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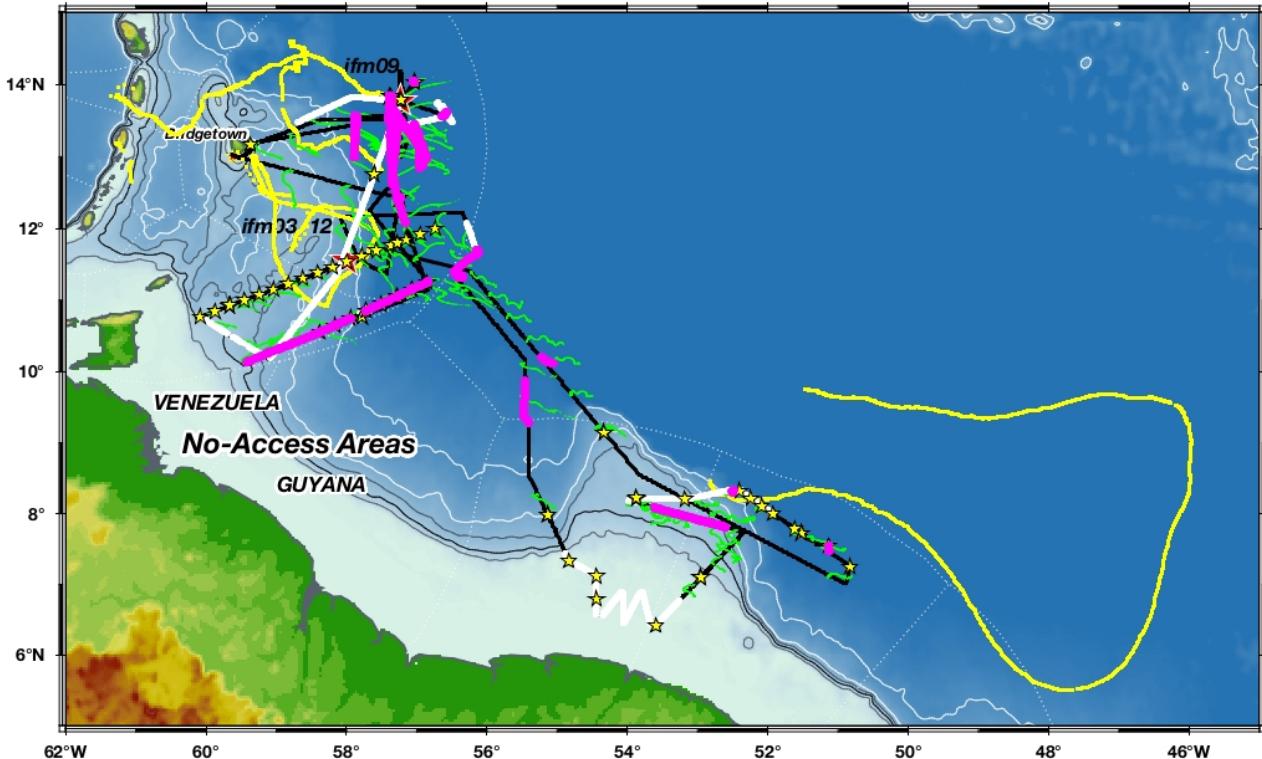
Short Cruise Report RV Maria S Merian MSM89

Bridgetown, Barbados – Bridgetown, Barbados

17. January – 20. February 2020

Chief scientist: Johannes Karstensen

**(substitute chief scientist from 08th to 20th February 2020: Gaute
Lavik) Captain: Björn Maass**



RV Maria S. Merian MSM89 cruise track and station overview. Black line: underlying cruise track (Underway data); red dots uCTD; white dots: Moving Vessel Profiler (MVP); stars CTD stations; blue squares: Microstructure profiles (MSS); yellow lines: SVP drifter trajectories (as of 30. March 2020); green lines: Radiosound trajectories; Glider locations: red stars, labelled; magenta line: Cloudkite in-air operations

Objectives

The MSM89 expedition of Maria S Merian was a contribution to the international research initiative EUREC4A (www.eurec4a.eu). The cruise was carried out in concert with the M161 campaign on RV METEOR (Germany) and the EUREC4A-OA campaign on NO L'ATALANTE (France). Airplane and drone operations as well as operations at an atmospheric time series station on the island of Barbados (BCO) were considered in the execution of the MSM89 campaign. Moreover, the cruise was coordinated with ship and Saildrone operations in the context of the US American ATOMIC project. The overall goal of the EUREC4A field campaign was to collect observational data that will enable research on dynamic and thermodynamic processes in the atmosphere and ocean. The analysis of the data will bring our understanding of the lifecycle of clouds and their role in the climate system to a new level.

MSM89 had its focus on the ocean/atmosphere coupling across ocean mesoscale vortices (EUREC4A-OA). For this purpose, both ocean and atmosphere profile measurements were carried out to observe the temporal evolution and spatial heterogeneity of the atmospheric boundary layer and ocean underneath. Autonomous observing platforms (underwater glider) and a ship-towed platform (Cloudkite) augmented the ship based observations. Incubation experiments were performed to determine Nitrogen fixation rates, the gas exchange for carbon dioxide, oxygen uptake and other processes.

Narrative (all times are Local Time, LT, if not otherwise stated)

The MARIA S. MERIAN moored in the afternoon of the 14nd of January 2020 in the port of Bridgetown, Barbados at the Pier „Flour Mill“. The pier did not allow to crane container and as such only “light” air freight goods were loaded. Nevertheless, science crew members were able to start packing and installing equipment at the respective labs. On the 15th of January MARIA S. MERIAN changed to the busy cruise liner pier. Containers were loaded with a rented crane and on the 16th and 17th preparations continued. On the 16th the Cloudkite group set up (filled with helium) the balloon “Augsburg” on the aft deck. A group of 20 pupils from a local school visited the ship. The captain and the safety officer accompanied a tour-de-ship and later the cohort met in the conference room for an introduction to the science program by Claudia Acquistpace and the chief scientist Johannes Karstensen. On the 17th of January MARIA S. MERIAN again changed pier back to „Flour Mill“. Most port guests left the ship at 13:30LT and finally at about 22:00 LT MARIA S. MERIAN departed and steamed just outside the harbour and positioned itself at the 3nm zone and the cruise begun. On the 18th at 00:00LT we started data collection, steaming around the island outside of the 3nm EEZ to a position off the Barbados Cloud Observatory (BCO). This was also the start of the various and quasi continuous ocean/atmosphere underway observations. With arrival at the BCO an instrument intercomparing started for selected atmosphere devices. The first CTD was done at about 750m water depth at 07:00. After the CTD we started steaming east jointly with METEOR, both ship separated less than <1nm from each other to collect a data set for determining directly the relative vorticity (and other dynamical parameters) of the upper ocean. At 12:30 a first Moving Vessel Profiler (MVP) survey begun and a first radio soundings was done at 14:45 LT (18:45 UTC). The daily science/coordination meeting was held at 13:00. The MVP survey ended on the 19th at 03:00 and 3 CTD profiles were done, two shallow casts (for Biological sampling) and one full depth cast (4800m). We headed towards the planned flight path from the Halo and the P3 airplanes, roughly a straight line from the NTAS site (mooring site at 14°44'35" N 50°56'42" W) to the “Halo centre” (a projected circle that encompasses the Halo flight track with a centre at 13°17'09"N; 57°54'00"W) to BCO. The

cruise track along the virtual flight path was accompanied by MVP profiling. A first launch and recovery test of the Cloudkite system was initiated with the “Augsburg” balloon and the base Cloudkite. It turned out the “Augsburg” balloon behaved different than expected and was abandoned for further operations. However, the main Cloudkite behaved stable. We continued with high resolution MVP mapping until the 20th when the first glider deployment (Ifm09) took place and that run smoothly. The deployment of the glider followed a CTD and three Microstructure casts. All these operations were done in the “Halo circle”. This glider was supposed to stay stationary to observe the diurnal cycle within the airplane projected area. Discussing the further planning at the daily science meeting, it was agreed that the priority was to go southwest to survey a well-developed mesoscale eddy. From the daily satellite products that was send to us from the French group (also accessible online via the AERIS website for EUREC4A <https://observations.ipsl.fr/aeris/eurec4a/#/>) the eddy centre was estimated to be at approx. 11°N/58°W. During the day, further testing of the more mechanical components for the Cloudkite were done. Radiosondes were launched routinely. On the transit to the eddy we did three biological CTD casts on 21st January starting at 03:30 (always same time before sunrise). This sequence of three CTD casts for biological sampling became a routine procedure nearly every second day. The routine was established not only on MERIAN but was done in parallel on METEOR (cruise M161) by the MPI-Microbiology group (lead: W. Mohr). The triad of CTD’s in almost all cases was followed by MSS casts. On the way south, the MVP was used for upper ocean high resolution vertical ocean profiling. The Cloudkite team prepared instruments for the first science deployment envisioned for Thursday 23rd January.

From the 22nd to the 24th we did an intense eddy survey – crossing the structure that was identified from the satellite maps from west to east, through the best estimated centre. The vertical structure was sampled with CTD (upper 2000m) and MSS dissipation (upper 150m) for mixed layer flux estimates. Radiosonde launches were done here every 4h. We also deployed two underwater gliders at the north-eastern side of the eddy. The first science mission launch of Cloudkite with an advanced sensor package (MPCK+) was done. A DBCP surface drifter was deploy in the eddy rim, the region of maximal velocity. A next next eddy centre that was of interest to be sampled was identified at approximately 9°N/56°W, which was in the EEZ of Guyana. Starting on the 25th January we aimed for of surveying that eddy but so far did not get permission for entering the Guyana EEZ. Unfortunately, North Brazil Current Ring eddies, our main mesoscale eddy observing “targets”, prefer to propagate along the coast and as such through many EEZs. As we did not get the permission to enter Guyana waters it was agreed to target the “next” well-developed mesoscale eddy located southeast of Guyana, in Surinam and French Guiana waters. This region is also close to where the retroflection area is, the region where the North Brazil Current Ring eddies are being formed. Besides the EEZ permissions we also had to care about obtaining flight permissions from airspace authorities (namely PIARCO, Cayenne, and Paramaribo) for the Cloudkite operations.

On the 25th and 26th we steamed south, avoiding Guyana EEZ, towards the next eddy centre profiling the upper water column using the uCTD. During the transit time Cloukite launch tests took place and the routine biological sampling at 03:30 was done. On the 27th January we continued the uCTD section and surveyed very impressive thermohaline staircases stratification, previously known to occur in the region. Science collaboration developed and interesting discussions on how to combine remote sensing techniques of the atmosphere (radar, lidar) with in-situ methods (sensor packages of Cloudkite, TSG data) took place. On the 28th January we lost one uCTD probe (#54) but fortunately had

spare ones so we could continue with the underway profile sampling on our way south. The flight permission for the Cloudkite for Cayenne was granted and the kite was launched at 17:00. A frontal survey of the southern eddy was done on the 29th January using CTD/MSS and MVP (ocean), and LIDAR, Radar, etc. (atmosphere). Radiosondes were launched now only every 12h because we were south of 9°N (but there was confusion if the probes should be launched at all). There was on-going coordination with L'ATALANTE for a joint survey. In addition, we planned for coordinating our sampling with the autonomous sailing boats "Saildrone", operated in the context of the ATOMIC projects. Unfortunately, the Saildrone's were too far east (2-3 days) to reach a rendezvous waypoint at that time. On the 30th January we finally joined with L'ATALANTE and started a parallel course to survey a dynamical front. We had since a couple of days severe problems with our Internet on board because the region we were operating in, was a blind spot for the satellite systems used on board. However, local coordination with L'ATALANTE was done via VHF. On Friday the 31st January we continued the joint survey – first with MVP and microstructure every hour and followed by MVP & MSS on L'ATALANTE and uCTD & MSS on MARIA S MERIAN. The Cloudkite was launched for a science flight at 15:00 envisioned for 17hours flight time. On the 01st February we finalized the frontal survey and both ships headed southwest to survey a coastal near cold filament in French Guiana EEZ waters. The cold filaments are generated from the offshore transport of waters as part of the mesoscale eddy flow field. The survey was one key science objective outlined in the cruise proposal. Despite the fact that all scientific party would have preferred to do the cold filament survey at a more northern location, the only one other filament we identified in the satellite data was in Guyana EEZ waters and were MARIA S MERIAN was not allowed to enter. The cold filament study brought us to very shallow waters and not only the colour of the water changed also the sea life very much increased with bird, whales and even a shark was spotted. On the 3rd of February we split from L'ATALANTE and she moved east to survey again the dynamical front of the eddy close to the retroflection zone and we headed northwest to re-enter the PIARCO air-space where Cloudkite operations were allowed. Moreover, we had to transit north to re-enter the "Tradewind Alley", or more precisely the Halo circle, by 7th February. On our way north, we did "Into clouds" courses on the 4th February with the Cloudkite and the lidar/radar running throughout. Whenever possible we used the MVP or the uCTD systems during the transit times although no specific survey target was identified. In the morning of the 7th February we met with METEOR at the southern part of the Halo Circle and did side-by-side CTDs with the intention to later have a calibration dataset, primarily for the METEOR CTD that had less options for calibration (oxygen, salinity). MARIA S MERIAN then set course for Bridgetown harbour, because chief scientist Johannes Karstensen had to disembark the vessel because of an emergency at home. Gaute Lavik took over as substitute chief scientist after disembarkment at 10:00 on the 8th February. Later that day (22:00) the Cloudkite was launched and recovered about 11h later, on the 9th February at 09:00. While the kite was up MARIA S MERIAN set course toward the position in the Halo circle were the glider IFM09 was operating. During transit uCTD's were launched and 3 shallow CTD casts for biological sampling (no cast deeper than 600m) were performed. On the 8th February at about 10:00 the glider IFM09 was recovered and shortly after a SVP drifter launched and MSS profiles taken. The following days an intense uCTD program was completed. On the 12th February the 03:00 Biology CTDs were done and uCTD followed on the 13th and 14th February. On the 14th February in the evening an MVP survey begun and on the 15th February the third eddy survey, again in the Trinidad/Tobago EEZ, followed. This eddy was located close to where the first eddy was found. The eddy was surveyed with a sequence of CTD (up to 2000m depth), MSS, MVP took until 16th February noon. We then headed

for the glider IFM12 recovered and that was done on the 17th in the morning and another SVP drifter launched. A long Cloudkite launch were done from the 16th to 18th February. The last CTD (#86) was done on the 18th February at 14:00. Radiosondes were launched in regular intervals (4h) throughout this tradewind alley operations. On the 19th February packing for the demob started and on the 20th February, the MSM89 mission ended in Bridgetown, Barbados. Unloading equipment continued into the next day. Another cohort of pupils visited the ship supervised by the crew and Gaute Lavik.

MSM 89 cruise participants (science crew)

Name	Task	Institute
Dr Johannes Karstensen	Fahrtleiter / Chiefscientist	GEOMAR
Christian Begler	Technical (all ocean devices)	GEOMAR
Melina Mehlmann	SVP drifter, Salinometer, blog	CAU Kiel
Mareike Körner	MVP/uCTD & glider processing	GEOMAR
Dr Joachim Ribbe	Salinometer, real time data	USQ
Arne Bendinger	CTD & IADCP processing	CAU Kiel
Klaus Reus	X-Band radar, sADCP processing	CAU Kiel
Jonathan Wiskandt	Microstructure (MSS) processing, UVP	CAU Kiel
Prof. Dr. Dr. Eberhard Bodenschatz	Cloudkite (lead)	MPI-D-SO
Dr Gholamhossein Bagheri	Cloudkite (co-lead)	MPI-D-SO
Dr Freja Nordsiek	Cloudkite	MPI-D-SO
Johannes Güttler	Cloudkite	MPI-D-SO
Andreas Kopp	Cloudkite	MPI-D-SO
Dr Claudia Acquistapace	W-Band Radar, Radiosound	Uni Köln
Tobias Böck	W- Band Radar	Uni Köln
Dr Gaute Lavik	N2 fixation, Nutrients, O2/Ar, DMS, oxygen	MPI-MM
Sandra Piosek	MPI-MM technician	MPI-MM
Miriam Philippi	N2 fixation, Nutrients, O2/Ar, DMS, oxygen	MPI-MM
Dr Bernhard Tschitschko	N2 fixation, Nutrients, O2/Ar, DMS, oxygen	MPI-MM
Markus Ritschel	Ferrybox	MPI-MI
Dr Diego Lange	ARTHUS & Halo wind Lidar	IPM
Kashawn Hall	CloudKite operations	CIMH (observer)

Institution

GEOMAR: Helmholtz Zentrum für Ozeanforschung Kiel, Kiel, Germany

CAU Kiel: Christian-Albrechts-Universität Kiel, Kiel, Germany

MPI-D-SO: Max Planck Institute for Dynamics and Self-Organization Göttingen, Germany

MPI-MM: Max Planck Institute for Marine Microbiology, Bremen

MPI-MI: Max Planck Institute for Meteorology, Hamburg

USQ: University of Southern Queensland, Toowoomba, Australia

Uni Cologne: Institut für Geophysik und Meteorologie an der Universität Köln, Köln, Germany

IPM: IPM, University of Hohenheim, Stuttgart, Germany

CIMH: Caribbean Institute for Meteorology and Hydrology, Bridgetown, Barbados



Science crew participants Maria S Merian MSM89 expedition (end of cruise)

Acknowledgement

We thank Captain Björn Maass, his officers and the crew of RV Maria S. Merian for their support of our observational program and the hospitality and friendliness on board. We also thank the crew on deck, in the engine rooms and the galley for providing and supporting an excellent working environment. The ship time was provided by the Deutsche Forschungsgemeinschaft within the METEOR/MERIAN core program. We benefited from financial contributions by the research institutions involved.

Preliminary data can be accessed via: <https://observations.ipsl.fr/aeris/eurec4a-data/SHIPS/RV-MARIASMERIAN/>

Station list Maria S Merian MSM89

Gear coding:

CTD: CTD/lowered Acoustic Doppler Current Profiler/UVP and rosette sampler

MVP: Moving Vessel Profiler

BLN: Radiosonde

uCTD: underway CTD

GLID: Underwater electric Glider

DRIFT: SVP Drifter (DBCP Programm)

CKIT: Cloudkite (MPI-DS)

MSS: Ship based Microstructure Sonde

Underway data (Station „MSM89_0“ and measured quasi continuously from ship): W-Band Radar, X-Band Radar, ARTHUS LIDAR, Halo Doppler LIDAR; DISDRO, FBOX, TSG, ADCP, ASCAM, UAS/NanoScan

MSM89_0	18.01.20	04:01:10		13° 04.532' N	059° 40.822' W	239.7	Underway recording start
MSM89_1-1	18.01.20	11:26:23	CTD	13° 10.198' N	059° 22.270' W	736.5	CTD001
MSM89_2-1	18.01.20	16:33:37	MVP	13° 27.927' N	058° 43.320' W	2609.6	deployed
MSM89_2-1	18.01.20	20:26:03	MVP	13° 39.520' N	058° 17.894' W	3303.4	recovered
MSM89_3-1	18.01.20	18:45:34	BLN	13° 34.638' N	058° 28.598' W	2844.7	launched
MSM89_4-1	18.01.20	21:04:55	MVP	13° 39.681' N	058° 17.525' W	3255.2	deployed
MSM89_4-1	19.01.20	07:12:20	MVP	13° 46.459' N	057° 15.962' W	4833.2	recovered
MSM89_5-1	18.01.20	22:46:49	BLN	13° 44.623' N	058° 06.666' W	3723.5	launched
MSM89_6-1	19.01.20	08:19:01	CTD	13° 46.327' N	057° 14.899' W	4825.0	CTD002
MSM89_7-1	19.01.20	10:05:05	CTD	13° 46.328' N	057° 14.898' W	5068.4	CTD003
MSM89_8-1	19.01.20	12:28:52	CTD	13° 46.327' N	057° 14.899' W	5063.2	CTD004
MSM89_9-1	19.01.20	15:37:42	MVP	13° 26.469' N	057° 08.170' W	4907.0	deployed
MSM89_9-1	19.01.20	20:28:44	MVP	13° 32.521' N	056° 39.389' W	4934.1	recovered
MSM89_10-1	19.01.20	20:59:39	CKITE	13° 33.484' N	056° 38.304' W	5167.3	launched
MSM89_10-1	19.01.20	22:56:42	CKITE	13° 37.139' N	056° 34.214' W	4967.8	recovered
MSM89_11-1	19.01.20	23:27:55	MVP	13° 37.772' N	056° 34.547' W	4952.3	deployed
MSM89_11-1	20.01.20	10:08:31	MVP	13° 32.816' N	056° 32.831' W	4906.2	recovered
MSM89_12-1	20.01.20	14:17:29	MSS	13° 47.065' N	057° 14.671' W	5082.1	MSS0001-2
MSM89_12-1	20.01.20	15:18:59	MSS	13° 47.171' N	057° 14.046' W	5082.0	MSS0001-2
MSM89_13-1	20.01.20	15:33:15	GLID	13° 47.223' N	057° 13.977' W	4931.1	IFM09 deployed
MSM89_14-1	20.01.20	17:31:48	CTD	13° 47.322' N	057° 13.599' W	4830.9	CTD005
MSM89_14-2	20.01.20	18:46:14	BLN	13° 47.321' N	057° 13.600' W	4830.8	launched
MSM89_14-3	20.01.20	20:22:11	CTD	13° 47.321' N	057° 13.601' W	4834.5	CTD006
MSM89_15-1	20.01.20	22:00:37	MVP	13° 47.193' N	057° 13.530' W	4830.0	deployed
MSM89_15-1	21.01.20	07:21:34	MVP	12° 45.735' N	057° 36.522' W	4228.0	recovered
MSM89_16-1	21.01.20	07:52:44	CTD	12° 45.598' N	057° 36.539' W	4225.7	CTD007
MSM89_17-1	21.01.20	09:18:05	CTD	12° 45.599' N	057° 36.540' W	4221.3	CTD008
MSM89_18-1	21.01.20	10:19:23	CTD	12° 45.599' N	057° 36.540' W	4222.8	CTD009
MSM89_19-1	21.01.20	11:07:42	MSS	12° 45.657' N	057° 36.459' W	4469.4	MSS0003-5
MSM89_19-1	21.01.20	11:45:57	MSS	12° 46.128' N	057° 36.096' W	4309.5	MSS0003-5
MSM89_20-1	21.01.20	11:56:49	MVP	12° 45.679' N	057° 36.058' W	4246.2	deployed
MSM89_20-1	22.01.20	16:57:29	MVP	10° 22.035' N	059° 25.437' W	1456.9	recovered
MSM89_21-1	21.01.20	18:45:09	BLN	12° 00.922' N	057° 53.004' W	2999.6	launched
MSM89_22-1	21.01.20	23:01:56	BLN	11° 32.727' N	058° 03.702' W	2540.5	launched
MSM89_23-1	21.01.20	23:24:43	DRIFT	11° 30.223' N	058° 04.633' W	2443.8	deployed

MSM89_20-2	22.01.20	02:45:36	BLN	11° 10.534' N	058° 17.236' W	2403.9	launched
MSM89_24-1	22.01.20	06:42:30	BLN	10° 48.898' N	058° 34.815' W	1940.8	launched
MSM89_25-1	22.01.20	10:48:15	BLN	10° 26.446' N	058° 53.032' W	1941.5	launched
MSM89_20-3	22.01.20	14:45:58	BLN	10° 14.100' N	059° 12.407' W	1645.2	launched
MSM89_26-1	22.01.20	17:07:09	MVP	10° 22.410' N	059° 25.971' W	1441.6	deployed
MSM89_26-1	22.01.20	23:32:22	MVP	10° 45.576' N	060° 04.488' W	1014.2	recovered
MSM89_27-1	22.01.20	18:45:21	BLN	10° 28.210' N	059° 35.667' W	1234.8	launched
MSM89_28-1	22.01.20	22:43:59	BLN	10° 42.821' N	059° 59.757' W	1069.0	launched
MSM89_29-1	23.01.20	00:15:00	CTD	10° 46.021' N	060° 04.991' W	1009.2	CTD010
MSM89_30-1	23.01.20	01:02:20	MSS	10° 45.996' N	060° 05.021' W	1002.8	MSS0006-8
MSM89_30-1	23.01.20	01:48:09	MSS	10° 45.907' N	060° 05.150' W	1003.5	MSS0006-8
MSM89_31-1	23.01.20	02:49:26	BLN	10° 49.252' N	059° 56.169' W	1113.6	launched
MSM89_32-1	23.01.20	03:51:08	CTD	10° 50.628' N	059° 52.412' W	1180.0	CTD011
MSM89_33-1	23.01.20	04:35:50	MSS	10° 50.566' N	059° 52.446' W	1179.6	MSS0009-11
MSM89_33-1	23.01.20	05:11:07	MSS	10° 50.052' N	059° 52.746' W	1165.0	MSS0009-11
MSM89_34-1	23.01.20	06:48:48	BLN	10° 55.265' N	059° 39.905' W	1207.6	launched
MSM89_35-1	23.01.20	07:45:44	CTD	10° 55.270' N	059° 39.911' W	1215.8	CTD012
MSM89_36-1	23.01.20	08:58:24	CTD	10° 55.312' N	059° 39.903' W	1231.4	CTD013
MSM89_37-1	23.01.20	09:56:14	CTD	10° 55.583' N	059° 39.856' W	1181.7	CTD014
MSM89_38-1	23.01.20	10:47:28	CTD	10° 55.778' N	059° 39.754' W	1172.9	CTD015
MSM89_39-1	23.01.20	10:44:21	BLN	10° 55.759' N	059° 39.768' W	1170.1	launched
MSM89_40-1	23.01.20	11:20:09	MSS	10° 55.924' N	059° 39.561' W	1194.1	MSS0012-14
MSM89_40-1	23.01.20	12:19:15	MSS	10° 56.429' N	059° 38.682' W	1269.7	MSS0012-14
MSM89_41-1	23.01.20	14:23:13	CTD	10° 59.983' N	059° 27.411' W	1593.4	CTD016
MSM89_41-2	23.01.20	14:45:31	BLN	10° 59.983' N	059° 27.412' W	1594.7	launched
MSM89_42-1	23.01.20	15:10:53	MSS	10° 59.824' N	059° 27.546' W	1582.5	MSS0015-17
MSM89_42-1	23.01.20	15:44:11	MSS	10° 59.396' N	059° 27.910' W	1459.3	MSS0015-17
MSM89_43-1	23.01.20	17:55:17	CTD	11° 04.630' N	059° 14.848' W	1219.0	CTD017
MSM89_44-1	23.01.20	18:34:15	MSS	11° 04.600' N	059° 14.860' W	1218.0	MSS0018-20
MSM89_44-1	23.01.20	19:11:15	MSS	11° 04.035' N	059° 14.928' W	1147.7	MSS0018-20
MSM89_45-1	23.01.20	18:46:20	BLN	11° 04.422' N	059° 14.941' W	1209.7	launched
MSM89_46-1	23.01.20	21:25:41	CTD	11° 09.153' N	059° 02.311' W	1681.4	CTD018
MSM89_47-1	23.01.20	22:16:33	MSS	11° 09.133' N	059° 02.193' W	1663.1	MSS0021-23
MSM89_47-1	23.01.20	22:50:38	MSS	11° 09.034' N	059° 01.623' W	1567.9	MSS0021-23
MSM89_48-1	23.01.20	22:45:37	BLN	11° 09.048' N	059° 01.706' W	1587.3	launched
MSM89_49-1	24.01.20	00:40:56	CTD	11° 13.799' N	058° 49.749' W	1685.1	CTD019
MSM89_50-1	24.01.20	01:36:44	MSS	11° 13.793' N	058° 49.719' W	1675.4	MSS0024-26
MSM89_50-1	24.01.20	02:08:35	MSS	11° 13.700' N	058° 49.184' W	1585.6	MSS0024-26
MSM89_51-1	24.01.20	02:45:10	BLN	11° 16.093' N	058° 43.484' W	1636.4	launched
MSM89_52-1	24.01.20	04:04:51	CTD	11° 18.419' N	058° 37.227' W	1857.2	CTD020
MSM89_53-1	24.01.20	05:01:37	MSS	11° 18.409' N	058° 37.164' W	1858.7	MSS0027-29
MSM89_53-1	24.01.20	05:37:23	MSS	11° 18.306' N	058° 36.565' W	1858.9	MSS0027-29
MSM89_54-1	24.01.20	07:31:07	CTD	11° 23.032' N	058° 24.669' W	2164.1	CTD021
MSM89_55-1	24.01.20	07:02:50	BLN	11° 23.031' N	058° 24.670' W	2163.0	launched
MSM89_56-1	24.01.20	08:42:58	MSS	11° 23.032' N	058° 24.128' W	2081.5	MSS0030
MSM89_56-1	24.01.20	08:56:44	MSS	11° 23.031' N	058° 24.056' W	2097.1	MSS0030

MSM89_56-1	24.01.20	08:57:26	MSS	11° 23.031' N	058° 24.056' W	2098.2	MSS0030
MSM89_57-1	24.01.20	10:55:14	CTD	11° 27.656' N	058° 12.147' W	2355.5	CTD022
MSM89_58-1	24.01.20	10:46:18	BLN	11° 27.656' N	058° 12.146' W	2352.2	launched
MSM89_59-1	24.01.20	14:00:18	CTD	11° 32.378' N	057° 59.574' W	2501.9	CTD023
MSM89_59-2	24.01.20	14:47:05	BLN	11° 32.534' N	057° 59.546' W	2517.1	launched
MSM89_60-1	24.01.20	14:59:42	MSS	11° 32.545' N	057° 59.538' W	2514.7	MSS0031-32
MSM89_60-1	24.01.20	15:36:47	MSS	11° 32.579' N	057° 59.349' W	2492.7	MSS0031-32
MSM89_61-1	24.01.20	16:19:54	GLID	11° 32.585' N	057° 59.337' W	2490.9	IFM03 deployed
MSM89_62-1	24.01.20	17:27:15	GLID	11° 32.599' N	057° 59.267' W	2487.6	IFM13 failed
MSM89_62-1	24.01.20	18:01:00	GLID	11° 32.615' N	057° 59.212' W	2488.8	IFM13 failed
MSM89_62-1	24.01.20	18:31:25	GLID	11° 32.880' N	057° 59.744' W	2587.0	IFM13 failed
MSM89_62-1	24.01.20	18:46:00	GLID	11° 32.880' N	057° 59.742' W	2590.3	IFM13 failed
MSM89_63-1	24.01.20	18:47:04	BLN	11° 32.880' N	057° 59.743' W	2588.8	launched
MSM89_64-1	24.01.20	19:33:11	GLID	11° 32.880' N	057° 59.722' W	2586.9	IFM12 deployed
MSM89_65-1	24.01.20	22:55:14	CTD	11° 36.913' N	057° 47.091' W	2939.0	CTD024
MSM89_66-1	24.01.20	22:46:08	BLN	11° 36.912' N	057° 47.091' W	2944.2	launched
MSM89_67-1	24.01.20	23:46:19	MSS	11° 36.900' N	057° 47.057' W	2936.0	MSS0033-35
MSM89_67-1	25.01.20	00:16:47	MSS	11° 36.726' N	057° 46.569' W	2934.5	MSS0033-35
MSM89_68-1	25.01.20	02:20:30	CTD	11° 41.546' N	057° 34.491' W	3692.8	CTD025
MSM89_68-2	25.01.20	02:45:45	BLN	11° 41.546' N	057° 34.492' W	3685.7	launched
MSM89_69-1	25.01.20	03:07:28	MSS	11° 41.535' N	057° 34.462' W	3693.9	MSS0036-38
MSM89_69-1	25.01.20	03:35:08	MSS	11° 41.376' N	057° 34.018' W	3760.2	MSS0036-38
MSM89_70-1	25.01.20	05:33:07	CTD	11° 46.179' N	057° 21.915' W	4364.0	CTD026
MSM89_71-1	25.01.20	06:21:54	MSS	11° 46.164' N	057° 21.832' W	4369.5	MSS0039-40
MSM89_71-1	25.01.20	06:55:02	MSS	11° 46.067' N	057° 21.276' W	4372.1	MSS0039-40
MSM89_72-1	25.01.20	06:44:15	BLN	11° 46.098' N	057° 21.456' W	4375.8	launched
MSM89_73-1	25.01.20	07:47:05	CTD	11° 48.050' N	057° 16.529' W	4381.2	CTD027
MSM89_74-1	25.01.20	09:09:33	CTD	11° 48.050' N	057° 16.529' W	4379.2	CTD028
MSM89_75-1	25.01.20	10:10:41	CTD	11° 48.050' N	057° 16.530' W	4379.1	CTD029
MSM89_76-1	25.01.20	11:00:46	BLN	11° 49.660' N	057° 12.595' W	4396.0	launched
MSM89_77-1	25.01.20	12:05:59	CTD	11° 50.814' N	057° 09.413' W	4403.1	CTD030
MSM89_78-1	25.01.20	12:54:50	MSS	11° 50.778' N	057° 09.314' W	4405.7	MSS0042-44
MSM89_78-1	25.01.20	13:21:04	MSS	11° 50.628' N	057° 08.892' W	4400.6	MSS0042-44
MSM89_79-1	25.01.20	15:26:12	CTD	11° 55.469' N	056° 56.878' W	4429.2	CTD031
MSM89_80-1	25.01.20	14:49:21	BLN	11° 55.470' N	056° 56.877' W	4426.6	launched
MSM89_81-1	25.01.20	16:16:24	MSS	11° 55.443' N	056° 56.817' W	4429.0	MSS0045-48
MSM89_81-1	25.01.20	16:58:12	MSS	11° 55.145' N	056° 56.170' W	4429.0	MSS0045-48
MSM89_82-1	25.01.20	18:56:06	CTD	12° 00.075' N	056° 44.317' W	4450.7	CTD032
MSM89_83-1	25.01.20	18:45:13	BLN	12° 00.075' N	056° 44.317' W	4451.0	launched
MSM89_84-1	25.01.20	19:44:13	MSS	12° 00.059' N	056° 44.264' W	4450.1	MSS0049-51
MSM89_84-1	25.01.20	20:18:42	MSS	11° 59.872' N	056° 43.706' W	4452.6	MSS0049-51
MSM89_85-1	25.01.20	22:45:21	BLN	11° 59.860' N	056° 43.668' W	4450.9	launched
MSM89_86-1	25.01.20	23:11:19	UCTD	11° 57.921' N	056° 42.228' W	4445.6	uCTD001
MSM89_87-1	26.01.20	00:00:54	UCTD	11° 53.928' N	056° 39.207' W	4442.1	uCTD002
MSM89_88-1	26.01.20	00:30:20	UCTD	11° 51.635' N	056° 37.308' W	4445.8	uCTD003
MSM89_89-1	26.01.20	01:03:37	UCTD	11° 49.039' N	056° 35.156' W	4442.2	uCTD004

MSM89_90-1	26.01.20	01:33:20	UCTD	11° 46.729' N	056° 33.243' W	4442.1	uCTD005
MSM89_91-1	26.01.20	02:00:06	UCTD	11° 44.641' N	056° 31.514' W	4439.7	uCTD006
MSM89_92-1	26.01.20	02:29:47	UCTD	11° 42.338' N	056° 29.603' W	4433.9	uCTD007
MSM89_93-1	26.01.20	02:51:40	BLN	11° 40.637' N	056° 28.195' W	4422.8	launched
MSM89_94-1	26.01.20	03:02:23	UCTD	11° 39.808' N	056° 27.508' W	4417.4	uCTD008
MSM89_95-1	26.01.20	03:34:01	UCTD	11° 37.344' N	056° 25.468' W	4412.6	uCTD009
MSM89_96-1	26.01.20	04:00:14	UCTD	11° 35.303' N	056° 23.779' W	4402.2	uCTD010
MSM89_97-1	26.01.20	04:32:53	UCTD	11° 32.751' N	056° 21.665' W	4394.5	uCTD011
MSM89_98-1	26.01.20	05:00:43	UCTD	11° 30.584' N	056° 19.872' W	4384.7	uCTD012
MSM89_99-1	26.01.20	05:30:36	UCTD	11° 28.263' N	056° 17.947' W	4377.7	uCTD013
MSM89_100-1	26.01.20	05:59:53	UCTD	11° 25.986' N	056° 16.064' W	4368.2	uCTD014
MSM89_101-1	26.01.20	06:29:07	UCTD	11° 23.713' N	056° 14.184' W	4363.7	uCTD015
MSM89_102-1	26.01.20	06:45:12	BLN	11° 22.464' N	056° 13.151' W	4354.2	launched
MSM89_103-1	26.01.20	07:00:00	UCTD	11° 21.317' N	056° 12.200' W	4348.8	uCTD016
MSM89_104-1	26.01.20	07:30:07	UCTD	11° 18.968' N	056° 10.255' W	4341.8	uCTD017
MSM89_105-1	26.01.20	08:07:43	UCTD	11° 16.049' N	056° 07.839' W	4333.5	uCTD018
MSM89_106-1	26.01.20	08:44:37	UCTD	11° 13.176' N	056° 05.461' W	4323.4	uCTD019
MSM89_107-1	26.01.20	09:16:03	UCTD	11° 10.726' N	056° 03.439' W	4314.6	uCTD020
MSM89_108-1	26.01.20	09:51:12	UCTD	11° 07.984' N	056° 01.172' W	4305.2	uCTD021
MSM89_109-1	26.01.20	10:17:54	UCTD	11° 05.916' N	055° 59.459' W	4300.0	uCTD022
MSM89_110-1	26.01.20	10:47:15	BLN	11° 03.633' N	055° 57.571' W	4293.8	launched
MSM89_111-1	26.01.20	10:47:45	UCTD	11° 03.595' N	055° 57.539' W	4283.3	uCTD023
MSM89_112-1	26.01.20	11:31:22	UCTD	11° 00.199' N	055° 54.731' W	4275.7	uCTD024
MSM89_113-1	26.01.20	11:47:07	UCTD	10° 58.977' N	055° 53.720' W	4269.4	uCTD025
MSM89_114-1	26.01.20	12:15:16	UCTD	10° 56.782' N	055° 51.910' W	4262.0	uCTD026
MSM89_115-1	26.01.20	12:47:32	UCTD	10° 54.262' N	055° 49.830' W	4249.5	uCTD027
MSM89_116-1	26.01.20	13:13:07	UCTD	10° 52.265' N	055° 48.180' W	4244.8	uCTD028
MSM89_117-1	26.01.20	13:42:15	UCTD	10° 50.008' N	055° 46.315' W	4236.9	uCTD029
MSM89_118-1	26.01.20	14:11:39	UCTD	10° 47.703' N	055° 44.409' W	4228.3	uCTD030
MSM89_119-1	26.01.20	14:44:15	BLN	10° 45.202' N	055° 42.323' W	4222.5	launched
MSM89_120-1	26.01.20	14:44:32	UCTD	10° 45.182' N	055° 42.306' W	4212.1	uCTD031
MSM89_121-1	26.01.20	15:10:18	UCTD	10° 43.211' N	055° 40.624' W	4203.2	uCTD032
MSM89_122-1	26.01.20	15:38:17	UCTD	10° 41.065' N	055° 38.801' W	4197.5	uCTD033
MSM89_123-1	26.01.20	16:08:40	UCTD	10° 38.734' N	055° 36.814' W	4190.0	uCTD034
MSM89_124-1	26.01.20	16:39:12	UCTD	10° 36.405' N	055° 34.817' W	4180.7	uCTD035
MSM89_125-1	26.01.20	17:10:54	UCTD	10° 33.963' N	055° 32.748' W	4174.9	uCTD036
MSM89_126-1	26.01.20	17:38:54	UCTD	10° 31.813' N	055° 30.910' W	4162.3	uCTD037
MSM89_127-1	26.01.20	18:09:45	UCTD	10° 29.378' N	055° 28.849' W	4155.3	uCTD038
MSM89_0	26.01.20	18:22:12	EM122	10° 27.927' N	055° 27.605' W	4143.4	started
MSM89_128-1	26.01.20	18:39:59	UCTD	10° 25.882' N	055° 25.865' W	4139.4	uCTD039
MSM89_129-1	26.01.20	18:45:18	BLN	10° 25.269' N	055° 25.342' W	4135.3	launched
MSM89_130-1	26.01.20	19:10:10	UCTD	10° 22.415' N	055° 22.911' W	4117.8	uCTD040
MSM89_131-1	26.01.20	19:39:06	UCTD	10° 19.075' N	055° 20.066' W	4112.9	uCTD041
MSM89_132-1	26.01.20	20:17:45	UCTD	10° 14.621' N	055° 16.270' W	4113.8	uCTD042
MSM89_133-1	26.01.20	20:45:11	CKITE	10° 12.747' N	055° 13.972' W	4086.5	launched
MSM89_134-1	26.01.20	21:16:49	UCTD	10° 11.147' N	055° 11.835' W	4068.2	uCTD043

MSM89_135-1	26.01.20	22:05:11	UCTD	10° 07.586' N	055° 06.539' W	4027.0	uCTD044
MSM89_133-1	26.01.20	22:36:00	CKITE	10° 06.910' N	055° 03.296' W	4063.6	recovered
MSM89_136-1	26.01.20	22:42:20	BLN	10° 06.911' N	055° 03.296' W	4056.7	launched
MSM89_137-1	26.01.20	23:29:50	UCTD	10° 02.836' N	055° 06.206' W	3978.0	uCTD045
MSM89_138-1	27.01.20	00:00:23	UCTD	09° 59.327' N	055° 03.243' W	3969.5	uCTD046
MSM89_139-1	27.01.20	00:29:15	UCTD	09° 55.984' N	055° 00.412' W	3949.6	uCTD047
MSM89_140-1	27.01.20	00:59:32	UCTD	09° 52.490' N	054° 57.448' W	4237.5	uCTD048
MSM89_141-1	27.01.20	01:28:37	UCTD	09° 49.125' N	054° 54.600' W	4028.0	uCTD049
MSM89_142-1	27.01.20	01:58:38	UCTD	09° 45.661' N	054° 51.660' W	4062.5	uCTD050
MSM89_143-1	27.01.20	02:29:01	UCTD	09° 42.161' N	054° 48.705' W	4202.6	uCTD051
MSM89_144-1	27.01.20	02:45:37	BLN	09° 40.244' N	054° 47.076' W	4150.9	launched
MSM89_145-1	27.01.20	02:58:47	UCTD	09° 38.728' N	054° 45.791' W	4178.2	uCTD052
MSM89_146-1	27.01.20	03:29:22	UCTD	09° 35.206' N	054° 42.813' W	3787.0	uCTD053
MSM89_147-1	27.01.20	04:01:02	UCTD	09° 31.553' N	054° 39.723' W	3376.7	uCTD054
MSM89_148-1	27.01.20	04:29:16	UCTD	09° 28.351' N	054° 36.917' W	3390.0	uCTD055
MSM89_149-1	27.01.20	04:59:54	UCTD	09° 24.799' N	054° 33.954' W	2872.0	uCTD056
MSM89_150-1	27.01.20	05:29:46	UCTD	09° 21.369' N	054° 31.022' W	2686.1	uCTD057
MSM89_151-1	27.01.20	06:00:47	UCTD	09° 17.781' N	054° 27.979' W	2511.4	uCTD058
MSM89_152-1	27.01.20	06:31:14	UCTD	09° 14.282' N	054° 25.003' W	2346.2	uCTD059
MSM89_153-1	27.01.20	06:46:52	BLN	09° 12.474' N	054° 23.471' W	2261.8	launched
MSM89_154-1	27.01.20	07:46:09	CTD	09° 08.634' N	054° 20.013' W	2082.5	CTD033
MSM89_155-1	27.01.20	09:06:16	CTD	09° 08.633' N	054° 20.013' W	2080.6	CTD034
MSM89_156-1	27.01.20	10:11:54	CTD	09° 08.633' N	054° 20.012' W	2079.7	CTD035
MSM89_157-1	27.01.20	10:45:37	BLN	09° 08.769' N	054° 19.673' W	2078.4	launched
MSM89_158-1	27.01.20	11:03:58	UCTD	09° 06.877' N	054° 18.017' W	2007.8	uCTD060
MSM89_159-1	27.01.20	11:30:45	UCTD	09° 03.700' N	054° 15.415' W	1851.0	uCTD061
MSM89_160-1	27.01.20	12:00:18	UCTD	09° 00.276' N	054° 12.627' W	1673.7	uCTD062
MSM89_161-1	27.01.20	12:30:20	UCTD	08° 56.706' N	054° 09.714' W	1555.2	uCTD063
MSM89_162-1	27.01.20	13:00:04	UCTD	08° 53.223' N	054° 06.879' W	1453.8	uCTD064
MSM89_163-1	27.01.20	13:28:54	UCTD	08° 49.873' N	054° 04.149' W	1386.2	uCTD065
MSM89_164-1	27.01.20	13:58:54	UCTD	08° 46.354' N	054° 01.283' W	1322.4	uCTD066
MSM89_165-1	27.01.20	14:29:35	UCTD	08° 42.706' N	053° 58.229' W	1285.1	uCTD067
MSM89_166-1	27.01.20	15:02:55	UCTD	08° 38.866' N	053° 54.973' W	1261.3	uCTD068
MSM89_167-1	27.01.20	15:32:17	UCTD	08° 35.446' N	053° 52.073' W	1250.7	uCTD069
MSM89_168-1	27.01.20	15:51:53	DRIFT	08° 33.156' N	053° 50.165' W	1248.5	deployed
MSM89_169-1	27.01.20	15:59:58	UCTD	08° 32.558' N	053° 49.163' W	1242.8	uCTD070
MSM89_170-1	27.01.20	16:30:00	UCTD	08° 30.470' N	053° 45.177' W	1240.2	uCTD071
MSM89_171-1	27.01.20	17:00:33	UCTD	08° 28.326' N	053° 41.098' W	1242.5	uCTD072
MSM89_172-1	27.01.20	17:28:44	UCTD	08° 26.350' N	053° 37.324' W	1237.1	uCTD073
MSM89_173-1	27.01.20	17:59:10	UCTD	08° 24.209' N	053° 33.244' W	1236.7	uCTD074
MSM89_174-1	27.01.20	18:30:33	UCTD	08° 22.005' N	053° 29.046' W	1239.4	uCTD075
MSM89_175-1	27.01.20	19:00:59	UCTD	08° 19.864' N	053° 24.960' W	1247.6	uCTD076
MSM89_175-1	27.01.20	19:14:53	UCTD	08° 18.887' N	053° 23.104' W	1248.7	uCTD076
MSM89_176-1	27.01.20	19:30:54	UCTD	08° 17.769' N	053° 20.963' W	1253.0	uCTD077
MSM89_176-1	27.01.20	19:44:47	UCTD	08° 16.791' N	053° 19.108' W	1258.0	uCTD077
MSM89_177-1	27.01.20	20:02:50	UCTD	08° 14.894' N	053° 17.265' W	1253.2	uCTD078

MSM89_178-1	27.01.20	20:31:04	UCTD	08° 13.408' N	053° 13.307' W	1275.5	uCTD079
MSM89_179-1	27.01.20	20:59:33	UCTD	08° 11.681' N	053° 09.367' W	1297.4	uCTD080
MSM89_180-1	27.01.20	21:29:31	UCTD	08° 09.576' N	053° 05.367' W	1323.9	uCTD081
MSM89_181-1	27.01.20	22:17:09	UCTD	08° 06.242' N	052° 59.007' W	1393.0	uCTD082
MSM89_182-1	27.01.20	22:45:17	UCTD	08° 04.273' N	052° 55.252' W	1448.1	uCTD083
MSM89_183-1	27.01.20	23:21:07	UCTD	08° 01.756' N	052° 50.458' W	1552.8	uCTD084
MSM89_184-1	27.01.20	23:47:00	UCTD	07° 59.938' N	052° 46.996' W	1654.0	uCTD085
MSM89_185-1	27.01.20	23:59:41	BLN	07° 59.049' N	052° 45.307' W	1721.5	launched
MSM89_186-1	28.01.20	00:13:55	UCTD	07° 58.051' N	052° 43.404' W	1821.0	uCTD086
MSM89_187-1	28.01.20	00:44:23	UCTD	07° 55.912' N	052° 39.335' W	2016.1	uCTD087
MSM89_188-1	28.01.20	01:15:15	UCTD	07° 53.744' N	052° 35.208' W	2169.7	uCTD088
MSM89_189-1	28.01.20	01:45:10	UCTD	07° 51.643' N	052° 31.208' W	2299.0	uCTD089
MSM89_190-1	28.01.20	02:14:38	UCTD	07° 49.571' N	052° 27.265' W	2450.5	uCTD090
MSM89_191-1	28.01.20	02:43:50	UCTD	07° 47.522' N	052° 23.356' W	2575.6	uCTD091
MSM89_192-1	28.01.20	03:15:01	UCTD	07° 45.333' N	052° 19.197' W	2708.0	uCTD092
MSM89_192-1	28.01.20	03:28:28	UCTD	07° 44.387' N	052° 17.398' W	2764.1	uCTD092
MSM89_193-1	28.01.20	03:46:40	UCTD	07° 43.110' N	052° 14.968' W	2851.3	uCTD093
MSM89_194-1	28.01.20	04:14:37	UCTD	07° 41.142' N	052° 11.218' W	2965.0	uCTD094
MSM89_195-1	28.01.20	04:44:50	UCTD	07° 39.014' N	052° 07.174' W	3159.8	uCTD095
MSM89_196-1	28.01.20	05:15:14	UCTD	07° 36.883' N	052° 03.117' W	3298.5	uCTD096
MSM89_197-1	28.01.20	05:44:36	UCTD	07° 34.817' N	051° 59.186' W	3496.2	uCTD097
MSM89_198-1	28.01.20	06:15:52	UCTD	07° 32.610' N	051° 54.994' W	3793.1	uCTD098
MSM89_199-1	28.01.20	06:45:02	UCTD	07° 30.566' N	051° 51.102' W	4009.6	uCTD099
MSM89_200-1	28.01.20	07:14:29	UCTD	07° 28.492' N	051° 47.163' W	4092.4	uCTD100
MSM89_201-1	28.01.20	07:45:32	UCTD	07° 26.316' N	051° 43.017' W	4129.4	uCTD101
MSM89_202-1	28.01.20	08:15:54	UCTD	07° 24.180' N	051° 38.959' W	4118.1	uCTD102
MSM89_203-1	28.01.20	09:24:43	UCTD	07° 19.969' N	051° 30.967' W	4026.6	uCTD103
MSM89_204-1	28.01.20	10:05:02	UCTD	07° 17.166' N	051° 25.627' W	4069.1	uCTD104
MSM89_205-1	28.01.20	10:33:00	UCTD	07° 15.210' N	051° 21.910' W	4066.2	uCTD105
MSM89_206-1	28.01.20	11:01:34	UCTD	07° 13.199' N	051° 18.083' W	4291.2	uCTD106
MSM89_207-1	28.01.20	11:32:19	UCTD	07° 11.042' N	051° 13.990' W	4029.7	uCTD107
MSM89_208-1	28.01.20	12:01:07	UCTD	07° 08.998' N	051° 10.102' W	4016.4	uCTD108
MSM89_209-1	28.01.20	12:27:14	BLN	07° 07.163' N	051° 06.617' W	4032.3	launched
MSM89_210-1	28.01.20	12:43:27	UCTD	07° 06.023' N	051° 04.446' W	4061.7	uCTD109
MSM89_211-1	28.01.20	13:12:33	UCTD	07° 03.963' N	051° 00.537' W	4342.1	uCTD110
MSM89_212-1	28.01.20	13:29:29	UCTD	07° 02.818' N	050° 58.319' W	4099.4	uCTD111
MSM89_213-1	28.01.20	14:03:40	UCTD	07° 00.527' N	050° 53.905' W	4086.0	uCTD112
MSM89_214-1	28.01.20	14:30:48	UCTD	07° 03.758' N	050° 52.244' W	4131.4	uCTD113
MSM89_215-1	28.01.20	15:01:00	UCTD	07° 08.200' N	050° 51.358' W	4190.2	uCTD114
MSM89_216-1	28.01.20	16:35:49	CTD	07° 14.978' N	050° 49.995' W	4265.6	CTD036
MSM89_217-1	28.01.20	17:24:40	MSS	07° 15.003' N	050° 49.964' W	4268.8	MSS0052-54
MSM89_217-1	28.01.20	18:01:01	MSS	07° 15.394' N	050° 49.497' W	4277.0	MSS0052-54
MSM89_218-1	28.01.20	20:29:13	MSS	07° 27.936' N	051° 08.705' W	4274.3	MSS0055-57
MSM89_218-1	28.01.20	21:11:17	MSS	07° 28.432' N	051° 08.206' W	4282.8	MSS0055-57
MSM89_219-1	28.01.20	21:29:24	CKITE	07° 28.378' N	051° 08.082' W	4297.6	launched
MSM89_220-1	29.01.20	00:02:48	BLN	07° 32.412' N	051° 08.088' W	4330.3	launched

MSM89_221-1	29.01.20	00:56:53	CTD	07° 32.413' N	051° 08.088' W	4321.3	CTD037
MSM89_219-1	29.01.20	02:16:46	CKITE	07° 32.413' N	051° 08.088' W	4566.3	recovered
MSM89_222-1	29.01.20	02:38:02	MSS	07° 32.425' N	051° 08.075' W	4320.2	MSS0058-60
MSM89_222-1	29.01.20	03:13:50	MSS	07° 32.885' N	051° 07.689' W	4332.3	MSS0058-60
MSM89_223-1	29.01.20	04:23:28	MSS	07° 34.268' N	051° 18.215' W	4295.6	MSS0061-63
MSM89_223-1	29.01.20	05:01:19	MSS	07° 34.674' N	051° 17.731' W	4290.0	MSS0061-63
MSM89_224-1	29.01.20	06:15:45	MSS	07° 40.689' N	051° 27.664' W	4283.4	MSS0064-66
MSM89_224-1	29.01.20	06:53:08	MSS	07° 41.092' N	051° 27.182' W	4319.7	MSS0064-66
MSM89_225-1	29.01.20	07:48:50	CTD	07° 43.527' N	051° 31.168' W	4295.9	CTD038
MSM89_226-1	29.01.20	09:10:35	CTD	07° 43.527' N	051° 31.170' W	4297.3	CTD039
MSM89_227-1	29.01.20	10:13:45	CTD	07° 43.526' N	051° 31.169' W	4294.1	CTD040
MSM89_228-1	29.01.20	10:49:17	MSS	07° 43.533' N	051° 31.137' W	4296.1	MSS0067-69
MSM89_228-1	29.01.20	11:28:48	MSS	07° 43.648' N	051° 30.483' W	4316.5	MSS0067-69
MSM89_229-1	29.01.20	12:03:20	BLN	07° 46.186' N	051° 35.512' W	4327.7	launched
MSM89_230-1	29.01.20	13:07:34	CTD	07° 47.092' N	051° 37.062' W	4330.1	CTD041
MSM89_231-1	29.01.20	14:10:15	MSS	07° 47.109' N	051° 37.014' W	4342.4	MSS0070-72
MSM89_231-1	29.01.20	14:49:40	MSS	07° 47.335' N	051° 36.391' W	4333.8	MSS0070-72
MSM89_232-1	29.01.20	16:02:57	MSS	07° 53.526' N	051° 46.428' W	4251.8	MSS0073-75
MSM89_232-1	29.01.20	16:44:24	MSS	07° 53.764' N	051° 45.772' W	4291.9	MSS0073-75
MSM89_233-1	29.01.20	18:43:47	CTD	07° 59.915' N	051° 55.923' W	3964.7	CTD042
MSM89_234-1	29.01.20	19:47:14	MSS	07° 59.813' N	051° 56.088' W	3980.8	MSS0076-78
MSM89_234-1	29.01.20	20:30:59	MSS	08° 00.065' N	051° 55.394' W	3984.5	MSS0076-78
MSM89_235-1	29.01.20	20:45:03	MVP	08° 00.456' N	051° 55.348' W	3983.4	deployed
MSM89_235-1	29.01.20	22:07:32	MVP	08° 06.130' N	052° 05.033' W	3737.3	recovered
MSM89_236-1	29.01.20	23:28:56	CTD	08° 06.375' N	052° 05.239' W	3735.5	CTD043
MSM89_236-2	30.01.20	00:02:01	BLN	08° 06.374' N	052° 05.239' W	3739.1	launched
MSM89_237-1	30.01.20	00:59:52	MVP	08° 06.743' N	052° 05.321' W	3749.2	deployed
MSM89_237-1	30.01.20	02:16:19	MVP	08° 12.375' N	052° 14.109' W	3605.2	recovered
MSM89_238-1	30.01.20	03:38:25	CTD	08° 12.832' N	052° 14.591' W	3611.1	CTD044
MSM89_239-1	30.01.20	04:54:50	MSS	08° 12.840' N	052° 14.488' W	3610.8	MSS0079-81
MSM89_239-1	30.01.20	05:46:14	MSS	08° 12.683' N	052° 13.483' W	3626.3	MSS0079-81
MSM89_240-1	30.01.20	05:55:40	MVP	08° 12.974' N	052° 13.486' W	3635.4	deployed
MSM89_240-1	30.01.20	07:13:30	MVP	08° 18.512' N	052° 23.335' W	3838.7	recovered
MSM89_241-1	30.01.20	08:42:19	CTD	08° 19.239' N	052° 24.140' W	3801.8	CTD045
MSM89_242-1	30.01.20	10:12:49	MSS	08° 19.465' N	052° 23.805' W	3849.7	MSS0082-84
MSM89_242-1	30.01.20	10:51:10	MSS	08° 20.065' N	052° 22.663' W	3927.1	MSS0082-84
MSM89_243-1	30.01.20	10:59:08	MVP	08° 19.943' N	052° 22.703' W	4164.6	deployed
MSM89_243-1	30.01.20	11:49:09	MVP	08° 18.382' N	052° 29.645' W	3345.8	recovered
MSM89_244-1	30.01.20	11:59:39	BLN	08° 18.275' N	052° 29.633' W	3348.7	launched
MSM89_245-1	30.01.20	12:03:12	CKITE	08° 18.273' N	052° 29.633' W	3344.5	launched
MSM89_245-1	30.01.20	13:19:43	CKITE	08° 20.069' N	052° 28.510' W	3512.6	recovered
MSM89_246-1	30.01.20	13:28:40	MVP	08° 20.194' N	052° 28.951' W	3484.7	deployed
MSM89_246-1	30.01.20	14:00:41	MVP	08° 19.894' N	052° 31.453' W	3370.6	recovered
MSM89_247-1	30.01.20	14:08:06	MVP	08° 20.009' N	052° 31.664' W	3352.7	deployed
MSM89_247-1	30.01.20	18:38:14	MVP	08° 12.252' N	053° 09.543' W	1299.7	recovered
MSM89_248-1	30.01.20	18:44:21	BLN	08° 12.155' N	053° 10.067' W	1291.1	launched

MSM89_249-1	30.01.20	19:30:57	CTD	08° 12.390' N	053° 11.203' W	1282.2	CTD046
MSM89_250-1	30.01.20	20:05:19	MSS	08° 12.765' N	053° 11.374' W	1285.2	MSS0084-86
MSM89_250-1	30.01.20	20:59:20	MSS	08° 13.878' N	053° 10.589' W	1308.4	MSS0084-86
MSM89_251-1	30.01.20	21:21:26	MVP	08° 13.433' N	053° 11.133' W	1293.6	deployed
MSM89_251-1	30.01.20	23:33:02	MVP	08° 12.601' N	053° 22.932' W	1226.1	recovered
MSM89_252-1	30.01.20	22:49:26	BLN	08° 12.575' N	053° 19.093' W	1233.4	launched
MSM89_253-1	30.01.20	23:40:16	MSS	08° 12.757' N	053° 23.225' W	1224.0	MSS0087-89
MSM89_253-1	31.01.20	00:24:14	MSS	08° 13.455' N	053° 22.742' W	1223.0	MSS0087-89
MSM89_254-1	31.01.20	00:42:48	MVP	08° 12.544' N	053° 23.309' W	1221.6	deployed
MSM89_254-1	31.01.20	01:29:29	MVP	08° 12.521' N	053° 27.374' W	1221.6	recovered
MSM89_255-1	31.01.20	01:44:52	MSS	08° 12.710' N	053° 27.704' W	1219.7	MSS0090-92
MSM89_255-1	31.01.20	02:19:59	MSS	08° 13.320' N	053° 27.351' W	1220.1	MSS0090-92
MSM89_256-1	31.01.20	02:40:44	MVP	08° 12.514' N	053° 28.287' W	1219.0	deployed
MSM89_256-1	31.01.20	07:13:52	MVP	08° 12.537' N	053° 51.875' W	1205.8	recovered
MSM89_257-1	31.01.20	02:46:34	BLN	08° 12.526' N	053° 28.826' W	1222.1	launched
MSM89_258-1	31.01.20	06:45:48	BLN	08° 12.527' N	053° 49.527' W	1210.2	launched
MSM89_259-1	31.01.20	07:46:47	CTD	08° 12.859' N	053° 52.499' W	1206.8	CTD047
MSM89_260-1	31.01.20	09:09:27	CTD	08° 13.135' N	053° 52.432' W	1207.8	CTD048
MSM89_261-1	31.01.20	10:14:36	CTD	08° 13.384' N	053° 52.499' W	1209.9	CTD049
MSM89_262-1	31.01.20	10:45:39	BLN	08° 13.548' N	053° 52.503' W	1208.7	launched
MSM89_263-1	31.01.20	11:05:06	MVP	08° 12.498' N	053° 52.321' W	1204.4	deployed
MSM89_263-1	31.01.20	14:26:03	MVP	08° 09.347' N	053° 52.416' W	1196.4	recovered
MSM89_264-1	31.01.20	14:40:59	MSS	08° 09.334' N	053° 52.225' W	1194.6	MSS0093-95
MSM89_264-1	31.01.20	15:21:10	MSS	08° 09.424' N	053° 51.584' W	1192.6	MSS0093-95
MSM89_265-1	31.01.20	14:48:22	BLN	08° 09.353' N	053° 52.132' W	1190.5	launched
MSM89_266-1	31.01.20	15:52:47	UCTD	08° 08.786' N	053° 50.174' W	1193.3	uCTD115
MSM89_267-1	31.01.20	16:40:02	MSS	08° 08.029' N	053° 47.402' W	1201.1	MSS0096
MSM89_267-1	31.01.20	17:00:26	MSS	08° 08.036' N	053° 47.059' W	1197.3	MSS0096
MSM89_268-1	31.01.20	17:17:05	UCTD	08° 07.696' N	053° 46.049' W	1193.0	uCTD116
MSM89_269-1	31.01.20	17:43:15	UCTD	08° 07.123' N	053° 43.934' W	1197.4	uCTD117
MSM89_270-1	31.01.20	18:15:03	UCTD	08° 06.435' N	053° 41.353' W	1200.3	uCTD118
MSM89_271-1	31.01.20	18:44:39	UCTD	08° 05.805' N	053° 38.971' W	1199.6	uCTD119
MSM89_272-1	31.01.20	18:46:27	BLN	08° 05.766' N	053° 38.820' W	1198.5	launched
MSM89_273-1	31.01.20	19:18:33	CKITE	08° 05.398' N	053° 37.340' W	1206.0	launched
MSM89_274-1	31.01.20	20:04:11	UCTD	08° 04.911' N	053° 36.630' W	1200.3	uCTD120
MSM89_275-1	31.01.20	20:32:31	UCTD	08° 04.406' N	053° 34.831' W	1199.7	uCTD121
MSM89_276-1	31.01.20	20:56:49	MSS	08° 04.079' N	053° 33.560' W	1200.1	MSS0097
MSM89_276-1	31.01.20	21:18:52	MSS	08° 04.106' N	053° 33.227' W	1202.9	MSS0097
MSM89_277-1	31.01.20	21:34:51	UCTD	08° 04.078' N	053° 32.914' W	1206.4	uCTD122
MSM89_278-1	31.01.20	22:11:54	UCTD	08° 03.274' N	053° 31.087' W	1202.4	uCTD123
MSM89_279-1	31.01.20	22:47:00	BLN	08° 02.519' N	053° 28.141' W	1207.0	launched
MSM89_280-1	31.01.20	22:47:14	UCTD	08° 02.513' N	053° 28.122' W	1209.1	uCTD124
MSM89_281-1	31.01.20	23:03:23	MSS	08° 02.257' N	053° 27.167' W	1220.4	MSS0098
MSM89_281-1	31.01.20	23:26:24	MSS	08° 02.286' N	053° 26.819' W	1206.5	MSS0098
MSM89_282-1	01.02.20	00:00:19	UCTD	08° 01.578' N	053° 24.639' W	1213.2	uCTD125
MSM89_283-1	01.02.20	00:30:44	UCTD	08° 00.792' N	053° 21.895' W	1215.9	uCTD126

MSM89_284-1	01.02.20	01:00:03	UCTD	08° 00.050' N	053° 19.231' W	1213.3	uCTD127
MSM89_285-1	01.02.20	01:35:58	MSS	07° 59.728' N	053° 17.785' W	1220.4	MSS0099
MSM89_285-1	01.02.20	01:54:24	MSS	07° 59.785' N	053° 17.480' W	1213.1	MSS0099
MSM89_286-1	01.02.20	02:30:08	UCTD	07° 58.891' N	053° 14.375' W	1223.5	uCTD128
MSM89_287-1	01.02.20	02:55:22	BLN	07° 58.275' N	053° 12.091' W	1221.7	launched
MSM89_288-1	01.02.20	02:59:56	UCTD	07° 58.162' N	053° 11.654' W	1223.9	uCTD129
MSM89_289-1	01.02.20	03:31:51	UCTD	07° 57.341' N	053° 08.583' W	1227.1	uCTD130
MSM89_290-1	01.02.20	04:02:03	MSS	07° 57.018' N	053° 07.279' W	1232.2	MSS0100-101
MSM89_290-1	01.02.20	04:28:45	MSS	07° 57.018' N	053° 06.829' W	1225.8	MSS0100-101
MSM89_291-1	01.02.20	04:58:10	UCTD	07° 56.267' N	053° 04.726' W	1229.6	uCTD131
MSM89_292-1	01.02.20	05:29:29	UCTD	07° 55.551' N	053° 02.028' W	1234.8	uCTD132
MSM89_293-1	01.02.20	06:02:19	MSS	07° 55.061' N	053° 00.031' W	1237.8	MSS0102
MSM89_293-1	01.02.20	06:19:51	MSS	07° 55.055' N	052° 59.737' W	1242.6	MSS0102
MSM89_294-1	01.02.20	06:28:31	UCTD	07° 54.957' N	052° 59.274' W	1243.5	uCTD133
MSM89_295-1	01.02.20	06:59:57	UCTD	07° 54.079' N	052° 56.708' W	1261.3	uCTD134
MSM89_296-1	01.02.20	07:11:11	BLN	07° 53.833' N	052° 55.760' W	1254.1	launched
MSM89_297-1	01.02.20	07:29:40	UCTD	07° 53.371' N	052° 54.014' W	1270.7	uCTD135
MSM89_298-1	01.02.20	08:02:53	MSS	07° 52.800' N	052° 51.791' W	1291.4	MSS0103
MSM89_298-1	01.02.20	08:29:03	MSS	07° 52.685' N	052° 51.370' W	1294.4	MSS0103
MSM89_299-1	01.02.20	08:46:40	UCTD	07° 52.294' N	052° 50.041' W	1309.0	uCTD136
MSM89_300-1	01.02.20	09:29:06	MSS	07° 51.414' N	052° 46.675' W	1373.4	MSS0104
MSM89_300-1	01.02.20	09:47:22	MSS	07° 51.440' N	052° 46.398' W	1381.4	MSS0104
MSM89_301-1	01.02.20	10:10:17	UCTD	07° 50.719' N	052° 44.268' W	1443.3	uCTD137
MSM89_302-1	01.02.20	10:40:22	UCTD	07° 49.935' N	052° 41.301' W	1571.7	uCTD138
MSM89_303-1	01.02.20	10:51:39	BLN	07° 49.628' N	052° 40.160' W	1664.0	launched
MSM89_304-1	01.02.20	10:59:45	MSS	07° 49.607' N	052° 39.996' W	1673.3	MSS0105
MSM89_304-1	01.02.20	11:14:40	MSS	07° 49.627' N	052° 39.771' W	1687.1	MSS0105
MSM89_305-1	01.02.20	11:40:56	UCTD	07° 48.976' N	052° 37.725' W	1819.5	uCTD139
MSM89_273-1	01.02.20	12:22:18	CKITE	07° 48.684' N	052° 36.627' W	1901.6	recovered
MSM89_306-1	01.02.20	12:40:36	UCTD	07° 48.309' N	052° 35.114' W	1995.2	uCTD140
MSM89_307-1	01.02.20	13:05:43	UCTD	07° 47.702' N	052° 32.816' W	2117.0	uCTD141
MSM89_308-1	01.02.20	13:37:11	MSS	07° 47.240' N	052° 31.018' W	2201.5	MSS0106
MSM89_308-1	01.02.20	13:54:42	MSS	07° 47.265' N	052° 30.700' W	2209.2	MSS0106
MSM89_309-1	01.02.20	14:11:02	UCTD	07° 46.806' N	052° 29.571' W	2249.7	uCTD142
MSM89_310-1	01.02.20	14:40:25	UCTD	07° 46.113' N	052° 26.947' W	2358.2	uCTD143
MSM89_311-1	01.02.20	14:45:21	BLN	07° 45.990' N	052° 26.493' W	2370.5	launched
MSM89_312-1	01.02.20	15:11:03	MSS	07° 45.645' N	052° 25.130' W	2431.5	MSS0107
MSM89_312-1	01.02.20	15:26:58	MSS	07° 45.622' N	052° 24.864' W	2440.2	MSS0107
MSM89_313-1	01.02.20	15:45:37	UCTD	07° 45.216' N	052° 23.614' W	2497.0	uCTD144
MSM89_314-1	01.02.20	16:20:37	MSS	07° 44.561' N	052° 21.010' W	2847.7	MSS0108
MSM89_314-1	01.02.20	16:36:31	MSS	07° 44.538' N	052° 20.744' W	2619.7	MSS0108
MSM89_315-1	01.02.20	16:49:43	UCTD	07° 43.779' N	052° 21.213' W	2581.0	uCTD145
MSM89_316-1	01.02.20	17:19:19	UCTD	07° 41.238' N	052° 23.569' W	2406.4	uCTD146
MSM89_317-1	01.02.20	17:46:00	MSS	07° 39.535' N	052° 24.998' W	2321.9	MSS0109
MSM89_317-1	01.02.20	18:01:58	MSS	07° 39.512' N	052° 24.731' W	2337.0	MSS0109
MSM89_318-1	01.02.20	18:15:30	UCTD	07° 38.733' N	052° 25.356' W	2288.0	uCTD147

MSM89_319-1	01.02.20	18:44:21	UCTD	07° 36.479' N	052° 28.055' W	2063.1	uCTD148
MSM89_320-1	01.02.20	18:46:11	BLN	07° 36.334' N	052° 28.224' W	2028.8	launched
MSM89_321-1	01.02.20	19:15:46	MSS	07° 34.368' N	052° 29.935' W	1763.8	MSS0110
MSM89_321-1	01.02.20	19:33:17	MSS	07° 34.341' N	052° 29.642' W	1814.0	MSS0110
MSM89_322-1	01.02.20	19:45:02	UCTD	07° 33.811' N	052° 30.075' W	1716.6	uCTD149
MSM89_323-1	01.02.20	20:14:00	UCTD	07° 31.624' N	052° 32.729' W	1412.0	uCTD150
MSM89_324-1	01.02.20	20:44:51	MSS	07° 29.757' N	052° 34.388' W	0.0	MSS0111
MSM89_324-1	01.02.20	21:01:02	MSS	07° 29.842' N	052° 34.159' W	1332.0	MSS0111
MSM89_325-1	01.02.20	21:14:09	UCTD	07° 29.173' N	052° 34.616' W	1311.1	uCTD151
MSM89_326-1	01.02.20	21:59:57	UCTD	07° 25.678' N	052° 38.319' W	1174.9	uCTD152
MSM89_327-1	01.02.20	22:32:06	MSS	07° 23.843' N	052° 39.957' W	1108.1	MSS0112
MSM89_327-1	01.02.20	22:47:20	MSS	07° 23.924' N	052° 39.739' W	1102.2	MSS0112
MSM89_328-1	01.02.20	22:45:49	BLN	07° 23.915' N	052° 39.762' W	1099.9	launched
MSM89_329-1	01.02.20	23:00:14	UCTD	07° 23.159' N	052° 40.408' W	1072.8	uCTD153
MSM89_330-1	01.02.20	23:28:25	UCTD	07° 21.109' N	052° 42.643' W	970.1	uCTD154
MSM89_331-1	01.02.20	23:59:47	MSS	07° 19.738' N	052° 43.840' W	916.5	MSS0113
MSM89_331-1	02.02.20	00:24:34	MSS	07° 19.867' N	052° 43.488' W	925.8	MSS0113
MSM89_332-1	02.02.20	00:41:27	UCTD	07° 19.129' N	052° 44.302' W	892.1	uCTD155
MSM89_333-1	02.02.20	01:13:25	UCTD	07° 17.264' N	052° 46.279' W	815.4	uCTD156
MSM89_334-1	02.02.20	01:58:00	MSS	07° 15.273' N	052° 48.091' W	740.8	MSS0114
MSM89_334-1	02.02.20	02:13:38	MSS	07° 15.353' N	052° 47.871' W	746.2	MSS0114
MSM89_335-1	02.02.20	02:29:46	UCTD	07° 14.795' N	052° 48.551' W	719.5	uCTD157
MSM89_336-1	02.02.20	03:01:09	UCTD	07° 12.942' N	052° 50.378' W	638.0	uCTD158
MSM89_337-1	02.02.20	03:30:50	MSS	07° 12.061' N	052° 51.285' W	606.7	MSS0115
MSM89_337-1	02.02.20	03:47:21	MSS	07° 12.061' N	052° 51.285' W	596.7	MSS0115
MSM89_338-1	02.02.20	04:05:53	UCTD	07° 11.278' N	052° 51.974' W	559.3	uCTD159
MSM89_339-1	02.02.20	04:31:01	UCTD	07° 09.750' N	052° 53.406' W	491.4	uCTD160
MSM89_340-1	02.02.20	04:59:16	MSS	07° 08.397' N	052° 54.630' W	440.8	MSS0116
MSM89_340-1	02.02.20	05:15:03	MSS	07° 08.397' N	052° 54.629' W	440.2	MSS0116
MSM89_341-1	02.02.20	05:30:06	UCTD	07° 07.748' N	052° 55.176' W	417.6	uCTD161
MSM89_342-1	02.02.20	05:56:16	UCTD	07° 06.365' N	052° 56.697' W	370.4	uCTD162
MSM89_343-1	02.02.20	06:15:45	MSS	07° 05.773' N	052° 57.190' W	359.2	MSS0117
MSM89_343-1	02.02.20	06:32:14	MSS	07° 05.774' N	052° 57.189' W	360.9	MSS0117
MSM89_344-1	02.02.20	07:45:16	CTD	07° 05.885' N	052° 57.257' W	353.5	CTD050
MSM89_345-1	02.02.20	09:00:46	CTD	07° 06.571' N	052° 58.184' W	365.3	CTD051
MSM89_346-1	02.02.20	10:13:23	CTD	07° 05.979' N	052° 57.447' W	354.3	CTD052
MSM89_347-1	02.02.20	11:00:41	MVP	07° 04.544' N	052° 58.907' W	305.7	deployed
MSM89_347-1	02.02.20	11:25:24	MVP	07° 02.265' N	053° 00.481' W	261.4	hold
MSM89_347-1	02.02.20	11:29:25	MVP	07° 02.044' N	053° 00.697' W	251.7	recovered
MSM89_348-1	02.02.20	12:05:47	BLN	06° 59.246' N	053° 03.320' W	215.6	launched
MSM89_349-1	02.02.20	12:17:13	UCTD	06° 58.532' N	053° 04.001' W	190.4	uCTD163
MSM89_350-1	02.02.20	12:40:00	UCTD	06° 57.114' N	053° 05.371' W	153.1	uCTD164
MSM89_351-1	02.02.20	13:00:01	UCTD	06° 55.431' N	053° 06.958' W	107.1	uCTD165
MSM89_352-1	02.02.20	13:20:52	UCTD	06° 53.695' N	053° 08.597' W	95.3	uCTD166
MSM89_353-1	02.02.20	13:42:59	UCTD	06° 51.772' N	053° 10.406' W	85.8	uCTD167
MSM89_354-1	02.02.20	14:01:30	UCTD	06° 50.214' N	053° 11.890' W	81.1	uCTD168

MSM89_355-1	02.02.20	14:18:58	UCTD	06° 48.704' N	053° 13.315' W	79.3	uCTD169
MSM89_356-1	02.02.20	14:41:39	MVP	06° 46.767' N	053° 15.165' W	70.1	deployed
MSM89_356-1	02.02.20	16:24:17	MVP	06° 36.019' N	053° 25.352' W	54.8	recovered
MSM89_357-1	02.02.20	16:37:14	MVP	06° 35.330' N	053° 26.176' W	56.0	deployed
MSM89_357-1	02.02.20	18:14:07	MVP	06° 25.375' N	053° 35.374' W	45.1	recovered
MSM89_358-1	02.02.20	18:32:41	CTD	06° 25.133' N	053° 35.631' W	45.5	CTD053
MSM89_359-1	02.02.20	18:43:21	MSS	06° 25.163' N	053° 35.625' W	46.0	MSS0118-20
MSM89_359-1	02.02.20	18:56:05	MSS	06° 25.077' N	053° 35.476' W	46.2	MSS0118-20
MSM89_360-1	02.02.20	20:05:22	MVP	06° 26.102' N	053° 40.306' W	46.3	deployed
MSM89_360-1	03.02.20	01:25:36	MVP	06° 53.513' N	053° 48.557' W	59.1	recovered
MSM89_360-1	03.02.20	01:33:26	MVP	06° 52.646' N	053° 49.278' W	58.5	deployed
MSM89_360-1	03.02.20	05:12:59	MVP	06° 27.003' N	054° 02.950' W	34.8	recovered
MSM89_360-1	03.02.20	05:23:49	MVP	06° 26.907' N	054° 03.453' W	35.2	deployed
MSM89_360-1	03.02.20	08:56:36	MVP	06° 53.646' N	054° 03.458' W	55.5	recovered
MSM89_360-1	03.02.20	09:08:03	MVP	06° 53.957' N	054° 04.646' W	56.6	deployed
MSM89_360-1	03.02.20	09:49:23	MVP	06° 49.955' N	054° 08.178' W	47.5	recovered
MSM89_360-1	03.02.20	10:12:23	MVP	06° 49.395' N	054° 08.567' W	47.3	deployed
MSM89_360-1	03.02.20	12:57:32	MVP	06° 33.637' N	054° 21.337' W	36.1	recovered
MSM89_360-1	03.02.20	13:41:02	MVP	06° 34.369' N	054° 26.339' W	36.7	deployed
MSM89_360-1	03.02.20	15:24:12	MVP	06° 47.433' N	054° 26.330' W	48.4	recovered
MSM89_360-1	03.02.20	16:00:13	MVP	06° 48.125' N	054° 26.364' W	49.0	deployed
MSM89_360-1	03.02.20	18:17:57	MVP	07° 06.894' N	054° 26.364' W	77.7	recovered
MSM89_360-1	03.02.20	19:05:21	MVP	07° 07.191' N	054° 26.195' W	78.2	deployed
MSM89_360-1	03.02.20	22:02:40	MVP	07° 19.524' N	054° 49.499' W	94.7	recovered
MSM89_360-2	03.02.20	15:41:38	CTD	06° 47.650' N	054° 26.376' W	48.8	CTD054
MSM89_361-1	03.02.20	18:30:24	CTD	07° 07.018' N	054° 26.383' W	77.8	CTD055
MSM89_362-1	03.02.20	18:43:53	MSS	07° 07.014' N	054° 26.332' W	78.0	MSS0121-23
MSM89_362-1	03.02.20	18:58:34	MSS	07° 06.993' N	054° 26.086' W	77.4	MSS0121-23
MSM89_363-1	03.02.20	22:32:19	CTD	07° 19.984' N	054° 50.068' W	96.5	CTD056
MSM89_364-1	03.02.20	23:01:24	MSS	07° 19.983' N	054° 49.961' W	95.5	MSS0124-26
MSM89_364-1	03.02.20	23:18:04	MSS	07° 19.984' N	054° 49.710' W	95.5	MSS0124-26
MSM89_365-1	03.02.20	23:24:32	MVP	07° 20.195' N	054° 49.749' W	96.6	deployed
MSM89_365-1	04.02.20	00:27:06	MVP	07° 28.259' N	054° 53.874' W	469.9	recovered
MSM89_366-1	04.02.20	00:39:08	UCTD	07° 29.550' N	054° 54.491' W	621.4	uCTD170
MSM89_367-1	04.02.20	01:11:56	UCTD	07° 34.026' N	054° 56.589' W	1183.3	uCTD171
MSM89_368-1	04.02.20	01:46:52	MSS	07° 37.295' N	054° 58.067' W	1489.2	MSS0127-29
MSM89_368-1	04.02.20	02:31:49	MSS	07° 37.295' N	054° 57.387' W	1361.5	MSS0127-29
MSM89_369-1	04.02.20	02:49:36	UCTD	07° 39.048' N	054° 58.471' W	1588.0	uCTD172
MSM89_370-1	04.02.20	03:19:58	UCTD	07° 42.933' N	055° 00.771' W	1803.6	uCTD173
MSM89_371-1	04.02.20	04:00:04	MSS	07° 45.723' N	055° 01.986' W	2037.0	MSS0130-32
MSM89_371-1	04.02.20	04:45:57	MSS	07° 45.723' N	055° 01.293' W	2045.0	MSS0130-32
MSM89_372-1	04.02.20	04:58:52	UCTD	07° 46.686' N	055° 01.721' W	2049.8	uCTD174
MSM89_373-1	04.02.20	05:29:03	UCTD	07° 50.612' N	055° 03.986' W	2201.2	uCTD175
MSM89_374-1	04.02.20	06:01:08	MSS	07° 53.912' N	055° 05.794' W	2280.8	MSS0133-35
MSM89_374-1	04.02.20	06:47:01	MSS	07° 53.911' N	055° 05.098' W	2282.9	MSS0133-35
MSM89_375-1	04.02.20	07:45:40	CTD	07° 59.021' N	055° 08.173' W	2382.7	CTD057

MSM89_376-1	04.02.20	09:03:36	CTD	07° 59.020' N	055° 08.173' W	2382.4	CTD058
MSM89_377-1	04.02.20	10:10:15	CTD	07° 59.020' N	055° 08.173' W	2386.2	CTD059
MSM89_378-1	04.02.20	12:06:16	BLN	08° 16.768' N	055° 16.678' W	2796.5	launched
MSM89_379-1	04.02.20	17:05:18	CKITE	09° 16.134' N	055° 24.157' W	3496.4	launched
MSM89_380-1	04.02.20	17:45:48	UCTD	09° 18.600' N	055° 25.030' W	3545.7	uCTD176
MSM89_381-1	04.02.20	18:19:55	UCTD	09° 22.337' N	055° 28.359' W	3598.5	uCTD177
MSM89_382-1	04.02.20	18:45:23	UCTD	09° 25.794' N	055° 28.806' W	3642.8	uCTD178
MSM89_383-1	04.02.20	19:16:00	UCTD	09° 29.820' N	055° 28.399' W	3705.2	uCTD179
MSM89_384-1	04.02.20	19:46:03	UCTD	09° 33.830' N	055° 28.109' W	3743.2	uCTD180
MSM89_385-1	04.02.20	20:14:20	UCTD	09° 37.637' N	055° 27.914' W	3784.3	uCTD181
MSM89_386-1	04.02.20	20:31:12	BLN	09° 39.908' N	055° 27.907' W	4030.5	launched
MSM89_387-1	04.02.20	20:46:04	UCTD	09° 41.942' N	055° 27.913' W	3793.9	uCTD182
MSM89_388-1	04.02.20	21:14:42	UCTD	09° 45.777' N	055° 27.910' W	3811.1	uCTD183
MSM89_389-1	04.02.20	21:39:12	UCTD	09° 49.025' N	055° 27.910' W	3819.0	uCTD184
MSM89_379-1	04.02.20	22:23:58	CKITE	09° 52.394' N	055° 26.598' W	3845.0	recovered
MSM89_390-1	04.02.20	22:43:24	UCTD	09° 54.743' N	055° 26.618' W	3853.4	uCTD185
MSM89_391-1	04.02.20	23:13:52	UCTD	09° 58.469' N	055° 27.485' W	3890.8	uCTD186
MSM89_392-1	04.02.20	23:44:31	UCTD	10° 01.972' N	055° 27.906' W	3915.0	uCTD187
MSM89_393-1	05.02.20	00:17:03	UCTD	10° 05.853' N	055° 27.905' W	3943.4	uCTD188
MSM89_394-1	05.02.20	00:31:48	BLN	10° 07.668' N	055° 27.904' W	3953.4	launched
MSM89_395-1	05.02.20	00:46:41	UCTD	10° 09.527' N	055° 27.903' W	4224.1	uCTD189
MSM89_396-1	05.02.20	01:17:11	UCTD	10° 12.778' N	055° 29.844' W	3959.2	uCTD190
MSM89_397-1	05.02.20	01:47:57	UCTD	10° 15.726' N	055° 32.357' W	3984.9	uCTD191
MSM89_398-1	05.02.20	02:16:40	UCTD	10° 18.454' N	055° 34.675' W	3996.7	uCTD192
MSM89_399-1	05.02.20	02:46:11	UCTD	10° 21.312' N	055° 37.115' W	4232.2	uCTD193
MSM89_400-1	05.02.20	03:16:56	UCTD	10° 24.352' N	055° 39.708' W	4034.9	uCTD194
MSM89_401-1	05.02.20	03:46:49	UCTD	10° 27.347' N	055° 42.261' W	4044.1	uCTD195
MSM89_402-1	05.02.20	04:16:00	UCTD	10° 30.251' N	055° 44.737' W	4070.6	uCTD196
MSM89_403-1	05.02.20	04:44:22	UCTD	10° 33.090' N	055° 47.160' W	4090.4	uCTD197
MSM89_404-1	05.02.20	05:15:26	UCTD	10° 36.154' N	055° 49.767' W	4107.1	uCTD198
MSM89_405-1	05.02.20	05:45:19	UCTD	10° 39.052' N	055° 52.241' W	4245.4	uCTD199
MSM89_406-1	05.02.20	06:15:36	UCTD	10° 42.048' N	055° 54.803' W	4296.3	uCTD200
MSM89_407-1	05.02.20	06:45:15	UCTD	10° 44.822' N	055° 57.164' W	4288.8	uCTD201
MSM89_408-1	05.02.20	07:15:55	UCTD	10° 47.770' N	055° 59.682' W	4302.4	uCTD202
MSM89_409-1	05.02.20	07:46:23	UCTD	10° 50.782' N	056° 02.253' W	4297.5	uCTD203
MSM89_410-1	05.02.20	08:16:56	UCTD	10° 53.815' N	056° 04.841' W	4325.8	uCTD204
MSM89_411-1	05.02.20	08:47:04	UCTD	10° 56.833' N	056° 07.414' W	4421.6	uCTD205
MSM89_412-1	05.02.20	09:15:56	UCTD	10° 59.712' N	056° 09.875' W	4389.6	uCTD206
MSM89_413-1	05.02.20	09:45:08	UCTD	11° 02.575' N	056° 12.327' W	4396.5	uCTD207
MSM89_414-1	05.02.20	10:16:17	UCTD	11° 05.618' N	056° 14.914' W	4417.5	uCTD208
MSM89_415-1	05.02.20	10:45:47	UCTD	11° 08.437' N	056° 17.335' W	4427.0	uCTD209
MSM89_416-1	05.02.20	10:52:10	BLN	11° 09.051' N	056° 17.852' W	4426.1	launched
MSM89_417-1	05.02.20	11:14:49	UCTD	11° 11.248' N	056° 19.732' W	4681.6	uCTD210
MSM89_418-1	05.02.20	11:44:36	UCTD	11° 14.037' N	056° 22.113' W	4444.0	uCTD211
MSM89_419-1	05.02.20	12:16:45	UCTD	11° 17.098' N	056° 24.738' W	4452.7	uCTD212
MSM89_420-1	05.02.20	12:43:23	CKITE	11° 18.629' N	056° 25.052' W	4458.1	launched

MSM89_420-1	05.02.20	13:30:34	CKITE	11° 18.937' N	056° 22.582' W	4468.1	recovered
MSM89_420-1	05.02.20	20:30:25	CKITE	11° 42.191' N	056° 09.197' W	4535.0	launched
MSM89_420-1	05.02.20	20:42:38	CKITE	11° 42.139' N	056° 09.636' W	4534.3	recovered
MSM89_421-1	05.02.20	14:31:03	UCTD	11° 20.281' N	056° 21.436' W	4477.1	uCTD213
MSM89_422-1	05.02.20	14:44:28	BLN	11° 20.869' N	056° 22.926' W	4473.4	launched
MSM89_423-1	05.02.20	15:01:20	UCTD	11° 21.614' N	056° 24.801' W	4718.5	uCTD214
MSM89_424-1	05.02.20	15:31:40	UCTD	11° 22.955' N	056° 28.165' W	4706.7	uCTD215
MSM89_425-1	05.02.20	16:02:31	UCTD	11° 25.251' N	056° 26.286' W	4465.9	uCTD216
MSM89_426-1	05.02.20	16:30:48	UCTD	11° 27.523' N	056° 23.899' W	4489.4	uCTD217
MSM89_427-1	05.02.20	17:00:15	UCTD	11° 29.968' N	056° 21.328' W	4746.0	uCTD218
MSM89_428-1	05.02.20	17:31:40	UCTD	11° 32.356' N	056° 18.291' W	4509.7	uCTD219
MSM89_429-1	05.02.20	18:00:23	UCTD	11° 34.508' N	056° 15.417' W	4521.6	uCTD220
MSM89_430-1	05.02.20	18:28:56	UCTD	11° 36.459' N	056° 12.430' W	4530.1	uCTD221
MSM89_431-1	05.02.20	19:15:28	UCTD	11° 39.349' N	056° 07.861' W	4545.7	uCTD222
MSM89_432-1	05.02.20	20:50:12	MVP	11° 42.485' N	056° 09.733' W	4536.6	deployed
MSM89_432-1	06.02.20	00:23:01	MVP	12° 09.112' N	056° 19.346' W	4479.6	recovered
MSM89_433-1	05.02.20	22:48:51	BLN	11° 57.447' N	056° 14.582' W	4790.0	launched
MSM89_432-2	06.02.20	02:45:04	BLN	12° 13.007' N	056° 35.709' W	4442.8	launched
MSM89_434-1	06.02.20	06:45:25	BLN	12° 11.913' N	057° 08.371' W	4470.4	launched
MSM89_435-1	06.02.20	10:47:07	BLN	12° 10.803' N	057° 41.266' W	3254.8	launched
MSM89_436-1	06.02.20	12:50:40	UCTD	12° 10.241' N	057° 58.100' W	2522.5	uCTD223
MSM89_437-1	06.02.20	13:16:07	UCTD	12° 10.115' N	058° 01.555' W	2439.2	uCTD224
MSM89_438-1	06.02.20	13:50:16	UCTD	12° 09.218' N	058° 05.384' W	2236.8	uCTD225
MSM89_439-1	06.02.20	14:15:31	UCTD	12° 06.199' N	058° 03.832' W	2211.8	uCTD226
MSM89_441-1	06.02.20	14:45:03	BLN	12° 02.669' N	058° 02.023' W	2229.2	launched
MSM89_440-1	06.02.20	14:45:51	UCTD	12° 02.566' N	058° 01.980' W	2232.4	uCTD227
MSM89_442-1	06.02.20	15:15:45	UCTD	11° 58.860' N	058° 00.468' W	2532.6	uCTD228
MSM89_443-1	06.02.20	15:45:39	UCTD	11° 55.132' N	057° 58.957' W	2429.1	uCTD229
MSM89_444-1	06.02.20	16:14:29	UCTD	11° 51.426' N	057° 57.923' W	2562.2	uCTD230
MSM89_445-1	06.02.20	16:44:36	UCTD	11° 47.719' N	057° 56.315' W	2858.2	uCTD231
MSM89_446-1	06.02.20	17:17:44	UCTD	11° 43.719' N	057° 54.353' W	2917.6	uCTD232
MSM89_447-1	06.02.20	17:45:46	UCTD	11° 40.249' N	057° 52.907' W	2781.4	uCTD233
MSM89_448-1	06.02.20	18:16:01	UCTD	11° 36.586' N	057° 51.161' W	3081.3	uCTD234
MSM89_449-1	06.02.20	18:45:34	UCTD	11° 33.078' N	057° 49.441' W	3196.9	uCTD235
MSM89_450-1	06.02.20	18:48:56	BLN	11° 32.881' N	057° 49.038' W	3018.6	launched
MSM89_451-1	06.02.20	19:15:17	UCTD	11° 31.387' N	057° 45.872' W	3003.9	uCTD236
MSM89_452-1	06.02.20	19:45:05	UCTD	11° 29.621' N	057° 42.130' W	3338.2	uCTD237
MSM89_453-1	06.02.20	20:14:52	UCTD	11° 27.863' N	057° 38.406' W	3470.9	uCTD238
MSM89_454-1	06.02.20	20:45:03	UCTD	11° 26.012' N	057° 34.493' W	3683.0	uCTD239
MSM89_455-1	06.02.20	21:13:46	UCTD	11° 24.306' N	057° 30.875' W	3969.5	uCTD240
MSM89_456-1	06.02.20	21:51:59	DRIFT	11° 21.973' N	057° 25.960' W	4204.6	launched
MSM89_457-1	06.02.20	21:59:52	UCTD	11° 22.716' N	057° 25.653' W	4205.3	uCTD241
MSM89_458-1	06.02.20	22:28:54	UCTD	11° 26.545' N	057° 25.194' W	4234.1	uCTD242
MSM89_459-1	06.02.20	22:45:47	BLN	11° 28.616' N	057° 24.818' W	4247.9	launched
MSM89_460-1	06.02.20	22:59:57	UCTD	11° 30.245' N	057° 24.529' W	4259.2	uCTD243
MSM89_461-1	06.02.20	23:30:24	UCTD	11° 34.571' N	057° 23.753' W	4302.1	uCTD244

MSM89_462-1	07.02.20	00:01:15	UCTD	11° 38.746' N	057° 23.009' W	4317.1	uCTD245
MSM89_463-1	07.02.20	00:31:02	UCTD	11° 42.749' N	057° 22.291' W	4342.9	uCTD246
MSM89_464-1	07.02.20	01:01:08	UCTD	11° 46.616' N	057° 21.596' W	4364.4	uCTD247
MSM89_465-1	07.02.20	01:31:09	UCTD	11° 50.477' N	057° 20.908' W	4398.6	uCTD248
MSM89_466-1	07.02.20	02:00:46	UCTD	11° 54.260' N	057° 20.231' W	4411.4	uCTD249
MSM89_467-1	07.02.20	02:30:37	UCTD	11° 58.039' N	057° 19.554' W	4431.7	uCTD250
MSM89_468-1	07.02.20	02:45:05	BLN	11° 59.895' N	057° 19.228' W	4439.7	launched
MSM89_469-1	07.02.20	03:01:54	UCTD	12° 02.096' N	057° 18.831' W	4448.6	uCTD251
MSM89_470-1	07.02.20	03:30:38	UCTD	12° 05.804' N	057° 18.167' W	4467.8	uCTD252
MSM89_471-1	07.02.20	04:00:42	UCTD	12° 09.745' N	057° 17.463' W	4724.9	uCTD253
MSM89_472-1	07.02.20	04:29:18	UCTD	12° 13.365' N	057° 16.816' W	4479.4	uCTD254
MSM89_473-1	07.02.20	04:59:19	UCTD	12° 17.308' N	057° 16.105' W	4483.7	uCTD255
MSM89_474-1	07.02.20	05:30:05	UCTD	12° 21.373' N	057° 15.375' W	4485.4	uCTD256
MSM89_475-1	07.02.20	07:48:24	CTD	12° 25.147' N	057° 14.727' W	4489.3	CTD060
MSM89_476-1	07.02.20	09:16:04	CTD	12° 25.146' N	057° 14.728' W	4736.1	CTD061
MSM89_477-1	07.02.20	10:22:57	CTD	12° 25.148' N	057° 14.727' W	4487.2	CTD063
MSM89_479-1	07.02.20	14:28:32	CTD	12° 25.145' N	057° 14.727' W	4488.7	CTD064
MSM89_480-1	07.02.20	16:04:54	MSS	12° 25.158' N	057° 14.681' W	4738.3	MSS0136-138
MSM89_480-1	07.02.20	16:49:12	MSS	12° 25.330' N	057° 14.027' W	4490.0	MSS0136-138
MSM89_481-1	07.02.20	17:55:12	CKITE	12° 25.336' N	057° 14.009' W	4489.1	launched
MSM89_481-1	07.02.20	22:53:44	CKITE	12° 25.450' N	057° 13.697' W	4736.1	recovered
MSM89_482-1	07.02.20	23:04:16	BLN	12° 25.449' N	057° 13.696' W	4490.2	launched
MSM89_483-1	08.02.20	02:48:07	BLN	12° 36.211' N	057° 58.726' W	2867.0	launched
MSM89_484-1	08.02.20	06:45:25	BLN	12° 48.678' N	058° 48.324' W	1727.8	launched
MSM89_0	08.02.20	13:30:00	diverse	13° 01.281' N	059° 38.196' W	230,4	stopped
MSM89_485-1	08.02.20	22:45:23	BLN	13° 30.803' N	058° 08.800' W	3278.9	launched
MSM89_486-1	09.02.20	03:17:30	CKITE	13° 30.660' N	057° 24.088' W	4908.8	launched
MSM89_487-1	09.02.20	03:47:11	UCTD	13° 32.530' N	057° 23.914' W	4888.6	uCTD257
MSM89_488-1	09.02.20	04:16:38	UCTD	13° 35.172' N	057° 23.791' W	4905.4	uCTD258
MSM89_489-1	09.02.20	04:45:41	UCTD	13° 37.834' N	057° 23.663' W	4899.2	uCTD259
MSM89_490-1	09.02.20	05:15:31	UCTD	13° 40.495' N	057° 23.514' W	4880.3	uCTD260
MSM89_491-1	09.02.20	05:45:14	UCTD	13° 43.254' N	057° 23.375' W	4877.8	uCTD261
MSM89_492-1	09.02.20	06:15:29	UCTD	13° 45.981' N	057° 23.236' W	4826.6	uCTD262
MSM89_493-1	09.02.20	06:45:34	UCTD	13° 48.480' N	057° 23.112' W	4885.0	uCTD263
MSM89_494-1	09.02.20	08:40:54	CTD	13° 50.148' N	057° 23.053' W	4883.2	CTD065
MSM89_495-1	09.02.20	10:02:30	CTD	13° 50.147' N	057° 23.053' W	4875.9	CTD066
MSM89_496-1	09.02.20	11:06:08	CTD	13° 50.149' N	057° 23.053' W	4879.3	CTD067
MSM89_497-1	09.02.20	12:40:26	UCTD	13° 48.648' N	057° 22.031' W	4866.6	uCTD264
MSM89_498-1	09.02.20	13:11:27	UCTD	13° 45.367' N	057° 21.852' W	4805.0	uCTD265
MSM89_486-1	09.02.20	13:57:21	CKITE	13° 44.137' N	057° 22.540' W	5103.7	recovered
MSM89_499-1	09.02.20	14:45:11	BLN	13° 50.012' N	057° 23.359' W	4811.4	launched
MSM89_13-1	09.02.20	14:55:21	GLID	13° 49.953' N	057° 23.366' W	4806.4	IFM09 recover
MSM89_500-1	09.02.20	15:08:34	DRIFT	13° 50.049' N	057° 23.247' W	4801.1	deployed
MSM89_501-1	09.02.20	16:02:38	MSS	13° 49.947' N	057° 23.969' W	4854.3	MSS0139-146
MSM89_501-1	09.02.20	17:59:49	MSS	13° 50.293' N	057° 21.960' W	4862.8	MSS0139-146
MSM89_502-1	09.02.20	18:46:20	BLN	13° 50.314' N	057° 21.851' W	4866.2	launched

MSM89_503-1	09.02.20	19:39:45	CTD	13° 50.313' N	057° 21.850' W	4867.6	CTD068
MSM89_504-1	09.02.20	21:54:57	CKITE	13° 50.312' N	057° 21.849' W	4868.2	launched
MSM89_505-1	09.02.20	22:13:31	UCTD	13° 49.042' N	057° 21.565' W	4868.9	uCTD266
MSM89_506-1	09.02.20	22:47:17	UCTD	13° 45.449' N	057° 21.423' W	4803.7	uCTD267
MSM89_507-1	09.02.20	22:52:32	BLN	13° 44.919' N	057° 21.419' W	4812.7	launched
MSM89_508-1	09.02.20	23:14:52	UCTD	13° 42.626' N	057° 21.425' W	4861.5	uCTD268
MSM89_509-1	09.02.20	23:43:43	UCTD	13° 39.919' N	057° 20.328' W	4877.1	uCTD269
MSM89_510-1	10.02.20	00:15:47	UCTD	13° 37.158' N	057° 18.362' W	5110.4	uCTD270
MSM89_511-1	10.02.20	00:45:03	UCTD	13° 34.627' N	057° 16.563' W	4838.0	uCTD271
MSM89_512-1	10.02.20	01:15:20	UCTD	13° 31.948' N	057° 14.647' W	5175.2	uCTD272
MSM89_513-1	10.02.20	01:46:08	UCTD	13° 29.287' N	057° 12.740' W	4929.9	uCTD273
MSM89_514-1	10.02.20	02:15:42	UCTD	13° 26.866' N	057° 11.027' W	4907.9	uCTD274
MSM89_515-1	10.02.20	02:49:08	BLN	13° 25.201' N	057° 09.844' W	4945.5	launched
MSM89_516-1	10.02.20	03:01:53	UCTD	13° 24.941' N	057° 09.645' W	4946.9	uCTD275
MSM89_517-1	10.02.20	03:31:03	UCTD	13° 22.533' N	057° 07.935' W	5192.1	uCTD276
MSM89_518-1	10.02.20	03:59:44	UCTD	13° 20.103' N	057° 06.216' W	5196.3	uCTD277
MSM89_519-1	10.02.20	04:29:30	UCTD	13° 17.549' N	057° 04.381' W	5185.9	uCTD278
MSM89_520-1	10.02.20	05:00:01	UCTD	13° 15.130' N	057° 02.665' W	4942.1	uCTD279
MSM89_521-1	10.02.20	05:29:46	UCTD	13° 12.869' N	057° 01.066' W	4941.6	uCTD280
MSM89_522-1	10.02.20	06:00:34	UCTD	13° 10.422' N	056° 59.327' W	4943.4	uCTD281
MSM89_523-1	10.02.20	06:30:24	UCTD	13° 07.822' N	056° 57.993' W	4919.9	uCTD282
MSM89_524-1	10.02.20	06:47:08	BLN	13° 06.117' N	056° 58.004' W	4939.8	launched
MSM89_525-1	10.02.20	07:00:46	UCTD	13° 04.728' N	056° 58.011' W	4865.8	uCTD283
MSM89_526-1	10.02.20	07:30:12	UCTD	13° 01.643' N	056° 58.005' W	4765.1	uCTD284
MSM89_527-1	10.02.20	08:02:15	UCTD	12° 58.225' N	056° 58.005' W	4670.3	uCTD285
MSM89_528-1	10.02.20	08:32:43	UCTD	12° 54.905' N	056° 57.997' W	4586.6	uCTD286
MSM89_529-1	10.02.20	09:04:26	UCTD	12° 51.392' N	056° 58.003' W	4530.0	uCTD287
MSM89_530-1	10.02.20	10:00:42	UCTD	12° 53.113' N	056° 54.299' W	4786.4	uCTD288
MSM89_531-1	10.02.20	10:54:04	BLN	12° 59.339' N	056° 54.633' W	4680.4	launched
MSM89_532-1	10.02.20	11:02:01	UCTD	13° 00.223' N	056° 54.974' W	4700.1	uCTD289
MSM89_533-1	10.02.20	12:22:37	UCTD	13° 03.666' N	056° 54.032' W	4785.1	uCTD290
MSM89_534-1	10.02.20	12:55:40	UCTD	12° 59.857' N	056° 52.767' W	4687.5	uCTD291
MSM89_535-1	10.02.20	13:36:08	UCTD	12° 58.822' N	056° 51.376' W	4929.1	uCTD292
MSM89_536-1	10.02.20	14:06:30	UCTD	13° 02.070' N	056° 52.590' W	4736.6	uCTD293
MSM89_537-1	10.02.20	14:36:47	UCTD	13° 05.280' N	056° 53.784' W	4851.1	uCTD294
MSM89_538-1	10.02.20	15:06:40	UCTD	13° 08.419' N	056° 54.957' W	4872.2	uCTD295
MSM89_539-1	10.02.20	15:35:45	UCTD	13° 11.589' N	056° 56.139' W	4933.9	uCTD295
MSM89_540-1	10.02.20	16:07:15	UCTD	13° 15.073' N	056° 57.427' W	4941.7	uCTD296
MSM89_541-1	10.02.20	16:35:28	UCTD	13° 18.210' N	056° 58.598' W	4939.4	uCTD297
MSM89_542-1	10.02.20	17:06:18	UCTD	13° 21.654' N	056° 59.879' W	4944.8	uCTD298
MSM89_543-1	10.02.20	17:36:03	UCTD	13° 24.941' N	057° 01.099' W	5121.9	uCTD299
MSM89_504-1	10.02.20	18:43:13	CKITE	13° 26.765' N	057° 01.651' W	5159.2	recovered
MSM89_544-1	10.02.20	18:59:06	BLN	13° 26.768' N	057° 01.651' W	5150.8	launched
MSM89_545-1	10.02.20	20:17:47	UCTD	13° 23.953' N	057° 02.815' W	4939.8	uCTD300
MSM89_546-1	10.02.20	20:45:48	UCTD	13° 20.219' N	057° 04.426' W	5191.5	uCTD301
MSM89_547-1	10.02.20	21:02:08	BLN	13° 18.112' N	057° 05.455' W	4942.8	launched

MSM89_548-1	10.02.20	21:18:27	UCTD	13° 16.834' N	057° 05.737' W	4947.3	uCTD302
MSM89_549-1	10.02.20	22:00:48	UCTD	13° 11.375' N	057° 08.448' W	4950.0	uCTD303
MSM89_550-1	10.02.20	22:30:32	UCTD	13° 07.402' N	057° 10.217' W	4942.0	uCTD304
MSM89_551-1	10.02.20	22:50:15	BLN	13° 04.750' N	057° 11.395' W	4839.4	launched
MSM89_552-1	10.02.20	23:01:13	UCTD	13° 03.276' N	057° 12.045' W	4823.9	uCTD305
MSM89_553-1	11.02.20	00:57:44	BLN	13° 00.007' N	057° 13.524' W	4986.7	launched
MSM89_554-1	11.02.20	02:45:06	BLN	13° 10.899' N	057° 13.527' W	4951.8	launched
MSM89_555-1	11.02.20	03:02:25	UCTD	13° 12.779' N	057° 13.534' W	4947.1	uCTD306
MSM89_556-1	11.02.20	03:32:09	UCTD	13° 16.177' N	057° 13.533' W	4944.6	uCTD307
MSM89_557-1	11.02.20	03:59:09	UCTD	13° 19.143' N	057° 13.537' W	5196.1	uCTD308
MSM89_558-1	11.02.20	04:29:11	UCTD	13° 22.705' N	057° 13.590' W	4948.0	uCTD309
MSM89_559-1	11.02.20	04:59:15	UCTD	13° 26.561' N	057° 13.655' W	4932.1	uCTD310
MSM89_560-1	11.02.20	05:29:20	UCTD	13° 30.583' N	057° 13.722' W	5180.2	uCTD311
MSM89_561-1	11.02.20	05:59:37	UCTD	13° 34.033' N	057° 13.602' W	4858.6	uCTD312
MSM89_562-1	11.02.20	06:29:21	UCTD	13° 37.657' N	057° 13.730' W	4858.1	uCTD313
MSM89_563-1	11.02.20	07:00:19	UCTD	13° 41.490' N	057° 13.867' W	4850.0	uCTD314
MSM89_564-1	11.02.20	07:28:41	UCTD	13° 45.291' N	057° 14.005' W	4821.0	uCTD315
MSM89_565-1	11.02.20	08:01:20	UCTD	13° 49.553' N	057° 14.153' W	4850.6	uCTD316
MSM89_566-1	11.02.20	08:29:36	UCTD	13° 52.677' N	057° 14.265' W	4853.3	uCTD317
MSM89_567-1	11.02.20	09:11:46	UCTD	13° 57.464' N	057° 14.708' W	4839.0	uCTD318
MSM89_64-2	11.02.20	09:45:03	UCTD	14° 01.204' N	057° 14.651' W	4929.6	uCTD319
MSM89_568-1	11.02.20	10:16:18	UCTD	14° 04.787' N	057° 14.568' W	4994.7	uCTD320
MSM89_569-1	11.02.20	10:46:19	UCTD	14° 08.099' N	057° 14.523' W	5071.7	uCTD321
MSM89_570-1	11.02.20	13:22:48	MSS	14° 11.065' N	057° 14.412' W	5193.3	MSS0147-150
MSM89_570-1	11.02.20	14:23:47	MSS	14° 11.330' N	057° 13.402' W	5169.1	MSS0147-150
MSM89_571-1	11.02.20	14:37:59	UCTD	14° 09.973' N	057° 13.182' W	5113.5	uCTD322
MSM89_572-1	11.02.20	15:06:52	UCTD	14° 06.188' N	057° 12.585' W	5250.4	uCTD323
MSM89_573-1	11.02.20	15:36:14	UCTD	14° 01.862' N	057° 12.270' W	4937.6	uCTD324
MSM89_574-1	11.02.20	16:06:14	UCTD	13° 57.419' N	057° 12.222' W	4832.6	uCTD325
MSM89_575-1	11.02.20	16:34:21	UCTD	13° 53.347' N	057° 11.907' W	4858.0	uCTD326
MSM89_576-1	11.02.20	17:13:49	UCTD	13° 49.379' N	057° 10.756' W	4851.3	uCTD327
MSM89_577-1	11.02.20	20:25:21	CKITE	14° 03.324' N	057° 02.677' W	4933.1	launched
MSM89_578-1	11.02.20	22:44:51	BLN	14° 01.875' N	057° 01.617' W	4903.3	launched
MSM89_577-1	12.02.20	02:06:11	CKITE	14° 01.875' N	057° 01.616' W	4909.4	recovered
MSM89_579-1	12.02.20	07:47:32	CTD	14° 01.875' N	057° 01.620' W	4899.3	CTD069
MSM89_580-1	12.02.20	09:10:11	CTD	14° 01.875' N	057° 01.620' W	4901.6	CTD070
MSM89_581-1	12.02.20	10:19:15	CTD	14° 01.874' N	057° 01.619' W	4903.9	CTD071
MSM89_582-1	12.02.20	12:46:37	UCTD	13° 58.368' N	057° 02.996' W	5089.2	uCTD328
MSM89_583-1	12.02.20	13:02:29	UCTD	13° 56.664' N	057° 04.733' W	4838.3	uCTD329
MSM89_584-1	12.02.20	13:31:52	UCTD	13° 53.541' N	057° 07.920' W	4881.7	uCTD330
MSM89_585-1	12.02.20	14:00:55	UCTD	13° 50.483' N	057° 11.052' W	4857.0	uCTD331
MSM89_586-1	12.02.20	14:16:10	BLN	13° 48.870' N	057° 12.698' W	4834.4	launched
MSM89_587-1	12.02.20	14:31:52	UCTD	13° 47.224' N	057° 14.385' W	4833.0	uCTD332
MSM89_588-1	12.02.20	15:01:37	UCTD	13° 44.067' N	057° 17.616' W	4822.2	uCTD333
MSM89_589-1	12.02.20	15:28:54	UCTD	13° 42.471' N	057° 17.228' W	5073.4	uCTD334
MSM89_590-1	12.02.20	16:00:42	UCTD	13° 42.646' N	057° 13.922' W	4824.0	uCTD335

MSM89_591-1	12.02.20	16:31:28	UCTD	13° 40.537' N	057° 14.395' W	5107.3	uCTD336
MSM89_592-1	12.02.20	17:00:14	UCTD	13° 38.137' N	057° 16.837' W	5124.6	uCTD337
MSM89_593-1	12.02.20	17:31:18	UCTD	13° 36.121' N	057° 18.892' W	4866.1	uCTD338
MSM89_594-1	12.02.20	18:01:10	UCTD	13° 34.194' N	057° 20.875' W	4852.3	uCTD339
MSM89_595-1	12.02.20	18:30:14	UCTD	13° 32.237' N	057° 22.871' W	4891.9	uCTD340
MSM89_596-1	12.02.20	18:56:40	BLN	13° 31.111' N	057° 23.800' W	5149.9	launched
MSM89_597-1	12.02.20	19:02:10	CKITE	13° 31.110' N	057° 23.798' W	5145.0	launched
MSM89_597-1	13.02.20	01:04:15	CKITE	12° 54.059' N	057° 21.594' W	4789.0	recovered
MSM89_597-1	13.02.20	01:08:18	CKITE	12° 54.058' N	057° 21.594' W	4537.1	launched
MSM89_597-1	13.02.20	19:17:11	CKITE	12° 05.205' N	057° 09.748' W	4709.6	recovered
MSM89_598-1	12.02.20	19:45:11	UCTD	13° 29.205' N	057° 22.710' W	4945.5	uCTD341
MSM89_599-1	12.02.20	20:59:36	UCTD	13° 22.406' N	057° 22.746' W	4922.6	uCTD342
MSM89_600-1	12.02.20	22:45:45	BLN	13° 06.586' N	057° 22.733' W	4854.3	launched
MSM89_601-1	13.02.20	00:04:44	UCTD	12° 59.041' N	057° 22.193' W	4658.6	uCTD343
MSM89_602-1	13.02.20	00:30:20	UCTD	12° 55.681' N	057° 21.920' W	4590.9	uCTD344
MSM89_597-2	13.02.20	01:32:56	UCTD	12° 51.406' N	057° 21.253' W	4478.1	uCTD345
MSM89_603-1	13.02.20	02:01:11	UCTD	12° 47.712' N	057° 20.719' W	4464.2	uCTD346
MSM89_604-1	13.02.20	02:30:44	UCTD	12° 43.860' N	057° 20.031' W	4476.5	uCTD347
MSM89_605-1	13.02.20	02:43:39	BLN	12° 42.141' N	057° 19.728' W	4483.0	launched
MSM89_606-1	13.02.20	03:00:50	UCTD	12° 39.901' N	057° 19.328' W	4491.1	uCTD348
MSM89_607-1	13.02.20	03:31:40	UCTD	12° 35.817' N	057° 18.599' W	4737.8	uCTD349
MSM89_608-1	13.02.20	04:00:34	UCTD	12° 31.975' N	057° 17.893' W	4493.2	uCTD350
MSM89_609-1	13.02.20	04:28:22	UCTD	12° 28.289' N	057° 17.240' W	4489.6	uCTD351
MSM89_610-1	13.02.20	06:48:02	BLN	12° 23.599' N	057° 16.347' W	4735.0	launched
MSM89_611-1	13.02.20	10:45:42	BLN	12° 23.602' N	057° 16.349' W	4735.9	launched
MSM89_612-1	13.02.20	14:46:16	BLN	12° 23.604' N	057° 16.344' W	4487.2	launched
MSM89_613-1	13.02.20	18:48:03	BLN	12° 06.331' N	057° 10.226' W	4462.5	launched
MSM89_614-1	13.02.20	22:43:58	BLN	11° 34.297' N	056° 59.250' W	4328.6	launched
MSM89_615-1	14.02.20	01:06:35	UCTD	11° 08.266' N	056° 51.174' W	4192.9	uCTD352
MSM89_616-1	14.02.20	01:30:45	UCTD	11° 06.922' N	056° 54.539' W	4426.2	uCTD353
MSM89_617-1	14.02.20	02:00:57	UCTD	11° 05.272' N	056° 58.743' W	4158.7	uCTD354
MSM89_618-1	14.02.20	02:31:06	UCTD	11° 03.645' N	057° 02.881' W	4397.5	uCTD355
MSM89_618-2	14.02.20	02:42:08	BLN	11° 03.055' N	057° 04.394' W	4126.1	launched
MSM89_619-1	14.02.20	03:00:36	UCTD	11° 02.068' N	057° 06.906' W	4137.2	uCTD356
MSM89_620-1	14.02.20	03:30:58	UCTD	11° 00.457' N	057° 11.018' W	4086.5	uCTD357
MSM89_621-1	14.02.20	03:59:59	UCTD	10° 58.893' N	057° 15.014' W	4055.6	uCTD358
MSM89_622-1	14.02.20	04:30:18	UCTD	10° 57.228' N	057° 19.257' W	4033.1	uCTD359
MSM89_623-1	14.02.20	04:59:30	UCTD	10° 55.625' N	057° 23.342' W	4233.3	uCTD360
MSM89_624-1	14.02.20	05:29:36	UCTD	10° 53.990' N	057° 27.514' W	4229.6	uCTD361
MSM89_625-1	14.02.20	06:00:02	UCTD	10° 52.335' N	057° 31.728' W	3924.7	uCTD362
MSM89_626-1	14.02.20	06:30:20	UCTD	10° 50.684' N	057° 35.922' W	4141.5	uCTD363
MSM89_627-1	14.02.20	06:49:44	BLN	10° 49.641' N	057° 38.591' W	3858.9	launched
MSM89_628-1	14.02.20	07:01:00	UCTD	10° 49.026' N	057° 40.162' W	3823.4	uCTD364
MSM89_629-1	14.02.20	07:30:03	UCTD	10° 47.436' N	057° 44.211' W	3790.0	uCTD365
MSM89_630-1	14.02.20	08:17:57	CTD	10° 46.139' N	057° 46.897' W	3502.4	CTD072
MSM89_631-1	14.02.20	08:59:59	MSS	10° 46.161' N	057° 46.771' W	3545.5	MSS0151

MSM89_631-1	14.02.20	09:13:22	MSS	10° 46.203' N	057° 46.547' W	3552.0	MSS0151
MSM89_632-1	14.02.20	09:43:51	CTD	10° 46.139' N	057° 46.899' W	3506.5	CTD073
MSM89_633-1	14.02.20	10:09:07	MSS	10° 46.147' N	057° 46.867' W	3572.0	MSS0152
MSM89_633-1	14.02.20	10:24:04	MSS	10° 46.191' N	057° 46.606' W	3553.1	MSS0152
MSM89_634-1	14.02.20	10:55:37	CTD	10° 46.145' N	057° 46.903' W	3502.8	CTD074
MSM89_635-1	14.02.20	10:45:43	BLN	10° 46.147' N	057° 46.904' W	3508.9	launched
MSM89_636-1	14.02.20	11:25:59	MSS	10° 46.164' N	057° 46.834' W	3538.9	MSS0153
MSM89_636-1	14.02.20	11:38:38	MSS	10° 46.226' N	057° 46.603' W	3553.4	MSS0153
MSM89_637-1	14.02.20	12:01:14	UCTD	10° 45.692' N	057° 48.657' W	3289.6	uCTD366
MSM89_638-1	14.02.20	12:31:50	UCTD	10° 43.983' N	057° 53.001' W	2935.3	uCTD367
MSM89_639-1	14.02.20	13:05:12	UCTD	10° 42.121' N	057° 57.726' W	2762.0	uCTD368
MSM89_640-1	14.02.20	13:31:57	UCTD	10° 40.645' N	058° 01.504' W	2739.9	uCTD369
MSM89_641-1	14.02.20	14:01:47	UCTD	10° 38.987' N	058° 05.722' W	2667.0	uCTD370
MSM89_642-1	14.02.20	14:31:17	UCTD	10° 37.346' N	058° 09.897' W	2668.4	uCTD371
MSM89_643-1	14.02.20	15:01:23	UCTD	10° 35.679' N	058° 14.142' W	2434.2	uCTD372
MSM89_644-1	14.02.20	15:30:54	UCTD	10° 34.040' N	058° 18.317' W	2447.2	uCTD373
MSM89_645-1	14.02.20	16:01:16	UCTD	10° 32.357' N	058° 22.615' W	2309.5	uCTD374
MSM89_646-1	14.02.20	16:31:59	UCTD	10° 30.655' N	058° 26.946' W	2056.7	uCTD375
MSM89_647-1	14.02.20	16:59:39	UCTD	10° 29.117' N	058° 30.866' W	2206.6	uCTD376
MSM89_648-1	14.02.20	17:31:58	UCTD	10° 27.327' N	058° 35.436' W	1898.9	uCTD377
MSM89_649-1	14.02.20	18:00:20	UCTD	10° 25.746' N	058° 39.448' W	2070.5	uCTD378
MSM89_650-1	14.02.20	18:30:49	UCTD	10° 24.042' N	058° 43.761' W	1996.2	uCTD379
MSM89_651-1	14.02.20	18:56:44	BLN	10° 22.604' N	058° 47.435' W	1743.6	launched
MSM89_652-1	14.02.20	19:00:43	UCTD	10° 22.381' N	058° 48.001' W	1713.3	uCTD380
MSM89_653-1	14.02.20	19:30:21	UCTD	10° 20.735' N	058° 52.192' W	1731.1	uCTD380
MSM89_654-1	14.02.20	20:01:00	UCTD	10° 19.027' N	058° 56.529' W	1838.0	uCTD381
MSM89_655-1	14.02.20	20:31:12	UCTD	10° 17.351' N	059° 00.802' W	1788.2	uCTD382
MSM89_656-1	14.02.20	21:00:42	UCTD	10° 15.709' N	059° 04.981' W	1736.9	uCTD383
MSM89_657-1	14.02.20	21:27:34	BLN	10° 14.213' N	059° 08.775' W	1693.6	launched
MSM89_658-1	14.02.20	21:30:11	UCTD	10° 14.066' N	059° 09.141' W	1685.8	uCTD384
MSM89_659-1	14.02.20	22:13:51	UCTD	10° 11.633' N	059° 15.332' W	1588.0	uCTD385
MSM89_660-1	14.02.20	23:03:45	UCTD	10° 08.738' N	059° 22.689' W	1462.0	uCTD386
MSM89_661-1	14.02.20	23:13:16	BLN	10° 08.178' N	059° 24.109' W	1464.9	launched
MSM89_662-1	14.02.20	23:37:12	CKITE	10° 08.033' N	059° 25.008' W	1434.1	launched
MSM89_663-1	14.02.20	23:49:53	MVP	10° 08.179' N	059° 24.759' W	1440.9	deployed
MSM89_663-1	15.02.20	00:59:05	MVP	10° 09.510' N	059° 21.634' W	1475.4	recovered
MSM89_664-1	15.02.20	02:39:17	MVP	10° 15.957' N	059° 06.578' W	1736.7	deployed
MSM89_664-1	15.02.20	03:07:23	MVP	10° 16.464' N	059° 05.456' W	1751.1	recovered
MSM89_664-2	15.02.20	02:56:04	BLN	10° 16.277' N	059° 05.919' W	1744.5	launched
MSM89_665-1	15.02.20	04:04:18	MVP	10° 19.156' N	058° 57.398' W	1842.7	deployed
MSM89_665-1	15.02.20	04:37:29	MVP	10° 19.740' N	058° 55.920' W	1823.7	recovered
MSM89_666-1	15.02.20	05:29:00	MVP	10° 22.726' N	058° 48.474' W	1632.9	deployed
MSM89_666-1	15.02.20	06:00:53	MVP	10° 23.322' N	058° 47.076' W	1750.4	recovered
MSM89_667-1	15.02.20	06:15:14	BLN	10° 23.996' N	058° 45.287' W	1909.0	launched
MSM89_668-1	15.02.20	06:59:11	MVP	10° 26.704' N	058° 38.519' W	2092.4	deployed
MSM89_668-1	15.02.20	07:31:21	MVP	10° 27.287' N	058° 37.110' W	2029.9	recovered

MSM89_669-1	15.02.20	08:29:20	MVP	10° 30.617' N	058° 28.766' W	2189.3	deployed
MSM89_669-1	15.02.20	09:01:07	MVP	10° 31.032' N	058° 27.597' W	2171.5	recovered
MSM89_670-1	15.02.20	10:20:09	CTD	10° 32.973' N	058° 22.907' W	2301.2	CTD075
MSM89_671-1	15.02.20	10:45:48	BLN	10° 32.975' N	058° 22.910' W	2301.0	launched
MSM89_672-1	15.02.20	11:11:20	MSS	10° 32.980' N	058° 22.894' W	2304.5	MSS0154-155
MSM89_672-1	15.02.20	11:34:01	MSS	10° 33.097' N	058° 22.569' W	2311.1	MSS0154-155
MSM89_673-1	15.02.20	12:25:46	MVP	10° 36.304' N	058° 15.539' W	2255.4	deployed
MSM89_673-1	15.02.20	12:46:51	MVP	10° 36.655' N	058° 14.720' W	2344.2	recovered
MSM89_674-1	15.02.20	14:09:20	CTD	10° 38.937' N	058° 09.749' W	2649.7	CTD076
MSM89_674-2	15.02.20	13:57:40	BLN	10° 38.927' N	058° 09.781' W	2651.1	launched
MSM89_675-1	15.02.20	14:59:20	MSS	10° 38.977' N	058° 09.648' W	2655.3	MSS0156-157
MSM89_675-1	15.02.20	15:24:14	MSS	10° 39.135' N	058° 09.304' W	2664.3	MSS0156-157
MSM89_676-1	15.02.20	15:59:25	MVP	10° 41.284' N	058° 04.664' W	2617.6	deployed
MSM89_676-1	15.02.20	16:29:48	MVP	10° 41.924' N	058° 03.258' W	2813.1	recovered
MSM89_677-1	15.02.20	18:03:33	CTD	10° 44.962' N	057° 56.477' W	2776.0	CTD077
MSM89_678-1	15.02.20	17:58:01	BLN	10° 44.964' N	057° 56.510' W	2777.8	launched
MSM89_662-1	15.02.20	19:09:36	CKITE	10° 44.946' N	057° 56.248' W	2776.9	recovered
MSM89_679-1	15.02.20	19:14:20	MSS	10° 44.948' N	057° 56.243' W	2774.3	MSS0158-159
MSM89_679-1	15.02.20	19:40:18	MSS	10° 45.132' N	057° 55.844' W	3027.4	MSS0158-159
MSM89_680-1	15.02.20	20:28:49	MVP	10° 48.520' N	057° 48.702' W	3225.7	deployed
MSM89_680-1	15.02.20	21:00:00	MVP	10° 49.082' N	057° 47.428' W	3576.8	recovered
MSM89_681-1	15.02.20	22:11:06	CTD	10° 50.927' N	057° 43.522' W	3777.6	CTD078
MSM89_682-1	15.02.20	21:58:04	CKITE	10° 50.926' N	057° 43.521' W	3775.8	launched
MSM89_682-1	16.02.20	12:50:26	CKITE	11° 08.870' N	057° 04.198' W	4191.5	recovered
MSM89_683-1	15.02.20	22:03:01	BLN	10° 50.927' N	057° 43.522' W	3772.7	launched
MSM89_684-1	15.02.20	23:45:49	MVP	10° 53.420' N	057° 38.042' W	3921.0	deployed
MSM89_684-1	16.02.20	00:24:39	MVP	10° 54.145' N	057° 36.476' W	3910.0	recovered
MSM89_685-1	16.02.20	01:52:34	CTD	10° 56.822' N	057° 30.445' W	3951.8	CTD079
MSM89_685-2	16.02.20	01:56:45	BLN	10° 56.822' N	057° 30.444' W	3954.0	launched
MSM89_686-1	16.02.20	02:52:06	MSS	10° 56.837' N	057° 30.404' W	3954.3	MSS0160-161
MSM89_686-1	16.02.20	03:19:27	MSS	10° 56.973' N	057° 29.667' W	3964.1	MSS0160-161
MSM89_687-1	16.02.20	04:00:34	MVP	10° 59.682' N	057° 24.194' W	4006.3	deployed
MSM89_687-1	16.02.20	04:31:49	MVP	11° 00.262' N	057° 22.898' W	4004.6	recovered
MSM89_688-1	16.02.20	05:56:21	CTD	11° 02.988' N	057° 17.259' W	4059.3	CTD080
MSM89_689-1	16.02.20	06:55:47	MSS	11° 03.120' N	057° 17.111' W	4060.4	MSS0162
MSM89_689-1	16.02.20	07:06:57	MSS	11° 03.121' N	057° 16.827' W	4062.0	MSS0162
MSM89_690-1	16.02.20	07:46:42	CTD	11° 03.118' N	057° 16.793' W	4063.5	CTD081
MSM89_691-1	16.02.20	09:08:30	CTD	11° 03.121' N	057° 16.795' W	4067.8	CTD082
MSM89_692-1	16.02.20	10:12:01	CTD	11° 03.119' N	057° 16.795' W	4063.3	CTD083
MSM89_693-1	16.02.20	10:00:17	BLN	11° 03.121' N	057° 16.794' W	4062.3	launched
MSM89_694-1	16.02.20	11:01:00	MVP	11° 05.052' N	057° 12.514' W	4103.0	deployed
MSM89_694-1	16.02.20	11:32:02	MVP	11° 05.640' N	057° 11.409' W	4115.2	recovered
MSM89_682-2	16.02.20	12:57:13	BLN	11° 08.869' N	057° 04.196' W	4189.7	launched
MSM89_682-3	16.02.20	13:37:34	CTD	11° 08.943' N	057° 04.217' W	4190.4	CTD084
MSM89_695-1	16.02.20	14:59:51	MSS	11° 09.372' N	057° 04.263' W	4193.6	MSS0163-164
MSM89_695-1	16.02.20	15:24:22	MSS	11° 09.688' N	057° 03.996' W	4194.6	MSS0163-164

MSM89_696-1	16.02.20	17:19:46	CTD	11° 14.968' N	056° 51.035' W	4263.6	CTD085
MSM89_697-1	16.02.20	17:04:00	BLN	11° 14.891' N	056° 51.013' W	4261.6	launched
MSM89_698-1	16.02.20	17:59:53	MSS	11° 15.153' N	056° 51.046' W	4260.9	MSS0165-166
MSM89_698-1	16.02.20	18:34:05	MSS	11° 15.561' N	056° 50.636' W	4309.5	MSS0165-166
MSM89_682-1	17.02.20	01:01:03	CKITE	12° 15.079' N	057° 40.434' W	3333.0	launched
MSM89_682-1	17.02.20	11:18:07	CKITE	12° 35.254' N	057° 22.534' W	4500.3	recovered
MSM89_64-1	17.02.20	11:57:50	GLID	12° 35.453' N	057° 22.393' W	4506.7	IFM12 recover
MSM89_699-1	17.02.20	12:05:28	DRIFT	12° 35.493' N	057° 22.197' W	4509.3	deployed
MSM89_700-1	17.02.20	12:41:25	CKITE	12° 36.744' N	057° 21.557' W	4510.4	launched
MSM89_701-1	17.02.20	13:10:25	BLN	12° 40.845' N	057° 21.271' W	4415.6	released
MSM89_700-1	17.02.20	18:11:07	CKITE	13° 28.675' N	057° 15.466' W	4799.2	recovered
MSM89_702-1	17.02.20	18:46:40	BLN	13° 33.736' N	057° 14.827' W	4800.3	released
MSM89_703-1	17.02.20	21:56:48	CKITE	13° 34.012' N	057° 51.643' W	4400.3	launched
MSM89_704-1	17.02.20	22:45:37	BLN	13° 27.331' N	057° 51.279' W	3821.7	released
MSM89_705-1	18.02.20	02:47:14	BLN	13° 00.118' N	057° 53.482' W	3834.2	released
MSM89_706-1	18.02.20	06:52:30	BLN	13° 27.335' N	057° 53.361' W	3789.2	released
MSM89_707-1	18.02.20	10:43:52	BLN	13° 31.078' N	057° 52.238' W	3779.4	released
MSM89_703-1	18.02.20	11:58:51	CKITE	13° 27.001' N	057° 50.693' W	3765.8	recovered
MSM89_708-1	18.02.20	14:49:09	BLN	13° 27.003' N	057° 50.702' W	3744.0	released
MSM89_709-1	18.02.20	20:33:09	CTD	13° 20.546' N	058° 26.520' W	3765.2	CTD86
MSM89_710-1	18.02.20	22:45:50	BLN	13° 17.516' N	058° 43.829' W	3771.4	released
MSM89_711-1	19.02.20	01:55:09	BLN	13° 11.991' N	059° 15.003' W	2210.4	released
MSM89_0	19.02.20	13:30:00	FBOX	13° 11.997' N	059° 15.011' W	2210.6	recording end
MSM89_0	19.02.20	14:30:03	RADAR	13° 11.697' N	059° 15.004' W	2130.4	recording end
MSM89_0	19.02.20	14:30:18	ASCAM	13° 11.666' N	059° 15.040' W	2130.3	recording end
MSM89_0	19.02.20	14:30:34	DISDRO	13° 11.633' N	059° 15.079' W	2130.3	recording end
MSM89_0	19.02.20	14:30:48	UAS	13° 11.604' N	059° 15.114' W	2130.3	recording end
MSM89_0	19.02.20	18:30:00	TSG	13° 02.638' N	059° 39.630' W	216.2	recording end
MSM89_0	19.02.20	18:30:00	EM122	13° 02.638' N	059° 39.630' W	216.2	recording end
MSM89_0	19.02.20	18:30:00	ADCP	13° 02.638' N	059° 39.630' W	216.2	recording end