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Short Cruise Report
R/V MARIA S. MERIAN cruise MSM72

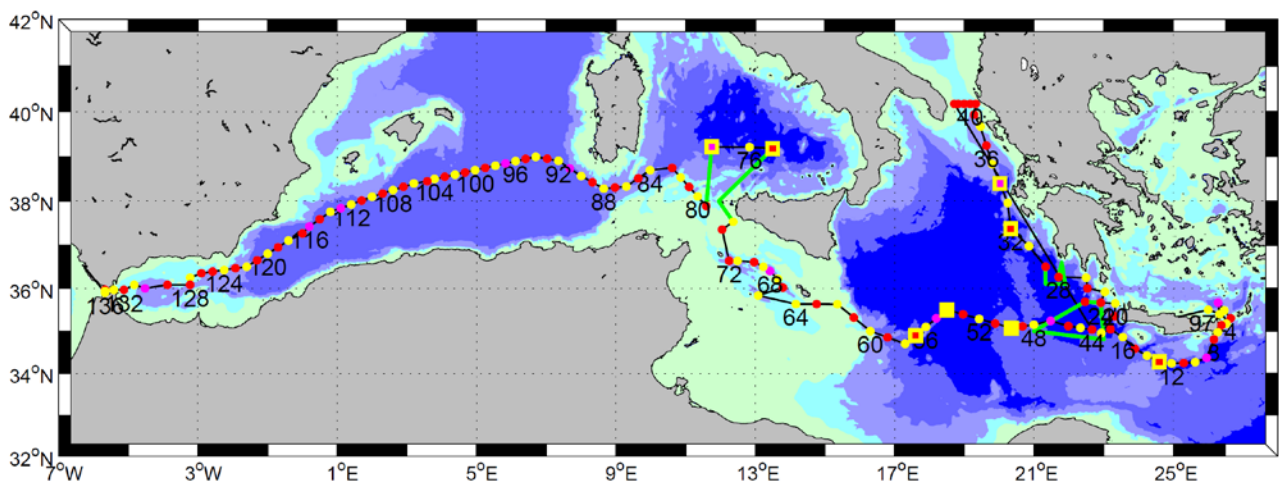
Iraklion, Greece – Cádiz, Spain

02.03.2018 – 03.04.2018

Chief Scientist: Dagmar Hainbucher

Captain: Björn Maaß

MSM72 Track



Yellow dots: CTD without any chemical sampling, red dots: CTD with chemical sampling, pink dots: CTD with chemical and additional sampling of isotopes, yellow squares: deployment of drifter and floats, green lines: fine resolved uCTD and ADCP tracks. Black lines: Track with uCTD casts between CTD stations.

Objectives

The last few decades have seen dramatic changes in the hydrography and biogeochemistry of the Mediterranean Sea. The complex bathymetry, the highly variable spatial and temporal scales of atmospheric forcing and internal processes contribute to generate complex and unsteady circulation patterns and significant variability in biogeochemical systems. Part of this variability can be influenced by anthropogenic contributions. Consequently, there is a need to document its details as well as to understand ongoing trends in order to better relate the observed processes and to possibly predict the consequences of these changes. The main goal of the cruise was to contribute to the understanding of long-term changes and trends in physical and biogeochemical parameters, such as the anthropogenic carbon uptake and to still evaluate the hydrographical situation after the major climatological shifts in the eastern and western part of the basin, known as the Eastern and Western Mediterranean Transients.

The following science questions were addressed:

1. What are the long-term changes and/or trends in physics and biogeochemistry in the Mediterranean Sea, including all the sub-basins?
2. How is the hydrographic situation in the Mediterranean developing further on after the EMT and WMT? Is there still a trend of the system to return to the pre-EMT situation and is there a similar trend in the WMed?
3. How are eddies distributed in the EMed and WMed during the cruise? Do they differ in the sub basins? To what extend is heat and salt transferred into the vertical by eddies in the WMed and EMed during the cruise?
4. What is the rate of uptake of the anthropogenic carbon in the Mediterranean and is this changing over time?
5. What is the magnitude of variability and trends in the inventory of biogeochemical variables (including oxygen and nutrients)?
6. What is the base-line values of rarely measured Essential Ocean Variables (EOVs) such as DOC and N₂O

Narrative

The scientific crew embarked at around 9:00 am on March 1st. The ship then left the port of Heraklion at 9:30 in the evening to bunker fuel in Kali Limenes the next morning. In the early afternoon of March 2nd we finally started our transfer to our first CTD station in the coastal area northeast of Crete. Unfortunately, this was not the first station we planned for the cruise. In view of the territorial ambiguities in parts of the work area, which only became clear shortly before the start of the cruise, the station plan was modified and adapted and we cancelled all stations east of our new first station.

During transfer and during bunkering we already unpacked our equipment and started to install the instruments. However, some of us had to stay in bed because of a cold with a feverish course. We received our mandatory safety briefing shortly after embarking and a safety exercise on the next day in which we also had to board the lifeboat. Everything went well and the scientific crew started to feel comfortable on board. On March 2nd at 10:30 pm we began with the station work. We started with CTD stations north-east of Crete in the Aegean Sea, carried out CTD stations in the Strait of Kasos, and then moved south of Crete to the west into the Ionian Basin. Along the Strait of Antikythera we steamed northwards in the height of the Peloponnese. Our main program was taking CTD casts. The biogeochemists took water samples from several depths to determine different parameters (nutrients, oxygen, inorganic carbon, etc.). We took biogeochemical samples in about every second station, because the laboratory analysis is sometimes very time-

consuming. At a few stations, the CTD was run twice in order to cover the demand for water for the additional isotope measurements. The deepest CTD station was station 23 with 4528 m water depth which we reached on the 8th of March. From station 15 (05.03.2018 early morning) onwards, we additionally took underway CTD measurements between the CTD stations. During these measurements we reduced the ship's speed to about 3 knots, so that we could reach depths between 600 - 800 m with the uCTD. On station 13 on 4th of March at around 20:30 UTC we deployed the first ARVOR float and a surface drifter. After station 21 on the 7th of March early morning, we interrupted our CTD work in order to investigate eddies for the first time on our cruise with fine resolved measurements. For this purpose, the uCTD was run about every hour, the ship speed between the stations was about 8 nm, while during uCTD measurements it was reduced to 3 nm. The route was determined using maps of dynamic topographies. Another "eddy track" followed after station 28 on the 10th of March. On these sections we were especially interested in the continuous ship's ADCP measurements, which we hope will help us to recognize eddies also in their vertical extension. Our northernmost stations were in the Strait of Otranto which we reached on the 12th of March in the afternoon. The section through the Strait of Otranto is repeatedly taken on cruises by us, as the Adriatic Sea is the most important producer of deep water in the Ionian Basin and we are interested in the changes in the outflow of deep water over long time scales. After this northernmost section a long transit route followed back to our section across the Mediterranean Sea, which we resumed with station 44 on the 14th of March west of Crete. On the transit, we continued to continuously collect data with the ADCP and ran an uCTD approximately every two hours. Additionally, we had some time to visit the ship's engine. On stations 50 (15.03.2018 23:30 UTC), 54 (16.03.2018, 20:00 UTC) and 56 (17.03.2018 07:30 UTC) surface drifters and additionally an ARVOR float (station 56) were deployed. At station 34 (11.03.2018 23:00 UTC) we dropped the only PROVOR BIO float.

Unfortunately, we had to contend with considerable technical problems with the CTD. On Monday, March 6 at 22:00, station 18, the rosette returned on deck with 2 missing and 3 broken Niskin bottles. First of all, we suspected an operating error when clamping one or more bottles. But then the release unit also stopped working. From now on, none of the bottles could be closed electronically in the water. So we swapped plugs, cables and devices. We first drove our own CTD and rosette and finally the CTD and rosette of the ship. But nothing helped. We also exchanged the winches. It turned out that the errors were caused by the defective releaser unit of our rosette and by the termination of the winches. Communication with the release unit was interrupted during tension and movement. On the next station everything worked fine, but on station 24 (09.03.2018 09:30 UTC) some of the bottles did not close again, and this time there were also faulty data transfers. We replaced the ship's CTD to its backup CTD. CTD operation ran then smoothly for some stations with the ship's own rosette and CTD. But on the evening of March 14, both oxygen sensors showed only noisy profiles from approx. 1000 m on, combined with a sudden offset. Now everything started again from the beginning, we exchanged cables, sensors and even the winches again. But all this did not help here either. Finally we decided to connect our CTD including sensors with the ship's own rosette. But for this we had to build an adapter cable, because the rosette of the ship uses different plugs (Subconn) than for our CTD (Seacon).

On the 15th of March 06:00 UTC station 47, we placed our CTD in a deep sea brine pool on a depth of 3528 m. These brines contain hydrogen sulphide and the water samples brought along smell accordingly when they arrived on deck. The laboratories were ventilated long after the event. Probably we came across the "I'Atalante Basin".

The weather has blown up since 17th of March. Again and again smaller strong wind events with up to 9Bft took place during which we had to suspend the uCTD work. However, the CTD stations could be carried out as planned. On Monday, 19.03.2018, we

had a seminar in which we discussed the state of work and presented first results of the cruise. The next day we started a fine resolving ADCP track on the Sicily shelf. The area was too flat and the swell too high to take uCTD profiles additionally. Now that more than half of our cruise was over, we celebrated this in the evening of the same day.

We entered the western basin of the Mediterranean Sea during the night to the 21st of March and had stations in the Tyrrhenian Sea. Again, on station 75 and 76, we were facing technical problems with the rosette but the problem was quickly solved. We deployed another float on Wednesday, 21.03.2018, after station 75 and continued also with uCTD measurements. On Thursday, 22.03.2018, we dropped the last ARVOR float on this cruise on CTD station 77 and changed again the CTD due to technical problems. At 8:00 in the morning on the same day we started another fine resolving uCTD/ADCP section to track eddies. The weather was mixed and we had to stop the uCTD measurements every now and then. The weather at the beginning of the last week of our cruise was windy with an average of 5 Bft, but allowed all work. We progressed quickly and according to plan.

On Wednesday, 28.03, we held a seminar to discuss our results and to agree on publications. We also took a group picture. On Thursday, 29.03., around 14:30 the sailing yacht Malizia II crossed our course with Boris Hermann, one of Germany's most famous extreme sailors, on board.

On Friday, 26.03., we had sunshine but again winds up to 9 Bft, so the uCTD casts had to be discontinued. On Saturday the weather calmed down, the uCTD work was resumed and on Easter Sunday, April 1st, we could carry out our last CTD station, No. 136, in the Strait of Gibraltar, in the afternoon. We celebrated this with a little drink. After the station we set course to the port of Cádiz, where we arrived on Monday morning. After the last CTD, the continuous data acquisition of the ADCPs and the thermosalinograph were also completed on the transit. We started to dismantle our equipment, to load the container and to clean the laboratories. Due to the cancelled stations at the beginning of this cruise, we entered the port of Cádiz one day earlier than expected.

Acknowledgements

We would like to thank Captain Björn Maaß, his officers and the crew of R/V MARIA S. MERIAN for the support of our scientific programme. Besides this always professional support, the welcome on board was warm and the helpfulness from the bridge, over the deck to the engine was great. We have always felt comfortable on board.

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Teilnehmerliste

01	Dagmar Hainbucher	Fahrtleiter / <i>Chief Scientist</i>	IfMHH
02	Vanessa Cardin	CTD/IADCP/uCTD/ADCP/Thermosal	OGS
03	Maria del Mar Chavez Montero	CTD/IADCP/uCTD/ADCP/Thermosal	OGS
04	Dimitrios Velaoras	CTD/IADCP/uCTD/ADCP/Thermosal	HCMR
05	Paolo Celentano	CTD/IADCP/uCTD/ADCP/Thermosal	ISMAR
06	Birte Gülk	CTD/IADCP/uCTD/ADCP/Thermosal	IfMHH
07	Andrea Rochner	CTD/IADCP/uCTD/ADCP/Thermosal	IfMHH
08	Andreas Welsch	Salinometer / technical support	IfMHH
09	Toste Tanhua	Transient tracers	GEOMAR
10	Fabian Wolf	Transient tracers	GEOMAR
11	Nico Lange	Transient tracers	GEOMAR
12	Lennart Gerke	Transient tracers	GEOMAR
13	Giuseppe Civitarese	Nutrients, TN, TP, Oxygen	OGS
14	Lidia Urbini	Nutrients, TN, TP, Oxygen	OGS
15	Spyros Chaikakis	LISST, POC, PON	HCMR
16	Noelia M. Fajar Gonzalez	Carbonate System	IEO
17	Elisa Fernández Guallart	Carbonate System	IEO
18	Blanca Astray Uceda	Carbonate System	IEO
19	Abed El Rahaman Hassoun	Carbonate System	CNRS-L
20	Giancarlo Bachi	DOC, CDOM	CNR-P

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GEOMAR: Helmholtz-Zentrum für Ozeanforschung Kiel, Düsternbrooker Weg 20, 24105
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OGS: Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Trieste, Borgo Grotta
 Gigante 42/C, 34010 Sgonico (TS), Italy, <http://www.ogs.trieste.it>

IEO: Instituto Español de Oceanografía (IEO), centro de A Coruña, Spain,
<http://www.co.ieo.es>

CNRS-L: National Council for Scientific Research in Lebanon. National Center for Marine
 Sciences, P.O. Box 534, San Stephano Street, Batroun, Lebanon, [http://](http://https://www.cnrs.edu.lb)
<https://www.cnrs.edu.lb>

ISMAR: Istituto di Scienze Marine, Arsenale – Tesa 104, Castello 2737/F, 30122 Venezia,
 Italy, <http://www.ismar.cnr.it>

HCMR: Hellenic Centre for Marine Research, 46.7 km Athens – Sounio ave., P.O. Box
 712, P.C. 19013, Anavyssos Greece, <https://www.hcmr.gr/en/>

CNR-P: CNR Istituto di Biofisica Unità Operativa di Pisa, Ruolo Ricercatore, Via G.
 Moruzzi N° 1 Pisa, Italy, <http://www.pi.ibf.cnr.it/?q=Facilities%20>

XPO-COD	Stat. No.	Cast. No.	Type	Date	Time	Code	POSITION		Bottom depth	Max. press.	Bottom dist.	Biogeochem. Samples	Remarks
					UTC		Latitude	Longitude					
MSM72	001	1	CTD/IADCP	02.03.18	20:21	BE	35° 24,016'N	026° 20,016'E	287			CHE1	
MSM72	001	1	CTD/IADCP	02.03.18	20:31	BO	35° 24,008'N	026° 20,029'E	289	281	10		
MSM72	001	1	CTD/IADCP	02.03.18	20:59	EN	35° 24,008'N	026° 20,029'E	288				
MSM72	002	1	CTD/IADCP	02.03.18	22:42	BE	35° 40,040'N	026° 17,005'E	2288			CHE2	
MSM72	002	1	CTD/IADCP	02.03.18	23:26	BO	35° 40,019'N	026° 17,033'E	2282	2315	12		
MSM72	002	1	CTD/IADCP	03.03.18	0:26	EN	35° 40,018'N	026° 17,034'E	2290				
MSM72	002	2	CTD	03.03.18	2:01	BE	35° 40,018'N	026° 17,034'E	2280				
MSM72	002	2	CTD	03.03.18	2:12	BO	35° 40,019'N	026° 17,033'E	2284	256			
MSM72	002	2	CTD	03.03.18	2:27	EN	35° 40,019'N	026° 17,035'E	2284				
MSM72	002	3	CTD/LISST	03.03.18	3:38	BE	35° 40,020'N	026° 17,036'E	2288				
MSM72	002	3	CTD/LISST	03.03.18	4:00	BO	35° 40,018'N	026° 17,036'E	2288	1010			
MSM72	002	3	CTD/LISST	03.03.18	4:24	EN	35° 40,016'N	026° 17,037'E	0				
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MSM72	003	1	CTD/IADCP	03.03.18	6:35	EN	35° 29,015'N	026° 28,040'E	1026				
MSM72	004	1	CTD/IADCP	03.03.18	8:00	BE	35° 18,014'N	026° 39,042'E	1099			CHE1	
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MSM72	004	1	CTD/IADCP	03.03.18	9:05	EN	35° 18,014'N	026° 39,042'E	1101				
MSM72	005	1	CTD/IADCP	03.03.18	10:12	BE	35° 10,503'N	026° 31,042'E	612			PHY	
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MSM72	006	1	CTD/IADCP	03.03.18	12:06	BE	35° 06,458'N	026° 21,975'E	269			CHE1	
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MSM72	007	1	CTD/IADCP/LISST	03.03.18	13:37	BE	34° 58,087'N	026° 16,437'E	1593			PHY	
MSM72	007	1	CTD/IADCP/LISST	03.03.18	14:08	BO	34° 58,103'N	026° 16,521'E	1592	1593	20		
MSM72	007	1	CTD/IADCP/LISST	03.03.18	14:41	EN	34° 58,103'N	026° 16,521'E	1595				
MSM72	008	1	CTD/IADCP/LISST	03.03.18	15:46	BE	34° 48,189'N	026° 10,033'E	1246			CHE1	
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MSM72	009	1	CTD/IADCP	03.03.18	19:25	BE	34° 22,002'N	025° 57,540'E	4000			CHE2	
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MSM72	011	2	CTD	04.03.18	8:15	BE	34° 14,378'N	025° 18,053'E	3829				
MSM72	011	2	CTD	04.03.18	9:23	BO	34° 14,321'N	025° 18,166'E	3835	3896	13		
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MSM72	013	1	Float ARVOR I	04.03.18	20:39	Deployed	34° 16,199'N	024° 36,203'E	3224				
MSM72	013	2	Driftr DWS	04.03.18	20:57	Deployed	34° 15,469'N	024° 35,288'E	2908				
MSM72	014	1	CTD/IADCP/LISST	04.03.18	23:11	BE	34° 25,009'N	024° 14,996'E	2334			PHY	
MSM72	014	1	CTD/IADCP/LISST	04.03.18	23:53	BO	34° 25,016'N	024° 15,010'E	2325	2348	10		
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MSM72	015	1	CTD/IADCP	05.03.18	5:03	EN	34° 34,816'N	023° 54,013'E	2783				
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MSM72	016	1	CTD/IADCP	05.03.18	8:09	BE	34° 51,511'N	023° 32,997'E	3011			PHY	
MSM72	016	1	CTD/IADCP	05.03.18	9:11	BO	34° 51,514'N	023° 33,010'E	3011	352	15		
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MSM72	016	2	uCTD	05.03.18	11:34	BE	34° 57,262'N	023° 22,038'E	2958	608			
MSM72	017	1	CTD/IADCP	05.03.18	13:09	BE	023° 11,950'N	023° 11,950'E	3221			CHE1	
MSM72	017	1	CTD/IADCP	05.03.18	14:10	BO	023° 12,017'N	023° 12,017'E	3201	3237	16		
MSM72	017	1	CTD/IADCP	05.03.18	15:27	EN	023° 12,017'N	023° 12,017'E	3202				
MSM72	017	3	uCTD	05.03.18	16:16	BE	35° 00,128'N	023° 04,798'E		640			
MSM72	018	1	CTD/IADCP	05.03.18	17:33	BE	34° 57,306'N	022° 56,027'E	3219			PHY	
MSM72	018	1	CTD/IADCP	05.03.18	18:35	BO	34° 57,308'N	022° 56,028'E	3241	3261	14		
MSM72	018	1	CTD/IADCP	05.03.18	19:45	EN	34° 57,306'N	022° 56,028'E	3226				
MSM72	018	4	uCTD	05.03.18	21:38	BE	35° 08,864'N	023° 07,394'E	3753	579			
MSM72	019	1	CTD/IADCP	06.03.18	0:00	BE	35° 21,000'N	023° 19,024'E	3181			CHE1	
MSM72	019	1	CTD/IADCP	06.03.18	0:58	BO	35° 21,000'N	023° 19,023'E	3184	3217	14		no bottle closing
MSM72	019	1	CTD/IADCP	06.03.18	2:14	EN	35° 21,001'N	023° 19,023'E	3185				
MSM72	019	2	CTD	06.03.18	11:06	BE	35° 21,001'N	023° 19,023'E	3185				
MSM72	019	2	CTD	06.03.18	12:12	BO	35° 21,003'N	023° 19,025'E	3176	3213	15		no bottle closing
MSM72	019	2	CTD	06.03.18	13:46	EN	35° 21,003'N	023° 19,025'E	3184				
MSM72	019	3	CTD	06.03.18	14:51	BE	35° 21,003'N	023° 19,011'E	3184				
MSM72	019	3	CTD	06.03.18	15:49	BO	35° 21,003'N	023° 19,012'E	3429	3208	14		Canceling because of defective CTD
MSM72	019	3	CTD	06.03.18	18:28	EN	35° 21,003'N	023° 19,011'E	3181				

MSM72	019	5	uCTD	06.03.18	19:58	BE	35° 29,229' N	023° 19,303' E	2178	626			
MSM72	020	1	CTD/IADCP	06.03.18	22:00	BE	35° 39,015' N	023° 20,024' E	0			PHY	
MSM72	020	1	CTD/IADCP	06.03.18	22:13	BO	35° 39,015' N	023° 20,024' E	419	419	9		
MSM72	020	1	CTD/IADCP	06.03.18	22:38	EN	35° 39,014' N	023° 20,024' E	419				
MSM72	020	6	uCTD	07.03.18	0:28	BE	35° 38,973' N	023° 04,407' E	1892	660			
MSM72	021	1	CTD/IADCP	07.03.18	2:17	BE	35° 40,023' N	022° 55,011' E	2965			CHE1	
MSM72	021	1	CTD/IADCP	07.03.18	3:07	BO	35° 40,023' N	022° 55,011' E	2965	2994	16		
MSM72	021	1	CTD/IADCP	07.03.18	4:07	EN	35° 40,023' N	022° 55,011' E	2962				
MSM72	022	7	uCTD	07.03.18	4:37	BE	35° 39,870' N	022° 55,036' E	2964	593			
MSM72	022	8	uCTD	07.03.18	5:46	BE	35° 32,374' N	022° 55,776' E	2066	568			
MSM72	022	9	uCTD	07.03.18	6:46	BE	35° 25,958' N	022° 56,399' E	3470	627			
MSM72	022	10	uCTD	07.03.18	7:46	BE	35° 19,812' N	022° 56,949' E	3626	657			
MSM72	022	11	uCTD	07.03.18	8:48	BE	35° 13,127' N	022° 57,609' E	3537	662			
MSM72	022	12	uCTD	07.03.18	9:48	BE	35° 06,923' N	022° 58,278' E	3058	647			
MSM72	022	13	uCTD	07.03.18	10:53	BE	35° 00,204' N	022° 59,309' E	3488	0			no data recorded
MSM72	022	14	uCTD	07.03.18	11:50	BE	34° 54,122' N	022° 59,371' E	3185	594			
MSM72	022	15	uCTD	07.03.18	12:53	BE	34° 48,189' N	022° 57,892' E	2964	638			
MSM72	022	16	uCTD	07.03.18	13:44	BE	34° 48,698' N	022° 53,095' E	2947	680			
MSM72	022	1	CTD/IADCP	07.03.18	14:32	BE	34° 48,843' N	022° 51,444' E	2944			CHE1	
MSM72	022	1	CTD/IADCP	07.03.18	15:27	BO	34° 48,843' N	022° 51,444' E	2944	2970	14		Test of new CTD configuration
MSM72	022	1	CTD/IADCP	07.03.18	16:41	EN	34° 48,843' N	022° 51,444' E	2945				
MSM72	022	17	uCTD	07.03.18	17:31	BE	34° 49,481' N	022° 44,416' E	2913	663			
MSM72	022	18	uCTD	07.03.18	18:30	BE	34° 50,032' N	022° 38,098' E	2906	707			
MSM72	022	19	uCTD	07.03.18	19:30	BE	34° 50,685' N	022° 32,570' E	2938	703			
MSM72	022	20	uCTD	07.03.18	20:30	BE	34° 51,348' N	022° 26,895' E	2992	721			
MSM72	022	21	uCTD	07.03.18	21:30	BE	34° 51,743' N	022° 20,618' E	3047	723			
MSM72	022	22	uCTD	07.03.18	22:30	BE	34° 52,403' N	022° 14,853' E	3098	662			
MSM72	022	23	uCTD	07.03.18	23:30	BE	34° 52,809' N	022° 08,485' E	3132	661			
MSM72	022	24	uCTD	08.03.18	0:31	BE	34° 53,704' N	022° 02,174' E	3298	674			
MSM72	022	25	uCTD	08.03.18	1:31	BE	34° 54,344' N	021° 55,913' E	3145	687			
MSM72	022	26	uCTD	08.03.18	2:28	BE	34° 55,030' N	021° 50,167' E	3157	669			
MSM72	022	27	uCTD	08.03.18	3:32	BE	34° 55,714' N	021° 43,348' E	3133	696			
MSM72	022	28	uCTD	08.03.18	4:29	BE	34° 56,354' N	021° 37,547' E	3257	692			
MSM72	022	29	uCTD	08.03.18	5:27	BE	34° 57,015' N	021° 31,588' E	3267	710			
MSM72	022	30	uCTD	08.03.18	6:30	BE	34° 57,754' N	021° 24,631' E	2899	785			
MSM72	022	31	uCTD	08.03.18	7:30	BE	34° 57,845' N	021° 19,067' E	2633	787			
MSM72	022	32	uCTD	08.03.18	8:30	BE	34° 58,487' N	021° 14,311' E	2733	773			
MSM72	022	33	uCTD	08.03.18	9:28	BE	35° 01,889' N	021° 04,678' E	2738	772			
MSM72	022	34	uCTD	08.03.18	11:00	BE	35° 01,889' N	021° 04,678' E	2738	672			
MSM72	022	35	uCTD	08.03.18	12:01	BE	35° 04,387' N	021° 09,788' E	2860	667			
MSM72	022	36	uCTD	08.03.18	12:59	BE	35° 06,651' N	021° 14,287' E	2816	638			
MSM72	022	37	uCTD	08.03.18	14:05	BE	35° 08,837' N	021° 19,654' E	3107	649			
MSM72	023	1	CTD/IADCP	08.03.18	21:26	BE	35° 40,991' N	022° 28,017' E	4525			CHE1	
MSM72	023	1	CTD/IADCP	08.03.18	22:45	BO	35° 40,992' N	022° 28,015' E	4524	4528	11		
MSM72	023	1	CTD/IADCP	09.03.18	0:35	EN	35° 40,991' N	022° 28,014' E	4525				
MSM72	023	38	uCTD	09.03.18	2:07	BE	35° 40,466' N	022° 42,414' E	0	651			
MSM72	024	1	CTD/IADCP	09.03.18	3:39	BE	35° 39,990' N	022° 55,027' E	2965			CHE1	
MSM72	024	1	CTD/IADCP	09.03.18	4:32	BO	35° 39,989' N	022° 55,027' E	2969	2987	15		
MSM72	024	1	CTD/IADCP	09.03.18	5:40	EN	35° 39,989' N	022° 55,028' E	2969				
MSM72	024	39	uCTD	09.03.18	6:38	BE	35° 47,000' N	022° 58,292' E	1842	802			
MSM72	025	1	CTD/IADCP	09.03.18	8:09	BE	35° 54,986' N	023° 02,031' E	1051			PHY	
MSM72	025	1	CTD/IADCP	09.03.18	8:36	BO	35° 54,990' N	023° 02,028' E	1049	1053	10		
MSM72	025	1	CTD/IADCP	09.03.18	9:02	EN	35° 54,990' N	023° 02,029' E	1049				
MSM72	025	40	uCTD	09.03.18	10:39	BE	35° 57,879' N	022° 45,088' E	1163	695			
MSM72	026	1	CTD/IADCP	09.03.18	12:15	BE	35° 59,990' N	022° 32,028' E	3164			CHE1	
MSM72	026	1	CTD/IADCP	09.03.18	13:13	BO	35° 59,993' N	022° 32,024' E	3167	3200	9		
MSM72	026	1	CTD/IADCP	09.03.18	14:31	EN	35° 59,994' N	022° 32,024' E	3169				
MSM72	026	41	uCTD	09.03.18	15:27	BE	36° 07,090' N	022° 31,180' E	2792	706			
MSM72	027	1	CTD/IADCP	09.03.18	16:51	BE	36° 14,987' N	022° 30,031' E	2164			PHY	
MSM72	027	1	CTD/IADCP	09.03.18	17:31	BO	36° 14,986' N	022° 30,029' E	2166	2190	14		
MSM72	027	1	CTD/IADCP	09.03.18	18:16	EN	36° 14,986' N	022° 30,029' E	2163				
MSM72	027	42	uCTD	09.03.18	20:17	BE	36° 15,492' N	022° 06,983' E	2713	749			
MSM72	028	1	CTD/IADCP	09.03.18	22:58	BE	36° 15,843' N	021° 42,536' E	3571			CHE1	
MSM72	028	1	CTD/IADCP	10.03.18	0:02	BO	36° 15,809' N	021° 42,499' E	3571	3605	8		
MSM72	028	1	CTD/IADCP	10.03.18	1:33	EN	36° 15,809' N	021° 42,499' E	3576				
MSM72	029	43	uCTD	10.03.18	1:45	BE	36° 16,011' N	021° 42,555' E	3539	650			
MSM72	029	44	uCTD	10.03.18	2:45	BE	36° 22,209' N	021° 44,487' E	3551	672			
MSM72	029	45	uCTD	10.03.18	3:44	BE	36° 27,591' N	021° 45,995' E	3093	667			
MSM72	029	46	uCTD	10.03.18	4:43	BE	36° 33,464' N	021° 47,564' E	2427	694			
MSM72	029	47	uCTD	10.03.18	5:43	BE	36° 32,959' N	021° 48,632' E	2280	783			
MSM72	029	48	uCTD	10.03.18	6:45	BE	36° 26,914' N	021° 49,855' E	2488	785			
MSM72	029	49	uCTD	10.03.18	7:47	BE	36° 20,742' N	021° 51,043' E	3744	778			
MSM72	029	50	uCTD	10.03.18	9:17	BE	36° 13,660' N	021° 52,271' E	3545	765			
MSM72	029	51	uCTD	10.03.18	10:14	BE	36° 08,564' N	021° 53,432' E	3160	765			
MSM72	029	52	uCTD	10.03.18	11:15	BE	36° 05,966' N	021° 48,443' E	3886	757			
MSM72	029	53	uCTD	10.03.18	12:14	BE	36° 06,015' N	021° 41,212' E	3567	787			
MSM72	029	54	uCTD	10.03.18	13:15	BE	36° 06,027' N	021° 33,438' E	3607	783			
MSM72	029	55	uCTD	10.03.18	14:14	BE	36° 06,004' N	021° 25,814' E	3693	773			
MSM72	029	56	uCTD	10.03.18	15:14	BE	36° 08,009' N	021° 19,984' E	3972	816			
MSM72	029	57	uCTD	10.03.18	16:13	BE	36° 13,914' N	021° 19,993' E	4352	818			
MSM72	029	58	uCTD	10.03.18	17:14	BE	36° 20,172' N	021° 20,053' E	4312	814			
MSM72	029	59	uCTD	10.03.18	18:12	BE	36° 25,947' N	021° 19,997' E	4213	789			
MSM72	30	1	CTD/IADCP	10.03.18	19:08	BE	36° 30,008' N	021° 20,027' E	4225			CHE1	

MSM72	30	1	CTD/IADCP	10.03.18	20:25	BO	36° 30,042' N	021° 20,025' E	4233	4290	11		
MSM72	30	1	CTD/IADCP	10.03.18	22:02	EN	36° 30,042' N	021° 20,025' E	4235				
MSM72	30	60	uCTD	11.03.18	0:04	BE	36° 44,697' N	021° 05,365' E	3919	722			
MSM72	31	1	CTD/IADCP	11.03.18	2:23	BE	36° 58,485' N	020° 51,618' E	2574			PHY	
MSM72	31	1	CTD/IADCP	11.03.18	3:15	BO	36° 58,486' N	020° 51,618' E	2578	2554	3		
MSM72	31	1	CTD/IADCP	11.03.18	3:56	EN	36° 58,485' N	020° 51,618' E	2575				
MSM72	31	61	uCTD	11.03.18	5:43	BE	37° 09,676' N	020° 36,886' E	2595	730			
MSM72	32	1	CTD/IADCP	11.03.18	8:04	BE	37° 22,514' N	020° 20,035' E	4250			CHE1	
MSM72	32	1	CTD/IADCP	11.03.18	9:18	BO	37° 22,511' N	020° 20,030' E	4250	4322	10		
MSM72	32	1	CTD/IADCP	11.03.18	11:01	EN	37° 22,511' N	020° 20,030' E	4496				
MSM72	32	3	Float AVOR I	11.03.18	11:04	deployed	37° 22,506' N	020° 20,031' E	4240				
MSM72	32	62	uCTD	11.03.18	13:08	BE	37° 40,883' N	020° 17,378' E	2714	728			
MSM72	33	1	CTD/IADCP/LISST	11.03.18	15:17	BE	37° 57,621' N	020° 15,026' E	813			PHY	
MSM72	33	1	CTD/IADCP/LISST	11.03.18	15:34	BO	37° 57,621' N	020° 15,026' E	811	807	15		
MSM72	33	1	CTD/IADCP/LISST	11.03.18	0:00	EN	37° 57,622' N	020° 15,025' E	811				
MSM72	33	63	uCTD	11.03.18	17:29	BE	38° 11,122' N	020° 08,073' E	3400	747			
MSM72	34	1	CTD/IADCP	11.03.18	19:24	BE	38° 23,926' N	020° 01,525' E	2602			CHE2	
MSM72	34	1	CTD/IADCP	11.03.18	20:12	BO	38° 23,918' N	020° 01,535' E	2603	2624	10		
MSM72	34	1	CTD/IADCP	11.03.18	21:14	EN	38° 23,918' N	020° 01,536' E	2599				
MSM72	34	2	CTD	11.03.18	22:27	BE	38° 23,920' N	020° 01,534' E	2605				
MSM72	34	2	CTD	11.03.18	22:35	BO	38° 23,920' N	020° 01,534' E	2604	203			
MSM72	34	2	CTD	11.03.18	22:49	EN	38° 23,920' N	020° 01,534' E	2602				
MSM72	34	4	Float PROV-BIO	11.03.18	22:51	deployed	38° 23,918' N	020° 01,538' E	2600				
MSM72	34	64	uCTD	12.03.18	0:38	BE	38° 38,072' N	019° 54,189' E	1922	695			
MSM72	35	1	CTD/IADCP	12.03.18	2:25	BE	38° 50,114' N	019° 47,991' E	1455			PHY	
MSM72	35	1	CTD/IADCP	12.03.18	2:55	BO	38° 50,111' N	019° 47,990' E	1448	1458	14		
MSM72	35	1	CTD/IADCP	12.03.18	3:25	EN	38° 50,112' N	019° 47,991' E	1463				
MSM72	35	65	uCTD	12.03.18	4:50	BE	39° 02,029' N	019° 43,222' E	1444	765			
MSM72	36	1	CTD/IADCP	12.03.18	6:44	BE	39° 15,031' N	019° 37,997' E	1406			CHE1	
MSM72	36	1	CTD/IADCP	12.03.18	7:11	BO	39° 15,043' N	019° 38,021' E	1404	1412	10		
MSM72	36	1	CTD/IADCP	12.03.18	7:56	EN	39° 15,042' N	019° 38,020' E	1406				
MSM72	36	66	uCTD	12.03.18	9:22	BE	39° 27,162' N	019° 33,112' E	1253	747			
MSM72	37	1	CTD/IADCP	12.03.18	11:14	BE	39° 40,221' N	019° 27,885' E	345			PHY	
MSM72	37	1	CTD/IADCP	12.03.18	11:26	BO	39° 40,222' N	019° 27,885' E	346	339	11		
MSM72	37	1	CTD/IADCP	12.03.18	11:38	EN	39° 40,222' N	019° 27,886' E	347				
MSM72	37	67	uCTD	12.03.18	12:54	BE	39° 49,228' N	019° 19,903' E	823	646			
MSM72	38	1	CTD/IADCP	12.03.18	14:04	BE	39° 56,025' N	019° 16,994' E	986			CHE1	
MSM72	38	1	CTD/IADCP	12.03.18	14:25	BO	39° 56,025' N	019° 16,994' E	987	982	15		
MSM72	38	1	CTD/IADCP	12.03.18	14:55	EN	39° 56,025' N	019° 16,994' E	985				
MSM72	38	68	uCTD	12.03.18	15:44	BE	40° 02,085' N	019° 18,202' E	996	695			
MSM72	39	1	CTD/IADCP/LISST	12.03.18	17:04	BE	40° 10,237' N	019° 19,830' E	937			PHY	
MSM72	39	1	CTD/IADCP/LISST	12.03.18	17:24	BO	40° 10,237' N	019° 19,831' E	935	925	15		
MSM72	39	1	CTD/IADCP/LISST	12.03.18	17:54	EN	40° 10,237' N	019° 19,830' E	937				
MSM72	40	1	CTD/IADCP/LISST	12.03.18	19:05	BE	40° 10,231' N	019° 10,218' E	970			CHE1	
MSM72	40	1	CTD/IADCP/LISST	12.03.18	19:27	BO	40° 10,232' N	019° 10,217' E	969	967	10		
MSM72	40	1	CTD/IADCP/LISST	12.03.18	20:06	EN	40° 10,231' N	019° 10,217' E	973				
MSM72	41	1	CTD/IADCP/LISST	12.03.18	21:17	BE	40° 10,220' N	019° 00,043' E	919			PHY	
MSM72	41	1	CTD/IADCP/LISST	12.03.18	21:36	BO	40° 10,222' N	019° 00,045' E	926	915	10		
MSM72	41	1	CTD/IADCP/LISST	12.03.18	22:13	EN	40° 10,222' N	019° 00,045' E	921				
MSM72	42	1	CTD/IADCP/LISST	12.03.18	23:15	BE	40° 10,223' N	018° 49,789' E	777			CHE1	
MSM72	42	1	CTD/IADCP/LISST	12.03.18	23:34	BO	40° 10,223' N	018° 49,788' E	777	774	10		
MSM72	42	1	CTD/IADCP/LISST	13.03.18	0:06	EN	40° 10,222' N	018° 49,789' E	774				
MSM72	43	1	CTD/IADCP/LISST	13.03.18	1:07	BE	40° 10,230' N	018° 43,015' E	597			PHY	
MSM72	43	1	CTD/IADCP/LISST	13.03.18	1:22	BO	40° 10,229' N	018° 43,016' E	598	589	9		
MSM72	43	1	CTD/IADCP/LISST	13.03.18	1:49	EN	40° 10,229' N	018° 43,016' E	598				
MSM72	43	69	uCTD	13.03.18	4:18	BE	39° 49,705' N	018° 58,653' E	904	718			
MSM72	43	70	uCTD	13.03.18	6:18	BE	39° 36,106' N	019° 08,904' E	1082,1	754			
MSM72	43	71	uCTD	13.03.18	8:13	BE	39° 22,396' N	019° 19,285' E	1167,6	727			
MSM72	43	72	uCTD	13.03.18	10:16	BE	39° 07,414' N	019° 30,607' E	1102,3	797			
MSM72	43	73	uCTD	13.03.18	12:15	BE	38° 52,918' N	019° 41,961' E	1340,5	729			
MSM72	43	74	uCTD	13.03.18	14:14	BE	38° 38,660' N	019° 52,648' E	1761,7	731			
MSM72	43	75	uCTD	13.03.18	16:13	BE	38° 24,230' N	020° 03,409' E	2684,6	712			
MSM72	43	76	uCTD	13.03.18	18:12	BE	38° 09,169' N	020° 11,644' E	2505,2	746			
MSM72	43	77	uCTD	13.03.18	20:14	BE	37° 54,040' N	020° 23,862' E	1599,2	739			
MSM72	43	78	uCTD	13.03.18	22:15	BE	37° 39,699' N	020° 35,585' E	1129,2	697			
MSM72	43	79	uCTD	14.03.18	0:14	BE	37° 25,669' N	020° 45,781' E	3361,7	701			
MSM72	43	80	uCTD	14.03.18	4:13	BE	36° 53,692' N	021° 09,335' E	2015,9	771			
MSM72	43	81	uCTD	14.03.18	6:16	BE	36° 39,668' N	021° 22,171' E	4108	745			
MSM72	43	82	uCTD	14.03.18	8:13	BE	36° 26,328' N	021° 33,766' E	3898,2	847			
MSM72	44	1	CTD/IADCP	14.03.18	16:18	BE	35° 01,984' N	022° 40,044' E	3154			CHE1	
MSM72	44	1	CTD/IADCP	14.03.18	17:18	BO	35° 02,016' N	022° 40,019' E	3154	3186	15.16		
MSM72	44	1	CTD/IADCP	14.03.18	18:36	EN	35° 02,016' N	022° 40,019' E	3155				
MSM72	44	83	uCTD	14.03.18	19:32	BE	35° 03,141' N	022° 31,015' E	3346,7	731			
MSM72	45	1	CTD/IADCP	14.03.18	20:50	BE	35° 04,590' N	022° 20,042' E	3314			PHY	
MSM72	45	1	CTD/IADCP	14.03.18	21:53	BO	35° 04,628' N	022° 20,009' E	3321	3372	11.2		
MSM72	45	1	CTD/IADCP	14.03.18	22:55	EN	35° 04,629' N	022° 20,007' E	3309				
MSM72	45	84	uCTD	14.03.18	23:45	BE	35° 05,824' N	022° 10,493' E	3185,9	705			
MSM72	46	1	CTD/IADCP	15.03.18	0:59	BE	35° 07,209' N	021° 59,405' E	3252			CHE1	
MSM72	46	1	CTD/IADCP	15.03.18	1:59	BO	35° 07,230' N	021° 59,410' E	3247	3275	10		
MSM72	46	1	CTD/IADCP	15.03.18	3:15	EN	35° 07,239' N	021° 59,411' E	3244				
MSM72	46	85	uCTD	15.03.18	4:25	BE	35° 10,719' N	021° 44,345' E	3304,1	672			
MSM72	47	1	CTD/IADCP	15.03.18	5:56	BE	35° 14,319' N	021° 28,850' E	3527			CHE2	
MSM72	47	1	CTD/IADCP	15.03.18	6:23	BO	35° 14,319' N	021° 28,850' E	3514	1262			

MSM72	47	1	CTD/IADCP	15.03.18	7:12	EN	35° 14,319' N	021° 28,850' E					
MSM72	47	2	CTD/IADCP	15.03.18	8:40	BE	35° 14,394' N	021° 28,850' E	3522			CHE2	
MSM72	47	2	CTD/IADCP	15.03.18	9:46	BO	35° 14,394' N	021° 28,850' E	3528		10.1		
MSM72	47	2	CTD/IADCP	15.03.18	10:56	EN	35° 14,393' N	021° 28,848' E	3536				
MSM72	47	86	uCTD	15.03.18	12:04	BE	35° 11,648' N	021° 14,156' E	3095,9	730			
MSM72	48	1	CTD/IADCP	15.03.18	13:32	BE	35° 08,979' N	021° 00,065' E	3076			PHY	
MSM72	48	1	CTD/IADCP	15.03.18	14:27	BO	35° 08,992' N	021° 00,050' E	3078	3118	14.8		
MSM72	48	1	CTD/IADCP	15.03.18	15:25	EN	35° 08,992' N	021° 00,051' E	3076				
MSM72	48	87	uCTD	15.03.18	16:10	BE	35° 07,853' N	020° 50,846' E	2805,9	761			
MSM72	49	1	CTD/IADCP/LISST	15.03.18	17:20	BE	35° 06,588' N	020° 14,523' E	2844			CHE1	
MSM72	49	1	CTD/IADCP/LISST	15.03.18	18:13	BO	35° 06,588' N	020° 14,523' E	2851	2877	9.3		
MSM72	49	1	CTD/IADCP/LISST	15.03.18	19:28	EN	35° 06,588' N	020° 14,523' E	2848				
MSM72	49	88	uCTD	15.03.18	20:12	BE	35° 05,528' N	020° 31,758' E	2957,9	757			
MSM72	50	1	CTD/IADCP/LISST	15.03.18	21:27	BE	35° 04,218' N	020° 21,053' E	2984			PHY	
MSM72	50	1	CTD/IADCP/LISST	15.03.18	22:22	BO	35° 04,234' N	020° 21,014' E	2996	3014	9.9		
MSM72	50	1	CTD/IADCP/LISST	15.03.18	23:16	EN	35° 04,234' N	020° 21,013' E	2956				
MSM72	50	5	Drifter	15.03.18	23:24	deployed	35° 04,189' N	020° 20,990' E	3237				
MSM72	50	89	uCTD	16.03.18	0:31	BE	35° 07,565' N	020° 06,521' E	2957,9	685			
MSM72	51	1	CTD/IADCP	16.03.18	1:58	BE	35° 10,760' N	019° 53,220' E	2976			CHE1	
MSM72	51	1	CTD/IADCP	16.03.18	2:55	BO	35° 10,760' N	019° 53,219' E	2975	2982	15.1		
MSM72	51	1	CTD/IADCP	16.03.18	4:05	EN	35° 10,760' N	019° 53,219' E	2975				
MSM72	51	90	uCTD	16.03.18	4:57	BE	35° 13,510' N	019° 41,652' E	3176,1	731			
MSM72	52	1	CTD/IADCP	16.03.18	6:36	BE	35° 17,144' N	019° 25,472' E	3366,1			CHE1	
MSM72	52	1	CTD/IADCP	16.03.18	7:38	BO	35° 17,143' N	019° 25,474' E	3368,7	3402,4	10.8		
MSM72	52	1	CTD/IADCP	16.03.18	8:54	EN	35° 17,143' N	019° 25,474' E	3368,3				
MSM72	52	91	uCTD	16.03.18	6:37	BE	35° 17,145' N	019° 25,473' E	3369	733			
MSM72	53	1	CTD/IADCP	16.03.18	11:50	BE	35° 23,621' N	018° 57,817' E	3771			CHE1	
MSM72	53	1	CTD/IADCP	16.03.18	12:55	BO	35° 23,621' N	018° 57,818' E	3771	3825	9.2		
MSM72	53	1	CTD/IADCP	16.03.18	14:23	EN	35° 23,621' N	018° 57,816' E	3772				
MSM72	53	92	uCTD	16.03.18	15:32	BE	35° 27,785' N	018° 44,951' E	3917,7	724			
MSM72	54	1	CTD/IADCP	16.03.18	17:09	BE	35° 30,019' N	018° 29,977' E	4029			PHY	
MSM72	54	1	CTD/IADCP	16.03.18	18:32	BO	35° 29,658' N	018° 29,959' E	4018	4029	10.3		
MSM72	54	1	CTD/IADCP	16.03.18	19:49	EN	35° 29,379' N	018° 29,956' E					
MSM72	54	6	Float	16.03.18	19:59	deployed	35° 29,341' N	018° 29,951' E	4016				
MSM72	54	7	Drifter	16.03.18	20:09	deployed	35° 28,541' N	018° 30,037' E	4283,8				
MSM72	54	93	uCTD	16.03.18	20:49	BE	35° 24,683' N	018° 23,038' E	3908,4	816			
MSM72	55	1	CTD/IADCP	16.03.18	22:22	BE	35° 18,001' N	018° 11,991' E	3866			CHE2	
MSM72	55	1	CTD/IADCP	16.03.18	23:32	BO	35° 18,002' N	018° 11,991' E	3862	3924	9.9		
MSM72	55	1	CTD/IADCP	17.03.18	0:55	EN	35° 18,000' N	018° 11,993' E	3868				
MSM72	55	2	CTD/IADCP	17.03.18	2:08	BE	35° 18,000' N	018° 11,994' E	3865,7			CHE2	
MSM72	55	2	CTD/IADCP	17.03.18	2:30	BO	35° 17,996' N	018° 11,995' E	3865,7	1009			
MSM72	55	2	CTD/IADCP	17.03.18	3:02	EN	35° 17,996' N	018° 11,993' E	3865,7				
MSM72	56	1	CTD/IADCP	17.03.18	5:05	BE	35° 06,023' N	017° 53,992' E	3579			PHY	
MSM72	56	1	CTD/IADCP	17.03.18	6:10	BO	35° 06,020' N	017° 53,992' E	3576	3615	14.6		
MSM72	56	1	CTD/IADCP	17.03.18	7:21	EN	35° 06,022' N	017° 53,992' E	3591				
MSM72	57	1	CTD/IADCP	17.03.18	9:51	BE	34° 54,048' N	017° 35,983' E	2965			CHE1	
MSM72	57	1	CTD/IADCP	17.03.18	10:45	BO	34° 54,048' N	017° 35,988' E	2950	2994	12		
MSM72	57	1	CTD/IADCP	17.03.18	12:02	EN	34° 54,047' N	017° 35,987' E	2962				
MSM72	58	1	CTD/IADCP	17.03.18	14:21	BE	34° 42,007' N	017° 18,012' E	2830			PHY	
MSM72	58	1	CTD/IADCP	17.03.18	15:15	BO	34° 42,006' N	017° 18,011' E	2831	2856	14		
MSM72	58	1	CTD/IADCP	17.03.18	16:10	EN	34° 42,008' N	017° 18,012' E	2832				
MSM72	59	1	CTD/IADCP/LISST	17.03.18	18:47	BE	34° 50,995' N	016° 48,006' E	2292			CHE1	
MSM72	59	1	CTD/IADCP/LISST	17.03.18	19:32	BO	34° 50,995' N	016° 48,006' E	2292	2310	9.8		
MSM72	59	1	CTD/IADCP/LISST	17.03.18	20:32	EN	34° 50,995' N	016° 48,006' E	2290				
MSM72	59	94	uCTD	17.03.18	21:53	BE	34° 55,376' N	016° 33,362' E	2085,9	758			
MSM72	60	1	CTD/IADCP	17.03.18	23:45	BE	35° 00,007' N	016° 17,985' E	1504			PHY	
MSM72	60	1	CTD/IADCP	18.03.18	0:16	BO	35° 00,009' N	016° 17,985' E	1497	1487	11.5		
MSM72	60	1	CTD/IADCP	18.03.18	0:47	EN	35° 00,009' N	016° 17,986' E	1495				
MSM72	61	1	CTD/IADCP	18.03.18	4:05	BE	35° 18,894' N	015° 49,817' E	413			CHE1	
MSM72	61	1	CTD/IADCP	18.03.18	4:18	BO	35° 18,864' N	015° 49,829' E	413	406	10.2		
MSM72	61	1	CTD/IADCP	18.03.18	4:37	EN	35° 18,808' N	015° 49,858' E	415				
MSM72	62	1	CTD/IADCP/LISST	18.03.18	7:41	BE	35° 37,783' N	015° 21,642' E	284			PHY	
MSM72	62	1	CTD/IADCP/LISST	18.03.18	7:53	BO	35° 37,786' N	015° 21,641' E	284	279	10.5		
MSM72	62	1	CTD/IADCP/LISST	18.03.18	8:04	EN	35° 37,786' N	015° 21,640' E	286				
MSM72	63	1	CTD/IADCP	18.03.18	11:41	BE	35° 37,920' N	014° 45,780' E	134			CHE1	
MSM72	63	1	CTD/IADCP	18.03.18	11:48	BO	35° 37,920' N	014° 45,780' E	134	125	9.2		
MSM72	63	1	CTD/IADCP	18.03.18	11:59	EN	35° 37,920' N	014° 45,781' E	135				
MSM72	64	1	CTD/IADCP	18.03.18	15:06	BE	35° 38,029' N	014° 10,026' E	560			PHY	
MSM72	64	1	CTD/IADCP	18.03.18	15:26	BO	35° 38,028' N	014° 10,025' E	556	546	14		
MSM72	64	1	CTD/IADCP	18.03.18	15:41	EN	35° 38,028' N	014° 10,025' E	551				
MSM72	64	95	uCTD	18.03.18	17:38	BE	35° 43,562' N	013° 45,671' E	601,8	547			
MSM72	64	96	uCTD	18.03.18	20:02	BE	35° 48,069' N	013° 18,644' E	1446,4	667			
MSM72	65	1	CTD/IADCP	18.03.18	22:19	BE	35° 49,994' N	013° 05,030' E	1527			PHY	
MSM72	65	1	CTD/IADCP	18.03.18	22:52	BO	35° 49,965' N	013° 05,074' E	1530	1536,3	11.6		
MSM72	65	1	CTD/IADCP	18.03.18	23:22	EN	35° 49,944' N	013° 05,105' E	1526				
MSM72	65	97	uCTD	18.03.18	23:36	BE	35° 50,143' N	013° 05,354' E	1532,9	665			
MSM72	66	1	CTD/IADCP	19.03.18	3:05	BE	36° 00,995' N	013° 47,503' E	1109			CHE1	
MSM72	66	1	CTD/IADCP	19.03.18	3:30	BO	36° 00,995' N	013° 47,503' E	1111	1111	13.2		
MSM72	66	1	CTD/IADCP	19.03.18	4:03	EN	36° 00,994' N	013° 47,502' E	1108				
MSM72	66	98	uCTD	19.03.18	4:45	BE	36° 06,896' N	013° 44,004' E	1036,3	647			
MSM72	67	1	CTD/IADCP	19.03.18	5:52	BE	36° 12,990' N	013° 38,977' E	1309			PHY	
MSM72	67	1	CTD/IADCP	19.03.18	6:23	BO	36° 12,990' N	013° 38,976' E	1308	1315	9.9		
MSM72	67	1	CTD/IADCP	19.03.18	6:53	EN	36° 12,984' N	013° 38,971' E	1306				

MSM72	67	99	uCTD	19.03.18	7:44	BE	36° 18,722' N	013° 31,740' E	1265,4	729			
MSM72	68	1	CTD/IADCP/LISST	19.03.18	8:53	BE	36° 23,980' N	013° 25,031' E	1714			CHE2	
MSM72	68	1	CTD/IADCP/LISST	19.03.18	9:35	BO	36° 23,981' N	013° 25,032' E	1710	1722	10.7		
MSM72	68	1	CTD/IADCP/LISST	19.03.18	10:24	EN	36° 23,980' N	013° 25,032' E	1712				
MSM72	68	100	uCTD	19.03.18	11:03	BE	36° 26,885' N	013° 19,663' E	1722	722			
MSM72	69	1	CTD/IADCP/LISST	19.03.18	12:01	BE	36° 30,016' N	013° 13,982' E	1715			PHY	
MSM72	69	1	CTD/IADCP/LISST	19.03.18	12:36	BO	36° 30,018' N	013° 13,981' E	1713	1705	10.3		
MSM72	69	1	CTD/IADCP/LISST	19.03.18	13:10	EN	36° 30,018' N	013° 13,982' E	1714				
MSM72	69	101	uCTD	19.03.18	14:05	BE	36° 33,803' N	013° 04,473' E	1213,9	799			
MSM72	70	1	CTD/IADCP/LISST	19.03.18	15:12	BE	36° 36,493' N	012° 57,799' E	1008			CHE1	
MSM72	70	1	CTD/IADCP/LISST	19.03.18	15:35	BO	36° 36,494' N	012° 57,798' E	1013	1013.5	13.45		
MSM72	70	1	CTD/IADCP/LISST	19.03.18	16:07	EN	36° 36,494' N	012° 57,798' E	1026				
MSM72	70	102	uCTD	19.03.18	16:48	BE	36° 36,860' N	012° 50,504' E	785,5	559			
MSM72	70	103	uCTD	19.03.18	18:00	BE	36° 37,485' N	012° 38,783' E	1193	699			
MSM72	71	1	CTD/IADCP/LISST	19.03.18	19:24	BE	36° 37,985' N	012° 29,522' E	1327			PHY	
MSM72	71	1	CTD/IADCP/LISST	19.03.18	19:55	BO	36° 37,985' N	012° 29,520' E	1311	1313	9.5		
MSM72	71	1	CTD/IADCP/LISST	19.03.18	20:23	EN	36° 37,985' N	012° 29,520' E	1308				
MSM72	71	104	uCTD	19.03.18	21:13	BE	36° 39,242' N	012° 23,235' E	1315,7	777			
MSM72	72	1	CTD/IADCP	19.03.18	22:47	BE	36° 38,022' N	012° 15,028' E	1302			CHE1	
MSM72	72	1	CTD/IADCP	19.03.18	23:16	BO	36° 38,022' N	012° 15,030' E	1302	1308	10.7		
MSM72	72	1	CTD/IADCP	19.03.18	23:53	EN	36° 38,022' N	012° 15,030' E	?				
MSM72	72	105	uCTD	20.03.18	0:17	BE	36° 38,387' N	012° 14,986' E	1304,4	705			
MSM72	72	106	uCTD	20.03.18	2:03	BE	36° 48,949' N	012° 12,009' E	1163	683			
MSM72	73	1	CTD/IADCP/LISST	20.03.18	7:05	BE	37° 21,324' N	012° 03,008' E	78			CHE1	
MSM72	73	1	CTD/IADCP/LISST	20.03.18	7:09	BO	37° 21,324' N	012° 03,011' E	77	72.2	8,7		
MSM72	73	1	CTD/IADCP/LISST	20.03.18	7:17	EN	37° 21,324' N	012° 03,010' E	79				
MSM72	74	1	CTD/IADCP/LISST	20.03.18	10:10	BE	37° 32,035' N	012° 22,046' E	80			PHY	
MSM72	74	1	CTD/IADCP/LISST	20.03.18	10:20	BO	37° 32,017' N	012° 22,087' E	80	67.8	9,5		
MSM72	74	1	CTD/IADCP/LISST	20.03.18	10:25	EN	37° 32,003' N	012° 22,129' E	80				
MSM72	75	1	CTD/IADCP	21.03.18	6:37	BE	39° 10,979' N	013° 30,062' E	3076			CHE1	Bottles did not close, ctd probe changed
MSM72	75	1	CTD/IADCP	21.03.18	7:38	BO	39° 10,948' N	013° 30,066' E	3096	3122	11.6		
MSM72	75	1	CTD/IADCP	21.03.18	8:50	EN	39° 10,948' N	013° 30,066' E					
MSM72	75	2	CTD/IADCP	21.03.18	11:14	BE	39° 10,946' N	013° 30,067' E	3095			CHE1	
MSM72	75	2	CTD/IADCP	21.03.18	12:14	BO	39° 10,948' N	013° 30,066' E	3100	3127	6.5		
MSM72	75	2	CTD/IADCP	21.03.18	13:28	EN	39° 10,948' N	013° 30,067' E	3100				
MSM72	75	7	Float	21.03.18	14:42	deployed	39° 10,948' N	013° 30,06' E	3083				
MSM72	75	107	uCTD	21.03.18	15:56	BE	39° 11,983' N	013° 10,128' E	3151,5	760			
MSM72	76	1	CTD/IADCP	21.03.18	17:37	BE	39° 12,988' N	012° 50,028' E	3414			PHY	
MSM72	76	1	CTD/IADCP	21.03.18	18:44	BO	39° 13,000' N	012° 50,029' E	3418	3465.9	8.8		
MSM72	76	1	CTD/IADCP	21.03.18	19:50	EN	39° 13,000' N	012° 50,027' E	3417				
MSM72	76	108	uCTD	21.03.18	22:04	BE	39° 13,036' N	012° 29,529' E	3170,3				
MSM72	76	109	uCTD	22.03.18	22:04	BE	39° 13,110' N	012° 05,920' E	3100				
MSM72	77	1	CTD/IADCP	22.03.18	1:59	BE	39° 13,198' N	011° 45,041' E	3216			CHE2	
MSM72	77	1	CTD/IADCP	22.03.18	2:17	BO	39° 13,198' N	011° 45,042' E	3218	758			
MSM72	77	1	CTD/IADCP	22.03.18	2:44	EN	39° 13,198' N	011° 45,041' E	3217				
MSM72	77	2	CTD/IADCP	22.03.18	3:49	BE	39° 13,197' N	011° 45,039' E	3218			CHE2	
MSM72	77	2	CTD/IADCP	22.03.18	4:49	BO	39° 13,010' N	011° 44,992' E	3155	3219	14.1		
MSM72	77	2	CTD/IADCP	22.03.18	5:54	EN	39° 12,920' N	011° 44,956' E	3107				
MSM72	77	8	Float	22.03.18	6:08	BE	39° 12,950' N	011° 44,96' E	3200				
MSM72	78	110	uCTD	22.03.18	6:21	BE	39° 12,704' N	011° 44,929' E	3055,5	686			
MSM72	78	111	uCTD	22.03.18	7:27	BE	39° 05,312' N	011° 44,070' E	2551,8	721			
MSM72	78	112	uCTD	22.03.18	8:33	BE	38° 58,086' N	011° 43,278' E	2284	706			
MSM72	78	113	uCTD	22.03.18	9:40	BE	38° 50,784' N	011° 42,289' E	1859,2	392			
MSM72	78	114	uCTD	22.03.18	10:57	BE	38° 42,283' N	011° 41,445' E	1933,2	718			
MSM72	78	115	uCTD	22.03.18	12:25	BE	38° 31,965' N	011° 41,040' E	2512,4	716			
MSM72	78	116	uCTD	22.03.18	13:59	BE	38° 21,813' N	011° 38,655' E	1071,2	634			
MSM72	78	117	uCTD	22.03.18	15:19	BE	38° 12,334' N	011° 37,984' E	713,1	466			
MSM72	78	118	uCTD	22.03.18	16:32	BE	38° 02,816' N	011° 36,797' E	708,9	445			
MSM72	79	1	CTD/IADCP/LISST	22.03.18	17:57	BE	37° 53,489' N	011° 35,581' E	473			CHE1	
MSM72	79	1	CTD/IADCP/LISST	22.03.18	18:11	BO	37° 53,539' N	011° 35,558' E	474	470	9.7		
MSM72	79	1	CTD/IADCP/LISST	22.03.18	18:34	EN	37° 53,646' N	011° 35,508' E	476				
MSM72	80	1	CTD/IADCP	22.03.18	21:07	BE	38° 06,340' N	011° 20,776' E	493			PHY	
MSM72	80	1	CTD/IADCP	22.03.18	21:21	BO	38° 06,366' N	011° 20,776' E	500	484	9.8		
MSM72	80	1	CTD/IADCP	22.03.18	21:34	EN	38° 06,380' N	011° 20,755' E	500				
MSM72	81	1	CTD/IADCP	22.03.18	22:53	BE	38° 19,333' N	011° 6,107' E	716			CHE1	
MSM72	81	1	CTD/IADCP	23.03.18	0:10	BO	38° 19,334' N	011° 6,106' E	712	706	14.7		
MSM72	81	1	CTD/IADCP	23.03.18	0:35	EN	38° 19,332' N	011° 6,103' E	716				
MSM72	82	1	CTD/IADCP	23.03.18	2:51	BE	38° 32,213' N	010° 51,523' E	725			PHY	
MSM72	82	1	CTD/IADCP	23.03.18	3:08	BO	38° 32,213' N	010° 51,523' E	717	706	13.6		
MSM72	82	1	CTD/IADCP	23.03.18	3:27	EN	38° 32,210' N	010° 51,534' E	722				
MSM72	83	1	CTD/IADCP	23.03.18	5:35	BE	38° 44,976' N	010° 36,631' E	2468			CHE1	
MSM72	83	1	CTD/IADCP/LISST	23.03.18	6:23	BO	38° 44,977' N	010° 36,634' E	2469	2492	10.3		
MSM72	83	1	CTD/IADCP/LISST	23.03.18	7:30	EN	38° 44,978' N	010° 36,634' E	2466				
MSM72	83	2	CTD/IADCP/LISST	23.03.18	7:57	BE	38° 44,978' N	010° 36,634' E	2477			CHE1	
MSM72	83	2	CTD/IADCP/LISST	23.03.18	8:44	BO	38° 44,976' N	010° 36,631' E	2598	2492	10.9		
MSM72	83	2	CTD/IADCP/LISST	23.03.18	9:47	EN	38° 44,977' N	010° 36,631' E	2475				
MSM72	83	119	uCTD	23.03.18	11:12	BE	38° 43,878' N	010° 22,921' E	2689,6	655			
MSM72	83	120	uCTD	23.03.18	12:41	BE	38° 42,870' N	010° 09,675' E	2110,3	707			
MSM72	84	1	CTD/IADCP/LISST	23.03.18	14:02	BE	38° 42,006' N	009° 59,028' E	2277			PHY	
MSM72	84	1	CTD/IADCP/LISST	23.03.18	14:48	BO	38° 42,007' N	009° 59,026' E	2270	2297	13.6		
MSM72	84	1	CTD/IADCP/LISST	23.03.18	15:42	EN	38° 42,007' N	009° 59,029' E	2272				
MSM72	84	121	uCTD	23.03.18	16:49	BE	38° 36,329' N	009° 48,143' E	2060,7	766			

MSM72	85	1	CTD/IADCP/LISST	23.03.18	18:09	BE	38° 30,998' N	009° 38,540' E	1868			CHE1	
MSM72	85	1	CTD/IADCP/LISST	23.03.18	18:49	BO	38° 30,997' N	009° 38,543' E	1866	1884	8		
MSM72	85	1	CTD/IADCP/LISST	23.03.18	19:40	EN	38° 30,997' N	009° 38,544' E	1867				
MSM72	85	122	uCTD	23.03.18	19:53	BE	38° 30,919' N	009° 38,023' E	1869,2	715			
MSM72	85	123	uCTD	23.03.18	21:25	BE	38° 24,087' N	009° 26,078' E	1629,6	775			
MSM72	86	1	CTD/IADCP	23.03.18	22:45	BE	38° 19,982' N	009° 18,024' E	1934			PHY	
MSM72	86	1	CTD/IADCP	23.03.18	23:22	BO	38° 19,982' N	009° 18,023' E	1927	1942	14.3		
MSM72	86	1	CTD/IADCP	23.03.18	0:00	EN	38° 19,983' N	009° 18,018' E	1930				
MSM72	86	124	uCTD	24.03.18	1:05	BE	38° 19,242' N	009° 07,590' E	1991,3	705			
MSM72	87	1	CTD/IADCP	24.03.18	2:15	BE	38° 18,476' N	008° 58,528' E	2093			CHE1	
MSM72	87	1	CTD/IADCP	24.03.18	2:58	BO	38° 18,476' N	008° 58,525' E	2107				
MSM72	87	1	CTD/IADCP	24.03.18	3:53	EN	38° 18,476' N	008° 58,525' E	2107	2115	13,9		
MSM72	87	125	uCTD	24.03.18	4:43	BE	38° 17,771' N	008° 48,827' E	2177,6	781			
MSM72	88	1	CTD/IADCP	24.03.18	5:55	BE	38° 17,004' N	008° 39,029' E	2135			PHY	
MSM72	88	1	CTD/IADCP	24.03.18	6:41	BO	38° 17,005' N	008° 39,030' E	2124	2144	10		
MSM72	88	1	CTD/IADCP	24.03.18	7:25	EN	38° 17,004' N	008° 39,030' E	2120				
MSM72	88	126	uCTD	24.03.18	7:35	BE	38° 17,143' N	008° 38,765' E	2119,6	654			
MSM72	88	127	uCTD	24.03.18	9:03	BE	38° 22,224' N	008° 27,131' E	816,5	638			
MSM72	89	1	CTD/IADCP/LISST	24.03.18	10:12	BE	38° 25,511' N	008° 19,522' E	2097			CHE1	
MSM72	89	1	CTD/IADCP/LISST	24.03.18	10:54	BO	38° 25,526' N	008° 19,529' E	2112	2108.1	9		
MSM72	89	1	CTD/IADCP/LISST	24.03.18	11:47	EN	38° 25,525' N	008° 19,531' E	2057				
MSM72	89	128	uCTD	24.03.18	12:55	BE	38° 29,908' N	008° 09,380' E	2241,8	646			
MSM72	90	1	CTD/IADCP/LISST	24.03.18	14:12	BE	38° 34,031' N	007° 50,987' E	2211			PHY	
MSM72	90	1	CTD/IADCP/LISST	24.03.18	14:56	BO	38° 34,080' N	008° 00,128' E	2214	2220	16		
MSM72	90	1	CTD/IADCP/LISST	24.03.18	15:40	EN	38° 34,106' N	008° 00,208' E	2204				
MSM72	90	129	uCTD	24.03.18	16:48	BE	38° 39,141' N	007° 50,009' E	2381	772			
MSM72	91	1	CTD/IADCP/LISST	24.03.18	18:07	BE	38° 44,313' N	007° 40,482' E	2843			CHE2	
MSM72	91	1	CTD/IADCP/LISST	24.03.18	18:24	BO	38° 44,312' N	007° 40,483' E	2829	505			
MSM72	91	1	CTD/IADCP/LISST	24.03.18	18:48	EN	38° 44,311' N	007° 40,482' E	2946				
MSM72	91	2	CTD/IADCP/LISST	24.03.18	20:08	BE	38° 44,309' N	007° 40,482' E	2827			CHE2	
MSM72	91	2	CTD/IADCP/LISST	24.03.18	21:04	BO	38° 44,302' N	007° 40,453' E	2836	2864	9		
MSM72	91	2	CTD/IADCP/LISST	24.03.18	22:14	EN	38° 44,302' N	007° 40,463' E	2826				
MSM72	91	130	uCTD	24.03.18	22:28	BE	38° 44,480' N	007° 40,145' E	2835,2	762			
MSM72	91	131	uCTD	25.03.18	0:00	BE	38° 50,270' N	007° 28,640' E	2840,6	752			
MSM72	92	1	CTD/IADCP	25.03.18	1:16	BE	38° 54,492' N	007° 21,043' E	2842			PHY	
MSM72	92	1	CTD/IADCP	25.03.18	2:11	BO	38° 54,515' N	007° 21,012' E	2843	2868	14.6		
MSM72	92	1	CTD/IADCP	25.03.18	3:04	EN	38° 54,506' N	007° 20,984' E	2842				
MSM72	92	132	uCTD	25.03.18	3:57	BE	38° 56,455' N	007° 11,260' E	2850,2	773			
MSM72	93	1	CTD/IADCP	25.03.18	5:12	BE	38° 57,324' N	007° 01,518' E	2857			CHE1	
MSM72	93	1	CTD/IADCP	25.03.18	6:06	BO	38° 57,348' N	007° 01,506' E	2849	2857	14		
MSM72	93	1	CTD/IADCP	25.03.18	7:19	EN	38° 57,867' N	007° 01,496' E	2851				
MSM72	93	133	uCTD	25.03.18	8:20	BE	38° 58,863' N	006° 51,977' E	2848,9	683			
MSM72	94	1	CTD/IADCP/LISST	25.03.18	9:34	BE	39°00,049' N	006° 41,962' E	2848			PHY	
MSM72	94	1	CTD/IADCP/LISST	25.03.18	10:31	BO	39°00,090' N	006° 41,934' E	2852	2884	9.5		
MSM72	94	1	CTD/IADCP/LISST	25.03.18	11:26	EN	39°00,090' N	006° 41,935' E	2851				
MSM72	94	134	uCTD	25.03.18	11:39	BE	38° 59,932' N	006° 41,403' E	2853	675			
MSM72	94	135	uCTD	25.03.18	12:54	BE	38° 58,058' N	006° 31,076' E	2856,5	674			
MSM72	95	1	CTD/IADCP/LISST	25.03.18	13:56	BE	39°56,966' N	006° 24,575' E	2867			CHE1	
MSM72	95	1	CTD/IADCP/LISST	25.03.18	14:49	BO	39°56,808' N	006° 24,612' E	2865	2882	13.7		
MSM72	95	1	CTD/IADCP/LISST	25.03.18	15:57	EN	39°56,586' N	006° 24,665' E	2858				
MSM72	95	136	uCTD	25.03.18	16:39	BE	38° 55,832' N	006° 17,188' E	2862,9	738			
MSM72	96	1	CTD/IADCP/LISST	25.03.18	17:58	BE	38°53,975' N	006° 07,218' E	2854			PHY	
MSM72	96	1	CTD/IADCP/LISST	25.03.18	18:52	BO	38°53,934' N	006° 07,194' E	2857	2884	10.4		
MSM72	96	1	CTD/IADCP/LISST	25.03.18	19:48	EN	38°53,921' N	006° 07,184' E	2850,5				
MSM72	96	137	uCTD	25.03.18	20:38	BE	38° 52,754' N	005° 58,727' E	2856,6	729			
MSM72	97	1	CTD/IADCP/LISST	25.03.18	21:53	BE	38°50,974' N	005° 49,813' E	2850			CHE2	
MSM72	97	1	CTD/IADCP/LISST	25.03.18	22:08	BO	38°50,974' N	005° 49,816' E	2851	504	---		
MSM72	97	1	CTD/IADCP/LISST	25.03.18	22:29	EN	38°50,972' N	005° 49,814' E	2851				
MSM72	97	2	CTD/IADCP/LISST	25.03.18	23:46	BE	38°50,972' N	005° 49,818' E	2850			CHE2	
MSM72	97	2	CTD/IADCP/LISST	26.03.18	0:38	BO	38°50,971' N	005° 49,814' E	2850	2880	10.1		
MSM72	97	2	CTD/IADCP/LISST	26.03.18	1:40	EN	38°50,972' N	005° 49,817' E	2851				
MSM72	97	138	uCTD	26.03.18	1:55	BE	38° 50,973' N	005° 49,419' E	2842,6	654			
MSM72	97	139	uCTD	26.03.18	2:58	BE	38° 50,009' N	005° 40,419' E	2851	703			
MSM72	98	1	CTD/IADCP	26.03.18	4:03	BE	38°47,981' N	005° 32,396' E	2853			PHY	
MSM72	98	1	CTD/IADCP	26.03.18	4:58	BO	38°47,982' N	005° 32,395' E	2846	2835	13.5		
MSM72	98	1	CTD/IADCP	26.03.18	5:53	EN	38°47,981' N	005° 32,395' E	2851				
MSM72	98	140	uCTD	26.03.18	6:44	BE	38° 47,163' N	005° 23,256' E	2836	762			
MSM72	99	1	CTD/IADCP	26.03.18	8:02	BE	38°44,976' N	005° 14,998' E	2812			CHE1	
MSM72	99	1	CTD/IADCP	26.03.18	8:57	BO	38°44,976' N	005° 15,020' E	2803	2802	10		
MSM72	99	1	CTD/IADCP	26.03.18	10:11	EN	38°44,976' N	005° 15,020' E	2807				
MSM72	99	141	uCTD	26.03.18	11:08	BE	38° 43,448' N	005° 05,206' E	2800,7	709			
MSM72	100	1	CTD/IADCP/LISST	26.03.18	12:17	BE	38°42,007' N	004° 57,637' E	2746			PHY	
MSM72	100	1	CTD/IADCP/LISST	26.03.18	13:09	BO	38°42,008' N	004° 57,640' E	2742	2765	9.1		
MSM72	100	1	CTD/IADCP/LISST	26.03.18	14:02	EN	38°42,008' N	004° 57,641' E	2741				
MSM72	100	142	uCTD	26.03.18	14:09	BE	38° 41,981' N	004° 57,476' E	2733,2	682			
MSM72	100	143	uCTD	26.03.18	15:23	BE	38° 40,230' N	004° 47,042' E	2698,7	747			
MSM72	101	1	CTD/IADCP/LISST	26.03.18	16:23	BE	38°39,009' N	004° 40,254' E	2650			CHE1	
MSM72	101	1	CTD/IADCP/LISST	26.03.18	17:13	BO	38°39,008' N	004° 40,254' E	2652	2675	12.7		
MSM72	101	1	CTD/IADCP/LISST	26.03.18	18:22	EN	38°39,010' N	004° 40,254' E	2648				
MSM72	101	144	uCTD	26.03.18	19:11	BE	38° 37,331' N	004° 31,998' E	2421,3	747			
MSM72	102	1	CTD/IADCP/LISST	26.03.18	20:23	BE	38°35,966' N	004° 22,823' E	2477			PHY	
MSM72	102	1	CTD/IADCP/LISST	26.03.18	21:15	BO	38°35,969' N	004° 22,820' E	2476	2500			
MSM72	102	1	CTD/IADCP/LISST	26.03.18	22:06	EN	38°35,969' N	004° 22,818' E	2476				

MSM72	102	145	uCTD	26.03.18	23:29	BE	38° 34,615' N	004° 10,855' E	2624,7	699			
MSM72	103	1	CTD/IADCP	27.03.18	0:08	BE	38° 33,000' N	004° 05,088' E	2534			CHE1	
MSM72	103	1	CTD/IADCP	27.03.18	0:56	BO	38° 33,000' N	004° 05,090' E	2541				
MSM72	103	1	CTD/IADCP	27.03.18	1:59	EN	38° 33,000' N	004° 05,092' E	2530	2560	9.2		
MSM72	103	146	uCTD	27.03.18	2:05	BE	38° 33,002' N	004° 04,953' E	2535	779			
MSM72	103	147	uCTD	27.03.18	3:13	BE	38° 31,163' N	003° 54,949' E	2532,5	476			
MSM72	104	1	CTD/IADCP	27.03.18	4:12	BE	38° 29,977' N	003° 47,370' E	2580			PHY	
MSM72	104	1	CTD/IADCP	27.03.18	5:03	BO	38° 29,659' N	003° 46,944' E	2588	2584	13		
MSM72	104	1	CTD/IADCP	27.03.18	5:53	EN	38° 29,332' N	003° 46,530' E	2590				
MSM72	104	148	uCTD	27.03.18	6:26	BE	38° 28,245' N	003° 40,742' E	2616,5	406			
MSM72	105	1	CTD/IADCP/LISST	27.03.18	7:20	BE	38° 26,971' N	003° 35,209' E	2614			CHE1	
MSM72	105	1	CTD/IADCP/LISST	27.03.18	8:14	BO	38° 26,970' N	003° 35,207' E	2615	2644	10.4		
MSM72	105	1	CTD/IADCP/LISST	27.03.18	9:28	EN	38° 26,971' N	003° 35,208' E	2615				
MSM72	105	149	uCTD	27.03.18	10:39	BE	38° 25,440' N	003° 22,058' E	2691,5	729			
MSM72	106	1	CTD/IADCP	27.03.18	11:55	BE	38° 23,996' N	003° 12,046' E	2704			PHY	
MSM72	106	1	CTD/IADCP	27.03.18	12:48	BO	38° 23,996' N	003° 12,047' E	2704	2737	9.5		
MSM72	106	1	CTD/IADCP	27.03.18	13:47	EN	38° 23,996' N	003° 12,048' E	2704				
MSM72	106	150	uCTD	27.03.18	13:57	BE	38° 24,015' N	003° 11,749' E	2713,3	747			
MSM72	106	151	uCTD	27.03.18	15:08	BE	38° 21,232' N	003° 02,185' E	2722,9	697			
MSM72	107	1	CTD/IADCP/LISST	27.03.18	16:12	BE	38° 19,495' N	002° 54,034' E	2743			CHE1	
MSM72	107	1	CTD/IADCP/LISST	27.03.18	17:06	BO	38° 19,494' N	002° 54,032' E	2741	2770	13.1		
MSM72	107	1	CTD/IADCP/LISST	27.03.18	18:18	EN	38° 19,494' N	002° 54,032' E	2740,8				
MSM72	107	152	uCTD	27.03.18	19:14	BE	38° 17,220' N	002° 44,885' E	2725,3	756			
MSM72	108	1	CTD/IADCP/LISST	27.03.18	21:23	BE	38° 15,014' N	002° 36,035' E	2734			PHY	
MSM72	108	1	CTD/IADCP/LISST	27.03.18	21:23	BO	38° 15,013' N	002° 36,034' E	2732	2763	9.7		
MSM72	108	1	CTD/IADCP/LISST	27.03.18	22:17	EN	38° 15,013' N	002° 36,034' E	2732				
MSM72	108	153	uCTD	27.03.18	23:13	BE	38° 12,472' N	002° 26,131' E	2733,3	584			
MSM72	109	1	CTD/IADCP	28.03.18	0:20	BE	38° 10,488' N	002° 18,047' E	2731			CHE1	
MSM72	109	1	CTD/IADCP	28.03.18	1:14	BO	38° 10,402' N	002° 18,012' E	2743	2768	10.1		
MSM72	109	1	CTD/IADCP	28.03.18	2:19	EN	38° 10,398' N	002° 18,014' E	2734				
MSM72	109	154	uCTD	28.03.18	2:25	BE	38° 10,314' N	002° 17,896' E	2741,6	654			
MSM72	109	155	uCTD	28.03.18	3:37	BE	38° 08,051' N	002° 08,035' E	2190,3	761			
MSM72	110	1	CTD/IADCP	28.03.18	4:47	BE	38° 06,008' N	002° 00,040' E	1884			PHY	
MSM72	110	1	CTD/IADCP	28.03.18	5:26	BO	38° 06,010' N	002° 00,040' E	1883	1877	12.1		
MSM72	110	1	CTD/IADCP	28.03.18	6:01	EN	38° 06,010' N	002° 00,040' E	1883				
MSM72	110	156	uCTD	28.03.18	7:02	BE	38° 03,423' N	001° 50,740' E	1790,9	699			
MSM72	111	1	CTD/IADCP/LISST	28.03.18	8:17	BE	38° 01,025' N	001° 42,028' E	1624			CHE1	
MSM72	111	1	CTD/IADCP/LISST	28.03.18	8:53	BO	38° 01,026' N	001° 42,026' E	1624	1644	10.3		
MSM72	111	1	CTD/IADCP/LISST	28.03.18	9:43	EN	38° 01,026' N	001° 42,026' E	1625				
MSM72	111	157	uCTD	28.03.18	10:38	BE	37° 57,931' N	001° 32,008' E	2356,6	703			
MSM72	112	1	CTD/IADCP/LISST	28.03.18	11:45	BE	37° 55,510' N	001° 24,051' E	2496			PHY	
MSM72	112	1	CTD/IADCP/LISST	28.03.18	12:32	BO	37° 55,511' N	001° 24,091' E	2495	2523	9.4		
MSM72	112	1	CTD/IADCP/LISST	28.03.18	13:22	EN	37° 55,511' N	001° 24,091' E	2497				
MSM72	112	158	uCTD	28.03.18	13:37	BE	37° 55,435' N	001° 23,924' E	2500,4	728			
MSM72	112	159	uCTD	28.03.18	14:50	BE	37° 52,776' N	001° 13,194' E	2588,1	755			
MSM72	113	1	CTD/IADCP/LISST	28.03.18	15:54	BE	37° 50,514' N	001° 06,054' E	2643			CHE2	
MSM72	113	1	CTD/IADCP/LISST	28.03.18	16:08	BO	37° 50,490' N	001° 06,073' E	2637	506			
MSM72	113	1	CTD/IADCP/LISST	28.03.18	16:30	EN	37° 50,438' N	001° 06,115' E	2639				
MSM72	113	2	CTD/IADCP/LISST	28.03.18	17:31	BE	37° 50,441' N	001° 06,115' E	2637			CHE2	
MSM72	113	2	CTD/IADCP/LISST	28.03.18	18:24	BO	37° 50,377' N	001° 06,184' E	2638	2638	9.8		
MSM72	113	2	CTD/IADCP/LISST	28.03.18	19:30	EN	37° 50,377' N	001° 06,184' E	2637				
MSM72	113	160	uCTD	28.03.18	20:25	BE	37° 48,046' N	000° 56,770' E	2750,6	691			
MSM72	114	1	CTD/IADCP	28.03.18	21:36	BE	37° 45,498' N	000° 48,014' E	2716			PHY	
MSM72	114	1	CTD/IADCP	28.03.18	22:29	BO	37° 45,498' N	000° 48,014' E	2764	2740	9		
MSM72	114	1	CTD/IADCP	28.03.18	23:21	EN	37° 45,498' N	000° 48,016' E	2720				
MSM72	114	161	uCTD	29.03.18	0:28	BE	37° 39,955' N	000° 38,039' E	2654,4	720			
MSM72	115	1	CTD/IADCP	29.03.18	1:45	BE	37° 35,514' N	000° 30,011' E	2675			CHE1	
MSM72	115	1	CTD/IADCP	29.03.18	2:36	BO	37° 35,514' N	000° 30,010' E	2676	2703	12.5		
MSM72	115	1	CTD/IADCP	29.03.18	3:41	EN	37° 35,514' N	000° 30,008' E	2676				
MSM72	115	162	uCTD	29.03.18	3:47	BE	37° 35,451' N	000° 29,941' E	2683,2	730			
MSM72	115	163	uCTD	29.03.18	5:19	BE	37° 28,541' N	000° 17,370' E	2731	777			
MSM72	116	1	CTD/IADCP/LISST	29.03.18	6:07	BE	37° 25,512' N	000° 12,026' E	2731			PHY	
MSM72	116	1	CTD/IADCP/LISST	29.03.18	7:01	BO	37° 25,511' N	000° 12,025' E	2731	2772	9.5		
MSM72	116	1	CTD/IADCP/LISST	29.03.18	7:55	EN	37° 25,511' N	000° 12,026' E	2729				
MSM72	116	164	uCTD	29.03.18	8:44	BE	37° 20,839' N	000° 06,125' E	2725	731			
MSM72	117	1	CTD/IADCP/LISST	29.03.18	9:48	BE	37° 15,989' N	000° 00,035' E	2713			CHE1	
MSM72	117	1	CTD/IADCP/LISST	29.03.18	10:44	BO	37° 15,980' N	000° 00,042' E	2713	2747	9.3		
MSM72	117	1	CTD/IADCP/LISST	29.03.18	11:50	EN	37° 15,980' N	000° 00,042' E	2710				
MSM72	117	165	uCTD	29.03.18	12:46	BE	37° 12,429' N	000° 08,498' W	2699,6	706			
MSM72	117	166	uCTD	29.03.18	13:54	BE	37° 09,149' N	000° 16,457' W	2687,1	692			
MSM72	118	1	CTD/IADCP/LISST	29.03.18	15:03	BE	37° 06,029' N	000° 23,957' W	2667			PHY	
MSM72	118	1	CTD/IADCP/LISST	29.03.18	15:55	BO	37° 06,090' N	000° 23,838' W	2670	2655	13.2		
MSM72	118	1	CTD/IADCP/LISST	29.03.18	16:46	EN	37° 06,196' N	000° 23,672' W	2679				
MSM72	118	167	uCTD	29.03.18	17:25	BE	37° 06,095' N	000° 23,878' W	2668			No data recorded!	
MSM72	118	167	uCTD	29.03.18	18:50	BE	37° 00,148' N	000° 35,730' W	2665,5	737			
MSM72	119	1	CTD/IADCP/LISST	29.03.18	19:32	BE	37° 57,017' N	000° 41,970' W	2665			CHE1	
MSM72	119	1	CTD/IADCP/LISST	29.03.18	20:24	BO	37° 57,012' N	000° 41,965' W	2669	2698	9.5		
MSM72	119	1	CTD/IADCP/LISST	29.03.18	1:43	EN	37° 57,012' N	000° 41,966' W	2670				
MSM72	119	168	uCTD	29.03.18	22:48	BE	36° 52,195' N	000° 51,568' W	2653,1	735			
MSM72	120	1	CTD/IADCP	30.03.18	0:11	BE	36° 47,976' N	000° 59,948' W	2627			PHY	
MSM72	120	1	CTD/IADCP	30.03.18	1:00	BO	36° 47,996' N	000° 59,962' W	2627	2648	9.6		
MSM72	120	1	CTD/IADCP	30.03.18	1:51	EN	36° 47,995' N	000° 59,963' W	2620				
MSM72	120	169	uCTD	30.03.18	3:13	BE	36° 42,241' N	001° 11,423' W	2611,6	785			

MSM72	121	1	CTD/IADCP	30.03.18	04:29:00	BE	36° 39,020' N	001° 17,973' W	2427				CHE1	
MSM72	121	1	CTD/IADCP	30.03.18	05:16:00	BO	36° 39,019' N	001° 17,976' W	2431	2454	13,6			
MSM72	121	1	CTD/IADCP	30.03.18	06:23	EN	36° 39,020' N	001° 17,975' W	2431					
MSM72	121	170	uCTD	30.03.18	6:30	BE	36° 38,924' N	001° 18,169' W	2437,2	787				
MSM72	122	1	CTD/IADCP/LISST	30.03.18	9:04	BE	36° 30,002' N	001° 35,969' W	1450				PHY	
MSM72	122	1	CTD/IADCP/LISST	30.03.18	9:40	BO	36° 30,004' N	001° 35,964' W	1452	1486	9.6			
MSM72	122	1	CTD/IADCP/LISST	30.03.18	10:12	EN	36° 30,002' N	001° 35,969' W	1456					
MSM72	123	1	CTD/IADCP/LISST	30.03.18	12:30	BE	36° 27,992' N	001° 55,451' W	1391				CHE1	
MSM72	123	1	CTD/IADCP/LISST	30.03.18	12:59	BO	36° 27,990' N	001° 55,448' W	1390	1398	10.5			
MSM72	123	1	CTD/IADCP/LISST	30.03.18	13:47	EN	36° 27,985' N	001° 55,445' W	1392					
MSM72	124	1	CTD/IADCP/LISST	30.03.18	15:53	BE	36° 27,024' N	002° 14,388' W	1031				PHY	
MSM72	124	1	CTD/IADCP/LISST	30.03.18	16:17	BO	36° 27,020' N	002° 14,378' W	1021	1031	13.9			
MSM72	124	1	CTD/IADCP/LISST	30.03.18	16:43	EN	36° 27,011' N	002° 14,357' W	1034					
MSM72	125	1	CTD/IADCP/LISST	30.03.18	18:25	BE	36° 23,316' N	002° 34,471' W	1382				CHE1	
MSM72	125	1	CTD/IADCP/LISST	30.03.18	19:51	BO	36° 23,315' N	002° 34,472' W	1382	1380	10			
MSM72	125	1	CTD/IADCP/LISST	30.03.18	20:43	EN	36° 23,317' N	002° 34,464' W	1383					
MSM72	126	1	CTD/IADCP	31.03.18	0:09	BE	36° 20,983' N	002° 53,971' W	1063				PHY	
MSM72	126	1	CTD/IADCP	31.03.18	0:33	BO	36° 20,957' N	002° 53,969' W	1072	1073	8.9			
MSM72	126	1	CTD/IADCP	31.03.18	0:59	EN	36° 20,918' N	002° 53,969' W	1072					
MSM72	127	1	CTD/IADCP	31.03.18	3:49	BE	36° 14,992' N	003° 13,444' W	856				PHY	
MSM72	127	1	CTD/IADCP	31.03.18	4:00	BO	36° 14,990' N	003° 13,440' W	845	853	12.3			
MSM72	127	1	CTD/IADCP	31.03.18	4:32	EN	36° 14,992' N	003° 13,438' W	852					
MSM72	128	1	CTD/IADCP	31.03.18	5:53	BE	36° 05,015' N	003° 13,471' W	1172				CHE1	
MSM72	128	1	CTD/IADCP	31.03.18	6:20	BO	36° 05,015' N	003° 13,494' W	1162	1186	10.1			
MSM72	128	1	CTD/IADCP	31.03.18	7:01	EN	36° 05,014' N	003° 13,474' W	1167					
MSM72	128	171	uCTD	31.03.18	8:12	BE	36° 05,209' N	003° 25,167' W	729,1	708				
MSM72	128	172	uCTD	31.03.18	9:40	BE	36° 04,382' N	003° 38,523' W	784,6	684				
MSM72	129	1	CTD/IADCP/LISST	31.03.18	11:42	BE	36° 04,952' N	003° 52,402' W	1176				CHE1	
MSM72	129	1	CTD/IADCP/LISST	31.03.18	12:09	BO	36° 04,982' N	003° 52,427' W	1177	1182	9.8			
MSM72	129	1	CTD/IADCP/LISST	31.03.18	12:46	EN	36° 04,501' N	003° 52,440' W	1188					
MSM72	129	173	uCTD	31.03.18	12:55	BE	36° 04,547' N	003° 52,690' W	1190,2	557				
MSM72	129	174	uCTD	31.03.18	14:33	BE	36° 03,175' N	004° 05,996' W	1315,6	546				
MSM72	129	175	uCTD	31.03.18	16:23	BE	36° 01,349' N	004° 20,382' W	1305,8	599				
MSM72	130	1	CTD/IADCP/LISST	31.03.18	17:54	BE	36° 00,000' N	004° 30,949' W	1236				CHE2	
MSM72	130	1	CTD/IADCP/LISST	31.03.18	18:14	BO	36° 00,020' N	004° 30,743' W	1240					
MSM72	130	1	CTD/IADCP/LISST	31.03.18	18:32	EN	36° 00,034' N	004° 30,572' W	1240				for calibrating UCTD 289 and 183	
MSM72	130	176	uCTD	31.03.18	17:54	BE	36° 00,035' N	004° 30,556' W	1243,9	900				
MSM72	130	2	CTD/IADCP/LISST	31.03.18	18:44	BE	36° 00,035' N	004° 30,556' W	1244				CHE2	
MSM72	130	2	CTD/IADCP/LISST	31.03.18	19:13	BO	36° 00,062' N	004° 30,208' W	1244	1237	9.6			
MSM72	130	2	CTD/IADCP/LISST	31.03.18	19:53	EN	36° 00,088' N	004° 29,882' W	1245					
MSM72	131	1	CTD/IADCP	31.03.18	22:45:40	BE	36° 05,063' N	004° 49,927' W	926				PHY	
MSM72	131	1	CTD/IADCP	31.03.18	23:12	BO	36° 05,358' N	004° 49,661' W	928	923	18			
MSM72	131	1	CTD/IADCP	31.03.18	23:31	EN	36° 05,550' N	004° 49,490' W	929					
MSM72	132	1	CTD/IADCP	01.04.18	2:01	BE	35° 58,028' N	005° 07,440' W	517				CHE1	
MSM72	132	1	CTD/IADCP	01.04.18	2:18	BO	35° 58,132' N	005° 07,181' W	516	507	12.3			
MSM72	132	1	CTD/IADCP	01.04.18	2:39	EN	35° 58,273' N	005° 06,828' W	518					
MSM72	133	1	CTD/IADCP/LISST	01.04.18	5:35	BE	35° 59,104' N	005° 25,478' W	921				PHY	
MSM72	133	1	CTD/IADCP/LISST	01.04.18	5:58	BO	35° 59,274' N	005° 24,865' W	933		14.9			
MSM72	133	1	CTD/IADCP/LISST	01.04.18	6:18	EN	35° 59,388' N	005° 24,398' W	942					
MSM72	134	1	CTD/IADCP/LISST	01.04.18	11:12	BE	35° 58,608' N	005° 40,033' W	356				CHE1	
MSM72	134	1	CTD/IADCP/LISST	01.04.18	11:24	BO	35° 58,656' N	005° 40,134' W	347	348	10			
MSM72	134	1	CTD/IADCP/LISST	01.04.18	11:40	EN	35° 58,842' N	005° 40,400' W	316					
MSM72	135	1	CTD/IADCP/LISST	01.04.18	12:23	BE	35° 56,017' N	005° 40,026' W	588				CHE1	
MSM72	135	1	CTD/IADCP/LISST	01.04.18	12:39	BO	35° 56,046' N	005° 40,270' W	562	564	7.9			
MSM72	135	1	CTD/IADCP/LISST	01.04.18	13:01	EN	35° 56,052' N	005° 40,999' W	536					
MSM72	136	1	CTD/IADCP/LISST	01.04.18	13:48	BE	35° 53,222' N	005° 39,690' W	330				CHE1	
MSM72	136	1	CTD/IADCP/LISST	01.04.18	14:00	BO	35° 53,233' N	005° 39,755' W	336	376	10.5			
MSM72	136	1	CTD/IADCP/LISST	01.04.18	14:16	EN	35° 53,233' N	005° 39,754' W	335					
BE=Begin, BO=Bottom, EN=End														
PHY=no chemical sampling (only salinity samples)														
CHE1=chemical sampling (Oxygen,Phosphate, Total-P, Nitrate, Nitrite, Total-N,Silicate, Alkalinity, PH, CFC12, SF6, CDOM, DOC, dissolved sulphur hexafluoride, Freon-12, total dissolved inorganic carbon)														
CHE2=CHE1 plus Isotopes, POC, PON														