Northeast Fisheries Science Center
Woods Hole Laboratory
Woods Hole, Ma 02543

November 29, 2004

MEMORANDUM FOR: David Mountain
Linda Despres

FROM: Cristina Bascuñán (ext. 2243)

SUBJECT: ALB0402 – Winter Bottom Trawl Survey

CTD data from the Winter Bottom Trawl survey have been processed and are now available. There were 139 casts done, including 27 for calibrations.

Hydrographic data for this cruise may be found in the following location:

- whsun2: /ftp/pub/hydro/alb0402.dat (NODC file)

Please call if you have any questions.

ALB0402

Winter Bottom Trawl Survey

4 - 28 February, 2004

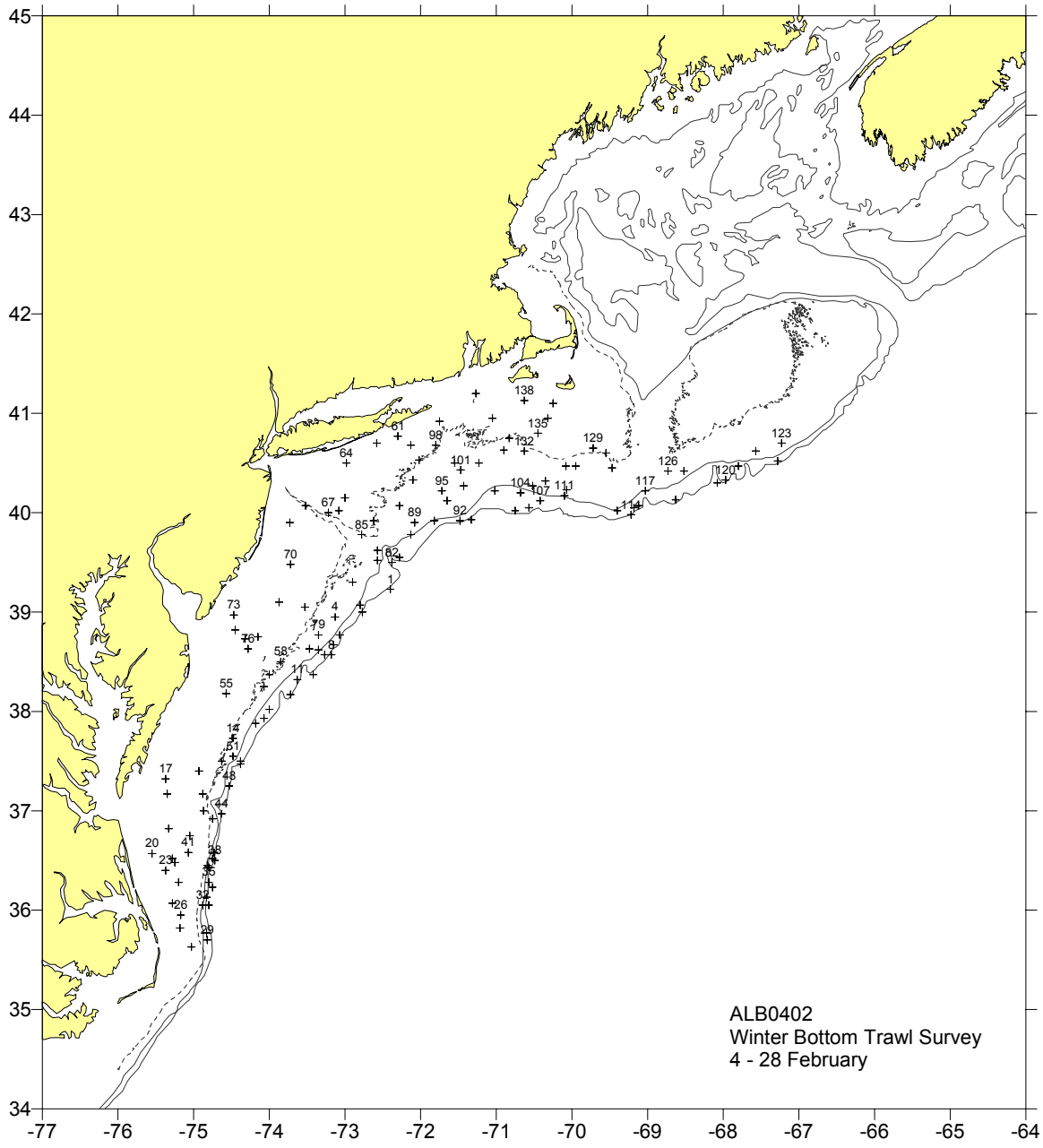
Cast #	Station #	Lat.	Lon.	Day	Month	Year	Time	Btm Depth	Sfc Temp.	Sfc Salt	Btm Temp.	Btm Salt	Metres from Btm
1	1	3914.2	7225.2	4	2	2004	23:42	240	9.0	34.51	10.8	35.39	7
2	1	3914.2	7224.8	5	2	2004	0:12	245	9.3	34.59	11.6	35.36	45
3	2	3904.4	7248.0	5	2	2004	4:24	120	9.2	34.48	9.2	34.70	5
4	3	3900.5	7248.1	5	2	2004	6:00	241	9.7	34.78	10.1	34.94	45
5	3	3900.6	7246.3	5	2	2004	6:30	339	9.7	34.63	8.4	35.16	7
6	4	3857.2	7308.3	5	2	2004	10:18	80	8.1	34.37	8.1	34.56	5
7	5	3846.3	7304.1	5	2	2004	12:11	147	9.0	34.65	9.3	34.77	4
9	7	3840.8	7309.3	5	2	2004	16:53	136	9.9	34.81	9.9	34.87	5
10	8	3834.1	7311.7	5	2	2004	19:36	441	10.1	34.81	6.5	35.05	6
11	9	3834.6	7316.8	5	2	2004	22:30	121	10.2	34.89	10.1	34.93	6
12	10	3822.6	7325.7	6	2	2004	0:41	315	10.5	35.00	9.2	35.20	5
13	11	3819.0	7338.4	6	2	2004	3:17	132	10.7	35.05	10.7	35.14	5
14	12	3810.0	7343.8	6	2	2004	5:11	155	10.4	9999	9.8	34.90	4
15	13	3801.7	7400.4	6	2	2004	7:30	112	11.0	9999	11.0	35.19	5
16	14	3744.5	7429.9	6	2	2004	11:00	60	7.6	34.33	7.7	34.56	6
17	15	3730.1	7438.5	6	2	2004	14:06	57	9.2	34.74	9.1	34.84	5
18	16	3724.7	7456.9	6	2	2004	16:36	34	7.1	34.31	7.1	34.32	6
19	17	3719.6	7522.4	6	2	2004	19:30	24	4.2	32.48	4.2	32.49	4
20	18	3710.0	7521.5	6	2	2004	21:17	27	4.6	9999	4.9	32.76	5
21	19	3649.3	7520.3	8	2	2004	22:23	24	5.3	33.12	5.4	33.18	6
22	20	3634.1	7533.0	9	2	2004	1:00	23	5.5	33.00	5.5	33.01	6
23	21	3631.4	7517.8	9	2	2004	3:00	20	6.9	34.11	7.1	34.18	5
24	22	3629.8	7515.7	9	2	2004	4:35	29	6.9	34.11	7.2	34.25	5
25	23	3624.4	7522.8	9	2	2004	6:00	25	6.2	33.58	6.2	33.66	6
26	24	3617.1	7512.8	9	2	2004	7:41	29	6.2	33.62	6.3	33.65	6

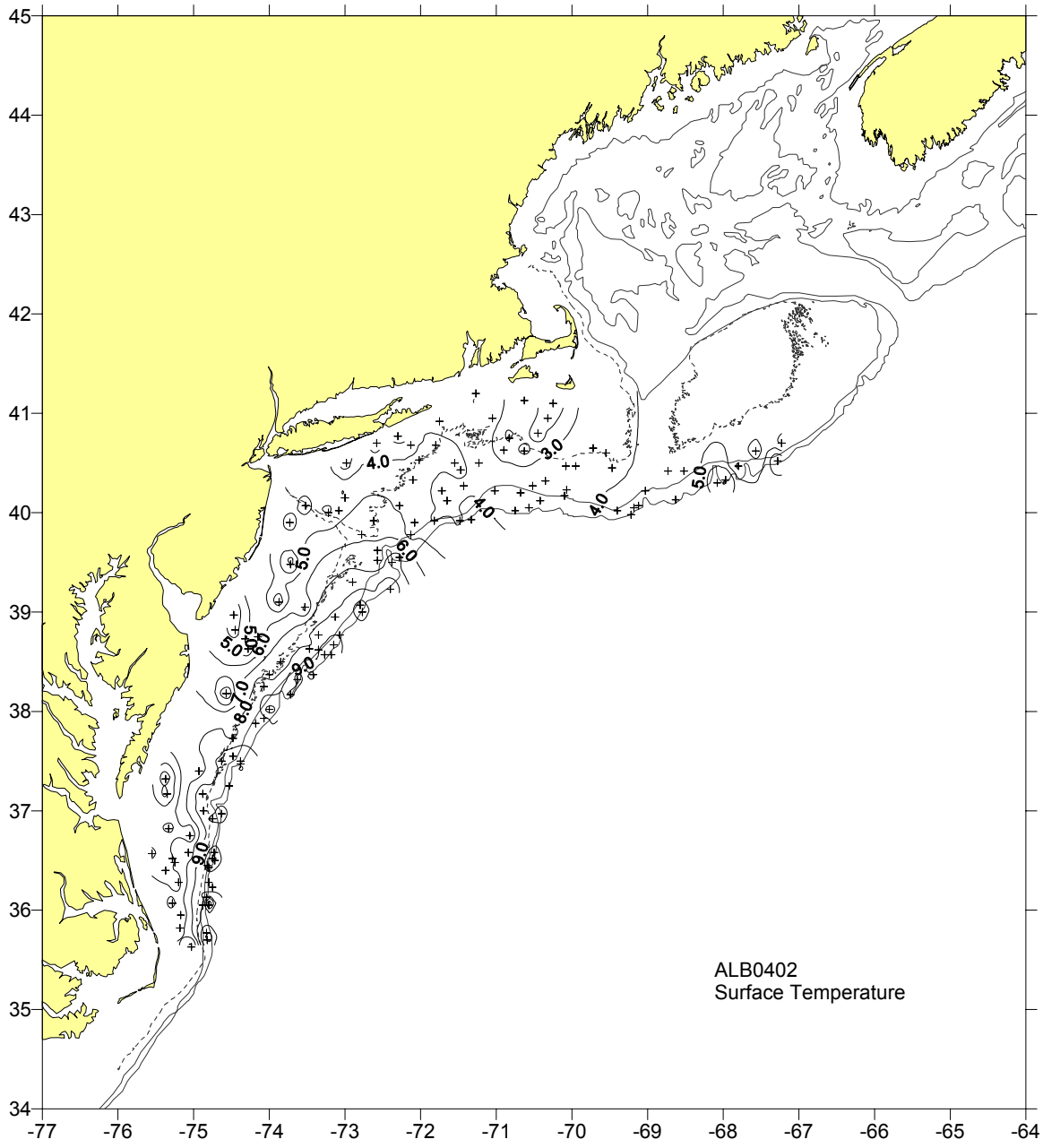
27	25	3604.4	7517.4	9	2	2004	9:41	33	6.6	33.75	6.6	33.90	6
28	26	3557.1	7510.6	9	2	2004	11:23	30	7.0	34.07	7.2	34.12	6
29	27	3549.1	7511.6	9	2	2004	13:23	34	7.6	34.38	7.7	34.40	5
30	28	3538.5	7502.1	9	2	2004	15:23	43	6.7	9999	7.5	34.08	5
31	29	3542.6	7449.4	9	2	2004	17:17	360	13.1	33.43	7.5	35.10	4
32	30	3546.2	7450.9	9	2	2004	20:00	305	11.5	32.69	9.0	35.18	2
33	31	3603.9	7448.1	9	2	2004	23:06	145	13.9	33.95	10.7	35.26	5
34	32	3603.1	7453.4	10	2	2004	1:23	82	9.6	32.46	10.6	35.12	5
35	33	3608.0	7450.3	10	2	2004	3:05	97	10.2	32.86	10.3	35.03	4
36	34	3614.9	7445.6	10	2	2004	4:48	450	9.2	32.46	6.2	35.01	17
37	35	3617.7	7448.8	10	2	2004	7:18	94	9.2	34.23	10.4	35.01	3
38	36	3627.8	7449.1	10	2	2004	9:06	72	10.4	34.95	10.3	34.99	5
39	37	3626.1	7448.0	10	2	2004	11:00	85	10.4	34.96	10.3	35.00	5
40	38	3630.3	7443.5	10	2	2004	13:48	360	10.5	34.84	6.8	35.03	4
41	39	3635.8	7444.3	10	2	2004	17:06	96	10.3	34.51	10.5	35.04	4
42	40	3631.8	7445.5	10	2	2004	19:06	94	10.5	34.83	10.8	35.11	4
43	41	3635.4	7504.8	10	2	2004	21:30	26	7.3	34.17	8.1	34.59	6
44	42	3645.9	7503.1	10	2	2004	23:12	29	5.6	33.18	7.4	34.31	5
45	43	3655.6	7445.2	11	2	2004	1:42	76	10.5	35.06	10.4	35.05	5
46	44	3658.3	7438.1	11	2	2004	3:17	132	10.6	35.00	11.1	35.22	6
47	46	3700.6	7452.6	11	2	2004	6:48	51	9.7	34.52	9.8	34.91	6
48	47	3710.5	7453.4	11	2	2004	9:06	46	9.7	34.64	9.8	34.92	5
49	48	3715.5	7432.6	11	2	2004	11:23	121	9.9	34.88	10.5	35.06	6
50	49	3728.6	7423.0	11	2	2004	13:53	285	10.9	35.15	8.7	35.18	5
51	50	3730.1	7423.3	11	2	2004	16:00	107	9.7	34.84	10.6	35.12	5
52	51	3733.1	7429.3	11	2	2004	17:53	68	9.7	34.73	9.9	34.92	4
54	53	3756.5	7404.3	11	2	2004	23:17	124	8.8	9999	8.9	34.10	6
55	54	3753.1	7411.9	12	2	2004	1:00	101	8.4	9999	8.5	33.85	4
56	55	3811.1	7434.2	12	2	2004	4:05	36	4.1	9999	5.5	33.62	7
57	56	3815.2	7404.4	12	2	2004	7:00	64	9.0	34.45	9.1	34.14	7
58	57	3822.8	7400.1	12	2	2004	8:36	60	7.6	33.78	9.1	34.26	6
59	58	3830.5	7351.2	12	2	2004	10:30	57	7.2	34.09	7.6	33.98	4
60	59	3845.6	7409.9	12	2	2004	13:18	44	5.6	33.62	5.6	33.54	4

61	60	4055.4	7145.2	18	2	2004	21:47	52	3.3	32.94	5.3	33.70	6
62	61	4046.3	7218.3	19	2	2004	1:30	36	2.5	32.91	3.3	33.27	6
63	62	4041.1	7208.5	19	2	2004	3:12	46	2.8	32.95	4.6	33.61	8
64	63	4042.2	7235.9	19	2	2004	8:00	30	2.2	32.89	2.7	33.06	6
65	64	4030.9	7259.8	19	2	2004	10:48	32	2.2	32.89	2.4	32.96	7
66	65	4009.5	7300.8	19	2	2004	14:00	46	3.8	33.57	4.5	33.75	4
67	66	4001.3	7305.4	19	2	2004	15:41	46	4.9	33.95	5.1	34.03	6
68	67	4000.8	7313.6	19	2	2004	17:06	46	3.6	33.42	4.7	33.84	6
69	68	4004.4	7331.7	19	2	2004	19:17	61	3.5	33.26	5.5	33.97	4
70	69	3954.2	7344.3	19	2	2004	21:23	30	3.6	33.09	3.5	33.33	5
71	70	3929.7	7343.6	20	2	2004	0:30	28	2.5	32.73	2.8	33.03	6
72	71	3903.4	7332.5	20	2	2004	4:35	53	4.7	33.69	5.6	33.97	6
73	72	3906.5	7352.7	20	2	2004	6:18	34	3.2	33.08	3.2	33.11	5
74	73	3858.9	7428.7	20	2	2004	9:53	26	2.6	32.72	2.8	32.87	6
75	74	3849.2	7427.8	20	2	2004	11:48	22	3.2	33.07	3.2	33.07	5
76	75	3844.8	7419.1	20	2	2004	13:11	37	4.2	33.43	4.2	33.44	6
77	76	3838.8	7417.9	20	2	2004	14:36	42	3.8	33.23	3.9	33.28	5
78	77	3838.6	7328.2	20	2	2004	18:53	75	7.7	34.32	7.7	34.49	4
79	78	3837.7	7321.2	20	2	2004	20:47	84	8.6	34.42	7.8	34.50	6
80	79	3846.9	7321.8	20	2	2004	22:36	78	8.2	34.34	8.3	34.63	6
81	80	3918.8	7254.6	21	2	2004	3:30	70	7.3	34.22	7.0	34.36	8
82	81	3931.6	7234.9	21	2	2004	6:24	85	6.6	34.04	6.5	34.17	6
83	82	3930.1	7223.0	21	2	2004	8:41	212	7.6	34.14	7.4	34.26	5
84	83	3933.5	7217.6	21	2	2004	11:00	124	7.3	34.02	7.9	34.44	5
85	84	3937.9	7234.2	21	2	2004	13:06	77	5.9	33.60	7.4	34.19	7
86	85	3947.9	7247.4	21	2	2004	15:30	63	6.0	33.85	6.1	34.05	8
87	87	3955.5	7237.9	21	2	2004	19:06	55	5.2	33.50	6.4	34.18	6
88	88	4004.7	7217.5	21	2	2004	21:42	73	4.9	33.43	6.1	34.03	6
89	89	3954.7	7205.3	22	2	2004	0:00	88	4.5	33.23	6.5	34.00	6
90	90	3947.0	7208.2	22	2	2004	1:47	104	4.7	33.26	6.1	33.65	9
91	91	3955.5	7149.4	23	2	2004	1:53	115	3.8	33.11	8.6	34.25	4
92	92	3955.9	7129.2	23	2	2004	5:05	227	3.8	33.08	10.9	35.43	5
93	93	3956.9	7120.8	23	2	2004	8:11	303	4.5	33.20	10.5	35.33	6

94	94	4007.7	7139.7	23	2	2004	11:30	83	3.0	32.88	5.8	33.54	8
95	95	4013.0	7143.4	23	2	2004	12:00	80	3.2	32.96	5.1	33.58	7
96	96	4020.7	7206.9	23	2	2004	15:41	61	4.9	33.52	6.0	33.92	6
97	97	4032.9	7201.8	23	2	2004	17:36	57	4.8	33.46	5.5	33.73	6
98	98	4041.4	7148.2	23	2	2004	19:36	54	4.4	33.32	5.6	33.73	5
99	99	4030.5	7133.6	23	2	2004	21:42	75	4.2	33.18	5.3	33.54	6
100	100	4030.6	7114.4	23	2	2004	23:53	72	3.6	32.94	3.6	32.95	7
101	101	4026.1	7128.4	24	2	2004	1:53	74	4.1	33.15	4.2	33.17	6
102	102	4016.2	7126.4	24	2	2004	4:30	85	3.9	33.01	4.7	33.27	6
103	103	4013.6	7101.9	24	2	2004	7:05	123	3.7	33.07	7.9	34.06	5
104	104	4012.3	7041.7	24	2	2004	9:30	125	3.6	33.11	8.2	34.18	5
105	105	4001.2	7045.7	24	2	2004	11:48	229	4.0	33.20	11.9	35.47	5
106	106	4003.3	7034.0	24	2	2004	13:53	148	3.5	33.09	11.9	35.42	5
107	107	4007.7	7025.3	24	2	2004	15:36	122	3.5	33.12	6.1	33.75	6
108	109	4016.3	7031.2	24	2	2004	18:23	107	3.7	33.04	3.7	33.05	5
109	110	4019.4	7021.5	24	2	2004	19:53	90	3.7	33.06	3.4	33.07	5
110	111	4010.6	7006.0	25	2	2004	0:48	105	4.1	9999	3.8	33.17	6
111	112	4014.5	7004.2	25	2	2004	2:30	97	3.4	9999	3.3	33.11	6
112	113	4001.4	6924.0	25	2	2004	6:18	101	4.5	9999	8.8	34.48	5
113	114	3959.3	6913.8	25	2	2004	8:06	240	4.8	33.07	12.2	35.57	4
114	115	4003.1	6911.7	25	2	2004	9:36	151	4.6	33.04	11.2	35.19	5
115	116	4004.8	6907.5	25	2	2004	11:30	148	4.6	33.11	10.8	35.07	6
116	117	4013.8	6902.3	25	2	2004	13:36	116	4.0	32.93	4.2	33.26	6
117	118	4008.5	6838.0	25	2	2004	16:12	174	4.7	9999	11.2	35.20	6
118	119	4018.6	6805.3	25	2	2004	20:47	232	6.9	9999	12.0	35.45	4
119	120	4020.2	6758.2	25	2	2004	22:47	146	7.3	9999	12.2	35.45	6
120	121	4028.0	6748.9	26	2	2004	1:30	131	3.9	9999	9.2	34.48	8
121	122	4031.1	6717.1	26	2	2004	6:35	140	7.1	9999	10.9	35.06	5
122	123	4042.9	6714.0	26	2	2004	9:23	97	3.7	9999	6.6	33.75	6
123	124	4037.9	6734.0	26	2	2004	13:06	92	3.6	9999	3.9	32.91	4
124	125	4025.5	6831.9	26	2	2004	19:00	93	3.9	9999	3.7	33.13	3
125	126	4025.4	6844.5	26	2	2004	21:42	85	4.0	33.05	3.4	33.17	7
126	127	4027.9	6928.4	27	2	2004	2:17	65	3.4	33.04	3.4	33.08	6

127	128	4036.4	6933.4	27	2	2004	4:11	59	3.7	33.12	3.7	33.13	6
128	129	4039.2	6943.6	27	2	2004	5:54	54	3.1	33.07	3.2	33.08	6
129	130	4028.3	6957.3	27	2	2004	8:11	72	3.3	9999	3.2	33.06	3
130	131	4028.4	7005.6	27	2	2004	9:48	69	3.2	33.04	3.1	33.05	5
131	132	4037.9	7038.3	27	2	2004	13:18	62	1.5	32.29	1.7	32.84	7
132	133	4038.9	7054.7	27	2	2004	15:18	68	2.4	32.62	3.0	32.90	6
133	134	4045.9	7050.0	27	2	2004	16:42	62	1.6	32.59	1.8	32.82	8
134	135	4048.2	7027.2	27	2	2004	19:06	52	1.2	32.43	2.2	32.76	5
135	136	4057.8	7019.0	27	2	2004	20:47	40	1.2	32.08	1.4	32.57	5
136	137	4106.2	7015.4	27	2	2004	22:23	28	0.9	32.49	1.4	32.71	6
137	138	4108.3	7038.0	28	2	2004	0:41	41	2.0	32.56	2.3	32.86	6
138	139	4057.8	7103.9	28	2	2004	3:42	49	3.3	33.09	3.3	33.13	5
139	140	4112.8	7116.8	28	2	2004	7:05	38	2.9	33.03	4.1	33.35	6


ALB0402
Winter Bottom Trawl Survey
4 - 28 February


ALB0402
Surface Temperature
45
44
43
42
41
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37
36
35
34
-77
-76
-75
-74
-73
-72
-71
-70
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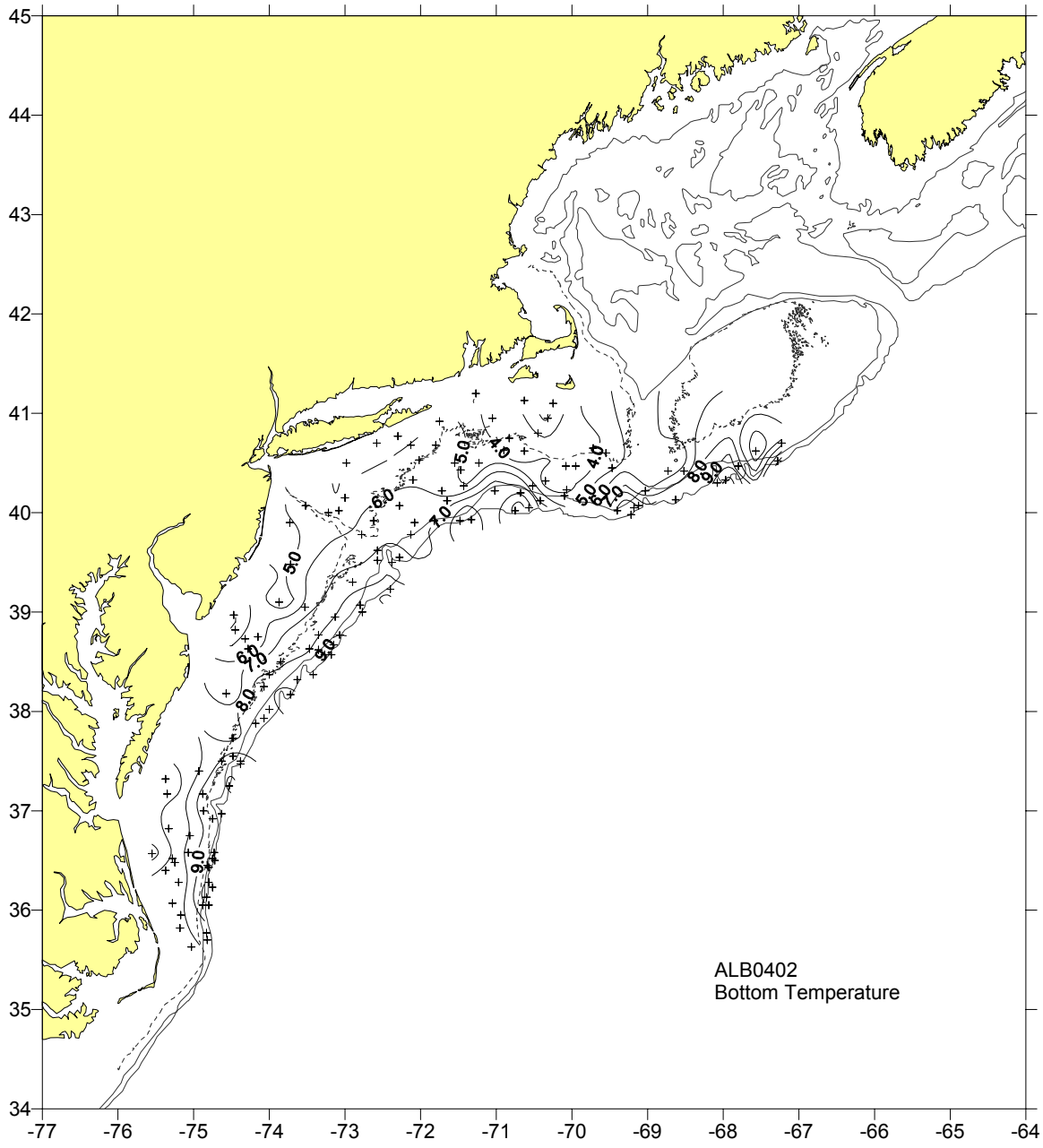
ALB0402
Bottom Temperature
45
44
43
42
41
40
39
38
37
36
35
34
-77
-76
-75
-74
-73
-72
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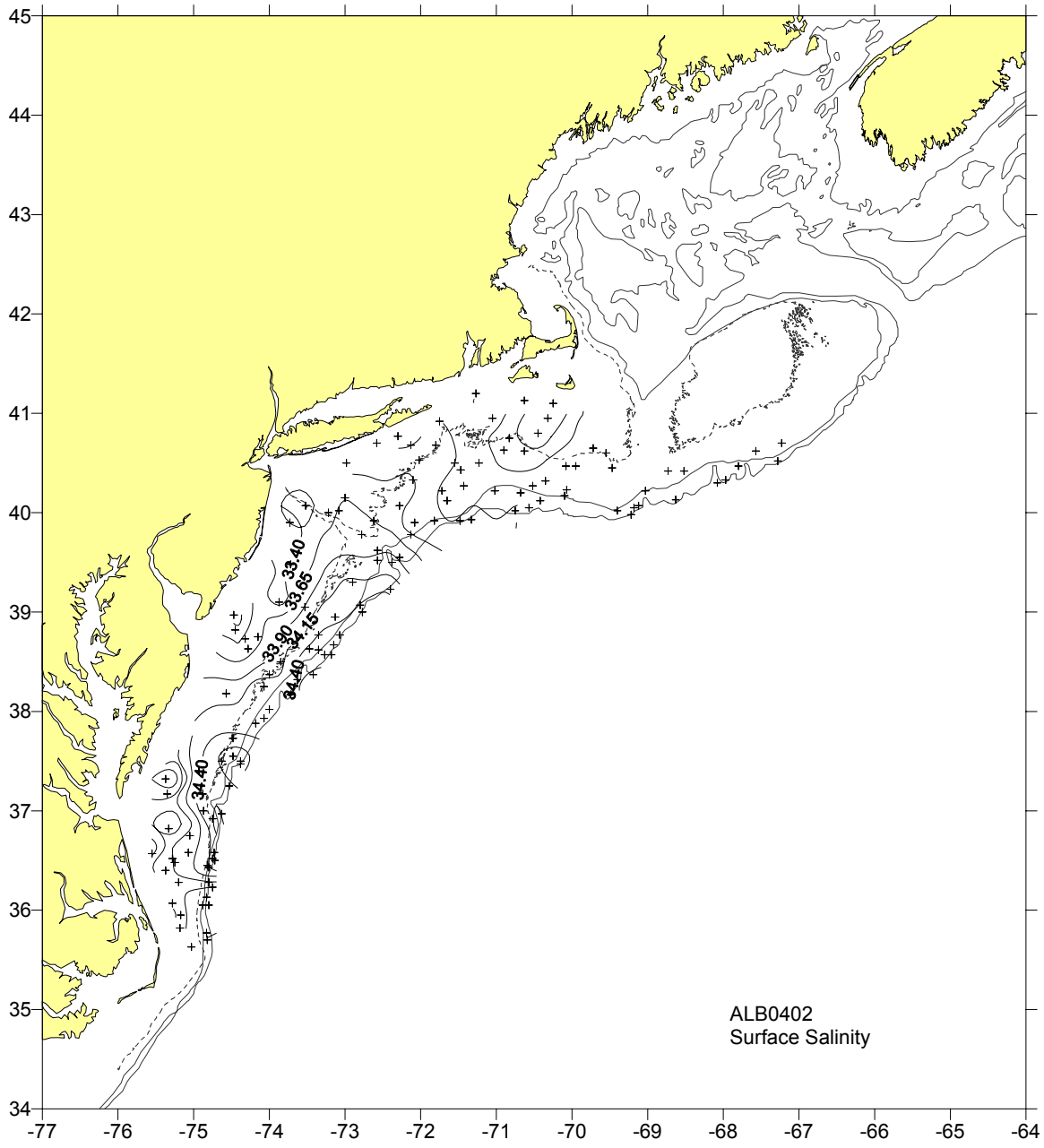
9.0
4.0


45
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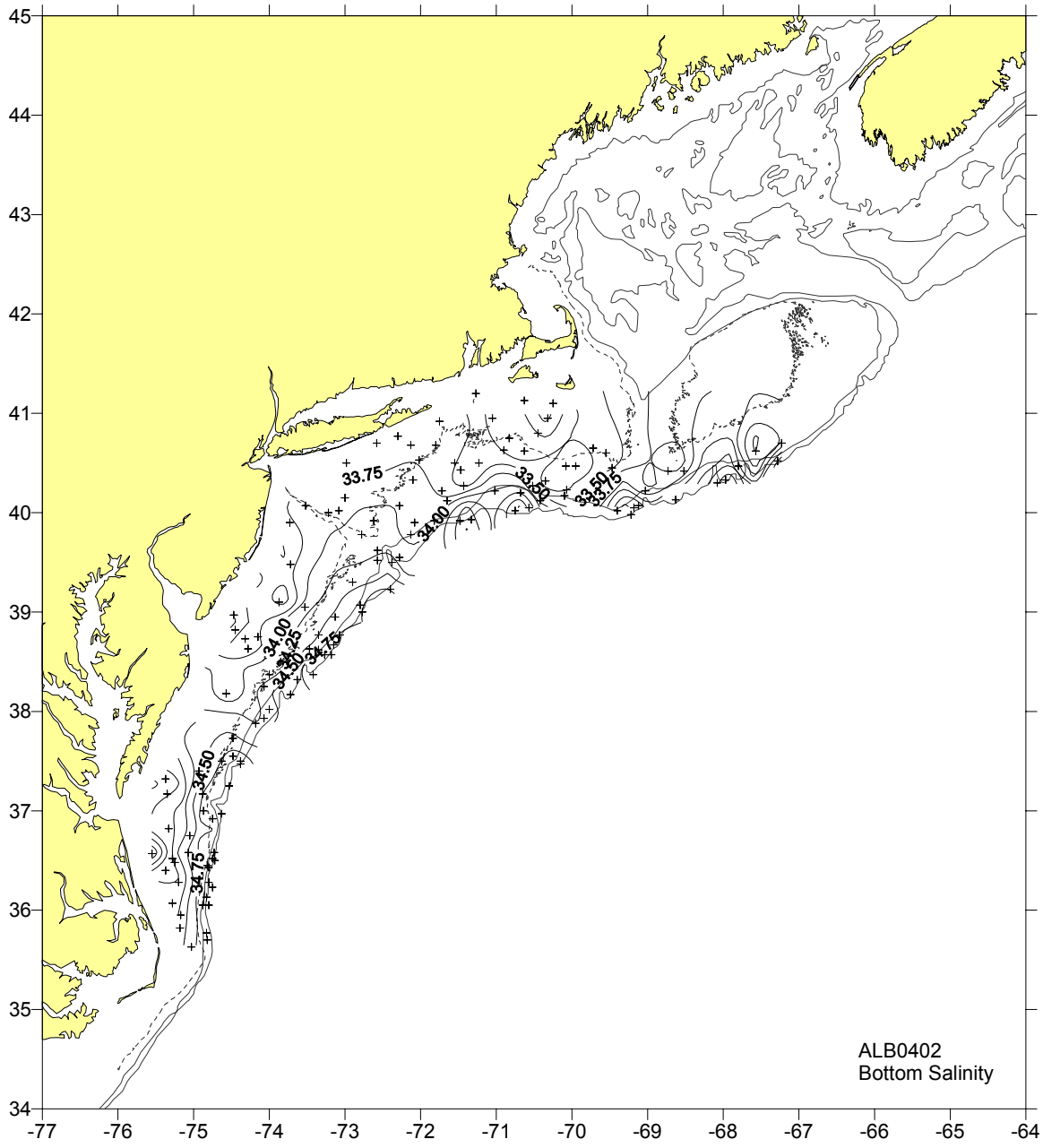
-71
-70
-69
-68
-67
-66
-65
-64
33.40
33.65
33.90
34.15
34.40
34.40
ALB0402
Surface Salinity


ALB0402
Bottom Salinity
33.75
33.50
33.50
33.75
34.00
34.00
34.25
34.50
34.75
34.50
34.75
45
44
43
42
41
40
39
38
37
36
35
34
-77
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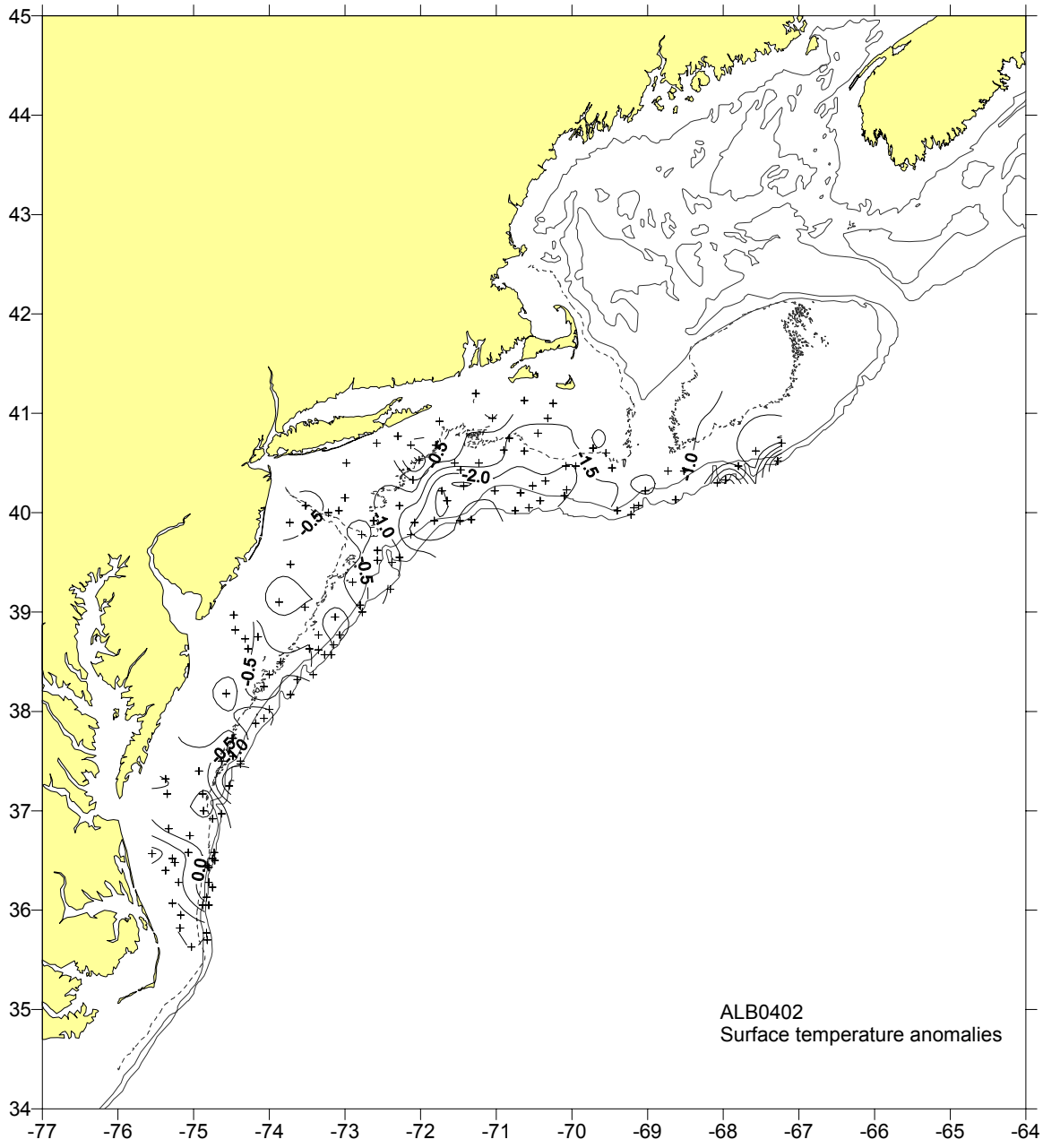
-75
-74
-73
-72
-71
-70
-69
-68
-67
-66
-65
-64


ALB0402
Surface temperature anomalies
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-0.5
-1.0
-0.5
-0.5
-0.5
-1.0
0.0
45
44
43
42
41
40
39
38
37
36
35
34
-77
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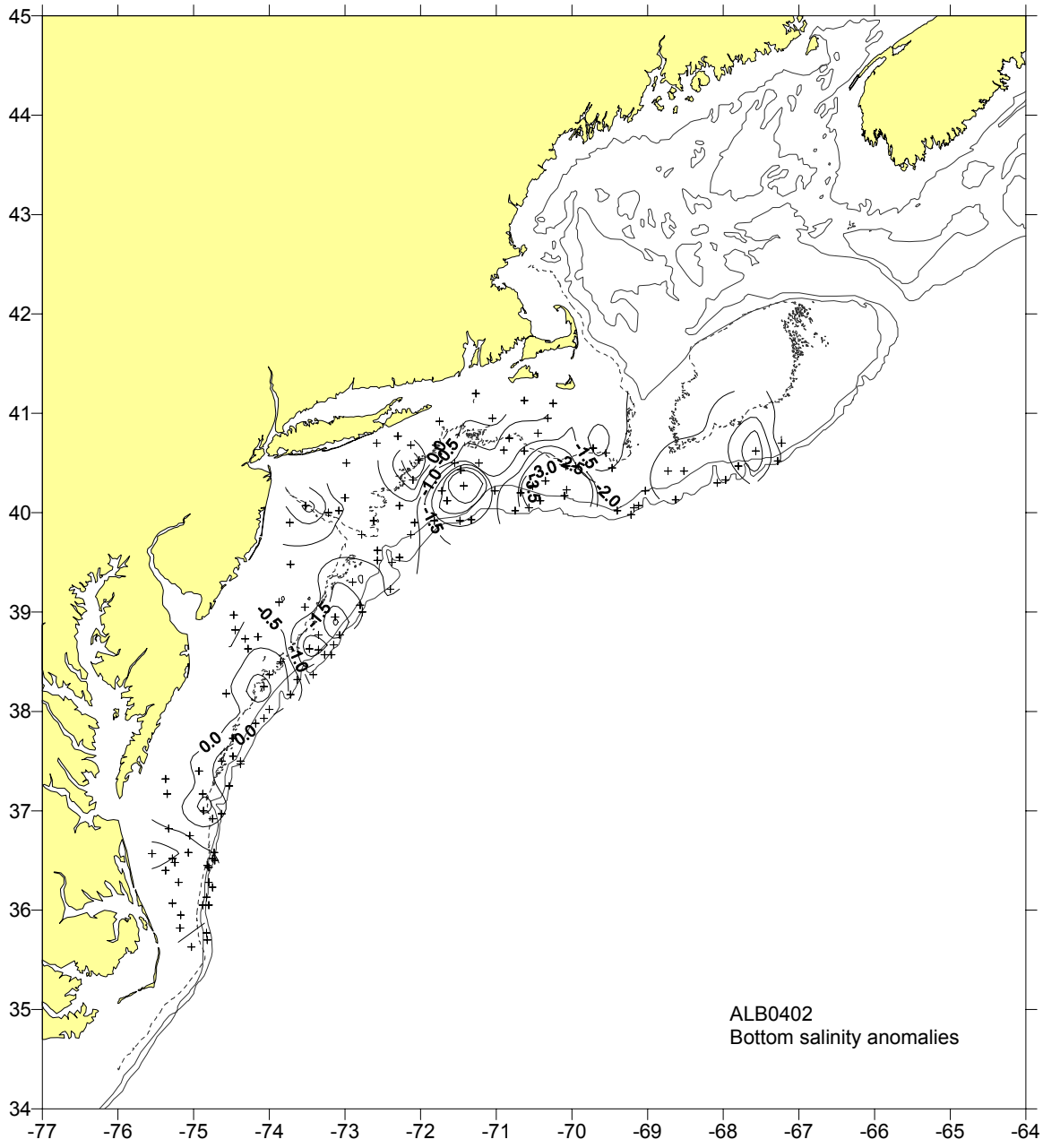
-75
-74
-73
-72
-71
-70
-69
-68
-67
-66
-65
-64


ALB0402
Bottom salinity anomalies
45
44
43
42
41
40
39
38
37
36
35
34
-77
-76
-75
-74
-73
-72
-71
-70
-69
-68
-67
-66
-65
-64
0.0
0.0
-0.5
-1.5
-1.0
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0.0
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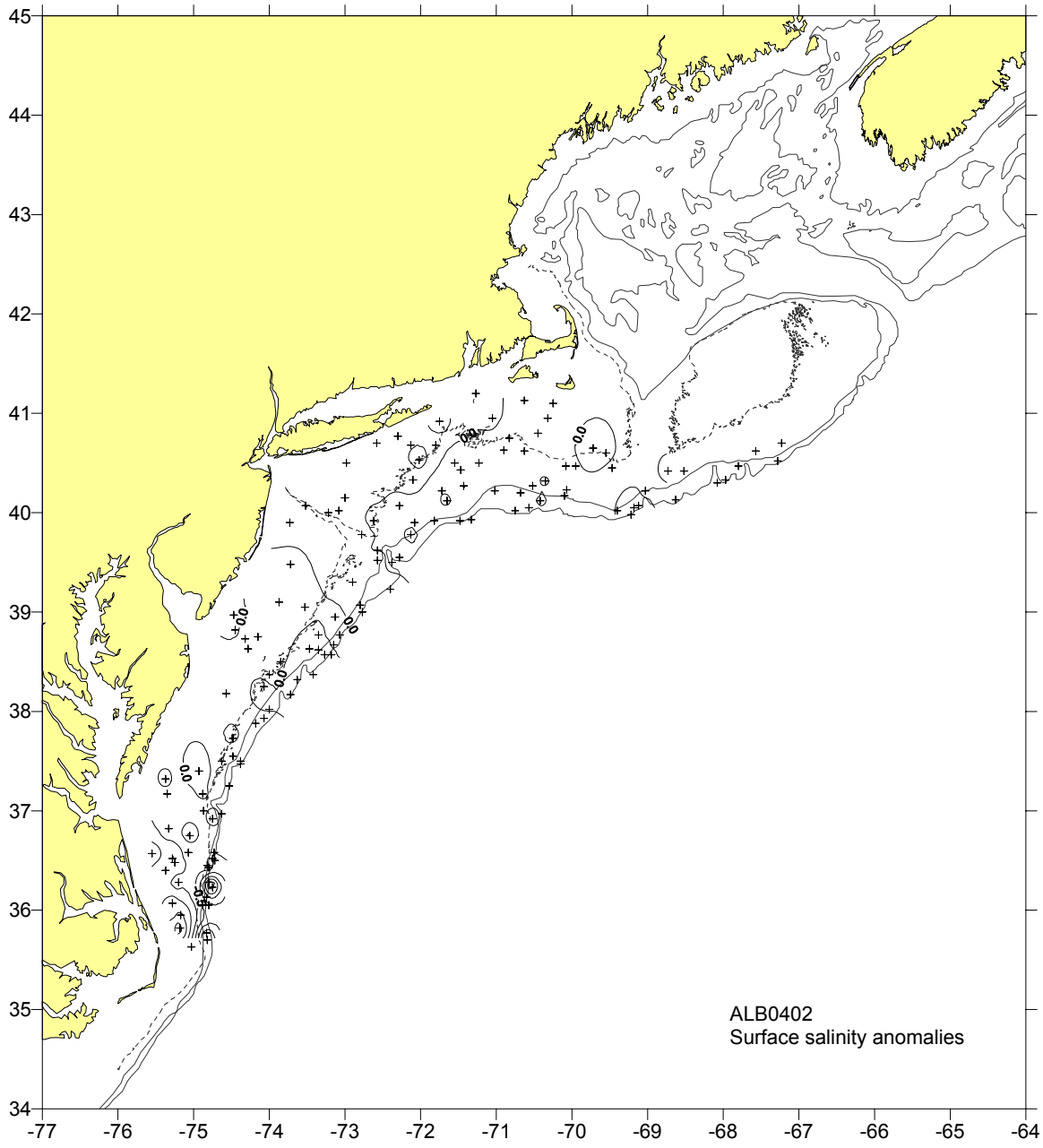
ALB0402
Surface salinity anomalies
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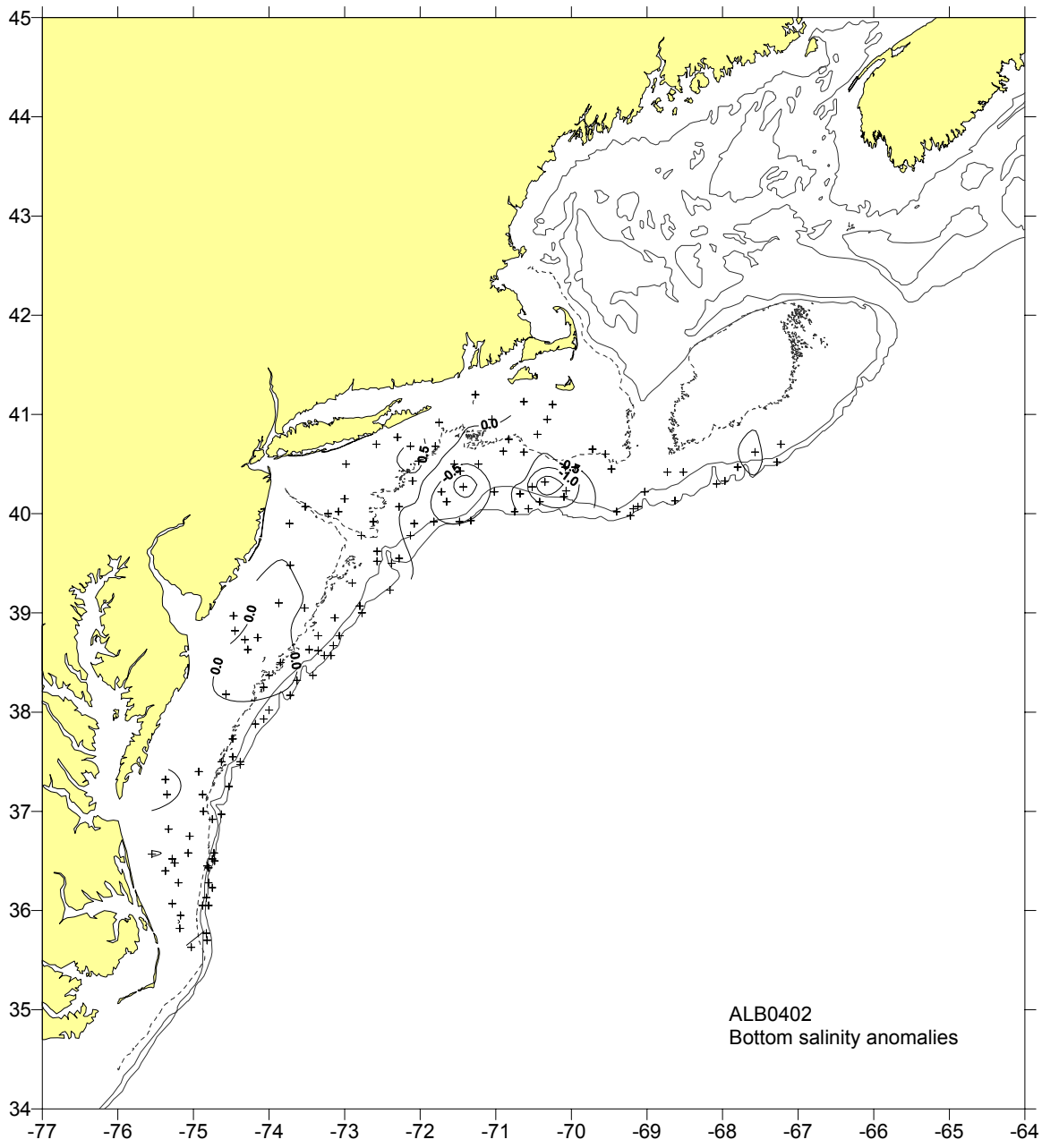
-65
-64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-64
0.0
-0.5
-1.0
ALB0402
Bottom salinity anomalies