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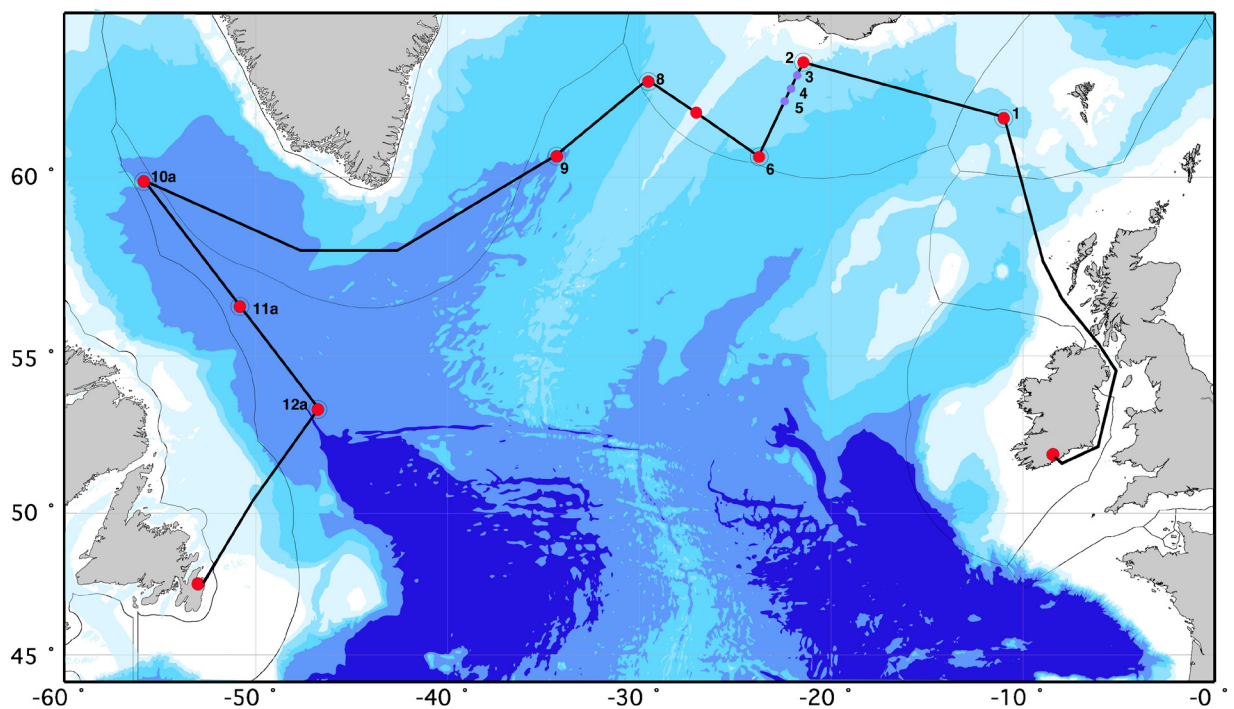
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Short Cruise Report
Maria S. Merian MSM 26

Cork (Ireland) - St. John's (Canada)
20 March - 16 April 2013

Chief Scientist: Bernd Christiansen
Captain: Ralf Schmidt



Objectives

As part of the International BASIN project trans-Atlantic cruises are performed in 2013 with three cooperating vessels taking part from Norway, Germany and Canada. Changes in the physical environment of the North Atlantic basins have been linked to observed changes in biogeography and population dynamics of key species and exploited fish stocks in the basins itself as well as associated shelves. These observed shifts in the biogeographic boundaries of important biogeochemical and ecosystem species and groups are an emergent system property governed by climate forcing on physiological rates, behaviour and life history characteristics.

The scientific programme of cruise MSM 26 focused on a broad scale survey of the North Atlantic pelagic ecosystem as well as targeted process studies in different habitats. The activities were designed to establish habitat utilization of different taxa as well as their impacts on carbon flux using a combination of field sampling with conventional and new equipment as well as on board process studies. The EU (Germany and Norway) based synoptic cruises as part of the EU funded EURO-BASIN program will allow a basin-wide assessment of habitats, vital rates and plasticity of response of key rates relative to abiotic forcing. The ultimate goal of these activities is to identify the critical abiotic habitats utilized by key ecosystem and biogeochemical players. The occurrence of these habitats then can be linked to coupled atmosphere ocean ecosystem models enabling an assessment of the future dynamics of marine ecosystems and their services.

Cruise MSM 26 covered a transect across the subpolar North Atlantic with stations in the Iceland Basin, Irminger Basin and Labrador Basin (see Figure 3.1). In order to assess those parameters that are crucial for an advanced understanding of the ecosystem, physical, biogeochemical and biological samples were taken at each station, and vital rates, like egg production and grazing, of key ecosystem components were measured. The focus of the biological activities was on the lower trophic levels, from protists to micronekton, with special emphasis on the copepod *Calanus finmarchicus*, which plays a crucial role in the Nordic Seas ecosystems. The basic sampling scheme involved, at each station, a series of different instruments, including CTD rosette, video plankton recorder (VPR), laser optical plankton counter (LOPC), multiple opening and closing nets (MOCNESS, MultiNet[®]), WP2-net and Isaac-Kidd-midwater-trawl (IKMT). During transits between stations, a TRIAXUS was towed, if possible, providing continuous data on temperature, salinity, oxygen, fluorescence, zooplankton size spectra, and micronekton assemblages.

Narrative

MARIA S. MERIAN left the port of Cork on 20 March, 2013, at 11:00. After the passage along the estuary of the river Lee we reached the Irish Sea in the afternoon of the same day and headed north. Still in the Irish Sea, the wind increased to 6-7 Bft during the 21 March and developed to a gale with 10 Bft on the following day, forcing us to cancel the planned test station to the west of the Outer Hebrides and instead steam north as fast as possible in order to escape the strongest wind field. Station 1 in the Iceland Basin close to the Iceland Faroe Ridge was reached in the night from 21 to 22 March, but the wind was still strong with 8 Bft, and we proceeded further to the north. Only in the evening of 23 March the wind had decreased to 6 Bft and the sea calmed down, so that we could start station work at Station 1 with a CTD cast and, following, a deployment of the video plankton recorder. This station corresponds to one of the time series stations sampled during METEOR cruise M 87/1 in March/April 2012. The situation was very similar to the one encountered on the first visit in 2012: The convection reached down to 600 m, chlorophyll *a* was very low, and most *Calanus finmarchicus* (mainly C5 stage) were found below the convection cell. During the next day the station was sampled with a variety of different instruments, including video plankton recorder (VPR), laser optical plankton counter (LOPC), multiple opening-closing nets (MOCNESS, MultiNet[®]), WP2-net and Isaac-Kidd-Midwater-Trawl (IKMT). The TRIAXUS towed instrument platform was deployed in the early morning of 26 March, but the tow had to be abandoned due to technical problems. We proceeded to Station 2 south of Iceland then, where we arrived in the early afternoon of 27 March. The routine sampling programme including CTD, VPR, LOPC, Multinet, MOCNESS, WP-2 and IKMT was performed here until early morning of 29 March. Despite weak winds, the swell was rather high causing the damage of some of the fine-meshed multinetts.

The next three stations 3, 4 and 5 above the continental slope south of Iceland complement a station grid of the Icelandic research vessel BJARNI SÆMUNDSSON planned for May 2013, and were sampled only with VPR. After Station 5, the TRIAXUS was deployed and towed, with minor technical problems, to Station 6, where we arrived in the morning of 30 March. The routine sampling programme was performed at this station; however, high swell made sampling with the fine-meshed nets difficult. After finishing the station on 31 March, we decided, due to the time loss at the beginning of the cruise, to skip Station 7 in the SW of the Iceland Basin, and instead go directly to Station 8 in the Irminger Basin, with a short station on the Reykjanes Ridge (7a, only LOPC and VPR). The TRIAXUS was towed successfully from Station 7a to Station 8, undulating between 40 and 200 m.

We arrived at Station 8 in the evening of 1 April. Favourite weather conditions allowed us to perform the routine sampling programme without problems, and in the morning of 3 April we could tow the TRIAXUS toward Station 9 in the southern part of the Irminger Basin, which we reached in late evening. After sampling was finished at this station at noon on 5 April, the wind increased quickly to 9-10 Bft. The weather services predicted a large, slow moving low pressure system with wind forces of up to 12 Bft in the area of our next stations across the Subpolar Gyre, which would make any station work impossible during the next days and potentially endanger the ship. In order to avoid the gale field, we decided to cancel the stations in the northern part of the Subpolar Gyre and instead round Cape Farvel and place two stations into the Labrador Basin, where reasonable weather conditions were forecasted. We arrived at the northern one of these stations (Station 10a) in the evening of 7 April, but due to high swell could not start station work before the morning of 8

April. After one VPR haul had to be abandoned due to a leakage in the illumination unit, sampling at this station continued until the evening of 9 April. The planned deployment of the TRIAXUS failed because a weak link was broken.

In the evening of 10 April we arrived at the southern Labrador Basin station (11a), where the routine sampling programme was performed without problems until the morning of 12 April; however, the relatively high swell did not allow the deployment of the TRIAXUS. The next station (12a), which we reached on 13 April at 01:00 h, corresponds to the originally planned southern Polar Gyre station. The routine sampling programme was performed at this station until 14 April 03:00 h, when all work had to be abandoned after the wind increased to 9 Bft. We decided then to head directly to St. John's and to deploy the TRIAXUS on the way, if possible, but due to high swell during the whole transit, we had to cancel this activity.

MARIA S. MERIAN docked in the port of St. John's on 16 April, 08:30 h.

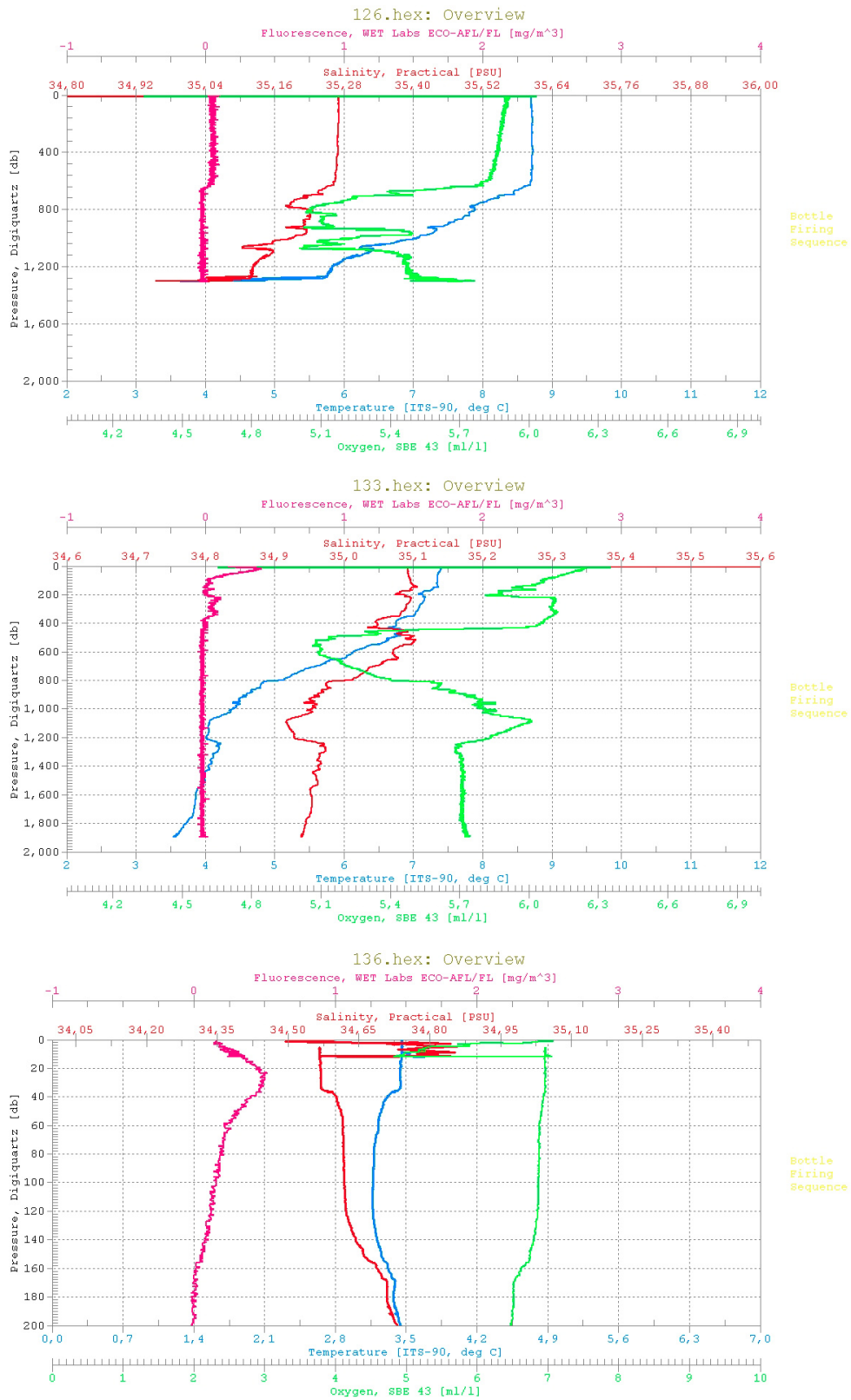


Fig. 1 Water mass properties in the Iceland Basin (Station 1, top), Irminger Basin (Station 8, middle), and Labrador Basin (Station 10a, bottom)

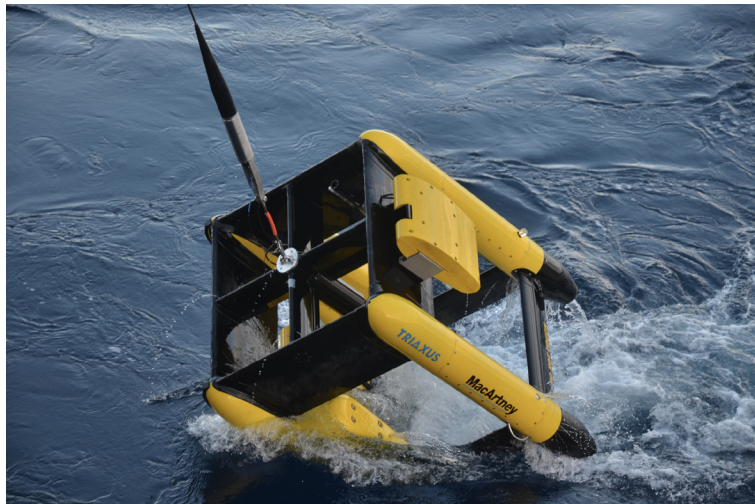


Fig. 2 Recovery of the TRIAXUS

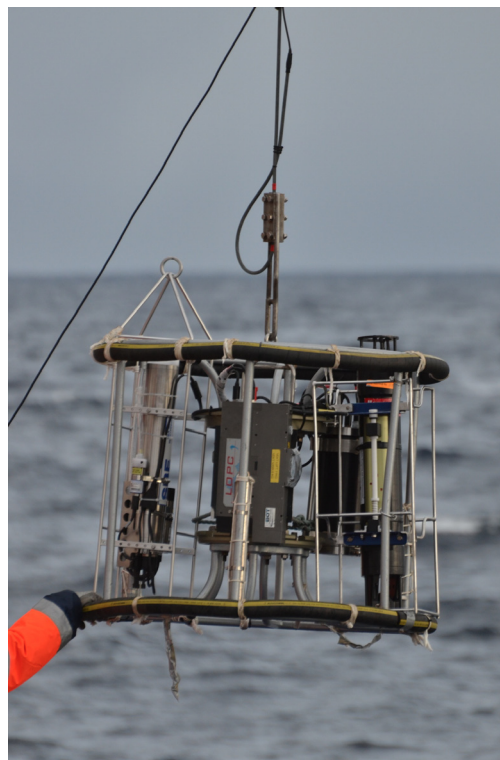


Fig. 3 LOPC frame with CTD, LOPC and LISST

Acknowledgements

We thank Captain Schmidt and his crew for their excellent support throughout the cruise. The ship-time was provided by the Deutsche Forschungsgemeinschaft. Financial support was provided by the EU Framework Programme 7 (EURO-BASIN, contract No 264933), the Universität Hamburg and the Deutsche Forschungsgemeinschaft.

List of participants

Name	Role	Institution
Christiansen, Bernd	chief scientist	UHH-IHF
Basedow, Sünnje	zooplankton/LOPC	UiN
Dudeck, Tim	zooplankton/TRIAXUS	UHH-IHF
Eckardt, André	technics/TRIAXUS	UHH-IHF
Gloe, Dominik	fish/TRIAXUS	UHH-IHF
Hänselmann, Kristin	microzooplankton	UHH-IHF
Harmer, Rachel	zooplankton physiology	PML
Janßen, Silke	technics/MOCNESS	UHH-IHF
Lawrance de Silva, Nuwan	zooplankton	UiN
Möller, Klas	zooplankton	UHH-IHF
Mootz, Gabriela	zooplankton/Multinet	UHH-IHF
Nielsen, Kristian	zooplankton	DTU Aqua
Nowicki, Margarethe	zooplankton physiology	UHH-IHF
Reichelt, Theresa	physics	UHH-IHF
Schmithüsen, Tosia	zooplankton physiology	AWI
Schneider, Lisa	zooplankton	UHH-IHF
Stefanowitsch, Benjamin	zooplankton/MOCNESS	UHH-IHF
Walsh, Harvey	fish larvae	NOOA
Walter, Bettina	phytoplankton	UHH-IHF

Participating institutions

AWI	Alfred Wegener Institute for Polar and Marine Research, Germany
DTU Aqua	Technical University of Denmark, National Institute of Aquatic Resources, Denmark
NOAA	NOAA, Northeast Fisheries Science Center, Narragansett, USA
PML	Plymouth Marine Laboratory, Plymouth, UK
UHH-IHF	Universität Hamburg, Institut für Hydrobiologie und Fischereiwissenschaft, Germany
UiN	University of Nordland, Department of Biosciences and Aquaculture, Norway

Station list

Times and positions refer to beginning of station

Gear abbreviations:

CTD/RO	Seabird CTD with 24 bottle rosette	IKMT	Isaac Kidd Midwater Trawl
VPR	video plankton recorder	TRIAXUS	TRIAXUS towed instrument platform
MOC-D	1m ² -double-MOCNESS		
WP2	WP2-net		
MN	MultiNet [®]		
CTD/LOPC	laser optical plankton counter (partly with LISST)		

Station	Date	Time	Latitude	Longitude	Depth (m)	Gear.
MSM26/126-1	24.03.13	11:55	61° 30.00' N	11° 0.04' W	1335.3	CTD/RO
MSM26/126-2	24.03.13	23:21	61° 30.00' N	11° 0.01' W	1333.2	VPR
MSM26/126-3	25.03.13	01:05	61° 30.00' N	11° 0.01' W	1332.6	CTD/LOPC
MSM26/126-4	25.03.13	04:53	61° 30.00' N	11° 0.01' W	1332.2	WP2
MSM26/126-5	25.03.13	05:48	61° 30.00' N	11° 0.01' W	1334.4	WP2
MSM26/126-6	25.03.13	08:22	61° 30.00' N	11° 0.01' W	1330.3	VPR
MSM26/126-7	25.03.13	10:07	61° 30.00' N	11° 0.01' W	1332.5	VPR
MSM26/126-8	25.03.13	11:51	61° 30.00' N	11° 0.01' W	1333.5	VPR
MSM26/126-9	25.03.13	13:24	61° 29.88' N	10° 59.79' W	1321.1	MOC-D
MSM26/126-10	25.03.13	16:41	61° 26.69' N	10° 52.16' W	1218.2	CTD/LOPC
MSM26/126-11	25.03.13	20:12	61° 26.91' N	10° 51.77' W	1221.2	MN
MSM26/126-12	25.03.13	20:56	61° 26.91' N	10° 51.77' W	1223.4	MN
MSM26/126-13	25.03.13	22:46	61° 29.89' N	10° 59.96' W	1326.3	MOC-D
MSM26/126-14	26.03.13	01:59	61° 26.34' N	10° 52.07' W	1204.2	MN
MSM26/126-15	26.03.13	03:24	61° 26.42' N	10° 51.50' W	1199.4	IKMT
MSM26/126-16	26.03.13	05:59	61° 23.18' N	10° 44.75' W	1226	TRIAXUS
MSM26/126-17	26.03.13	11:08	61° 27.62' N	11° 30.21' W	1070.8	TRIAXUS
MSM26/126-18	26.03.13	15:10	61° 41.74' N	12° 48.79' W	1417.1	TRIAXUS
MSM26/127-1	27.03.13	13:28	62° 51.46' N	21° 26.53' W	1132.7	VPR
MSM26/127-2	27.03.13	14:57	62° 51.46' N	21° 26.52' W	1131.6	VPR
MSM26/127-3	27.03.13	16:27	62° 51.46' N	21° 26.52' W	1131	VPR
MSM26/127-4	27.03.13	17:42	62° 51.46' N	21° 26.51' W	1134.2	CTD/RO
MSM26/127-5	27.03.13	19:09	62° 51.40' N	21° 26.34' W	1134.3	MOC-D
MSM26/127-6	27.03.13	22:35	62° 51.45' N	21° 26.51' W	1133.3	VPR
MSM26/127-7	28.03.13	00:06	62° 50.45' N	21° 24.64' W	1144.7	VPR
MSM26/127-8	28.03.13	01:37	62° 49.27' N	21° 21.74' W	1143.6	VPR
MSM26/127-9	28.03.13	03:09	62° 49.27' N	21° 21.74' W	1145.2	WP2
MSM26/127-10	28.03.13	04:24	62° 49.27' N	21° 21.74' W	1144.7	WP2
MSM26/127-11	28.03.13	05:19	62° 49.28' N	21° 21.73' W	1146.8	WP2
MSM26/127-12	28.03.13	05:54	62° 49.27' N	21° 21.74' W	1149.5	WP2
MSM26/127-13	28.03.13	06:49	62° 49.28' N	21° 21.74' W	1144.7	CTD/LOPC
MSM26/127-14	28.03.13	10:10	62° 49.28' N	21° 21.72' W	1146.9	MN
MSM26/127-15	28.03.13	10:49	62° 49.28' N	21° 21.73' W	1145.6	MN
MSM26/127-16	28.03.13	12:19	62° 49.28' N	21° 21.73' W	1141.9	CTD/RO
MSM26/127-17	28.03.13	12:53	62° 49.18' N	21° 21.60' W	1144.8	MOC-D
MSM26/127-18	28.03.13	17:23	62° 51.49' N	21° 26.55' W	1133.6	MN
MSM26/127-19	28.03.13	18:34	62° 51.49' N	21° 26.55' W	1134.8	WP2
MSM26/127-20	28.03.13	19:40	62° 51.49' N	21° 26.56' W	1136.7	WP2
MSM26/127-21	28.03.13	21:09	62° 50.75' N	21° 25.65' W	1138	IKMT
MSM26/127-22	28.03.13	23:20	62° 51.45' N	21° 26.50' W	1134.4	CTD/LOPC
MSM26/127-23	28.03.13	23:38	62° 51.45' N	21° 26.50' W	1132.7	CTD/LOPC

Station	Date	Time	Latitude	Longitude	Depth (m)	Gear.
MSM26/127-24	29.03.13	02:16	62° 51.45' N	21° 26.50' W	1131.5	MN
MSM26/128-1	29.03.13	05:03	62° 33.00' N	21° 46.14' W	1365.4	VPR
MSM26/128-2	29.03.13	06:32	62° 33.00' N	21° 46.12' W	1368.2	VPR
MSM26/129-1	29.03.13	09:56	62° 13.48' N	22° 5.24' W	1499.2	VPR
MSM26/129-2	29.03.13	11:23	62° 13.48' N	22° 5.24' W	1500.4	VPR
MSM26/129-3	29.03.13	12:56	62° 13.30' N	22° 5.14' W	1498.8	TRIAXUS
MSM26/130-1	29.03.13	15:43	61° 55.13' N	22° 25.14' W	1655.3	VPR
MSM26/130-2	29.03.13	17:17	61° 55.09' N	22° 25.18' W	1649	VPR
MSM26/130-3	29.03.13	18:42	61° 54.90' N	22° 25.12' W	1650.3	TRIAXUS
MSM26/131-1	30.03.13	07:17	60° 31.24' N	23° 45.18' W	2052.1	VPR
MSM26/131-2	30.03.13	08:43	60° 31.37' N	23° 44.97' W	2053	VPR
MSM26/131-3	30.03.13	10:07	60° 31.41' N	23° 44.91' W	2053.4	VPR
MSM26/131-4	30.03.13	11:22	60° 31.44' N	23° 44.88' W	2056.4	CTD/LOPC
MSM26/131-5	30.03.13	11:53	60° 31.45' N	23° 44.87' W	2055.9	CTD/LOPC
MSM26/131-6	30.03.13	16:06	60° 31.46' N	23° 44.88' W	2055.6	MN
MSM26/131-7	30.03.13	16:41	60° 31.49' N	23° 44.79' W	2049.9	WP2
MSM26/131-8	30.03.13	17:26	60° 31.41' N	23° 44.63' W	2046.8	IKMT
MSM26/131-9	30.03.13	19:05	60° 29.91' N	23° 39.58' W	2020.1	MN
MSM26/131-10	30.03.13	20:41	60° 29.91' N	23° 38.56' W	2024	MOC-D
MSM26/131-11	30.03.13	23:10	60° 28.11' N	23° 32.17' W	1972.2	CTD/LOPC
MSM26/131-12	30.03.13	23:30	60° 28.11' N	23° 32.18' W	1972.4	CTD/LOPC
MSM26/131-13	31.03.13	02:21	60° 28.11' N	23° 32.18' W	1980.7	VPR
MSM26/131-14	31.03.13	03:48	60° 28.11' N	23° 32.18' W	1971.3	VPR
MSM26/131-15	31.03.13	05:18	60° 28.11' N	23° 32.18' W	1976.8	VPR
MSM26/131-16	31.03.13	06:41	60° 28.11' N	23° 32.18' W	1976.9	MN
MSM26/131-17	31.03.13	08:29	60° 28.02' N	23° 31.82' W	2069.2	MOC-D
MSM26/131-18	31.03.13	13:02	60° 31.23' N	23° 45.19' W	2052.7	CTD/RO
MSM26/131-19	31.03.13	14:56	60° 31.23' N	23° 45.20' W	2053.7	MN
MSM26/132-1	01.04.13	02:07	61° 38.26' N	27° 2.09' W	749.5	CTD/LOPC
MSM26/132-2	01.04.13	02:29	61° 38.26' N	27° 2.08' W	750.1	CTD/LOPC
MSM26/132-3	01.04.13	04:14	61° 38.26' N	27° 2.08' W	752.1	VPR
MSM26/132-4	01.04.13	06:09	61° 38.26' N	27° 2.09' W	751	VPR
MSM26/132-5	01.04.13	07:57	61° 38.26' N	27° 2.09' W	749.3	MN
MSM26/132-6	01.04.13	08:30	61° 38.26' N	27° 2.09' W	751.7	WP2
MSM26/132-7	01.04.13	09:08	61° 38.17' N	27° 2.05' W	765.4	TRIAXUS
MSM26/132-8	01.04.13	11:55	61° 46.94' N	27° 27.82' W	986.4	TRIAXUS
MSM26/133-1	01.04.13	21:08	62° 24.00' N	29° 31.78' W	1947.7	MOC-D
MSM26/133-2	02.04.13	00:36	62° 24.01' N	29° 31.81' W	1945.4	VPR
MSM26/133-3	02.04.13	01:57	62° 24.01' N	29° 31.82' W	1945.9	VPR
MSM26/133-4	02.04.13	03:25	62° 24.01' N	29° 31.81' W	1945.6	VPR
MSM26/133-5	02.04.13	04:50	62° 24.01' N	29° 31.81' W	1944.6	MN
MSM26/133-6	02.04.13	07:00	62° 27.33' N	29° 36.78' W	1908.5	MOC-D
MSM26/133-7	02.04.13	09:37	62° 24.01' N	29° 31.81' W	1947.5	CTD/LOPC
MSM26/133-8	02.04.13	09:55	62° 24.01' N	29° 31.82' W	1945.9	CTD/LOPC
MSM26/133-9	02.04.13	13:49	62° 24.01' N	29° 31.81' W	1945.7	VPR
MSM26/133-10	02.04.13	15:12	62° 24.01' N	29° 31.82' W	1945.9	VPR
MSM26/133-11	02.04.13	16:38	62° 24.01' N	29° 31.82' W	1946.5	VPR
MSM26/133-12	02.04.13	17:56	62° 24.00' N	29° 31.81' W	1945.8	CTD/RO
MSM26/133-13	02.04.13	19:47	62° 23.95' N	29° 31.72' W	1947.9	IKMT
MSM26/133-14	02.04.13	22:08	62° 24.00' N	29° 31.80' W	1955.9	CTD/LOPC
MSM26/133-15	02.04.13	22:25	62° 24.00' N	29° 31.80' W	1947.3	CTD/LOPC
MSM26/133-16	03.04.13	02:23	62° 24.02' N	29° 31.78' W	1946.2	MN
MSM26/133-17	03.04.13	02:51	62° 24.05' N	29° 31.74' W	1948.5	WP2

Station	Date	Time	Latitude	Longitude	Depth (m)	Gear.
MSM26/133-18	03.04.13	03:30	62° 24.15' N	29° 31.60' W	1950.5	WP2
MSM26/133-19	03.04.13	04:35	62° 24.36' N	29° 31.32' W	1954.1	MN
MSM26/133-20	03.04.13	05:51	62° 24.56' N	29° 31.05' W	1955.7	MN
MSM26/133-21	03.04.13	06:35	62° 24.47' N	29° 30.53' W	1960.1	TRIAXUS
MSM26/134-1	04.04.13	02:57	60° 32.40' N	34° 18.60' W	3017.4	VPR
MSM26/134-2	04.04.13	04:23	60° 32.40' N	34° 18.60' W	3003.6	VPR
MSM26/134-3	04.04.13	05:41	60° 32.40' N	34° 18.60' W	2988.5	VPR
MSM26/134-4	04.04.13	07:53	60° 32.40' N	34° 18.60' W	3012.5	CTD/RO
MSM26/134-5	04.04.13	09:33	60° 32.40' N	34° 18.60' W	3015.8	MN
MSM26/134-6	04.04.13	10:59	60° 32.39' N	34° 18.60' W	3020	MN
MSM26/134-7	04.04.13	11:24	60° 32.40' N	34° 18.60' W	3008.2	WP2
MSM26/134-8	04.04.13	13:17	60° 32.40' N	34° 18.61' W	3010.2	WP2
MSM26/134-9	04.04.13	14:05	60° 32.40' N	34° 18.61' W	3002.1	MN
MSM26/134-10	04.04.13	14:39	60° 32.40' N	34° 18.60' W	3007.2	VPR
MSM26/134-11	04.04.13	16:01	60° 32.39' N	34° 18.61' W	3005.6	VPR
MSM26/134-12	04.04.13	17:14	60° 32.39' N	34° 18.60' W	3011.4	VPR
MSM26/134-13	04.04.13	18:27	60° 32.40' N	34° 18.61' W	3015.9	MN
MSM26/134-14	04.04.13	19:30	60° 32.40' N	34° 18.61' W	3017.8	WP2
MSM26/134-15	04.04.13	20:30	60° 32.41' N	34° 18.48' W	3018.9	MOC-D
MSM26/134-16	05.04.13	00:25	60° 32.40' N	34° 18.62' W	3002.4	CTD/LOPC
MSM26/134-17	05.04.13	00:40	60° 32.40' N	34° 18.62' W	2989	CTD/LOPC
MSM26/134-18	05.04.13	04:58	60° 32.40' N	34° 18.29' W	3019.5	IKMT
MSM26/134-19	05.04.13	07:50	60° 32.33' N	34° 26.87' W	3400	MOC-D
MSM26/134-20	05.04.13	11:26	60° 32.28' N	34° 14.52' W	2956.2	CTD/LOPC
MSM26/134-21	05.04.13	13:06	60° 32.28' N	34° 14.52' W	2954.6	CTD/RO
MSM26/135-1	08.04.13	09:59	59° 53.28' N	55° 50.94' W	3163.8	CTD/LOPC
MSM26/135-2	08.04.13	10:23	59° 53.28' N	55° 50.94' W	3160.9	CTD/LOPC
MSM26/135-3	08.04.13	14:24	59° 53.28' N	55° 50.94' W	3159.3	WP2
MSM26/135-4	08.04.13	15:03	59° 53.28' N	55° 50.94' W	3159.1	MN
MSM26/135-5	08.04.13	15:35	59° 53.28' N	55° 50.94' W	3159.7	VPR
MSM26/135-6	08.04.13	16:50	59° 53.28' N	55° 50.93' W	3160.3	VPR
MSM26/135-7	08.04.13	18:10	59° 53.28' N	55° 50.94' W	3160.3	VPR
MSM26/135-8	08.04.13	19:27	59° 53.28' N	55° 50.93' W	3159.9	MN
MSM26/135-9	08.04.13	21:06	59° 53.40' N	55° 51.27' W	3161.4	MOC-D
MSM26/135-10	09.04.13	00:45	59° 55.66' N	55° 58.78' W	3155.1	CTD/LOPC
MSM26/135-11	09.04.13	01:04	59° 55.66' N	55° 58.78' W	3154.6	CTD/LOPC
MSM26/135-12	09.04.13	02:29	59° 55.66' N	55° 58.77' W	3159.2	CTD/LOPC
MSM26/135-13	09.04.13	03:58	59° 55.66' N	55° 58.78' W	3155.4	VPR
MSM26/135-14	09.04.13	06:27	59° 55.66' N	55° 58.78' W	3157	CTD/RO
MSM26/135-15	09.04.13	08:12	59° 55.40' N	55° 58.20' W	3155.3	WP2
MSM26/135-16	09.04.13	09:08	59° 55.56' N	55° 58.67' W	3160	MOC-D
MSM26/135-17	09.04.13	12:47	59° 53.28' N	55° 50.94' W	3160	MN
MSM26/135-18	09.04.13	14:11	59° 53.28' N	55° 50.93' W	3158.9	MN
MSM26/135-19	09.04.13	14:35	59° 53.28' N	55° 50.93' W	3160.8	CTD/RO
MSM26/135-20	09.04.13	15:16	59° 53.16' N	55° 50.39' W	3159.3	IKMT
MSM26/135-21	09.04.13	17:00	59° 52.33' N	55° 44.27' W	3168.4	CTD/LOPC
MSM26/135-22	09.04.13	18:23	59° 52.70' N	55° 44.15' W	3180.7	CTD/LOPC
MSM26/135-23	09.04.13	22:32	59° 37.30' N	55° 18.68' W	3144.9	TRIAXUS
MSM26/136-1	10.04.13	19:18	56° 26.80' N	50° 50.30' W	3628.8	VPR
MSM26/136-2	10.04.13	21:52	56° 27.27' N	50° 41.56' W	3634.3	MOC-D
MSM26/136-3	11.04.13	01:09	56° 26.80' N	50° 50.31' W	3628	VPR
MSM26/136-4	11.04.13	02:26	56° 26.80' N	50° 50.30' W	3630.1	VPR
MSM26/136-5	11.04.13	03:38	56° 26.80' N	50° 50.29' W	3627.1	VPR

Station	Date	Time	Latitude	Longitude	Depth (m)	Gear.
MSM26/136-6	11.04.13	04:54	56° 26.80' N	50° 50.30' W	3628.8	VPR
MSM26/136-7	11.04.13	06:12	56° 26.80' N	50° 50.30' W	3629.3	MN
MSM26/136-8	11.04.13	08:08	56° 26.82' N	50° 59.15' W	3624.1	MOC-D
MSM26/136-9	11.04.13	11:08	56° 26.80' N	50° 50.29' W	3630.6	CTD/LOPC
MSM26/136-10	11.04.13	11:30	56° 26.80' N	50° 50.29' W	3627	CTD/LOPC
MSM26/136-11	11.04.13	15:33	56° 27.27' N	50° 49.93' W	3631.6	CTD/RO
MSM26/136-12	11.04.13	16:07	56° 27.32' N	50° 49.84' W	3629.6	VPR
MSM26/136-13	11.04.13	17:33	56° 26.79' N	50° 50.33' W	3627.3	VPR
MSM26/136-14	11.04.13	18:50	56° 27.06' N	50° 50.17' W	3627.7	VPR
MSM26/136-15	11.04.13	19:56	56° 27.27' N	50° 50.03' W	3627.6	WP2
MSM26/136-16	11.04.13	20:47	56° 27.45' N	50° 49.88' W	3631.5	MN
MSM26/136-17	11.04.13	22:10	56° 27.74' N	50° 49.69' W	3628.4	MN
MSM26/136-18	11.04.13	22:42	56° 27.82' N	50° 49.53' W	3628.9	IKMT
MSM26/136-19	12.04.13	00:58	56° 26.79' N	50° 50.30' W	3631.6	CTD/LOPC
MSM26/136-20	12.04.13	01:20	56° 26.84' N	50° 50.18' W	3630	CTD/LOPC
MSM26/136-21	12.04.13	02:42	56° 27.08' N	50° 49.61' W	3628.3	CTD/LOPC
MSM26/136-22	12.04.13	05:31	56° 27.50' N	50° 48.58' W	3629.3	CTD/RO
MSM26/137-1	13.04.13	02:59	53° 21.49' N	46° 46.01' W	3812.8	VPR
MSM26/137-2	13.04.13	04:36	53° 21.50' N	46° 45.98' W	3807.9	VPR
MSM26/137-3	13.04.13	05:51	53° 21.50' N	46° 45.97' W	3810.4	VPR
MSM26/137-4	13.04.13	07:07	53° 21.50' N	46° 45.96' W	3810.6	VPR
MSM26/137-5	13.04.13	08:20	53° 21.50' N	46° 45.97' W	3811.3	MN
MSM26/137-6	13.04.13	08:51	53° 21.48' N	46° 45.91' W	3812	WP2
MSM26/137-7	13.04.13	09:22	53° 21.48' N	46° 45.91' W	3810.7	CTD/LOPC
MSM26/137-8	13.04.13	09:42	53° 21.47' N	46° 45.91' W	3809.1	CTD/LOPC
MSM26/137-9	13.04.13	13:49	53° 21.48' N	46° 45.94' W	3814.1	CTD/RO
MSM26/137-10	13.04.13	15:28	53° 21.48' N	46° 45.93' W	3808.4	VPR
MSM26/137-11	13.04.13	17:10	53° 21.48' N	46° 45.97' W	3811.1	VPR
MSM26/137-12	13.04.13	18:13	53° 21.49' N	46° 45.96' W	3810.7	VPR
MSM26/137-13	13.04.13	19:21	53° 21.48' N	46° 45.97' W	3810.6	WP2
MSM26/137-14	13.04.13	20:16	53° 21.48' N	46° 45.97' W	3812.5	MN
MSM26/137-15	13.04.13	22:39	53° 21.53' N	46° 46.00' W	3809.4	MOC-D
MSM26/137-16	14.04.13	02:51	53° 21.48' N	46° 46.02' W	3810.9	CTD/LOPC
MSM26/137-17	14.04.13	03:17	53° 21.49' N	46° 46.05' W	3813.1	CTD/LOPC