

INFORMAL REPORT AND INDEX OF  
NAVIGATION, DEPTH, MAGNETIC AND SUBBOTTOM PROFILER DATA  
(Issued March 1988)

HELIOS EXPEDITION

LEG 2

Papeete, Tahiti (24 October 1987)  
to  
Easter Island (24 November 1987)

R/V Melville

Co-Chief Scientists - S. Riser (University of Washington)  
T. Rossby (University of Rhode Island)

Resident Marine Technician - G. Hargreaves

Post-Cruise Processing and Report Preparation  
by Geological Data Center, Scripps Institution of Oceanography

Data Collection and Processing Funded by NSF  
Grant Number OCE86-16368

NOTE: This is an index of underway geophysical data edited and processed after the completion of the cruise leg and is intended primarily for informal use within the institution. This document is not to be reproduced or distributed outside Scripps without prior approval of the chief scientist or the Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093.

GDC Cruise I.D.# 233

INFORMAL REPORT AND INDEX OF NAVIGATION  
AND UNDERWAY GEOPHYSICAL DATA

Processed by the Geological Data Center  
Scripps Institution of Oceanography

Contents:

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Index Chart - gives track of cruise leg, dates, ports, and mileage of each type of data collected.

Track Charts - annotated with dates and hour ticks.

Profiles - depth, magnetic anomaly and gravity free air anomaly vs. distance. Sections of track having subbottom profiles (airgun or watergun) records have a wide black line along the bottom of the profile. Sections having Sea Beam are indicated by a narrow black line.

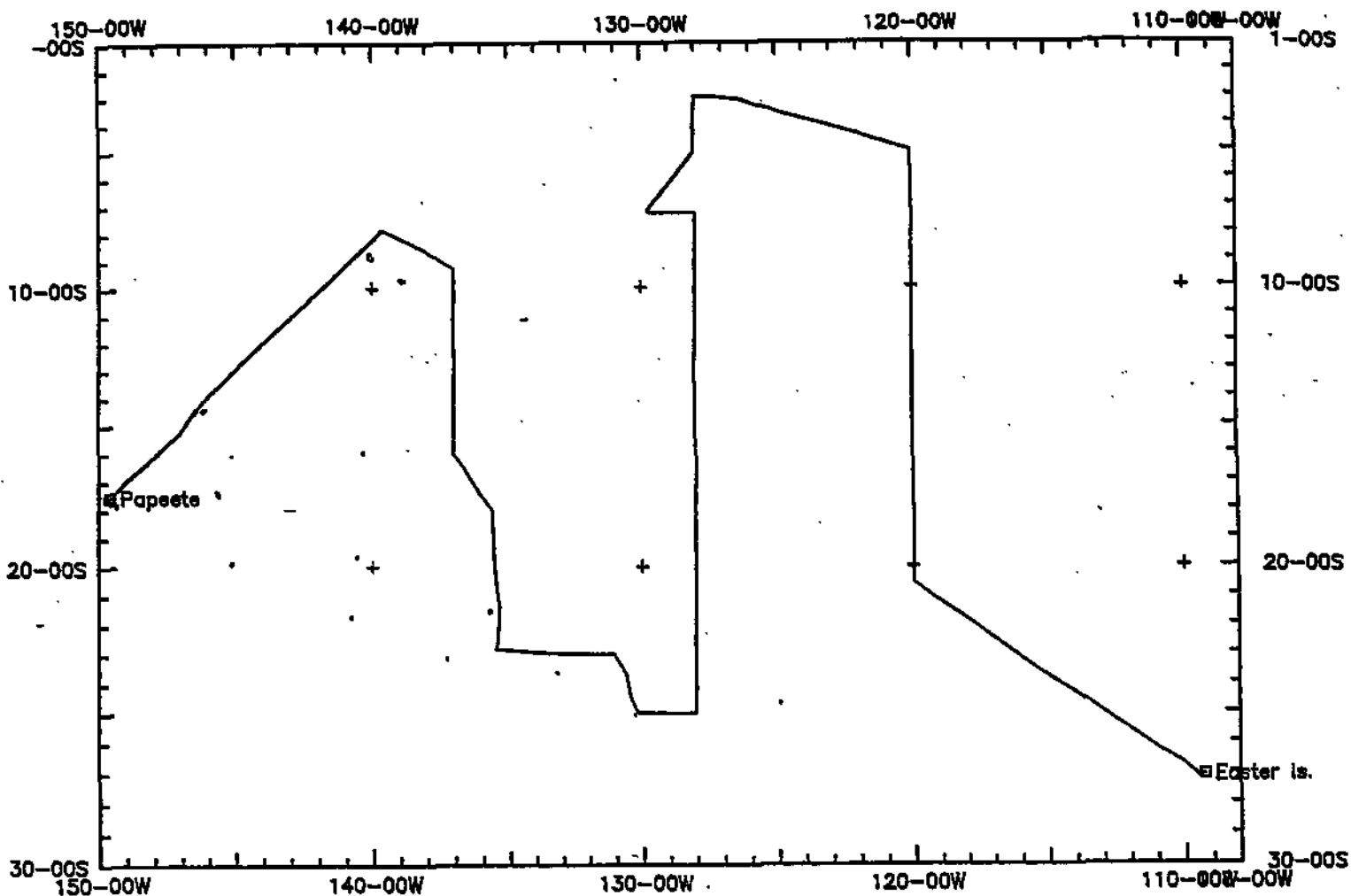
Sample Index - list of beginning and end times and positions of all underway records as well as all other samples and measurements (geology, biology, physical oceanography, etc.) collected on the cruise leg.

NOTE: One or more of the underway data types may not be collected on a given cruise leg.

For information on the availability and reproduction costs of data in the following forms, contact S. M. Smith, Curator, Geological Data Center, Scripps Institution of Oceanography, La Jolla, CA 92093. Phone (619)534-2752.

1. Navigation listing with times and positions of course and speed changes, fixes and drift velocity.
2. Depth compilation plots - compilation plots at the traditional scale of 4in/degree longitude (1:1,000,000) are no longer produced for Sea Beam cruises. Custom plots may be requested of vertical beam (2 $\frac{2}{3}$  degree beam width) depths retrieved at one minute intervals of ship time.
3. Plots of depths, magnetics or gravity profiles along track - custom plots at various map and profile scales on Mercator projection may be requested.
4. Separate time series files of navigation, depth, gravity and magnetics as well as these data merged in the MGD77 Exchange format on magnetic tape.
5. Microfilm or Xerox copies of:
  - a. Echosounder records - 12 and 3.5 kHz frequency
  - b. Subbottom profiler records
  - c. Magnetometer records
  - d. Gravity records
  - e. Underway data log book

Revised September 1987



## HELIOS LEG 2

Track at .1632in/deg (HELIO2MV)

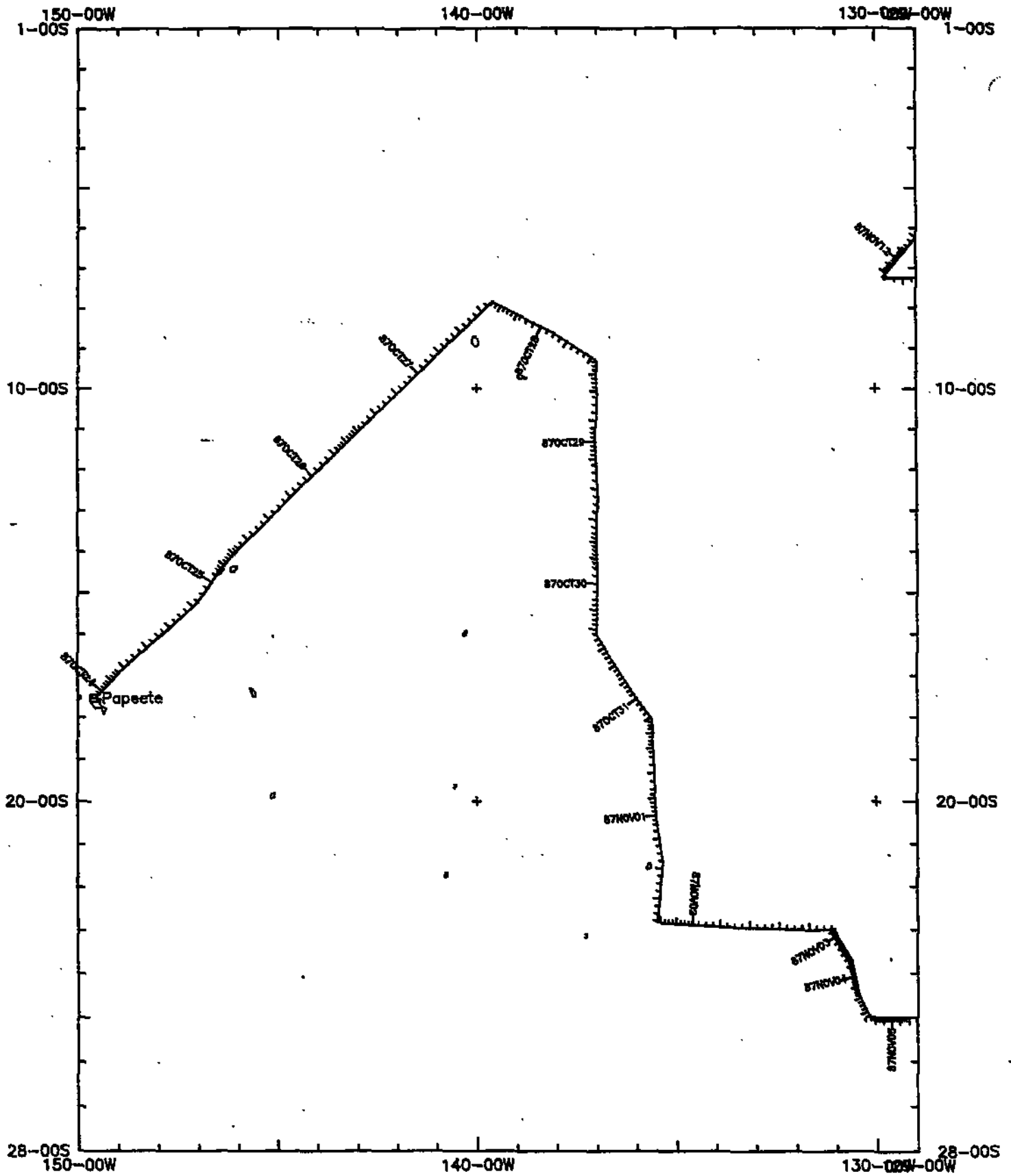
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### HELIOS EXPEDITION LEG 2

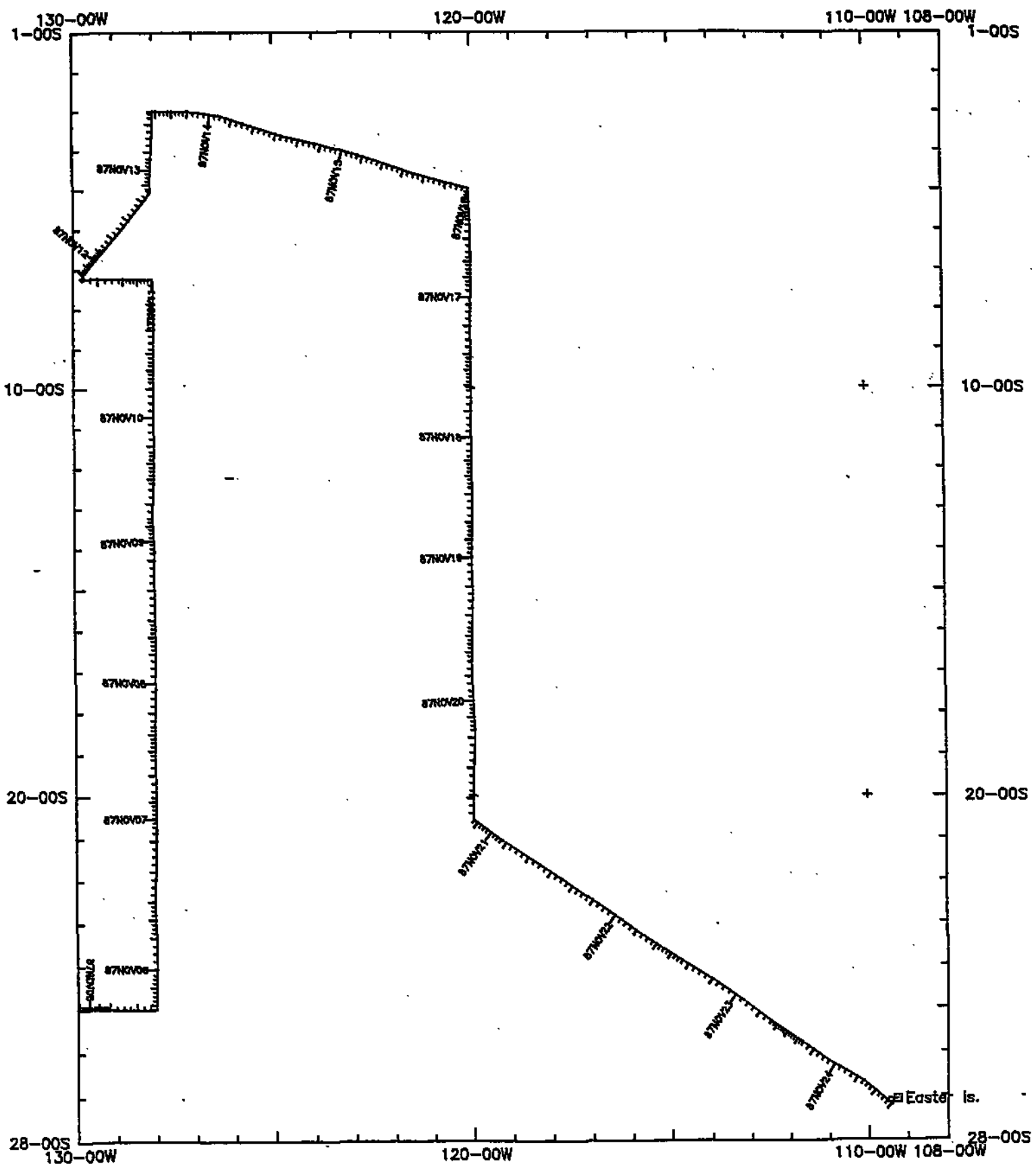
CO-CHIEF SCIENTISTS: S. Riser (Univ. of Washington)  
 T. Rossby (Univ. of Rhode Island)  
 PORTS: Papeete, Tahiti - Easter Island  
 DATES: 24 October - 24 November 1987  
 SHIP: R/V Melville

#### TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

- 1) Cruise - 6133 miles
- 2) Bathymetry - 6035 miles
- 3) Magnetics - none collected
- 4) Seismic Reflection - none collected

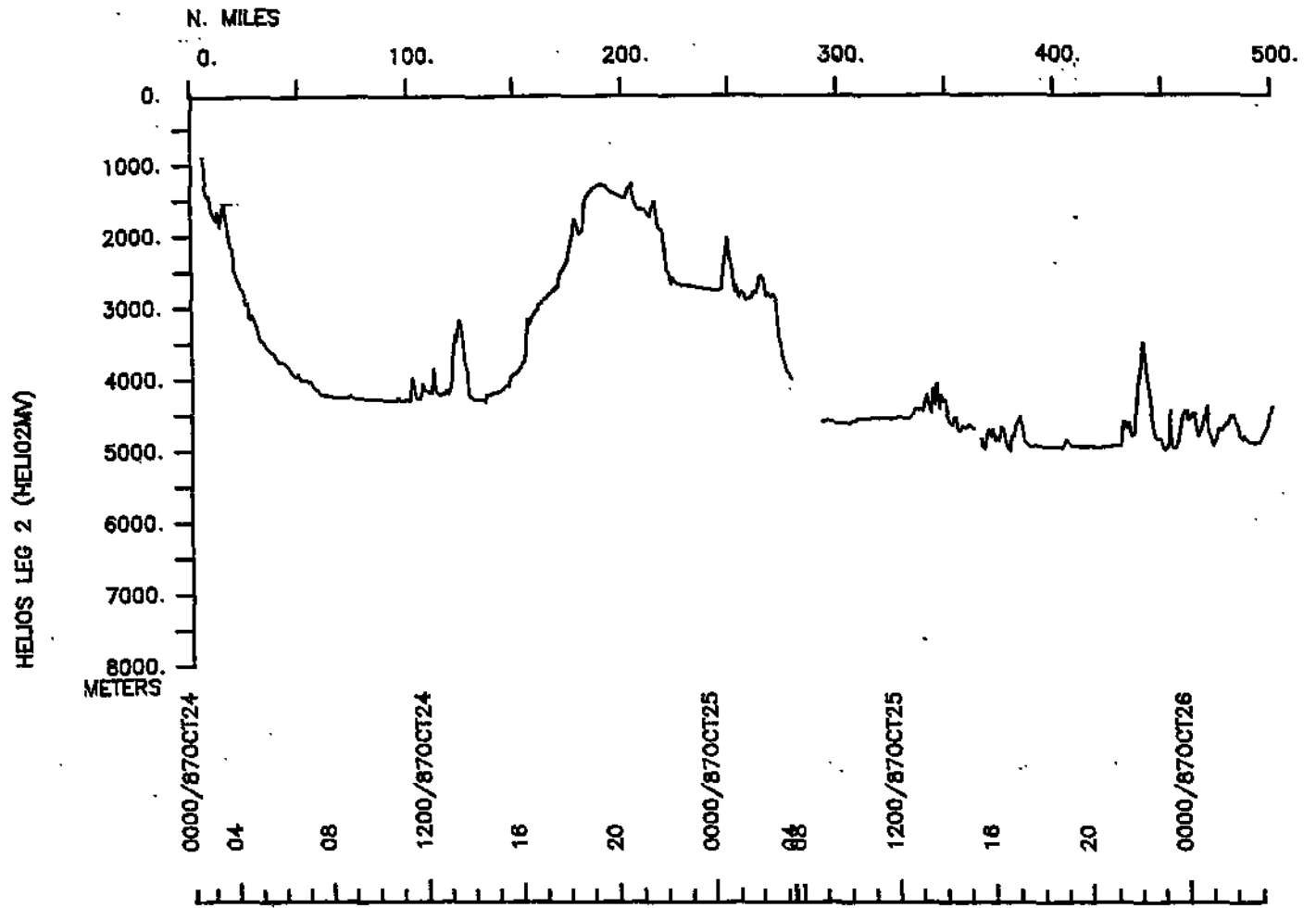


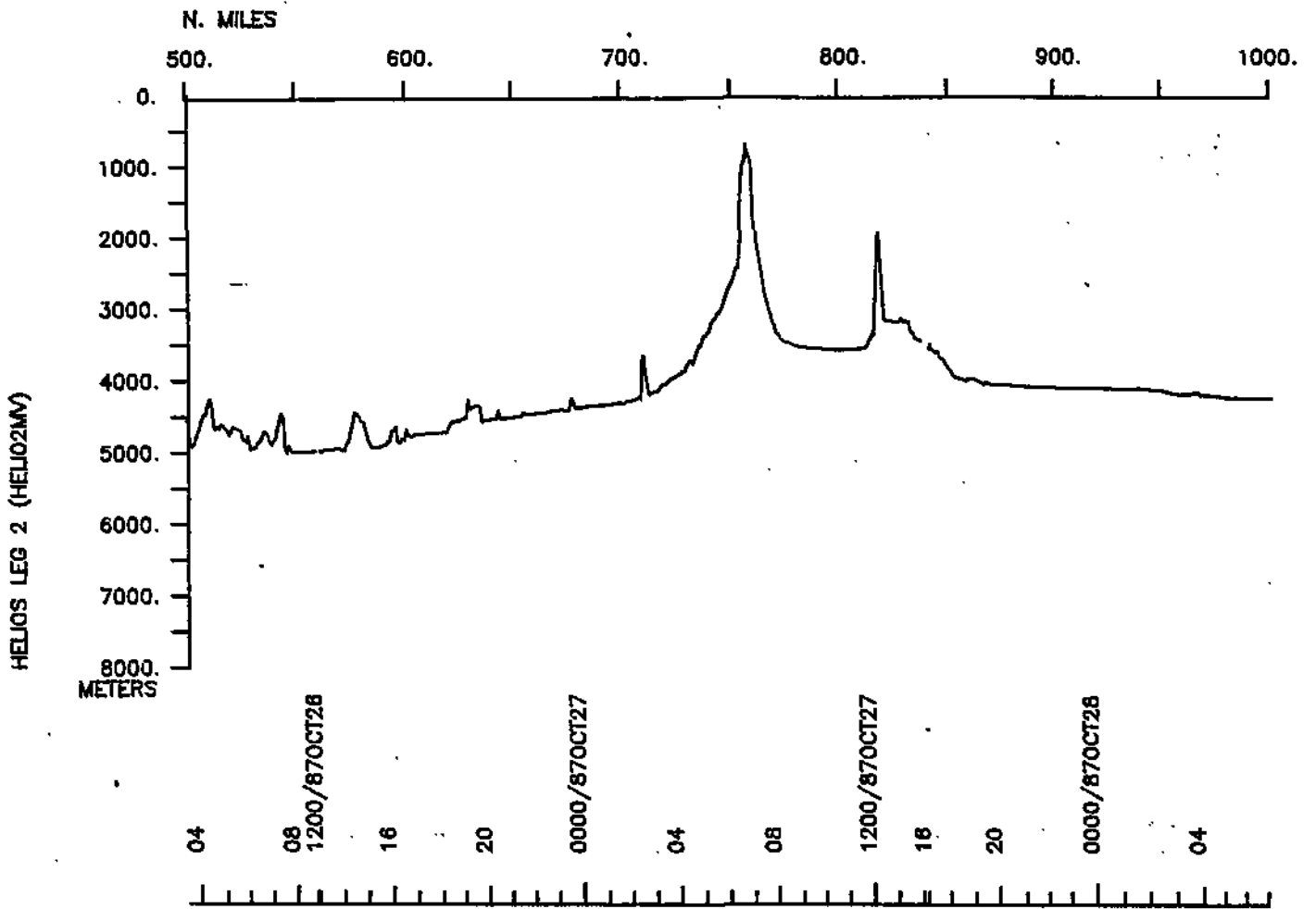
HELIOS LEG 2 (HELIO2MV)  
Track 1 of 2 at .312in/deg

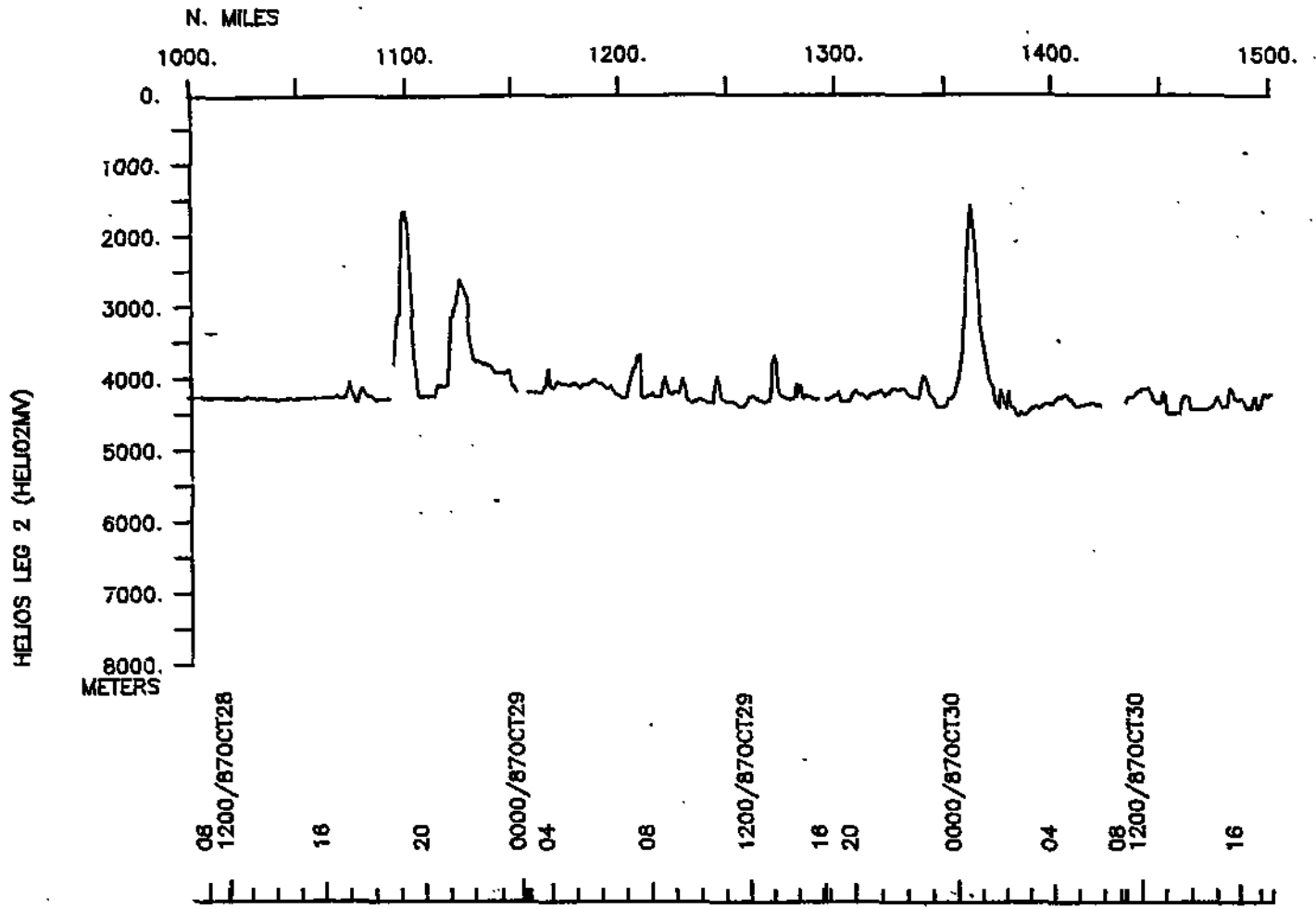


HELIOS LEG 2 (HELI02MV)  
Track 2 of 2 at .312in/deg

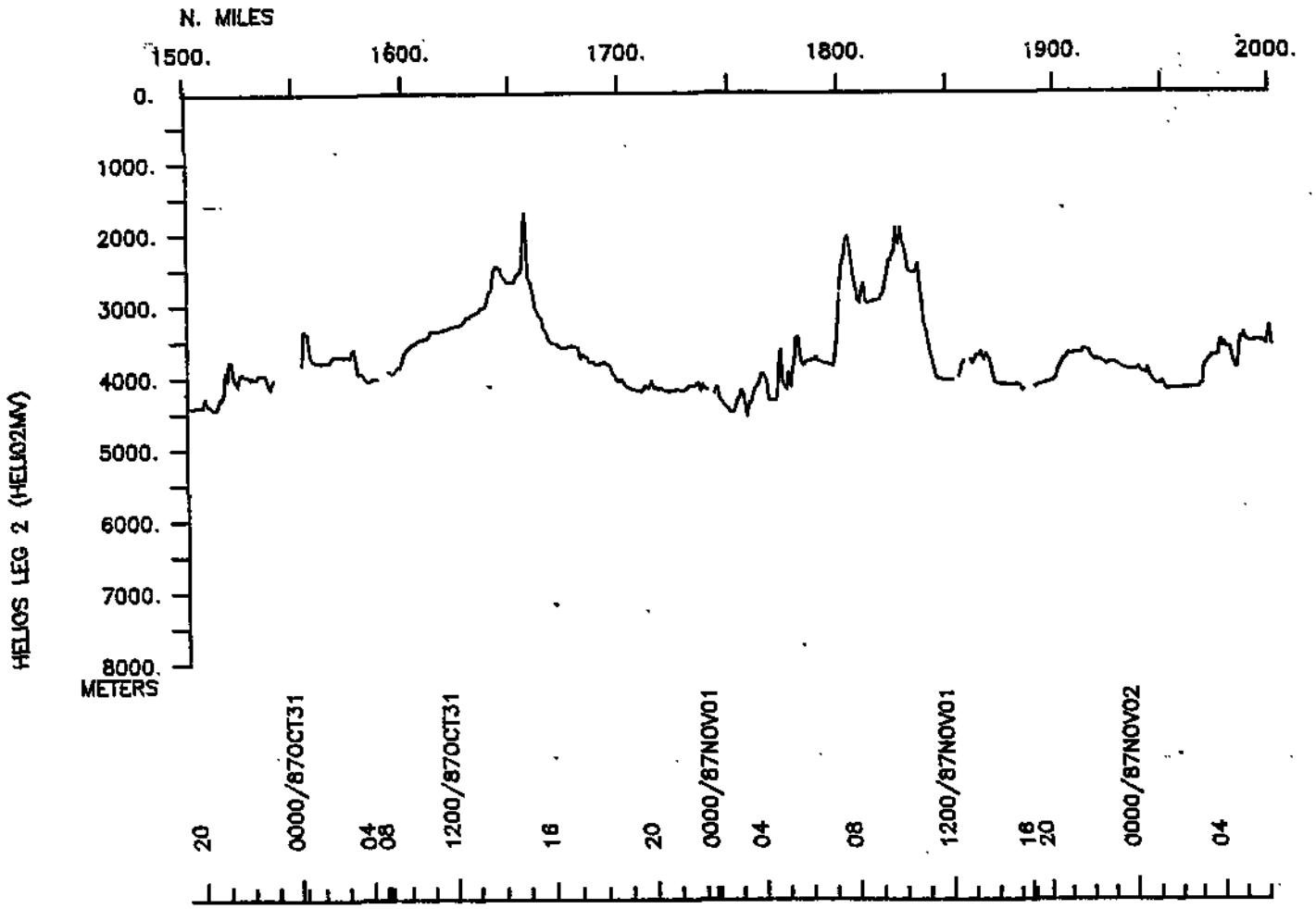
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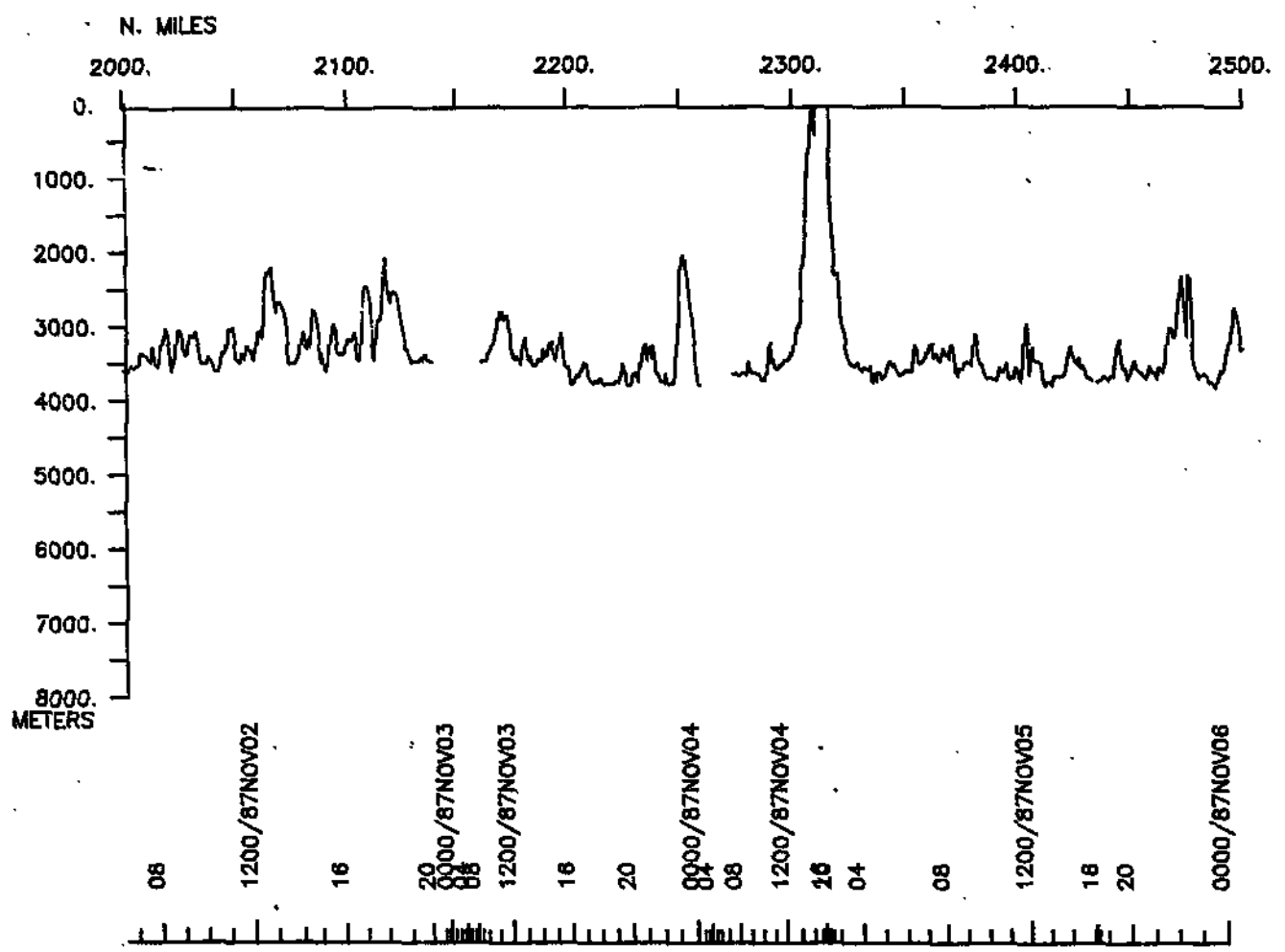


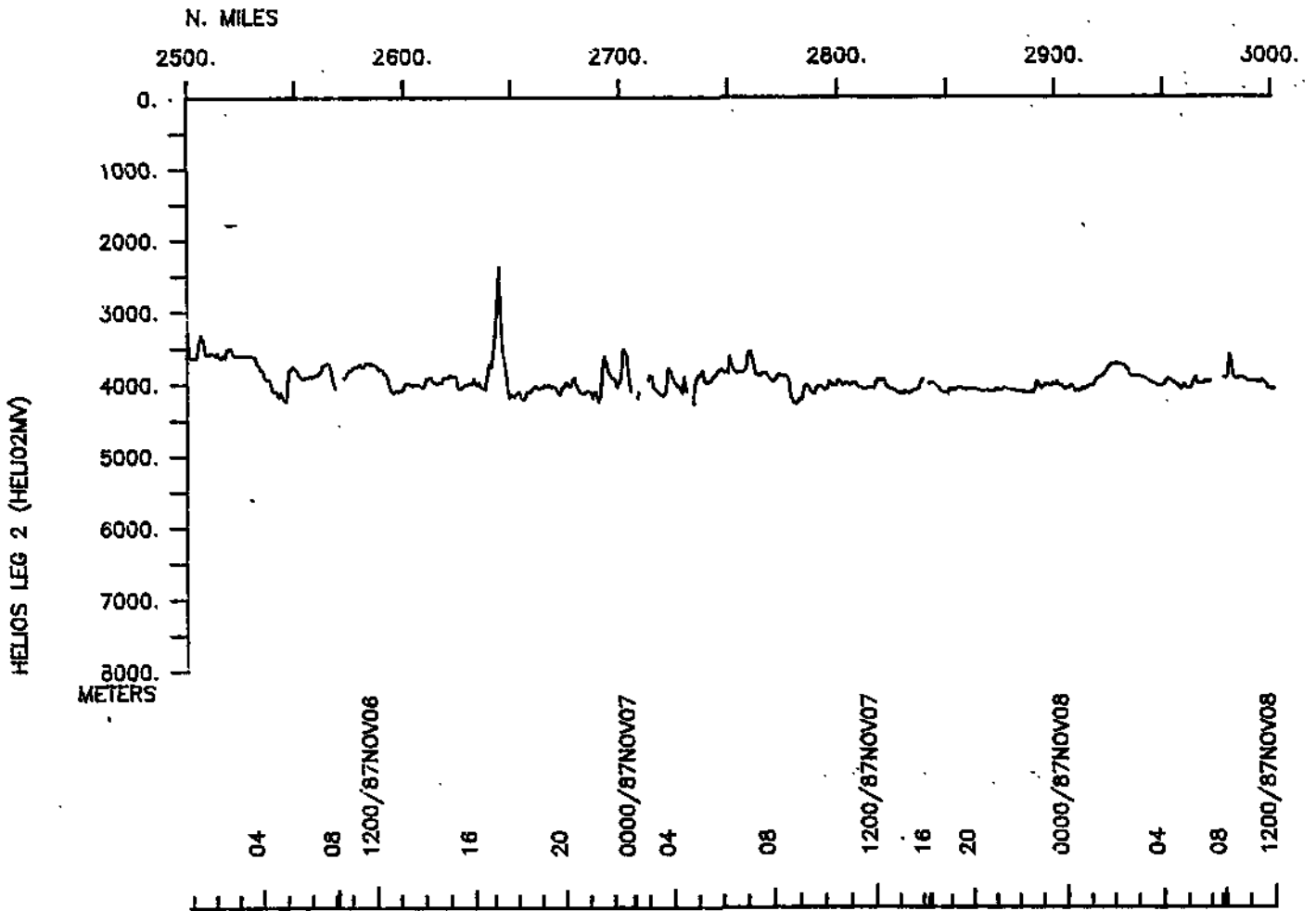


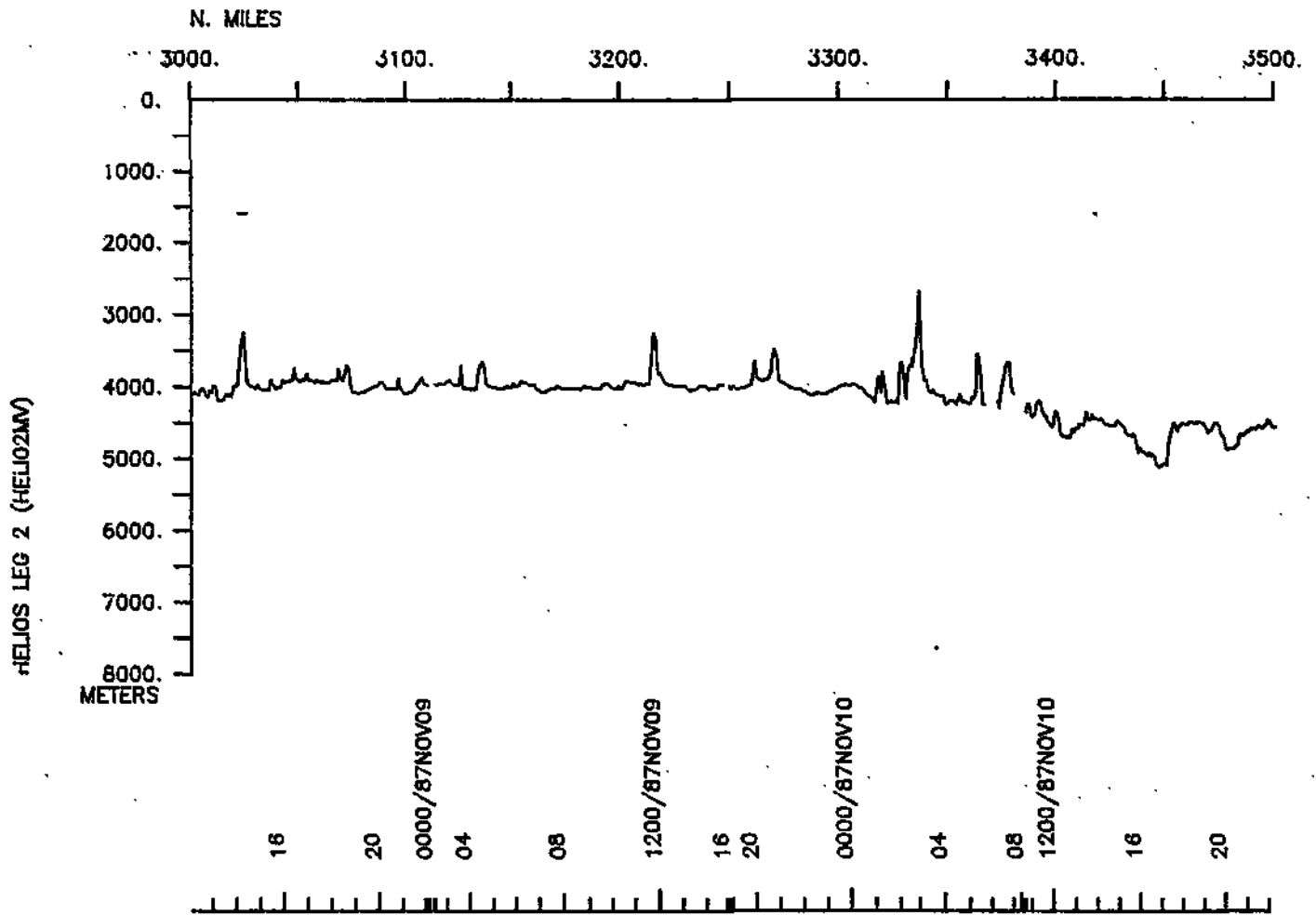


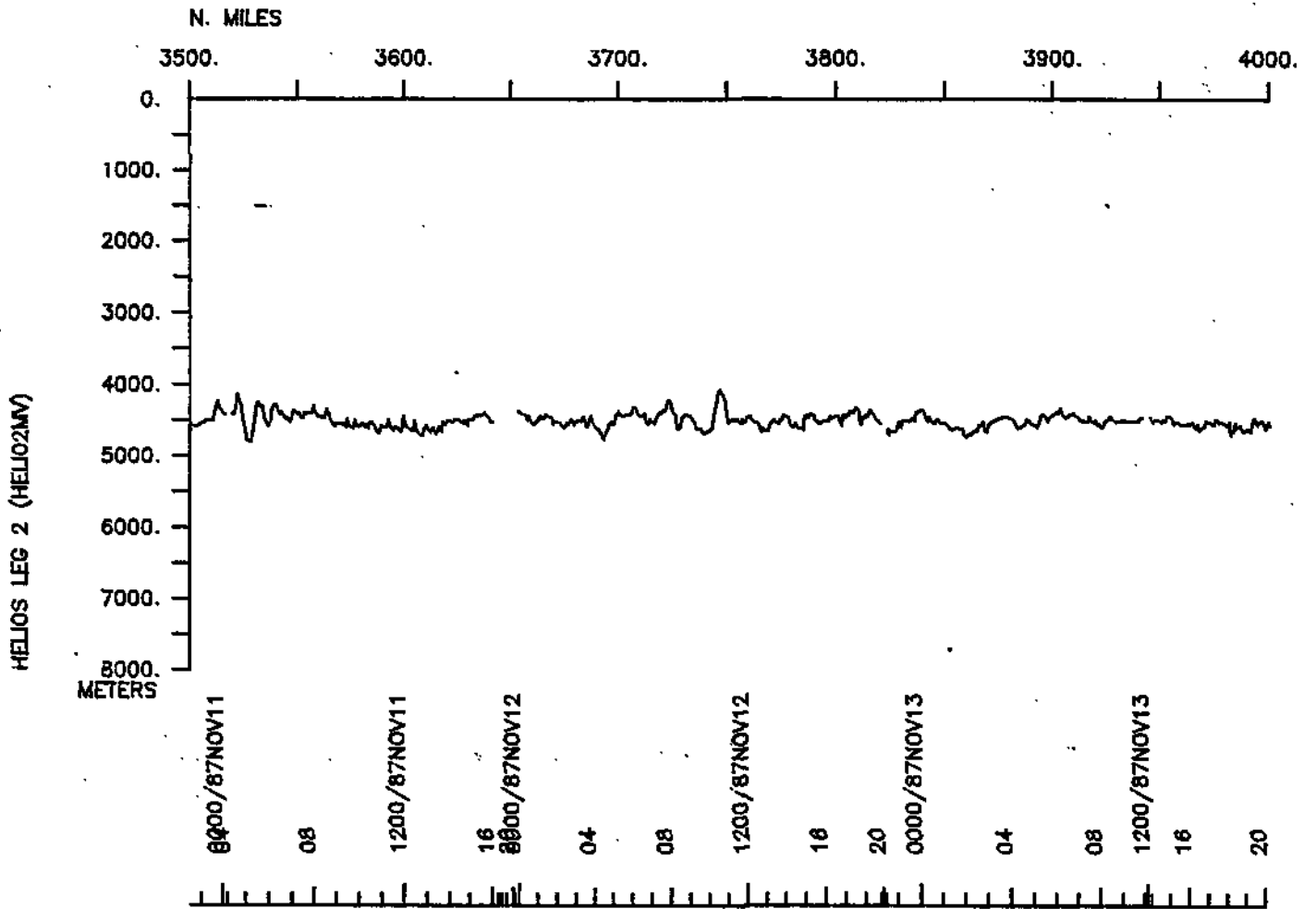


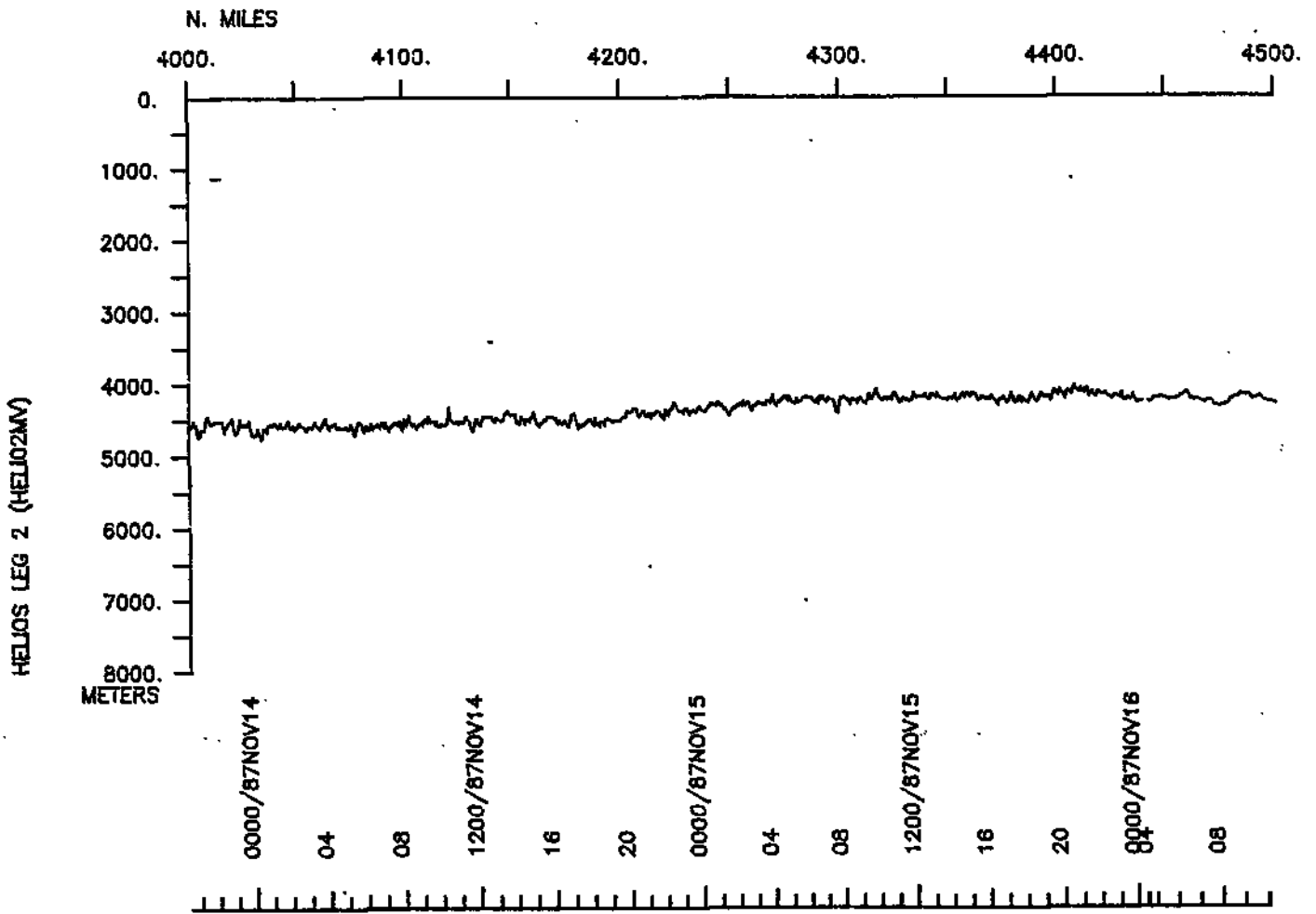
HELIOS LEG 2 (HELIOS2MV)

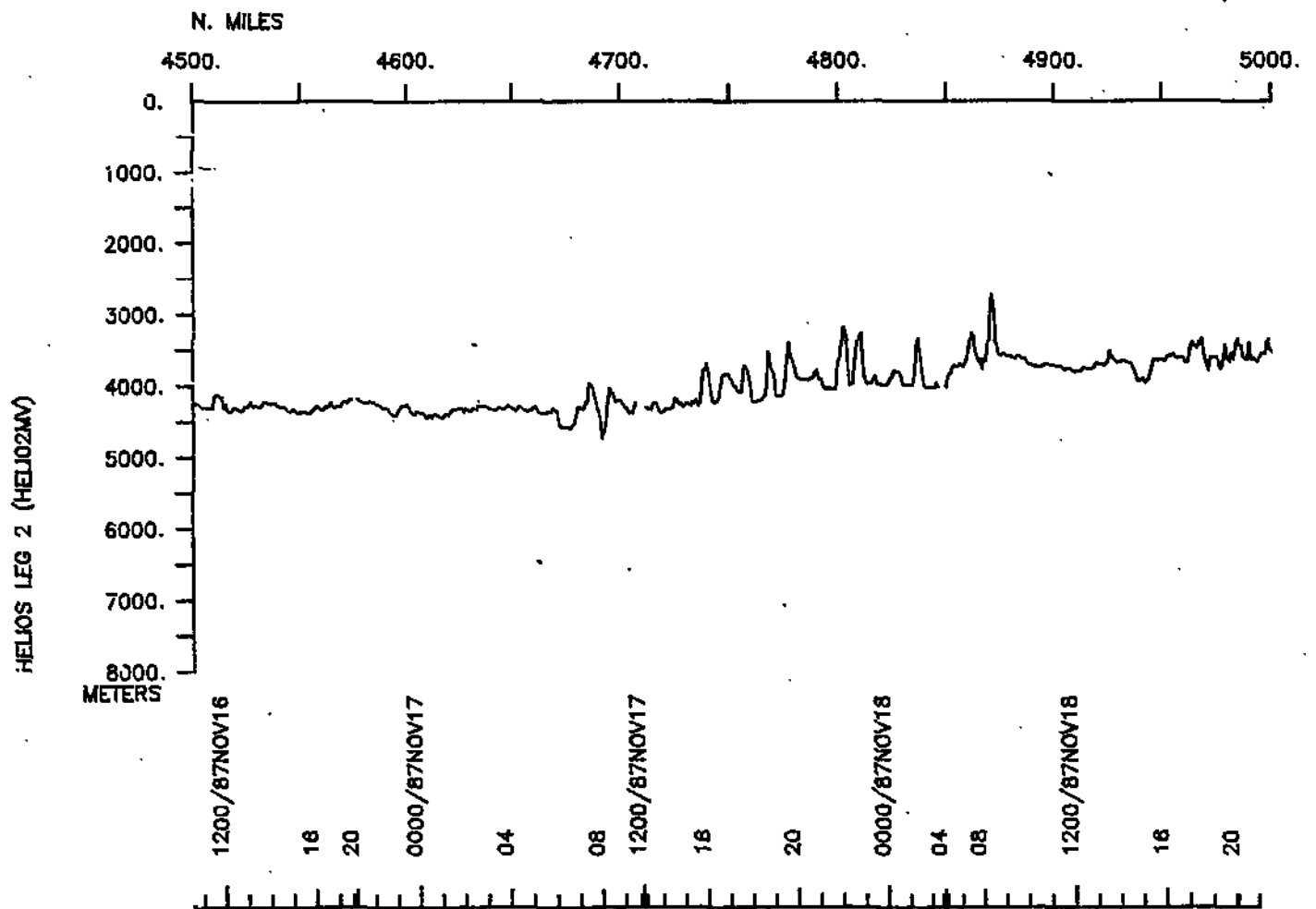


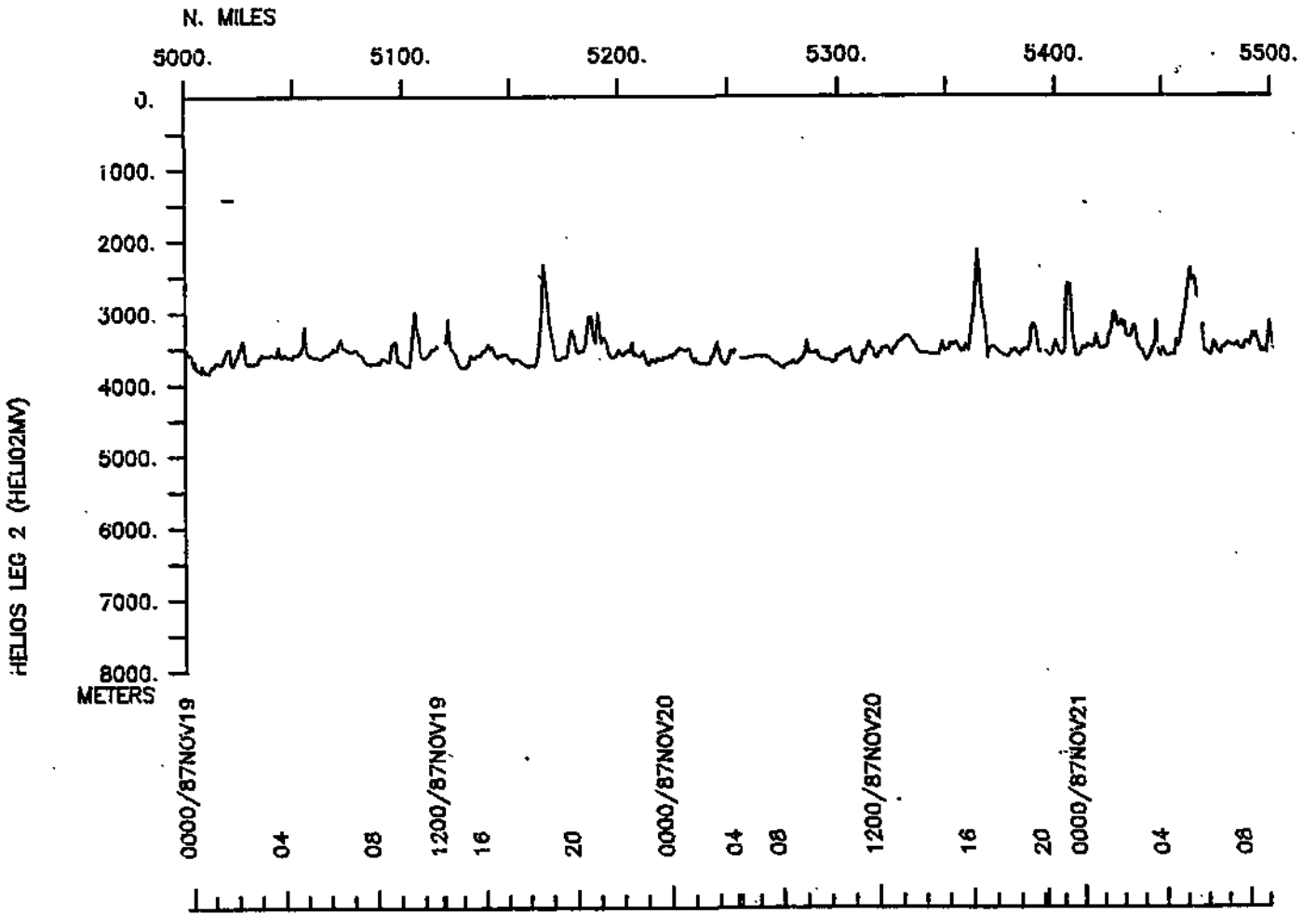




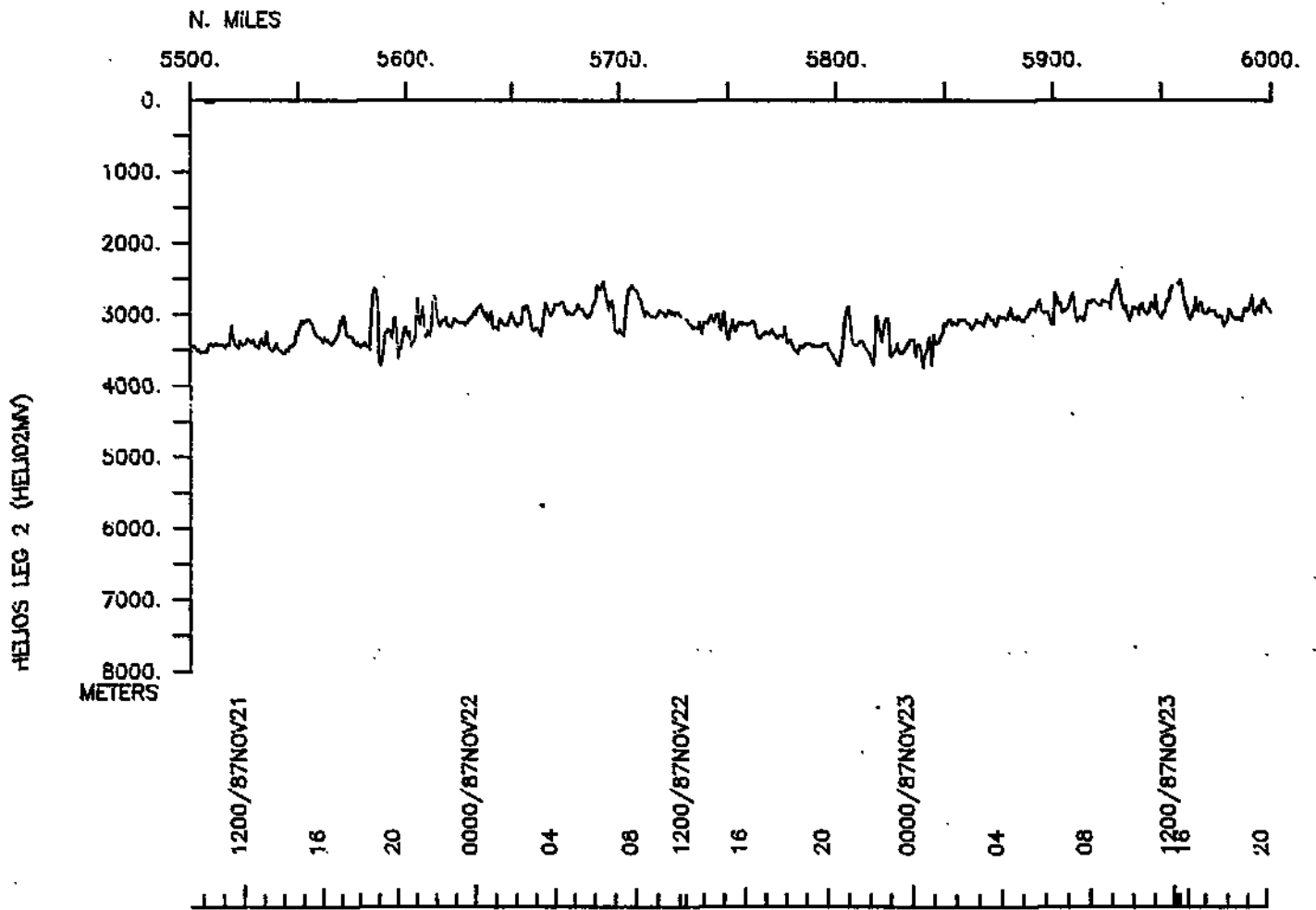


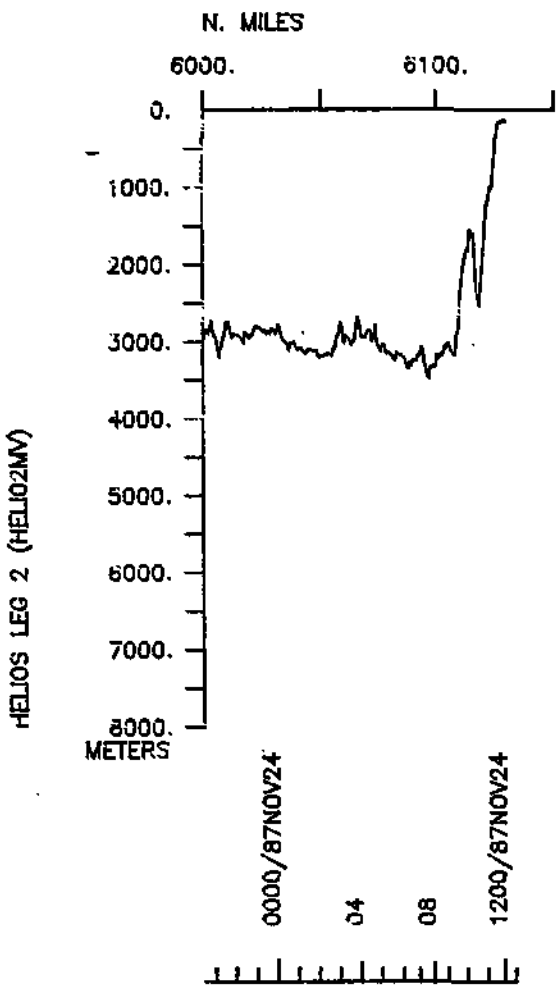












S.I.O. SAMPLE INDEX

(Issued March 1988)

HELIOS EXPEDITION

Leg 2

Papeete, Tahiti (24 October 1987)  
to  
Easter Island (24 November 1987)

R/V Melville

Co-Chief Scientists - S. Riser (Univ. of Washington)  
T. Rossby (Univ. of Rhode Island)

The Sample Index is a first level interdisciplinary listing of time, position, sample identification and disposition of all samples, records and measurements collected on this cruise leg. The index data are encoded at sea by the resident marine technician and processed on shore by the S.I.O. Geological Data Center shortly after the completion of the cruise leg.

Positions are interpolated on the basis of sample time by comparison to a single, edited navigation file. Samples beginning at one time and position and ending at another are entered on two consecutive lines. Disposition and sample type are represented by three and four character codes to permit further computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

GDC Cruise I.D.# 233

\*\*\*\* PORTS \*\*\*

0200	241087	LGPT B	PAPEETE TAHITI	17-32 S	149-34 W	fHELIO2MV
0000	241187	LGPT E	EASTER ISLAND	27-09 S	109-27 W	fHELIO2MV
1500	041187	LGSS B	PITCARIN	25-040S	130-050W	fHELIO2MV
0224	051187	LGSS E	PITCARIN	25-040S	130-050W	fHELIO2MV

\*\*\*\* PERSONNEL \*\*\*

#	NAME	TITLE	AFFILIATION	GRID **	
PECS	UWA	RISER, S.	CO-CHIEF SCIENTIST	UNIV. OF WASHINGTON	HELIO2MV
PECS	URI	ROSSBY, T.	CO-CHIEF SCIENTIST	UNIV. OF RHODE IS.	HELIO2MV
PECT	STS	CHARTERS, J.	COMPUTER TECH	SCRIPPS INSTITUTION	HELIO2MV
PEMT	URI	COVINGTON, L.	CTD TECH	UNIV. OF RHODE IS.	HELIO2MV
PEMT	UWA	DARNELL, C.	MOORING TECH	UNIV. OF WASHINGTON	HELIO2MV
PESP	STS	GRANIER, J.	WATCH STANDER	SCRIPPS INSTITUTION	HELIO2MV
PERT	STS	HARGREAVES, G.	RES. TECH.	SCRIPPS INSTITUTION	HELIO2MV
PESP	STS	HARRISON, K.	WATCH STANDER	SCRIPPS INSTITUTION	HELIO2MV
PEST	UWA	HAUTALA, S.	GRAD STUDENT	UNIV. OF WASHINGTON	HELIO2MV
PEMT	UWA	KROGSLUND, K.	NUTRIENT TECH	UNIV. OF WASHINGTON	HELIO2MV
PEMT	LDGO	MORTLOCK, R.	CHEMVTECH	LAMONT-DOHERTY G.O.	HELIO2MV
PESP	UWA	SWIFT, D.	MOORING TECH	UNIV. OF WASHINGTON	HELIO2.
PEMT	URI	SZELAG, J.	CTD TECH	UNIV. OF RHODE IS.	HELIO2MV
PEVL	SIX	HAZELTINE, J.	PASS. TO PITCARIN	NON-SCRIPPS EMPLOYEE	HELIO2MV
PEMT	UCS	THORNBERRY, K.	HELIUM TECH	U.OF CAL.SANTA BARBARA	HELIO2MV

\*\*\*\*NOTES\*\*\*\*

#AN 'X' IN THE (B)EGIN/(E)ND COLUMN FOLLOWING THE SAMPLE CODE INDICATES NO  
 #SAMPLE OR DATA RECOVERED. A 'C' INDICATES CONTINUATION OF DATA COLLECTION  
 #FROM BEFORE THE BEGINNING OR AFTER THE END OF A PARTICULAR LEG. (MOORED  
 #BOTTOM INSTRUMENTS, FOR EXAMPLE.) THE NUMBER APPEARING IN THE COLUMNS  
 #BETWEEN THE SAMPLE IDENTIFIER AND THE DISPOSITION CODE, FOR MANY SAMPLE  
 #ENTRIES, IS THE WATER DEPTH IN CORRECTED METERS. POSITIONS ARE IN TENTHS  
 #OF MINUTES.

#GMT #TIME #	DDMMYY DATE -----	LOC TIME -----	T Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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\*\*\*UNDERWAY DATA CURATOR - S. M. SMITH EXT. 42752

\*\*\*LOG BOOKS\*\*\*

0235	241087			LBUW	B UNDERWAY WATCH LOG	GDC	17-302S	149-342W	sHELIO2MV
1215	241187			LBUW	E UNDERWAY WATCH LOG	GDC	27-134S	109-246W	sHELIO2MV

\*\*\* ECHOSOUNDER RECORDS \*\*\*

0235	241087			DPRT	B 12 KHZ PDR R-01	GDC	17-302S	149-342W	sHELIO2MV
1155	131187			DPRT	E 12 KHZ PDR R-01	GDC	2-596S	127-593W	sHELIO2MV
1358	131187			DPRT	B 12 KHZ PDR R-02	GDC	2-593S	127-584W	sHELIO2MV
1308	241187			DPRT	E 12 KHZ PDR R-02	GDC	27-109S	109-239W	sHELIO2MV

\*\*\* CONDUCTIVITY, TEMPERATURE AND DEPTH WITH OXYGEN SENSOR \*\*\*

0347	251087			TDOT	B CTD#1	UWA	14-147S	146-211W	sHELIO2MV
0732	251087			TDOT	E CTD#1	UWA	14-151S	146-220W	sHELIO2MV
0903	261087			TDOT	B CTD#2	UWA	11-020S	142-571W	sHELIO2MV
1248	261087			TDOT	E CTD#2	UWA	11-028S	142-572W	sHELIO2MV
1044	261087			TDOT	CTD#2 BOTTOM	4837M UWA	11-029S	142-573W	sHELIO2MV
1413	271087			TDOT	B CTD#3	UWA	7-499S	139-346W	sHELIO2MV
1700	271087			TDOT	E CTD#3	UWA	7-503S	139-348W	sHELIO2MV
1527	271087			TDOT	CTD#3 BOTTOM	3488M UWA	7-501S	139-348W	sHELIO2MV
0853	281087			TDOT	B CTD#4	UWA	9-180S	137-001W	sHELIO2MV
1156	281087			TDOT	E CTD#4	UWA	9-181S	137-002W	sHELIO2MV
1013	281087			TDOT	CTD#4 BOTTOM	4154M UWA	9-182S	137-003W	sHELIO2MV
2355	281087			TDOT	B CTD#5	UWA	11-326S	137-005W	sHELIO2MV
0254	291087			TDOT	E CTD#5	UWA	11-321S	136-599W	sHELIO2MV
0112	291087			TDOT	CTD#5 BOTTOM	4085M UWA	11-320S	137-002W	sHELIO2MV
1521	291087			TDOT	B CTD#6	UWA	13-472S	137-004W	sHELIO2MV
1838	291087			TDOT	E CTD#6	UWA	13-476S	137-001W	sHELIO2MV
1700	291087			TDOT	CTD#6 BOTTOM	4181M UWA	13-473S	137-001W	sHELIO2MV
0729	301087			TDOT	B CTD#7	UWA	16-015S	137-008W	sHELIO2MV
1104	301087			TDOT	E CTD#7	UWA	16-016S	137-003W	sHELIO2MV
0924	301087			TDOT	CTD#7 BOTTOM	4245M UWA	16-017S	137-007W	sHELIO2MV
0436	311087			TDOT	B CTD#8	UWA	18-039S	135-370W	sHELIO2MV
0737	311087			TDOT	E CTD#8	UWA	18-044S	135-387W	sHELIO2MV
0608	311087			TDOT	CTD#8 BOTTOM	3922M UWA	18-042S	135-376W	sHELIO2MV
234	311087			TDOT	B CTD#9	UWA	20-310S	135-295W	sHELIO2MV
0146	011187			TDOT	E CTD#9	UWA	20-306S	135-297W	sHELIO2MV
0009	011187			TDOT	CTD#9 BOTTOM	4125M UWA	20-308S	135-298W	sHELIO2MV

#GMT #TIME	DDMMYY DATE	LOC T TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
1536	011187		TDOT B	CTD#10		UWA 22-531S	135-301W	sHELIO2MV
1901	011187		TDOT E	CTD#10		UWA 22-529S	135-301W	sHELIO2MV
1734	011187		TDOT	CTD#10 BOTTOM	4080M	UWA 22-528S	135-304W	sHELIO2MV
0318	031187		TDOT B	CTD#11		UWA 22-586S	131-000W	sHELIO2MV
0617	031187		TDOT E	CTD#11		UWA 22-586S	130-591W	sHELIO2MV
0455	031187		TDOT	CTD#11 BOTTOM	3272M	UWA 22-581S	130-597W	sHELIO2MV
0038	041187		TDOT B	CTD#12		UWA 24-248S	130-230W	sHELIO2MV
0407	041187		TDOT E	CTD#12		UWA 24-255S	130-247W	sHELIO2MV
0229	041187		TDOT	CTD#12 BOTTOM	3677M	UWA 24-255S	130-236W	sHELIO2MV
1512	051187		TDOT B	CTD#13		UWA 25-002S	127-599W	sHELIO2MV
1819	051187		TDOT E	CTD#13		UWA 25-011S	127-591W	sHELIO2MV
L657	051187		TDOT	CTD#13 BOTTOM	3636M	UWA 25-008S	127-599W	sHELIO2MV
0709	061187		TDOT B	CTD#14		UWA 22-472S	128-007W	sHELIO2MV
1040	061187		TDOT E	CTD#14		UWA 22-453S	128-013W	sHELIO2MV
2250	061187		TDOT B	CTD#15		UWA 20-337S	127-584W	sHELIO2MV
0202	071187		TDOT E	CTD#15		UWA 20-330S	127-579W	sHELIO2MV
0024	071187		TDOT	CTD#15 BOTTOM	4028M	UWA 20-335S	127-581W	sHELIO2MV
1418	071187		TDOT B	CTD#16		UWA 18-201S	128-003W	sHELIO2MV
1754	071187		TDOT E	CTD#16		UWA 18-204S	128-010W	sHELIO2MV
1617	071187		TDOT	CTD#16 BOTTOM	3880M	UWA 18-202S	128-009W	sHELIO2MV
0625	081187		TDOT B	CTD#17		UWA 16-072S	127-578W	sHELIO2MV
0941	081187		TDOT E	CTD#17		UWA 16-065S	127-585W	sHELIO2MV
0810	081187		TDOT	CTD#17 BOTTOM	3882M	UWA 16-066S	127-590W	sHELIO2MV
2221	081187		TDOT B	CTD #18		UWA 13-539S	127-599W	sHELIO2MV
0209	091187		TDOT E	CTD #18		UWA 13-535S	127-599W	sHELIO2MV
2351	081187		TDOT	CTD #18 BOTTOM	3905M	UWA 13-540S	128-001W	sHELIO2MV
1502	091187		TDOT B	CTD #19		UWA 11-400S	127-598W	sHELIO2MV
1817	091187		TDOT E	CTD #19		UWA 11-391S	128-002W	sHELIO2MV
1641	091187		TDOT	CTD #19 BOTTOM	3933M	UWA 11-396S	128-002W	sHELIO2MV
0724	101187		TDOT B	CTD #20		UWA 9-266S	127-598W	sHELIO2MV
1025	101187		TDOT E	CTD #20		UWA 9-233S	128-002W	sHELIO2MV
0854	101187		TDOT	CTD #20 BOTTOM	4025M	UWA 9-250S	128-003W	sHELIO2MV
0015	111187		TDOT B	CTD #21		UWA 7-122S	128-005W	sHELIO2MV
0356	111187		TDOT E	CTD #21		UWA 7-116S	128-006W	sHELIO2MV
0155	111187		TDOT	CTD #21 BOTTOM	4372M	UWA 7-116S	128-005W	sHELIO2MV
1946	111187		TDOT B	CTD #22		UWA 7-113S	129-454W	sHELIO2MV
2307	111187		TDOT E	CTD #22		UWA 7-102S	129-448W	sHELIO2MV
2130	111187		TDOT	CTD #22 BOTTOM	4455M	UWA 7-109S	129-449W	sHELIO2MV
1856	121187		TDOT B	CTD #23		UWA 5-000S	128-000W	sHELIO2MV
2220	121187		TDOT E	CTD #23		UWA 4-586S	127-592W	sHELIO2MV
2042	121187		TDOT	CTD #23 BOTTOM	4535M	UWA 4-594S	128-006W	sHELIO2MV
1001	131187		TDOT B	CTD #24		UWA 3-010S	127-588W	sHELIO2MV
1335	131187		TDOT E	CTD #24		UWA 2-593S	127-594W	sHELIO2MV
1148	131187		TDOT	CTD #24 BOTTOM	4462M	UWA 2-596S	127-592W	sHELIO2MV

#GMT #TIME	DDMMYY DATE	LOC TIME	T Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
0040	161187			TDOT B	CTD #25	UWA	4-594S	120-004W	sHELIO2MV
0429	161187			TDOT E	CTD #25	UWA	5-005S	120-008W	sHELIO2MV
0244	161187			TDOT	CTD #25 BOTTOM	4191M UWA	5-001S	120-000W	sHELIO2MV
1740	161187			TDOT B	CTD #26	UWA	7-139S	120-000W	sHELIO2MV
2057	161187			TDOT E	CTD #26	UWA	7-141S	119-599W	sHELIO2MV
1920	161187			TDOT	CTD #26 BOTTOM	4112M UWA	7-137S	120-005W	sHELIO2MV
0937	171187			TDOT B	CTD #27	UWA	9-258S	119-593W	sHELIO2MV
1258	171187			TDOT E	CTD #27	UWA	9-263S	119-597W	sHELIO2MV
1115	171187			TDOT	CTD #27 BOTTOM	4163M UWA	9-260S	119-585W	sHELIO2MV
0230	181187			TDOT B	CTD #28	UWA	11-410S	120-011W	sHELIO2MV
0601	181187			TDOT E	CTD #28	UWA	11-408S	120-021W	sHELIO2MV
0427	181187			TDOT	CTD #28 BOTTOM	3958M UWA	11-405S	120-020W	sHELIO2MV
1900	181187			TDOT B	CTD #29	UWA	13-538S	120-009W	sHELIO2MV
2149	181187			TDOT E	CTD #29	UWA	13-540S	120-004W	sHELIO2MV
2029	181187			TDOT	CTD #29 BOTTOM	3564M UWA	13-538S	120-005W	sHELIO2MV
1053	191187			TDOT B	CTD #30	UWA	16-075S	120-006W	sHELIO2MV
1400	191187			TDOT E	CTD #30	UWA	16-067S	120-013W	sHELIO2MV
.232	191187			TDOT	CTD #30 BOTTOM	3371M UWA	16-068S	120-012W	sHELIO2MV
0251	201187			TDOT B	CTD #31	UWA	18-201S	119-588W	sHELIO2MV
0555	201187			TDOT E	CTD #31	UWA	18-184S	119-572W	sHELIO2MV
0421	201187			TDOT	CTD #31 BOTTOM	3621M UWA	18-193S	119-579W	sHELIO2MV
1908	201187			TDOT B	CTD #32	UWA	20-364S	120-000W	sHELIO2MV
2156	201187			TDOT E	CTD #32	UWA	20-371S	120-000W	sHELIO2MV
2032	201187			TDOT	CTD #32 BOTTOM	3496M UWA	20-368S	119-600W	sHELIO2MV
1022	221187			TDOT B	CTD #33	UWA	23-459S	115-005W	sHELIO2MV
1302	221187			TDOT E	CTD #33	UWA	23-454S	115-007W	sHELIO2MV
1137	221187			TDOT	CTD #33 BOTTOM	2975M UWA	23-457S	115-006W	sHELIO2MV
1206	231187			TDOT B	CTD #34	UWA	25-366S	111-594W	sHELIO2MV
1441	231187			TDOT E	CTD #34	UWA	25-352S	111-590W	sHELIO2MV

## \*\*\* REMOTE TRACKED DRIFTER CURRENT METER \*\*\*

0302	291087			CMRT	RAFOS #111	URI	11-321S	136-598W	sHELIO2MV
1845	291087			CMRT	RAFOS #112	URI	13-477S	137-000W	sHELIO2MV
1111	301087			CMRT	RAFOS #113	URI	16-016S	137-003W	sHELIO2MV
0907	311087			CMRT	RAFOS #70	URI	18-044S	135-388W	sHELIO2MV
1825	051187			CMRT	RAFOS #117	URI	25-011S	127-592W	sHELIO2MV

#GMT #TIME #-----	DMMYY DATE -----	LOC TIME -----	T Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
1613	061187			CMRT	RAFOS #98	URI	21-441S	128-002W	sHELIO2MV
0212	071187			CMRT	RAFOS #88	URI	20-329S	127-578W	sHELIO2MV
1800	071187			CMRT	RAFOS #89	URI	18-202S	128-011W	sHELIO2MV
0947	081187			CMRT	RAFOS #116	URI	16-066S	127-585W	sHELIO2MV
0952	081187			CMRT	RAFOS #81	URI	16-066S	127-585W	sHELIO2MV
0214	091187			CMRT	RAFOS #79	URI	13-534S	127-599W	sHELIO2MV
1824	091187			CMRT	RAFOS #83	URI	11-391S	128-002W	sHELIO2MV
1032	101187			CMRT	RAFOS #107	URI	9-232S	128-002W	sHELIO2MV
0402	111187			CMRT	RAFOS #73	URI	7-116S	128-007W	sHELIO2MV
1852	121187			CMRT	RAFOS #69	URI	5-000S	128-000W	sHELIO2MV
1340	131187			CMRT	RAFOS #71	URI	2-593S	127-594W	sHELIO2MV
0029	161187			CMRT	RAFOS #77	URI	4-593S	120-011W	sHELIO2MV
2102	161187			CMRT	RAFOS #99	URI	7-141S	119-598W	sHELIO2MV
1304	171187			CMRT	RAFOS #86	URI	9-264S	119-597W	sHELIO2MV
0606	181187			CMRT	RAFOS #78	URI	11-409S	120-021W	sHELIO2MV
2157	181187			CMRT	RAFOS #102	URI	13-542S	120-004W	sHELIO2MV
2201	181187			CMRT	RAFOS #103	URI	13-543S	120-005W	sHELIO2M
1406	191187			CMRT	RAFOS #105	URI	16-068S	120-014W	sHELIO2I
0601	201187			CMRT	RAFOS #87	URI	18-183S	119-572W	sHELIO2MV
2201	201187			CMRT	RAFOS #85	URI	20-372S	119-599W	sHELIO2MV
1308	221187			CMRT	RAFOS #111	URI	23-454S	115-007W	sHELIO2MV

\*\*\*\* SOUND SOURCE MOORINGS FOR CURRENT METERS \*\*\*\*

1754	301087			CMSS B	Mooring #1	URI	16-524S	136-277W	sHELIO2MV
1911	301087			CMSS E	Mooring #1	URI	16-531S	136-292W	sHELIO2MV
0225	031187			CMSS B	Mooring #2	URI	22-589S	131-020W	sHELIO2MV
0920	031187			CMSS E	Mooring #2	URI	22-566S	131-031W	sHELIO2MV
1912	111187			CMSS	Mooring #3	URI	7-133S	129-462W	sHELIO2MV

\*\*\*\* EXPENDABLE BATHY THERMOGRAPHS \*\*\*\*

0522	241087			BTXP	XBT 0001 Probe T-7	GDC	17-087S	149-128W	sHELIO2MV
0527	241087			BTXP	XBT 0002 Probe T-4	GDC	17-081S	149-121W	sHELIO2MV
0534	241087			BTXP	XBT 0003 Probe T-7	GDC	17-072S	149-111W	sHELIO2MV
1007	241087			BTXP	XBT 0004 Probe T-7	GDC	16-347S	148-329W	sHELIO2MV
1615	241087			BTXP	XBT 0005 Probe T-7	GDC	15-490S	147-403W	sHELIO2MV
2203	241087			BTXP	XBT 0006 Probe T-7	GDC	15-037S	146-532W	sHELIO2MV
2212	241087			BTXP	XBT 0007 Probe T-7	GDC	15-023S	146-522W	sHELIO2MV
2221	241087			BTXP	XBT 0008 Probe T-7	GDC	15-008S	146-511W	sHELIO2MV
1005	251087			BTXP	XBT 0009 Probe T-7	GDC	13-578S	146-023W	sHELIO2M
1621	251087			BTXP	XBT 0010 Probe T-7	GDC	13-101S	145-104W	sHELIO2M



#GMT #TIME	DDMMYY DATE	LOC TIME	T Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
2200	251087			BTXP	XBT 0011 Probe T-7	GDC	12-246S	144-242W	sHELIO2MV
0404	261087			BTXP	XBT 0012 Probe T-7	GDC	11-384S	143-346W	sHELIO2MV
1531	261087			BTXP	XBT 0015 Probe T-7	GDC	10-432S	142-374W	sHELIO2MV
2104	261087			BTXP	XBT 0016 Probe T-7	GDC	10-008S	141-518W	sHELIO2MV
0328	271087			BTXP	XBT 0017 Probe T-7	GDC	9-117S	141-010W	sHELIO2MV
0336	271087			BTXP	XBT 0018 Probe T-7	GDC	9-105S	140-599W	sHELIO2MV
0902	271087			BTXP	XBT 0019 Probe T-7	GDC	8-283S	140-155W	sHELIO2MV
2103	271087			BTXP	XBT 0020 Probe T-7	GDC	8-130S	138-541W	sHELIO2MV
0256	281087			BTXP	XBT 0021 Probe T-7	GDC	8-453S	137-528W	sHELIO2MV
1501	281087			BTXP	XBT 0022 Probe T-7	GDC	9-512S	136-589W	sHELIO2MV
2103	281087			BTXP	XBT 0023 Probe T-7	GDC	11-008S	137-017W	sHELIO2MV
0902	291087			BTXP	XBT 0024 Probe T-7	GDC	12-402S	136-589W	sHELIO2MV
2104	291087			BTXP	XBT 0025 Probe T-7	GDC	14-129S	136-599W	sHELIO2MV
0308	301087			BTXP	XBT 0026 Probe T-7	GDC	15-227S	136-590W	sHELIO2MV
0319	301087			BTXP	XBT 0027 Probe T-7	GDC	15-247S	136-588W	sHELIO2MV
1512	301087			BTXP	XBT 0028 Probe T-7	GDC	16-382S	136-358W	sHELIO2MV
2105	301087			BTXP	XBT 0029 Probe T-7	GDC	17-085S	136-193W	sHELIO2MV
1534	311087			BTXP	XBT 0032 Probe T-7	GDC	19-142S	135-345W	sHELIO2MV
2102	311087			BTXP	XBT 0033 Probe T-7	GDC	20-170S	135-307W	sHELIO2MV
0310	011187			BTXP	XBT 0034 Probe T-7	GDC	20-434S	135-276W	sHELIO2MV
0927	011187			BTXP	XBT 0035 Probe T-7	GDC	21-503S	135-223W	sHELIO2MV
2102	011187			BTXP	XBT 0036 Probe T-7	GDC	22-520S	135-111W	sHELIO2MV
0308	021187			BTXP	XBT 0037 Probe T-7	GDC	22-564S	134-048W	sHELIO2MV
0857	021187			BTXP	XBT 0038 Probe T-7	GDC	22-583S	133-000W	sHELIO2MV
2110	021187			BTXP	XBT 0039 Probe T-7	GDC	22-583S	131-017W	sHELIO2MV
1404	031187			BTXP	XBT 0040 Probe T-7	GDC	23-195S	130-485W	sHELIO2MV
0157	061187			BTXP	XBT 0041 Probe T-7	GDC	23-431S	128-004W	sHELIO2MV
1411	061187			BTXP	XBT 0042 Probe T-7	GDC	22-058S	128-005W	sHELIO2MV
0804	071187			BTXP	XBT 0043 Probe T-7	GDC	19-289S	128-005W	sHELIO2MV
2003	071187			BTXP	XBT 0044 Probe T-7	GDC	18-003S	128-014W	sHELIO2MV
0159	081187			BTXP	XBT 0045 Probe T-7	GDC	16-556S	127-589W	sHELIO2MV
1407	081187			BTXP	XBT 0046 Probe T-7	GDC	15-215S	128-012W	sHELIO2MV
2003	081187			BTXP	XBT 0047 Probe T-7	GDC	14-163S	128-000W	sHELIO2MV
0755	091187			BTXP	XBT 0048 Probe T-7	GDC	12-539S	128-023W	sHELIO2MV
2006	091187			BTXP	XBT 0049 Probe T-7	GDC	11-260S	128-003W	sHELIO2MV
0205	101187			BTXP	XBT 0050 Probe T-7	GDC	10-207S	128-011W	sHELIO2MV
1412	101187			BTXP	XBT 0051 Probe T-7	GDC	8-492S	128-003W	sHELIO2MV
2033	101187			BTXP	XBT 0052 Probe T-7	GDC	7-471S	128-000W	sHELIO2MV
0754	111187			BTXP	XBT 0053 Probe T-7	GDC	7-136S	128-391W	sHELIO2MV
1405	111187			BTXP	XBT 0054 Probe T-7	GDC	7-142S	129-451W	sHELIO2MV
0157	121187			BTXP	XBT 0055 Probe T-7	GDC	6-551S	129-343W	sHELIO2MV

#GMT #TIME #	DDMMYY DATE	LOC TIME Z	T	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
0751	121187			BTXP	XBT 0056 Probe T-7	GDC	6-154S	129-007W	sHELIO2MV
1404	121187			BTXP	XBT 0057 Probe T-7	GDC	5-336S	128-252W	sHELIO2MV
0257	131187			BTXP	XBT 0058 Probe T-7	GDC	4-133S	128-018W	sHELIO2MV
0753	131187			BTXP	XBT 0059 Probe T-7	GDC	3-221S	127-594W	sHELIO2MV
0804	131187			BTXP	XBT 0060 Probe T-7	GDC	3-202S	127-593W	sHELIO2MV
2035	131187			BTXP	XBT 0061 Probe T-7	GDC	3-004S	127-008W	sHELIO2MV
0153	141187			BTXP	XBT 0062 Probe T-7	GDC	3-079S	126-167W	sHELIO2MV
0750	141187			BTXP	XBT 0063 Probe T-7	GDC	3-249S	125-279W	sHELIO2MV
1354	141187			BTXP	XBT 0064 Probe T-7	GDC	3-405S	124-373W	sHELIO2MV
2015	141187			BTXP	XBT 0065 Probe T-7	GDC	3-532S	123-446W	sHELIO2MV
0207	151187			BTXP	XBT 0066 Probe T-7	GDC	4-061S	122-579W	sHELIO2MV
0814	151187			BTXP	XBT 0067 Probe T-7	GDC	4-212S	122-112W	sHELIO2MV
1420	151187			BTXP	XBT 0068 Probe T-7	GDC	4-376S	121-234W	sHELIO2MV
2010	151187			BTXP	XBT 0069 Probe T-7	GDC	4-503S	120-349W	sHELIO2MV
0753	161187			BTXP	XBT 0070 Probe T-7	GDC	5-324S	120-017W	sHELIO2MV
1409	161187			BTXP	XBT 0071 Probe T-7	GDC	6-375S	119-599W	sHELIO2MV
0204	171187			BTXP	XBT 0072 Probe T-7	GDC	8-063S	120-003W	sHELIO2MV
0803	171187			BTXP	XBT 0073 Probe T-7	GDC	9-100S	120-003W	sHELIO2MV
1923	171187			BTXP	XBT 0074 Probe T-7	GDC	10-292S	119-595W	sHELIO2
0106	181187			BTXP	XBT 0075 Probe T-7	GDC	11-274S	120-014W	sHELIO2MV
0713	181187			BTXP	XBT 0076 Probe T-7	GDC	11-499S	120-015W	sHELIO2MV
1354	181187			BTXP	XBT 0080 Probe T-7	GDC	13-002S	119-592W	sHELIO2MV
0103	191187			BTXP	XBT 0081 Probe T-7	GDC	14-246S	120-003W	sHELIO2MV
0658	191187			BTXP	XBT 0082 Probe T-7	GDC	15-276S	119-588W	sHELIO2MV
1911	191187			BTXP	XBT 0083 Probe T-7	GDC	16-587S	120-002W	sHELIO2MV
0104	201187			BTXP	XBT 0084 Probe T-7	GDC	18-022S	119-591W	sHELIO2MV
0652	201187			BTXP	XBT 0085 Probe T-7	GDC	18-246S	119-573W	sHELIO2MV
1303	201187			BTXP	XBT 0086 Probe T-7	GDC	19-313S	119-595W	sHELIO2MV
0104	211187			BTXP	XBT 0087 Probe T-7	GDC	20-525S	119-365W	sHELIO2MV
0738	211187			BTXP	XBT 0088 Probe T-7	GDC	21-259S	118-401W	sHELIO2MV
1304	211187			BTXP	XBT 0089 Probe T-7	GDC	21-547S	117-539W	sHELIO2MV
1932	211187			BTXP	XBT 0090 Probe T-7	GDC	22-270S	117-040W	sHELIO2MV
0104	221187			BTXP	XBT 0091 Probe T-7	GDC	22-567S	116-185W	sHELIO2MV
0709	221187			BTXP	XBT 0092 Probe T-7	GDC	23-290S	115-282W	sHELIO2MV
2352	221187			BTXP	XBT 0093 Probe T-7	GDC	24-407S	113-274W	sHELIO2MV
0553	231187			BTXP	XBT 0094 Probe T-7	GDC	25-175S	112-319W	sHELIO2MV

#GMT #TIME	DMMYY DATE	LOC T TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
***** SALINITY SAMPLE SURFACE SALT ****								
2203	241087		SSSA	Surf salt	XBT 006	UWA 15-037S	146-532W	sHELIO2MV
2212	241087		SSSA	Surf salt	XBT 007	UWA 15-023S	146-522W	sHELIO2MV
2221	241087		SSSA	Surf salt	XBT 008	UWA 15-008S	146-511W	sHELIO2MV
1005	251087		SSSA	Surf salt	XBT 009	UWA 13-578S	146-023W	sHELIO2MV
1621	251087		SSSA	Surf salt	XBT 010	UWA 13-101S	145-104W	sHELIO2MV
2200	251087		SSSA	Surf salt	XBT 011	UWA 12-246S	144-242W	sHELIO2MV
0404	261087		SSSA	Surf salt	XBT 012	UWA 11-384S	143-346W	sHELIO2MV
1531	261087		SSSA	Surf salt	XBT 015	UWA 10-432S	142-374W	sHELIO2MV
2104	261087		SSSA	Surf salt	XBT 016	UWA 10-008S	141-518W	sHELIO2MV
0328	271087		SSSA	Surf salt	XBT 017	UWA 9-117S	141-010W	sHELIO2MV
0336	271087		SSSA	Surf salt	XBT 018	UWA 9-105S	140-599W	sHELIO2MV
0902	271087		SSSA	Surf salt	XBT 019	UWA 8-283S	140-155W	sHELIO2MV
2103	271087		SSSA	Surf salt	XBT 020	UWA 8-130S	138-541W	sHELIO2MV
0256	281087		SSSA	Surf salt	XBT 021	UWA 8-453S	137-528W	sHELIO2MV
1501	281087		SSSA	Surf salt	XBT 022	UWA 9-512S	136-589W	sHELIO2MV
2103	281087		SSSA	Surf salt	XBT 023	UWA 11-008S	137-017W	sHELIO2MV
0902	291087		SSSA	Surf salt	XBT 024	UWA 12-402S	136-589W	sHELIO2MV
2104	291087		SSSA	Surf salt	XBT 025	UWA 14-129S	136-599W	sHELIO2MV
0308	301087		SSSA	Surf salt	XBT 026	UWA 15-227S	136-590W	sHELIO2MV
0319	301087		SSSA	Surf salt	XBT 027	UWA 15-247S	136-588W	sHELIO2MV
1512	301087		SSSA	Surf salt	XBT 028	UWA 16-382S	136-358W	sHELIO2MV
2105	301087		SSSA	Surf salt	XBT 029	UWA 17-085S	136-193W	sHELIO2MV
1534	311087		SSSA	Surf salt	XBT 032	UWA 19-142S	135-345W	sHELIO2MV
2102	311087		SSSA	Surf salt	XBT 033	UWA 20-170S	135-307W	sHELIO2MV
0310	011187		SSSA	Surf salt	XBT 034	UWA 20-434S	135-276W	sHELIO2MV
0927	011187		SSSA	Surf salt	XBT 035	UWA 21-503S	135-223W	sHELIO2MV
2102	011187		SSSA	Surf salt	XBT 036	UWA 22-520S	135-111W	sHELIO2MV
0308	021187		SSSA	Surf salt	XBT 037	UWA 22-564S	134-048W	sHELIO2MV
0857	021187		SSSA	Surf salt	XBT 038	UWA 22-583S	133-000W	sHELIO2MV
2110	021187		SSSA	Surf salt	XBT 039	UWA 22-583S	131-017W	sHELIO2MV
1404	031187		SSSA	Surf salt	XBT 040	UWA 23-195S	130-485W	sHELIO2MV
0157	061187		SSSA	Surf salt	XBT 041	UWA 23-431S	128-004W	sHELIO2MV
1411	061187		SSSA	Surf salt	XBT 042	UWA 22-058S	128-005W	sHELIO2MV
0804	071187		SSSA	Surf salt	XBT 043	UWA 19-289S	128-005W	sHELIO2MV
2003	071187		SSSA	Surf salt	XBT 044	UWA 18-003S	128-014W	sHELIO2MV
0159	081187		SSSA	Surf salt	XBT 045	UWA 16-556S	127-589W	sHELIO2MV
1407	081187		SSSA	Surf salt	XBT 046	UWA 15-215S	128-012W	sHELIO2MV
2003	081187		SSSA	Surf salt	XBT 047	UWA 14-163S	128-000W	sHELIO2MV
0755	091187		SSSA	Surf salt	XBT 048	UWA 12-539S	128-023W	sHELIO2MV
2006	091187		SSSA	Surf salt	XBT 049	UWA 11-260S	128-003W	sHELIO2MV
1205	101187		SSSA	Surf salt	XBT 050	UWA 10-207S	128-011W	sHELIO2MV
1412	101187		SSSA	Surf salt	XBT 051	UWA 8-492S	128-003W	sHELIO2MV
2033	101187		SSSA	Surf salt	XBT 052	UWA 7-471S	128-000W	sHELIO2MV

#GMT #TIME #	DDMMYY DATE	LOC T TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
0754	111187		SSSA	Surf salt	XBT 053	UWA	7-136S 128-391W	sHELIO2MV
1405	111187		SSSA	Surf salt	XBT 054	UWA	7-142S 129-451W	sHELIO2MV
0157	121187		SSSA	Surf salt	XBT 055	UWA	6-551S 129-343W	sHELIO2MV
0751	121187		SSSA	Surf salt	XBT 056	UWA	6-154S 129-007W	sHELIO2MV
1404	121187		SSSA	Surf salt	XBT 057	UWA	5-336S 128-252W	sHELIO2MV
0257	131187		SSSA	Surf salt	XBT 058	UWA	4-133S 128-018W	sHELIO2MV
0753	131187		SSSA	Surf salt	XBT 059	UWA	3-221S 127-594W	sHELIO2MV
0804	131187		SSSA	Surf salt	XBT 060	UWA	3-202S 127-593W	sHELIO2MV
2035	131187		SSSA	Surf salt	XBT 061	UWA	3-004S 127-008W	sHELIO2MV
0153	141187		SSSA	Surf salt	XBT 062	UWA	3-079S 126-167W	sHELIO2MV
0750	141187		SSSA	Surf salt	XBT 063	UWA	3-249S 125-279W	sHELIO2MV
1354	141187		SSSA	Surf salt	XBT 064	UWA	3-405S 124-373W	sHELIO2MV
2015	141187		SSSA	Surf salt	XBT 065	UWA	3-532S 123-446W	sHELIO2MV
0207	151187		SSSA	Surf salt	XBT 066	UWA	4-061S 122-579W	sHELIO2MV
0814	151187		SSSA	Surf salt	XBT 067	UWA	4-212S 122-112W	sHELIO2MV
1420	151187		SSSA	Surf salt	XBT 068	UWA	4-376S 121-234W	sHELIO2MV
2010	151187		SSSA	Surf salt	XBT 069	UWA	4-503S 120-349W	sHELIO2MV
0753	161187		SSSA	Surf salt	XBT 070	UWA	5-324S 120-017W	sHELIO2MV
1409	161187		SSSA	Surf salt	XBT 071	UWA	6-375S 119-599W	sHELIO2
0204	171187		SSSA	Surf salt	XBT 072	UWA	8-063S 120-003W	sHELIO2MV
0803	171187		SSSA	Surf salt	XBT 073	UWA	9-100S 120-003W	sHELIO2MV
1923	171187		SSSA	Surf salt	XBT 074	UWA	10-292S 119-595W	sHELIO2MV
0106	181187		SSSA	Surf salt	XBT 075	UWA	11-274S 120-014W	sHELIO2MV
0713	181187		SSSA	Surf salt	XBT 076	UWA	11-499S 120-015W	sHELIO2MV
1354	181187		SSSA	Surf salt	XBT 080	UWA	13-002S 119-592W	sHELIO2MV
0103	191187		SSSA	Surf salt	XBT 081	UWA	14-246S 120-003W	sHELIO2MV
0658	191187		SSSA	Surf salt	XBT 082	UWA	15-276S 119-588W	sHELIO2MV
1911	191187		SSSA	Surf salt	XBT 083	UWA	16-587S 120-002W	sHELIO2MV
0104	201187		SSSA	Surf salt	XBT 084	UWA	18-022S 119-591W	sHELIO2MV
0652	201187		SSSA	Surf salt	XBT 085	UWA	18-246S 119-573W	sHELIO2MV
1303	201187		SSSA	Surf salt	XBT 086	UWA	19-313S 119-595W	sHELIO2MV
0104	211187		SSSA	Surf salt	XBT 087	UWA	20-525S 119-365W	sHELIO2MV
0738	211187		SSSA	Surf salt	XBT 088	UWA	21-259S 118-401W	sHELIO2MV
1304	211187		SSSA	Surf salt	XBT 089	UWA	21-547S 117-539W	sHELIO2MV
1932	211187		SSSA	Surf salt	XBT 090	UWA	22-270S 117-040W	sHELIO2MV
0104	221187		SSSA	Surf salt	XBT 091	UWA	22-567S 116-185W	sHELIO2MV
0709	221187		SSSA	Surf salt	XBT 092	UWA	23-290S 115-282W	sHELIO2MV
2352	221187		SSSA	Surf salt	XBT 093	UWA	24-407S 113-274W	sHELIO2MV
0553	231187		SSSA	Surf salt	XBT 094	UWA	25-175S 112-319W	sHELIO2MV
1805	231187		SSSA	Surf salt	XBT 095	UWA	25-481S 111-400W	sHELIO2MV
2357	231187		SSSA	Surf salt	XBT 096	UWA	26-166S 110-539W	sHELIO2MV
0610	241187		SSSA	Surf salt	XBT 097	UWA	26-456S 110-001W	sHELIO2MV

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END SAMPLE INDEX