

Oceanography Branch CTD Data Report
CTD_REPORT_2013003HB

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DATE: July 18, 2014

Oceanography Branch CTD Data Report

CTD_REPORT_2013003HB

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

HB 13-03
ECOMON
Data Coverage: July 2 – August 18, 2013
Mid Atlantic Bight, Georges Bank

This report presents a summary of surface and bottom temperature and salinity data collected during the Northeast Fisheries Science Center's HB1303 AMAPPS Survey aboard the NOAA FSV *Henry B Bigelow*. Data was obtained with four Seabird Electronics SBE Model 19+ profiling CTD (s/n's 4493, 4684, 4759 & 4887). Sea water samples were taken for the purpose of correcting salinity values for 4759 & 4493. No salinity correction was necessary for either instrument.

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/hb1303.dat>

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

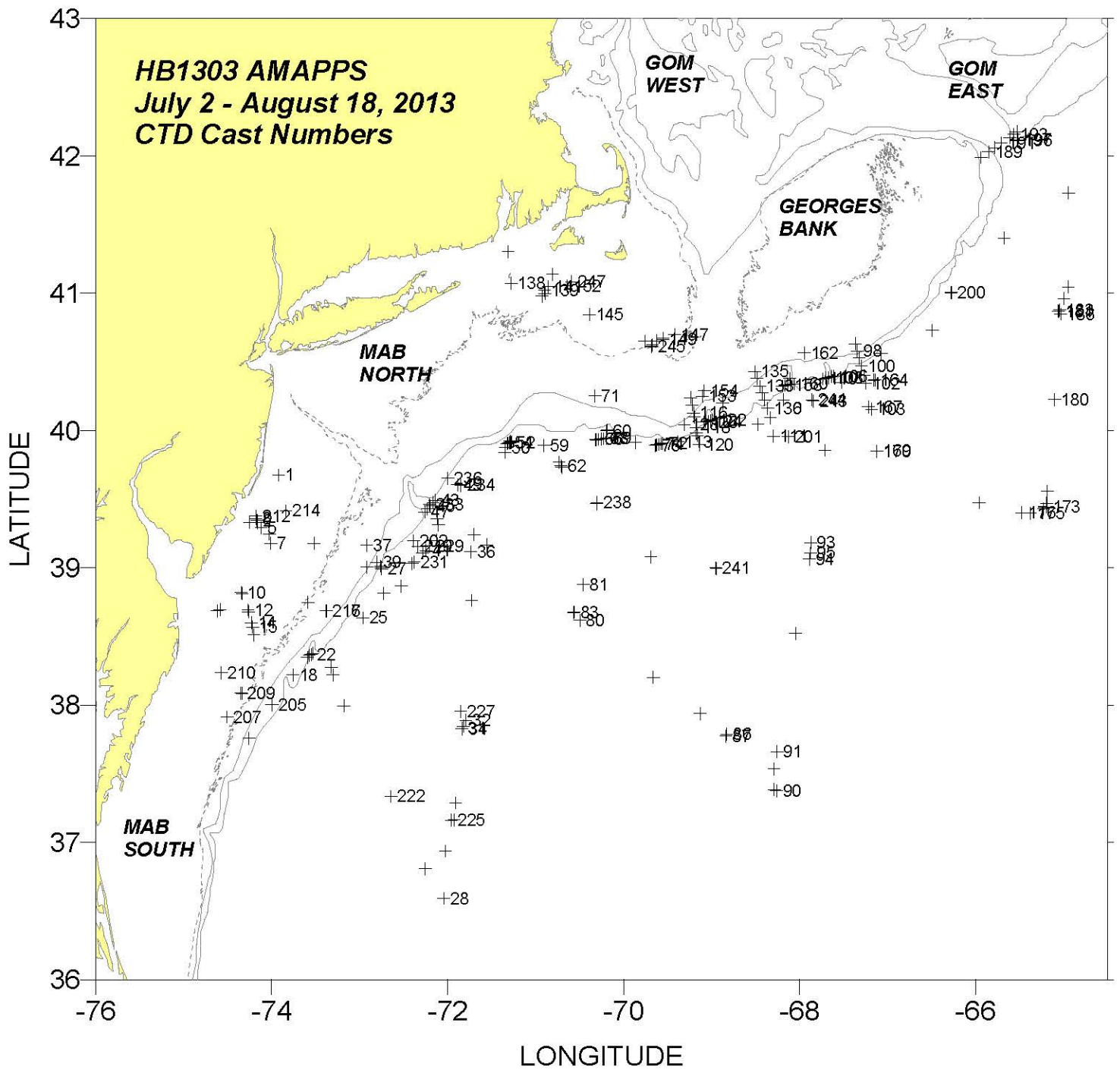
<http://www.nefsc.noaa.gov/HydroAtlas/>

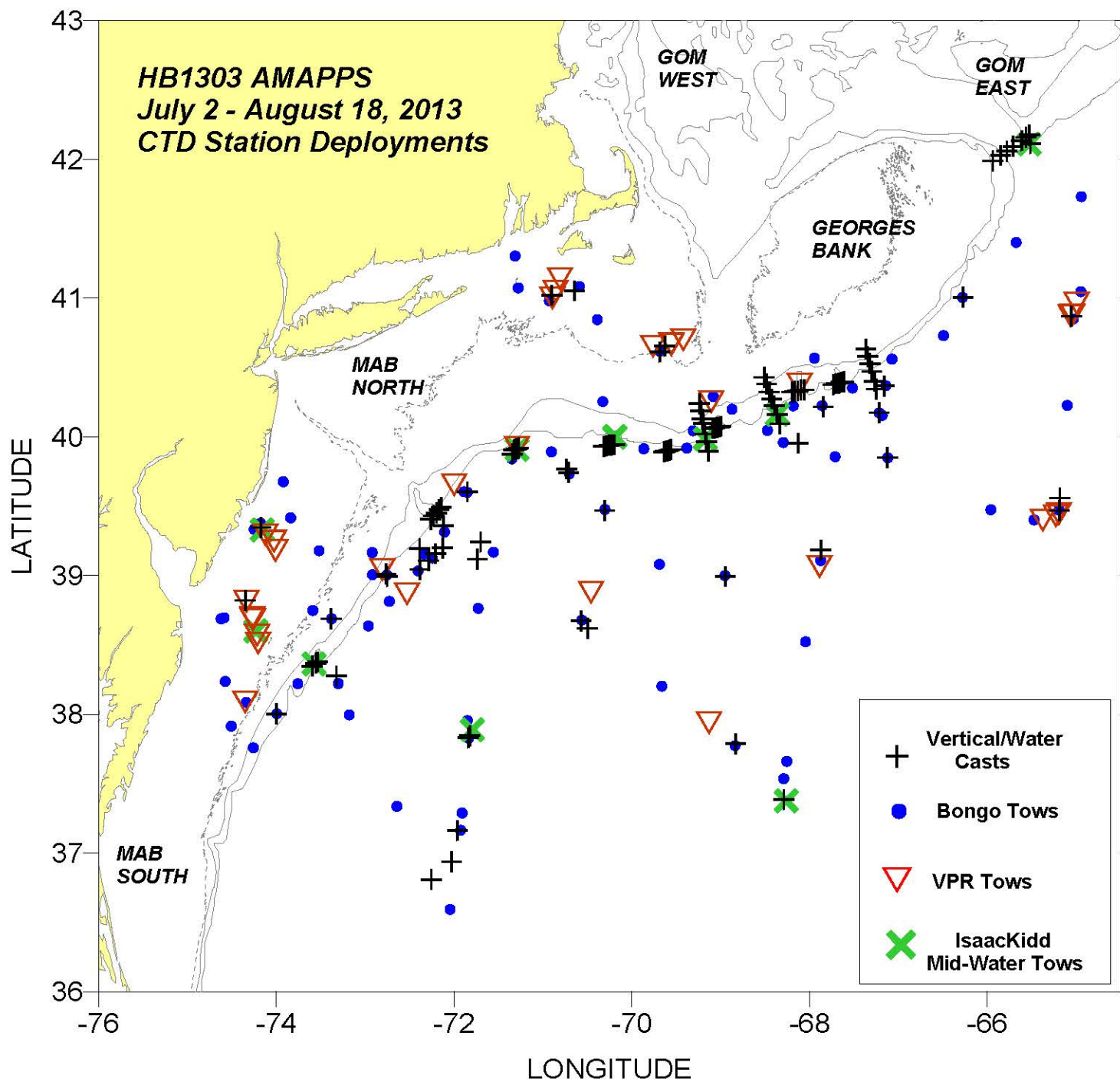
choose: **2013 Cruises**

JUL_AMAPPS_HB1303

CTD_REPORT_2013003HB.pdf

Revised: July 18, 2014





**Areal average surface and bottom temperature/salinity and temperature/salinity anomalies for the
HB1303 AMAPPS Survey
July 2 - August 18, 2013**

CRUISE	CD	SURFACE						BOTTOM						Purpose
		#obs	T/S	Anomaly	SDV1	SDV2	Flag	#obs	T/S	Anomaly	SDV1	SDV2	Flag	
							Georges Bank							
HB1303	206	37	23.02	5.04	0.24	3.30	1	6	11.35	1.92	0.54	5.31	1	93
HB1303	206	37	33.40	0.11	0.15	1.18	1	6	34.16	0.60	0.32	1.99	1	93
							MAB North							
HB1303	213	20	19.62	1.09	0.29	2.58	1	11	11.48	0.92	0.35	3.53	1	93
HB1303	213	20	32.30	-0.41	0.17	1.02	1	11	32.77	-0.01	0.22	1.24	1	93
							MAB South							
HB1303	199	51	23.30	0.89	0.20	1.28	1	18	10.97	0.55	0.32	2.43	1	93
HB1303	199	50	31.53	-0.44	0.14	0.68	1	18	33.40	0.41	0.20	0.66	1	93

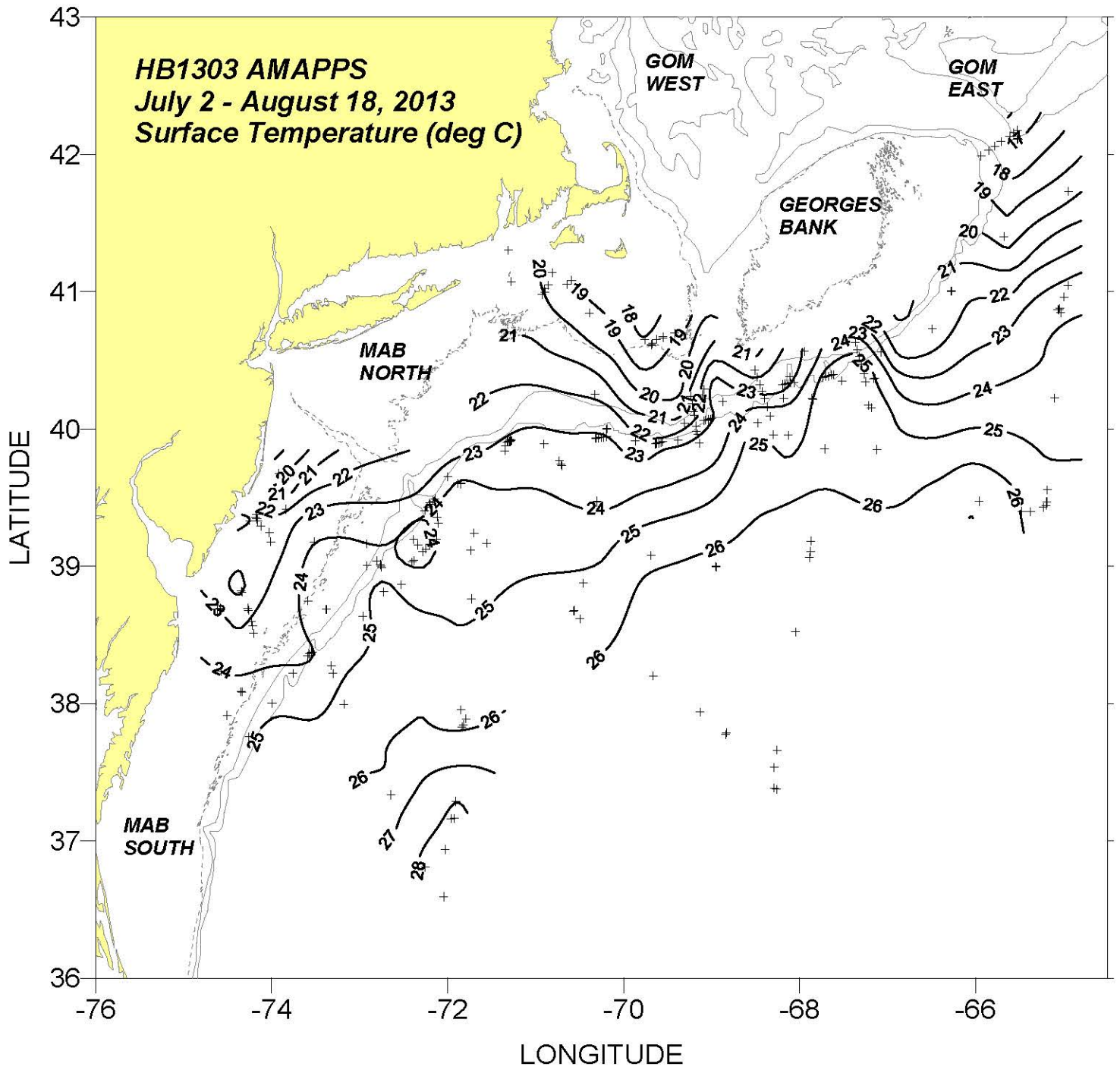
"CRUISE", the code name for a cruise: "CD", the calendar mid-date of all the stations within a region for a cruise:

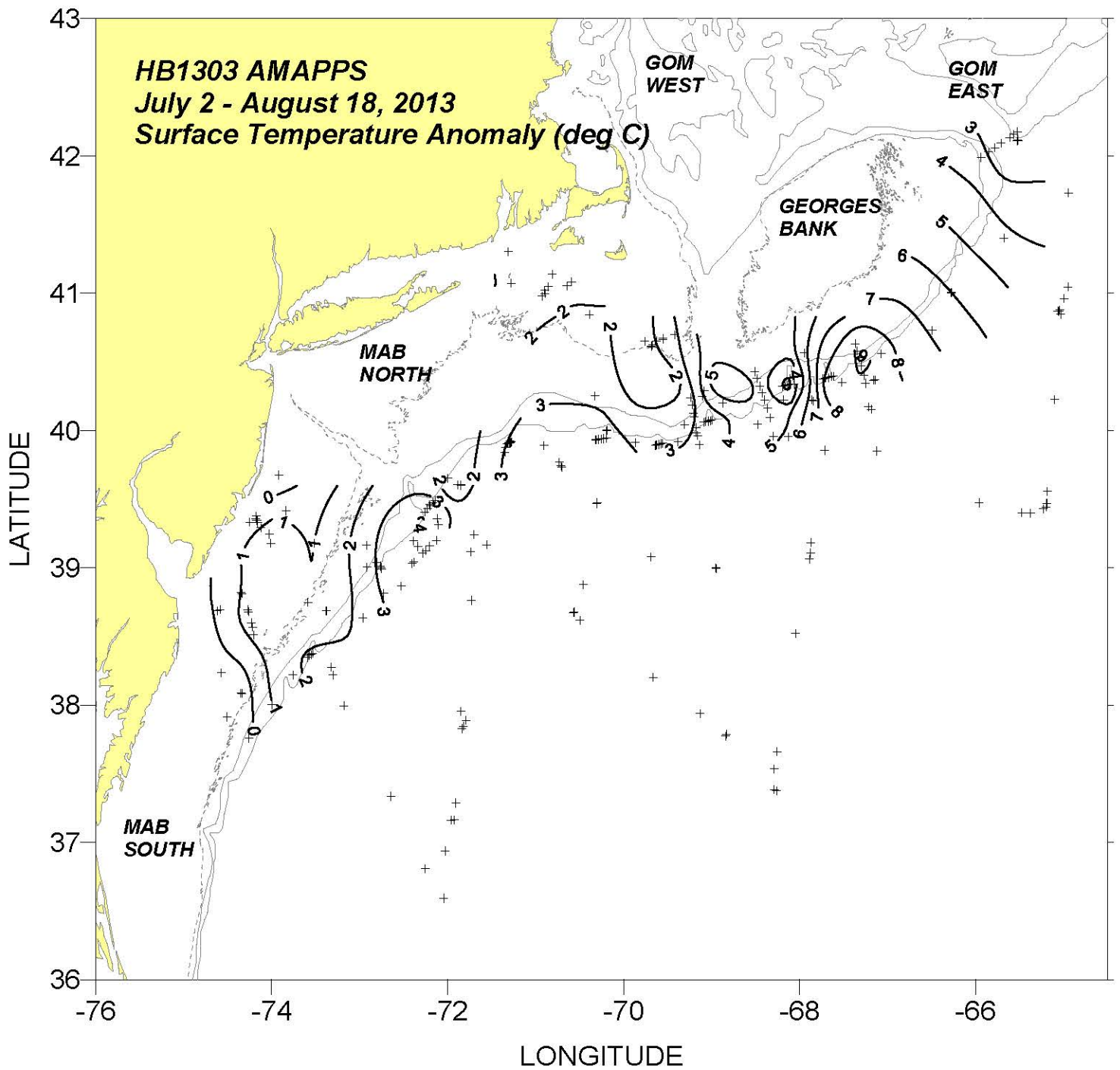
"#obs", the number of observations include in each average: "T/S", the areal average temp/salt: "Anomaly", the areal average temp/salt anomaly:

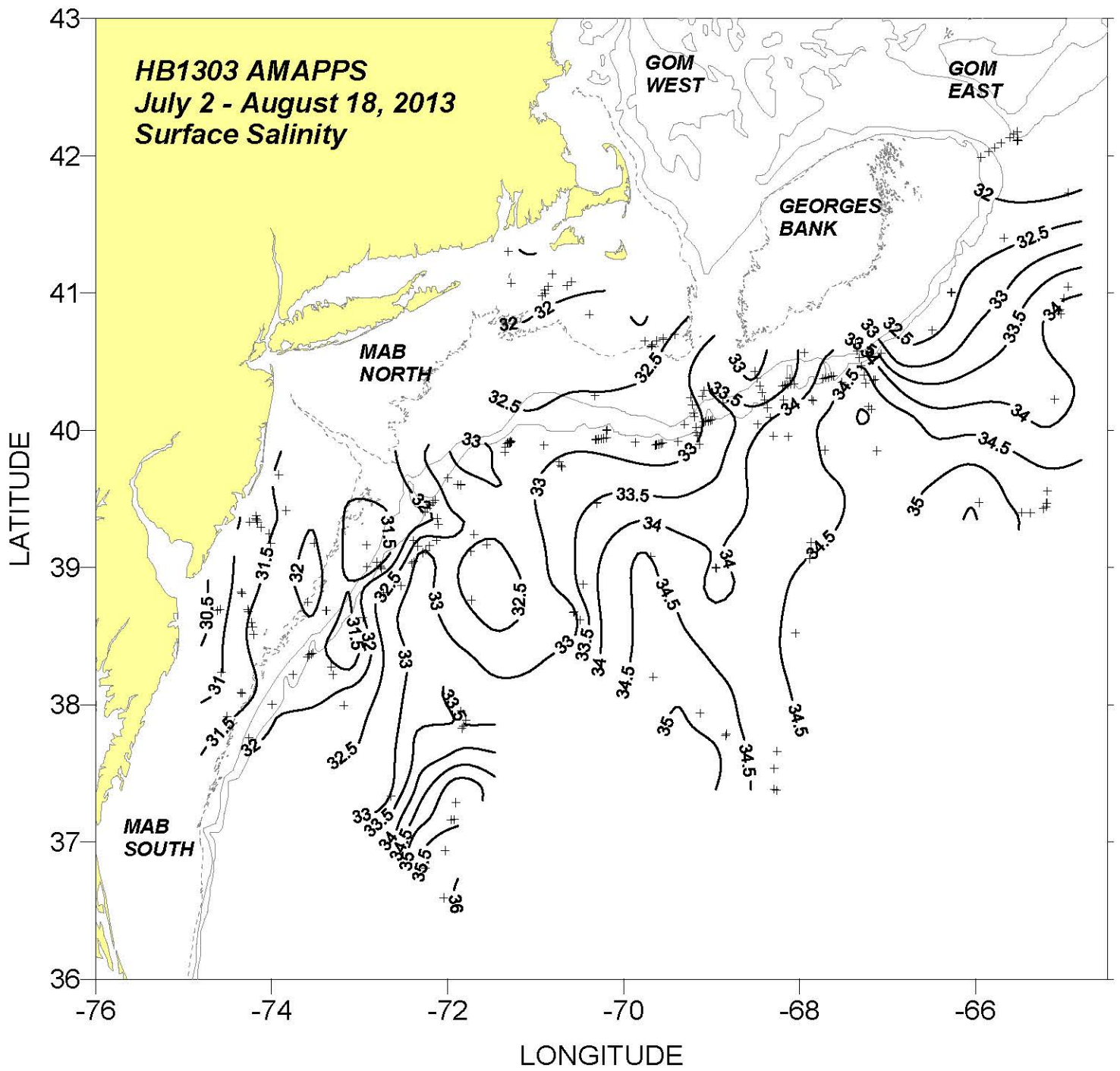
"SDV1", the standard deviation associated with the average temp/salt anomaly: "SDV2", the standard deviation of the individual anomalies from which the average anomaly was derived

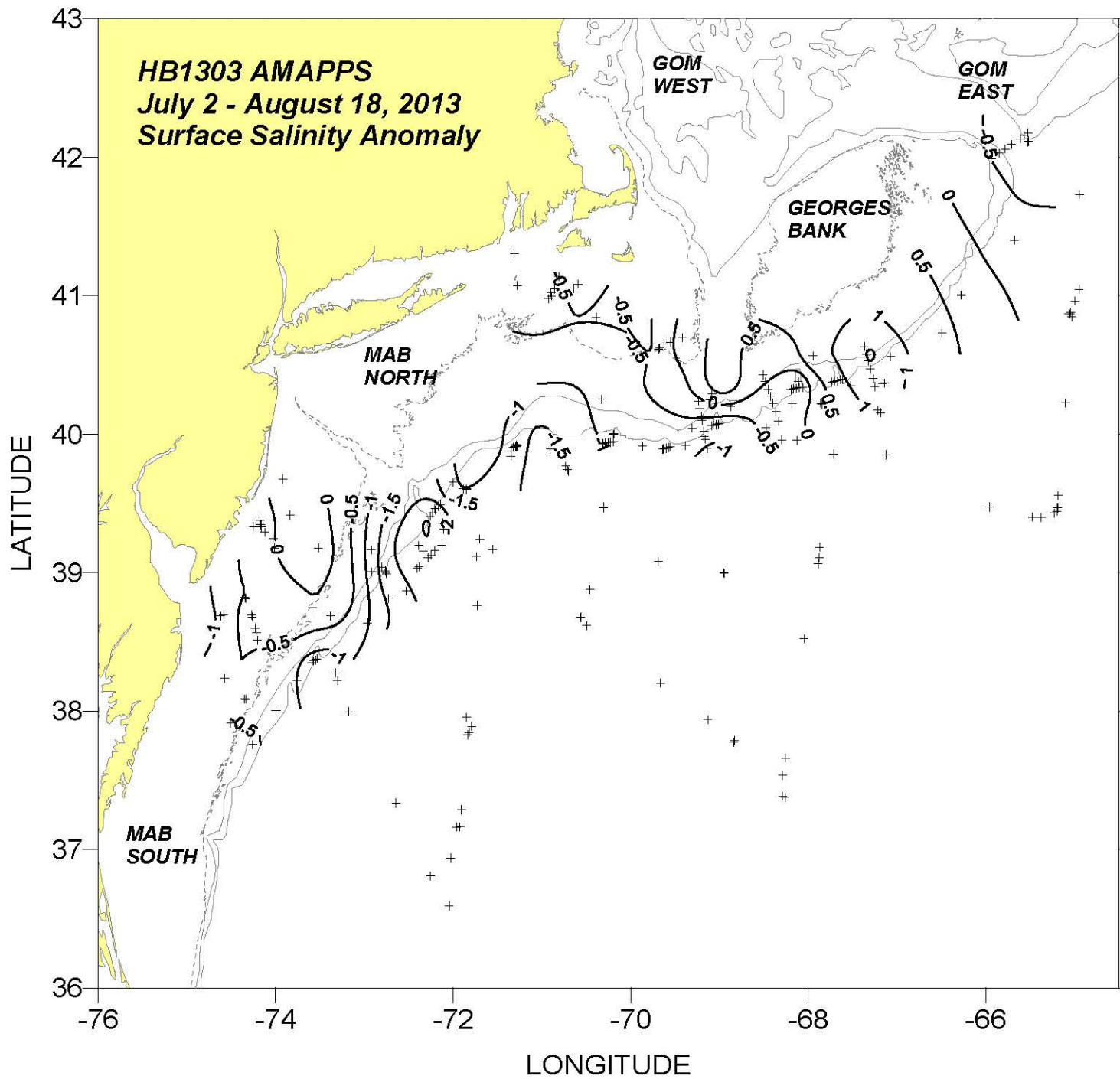
"Flag", a value of "1" indicates that a true areal average could not be calculated due to poor station coverage. The areal averages listed were derived from a simple average of the observations within the region.

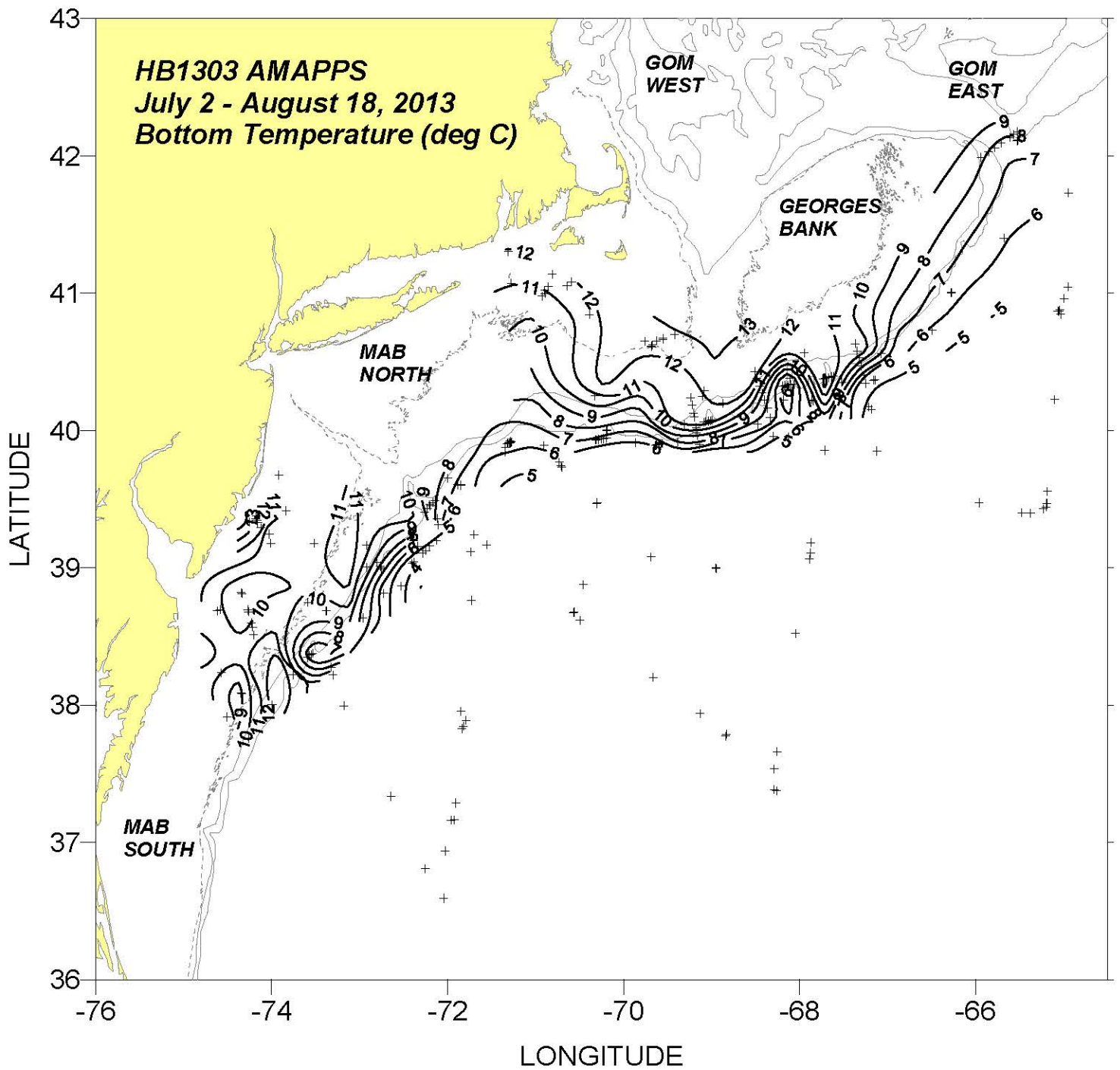
"Purpose", 2 digit code assigned by DMS to identify a unique NEFSC program survey.

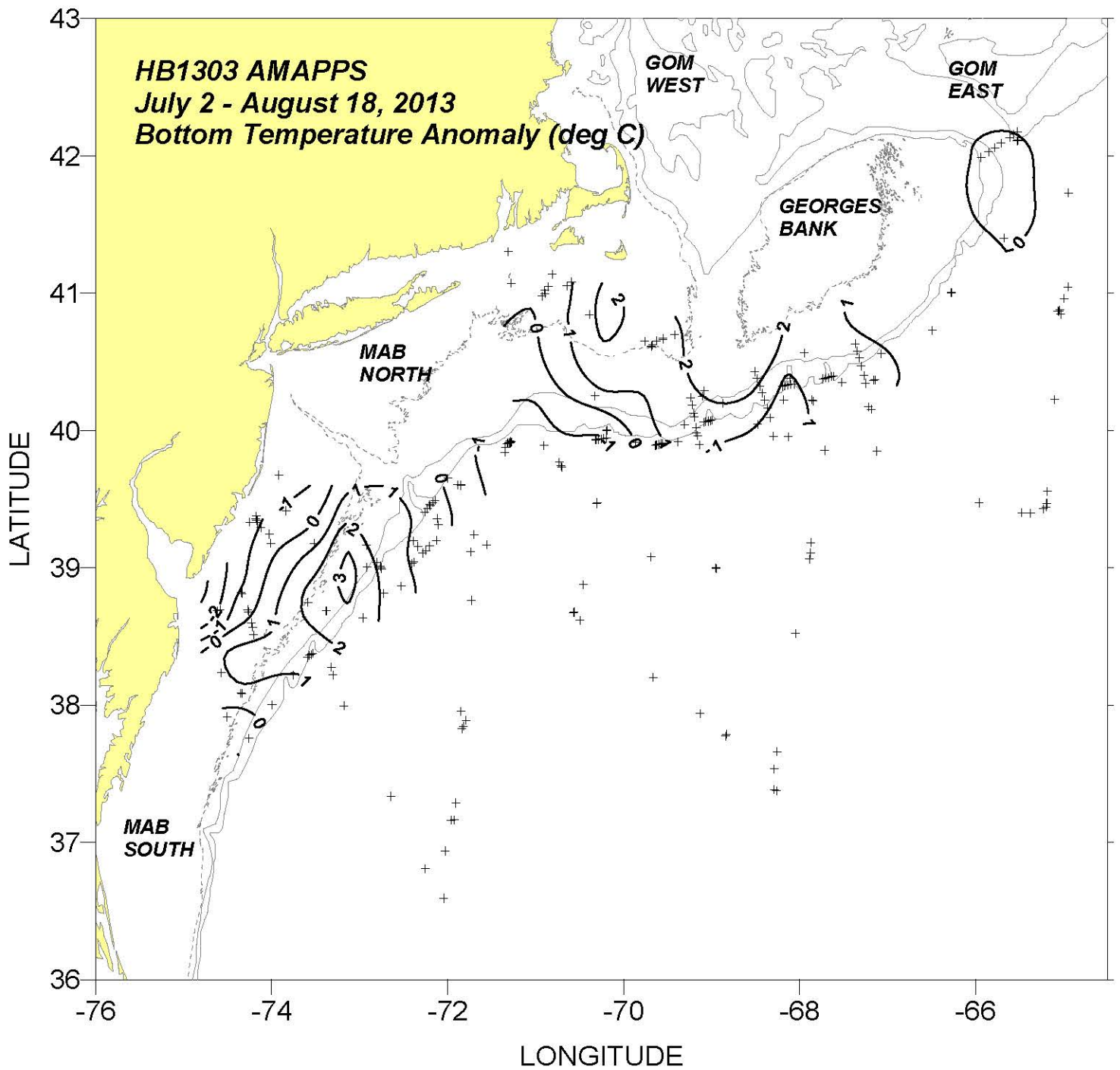


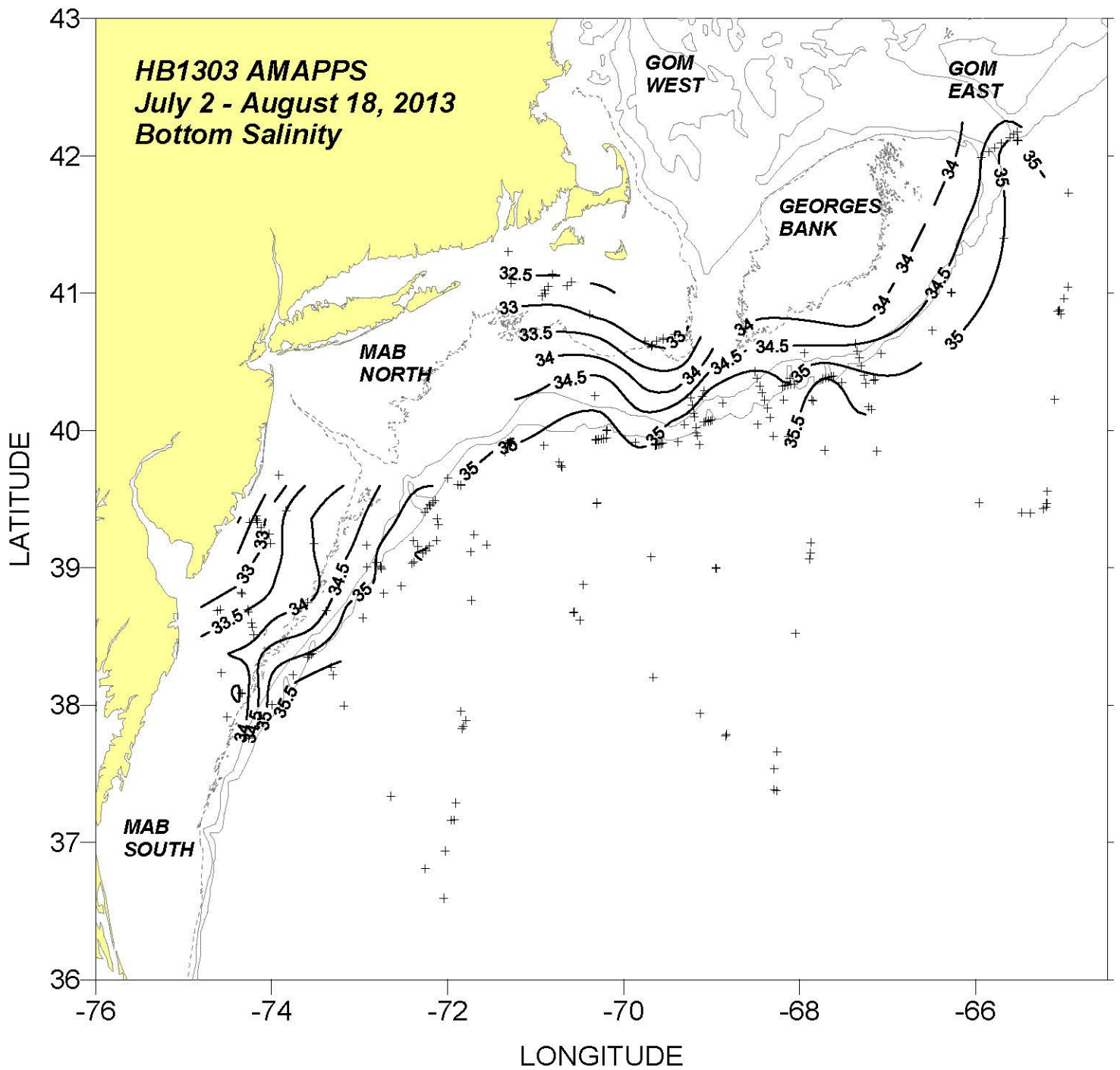


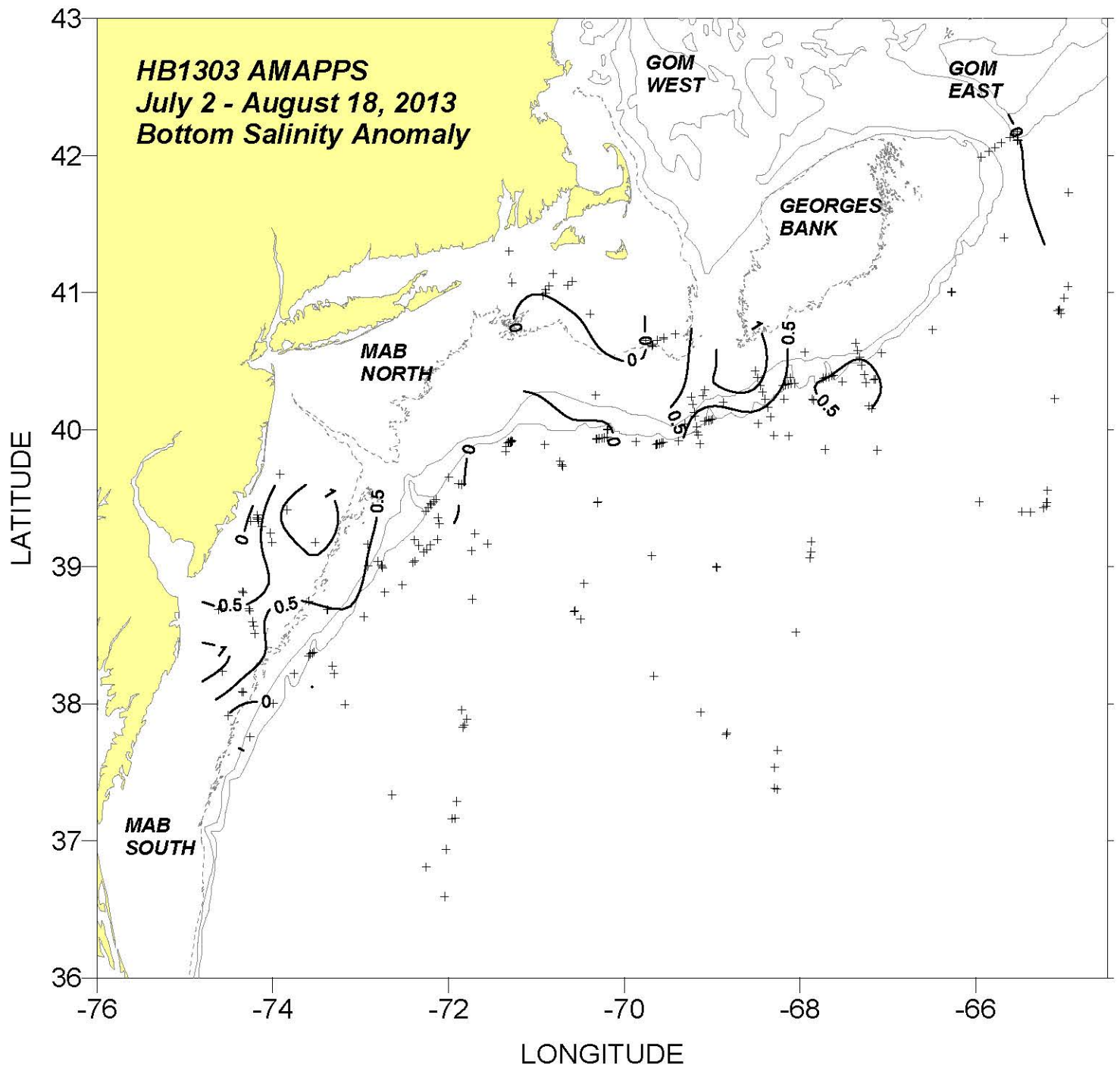












HB1303 AMAPPS Survey
July 2 - August 18, 2013

Cast #	Sta #	Lat (deg N)	Long (deg W)	Day	Mo	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg C)	Sfc Salt	Deepest Observed Temp (deg C)	Deepest Observed Salt	Meters from Bottom	Method of Deployment
001	1	3940.5	7355.2	2	7	2013	8:55	27	18.06	31.63	9.49	32.50	3	B
002	2	3920.7	7410.2	2	7	2013	22:23	24	18.38	31.25	11.22	32.47	4	W
003	3	3920.7	7409.9	2	7	2013	22:34	29	18.70	31.54	11.23	32.50	8	B
004	4	3919.7	7409.5	2	7	2013	23:10	25	20.49	31.66	11.25	32.57	11	IKMT
005	5	3917.5	7407.2	3	7	2013	0:28	28	20.51	31.61	13.32	32.31	14	VPR
006	6	3914.7	7401.5	3	7	2013	3:37	29	21.50	31.30	19.42	31.69	18	VPR
007	7	3910.6	7400.5	3	7	2013	5:31	35	22.17	99.99	14.58	32.17	22	VPR
008	8	3921.4	7410.7	3	7	2013	15:38	21	18.66	31.59	11.40	32.39	6	B
009	9	3849.2	7420.8	3	7	2013	22:43	37	21.72	31.15	9.04	33.14	6	W
011	11	3848.7	7420.1	3	7	2013	23:10	38	22.57	30.95	21.15	31.38	31	VPR
012	12	3841.6	7416.2	4	7	2013	1:36	45	23.29	99.99	8.49	33.20	22	VPR
013	13	3840.7	7415.7	4	7	2013	2:04	41	23.21	31.47	8.11	33.14	16	VPR
014	14	3836.0	7413.8	4	7	2013	3:45	45	23.17	31.75	11.41	33.10	26	IKMT
015	15	3834.1	7412.9	4	7	2013	4:46	47	23.18	31.89	9.26	33.07	23	VPR
016	16	3830.7	7412.2	4	7	2013	5:52	55	23.24	99.99	23.08	31.85	41	VPR
017	17	3841.7	7435.2	4	7	2013	9:01	33	21.34	31.12	9.37	33.14	5	B
018	18	3813.1	7345.5	4	7	2013	15:51	119	23.55	31.97	13.68	35.69	6	B
019	19	3816.5	7319.3	4	7	2013	22:37	1822	24.40	29.46	13.38	35.69	1711	IKMT
020	20	3821.8	7334.3	5	7	2013	2:55	295	23.97	31.25	11.71	35.52	72	B
021	21	3820.8	7335.6	5	7	2013	4:33	150	24.05	31.67	13.51	35.72	2	V
022	22	3822.1	7333.1	5	7	2013	5:07	578	23.95	31.91	5.82	35.02	35	V
023	23	3822.6	7331.9	5	7	2013	5:56	995	23.56	31.34	4.33	34.97	16	V
024	24	3813.2	7318.1	5	7	2013	8:51	852	24.12	32.00	12.50	35.62	652	B
025	25	3838.1	7257.8	5	7	2013	15:46	485	24.62	31.23	12.73	35.65	283	B
026	26	3900.1	7245.4	5	7	2013	21:37	503	24.49	30.63	11.60	35.48	300	B
027	27	3859.5	7245.1	5	7	2013	22:08	643	24.83	30.10	5.30	35.00	1	W
028	28	3635.5	7202.6	6	7	2013	10:53	784	28.39	36.02	20.23	36.65	583	B
029	29	3717.2	7154.5	6	7	2013	15:51	501	28.34	36.02	19.07	36.61	301	B
031	31	3749.8	7150.3	6	7	2013	23:12	3170	26.26	32.12	5.74	35.05	2664	V
032	32	3753.3	7147.5	7	7	2013	5:41	3150	25.60	33.04	11.58	35.44	2950	IKMT
033	33	3750.7	7149.3	7	7	2013	8:04	3147	25.62	33.09	5.66	35.05	2640	W
034	34	3749.7	7150.1	7	7	2013	8:55	3150	25.57	33.10	11.76	35.48	2949	B

HB1303 AMAPPS Survey
July 2 - August 18, 2013

Cast #	Sta #	Lat (deg N)	Long (deg W)	Day	Mo	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg C)	Sfc Salt	Deepest Observed Temp (deg C)	Deepest Observed Salt	Meters from Bottom	Method of Deployment
035	35	3845.7	7143.7	7	7	2013	15:46	2817	24.63	32.05	13.51	35.77	2616	B
036	36	3907.0	7144.2	7	7	2013	22:30	2379	24.62	31.98	6.35	35.04	1871	W
037	37	3909.9	7255.2	8	7	2013	5:37	87	24.41	30.93	11.05	34.60	5	B
038	38	3900.3	7255.0	8	7	2013	6:50	95	24.53	30.93	11.99	34.91	3	B
039	39	3902.4	7248.3	8	7	2013	7:43	155	24.42	30.98	13.22	35.67	4	VPR
040	40	3900.7	7245.8	8	7	2013	8:49	535	24.57	31.03	5.81	35.03	24	V
041	41	3907.5	7214.7	8	7	2013	15:43	1214	24.78	32.39	13.00	35.70	1011	B
042	42	3921.4	7207.1	8	7	2013	22:43	1232	24.77	32.03	5.81	35.02	728	W
043	43	3929.4	7208.6	9	7	2013	0:19	343	24.43	31.62	8.07	35.12	5	V
044	44	3928.5	7210.0	9	7	2013	0:53	500	24.34	31.99	6.33	35.05	1	V
045	45	3927.0	7211.8	9	7	2013	1:40	1119	23.98	31.01	4.48	34.97	30	V
046	46	3925.8	7213.7	9	7	2013	2:46	517	24.00	31.71	5.69	35.02	7	V
047	47	3924.3	7215.6	9	7	2013	3:37	215	24.26	31.37	11.42	35.49	1	V
048	48	3918.7	7206.3	9	7	2013	8:48	858	24.10	31.66	12.08	35.55	657	B
049	49	3936.2	7153.2	9	7	2013	15:43	466	24.07	32.61	12.00	35.53	264	B
050	50	3952.5	7120.5	9	7	2013	22:45	561	22.96	32.84	5.58	35.01	57	W
051	51	3955.1	7116.3	10	7	2013	1:22	472	23.17	31.90	5.92	35.03	8	V
052	52	3954.8	7117.0	10	7	2013	1:55	483	23.11	32.31	5.90	35.03	10	V
053	53	3954.7	7117.8	10	7	2013	2:28	603	23.14	32.75	5.51	35.01	6	V
054	54	3954.5	7118.7	10	7	2013	3:10	454	23.11	32.79	6.01	35.02	4	V
055	55	3954.3	7119.5	10	7	2013	3:43	466	23.05	32.67	6.00	35.03	2	V
056	56	3954.5	7117.4	10	7	2013	4:35	493	23.20	32.90	6.52	35.04	71	IKMT
057	57	3955.4	7117.5	10	7	2013	7:25	441	23.14	99.99	10.65	35.36	244	VPR
058	58	3950.4	7121.0	10	7	2013	8:46	724	23.09	32.87	12.19	35.56	520	B
059	59	3953.4	7054.2	10	7	2013	15:43	622	23.49	33.31	12.42	35.60	421	B
060	60	3959.9	7011.5	11	7	2013	1:25	521	23.16	33.17	13.74	35.60	447	IKMT
061	61	4000.1	7011.2	11	7	2013	2:58	511	23.01	33.25	16.16	35.15	476	IKMT
062	62	3944.5	7042.6	11	7	2013	7:58	2075	23.57	33.24	4.38	34.96	1066	V
063	63	3943.9	7042.1	11	7	2013	8:43	2072	23.56	33.18	12.89	35.68	1890	B
064	64	3955.9	7019.0	11	7	2013	22:42	472	23.16	32.56	11.18	35.42	248	W
065	65	3955.8	7018.7	11	7	2013	23:07	485	23.17	32.94	6.26	35.04	18	V
066	66	3956.1	7017.2	11	7	2013	23:38	647	23.20	32.71	5.37	35.01	1	V
067	67	3956.3	7015.3	12	7	2013	0:20	896	23.18	32.59	4.75	34.98	13	V

HB1303 AMAPPS Survey
July 2 - August 18, 2013

Cast	Sta	Lat	Long	Day	Mo	Year	Time	Btm	Sfc	Sfc	Deepest	Deepest	Meters	Method
#	#	(deg N)	(deg W)				(GMT)	Depth (m)	Temp (deg C)	Salt	Observed	Observed	from	of
											Temp (deg C)	Salt	Bottom	Deployment
068	68	3956.4	7013.5	12	7	2013	1:07	537	23.24	33.13	5.77	35.02	5	V
069	69	3956.6	7011.7	12	7	2013	1:43	419	23.24	32.84	6.63	35.06	11	W
070	70	3946.1	7043.9	12	7	2013	8:46	1814	23.57	33.04	6.12	35.05	1307	V
071	71	4015.1	7019.5	12	7	2013	15:41	101	21.76	32.34	12.63	35.24	5	B
072	72	3954.4	6933.4	13	7	2013	0:00	382	20.67	32.51	7.58	35.11	16	V
073	73	3954.2	6934.6	13	7	2013	0:31	745	21.56	32.74	5.19	35.00	38	V
074	74	3953.9	6935.9	13	7	2013	1:12	1098	21.69	32.65	4.31	34.96	1	V
075	75	3953.7	6937.2	13	7	2013	2:12	670	21.55	32.93	5.23	35.00	2	V
076	76	3953.4	6938.2	13	7	2013	2:52	550	21.74	99.99	13.71	35.58	470	V
077	77	3953.5	6938.0	13	7	2013	3:16	549	21.43	32.57	6.72	35.07	71	W
078	78	3914.5	7142.0	13	7	2013	14:16	2228	24.23	32.27	6.17	35.04	1730	V
079	79	3910.0	7133.4	13	7	2013	15:38	2725	24.95	32.36	12.50	35.62	2525	B
080	80	3837.1	7029.8	13	7	2013	22:42	3043	25.31	33.45	5.63	35.03	2533	W
081	81	3852.7	7027.5	14	7	2013	1:52	2960	24.59	34.16	13.82	35.77	2860	VPR
082	82	3840.4	7034.1	14	7	2013	8:11	3023	25.41	32.50	5.65	35.03	2516	W
083	83	3840.6	7033.7	14	7	2013	8:46	3020	25.54	33.61	10.19	35.29	2818	B
084	84	3812.1	6939.7	14	7	2013	15:43	3233	26.61	34.80	11.99	35.53	3030	B
085	85	3756.2	6907.8	15	7	2013	2:16	4086	26.67	35.09	15.11	35.93	4003	VPR
086	86	3747.2	6849.8	15	7	2013	8:06	4330	26.03	34.30	5.69	35.04	3820	W
087	87	3746.4	6850.3	15	7	2013	8:43	4336	26.31	35.04	10.55	35.33	4132	B
088	88	3732.1	6817.4	15	7	2013	15:37	4766	26.19	34.30	12.19	35.57	4564	B
089	89	3723.1	6817.2	16	7	2013	0:03	4825	26.92	34.12	6.86	35.07	4320	W
090	90	3722.5	6815.6	16	7	2013	0:45	4835	26.66	34.23	16.29	36.03	4733	IKMT
091	91	3739.6	6815.3	16	7	2013	8:45	4720	25.97	34.38	10.40	35.31	4516	B
092	92	3831.3	6802.7	16	7	2013	15:38	4209	26.32	34.63	11.41	35.44	4007	B
093	93	3911.0	6752.3	16	7	2013	22:38	3511	26.70	34.19	6.60	35.05	3004	W
094	94	3903.8	6753.2	17	7	2013	6:25	3610	26.52	34.66	16.47	36.03	3530	VPR
095	95	3906.4	6752.5	17	7	2013	8:49	3548	26.42	34.67	14.29	35.97	3345	B
096	96	3951.3	6742.7	17	7	2013	16:06	2887	25.64	34.59	12.97	35.66	2684	B
097	97	4037.9	6721.9	18	7	2013	3:13	100	23.57	34.01	9.50	33.80	3	W
098	98	4034.7	6720.7	18	7	2013	3:49	116	25.47	34.64	10.48	34.32	7	V
099	99	4031.6	6719.3	18	7	2013	4:25	148	25.70	34.49	11.56	35.40	6	V
100	100	4028.2	6717.9	18	7	2013	5:03	233	25.63	34.71	12.44	35.57	8	V

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Cast #	Sta #	Lat (deg N)	Long (deg W)	Day	Mo	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg C)	Sfc Salt	Deepest Observed Temp (deg C)	Deepest Observed Salt	Meters from Bottom	Method of Deployment
101	101	4024.0	6716.0	18	7	2013	5:46	1110	25.86	34.60	4.41	34.96	82	V
102	102	4020.6	6714.9	18	7	2013	7:19	1637	25.48	34.72	3.85	34.95	14	V
103	103	4009.2	6710.9	18	7	2013	9:46	2487	26.31	36.19	17.27	36.38	2285	B
104	104	4021.0	6731.1	18	7	2013	22:21	568	25.94	34.93	12.92	35.65	364	B
106	106	4023.7	6736.8	18	7	2013	23:28	185	26.03	34.54	12.36	35.57	5	W
107	107	4023.6	6738.4	18	7	2013	23:57	221	25.94	34.31	11.44	35.45	6	V
108	108	4023.1	6740.2	19	7	2013	0:25	611	25.76	34.22	5.70	35.02	1	V
109	109	4022.9	6742.2	19	7	2013	1:10	170	25.59	34.12	13.12	35.63	3	V
110	110	4022.5	6744.0	19	7	2013	1:37	161	25.48	34.12	13.00	35.62	4	V
111	111	3957.5	6817.7	19	7	2013	10:00	2266	25.85	34.61	13.02	35.66	2064	B
112	112	4011.8	6852.4	19	7	2013	15:48	130	23.98	33.25	12.71	35.58	9	B
113	113	3955.0	6922.8	19	7	2013	22:02	452	23.57	32.82	11.71	35.49	251	B
114	114	4014.3	6914.3	20	7	2013	1:49	95	19.56	32.68	10.23	34.20	8	W
115	115	4011.1	6913.3	20	7	2013	2:22	101	20.73	32.56	12.08	35.23	9	V
116	116	4007.7	6912.3	20	7	2013	2:57	117	20.83	32.59	11.97	35.39	6	V
117	117	4005.8	6911.7	20	7	2013	3:24	129	21.27	32.61	12.20	35.45	10	V
118	118	4001.2	6910.5	20	7	2013	4:07	274	21.61	32.64	11.05	35.41	1	V
119	119	3957.8	6909.6	20	7	2013	4:46	915	21.01	32.57	4.58	34.97	1	V
120	120	3953.7	6908.2	20	7	2013	5:50	1534	22.24	32.80	4.12	34.96	78	V
121	121	3959.0	6910.4	20	7	2013	7:34	619	20.82	32.57	9.58	33.02	599	IKMT
122	122	4004.5	6859.7	21	7	2013	2:04	178	22.61	33.15	11.46	35.45	6	W
123	123	4004.2	6900.7	21	7	2013	2:37	199	22.88	33.10	11.26	35.43	15	V
124	124	4004.0	6902.4	21	7	2013	3:04	846	22.80	32.92	4.65	34.98	1	V
125	125	4003.8	6903.9	21	7	2013	3:52	217	22.39	32.92	11.38	35.44	4	V
126	126	4003.6	6905.3	21	7	2013	4:20	177	21.99	32.80	11.62	35.47	3	V
127	127	3954.8	6951.9	21	7	2013	9:08	451	22.62	32.76	12.86	35.65	249	B
128	128	4002.6	6918.5	21	7	2013	15:55	110	21.35	32.57	12.45	35.31	4	B
129	129	4005.6	6820.0	21	7	2013	22:46	1400	25.32	34.09	4.07	34.96	8	V
130	130	4009.6	6821.9	22	7	2013	0:07	416	24.61	33.91	7.65	35.09	1	V
131	131	4013.4	6823.8	22	7	2013	0:53	174	22.14	33.12	12.43	35.57	7	V
132	132	4016.3	6825.5	22	7	2013	1:28	153	22.25	32.94	12.19	35.54	8	W
133	133	4019.3	6827.1	22	7	2013	2:04	126	22.31	32.95	12.13	35.53	6	V
134	134	4022.8	6829.0	22	7	2013	2:40	104	22.89	33.27	12.04	35.19	5	V

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Cast #	Sta #	Lat (deg N)	Long (deg W)	Day	Mo	Year	Time (GMT)	Btm Depth (m)	Sfc Temp (deg C)	Sfc Salt	Deepest Observed Temp (deg C)	Deepest Observed Salt	Meters from Bottom	Method of Deployment
135	135	4025.7	6830.6	22	7	2013	3:12	95	20.40	32.65	11.88	34.98	7	V
136	136	4009.7	6821.7	22	7	2013	6:34	415	25.10	34.07	13.93	35.39	358	IKMT
137	137	4002.7	6828.4	22	7	2013	9:18	1832	25.39	34.09	12.98	35.66	1630	B
138	138	4104.3	7116.6	30	7	2013	16:34	43	20.05	31.66	11.17	32.53	6	B
139	139	4101.2	7053.9	30	7	2013	22:19	47	20.38	31.97	10.99	32.65	6	W
140	140	4108.3	7048.5	30	7	2013	23:58	35	19.91	31.20	13.56	32.25	15	VPR
141	141	4102.8	7051.4	31	7	2013	2:05	46	19.83	32.11	12.12	32.42	30	VPR
142	142	4059.9	7053.6	31	7	2013	4:04	57	20.34	31.74	10.23	32.88	8	VPR
144	144	4058.7	7055.6	31	7	2013	8:52	53	20.39	31.92	10.28	32.89	6	B
145	145	4050.6	7023.3	31	7	2013	15:48	51	19.39	32.35	11.44	32.87	7	B
146	146	4039.2	6937.6	31	7	2013	22:25	53	16.39	31.80	11.85	32.87	4	W
147	147	4041.8	6925.2	1	8	2013	0:09	51	19.29	32.53	13.11	32.61	7	VPR
148	148	4040.2	6933.2	1	8	2013	2:12	53	13.87	32.15	12.89	32.21	27	VPR
149	149	4039.8	6933.2	1	8	2013	4:03	55	16.25	32.20	12.86	32.24	13	VPR
150	150	4039.0	6945.6	1	8	2013	6:18	56	18.34	32.03	12.97	32.20	48	VPR
151	151	4037.4	6940.4	1	8	2013	9:00	59	19.21	32.45	11.81	32.87	4	B
152	152	4103.1	7038.6	1	8	2013	22:17	47	18.87	31.92	11.30	32.63	4	W
153	153	4015.0	6906.3	2	8	2013	6:01	128	22.32	32.82	12.26	35.25	13	VPR
154	154	4017.3	6904.9	2	8	2013	9:00	98	23.65	34.09	11.96	34.91	3	B
155	155	4013.3	6810.9	2	8	2013	15:46	563	25.09	34.43	12.41	35.59	360	B
156	156	4019.3	6811.7	3	8	2013	1:25	173	23.13	33.68	11.70	35.47	4	W
157	157	4019.6	6809.8	3	8	2013	1:55	427	22.83	33.53	6.46	35.06	2	V
158	158	4019.8	6807.9	3	8	2013	2:30	929	22.72	33.46	4.46	34.97	1	V
159	159	4020.2	6805.9	3	8	2013	3:25	335	22.96	33.46	8.83	35.22	15	V
160	160	4020.3	6803.8	3	8	2013	4:00	163	22.94	33.37	12.50	35.60	7	V
161	161	4022.7	6806.6	3	8	2013	4:40	176	23.67	33.65	13.71	35.70	52	VPR
162	162	4033.9	6756.7	3	8	2013	9:01	98	22.88	33.64	11.41	34.43	5	B
163	163	4022.0	6708.5	3	8	2013	16:10	2019	25.29	34.69	12.10	35.52	1816	B
164	164	4021.9	6709.4	3	8	2013	22:31	1871	25.36	34.66	7.10	35.06	1465	W
165	165	4010.4	6713.0	4	8	2013	8:30	2370	25.49	99.99	6.36	35.05	1951	V
167	167	4010.3	6713.0	4	8	2013	8:58	2529	25.49	34.94	9.50	35.24	2324	B
168	168	4043.7	6629.5	4	8	2013	15:46	2047	21.14	32.24	9.34	35.22	1844	B
169	169	3951.0	6707.4	5	8	2013	8:26	3333	25.02	34.45	8.34	35.12	2928	V

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170	170	3950.8	6707.2	5	8	2013	8:56	3328	25.15	34.47	12.97	35.67	3126	B
171	171	3928.4	6557.6	5	8	2013	15:45	4411	27.11	35.67	17.56	36.40	4209	B
172	172	3933.4	6511.0	5	8	2013	22:34	4761	25.51	34.82	10.11	35.26	4353	W
173	173	3926.6	6511.7	6	8	2013	0:07	4708	25.51	34.98	7.04	35.07	4159	VPR
174	174	3925.7	6513.7	6	8	2013	1:40	4463	25.70	35.17	18.58	36.54	4357	VPR
175	175	3923.8	6522.5	6	8	2013	4:30	1315	22.54	33.17	16.31	35.96	1202	VPR
176	176	3924.0	6528.4	6	8	2013	6:07	3135	26.22	34.85	18.67	35.84	3069	B
177	178	3928.1	6511.2	6	8	2013	8:31	4814	25.88	35.49	9.71	35.21	4402	V
179	179	3928.2	6511.5	6	8	2013	9:06	4805	25.77	35.39	14.14	35.80	4604	B
180	180	4013.5	6506.0	6	8	2013	15:49	4431	23.95	33.56	13.10	35.67	4229	B
181	181	4052.1	6503.2	6	8	2013	23:49	3817	24.79	34.77	7.32	35.04	3409	W
182	182	4052.2	6503.8	7	8	2013	0:22	3799	24.33	34.38	6.08	35.02	3267	VPR
183	183	4052.6	6502.5	7	8	2013	2:19	3805	24.29	34.76	14.80	35.81	3705	VPR
184	184	4057.6	6459.7	7	8	2013	4:37	3707	23.62	33.95	23.48	35.63	3656	VPR
185	185	4102.7	6456.8	7	8	2013	6:16	3665	23.65	33.97	23.15	35.64	3615	B
186	186	4050.8	6501.9	7	8	2013	8:45	3870	24.35	34.77	11.69	35.47	3668	B
187	187	4143.8	6456.6	7	8	2013	15:45	2571	19.63	31.74	12.64	35.60	2369	B
188	188	4159.3	6556.2	8	8	2013	2:24	118	18.72	31.95	8.41	34.22	2	W
189	189	4201.7	6551.0	8	8	2013	3:07	246	17.35	31.90	8.00	35.08	4	V
190	190	4203.5	6546.7	8	8	2013	3:52	266	15.35	31.89	7.34	35.05	4	V
191	191	4205.5	6542.5	8	8	2013	4:33	280	16.29	31.65	8.24	35.11	6	V
192	192	4208.0	6536.7	8	8	2013	5:24	300	16.20	31.54	7.13	35.03	5	V
193	193	4209.4	6533.9	8	8	2013	6:03	124	16.09	31.71	9.73	34.76	4	V
194	194	4210.5	6531.5	8	8	2013	6:28	120	16.68	31.81	8.92	34.16	5	V
195	195	4206.5	6531.7	8	8	2013	7:09	554	18.44	31.25	9.51	35.15	254	IKMT
196	196	4206.7	6530.9	8	8	2013	8:28	406	16.82	31.52	7.49	35.03	1	W
197	197	4207.0	6531.2	8	8	2013	9:01	320	17.87	31.45	10.19	34.92	119	B
198	198	4124.0	6540.5	8	8	2013	15:48	2359	19.28	32.33	10.62	35.30	2157	B
199	199	4100.3	6616.4	8	8	2013	23:40	1879	22.19	32.49	7.05	35.03	1470	W
200	200	4100.2	6616.7	9	8	2013	0:10	1941	21.92	32.44	12.91	35.65	1737	B
201	201	3957.2	6807.6	9	8	2013	22:17	1036	24.01	33.78	7.11	35.06	631	W
202	202	3911.7	7223.2	10	8	2013	8:55	543	22.96	32.62	6.79	35.05	118	V
203	203	3844.8	7335.3	10	8	2013	17:31	65	24.38	32.11	9.11	33.48	5	B

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204	204	3800.1	7359.8	10	8	2013	22:52	131	25.12	31.86	13.11	35.54	2	W
205	205	3800.2	7359.6	10	8	2013	23:07	131	25.06	31.83	13.08	35.55	3	B
206	206	3745.4	7415.4	11	8	2013	1:37	110	24.64	32.08	11.01	34.46	6	B
207	207	3754.8	7430.3	11	8	2013	3:34	57	24.75	31.36	7.48	33.06	4	B
208	208	3805.1	7420.1	11	8	2013	5:04	51	24.48	31.23	8.01	33.20	5	B
209	209	3805.2	7420.9	11	8	2013	5:50	45	24.21	31.13	22.98	31.65	33	VPR
210	210	3814.1	7434.4	11	8	2013	9:00	43	24.11	30.95	12.33	34.75	4	B
211	211	3841.2	7437.2	11	8	2013	15:37	31	23.30	30.22	9.84	33.03	7	B
212	212	3922.5	7410.6	11	8	2013	22:15	21	23.62	31.12	15.98	32.00	8	B
213	213	3919.9	7414.9	11	8	2013	23:10	19	23.38	31.16	14.91	32.08	4	B
214	214	3924.9	7350.2	12	8	2013	1:31	31	23.57	31.63	10.42	34.06	4	B
215	215	3910.7	7331.0	12	8	2013	3:39	50	24.04	32.20	10.49	33.37	20	B
216	216	3841.2	7322.9	12	8	2013	8:43	77	24.63	32.48	12.35	34.91	3	W
217	217	3841.2	7322.7	12	8	2013	8:58	77	24.63	32.64	12.30	34.91	9	B
218	218	3848.8	7243.6	12	8	2013	15:37	1651	25.15	33.22	11.58	35.46	1449	B
219	219	3909.3	7220.2	12	8	2013	22:19	965	23.71	32.39	12.14	35.54	765	B
220	220	3852.0	7231.7	13	8	2013	1:06	1997	25.55	33.53	13.62	35.67	1897	VPR
221	221	3759.7	7310.7	13	8	2013	8:43	2459	25.77	32.20	12.21	35.58	2257	B
222	222	3720.1	7238.6	13	8	2013	15:43	3074	26.04	32.69	12.24	35.60	2871	B
223	223	3648.5	7215.2	13	8	2013	22:06	3537	28.21	35.88	16.66	36.27	3131	W
224	224	3656.2	7201.5	14	8	2013	0:25	3778	28.34	36.02	5.13	35.01	2889	V
225	225	3709.7	7157.6	14	8	2013	8:41	3577	28.89	35.92	10.40	35.29	3252	V
226	226	3709.8	7155.5	14	8	2013	9:11	3604	28.23	35.30	14.19	35.86	3398	B
227	227	3757.2	7151.0	14	8	2013	15:56	3127	25.95	34.04	10.87	35.36	2923	B
228	228	3911.9	7207.6	15	8	2013	2:24	1144	24.84	34.01	4.32	34.97	33	V
229	229	3909.5	7212.4	15	8	2013	3:39	1232	24.41	33.74	4.30	34.97	36	V
230	230	3906.4	7217.1	15	8	2013	4:58	1314	23.71	33.25	4.22	34.96	66	V
231	231	3902.6	7222.9	15	8	2013	6:25	1488	22.67	32.36	4.14	34.96	86	V
232	232	3901.9	7224.2	15	8	2013	7:28	1433	22.63	32.41	14.23	35.43	1383	B
233	233	3927.6	7212.2	15	8	2013	16:02	914	22.58	32.51	11.99	35.59	713	B
234	234	3936.2	7150.8	15	8	2013	22:28	1138	24.30	33.60	9.04	35.15	833	W
235	235	3935.9	7151.0	15	8	2013	22:53	942	24.09	33.68	11.38	35.42	740	B
236	236	3939.2	7159.9	16	8	2013	0:34	235	22.61	33.14	13.97	35.63	157	VPR

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237	237	3928.0	7018.3	16	8	2013	8:28	2554	23.63	33.62	7.11	35.07	2115	V
238	238	3928.5	7018.1	16	8	2013	9:04	2536	23.55	33.58	12.18	35.54	2332	B
239	239	3904.8	6941.4	16	8	2013	15:34	2903	26.04	34.73	11.59	35.45	2699	B
240	240	3859.6	6856.7	16	8	2013	22:13	3223	26.23	33.60	9.36	35.17	2916	W
241	241	3859.9	6857.1	16	8	2013	22:36	3220	26.22	34.00	11.98	35.51	3017	B
242	242	4033.5	6704.3	17	8	2013	14:46	266	21.52	32.18	11.44	35.43	64	B
243	243	4012.9	6750.7	17	8	2013	22:21	1865	24.21	34.21	8.46	35.12	1559	W
244	244	4013.4	6751.5	17	8	2013	22:49	1830	24.16	34.39	10.72	35.34	1627	B
245	245	4036.6	6941.0	18	8	2013	8:56	61	16.50	32.49	12.34	32.84	4	V
246	246	4036.9	6941.0	18	8	2013	9:07	60	17.58	32.40	12.35	32.84	4	B
247	247	4104.9	7035.4	18	8	2013	15:41	43	19.23	31.84	12.53	32.55	5	B
248	248	4118.1	7118.7	18	8	2013	21:28	34	20.96	31.63	17.38	31.77	16	B

Deployment codes: B=bongo cast; W=water cast; V=vertical cast; IKMT=Isaac-Kidd Mid-Water Trawl; and VPR=Video Plankton Recorder tow