Core no. 16458-1 G.C. N 5° 20.1' W 22° 03.2': 3518 m b.s.l.
16458-2 B.C. N 5° 20.1' W 22° 03.3': 3518 m b.s.l.

Age control: Date: 14/02/1992

- *C. wuellerstorfi* and *G. ruber* $\delta^{18}O$ records (Sarnthein et al., 1988; Winn et al. 1991); -2 *G. sacculifer* $\delta^{18}O$ record (Kassens & Sarnthein, 1989), -1 (U. Pflaumann, unpublished data).
- ^{14}C ages of coarse carbonate fraction (Kassens & Sarnthein, 1989).
- AMS ^{14}C analogue stratigraphy.

Core fit :

- 2 cm in core -2 = 0 cm in core -1, based on *G. sacculifer* $\delta^{18}O$ record.

Surface sediment age :

- Zero, inferred from undisturbed surface sediment in B.C.
- Implied by continuous sedimentation rates, in harmony with ^{14}C ages.

Age/depth correlation :

Comp. depth	^{14}C age	Error ±	Calendar years		Sed.rate	Original interval/ material/	Core no.	Remarks
[cm]	[ky BP]		[ka]		[cm/ky]	$\delta^{18}O$ stratigraphy		
0			0		-.-			
3.5	4.27	65	4.86	a)	-.-	3- 4 cm carbonate >125µm	-2	ignored, mixed layer
7.5	5.31	75	6.16	a)	-.-	7- 8 cm carbonate >125µm	-2	ignored, b)
9.75	9.1		9.8	c)	1	AMS ^{14}C analogue	-2	
14.5	9.81	110	11.22	c)	-.-	14- 15 cm carbonate >125µm	-2	ignored, b)
14.75			11.6	c)	2.77	Top Younger Dryas GISP2	-2	
24.5	18.11	380	21.61	c)	-.-	24- 25 cm carbonate >125µm	-2	ignored, b)
24.75	14.8		18.3	c)	1.49	AMS ^{14}C analogue	-2	
53	26		29.5	c)	2.52	AMS ^{14}C analogue	-1	

a) see Winn et al. (1991).
b) ^{14}C ages are biased probably due to winnowing.
c) corrected after Bard et al. (1990).

Remarks :

- C_{org}, sediment physical properties (Kassens & Sarnthein, 1989).
- Stratigraphic definitions at $\delta^{18}O$ record of *C. wuellerstorfi* are substantiated by $\delta^{18}O$ record of *G. ruber* and by $\delta^{13}C$ record of *C. wuellerstorfi*.

Original references:

- Sarnthein, M., Winn, K., Jung, S.J.A., Duplessy, J.-A., Labeyrie, L., Erlenkeuser, H. & Ganssen, G. (1994): Changes in east Atlantic deepwater circulation over the last 30,000 years: Eight time slice reconstructions.- Paleoceanography, 9, 209-267.
- Winn, K., Sarnthein, M. & Erlenkeuser, H. (1991): $\delta^{18}O$ stratigraphy and chronology of Kiel sediment cores from the East Atlantic.- Ber.-Rep. Geol. Paläont. Inst. Univ. Kiel, 45, 99 pp.
- Kassens, H. & Sarnthein, M. (1989): A link between paleooceanography, early diagenetic cementation, and sheer strength maxima in Late Quaternary deep-sea sediments?.- Paleoceanography, 4, 253-269.
- Sarnthein, M., Winn, K., Duplessy, J.-C. & Fontugne, M. (1988): Global variations of surface ocean productivity in low and mid latitudes: Influence on CO_2 reservoirs of the deep ocean and atmosphere during the last 21,000 years.- Paleoceanography, 3, 361-399.

LGM time slice:

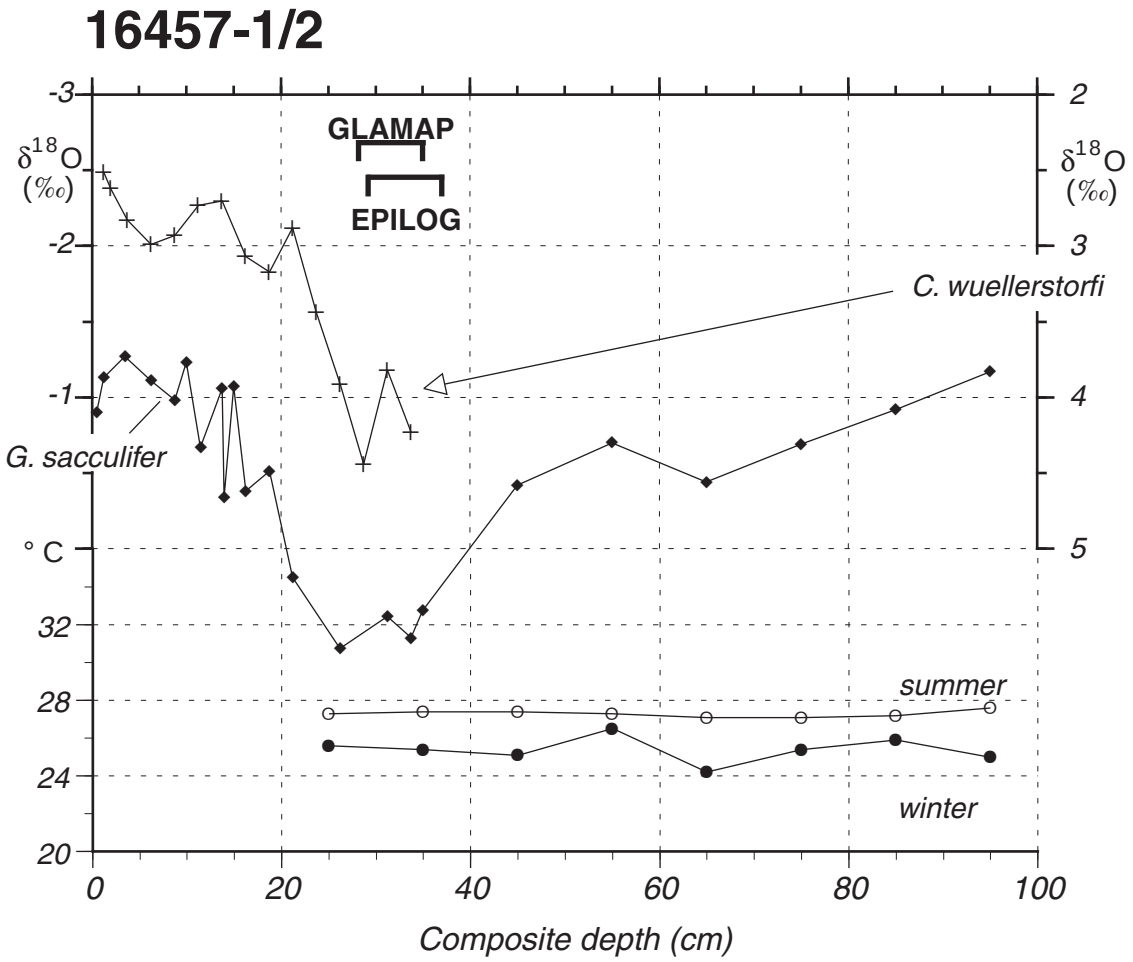
- GLAMAP: 24.5-32.7 cm comp. depth = 22.5-30.7 cm orig. depth in core (-1) = 24.5-32.7 cm orig. depth in core (-2)
- EPILOG: 26.5-35 cm comp. depth = 24.5-33 cm orig. depth in core (-1) = 26.5-35 cm orig. depth in core (-2)

LGM foraminifera counts: Pflaumann (UP)

- GLAMAP: (in core -1) 24, 26, 28, 30 cm orig. depth, (in core -2) 26, 29, 32 cm orig. depth.
- EPILOG: (in core -1) 24, 26, 28, 30, 32 cm orig. depth, (in core -2) 26, 29, 32, 34.5 cm orig. depth.

References for faunal analysis:

- Pflaumann et al., Paleoceanography, in prep.


16457-1/2
GLAMAP
EPILOG
δ18O (‰)
δ18O (‰)
C. wuellerstorfi
G. sacculifer
° C
summer
winter
Composite depth (cm)
-3
-2
-1
2
3
4
5
32
28
24
20
0
20
40
60
80
100