

Oceanography Branch CTD Data Report
CTD_REPORT_2016004HB

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Northeast Fisheries Science Center,
Woods Hole, Massachusetts 02543-1097.**

DATE: March 9, 2017

Oceanography Branch CTD Data Report

CTD_REPORT_2016004HB

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

HB 1604
Fall Bottom Trawl Survey
Data Coverage: September 9 – November 9, 2016
Mid Atlantic Bight, Georges Bank, Gulf of Maine

This report presents a summary of surface and bottom temperature and salinity data collected during the Northeast Fisheries Science Center's HB1604 Fall Bottom Trawl Survey aboard the NOAA FSV *Henry B Bigelow*. Data was obtained with a Seabird Electronics SBE Model 19+ profiling CTD (s/n 7143) during double oblique bongo tows and on vertical casts with a SBE Model 9/11+ s/n 0832. Sea water samples were taken for the purpose of calibrating salinity values. An SBE43 Dissolved Oxygen sensor and a Biospherical Instruments Inc. QSP2300 PAR (Photosynthetically Active Radiation) Sensor were attached to the SBE 9/11+. A QSR2200 Surface PAR sensor was located on the flying bridge and relayed data in realtime to the 9/11+ deck unit. The PAR data obtained during the vertical profiling casts is included in the archived CTD data; the surface PAR data will be made available on request.

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/nodc_files/hb1604.dat

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

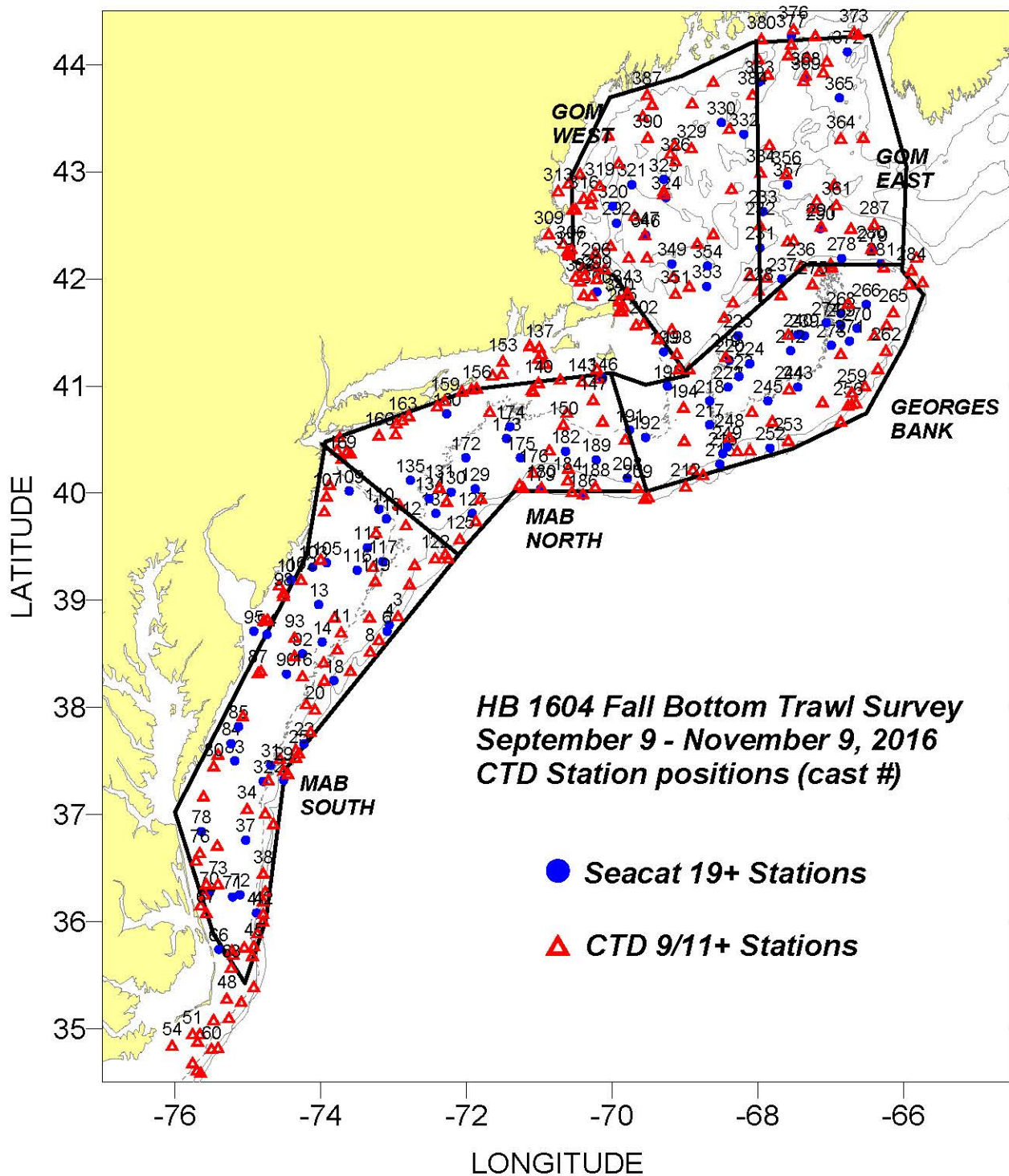
<http://www.nefsc.noaa.gov/HydroAtlas/>

choose: **2016 Cruises**

SEP_TRAWL_HB1604

CTD_REPORT_2016004HB.pdf

Revised: March 9, 2017



**Areal average surface and bottom temperature/salinity and temperature/salinity anomalies for the
HB1604 Fall Bottom Trawl Survey
September 9 - November 9, 2016**

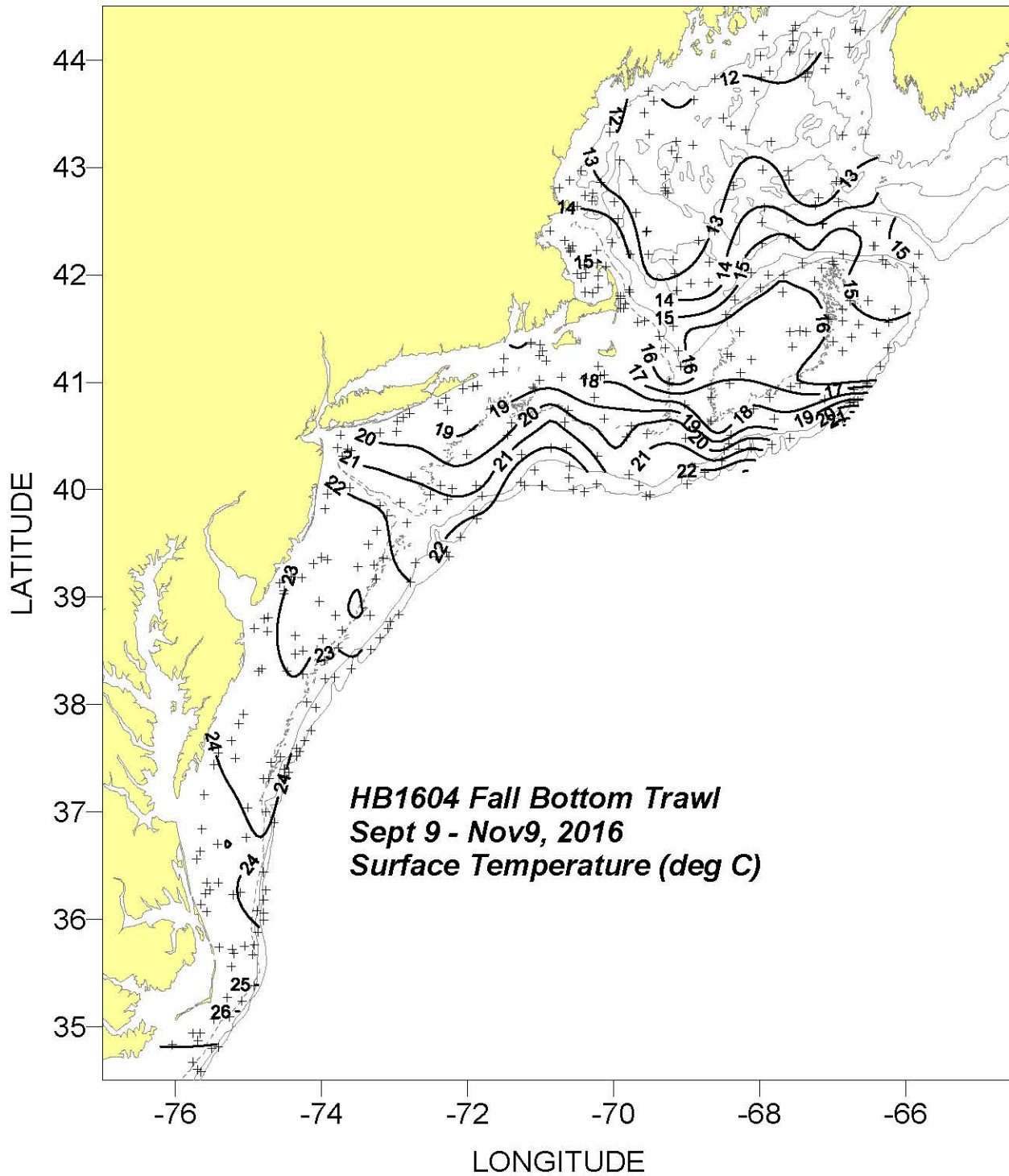
CRUISE	CD	SURFACE						BOTTOM						Purpose
		#obs	T/S	Anomaly	SDV1	SDV2	Flag	#obs	T/S	Anomaly	SDV1	SDV2	Flag	
Western Gulf of Maine														
HB1604	302	53	13.09	1.85	0.15	0.67	0	48	8.8	1.78	0.13	0.94	0	10
HB1604	302	53	32.81	0.2	0.06	0.25	0	48	33.66	0.1	0.04	0.24	0	10
Eastern Gulf of Maine														
HB1604	303	42	13.23	1.55	0.14	0.41	0	34	9.95	1.51	0.2	1.55	0	10
HB1604	303	42	32.69	0.04	0.08	0.29	0	34	34.57	0.29	0.06	0.3	0	10
Georges Bank														
HB1604	289	58	17.09	2.3	0.2	2.01	0	54	14.91	2.43	0.19	1.71	0	10
HB1604	289	58	33.5	0.7	0.06	0.87	0	54	33.62	0.33	0.07	0.35	0	10
MAB North														
HB1604	274	59	20.33	2.4	0.22	1.51	0	57	14.96	2.44	0.27	1.83	0	10
HB1604	274	59	33.67	0.9	0.1	0.81	0	57	33.72	0.05	0.09	0.61	0	10
MAB South														
HB1604	260	90	23.13	1.2	0.19	1.18	0	86	16.21	2.63	0.24	2.67	0	10
HB1604	260	90	32.68	0.33	0.11	0.63	0	86	33.25	-0.36	0.09	0.61	0	10

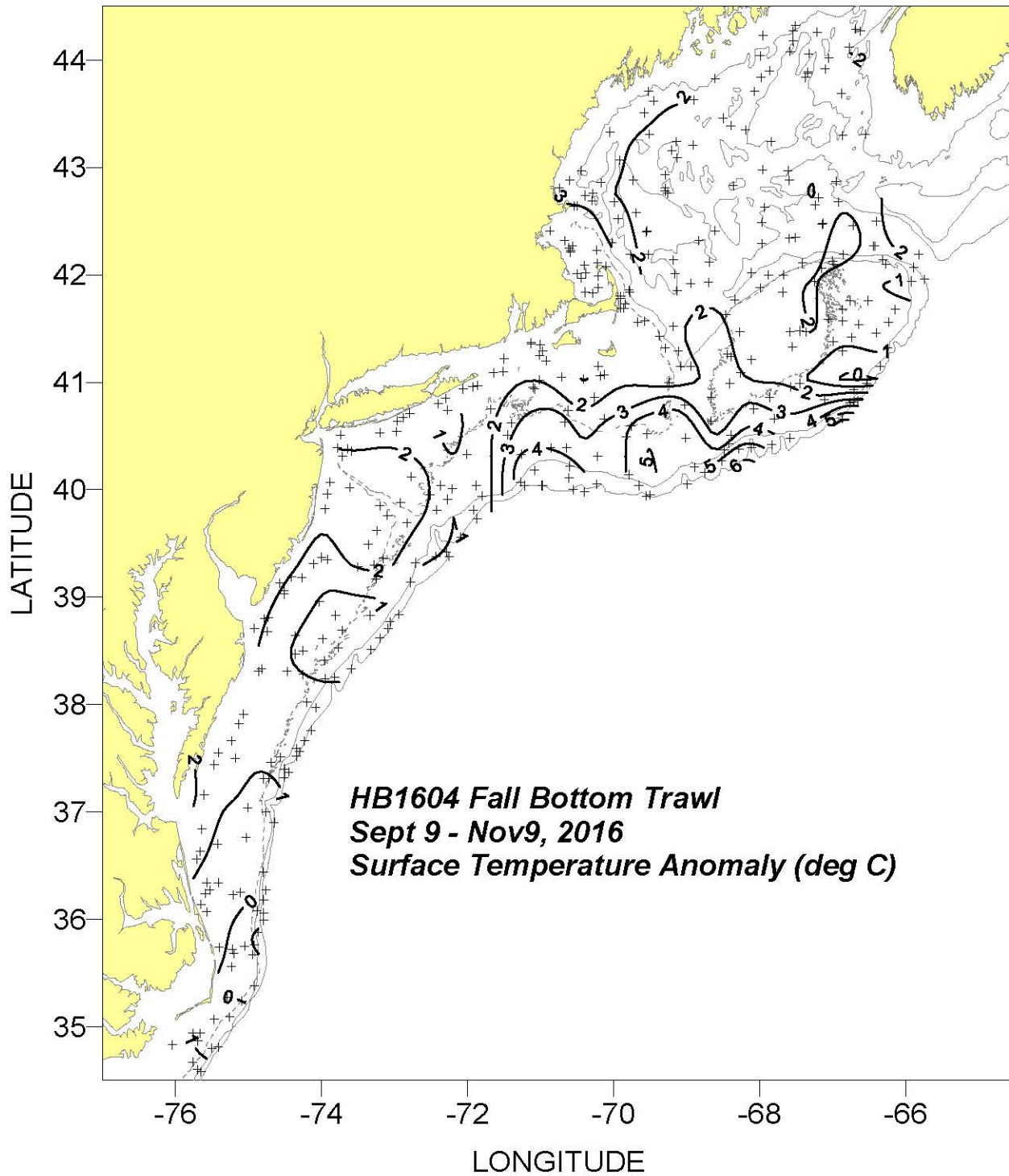
"CRUISE", the code name for a cruise: "CD", the calendar mid-date of all the stations within a region for a cruise:

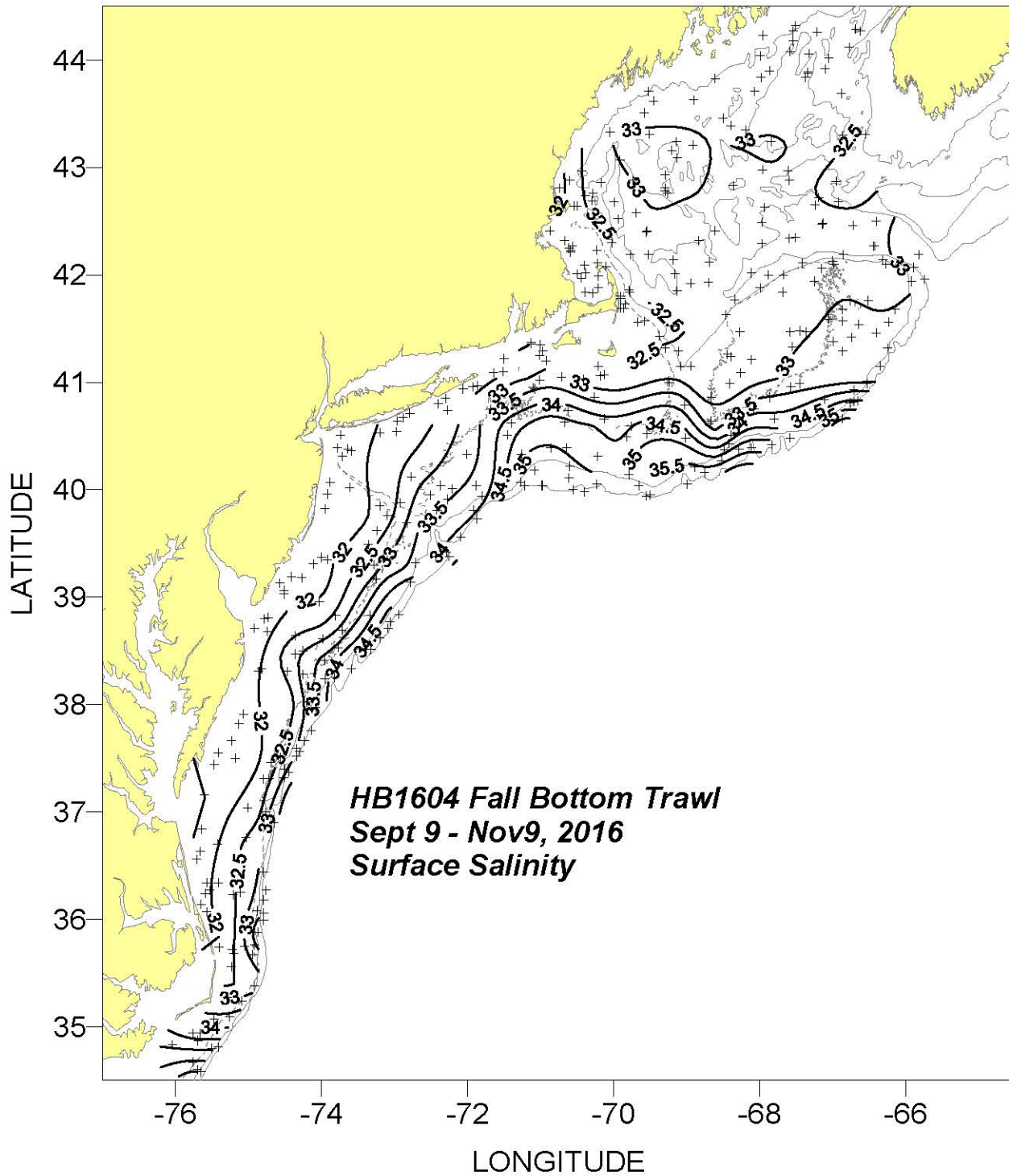
"#obs", the number of observations include in each average: "T/S", the areal average temp/salt: "Anomaly", the areal average temp/salt anomaly:

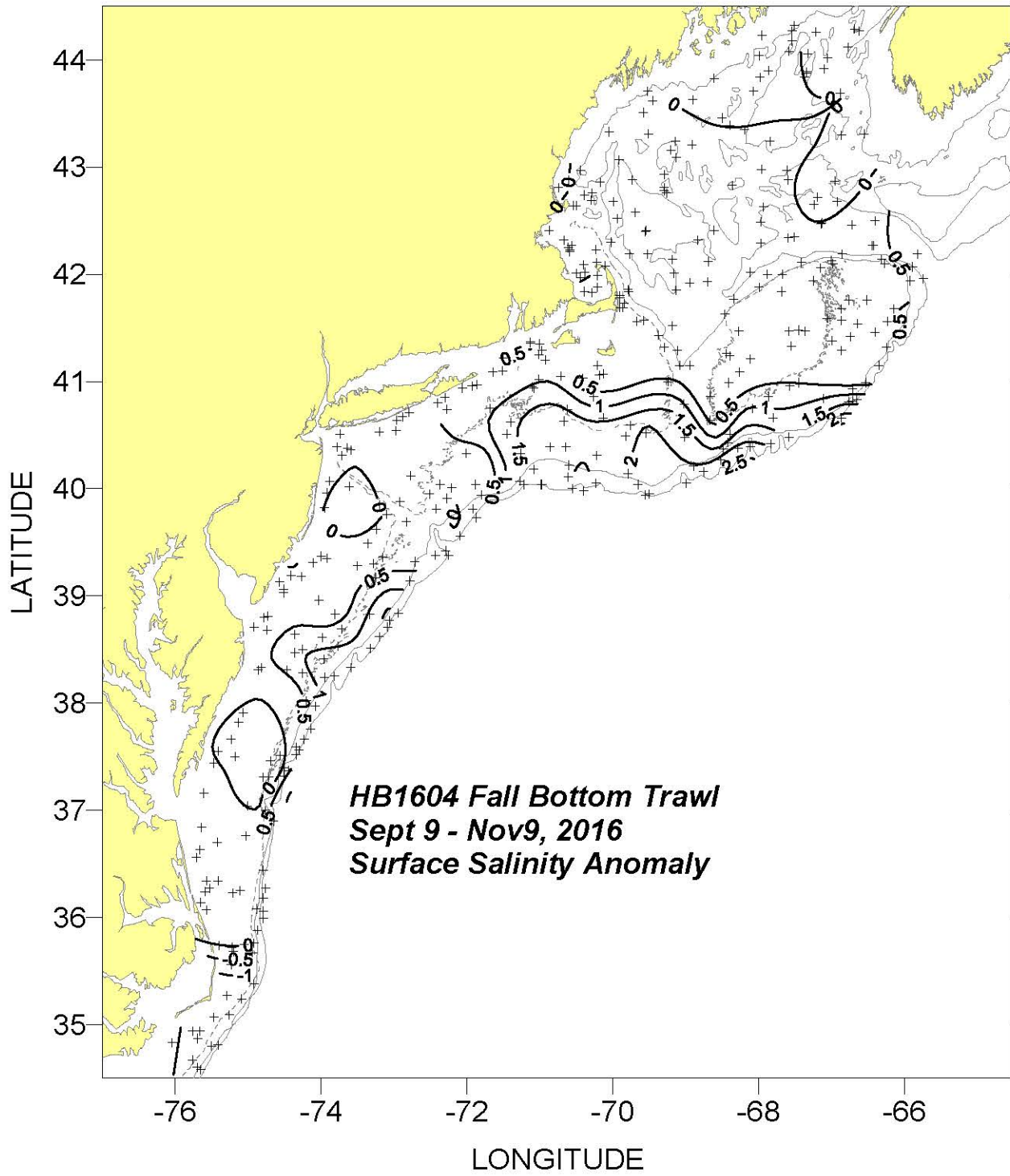
"SDV1", the standard deviation associated with the average temp/salt anomaly: "SDV2", the standard deviation of the individual anomalies from which the average anomaly was derived
"Flag", a value of "1" indicates that a true areal average could not be calculated due to poor station coverage. The areal averages listed were derived from a simple average of the observations within the region.

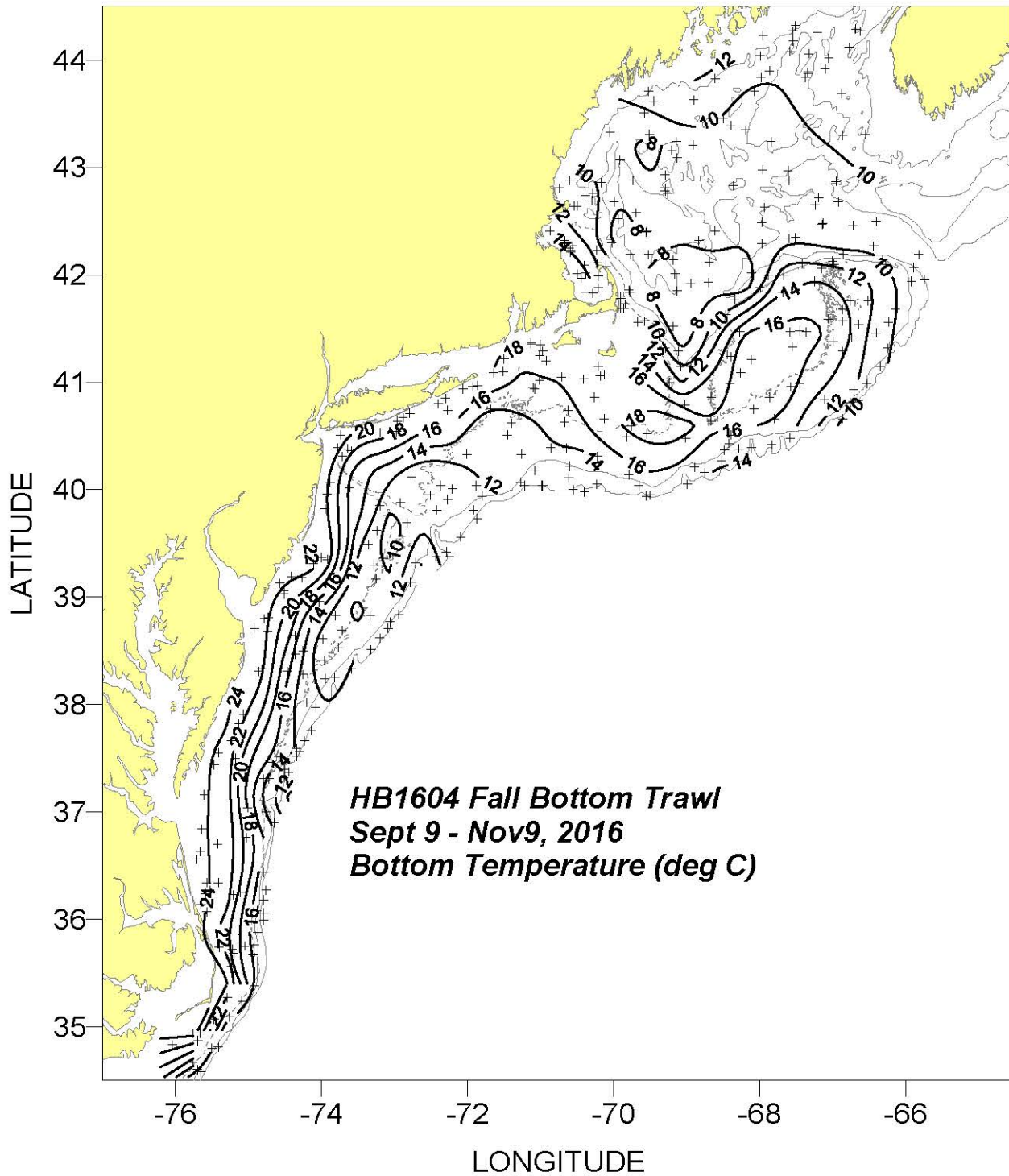
"Purpose", 2 digit code assigned by DMS to identify a unique NEFSC program survey.

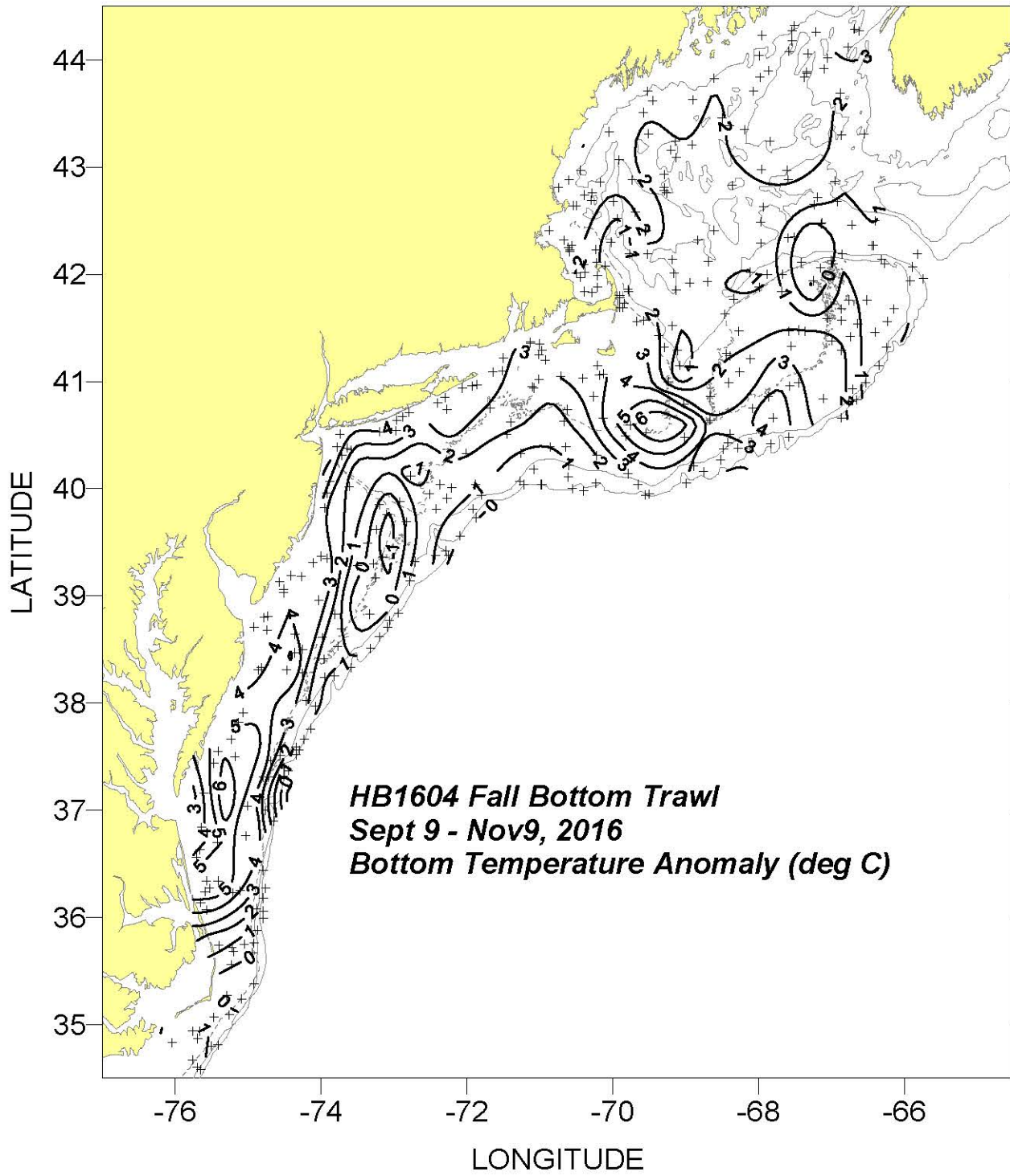


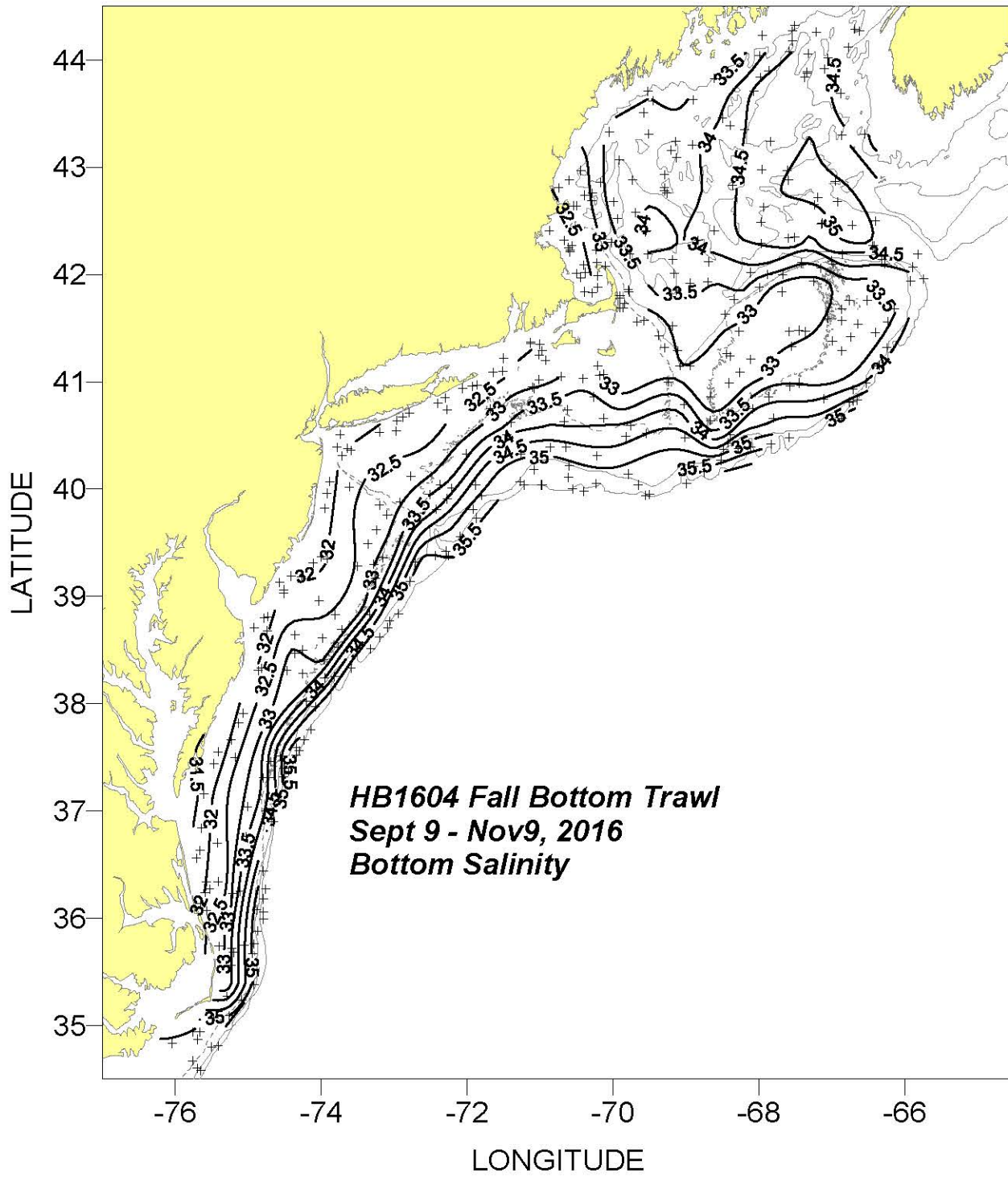


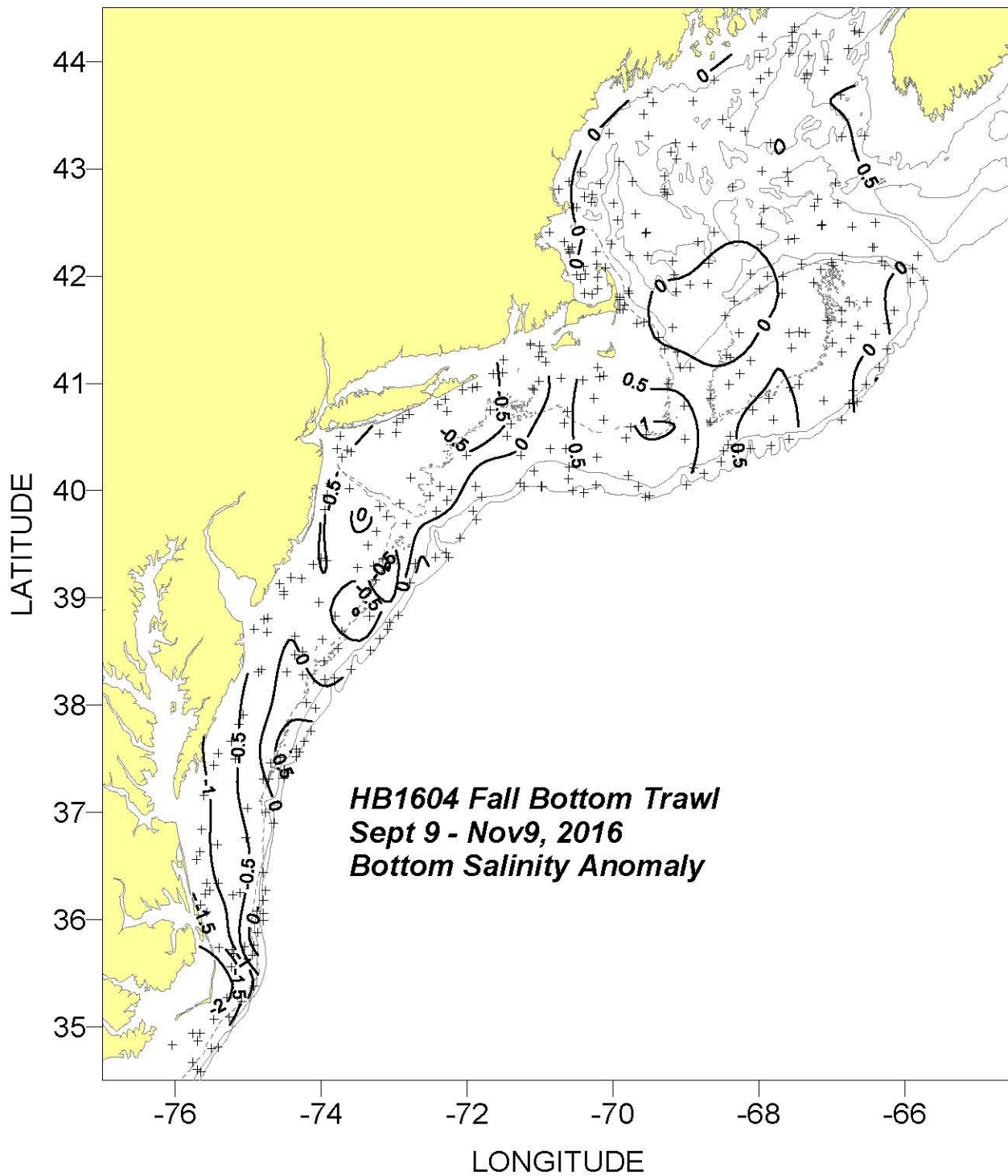












**HB1604 Fall Bottom Trawl Survey
September 9 - November 9, 2016**

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
3	12026	3850.6	7256.2	9	9	2016	19:14	229	24.01	35.47	11.82	35.51	3	V
4	12025	3846.2	7303.3	9	9	2016	21:58	177	22.65	34.67	13.17	35.67	4	B
5	12315	3849.6	7319.8	10	9	2016	0:41	79	21.34	33.78	8.54	32.82	5	V
6	12024	3842.7	7305.7	10	9	2016	3:12	156	21.96	34.10	13.19	35.68	6	B
7	12027	3836.9	7312.0	10	9	2016	5:03	340	22.18	34.05	8.98	35.21	1	V
8	12023	3830.4	7319.3	10	9	2016	7:10	128	23.85	35.25	13.63	35.73	4	V
9	12018	3820.0	7335.2	10	9	2016	11:02	168	22.84	34.35	11.91	35.52	5	V
10	12015	3832.0	7346.2	10	9	2016	12:50	62	23.01	34.02	10.23	32.88	6	V
11	12308	3841.4	7343.3	10	9	2016	14:31	58	22.36	32.95	9.92	32.70	9	V
12	12310	3849.7	7348.9	10	9	2016	16:26	47	22.22	32.45	10.76	32.59	1	V
13	12309	3857.8	7402.0	10	9	2016	18:37	42	22.74	31.83	14.74	32.29	7	B
14	12302	3836.4	7358.9	10	9	2016	21:48	51	22.94	32.76	10.78	32.87	9	B
15	12013	3824.3	7357.5	11	9	2016	0:52	61	23.21	33.68	9.88	32.89	5	V
16	12301	3816.9	7415.2	11	9	2016	3:41	53	22.78	32.92	11.44	32.77	10	V
17	12011	3814.6	7357.1	11	9	2016	6:09	70	23.64	33.88	9.86	33.14	6	V
18	12020	3814.9	7349.1	11	9	2016	8:35	112	23.71	33.97	14.21	35.74	14	B
19	12014	3801.3	7412.0	11	9	2016	12:39	72	22.97	32.39	9.80	32.96	6	V
20	12016	3758.1	7404.7	11	9	2016	14:30	117	23.70	33.54	13.83	35.47	5	V
21	12021	3745.7	7408.7	11	9	2016	16:55	310	24.67	34.87	10.27	35.34	1	V
22	12019	3739.6	7414.1	11	9	2016	19:42	186	24.38	33.85	12.10	35.53	3	B
24	12012	3735.6	7420.1	11	9	2016	23:18	110	24.12	32.72	13.91	35.72	7	V
25	12297	3733.5	7418.1	12	9	2016	1:00	350	24.03	33.10	8.97	35.21	1	V
26	12296	3730.9	7420.5	12	9	2016	2:45	195	24.06	33.31	13.25	35.66	1	V
27	12008	3719.1	7430.4	12	9	2016	5:09	140	23.58	32.87	13.49	35.58	10	B
28	12295	3722.2	7427.3	12	9	2016	6:36	302	23.84	33.18	9.87	35.29	7	V
29	12010	3723.8	7430.4	12	9	2016	8:02	117	23.60	33.29	13.22	35.66	7	V
30	12007	3730.7	7433.6	12	9	2016	9:43	67	23.83	32.24	13.17	35.42	4	V
31	12004	3727.3	7441.4	12	9	2016	11:11	54	23.73	32.16	14.68	32.90	11	B

**HB1604 Fall Bottom Trawl Survey
September 9 - November 9, 2016**

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
32	12000	3718.8	7447.5	12	9	2016	12:58	52	23.40	32.03	12.66	32.95	7	B
33	12005	3718.8	7443.0	12	9	2016	14:19	61	23.68	32.35	11.02	33.62	4	V
34	12001	3702.5	7500.8	12	9	2016	17:12	45	23.82	32.30	20.98	34.10	2	V
35	12006	3659.9	7445.5	12	9	2016	19:41	78	24.01	32.48	10.77	33.49	6	V
36	12009	3653.9	7438.8	12	9	2016	21:36	107	25.11	34.81	13.59	35.53	9	V
37	11999	3645.5	7501.6	13	9	2016	0:40	29	24.00	32.15	21.81	32.94	7	B
38	12290	3626.4	7447.1	13	9	2016	3:43	101	23.38	32.70	13.21	35.14	4	V
39	12293	3616.1	7445.6	13	9	2016	5:43	464	23.54	33.48	6.66	35.09	10	V
40	12291	3610.6	7447.2	13	9	2016	8:03	179	23.36	33.18	13.10	35.61	2	V
41	11996	3604.8	7453.0	13	9	2016	9:53	84	25.49	34.15	17.08	35.86	7	B
42	12294	3603.6	7447.4	13	9	2016	11:41	201	25.18	33.75	12.93	35.63	3	V
43	12292	3559.6	7447.5	13	9	2016	22:57	235	24.15	33.47	11.65	35.48	5	V
44	12289	3552.7	7452.1	14	9	2016	3:42	122	25.07	33.94	14.41	35.45	3	V
45	11995	3545.8	7455.1	14	9	2016	5:19	69	22.18	33.44	15.41	35.34	3	V
46	11990	3545.0	7503.2	14	9	2016	7:10	47	23.48	32.32	11.38	33.44	9	V
47	11997	3540.4	7456.5	14	9	2016	8:42	53	22.51	32.43	14.12	34.65	9	V
48	12047	3516.2	7517.6	14	9	2016	12:38	24	25.03	32.63	24.35	33.25	7	V
49	12340	3505.3	7515.5	14	9	2016	14:34	72	26.03	33.00	20.76	36.23	6	V
50	13119	3504.0	7528.3	14	9	2016	16:46	25	26.30	32.86	25.13	33.85	6	V
51	12335	3456.2	7545.5	14	9	2016	19:36	28	26.68	34.24	27.12	35.59	6	V
52	12339	3456.6	7539.7	14	9	2016	21:10	34	26.76	34.29	27.25	35.95	6	V
53	12338	3452.3	7541.1	14	9	2016	22:26	40	26.41	34.17	26.87	36.20	6	V
54	12337	3449.7	7602.2	15	9	2016	1:40	31	27.13	35.20	26.54	36.16	5	V
55	12342	3440.5	7545.4	15	9	2016	5:48	51	27.81	36.18	24.63	36.25	9	V
56	12058	3435.9	7542.3	15	9	2016	6:39	135	27.86	36.23	16.73	36.27	6	V
57	12061	3422.8	7548.7	15	9	2016	9:15	292	27.42	36.18	10.60	35.34	9	V
58	12059	3434.5	7538.8	15	9	2016	12:01	319	27.33	36.07	9.37	35.22	6	V

**HB1604 Fall Bottom Trawl Survey
September 9 - November 9, 2016**

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
59	12060	3448.8	7524.7	15	9	2016	15:40	345	27.54	35.94	9.02	35.18	3	V
60	12057	3448.2	7529.8	15	9	2016	17:57	157	27.62	36.15	14.88	35.96	3	V
61	12341	3514.3	7505.5	16	9	2016	0:57	76	27.03	34.74	25.38	36.28	3	V
62	12056	3522.8	7455.1	16	9	2016	4:00	107	25.26	32.55	15.59	35.21	6	V
63	12046	3533.8	7513.9	16	9	2016	7:47	33	24.69	32.22	21.94	32.98	7	V
64	11991	3541.0	7512.1	16	9	2016	9:28	35	24.53	31.96	21.81	32.99	8	V
65	12045	3543.4	7513.4	16	9	2016	10:27	39	24.33	32.14	20.68	33.60	7	V
66	12048	3544.7	7523.8	16	9	2016	12:52	28	24.30	31.79	21.78	32.69	3	B
67	12042	3604.1	7534.3	16	9	2016	17:36	20	24.39	31.89	24.24	31.90	7	V
68	12041	3608.3	7538.9	16	9	2016	19:48	23	24.66	31.62	24.66	31.62	9	V
69	12043	3614.5	7535.7	16	9	2016	21:39	27	24.16	32.08	24.16	32.07	7	V
70	12040	3616.4	7531.7	16	9	2016	23:23	26	24.28	32.07	23.86	32.14	2	B
71	11992	3614.0	7512.8	17	9	2016	2:50	32	24.00	32.31	21.94	32.82	9	B
72	11994	3614.9	7506.6	17	9	2016	5:06	37	24.19	32.32	21.18	33.05	7	B
73	11993	3620.2	7524.3	17	9	2016	8:21	27	24.28	32.22	24.22	32.23	7	V
74	12044	3620.7	7534.3	17	9	2016	10:24	29	23.78	NaN	23.80	32.19	8	V
75	12133	3633.4	7542.5	17	9	2016	12:47	25	24.42	31.50	24.41	31.51	9	V
76	12131	3637.6	7539.3	17	9	2016	14:19	21	24.10	31.93	24.10	31.93	9	V
77	12003	3642.0	7525.0	17	9	2016	16:37	23	24.01	32.17	23.60	32.20	7	V
78	12132	3650.1	7538.1	17	9	2016	18:57	20	24.79	31.35	24.19	31.62	3	B
79	12038	3709.7	7536.6	17	9	2016	21:56	18	24.85	31.35	24.23	31.44	4	V
80	12037	3726.2	7528.2	18	9	2016	0:23	24	24.38	32.00	23.77	31.99	8	V
82	12036	3732.9	7524.6	18	9	2016	3:06	21	23.88	NaN	23.59	32.03	4	V
83	11998	3730.2	7510.8	18	9	2016	5:02	33	23.43	31.95	22.59	31.97	5	B
84	12002	3739.7	7514.1	18	9	2016	6:56	23	23.73	31.93	23.22	31.92	5	B
85	12035	3749.2	7507.9	18	9	2016	9:27	23	23.38	31.88	22.86	31.91	5	B
86	12034	3754.3	7504.2	18	9	2016	11:19	27	23.33	31.94	23.04	31.99	6	V
87	12031	3818.6	7451.4	18	9	2016	14:32	14	23.33	32.02	23.32	32.03	6	V

HB1604 Fall Bottom Trawl Survey
September 9 - November 9, 2016

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
88	12032	3820.0	7449.0	18	9	2016	15:34	21	23.73	32.03	23.16	32.03	3	V
90	12304	3818.6	7428.1	18	9	2016	20:09	37	23.46	32.49	18.02	33.53	5	B
91	12303	3828.4	7421.5	18	9	2016	22:18	49	22.43	33.03	14.83	33.04	6	V
92	12298	3830.2	7415.1	18	9	2016	23:43	45	23.27	33.18	13.17	32.87	3	B
93	12300	3838.5	7421.8	19	9	2016	1:47	41	22.49	32.32	15.36	32.65	2	V
94	12299	3840.7	7444.7	19	9	2016	4:52	15	23.28	32.00	22.86	32.06	5	B
95	12028	3842.7	7455.4	19	9	2016	6:49	22	23.39	31.33	22.91	31.57	6	B
96	12030	3848.1	7447.0	19	9	2016	8:38	21	23.19	31.79	23.11	31.89	5	V
97	12029	3848.5	7443.8	19	9	2016	9:42	20	23.20	31.88	22.89	32.04	6	V
98	12128	3902.1	7430.4	19	9	2016	12:39	21	23.09	31.99	22.57	32.02	4	V
99	12130	3903.8	7430.7	19	9	2016	13:43	22	23.11	31.99	22.69	32.01	6	V
100	12129	3907.5	7434.3	19	9	2016	15:40	21	23.22	31.75	23.11	31.96	6	V
101	12125	3911.4	7424.7	19	9	2016	17:55	20	23.09	31.62	22.46	32.00	7	B
102	12124	3910.7	7416.3	19	9	2016	21:40	22	22.80	31.81	22.09	32.04	6	V
103	12127	3918.4	7406.4	19	9	2016	23:36	28	22.75	31.78	22.47	31.91	8	B
104	12126	3922.3	7359.9	20	9	2016	1:00	28	22.74	31.80	22.18	31.93	6	V
105	12307	3920.8	7355.5	20	9	2016	2:28	30	22.48	31.81	22.42	31.94	8	B
106	12121	3949.1	7357.2	20	9	2016	6:04	24	22.68	31.58	20.44	31.77	5	V
107	12123	3957.8	7355.4	20	9	2016	7:37	23	22.61	31.50	20.85	31.83	6	V
108	12122	4004.0	7352.8	20	9	2016	8:59	25	22.58	31.53	19.92	31.85	6	V
109	12062	4001.2	7336.4	20	9	2016	11:22	38	22.57	31.47	12.50	32.46	4	B
110	12064	3951.1	7311.9	20	9	2016	14:34	51	21.75	32.33	9.66	33.06	5	B
111	12065	3952.5	7255.0	20	9	2016	17:11	56	21.82	32.42	9.57	32.76	1	V
112	12074	3941.2	7249.7	20	9	2016	19:16	72	21.46	33.42	10.26	33.39	3	V
113	12066	3945.4	7305.9	20	9	2016	21:21	50	21.95	32.30	9.55	32.78	8	B
114	12063	3937.1	7314.3	20	9	2016	23:16	40	22.29	32.03	12.32	32.53	4	V
115	12305	3929.7	7321.4	21	9	2016	0:58	39	22.43	32.27	15.87	32.96	8	B
116	12306	3916.7	7329.8	21	9	2016	3:29	49	22.16	32.50	10.96	32.55	6	B

**HB1604 Fall Bottom Trawl Survey
September 9 - November 9, 2016**

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
117	12314	3921.8	7308.9	21	9	2016	5:57	63	22.09	32.80	8.98	32.76	4	B
118	12313	3918.0	7316.9	21	9	2016	7:31	58	21.53	32.63	9.59	32.69	6	V
119	12311	3910.1	7315.0	21	9	2016	9:05	63	22.22	33.13	9.31	32.97	7	V
120	12022	3908.2	7247.0	21	9	2016	12:44	118	22.50	33.82	13.87	35.66	8	V
121	12076	3919.4	7242.6	21	9	2016	15:27	105	21.42	33.75	14.04	35.55	7	V
122	12080	3922.5	7225.6	21	9	2016	19:04	139	21.56	33.65	13.60	35.64	4	V
123	12077	3925.3	7217.2	21	9	2016	20:54	172	22.19	34.26	12.15	35.53	7	V
124	12083	3923.0	7215.2	21	9	2016	22:22	240	22.78	34.37	10.61	35.35	2	V
125	12082	3933.5	7205.6	22	9	2016	0:56	257	22.45	34.25	9.04	35.22	4	V
126	12081	3943.8	7152.1	22	9	2016	3:35	302	22.28	34.25	9.56	35.26	7	V
127	12078	3948.4	7155.3	22	9	2016	5:35	158	21.14	33.40	12.84	35.59	8	B
128	12079	3956.4	7148.0	22	9	2016	7:44	116	21.17	33.30	13.51	35.59	7	V
129	12071	4002.5	7152.8	22	9	2016	9:26	85	20.77	32.97	12.87	35.21	5	B
130	12069	4000.7	7212.8	22	9	2016	11:48	82	21.10	33.33	10.77	33.77	3	B
131	12073	4002.6	7222.0	22	9	2016	13:16	70	20.95	33.26	10.04	33.27	6	V
132	12075	3954.4	7216.2	22	9	2016	15:01	85	21.32	33.44	11.34	34.03	6	V
133	12072	3948.5	7225.0	22	9	2016	16:46	78	21.47	33.52	11.78	34.25	5	B
134	12070	3957.0	7230.5	22	9	2016	18:38	70	20.95	33.41	9.75	33.12	7	B
135	12067	4006.9	7246.3	22	9	2016	20:53	54	21.48	32.63	9.96	32.75	7	B
136	12051	4122.0	7108.0	28	9	2016	18:59	30	18.72	32.33	18.72	32.32	8	W
137	12052	4121.0	7100.1	28	9	2016	20:04	30	18.62	32.34	18.62	32.33	10	V
138	12088	4117.6	7058.2	28	9	2016	21:24	38	18.36	32.45	16.04	32.52	5	V
139	12054	4111.8	7055.1	28	9	2016	23:36	33	17.94	32.74	17.94	32.73	3	V
140	12086	4101.0	7100.7	29	9	2016	2:25	46	19.00	33.29	15.18	32.69	6	V
141	12084	4056.7	7106.0	29	9	2016	4:41	50	18.75	33.15	13.80	32.74	4	V
142	12107	4102.9	7042.7	29	9	2016	8:50	50	17.81	32.97	16.02	32.99	1	V
143	12106	4101.8	7024.6	29	9	2016	12:04	41	17.81	32.77	17.80	33.37	9	V
144	13147	4109.2	7012.4	29	9	2016	14:28	24	18.88	32.22	18.79	32.28	1	V

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145	12055	4103.3	7011.0	29	9	2016	16:27	27	18.65	32.29	18.65	32.29	6	V
146	12053	4104.4	7007.6	29	9	2016	17:59	24	18.25	32.12	18.25	32.12	5	B
147	12108	4051.4	7015.5	29	9	2016	20:31	38	17.25	33.07	17.23	33.18	1	V
148	12105	4039.7	7008.0	29	9	2016	23:28	48	18.42	33.88	18.58	34.09	6	V
149	12140	4044.7	7037.1	30	9	2016	2:53	60	20.24	34.56	14.74	33.64	6	V
150	12146	4037.7	7040.1	30	9	2016	4:56	63	21.45	35.08	13.54	33.62	9	V
151	12084	4056.2	7104.9	30	9	2016	8:35	52	18.21	33.23	15.31	32.87	6	V
152	12093	4045.0	7141.0	30	9	2016	12:46	69	18.92	33.48	12.56	32.81	5	V
153	12050	4113.3	7130.1	30	9	2016	20:16	37	17.84	32.48	17.84	32.47	6	V
154	12049	4105.9	7130.7	30	9	2016	22:54	28	17.92	32.55	17.94	32.54	6	V
155	12317	4105.3	7138.7	1	10	2016	7:40	36	18.32	32.31	18.32	32.30	8	V
156	12316	4058.3	7151.8	1	10	2016	10:05	31	18.29	32.22	18.28	32.24	10	V
157	12318	4057.4	7155.7	1	10	2016	11:40	29	18.32	32.21	18.32	32.20	8	V
158	12109	4056.6	7203.4	1	10	2016	13:32	26	18.52	32.14	18.52	32.13	9	V
159	12110	4051.1	7218.1	1	10	2016	16:32	25	18.44	32.08	18.43	32.07	6	V
160	12087	4044.4	7216.0	1	10	2016	18:22	43	18.34	32.53	18.34	32.53	4	B
161	12111	4047.8	7224.1	1	10	2016	20:05	31	18.33	32.08	18.35	32.10	4	V
162	12113	4042.3	7247.6	1	10	2016	22:39	26	19.06	32.03	19.06	32.02	7	V
163	12114	4040.3	7252.5	2	10	2016	0:08	27	19.27	32.00	19.29	32.00	7	V
164	12112	4038.2	7257.6	2	10	2016	1:18	25	19.33	31.99	19.34	31.99	6	V
165	12068	4032.2	7258.0	2	10	2016	3:01	30	19.14	32.28	19.14	32.27	5	V
166	12117	4031.6	7312.3	2	10	2016	4:40	27	19.58	32.15	19.58	32.15	8	V
167	12119	4030.4	7344.4	2	10	2016	8:25	23	20.17	31.58	20.17	31.57	9	V
168	13416	4023.6	7346.5	2	10	2016	9:19	35	20.11	31.71	20.11	31.70	9	V
169	12120	4018.5	7342.8	2	10	2016	10:45	28	20.00	32.12	20.00	32.11	6	V
170	12116	4023.1	7338.4	2	10	2016	12:13	26	20.02	32.05	20.02	32.04	8	V
171	12115	4021.3	7335.5	2	10	2016	13:17	26	20.03	32.05	20.03	32.04	8	V

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172	12092	4019.8	7200.3	2	10	2016	20:29	64	18.95	33.64	11.42	32.95	3	B
173	12096	4030.5	7127.0	2	10	2016	23:46	71	20.21	34.50	12.22	33.64	3	B
174	12089	4037.3	7124.0	3	10	2016	1:29	66	19.52	34.30	13.17	33.50	1	B
175	12090	4020.0	7115.5	3	10	2016	4:05	88	22.24	35.03	13.29	35.13	5	B
176	12098	4011.1	7104.8	3	10	2016	6:06	133	22.90	35.30	13.14	35.56	7	V
177	12099	4004.2	7115.9	3	10	2016	8:36	151	22.68	35.24	12.96	35.61	9	V
178	12103	4002.6	7113.1	3	10	2016	10:20	200	22.69	35.25	12.65	35.59	6	V
179	12102	4002.3	7058.7	3	10	2016	12:31	243	22.98	35.39	12.54	35.58	40	B
180	12102	4002.5	7058.0	3	10	2016	13:03	231	22.98	35.39	11.18	35.43	2	V
181	12094	4023.2	7051.9	3	10	2016	16:30	91	22.34	35.03	15.27	35.00	6	V
182	12095	4023.2	7038.1	3	10	2016	18:19	88	22.56	35.42	15.11	34.71	4	B
183	12100	4012.9	7035.8	3	10	2016	20:34	118	21.68	34.73	13.70	35.62	5	V
184	12097	4006.4	7036.9	3	10	2016	22:43	129	22.82	35.09	13.56	35.63	5	V
185	12101	4000.2	7032.9	4	10	2016	1:00	270	23.02	35.33	11.18	35.43	5	V
186	12154	3958.6	7023.8	4	10	2016	4:25	332	22.94	35.22	12.68	35.61	126	B
187	12154	3959.0	7023.9	4	10	2016	4:53	308	22.93	35.22	8.37	35.17	1	V
188	12152	4003.2	7013.6	4	10	2016	7:18	177	21.88	34.95	13.10	35.65	4	V
189	12141	4018.6	7013.5	4	10	2016	9:47	90	21.71	35.15	14.60	34.30	8	B
190	12145	4029.4	6949.4	4	10	2016	12:48	73	21.02	34.87	16.40	33.99	6	V
191	12143	4035.5	6945.3	4	10	2016	14:26	64	20.45	34.82	18.60	34.36	6	B
192	12142	4031.5	6932.3	4	10	2016	16:44	66	20.95	34.98	19.39	34.56	8	B
193	12147	4028.7	6900.5	4	10	2016	21:27	76	21.89	35.37	18.72	34.81	5	V
194	12144	4047.3	6901.2	5	10	2016	0:54	77	17.83	33.26	18.59	33.81	7	V
195	12104	4059.8	6914.2	5	10	2016	4:13	62	14.28	32.62	13.68	32.71	8	B
196	12219	4108.9	6904.9	5	10	2016	7:30	107	14.65	32.71	8.23	32.80	2	V
197	12218	4109.2	6856.1	5	10	2016	9:52	105	17.33	33.52	7.88	32.83	2	V
198	12220	4117.1	6906.8	5	10	2016	12:01	149	15.76	32.57	6.60	33.15	8	V
199	12214	4119.1	6917.4	5	10	2016	14:28	93	15.59	32.37	9.28	32.71	7	B

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200	12226	4131.1	6911.0	5	10	2016	17:50	168	16.02	32.22	6.56	33.18	9	V
201	12228	4125.6	6922.2	5	10	2016	20:01	59	15.59	32.37	10.54	32.64	6	V
202	12229	4134.3	6934.0	5	10	2016	22:43	57	15.79	32.29	10.31	32.59	5	V
203	12231	4133.4	6940.3	6	10	2016	5:02	33	14.60	32.31	14.13	32.32	10	V
204	12320	4141.5	6953.9	6	10	2016	8:04	24	15.24	32.23	15.07	32.26	8	V
205	12319	4141.2	6951.5	6	10	2016	15:02	25	15.00	32.24	15.00	32.23	8	V
206	12428	4121.8	7107.9	11	10	2016	14:59	30	17.44	32.35	17.44	32.35	10	V
207	12465	4115.1	7100.6	11	10	2016	16:57	42	17.41	32.52	17.36	32.70	7	V
208	12148	4008.2	6947.2	12	10	2016	9:09	102	19.17	34.66	15.30	35.32	6	B
209	12150	4002.6	6938.8	12	10	2016	10:52	118	22.27	35.89	14.71	35.66	8	V
210	12155	3956.2	6933.1	12	10	2016	13:22	220	22.01	35.66	12.18	35.56	10	V
211	12149	3957.1	6930.2	12	10	2016	15:40	164	22.22	35.79	14.05	35.72	5	V
212	12153	4003.2	6859.5	12	10	2016	19:18	197	22.09	35.80	13.45	35.68	6	V
213	12151	4012.5	6853.4	12	10	2016	21:22	127	21.87	35.72	15.00	35.73	1	V
214	12167	4009.3	6845.2	12	10	2016	22:57	161	22.00	35.73	14.34	35.77	6	V
215	12168	4016.1	6831.4	13	10	2016	0:58	147	21.93	35.70	14.07	35.73	7	B
216	12163	4021.9	6829.1	13	10	2016	3:29	106	20.09	35.04	15.49	35.05	8	B
217	12161	4038.4	6839.8	13	10	2016	6:05	65	16.38	32.72	16.38	32.72	8	B
218	12198	4051.7	6839.8	13	10	2016	10:48	63	16.88	32.54	16.88	32.54	12	B
219	12205	4115.4	6826.5	13	10	2016	16:53	53	16.84	32.86	16.27	32.93	8	V
220	12204	4114.3	6823.7	13	10	2016	18:43	57	17.24	32.68	16.64	32.80	4	B
221	12193	4059.5	6824.5	13	10	2016	22:40	46	17.00	32.57	17.00	32.57	1	B
222	12193	4059.6	6824.6	13	10	2016	22:51	48	17.19	32.59	17.00	32.57	8	W
223	12195	4105.4	6815.6	14	10	2016	0:48	44	17.00	32.59	17.00	32.59	5	B
224	12199	4112.8	6806.6	14	10	2016	3:05	44	17.45	32.53	17.45	32.53	4	B
225	12203	4128.2	6816.2	14	10	2016	6:45	53	16.41	32.84	16.41	32.84	4	B
226	12216	4137.8	6827.4	14	10	2016	8:57	83	16.83	32.77	11.42	32.95	14	W
227	12213	4146.3	6820.7	14	10	2016	13:33	158	16.17	32.83	7.46	33.74	6	V

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228	12209	4152.6	6759.5	14	10	2016	17:02	87	16.16	32.79	7.49	33.01	6	V
229	12210	4159.9	6752.7	14	10	2016	19:13	184	15.64	32.95	7.50	33.72	9	V
230	12259	4201.5	6806.9	14	10	2016	21:51	231	14.96	32.92	8.98	34.78	10	V
231	12252	4217.3	6758.3	15	10	2016	1:06	200	15.90	32.90	9.01	34.75	8	B
232	12258	4229.7	6758.1	15	10	2016	4:12	222	14.82	32.54	9.22	34.91	7	V
233	12255	4237.6	6755.8	15	10	2016	6:17	200	14.33	32.58	8.76	34.53	12	B
234	12257	4220.2	6735.5	15	10	2016	10:26	270	15.06	32.72	9.03	35.10	6	V
235	12260	4220.8	6730.6	15	10	2016	12:23	303	14.38	32.69	8.98	35.12	7	V
236	12206	4206.3	6724.3	15	10	2016	15:15	85	15.28	32.91	8.77	32.98	8	V
237	12201	4159.9	6740.4	15	10	2016	17:27	56	15.14	32.87	11.18	32.93	4	B
238	12202	4150.7	6740.9	15	10	2016	22:15	37	16.62	32.75	16.37	32.77	9	V
239	12194	4128.0	6721.9	16	10	2016	2:30	41	16.70	32.97	16.70	32.97	7	B
240	12191	4128.5	6726.9	16	10	2016	4:30	48	16.77	32.83	16.77	32.83	6	B
241	12196	4128.2	6734.5	16	10	2016	7:23	34	16.84	32.83	16.84	32.83	9	V
242	12192	4119.9	6732.7	16	10	2016	10:10	44	16.79	32.75	16.79	32.75	8	B
243	12158	4059.5	6726.8	16	10	2016	13:45	72	15.75	33.26	15.75	33.26	7	B
244	12159	4057.5	6734.3	16	10	2016	15:31	70	16.24	33.25	17.22	33.79	6	V
245	12162	4051.3	6751.9	16	10	2016	18:17	65	16.94	33.35	16.83	33.56	5	B
246	12156	4039.7	6747.8	16	10	2016	20:16	80	16.94	33.68	16.39	34.26	8	V
247	12164	4045.1	6804.6	16	10	2016	22:19	73	16.51	33.19	16.83	33.51	5	V
248	13308	4030.7	6823.5	17	10	2016	1:14	96	19.93	35.02	16.61	34.40	9	V
249	12157	4025.9	6825.1	17	10	2016	2:37	101	21.57	35.76	15.19	34.63	1	B
250	12166	4022.5	6816.6	17	10	2016	4:22	133	21.80	35.78	14.52	35.64	6	V
251	12172	4023.5	6806.9	17	10	2016	6:53	172	21.70	35.72	12.86	35.58	11	V
252	12170	4025.1	6750.0	17	10	2016	9:47	176	21.47	35.67	14.14	35.75	5	B
253	12169	4029.0	6734.6	17	10	2016	13:02	142	21.61	35.54	15.51	35.72	11	V
254	12165	4050.1	6706.5	17	10	2016	16:58	94	15.61	33.36	13.16	33.84	6	V
255	12171	4039.7	6651.3	17	10	2016	20:10	346	23.41	35.94	9.26	35.27	5	W

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256	12346	4048.8	6645.5	17	10	2016	22:54	139	15.99	33.55	12.33	34.52	8	V
257	12187	4049.0	6642.7	18	10	2016	0:30	188	15.88	33.53	14.31	35.45	9	W
258	12190	4049.9	6638.8	18	10	2016	1:57	263	16.13	33.66	10.11	35.32	2	V
259	12173	4055.6	6642.7	18	10	2016	4:12	98	15.66	33.40	11.94	33.84	7	V
260	12183	4059.2	6631.7	18	10	2016	5:50	114	15.70	33.23	11.57	33.86	8	V
261	12345	4108.8	6621.2	18	10	2016	8:09	139	15.29	33.19	10.20	33.98	4	V
262	12343	4119.1	6614.6	18	10	2016	12:27	134	15.01	33.20	10.60	34.54	9	V
263	12176	4127.8	6624.1	18	10	2016	13:40	101	15.29	33.12	10.88	33.24	9	V
264	12178	4133.7	6614.1	18	10	2016	15:29	96	14.89	32.92	10.78	33.11	7	V
265	12177	4140.9	6608.5	18	10	2016	18:13	96	14.69	32.92	10.33	33.11	6	W
266	12186	4145.3	6630.8	18	10	2016	21:12	71	14.54	33.03	13.46	33.00	8	B
267	12181	4145.4	6645.3	18	10	2016	23:31	66	14.89	33.02	14.89	33.00	7	V
268	12175	4140.8	6651.8	19	10	2016	1:23	65	15.84	33.08	15.84	33.08	6	B
269	12179	4134.0	6651.5	19	10	2016	3:08	70	15.14	33.11	15.14	33.11	7	B
270	12174	4132.5	6638.6	19	10	2016	6:02	81	14.24	33.09	13.91	33.12	9	B
271	12184	4125.3	6644.4	19	10	2016	8:19	79	15.58	33.06	13.62	33.22	9	B
272	12182	4117.7	6651.8	19	10	2016	10:14	72	15.15	33.13	14.48	33.20	7	V
273	12185	4123.0	6659.4	19	10	2016	12:04	67	15.77	33.13	15.49	33.14	9	B
274	12180	4135.4	6703.9	19	10	2016	14:41	61	16.03	33.10	16.03	33.10	8	B
275	12197	4156.2	6715.1	19	10	2016	18:04	62	15.80	32.94	15.80	32.92	10	W
276	12200	4203.7	6709.2	19	10	2016	21:06	51	15.21	32.77	14.53	32.90	9	V
277	12208	4207.8	6700.2	20	10	2016	0:13	69	15.86	32.92	9.57	33.09	9	W
278	12211	4211.6	6650.9	20	10	2016	1:50	209	15.84	32.92	9.17	34.96	7	B
279	12250	4216.2	6625.3	20	10	2016	5:06	258	14.39	32.80	9.06	34.67	57	B
280	12250	4216.5	6626.2	20	10	2016	5:30	263	14.38	32.80	9.17	34.99	8	V
281	12212	4208.5	6618.4	20	10	2016	7:42	166	14.53	32.81	9.00	34.39	3	B
282	12207	4206.0	6615.9	20	10	2016	10:50	94	14.13	32.76	10.13	33.28	8	V
283	12344	4156.3	6555.4	20	10	2016	15:30	116	13.81	32.89	8.61	33.68	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
284	12188	4204.2	6553.6	20	10	2016	18:23	250	15.28	33.06	7.89	35.16	6	W
285	12189	4157.7	6544.2	20	10	2016	20:26	241	17.87	34.01	6.69	35.09	7	V
286	12251	4211.3	6549.1	20	10	2016	22:59	249	17.02	33.98	8.08	35.19	5	W
287	12256	4230.2	6624.1	21	10	2016	3:26	248	14.53	32.63	9.79	35.01	10	V
288	12261	4227.3	6643.0	21	10	2016	7:59	336	15.16	32.88	9.15	35.17	8	V
289	13188	4205.8	6658.8	21	10	2016	12:09	64	14.46	32.83	10.93	32.94	7	V
290	12262	4228.4	6708.5	21	10	2016	15:53	354	14.69	32.63	9.57	35.08	119	B
291	12262	4228.9	6707.6	21	10	2016	16:26	344	14.70	32.63	9.23	35.18	6	W
292	12242	4231.1	6956.5	22	10	2016	5:15	175	14.75	32.58	7.49	33.63	8	B
294	12239	4218.0	7001.0	22	10	2016	9:13	109	14.96	32.43	7.50	33.24	8	V
295	12235	4214.0	7013.8	22	10	2016	12:02	31	15.15	32.27	14.72	32.32	8	V
296	12135	4206.4	7013.3	22	10	2016	15:16	64	15.07	32.29	12.93	32.69	6	V
297	12136	4205.6	7023.9	22	10	2016	18:19	62	15.35	32.27	10.45	32.45	2	V
298	12134	4201.5	7022.6	22	10	2016	19:51	55	15.61	32.22	14.16	32.43	10	V
299	12325	4159.3	7012.7	22	10	2016	21:33	40	15.59	32.15	14.09	32.41	10	V
300	12322	4152.7	7012.6	22	10	2016	23:52	29	15.50	32.12	15.50	32.12	7	B
301	12323	4149.7	7016.5	23	10	2016	2:05	24	15.71	32.05	15.71	32.04	10	V
302	12324	4150.2	7023.5	23	10	2016	4:30	26	15.52	32.03	15.53	32.03	10	V
303	12326	4158.4	7026.5	23	10	2016	6:51	43	15.29	32.12	14.64	32.29	8	V
304	12327	4200.9	7030.1	23	10	2016	8:47	40	15.03	32.15	14.97	32.20	9	V
305	12328	4213.7	7035.7	23	10	2016	13:27	33	14.78	32.20	14.59	32.22	9	V
306	12332	4216.3	7033.5	23	10	2016	15:11	62	14.58	32.32	11.66	32.43	9	V
307	12329	4215.1	7036.6	23	10	2016	17:33	37	14.67	32.24	14.57	32.25	10	V
308	12138	4219.3	7040.0	23	10	2016	20:23	48	14.57	32.33	14.11	32.36	6	W
309	13358	4224.4	7052.3	23	10	2016	22:25	31	14.34	32.28	14.34	32.27	10	W
310	12331	4238.1	7032.1	24	10	2016	2:14	63	14.23	32.41	11.29	32.65	8	V
311	12333	4238.4	7030.2	24	10	2016	3:45	83	14.08	32.42	10.77	32.87	7	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
313	12330	4248.3	7044.6	24	10	2016	9:34	35	13.61	31.49	11.55	32.64	10	V
314	12288	4253.0	7035.9	24	10	2016	13:32	73	13.91	32.39	9.22	32.73	7	V
315	12286	4258.1	7026.3	24	10	2016	15:59	101	13.78	32.50	8.66	32.92	8	W
316	12232	4244.2	7023.6	24	10	2016	18:18	77	13.53	32.53	11.60	32.78	5	V
317	12233	4241.3	7017.3	24	10	2016	20:17	148	13.52	32.56	10.06	33.12	9	V
318	12236	4245.9	7016.8	24	10	2016	22:14	60	13.35	32.55	9.77	33.01	7	W
319	12234	4251.4	7010.5	25	10	2016	0:23	61	13.23	32.56	11.72	32.78	9	V
320	12240	4241.0	6959.7	25	10	2016	2:56	190	13.28	32.70	7.79	33.86	5	B
321	12248	4252.5	6944.1	25	10	2016	6:58	205	12.29	33.11	8.29	34.22	4	B
322	11971	4248.3	6917.3	25	10	2016	12:30	76	12.56	33.13	8.46	33.21	8	V
323	11970	4246.6	6917.3	25	10	2016	14:23	73	12.55	33.13	8.70	33.17	9	V
324	11972	4245.7	6915.3	25	10	2016	19:59	77	12.25	33.08	8.30	33.22	6	B
325	11976	4255.6	6917.2	25	10	2016	23:38	167	12.36	33.04	7.52	33.50	3	B
326	11975	4305.1	6907.6	26	10	2016	2:37	156	12.60	33.22	7.84	33.39	9	V
327	13458	4309.9	6911.9	26	10	2016	5:30	196	12.52	33.12	7.48	33.50	7	V
328	11973	4314.5	6908.7	26	10	2016	8:00	183	12.49	33.24	8.59	33.77	9	V
329	11974	4312.5	6854.6	26	10	2016	12:35	163	12.50	33.11	9.31	33.98	6	V
330	11977	4327.9	6830.0	26	10	2016	16:42	179	12.98	32.80	9.07	34.19	6	B
331	11983	4323.5	6823.3	26	10	2016	19:11	185	12.88	32.89	8.64	34.18	9	V
332	12280	4320.9	6811.5	26	10	2016	22:00	202	12.75	33.14	9.44	34.62	5	B
333	12284	4314.7	6750.6	27	10	2016	1:28	236	12.73	33.04	10.02	34.83	8	V
334	12281	4258.7	6757.9	27	10	2016	6:08	178	13.06	32.79	8.79	34.37	9	V
335	12276	4249.8	6821.8	27	10	2016	10:41	231	12.80	32.88	8.88	34.53	7	V
336	12225	4224.4	6836.7	27	10	2016	14:35	201	13.06	32.86	8.43	34.24	7	V
337	13320	4212.7	7035.1	2	11	2016	4:25	40	12.92	32.27	12.76	32.30	8	V
338	13396	4204.8	7006.0	2	11	2016	8:51	22	12.76	32.46	12.76	32.46	10	W
339	13236	4148.2	6954.0	2	11	2016	12:34	24	12.77	32.56	12.77	32.55	7	V
340	12321	4147.0	6953.9	2	11	2016	14:34	22	12.72	32.55	12.72	32.55	10	V

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341	12230	4143.6	6950.1	2	11	2016	17:01	41	12.84	32.59	12.34	32.72	9	V
342	12217	4150.7	6947.0	2	11	2016	18:51	119	12.86	32.59	9.11	33.12	9	V
343	12215	4151.5	6947.4	2	11	2016	21:18	117	12.73	32.64	8.68	33.12	8	V
344	12238	4211.1	6946.2	3	11	2016	0:09	214	12.51	32.75	7.78	33.92	7	V
345	12245	4235.0	6941.6	3	11	2016	3:54	253	11.92	32.95	8.73	34.49	6	W
346	12244	4224.9	6932.6	3	11	2016	6:05	265	12.25	32.78	8.39	34.27	24	B
347	12244	4224.0	6932.9	3	11	2016	6:36	272	12.19	32.83	8.46	34.31	6	V
348	12246	4211.5	6931.4	3	11	2016	9:05	234	12.21	32.84	8.13	34.15	12	V
349	12227	4208.7	6910.9	3	11	2016	11:51	197	13.11	32.64	7.52	33.83	8	B
350	12243	4200.8	6909.8	3	11	2016	14:11	208	13.14	32.65	7.49	33.81	11	V
351	12222	4151.0	6907.5	3	11	2016	16:58	205	13.14	32.64	7.64	33.86	8	V
352	12221	4155.0	6856.1	3	11	2016	19:22	167	13.13	32.65	6.89	33.39	8	V
353	12223	4155.7	6842.2	3	11	2016	21:40	158	12.67	32.82	6.83	33.36	6	B
354	12224	4207.3	6841.3	4	11	2016	1:24	189	12.96	32.68	8.08	33.95	8	B
355	12247	4219.0	6849.9	4	11	2016	5:13	210	12.67	32.75	8.62	34.29	9	W
356	12277	4258.3	6736.4	4	11	2016	13:52	211	12.43	33.17	9.02	34.53	19	W
357	12285	4252.5	6735.1	4	11	2016	15:53	226	12.49	33.15	9.48	34.65	27	B
359	12253	4243.2	6711.7	4	11	2016	19:59	227	12.41	32.37	9.40	35.16	5	V
360	13415	4238.8	6714.7	4	11	2016	22:04	269	12.38	32.42	9.52	35.15	7	V
361	12254	4240.8	6655.3	5	11	2016	0:52	214	13.42	32.39	9.42	35.22	3	V
362	12275	4252.2	6657.2	5	11	2016	3:43	208	12.49	32.14	9.89	35.02	11	W
363	12263	4318.7	6632.8	5	11	2016	8:50	90	11.92	31.94	11.95	33.52	6	V
364	12266	4317.8	6651.4	5	11	2016	11:52	192	12.34	32.71	10.06	34.71	6	W
365	12269	4341.1	6652.9	5	11	2016	14:58	136	12.02	32.92	11.26	34.34	1	B
366	12268	4355.1	6706.1	5	11	2016	17:57	161	12.19	32.58	10.88	34.70	7	V
367	12274	4350.1	6722.3	5	11	2016	20:15	219	12.03	32.84	10.58	34.80	7	V
368	12264	4353.4	6720.2	5	11	2016	22:16	218	11.89	32.64	10.67	34.85	7	V
369	12264	4353.0	6720.3	5	11	2016	22:37	219	12.17	32.92	10.65	34.84	25	B

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370	12265	4403.5	6719.0	6	11	2016	1:01	158	11.93	32.73	10.55	34.74	7	V
371	12267	4401.3	6702.9	6	11	2016	3:16	141	11.86	32.72	10.84	34.71	8	V
372	12273	4407.1	6645.9	6	11	2016	6:00	122	12.22	32.57	11.60	34.32	9	B
373	12272	4417.5	6640.6	6	11	2016	8:39	191	12.09	32.80	11.31	34.50	6	W
374	12270	4416.4	6637.4	6	11	2016	10:59	203	12.13	32.88	11.70	34.25	7	V
375	12271	4415.3	6712.7	6	11	2016	15:02	193	12.13	32.59	10.39	34.66	4	W
376	13326	4419.3	6730.4	6	11	2016	18:50	102	12.04	32.77	11.78	33.19	6	V
377	11981	4416.0	6732.5	6	11	2016	20:43	135	11.86	32.63	11.47	33.58	8	B
378	12283	4410.6	6732.5	6	11	2016	22:47	197	11.79	32.78	10.07	34.74	3	V
379	12282	4404.8	6734.9	7	11	2016	1:38	262	11.69	32.85	9.95	34.75	6	V
380	11989	4414.0	6757.3	7	11	2016	5:24	75	11.66	32.79	11.99	32.99	6	W
381	11985	4402.3	6759.7	7	11	2016	9:25	144	11.78	32.88	11.53	33.89	5	V
382	12279	4353.9	6751.4	7	11	2016	12:14	187	11.94	32.52	10.11	34.64	8	W
383	12278	4350.1	6759.0	7	11	2016	14:48	172	11.89	32.54	10.06	34.56	7	B
384	11979	4342.6	6804.2	7	11	2016	17:12	174	12.05	32.58	9.51	34.63	7	V
385	11986	4349.8	6836.9	7	11	2016	22:14	104	11.77	32.70	12.12	33.22	9	V
386	11984	4337.9	6854.2	8	11	2016	7:23	120	11.76	32.56	12.17	33.43	6	W
387	13359	4342.4	6930.9	8	11	2016	14:27	113	11.86	32.96	11.59	33.37	3	W
388	11978	4337.0	6927.3	8	11	2016	20:21	142	12.25	32.69	10.63	33.59	5	V
389	11980	4330.5	6934.9	8	11	2016	22:36	158	NaN	NaN	9.36	33.56	6	V
390	11982	4318.6	6930.5	9	11	2016	1:31	189	12.00	33.07	7.72	33.45	8	V
391	12241	4319.5	7002.9	9	11	2016	4:38	199	12.03	32.95	8.93	33.48	6	W
392	12249	4304.0	6954.9	9	11	2016	7:42	198	11.98	33.14	8.21	34.17	8	W

Deployment codes: B=bongo cast; W=water cast; and V=vertical cast
Records in bold are collected with SBE0832