



EXPEDITION PROGRAM ANTARCTICA (ANT – Land 2007/2008)

STATIONS AND FLIGHT MISSIONS

Neumayer Station

Kohnen Station

Flight Missions

Dallmann Laboratory

Other Activities

Co-ordination

Heinz Miller

Christian Wiencke

Hartwig Gernandt

Dirk Mengedoht

Thomas Matz

**ALFRED WEGENER INSTITUTE
FOR POLAR AND MARINE RESEARCH
HELMHOLTZ ASSOCIATION**

November 2007

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Neumayer Station

November 1, 2007 – March 11, 2008

Kohnen Station

January 10, 2008 – February 4, 2008

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1. ANT – LAND 07/08: NEUMAYER/KOHNEN

1.1 Summery and Itinerary

Activities at Neumayer Station

Neumayer Station is permanently occupied. The exchange of the wintering staff will be performed as a regular task during the summer season. In parallel technical works are planned for maintenance of the station buildings and technical facilities.

Likewise the scientific observatories for air chemistry, meteorology, and geophysics will be maintained. These activities will include the maintenance of the infrasound station IS27DE and the hydro acoustic observatory PALAOA (Perennial Acoustic Observatory in the Antarctic Ocean).

Medical studies of the Berlin Centre for Space Medicine (ZWMB) will be continued the third year.

Neumayer Station will be used as the operational base for the Basler BT-67 aircraft POLAR 5. As a contribution to the international project Dronning Maud Land Air Network (DROMLAN) the regular weather forecast service is provided to all national operators within the Dronning Maud Land region.

A German television team from Realnature.TV will report on the activities around the construction of the new station Neumayer III. Furthermore a group of persons from AWI and cooperating companies will visit Neumayer Station to survey the initial operation of POLAR 5.

This season the first part of the new station Neumayer III will be transported to Antarctica. A camp site will be set up for the working team for the new station and the outer shell will be assembled. The completion of Neumayer III Station and the start of operation is to follow next season.

Activities at Kohnen Station

Kohnen Station will be in operation for maintenance work from January 10, to February 4, 2008. 7 persons and cargo will be transported to the base by aircraft in the frame of DROMLAN. The platform of the station will be jacked up to avoid that the station will be buried by snow accumulation in the near future. Containers standing on the snow surface in the surroundings of the station will be raised to the present snow level. The status of the drill trench will be checked.

The autonomous aerosol sampler will be repaired and prepared for a further year of unmanned operation. A modified automatic weather station will be set up to replace the old AWS9 operated by the University of Utrecht. Shallow firn cores will be drilled for monitoring the environmental status around the station.

The Swedish traverse from Svea towards Dome F will call at Kohnen Station on the return way mid of January to leave frozen snow and ice samples for later transfer by aircraft to Neumayer Station.

Itinerary, international co-ordination and transport facilities

The season ANT-Land 2007-2008 is scheduled for the period from October 31, 2007 until March 11, 2008. The 28th wintering staff will stay at Neumayer Station until summer season 2008/2009.

In total 105 scientists and technicians are working or temporarily staying at Neumayer II and at the camp site during the campaign ANT-Land 2007/2008. All participants will fly to Neumayer station within the scope of intercontinental and feeder flights of DROMLAN and return the same way at the end of season. Aircraft will also transport a substantial part of freight in order to get technical and scientific equipment available in the beginning of season. Altogether 12 intercontinental flights have been scheduled in the scope of DROMLAN. The final flight for return personnel and freight is scheduled on March 11, 2008

RV Polarstern (ANT XXIV/2) will carry the majority of freight and fuel for Neumayer and aircraft support. The call at Atka Bay is planned for the December 8, 2007. The resupply of Neumayer station will also be performed by SA Agulhas in the beginning of February and by the RV Polarstern end of February 2008.

Further ship calls at Atka Bay are planned for S.A. Agulhas in the frame of the South African National Antarctic Program (SANAP) and for the Naja Arctica carrying components for the new station Neumayer III

The logistic operations have been co-ordinated with the South African National Antarctic Program (SANAP), the British Antarctic Survey (BAS) and the national programs within DROMLAN, mainly with RAE, ALCI, NPI, and SPRS. Following aircraft are scheduled to land at Neumayer during the season:

Basler (BT-67)	operated by ALCI for feeder flights in the scope of DROMLAN
Helicopter	operated by SANAP for support their own ship calls

Ship calls for Atka Bay during the season:

RV Polarstern	operated by AWI/Reederei F. Laeisz
S.A. Agulhas	operated by SANAP
MV Naja Arctica	chartered by AWI from the Danish Shipping Company Royal Arctic Line

1.2 Neumayer Station and Kohnen Station

1.2.1 Logistics

ANT Land 2007-2008 – Summer Season

The scientific and logistic projects during the Antarctic summer season at Neumayer and Kohnen Stations will start in the beginning of November 2007 and last till the beginning of March 2008.

The personnel participating this season will enter from and return to Cape Town, South Africa with the Dronning Maud Land Airway Network (DROMLAN) via the Russian station Novolazerevskaya or the Norwegian station Troll respectively. These flights will be carried out with an Iljushin 76. The continental flights to Neumayer Station will be carried out by 3 aircraft Basler BT-67 which is new in this season. Up to 105 persons will travel this way.

Deutscher Wetterdienst (DWD) at Neumayer Station guarantees a weather forecast service for the 12 intercontinental flights as well as for the flights to the different stations within DROMLAN.

The delivery of supply to Neumayer Station will take place at the beginning of December by RV Polarstern. The ship will bring provisions, cargo and fuel for the summer campaign and for the winter. In February the ship will call at Neumayer again and care for the waste disposal.

Maintenance works will be carried out as usual during this season. I27DE is uncovered and repositioned on the snow as a matter of routine. Due to the pressure of the ice on the station the tubes show further deformations and so it will be necessary to carry out maintenance works here as well. During the past years steel plates from the ceilings and ice have already been removed in the fuel store. In order still to be able to use the ice tunnel to the garage as a shelter for two heavy trucks (chieftains) it is necessary to remove ice here as well.

Furthermore the logistics will at Neumayer Station be responsible for the realisation of the preparation for the scientific projects and for the construction of the new station Neumayer III.

At Neumayer Station the 27th wintering team will be replaced by its successor team consisting of 2 women 6 men for the scientific and technical operation of the station and a physician, who will be responsible for the daily work at the station and for the health of the team. In Bremerhaven the team has been trained and prepared for the wintering period.

Kohnen Station will be in operation for maintenance work from January 10, to February 4, 2008. 7 persons and cargo will be transported to the base by aircraft in the frame of DROMLAN.

The different scientific projects and the supervision of the long-term measurements at the observatories at Neumayer and Kohnen are described in the following reports.

1.2.2 Observatories and services

1.2.2.1 Air Chemistry Observatory

Summer Campaign 2007 / 2008 at Neumayer and Kohnen Stations

Air Chemistry Programme

R. Weller (AWI)

Participants: Karin Smolla (winterer 2007), Franziska Nehring (winterer 2008)

During the forthcoming summer campaign, our activities at Neumayer Station will be restricted to maintenance of the equipment, validation of the measured data, as well as practice of the new wintering staff will be performed as every year.

The main focus of our work at Kohnen Station (EPICA-DML) is maintenance of the automated aerosol sampler designed for year-round measurements. The equipment was set up during summer campaign 2002/2003 in a purpose-built container located in the clean-air sector about 300 m north-easterly of the drilling trench. Electric power supply is realized by a combination of a wind turbine and solar panels, buffered by Ni/Cd batteries. A sophisticated version of the automated aerosol sampler has been installed in January 2005. The aerosol sampler consists of 22 filter holders, each one equipped with a teflon/nylon filter combination. Hence in total 22 aerosol samples per year are achievable with an individual sampling period of 15 days. Due to the fact that Kohnen Station was not opened during the last season (2006/2007), extensive general maintenance activities will be necessary. Provided that the reconditioning is successful a set of new filter holders will be installed for remote year-round sampling during 2008. The project is a close co-operation with the Institut für Umweltphysik, University of Heidelberg (IUPH). The samples are destined for analysis of the ionic composition by ion chromatography.

1.2.2.2 Meteorological Observatory

König-Langlo, Rudolph, Wittig (AWI),

In the coming summer season 2007/2008 the following activities are planned:

- Exchange of all radiation sensors with recently calibrated ones
- Training of the winterer
- Repair of the existing satellite image receiving station (SeaSpace)
- Installation of a new satellite image receiving station (VCS)
- Upgrade of the software from the upper air sounding system
- Installation of new visualization software

1.2.2.3 DROMLAN weather forecast service

October 24 2007 – March 14, 2008

Ralf Brauner (DWD),

Established in season 2002/03 and now for the fifth summer season the meteorological observatory of the German Antarctic station Neumayer offered a detailed and individual weather forecast service for all activities in Dronning Maud Land. This service is performed in close co-operation between the Alfred-Wegener-Institute for Polar and Marine Research (AWI) and the German Weather Service (DWD).

Neumayer station has a central position within the Dronning Maud Land due to its good communication facilities including a permanent satellite data link (128 kb, Intelsat), and the modern infrastructure of the meteorological observatory.

The forecasts based on special model outputs from the European Centre for Medium-Range Weather Forecasts (ECMWF), the Antarctic Mesoscale Prediction System (AMPS) and the Global-Model (GME). New outputs are available twice daily. They are used to cover a forecast period up to one week.

For short-term forecasts and flight activities the satellite image receiving station from Neumayer (HRPT, SeaSpace) is of great importance. Up to 20 satellite passes can be obtained daily (NOAA 17, 18, DMSP 14, 15 and 16). Visual as well as infrared pictures get geocoded automatically on a variety of masters covering the synoptic scale (2500 x 5000 km) down to local scale with a spatial resolution up 500 x 500 m at any place in the Dronning Maud Land area.

Additionally, all information from the Global Telecommunication System (GTS) is available via the permanent data link at any time. Also measurements from surrounding automatic weather stations transponding via ARGOS but not included into the GTS are extracted automatically from the NOAA-satellite information.

The forecaster at Neumayer can be reached at any time from all DROMLAN members by mail, fax, telex, phone, and by short-wave communication. While the forecaster is not at Neumayer his service can be obtained via Iridium.

During the summer season 2007/2008 several thousand forecasts will be performed for field parties, ships, stations and especially aircraft. It is obvious, that this service increases the safeness of the ambiguous projects in the Dronning Maud Land. Furthermore, it helps to reduce weather induced idle times of expensive flight operations to a minimum

1.2.2.4 Geophysical Observatory

Alfons Eckstaller, Daniel Paranhos Zitterbart, Seweryn Langer, Nora Graser, Christine Läderach

Seismology:

The main task of seismographic observations at Neumayer Station is the monitoring of local, regional and global seismic activities. As the global seismographic monitoring network in the southern hemisphere is rather wide-meshed, especially in Antarctica, seismographic recordings at Neumayer Station's local seismographic network (including also the broad band station SNAA at Sanae IV) contribute substantially to seismological research in Antarctica. Onset times of first arrivals and other seismic phases of detected earthquakes are determined and reported to the National Earthquake Information Center (NEIC), USA, on a daily schedule. One of the main topics in seismological research at Neumayer Station is the investigation of the local and regional seismicity. Antarctica is not that aseismic as it was generally believed. Monitoring this seismicity since many years revealed the existence of distinct seismic active areas in Dronning Maud Land. These new results will substantially contribute to a better understanding of active neotectonics in Dronning Maud land.

Both remote seismographic stations, VNA2 on Halfvar Ryggen, where a small aperture detection array with totally 16 seismometers is located, and VNA3 on Søråsen Ice Rise had been serviced during a several days visit in October 2006. Therefore, no extensive further service trip to these stations is necessary in austral summer 2007/2008. In late December 2006 a seismographic station had been deployed at the Swedish summer base SVEA in co-operation with the Swedish Polar Secretariat. This station is designed to operate autonomously for almost a whole year, if power supply will not fail during winter. A further seismographic station has been installed at Kohlen Station some years earlier. However, this station failed again completely in operation in 2006 and even before this there had always been some severe problems. Therefore the recording system has been completely exchanged in December 2006 and the station has been set into operation again, now hopefully recording without any failure for a couple of months in 2007. At both stations, Kohlen and SVEA, data should be retrieved during season 2007/2008 and eventually the recording units exchanged by newly upgraded systems. The operation of these two autonomously operating seismographic stations at bases which are only open and accessible during the austral summer may be another step towards the establishment of a large scale regional seismographic network in Dronning Maud Land.

Geomagnetism:

The long term recordings of the geomagnetic field and its time dependent variations are further continued. Absolute hourly means of the three field components and the total field intensity are reported on a monthly schedule to the World Data Center (WDC) in Copenhagen, Denmark. The results of these measurements are included into the development of the International Geomagnetic Reference Field (IGRF) which is performed by WDC. The new 3-component fluxgate system, which has been installed during the summer season 2005/06 and which offers superior performance, is now in a very stable mode of operation. It is intended to transfer preliminary, pseudo- calibrated high-resolution data from this system on a daily schedule to one of the INTERMAGNET data centres.

Others:

To determine the amount of ice melting at the bottom of the Ekström Ice Shelf recordings from a thermistor chain, frozen in into the ice at the bottom of the Ekström Ice Shelf, have still been carried

out since 1993. In October 2007 the data acquisition exhibited severe problems. If it is not possible to bring it back to normal operation these measurements have to be stopped. The operation of a PRARE satellite tracking ground station was stopped at the end of January 2007 because of the project's final termination. The recordings of this station have been used to improve the ephemerides of the ERS-2 satellite.

1.2.2.5 Infrasound station I27DE

Infrasound Array I27DE (CTBT-network):

According to the Comprehensive Nuclear Test Ban Treaty (CTBT), the I27DE infrasound station is operated at the German "Neumayer" Antarctic Research base as one of 60 elements of the global infrasound network of the International Monitoring System (IMS). Infrasound stations measure micropressure fluctuations in the atmosphere. Therefore they are mainly focused on the monitoring of the compliance of the CTBT with respect to atmospheric nuclear explosions. The nearly uniform global distribution of the 60 stations ensures the ability to detect any atmospheric nuclear explosion of 1 kiloton TNT equivalent or more by at least two stations. Besides I27DE, three other infrasound stations should be operational along the coast of Antarctica.

The Federal Institute for Geosciences and Natural Resources (BGR) operates the German National Data Center (NDC) for the CTBT and is responsible for the operation of I27DE, which will be carried out in close co-operation with the Alfred Wegener Institute for Polar and Marine Research (AWI).

I27DE is an infrasound array with nine array stations. Each station is equipped with a microbarometer and a data acquisition system. Meteorological sensors are installed at the central station. A wind-noise reducing pipe array is connected to each microbarometer. The distribution of the inlet ports to the microbarometer in a wide area ensures the suppression of wind-generated disturbances. The central array control system is installed in the seismo-acoustic observatory where recorded data are retrieved and from where the stations are supplied with electrical power. The infrasound data are transmitted continuously in near real time with a maximum delay of 5 minutes to the International Data Center (IDC) in Vienna, Austria, sharing the permanent satellite link between the Neumayer base and AWI.

I27DE could be operated continuously with at least 98 % mission capability during 2007 until now, which is a basic claim for any IMS station. Routine maintenance of the entire array is therefore a basic requirement to ensure the high reliability. This is normally carried out every year during austral summer. Thus, during December 2006, all nine array elements had been recovered from approximately 1 meter down below the snow surface and re-installed on the surface. All equipment was checked carefully and was partly upgraded to ensure another year of undisturbed operation. These service works have to be carried out again in late 2007.

1.2.3 Projects

1.2.3.1 Change of body weight, body composition and adaptation of the cardiovascular system during wintering over in Antarctica 2007

H.-C. Gunga (ZWMB, Berlin) and E. Kohlberg (Laeisz/AWI), Participants: wintering over personnel 2007/2008

During summer season 2004/2005 a medical study started at Neumayer Station in co-operation with the Berlin Centre for Space Medicine (ZWMB) and the Alfred Wegener Institute. Data collection has been continued the complete wintering over periods 2005 and 2006. The 28th wintering over team should resume the project in 2008. Measurements will be made during the whole wintering over period focussed on the nine months lasting phase of isolation. All members of the wintering team will be involved.

The project derives from space medicine which made it possible to study the impacts of extreme environments referring to the human organism. In the same way Antarctica presents the opportunity to do research on change of body weight, body composition and adaptation of the cardiovascular system under isolated conditions. It is intended to record the body composition of the wintering over personnel with the non-invasive body impedance analysis. Conditional on dehydration of the organism in Antarctic climate there is an increased loss of water through respiratory tract and skin. This potential dehydration can be recorded by the measurement of the impedance. Additional monthly taken blood samples should give information about possible correlation between changes of the autonomous nervous system and some metabolic parameters.

The autonomous nervous system is always involved in adaptation to extreme environments. That may become apparent in sleeplessness, loss of appetite, nausea and heart trouble. Early symptoms can be found in changes of the variability of heartbeat. This variability should produce knowledge about influence on the autonomous nervous system during isolation. There is a direct correlation between variability of heart frequency and actual state of reaction of the autonomous nervous system. All members of the wintering over team will be introduced to the method and record an electrocardiogram weekly before getting up in the morning. The data are saved on a datalogger, the medical officer of Neumayer Station will transmit the data via computer and internet to the Berlin Centre for Space Medicine (ZWMB). Due to these periodical checkups the state of health of the personnel can be followed. The data-loggers are developed by the Berlin Centre for Space Medicine. They record the beat-to-beat intervals of the heart to find out the variability.

1.2.3.2 Telemedicine at Neumayer Station and its Development

In Antarctica the Alfred Wegener Institute has to manage the medical service of the Neumayer Station, Kohnen Station and the Research Vessel Polarstern. Neumayer Station has a year round a Medical

Officer who takes care of the health of the wintering team. Basic prerequisite for employment at the stations as well as onboard Polarstern is to be a specialist in surgery. In addition the candidate must have knowledge and experience in dentistry, anaesthesia and general medicine, so that with specialist support they can treat nearly any case.

Since a few years there is a close co-operation with the Central Hospital "Reinkenheide" in Bremerhaven. In the Central Hospital all specialities are available, and the consultants who train the medical officers are the same as those providing the specialist advice if there are inquiries from the stations or the ship.

During the period between March and November the medical officer is on his own and in case of emergency surgery the only support he can get is via satellite link. The difficulty is that he is both surgeon and anaesthetist. So the doctor of the wintering team needs some help or better a "third eye" to take care of the patient during an emergency operation. The surgeon can focus on his main job, the operation, and gets online support from the anaesthetic department of the Central Hospital in Bremerhaven. Over a distance of about 14000 km the anaesthetist can observe all vital parameters of the patient on his monitor and send messages immediately or give advice via a standing telephone link if it is necessary to modify the narcosis.

In the year 2000 a permanent satellite link between the AWI and Neumayer Station with 128 kb transmission rate was opened. This was the starting point of telemedicine. First we only could transmit ECG data online. At the moment in case of an emergency operation we are able to monitor a patient automatically with 5 important parameters such as CO₂, body temperature, 12-channel ECG, blood pressure and O₂ SAT. Coming season we are going to extend this system and establish the online monitoring of narcotic gases such as O₂, Sevoflurane and nitrous oxide (laughing gas) combined with the installation of a new anaesthetic apparatus. At the end of the season we should be able to transmit 8 vital parameters in real time to Bremerhaven. The next step for the following years should be the online transmission of ultrasound scans.

2. ANT-LAND 07/08 FLIGHT MISSIONS

2.1 Summary and Itinerary

Dronning Maud Land Air Network (DROMLAN)

AWI has co-ordinated the air transport of personnel and freight to Neumayer within the frame of DROMLAN, which is organized by 11 national operators. Altogether 12 intercontinental flights are planned. DROMLAN performs 12 flights from Cape Town to Novo-Airbase (Russia) / Troll (Norway) and back with aircraft Iljushin IL-76TD. 5 flights are scheduled for November 2007, one flight for December 2007, 3 flights for February 2008, and a final flight for the middle of March 2008. Feeder flights to the station Neumayer will be performed with Basler (BT-67) aircraft.

AWI aircraft Basler BT-67 (POLAR 5)

One aircraft Basler BT-67 (C-GAWI) - POLAR 5 will perform scientific and logistic flight missions within the ANT – Land 07/08 program. The aircraft will be operated for flight missions Novo airbase. The preliminary schedule is as follows:

Aircraft missions POLAR 5: 23 Nov – 04 Feb

CryoVEx-VAL –Validation measurements with ASIRAS – scheduled in December from Novo-Airbase /AWI, ESA

VISA – scheduled in November / December from Novo-Airbase /AWI

DoCo-East Antarctica, scheduled in January from Dome A /AWI

Support feeder flights activities in the frame of DROMLAN cooperation

2.1.1 Airborne Geophysics with Polar 5 in West Dronning Maud Land

Airborne Geophysics - first season of POLAR 5 in Antarctica
(AWI, ALCI, EAI, Optimare)

In 2007/08 AWI's new research aircraft POLAR 5, a Basler BT-67 on skis, will be introduced to the community in Antarctica conducting flights for three missions with varying geophysical instrumentation as well as for logistic purposes, especially within DROMLAN. For logistic reasons POLAR 5 will be

based at Novo runway for the forthcoming season. The ferry of POLAR 5 runs from Oshawa near Toronto, Canada, straight down to Punta Arenas, Chile, and further on either via the Russian wintering base Bellingshausen, King George Island, or the British wintering base Rothera, Antarctic Peninsula, and Halley to Novo runway.

The scientific equipment for the three intended geophysical surveys CryoVEx Ant, DoCo, and VISA will be flown in from Cape Town, South Africa, with the DROMLAN Iljushin flights. A preliminary schedule is given in table aero.tab1.

Table: Preliminary schedule of POLAR 5

15/10/2007	ETD from Oshawa, Canada
01/11/2007	ETA at Novo runway
01/11/2007	Begin of logistic operation
23/11/2007 - 11/12/2007	CryoVEx ANT
09/01/2008 - 04/02/2008	DoCo & VISA
07/02/2008	ETD from Novo runway
20/02/2008	ETA at Oshkosh, USA

International co-operation

Aircraft missions for AWI needs close co-operation with other national operators. Beside DROMLAN co-operation special support is given by BAS, SANAP, NIPR and ALCI.

The Basler BT-67 (POLAR 5) ferry flight is supported by the British Antarctic Survey with ground service at station Halley.

Beside the DROMLAN co-operation additional logistic flights and service for SAR will be performed in the scope of AWI by BT-67 (ALCI) and by helicopters in co-operation with SANAP.

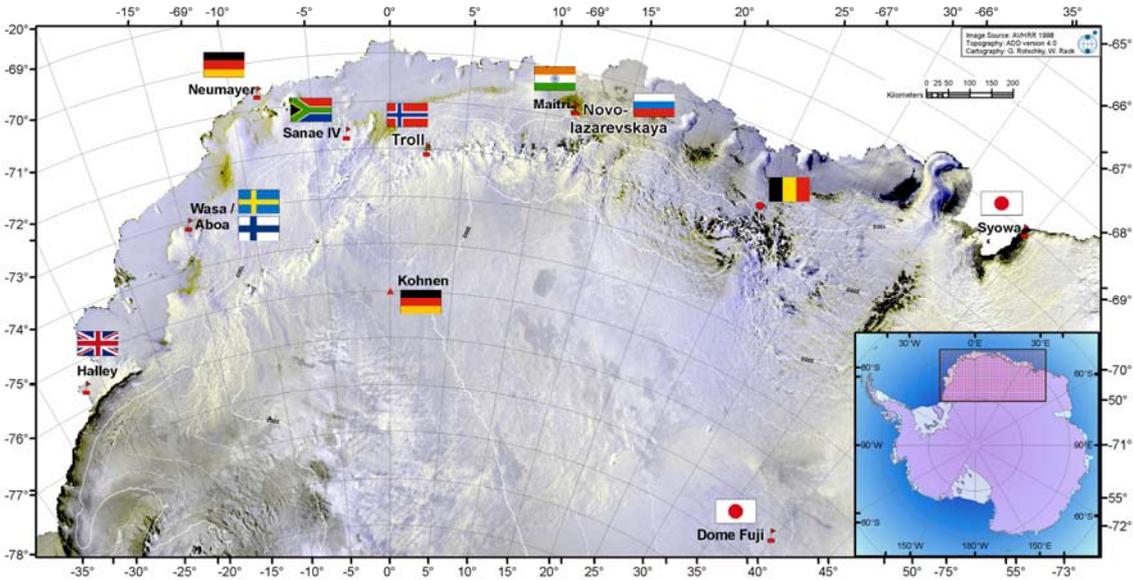
2.1.2 Dronning Maud Land Air Network (DROMLAN)

DROMLAN performance

The aim of the Dronning Maud Land Air Network (DROMLAN) is to provide an intercontinental air-link from Cape Town to destinations within Dronning Maud Land (DML) to any member country of COMNAP and SCAR in science related activities, including logistics. This regularly operated air-link improves the accessibility and extends the time period for summer season activities. DROMLAN has been established as an international project by Belgium, Finland, Germany, India, Japan, Norway, Russia, South Africa, Sweden and UK.

Each summer season runways are prepared at Novo-Airbase close to the Russian station Novolazarevskaya and at the Norwegian station Troll for landing of heavy aircraft. The runway at Novo Airbase consists of compacted snow and is elevated about 500 m a.s.l. Because of surface melting this runway cannot be used for intercontinental flights from mid December until mid January. The runway at Troll station consists of blue ice at elevation of about 1300 m a.s.l. Because of higher altitude this runway is operational for greater aircraft during the whole summer period. Novo-Airbase is operated by Antarctic Logistics Centre International (ALCI, Cape Town) in charge of the Russian Antarctic expedition (RAE). The Norwegian Antarctic Research Expedition (NARE) maintains the

Dronning Maud Land Air Network



runway at Troll. The weather forecast for intercontinental and internal flight operations is organized at Neumayer Station (AWI, DWD). This service covers the region between Halley and Syowa for all intercontinental and internal flights in the scope of DROMLAN.

Since the establishment of DROMLAN the Antarctic Logistics Centre International (ALCI) as the logistic operator of the Russian Antarctic Expedition (RAE) organizes and performs intercontinental flights with cargo aircraft Iljushin (IL-76TD) between Cape Town and Novo Airbase every summer season. Internal feeder flights are performed with ski-equipped aircraft Basler (BT-67). The map shows destinations within Dronning Maud Land. DROMLAN member's co-ordinate the feeder flights with ALCI and provide necessary services, fuel and facilities at their stations.

The number of flight missions depends on logistic and scientific requirements of the national programs. Every season DROMLAN generally aims to perform 10 - 12 intercontinental flights with connecting flights to various destinations.

DROMLAN for 2007/2008

For season 2007/2008 altogether 12 intercontinental flights are scheduled in order to carry personnel and cargo for AWI (Germany), BAS (UK), BELARE (Belgium), FIMR (Finland), NCAOR (India), NARE (Norway), NIPR (Japan), RAE (Russia) and SPRS (Sweden).

For DROMLAN 11 flights are planned with IL-76TD from Cape Town to Novo Airbase and 1 flight to Troll Station: 5 flights in November, 1 in December 2007, 1 in January 2008, 3 flights in February 2008 and the last flight middle of March 2008. The IL-76TD flights running via Novo-Airbase and Troll are arranged by ALCI.

At Troll runway flight management is arranged by NARE. Pre-flight assistance in Cape Town will be provided by ALCI for all DROMLAN intercontinental flights.

This season scientists, technicians and other personnel from 11 DROMLAN members are going to join the intercontinental flights. In total - including support personnel, pilots and others for Novo-Airbase - 296 persons will fly into Antarctica and 313 persons back. About 42.5 tons of airfreight has to be carried in and about 15 tons out.

DROMLAN intercontinental transport			AWI share	
Aircraft - number of flights	Persons in / out	Cargo (ton) in / out	Persons in / out	Cargo (ton) in / out
IL-76TD – 7 flights	296 / 313	42.5 / 15	105 / 105	9.4 / 5.3

The BT-67 will carry out the feeder flights to various stations and summer camps in Dronning Maud Land. ALCI co-ordinates and performs feeder flights according to the requirements for DROMLAN as well as for RAE activities at the Russian stations Progress and Vostok.

DROMLAN for AWI activities

Altogether 105 scientists and technicians with about 9.4 ton cargo will be carried from Cape Town to Neumayer, and 105 persons with about 5.3 ton cargo back from to Cape Town (schedule details in 5.1.1).

The following aircraft will perform logistic tasks of AWI personnel and cargo:

- Ilyushin (IL-76-TD) operated by ALCI for DROMLAN
- Basler (BT-67) 2 operated by ALCI for feeder flights in the scope of DROMLAN and 1 (POLAR 5) for scientific and logistic tasks

2.1.3 Polar 5 ANT– on-site commissioning

Representatives of AWI and companies, which have participated in the concept development, engineering design and manufacturing, will join the on-site commissioning of the new AWI research aircraft Polar5 in Antarctica. This group will also include representatives of the operating company. On this occasion altogether 9 persons will travel via DROMLAN into Antarctica and are going to stay there for the period from 15 to 19 November 2007. During this period of time the new aircraft Polar5 is scheduled to perform first logistic and scientific missions including visits at various stations such as Neumayer Station, Svea Station, Kohnen Station, SANAE IV and Novo Airbase. The commissioning of Polar5 will take place at Neumayer Station n 16 November 2007.

Participating institutions:

Alfred Wegener Institut für Polar- und Meeresforschung (AWI), Germany

Basler Turbo Conversion, LLC, Oshkosh, WI, USA

Antarctic Logistics Centre International (PTY) Ltd (ALCI), Cape Town, South Africa

Enterprise Airlines Inc. Ltd, Oshawa (EAI), ON, Canada

Optimare Sensorsysteme AG, Bremerhaven, Germany

Participants:

Dr. Heike Wolke	AWI, Bremerhaven, Germany
Prof. Heinz Miller	AWI, Bremerhaven, Germany
Dr. Hartwig Gernandt	AWI, Bremerhaven, Germany
Dr. Andreas Herber	AWI, Bremerhaven, Germany
Dr. Theo Hengstermann	Optimare Sensorsysteme AG, Bremerhaven
Tom Weigt	Basler Turbo Conversions LLC, Oshkosh, USA
Randy Myers	Basler Turbo Conversions LLC, Oshkosh, USA
Manny Rosario	Enterprise Airline Inc., Oshawa, Canada
Sven Müller-Marks	ALCI, Cape Town, SA
Vasily Kaliazin	ALCI, Cape Town, SA

Schedule and activities in Antarctica

15 Nov: ETA: 0530 at Novo Airbase

Accommodation (tents) at Novo Airbase until connecting flight with Polar 5.

15 Nov: Flight Novo Airbase - Neumayer Station

Welcome and visitation of station facilities

16 Nov: Visit to construction site Neumayer III

Visit to penguin rockery on sea ice

Evening: presentations

Neumayer III project (Gernandt)

Polar 5 project and science (Herber)

DROMLAN and BT-67 fleet (NN)

17 Nov: Flight Neumayer – Kohlen – SANAE IV)

Landing at Kohlen

SANAE IV: Welcome and visitation of station facilities

Over night stay at SANAE IV

18 Nov: Flight SANAE IV - Novo Airbase

Goodbye for Polar 5

Option: Excursion to Schirmacher Oasis

Short visit at stations Novolazarevskaya, former Georg Forster site, Maitri

Before midnight:

Check-in for flight D2 (Novo Airbase - CT)

Personal luggage, emergency kits, hand luggage (8 kg each) and polar clothing dressed

19 Nov: ETD: 0100 from Novo Airbase

ETA: 0630 at Cape Town

Transfer to ALCI office by Meihuizen

2.1.4 CryoVEx ANT:

CryoVEx-Antarctica-2007-08 continues and extends the preparatory activities related to the CryoSat-2 validation objectives with a programme of airborne laser/radar altimeter acquisitions in conjunction with ground measurements on selected sites in Antarctica. Aim is to sample areas with different snow and firn properties, for instance the blue ice fields near Novo runway, shelf ice, sea ice, dry inland ice and the transition zone north of the mountain chains in Dronning Maud Land. The instrumentation of POLAR 5 will consist of the ASIRAS instrument of ESA, a laser scanner, a laser altimeter, nadir video camera, and several geodetic GPS receivers. On ground reference GPS station will be established in the Schirmacher Oasis and corner reflectors will be brought out as reference markers in some selected areas. A brief overview on the survey areas is shown in figure aero.fig1.

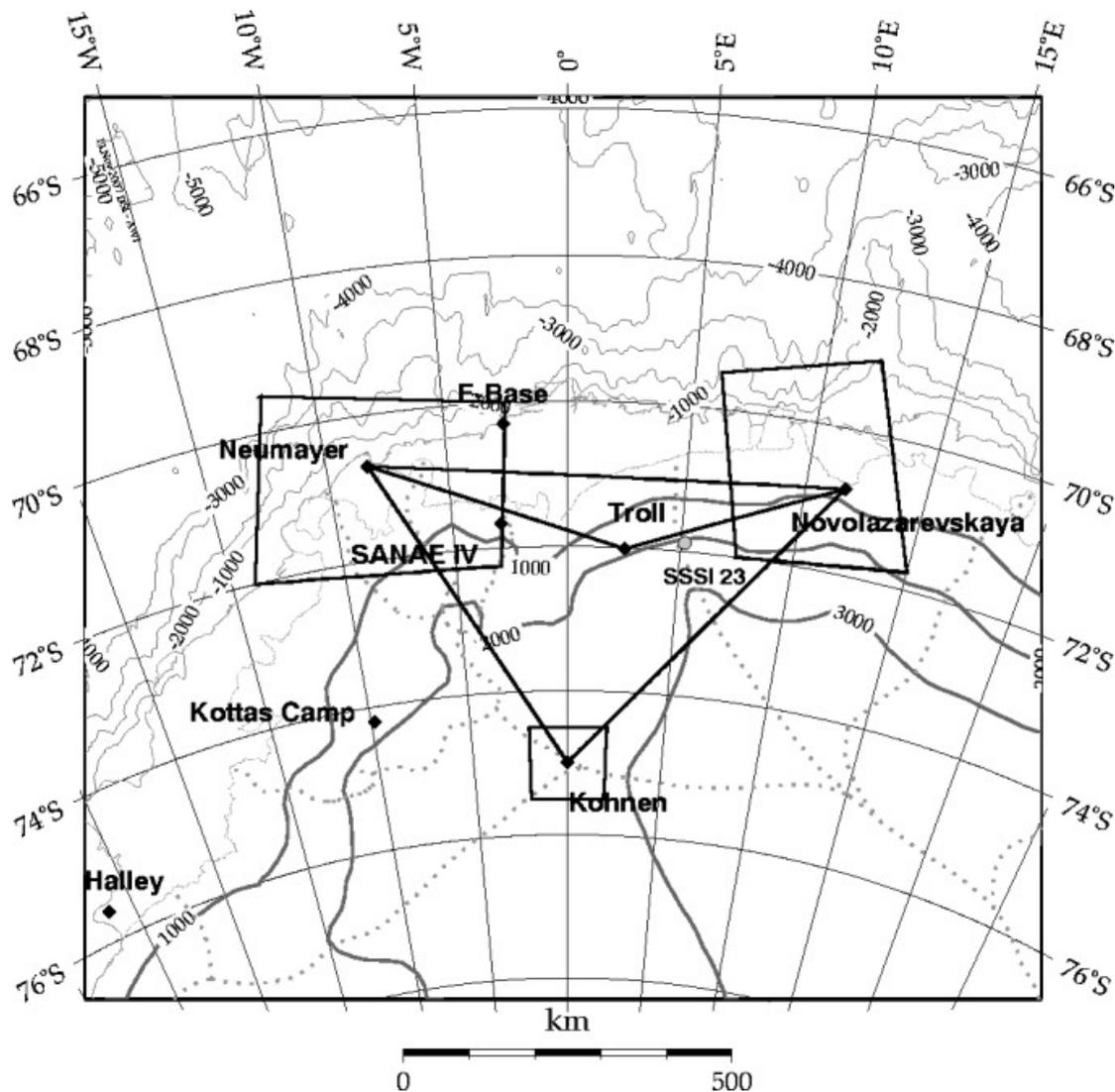


Fig. aero.fig1: The map shows the 3 main areas of interest of the CryoVEX ANT project. All flight will be carried out from Novo runway.

2.1.5 DoCo East Antarctica:

The project Dome Connections in East Antarctica (DOCO) aims for radar sections connecting deep ice core drill sites in East Antarctica mainly following the ice divides between them (Dome Fuji, Dome A region, Vostok, Dome C, Talos Dome, see also figure aero.fig2) supporting interpretation of the deep ice cores. The ice divide between Kohonen and Dome Fuji has been mapped with POLAR 2 in the past. The larger endurance of POLAR 5 compared to POALR 2 allows now to extend the survey and include the other deep ice core drill sites in East Antarctica. The profiles will allow for the first time an independent correlation of the cores by tracing internal layers, isochrones, along the ice divides between the deep ice core drill sites. This survey will be conducted within 8-10 days in January 2008. The instrumentation has not been fixed yet, but at least the ice thickness radar, geodetic GPS, and laser altimeter will be installed, magnetic system, laser scanner, and video system are optional.

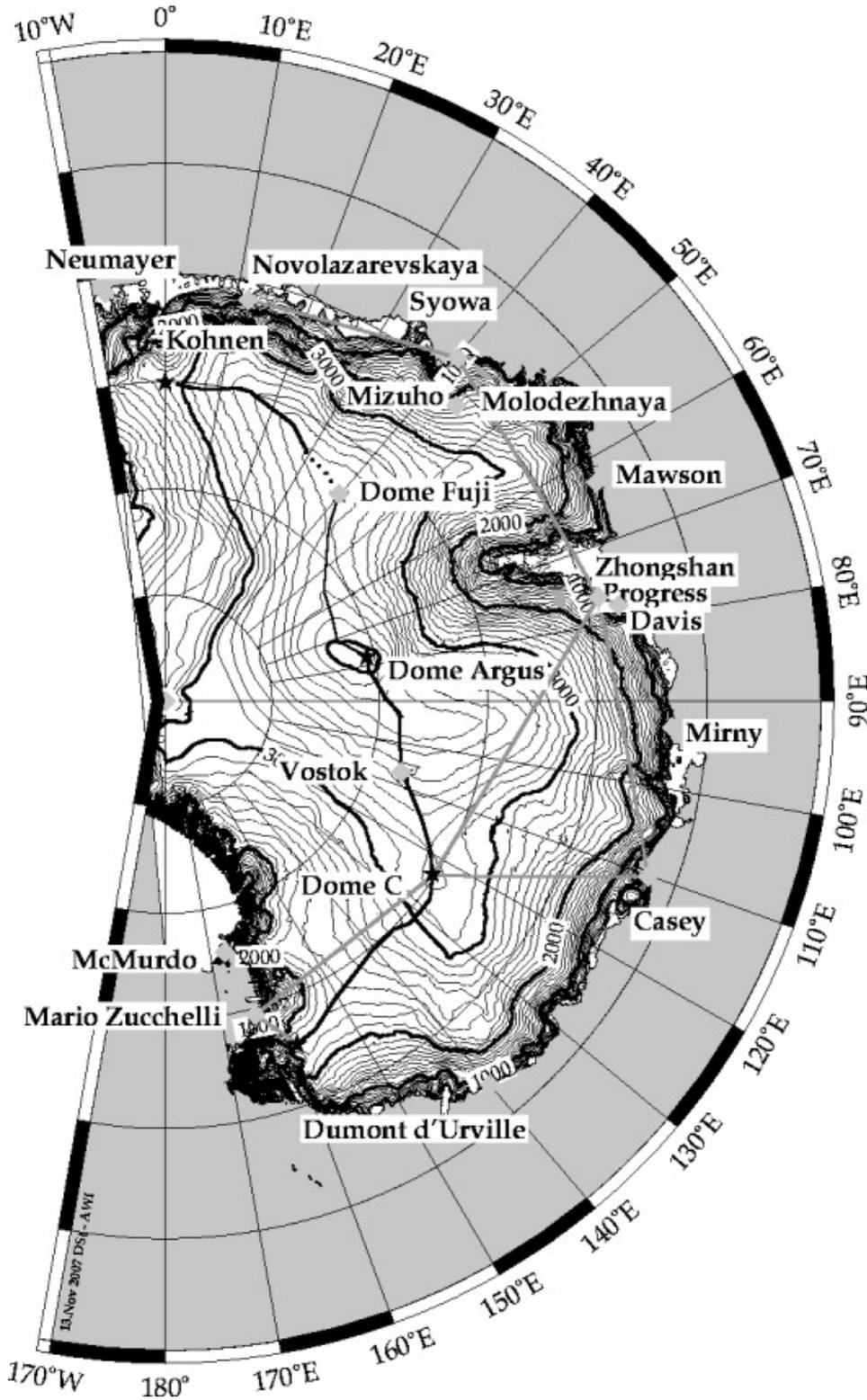


Fig. aero.fig2: Map of the Dome Connection (bold line) project. The grey stars indicate the deep ice core drill sites (Dome Fuji, Dome A (in preparation), Vostok, Dome C, and Talos Dome) in East Antarctica. The straight grey lines indicate flight tracks towards, respectively from the dome line

2.1.6 VISA:

It is planned to carry out several flights for the VISA project, filling gaps in earlier surveys, in order to achieve a homogenous line spacing of 10 km for the whole area covered by magnetic, gravity, and ice thickness survey flights, see figure aero.fig3. The VISA data set will serve as a reference for satellite based magnetic and gravity field measurements, e.g. GRACE. Furthermore will these data be used for mass balance and ice sheet modelling studies as well as for studies of the geodynamic processes and the tectonic structure underneath the ice sheet. For VISA a GPS reference station will be established in the Schirmacher Oasis and a magnetic base station will be set-up for the Period of the survey at Novo runway.

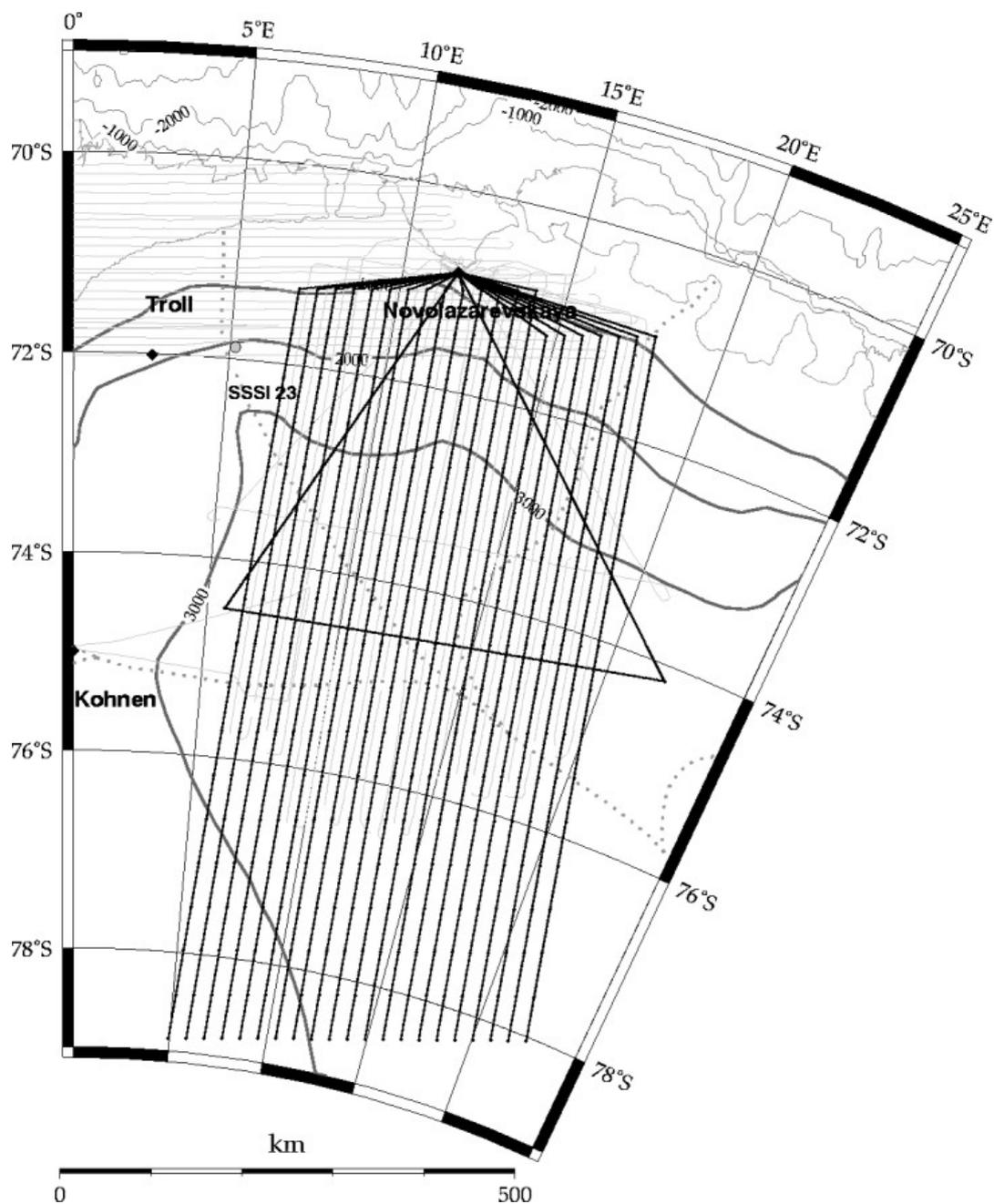


Fig. aero.fig3: Map of planned profiles for VISA. The tracks of the survey VISA 2003/04 are shown as thin grey lines. South of Novo these earlier tracks and the planned ones will have a line spacing of 10 km as the rest of the VISA survey lines.

Acronyms:

CryoVEx ANT	CryoSat Validation Experiment in Antarctica
DoCo East Antarctica	Dome Connection East Antarctica
DROMLAN	Dronning Maud Land Air Network
GPS	global positioning system
GRACE	Gravity Recovery and Climate Experiment
VISA	Verdichtung und Interpretation von Satellitendaten zur Bestimmung von Magnetfeld, Schwerefeld, Eismassenhaushalt und Krustenstruktur in der Antarktis unter Nutzung flugzeuggestützter und bodengebundener Messungen

3. ANT – LAND 07/08: DALLMAN LABORATORY

3.1 Summary and Itinerary

Activities at Dallmann Laboratory

The Dallmann Laboratory will be opened in the middle of November 2007. It is operated in co-operation with the Instituto Antártico Argentino (IAA) and placed at the Argentinean station Jubany. During the season 2007/08 up to 14 German scientists (5 scientific groups will work at the Potter Cove and the station area). The planned scientific activities of AWI focus on terrestrial and shallow water biological projects.

A German diving group will support the scientific work in co-operation with the Argentine divers.

In order to perform all planned scientific works up to 4.5 ton of cargo have to be shipped by sea and up to 1 ton by air.

On 30th March RV Polarstern will call for King George Island to pick up cargo and exchange 9 scientists for Polarstern. After this operation the station will be closed till the beginning of November 2008.

List of Participants

Names, Institute	Title of project	Travel arrangements
Dr. Doris Abele, AWI	Scientific leader, Adaptation and stress defence in intertidal and subtidal Antarctic limpets	29. October C-130 – 28 Dec. C-130 (Arg. Airforce; Buenos Aires)
Ellen Weihe, AWI	Adaptation and stress defence in intertidal and subtidal Antarctic limpets	29. October C-130 – 28. December Arg. Airforce (Buenos Aires)
Maarten Raes, Ghent University, Biology Department Krijgslaan 281/Building S8 9000 Ghent Belgium	Biodiversity of three representative groups of Antarctic zoobenthos – Coping with change	29. October C-130 – 03/08. December.- C-130 Chil. Airforce (Frei - Punta Arenas)
Frank Nitsche, University of Cologne, Zoological Institute, Weyertal 119, 50931 Cologne, Germany	Overlap and discrepancies between ecotypes, genotypes and morphotypes of Antarctic and Arctic nanofauna	28. 11. A. Castillo (Ushuaia) – 28. December Arg. Airforce (Buenos Aires)

Marc Weeber	Student	29. October C130 28. December) C 130 Arg. Airforce (Frei -Buenos Aires)
Marie Louise Kroon	Student	16. January C-130 (Chil. Airforce Punta Arenas – Frei) – 28. February C-130 Arg. Airforce (Frei - Buenos Aires)
Patrick Jordan Forschungsinstitut Senckenberg Senckenberganlage 25 D-60325 Frankfurt/Main	Population genetic study of the common lichen <i>Cetraria aculeata</i> and associated lichen and bryophyte species	28. 11. C 130 Arg. Airforce) — 13. January) Arg. Airforce (Buenos Aires) (or 14. Jan Vistamar
Dirk Mengedoht	Logistic coordinator AWI Dallmann Laboratory	Mid February C 130 Chil. Airforce (Frei Punta Arenas) - 28. February C-130 Arg. Airforce (Frei - Buenos Aires)
Dr. Indra Ottich Forschungsinstitut Senckenberg Senckenberganlage 25 D-60325 Frankfurt/Main	Population genetic study of the common lichen <i>Cetraria aculeata</i> and associated lichen and bryophyte species	28. 11. C 130 Arg. Airforce) — 13. January) Arg. Airforce (Buenos Aires) (or 14. Jan Vistamar
Susanne Becker Marine Botany, University of Bremen, PO Box 33440, 28334 Bremen	Photosynthesis at low temperatures: D1-turnover in Antarctic Rhodophytes	29. October C-130 – 28. February C-130 Arg. Airforce (Frei - Buenos Aires)
Max Schwanitz AWI	Head of German diving group, Scientific leader	16. January C-130 (Chil. Airforce Punta Arenas – Frei) – 28. February C-130 Arg. Airforce (Frei - Buenos Aires)
Claudia Daniel AWI Bremerhaven	Scientific diver	16. January C-130 (Chil. Airforce Punta Arenas – Frei) – 28. February C-130 Arg. Airforce (Frei - Buenos Aires)
Anita Flohr AWI Bremerhaven	diver	16. January C-130 (Chil. Airforce Punta Arenas – Frei) – 28. February C-130 Arg. Airforce (Frei - Buenos Aires)

Dr. Bas Amelung, University of Maastricht, ICIS, Kapoenstraat 23, PO Box 616, 6200MD Maastricht, The Netherlands	Tourism on Potter Peninsula	16. January C-130 – mid February (tourist ship, organised by Amelung) ?
Machiel Lamers, University of Maastricht, ICIS, Kapoenstraat 23, PO Box 616, 6200MD Maastricht, The Netherlands	Tourism on Potter Peninsula	16. January C-130 –mid February (tourist ship, organised by Amelung) ?

International co-operation and transport facilities

The transport of personnel and cargo needs close co-ordination and assistance by various national programs and commercial operators. That includes aircraft and ship transportation. Transport is organised by DNA and performed by Argentinean aircraft and vessels MS Beagle and MS Castillo.

3 pax of German personnel and cargo will transported by the Uruguayan Air Force (FAU) between Punta Arenas and Teniente Marsh on King George Island.

Furthermore transport of 2 pax is carried out by MV Oscar Viel, operated by INACH / Chilean Navy.

3.2 Planned scientific projects

3.2.1 Genetic diversity and geographical differentiation of green-algal photobionts in Antarctic lichens

Christian Printzen, Abteilung Botanik und Molekulare Evolutionsforschung/
Herbarium Senckenbergianum (FR), Forschungsinstitut Senckenberg



Cetraria aculeata on Potter Peninsula, Isla 25 de Mayo

The biomass and diversity of terrestrial Antarctic ecosystems is almost entirely made up of bryophytes and lichens. As highly specialized symbiotic systems of fungi and algae or cyanobacteria lichens are especially sensitive to rapid climatic changes. Lichen fungi depend critically on the availability and ecological performance of suitable algal strains and genotypes in their environment. Up to now, the genetic diversity and geographical differentiation of Antarctic green algal lichen photobionts has not been studied in detail and little is known about the photobiont selectivity of green algal lichens. Based on DNA-sequences, we want to study the genetic diversity and structure of Antarctic populations of trebouxoid lichen photobionts and mycobionts and compare them with populations from other continents. As a model system of the current project, the photobiont diversity in different haplotypes of the macrolichen *Cetraria aculeata* will be examined and compared to the total stand diversity. Within the Antarctic, *Cetraria aculeata* occurs on the northern Antarctic Peninsula, South Georgia, the South Orkney Islands and the South Shetland Islands. The genetic variability of ca 20 individuals of *Cetraria aculeata* and 20 associated lichen thalli from ca. 10 different populations from various part ranges shall be studied and compared with the species diversity of these stands (lichens and bryophytes). We are especially interested in the question, how strongly Antarctic populations of *C. aculeata* select for certain photobiont strains and whether Antarctic photobiont populations are genetically isolated from those of other continents. Our study shall enable us to better estimate whether Antarctic green-algal lichens can respond to rapid climate warming by range shifts or photobiont switches.

3.2.2 Adaptation and stress defence in intertidal and subtidal Antarctic limpets

Nacella concinna

Ellen Weihe, Doris Abele, AWI

The Antarctic limpet *Nacella concinna* is the only species that has successfully colonized most accessible intertidal areas. Here, the snails have to deal with a very stressful environment, air exposure twice in 24 hours during low tide, high predatory pressure, wave action and massive changes in temperature and salinity. The subtidal subpopulation of *Nacella concinna* lives in a comparably stable environment.

We will compare animals from the intertidal and the subtidal to see if the intertidals developed a special adaptation to deal with these stress factors. For this we will do hypoxia incubations and take tissue samples to measure biochemical (glutathione, ascorbate, pH) and molecular (HIF-1a (hypoxia-inducible factor)) parameters in Bremerhaven. Furthermore we will expose limpets to air to determine their water loss and snap freeze samples for measurements as intracellular pH, glutathione and ascorbate.

To find out, if limpets from the intertidal have the ability to take up oxygen during air exposure, we will measure the pO₂ in the shell water, located between the shell and the body. The idea is that this water functions as an oxygen reservoir during low tides, when the animals are contracted to the rock. These measurements will show how the animal regulate the internal pO₂, if oxygen diffuses

continuously or if some kind of air gapping is performed. First measurements of organic acids in the foot tissue of the limpets indicated that, in contrast to the subtidal limpets, intertidal animals prevent becoming anaerobic during air exposure.

This project is supported by DFG AB 124/7

3.2.3 Photosynthesis and photo-inhibition at low temperatures: D1-turnover in Antarctic Rhodophytes

Wiencke (AWI), Bischof, Becker (IPÖ)

Performing photosynthesis under high light but low temperature conditions poses the problem of slowed down enzymatic reactions and increased generation of reactive oxygen species. However, these are the abiotic conditions, macroalgae from Antarctica are usually exposed to during the Antarctic spring/summer season. The proposed study aims at a characterisation of photosynthetic performance of Antarctic red algae under different temperature and light conditions. In particular, the interactive effect of high light and low temperature will be evaluated in laboratory and field experiments. The generation and scavenging of reactive oxygen species, as well as the related damage and turnover of the reaction centre protein of photosystem II (D1) will be monitored. Moreover, changes in the abundance of D1 will be related to species-specific lipid composition and expression of *psbA* genes encoding for D1. Furthermore, the effect of salinity changes due to increased glacier melting will be included as an additional factor modulating physiological responses. This will add new information on both algal physiology and polar ecosystem function.

3.2.4 Overlap and discrepancies between ecotypes, genotypes and morphotypes of Antarctic and Arctic nanofauna

Frank Nitsche and Hartmut Arndt, University of Cologne, Institute for Zoology / General Ecology, Weyertal 119 D-50923 Cologne

Heterotrophic nanoflagellates are major consumers of bacteria in Polar Regions and contribute significantly to the carbon flux from DOC via bacteria to larger organisms such as ciliates and metazoans. Many morphotypes contain several genotypes with sometimes high evolutionary distances. To study the role of endemism in polar waters, we want to analyze discrepancies and overlaps between morphotypes, genotypes and ecotypes of selected nanoflagellates to draw conclusions regarding the possible effects of small changes in temperature on the sensitive Antarctic and Arctic ice biota.

In May 2007, we took samples from arctic waters and carried out live-counts of heterotrophic flagellates and established clonal cultures. We would like to compare arctic isolates with those from Antarctic waters. In addition we want to study temperature and salinity tolerances of isolates. At Dallmann we want to analyse water samples of the open waters, sea ice (surface, core, slush and underside) and sediment. A part of these samples, as those from arctic waters, will be used for live counts of flagellates, which will be done directly at Dallmann laboratory. Another part will be aliquoted and used to establish new clonal cultures. Furthermore single cells will be extracted from the samples with a micromanipulator for single cell PCR. These frozen samples will be taken back to Cologne where they are going to be sequenced to compare the different genotypes.

This project is supported by DFG AR 288/12-1

3.2.5 Observation of Tourism Activities on Potter Peninsula, Dallmann Campaign 2007/2008

Amelung, Lamers, Stel, Ghent University

In this field research project the objective is to observe and record the temporal and spatial distribution of tourism activities on the Potter Peninsula and link these to the current applicable management rules. The main research methodologies used to meet this objective are interviewing, participatory observation and GIS mapping. By means of an agent based simulation model, various scenarios of future tourism development will be analysed. The results will be discussed in the light of possible additional management options (such as: site guidelines), and compared to activities elsewhere on KGI and the Antarctica Peninsula. Based on these analyses, recommendations will be drawn and presented to the various NAPs active on Jubany Base.

3.2.6 Meiofauna at the poles - Coping with change

Maarten Raes, Ann Vanreusel, Ghent University

The Belgian BIANZO II (Biodiversity of three representative groups of the Antarctic zoobenthos - Coping with change) project investigates biodiversity patterns of the Antarctic zoobenthos and their causal processes for three representative groups of different size categories: nematodes (meiobenthos), amphipods (macrobenthos) and echinoids (megabenthos). At the Marine Biology Section of Ghent University (where the project is coordinated), we will study the meiobenthos from the arctic and Antarctic. The focus here is on the ability of the meiobenthos to cope with temperature and temperature-related changes. In addition, the trophic position of these animals will be studied.

Our work at the Dallmann Laboratory includes two experiments: (1) a temperature experiment and (2) a food experiment. These experiments will be carried out on incubated cores from subtidal origin. In the first experiment (approx. 20 days), benthic respiration will be measured at different temperatures. The cores will also be sampled afterwards to investigate nematode densities, biomass and reproduction rate, as well as bacterial densities and biomass. In the second experiment, different food sources will be added to the cores: (1) labeled diatoms (*Thalassiosira weissflogii*), (2) labeled bacteria, (3) plankton and (4) degraded macro-algae. Nematode trophic position and food uptake will be investigated by means of a stable isotopes analysis on the frozen material (1-2). Autochthonous plankton will be added to cores at different temperatures in order to investigate the impact of temperature on food uptake by nematodes. The effect of food quantity will be investigated by adding different amounts of (autochthonous) degraded macro-algae to cores. These cores (3-4) will be sampled afterwards and meiofauna and nematode densities, biomass and reproduction rates will be measured.

Next to these two experiments, different meiofauna taxa will be picked out and frozen for analysis of stable isotopes and fatty acids.

4. ANT-LAND 07/08: OTHER ACTIVITIES OF AWI

4.1 Summery and Itinerary

4.1.1 Geological Investigations of the second ANDRILL-Core from underneath the Southern McMurdo Sound

Kuhn, Niessen, Magens (AWI), Wonik (GGA, Hannover)

ANDRILL is a multi-national (USA, NZ, IT, GER) initiative to investigate the tectonic history of Antarctica and the role of the continent in Cenozoic-Recent global environmental change through stratigraphic drilling along the Antarctic margin (<http://andrill.org>). ANDRILL provided the development of a new drilling rig that enables sampling of more than 1500 m below the sea surface utilizing both fast ice and ice shelf as drilling platforms. Based on the successful international ANDRILL Proposal submitted in 2002, funding allows drilling at sites in the McMurdo Sound region in 2006 and 2007. The second project, the **Southern McMurdo Sound Project (SMS)** with its drilling phase from October to December 2007, aims recovery of a 1000 m long core comprising Miocene glacial marine terrigenous, volcanic, and biogenic sediments that have accumulated in a marine rift basin adjacent to Transantarctic Mountains. The SMS Project is drilling from a 8.5 m thick multi year sea-ice platform through a water column of 390 m.

A major objective of the project is to establish a robust history of Neogene Antarctic ice sheet variation and climate evolution that can be integrated into continental and global records toward a better understanding of Antarctica's role in the past, present and future global system. The recovery of middle Miocene Antarctic stratigraphic sequences is required to evaluate the history derived from global proxy records that invoke a change from a warm climatic optimum (~17 Ma) to the onset of major cooling (~14 Ma) and the formation of a quasi-permanent ice sheet on East Antarctica. The SMS site is well-connected to the grid of seismic lines in the Victoria Land Basin; hence the recovered sections will provide excellent chronostratigraphic control for regional seismic surfaces and units important for interpreting regional stratal architecture and for dating Neogene and younger subsidence and rift fault history.

The German scientific involvement in ANDRILL projects is based on the 6.5% share of the total ANDRILL logistics costs provided by funds from the Alfred Wegener Institute for Polar and Marine Research. For the SMS project, this includes on-ice science work such as XRF core-scanning (AWI), borehole logging (GGA), logging of physical core properties (AWI) and interpretation of the data after the field season. In addition using core material off-ice, geochemical, petrological and palynological work will be carried out by the Universities of Göttingen, Leipzig and the Museum of Natural History in Berlin, respectively.

4.2 Other Activities of AWI and activities supported by AWI

4.2.2 Are there meteorite concentrations on blue ice fields in Queen Maud Land/Antarctica?

Georg Delisle (Bundesanstalt für Geowissenschaften und Rohstoffe, BGR) & Jochen Schlüter (Mineralogisches Museum Hamburg)

A rather constant influx of extraterrestrial matter arrives annually on the Earth's surface. Very little of the total mass is ever recovered, since most matter arrives in the form of dust or as small meteorites. Extraterrestrial material landing on the Antarctic ice is usually incorporated into the snow-, firn- and eventually ice layer and will disappear as it is carried within one of the major outlet glaciers to the coast and into sea water. A small portion of it, however, gets caught by what we call "meteorite concentration sites" or "meteorite traps". These places are characterized by a glaciological situation where the ice flow velocity is reduced on its way over a sub-ice obstruction and being exposed to high sublimation rates during the summer season. Such sites may show high meteorite concentrations at the ice surface, in particular, if this field relation had remained stable over sufficiently long time periods to allow for the build-up of a high meteorite concentration. Field cases exist where ice has travelled since millennia to sites where it has been totally sublimated, leaving behind meteorites with "terrestrial ages" of up to 2 million years, implying long-time stable glaciological field situations during several episodes of pronounced climatic fluctuations. Such data might assist us to reaffirm our concepts on the likely reaction of the East Antarctic ice sheet to global climatic changes.

Additional attention will be paid to geological evidence of ice level changes in the past (such as e. g. out of place lateral moraines). Ground based radar measurements will assist us to assess the potential of the visited sites for the build-up of high meteorite concentrations.

All Antarctic meteorite concentration sites are located along the 2200 (\pm 200) m elevation line. The QueenMet-expedition will survey hitherto unexplored blue ice fields at this elevation to the south of the Wohlthat Massiv / Queen Maud Land. Back in 1961 one meteorite had been found in the area, but no subsequent effort for a systematic follow-up search was ever initiated in this particular region.

We will visit first the Payer Mts. (71°55'S 14°03'E), followed by an area SE of the Payer Mts. (72°20'S 16°E) and (optionally) Skeidshovden (72°05'S 11°30'E). Start of the field work will be in late November 2007.

Extraterrestrial material recovered during our field campaign will be made available to institutions specializing in extraterrestrial material, namely the Senckenberg Institution in Frankfurt, the Institute of Planetology in Münster, the Mineralogical Institute in Cologne and others.

5. LOGISTICS AND DETAILED SCHEDULES

5.1 Neumayer, Kohlen: Flight schedules and ship calls

Schedule for DROMLAN intercontinental and feeder destinations

DROMLAN flight D1 by Iljushin 76TD

Intercontinental flight D1 CT–Novo–CT 02-04 November 2007

Cape Town to Novo airfield

pax: 10

cargo: 1760 kg

Novo airfield to Cape Town

pax: 0

cargo: 30 kg

Feeder flights D1 Novo-NM-Novovo

Novo airfield to Neumayer Station:

pax: 9

cargo: 1640 kg

Neumayer Station to Novo airfield:

pax: 0

cargo: 130 kg

DROMLAN flight TAC-1 by Iljushin 76TD

Intercontinental flight TAC-1 CT–Novo–CT 07-10 November 2007

Cape Town to Novo airfield

pax: 2

cargo: 0 kg

Novo airfield to Cape Town

pax: 0

cargo: 0

Feeder flights TAC-1 Novo-NM-Novu

Novo airfield to Neumayer Station:

pax: 0

cargo: 0

Neumayer Station to Novo airfield:

pax: 0

cargo: 0

DROMLAN flight D2 by Ilyushin 76TD

Intercontinental flight D2 CT-Novu-CT 14-19 November 2007

Cape Town to Novo airfield

pax: 11

cargo: 2450 kg

Novo airfield to Cape Town

pax: 9

cargo: 0

Feeder flights D2 Novo-NM-Novu

Novo airfield to Neumayer Station:

pax: 10

cargo: 200 kg

Neumayer Station to Novo airfield:

pax: 10

cargo: 0 kg

Feeder flight Novo via Troll to Neumayer: t.b.d.

Feeder flight Neumayer via Kohnen to Novo (no refuelling at Kohnen)

DROMLAN flight TAC-2 by Ilyushin 76TD

Intercontinental flight TAC-2 CT-Novo-CT 22-26 November 2007

Cape Town to Novo airfield

pax: 4

cargo: 3297 kg

Novo airfield to Cape Town

pax: 1

cargo: 0

Feeder flights TAC-2 Novo-NM-Novovo

Novo airfield to Neumayer Station:

pax: 1

cargo: 60 kg

Neumayer Station to Novo airfield:

pax: 1

cargo: 0

DROMLAN flight D3 by Ilyushin 76TD

Intercontinental flight D3 CT-Novo-CT 29 Nov – 03 Dec 2007

Cape Town to Novo airfield

pax: 7

cargo: 243 kg

Novo airfield to Cape Town

pax: 2

cargo: 80 kg

Feeder flights D3 Novo-NM-Novovo

Novo airfield to Neumayer Station:

pax: 7

cargo: 243 kg

Neumayer Station to Novo airfield:

pax: 1

cargo: 0

DROMLAN flight D4 by Ilyushin 76TD

Intercontinental flight D4 CT-Novo-CT 15-19 December 2007

Cape Town to Novo/Troll airfield

pax: 43

cargo: 400 kg

Novo airfield to Cape Town

pax: 3

cargo: 300 kg

Feeder flights D4 Novo-NM-Novu

Novo airfield to Neumayer Station:

pax: 43

cargo: 400 kg

Neumayer Station to Novo airfield:

pax: 0

cargo: 0

DROMLAN flight D5 by Hercules C130

Intercontinental flight D5 CT-Troll-CT 05-07 January 2008

Cape Town to Troll airfield

pax: 23

cargo: 210 kg

Troll airfield to Cape Town

pax: 0

cargo: 0

Feeder flights D5 Troll-NM/Novo-Troll

Troll airfield to Neumayer Station:

pax: 21

cargo: 150 kg

Troll airfield to Novo airfield by POLAR 5:

pax: 3

cargo: 60 kg

Neumayer Station to Troll airfield

pax: 0

cargo: 0

DROMLAN flight D7 by Iljushin 76TD

Intercontinental flight D7 CT-Novu-CT 04-06 February 2008

Cape Town to Novo airfield

pax: 5

cargo: 480 kg

Novo airfield to Cape Town

pax: 31

cargo: 1960 kg

Feeder flights D7 Novo-NM-Novu

Novo airfield to Neumayer Station

pax: 5

cargo: 480 kg

Neumayer Station to Novo airfield

pax: 22

cargo: 40 kg

Feeder flights D7 Kohnen-Novo

Kohnen Station to Novo airfield

pax: 7

cargo: 820 kg

DROMLAN flight D8 by Iljushin 76TD

Intercontinental flight D8 CT-Novo-CT 12-14 February 2008

Cape Town to Novo airfield

pax: 0

cargo: 300 kg

Novo airfield to Cape Town

pax: 4

cargo: 0

Feeder flights D8 Novo-NM-Novo

Novo airfield to Neumayer Station:

pax: 0

cargo: 300 kg

Neumayer Station to Novo airfield:

pax: 4

cargo: 0

DROMLAN flight D9 by Iljushin 76TD

Intercontinental flight D9 CT-Novo-CT 26-28 February 2008

Cape Town to Novo airfield

pax: 0

cargo: 0

Novo airfield to Cape Town

pax: 11

cargo: 2000 kg

Feeder flights D9 Novo-NM-Novu

Novo airfield to Neumayer Station:

pax: 0

cargo: 80 kg

Neumayer Station to Novo airfield

pax: 7

cargo: 200 kg

DROMLAN flight D10 by Iljushin 76TD

Intercontinental flight D10 CT-Novu-CT 03-06 March 2008

Cape Town to Novo airfield

pax: 0

cargo: 0

Novo airfield to Cape Town

pax: 0

cargo: 0

Feeder flights D10 Novo-NM-Novu

Novo airfield to Neumayer Station

pax: 0

cargo: 0

Neumayer Station to Novo airfield

pax: 0

cargo: 0

DROMLAN flight D11 by Iljushin 76TD

Intercontinental flight D11 CT-Novu-CT 10-12 March 2008

Cape Town to Novo airfield

pax: 0

cargo: 200 kg

Novo airfield to Cape Town

pax: 44

cargo: 960 kg

Feeder flights D11 Novo-NM-Novu

Novo airfield to Neumayer Station:

pax: 0

cargo: 200 kg

Neumayer Station to Novo airfield:

pax: 44

cargo: 960 kg

Logistic flights for AWI

LOG-1: Transportation of pax and cargo from Punta Arenas to Bellingshausen (Oct. – Nov. 2007)

LOG-2: Transportation of personnel for BAS, Positioning first Basler to Novo-Airbase (Oct. – Nov. 2007)

LOG-3: QueenMET field campaign (

LOG-4: Transportation of firm samples and ice cores provided by Swedish and Norwegian traverses and Norwegian personnel - from Kohnen Station (Swedish traverses) to Neumayer (Nov. 2007 – Jan. 2008)

LOG-6: Logistic flights Kohnen station (Jan. – Feb. 2008)

LOG-7: Scientific flight to WASA to pick up data of the German seismometer at SVEA

Ship calls for Atka Bay

RV Polarstern - Supply Neumayer

Time frame: 08 – 10 December 2007

Personnel: No personnel

cargo: Supply for Neumayer Station

- Scientific /logistic cargo, provisions for Neumayer II
- fuel supply for Neumayer II and construction site
- logistic cargo, Kohnen Station

RV Polarstern will operate near by and stay as backup for assistance when Naja Arctica is heading for Atka Bay.

S.A. Agulhas – Supply SANAE IV via Atka Bay

Time frame: 08 – t.b.d. December 2007

Personnel: No personnel

cargo: Supply for SANAE IV via Atka Bay by traverse

Accommodation of ARGE personnel at SANAE station or on board SA Agulhas at Atka Bay (option). The personnel coming in with D4, by Basler to SANAE and transfer to Neumayer to the construction site by SANAP helicopter according to the construction progress of the container camp.

Naja Arctica - Construction material Neumayer III

Time frame: 16 December 2007 – 05 January 2008

Personnel: No personnel

cargo:

- construction material Neumayer III Station
- vehicles, cranes
- construction camp

RV Polarstern – Supply Neumayer Station

Time frame: 28 February 2008

Personnel: No personnel

cargo: Fuel supply

Loading of one reefer container with firm cores and snow samples and one stand by reefer container

Loading logistics container (t.b.d., option)

S.A. Agulhas – Resupply Neumayer Station

Time frame: 08 – 10 February 2008

Personnel: No personnel

cargo: Resupply Neumayer Station

- cargo containers

Schedule for Participants

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -					
preliminary list				AWI-Logistics, Germany	
in / out with	date	ID	route	pax in	pax out
DROMLAN flight - Iljushin 76TD	02-04 Nov 2007	D1	Cape Town - Novo - Cape Town	10	0
DROMLAN flight - Iljushin 76TD	08-10 Nov 2007	TAC-1	Cape Town - Novo - Cape Town	2	0
DROMLAN flight - Iljushin 76TD	14-19 Nov 2007	D2	Cape Town - Novo - Cape Town	11	9
DROMLAN flight - Iljushin 76TD	22-26 Nov 2007	TAC-2	Cape Town - Novo - Cape Town	4	1
DROMLAN flight - Iljushin 76TD	30 Nov-04 Dec 2007	D3	Cape Town - Novo - Cape Town	7	2
DROMLAN flight - Iljushin 76TD	15-19 Dec 2007	D4	Cape Town - Novo - Cape Town	43	3
DROMLAN flight - Iljushin 76TD	05-07 Jan 2008	D5	Cape Town - Troll - Cape Town	23	0
DROMLAN flight - Iljushin 76TD	04-06 Feb 2008	D7	Cape Town - Novo - Cape Town	5	31
DROMLAN flight - Iljushin 76TD	12-14 Feb 2008	D8	Cape Town - Novo - Cape Town	0	4
DROMLAN flight - Iljushin 76TD	26-28 Feb 2008	D9	Cape Town - Novo - Cape Town	0	11
DROMLAN flight - Iljushin 76TD	03-06 Mar 2008	D10	Cape Town - Novo - Cape Town	0	0
DROMLAN flight - Iljushin 76TD	10-12 Mar 2008	D11	Cape Town - Novo - Cape Town	0	44
Polar 5 (BT-67)	01 Nov 2007 - 20 Feb 2008	P5	Oshawa-Novo-Oshkosh	3	3
RV Polarstern-ANTXXIV/2, supply NM	08-10 Dec 2007	PS /2	Cape Town - Atka Bay	0	0
SA Agulhas, supply SANAE via NM	16-xx Dec 2007	Ag1	Cape Town - Atka Bay	0	0
Naja Arctica, constr. material NM-III	16 Dec 2007 - 05 Jan 2008	NA	Cape Town - Atka Bay	0	0
Polarstern - ANT XXIV/3, fuel supply	28 Feb 2008	PS /3	Neumayer - Cape Town	0	0
SA Agulhas, resupply NM	25-Jan - 10 Feb 2008	Ag2	Atka Bay - Cape Town	0	0
				DROMLAN Pax in / out:	105 105
Total number of participants:	113			Total Pax in / out:	108 108

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -						
surname	given name	institute/company	profession / activity		in	out
Neumayer Station II						
Logistics:						
Matz	Thomas	AWI-logistics	engineer	field coordinator	D3	D9
Weynand	Markus	AWI-logistics	technician	fieldoperator	D1	D11
Sulzbach	Frank	maintenance company	technician	maintenance NM-II	D3	D7
Pyrskalla	Boleslav	maintenance company	technician	maintenance NM-II	D3	D7
Eron	Andreas	maintenance company	technician	maintenance NM-II	D3	D7
Falkenberg	Falk	maintenance company	technician	maintenance NM-II, I27DE	D3	D7
Thumm	Martin	Kaessbohrer (Pistenbully)	technician	co-operation NCAOR - assignm. Maitri	D1	D3
						7
Observatories / Service NM-II						
König-Langlo	Gert	AWI	scientist	maintenance meteorological observatory	D5	D9
Müller	Christian	FIELAX	scientist	maintenance geophysical observatory	D5	D7
Hofmann	Joerg	FIELAX	scientist	IT maintenance	D1	D3
Grasse	Torsten	BGR Hannover	engineer	maintenance I27DE	D5	D7
						4
DROMLAN weather service:						
Brauner	Ralf	DWD	scientist	DROMLAN weather forecast	D1	TAC-2
Möller	Hans-Joachim	DWD	scientist	DROMLAN weather forecast	TAC-2	D7
Brauner	Ralf	DWD	scientist	DROMLAN weather forecast	D7	D11

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -						
surname	given name	institute/company	profession / activity		in	out
Neumayer Station II						
Wintering Team 2008:						
Nantke	Jürgen	AWI	physician	station leader, physician	D4	2009
Heinzius	Benjamin	AWI / Reederei F. Laeisz	engineer	station engineer	D1	2009
Weise	Jörg	AWI / Reederei F. Laeisz	engineer	electrician	D1	2009
Görler	Max	AWI / Reederei F. Laeisz	engineer	electronic engineer, IT, radiooperator	D3	2009
Brandel	Stefan	AWI / Reederei F. Laeisz	cook	cook	D3	2009
Nehring	Franziska	AWI	scientist	air chemistry	D5	2009
Langer	Seweryn	AWI	scientist	geophysics	D5	2009
Zitterbart	Daniel	AWI	scientist	geophysics	D5	2009
Wittig	Julia	AWI	scientist	meteorology	D5	2009
						9

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -						
surname	given name	institute/company	profession / activity		in	out
Construction Site Neumayer Station III						
Logistics:						
Janneck	Jürgen	AWI-logistics	engineer	AWI construction coordinator	D1	D11
Kohlberg	Eberhard	Reederei F. Laeisz	physician	construction site NM-III	D1	D11
Brehme	Andreas	Reederei F. Laeisz	engineer	AWI technical supervisor construction	D1	D11
Riess	Felix	Reederei F. Laeisz	engineer	AWI technical supervisor construction	D4	D11
Blattner	Mark	Kaessbohrer (Pistenbully)	technician	vehicle maintenance	D1	D11
						5
Construction Team:						
Behrends	Detlev	ARGE	construction team		D4	D11
Berger	Rolf	ARGE	construction team		D4	D11
Berschik	Christian	ARGE	construction team		D4	D11
Eder	Pitt	ARGE	construction team		D4	D11
Ennulat	Günther	ARGE	construction team		D4	D11
Germerott	André	ARGE	construction team		D4	D11
Gerstmann	Michael	ARGE	construction team		D4	D11
Hartling	Thomas	ARGE	construction team		D4	D11
Heenrink	Henk	ARGE	construction team		D4	D11
Kers	Raymond	ARGE	construction team		D4	D11
Koepf	Holger	ARGE	construction team		D4	D11

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -					
surname	given name	institute/company	profession / activity	in	out
Construction Site Neumayer Station III					
Kröger	Thomas	ARGE	construction team	D4	D11
Lawrenz	Peter	ARGE	construction team	D4	D11
Littmann	Heinrich	ARGE	construction team	D4	D11
Lux	Reinhard	ARGE	construction team	D4	D11
Müller	Malte	ARGE	construction team	D4	D11
Münch	Lothar	ARGE	construction team	D4	D11
Paulsen	Uwe	ARGE	construction team	D4	D11
Pelludat	Ingo	ARGE	construction team	D4	D11
Schmidt	Arne	ARGE	construction team	D4	D11
Schmidt	Roland	ARGE	construction team	D4	D11
Schwegmann	Kai	ARGE	construction team	D4	D11
Schwiers	Torben	ARGE	construction team	D4	D11
Stanieda	Peter	ARGE	construction team	D4	D11
Suhr	Axel	ARGE	construction team	D4	D11
Trimborn	Klaus	ARGE	construction team	D4	D11
v. Borstel	Jörg	ARGE	construction team	D4	D11
v. Hassel	Ralf	ARGE	construction team	D4	D11
Eckhardt	Georg	ARGE	construction team	D4	D7
Gröger	Herbert	ARGE	construction team	D4	D7
Ihwe	René	ARGE	construction team	D4	D7
Klostermann	Jörg	ARGE	construction team	D4	D7
Lindner	Hartmut	ARGE	construction team	D4	D7

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -

surname	given name	institute/company	profession / activity	in	out
Construction Site Neumayer Station III					
Marx	Andreas	ARGE	construction team	D4	D7
Neuber	Jürgen	ARGE	construction team	D4	D7
Staggat	Dieter	ARGE	construction team	D4	D7
Wartmann	Maik	ARGE	construction team	D4	D7
Wulfmeier	Giesbert	ARGE	construction team	D4	D7
Wegener	Bernd	ARGE	construction team	D5	D7
Ahrens	Siegmar	ARGE	construction team	D5	D11
Göttsch	Frank	ARGE	construction team	D5	D11
Hacker	Richard	ARGE	construction team	D5	D11
Irmiler	Stephan	ARGE	construction team	D5	D11
Marx	Oliver	ARGE	construction team	D5	D11
Riedel	Andreas	ARGE	construction team	D5	D11
					46

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -						
surname	given name	institute/company	profession / activity		in	out
Construction Site Neumayer Station III						
Public Relations at construction site NM-III:						
Wehrmann	Lars	realnature.tv	journalist	TV team NM-III	D7	D11
Hansmann	Thomas	realnature.tv	journalist	TV team NM-III	D7	D11
Klimmeck	Jens	realnature.tv	journalist	TV team NM-III	D4	D7
Trapp	Michael	realnature.tv	journalist	TV team NM-III	D4	D7
Kohnen-Station						
Druecker	Cord	AWI logistics	technician	inspection and maintenance	D5	D7
Stoof	Günter	AWI logistics	technician	inspection and maintenance	D5	D7
Köhler	Jens	Reederei F. Laeisz	technician	inspection and maintenance	D5	D7
Schubert	Holger	Reederei F. Laeisz	technician	inspection and maintenance	D5	D7
Weller	Rolf	AWI	scientist	maintenance air chemistry	D5	D7
Oerter	Hans	AWI	scientist	maintenance air chemistry	D5	D7
						6
Aircraft missions (Polar 5)						
Gehrmann	Martin	AWI	scientist	project CryoVEX, VISA, DML	TAC-2	D4
Helm	Veith	AWI	scientist	project CryoVEX, VISA, DML	TAC-2	D4
Böbel	Tobias	Optimare	technician	project CryoVEX, VISA, DML	TAC-2	D4
Steinhage	Daniel	AWI	scientist	project DoCo - East Antarctica	D5	D7
Mach	Dieter	Optimare	technician	project DoCo - East Antarctica	D5	D7
Burchartz	Brian	Enterprise Airline Inc.	chief pilot	Polar 5	P5	P5
Aylward	Jim	Enterprise Airline Inc.	pilot	Polar 5	P5	P5
Woudsma	David	Enterprise Airline Inc.	engineer	Polar 5	P5	P5

AWI - Antarctic Summer Season ANT-Land 2007/08 - Participants -						
surname	given name	institute/company	profession / activity		in	out
POLAR 5-ANT						
Miller	Heinz	AWI	scientist	visit - commissioning POLAR 5	D2	D2
Gernandt	Hartwig	AWI	scientist	visit - commissioning POLAR 5	TAC-1	D2
Wolke	Heike	AWI	engineer	visit - commissioning POLAR 5	D2	D2
Herber	Andreas	AWI	scientist	visit - commissioning POLAR 5	D2	D2
Hengstermann	Theo	Optimare	scientist	visit - commissioning POLAR 5	D2	D2
Weigt	Tom	Basler Turbo	engineer	visit - commissioning POLAR 5	D2	D2
Myers	Randy	Basler Turbo	engineer	visit - commissioning POLAR 5	D2	D2
Rosario	Manny	EAI	operator	visit - commissioning POLAR 5	D2	D2
Müller-Marks	Sven	ALCI	technician	visit - commissioning POLAR 5	TAC-1	D2
Kaliazin	Vasily	ALCI	scientist	visit - commissioning POLAR 5	(D2)	(D2)
field party QueenMET						
Delisle	Georg	BGR Hannover	scientist	project QueenMET	D2	D9
Barckhausen	Udo	BGR Hannover	scientist	project QueenMET	D2	D9
Schlüter	Jochen	University Hamburg	scientist	project QueenMET	D2	D9
Gessler	Jonas	Switzerland	field guide	project QueenMET	D2	D9
Other projects						
Fetkötter	Jörn	ARGE	director	inspection construction NM-III	D7	D7
Kramer	Ingo	ARGE	director	inspection construction NM-III, option	D7	D7
Total number of participants:						113

5.2 Dallmann

Schedules are not available at the present stage.

6. PARTICIPANTS

6.1 Neumayer and Kohlen Station

Name	First Name	Institute	Profession
Ahrens	Siegmar	ARGE	Mechanic
Barckhausen	Udo	BGR Hannover	Geophysicist
Behrends	Dietmar	ARGE	Project manager
Berger	Rolf	ARGE	Metalworker
Berschick	Christian	ARGE	Electrician
Blattner	Marc	Kässbohrer	Technician
Boebel	Tobias	Optimare	Scientist
Brendel	Stefan	AWI	Cook
Brauner	Ralf	DWD	Meteorologist
Brehme	Andreas	Laeisz	Engineer
Delisle	Georg	BGR	Geologist
Eckhardt	Georg	ARGE	Mechanic
Engelke	Rainer	ARGE	Plumber
Ennular	Günther	ARGE	Cook
Eron	Andreas	Manpower	Electrician
Eulitz	Jürgen	ARGE	Technician
Falkenberg	Falk	Manpower	Mechanic
Gehrmann	Martin	AWI	Engineer
Germerott	André	ARGE	Engineer
Gernandt	Hartwig	AWI	Physicist
Gerstmann	Michael	ARGE	Electrician

Name	First Name	Institute	Profession
Görler	Max	AWI	Electronician
Grasse	Torsten	BGR	Engineer
Gröger	Herbert	ARGE	Mechanic
Hacker	Richard	JKH	Engineer
Hansmann	Thomas	Realnature	Cameraman
Hartling	Thomas	ARGE	Cook
Heinzius	Benjamin Felix	AWI	Engineer
Helm	Veit	AWI	Geophysicist
Hengstermann	Theo	Optimare	Physicist
Herber	Andreas	AWI	Physicist
Hofmann	Jörg	Fielax	Meteorologist
Ihwe	René	ARGE	Crane driver
Janneck	Jürgen	AWI	Engineer
Kaliazin	Vasily	ALCI	Scientist
Kers	Raymond	ARGE	Crane driver
Klimmeck	Jens	Realnature	Student
König-Langlo	Gert	AWI	Meteorologist
Koepp	Holger	ARGE	Technician
Kohlberg	Eberhard	AWI	Physician
Kröger	Thomas	ARGE	Mechanic
Krüger	XChristian	ARGE	Crane driver
Langer	Seweryn	AWI	Geophysicist
Lawrenz	Peter	ARGE	Store keeper
Lindner	Hartmut	ARGE	Technician
Littmann	Heinrich	ARGE	Technician
Lux	Reinhard	ARGE	technician
Matz	Thomas	AWI	Engineer

Name	First Name	Institute	Profession
Miller	Heinrich	AWI	Geophysicist
Möller	Hans-Joachim	DWD	Meteorologist
Müller	Malte	ARGE	Engineer
Müller-Marks	Sven	ALCI	Technician
Münch	Lothar	ARGE	Mechanic
Myers	Randal	Basler Turbo	Manager
Nantke	Jürgen	AWI	Physician
Nehring	Franziska	AWI	Geologist
Neuber	Jürgen	ARGE	Mechanic
Paranhos-			
Zitterbart	Daniel	AWI	Physicist
Paulsen	Uwe	ARGE	Mechanic
Pelludat	Ingo	ARGE	Mechanic
Pyrskalla	Boleslaw	Manpower	Technician
Riedel	Andreas	ARGE	Mechanic
Riess	Felix	Laeisz	Engineer
Rosario	Manny	EAI	
Saar	Michael	ARGE	Metalworker
Schlüter	Jochen	Uni Hamburg	Mineralogist
Schmidt	Arne	ARGE	Electrician
Schmidt	Roland	ARGE	Mechanic
Schwegmann	Kai	ARGE	Electrician
Schwiers	Torben	ARGE	Elektrician
Staggat	Dieter	ARGE	Technician
Stanieda	Peter	ARGE	Technician
Steinhage	Daniel	AWI	Geophysicist
Stenger	Jan	ARGE	Metalworker

Name	First Name	Institute	Profession
Suhr	Axel	ARGE	Carpenter
Sulzbach	Frank W.	Sulzbach	Technician
Thumm	Martin	Kässbohrer	Technician
Trapp	Michael	Realnature	Producer
Trimborn	Klaus	ARGE	Engine builder
Von Borsterl	Jörg	ARGE	Electrician
Von Hassel	Ralf	ARGE	Metalworker
Wandel	Rainer	ARGE	Mechanic
Wartmann	Maik	ARGE	Mechanic
Wehrmann	Lars	Realnature	Producer
Weigt	Thomas	Basler Turbo	Manager
Weise	Jörg	AWI	Engineer
Weller	Rolf	AWI	Chemist
Weynandt	Markus	AWI	Technician
Wirth	Michael	ARGE	Mechanic
Wittig	Julia	AWI	Meteorologist
Wolke	Heike	AWI	Engineer
Wulfmeier	Giesbert	ARGE	Technician

Dallmann Laboratory and other activities

6.2.2 Dallmann, Jubany Station

Name	First Name	Institute	Profession
Abele	Doris	AWI	Scientist
Amelung	Sebastiaan	Uni Maastricht	Scientist
Becker	Susanne	Uni Bremen	Scientist
Daniel	Claudia	AWI	Technician
Flohr	Anita	AWI	Student
Jordan	Patrick	Senckenberg Frankf.	Student
Kroon	Marie-Louise		Student
Lamers	Machiel	Uni Maastricht	Scientist
Nitsche	Frank	Uni Köln	Scientist
Ottich	Indra	Senckenberg Frankf.	Scientist
Raes	Maarten	Uni Gent	Scientist
Schwanitz	Max	AWI	Scientist/Diver
Weeber	Marc		Student
Weihe	Ellen	AWI	Scientist

6.2.3 King George Island, Bellingshausen

Name	First Name	Institute	Profession
Braun	Matthias	Uni Bonn	Scientist
Braunschweig	Anne	FSU Jena	Student
Erasmy	Maude	FSU Jena	Student
Höne	Elena	FSU Jena	Student
Huck	Anica	FSU Jena	Student
Janowski	Susann	FSU Jena	Student
Kopp	Matthias	FSU Jena	Student

Name	First Name	Institute	Profession
Kotzerka	Jana	FSU Jena	Student
Mühlichen	Henrike	FSU Jena	Student
Müller	Udo	FSU Jena	Student
Peter	Hans-Ulrich	FSU Jena	Scientist
Rückamp	Martin	Uni Münster	Scientist
Schmidt	Jennifer M	FSU Jena	Student
Stich	Elias	FSU Jena	Student
Suckro	Sonja	Uni Münster	Student
Thomas	Eric	FSU Jena	Student

6.2.4 King Georg Island – Marambio

Name	First Name	Institute	Profession
Domaschke	Stephanie	Senckenberg, Frank.	Scientist
Printzen	Christian	Senckenberg, Frank	Scien

7. PARTICIPATING INSTITUTIONS

Institute/Company	Address
ALCI	Antarctic Logistics Centre Intl. (Pty.) Ltd. 97, Keerom Street Cape Town 8001 Republic of South Africa
ARGE	C/O J.H.K. Labradorstrasse 5 27572 Bremerhaven
	C/O KAEFER Riodemannstr. 3 27572 Bremerhaven
AWI	Alfred-Wegener-Institut für Polar- und Meeresforschung in der Helmholtz-Gemeinschaft Postfach 12 01 61 27515 Bremerhaven
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe Stilleweg 2 30655 Hannover
DEAT	Department of Environmental Affairs and Tourism Directorate: Antarctica and Islands P.O. Box 8172, Roggebaai 8012 Cape Town 9012 Republic of South Africa
DNA	Dirección Nacional del Antártico Cerrito 1248 1010 Buenos Aires Argentina
DWD	Deutscher Wetterdienst Bernhard-Nocht Str. 76 20359 Hamburg
EAI	Enterprise Air Inc. 1190 Keith Ross Court L1H 7K4 Oshawa Ontario Kanada
FACH	Fuerza Aero de Chile, División Antártica Tarpaca No. 1129, 2°Piso Santiago de Chile Chile
FAU	Fuerza Aero de Uruguay Av. 8 de Octubre 2958 Montevideo 11600 Uruguay

Fielax	Fielax Gesellschaft für wissenschaftliche Datenverarbeitung mbH Schifferstraße 10 – 14 27568 Bremerhaven
Ghent University	Ghent University Sint-Pietersnieuwstraat 25 9000 Ghent, Belgium
Heli-Service	Heli Service International Im Geisbaum 2 63329 Egelsbach
IAA	Instituto Antártico Argentino Cerrito 1248 1010 Buenos Aires Argentina
IAU	Instituto Antártico Uruguayo Av. 8 de Octubre 2958 Montevideo 11600 Uruguay
INACH	Instituto Antártico Chileno Plaza Munoz Gamero 1055 Punta Arenas, Chile
Kässbohrer	Kässbohrer Geländefahrzeug AG Kässbohrerstr. 11 88471 Laupheim
Laeisz	Reederei F. Laeisz GmbH Barkhausenstraße 37 27568 Bremerhaven
ManPower	MANPOWER GmbH Personaldienstleistungen Bürgermeister-Smidt-Str.16-18 27568 Bremerhaven
NPIR	National Institute of Polar Research 9-10, Kaga Chome, Itabashi-ku Tokyo 173-8515 Japan
Optimare	Optimare Sensorsysteme AG Am Luneort 15a 27572 Bremerhaven
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DROMLAN – Partners

AWI Alfred Wegener Institute for Polar and Marine Research,
 Germany

AARI Arctic and Antarctic Research Institute
 Russian Antarctic Expedition
 Russia

BAS British Antarctic Survey,
 UK

BELARE Belgian Antarctic Research Expedition
 Belgium

FINARP Finnish Antarctic Survey,
 Finland

NCAOR National Centre for Antarctic and Ocean Research,
 India

NIPR National Institute of Polar Research,
 Japan

NPI Norsk Polar Institutt,
 Norway

NWO Nederlandse Organisatie voor Wetenschappelijk Onderzoek,
 Netherlands

AARI Russian Antarctic Expedition,
 Russia

DEAT Department of Environmental Affairs and Tourism
 Directorate: Antarctica and Islands
 South Africa

SPRS Swedish Polar Research Secretariat,
 Sweden