

*Oceans and Climate Branch CTD Data Report
CTD_REPORT_2021006PC*

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DATE: 5 December 2022

Oceans and Climate Branch CTD Data Report

CTD_REPORT_2021006PC

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

PC 2106
Fall ECOMON Survey
Data Coverage: October 15 - 25, 2021
Mid Atlantic Bight, Georges Bank, Gulf of Maine

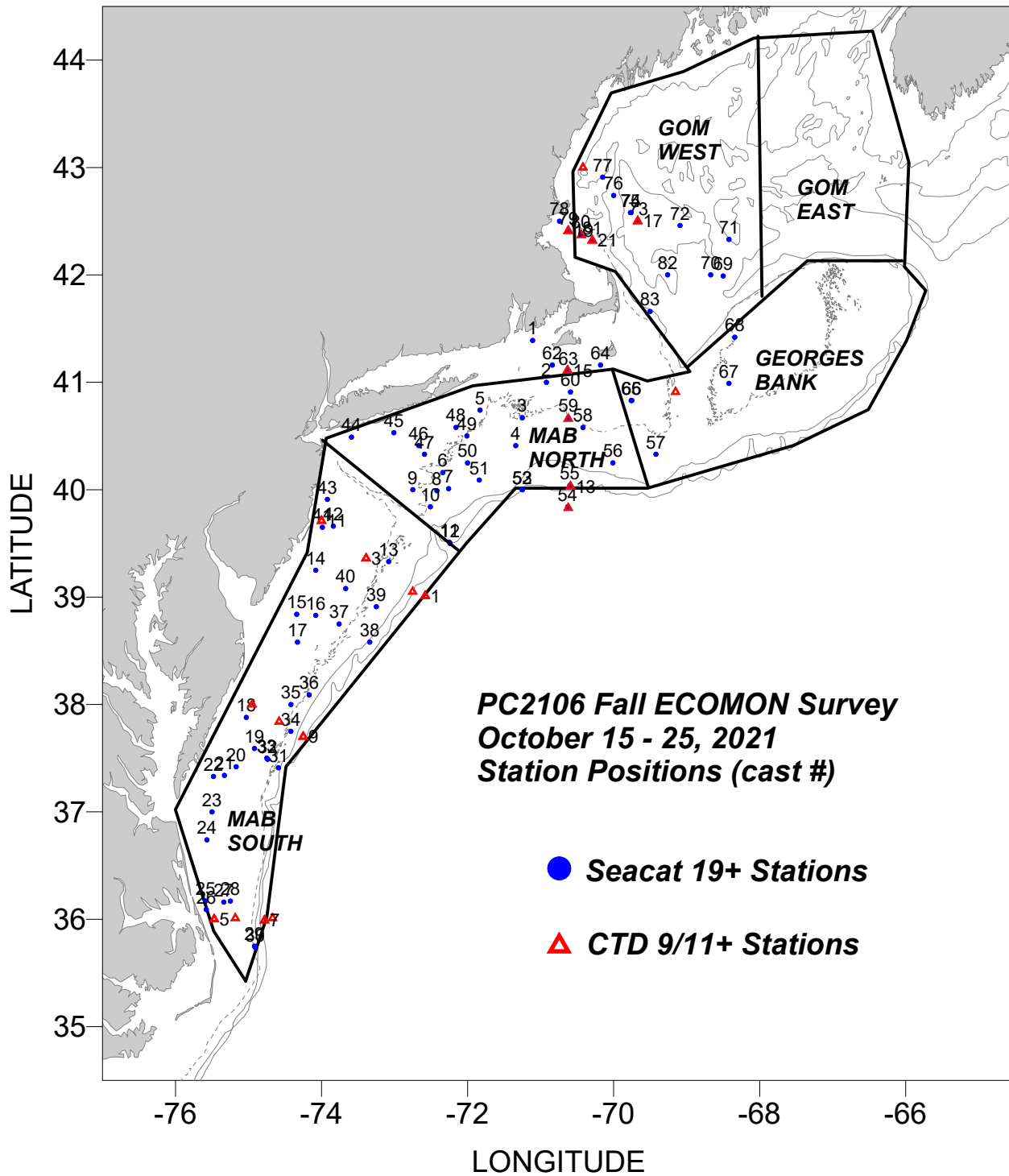
This report presents a summary of surface and bottom temperature and salinity data collected during the Northeast Fisheries Science Center's PC2106 Fall ECOMON Survey aboard the NOAA FSV *Pisces*. Data was obtained with two Sea-Bird Electronics SBE Model 19+V2 profiling CTDs (s/n 7143 and s/n 4758) during double oblique bongo tows and on vertical casts with a SBE Model 9/11+ s/n 1010. Sea water samples were taken for the purpose of calibrating salinity values.

The SBE19+V2 was successfully deployed on 78 double oblique bongo casts and 3 vertical casts. The SBE9/11+ was used successfully on 21 stations.

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 by contacting [Dr. Chris Melrose](#)

Revised: January 27, 2022



**Areal average surface and bottom temperature/salinity and temperature/salinity anomalies for the
PC2106 Fall ECOMON Survey
October 15 - 28, 2021**

		SURFACE						BOTTOM					
Region	CD	#obs	Temp (degC)	Anomaly	SDV1	SDV2	Flag	#obs	Temp (degC)	Anomaly	SDV1	SDV2	Flag
WGOM	297	17	14.62	2.97	1.07	0.50	1	14	9.37	1.81	0.87	0.47	1
GB	296	4	16.16	1.73	1.09	0.90	1	4	15.48	2.28	1.23	1.57	1
MABN	293	28	19.00	3.13	0.30	0.81	0	27	15.27	2.63	0.33	1.52	0
MABS	292	41	20.40	2.27	0.28	1.10	0	38	17.27	2.48	0.33	2.49	0

		SURFACE						BOTTOM					
Region	CD	#obs	Salinity	Anomaly	SDV1	SDV2	Flag	#obs	Salinity	Anomaly	SDV1	SDV2	Flag
WGOM	297	17	32.36	-0.03	0.48	0.24	1	14	33.44	0.16	0.30	0.29	1
GB	296	4	32.78	0.01	0.39	0.07	1	4	33.15	0.27	0.43	0.14	1
MABN	293	28	33.48	0.58	0.13	0.60	0	27	34.00	0.40	0.12	0.42	0
MABS	292	41	33.23	0.52	0.16	0.92	0	38	33.42	0.00	0.12	0.84	0

"Region"; WGOM is the Western Gulf of Maine; GB is Georges Bank; MABN is the northern Mid-Atlantic Bight;

MABS is the southern Mid-Atlantic Bight;

"CD": the calendar mid-date of all the stations within a region for a cruise;

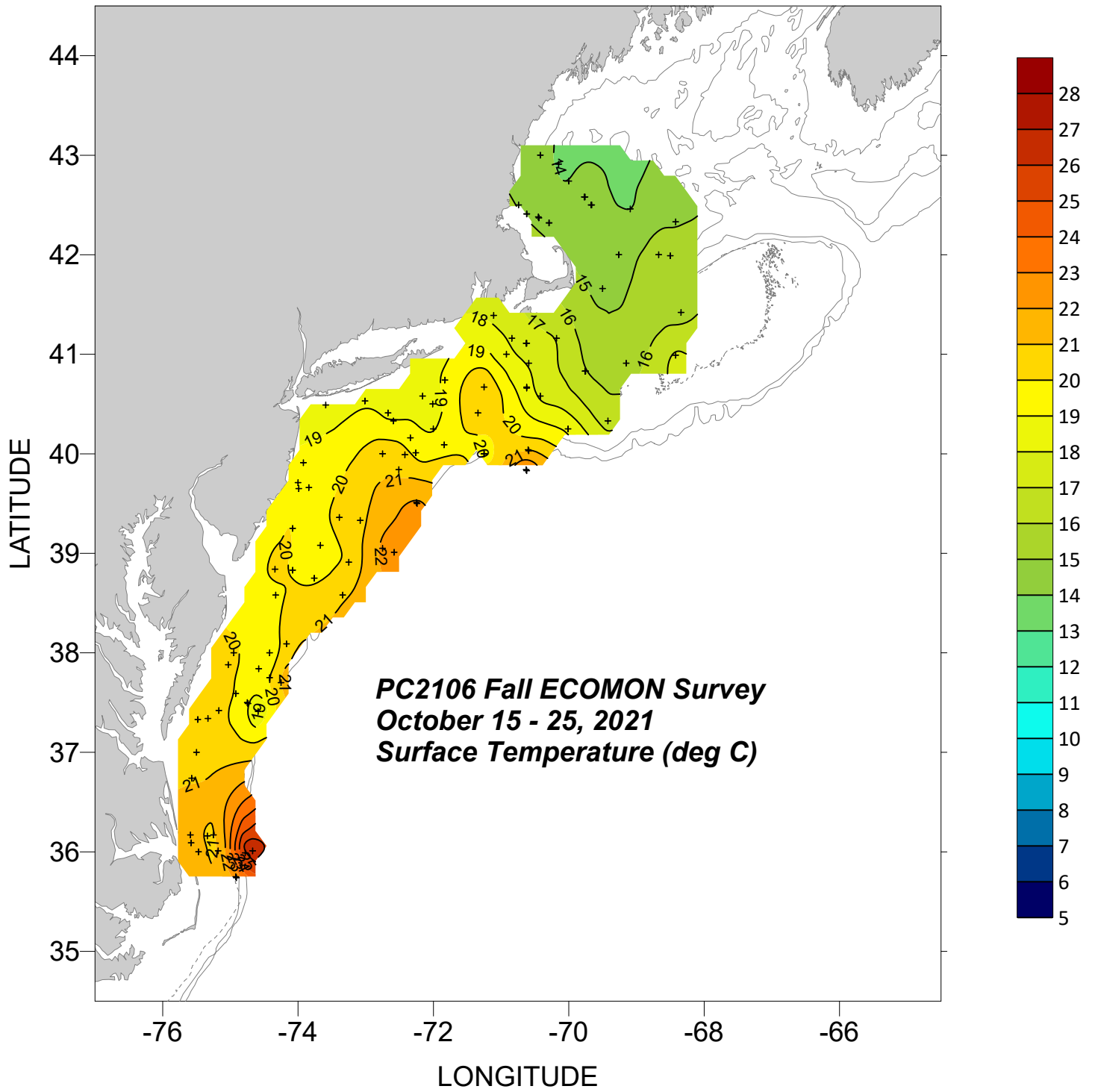
"#obs": the number of observations included in each average;

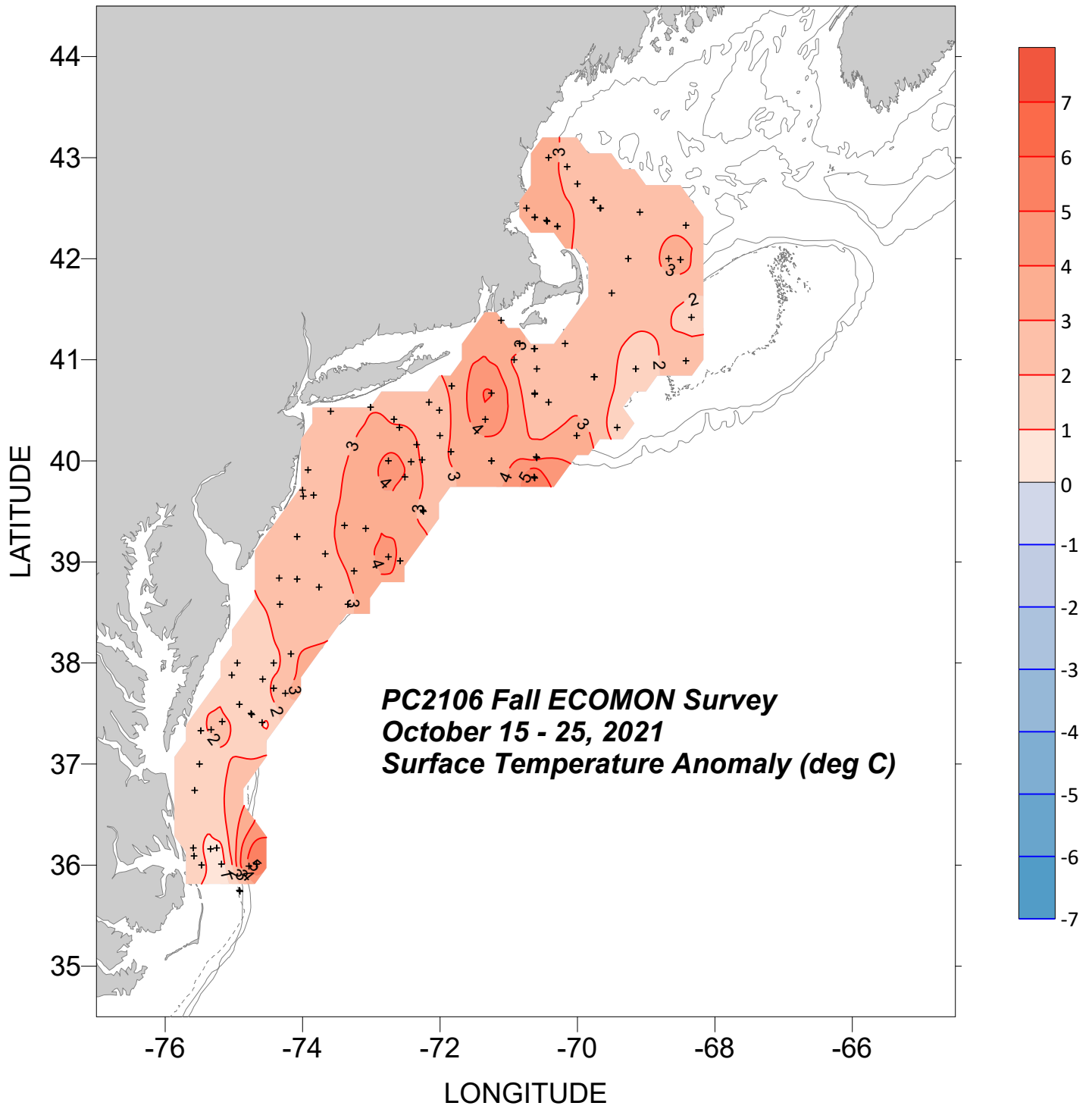
Temp (degC)/"Salt": the areal averaged temperature or salinity; "Anomaly": the areal averaged temp/salt anomaly;

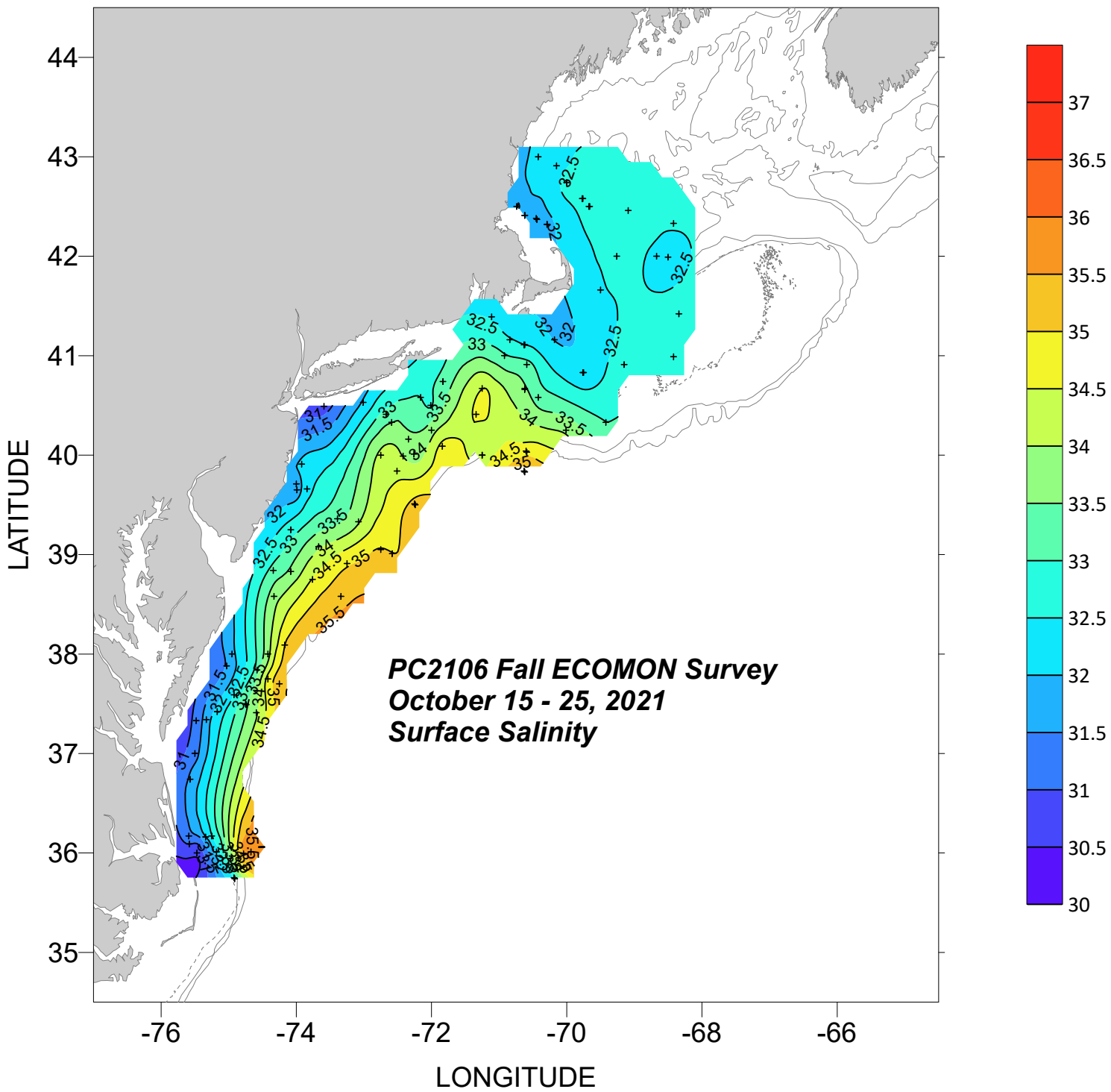
"SDV1": the standard deviation associated with the average temp/salt anomaly;

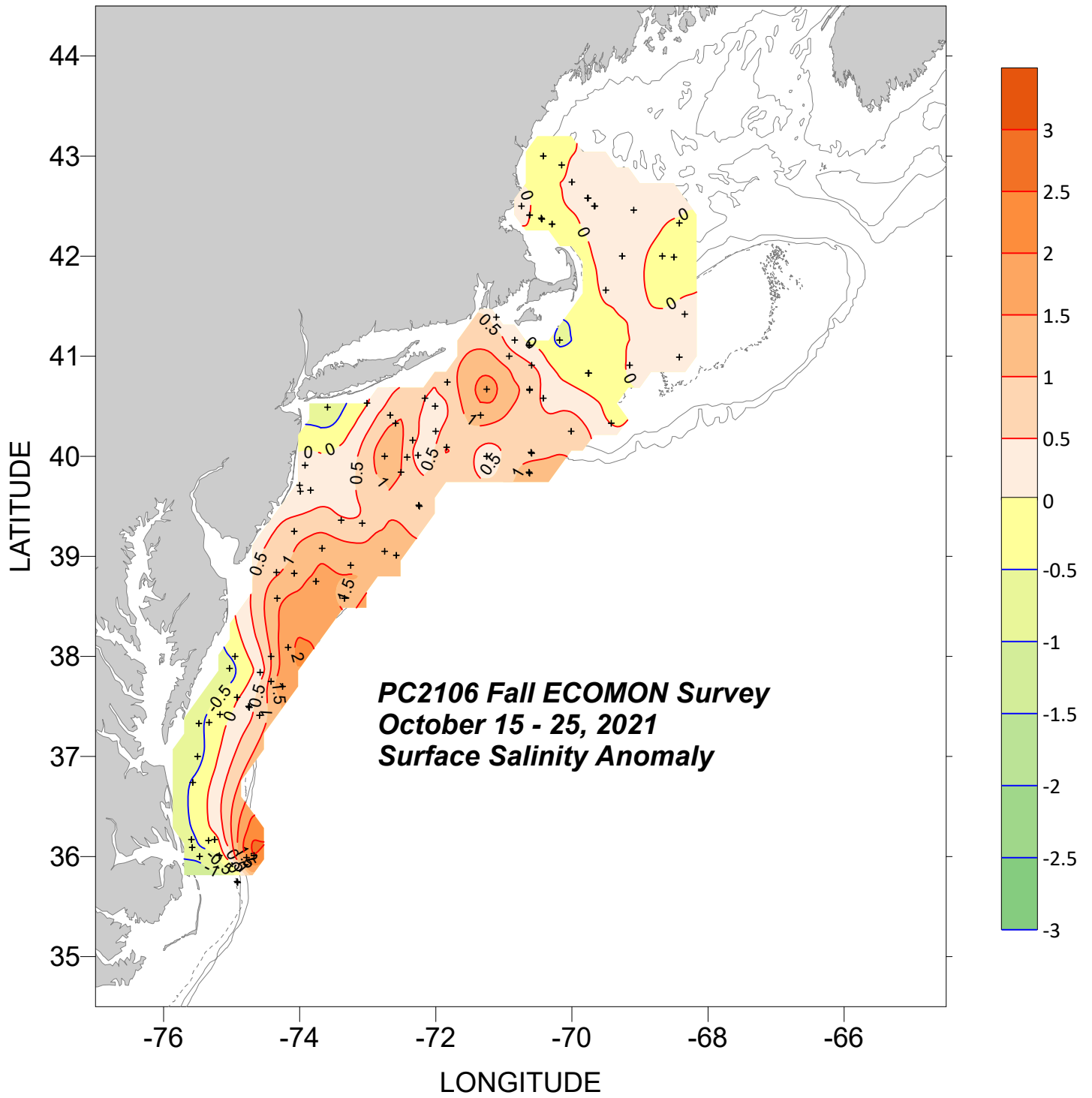
"SDV2": the standard deviation of the individual anomalies from which the average anomaly was derived;

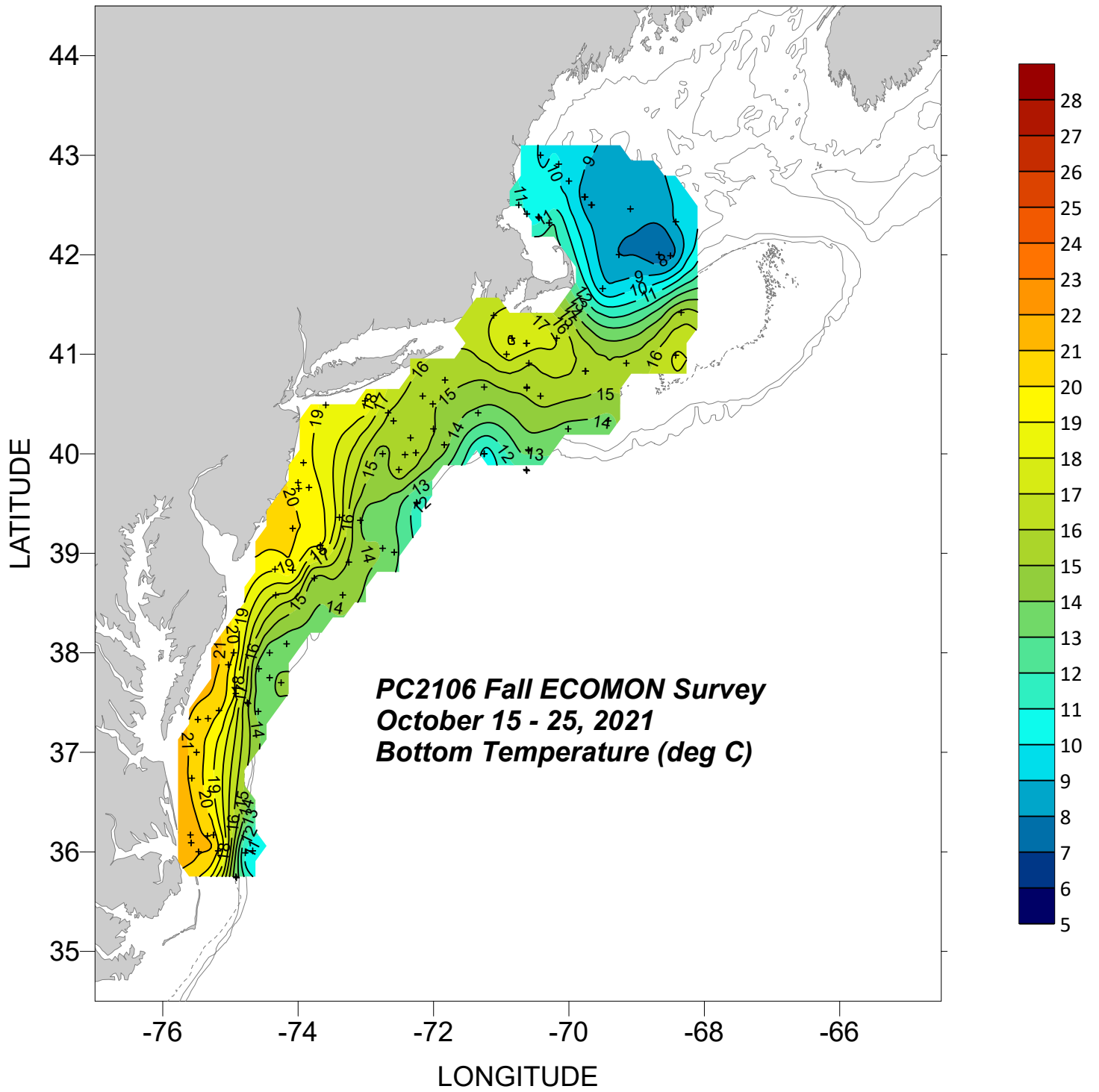
"Flag": a value of "1" indicates that a true areal average could not be calculated due to poor station coverage. The areal averages listed were derived from a simple average of the observations within the region.

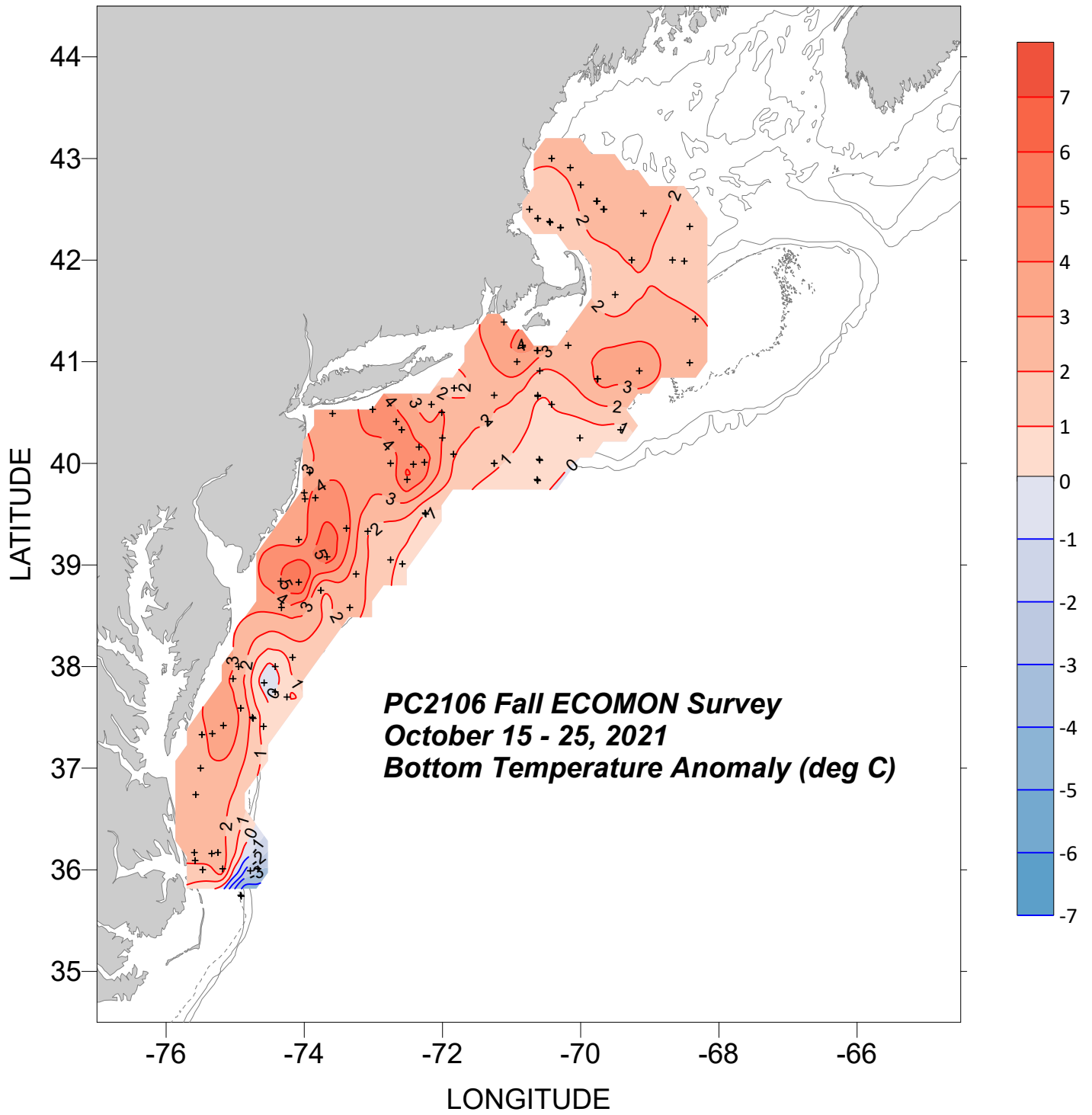


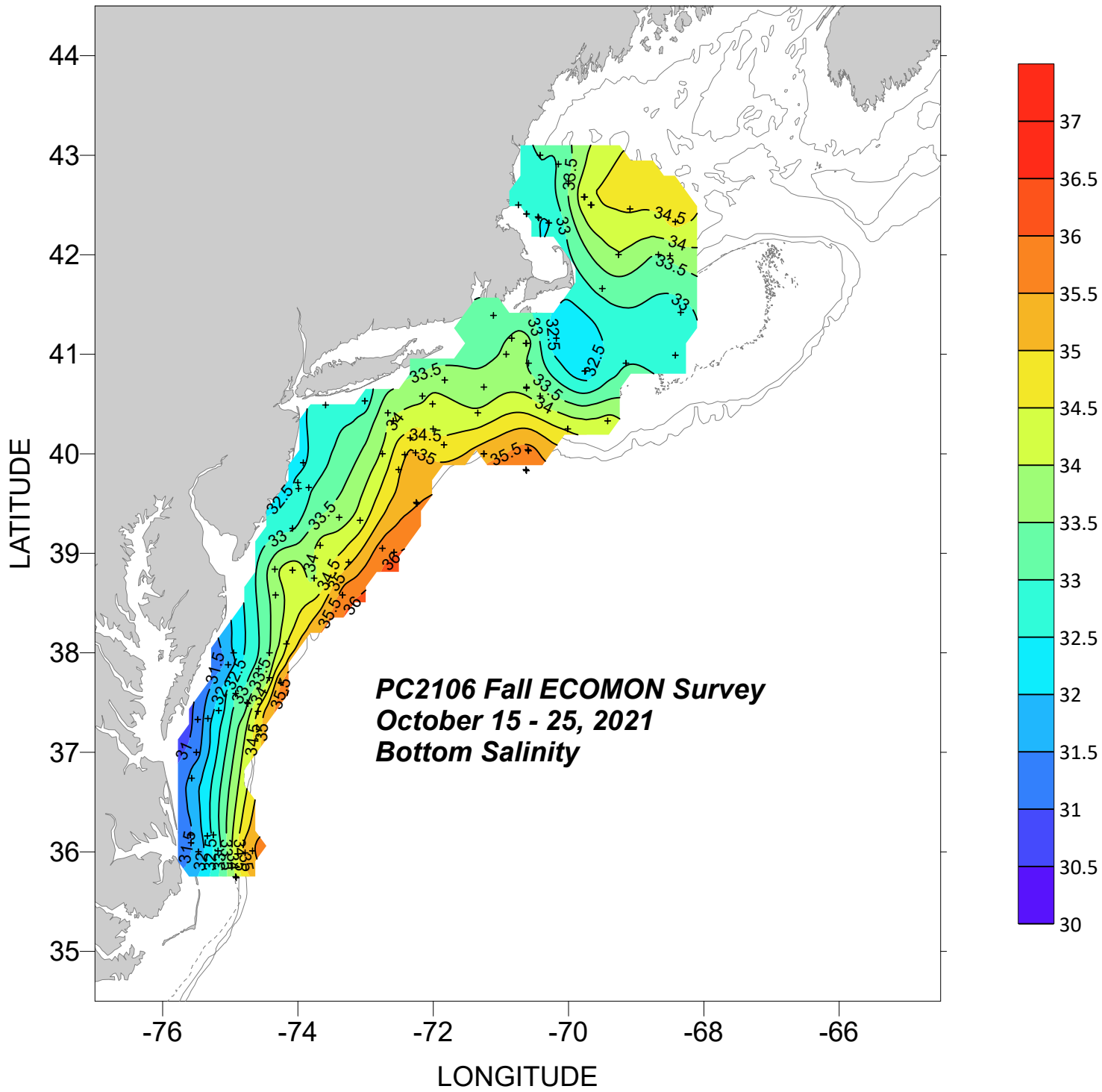


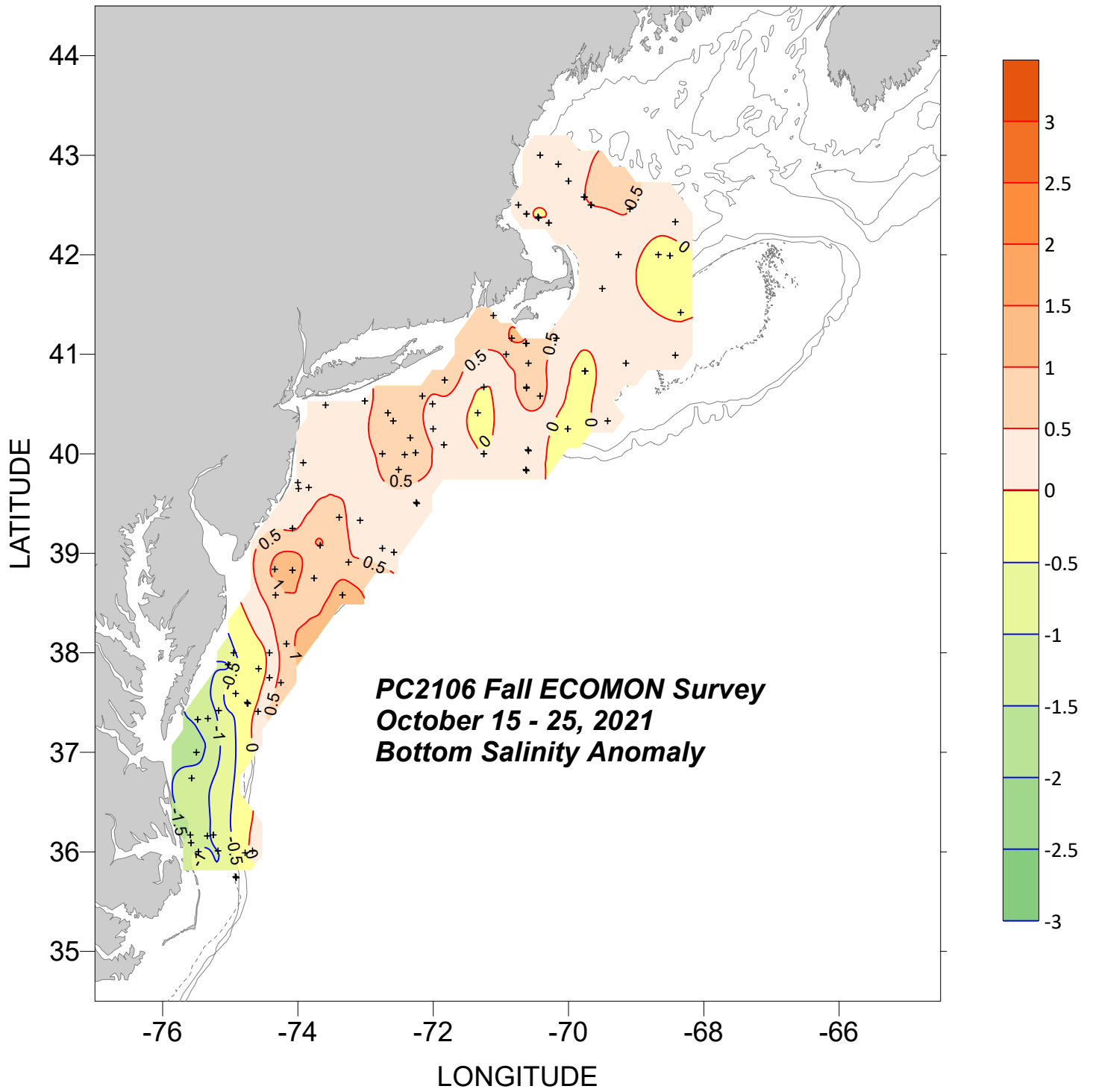












PC2106 Fall ECOMON Survey
October 15 - 28, 2021

Cast #	Station #	Lat (DDMM.M)	Long (DDMM.M)	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
2	2	4059.9	7055.0	15	10	2021	23:58	48	18.07	33.03	17.50	33.53	3	B
3	3	4040.1	7114.9	16	10	2021	2:54	62	21.13	34.65	14.51	33.64	4	B
4	4	4024.9	7120.2	16	10	2021	4:46	77	20.91	34.58	13.90	34.05	3	B
5	5	4044.5	7150.0	16	10	2021	8:10	56	19.20	33.15	15.35	33.70	3	B
6	6	4009.9	7220.2	16	10	2021	12:43	69	19.65	33.59	15.27	34.71	4	B
7	7	4000.5	7215.6	16	10	2021	14:04	79	19.45	33.48	15.71	35.08	5	B
8	8	3959.7	7225.0	16	10	2021	15:05	69	20.50	34.09	16.08	35.08	5	B
9	9	3959.8	7244.8	16	10	2021	16:55	56	20.75	34.26	14.34	34.03	3	B
10	10	3950.2	7230.3	16	10	2021	18:52	65	20.67	34.35	15.97	34.95	3	B
11	11	3930.4	7214.9	16	10	2021	21:39	247	22.30	35.20	13.81	35.75	45	B
12	11	3930.0	7214.4	16	10	2021	22:06	289	22.27	35.19	11.41	35.46	8	V
1	12	3900.8	7234.9	17	10	2021	2:11	982	22.18	34.86	6.60	35.09	461	W
2	13	3903.0	7244.9	17	10	2021	3:58	184	22.37	35.14	14.24	35.79	7	W
13	14	3919.7	7305.0	17	10	2021	7:04	62	20.67	33.89	13.45	34.19	5	B
3	15	3921.7	7323.1	17	10	2021	8:58	49	20.39	33.24	17.76	33.73	4	W
14	16	3915.1	7404.6	17	10	2021	12:51	28	20.10	32.82	20.10	32.85	4	B
15	17	3850.1	7420.1	17	10	2021	23:02	33	20.12	33.17	19.12	33.89	3	B
16	18	3849.7	7404.7	18	10	2021	0:35	46	19.96	33.54	19.93	34.38	4	B
17	19	3835.0	7419.8	18	10	2021	2:49	42	19.89	33.83	16.81	33.71	4	B
4	20	3759.9	7457.1	18	10	2021	7:46	24	20.22	31.92	20.28	32.11	3	W
18	21	3753.0	7501.8	18	10	2021	8:47	24	20.20	31.39	20.26	31.45	4	B
19	22	3735.1	7455.3	18	10	2021	10:56	38	19.95	32.50	19.06	33.20	3	B
20	23	3725.0	7510.0	18	10	2021	12:46	29	20.27	32.18	20.29	32.18	6	B
21	24	3720.1	7519.8	18	10	2021	13:57	29	20.38	31.84	20.35	31.91	5	B
22	25	3719.9	7529.0	18	10	2021	15:01	21	20.34	31.08	20.35	31.10	5	B
23	26	3659.9	7529.9	18	10	2021	17:19	26	20.60	31.25	20.59	31.26	5	B
24	27	3644.4	7534.4	18	10	2021	19:14	23	20.97	31.64	20.77	31.71	4	B
25	28	3610.1	7535.1	18	10	2021	23:01	23	21.54	31.32	21.57	31.36	3	B
26	29	3605.5	7534.5	18	10	2021	23:54	24	21.74	31.15	21.43	31.45	4	B

PC2106 Fall ECOMON Survey
October 15 - 28, 2021

Cast #	Station #	Lat (DDMM.M)	Long (DDMM.M)	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
5	30	3559.9	7528.3	19	10	2021	1:01	22	21.63	30.18	21.16	31.67	2	W
27	31	3609.9	7520.1	19	10	2021	2:39	32	20.72	32.15	20.63	32.37	4	B
28	32	3610.1	7515.2	19	10	2021	3:20	28	20.72	32.38	20.72	32.57	4	B
6	33	3600.4	7510.8	19	10	2021	4:42	34	20.57	32.15	21.03	32.72	2	W
29	34	3545.1	7455.4	19	10	2021	6:55	64	22.26	32.36	13.21	33.99	1	B
30	34	3544.4	7454.3	19	10	2021	9:06	72	21.79	32.88	13.50	34.22	4	B
7	35	3559.7	7447.0	19	10	2021	11:12	345	26.81	36.01	10.19	35.31	3	W
8	36	3600.3	7440.4	19	10	2021	12:27	1217	26.71	35.97	6.51	35.09	712	W
31	37	3724.4	7435.4	19	10	2021	22:09	81	17.75	33.85	13.68	34.76	5	B
32	38	3729.6	7444.6	19	10	2021	23:27	55	19.34	33.44	13.99	NaN	1	B
33	38	3729.9	7445.0	20	10	2021	0:09	50	19.40	33.57	14.68	33.14	4	B
9	39	3741.9	7415.1	20	10	2021	3:19	121	21.43	35.30	14.92	35.81	1	W
34	40	3744.8	7425.1	20	10	2021	4:31	64	19.81	34.88	13.02	33.83	3	B
10	41	3750.6	7434.6	20	10	2021	5:52	53	19.63	33.00	13.07	33.21	3	W
35	42	3759.8	7425.3	20	10	2021	7:23	53	18.99	33.78	13.31	33.43	7	B
36	43	3805.1	7410.5	20	10	2021	8:57	70	20.64	35.09	13.45	34.46	5	B
37	44	3844.9	7345.3	20	10	2021	13:40	50	19.85	34.56	13.96	33.71	4	B
38	45	3834.8	7320.1	20	10	2021	16:06	97	20.84	35.31	14.90	35.80	5	B
39	46	3854.7	7315.0	20	10	2021	18:44	63	20.11	35.01	14.66	34.86	1	B
40	47	3904.8	7340.0	20	10	2021	21:17	42	19.48	33.97	19.44	34.19	4	B
41	48	3938.9	7359.6	21	10	2021	1:20	23	19.04	31.66	19.56	32.49	6	B
11	49	3942.4	7400.1	21	10	2021	2:03	22	19.05	31.71	19.68	32.62	3	W
42	50	3939.8	7350.2	21	10	2021	3:20	31	19.21	32.38	19.57	32.96	4	B
43	51	3954.9	7355.2	21	10	2021	5:18	22	19.29	32.28	19.26	32.37	4	B
44	52	4029.7	7335.1	21	10	2021	10:14	24	18.36	30.66	18.80	32.90	6	B
45	53	4031.6	7300.4	21	10	2021	13:08	32	18.85	32.04	19.13	32.73	7	B
46	54	4024.6	7240.4	21	10	2021	15:01	46	18.77	33.15	15.78	34.02	4	B
47	55	4019.8	7235.1	21	10	2021	15:50	51	18.97	33.62	15.80	34.00	4	B

PC2106 Fall ECOMON Survey
October 15 - 28, 2021

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48	56	4034.9	7209.9	21	10	2021	18:37	53	18.59	33.05	15.30	33.80	6	B
49	57	4029.8	7200.7	21	10	2021	19:45	62	18.42	32.90	15.06	34.34	5	B
50	58	4015.2	7200.0	21	10	2021	21:23	62	18.88	33.78	15.07	34.40	6	B
51	59	4005.4	7150.5	21	10	2021	22:50	81	19.69	34.78	14.48	34.60	5	B
52	60	4000.1	7114.9	22	10	2021	1:57	260	19.29	34.11	12.40	35.59	60	B
53	60	4000.0	7115.0	22	10	2021	2:44	260	19.30	34.09	10.31	35.32	7	V
54	61	3950.2	7037.5	22	10	2021	6:14	878	23.44	35.67	12.48	35.60	677	B
12	61	3949.7	7037.2	22	10	2021	6:45	878	22.93	35.59	6.17	35.07	373	W
55	62	4002.6	7036.1	22	10	2021	8:46	158	20.30	34.55	13.73	35.78	5	B
13	62	4002.0	7035.7	22	10	2021	9:19	178	21.15	34.91	13.04	35.68	3	W
56	63	4015.0	7000.6	22	10	2021	12:43	94	18.83	33.96	13.59	34.47	5	B
57	64	4019.8	6925.0	22	10	2021	16:03	76	16.50	32.99	13.61	34.21	7	B
58	65	4034.7	7025.1	22	10	2021	22:20	62	17.72	33.19	15.48	33.74	4	B
59	66	4040.2	7037.2	22	10	2021	23:41	61	18.39	33.62	15.21	33.80	5	B
14	66	4039.9	7037.3	23	10	2021	0:07	61	18.36	33.60	15.21	33.81	2	W
60	67	4054.7	7035.6	23	10	2021	1:52	51	17.99	33.24	15.65	33.45	5	B
62	68	4109.8	7050.7	23	10	2021	4:18	30	17.94	32.47	18.34	33.57	4	B
63	69	4106.3	7037.3	23	10	2021	5:39	40	17.40	32.48	18.04	33.77	4	B
15	69	4106.3	7037.6	23	10	2021	5:55	43	17.40	32.47	17.92	33.77	3	W
64	70	4109.9	7011.0	23	10	2021	8:28	24	17.06	31.92	17.20	32.08	3	B
65	71	4050.0	6945.4	23	10	2021	12:57	36	15.91	32.07	15.91	32.07	6	B
66	71	4049.7	6945.0	23	10	2021	13:18	35	16.04	32.08	16.08	32.11	5	B
16	72	4054.4	6909.2	23	10	2021	16:21	67	15.37	32.83	15.49	32.98	5	W
67	73	4059.7	6825.0	23	10	2021	22:02	45	17.24	32.61	17.26	32.62	5	B
68	74	4125.0	6820.4	24	10	2021	1:14	57	15.52	32.67	15.57	32.79	6	B
69	75	4159.6	6830.1	24	10	2021	5:00	170	15.92	32.33	7.29	33.60	9	B
70	76	4159.9	6840.0	24	10	2021	6:19	166	15.61	32.38	7.06	33.39	2	B
71	77	4219.6	6825.4	24	10	2021	9:21	206	14.83	32.54	9.09	34.70	4	B

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72	78	4227.9	6905.2	24	10	2021	12:53	229	13.96	32.94	8.80	34.56	8	B
73	79	4229.9	6939.8	24	10	2021	15:53	255	14.14	32.69	8.26	34.21	53	B
17	79	4229.9	6940.0	24	10	2021	16:30	253	14.15	32.72	8.51	34.45	1	W
74	80	4234.7	6945.3	24	10	2021	17:32	231	14.77	32.57	8.35	34.32	28	B
75	80	4234.7	6946.2	24	10	2021	18:02	238	14.76	32.57	8.49	34.44	7	V
76	81	4244.5	7000.0	24	10	2021	19:47	167	13.92	32.78	7.62	33.38	11	B
77	82	4254.6	7009.1	24	10	2021	21:23	57	13.89	32.19	10.25	32.92	5	B
18	83	4300.0	7025.4	24	10	2021	22:57	101	14.31	32.08	9.78	33.07	3	W
78	84	4229.8	7044.7	25	10	2021	3:00	45	14.94	32.02	11.44	32.56	4	B
79	85	4224.8	7037.0	25	10	2021	4:02	83	14.89	31.94	10.50	32.75	4	B
19	85	4224.4	7037.2	25	10	2021	4:18	82	14.89	31.93	10.50	32.73	4	W
80	86	4222.7	7026.8	25	10	2021	5:28	84	14.78	31.76	10.03	32.61	4	B
20	86	4222.3	7026.6	25	10	2021	5:45	84	14.79	31.75	10.02	32.59	4	W
81	87	4219.1	7017.4	25	10	2021	7:00	33	14.69	31.83	12.43	32.31	6	B
21	87	4219.0	7017.6	25	10	2021	7:12	32	14.73	31.81	12.35	32.31	4	W
82	88	4200.2	6915.4	25	10	2021	12:11	203	14.63	32.65	7.94	33.98	7	B
83	89	4139.8	6929.9	25	10	2021	14:55	107	14.64	32.47	9.11	33.18	6	B

Deployment codes: B=bongo cast; W=water cast; and V=vertical cast

Records in bold are collected with an SBE911+ CTD