APPENDICES TO WATER QUALITY MONITORING IN MASSACHUSETTS AND CAPE COD BAYS: APRIL - MAY 1994

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APPENDIX A

STATION DATA TABLES AND INSTRUMENT CALIBRATION DATA

Part 1

Physical and Chemical Parameters at Discrete Bottle Measurement Depths

Depth, temperature (Temp), dissolved oxygen (DO), conductivity (Cond), sigma-T, fluorescence (Flu), salinity (Sal), and beam attenuation (Beam) were all obtained electronically from *in situ* readings made during the upcast of vertical profiling, during which water samples were taken by closing bottles. The table values represent a depth-averaged value bracketing the depth interval encompassed by the hydrocast bottle at closing. Dissolved oxygen and fluorescence data represent post-survey calibrated values based on wet chemistry determinations made on a subset of the bottles (Appendix A, Part 2). The other parameters rely on factory calibrations of sensors to calculate values. The dissolved inorganic nutrient data (Table A-1) and additional measurements made at a subset of stations (Table A-2) represent direct analyses of water samples from bottles.

Data from all surveys represented in this report are included in the tables. Table A-1 lists the early April combined farfield/nearfield survey followed by the late April and May nearfield surveys. Table A-2 lists data for the combined survey, and the values for analytical replicates of a given bottle.

Note that % saturation for dissolved oxygen has been calculated using an algorithm given on the following page.

Saturation Values of Oxygen is Sea Water (mg/L) based on Weiss (1970)

Salinity PPT \ Temperature (°C)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	14.60	14.20	13.81	13.45	13.09	12.76	12.44	12.13	11.83	11.55	11.28	11.02	10.77	10.53	10.29	10.07	9.86	9.65	9.45	9.26	9.08
1	14.50	14.10	13.72	13.36	13.01	12.67	12.35	12.05	11.76	11.47	11.21	10.95	10.70	10.46	10.23	10.01	9.80	9.59	9.40	9.21	9.02
2	14.40	14.01	13.63	13.27	12.92	12.59	12.27	11.97	11.68	11.40	11.13	10.88	10.63	10.40	10.17	9.95	9.74	9.54	9.34	9.15	8.97
3	14.31	13.91	13.54	13.18	12.84	12.51	12.19	11.89	11.61	11.33	11.06	10.81	10.57	10.33	10.11	9.89	9.68	9.48	9.28	9.10	8.92
4	14.21	13.82	13.45	13.09	12.75	12.43	12.11	11.82	11.53	11.26	10.99	10.74	10.50	10.27	10.04	9.83	9.62	9.42	9.23	9.04	8.86
5	14.11	13.72	13.36	13.00	12.67	12.34	12.04	11.74	11.46	11.18	10.92	10.67	10.43	10.20	9.98	9.77	9.56	9.36	9.17	8.99	8.81
6	14.02	13.63	13.27	12.92	12.58	12.26	11.96	11.66	11.38	11.11	10.86	10.61	10.37	10.14	9.92	9.71	9.50	9.31	9.12	8.94	8.76
7	13.92	13.54	13.18	12.83	12.50	12.18	11.88	11.59	11.31	11.04	10.79	10.54	10.30	10.08	9.86	9.65	9.45	9.25	9.06	8.88	8.71
8	13.82	13.45	13.09	12.75	12.42	12.10	11.80	11.51	11.24	10.97	10.72	10.47	10.24	10.01	9.80	9.59	9.39	9.20	9.01	8.83	8.66
9	13.73	13.36	13.00	12.66	12.33	12.02	11.72	11.44	11.16	10.90	10.65	10.41	10.18	9.95	9.74	9.53	9.33	9.14	8.96	8.78	8.61
10	13.64	13.27	12.91	12.58	12.25	11.94	11.65	11.36	11.09	10.83	10.58	10.34	10.11	9.89	9.68	9.47	9.28	9.09	8.90	8.73	8.56
11	13.54	13.18	12.83	12.49	12.17	11.87	11.57	11.29	11.02	10.76	10.52	10.28	10.05	9.83	9.62	9.42	9.22	9.03	8.85	8.67	8.51
12	13.45	13.09	12.74	12.41	12.09	11.79	11.50	11.22	10.95	10.70	10.45	10.21	9.99	9.77	9.56	9.36	9.16	8.98	8.80	8.62	8.46
13	13.36	13.00	12.66	12.33	12.01	11.71	11.42	11.15	10.88	10.63	10.38	10.15	9.92	9.71	9.50	9.30	9.11	8.92	8.74	8.57	8.41
14	13.27	12.91	12.57	12.24	11.93	11.63	11.35	11.07	10.81	10.56	10.32	10.09	9.86	9.65	9.44	9.24	9.05	8.87	8.69	8.52	8.36
15	13.18	12.82	12.49	12.16	11.85	11.56	11.27	11.00	10.74	10.49	10.25	10.02	9.80	9.59	9.38	9.19	9.00	8.82	8.64	8.47	8.31
16	13.09	12.74	12.40	12.08	11.77	11.48	11.20	10.93	10.67	10.42	10.19	9.96	9.74	9.53	9.33	9.13	8.94	8.76	8.59	8.42	8.26
17	13.00	12.65	12.32	12.00	11.70	11.41	11.13	10.86	10.60	10.36	10.12	9.90	9.68	9.47	9.27	9.08	8.89	8.71	8.54	8.37	8.21
18	12.91	12.57	12.24	11.92	11.62	11.33	11.05	10.79	10.54	10.29	10.06	9.83	9.62	9.41	9.21	9.02	8.84	8.66	8.49	8.32	8.16
19	12.82	12.48	12.15	11.84	11.54	11.26	10.98	10.72	10.47	10.23	9.99	9.77	9.56	9.35	9.16	8.97	8.78	8.61	8.44	8.27	8.11
20	12.74	12.40	12.07	11.76	11.47	11.18	10.91	10.65	10.40	10.16	9.93	9.71	9.50	9.30	9.10	8.91	8.73	8.55	8.39	8.22	8.07
21	12.65	12.31	11.99	11.68	11.39	11.11	10.84	10.58	10.33	10.10	9.87	9.65	9.44	9.24	9.04	8.86	8.68	8.50	8.33	8.17	8.02
22	12.56	12.23	11.91	11.61	11.32	11.04	10.77	10.51	10.27	10.03	9.81	9.59	9.38	9.18	8.99	8.80	8.62	8.45	8.29	8.13	7.97
23	12.48	12.15	11.83	11.53	11.24	10.96	10.70	10.45	10.20	9.97	9.74	9.53	9.32	9.12	8.93	8.75	8.57	8.40	8.24	8.08	7.92
24	12.39	12.07	11.75	11.45	11.17	10.89	10.63	10.38	10.14	9.90	9.68	9.47	9.26	9.07	8.88	8.69	8.52	8.35	8.19	8.03	7.88
25	12.31	11.98	11.67	11.38	11.09	10.82	10.56	10.31	10.07	9.84	9.62	9.41	9.21	9.01	8.82	8.64	8.47	8.30	8.14	7.98	7.83
26	12.23	11.90	11.59	11.30	11.02	10.75	10.49	10.24	10.01	9.78	9.56	9.35	9.15	8.96	8.77	8.59	8.42	8.25	8.09	7.93	7.78
27	12.14	11.82	11.52	11.23	10.95	10.68	10.42	10.18	9.94	9.72	9.50	9.29	9.09	8.90	8.71	8.54	8.37	8.20	8.04	7.89	7.74
28	12.06	11.74	11.44	11.15	10.87	10.61	10.35	10.11	9.88	9.65	9.44	9.23	9.04	8.84	8.66	8.48	8.31	8.15	7.99	7.84	7.69
29	11.98	11.66	11.36	11.08	10.80	10.54	10.29	10.05	9.81	9.59	9.38	9.18	8.98	8.79	8.61	8.43	8.26	8.10	7.94	7.79	7.65
30	11.90	11.58	11.29	11.00	10.73	10.47	10.22	9.98	9.75	9.53	9.32	9.12	8.92	8.74	8.55	8.38	8.21	8.05	7.90	7.75	7.60
31	11.81	11.51	11.21	10.93	10.66	10.40	10.15	9.92	9.69	9.47	9.26	9.06	8.87	8.68	8.50	8.33	8.16	8.00	7.85	7.70	7.56
32	11.73	11.43	11.14	10.86	10.59	10.33	10.09	9.85	9.63	9.41	9.20	9.00	8.81	8.63	8.45	8.28	8.11	7.96	7.80	7.66	7.51
33	11.65	11.35	11.06	10.78	10.52	10.26	10.02	9.79	9.56	9.35	9.14	8.95	8.76	8.57	8.40	8.23	8.07	7.91	7.76	7.61	7.47
34	11.58	11.27	10.99	10.71	10.45	10.20	9.96	9.73	9.50	9.29	9.09	8.89	8.70	8.52	8.35	8.18	8.02	7.86	7.71	7.57	7.43
35	11.50	11.20	10.91	10.64	10.38	10.13	9.89	9.66	9.44	9.23	9.03	8.83	8.65	8.47	8.29	8.13	7.97	7.81	7.66	7.52	7.38
36	11.42	11.12	10.84	10.57	10.31	10.06	9.83	9.60	9.38	9.17	8.97	8.78	8.59	8.42	8.24	8.08	7.92	7.77	7.62	7.48	7.34
37	11.34	11.05	10.77	10.50	10.24	10.00	9.76	9.54	9.32	9.11	8.92	8.72	8.54	8.36	8.19	8.03	7.87	7.72	7.57	7.43	7.29
38	11.26	10.97	10.70	10.43	10.18	9.93	9.70	9.48	9.26	9.06	8.86	8.67	8.49	8.31	8.14	7.98	7.82	7.67	7.53	7.39	7.25
39	11.19	10.90	10.62	10.36	10.11	9.87	9.64	9.41	9.20	9.00	8.80	8.61	8.43	8.26	8.09	7.93	7.78	7.63	7.48	7.34	7.21
40	11.11	10.82	10.55	10.29	10.04	9.80	9.57	9.35	9.14	8.94	8.75	8.56	8.38	8.21	8.04	7.88	7.73	7.58	7.44	7.30	7.17

OXsat=1.429*EXP(-173.4292+249.6339*(100/(273.15+T))+143.3483*LN((T+273.15)/100)
-21.8492*((T+273.15)/100)+Salinity*(-0.033096+0.014259*((T+273.15)/100)-0.0017*((T+273.15)/100)^2))

% Saturation =100*DO/OXsat

Reference:

Weiss, R.F., 1970: The Solubility of Nitrogen, Oxygen, and Argon in Water and Seawater. Deep-Sea Res., 17, 721-735

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9404	F01P	04-07-94	845	1.07	W94040416	4.301	31.508	11.12	10.54	105.46	29.851	24.98	0.9627	0.64745	0.34	0.03	0.09	0.22	0.87
W9404	F01P	04-07-94	843	5.06	W94040415	4.304	31.508	11.16	10.54	105.84	29.855	24.98	1.0364	0.64759	0.33	0.01	0.06	0.24	0.85
W9404	F01P	04-07-94	842	12.63	W94040414	4.043	31.624	11.53	10.60	108.73	29.742	25.097	0.7766	0.56029	0.43	0.02	0.07	0.19	0.43
W9404	F01P	04-07-94	841	18.59	W94040413	2.707	31.778	11.37	10.95	103.81	28.782	25.338	0.7956	0.56021	0.46	0.02	0.11	0.23	0.41
W9404	F01P	04-07-94	840	25.01	W94040412	2.301	32.149	11	11.04	99.64	28.755	25.666	0.7315	0.77515	2.63	0.05	1.23	0.58	3.23
W9404	F02P	04-07-94	715	1.04	W94040401	4.069	31.159	10.92	10.63	102.73	29.362	24.726	1.7561	0.74005	0.11	0.01	0.02	0.06	0.81
W9404	F02P	04-07-94	714	6.28	W94040400	4.056	31.156	11.07	10.63	104.11	29.352	24.724	1.8546	0.74826	0.11	0.01	0.08	0.05	0.82
W9404	F02P	04-07-94	713	12.35	W94040399	3.59	31.311	11.28	10.75	104.97	29.108	24.891	1.9969	0.76529	0.09	0	0.09	0.21	1.2
W9404	F02P	04-07-94	712	22.44	W94040398	3.193	31.614	11.53	10.83	106.45	29.044	25.167	0.7264	0.57625	0.09	0.01	0.05	0.25	1.56
W9404	F02P	04-07-94	711	29.63	W94040397	2.507	32.061	11.11	10.99	101.11	28.854	25.58	1.0334	0.748	0.13	0.02	0.05	0.26	2.92
W9404	F03	04-07-94	942	2.1	W94040428	3.325	31.986	11.06	10.77	102.70	29.452	25.452	0.7164	0.69426	0.11	0.01	0.04	0.23	1.57
W9404	F03	04-07-94	941	2.74	W94040427	3.354	31.968	11.25	10.76	104.53	29.462	25.434	1.2117	0.69625	1.45	0.04	0.59	0.44	1.56
W9404	F03	04-07-94	941	5.17	W94040426	3.3	31.999	11.22	10.77	104.13	29.445	25.465	0.8236	0.70745	1.49	0.04	0.63	0.43	1.59
W9404	F03	04-07-94	940	9.52	W94040425	2.726	32.109	11.39	10.92	104.27	29.065	25.6	1.0543	0.92236	1.91	0.04	1.06	0.48	1.65
W9404	F03	04-07-94	940	13.08	W94040424	2.412	32.245	11.35	11.00	103.17	28.919	25.734	1.1652	0.67442	1.91	0.04	0.99	0.47	1.7
W9404	F05	04-07-94	1105	1.98	W94040451	4.036	31.724	11.63	10.60	109.73	29.818	25.178	0.4876	0.57489	0.46	0.03	0.08	0.25	0.43
W9404	F05	04-07-94	1105	4.6	W94040450	3.933	31.727	11.84	10.63	111.43	29.737	25.19	0.6253	0.58888	0.42	0.02	0.08	0.23	0.45
W9404	F05	04-07-94	1104	8.52	W94040449	3.746	31.771	11.97	10.67	112.16	29.622	25.242	0.9741	0.62525	0.47	0.04	0.05	0.25	0.38
W9404	F05	04-07-94	1104	12.65	W94040448	3.291	31.95	12.2	10.78	113.16	29.399	25.426	0.5475	0.53308	0.53	0.03	0.12	0.28	0.41
W9404	F05	04-07-94	1103	16.15	W94040447	2.853	32.084	12.24	10.89	112.39	29.151	25.57	0.899	0.5972	0.55	0.03	0.24	0.31	0.52
W9404	F06	04-07-94	1154	1.3	W94040462	4.137	31.222	12.18	10.61	114.82	29.472	24.769	0.4369	0.54392	0.31	0.03	0.03	0.05	0.07
W9404	F06	04-07-94	1154	4.1	W94040461	3.93	31.217	12.37	10.66	116.02	29.3	24.785	0.6249	0.5791	0.29	0.02	0.03	0.07	0.06
W9404	F06	04-07-94	1153	11.9	W94040460	3.702	31.59	12.13	10.70	113.40	29.435	25.103	0.9991	0.60248	0.39	0.03	0.09	0.1	0.14
W9404	F06	04-07-94	1152	17.49	W94040459	2.73	32.055	11.79	10.93	107.90	29.027	25.557	1.3082	0.67728	0.07	0.02	0.02	0.18	0.65
W9404	F06	04-07-94	1151	31.14	W94040458	2.199	32.366	11.68	11.05	105.68	28.85	25.848	3.9836	0.91443	1.43	0.07	2.38	0.48	0.87
W9404	F07	04-07-94	1244	0.99	W94040476	4.156	31.195	11.86	10.60	111.84	29.464	24.746	0.5463	0.55288	0.18	0.02	0	0.02	0.04
W9404	F07	04-07-94	1244	6.37	W94040475	4.086	31.202	11.96	10.62	112.59	29.415	24.758	0.6929	0.55287	0.28	0.02	-0.01	0.04	0.04
W9404	F07	04-07-94	1243	16.73	W94040474	2.699	31.968	12.37	10.94	113.06	28.93	25.49	1.8965	0.64505	0.13	0.02	-0.01	0.11	0.08
W9404	F07	04-07-94	1242	29.57	W94040473	2.156	32.322	11.32	11.07	102.28	28.778	25.815	5.2468	0.95646	0.12	0.02	-0.01	0.09	0.27
W9404	F07	04-07-94	1240	50.33	W94040472	2.127	32.424	11.06	11.07	99.93	28.846	25.899	2.3099	0.78167	0.09	0.03	0.01	0.14	1.76
W9404	F10	04-07-94	1336	0.9	W94040487	3.989	31.219	12.02	10.65	112.90	29.349	24.781	0.6305	0.58211	0.13	0.02	-0.01	0.01	0.08
W9404	F10	04-07-94	1335	5.53	W94040486	3.757	31.24	12.17	10.71	113.67	29.18	24.819	1.4355	0.62599	0.12	0.02	0	0.03	0.08
W9404	F10	04-07-94	1334	10.97	W94040485	3.212	31.753	11.37	10.82	105.12	29.17	25.276	1.1609	0.56073	0.15	0.03	-0.01	0.12	0.31
W9404	F10	04-07-94	1333	15.47	W94040484	2.723	31.995	11.49	10.93	105.10	28.971	25.509	1.0267	0.59341	0.16	0.03	0	0.16	0.57
W9404	F10	04-07-94	1332	25.58	W94040483	2.308	32.248	11.51	11.03	104.35	28.841	25.745	2.9536	0.77476	0.33	0.04	0	0.17	0.68
W9404	F12	04-06-94	1409	1.95	W94040367	3.947	31.268	11.67	10.65	109.53	29.357	24.824	1.3256	0.62196	0.22	0.02	0.03	0.06	0.07
W9404	F12	04-06-94	1408	14.07	W94040366	3.075	31.771	11.84	10.85	109.10	29.074	25.302	1.829	0.61227	0.26	0.03	0.17	0.18	0.12
W9404	F12	04-06-94	1407	30.6	W94040365	2.357	32.432	11.09	11.00	100.79	29.033	25.888	3.7745	0.7844	1.74	0.08	2.41	0.49	0.66
W9404	F12	04-06-94	1405	52.26	W94040364	2.229	32.595	10.35	11.03	93.86	29.069	26.028	0.8927	0.67356	3.48	0.11	6.2	0.83	4.99
W9404	F12	04-06-94	1403	86.21	W94040363	2.21	32.61	10.24	11.03	92.83	29.08	26.042	0.8648	0.8641	3.54	0.1	6.79	0.87	6.47
W9404	F13P	04-07-94	1417	1.1	W94040500	4.778	31.213	11.35	10.44	108.69	29.987	24.698	2.9219	0.83986	0.4	0.05	0.17	0.15	0.26
W9404	F13P	04-07-94	1417	3.98	W94040499	4.607	31.281	11.34	10.48	108.19	29.907	24.769	2.5534	0.81443	0.29	0.04	0.21	0.18	0.31
W9404	F13P	04-07-94	1416	6.16	W94040498	4.175	31.45	11.32	10.58	106.98	29.7	24.947	2.3242	0.76294	0.47	0.04	0.29	0.19	0.37
W9404	F13P	04-07-94	1415	9.55	W94040497	2.801	31.912	11.06	10.92	101.31	28.964	25.438	1.0895	0.68113	0.04	0.01	0.04	0.15	0.66
W9404	F13P	04-07-94	1414	19.2	W94040496	2.531	32.075	10.93	10.98	99.54	28.88	25.589	1.5106	0.69379	1.21	0.09	2.06	0.47	1.06
W9404	F14	04-05-94	1432	1.45	W94040188	4.806	30.953	11.92	10.45	114.03	29.783	24.488	1.7014	1.14247	0.39	0.03	0.03	0.06	0.75
W9404	F14	04-05-94	1430	3.9	W94040187	4.771	30.94	12.1	10.46	115.64	29.745	24.482	3.5024	1.15199	0.3	0.03	0.04	0.05	0.76
W9404	F14	04-05-94	1430	6.18	W94040186	4.34	31.016	12.2	10.57	115.43	29.462	24.586	4.9308	1.14593	0.45	0.03	0.02	0.08	0.68
W9404	F14	04-05-94	1429	10.09	W94040185	3.908	31.163	12.16	10.67	113.94	29.24	24.744	4.8147	1.05431	0.09	0.02	0.03	0	0.62
W9404	F14	04-05-94	1428	12.55	W94040184	2.908	31.792	11.87	10.90	108.93	28.955	25.333	1.8856	0.7402	0.19	0.02	0.03	0.05	0.81

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9404	F15	04-05-94	1350	1.42	W94040177	4.276	31.133	12.23	10.58	115.62	29.509	24.685	0.6681	0.68234	0.1	0.02	0.02	0	0.17
W9404	F15	04-05-94	1350	5.18	W94040176	4.171	31.168	12.23	10.60	115.35	29.455	24.723	0.8431	0.6873	0.15	0.02	0	0.09	0.1
W9404	F15	04-05-94	1349	11.85	W94040175	3.28	31.551	12.09	10.81	111.82	29.057	25.109	2.539	0.78251	0.37	0.06	0.1	0.19	0.21
W9404	F15	04-05-94	1348	20.65	W94040174	2.991	31.833	11.43	10.87	105.14	29.06	25.358	2.5195	0.85096	1	0.09	1.38	0.4	0.72
W9404	F15	04-05-94	1347	28.91	W94040173	2.387	32.145	11.81	11.02	107.21	28.825	25.656	1.5366	0.65576	1.16	0.09	1.5	0.39	0.69
W9404	F16	04-05-94	1312	2.37	W94040166	4.127	30.795	12.4	10.64	116.54	29.099	24.431	0.8183	0.69844	0.19	0.02	0.02	0	0.16
W9404	F16	04-05-94	1311	15.18	W94040165	3.405	31.014	12.71	10.82	117.50	28.71	24.671	4.1138	0.85692	0.2	0.02	0.02	0.06	0.14
W9404	F16	04-05-94	1310	24.67	W94040164	2.676	32.099	13.12	10.94	119.95	29.022	25.597	4.7463	0.87122	0.23	0.02	0.04	0.16	0.19
W9404	F16	04-05-94	1309	33.45	W94040163	2.179	32.294	11.52	11.06	104.13	28.776	25.791	6.1576	1.00802	1.42	0.07	1.56	0.41	0.32
W9404	F16	04-05-94	1307	50.18	W94040162	2.131	32.413	11.08	11.07	100.11	28.84	25.89	1.4985	0.82641	2.58	0.1	2.96	0.55	1.95
W9404	F17	04-05-94	1233	4.32	W94040155	4.001	31.249	12.19	10.64	114.55	29.385	24.803	0.8029	0.66973	0.13	0.01	0.04	0.02	0.13
W9404	F17	04-05-94	1232	18.61	W94040154	2.883	31.656	12.68	10.91	116.19	28.825	25.226	2.8095	0.76608	0.15	0.01	0.07	0.07	0.06
W9404	F17	04-05-94	1231	30.91	W94040153	2.639	32.317	12.34	10.93	112.87	29.173	25.774	6.6204	0.99529	0.07	0.01	0.06	0.13	0.16
W9404	F17	04-05-94	1229	51.45	W94040152	2.446	32.54	11.4	10.97	103.92	29.204	25.968	2.3402	0.78602	1.11	0.12	0.3	0.22	1.89
W9404	F17	04-05-94	1228	73.53	W94040151	2.288	32.565	11.11	11.01	100.89	29.103	26	1.2566	1.83471	0.55	0.12	2.22	0.29	4.39
W9404	F18	04-05-94	816	1.85	W94040076	4.106	31.191	12.86	10.62	121.12	29.42	24.747	1.6463	0.90736	0.18	0.04	0.08	0	0.23
W9404	F18	04-05-94	816	4.75	W94040075	3.993	31.211	12.93	10.65	121.45	29.346	24.774	4.1439	0.97583	0.14	0.03	0.07	0	0.25
W9404	F18	04-05-94	815	9.24	W94040074	3.248	31.486	12.86	10.83	118.79	28.976	25.06	7.1534	1.00553	0.12	0.03	0.05	0.07	0.4
W9404	F18	04-05-94	814	16.78	W94040073	2.596	31.995	12.63	10.97	115.15	28.868	25.52	1.5479	0.65153	0.43	0.03	0.1	0.15	0.72
W9404	F18	04-05-94	813	22.85	W94040072	2.398	32.15	12.17	11.01	110.52	28.835	25.659	1.1941	0.71815	0.13	0.02	0.07	0.14	1.22
W9404	F19	04-05-94	1134	2.32	W94040139	3.857	30.973	12.54	10.70	117.21	29.033	24.597	0.6997	0.69009	0.27	0.05	0.09	0	0.04
W9404	F19	04-05-94	1133	13.47	W94040138	3.091	31.241	12.82	10.89	117.76	28.647	24.878	3.3377	0.83955	0.26	0.04	0.09	0.06	0.03
W9404	F19	04-05-94	1132	33.02	W94040137	2.174	32.16	11.91	11.07	107.55	28.663	25.684	5.5109	0.86497	1.12	0.07	1.05	0.32	0.25
W9404	F19	04-05-94	1130	55.02	W94040135	2.402	32.471	11.66	10.99	106.12	29.113	25.916	2.3088	0.75507	2.37	0.1	2.98	0.52	0.99
W9404	F19	04-05-94	1129	74.3	W94040134	2.551	32.537	11.66	10.94	106.57	29.298	25.957	2.2494	1.0783	2.72	0.1	3.29	0.55	1.64
W9404	F22	04-06-94	947	2.27	W94040304	4.199	31.206	11.88	10.59	112.16	29.509	24.75	2.2404	0.75272	0.21	0.02	0.08	0.04	0.11
W9404	F22	04-06-94	947	13.89	W94040303	2.317	31.899	11.94	11.05	108.02	28.56	25.464	2.5247	0.6592	0.17	0.07	0.03	0.08	0.09
W9404	F22	04-06-94	945	30.88	W94040302	2.081	32.291	11.27	11.09	101.61	28.693	25.796	2.3461	0.72689	0.22	0.03	0.08	0.15	0.54
W9404	F22	04-06-94	944	52.97	W94040301	2.453	32.496	11.12	10.97	101.36	29.175	25.932	3.186	0.82281	1.85	0.06	0.1	0.25	1
W9404	F22	04-06-94	942	75.55	W94040300	2.668	32.605	10.88	10.90	99.79	29.452	26.002	2.4211	1.19005	2.52	0.13	4.39	0.53	2.2
W9404	F23P	04-05-94	649	2.09	W94040038	4.138	30.464	11.04	10.66	103.56	28.824	24.167	3.0045	1.19825	0.95	0.2	1.75	0.11	2.22
W9404	F23P	04-05-94	648	5.92	W94040037	3.939	30.709	11.14	10.70	104.15	28.876	24.38	3.3977	1.16503	1.22	0.15	1.64	0.09	2.04
W9404	F23P	04-05-94	647	11.72	W94040036	3.517	31.214	11.08	10.77	102.85	28.967	24.82	1.9288	0.94079	1.75	0.12	1.53	0.26	1.45
W9404	F23P	04-05-94	646	18.03	W94040035	3.451	31.301	11.29	10.78	104.69	28.989	24.895	2.0481	0.926	0.73	0.01	0.08	0.12	1.29
W9404	F23P	04-05-94	645	24.56	W94040034	3.192	31.541	11.28	10.84	104.09	28.982	25.109	1.4904	0.82229	0.79	0.01	0.09	0.09	1.23
W9404	F23P	04-06-94	553	2.52	W94040246	4.725	29.962	10.87	10.54	103.10	28.855	23.712	3.7864	1.25873	1.54	0.21	0.8	0.05	2.3
W9404	F23P	04-06-94	552	4.71	W94040245	4.356	30.406	10.9	10.61	102.76	28.949	24.1	3.5639	1.16938	0.59	0.24	1.54	0.11	2.24
W9404	F23P	04-06-94	551	8.44	W94040244	3.883	30.885	10.84	10.70	101.32	28.982	24.525	2.6565	1.00549	2.51	0.02	0.11	0.26	1.81
W9404	F23P	04-06-94	551	14.66	W94040243	3.657	31.086	10.9	10.74	101.45	28.974	24.706	2.7301	0.97872	2.02	0.01	0.12	0.27	1.67
W9404	F23P	04-06-94	550	20.63	W94040242	3.191	31.538	11.13	10.84	102.70	28.977	25.106	2.0388	0.83739	1.46	0.01	0.13	0.14	1.54
W9404	F24	04-05-94	740	1.79	W94040063	4.153	30.705	11.7	10.64	109.96	29.042	24.357	2.614	1.25767	4.78	0.15	1.3	0.29	1.52
W9404	F24	04-05-94	740	4.02	W94040062	4.122	30.714	11.74	10.65	110.26	29.026	24.367	5.1436	1.27495	2.81	0.13	1.3	0.31	1.16
W9404	F24	04-05-94	739	8.24	W94040061	2.906	31.719	11.82	10.90	108.42	28.89	25.275	2.5301	0.74566	1.12	0.06	1.05	0.39	0.69
W9404	F24	04-05-94	739	13.33	W94040060	2.611	31.95	11.86	10.97	108.14	28.842	25.483	1.4926	0.6916	1.58	0.06	1.28	0.42	0.86
W9404	F24	04-05-94	738	18.89	W94040059	2.531	32.029	11.6	10.98	105.61	28.844	25.552	1.0661	0.6902	1.28	0.06	1.46	0.42	1.04
W9404	F25	04-05-94	1535	1.11	W94040213	4.821	30.694	11.35	10.47	108.43	29.569	24.282	2.0665	1.25872	3.18	0.16	1.4	0.42	1.29
W9404	F25	04-05-94	1534	2.2	W94040212	4.762	30.72	11.41	10.48	108.87	29.545	24.308	2.2821	1.24739	1.89	0.11	0.82	0.28	0.78
W9404	F25	04-05-94	1533	5.34	W94040211	4.782	31.046	11.93	10.45	114.13	29.847	24.565	4.5874	1.08277	1.05	0.1	0.62	0.22	0.58
W9404	F25	04-05-94	1532	7.98	W94040210	4.564	31.1	12.02	10.51	114.42	29.717	24.63	3.8544	1.04258	1.1	0.08	0.73	0.28	0.62
W9404	F25	04-05-94	1531	10.6	W94040209	3.961	31.277	12.02	10.65	112.86	29.379	24.829	2.8106	1.0168	1.65	0.1	0.95	0.33	0.83

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9404	F26	04-06-94	1046	1.91	W94040320	4.024	31.245	11.69	10.64	109.91	29.4	24.798	1.1974	0.67204	0.3	0.01	0.17	0.12	0.31
W9404	F26	04-06-94	1045	8.12	W94040319	2.888	31.901	12.41	10.89	113.91	29.026	25.421	4.8033	0.88278	0.39	0.01	0.24	0.19	0.21
W9404	F26	04-06-94	1044	17.12	W94040318	2.301	32.252	11.75	11.03	106.51	28.835	25.748	11.4187	1.24254	0.96	0.04	1.13	0.36	0.37
W9404	F26	04-06-94	1042	33.31	W94040316	2.471	32.489	11.11	10.97	101.31	29.174	25.924	3.9949	0.89415	0.15	0.1	4.28	0.4	2.51
W9404	F26	04-06-94	1042	49.73	W94040315	2.498	32.617	10.4	10.95	94.98	29.309	26.025	0.6802	0.74208	2.77	0.1	6.45	0.76	4.41
W9404	F27B	04-06-94	1149	1.08	W94040333	3.854	31.279	12.5	10.68	117.06	29.291	24.841	1.6934	0.83808	0.37	0.01	0.08	0.08	0.29
W9404	F27B	04-06-94	1148	8.29	W94040332	3.661	31.429	12.55	10.72	117.08	29.263	24.978	4.194	0.8966	0.31	0.01	0.09	0.02	0.4
W9404	F27B	04-06-94	1147	19.15	W94040331	2.9	32.449	11.57	10.85	106.63	29.492	25.858	11.8671	1.3309	0.32	0.01	0.08	0	0.33
W9404	F27B	04-06-94	1145	56.15	W94040330	3.034	32.763	10.43	10.79	96.65	29.879	26.097	0.804	0.79389	0.99	0.25	4.33	0.48	5.32
W9404	F27B	04-06-94	1142	97.26	W94040329	3.875	32.921	10.66	10.56	100.98	30.738	26.146	2.1292	0.70263	1.49	0.34	2.49	0.36	4.37
W9404	F28	04-06-94	1318	2.04	W94040354	3.773	31.581	12.06	10.68	112.94	29.481	25.089	1.5727	0.64095	0.37	0	0.11	0.07	0.14
W9404	F28	04-06-94	1317	6.31	W94040353	3.537	31.658	12.28	10.74	114.39	29.354	25.172	2.1094	0.64753	0.39	0	0.12	0.09	0.14
W9404	F28	04-06-94	1316	10.19	W94040352	2.99	31.969	12.15	10.86	111.87	29.167	25.467	3.1547	0.68605	0.41	0.01	0.11	0.12	0.23
W9404	F28	04-06-94	1315	15.48	W94040351	2.534	32.287	11.66	10.96	106.35	29.055	25.758	4.6953	0.76465	1	0.01	0.1	0.21	0.61
W9404	F28	04-06-94	1314	24.17	W94040350	2.47	32.344	11.51	10.98	104.85	29.052	25.809	4.609	0.88246	0.75	0.01	0.09	0.22	0.83
W9404	F29	04-06-94	1557	1.06	W94040378	3.595	31.809	11.15	10.71	104.12	29.527	25.287	0.6424	0.50872	1.1	0.06	0.1	0.13	0.59
W9404	F29	04-06-94	1556	9.62	W94040377	3.338	31.93	11.43	10.77	106.13	29.419	25.406	1.3219	0.54265	0.61	0.04	0.09	0.15	0.54
W9404	F29	04-06-94	1555	20.23	W94040376	3.108	32.105	11.75	10.82	108.60	29.381	25.565	2.3995	0.64721	0.52	0.01	0.12	0.18	0.44
W9404	F29	04-06-94	1554	37.6	W94040375	3.011	32.251	11.6	10.84	107.06	29.429	25.691	3.4406	0.74156	0.41	0	0.11	0.12	0.48
W9404	F29	04-06-94	1553	58.28	W94040374	3.07	32.408	11.47	10.81	106.13	29.616	25.81	5.274	0.91814	0.55	0.02	0.13	0.18	0.66
W9404	F30B	04-05-94	548	2.66	W94040016	5.503	28.077	10.94	10.47	104.45	27.785	22.141	6.0546	1.70984	2.91	0.3	3.26	0.16	6.72
W9404	F30B	04-05-94	546	4.82	W94040015	4.628	30.058	10.8	10.56	102.26	28.863	23.798	3.3632	1.48511	5.49	0.22	2.43	0.5	3.06
W9404	F30B	04-05-94	544	9.22	W94040014	4.429	30.358	10.66	10.59	100.64	28.967	24.055	3.1863	1.42707	5.17	0.2	2.27	0.53	2.88
W9404	F31B	04-05-94	1607	1.36	W94040222	5.187	30.337	11.26	10.40	108.28	29.551	23.961	3.2189	1.42257	4.93	0.22	1.69	0.46	1.9
W9404	F31B	04-05-94	1606	4.93	W94040221	5.045	30.359	11.36	10.43	108.88	29.458	23.993	3.8981	1.42496	0.22	0.04	0	0	1.84
W9404	F31B	04-05-94	1605	10.73	W94040220	4.938	30.388	11.48	10.46	109.76	29.4	24.028	3.6154	1.4385	3.17	0.24	0.68	0.2	1.93
W9404	N01P	04-06-94	649	2.2	W94040262	4.496	31.031	11.35	10.53	107.81	29.599	24.582	2.6883	0.99898	0.05	0.03	-0.01	0	0.76
W9404	N01P	04-06-94	648	3.46	W94040261	4.243	31.021	11.47	10.59	108.27	29.387	24.6	3.5361	1.04548	0.45	0.02	0	0.05	0.55
W9404	N01P	04-06-94	648	6.51	W94040260	3.731	31.256	11.6	10.71	108.29	29.173	24.834	4.8062	0.93268	0.06	0.01	0.01	0	0.39
W9404	N01P	04-06-94	646	17.66	W94040259	2.278	32.188	10.67	11.04	96.62	28.765	25.699	1.2117	0.66825	2.48	0.02	0.01	0.34	1.51
W9404	N01P	04-06-94	645	27.14	W94040258	2.113	32.352	10.3	11.08	92.98	28.766	25.842	1.3002	0.7916	2.26	0.03	0.02	0.41	2.16
W9404	N01P	04-08-94	736	2.34	W94040577	3.025	31.719	11.57	10.87	106.44	28.985	25.265	0.8632	0.72595	0.5	0	0.07	0.45	0.51
W9404	N01P	04-08-94	736	4.29	W94040576	3.022	31.723	11.57	10.87	106.44	28.986	25.268	1.7278	0.73224	1.02	0.06	1.01	0.66	0.58
W9404	N01P	04-08-94	735	10	W94040575	2.883	31.818	11.64	10.90	106.77	28.954	25.356	2.2126	0.72845	0.65	0	0.07	0.53	0.61
W9404	N01P	04-08-94	734	20.26	W94040574	2.294	32.245	11.06	11.03	100.23	28.825	25.743	1.9088	0.70356	2.15	0.07	3.36	0.97	2.18
W9404	N01P	04-08-94	734	27.47	W94040573	2.163	32.326	11.13	11.07	100.59	28.787	25.818	0.9708	0.67507	1.58	0	0.07	0.62	2.06
W9404	N02	04-08-94	800	2.18	W94040592	3.286	31.547	11.6	10.81	107.30	29.055	25.106	1.3331	0.74142	0.22	0.02	0.04	0.42	0.29
W9404	N02	04-08-94	759	5.76	W94040591	3.279	31.546	11.68	10.81	108.02	29.05	25.105	2.4075	0.74834	0.81	0.05	0.36	0.55	0.32
W9404	N02	04-08-94	759	11.56	W94040590	3.089	31.757	11.56	10.85	106.55	29.073	25.29	2.7477	0.71622	0.11	0.01	0.05	0.46	0.43
W9404	N02	04-08-94	758	26.22	W94040589	2.163	32.304	11.13	11.07	100.57	28.769	25.801	1.8827	0.78108	1.43	0.02	0.05	0.76	1.5
W9404	N02	04-08-94	757	36.06	W94040588	2.158	32.331	10.99	11.07	99.31	28.79	25.822	1.2749	0.81801	2.3	0.08	3.09	0.96	2.05
W9404	N03	04-08-94	824	2.19	W94040605	3.227	31.609	11.96	10.82	110.51	29.058	25.16	1.094	0.70728	0.4	0.03	0.13	0.52	0.22
W9404	N03	04-08-94	823	14.52	W94040604	3.165	31.636	12.06	10.84	111.28	29.036	25.187	2.4557	0.70728	0.34	0.03	0.13	0.56	0.22
W9404	N03	04-08-94	823	23.93	W94040603	2.127	32.246	11.61	11.08	104.77	28.691	25.756	2.2208	0.58436	1.43	0.08	1.5	0.78	0.42
W9404	N03	04-08-94	822	33.96	W94040602	2.147	32.294	11.43	11.07	103.23	28.751	25.793	3.1266	0.78488	2.09	0.09	2.28	0.91	1.13
W9404	N03	04-08-94	821	42.52	W94040601	2.167	32.307	11.36	11.07	102.66	28.781	25.803	3.2067	0.8582	2.33	0.08	2.47	0.88	1.2
W9404	N04P	04-06-94	748	2.3	W94040278	4.417	31.05	11.98	10.55	113.59	29.552	24.605	4.3446	0.99147	0.09	0.02	0.02	0	0.22
W9404	N04P	04-06-94	747	4.68	W94040277	4.35	31.062	11.9	10.56	112.66	29.51	24.622	4.9848	1.00863	0.08	0.01	0.03	0.06	0.19
W9404	N04P	04-06-94	746	22.98	W94040276	2.068	32.097	11.73	11.11	105.59	28.522	25.641	3.3233	0.64633	0.1	0.02	0.01	0.25	0.15
W9404	N04P	04-06-94	745	33.56	W94040275	2.072	32.213	11.54	11.10	103.97	28.624	25.735	2.3923	0.64303	1.12	0.04	0.01	0.27	0.36

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9404	N04P	04-06-94	744	46.34	W94040274	2.22	32.407	10.99	11.04	99.52	28.907	25.879	3.6244	1.06316	1.13	0.02	0	0.25	0.72
W9404	N04P	04-08-94	848	2.34	W94040619	2.988	31.751	11.87	10.88	109.12	28.981	25.293	0.7677	0.66973	0.11	0.02	0.05	0.46	0.23
W9404	N04P	04-08-94	847	11.79	W94040618	2.905	31.769	11.99	10.90	110.01	28.932	25.315	2.6918	0.67881	0.35	0.03	0.17	0.57	0.2
W9404	N04P	04-08-94	846	23.55	W94040617	2.305	32.229	11.7	11.03	106.05	28.823	25.73	2.0946	0.65882	1.31	0.04	0.59	0.68	0.24
W9404	N04P	04-08-94	845	37.81	W94040615	2.214	32.374	11.28	11.05	102.11	28.871	25.852	3.7126	0.94608	1.88	0.01	0.02	0.76	1.01
W9404	N04P	04-08-94	844	46.3	W94040614	2.267	32.43	11.33	11.03	102.74	28.964	25.893	2.9862	1.02176	2.64	0.08	2.97	0.92	1.47
W9404	N05	04-08-94	915	2.34	W94040636	3.284	31.635	11.99	10.81	110.96	29.126	25.175	0.8446	0.63527	0.53	0.02	0.07	0.5	0.15
W9404	N05	04-08-94	915	12.61	W94040635	3.249	31.636	12	10.81	110.96	29.103	25.18	1.7418	0.63828	0.25	0.01	0.08	0.51	0.14
W9404	N05	04-08-94	914	23.81	W94040634	2.193	32.239	11.52	11.06	104.13	28.74	25.746	1.6368	0.60042	0.24	0.01	0.05	0.57	0.28
W9404	N05	04-08-94	913	38.27	W94040633	2.229	32.394	11.11	11.04	100.62	28.9	25.868	3.6514	0.9255	2.45	0.06	2.71	0.91	1.04
W9404	N05	04-08-94	912	48.3	W94040632	2.239	32.402	11.06	11.04	100.20	28.92	25.873	3.4787	0.96505	2.41	0.06	2.74	0.9	1.07
W9404	N06	04-08-94	940	2.3	W94040652	3.491	31.507	11.6	10.76	107.82	29.187	25.055	0.7566	0.61884	0.38	0.02	0.09	0.47	0.12
W9404	N06	04-08-94	939	12.21	W94040651	3.398	31.547	11.69	10.78	108.43	29.15	25.096	1.4722	0.62694	0.57	0.03	0.09	0.51	0.17
W9404	N06	04-08-94	938	23.47	W94040650	2.219	32.197	11.4	11.06	103.08	28.726	25.71	1.8185	0.61292	1.13	0.05	0.91	0.72	0.24
W9404	N06	04-08-94	937	39.05	W94040649	2.406	32.418	11.16	10.99	101.55	29.066	25.873	3.6288	0.86899	2.19	0.07	2.4	0.83	0.47
W9404	N06	04-08-94	936	49.09	W94040648	2.41	32.471	10.82	10.98	98.50	29.117	25.916	2.9705	0.91862	2.75	0.07	2.81	0.86	1.26
W9404	N07P	04-05-94	1024	2.17	W94040122	4.07	30.871	12.26	10.65	115.12	29.118	24.497	0.6874	0.68314	0.11	0.02	0.04	0.04	0.12
W9404	N07P	04-05-94	1022	10.7	W94040120	3.789	30.984	12.37	10.72	115.43	28.992	24.612	2.8449	0.77871	0.16	0.02	0.06	0.11	0.14
W9404	N07P	04-05-94	1021	23.15	W94040119	2.811	31.812	12.96	10.92	118.66	28.896	25.357	5.352	0.95465	0.21	0.03	0.09	0.21	0.15
W9404	N07P	04-05-94	1020	35.15	W94040118	2.235	32.229	11.92	11.05	107.85	28.771	25.735	7.2438	1.08446	0.1	0.02	0.04	0.13	0.44
W9404	N07P	04-05-94	1017	45.58	W94040117	2.145	32.353	11.42	11.07	103.18	28.801	25.841	1.9213	0.70867	2.06	0.08	2.38	0.56	1.11
W9404	N07P	04-08-94	1004	2.52	W94040666	3.643	31.344	11.63	10.73	108.39	29.174	24.912	0.5901	0.60247	0.58	0.02	0.08	0.47	0.13
W9404	N07P	04-08-94	1004	12.04	W94040665	3.536	31.374	11.76	10.76	109.33	29.118	24.946	1.1808	0.61884	0.71	0.02	0.08	0.48	0.12
W9404	N07P	04-08-94	1003	23.76	W94040664	2.257	32.168	11.51	11.05	104.16	28.734	25.684	1.9288	0.56679	0.99	0.05	0.34	0.63	0.29
W9404	N07P	04-08-94	1002	37.1	W94040663	2.431	32.394	11.04	10.98	100.50	29.066	25.852	4.0502	0.92452	0.56	0.03	0.02	0.55	0.68
W9404	N07P	04-08-94	1001	43.67	W94040662	2.352	32.456	10.61	11.00	96.43	29.054	25.908	3.552	1.01177	3.5	0.09	2.75	0.89	1.45
W9404	N08	04-08-94	1047	2.39	W94040686	3.612	31.334	11.92	10.74	111.00	29.141	24.907	0.4461	0.57096	0.14	0.01	0.03	0.32	0.11
W9404	N08	04-08-94	1047	6.09	W94040685	3.514	31.333	11.94	10.76	110.92	29.062	24.915	0.6302	0.5919	0.1	0.01	0.04	0.34	0.1
W9404	N08	04-08-94	1046	13.15	W94040684	3.188	31.577	11.97	10.84	110.47	29.005	25.138	1.4002	0.61687	1.4	0.03	0.4	0.55	0.32
W9404	N08	04-08-94	1046	20.79	W94040683	2.416	32.205	11.53	11.00	104.79	28.893	25.702	2.6227	0.72377	1.02	0	0.06	0.59	0.91
W9404	N08	04-08-94	1045	26.32	W94040682	2.367	32.235	11.41	11.01	103.59	28.879	25.73	2.8642	0.78074	1.44	0.01	0.07	0.49	0.83
W9404	N09	04-08-94	1115	2.37	W94040699	3.719	31.387	11.76	10.71	109.84	29.273	24.94	0.6037	0.65132	0.3	0.02	0.03	0.38	0.73
W9404	N09	04-08-94	1114	6.4	W94040698	3.613	31.4	11.75	10.73	109.47	29.199	24.96	1.1675	0.65913	0.24	0.01	0.07	0.42	1.16
W9404	N09	04-08-94	1114	13.95	W94040697	3.51	31.407	11.78	10.76	109.47	29.124	24.974	1.6632	0.63893	0.28	0.02	0.04	0.29	0.19
W9404	N09	04-08-94	1113	23.09	W94040696	2.377	32.194	10.99	11.01	99.78	28.853	25.696	1.418	0.6873	1.95	0.08	1.91	0.78	0.13
W9404	N09	04-08-94	1113	30.55	W94040695	2.314	32.238	10.98	11.03	99.55	28.841	25.736	1.1057	0.67034	0.8	0.06	1.21	0.56	0.14
W9404	N10P	04-05-94	1500	1.35	W94040199	4.89	30.65	11.25	10.45	107.63	29.587	24.24	1.8585	1.21482	0.28	0.02	0.08	0	1.36
W9404	N10P	04-05-94	1459	3.99	W94040198	4.778	30.72	11.28	10.48	107.67	29.559	24.307	4.2895	1.20667	0.89	0.02	0.05	0.09	1.24
W9404	N10P	04-05-94	1458	7.95	W94040197	4.243	31.02	11.72	10.59	110.63	29.388	24.598	5.4699	1.11074	2.18	0.13	0.9	0.34	0.8
W9404	N10P	04-05-94	1457	14.17	W94040196	3.017	31.677	11.54	10.88	106.11	28.949	25.232	2.7172	0.79569	0.2	0.02	0.03	0.14	0.8
W9404	N10P	04-05-94	1455	19.76	W94040195	2.491	32.028	11.77	10.99	107.05	28.81	25.555	1.5923	0.72021	1.53	0.08	1.26	0.46	0.93
W9404	N10P	04-08-94	621	2.29	W94040530	3.742	31.145	10.86	10.72	101.33	29.087	24.745	3.5307	0.93043	2.07	0.1	1.37	0.45	1.11
W9404	N10P	04-08-94	620	3.76	W94040529	3.772	31.162	10.89	10.71	101.70	29.126	24.756	3.1407	0.94161	0.17	0	0.07	0.18	1.06
W9404	N10P	04-08-94	620	8.72	W94040528	3.858	31.193	10.93	10.68	102.31	29.224	24.773	3.8934	0.94961	0.92	0	0.06	0.26	0.81
W9404	N10P	04-08-94	619	14.39	W94040527	3.871	31.267	11.07	10.67	103.71	29.299	24.83	3.6691	0.92635	1.65	0.06	0.79	0.34	0.68
W9404	N10P	04-08-94	618	20.76	W94040526	3.216	31.656	10.73	10.82	99.15	29.096	25.198	1.8455	0.74882	1.92	0.07	1.19	0.43	0.96
W9404	N11	04-08-94	649	2.27	W94040549	3.712	31.27	11.24	10.72	104.89	29.168	24.847	2.3788	0.89122	1.38	0.07	0.79	0.32	0.63
W9404	N11	04-08-94	649	4.37	W94040548	3.711	31.272	11.22	10.72	104.70	29.17	24.849	3.6859	0.89009	1.43	0.06	0.81	0.33	0.63
W9404	N11	04-08-94	648	9.46	W94040547	3.726	31.3	11.3	10.71	105.50	29.207	24.869	3.4718	0.89233	1.17	0.06	0.82	0.36	0.65
W9404	N11	04-08-94	647	17.3	W94040546	2.556	32.017	10.98	10.98	100.02	28.853	25.541	1.5575	0.69542	1.77	0.06	1.72	0.51	1.19

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9404	N11	04-08-94	646	26.26	W94040545	2.424	32.108	11.06	11.01	100.47	28.824	25.624	1.2346	0.71887	1.57	0.06	1.68	0.5	1.17
W9404	N12	04-08-94	713	2.33	W94040564	3.457	31.408	11.64	10.77	108.03	29.077	24.98	1.9238	0.79629	0.96	0.06	0.5	0.29	0.43
W9404	N12	04-08-94	712	2.35	W94040563	3.456	31.408	11.68	10.78	108.40	29.076	24.98	2.163	0.79337	0.67	0.06	0.52	0.31	0.45
W9404	N12	04-08-94	712	6.34	W94040562	3.424	31.436	11.75	10.78	108.98	29.076	25.005	3.2462	0.79635	0.73	0.06	0.91	0.35	0.54
W9404	N12	04-08-94	711	11.7	W94040561	2.917	31.792	11.29	10.89	103.63	28.961	25.332	1.8926	0.75777	1.28	0.07	1.68	0.5	1.17
W9404	N12	04-08-94	711	15.37	W94040560	2.45	32.128	11.06	11.00	100.55	28.856	25.638	1.3287	0.67244	1.01	0.06	1.12	0.4	0.82
W9404	N13	04-08-94	1252	1.42	W94040758	3.933	31.478	11.44	10.64	107.49	29.523	24.992	0.9167	0.74571	0.12	0.04	0.05	0.08	0.27
W9404	N13	04-08-94	1251	5.65	W94040757	3.679	31.49	11.51	10.71	107.47	29.329	25.025	1.6612	0.76992	0.17	0.03	0.07	0.11	0.28
W9404	N13	04-08-94	1250	12.29	W94040756	3.437	31.509	11.45	10.77	106.28	29.15	25.062	3.1379	0.78029	0.16	0.03	0.06	0.1	0.36
W9404	N13	04-08-94	1249	20.06	W94040755	2.505	32.029	10.99	10.99	99.99	28.823	25.555	1.4576	0.72024	1.75	0.03	0.07	0.33	0.93
W9404	N13	04-08-94	1249	27.82	W94040754	2.199	32.284	10.69	11.06	96.67	28.782	25.781	1.6636	0.76113	0.97	0.03	0.07	0.26	0.71
W9404	N14	04-08-94	1315	1.34	W94040771	3.927	31.462	11.89	10.65	111.69	29.505	24.979	0.8957	0.72611	0.07	0.02	0.09	0.11	0.23
W9404	N14	04-08-94	1314	4.43	W94040770	3.679	31.476	12.01	10.71	112.13	29.316	25.014	1.3183	0.76248	0.06	0.01	0.2	0.11	0.25
W9404	N14	04-08-94	1314	10.13	W94040769	3.527	31.509	12.01	10.75	111.73	29.223	25.054	3.1862	0.76766	0.87	0.03	0.05	0.19	0.36
W9404	N14	04-08-94	1313	15.02	W94040768	2.641	31.996	11.7	10.96	106.80	28.905	25.518	1.8404	0.68234	1.51	0.03	0.04	0.25	0.61
W9404	N14	04-08-94	1311	28.45	W94040767	2.206	32.284	11.53	11.06	104.29	28.788	25.781	2.4515	0.86319	1.15	0.02	0.06	0.29	0.67
W9404	N15	04-08-94	1339	0.6	W94040782	3.977	31.524	11.77	10.63	110.74	29.599	25.024	0.6125	0.6665	0.03	0.03	0.03	0.11	0.21
W9404	N15	04-08-94	1338	12.03	W94040781	3.376	31.57	11.92	10.79	110.52	29.151	25.116	3.0209	0.72288	0.01	0.03	0.02	0.04	0.22
W9404	N15	04-08-94	1336	18.39	W94040780	2.92	31.84	11.88	10.89	109.09	29.006	25.37	2.2471	0.68632	0.41	0.03	0.05	0.22	0.34
W9404	N15	04-08-94	1335	23.31	W94040779	2.35	32.25	11.62	11.02	105.46	28.877	25.743	3.5365	0.80649	1.3	0.03	0.04	0.31	0.46
W9404	N15	04-08-94	1334	34.43	W94040778	2.206	32.307	11.44	11.05	103.49	28.81	25.8	3.5426	0.88035	1.41	0.04	0.05	0.32	0.72
W9404	N16P	04-05-94	938	1.55	W94040105	4.036	30.859	12.76	10.66	119.70	29.081	24.491	0.4911	0.65269	0.05	0.01	0.08	0	0.16
W9404	N16P	04-05-94	937	9.22	W94040104	3.355	31.121	13.08	10.82	120.85	28.757	24.76	3.642	0.88051	0.11	0	0.13	0.08	0.14
W9404	N16P	04-05-94	936	21.05	W94040103	2.345	32.088	13.26	11.03	120.20	28.74	25.614	5.3812	0.84297	0.37	0.01	0.24	0.22	0.14
W9404	N16P	04-05-94	935	31.56	W94040102	2.204	32.181	12.79	11.06	115.60	28.705	25.699	4.7457	0.91473	0.99	0.04	1.02	0.4	0.39
W9404	N16P	04-05-94	935	39.37	W94040101	2.152	32.334	12.18	11.07	110.05	28.788	25.825	2.2665	0.81024	1.74	0.06	2.23	0.52	1.06
W9404	N16P	04-06-94	832	2.24	W94040292	4.1	31.21	11.64	10.62	109.62	29.432	24.763	1.1988	0.62021	0.1	0	0.08	0.01	0.22
W9404	N16P	04-06-94	831	12.89	W94040291	3.351	31.493	12	10.80	111.14	29.067	25.057	2.9374	0.71154	0.31	0	0.1	0.01	0.42
W9404	N16P	04-06-94	830	25.34	W94040290	2.299	32.202	11.55	11.04	104.66	28.797	25.709	4.7887	0.89201	1.1	0.03	0.98	0.34	0.45
W9404	N16P	04-06-94	829	32.76	W94040289	2.138	32.318	11.2	11.07	101.15	28.761	25.813	3.8168	0.8726	1.94	0	0.11	0.35	0.89
W9404	N16P	04-06-94	828	38.69	W94040288	2.142	32.338	11.2	11.07	101.17	28.783	25.829	3.0626	0.89317	1.13	0.19	0.8	0.25	1.05
W9404	N16P	04-08-94	1403	1.42	W94040794	4.056	31.508	12.08	10.61	113.87	29.65	25.004	0.4827	0.60893	0.03	0.02	0.03	0.12	0.14
W9404	N16P	04-08-94	1402	14.97	W94040793	3.428	31.503	12.3	10.78	114.14	29.139	25.058	1.7701	0.64745	0.01	0.03	0.03	0.07	0.16
W9404	N16P	04-08-94	1401	21.68	W94040792	2.898	31.865	12.19	10.89	111.90	29.011	25.392	1.8495	0.65844	0.32	0.03	0.02	0.26	0.46
W9404	N16P	04-08-94	1400	27.27	W94040791	2.416	32.172	11.99	11.01	108.95	28.87	25.676	2.0308	0.64123	0.86	0.03	0.02	0.33	0.84
W9404	N16P	04-08-94	1359	37.03	W94040790	2.2	32.329	11.68	11.05	105.66	28.823	25.818	4.3948	0.95913	2.8	0.03	0.03	0.38	0.74
W9404	N17	04-08-94	1425	1.56	W94040805	4.107	31.416	12.2	10.60	115.08	29.613	24.926	0.3227	0.54895	0.08	0.01	0.06	0.14	0.11
W9404	N17	04-08-94	1424	8.31	W94040804	3.55	31.427	12.4	10.75	115.36	29.171	24.986	0.642	0.58889	0	0.01	0.04	0.11	0.13
W9404	N17	04-08-94	1423	18.58	W94040803	3.061	31.678	12.26	10.86	112.86	28.987	25.229	1.9035	0.6324	0.53	0.04	0.37	0.31	0.36
W9404	N17	04-08-94	1422	25.76	W94040802	2.376	32.209	11.83	11.01	107.41	28.865	25.708	2.3946	0.71954	0.98	0.02	0.03	0.33	0.72
W9404	N17	04-08-94	1421	34.39	W94040801	2.346	32.245	11.96	11.02	108.53	28.874	25.739	2.3879	0.72689	0.74	0.06	0.96	0.42	0.66
W9404	N18	04-08-94	1444	1.35	W94040818	4.397	31.402	11.81	10.53	112.18	29.839	24.887	0.8577	0.70666	0.09	0.01	0.05	0.05	0.14
W9404	N18	04-08-94	1444	3.72	W94040817	3.836	31.392	12.01	10.67	112.51	29.372	24.933	1.3662	0.72982	0.07	0.01	0.05	0.08	0.16
W9404	N18	04-08-94	1443	10.18	W94040816	3.573	31.422	12.06	10.74	112.26	29.187	24.981	1.9697	0.68962	0.05	0.01	0.05	0.05	0.26
W9404	N18	04-08-94	1442	14.86	W94040815	3.218	31.599	11.87	10.83	109.64	29.048	25.153	1.8323	0.64505	0.07	0.01	0.05	0.17	0.44
W9404	N18	04-08-94	1442	19.55	W94040814	2.767	31.949	11.81	10.92	108.11	28.972	25.47	2.0752	0.6797	0.07	0.01	0.05	0.08	0.28
W9404	N19	04-08-94	1202	1.54	W94040713	4.012	31.358	12.14	10.63	114.20	29.486	24.889	1.289	0.78481	0.1	0.02	0.03	0.04	0.19
W9404	N19	04-08-94	1202	5.25	W94040712	3.887	31.358	12.34	10.66	115.72	29.386	24.901	1.8299	0.7956	0.27	0.02	0.03	0.1	0.16
W9404	N19	04-08-94	1201	11.61	W94040711	3.8	31.366	12.4	10.69	116.04	29.325	24.915	3.098	0.78663	0.1	0.01	0.05	0.12	0.22
W9404	N19	04-08-94	1200	16.52	W94040710	2.846	31.908	11.99	10.91	109.95	29.001	25.43	2.1542	0.72378	0.66	0.01	0.04	0.28	0.62

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9404	N19	04-08-94	1159	24.32	W94040709	2.42	32.158	12.04	11.01	109.40	28.86	25.664	1.5463	0.67978	0.1	0.01	0.06	0.21	0.51
W9404	N20P	04-05-94	901	2.19	W94040091	4.05	31.071	12.24	10.64	115.03	29.273	24.657	1.8273	0.82881	0.69	0.04	0.12	0.08	0.21
W9404	N20P	04-05-94	900	9.65	W94040090	3.482	31.408	12.03	10.77	111.72	29.1	24.977	3.2628	0.79772	0.19	0.03	0.2	0.16	0.24
W9404	N20P	04-05-94	859	17.15	W94040089	2.423	32.01	11.95	11.02	108.49	28.739	25.546	3.6173	0.82366	0.83	0.05	0.95	0.37	0.55
W9404	N20P	04-05-94	858	21.01	W94040088	2.348	32.08	11.92	11.03	108.06	28.736	25.607	2.9042	0.75749	1.06	0.02	1.48	0.46	0.87
W9404	N20P	04-05-94	857	27.69	W94040087	2.27	32.132	12	11.05	108.60	28.718	25.655	1.865	0.75844	1.24	0	1.69	0.46	1.02
W9404	N20P	04-08-94	1232	1.32	W94040747	4.101	31.338	11.82	10.61	111.42	29.542	24.865	1.7565	0.80795	0.15	0.02	0.04	0.08	0.24
W9404	N20P	04-08-94	1231	5.91	W94040746	3.745	31.356	11.87	10.70	110.92	29.268	24.912	3.6477	0.8733	0.18	0.03	0.05	0.09	0.23
W9404	N20P	04-08-94	1231	12.89	W94040745	3.698	31.367	11.84	10.71	110.52	29.243	24.925	4.1381	0.84404	0.69	0.03	0.03	0.21	0.41
W9404	N20P	04-08-94	1230	17.84	W94040744	2.364	32.158	11.31	11.02	102.62	28.811	25.668	1.6541	0.70472	1.24	0.02	0.04	0.33	1
W9404	N20P	04-08-94	1229	27.61	W94040743	2.29	32.204	11.24	11.04	101.83	28.792	25.711	1.5256	0.73626	1.48	0.02	0.04	0.32	1.21
W9404	N21	04-08-94	1506	1.48	W94040831	4.518	31.396	11.65	10.50	110.99	29.933	24.869	1.2167	0.76182	1.7	0.03	0.06	0.08	0.27
W9404	N21	04-08-94	1505	4.79	W94040830	3.84	31.395	11.8	10.67	110.55	29.379	24.935	2.5481	0.84014	0.14	0.02	0.06	0.14	0.24
W9404	N21	04-08-94	1504	9.75	W94040829	3.756	31.415	11.74	10.69	109.78	29.33	24.959	3.8847	0.78662	0.18	0.02	0.06	0.14	0.23
W9404	N21	04-08-94	1503	18.63	W94040828	2.514	32.1	11.28	10.98	102.70	28.887	25.61	1.6707	0.66881	1.19	0.06	1.04	0.42	0.81
W9404	N21	04-08-94	1502	30.37	W94040827	2.379	32.172	11.25	11.02	102.13	28.841	25.679	1.3979	0.66881	1.25	0.06	1.02	0.43	0.81
W9405	N01P	04-27-94	831	1.64	W94050067	6.057	30.948	10.24	10.14	100.95	30.802	24.346	1.8977	1.03429	1.24	0.12	1.31	0.42	3.01
W9405	N01P	04-27-94	830	5.62	W94050066	5.515	31.266	10.13	10.25	98.79	30.641	24.659	1.3778	0.86347	1.5	0.12	1.53	0.47	3.01
W9405	N01P	04-27-94	829	12.75	W94050065	5.52	31.378	10.15	10.25	99.07	30.747	24.748	1.3773	0.89196	1.52	0.12	1.48	0.48	2.77
W9405	N01P	04-27-94	828	18.89	W94050064	4.902	31.7	9.92	10.38	95.59	30.52	25.071	0.8183	0.73897	2.25	0.13	2.06	0.59	3.08
W9405	N01P	04-27-94	828	27.37	W94050063	3.168	32.234	9.49	10.79	87.92	29.54	25.664	0.4002	0.5977	2.88	0.14	3.16	0.75	4.04
W9405	N02	04-27-94	917	1.74	W94050080	6.218	30.795	10.35	10.11	102.33	30.795	24.206	1.6787	1.04291	1.12	0.1	0.99	0.37	3.31
W9405	N02	04-27-94	916	7.55	W94050079	4.807	31.214	10.31	10.44	98.80	30.014	24.695	1.1098	0.74716	1.59	0.12	1.61	0.47	3.43
W9405	N02	04-27-94	915	17.84	W94050078	4.051	31.761	10.21	10.59	96.39	29.868	25.206	0.786	0.64237	2.41	0.13	2.6	0.61	3.22
W9405	N02	04-27-94	914	26.01	W94050077	3.012	32.245	9.58	10.84	88.42	29.408	25.685	0.4782	0.56576	1.56	0.11	1.59	0.47	3.46
W9405	N02	04-27-94	913	36.3	W94050076	2.733	32.452	9.32	10.90	85.53	29.364	25.874	0.4592	0.71775	1.37	0.11	0.94	0.33	3.23
W9405	N03	04-27-94	943	1.72	W94050091	6.261	30.497	10.48	10.12	103.52	30.56	23.965	1.3773	0.94807	0.6	0.1	0.48	0.25	3.71
W9405	N03	04-27-94	942	9.34	W94050090	5.283	30.962	10.72	10.33	103.75	30.183	24.445	1.0117	0.70106	1.33	0.11	1.15	0.4	3.26
W9405	N03	04-27-94	942	18.63	W94050089	4.124	32.253	10.88	10.54	103.24	30.348	25.589	1.2118	0.63042	0.93	0.1	1.37	0.45	13.16
W9405	N03	04-27-94	941	26.78	W94050088	2.874	32.419	10.01	10.86	92.17	29.449	25.836	1.5915	0.77125	2.87	0.14	4.34	0.79	3.29
W9405	N03	04-27-94	939	40.75	W94050087	2.852	32.494	9.71	10.86	89.40	29.498	25.897	0.8446	0.62077	3.42	0.14	5.19	0.89	4.37
W9405	N04P	04-27-94	1009	1.78	W94050102	6.26	30.337	10.52	10.13	103.80	30.415	23.84	1.0643	0.95301	0.5	0.1	0.51	0.25	4.12
W9405	N04P	04-27-94	1009	11.73	W94050101	5.337	31.008	10.86	10.32	105.28	30.269	24.475	0.8758	0.65532	1.22	0.08	0.48	0.33	2.17
W9405	N04P	04-27-94	1007	24.74	W94050100	3.151	32.552	10.04	10.78	93.18	29.789	25.919	1.3218	0.72194	2.3	0.15	5.5	0.82	3.9
W9405	N04P	04-27-94	1006	36.34	W94050099	2.927	32.569	10.16	10.83	93.77	29.621	25.952	2.1772	0.90137	2.42	0.16	6.24	0.86	4.42
W9405	N04P	04-27-94	1005	47.73	W94050098	2.992	32.593	10.21	10.82	94.40	29.7	25.965	2.0549	0.94359	2.35	0.17	6.43	0.86	4.66
W9405	N05	04-27-94	1043	2.01	W94050113	6.173	30.466	10.59	10.15	104.36	30.461	23.952	0.7829	0.89436	0.63	0.07	0.48	0.26	3.86
W9405	N05	04-27-94	1042	13.91	W94050112	4.698	31.617	11.24	10.44	107.71	30.277	25.027	0.7049	0.587	1.07	0.06	0.33	0.33	2.01
W9405	N05	04-27-94	1041	29.4	W94050111	3.054	32.57	10.45	10.80	96.76	29.725	25.941	2.9613	0.97541	2.13	0.13	5.74	0.84	4.2
W9405	N05	04-27-94	1040	40.01	W94050110	2.922	32.575	10.3	10.84	95.05	29.623	25.956	2.6274	1.00369	2.55	0.14	6.13	0.87	4.27
W9405	N05	04-27-94	1039	51.98	W94050109	2.933	32.577	10.38	10.83	95.82	29.64	25.958	3.1226	1.02872	2.5	0.13	6.08	0.85	4.27
W9405	N06	04-27-94	1112	0.74	W94050124	6.324	30.532	10.6	10.11	104.88	30.643	23.985	0.7214	0.88408	0.6	0.08	0.41	0.29	3.66
W9405	N06	04-27-94	1111	10.86	W94050123	5.542	30.922	10.8	10.27	105.15	30.36	24.385	1.107	0.69325	1.24	0.08	0.69	0.38	2.77
W9405	N06	04-27-94	1110	23.38	W94050122	2.989	32.362	10.46	10.83	96.56	29.495	25.781	1.9482	0.72077	2.43	0.13	4.17	0.79	3.11
W9405	N06	04-27-94	1109	36.61	W94050121	2.812	32.513	10.03	10.87	92.27	29.479	25.916	1.8968	0.84885	3.38	0.13	5.54	0.91	4.26
W9405	N06	04-27-94	1108	49.83	W94050120	2.814	32.515	10.11	10.87	93.01	29.488	25.918	1.8996	0.8663	3.33	0.14	5.55	0.91	4.33
W9405	N07P	04-27-94	1158	1.79	W94050149	6.121	31.016	10.57	10.12	104.41	30.915	24.391	0.8311	0.95401	0.9	0.1	0.71	0.38	2.71
W9405	N07P	04-27-94	1157	13.41	W94050148	5.102	31.341	10.81	10.35	104.42	30.37	24.765	1.2211	0.73999	1.73	0.1	1.32	0.51	2.29
W9405	N07P	04-27-94	1156	25.15	W94050147	2.781	32.483	10.37	10.88	95.30	29.423	25.895	2.885	0.90174	2.79	0.15	5.11	0.89	3.61
W9405	N07P	04-27-94	1155	36.12	W94050146	2.83	32.529	10.42	10.86	95.91	29.506	25.927	2.0459	0.87663	3.06	0.15	5.64	0.91	4.12

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9405	N07P	04-27-94	1154	47.5	W94050145	2.834	32.529	10.56	10.86	97.21	29.515	25.927	2.213	0.89436	3.13	0.16	5.64	0.89	4.15
W9405	N08	04-27-94	1300	1.73	W94050168	6.287	31.425	10.47	10.06	104.11	31.422	24.694	0.919	1.14425	3.43	0.14	4.28	0.9	3.78
W9405	N08	04-27-94	1300	6.09	W94050167	5.655	31.463	10.4	10.21	101.89	30.931	24.799	2.3789	1.14972	2.42	0.17	1.63	0.6	1.74
W9405	N08	04-27-94	1259	12.64	W94050166	4.921	31.684	10.4	10.37	100.25	30.52	25.056	1.163	0.7578	2.16	0.13	2.02	0.61	2.28
W9405	N08	04-27-94	1258	20.66	W94050165	2.999	32.301	9.84	10.83	90.82	29.453	25.732	0.5688	0.55515	3.27	0.15	4.24	0.88	3.77
W9405	N08	04-27-94	1257	29.67	W94050164	2.91	32.377	9.81	10.85	90.39	29.446	25.8	0.4803	0.5425	3.49	0.15	4.28	0.87	3.8
W9405	N09	04-27-94	1325	1.82	W94050179	6.197	31.389	10.65	10.08	105.65	31.315	24.677	0.7123	1.04343	1.08	0.11	0.95	0.43	3.49
W9405	N09	04-27-94	1324	7.27	W94050178	5.32	31.52	10.57	10.29	102.77	30.705	24.883	0.7944	0.81038	1.73	0.11	1.32	0.51	3.51
W9405	N09	04-27-94	1323	15.26	W94050177	3.694	32.079	10.13	10.66	94.99	29.841	25.492	0.658	0.58539	2.84	0.12	2.88	0.76	3.03
W9405	N09	04-27-94	1322	23.52	W94050176	3.3	32.192	10.02	10.76	93.11	29.613	25.618	0.4837	0.56158	3.1	0.14	3.31	0.81	2.09
W9405	N09	04-27-94	1321	31.47	W94050175	3.275	32.201	10.04	10.77	93.25	29.603	25.628	0.4423	0.55485	3.35	0.15	3.16	0.79	2.08
W9405	N10P	04-27-94	648	1.75	W94050028	5.775	31.362	9.46	10.18	92.89	30.939	24.705	1.2822	1.46744	5.89	0.22	2.02	0.83	2.77
W9405	N10P	04-27-94	647	3.01	W94050027	5.704	31.376	9.52	10.20	93.33	30.893	24.725	1.1417	1.54212	6.86	0.21	2.04	0.85	2.84
W9405	N10P	04-27-94	646	10.71	W94050026	5.639	31.41	9.5	10.21	93.01	30.873	24.759	1.2138	1.59556	5.16	0.21	2.02	0.79	2.73
W9405	N10P	04-27-94	645	15	W94050025	5.603	31.425	9.51	10.22	93.04	30.858	24.775	1.0825	1.59006	5.2	0.21	2.04	0.77	2.73
W9405	N10P	04-27-94	644	20.22	W94050024	5.549	31.445	9.58	10.23	93.61	30.834	24.797	1.1229	1.54248	5.44	0.18	2.12	0.76	2.91
W9405	N11	04-27-94	723	1.68	W94050041	5.687	31.388	9.96	10.20	97.61	30.889	24.736	1.215	1.23486	3.64	0.21	1.58	0.65	2.99
W9405	N11	04-27-94	722	5.2	W94050040	5.572	31.427	9.88	10.23	96.58	30.83	24.781	1.4594	1.25251	3.93	0.18	1.71	0.71	3
W9405	N11	04-27-94	721	12.79	W94050039	5.089	31.66	10.08	10.33	97.55	30.638	25.019	0.9718	0.78633	2.66	0.14	1.8	0.64	2.78
W9405	N11	04-27-94	720	19.62	W94050038	4.34	31.888	9.76	10.51	92.88	30.217	25.278	0.5608	0.64238	2.95	0.14	2.23	0.7	3.03
W9405	N11	04-27-94	719	24.53	W94050037	4.159	31.936	9.72	10.55	92.12	30.109	25.334	0.5519	0.63615	2.77	0.15	2.09	0.67	2.97
W9405	N12	04-27-94	754	1.81	W94050056	5.891	31.371	10.28	10.16	101.23	31.043	24.699	1.7056	0.99094	1.17	0.2	1.12	0.42	2.42
W9405	N12	04-27-94	753	4.5	W94050055	5.643	31.387	10.2	10.21	99.86	30.853	24.741	1.5557	0.92101	1.7	0.18	1.68	0.51	2.94
W9405	N12	04-27-94	752	8.12	W94050054	4.918	31.458	10.05	10.39	96.72	30.318	24.877	1.0994	0.76581	2.29	0.18	2.05	0.58	3.18
W9405	N12	04-27-94	748	12.62	W94050050	4.87	31.598	10.05	10.39	96.70	30.403	24.993	0.9474	0.71476	2.44	0.19	2.05	0.6	3
W9405	N12	04-27-94	747	17.59	W94050049	4.42	31.866	9.89	10.49	94.29	30.264	25.253	0.6369	0.67348	2.52	0.17	2.04	0.64	3.02
W9405	N13	04-27-94	1433	1.76	W94050214	6.64	31.065	10.41	10.00	104.14	31.389	24.367	0.7757	0.89435	1.36	0.11	0.98	0.63	2.89
W9405	N13	04-27-94	1432	5.63	W94050213	5.285	31.239	10.53	10.31	102.10	30.427	24.664	1.1179	0.84363	1.61	0.13	1.39	0.39	3.06
W9405	N13	04-27-94	1431	13.63	W94050212	4.044	31.722	10.55	10.60	99.56	29.828	25.175	0.939	0.70557	2.23	0.15	2.4	0.59	3.19
W9405	N13	04-27-94	1430	22.26	W94050211	3.541	32.06	10.17	10.71	95.00	29.702	25.492	0.8012	0.62535	2.89	0.17	3.16	0.7	3.24
W9405	N13	04-27-94	1429	29.15	W94050210	3.124	32.24	9.76	10.81	90.33	29.509	25.672	0.3698	0.63062	3.09	0.2	3.27	0.76	3.91
W9405	N14	04-27-94	1457	0.87	W94050225	7.23	30.815	10.4	9.88	105.32	31.646	24.094	0.7233	0.9232	0.59	0.04	0.65	0.29	3
W9405	N14	04-27-94	1456	6.1	W94050224	6.198	30.934	10.69	10.11	105.74	30.907	24.318	1.9714	1.06649	0.8	0.05	0.72	0.32	2.92
W9405	N14	04-27-94	1455	14.29	W94050223	4.315	31.89	11.02	10.51	104.81	30.196	25.282	0.7883	0.64227	1.53	0.03	1.71	0.52	2.31
W9405	N14	04-27-94	1454	21.26	W94050222	2.989	32.316	9.92	10.84	91.54	29.457	25.744	0.5631	0.56754	4.46	0.09	4.01	0.76	4.3
W9405	N14	04-27-94	1452	29.39	W94050221	2.9	32.35	9.97	10.86	91.82	29.414	25.779	0.4882	0.57619	0.22	0.13	3.77	0.44	4.19
W9405	N15	04-27-94	1542	0.77	W94050236	6.831	30.44	10.86	9.99	108.69	30.972	23.85	0.9073	0.95848	0.65	0.03	0.45	0.27	4.04
W9405	N15	04-27-94	1541	9.28	W94050235	5.938	30.599	11.07	10.20	108.58	30.393	24.084	1.4261	0.82049	1.25	0.04	0.54	0.32	3.21
W9405	N15	04-27-94	1540	19.58	W94050234	3.097	32.297	10.68	10.81	98.81	29.53	25.72	1.1896	0.69434	2.19	0.06	2.94	0.67	2.48
W9405	N15	04-27-94	1539	29.05	W94050233	2.867	32.438	10.57	10.86	97.32	29.459	25.851	1.0028	0.64074	3.2	0.1	4.84	0.85	3.87
W9405	N15	04-27-94	1538	37.67	W94050232	2.858	32.465	10.49	10.86	96.58	29.478	25.874	0.8845	0.64476	3.26	0.09	5.03	0.87	4.13
W9405	N16P	04-27-94	1608	1.8	W94050247	6.851	30.506	10.71	9.98	107.28	31.05	23.9	1.2602	0.97043	0.71	0.05	0.49	0.28	3.65
W9405	N16P	04-27-94	1607	10.16	W94050246	6.311	30.839	10.84	10.09	107.44	30.915	24.229	2.0045	1.02682	0.86	0.05	0.66	0.31	3.04
W9405	N16P	04-27-94	1606	20.14	W94050245	3.317	32.136	10.73	10.76	99.72	29.579	25.572	0.9468	0.67496	2.46	0.08	2.86	0.68	2.76
W9405	N16P	04-27-94	1605	29.59	W94050244	2.844	32.397	10.05	10.87	92.46	29.407	25.821	0.5047	0.56566	3.55	0.11	4.83	0.89	4.4
W9405	N16P	04-27-94	1604	38.4	W94050243	2.806	32.44	10.12	10.88	93.04	29.415	25.859	0.6406	0.60644	3.48	0.1	5.01	0.89	4.45
W9405	N17	04-27-94	1637	1.05	W94050258	7.13	30.828	10.57	9.90	106.80	31.576	24.117	1.4381	0.95718	1.06	0.07	0.62	0.32	3.08
W9405	N17	04-27-94	1637	7.45	W94050257	5.546	31.314	10.76	10.24	105.04	30.71	24.694	1.5103	0.8322	1.5	0.06	1.09	0.41	2.52
W9405	N17	04-27-94	1636	15.34	W94050256	4.059	31.83	10.57	10.59	99.86	29.932	25.259	0.8375	0.70441	2.42	0.07	2.51	0.63	2.8
W9405	N17	04-27-94	1635	23.04	W94050255	3.16	32.25	10.06	10.79	93.19	29.545	25.677	0.5964	0.55778	3.28	0.1	3.95	0.84	3.83

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9405	N17	04-27-94	1634	33.93	W94050254	2.949	32.352	9.97	10.84	91.93	29.46	25.777	0.484	0.54916	3.49	0.11	4.3	0.85	4.08
W9405	N18	04-27-94	1659	0.87	W94050270	6.85	31.19	10.57	9.94	106.35	31.677	24.438	1.4846	0.89272	1.16	0.06	0.91	0.37	2.54
W9405	N18	04-27-94	1659	4.15	W94050269	6.432	31.221	10.73	10.04	106.92	31.359	24.515	1.5842	0.93076	1.21	0.06	0.91	0.37	2.55
W9405	N18	04-27-94	1658	9.48	W94050268	4.894	31.51	10.68	10.39	102.76	30.344	24.921	1.0498	0.81129	1.86	0.07	1.79	0.52	2.9
W9405	N18	04-27-94	1657	15.6	W94050267	3.623	32.093	10.12	10.68	94.74	29.794	25.51	0.6277	0.61195	2.77	0.1	3.08	0.75	3.42
W9405	N18	04-27-94	1657	21.5	W94050266	3.392	32.17	10.1	10.74	94.06	29.67	25.593	0.5224	0.55665	3.01	0.1	3.18	0.75	3.45
W9405	N19	04-27-94	1346	0.9	W94050191	5.908	31.403	10.59	10.15	104.34	31.086	24.723	0.7823	0.94029	1.23	0.09	1.1	0.4	2.32
W9405	N19	04-27-94	1345	4.59	W94050190	5.403	31.433	10.57	10.27	102.91	30.695	24.804	0.8905	0.8864	1.63	0.08	1.64	0.5	2.75
W9405	N19	04-27-94	1345	10.97	W94050189	4.599	31.559	10.47	10.46	100.05	30.144	24.99	1.0213	0.7782	2.32	0.08	2.43	0.61	3.2
W9405	N19	04-27-94	1344	17.92	W94050188	3.675	32.094	10.15	10.67	95.15	29.839	25.506	0.5615	0.57619	2.56	0.09	2.77	0.68	3.22
W9405	N19	04-27-94	1343	22.99	W94050187	3.563	32.122	10.17	10.70	95.09	29.773	25.539	0.5087	0.56809	2.77	0.1	2.85	0.7	3.56
W9405	N20P	04-27-94	1406	0.81	W94050203	6.664	31.327	10.4	9.97	104.27	31.648	24.57	0.5463	0.9374	0.93	0.07	0.97	0.35	2.35
W9405	N20P	04-27-94	1405	4.12	W94050202	6.001	31.326	10.54	10.13	104.03	31.095	24.65	0.9121	1.03277	1.13	0.07	1.04	0.39	2.45
W9405	N20P	04-27-94	1405	12.27	W94050201	5.091	31.375	10.5	10.35	101.43	30.391	24.793	1.2935	0.84205	1.8	0.07	1.83	0.51	2.98
W9405	N20P	04-27-94	1403	20.62	W94050200	3.849	31.91	10.3	10.63	96.85	29.829	25.343	0.978	0.65546	2.67	0.1	3.03	0.7	3.31
W9405	N20P	04-27-94	1402	27.53	W94050199	3.112	32.246	9.86	10.81	91.23	29.503	25.677	0.4344	0.56244	3.07	0.1	3.47	0.78	3.85
W9405	N21	04-27-94	1720	1.84	W94050282	6.512	31.19	10.46	10.02	104.41	31.396	24.481	1.6578	0.97144	1.08	0.06	0.85	0.37	2.56
W9405	N21	04-27-94	1720	7.16	W94050281	6.091	31.181	10.64	10.12	105.14	31.041	24.525	1.7231	1.01512	1.2	0.06	0.83	0.35	2.48
W9405	N21	04-27-94	1719	12.63	W94050280	5.325	31.338	10.86	10.30	105.47	30.55	24.738	1.1536	0.83749	1.41	0.05	1.1	0.41	2.76
W9405	N21	04-27-94	1718	22.05	W94050279	3.182	32.229	9.98	10.79	92.49	29.546	25.658	0.5133	0.55769	3.12	0.11	3.68	0.81	3.84
W9405	N21	04-27-94	1717	29.89	W94050278	3.003	32.291	9.84	10.83	90.82	29.452	25.723	0.468	0.56218	3.19	0.1	3.92	0.81	4.09
W9406	N01P	05-22-94	724	1.79	W94060084	9.322	30.426	10.05	9.44	106.50	33.013	23.49	2.8499	1.59655	0.49	0.06	0.2	0.25	3
W9406	N01P	05-22-94	723	5.34	W94060083	8.907	30.514	10.17	9.52	106.82	32.754	23.622	4.2265	1.42982	0.28	0.04	0.1	0.21	2.84
W9406	N01P	05-22-94	722	14.38	W94060082	8.364	30.582	10.37	9.63	107.63	32.372	23.755	2.6309	1.04598	0.57	0.03	0.1	0.19	2.54
W9406	N01P	05-22-94	721	22.12	W94060081	7.256	31.023	9.62	9.86	97.61	31.87	24.255	0.878	0.71108	3.45	0.1	1.58	0.62	4.89
W9406	N01P	05-22-94	720	27.46	W94060078	5.846	31.508	9.59	10.16	94.42	31.14	24.813	0.5452	0.84675	2.92	0.09	1.51	0.55	4.78
W9406	N02	05-22-94	752	1.88	W94060100	9.41	30.514	10.13	9.41	107.62	33.173	23.546	1.9381	1.30605	0.4	0.02	0.18	0.22	2.44
W9406	N02	05-22-94	750	6.94	W94060098	8.656	30.566	10.36	9.57	108.24	32.597	23.7	2.3	0.98489	0.33	0.01	0.07	0.19	2.64
W9406	N02	05-22-94	750	14.62	W94060097	7.869	30.687	10.2	9.74	104.74	32.061	23.907	2.4714	0.91652	0.43	0.03	0.07	0.2	2.75
W9406	N02	05-22-94	748	26.39	W94060096	6.836	31.12	9.55	9.95	96.01	31.612	24.385	0.5925	0.73469	3.51	0.11	1.6	0.64	5.08
W9406	N02	05-22-94	748	35.11	W94060095	4.927	31.823	8.85	10.36	85.40	30.656	25.166	0.471	0.92354	3.8	0.12	2.79	0.76	7.11
W9406	N03	05-22-94	816	1.88	W94060115	8.874	30.557	10.38	9.52	108.98	32.768	23.661	1.3662	1.03874	0.26	0.02	0.05	0.16	2.42
W9406	N03	05-22-94	815	8.81	W94060114	8.436	30.63	10.63	9.62	110.55	32.476	23.782	2.4848	1.04204	0.22	0.01	0.06	0.18	2.12
W9406	N03	05-22-94	815	18.45	W94060113	7.514	30.801	9.85	9.81	100.40	31.876	24.045	2.8356	1.0446	1.07	0.06	0.57	0.35	3.12
W9406	N03	05-22-94	814	31.53	W94060112	5.364	31.662	9.1	10.26	88.65	30.877	24.99	0.4528	0.84722	4.89	0.14	3.47	0.92	8.59
W9406	N03	05-22-94	813	42.14	W94060111	4.47	31.988	9	10.47	85.98	30.42	25.344	0.4593	0.93461	4.93	0.16	3.93	0.97	9.38
W9406	N04P	05-22-94	841	0.99	W94060127	9.299	30.541	10.23	9.44	108.43	33.105	23.583	0.9439	0.95642	0.19	0.02	0.05	0.15	2.48
W9406	N04P	05-22-94	840	7.47	W94060126	8.898	30.554	10.33	9.52	108.51	32.787	23.655	2.1354	1.01414	0.47	0.01	0.04	0.15	2.47
W9406	N04P	05-22-94	839	16.56	W94060125	7.913	30.658	9.84	9.73	101.13	32.071	23.879	3.3578	1.10291	0.25	0.02	0.21	0.27	3.06
W9406	N04P	05-22-94	838	32.41	W94060123	5.66	31.518	9.52	10.20	93.32	30.996	24.843	0.4747	0.66612	4.07	0.11	3.09	0.81	6.61
W9406	N04P	05-22-94	837	47.27	W94060122	3.955	32.223	9.31	10.58	87.96	30.194	25.582	0.3911	0.74918	3.96	0.11	3.44	0.83	7.38
W9406	N05	05-22-94	913	1.75	W94060142	9.626	30.454	10.16	9.37	108.42	33.294	23.465	1.4802	1.31146	0.16	0.02	0.06	0.19	2.45
W9406	N05	05-22-94	912	11.1	W94060141	8	30.539	10.25	9.72	105.48	32.028	23.773	2.9102	0.98257	0.19	0.01	0.06	0.21	2.27
W9406	N05	05-22-94	911	22.42	W94060140	7.636	30.631	10.12	9.79	103.33	31.82	23.895	1.0582	0.62066	1.03	0.02	0.22	0.27	2.35
W9406	N05	05-22-94	910	35.74	W94060139	5.314	31.629	9.61	10.28	93.49	30.808	24.97	0.4594	0.64148	3.85	0.1	2.89	0.77	6.07
W9406	N05	05-22-94	909	51.59	W94060138	4.101	32.14	9.25	10.55	87.66	30.248	25.502	0.4272	0.72259	4.31	0.11	3.86	0.89	7.85
W9406	N06	05-22-94	937	1.81	W94060157	9.468	30.489	10.22	9.40	108.70	33.197	23.517	1.112	1.08762	0.34	0	0.1	0.17	2.32
W9406	N06	05-22-94	936	13.66	W94060156	8.094	30.507	10.26	9.70	105.78	32.077	23.734	3.5747	1.09498	0.33	0	0.07	0.19	2.23
W9406	N06	05-22-94	935	26.97	W94060155	7.692	30.659	10.15	9.78	103.79	31.893	23.91	1.2848	0.66036	0.97	0.02	0.34	0.27	2.46
W9406	N06	05-22-94	935	37	W94060154	6.033	31.361	9.48	10.12	93.66	31.168	24.675	0.6078	0.67342	3.55	0.09	2.63	0.7	5.91

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9406	N06	05-22-94	933	48.95	W94060153	4.011	32.18	9.18	10.57	86.82	30.204	25.543	0.3978	0.74429	4.17	0.1	3.71	0.87	7.35
W9406	N07P	05-22-94	1000	1.1	W94060170	9.121	30.393	10.33	9.48	108.95	32.814	23.495	1.1079	1.01758	0.27	0	0.06	0.17	3.16
W9406	N07P	05-22-94	959	11.26	W94060169	8.191	30.514	10.3	9.68	106.44	32.163	23.726	3.79	1.0989	0.61	0	0.1	0.21	3.13
W9406	N07P	05-22-94	958	20.26	W94060168	7.564	30.677	10.11	9.81	103.08	31.802	23.941	1.0572	0.61064	1.24	0.02	0.34	0.28	3.29
W9406	N07P	05-22-94	958	32.27	W94060167	7.209	30.818	10.01	9.88	101.32	31.644	24.099	0.792	0.58035	2.46	0.06	1.54	0.51	4.18
W9406	N07P	05-22-94	957	45.96	W94060166	4.377	32.049	9.49	10.49	90.49	30.397	25.403	0.3896	0.71278	3.75	0.1	2.86	0.73	6.19
W9406	N08	05-22-94	1048	1.69	W94060188	10.004	30.246	10.3	9.31	110.69	33.403	23.242	2.8531	1.86853	1.23	0.12	0.55	0.31	3.25
W9406	N08	05-22-94	1048	7.03	W94060187	9.289	30.426	10.32	9.44	109.28	32.987	23.495	5.6487	1.5956	0.27	0.04	0.11	0.22	2.61
W9406	N08	05-22-94	1047	14.32	W94060186	8.375	30.614	10.24	9.63	106.33	32.412	23.779	3.4447	1.14356	0.46	0.01	0.06	0.17	2.38
W9406	N08	05-22-94	1046	24.24	W94060185	7.585	30.769	9.95	9.80	101.56	31.907	24.011	1.4205	0.79257	1.23	0.06	0.67	0.32	3.2
W9406	N08	05-22-94	1045	31.92	W94060184	6.375	31.214	9.7	10.05	96.52	31.317	24.518	0.7132	0.74259	1.83	0.07	1.07	0.41	3.87
W9406	N09	05-22-94	1128	2.03	W94060201	9.976	30.283	10.04	9.31	107.86	33.417	23.276	2.1821	1.758	2.63	0.18	1.02	0.44	4.04
W9406	N09	05-22-94	1127	8.25	W94060200	8.87	30.467	10.14	9.53	106.39	32.679	23.591	3.8001	1.28816	0.14	0.04	0.02	0.14	2.95
W9406	N09	05-22-94	1126	13.9	W94060199	8.528	30.532	10.07	9.60	104.88	32.461	23.692	2.9883	1.11271	0.33	0.02	0.11	0.18	2.8
W9406	N09	05-22-94	1126	21.8	W94060198	7.447	30.844	9.57	9.82	97.42	31.862	24.088	1.1096	0.85723	2.44	0.1	1.46	0.48	5.24
W9406	N09	05-22-94	1125	29.39	W94060197	6.437	31.201	9.25	10.04	92.17	31.356	24.5	0.6571	0.92491	2.66	0.1	1.75	0.53	5.89
W9406	N10P	05-22-94	602	1.21	W94060041	10.007	30.002	9.07	9.32	97.33	33.163	23.051	2.7704	1.5362	5.8	0.32	1.94	0.71	5.44
W9406	N10P	05-22-94	601	6.63	W94060040	9.531	30.258	9.5	9.40	101.03	33.024	23.327	3.6132	1.59704	0.81	0.29	0.71	0.23	4.29
W9406	N10P	05-22-94	601	11.67	W94060039	9.238	30.334	9.33	9.46	98.62	32.857	23.431	2.1822	1.39395	3.19	0.19	1.13	0.45	4.38
W9406	N10P	05-22-94	600	16.85	W94060038	8.653	30.489	9.28	9.58	96.90	32.524	23.64	1.3404	1.28743	3.03	0.15	1.05	0.44	4.37
W9406	N10P	05-22-94	559	21.99	W94060037	7.514	30.86	9.23	9.81	94.11	31.932	24.092	0.9018	1.10931	3.28	0.15	1.28	0.55	5.11
W9406	N11	05-22-94	628	0.99	W94060052	9.845	29.884	9	9.36	96.16	32.911	22.985	2.1847	1.79883	6.15	0.25	1.38	0.67	5.07
W9406	N11	05-22-94	627	7.24	W94060051	8.984	30.513	10.28	9.50	108.17	32.818	23.609	3.2839	1.28931	0.51	0.08	0.2	0.22	2.76
W9406	N11	05-22-94	626	15.79	W94060050	8.347	30.56	10.01	9.64	103.84	32.338	23.741	1.7443	0.9767	1.01	0.09	0.3	0.25	3.08
W9406	N11	05-22-94	626	20.18	W94060049	7.972	30.661	9.84	9.72	101.27	32.125	23.873	1.2286	0.89253	1.51	0.1	0.86	0.39	4.43
W9406	N11	05-22-94	625	26.53	W94060048	7.48	30.845	9.64	9.82	98.21	31.892	24.084	1.2892	1.06835	1.61	0.11	0.97	0.43	4.54
W9406	N12	05-22-94	653	1.84	W94060067	9.713	30.158	9.65	9.37	102.98	33.074	23.22	3.4016	1.66402	4.5	0.23	1.13	0.49	4.3
W9406	N12	05-22-94	652	5.63	W94060066	9.419	30.418	10.15	9.42	107.78	33.087	23.469	3.8936	1.55029	0.53	0.07	0.11	0.19	2.49
W9406	N12	05-22-94	652	9.79	W94060065	8.676	30.542	10.33	9.57	107.96	32.592	23.678	2.8768	1.17522	0.22	0.06	0.1	0.17	2.66
W9406	N12	05-22-94	651	14.88	W94060064	8.253	30.598	10.36	9.66	107.27	32.296	23.783	2.4413	1.01777	0.16	0.06	0.09	0.12	2.51
W9406	N12	05-22-94	651	19.69	W94060063	8.086	30.627	10.33	9.69	106.57	32.187	23.83	2.5171	0.9912	1.1	0.1	0.22	0.24	2.97
W9406	N13	05-22-94	1236	1.16	W94060236	10.82	30.397	10.04	9.13	109.96	34.239	23.225	1.3789	1.35557	0.24	0.01	0.04	0.19	2.58
W9406	N13	05-22-94	1235	6.47	W94060235	9.143	30.492	10.23	9.47	108.01	32.93	23.569	3.44	1.26391	0 s	0.01	0.03	0.25	2.39
W9406	N13	05-22-94	1234	12.59	W94060234	8.628	30.546	10.21	9.58	106.59	32.556	23.688	3.3047	1.12472	0.11 s	0.02	0.11	0.21	2.38
W9406	N13	05-22-94	1234	21.29	W94060233	7.31	30.929	9.51	9.85	96.55	31.827	24.173	1.2325	0.76865	2.65	0.1	1.66	0.6	5.06
W9406	N13	05-22-94	1233	28.14	W94060232	5.63	31.585	8.97	10.20	87.90	31.029	24.899	0.4908	0.9301	3.29	0.11	2.27	0.71	6.42
W9406	N14	05-22-94	1258	0.8	W94060248	10.198	30.534	10.32	9.25	111.59	33.853	23.434	1.1336	1.22159	0.02 s	0.06	0	0.17	2.37
W9406	N14	05-22-94	1257	7	W94060247	8.929	30.553	10.39	9.51	109.22	32.811	23.649	2.111	1.06825	0.14 s	0.04	0.03	0.17	2.26
W9406	N14	05-22-94	1256	11.47	W94060246	8.298	30.615	10.46	9.65	108.43	32.348	23.79	4.7739	1.21656	0.05 s	0.03	0.08	0.2	2.28
W9406	N14	05-22-94	1255	23.78	W94060245	6.781	31.152	9.44	9.96	94.80	31.594	24.417	0.7814	0.7466	3.54	0.13	2.1	0.72	5.92
W9406	N14	05-22-94	1254	30.4	W94060243	5.25	31.713	8.83	10.29	85.81	30.825	25.043	0.5038	0.95117	4.1	0.13	3.02	0.87	7.93
W9406	N15	05-22-94	1320	0.68	W94060260	11.376	30.37	10.09	9.02	111.83	34.681	23.108	1.3401	1.38091	0.07 s	0.06	0.14	0.02	2.76
W9406	N15	05-22-94	1319	7.55	W94060259	9.025	30.558	10.52	9.49	110.83	32.897	23.639	1.9587	1.00083	0.41	0.04	0.13	0.13	2.16
W9406	N15	05-22-94	1318	13.72	W94060258	8.259	30.589	10.23	9.66	105.93	32.292	23.775	4.7272	1.23896	1.13	0.04	0.22	0.25	2.6
W9406	N15	05-22-94	1317	27.63	W94060257	6.46	31.266	9.15	10.03	91.26	31.433	24.548	0.7699	0.77161	4.28	0.16	2.52	0.68	6.62
W9406	N15	05-22-94	1316	40.28	W94060256	4.489	31.978	9.05	10.46	86.49	30.426	25.334	0.4473	0.802	4.59	0.17	4.08	0.95	9
W9406	N16P	05-22-94	1344	0.88	W94060271	10.804	30.508	10.46	9.13	114.60	34.339	23.313	2.1167	1.63605	0.44	0.11	0.25	0.31	2.86
W9406	N16P	05-22-94	1343	5.93	W94060270	9.132	30.523	10.39	9.47	109.70	32.95	23.595	3.6752	1.25302	0.06 s	0.04	0.07	0.21	2.36
W9406	N16P	05-22-94	1342	16.67	W94060269	7.79	30.7	9.67	9.75	99.13	32.009	23.928	1.711	0.93408	0.68	0.09	0.77	0.36	3.75
W9406	N16P	05-22-94	1341	31.03	W94060268	6.398	31.245	9.34	10.04	93.01	31.364	24.539	0.711	0.76167	2.57	0.14	2.12	0.61	5.5

Table A1. Physical and Chemical Parameters at Discrete Bottle Measurement Depths.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Temp (C)	Sal (PSU)	DO (mg/L)	Oxy Sat	Oxy Sat (%)	Cond (mmhos /cm)	Sigma t	Flu (ug/L)	Beam (1/M)	NH4 (uM)	NO2 (uM)	NO3 (uM)	PO4 (uM)	SIO4 (uM)
W9406	N16P	05-22-94	1339	38.37	W94060267	5.731	31.5	9.29	10.19	91.21	31.041	24.82	0.5154	0.75507	2.56	0.12	2.19	0.59	5.69
W9406	N17	05-22-94	1411	1.78	W94060282	11.4	30.328	10.26	9.02	113.75	34.658	23.071	2.3736	1.66461	1.35	0.15	0.58	0.4	3.35
W9406	N17	05-22-94	1410	7.96	W94060281	8.757	30.554	10.51	9.55	110.05	32.67	23.676	4.0451	1.23049	0.12	0.04	0.05	0.17	2.46
W9406	N17	05-22-94	1410	18.25	W94060280	8.07	30.602	10.09	9.70	104.04	32.149	23.812	2.9283	1.07126	0.11	0.04	0.07	0.24	2.82
W9406	N17	05-22-94	1409	24.2	W94060279	7.954	30.64	9.85	9.72	101.32	32.091	23.858	2.2993	0.9806	0.42	0.08	0.41	0.31	3.5
W9406	N17	05-22-94	1408	36.36	W94060278	5.023	31.757	9.4	10.34	90.88	30.678	25.103	0.4501	0.80587	2.1	0.12	1.82	0.57	5.38
W9406	N18	05-22-94	1431	1.85	W94060293	11.186	30.154	10.04	9.07	110.67	34.299	22.973	2.767	1.81902	2.4	0.2	0.89	0.49	8.87
W9406	N18	05-22-94	1431	4.79	W94060292	9.594	30.384	10.36	9.38	110.42	33.2	23.415	6.15	1.7745	0.19	0.05	0.05	0.08	3.1
W9406	N18	05-22-94	1430	16.21	W94060291	8.246	30.614	10.13	9.66	104.88	32.306	23.797	3.3998	1.08043	0.19	0.04	0.05	0.13	2.7
W9406	N18	05-22-94	1429	20.69	W94060290	7.605	30.778	9.51	9.79	97.12	31.93	24.015	1.539	0.84931	1.7	0.1	0.95	0.37	4.12
W9406	N18	05-22-94	1428	25.86	W94060289	7.13	30.961	9.11	9.89	92.12	31.709	24.222	0.7583	0.81203	1.95	0.12	1.29	0.46	4.93
W9406	N19	05-22-94	1149	0.74	W94060214	10.579	30.231	10.1	9.19	109.92	33.868	23.136	1.8857	1.67383	0.81	0.03	0.05	0.18	3.67
W9406	N19	05-22-94	1148	5.7	W94060213	9.261	30.448	10.12	9.45	107.10	32.985	23.517	5.0653	1.57286	0 s	0.02	0.03	0.2	3.08
W9406	N19	05-22-94	1147	12.01	W94060212	8.549	30.55	9.99	9.60	104.11	32.495	23.703	2.5014	1.0273	0.82	0.05	0.17	0.21	2.75
W9406	N19	05-22-94	1146	16.17	W94060211	8.317	30.571	9.93	9.65	102.95	32.324	23.753	2.0704	0.96505	0.13	0.06	0.06	0.15	3.34
W9406	N19	05-22-94	1145	21.21	W94060210	7.575	30.804	9.42	9.80	96.15	31.931	24.04	0.9788	0.89496	1.82	0.11	0.97	0.39	4.59
W9406	N20P	05-22-94	1212	1.58	W94060225	11.005	30.417	10.04	9.09	110.42	34.415	23.209	1.7852	1.46383	0.44	0.05	0.13	0.23	2.87
W9406	N20P	05-22-94	1211	4.38	W94060224	9.53	30.467	10.24	9.39	109.04	33.228	23.49	4.0191	1.5776	0.58	0.03	0.1	0.24	2.69
W9406	N20P	05-22-94	1210	13.06	W94060223	8.436	30.588	10.14	9.62	105.42	32.437	23.749	3.1777	1.07892	0.3	0.03	0.13	0.2	2.57
W9406	N20P	05-22-94	1209	20.22	W94060222	7.427	30.858	9.48	9.83	96.47	31.858	24.102	1.3231	0.82825	2.37	0.11	1.29	0.51	4.61
W9406	N20P	05-22-94	1208	28.84	W94060221	6.19	31.373	8.72	10.08	86.48	31.306	24.666	0.5558	1.2358	3.16	0.13	2.11	0.67	6.85
W9406	N21	05-22-94	1450	0.6	W94060304	10.584	30.431	10.2	9.18	111.16	34.074	23.291	1.7051	1.50921	0.74	0.02	0.13	0.24	2.68
W9406	N21	05-22-94	1450	8.03	W94060303	8.973	30.557	10.38	9.50	109.22	32.853	23.646	2.7296	1.06413	0.57	0.02	0.1	0.22	2.38
W9406	N21	05-22-94	1449	14.45	W94060302	8.085	30.661	10.33	9.69	106.59	32.216	23.857	3.5844	1.08084	0.42	0.01	0.14	0.25	2.29
W9406	N21	05-22-94	1448	21.11	W94060301	7.478	30.851	9.53	9.82	97.09	31.894	24.09	2.0673	0.90473	1.97	0.08	0.88	0.47	4.87
W9406	N21	05-22-94	1447	27.73	W94060300	6.261	31.308	8.81	10.07	87.48	31.306	24.606	0.5692	0.96272	2.6	0.1	1.76	0.61	5.72

Table A2. Chemical and Biological Parameters at Two Depths of Bioproductivity Stations and Special Station F25.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Rep	Chl A (ug/L)	DOC (uM)	PHA (ug/L)	PON (uM)	POC (uM)	TDN (uM)	TDP (uM)	TSS (mg/L)	
W9404	F01P	04-07-94	845	1.07	W94040416	1	0.31	149.17	0.46	2.22	8.33	9.75	0.22	0.8	
W9404	F01P	04-07-94	845	1.07	W94040416	2	0.36	133.33	0.43	3.43	13.71	10.58	0.2	1.03	
W9404	F01P	04-07-94	842	12.63	W94040414	1	0.42	124.17	0.56	2.3	7.28	9.79	0.24	0.46	
W9404	F01P	04-07-94	842	12.63	W94040414	2	0.43	140.83	0.48	2.72	8.8	9.64	0.3	1.57	
W9404	F02P	04-07-94	715	1.04	W94040401	1	0.57	140.83	0.59	2.5	9.24	12.01	0.2	0.99	
W9404	F02P	04-07-94	715	1.04	W94040401	2	0.52	138.33	0.48	4.73	24.5	12.56	0.21		e
W9404	F02P	04-07-94	714	6.28	W94040400	1	0.69	127.5	0.56	2.98	12.63	11.24	0.21	0.76	
W9404	F02P	04-07-94	714	6.28	W94040400	2	0.75	127.5	0.51	2.65	11.06	14.66	0.34	1.16	
W9404	F06	04-07-94	1154	1.3	W94040462	1	0.46	117.5	0.62	3.16	11.73	11.21	0.12	0.66	
W9404	F06	04-07-94	1154	1.3	W94040462	2	0.56	119.17	0.61	3.82	20.8	10.23	0.13	0.99	
W9404	F06	04-07-94	1153	11.9	W94040460	1	0.75	111.67	0.81	2.97	10.47	10.58	0.18	0.62	
W9404	F06	04-07-94	1153	11.9	W94040460	2	0.52	115.83	0.74	3.38	13.07	10.99	0.21		e
W9404	F13P	04-07-94	1417	1.1	W94040500	1	1.47	115	1.02	3.05	11.07	10.12	0.2	1.2	
W9404	F13P	04-07-94	1417	1.1	W94040500	2	1.84	93.33	1.32	2.86	10.95	11.46	0.19	0.56	
W9404	F13P	04-07-94	1416	6.16	W94040498	1	1.05	297.5	0.98	3.17	10.87	11	0.22	0.94	
W9404	F13P	04-07-94	1416	6.16	W94040498	2	1.14	300	0.93	3	10.7	12.63	0.24	0.37	
W9404	F23P	04-05-94	649	2.09	W94040038	1	2.56	140	1.17	3.62	16.85	17.73	0.41	1.52	
W9404	F23P	04-05-94	649	2.09	W94040038	2	2.6	235.83	1.22	3.91	19.03	15.59	0.38	2.23	
W9404	F23P	04-05-94	648	5.92	W94040037	1	2.19	160	1.06	3.92	18.9	16.83	0.37	1.01	
W9404	F23P	04-05-94	648	5.92	W94040037	2	2.42	132.5	1.04	3.51	14.29	14.65	0.37	0.62	
W9404	F23P	04-06-94	553	2.52	W94040246	1	2.88	156.67	1.08	3.72	16.63	23.37	0.38	1.57	
W9404	F23P	04-06-94	553	2.52	W94040246	2	2.5	180.83	1.07	4.25	17.38	25.93	0.45	1.83	
W9404	F23P	04-06-94	552	4.71	W94040245	1	2.99	220.83	1.1	3.62	14.61	23.36	0.47	0.39	
W9404	F23P	04-06-94	552	4.71	W94040245	2	3.08	198.33	1.09	3.45	15.11	26.59	0.48	0.53	
W9404	F24	04-05-94	740	1.79	W94040063	1	4.05		1.02			15.75	0.32	2.18	
W9404	F24	04-05-94	740	1.79	W94040063	2	4.72		1.07					1.5	
W9404	F24	04-05-94	740	4.02	W94040062	1	3.62		0.83			13.35	0.29	0.91	
W9404	F24	04-05-94	740	4.02	W94040062	2	3.26		0.98					1.41	
W9404	F25	04-05-94	1535	1.11	W94040213	1	2.24	166.67	1.21	3.6	15.33	13.49	0.36	1.67	
W9404	F25	04-05-94	1535	1.11	W94040213	2	2.14	150.83	1.28	3.84	17.62	12.81	0.33	1.5	
W9404	F25	04-05-94	1533	5.34	W94040211	1	2.32	128.33	1.08	3.51	13.31	11.56	0.37	1.4	
W9404	F25	04-05-94	1533	5.34	W94040211	2	2.54	116.67	1.06	3.28	12.8	9.28	0.21	1.14	
W9404	F27B	04-06-94	1149	1.08	W94040333	1	2.09	169.17	1.23	3.63	17.26	12.84	0.2	1.01	
W9404	F27B	04-06-94	1149	1.08	W94040333	2	1.67	167.5	1.01	2.86	15.61	14.72	0.21	3.33	
W9404	F27B	04-06-94	1147	19.15	W94040331	1	17.13	95	2.24	8.1	45.34	16.59	0.08	2.26	
W9404	F27B	04-06-94	1147	19.15	W94040331	2	18.11	98.33	1.93	8.63	67.44	16.03	0.09	2.31	
W9404	F30B	04-05-94	548	2.66	W94040016	1	5.91	136.67	1.21	5.9	29.77	21.81	0.32	2.63	
W9404	F30B	04-05-94	548	2.66	W94040016	2	5.66	121.67	1.04	5.88	28.43	21.71	0.32	1.49	
W9404	F30B	04-05-94	546	4.82	W94040015	1	3.58	149.17	1.05	5.54	25.18	19.69	0.48	2.33	
W9404	F30B	04-05-94	546	4.82	W94040015	2	3.62	137.5	1.19	5.33	23.79	17.82	0.47	1.18	
W9404	F31B	04-05-94	1607	1.36	W94040222	1	2.88	147.5	0.94	4.56	21.15	14.96	0.43	2.25	
W9404	F31B	04-05-94	1607	1.36	W94040222	2	2.97	133.33	1.06	4.97	26.07	16.89	0.46	2.41	
W9404	F31B	04-05-94	1606	4.93	W94040221	1	2.94	149.17	1.17	4.45	22.47	15.96	0.44	2.15	
W9404	F31B	04-05-94	1606	4.93	W94040221	2	2.85	201.67	1.17	4.65	21.68	15.33	0.44	2.15	
W9404	N01P	04-06-94	649	2.2	W94040262	1	3.11	150	1.14	3.49	14.62	17.32	0.25	1.02	
W9404	N01P	04-06-94	649	2.2	W94040262	2	2.76	149.17	1	4.02	17.31	18.45	0.25		e

Table A2. Chemical and Biological Parameters at Two Depths of Bioproductivity Stations and Special Station F25.

Event	Station	Date	Time (EST)	Depth (M)	Sample id	Rep	Chl A (ug/L)	DOC (uM)	PHA (ug/L)	PON (uM)	POC (uM)	TDN (uM)	TDP (uM)	TSS (mg/L)
W9404	N01P	04-06-94	648	6.51	W94040260	1	3.1	123.33	2.28	3.85	18.44	15.66	0.24	1.04
W9404	N01P	04-06-94	648	6.51	W94040260	2	3.2	127.5	1.35	4.13	19.64	18.2	0.33	1.76
W9404	N04P	04-06-94	748	2.3	W94040278	1	2.92	119.17	1.33	4.23	19.3	16.68	0.17	0.8
W9404	N04P	04-06-94	748	2.3	W94040278	2	2.96	124.17	1.4	3.72	15.2	16.06	0.16	0.67
W9404	N04P	04-06-94	747	4.68	W94040277	1	3.74	117.5	0.95	3.56	14.94	15.67	0.17	1
W9404	N04P	04-06-94	747	4.68	W94040277	2	3.23	132.5	1.48	3.4	14.13	16.1	0.17	0.52
W9404	N07P	04-05-94	1024	2.17	W94040122	1	1.08	137.5	0.81	2.72	19.72	7.84	0.1	1.07
W9404	N07P	04-05-94	1024	2.17	W94040122	2	0.91	139.17	0.63	2.73	11.73	9.2	0.11	0.68
W9404	N07P	04-05-94	1021	23.15	W94040119	2		130.83				10.4	0.36	
W9404	N07P	04-05-94	1021	23.15	W94040119	1		129.17				10.29	0.36	
W9404	N07P	04-05-94	1020	35.15	W94040118	1	4.5		2.87	5.96	31.85			0.7
W9404	N07P	04-05-94	1020	35.15	W94040118	2	6.36		2.94	4.11	19.75			1.29
W9404	N10P	04-05-94	1500	1.35	W94040199	1	2.4	109.17	1.1	5.86	31.25	11.74	0.34	1.89
W9404	N10P	04-05-94	1500	1.35	W94040199	2	1.87	114.17	1.14	4.37	19.71	11.95	0.33	1.94
W9404	N10P	04-05-94	1458	7.95	W94040197	1	3.08	90.83	1.05	3.04	12.45	10.17	0.32	1.32
W9404	N10P	04-05-94	1458	7.95	W94040197	2	3.11	103.33	1.16	3.15	12.35	10.2	0.3	1.5
W9404	N16P	04-05-94	938	1.55	W94040105	1	0.7	108.33	0.7	2.55	12.74	9.79	0.09	0.59
W9404	N16P	04-05-94	938	1.55	W94040105	2	0.45	105.83	0.67	2.94	14.41	9.17	0.09	1.38
W9404	N16P	04-05-94	936	21.05	W94040103	1	2.91	95.83	1.83	3.51	15.46	9.86	0.22	1.07
W9404	N16P	04-05-94	936	21.05	W94040103	2	3.71	95	1.47	4.32	20.91	9.65	0.23	0.67
W9404	N16P	04-06-94	832	2.24	W94040292	1	0.41	130.83	0.8	2.49	8.88	14.53	0.18	0.64
W9404	N16P	04-06-94	832	2.24	W94040292	2	0.35	133.33	0.73	2.56	9.17	15.88	0.15	0.47
W9404	N16P	04-06-94	830	25.34	W94040290	1	2.41	90.83	1.87	4.13	20.51	17.63	0.38	2.41
W9404	N16P	04-06-94	830	25.34	W94040290	2	2.97	139.17	1.86	3.74	17.56	17.59	0.39	0.95
W9404	N20P	04-05-94	901	2.19	W94040091	1	1.64	140.83	1.02	3.03	16.13	9.19	0.17	0.32
W9404	N20P	04-05-94	901	2.19	W94040091	2	1.82	133.33	0.96	3.06	15.76	12.44	0.18	1.44
W9404	N20P	04-05-94	859	17.15	W94040089	1	2.34	104.17	1.64	3.14	17.52	10.61	0.34	1.39
W9404	N20P	04-05-94	859	17.15	W94040089	2	2.86	116.67	1.51	3.1	16.42	10.45	0.34	1.05

APPENDIX A

STATION DATA TABLES AND INSTRUMENT CALIBRATION DATA

Part 2

Instrument Calibration Data for Fluorescence and Dissolved Oxygen

The average value of individual analytical replicates from chlorophyll (n=2) and dissolved oxygen determinations (n=2) was used to post-calibrate *in situ* sensor readings, where the CTD value is regarded as dependent on the bottle value. All regressions were forced through zero (top regression of statistics block and ANOVA table accompanying each survey and parameter). Tests of intercept significance (regression statistics and ANOVA table) suggest whether the intercept model had intercepts not significantly different from zero. Note that, as described on the next page, setting the intercept to zero can produce negative r^2 values, but instrument blank readings are near zero and the established practice of forcing through zero was followed for all surveys.

For the survey series, to allow easy comparison of trends in calibration over time, all survey chlorophyll calibrations are given, followed by all survey dissolved oxygen calibrations. The sequence of surveys, coded as follows, is:

W9404 = Early April 1994 combined survey
W9405 = Late April 1994 nearfield survey
W9406 = May 1994 nearfield survey.

Survey W9404 Chlorophyll a Calibration

MARKER	STATION_ID	DEPTH	BOTTLE_CHL	CTD_CHLA	Predict_Chla	Residual
15	F30	4.82	3.60	2.58	3.36	0.24
16	F30	2.66	5.79	4.65	6.05	-0.27
34	F23P	24.56	1.52	1.14	1.49	0.03
35	F23P	18.03	1.66	1.57	2.05	-0.38
36	F23P	11.72	1.76	1.48	1.93	-0.17
37	F23P	5.92	2.30	2.61	3.40	-1.09
38	F23P	2.09	2.58	2.31	3.00	-0.42
60	F24	13.33	1.14	1.15	1.49	-0.35
62	F24	4.02	3.44	3.95	5.14	-1.71
63	F24	1.79	4.38	2.01	2.61	1.77
88	N20P	21.01	1.71	2.23	2.90	-1.20
89	N20P	17.15	2.60	2.78	3.62	-1.02
91	N20P	2.19	1.73	1.40	1.83	-0.10
101	N16P	39.37	1.79	1.74	2.27	-0.48
102	N16P	31.56	4.25	3.64	4.75	-0.50
103	N16P	21.05	3.31	4.13	5.38	-2.07
104	N16P	9.22	1.80	2.80	3.64	-1.84
105	N16P	1.55	0.57	0.38	0.49	0.08
118	N07P	35.15	5.43	5.56	7.24	-1.81
122	N07P	2.17	0.99	0.53	0.69	0.31
197	N10P	7.95	3.09	4.20	5.47	-2.38
199	N10P	1.35	2.14	1.43	1.86	0.28
211	F25	5.34	2.43	3.52	4.59	-2.16
213	F25	1.11	2.19	1.59	2.07	0.12
221	F31B	4.93	2.89	2.99	3.90	-1.01
222	F31B	1.36	2.93	2.47	3.22	-0.29
242	F23P	20.63	1.62	1.57	2.04	-0.42
243	F23P	14.66	1.74	2.10	2.73	-0.99
244	F23P	8.44	1.63	2.04	2.66	-1.03
245	F23P	4.71	3.03	2.74	3.56	-0.53
246	F23P	2.52	2.69	2.91	3.79	-1.10
260	N01P	6.51	3.15	3.69	4.81	-1.66
262	N01P	2.20	2.94	2.06	2.69	0.25
277	N04P	4.68	3.48	3.83	4.98	-1.50
278	N04P	2.30	2.94	3.34	4.34	-1.40
288	N16P	38.69	2.48	2.35	3.06	-0.58
289	N16P	32.76	2.84	2.93	3.82	-0.97
290	N16P	25.34	2.69	3.68	4.79	-2.10
291	N16P	12.89	0.90	2.26	2.94	-2.04
292	N16P	2.24	0.38	0.92	1.20	-0.82
331	F27	19.15	17.62	9.11	11.87	5.75
333	F27	1.08	1.88	1.30	1.69	0.19
400	F02P	6.28	0.72	1.42	1.85	-1.13
401	F02P	1.04	0.55	1.35	1.76	-1.21
414	F01P	12.63	0.43	0.60	0.78	-0.35
416	F01P	1.07	0.34	0.74	0.96	-0.63
460	F06	11.90	0.63	0.77	1.00	-0.37
462	F06	1.30	0.51	0.34	0.44	0.07
498	F13P	6.16	1.09	1.79	2.32	-1.23
500	F13P	1.10	1.65	2.24	2.92	-1.27
526	N10P	20.76	1.71	1.42	1.85	-0.13
528	N10P	8.72	2.42	2.99	3.89	-1.47
530	N10P	2.29	2.58	2.71	3.53	-0.95
588	N02	36.06	0.63	0.98	1.27	-0.65
590	N02	11.56	1.34	2.11	2.75	-1.40
592	N02	2.18	1.36	1.02	1.33	0.02
614	N04P	46.30	2.40	2.29	2.99	-0.58
615	N04P	37.81	2.39	2.85	3.71	-1.32
619	N04P	2.34	1.18	0.59	0.77	0.41
662	N07P	43.67	2.99	2.73	3.55	-0.57
663	N07P	37.10	3.87	3.11	4.05	-0.18
666	N07P	2.52	0.55	0.45	0.59	-0.04

Regression Statistics	
Multiple R	0.725541726
R Square	0.526410796
Adjusted R Square	0.510017353
Standard Error	0.995035679
Observations	62

Standard Deviation of Residual: 1.135

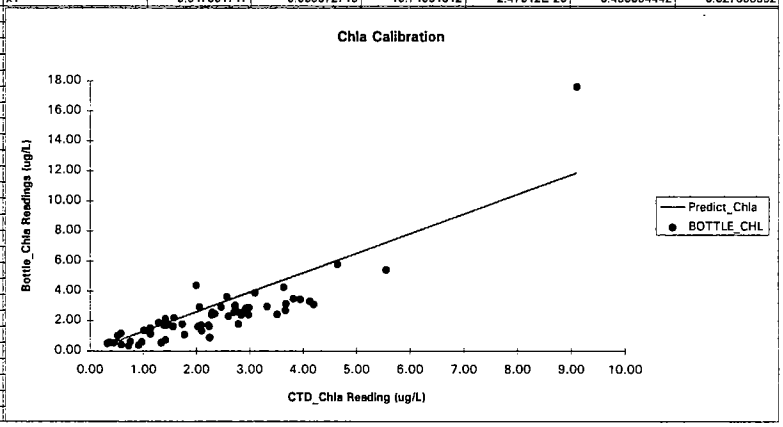
Analysis of Variance	df	Sum of Squares	Mean Square	F	Significance F
Regression	1	67.13208508	67.13208508	67.80361182	1.95409E-11
Residual	61	60.39585621	0.990096003		
Total	62	127.5279413			

	Coefficients	Standard Error	t Statistic	P-value	Lower 95%	Upper 95%
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A
x1	0.768037212	0.038096325	20.16040184	6.42111E-29	0.691858882	0.844215543

Regression Statistics	
Multiple R	0.871108979
R Square	0.758830853
Adjusted R Square	0.754811368
Standard Error	0.71595862
Observations	62

Analysis of Variance	df	Sum of Squares	Mean Square	F	Significance F
Regression	1	96.77213652	96.77213652	188.788043	3.4549E-20
Residual	60	30.75580476	0.512596746		
Total	61	127.5279413			

	Coefficients	Standard Error	t Statistic	P-value	Lower 95%	Upper 95%
Intercept	1.005743118	0.132262131	7.604165388	2.11326E-10	0.741179552	1.270306685
x1	0.547851717	0.039872713	13.74001612	2.47012E-20	0.468094442	0.627608992

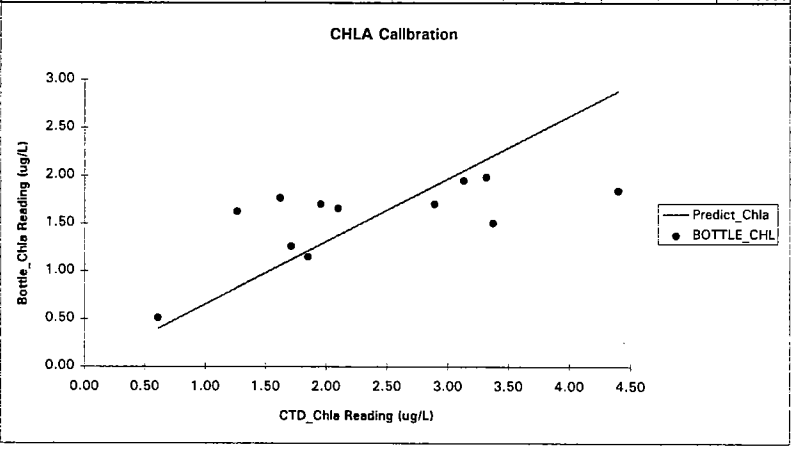


Survey W9405 Chlorophyll a Calibration

MARKER	STATION	DEPTH	BOTTLE_CHL	CTD_CHLA	Predict_Chla	Residual
24	N10P	20.22	1.26	1.71	1.12	0.14
26	N10P	10.71	1.15	1.85	1.21	-0.06
28	N10P	1.75	1.71	1.96	1.28	0.42
63	N01P	27.37	0.51	0.61	0.40	0.11
65	N01P	12.75	1.66	2.10	1.38	0.28
67	N01P	1.64	1.70	2.90	1.90	-0.19
98	N04P	47.73	1.95	3.14	2.05	-0.11
99	N04P	36.34	1.99	3.32	2.18	-0.19
102	N04P	1.78	1.77	1.62	1.06	0.71
145	N07P	47.50	1.51	3.38	2.21	-0.70
147	N07P	25.15	1.85	4.40	2.88	-1.04
149	N07P	1.79	1.63	1.27	0.83	0.80

Regression Statistics						
				Standard Deviation of Residual	0.530	
Multiple R	0.658961374					
R Square	0.434230092					
Adjusted R Square	0.343321001					
Standard Error	0.808731993					
Observations	12					
Analysis of Variance						
	df	Sum of Squares	Mean Square	F	Significance F	
Regression	1	5.521816945	5.521816945	8.442532817	0.015682357	
Residual	11	7.194521799	0.654047436			
Total	12	12.71633874				
	Coefficients	*Standard Error*	*t Statistic*	*P-value*	*Lower 95%*	*pper 95%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A
x1	1.525804665	0.145364557	10.49640091	2.1166E-07	1.205859271	1.84575

Regression Statistics						
Multiple R	0.664033795					
R Square	0.440940881					
Adjusted R Square	0.385034969					
Standard Error	0.843159838					
Observations	12					
Analysis of Variance						
	df	*Sum of Squares*	*Mean Square*	*F*	*Significance F*	
Regression	1	5.607153612	5.607153612	7.88719594	0.018525183	
Residual	10	7.109185132	0.710918513			
Total	11	12.71633874				
	Coefficients	*Standard Error*	*t Statistic*	*P-value*	*Lower 95%*	*pper 95%*
Intercept	-0.34337217	0.991076477	-0.346463849	0.73553075	-2.551628557	1.864884
x1	1.733057655	0.617094529	2.808415201	0.01701668	0.358085122	3.10803

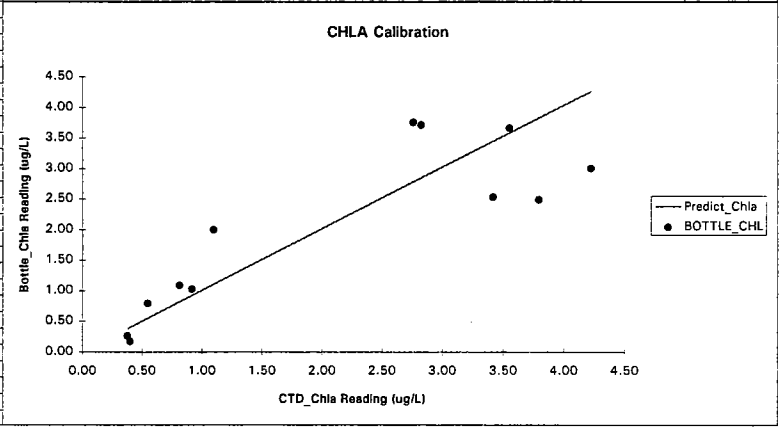


Survey W9406 Chlorophyll a Calibration

MARKER	STATION_ID	DEPTH	BOTTLE_CHL	CTD_CHLA	Predict_Chla	Residual
37	N10P	21.45	1.02	0.92	0.93	0.10
40	N10P	5.98	3.66	3.56	3.59	0.07
41	N10P	0.43	3.76	2.76	2.78	0.97
78	N01P	26.88	0.79	0.55	0.55	0.24
83	N01P	4.68	3.00	4.23	4.26	-1.26
84	N01P	1.79	3.72	2.83	2.85	0.87
122	N04P	46.58	0.27	0.38	0.38	-0.11
125	N04P	15.47	2.53	3.42	3.45	-0.91
127	N04P	0.52	1.09	0.82	0.82	0.27
166	N07P	45.22	0.18	0.40	0.40	-0.23
169	N07P	10.25	2.49	3.80	3.83	-1.34
170	N07P	1.07	2.00	1.10	1.11	0.89

Regression Statistics						
Multiple R	0.850239495				Standard Deviation of Residual	0.791
R Square	0.722907199					
Adjusted R Square	0.631998108					
Standard Error	0.7859609					
Observations	12					
Analysis of Variance						
	df	Sum of Squares	Mean Square	F	Significance F	
Regression	1	17.72767879	17.72767879	28.69789165	0.000320376	
Residual	11	6.795079898	0.617734536			
Total	12	24.52275869				
	Coefficients	*Standard Error*	*t Statistic*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A
x1	0.9921203	0.093996778	10.55483307	1.9922E-07	0.785234683	1.19900592

Regression Statistics						
Multiple R	0.85164628					
R Square	0.72530139					
Adjusted R Square	0.69783153					
Standard Error	0.82075378					
Observations	12					
Analysis of Variance						
	df	*Sum of Squares*	*Mean Square*	*F*	*Significance F*	
Regression	1	17.78639098	17.78639098	26.4035334	0.000438757	
Residual	10	6.736367711	0.673636771			
Total	11	24.52275869				
	Coefficients	*Standard Error*	*t Statistic*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.13121039	0.444443937	0.295223714	0.77332074	-0.859072586	1.12149337
x1	0.94612967	0.184127915	5.138436863	0.00032402	0.535867034	1.3563923



Survey W9404 Dissolved Oxygen Calibration

MARKER	STATION	DEPTH	BOTTLE_DO	CTD_DO	Predict_DO	Residual
15	F30	4.82	11.03	11.06	10.79	0.25
16	F30	2.66	11.18	11.20	10.93	0.25
35	F23P	18.03	11.18	11.56	11.28	-0.10
37	F23P	5.92	11.05	11.41	11.13	-0.08
38	F23P	2.09	11.12	11.30	11.02	0.10
88	N20P	21.01	11.39	12.20	11.91	-0.52
89	N20P	17.15	11.47	12.24	11.94	-0.47
91	N20P	2.19	12.01	12.54	12.23	-0.23
102	N16P	31.56	11.62	13.10	12.78	-1.16
103	N16P	21.05	12.38	13.58	13.25	-0.88
105	N16P	1.55	12.45	13.07	12.75	-0.30
118	N07P	35.15	11.54	12.21	11.91	-0.37
119	N07P	23.15	12.22	13.27	12.95	-0.72
122	N07P	2.17	12.47	12.55	12.25	0.22
135	F19	55.02	11.25	11.94	11.65	-0.40
137	F19	33.02	11.72	12.20	11.90	-0.18
139	F19	2.32	12.48	12.84	12.53	-0.05
196	N10P	14.17	11.15	11.82	11.53	-0.38
197	N10P	7.95	11.39	12.01	11.71	-0.33
199	N10P	1.35	11.35	11.52	11.24	0.11
220	F31B	10.73	11.11	11.76	11.47	-0.36
221	F31B	4.93	11.15	11.63	11.34	-0.19
222	F31B	1.36	11.15	11.53	11.25	-0.10
243	F23P	14.66	11.10	11.17	10.89	0.20
245	F23P	4.71	11.13	11.16	10.89	0.24
246	F23P	2.52	11.17	11.13	10.86	0.31
259	N01P	17.66	10.78	10.93	10.66	0.11
260	N01P	6.51	11.85	11.88	11.59	0.25
262	N01P	2.20	11.76	11.62	11.33	0.43
275	N04P	33.56	11.58	11.81	11.53	0.05
277	N04P	4.68	12.18	12.19	11.89	0.28
278	N04P	2.30	12.32	12.27	11.97	0.35
289	N16P	32.76	11.25	11.47	11.19	0.06
290	N16P	25.34	11.75	11.83	11.54	0.21
292	N16P	2.24	11.86	11.92	11.63	0.23
330	F27	56.15	10.61	10.68	10.42	0.20
331	F27	19.15	12.10	11.85	11.56	0.53
333	F27	1.08	12.84	12.80	12.49	0.36
364	F12	52.26	10.60	10.60	10.34	0.26
365	F12	30.60	11.41	11.36	11.08	0.33
367	F12	1.95	12.17	11.95	11.66	0.50
375	F29	37.60	11.70	11.88	11.59	0.12
376	F29	20.23	11.88	12.03	11.74	0.15
378	F29	1.06	11.59	11.42	11.14	0.46
398	F02P	22.44	11.42	11.81	11.52	-0.10
400	F02P	6.28	11.18	11.34	11.06	0.12
401	F02P	1.04	11.19	11.18	10.91	0.28
413	F01P	18.59	11.66	11.64	11.36	0.30
414	F01P	12.63	11.54	11.81	11.52	0.01
416	F01P	1.07	11.32	11.38	11.11	0.22
459	F06	17.49	11.32	12.07	11.78	-0.46
460	F06	11.90	12.07	12.42	12.12	-0.05
462	F06	1.30	12.19	12.48	12.17	0.01
497	F13P	9.55	11.04	11.33	11.05	-0.01
498	F13P	6.16	11.48	11.59	11.31	0.17
500	F13P	1.10	11.64	11.63	11.34	0.30
526	N10P	20.76	11.28	10.99	10.73	0.56
527	N10P	14.39	11.46	11.34	11.06	0.40
528	N10P	8.72	11.35	11.19	10.92	0.44
529	N10P	3.76	11.24	11.15	10.88	0.36
530	N10P	2.29	11.20	11.12	10.85	0.35
588	N02	36.06	10.76	11.26	10.98	-0.22
589	N02	26.22	10.62	11.40	11.12	-0.50
590	N02	11.56	11.29	11.84	11.55	-0.26
591	N02	5.76	11.38	11.96	11.67	-0.30
592	N02	2.18	11.35	11.88	11.59	-0.24
614	N04P	46.30	10.91	11.61	11.32	-0.41
615	N04P	37.81	11.00	11.55	11.27	-0.27
617	N04P	23.55	11.73	11.99	11.69	0.04
618	N04P	11.79	11.97	12.27	11.97	-0.01
619	N04P	2.34	11.97	12.15	11.86	0.11
662	N07P	43.67	10.92	10.86	10.60	0.33
663	N07P	37.10	11.21	11.30	11.03	0.18
664	N07P	23.76	11.86	11.79	11.50	0.36
665	N07P	12.04	12.09	12.04	11.75	0.34
666	N07P	2.52	11.89	11.91	11.62	0.27
743	N20P	27.61	11.30	11.51	11.23	0.07
744	N20P	17.84	11.19	11.58	11.30	-0.11
745	N20P	12.89	11.76	12.13	11.83	-0.07
746	N20P	5.91	11.97	12.15	11.86	0.11
747	N20P	1.32	11.91	12.10	11.81	0.10
790	N16P	37.03	11.02	11.96	11.67	-0.65
791	N16P	27.27	11.36	12.27	11.97	-0.61
792	N16P	21.68	11.71	12.49	12.18	-0.47
793	N16P	14.97	11.93	12.60	12.29	-0.36
794	N16P	1.42	11.89	12.37	12.06	-0.17

Regression Statistics	
Multiple R	0.790950026
R Square	0.625601944
Adjusted R Square	0.613837238
Standard Error	0.352561747
Observations	86

Analysis of Variance	df	Sum of Squares	Mean Square	F	Significance F
Regression	1	17.65443437	17.65443437	142.0310932	9.57477E-20
Residual	85	10.56548174	0.124299785		
Total	86	28.2199161			

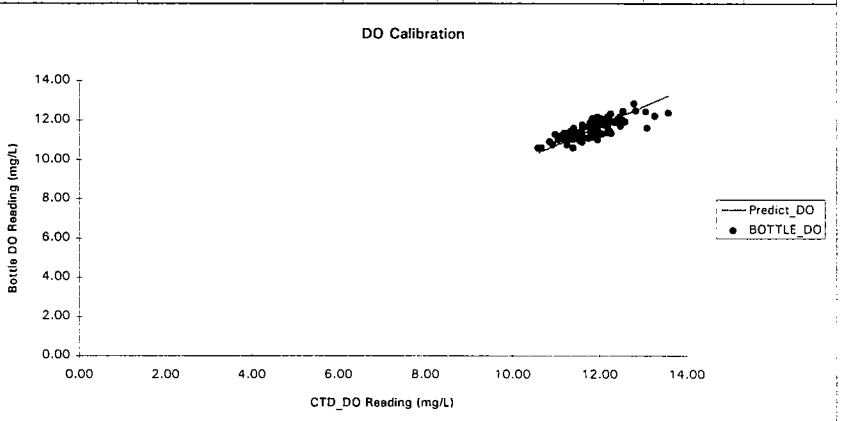
	Coefficients	Standard Error	t Statistic	P-value	Lower 95%	Upper 95%
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A
x1	1.02495181	0.00329631	310.9391587	5.3748E-133	1.018397859	1.031505761

Standard Deviation of Residual: 0.344

Regression Statistics	
Multiple R	0.792380727
R Square	0.627867217
Adjusted R Square	0.623437065
Standard Error	0.353579585
Observations	86

Analysis of Variance	df	Sum of Squares	Mean Square	F	Significance F
Regression	1	17.71836019	17.71836019	141.7258803	1.01378E-19
Residual	84	10.50155591	0.125018523		
Total	85	28.2199161			

	Coefficients	Standard Error	t Statistic	P-value	Lower 95%	Upper 95%
Intercept	0.669846686	0.936751545	0.715074013	0.476522817	-1.192986958	2.53268033
x1	0.966921159	0.081220654	11.90486793	8.44387E-20	0.805404941	1.128437377



Survey W9405 Dissolved Oxygen Calibration

Marker	Station_I	CTD_DO	Bottle_DO	Predict_DO	Residual
24	N10P	9.83	9.82	9.58	0.24
25	N10P	9.76	9.70	9.51	0.19
26	N10P	9.75	9.91	9.50	0.41
27	N10P	9.76	9.88	9.52	0.36
28	N10P	9.70	9.90	9.46	0.44
63	N01P	9.73	9.91	9.49	0.41
64	N01P	10.17	10.20	9.92	0.28
65	N01P	10.41	10.43	10.15	0.28
66	N01P	10.38	10.39	10.12	0.27
67	N01P	10.50	10.44	10.24	0.20
98	N04P	10.47	10.13	10.21	-0.07
99	N04P	10.43	10.08	10.17	-0.09
100	N04P	10.30	10.02	10.04	-0.02
101	N04P	11.14	10.95	10.86	0.08
102	N04P	10.78	10.54	10.52	0.03
145	N07P	10.83	9.94	10.56	-0.62
146	N07P	10.69	9.92	10.42	-0.50
147	N07P	10.63	10.08	10.36	-0.28
148	N07P	11.08	10.70	10.81	-0.11
149	N07P	10.84	10.62	10.57	0.05
199	N20P	10.11	9.85	9.86	-0.01
200	N20P	10.57	10.13	10.31	-0.18
201	N20P	10.77	10.40	10.50	-0.10
202	N20P	10.81	10.68	10.54	0.13
203	N20P	10.67	10.65	10.41	0.24
243	N16P	10.38	9.59	10.12	-0.53
244	N16P	10.31	9.59	10.05	-0.46
245	N16P	11.01	10.29	10.73	-0.45
246	N16P	11.11	10.72	10.84	-0.12
247	N16P	10.99	10.58	10.71	-0.13

Standard Deviation of Residual: 0.300

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.72952308
R Square	0.53220392
Adjusted R Square	0.49772116
Standard Error	0.30786046
Observations	30

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.126995922	3.12699592	32.9928243	3.65307E-06
Residual	29	2.748563778	0.09477806		
Total	30	5.8755597			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
X Variable 1	1.02555495	0.00550647	186.245448	3.4213E-46	1.014292945	1.03681695	1.014292945	1.036816949

SUMMARY OUTPUT

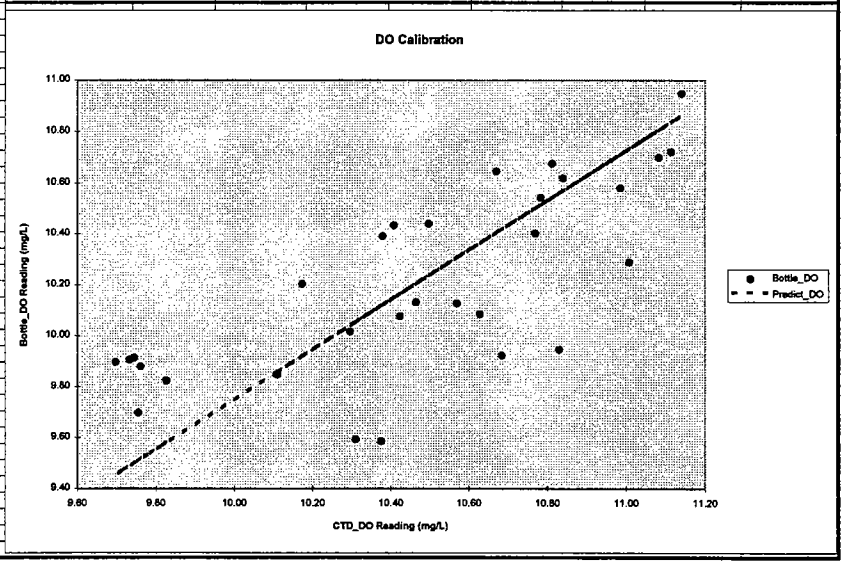
Regression Statistics

Multiple R	0.73727218
R Square	0.54357027
Adjusted R Square	0.52726921
Standard Error	0.30947999
Observations	30

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.193779586	3.19377959	33.3456975	3.36233E-06
Residual	28	2.681780114	0.09577786		
Total	29	5.8755597			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	1.32263791	1.583938859	0.83503091	0.41076891	-1.921917402	4.56719323	-1.921917402	4.567193226
X Variable 1	0.8960625	0.155173801	5.77457336	3.3623E-06	0.578203018	1.21392198	0.578203018	1.213921975



Survey W9406 Dissolved Oxygen Calibration

Marker	Station_ID	Depth	Bottle_DO	CTD_DO	Predict_DO	Residual
37	N10P	21.45	9.28	9.18	9.22	0.06
38	N10P	16.43	9.35	9.23	9.27	0.08
39	N10P	10.87	9.40	9.29	9.33	0.07
40	N10P	5.98	9.52	9.48	9.51	0.01
41	N10P	0.43	9.30	9.04	9.07	0.23
78	N01P	26.88	9.50	9.52	9.55	-0.05
81	N01P	21.33	9.39	9.59	9.63	-0.25
82	N01P	12.91	9.96	10.34	10.39	-0.42
83	N01P	4.68	10.06	10.13	10.17	-0.11
84	N01P	1.79	9.95	10.01	10.05	-0.09
122	N04P	46.58	9.14	9.28	9.32	-0.18
123	N04P	32.09	9.30	9.49	9.52	-0.23
125	N04P	15.47	9.67	9.76	9.80	-0.12
126	N04P	6.83	10.21	10.28	10.32	-0.11
127	N04P	0.52	10.23	10.14	10.18	0.05
166	N07P	45.22	9.39	9.39	9.42	-0.03
167	N07P	31.58	9.68	10.00	10.04	-0.36
168	N07P	19.77	9.98	10.08	10.12	-0.14
169	N07P	10.25	10.20	10.30	10.34	-0.14
170	N07P	1.07	10.33	10.27	10.31	0.02
221	N20P	27.66	9.01	8.68	8.72	0.30
222	N20P	19.73	9.30	9.44	9.48	-0.18
223	N20P	12.62	10.04	10.08	10.12	-0.08
224	N20P	3.57	10.01	10.20	10.24	-0.23
225	N20P	1.58	10.20	10.00	10.04	0.16
267	N16P	37.57	9.30	9.26	9.29	0.00
268	N16P	30.46	9.21	9.33	9.36	-0.15
270	N16P	5.49	10.27	10.36	10.40	-0.13
271	N16P	0.46	10.40	10.42	10.46	-0.06

SUMMARY OUTPUT

Standard Deviation of Residual: 0.160

Regression Statistics

Multiple R	0.929580508
R Square	0.864119921
Adjusted R Square	0.828405636
Standard Error	0.157798544
Observations	29

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	4.433862733	4.433862733	178.0640552	2.10646E-13
Residual	28	0.697210655	0.024900381		
Total	29	5.131073388			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
X Variable 1	0.996076666	0.003003753	331.610689	7.17136E-52	0.98992375	1.002229563	0.98992375	1.002229563

SUMMARY OUTPUT

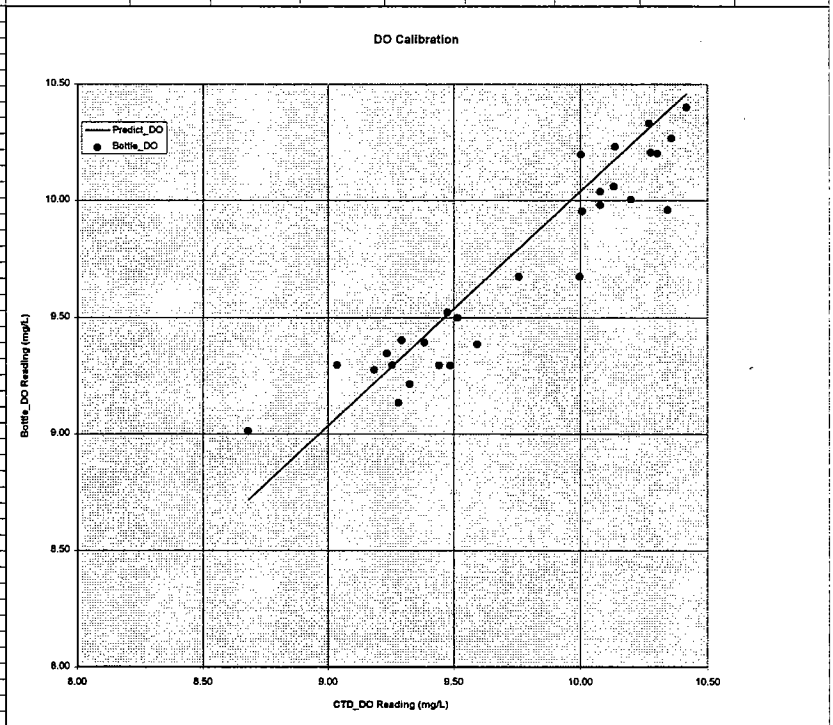
Regression Statistics

Multiple R	0.706594423
R Square	0.499275679
Adjusted R Square	0.480730334
Standard Error	9.931208831
Observations	29

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2655.276288	2655.276288	26.92188649	1.83519E-05
Residual	27	2662.980539	98.62890885		
Total	28	5318.256827			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	237.1182265	42.60747514	5.565179015	6.70129E-06	149.6949674	324.5414857	149.6949674	324.5414857
X Variable 1	-22.7483942	4.384277161	-5.188630502	1.83519E-05	-31.74418185	-13.75260656	-31.74418185	-13.75260656



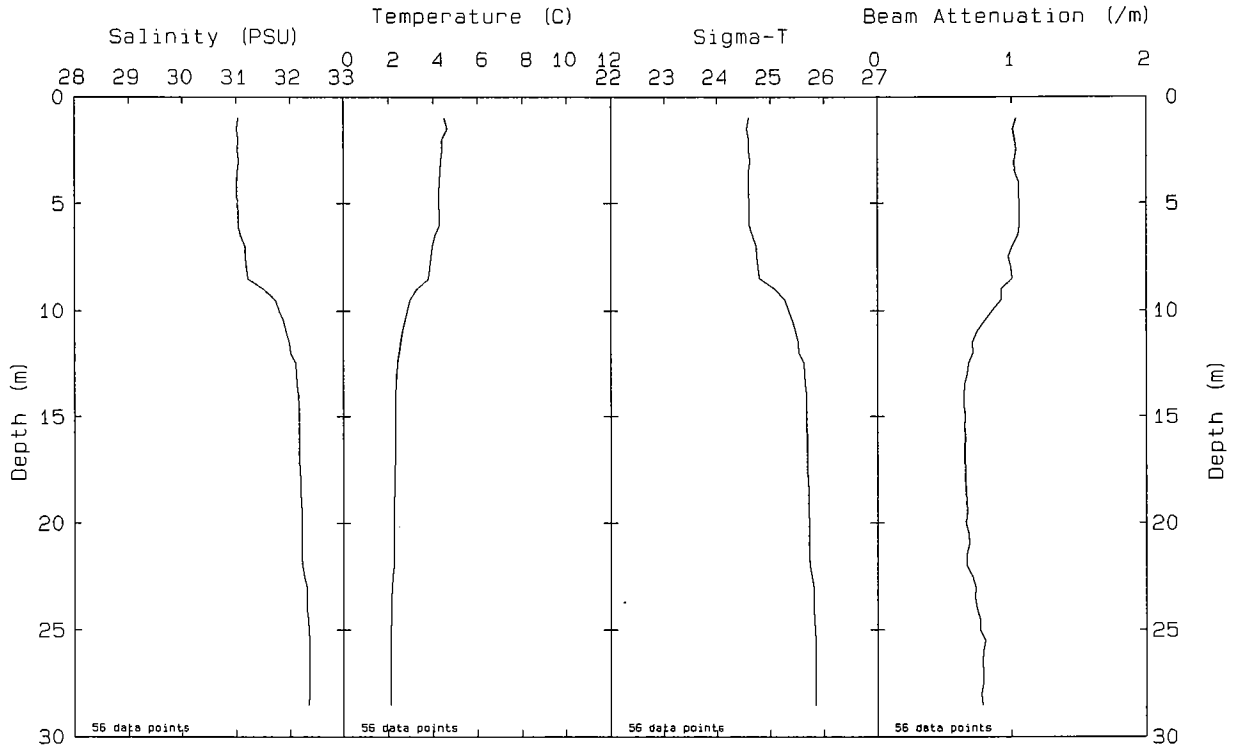
APPENDIX B

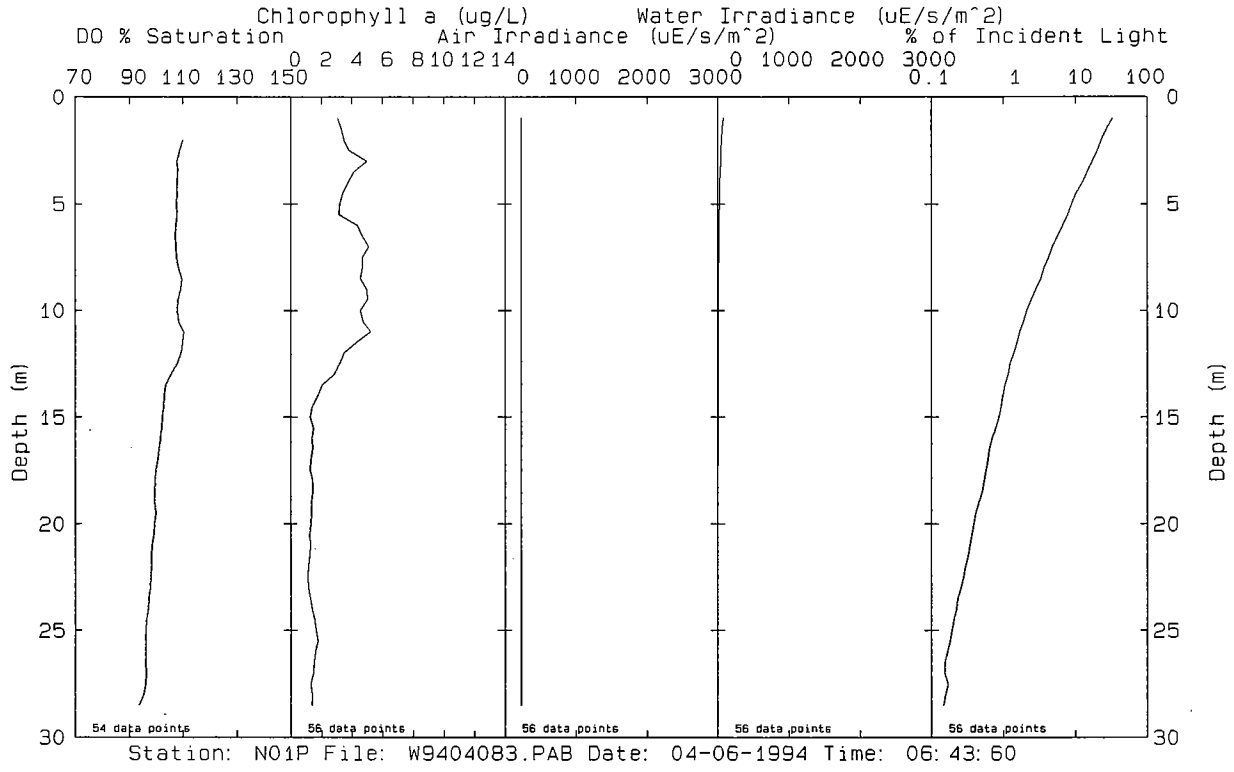
VERTICAL PROFILE DATA FROM FARFIELD AND NEARFIELD STATIONS

Only post-survey calibrated data are presented, where calibrations have been performed as given in Appendix A. The data are from the downcast at stations and, therefore, may not match precisely the data in Appendix A because bottles were closed on the upcast.

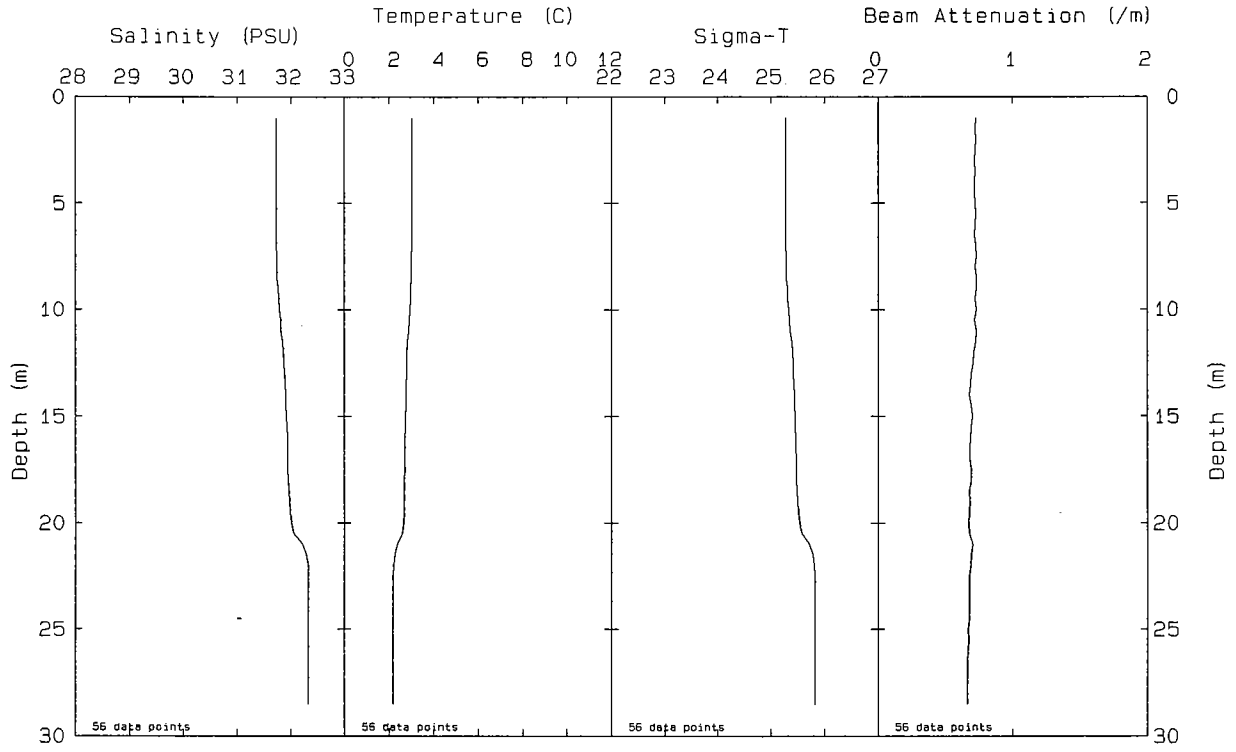
For each station occupation, there is a one-page set of profiles, with station, cruise code, date and time listed across the bottom.

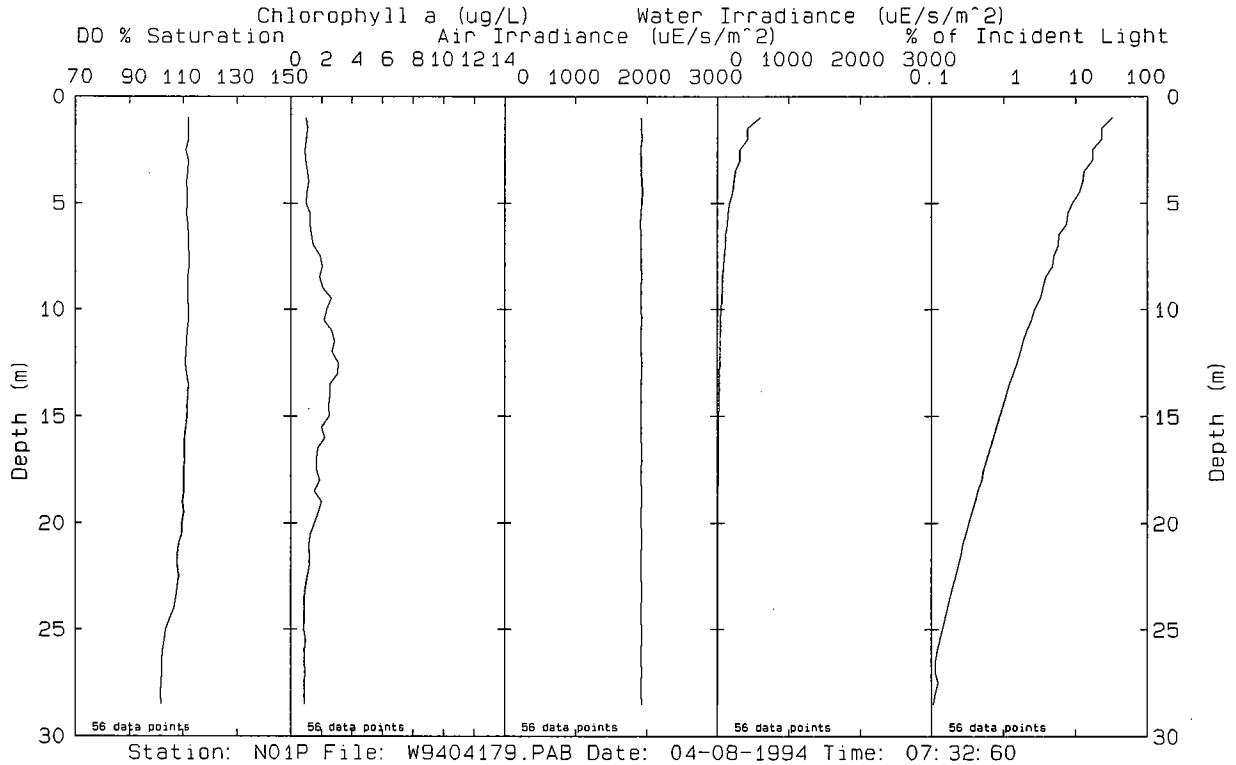
Early April 1994 Profiles





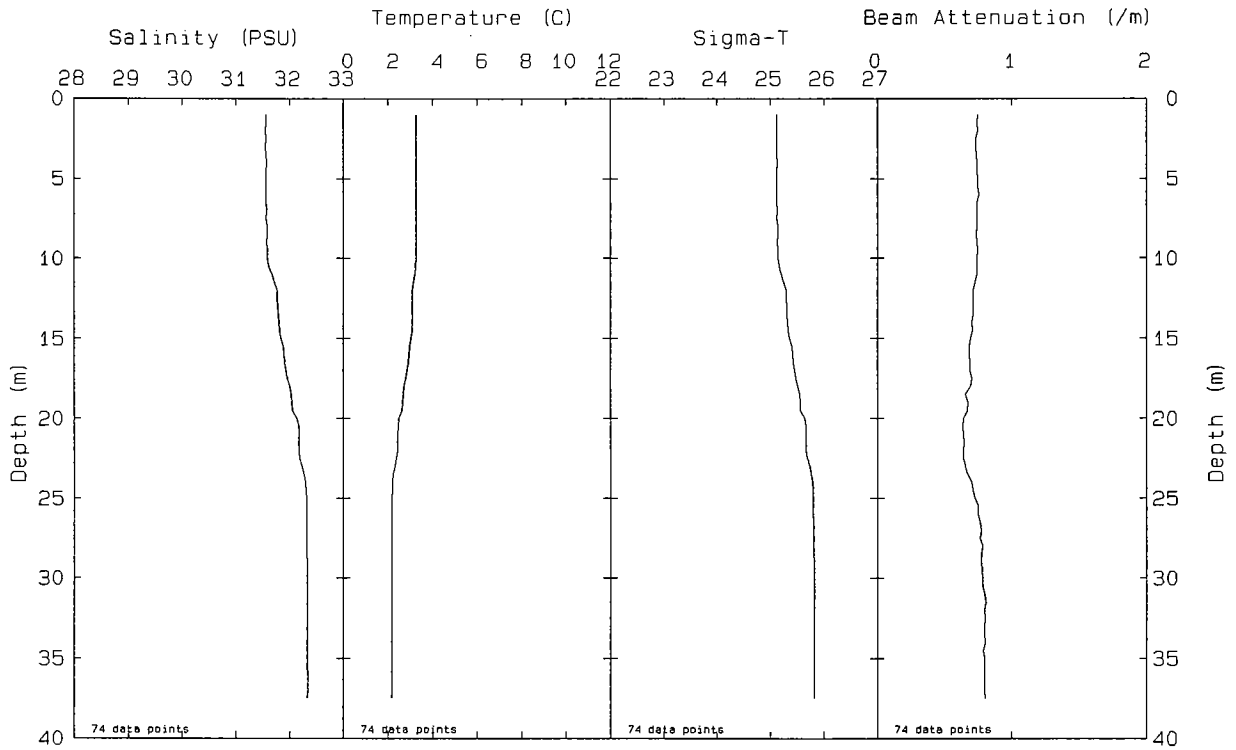
Station: NO1P File: W9404083.PAB Date: 04-06-1994 Time: 06:43:60

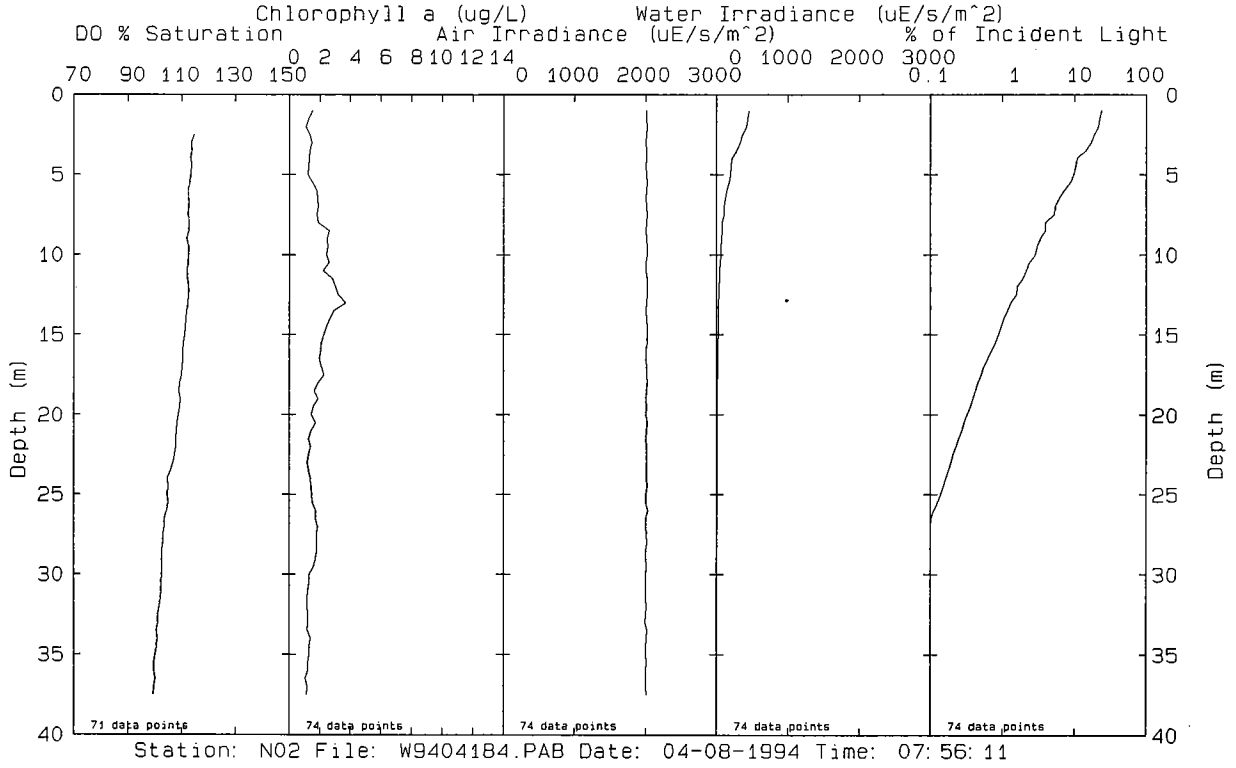




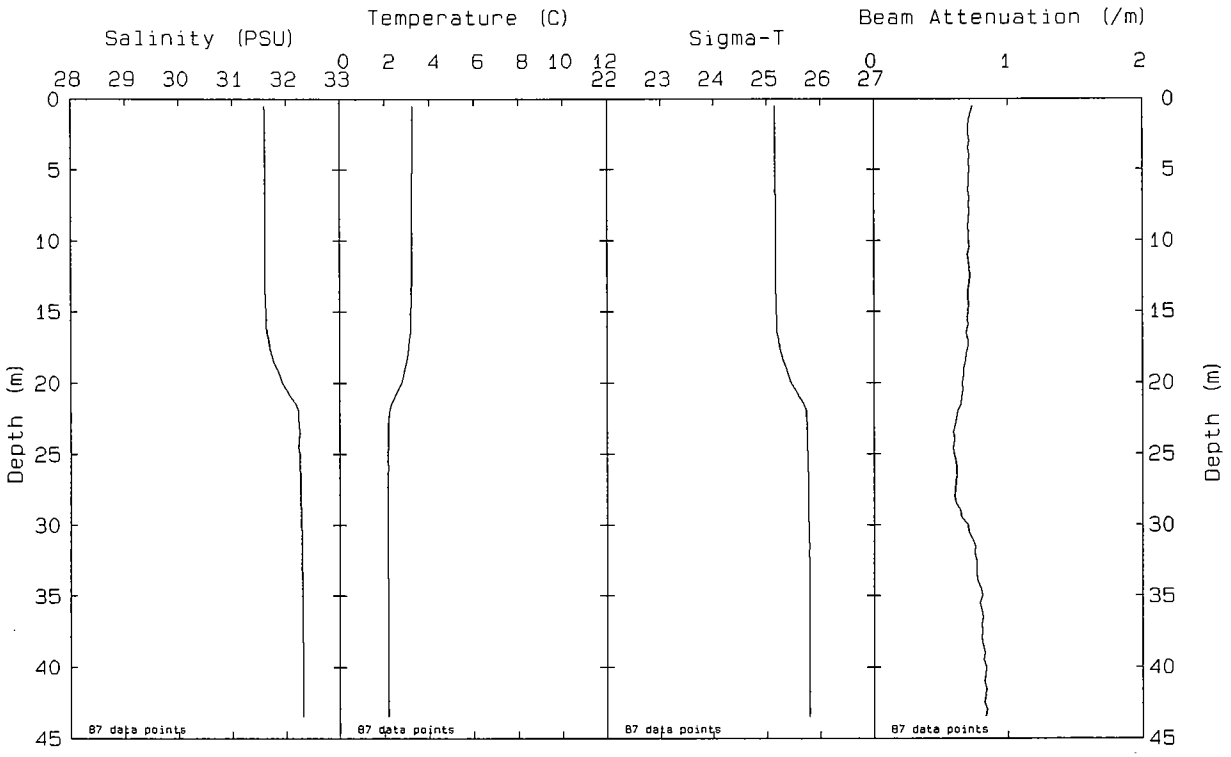
Station: N01P File: W9404179.PAB Date: 04-08-1994 Time: 07:32:60

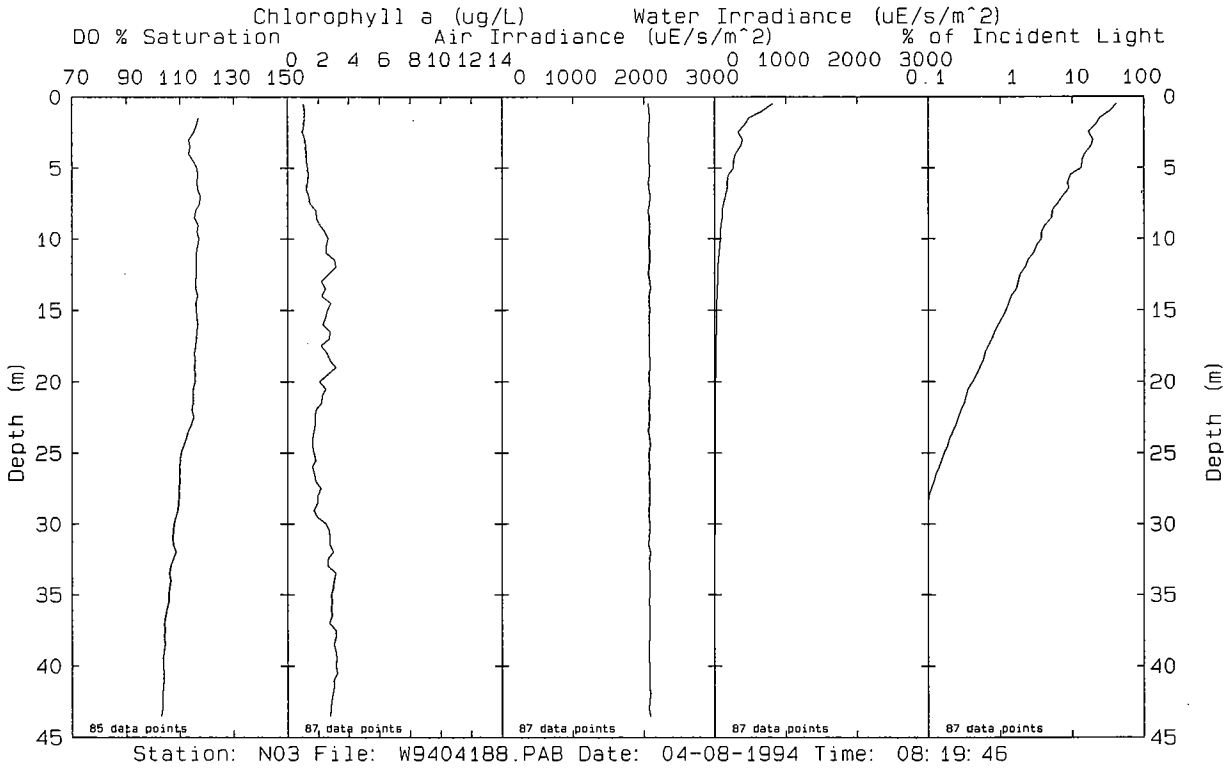
10-06-1994 12:47:57 Battelle

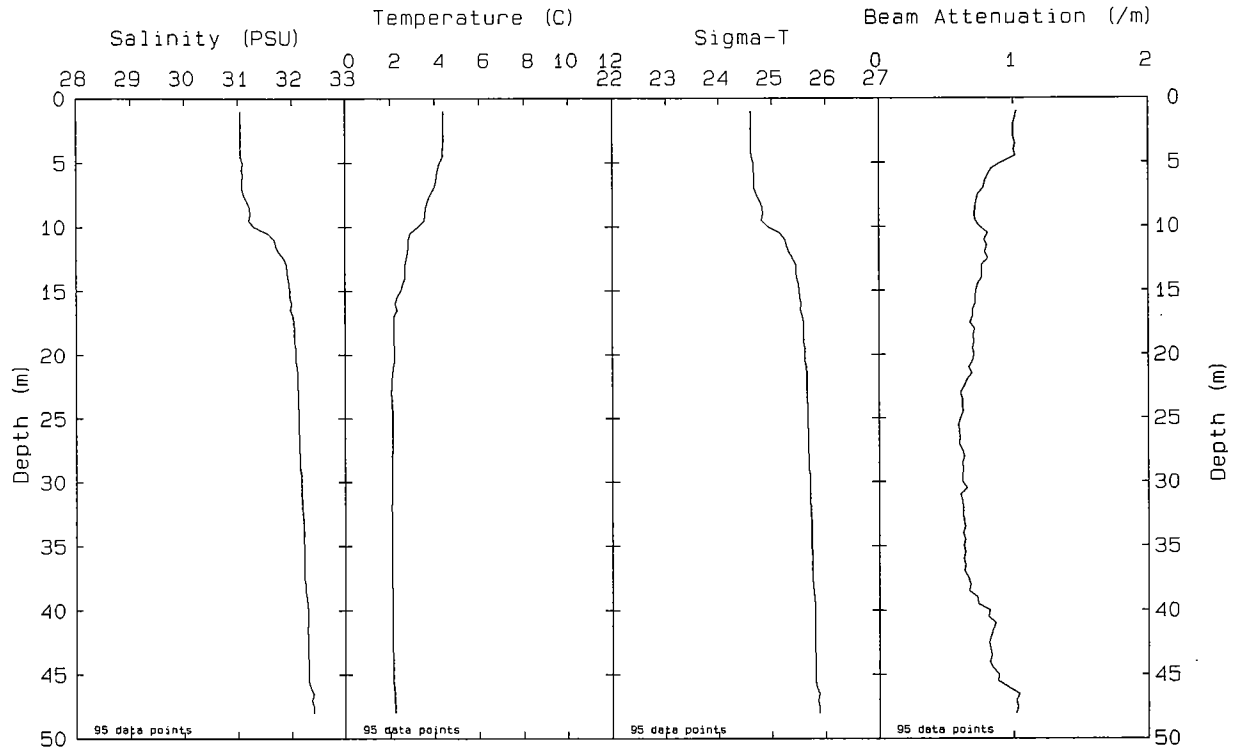


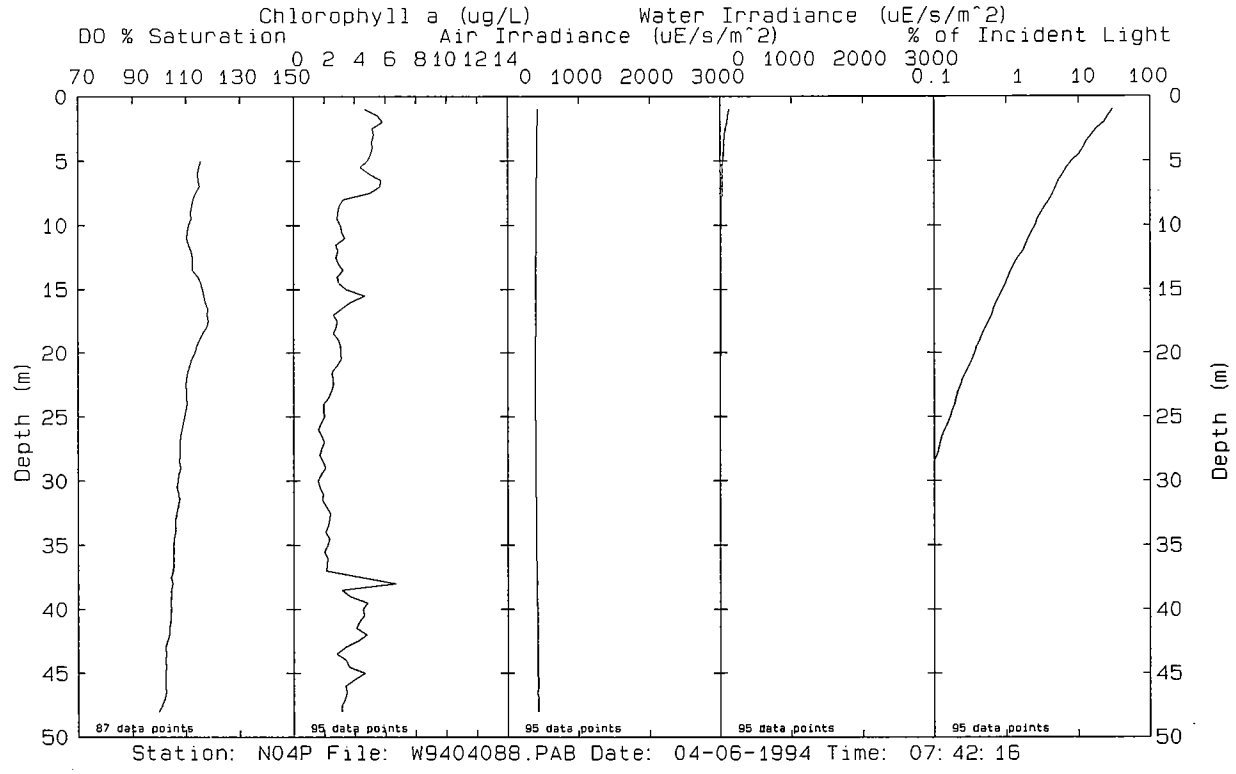


Station: N02 File: W9404184.PAB Date: 04-08-1994 Time: 07:56:11

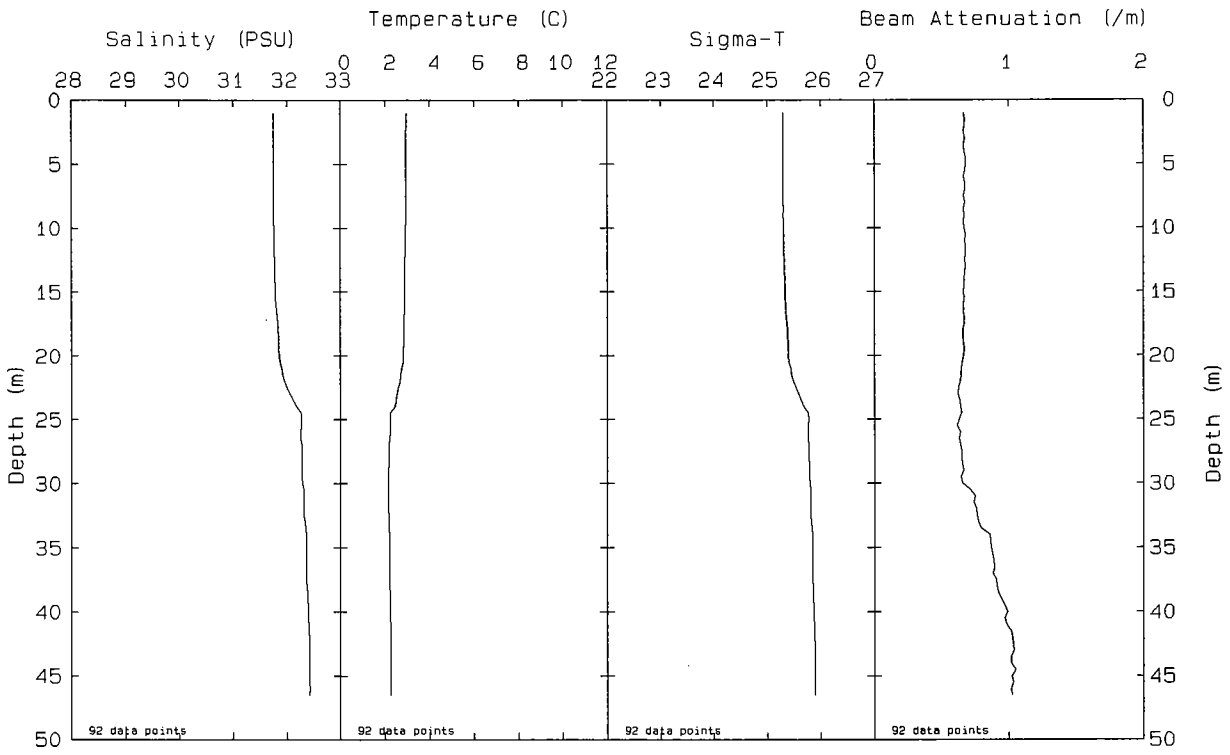

Salinity (PSU)
28 29 30 31 32 33
Temperature (C)
0 2 4 6 8 10 12
Sigma-T
22 23 24 25 26 27
Beam Attenuation (/m)
0 1 2
Depth (m)
0 5 10 15 20 25 30 35 40 45
87 data points
87 data points
87 data points
87 data points

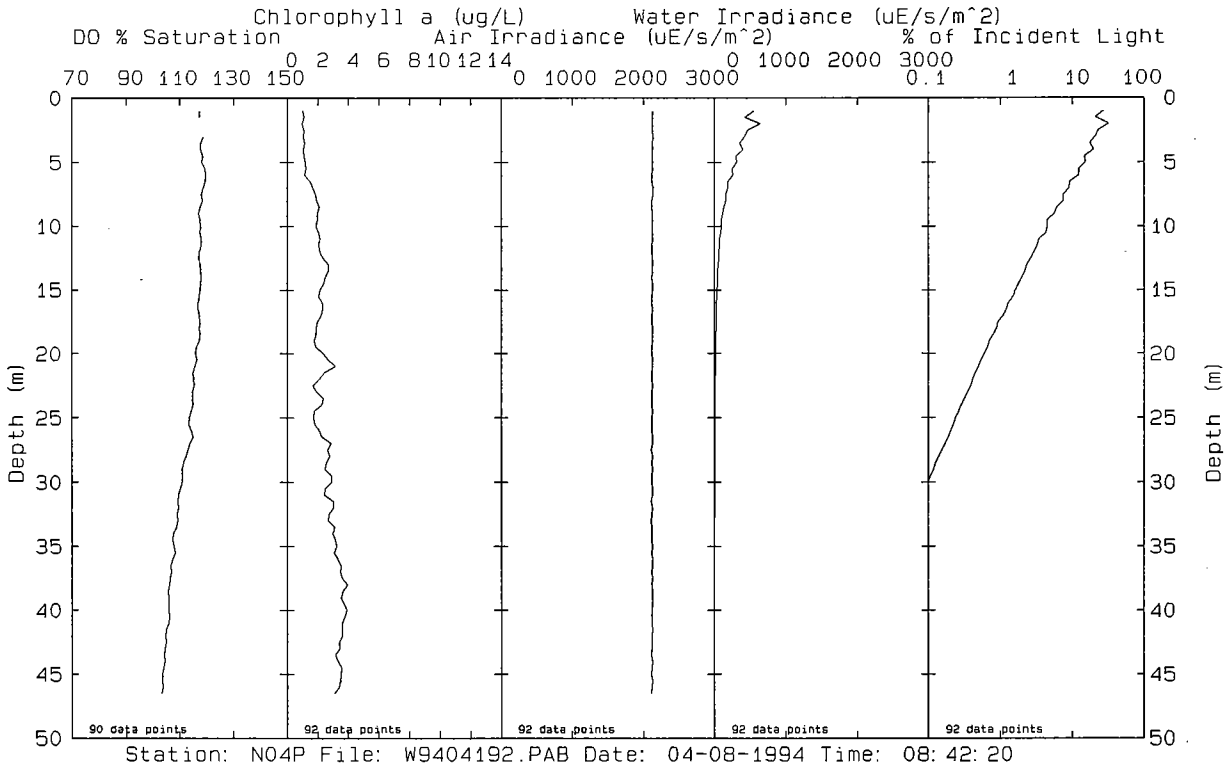

DO % Saturation
70 90 110 130 150
Chlorophyll a (ug/L)
0 2 4 6 8 10 12 14
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45
85 data points
87 data points
87 data points
87 data points
87 data points
Station: N03 File: W9404188.PAB Date: 04-08-1994 Time: 08:19:46



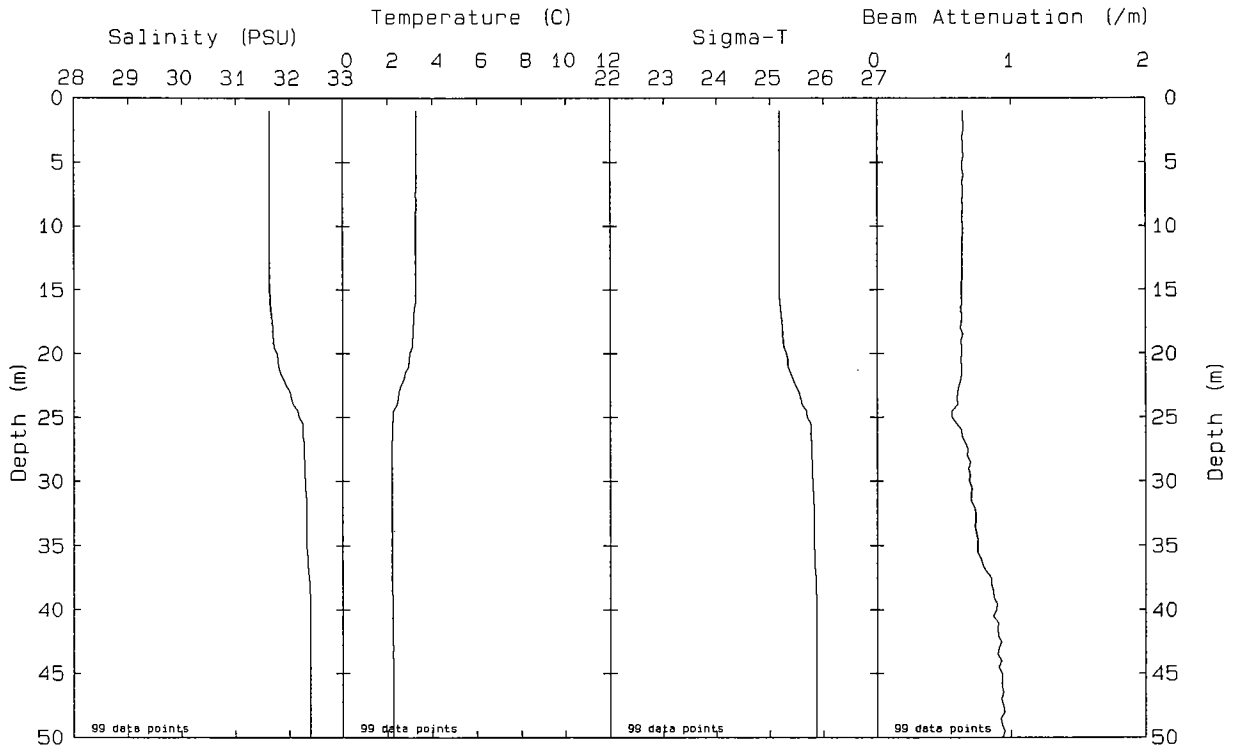


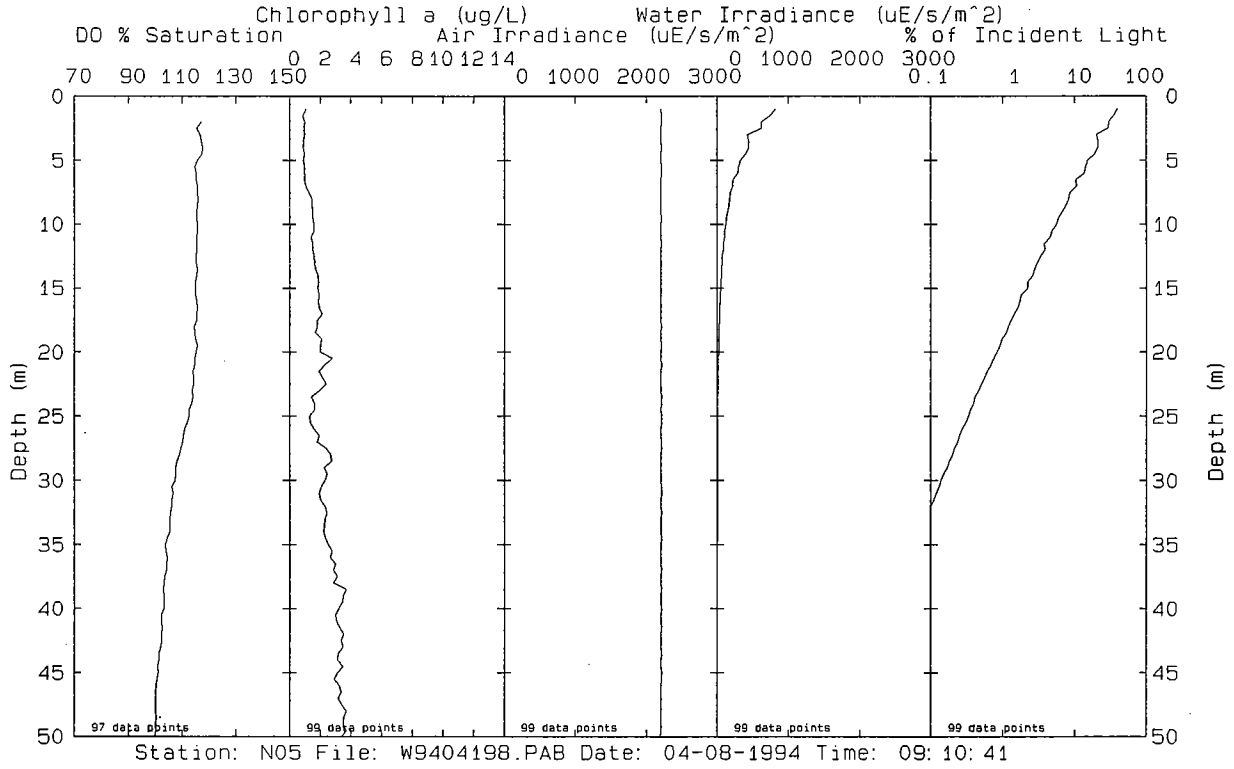
Station: N04P File: W9404088.PAB Date: 04-06-1994 Time: 07:42:16



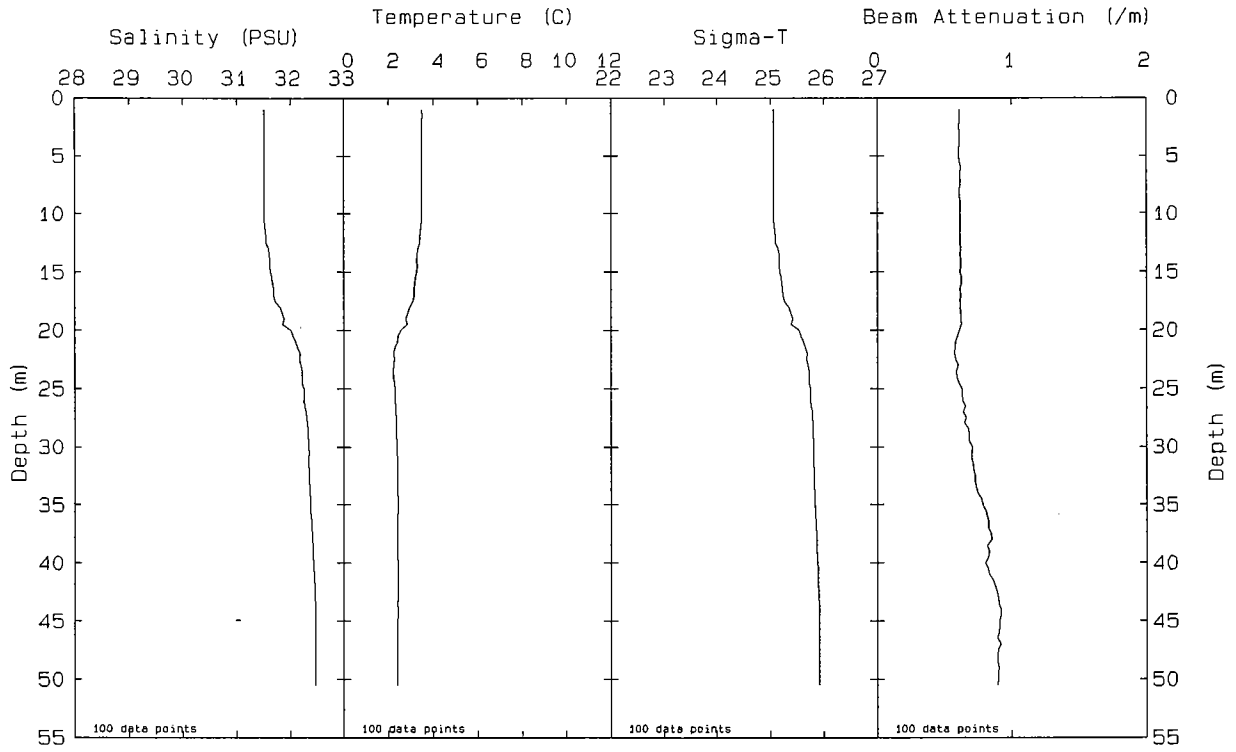


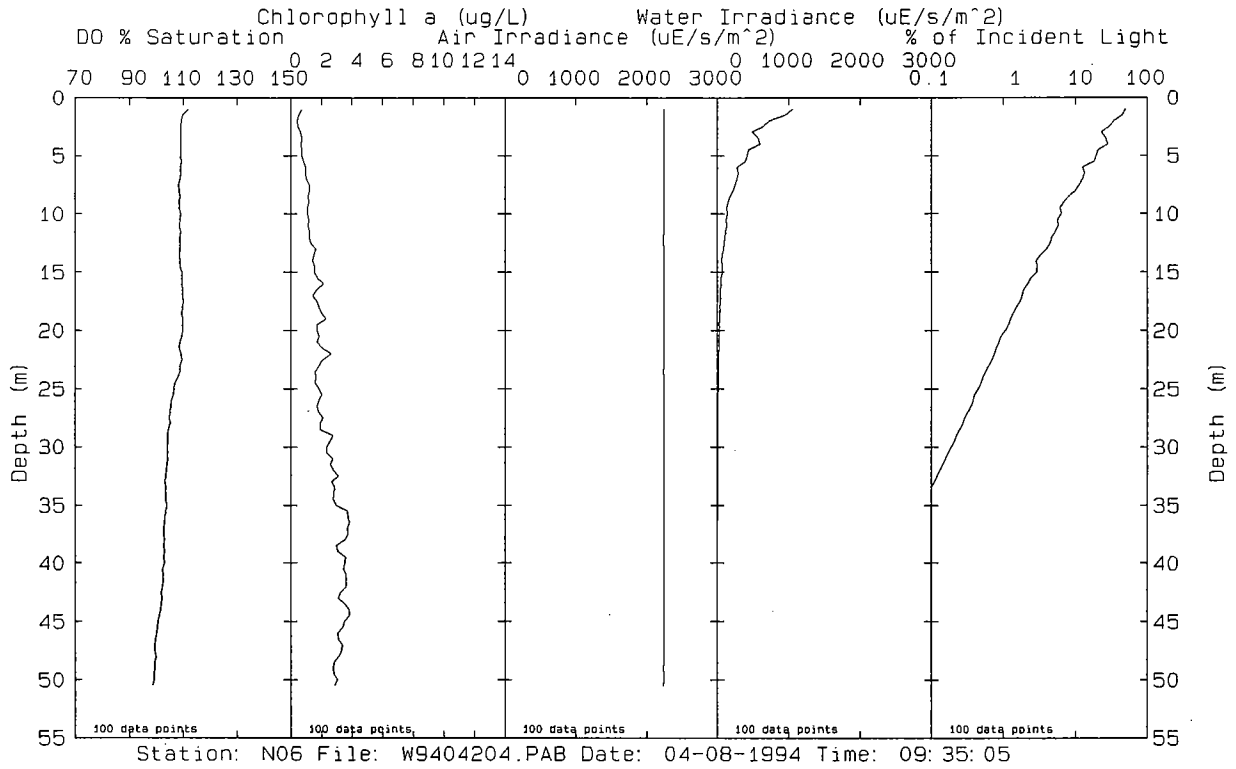
Station: N04P File: W9404192.PAB Date: 04-08-1994 Time: 08:42:20



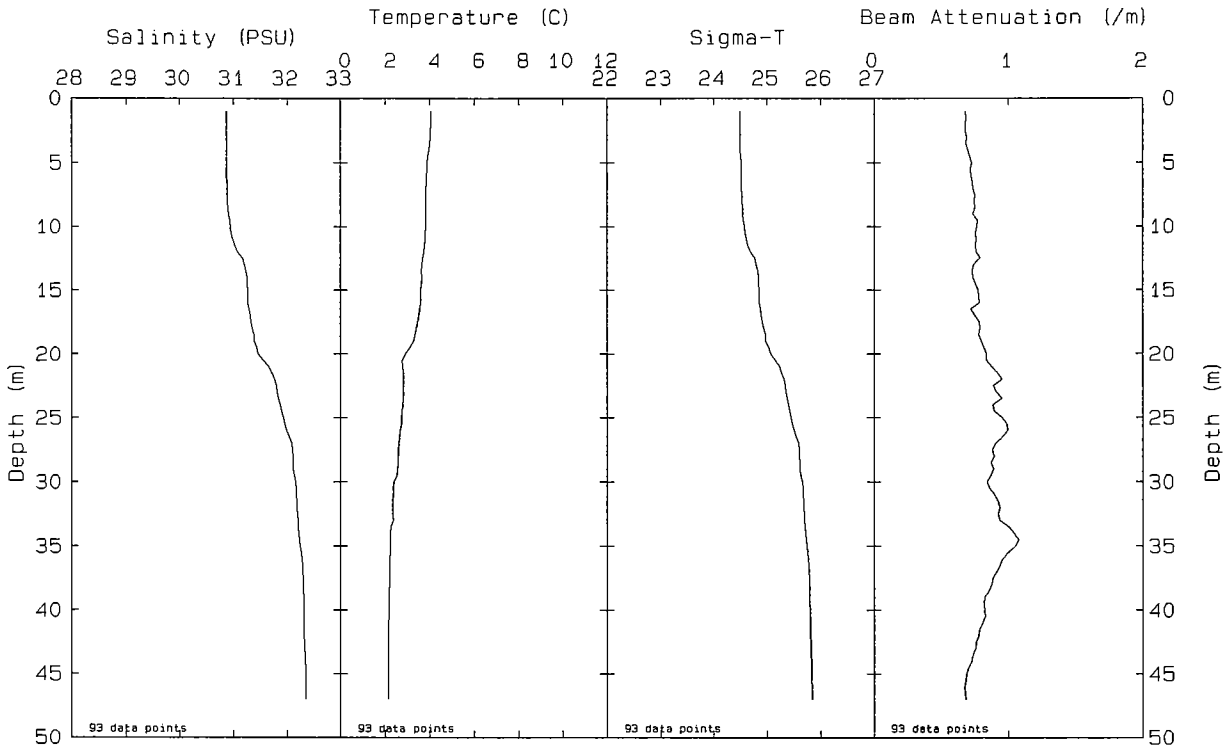


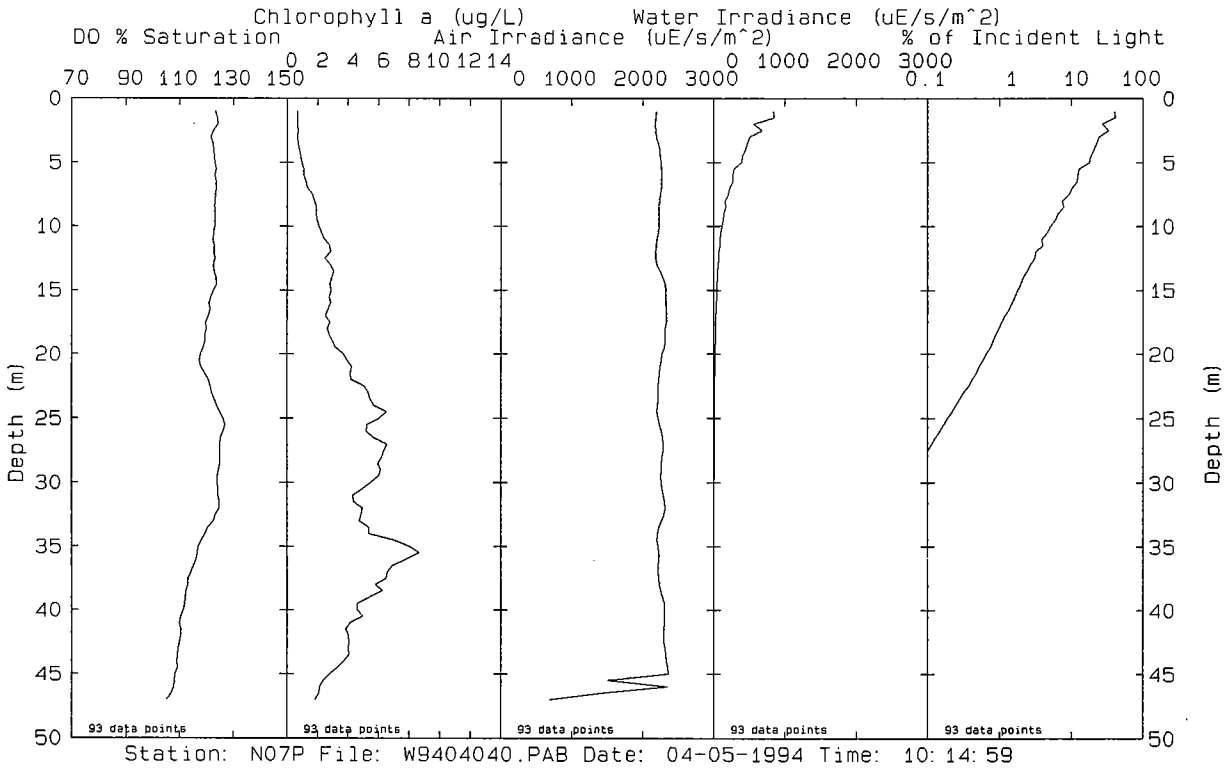
Station: N05 File: W9404198.PAB Date: 04-08-1994 Time: 09:10:41



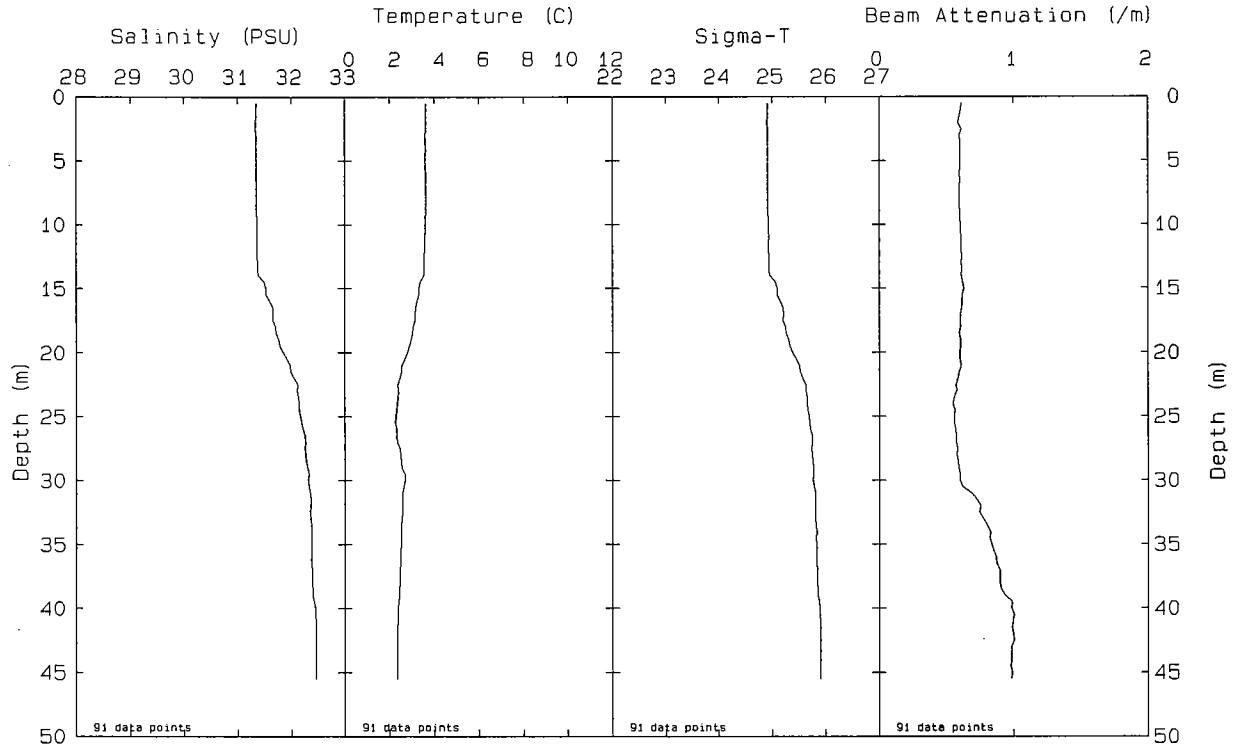


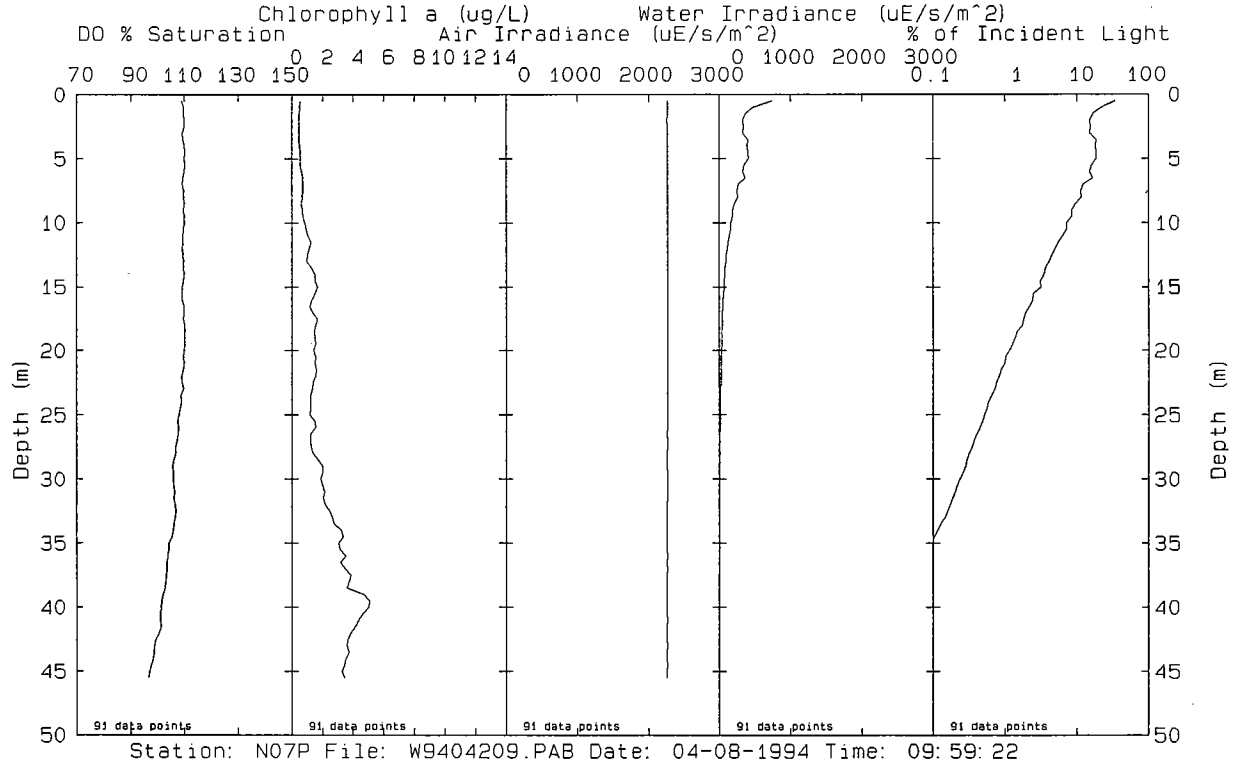
Station: N06 File: W9404204.PAB Date: 04-08-1994 Time: 09:35:05





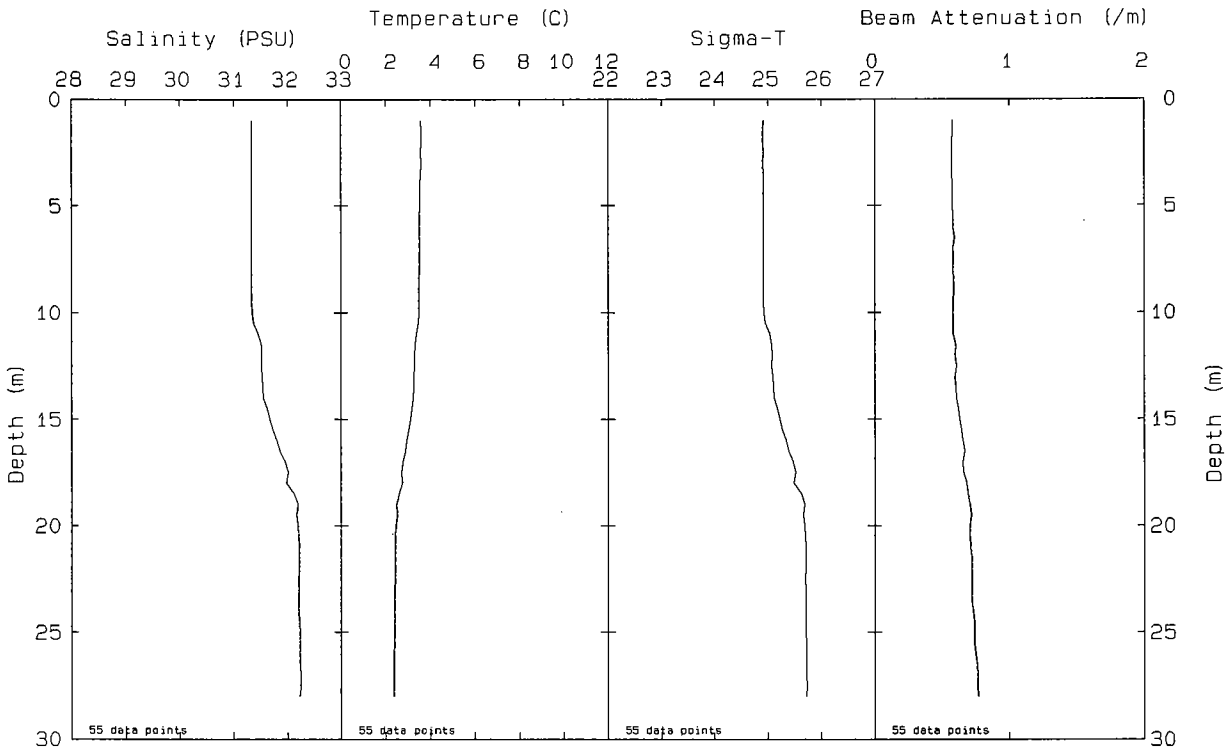
Station: N07P File: W9404040.PAB Date: 04-05-1994 Time: 10:14:59

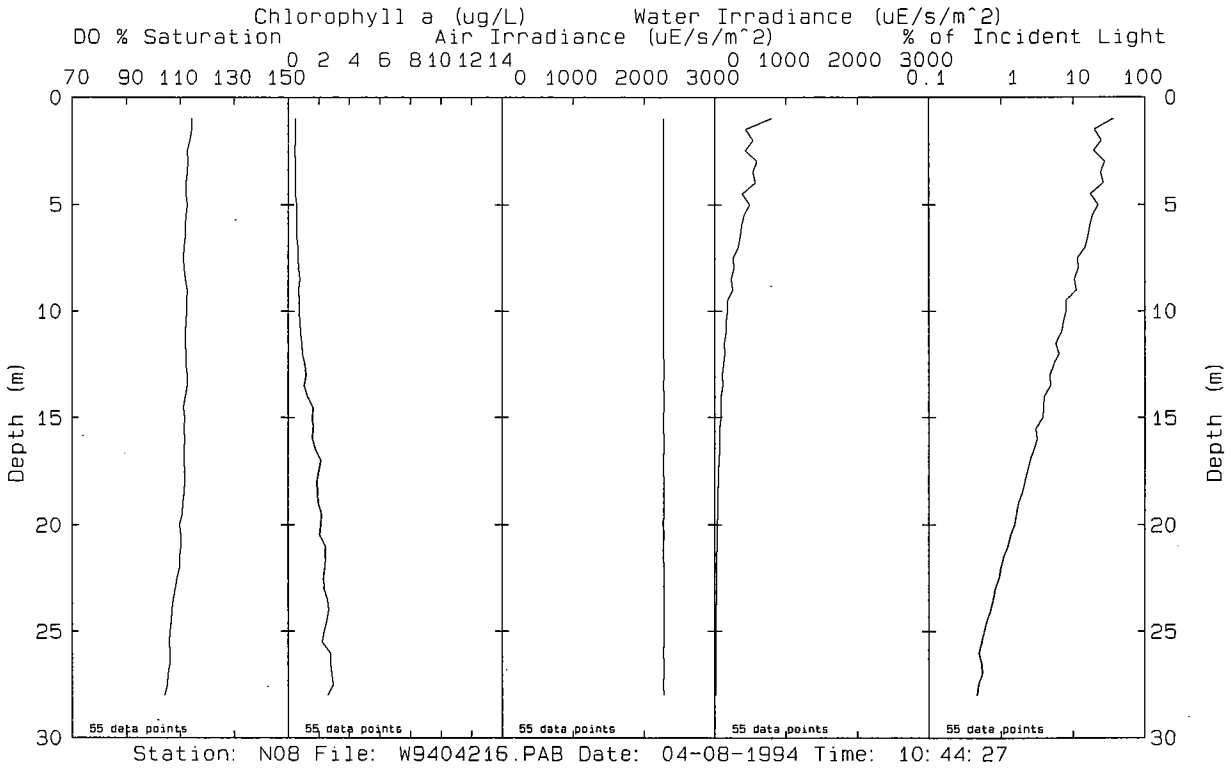




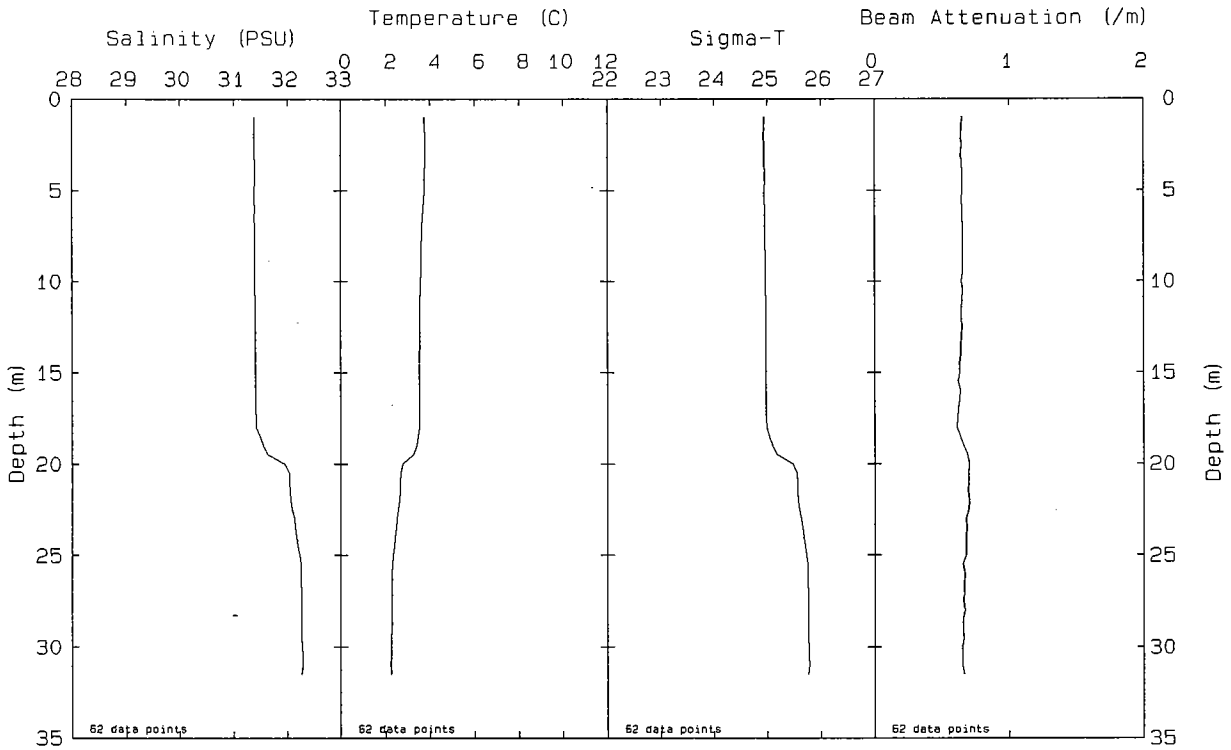
Station: N07P File: W9404209.PAB Date: 04-08-1994 Time: 09:59:22

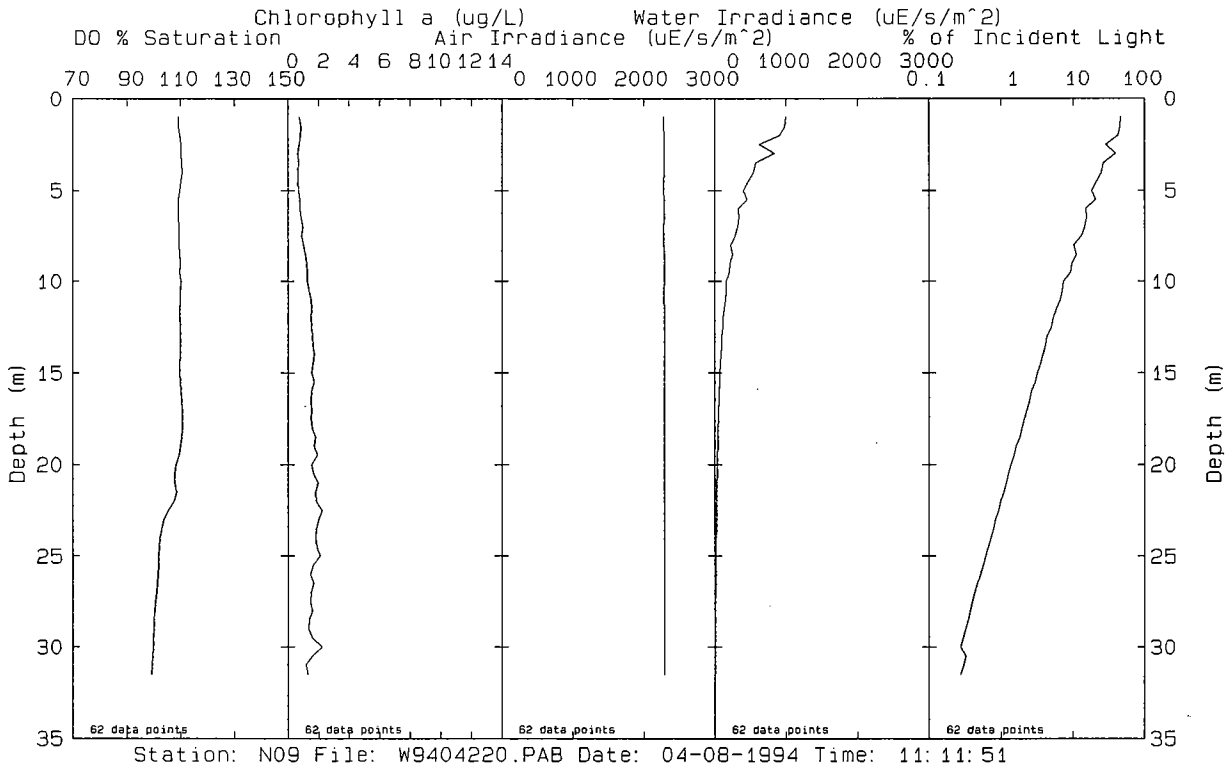
10-06-1994 12:48:19 Battelle



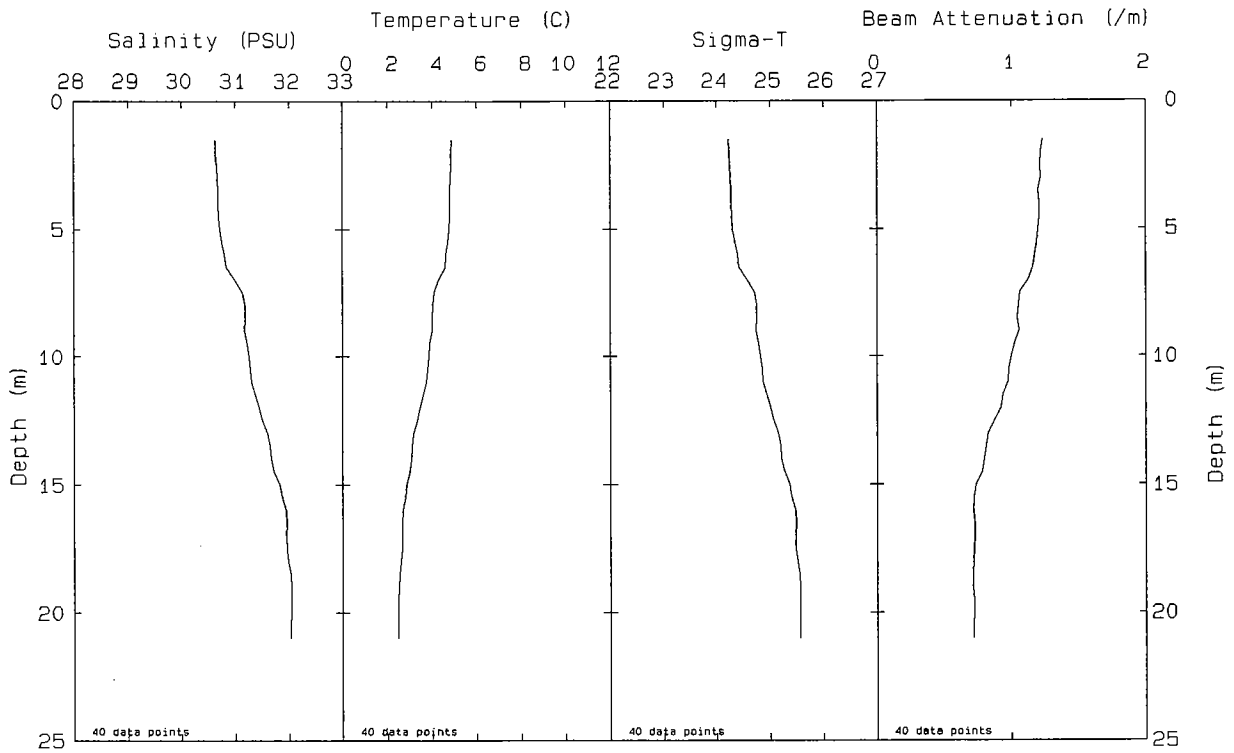


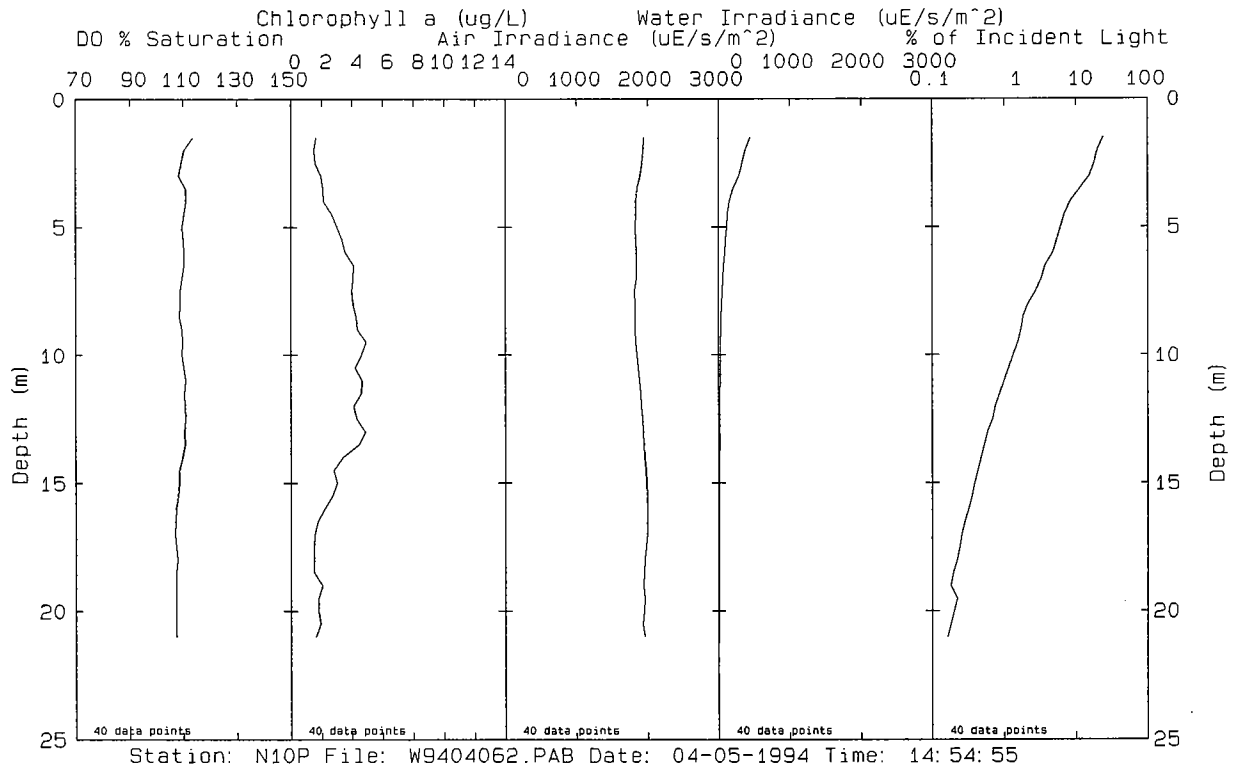
Station: N08 File: W9404216.PAB Date: 04-08-1994 Time: 10:44:27



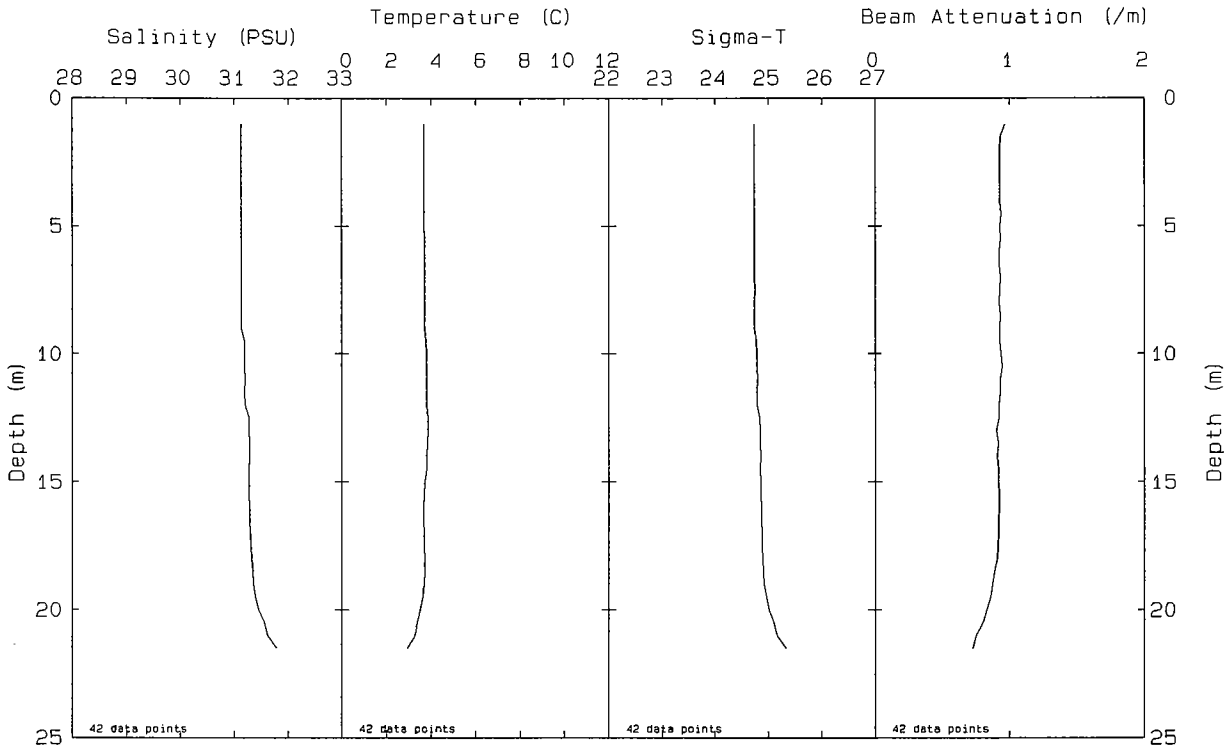


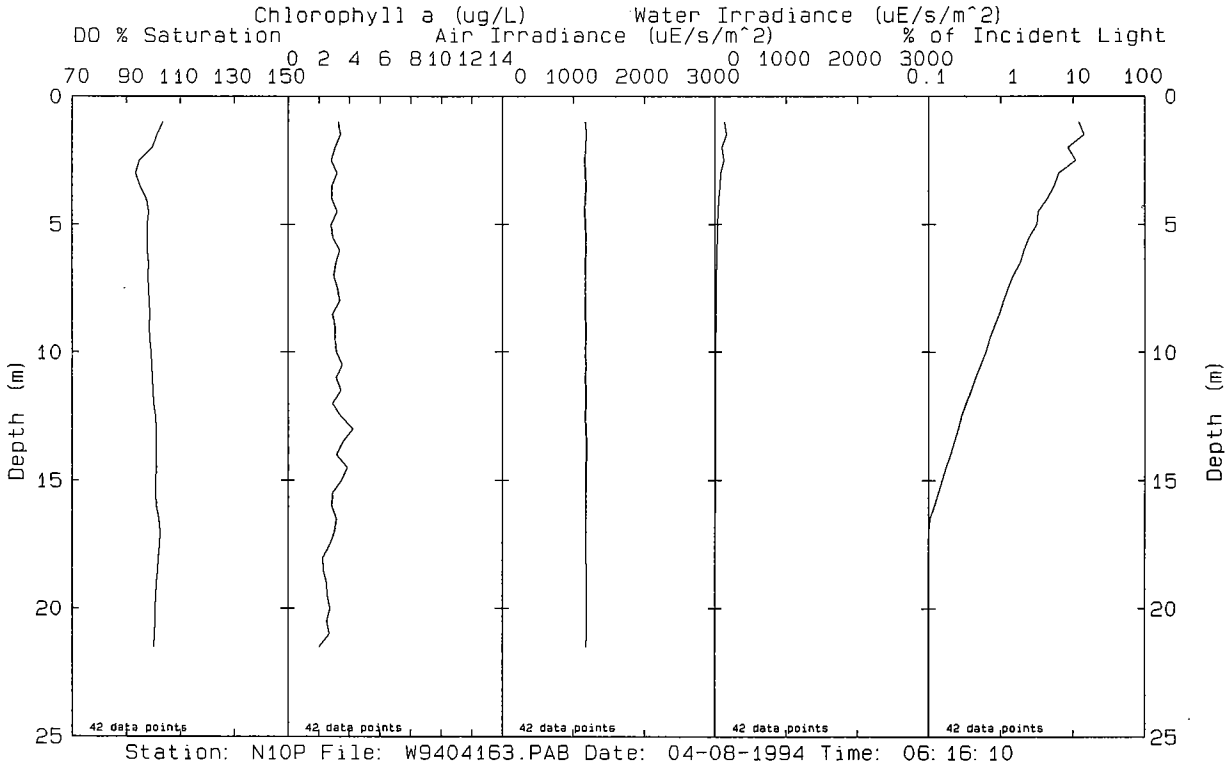
Station: N09 File: W9404220.PAB Date: 04-08-1994 Time: 11:11:51



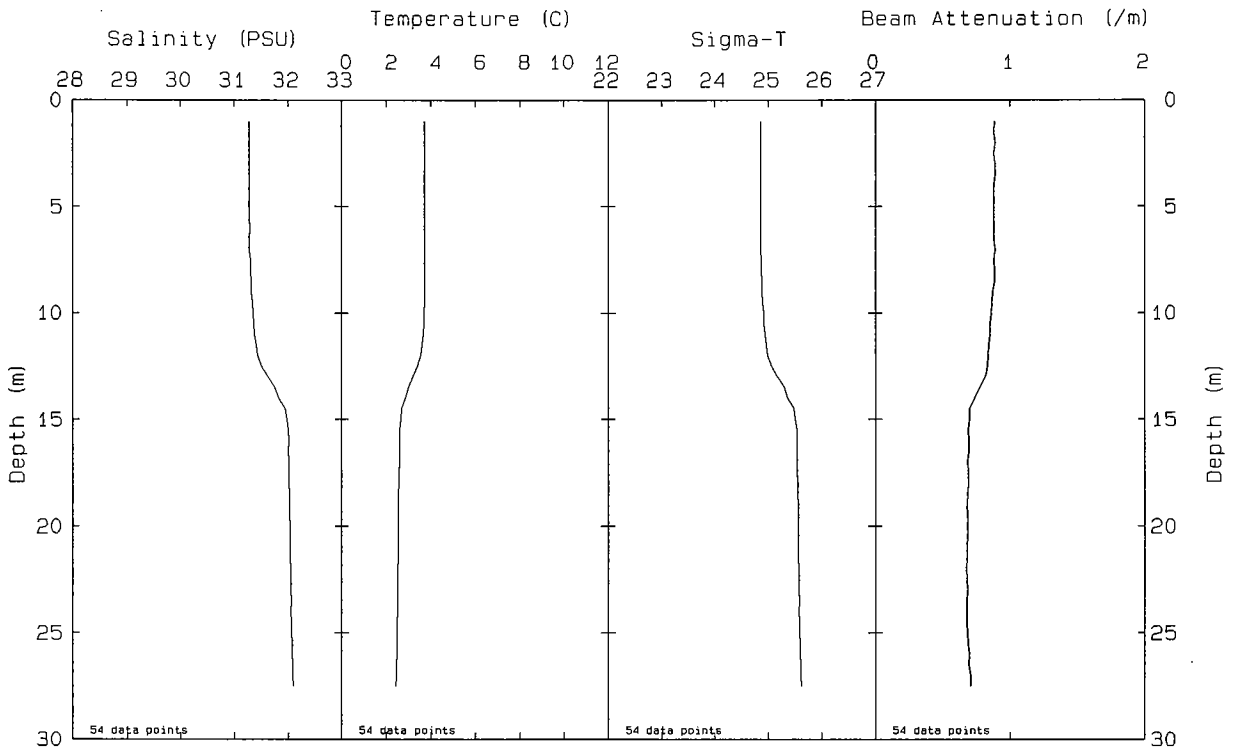


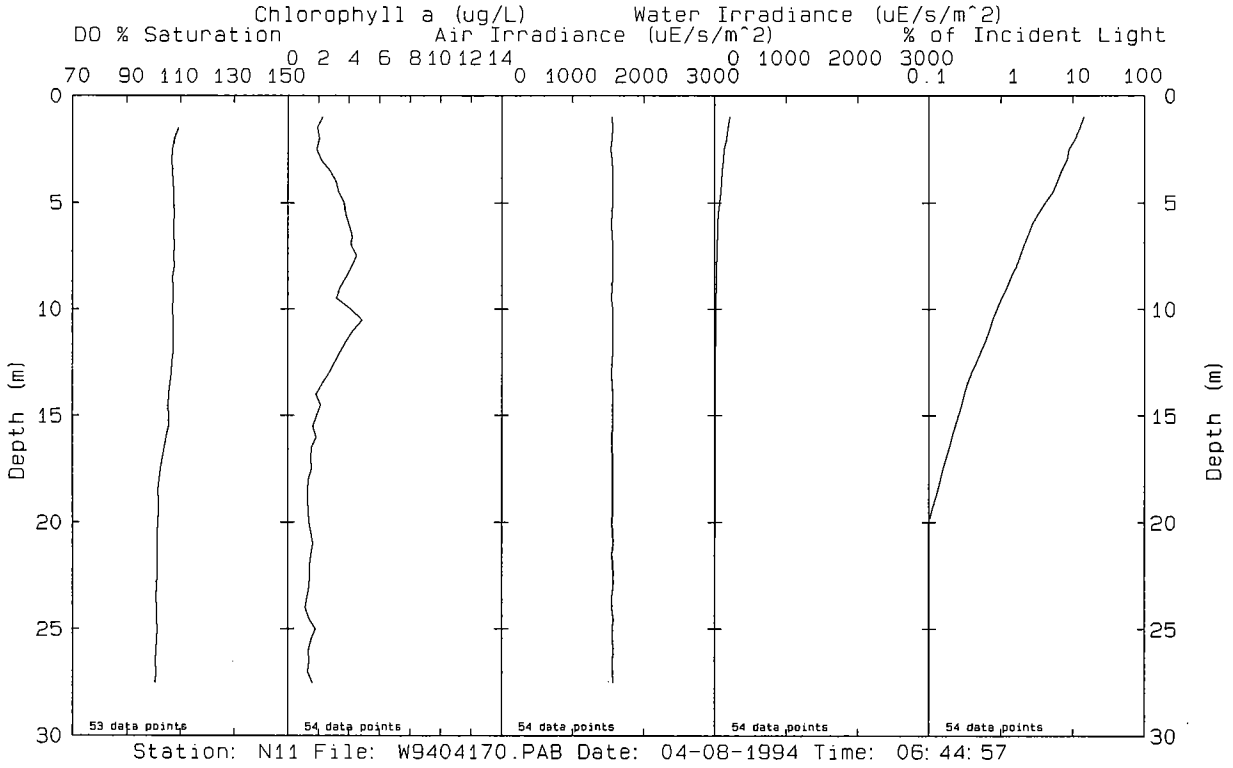
Station: N10P File: W9404062.PAB Date: 04-05-1994 Time: 14:54:55



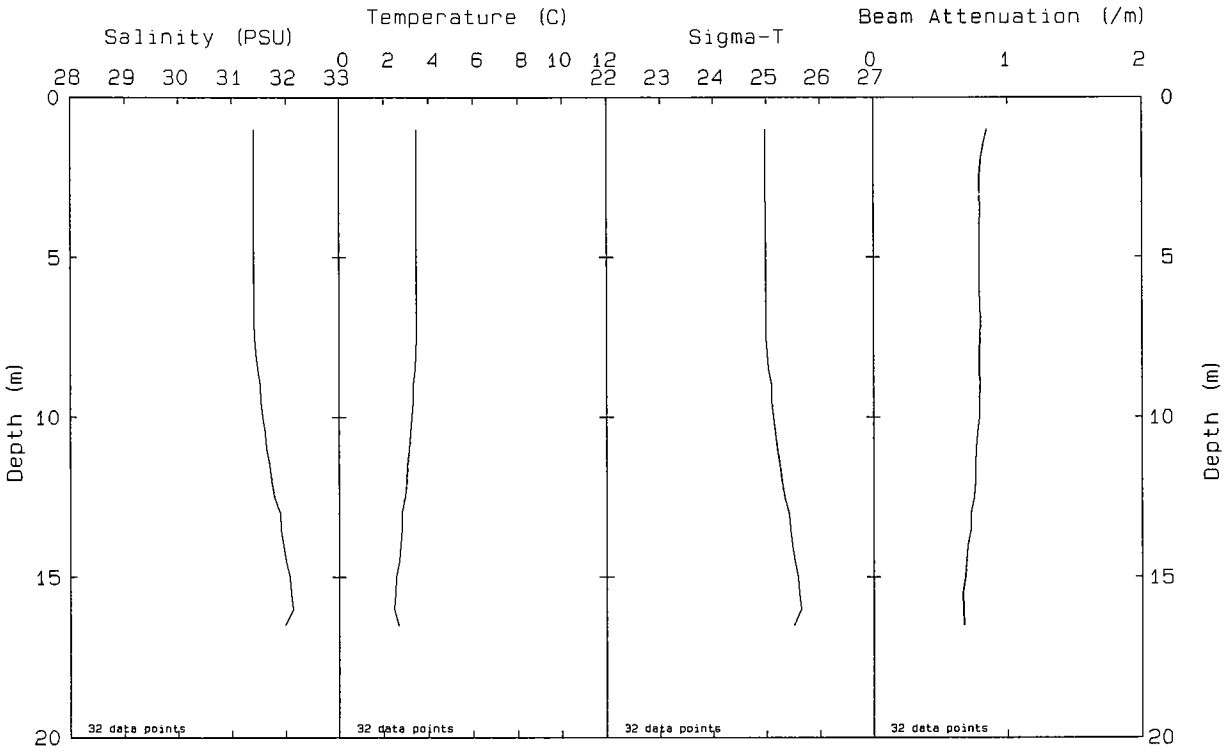


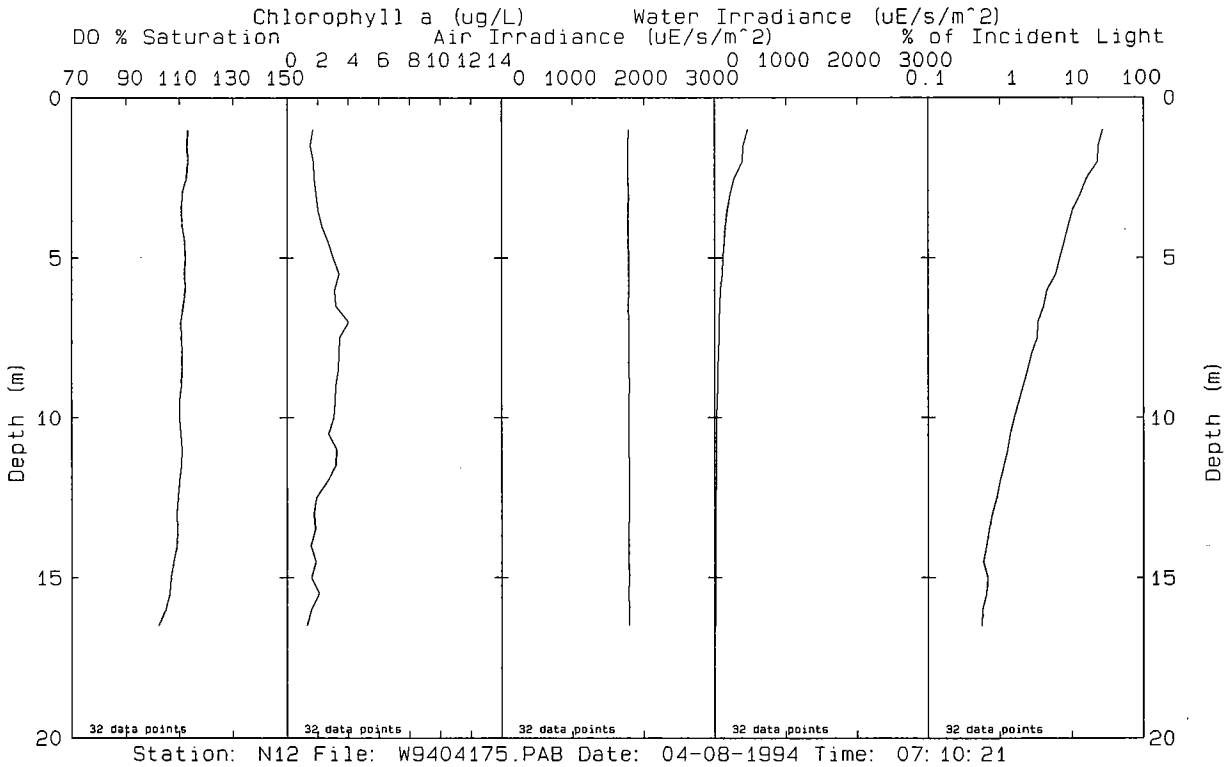
Station: N10P File: W9404163.PAB Date: 04-08-1994 Time: 06:16:10



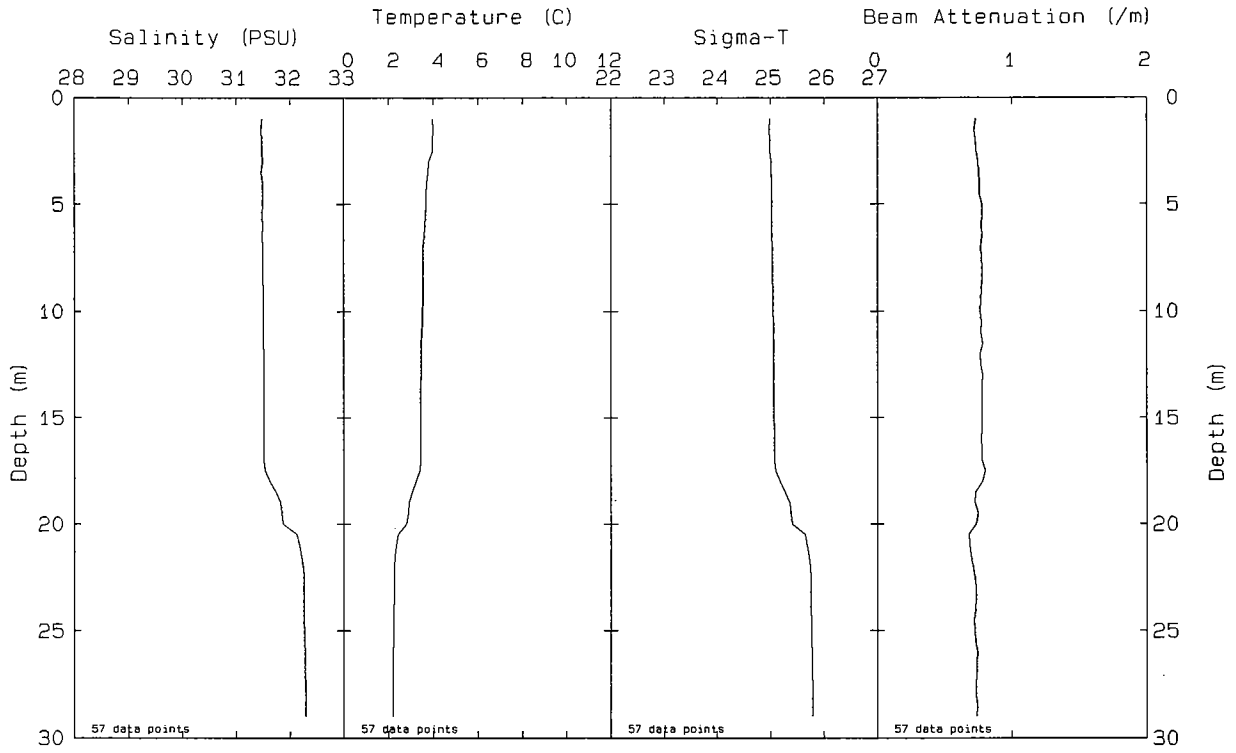


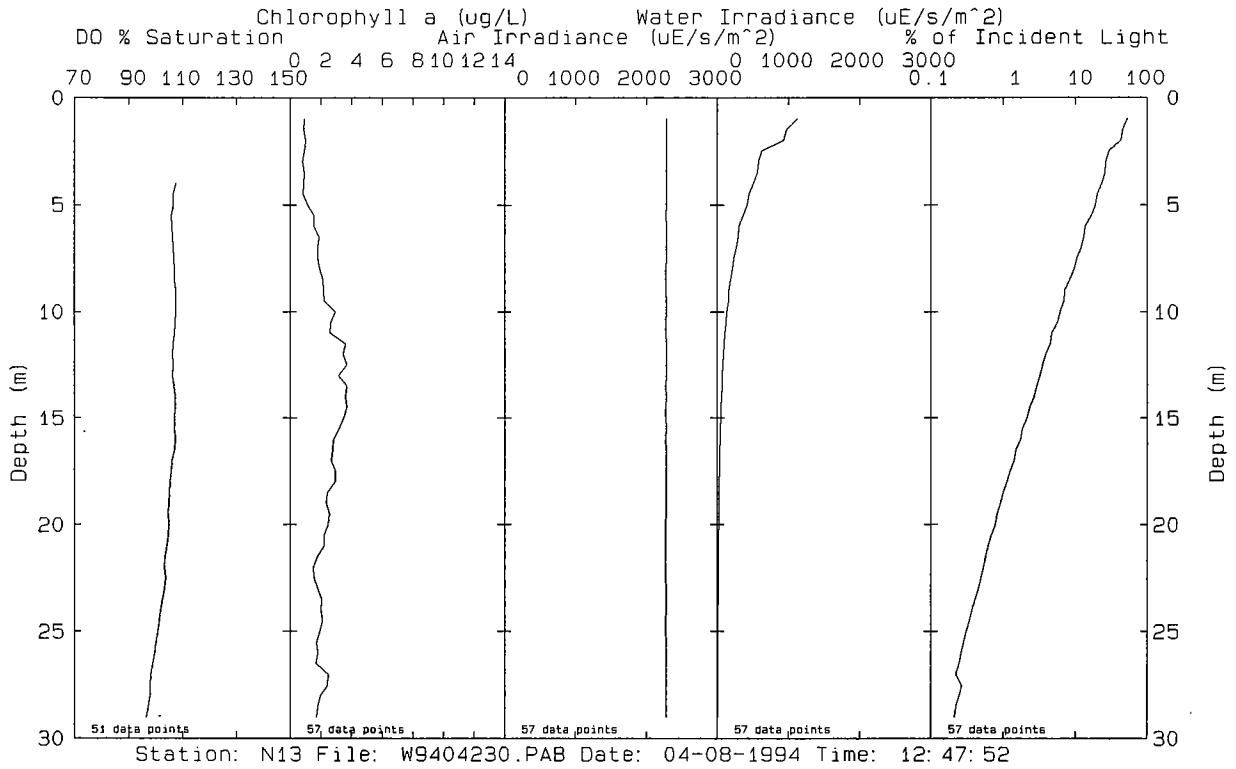
Station: N11 File: W9404170.PAB Date: 04-08-1994 Time: 06:44:57



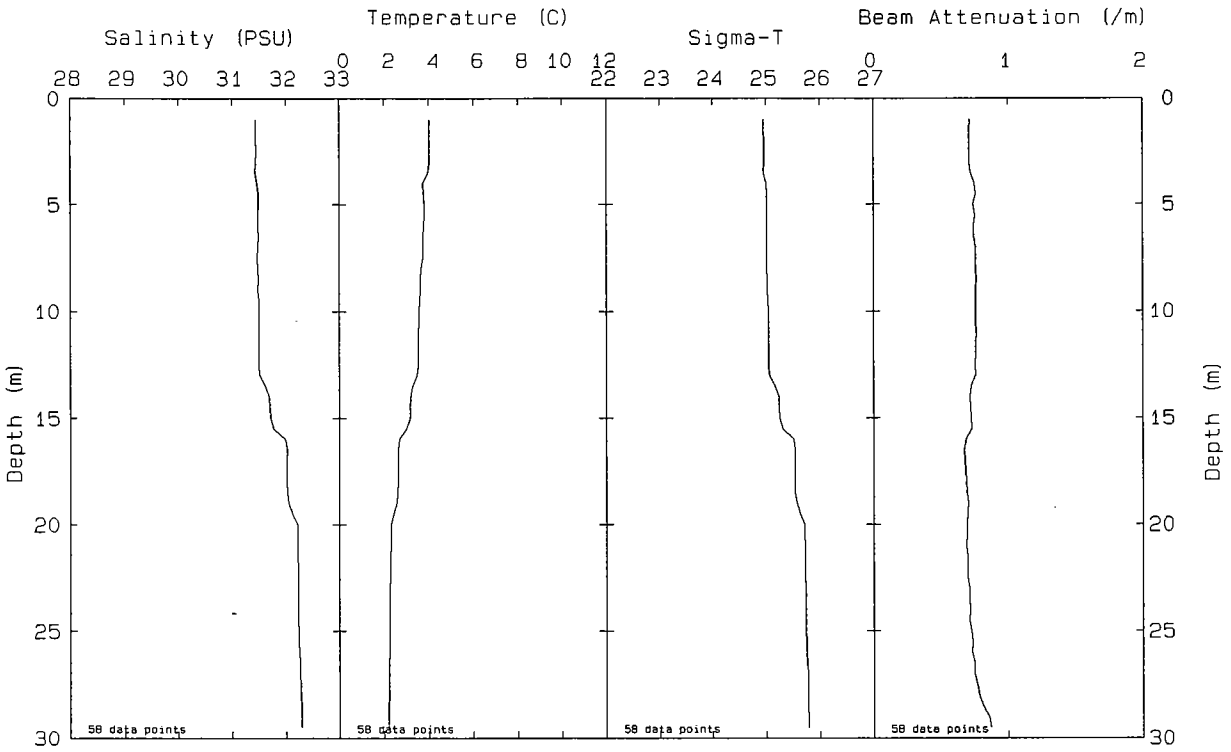


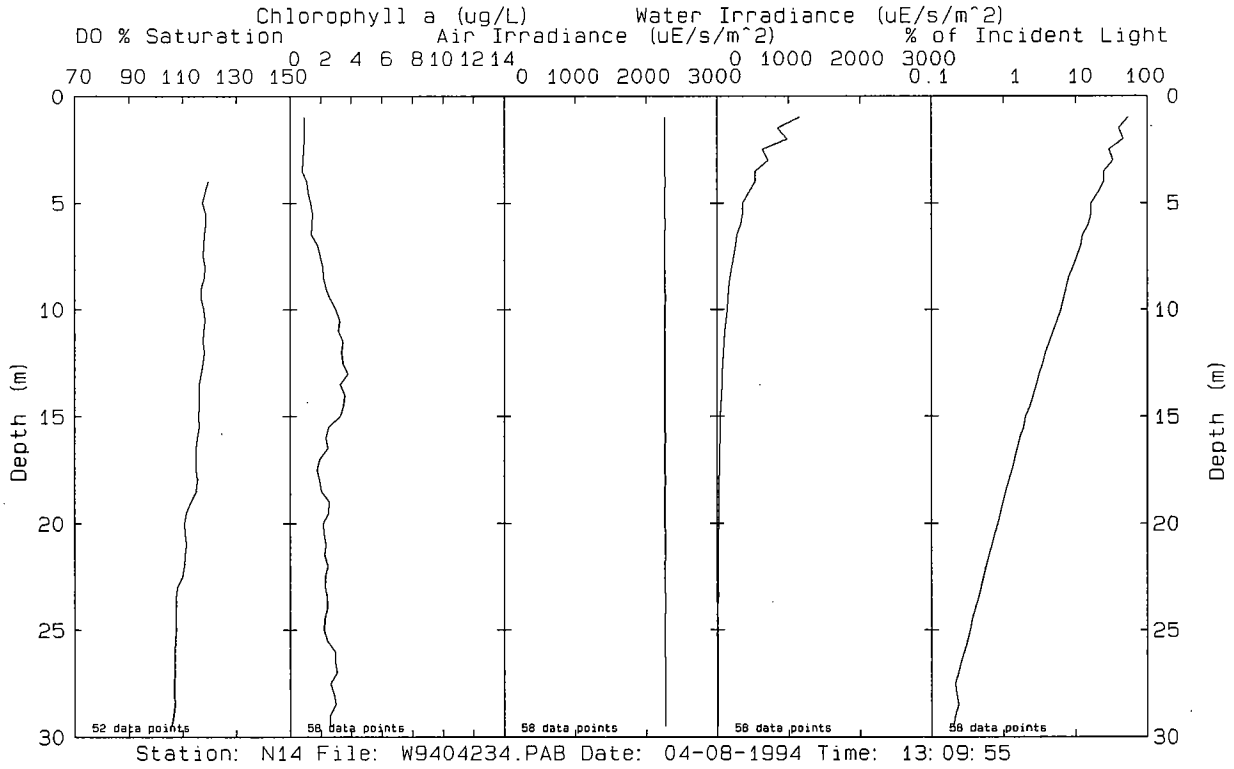
Station: N12 File: W9404175.PAB Date: 04-08-1994 Time: 07:10:21



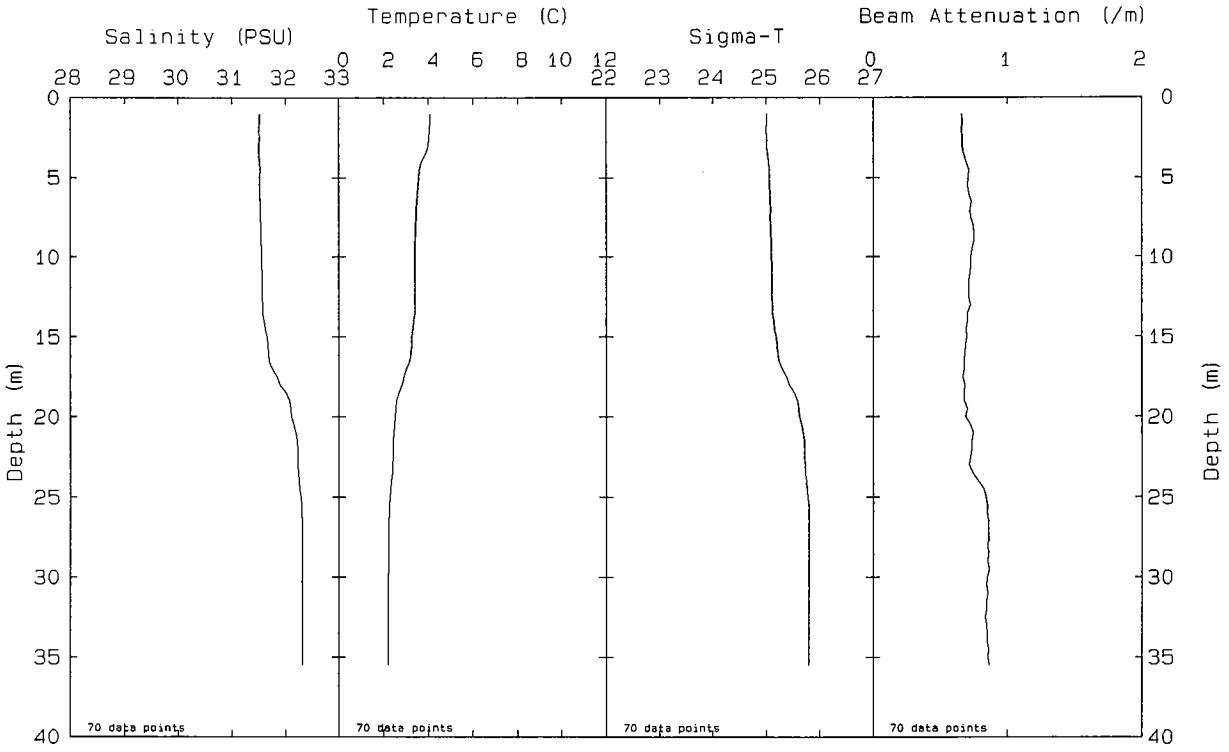


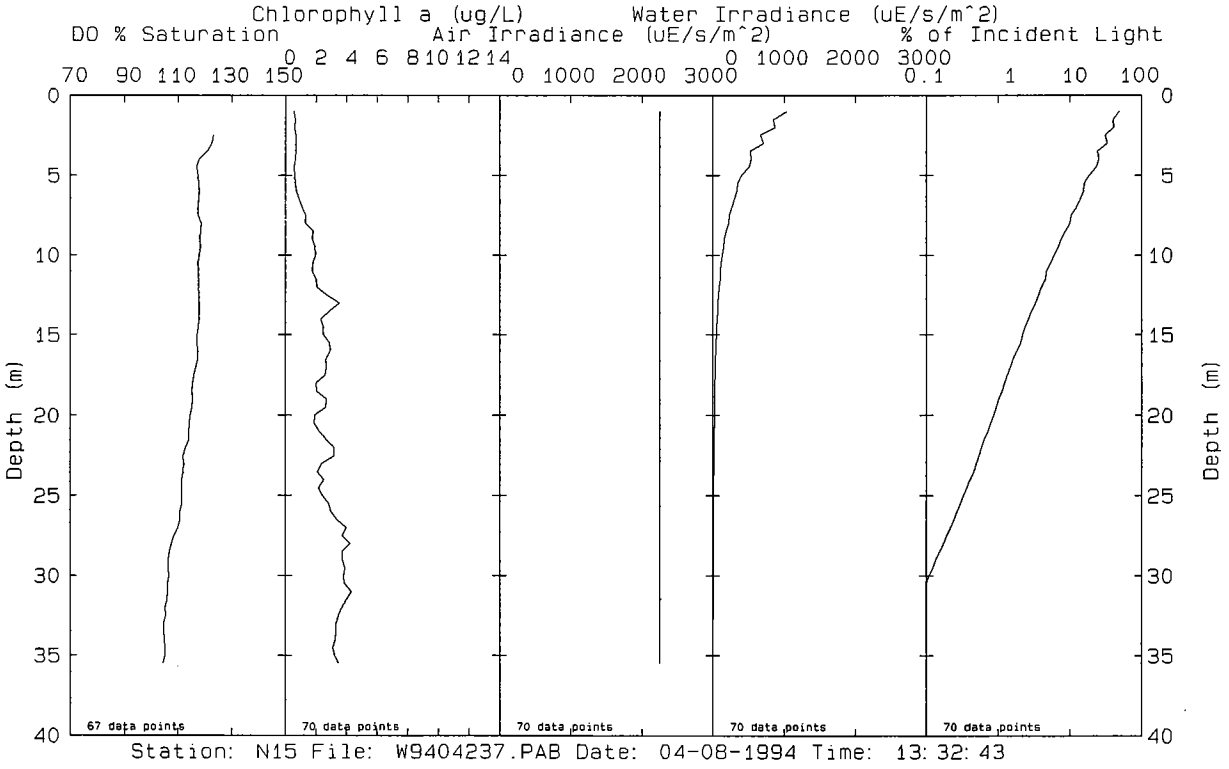
Station: N13 File: W9404230.PAB Date: 04-08-1994 Time: 12:47:52



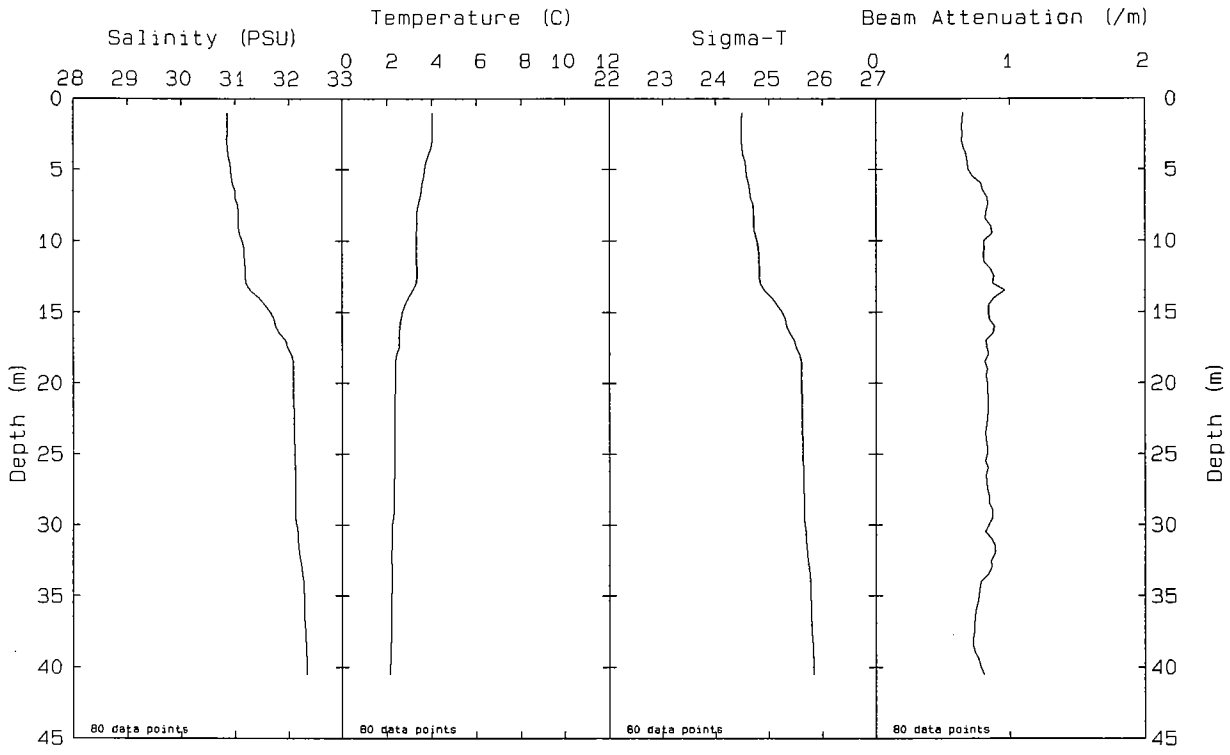


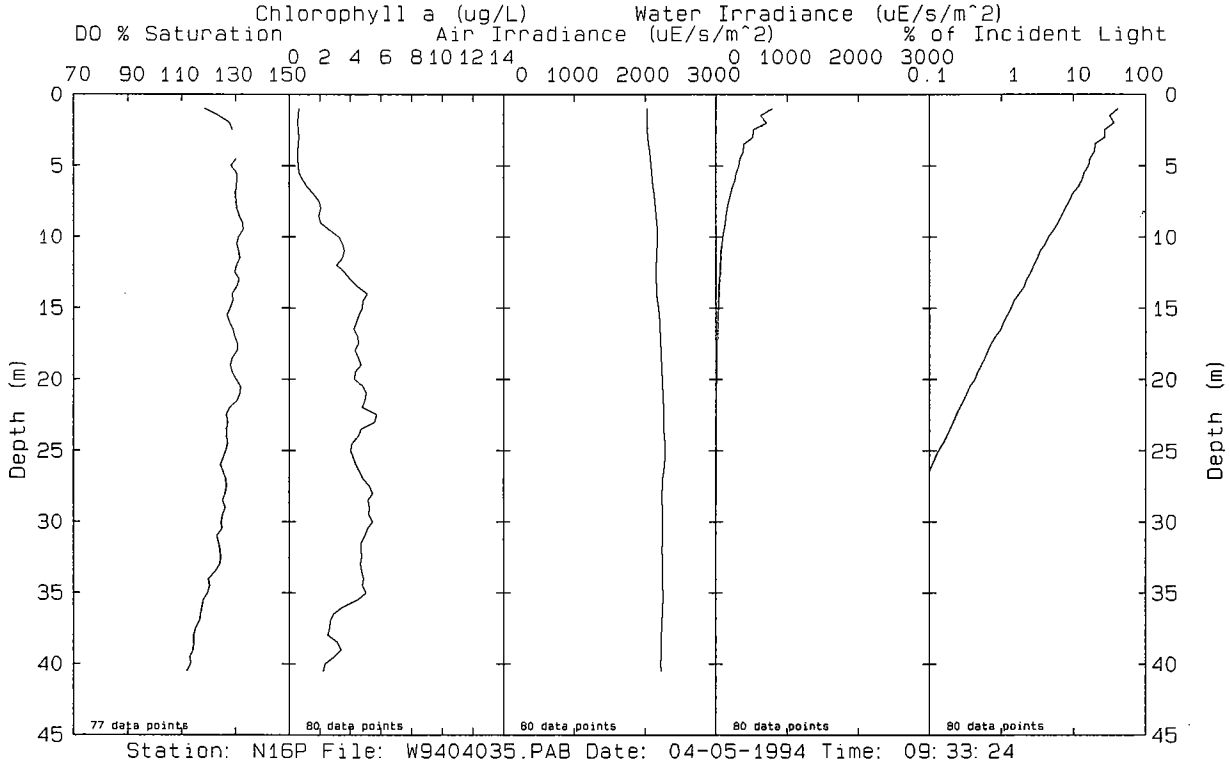
Station: N14 File: W9404234.PAB Date: 04-08-1994 Time: 13:09:55



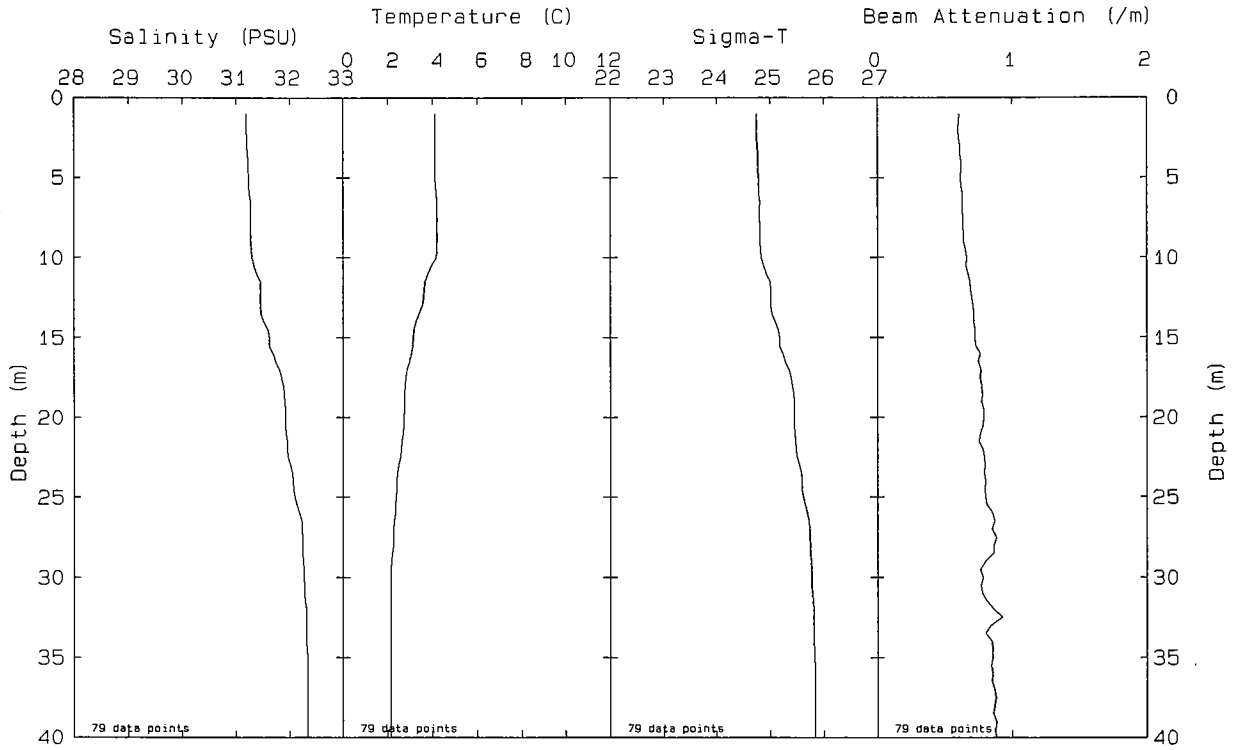


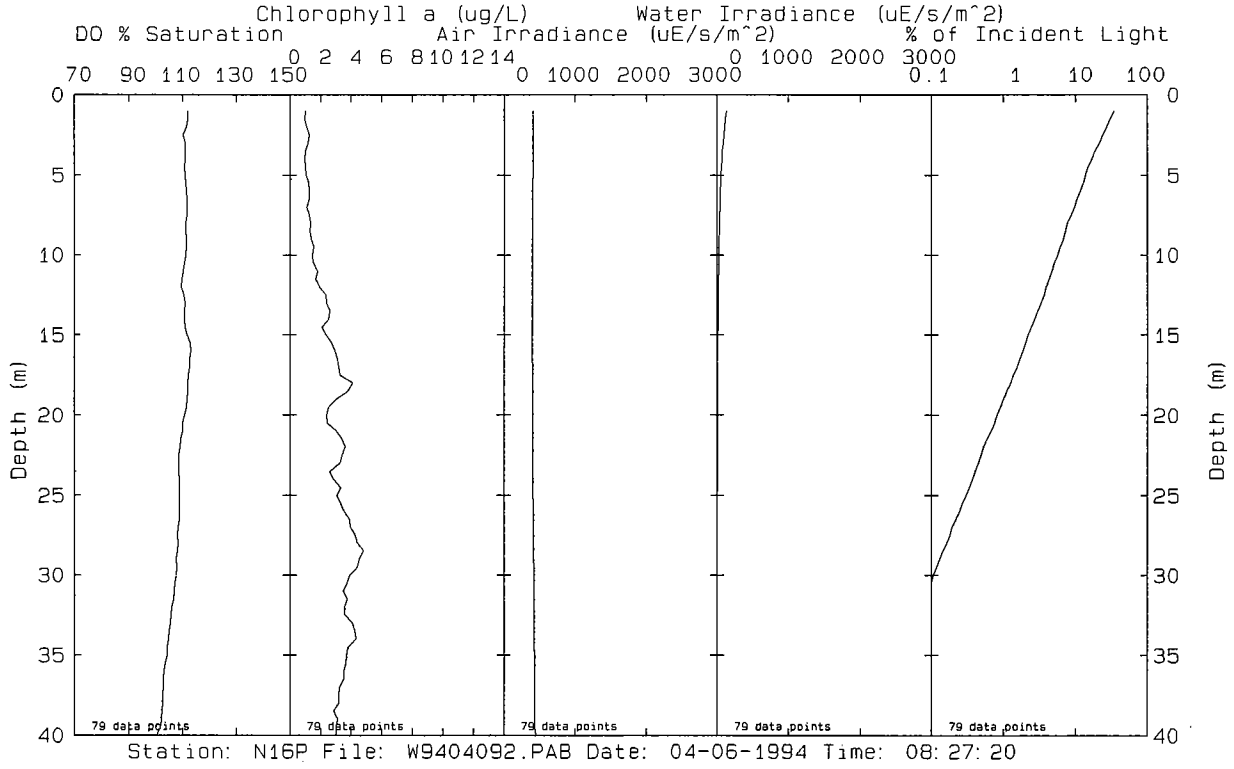
Station: N15 File: W9404237.PAB Date: 04-08-1994 Time: 13:32:43



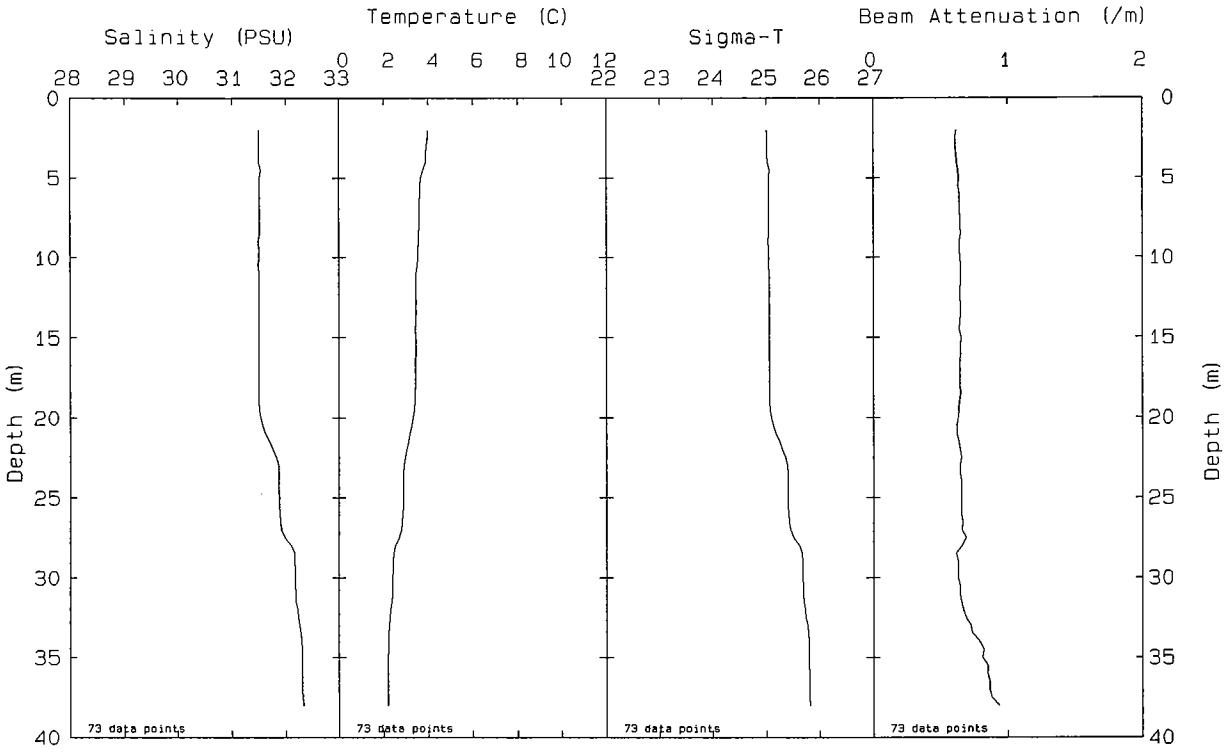


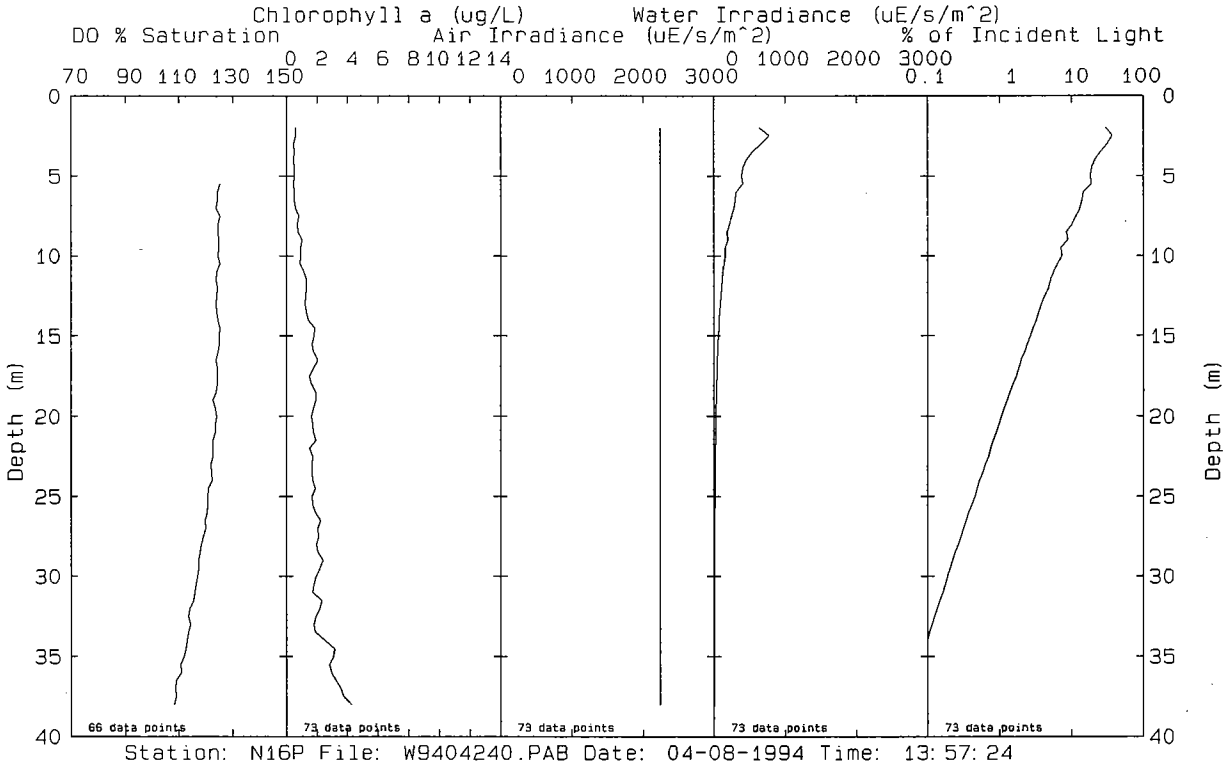
Station: N16P File: W9404035.PAB Date: 04-05-1994 Time: 09:33:24



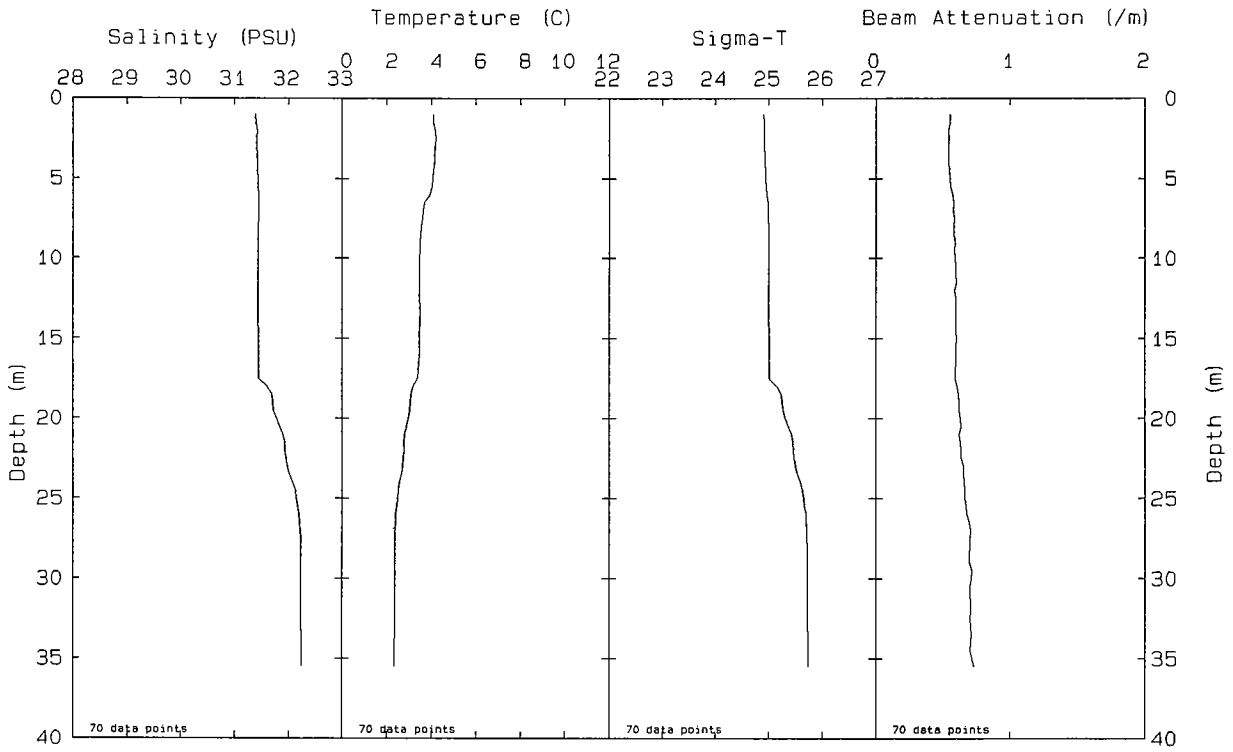


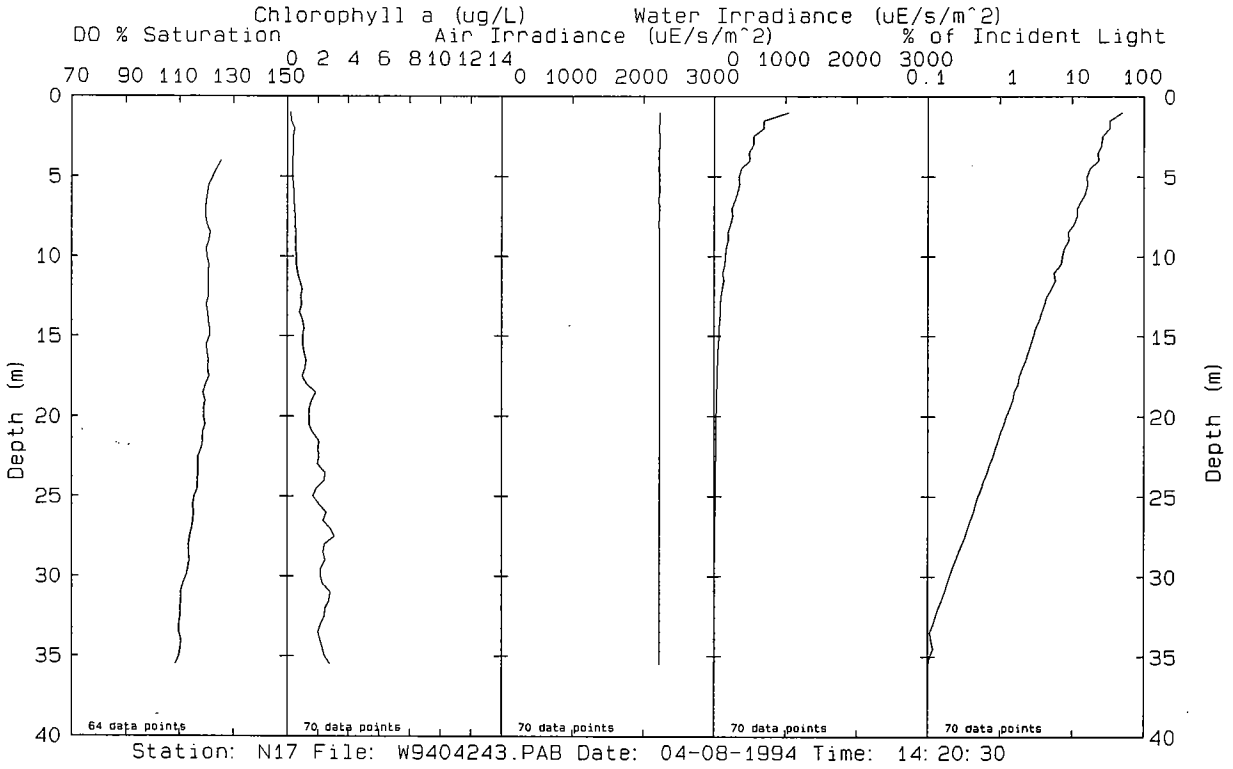
Station: N16P File: W9404092.PAB Date: 04-06-1994 Time: 08:27:20



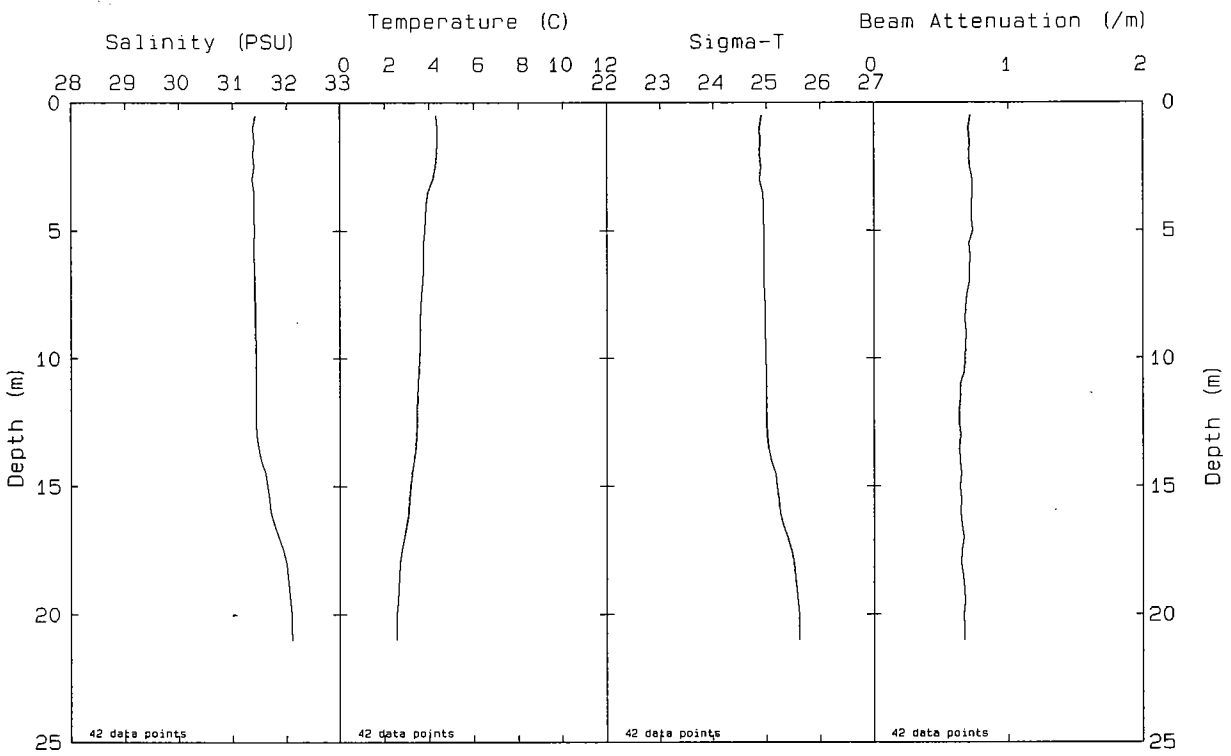


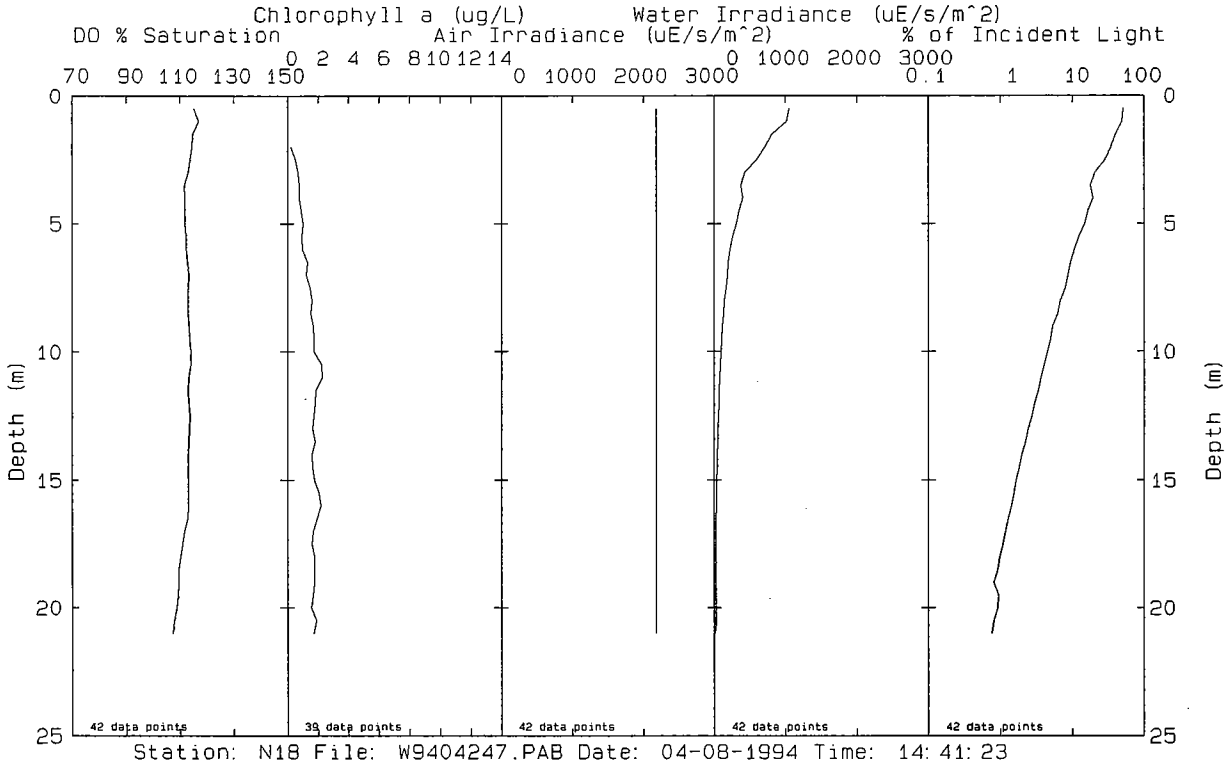
Station: N16P File: W9404240.PAB Date: 04-08-1994 Time: 13:57:24



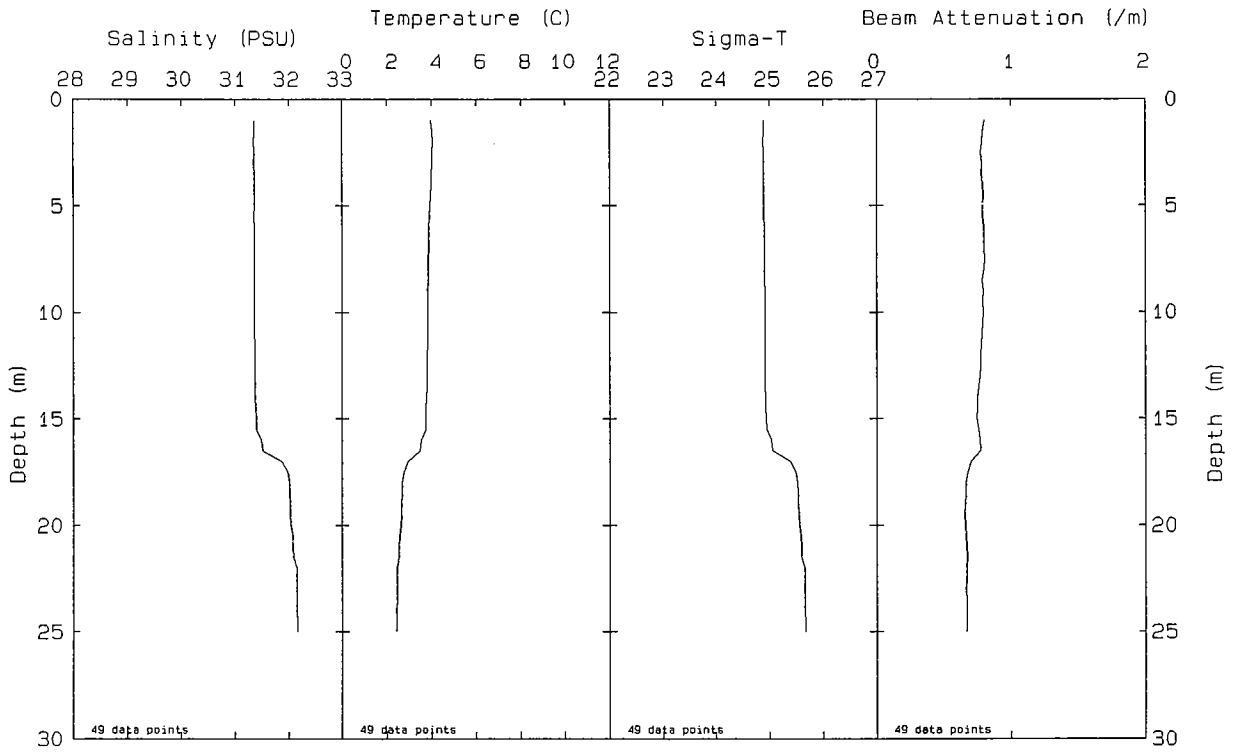


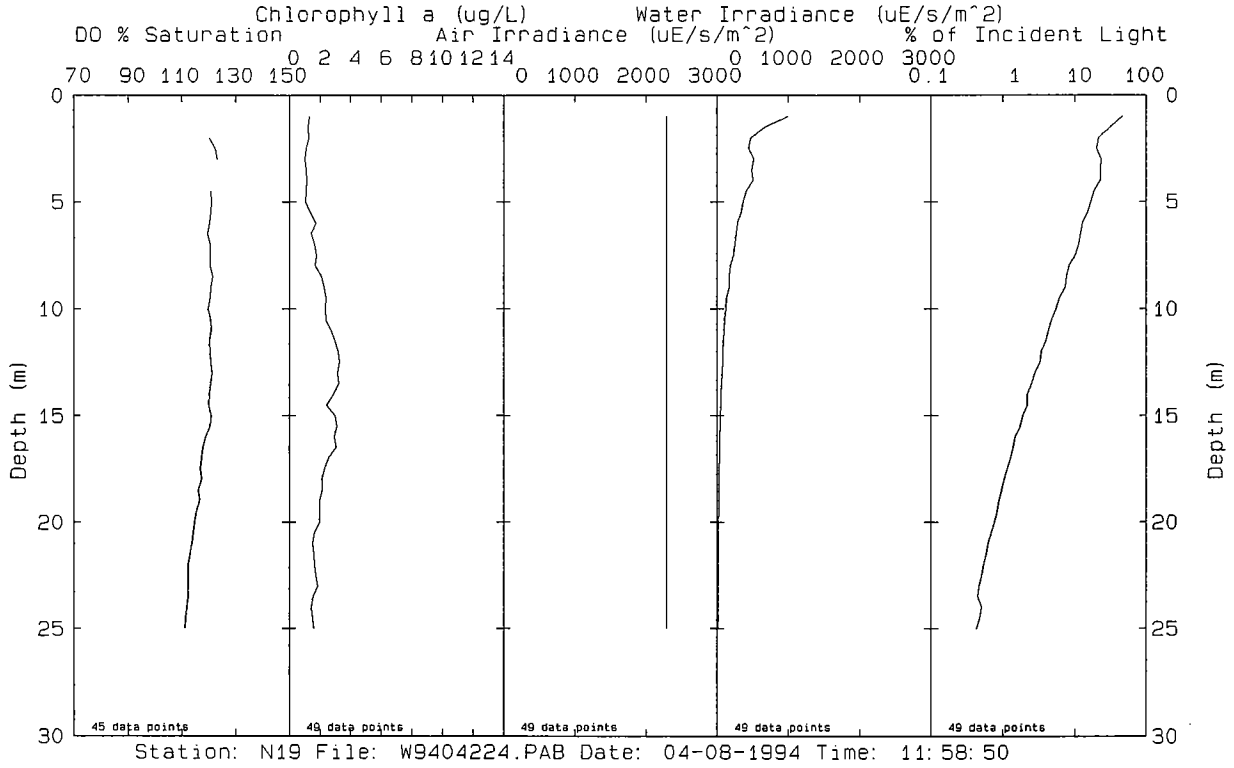
Station: N17 File: W9404243.PAB Date: 04-08-1994 Time: 14:20:30



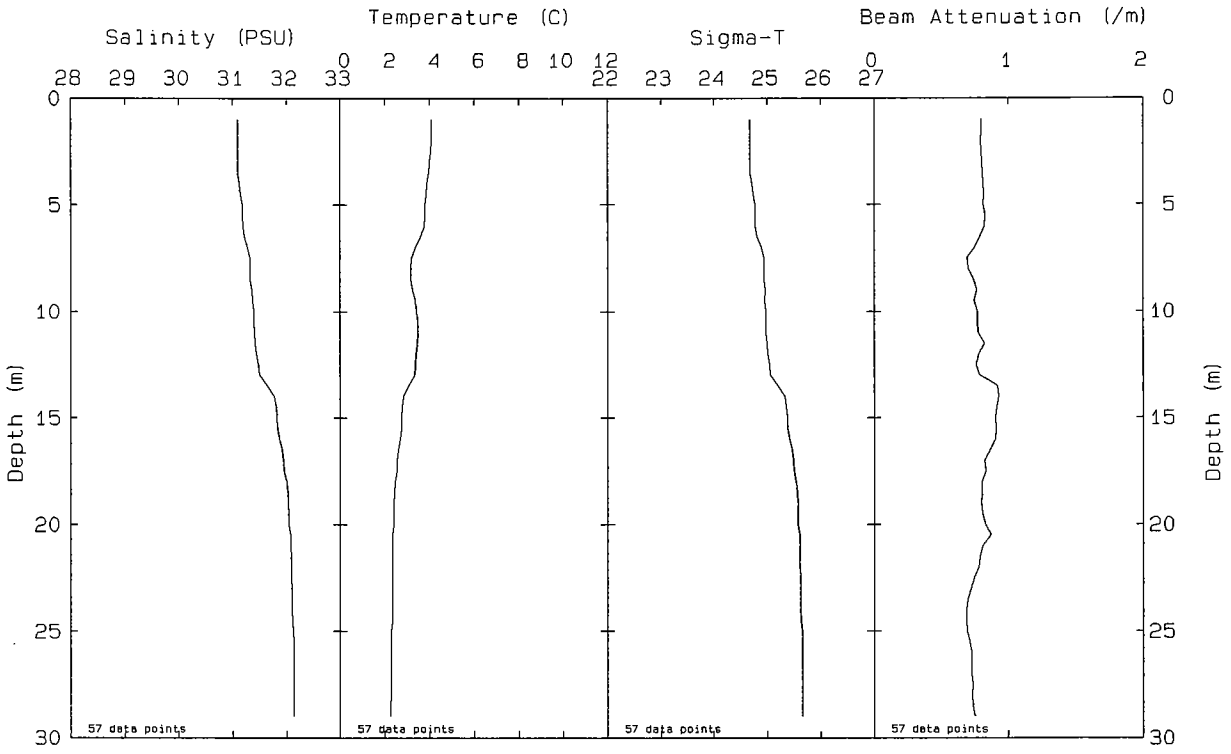


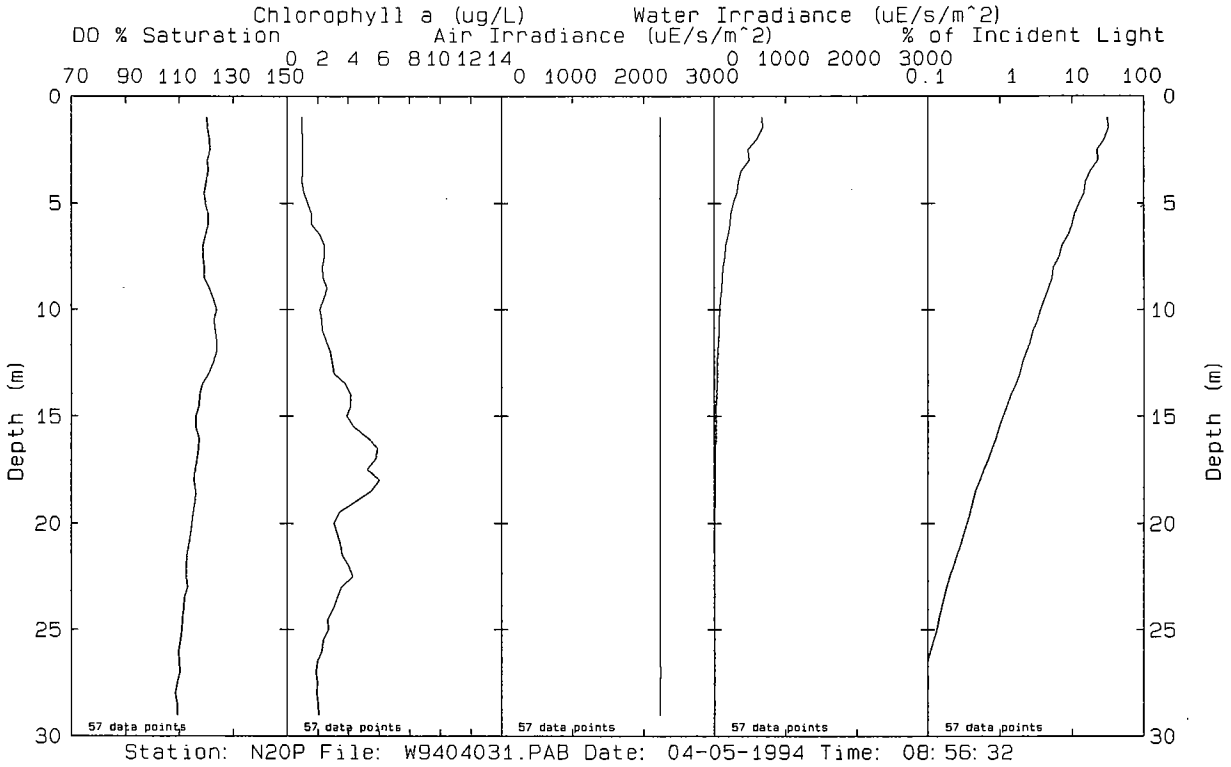
Station: N18 File: W9404247.PAB Date: 04-08-1994 Time: 14:41:23



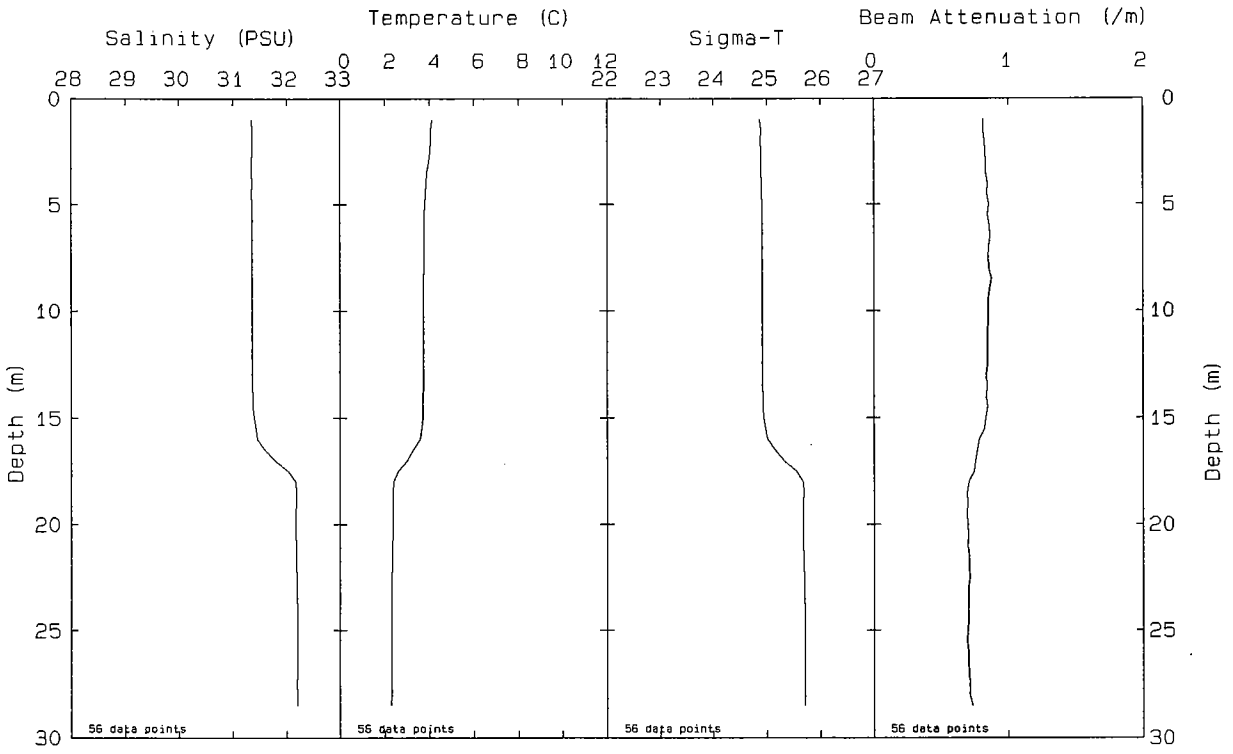


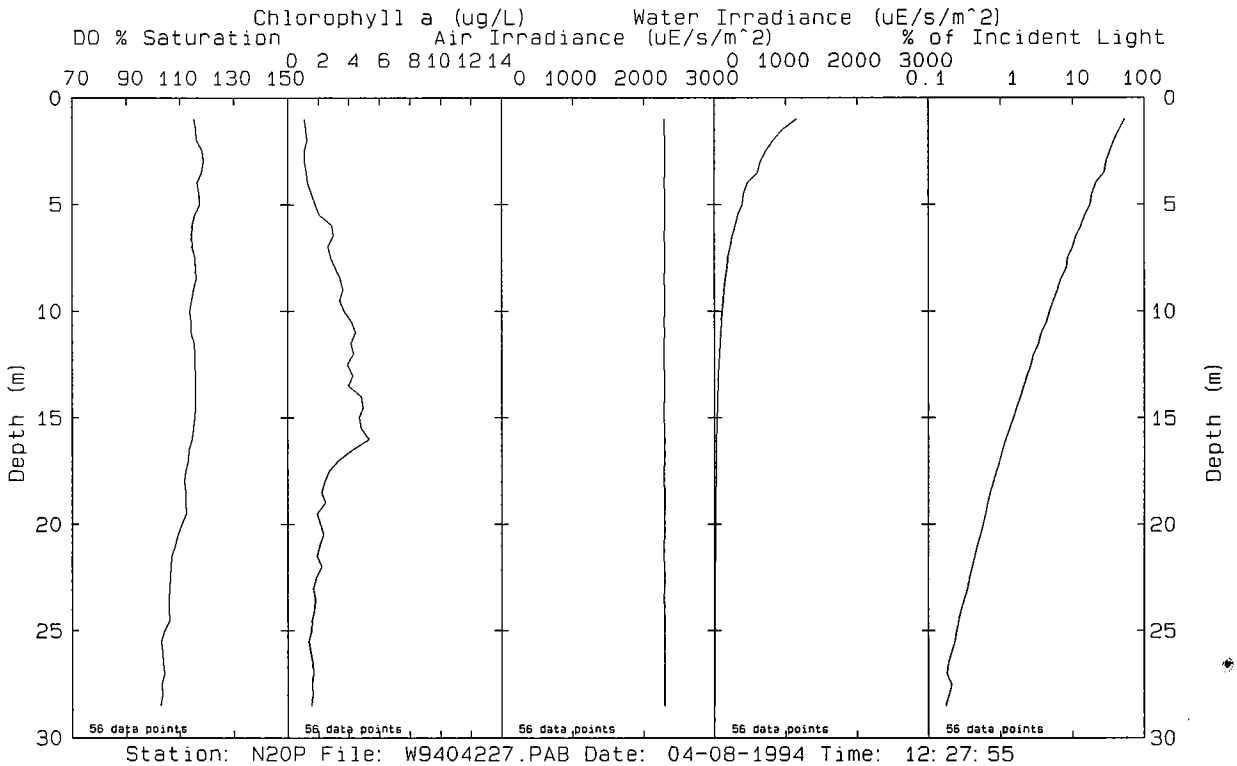
Station: N19 File: W9404224.PAB Date: 04-08-1994 Time: 11:58:50



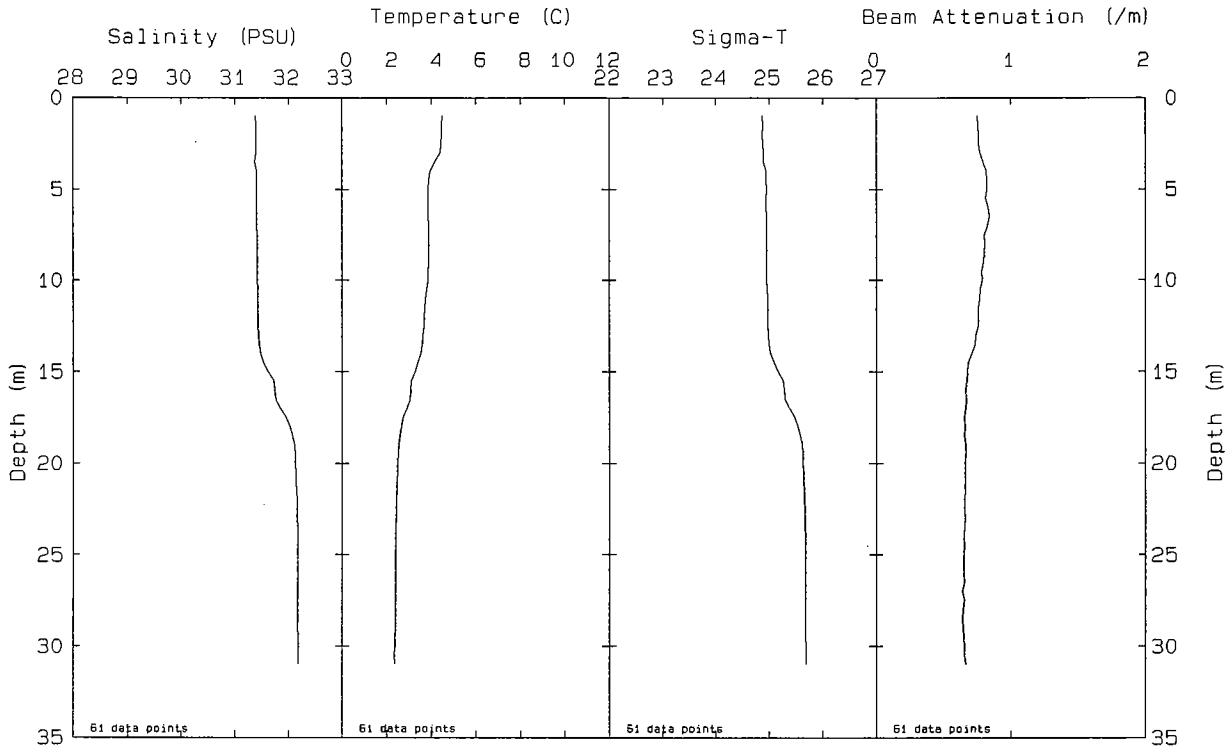


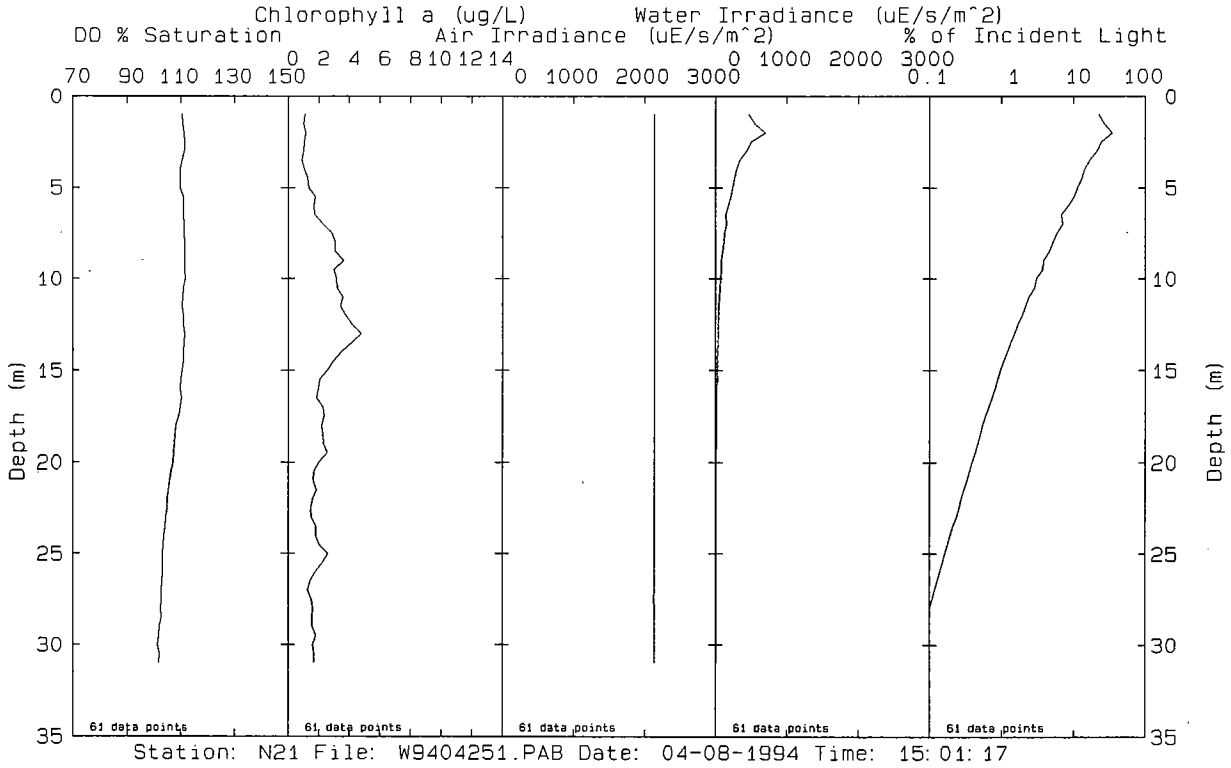
Station: N20P File: W9404031.PAB Date: 04-05-1994 Time: 08:56:32



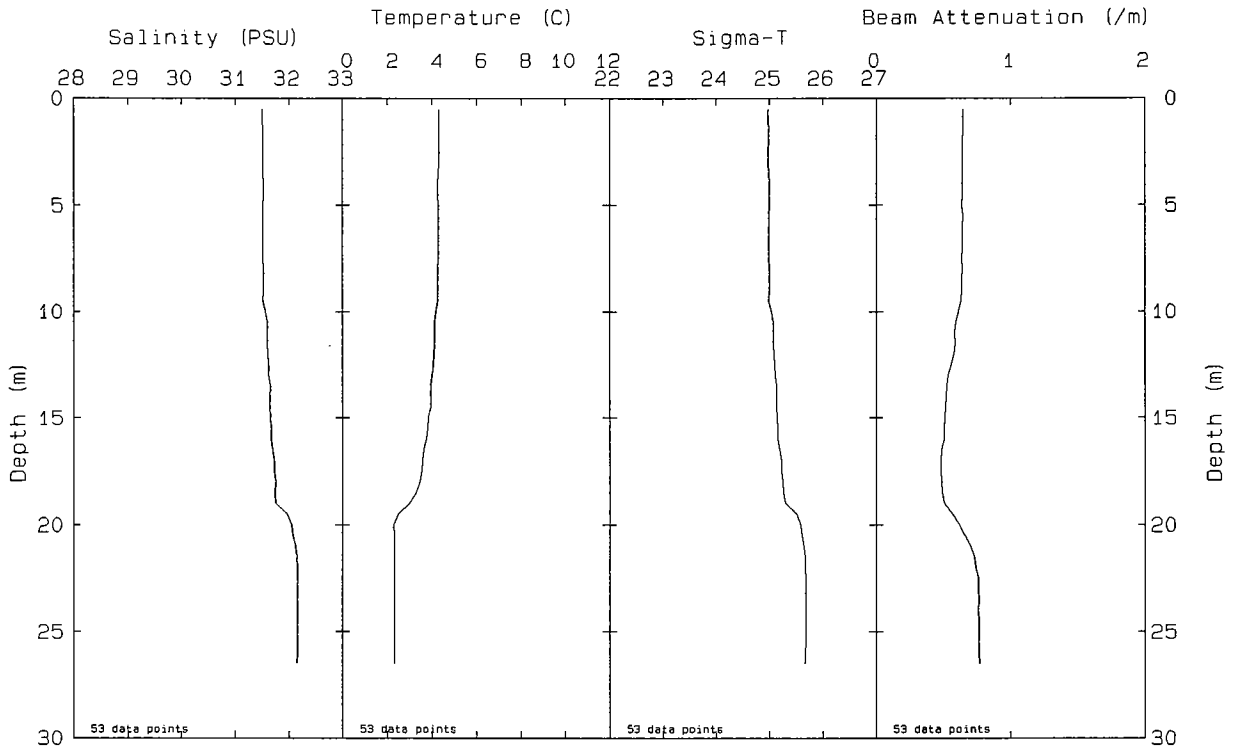


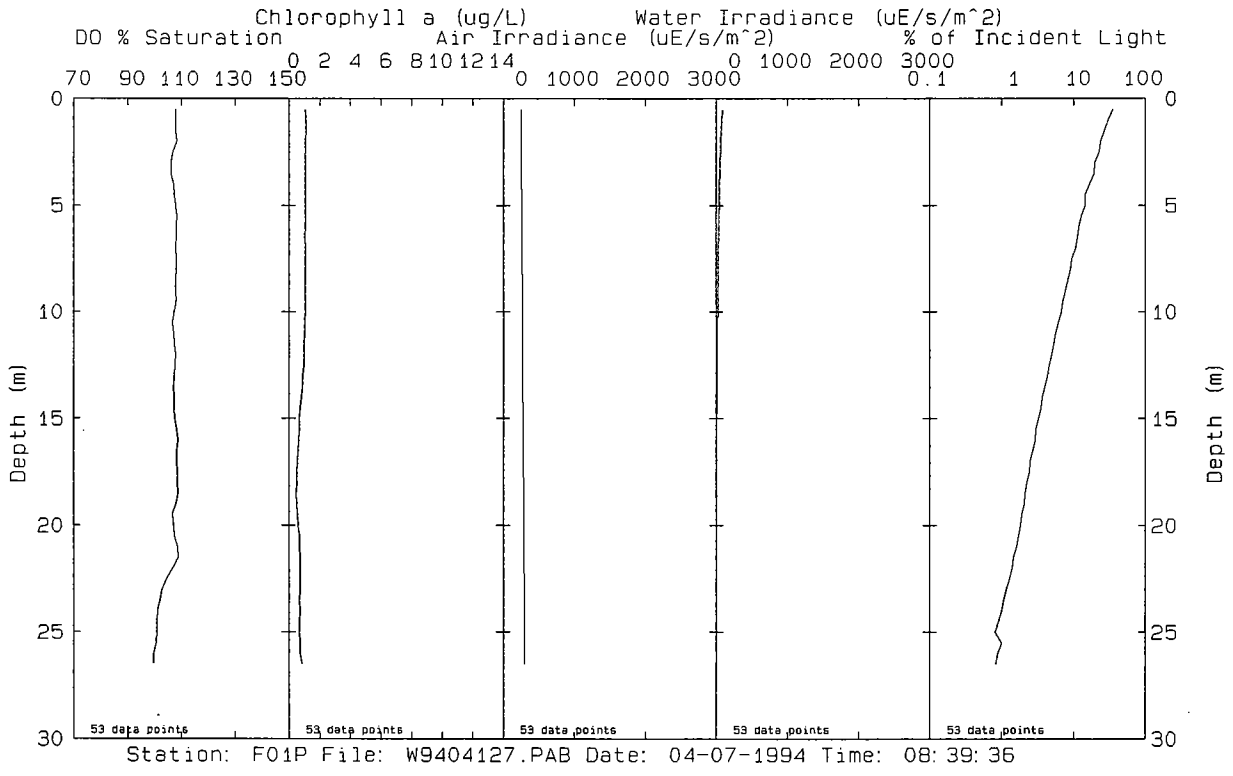
Station: N20P File: W9404227.PAB Date: 04-08-1994 Time: 12:27:55



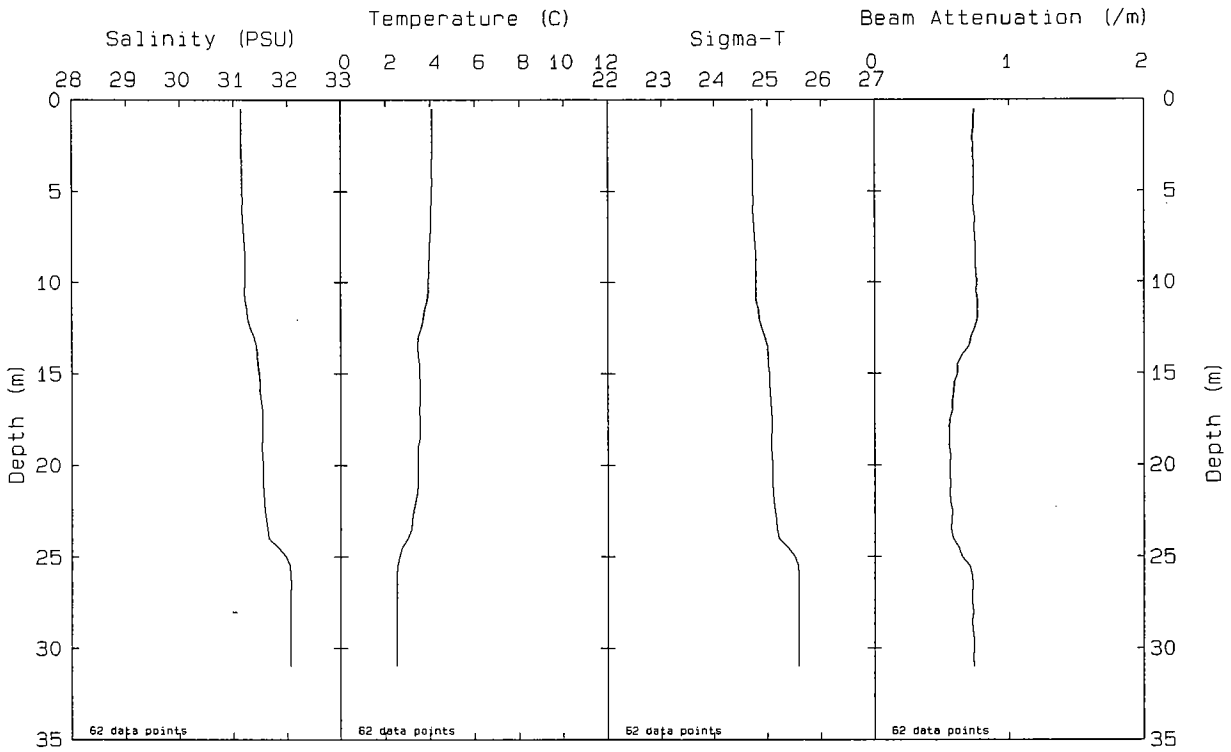


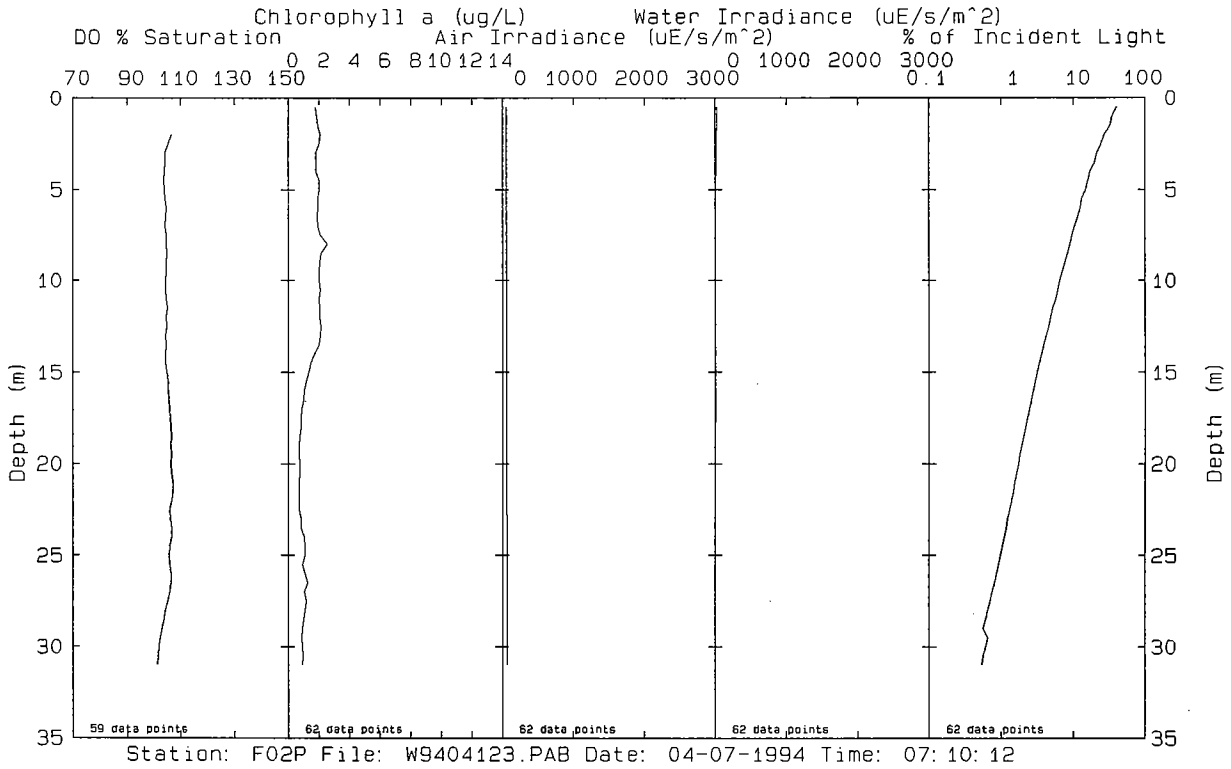
Station: N21 File: W9404251.PAB Date: 04-08-1994 Time: 15:01:17





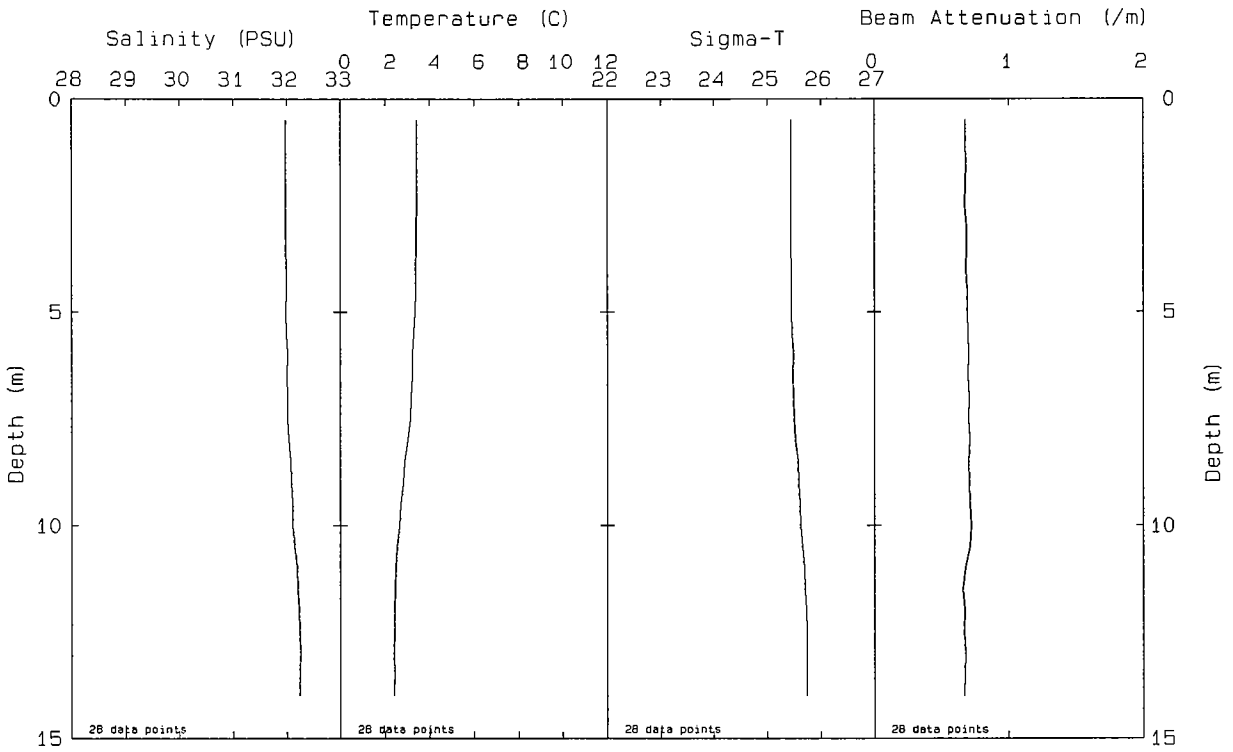
Station: F01P File: W9404127.PAB Date: 04-07-1994 Time: 08:39:36

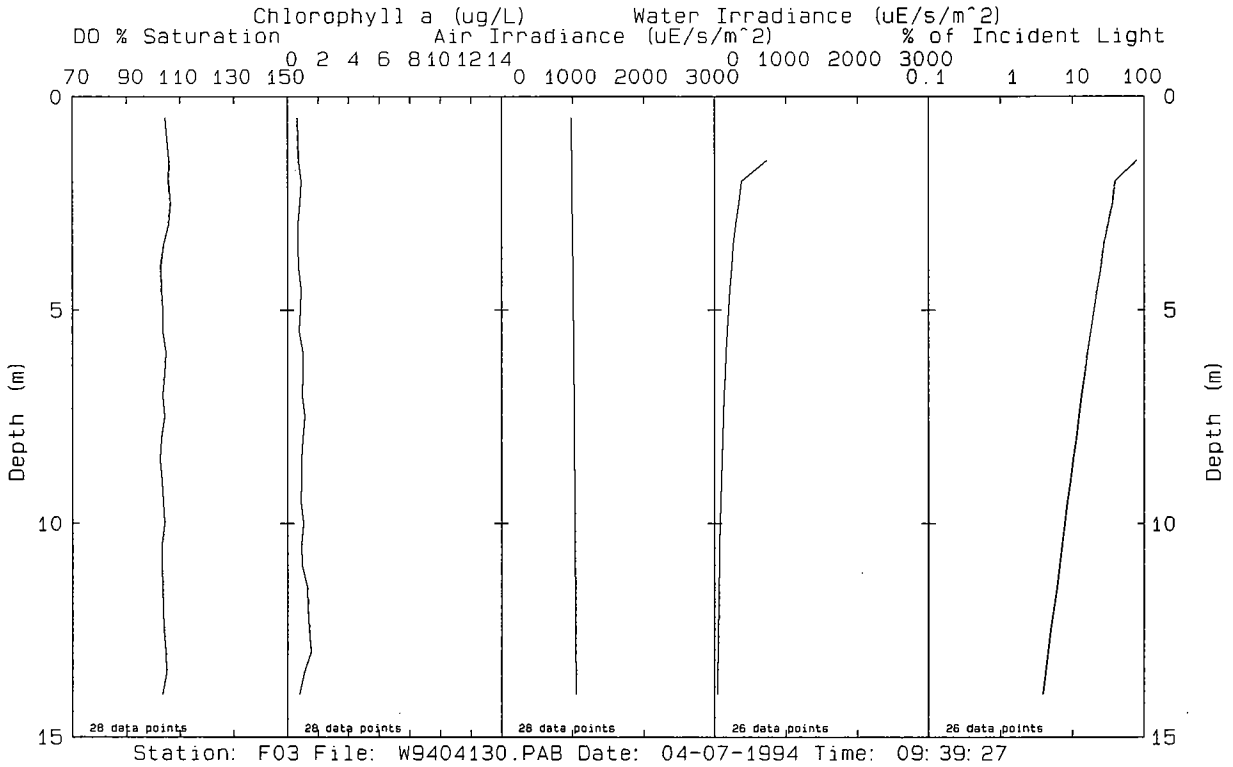




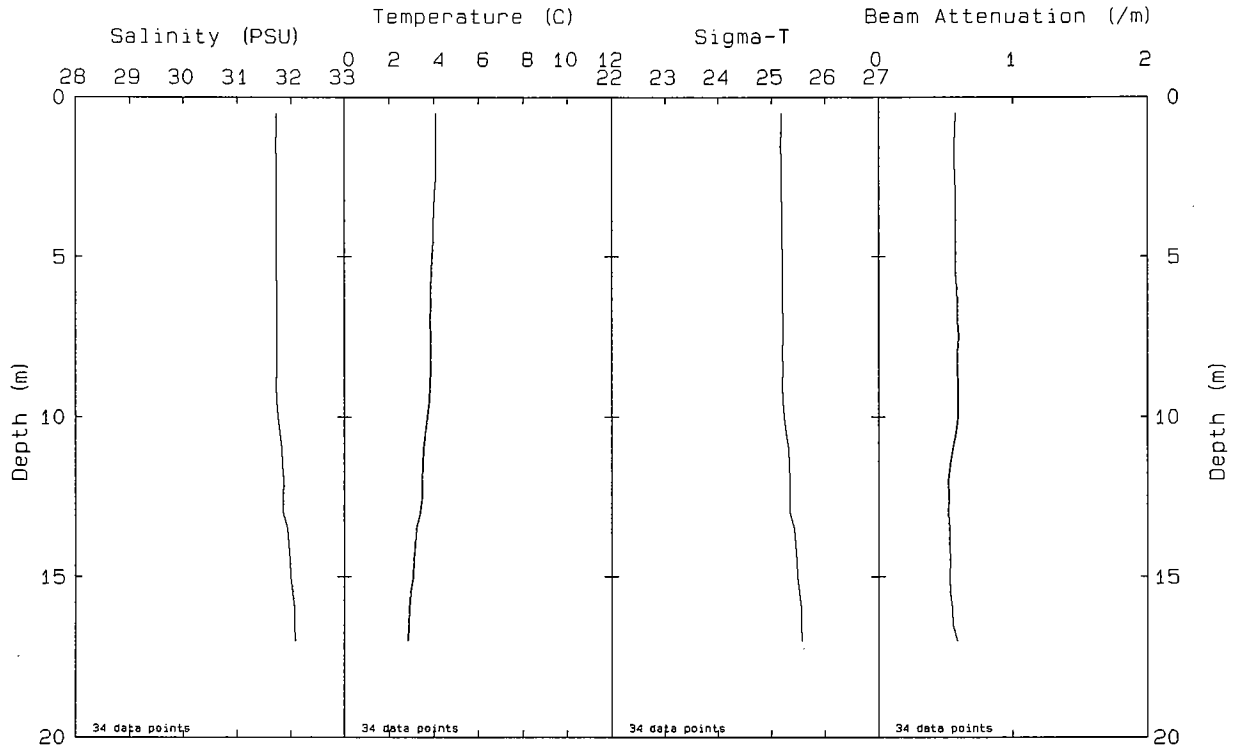
Station: F02P File: W9404123.PAB Date: 04-07-1994 Time: 07:10:12

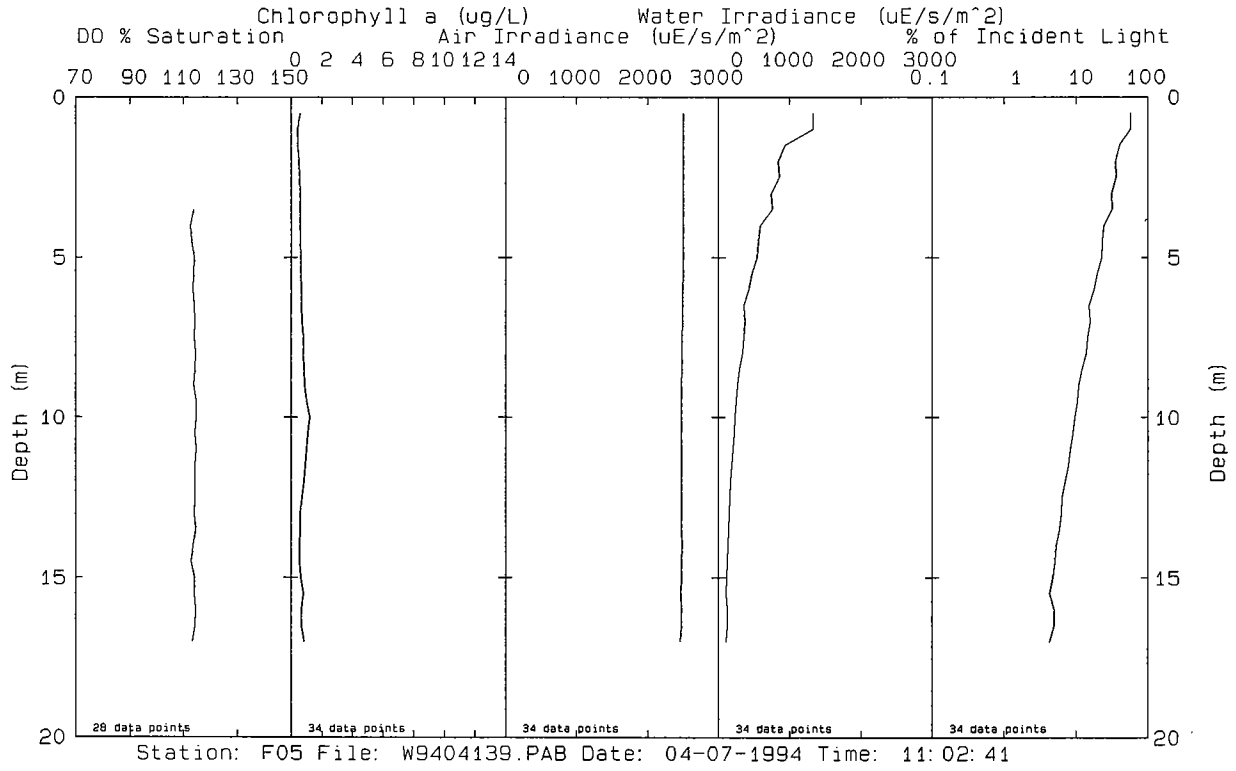
10-06-1994 12:47:33 Battelle



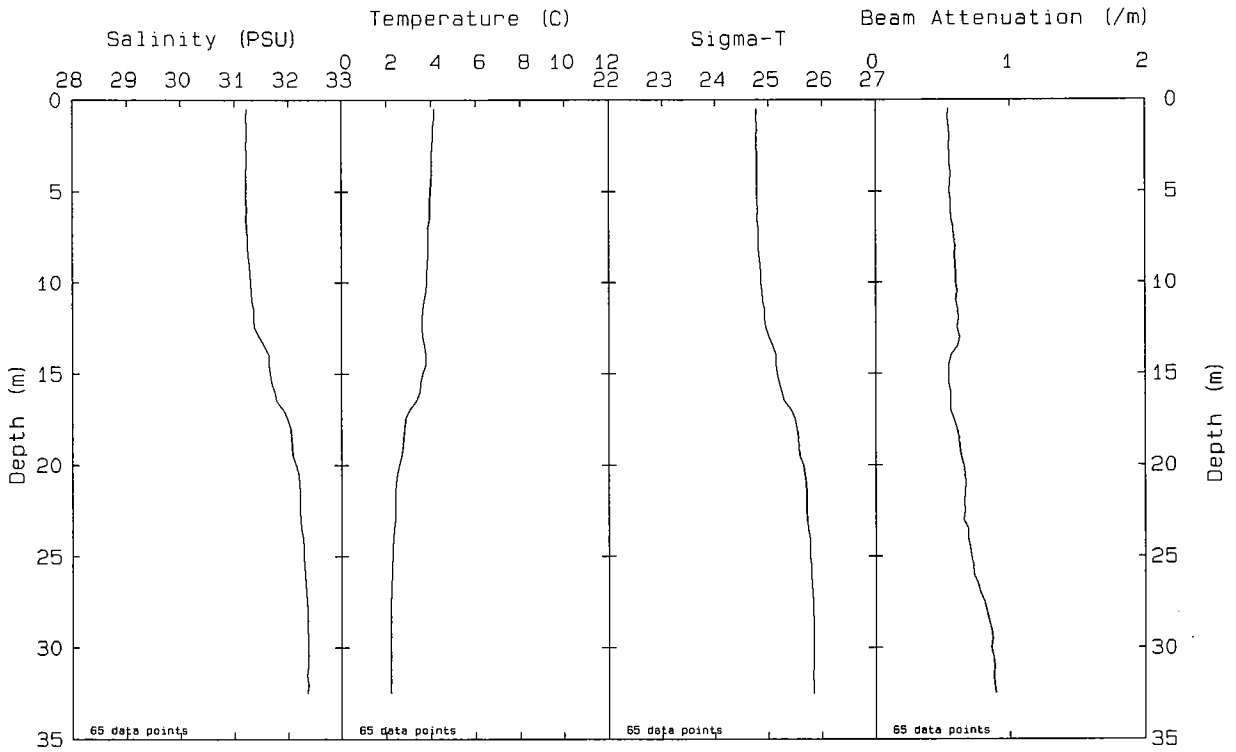


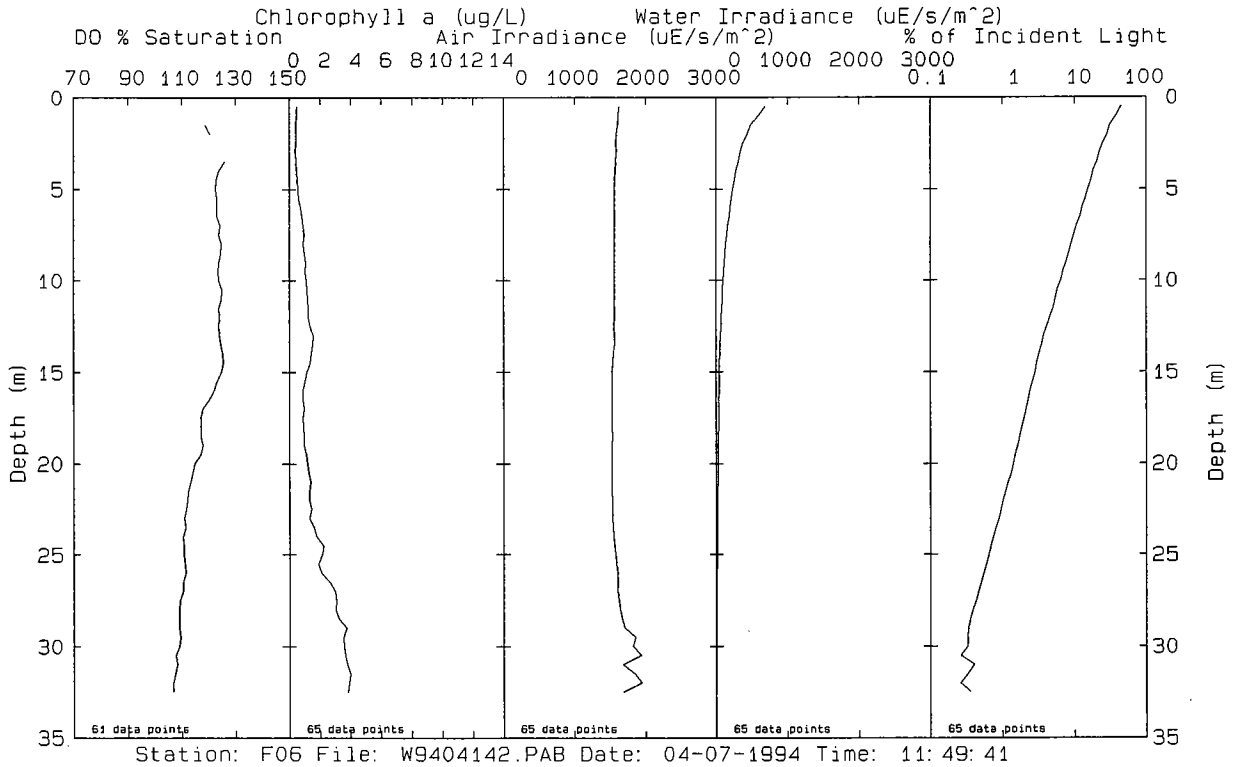
Station: F03 File: W9404130.PAB Date: 04-07-1994 Time: 09:39:27

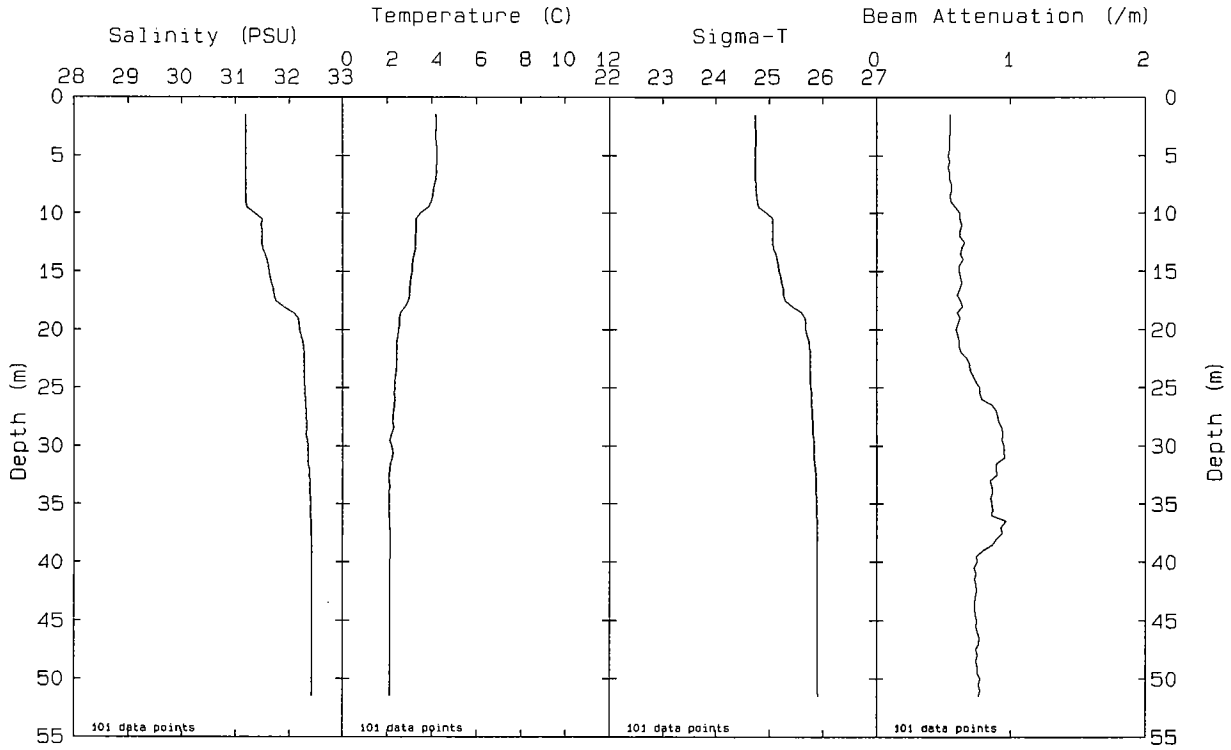


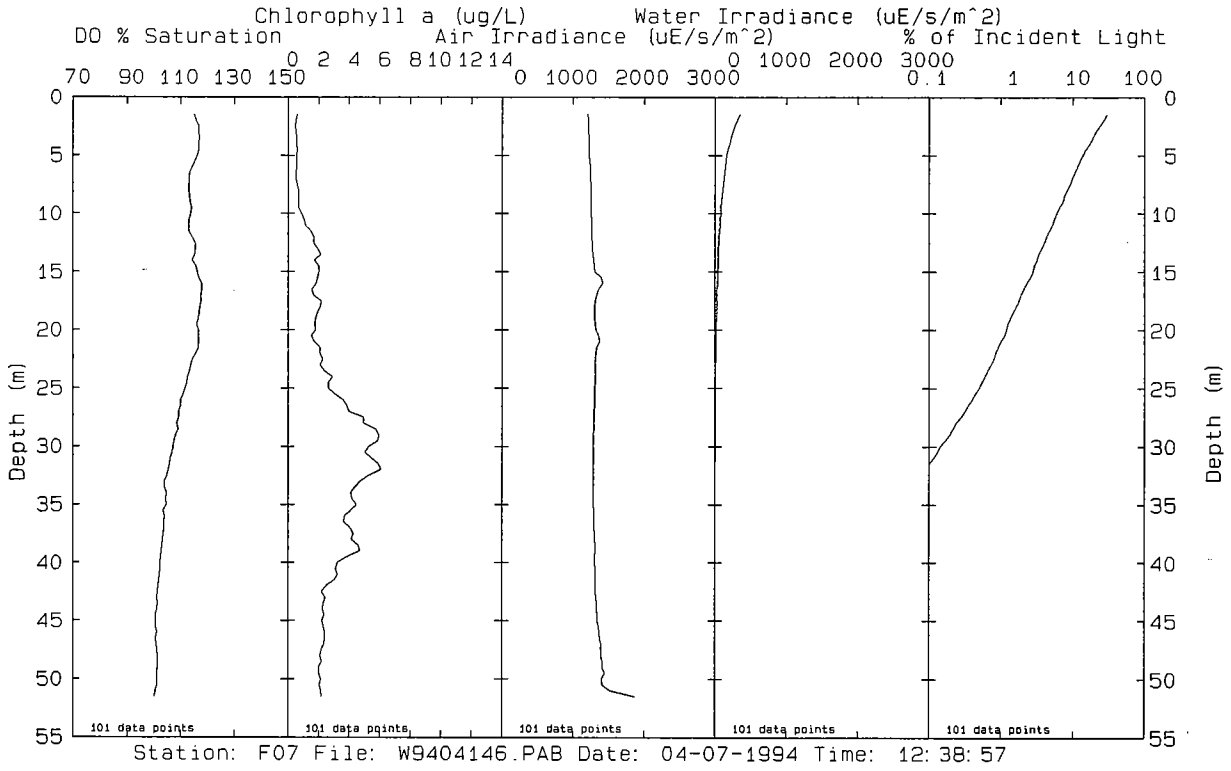


Station: F05 File: W9404139.PAB Date: 04-07-1994 Time: 11:02:41

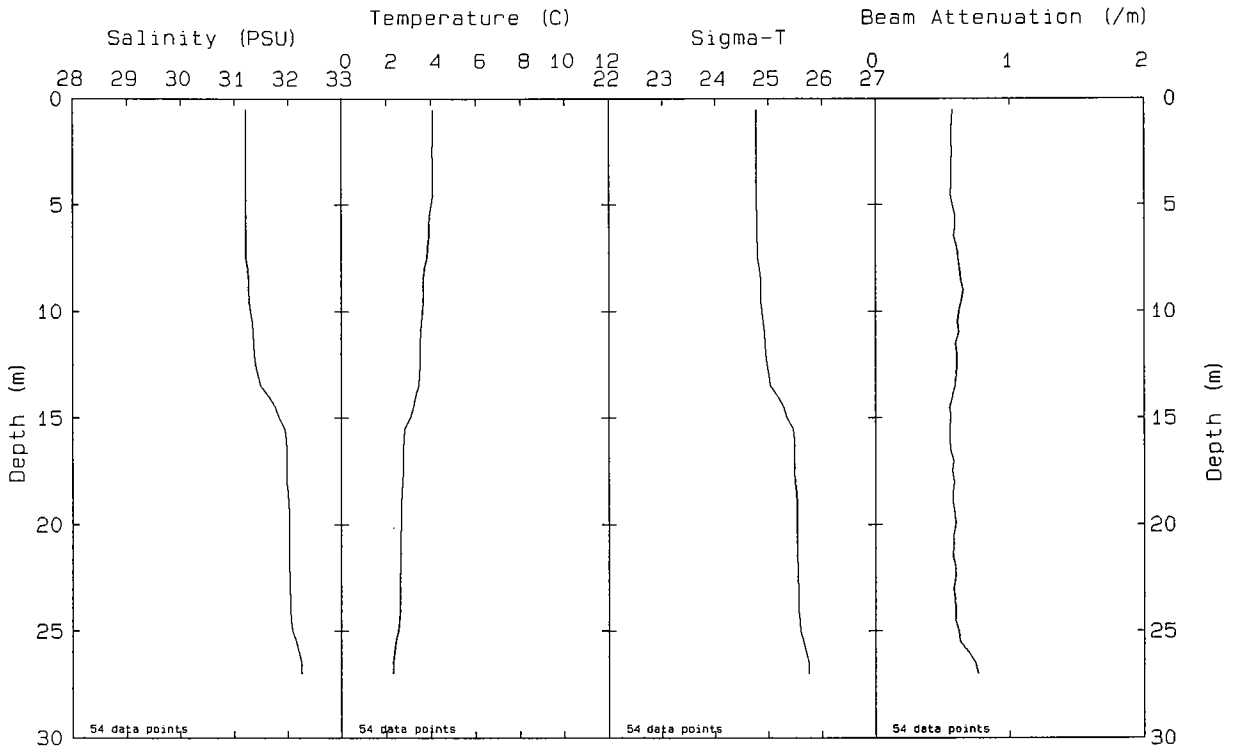

Salinity (PSU)
28 29 30 31 32 33
Temperature (C)
0 2 4 6 8 10 12
Sigma-T
22 23 24 25 26 27
Beam Attenuation (/m)
0 1 2
Depth (m)
0 5 10 15 20 25 30 35
65 data points
65 data points
65 data points
65 data points

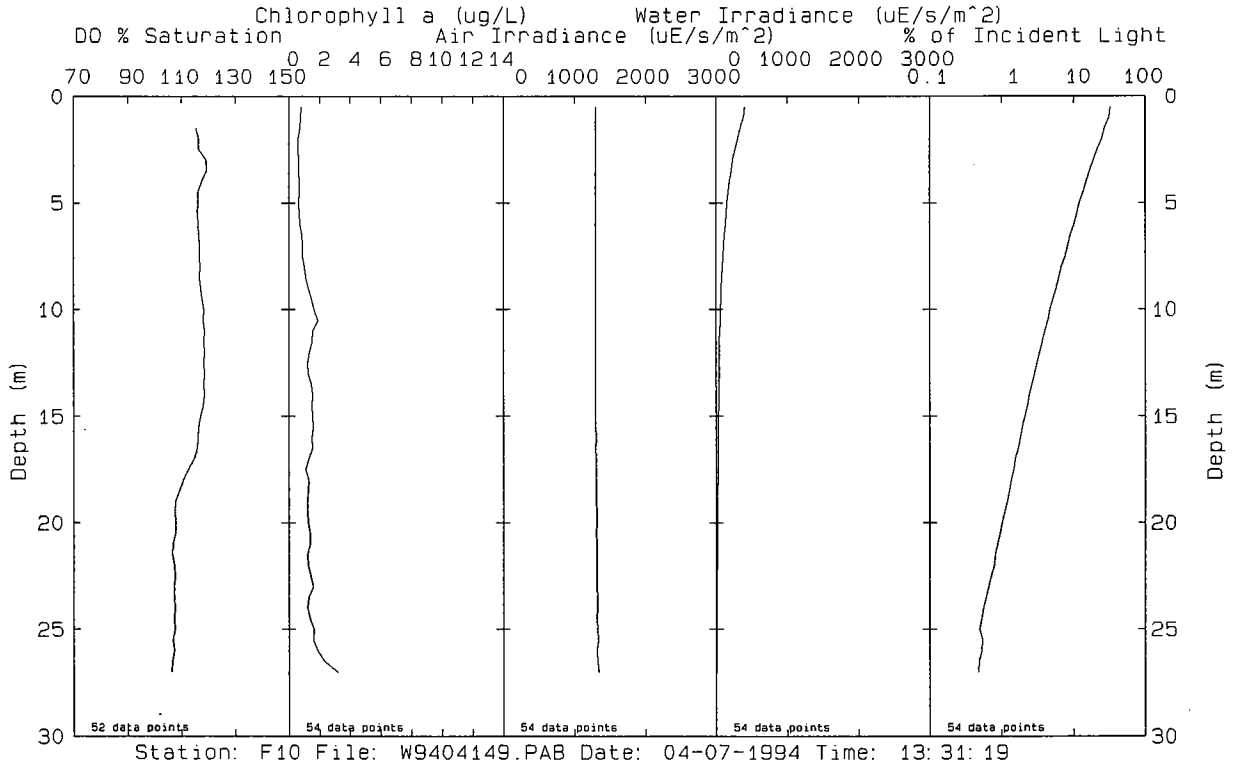

DO % Saturation
70 90 110 130 150
Chlorophyll a (ug/L)
0 2 4 6 8 10 12 14
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35
61 data points
65 data points
65 data points
65 data points
65 data points
Station: F06 File: W9404142.PAB Date: 04-07-1994 Time: 11:49:41



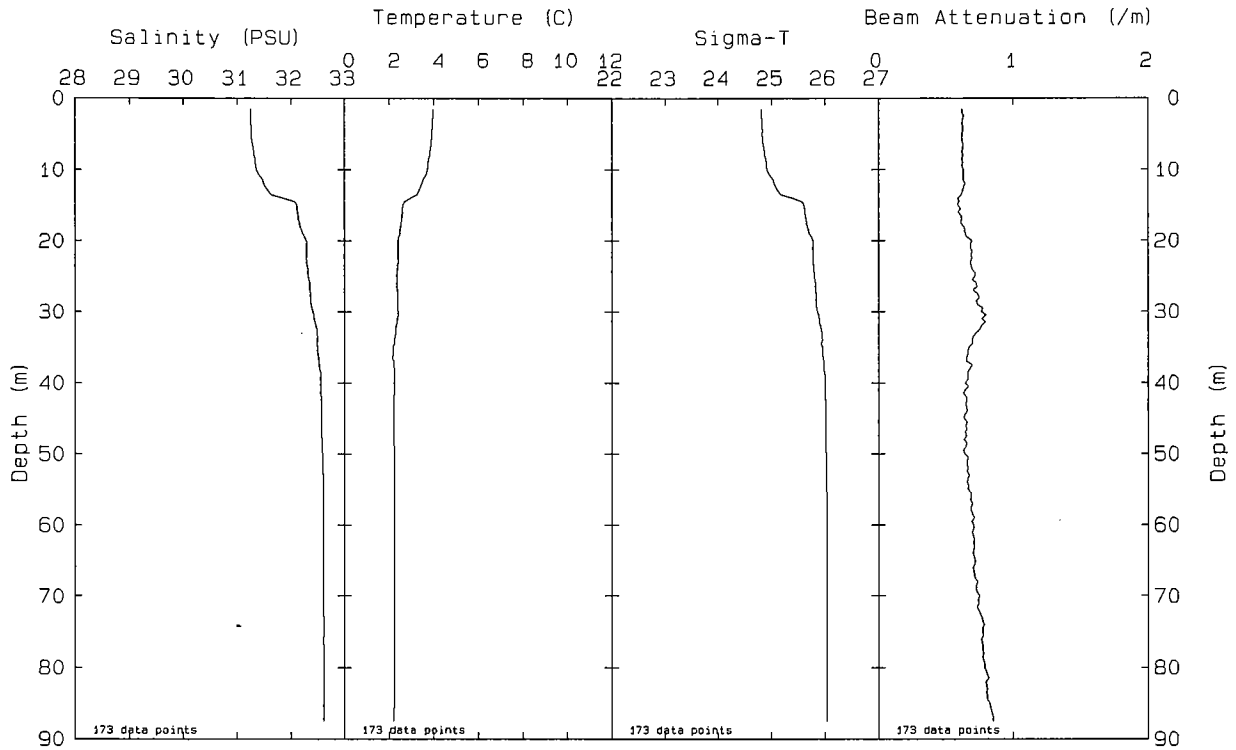


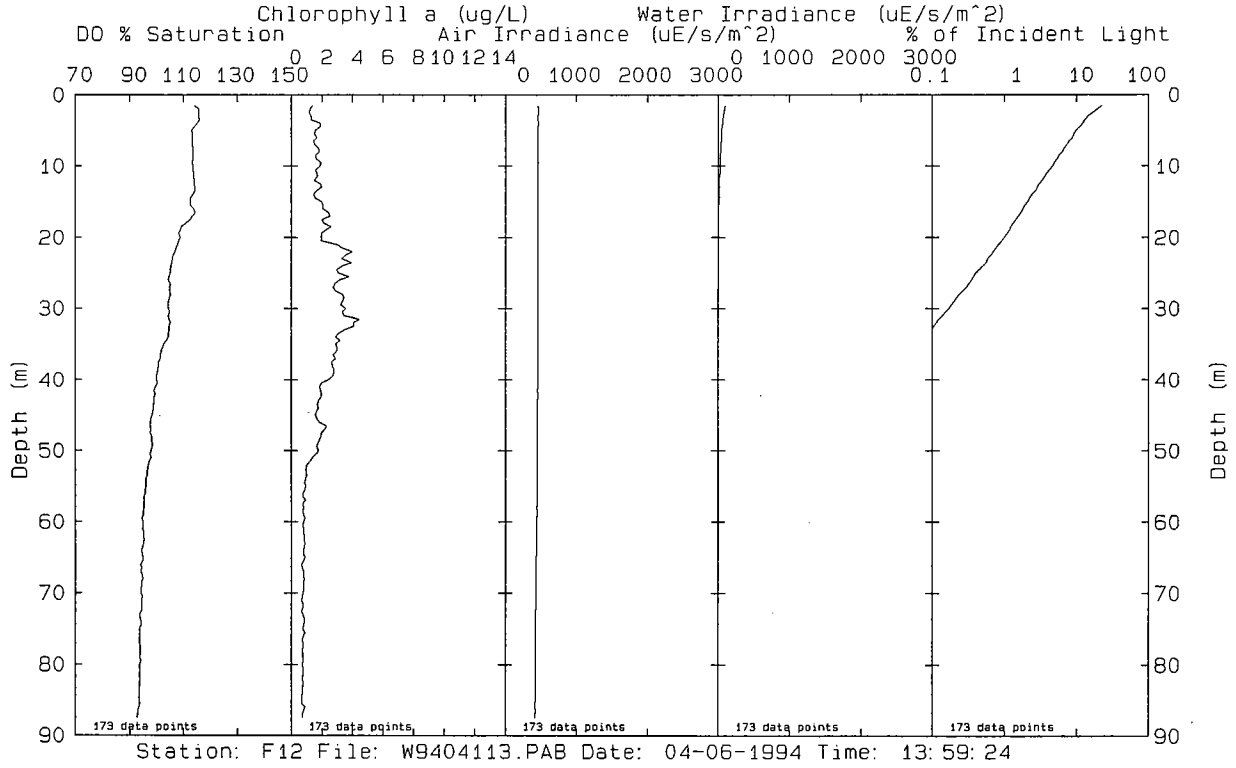
Station: F07 File: W9404146.PAB Date: 04-07-1994 Time: 12:38:57



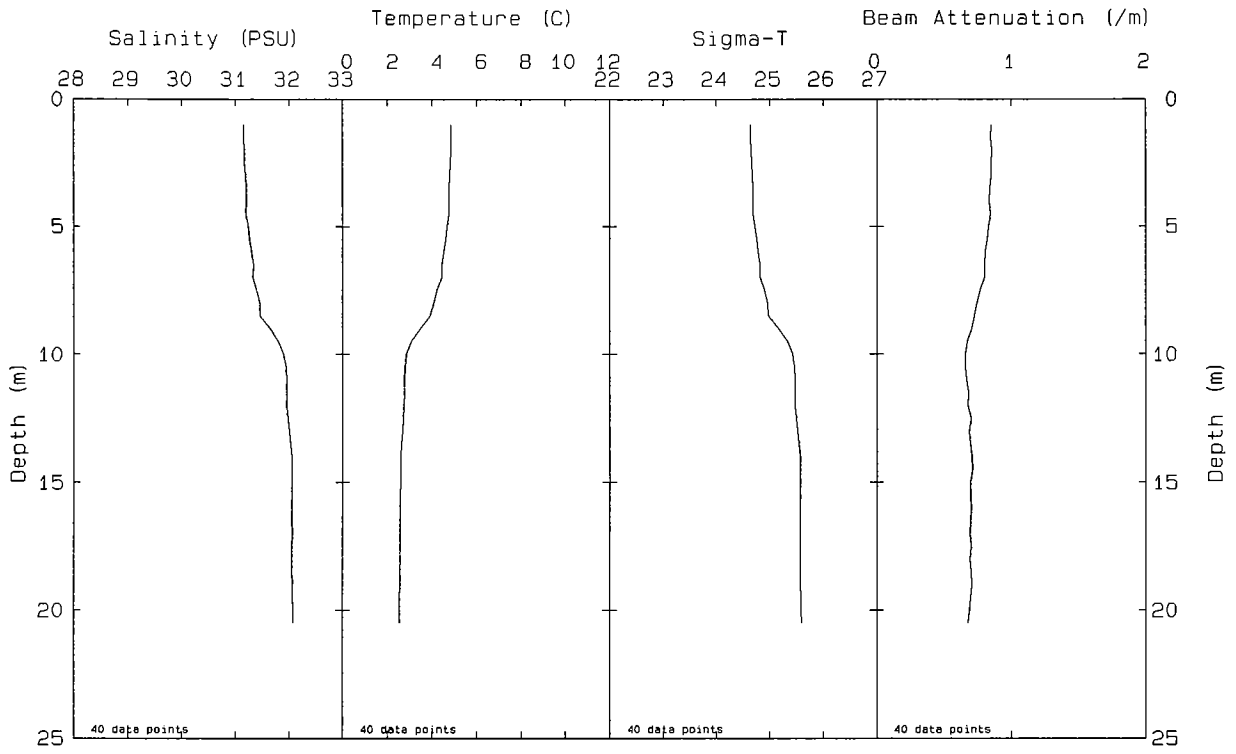


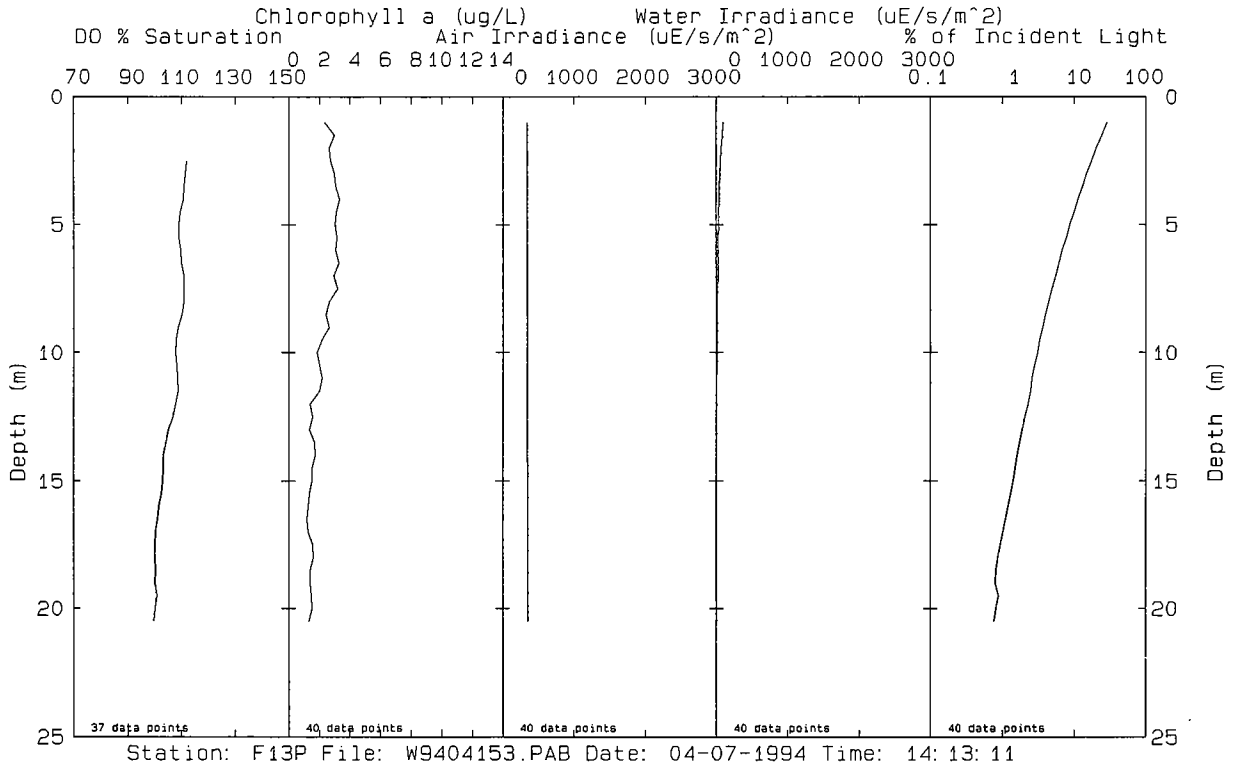
Station: F10 File: W9404149.PAB Date: 04-07-1994 Time: 13:31:19



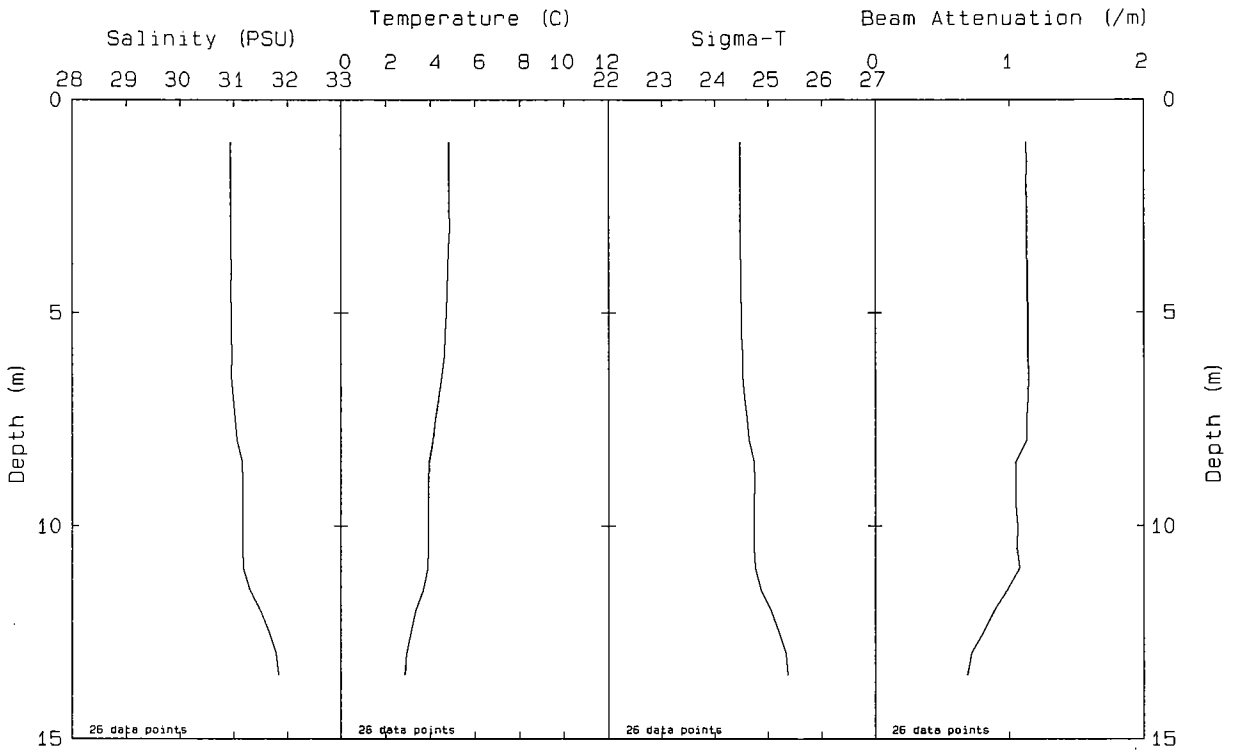


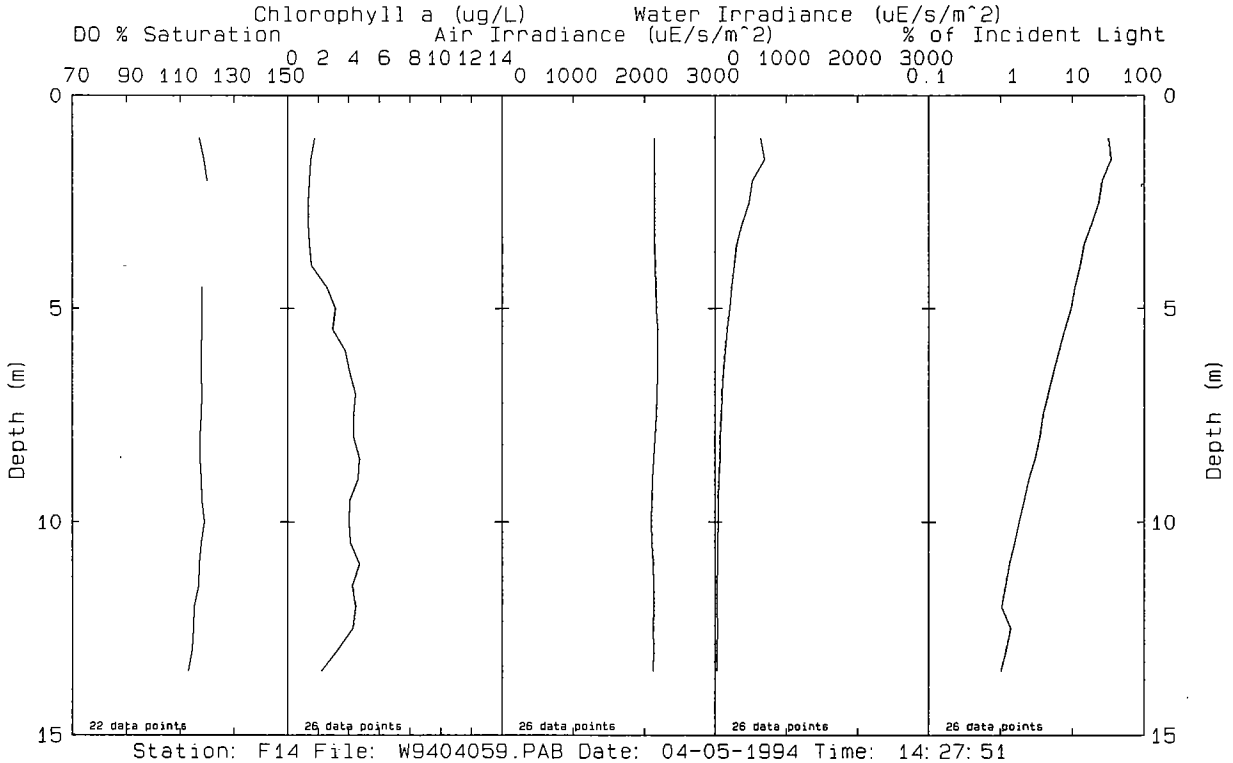
Station: F12 File: W9404113.PAB Date: 04-06-1994 Time: 13:59:24



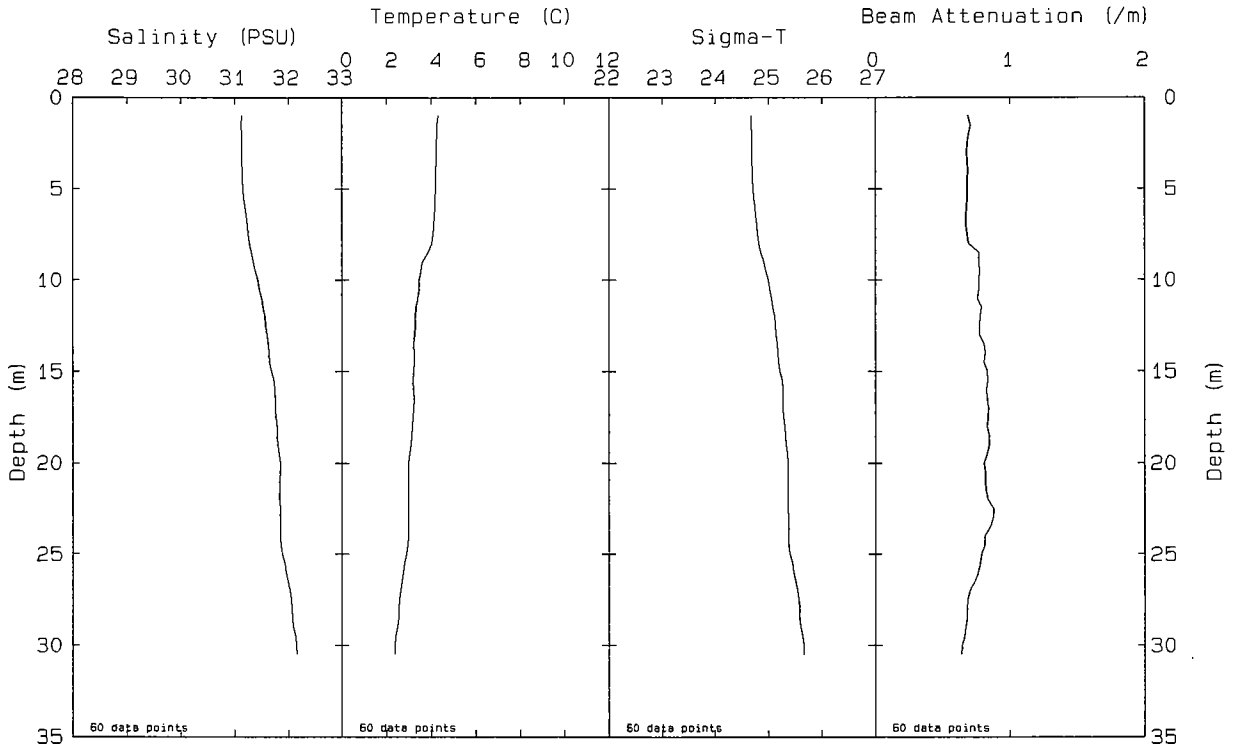


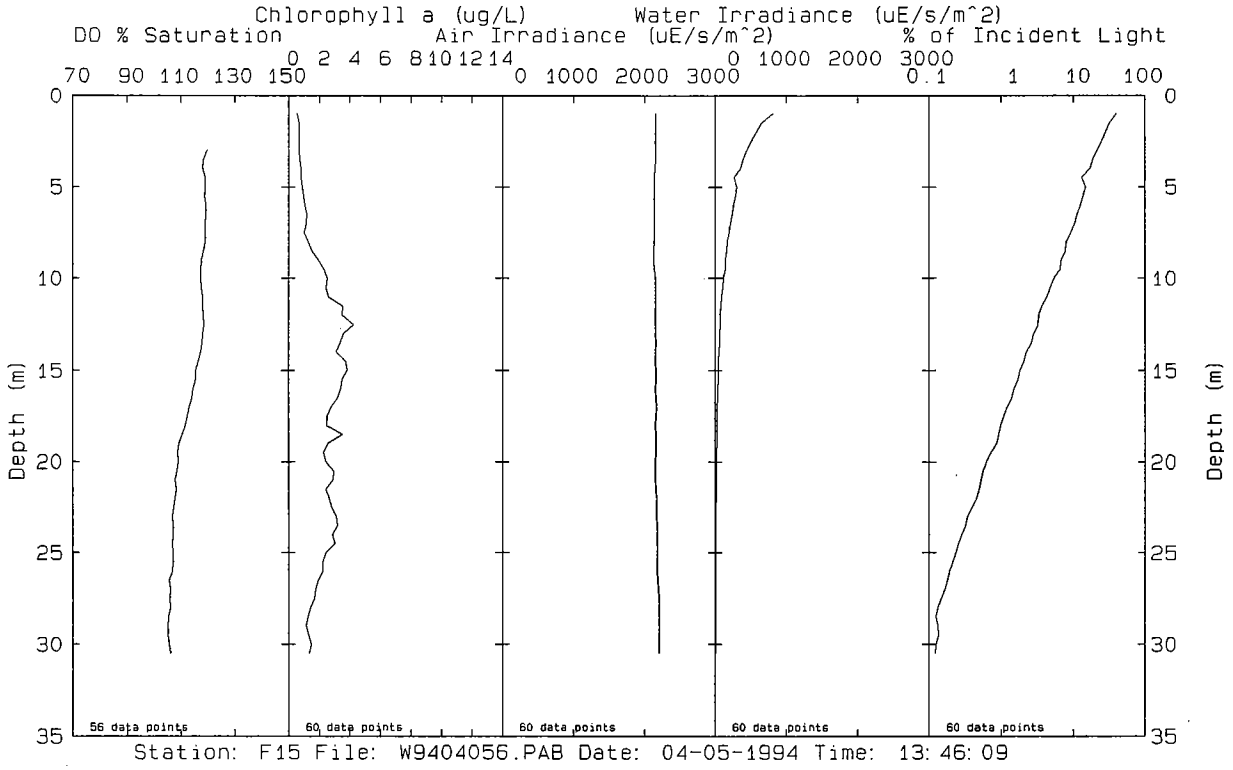
Station: F13P File: W9404153.PAB Date: 04-07-1994 Time: 14:13:11



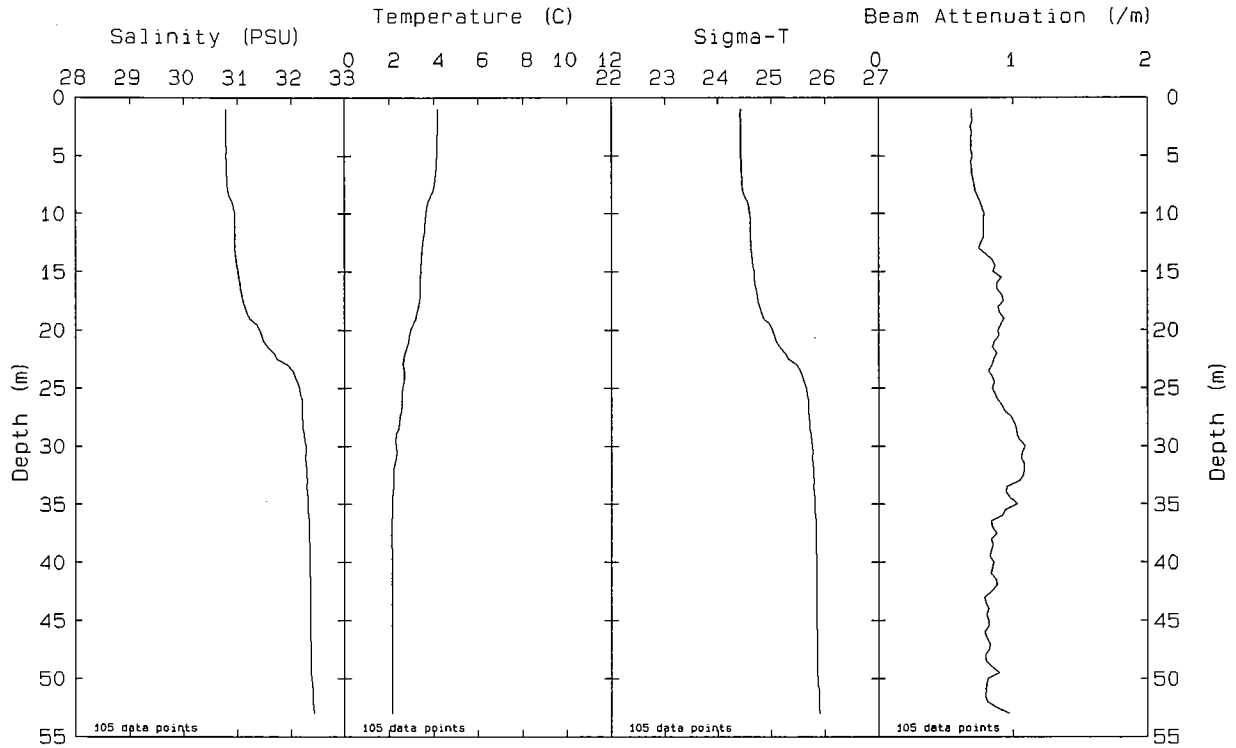


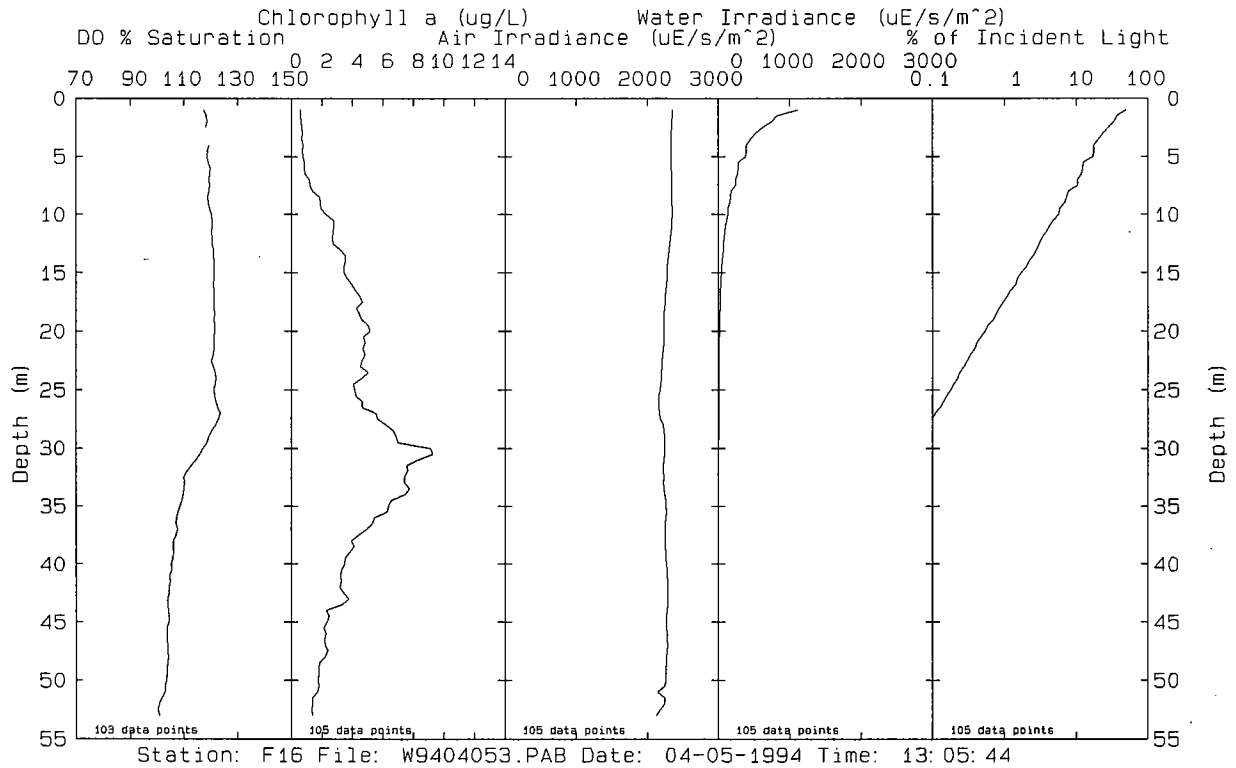
Station: F14 File: W9404059.PAB Date: 04-05-1994 Time: 14:27:51



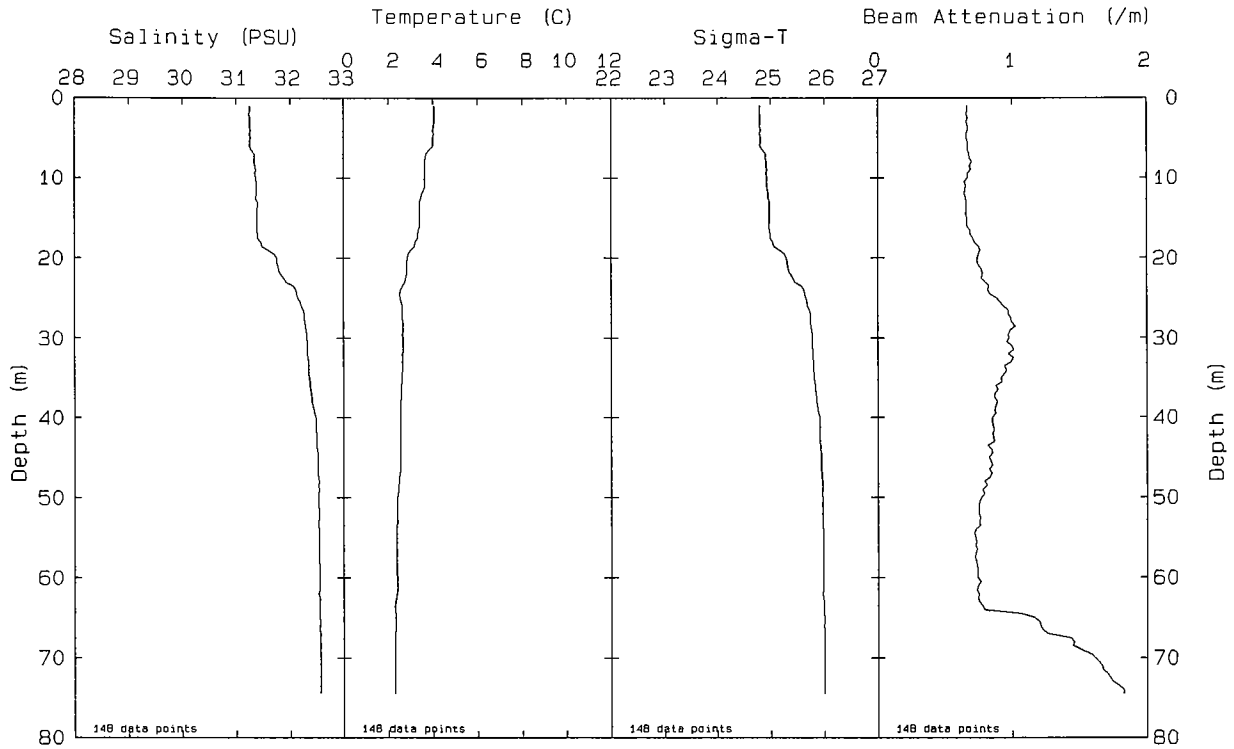


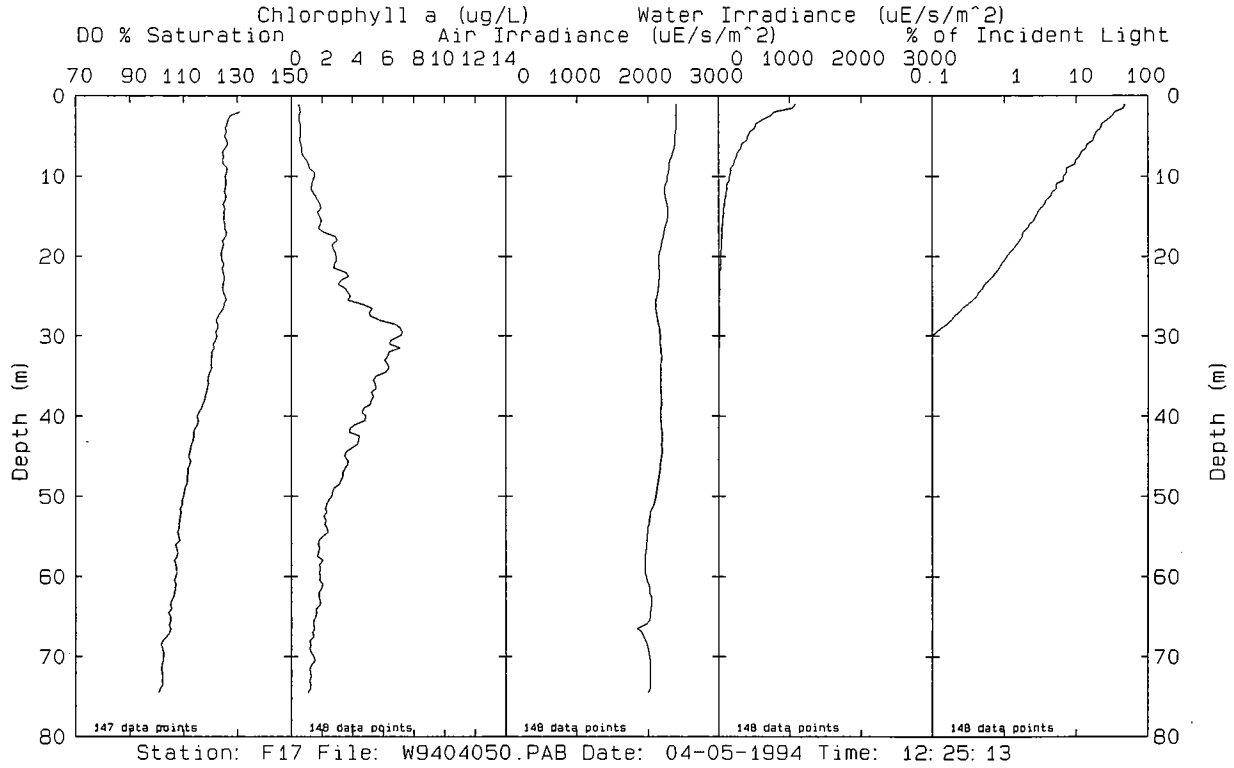
Station: F15 File: W9404056.PAB Date: 04-05-1994 Time: 13:46:09



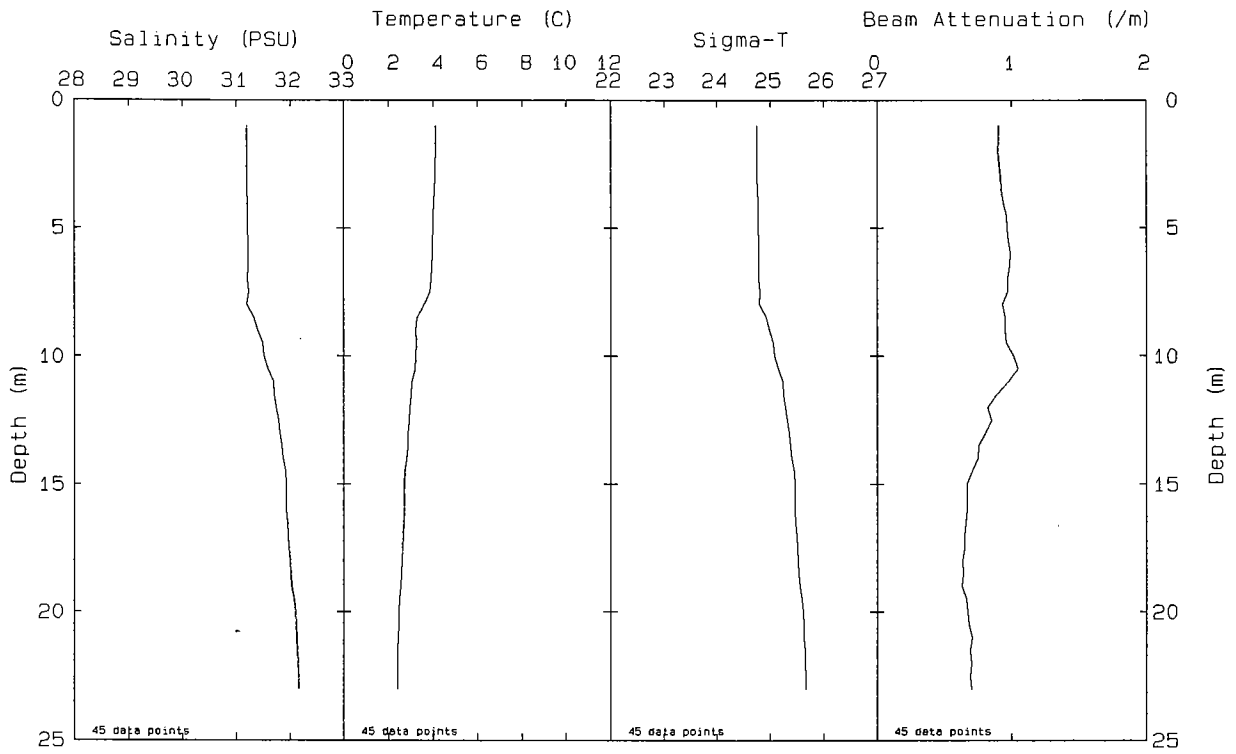


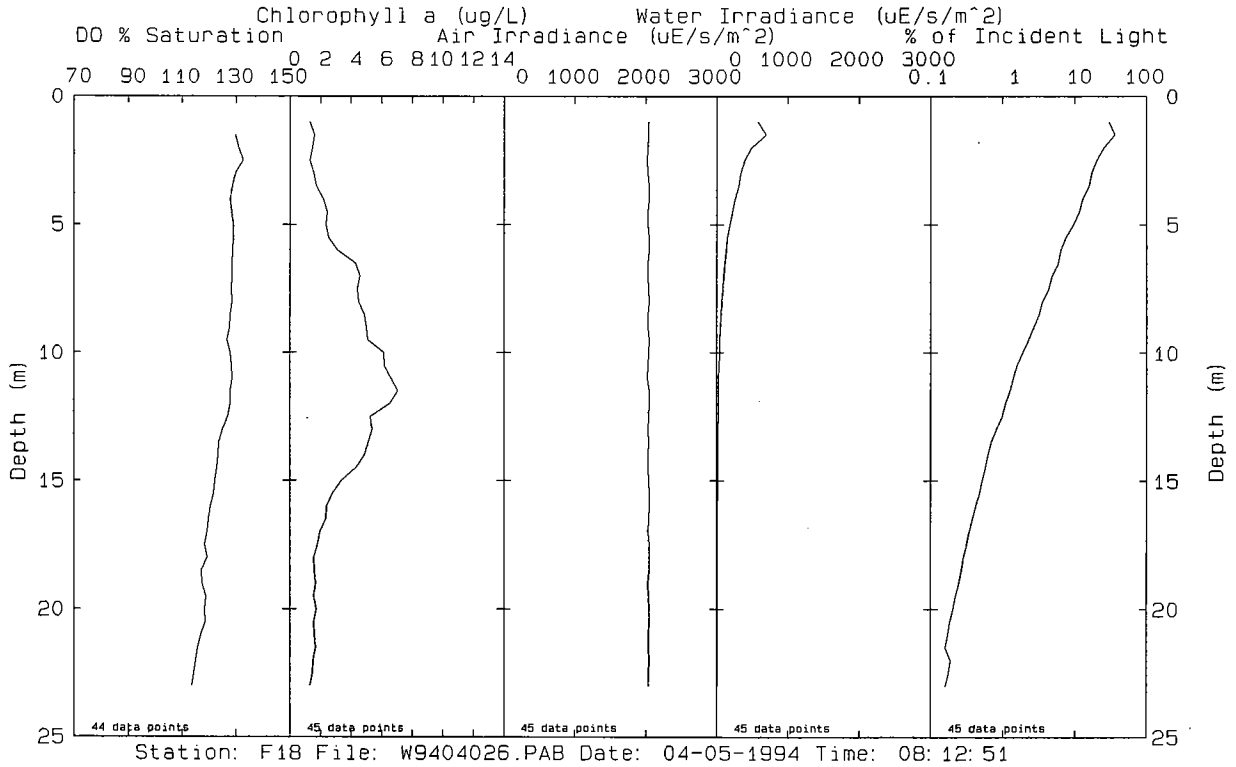
Station: F16 File: W9404053.PAB Date: 04-05-1994 Time: 13:05:44



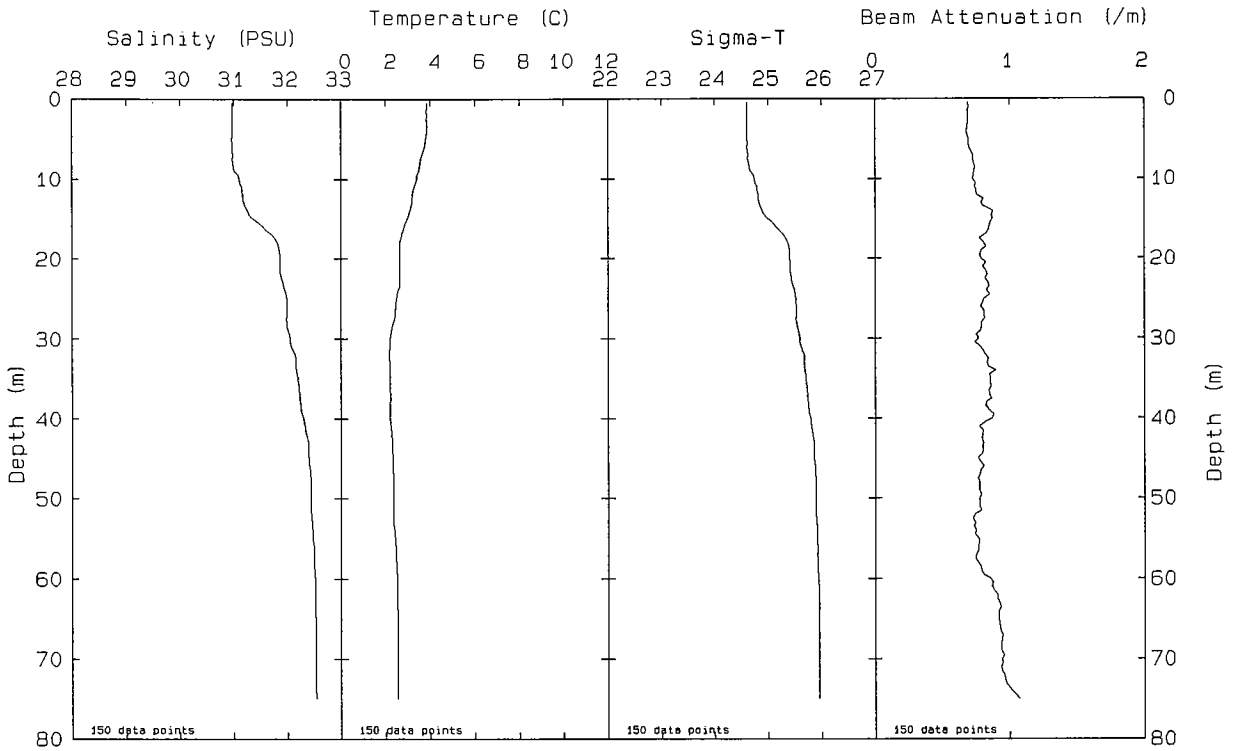


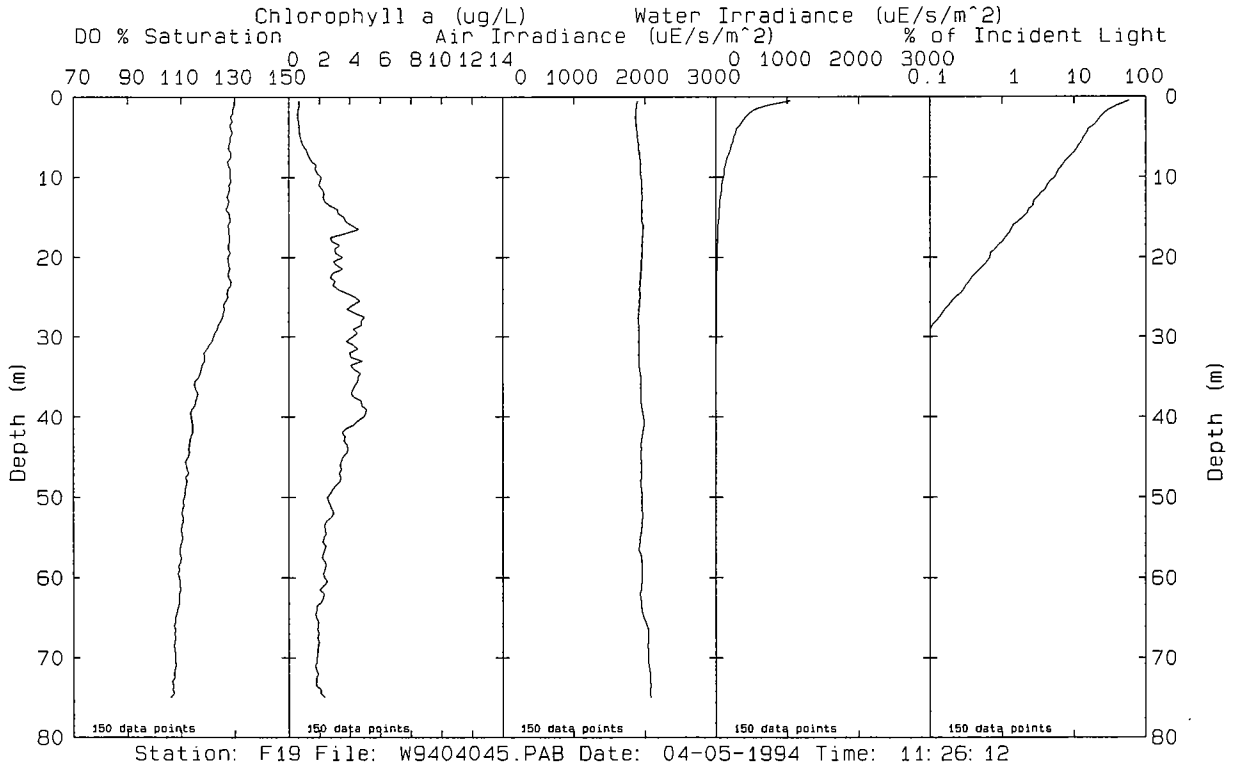
Station: F17 File: W9404050.PAB Date: 04-05-1994 Time: 12:25:13



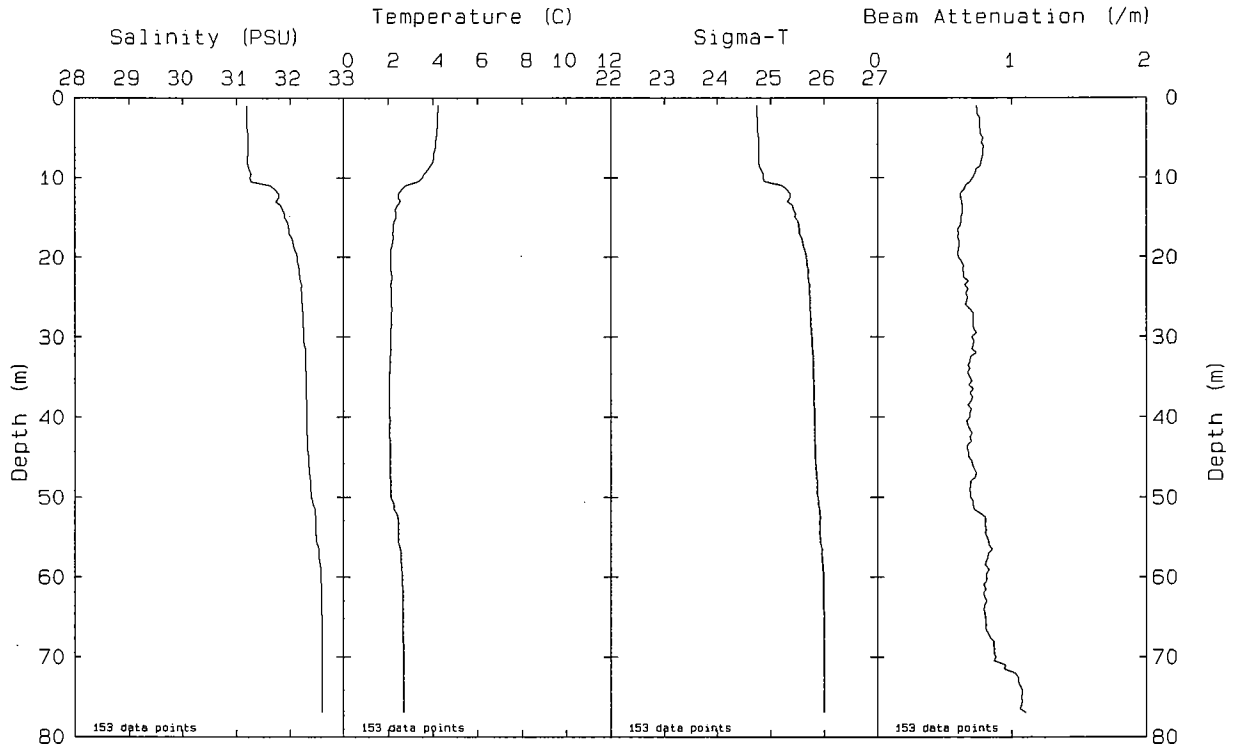


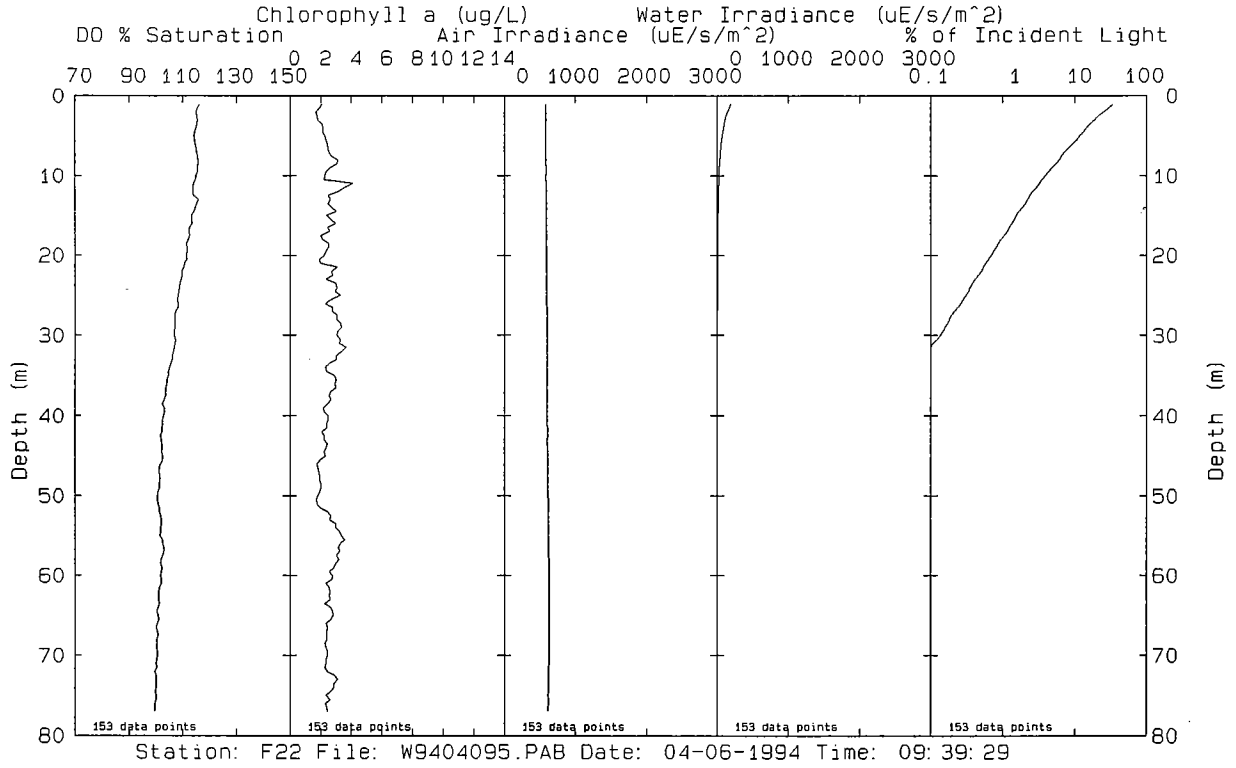
Station: F18 File: W9404026.PAB Date: 04-05-1994 Time: 08:12:51



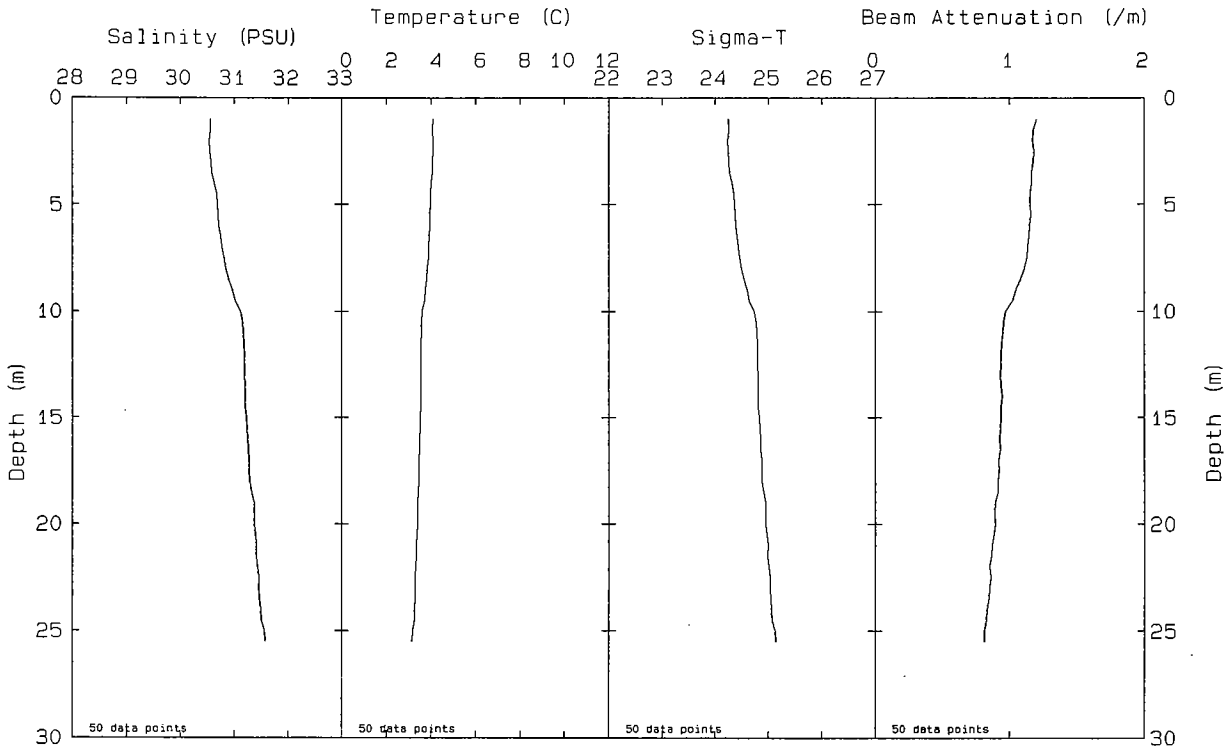


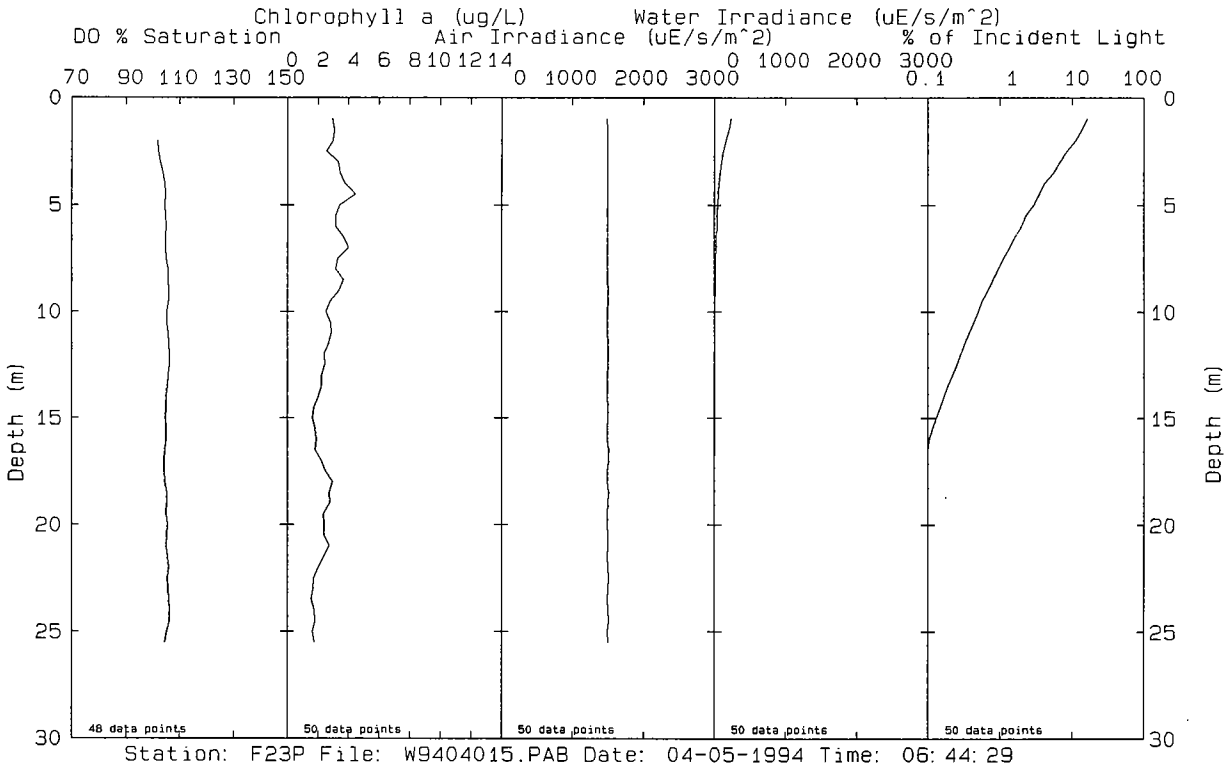
Station: F19 File: W9404045.PAB Date: 04-05-1994 Time: 11:26:12



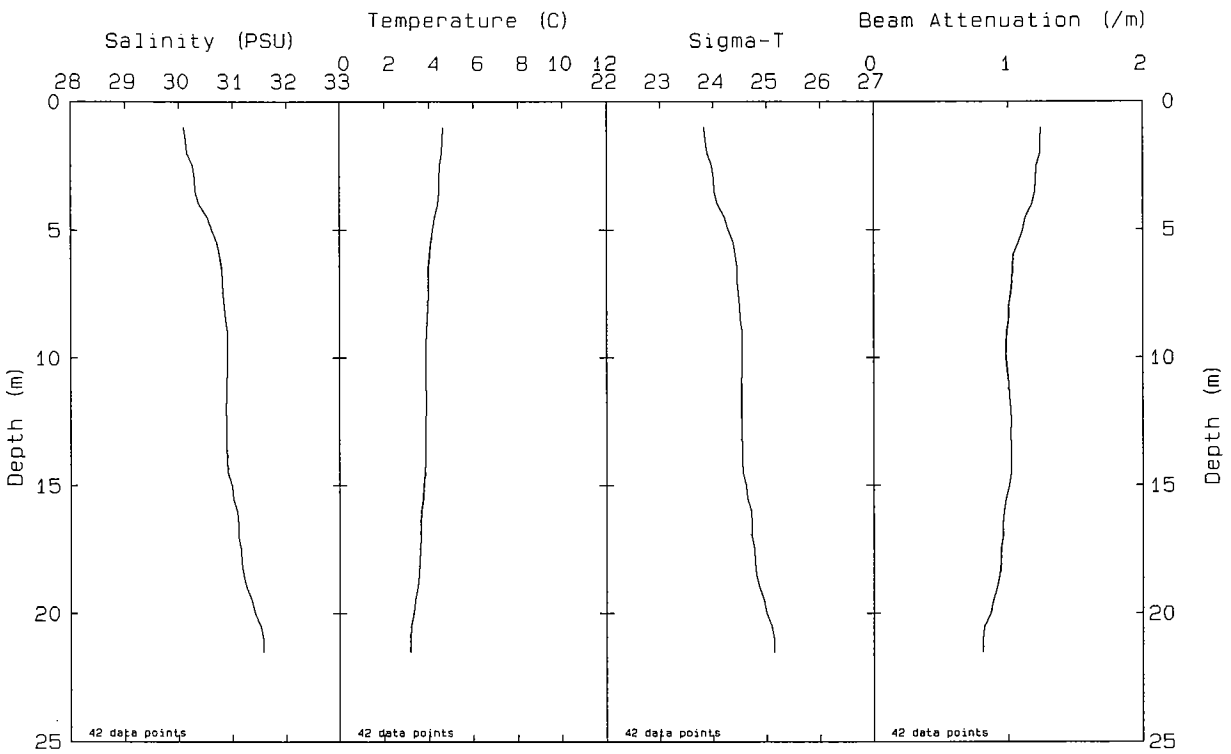


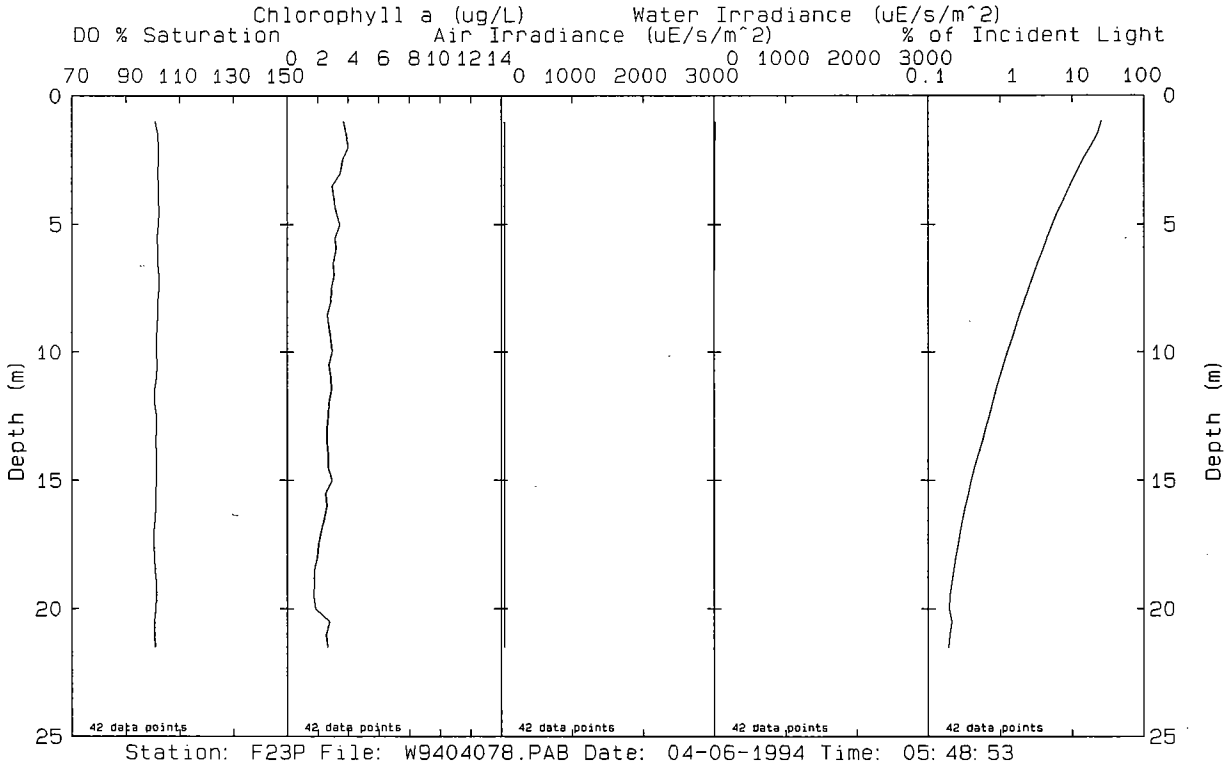
Station: F22 File: W9404095.PAB Date: 04-06-1994 Time: 09:39:29



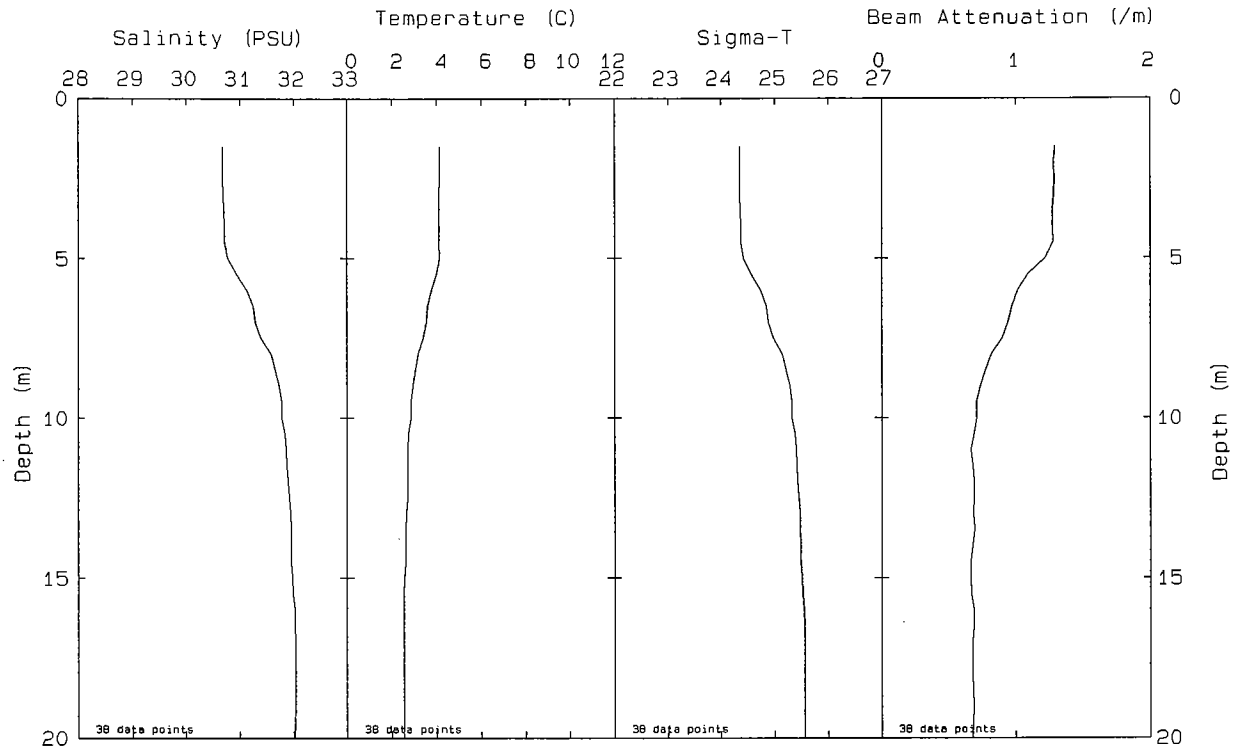


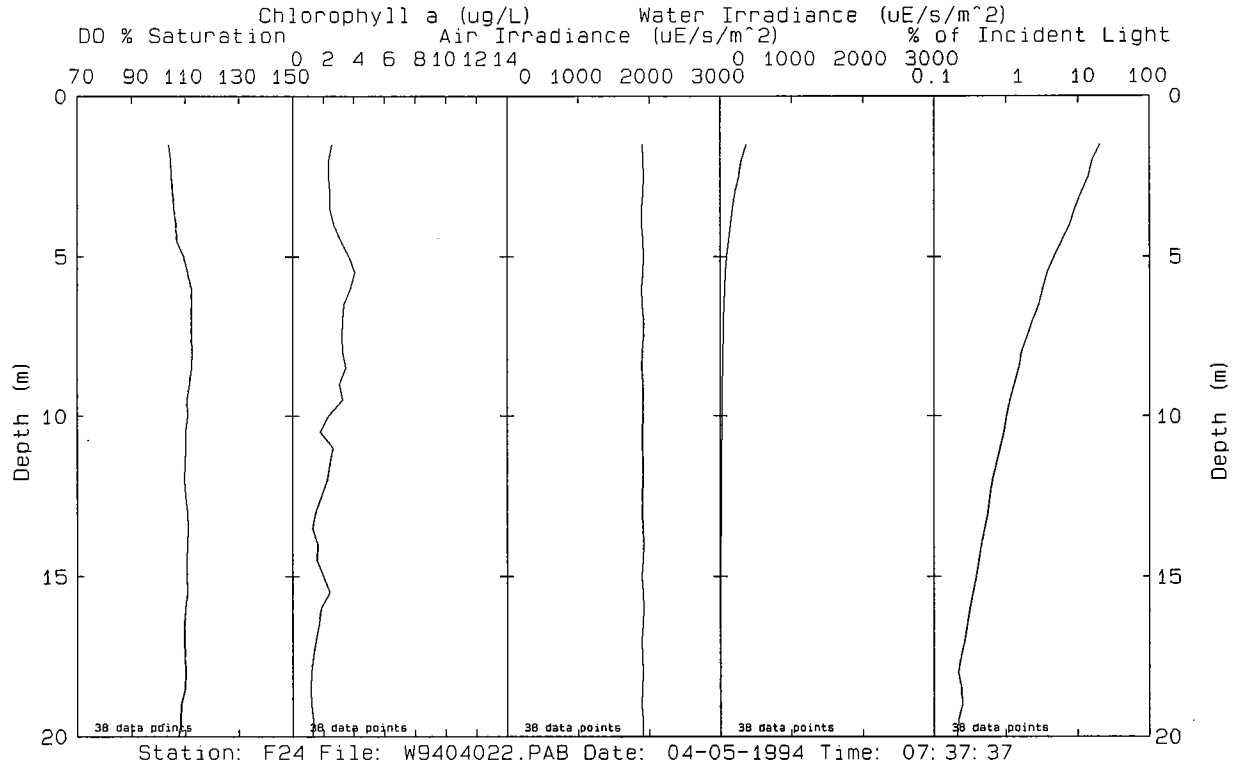
Station: F23P File: W9404015.PAB Date: 04-05-1994 Time: 06:44:29





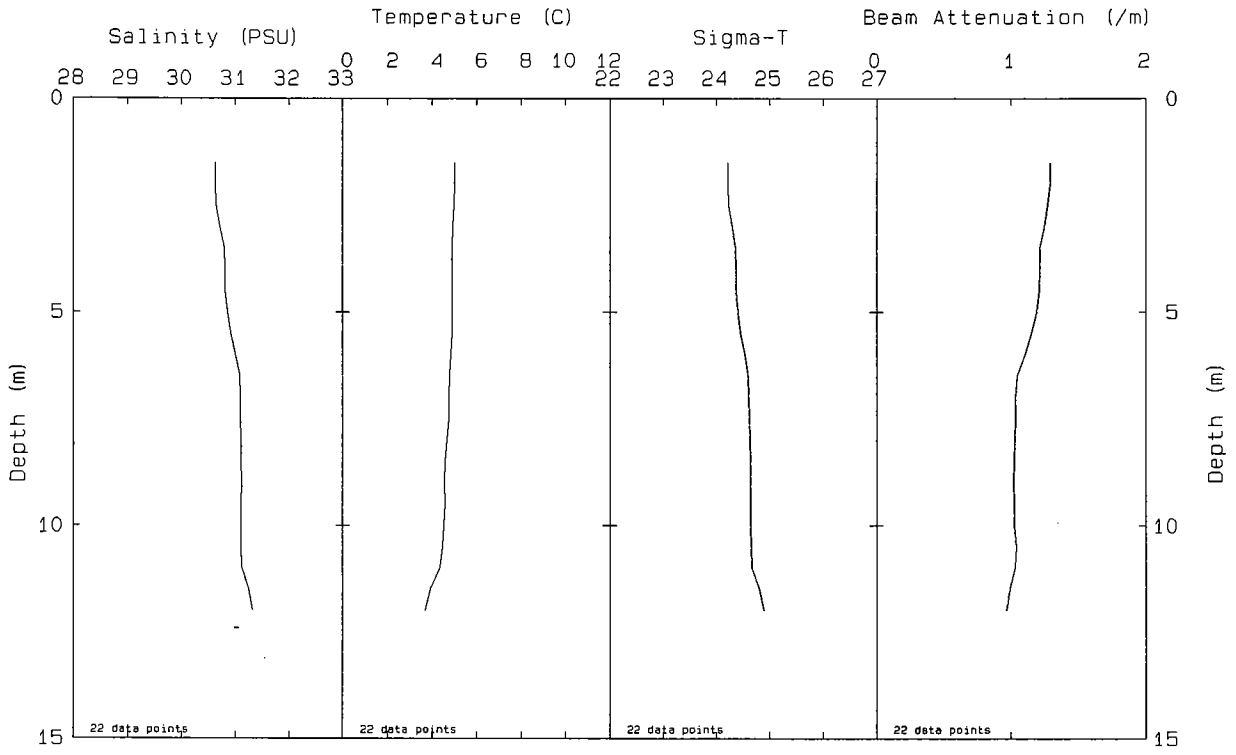
Station: F23P File: W9404078.PAB Date: 04-06-1994 Time: 05:48:53

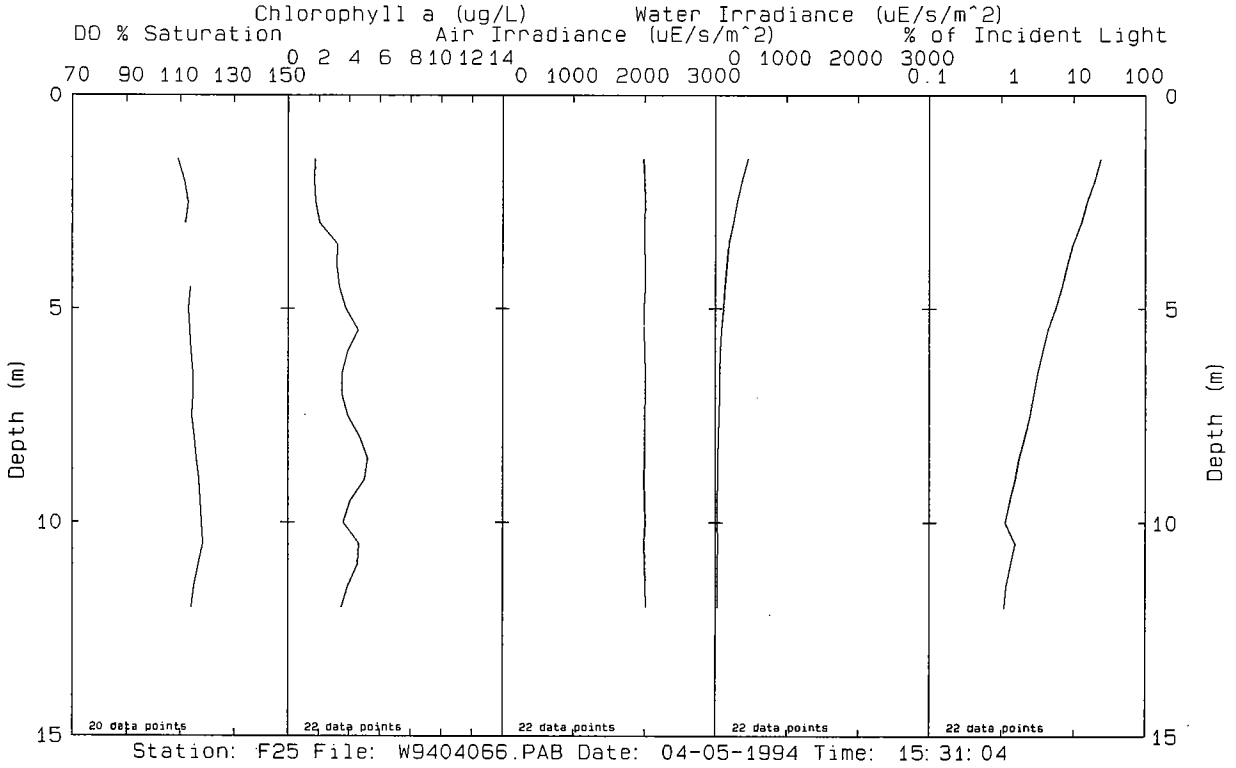




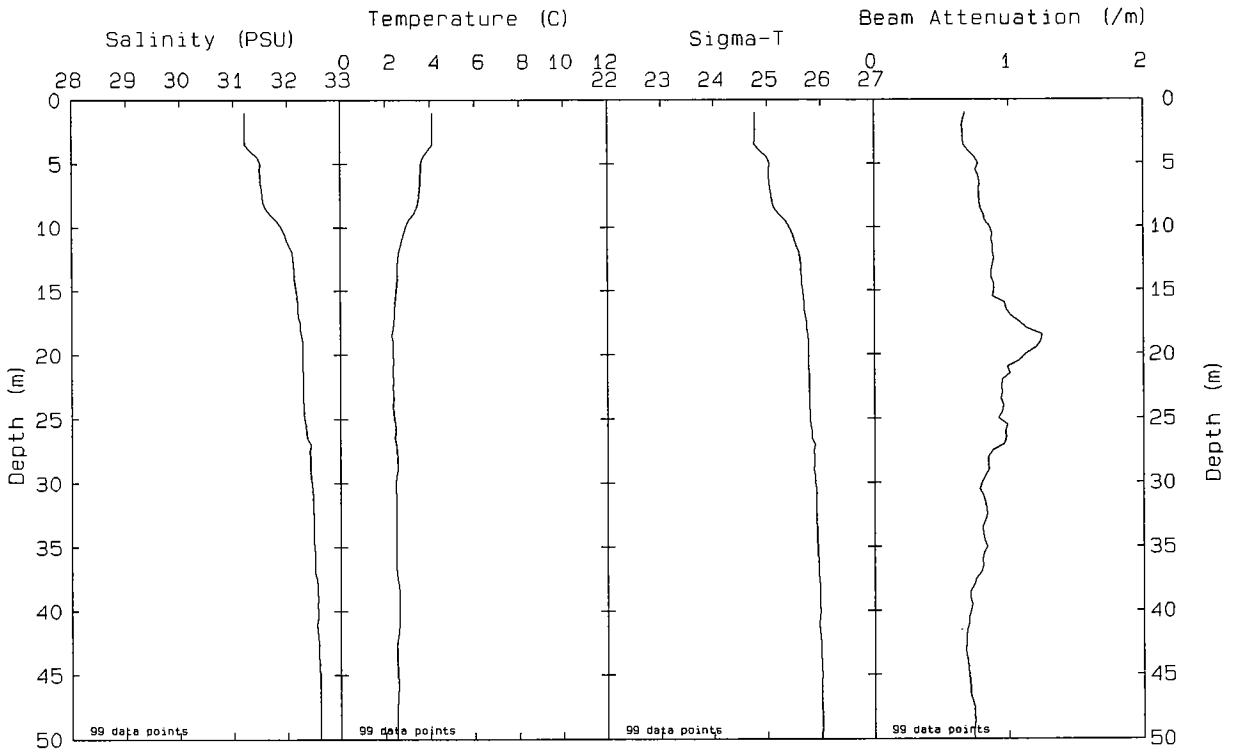
Station: F24 File: W9404022.PAB Date: 04-05-1994 Time: 07:37:37

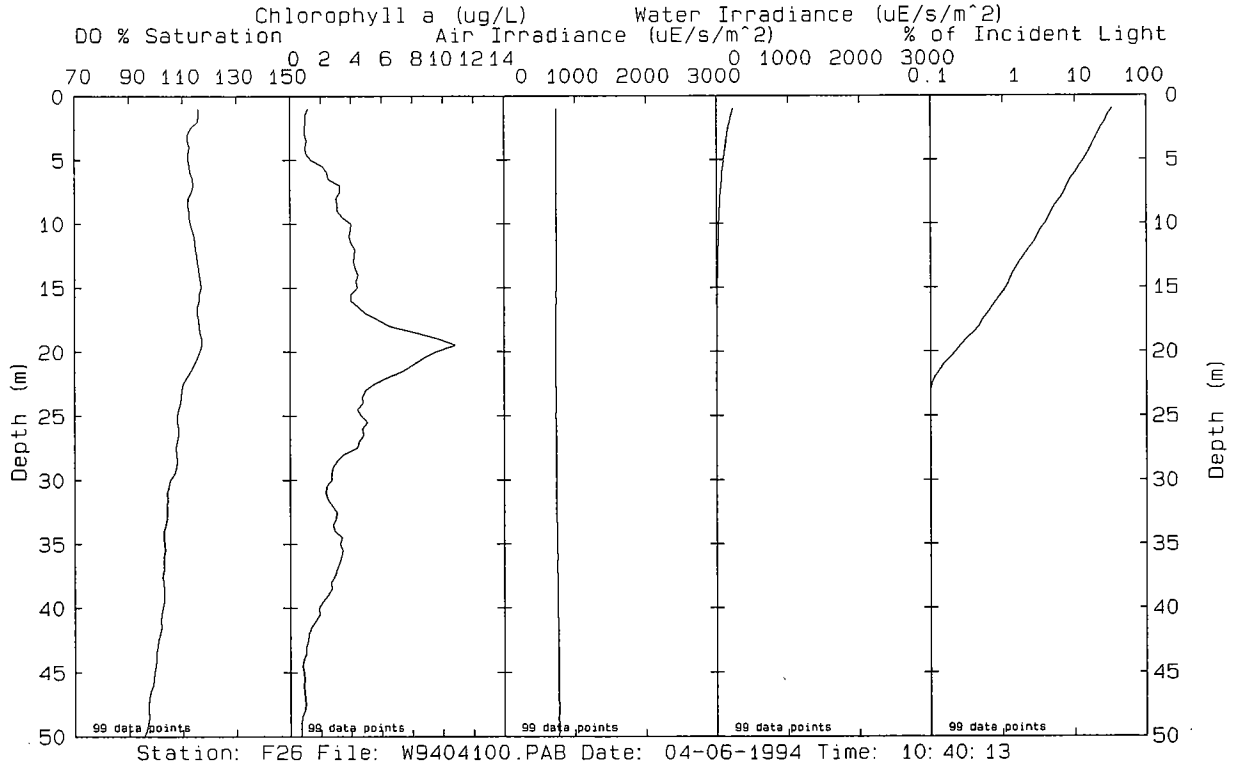
10-06-1994 12:46:16 Battelle



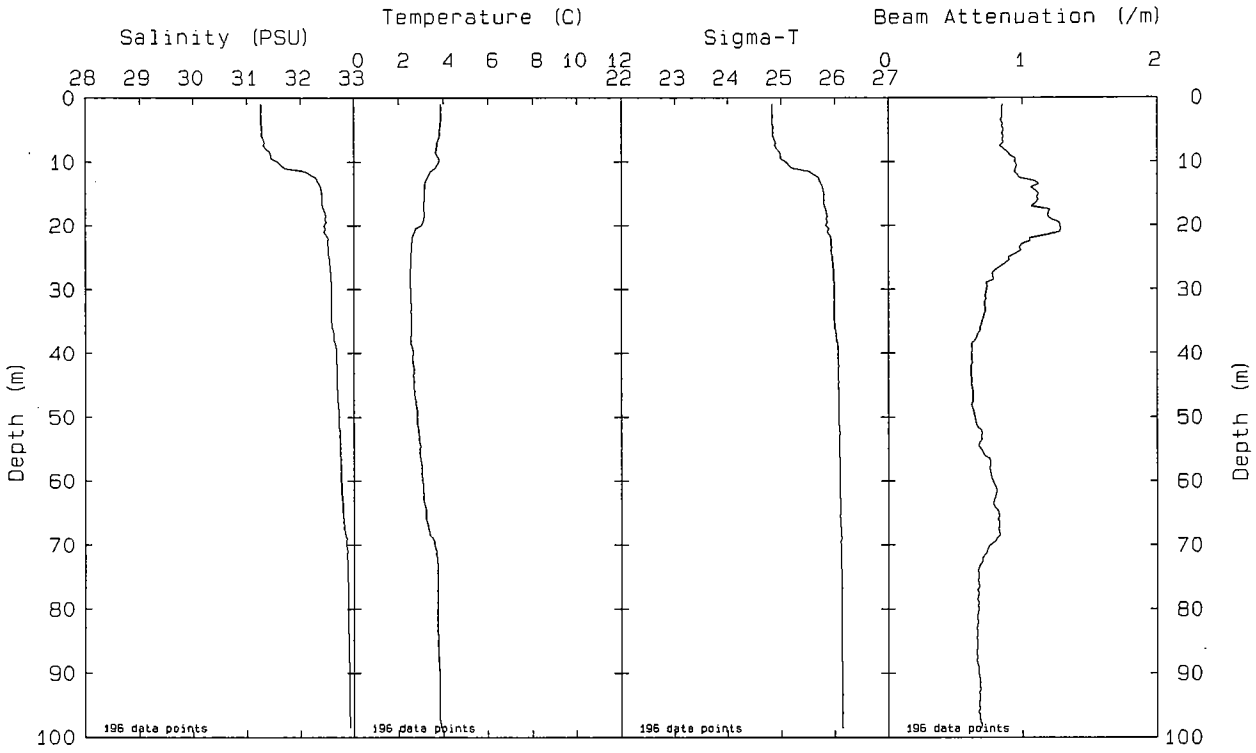


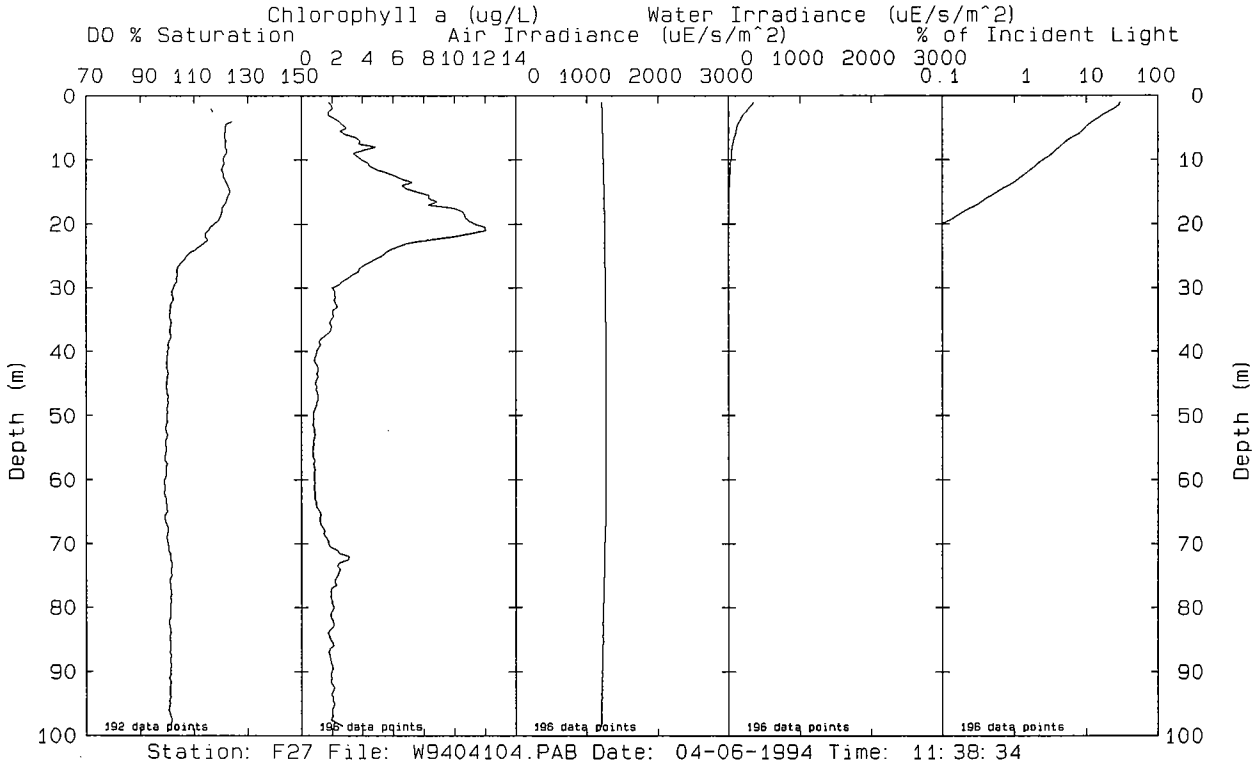
Station: F25 File: W9404066.PAB Date: 04-05-1994 Time: 15:31:04



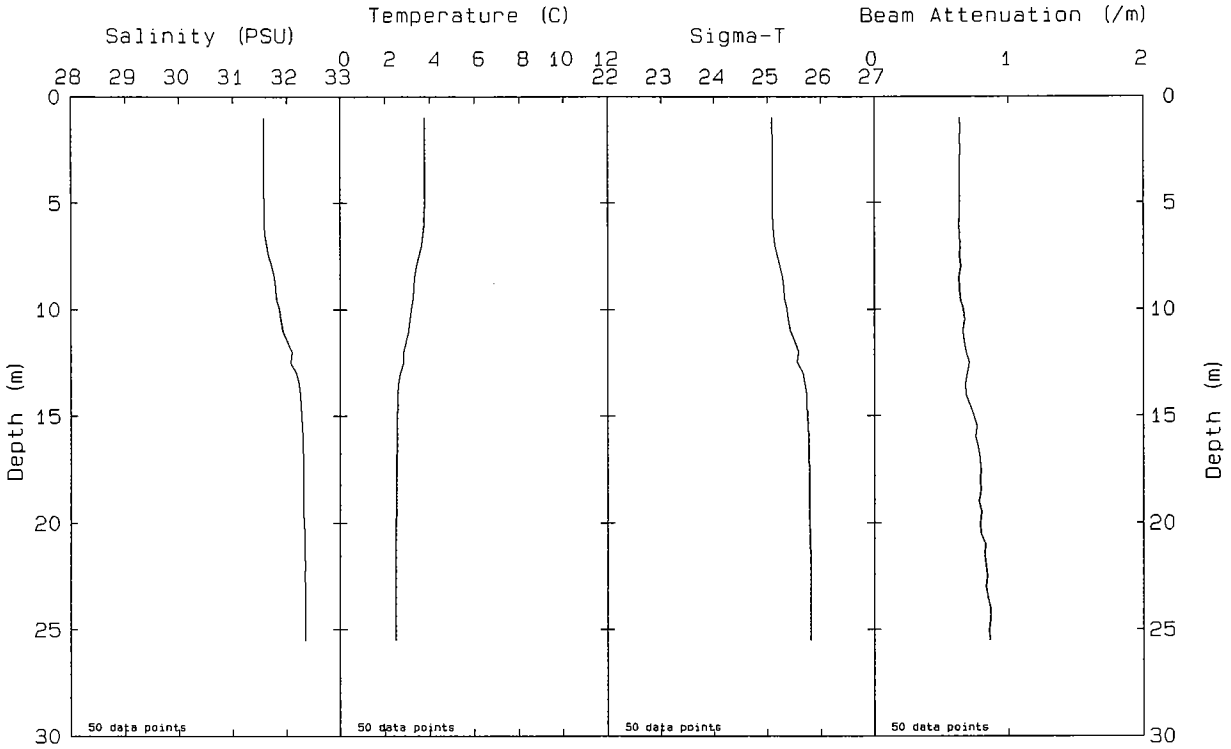


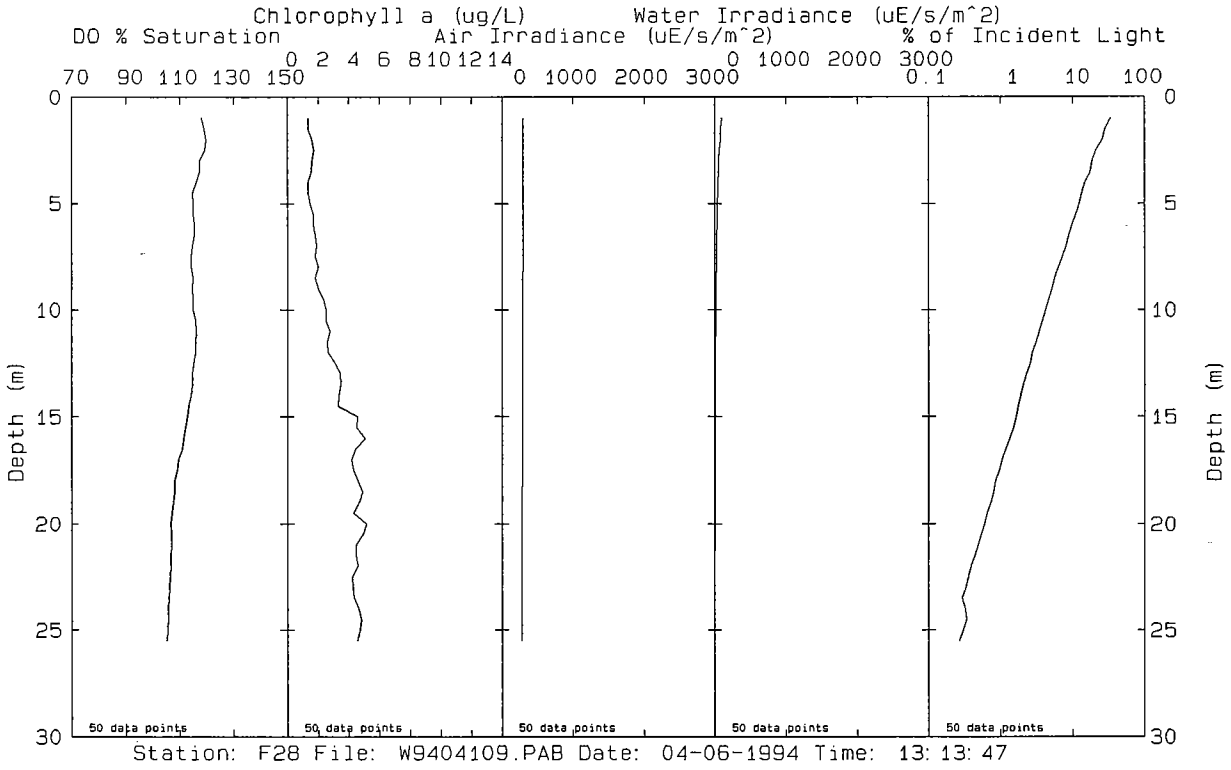
Station: F26 File: W9404100.PAB Date: 04-06-1994 Time: 10:40:13



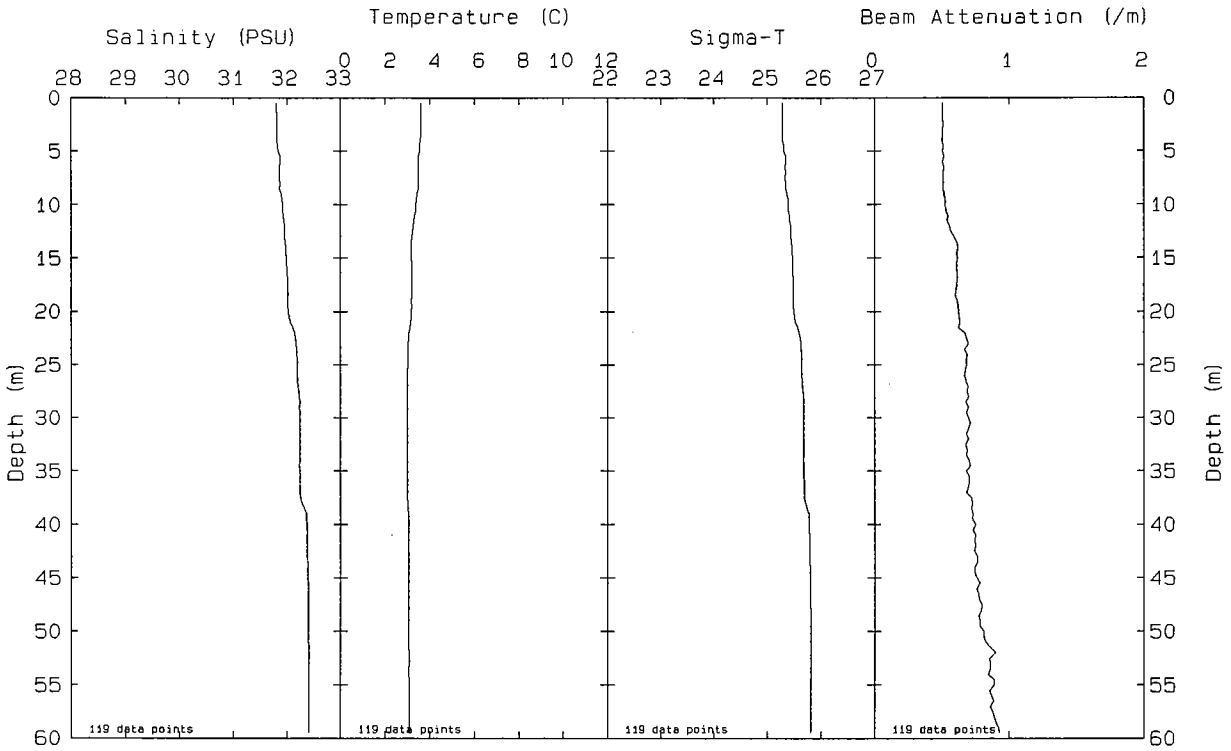


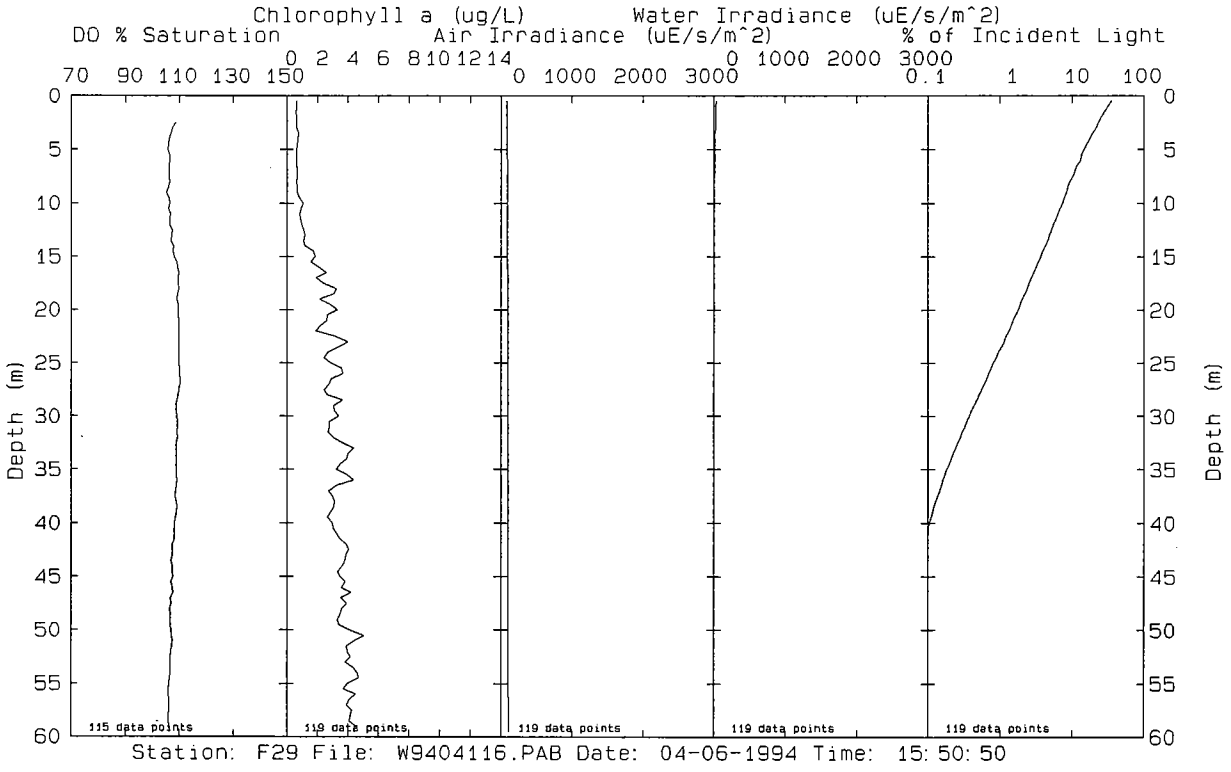
Station: F27 File: W9404104.PAB Date: 04-06-1994 Time: 11:38:34



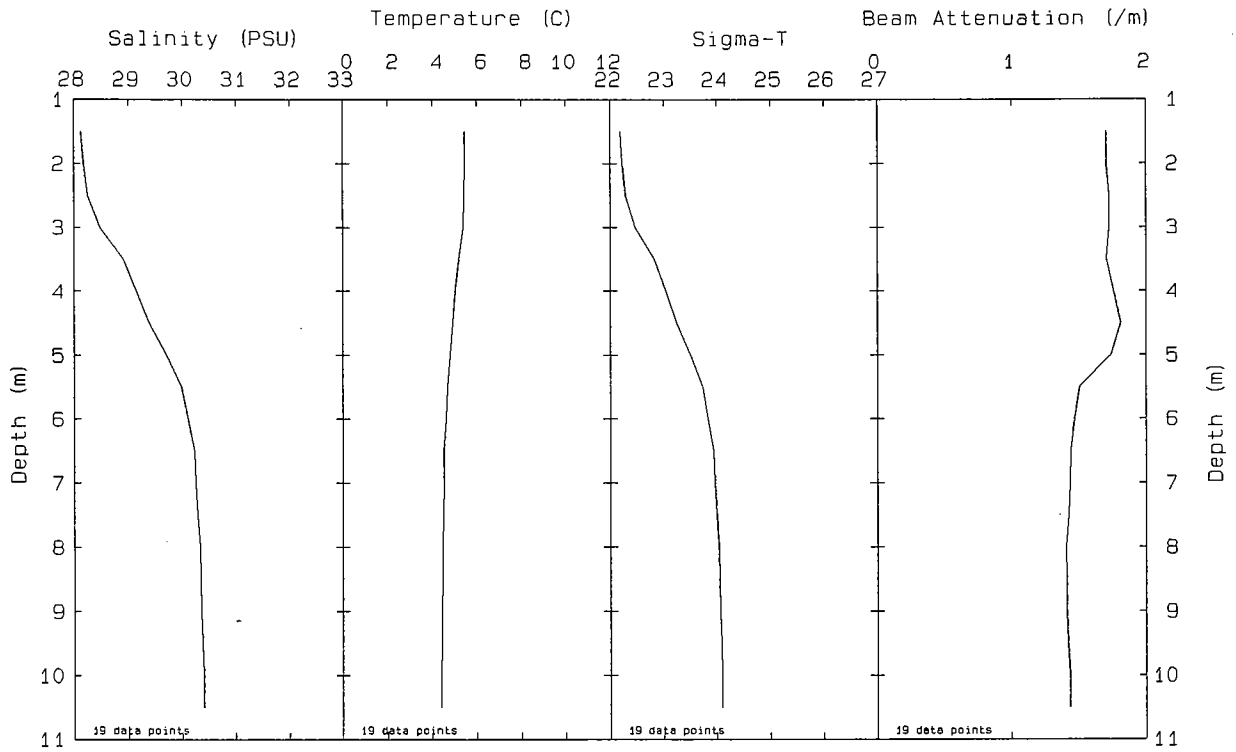


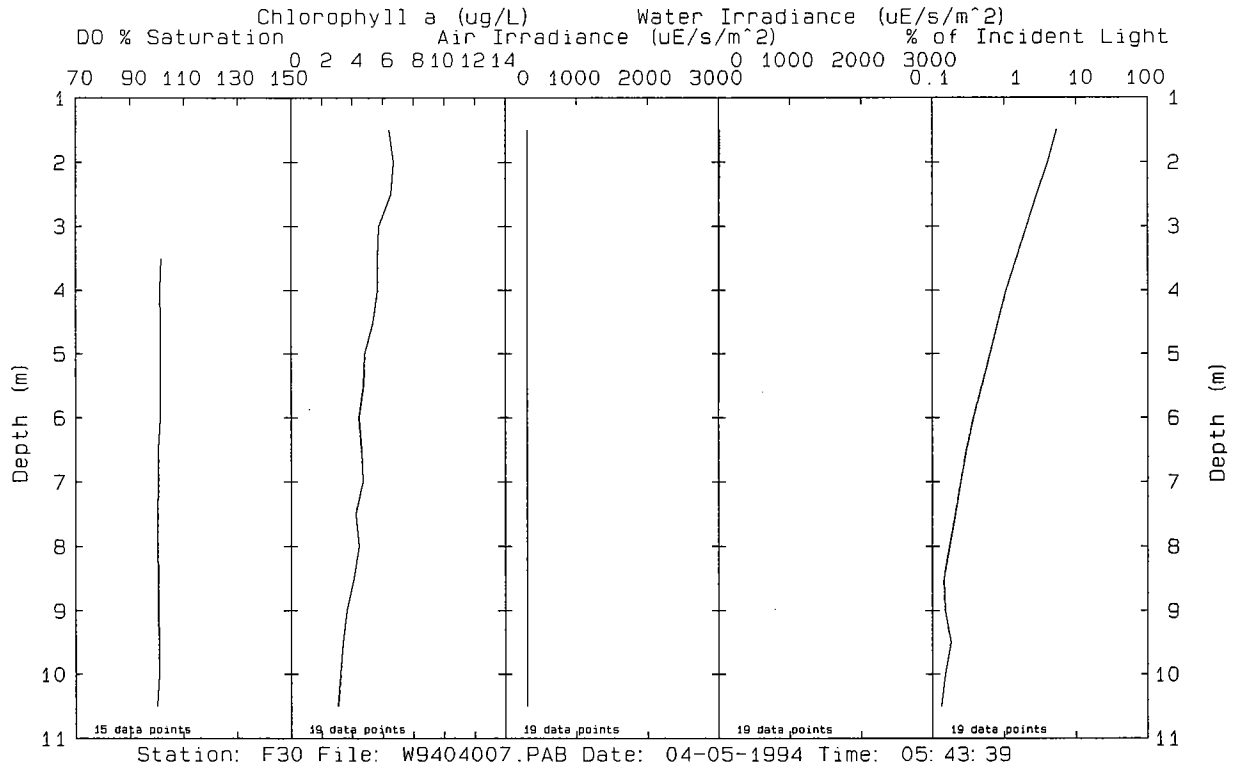
Station: F28 File: W9404109.PAB Date: 04-06-1994 Time: 13:13:47



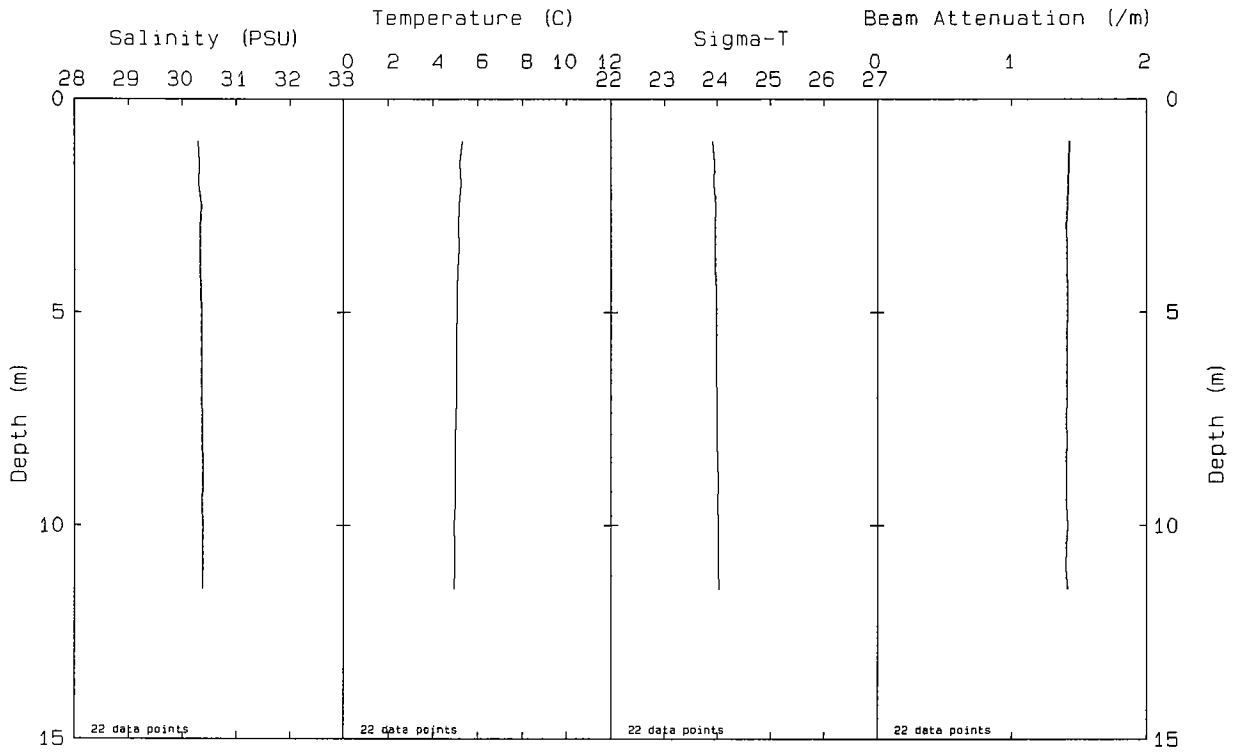


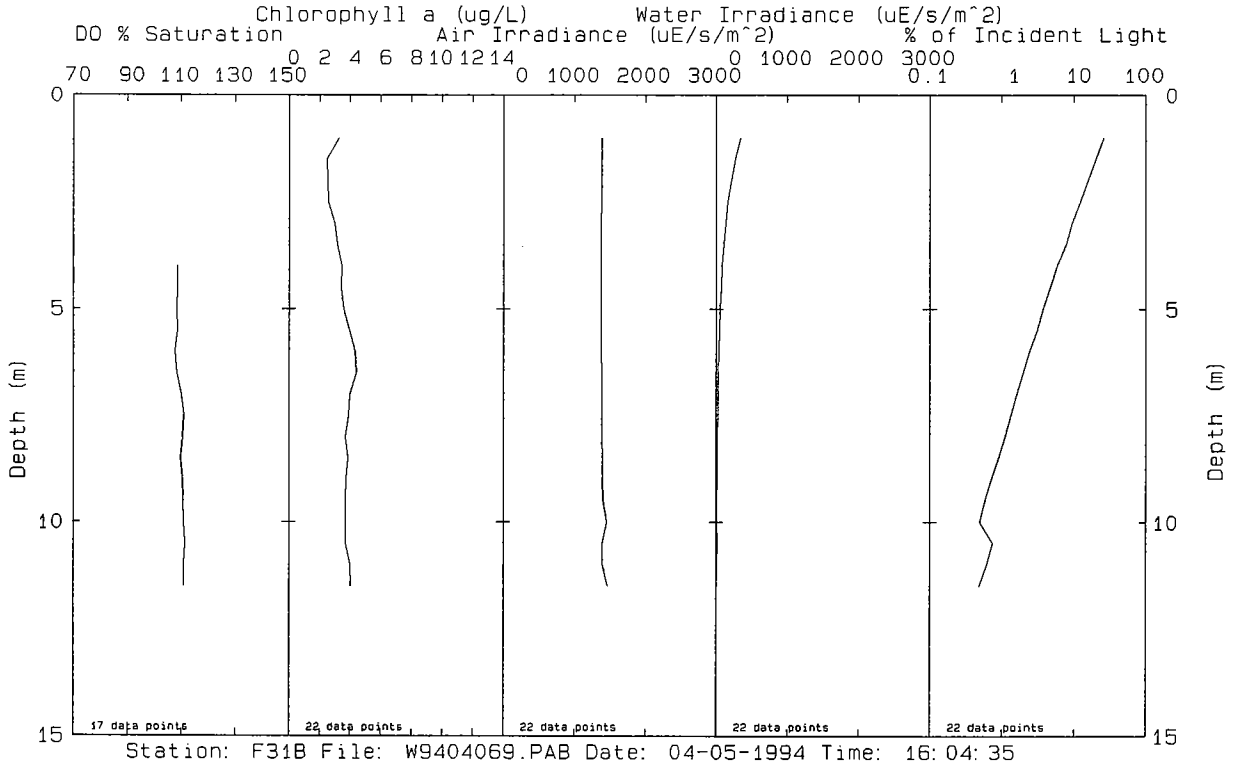
Station: F29 File: W9404116.PAB Date: 04-06-1994 Time: 15:50:50





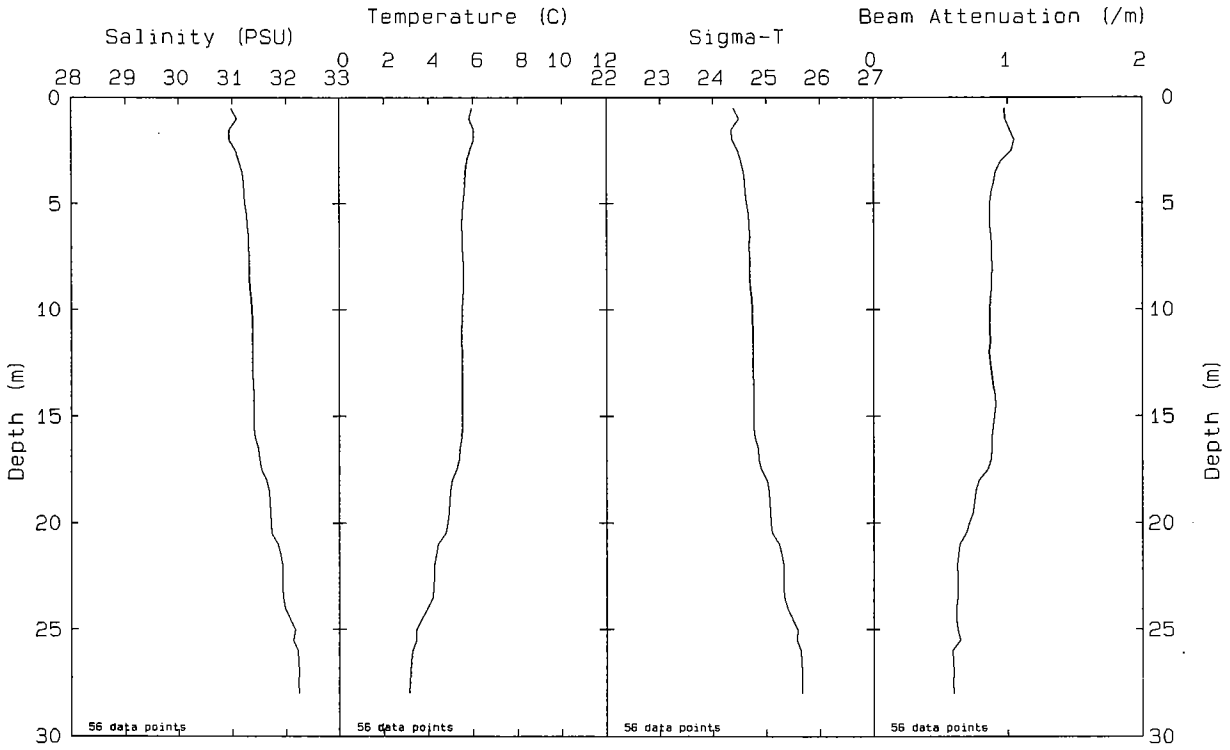
Station: F30 File: W9404007.PAB Date: 04-05-1994 Time: 05:43:39

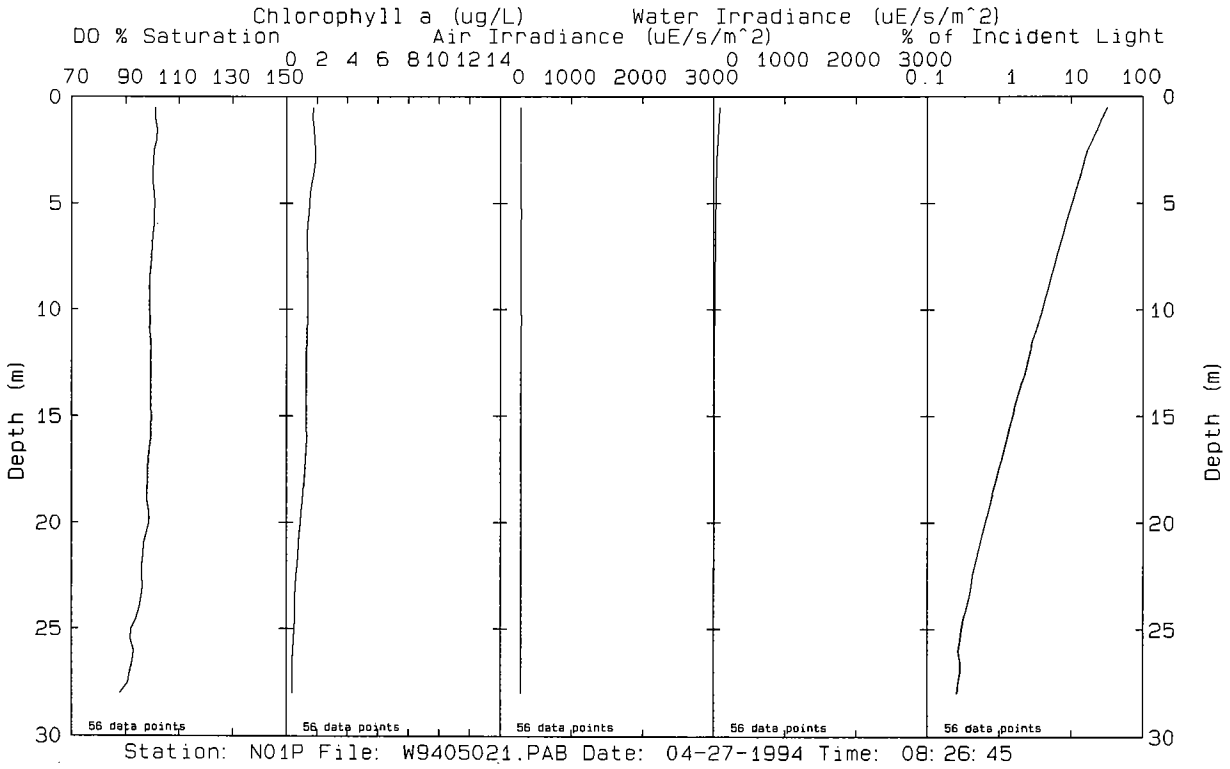


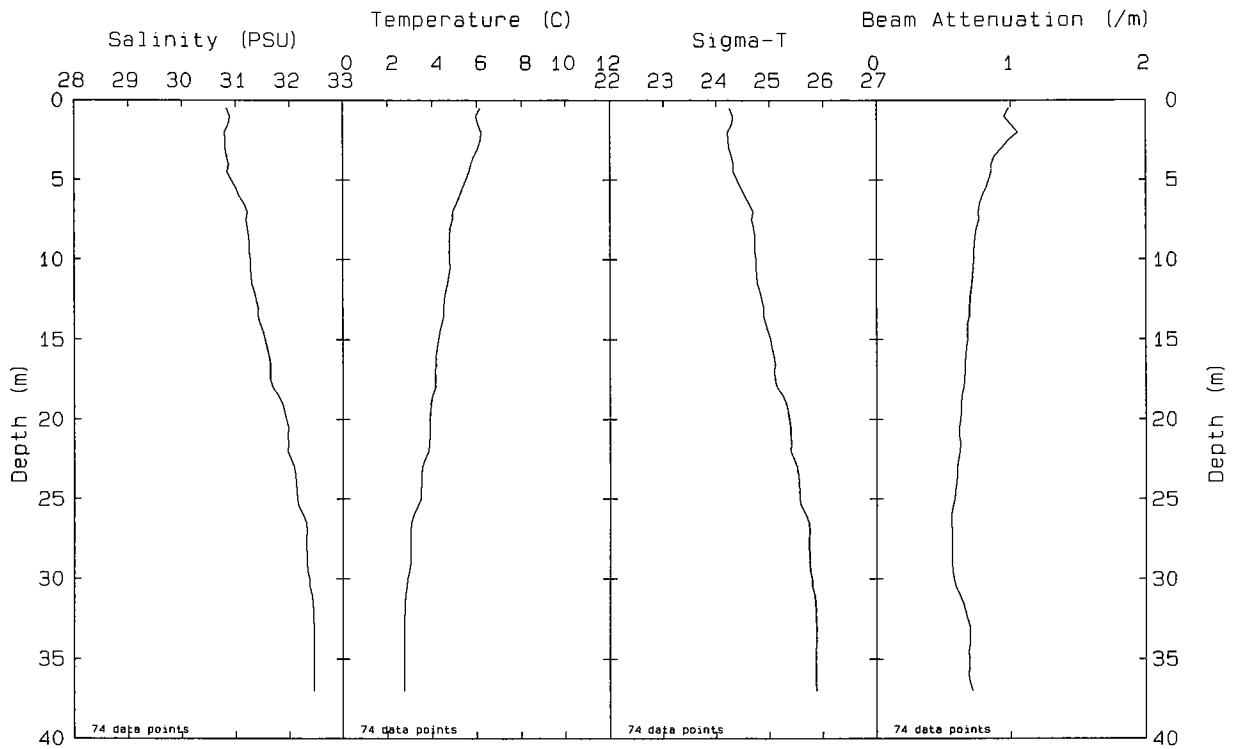


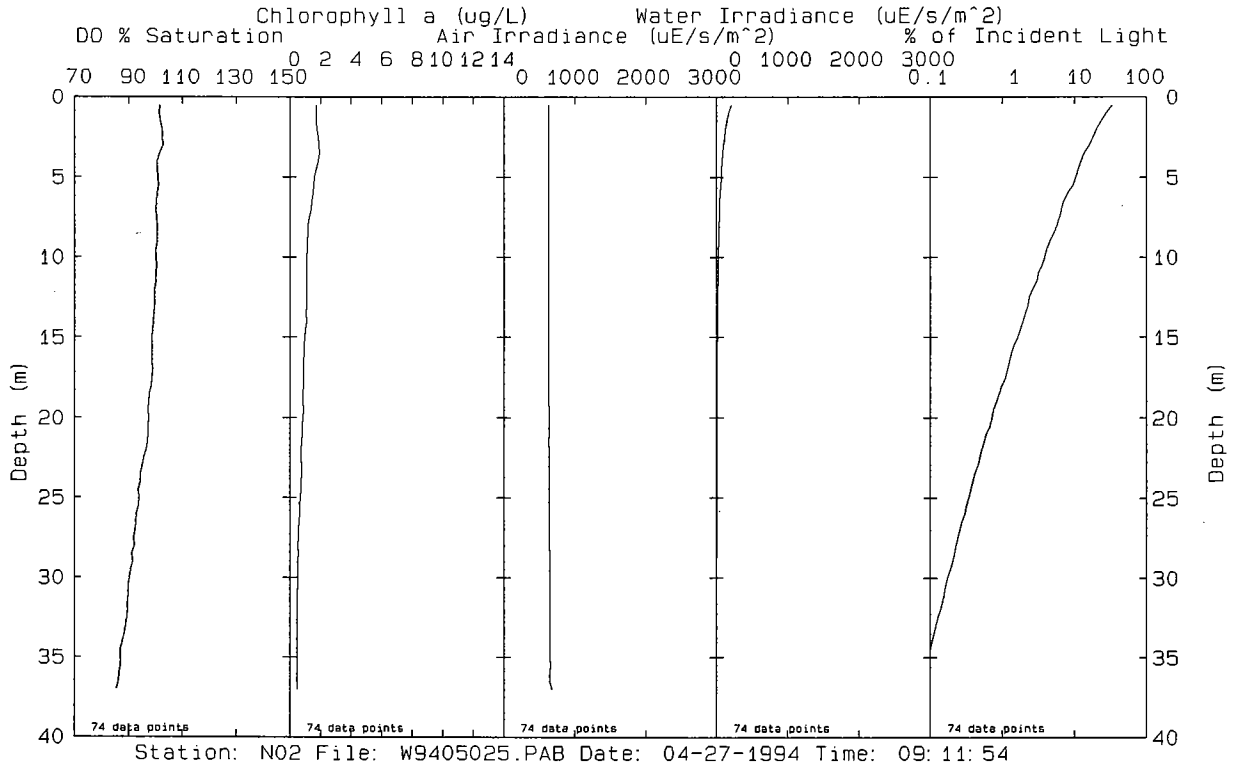
Station: F31B File: W9404069.PAB Date: 04-05-1994 Time: 16:04:35

Late April 1994 Profiles

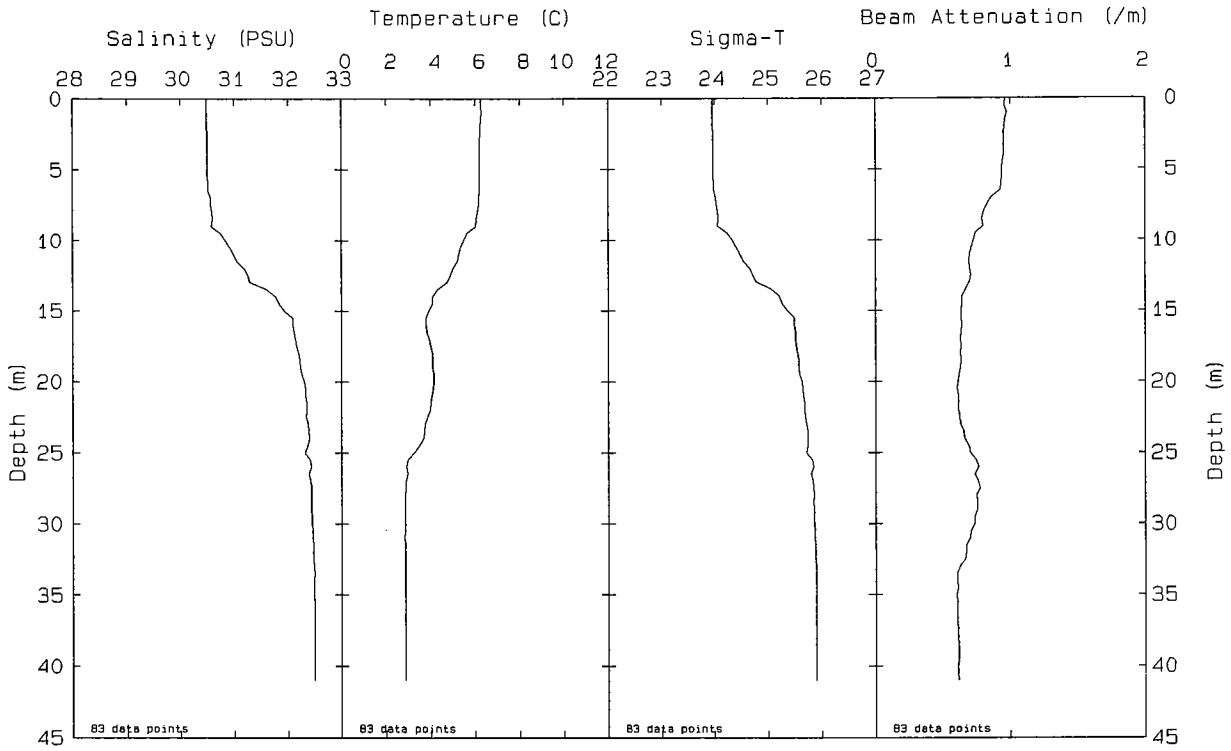

Salinity (PSU)
28 29 30 31 32 33
Temperature (C)
0 2 4 6 8 10 12
Sigma-T
22 23 24 25 26 27
Beam Attenuation (/m)
0 1 2
Depth (m)
0 5 10 15 20 25 30
56 data points
56 data points
56 data points
56 data points

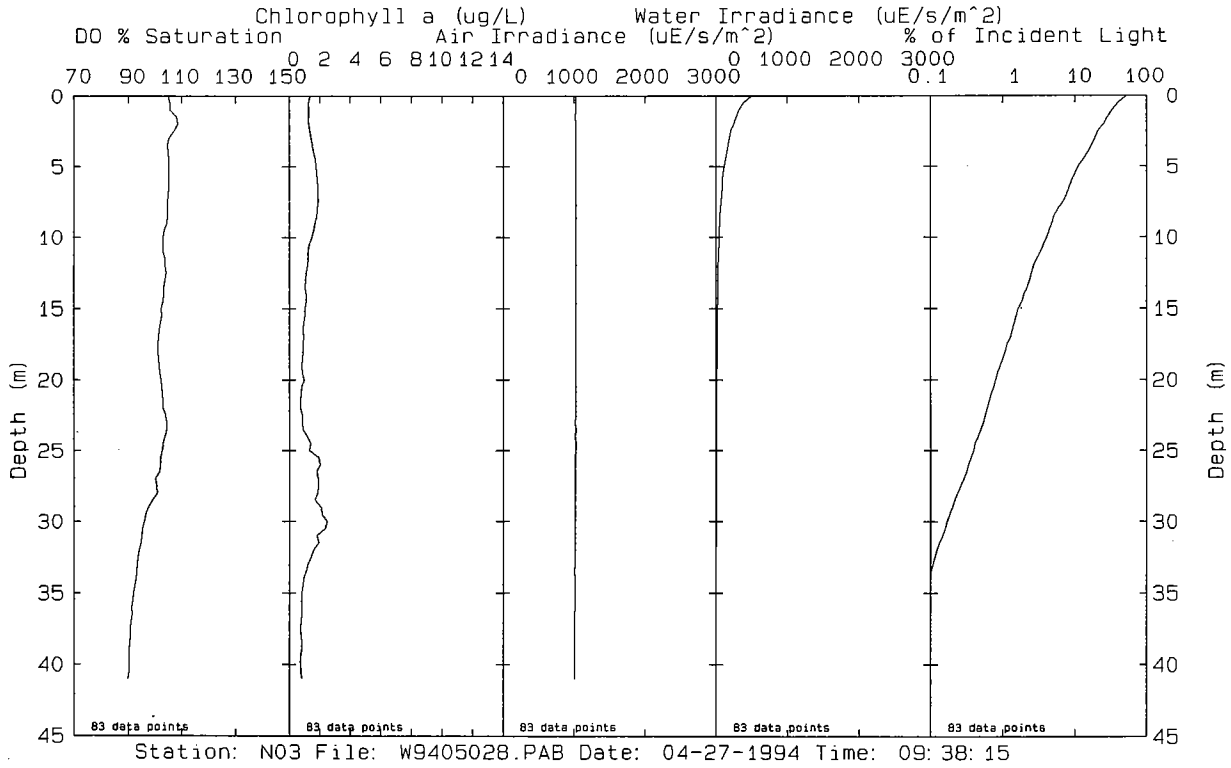

DO % Saturation
70 90 110 130 150
Chlorophyll a (ug/L)
0 2 4 6 8 10 12 14
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0.1 1 10 100
% of Incident Light
0 1000 2000 3000
Depth (m)
0 5 10 15 20 25 30
56 data points
56 data points
56 data points
56 data points
56 data points
Station: N01P File: W9405021.PAB Date: 04-27-1994 Time: 08:26:45



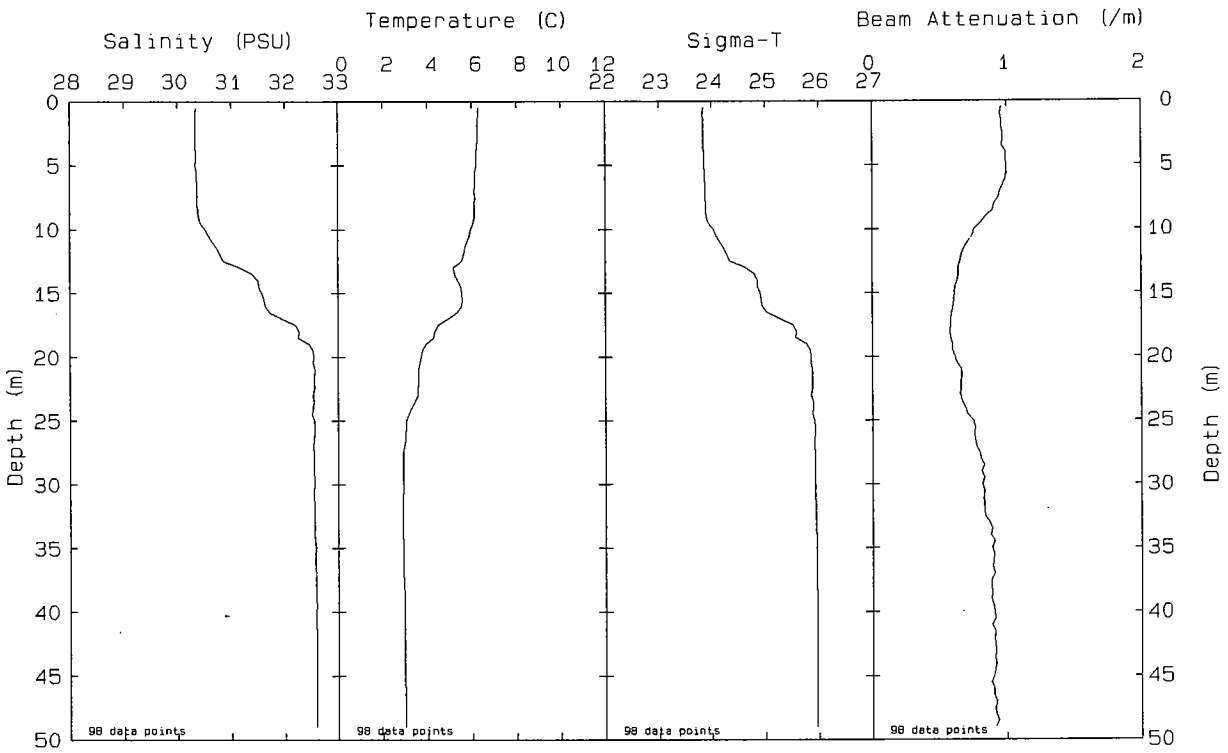


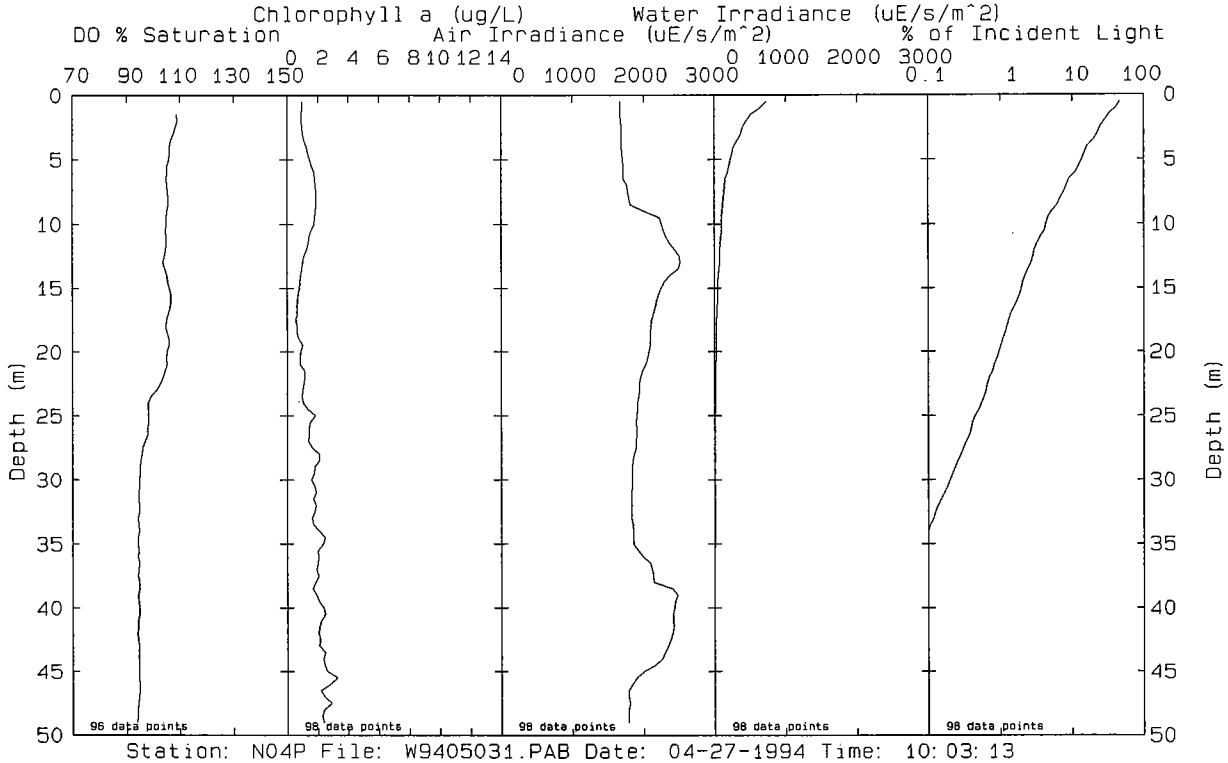
Station: N02 File: W9405025.PAB Date: 04-27-1994 Time: 09:11:54



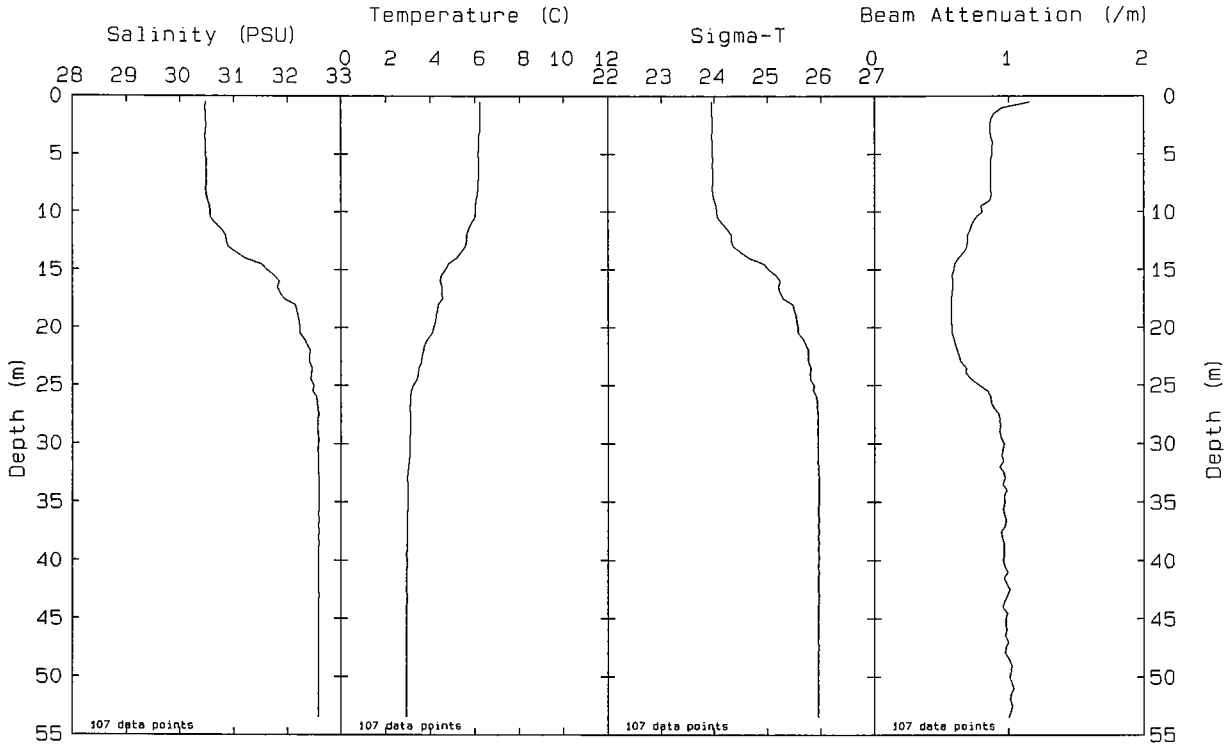


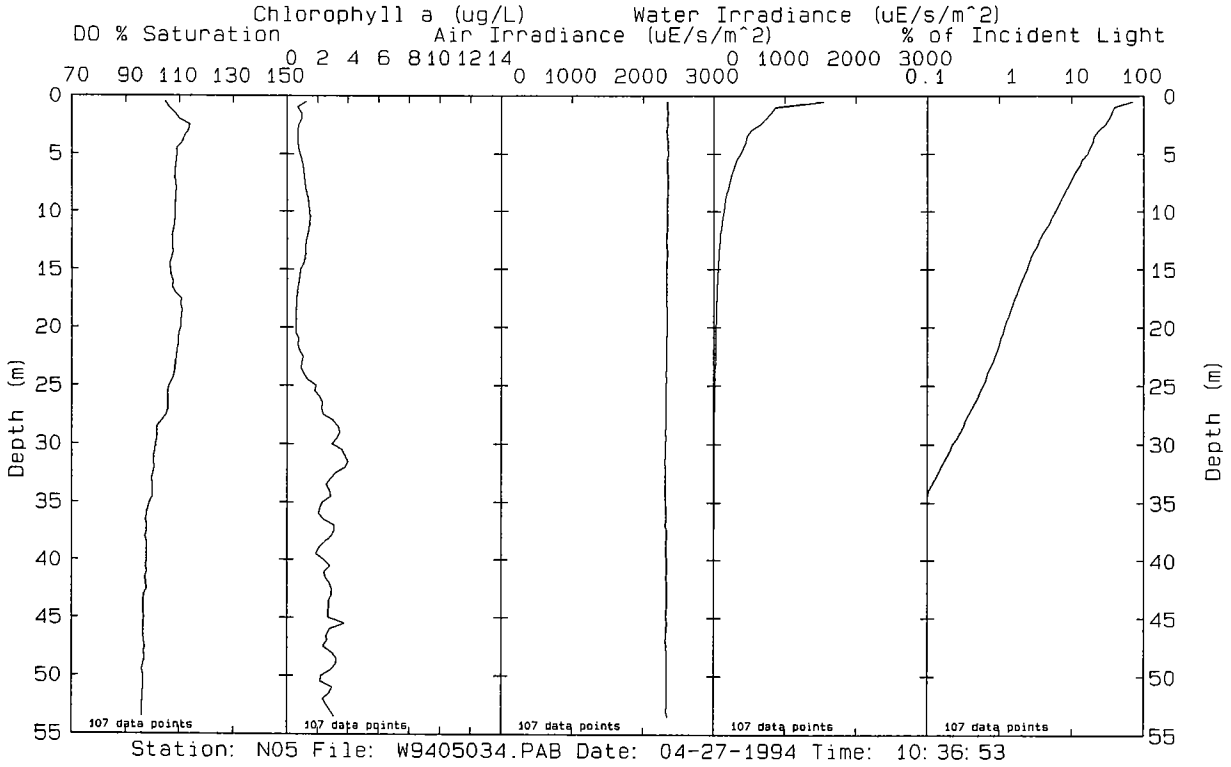
Station: N03 File: W9405028.PAB Date: 04-27-1994 Time: 09:38:15



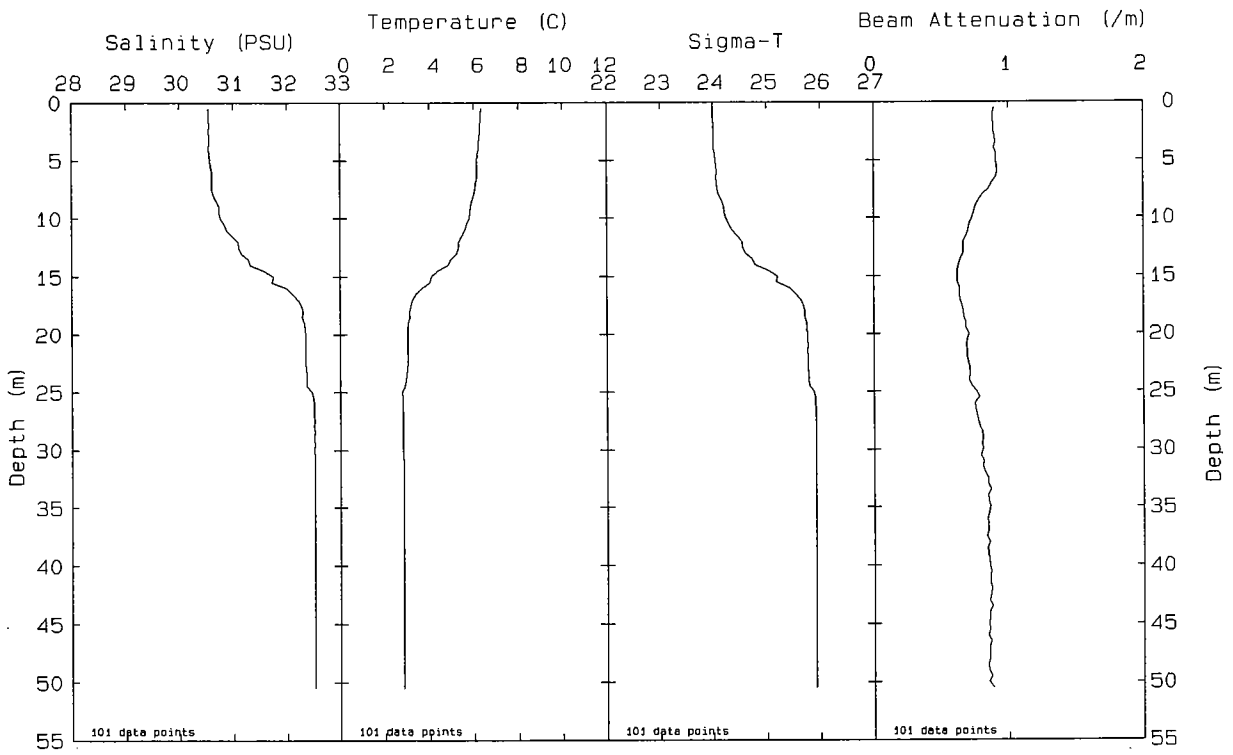


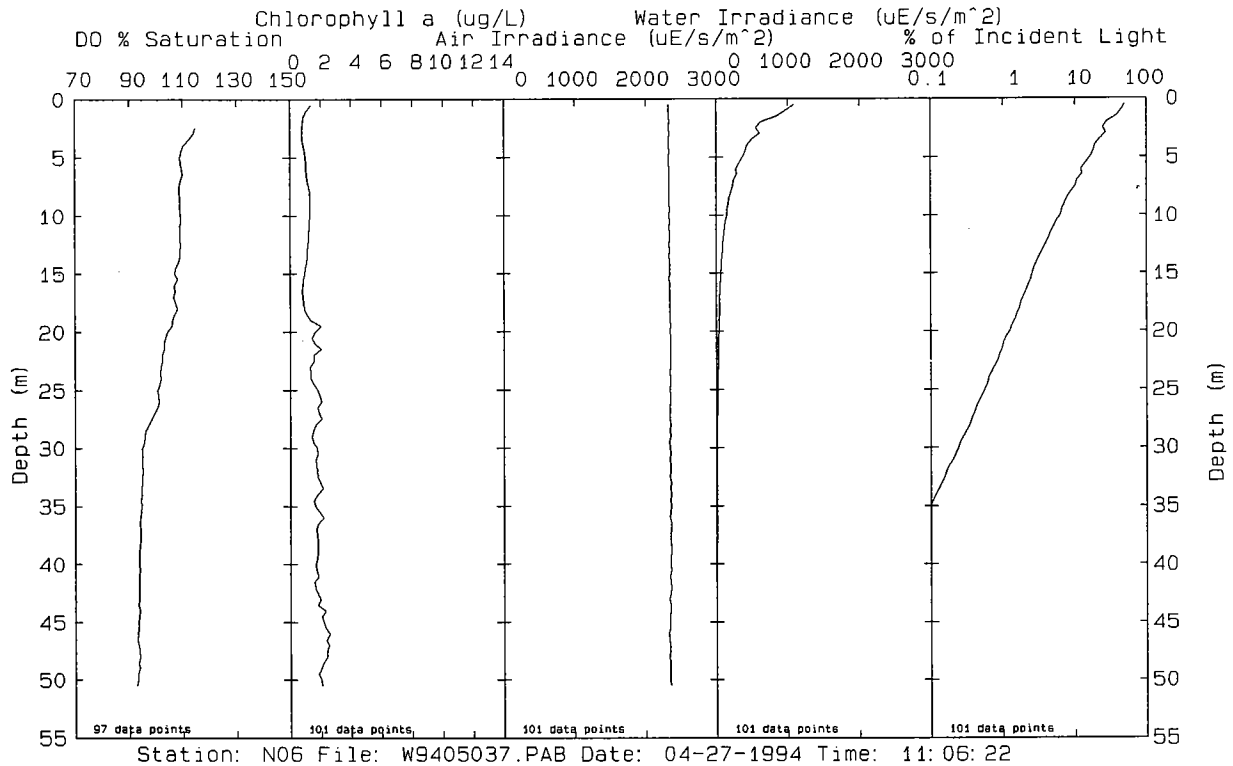
Station: N04P File: W9405031.PAB Date: 04-27-1994 Time: 10:03:13



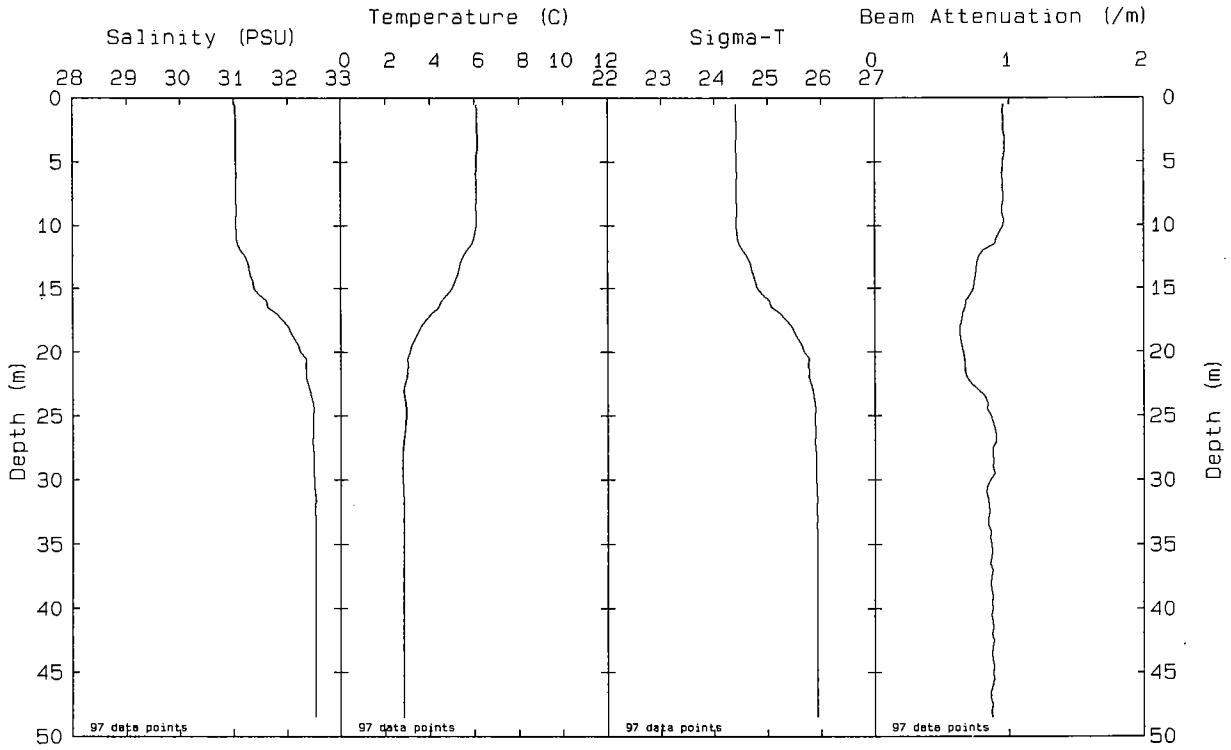


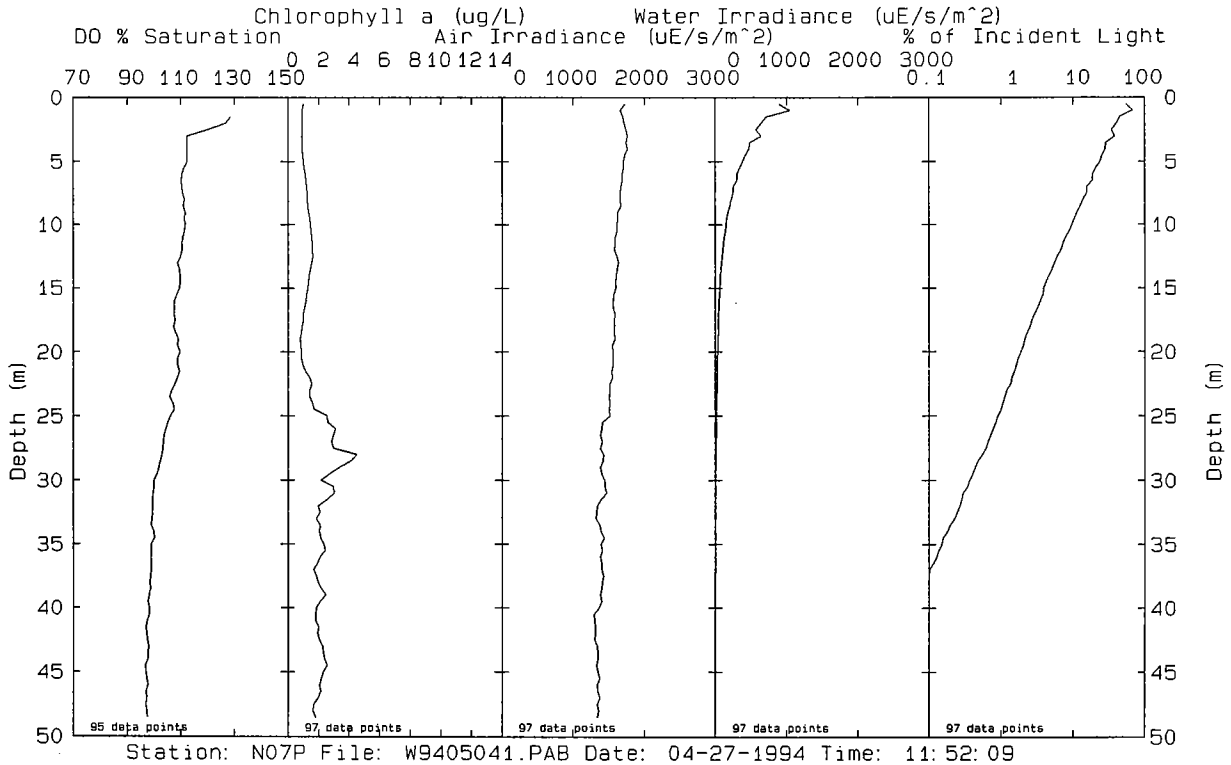
Station: N05 File: W9405034.PAB Date: 04-27-1994 Time: 10:36:53



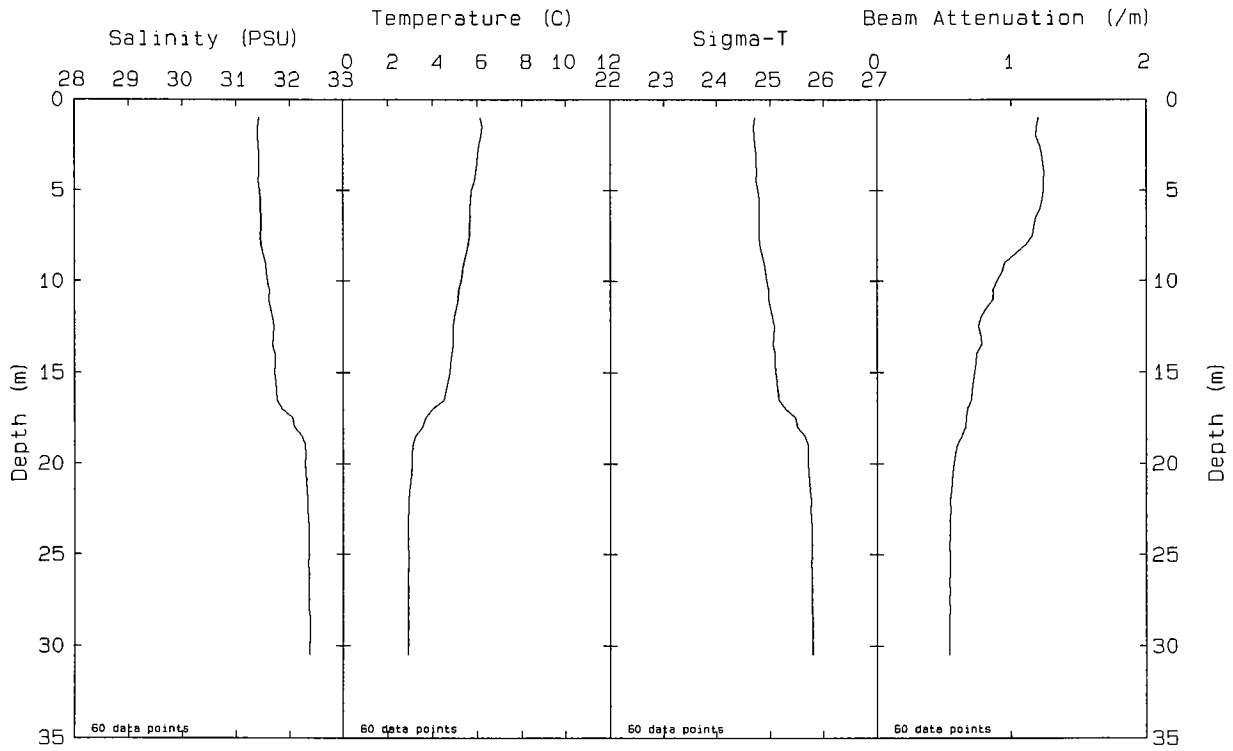


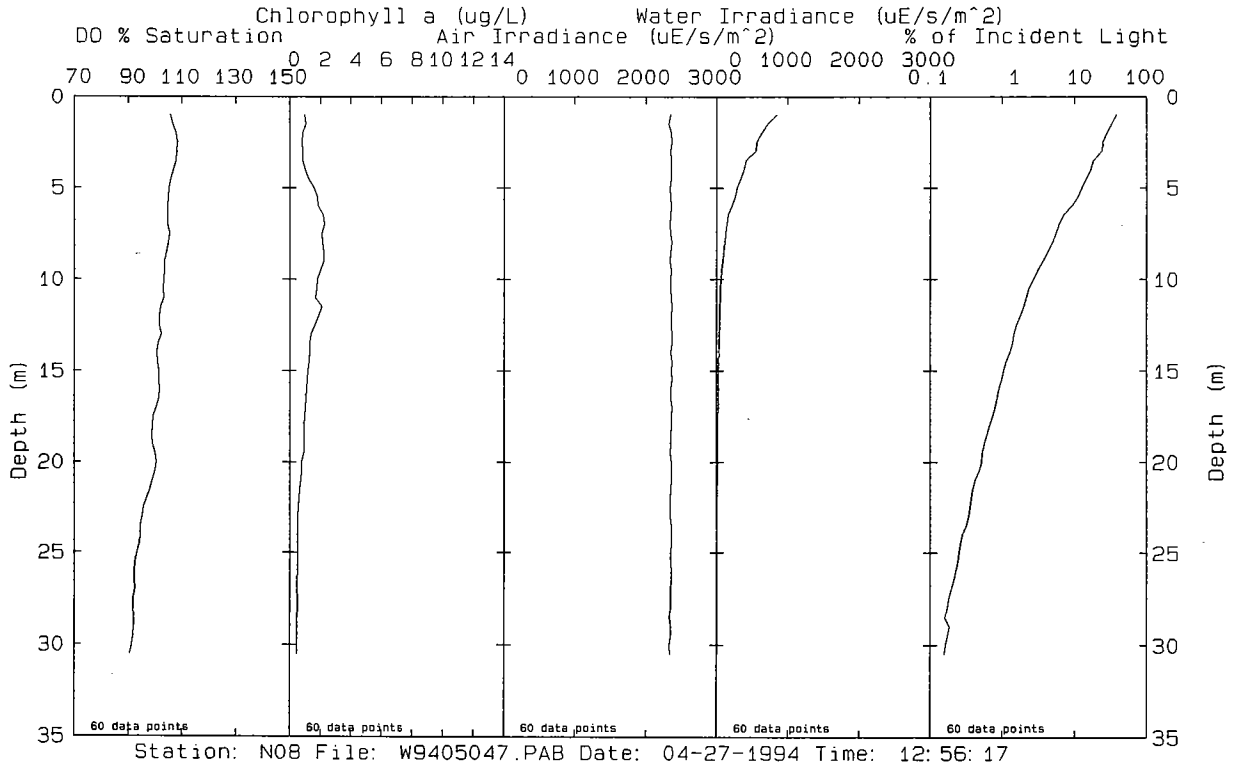
Station: N06 File: W9405037.PAB Date: 04-27-1994 Time: 11:06:22



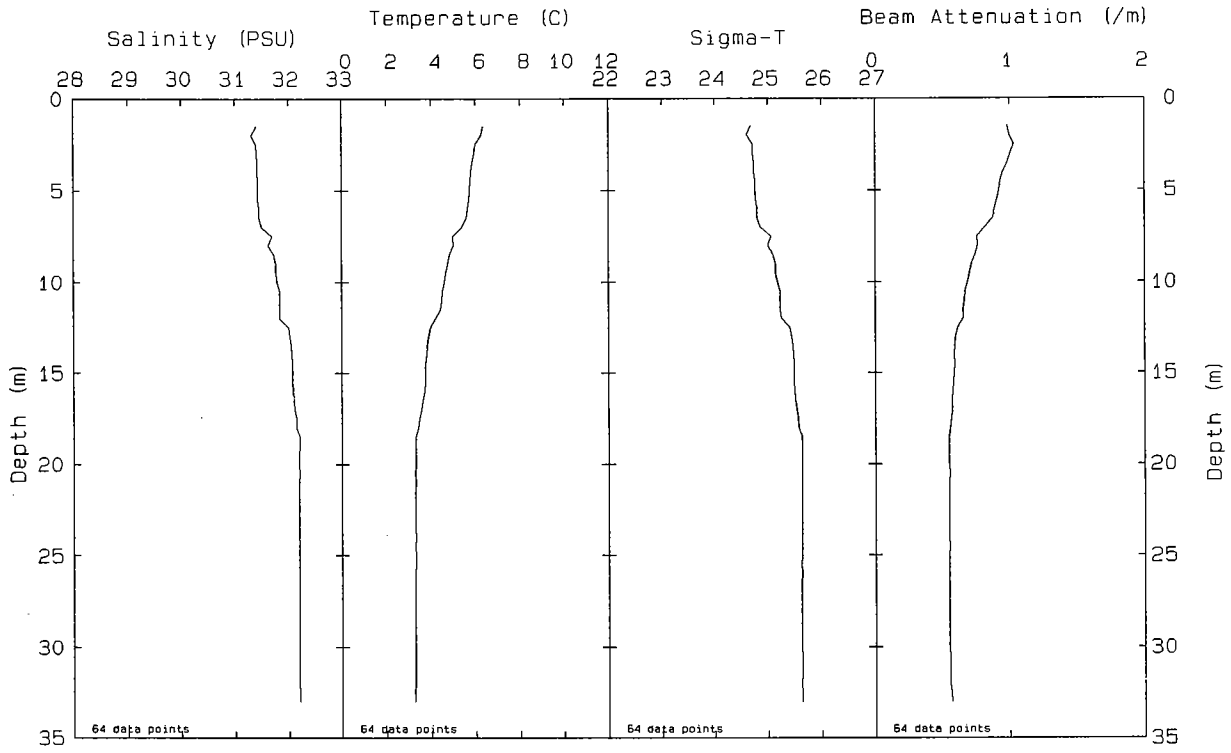


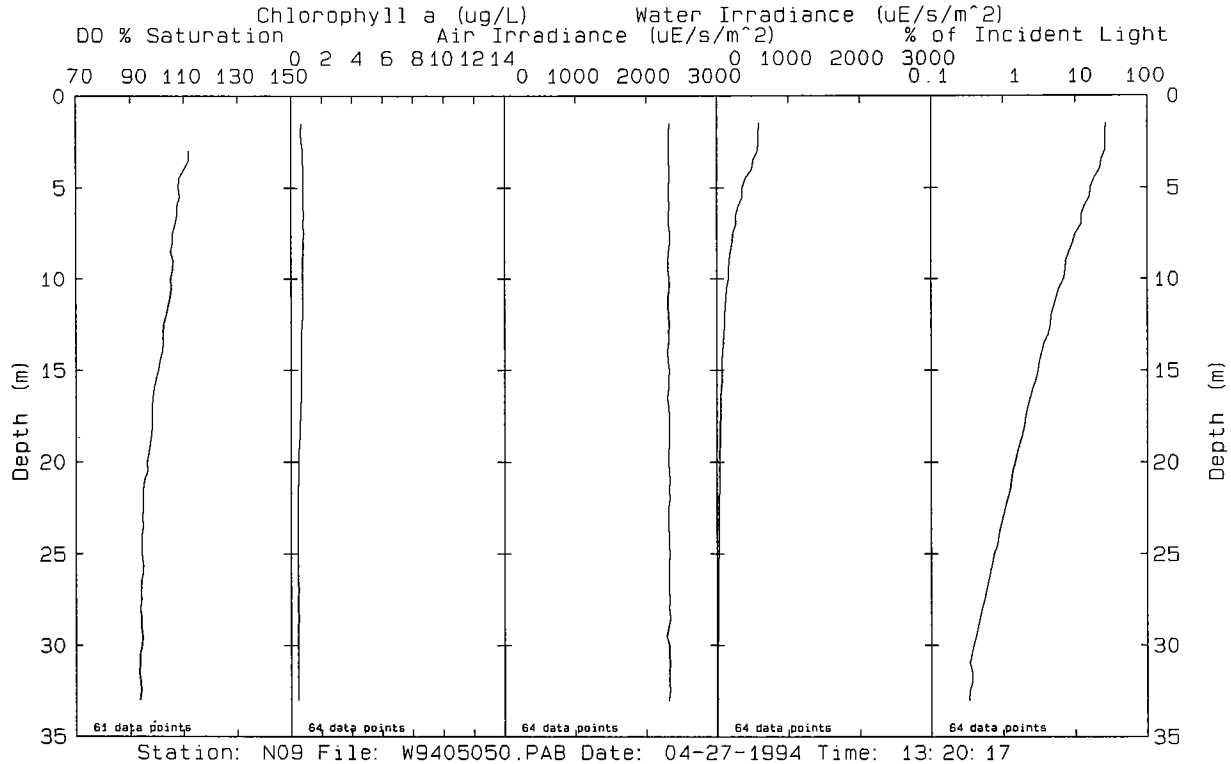
Station: N07P File: W9405041.PAB Date: 04-27-1994 Time: 11:52:09





Station: N08 File: W9405047.PAB Date: 04-27-1994 Time: 12:56:17





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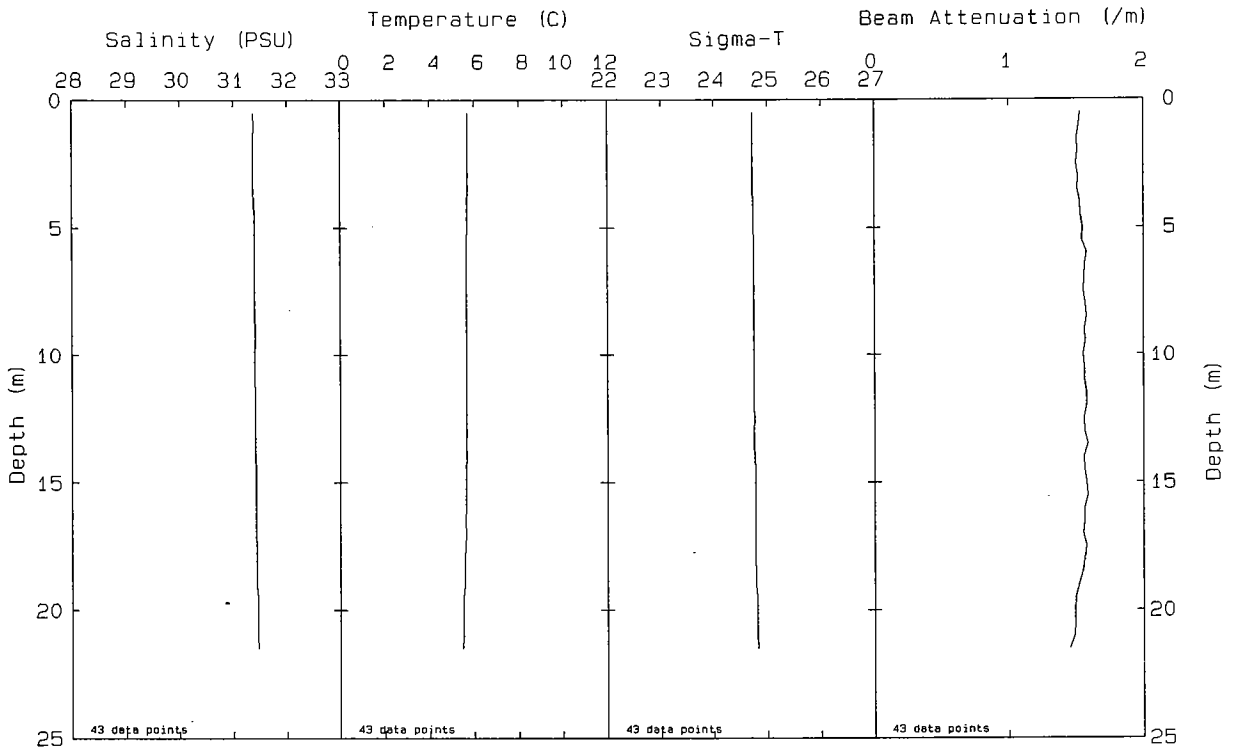

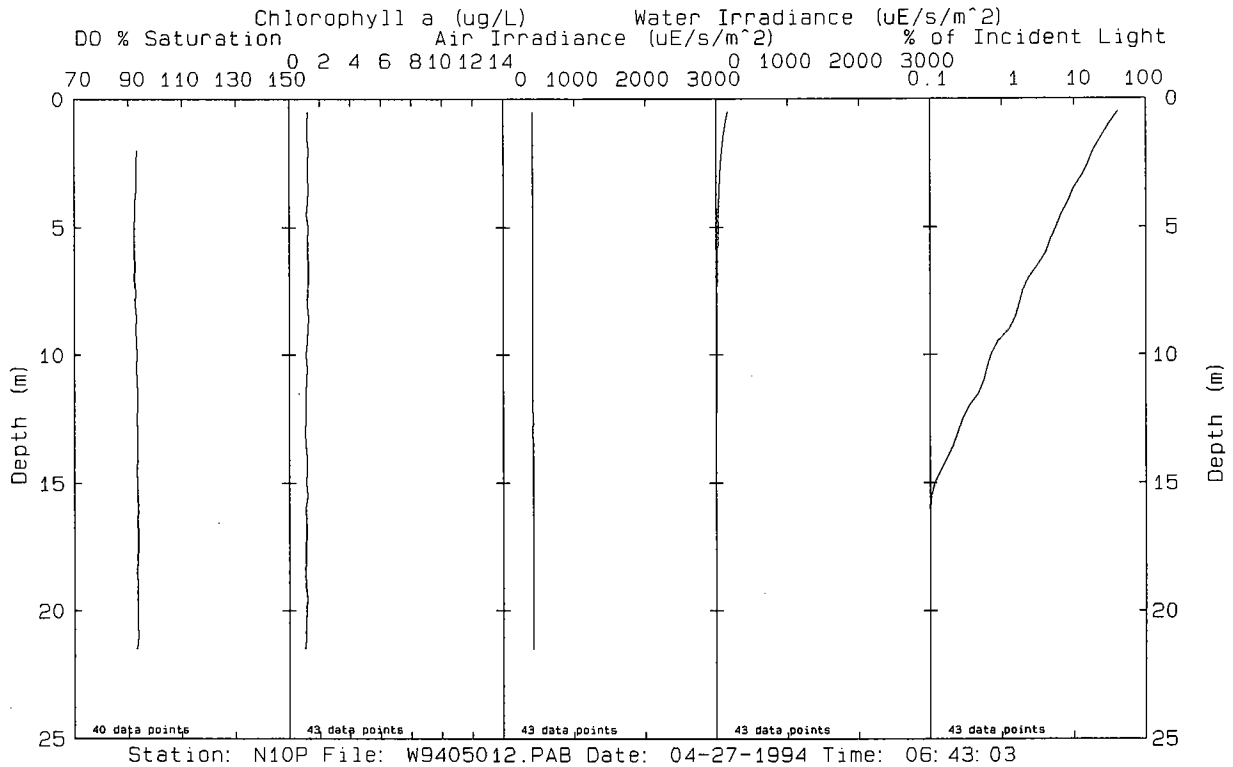

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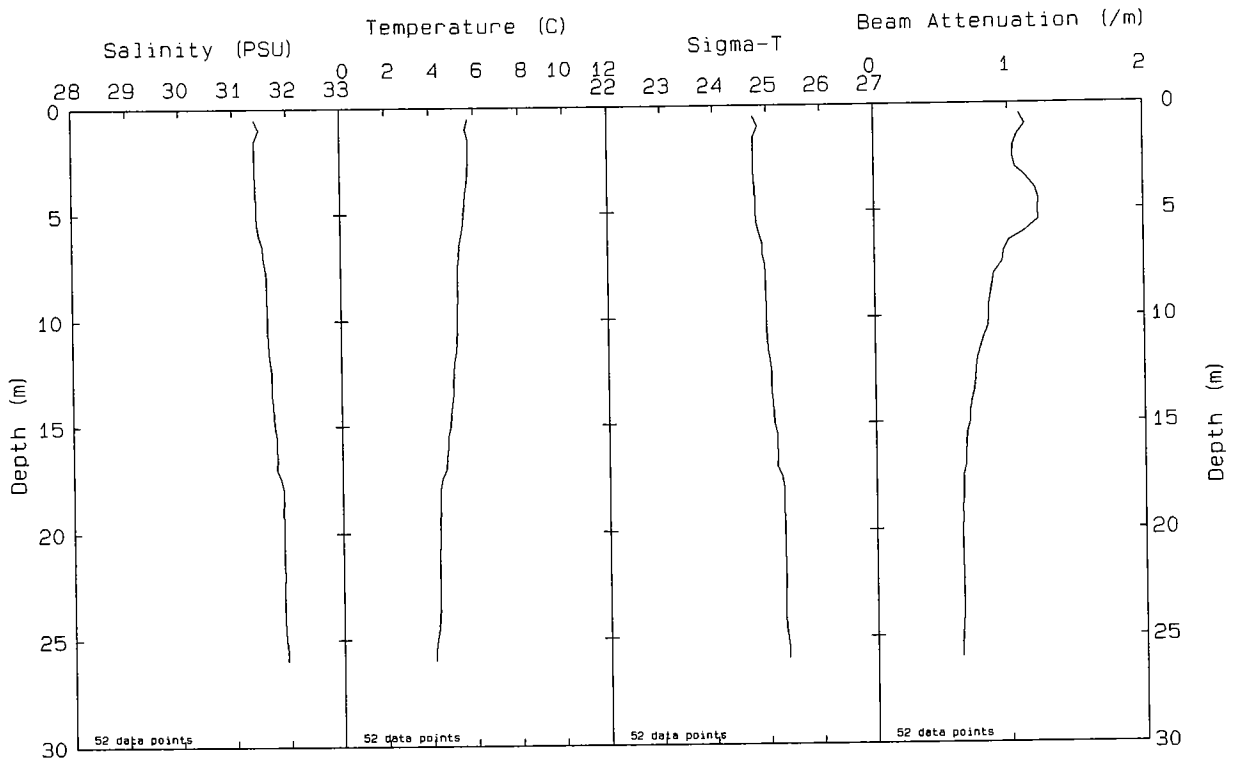
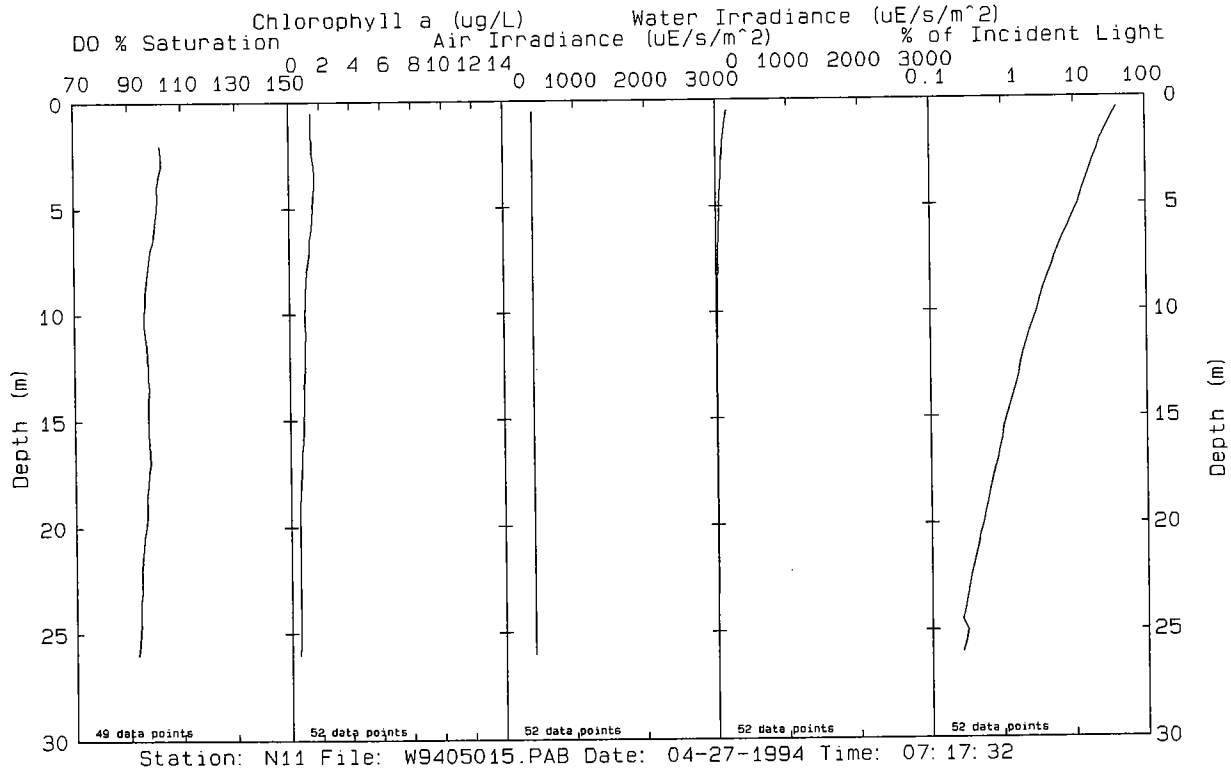
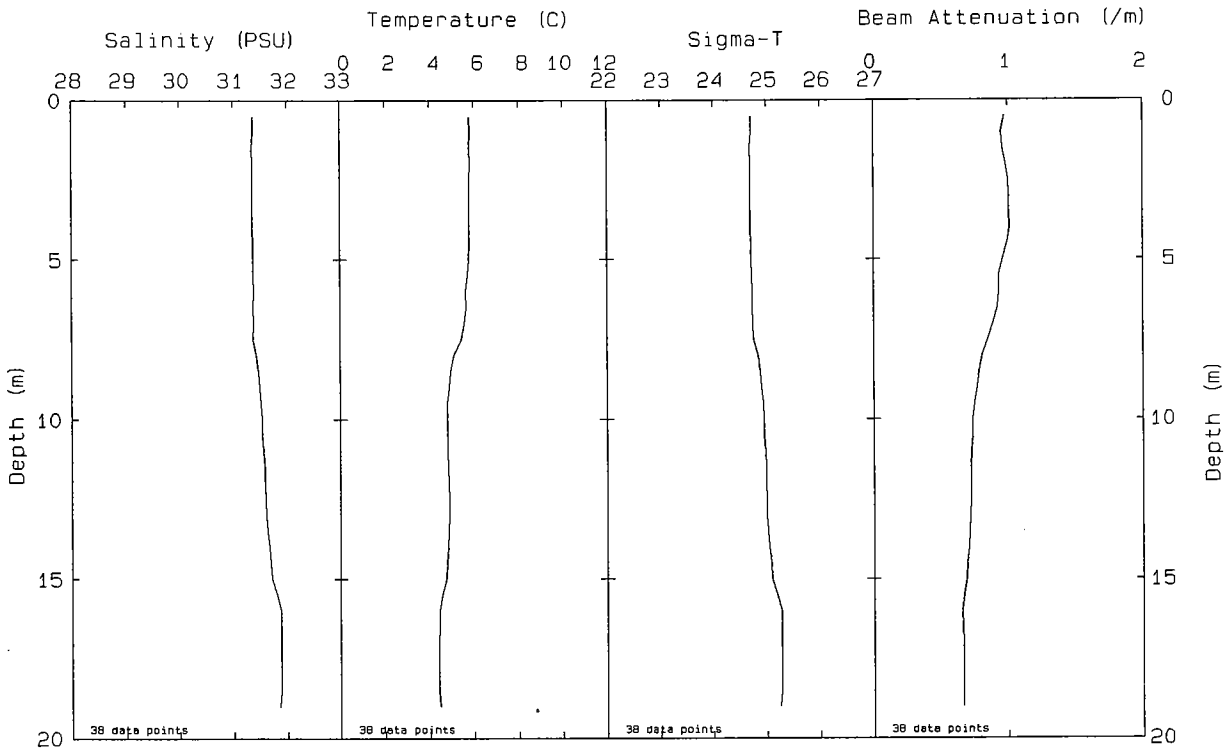
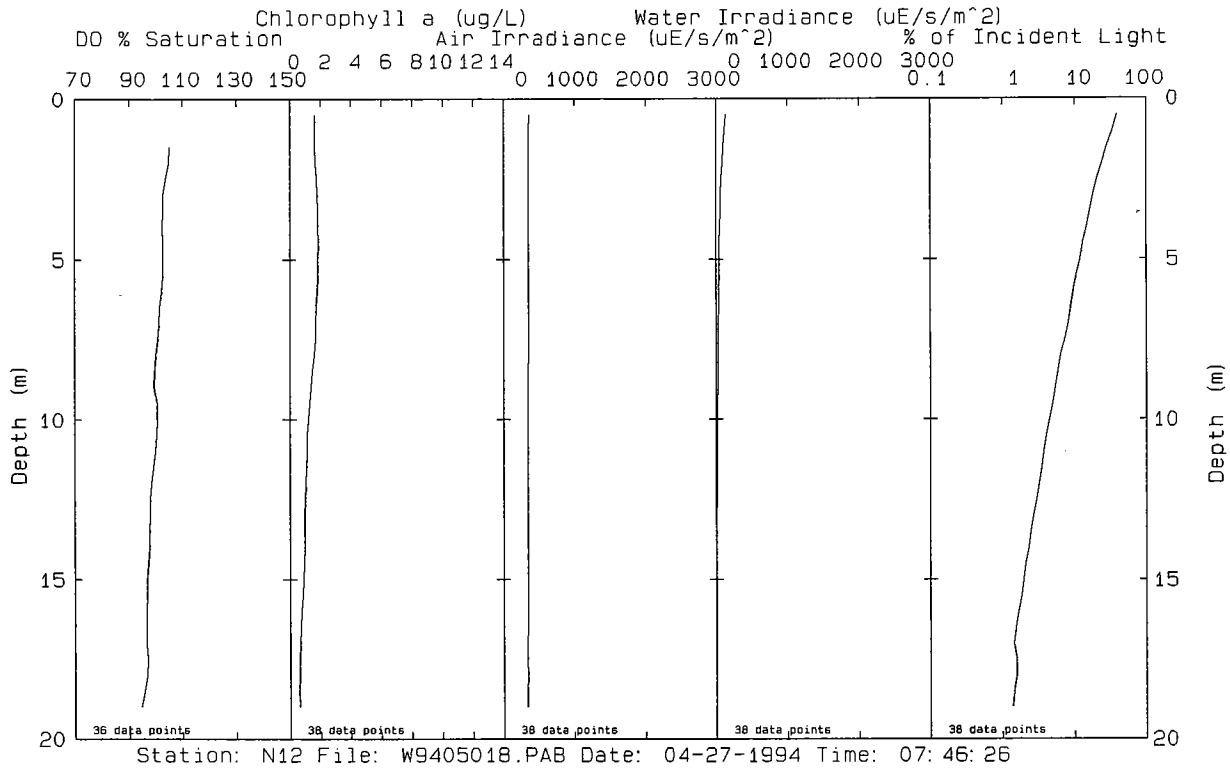


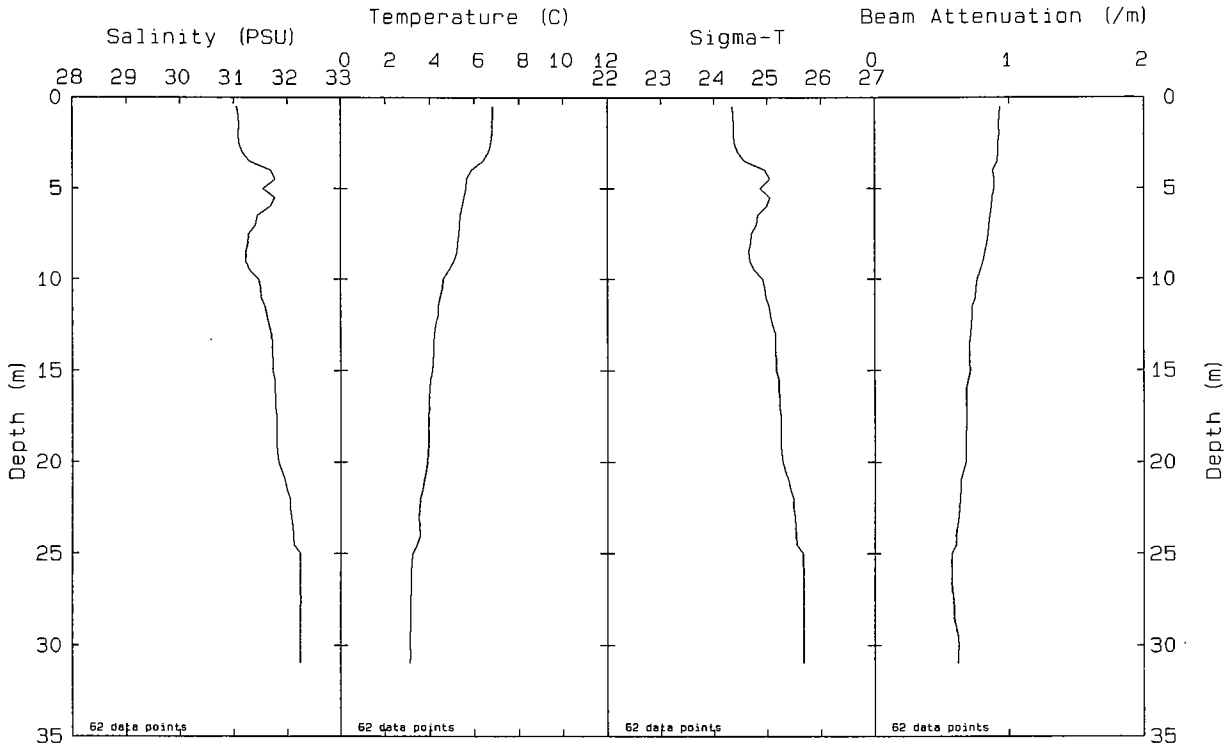


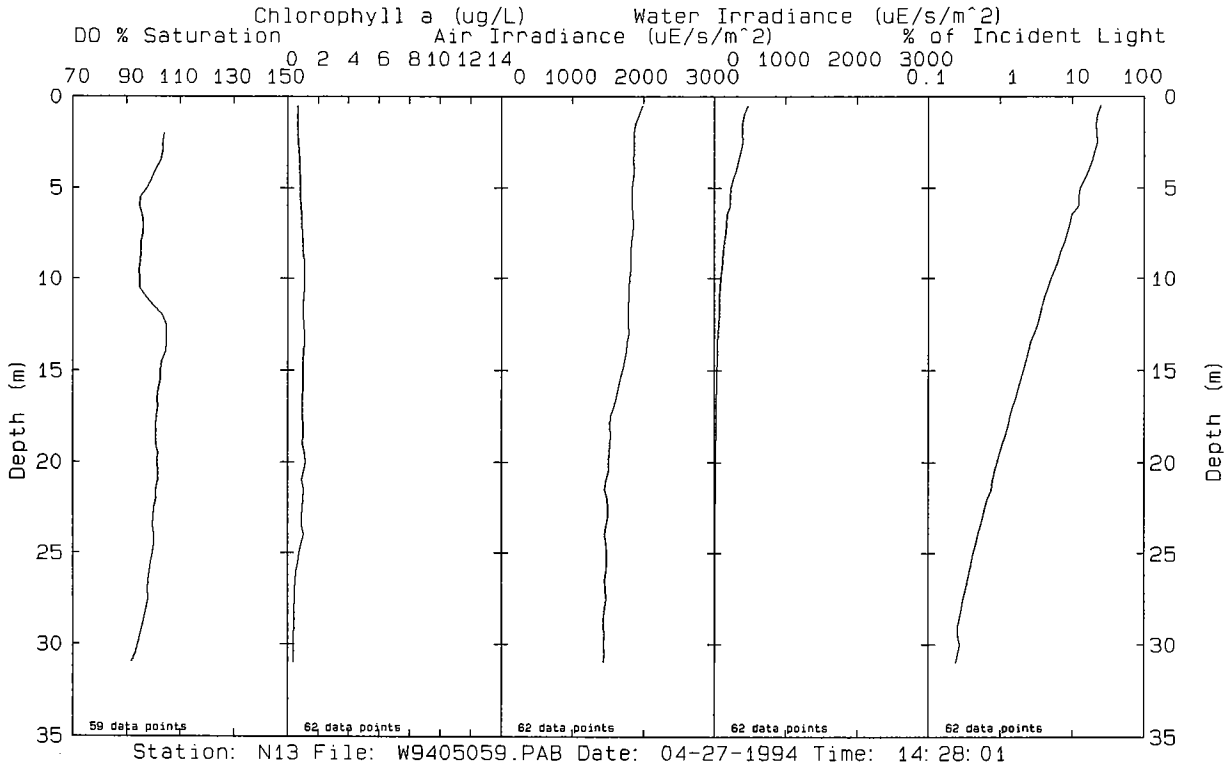
Station: N11 File: W9405015.PAB Date: 04-27-1994 Time: 07:17:32



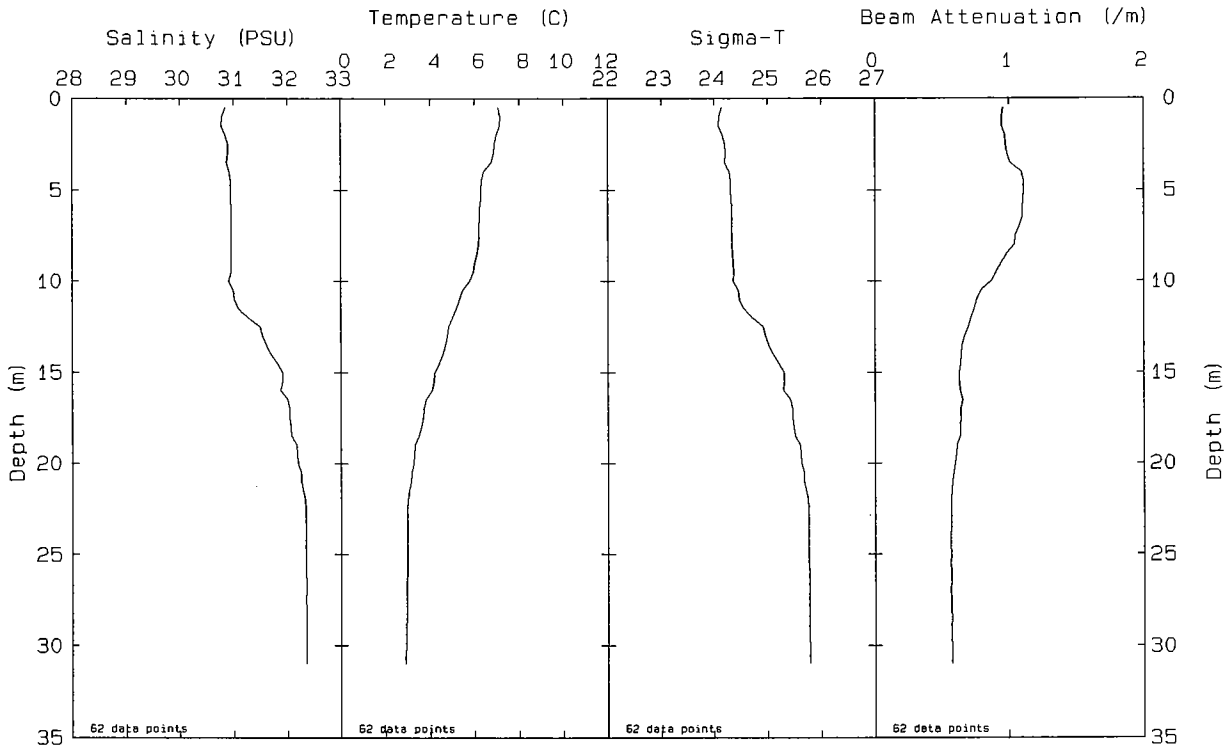


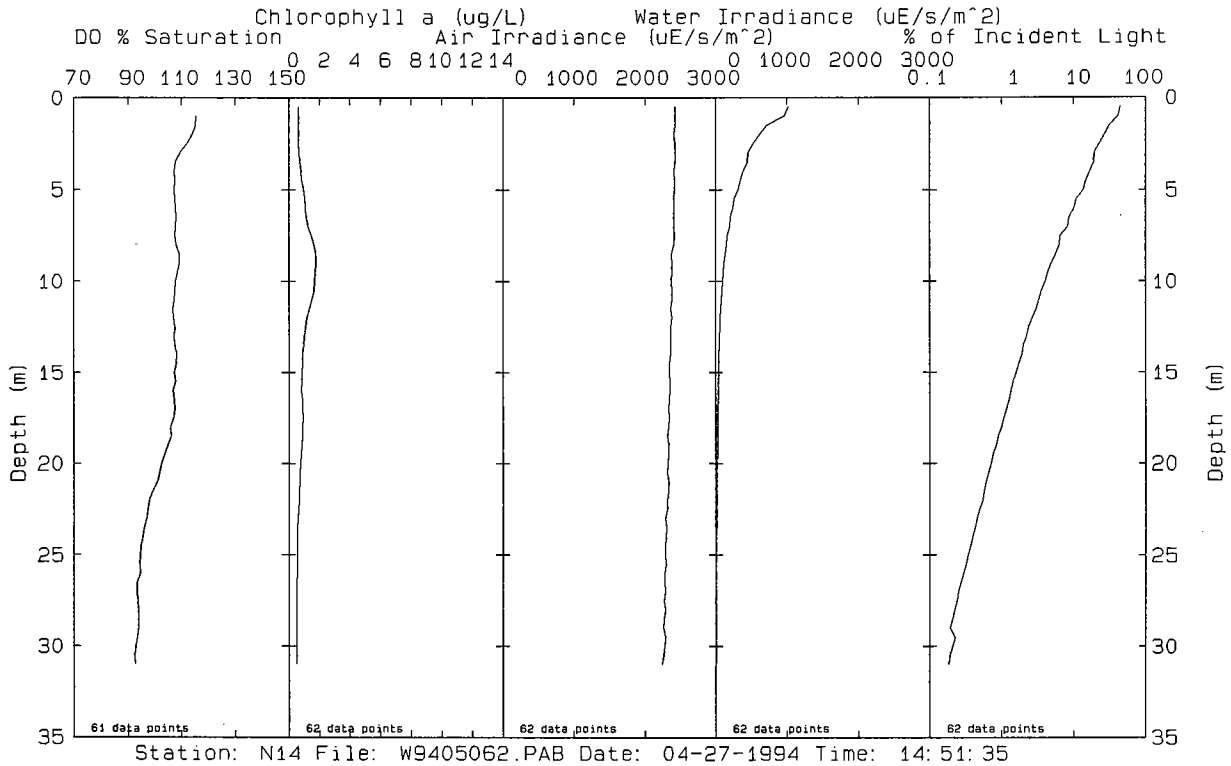
Station: N12 File: W9405018.PAB Date: 04-27-1994 Time: 07:46:26



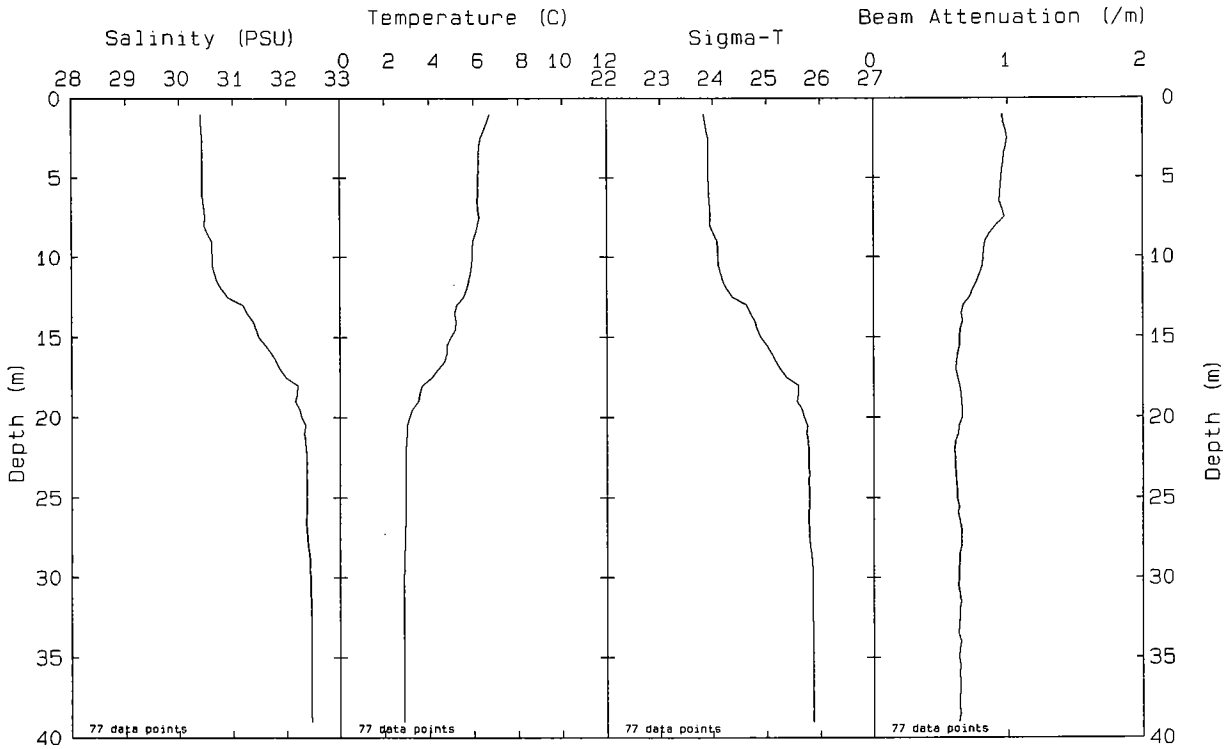


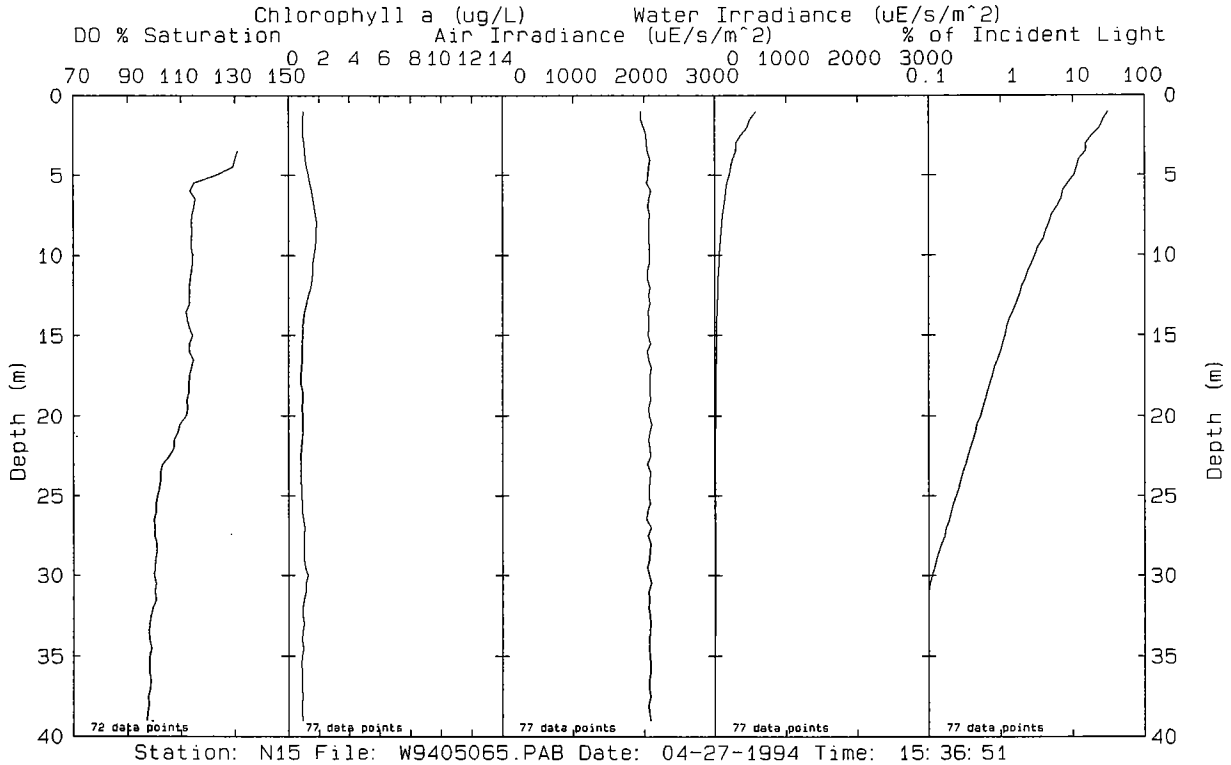
Station: N13 File: W9405059.PAB Date: 04-27-1994 Time: 14:28:01





Station: N14 File: W9405062.PAB Date: 04-27-1994 Time: 14:51:35





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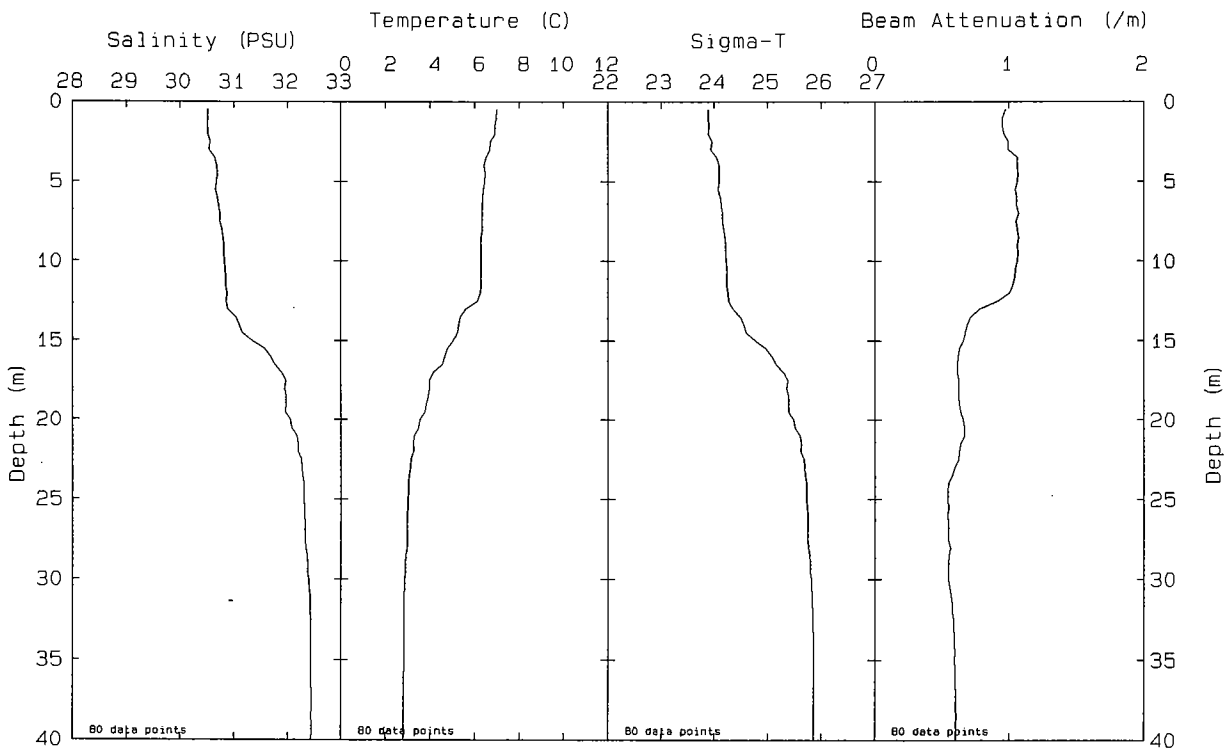

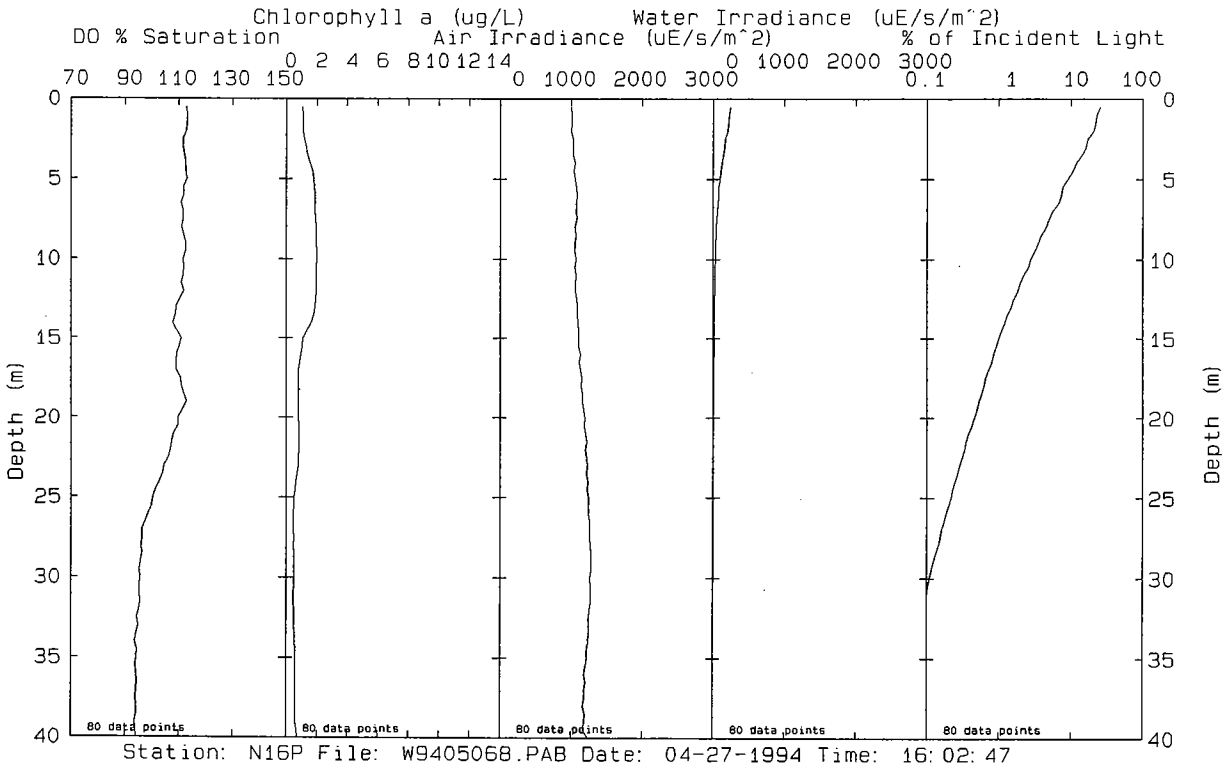

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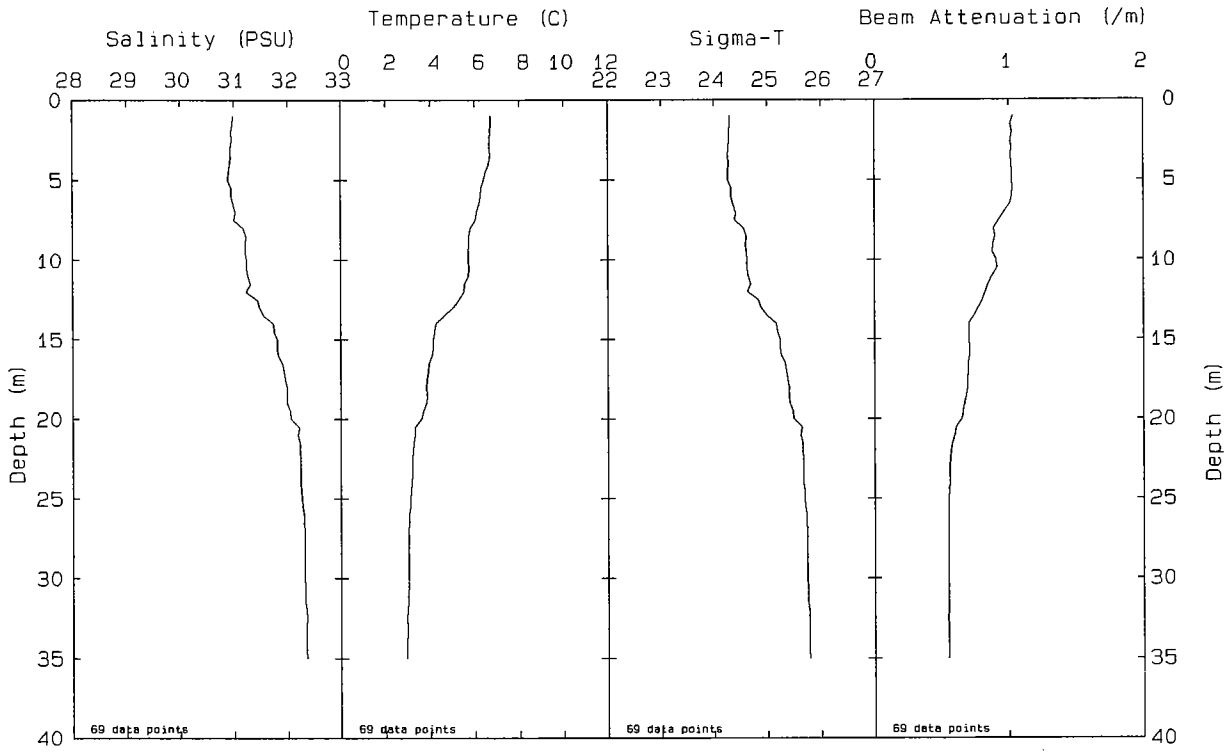

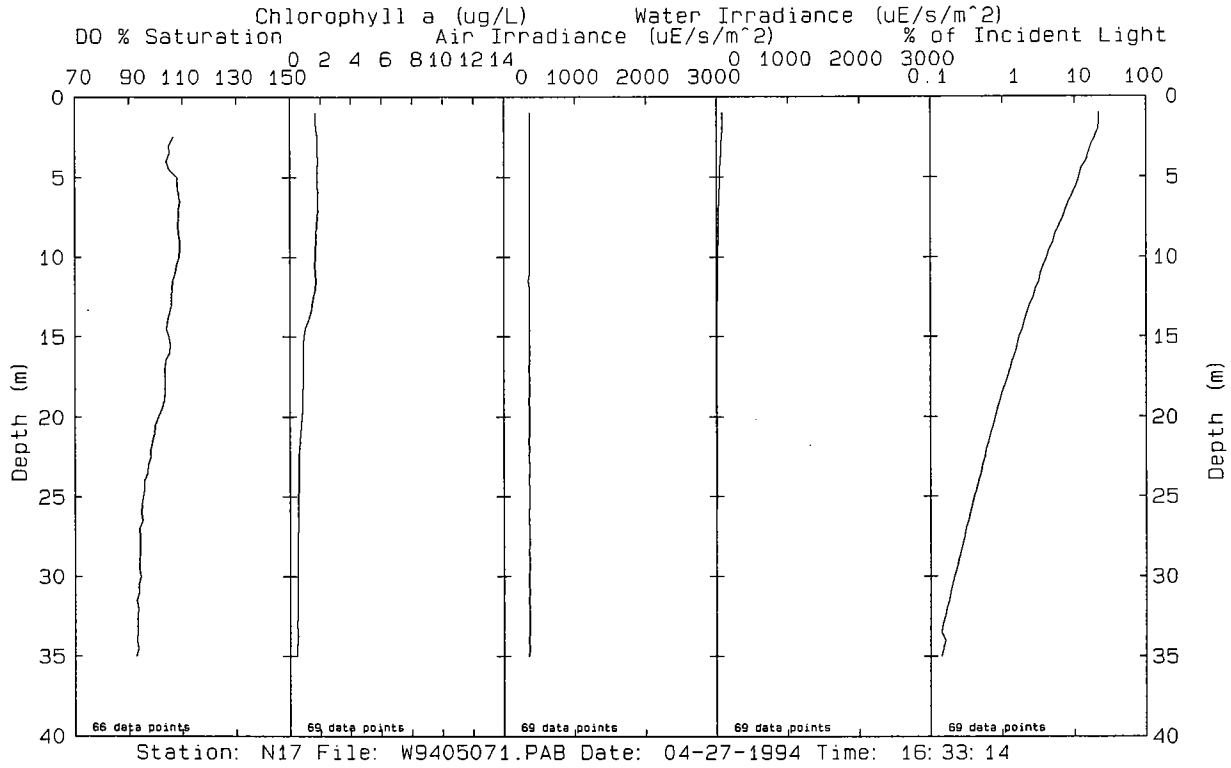

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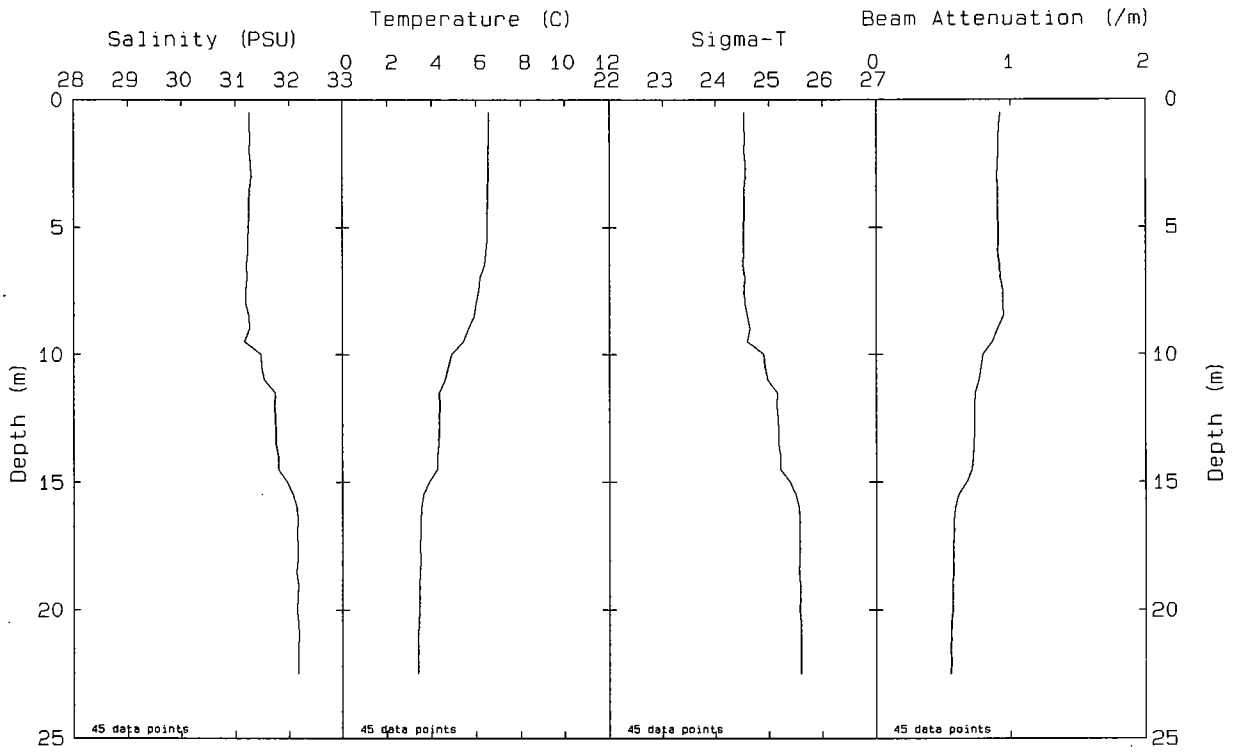
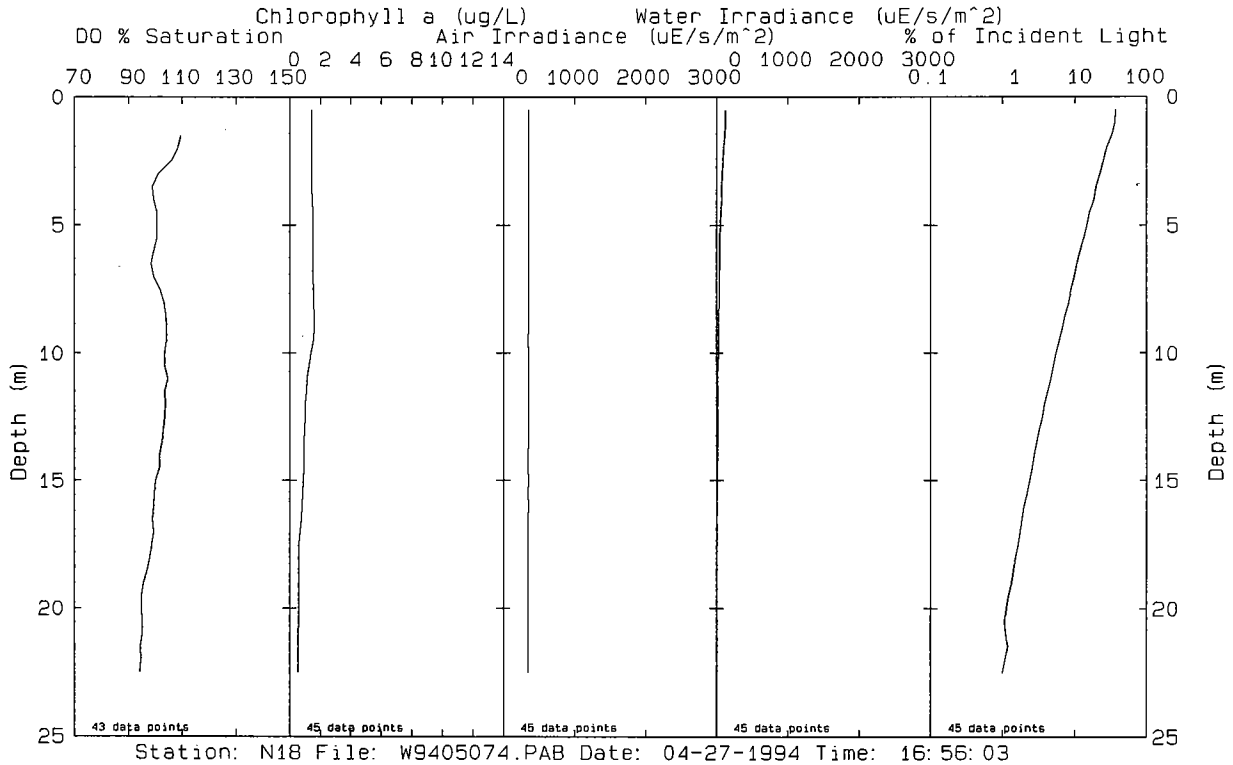
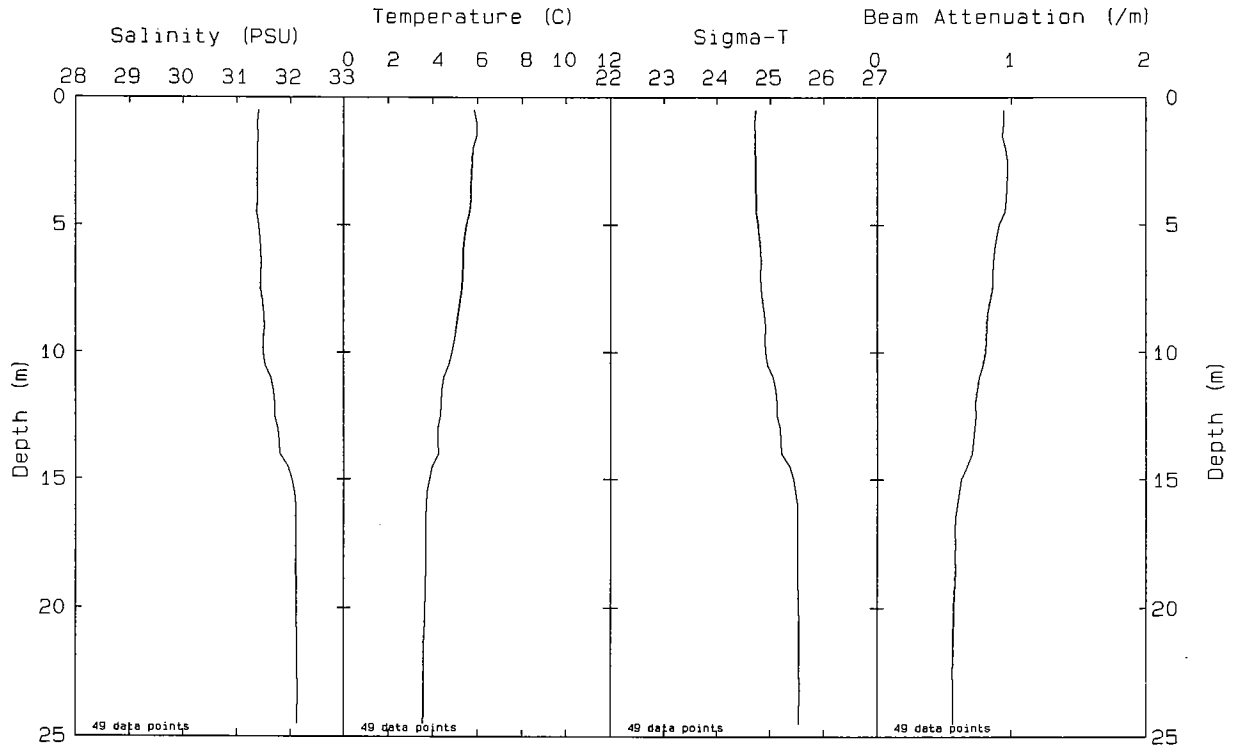
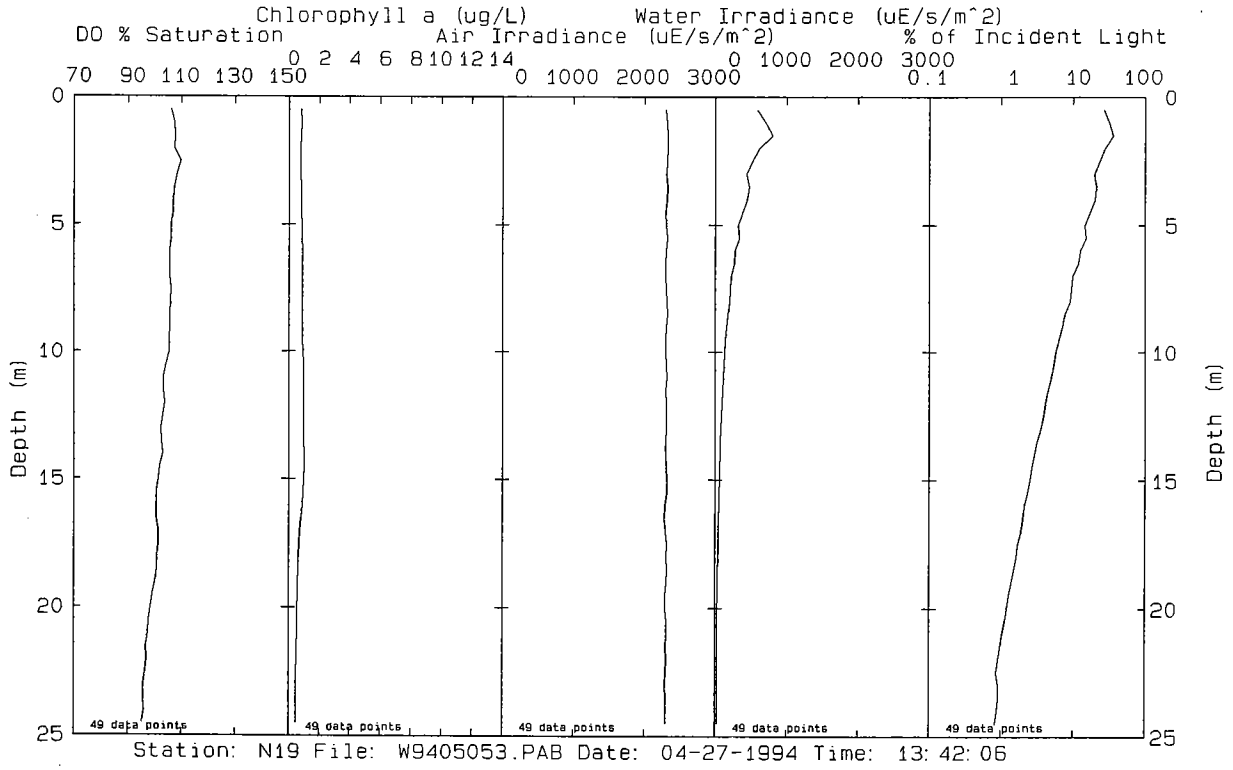




Station: N18 File: W9405074.PAB Date: 04-27-1994 Time: 16:56:03





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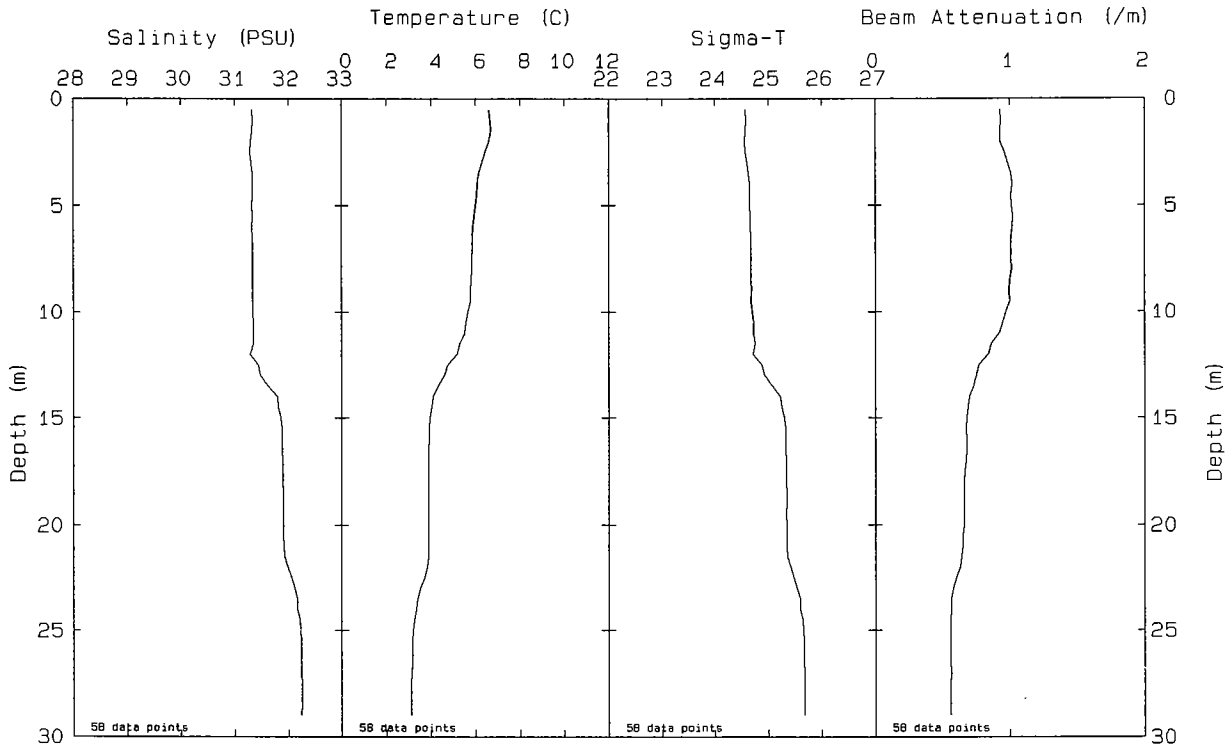

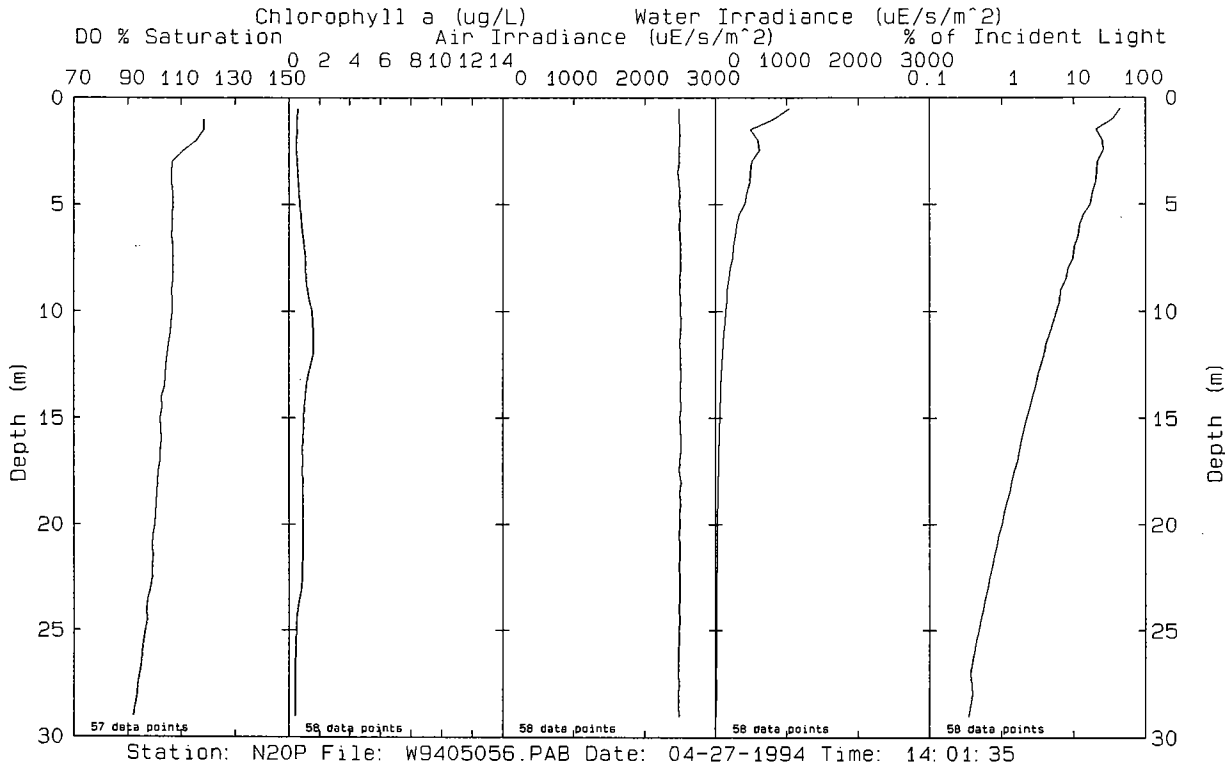

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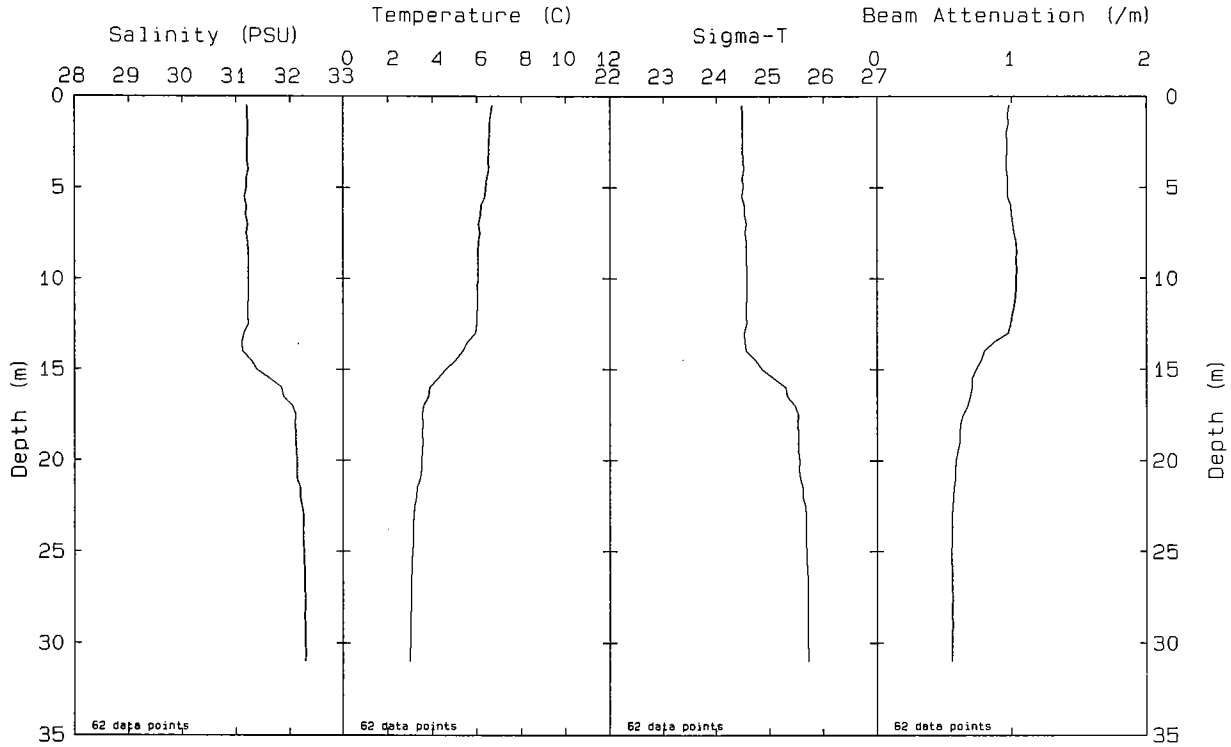

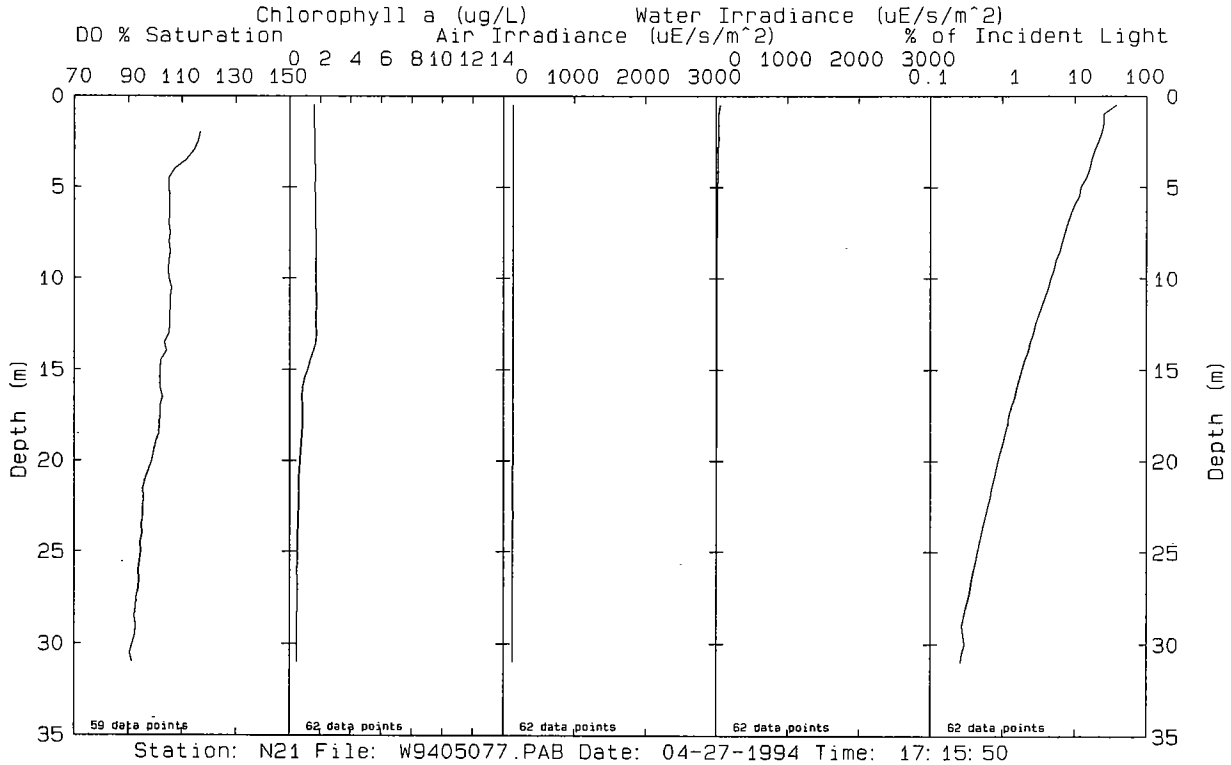

Station: N21 File: W9405077.PAB Date: 04-27-1994 Time: 17:15:50

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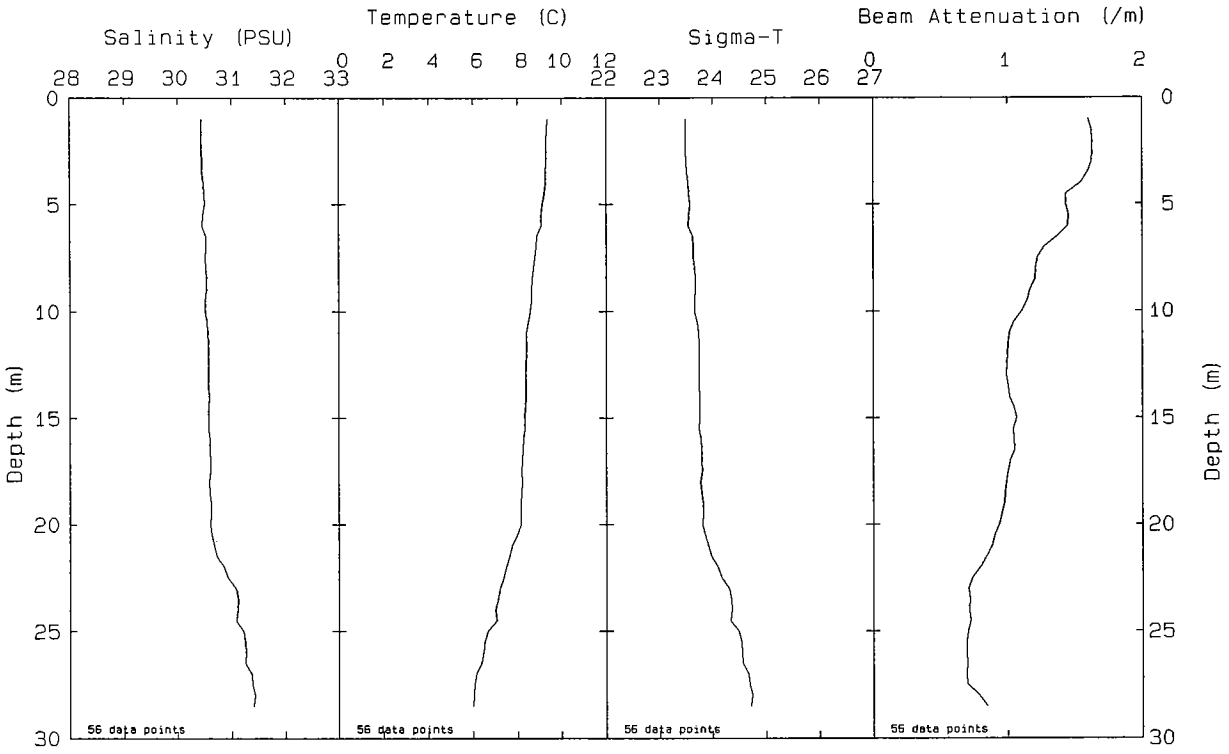
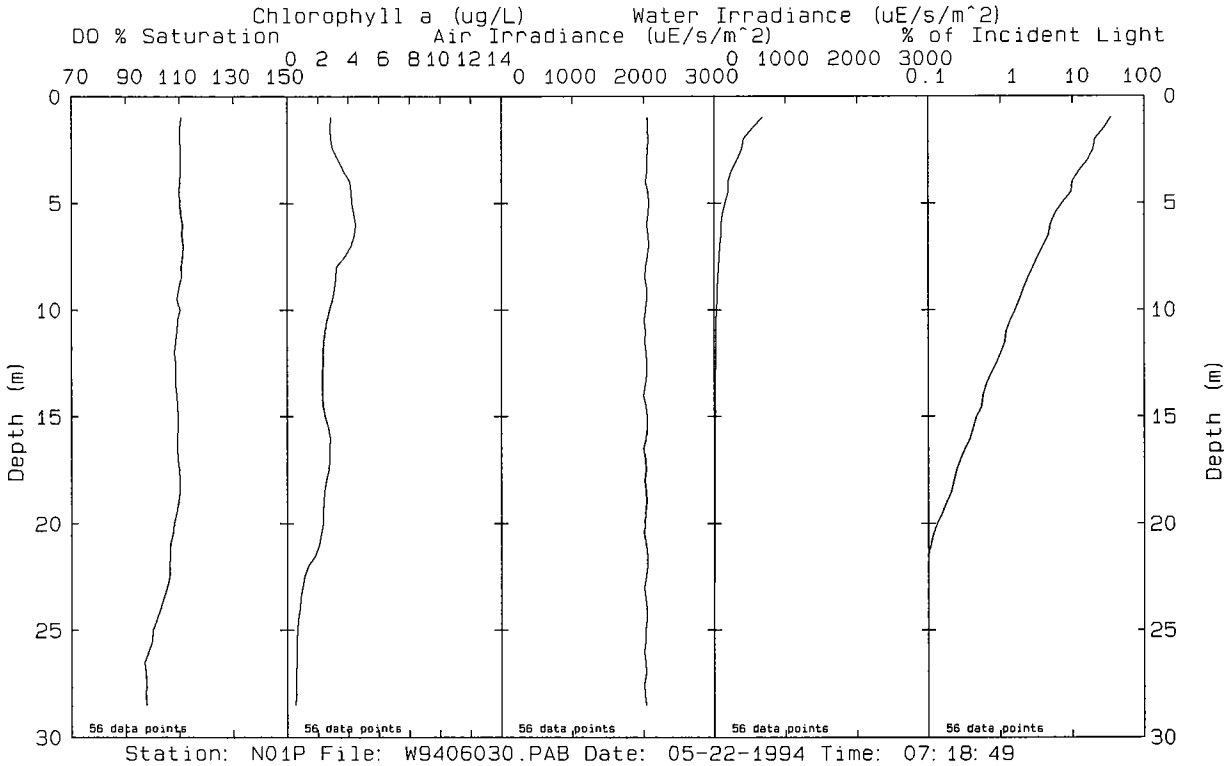
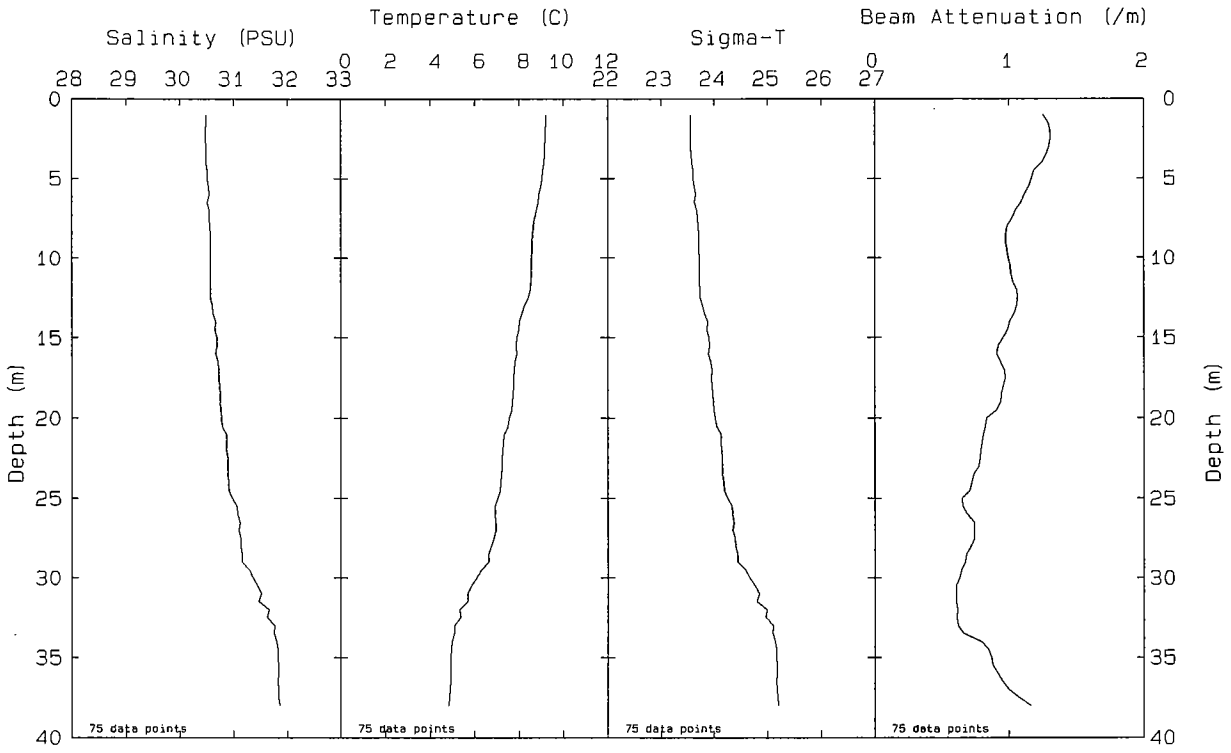
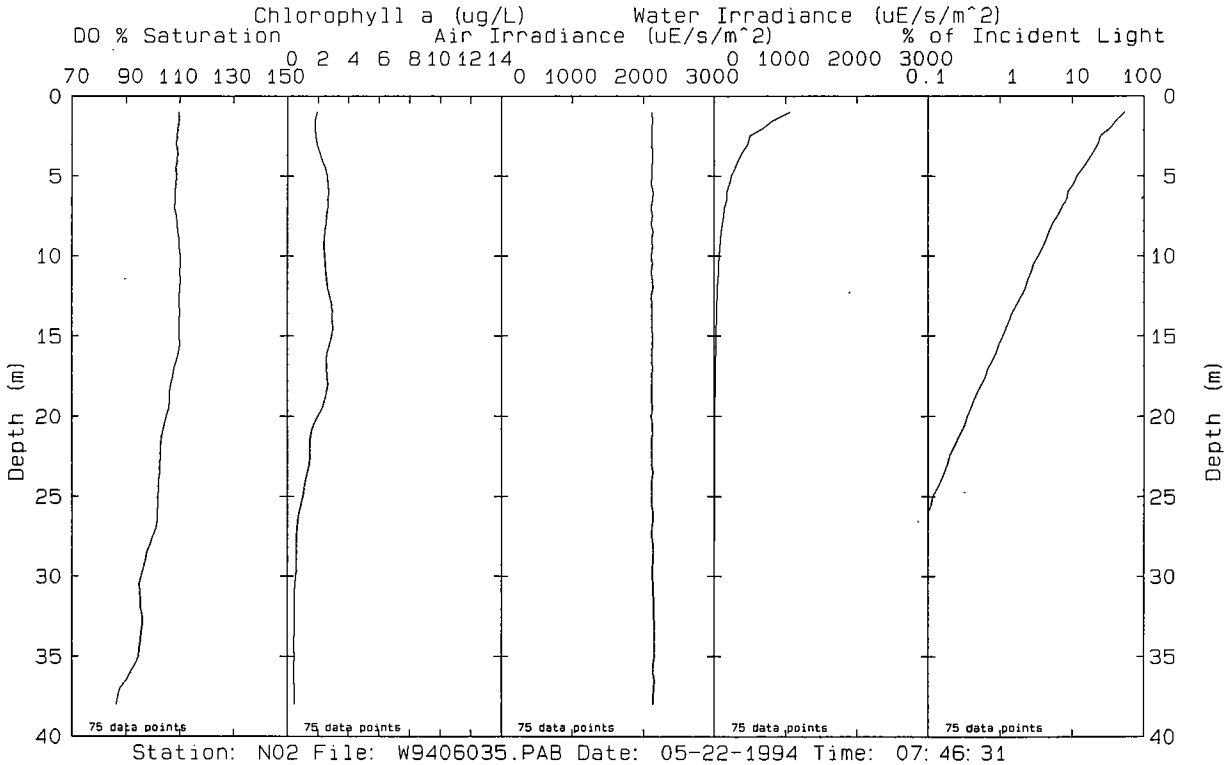




Station: N01P File: W9406030.PAB Date: 05-22-1994 Time: 07:18:49

10-06-1994 12:49:57 Battelle





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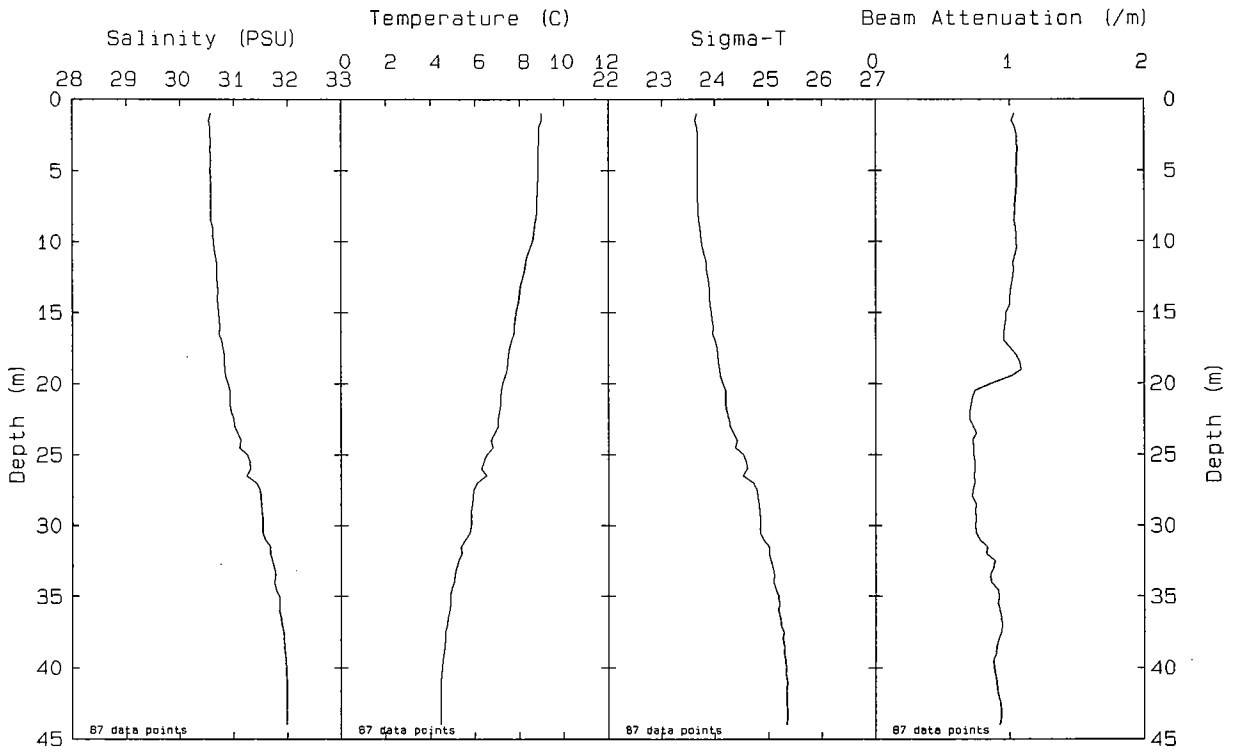
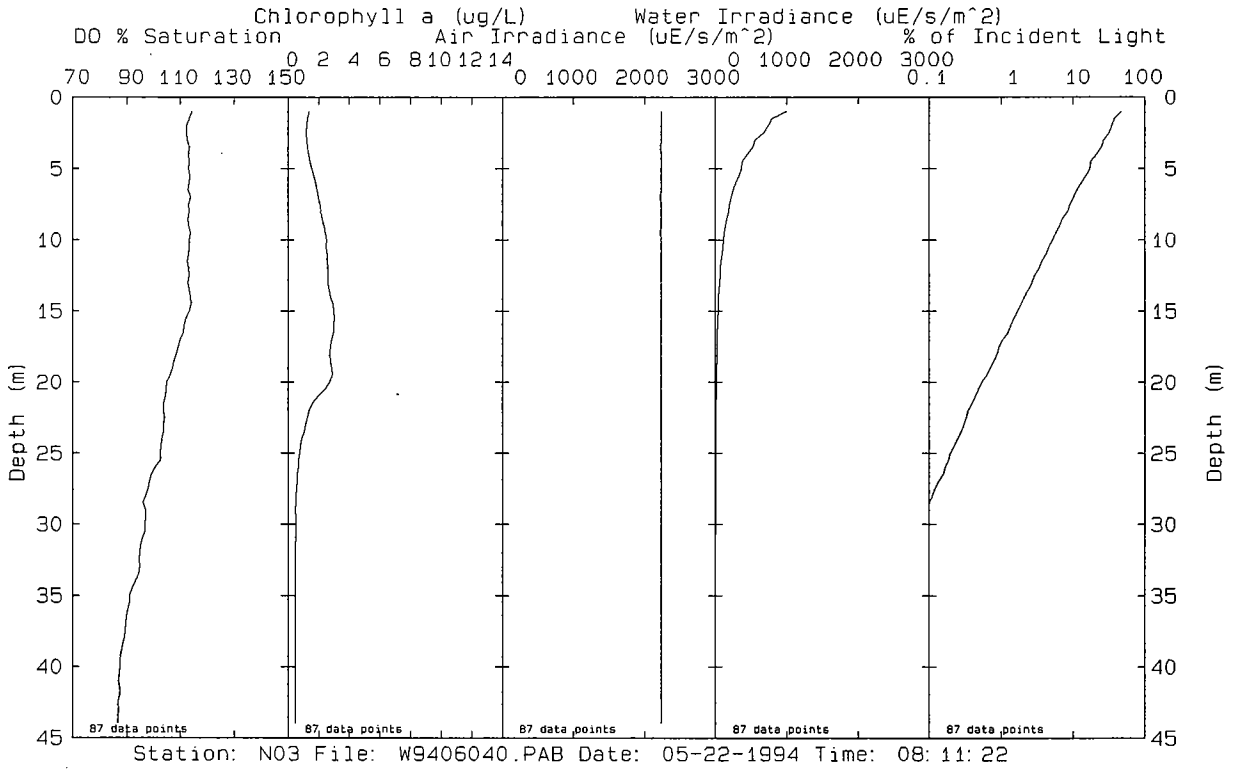
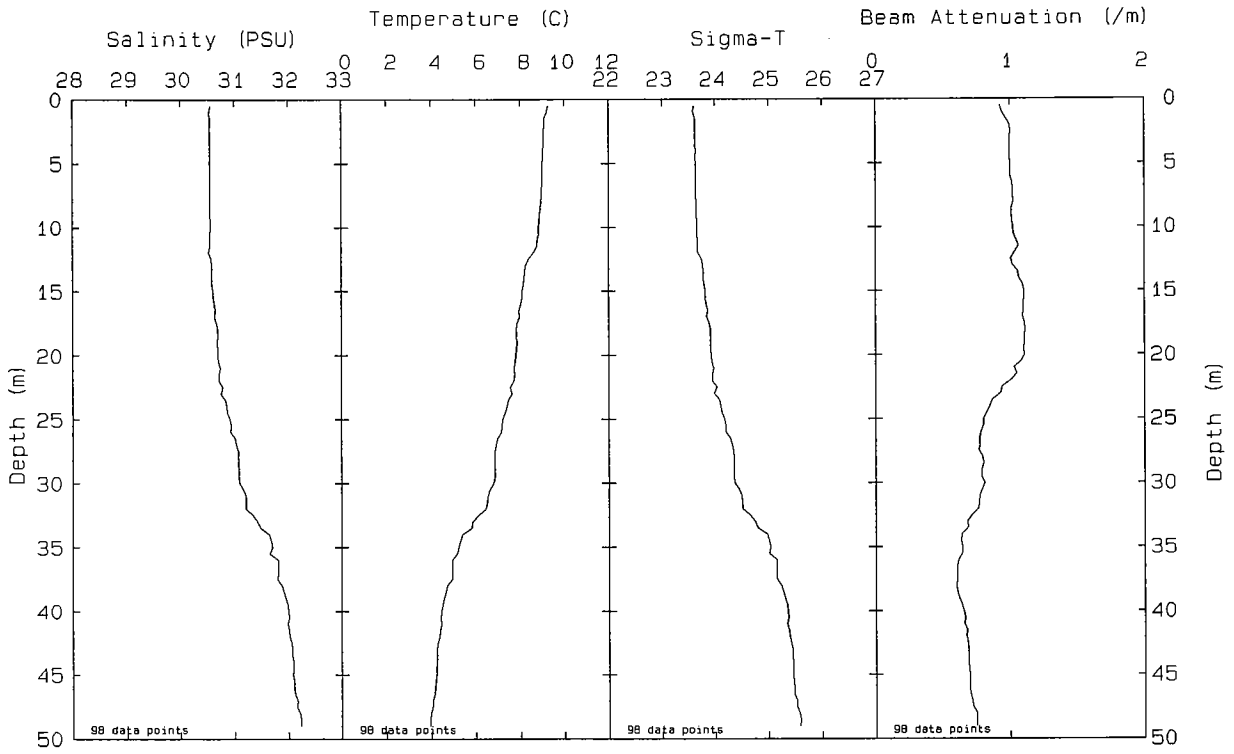
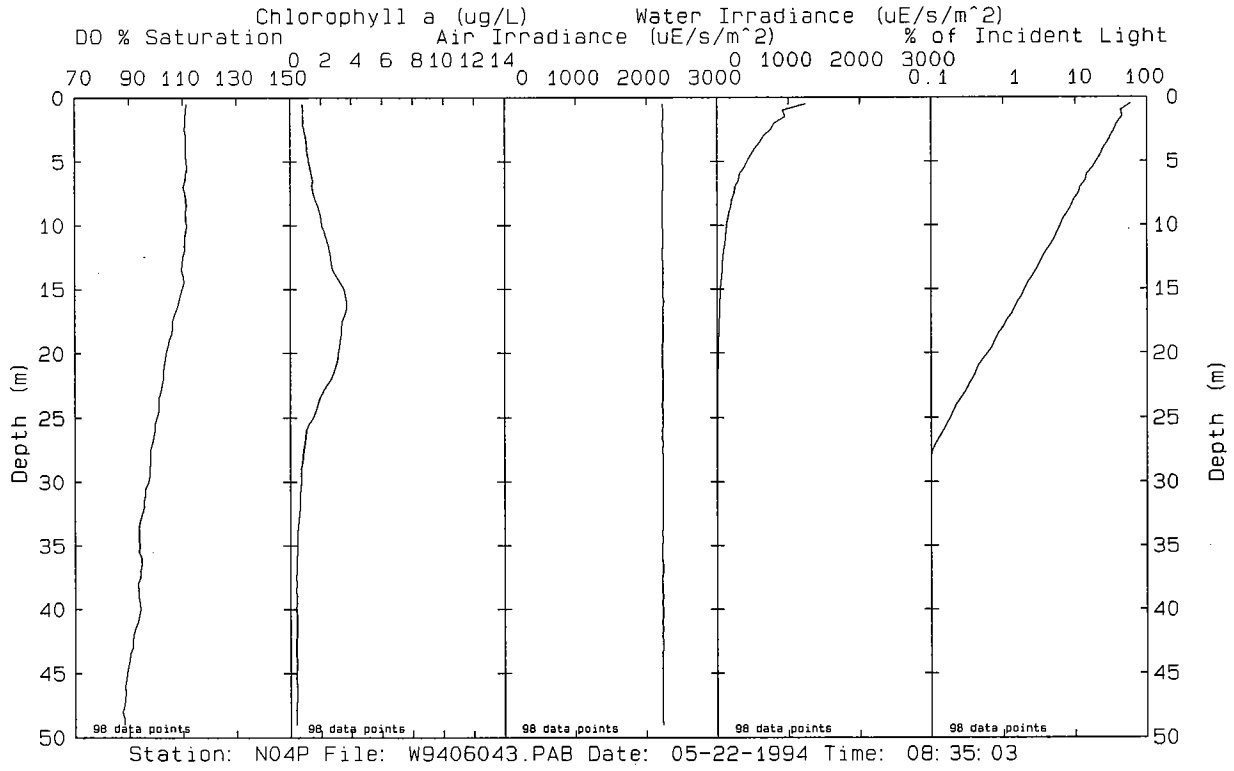


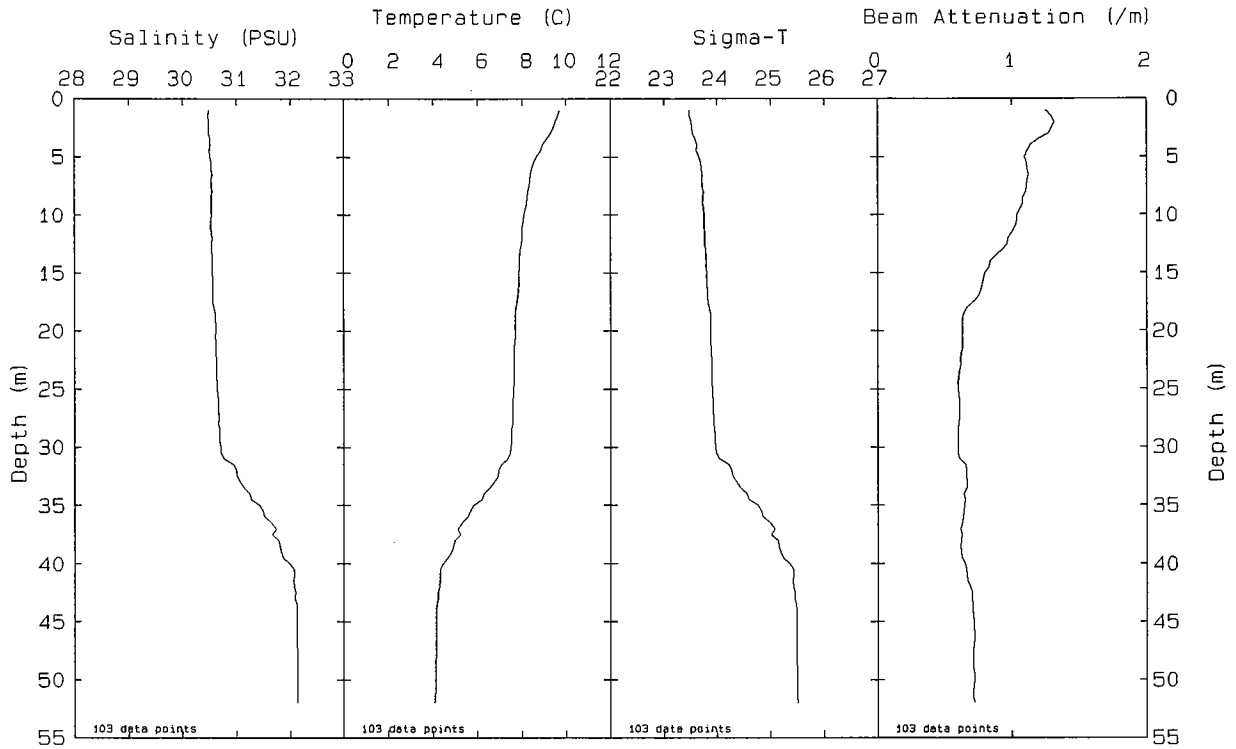


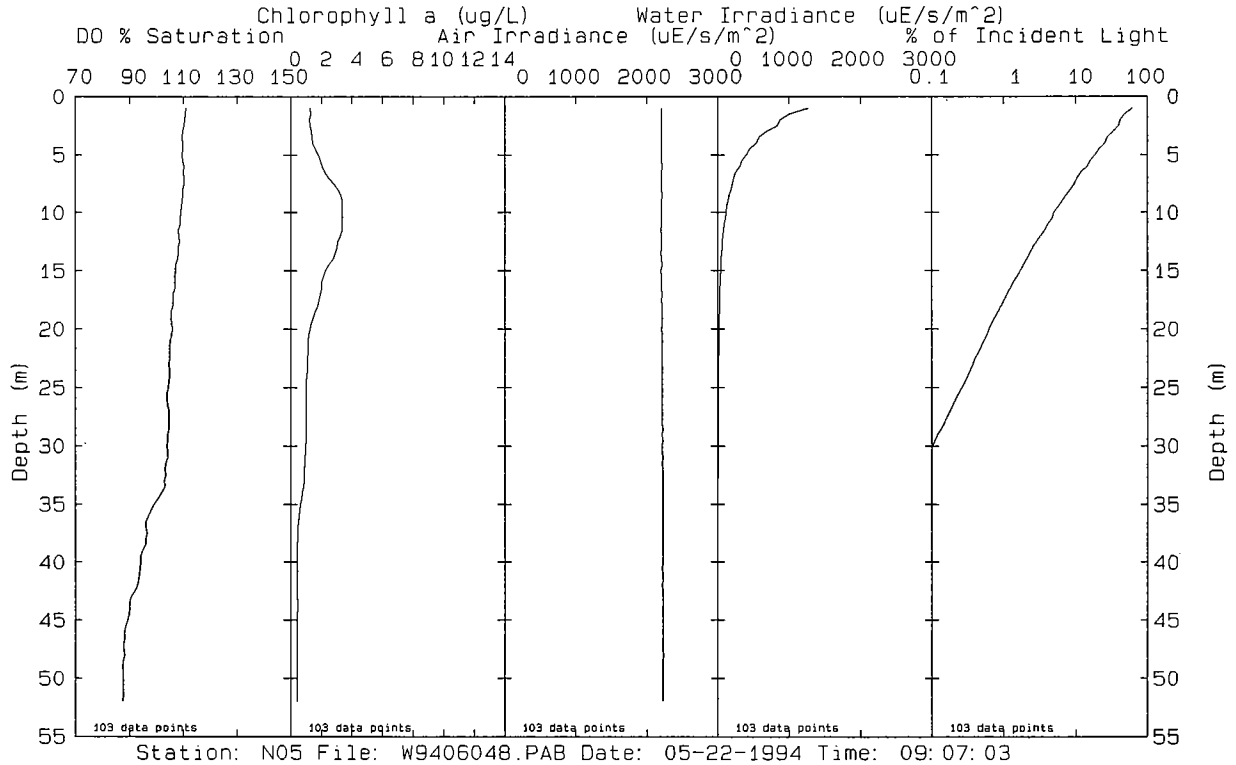
Station: N03 File: W9406040.PAB Date: 05-22-1994 Time: 08:11:22



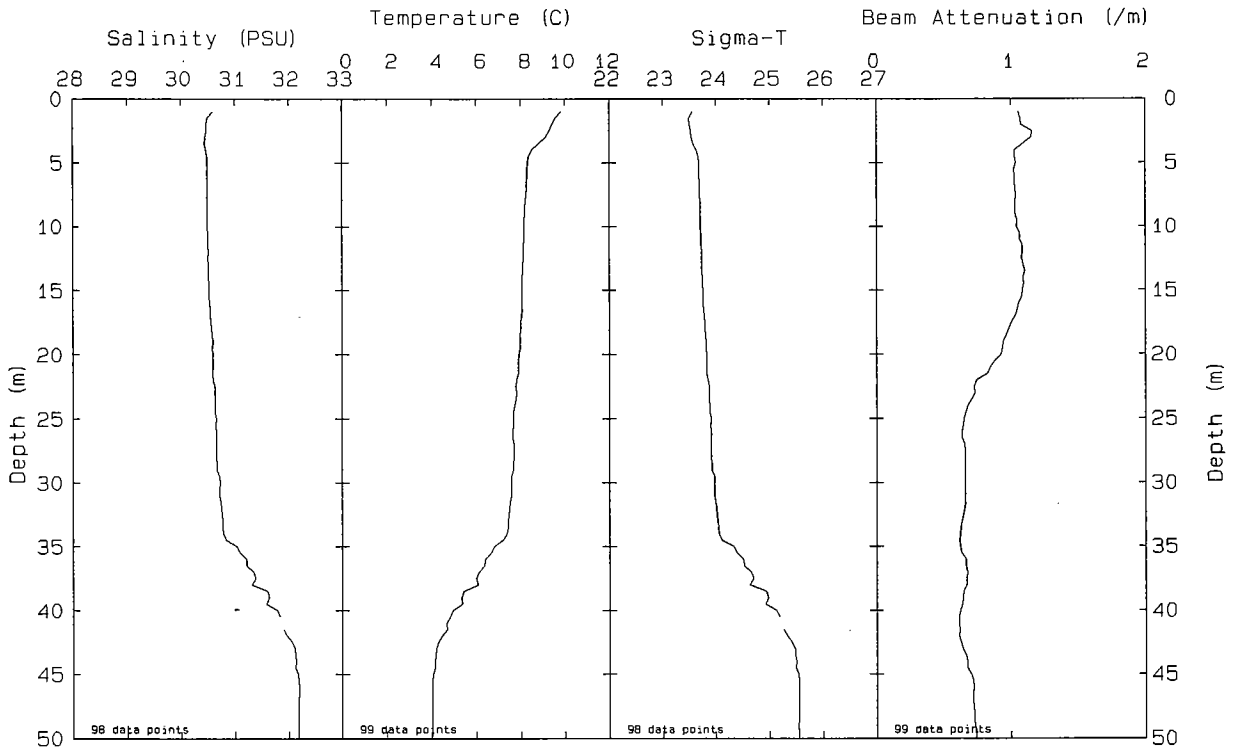


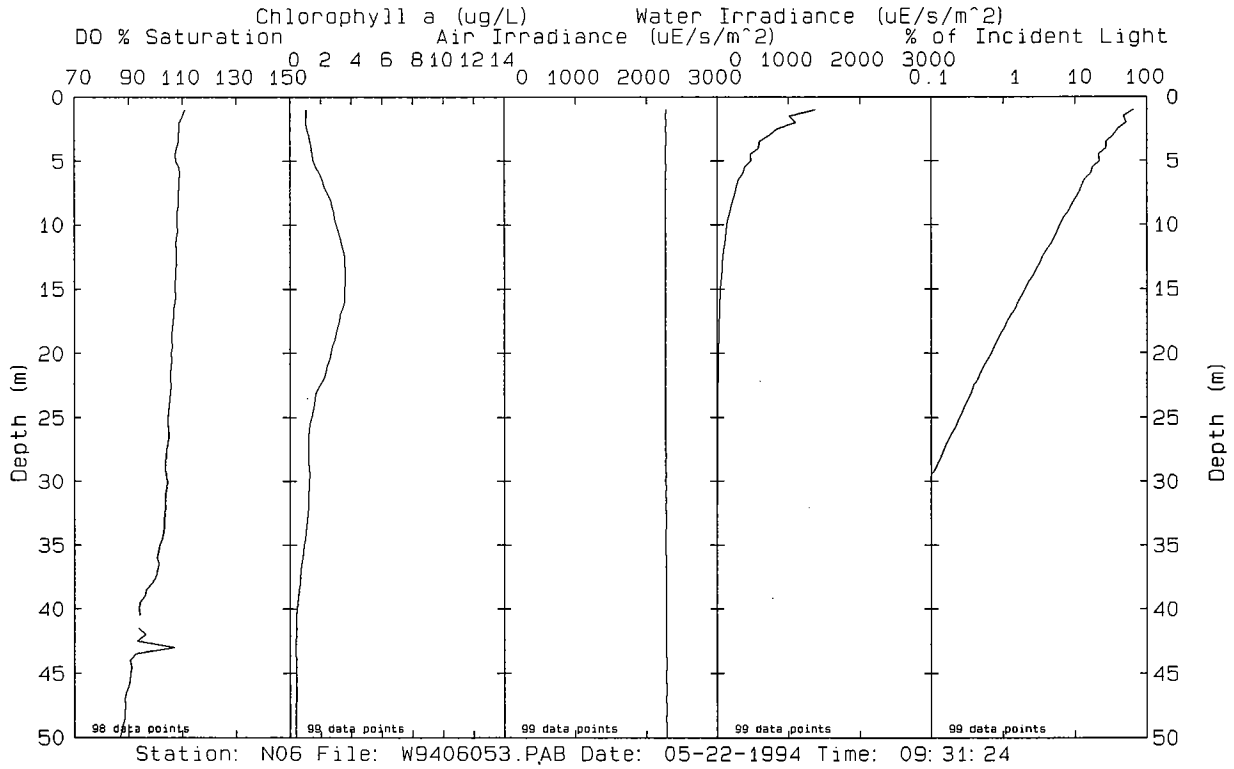
Station: N04P File: W9406043.PAB Date: 05-22-1994 Time: 08:35:03



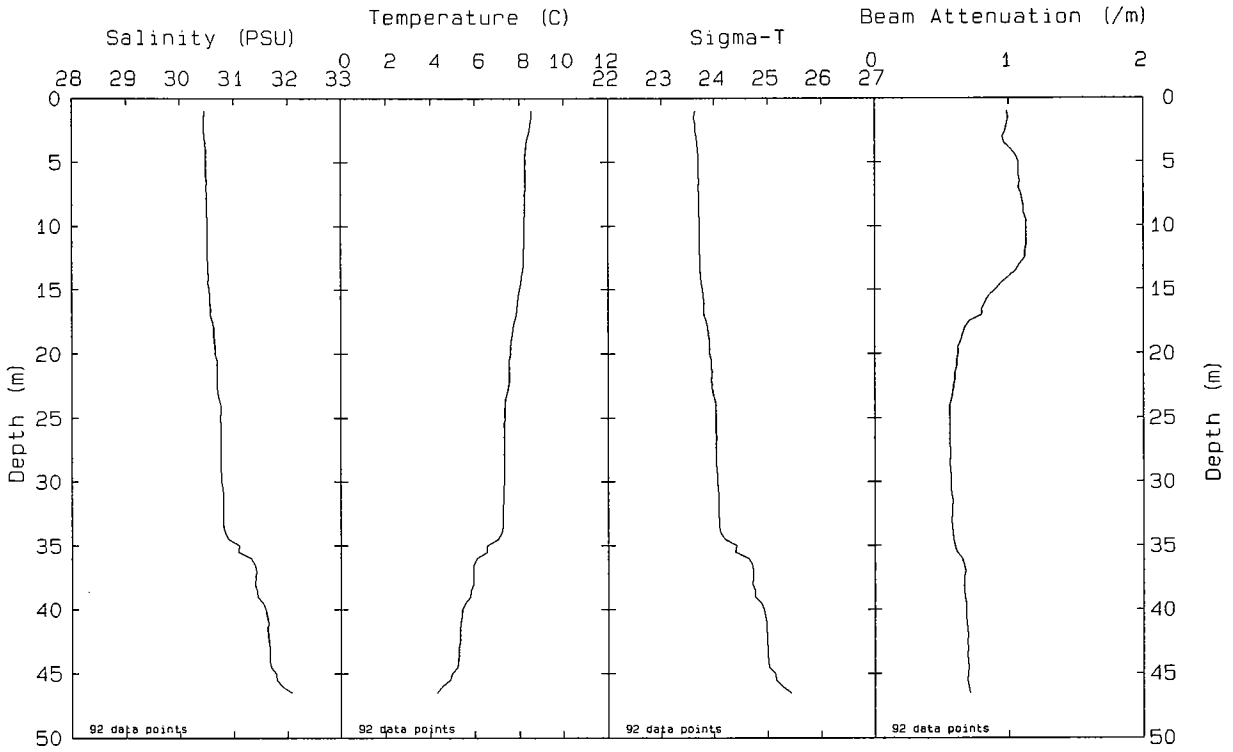


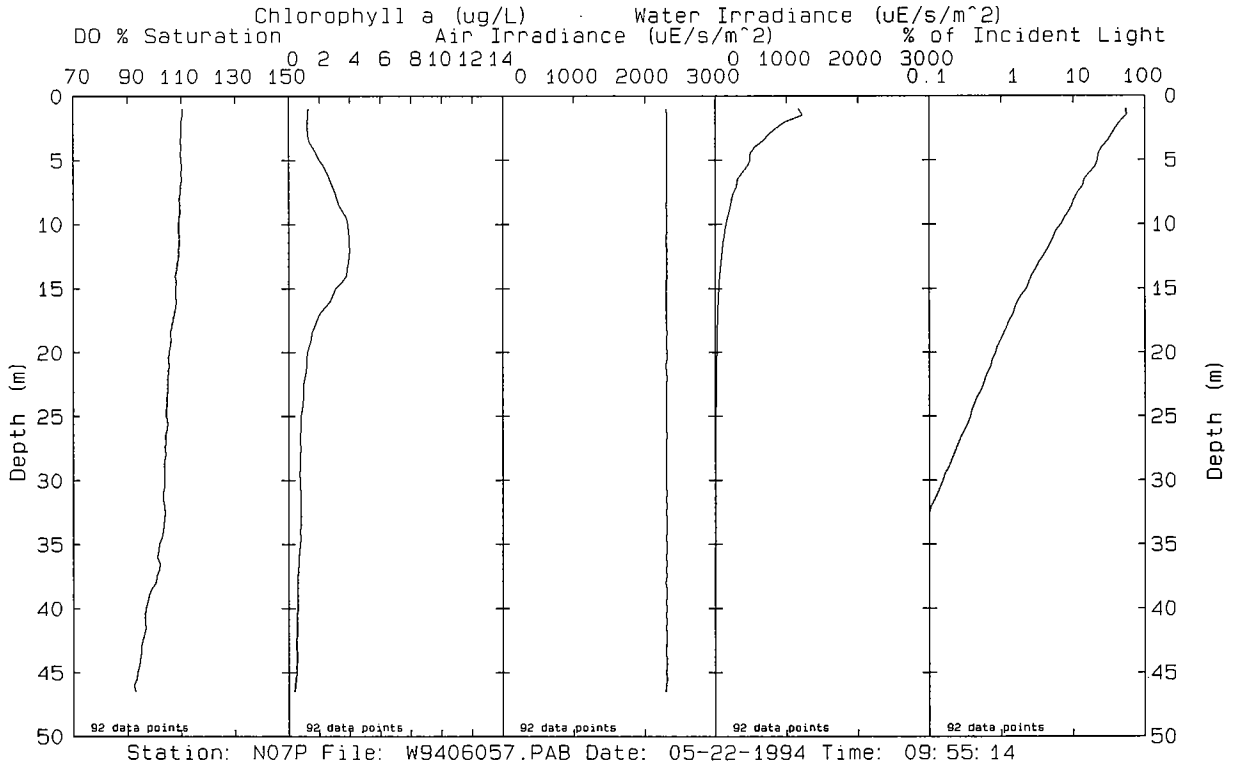
Station: N05 File: W9406048.PAB Date: 05-22-1994 Time: 09:07:03





Station: N06 File: W9406053.PAB Date: 05-22-1994 Time: 09:31:24





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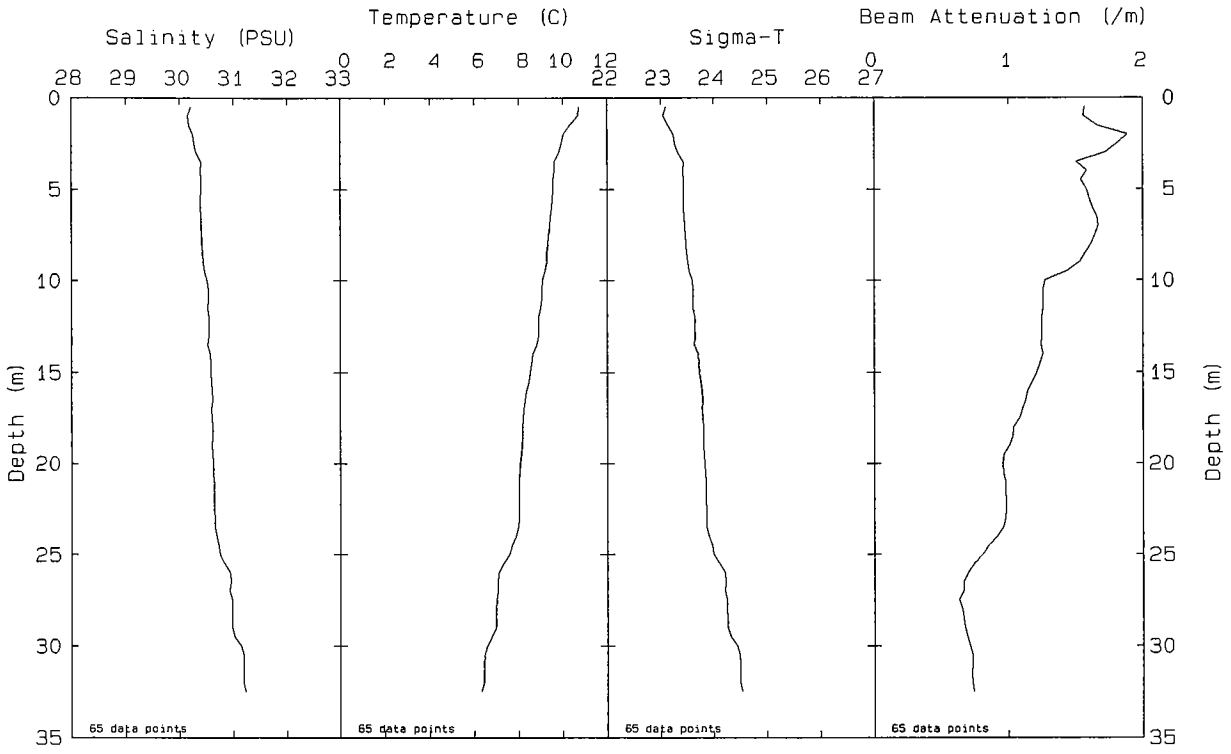

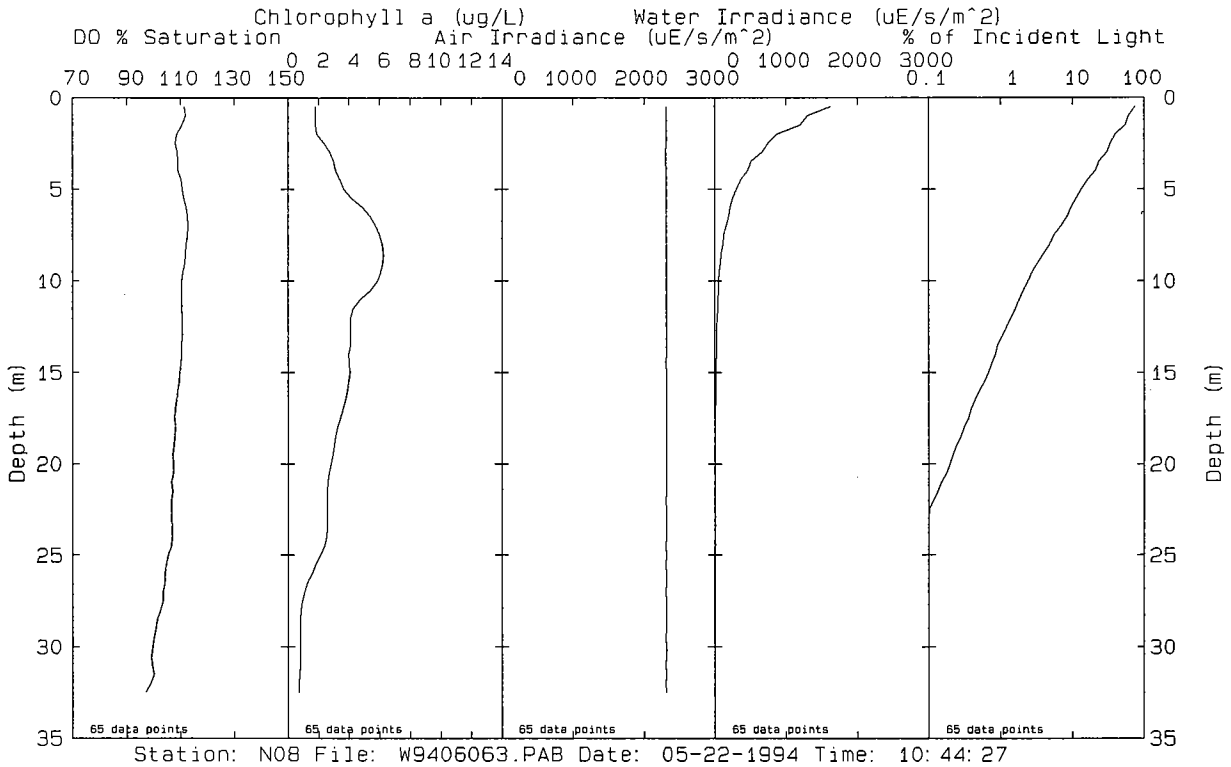

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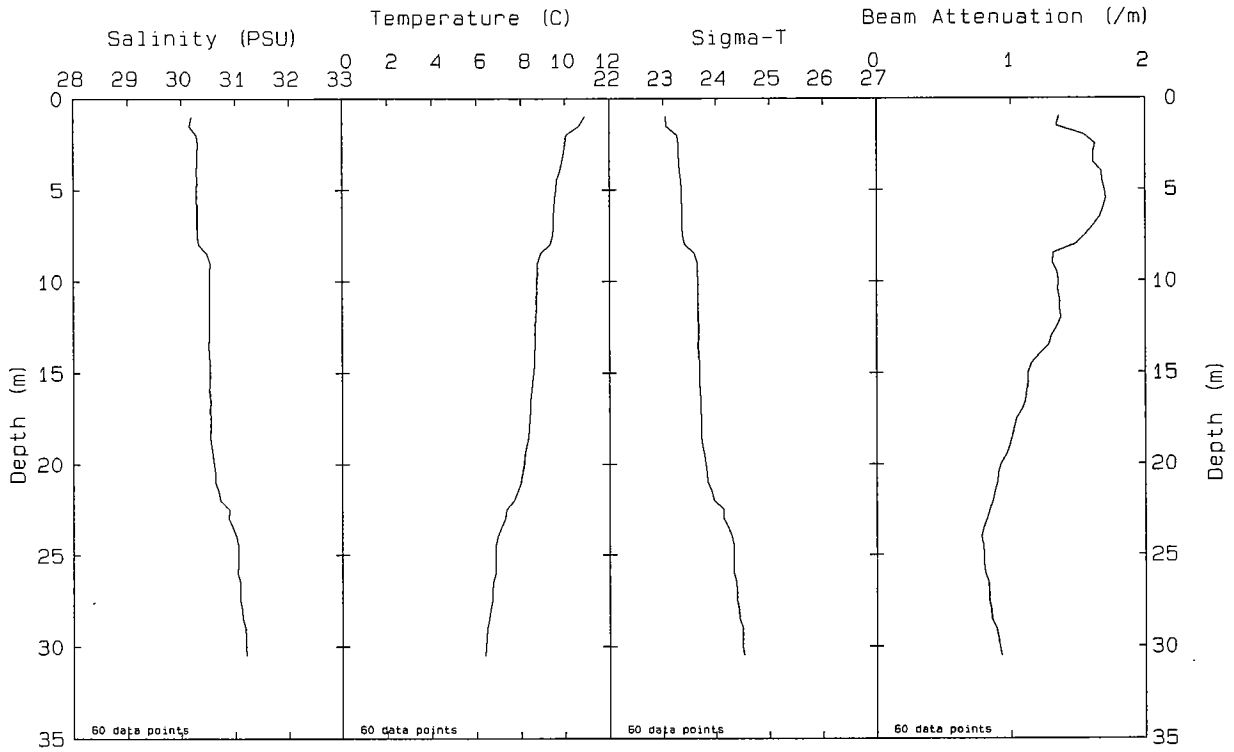
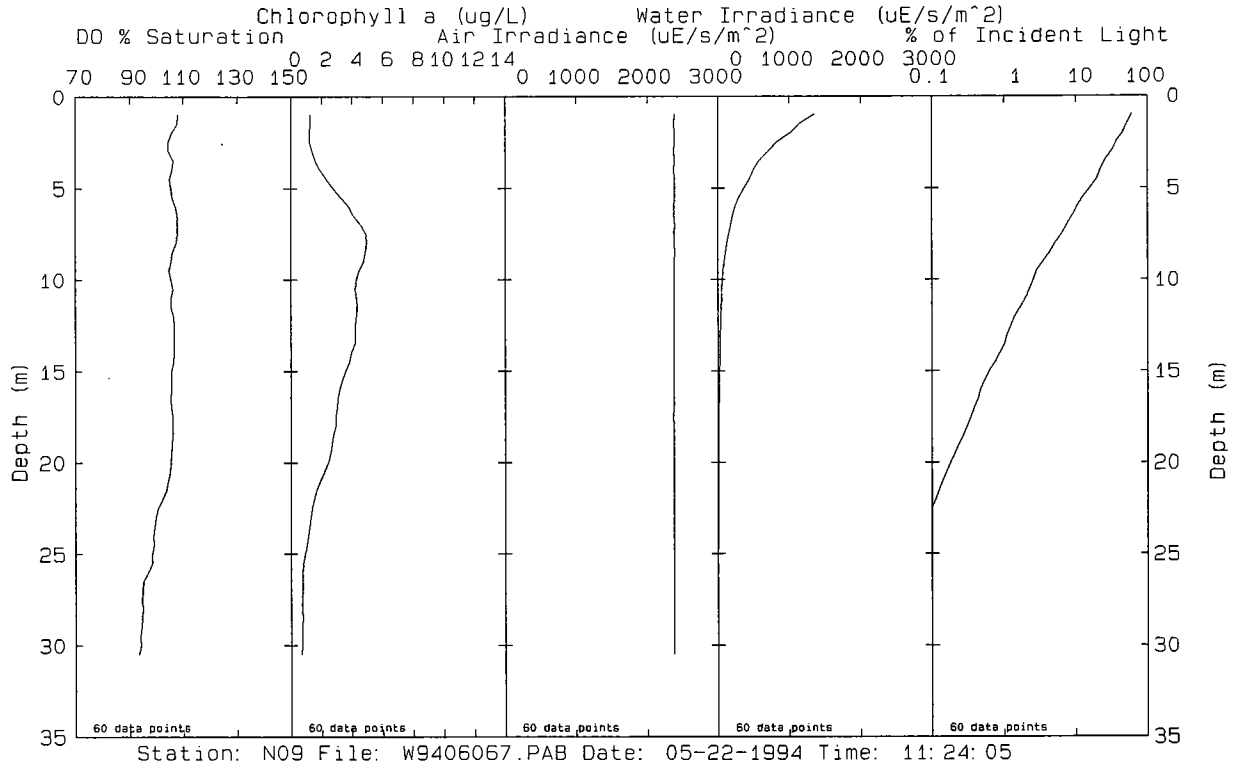
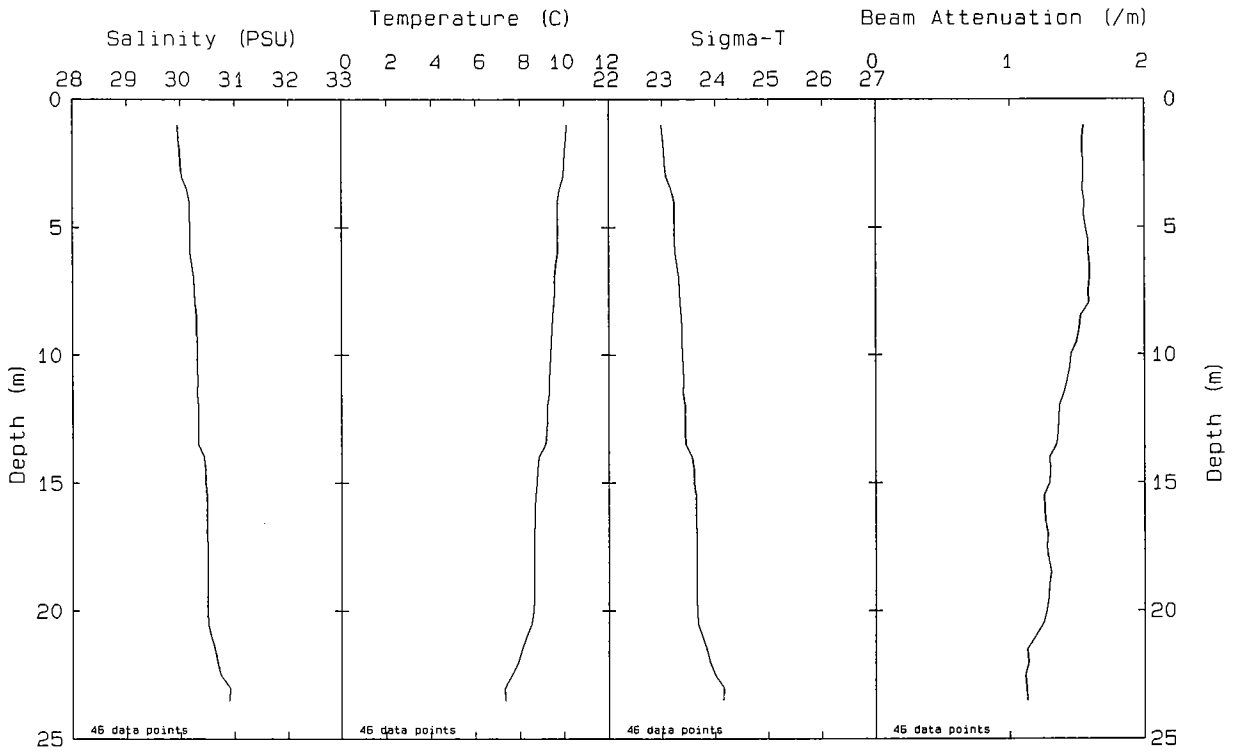
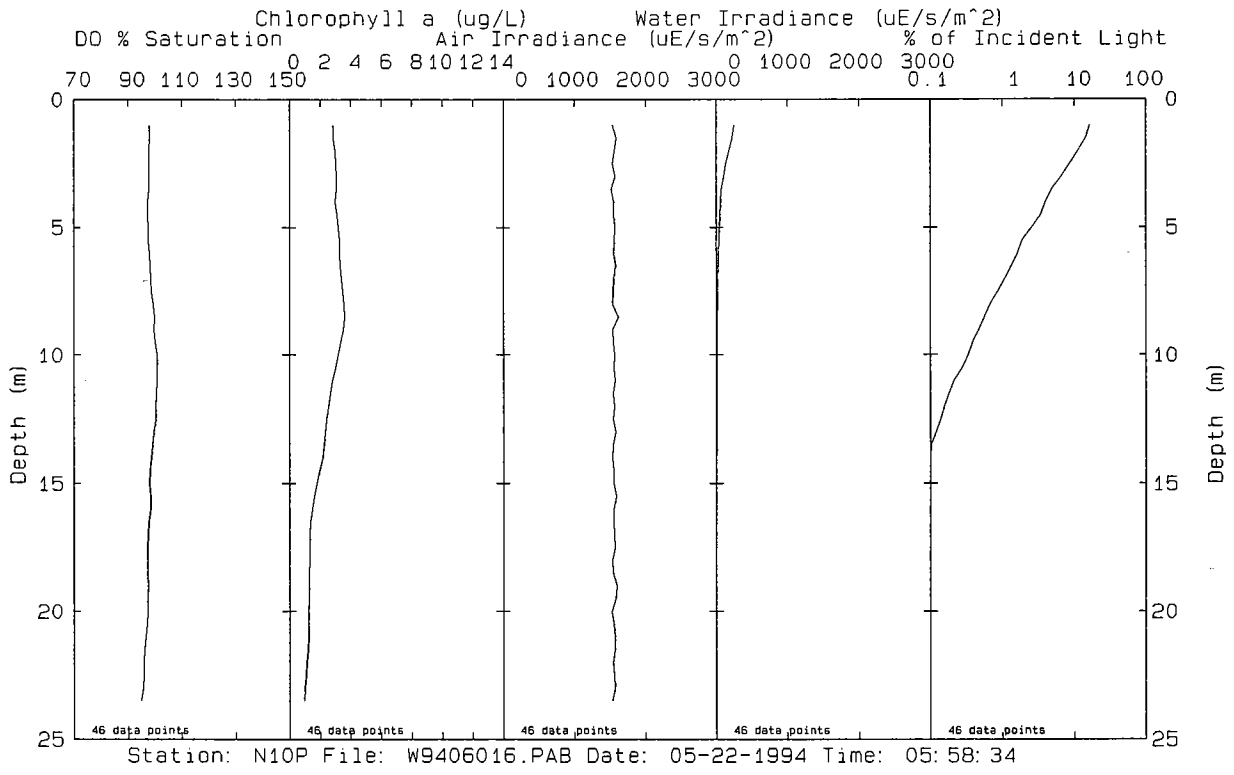


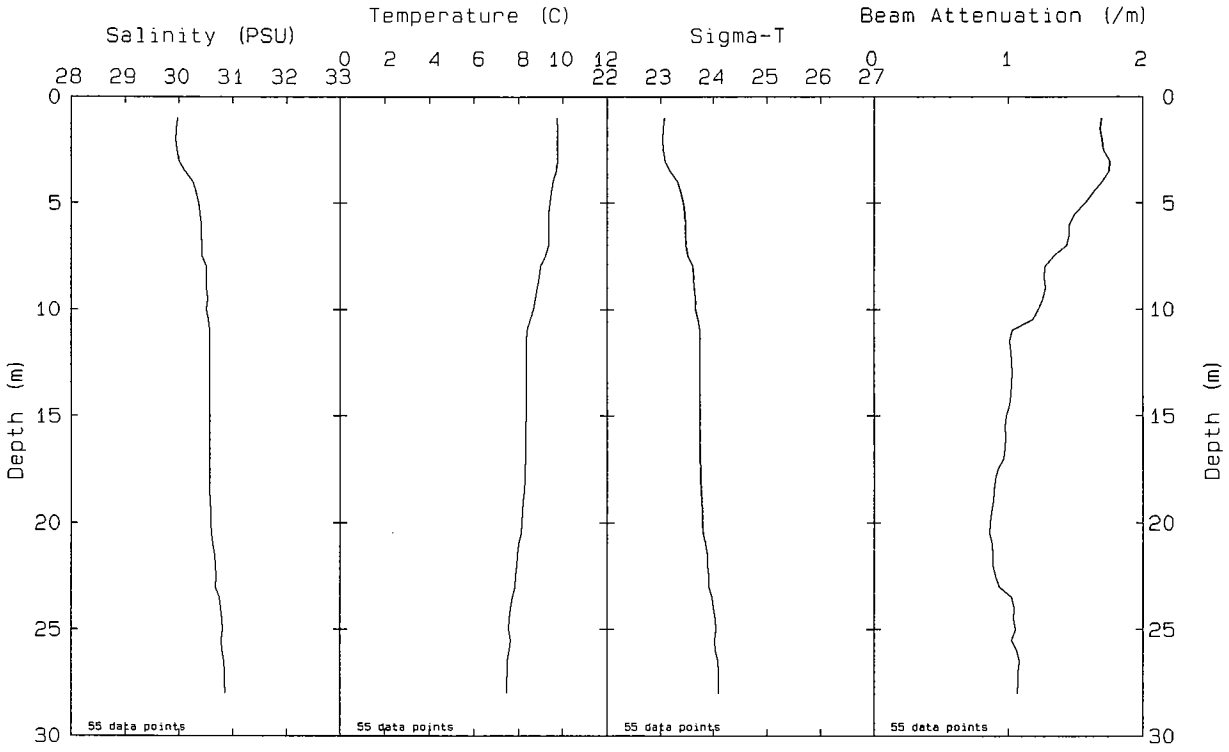


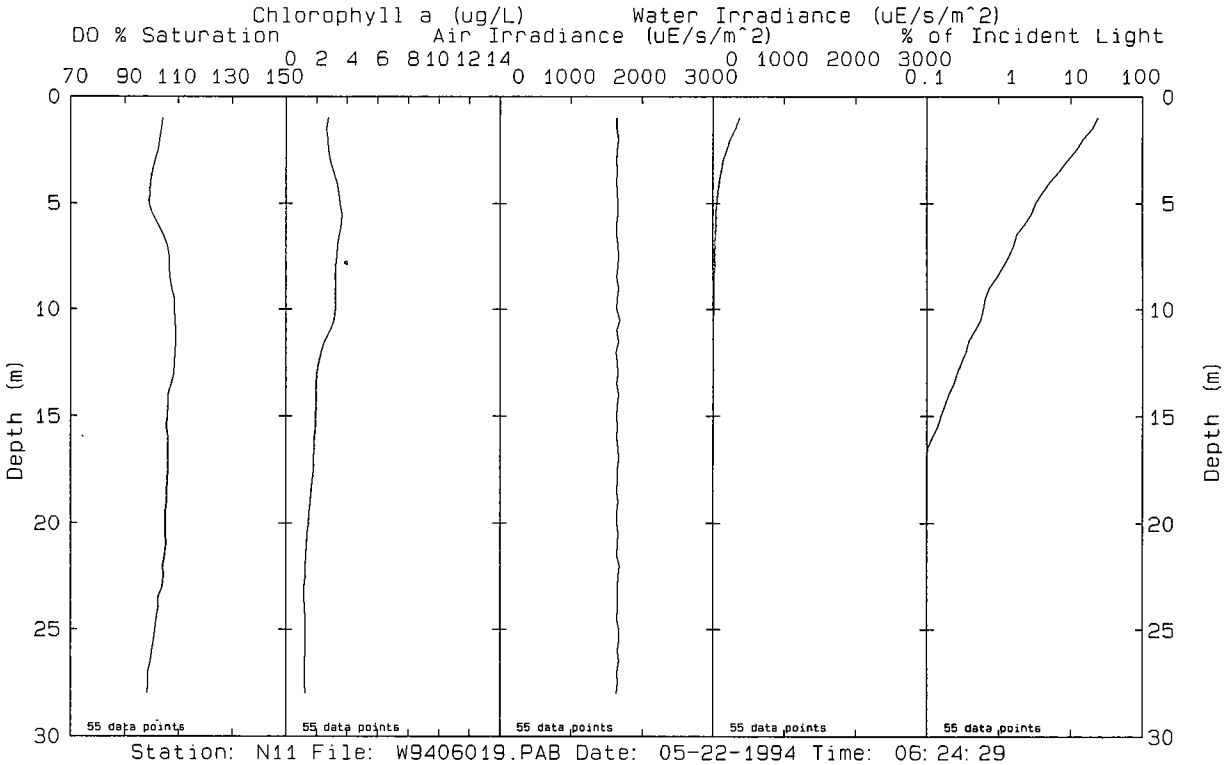
Station: N09 File: W9406067.PAB Date: 05-22-1994 Time: 11:24:05



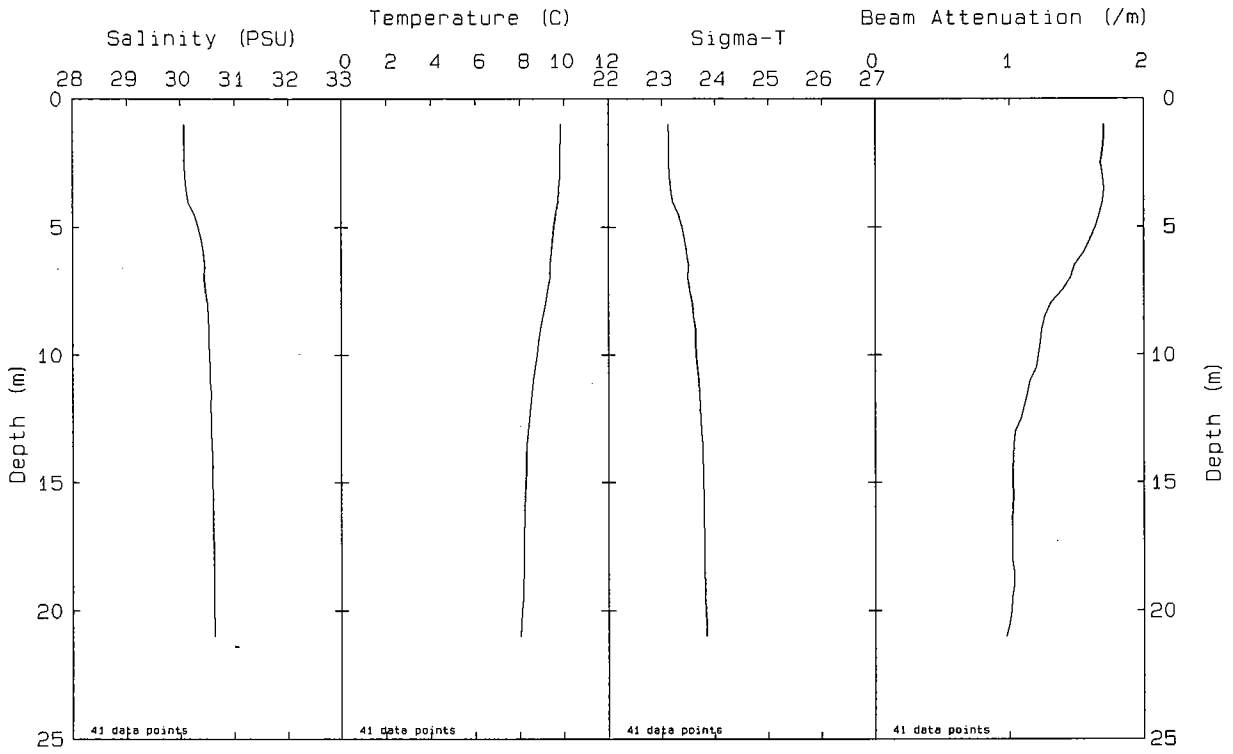


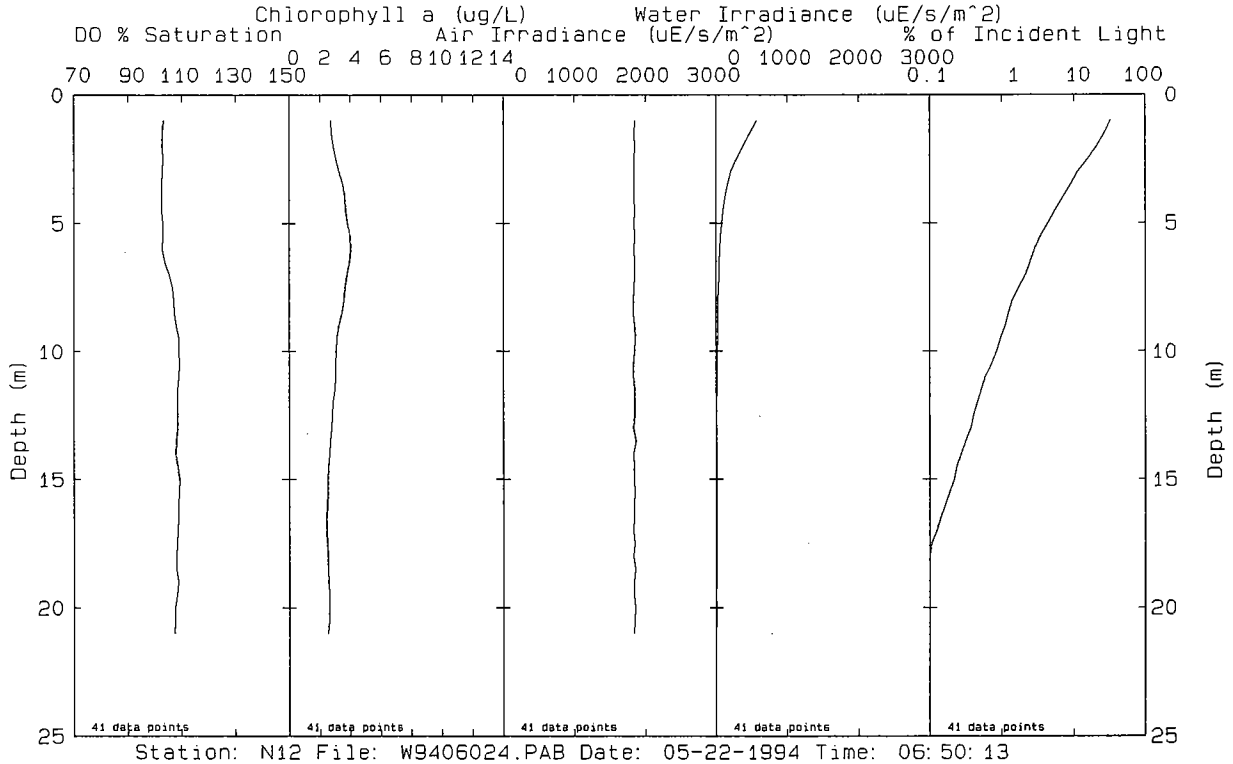
Station: N10P File: W9406016.PAB Date: 05-22-1994 Time: 05:58:34



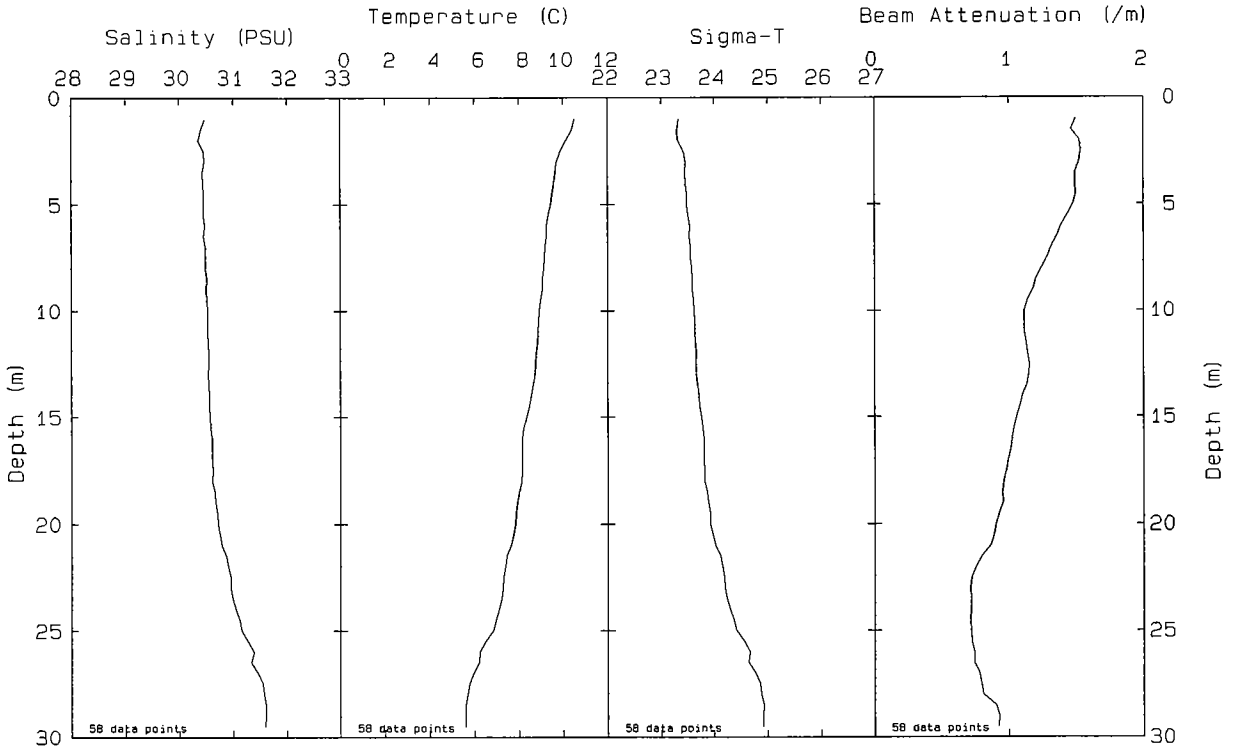


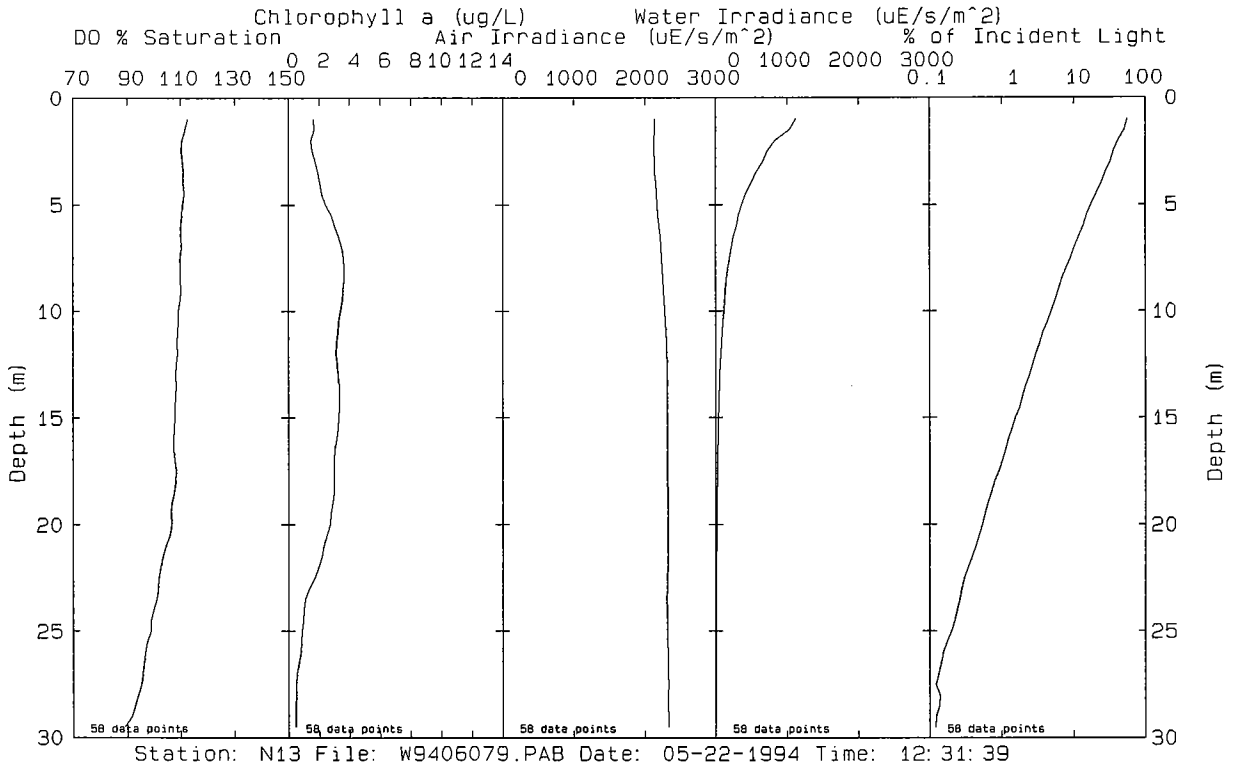
Station: N11 File: W9406019.PAB Date: 05-22-1994 Time: 06:24:29





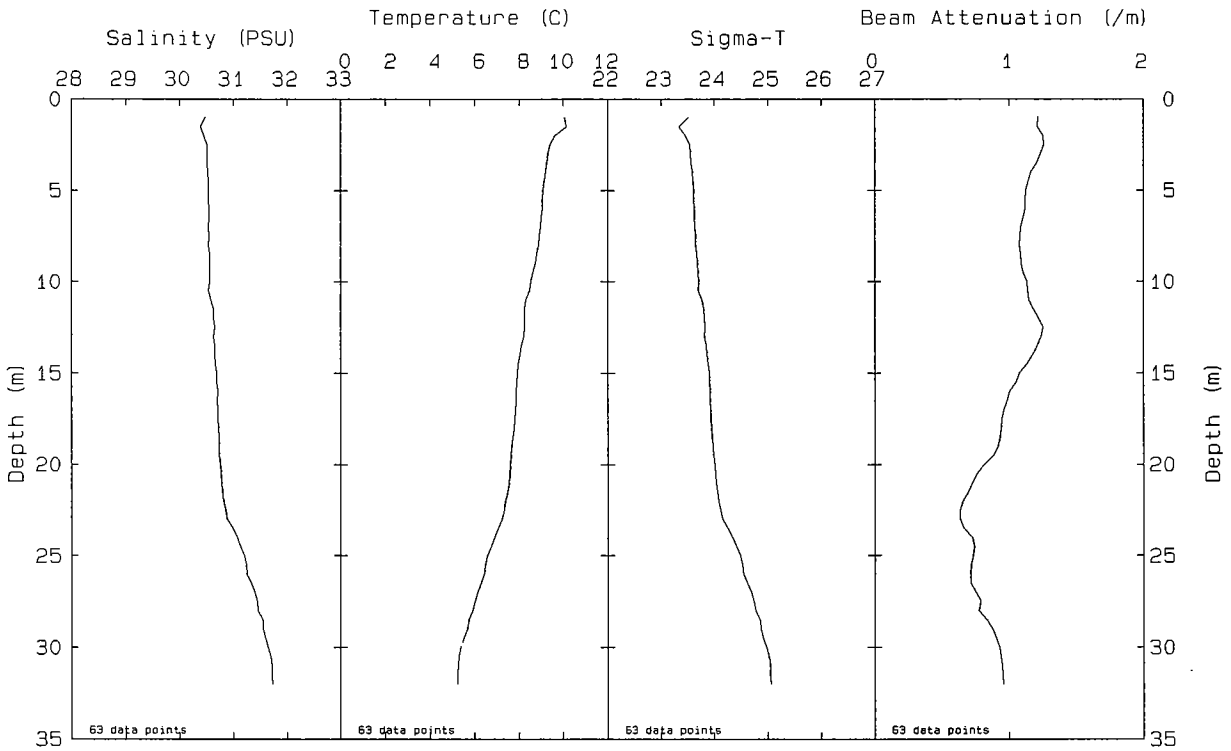
Station: N12 File: W9406024.PAB Date: 05-22-1994 Time: 06:50:13

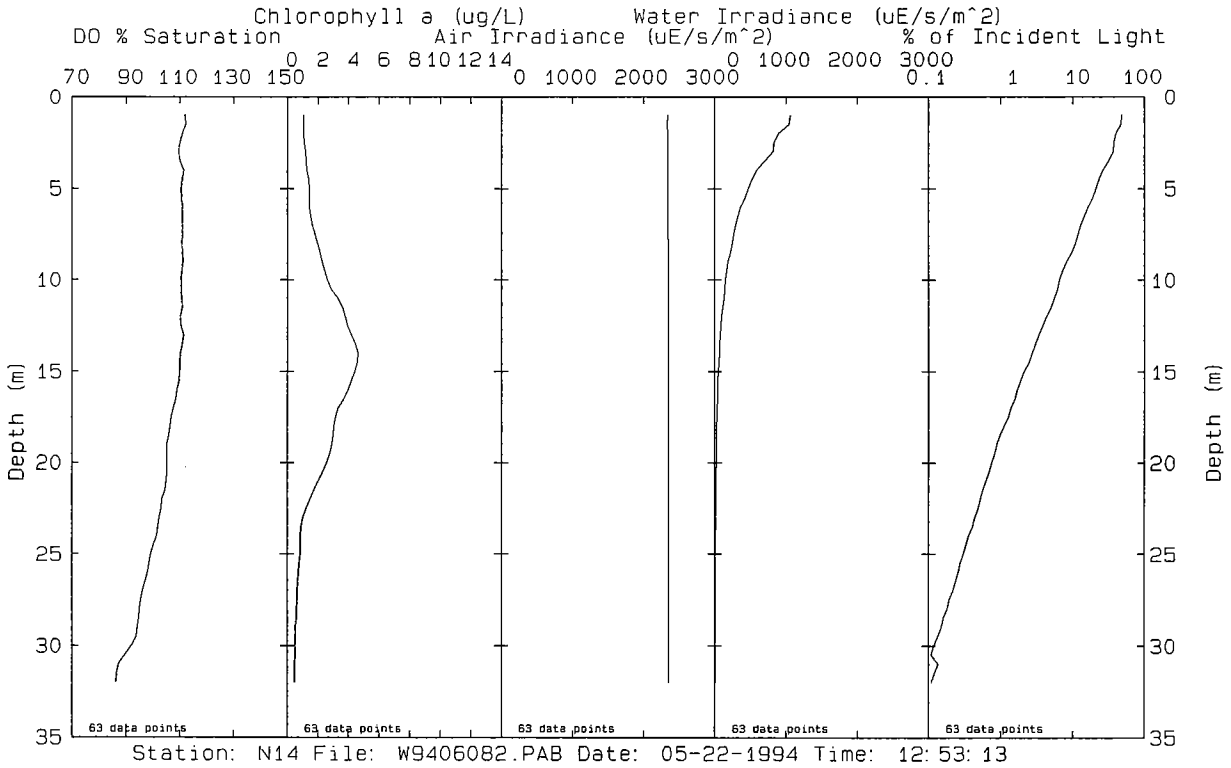




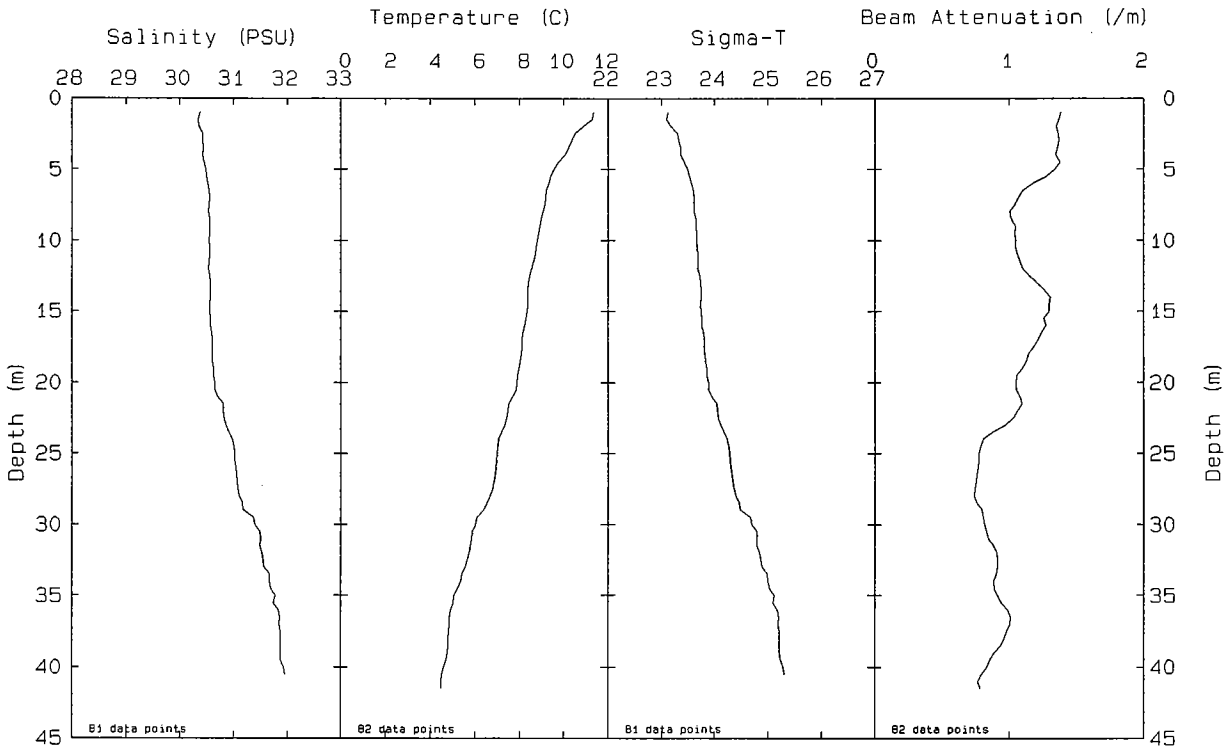
Station: N13 File: W9406079.PAB Date: 05-22-1994 Time: 12:31:39

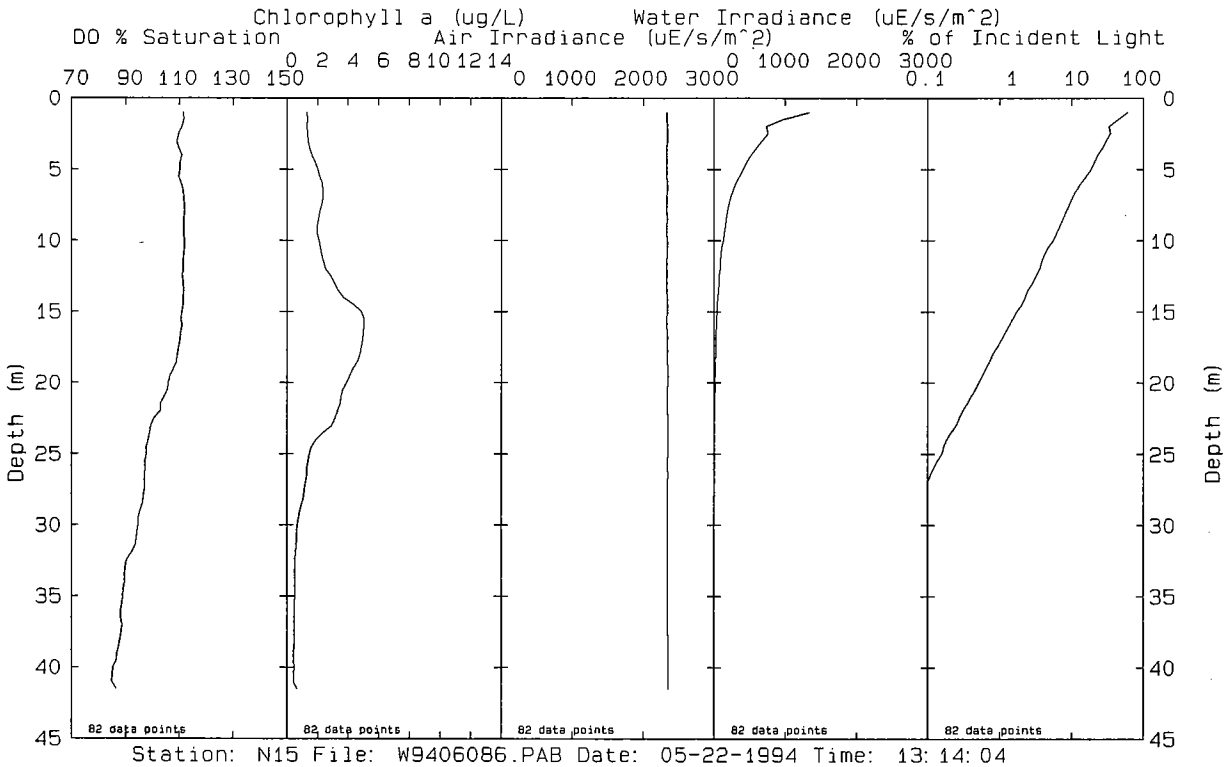
10-06-1994 12:50:33 Battelle



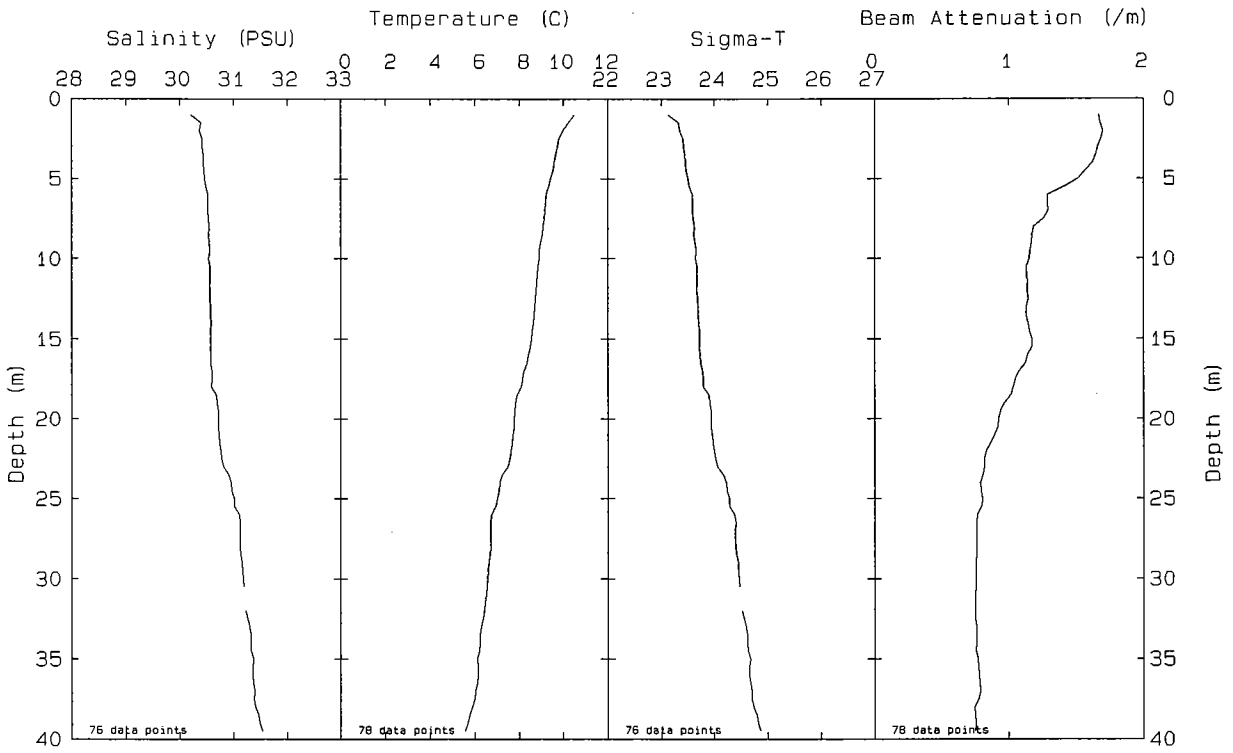


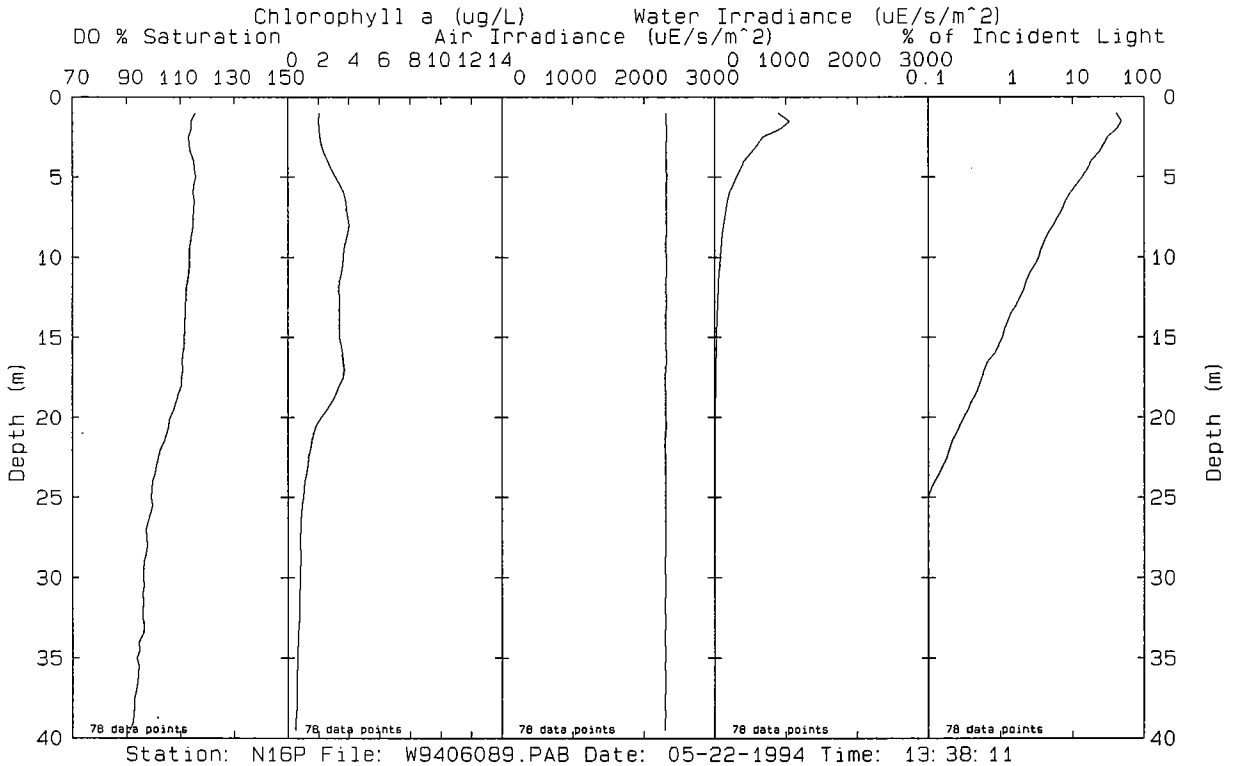
Station: N14 File: W9406082.PAB Date: 05-22-1994 Time: 12:53:13



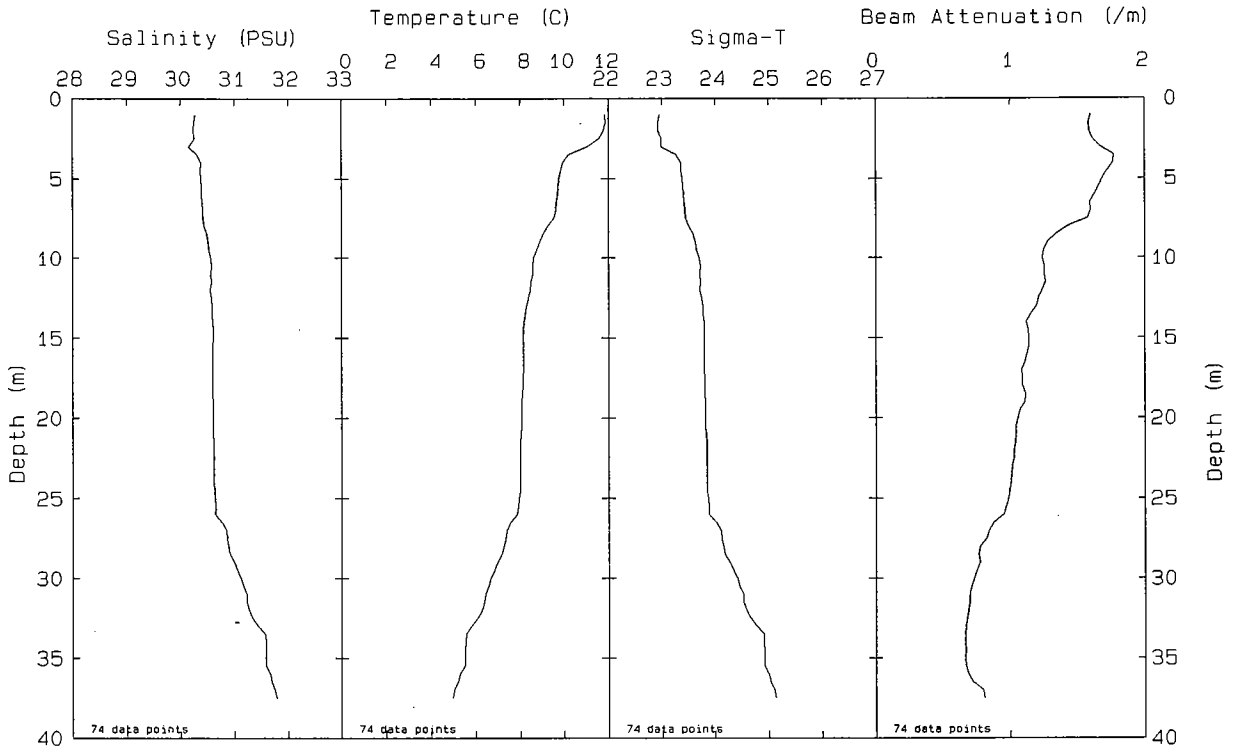


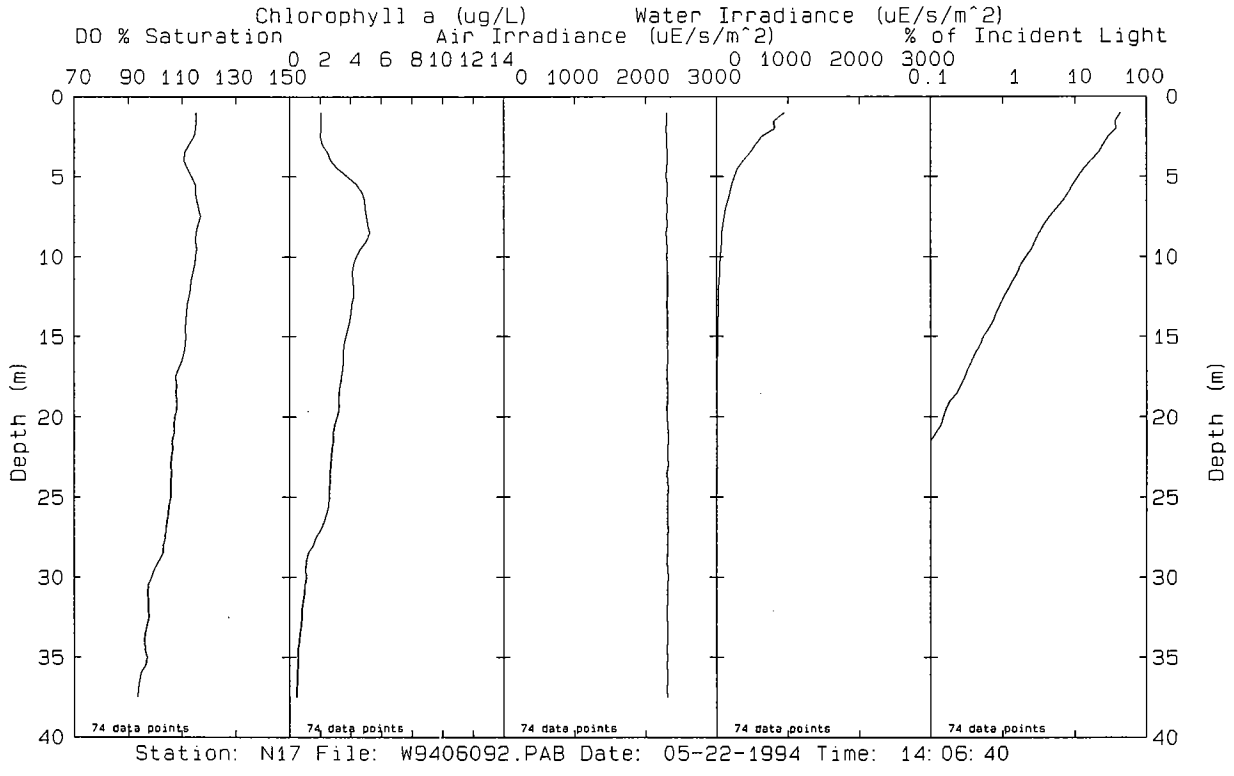
Station: N15 File: W9406086.PAB Date: 05-22-1994 Time: 13:14:04



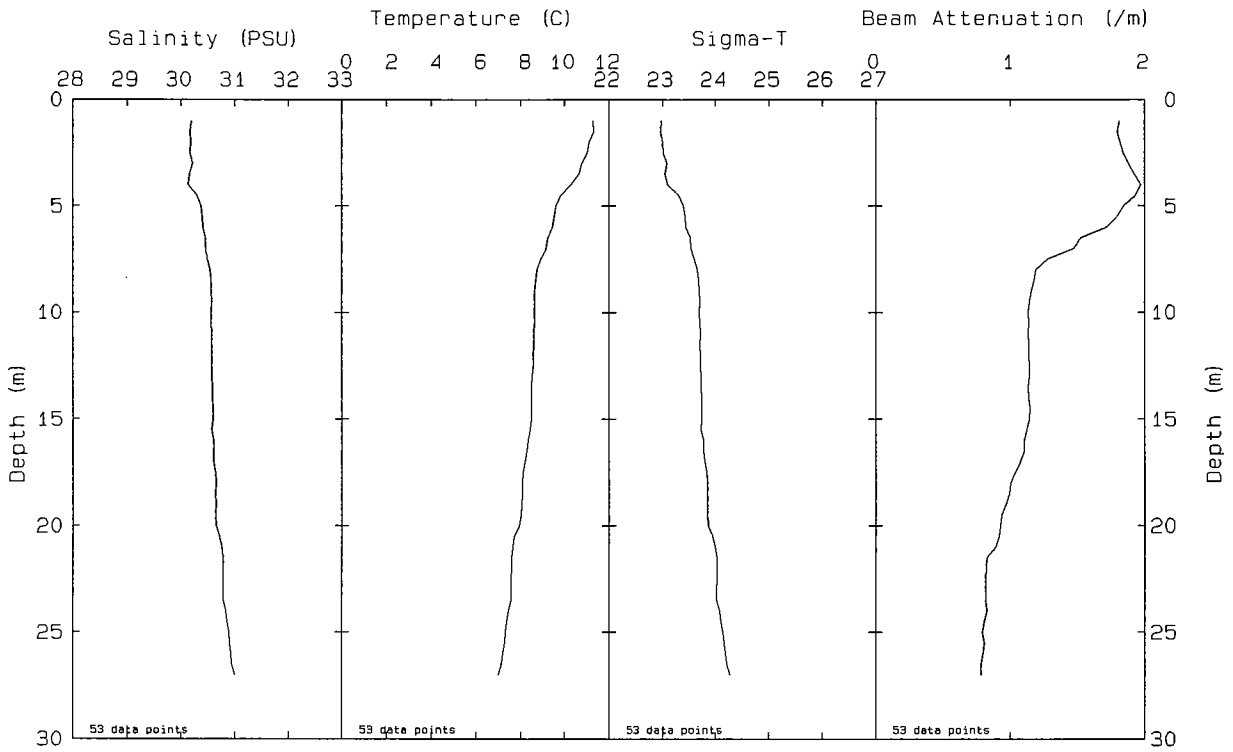


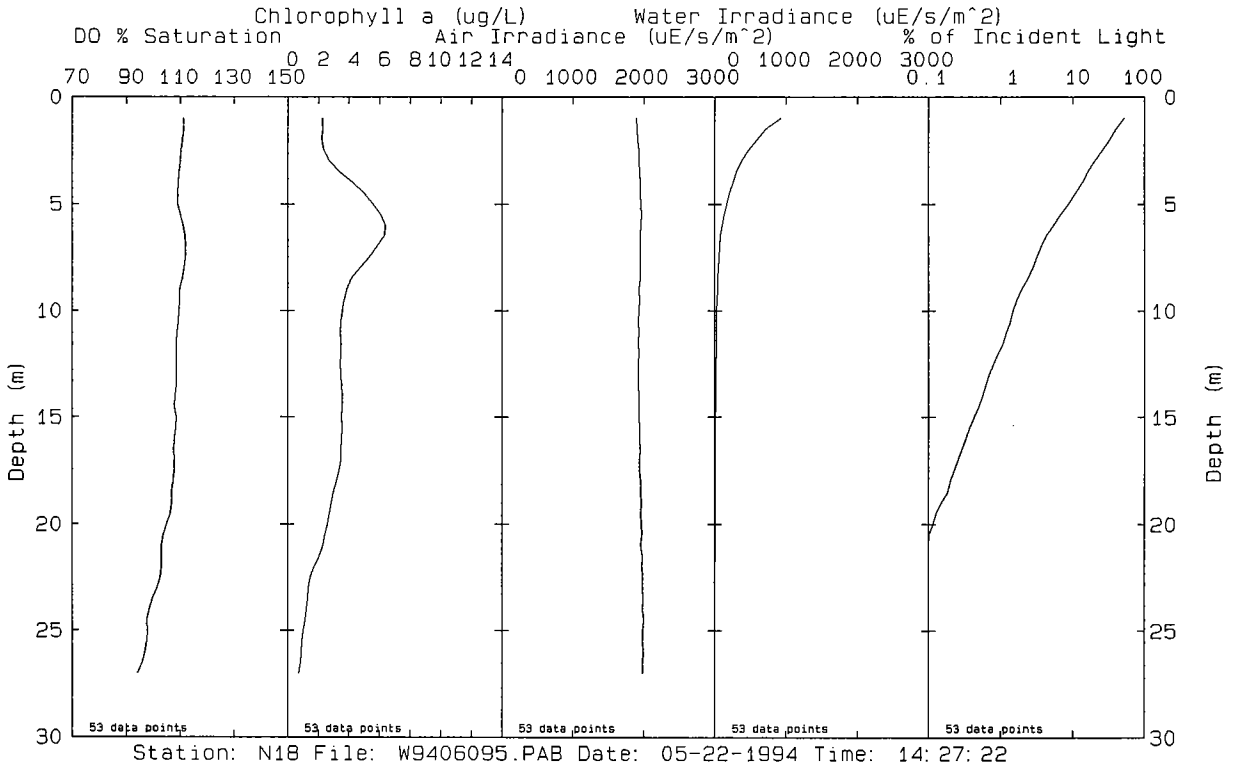
Station: N16P File: W9406089.PAB Date: 05-22-1994 Time: 13:38:11



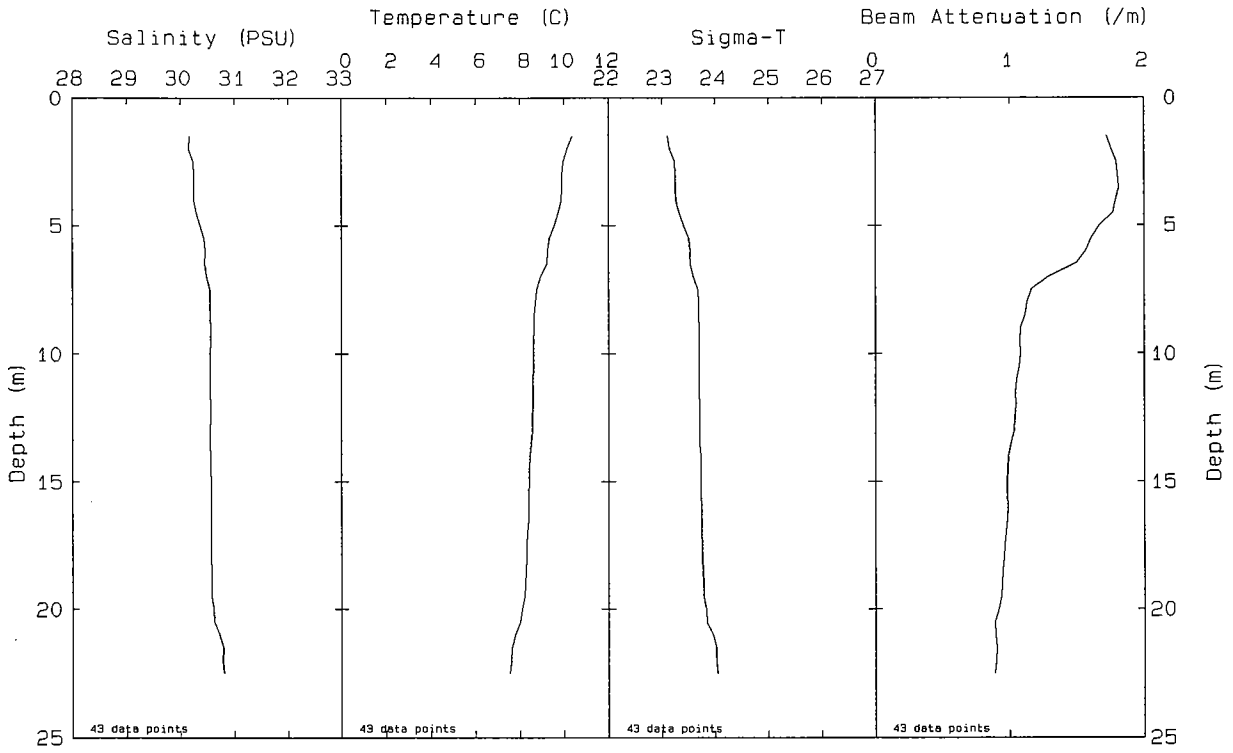


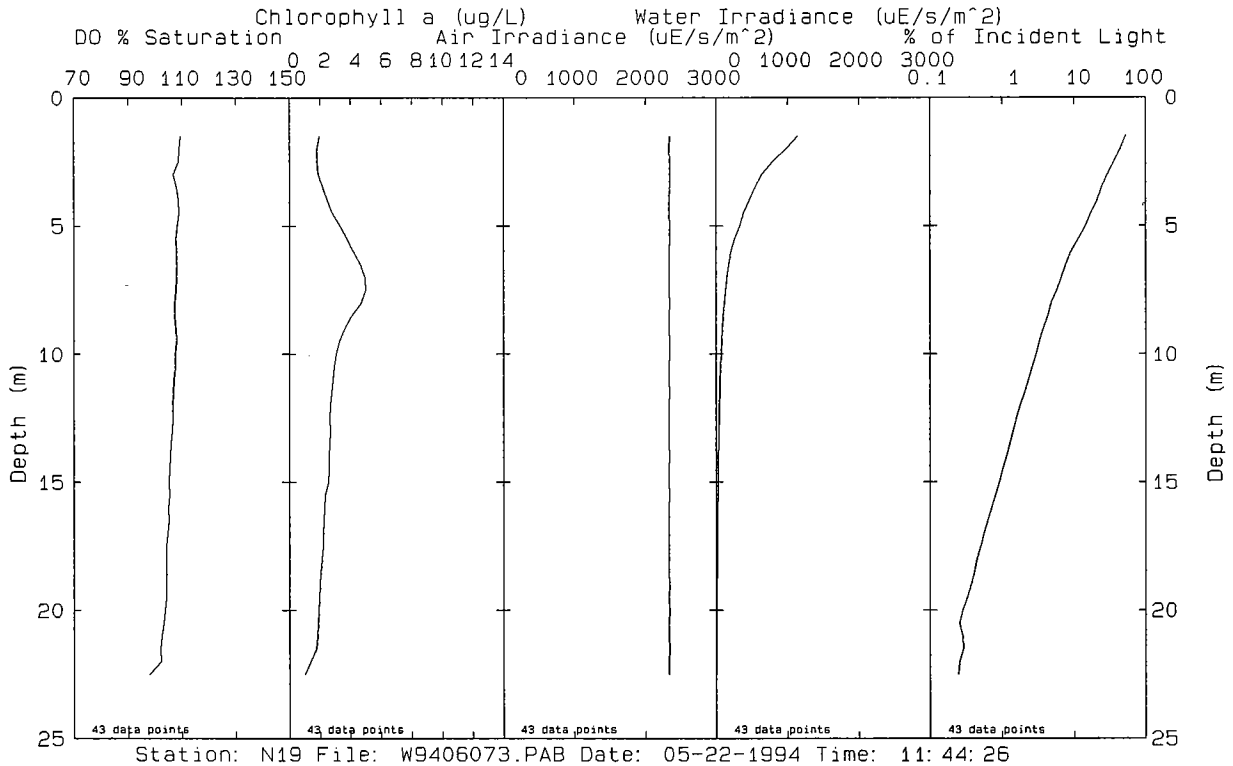
Station: N17 File: W9406092.PAB Date: 05-22-1994 Time: 14:06:40



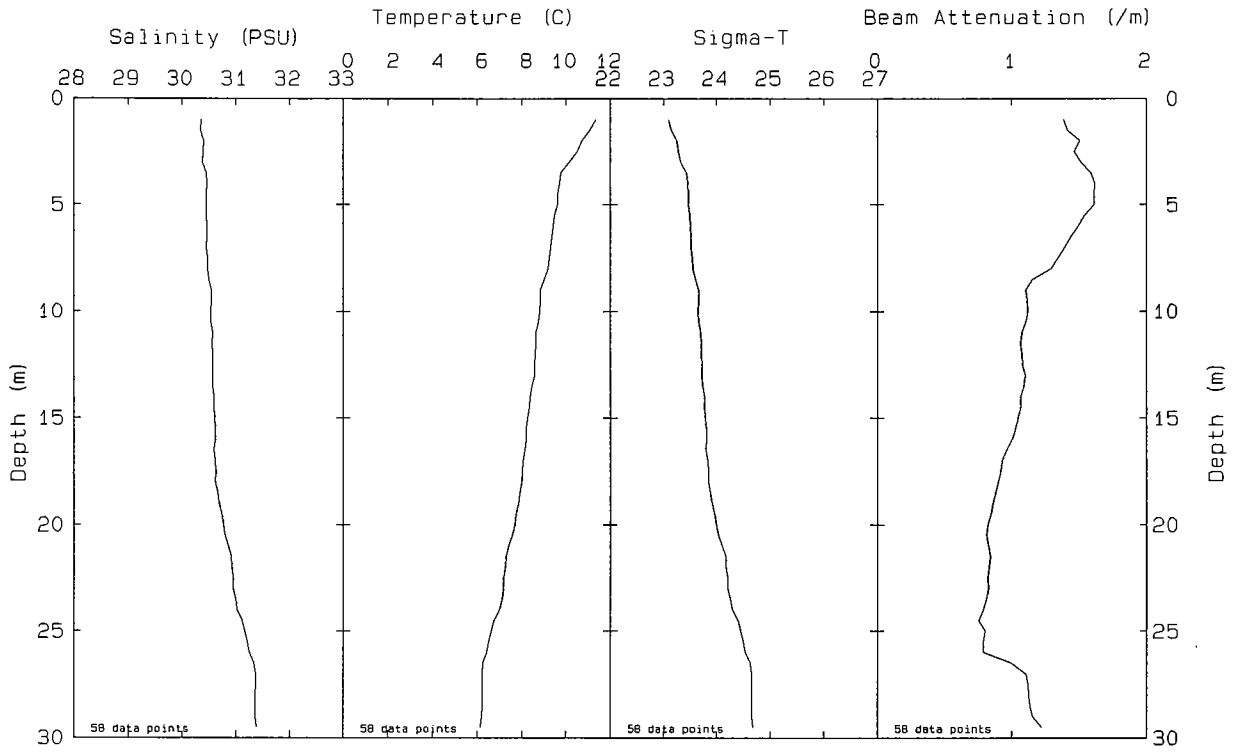


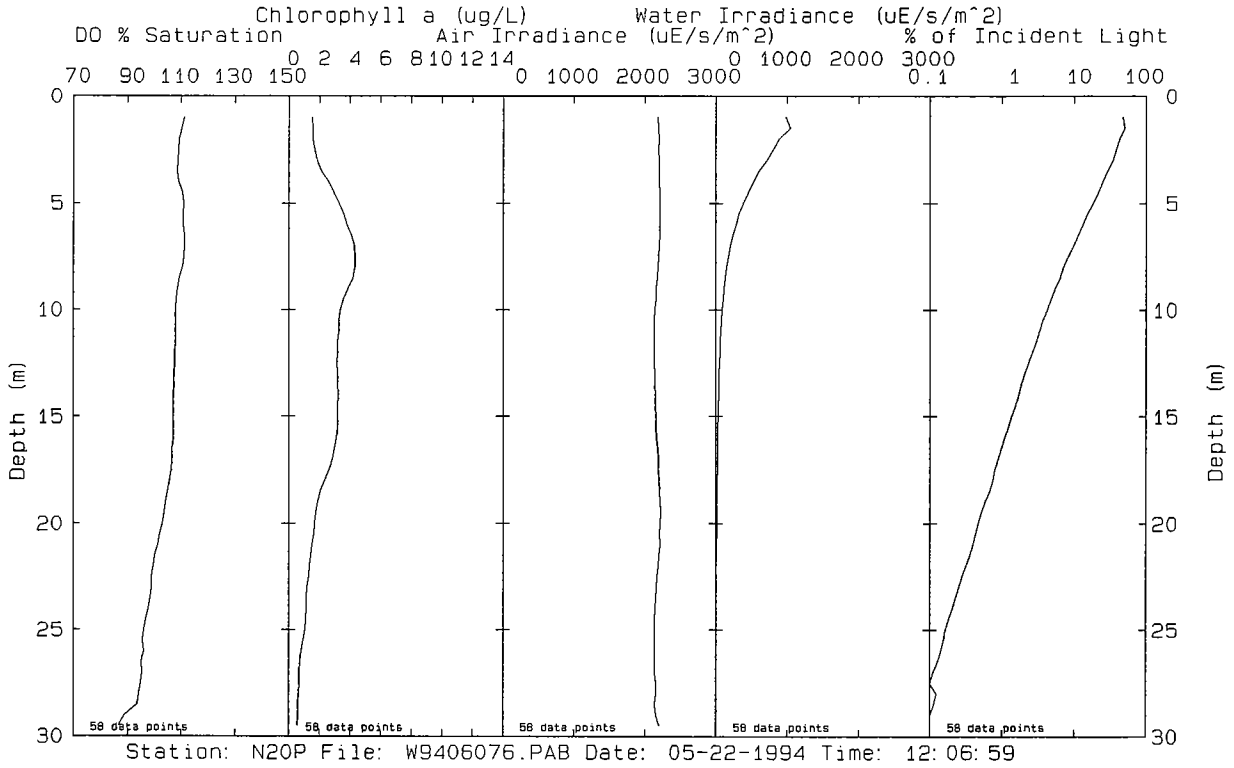
Station: N18 File: W9406095.PAB Date: 05-22-1994 Time: 14:27:22



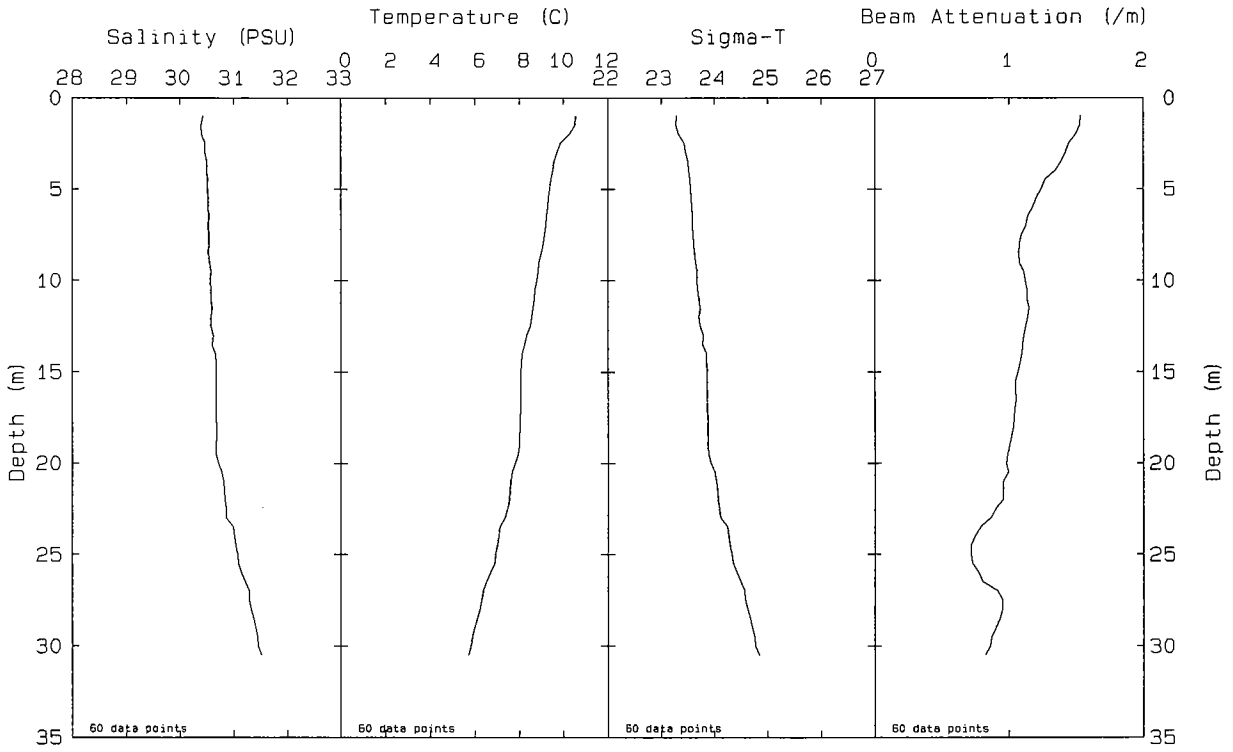


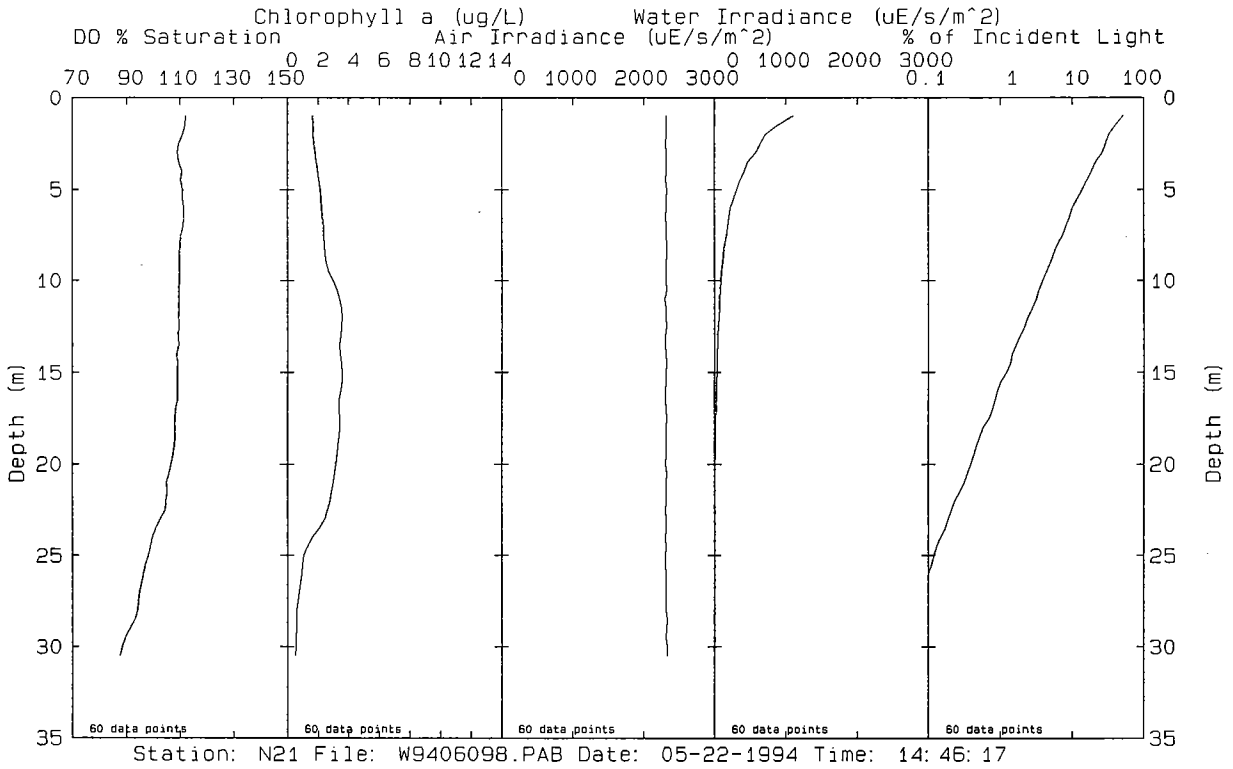
Station: N19 File: W9406073.PAB Date: 05-22-1994 Time: 11:44:26





Station: N20P File: W9406076.PAB Date: 05-22-1994 Time: 12:06:59





Station: N21 File: W9406098.PAB Date: 05-22-1994 Time: 14:46:17

APPENDIX C

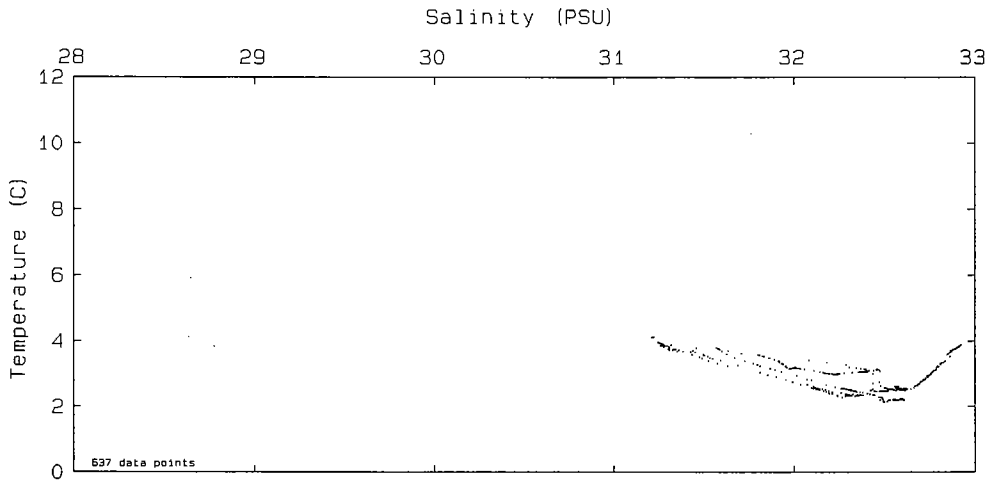
COMPARISON OF VERTICAL PROFILE DATA: SCATTER PLOTS

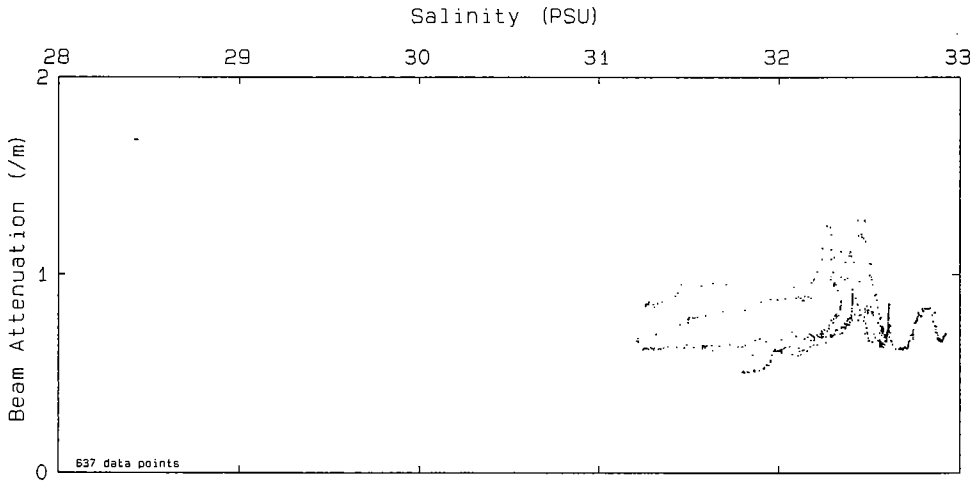
Parameter-Parameter Plots of Vertical Profile Data, Combined Surveys

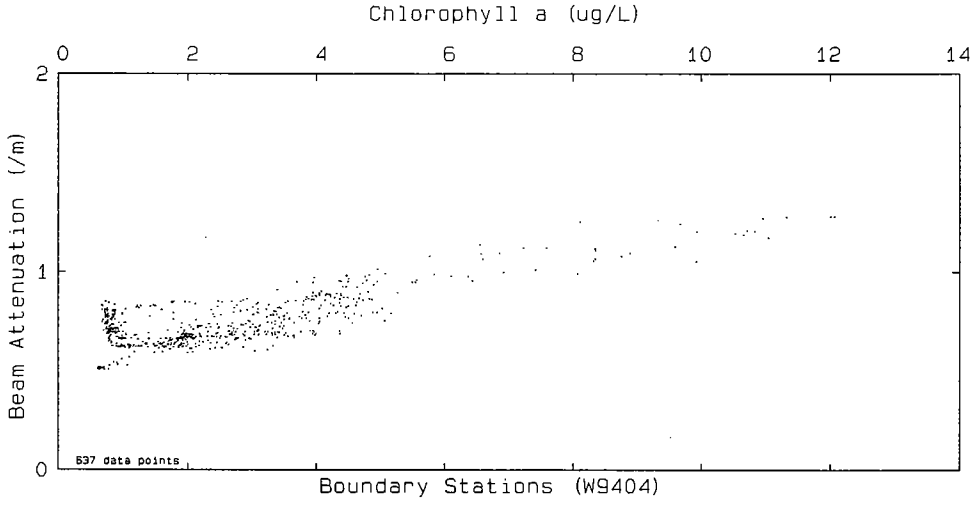
Note that for nearfield surveys, all plots are given as figures in the accompanying text report. For the combined survey, composite plots (all stations) are given as figures in the accompanying text report.

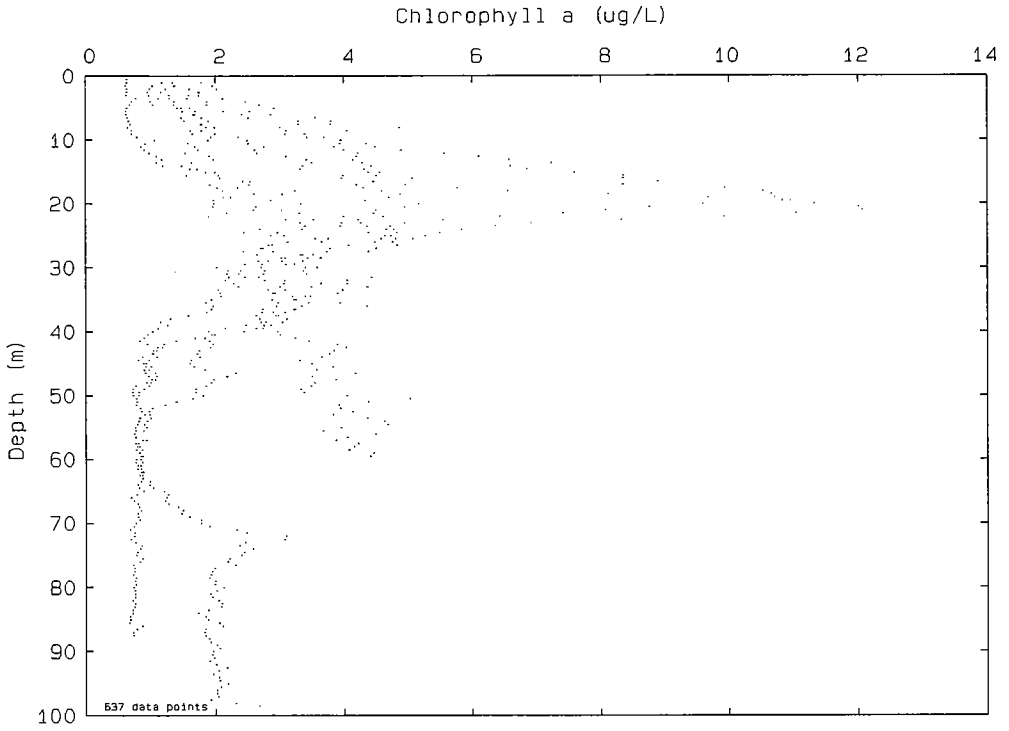
The plots for the early April (W9404) survey given here separate stations by station groups as defined in the text report.

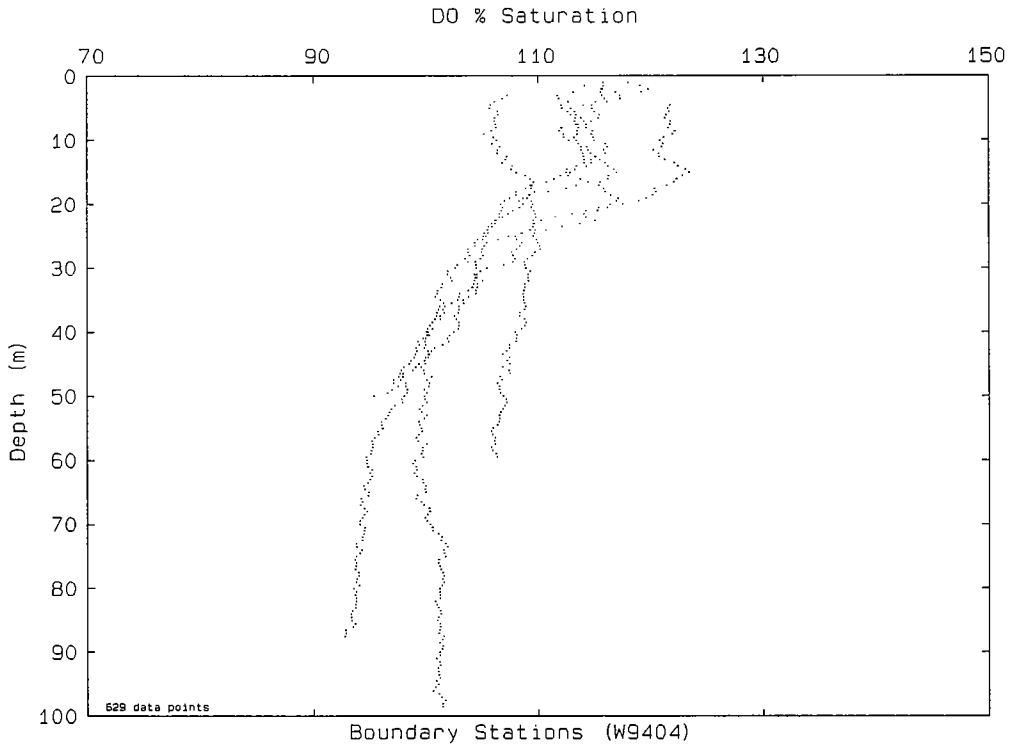
Data are as described in Appendix B and include the entire profile at each station.

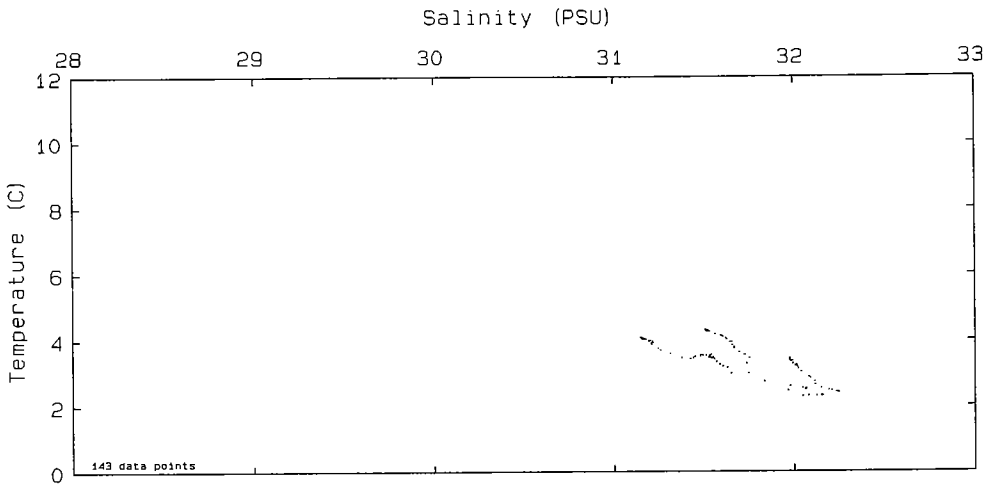

Salinity (PSU)
28
29
30
31
32
33
Temperature (C)
0
2
4
6
8
10
12
637 data points

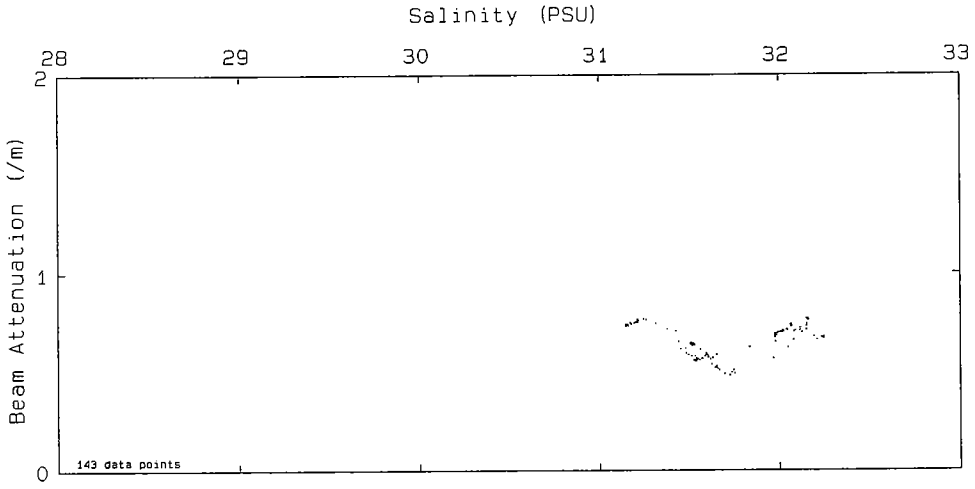

Salinity (PSU)
28
29
30
31
32
33
Beam Attenuation (/m)
0
1
2
637 data points

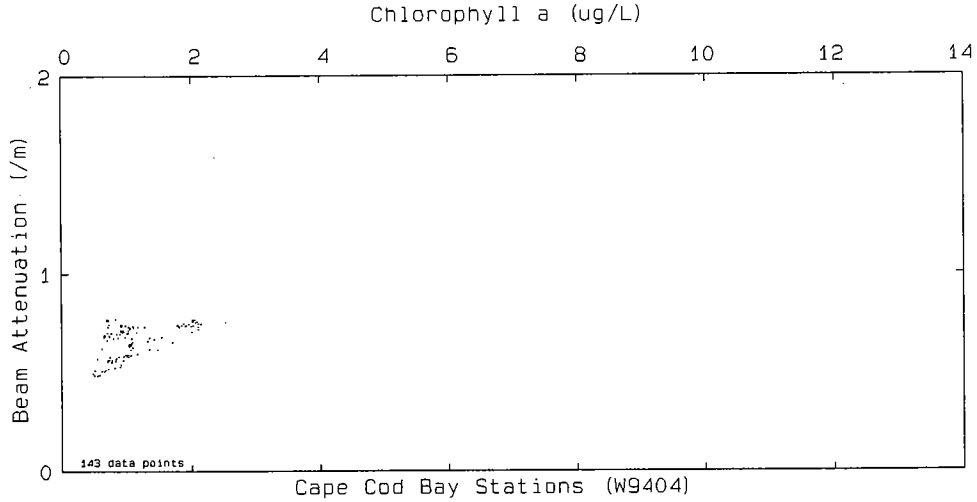

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Beam Attenuation (/m)
0
1
2
637 data points
Boundary Stations (W9404)

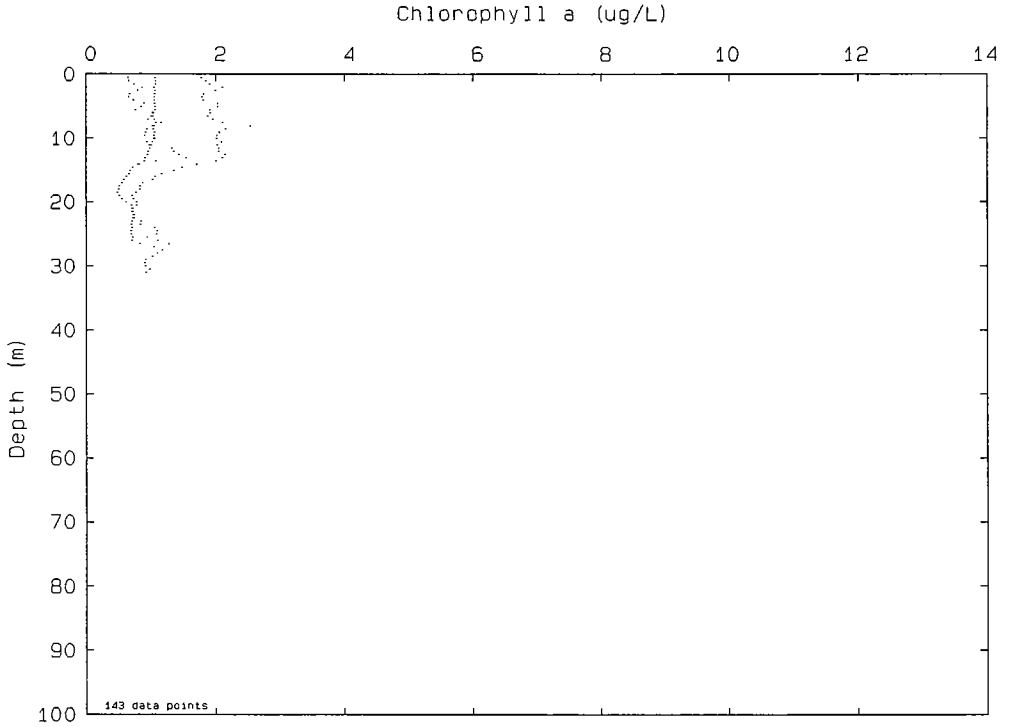

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
637 data points

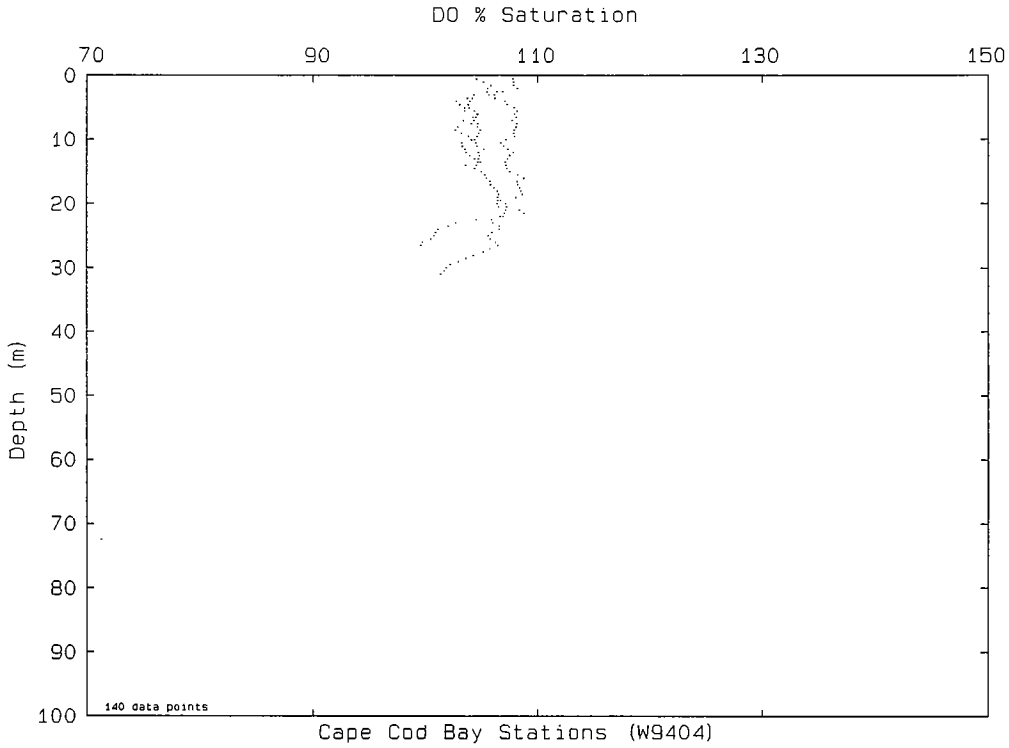

DO % Saturation
70
90
110
130
150
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
629 data points
Boundary Stations (W9404)


Salinity (PSU)
28
29
30
31
32
33
Temperature (C)
12
10
8
6
4
2
0
143 data points

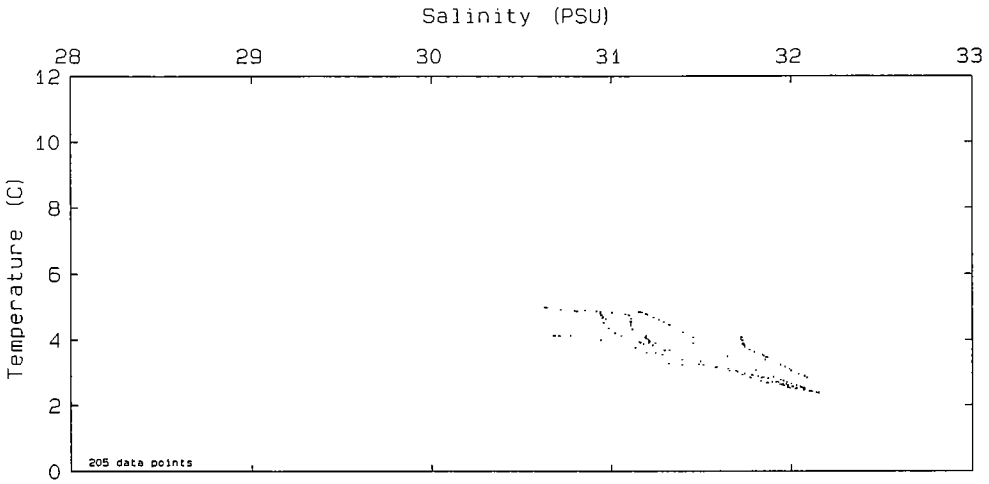

Salinity (PSU)
28
29
30
31
32
33
Beam Attenuation (/m)
2
1
0
143 data points

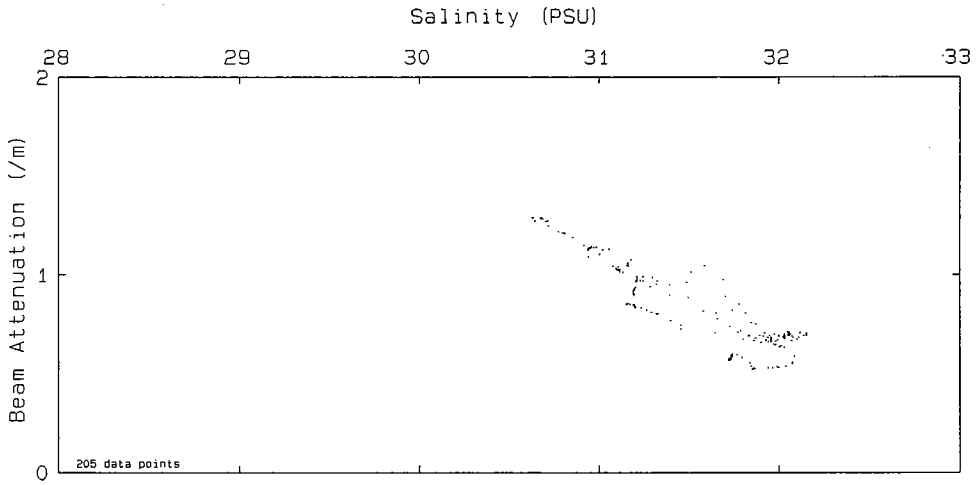

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Beam Attenuation (/m)
2
1
0
143 data points
Cape Cod Bay Stations (W9404)

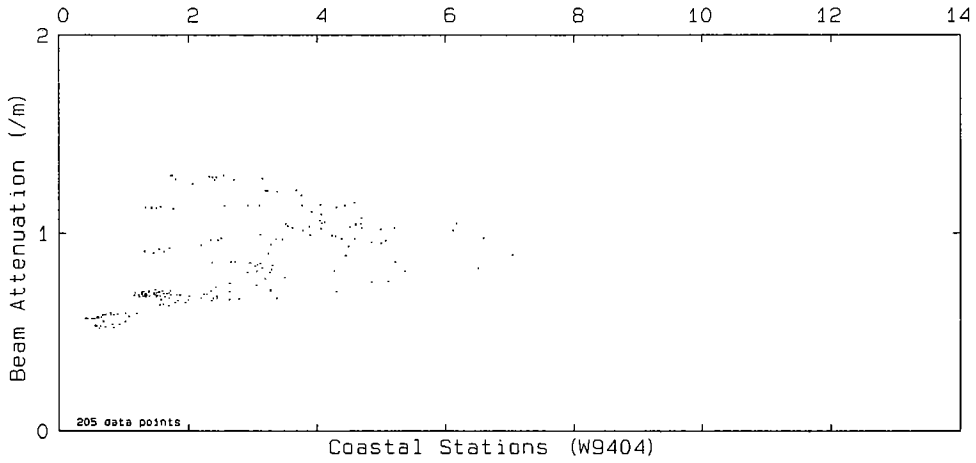


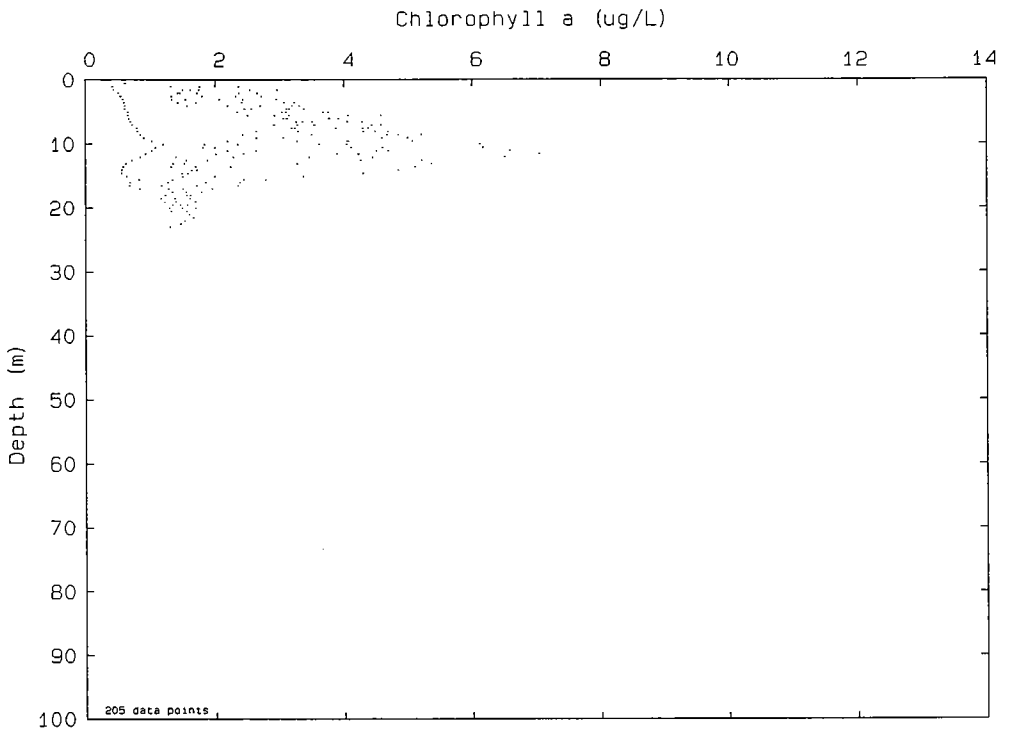


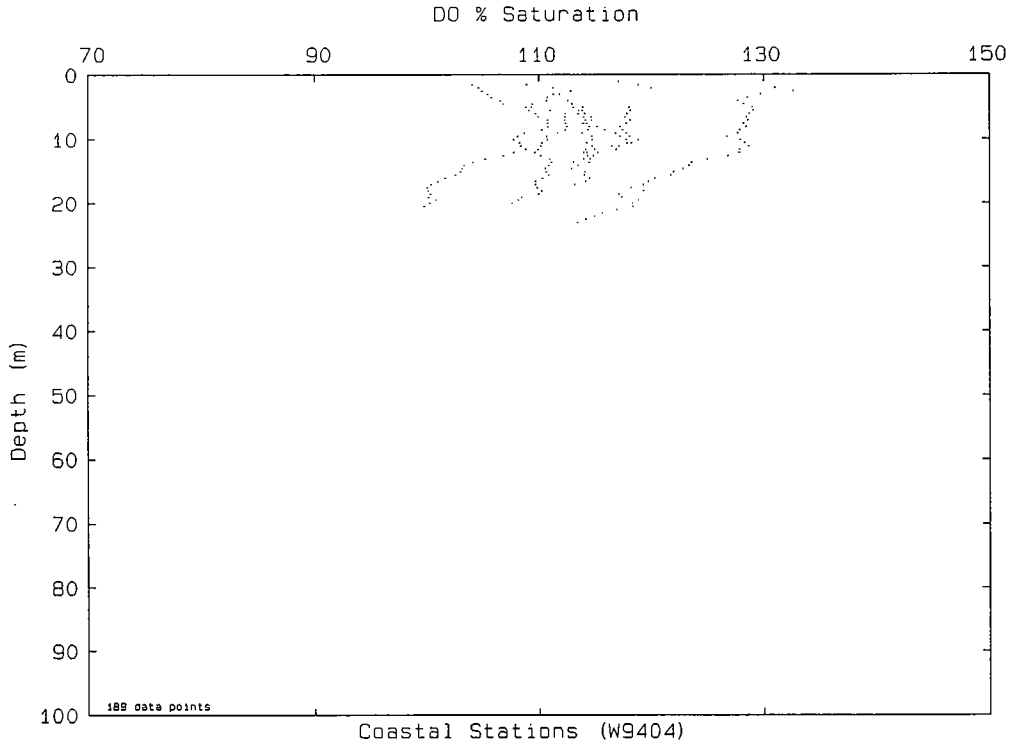
10-06-1994 13:36:39 Battelle

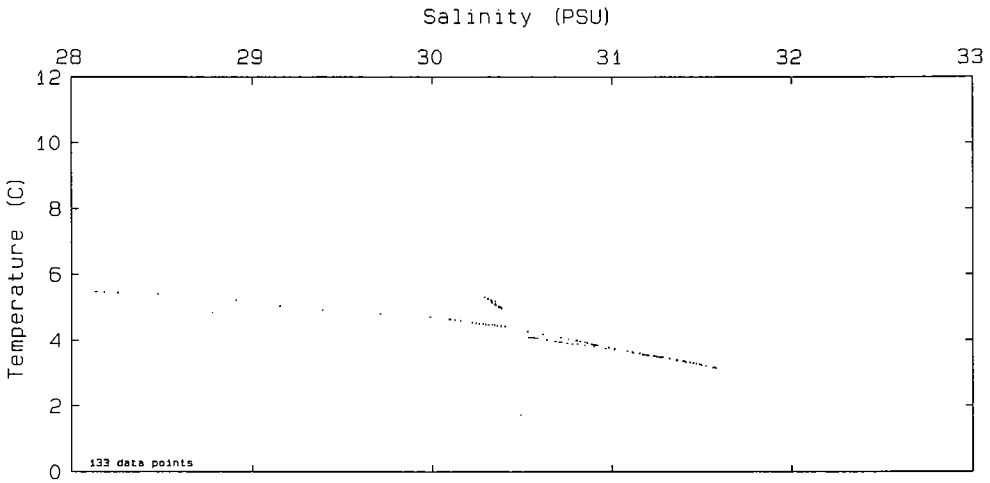

Salinity (PSU)
28
29
30
31
32
33
Temperature (C)
0
2
4
6
8
10
12
205 data points

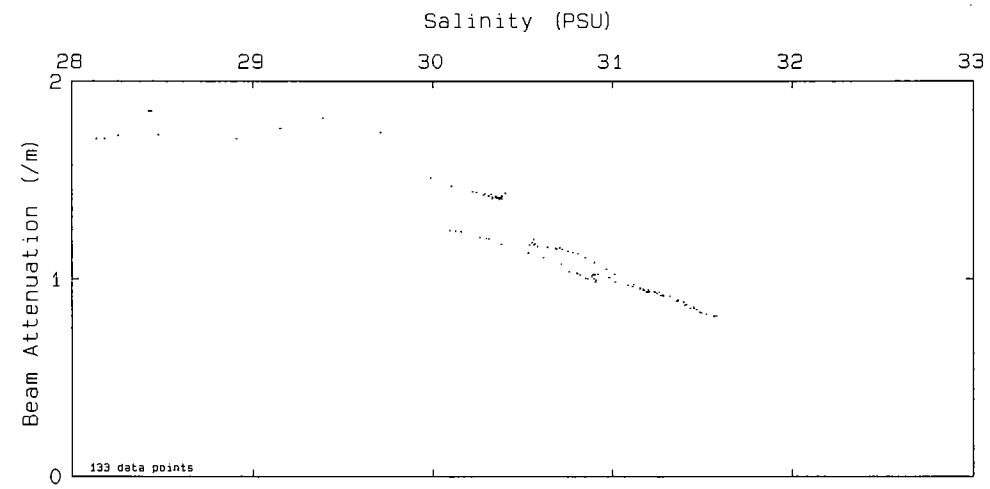

Salinity (PSU)
28
29
30
31
32
33
Beam Attenuation (/m)
0
1
2
205 data points

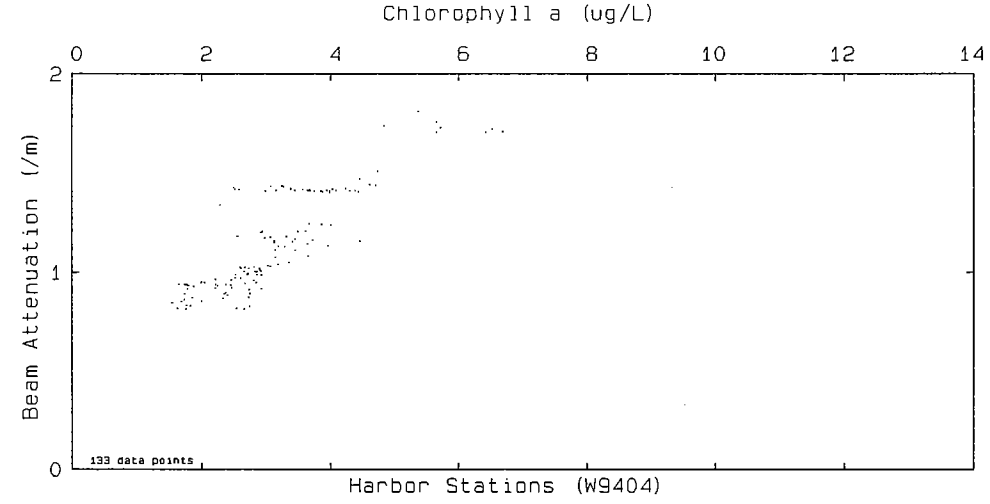

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Beam Attenuation (/m)
0
1
2
205 data points
Coastal Stations (W9404)

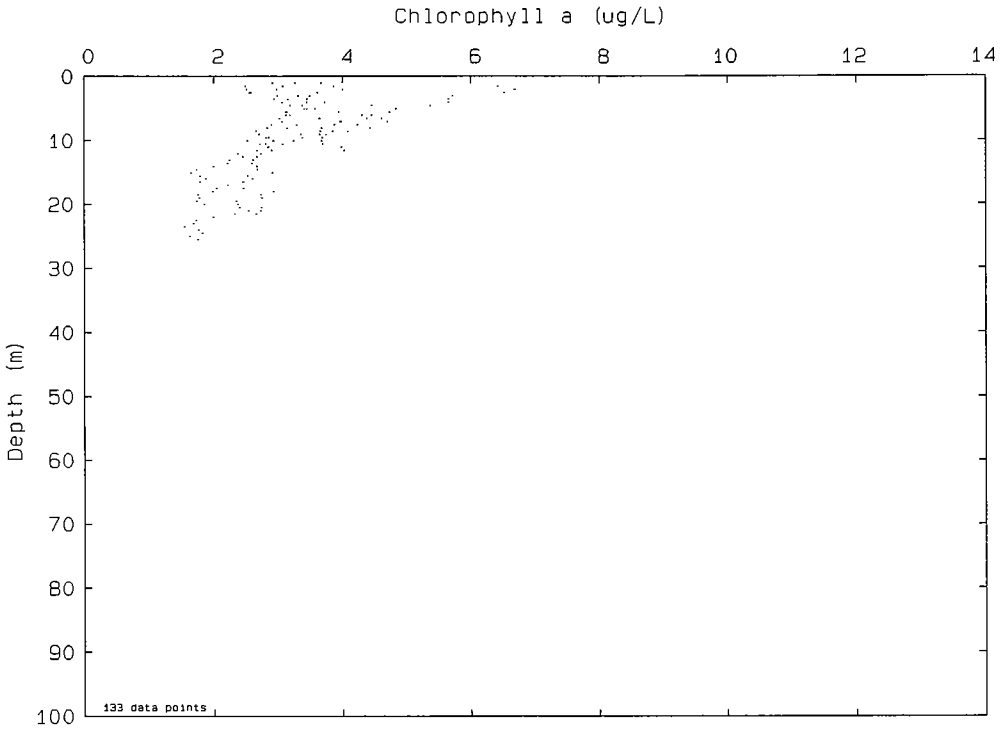

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
205 data points

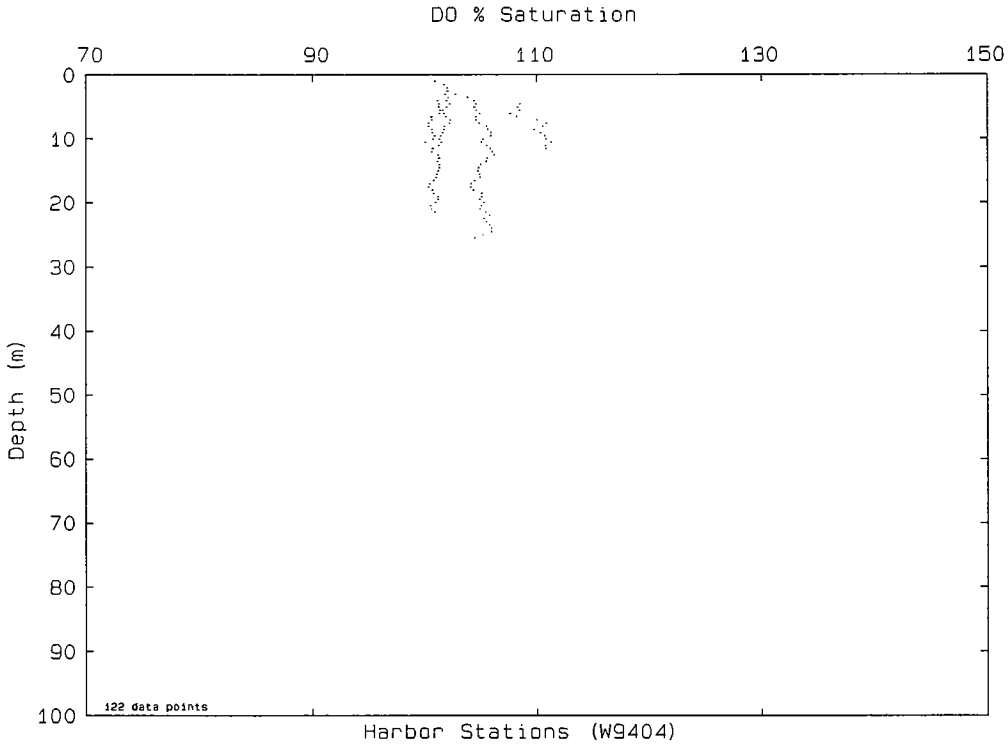

DO % Saturation
70
90
110
130
150
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
188 data points
Coastal Stations (W9404)

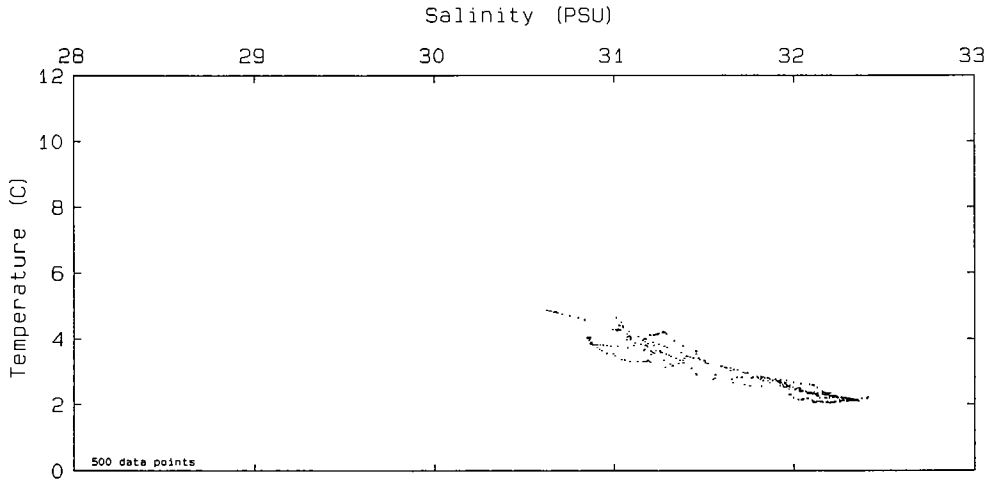

Salinity (PSU)
28
29
30
31
32
33
12
10
8
6
4
2
0
Temperature (C)
133 data points

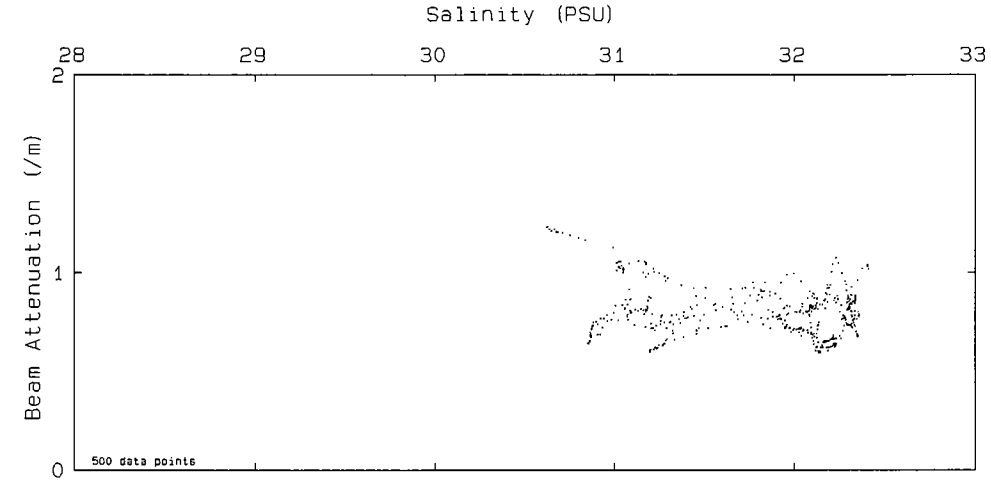

Salinity (PSU)
28
29
30
31
32
33
2
1
0
Beam Attenuation (/m)
133 data points

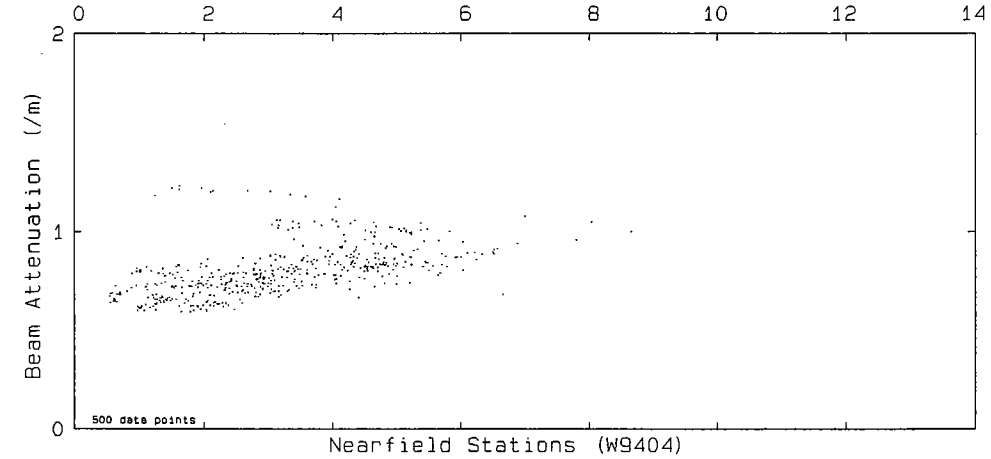

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
2
1
0
Beam Attenuation (/m)
133 data points
Harbor Stations (W9404)

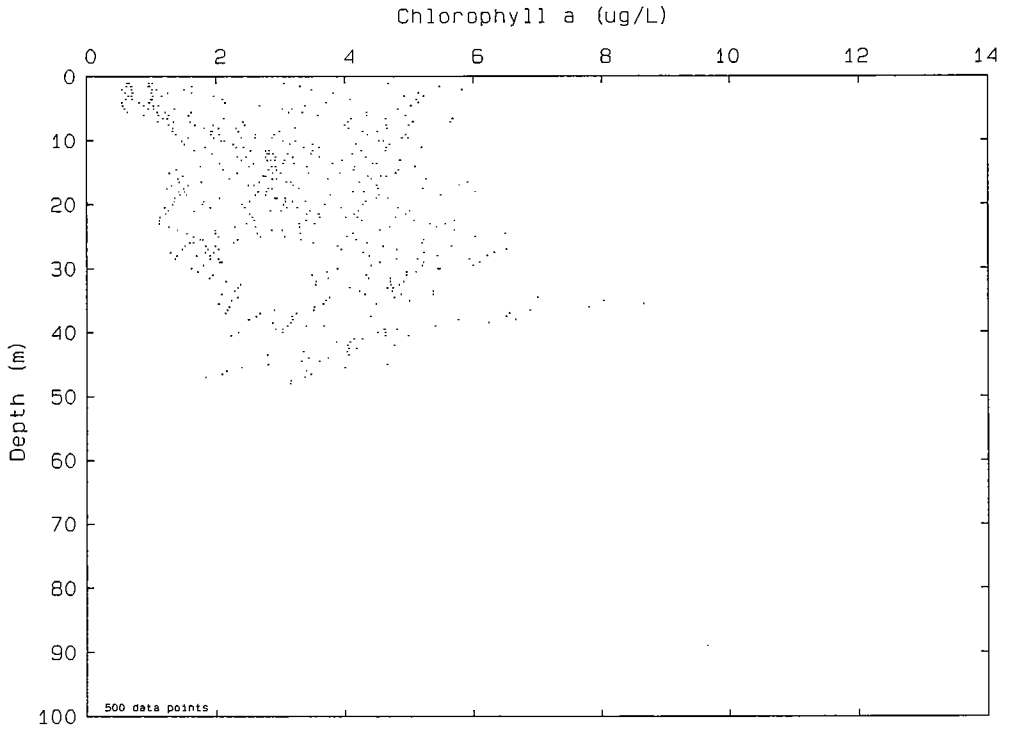

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
133 data points

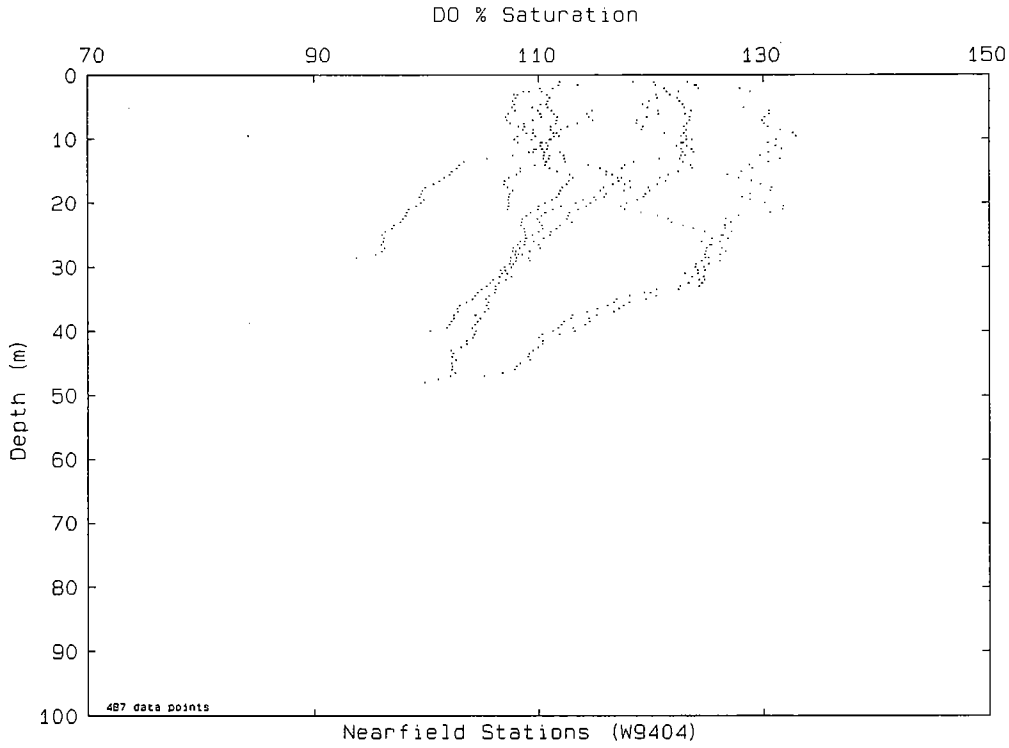

DO % Saturation
70
90
110
130
150
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
122 data points
Harbor Stations (W9404)

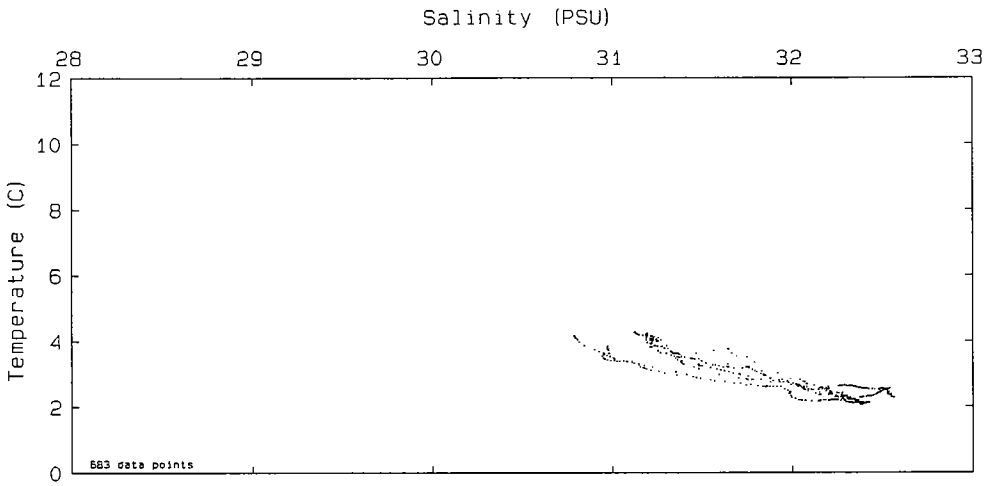

Salinity (PSU)
28
29
30
31
32
33
12
10
8
6
4
2
0
Temperature (C)
500 data points

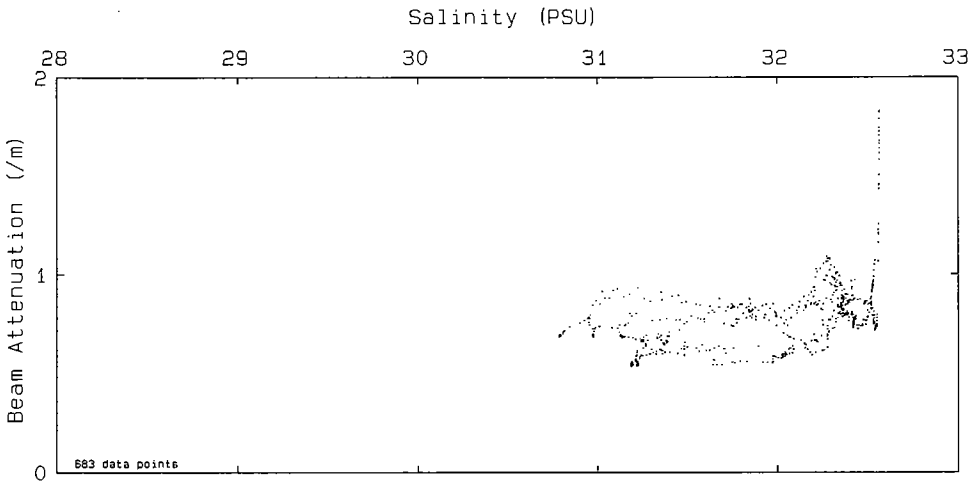

Salinity (PSU)
28
29
30
31
32
33
2
1
0
Beam Attenuation (/m)
500 data points

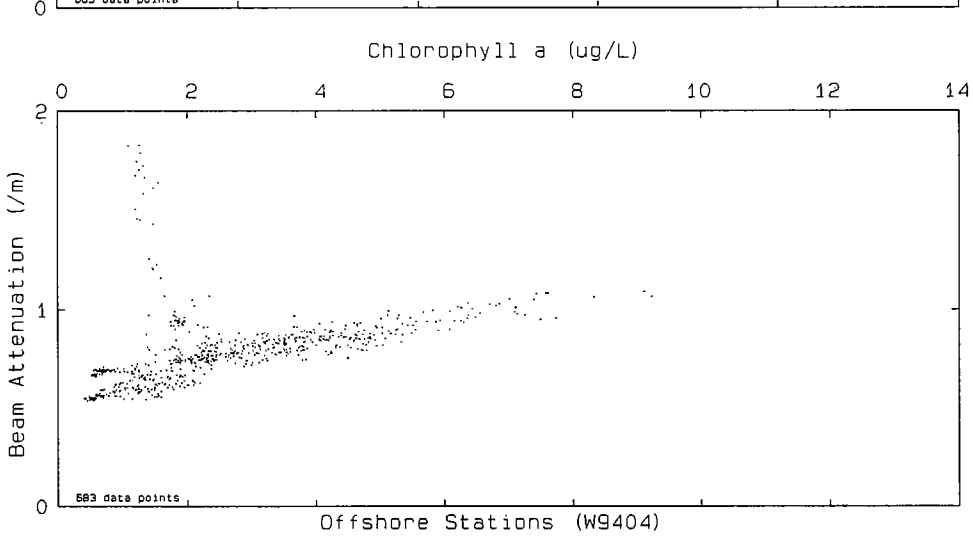

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
2
1
0
Beam Attenuation (/m)
500 data points
Nearfield Stations (W9404)

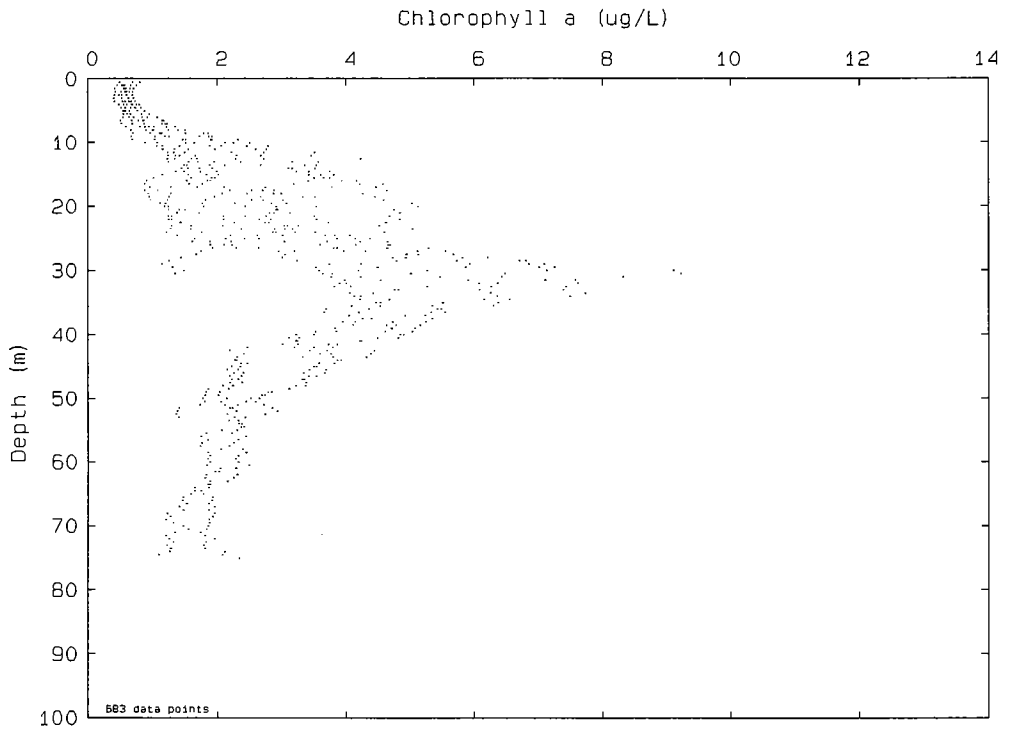

Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
500 data points

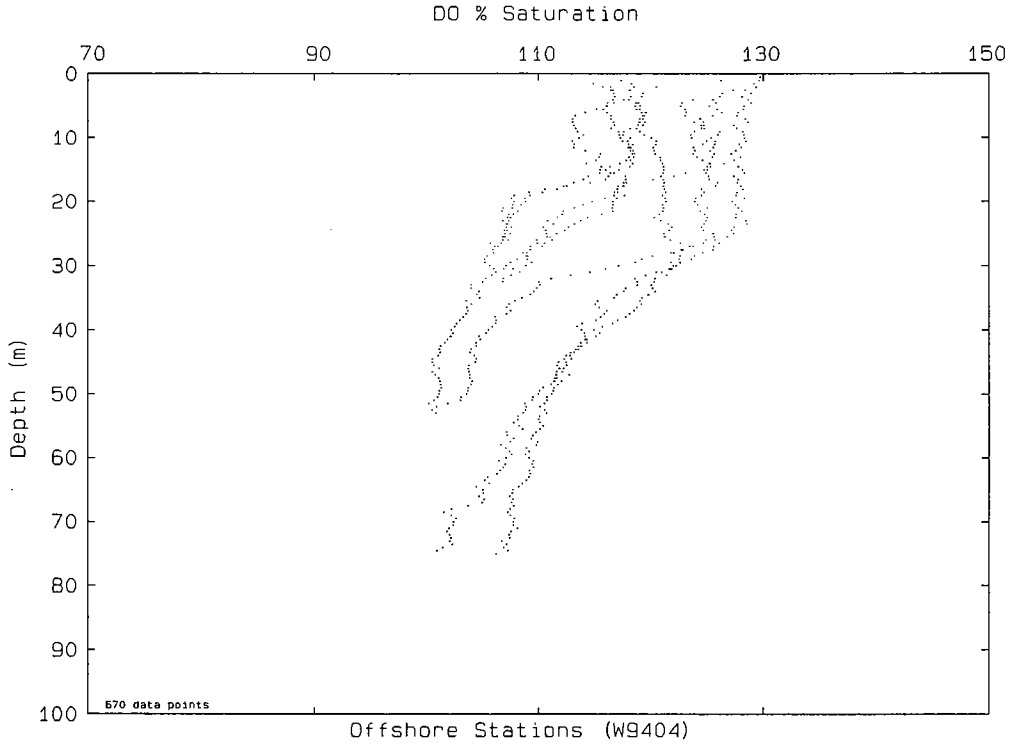

DO % Saturation
70
90
110
130
150
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
487 data points
Nearfield Stations (W9404)


Salinity (PSU)
28
29
30
31
32
33
Temperature (C)
12
10
8
6
4
2
0
683 data points


Salinity (PSU)
28
29
30
31
32
33
Beam Attenuation (/m)
2
1
0
683 data points


Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Beam Attenuation (/m)
2
1
0
683 data points
Offshore Stations (W9404)


Chlorophyll a (ug/L)
0
2
4
6
8
10
12
14
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
883 data points


DO % Saturation
70
90
110
130
150
Depth (m)
0
10
20
30
40
50
60
70
80
90
100
870 data points
Offshore Stations (W9404)

APPENDIX D

METABOLISM DATA AND PRODUCTIVITY—IRRADIANCE MODELING

Part 1

^{14}C Incubation Data

Table D1-1 includes data from the early April (W9404) survey. The table includes data for samples from BioProductivity stations F23P and N16P that were incubated from surface, mid-surface, mid-depth, and mid-bottom depths (dark and light bottles). ^{14}C-production was calculated using measured dissolved inorganic carbon and after subtraction of the mean (n=3) dark bottle uptake rates as described in the text report. Where ^{14}C (DPM) for a dark bottle are labeled with an "s" qualifier the data were suspect and were not used in calculating production. In Appendix D, Part 2, the criterion used for rejecting suspect data is given.

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	F23P	05-APR-94	0649	2.09	W94040038					5717500.0	24.6	5.7	
W9404	F23P	05-APR-94	0649	2.09	W94040038	-3	DARK	0	1089.2				
W9404	F23P	05-APR-94	0649	2.09	W94040038	-2	DARK	0	784.3				
W9404	F23P	05-APR-94	0649	2.09	W94040038	-1	DARK	0	832.9				
W9404	F23P	05-APR-94	0649	2.09	W94040038	1	LIGHT	793	21813.0				16.6
W9404	F23P	05-APR-94	0649	2.09	W94040038	2	LIGHT	1141	22044.1				16.8
W9404	F23P	05-APR-94	0649	2.09	W94040038	3	LIGHT	348	22155.0				16.9
W9404	F23P	05-APR-94	0649	2.09	W94040038	4	LIGHT	1841	20852.5				15.8
W9404	F23P	05-APR-94	0649	2.09	W94040038	5	LIGHT	1177	22040.8				16.8
W9404	F23P	05-APR-94	0649	2.09	W94040038	6	LIGHT	190	20701.5				15.7
W9404	F23P	05-APR-94	0649	2.09	W94040038	7	LIGHT	190	20854.4				15.8
W9404	F23P	05-APR-94	0649	2.09	W94040038	8	LIGHT	75	10936.6				8.0
W9404	F23P	05-APR-94	0649	2.09	W94040038	9	LIGHT	20	4894.7				3.2
W9404	F23P	05-APR-94	0649	2.09	W94040038	10	LIGHT	19	5395.8				3.6
W9404	F23P	05-APR-94	0649	2.09	W94040038	11	LIGHT	4	2365.2				1.2
W9404	F23P	05-APR-94	0649	2.09	W94040038	12	LIGHT	2	1652.1				0.6
W9404	F23P	05-APR-94	0648	5.92	W94040037					5717500.0	24.7	5.8	
W9404	F23P	05-APR-94	0648	5.92	W94040037	-3	DARK	0	768.5				
W9404	F23P	05-APR-94	0648	5.92	W94040037	-2	DARK	0	667.5				
W9404	F23P	05-APR-94	0648	5.92	W94040037	-1	DARK	0	552.7				
W9404	F23P	05-APR-94	0648	5.92	W94040037	1	LIGHT	583	19737.3				15.0
W9404	F23P	05-APR-94	0648	5.92	W94040037	2	LIGHT	886	21697.5				16.5
W9404	F23P	05-APR-94	0648	5.92	W94040037	3	LIGHT	1440	18906.1				14.3
W9404	F23P	05-APR-94	0648	5.92	W94040037	4	LIGHT	218	18062.1				13.7
W9404	F23P	05-APR-94	0648	5.92	W94040037	5	LIGHT	176	18739.5				14.2
W9404	F23P	05-APR-94	0648	5.92	W94040037	6	LIGHT	197	16809.2				12.7
W9404	F23P	05-APR-94	0648	5.92	W94040037	7	LIGHT	283	15887.3				12.0
W9404	F23P	05-APR-94	0648	5.92	W94040037	8	LIGHT	54	7966.3				5.7
W9404	F23P	05-APR-94	0648	5.92	W94040037	9	LIGHT	11	2486.7				1.4
W9404	F23P	05-APR-94	0648	5.92	W94040037	10	LIGHT	18	2851.9				1.7
W9404	F23P	05-APR-94	0648	5.92	W94040037	11	LIGHT	2	1174.6				0.4
W9404	F23P	05-APR-94	0648	5.92	W94040037	12	LIGHT	2	1237.2				0.5
W9404	F23P	05-APR-94	0647	11.72	W94040036					5717500.0	25.1	5.4	
W9404	F23P	05-APR-94	0647	11.72	W94040036	-3	DARK	0	632.2				
W9404	F23P	05-APR-94	0647	11.72	W94040036	-2	DARK	0	682.7				
W9404	F23P	05-APR-94	0647	11.72	W94040036	-1	DARK	0	836.3				
W9404	F23P	05-APR-94	0647	11.72	W94040036	1	LIGHT	825	10500.3				8.4
W9404	F23P	05-APR-94	0647	11.72	W94040036	2	LIGHT	795	10075.6				8.0
W9404	F23P	05-APR-94	0647	11.72	W94040036	3	LIGHT	91	7309.3				5.7
W9404	F23P	05-APR-94	0647	11.72	W94040036	4	LIGHT	1284	9498.8				7.5
W9404	F23P	05-APR-94	0647	11.72	W94040036	5	LIGHT	1395	10197.3				8.1

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	F23P	05-APR-94	0647	11.72	W94040036	6	LIGHT	225	7990.0				6.2
W9404	F23P	05-APR-94	0647	11.72	W94040036	7	LIGHT	31	2085.8				1.2
W9404	F23P	05-APR-94	0647	11.72	W94040036	8	LIGHT	23	2389.2				1.4
W9404	F23P	05-APR-94	0647	11.72	W94040036	9	LIGHT	169	7897.1				6.2
W9404	F23P	05-APR-94	0647	11.72	W94040036	10	LIGHT	23	2502.0				1.5
W9404	F23P	05-APR-94	0647	11.72	W94040036	11	LIGHT	2	945.7				0.2
W9404	F23P	05-APR-94	0647	11.72	W94040036	12	LIGHT	1	1206.1				0.4
W9404	F23P	05-APR-94	0646	18.03	W94040035					5717500.0	25.2	5.5	
W9404	F23P	05-APR-94	0646	18.03	W94040035	-3	DARK	0	737.7 s				
W9404	F23P	05-APR-94	0646	18.03	W94040035	-2	DARK	0	547.2				
W9404	F23P	05-APR-94	0646	18.03	W94040035	-1	DARK	0	537.6				
W9404	F23P	05-APR-94	0646	18.03	W94040035	1	LIGHT	715	8294.2				6.5
W9404	F23P	05-APR-94	0646	18.03	W94040035	2	LIGHT	916	8154.9				6.4
W9404	F23P	05-APR-94	0646	18.03	W94040035	3	LIGHT	1448	8148.5				6.4
W9404	F23P	05-APR-94	0646	18.03	W94040035	4	LIGHT	189	7705.9				6.0
W9404	F23P	05-APR-94	0646	18.03	W94040035	5	LIGHT	194	8179.1				6.4
W9404	F23P	05-APR-94	0646	18.03	W94040035	6	LIGHT	152	6524.7				5.0
W9404	F23P	05-APR-94	0646	18.03	W94040035	7	LIGHT	228	22520.1				18.6
W9404	F23P	05-APR-94	0646	18.03	W94040035	8	LIGHT	54	4331.8				3.2
W9404	F23P	05-APR-94	0646	18.03	W94040035	9	LIGHT	11	2086.6				1.3
W9404	F23P	05-APR-94	0646	18.03	W94040035	10	LIGHT	16	2781.4				1.8
W9404	F23P	05-APR-94	0646	18.03	W94040035	11	LIGHT	2	1166.2				0.5
W9404	F23P	05-APR-94	0646	18.03	W94040035	12	LIGHT	2	1382.0				0.7
W9404	F23P	06-APR-94	0553	2.52	W94040246					5793215.0	24.6	5.6	
W9404	F23P	06-APR-94	0553	2.52	W94040246	-3	DARK	0	1677.0				
W9404	F23P	06-APR-94	0553	2.52	W94040246	-2	DARK	0	1447.9				
W9404	F23P	06-APR-94	0553	2.52	W94040246	-1	DARK	0	2165.3				
W9404	F23P	06-APR-94	0553	2.52	W94040246	1	LIGHT	789	34322.6				26.0
W9404	F23P	06-APR-94	0553	2.52	W94040246	2	LIGHT	1090	36538.1				27.8
W9404	F23P	06-APR-94	0553	2.52	W94040246	3	LIGHT	1235	35270.4				26.8
W9404	F23P	06-APR-94	0553	2.52	W94040246	4	LIGHT	310	26569.9				19.8
W9404	F23P	06-APR-94	0553	2.52	W94040246	5	LIGHT	1908	32467.8				24.5
W9404	F23P	06-APR-94	0553	2.52	W94040246	6	LIGHT	191	32552.4				24.6
W9404	F23P	06-APR-94	0553	2.52	W94040246	7	LIGHT	20	7385.1				4.5
W9404	F23P	06-APR-94	0553	2.52	W94040246	8	LIGHT	19	15592.1				11.1
W9404	F23P	06-APR-94	0553	2.52	W94040246	9	LIGHT	191	26580.7				19.8
W9404	F23P	06-APR-94	0553	2.52	W94040246	10	LIGHT	75	20027.7				14.6
W9404	F23P	06-APR-94	0553	2.52	W94040246	11	LIGHT	4	5361.4				2.9
W9404	F23P	06-APR-94	0553	2.52	W94040246	12	LIGHT	2	10328.6				6.8
W9404	F23P	06-APR-94	0552	4.71	W94040245					5793215.0	24.5	5.5	
W9404	F23P	06-APR-94	0552	4.71	W94040245	-3	DARK	0	8265.9				

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	F23P	06-APR-94	0552	4.71	W94040245	-2	DARK	0	1353.6				
W9404	F23P	06-APR-94	0552	4.71	W94040245	-1	DARK	0	2369.7				
W9404	F23P	06-APR-94	0552	4.71	W94040245	1	LIGHT	148	23396.6				15.6
W9404	F23P	06-APR-94	0552	4.71	W94040245	2	LIGHT	167	21726.7				14.3
W9404	F23P	06-APR-94	0552	4.71	W94040245	3	LIGHT	1366	36419.9				26.1
W9404	F23P	06-APR-94	0552	4.71	W94040245	4	LIGHT	842	31983.2				22.5
W9404	F23P	06-APR-94	0552	4.71	W94040245	5	LIGHT	525	29573.7				20.6
W9404	F23P	06-APR-94	0552	4.71	W94040245	6	LIGHT	185	19902.0				12.8
W9404	F23P	06-APR-94	0552	4.71	W94040245	7	LIGHT	267	22129.9				14.6
W9404	F23P	06-APR-94	0552	4.71	W94040245	8	LIGHT	51	12500.3				6.8
W9404	F23P	06-APR-94	0552	4.71	W94040245	9	LIGHT	17	5684.0				1.4
W9404	F23P	06-APR-94	0552	4.71	W94040245	10	LIGHT	11	10067.5				4.9
W9404	F23P	06-APR-94	0552	4.71	W94040245	11	LIGHT	2	5641.5				1.3
W9404	F23P	06-APR-94	0552	4.71	W94040245	12	LIGHT	2	7927.6				3.2
W9404	F23P	06-APR-94	0551	8.44	W94040244					5793215.0	24.9	5.9	
W9404	F23P	06-APR-94	0551	8.44	W94040244	-3	DARK	0	7216.5				
W9404	F23P	06-APR-94	0551	8.44	W94040244	-2	DARK	0	967.1				
W9404	F23P	06-APR-94	0551	8.44	W94040244	-1	DARK	0	11308.5				
W9404	F23P	06-APR-94	0551	8.44	W94040244	1	LIGHT	700	32685.8				19.9
W9404	F23P	06-APR-94	0551	8.44	W94040244	2	LIGHT	767	32169.8				19.6
W9404	F23P	06-APR-94	0551	8.44	W94040244	3	LIGHT	1149	33242.5				20.4
W9404	F23P	06-APR-94	0551	8.44	W94040244	4	LIGHT	1302	34208.0				21.1
W9404	F23P	06-APR-94	0551	8.44	W94040244	5	LIGHT	78	20756.3				10.9
W9404	F23P	06-APR-94	0551	8.44	W94040244	6	LIGHT	209	21403.5				11.4
W9404	F23P	06-APR-94	0551	8.44	W94040244	7	LIGHT	21	9025.4				1.9
W9404	F23P	06-APR-94	0551	8.44	W94040244	8	LIGHT	157	16065.6				7.3
W9404	F23P	06-APR-94	0551	8.44	W94040244	9	LIGHT	29	11779.2				4.0
W9404	F23P	06-APR-94	0551	8.44	W94040244	10	LIGHT	22	16352.9				7.5
W9404	F23P	06-APR-94	0551	8.44	W94040244	11	LIGHT	1	11198.0				3.6
W9404	F23P	06-APR-94	0551	8.44	W94040244	12	LIGHT	2	10614.3				3.1
W9404	F23P	06-APR-94	0551	14.66	W94040243					5793215.0	25.1	5.9	
W9404	F23P	06-APR-94	0551	14.66	W94040243	-3	DARK	0	1496.7				
W9404	F23P	06-APR-94	0551	14.66	W94040243	-2	DARK	0	1429.7				
W9404	F23P	06-APR-94	0551	14.66	W94040243	-1	DARK	0	1394.2				
W9404	F23P	06-APR-94	0551	14.66	W94040243	1	LIGHT	141	9186.8				6.0
W9404	F23P	06-APR-94	0551	14.66	W94040243	2	LIGHT	761	12321.2				8.4
W9404	F23P	06-APR-94	0551	14.66	W94040243	3	LIGHT	544	15334.5				10.8
W9404	F23P	06-APR-94	0551	14.66	W94040243	4	LIGHT	849	13207.0				9.1
W9404	F23P	06-APR-94	0551	14.66	W94040243	5	LIGHT	1238	13095.5				9.0
W9404	F23P	06-APR-94	0551	14.66	W94040243	6	LIGHT	132	8714.0				5.6
W9404	F23P	06-APR-94	0551	14.66	W94040243	7	LIGHT	47	2983.6				1.2

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	F23P	06-APR-94	0551	14.66	W94040243	8	LIGHT	198	9013.5				5.9
W9404	F23P	06-APR-94	0551	14.66	W94040243	9	LIGHT	14	2588.6				0.9
W9404	F23P	06-APR-94	0551	14.66	W94040243	10	LIGHT	10	2137.0				0.5
W9404	F23P	06-APR-94	0551	14.66	W94040243	11	LIGHT	1	1375.5				-0.1
W9404	F23P	06-APR-94	0551	14.66	W94040243	12	LIGHT	2	1247.6				-0.1
W9404	N16P	05-APR-94	0938	1.55	W94040105					5717500.0	24.0	5.5	
W9404	N16P	05-APR-94	0938	1.55	W94040105	-3	DARK	0	794.2				
W9404	N16P	05-APR-94	0938	1.55	W94040105	-2	DARK	0	766.1				
W9404	N16P	05-APR-94	0938	1.55	W94040105	-1	DARK	0	1091.3				
W9404	N16P	05-APR-94	0938	1.55	W94040105	1	LIGHT	1165	10544.1				7.8
W9404	N16P	05-APR-94	0938	1.55	W94040105	2	LIGHT	1881	10310.4				7.6
W9404	N16P	05-APR-94	0938	1.55	W94040105	3	LIGHT	727	7898.8				5.7
W9404	N16P	05-APR-94	0938	1.55	W94040105	4	LIGHT	320	7594.3				5.4
W9404	N16P	05-APR-94	0938	1.55	W94040105	5	LIGHT	336	7839.1				5.6
W9404	N16P	05-APR-94	0938	1.55	W94040105	6	LIGHT	237	8691.8				6.3
W9404	N16P	05-APR-94	0938	1.55	W94040105	7	LIGHT	246	8789.1				6.4
W9404	N16P	05-APR-94	0938	1.55	W94040105	8	LIGHT	334	6445.8				4.5
W9404	N16P	05-APR-94	0938	1.55	W94040105	9	LIGHT	17	4549.6				3.0
W9404	N16P	05-APR-94	0938	1.55	W94040105	10	LIGHT	10	2850.8				1.6
W9404	N16P	05-APR-94	0938	1.55	W94040105	11	LIGHT	3	2357.7				1.2
W9404	N16P	05-APR-94	0938	1.55	W94040105	12	LIGHT	2	1407.0				0.4
W9404	N16P	05-APR-94	0937	9.22	W94040104					5717500.0	24.5	5.4	
W9404	N16P	05-APR-94	0937	9.22	W94040104	-3	DARK	0	1119.5				
W9404	N16P	05-APR-94	0937	9.22	W94040104	-2	DARK	0	726.5				
W9404	N16P	05-APR-94	0937	9.22	W94040104	-1	DARK	0	758.5				
W9404	N16P	05-APR-94	0937	9.22	W94040104	1	LIGHT	921	11444.9				8.8
W9404	N16P	05-APR-94	0937	9.22	W94040104	2	LIGHT	1420	12466.4				9.6
W9404	N16P	05-APR-94	0937	9.22	W94040104	3	LIGHT	877	10971.4				8.4
W9404	N16P	05-APR-94	0937	9.22	W94040104	4	LIGHT	486	11260.0				8.6
W9404	N16P	05-APR-94	0937	9.22	W94040104	5	LIGHT	214	10905.6				8.3
W9404	N16P	05-APR-94	0937	9.22	W94040104	6	LIGHT	202	9781.8				7.4
W9404	N16P	05-APR-94	0937	9.22	W94040104	7	LIGHT	191	9081.8				6.8
W9404	N16P	05-APR-94	0937	9.22	W94040104	8	LIGHT	149	10602.4				8.1
W9404	N16P	05-APR-94	0937	9.22	W94040104	9	LIGHT	19	3572.1				2.2
W9404	N16P	05-APR-94	0937	9.22	W94040104	10	LIGHT	23	5130.2				3.5
W9404	N16P	05-APR-94	0937	9.22	W94040104	11	LIGHT	1	2390.7				1.3
W9404	N16P	05-APR-94	0937	9.22	W94040104	12	LIGHT	2	1891.7				0.8
W9404	N16P	05-APR-94	0936	21.05	W94040103					5717500.0	25.3	5.9	
W9404	N16P	05-APR-94	0936	21.05	W94040103	-3	DARK	0	821.3				
W9404	N16P	05-APR-94	0936	21.05	W94040103	-2	DARK	0	777.6				
W9404	N16P	05-APR-94	0936	21.05	W94040103	-1	DARK	0	632.2				

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	N16P	05-APR-94	0936	21.05	W94040103	1	LIGHT	201	20355.7				15.4
W9404	N16P	05-APR-94	0936	21.05	W94040103	2	LIGHT	194	21297.6				16.1
W9404	N16P	05-APR-94	0936	21.05	W94040103	3	LIGHT	858	24568.5				18.7
W9404	N16P	05-APR-94	0936	21.05	W94040103	4	LIGHT	968	22012.5				16.7
W9404	N16P	05-APR-94	0936	21.05	W94040103	5	LIGHT	1477	20331.9				15.3
W9404	N16P	05-APR-94	0936	21.05	W94040103	6	LIGHT	148	24803.5				18.8
W9404	N16P	05-APR-94	0936	21.05	W94040103	7	LIGHT	16	8826.4				6.3
W9404	N16P	05-APR-94	0936	21.05	W94040103	8	LIGHT	8	6184.8				4.3
W9404	N16P	05-APR-94	0936	21.05	W94040103	9	LIGHT	165	19700.7				14.8
W9404	N16P	05-APR-94	0936	21.05	W94040103	10	LIGHT	115	17446.4				13.1
W9404	N16P	05-APR-94	0936	21.05	W94040103	11	LIGHT	2	5311.4				3.6
W9404	N16P	05-APR-94	0936	21.05	W94040103	12	LIGHT	1	4770.3				3.2
W9404	N16P	05-APR-94	0935	31.56	W94040102					5717500.0	25.5	5.8	
W9404	N16P	05-APR-94	0935	31.56	W94040102	-3	DARK	0	942.7				
W9404	N16P	05-APR-94	0935	31.56	W94040102	-2	DARK	0	1209.7				
W9404	N16P	05-APR-94	0935	31.56	W94040102	-1	DARK	0	434.6				
W9404	N16P	05-APR-94	0935	31.56	W94040102	1	LIGHT	105	14186.5				10.7
W9404	N16P	05-APR-94	0935	31.56	W94040102	2	LIGHT	105	17432.7				13.3
W9404	N16P	05-APR-94	0935	31.56	W94040102	3	LIGHT	471	19645.5				15.1
W9404	N16P	05-APR-94	0935	31.56	W94040102	4	LIGHT	1261	23314.7				18.0
W9404	N16P	05-APR-94	0935	31.56	W94040102	5	LIGHT	1275	20957.9				16.2
W9404	N16P	05-APR-94	0935	31.56	W94040102	6	LIGHT	175	19144.4				14.7
W9404	N16P	05-APR-94	0935	31.56	W94040102	7	LIGHT	235	19884.0				15.3
W9404	N16P	05-APR-94	0935	31.56	W94040102	8	LIGHT	281	17279.3				13.2
W9404	N16P	05-APR-94	0935	31.56	W94040102	9	LIGHT	19	5631.8				3.8
W9404	N16P	05-APR-94	0935	31.56	W94040102	10	LIGHT	4	3772.4				2.3
W9404	N16P	05-APR-94	0935	31.56	W94040102	11	LIGHT	2	2003.2				0.9
W9404	N16P	05-APR-94	0935	31.56	W94040102	12	LIGHT	1	1628.1				0.6
W9404	N16P	06-APR-94	0832	2.24	W94040292					5793215.0	24.4	5.6	
W9404	N16P	06-APR-94	0832	2.24	W94040292	-3	DARK	0	465.2				
W9404	N16P	06-APR-94	0832	2.24	W94040292	-2	DARK	0	562.0				
W9404	N16P	06-APR-94	0832	2.24	W94040292	-1	DARK	0	597.0				
W9404	N16P	06-APR-94	0832	2.24	W94040292	1	LIGHT	279	3079.8				2.0
W9404	N16P	06-APR-94	0832	2.24	W94040292	2	LIGHT	647	3054.1				2.0
W9404	N16P	06-APR-94	0832	2.24	W94040292	3	LIGHT	337	2883.2				1.9
W9404	N16P	06-APR-94	0832	2.24	W94040292	4	LIGHT	1788	3227.5				2.1
W9404	N16P	06-APR-94	0832	2.24	W94040292	5	LIGHT	1161	3440.4				2.3
W9404	N16P	06-APR-94	0832	2.24	W94040292	6	LIGHT	238	3270.9				2.2
W9404	N16P	06-APR-94	0832	2.24	W94040292	7	LIGHT	335	3649.3				2.5
W9404	N16P	06-APR-94	0832	2.24	W94040292	8	LIGHT	247	2200.8				1.3
W9404	N16P	06-APR-94	0832	2.24	W94040292	9	LIGHT	17	15722.1				12.0

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	N16P	06-APR-94	0832	2.24	W94040292	10	LIGHT	10	1627.3				0.9
W9404	N16P	06-APR-94	0832	2.24	W94040292	11	LIGHT	2	968.0				0.3
W9404	N16P	06-APR-94	0832	2.24	W94040292	12	LIGHT	3	764.0				0.2
W9404	N16P	06-APR-94	0831	12.89	W94040291					5793215.0	24.8	5.5	
W9404	N16P	06-APR-94	0831	12.89	W94040291	-3	DARK	0	356.7				
W9404	N16P	06-APR-94	0831	12.89	W94040291	-2	DARK	0	760.3				
W9404	N16P	06-APR-94	0831	12.89	W94040291	-1	DARK	0	573.1				
W9404	N16P	06-APR-94	0831	12.89	W94040291	1	LIGHT	868	8948.2				6.8
W9404	N16P	06-APR-94	0831	12.89	W94040291	2	LIGHT	1319	6986.0				5.2
W9404	N16P	06-APR-94	0831	12.89	W94040291	3	LIGHT	779	6284.5				4.6
W9404	N16P	06-APR-94	0831	12.89	W94040291	4	LIGHT	411	7292.1				5.5
W9404	N16P	06-APR-94	0831	12.89	W94040291	5	LIGHT	161	6003.4				4.4
W9404	N16P	06-APR-94	0831	12.89	W94040291	6	LIGHT	191	6102.0				4.5
W9404	N16P	06-APR-94	0831	12.89	W94040291	7	LIGHT	22	1658.2				0.9
W9404	N16P	06-APR-94	0831	12.89	W94040291	8	LIGHT	18	1440.8				0.7
W9404	N16P	06-APR-94	0831	12.89	W94040291	9	LIGHT	180	4063.4				2.8
W9404	N16P	06-APR-94	0831	12.89	W94040291	10	LIGHT	140	4268.8				3.0
W9404	N16P	06-APR-94	0831	12.89	W94040291	11	LIGHT	2	858.2				0.2
W9404	N16P	06-APR-94	0831	12.89	W94040291	12	LIGHT	1	607.7				0.0
W9404	N16P	06-APR-94	0830	25.34	W94040290					5793215.0	25.6	5.9	
W9404	N16P	06-APR-94	0830	25.34	W94040290	-3	DARK	0	544.5				
W9404	N16P	06-APR-94	0830	25.34	W94040290	-2	DARK	0	818.6				
W9404	N16P	06-APR-94	0830	25.34	W94040290	-1	DARK	0	631.9				
W9404	N16P	06-APR-94	0830	25.34	W94040290	1	LIGHT	1107	18197.5				13.8
W9404	N16P	06-APR-94	0830	25.34	W94040290	2	LIGHT	1282	17984.9				13.7
W9404	N16P	06-APR-94	0830	25.34	W94040290	3	LIGHT	457	19272.8				14.7
W9404	N16P	06-APR-94	0830	25.34	W94040290	4	LIGHT	104	12382.3				9.2
W9404	N16P	06-APR-94	0830	25.34	W94040290	5	LIGHT	99	20610.1				15.7
W9404	N16P	06-APR-94	0830	25.34	W94040290	6	LIGHT	162	15578.2				11.8
W9404	N16P	06-APR-94	0830	25.34	W94040290	7	LIGHT	218	16833.9				12.8
W9404	N16P	06-APR-94	0830	25.34	W94040290	8	LIGHT	260	17827.4				13.5
W9404	N16P	06-APR-94	0830	25.34	W94040290	9	LIGHT	18	2695.4				1.6
W9404	N16P	06-APR-94	0830	25.34	W94040290	10	LIGHT	4	1398.5				0.6
W9404	N16P	06-APR-94	0830	25.34	W94040290	11	LIGHT	1	1011.2				0.3
W9404	N16P	06-APR-94	0830	25.34	W94040290	12	LIGHT	2	943.3				0.2
W9404	N16P	06-APR-94	0829	32.76	W94040289					5793215.0	25.8	5.8	
W9404	N16P	06-APR-94	0829	32.76	W94040289	-3	DARK	0	651.8				
W9404	N16P	06-APR-94	0829	32.76	W94040289	-2	DARK	0	763.3				
W9404	N16P	06-APR-94	0829	32.76	W94040289	-1	DARK	0	726.6				
W9404	N16P	06-APR-94	0829	32.76	W94040289	1	LIGHT	819	15282.6				11.7
W9404	N16P	06-APR-94	0829	32.76	W94040289	2	LIGHT	1276	15287.2				11.7

Table D1-1. C14 Production at Bioproductivity Stations in April of 1994.

Event	Station	Date	Time	Depth (M)	Sample Id	Rep	Level	Light uEm/m^2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of incubation (hours)	Production (Dark corrected) (mg C/m^3/hr)
W9404	N16P	06-APR-94	0829	32.76	W94040289	3	LIGHT	761	15265.7				11.7
W9404	N16P	06-APR-94	0829	32.76	W94040289	4	LIGHT	154	13043.0				9.9
W9404	N16P	06-APR-94	0829	32.76	W94040289	5	LIGHT	169	12557.8				9.5
W9404	N16P	06-APR-94	0829	32.76	W94040289	6	LIGHT	128	10736.8				8.0
W9404	N16P	06-APR-94	0829	32.76	W94040289	7	LIGHT	7	1996.4				1.0
W9404	N16P	06-APR-94	0829	32.76	W94040289	8	LIGHT	14	2432.0				1.4
W9404	N16P	06-APR-94	0829	32.76	W94040289	9	LIGHT	144	11191.3				8.4
W9404	N16P	06-APR-94	0829	32.76	W94040289	10	LIGHT	100	9424.4				7.0
W9404	N16P	06-APR-94	0829	32.76	W94040289	11	LIGHT	2	989.7				0.2
W9404	N16P	06-APR-94	0829	32.76	W94040289	12	LIGHT	1	724.7				0.0

s = Suspect data, value not used in calculating production

APPENDIX D

METABOLISM DATA AND PRODUCTIVITY—IRRADIANCE MODELING

Part 2

Summary of P-I Modeling

The modeling effort is described in Section 2 of the accompanying text report. All parameters were estimated using SAS (1985). P-I incubations were performed using water from four depths (surface, mid-surface, mid-depth, and mid-bottom) at BioProductivity stations F23P and N16P twice per combined survey. Volumetric net production rates for these are given in Table D1-1. The rates were normalized for each sample by dividing the volumetric rate by the average chlorophyll value for that sample (Appendix A), to yield an estimate of net production as μg C (μg Chl)$^{-1}$ hr^{-1} after correcting for dark uptake; rates thus expressed were used in the modeling and graphics that follow.

Table D2-1 summarizes the statistics used as a basis for rejecting certain outliers in the dark bottle replicates for survey W9404. This appendix provides the modeled data in chronological order. For each sampling date, the following sequence is used: modeled parameters for a 3-parameter model of Platt *et al.* (1980), followed by graphs of situations which were fit by this model; modeled parameters for a 2-parameter model of Webb *et al.* (1974), followed by graphs of situations which were fit by this model, which assumes zero photoinhibition.

Note that no incubation samples were taken from the bottom sampling depth. The sample qualifiers used in Tables D2-1 to D2-5 are explained as follows:

D2-1 Qualifier (BOT)	D2-2 to D2-5 Qualifier	Relative Sample Bottle Depth
4	BOT (bottom)	mid-bottom
6	IBOT (intermediate bottom)	mid-depth
8	ISUR (intermediate surface)	mid-surface
10	SUR (surface)	surface

Table D2-1. Basis for excluding dark bottle outliers using the Dixon Criteria for high values (X_3) and low values (X_1) [Survey W9404]. Note that COL1, COL2, and COL3 are replicate dark bottle values (dpm).

THE DIXON CRITERION CRUISE 9404 1
13:13 Thursday, July 28, 1994

OBS	STA	DEPTH	DATE	_NAME_	COL1	COL2	COL3	X_N	X_1
1	F23P	4	4/5/94	DARKDPM	537.60	547.18	737.65	0.95211	0.04789
2	F23P	4	4/6/94	DARKDPM	1394.20	1429.66	1496.66	0.65391	0.34609
3	F23P	6	4/5/94	DARKDPM	632.22	682.75	836.26	0.75235	0.24765
4	F23P	6	4/6/94	DARKDPM	967.12	7216.49	11308.47	0.39569	0.60431
5	F23P	8	4/5/94	DARKDPM	552.73	667.53	768.47	0.46788	0.53212
6	F23P	8	4/6/94	DARKDPM	1353.62	2369.70	8265.87	0.85300	0.14700
7	F23P	10	4/5/94	DARKDPM	784.34	832.93	1089.24	0.84064	0.15936
8	F23P	10	4/6/94	DARKDPM	1447.87	1676.99	2165.28	0.68063	0.31937
9	N16P	4	4/5/94	DARKDPM	434.57	942.75	1209.67	0.34437	0.65563
10	N16P	4	4/6/94	DARKDPM	651.76	726.58	763.29	0.32915	0.67085
11	N16P	6	4/5/94	DARKDPM	632.21	777.57	821.32	0.23135	0.76865
12	N16P	6	4/6/94	DARKDPM	544.47	631.85	818.56	0.68120	0.31880
13	N16P	8	4/5/94	DARKDPM	726.45	758.48	1119.53	0.91852	0.08148
14	N16P	8	4/6/94	DARKDPM	356.65	573.13	760.35	0.46376	0.53624
15	N16P	10	4/5/94	DARKDPM	766.15	794.22	1091.26	0.91366	0.08634
16	N16P	10	4/6/94	DARKDPM	465.15	562.03	597.02	0.26534	0.73466

THE DIXON CRITERION CRUISE 9404 2
HIGH DARK VALUES TO BE REJECTED P<0.05
13:13 Thursday, July 28, 1994

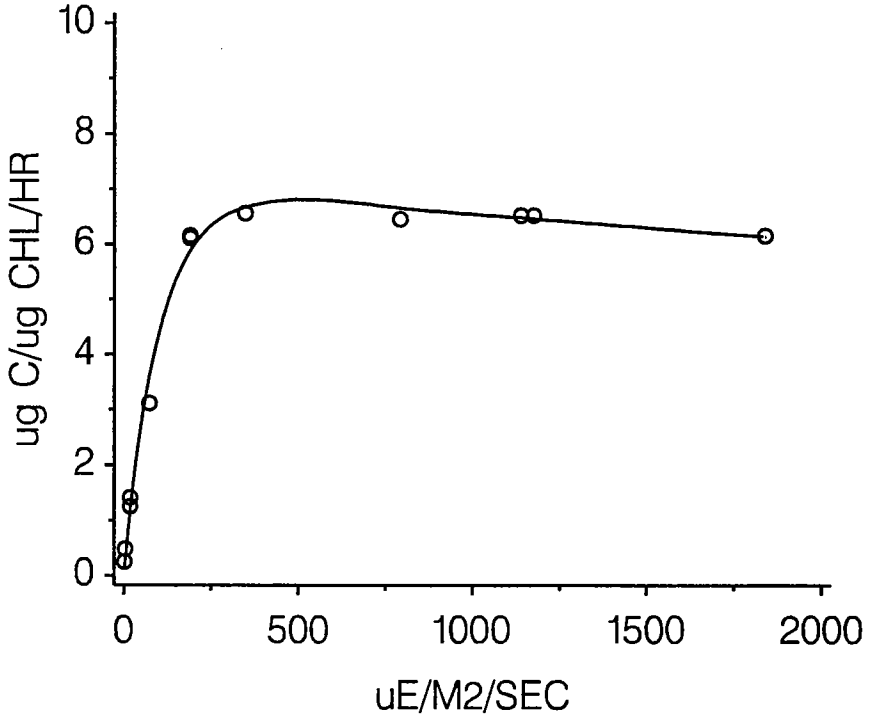
OBS	STA	DEPTH	DATE	_NAME_	COL1	COL2	COL3	X_N	X_1
1	F23P	4	4/5/94	DARKDPM	537.6	547.18	737.65	0.95211	0.047888

Table D2-2. P-I modeling using the Platt *et al.* (1980) model: April 5, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9404 APR 5, 1994
MODEL PLATT ET AL. 1980

STA	DEPTH	P_SB	ALPHA	BETA	R_2
F23P	SUR	7.12(0.30)	0.068(0.004)	0.001(0.0002)	0.99
F23P	ISUR	. .	. .	. .	.
F23P	IBOT	. .	. .	. .	.
F23P	BOT	. .	. .	. .	.
N16P	SUR	. .	. .	. .	.
N16P	ISUR	. .	. .	. .	.
N16P	IBOT	. .	. .	. .	.
N16P	BOT	. .	. .	. .	.

STATION F23P SURFACE



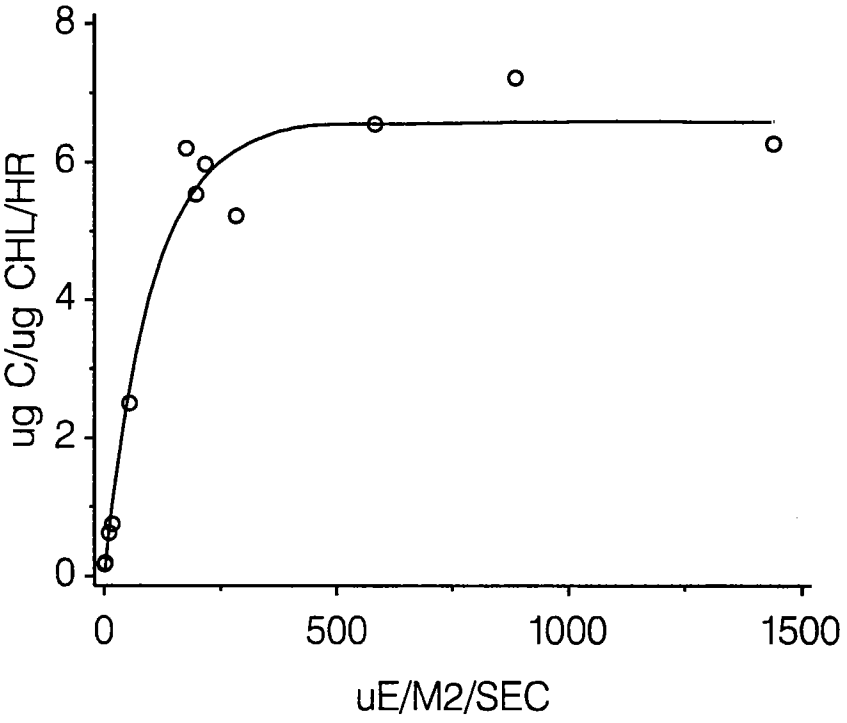
PLATT ET AL, 1980 MODEL
SURVEY W9404 APRIL 5, 1994

Table D2-3. P-I modeling using the Webb *et al.* (1974) model: April 5, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9404 APRIL 5, 1994
MODEL WEBB ET AL. 1974

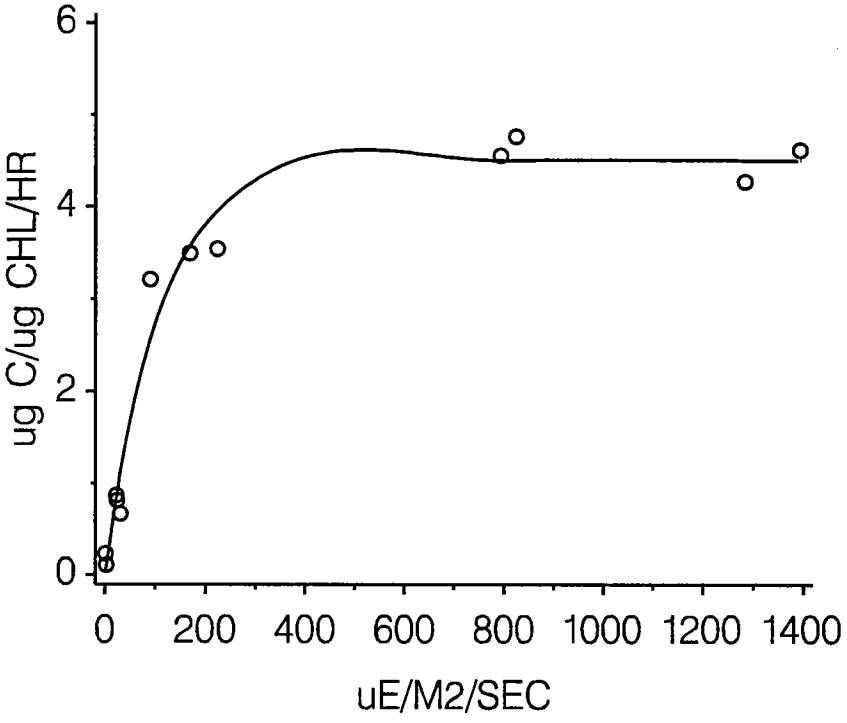
STATION	DEPTH	PMAX		ALPHA		R_2
F23P	SUR	.	.	.	.	.
F23P	ISUR	6.59	(0.06)	0.064	(0.008)	0.97
F23P	IBOT	4.52	(0.04)	0.042	(0.005)	0.98
F23P	BOT	3.85	(0.01)	0.054	(0.006)	0.99
N16P	SUR	10.66	(0.58)	0.397	(0.140)	0.87
N16P	ISUR	4.69	(0.16)	0.082	(0.014)	0.96
N16P	IBOT	4.89	(0.22)	0.163	(0.051)	0.93
N16P	BOT	3.73	(0.01)	0.051	(0.006)	0.97

STATION F23P INTERMED SURFACE



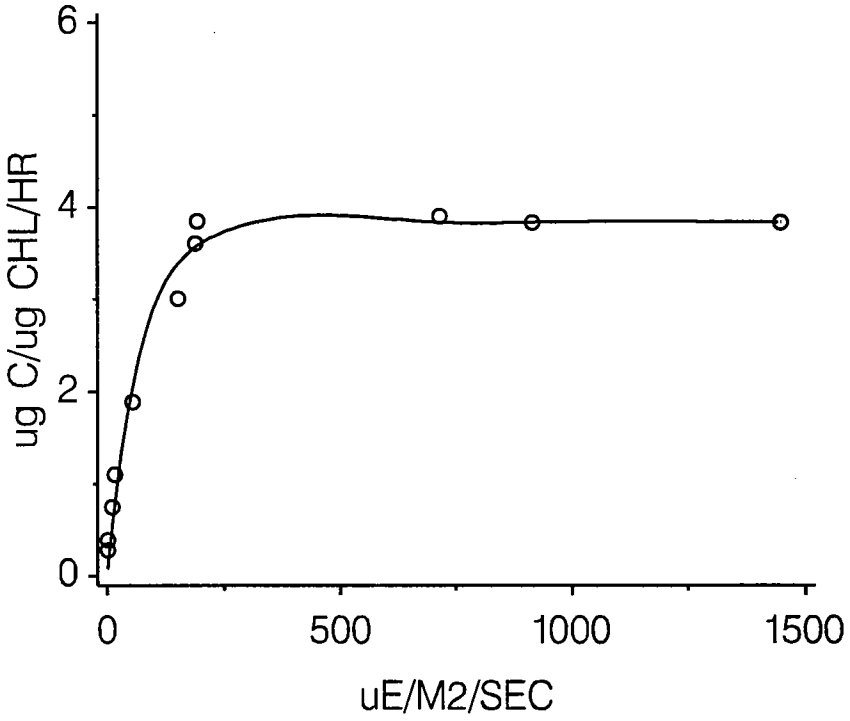
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

STATION F23P INTERMED BOTTOM



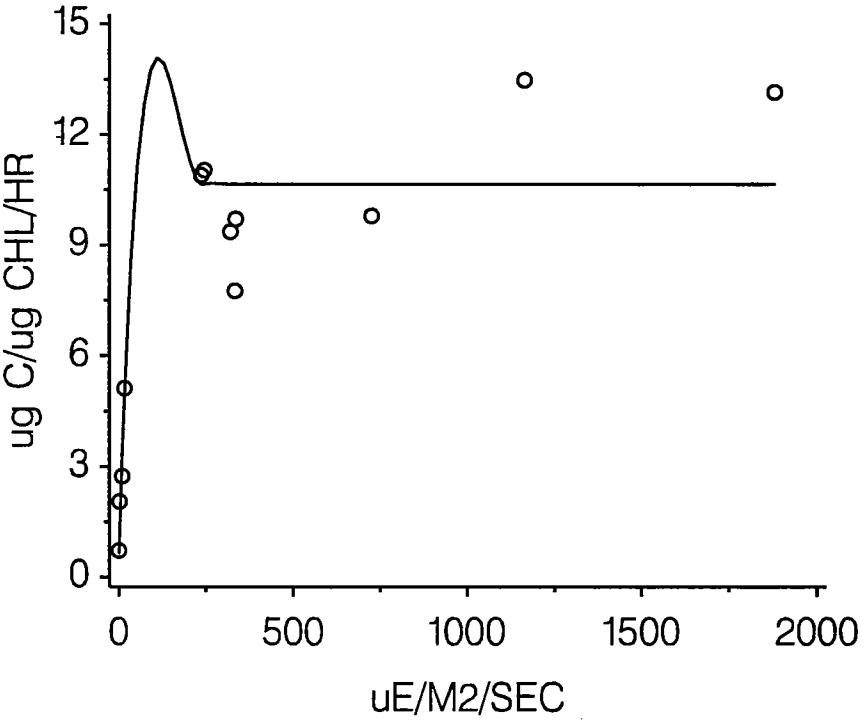
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

STATION F23P BOTTOM



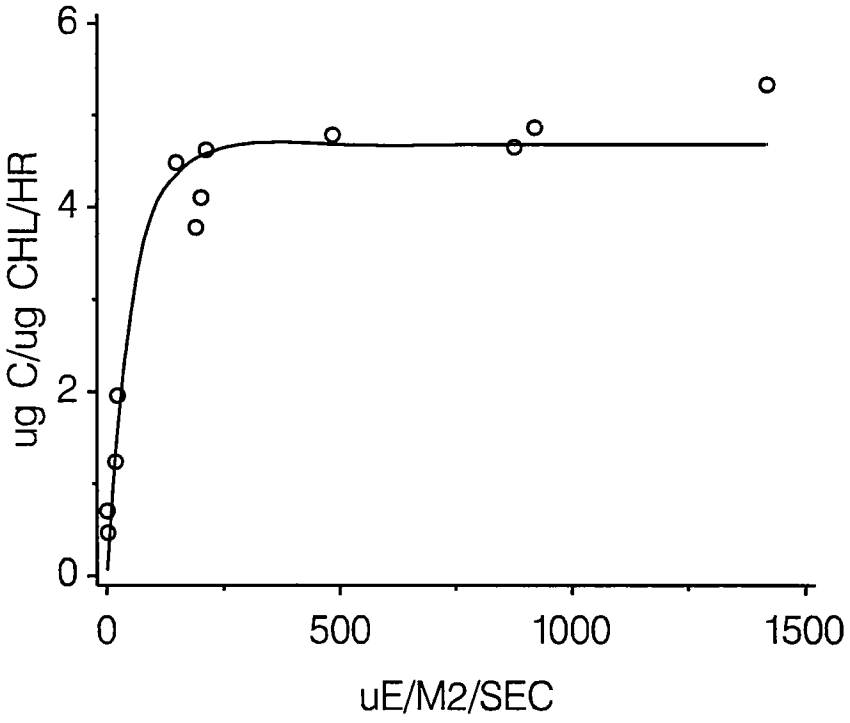
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

STATION N16P SURFACE



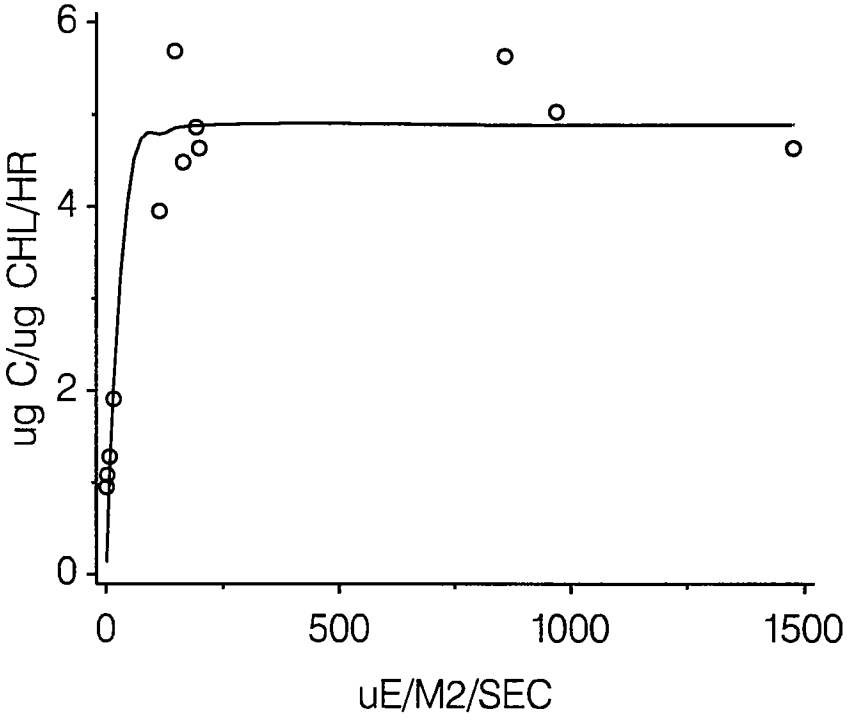
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

STATION N16P INTERMED SURFACE



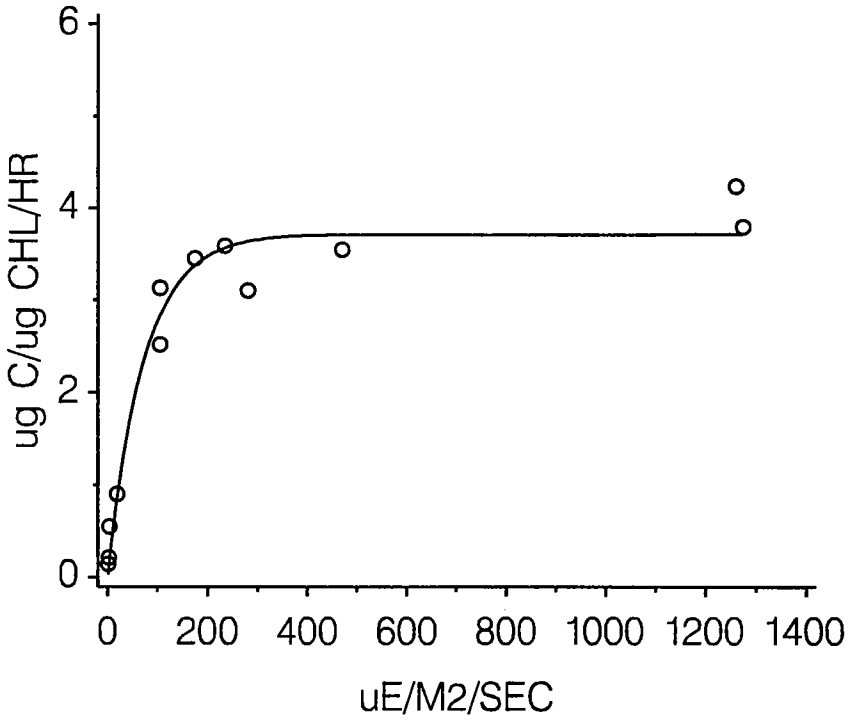
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

STATION N16P INTERMED BOTTOM



WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

STATION N16P BOTTOM



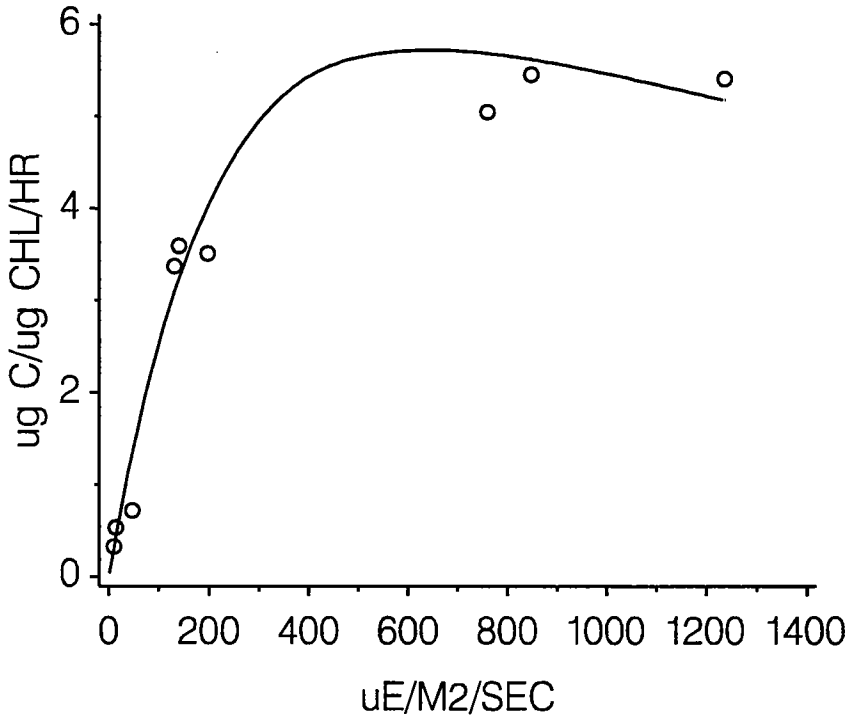
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 5, 1994

Table D2-4. P-I modeling using the Platt *et al.* (1980) model: April 6, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9404 APR 6, 1994
MODEL PLATT ET AL. 1980

STA	DEPTH	P_SB	ALPHA	BETA	R_2
F23P	SUR	.	.	.	.
F23P	ISUR	.	.	.	.
F23P	IBOT	.	.	.	.
F23P	BOT	7.21(0.27)	0.032(0.004)	0.002(0.0030)	0.97
N16P	SUR	.	.	.	.
N16P	ISUR	.	.	.	.
N16P	IBOT	.	.	.	.
N16P	BOT	.	.	.	.

STATION F23P BOTTOM



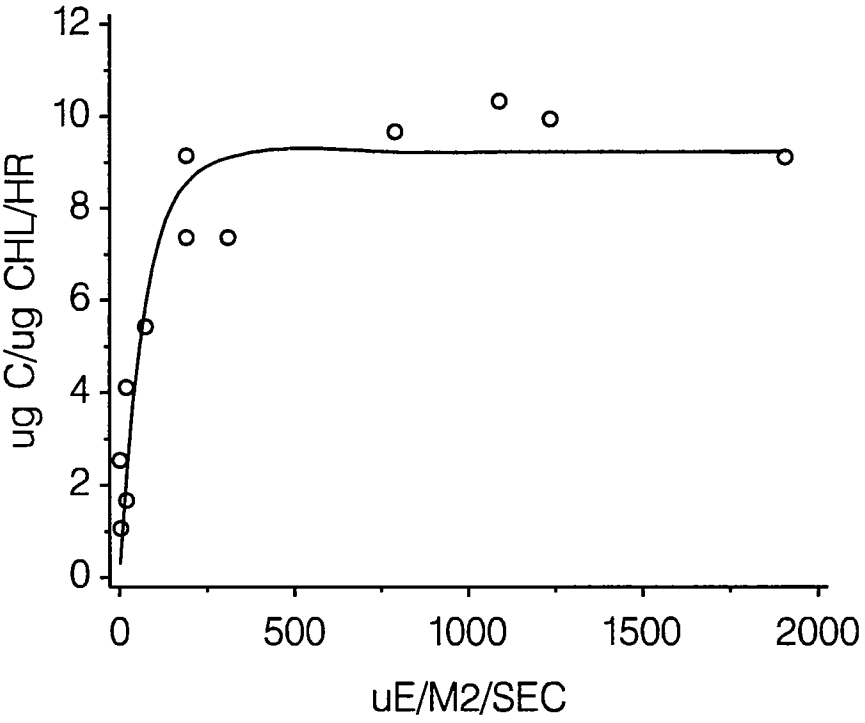
PLATT ET AL, 1980 MODEL
SURVEY W9404 APRIL 6, 1994

Table D2-5. P-I modeling using the Webb *et al.* (1974) model: April 6, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9404 APRIL 6, 1994
MODEL WEBB ET AL. 1974

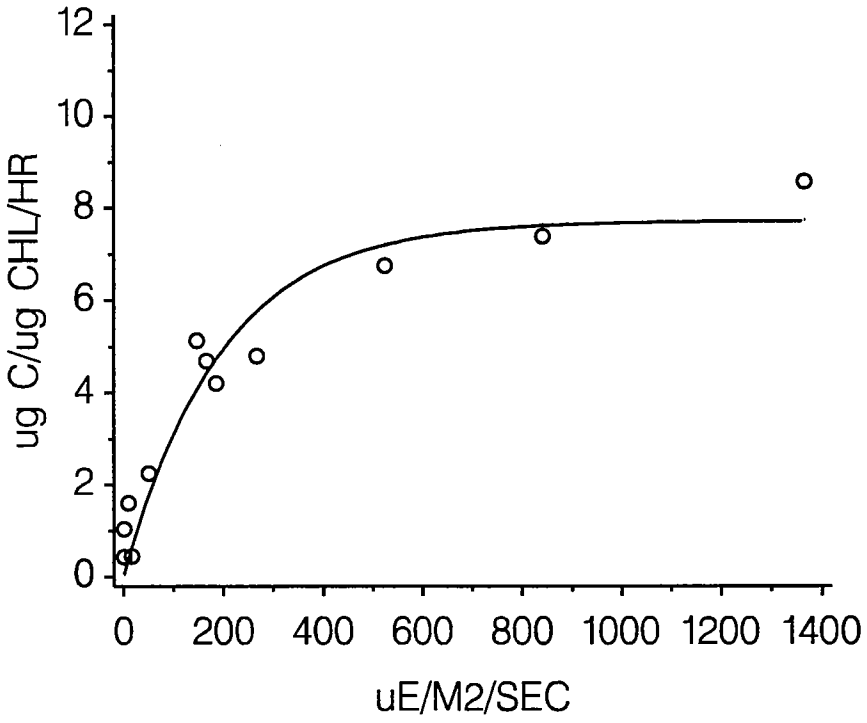
STATION	DEPTH	PMAX		ALPHA		R_2
F23P	SUR	9.24	(0.56)	0.125	(0.034)	0.91
F23P	ISUR	7.76	(0.53)	0.039	(0.006)	0.95
F23P	IBOT	11.57	(0.36)	0.056	(0.014)	0.91
F23P	BOT	.	.	.	.	.
N16P	SUR	5.34	(0.02)	0.287	(0.125)	0.86
N16P	ISUR	6.24	(0.42)	0.041	(0.004)	0.92
N16P	IBOT	5.15	(0.17)	0.087	(0.023)	0.93
N16P	BOT	4.11	(0.07)	0.039	(0.001)	0.99

STATION F23P SURFACE



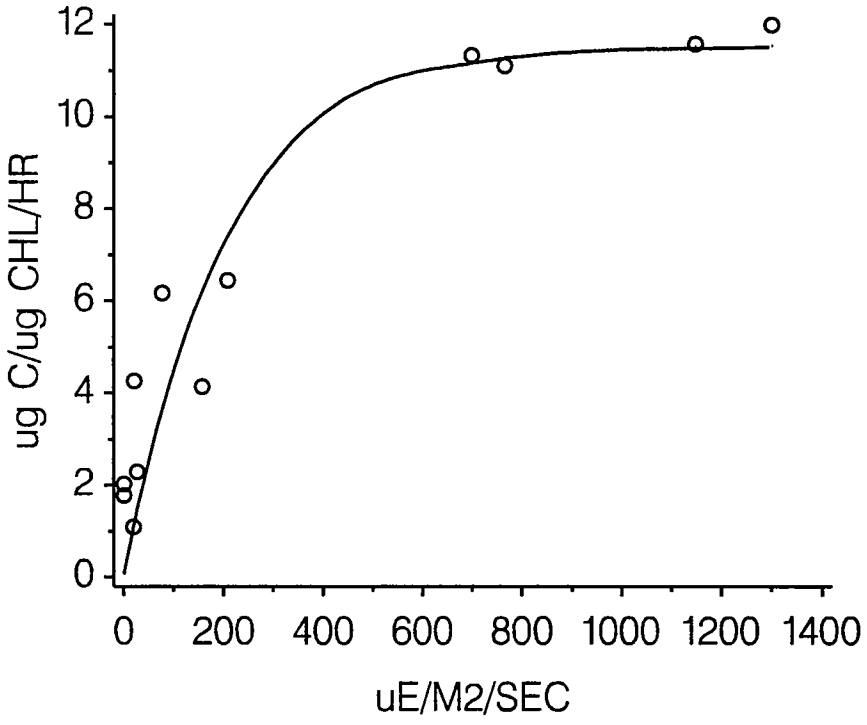
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

STATION F23P INTERMED SURFACE



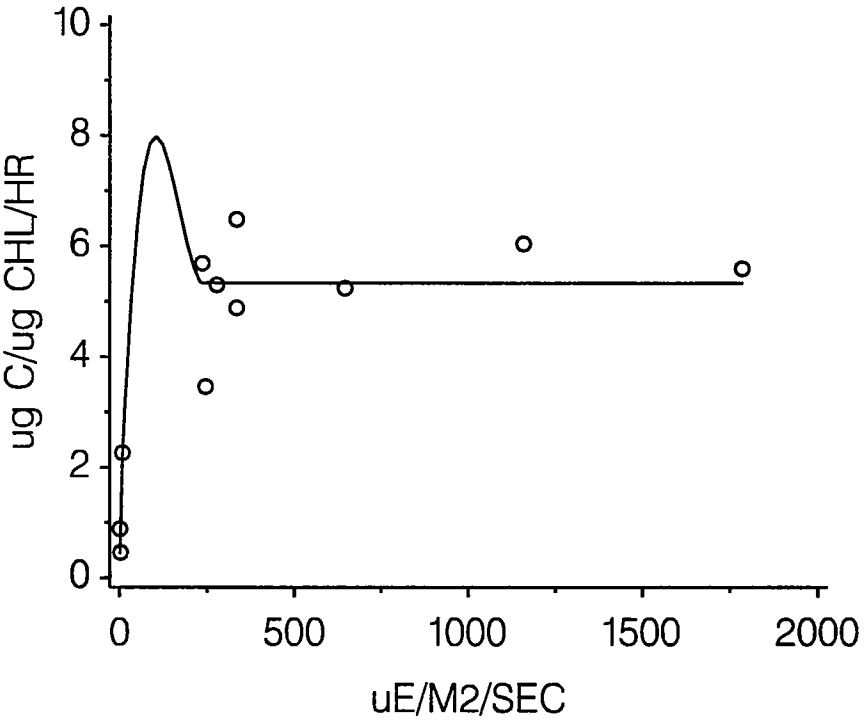
WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

STATION F23P INTERMED BOTTOM



WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

STATION N16P SURFACE



WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

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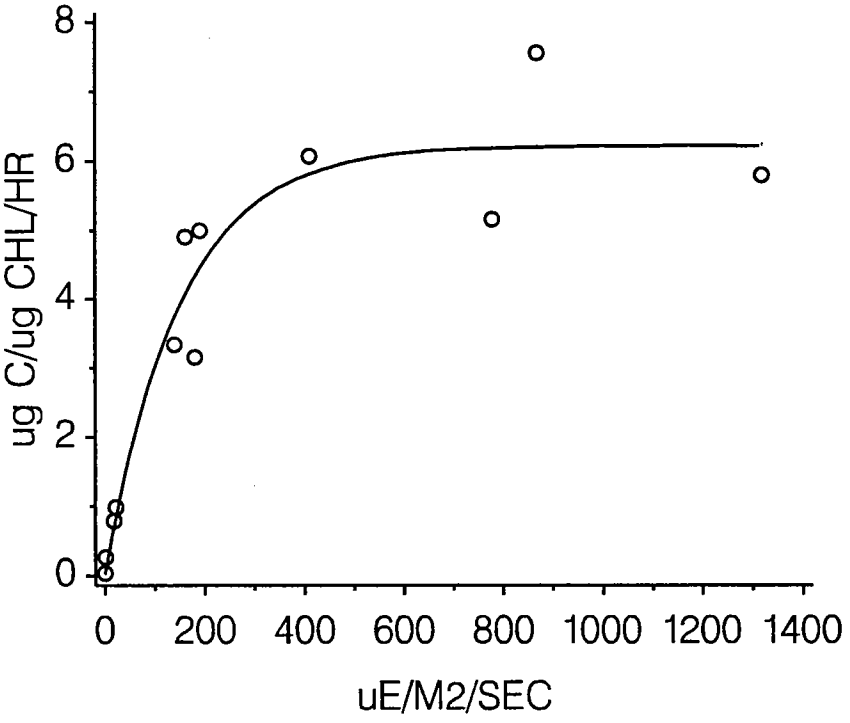

WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

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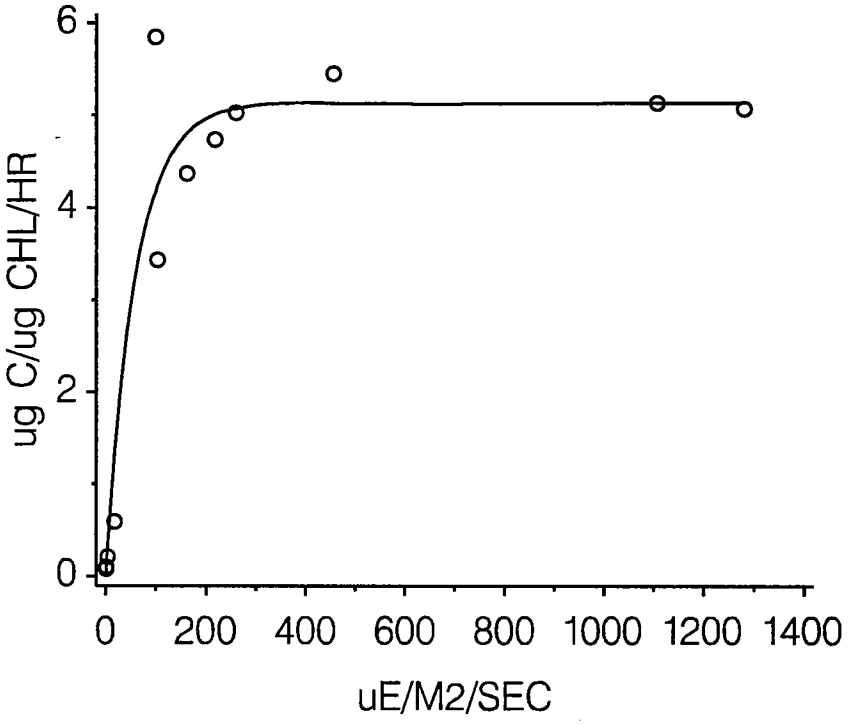
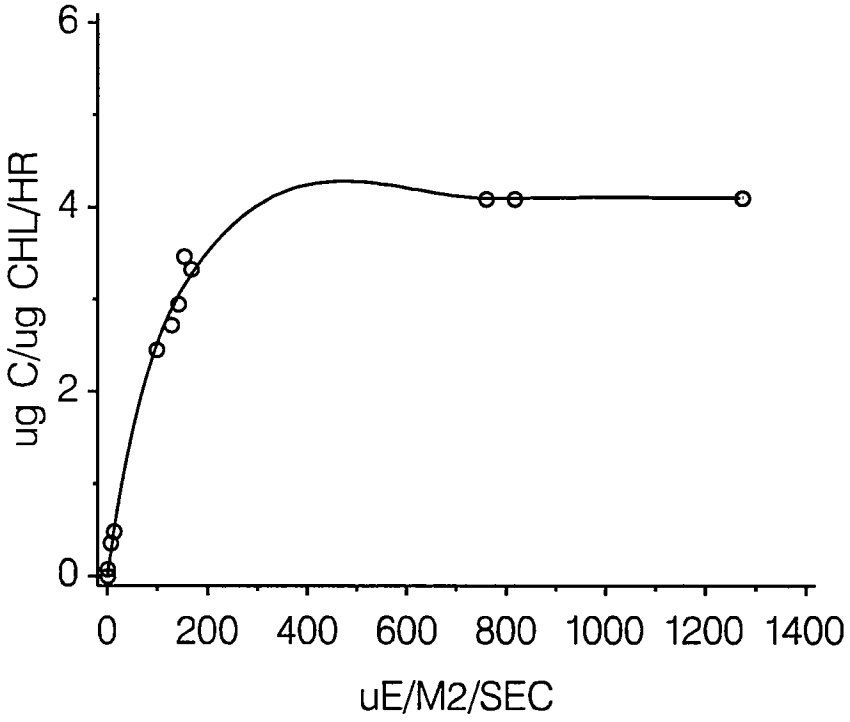


WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

STATION N16P BOTTOM



WEBB ET AL. 1974 MODEL
SURVEY W9404 APRIL 6, 1994

APPENDIX D

METABOLISM DATA AND PRODUCTIVITY—IRRADIANCE MODELING

Part 3

Respiration Data

Table D3-1 includes data from the early April survey (W9404). Water samples were taken at surface, subsurface chlorophyll maximum, and intermediate bottom depths. Initial dissolved oxygen (DO) concentrations were determined in triplicate from samples fixed immediately after being taken from the hydrocast bottles. Final DO concentrations were determined by fixing samples after incubating bottles (time indicated) in the dark. Net respiration was calculated for each sampling depth, as the linear regression of oxygen concentration vs. incubation time. The table includes incubation data for samples from stations F19 and N20P. Graphs of oxygen concentrations vs. incubation time and the associated regressions are presented following Table D3-1.

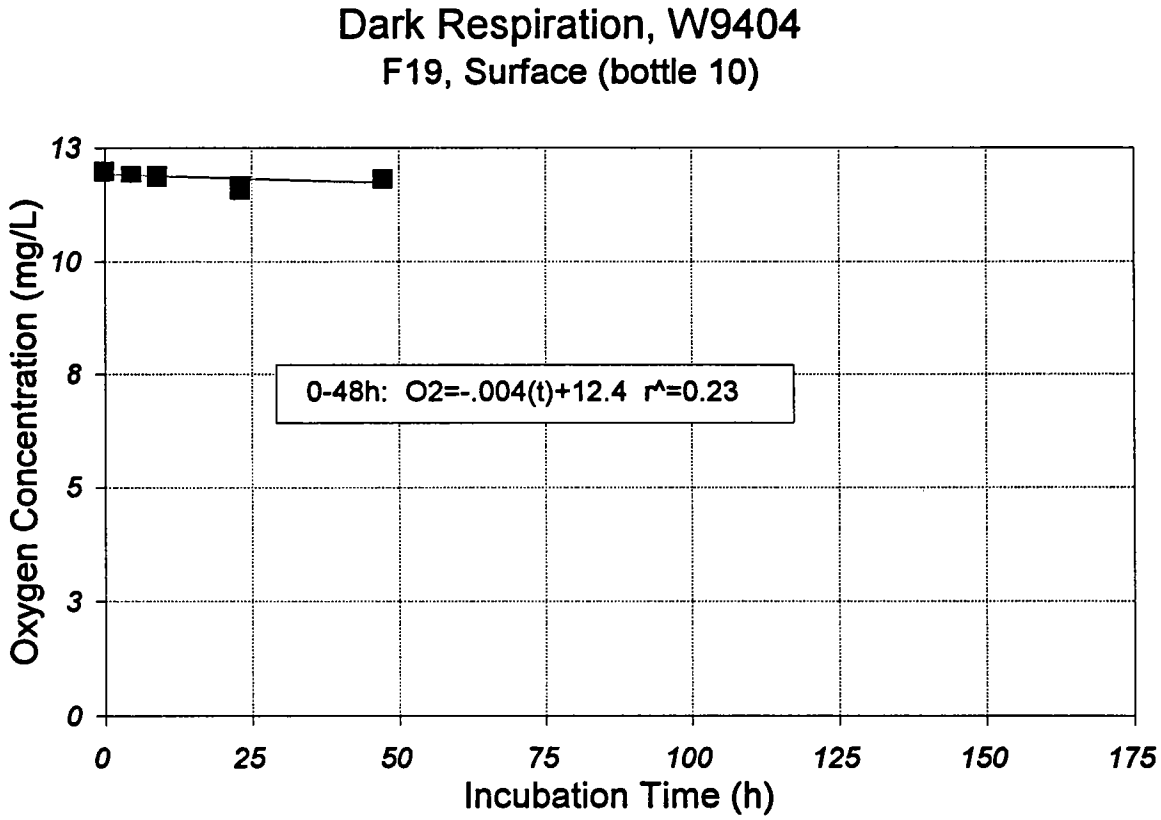
Table D3-1. Dark Respiration at Bioproductivity Stations in April of 1994.

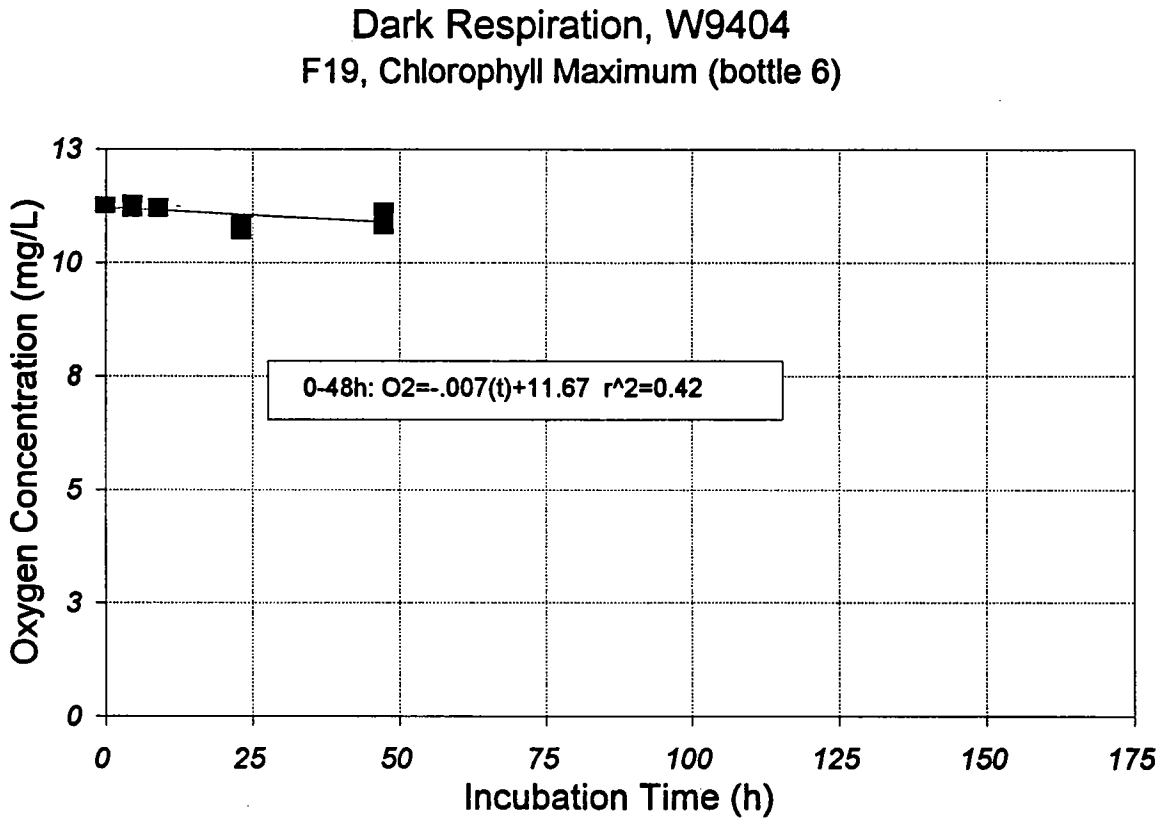
EVENT	STATION	DATE	TIME	DEPTH	SAMPLE ID	LEVEL	DISSOLVED OXYGEN (mg/L)	LENGTH OF INCUBATION (hours)	INCUBATION TEMPERATURE (C)
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.41	4.63	6.50
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.38	4.63	6.50
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.41	9.00	6.00
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.28	9.00	6.00
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.18	23.08	5.00
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.00 s	23.08	5.00
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.33	47.53	5.00
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.34	47.53	5.00
W9404	F19	05-APR-94	1134	2.32	W94040139	DARK	12.24	47.53	5.00
W9404	F19	05-APR-94	1134	2.32	W94040139	INIT	12.50	0.00	
W9404	F19	05-APR-94	1134	2.32	W94040139	INIT	12.41	0.00	
W9404	F19	05-APR-94	1134	2.32	W94040139	INIT	12.52	0.00	
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.78	4.63	6.50
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.61 s	4.63	6.50
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.61	9.00	6.00
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.69	9.00	6.00
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.29	23.08	5.00
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.12	23.08	5.00
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.24	47.53	5.00
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.59	47.53	5.00
W9404	F19	05-APR-94	1132	33.02	W94040137	DARK	11.40	47.53	5.00
W9404	F19	05-APR-94	1132	33.02	W94040137	INIT	11.72	0.00	
W9404	F19	05-APR-94	1132	33.02	W94040137	INIT	11.73	0.00	
W9404	F19	05-APR-94	1132	33.02	W94040137	INIT	11.70 s	0.00	
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.19	4.63	6.50
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.18	4.63	6.50
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.20	9.00	6.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.26	9.00	6.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.10	23.08	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.06	23.08	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.15	47.53	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.16	47.53	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	11.13	47.53	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	10.30	167.91	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	10.83	167.91	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	DARK	10.73	167.91	5.00
W9404	F19	05-APR-94	1130	55.02	W94040135	INIT	11.24	0.00	
W9404	F19	05-APR-94	1130	55.02	W94040135	INIT	11.26	0.00	
W9404	F19	05-APR-94	1130	55.02	W94040135	INIT	11.25	0.00	
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	12.06	5.02	5.50
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	12.01	5.02	5.50
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	12.10	8.00	6.50
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	12.07	8.00	6.50
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	11.81	23.18	5.20
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	11.81	23.18	5.20
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	11.85	47.25	5.20
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	11.85	47.25	5.20
W9404	N20P	05-APR-94	0901	2.19	W94040091	DARK	11.82	47.25	5.20
W9404	N20P	05-APR-94	0901	2.19	W94040091	INIT	12.11	0.00	
W9404	N20P	05-APR-94	0901	2.19	W94040091	INIT	11.99	0.00	
W9404	N20P	05-APR-94	0901	2.19	W94040091	INIT	11.92	0.00	
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.53	5.02	5.50
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.52	5.02	5.50
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.49	8.00	6.50
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.41	8.00	6.50
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.44	23.18	5.20
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.38	23.18	5.20
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.42	47.25	5.20
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.35	47.25	5.20
W9404	N20P	05-APR-94	0859	17.15	W94040089	DARK	11.34	47.25	5.20
W9404	N20P	05-APR-94	0859	17.15	W94040089	INIT	11.53	0.00	
W9404	N20P	05-APR-94	0859	17.15	W94040089	INIT	11.32	0.00	

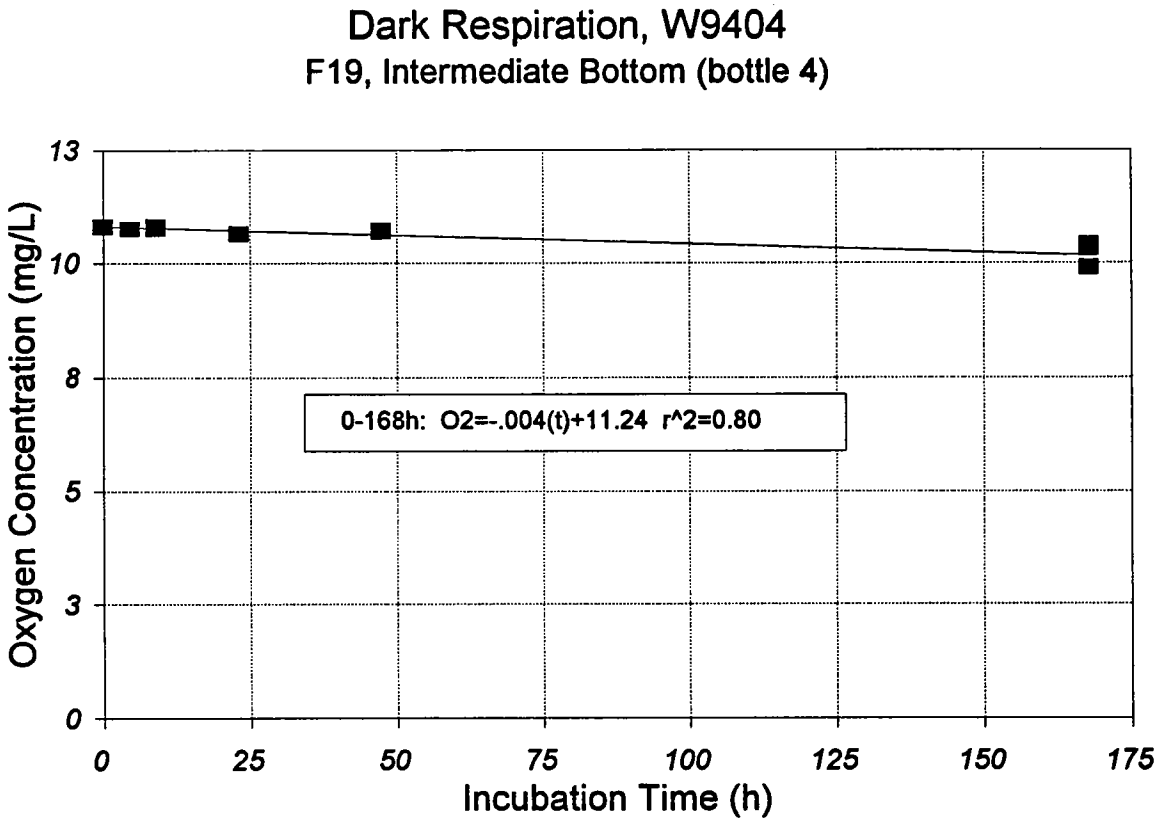
Table D3-1. Dark Respiration at Bioproductivity Stations in April of 1994.

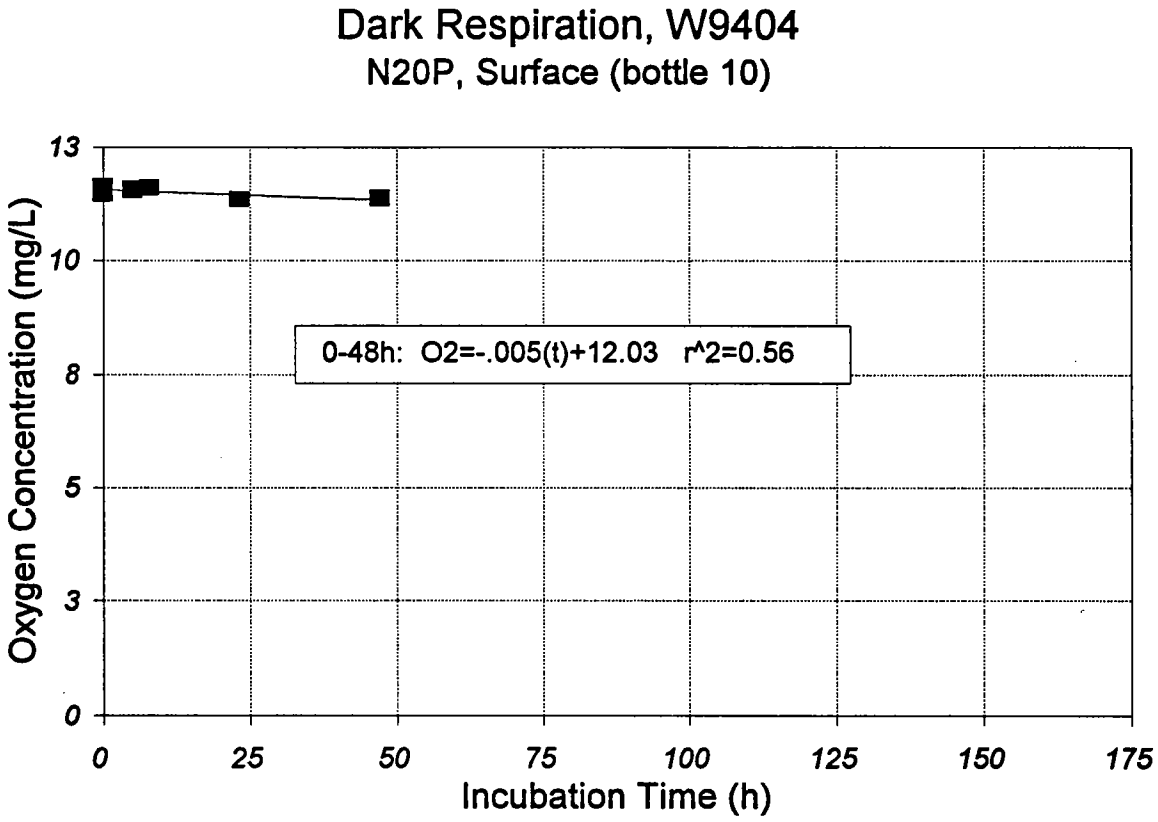
EVENT	STATION	DATE	TIME	DEPTH	SAMPLE ID	LEVEL	DISSOLVED OXYGEN (mg/L)	LENGTH OF INCUBATION (hours)	INCUBATION TEMPERATURE (C)
W9404	N20P	05-APR-94	0859	17.15	W94040089	INIT	11.57	0.00	
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.24	5.02	5.50
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.27	5.02	5.50
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.26	8.00	6.50
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.00	8.00	6.50
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.33	23.18	5.20
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.22	23.18	5.20
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	10.98	47.25	5.20
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.28	47.25	5.20
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	11.24	47.25	5.20
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	10.72	168.08	5.00
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	10.75	168.08	5.00
W9404	N20P	05-APR-94	0858	21.01	W94040088	DARK	10.77	168.08	5.00
W9404	N20P	05-APR-94	0858	21.01	W94040088	INIT	11.35	0.00	
W9404	N20P	05-APR-94	0858	21.01	W94040088	INIT	11.40	0.00	
W9404	N20P	05-APR-94	0858	21.01	W94040088	INIT	11.42	0.00	

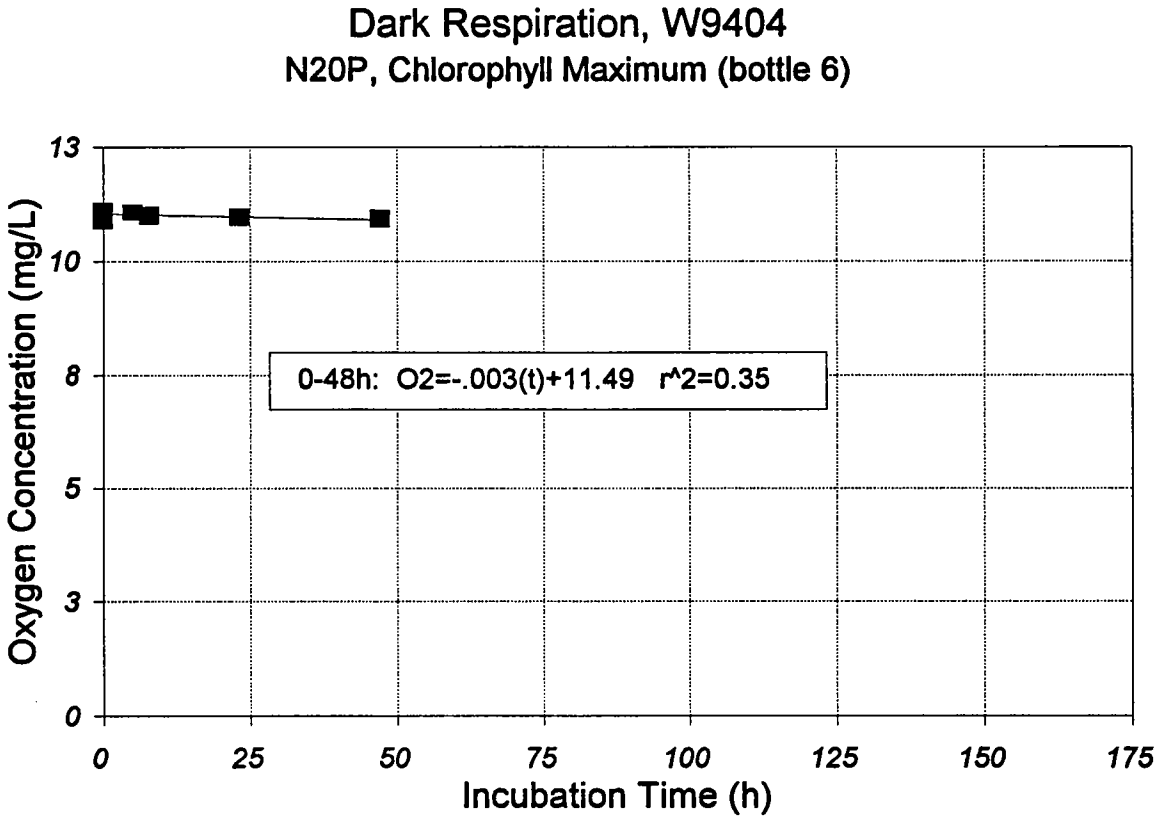
s = Suspect data

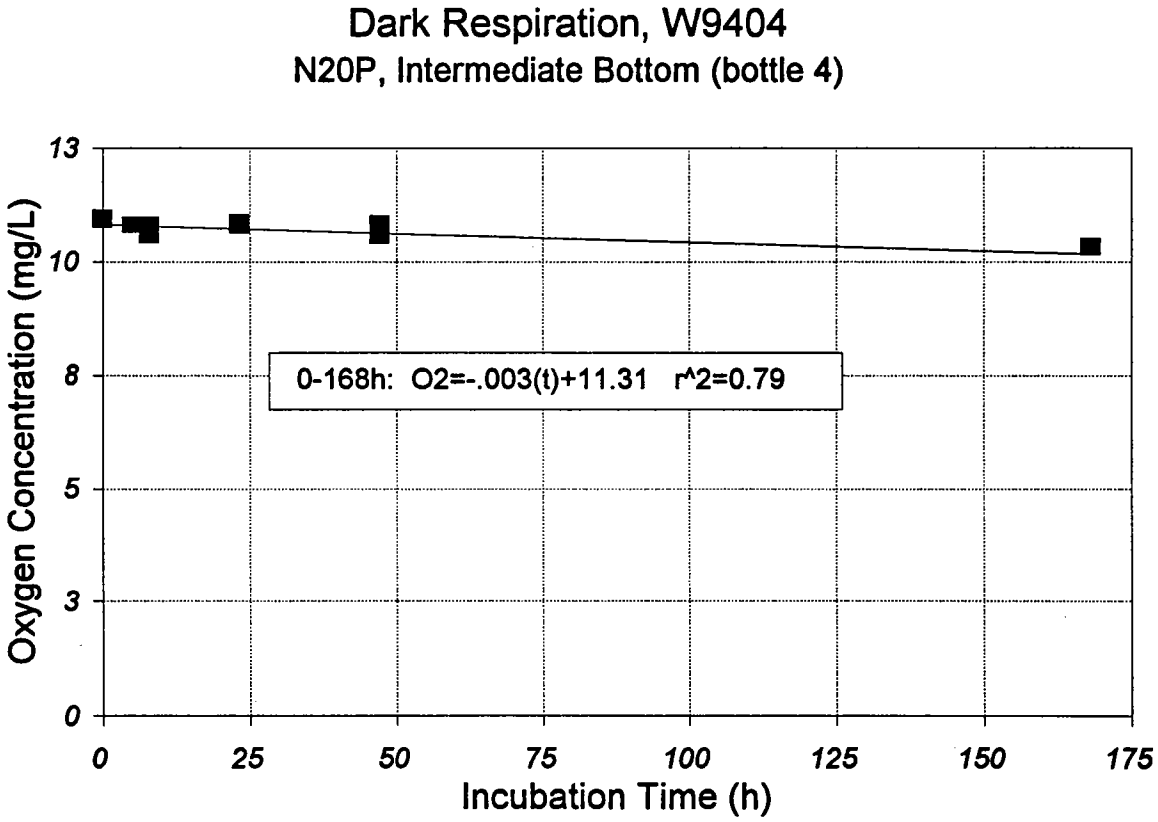

Dark Respiration, W9404
F19, Surface (bottle 10)
Oxygen Concentration (mg/L)
13
10
8
5
3
0
0-48h: O2=-.004(t)+12.4 r^=0.23
0
25
50
75
100
125
150
175
Incubation Time (h)


Dark Respiration, W9404
F19, Chlorophyll Maximum (bottle 6)
Oxygen Concentration (mg/L)
13
10
8
5
3
0
0-48h: O2=-.007(t)+11.67 r^2=0.42
0
25
50
75
100
125
150
175
Incubation Time (h)


Dark Respiration, W9404
F19, Intermediate Bottom (bottle 4)
Oxygen Concentration (mg/L)
13
10
8
5
3
0
0-168h: O2=-.004(t)+11.24 r^2=0.80
0
25
50
75
100
125
150
175
Incubation Time (h)


Dark Respiration, W9404
N20P, Surface (bottle 10)
Oxygen Concentration (mg/L)
13
10
8
5
3
0
0-48h: O2=-.005(t)+12.03 r^2=0.56
0
25
50
75
100
125
150
175
Incubation Time (h)


Dark Respiration, W9404
N20P, Chlorophyll Maximum (bottle 6)
Oxygen Concentration (mg/L)
13
10
8
5
3
0
0-48h: O2=-.003(t)+11.49 r^2=0.35
0
25
50
75
100
125
150
175
Incubation Time (h)


Dark Respiration, W9404
N20P, Intermediate Bottom (bottle 4)
Oxygen Concentration (mg/L)
13
10
8
5
3
0
0-168h: O2=-.003(t)+11.31 r^2=0.79
0
25
50
75
100
125
150
175
Incubation Time (h)

APPENDIX E

PHYTOPLANKTON SPECIES DATA TABLE

A complete listing, by survey, is given for taxonomic analyses of whole-water samples analyzed for W9404, W9405, and W9406 (Table E-1). All counts for screened (20 μm) samples for W9404, W9405, and W9406 are given in the text report.

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040037	F23P	04-05-94	06:48	6.83	CHAETOCEROS COMPRESSUS	.031
W94040037	F23P	04-05-94	06:48	6.83	CHAETOCEROS DEBILIS	.059
W94040037	F23P	04-05-94	06:48	6.83	CHAETOCEROS SOCIALIS	.039
W94040037	F23P	04-05-94	06:48	6.83	CHAETOCEROS SPP. (10-20UM)	.017
W94040037	F23P	04-05-94	06:48	6.83	CHAETOCEROS SPP.(<10UM)	.116
W94040037	F23P	04-05-94	06:48	6.83	CRYPTOMONADS	.01
W94040037	F23P	04-05-94	06:48	6.83	CYLINDROTHECA CLOSTERIUM	.004
W94040037	F23P	04-05-94	06:48	6.83	GYMNODINIUM SPP.	.001
W94040037	F23P	04-05-94	06:48	6.83	GYRODINIUM SPIRALE	.001
W94040037	F23P	04-05-94	06:48	6.83	GYRODINIUM SPP.	.001
W94040037	F23P	04-05-94	06:48	6.83	LICMOPHORA SPP.	.001
W94040037	F23P	04-05-94	06:48	6.83	MICROFLAGELLATES	.06
W94040037	F23P	04-05-94	06:48	6.83	NAVICULOIDS (LYRATE)	.001
W94040037	F23P	04-05-94	06:48	6.83	RHIZOSOLENIA FRAGILISSIMA	.001
W94040037	F23P	04-05-94	06:48	6.83	THALASSIONEMA NITZSCHOIDES	.004
W94040037	F23P	04-05-94	06:48	6.83	THALASSIOSIRA (CF) CONSTRICTA	.01
W94040037	F23P	04-05-94	06:48	6.83	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.089
W94040037	F23P	04-05-94	06:48	6.83	THALASSIOSIRA NORDENSKIOLDII	.002
W94040037	F23P	04-05-94	06:48	6.83	THALASSIOSIRA SPP.	.059
W94040037	F23P	04-05-94	06:48	6.83	UNID. ATHECATE DINOFLAGELLATE	.004
W94040038	F23P	04-05-94	06:49	2.1	CHAETOCEROS COMPRESSUS	.02
W94040038	F23P	04-05-94	06:49	2.1	CHAETOCEROS DEBILIS	.059
W94040038	F23P	04-05-94	06:49	2.1	CHAETOCEROS SEPTENTRIONALIS	.002
W94040038	F23P	04-05-94	06:49	2.1	CHAETOCEROS SOCIALIS	.031
W94040038	F23P	04-05-94	06:49	2.1	CHAETOCEROS SPP. (10-20UM)	.027
W94040038	F23P	04-05-94	06:49	2.1	CHAETOCEROS SPP.(<10UM)	.102
W94040038	F23P	04-05-94	06:49	2.1	CRYPTOMONADS	.013
W94040038	F23P	04-05-94	06:49	2.1	CYLINDROTHECA CLOSTERIUM	.005
W94040038	F23P	04-05-94	06:49	2.1	GYRO/PLEUROSIGMA SPP.	.001
W94040038	F23P	04-05-94	06:49	2.1	GYRODINIUM SPIRALE	.002
W94040038	F23P	04-05-94	06:49	2.1	LICMOPHORA SPP.	.001
W94040038	F23P	04-05-94	06:49	2.1	MICROFLAGELLATES	.178
W94040038	F23P	04-05-94	06:49	2.1	NAVICULOID DIATOMS	.004
W94040038	F23P	04-05-94	06:49	2.1	NITZSCHIA SPP.	.001
W94040038	F23P	04-05-94	06:49	2.1	PYRAMIMONAS/TETRASELMIS SPP.	.001
W94040038	F23P	04-05-94	06:49	2.1	RHIZOSOLENIA FRAGILISSIMA	.001
W94040038	F23P	04-05-94	06:49	2.1	SKELETONEMA COSTATUM	.002
W94040038	F23P	04-05-94	06:49	2.1	STEPHANOPYXIS TURRIS	.001
W94040038	F23P	04-05-94	06:49	2.1	THALASSIONEMA NITZSCHOIDES	.008
W94040038	F23P	04-05-94	06:49	2.1	THALASSIOSIRA (CF) CONSTRICTA	.014
W94040038	F23P	04-05-94	06:49	2.1	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.147
W94040038	F23P	04-05-94	06:49	2.1	THALASSIOSIRA SPP.	.012
W94040038	F23P	04-05-94	06:49	2.1	UNID. ATHECATE DINOFLAGELLATE	.003
W94040038	F23P	04-05-94	06:49	2.1	UNID. CENTRALES	.005
W94040089	N20P	04-05-94	08:59	18.12	AMPHIDINIUM SPP.	.001
W94040089	N20P	04-05-94	08:59	18.12	CHAETOCEROS COMPRESSUS	.012
W94040089	N20P	04-05-94	08:59	18.12	CHAETOCEROS DEBILIS	.02
W94040089	N20P	04-05-94	08:59	18.12	CHAETOCEROS SEPTENTRIONALIS	.001
W94040089	N20P	04-05-94	08:59	18.12	CHAETOCEROS SOCIALIS	.004
W94040089	N20P	04-05-94	08:59	18.12	CHAETOCEROS SPP. (10-20UM)	.014
W94040089	N20P	04-05-94	08:59	18.12	CHAETOCEROS SPP.(<10UM)	.021
W94040089	N20P	04-05-94	08:59	18.12	COCCONEIS SCUTELLUM	.001
W94040089	N20P	04-05-94	08:59	18.12	CRYPTOMONADS	.012
W94040089	N20P	04-05-94	08:59	18.12	GYRODINIUM SPIRALE	.002
W94040089	N20P	04-05-94	08:59	18.12	GYRODINIUM SPP.	.002
W94040089	N20P	04-05-94	08:59	18.12	MICROFLAGELLATES	.175
W94040089	N20P	04-05-94	08:59	18.12	RHIZOSOLENIA FRAGILISSIMA	.002
W94040089	N20P	04-05-94	08:59	18.12	STEPHANOPYXIS TURRIS	.002
W94040089	N20P	04-05-94	08:59	18.12	THALASSIONEMA NITZSCHOIDES	.002
W94040089	N20P	04-05-94	08:59	18.12	THALASSIOSIRA (CF) CONSTRICTA	.006
W94040089	N20P	04-05-94	08:59	18.12	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.115
W94040089	N20P	04-05-94	08:59	18.12	THALASSIOSIRA SPP.	.003
W94040089	N20P	04-05-94	08:59	18.12	UNID. ATHECATE DINOFLAGELLATE	.008

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040089	N20P	04-05-94	08:59	18.12	UNID. CENTRALES	.001
W94040091	N20P	04-05-94	09:01	2.22	CHAETOCEROS COMPRESSUS	.016
W94040091	N20P	04-05-94	09:01	2.22	CHAETOCEROS DEBILIS	.017
W94040091	N20P	04-05-94	09:01	2.22	CHAETOCEROS SOCIALIS	.009
W94040091	N20P	04-05-94	09:01	2.22	CHAETOCEROS SPP. (10-20UM)	.008
W94040091	N20P	04-05-94	09:01	2.22	CHAETOCEROS SPP.(<10UM)	.066
W94040091	N20P	04-05-94	09:01	2.22	CORETHRON CRIOPHILUM	.001
W94040091	N20P	04-05-94	09:01	2.22	CRYPTOMONADS	.009
W94040091	N20P	04-05-94	09:01	2.22	CYLINDROTHECA CLOSTERIUM	.001
W94040091	N20P	04-05-94	09:01	2.22	GYRODINIUM SPIRALE	.002
W94040091	N20P	04-05-94	09:01	2.22	GYRODINIUM SPP.	.001
W94040091	N20P	04-05-94	09:01	2.22	MICROFLAGELLATES	.143
W94040091	N20P	04-05-94	09:01	2.22	NAVICULOID DIATOMS	.003
W94040091	N20P	04-05-94	09:01	2.22	NITZSCHIA (CF) DELICATISSIMA	.001
W94040091	N20P	04-05-94	09:01	2.22	PROROCENTRUM MINIMUM	.001
W94040091	N20P	04-05-94	09:01	2.22	PROTOPERIDINIUM BIPES	.001
W94040091	N20P	04-05-94	09:01	2.22	PROTOPERIDINIUM SPP.	.001
W94040091	N20P	04-05-94	09:01	2.22	THALASSIONEMA NITZSCHOIDES	.003
W94040091	N20P	04-05-94	09:01	2.22	THALASSIOSIRA (cf) ECCENTRICA	.007
W94040091	N20P	04-05-94	09:01	2.22	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.087
W94040091	N20P	04-05-94	09:01	2.22	THALASSIOSIRA SPP.	.01
W94040091	N20P	04-05-94	09:01	2.22	UNID. ATHECATE DINOFLAGELLATE	.008
W94040091	N20P	04-05-94	09:01	2.22	UNID. CENTRALES	.001
W94040103	N16P	04-05-94	09:36	21.86	AMPHIDINIUM SPP.	.002
W94040103	N16P	04-05-94	09:36	21.86	CHAETOCEROS COMPRESSUS	.003
W94040103	N16P	04-05-94	09:36	21.86	CHAETOCEROS DEBILIS	.005
W94040103	N16P	04-05-94	09:36	21.86	CHAETOCEROS SOCIALIS	.005
W94040103	N16P	04-05-94	09:36	21.86	CHAETOCEROS SPP. (10-20UM)	.003
W94040103	N16P	04-05-94	09:36	21.86	CHAETOCEROS SPP.(<10UM)	.021
W94040103	N16P	04-05-94	09:36	21.86	CRYPTOMONADS	.01
W94040103	N16P	04-05-94	09:36	21.86	CYLINDROTHECA CLOSTERIUM	.001
W94040103	N16P	04-05-94	09:36	21.86	EUTREPTIA/EUTREPTIELLA SPP.	.001
W94040103	N16P	04-05-94	09:36	21.86	GYRODINIUM SPIRALE	.002
W94040103	N16P	04-05-94	09:36	21.86	GYRODINIUM SPP.	.001
W94040103	N16P	04-05-94	09:36	21.86	MICROFLAGELLATES	.158
W94040103	N16P	04-05-94	09:36	21.86	NAVICULOID DIATOMS	.002
W94040103	N16P	04-05-94	09:36	21.86	STEPHANOPYXIS TURRIS	.001
W94040103	N16P	04-05-94	09:36	21.86	THALASSIONEMA NITZSCHOIDES	.004
W94040103	N16P	04-05-94	09:36	21.86	THALASSIOSIRA (CF) CONSTRICTA	.003
W94040103	N16P	04-05-94	09:36	21.86	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.143
W94040103	N16P	04-05-94	09:36	21.86	THALASSIOSIRA SPP.	.011
W94040103	N16P	04-05-94	09:36	21.86	UNID. ATHECATE DINOFLAGELLATE	.006
W94040103	N16P	04-05-94	09:36	21.86	UNID. CENTRALES	.002
W94040105	N16P	04-05-94	09:38	2.46	CHAETOCEROS COMPRESSUS	.011
W94040105	N16P	04-05-94	09:38	2.46	CHAETOCEROS DEBILIS	.008
W94040105	N16P	04-05-94	09:38	2.46	CHAETOCEROS SPP. (10-20UM)	.009
W94040105	N16P	04-05-94	09:38	2.46	CHAETOCEROS SPP.(<10UM)	.017
W94040105	N16P	04-05-94	09:38	2.46	CRYPTOMONADS	.007
W94040105	N16P	04-05-94	09:38	2.46	MICROFLAGELLATES	.091
W94040105	N16P	04-05-94	09:38	2.46	NAVICULOID DIATOMS	.002
W94040105	N16P	04-05-94	09:38	2.46	THALASSIONEMA NITZSCHOIDES	.002
W94040105	N16P	04-05-94	09:38	2.46	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.08
W94040105	N16P	04-05-94	09:38	2.46	THALASSIOSIRA SPP.	.004
W94040105	N16P	04-05-94	09:38	2.46	UNID. ATHECATE DINOFLAGELLATE	.004
W94040118	N07P	04-05-94	10:20	35.46	AMPHIDINIUM SPP.	.001
W94040118	N07P	04-05-94	10:20	35.46	CHAETOCEROS COMPRESSUS	.005
W94040118	N07P	04-05-94	10:20	35.46	CHAETOCEROS DEBILIS	.008
W94040118	N07P	04-05-94	10:20	35.46	CHAETOCEROS SPP. (10-20UM)	.007
W94040118	N07P	04-05-94	10:20	35.46	CHAETOCEROS SPP.(<10UM)	.034
W94040118	N07P	04-05-94	10:20	35.46	CRYPTOMONADS	.008
W94040118	N07P	04-05-94	10:20	35.46	CYLINDROTHECA CLOSTERIUM	.002
W94040118	N07P	04-05-94	10:20	35.46	GYRODINIUM SPIRALE	.001
W94040118	N07P	04-05-94	10:20	35.46	MICROFLAGELLATES	.177

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040118	N07P	04-05-94	10:20	35.46	NAVICULOID DIATOMS	.001
W94040118	N07P	04-05-94	10:20	35.46	NITZSCHIA (CF) DELICATISSIMA	.003
W94040118	N07P	04-05-94	10:20	35.46	THALASSIONEMA NITZSCHOIDES	.003
W94040118	N07P	04-05-94	10:20	35.46	THALASSIOSIRA (CF) CONSTRICTA	.003
W94040118	N07P	04-05-94	10:20	35.46	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.284
W94040118	N07P	04-05-94	10:20	35.46	THALASSIOSIRA SPP.	.009
W94040118	N07P	04-05-94	10:20	35.46	UNID. ATHECATE DINOFLAGELLATE	.005
W94040122	N07P	04-05-94	10:24	2.11	AMPHIDINIUM SPP.	.001
W94040122	N07P	04-05-94	10:24	2.11	CHAETOCEROS COMPRESSUS	.003
W94040122	N07P	04-05-94	10:24	2.11	CHAETOCEROS DEBILIS	.014
W94040122	N07P	04-05-94	10:24	2.11	CHAETOCEROS SPP. (10-20UM)	.038
W94040122	N07P	04-05-94	10:24	2.11	CHAETOCEROS SPP.(<10UM)	.014
W94040122	N07P	04-05-94	10:24	2.11	CRYPTOMONADS	.006
W94040122	N07P	04-05-94	10:24	2.11	GYRODINIUM SPIRALE	.001
W94040122	N07P	04-05-94	10:24	2.11	MICROFLAGELLATES	.085
W94040122	N07P	04-05-94	10:24	2.11	NAVICULOID DIATOMS	.001
W94040122	N07P	04-05-94	10:24	2.11	THALASSIONEMA NITZSCHOIDES	.001
W94040122	N07P	04-05-94	10:24	2.11	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.116
W94040122	N07P	04-05-94	10:24	2.11	THALASSIOSIRA SPP.	.007
W94040122	N07P	04-05-94	10:24	2.11	UNID. ATHECATE DINOFLAGELLATE	.003
W94040197	N10P	04-05-94	14:58	8.89	CHAETOCEROS COMPRESSUS	.043
W94040197	N10P	04-05-94	14:58	8.89	CHAETOCEROS DEBILIS	.042
W94040197	N10P	04-05-94	14:58	8.89	CHAETOCEROS SEPTENTRIONALIS	.001
W94040197	N10P	04-05-94	14:58	8.89	CHAETOCEROS SOCIALIS	.004
W94040197	N10P	04-05-94	14:58	8.89	CHAETOCEROS SPP. (10-20UM)	.007
W94040197	N10P	04-05-94	14:58	8.89	CHAETOCEROS SPP.(<10UM)	.111
W94040197	N10P	04-05-94	14:58	8.89	COCCONEIS SCUTELLUM	.001
W94040197	N10P	04-05-94	14:58	8.89	CRYPTOMONADS	.009
W94040197	N10P	04-05-94	14:58	8.89	CYLINDROTHECA CLOSTERIUM	.002
W94040197	N10P	04-05-94	14:58	8.89	GYRODINIUM SPIRALE	.002
W94040197	N10P	04-05-94	14:58	8.89	MICROFLAGELLATES	.121
W94040197	N10P	04-05-94	14:58	8.89	NAVICULOID DIATOMS	.004
W94040197	N10P	04-05-94	14:58	8.89	THALASSIONEMA NITZSCHOIDES	.001
W94040197	N10P	04-05-94	14:58	8.89	THALASSIOSIRA (CF) CONSTRICTA	.015
W94040197	N10P	04-05-94	14:58	8.89	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.102
W94040197	N10P	04-05-94	14:58	8.89	THALASSIOSIRA SPP.	.002
W94040197	N10P	04-05-94	14:58	8.89	UNID. ATHECATE DINOFLAGELLATE	.008
W94040197	N10P	04-05-94	14:58	8.89	UNID. CENTRALES	.003
W94040199	N10P	04-05-94	15:00	2.24	CHAETOCEROS COMPRESSUS	.014
W94040199	N10P	04-05-94	15:00	2.24	CHAETOCEROS DEBILIS	.031
W94040199	N10P	04-05-94	15:00	2.24	CHAETOCEROS SPP. (10-20UM)	.006
W94040199	N10P	04-05-94	15:00	2.24	CHAETOCEROS SPP.(<10UM)	.061
W94040199	N10P	04-05-94	15:00	2.24	CRYPTOMONADS	.007
W94040199	N10P	04-05-94	15:00	2.24	CYLINDROTHECA CLOSTERIUM	.002
W94040199	N10P	04-05-94	15:00	2.24	GYRODINIUM SPIRALE	.002
W94040199	N10P	04-05-94	15:00	2.24	LICMOPHORA SPP.	.001
W94040199	N10P	04-05-94	15:00	2.24	MICROFLAGELLATES	.18
W94040199	N10P	04-05-94	15:00	2.24	NAVICULOID DIATOMS	.003
W94040199	N10P	04-05-94	15:00	2.24	THALASSIONEMA NITZSCHOIDES	.003
W94040199	N10P	04-05-94	15:00	2.24	THALASSIOSIRA (CF) CONSTRICTA	.014
W94040199	N10P	04-05-94	15:00	2.24	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.118
W94040199	N10P	04-05-94	15:00	2.24	THALASSIOSIRA NORDENSKIOLDII	.005
W94040199	N10P	04-05-94	15:00	2.24	THALASSIOSIRA SPP.	.009
W94040199	N10P	04-05-94	15:00	2.24	UNID. ATHECATE DINOFLAGELLATE	.003
W94040199	N10P	04-05-94	15:00	2.24	UNID. CENTRALES	.001
W94040245	F23P	04-06-94	05:52	5.62	CHAETOCEROS COMPRESSUS	.034
W94040245	F23P	04-06-94	05:52	5.62	CHAETOCEROS DEBILIS	.037
W94040245	F23P	04-06-94	05:52	5.62	CHAETOCEROS SEPTENTRIONALIS	.001
W94040245	F23P	04-06-94	05:52	5.62	CHAETOCEROS SOCIALIS	.009
W94040245	F23P	04-06-94	05:52	5.62	CHAETOCEROS SPP. (10-20UM)	.005
W94040245	F23P	04-06-94	05:52	5.62	CHAETOCEROS SPP.(<10UM)	.162
W94040245	F23P	04-06-94	05:52	5.62	CRYPTOMONADS	.005
W94040245	F23P	04-06-94	05:52	5.62	DETONULA CONFERVACEA	.002

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040245	F23P	04-06-94	05:52	5.62	GYRODINIUM SPIRALE	.001
W94040245	F23P	04-06-94	05:52	5.62	MICROFLAGELLATES	.151
W94040245	F23P	04-06-94	05:52	5.62	NAVICULOID DIATOMS	.007
W94040245	F23P	04-06-94	05:52	5.62	PLEUROSIGMA SPP.	.001
W94040245	F23P	04-06-94	05:52	5.62	PROTOPERIDINIUM BIPES	.001
W94040245	F23P	04-06-94	05:52	5.62	THALASSIONEMA NITZSCHOIDES	.002
W94040245	F23P	04-06-94	05:52	5.62	THALASSIOSIRA (CF) CONSTRICTA	.018
W94040245	F23P	04-06-94	05:52	5.62	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.176
W94040245	F23P	04-06-94	05:52	5.62	THALASSIOSIRA ANGUSTE-LINEATA	.004
W94040245	F23P	04-06-94	05:52	5.62	THALASSIOSIRA NORDENSKIOLDII	.004
W94040245	F23P	04-06-94	05:52	5.62	THALASSIOSIRA SPP.	.007
W94040245	F23P	04-06-94	05:52	5.62	UNID. ATHECATE DINOFLAGELLATE	.004
W94040245	F23P	04-06-94	05:52	5.62	UNID. CENTRALES	.002
W94040246	F23P	04-06-94	05:53	2.47	CHAETOCEROS COMPRESSUS	.011
W94040246	F23P	04-06-94	05:53	2.47	CHAETOCEROS DEBILIS	.017
W94040246	F23P	04-06-94	05:53	2.47	CHAETOCEROS SOCIALIS	.005
W94040246	F23P	04-06-94	05:53	2.47	CHAETOCEROS SPP.(<10UM)	.19
W94040246	F23P	04-06-94	05:53	2.47	CRYPTOMONADS	.007
W94040246	F23P	04-06-94	05:53	2.47	DETONULA CONFERVACEA	.002
W94040246	F23P	04-06-94	05:53	2.47	MICROFLAGELLATES	.116
W94040246	F23P	04-06-94	05:53	2.47	NAVICULOID DIATOMS	.011
W94040246	F23P	04-06-94	05:53	2.47	NAVICULOIDS (LYRATE)	.001
W94040246	F23P	04-06-94	05:53	2.47	PYRAMIMONAS/TETRASELMIS SPP.	.001
W94040246	F23P	04-06-94	05:53	2.47	THALASSIONEMA NITZSCHOIDES	.001
W94040246	F23P	04-06-94	05:53	2.47	THALASSIOSIRA (CF) CONSTRICTA	.016
W94040246	F23P	04-06-94	05:53	2.47	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.093
W94040246	F23P	04-06-94	05:53	2.47	THALASSIOSIRA SPP.	.015
W94040246	F23P	04-06-94	05:53	2.47	UNID. ATHECATE DINOFLAGELLATE	.002
W94040246	F23P	04-06-94	05:53	2.47	UNID. CENTRALES	.004
W94040260	N01P	04-06-94	06:48	7.45	AMPHIDINIUM SPP.	.001
W94040260	N01P	04-06-94	06:48	7.45	CHAETOCEROS COMPRESSUS	.006
W94040260	N01P	04-06-94	06:48	7.45	CHAETOCEROS DEBILIS	.068
W94040260	N01P	04-06-94	06:48	7.45	CHAETOCEROS SEPTENTRIONALIS	.004
W94040260	N01P	04-06-94	06:48	7.45	CHAETOCEROS SOCIALIS	.024
W94040260	N01P	04-06-94	06:48	7.45	CHAETOCEROS SPP. (10-20UM)	.024
W94040260	N01P	04-06-94	06:48	7.45	CHAETOCEROS SPP.(<10UM)	.376
W94040260	N01P	04-06-94	06:48	7.45	CRYPTOMONADS	.018
W94040260	N01P	04-06-94	06:48	7.45	MICROFLAGELLATES	.183
W94040260	N01P	04-06-94	06:48	7.45	NAVICULOID DIATOMS	.001
W94040260	N01P	04-06-94	06:48	7.45	PROTOPERIDINIUM BIPES	.001
W94040260	N01P	04-06-94	06:48	7.45	PYRAMIMONAS/TETRASELMIS SPP.	.003
W94040260	N01P	04-06-94	06:48	7.45	STEPHANOPYXIS TURRIS	.001
W94040260	N01P	04-06-94	06:48	7.45	THALASSIONEMA NITZSCHOIDES	.003
W94040260	N01P	04-06-94	06:48	7.45	THALASSIOSIRA (CF) CONSTRICTA	.012
W94040260	N01P	04-06-94	06:48	7.45	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.085
W94040260	N01P	04-06-94	06:48	7.45	THALASSIOSIRA SPP.	.009
W94040260	N01P	04-06-94	06:48	7.45	UNID. ATHECATE DINOFLAGELLATE	.001
W94040260	N01P	04-06-94	06:48	7.45	UNID. CENTRALES	.007
W94040262	N01P	04-06-94	06:49	2.23	CHAETOCEROS COMPRESSUS	.012
W94040262	N01P	04-06-94	06:49	2.23	CHAETOCEROS DEBILIS	.049
W94040262	N01P	04-06-94	06:49	2.23	CHAETOCEROS SOCIALIS	.021
W94040262	N01P	04-06-94	06:49	2.23	CHAETOCEROS SPP. (10-20UM)	.033
W94040262	N01P	04-06-94	06:49	2.23	CHAETOCEROS SPP.(<10UM)	.37
W94040262	N01P	04-06-94	06:49	2.23	CRYPTOMONADS	.018
W94040262	N01P	04-06-94	06:49	2.23	CYLINDROTHECA CLOSTERIUM	.001
W94040262	N01P	04-06-94	06:49	2.23	GYRODINIUM SPIRALE	.001
W94040262	N01P	04-06-94	06:49	2.23	MICROFLAGELLATES	.095
W94040262	N01P	04-06-94	06:49	2.23	NAVICULOID DIATOMS	.005
W94040262	N01P	04-06-94	06:49	2.23	PROTOPERIDINIUM BIPES	.001
W94040262	N01P	04-06-94	06:49	2.23	PYRAMIMONAS/TETRASELMIS SPP.	.001
W94040262	N01P	04-06-94	06:49	2.23	THALASSIOSIRA (CF) CONSTRICTA	.01
W94040262	N01P	04-06-94	06:49	2.23	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.085
W94040262	N01P	04-06-94	06:49	2.23	THALASSIOSIRA SPP.	.011

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040262	N01P	04-06-94	06:49	2.23	UNID. ATHECATE DINOFLAGELLATE	.006
W94040262	N01P	04-06-94	06:49	2.23	UNID. CENTRALES	.002
W94040277	N04P	04-06-94	07:47	5.56	CHAETOCEROS COMPRESSUS	.016
W94040277	N04P	04-06-94	07:47	5.56	CHAETOCEROS DEBILIS	.088
W94040277	N04P	04-06-94	07:47	5.56	CHAETOCEROS SOCIALIS	.029
W94040277	N04P	04-06-94	07:47	5.56	CHAETOCEROS SPP. (10-20UM)	.018
W94040277	N04P	04-06-94	07:47	5.56	CHAETOCEROS SPP.(<10UM)	.329
W94040277	N04P	04-06-94	07:47	5.56	CRYPTOMONADS	.011
W94040277	N04P	04-06-94	07:47	5.56	GYRODINIUM SPIRALE	.001
W94040277	N04P	04-06-94	07:47	5.56	LICMOPHORA SPP.	.001
W94040277	N04P	04-06-94	07:47	5.56	MICROFLAGELLATES	.084
W94040277	N04P	04-06-94	07:47	5.56	NAVICULOID DIATOMS	.004
W94040277	N04P	04-06-94	07:47	5.56	NITZSCHIA (CF) DELICATISSIMA	.001
W94040277	N04P	04-06-94	07:47	5.56	RHIZOSOLENIA DELICATULA	.001
W94040277	N04P	04-06-94	07:47	5.56	THALASSIONEMA NITZSCHOIDES	.001
W94040277	N04P	04-06-94	07:47	5.56	THALASSIOSIRA (CF) CONSTRICTA	.008
W94040277	N04P	04-06-94	07:47	5.56	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.115
W94040277	N04P	04-06-94	07:47	5.56	THALASSIOSIRA SPP.	.005
W94040277	N04P	04-06-94	07:47	5.56	UNID. ATHECATE DINOFLAGELLATE	.008
W94040277	N04P	04-06-94	07:47	5.56	UNID. CENTRALES	.004
W94040278	N04P	04-06-94	07:48	2.23	CHAETOCEROS COMPRESSUS	.023
W94040278	N04P	04-06-94	07:48	2.23	CHAETOCEROS DEBILIS	.088
W94040278	N04P	04-06-94	07:48	2.23	CHAETOCEROS SOCIALIS	.02
W94040278	N04P	04-06-94	07:48	2.23	CHAETOCEROS SPP. (10-20UM)	.03
W94040278	N04P	04-06-94	07:48	2.23	CHAETOCEROS SPP.(<10UM)	.395
W94040278	N04P	04-06-94	07:48	2.23	CRYPTOMONADS	.02
W94040278	N04P	04-06-94	07:48	2.23	GYRODINIUM SPIRALE	.001
W94040278	N04P	04-06-94	07:48	2.23	MICROFLAGELLATES	.08
W94040278	N04P	04-06-94	07:48	2.23	NAVICULOID DIATOMS	.004
W94040278	N04P	04-06-94	07:48	2.23	THALASSIONEMA NITZSCHOIDES	.001
W94040278	N04P	04-06-94	07:48	2.23	THALASSIOSIRA (CF) CONSTRICTA	.009
W94040278	N04P	04-06-94	07:48	2.23	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.155
W94040278	N04P	04-06-94	07:48	2.23	THALASSIOSIRA SPP.	.006
W94040278	N04P	04-06-94	07:48	2.23	UNID. ATHECATE DINOFLAGELLATE	.003
W94040290	N16P	04-06-94	08:30	26.26	CHAETOCEROS DEBILIS	.007
W94040290	N16P	04-06-94	08:30	26.26	CHAETOCEROS SPP. (10-20UM)	.006
W94040290	N16P	04-06-94	08:30	26.26	CHAETOCEROS SPP.(<10UM)	.072
W94040290	N16P	04-06-94	08:30	26.26	CRYPTOMONADS	.006
W94040290	N16P	04-06-94	08:30	26.26	CYLINDROTHECA CLOSTERIUM	.001
W94040290	N16P	04-06-94	08:30	26.26	GYRODINIUM SPIRALE	.003
W94040290	N16P	04-06-94	08:30	26.26	MICROFLAGELLATES	.179
W94040290	N16P	04-06-94	08:30	26.26	THALASSIONEMA NITZSCHOIDES	.004
W94040290	N16P	04-06-94	08:30	26.26	THALASSIOSIRA (CF) CONSTRICTA	.001
W94040290	N16P	04-06-94	08:30	26.26	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.144
W94040290	N16P	04-06-94	08:30	26.26	UNID. ATHECATE DINOFLAGELLATE	.004
W94040292	N16P	04-06-94	08:32	2.2	AMPHIDINIUM SPP.	.001
W94040292	N16P	04-06-94	08:32	2.2	CHAETOCEROS COMPRESSUS	.015
W94040292	N16P	04-06-94	08:32	2.2	CHAETOCEROS DEBILIS	.011
W94040292	N16P	04-06-94	08:32	2.2	CHAETOCEROS SOCIALIS	.012
W94040292	N16P	04-06-94	08:32	2.2	CHAETOCEROS SPP. (10-20UM)	.004
W94040292	N16P	04-06-94	08:32	2.2	CHAETOCEROS SPP.(<10UM)	.135
W94040292	N16P	04-06-94	08:32	2.2	CRYPTOMONADS	.01
W94040292	N16P	04-06-94	08:32	2.2	GYRODINIUM SPIRALE	.001
W94040292	N16P	04-06-94	08:32	2.2	MICROFLAGELLATES	.08
W94040292	N16P	04-06-94	08:32	2.2	NAVICULOID DIATOMS	.002
W94040292	N16P	04-06-94	08:32	2.2	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.024
W94040292	N16P	04-06-94	08:32	2.2	THALASSIOSIRA SPP.	.001
W94040292	N16P	04-06-94	08:32	2.2	UNID. ATHECATE DINOFLAGELLATE	.002
W94040400	F02P	04-07-94	07:14	7.14	ASTERIONELLOPSIS GLACIALIS	.002
W94040400	F02P	04-07-94	07:14	7.14	CHAETOCEROS SPP. (10-20UM)	.002
W94040400	F02P	04-07-94	07:14	7.14	CHAETOCEROS SPP.(<10UM)	.007
W94040400	F02P	04-07-94	07:14	7.14	COCCONEIS SCUTELLUM	.002
W94040400	F02P	04-07-94	07:14	7.14	CRYPTOMONADS	.003

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040400	F02P	04-07-94	07:14	7.14	CYLINDROTHECA CLOSTERIUM	.003
W94040400	F02P	04-07-94	07:14	7.14	DINOPHYSIS NORVEGICA	.001
W94040400	F02P	04-07-94	07:14	7.14	GYRODINIUM SPIRALE	.001
W94040400	F02P	04-07-94	07:14	7.14	LEPTOCYLINDRUS MINIMUS	.168
W94040400	F02P	04-07-94	07:14	7.14	MICROFLAGELLATES	.08
W94040400	F02P	04-07-94	07:14	7.14	NAVICULOID DIATOMS	.006
W94040400	F02P	04-07-94	07:14	7.14	NITZSCHIA (CF) DELICATISSIMA	.001
W94040400	F02P	04-07-94	07:14	7.14	PROTOPERIDINIUM BIPES	.001
W94040400	F02P	04-07-94	07:14	7.14	PROTOPERIDINIUM BREVE	.001
W94040400	F02P	04-07-94	07:14	7.14	RHIZOSOLENIA DELICATULA	.001
W94040400	F02P	04-07-94	07:14	7.14	THALASSIONEMA NITZSCHOIDES	.004
W94040400	F02P	04-07-94	07:14	7.14	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.001
W94040400	F02P	04-07-94	07:14	7.14	UNID. ATHECATE DINOFLAGELLATE	.002
W94040401	F02P	04-07-94	07:15	1.99	ASTERIONELLOPSIS GLACIALIS	.002
W94040401	F02P	04-07-94	07:15	1.99	CHAETOCEROS DEBILIS	.002
W94040401	F02P	04-07-94	07:15	1.99	CHAETOCEROS SPP. (10-20UM)	.002
W94040401	F02P	04-07-94	07:15	1.99	CHAETOCEROS SPP.(<10UM)	.008
W94040401	F02P	04-07-94	07:15	1.99	COCCONEIS SCUTELLUM	.002
W94040401	F02P	04-07-94	07:15	1.99	CRYPTOMONADS	.002
W94040401	F02P	04-07-94	07:15	1.99	CYLINDROTHECA CLOSTERIUM	.003
W94040401	F02P	04-07-94	07:15	1.99	GYRODINIUM SPIRALE	.003
W94040401	F02P	04-07-94	07:15	1.99	LEPTOCYLINDRUS MINIMUS	.21
W94040401	F02P	04-07-94	07:15	1.99	MICROFLAGELLATES	.096
W94040401	F02P	04-07-94	07:15	1.99	NAVICULOID DIATOMS	.002
W94040401	F02P	04-07-94	07:15	1.99	NITZSCHIA SPP.	.001
W94040401	F02P	04-07-94	07:15	1.99	RHIZOSOLENIA DELICATULA	.001
W94040401	F02P	04-07-94	07:15	1.99	THALASSIONEMA NITZSCHOIDES	.005
W94040401	F02P	04-07-94	07:15	1.99	UNID. ATHECATE DINOFLAGELLATE	.003
W94040414	F01P	04-07-94	08:42	13.26	CHAETOCEROS DEBILIS	.001
W94040414	F01P	04-07-94	08:42	13.26	CHAETOCEROS SOCIALIS	.007
W94040414	F01P	04-07-94	08:42	13.26	CHAETOCEROS SPP.(<10UM)	.013
W94040414	F01P	04-07-94	08:42	13.26	CRYPTOMONADS	.01
W94040414	F01P	04-07-94	08:42	13.26	GYRODINIUM SPIRALE	0
W94040414	F01P	04-07-94	08:42	13.26	GYRODINIUM SPP.	0
W94040414	F01P	04-07-94	08:42	13.26	LEPTOCYLINDRUS MINIMUS	.002
W94040414	F01P	04-07-94	08:42	13.26	MICROFLAGELLATES	.084
W94040414	F01P	04-07-94	08:42	13.26	UNID. ATHECATE DINOFLAGELLATE	.001
W94040416	F01P	04-07-94	08:45	1.87	CHAETOCEROS DEBILIS	.003
W94040416	F01P	04-07-94	08:45	1.87	CHAETOCEROS SOCIALIS	.012
W94040416	F01P	04-07-94	08:45	1.87	CHAETOCEROS SPP.(<10UM)	.004
W94040416	F01P	04-07-94	08:45	1.87	CRYPTOMONADS	.016
W94040416	F01P	04-07-94	08:45	1.87	GYRODINIUM SPIRALE	.002
W94040416	F01P	04-07-94	08:45	1.87	GYRODINIUM SPP.	.003
W94040416	F01P	04-07-94	08:45	1.87	LEPTOCYLINDRUS MINIMUS	.005
W94040416	F01P	04-07-94	08:45	1.87	MICROFLAGELLATES	.079
W94040416	F01P	04-07-94	08:45	1.87	THALASSIONEMA NITZSCHOIDES	.002
W94040416	F01P	04-07-94	08:45	1.87	UNID. ATHECATE DINOFLAGELLATE	.002
W94040498	F13P	04-07-94	14:16	7.09	CHAETOCEROS COMPRESSUS	.01
W94040498	F13P	04-07-94	14:16	7.09	CHAETOCEROS DEBILIS	.042
W94040498	F13P	04-07-94	14:16	7.09	CHAETOCEROS SOCIALIS	.007
W94040498	F13P	04-07-94	14:16	7.09	CHAETOCEROS SPP.(<10UM)	.201
W94040498	F13P	04-07-94	14:16	7.09	COSCINODISCUS SPP.	.001
W94040498	F13P	04-07-94	14:16	7.09	CRYPTOMONADS	.016
W94040498	F13P	04-07-94	14:16	7.09	CYLINDROTHECA CLOSTERIUM	.003
W94040498	F13P	04-07-94	14:16	7.09	GYRODINIUM SPIRALE	.002
W94040498	F13P	04-07-94	14:16	7.09	GYRODINIUM SPP.	.001
W94040498	F13P	04-07-94	14:16	7.09	MICROFLAGELLATES	.095
W94040498	F13P	04-07-94	14:16	7.09	NAVICULOID DIATOMS	.001
W94040498	F13P	04-07-94	14:16	7.09	NITZSCHIA SERIATA	.001
W94040498	F13P	04-07-94	14:16	7.09	NITZSCHIA SPP.	.001
W94040498	F13P	04-07-94	14:16	7.09	THALASSIOSIRA (CF) CONSTRICTA	.001
W94040498	F13P	04-07-94	14:16	7.09	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.032
W94040498	F13P	04-07-94	14:16	7.09	THALASSIOSIRA SPP.	.001

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94040498	F13P	04-07-94	14:16	7.09	UNID. ATHECATE DINOFLAGELLATE	.005
W94040498	F13P	04-07-94	14:16	7.09	UNID. CENTRALES	.002
W94040500	F13P	04-07-94	14:17	2.03	CHAETOCEROS ATLANTICUS	.001
W94040500	F13P	04-07-94	14:17	2.03	CHAETOCEROS COMPRESSUS	.008
W94040500	F13P	04-07-94	14:17	2.03	CHAETOCEROS DEBILIS	.043
W94040500	F13P	04-07-94	14:17	2.03	CHAETOCEROS SOCIALIS	.014
W94040500	F13P	04-07-94	14:17	2.03	CHAETOCEROS SPP.(<10UM)	.204
W94040500	F13P	04-07-94	14:17	2.03	CRYPTOMONADS	.01
W94040500	F13P	04-07-94	14:17	2.03	CYLINDROTHECA CLOSTERIUM	.001
W94040500	F13P	04-07-94	14:17	2.03	GYRODINIUM SPIRALE	.002
W94040500	F13P	04-07-94	14:17	2.03	MICROFLAGELLATES	.13
W94040500	F13P	04-07-94	14:17	2.03	NAVICULOID DIATOMS	.003
W94040500	F13P	04-07-94	14:17	2.03	PLEUROSIGMA SPP.	.001
W94040500	F13P	04-07-94	14:17	2.03	PROTOPERIDINIUM BIPES	.001
W94040500	F13P	04-07-94	14:17	2.03	THALASSIONEMA NITZSCHOIDES	.005
W94040500	F13P	04-07-94	14:17	2.03	THALASSIOSIRA (CF) CONSTRICTA	.007
W94040500	F13P	04-07-94	14:17	2.03	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.031
W94040500	F13P	04-07-94	14:17	2.03	THALASSIOSIRA SPP.	.011
W94040500	F13P	04-07-94	14:17	2.03	UNID. CENTRALES	.003
W94040530	N10P	04-08-94	06:21	2.36	CHAETOCEROS COMPRESSUS	.012
W94040530	N10P	04-08-94	06:21	2.36	CHAETOCEROS DEBILIS	.047
W94040530	N10P	04-08-94	06:21	2.36	CHAETOCEROS SOCIALIS	.012
W94040530	N10P	04-08-94	06:21	2.36	CHAETOCEROS SPP.(<10UM)	.266
W94040530	N10P	04-08-94	06:21	2.36	CRYPTOMONADS	.008
W94040530	N10P	04-08-94	06:21	2.36	GYRODINIUM SPIRALE	.002
W94040530	N10P	04-08-94	06:21	2.36	MICROFLAGELLATES	.122
W94040530	N10P	04-08-94	06:21	2.36	NAVICULOID DIATOMS	.002
W94040530	N10P	04-08-94	06:21	2.36	STEPHANOPYXIS TURRIS	.002
W94040530	N10P	04-08-94	06:21	2.36	THALASSIONEMA NITZSCHOIDES	.002
W94040530	N10P	04-08-94	06:21	2.36	THALASSIOSIRA (CF) CONSTRICTA	.005
W94040530	N10P	04-08-94	06:21	2.36	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.088
W94040530	N10P	04-08-94	06:21	2.36	THALASSIOSIRA SPP.	.009
W94040530	N10P	04-08-94	06:21	2.36	UNID. ATHECATE DINOFLAGELLATE	.002
W94040530	N10P	04-08-94	06:21	2.36	UNID. CENTRALES	.008
W94050028	N10P	04-27-94	06:48	1.59	CHAETOCEROS COMPRESSUS	.019
W94050028	N10P	04-27-94	06:48	1.59	CHAETOCEROS DEBILIS	.098
W94050028	N10P	04-27-94	06:48	1.59	CHAETOCEROS SEPTENTRIONALIS	.004
W94050028	N10P	04-27-94	06:48	1.59	CHAETOCEROS SOCIALIS	.035
W94050028	N10P	04-27-94	06:48	1.59	CHAETOCEROS SPP. (10-20UM)	.004
W94050028	N10P	04-27-94	06:48	1.59	CHAETOCEROS SPP.(<10UM)	.068
W94050028	N10P	04-27-94	06:48	1.59	CRYPTOMONADS	.102
W94050028	N10P	04-27-94	06:48	1.59	CYLINDROTHECA CLOSTERIUM	.001
W94050028	N10P	04-27-94	06:48	1.59	DETONULA CONFERVACEA	.005
W94050028	N10P	04-27-94	06:48	1.59	GYRODINIUM SPIRALE	.001
W94050028	N10P	04-27-94	06:48	1.59	LICMOPHORA SPP.	.002
W94050028	N10P	04-27-94	06:48	1.59	MICROFLAGELLATES	.137
W94050028	N10P	04-27-94	06:48	1.59	NAVICULOID DIATOMS	.004
W94050028	N10P	04-27-94	06:48	1.59	THALASSIONEMA NITZSCHIOIDES	.002
W94050028	N10P	04-27-94	06:48	1.59	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.024
W94050028	N10P	04-27-94	06:48	1.59	UNID. CENTRALES	.002
W94060041	N10P	05-22-94	06:02	2	CHAETOCEROS SPP.(<10UM)	.002
W94060041	N10P	05-22-94	06:02	2	CRYPTOMONADS	.229
W94060041	N10P	05-22-94	06:02	2	EUTREPTIA/EUTREPTIELLA SPP.	.006
W94060041	N10P	05-22-94	06:02	2	GYRODINIUM SPIRALE	.001
W94060041	N10P	05-22-94	06:02	2	KATODINIUM ROTUNDATUM	.001
W94060041	N10P	05-22-94	06:02	2	LICMOPHORA SPP.	.001
W94060041	N10P	05-22-94	06:02	2	MICROFLAGELLATES	.223
W94060041	N10P	05-22-94	06:02	2	NAVICULOID DIATOMS	.005
W94060041	N10P	05-22-94	06:02	2	SKELETONEMA COSTATUM	.193
W94060041	N10P	05-22-94	06:02	2	THALASSIONEMA NITZSCHIOIDES	.002
W94060041	N10P	05-22-94	06:02	2	THALASSIOSIRA (cf) GRAVIDA/ROTULA	.099
W94060041	N10P	05-22-94	06:02	2	THALASSIOSIRA SPP.	.008
W94060041	N10P	05-22-94	06:02	2	UNID. ATHECATE DINOFLAGELLATE	.004

Table E1. Phytoplankton Species Data for April, May 1994.

Sample ID	Station	Date	Time (EST)	Depth (M)	Taxon	Millions of Cells per Liter
W94060041	N10P	05-22-94	06:02	2	UNID. CENTRALES	.004

APPENDIX F

ZOOPLANKTON SPECIES DATA TABLE

A complete listing for survey W9404 is given for taxonomic analyses of zooplankton net tow samples (Table F-1).

Table F1. Zooplankton Species Data for April, 1994.

Sample ID	Station	Date	Time	Taxon	Qual*	Individuals Per M3
W94040041	F23P	04-05-94	06:54	BARNACLE NAUPLII	N	2820
W94040041	F23P	04-05-94	06:54	CALANUS FINMARCHICUS	C	45
W94040041	F23P	04-05-94	06:54	CENTROPAGES SPP.	C	22
W94040041	F23P	04-05-94	06:54	COPEPOD NAUPLII	N	2260
W94040041	F23P	04-05-94	06:54	ECHINODERM PLUTEI		22
W94040041	F23P	04-05-94	06:54	EUCONCHOEICA SP.		67
W94040041	F23P	04-05-94	06:54	GASTROPOD VELIGER		22
W94040041	F23P	04-05-94	06:54	MEDUSA		45
W94040041	F23P	04-05-94	06:54	OIKIOPLEURA DIOICA		492
W94040041	F23P	04-05-94	06:54	OITHONA SIMILIS	F	246
W94040041	F23P	04-05-94	06:54	OITHONA SIMILIS	C	201
W94040041	F23P	04-05-94	06:54	PARACALANUS PARVUS	C	738
W94040041	F23P	04-05-94	06:54	PARACALANUS PARVUS	M	22
W94040041	F23P	04-05-94	06:54	POLYCHAETE LARVAE		1678
W94040041	F23P	04-05-94	06:54	POLYCHAETE TROCHOPHORES		45
W94040041	F23P	04-05-94	06:54	PSEUDOCALANUS NEWMANI	F	67
W94040041	F23P	04-05-94	06:54	PSEUDOCALANUS NEWMANI	C	22
W94040041	F23P	04-05-94	06:54	PSEUDOCALANUS NEWMANI	M	22
W94040041	F23P	04-05-94	06:54	TEMORA LONGICORNIS	C	112
W94040041	F23P	04-05-94	06:54	UNIDENTIFIED HARPACTICOID		134
W94040094	N20P	04-05-94	09:05	ACARTIA HUDSONICA	C	32
W94040094	N20P	04-05-94	09:05	BARNACLE NAUPLII	N	2412
W94040094	N20P	04-05-94	09:05	CALANUS FINMARCHICUS	C	2669
W94040094	N20P	04-05-94	09:05	COPEPOD NAUPLII	N	6078
W94040094	N20P	04-05-94	09:05	DECAPOD LARVAE		32
W94040094	N20P	04-05-94	09:05	ECHINODERM PLUTEI		708
W94040094	N20P	04-05-94	09:05	EUCONCHOEICA SP.		32
W94040094	N20P	04-05-94	09:05	GASTROPOD VELIGER		579
W94040094	N20P	04-05-94	09:05	MICROSETELLA NORVEGICA		322
W94040094	N20P	04-05-94	09:05	OIKIOPLEURA DIOICA		5660
W94040094	N20P	04-05-94	09:05	OITHONA SIMILIS	F	643
W94040094	N20P	04-05-94	09:05	OITHONA SIMILIS	C	1930
W94040094	N20P	04-05-94	09:05	OITHONA SIMILIS	M	193
W94040094	N20P	04-05-94	09:05	PARACALANUS PARVUS	F	129
W94040094	N20P	04-05-94	09:05	PARACALANUS PARVUS	M	32
W94040094	N20P	04-05-94	09:05	PARACALANUS PARVUS	C	611
W94040094	N20P	04-05-94	09:05	POLYCHAETE LARVAE		901
W94040094	N20P	04-05-94	09:05	PSEUDOCALANUS NEWMANI	M	96
W94040094	N20P	04-05-94	09:05	PSEUDOCALANUS NEWMANI	C	32
W94040094	N20P	04-05-94	09:05	PSEUDOCALANUS NEWMANI	F	129
W94040094	N20P	04-05-94	09:05	TEMORA LONGICORNIS	C	161
W94040108	N16P	04-05-94	09:44	BARNACLE NAUPLII	N	340
W94040108	N16P	04-05-94	09:44	CALANUS FINMARCHICUS	C	1396
W94040108	N16P	04-05-94	09:44	COPEPOD NAUPLII	N	6979
W94040108	N16P	04-05-94	09:44	ECHINODERM PLUTEI		170
W94040108	N16P	04-05-94	09:44	EUCONCHOEICA SP.		34
W94040108	N16P	04-05-94	09:44	GASTROPOD VELIGER		511
W94040108	N16P	04-05-94	09:44	MEDUSA		34
W94040108	N16P	04-05-94	09:44	MICROSETELLA NORVEGICA		238
W94040108	N16P	04-05-94	09:44	OIKIOPLEURA DIOICA		5991
W94040108	N16P	04-05-94	09:44	OITHONA SIMILIS	F	1055
W94040108	N16P	04-05-94	09:44	OITHONA SIMILIS	M	238
W94040108	N16P	04-05-94	09:44	OITHONA SIMILIS	C	2723
W94040108	N16P	04-05-94	09:44	PARACALANUS PARVUS	C	374
W94040108	N16P	04-05-94	09:44	POLYCHAETE LARVAE		409
W94040108	N16P	04-05-94	09:44	POLYCHAETE TROCHOPHORES		34
W94040108	N16P	04-05-94	09:44	TEMORA LONGICORNIS	C	204
W94040125	N07P	04-05-94	10:29	ACARTIA HUDSONICA	C	68
W94040125	N07P	04-05-94	10:29	BARNACLE NAUPLII	N	271
W94040125	N07P	04-05-94	10:29	CALANUS FINMARCHICUS	C	4402
W94040125	N07P	04-05-94	10:29	COPEPOD NAUPLII	N	7517

*C = COPEPIDITES, F = FEMALE, M = MALE, N = NAUPLII

Table F1. Zooplankton Species Data for April, 1994.

Sample ID	Station	Date	Time	Taxon	Qual*	Individuals Per M3
W94040125	N07P	04-05-94	10:29	DECAPOD LARVAE		68
W94040125	N07P	04-05-94	10:29	ECHINODERM PLUTEI		135
W94040125	N07P	04-05-94	10:29	MICROSETELLA NORVEGICA		68
W94040125	N07P	04-05-94	10:29	OIKIOPLEURA DIOICA		339
W94040125	N07P	04-05-94	10:29	OITHONA SIMILIS	F	1964
W94040125	N07P	04-05-94	10:29	OITHONA SIMILIS	C	3386
W94040125	N07P	04-05-94	10:29	OITHONA SIMILIS	M	203
W94040125	N07P	04-05-94	10:29	PARACALANUS PARVUS	F	68
W94040125	N07P	04-05-94	10:29	PARACALANUS PARVUS	M	68
W94040125	N07P	04-05-94	10:29	PARACALANUS PARVUS	C	1151
W94040125	N07P	04-05-94	10:29	POLYCHAETE LARVAE		271
W94040125	N07P	04-05-94	10:29	POLYCHAETE TROCHOPHORES		203
W94040125	N07P	04-05-94	10:29	TEMORA LONGICORNIS	C	474
W94040202	N10P	04-05-94	15:05	ACARTIA HUDSONICA	C	54
W94040202	N10P	04-05-94	15:05	BARNACLE NAUPLII	N	14579
W94040202	N10P	04-05-94	15:05	CALANUS FINMARCHICUS	C	566
W94040202	N10P	04-05-94	15:05	COPEPOD NAUPLII	N	2991
W94040202	N10P	04-05-94	15:05	ECHINODERM PLUTEI		269
W94040202	N10P	04-05-94	15:05	EUCONCHOEICA SP.		81
W94040202	N10P	04-05-94	15:05	GASTROPOD VELIGER		135
W94040202	N10P	04-05-94	15:05	MEDUSA		162
W94040202	N10P	04-05-94	15:05	MICROSETELLA NORVEGICA		135
W94040202	N10P	04-05-94	15:05	OIKIOPLEURA DIOICA		1401
W94040202	N10P	04-05-94	15:05	OITHONA ATLANTICA	F	27
W94040202	N10P	04-05-94	15:05	OITHONA SIMILIS	F	377
W94040202	N10P	04-05-94	15:05	OITHONA SIMILIS	M	54
W94040202	N10P	04-05-94	15:05	OITHONA SIMILIS	C	647
W94040202	N10P	04-05-94	15:05	PARACALANUS PARVUS	C	1051
W94040202	N10P	04-05-94	15:05	PARACALANUS PARVUS	F	27
W94040202	N10P	04-05-94	15:05	POLYCHAETE LARVAE		2776
W94040202	N10P	04-05-94	15:05	POLYCHAETE TROCHOPHORES		485
W94040202	N10P	04-05-94	15:05	PSEUDOCALANUS NEWMANI	M	27
W94040202	N10P	04-05-94	15:05	PSEUDOCALANUS NEWMANI	C	27
W94040202	N10P	04-05-94	15:05	PSEUDOCALANUS NEWMANI	F	27
W94040202	N10P	04-05-94	15:05	TEMORA LONGICORNIS	F	54
W94040202	N10P	04-05-94	15:05	TEMORA LONGICORNIS	C	458
W94040202	N10P	04-05-94	15:05	TEMORA LONGICORNIS	M	54
W94040202	N10P	04-05-94	15:05	TORTANUS DISCAUDATUS	C	27
W94040265	N01P	04-06-94	06:56	BARNACLE NAUPLII	N	13024
W94040265	N01P	04-06-94	06:56	BIVALVE VELIGER		99
W94040265	N01P	04-06-94	06:56	CALANUS FINMARCHICUS	C	348
W94040265	N01P	04-06-94	06:56	COPEPOD NAUPLII	N	2933
W94040265	N01P	04-06-94	06:56	ECHINODERM PLUTEI		249
W94040265	N01P	04-06-94	06:56	EUCONCHOEICA SP.		99
W94040265	N01P	04-06-94	06:56	GASTROPOD VELIGER		199
W94040265	N01P	04-06-94	06:56	OIKIOPLEURA DIOICA		1342
W94040265	N01P	04-06-94	06:56	OITHONA SIMILIS	C	795
W94040265	N01P	04-06-94	06:56	OITHONA SIMILIS	F	50
W94040265	N01P	04-06-94	06:56	PARACALANUS PARVUS	F	99
W94040265	N01P	04-06-94	06:56	PARACALANUS PARVUS	C	1640
W94040265	N01P	04-06-94	06:56	POLYCHAETE LARVAE		3629
W94040265	N01P	04-06-94	06:56	POLYCHAETE TROCHOPHORES		547
W94040265	N01P	04-06-94	06:56	PSEUDOCALANUS NEWMANI	F	50
W94040265	N01P	04-06-94	06:56	PSEUDOCALANUS NEWMANI	M	99
W94040265	N01P	04-06-94	06:56	PSEUDOCALANUS NEWMANI	C	50
W94040265	N01P	04-06-94	06:56	TEMORA LONGICORNIS	C	199
W94040281	N04P	04-06-94	07:54	BARNACLE NAUPLII	N	313
W94040281	N04P	04-06-94	07:54	CALANUS FINMARCHICUS	C	3130
W94040281	N04P	04-06-94	07:54	COPEPOD NAUPLII	N	6510
W94040281	N04P	04-06-94	07:54	DECAPOD LARVAE		63
W94040281	N04P	04-06-94	07:54	ECHINODERM PLUTEI		63

*C = COPEPIDITES, F = FEMALE, M = MALE, N = NAUPLII

Table F1. Zooplankton Species Data for April, 1994.

Sample ID	Station	Date	Time	Taxon	Qual*	Individuals Per M3
W94040281	N04P	04-06-94	07:54	EVADNE NORDMANI		63
W94040281	N04P	04-06-94	07:54	GASTROPOD VELIGER		689
W94040281	N04P	04-06-94	07:54	MICROSETELLA NORVEGICA		501
W94040281	N04P	04-06-94	07:54	OIKIOPLEURA DIOICA		7323
W94040281	N04P	04-06-94	07:54	OITHONA SIMILIS	F	876
W94040281	N04P	04-06-94	07:54	OITHONA SIMILIS	M	125
W94040281	N04P	04-06-94	07:54	OITHONA SIMILIS	C	3067
W94040281	N04P	04-06-94	07:54	PARACALANUS PARVUS	C	876
W94040281	N04P	04-06-94	07:54	POLYCHAETE LARVAE		188
W94040281	N04P	04-06-94	07:54	TEMORA LONGICORNIS	C	250
W94040406	F02P	04-07-94	07:21	ACARTIA HUDSONICA	C	21
W94040406	F02P	04-07-94	07:21	BARNACLE NAUPLII	N	622
W94040406	F02P	04-07-94	07:21	CALANUS FINMARCHICUS	C	249
W94040406	F02P	04-07-94	07:21	CENTROPAGES SPP.	C	41
W94040406	F02P	04-07-94	07:21	COPEPOD NAUPLII	N	23318
W94040406	F02P	04-07-94	07:21	EUCONCHOEICA SP.		228
W94040406	F02P	04-07-94	07:21	MEDUSA		166
W94040406	F02P	04-07-94	07:21	OIKIOPLEURA DIOICA		5352
W94040406	F02P	04-07-94	07:21	OITHONA SIMILIS	F	788
W94040406	F02P	04-07-94	07:21	OITHONA SIMILIS	C	2178
W94040406	F02P	04-07-94	07:21	OITHONA SIMILIS	M	104
W94040406	F02P	04-07-94	07:21	PARACALANUS PARVUS	F	270
W94040406	F02P	04-07-94	07:21	PARACALANUS PARVUS	M	166
W94040406	F02P	04-07-94	07:21	PARACALANUS PARVUS	C	5415
W94040406	F02P	04-07-94	07:21	PODON POLYPHEMOIDES		21
W94040406	F02P	04-07-94	07:21	POLYCHAETE LARVAE		934
W94040406	F02P	04-07-94	07:21	PSEUDOCALANUS NEWMANI	M	270
W94040406	F02P	04-07-94	07:21	PSEUDOCALANUS NEWMANI	C	124
W94040406	F02P	04-07-94	07:21	PSEUDOCALANUS NEWMANI	F	249
W94040406	F02P	04-07-94	07:21	PTEROPOD		21
W94040406	F02P	04-07-94	07:21	TEMORA LONGICORNIS	C	394
W94040406	F02P	04-07-94	07:21	TEMORA LONGICORNIS	M	104
W94040419	F01P	04-07-94	08:49	BARNACLE NAUPLII	N	1655
W94040419	F01P	04-07-94	08:49	BIVALVE VELIGER		120
W94040419	F01P	04-07-94	08:49	CALANUS FINMARCHICUS	F	90
W94040419	F01P	04-07-94	08:49	CALANUS FINMARCHICUS	C	1354
W94040419	F01P	04-07-94	08:49	CENTROPAGES HAMATUS	F	30
W94040419	F01P	04-07-94	08:49	COPEPOD NAUPLII	N	18591
W94040419	F01P	04-07-94	08:49	GASTROPOD VELIGER		120
W94040419	F01P	04-07-94	08:49	MEDUSA		90
W94040419	F01P	04-07-94	08:49	MICROSETELLA NORVEGICA		60
W94040419	F01P	04-07-94	08:49	OIKIOPLEURA DIOICA		3881
W94040419	F01P	04-07-94	08:49	OITHONA SIMILIS	C	1384
W94040419	F01P	04-07-94	08:49	OITHONA SIMILIS	F	421
W94040419	F01P	04-07-94	08:49	OITHONA SIMILIS	M	30
W94040419	F01P	04-07-94	08:49	PARACALANUS PARVUS	F	60
W94040419	F01P	04-07-94	08:49	PARACALANUS PARVUS	C	1594
W94040419	F01P	04-07-94	08:49	PARACALANUS PARVUS	M	60
W94040419	F01P	04-07-94	08:49	POLYCHAETE LARVAE		2557
W94040419	F01P	04-07-94	08:49	POLYCHAETE TROCHOPHORES		511
W94040419	F01P	04-07-94	08:49	PSEUDOCALANUS NEWMANI	F	180
W94040419	F01P	04-07-94	08:49	PSEUDOCALANUS NEWMANI	M	60
W94040419	F01P	04-07-94	08:49	PSEUDOCALANUS NEWMANI	C	120
W94040419	F01P	04-07-94	08:49	TEMORA LONGICORNIS	F	60
W94040419	F01P	04-07-94	08:49	TEMORA LONGICORNIS	M	60
W94040419	F01P	04-07-94	08:49	TEMORA LONGICORNIS	C	241
W94040504	F13P	04-07-94	14:22	ACARTIA HUDSONICA	C	119
W94040504	F13P	04-07-94	14:22	BARNACLE NAUPLII	N	7859
W94040504	F13P	04-07-94	14:22	CALANUS FINMARCHICUS	C	437
W94040504	F13P	04-07-94	14:22	COPEPOD NAUPLII	N	3453
W94040504	F13P	04-07-94	14:22	ECHINODERM PLUTEI		119

*C = COPEPIDITES, F = FEMALE, M = MALE, N = NAUPLII

Table F1. Zooplankton Species Data for April, 1994.

Sample ID	Station	Date	Time	Taxon	Qual*	Individuals Per M3
W94040504	F13P	04-07-94	14:22	EUCONCHOEICA SP.		119
W94040504	F13P	04-07-94	14:22	GASTROPOD VELIGER		437
W94040504	F13P	04-07-94	14:22	MEDUSA		79
W94040504	F13P	04-07-94	14:22	MICROSETELLA NORVEGICA		40
W94040504	F13P	04-07-94	14:22	MYSIID LARVA		40
W94040504	F13P	04-07-94	14:22	OIKIOPLEURA DIOICA		2223
W94040504	F13P	04-07-94	14:22	OITHONA SIMILIS	M	40
W94040504	F13P	04-07-94	14:22	OITHONA SIMILIS	C	476
W94040504	F13P	04-07-94	14:22	OITHONA SIMILIS	F	119
W94040504	F13P	04-07-94	14:22	PARACALANUS PARVUS	C	913
W94040504	F13P	04-07-94	14:22	POLYCHAETE LARVAE		1588
W94040504	F13P	04-07-94	14:22	POLYCHAETE TROCHOPHORES		1032
W94040504	F13P	04-07-94	14:22	PSEUDOCALANUS NEWMANI	F	79
W94040504	F13P	04-07-94	14:22	TEMORA LONGICORNIS	F	79
W94040504	F13P	04-07-94	14:22	TEMORA LONGICORNIS	C	278

*C = COPEPIDITES, F = FEMALE, M = MALE, N = NAUPLII