.67+0.08	-1.8	3.97	17.50	-1.7	66.1					4	7.3 +0.7			
486	4	6.48	33.730	26.530	44.128		2108(I)		28.0									14.5 +0.6				4				
302	30	6.448	33.743	26.544	44.144		2109	1.99				0.62+0.06										30				
303	70	6.292	33.759	26.577	44.191		2100	2.00				0.58+0.06					65.4					70	6.8 +0.5			
487	74	6.24	33.761	26.585	44.204		2101(I)		29.4									13.8 +0.6				74				
304	144	4.236	33.808	26.853	44.666		2135	1.75				0.55+0.06					68.1					144				
488	149	4.08	33.816	26.875	44.704		2137(I)		14.3									13.7 +0.8				149				
305	195	3.116	33.896	27.030	44.955		2152	1.55				0.50+0.07	-0.5	4.03	18.01	-1.6						195				
306	243	3.083	34.036	27.145	45.069		2164	1.37				0.41+0.06					64.3					243	8.8 +0.4			
490	248	3.08	34.029	27.140	45.064		2166(I)		-16.5									13.8 +0.6				248				
307	295	2.985	34.123	27.223	45.154		2179	1.16				0.38+0.06										295				
308	386	2.539	34.184	27.309	45.286		2189	1.05				0.38+0.06	1.4				65.5					386				
309	447	2.592	34.243	27.352	45.321		2215(I)	0.95									69.3					447	10.9 +0.5			
491	452	2.60	34.250	27.357	45.325		2217(I)		-81.3									15.5 +0.7				452				
310	522	2.539	34.314	27.413	45.386		2245	0.72				0.13+0.05	3.7	4.11	18.15	-0.3	71.6					522				
311	600	2.479	34.374	27.466	45.443		2247	0.65														600				
312	679	2.417	34.432	27.517	45.499		2247	0.46				0.12+0.04					75.3					679	11.4 +0.5			
492	684	2.43	34.442	27.525	45.504		2247(I)		-124.8									15.8 +0.7				684				
313	755	2.438	34.492	27.564	45.541		2251(I)	0.45						7.7	4.13	18.14	0.3					755				
314	832	2.440	34.529	27.593	45.569		2256	0.44				0.11+0.04					78.2	15.1 +0.4				832				
315	908	2.414	34.566	27.625	45.602		2260(I)	0.51														908	12.0 +0.6			
316	986	2.384	34.593	27.649	45.628		2264	0.40						7.1	4.13	18.11	0.5	79.4					986				
493	995	2.34	34.604	27.661	45.645		2264(I)		-149.8									17.1 +0.8				995				
317	1081	2.341	34.633	27.684	45.667		2266	0.44				0.05+0.05										1081	12.3 +0.6			
318	1181	2.315	34.662	27.710	45.694		2260(I)	0.45									81.4	16.9 +0.7				1181				
319	1276	2.293	34.695	27.738	45.724		2255	0.44						8.1	4.24	18.44	1.4						1276	11.2 +0.4			
320	1372	2.234	34.720	27.762	45.754		2257	0.55									81.8					1372				
494	1382	2.21	34.723	27.767	45.760		2257(I)		-147.0									16.3 +0.5				1382				
321	1468	2.196	34.734	27.777	45.772		2259(I)	0.43						9.6	4.22	18.45	1.0					1468	12.5 +0.5			
322	1567	2.149	34.747	27.791	45.791		2261	0.52									82.4	16.1 +0.5				1567				
323	1662	2.092	34.757	27.803	45.809		2256	0.46														1662				
324	1759	2.018	34.764	27.815	45.828		2255	0.42						7.9	4.19	18.26	1.4	83.3					1759	11.6 +0.6			
495	1765	1.99	34.767	27.819	45.835		2255(I)		-143.7									17.3 +0.5				1765				
101	1886	1.909	34.768	27.826	45.851		2253	0.53						4.4	4.20	18.38	1.0					1886				
102	2055	1.769	34.770	27.838	45.878		2252	0.50						7.6	4.26	18.57	1.5	86.7					2055	11.0 +0.4			
286	2065	1.77	34.772	27.840	45.881		2252(I)		-143.6									16.6 +0.9				2065				
103	2225	1.609	34.767	27.848	45.905		2247	0.54														2225				
104	2394	1.456	34.758	27.851	45.926		2257	0.40						7.0	4.24	18.49	1.4	90.9					2394	11.3 +0.6			
287	2406	1.42	34.760	27.855	45.933		2257(I)		-149.6									18.0 +0.5				2406				
105	2564	1.285	34.749	27.856	45.949		2259	0.46						8.9	4.21	18.39	1.3	91.3					2564				
106	2732	1.121	34.740	27.860	45.972		2275	0.46									92.0					2732	12.3 +0.5			
288	2745		34.742				2274(I)		-151.3									18.5 +0.4				2745				
107	2903	0.954	34.730	27.862	45.993		2263	0.32						8.9	4.16	18.36	0.5	94.2					2903				
108	3073	0.766	34.720	27.866	46.018		2269	0.47						8.3	4.18	18.46	0.5	95.5					3073	10.4 +0.4			
290	3085	0.78	34.724	27.868	46.018		2270(I)		-159.6									21.5 +0.9				3085				
109	3238	0.606	34.711	27.868	46.039		2275	0.48														3238				
110	3407	0.433	34.702	27.871	46.061		2276	0.47						8.4				97.8					3407	9.6 +0.5			
291	3424	0.44	34.704	27.872	46.062		2276(I)		-161.5									20.5 +0.6				3424				
111	3575	0.303	34.696	27.874	46.079		2274	0.40						7.5	4.16	18.50	-0.1						3575				
112	3740	0.195	34.689	27.874	46.091		2271	0.49									98.6					3740	8.7 +0.4			
292	3762	0.20	34.692	27.876	46.093		2269(I)		-160.0									20.5 +0.5				3762				
114	3904	0.106	34.685	27.875	46.103		2261	0.45						7.5	4.18	18.62	0.0						3904				
115	4073	0.016	34.682	27.877	46.116		2277	0.53									100.2					4073	7.4 +0.5			
293	4098	-0.03	34.681	27.879	46.123		2277(I)		-169.3									21.4 +0.5				4098				
116	4238	-0.090	34.677	27.879	46.129		2272	0.53									101.1					4238				
117	4405	-0.169	34.674	27.880	46.140		2268	0.50						6.3				101.3					4405	8.0 +0.6			
294	4433	-0.22	34.673	27.882	46.148		2273(I)		-164.9									22.7 +1.6				4433				
118	4443	-0.187	34.673	27.880	46.142		2275	0.47														4443	8.8 +0.5			
119	4474	-0.201	34.673	27.881	46.144		2276	0.45									101.1					4474	8.4 +0.6			
120	4500	-0.213	34.673	27.881	46.146		2277	0.54						7.1								4500	8.0 +0.6			
121	4519	-0.241	34.671	27.881	46.149		2277	0.48														4519	8.5 +0.4			
122	4537	-0.255	34.670	27.881	46.151		2270	0.53									101.8					4537	8.6 +0.4			
123	4553	-0.262	34.670	27.881	46.152		2261	0.50														4553	7.8 +0.5			
295	4562	-0.28	34.671	27.883	46.156		2269(I)		-158.2									24.3 +0.7				4562				
124	4563	-0.265	34.670	27.881	46.152		2270	0.52						6.4	4.22	18.67	0.9	101.8					4563	8.1 +0.5			
PRECISION:													0.3	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 430 POSITION: 59°59'S 60°58'E DATE: 10 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM					SIO	NOOW					SIO	SIO	SIO
486	4	1.80	33.842	27.093	45.160				-19.9									15.5 +0.5				4				
301	8	1.804	33.841	27.092	45.159		2164	1.54				0.52+0.07	-1.3									8	7.1 +0.4	1.24 +0.27		4.1 +0.5
302	18	1.764	33.842	27.096	45.167		2159					0.63+0.06										18				
303	54	1.538	33.838	27.108	45.204		2170(I)	1.49				0.59+0.06	-1.0	3.99	18.04	-2.1		16.9 +0.6				54				
304	79	-0.906	33.966	27.339	45.709		2178					0.51+0.06	-1.4									79	7.8 +0.4	0.92 +0.12		9.2 +1.8
305	99	-0.851	34.023	27.383	45.745		2193	1.29				0.62+0.09										99	9.0 +0.4	0.60 +0.11		8.0 +0.6
487	99	-0.99	34.019	27.385	45.763		2193(I)		-41.9									17.9 +0.6				99				
306	119	-1.148	34.025	27.395	45.792		2194					0.46+0.05	-0.6	4.14	18.79	-1.3						119	9.5 +0.7	0.72 +0.12		10.5 +0.8
307	177	1.419	34.418	27.581	45.671		2260	0.45				0.16+0.05						16.7 +0.5				177				
308	241	1.833	34.530	27.641	45.682		2273					0.10+0.05	7.4	4.16	18.41	-0.2						241				
309	307	1.906	34.582	27.678	45.709		2270	0.31				0.09+0.06										307	13.1 +0.8	0.23 +0.05		15.7 +1.1
488	309	1.89	34.585	27.681	45.713		2270(I)		-143.0									19.6 +0.5				309				
310	397	1.895	34.631	27.718	45.749		2276					0.09+0.06										397				
490	498	1.89	34.666	27.746	45.777		2276(I)		-149.4									17.0 +0.5				498				
311	501	1.888	34.667	27.747	45.778		2276(I)	0.36				0.04+0.04	9.0	4.20	18.50	0.4						501	13.2 +0.4	0.29 +0.06		15.6 +0.5
312	598	1.886	34.694	27.769	45.799		2276					0.03+0.05										598				
313	693	1.845	34.714	27.788	45.822		2270	0.38					7.7	4.12	18.17	0.2						693				
491	747	1.80	34.722	27.797	45.835		2270(I)		-153.6									19.9 +1.5				747				
314	794	1.796	34.730	27.804	45.843		2270(I)															794	12.4 +0.8	0.18 +0.07		14.4 +1.1
315	892	1.733	34.738	27.815	45.860		2271	0.49														892				
316	991	1.673	34.746	27.826	45.877		2265						8.8	4.19	18.40	0.7						991	12.4 +0.4	0.27 +0.10		12.2 +0.6
492	997	1.68	34.750	27.829	45.880		2265(I)		-149.3									16.5 +0.5				997				
317	1089	1.589	34.746	27.832	45.893		2265(I)	0.49				0.09+0.05						19.3 +0.7				1089				
319	1289	1.385	34.745	27.846	45.929		2264	0.45					8.2	4.15	18.35	0.3						1289	11.7 +0.3	0.50 +0.05		13.4 +0.4
493	1296	1.35	34.745	27.848	45.935		2264(I)		-154.0									19.8 +1.3				1296				
321	1488	1.189	34.735	27.851	45.956		2267(I)	0.51														1488				
322	1587	1.089	34.734	27.857	45.973		2265						8.3									1587	11.8 +0.7	0.31 +0.04		11.6 +1.0
494	1593	1.07	34.733	27.858	45.976		2265(I)		-155.1			-0.01+0.05						20.9 +0.8				1593				
323	1690	0.999	34.727	27.857	45.983		2266	0.45														1690				
324	1813	0.890	34.721	27.859	45.997		2273						8.8									1813	12.1 +0.4	0.45 +0.06		12.3 +0.5
495	1814	0.87	34.724	27.863	46.003		2273(I)		-161.5			0.04+0.05						20.9 +0.5				1814				
101	1937	0.772	34.718	27.864	46.016		2277	0.51														1937				
102	2108	0.640	34.709	27.865	46.031		2274						8.3	4.33	19.09	0.8						2108	11.6 +0.5	1.29 +0.27		12.6 +0.7
286	2135	0.63	34.711	27.867	46.035		2276(I)		-163.3									20.8 +0.6				2135				
103	2285	0.521	34.702	27.866	46.046		2285	0.39														2285				
104	2459	0.412	34.699	27.870	46.063		2276						7.8									2459	11.7 +0.3	0.77 +0.09		12.5 +0.4
287	2486	0.37	34.697	27.870	46.068		2276(I)		-163.3									21.4 +0.6				2486				
105	2634	0.302	34.693	27.871	46.076		2280	0.40														2634				
106	2805	0.207	34.687	27.871	46.088		2278						6.6	4.34	19.10	1.1						2805	11.5 +0.6	1.03 +0.13		13.0 +0.8
288	2835	0.15	34.687	27.874	46.097		2277(I)		-158.1									21.0 +0.7				2835				
586	2972	0.09	34.685	27.876	46.105		2275(I)												0.9 +0.4			2972				
107	2980	0.100	34.683	27.874	46.103		2275	0.47														2980				
108	3152	0.012	34.680	27.876	46.115		2277															3152	11.5 +0.4	0.79 +0.11		11.7 +0.5
290	3186	-0.00	34.680	27.877	46.117		2278(I)		-160.8									21.3 +1.0				3186				
109	3330	-0.077	34.675	27.876	46.125		2280	0.48					6.8	4.30	19.05	0.6						3330				
588	3476		34.675				2272(I)												0.5			3476				
110	3506	-0.160	34.675	27.880	46.139		2271	0.48														3506	11.6 +0.6	0.55 +0.11		12.0 +0.9
291	3536	-0.17	34.673	27.879	46.140		2272(I)		-159.1									19.9 +0.6				3536				
590	3677	-0.24	34.672	27.882	46.150		2280(I)												1.4 +0.3			3677				
111	3681	-0.239	34.670	27.880	46.148		2280						6.7	4.31	18.97	1.2						3681				
112	3858	-0.305	34.667	27.881	46.157		2277															3858	12.3 +0.4	0.76 +0.16		12.8 +0.5
292	3874	-0.32	34.668	27.882	46.160		2276(I)		-162.8									21.0 +1.1				3874				
591	3876	-0.33	34.669	27.884	46.162		2276(I)												0.8 +0.4			3876				
114	4030	-0.375	34.665	27.882	46.167		2270	0.60					5.8	4.23	18.78	0.4						4030				
592	4077	-0.40	34.667	27.885	46.172		2271(I)												2.4 +0.5			4077				
115	4205	-0.437	34.663	27.884	46.175		2274	0.53					5.4	4.32	19.15	0.6						4205	11.7 +0.4	1.00 +0.19		9.1 +0.6
293	4213	-0.45	34.664	27.885	46.178		2274(I)		-159.5									21.1 +0.5				4213				
593	4276	-0.48	34.665	27.887	46.183		2271(I)												0.6 +0.3			4276				
594	4475	-0.53	34.662	27.887	46.188		2269(I)												1.1 +0.4			4475				
117	4554	-0.543	34.661	27.887	46.190		2271	0.51														4554	9.6 +0.6	0.94 +0.27		7.5 +1.0
294	4561	-0.55	34.663	27.888	46.192		2268(I)		-159.1									21.3 +0.5				4561				
118	4594	-0.557	34.662	27.888	46.193		2262															4594	10.0 +0.7	1.46 +0.22		
119	4625	-0.569	34.658	27.885	46.192		2279	0.53														4625		1.48 +0.16		
120	4650	-0.578	34.660	27.887	46.195		2268															4650	8.5 +0.3	1.36 +0.21		6.5 +0.5
121	4669	-0.589	34.659	27.887	46.196		2271	0.49														4669		1.20 +0.08		
595	4673	-0.60	34.660	27.888	46.198		2268(I)												2.5 +0.6			4673				
122	4684	-0.602	34.658	27.887	46.197		2263															4684	10.7 +0.4	1.19 +0.15		2.0 +0.6
295	4695	-0.64	34.658	27.888	46.203		2274(I)		-145.8									21.4 +0.6				4695				
123	4697	-0.606	34.660	27.889	46.199		2275	0.57														4697		1.14 +0.12		
124	4709	-0.615	34.659	27.888	46.200		2260						4.4	4.26	18.96	0.4						4709	7.6 +0.4	1.38 +0.23		6.2 +0.7
												PRECISION:	0.3	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 431 — **POSITION: 64°11'S 83°58'E** — **DATE: 13 FEB 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM				USC					SIO			SIO
101	5	2.349	33.788	27.009	45.018		2167	1.38				0.46+0.07		3.96	17.83	-2.1					5	7.4 +0.5			3.8 +0.7
286	9	2.34	33.789	27.010	45.021		2167(I)		-66.9								17.0 +0.4				9				
102	10	2.356	33.789	27.009	45.017		2167	1.36				0.41+0.07									10				
287	29	2.06	33.795	27.036	45.076		2182(I)		-67.9								17.0 +0.4				29				
103	42	-0.687	34.140	27.472	45.810		2199	1.06				0.35+0.07	1.1	4.05	18.30	-1.0					42	10.9 +0.5			8.7 +0.7
288	46	-0.62	34.170	27.493	45.823		2204(I)		-92.9								19.1 +0.3				46				
104	54	-1.075	34.265	27.587	45.967		2213	0.84				0.37+0.07									54				
105	136	1.249	34.580	27.723	45.826		2274	0.35				0.20+0.06									136				
106	210	1.602	34.655	27.758	45.820		2277	0.27				-0.01+0.05	9.7	4.16	18.25	0.8					210	14.2 +0.4			10.9 +0.6
290	210	1.67	34.661	27.758	45.813		2277(I)		-147.8								19.2 +0.4				210				
107	352	1.605	34.698	27.793	45.853		2281	0.42				0.06+0.05									352				
291	442	1.64	34.722	27.809	45.865		2279(I)										19.1 +0.3				442				
108	502	1.467	34.711	27.813	45.888		2277	0.40				0.12+0.06	8.9								502	12.9 +0.5			13.1 +0.8
292	674	1.46	34.738	27.835	45.910		2270(I)		-155.1								19.3 +0.4				674				
293	905	1.18	34.733	27.850	45.956		2278(I)		-159.1								20.1 +0.5				905				
110	918	1.080	34.721	27.847	45.964		2279	0.39				0.05+0.05									918	13.1 +0.5			10.4 +0.7
294	1119	0.98	34.725	27.856	45.984		2281(I)		-164.0								21.3 +0.3				1119				
111	1126	0.919	34.718	27.855	45.990		2281	0.40				0.04+0.06	8.7	4.17	18.41	0.5					1126	12.8 +0.4			10.6 +0.6
112	1334	0.775	34.714	27.861	46.012		2279	0.37													1334				
295	1392	0.72	34.713	27.863	46.021		2281(I)		-159.5			0.06+0.05					21.4 +0.5				1392				
114	1539	0.599	34.707	27.866	46.037		2285	0.48					7.7	4.23	18.46	1.9					1539	12.9 +0.8			12.9 +1.2
395	1665	0.48	34.701	27.868	46.053		2284(I)		-161.4								23.5 +0.4				1665				
115	1784	0.417	34.696	27.867	46.059		2282	0.45													1784	13.2 +0.5			13.0 +0.8
394	1939	0.31	34.693	27.870	46.074		2281(I)		-161.2								21.8 +0.4				1939				
116	2029	0.265	34.689	27.870	46.080		2281	0.47													2029				
393	2214	0.13	34.684	27.873	46.098		2283(I)		-161.6								22.2 +0.4				2214				
117	2272	0.102	34.680	27.871	46.100		2284	0.49					7.8	4.16	18.46	0.3					2272	13.3 +1.0			12.5 +1.3
392	2490	-0.01	34.679	27.876	46.118		2289(I)		-163.1								23.3 +0.5				2490				
118	2517	-0.022	34.676	27.874	46.117		2289	0.41													2517				
119	2760	-0.138	34.674	27.879	46.135		2281	0.48					6.6	4.31	19.05	0.9					2760	12.5 +0.5			12.0 +0.7
391	2763	-0.15	34.676	27.881	46.138		2281(I)		-161.7								21.1 +0.3				2763				
120	2945	-0.218	34.674	27.882	46.148		2278	0.52													2945	12.0 +0.6			12.2 +0.9
390	2975	-0.21	34.675	27.883	46.148		2278(I)		-155.5								21.1 +0.3				2975				
121	3129	-0.274	34.674	27.885	46.157		2280	0.52													3129				
388	3186	-0.29	34.676	27.887	46.161		2276(I)		-151.9								21.1 +0.4				3186				
122	3312	-0.331	34.675	27.888	46.167		2269	0.56					6.3	4.28	18.89	1.0					3312	10.4 +0.4			8.1 +0.6
387	3396	-0.35	34.679	27.893	46.173		2273(I)		-148.8								21.5 +0.3				3396				
123	3485	-0.384	34.680	27.895	46.179		2278	0.51				0.19+0.05									3485				
386	3580	-0.45	34.681	27.899	46.191		2276(I)		-151.4								22.3 +0.5				3580				
124	3605	-0.450	34.680	27.898	46.190		2275	0.56				0.31+0.05	6.1	4.19	18.69	0.1					3605	6.6 +0.6			6.3 +0.8
												PRECISION:	0.3	0.01	0.06	0.2									

STATION 432 — **POSITION: 59°19'S 92°38'E** — **DATE: 15 FEB 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UM			UM	MCM				USC	NOOW							
486	9	1.82	33.864	27.110	45.174				-54.0								16.5 +0.3				9				
301	11	1.831	33.865	27.109	45.172		2158					0.55+0.06									11				
302	34	1.827	33.865	27.110	45.173		2172					0.45+0.06	-1.8	4.01	18.03	-1.6					34				
303	60	-0.054	33.953	27.293	45.564		2187					0.34+0.05									60				
304	91	-0.836	34.170	27.502	45.856		2232					0.36+0.05									91				
487	91	-0.79	34.143	27.478	45.829		2232(I)		-93.8								17.5 +0.4				91				
305	172	0.567	34.451	27.662	45.845		2255(I)					0.19+0.04									172				
488	252	1.34	34.596	27.729	45.821		2277(I)		-135.9								18.7 +0.3				252				
306	254	1.333	34.591	27.726	45.819		2278					0.06+0.05	8.6								254				
307	333	1.288	34.628	27.759	45.856		2276					0.05+0.04									333				
308	413	1.512	34.675	27.781	45.852		2281					0.01+0.04	8.4	4.13	18.15	0.6					413				
490	413	1.43	34.676	27.787	45.867		2281(I)		-142.7								18.3 +0.3				413				
309	489	1.608	34.706	27.799	45.859		2277					0.11+0.04	8.7	4.17	18.35	0.6					489				
310	563	1.559	34.714	27.809	45.873		2273					0.09+0.04									563				
491	588	1.53	34.719	27.815	45.882		2276(I)		-149.5								18.5 +0.4				588				
311	643	1.495	34.718	27.817	45.888		2282					0.06+0.05	9.1								643				
313	797	1.511	34.740	27.833	45.902		2284						9.3								797				
492	797	1.50	34.738	27.832	45.903		2284(I)		-152.8								18.6 +0.4				797				
314	892	1.417	34.735	27.836	45.915		2275						8.9	4.12	18.16	0.5					892				
315	988	1.306	34.735	27.843	45.935		2278					0.00+0.08		4.09	18.07	0.4					988				
493	1096	1.18	34.730	27.848	45.954		2281(I)		-151.5								19.5 +0.4				1096				
317	1178	1.115	34.727	27.850	45.963		2288						9.4	4.16	18.36	0.4					1178				
319	1368	0.939	34.723	27.858	45.990		2283						8.0	4.17	18.35	0.9					1368				
494	1395	0.90	34.719	27.857	45.994		2283(I)		-155.6								19.9 +0.7				1395				
321	1559	0.769	34.712	27.859	46.011		2292						8.6	4.13	18.20	0.8					1559				
495	1693	0.65	34.709	27.864	46.029		2289(I)		-163.1			0.08+0.05					20.8 +0.6				1693				
323	1750	0.636	34.707	27.863	46.031		2295						8.5								1750				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 432 — *CONTINUED*

POSITION: 59°19'S 92°38'E

DATE: 15 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UM			UM	MCM					USC	NOOW							
101	1950	0.477	34.701	27.868	46.053		2282						7.7	4.19	18.40	1.2						1950				
286	1986	0.46	34.703	27.870	46.058		2283(I)		-159.7									21.3 +0.4				1986				
103	2270	0.271	34.690	27.870	46.079		2296						8.3	4.15	18.33	0.8						2270				
287	2292	0.26	34.690	27.871	46.081		2295(I)		-164.2									21.0 +0.4				2292				
105	2592	0.093	34.684	27.875	46.104		2295						6.6	4.23	18.74	0.6						2592				
288	2597	0.09	34.684	27.875	46.106		2295(I)		-168.2													2597				
595	2612	0.07	34.685	27.877	46.109		2294(I)		-160.4									21.2 +0.5	0.4			2612				
290	2903	-0.06	34.680	27.880	46.127		2279(I)		-159.9									21.3 +0.4				2903				
107	2913	-0.069	34.680	27.880	46.128		2279						6.5	4.31	18.98	1.1						2913				
594	3154	-0.16	34.681	27.885	46.144		2283(I)												0.4			3154				
291	3209	-0.17	34.680	27.885	46.145		2282(I)		-156.1									21.8 +0.5				3209				
109	3233	-0.184	34.680	27.886	46.147		2281						6.1	4.13	18.39	0.2						3233				
593	3405	-0.25	34.679	27.888	46.157		2280(I)												1.2 +0.4			3405				
292	3514	-0.26	34.678	27.888	46.158		2280(I)		-154.8									21.2 +0.5				3514				
111	3553	-0.279	34.679	27.889	46.162		2280						5.8									3553				
592	3655	-0.31	34.679	27.891	46.166		2289(I)												1.3 +0.4			3655				
293	3818	-0.34	34.678	27.891	46.171		2288(I)		-152.5									20.8 +0.5				3818				
591	3852	-0.35	34.679	27.893	46.174		2285(I)												0.5			3852				
114	3874	-0.354	34.678	27.892	46.173		2283						4.9	4.16	18.53	0.2						3874				
590	4048	-0.38	34.679	27.894	46.179		2268(I)												1.2 +0.3			4048				
294	4122	-0.40	34.679	27.895	46.181		2274(I)		-151.9									21.7 +0.5				4122				
588	4193	-0.43	34.679	27.896	46.186		2281(I)												1.5 +0.5			4193				
116	4195	-0.414	34.678	27.895	46.183		2281						4.7	4.33	19.01	1.6						4195				
117	4355	-0.454	34.679	27.897	46.190		2280						5.6	4.31	19.01	1.1						4355				
295	4427	-0.48	34.679	27.899	46.195		2285(I)		-141.7									21.9 +0.4				4427				
124	4452	-0.482	34.679	27.899	46.194		2278						4.9									4452				
												PRECISION:	0.3	0.01	0.06	0.2										

STATION 433

POSITION: 53°0'S 103°1'E

DATE: 18 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
401	8	3.334	33.905	27.018	44.920		2157	1.69				0.50+0.06	-0.4	4.01	17.89	-1.6						8				
286	10	3.36	33.913	27.022	44.922		2156(I)		-14.4									12.8 +0.2				10				
402	30	3.285	33.907	27.024	44.931		2151					0.48+0.06										30				
586	59	3.24	33.907	27.028	44.940		2154(I)		-19.4									15.4 +0.3				59				
403	69	3.196	33.910	27.034	44.950		2155	1.71				0.54+0.05	-1.7	4.00	17.88	-1.7						69				
404	105	1.542	33.970	27.214	45.305		2183					0.44+0.05										105				
590	139	0.90	34.045	27.316	45.475		2198(I)		-49.6									18.7 +0.4				139				
405	140	0.898	34.040	27.312	45.472		2198	1.22				0.38+0.05	-0.7	4.18	18.69	-0.8						140				
406	198	1.393	34.244	27.444	45.542		2239					0.20+0.05										198				
407	261	1.895	34.365	27.505	45.544		2254	0.68				0.14+0.04	4.0	4.20	18.65	-0.4						261				
408	340	1.965	34.463	27.578	45.607		2266					0.05+0.04										340				
587	350	1.97	34.472	27.584	45.612		2268(I)		-120.8									18.4 +0.3				350				
409	420	2.059	34.536	27.629	45.645		2276	0.47				0.06+0.05	6.1	4.12	18.14	0.3		18.6 +0.2				420				
410	499	2.097	34.602	27.679	45.689		2276	0.45				0.00+0.07										499				
411	588	2.044	34.639	27.713	45.727		2281	0.46				0.05+0.04	7.7	4.15	18.28	0.3						588				
412	629	2.167	34.673	27.730	45.731		2270					0.06+0.05										629				
591	639	2.16	34.676	27.733	45.734		2270(I)		-145.8									19.0 +0.9				639				
413	714	2.108	34.693	27.751	45.757		2274	0.50				0.12+0.04	8.1									714				
414	800	2.010	34.705	27.768	45.784		2282					0.03+0.05										800				
592	860	1.99	34.718	27.780	45.797		2279(I)		-149.1									19.5 +0.3				860				
415	885	1.977	34.723	27.785	45.804		2276	0.45				0.01+0.05	8.3	4.19	18.41	0.4						885				
417	1056	1.858	34.740	27.808	45.839		2275	0.44					7.8	4.23	18.57	0.7						1056				
593	1079	1.84	34.740	27.809	45.842		2274(I)		-144.7									19.4 +0.5				1079				
418	1140	1.776	34.740	27.814	45.854		2273					-0.01+0.05										1140				
419	1225	1.720	34.751	27.827	45.873		2269	0.47					8.1	4.20	18.50	0.3						1225				
594	1298	1.68	34.749	27.828	45.879		2276(I)		-154.5									20.4 +0.4				1298				
421	1398	1.588	34.749	27.835	45.895		2268	0.51										20.7 +0.3				1398				
422	1480	1.481	34.750	27.843	45.915		2272					-0.04+0.07										1480				
423	1566	1.380	34.743	27.845	45.928		2280	0.53					9.3	4.18	18.43	0.4						1566				
595	1583	1.38	34.744	27.846	45.930		2281(I)		-148.6			-0.05+0.05						20.9 +0.7				1583				
101	1745	1.255	34.742	27.852	45.949		2280	0.50					8.7	4.19	18.65	-0.6						1745				
588	1867		34.732				2284(I)		-153.7									20.5 +0.3				1867				
103	1932	1.095	34.734	27.857	45.972		2288	0.55					8.4									1932				
105	2117	0.882	34.721	27.860	45.999		2286	0.51					8.4									2117				
287	2182	0.83	34.719	27.861	46.007		2287(I)		-159.0									20.8 +0.3				2182				
107	2303	0.741	34.714	27.863	46.018		2285	0.48					8.7	4.15	18.31	0.7						2303				
387	2381	0.64	34.710	27.866	46.033		2283(I)		-171.4									20.5 +0.4				2381				
109	2491	0.546	34.706	27.868	46.045		2291	0.49														2491				
391	2612	0.43	34.700	27.870	46.061		2291(I)		-154.3									21.2 +0.3				2612				
111	2679	0.375	34.698	27.871	46.068		2290	0.50					6.7	4.25	18.61	1.5						2679				
112	2771	0.311	34.696	27.873	46.077		2287	0.43														2771				
392	2843	0.22	34.691	27.874	46.089		2285(I)		-158.2									22.6 +0.4				2843				
114	2866	0.243	34.692	27.874	46.086		2284						7.9									2866				
115	2959	0.156	34.688	27.875	46.097		2293	0.46														2959				
116	3054	0.082	34.687	27.878	46.109		2284						6.5	4.27	18.68	1.9						3054				
393	3073	0.08	34.686	27.877	46.108		2284(I)		-156.0									21.8 +0.3				3073				
117	3145	0.043	34.686	27.879	46.114		2287	0.41														3145				
118	3239	-0.023	34.684	27.881	46.124		2290						5.7	4.26	18.61	1.9						3239				
394	3300	-0.05	34.683	27.881	46.127		2289(I)		-156.8									20.9 +0.3				3300				
119	3333	-0.068	34.684	27.883	46.131		2289	0.44														3333				
120	3427	-0.112	34.684	27.885	46.138		2284						6.7	4.21	18.50	1.4						3427				
121	3520	-0.139	34.682	27.885	46.141		2298	0.50														3520				
395	3527	-0.14	34.681	27.884	46.140		2297(I)		-153.2									21.4 +0.3				3527				
123	3614	-0.143	34.682	27.885	46.142		2286	0.52					6.7	4.28	18.99	0.4						3614				
388	3749	-0.17	34.681	27.886	46.146		2292(I)		-157.5									20.2 +0.4				3749				
122	3770	-0.168	34.682	27.886	46.146		2293						7.0									3770				
												PRECISION:	0.3	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 434

POSITION: 45°38'S 107°15'E

DATE: 20 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
												UM		----------MCM----------				·····DPM/100kg·····						·····DPM/100kg·····		
101	4	11.754	34.641	26.395	43.515																	4				
102	43	11.578	34.640	26.427	43.561							1.13+0.09	-1.3	3.85	16.38	-0.6						43				
103	97	11.479	34.654	26.457	43.598							1.10+0.08										97				
104	146	10.796	34.844	26.730	43.920							0.99+0.06		3.92	16.75	-1.0						146				
105	332	10.074	34.733	26.771	44.023							1.08+0.09	-0.4	3.82	16.24	-0.1						332				
106	430	9.872	34.735	26.807	44.076							1.05+0.06	-0.9	3.84	16.58	-1.3						430				
107	560	9.227	34.689	26.879	44.203							0.83+0.07	-0.4	3.90	16.76	-0.9						560				
108	785	6.817	34.485	27.079	44.623							0.64+0.07	0.3	3.89	16.81	-1.1						785				
109	1001	4.407	34.343	27.259	45.038							0.15+0.05	1.8	4.11	17.78	0.1						1001				
110	1184	3.457	34.369	27.375	45.250							0.21+0.04	2.0	4.14	18.09	0.1						1184				
111	1369	2.879	34.446	27.490	45.422							0.09+0.05	3.8	4.00	17.65	-0.7						1369				
112	1554	2.592	34.532	27.583	45.543								5.0	4.10	18.00	0.2						1554				
114	1731	2.466	34.617	27.661	45.632							0.08+0.05	7.9	4.06	17.87	0.2						1731				
115	1944	2.326	34.680	27.723	45.706								9.1	4.08	17.94	0.3						1944				
116	2161	2.204	34.719	27.764	45.759									4.10	17.82	1.6						2161				
117	2377	2.060	34.748	27.799	45.808								8.9									2377				
118	2594	1.852	34.757	27.822	45.853								10.3	4.27	18.67	0.9						2594				
119	2794	1.597	34.753	27.837	45.897								8.7	4.22	18.49	0.8						2794				
121	3194	1.164	34.742	27.858	45.966								11.2	4.26	18.46	2.0						3194				
122	3442	1.089	34.731	27.855	45.970								12.4	4.18	18.24	1.5						3442				
124	3894	0.973	34.727	27.859	45.988								11.0	4.29	18.59	2.3						3894				
													9.6													
												PRECISION:	0.3	0.01	0.06	0.2										

STATION 435

POSITION: 39°57'S 109°58'E

DATE: 22 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UW		SIO	UM		----------MCM----------				USC	NOOW					·····DPM/100kg·····		
486	4	15.49	34.842	25.771	42.611				98.1									9.0 +0.3				4				
301	5	15.487	34.840	25.771	42.612		2061	2.15			0.37	1.36+0.07	-1.2	3.86	16.33	-1.6						5				
302	19	15.284	34.797	25.784	42.639		2069(I)					1.21+0.08										19				
303	52	13.775	34.749	26.074	43.039		2084(I)	2.03			0.26	1.28+0.08	-2.2									52				
490	53	13.79	34.752	26.073	43.036		2085(I)		87.8									10.3 +0.2				53				
304	83	12.211	34.714	26.364	43.446		2095(I)					1.24+0.08										83				
305	116	10.959	34.799	26.665	43.844		2103	1.70			0.28	1.24+0.08	-1.7					10.0 +0.3				116				
306	163	10.467	34.773	26.733	43.952		2103(I)					1.22+0.07										163				
487	208	10.38	34.784	26.757	43.983		2102(I)		89.4									10.2 +0.2				208				
307	210	10.378	34.775	26.751	43.977		2102	1.69			0.24	1.28+0.08	-1.3	3.93	16.94	-1.2						210				
308	258	10.141	34.738	26.763	44.010		2105(I)					1.17+0.07										258				
309	304	9.981	34.712	26.771	44.031		2109	1.66				1.34+0.08	-1.9	3.95	17.03	-1.1		151.6 +2.5				304				
311	419	9.992	34.794	26.833	44.090		2113	1.55			0.25	0.92+0.05	-0.3	3.93	16.94	-1.1						419				
491	432	9.88	34.777	26.839	44.106		2114(I)		68.4									10.7 +0.5				432				
312	518	9.499	34.735	26.870	44.170		2120(I)					0.70+0.07										518				
313	618	8.972	34.670	26.905	44.252		2130	1.47			0.21	0.71+0.07	-0.1	3.95	17.08	-1.1						618				
492	644	8.86	34.660	26.915	44.272		2134(I)		26.0									11.4 +0.3				644				
314	718	8.433	34.609	26.942	44.337		2145(I)					0.41+0.05										718				
315	818	7.467	34.524	27.019	44.503		2162	1.25			0.08	0.25+0.05	-0.1									818				
493	858		34.487				2168(I)		-56.1									11.9 +0.4				858				
316	916	6.179	34.431	27.121	44.726		2178(I)					0.07+0.07	0.7	4.18	18.12	0.0						916				
317	997	5.128	34.373	27.203	44.910		2193	1.11			-0.02	0.10+0.05										997				
494	1071	4.40	34.358	27.271	45.051		2208(I)		-97.8									15.7 +0.4				1071				
318	1074	4.373	34.355	27.272	45.055		2209						2.2	4.01	17.67	-0.9						1074				
319	1148	3.929	34.364	27.325	45.152		2222(I)	0.92			-0.02		3.2	4.02	17.76	-0.9		16.1 +0.4				1148				
320	1272	3.300	34.400	27.415	45.305		2239					-0.06+0.05										1272				
495	1369	3.09	34.448	27.472	45.382		2250(I)		-144.0									16.9 +0.4				1369				
321	1395	2.953	34.455	27.490	45.414		2253(I)	0.61			-0.04		6.5									1395				
322	1520	2.812	34.517	27.552	45.489		2264											17.3 +0.5				1520				
323	1646	2.602	34.565	27.608	45.566		2271(I)	0.46					8.1	4.11	18.06	0.2						1646				
488	1672	2.58	34.577	27.620	45.580		2272(I)		-150.7									17.5 +0.3				1672				
324	1768	2.509	34.614	27.655	45.621		2275				0.06											1768				
101	1894	2.410	34.653	27.695	45.670		2278	0.40														1894				
286	1988	2.32	34.677	27.721	45.704		2276(I)											17.5 +0.3				1988				
102	2067	2.286	34.693	27.737	45.724		2274					0.07+0.06										2067				
103	2242	2.144	34.724	27.773	45.774		2273	0.40			0.08		9.4	4.12	18.02	0.8						2242				
290	2319	2.05	34.735	27.789	45.800		2273(I)											19.4 +0.4				2319				
105	2595	1.803	34.749	27.819	45.856		2269(I)	0.42					9.9	4.23	18.46	1.3						2595				
287	2647	1.75	34.749	27.823	45.865		2269(I)											18.8 +0.7				2647				
106	2765	1.617	34.749	27.833	45.890		2267				0.05		10.1	4.26	18.50	1.9						2765				
107	2934	1.423	34.745	27.843	45.922		2278	0.43					11.1	4.18	18.27	1.2						2934				
291	2975	1.40	34.744	27.844	45.925		2278(I)		-159.5									20.0 +0.6				2975				
108	3103	1.260	34.740	27.850	45.947		2279						9.9	4.24	18.58	1.1						3103				
109	3273	1.102	34.732	27.854	45.969		2284(I)	0.43					11.9	4.15	18.30	0.5						3273				
292	3305	1.06	34.730	27.856	45.975		2285(I)		-162.8									22.3 +0.6				3305				
110	3444	0.918	34.724	27.860	45.995		2287				-0.01											3444				
111	3614	0.764	34.718	27.865	46.017		2282	0.46					10.8	4.21	18.61	0.5						3614				
293	3632	0.76	34.715	27.863	46.016		2282(I)		-166.3									22.9 +0.4				3632				
586	3778	0.65	34.714	27.868	46.033		2282(I)												0.9	+0.3		3778				
112	3783	0.649	34.712	27.867	46.032		2282	0.38					10.6	4.20	18.39	1.3						3783				
590	3889	0.62	34.712	27.869	46.038		2283(I)												0.9	+0.3		3889				
114	3954	0.597	34.710	27.868	46.040		2284	0.40										22.9 +0.3				3954				
294	3959	0.56	34.708	27.869	46.044		2284(I)		-161.2										1.2	+0.4		3959				
587	4000	0.57	34.711	27.871	46.046		2285(I)												0.6			4000				
591	4111	0.55	34.709	27.870	46.047		2288(I)															4111				
115	4123	0.542	34.709	27.871	46.048		2288(I)	0.45			-0.07								2.7	+0.5		4123				
592	4221	0.53	34.713	27.874	46.053		2291(I)															4221				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 435 — *CONTINUED*

POSITION: 39°57'S 109°58'E

DATE: 22 FEB 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UW		SIO	UM	----------MCM----------					USC	NOOW				DPM/100kg		
295	4286	0.51	34.705	27.869	46.050		2292(I)		-165.3									23.3 +0.5	0.7			4286				
593	4333	0.51	34.708	27.871	46.052		2292(I)												1.4 +0.3			4333				
117	4459	0.495	34.705	27.870	46.053		2292(I)	0.33					9.2	4.26	18.77	1.0						4459				
119	4530	0.480	34.705	27.871	46.056		2282	0.37														4530				
595	4556	0.49	34.706	27.871	46.055		2285(I)												1.4 +0.4			4556				
121	4583	0.474	34.705	27.871	46.057		2288	0.41										22.0 +0.4				4583				
122	4594	0.473	34.705	27.871	46.057		2281											24.0 +0.4				4594				
123	4609	0.472	34.705	27.871	46.057		2292	0.40														4609				
288	4611	0.47	34.703	27.870	46.056		2292(I)		-210.3									24.2 +0.4				4611				
124	4621	0.473	34.705	27.871	46.057		2284				-0.06		9.4									4621				
												PRECISION:	0.3	0.01	0.06	0.2										

STATION 436

POSITION: 29°15'S 109°58'E

DATE: 8 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UW			UM	----------MCM----------					USC	LDGO				WHOI YALE*	YALE	YALE	WHOI YALE*
799	0																		4.75 +0.37			0				
301	10	24.515	35.734	24.070	40.344		2007	1.65				3.14+0.13	-1.3	3.79	15.38	-1.7						10				
486	10	24.64	35.734	24.032	40.299		2007(I)		140.4									8				10				
302	35	21.495	35.880	25.048	41.486		2035					3.01+0.12										35	8.2**0.4	0.16 +0.11	8.4 +2.1	5.9**0.6
303	65	20.432	35.918	25.367	41.866		2044	1.67				2.70+0.11	-2.5	3.82	15.83	-2.0		8.5 +0.2				65				
487	74	19.89	35.879	25.482	42.013		2048(I)		147.3													74				
304	86	18.079	35.788	25.880	42.525		2053					2.53+0.10										86				
305	120	16.661	35.715	26.170	42.909		2068	1.56				2.72+0.09	0.8	3.83	15.94	-0.7		8.5 +0.2				120				
488	134	16.47	35.700	26.203	42.954		2075(I)		146.0													134				
306	166	15.255	35.574	26.388	43.225		2086					2.52+0.09										166	8.6**0.4			9.2**0.6
307	208	14.046	35.395	26.515	43.443		2086	1.61				2.30+0.10	-1.6	3.89	16.30	-0.2		10.2 +0.3				208				
490	223	13.95	35.380	26.523	43.458		2088(I)		138.6													223				
308	254	12.793	35.220	26.640	43.665		2095					1.92+0.09										254	8.8**0.4	0.14 +0.02		9.2**0.7
309	298	11.666	35.056	26.734	43.849		2103	1.65				1.56+0.08	-2.4	4.10	17.20	0.7		11.3 +0.4				298				
491	312	11.43	35.016	26.747	43.882		2107(I)		106.8													312				
310	355	10.444	34.890	26.829	44.046		2120					1.36+0.07										355				
311	425	9.602	34.764	26.875	44.166		2123	1.38				0.97+0.06	-1.3	3.92	16.77	-0.1						425				
492	437	9.40	34.733	26.884	44.192		2124(I)		50.9													437				
312	534	8.657	34.640	26.932	44.306		2138					0.63+0.06						11.0 +0.5				534				
313	669	6.943	34.489	27.065	44.597		2170	1.25				0.18+0.05										669	9.2**0.5			7.0**0.6
314	796	4.996	34.404	27.243	44.962		2214					0.02+0.05						15.0 +0.4				796				
493	797	4.96	34.403	27.246	44.968		2214(I)		-106.3													797				
315	917	4.084	34.456	27.383	45.191		2244	0.64				0.09+0.04	5.2	4.02	17.54	0.4						917				
316	1038	3.717	34.504	27.458	45.302		2269					0.16+0.04						17.0 +0.3				1038				
494	1146	3.39	34.531	27.511	45.387		2281(I)		-167.6													1146				
317	1164	3.448	34.553	27.523	45.393		2282	0.41				0.04+0.08	8.9									1164	11.1**0.5	0.31 +0.03		10.8**0.7
318	1288	3.136	34.597	27.587	45.488		2290(I)											18.8 +0.5				1288				
319	1410	2.827	34.629	27.640	45.572		2296	0.38					10.1	4.19	18.13	1.7						1410				
495	1492	2.71	34.643	27.661	45.605		2300(I)		-169.9													1492				
320	1540	2.679	34.662	27.679	45.626		2301											21.3 +0.5				1540				
321	1659	2.516	34.685	27.711	45.674		2294	0.28					12.2	4.15	17.90	2.3						1659	14.8**0.6	0.39 +0.03		12.2**0.9
322	1786	2.346	34.704	27.741	45.721		2302											21.1 +0.4				1786				
286	1896	2.21	34.710	27.756	45.750		2313(I)		-185.0													1896				
323	1909	2.207	34.716	27.761	45.756		2314	0.32					11.6	4.22	18.18	2.3						1909				
324	2032	2.086	34.722	27.776	45.783		2306											21.4 +0.4				2032				
101	2085	2.042	34.724	27.781	45.793		2317	0.29														2085	15.4**0.6	0.40 +0.04		14.4**0.9
102	2284	1.876	34.726	27.795	45.825		2315											22.4 +0.4				2284				
287	2295	1.87	34.721	27.791	45.822		2315(I)		-190.8													2295				
103	2486	1.740	34.729	27.808	45.852		2313	0.22										23.8 +0.6				2486	16.2 +0.5			19.8 +0.7
104	2685	1.599	34.729	27.818	45.878		2311						13.5	4.27	18.54	1.9						2685				
288	2694	1.59	34.719	27.811	45.872		2311(I)		-187.6													2694				
105	2935	1.441	34.729	27.829	45.906		2309	0.36					12.0	4.28	18.56	2.0						2935	16.1**0.6	0.51 +0.04		17.0**0.9
290	3093	1.33	34.722	27.831	45.920		2310(I)		-190.0													3093				
686	3128	1.33	34.727	27.835	45.925		2310(I)												0.24 +0.09			3128				
106	3184	1.299	34.727	27.837	45.930		2310						12.7	4.19	18.34	1.3		25.9 +0.4				3184		17.8 +2.7		
687	3428	1.18	34.725	27.844	45.949		2313(I)											26.4 +0.6	0.26 +0.09			3428				
107	3435	1.176	34.727	27.846	45.952		2313	0.29					10.7	4.18	18.22	1.6						3435	15.9**0.4	0.59 +0.04		15.4**0.6
291	3491	1.13	34.717	27.840	45.952		2313(I)		-184.4													3491				
108	3683	1.057	34.724	27.851	45.971		2312						11.0	4.20	18.20	2.4						3683				
688	3727		34.721				2311(I)											25.8 +0.4	0.26 +0.10			3727				
109	3930	0.949	34.719	27.854	45.986		2305	0.30					10.2					27.7 +0.6				3930				
292	3990	0.93	34.715	27.852	45.986		2305(I)		-178.0													3990				
690	4027	0.92	34.719	27.856	45.991		2305(I)												0.16 +0.08			4027				
691	4325	0.83	34.717	27.860	46.004		1355(I)												0.11 +0.08			4325				
111	4430	0.798	34.717	27.862	46.010		2300	0.36					10.1	4.25	18.59	1.5		28.7 +0.8				4430				
112	4430	0.798	34.718	27.862	46.011		2302															4430	16.2**0.7	0.71 +0.04		14.8**1.2
293	4488	0.77	34.709	27.857	46.010		2301(I)		-172.9													4488				

(I) INTERPOLATED FROM NISKIN DATA

STATION 436 — *CONTINUED*

POSITION: 29°15'S 109°58'E

DATE: 8 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10⁻⁵cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
								UH	UW			UM	MCM					USC	LDGO				WHOI YALE*	YALE	YALE	WHOI YALE*
692	4627	0.77	34.715	27.862	46.014		2299(I)											26.8 +0.4	0.36 +0.11			4627				
693	4926	0.68	34.716	27.868	46.030		2294(I)												0.84 +0.10			4926				
114	4937	0.673	34.714	27.867	46.030		2294	0.42														4937				
294	4986	0.66	34.710	27.864	46.029		2294(I)		-160.3													4986				
115	5184	0.639	34.713	27.868	46.035		2295	0.38					9.9	4.27	18.69	1.6						5184	8.3**+0.4			5.8**+0.6
116	5184	0.639	34.713	27.868	46.035		2296											26.2 +0.6				5184		1.30 +0.10		
694	5227	0.64	34.712	27.867	46.034		2295(I)												0.81 +0.11			5227				
117	5431	0.617	34.712	27.869	46.038		2292	0.46						4.25	18.41	2.6						5431				
119	5480	0.607	34.711	27.868	46.039		2297	0.39														5480				
295	5485	0.60	34.705	27.864	46.035		2295(I)		-167.8									24.4 +0.5				5485				
124	5504	0.608	34.711	27.868	46.039		2291						10.6									5504			7.3 +1.0	
121	5525	0.608	34.714	27.871	46.041		2292	0.32														5525	6.8**+0.3	1.60 +0.10		4.0**+0.6
695	5527	0.61	34.711	27.868	46.039		2293(I)											28.0 +0.5	1.28 +0.14			5527				
123	5556	0.607	34.714	27.871	46.041		2295	0.41														5556				
												PRECISION:	0.3	0.01	0.06	0.2										

STATION 437

POSITION: 24°28'S 104°55'E

DATE: 11 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10⁻⁵cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UW			UM						USC	LDGO							
499	0																		4.89 +0.37			0				
101	8	24.37	35.728	24.109	40.391		2009					2.96+0.13										8				
286	10	24.31	35.742	24.135	40.420		2009(I)		149.5													10				
287	39	23.24	35.710	24.427	40.770		2012(I)		142.7													39				
102	40	23.2	35.701	24.434	40.780		2012					2.97+0.12										40				
103	70	21.2	35.638	24.951	41.412		2026					2.94+0.12						8.5 +0.5				70				
288	70	20.66	35.638	25.093	41.585		2026(I)		151.6													70				
104	110	19.5	35.730	25.478	42.038		2051					2.66+0.10										110				
290	158	18.17	35.746	25.824	42.464		2089(I)		142.4													158				
105	160	17.90	35.742	25.889	42.546		2090					2.70+0.12										160				
106	211	16.5	35.668	26.165	42.914		2076					2.57+0.11										211				
291	228	15.82	35.610	26.286	43.084		2087(I)		146.1													228				
107	241	15.2	35.538	26.377	43.221		2097					2.18+0.09										241				
292	298	12.94	35.252	26.635	43.647		2097(I)		86.7													298				
108	302	13.1	35.288	26.624	43.621		2097					1.74+0.09										302				
109	362	11.561	35.056	26.754	43.877		2105					1.36+0.07										362				
293	377	10.47	34.903	26.834	44.048		2108(I)		116.8													377				
110	402	10.56	34.903	26.819	44.027		2114					1.23+0.06						8.7 +0.4				402				
294	457	9.27	34.728	26.902	44.222		2118(I)		46.8													457				
111	466	9.52	34.757	26.883	44.181		2119					0.85+0.06										466				
112	550	8.579	34.637	26.942	44.323		2135					0.48+0.05										550				
113	619	7.294	34.522	27.042	44.541		2165					0.25+0.05										619				
114	692	5.680	34.451	27.199	44.851		2208					0.08+0.05										692				
295	719	5.97	34.466	27.175	44.798		2219(I)		-88.5													719				
115	769	5.044	34.462	27.283	44.996		2236					0.04+0.04										769				
116	839	4.788	34.504	27.345	45.082		2259					0.00+0.05										839				
117	910	4.598	34.561	27.412	45.165		2291					-0.07+0.04										910				
118	986	4.330	34.581	27.456	45.236		2293					-0.09+0.04						18.3 +0.3				986				
119	1088	3.951	34.594	27.506	45.323		2301					0.03+0.04										1088				
124	1587	2.623	34.685	27.702	45.654		2303											19.5 +0.5				1587				

(I) INTERPOLATED FROM NISKIN DATA

STATION 438 | **POSITION: 19°29'S 101°17'E** | **DATE: 12 MAR 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (³He) %	He 10⁻⁵cc/kg	Ne 10⁻⁵cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW		SIO	UM	MCM	MCM	MCM	MCM		USC	LDGO				WHOI YALE*		YALE	WHOI YALE*
699	0																		5.84 +0.42			0				
301	8	26.62	35.282	23.091	39.265		1972	1.50			0.55	3.24+0.13	-1.4	3.78	15.17	-1.6						8				
486	15	26.63	35.280	23.084	39.258		1973(I)		137.5									8.8 +0.3				15				
302	53	24.3	35.263	23.783	40.079		1976					3.06+0.12										53	11.6**0.5		10.2 +2.2	7.6**1.0
487	69	23.17	35.350	24.173	40.528		1986(I)		138.6													69				
303	102	21.9	35.449	24.616	41.041		2010	1.41			0.60	3.07+0.11	-0.7	3.84	15.96	-2.9		9.5 +0.7				102				
304	152	20.1	35.624	25.233	41.759		2041					3.00+0.10										152				
488	198	18.25	35.695	25.766	42.402		2075(I)		125.8													198				
305	201	18.22	35.660	25.746	42.385		2077	1.29			0.71	2.81+0.10	0.3					8.9 +0.2				201				
306	251	15.9	35.618	26.285	43.080		2078					2.22+0.09										251	9.9**0.4			8.4**1.0
307	302	13.72	35.372	26.566	43.518		2106	1.41			0.57	1.92+0.08	-0.3	3.89	16.38	-0.5		10.5 +0.3				302				
490	348	11.98	35.136	26.736	43.825		2108(I)		76.2													348				
308	352	12.03	35.143	26.732	43.817		2108					1.35+0.07										352				
309	412	10.551	34.927	26.838	44.046		2122	1.49				1.00+0.07	-2.3	4.08	17.39	-0.4		9.8 +0.5				412				
310	472	9.51	34.782	26.905	44.202		2126(I)				0.20	0.84+0.06										472	8.2**0.3			7.1**0.8
491	498	8.93	34.701	26.937	44.286		2128(I)		6.5													498				
311	532	8.67	34.671	26.954	44.327		2130	1.43				0.62+0.06	-1.6	3.99	17.20	-0.5		11.6 +0.3				532				
312	593	7.855	34.595	27.019	44.465		2157					0.30+0.04										593				
313	638	7.00	34.566	27.118	44.642		2207	0.63			0.09	0.05+0.04	3.0					14.2 +0.3				638				
492	646	6.72	34.572	27.161	44.710		2214(I)		-107.1													646				
314	719	6.39	34.606	27.232	44.812		2260					0.01+0.04										719	8.7**0.3			7.8**0.8
315	808	5.9440	4.637	27.313	44.934		2278	0.27			0.09	0.03+0.04	10.4	4.18	17.85	1.7						808				
316	893	5.556	34.647	27.369	45.026		2294					0.03+0.05										893	10.2**0.3			10.5**1.0
493	946	5.20	34.650	27.414	45.106		2302(I)		-167.5									20.8 +0.4				946				
317	992	5.130	34.646	27.419	45.117		2307	0.19				0.14+0.04	12.1	4.20	17.93	2.0						992				
318	1193	4.411	34.648	27.501	45.270		2319				0.07	-0.02+0.05						20.8 +0.4				1193				
494	1196	4.35	34.653	27.511	45.286		2319(I)		-169.3													1196				
319	1392	3.797	34.660	27.574	45.405		2311	0.21				0.07+0.06	11.2	4.25	18.22	2.2						1392	13.6**0.5			12.6**1.0
495	1494	3.42	34.671	27.619	45.489		2309(I)		-181.6			-0.03+0.05										1494				
320	1592	3.144	34.684	27.655	45.552		2308											21.3 +0.5				1592				
321	1790	2.683	34.710	27.717	45.661		2310	0.18			0.05											1790				
286	1888	2.47	34.721	27.744	45.711		2312(I)		-191.1													1888				
322	1980	2.378	34.716	27.748	45.724		2313(I)											22.5 +0.4				1980				
323	2177	2.087	34.725	27.778	45.785		2315	0.21					15.2	4.21	18.23	1.9						2177	14.3**0.6			13.2**1.2
287	2238	2.02	34.729	27.786	45.801		2314(I)		-189.7									24.0 +0.3				2238				
101	2340	1.897	34.728	27.795	45.823		2312	0.19					12.5									2340				
324	2378	1.880	34.728	27.796	45.826		2315				0.02		13.1	4.18	18.20	1.4						2378				
102	2587	1.678	34.729	27.812	45.864		2309						12.7									2587				
288	2737	1.55	34.728	27.821	45.886		2309(I)		-188.5									24.1 +0.6				2737				
103	2840	1.468	34.727	27.826	45.900		2309	0.26					13.4	4.24	18.45	1.8						2840	17.4**0.8			16.4**1.2
104	3086	1.322	34.724	27.833	45.924		2308				-0.03		12.3	4.28	18.57	2.1		27.2 +0.4				3086	17.4 +0.4			19.3 +0.8
290	3236	1.20	34.724	27.842	45.946		2310(I)		-191.0													3236				
105	3334	1.174	34.723	27.842	45.949		2311	0.35														3334				
586	3376	1.14	34.723	27.845	45.955		2311(I)												0.58 +0.11			3376				
106	3586	1.049	34.720	27.848	45.969		2308						13.7	4.24	18.50	1.6		25.3 +0.4				3586				
587	3680	1.03	34.720	27.850	45.973		2306(I)												0.54 +0.10			3680				
291	3734	0.99	34.720	27.852	45.980		2305(I)		-182.4													3734				
107	3834	0.969	34.717	27.851	45.981		2304	0.35			-0.04											3834	16.8**0.5		14.9 +1.6	21.2**1.3
588	3984	0.94	34.718	27.854	45.986		2307(I)												0.37 +0.09			3984				
108	4083	0.892	34.717	27.856	45.994		2308						11.2					26.7 +0.4				4083				
292	4232	0.86	34.716	27.857	45.999		2305(I)		-179.6													4232				
590	4288	0.84	34.716	27.858	46.003		2303(I)											27.6 +0.4	0.90 +0.10			4288				
109	4332	0.844	34.715	27.857	46.001		2302	0.32														4332	16.5**0.5			17.3**1.2
110	4582	0.786	34.713	27.859	46.009		2296				-0.02		10.1	4.22	18.50	1.1						4582				
591	4590	0.77	34.715	27.862	46.013		2296(I)											29.4 +0.4	0.42 +0.10			4590				
293	4729	0.74	34.714	27.863	46.018		2298(I)		-176.0													4729				
111	4830	0.740	34.715	27.864	46.019		2300	0.33														4830	13.4**0.4			14.8**0.9
592	4892	0.75	34.715	27.863	46.018		2300(I)											29.1 +0.4	0.08 +0.10			4892				
112	5079	0.718	34.713	27.863	46.021		2298						10.0	4.23	18.53	1.4		27.2 +0.5				5079				
593	5191	0.72	34.719	27.868	46.026		2294(I)												0.48 +0.09			5191				
294	5223	0.72	34.716	27.866	46.023		2293(I)		-165.4													5223				
115	5340	0.709	34.713	27.864	46.023		2290	0.33			0.00											5340	16.8**0.5			16.5**1.3
594	5491	0.72	34.715	27.865	46.023		2290(I)											28.3 +0.5	0.32 +0.09			5491				
116	5577	0.704	34.714	27.865	46.024		2290											26.7 +0.5				5577				
295	5717	0.69	34.714	27.866	46.026		2289(I)		-169.4													5717				
595	5787	0.69	34.714	27.866	46.026		2288(I)												0.76 +0.11			5787				
123	5825	0.697	34.715	27.866	46.026		2290(I)											28.1 +0.6				5825				
124	5825	0.697	34.711	27.863	46.023		2290	0.36			0.00		10.1	4.22	18.43	1.8						5825	11.6**0.5		11.5 +1.9	11.4**0.9
												PRECISION:	0.3	0.01	0.06	0.2										

(I) INTERPOLATED FROM NISKIN DATA

STATION 439

POSITION: 13°2'S 97°8'E

DATE: 15 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UW			UM		----------MCM----------				USC	DPM/100kg					DPM/100kg		
286	15	28.74	34.393	21.754	37.840																					
101	21	28.742	34.423	21.774	37.860				130.0									9.0 +0.3				15				
102	45	28.6234	4.578	21.929	38.017		1915					3.11+0.11										21				
103	55	27.23	34.647	22.422	38.579		1928					3.08+0.13										45				
104	70	24.4633	4.742	23.336	39.635		1929					3.09+0.11	-2.4	3.77	15.02	-1.2						55				
105	90	23.55	34.847	23.682	40.028		1951					3.07+0.11										70				
287	149	18.74	34.593	24.800	41.433		1972					2.93+0.11	0.1	3.86	15.56	-0.7						90				
106	151	18.4049	4.950	25.158	41.803		2090(I)		63.8									10.3 +0.3				149				
107	251	13.3218	5.046	26.398	43.388		2094					2.59+0.11										151				
288	268	13.15	35.175	26.532	43.531		2142					1.58+0.06	5.0	3.99	16.76	-0.1						251				
108	275	13.163	35.227	26.571	43.567		2126(I)		47.0									11.4 +0.3				268				
109	325	11.325	35.050	26.793	43.936		2120					1.52+0.07										275				
290	348	11.02	34.992	26.804	43.972		2122					1.07+0.07	1.3	3.93	16.73	-0.5						325				
110	377	9.556	34.821	26.928	44.220		2126(I)		35.2									9.7 +0.3				348				
111	425	8.625	34.692	26.977	44.353		2132					0.68+0.05										377				
291	447	8.41	34.677	26.999	44.394		2172					0.28+0.05	3.5	3.99	17.26	-0.9						425				
112	473	8.216	34.669	27.023	44.435		2185(I)		-72.9									13.6 +0.2				447				
113	520	7.746	34.668	27.092	44.546		2199					0.03+0.05										473				
114	593	7.078	34.660	27.181	44.696		2223					-0.02+0.04	7.0	4.01	17.37	-0.8						520				
292	597	6.89	34.652	27.200	44.732		2269					0.18+0.06	8.9	4.17	17.94	0.4						593				
115	670	6.281	34.633	27.267	44.856		2271(I)		-143.5			0.02+0.05						17.7 +0.5				597				
116	755	5.818	34.644	27.335	44.967		2288					0.12+0.04	13.0	4.06	17.58	0.0						670				
117	843	5.353	34.632	27.382	45.059		2295					0.12+0.05						19.0 +0.3				755				
293	895	5.09	34.630	27.411	45.114		2305					0.16+0.04										843				
118	930	4.930	34.630	27.429	45.148		2308(I)		-171.9									21.8 +0.4				895				
119	1022	4.627	34.644	27.474	45.222		2310					0.11+0.06										930				
294	1196	4.17	34.659	27.535	45.328		2318					0.04+0.05	15.7	4.18	17.97	1.4		23.4 +0.8				1022				
121	1200	4.096	34.662	27.545	45.345		2319(I)		-179.7									23.2 +0.4				1196				
123	1390	3.580	34.692	27.621	45.473		2319						15.4	4.23	17.92	3.2						1200				
295	1495	3.31	34.713	27.663	45.542		2317						14.7	4.14	17.87	1.6						1390				
									-186.3									23.3 +0.6				1495				
												PRECISION:	0.3	0.01	0.06	0.2										

STATION 440

POSITION: 9°21'S 95°1'E

DATE: 17 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
									UW			UM		----------MCM----------				USC	LDGO	DPM/100kg				WHOI YALE*	WHOI	DPM/100kg	
1035	0								123.3									8.6 +0.3				0				
899	0																		7.11 +0.60				0				
714	14	29.133	34.248	21.517	37.587																	14	12.7**+0.5			
301	17	29.130	34.188	21.473	37.545		1904					3.11+0.12	-0.8	3.72	14.71	-1.4						17				
486	60	23.63	34.656	23.515	39.861		1985(I)		104.2									8.7 +0.2				60				
302	63	23.591	34.606	23.489	39.838		1991					2.91+0.14										63				
303	80	20.521	34.522	24.282	40.809		2070					2.99+0.09	4.2	3.80	15.54	-0.7						80				
304	100	18.905	34.639	24.794	41.416		2112					2.63+0.10										100				
487	103	18.13	34.662	25.007	41.676		2119(I)		24.9													103				
305	128	15.763	34.713	25.611	42.436		2165					2.41+0.10	7.7	3.87	16.22	-1.0		12.0 +0.3				128				
488	146	14.83	34.781	25.873	42.761		2177(I)		-21.6													146				
306	163	13.842	34.687	26.013	42.974		2183					1.73+0.08										163	6.5**+0.4			
307	200	12.130	34.736	26.397	43.485		2213					0.95+0.08	6.5	4.00	16.96	-0.5		10.3 +0.2				200				
308	257	11.384	34.884	26.653	43.796		2221					0.39+0.06										257				
490	264	11.34	34.901	26.675	43.820		2222(I)		-75.5													264				
309	351	10.231	34.882	26.860	44.095		2229					0.09+0.05	3.9					11.7 +0.3				351				
310	470	8.982	34.807	27.011	44.353		2243					0.01+0.06										470	10.0**+0.4			
491	539	8.43	34.784	27.079	44.469		2255(I)		-110.4													539				
311	591	7.891	34.748	27.133	44.572		2265					0.00+0.06	5.9	4.08	17.45	0.6		16.0 +0.5				591				
312	698	7.151	34.743	27.236	44.742		2285					-0.03+0.06										698				
492	786	6.60	34.742	27.311	44.866		2302(I)		-153.8													786				
313	794	6.505	34.738	27.320	44.885		2303(I)					-0.08+0.04	10.5	4.09	17.46	1.5		20.1 +0.6				794				
314	895	5.834	34.711	27.385	45.014		2317					0.03+0.05										895				
315	993	5.313	34.696	27.437	45.116		2319					-0.04+0.05	13.1	4.13	17.61	1.9						993				
316	1092	4.918	34.701	27.487	45.204		2327											20.6 +0.5				1092				
493	1132	4.76	34.700	27.504	45.238		2327(I)		-172.7				14.1	4.20	17.90	2.4						1132				
317	1191	4.547	34.696	27.524	45.278		2327											22.4 +0.6				1191				
318	1292	4.202	34.707	27.570	45.358		2333						13.7	4.22	18.01	2.6						1292				
319	1393	4.018	34.728	27.606	45.412		2339															1393	10.7**+0.5			
494	1478	3.69	34.733	27.642	45.481		2330(I)		-187.9									21.2 +0.4				1478				
320	1489	3.705	34.741	27.647	45.485		2329						13.2									1489				
321	1637	3.118	34.738	27.701	45.599		2332											22.7 +0.4				1637				
322	1786	2.826	34.748	27.735	45.663		2333															1786				
495	1822	2.74	34.748	27.742	45.679		2333(I)		-189.9				13.7									1822				
323	1934	2.551	34.740	27.752	45.710		2333											23.6 +0.4				1934	12.9**+0.7			
324	2081	2.267	34.735	27.772	45.759		2328						13.0	4.23	18.19	2.6						2081				
101	2087	2.257	34.739	27.776	45.764		2327															2087				
286	2201	2.08	34.743	27.793	45.800		2329(I)		-191.0				13.4	4.21	18.21	2.1		25.9 +0.5				2201				
102	2336	1.953	34.738	27.799	45.820		2332															2336				
287	2497	1.83	34.738	27.808	45.843		2330(I)		-190.1				13.2	4.19	18.15	2.0						2497				
103	2585	1.744	34.735	27.812	45.856		2329											26.3 +0.5				2585				
288	2793	1.58	34.735	27.824	45.886		2328(I)		-187.2				12.1	4.22								2793				
104	2833	1.551	34.734	27.825	45.890		2328												0.53 +0.10			2833	15.4 +0.5		17.4 +0.5	
686	2881	1.53	34.735	27.828	45.895		2327(I)						12.3	4.26	18.49	1.9		27.7 +0.4				2881				
105	3081	1.401	34.726	27.830	45.911		2325															3081				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 440 — *CONTINUED*

POSITION: 9°21'S 95°1'E

DATE: 17 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UW				UM	MCM					USC	LDGO				WHOI YALE*			WHOI
290	3089	1.37	34.729	27.834	45.919		2325(I)		-193.1													3089				
687	3133	1.36	34.728	27.834	45.920		2325(I)											28.6 +0.5	0.78 +0.25			3133				
106	3328	1.233	34.723	27.839	45.939		2326															3328	12.1**+0.4			
688	3386	1.19	34.725	27.843	45.947		2325(I)												0.73 +0.11			3386				
291	3484	1.10	34.721	27.846	45.961		2324(I)		-189.8													3484				
107	3580	1.048	34.718	27.847	45.968		2321						12.0	4.18	18.17	2.0		28.5 +0.6				3580				
690	3638	0.99	34.721	27.853	45.980		2318(I)												0.74 +0.12			3638				
108	3828	0.933	34.716	27.852	45.986		2310															3828	17.5**+0.6			
292	3878	0.92	34.718	27.855	45.990		2309(I)		-185.9									28.0 +0.6				3878				
691	3889	0.90	34.717	27 855	45.993		2308(I)												0.73 +0.12			3889				
109	4078	0.850	34.716	27.858	46.001		2306						11.2	4.18	18.32	1.2		28.4 +0.5				4078				
692	4139	0.85	34.716	27.858	46.001		2306(I)												0.82 +0.11			4139				
293	4273	0.79	34.716	27.851	46.010		2307(I)		-179.9									30.0 +0.4				4273				
110	4328	0.798	34.714	27.859	46.008		2307															4328	18.6**+0.7			
693	4388	0.78	34.716	27.862	46.012		2305(I)												0.98 +0.16			4388				
111	4576	0.772	34.714	27.861	46.013		2300						10.9	4.21	18.50	0.9		29.8 +0.6				4576				
694	4635	0.78	34.716	27.862	46.012		2299(I)												0.80 +0.12			4635				
294	4669	0.77	34.718	27.864	46.016		2299(I)		-179.9													4669				
695	4883	0.76	34.715	27.863	46.016		2298(I)												0.80 +0.14			4883				
295	5063	0.74	34.715	27.863	46.018		2303(I)		-178.9													5063				
116	5073	0.756	34.714	27.862	46.015		2303											29.1 +0.7				5073				
115	5075	0.756	34.714	27.862	46.015		2307						10.2	4.18	18.27	1.5						5075	14.6**+0.6			
124	5236	0.752	34.713	27.861	46.015		2297						10.5	4.26	18.56	2.0						5236	13.5**+0.5			
123	5238	0.752	34.714	27.862	46.016		2298(I)											29.4 +0.3				5238				
												PRECISION:	0.3	0.01	0.06	0.2										

STATION 441

POSITION: 5°1'S 91°46'E

DATE: 20 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM	WHOI					USC	LDGO				WHOI YALE*			WHOI
699	0																		4.75 +0.33			0				
301	14	29.418	34.295	21.460	37.515		1908	1.53				2.76+0.11	-1.2	3.75								14				
486	20	29.40	34.293	21.466	37.522		1926(I)		122.6									9.5 +0.5				20				
302	71	24.775	35.341	23.696	39.965		2052					2.07+0.09										71	9.4**+0.5			
487	75	25.51	35.385	23.509	39.738		2060(I)		67.1													75				
303	109	21.437	35.174	24.529	40.986		2118	0.61				2.02+0.11						8.0 +0.2				109				
488	159	14.57	34.819	25.958	42.863		2185(I)		-33.1													159				
304	167	13.952	34.801	26.077	43.027		2193					1.27+0.06										167				
305	202	12.505	34.942	26.483	43.536		2219	0.33				0.29+0.06						10.5 +0.3				202				
490	249	11.82	34.992	26.655	43.760		2210(I)		-68.9													249				
306	251	11.625	34.989	26.689	43.810		2209					0.17+0.04	2.8	4.09								251	8.3**+0.4			
307	302	11.005	34.981	26.798	43.968		2226	0.45				0.18+0.04						12.2 +0.2				302				
491	379	10.50	34.944	26.861	44.073		2239(I)		-83.9													379				
308	402	9.913	34.904	26.932	44.193		2242					0.10+0.06	3.2	3.98								402				
492	499	9.18	34.874	27.031	44.354		2262(I)		-106.6													499				
309	504	9.045	34.872	27.051	44.386		2263	0.32				0.18+0.05						13.4 +0.3				504				
310	604	8.353	34.865	27.155	44.550		2273					0.01+0.03										604	8.6**+0.3			
311	703	7.669	34.868	27.260	44.715		2299	0.18				0.00+0.04						16.6 +0.7				703				
493	798	7.10	34.856	27.332	44.839		2309(I)		-150.5									18.2 +0.5				798				
312	801	7.057	34.854	27.337	44.847		2309					-0.02+0.04										801				
313	897	6.589	34.844	27.393	44.947		2315	-0.01				-0.09+0.04										897	11.6**+0.5			
314	995	5.970	34.813	27.449	45.062		2325					0.05+0.04						19.3 +0.3				995				
315	1094	5.570	34.809	27.495	45.147		2328	0.06				0.00+0.04										1094				
316	1195	5.156	34.805	27.542	45.233		2330						12.3	4.16				20.9 +0.5				1195				
494	1198	5.14	34.801	27.541	45.234		2330(I)		-170.7													1198				
317	1296	4.696	34.794	27.585	45.322		2328	0.00														1296	13.2**+0.5			
318	1395	4.282	34.792	27.629	45.407		2337						11.2	4.20				21.2 +0.3				1395				
319	1493	3.889	34.801	27.677	45.494		2338	0.03				0.04+0.04										1493				
320	1593	3.606	34.785	27.692	45.538		2337											24.0 +0.5				1593				
495	1594	3.56	34.786	27.697	45.547		2337(I)		-168.9													1594				
321	1694	3.241	34.777	27.721	45.605		2336	0.05														1694	14.2**+0.6			
322	1788	3.013	34.777	27.742	45.649		2323											24.6 +0.3				1788				
323	1883	2.763	34.767	27.756	45.690		2335	0.16														1883				
324	1984	2.511	34.760	27.772	45.732		2324											24.9 +0.3				1984				
101	1992	2.557	34.759	27.767	45.723		2332	0.12														1992				
286	1993	2.50	34.764	27.776	45.737		2332(I)		-186.5													1993				
102	2190	2.227	34.750	27.787	45.778		2335															2190	18.0**+0.6			
287	2295	2.06	34.750	27.800	45.810		2329(I)		-192.4													2295				
103	2390	1.944	34.743	27.803	45.825		2325	0.21					14.4	4.21				25.7 +0.5				2390				
288	2597	1.74	34.741	27.817	45.861		2333(I)		-187.2									26.3 +0.5				2597				
105	2788	1.617	34.735	27.821	45.879		2325	0.24										23.7 +0.4				2788				
290	2899	1.51	34.735	27.829	45.899		2325(I)		-191.5													2899				
106	2984	1.483	34.731	27.828	45.900		2325															2984	18.6**+0.6			
107	3231	1.307	34.726	27.836	45.928		2326	0.31										27.1 +1.3				3231				
291	3301	1.23	34.726	27.841	45.942		2326(I)		-191.0													3301				
586	3306	1.25	34.728	27.841	45.939		2326(I)												0.59 +0.12			3306				
108	3474	1.118	34.720	27.844	45.957		2326															3474	18.4 +0.5			20.9 +0.7
587	3509	1.11	34.723	27.847	45.961		2325(I)											28.2 +0.4	0.80 +0.14			3509				
292	3700	0.97	34.719	27.853	45.982		2316(I)		-182.5													3700				
588	3712	0.94	34.721	27.856	45.989		2315(I)												0.93 +0.15			3712				
109	3718	0.966	34.717	27.851	45.981		2315	0.31					0.1	4.13				28.8 +0.8				3718				
590	3914	0.83	34.728	27.868	46.013		2309(I)											30.4 +0.9	0.60 +0.13			3914				
110	3956	0.849	34.713	27.855	45.998		2308															3956	17.1**+0.7			
293	4097	0.82	34.717	27.860	46.007		2311(I)		-173.9									29.2 +0.4				4097				
591	4116	0.81	34.717	27.861	46.008		2312(I)												0.92 +0.13			4116				
111	4209	0.808	34.713	27.858	46.006		2313	0.38														4209				
592	4317	0.81	34.716	27.860	46.008		2306(I)												0.52 +0.13			4317				

(I) INTERPOLATED FROM NISKIN DATA

POSITION: 5°1'S 91°46'E

DATE: 20 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg								
								UH	UW			UM	----------WHOI----------				USC	LDGO				WHOI YALE*			WHOI
112	4457	0.787	34.715	27.861	46.011		2297	0.41									28.8 +0.6				4457				
294	4492	0.80	34.719	27.863	46.012		2298(I)		-179.4												4492				
593	4517	0.78	34.717	27.863	46.013		2298(I)											0.80 +0.12			4517				
115	4698	0.779	34.713	27.860	46.010		2301	0.27													4698				
116	4701	0.778	34.714	27.860	46.011		2306										29.3 +0.4				4701				
594	4715	0.79	34.720	27.864	46.014		2306(I)										29.3 +0.5	1.22 +0.23			4715				
117	4741	0.777	34.713	27.860	46.011		2305	0.42													4741				
119	4807	0.774	34.713	27.860	46.011		2306(I)	0.39													4807	14.9**+0.6			
121	4870	0.772	34.713	27.860	46.012		2307	0.45													4870				
295	4881	0.78	34.717	27.863	46.014		2307(I)		-181.3												4881				
595	4912	0.77	34.717	27.863	46.015		2308(I)										28.6 +0.5	0.84 +0.13			4912				
123	4927	0.771	34.712	27.859	46.011		2309(I)	0.30									29.2 +0.7				4927				
124	4927	0.771	34.714	27.861	46.013		2309														4927	12.8**+0.4			
												PRECISION:	0.25	1.0											

STATION 442

POSITION: 1°12'S 90°45'E

DATE: 22 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg								
									UW			UM	----------MCM---------- WHOI*				USC	LDGO				WHOI YALE*		YALE	WHOI YALE*
899	0						1887(I)											11.46 +0.90			0				
401	20	29.673	33.731	20.955	37.009		1872					3.21+0.11	0.3	4.08	16.00	-0.6					20				
													-1.1*	3.81*											
394	20	29.82	33.734	20.907	36.955		1872(I)		119.4								14.2 +0.3				20				
402	51	29.093	34.434	21.670	37.738		1916					2.71+0.10									51	13.0**+0.7			11.4**+1.6
403	89	23.122	35.183	24.061	40.423		2081					2.01+0.08	1.4	3.81	15.50	-1.3	9.6 +0.4				89				
													1.6*	3.86*											
586	89	22.86	35.202	24.151	40.527		2081(I)		50.1												89				
404	109	20.646	35.181	24.750	41.253		2126					1.74+0.07									109				
405	139	15.730	35.129	25.938	42.754		2194					1.17+0.07	0.0				9.2 +0.4				139				
587	149	15.34	35.126	26.025	42.868		2195(I)		-27.6												149				
406	170	14.892	35.121	26.120	42.995		2198					0.88+0.05									170	7.7**+0.4		6.7 +2.3	10.5**+1.0
407	210	13.915	35.125	26.335	43.279		2198					0.67+0.04	3.5	4.15	17.29	0.4	9.9 +0.2				210				
588	247	12.79	35.110	26.556	43.584		2208(I)		-59.2												247				
408	259	12.707	35.109	26.572	43.606		2211					0.43+0.07									259				
409	307	12.152	35.085	26.663	43.740		2213					0.37+0.05	2.8	4.05	17.10	0.0	11.1 +0.2				307				
													1.6*	4.01*											
590	396	10.61	35.016	26.896	44.097		2239(I)		-87.8												396				
410	411	10.588	35.020	26.904	44.106		2244					0.05+0.04									411	7.5**+0.3			8.3**+1.0
411	508	10.026	34.986	26.976	44.225		2241					-0.02+0.05	3.3	4.00	17.03	0.0	14.9 +1.8				508				
													2.6*	4.01*											
591	595	9.16	34.950	27.093	44.415		2256(I)		-105.1												595				
412	610	9.115	34.953	27.103	44.430		2260					0.06+0.03									610				
415	705	8.638	35.002	27.218	44.584		2283					0.08+0.04	5.6	4.07	17.43	0.2					705	10.0**+0.4			7.5**+1.1
592	796	8.03	34.987	27.299	44.719		2301(I)		-77.3								16.3 +0.2				796				
416	804	8.020	34.988	27.302	44.722		2302					-0.02+0.03									804				
417	902	7.324	34.952	27.376	44.860		2315					-0.10+0.04	8.1	4.09	17.44	1.2					902				
418	1003	6.714	34.946	27.456	44.996		2317					-0.04+0.04					18.4 +0.4				1003				
593	1096	6.27	34.921	27.495	45.076		2323(I)		-152.3												1096				
419	1103	6.207	34.917	27.500	45.088		2323						11.0	4.06	17.40	1.2					1103	9.6**+0.4			11.0**+1.1
420	1203	5.773	34.897	27.540	45.169		2329										19.5 +0.3				1203				
421	1352	4.833	34.864	27.625	45.346		2329						12.6	4.23	18.16	1.6					1352				
													12.5*	4.17*											
594	1495	3.98	34.829	27.690	45.497		2333(I)		-180.9												1495				
422	1499	3.981	34.828	27.689	45.496		2333										22.1 +0.4				1499				
423	1651	3.552	34.812	27.719	45.570		2333						13.5	4.23	18.14	2.2					1651	12.1**+0.5			12.7**+1.1
595	1790	3.00	34.793	27.756	45.665		2336(I)		-188.3												1790				
424	1799	3.031	34.796	27.755	45.660		2340										24.6 +0.4				1799				
287	2138	2.18	34.762	27.801	45.797		2334(I)		-188.4												2138				
103	2188	2.195	34.762	27.799	45.794		2334						13.8	4.22	18.19	2.4	26.9 +0.8				2188				
104	2386	1.951	34.754	27.812	45.833		2337														2386	15.1**+0.4			15.4**+1.3
288	2489	1.82	34.748	27.817	45.853		2334(I)		-189.7								28.3 +0.4				2489				
105	2585	1.751	34.745	27.820	45.862		2331						14.4	4.18	18.20	1.6	26.8 +0.4				2585				
290	2840	1.56	34.740	27.830	45.894		2335(I)		-185.3								28.2 +0.3				2840				
686	2964	1.45	34.734	27.832	45.908		2329(I)											0.49 +0.09			2964				
107	2984	1.473	34.737	27.833	45.907		2328						12.7	4.23	18.32	2.3	29.6 +0.9				2984				
687	3165	1.37	34.731	27.835	45.920		2331(I)											0.46 +0.11			3165				
291	3190	1.35	34.732	27.838	45.925		2332(I)		-193.3								29.3 +0.6				3190				
108	3229	1.361	34.730	27.835	45.921		2333														3229	16.3**+0.6	14.7 +2.2		16.9**+1.4
688	3367		34.728				2330(I)											0.57 +0.10			3367				
109	3478	1.146	34.725	27.846	45.956		2326						11.9	4.23	18.50	1.4	29.0 +0.3				3478				
292	3539	1.04	34.723	27.851	45.973		2323(I)		-188.7												3539				
790	3578	1.00	34.721	27.852	45.978		2321(I)										29.4 +0.5	1.22 +0.24			3578				
110	3726	0.894	34.721	27.859	45.997		2314											0.75 +0.12			3726	14.4 +0.4	13.9 +2.1		16.1 +0.5
791	3777	0.85	34.717	27.859	46.002		2312(I)														3777				
293	3888	0.83	34.719	27.862	46.007		2307(I)		-176.6								30.8 +0.4				3888				
111	3977	0.832	34.718	27.860	46.005		2304						10.7	4.28	18.50	2.7					3977				

(I) INTERPOLATED FROM NISKIN DATA

CONTINUED

STATION 442 — *CONTINUED*

POSITION: 1°12'S 90°45'E

DATE: 22 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
									UW			UM		MCM / WHOI*			USC	LDGO				WHOI YALE*		YALE	WHOI YALE*
792	3978	0.83	34.716	27.859	46.003													1.06 +0.16			3978				
793	4178	0.80	34.718	27.862	46.011		2300(I)										31.2 +0.7	1.11 +0.13			4178				
112	4222	0.811	34.718	27.862	46.009		2300														4222	13.2*+0.5			13.6*+1.0
294	4236	0.81	34.720	27.863	46.010		2300(I)		-179.7												4236				
794	4375	0.80	34.718	27.862	46.010		2301(I)										31.1 +0.7	1.09 +0.15			4375				
115	4455	0.794	34.718	27.863	46.012		2301							11.0							4455				
														11.4* 4.18*											
795	4572	0.80	34.716	27.861	46.010		2303(I)										31.0 +0.5	1.24 +0.13			4572				
295	4582	0.78	34.717	27.863	46.013		2304(I)		-176.2												4582				
124	4604	0.786	34.717	27.862	46.012		2306							10.4 4.27	18.57	2.0					4604	11.3*+0.5			11.3*+1.2
														10.1* 4.24*											
												PRECISION:		0.3 0.01	0.06	0.2									
														0.25* 1.0 *											

STATION 444

POSITION: 0°36'N 88°36'E

DATE: 24 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra DPM/100kg	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p DPM/100kg	$T^{210}Pb$	^{210}Po
								UH	UW					WHOI			USC	LDGO							
499	0																	6.37 +0.51			0				
186	2054	2.35	34.771	27.794	45.772		2290(I)		-181.8									0.97 +0.15			2054				
201	2286	2.022	34.753	27.805	45.819		2328	0.15													2286				
187	2352	1.95	34.751	27.809	45.831		2333(I)		-190.5									0.72 +0.16			2352				
202	2436	1.88	34.747	27.812	45.840		2337							13.3 4.15			28.8 +0.8				2436				
203	2586	1.75	34.745	27.819	45.862		2334	0.08						13.3 4.19							2586				
188	2651	1.69	34.742	27.822	45.872		2334(I)		-203.5									1.00 +0.20			2651				
204	2736	1.61	34.736	27.823	45.881		2333										30.7 +0.8				2736				
386	2796	1.55	34.739	27.829	45.894		2331(I)											0.39 +0.15			2796				
205	2886	1.527	34.734	27.827	45.895		2329	0.20													2886				
190	2951	1.47	34.734	27.831	45.906		2330(I)		-190.1												2951				
206	3036	1.42	34.732	27.833	45.912		2332							12.8 4.32			30.9 +0.8				3036				
388	3200	1.33	34.731	27.838	45.927		2334(I)											0.68 +0.10			3200				
207	3235	1.30	34.729	27.839	45.931		2335	0.11						11.6 4.33							3235				
191	3250	1.29	34.728	27.839	45.932		2334(I)		-192.7												3250				
208	3335	1.25	34.726	27.840	45.938		2329										30.8 +0.8				3335				
390	3402	1.23	34.727	27.842	45.942		2327(I)											1.68 +0.22			3402				
209	3535	1.115	34.724	27.847	45.960		2324	0.23													3535				
192	3549	1.11	34.722	27.846	45.959		2324(I)		-190.7								30.3 +0.8				3549				
391	3604	1.08	34.722	27.848	45.965		2322(I)											1.13 +0.14			3604				
392	3805	1.07	34.722	27.848	45.966		2323(I)											1.20 +0.15			3805				
193	3849	1.04	34.721	27.850	45.971		2324(I)		-193.6												3849				
211	3935	1.05	34.720	27.848	45.968		2327	0.22						11.0 4.27			33.0 +0.9				3935				
393	4006	1.03	34.723	27.852	45.974		2329(I)											0.99 +0.12			4006				
194	4149	1.05	34.723	27.851	45.972		2333(I)		-189.2												4149				
394	4206	1.04	34.725	27.853	45.974		2334(I)											1.18 +0.54			4206				
215	4281	1.038	34.720	27.849	45.971		2336	0.18													4281				
216	4282	1.047	34.720	27.848	45.969		2331										34.0 +1.4				4282				
217	4305	1.045	34.719	27.848	45.969		2326	0.20													4305				
219	4354	1.041	34.718	27.847	45.969		2327(I)	0.23													4354				
221	4404	1.040	34.718	27.847	45.969		2329	0.10													4404				
195	4448	1.04	34.723	27.851	45.972				-188.1									1.84 +0.15			4448				
223	4453	1.040	34.718	27.847	45.969			0.19									34.2 +0.5				4453				
												PRECISION:		0.25 1.0											

(I) INTERPOLATED FROM NISKIN DATA

STATION 445 | POSITION: 8°31'N 86°2'E | DATE: 26 MAR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic µg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg						DPM/100kg		
								UH	UW			UM		WHOI		LSU	USC	LDGO				WHOI YALE*			WHOI YALE*
799	0																	7.52 +0.48			0				
301	19	29.079	34.225	21.517	37.591		1909	1.56				2.97+0.10	0.0	3.70		42.6					19				
486	20	29.32	34.231	21.444	37.506		1910(I)		102.3								9.1 +0.5				20				
302	59	25.710	34.285	22.618	38.861		1999					2.57+0.09									59	8.6**0.4			7.0**1.1
487	59	27.66	34.270	22.003	38.146		1999(I)		83.6												59				
303	90	21.389	34.809	24.265	40.733		2140	0.36				2.01+0.07				42.4	9.5 +0.2				90				
304	125	17.693	34.867	25.272	41.964		2198					1.50+0.06									125	6.1**0.5			6.3**1.7
488	129	17.51	34.866	25.315	42.019		2200(I)		-39.0												129				
305	140	16.556	34.877	25.553	42.320		2205	0.10				1.22+0.05				46.6	10.6 +0.2				140				
306	160	15.318	34.924	25.874	42.724		2227					0.84+0.06									160				
307	180	14.067	34.951	26.169	43.106		2250	0.06				0.69+0.05				50.7	11.8 +0.3				180				
308	200	13.307	34.986	26.355	43.347		2251					0.47+0.04									200				
490	238	12.41	35.009	26.553	43.612		2265(I)		-85.3												238				
309	240	12.177	35.016	26.604	43.681		2266	-0.03				0.27+0.04									240				
310	280	11.517	35.048	26.756	43.883		2272					0.13+0.04				52.6	12.4 +0.4				280				
311	321	10.976	35.035	26.846	44.016		2274	-0.02				0.12+0.05									321	5.3**0.4			6.5**1.0
491	348	10.78	35.034	26.880	44.066		2278(I)		-99.7												348				
312	381	10.509	35.034	26.929	44.137		2283					0.14+0.04				57.4	14.0 +0.3				381				
313	445	9.973	35.024	27.015	44.268		2291	0.07				0.03+0.04									445				
492	497	9.66	35.020	27.066	44.344		2293(I)		-111.6												497				
314	545	9.324	35.011	27.114	44.421		2295					-0.02+0.03				62.9	14.9 +0.2				545				
315	646	8.616	34.998	27.218	44.586		2305(I)	0.00				-0.05+0.03									646	6.1**0.4			5.6**1.3
316	745	7.902	34.978	27.312	44.743		2317					0.01+0.04				72.1	17.1 +1.1				745				
493	747	7.97	34.980	27.304	44.729		2317(I)		-143.1												747				
317	844	7.322	34.961	27.383	44.867		2328	-0.06				0.00+0.03	8.4	4.39							844				
318	943	6.770	34.940	27.444	44.978		2327									81.1	19.1 +0.4				943				
494	996	6.65	34.939	27.459	45.005		2332(I)		-155.9												996				
319	1041	6.313	34.927	27.495	45.072		2337	-0.04					9.6	4.26							1041	6.1**0.4			5.9**1.6
320	1134	5.828	34.906	27.540	45.164		2336									87.0	19.9 +0.3				1134				
321	1230	5.372	34.890	27.583	45.251		2340	0.01													1230				
495	1245	5.40	34.892	27.581	45.245		2341(I)		-167.5												1245				
322	1328	4.892	34.873	27.626	45.341		2344									93.9	22.1 +0.4				1328				
323	1425	4.459	34.854	27.659	45.417		2349	-0.01													1425	7.2**0.4			8.3**1.2
286	1484	4.37	34.855	27.669	45.436		2345(I)		-187.0												1484				
101	1497	4.231	34.843	27.675	45.456		2345	-0.02								100.8	22.6 +0.6				1497				
324	1525	4.042	34.839	27.691	45.492		2349										22.4 +0.4				1525				
102	1643	3.604	34.821	27.721	45.566		2347									104.8					1643				
287	1733	3.25	34.810	27.746	45.628		2345(I)		-188.3												1733				
103	1792	3.022	34.799	27.758	45.664		2345	-0.02					12.4	4.07		109.2	23.2 +0.7				1792				
104	1944	2.648	34.782	27.778	45.723		2348									112.9					1944	8.8**0.5			10.6**1.3
288	1982	2.57	34.781	27.783	45.738		2348(I)		-195.7												1982				
105	2091	2.383	34.771	27.791	45.765		2348	0.01					12.4	4.37		116.2	25.2 +0.4				2091				
290	2230	2.12	34.762	27.805	45.807		2353(I)		-203.9								26.6 +0.5				2230				
106	2241	2.142	34.759	27.801	45.801		2353									118.6					2241				
107	2389	1.963	34.751	27.808	45.828		2356	-0.04								119.9	26.1 +0.5				2389				
586	2425	1.93	34.753	27.813	45.837		2355(I)											0.24 +0.09			2425				
291	2479	1.81	34.749	27.818	45.855		2354(I)		-197.7												2479				
108	2536	1.805	34.746	27.816	45.853		2353									121.7					2536	8.4**0.6			9.1**1.3
587	2575	1.79	34.746	27.818	45.856		2350(I)											0.11 +0.12			2575				
109	2686	1.672	34.741	27.822	45.874		2343	0.02					12.3	4.33		122.4	28.3 +0.5				2686				
588	2726	1.67	34.743	27.824	45.876		2344(I)											0.10 +0.10			2726				
292	2727	1.64	34.741	27.825	45.880		2344(I)		-198.3												2727				
590	2875	1.55	34.738	27.829	45.894		2350(I)										29.3 +0.7	0.14 +0.11			2875				
110	2929	1.509	34.734	27.828	45.898		2352									127.1					2929	11.5 +0.4			11.4 +0.4
293	3024	1.43	34.734	27.834	45.913		2347(I)		-202.0												3024				
591	3025	1.46	34.735	27.833	45.908		2347(I)											0.15 +0.10			3025				
111	3077	1.407	34.730	27.832	45.913		2344	0.08					11.7	4.26		129.4	30.8 +0.5				3077				
592	3174	1.37	34.731	27.836	45.921		2344(I)											0.15 +0.10			3174				
112	3226	1.314	34.729	27.838	45.929		2344	0.05								131.1					3226	10.3**0.7			11.2**1.5
294	3322	1.25	34.730	27.843	45.941		2346(I)		-196.5												3322				
593	3325	1.26	34.728	27.841	45.938		2346(I)											0.39 +0.11			3325				
114	3377	1.227	34.727	27.842	45.943		2348									133.4	35.0 +0.8				3377				
594	3475	1.19	34.726	27.844	45.948		2353(I)											0.09 +0.17			3475				
115	3541	1.158	34.724	27.844	45.953		2356	0.09								137.4					3541				
117	3555	1.150	34.723	27.844	45.954		2360	0.05								138.1					3555				
119	3575	1.144	34.722	27.844	45.954		2362	0.01													3575				
120	3586	1.141	34.722	27.844	45.954		2362(I)									140.1					3586				
121	3606	1.140	34.722	27.844	45.954		2362	0.04													3606				
295	3617	1.15	34.724	27.845	45.954		2362(I)		-195.4								32.5 +0.6				3617				
122	3624	1.139	34.722	27.844	45.955		2361(I)									139.6					3624				
595	3625	1.15	34.724	27.845	45.953		2361(I)											2.51 +0.25			3625				
124	3642	1.138	34.723	27.845	45.956		2360						10.1	4.42		140.0					3642	7.6**0.4			8.0**1.1
123	3642	1.138	34.723	27.845	45.956			0.05													3642				
												PRECISION:	0.25	1.0											

(I) INTERPOLATED FROM NISKIN DATA

STATION 446 | **POSITION: 12°31'N 84°30'E** | **DATE: 28 MAR 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ(^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{228}Ra	^{226}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg								
								UH	UW		SIO	UM	WHOI			LSU	USC	LDGO				WHOI YALE*	YALE		WHOI YALE*
999	0																	19.78 +2.16			0				
401	9	28.107	33.250	21.097	37.240		1887	1.35			0.23	4.94+0.15	-1.1	3.78		56.8	11.1 +0.3				9				
386	20	28.15	33.422	21.211	37.347		1891(I)		116.6												20				
402	38	27.939	33.640	21.442	37.585		1897					4.08+0.12									38	12.8**+0.7	0.13 +0.09		-0.2**+0.7
387	44	27.70	33.582	21.475	37.632		1902(I)		97.7												44				
403	68	27.239	34.036	21.960	38.129		1935	1.40				3.42+0.10	-0.7	3.70		46.2	10.8 +0.2				68				
404	89	27.447	34.803	22.471	38.614		1983	1.30			0.55	2.93+0.10									89				
388	99	27.48	34.984	22.596	38.733		1986(I)		91.5												99				
405	101	27.443	35.069	22.672	38.809		1987	1.32				2.70+0.07	-1.0	3.79		41.0	9.8 +0.1				101				
406	106	27.127	34.994	22.715	38.869		2003					2.56+0.08									106				
407	118	25.020	34.730	23.161	39.431		2068	0.71			0.44	2.45+0.09	0.4	3.89		44.0	9.8 +0.1				118				
408	127	22.345	34.704	23.920	40.336		2134					2.24+0.09									127				
409	137	20.276	34.823	24.577	41.110		2166	0.07				1.94+0.08	3.4	3.81		43.4	9.9 +0.3				137				
410	147	19.137	34.858	24.902	41.503		2179					1.87+0.07									147	5.6**+0.4	0.37 +0.05		9.0**+1.9
411	157	18.600	34.846	25.030	41.665		2187	0.09				1.73+0.08					9.3 +0.2				157				
390	162	18.47	34.857	25.070	41.713		2194(I)		-27.1												162				
412	179	16.998	34.882	25.452	42.189		2221					1.16+0.08									179				
413	195	15.156	34.926	25.912	42.773		2242	-0.06			0.35	0.91+0.06				59.2	12.1 +0.2				195				
414	236	12.961	34.986	26.425	43.444		2261				0.26	0.51+0.07									236				
391	247	13.15	34.982	26.384	43.388		2264(I)		-81.9												247				
415	275	12.059	35.010	26.623	43.709		2272	-0.06			0.34	0.34+0.06				52.7	13.3 +0.4				275				
416	316	11.195	35.026	26.799	43.952		2290					0.11+0.06									316	2.9**+0.3	0.50 +0.04		2.3**+1.6
417	357	10.795	35.024	26.870	44.055		2278	-0.05				0.10+0.05	4.1	4.03		55.9	14.0 +0.3				357				
392	396	10.50	35.028	26.926	44.134		2295(I)		-103.5												396				
418	397	10.418	35.029	26.941	44.157		2296				0.30	0.05+0.05									397				
419	495	9.689	35.016	27.057	44.334		2303	-0.02			0.25	0.07+0.05	4.8	4.02		60.4	14.6 +0.5				495				
393	597	8.88	35.002	27.180	44.525		2319(I)		-129.8												597				
420	622	8.795	35.000	27.191	44.544		2323				0.31					66.3					622	3.1**+0.3	0.75 +0.06		2.2**+1.5
421	745	7.964	34.980	27.304	44.730		2322	-0.07			0.27		7.2	4.03		71.4	18.8 +0.4				745				
394	796	7.58	34.968	27.352	44.813		2323(I)		-149.9												796				
422	894	7.055	34.949	27.412	44.920		2326									79.3					894	5.0**+0.3	0.55 +0.05		2.0**+1.7
395	995	6.35	34.930	27.492	45.065		2330(I)		-157.4												995				
423	1040	6.248	34.920	27.498	45.081		2332	0.02				-0.03+0.05				85.5	19.0 +0.3				1040				
424	1190	5.531	34.898	27.570	45.223		2340				0.15					89.4					1190				
186	1190	5.53	34.898	27.570	45.223		2340(I)		-164.6												1190				
201	1192	5.459	34.891	27.574	45.233		2333	-0.03									22.4 +0.4				1192				
202	1342	4.874	34.872	27.627	45.344		2342(I)									95.5					1342	5.2**+0.3	0.51 +0.06		4.9**+1.5
187	1441	4.47	34.856	27.659	45.415		2347(I)		-177.5												1441				
203	1488	4.288	34.848	27.673	45.448		2350	-0.03								100.5	24.1 +0.4				1488				
204	1640	3.542	34.819	27.725	45.577		2354									104.4					1640				
188	1692	3.34	34.813	27.740	45.613		2352(I)		-187.5												1692				
205	1790	2.958	34.796	27.762	45.674		2349	-0.02								111.6	26.4 +0.6				1790				
206	1938	2.595	34.779	27.780	45.731		2353						12.6	4.25		116.6					1938				
190	1943	2.58	34.782	27.784	45.737		2353(I)		-198.1												1943				
207	2087	2.336	34.768	27.792	45.772		2352	0.10								118.3	25.4 +0.5				2087				
208	2236	2.123	34.759	27.802	45.805		2361				-0.02					119.4					2236	4.3 +0.2			5.8 +0.3
209	2385	1.938	34.751	27.810	45.833		2369	0.09								122.9	27.1 +0.6				2385				
586	2398	1.91	34.752	27.814	45.839		2368(I)											0.00 +0.09			2398				
192	2443	1.89	34.751	27.814	45.841		2365(I)		-199.0												2443				
587	2495	1.83	34.748	27.816	45.851		2360(I)											0.46 +0.13			2495				
210	2536	1.792	34.745	27.817	45.855		2357									123.9					2536	5.2**+0.3	0.82 +0.06		5.1**+1.5
588	2596	1.73	34.745	27.821	45.866		2359(I)										28.9 +1.3	0.06 +0.09			2596				
211	2684	1.667	34.740	27.822	45.874		2363	0.02								127.1					2684				
193	2692	1.65	34.742	27.824	45.878		2363(I)		-202.2												2692				
690	2702	1.65	34.743	27.826	45.880		2363(I)											0.12 +0.10			2702				
691	2801	1.58	34.739	27.828	45.889		2360(I)										29.8 +0.3	0.59 +0.11			2801				
692	2901	1.52	34.736	27.829	45.898		2358(I)											0.04 +0.08			2901				
212	2932	1.492	34.734	27.830	45.901		2357	0.09			-0.06					128.6					2932				
194	2991	1.44	34.734	27.833	45.911		2354(I)		-194.3								29.3 +0.5				2991				
214	3091	1.354	34.729	27.835	45.922		2350									131.5	31.4 +0.5				3091				
693	3098	1.35	34.731	27.837	45.924		2350(I)											0.26 +0.09			3098				
216	3185	1.260	34.727	27.840	45.937		2353(I)														3185				
215	3187	1.258	34.727	27.840	45.937		2353	0.12								131.8	32.5 +0.8				3187				
694	3197	1.27	34.728	27.840	45.936		2356(I)											0.18 +0.11			3197				
217	3199	1.247	34.726	27.840	45.938		2356	0.12													3199				
218	3215	1.228	34.725	27.840	45.941		2358(I)									132.3					3215				
219	3226	1.220	34.725	27.841	45.943		2359	-0.01								137.2					3226				
221	3264	1.220	34.725	27.841	45.943		2363	0.12													3264				
195	3286	1.22	34.727	27.843	45.945		2362(I)		-197.8								36.5 +1.4				3286				
695	3297	1.23	34.727	27.842	45.943		2362(I)											1.90 +0.24			3297				
224	3306	1.220	34.725	27.841	45.943		2362				-0.02										3306	6.0**+0.4	1.00 +0.13		4.3**+1.6
223	3308	1.219	34.724	27.840	45.942			0.13								137.2	36.0 +0.6				3308				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 447 | POSITION: 4°59'N 79°57'E | DATE: 5 APR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM	----------WHOI----------			LSU	USC	LDGO				WHOI YALE*			WHOI YALE*
699	0																	9.73 +0.70			0				
301	2	29.990	33.917	20.990	37.025		1903	1.56				3.38+0.11				45.6					2	14.5 +0.4			5.5 +0.3
302	2	29.990	33.913	20.987	37.023		1900					3.38+0.10	-1.9	3.73			9.6 +0.3				2				
486	2	29.77	33.899	21.049	37.095		1903(I)		105.0												2				
303	5	29.432	34.297	21.457	37.512		1914	1.55				3.33+0.12									5	15.9 +0.4			6.2 +0.2
487	30	29.29	34.663	21.779	37.833		1955(I)		102.8												30				
304	46	28.491	35.200	22.438	38.520		1966					2.69+0.10	-0.4	3.79		40.4	10.6 +0.3				46				
305	85	21.809	34.819	24.157	40.601		2115	0.45				1.96+0.09									85	8.6 +0.3			10.9 +0.4
488	94	20.64	34.671	24.364	40.879		2139(I)		17.7												94				
306	123	17.062	34.850	25.412	42.146		2198					1.30+0.07				46.1	10.8 +0.2				123				
307	148	14.397	34.975	26.116	43.030		2234	0.04				0.72+0.08				48.8					148	6.5 +0.3			5.5 +0.3
490	188	12.83	35.075	26.521	43.547		2248(I)		-72.3												188				
308	198	12.790	35.082	26.534	43.563		2252					0.34+0.06	2.7	4.01		48.7	12.0 +0.3				198				
309	247	11.932	35.108	26.723	43.817		2251	0.16				0.15+0.05									247	7.3 +0.3			7.4 +0.4
491	288	11.51	35.086	26.786	43.912		2246(I)		-68.9												288				
310	297	11.557	35.097	26.786	43.909		2246					0.20+0.06				49.0	12.0 +0.3				297				
311	328	11.234	35.081	26.834	43.983		2251	0.18				0.08+0.05									328	7.2 +0.2			6.9 +0.4
312	359	10.866	35.073	26.895	44.074		2247					0.15+0.05	3.2	3.98		51.2	12.3 +0.2				359				
492	388	10.56	35.042	26.927	44.131		2245(I)		-89.3												388				
313	427	10.513	35.054	26.944	44.151		2243	0.37				0.20+0.06									427	7.4 +0.2			6.9 +0.5
314	499	10.060	35.059	27.027	44.272		2262					0.15+0.06	3.1	3.91		56.5	13.3 +0.3				499				
493	499	9.97	35.055	27.040	44.292		2262(I)		-100.2												499				
315	599	9.408	35.038	27.121	44.421		2293	0.09				0.02+0.06									599	7.5 +0.2			6.9 +0.4
316	696	8.703	35.019	27.221	44.581		2305					0.05+0.05	7.1	4.01		65.1	16.5 +0.3				696				
317	796	7.977	34.983	27.305	44.729		2311	-0.03				-0.01+0.05									796	6.4 +0.2			4.8 +0.4
494	801	8.01	34.986	27.302	44.723		2311(I)		-137.0												801				
318	897	7.468	34.968	27.368	44.838		2321									75.7	18.9 +0.3				897				
319	996	6.829	34.949	27.443	44.972		2329	-0.06													996	6.4 +0.2			5.7 +0.3
320	1094	6.213	34.927	27.508	45.094		2331					0.13+0.05	11.0	4.06		85.0	21.1 +0.4				1094				
321	1193	5.736	34.913	27.557	45.189		2338	0.02													1193	8.7 +0.3			
495	1196	5.72	34.912	27.558	45.192		2291(I)		-123.8												1196				
323	1342	5.045	34.880	27.614	45.313		2340	-0.04													1342	8.1 +0.3			
322	1342	5.045	34.884	27.617	45.316		2341						12.3	4.13		92.9	22.0 +0.3				1342				
101	1387	4.998	34.877	27.617	45.321		2322	-0.08													1387	8.9 +0.3			
286	1463	4.54	34.872	27.664	45.413		2334(I)		-177.1												1463				
324	1498	4.341	34.855	27.672	45.442		2345										23.0 +0.4				1498				
102	1539	4.380	34.857	27.670	45.436		2345									97.4	22.2 +0.4				1539				
287	1662	3.56	34.827	27.730	45.580		2348(I)		-185.3												1662				
103	1686	3.686	34.827	27.718	45.555		2349	-0.03								104.3					1686	11.4 +0.3			
104	1838	2.958	34.800	27.765	45.677		2342									109.1	26.3 +0.5				1838				
586	1881	2.69	34.787	27.778	45.719		2343(I)											0.31 +0.11			1881				
288	1961	2.58	34.784	27.785	45.738		2344(I)		-194.9												1961				
105	1988	2.589	34.781	27.782	45.734		2344(I)	-0.03								112.4					1988	10.6 +0.3			
106	2184	2.229	34.765	27.799	45.789		2346									116.4	25.0 +0.3				2184				
290	2361	1.99	34.756	27.810	45.827		2336(I)		-193.5												2361				
107	2384	1.969	34.756	27.812	45.831		2335	0.04								118.1					2384	12.0 +0.4			
108	2579	1.764	34.745	27.819	45.860		2342									121.5	29.2 +0.6				2579				
588	2677	1.65	34.741	27.824	45.878		2342(I)											0.24 +0.12			2677				
291	2760	1.60	34.741	27.828	45.887		2343(I)		-197.9												2760				
109	2781	1.596	34.738	27.825	45.885		2343	0.11								122.5					2781	10.8 +0.3			
110	2969	1.469	34.733	27.830	45.904		2341									124.1	32.2 +0.8				2969				
590	3075	1.40	34.732	27.835	45.916		2345(I)											1.44 +0.22			3075				
292	3159	1.38	34.730	27.834	45.918		2349(I)		-185.0												3159				
111	3176	1.367	34.730	27.835	45.920		2350	0.04								127.2					3176	8.4 +0.3			
112	3376	1.270	34.727	27.839	45.935		2353	0.19								130.2	32.7 +1.1				3376				
591	3473	1.23	34.726	27.841	45.942		2349(I)											0.92 +0.15			3473				
293	3559	1.21	34.726	27.842	45.945		2344(I)		-195.1												3559				
114	3634	1.167	34.725	27.845	45.952		2340									131.0					3634	6.5**0.4			5.9**0.5
115	3738	1.136	34.721	27.843	45.954		2340(I)	0.18								131.7	33.0 +0.4				3738				
592	3772	1.14	34.723	27.845	45.955		2340(I)											0.87 +0.15			3772				
294	3859	1.10	34.725	27.849	45.964		2339(I)		-191.5												3859				
116	3952	1.073	34.720	27.847	45.965		2339														3952	13.1 +0.4			
593	3971	1.08	34.723	27.849	45.966		2337(I)											1.01 +0.20			3971				
117	3999	1.063	34.721	27.848	45.967		2333	0.15								129.1	32.8 +0.9				3999				
118	4000	1.064	34.720	27.847	45.966		2338						10.5	4.07							4000	8.8 +0.3			
594	4071	1.05	34.725	27.852	45.972		2339(I)											1.04 +0.13			4071				
119	4073	1.055	34.720	27.848	45.968		2339	0.14													4073				
120	4113	1.054	34.722	27.850	45.970		2335														4113	7.4 +0.2			
121	4153	1.051	34.720	27.848	45.969		2334	0.20								128.5	32.3 +0.4				4153				
295	4158	1.05	34.724	27.851	45.972		2334(I)		-187.7												4158				
595	4170	1.05	34.722	27.850	45.970		2335(I)											1.14 +0.22			4170				
123	4187	1.052	34.721	27.849	45.969		2335	0.18								128.1	35.4 +0.6				4187				
124	4187	1.052	34.721	27.849	45.969																4187	9.8 +0.3			

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 448 | **POSITION: 0°1'N 80°3'E** | **DATE: 6 APR 78**

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM	WHOI	WHOI			USC					WHOI YALE*			WHOI YALE*
301	1	29.836	34.328	21.349	37.383		1904	1.65				2.66+0.10	-0.9	3.78							1	15.8 +0.5			7.3 +0.4
302	1	29.836	34.328	21.349	37.383		1901					2.58+0.09					8.7 +0.3				1				
595	1	30.14	34.336	21.257	37.276		1904(I)		112.7												1				
303	22	29.616	34.343	21.432	37.476		1905	1.78				2.80+0.11	-0.8	3.78							22	15.8 +0.4			7.1 +0.5
486	49	28.24	34.747	22.178	38.282		1978(I)		95.1												49				
304	75	23.596	35.320	24.027	40.360		2062					2.13+0.09					8.9 +0.3				75				
305	125	20.271	35.280	24.925	41.448		2120	0.71				1.80+0.07	1.9	3.94							125	9.7 +0.3			10.5 +0.4
306	166	15.873	35.166	25.933	42.739		2181					1.11+0.06					11.1 +0.4				166				
487	177	14.86	35.177	26.171	43.047		2189(I)		-19.2												177				
307	218	13.849	35.145	26.364	43.313		2202	0.52				0.72+0.06	3.6	3.98							218	8.4 +0.3			9.4 +0.3
488	295	11.64	35.063	26.745	43.862		2213(I)		-63.8												295				
308	298	11.640	35.066	26.746	43.864		2213					0.22+0.05					10.7 +0.2				298				
309	371	10.840	35.026	26.864	44.045		2230					0.10+0.04									371	8.0 +0.3			7.5 +0.4
310	425	10.434	34.997	26.914	44.129		2222					0.12+0.07					12.1 +0.2				425				
490	494	9.60	34.965	27.033	44.319		2238(I)		-93.1												494				
311	518	9.454	34.963	27.055	44.353		2247	0.47				0.20+0.05	4.1	4.01							518	8.8 +0.3			8.6 +0.3
312	599	8.802	34.965	27.163	44.516		2265					0.04+0.04					16.6 +0.4				599				
313	687	8.385	35.000	27.256	44.644		2296	0.20				0.08+0.04									687	8.5 +0.4			8.6 +0.3
491	693	8.30	34.997	27.267	44.663		2296(I)		-126.7			-0.01+0.05									693				
314	747	8.268	34.996	27.271	44.669		2290										16.1 +0.2				747				
315	827	7.967	34.986	27.309	44.734		2299	0.12													827	9.9 +0.4			9.1 +0.5
492	893	7.21	34.972	27.408	44.901		2308(I)		-143.1			-0.08+0.04									893				
316	902	7.495	34.985	27.377	44.845		2309										18.8 +0.3				902				
317	1006	6.450	34.935	27.483	45.047		2327	0.06													1006	10.0 +0.4			9.5 +0.4
493	1093	5.84	34.915	27.545	45.167		2326(I)		-158.8			0.03+0.05									1093				
318	1127	5.785	34.911	27.549	45.177		2326					0.07+0.06					21.0 +0.4				1127				
319	1245	5.514	34.895	27.570	45.224		2329	0.08					11.7	4.24							1245	9.6 +0.3			
494	1292	5.18	34.876	27.595	45.282		2329(I)		-163.3			0.00+0.06									1292				
320	1353	4.940	34.865	27.614	45.324		2330										21.6 +0.6				1353				
321	1473	4.409	34.851	27.662	45.425		2337	0.05													1473	11.6 +0.3			
495	1590	3.78	34.827	27.708	45.534		2333(I)		-183.7												1590				
322	1594	3.829	34.828	27.704	45.527		2333										23.0 +0.3				1594				
323	1742	3.301	34.806	27.738	45.615		2338	0.13													1742	11.7 +0.3			
286	1755	3.16	34.804	27.749	45.641		2338(I)		-181.1												1755				
101	1836	2.935	34.794	27.762	45.677		2337	0.05					12.6	4.41							1836	13.6 +0.5			
324	1884	2.780	34.786	27.769	45.701		2337										25.0 +0.4				1884				
102	1981	2.630	34.778	27.776	45.724		2338										25.1 +1.1				1981				
287	2154	2.27	34.766	27.796	45.782		2341(I)		-186.3												2154				
103	2179	2.256	34.764	27.796	45.784		2341	0.11													2179	13.3 +0.5			
104	2377	1.932	34.749	27.809	45.832		2342										27.5 +0.4				2377				
288	2554	1.77	34.746	27.819	45.860		2338(I)		-185.7												2554				
105	2578	1.760	34.740	27.815	45.857		2337	0.15					14.2	4.22							2578	14.6 +0.4			
106	2776	1.584	34.734	27.823	45.884		2334										27.7 +0.6				2776				
290	2952	1.44	34.743	27.840	45.917		2334(I)		-192.9												2952				
107	2974	1.447	34.733	27.832	45.908		2334	0.13													2974	15.1 +0.4			
108	3175	1.354	34.725	27.832	45.919		2339										28.7 +0.5				3175				
291	3352	1.25	34.733	27.845	45.943		2348(I)		-191.7												3352				
109	3374	1.259	34.724	27.838	45.935		2348	0.15													3374	15.6 +0.5			
110	3573	1.209	34.724	27.841	45.944		2332										30.8 +0.5				3573				
292	3650	1.17	34.725	27.844	45.951		2334(I)		-184.8												3650				
111	3772	1.126	34.719	27.842	45.954		2339	0.18													3772	14.3**0.5			13.4**0.8
293	3949	1.09	34.723	27.848	45.965		2343(I)		-196.2												3949				
112	3972	1.096	34.720	27.845	45.961		2343	0.21									32.4 +1.4				3972				
114	4178	1.057	34.720	27.848	45.968		2328	0.22													4178	15.6 +0.5			
294	4248	1.03	34.724	27.853	45.975		2328(I)		-187.1												4248				
115	4330	1.037	34.719	27.848	45.970		2328	0.21													4330				
116	4429	1.030	34.718	27.848	45.971		2331										32.9 +0.5				4429				
117	4500	1.027	34.721	27.851	45.974		2332	0.26													4500				
118	4501	1.025	34.719	27.849	45.972		2328														4501	15.9 +0.5			
119	4550	1.022	34.718	27.848	45.972		2331	0.27									32.3 +0.5				4550				
295	4597	1.02	34.723	27.853	45.977		2327(I)		-191.1												4597				
121	4604	1.021	34.718	27.848	45.972		2328	0.23													4604				
124	4639	1.020	34.720	27.850	45.974		2323(I)														4639	13.4 +0.5			
123	4640	1.020	34.720	27.850	45.974		2323	0.19									32.1 +0.5				4640				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 449 — POSITION: 5°0'S 79°59'E — DATE: 8 APR 78

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 µM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	WHOI				USC	LDGO				WHOI YALE*			WHOI YALE*
301	0	29.290	34.433	21.605	37.664		1918					2.62+0.08									0	15.2 +0.4			6.3 +0.4
302	0	29.290	34.431	21.604	37.662		1916					2.81+0.09					8.6 +0.2				0				
799	0						1918(I)											4.15 +0.28			0				
486	10	29.31	34.432	21.599	37.657		1917(I)		114.5												10				
303	33	29.317	34.436	21.599	37.656		1919					2.63+0.09									33	15.7 +0.4			5.8 +0.5
304	65	27.725	34.837	22.409	38.537		1957					2.35+0.10					8.9 +0.4				65				
305	116	18.140	35.091	25.332	41.990		2160					1.71+0.08									116	9.9 +0.3			9.5 +0.4
487	129	16.62	35.031	25.656	42.414		2175(I)		-2.2												129				
306	146	15.316	35.024	25.951	42.799		2184					1.41+0.09					10.2 +0.2				146				
307	196	12.579	35.030	26.536	43.582		2215					0.58+0.05	3.4	3.93							196	9.7 +0.3			8.0 +0.5
308	247	11.410	34.988	26.729	43.867		2207					0.33+0.06					10.8 +0.3				247				
309	294	10.723	34.931	26.811	44.004		2220					0.26+0.05									294	9.0 +0.3			8.8 +0.3
488	297	10.83	34.943	26.801	43.987		2220(I)		-73.7												297				
310	348	10.352	34.924	26.871	44.095		2223					0.11+0.04					12.1 +0.2				348				
311	398	9.830	34.893	26.937	44.205		2225					0.18+0.06									398	8.9 +0.3			8.6 +0.3
312	446	9.379	34.866	26.992	44.299		2233					0.14+0.04					13.9 +0.5				446				
490	496	9.08	34.860	27.037	44.369		2244(I)		-99.8												496				
313	521	8.895	34.855	27.062	44.410		2250														521	9.2 +0.3			8.2 +0.3
314	606	8.378	34.854	27.143	44.535		2271										14.8 +0.4				606				
491	696	7.80	34.842	27.220	44.664		2285(I)		-131.1												696				
315	707	7.739	34.848	27.234	44.684		2287														707	10.7 +0.3			9.0 +0.6
316	805	7.141	34.832	27.308	44.811		2304					-0.04+0.05					17.2 +0.4				805				
492	906	6.54	34.818	27.378	44.937		2313(I)		-145.3												906				
317	915	6.476	34.814	27.384	44.949		2313														915	11.4 +0.3			10.5 +0.4
318	1005	5.896	34.797	27.446	45.066		2317										20.0 +1.1				1005				
493	1196	5.10	34.789	27.535	45.232		2324(I)		-174.0												1196				
320	1234	4.858	34.786	27.561	45.282		2327					0.09+0.05					21.6 +0.5				1234				
321	1393	4.319	34.794	27.626	45.400		2338						11.7	3.80							1393	15.2 +0.5			
494	1470	4.01	34.788	27.654	45.459		2336(I)		-187.2												1470				
322	1541	3.777	34.785	27.675	45.504		2333										24.1 +0.6				1541				
323	1690	3.273	34.777	27.718	45.598		2335						12.4	4.50							1690	13.4 +0.4			
495	1741	3.11	34.773	27.730	45.627		2330(I)		-184.6												1741				
101	1788	2.916	34.772	27.746	45.664		2327										24.5 +0.6				1788				
324	1836	2.796	34.769	27.754	45.685		2331										24.8 +0.6				1836				
102	1984	2.446	34.762	27.779	45.746		2334														1984	16.7 +0.4			
286	2043	2.33	34.756	27.783	45.764		2332(I)		-190.5												2043				
103	2185	2.124	34.754	27.798	45.801		2328										25.9 +0.7				2185				
104	2385	1.895	34.747	27.810	45.838		2329														2385	17.3 +0.4			
287	2394	1.90	34.745	27.808	45.835		2329(I)		-187.4												2394				
105	2580	1.721	34.740	27.818	45.864		2325										28.3 +1.1				2580				
288	2745	1.64	34.737	27.821	45.876		2326(I)		-192.0												2745				
106	2781	1.581	34.736	27.825	45.887		2326														2781	18.0 +0.4			
107	2979	1.455	34.736	27.834	45.909		2333										29.9 +0.7				2979				
586	2984	1.44	34.732	27.831	45.908		2333(I)											0.47 +0.10			2984				
108	3178	1.332	34.729	27.837	45.926		2333						12.8	4.18							3178	17.8 +0.4			
109	3376	1.225	34.726	27.841	45.943		2332										31.2 +0.3				3376				
587	3385	1.25	34.726	27.840	45.938		2332(I)											0.37 +0.11			3385				
291	3496	1.16	34.721	27.842	45.949		2331(I)		-191.1												3496				
110	3622	1.138	34.725	27.846	45.957		2330						12.0	4.16							3622	15.6**0.5			16.8**0.9
588	3687	1.14	34.724	27.845	45.956		2332(I)											0.24 +0.11			3687				
111	3871	1.087	34.723	27.848	45.965		2336										30.8 +0.4				3871				
292	3895	1.08	34.721	27.847	45.964		2336(I)		-196.8												3895				
590	4040	1.06	34.722	27.849	45.968		2333(I)											0.69 +0.12			4040				
112	4122	1.059	34.722	27.849	45.969		2331						10.7	4.24							4122	18.1 +0.4			
293	4295	1.04	34.720	27.849	45.971		2326(I)		-188.1												4295				
591	4344	1.03	34.720	27.850	45.973		2325(I)											0.54 +0.11			4344				
114	4379	1.028	34.723	27.852	45.975		2324										31.9 +0.5				4379				
115	4647	0.996	34.720	27.852	45.978		2320						11.1	4.25							4647	17.4 +0.4			
592	4649	1.01	34.719	27.850	45.975		2320(I)											0.64 +0.12			4649				
294	4692	0.97	34.721	27.854	45.983		2320(I)		-189.9												4692				
593	4853	0.98	34.722	27.854	45.983		2321(I)											0.53 +0.22			4853				
118	4974	0.972	34.721	27.854	45.983		2323						10.6	4.23							4974	14.7 +0.4			
117	4974	0.972	34.722	27.855	45.984		2324										31.5 +0.6				4974				
694	4994	0.97	34.725	27.858	45.987		2324(I)											0.57 +0.12			4994				
120	5052	0.957	34.721	27.855	45.986		2322										32.1 +0.4				5052				
695	5082	0.96	34.720	27.854	45.984		2320(I)											1.20 +0.16			5082				
295	5089	0.95	34.720	27.855	45.987		2319(I)		-188.5												5089				
123	5107	0.954	34.720	27.854	45.985		2317										32.0 +0.4				5107				
124	5107	0.954	34.719	27.854	45.985		2313														5107	13.7 +0.4			

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 450 POSITION: 10°0'S 79°59'E DATE: 10 APR 78

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^{3}He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra	^{228}Ra	^{228}Th	Partic μg/kg	Depth M	^{210}Pb s	^{210}Pb p	$T^{210}Pb$	^{210}Po
																	DPM/100kg								
								UH	UW		SIO	UM	----------WHOI----------				USC	LDGO				WHOI YALE*			WHOI YALE*
301	1	28.230	34.231	21.794	37.909		1908	1.52			0.30	3.00+0.10	-1.1	3.80							1	11.9 +0.3			7.9 +0.2
302	1	28.230	34.232	21.795	37.910		1907										9.1 +0.2				1				
486	9	28.27	34.433	21.933	38.042		1919(I)		128.9												9				
303	19	28.195	34.607	22.087	38.196		1931	1.72				3.07+0.09	-0.6	3.83							19	12.9 +0.3			7.6 +0.3
304	63	24.187	34.922	23.554	39.863		2035				0.46	2.52+0.07					9.7 +0.2				63				
305	105	19.375	34.757	24.763	41.353		2110	0.55				2.37+0.09	6.4	3.92							105	7.8 +0.2			9.6 +0.6
487	118	18.84	34.700	24.858	41.483		2128(I)		33.8												118				
306	134	17.417	34.938	25.393	42.102		2146					2.01+0.09					10.9 +0.6				134				
307	166	14.294	34.673	25.906	42.834		2171	0.49			0.22	1.93+0.07	9.2	4.03							166	6.7 +0.2			7.2 +0.3
308	246	11.482	34.737	26.521	43.659		2209					1.03+0.06					12.6 +0.2				246				
309	318	10.227	34.782	26.783	44.021		2219	0.54			0.19	0.48+0.06	5.3	4.09							318	6.8 +0.3			6.0 +0.4
488	376	9.57	34.782	26.894	44.186		2216(I)		-85.3												376				
310	405	9.080	34.738	26.941	44.276		2215				0.19	0.32+0.05					13.4 +0.2				405				
311	487	8.209	34.729	27.071	44.482		2238(I)	0.46				0.10+0.05	6.0	4.16							487	8.6 +0.3			6.8 +0.4
312	575	7.451	34.705	27.164	44.643		2271				0.10						16.2 +0.3				575				
490	595	7.25	34.716	27.201	44.697		2276(I)		-138.3												595				
313	685	6.816	34.728	27.271	44.807		2296	0.06													685	9.1 +0.3			8.1 +0.4
491	745	6.28	34.724	27.339	44.926		2306(I)		-154.5												745				
314	775	6.340	34.739	27.343	44.923		2309				0.03						18.7 +0.3				775				
315	875	5.547	34.693	27.406	45.063		2312	0.15			0.07	-0.01+0.04									875	10.0 +0.4			8.6 +0.4
492	894	5.38	34.688	27.423	45.096		2314(I)		-163.8												894				
316	986	5.052	34.690	27.463	45.168		2321				0.09						21.8 +0.4				986				
317	1104	4.685	34.720	27.528	45.268		2323	0.09			0.08										1104	11.2 +0.4			
318	1162	4.580	34.743	27.558	45.307		2327										21.2 +0.3				1162				
493	1165	4.55	34.745	27.563	45.316		2327(I)		-175.8												1165				
319	1262	4.286	34.755	27.599	45.377		2329	0.05			0.04	0.02+0.06	12.8	4.34							1262	12.2 +0.5			
320	1360	3.964	34.754	27.632	45.443		2330										21.9 +0.5				1360				
494	1446	3.63	34.755	27.665	45.510		2327(I)		-186.0												1446				
321	1471	3.551	34.757	27.675	45.528		2326(I)	0.09					13.0	4.31							1471	12.7 +0.5			
322	1598	3.188	34.757	27.710	45.600		2322				0.05						24.2 +1.0				1598				
323	1719	2.855	34.752	27.736	45.661		2324	0.15													1719	13.0 +0.5			
595	1746	2.78	34.752	27.742	45.675		2325(I)		-186.3												1746				
101	1789	2.729	34.748	27.744	45.682		2327	0.16									24.7 +0.4				1789				
324	1836	2.613	34.754	27.758	45.708		2328										24.8 +0.4				1836				
286	1973	2.40	34.752	27.774	45.747		2324(I)		-183.1												1973				
102	1987	2.391	34.746	27.770	45.745		2323						13.6	4.37							1987	14.4 +0.4			
103	2185	2.114	34.744	27.791	45.795		2329	0.16			0.03						26.4 +0.7				2185				
287	2372	1.92	34.740	27.803	45.828		2315(I)		-186.2												2372				
104	2383	1.901	34.738	27.803	45.830		2314														2383	14.1 +0.4			
105	2582	1.709	34.734	27.814	45.862		2318	0.29									26.8 +0.6				2582				
288	2772	1.59	34.735	27.824	45.884		2316(I)		-189.9												2772				
106	2778	1.580	34.730	27.820	45.882		2316				-0.02		13.3	4.43							2778	11.5 +0.4			
686	2922	1.46	34.731	27.830	45.905		2313(I)											0.57 +0.11			2922				
107	2979	1.460	34.727	27.826	45.901		2312	0.32									29.2 +0.5				2979				
290	3173	1.33	34.725	27.834	45.923		2321(I)		-190.4												3173				
108	3176	1.332	34.723	27.832	45.921		2321											2.67 +0.28			3225				
687	3225	1.32	34.727	27.836	45.926		2323(I)														3176	15.4 +0.5			
109	3376	1.214	34.720	27.837	45.940		2326	0.28			-0.02						29.4 +0.4				3376				
688	3527	1.17	34.724	27.843	45.950		2326(I)											0.53 +0.20			3527				
291	3574	1.15	34.724	27.845	45.955		2326(I)		-188.0												3574				
110	3673	1.102	34.717	27.842	45.957		2326						11.7	4.23							3673	16.7**0.5			17.3**1.1
690	3830	1.07	34.722	27.848	45.966		2322(I)											0.02 +0.08			3830				
111	3970	1.041	34.716	27.846	45.967		2318	0.25			-0.03						29.9 +0.3				3970				
292	3974	1.05	34.721	27.849	45.970		2318(I)		-184.1												3974				
691	4132	1.02	34.721	27.851	45.975		2319(I)											0.71 +0.15			4132				
112	4270	1.002	34.717	27.849	45.975		2321														4270	18.7 +0.5			
293	4374	0.99	34.721	27.853	45.979		2322(I)		-186.5												4374				
692	4433	1.00	34.720	27.851	45.978		2322(I)											0.74 +0.11			4433				
114	4577	0.979	34.716	27.850	45.978		2323	0.31			-0.05						30.8 +0.5				4577				
693	4734	0.99	34.721	27.853	45.980		2319(I)											0.64 +0.15			4734				
115	4874	0.973	34.716	27.850	45.979		2316	0.28					11.3	4.32							4874	16.0 +0.4			
294	4922	0.97	34.721	27.854	45.984		2317(I)		-186.3												4922				
694	5033	0.97	34.729	27.860	45.989		2318(I)											0.78 +0.14			5033				
116	5123	0.970	34.716	27.850	45.980		2319				-0.09						31.5 +0.5				5123				
118	5193	0.968	34.716	27.850	45.980		2324						10.6	4.39							5193	14.5 +0.4			
117	5194	0.968	34.715	27.849	45.979		2321	0.39													5194				
119	5243	0.967	34.716	27.850	45.980		2316	0.31									31.3 +2.1				5243				
121	5298	0.967	34.716	27.850	45.980		2321	0.32													5298				
295	5325	0.97	34.721	27.854	45.984		2317(I)		-185.4												5325				
123	5333	0.967	34.715	27.850	45.979		2317	0.33									31.3 +1.7				5333				
124	5334	0.967	34.716	27.850	45.980		2320				-0.01		11.6	4.35							5334	13.7 +0.3			
695	5336	0.97	34.720	27.853	45.982													0.71 +0.15			5336				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 451 — POSITION: 14°59'S 79°57'E — DATE: 13 APR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 µM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	δ (^3He) %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM	----------WHOI----------				USC	NOOW				WHOI YALE*			WHOI YALE*
301	1	27.823	34.550	22.163	38.292		1926					3.31+0.10	-0.9	3.84							1	12.5 +0.3			5.8 +0.3
302	1	27.823	34.547	22.160	38.289		1923										9.0 +0.2				1				
486	10	27.84	34.552	22.158	38.286		1923(I)		126.6												10				
303	45	27.822	34.548	22.161	38.291		1924					3.14+0.10	-0.9	3.75							45	11.3 +0.3			7.2 +0.4
304	98	24.011	34.918	23.602	39.922		1984					2.91+0.10					8.8 +0.1				98				
487	132	22.09	35.041	24.246	40.668		2033(I)		107.3												132				
305	141	20.968	35.073	24.580	41.067		2047					2.89+0.10	3.5	4.35							141	9.6 +0.3			12.9 +0.4
306	197	17.097	34.893	25.436	42.167		2124					2.44+0.09					10.6 +0.4				197				
307	248	14.409	34.842	26.011	42.927		2143					2.09+0.08									248	7.4 +0.2			7.0 +0.3
488	266	15.08	35.202	26.141	43.000		2128(I)		50.5												266				
308	278	15.358	35.393	26.225	43.060		2117					2.00+0.08					9.8 +0.1				278				
490	316	13.76	35.359	26.548	43.497		2103(I)		94.1												316				
309	319	13.827	35.394	26.561	43.505		2103					1.71+0.10	2.2	3.98							319	9.7 +0.3			8.9 +0.4
310	379	11.938	35.139	26.746	43.838		2108					1.29+0.06					9.1 +0.1				379				
311	459	9.942	34.840	26.877	44.137		2166					0.56+0.04	3.9	4.06							459	9.5 +0.3			7.0 +0.3
491	465	9.79	34.819	26.887	44.161		2168(I)		-5.0												465				
312	551	8.761	34.711	26.971	44.335		2181					0.26+0.05					12.3 +0.3				551				
492	646	7.12	34.594	27.123	44.636		2209(I)		-101.9												646				
313	657	7.038	34.595	27.136	44.656		2213					0.01+0.04									657	10.0 +0.3			7.5 +0.4
314	761	6.202	34.635	27.279	44.875		2264					-0.01+0.05					16.6 +0.8				761				
315	856	5.749	34.674	27.367	45.005		2287					0.06+0.04	9.4	4.14							856	12.2 +0.2			9.6 +0.4
493	941	5.43	34.699	27.426	45.094		2299(I)		-155.0												941				
316	956	5.352	34.701	27.436	45.112		2300										20.5 +0.4				956				
317	1055	4.989	34.701	27.479	45.189		2304						11.9	4.23							1055	12.3 +0.2			9.9 +0.1
318	1156	4.602	34.702	27.523	45.272		2307										20.8 +0.5				1156				
494	1199	4.54	34.706	27.533	45.288		2311(I)		-175.0												1199				
319	1258	4.236	34.704	27.564	45.349		2315						13.1	4.23							1258	13.4 +0.3			
320	1355	3.839	34.701	27.602	45.427		2312					-0.01+0.04					22.6 +0.4				1355				
321	1457	3.553	34.701	27.630	45.485		2318														1457	12.6 +0.2			
322	1550	3.266	34.712	27.666	45.550		2316										22.7 +0.4				1550				
495	1595	3.16	34.715	27.679	45.574		2314(I)		-189.7												1595				
323	1699	2.385	34.723	27.710	45.633		2309														1699	13.6 +0.3			
101	1786	2.718	34.726	27.727	45.667		2310										24.0 +0.5				1786				
324	1848	2.581	34.729	27.741	45.696		2319										24.3 +0.4				1848				
286	1884	2.49	34.733	27.752	45.715		2318(I)		-183.9												1884				
102	1983	2.368	34.732	27.761	45.738		2315						14.8	4.24							1983	15.3 +0.3			
103	2185	2.056	34.734	27.788	45.798		2317										25.6 +0.5				2185				
287	2185	2.08	34.736	27.788	45.796		2317(I)		-193.4												2185				
104	2382	1.851	34.735	27.804	45.837		2306						14.8	4.23							2382	16.4 +0.3			
288	2485	1.75	34.734	27.811	45.855		2308(I)		-191.3												2485				
105	2581	1.686	34.732	27.814	45.864		2310										25.6 +0.5				2581				
106	2776	1.540	34.730	27.823	45.889		2315						13.7	4.29							2776	15.6 +0.3			
290	2884	1.48	34.731	27.828	45.901		2313(I)		-186.7												2884				
586	2928	1.42	34.736	27.836	45.915		2313(I)											1.0 +0.4			2928				
107	2971	1.432	34.730	27.831	45.909		2312										27.6 +0.6				2971				
108	3166	1.329	34.727	27.835	45.925		2316											1.2 +0.3			3166	18.0 +0.3			
587	3179	1.30	34.732	27.841	45.933		2316(I)														3179				
291	3284	1.26	34.728	27.841	45.937		2317(I)		-189.9												3284				
110	3561	1.142	34.724	27.845	45.956		2312														3561	15.6**+0.5			19.3**+1.4
590	3682	1.09	34.726	27.851	45.967		2310(I)											0.7 +0.4			3682				
292	3683	1.10	34.724	27.848	45.963		2310(I)		-187.2												3683				
111	3759	1.081	34.722	27.848	45.965		2310										29.8 +0.5				3759				
591	3933	1.04	34.731	27.858	45.979		2311(I)											0.5			3933				
112	4013	1.036	34.720	27.849	45.971		2312														4013	19.8 +0.4			
293	4080	1.03	34.721	27.850	45.973		2312(I)		-194.5												4080				
592	4183	1.03	34.726	27.855	45.978		2311(I)											3.1 +0.6			4183				
114	4274	1.013	34.720	27.851	45.975		2311										31.3 +1.2				4274				
294	4477	1.01	34.721	27.852	45.977		2319(I)		-191.8												4477				
115	4528	1.004	34.719	27.850	45.976		2321						11.8	4.22							4528	18.9 +0.4			
594	4681	1.00	34.727	27.857	45.984		2316(I)											2.1 +0.4			4681				
118	4847	1.000	34.719	27.851	45.977		2318														4847	17.6 +0.5			
295	4874	1.00	34.721	27.852	45.978		2313(I)		-191.2												4874				
120	4943	0.998	34.721	27.852	45.979		2311										31.7 +0.8				4943				
124	5001	0.998	34.719	27.851	45.977		2309						11.8	4.44							5001	17.3 +0.4			
												PRECISION:	0.25	1.0											

(I) INTERPOLATED FROM NISKIN DATA

STATION 452 | **POSITION: 20°5'S 79°59'E** | **DATE: 15 APR 78**

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 μM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	$\delta(^3He)$ %	He 10^{-5}cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM	WHOI				LSU	SIO USC*	NOOW				WHOI YALE*			WHOI YALE*
486	10	26.80	34.753	22.636	38.813				124.7													10				
301	24	26.794	34.748	22.634	38.811		1939	1.61				2.75+0.09	-0.8	3.78			39.4					24	13.2 +0.4			7.1 +0.2
302	24	26.794	34.747	22.633	38.810		1940					2.70+0.08						7.4 +0.7 7.6**0.5				24				
303	33	26.812	34.748	22.628	38.804		1940	1.60				2.71+0.09	-1.5	3.81								33	13.0 +0.4			9.4 +0.3
304	75	25.325	35.313	23.509	39.750		1987					2.89+0.09					39.9	7.7 +0.6 8.1**0.3				75				
305	89	23.261	35.364	24.158	40.508		2002	1.54				2.60+0.09	-0.1	4.23								89	10.5 +0.3			9.6 +0.3
487	118	21.31	35.292	24.653	41.114		2038(I)		115.1													118				
306	119	21.050	35.280	24.715	41.192		2039					2.58+0.10					40.1	8.9 +0.5 10.1**0.3				119				
307	155	19.958	35.281	25.009	41.551		2057	1.19				2.84+0.09	2.2	3.82								155	9.5 +0.3			11.8 +0.5
308	196	18.745	35.389	25.407	42.020		2073					2.73+0.10					40.5	8.2 +0.7 9.0**0.1				196				
488	246	16.70	35.595	26.068	42.807		2090(I)		132.5													246				
309	252	16.898	35.520	25.964	42.692		2092	1.25				2.27+0.09	2.4	3.98								252	9.4 +0.4			8.5 +0.5
310	282	15.914	35.609	26.264	43.056		2096					2.05+0.11					41.7	8.8 +0.6 9.0**0.4				282				
311	344	13.752	35.352	26.545	43.495		2108	1.39				1.59+0.10	2.2	3.85								344	8.4 +0.5			9.4 +0.2
490	346	13.39	35.319	26.594	43.571		2108(I)		108.3													346				
312	428	11.790	35.099	26.743	43.848		2109					1.25+0.06					46.1	9.5 +0.6 9.6**0.5				428				
491	445	11.33	35.033	26.779	43.922		2111(I)		64.3													445				
313	532	10.506	34.908	26.832	44.043		2121	1.46				0.93+0.05	0.7	3.97								532	8.0 +0.3			8.3 +0.4
492	596	9.44	34.773	26.910	44.214		2128(I)		13.2													596				
314	605	9.399	34.749	26.897	44.206		2129					0.61+0.06					45.4	9.5 +0.4 10.3**0.3				605				
315	704	8.380	34.635	26.971	44.370		2141	1.21				0.26+0.05	-0.4	3.97								704	8.4 +0.3			9.4 +0.2
316	793	6.783	34.527	27.117	44.662		2191					0.06+0.05					55.7	12.3 +0.5 13.4**0.3				793				
493	847	5.93	34.504	27.210	44.836		2224(I)		-106.0													847				
317	852	5.792	34.496	27.221	44.860		2227	0.79					4.6	4.11			65.0					852	10.3 +0.3			10.2 +0.5
318	950	5.257	34.577	27.349	45.038		2278										76.7	15.8 +1.0 16.4**0.5				950				
319	1052	4.726	34.609	27.435	45.175		2283	0.36				-0.05+0.05										1052	10.6 +0.5			12.5 +0.4
494	1197	4.21	34.656	27.528	45.318		2304(I)		-166.6													1197				
320	1198	4.201	34.647	27.522	45.313		2304										86.8	18.6 +0.6 20.2**0.5				1198				
321	1349	3.685	34.672	27.595	45.436		2301	0.28														1349	12.9 +0.5			
495	1492	3.30	34.703	27.656	45.536		2313(I)		-173.2													1492				
322	1498	3.319	34.697	27.650	45.528		2313										94.9	20.4 +0.7 21.0**0.5				1498				
323	1668	2.960	34.719	27.700	45.615		2309	0.26					13.0	4.24								1668	13.2 +0.4			
101	1757	2.739	34.723	27.723	45.661		2309	0.24					13.9	4.16			100.1					1757	15.0 +0.4			
286	1786	2.68	34.731	27.734	45.678		2310(I)		-187.8													1786				
324	1839	2.617	34.727	27.736	45.687		2312											22.6 +0.6 20.6**0.5				1839				
102	1985	2.354	34.728	27.759	45.738		2320										102.8	23.5 +1.1 23.0**0.7				1985				
287	2086	2.19	34.733	27.777	45.773		2317(I)		-181.3													2086				
103	2213	2.043	34.729	27.785	45.797		2309	0.26									105.9					2213	12.8 +0.3			
288	2386	1.82	34.731	27.803	45.838		2303(I)		-173.5													2386				
104	2437	1.807	34.728	27.802	45.839		2302										106.4	23.2 +0.5 23.3**0.6				2437				
105	2653	1.650	34.728	27.813	45.868		2306	0.28					14.8	4.22			106.9					2653	12.3 +0.4			
290	2687	1.61	34.733	27.820	45.879		2305(I)		-179.4													2687				
586	2731	1.57	34.731	27.822	45.885		2304(I)													2.0	+0.4	2731				
106	2816	1.528	34.727	27.821	45.889		2302										107.9	23.0 +0.8 24.2**0.4				2816				
107	2936	1.442	34.730	27.830	45.907		2306	0.28					13.3	4.24								2936	12.1 +0.3			
587	2982	1.41	34.731	27.833	45.914		2306(I)													1.6	+0.4	2982				
291	3087	1.34	34.731	27.837	45.925		2307(I)		-186.1													3087				
108	3099	1.357	34.729	27.835	45.921		2307										111.1	25.0 +0.6 26.4**0.5				3099				
588	3234	1.28	34.730	27.841	45.936		2310(I)													0.6	+0.3	3234				
109	3285	1.257	34.726	27.839	45.937		2311	0.29					11.8	4.23			112.5					3285	17.3 +0.4			
110	3481	1.164	34.725	27.845	45.952		2310										114.7	27.3 +0.6 28.3**0.5				3481				
590	3485	1.15	34.728	27.848	45.957		2310(I)													0.9	+0.3	3485				
292	3486	1.18	34.729	27.847	45.954		2310(I)		-183.9													3486				
111	3635	1.123	34.723	27.846	45.958		2311	0.28									115.9					3635	17.8**0.5			17.3**0.5
112	3875	1.066	34.720	27.847	45.966		2316										118.3	27.2 +0.5 29.2**0.8				3875				
293	3885	1.07	34.724	27.850	45.969		2316(I)		-184.5													3885				
592	3986	1.06	34.723	27.850	45.969		2318(I)													1.8	+0.4	3986				
114	4205	1.020	34.719	27.849	45.973		2320	0.29					11.4	4.29			121.7					4205	17.6 +0.5			
593	4236	1.03	34.722	27.851	45.973		2320(I)													1.0	+0.3	4236				
294	4284	1.01	34.722	27.852	45.977		2320(I)		-189.6													4284				
115	4418	1.005	34.718	27.849	45.975		2320	0.32									121.2	32.8 +0.5 29.9**0.7				4418				
116	4525	1.002	34.717	27.849	45.975		2327										121.5	28.5 +0.8 30.5**0.6				4525				
118	4613	0.998	34.718	27.850	45.976		2313						9.4	4.05								4613	18.1 +0.5			
117	4613	0.998	34.719	27.851	45.977		2319	0.30														4613				
295	4681	1.00	34.724	27.854	45.980		2229(I)		-189.4													4681				
119	4684	0.997	34.718	27.850	45.977		2325	0.16									121.3	30.1 +0.5 32.1**0.6				4684				
121	4753	0.997	34.718	27.850	45.977		2310	0.26										30.6 +0.7 29.8**0.5				4753				
124	4791	0.996	34.718	27.850	45.977		2313															4791	16.8 +0.5			
123	4791	0.996	34.720	27.852	45.978		2320	0.31									121.1	30.3 +0.5 30.5**0.6				4791				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 453 — POSITION: 23°0'S 74°1'E — DATE: 18 APR 78

Sample Number	Depth M	Pot Temp °C	Salinity ‰	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(‰)	TCO_2 μM/kg	$\delta^{13}C$ ‰	$\Delta^{14}C$ ‰	δD ‰	$\delta^{18}O$ ‰	Tritium TU	$\delta(^3He)$ %	He Ne 10^{-5}cc/kg	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic μg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
								UH	UW			UM	WHOI				SIO	NOOW				WHOI YALE*			WHOI YALE*
513	7	24.784	35.528	23.834	40.098		1989	1.61				2.91+0.10	-0.5	3.79							7	10.7 +0.4			7.1 +0.3
514	7	24.784	35.525	23.832	40.096		1987						-0.6	3.79			6.3 +0.9				7				
486	14	24.82	35.536	23.829	40.091		1988(I)		142.9												14				
515	29	24.782	35.529	23.835	40.100		1990	1.61				2.89+0.10	-0.6	3.78							29	13.7 +0.5			8.9 +0.3
516	78	20.991	35.692	25.044	41.515		2022					2.48+0.11					6.1 +0.6				78				
487	98	20.54	35.707	25.178	41.676		2034(I)		135.5												98				
517	145	18.149	35.724	25.813	42.455		2059	1.59				2.32+0.09	-0.4	4.13							145	10.2 +0.4			11.1 +0.5
518	192	15.954	35.569	26.224	43.014		2083					1.81+0.09	0.5	3.94			6.3 +0.6				192				
488	198	16.42	35.600	26.139	42.896		2084(I)		122.4												198				
519	245	14.609	35.453	26.438	43.324		2089	1.41				1.64+0.07	1.5	3.95							245	8.6 +0.3			8.7 +0.5
520	295	13.225	35.250	26.575	43.567		2099					1.54+0.07	1.3	3.99			7.1 +0.6				295				
490	347	12.54	35.171	26.653	43.698		2102(I)		74.3												347				
521	384	12.131	35.115	26.690	43.768		2103	1.48				1.22+0.06	1.1	4.36							384	8.1 +0.3			8.6 +0.5
522	453	11.471	35.035	26.754	43.885		2108					0.95+0.06					9.3 +0.6				453				
523	523	10.782	34.944	26.810	43.999		2119	1.49				0.65+0.06									523	7.1 +0.3			8.0 +0.2
491	546	10.70	34.935	26.819	44.015		2121(I)		27.8												546				
524	594	10.276	34.880	26.850	44.082		2126					0.56+0.05					10.3 +0.5				594				
313	696	9.091	34.723	26.927	44.263		2141	1.34				0.35+0.06									696	8.8 +0.3			7.4 +0.3
492	746	8.51	34.659	26.970	44.358		2148(I)		-36.2												746				
314	786	7.815	34.587	27.018	44.469		2156					0.15+0.06					11.6 +0.7				786				
315	868	6.436	34.485	27.130	44.709		2184	1.11				0.06+0.06									868	9.4 +0.3			9.7 +0.4
493	926	5.40	34.442	27.226	44.904		2198(I)		-107.1												926				
316	930	5.445	34.437	27.216	44.891		2199					0.03+0.06					12.5 +0.5				930				
317	1020	4.566	34.454	27.330	45.090		2240	0.74													1020	10.8 +0.3			11.3 +0.3
318	1122	4.056	34.526	27.441	45.250		2273						8.3	4.06			17.6 +0.5				1122				
319	1220	3.751	34.568	27.505	45.344		2284	0.41				-0.04+0.05	8.5	4.26							1220	13.2 +0.4			
494	1228	3.72	34.577	27.515	45.356		2285(I)		-158.9												1228				
320	1318	3.469	34.606	27.563	45.429		2295										20.2 +0.5				1318				
321	1443	3.167	34.644	27.621	45.517		2302	0.30					10.7	4.14							1443	15.2 +0.4			
686	1515	3.06	34.653	27.638	45.545		2303(I)		-173.9												1515				
322	1566	3.047	34.689	27.668	45.575		2303						12.3	4.16			20.3 +1.0				1566				
286	1597	2.99	34.694	27.677	45.590		2305(I)		-177.3												1597				
323	1688	2.859	34.711	27.703	45.628		2310	0.25													1688	14.3 +0.4			
101	1789	2.658	34.716	27.724	45.671		2309	0.24					11.8	4.19							1789	14.0 +0.3			
287	1794	2.67	34.723	27.729	45.674		2307(I)		-177.9												1794				
324	1811	2.596	34.716	27.729	45.683		2299						11.9	4.26			20.8 +0.7				1811				
102	1990	2.300	34.721	27.758	45.742		2302										20.4 +0.5				1990				
288	2023	2.17	34.729	27.774	45.772		2302(I)		-181.4												2023				
103	2190	1.989	34.723	27.784	45.802		2298	0.41					15.7	4.01							2190	10.2 +0.3			
290	2373	1.73	34.730	27.809	45.854		2290(I)		-173.4												2373				
104	2387	1.758	34.728	27.805	45.848		2289										21.1 +0.7				2387				
105	2538	1.630	34.729	27.816	45.872		2286	0.41													2538	7.7 +0.2			
106	2684	1.522	34.732	27.826	45.894		2284										22.7 +0.5				2684				
291	2724	1.45	34.734	27.833	45.909		2285(I)		-174.2												2724				
687	2810	1.44	34.735	27.834	45.910		2289(I)											0.5			2810				
107	2835	1.416	34.736	27.836	45.916		2290	0.36													2835	7.8 +0.2			
108	2981	1.314	34.733	27.841	45.932		2291						12.1	4.22			24.6 +0.6				2981				
688	3010	1.32	34.734	27.841	45.931		2291(I)											1.1 +0.3			3010				
292	3075	1.26	34.732	27.844	45.941		2291(I)		-178.4												3075				
109	3132	1.238	34.730	27.844	45.943		2292	0.43													3132	11.0 +0.3			
690	3210	1.22	34.731	27.846	45.948		2294(I)											0.8 +0.4			3210				
110	3279	1.199	34.730	27.846	45.950		2296										27.2 +0.8				3279				
691	3410	1.16	34.728	27.848	45.956		2297(I)											1.9 +0.4			3410				
111	3424	1.166	34.726	27.845	45.953		2297	0.40					11.8	4.36							3424	13.1 +0.4			
293	3426	1.15	34.731	27.850	45.959		2297(I)		-183.1												3426				
112	3577	1.140	34.725	27.846	45.957		2303	0.28									27.1 +0.7				3577				
692	3610	1.14	34.727	27.848	45.959		2303(I)											0.9 +0.3			3610				
294	3772	1.11	34.724	27.847	45.960		2303(I)		-190.0												3772				
114	3784	1.118	34.724	27.847	45.960		2303														3784	12.9++0.6			11.2++1.9
693	3809	1.12	34.725	27.848	45.961		2305(I)											1.0 +0.3			3809				
115	3848	1.115	34.724	27.847	45.960		2307	0.41									26.7 +0.5				3848				
694	4009	1.11	34.724	27.848	45.962		2307(I)											1.2 +0.3			4009				
118	4014	1.109	34.723	27.847	45.961		2307														4014	15.3 +0.4			
117	4015	1.109	34.724	27.848	45.961		2302	0.32									26.8 +0.7				4015				
119	4063	1.105	34.723	27.847	45.961		2310	0.38													4063				
120	4093	1.104	34.723	27.847	45.961		2311										27.1 +0.5				4093				
121	4117	1.102	34.723	27.847	45.962		2305	0.34													4117				
124	4151	1.101	34.724	27.848	45.963		2307														4151	15.2 +0.4			
123	4153	1.101	34.724	27.848	45.963		2308	0.43									29.4 +0.5				4153				
695	4210	1.10	34.723	27.847	45.962													1.7 +0.4			4210				

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

STATION 454 POSITION: 26°59'S 67°5'E DATE: 21 APR 78

Sample Number	Depth M	Pot Temp °C	Salinity °/₀₀	Sigma θ	Sigma 4	$^{18}O(O_2)$ δ(°/₀₀)	TCO_2 µM/kg	$\delta^{13}C$ °/₀₀	$\Delta^{14}C$ °/₀₀	δD °/₀₀	$\delta^{18}O$ °/₀₀	Tritium TU	δ (^3He) %	He 10⁻⁵cc/kg	Ne	$\Delta\left(\frac{He}{Ne}\right)$ %	Barium nM/Kg	^{226}Ra DPM/100kg	^{228}Ra DPM/100kg	^{228}Th DPM/100kg	Partic µg/kg	Depth M	^{210}Pb s DPM/100kg	^{210}Pb p DPM/100kg	$T^{210}Pb$ DPM/100kg	^{210}Po DPM/100kg
									UW			UM		----------WHOI----------				SIO						WHOI YALE*		WHOI YALE*
301	1	24.495	35.513	23.909	40.189		1989					2.94+0.10	-1.5	3.76								1	11.4 +0.3		6.0 +0.3
302	1	24.495	35.509	23.906	40.186		1989					2.78+0.09	-1.5	3.80				7.8 +0.5				1			
486	9	24.50	35.515	23.909	40.189		1106(I)		134.8													9			
303	25	24.442	35.545	23.949	40.231		1992					2.83+0.10										25	11.3 +0.4		7.2 +0.2
304	70	24.169	35.595	24.067	40.362		1996					2.93+0.11	-1.4	3.87				6.5 +0.5				70			
487	88	21.36	35.555	24.839	41.291		2013(I)		135.7													88			
305	111	19.458	35.573	25.363	41.928		2038					2.65+0.09	-0.5	3.88								111	9.7 +0.3		11.2 +0.5
306	160	17.632	35.590	25.839	42.518		2071					2.13+0.09						6.6 +0.6				160			
488	198	16.35	35.556	26.121	42.884		2080(I)		117.8													198			
307	220	15.863	35.523	26.210	43.007		2084					1.89+0.08	0.6	3.91								220	7.9 +0.3		11.3 +0.4
308	276	14.370	35.401	26.450	43.355		2105					1.53+0.08						7.5 +0.6				276			
490	298	14.07	35.370	26.492	43.419		2106(I)		100.7													298			
309	366	13.193	35.267	26.595	43.589		2110					1.54+0.08	0.4	3.95								366	8.3 +0.3		9.9 +0.5
491	447	12.16	35.119	26.688	43.764		2116(I)		67.3													447			
310	462	12.044	35.104	26.698	43.783		2117					1.05+0.07	0.3	3.99				7.8 +0.6				462			
311	545	11.361	35.019	26.762	43.903		2121					0.88+0.08	0.7	3.98								545	7.7 +0.3		7.9 +0.6
492	598	10.83	34.952	26.807	43.992		2128(I)		18.9													598			
312	618	10.692	34.934	26.819	44.015		2130					0.71+0.06						9.1 +0.6				618			
313	702	10.080	34.851	26.862	44.110		2131					0.59+0.07										702	8.2 +0.3		8.2 +0.4
314	777	9.187	34.735	26.921	44.248		2134					0.32+0.07	-0.5	3.99				8.8 +0.6				777			
493	847	8.17	34.629	26.998	44.415		2148(I)		-48.9													847			
315	852	8.390	34.648	26.979	44.377		2149					0.24+0.07	0.2	3.98								852	8.4 +0.3		9.5 +0.6
316	924	7.051	34.525	27.079	44.600		2177					0.11+0.06	1.1	4.10				10.8 +0.7				924			
317	1023	5.683	34.441	27.191	44.842		2196					0.02+0.06	2.1	4.10								1023	9.2 +0.3		8.7 +0.5
318	1118	4.565	34.427	27.309	45.070		2222											14.2 +1.1				1118			
494	1131	4.44	34.432	27.326	45.099		2225(I)		-123.0													1131			
319	1222	3.987	34.468	27.402	45.220		2247															1222	10.3 +0.4		
320	1318	3.630	34.518	27.477	45.330		2273					-0.02+0.06						16.1 +0.6				1318			
495	1415	3.34	34.560	27.539	45.419		2280(I)		-148.5													1415			
321	1416	3.309	34.568	27.548	45.431		2280															1416	12.2 +0.5		
322	1527	2.978	34.612	27.613	45.530		2281							9.9 4.09				16.7 +0.7				1527			
323	1647	2.735	34.643	27.659	45.600		2287															1647	10.4 +0.4		
286	1697	2.72	34.647	27.664	45.606		2288(I)		-164.7													1697			
324	1784	2.504	34.669	27.700	45.664		2290							10.6 4.16				17.4 +0.4				1784			
101	1793	2.522	34.667	27.696	45.659		2288											18.6 +1.1				1793			
287	1897	2.31	34.691	27.733	45.718		2287(I)		-167.6													1897			
102	1990	2.153	34.700	27.753	45.754		2287															1990	11.5 +0.3		
103	2187	1.909	34.717	27.785	45.812		2295							13.5 4.20				20.7 +0.6				2187			
288	2197	1.90	34.720	27.788	45.816		2296(I)		-173.7									23.1 +0.5				2197			
104	2386	1.742	34.724	27.803	45.848		2306															2386	8.7 +0.4		
105	2585	1.655	34.724	27.810	45.864		2301							14.3 4.30				25.0 +0.6				2585			
290	2598	1.64	34.724	27.811	45.866		2301(I)		-173.0													2598			
106	2785	1.561	34.724	27.817	45.881		2298							15.7 4.21								2785	7.4 +0.3		
107	2981	1.510	34.725	27.821	45.891		2299							14.6 4.28				23.3 +0.6				2981			
291	2998	1.50	34.727	27.824	45.895		2300(I)		-179.0													2998			
108	3180	1.458	34.725	27.825	45.900		2308							13.1 4.16								3180	8.9 +0.4		
109	3381	1.398	34.724	27.828	45.910		2300							13.6 4.23				23.2 +0.9				3381			
292	3396	1.39	34.726	27.831	45.914		2300(I)		-174.6									21.8 +0.7				3396			
110	3580	1.343	34.723	27.831	45.919		2304															3580	6.9**+0.5		5.6**+0.9
111	3779	1.277	34.722	27.835	45.930		2309											24.6 +0.9				3779			

(I) INTERPOLATED FROM NISKIN DATA

PRECISION: 0.25 1.0

Chapter 3

VERTICAL SECTIONS

VERTICAL SECTION COLOR SCHEME

ATLANTIC

TRITIUM

- Greater than 10
- 5 to 10
- 1 to 5
- 0.2 to 1
- Less than 0.2

$\Delta^{14}C$ (‰)

- Greater than 0
- 0 to -50
- -50 to -100
- -100 to -150
- -150 to -200
- Less than -200

$\delta^{3}He$ (%)

- Less than 0
- 0 to 2.5
- 2.5 to 5
- 5 to 7.5
- 7.5 to 10
- Greater than 10

BARIUM

- Less than 45
- 45 - 55
- 55 - 70
- 70 - 90
- 90 - 100
- Greater than 100

PACIFIC

TRITIUM

- Greater than 10
- 5 to 10
- 1 to 5
- 0.2 to 1
- Less than 0.2

$\Delta^{14}C$ (‰)

- Greater than 0
- 0 to -50
- -50 to -100
- -100 to -150
- -150 to -200
- Less than -200

$\delta^{3}He$ (%)

- Less than 0
- 0 to 10
- 10 to 20
- 20 to 25
- 25 to 30
- Greater than 30

INDIAN

TRITIUM

- Greater than 10
- 5 to 10
- 1 to 5
- 0.2 to 1
- Less than 0.2

$\Delta^{14}C$ (‰)

- Greater than 0
- 0 to -50
- -50 to -100
- -100 to -150
- -150 to -200
- Less than -200

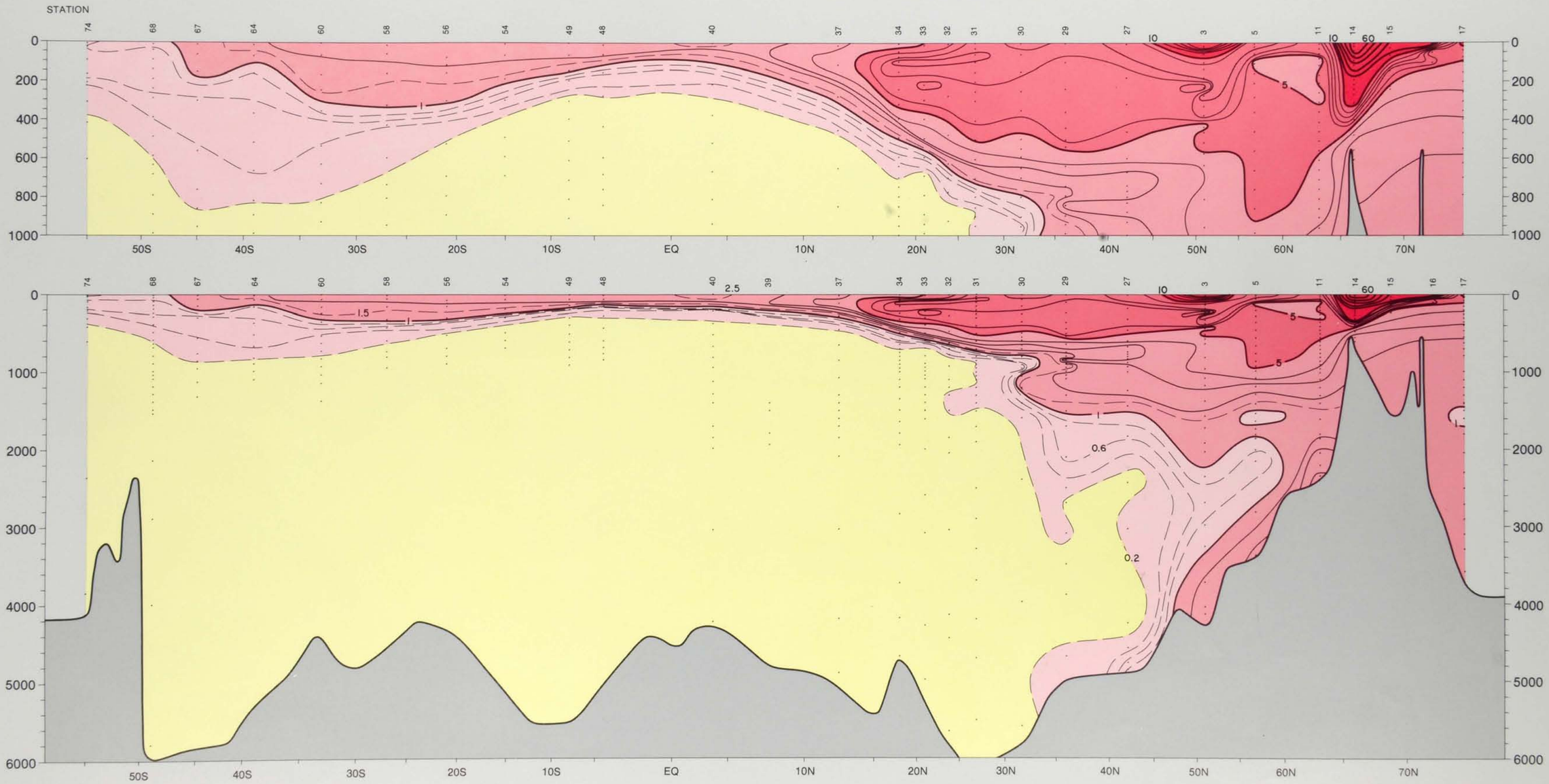
$\delta^{3}He$ (%)

- Less than 0
- 0 to 5
- 5 to 10
- 10 to 30
- 30 to 40
- Greater than 40

WESTERN ATLANTIC

PLATE 5

Vertical distribution of Tritium in the Western Atlantic, July to December 1972. GEOSECS Atlantic Expedition: R/V KNORR. Vertical exaggeration is 2500:1 in the upper section, and 1000:1 in the lower section.

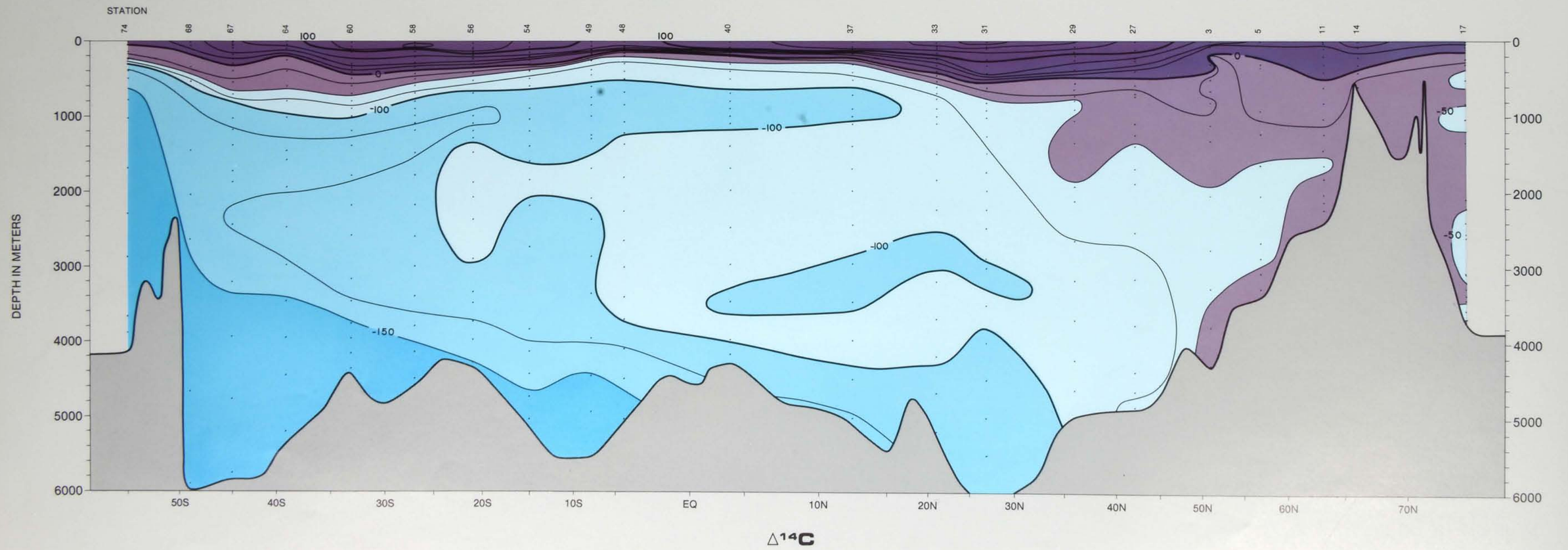


TRITIUM

PLATE 6

Vertical distribution of $\Delta^{14}C$(%) in the Western Atlantic, July to December 1972. GEOSECS Atlantic Expedition: R/V KNORR. Vertical exaggeration is 1000:1.

WESTERN ATLANTIC



WESTERN ATLANTIC

PLATE 7

Vertical distribution of δ^3He(%) in the Western Atlantic, July to December 1972. GEOSECS Atlantic Expedition: R/V KNORR. Vertical exaggeration is 1000:1.

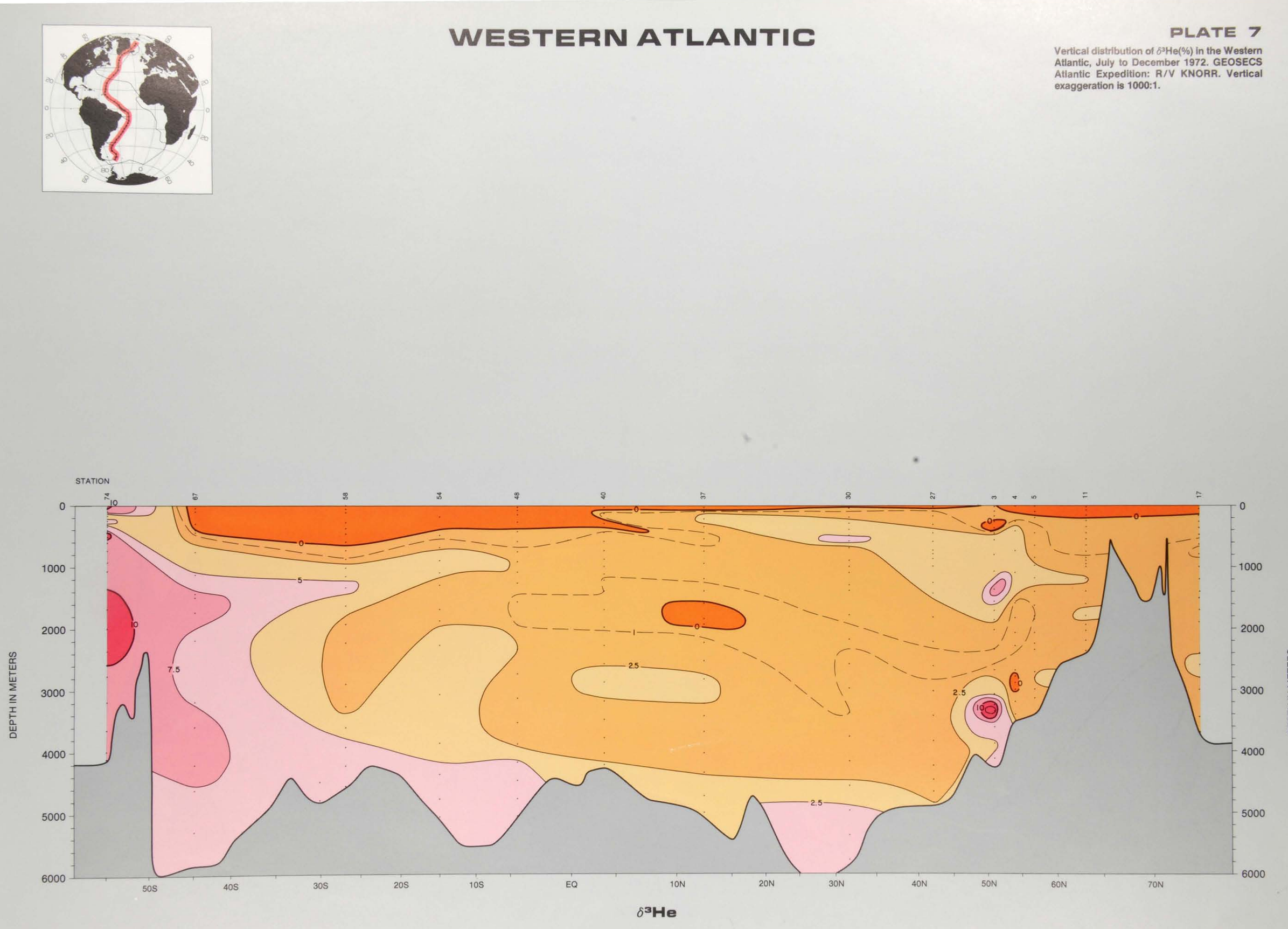
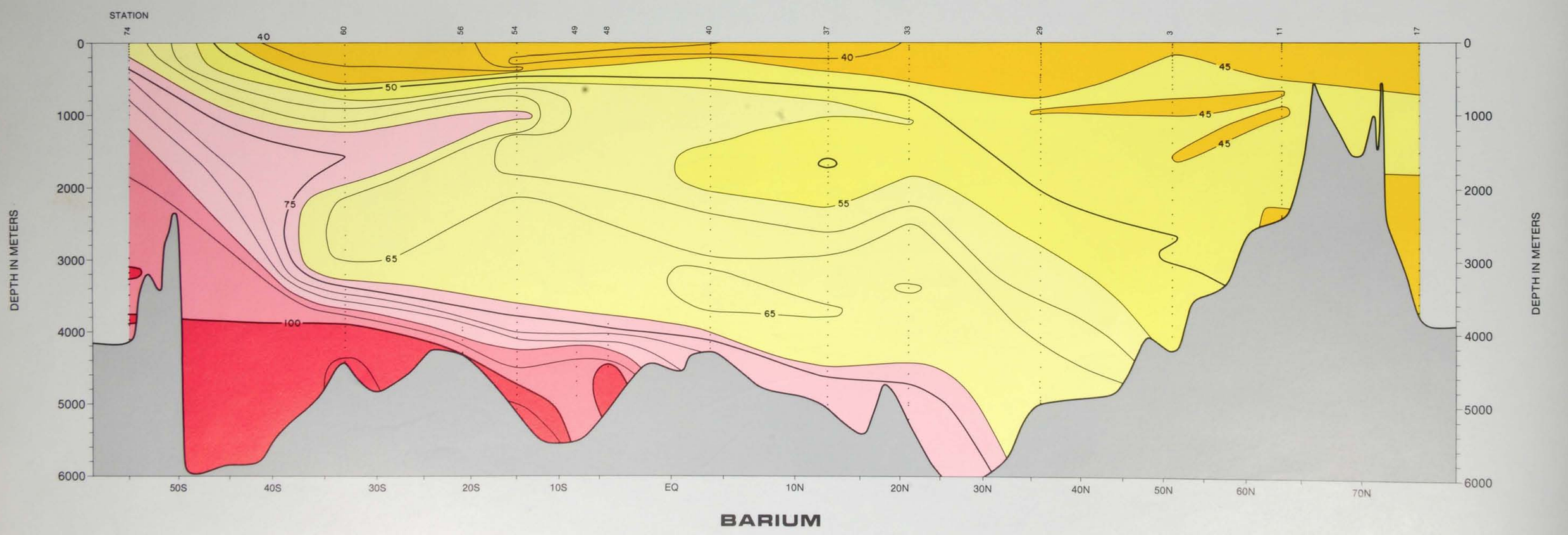


PLATE 8

Vertical distribution of Barium (nm/kg) in the Western Atlantic, July to December 1972. GEOSECS Atlantic Expedition: R/V KNORR. Vertical exaggeration is 1000:1.

WESTERN ATLANTIC



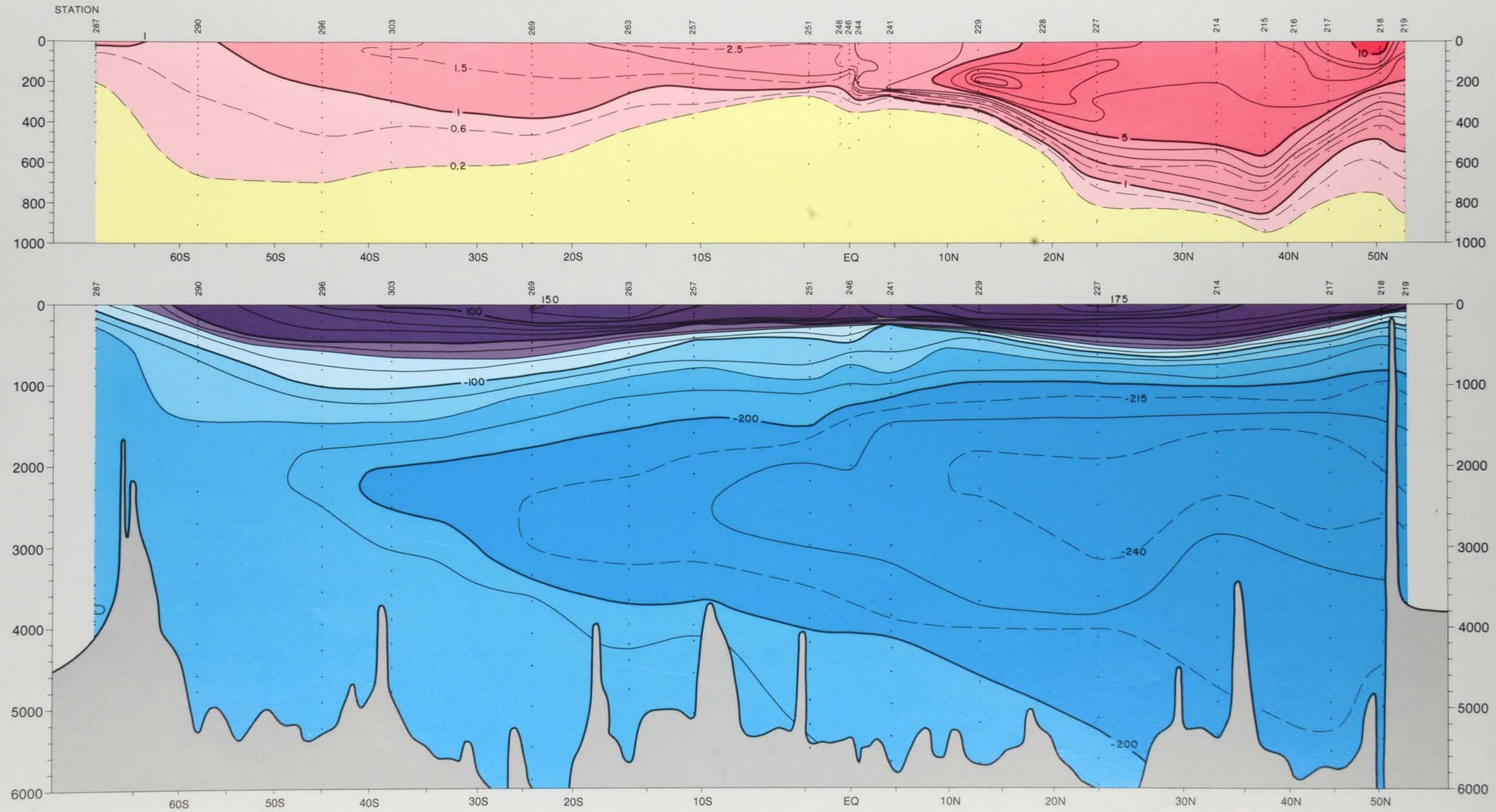
BARIUM

WESTERN PACIFIC

PLATE 9

Vertical distribution of Tritium and $\Delta^{14}C(‰)$ in the Western Pacific, September 1973 to March 1974. GEOSECS Pacific Expedition: R/V MELVILLE. Vertical exaggeration is 2500:1 for Tritium in the upper section, and 1000:1 for $\Delta^{14}C(‰)$ in the lower section.

TRITIUM

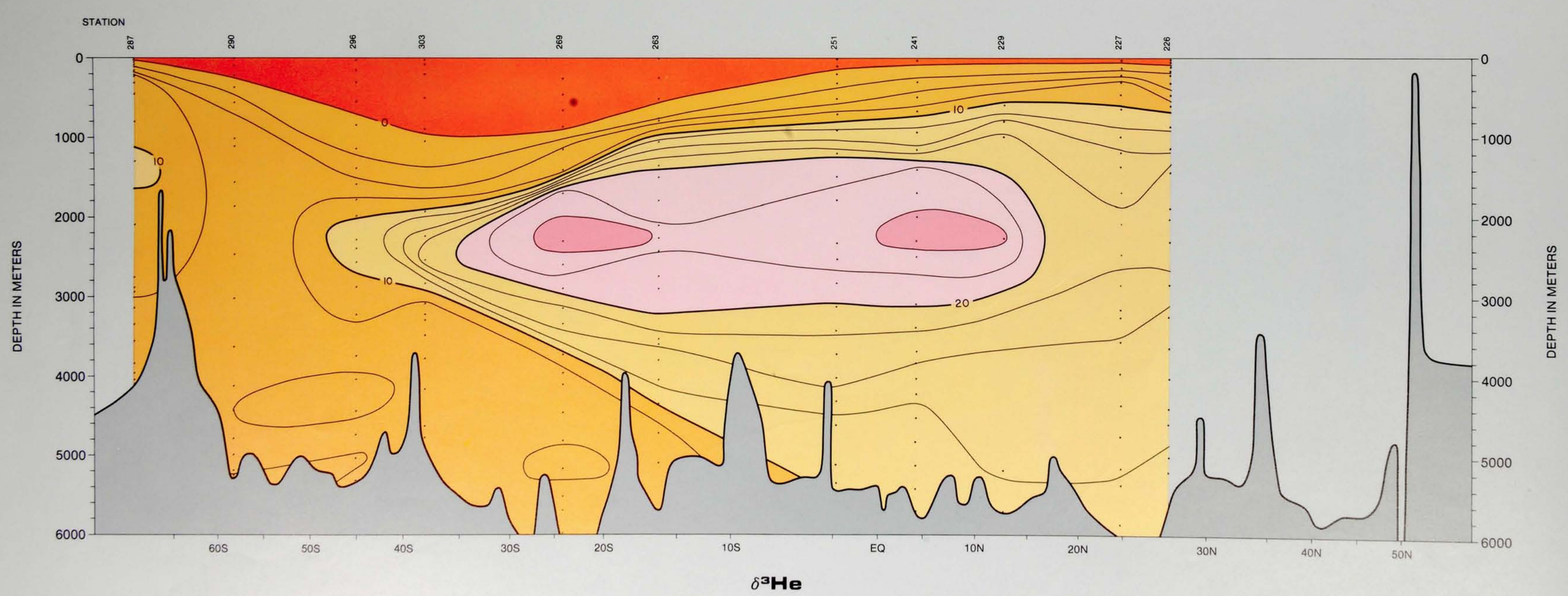


$\Delta^{14}C$

PLATE 10

WESTERN PACIFIC

Vertical distribution of δ^3He(%) in the Western Pacific, September 1973 to March 1974. GEOSECS Pacific Expedition: R/V MELVILLE. Vertical exaggeration is 1000:1.



EASTERN PACIFIC

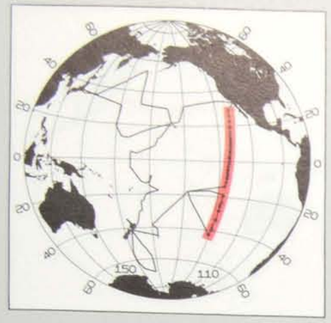
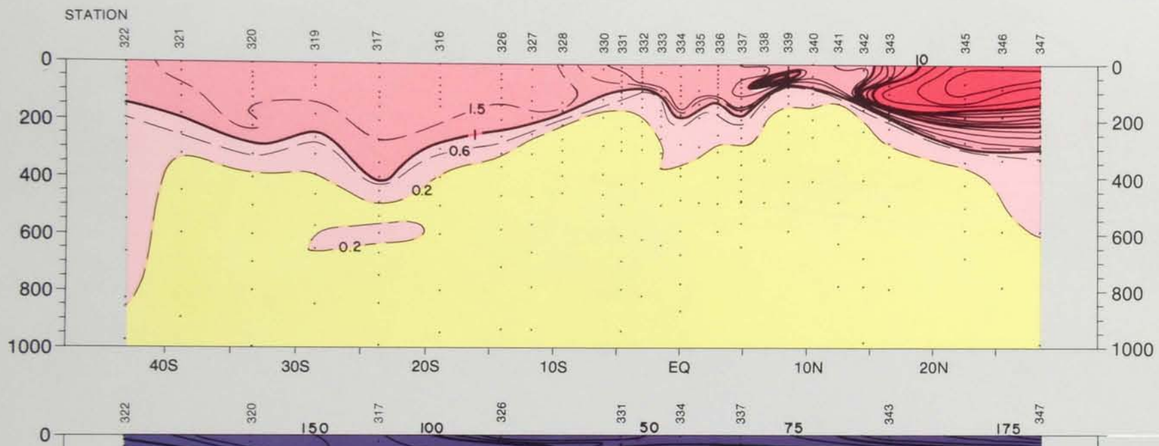
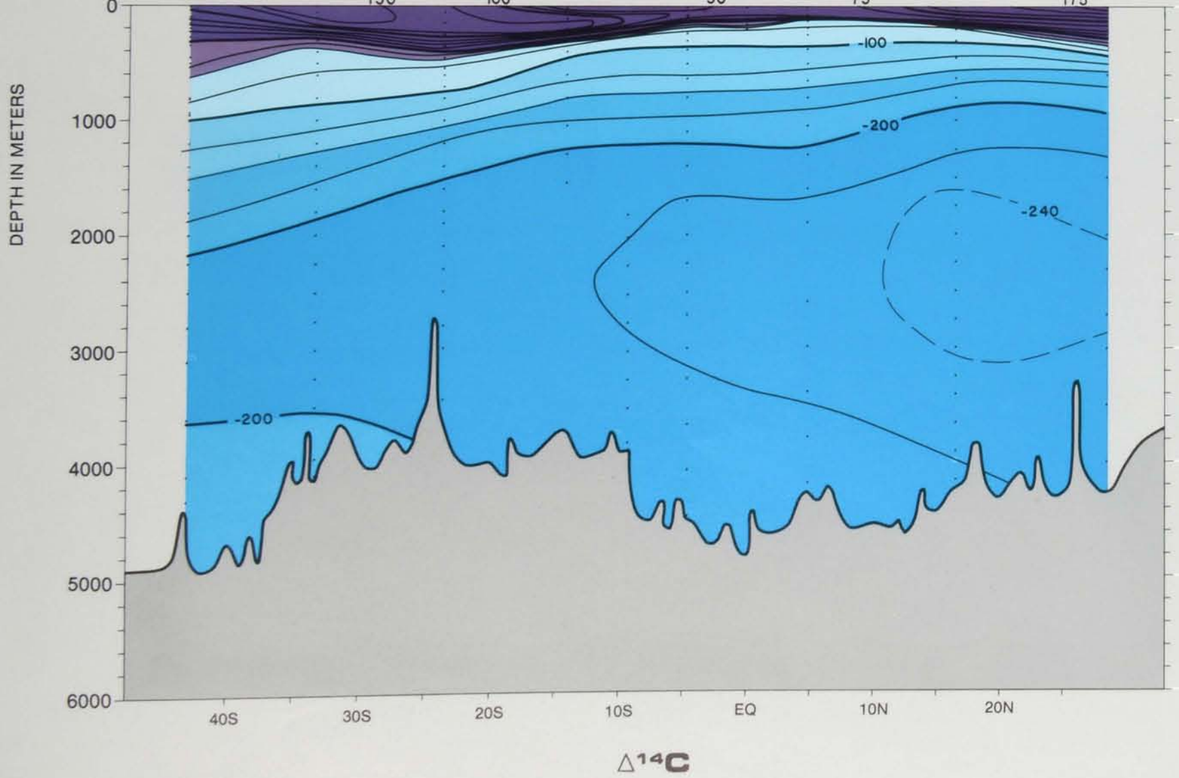


PLATE 11

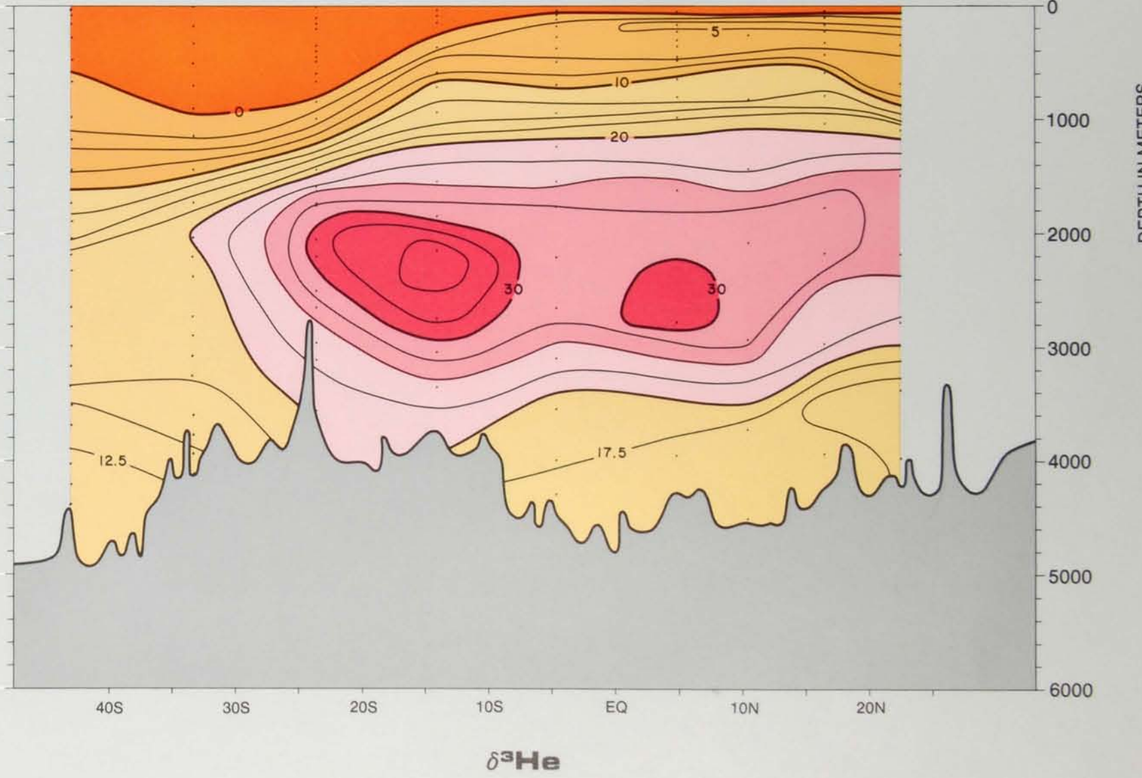
Vertical distribution of Tritium, $\Delta^{14}C(‰)$ and $\delta^{3}He(\%)$ in the Eastern Pacific, April to June 1974. GEOSECS Pacific Expedition: R/V MELVILLE. Vertical exaggeration is 2500:1 for Tritium in the upper section, and 1000:1 for $\Delta^{14}C(‰)$ and $\delta^{3}He(\%)$ in the lower sections.

TRITIUM





$\Delta^{14}C$



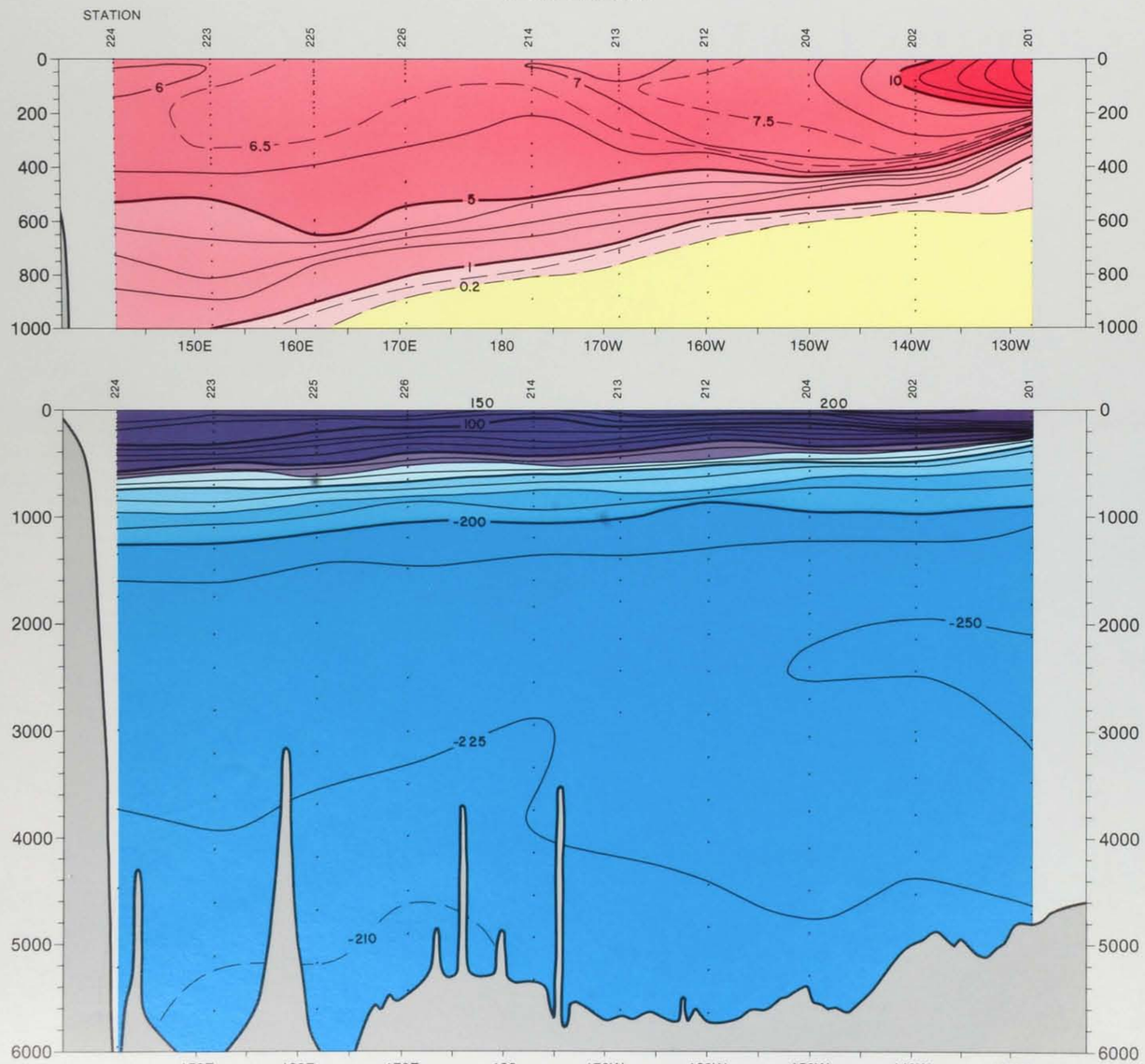
$\delta^{3}He$

PLATE 12

Vertical distribution of Tritium and $\Delta^{14}C(^0/_{00})$ in the North Pacific, August to November 1973. GEOSECS Pacific Expedition: R/V MELVILLE. Vertical exaggeration is 2500:1 for Tritium in the upper section, and 1000:1 for $\Delta^{14}C(^0/_{00})$ in the lower section.

NORTH PACIFIC

TRITIUM



$\Delta^{14}C$

NORTH PACIFIC

PLATE 13

Vertical distribution of δ^3He(%) in the North Pacific, August to November 1973. GEOSECS Pacific Expedition: R/V MELVILLE. Vertical exaggeration is 1000:1.

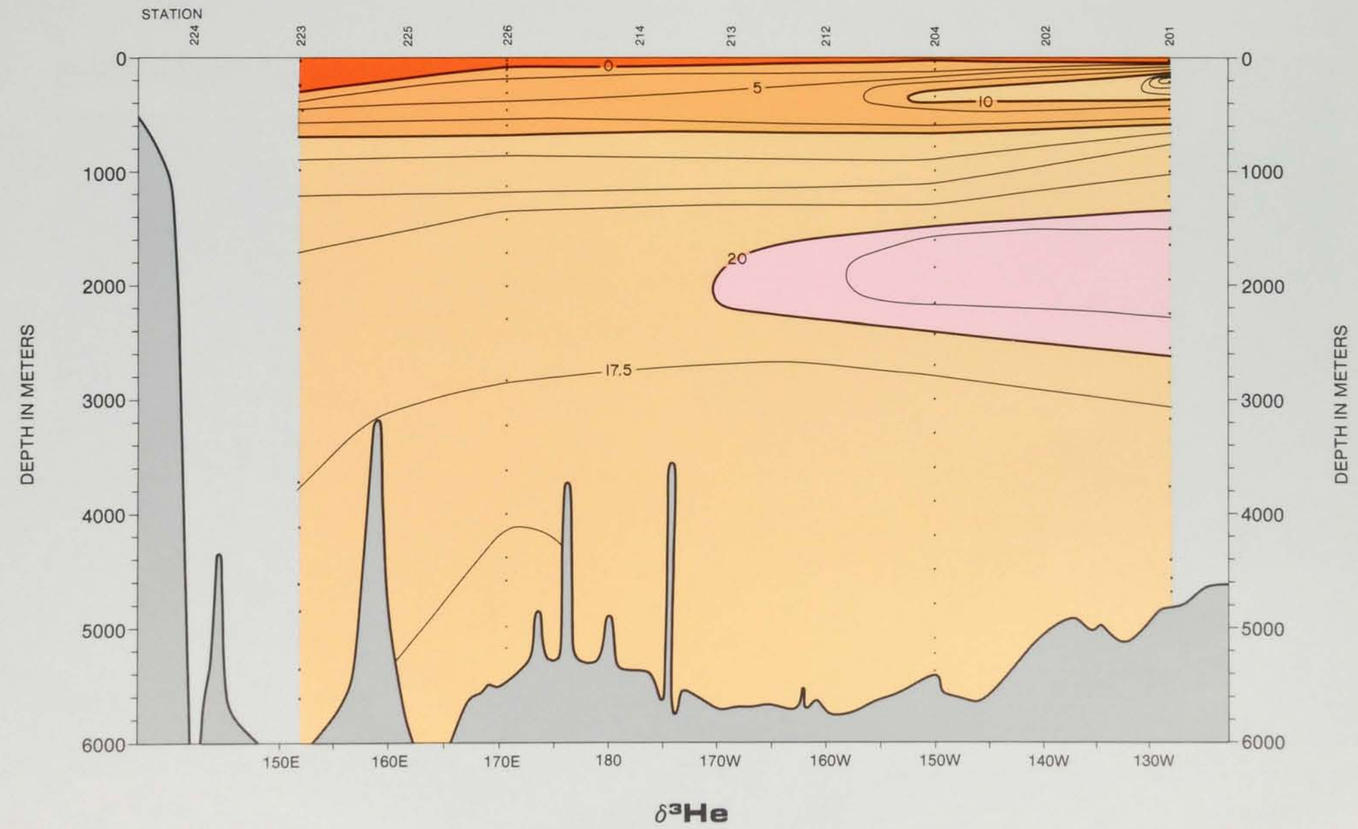
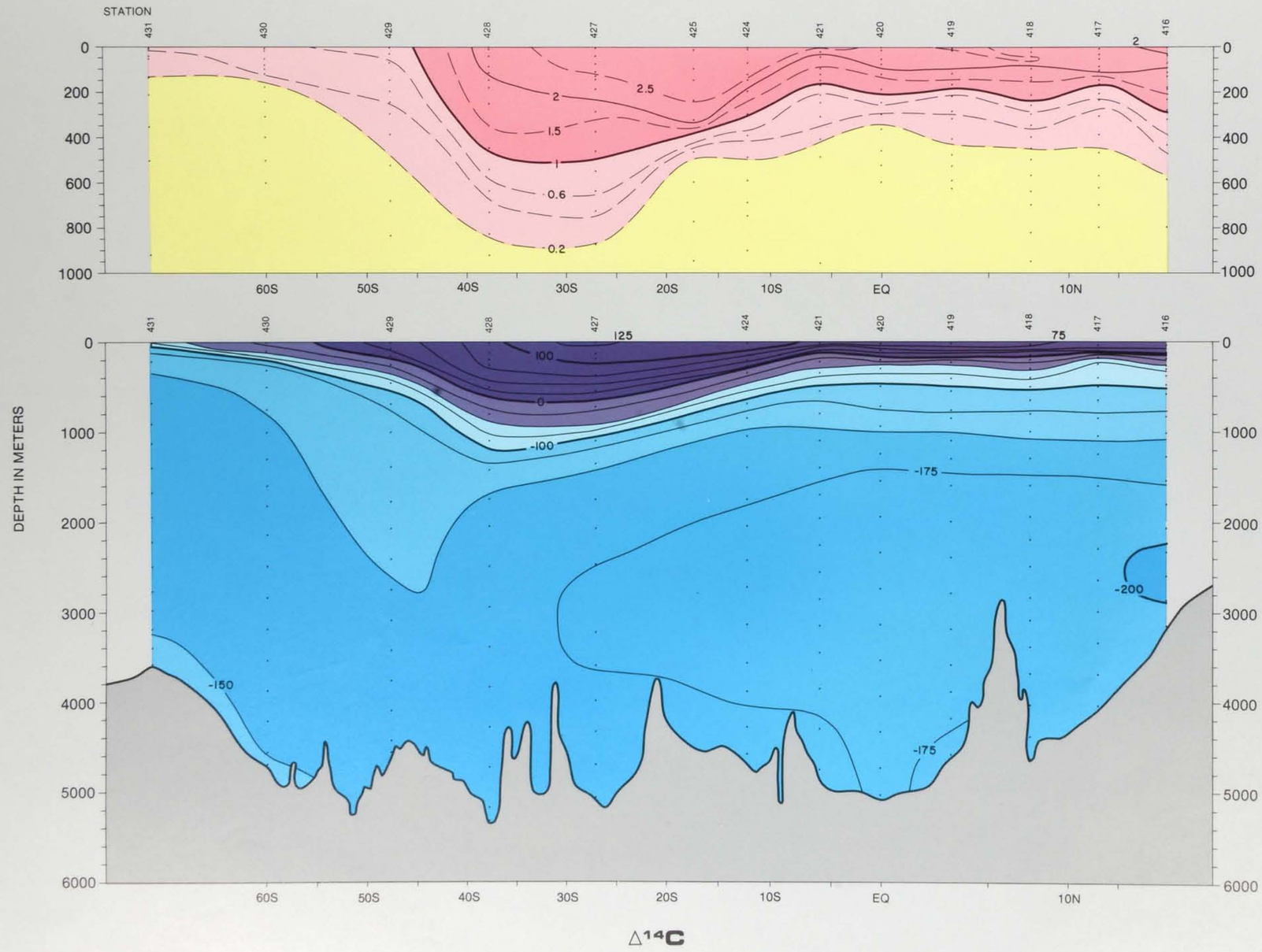


PLATE 14

WESTERN INDIAN OCEAN

Vertical distribution of Tritium and $\Delta^{14}C(‰)$ in the Western Indian Ocean, December 1977 to February 1978. GEOSECS Indian Ocean Expedition: R/V MELVILLE. Vertical exaggeration is 2500:1 for Tritium in the upper section, and 1000:1 for $\Delta^{14}C(‰)$ in the lower section.

TRITIUM



$\Delta^{14}C$

WESTERN INDIAN OCEAN

PLATE 15

Vertical distribution of δ^3He(%) in the Western Indian Ocean, December 1977 to February 1978. GEOSECS Indian Ocean Expedition: R/V MELVILLE. Vertical exaggeration is 1000:1.

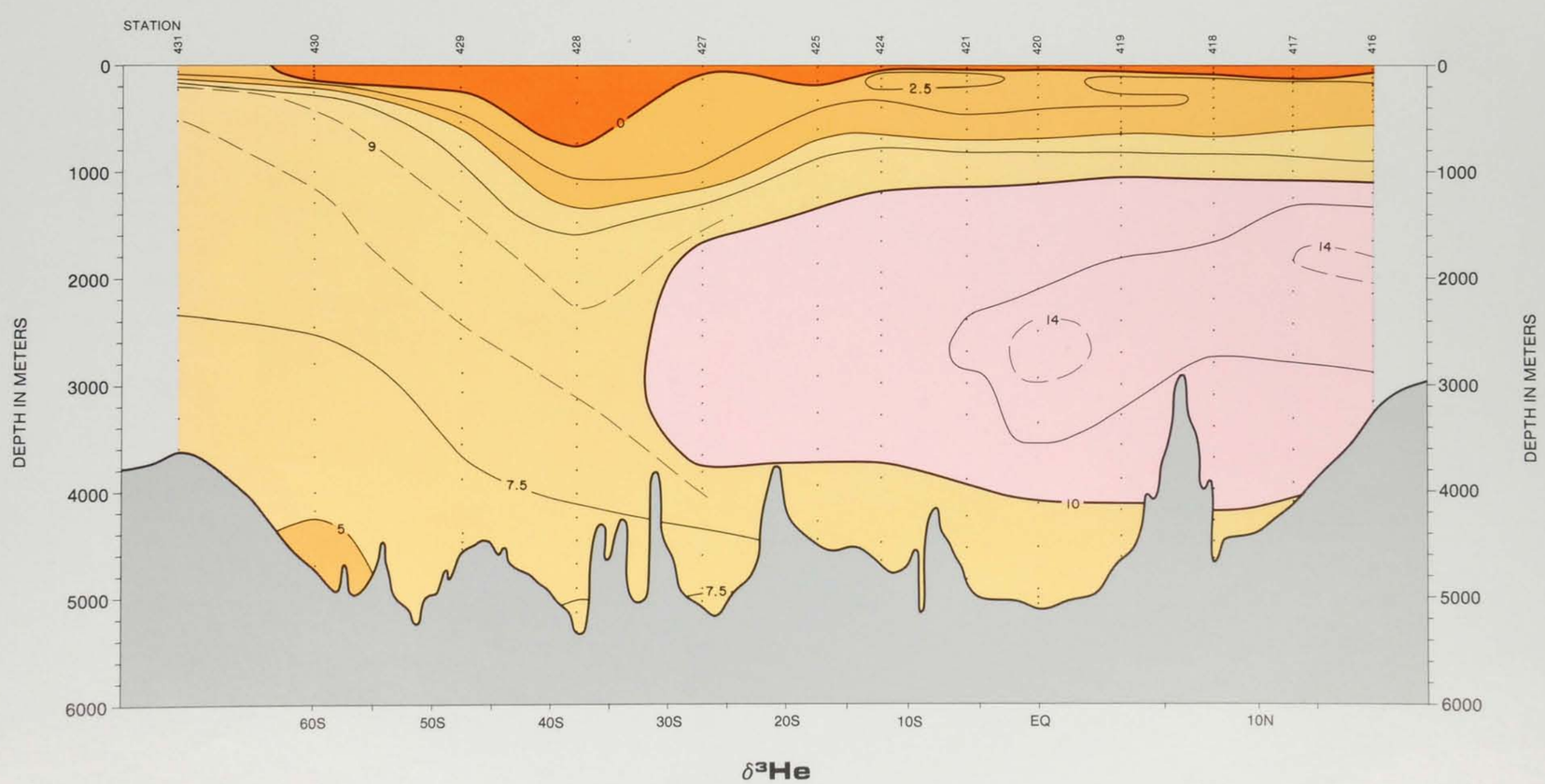
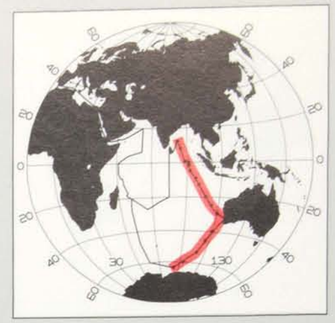


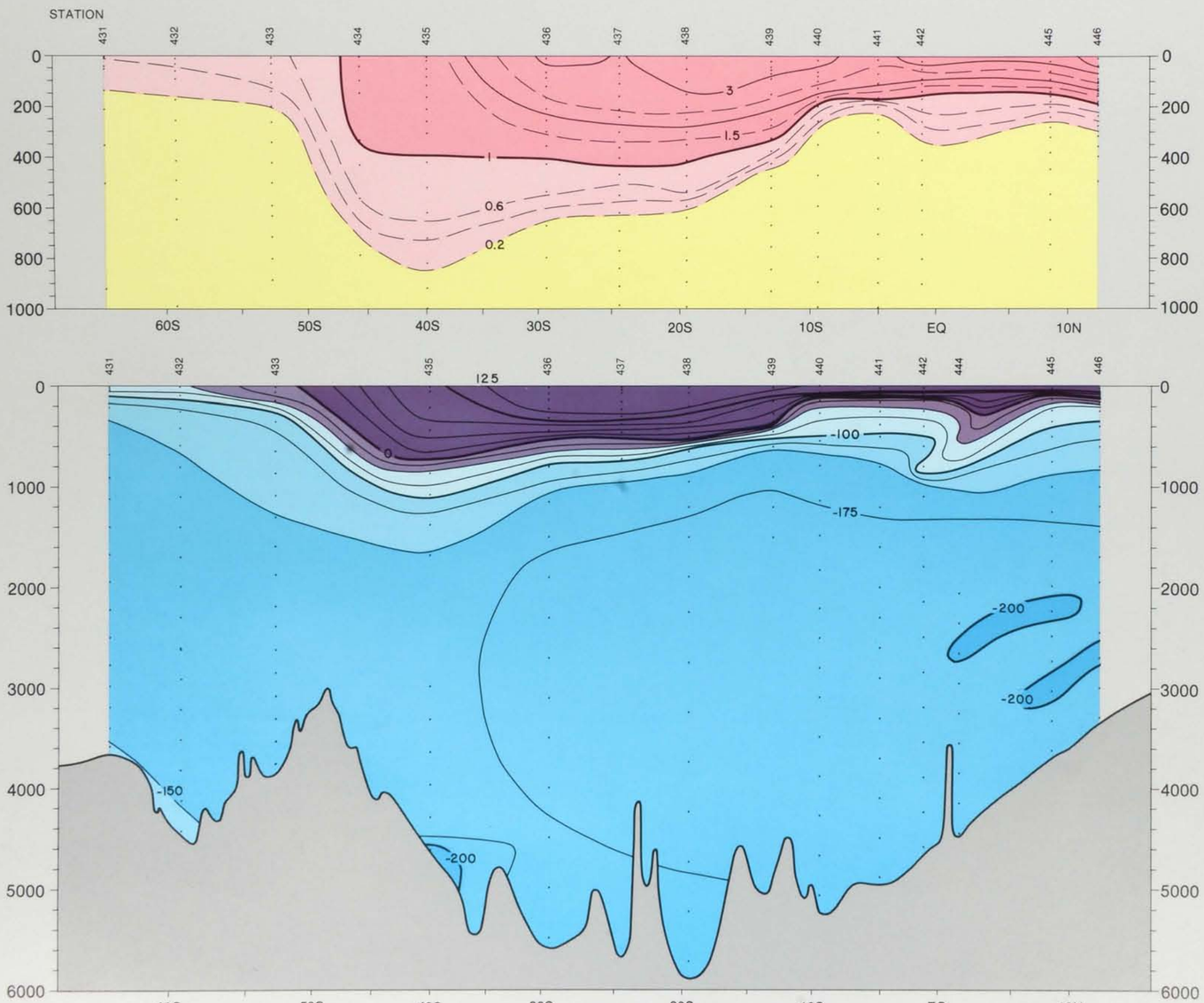
PLATE 16

Vertical distribution of Tritium and $\Delta^{14}C(‰)$ in the Eastern Indian Ocean, February to March 1978. GEOSECS Indian Ocean Expedition: R/V MELVILLE. Vertical exaggeration is 2500:1 for Tritium in the upper section, and 1000:1 for $\Delta^{14}C(‰)$ in the lower section.

EASTERN INDIAN OCEAN



TRITIUM

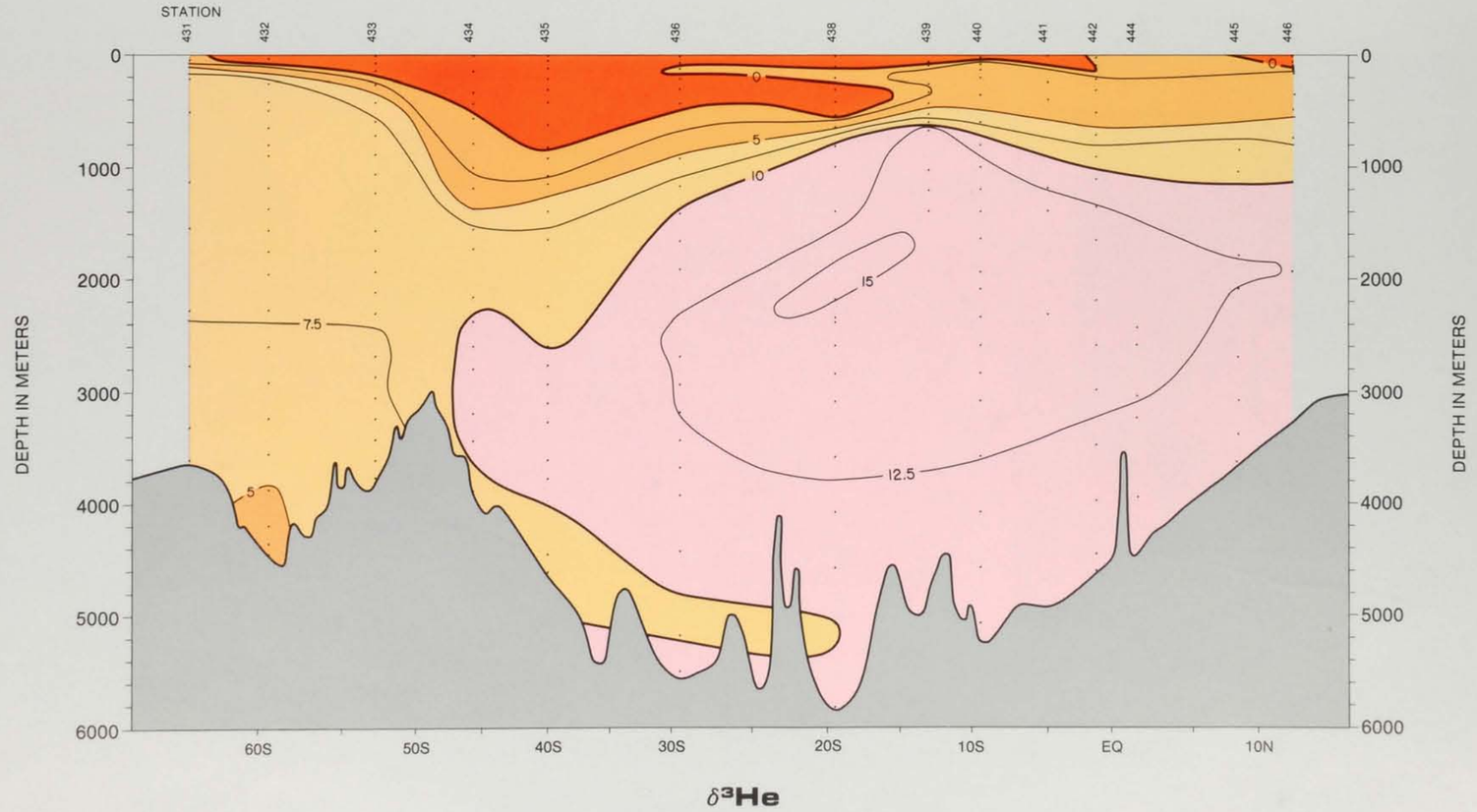


$\Delta^{14}C$

EASTERN INDIAN OCEAN

PLATE 17

Vertical distribution of δ^3He(%) in the Eastern Indian Ocean, February to March 1978. GEOSECS Indian Ocean Expedition: R/V MELVILLE. Vertical exaggeration is 1000:1.

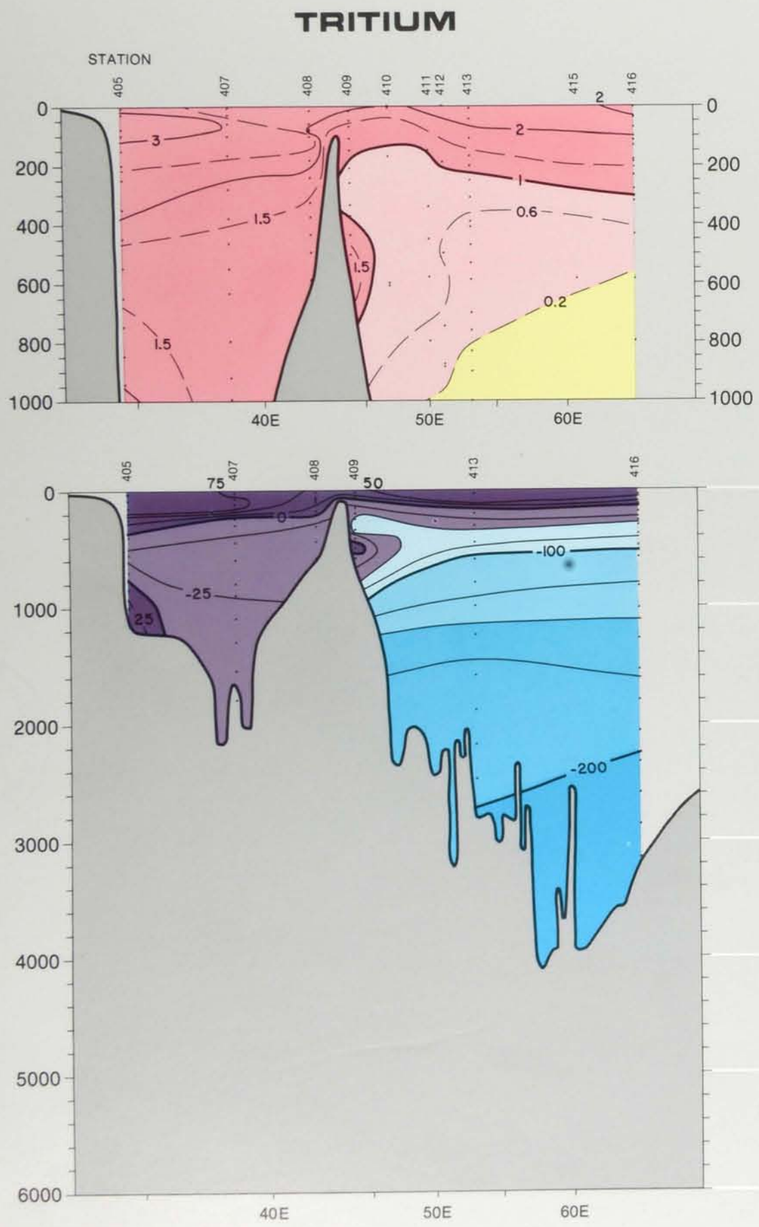


Institut für Meereskunde an der Universität Kiel

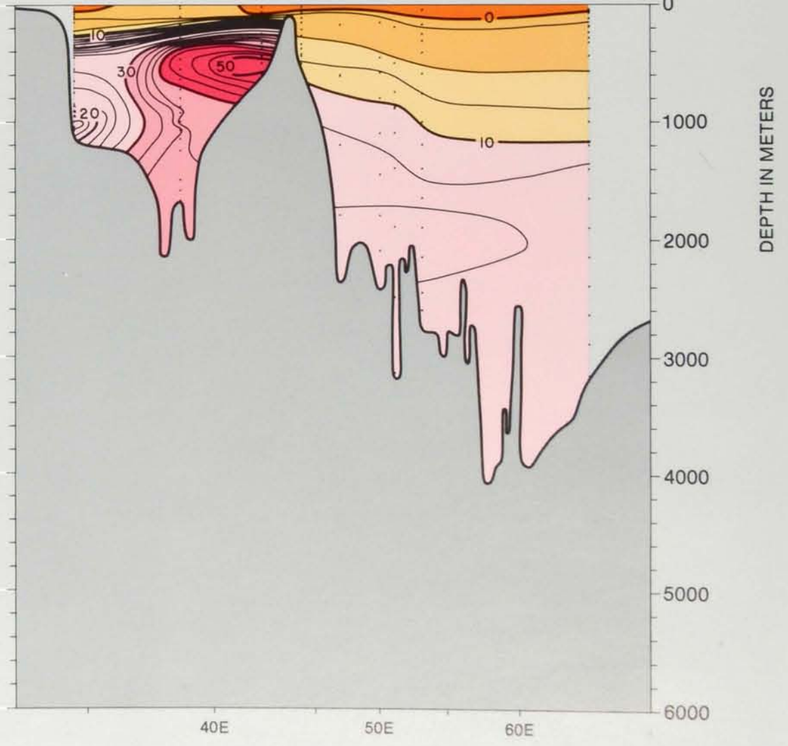
PLATE 18

RED SEA OVERFLOW

Vertical distribution of Tritium, $\Delta^{14}C(‰)$ and $\delta^{3}He(\%)$ in the Red Sea Overflow, December 1977 to January 1978. GEOSECS Indian Ocean Expedition: R/V MELVILLE. Vertical exaggeration is 2500:1 for Tritium in the upper section, and 1000:1 for $\Delta^{14}C(‰)$ and $\delta^{3}He(\%)$ in the lower sections.



$\Delta^{14}C$



$\delta^{3}He$

Tu ● $\Delta^{14}C$ ● $\delta^{3}He$