Oceanography Branch CTD Data Report
CTD_REPORT_2011003HB

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DATE: Revised: April 5, 2012

Oceanography Branch CTD Data Report

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NOAA Fisheries Service
Northeast Fisheries Science Center
Woods Hole, MA 02543

HB1103
Marine Mammal Survey
Data Coverage: 4 June – 31 July, 2011
GOM, MAB, GB, Other

This report presents a summary of surface and bottom temperature and salinity data collected during the Northeast Fisheries Science Center's Marine Mammal survey aboard the NOAA RSV *Henry Bigelow*. All data was obtained with Seabird Electronics SBE Model 19 and 19+ profiling CTDs (s/n 1447, 4758). Please note there is no data for station 46 and 64.

Data presented here have been audited, however, corrections and/or updates may be applied at a later time.
The most recent and complete station data can be found in an NODC formatted ASCII file at:
ftp://ftp.nefsc.noaa.gov/pub/hydro/hb1103.dat

This report may be viewed on the Oceanography Branch website at:

http://www.nefsc.noaa.gov/HydroAtlas/

choose: **2011 Cruises**
JUN_MAMMAL_HB1103
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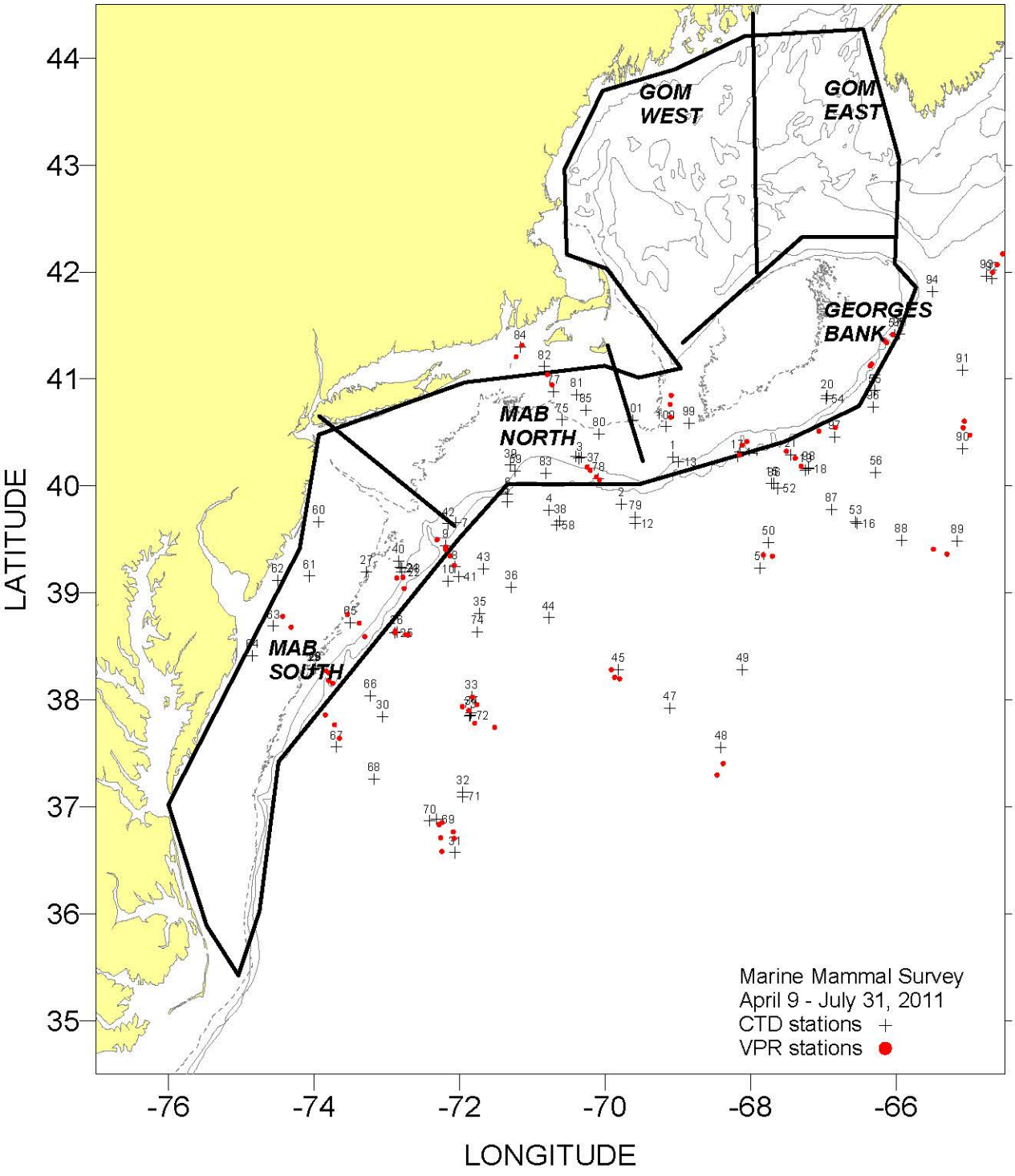
GOM WEST
GOM EAST
GEORGES BANK
MAB NORTH
MAB SOUTH
Marine Mammal Survey
April 9 - July 31, 2011
CTD stations
VPR stations
LATITUDE
LONGITUDE
44
43
42
41
40
39
38
37
36
35
-76
-74
-72
-70
-68
-66

Areal average surface and bottom temperature/salinity and temperature/salinity anomalies for HB1103 - Marine Mammal Survey.

		SURFACE						BOTTOM						
CRUISE	CD	#obs	T/S	Anomaly	SDV1	SDV2	Flag	#obs	T/S	Anomaly	SDV1	SDV2	Flag	Purpose
						Georges Bank								
HB1103	158	2	12.58	-0.20	0.91	2.61	1	1	11.76	3.75	1.23	-9.99	1	93
HB1103	158	2	32.04	-1.04	0.55	1.67	1	1	34.48	1.24	0.89	-9.99	1	93
						MAB North								
HB1103	156	4	15.92	2.62	0.78	1.46	1	3	12.72	1.88	0.81	0.63	1	93
HB1103	156	4	33.07	-0.39	0.48	0.96	1	3	35.2	0.08	0.44	0.17	1	93
						MAB South								
HB1103	159	2	20.36	3.55	1.07	-9.99	1	1	14.75	7.07	1.48	-9.99	1	93
HB1103	159	2	32.88	-1.51	0.75	-9.99	1	1	35.71	2.31	0.85	-9.99	1	93

"CRUISE", the code name for a cruise: "CD", the calendar mid-date of all the stations within a region for a cruise:
"#obs", the number of observations included in each average: "T/S", the areal average temp/salt: "Anomaly", the areal average temp/salt anomaly: "SDV1", the standard deviation associated with the average temp/salt anomaly: "SDV2", the standard deviation of the individual anomalies from which the average anomaly was derived

"Flag", a value of "1" indicates that a true areal average could not be calculated due to poor station coverage. The areal averages listed were derived from a simple average of the observations within the region.

"Purpose", 2 digit code assigned by DMS to identify a unique NEFSC program survey.

HB1103
MARINE MAMMAL SURVEY

Cast #	Sta #	Lat (deg. N)	Lon (deg. W)	Day	Month	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg. C)	Sfc Salt	Deepest Observed Temp (deg. C)	Deepest Observed Salt	Meters from Bottom
1	1	4016.3	6903.9	4	6	2011	9:07	100	12.5	31.98	11.8	34.47	3
2	2	3949.9	6946.4	4	6	2011	15:52	1011	18.4	33.75	12.5	35.30	809
3	3	4015.5	7021.2	4	6	2011	22:13	99	10.6	32.52	12.9	35.25	3
4	3	4016.1	7023.1	4	6	2011	23:07	100	14.7	32.69	12.9	35.20	4
5	3	4016.7	7024.3	4	6	2011	23:46	99	14.7	32.66	12.4	35.13	2
6	4	3946.5	7046.1	5	6	2011	15:49	1736	18.9	34.30	12.5	35.61	1535
7	5	3951.1	7120.7	5	6	2011	22:17	662	20.4	35.10	12.4	35.61	461
8	6	3955.6	7120.3	6	6	2011	8:56	385	18.7	34.48	7.7	35.10	1
9	7	3939.3	7202.9	6	6	2011	15:46	167	19.5	34.77	12.9	35.69	5
10	8	3914.6	7203.7	6	6	2011	21:10	1131	19.5	9999	11.1	35.39	930
11	9	3926.5	7211.5	7	6	2011	0:49	1274	20.0	34.77	5.8	35.01	770
12	10	3906.6	7209.4	7	6	2011	22:17	1693	21.2	35.39	11.4	35.67	1487
13	11	3817.1	7400.8	8	6	2011	9:41	71	20.7	30.99	14.8	35.71	2
14	12	3939.1	6934.9	9	6	2011	9:06	2198	21.0	35.08	14.1	35.97	1998
15	13	4013.9	6900	9	6	2011	16:00	118	12.69	32.09	12.27	35.3	1
16	13	4013.5	6859.4	9	6	2011	16:51	119	13.7	32.29	12.2	35.08	7
17	14	4019.1	6808.4	9	6	2011	23:22	920	17.6	33.72	10.4	35.31	720
18	14	4019.1	6808.6	9	6	2011	23:58	743	18.3	34.23	5.5	35.30	239
19	15	4001.5	6742.4	10	6	2011	9:08	2653	19.5	35.10	12.7	36.07	2455
20	16	3938.9	6632.3	10	6	2011	16:02	4000	18.7	34.64	12.8	35.85	3799
21	17	4016.5	6810.9	11	6	2011	9:15	241	18.6	34.31	9.9	35.26	7
22	18	4009.8	6712.2	12	6	2011	22:12	2425	16.6	33.99	12.9	35.63	2219
23	19	4008.8	6714.6	13	6	2011	9:00	2521	16.5	34.00	6.8	34.94	2019
24	20	4050.6	6656.9	13	6	2011	11:52	96	11.0	31.56	6.6	32.82	5
25	21	4017.5	6727.0	13	6	2011	22:15	1431	18.9	34.61	12.9	35.59	1232
26	22	3911.9	7247.4	14	6	2011	22:04	99	19.7	32.98	11.0	33.74	5
27	23	3914.0	7247.8	15	6	2011	9:01	93	19.4	32.77	17.1	33.93	73

Cast #	Sta #	Lat (deg. N)	Lon (deg. W)	Day	Month	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg. C)	Sfc Salt	Deepest Observed		Meters from Bottom
											Temp (deg. C)	Salt	
28	24	3914.3	7248.8	15	6	2011	9:26	86	19.5	32.92	10.3	33.60	2
29	25	3837.5	7253.4	15	6	2011	15:55	1995	25.4	35.86	12.2	35.42	1795
30	26	3838.0	7251.7	16	6	2011	9:04	1982	25.0	35.32	6.3	34.90	1480
31	27	3911.7	7316.6	16	6	2011	11:15	2600	25.5	35.82	11.9	35.29	2387
32	28	3817.8	7359.0	16	6	2011	22:07	71	21.6	31.17	10.2	33.43	4
33	29	3817.5	7359.9	18	6	2011	9:16	71	21.5	30.49	9.3	33.34	1
34	30	3750.5	7303.4	18	6	2011	15:06	2571	25.2	35.72	11.6	35.46	2370
35	31	3634.3	7203.6	19	6	2011	9:01	3844	26.1	36.29	18.7	36.65	3643
36	32	3708.1	7157.2	19	6	2011	15:55	4000	27.4	36.11	20.2	36.72	3799
37	33	3801.7	7150.1	19	6	2011	22:21	3048	25.5	34.60	13.0	35.65	2846
38	34	3752.6	7150.3	20	6	2011	9:07	3093	25.2	31.28	7.0	35.07	2593
39	35	3848.6	7143.4	20	6	2011	11:48	2800	22.1	35.07	10.9	35.39	2599
40	36	3903.1	7117.1	20	6	2011	22:22	2839	22.0	34.76	11.2	35.41	2638
41	37	4016.2	7019.5	21	6	2011	9:01	99	17.2	32.89	8.9	33.49	6
42	38	3940.3	7037.1	21	6	2011	15:58	2150	20.9	34.70	13.6	35.77	1949
43	39	4011.7	7118.1	21	6	2011	22:06	97	16.7	32.47	10.9	33.99	5
44	40	3918.0	7250.4	29	6	2011	8:58	79	22.1	31.64	10.2	33.55	4
45	41	3909.3	7200.9	29	6	2011	15:51	1971	23.4	34.56	11.2	35.38	1769
46	42	3938.8	7209.2	29	6	2011	22:21	134	23.4	33.74	13.0	35.59	7
47	43	3913.7	7140.1	30	6	2011	8:58	2100	22.8	34.38	12.4	35.60	1900
48	44	3846.1	7046.5	30	6	2011	15:51	1520	22.1	33.66	12.0	35.54	1317
49	45	3817.0	6948.9	30	6	2011	22:53	3369	23.7	34.49	11.9	35.53	3169
51	47	3755.3	6906.5	1	7	2011	15:49	4260	24.6	32.31	11.6	35.47	4064
52	48	3733.3	6824.3	2	7	2011	9:00	4708	26.7	35.52	14.3	35.86	4509
53	49	3816.8	6806.5	2	7	2011	15:46	4695	23.0	9999	17.6	36.47	4495
54	50	3928.3	6745.2	3	7	2011	6:22	3302	22.9	19.47	6.7	35.05	2799
55	50	3928.4	6745.2	3	7	2011	7:01	3301	22.4	14.26	13.0	35.57	3188
56	51	3913.8	6751.9	3	7	2011	8:49	3470	23.1	34.84	13.0	35.69	3268
57	52	3958.7	6737.6	3	7	2011	15:48	2892	21.0	9999	12.9	35.63	2691
58	53	3939.7	6633.5	3	7	2011	22:22	4120	22.1	18.28	12.9	35.63	3919
59	54	4048.9	6657.7	4	7	2011	8:55	101	14.4	31.58	8.5	33.40	5
60	55	4053.6	6617.6	4	7	2011	15:43	2232	16.4	32.01	9.3	35.18	2028
61	56	4007.5	6616.6	5	7	2011	8:56	926	13.2	31.37	5.5	34.98	424

Cast #	Sta #	Lat (deg. N)	Lon (deg. W)	Day	Month	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg. C)	Sfc Salt	Deepest Observed		Meters from Bottom
											Temp (deg. C)	Salt	
62	57	4125.0	6600.9	5	7	2011	15:53	211	18.4	33.17	9.0	35.17	8
63	58	3938.0	7040.0	6	7	2011	16:28	2240	24.3	11.62	13.4	35.77	2037
64	59	4008.3	7113.9	6	7	2011	22:19	132	21.9	32.37	13.3	35.56	8
65	60	3940.0	7356.1	7	7	2011	12:04	26	23.4	29.67	11.2	31.58	6
66	61	3909.4	7403.6	7	7	2011	15:43	38	24.5	29.65	9.7	31.85	7
67	62	3907.2	7430.1	7	7	2011	22:16	21	24.2	29.25	10.7	31.37	5
68	63	3841.4	7433.5	8	7	2011	9:36	36	25.0	30.28	8.6	31.72	4
70	64	3824.6	7450.9	8	7	2011	16:30	21	22.0	29.48	9.4	31.72	4
71	65	3843.3	7330.2	9	7	2011	9:18	77	24.9	30.36	8.6	33.04	5
72	66	3802.2	7313.6	9	7	2011	15:04	2201	24.8	31.23	11.3	35.43	1999
73	67	3733.6	7341.5	10	7	2011	8:58	2173	25.5	33.75	12.4	35.58	1972
74	68	3715.5	7310.6	10	7	2011	15:41	3000	25.5	11.18	10.1	35.28	2798
75	69	3653.0	7219.3	11	7	2011	7:11	3396	27.0	13.19	27.8	36.11	3370
76	70	3652.1	7224.8	11	7	2011	8:53	3341	27.7	36.11	19.0	36.67	3140
77	71	3705.8	7157.7	11	7	2011	15:45	3383	25.9	9999	19.1	36.66	3182
78	72	3751.5	7150.9	12	7	2011	8:55	3121	26.5	33.52	13.3	35.71	2969
79	73	3751.1	7151.5	13	7	2011	9:07	3125	27.3	36.07	14.9	35.93	3022
80	74	3838.1	7145.3	13	7	2011	15:45	2900	25.3	34.36	12.2	35.56	2698
81	75	4037.1	7035.3	14	7	2011	9:13	66	20.2	31.32	8.7	32.53	6
82	76	4118.3	7109.3	21	7	2011	9:00	32	20.09	30.99	11.08	31.66	5
83	77	4053.0	7042.2	21	7	2011	15:41	55	21.1	31.40	9.3	32.38	7
84	78	4004.2	7005.6	21	7	2011	22:31	163	18.7	31.95	12.4	35.58	5
85	79	3942.4	6935.1	22	7	2011	8:52	2000	18.7	32.30	11.5	35.45	1801
86	80	4029.3	7004.8	23	7	2011	8:58	69	20.2	31.44	8.1	32.56	4
87	80	4029.0	7004.8	23	7	2011	9:11	70	18.6	31.54	8.1	32.57	2
88	81	4051.1	7023.1	23	7	2011	15:48	51	11.1	32.02	10.4	32.16	9
89	82	4107.0	7049.8	23	7	2011	22:07	39	10.9	31.85	10.9	31.85	3
90	83	4007.1	7049.0	24	7	2011	9:18	38	20.6	31.14	11.0	31.84	4
91	84	4118.1	7109.9	24	7	2011	15:52	31	21.7	30.74	13.2	31.36	10
92	85	4042.6	7015.8	24	7	2011	22:16	47	20.0	31.17	10.0	32.22	4
93	86	4001.3	6740.7	25	7	2011	10:41	2000	24.4	34.64	12.9	35.66	1798
94	87	3946.7	6653.2	25	7	2011	15:45	2000	28.4	35.75	18.0	36.51	1799
95	88	3929.5	6555.6	26	7	2011	9:01	4468	27.9	34.90	19.6	36.66	4269

Cast #	Sta #	Lat (deg. N)	Lon (deg. W)	Day	Month	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg. C)	Sfc Salt	Deepest Observed		Meters from Bottom
											Temp (deg. C)	Salt	
96	89	3929.2	6509.3	26	7	2011	15:49	2000	27.9	36.22	18.6	36.62	1798
97	90	4020.9	6504.9	27	7	2011	8:55	4059	20.6	33.01	12.2	35.51	3859
98	91	4105.1	6505.1	27	7	2011	15:43	2000	20.0	32.76	13.1	35.64	1800
99	92	4156.5	6441.2	28	7	2011	7:25	2295	16.4	30.79	5.4	34.93	1792
100	93	4157.8	6445.2	28	7	2011	8:58	2214	15.8	30.82	12.5	35.60	2012
101	94	4149.1	6530.1	28	7	2011	15:48	1500	18.2	32.97	11.7	35.48	1298
102	95	4125.3	6557.4	29	7	2011	9:07	431	16.8	31.84	11.0	35.35	224
103	96	4044.2	6618.9	29	7	2011	15:46	2000	19.6	32.68	11.2	35.37	1800
104	97	4027.5	6650.8	29	7	2011	22:17	2008	27.9	35.32	17.4	36.43	1807
105	98	4010.0	6712.1	30	7	2011	9:04	2405	27.2	35.02	13.6	35.75	2207
106	99	4035.1	6850.7	30	7	2011	22:13	68	18.7	32.16	9.9	32.34	4
107	100	4033.3	6910.0	31	7	2011	9:15	72	15.9	31.97	8.3	32.53	6
108	101	4036.9	6936.8	31	7	2011	15:45	61	19.8	31.75	10.1	32.30	7