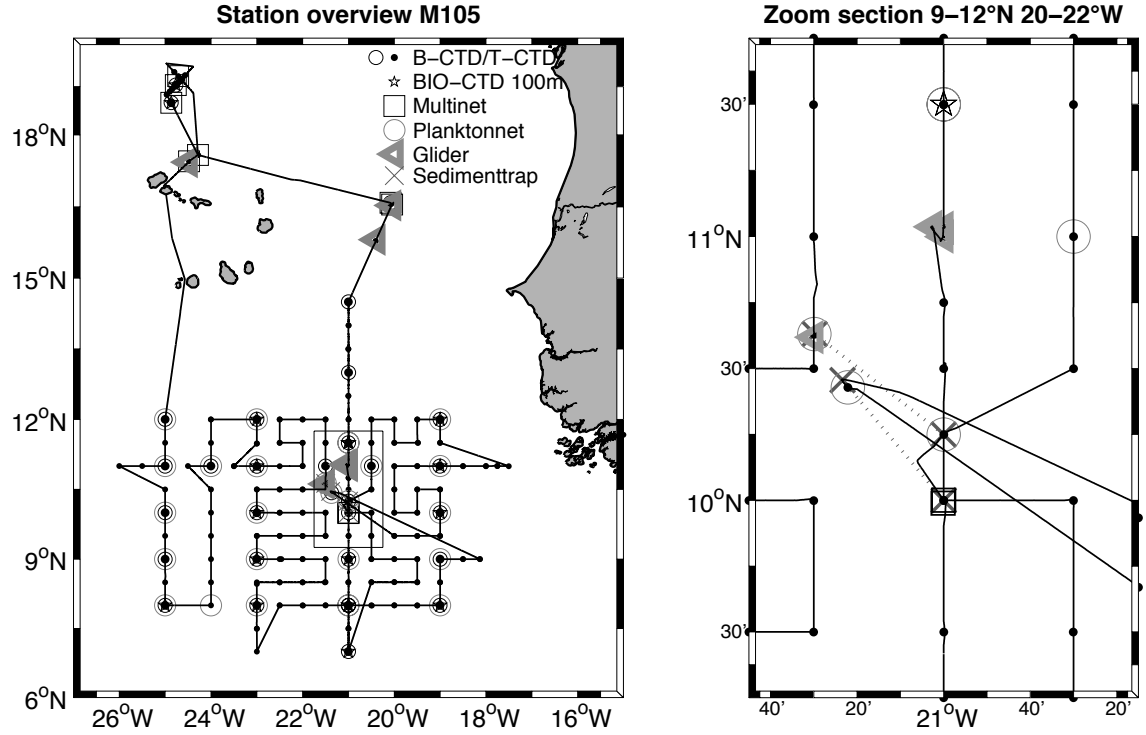
Prof. Dr. Martin Visbeck
GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel
Dienstgebäude Westufer
Düsternbrooker Weg 20
D-24105 Kiel
Germany
Tel.: +49 431 600 4100
Fax: +49 431 600 4102
E-Mail: mvisbeck@geomar.de

Short Cruise Report
R/V METEOR M105 Mindelo – Mindelo
17th March – 16th April 2014
Chief Scientist: Prof. Dr. Martin Visbeck
Captain: Rainer Hammacher



Cruise track of METEOR cruise M105 with locations of CTD stations (small dots), Bio-CTD (small black circle), WP2-Net (large black circle), Multi-Net (black square), drifting sediment trap (crosses) and glider operations (gray triangle).

Objectives

Cruise M105 is a contribution to the DFG Collaborative Research Project (SFB) 754: “Climate-Biogeochemistry Interactions in the Tropical Ocean”. The main goal of the study is to quantify and better understand the supply of oxygen to the oxygen minimum zone (OMZ) of the Tropical Atlantic with a particular focus on the role of regional advection, mesoscale and sub-mesoscale processes for lateral and vertical oxygen fluxes and thus a critical aspect of the ventilation of this region. One of the methods to derive oxygen transports is the “Oxygen Supply Tracer Release Experiment” (OSTRE), will allow for quantification of the time averaged diapycnal and lateral mixing rates in the region.

The main objective of the cruise was to: a) perform the second mapping of the tracer CF_3SF_5 that was injected in late 2012 (MSM23) near the OMZ at around 10°N 21°W and about 500 meters depth; b) map the water mass, oxygen and transient tracer distribution by the CTDs and glider; c) determine the synoptic ocean circulation and mixing by S-ADCP observations, as well as glider based microstructure measurement; d) determine biogeochemical rates of oxygen consumption and nutrient cycling by zooplankton studies, nitrogen fixation experiments and two drifting sediment trap experiments.

The cruise was very successful and all planned objectives were reached and the measurements were carried out as planned.

Scientific party of the cruise M105

Narrative

R/V METEOR departed from Mindelo on March 17, 2014 at 9:00 and northward towards the Cape Verde Ocean Observatory (CVOO). On the way a gilder was released at 17°26'N and 24°30'W followed by a test CTD station. The failed CTD station was followed by a successful deployment of a multi-net cast. At CVOO the CTD station had to be aborted near the bottom because a deck unit computer failed and the connection could not be fully established.

METEOR ventured north to sample a low oxygen eddy that was discovered before by an glider and remote sensing. Two 40nm long transects centered at 19° 02'N and 24° 46'W with ten CTD stations will allow for a detailed description of this remarkable feature.

On March 19 a full ocean depth CTD cast was obtained at the Cape Verde Ocean Observatory (CVOO). After a long transit towards southeast a glider was recovered at 16°N 33' and 20°W 03' on March 21 in the early morning. METEOR turned south and began early on March 22 a tracer sampling transect along 21°W with 30nm station spacing. Every 3 station a large number of biogeochemical parameter are sampled and a plankton net is taken. On March 23 we released two Glider at 11°N and 21°W one of which developed a leak and was recovered later. In the early afternoon we met with the German research icebreaker POLARSTERN and visits to the other ship was possible. On March 24 we released a drifting sediment-trap mooring at 10°N and 21°W. Midday on March 25 we reached the southernmost point a 7°N along the 21°W section and began steaming northward and completed the inner southeastern part of the survey grid.

On March 27 we reached 10°N and 21°W again and visually inspected the first drifting sediment-trap mooring. Shortly after that we deployed the second one at 10° 15'N and 21°W. From there we began to complete the north-eastern part of the survey grid. On March 29 we reached the North East corner of the survey grid at 12°N and 19°W and in the evening the easternmost station at 11°N and 17° 30'W. On April 1 we recovered the first drifting sediment trap mooring in the afternoon and inspected the second on the way towards the southeastern part of the sampling grid. On April 3 we reached the south east corner at 8°N and 19°W of the survey grid and heading west. On April 4 midday we reached 7°N at 23°W and working our way north in the western part of the sampling grid. On the morning of April 8 we deployed the last glider and recovered in the sediment morning #2 at 10° 38'N and 21° 30'W.

On April 10 we reached at 12°N and 23° the north western corner of the survey box. From there we began a southward section along 24°W. On April 12 we reached 8°N once again and began our last section northward along 25°W. The last CTD station was taken at 8°N and 25°W in the evening of April 14. METEOR arrived Mindelo in the early morning of April 16.

Acknowledgements

We greatly appreciate the wonderful working atmosphere as well as the professionalism and seamanship of crew, officers and Captain of R/V METEOR, which made this work a success. Financial support came from the German Science Foundation (DFG).

Participants

Name	Position/Discipline	Institute
1. Visbeck, Martin	Chief scientist	GEOMAR
2. Tanhua, Toste	Tracer	GEOMAR
3. Schmidtko, Sunke	CTD	GEOMAR
4. Schütte, Florian	CTD, SADCP, Glider	GEOMAR
5. Link, Rudolf	CTD	GEOMAR
6. Maas, Josefine	CTD	GEOMAR
7. Barth, Juliane	CTD	GEOMAR
8. Vieira, Nuno	CTD, O2	INDP
9. Bogner, Boie	Tracer	GEOMAR
10. Köllner, Manuela	Tracer	GEOMAR
11. Vollmer, Thorsten	Tracer	GEOMAR
12. Waltemathe, Henning	Tracer	GEOMAR
13. Wisner, Lea	Tracer	GEOMAR
14. Rudminat, Francie	Tracer	GEOMAR
15. Hahn, Tobias	pCO2, O2	GEOMAR
16. Christiansen, Svenja	Zooplankton	GEOMAR
17. Danelli, Maria	Zooplankton	GEOMAR
18. Wagner, Hannes	Sedimenttrap	GEOMAR
19. Roa, Jon	Sedimenttrap	GEOMAR
20. Meyer, Judith	Biochemistry	GEOMAR
21. Loginova, Alexandra	Biochemistry	GEOMAR
22. Singh, Arvind	Biochemistry	GEOMAR
23. Esser, Elisabeth	Biochemistry	GEOMAR
24. Heitmann-Bacza, Carola	Meteorology	DWD Hamburg
35. Stelzner, Martin	Meteorology	DWD Hamburg

GEOMAR GEOMAR Helmholtz Centre for Ocean Research Kiel, Düsternbrooker Weg 20, 24105 Kiel – Germany.

INDP Instituto Nacional do Desenvolvimento das Pescas , Rua: Cova de Inglesa, Mindelo, São Vicente, C.P: 132, Cabo Verde.

Station List: of R/V METEOR cruise M105.

Station	CTD Profile	Date	Time UTC	Latitude	Longitude	max. p [dbar]	Comment/measurements
M105/178-1		17/03/14	15:07	17° 25,95' N	24° 29,54' W		Deployment Glider IFM13
M105/178-2	Test	17/03/14	16:17	17° 26,98' N	24° 28,86' W	50	problems
M105/178-3	Test	17/03/14	16:32	17° 26,98' N	24° 28,86' W	50	problems
M105/178-4		17/03/14	16:57	17° 26,98' N	24° 28,86' W	850	Multinet
M105/178-5	Test	17/03/14	17:59	17° 26,98' N	24° 28,86' W	40	problems
M105/178-6	1	17/03/14	18:13	17° 26,98' N	24° 28,86' W	800	Tracer, O2
M105/179-1	2	17/03/14	21:06	17° 35,01' N	24° 17,01' W	3500	aborted
M105/180-1	3	18/03/14	10:14	19° 7,98' N	24° 38,01' W	600	O2, Salinity
M105/181-1	4	18/03/14	11:43	19° 12,98' N	24° 43,03' W	1000	Tracer, O2, Salinity
M105/181-2		18/03/14	12:40	19° 12,98' N	24° 43,03' W	650	Multinet
M105/182-1	5	18/03/14	14:04	19° 17,99' N	24° 48,05' W	605	O2, Salinity
M105/183-1	6	18/03/14	20:53	19° 13,99' N	24° 34,01' W	603	Tracer, O2, Salinity
M105/184-1	7	18/03/14	22:22	19° 9,98' N	24° 38,04' W	600	O2, DOP, DOC, Nu, BAC, CDOM, DAA, DCHO
M105/185-1	8	18/03/14	23:53	19° 5,99' N	24° 42,02' W	600	O2, Salinity
M105/186-1	9	19/03/14	01:24	19° 1,98' N	24° 46,00' W	603	N2O, O2, DIC/TA, Chla, POC/PON, POP, Nuts, DOP, DOC, Nu, BAC, CDOM, DAA, DCHO
M105/186-2		19/03/14	02:10	19° 1,98' N	24° 46,00' W	650	Multinet
M105/186-3	10	19/03/14	03:12	19° 1,98' N	24° 46,00' W	100	Water for incubations
M105/187-1	11	19/03/14	04:14	18° 58,00' N	24° 50,01' W	600	Tracer, O2, Salinity
M105/188-1	12	19/03/14	05:32	18° 54,00' N	24° 54,02' W	600	O2
M105/189-1	13	19/03/14	06:42	18° 50,01' N	24° 58,02' W	600	O2, Salinity
M105/190-1	14	19/03/14	08:36	18° 39,99' N	24° 52,02' W	50	O2, Water for incubations
M105/190-2		19/03/14	08:57	18° 40,00' N	24° 52,01' W	650	Multinet
M105/190-3	15	19/03/14	09:44	18° 40,10' N	24° 52,12' W	600	Tracer, O2, DIC/TA, Chla, POC/PON, POP, Nuts, DOP, DOC, Nu, BAC, CDOM, DAA, DCHO
M105/191-1		19/03/14	17:16	17° 35,00' N	24° 16,99' W	850	Multinet
M105/191-2	16	19/03/14	18:08	17° 35,00' N	24° 16,99' W	3636	Tracer, O2, DIC/TA, Salinity, Chla, POC/PON, POP, Nuts
M105/191-3		19/03/14	21:41	17° 35,00' N	24° 16,99' W	850	Multinet
M105/192-1		21/03/14	04:32	16° 35,01' N	20° 4,98' W	1050	Multinet
M105/192-2	17	21/03/14	05:26	16° 35,01' N	20° 4,97' W	1003	O2, Salinity, Chla, POC/PON, POP, Nuts, Water for incubation
M105/192-3	18	21/03/14	07:09	16° 35,01' N	20° 4,97' W	2036	Tracer, O2, Salinity
M105/193-1		21/03/14	08:56	16° 31,83' N	20° 3,24' W		Recovery Glider IFM12
M105/193-2		21/03/14	10:07	16° 32,91' N	20° 2,74' W	1000	Multinet
M105/194-1		21/03/14	15:33	15° 48,52' N	20° 23,82' W		Deployment Glider IFM02
M105/194-2	19	21/03/14	16:38	15° 46,66' N	20° 24,55' W	1003	Tracer, O2, Salinity
M105/195-1	20	22/03/14	01:05	14° 29,99' N	21° 0,07' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/196-1	21	22/03/14	04:56	14° 0,00' N	21° 0,00' W	1210	Tracer, O2, Salinity
M105/197-1	22	22/03/14	08:38	13° 30,00' N	21° 0,03' W	1203	Tracer, O2
M105/198-1	23	22/03/14	12:34	12° 59,99' N	20° 59,99' W	1201	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts, DOC, DOP BAC
M105/199-1	24	22/03/14	16:37	12° 29,99' N	21° 0,01' W	1201	Tracer, O2, Salinity
M105/200-1	25	22/03/14	20:11	11° 59,98' N	21° 0,00' W	1206	Tracer, O2, Salinity
M105/201-1	26	23/03/14	00:35	11° 29,96' N	20° 59,98' W	100	Water for incubations
M105/201-2		23/03/14	00:55	11° 29,96' N	20° 59,98' W	100	WP2 Plankton net
M105/201-3	27	23/03/14	01:23	11° 29,96' N	21° 0,01' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/201-4		23/03/14	02:18	11° 29,97' N	21° 0,01' W	100	WP2 Plankton net
M105/201-5	28	23/03/14	03:10	11° 29,97' N	21° 0,02' W	158	Water for incubations, DOP, DOC, Nu, BAC, CDOM, FDOM, DAA,

Station	CTD Profile	Date	Time UTC	Latitude	Longitude	max. p [dbar]	Comment/measurements
							DCHO
M105/202-1	29	23/03/14	06:07	11° 2,01' N	21° 0,00' W	1609	Tracer, O2
M105/202-2		23/03/14	09:16	11° 2,01' N	21° 0,00' W		Deployment Glider IFM08
M105/203-1	30	23/03/14	10:37	10° 59,97' N	21° 0,02' W	1210	Tracer, O2
M105/203-2		23/03/14	11:47	10° 59,97' N	21° 0,02' W		Deployment Glider IFM03
M105/204-1		23/03/14	18:39	11° 2,19' N	21° 2,66' W		Recovery Glider IFM08
M105/205-1	31	23/03/14	20:48	10° 45,00' N	21° 0,00' W	1200	Tracer, O2
M105/206-1	32	23/03/14	23:25	10° 30,00' N	21° 0,01' W	5230	Tracer, O2, Salinity
M105/207-1		24/03/14	05:22	10° 0,01' N	21° 0,00' W	1050	Multinet
M105/207-2	33	24/03/14	06:20	10° 0,00' N	20° 59,99' W	1366	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/207-3		24/03/14	09:02	10° 0,00' N	21° 0,00' W		Deployment Sediment Trap 1
M105/207-4		24/03/14	11:41	9° 59,36' N	21° 0,14' W	1080	Multinet
M105/208-1	34	24/03/14	15:22	9° 30,01' N	20° 59,98' W	1201	Tracer, O2
M105/209-1	35	24/03/14	19:09	9° 0,01' N	21° 0,00' W	87	Water for incubations
M105/209-2		24/03/14	19:24	9° 0,00' N	21° 0,00' W	100	WP2 Plankton net
M105/209-3	36	24/03/14	19:51	9° 0,00' N	21° 0,00' W	1199	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts, DOC, DOP, BAC
M105/210-1	37	24/03/14	23:42	8° 29,99' N	21° 0,01' W	1200	Tracer, O2
M105/211-1	38	25/03/14	03:28	8° 0,05' N	21° 0,01' W	20	Water for incubations
M105/211-2		25/03/14	03:38	8° 0,05' N	21° 0,01' W	100	WP2 Plankton net
M105/211-3	39	25/03/14	04:01	8° 0,05' N	21° 0,01' W	1203	Tracer, O2, Chla, POC/PON, POP, Nuts, DOC, DOP, BAC
M105/212-1	40	25/03/14	07:46	7° 29,99' N	21° 0,00' W	2002	Tracer, Salinity
M105/213-1	41	25/03/14	12:24	7° 0,03' N	21° 0,02' W	100	Water for incubations
M105/213-2	42	25/03/14	12:56	7° 0,03' N	21° 0,04' W	1202	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/214-1	43	25/03/14	23:24	8° 30,02' N	20° 30,00' W	1200	Tracer, O2
M105/215-1	44	26/03/14	03:12	8° 30,03' N	20° 0,03' W	1200	Tracer, O2, Salinity
M105/216-1	45	26/03/14	07:06	8° 30,02' N	19° 29,99' W	1200	Tracer, O2, Salinity
M105/217-1	46	26/03/14	10:53	9° 0,00' N	19° 29,99' W	1200	Tracer, O2
M105/218-1	47	26/03/14	14:42	8° 59,98' N	20° 0,01' W	1200	Tracer, O2, Salinity
M105/219-1	48	26/03/14	18:29	9° 0,00' N	20° 30,01' W	1200	Tracer, O2, Salinity
M105/220-1	49	26/03/14	22:32	9° 30,00' N	20° 30,05' W	1200	Tracer, O2, Salinity
M105/221-1	50	27/03/14	02:37	9° 59,97' N	20° 30,02' W	1200	Tracer, O2, Salinity
M105/222-1	51	27/03/14	06:27	9° 59,99' N	21° 0,00' W	5061	Tracer, O2, Salinity
M105/223-1		27/03/14	11:31	10° 14,99' N	20° 59,99' W	100	WP2 Plankton net
M105/223-2	52	27/03/14	11:59	10° 14,99' N	20° 59,98' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts, DOC, DOP, BAC
M105/223-3		27/03/14	14:01	10° 14,99' N	20° 59,99' W		Deployment Sediment Trap 2
M105/224-1	53	27/03/14	19:20	10° 29,98' N	20° 30,01' W	1200	Tracer, O2
M105/225-1		27/03/14	23:21	10° 59,99' N	20° 30,00' W	100	WP2 Plankton net
M105/225-2	54	27/03/14	23:38	10° 59,99' N	20° 30,00' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/226-1	55	28/03/14	03:49	11° 29,95' N	20° 30,04' W	1200	Tracer, O2, Salinity
M105/227-1	56	28/03/14	07:55	11° 59,99' N	20° 30,01' W	1202	Tracer, O2, Salinity
M105/228-1	57	28/03/14	11:42	11° 59,98' N	20° 0,00' W	1201	Tracer, O2, Salinity
M105/229-1	58	28/03/14	15:26	11° 30,00' N	19° 59,95' W	1200	Tracer, O2, Salinity
M105/230-1	59	28/03/14	19:18	11° 29,99' N	19° 29,00' W	1234	Tracer, O2
M105/231-1	60	28/03/14	23:26	12° 0,00' N	19° 29,99' W	1200	Tracer, O2
M105/232-1	61	29/03/14	03:17	12° 0,03' N	19° 0,02' W	150	Water for incubations
M105/232-2		29/03/14	03:36	12° 0,03' N	19° 0,02' W	100	WP2 Plankton net
M105/232-3	62	29/03/14	04:12	12° 0,03' N	19° 0,01' W	1202	Tracer, Chla, POC/PON, POP, Nuts
M105/232-4		29/03/14	05:08	12° 0,03' N	19° 0,01' W	100	WP2 Plankton net
M105/233-1	63	29/03/14	08:27	11° 29,98' N	19° 0,01' W	1200	Tracer, Salinity
M105/234-1	64	29/03/14	18:14	10° 59,97' N	17° 30,00' W	1512	Tracer, O2, Chla, POC/PON, POP, Nuts

Station	CTD Profile	Date	Time UTC	Latitude	Longitude	max. p [dbar]	Comment/measurements
M105/235-1	65	29/03/14	20:48	11° 0,00' N	17° 45,01' W	1200	Tracer, O2
M105/236-1	66	29/03/14	23:26	10° 59,98' N	18° 0,00' W	1200	Tracer, O2, Salinity
M105/237-1	67	30/03/14	04:15	10° 59,98' N	18° 30,01' W	1202	Tracer, O2, Salinity
M105/238-1	68	30/03/14	08:00	11° 0,00' N	19° 0,02' W	98	Water for incubations
M105/238-2		30/03/14	08:16	11° 0,01' N	19° 0,12' W	100	WP2 Plankton net
M105/238-3	69	30/03/14	08:44	11° 0,04' N	19° 0,32' W	1198	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/239-1	70	30/03/14	12:18	10° 59,98' N	19° 30,01' W	1200	Tracer, O2
M105/240-1	71	30/03/14	16:00	10° 59,97' N	20° 0,02' W	1200	Tracer, O2
M105/241-1	72	30/03/14	19:43	10° 30,00' N	20° 0,02' W	1201	Tracer, O2
M105/242-1	73	30/03/14	23:37	9° 59,98' N	20° 0,01' W	1200	Tracer, O2, Salinity
M105/243-1	74	31/03/14	03:30	10° 0,05' N	19° 30,01' W	1202	Tracer, O2, Salinity
M105/244-1	75	31/03/14	07:34	10° 29,99' N	19° 30,00' W	1206	Tracer, O2, Salinity
M105/245-1	76	31/03/14	11:24	10° 29,98' N	18° 59,95' W	1200	Tracer, O2, Salinity
M105/246-1	77	31/03/14	15:06	10° 0,01' N	18° 59,96' W	100	Water for incubations
M105/246-2		31/03/14	15:23	10° 0,01' N	18° 59,97' W	100	WP2 Plankton net
M105/246-3	78	31/03/14	15:47	10° 0,01' N	19° 0,00' W	1200	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/247-1	79	31/03/14	19:31	9° 29,99' N	19° 0,01' W	1200	Tracer, O2, Salinity
M105/248-1	80	31/03/14	23:21	9° 29,99' N	19° 30,00' W	1200	Tracer, O2, Salinity
M105/249-1	81	01/04/14	03:12	9° 30,01' N	19° 59,99' W	1200	Tracer, O2, Salinity
M105/250-1		01/04/14	13:51	10° 25,70' N	21° 22,14' W	100	WP2 Plankton net
M105/250-2	82	01/04/14	14:21	10° 25,70' N	21° 22,15' W	1203	O2, Salinity, Chla, POC/PON, POP, Nuts
M105/250-3		01/04/14	15:45	10° 27,35' N	21° 23,38' W		Recovery Sediment Trap 1
M105/251-1	83	02/04/14	12:34	8° 59,93' N	18° 8,01' W	1200	Tracer, O2, Salinity
M105/252-1	84	02/04/14	15:33	8° 59,98' N	18° 30,00' W	1200	Tracer, O2, Salinity
M105/253-1	85	02/04/14	19:19	8° 59,99' N	19° 0,01' W	1200	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/253-2		02/04/14	20:18	9° 0,00' N	19° 0,01' W	100	WP2 Plankton net
M105/254-1	86	02/04/14	23:36	8° 29,98' N	19° 0,02' W	1200	Tracer, O2, Salinity
M105/255-1	87	03/04/14	03:25	8° 0,00' N	19° 0,03' W	100	Water for incubations, DOC, DOP, BAC, Nu, DAA
M105/255-2		03/04/14	03:44	7° 59,99' N	19° 0,10' W	100	WP2 Plankton net
M105/255-3	88	03/04/14	04:10	7° 59,97' N	19° 0,24' W	1200	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/256-1	89	03/04/14	07:49	8° 0,00' N	19° 30,01' W	1200	Tracer, O2, Salinity
M105/257-1	90	03/04/14	11:21	7° 59,99' N	20° 0,04' W	1200	Tracer, O2, Salinity
M105/258-1	91	03/04/14	15:01	8° 0,02' N	20° 30,06' W	1200	Tracer, O2, Salinity
M105/259-1	92	03/04/14	18:47	8° 0,01' N	21° 0,01' W	100	Water for incubations
M105/259-2		03/04/14	19:00	8° 0,01' N	21° 0,01' W	100	WP2 Plankton net
M105/259-3	93	03/04/14	19:26	8° 0,00' N	21° 0,19' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/260-1	94	03/04/14	23:05	7° 59,99' N	21° 30,00' W	1200	Tracer, O2, Salinity
M105/261-1	95	04/04/14	02:52	8° 0,03' N	21° 59,99' W	1200	Tracer, O2, Salinity
M105/262-1	96	04/04/14	06:38	8° 0,04' N	22° 30,03' W	1200	Tracer, O2, Salinity
M105/263-1	97	04/04/14	13:56	6° 59,97' N	23° 0,00' W	1480	Tracer, O2, Salinity
M105/264-1	98	04/04/14	18:05	7° 29,99' N	23° 0,00' W	1200	Tracer, O2
M105/265-1	99	04/04/14	22:15	8° 0,04' N	22° 59,96' W	100	Water for incubations
M105/265-2		04/04/14	22:31	8° 0,04' N	22° 59,95' W	100	WP2 Plankton net
M105/265-3	100	04/04/14	23:02	8° 0,04' N	22° 59,95' W	1200	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/266-1	101	05/04/14	03:07	8° 29,99' N	22° 59,94' W	1200	Tracer, O2, Salinity
M105/267-1	102	05/04/14	06:49	8° 29,99' N	22° 30,00' W	1200	Tracer, O2, Salinity
M105/268-1	103	05/04/14	10:33	8° 29,97' N	22° 0,00' W	1200	Tracer, O2, Salinity
M105/269-1	104	05/04/14	14:22	8° 30,04' N	21° 30,01' W	1200	Tracer, O2, Salinity
M105/270-1	105	05/04/14	17:25	9° 0,00' N	21° 30,00' W	1200	Tracer, O2, Salinity
M105/271-1	106	05/04/14	21:11	8° 59,99' N	22° 0,03' W	1200	Tracer, O2
M105/272-1	107	06/04/14	01:01	8° 59,98' N	22° 29,98' W	1200	Tracer, Salinity
M105/273-1	108	06/04/14	04:49	9° 0,00' N	23° 0,02' W	100	Water for incubations
M105/273-2		06/04/14	05:07	9° 0,00' N	23° 0,03' W	100	WP2 Plankton net
M105/273-3	109	06/04/14	05:34	9° 0,00' N	23° 0,16' W	1200	Tracer, O2, Chla,

Station	CTD Profile	Date	Time UTC	Latitude	Longitude	max. p [dbar]	Comment/measurements
							POC/PON, POP, Nuts
M105/274-1	110	06/04/14	09:29	9° 30,14' N	23° 0,00' W	1200	Tracer, O2, Salinity
M105/275-1	111	06/04/14	13:28	9° 30,04' N	22° 30,06' W	1202	Tracer, O2, Salinity
M105/276-1	112	06/04/14	17:20	9° 29,99' N	22° 0,00' W	1200	Tracer, O2
M105/277-1	113	06/04/14	21:14	9° 29,99' N	21° 30,05' W	1200	Tracer, O2
M105/278-1	114	07/04/14	01:06	10° 0,03' N	21° 30,02' W	1200	Tracer, O2, Salinity
M105/279-1	115	07/04/14	04:51	10° 0,01' N	22° 0,00' W	1208	Tracer, O2, Salinity
M105/280-1	116	07/04/14	08:27	10° 0,00' N	22° 30,01' W	1200	Tracer, O2, Salinity
M105/281-1	117	07/04/14	12:22	9° 59,99' N	23° 0,00' W	100	Water for incubations, DOC, DOP, BAC, Nu, DAA
M105/281-2		07/04/14	12:37	9° 59,99' N	23° 0,00' W	100	WP2 Plankton net
M105/281-3	118	07/04/14	13:05	9° 59,99' N	23° 0,00' W	1200	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/282-1	119	07/04/14	17:05	10° 29,96' N	23° 0,03' W	1200	Tracer, O2
M105/283-1	120	07/04/14	21:07	10° 29,99' N	22° 30,01' W	1200	Tracer, O2, Salinity
M105/284-1	121	08/04/14	01:07	10° 30,01' N	22° 0,01' W	1200	Tracer, O2, Salinity
M105/285-1	122	08/04/14	05:04	10° 29,98' N	21° 30,02' W	5147	Tracer, O2, Salinity
M105/286-1		08/04/14	09:04	10° 37,13' N	21° 30,09' W		Deployment Glider IFM12
M105/286-2		08/04/14	10:24	10° 37,85' N	21° 29,81' W		Recovery Sediment Trap 2
M105/286-3		08/04/14	11:54	10° 37,81' N	21° 29,89' W	100	WP2 Plankton net
M105/286-4	123	08/04/14	12:25	10° 37,81' N	21° 29,89' W	1200	O2, Salinity, Chla, POC/PON, POP, Nuts
M105/287-1	124	08/04/14	15:41	10° 59,98' N	21° 30,01' W	1200	Tracer, O2, Salinity, Chla, POC/PON, POP, Nuts
M105/288-1	125	08/04/14	19:41	11° 29,97' N	21° 30,02' W	1200	Tracer
M105/289-1	126	08/04/14	23:43	11° 59,99' N	21° 30,02' W	1200	Tracer, O2, Salinity
M105/290-1	127	09/04/14	03:31	12° 0,00' N	21° 59,98' W	1200	Tracer, O2, Salinity
M105/291-1	128	09/04/14	07:19	12° 0,00' N	22° 30,00' W	1200	Tracer, O2
M105/292-1	129	09/04/14	11:02	11° 30,00' N	22° 29,99' W	1200	Tracer, O2, Salinity
M105/293-1	130	09/04/14	15:50	11° 29,97' N	22° 0,00' W	1200	Tracer, O2, Salinity
M105/294-1	131	09/04/14	19:32	11° 0,00' N	21° 59,98' W	1200	Tracer, O2, Salinity
M105/295-1	132	09/04/14	23:15	10° 59,99' N	22° 30,05' W	5124	Tracer, O2, Salinity
M105/296-1	133	10/04/14	05:05	10° 59,98' N	23° 0,04' W	105	Water for incubations
M105/296-2		10/04/14	05:22	10° 59,97' N	23° 0,03' W	100	WP2 Plankton net
M105/296-3	134	10/04/14	05:46	10° 59,97' N	23° 0,03' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/297-1	135	10/04/14	09:20	11° 0,00' N	23° 30,01' W	1200	Tracer, O2, Salinity
M105/298-1	136	10/04/14	15:40	11° 29,00' N	22° 59,97' W	1200	Tracer, O2, Salinity
M105/299-1	137	10/04/14	19:45	12° 0,03' N	23° 0,03' W	110	Water for incubations, DOC, DOP, BAC, Nu, DAA
M105/299-2		10/04/14	20:02	12° 0,03' N	23° 0,03' W	100	WP2 Plankton net
M105/299-3	138	10/04/14	20:29	12° 0,05' N	23° 0,09' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/300-1	139	11/04/14	02:41	12° 0,00' N	24° 0,05' W	1200	Tracer, Salinity
M105/301-1	140	11/04/14				1200	Tracer, O2
M105/302-1		11/04/14	10:17	11° 0,00' N	24° 0,04' W	100	WP2 Plankton net
M105/302-2	141	11/04/14	10:48	11° 0,00' N	24° 0,07' W	1200	Tracer, Salinity, Chla, POC/PON, POP, Nuts
M105/303-1	142	11/04/14	14:32	10° 59,99' N	24° 30,02' W	1200	Tracer, O2, Salinity
M105/304-1	143	11/04/14	19:29	10° 29,97' N	24° 0,01' W	1200	Tracer, O2
M105/305-1	144	11/04/14	23:21	10° 0,01' N	24° 0,01' W	1200	Tracer, O2, Salinity
M105/306-1	145	12/04/14	03:07	9° 29,98' N	23° 59,96' W	1200	Tracer, O2, Salinity
M105/307-1	146	12/04/14	06:49	9° 0,00' N	24° 0,01' W	1200	Tracer, O2, Salinity
M105/308-1	147	12/04/14	10:34	8° 29,99' N	24° 0,00' W	1200	Tracer, Salinity
M105/309-1	148	12/04/14	14:21	8° 0,06' N	23° 59,98' W	1200	Tracer, O2, Salinity
M105/309-2		12/04/14	15:15	8° 0,06' N	23° 59,98' W	100	WP2 Plankton net
M105/310-1	149	12/04/14	21:00	7° 59,99' N	25° 0,01' W	100	Water for incubations
M105/310-2		12/04/14	21:18	8° 0,00' N	25° 0,01' W	100	WP2 Plankton net
M105/310-3	150	12/04/14	21:41	8° 0,03' N	25° 0,11' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/311-1	151	13/04/14	01:57	8° 29,99' N	25° 0,01' W	1200	Tracer, O2
M105/312-1		13/04/14	05:52	8° 59,99' N	25° 0,01' W	100	WP2 Plankton net

Station	CTD Profile	Date	Time UTC	Latitude	Longitude	max. p [dbar]	Comment/measurements
M105/312-2	152	13/04/14	06:18	8° 59,98' N	25° 0,01' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/313-1	153	13/04/14	10:08	9° 29,99' N	25° 0,01' W	1200	Tracer
M105/314-1		13/04/14	14:00	9° 59,98' N	25° 0,01' W		WP2 Plankton net
M105/314-2	154	13/04/14	14:28	9° 59,98' N	25° 0,01' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/315-1	155	13/04/14	18:15	10° 29,99' N	25° 0,00' W	1200	Tracer
M105/316-1	156	14/04/14	02:59	10° 59,99' N	26° 0,02' W	1200	Tracer
M105/317-1	157	14/04/14	06:46	11° 0,00' N	25° 30,02' W	1200	Tracer
M105/318-1		14/04/14	10:34	11° 0,00' N	25° 0,02' W	100	WP2 Plankton net
M105/318-2	158	14/04/14	11:06	11° 0,03' N	25° 0,10' W	1200	Tracer, O2, Chla, POC/PON, POP, Nuts
M105/319-1	159	14/04/14	15:00	11° 30,02' N	25° 0,04' W	1200	Tracer
M105/320-1		14/04/14	18:50	12° 0,03' N	25° 0,02' W	100	WP2 Plankton net
M105/320-2	160	14/04/14	19:18	12° 0,17' N	25° 0,16' W	3000	Tracer, O2, Chla, POC/PON, POP, Nuts