APPENDICES TO WATER QUALITY MONITORING IN MASSACHUSETTS AND CAPE COD BAYS: OCTOBER - DECEMBER 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 data for the October combined farfield/nearfield survey, the November nearfield survey, and the December nearfield survey. 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

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

$$\% \text{ Saturation} = 100 * DO/OXsat$$

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)
W9414	F01P	10-13-94	854	22.8	W94140343	14.916	31.759	7.77	8.31	93.55	39.27	23.494	3.2408	1.49062	0.29	0.04	0.15	0.65	4.35
W9414	F01P	10-13-94	855	17.8	W94140344	14.917	31.758	7.91	8.31	95.24	39.268	23.493	3.3333	1.50497	0.22	0.04	0.11	0.63	4.3
W9414	F01P	10-13-94	857	12.1	W94140345	14.921	31.758	7.88	8.30	94.89	39.269	23.492	3.5854	1.53513	0.23	0.04	0.12	0.62	4.18
W9414	F01P	10-13-94	858	7.3	W94140346	14.929	31.757	7.93	8.30	95.50	39.273	23.489	3.7916	1.5701	0.19	0.03	0.12	0.65	4.3
W9414	F01P	10-13-94	859	1.9	W94140347	14.94	31.757	7.95	8.30	95.77	39.282	23.487	2.7886	1.57475	0.16	0.04	0.12	0.62	4.22
W9414	F02P	10-13-94	718	30.1	W94140329	14.586	31.753	6.17	8.36	73.79	38.969	23.559	1.9217	1.83093	1.64	0.09	0.35	0.72	5.78
W9414	F02P	10-13-94	720	22.1	W94140330	14.71	31.751	7.37	8.34	88.36	39.076	23.532	3.7331	1.48538	0.53	0.04	0.14	0.58	3.78
W9414	F02P	10-13-94	721	16.1	W94140331	14.716	31.751	7.27	8.34	87.17	39.078	23.53	3.7411	1.48226	0.28	0.04	0.11	0.56	3
W9414	F02P	10-13-94	723	9.3	W94140332	14.713	31.752	7.63	8.34	91.48	39.074	23.531	4.0219	1.51274	0.21	0.03	0.08	0.56	2.92
W9414	F02P	10-13-94	724	1.7	W94140333	14.708	31.754	7.63	8.34	91.48	39.069	23.534	3.4915	1.52557	0.22	0.04	0.09	0.55	2.96
W9414	F03	10-13-94	1002	14.9	W94140360	13.902	31.805	7.70	8.48	90.83	38.405	23.741	2.8977	1.38242	0.36	0.09	0.57	0.71	5.55
W9414	F03	10-13-94	1004	11.2	W94140361	14.044	31.783	7.49	8.45	88.60	38.506	23.694	4.6690	1.66504	0.33	0.08	0.38	0.72	5.17
W9414	F03	10-13-94	1005	7.5	W94140362	14.053	31.781	7.57	8.45	89.56	38.512	23.691	5.3959	1.77571	0.23	0.07	0.32	0.73	4.98
W9414	F03	10-13-94	1006	4.8	W94140363	14.088	31.775	7.54	8.45	89.27	38.535	23.679	5.3706	1.89836	0.2	0.06	0.2	0.72	4.9
W9414	F03	10-13-94	1007	2	W94140364	14.182	31.772	7.78	8.43	92.29	38.615	23.657	3.2443	1.84389	0.22	0.06	0.18	0.71	4.91
W9414	F05	10-13-94	1142	14.7	W94140375	13.715	31.765	8.59	8.51	100.91	38.193	23.747	5.7628	1.74849	0.21	0.04	0.09	0.58	2.3
W9414	F05	10-13-94	1143	11.5	W94140376	13.725	31.761	8.52	8.51	100.11	38.197	23.742	6.4493	1.83519	0.18	0.04	0.1	0.59	2.28
W9414	F05	10-13-94	1144	8.2	W94140377	13.744	31.759	8.94	8.51	105.09	38.21	23.737	7.1920	2.16171	0.17	0.03	0.09	0.56	2.31
W9414	F05	10-13-94	1145	4.4	W94140378	13.925	31.755	8.71	8.48	102.76	38.366	23.697	5.5464	1.9598	0.17	0.03	0.09	0.55	2.24
W9414	F05	10-13-94	1146	1.8	W94140379	14.129	31.749	8.92	8.44	105.68	38.542	23.65	3.9994	1.91063	0.19	0.03	0.1	0.57	2.12
W9414	F06	10-13-94	1220	33.8	W94140388	10.14	32.362	6.06	9.15	66.20	35.636	24.87	0.2729	1.10001	0.19	0.22	11.75	1.38	16.45
W9414	F06	10-13-94	1222	23.6	W94140389	11.621	32.13	5.60	8.88	63.09	36.713	24.432	0.5901	0.94396	0.15	0.23	10.94	1.39	15.87
W9414	F06	10-13-94	1223	16.1	W94140390	14.005	31.819	8.09	8.46	95.64	38.514	23.73	5.2418	1.87167	0.42	0.15	3.62	1	7.62
W9414	F06	10-13-94	1225	9.3	W94140391	14.205	31.797	8.40	8.42	99.70	38.666	23.672	6.2962	1.92284	0.14	0.03	0.12	0.75	2.82
W9414	F06	10-13-94	1226	1.6	W94140392	14.655	31.796	8.82	8.35	105.66	39.068	23.577	3.0055	1.97754	0.17	0.03	0.14	0.75	2.81
W9414	F07	10-13-94	1259	52	W94140400	9.796	32.406	6.35	9.22	68.87	35.383	24.962	0.2300	1.20098	0.26	0.12	12.13	1.32	16.1
W9414	F07	10-13-94	1301	41.2	W94140401	10.67	32.275	5.99	9.05	66.17	36.022	24.713	0.3127	0.87149	0.19	0.08	11.95	1.33	15.78
W9414	F07	10-13-94	1302	27	W94140402	14.042	31.918	8.12	8.45	96.13	38.658	23.799	3.3151	1.30807	0.22	0.08	0.92	0.72	3.28
W9414	F07	10-13-94	1304	11.8	W94140403	14.315	31.86	8.51	8.40	101.28	38.835	23.698	5.9090	1.96063	0.12	0.03	0.1	0.66	2.11
W9414	F07	10-13-94	1305	1.7	W94140404	14.981	31.826	8.65	8.29	104.33	39.395	23.531	1.7694	1.76245	0.16	0.03	0.1	0.69	2.28
W9414	F10	10-13-94	1354	29.4	W94140413	10.845	32.256	6.14	9.02	68.08	36.153	24.668	0.3366	0.87979	0.12	0.23	11.29	1.25	15.33
W9414	F10	10-13-94	1356	21.3	W94140414	11.952	32.121	6.47	8.81	73.41	36.997	24.364	0.7082	0.75501	0.23	0.24	9.87	1.22	13.89
W9414	F10	10-13-94	1357	11.3	W94140415	14.298	31.788	8.48	8.41	100.84	38.741	23.646	6.2415	2.03675	0.17	0.03	0.15	0.7	2.66
W9414	F10	10-13-94	1358	6.9	W94140416	14.354	31.786	8.84	8.40	105.24	38.787	23.632	6.1410	2.20185	0.18	0.03	0.08	0.71	2.53
W9414	F10	10-13-94	1359	1.5	W94140417	14.866	31.786	8.79	8.31	105.74	39.247	23.525	2.4495	1.97696	0.18	0.02	0.12	0.69	2.43
W9414	F12	10-12-94	1508	86.7	W94140291	9.64	32.441	6.27	9.25	67.78	35.295	25.015	0.2461	1.27012	0.17	0.1	12.27	1.17	16.66
W9414	F12	10-12-94	1510	56.3	W94140292	10.306	32.39	6.59	9.12	72.27	35.82	24.864	0.3203	0.79009	0.14	0.07	10.07	1.07	12.91
W9414	F12	10-12-94	1511	36.9	W94140293	12.607	32.235	8.01	8.69	92.22	37.71	24.33	2.1838	0.97055	0.31	0.21	2.78	0.67	4.85
W9414	F12	10-12-94	1513	10.5	W94140294	13.06	32.154	8.97	8.61	104.20	38.02	24.178	4.3999	1.5164	0.17	0.09	0.95	0.57	3.84
W9414	F12	10-12-94	1514	2.1	W94140295	14.343	31.834	8.94	8.40	106.44	38.827	23.672	3.4212	1.9389	0.16	0.04	0.24	0.59	2.67
W9414	F13P	10-13-94	1436	23	W94140432	12.465	32.033	6.65	8.72	76.23	37.364	24.2	1.1477	1.04581	0.7	0.04	0.03	0.41	8.74
W9414	F13P	10-13-94	1437	16.6	W94140433	13.398	31.857	7.51	8.56	87.70	38.009	23.882	2.6770	1.14326	0.39	0.33	4.54	0.77	8.1
W9414	F13P	10-13-94	1438	9.3	W94140434	13.696	31.766	8.74	8.52	102.64	38.176	23.752	6.7007	1.89772	0.2	0.03	0.1	0.48	1.39
W9414	F13P	10-13-94	1440	5.5	W94140435	13.92	31.789	8.99	8.47	106.08	38.4	23.724	6.9155	2.1327	0.18	0.03	0.18	0.52	2.02
W9414	F13P	10-13-94	1441	1.6	W94140436	14.452	31.802	8.86	8.38	105.70	38.891	23.624	3.1295	1.97974	0.17	0.03	0.18	0.43	2.16
W9414	F14	10-11-94	1708	13.4	W94140144	13.585	31.779	8.84	8.53	103.58	38.092	23.784	5.6105	1.78721	0.2	0.11	0.87	0.53	3.03
W9414	F14	10-11-94	1709	7.3	W94140146	13.608	31.766	8.60	8.53	100.81	38.097	23.77	5.9619	1.8144	0.26	0.05	0.05	0.37	2.94
W9414	F14	10-11-94	1709	9	W94140145	13.593	31.769	9.05	8.53	106.05	38.086	23.775	5.6650	1.78464	0.19	0.08	0.83	0.49	2.99
W9414	F14	10-11-94	1710	4.6	W94140147	13.636	31.767	8.76	8.53	102.74	38.12	23.764	6.7544	1.98028	0.36	0.05	0.07	0.4	2.92
W9414	F14	10-11-94	1711	2.1	W94140148	13.647	31.768	9.10	8.52	106.76	38.131	23.763	7.2421	2.05863	0.19	0.09	0.54	0.62	2.83

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)
W9414	F15	10-11-94	1625	13.4	W94140135	13.588	31.863	8.49	8.53	99.54	38.185	23.849	4.1195	1.39126	0.3	0.08	0.89	0.55	2.94
W9414	F15	10-11-94	1625	21.5	W94140134	12.664	32.018	7.25	8.69	83.45	37.525	24.15	1.5712	0.99192	0.82	0.27	5.61	0.9	8.9
W9414	F15	10-11-94	1625	32.3	W94140133	10.64	32.336	6.33	9.06	69.91	36.053	24.765	0.2941	1.02536	0.37	0.31	10.38	1.13	13.84
W9414	F15	10-11-94	1626	7.3	W94140136	13.676	31.841	8.47	8.52	99.47	38.238	23.814	4.9206	1.50983	0.22	0.05	0.66	0.55	2.67
W9414	F15	10-11-94	1627	2	W94140137	13.921	31.808	9.18	8.47	108.34	38.42	23.739	6.8539	1.93004	1.04	0.04	0.26	0.63	2.6
W9414	F16	10-11-94	1540	53.1	W94140122	10.044	32.452	6.36	9.17	69.38	35.649	24.957	0.2319	1.18939	0.35	0.1	11.71	1.22	15.19
W9414	F16	10-11-94	1541	32	W94140123	12.153	32.16	7.34	8.77	83.65	37.222	24.357	0.6261	0.6713	0.29	0.3	6.08	0.81	7.84
W9414	F16	10-11-94	1543	16.5	W94140124	13.531	32.043	8.73	8.53	102.34	38.325	23.999	4.0921	1.39825	0.23	0.04	0.27	0.47	2.38
W9414	F16	10-11-94	1544	10.6	W94140125	13.521	32.037	8.52	8.53	99.86	38.31	23.997	3.7510	1.3089	0.24	0.02	0.08	0.3	2.29
W9414	F16	10-11-94	1545	2.2	W94140126	13.633	32.039	8.78	8.51	103.15	38.41	23.975	3.5993	1.40184	1.22	0.02	0.11	0.46	2.3
W9414	F18	10-12-94	719	21	W94140204	11.944	32.206	6.64	8.81	75.36	37.077	24.431	0.7478	0.78815	0.31	0.35	7.95	1	11.3
W9414	F18	10-12-94	720	15.7	W94140205	12.568	32.065	8.16	8.70	93.77	37.487	24.205	4.4336	1.45507	0.25	0.25	5.51	0.88	8.05
W9414	F18	10-12-94	721	10.7	W94140206	13.055	31.832	8.60	8.63	99.69	37.673	23.93	5.7982	1.73316	0.17	0.12	1.61	0.64	3.57
W9414	F18	10-12-94	722	6.1	W94140207	13.06	31.83	8.95	8.63	103.76	37.674	23.927	5.8421	1.74	0.19	0.1	1.24	0.6	3.21
W9414	F18	10-12-94	723	2	W94140208	13.063	31.83	8.69	8.63	100.75	37.675	23.927	5.7560	1.74384	0.22	0.1	1.22	0.6	3.17
W9414	F19	10-11-94	1444	74.3	W94140112	9.961	32.706	6.89	9.17	75.14	35.834	25.169	0.2443	1.84067	0.25	0.18	10.72	1.07	13.02
W9414	F19	10-11-94	1446	47.9	W94140113	10.809	32.431	6.81	9.02	75.53	36.305	24.811	0.3014	0.68868	0.21	0.08	9.67	1.01	11.61
W9414	F19	10-11-94	1447	34.7	W94140114	12.601	32.322	7.64	8.68	87.99	37.794	24.398	0.6578	0.60882	1.06	0.38	2.7	0.67	4.26
W9414	F19	10-11-94	1449	11.8	W94140114A	13.556	32.045	5.97	8.53	70.03	38.353	23.995	3.3732	1.226	0.12	0.03	0.06	0.32	2.32
W9414	F19	10-11-94	1450	2.5	W94140115	13.699	32.041	8.59	8.50	101.05	38.472	23.963	2.4918	1.21355	0.45	0.06	0.25	0.49	2.23
W9414	F22	10-12-94	1024	74.9	W94140240	9.955	32.715	6.75	9.17	73.61	35.838	25.177	0.2344	1.35657	0.31	0.17	10.64	1.06	13.02
W9414	F22	10-12-94	1025	39.1	W94140241	12.04	32.373	7.60	8.78	86.52	37.345	24.543	0.4696	0.60037	0.27	0.3	5.25	0.74	6.25
W9414	F22	10-12-94	1027	17.4	W94140242	13.36	32.052	8.93	8.56	104.32	38.185	24.04	3.0487	1.17124	0.4	0.07	0.36	0.5	2.43
W9414	F22	10-12-94	1028	8.9	W94140243	13.381	32.049	8.79	8.56	102.73	38.197	24.034	3.5767	1.27224	0.23	0.06	0.19	0.48	2.35
W9414	F22	10-12-94	1029	2.4	W94140244	13.427	32.056	8.85	8.55	103.54	38.243	24.029	1.9303	1.25625	0.17	0.06	0.2	0.47	2.32
W9414	F23P	10-11-94	907	24.5	W94140037	13.364	31.406	7.95	8.59	92.51	37.499	23.54	1.9871	1.61807	4.98	0.62	5.17	1.07	6.7
W9414	F23P	10-11-94	908	19.6	W94140038	13.371	31.39	7.56	8.59	87.98	37.485	23.526	1.9847	1.58712	6.51	0.62	5.21	1.24	6.71
W9414	F23P	10-11-94	909	11.2	W94140039	13.393	31.363	7.60	8.59	88.47	37.472	23.501	2.1179	1.68449	6.74	0.62	5.12	1.2	6.45
W9414	F23P	10-11-94	910	5.5	W94140040	13.382	31.33	7.93	8.59	92.27	37.425	23.478	2.1328	1.67034	6.51	0.61	5.16	1.25	6.59
W9414	F23P	10-11-94	911	2.1	W94140041	13.396	31.257	7.83	8.60	91.09	37.357	23.418	1.8212	1.71705	6.84	0.63	5.33	1.2	6.79
W9414	F23P	10-12-94	546	26.3	W94140180	12.936	31.68	7.50	8.66	86.64	37.413	23.836	2.1932	1.2935	6.28	0.52	5.25	1.2	7.93
W9414	F23P	10-12-94	547	19.9	W94140181	12.95	31.673	7.27	8.65	84.01	37.414	23.827	1.9962	1.29732	5.64	0.53	5.46	1.18	8.18
W9414	F23P	10-12-94	548	13.3	W94140182	12.986	31.646	7.42	8.65	85.79	37.416	23.8	1.8146	1.29282	6.74	0.55	5.46	1.2	8.09
W9414	F23P	10-12-94	549	7.2	W94140183	13.036	31.576	7.51	8.64	86.89	37.384	23.736	1.7134	1.31608	8.31	0.56	5.37	1.28	7.94
W9414	F23P	10-12-94	550	2.2	W94140184	12.983	31.44	7.46	8.66	86.14	37.189	23.641	1.7543	1.5961	13.64	0.57	5.17	1.6	8.23
W9414	F24	10-11-94	1012	17.7	W94140061	12.578	31.951	6.77	8.71	77.75	37.377	24.114	1.1607	1.21219	5.1	0.48	6.27	1.23	9.41
W9414	F24	10-11-94	1013	13.2	W94140062	13.098	31.673	7.55	8.63	87.51	37.544	23.798	2.2710	1.36346	6.09	0.5	5.62	1.24	8.34
W9414	F24	10-11-94	1014	8.1	W94140063	13.134	31.638	7.75	8.62	89.88	37.536	23.765	2.3914	1.43021	6.82	0.51	5.26	1.3	7.84
W9414	F24	10-11-94	1015	4.9	W94140064	13.194	31.579	7.67	8.61	89.03	37.525	23.707	2.2993	1.56511	8.43	0.52	5.29	1.34	8.15
W9414	F24	10-11-94	1016	2.4	W94140065	13.246	31.547	7.56	8.61	87.83	37.536	23.672	1.4252	1.59217	9.33	0.52	5.08	1.31	7.99
W9414	F25	10-11-94	1751	15.6	W94140153	13.265	31.75	7.85	8.59	91.35	37.775	23.825	3.0561	1.2643	1.98	0.02	2.64	0.68	5.56
W9414	F25	10-11-94	1753	6.3	W94140156	13.371	31.719	7.75	8.58	90.37	37.833	23.78	3.6735	1.38691	0.87	0.03	3.64	0.64	5.62
W9414	F25	10-11-94	1753	8.9	W94140155	13.339	31.731	8.13	8.58	94.75	37.819	23.796	3.5084	1.33721	2.33	0.03	1.39	0.62	5.56
W9414	F25	10-11-94	1756	1.8	W94140157	13.397	31.706	8.14	8.57	94.96	37.84	23.765	3.5044	1.42263	2.79	0.45	3.71	0.89	5.33
W9414	F26	10-12-94	1144	46.9	W94140252	10.198	32.807	7.03	9.12	77.12	36.134	25.208	0.2065	0.77998	1.11	0.03	5	0.6	10.19
W9414	F26	10-12-94	1145	29.9	W94140253	10.94	32.461	6.80	8.99	75.65	36.445	24.811	0.4146	0.71813	0.39	0.03	8.91	0.73	10.94
W9414	F26	10-12-94	1147	18	W94140254	12.353	32.186	8.60	8.74	98.45	37.423	24.339	3.9091	1.20675	0.06	0.03	0.04	0.25	4.12
W9414	F26	10-12-94	1148	7.2	W94140255	12.958	32.054	9.52	8.63	110.29	37.821	24.121	5.5877	1.87792	0.08	0.01	0.06	0.31	2.6
W9414	F26	10-12-94	1150	2	W94140256	13.071	32.028	9.51	8.61	110.41	37.893	24.078	2.9908	1.8479	0.23	0.01	0.12	0.32	2.44
W9414	F27B	10-12-94	1246	97.4	W94140263	9.971	32.928	6.80	9.15	74.28	36.072	25.341	0.1800	0.94878	0.43	0.17	11.09	1.04	11.58

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)
W9414	F27B	10-12-94	1249	47.8	W94140264	10.215	32.647	6.82	9.12	74.77	35.992	25.081	0.2654	0.70578	0.16	0.26	8.7	0.97	10.31
W9414	F27B	10-12-94	1251	30.4	W94140265	12.541	32.34	7.78	8.69	89.50	37.757	24.423	0.5849	0.59325	0.86	0.44	2.86	0.66	4.64
W9414	F27B	10-12-94	1253	10.5	W94140266	13.569	31.971	8.24	8.53	96.63	38.283	23.936	3.2760	1.13819	0.4	0.12	0.18	0.44	2.08
W9414	F27B	10-12-94	1254	2	W94140267	13.84	31.972	8.77	8.48	103.43	38.525	23.882	1.4736	1.13133	0.2	0.07	0.16	0.43	2.12
W9414	F28	10-12-94	1412	27.1	W94140278	12.63	32.225	8.43	8.68	97.09	37.716	24.317	2.4984	1.00053	0.3	0.23	1.89	0.53	3.79
W9414	F28	10-12-94	1413	17.7	W94140279	12.931	32.146	8.53	8.63	98.82	37.899	24.198	3.6675	1.20506	0.37	0.21	1.29	0.52	3.14
W9414	F28	10-12-94	1414	9.8	W94140280	13.055	32.118	8.55	8.61	99.29	37.977	24.151	3.8549	1.20617	0.18	0.22	1.1	0.54	2.95
W9414	F28	10-12-94	1415	4.9	W94140281	13.185	32.104	8.79	8.59	102.35	38.077	24.115	3.8630	1.38164	0.18	0.22	0.78	0.53	2.68
W9414	F28	10-12-94	1416	2	W94140282	13.408	32.112	8.85	8.55	103.53	38.285	24.077	2.6448	1.40448	0.21	0.2	0.64	0.51	2.59
W9414	F29	10-12-94	1700	60	W94140302	12.479	32.428	7.89	8.70	90.70	37.806	24.504	1.2811	0.85004	0.74	0.33	3.46	0.62	5.16
W9414	F29	10-12-94	1701	43.9	W94140303	12.671	32.314	8.00	8.67	92.27	37.853	24.378	1.8629	0.8745	0.65	0.3	2.98	0.59	4.8
W9414	F29	10-12-94	1703	25.5	W94140304	13.033	32.1	8.21	8.62	95.29	37.945	24.142	2.5433	1.09862	0.76	0.23	2.11	0.56	4.67
W9414	F29	10-12-94	1704	7.2	W94140305	13.357	32.014	8.03	8.56	93.78	38.136	24.011	3.4914	1.31776	0.53	0.16	1.19	0.53	4.05
W9414	F29	10-12-94	1705	2	W94140306	14.245	31.829	8.91	8.42	105.87	38.734	23.688	5.1694	1.87642	0.62	0.1	0.28	0.45	2.61
W9414	F30B	10-11-94	545	9.4	W94140015	13.372	31.641	7.17	8.58	83.57	37.752	23.72	1.6957	1.48203	7.47	0.62	5.53	1.29	8.46
W9414	F30B	10-11-94	547	5.3	W94140016	13.804	31.187	7.32	8.53	85.85	37.642	23.283	1.7184	1.44808	3.82	0.73	5.89	1	8.27
W9414	F30B	10-11-94	548	1.8	W94140017	13.856	30.887	7.46	8.53	87.42	37.361	23.041	1.7269	1.41897	9.36	0.8	6.21	1.35	7.82
W9414	F31B	10-11-94	1842	13.9	W94140166	13.397	31.666	7.67	8.57	89.46	37.803	23.734	3.2400	1.37978	3.55	0.47	4.18	1.04	6.13
W9414	F31B	10-11-94	1843	1.1	W94140168	13.338	31.59	7.66	8.59	89.19	37.66	23.687	3.0646	1.392	4.08	0.51	4.3	1.01	6.52
W9414	F31B	10-11-94	1843	7.4	W94140167	13.368	31.635	7.51	8.58	87.52	37.741	23.716	3.3052	1.40612	3.63	0.47	4.15	1.02	6.13
W9414	N01P	10-12-94	647	28.5	W94140192	11.415	32.273	6.20	8.91	69.60	36.678	24.58	0.4183	0.88017	0.35	0.3	10.36	1.15	13.92
W9414	N01P	10-12-94	648	21.2	W94140193	12.155	32.133	6.66	8.78	75.89	37.191	24.336	0.8326	0.90633	0.6	0.39	8.52	1.07	11.86
W9414	N01P	10-12-94	649	12.7	W94140194	13.291	31.867	9.00	8.58	104.87	37.923	23.911	5.1848	1.69692	0.39	0.05	0.4	0.51	2.43
W9414	N01P	10-12-94	650	7.7	W94140195	13.292	31.862	8.78	8.58	102.31	37.917	23.907	5.3225	1.70637	0.31	0.04	0.56	0.51	2.53
W9414	N01P	10-12-94	651	2.1	W94140196	13.285	31.863	9.08	8.58	105.79	37.908	23.908	5.4696	1.7235	0.43	0.05	0.34	0.49	2.27
W9414	N01P	10-14-94	805	28	W94140505	10.993	32.31	5.19	8.99	57.75	36.338	24.684	0.3286	1.19872	0.95	0.69	5.52	0.69	16.14
W9414	N01P	10-14-94	807	20.4	W94140506	11.747	32.217	6.00	8.85	67.82	36.913	24.476	0.5098	0.83049	0.49	0.18	8.22	0.91	13.19
W9414	N01P	10-14-94	809	10.1	W94140507	13.118	31.869	8.43	8.61	97.88	37.769	23.946	6.4573	1.89226	0.8	0.03	0.54	0.4	3.28
W9414	N01P	10-14-94	810	5.1	W94140508	13.129	31.867	8.66	8.61	100.57	37.775	23.943	7.2566	1.97355	0.63	0.04	0.03	0.35	2.37
W9414	N01P	10-14-94	812	1.4	W94140510	13.102	31.856	8.70	8.62	100.97	37.737	23.939	6.4144	1.96782	0.19	0.03	0.05	0.24	2.47
W9414	N02	10-14-94	833	35.9	W94140517	10.506	32.383	5.62	9.08	61.90	35.982	24.825	0.2687	1.34683	0.32	0.32	11.04	1.21	16.59
W9414	N02	10-14-94	835	24.4	W94140518	11.104	32.3	6.08	8.97	67.81	36.426	24.656	0.3388	0.75987	0.21	0.28	10.12	1.11	13.86
W9414	N02	10-14-94	838	9.5	W94140519	13.281	31.894	8.41	8.58	97.99	37.941	23.933	5.6152	1.74811	0.33	0.05	0.29	0.49	2.5
W9414	N02	10-14-94	840	4.7	W94140520	13.304	31.895	8.47	8.58	98.74	37.961	23.93	5.5337	1.76534	0.27	0.03	0.07	0.46	2.27
W9414	N02	10-14-94	841	1.6	W94140521	13.31	31.897	8.72	8.58	101.67	37.967	23.93	4.6067	1.74968	0.33	0.03	0.07	0.45	2.2
W9414	N03	10-14-94	903	41.2	W94140526	10.452	32.431	5.94	9.09	65.37	35.985	24.872	0.2577	0.9778	1.09	0.43	6.43	0.83	14.79
W9414	N03	10-14-94	905	19.2	W94140527	12.281	32.092	6.75	8.75	77.11	37.26	24.28	0.9231	0.75623	0.18	0.31	4.71	0.66	10.12
W9414	N03	10-14-94	906	10	W94140528	13.398	31.901	8.40	8.56	98.12	38.05	23.916	4.5454	1.544	1.02	0.1	0.67	0.5	2.94
W9414	N03	10-14-94	907	5	W94140529	13.422	31.905	8.77	8.56	102.49	38.08	23.914	4.4540	1.59	0.18	0.03	0.05	0.33	2.28
W9414	N03	10-14-94	908	1.8	W94140530	13.41	31.92	9.01	8.56	105.28	38.08	23.92	2.4608	1.563	0.14	0.04	0.12	0.36	2.25
W9414	N04P	10-12-94	822	47.1	W94140215	10.451	32.434	6.74	9.09	74.17	35.99	24.874	0.2718	0.86298	0.22	0.19	10.48	1.09	13.19
W9414	N04P	10-12-94	823	29.2	W94140216	11.813	32.222	7.04	8.83	79.69	36.98	24.468	0.4677	0.58781	0.38	0.16	7.7	0.89	8.53
W9414	N04P	10-12-94	824	15.3	W94140217	13.507	31.963	9.03	8.54	105.76	38.221	23.942	3.7133	1.32216	0.43	0.03	0.15	0.46	2.21
W9414	N04P	10-12-94	825	7.8	W94140218	13.506	31.97	8.79	8.54	102.95	38.224	23.947	3.7245	1.32979	0.31	0.03	0.35	0.46	2.42
W9414	N04P	10-12-94	826	2.9	W94140219	13.513	31.965	8.98	8.54	105.19	38.223	23.942	2.7073	1.32863	0.39	0.03	0.15	0.44	2.23
W9414	N04P	10-14-94	932	46.1	W94140535	10.309	32.499	6.39	9.11	70.13	35.928	24.95	0.2381	0.93006	0.72	0.91	5.49	0.58	13.61
W9414	N04P	10-14-94	934	29.2	W94140536	11.264	32.266	6.73	8.94	75.30	36.536	24.602	0.3811	0.62694	0.2	0.51	3.94	0.4	10.74
W9414	N04P	10-14-94	936	11.9	W94140537	13.396	31.93	8.62	8.56	100.70	38.083	23.938	4.6991	1.62209	0.74	0.02	0.22	0.45	2.08
W9414	N04P	10-14-94	937	4.6	W94140538	13.407	31.921	8.85	8.56	103.41	38.081	23.93	4.1905	1.70354	0.8	0.02	0.05	0.42	1.78
W9414	N04P	10-14-94	938	1.7	W94140539	13.438	31.922	8.70	8.55	101.72	38.109	23.923	2.6757	1.68569	0.33	0.02	0.05	0.45	1.81

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)
W9414	N05	10-14-94	1001	49.9	W94140544	10.343	32.444	6.23	9.11	68.40	35.905	24.901	0.2434	0.96793	0.34	0.23	11.22	1.16	14.79
W9414	N05	10-14-94	1004	31.2	W94140545	11.245	32.248	6.63	8.94	74.15	36.502	24.591	0.3750	0.6559	0.92	0.09	9.11	1	11.47
W9414	N05	10-14-94	1006	10.3	W94140546	13.391	31.951	8.71	8.56	101.76	38.101	23.955	4.7262	1.62669	0.26	0.03	0.05	0.38	2.11
W9414	N05	10-14-94	1009	5.7	W94140547	13.432	31.944	8.92	8.55	104.29	38.128	23.942	3.9964	1.66823	0.5	0.02	0.02	0.48	1.84
W9414	N05	10-14-94	1010	1.8	W94140548	13.481	31.944	8.90	8.54	104.17	38.17	23.932	2.3701	1.63504	0.15	0.02	0.03	0.29	1.85
W9414	N06	10-14-94	1048	46	W94140559	10.146	32.459	6.24	9.15	68.22	35.743	24.945	0.2389	1.1691	0.13	0.19	10.64	1.08	16
W9414	N06	10-14-94	1049	35.8	W94140560	10.899	32.318	6.76	9.01	75.07	36.267	24.707	0.2861	0.60635	0.59	0.05	9.41	1	11.07
W9414	N06	10-14-94	1052	15.5	W94140561	13.378	31.978	8.77	8.56	102.45	38.121	23.98	4.3983	1.62056	0.97	0.03	0.05	0.44	2.02
W9414	N06	10-14-94	1053	5.5	W94140562	13.422	31.983	8.87	8.55	103.71	38.16	23.974	4.0419	1.64	1.01	0.02	0.05	0.41	1.99
W9414	N06	10-14-94	1054	1.7	W94140563	13.437	31.996	8.88	8.55	103.87	38.19	23.981	2.4412	1.624	1.05	0.03	0.05	0.38	1.98
W9414	N07P	10-11-94	1330	42.9	W94140100	10.134	32.434	6.49	9.15	70.93	35.706	24.928	0.2423	1.52394	0.34	0.23	10.56	1.16	15.73
W9414	N07P	10-11-94	1331	33.7	W94140101	10.906	32.324	6.90	9.00	76.64	36.278	24.71	0.3205	0.70644	0.23	0.18	9.92	1.05	13.13
W9414	N07P	10-11-94	1333	20.3	W94140102	13.591	31.998	8.99	8.52	105.49	38.336	23.953	2.9896	1.16328	0.34	0.1	1.05	0.5	2.98
W9414	N07P	10-11-94	1334	8.8	W94140103	13.657	31.991	9.03	8.51	106.10	38.382	23.933	3.6785	1.29707	0.22	0.05	0.32	0.47	2.38
W9414	N07P	10-11-94	1335	2.1	W94140104	13.703	31.992	8.86	8.50	104.21	38.423	23.925	2.2700	1.30167	0.34	0.05	0.21	0.45	2.23
W9414	N07P	10-14-94	1209	40.1	W94140575	10.847	32.325	6.52	9.01	72.32	36.229	24.721	0.3381	0.82067	0.55	0.15	9.44	1.01	12.7
W9414	N07P	10-14-94	1210	33.2	W94140576	12.135	32.144	6.76	8.78	77.01	37.19	24.348	0.6159	0.69723	0.17	0.13	7.66	1.01	11.07
W9414	N07P	10-14-94	1212	15.8	W94140577	13.569	31.908	8.98	8.53	105.27	38.217	23.887	5.2046	1.72131	0.38	0.03	0.06	0.54	1.78
W9414	N07P	10-14-94	1213	9.6	W94140578	13.595	31.907	8.85	8.53	103.80	38.237	23.881	5.3645	1.78286	0.12	0.03	0.04	0.32	1.65
W9414	N07P	10-14-94	1215	1.7	W94140579	13.601	31.904	9.17	8.52	107.57	38.236	23.877	3.4191	1.80563	0.75	0.02	0.05	0.46	1.66
W9414	N08	10-14-94	1241	28.1	W94140586	11.114	32.27	6.54	8.97	72.94	36.406	24.632	0.3999	0.79346	0.59	0.25	8.46	0.96	11.78
W9414	N08	10-14-94	1242	22.4	W94140587	13.539	31.836	8.86	8.54	103.75	38.116	23.838	4.8093	1.58462	0.67	0.07	0.51	0.51	2.3
W9414	N08	10-14-94	1244	13.1	W94140588	13.607	31.808	9.07	8.53	106.34	38.143	23.802	6.4042	1.90436	0.39	0.02	0.01	0.48	1.38
W9414	N08	10-14-94	1245	4.8	W94140589	13.738	31.811	9.37	8.51	110.16	38.26	23.778	6.6722	2.11614	0.1	0.03	0.02	0.34	1.28
W9414	N08	10-14-94	1246	1.8	W94140590	13.753	31.808	9.45	8.50	111.13	38.269	23.772	3.8620	2.12286	0.11	0.02	0.03	0.25	1.28
W9414	N09	10-14-94	1308	30.1	W94140597	10.769	32.311	6.21	9.03	68.76	36.142	24.723	0.3229	1.07667	0.21	0.28	10.41	1.15	14.16
W9414	N09	10-14-94	1309	21.6	W94140598	11.581	32.2	6.46	8.88	72.75	36.748	24.493	0.6054	0.84264	0.27	0.39	9.15	1.1	12.9
W9414	N09	10-14-94	1311	10.3	W94140599	13.476	31.787	9.23	8.55	107.91	38.002	23.812	7.0694	2.1329	0.17	0.02	0.14	0.52	1.61
W9414	N09	10-14-94	1313	5.5	W94140600	13.55	31.781	9.30	8.54	108.89	38.059	23.792	7.0788	2.20458	0.17	0.02	0.01	0.51	1.28
W9414	N09	10-14-94	1314	1.6	W94140601	13.572	31.783	9.15	8.54	107.19	38.079	23.789	5.5717	2.21727	0.24	0.02	0.05	0.51	1.25
W9414	N10P	10-13-94	1533	21.9	W94140444	12.455	32.008	4.82	8.73	55.23	37.329	24.182	1.1371	1.19747	2.05	0.34	5.01	0.96	8.48
W9414	N10P	10-13-94	1534	17.3	W94140445	13.232	31.795	5.29	8.60	61.54	37.795	23.867	2.7474	1.13428	1.77	0.31	3.45	0.86	6.42
W9414	N10P	10-13-94	1535	10.9	W94140446	13.148	31.743	5.38	8.61	62.45	37.662	23.843	2.8139	1.23881	2.23	0.09	1.53	0.58	5.03
W9414	N10P	10-13-94	1536	4.3	W94140447	13.334	31.699	5.88	8.58	68.51	37.778	23.772	5.1034	1.7972	3.33	0.42	3.42	0.91	4.8
W9414	N10P	10-13-94	1537	1.6	W94140448	13.571	31.685	5.96	8.54	69.77	37.973	23.714	5.5231	1.84002	3.29	0.43	3.56	0.93	4.98
W9414	N10P	10-14-94	645	20.9	W94140472	11.475	32.205	6.25	8.90	70.23	36.658	24.516	0.5611	1.0369	0.64	0.33	8.6	1.11	12.71
W9414	N10P	10-14-94	646	19.9	W94140473	11.508	32.203	6.11	8.89	68.70	36.685	24.509	0.5683	1.00498	0.78	0.35	8.14	1.11	11.99
W9414	N10P	10-14-94	647	10.8	W94140474	13.098	31.714	8.05	8.62	93.33	37.587	23.83	4.2254	1.59354	2.21	0.36	3.14	0.91	4.52
W9414	N10P	10-14-94	648	7	W94140475	13.119	31.712	8.13	8.62	94.30	37.601	23.825	4.4876	1.62454	2.04	0.39	3.11	0.91	4.48
W9414	N10P	10-14-94	649	1.8	W94140476	13.122	31.712	8.05	8.62	93.38	37.602	23.824	4.7290	1.64854	2.07	0.39	3.08	0.91	4.44
W9414	N11	10-14-94	710	26.7	W94140483	11.588	32.222	6.06	8.88	68.26	36.779	24.509	0.5406	1.05038	0.47	0.34	8.02	1.03	11.75
W9414	N11	10-14-94	712	17.8	W94140484	12.025	32.136	6.56	8.80	74.55	37.077	24.362	0.9925	0.91473	0.45	0.34	7.06	0.98	10.35
W9414	N11	10-14-94	714	10.6	W94140485	12.998	31.765	7.91	8.64	91.55	37.551	23.889	3.4138	1.37128	2.07	0.33	2.79	0.88	4.42
W9414	N11	10-14-94	716	6.5	W94140486	12.994	31.762	7.80	8.64	90.27	37.543	23.887	3.4715	1.37228	2.12	0.34	2.69	0.88	4.41
W9414	N11	10-14-94	717	1.7	W94140487	12.989	31.76	7.89	8.64	91.30	37.535	23.887	3.6402	1.38948	2.07	0.33	2.68	0.88	4.38
W9414	N12	10-14-94	737	18.9	W94140496	13.052	31.791	8.20	8.63	95.03	37.632	23.899	3.3925	1.35066	1.3	0.3	2.6	0.8	4.21
W9414	N12	10-14-94	738	13.9	W94140497	13.003	31.771	7.95	8.64	92.02	37.565	23.893	4.3142	1.5794	1.35	0.33	2.86	0.85	4.36
W9414	N12	10-14-94	739	11	W94140498	12.994	31.773	8.19	8.64	94.79	37.557	23.896	4.6853	1.62887	1.24	0.34	3	0.85	4.49
W9414	N12	10-14-94	740	6.9	W94140499	12.993	31.774	8.35	8.64	96.64	37.555	23.897	4.5421	1.60676	1.06	0.34	3.06	0.82	4.49
W9414	N12	10-14-94	743	1.4	W94140500	12.992	31.773	8.25	8.64	95.48	37.551	23.897	4.8609	1.66018	1.09	0.34	3.15	0.81	4.44

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)
W9414	N13	10-14-94	1432	24.2	W94140628	11.375	32.264	6.39	8.92	71.67	36.631	24.58	0.4651	0.9255	0.32	0.35	8.93	1.08	12.34
W9414	N13	10-14-94	1433	16.2	W94140629	12.506	32.03	7.52	8.72	86.28	37.395	24.19	1.7970	1.03714	0.16	0.02	2.35	0.21	8.07
W9414	N13	10-14-94	1435	9.1	W94140630	13.306	31.859	9.31	8.58	108.51	37.927	23.902	7.1767	1.99566	0.27	0.03	0.06	0.37	2.71
W9414	N13	10-14-94	1436	4.8	W94140631	13.33	31.859	9.46	8.58	110.31	37.946	23.897	7.6019	2.0618	0.11	0.07	0.35	0.41	2.55
W9414	N13	10-14-94	1437	1.6	W94140632	13.343	31.856	9.47	8.57	110.46	37.953	23.892	6.8326	2.08509	0.1	0.06	0.07	0.39	2.58
W9414	N14	10-14-94	1455	27.2	W94140639	10.987	32.32	6.52	8.99	72.54	36.343	24.692	0.3530	0.70646	0.19	0.24	8.36	1.02	10.84
W9414	N14	10-14-94	1456	20.4	W94140640	13.122	31.94	8.48	8.61	98.51	37.852	24.001	3.3085	1.24231	0.45	0.15	2.06	0.64	4.27
W9414	N14	10-14-94	1458	10.1	W94140641	13.473	31.862	9.02	8.55	105.50	38.079	23.871	6.2065	1.90821	0.51	0.04	0.17	0.47	2.33
W9414	N14	10-14-94	1459	5.2	W94140642	13.483	31.858	9.28	8.55	108.56	38.082	23.865	6.3392	1.93246	0.43	0.03	0.06	0.49	2.02
W9414	N14	10-14-94	1500	1.5	W94140643	13.481	31.857	9.39	8.55	109.84	38.078	23.865	5.1607	1.92765	0.16	0.03	0.07	0.44	2.1
W9414	N15	10-14-94	1517	39	W94140648	10.464	32.414	6.39	9.09	70.33	35.978	24.857	0.2485	0.825	1.27	0.04	4.99	0.79	13.89
W9414	N15	10-14-94	1519	27.1	W94140649	12.409	32.076	7.00	8.73	80.17	37.361	24.243	0.9196	0.76489	0.69	0.34	7.07	0.97	10.08
W9414	N15	10-14-94	1520	14.2	W94140650	13.501	31.938	9.08	8.54	106.31	38.188	23.924	5.0825	1.79532	0.36	0.04	0.18	0.49	2.04
W9414	N15	10-14-94	1521	5.7	W94140651	13.49	31.935	9.15	8.54	107.11	38.171	23.923	5.1741	1.78375	0.46	0.04	0.05	0.48	1.88
W9414	N15	10-14-94	1523	1.9	W94140652	13.503	31.934	9.18	8.54	107.49	38.18	23.92	4.5837	1.79163	1.12	0.03	0.09	0.46	1.85
W9414	N16P	10-11-94	1149	38.5	W94140084	10.421	32.418	6.64	9.09	73.02	35.944	24.867	0.2541	0.89525	0.33	0.2	10.3	1.09	13.69
W9414	N16P	10-11-94	1150	29	W94140085	12.102	32.199	7.54	8.78	85.86	37.215	24.396	0.6966	0.67125	0.25	0.2	6.88	0.85	8.29
W9414	N16P	10-11-94	1152	19.6	W94140086	13.612	31.942	8.95	8.52	105.03	38.294	23.905	4.1605	1.45511	0.71	0.04	0.27	0.59	2.32
W9414	N16P	10-11-94	1154	8.5	W94140087	13.645	31.934	8.96	8.52	105.22	38.31	23.892	4.6200	1.51775	0.26	0.03	0.22	0.46	2.33
W9414	N16P	10-11-94	1155	1.9	W94140088	13.685	31.928	8.98	8.51	105.54	38.338	23.879	2.5549	1.55806	0.54	0.04	0.16	0.42	2.24
W9414	N16P	10-12-94	905	36.2	W94140228	10.719	32.339	6.69	9.04	74.01	36.129	24.754	0.3235	0.79487	0.25	0.21	9.21	1.05	12.33
W9414	N16P	10-12-94	906	29.1	W94140229	11.452	32.244	6.94	8.90	77.96	36.68	24.551	0.4644	0.64719	0.25	0.21	8.53	0.98	10.25
W9414	N16P	10-12-94	907	6	W94140231	13.486	31.968	8.87	8.54	103.84	38.202	23.95	3.5132	1.27801	0.2	0.04	0.25	0.46	2.5
W9414	N16P	10-12-94	907	17.5	W94140230	13.473	31.962	8.78	8.54	102.76	38.189	23.948	3.3211	1.24179	0.26	0.05	0.17	0.45	2.46
W9414	N16P	10-12-94	908	1.9	W94140232	13.505	31.96	8.71	8.54	102.00	38.21	23.94	2.2190	1.27415	0.22	0.04	0.16	0.43	2.31
W9414	N16P	10-14-94	1544	37.2	W94140660	10.6	32.377	6.40	9.06	70.64	36.06	24.804	0.2727	0.76585	0.58	0.23	9.97	1.1	12.91
W9414	N16P	10-14-94	1545	25.3	W94140661	11.841	32.178	6.64	8.83	75.18	36.958	24.429	0.5920	0.73197	0.4	0.35	8.43	1.08	11.67
W9414	N16P	10-14-94	1546	14.5	W94140662	13.479	31.922	9.24	8.55	108.13	38.151	23.916	4.9527	1.79691	0.44	0.04	0.1	0.49	1.78
W9414	N16P	10-14-94	1548	5.9	W94140663	13.486	31.924	9.04	8.54	105.80	38.156	23.916	5.3281	1.8382	0.54	0.03	0.04	0.49	1.68
W9414	N16P	10-14-94	1549	1.5	W94140664	13.488	31.921	9.15	8.54	107.09	38.153	23.913	5.0326	1.84445	1.98	0.03	0.09	0.44	1.68
W9414	N17	10-14-94	1608	35.9	W94140671	10.589	32.365	6.17	9.06	68.08	36.038	24.797	0.3042	0.9028	0.06	0.29	10.28	1.05	14.71
W9414	N17	10-14-94	1609	24.6	W94140672	11.41	32.232	6.63	8.91	74.40	36.629	24.549	0.4647	0.70599	1.96	0.65	5.83	0.88	12.37
W9414	N17	10-14-94	1612	10.9	W94140673	13.667	31.843	8.74	8.52	102.62	38.233	23.817	5.7661	1.82465	0.99	0.02	0.17	0.5	1.78
W9414	N17	10-14-94	1613	4.2	W94140674	13.695	31.84	9.29	8.51	109.14	38.252	23.809	6.3188	1.93817	0.37	0.02	0.07	0.52	1.55
W9414	N17	10-14-94	1614	2.2	W94140675	13.695	31.839	9.13	8.51	107.26	38.251	23.808	6.1966	1.94868	0.45	0.02	0.07	0.47	1.55
W9414	N18	10-14-94	1632	22.2	W94140682	13.116	31.878	8.62	8.61	100.08	37.783	23.954	3.6799	1.36342	0.26	0.09	1.06	0.59	3.05
W9414	N18	10-14-94	1633	16.8	W94140683	13.449	31.812	9.05	8.56	105.76	38.008	23.837	6.2240	2.03597	0.47	0.02	0.14	0.52	1.75
W9414	N18	10-14-94	1634	11.9	W94140684	13.524	31.81	9.28	8.54	108.62	38.069	23.82	6.5548	2.13796	0.36	0.02	0.06	0.49	1.6
W9414	N18	10-14-94	1635	4.6	W94140685	13.612	31.811	9.16	8.53	107.41	38.147	23.803	6.8913	2.16202	0.25	0.01	0.11	0.47	1.41
W9414	N18	10-14-94	1636	1.5	W94140686	13.604	31.81	9.59	8.53	112.44	38.138	23.804	6.7784	2.1707	0.56	0.02	0.08	0.41	1.39
W9414	N19	10-14-94	1335	18	W94140606	12.024	32.123	6.92	8.80	78.63	37.062	24.352	0.9765	0.8719	0.48	0.04	2.97	0.63	9.17
W9414	N19	10-14-94	1336	14.2	W94140607	13.226	31.819	8.84	8.60	102.84	37.814	23.887	4.4292	1.52252	0.53	0.17	1.65	0.66	3.53
W9414	N19	10-14-94	1338	9.1	W94140608	13.327	31.793	9.38	8.58	109.33	37.874	23.846	7.6696	2.09787	0.41	0.02	0.07	0.38	3.05
W9414	N19	10-14-94	1339	5.7	W94140609	13.343	31.789	9.38	8.58	109.36	37.883	23.84	7.9368	2.13582	0.81	0.18	1.21	0.68	3.01
W9414	N19	10-14-94	1340	1.7	W94140610	13.348	31.785	9.34	8.58	108.91	37.881	23.836	6.1898	2.13844	0.48	0.18	1.21	0.63	3.02
W9414	N20P	10-11-94	1054	27.7	W94140072	11.912	32.21	7.12	8.82	80.76	37.056	24.44	0.5614	0.81714	0.4	0.29	7.01	0.94	9.99
W9414	N20P	10-11-94	1056	21.5	W94140073	12.592	32.058	7.48	8.70	85.99	37.504	24.195	1.2962	0.90707	0.63	0.28	4.83	0.82	7.29
W9414	N20P	10-11-94	1057	13.7	W94140074	13.506	31.907	9.02	8.54	105.60	38.159	23.899	5.4481	1.73392	0.35	0.05	0.47	0.45	2.54
W9414	N20P	10-11-94	1058	5.7	W94140075	13.546	31.91	9.12	8.53	106.86	38.195	23.893	5.1927	1.77023	0.43	0.03	0.14	0.45	2.24
W9414	N20P	10-11-94	1059	2.1	W94140076	13.558	31.907	9.01	8.53	105.60	38.201	23.888	3.2796	1.76186	0.38	0.03	0.13	0.41	2.2

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)
W9414	N20P	10-14-94	1401	25.4	W94140617	11.242	32.285	6.37	8.94	71.25	36.534	24.62	0.4224	1.01295	0.29	0.12	2.46	0.68	4.95
W9414	N20P	10-14-94	1402	19.6	W94140618	11.814	32.2	6.64	8.84	75.15	36.956	24.451	0.7287	0.98452	0.56	0.35	7.87	1.08	11.65
W9414	N20P	10-14-94	1403	12.3	W94140619	13.351	31.859	9.10	8.57	106.16	37.968	23.893	6.0815	1.8777	0.28	0.1	1.48	0.62	3.75
W9414	N20P	10-14-94	1405	6.9	W94140620	13.406	31.864	9.43	8.56	110.14	38.02	23.886	7.1730	2.07086	0.2	0.03	0.1	0.5	2.14
W9414	N20P	10-14-94	1406	1.9	W94140621	13.415	31.866	9.58	8.56	111.92	38.028	23.885	6.5077	2.08936	0.18	0.02	0.11	0.5	2.13
W9414	N21	10-14-94	1652	31.5	W94140693	10.932	32.318	6.39	9.00	71.01	36.294	24.701	0.3634	0.82075	0.1	0.06	9.6	1.05	13.19
W9414	N21	10-14-94	1653	24.1	W94140694	11.761	32.193	6.88	8.85	77.77	36.903	24.455	0.7274	0.75642	0.46	0.34	7.25	0.96	10.29
W9414	N21	10-14-94	1655	14.7	W94140695	13.466	31.841	9.25	8.55	108.16	38.052	23.856	6.0233	1.93029	0.36	0.02	0.11	0.46	1.88
W9414	N21	10-14-94	1656	7.8	W94140696	13.499	31.837	9.23	8.55	108.00	38.076	23.846	6.3238	1.96189	0.45	0.02	0.08	0.52	2.06
W9414	N21	10-14-94	1657	1.5	W94140697	13.495	31.837	9.08	8.55	106.23	38.069	23.847	6.3606	1.96343	0.09	0.03	0.06	0.34	1.73
W9415	N01P	11-04-94	835	27.78	W94150094	11.248	32.633	6.64	8.92	74.43	36.895	24.89	0.7343	1.1703	0.63	0.36	7.63	1.02	10.51
W9415	N01P	11-04-94	836	19.88	W94150095	11.66	32.372	7.11	8.86	80.25	36.994	24.613	1.7797	0.94011	0.58	0.32	6.84	0.94	8.59
W9415	N01P	11-04-94	837	13.41	W94150096	11.677	32.251	7.47	8.86	84.37	36.882	24.515	3.2957	1.15349	1.33	0.35	6.71	1.03	8.07
W9415	N01P	11-04-94	838	5.91	W94150098	11.821	32.213	7.63	8.83	86.42	36.969	24.459	3.8589	1.1559	1.49	0.35	5.88	0.99	7.04
W9415	N01P	11-04-94	839	1.89	W94150099	11.847	32.207	7.73	8.83	87.59	36.984	24.449	2.8898	1.2072	1.41	0.35	5.76	0.95	6.8
W9415	N02	11-04-94	909	36.67	W94150114	11.244	32.685	6.72	8.92	75.34	36.947	24.931	0.5235	1.57546	0.71	0.36	8.46	0.99	10.87
W9415	N02	11-04-94	910	26.51	W94150115	11.386	32.57	6.83	8.90	76.74	36.953	24.816	0.9411	1.02539	0.66	0.35	8.44	1	10.29
W9415	N02	11-04-94	911	17.71	W94150116	12.035	32.338	8.16	8.79	92.88	37.295	24.517	3.1042	0.93979	0.52	0.26	3.59	0.74	4.79
W9415	N02	11-04-94	912	8.89	W94150117	11.979	32.29	8.23	8.80	93.54	37.191	24.49	4.2713	1.04607	0.43	0.22	2.89	0.68	3.46
W9415	N02	11-04-94	913	1.82	W94150118	11.957	32.262	8.18	8.81	92.91	37.139	24.472	3.3796	1.08916	0.48	0.23	3.41	0.73	3.98
W9415	N03	11-04-94	930	42.86	W94150127	11.247	32.655	6.90	8.92	77.34	36.922	24.907	0.6741	0.9174	0.52	0.35	7.24	0.98	9.77
W9415	N03	11-04-94	931	30.63	W94150128	12.03	32.396	8.16	8.78	92.91	37.356	24.563	2.3807	0.85047	0.55	0.29	4.07	0.76	5.81
W9415	N03	11-04-94	932	19.8	W94150129	12.135	32.383	8.59	8.77	97.99	37.432	24.533	3.9949	1.03227	0.37	0.17	0.92	0.54	1.89
W9415	N03	11-04-94	933	2.03	W94150131	12.111	32.339	8.56	8.77	97.57	37.358	24.503	3.2999	1.14332	0.34	0.18	1.56	0.6	3.39
W9415	N03	11-04-94	933	8.66	W94150130	12.068	32.35	8.50	8.78	96.81	37.333	24.519	4.9251	1.1228	0.31	0.17	1.21	0.57	2.2
W9415	N04P	11-04-94	950	47.69	W94150140	11.036	32.764	6.88	8.95	76.82	36.845	25.03	0.5002	1.04965	0.32	0.37	8	0.95	9.86
W9415	N04P	11-04-94	951	22.85	W94150142	12.168	32.359	8.54	8.76	97.48	37.438	24.508	4.2101	1.05243	0.38	0.14	0.67	0.51	1.64
W9415	N04P	11-04-94	951	35.69	W94150141	11.939	32.448	7.99	8.80	90.84	37.33	24.621	2.2156	0.8205	0.42	0.32	3.88	0.71	4.78
W9415	N04P	11-04-94	953	8.83	W94150143	12.173	32.357	8.58	8.76	97.94	37.435	24.505	5.2413	1.13511	0.33	0.13	0.48	0.51	1.51
W9415	N04P	11-04-94	954	1.79	W94150144	12.244	32.355	8.66	8.75	99.00	37.493	24.49	3.1359	1.14696	0.33	0.13	0.42	0.5	1.49
W9415	N05	11-04-94	1015	48.06	W94150153	11.106	32.769	6.84	8.94	76.49	36.913	25.022	0.4139	0.92846	0.22	0.32	6.03	0.84	7.47
W9415	N05	11-04-94	1016	33.7	W94150154	12.107	32.369	8.28	8.77	94.41	37.398	24.528	3.3782	0.96727	0.31	0.24	2.82	0.63	3.8
W9415	N05	11-04-94	1017	21.75	W94150155	12.146	32.342	8.45	8.77	96.40	37.4	24.499	4.3110	1.05462	0.33	0.14	0.7	0.51	1.64
W9415	N05	11-04-94	1018	9.54	W94150156	12.15	32.34	8.54	8.76	97.43	37.397	24.497	5.0612	1.11486	0.28	0.13	0.65	0.51	1.64
W9415	N05	11-04-94	1019	1.83	W94150157	12.216	32.337	8.60	8.75	98.25	37.449	24.482	3.4452	1.16102	0.24	0.13	0.59	0.49	1.64
W9415	N06	11-04-94	1047	49.91	W94150172	11.01	32.803	6.72	8.96	75.01	36.861	25.065	0.4098	1.35941	0.33	0.37	8.17	1.01	10.92
W9415	N06	11-04-94	1048	37.09	W94150173	11.326	32.702	7.04	8.90	79.06	37.039	24.93	0.5989	0.78163	0.27	0.39	7.35	0.88	8.34
W9415	N06	11-04-94	1049	23.48	W94150174	12.127	32.356	8.40	8.77	95.80	37.398	24.514	3.4909	0.97617	0.43	0.17	0.92	0.53	1.85
W9415	N06	11-04-94	1050	8.95	W94150175	12.15	32.352	8.48	8.76	96.75	37.408	24.506	4.8105	1.06871	0.33	0.13	0.73	0.52	1.63
W9415	N06	11-04-94	1051	1.7	W94150176	12.242	32.344	8.65	8.75	98.87	37.481	24.482	2.6361	1.11074	0.31	0.13	0.66	0.52	1.61
W9415	N07P	11-04-94	1108	45.59	W94150185	10.989	32.804	6.66	8.96	74.31	36.841	25.069	0.4244	1.5092	0.38	0.32	5.93	0.85	8.08
W9415	N07P	11-04-94	1109	32.96	W94150186	11.943	32.458	7.87	8.80	89.49	37.342	24.627	2.1070	0.82946	0.36	0.29	4.43	0.76	6.32
W9415	N07P	11-04-94	1110	9.91	W94150188	12.095	32.395	8.35	8.77	95.19	37.404	24.549	3.6907	1.00162	0.34	0.18	1.2	0.53	2.27
W9415	N07P	11-04-94	1110	20.18	W94150187	12.081	32.396	8.31	8.77	94.71	37.397	24.553	3.8298	0.92354	0.4	0.19	1.23	0.56	2.28
W9415	N07P	11-04-94	1111	1.94	W94150189	12.323	32.388	8.53	8.73	97.70	37.599	24.501	2.2045	0.97497	0.22	0.04	0.05	0.35	2.13
W9415	N08	11-04-94	1128	21.21	W94150199	12.085	32.384	8.12	8.77	92.56	37.389	24.543	2.9670	0.9342	0.37	0.24	2.63	0.63	4.04
W9415	N08	11-04-94	1128	28.68	W94150198	11.295	32.628	6.81	8.91	76.40	36.932	24.877	0.8248	1.23179	0.35	0.27	3.84	0.76	5.73
W9415	N08	11-04-94	1129	13.94	W94150200	12.119	32.375	8.32	8.77	94.89	37.407	24.53	3.8497	0.9966	0.27	0.2	1.45	0.54	2.68
W9415	N08	11-04-94	1130	7.81	W94150201	12.131	32.373	8.43	8.77	96.16	37.413	24.526	4.7731	1.10549	0.24	0.19	1.33	0.54	2.53
W9415	N08	11-04-94	1131	1.98	W94150202	12.275	32.377	8.42	8.74	96.34	37.544	24.501	2.0675	1.08788	0.35	0.2	1.34	0.54	2.59

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)
W9415	N09	11-04-94	1147	34.45	W94150211	11.499	32.452	6.97	8.88	78.44	36.937	24.704	1.5498	1.23413	0.52	0.26	5.94	0.88	8.42
W9415	N09	11-04-94	1148	25.66	W94150212	11.584	32.445	7.11	8.87	80.15	37.004	24.683	1.8262	1.11111	0.39	0.26	5.87	0.89	8.35
W9415	N09	11-04-94	1149	17	W94150213	12.015	32.328	8.16	8.79	92.84	37.265	24.512	3.9268	1.01722	0.27	0.21	3.37	0.7	4.92
W9415	N09	11-04-94	1150	1.9	W94150215	12.278	32.24	8.43	8.75	96.38	37.404	24.395	2.5592	1.18422	0.24	0.18	2.35	0.64	3.6
W9415	N09	11-04-94	1150	8.04	W94150214	12.001	32.306	8.32	8.79	94.61	37.227	24.498	5.5463	1.20495	0.2	0.18	2.22	0.62	3.44
W9415	N10P	11-04-94	729	21.1	W94150050	11.749	32.095	7.10	8.85	80.15	36.789	24.381	1.4837	1.21019	6.2	0.55	7.87	1.42	9.58
W9415	N10P	11-04-94	730	15.72	W94150051	11.746	32.016	7.25	8.86	81.79	36.702	24.32	1.5218	1.34136	7.11	0.6	7.81	1.39	9.3
W9415	N10P	11-04-94	731	10.21	W94150052	11.752	32.012	7.22	8.86	81.46	36.701	24.316	1.5966	1.3649	7.63	0.61	7.87	1.51	9.27
W9415	N10P	11-04-94	732	1.93	W94150054	11.767	31.984	7.18	8.86	81.02	36.683	24.291	1.7237	1.43132	7.72	0.62	7.86	1.54	9.22
W9415	N10P	11-04-94	732	5.86	W94150053	11.756	32.003	7.19	8.86	81.13	36.694	24.308	1.5922	1.38591	7.41	0.62	7.87	1.5	9.33
W9415	N11	11-04-94	757	26.78	W94150065	11.741	32.243	7.12	8.85	80.44	36.936	24.497	1.8858	1.13366	2.22	0.37	7.03	1.12	9.06
W9415	N11	11-04-94	758	13.27	W94150067	11.835	32.189	7.36	8.83	83.27	36.96	24.438	2.2028	1.05529	2.62	0.4	6.8	1.14	8.47
W9415	N11	11-04-94	758	19.7	W94150066	11.755	32.242	7.21	8.84	81.47	36.945	24.494	1.9456	1.07242	2.27	0.38	6.86	1.09	8.82
W9415	N11	11-04-94	759	7.37	W94150068	11.881	32.13	7.46	8.83	84.57	36.936	24.383	2.5671	1.17437	3.51	0.44	6.74	1.21	8.29
W9415	N11	11-04-94	800	1.75	W94150069	11.772	32.049	7.33	8.85	82.75	36.754	24.341	1.9632	1.25284	5.59	0.52	7.31	1.36	8.77
W9415	N12	11-04-94	816	21.44	W94150079	11.723	32.4	7.25	8.84	81.95	37.08	24.623	1.6790	1.04686	0.69	0.29	5.49	0.9	7.39
W9415	N12	11-04-94	819	9.92	W94150081	11.802	32.221	7.26	8.84	82.11	36.961	24.469	2.3260	1.04786	2.07	0.39	6.62	1.08	8.4
W9415	N12	11-04-94	819	15.42	W94150080	11.81	32.316	7.14	8.83	80.82	37.069	24.541	1.8228	1.1257	1.57	0.34	6.29	1.03	8.24
W9415	N12	11-04-94	820	5.91	W94150082	11.796	32.181	7.54	8.84	85.34	36.913	24.439	2.7230	1.09242	2.47	0.4	6.24	1.09	7.86
W9415	N12	11-04-94	821	1.84	W94150083	11.851	32.182	7.67	8.83	86.91	36.962	24.43	3.1537	1.10713	2.59	0.39	6.04	1.11	7.5
W9415	N13	11-04-94	1313	30.6	W94150254	11.429	32.532	6.90	8.89	77.58	36.955	24.779	1.1285	1.20955	0.37	0.23	4.1	0.78	5.66
W9415	N13	11-04-94	1315	16.28	W94150256	12.038	32.272	8.29	8.79	94.32	37.228	24.465	4.1887	1.06315	0.28	0.18	2.68	0.68	3.34
W9415	N13	11-04-94	1315	23.1	W94150255	12	32.305	8.07	8.79	91.78	37.231	24.498	2.9861	0.95521	0.39	0.24	4.16	0.79	5.74
W9415	N13	11-04-94	1316	8.31	W94150257	12.034	32.237	8.37	8.79	95.20	37.184	24.438	5.7518	1.21715	0.28	0.2	2.9	0.73	3.83
W9415	N13	11-04-94	1317	1.94	W94150258	12.199	32.185	8.47	8.76	96.64	37.276	24.367	3.0035	1.21618	0.31	0.2	2.79	0.69	3.68
W9415	N14	11-04-94	1332	30.36	W94150265	11.324	32.581	6.74	8.91	75.64	36.91	24.835	0.9041	1.00968	0.29	0.26	4.77	0.83	6.95
W9415	N14	11-04-94	1333	22.8	W94150266	12.038	32.315	8.21	8.79	93.44	37.276	24.498	4.0700	1.06363	0.33	0.23	3.58	0.73	5.23
W9415	N14	11-04-94	1334	6.98	W94150268	12.083	32.297	8.59	8.78	97.83	37.29	24.476	6.2028	1.27354	0.59	0.16	1.92	0.62	3.14
W9415	N14	11-04-94	1334	15.87	W94150267	12.052	32.303	8.40	8.79	95.62	37.273	24.486	5.0916	1.14177	0.19	0.17	2.02	0.63	3.15
W9415	N14	11-04-94	1335	2.03	W94150269	12.203	32.279	8.62	8.76	98.41	37.378	24.439	3.5325	1.23899	0.22	0.18	2.25	0.65	3.29
W9415	N15	11-04-94	1350	41.88	W94150280	11.214	32.658	6.71	8.92	75.16	36.896	24.916	0.6484	1.01148	0.28	0.32	6.2	0.89	8.86
W9415	N15	11-04-94	1351	33.43	W94150281	11.838	32.456	7.71	8.82	87.48	37.246	24.645	1.8225	0.8663	0.33	0.27	4.34	0.8	6.36
W9415	N15	11-04-94	1352	22.45	W94150282	12.119	32.362	8.38	8.77	95.56	37.396	24.52	3.9728	1.02619	0.22	0.18	1.51	0.57	2.64
W9415	N15	11-04-94	1353	7.78	W94150283	12.105	32.35	8.49	8.77	96.77	37.365	24.513	5.5340	1.15981	0.2	0.17	1.28	0.57	2.5
W9415	N15	11-04-94	1354	1.79	W94150284	12.443	32.311	8.68	8.71	99.62	37.627	24.418	3.7507	1.24538	0.2	0.15	1.15	0.57	2.62
W9415	N16P	11-04-94	1410	38.83	W94150293	11.237	32.65	6.70	8.92	75.09	36.906	24.905	0.7332	1.16529	0.29	0.23	3.02	0.7	4.83
W9415	N16P	11-04-94	1411	30.7	W94150294	11.978	32.405	8.01	8.79	91.11	37.319	24.58	2.4128	0.89282	0.36	0.25	3.47	0.73	5.34
W9415	N16P	11-04-94	1412	20.1	W94150295	12.114	32.367	8.39	8.77	95.67	37.397	24.524	3.7535	0.99528	0.26	0.18	1.45	0.57	2.53
W9415	N16P	11-04-94	1413	8.61	W94150296	12.124	32.352	8.65	8.77	98.63	37.385	24.511	5.5742	1.24058	0.2	0.15	1.18	0.57	2.62
W9415	N16P	11-04-94	1414	1.9	W94150297	12.197	32.33	8.82	8.76	100.70	37.425	24.48	4.9715	1.32122	0.16	0.15	1.16	0.62	2.75
W9415	N17	11-04-94	1451	35.3	W94150319	11.685	32.482	7.33	8.84	82.82	37.137	24.694	1.6926	0.85618	0.33	0.21	2.58	0.65	4.2
W9415	N17	11-04-94	1452	26.13	W94150320	12.055	32.38	8.08	8.78	92.04	37.36	24.546	2.7010	0.90963	0.34	0.22	3.09	0.71	4.76
W9415	N17	11-04-94	1453	17.86	W94150321	12.11	32.368	8.25	8.77	94.07	37.393	24.526	3.6944	0.97798	0.25	0.18	1.62	0.57	2.8
W9415	N17	11-04-94	1454	8.02	W94150322	12.132	32.365	8.49	8.77	96.84	37.405	24.519	5.4664	1.18378	0.2	0.16	1.35	0.58	2.69
W9415	N17	11-04-94	1455	2.01	W94150323	12.507	32.341	8.60	8.70	98.86	37.716	24.43	4.2050	1.14385	0.22	0.15	1.35	0.55	2.9
W9415	N18	11-04-94	1509	17.04	W94150333	11.936	32.295	7.82	8.81	88.82	37.161	24.501	3.4022	0.93338	0.48	0.22	3.65	0.75	5.01
W9415	N18	11-04-94	1509	22.25	W94150332	11.809	32.391	7.52	8.83	85.25	37.149	24.6	1.9814	0.88538	0.33	0.2	3.17	0.74	4.74
W9415	N18	11-04-94	1510	10.82	W94150334	12.026	32.295	8.26	8.79	93.97	37.238	24.485	4.6362	1.09856	0.25	0.17	2.5	0.66	4.46
W9415	N18	11-04-94	1511	6.85	W94150335	12.048	32.283	8.54	8.79	97.18	37.245	24.471	5.8632	1.28178	0.22	0.15	1.99	0.66	3.43
W9415	N18	11-04-94	1512	1.99	W94150337	12.127	32.246	8.66	8.77	98.68	37.275	24.428	6.3179	1.34027	0.22	0.16	1.89	0.63	3.37

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)
W9415	N19	11-04-94	1232	25.26	W94150224	11.762	32.335	7.54	8.84	85.36	37.05	24.565	1.8204	0.98672	0.65	0.04	3.91	0.68	5.83
W9415	N19	11-04-94	1233	19.55	W94150225	11.852	32.3	7.84	8.82	88.89	37.092	24.521	2.2531	0.99697	0.76	0.27	4.75	0.85	6.47
W9415	N19	11-04-94	1234	7.9	W94150227	11.981	32.241	8.38	8.80	95.21	37.141	24.452	5.1913	1.21671	0.47	0.22	3.28	0.77	4.23
W9415	N19	11-04-94	1234	13.46	W94150226	11.97	32.257	8.29	8.80	94.18	37.15	24.466	3.3830	1.04977	0.45	0.24	3.39	0.76	4.6
W9415	N19	11-04-94	1236	1.77	W94150228	12.038	32.177	8.31	8.79	94.49	37.124	24.391	2.7614	1.31579	1.07	0.31	4.39	0.9	5.53
W9415	N20P	11-04-94	1252	30.34	W94150239	11.859	32.341	7.50	8.82	85.09	37.145	24.552	1.8945	1.02814	0.51	0.23	3.75	0.76	5.52
W9415	N20P	11-04-94	1253	22.97	W94150240	11.844	32.322	7.46	8.82	84.60	37.109	24.54	1.9002	0.94972	0.61	0.25	4.34	0.82	6.2
W9415	N20P	11-04-94	1254	15.11	W94150241	12.067	32.273	8.31	8.78	94.61	37.255	24.461	4.3049	1.06427	0.29	0.18	2.47	0.66	3.48
W9415	N20P	11-04-94	1255	7.85	W94150242	12.087	32.252	8.53	8.78	97.13	37.248	24.44	6.0242	1.31308	0.27	0.16	2.25	0.65	3.27
W9415	N20P	11-04-94	1256	1.89	W94150243	12.28	32.214	8.37	8.75	95.69	37.379	24.374	2.6601	1.16468	0.32	0.21	2.84	0.73	3.84
W9415	N21	11-04-94	1526	33.11	W94150344	11.615	32.477	7.07	8.86	79.77	37.067	24.702	1.4975	1.09524	0.51	0.27	4.86	0.84	7.14
W9415	N21	11-04-94	1527	25.96	W94150345	11.848	32.357	7.52	8.82	85.30	37.15	24.566	1.9218	0.92354	0.57	0.26	4.32	0.81	6.34
W9415	N21	11-04-94	1528	18.07	W94150346	11.885	32.325	7.60	8.82	86.26	37.146	24.534	2.1712	0.89903	0.53	0.25	4	0.79	5.62
W9415	N21	11-04-94	1529	8.9	W94150347	11.972	32.217	7.89	8.80	89.64	37.109	24.434	3.6137	1.00248	0.76	0.29	4.22	0.85	5.24
W9415	N21	11-04-94	1530	2.04	W94150348	12.102	32.214	8.50	8.78	96.80	37.219	24.407	5.4729	1.25872	0.3	0.2	2.57	0.72	3.72
W9416	N01P	12-01-94	908	31.07	W94160100	9.031	32.478	8.69	9.38	92.70	34.77	25.14	1.4554	1.28241	0.15	0.05	5.07	0.64	7.84
W9416	N01P	12-01-94	909	22.5	W94160101	8.94	32.453	8.79	9.40	93.57	34.662	25.134	1.6671	1.28545	0.13	0.07	2.32	0.43	7.72
W9416	N01P	12-01-94	910	15.05	W94160102	9.02	32.465	8.77	9.38	93.53	34.74	25.131	1.6369	1.25173	0.38	0.04	4.95	0.7	7.46
W9416	N01P	12-01-94	911	7.1	W94160103	9.02	32.468	8.73	9.38	93.10	34.74	25.133	1.7097	1.24882	0.72	0.41	6.4	1	7.41
W9416	N01P	12-01-94	912	2.08	W94160104	9.015	32.47	8.76	9.38	93.41	34.735	25.135	1.2404	1.23686	0.82	0.41	6.4	1.02	7.36
W9416	N02	12-01-94	936	36.65	W94160112	9.807	32.685	8.19	9.20	88.99	35.66	25.178	0.9003	1.10842	0.53	0.33	6.19	0.87	7.39
W9416	N02	12-01-94	937	26.96	W94160113	9.694	32.591	8.53	9.23	92.41	35.463	25.122	1.3939	0.97259	0.22	0.05	3.15	0.44	5.98
W9416	N02	12-01-94	938	18.37	W94160114	9.692	32.589	8.57	9.23	92.84	35.456	25.121	1.4845	0.9725	0.23 s	0.38 s	2.71 s	0.09 s	5.86 s
W9416	N02	12-01-94	939	10.04	W94160115	9.687	32.589	8.56	9.23	92.72	35.448	25.122	1.5088	0.97674	0.19 s	0.34 s	5.55 s	0.87 s	6.17 s
W9416	N02	12-01-94	940	2.29	W94160116	9.682	32.589	8.58	9.23	92.93	35.441	25.123	1.3044	0.98144	0.32	0.34	5.39	0.84	5.95
W9416	N03	12-01-94	959	40.63	W94160126	9.645	32.674	8.36	9.24	90.51	35.506	25.195	0.8935	0.91232	0.5	0.16	4.22	0.65	7.4
W9416	N03	12-01-94	1000	30.8	W94160127	9.336	32.529	8.67	9.31	93.15	35.087	25.132	1.4052	0.95859	0.57	0.4	6.27	0.99	6.75
W9416	N03	12-01-94	1001	20.63	W94160128	9.286	32.517	8.71	9.32	93.47	35.027	25.13	1.4999	0.97255	0.59	0.41	6.27	0.99	6.69
W9416	N03	12-01-94	1002	9.97	W94160129	9.301	32.519	8.73	9.32	93.72	35.038	25.129	1.5141	0.97165	0.56	0.41	6.26	0.99	6.71
W9416	N03	12-01-94	1003	2.57	W94160130	9.275	32.513	8.72	9.32	93.56	35.007	25.129	1.1632	0.9745	0.14	0.4	6.19	0.84	6.71
W9416	N04P	12-01-94	1024	48.68	W94160138	9.752	32.807	8.25	9.21	89.60	35.736	25.282	0.7287	1.00884	0.25	0.28	7.21	0.94	8.09
W9416	N04P	12-01-94	1025	37.47	W94160139	9.694	32.626	8.64	9.23	93.63	35.502	25.15	1.3708	0.90575	0.18	0.27	6.24	0.9	6.71
W9416	N04P	12-01-94	1026	25.57	W94160140	9.688	32.615	8.70	9.23	94.26	35.481	25.142	1.4806	0.90693	0.18	0.26	5.64	0.88	5.98
W9416	N04P	12-01-94	1027	12.48	W94160141	9.685	32.614	8.68	9.23	94.04	35.472	25.142	1.5928	0.91249	0.16	0.24	5.56	0.76	5.93
W9416	N04P	12-01-94	1028	2.21	W94160142	9.684	32.615	8.65	9.23	93.71	35.467	25.142	1.2169	0.91249	0.19	0.26	5.6	0.88	5.94
W9416	N05	12-01-94	1053	47.18	W94160150	9.752	32.824	8.08	9.21	87.76	35.752	25.295	0.7481	1.02421	0.58	0.29	7.16	0.92	8
W9416	N05	12-01-94	1054	36.45	W94160151	9.755	32.593	8.53	9.22	92.54	35.523	25.115	1.4378	0.94029	0.16	0.35	5.25	0.88	5.53
W9416	N05	12-01-94	1055	24.18	W94160152	9.754	32.592	8.61	9.22	93.41	35.517	25.113	1.4796	0.93585	0.21	0.35	5.08	0.85	5.31
W9416	N05	12-01-94	1056	11.73	W94160153	9.769	32.594	8.56	9.22	92.90	35.527	25.112	1.6281	0.93523	0.18	0.36	5.03	0.85	5.31
W9416	N05	12-01-94	1057	2.13	W94160154	9.781	32.591	8.60	9.21	93.35	35.53	25.108	1.1450	0.94655	0.63	0.35	5.05	0.81	5.29
W9416	N06	12-01-94	1116	47.88	W94160162	9.751	32.835	8.04	9.20	87.32	35.762	25.304	0.7920	1.59123	0.38	0.29	7.25	0.96	8.41
W9416	N06	12-01-94	1117	35.92	W94160163	9.833	32.596	8.57	9.20	93.14	35.595	25.104	1.3262	0.91407	0.34	0.36	5.3	0.85	5.51
W9416	N06	12-01-94	1118	23.67	W94160164	9.835	32.594	8.58	9.20	93.25	35.59	25.102	1.3716	0.91453	0.39	0.36	5.11	0.88	5.26
W9416	N06	12-01-94	1120	11.44	W94160165	9.833	32.594	8.59	9.20	93.35	35.584	25.102	1.4380	0.91535	0.15	0.36	5.11	0.86	5.22
W9416	N06	12-01-94	1121	1.93	W94160166	9.846	32.591	8.61	9.20	93.60	35.587	25.097	1.1354	0.93043	0.22	0.36	5.09	0.87	5.23
W9416	N07P	12-01-94	1138	44.44	W94160174	9.813	32.596	8.57	9.21	93.10	35.582	25.107	1.3217	0.9449	0.27	0.37	5.23	0.87	5.51
W9416	N07P	12-01-94	1139	33.28	W94160175	9.8	32.589	8.63	9.21	93.72	35.558	25.103	1.5088	0.93717	0.19	0.36	5.09	0.85	5.31
W9416	N07P	12-01-94	1140	22.05	W94160176	9.799	32.589	8.65	9.21	93.94	35.552	25.103	1.4496	0.93831	0.26	0.36	5.04	0.87	5.22
W9416	N07P	12-01-94	1141	11.67	W94160177	9.804	32.589	8.71	9.21	94.60	35.553	25.103	1.4948	0.94874	0.24	0.36	5	0.85	5.33
W9416	N07P	12-01-94	1142	1.85	W94160178	9.807	32.561	8.70	9.21	94.48	35.524	25.08	1.1374	1.02693	0.25	0.36	5.06	0.88	13.39

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)
W9416	N08	12-01-94	1258	30.71	W94160192	9.73	32.592	8.47	9.22	91.83	35.498	25.117	1.3412	1.00173	0.29	0.39	5.31	0.75	5.75
W9416	N08	12-01-94	1259	22.72	W94160193	9.724	32.587	8.47	9.22	91.82	35.484	25.114	1.5032	0.99296	0.16	0.06	3.3	0.6	5.62
W9416	N08	12-01-94	1300	14.62	W94160194	9.722	32.584	8.58	9.23	93.01	35.476	25.112	1.7175	1.00507	0.09	0.06	1.08	0.53	5.64
W9416	N08	12-01-94	1301	6.74	W94160195	9.732	32.584	8.61	9.22	93.36	35.482	25.111	1.7638	1.01554	0.11	0.39	5.14	0.8	5.58
W9416	N08	12-01-94	1302	2.17	W94160196	9.737	32.585	8.58	9.22	93.04	35.485	25.11	1.2488	1.00499	0.5	0.38	5.16	0.84	5.57
W9416	N09	12-01-94	1322	28.04	W94160216	9.412	32.539	8.66	9.29	93.21	35.164	25.127	1.7381	1.11064	0.35	0.37	5.21	0.93	5.83
W9416	N09	12-01-94	1323	21.01	W94160217	9.397	32.537	8.69	9.30	93.50	35.145	25.128	1.7155	1.0574	0.39	0.38	5.27	0.95	5.92
W9416	N09	12-01-94	1324	13.99	W94160218	9.413	32.541	8.74	9.29	94.08	35.16	25.129	1.8612	1.05206	0.31	0.37	5.27	0.92	5.83
W9416	N09	12-01-94	1325	7.22	W94160219	9.468	32.548	8.72	9.28	93.98	35.213	25.125	1.9991	1.06311	0.48	0.36	5.16	0.89	5.79
W9416	N09	12-01-94	1326	2.13	W94160220	9.465	32.548	8.75	9.28	94.30	35.208	25.126	1.5740	1.05916	0.29	0.36	5.07	0.88	5.69
W9416	N10P	12-01-94	735	22.09	W94160040	9.19	32.468	8.58	9.34	91.84	34.896	25.107	1.5951	1.06908	1.28	0.43	5.9	0.99	6.5
W9416	N10P	12-01-94	736	16.78	W94160041	9.179	32.463	8.60	9.35	92.03	34.879	25.105	1.5581	1.08049	1.34	0.43	5.94	0.99	6.56
W9416	N10P	12-01-94	737	6.35	W94160043	9.138	32.46	8.66	9.35	92.59	34.837	25.109	1.6730	1.07196	1.36	0.43	5.96	1.03	6.52
W9416	N10P	12-01-94	737	11.09	W94160042	9.177	32.464	8.64	9.35	92.46	34.875	25.106	1.6322	1.0746	2.22	0.44	6.02	0.99	6.57
W9416	N10P	12-01-94	738	2.34	W94160044	9.132	32.456	8.69	9.36	92.90	34.824	25.106	1.7171	1.08778	1.98	0.43	6.03	1.03	6.56
W9416	N11	12-01-94	822	28.25	W94160075	9.088	32.435	8.65	9.37	92.37	34.778	25.097	1.6872	1.10456	8.62	0.43	6.08	1.03	12.25
W9416	N11	12-01-94	823	20.73	W94160076	9.085	32.433	8.62	9.37	92.04	34.769	25.096	1.6793	1.10216	1.92	0.44	5.93	1	6.43
W9416	N11	12-01-94	825	7.13	W94160078	9.082	32.433	8.63	9.37	92.14	34.761	25.096	1.6589	1.09755	1.26	0.44	5.87	0.99	6.4
W9416	N11	12-01-94	825	14.05	W94160077	9.08	32.433	8.66	9.37	92.46	34.762	25.096	1.6919	1.10082	1.41	0.45	5.96	1.01	6.49
W9416	N11	12-01-94	826	2.13	W94160079	9.061	32.434	8.73	9.37	93.17	34.741	25.1	1.6605	1.0871	1.86	0.44	5.78	0.88	6.29
W9416	N12	12-01-94	844	23.98	W94160087	9.359	32.497	8.66	9.31	93.07	35.074	25.102	1.5155	1.06922	0.85	0.41	5.79	0.92	6.14
W9416	N12	12-01-94	846	18.33	W94160088	9.366	32.497	8.69	9.30	93.41	35.078	25.102	1.5379	1.06917	0.72	0.41	5.9	0.95	6.3
W9416	N12	12-01-94	847	12.65	W94160089	9.344	32.494	8.66	9.31	93.04	35.053	25.103	1.4827	1.06079	0.06	0.15	5.71	0.75	6.29
W9416	N12	12-01-94	848	2.24	W94160091	9.318	32.493	8.73	9.31	93.74	35.025	25.106	1.4693	1.06056	0.86	0.41	5.81	0.92	6.18
W9416	N12	12-01-94	848	5.84	W94160090	9.301	32.487	8.67	9.32	93.06	35.005	25.104	1.6244	1.05966	0.89	0.42	5.93	0.97	6.42
W9416	N13	12-01-94	1426	28.22	W94160254	9.506	32.53	8.60	9.27	92.75	35.238	25.106	1.5043	1.17844	0.46	0.05	3.12	0.57	6.01
W9416	N13	12-01-94	1427	21.34	W94160255	9.482	32.527	8.61	9.28	92.81	35.21	25.107	1.6407	1.10689	0.48	0.04	3.07	0.58	5.99
W9416	N13	12-01-94	1428	14.02	W94160256	9.417	32.501	8.65	9.29	93.09	35.125	25.097	1.8099	1.13648	0.16	0.05	3.54	0.57	6.07
W9416	N13	12-01-94	1429	6.71	W94160257	9.372	32.502	8.72	9.30	93.75	35.083	25.105	1.9641	1.15917	0.2	0.04	3.14	0.56	6.11
W9416	N13	12-01-94	1430	2.15	W94160258	9.378	32.501	8.73	9.30	93.87	35.086	25.103	1.8697	1.17461	0.95	0.04	3.94	0.63	6.08
W9416	N14	12-01-94	1442	29.8	W94160266	9.156	32.471	8.73	9.35	93.39	34.873	25.115	1.4862	1.01705	0.1	0.07	5.02	0.64	6.64
W9416	N14	12-01-94	1443	22.36	W94160267	9.125	32.46	8.74	9.36	93.42	34.832	25.111	1.5209	1.02662	0.14	0.06	4.56	0.67	6.71
W9416	N14	12-01-94	1444	14.88	W94160268	9.072	32.443	8.77	9.37	93.63	34.765	25.106	1.5938	1.04049	0.58	0.45	6.39	0.95	6.81
W9416	N14	12-01-94	1445	7.73	W94160269	9.112	32.448	8.72	9.36	93.18	34.802	25.103	1.7796	1.06248	0.91	0.44	6.38	0.92	6.81
W9416	N14	12-01-94	1446	1.97	W94160270	9.105	32.446	8.75	9.36	93.48	34.791	25.103	1.7767	1.06616	0.32	0.44	6.34	0.86	11.6
W9416	N15	12-01-94	1459	40.92	W94160278	9.765	32.786	8.03	9.20	87.22	35.723	25.264	0.7282	1.02165	0.21	0.07	4.72	0.55	7.62
W9416	N15	12-01-94	1501	29.86	W94160279	9.544	32.561	8.61	9.26	92.95	35.302	25.123	1.5258	0.9576	0.11	0.07	3.56	0.57	5.96
W9416	N15	12-01-94	1502	20.33	W94160280	9.388	32.523	8.70	9.30	93.58	35.122	25.118	1.7359	0.99196	0.1	0.09	4.13	0.6	5.98
W9416	N15	12-01-94	1503	10.2	W94160281	9.36	32.517	8.72	9.30	93.74	35.088	25.118	1.8023	1.00884	0.08	0.18	4.78	0.62	6
W9416	N15	12-01-94	1504	2.06	W94160282	9.592	32.565	8.74	9.25	94.47	35.337	25.118	1.7533	1.00012	0.13	0.08	3.64	0.54	5.59
W9416	N16P	12-01-94	1519	32.82	W94160290	9.798	32.592	8.49	9.21	92.19	35.559	25.106	1.2339	0.91334	0.35	0.38	5.19	0.83	5.44
W9416	N16P	12-01-94	1520	24	W94160291	9.792	32.59	8.51	9.21	92.39	35.548	25.106	1.2728	0.91862	e	e	e	e	e
W9416	N16P	12-01-94	1521	16.1	W94160293	9.745	32.577	8.60	9.22	93.27	35.491	25.103	1.6368	0.96347	0.26	0.37	5.02	0.79	5.3
W9416	N16P	12-01-94	1522	8.37	W94160294	9.72	32.576	8.66	9.23	93.87	35.463	25.106	1.7241	0.9807	0.16	0.37	4.96	0.83	5.24
W9416	N16P	12-01-94	1523	2.02	W94160295	9.706	32.575	8.69	9.23	94.17	35.447	25.108	1.7496	0.98897	0.26	0.37	4.86	0.8	5.28
W9416	N17	12-01-94	1541	36.28	W94160304	9.733	32.597	8.44	9.22	91.52	35.508	25.121	1.2298	0.93174	0.32	0.42	5.12	1.12	5.66
W9416	N17	12-01-94	1543	27.3	W94160305	9.733	32.596	8.45	9.22	91.62	35.503	25.12	1.3077	0.93831	0.27	0.42	5.1	0.92	5.64
W9416	N17	12-01-94	1544	18.4	W94160306	9.742	32.592	8.52	9.22	92.40	35.503	25.116	1.4386	0.94366	0.12	0.08	3.25	0.41	5.59
W9416	N17	12-01-94	1545	9.19	W94160307	9.754	32.591	8.59	9.22	93.19	35.51	25.112	1.5492	0.96713	0.12	0.43	4.2	0.7	5.58
W9416	N17	12-01-94	1546	2.28	W94160308	9.756	32.591	8.62	9.22	93.52	35.508	25.112	1.5495	0.97549	0.26	0.4	4.99	1.1	5.55

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)
W9416	N18	12-01-94	1604	20.47	W94160328	9.444	32.543	8.61	9.29	92.74	35.193	25.125	1.6473	0.94271	1.11	0.38	4.9	1.22	5.52
W9416	N18	12-01-94	1605	15.21	W94160329	9.473	32.546	8.67	9.28	93.45	35.218	25.123	1.8669	0.98463	0.23	0.39	4.89	0.9	5.49
W9416	N18	12-01-94	1606	10.28	W94160330	9.473	32.546	8.66	9.28	93.34	35.217	25.123	1.8441	0.98706	0.2	0.39	4.77	0.9	5.4
W9416	N18	12-01-94	1607	4.9	W94160331	9.498	32.55	8.71	9.27	93.94	35.239	25.122	2.1117	1.00688	0.24	0.38	4.74	1.18	5.33
W9416	N18	12-01-94	1608	2.02	W94160332	9.483	32.548	8.70	9.28	93.80	35.224	25.123	2.1643	0.99797	0.29	0.38	4.68	0.94	5.28
W9416	N19	12-01-94	1341	16.48	W94160228	9.445	32.555	8.64	9.28	93.07	35.202	25.134	1.6344	1.0037	0.09	0.27	5.1	0.72	6.14
W9416	N19	12-01-94	1342	12.79	W94160229	9.478	32.548	8.72	9.28	94.00	35.225	25.124	1.8389	1.01233	0.13	0.1	4.19	0.61	5.92
W9416	N19	12-01-94	1343	4.08	W94160231	9.349	32.498	8.84	9.31	95.00	35.058	25.105	1.7692	1.06778	0.58	0.44	5.34	0.94	5.9
W9416	N19	12-01-94	1343	8.02	W94160230	9.442	32.518	8.76	9.29	94.34	35.16	25.106	2.0061	1.05548	0.57	0.43	5.23	0.93	5.83
W9416	N19	12-01-94	1344	2.03	W94160232	9.339	32.497	8.86	9.31	95.19	35.047	25.106	1.4100	1.06362	0.75	0.44	5.27	0.89	5.88
W9416	N20P	12-01-94	1359	25.57	W94160240	9.044	32.43	8.82	9.38	94.09	34.732	25.1	1.6250	1.09507	1.11	0.46	6.12	1.06	6.66
W9416	N20P	12-01-94	1400	18.12	W94160241	9.024	32.422	8.83	9.38	94.15	34.704	25.097	1.7617	1.10741	1.31	0.46	6.07	1.04	6.65
W9416	N20P	12-01-94	1401	6.13	W94160243	8.998	32.405	8.87	9.39	94.52	34.66	25.088	2.0198	1.14176	1.25	0.46	6.26	1.06	6.84
W9416	N20P	12-01-94	1401	12.13	W94160242	9.022	32.419	8.83	9.38	94.15	34.696	25.094	1.8545	1.11443	1.19	0.46	6.18	1.06	6.76
W9416	N20P	12-01-94	1402	1.83	W94160244	9	32.406	8.85	9.39	94.31	34.661	25.088	1.7141	1.148	1.3	0.46	6.22	1.06	6.85
W9416	N21	12-01-94	1625	29.65	W94160345	9.67	32.568	8.45	9.24	91.48	35.421	25.109	1.7384	0.99463	0.19	0.39	4.8	0.9	5.28
W9416	N21	12-01-94	1626	22.04	W94160346	9.661	32.568	8.53	9.24	92.33	35.41	25.11	1.6970	0.97372	0.21	0.39	4.9	0.9	5.37
W9416	N21	12-01-94	1627	14.83	W94160347	9.662	32.569	8.54	9.24	92.44	35.408	25.11	1.7444	0.97612	0.18	0.38	4.79	0.89	5.25
W9416	N21	12-01-94	1628	7.34	W94160348	9.661	32.568	8.56	9.24	92.66	35.403	25.109	1.6813	0.9745	0.2	0.38	4.79	0.89	5.26
W9416	N21	12-01-94	1629	2	W94160349	9.65	32.568	8.62	9.24	93.29	35.392	25.111	1.7398	0.97052	0.28	0.38	4.8	0.92	5.34

Table A2. Chemical and Biological Parameters at Two Depths of Bioproductivity Stations and Special Stations F24 and F25.

EVENT	STATION	DATE	TIME (EST)	DEPTH (M)	SAMPLE ID	REP	CHLA (ug/L)	DOC (uM)	PHA (ug/L)	PON (uM)	POC (uM)	TDN (uM)	TDP (uM)	TSS (mg/L)
W9414	F01P	10-13-94	857	12.1	W94140345	1	3.35	105	1.98	2.33	11.02	7.66	0.55	1.71
W9414	F01P	10-13-94	857	12.1	W94140345	2	3.21	135.83	2.18	2.36	10.82	14.04	0.59	1.65
W9414	F01P	10-13-94	859	1.9	W94140347	1	4.28	105	2.33	2.57	11.15	7.76	0.56	1.27
W9414	F01P	10-13-94	859	1.9	W94140347	2	3.11	101.67	2.15	2.62	11.2	6.81	0.49	1.625
W9414	F02P	10-13-94	721	16.1	W94140331	1	4.07	116.67	1.92	2.28	10.3	8.08	0.43	1.12
W9414	F02P	10-13-94	721	16.1	W94140331	2	4.49	108.33	1.99	e	e	9.44	0.51	1.5
W9414	F02P	10-13-94	724	1.7	W94140333	1	4.33	113.33	1.84	2.72	12.58	8.92	0.57	1.46
W9414	F02P	10-13-94	724	1.7	W94140333	2	3.61	100.83	2.06	2.07	8.07	7.39	0.46	1.31
W9414	F06	10-13-94	1225	9.3	W94140391	1	4.98	117.5	2.43	3.44	18.83	7.8	0.43	2.67
W9414	F06	10-13-94	1225	9.3	W94140391	2	6	111.67	2.46	3.94	21.54	8.24	0.37	1.41
W9414	F06	10-13-94	1226	1.6	W94140392	1	5.27	175	2.32	4.16	24.97	5.28	0.43	1.53
W9414	F06	10-13-94	1226	1.6	W94140392	2	5.29	201.67	2.17	3.53	20.33	11.55	0.84	1.89
W9414	F13P	10-13-94	1438	9.3	W94140434	1	5.56	114.17	2.61	3.09	13.84	1.42	0.42	2.15
W9414	F13P	10-13-94	1438	9.3	W94140434	2	5.62	112.5	2.86	3.16	14.5	e	e	1.19
W9414	F13P	10-13-94	1441	1.6	W94140436	1	4.74	97.5	2.64	3.59	17.41	0.59	0.38	1.44
W9414	F13P	10-13-94	1441	1.6	W94140436	2	5.49	99.17	2.32	3.07	15.8	2.72	0.39	1.42
W9414	F23P	10-11-94	909	11.2	W94140039	1	2.01	111.67	2.23	2.69	14.84	20.86	1.02	2.24
W9414	F23P	10-11-94	909	11.2	W94140039	2	2.01	108.33	2.1	2.32	12	25.28	1.01	3.04
W9414	F23P	10-11-94	911	2.1	W94140041	1	1.75	109.17	2.18	3.6	20.22	16.23	0.93	2.7
W9414	F23P	10-11-94	911	2.1	W94140041	2	2.05	105	2.01	2.99	17.39	21.44	0.99	2.77
W9414	F23P	10-12-94	548	13.3	W94140182	1	1.52	179.17	1.72	3.65	21.42	29.35	1.22	1.44
W9414	F23P	10-12-94	548	13.3	W94140182	2	1.9	160.83	1.74	2.01	9.23	34.39	1.49	1.77
W9414	F23P	10-12-94	550	2.2	W94140184	1	1.45	185	1.84	3.43	19.7	40.03	1.27	2.2
W9414	F23P	10-12-94	550	2.2	W94140184	2	1.75	178.33	1.8	3.75	21.23	36.81	1.39	2
W9414	F24	10-11-94	1014	8.1	W94140063	1	2.16	120	1.79	3.02	15.12	19.38	0.85	1.71
W9414	F24	10-11-94	1014	8.1	W94140063	2	2	110.83	1.77	3.18	14.87	19.08	0.89	1.45
W9414	F24	10-11-94	1016	2.4	W94140065	1	2.08	116.67	1.78	3.46	19.67	22.16	0.98	2.22
W9414	F24	10-11-94	1016	2.4	W94140065	2	1.96	316.67	1.73	3.75	22.17	20.98	0.99	1.90
W9414	F25	10-11-94	1753	8.9	W94140155	1	2.61	167.5	2.26	2.48	11.27	15.38	0.54	1.65
W9414	F25	10-11-94	1753	8.9	W94140155	2	2.57	116.67	2.08	2.38	10.26	17.39	0.58	1.55
W9414	F25	10-11-94	1756	1.8	W94140157	1	3.09	105.83	2.45	4.02	20.36	15.38	0.64	1.95
W9414	F25	10-11-94	1756	1.8	W94140157	2	3.61	112.5	2.59	1.99	8.49	14.07	0.67	2.10
W9414	F27B	10-12-94	1253	10.5	W94140266	1	2.46	100.83	2.05	1.71	8.44	17.55	0.41	0.63
W9414	F27B	10-12-94	1253	10.5	W94140266	2	2.9	104.17	2.14	2.19	10.16	17.23	0.38	0.74
W9414	F27B	10-12-94	1254	2	W94140267	1	1.61	102.5	1.61	2.08	9.47	16.24	0.46	0.88
W9414	F27B	10-12-94	1254	2	W94140267	2	1.95	102.5	1.55	1.89	8.63	16.32	0.43	0.79
W9414	F30B	10-11-94	547	5.3	W94140016	1	2.22	130	1.52	2.37	13.03	19.75	0.93	2.58
W9414	F30B	10-11-94	547	5.3	W94140016	2	1.81	125.83	1.67	2.55	13.84	19.64	0.94	2.26
W9414	F30B	10-11-94	548	1.8	W94140017	1	1.75	130.83	1.81	2.35	13.13	20.54	1.05	2.02
W9414	F30B	10-11-94	548	1.8	W94140017	2	2.2	134.17	1.83	2.33	12.46	21.33	1.02	2.14
W9414	F31B	10-11-94	1843	1.1	W94140168	1	2.54	106.67	2.01	2.61	12.26	15.84	0.83	1.77
W9414	F31B	10-11-94	1843	1.1	W94140168	2	2.51	100.83	2.18	2	9.84	19.65	0.59	1.36
W9414	F31B	10-11-94	1843	7.4	W94140167	1	2.78	114.17	2.1	2.53	12.47	15.33	0.57	1.45
W9414	F31B	10-11-94	1843	7.4	W94140167	2	2.53	118.33	2.08	2.84	13.88	16.53	0.85	1.41
W9414	N01P	10-12-94	649	12.7	W94140194	1	5.15	108.33	3.02	3.04	15.7	17.89	0.49	1.36
W9414	N01P	10-12-94	649	12.7	W94140194	2	6.39	110	2.58	2.54	13.31	20.8	0.67	1.63
W9414	N01P	10-12-94	651	2.1	W94140196	1	5.56	118.33	2.87	3.03	15.82	18	0.78	1.32
W9414	N01P	10-12-94	651	2.1	W94140196	2	5.77	113.33	2.67	3.19	16.43	16.52	0.46	1.36

Table A2. Chemical and Biological Parameters at Two Depths of Bioproductivity Stations and Special Stations F24 and F25.

EVENT	STATION	DATE	TIME (EST)	DEPTH (M)	SAMPLE ID	REP	CHLA (ug/L)	DOC (uM)	PHA (ug/L)	PON (uM)	POC (uM)	TDN (uM)	TDP (uM)	TSS (mg/L)
W9414	N04P	10-12-94	824	15.3	W94140217	1	2.54	99.17	2.2	2.9	14.35	15.88	0.44	1.3
W9414	N04P	10-12-94	824	15.3	W94140217	2	3.05	115.83	2.15	2.7	13.52	16.85	0.66	0.74
W9414	N04P	10-12-94	826	2.9	W94140219	1	3.25	105	1.95	2.38	12.52	15.2	0.43	1.35
W9414	N04P	10-12-94	826	2.9	W94140219	2	2.74	95	2.33	2.31	11.13	15.93	0.44	0.95
W9414	N07P	10-11-94	1333	20.3	W94140102	1	1.43	125	1.5	1.92	8.71	7.2	0.24	1.11
W9414	N07P	10-11-94	1333	20.3	W94140102	2	2.29	143.33	1.69	2.12	10.38	7.28	0.25	0.78
W9414	N07P	10-11-94	1335	2.1	W94140104	1	2.4	119.17	1.82	3.03	16.27	7.38	0.2	0.86
W9414	N07P	10-11-94	1335	2.1	W94140104	2	2.03	123.33	1.87	2.69	13.96	18.65	0.41	1.1
W9414	N10P	10-13-94	1536	4.3	W94140447	1	5.01	131.67	2.1	2.86	14.01	6.09	0.87	1.04
W9414	N10P	10-13-94	1536	4.3	W94140447	2	4.72	147.5	2.27	3.14	16.24	14.37	0.77	1.22
W9414	N10P	10-13-94	1537	1.6	W94140448	1	4.5	116.67	2.01	2.99	16.38	16.59	0.73	1.67
W9414	N10P	10-13-94	1537	1.6	W94140448	2	5.28	122.5	2.23	3.32	18.81	19.74	0.72	1.5
W9414	N16P	10-11-94	1152	19.6	W94140086	1	3.69	106.67	1.97	2.43	13.09	10.29	0.21	0.46
W9414	N16P	10-11-94	1152	19.6	W94140086	2	3.84	110.83	2.28	2.74	15.05	11.86	0.21	0.96
W9414	N16P	10-11-94	1155	1.9	W94140088	1	3.87	117.5	1.82	3.58	19.19	15.92	0.31	1.18
W9414	N16P	10-11-94	1155	1.9	W94140088	2	3.27	108.33	2.07	2.19	10.17	15.66	0.31	1.2
W9414	N16P	10-12-94	907	17.5	W94140230	1	2.84	100.83	1.8	2.84	15.63	17.36	0.41	0.86
W9414	N16P	10-12-94	907	17.5	W94140230	2	2.96	99.17	2.09	2.19	11.08	17.35	0.35	1.25
W9414	N16P	10-12-94	908	1.9	W94140232	1	3.25	102.5	2.07	2.3	12	19.53	0.41	0.77
W9414	N16P	10-12-94	908	1.9	W94140232	2	3.11	111.67	1.9	2.07	11.96	19.24	0.39	1.05
W9414	N20P	10-11-94	1057	13.7	W94140074	1	4.76	102.5	2.37	3.42	19.1	9.59	0.24	1.87
W9414	N20P	10-11-94	1057	13.7	W94140074	2	5.62	109.17	2.09	3.91	21.22	12.44	0.29	0.62
W9414	N20P	10-11-94	1059	2.1	W94140076	1	5.68	105	2.34	2.98	15.87	10.51	0.26	0.86
W9414	N20P	10-11-94	1059	2.1	W94140076	2	5.28	104.17	2.73	3.5	20.08	12	0.27	1.11

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.

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:

W9414 = October 1994 combined survey
W9415 = November 1994 nearfield survey
W9416 = December 1994 nearfield survey.

Survey W9414 Chlorophyll a Calibration

Marker	Station_ID	Depth	CTD_Chla	Bottle_Chla	Predict_Chla	Residual
16	F30	5.133	2.539	2.015	1.718	0.297
17	F30	1.752	2.552	1.975	1.727	0.248
39	F23P	10.728	3.129	2.010	2.118	-0.108
41	F23P	1.948	2.691	1.900	1.821	0.079
63	F24	7.440	3.533	2.080	2.391	-0.311
65	F24	1.943	2.106	2.020	1.425	0.595
73	N20P	21.279	1.915	1.525	1.296	0.229
74	N20P	13.247	8.050	5.190	5.448	-0.258
76	N20P	1.852	4.846	5.480	3.280	2.200
84	N16P	38.485	0.375	0.175	0.254	-0.079
85	N16P	28.299	1.029	0.475	0.697	-0.222
86	N16P	18.975	6.147	3.765	4.160	-0.395
87	N16P	8.272	6.826	3.885	4.620	-0.735
88	N16P	1.762	3.775	3.570	2.555	1.015
102	N07P	20.250	4.417	1.860	2.989	-1.129
104	N07P	1.839	3.354	2.215	2.270	-0.055
155	F25	8.552	5.184	2.590	3.508	-0.918
157	F25	1.473	5.178	3.350	3.504	-0.154
167	F31B	6.950	4.884	2.655	3.305	-0.650
168	F31	1.550	4.528	2.525	3.064	-0.539
180	F23P	25.827	3.241	1.550	2.193	-0.643
181	F23P	19.536	2.950	1.870	1.996	-0.126
182	F23P	12.971	2.681	1.710	1.815	-0.105
183	F23P	6.742	2.532	1.650	1.713	-0.063
184	F23P	1.976	2.592	1.600	1.754	-0.154
194	N01P	12.175	7.661	5.770	5.185	0.585
196	N01P	1.938	8.082	5.665	5.470	0.195
217	N04P	14.636	5.487	2.795	3.713	-0.918
219	N04P	2.493	4.000	2.995	2.707	0.288
228	N16P	35.806	0.478	0.215	0.323	-0.108
229	N16P	28.630	0.686	0.480	0.464	0.016
230	N16P	16.913	4.907	2.900	3.321	-0.421
231	N16P	5.774	5.191	3.040	3.513	-0.473
232	N16P	1.787	3.279	3.180	2.219	0.961
266	F27	10.022	4.840	2.680	3.276	-0.596
267	F27	1.845	2.177	1.780	1.474	0.306
331	F02P	15.906	5.528	4.280	3.741	0.539
333	F02P	1.672	5.159	3.970	3.491	0.479
345	F01P	12.053	5.298	3.280	3.585	-0.305
347	F01P	1.733	4.120	3.695	2.789	0.906
391	F06	9.146	9.303	5.490	6.296	-0.806
392	F06	1.650	4.441	5.280	3.005	2.275
434	F13P	9.199	9.900	5.590	6.700	-1.110
436	F13P	1.580	4.624	5.115	3.129	1.986
472	N10P	20.621	0.829	0.250	0.561	-0.311
474	N10P	10.529	6.243	2.760	4.225	-1.465
476	N10P	1.762	6.987	2.910	4.729	-1.819
505	N01P	27.974	0.486	0.220	0.329	-0.109
507	N01P	10.053	9.541	4.635	6.457	-1.822
510	N01P	1.412	9.478	7.675	6.414	1.261
535	N04P	46.018	0.352	0.070	0.238	-0.168
537	N04P	11.755	6.943	1.615	4.699	-3.084
539	N04P	1.634	3.953	2.870	2.676	0.194
575	N07P	39.989	0.500	0.130	0.338	-0.208
577	N07P	15.911	7.690	2.040	5.204	-3.164
579	N07P	1.612	5.052	1.825	3.419	-1.594

SUMMARY OUTPUT

Standard Deviation of Residual: 1.017

Regression Statistics

Multiple R	0.79457415
R Square	0.63134808
Adjusted R Square	0.61316627
Standard Error	1.52859993
Observations	56

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	220.091227	220.091227	94.1922261	1.9505E-13
Residual	55	128.513976	2.33661775		
Total	56	348.605203			

	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	1.47758003	0.06299394	23.4559082	2.5578E-30	1.35133739	1.60382268	1.35133739	1.60382268

SUMMARY OUTPUT

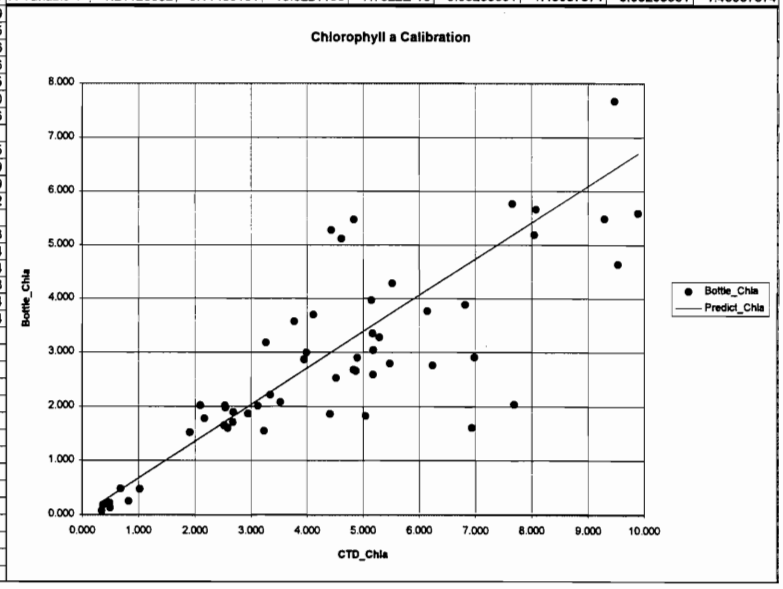
Regression Statistics

Multiple R	0.82238417
R Square	0.67631573
Adjusted R Square	0.67032158
Standard Error	1.44554245
Observations	56

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	235.767182	235.767182	112.829237	7.7322E-15
Residual	54	112.838021	2.08959298		
Total	55	348.605203			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	1.01277561	0.36976609	2.73896292	0.00833278	0.27143859	1.75411263	0.27143859	1.75411263
X Variable 1	1.21125852	0.11403181	10.6221108	7.7322E-15	0.98263831	1.43987874	0.98263831	1.43987874



Survey W9415 Chlorophyll a Calibration

Marker	Station_I	Depth	CTD_Chl	Bottle_Chla	Predict_Chla	Residual
52	N10P	9.31	1.57	0.92	1.60	-0.68
94	N01P	26.81	0.72	0.57	0.73	-0.17
98	N01P	5.04	3.79	3.57	3.86	-0.29
99	N01P	1.83	2.84	4.51	2.89	1.62
140	N04P	46.89	0.49	0.30	0.50	-0.20
143	N04P	7.85	5.15	4.90	5.24	-0.35
144	N04P	1.84	3.08	3.02	3.14	-0.12
188	N07P	8.92	3.62	1.86	3.69	-1.84

SUMMARY OUTPUT

Standard Deviation of Residuals: 0.942

Regression Statistics

Multiple R	0.802951702
R Square	0.644731436
Adjusted R Square	0.501874293
Standard Error	0.962241572
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	11.76219396	11.76219396	12.70340386	0.011867113
Residual	7	6.481361896	0.925908842		
Total	8	18.24355585			

	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	0.981732607	0.114372524	8.583640334	5.7987E-05	0.711284757	1.252180456	0.711284757	1.252180456

SUMMARY OUTPUT

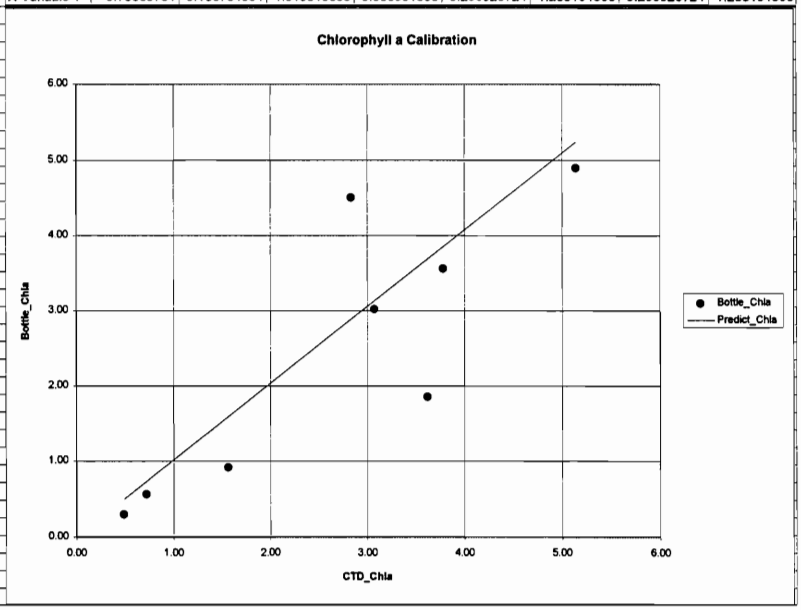
Regression Statistics

Multiple R	0.853937235
R Square	0.729208801
Adjusted R Square	0.684076934
Standard Error	0.907395023
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	13.30336149	13.30336149	16.15729322	0.006961896
Residual	6	4.940194365	0.823365728		
Total	7	18.24355585			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	0.776080123	0.567254602	1.368133675	0.220290622	-0.6119429	2.164103146	-0.6119429	2.164103146
X Variable 1	0.76655781	0.190704354	4.019613566	0.006961896	0.299920724	1.233194896	0.299920724	1.233194896



Survey W9416 Chlorophyll a Calibration

Marker	Station_ID	Depth	CTD_Chla	Bottle_Chla	Predict_Chla	Residual
40	N10P	21.68	1.75	1.41	1.60	-0.19
42	N10P	9.98	1.79	1.75	1.63	0.11
44	N10P	1.51	1.88	1.66	1.72	-0.06
100	N01P	30.12	1.60	1.44	1.46	-0.02
102	N01P	14.12	1.80	1.58	1.64	-0.06
104	N01P	1.66	1.36	1.74	1.24	0.49
138	N04P	47.79	0.80	0.75	0.73	0.02
140	N04P	24.76	1.63	1.32	1.48	-0.17
142	N04P	1.30	1.34	1.50	1.22	0.28
174	N07P	43.84	1.45	0.93	1.32	-0.40
176	N07P	21.08	1.59	1.00	1.45	-0.45
178	N07P	1.18	1.25	1.18	1.14	0.04

SUMMARY OUTPUT

Standard Deviation of Residuals: 0.262

Regression Statistics

Multiple R	0.297911631
R Square	0.08875134
Adjusted R Square	-0.00215775
Standard Error	0.289992735
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.09009588	0.09009588	1.07134834	0.32502284
Residual	11	0.92505365	0.08409579		
Total	12	1.01514953			

	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	1.097694765	0.06037435	18.1814743	1.4823E-09	0.964811641	1.23057789	0.96481164	1.23057789

SUMMARY OUTPUT

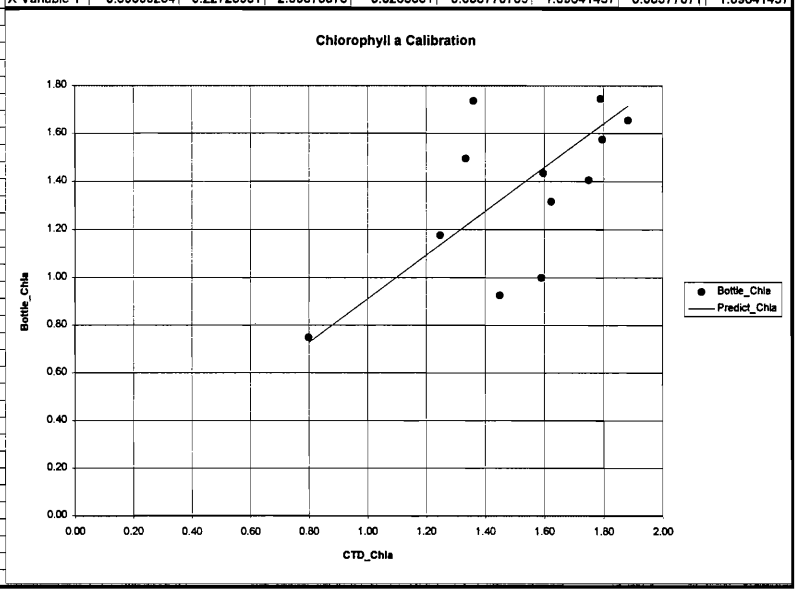
Regression Statistics

Multiple R	0.634622462
R Square	0.402745669
Adjusted R Square	0.343020236
Standard Error	0.246232096
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.40884708	0.40884708	6.74328587	0.026638098
Residual	10	0.60630245	0.06063025		
Total	11	1.01514953			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	0.7224531	0.31508549	2.29287959	0.04478373	0.020398746	1.42450745	0.02039875	1.42450745
X Variable 1	0.59009264	0.22723981	2.59678376	0.0266381	0.083770709	1.09641457	0.08377071	1.09641457



Survey W9414 Dissolved Oxygen Calibration

Marker	Station_ID	Depth	CTD_DO	Bottle_DO	Predict_DO	Residual
16	F30	5.13	6.64	7.33	7.32	0.02
17	F30	1.75	6.77	7.45	7.46	-0.02
38	F23P	19.02	6.86	7.66	7.56	0.10
39	F23P	10.73	6.90	7.69	7.60	0.09
41	F23P	1.95	7.10	7.66	7.83	-0.17
73	N20P	21.28	6.79	7.26	7.48	-0.22
74	N20P	13.25	8.18	8.63	9.02	-0.38
76	N20P	1.85	8.17	8.78	9.01	-0.23
85	N16P	28.30	6.84	7.27	7.54	-0.27
86	N16P	18.97	8.12	8.54	8.95	-0.41
88	N16P	1.76	8.15	8.68	8.98	-0.30
101	N07P	33.02	6.26	6.38	6.90	-0.53
102	N07P	20.25	8.15	8.39	8.99	-0.60
104	N07P	1.84	8.04	8.64	8.87	-0.23
113	F19	47.66	6.18	6.62	6.81	-0.19
114	F19	33.89	6.93	8.57	7.64	0.93
115	F19	2.20	7.79	8.65	8.59	0.06
166	F31B	13.45	6.96	7.96	7.67	0.29
167	F31B	6.95	6.81	8.00	7.51	0.49
168	F31	1.55	6.94	8.02	7.66	0.37
181	F23P	19.54	6.60	7.18	7.27	-0.10
182	F23P	12.97	6.73	7.17	7.42	-0.25
184	F23P	1.98	6.77	7.22	7.46	-0.24
193	N01P	20.84	6.04	6.61	6.66	-0.05
194	N01P	12.17	8.16	8.64	9.00	-0.35
196	N01P	1.94	8.24	7.96	9.08	-1.12
216	N04P	28.46	6.39	6.92	7.04	-0.12
217	N04P	14.64	8.19	8.59	9.03	-0.44
219	N04P	2.49	8.15	8.61	8.98	-0.37
229	N16P	28.63	6.29	6.71	6.94	-0.23
230	N16P	16.91	7.96	8.49	8.78	-0.29
232	N16P	1.79	7.90	8.50	8.71	-0.21
264	F27	47.48	6.18	7.00	6.82	0.18
266	F27	10.02	7.48	8.49	8.24	0.24
267	F27	1.85	7.95	8.62	8.77	-0.15
292	F12	55.78	5.98	6.58	6.59	-0.01
294	F12	9.97	8.14	8.73	8.97	-0.24
295	F12	1.78	8.11	8.93	8.94	-0.01
303	F29	43.44	7.26	7.95	8.00	-0.05
305	F29	6.74	7.29	8.24	8.03	0.21
306	F29	1.79	8.08	8.67	8.91	-0.24
330	F02P	22.10	6.68	7.95	7.37	0.58
331	F02P	15.91	6.59	8.03	7.27	0.76
333	F02P	1.67	6.92	8.11	7.63	0.48
344	F01P	17.63	7.18	8.02	7.91	0.10
345	F01P	12.05	7.15	8.04	7.88	0.16
347	F01P	1.73	7.21	8.11	7.95	0.16
389	F06	23.59	5.08	5.80	5.60	0.20
391	F06	9.15	7.62	8.45	8.40	0.04
392	F06	1.65	8.00	8.71	8.82	-0.11
433	F13P	16.44	6.81	7.33	7.51	-0.18
434	F13P	9.20	7.93	8.85	8.74	0.11
436	F13P	1.58	8.03	8.95	8.86	0.09
472	N10P	20.62	5.67	6.39	6.25	0.14
473	N10P	19.65	5.54	6.83	6.11	0.73
474	N10P	10.53	7.30	8.29	8.05	0.24
475	N10P	6.60	7.38	8.27	8.13	0.14
476	N10P	1.76	7.30	8.32	8.05	0.27
505	N01P	27.97	4.70	6.25	5.19	1.06
506	N01P	20.30	5.45	6.14	6.00	0.13
507	N01P	10.05	7.65	8.61	8.43	0.18
508	N01P	4.88	7.86	8.97	8.67	0.30
510	N01P	1.41	7.89	8.99	8.70	0.28
535	N04P	46.02	5.79	6.36	6.39	-0.03
536	N04P	29.09	6.11	6.57	6.73	-0.17
537	N04P	11.76	7.82	8.71	8.62	0.09
538	N04P	4.48	8.03	8.86	8.85	0.01
539	N04P	1.63	7.89	8.89	8.70	0.19
575	N07P	39.99	5.91	6.47	6.52	-0.05
576	N07P	33.18	6.13	6.58	6.76	-0.18
577	N07P	15.91	8.15	8.71	8.98	-0.27
578	N07P	9.24	8.03	8.78	8.85	-0.08
579	N07P	1.61	8.32	8.80	9.17	-0.37
617	N20P	25.25	5.78	8.75	6.37	2.38
618	N20P	19.43	6.03	6.46	6.64	-0.18
619	N20P	12.18	8.26	8.56	9.10	-0.54
620	N20P	6.73	8.56	9.15	9.43	-0.28
621	N20P	1.66	8.69	9.05	9.58	-0.54
660	N16P	37.25	5.80	6.29	6.40	-0.10
661	N16P	25.17	6.02	6.48	6.64	-0.16
662	N16P	14.30	8.38	8.92	9.24	-0.32
663	N16P	5.89	8.20	9.01	9.04	-0.04
664	N16P	1.59	8.30	9.04	9.15	-0.11

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.909013343
R Square	0.826305258
Adjusted R Square	0.814110136
Standard Error	0.390547099
Observations	83

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	59.49966613	59.49966613	390.0925858	1.04493E-32
Residual	82	12.507217	0.152527037		
Total	83	72.00688314			

	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	0.907102154	0.005372626	168.8377622	5.0937E-106	0.896414284	0.917790024	0.896414284	0.917790024

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.909083443
R Square	0.826432707
Adjusted R Square	0.824289901
Standard Error	0.392806298
Observations	83

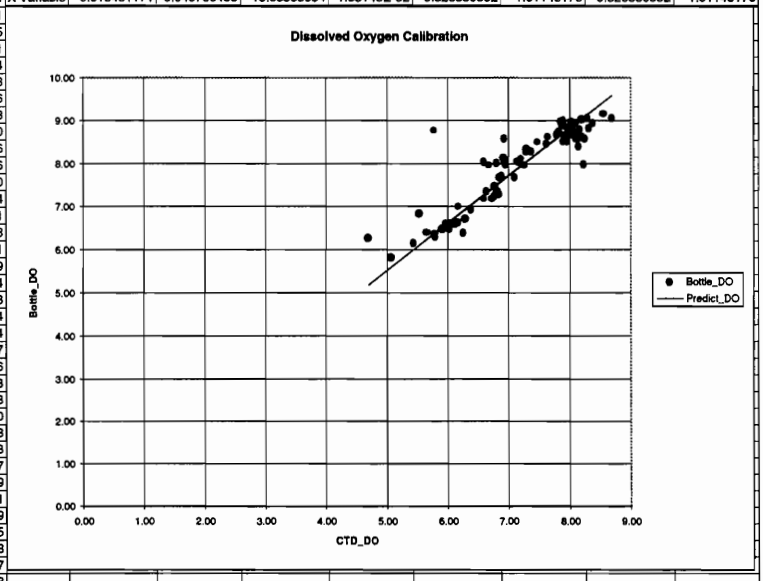
ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	59.50884333	59.50884333	385.677785	1.53148E-32
Residual	81	12.49803981	0.154296788		
Total	82	72.00688314			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	-0.091003615	0.373148811	-0.243880221	0.807940236	-0.833453295	0.651446066	-0.833453295	0.651446066
X Variable	0.918431171	0.046766439	19.63868084	1.53148E-32	0.825380552	1.01148179	0.825380552	1.01148179

Standard Deviation of Residuals

0.431



Survey W915 Dissolved Oxygen Calibration

Marker	Station_ID	Depth	CTD_D	Bottle_DO	Predict_DO	Residual
50	N10P	20.23	6.89	7.27	7.09	0.18
51	N10P	14.84	7.04	7.25	7.24	0.01
52	N10P	9.31	7.01	6.95	7.22	-0.27
54	N10P	1.97	6.98	7.29	7.18	0.11
94	N01P	26.81	6.45	6.89	6.64	0.25
95	N01P	19.05	6.91	7.08	7.10	-0.02
98	N01P	5.04	7.42	7.67	7.63	0.04
99	N01P	1.83	7.51	7.63	7.73	-0.10
140	N04P	46.89	6.68	6.86	6.88	-0.02
141	N04P	34.87	7.77	7.67	8.00	-0.33
142	N04P	22.00	8.30	8.42	8.54	-0.11
143	N04P	7.85	8.34	8.48	8.58	-0.10
144	N04P	1.84	8.42	8.67	8.66	0.01
185	N07P	44.57	6.47	7.30	6.66	0.64
186	N07P	31.96	7.65	7.39	7.87	-0.48
187	N07P	19.31	8.08	8.23	8.31	-0.07
188	N07P	8.92	8.12	8.18	8.35	-0.17
189	N07P	1.63	8.29	8.34	8.53	-0.18
239	N20P	29.37	7.29	7.69	7.50	0.18
240	N20P	22.03	7.25	7.37	7.46	-0.10
241	N20P	14.23	8.08	8.10	8.31	-0.21
242	N20P	6.84	8.29	8.35	8.53	-0.18
243	N20P	1.91	8.13	8.48	8.37	0.12
293	N16P	37.94	6.51	7.98	6.70	1.28
294	N16P	29.87	7.79	7.78	8.01	-0.23
295	N16P	19.17	8.15	8.34	8.39	-0.04
296	N16P	7.70	8.41	8.59	8.65	-0.06
297	N16P	1.91	8.57	8.75	8.82	-0.07

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.884887871
R Square	0.783026543
Adjusted R Square	0.745989506
Standard Error	0.31725935
Observations	28

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	9.8075945	9.8075945	97.4391846	2.8E-10
Residual	27	2.71764437	0.1006535		
Total	28	12.5252389			

	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	0.972022108	0.00764503	127.144361	4.7883E-39	0.95634	0.9877084	0.956335818	0.9877084

Standard Deviation of Residual: 0.326

SUMMARY OUTPUT

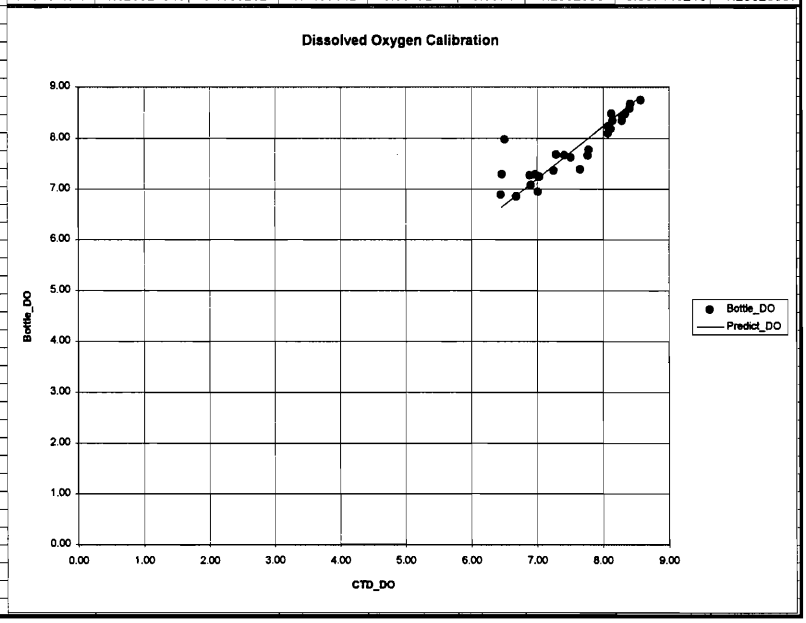
Regression Statistics

Multiple R	0.886008114
R Square	0.785010377
Adjusted R Square	0.776741546
Standard Error	0.321821521
Observations	28

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	9.8324425	9.8324425	94.9360698	3.6E-10
Residual	26	2.69279638	0.10356909		
Total	27	12.5252389			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	-0.40344552	0.82367201	-0.48981332	0.62837356	-2.09653	1.28963766	-2.09652871	1.28963766
X Variable 1	1.023324945	0.10502627	9.74351424	3.6317E-10	0.80744	1.23920967	0.807440216	1.23920967



Survey W9416 Dissolved Oxygen Calibration

Marker	Station_I	Depth	CTD_DO	Bottle_D	Predict_DO	Residual
40	N10P	21.68	8.30	8.66	8.58	0.08
41	N10P	16.00	8.32	8.71	8.60	0.11
42	N10P	9.98	8.36	8.67	8.64	0.03
43	N10P	5.70	8.38	8.72	8.66	0.06
44	N10P	1.51	8.41	8.72	8.69	0.03
100	N01P	30.12	8.41	8.64	8.69	-0.06
101	N01P	21.57	8.51	8.73	8.80	-0.07
102	N01P	14.12	8.49	8.76	8.77	-0.01
103	N01P	6.18	8.45	8.69	8.73	-0.04
104	N01P	1.66	8.47	8.74	8.76	-0.02
138	N04P	47.79	7.98	8.16	8.25	-0.09
139	N04P	36.58	8.36	8.51	8.65	-0.14
140	N04P	24.76	8.42	8.66	8.70	-0.04
141	N04P	11.56	8.40	8.49	8.68	-0.19
142	N04P	1.30	8.37	8.65	8.65	0.00
174	N07P	43.84	8.29	8.61	8.57	0.04
175	N07P	32.20	8.35	8.65	8.63	0.02
176	N07P	21.08	8.37	8.68	8.65	0.03
177	N07P	10.93	8.43	8.76	8.71	0.05
178	N07P	1.18	8.42	8.71	8.70	0.00
240	N20P	24.62	8.53	8.77	8.82	-0.04
241	N20P	17.17	8.54	8.76	8.83	-0.07
242	N20P	11.27	8.54	8.80	8.83	-0.03
243	N20P	5.24	8.58	8.83	8.87	-0.04
244	N20P	1.19	8.56	8.85	8.85	0.01
290	N16P	31.99	8.21	8.63	8.49	0.14
291	N16P	23.02	8.23	8.66	8.51	0.15
293	N16P	15.16	8.32	8.66	8.60	0.06
294	N16P	7.48	8.38	8.67	8.66	0.00
295	N16P	1.28	8.41	8.71	8.69	0.02

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.80578459
R Square	0.6492888
Adjusted R Square	0.61480604
Standard Error	0.07175362
Observations	30

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.27642284	0.27642	53.6891183	5.60106E-08
Residual	29	0.14930889	0.00515		
Total	30	0.42573173			

	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	0.96742834	0.00150997	640.693	9.5166E-62	0.964340097	0.97051657	0.964340097	0.97051657

SUMMARY OUTPUT

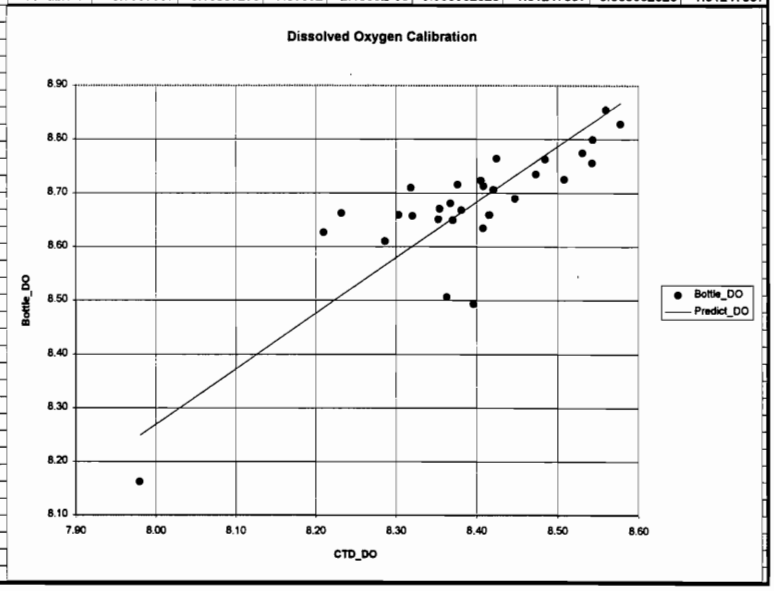
Regression Statistics

Multiple R	0.82411729
R Square	0.67916931
Adjusted R Square	0.66771107
Standard Error	0.06984365
Observations	30

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.28914392	0.28914	59.2734457	2.18652E-08
Residual	28	0.13658781	0.00488		
Total	29	0.42573173			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.000%*	*Upper 95.000%*
Intercept	1.45529084	0.90118662	1.61486	0.11755503	-0.39070835	3.30129003	-0.39070835	3.30129003
X Variable 1	0.7997057	0.10387239	7.69892	2.1865E-08	0.586932525	1.01247887	0.586932525	1.01247887



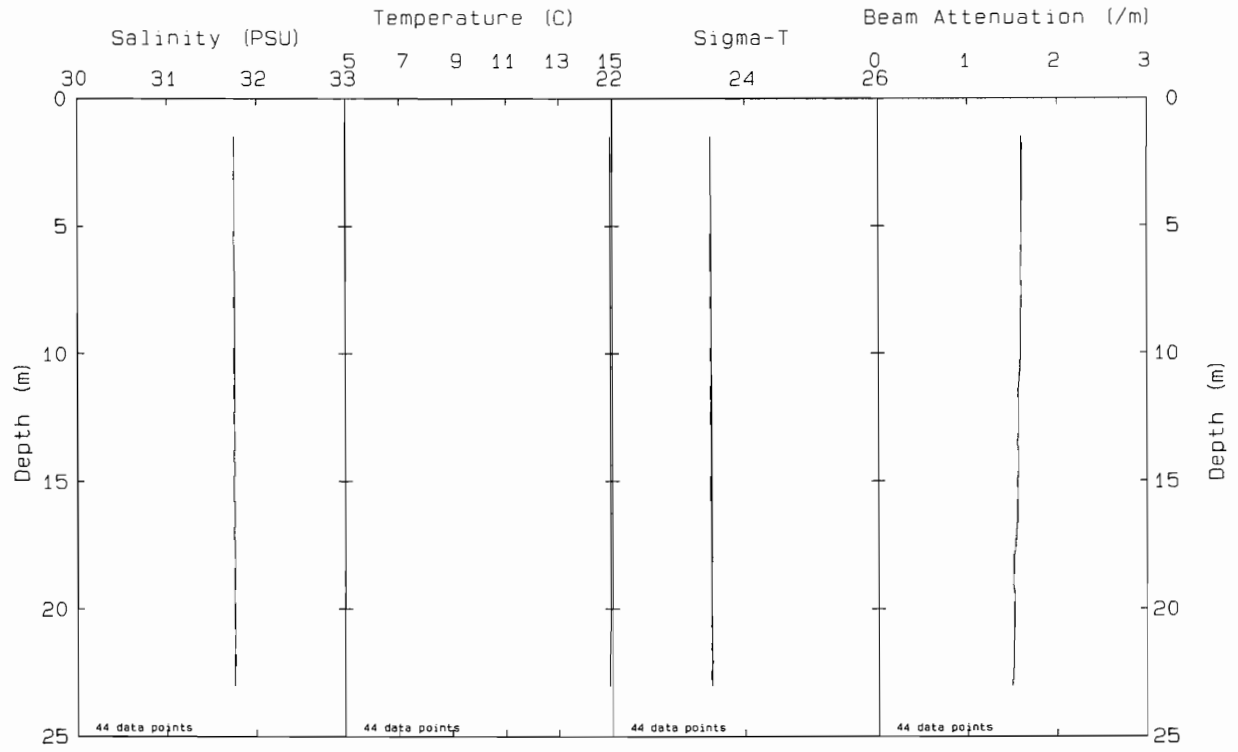
APPENDIX B

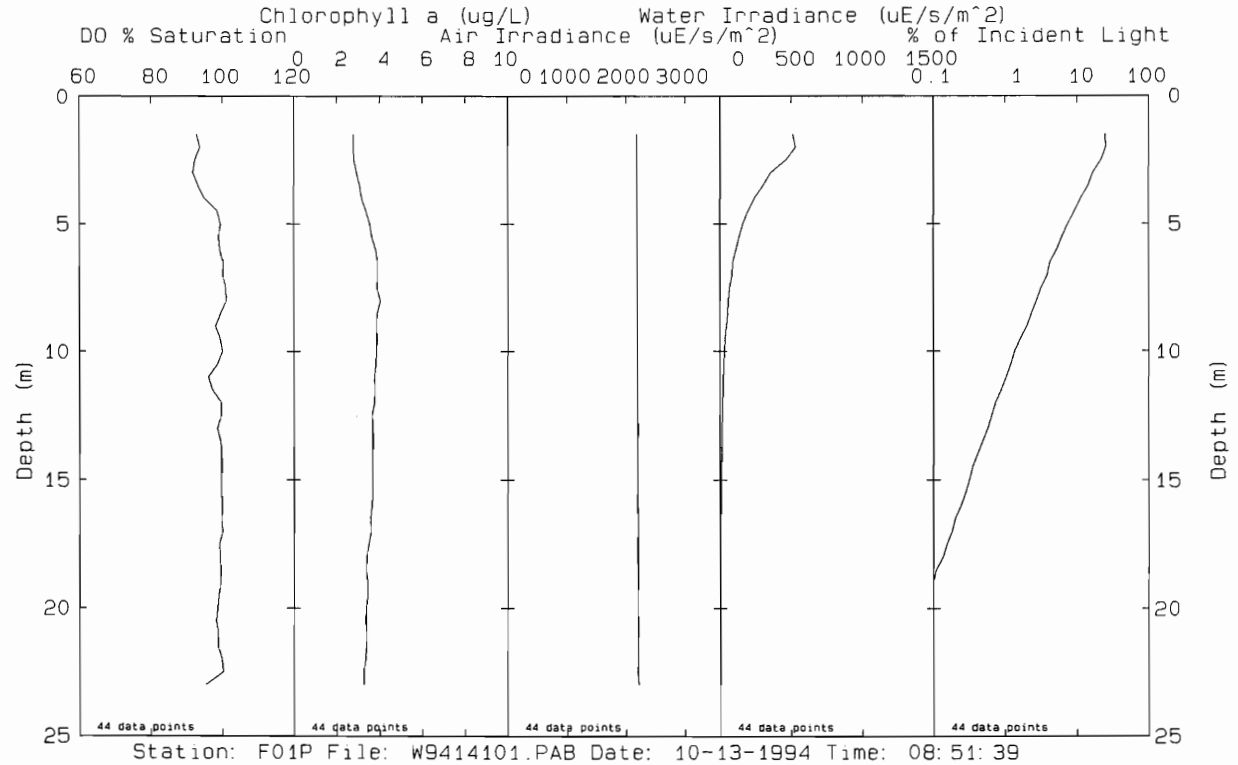
VERTICAL PROFILE DATA FROM FARFIELD AND NEARFIELD STATIONS

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.

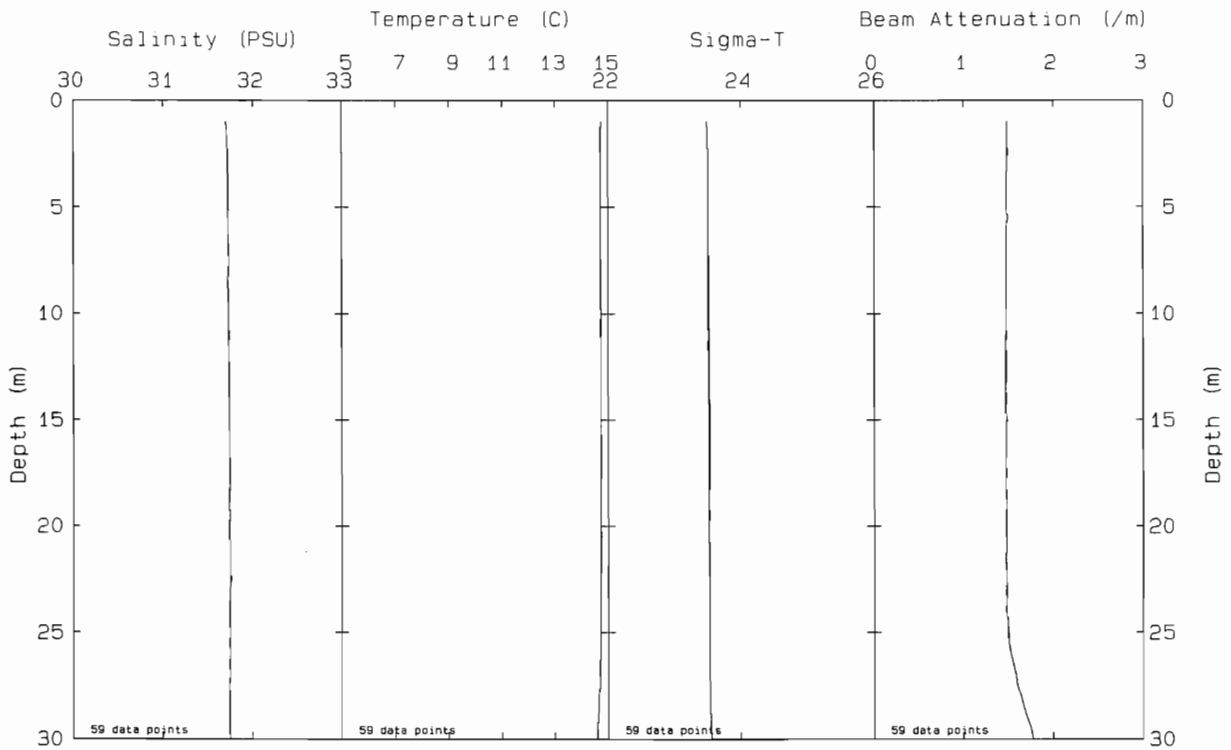
For each station occupation, there is a one-page set of profiles, with station, cruise code, date and time listed across the bottom.

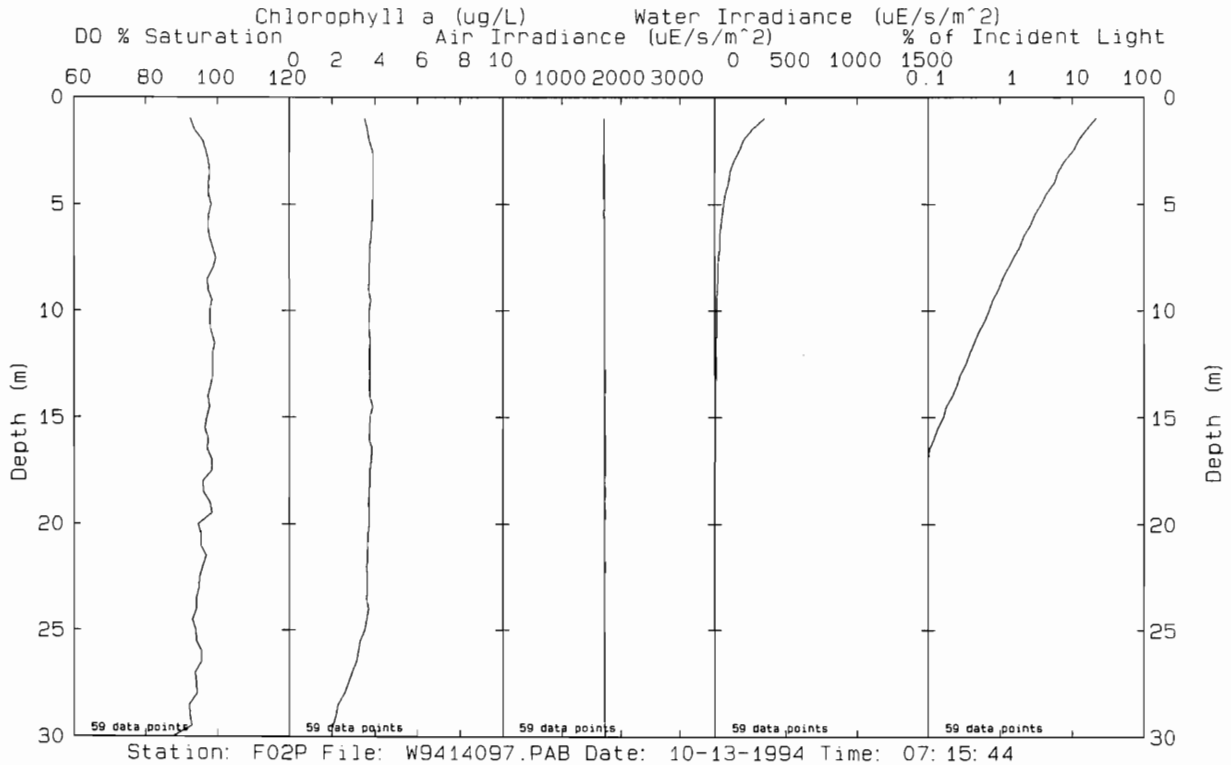
October 1994 Profiles



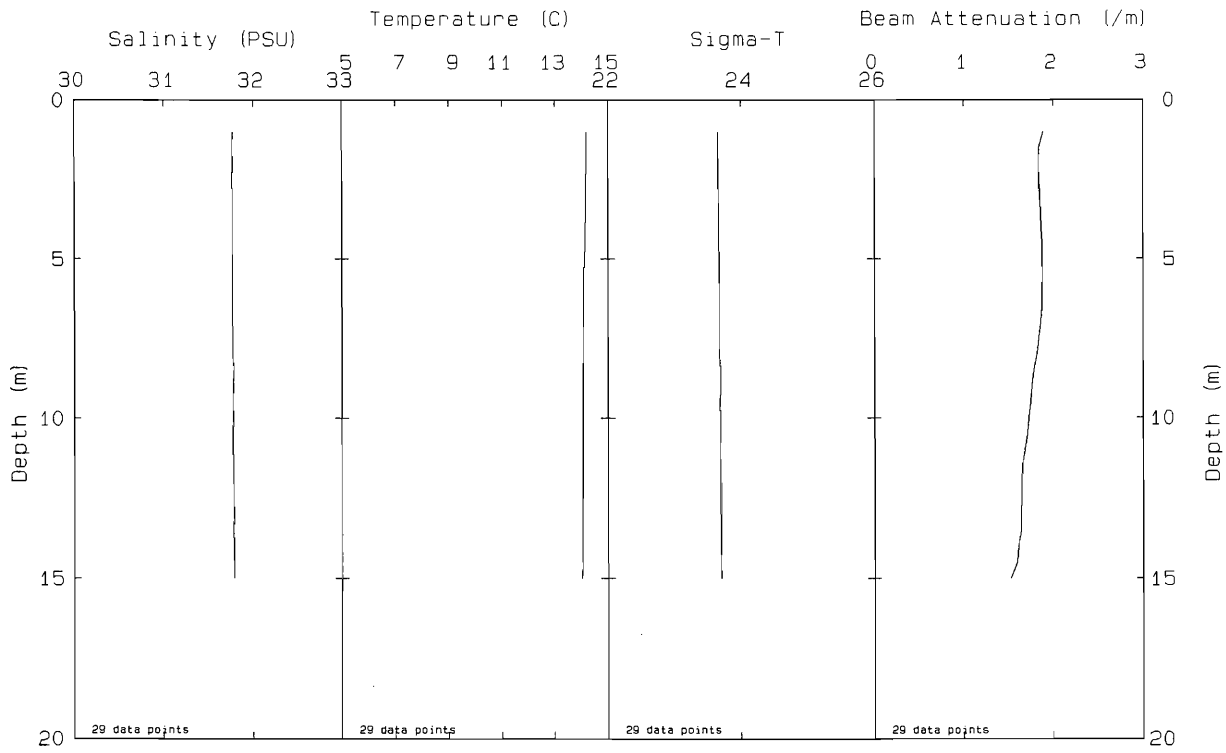


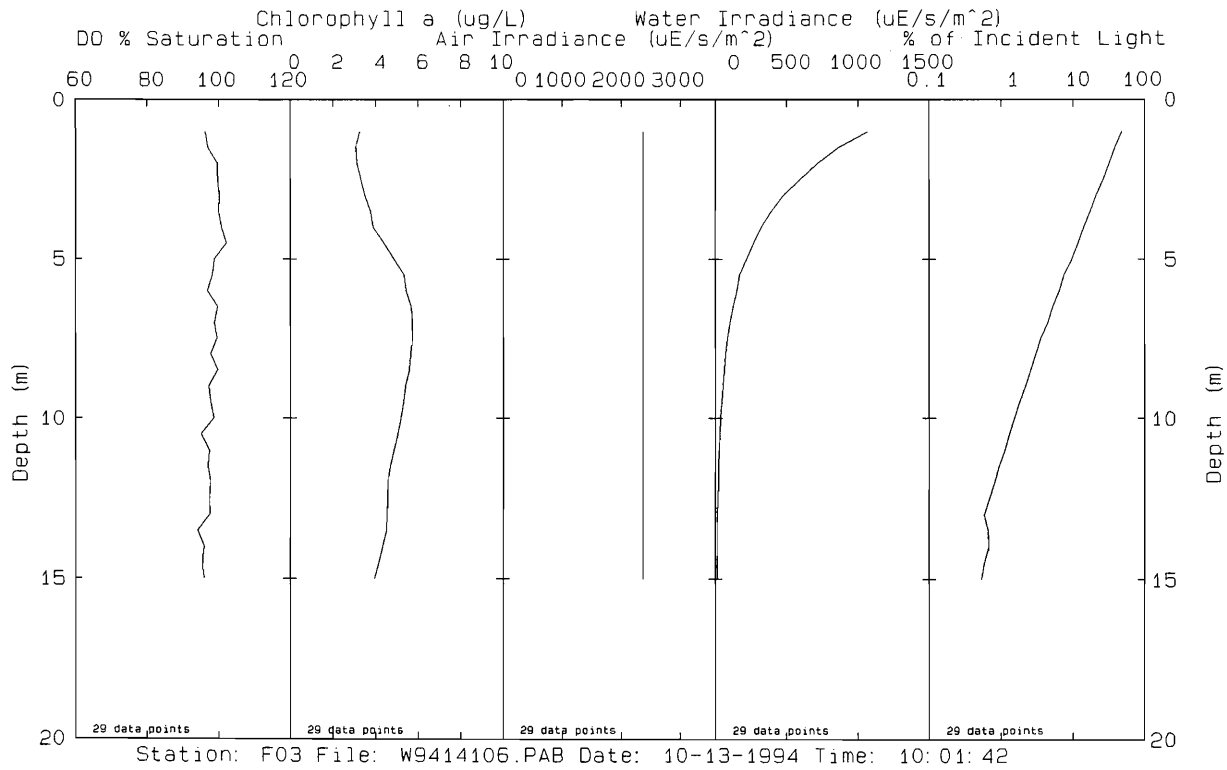
Station: F01P File: W9414101.PAB Date: 10-13-1994 Time: 08:51:39



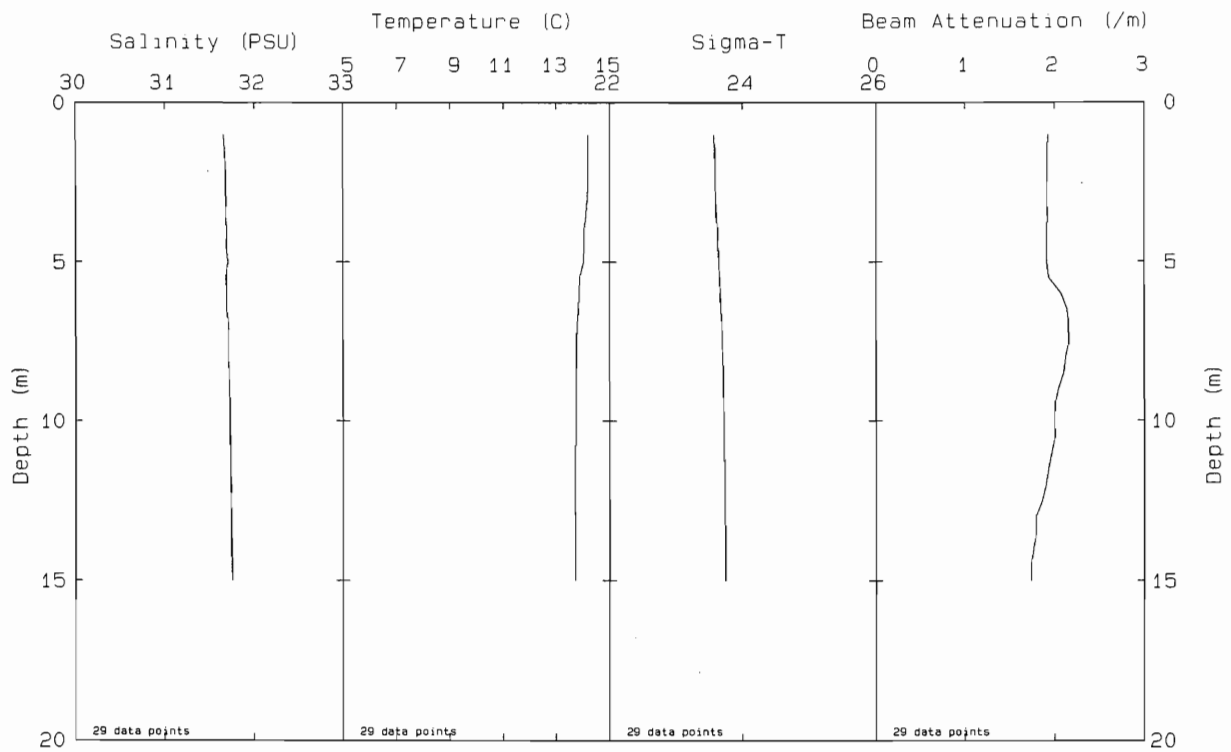


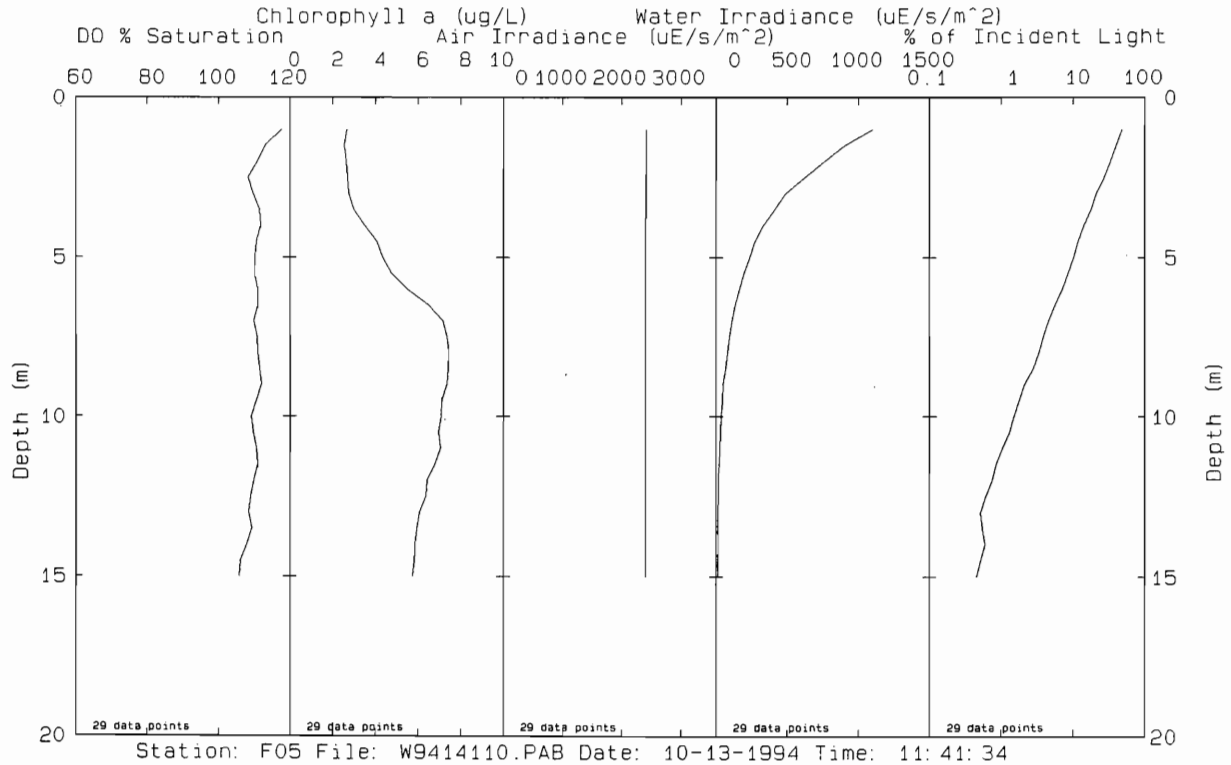
Station: F02P File: W9414097.PAB Date: 10-13-1994 Time: 07:15:44



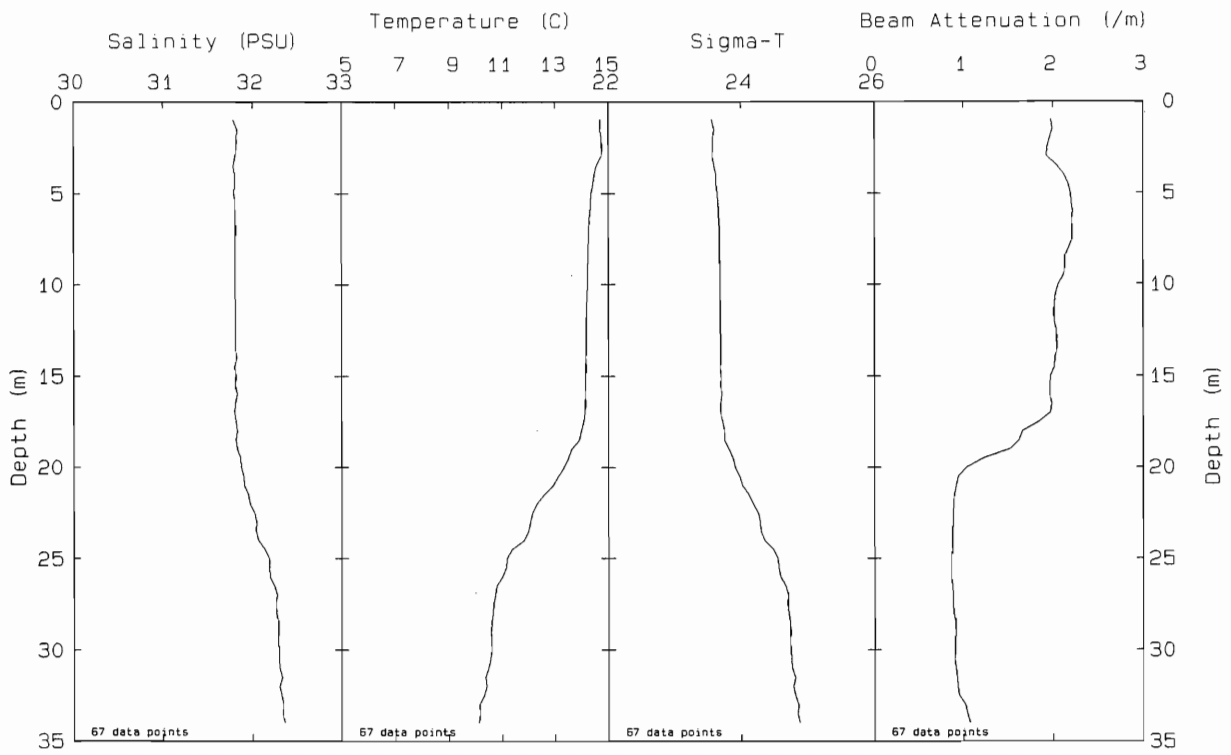


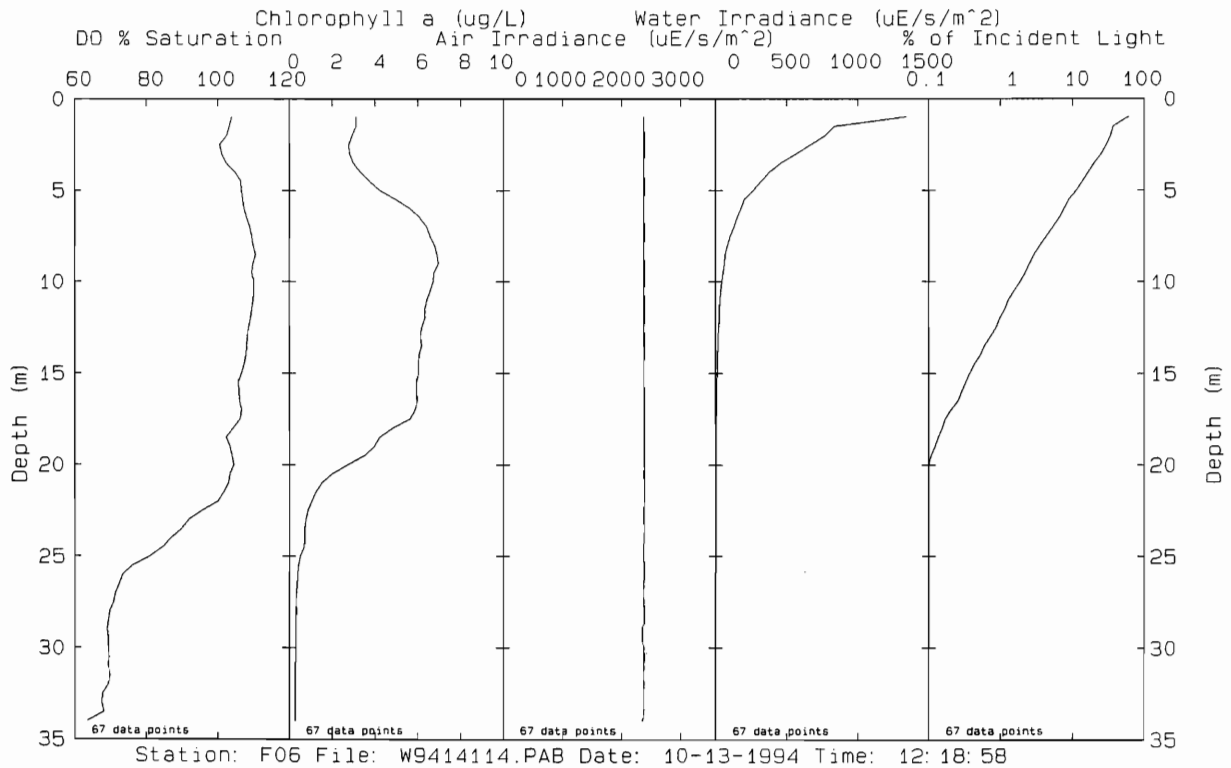
Station: F03 File: W9414106.PAB Date: 10-13-1994 Time: 10:01:42



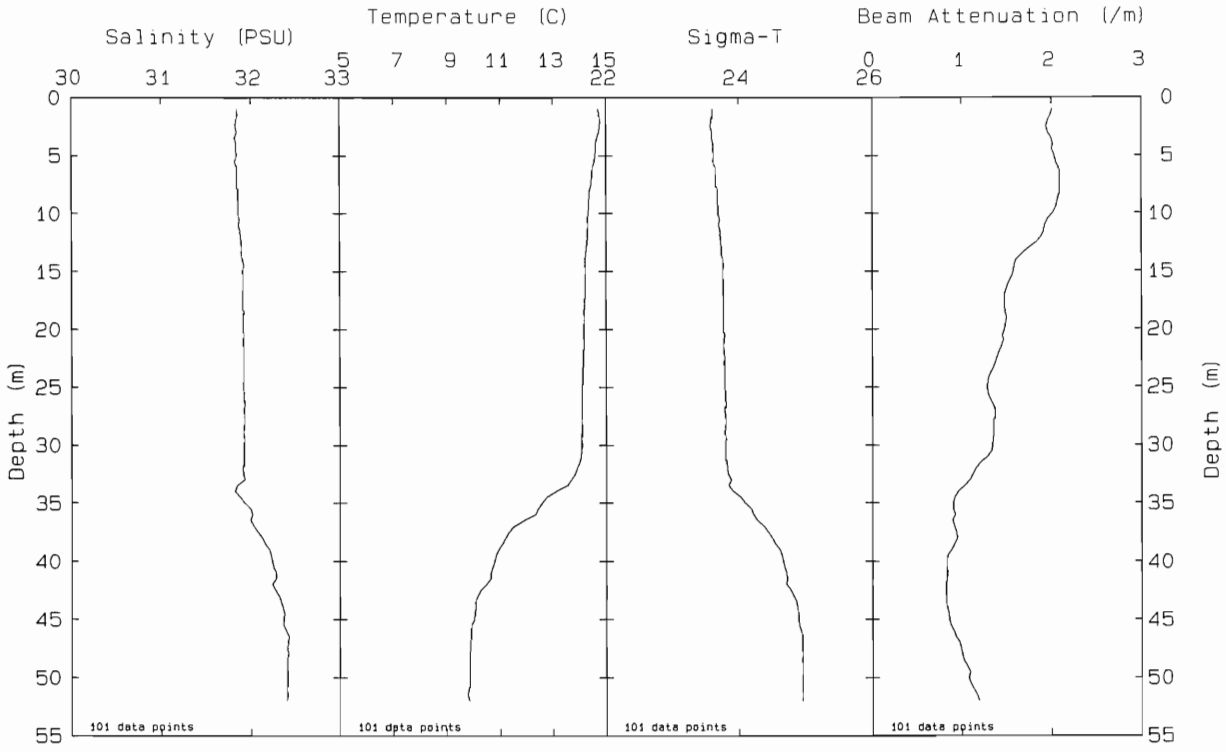


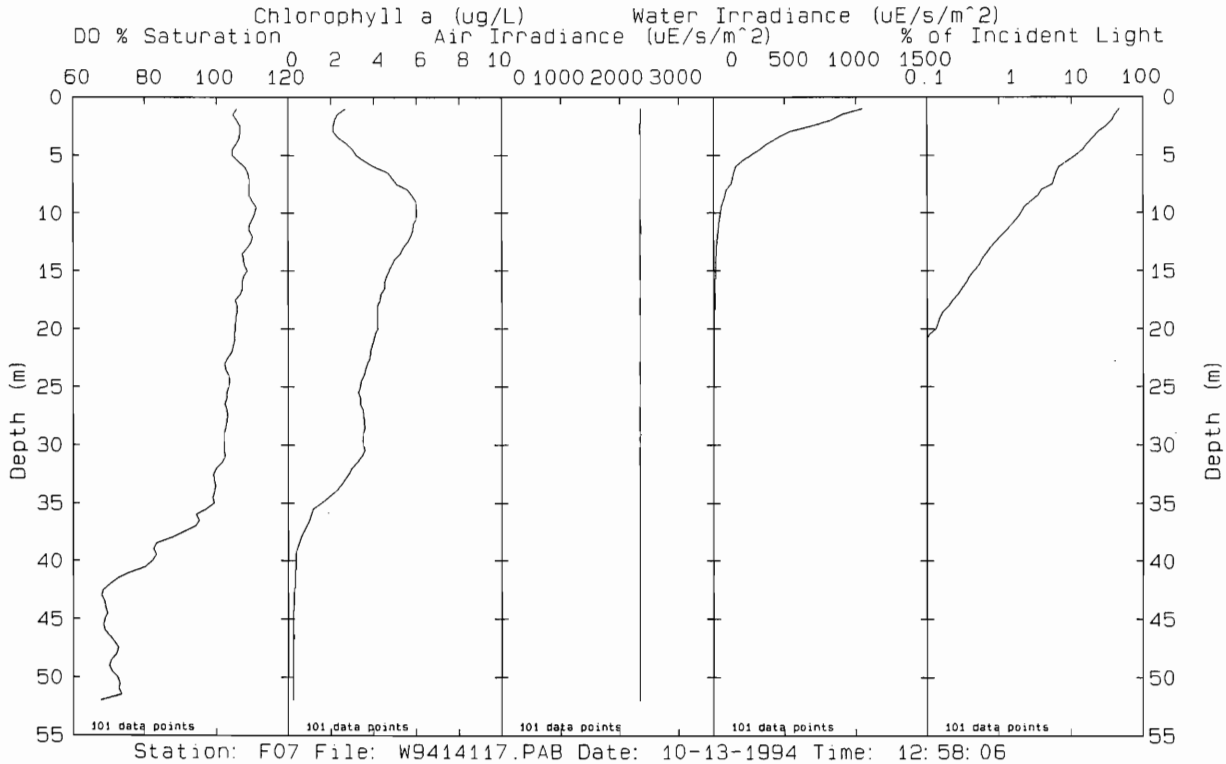
Station: F05 File: W9414110.PAB Date: 10-13-1994 Time: 11:41:34



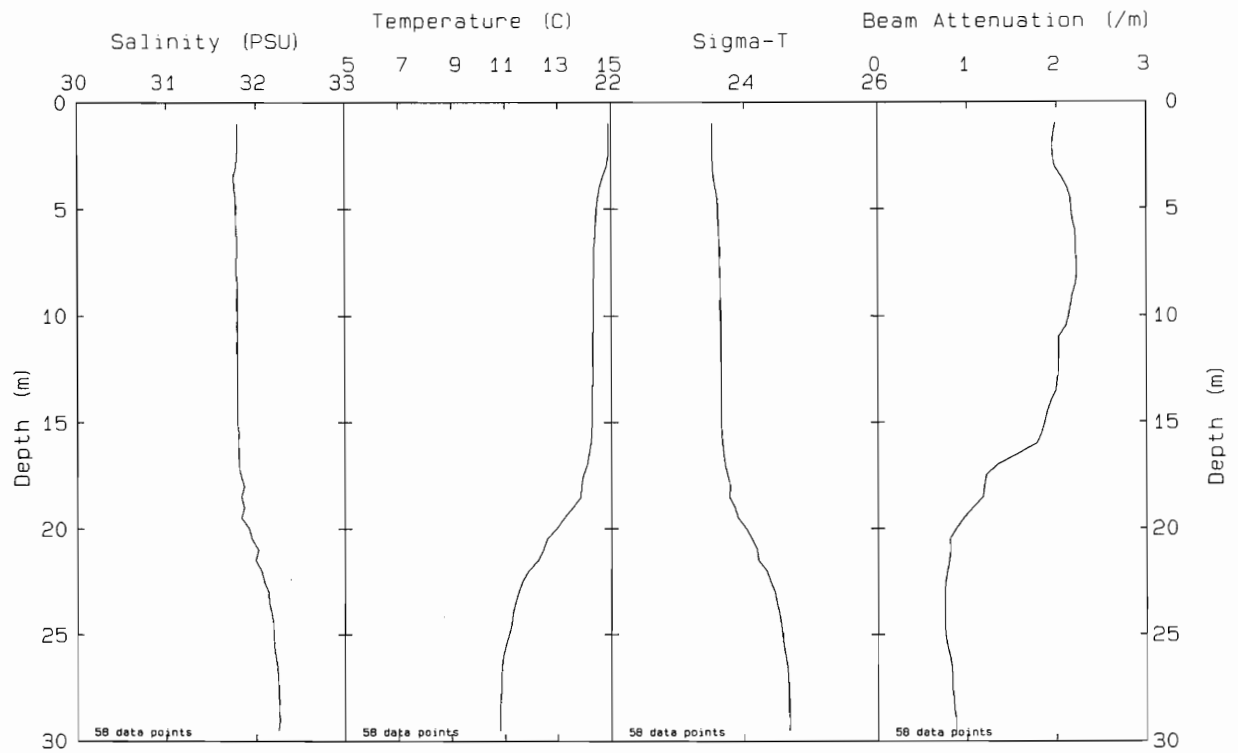


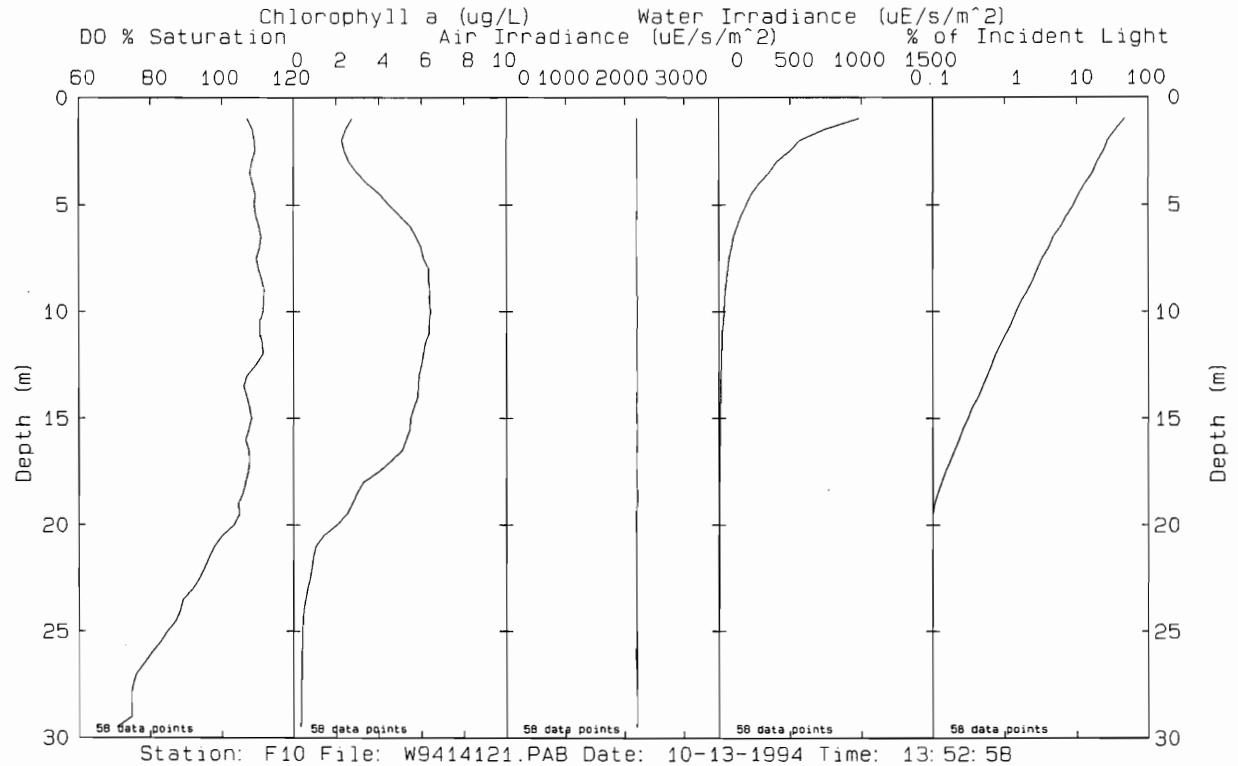
Station: F06 File: W9414114.PAB Date: 10-13-1994 Time: 12:18:58



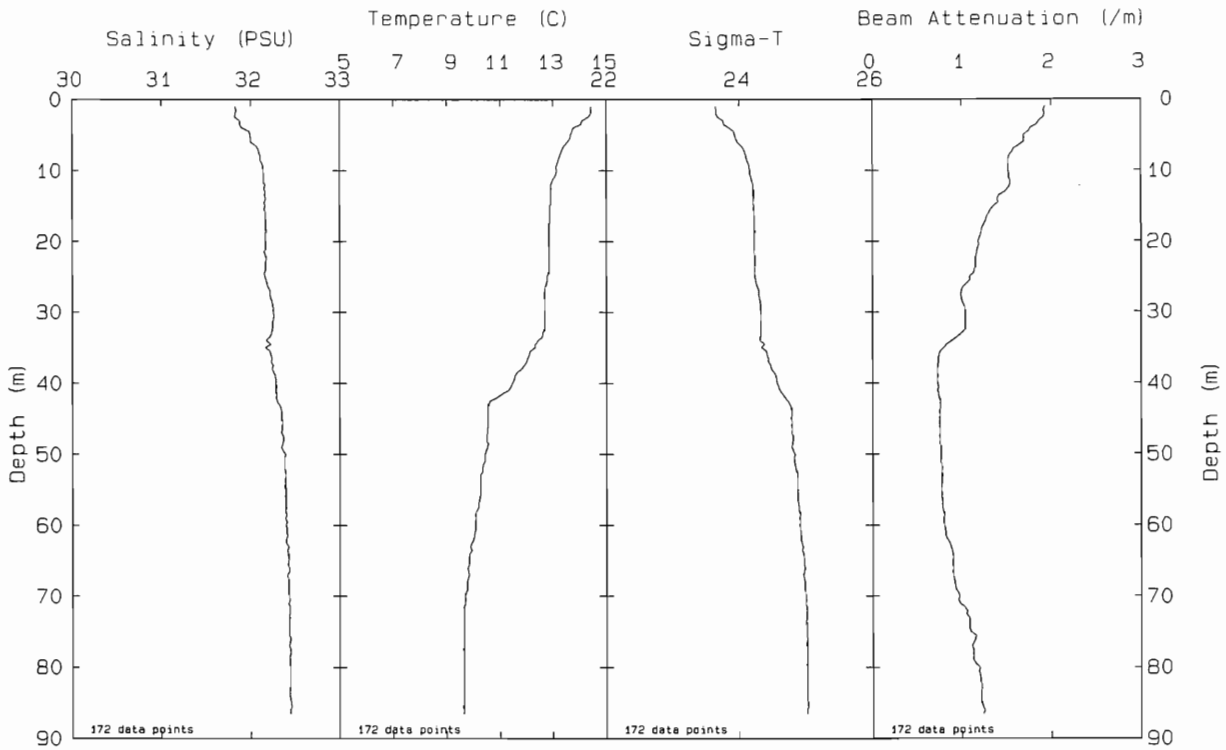


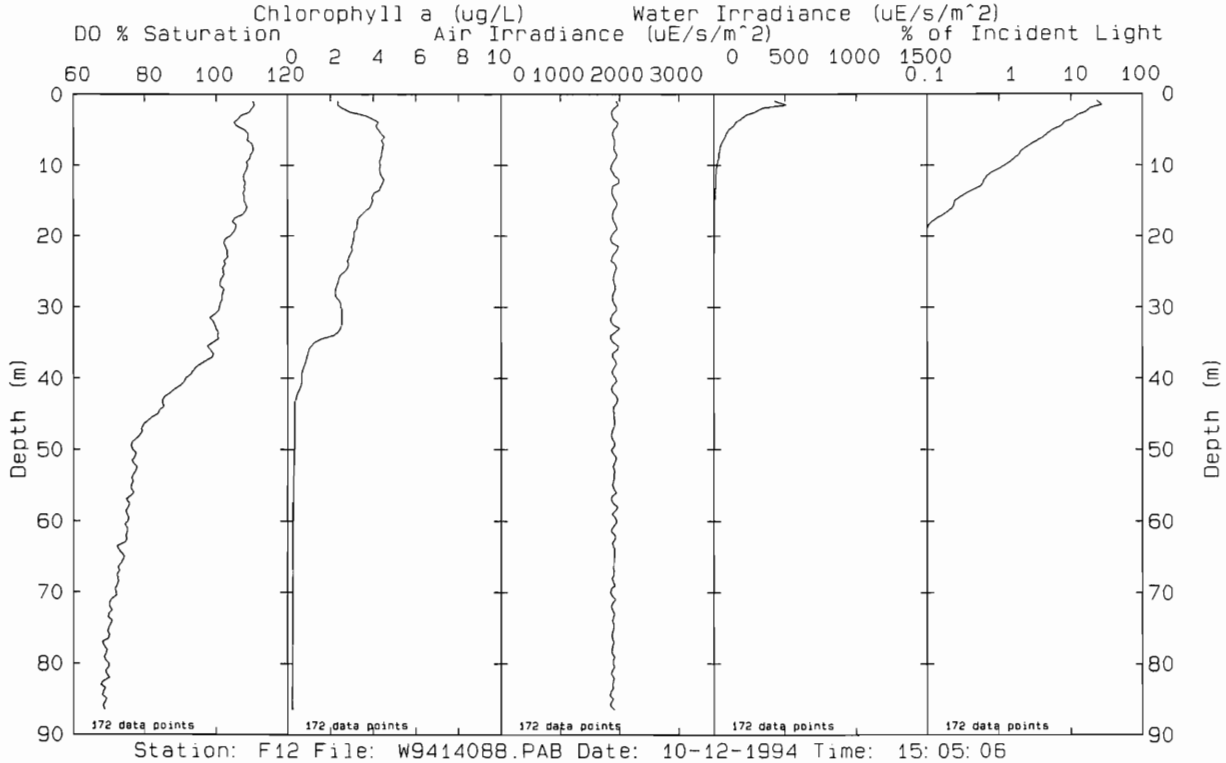
Station: F07 File: W9414117.PAB Date: 10-13-1994 Time: 12:58:06



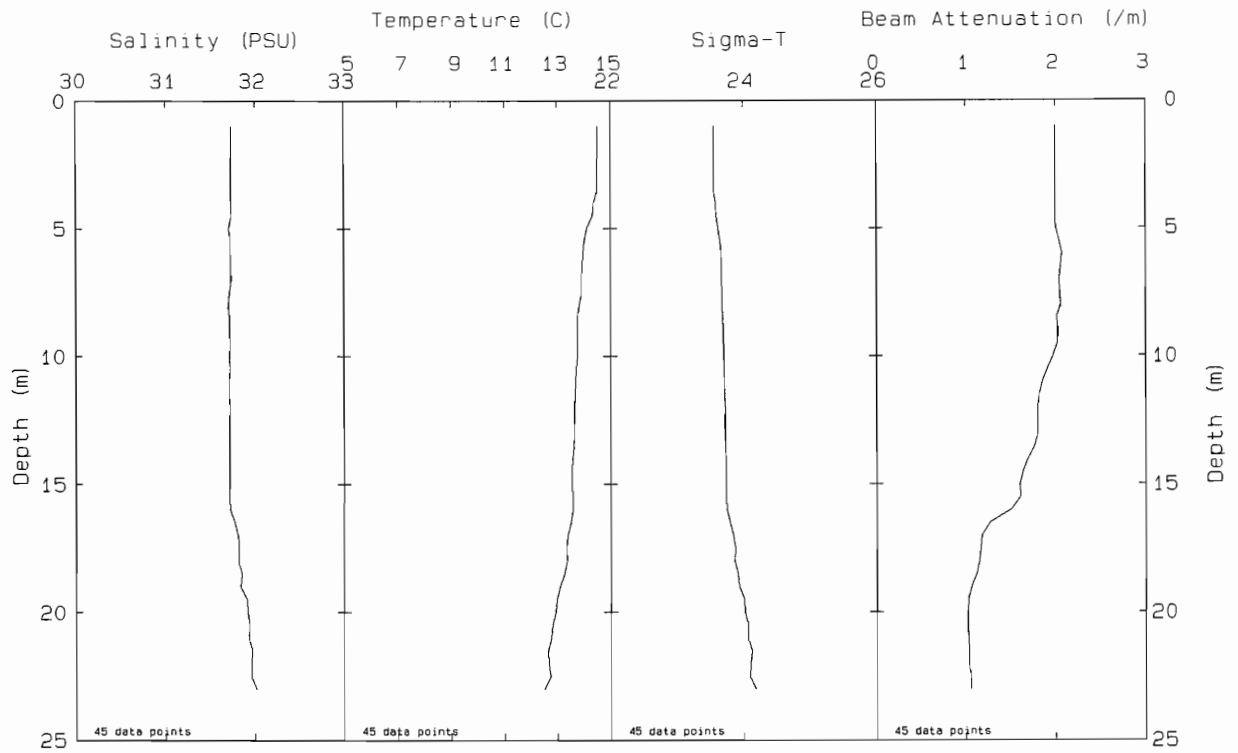


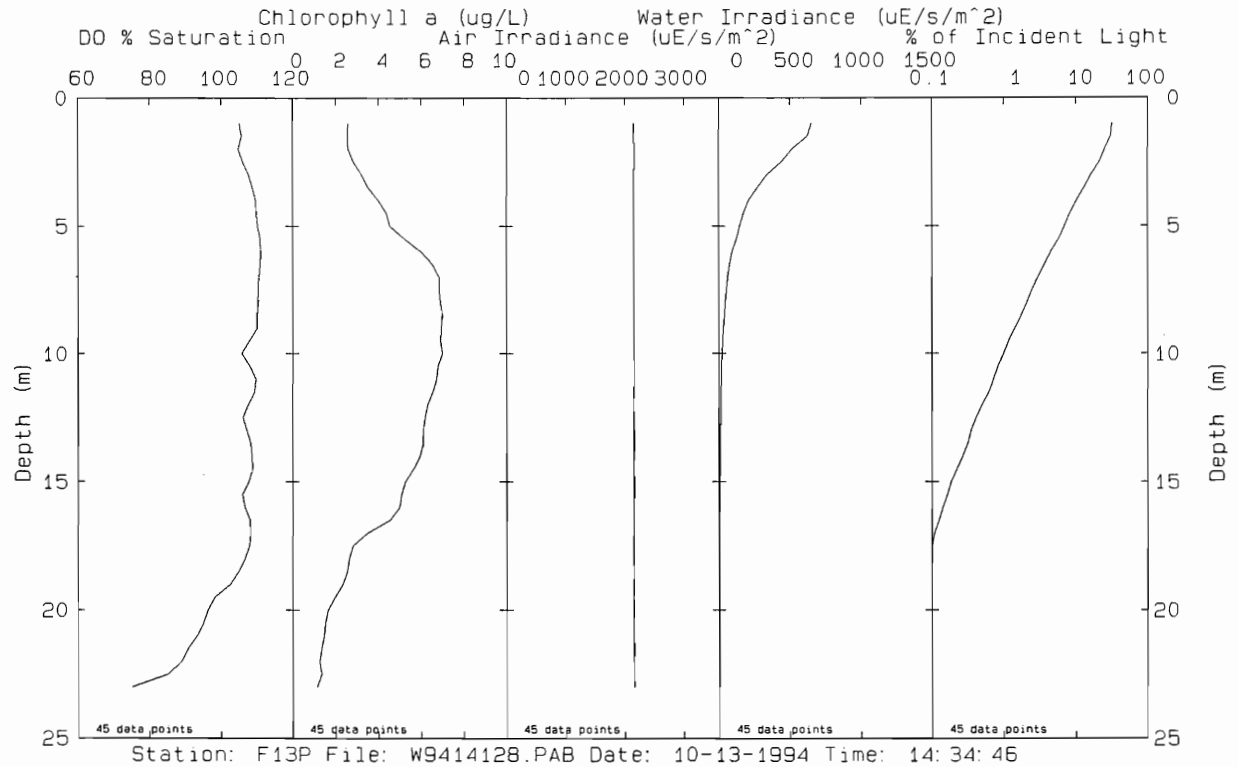
Station: F10 File: W9414121.PAB Date: 10-13-1994 Time: 13:52:58



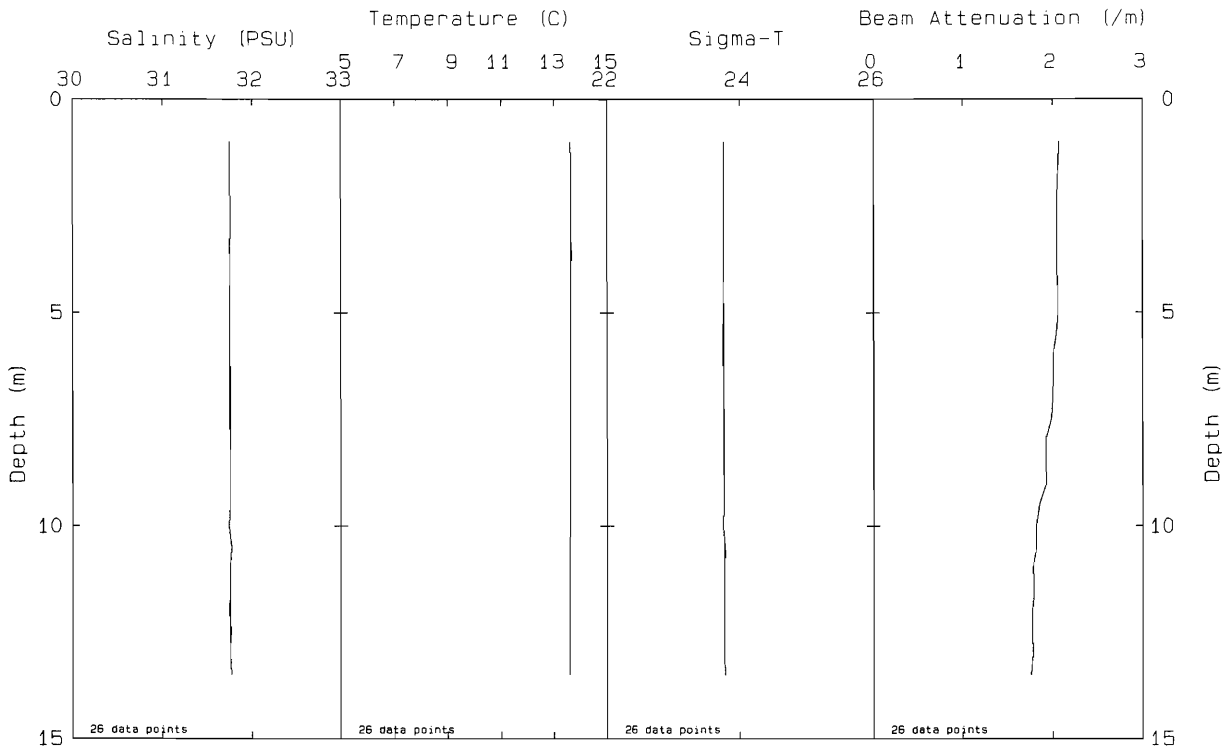


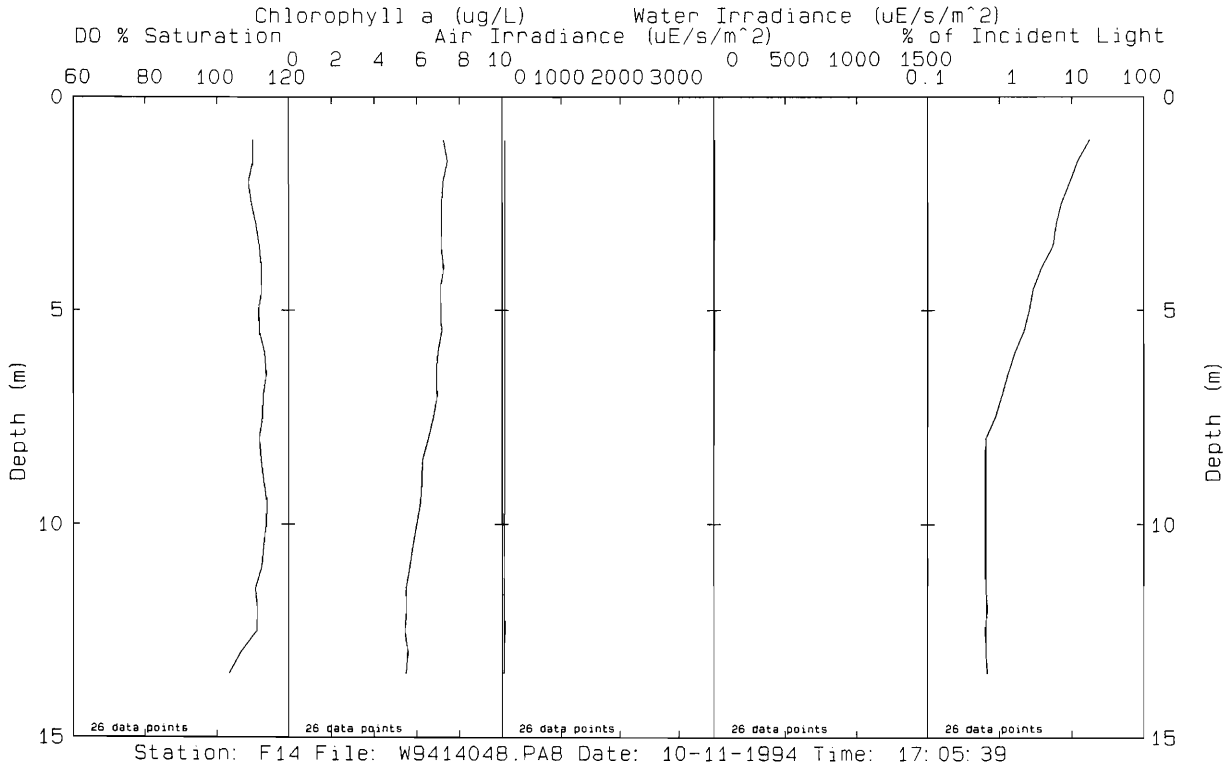
Station: F12 File: W9414088.PAB Date: 10-12-1994 Time: 15:05:06



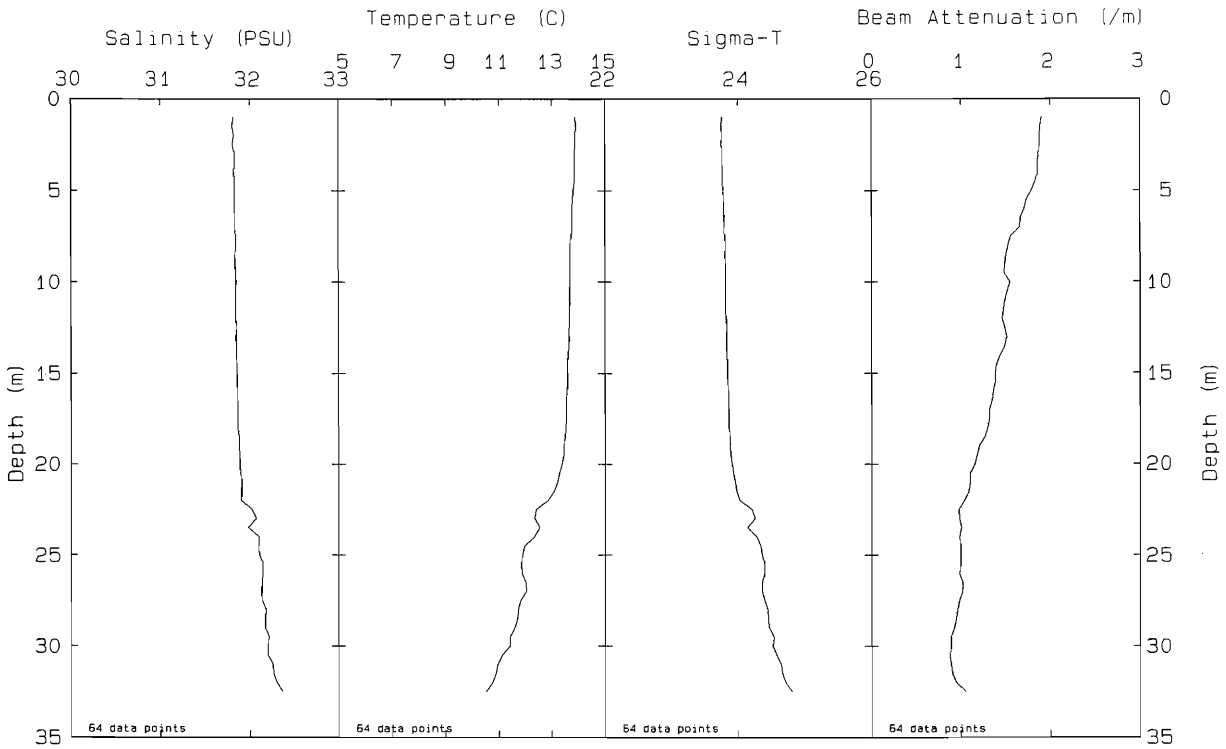


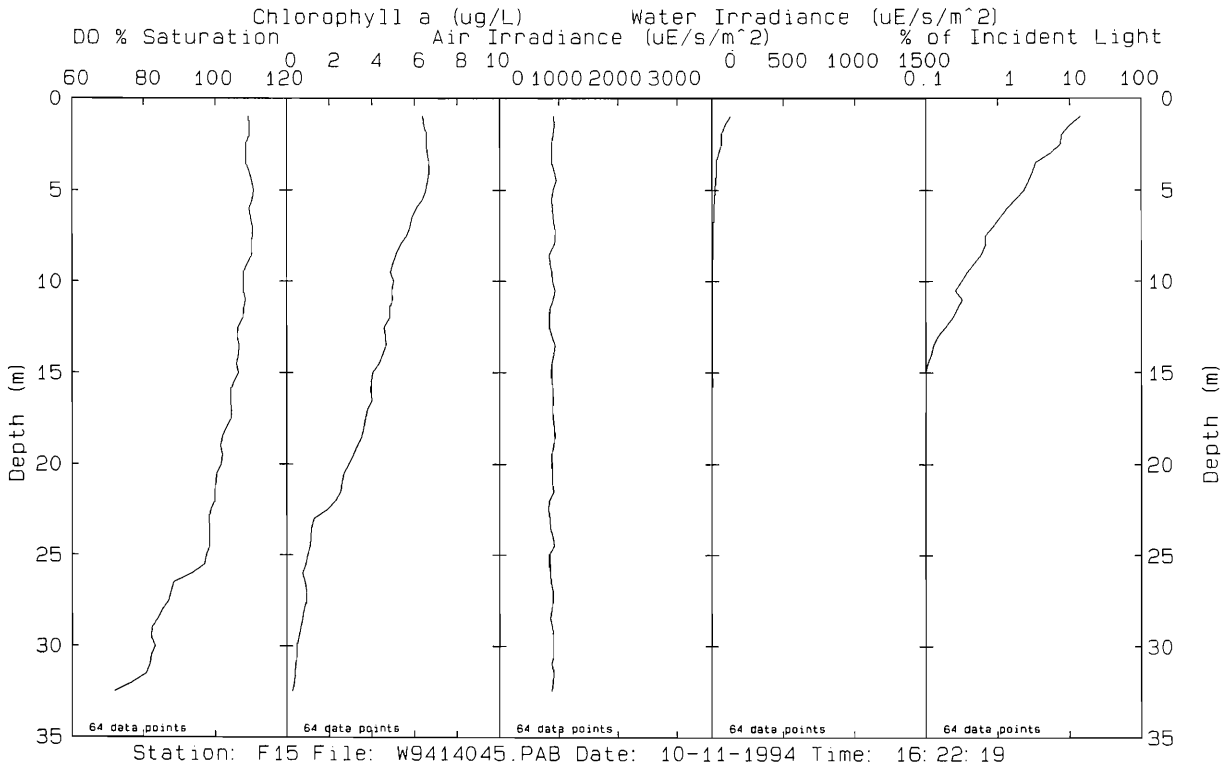
Station: F13P File: W9414128.PAB Date: 10-13-1994 Time: 14:34:46



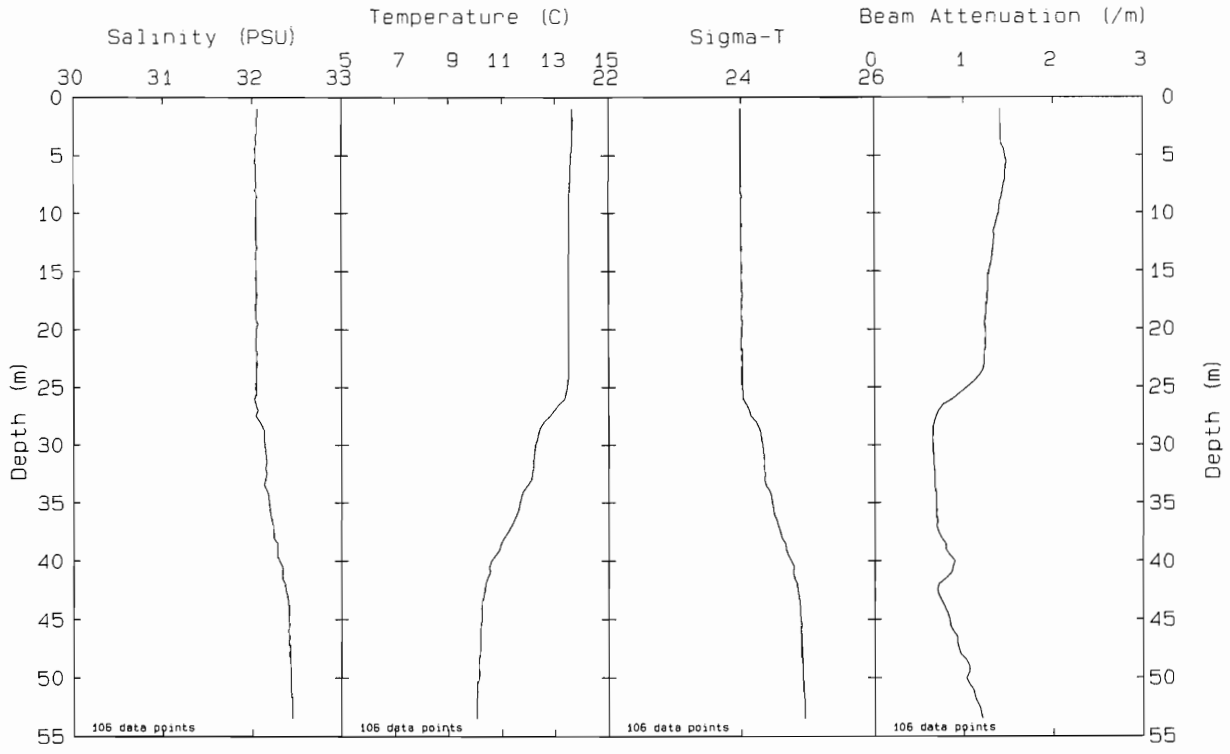


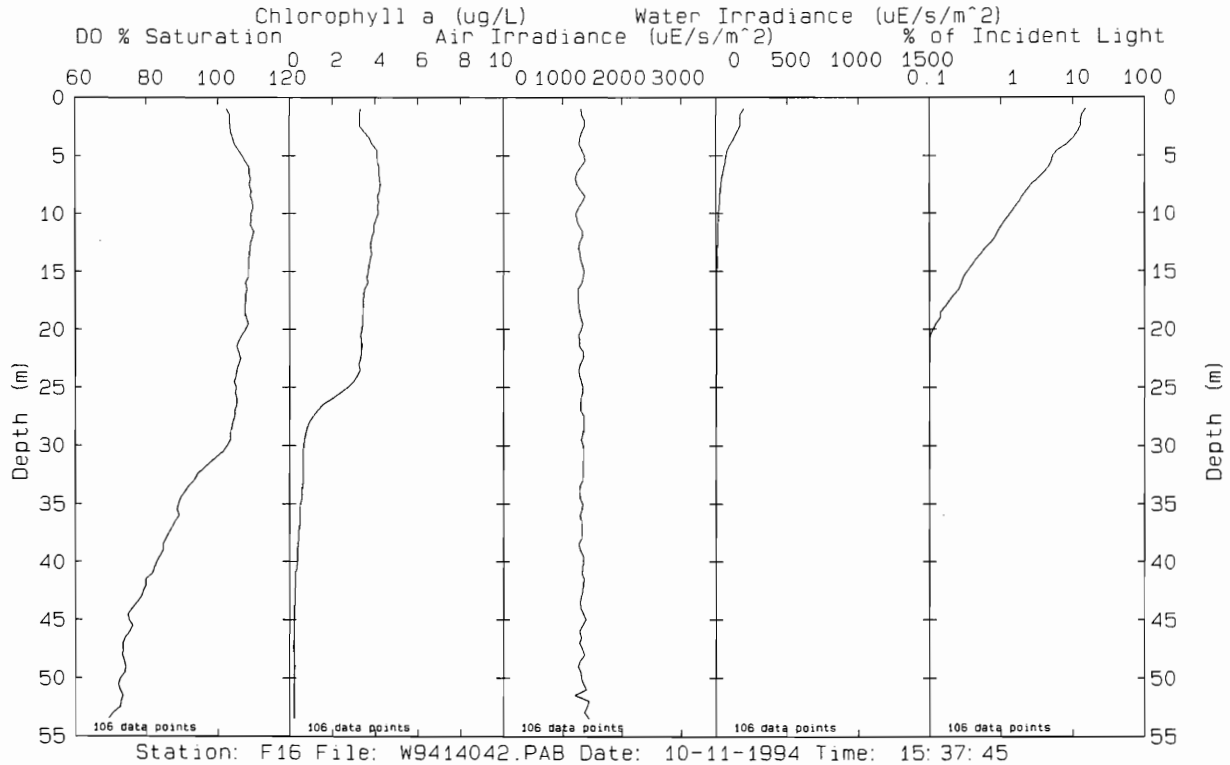
Station: F14 File: W9414048.PA8 Date: 10-11-1994 Time: 17:05:39



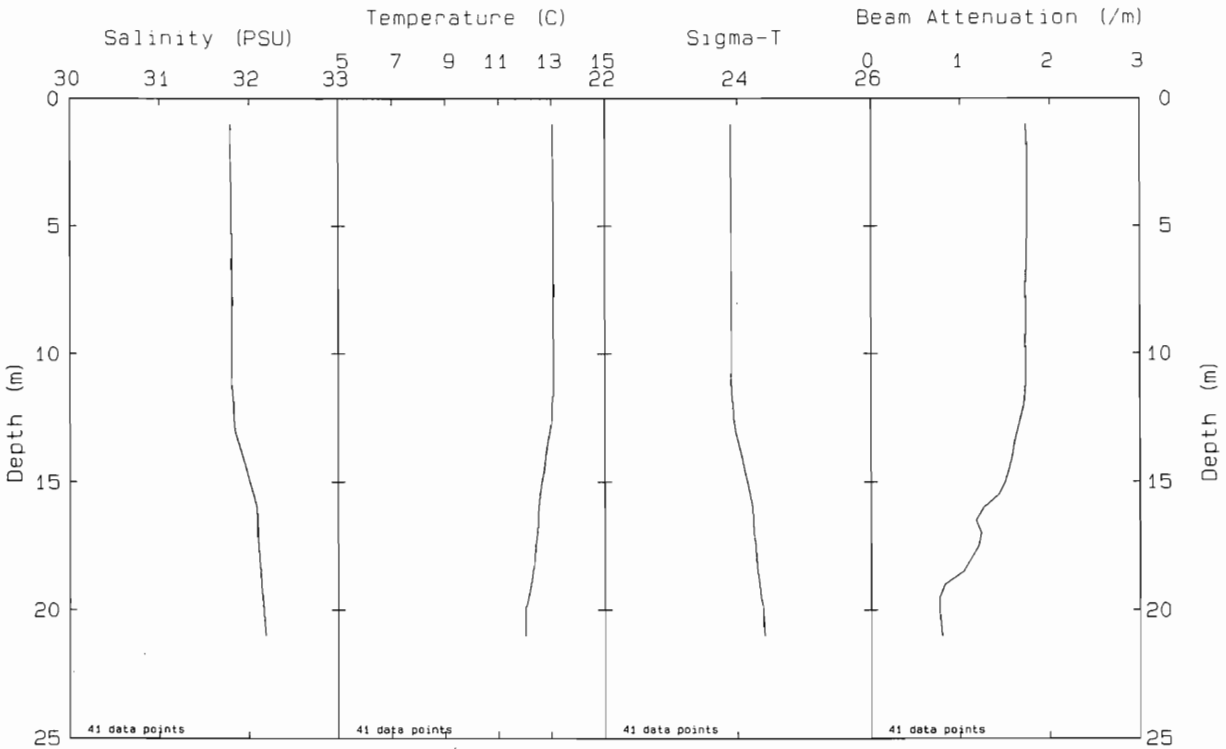


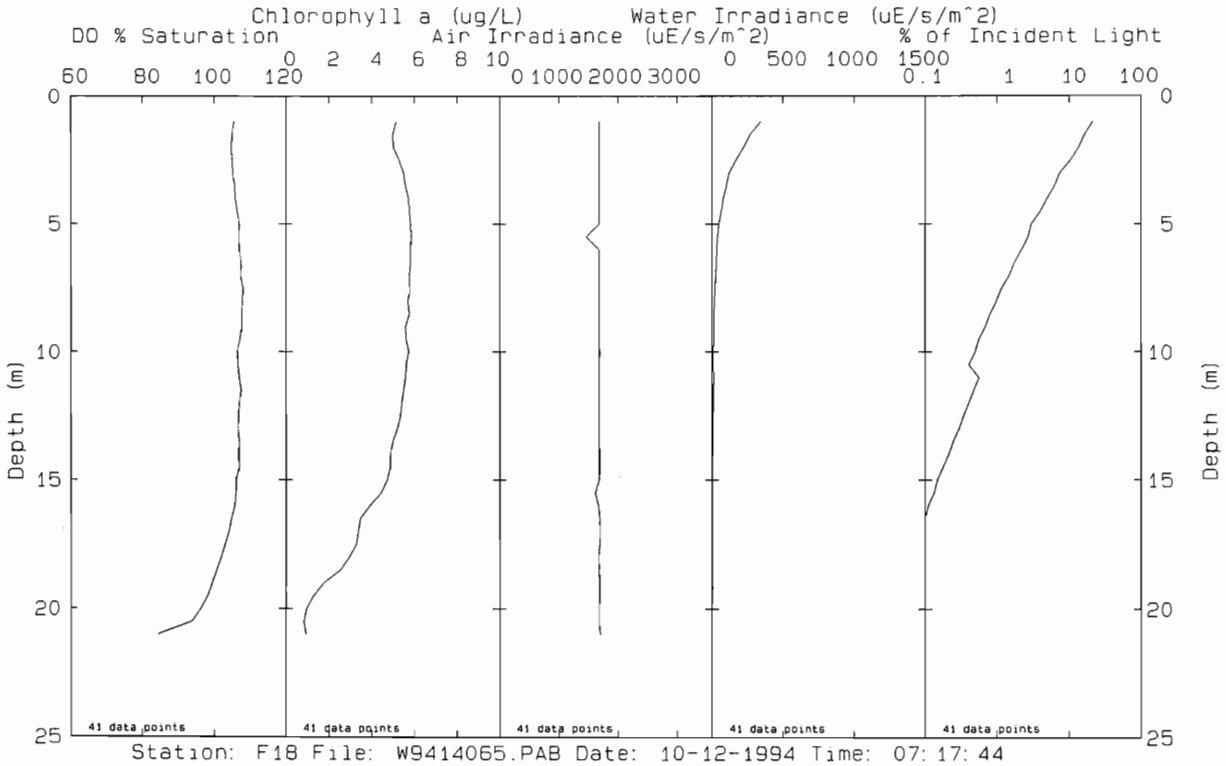
Station: F15 File: W9414045.PAB Date: 10-11-1994 Time: 16:22:19



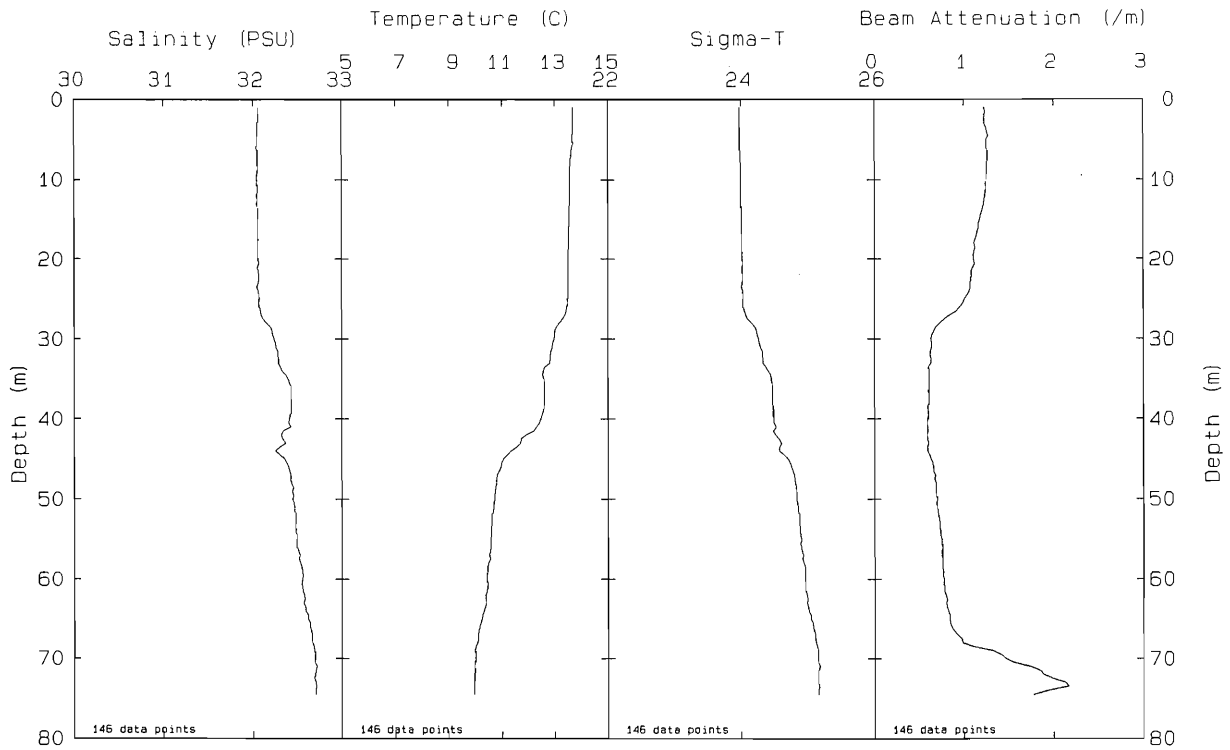


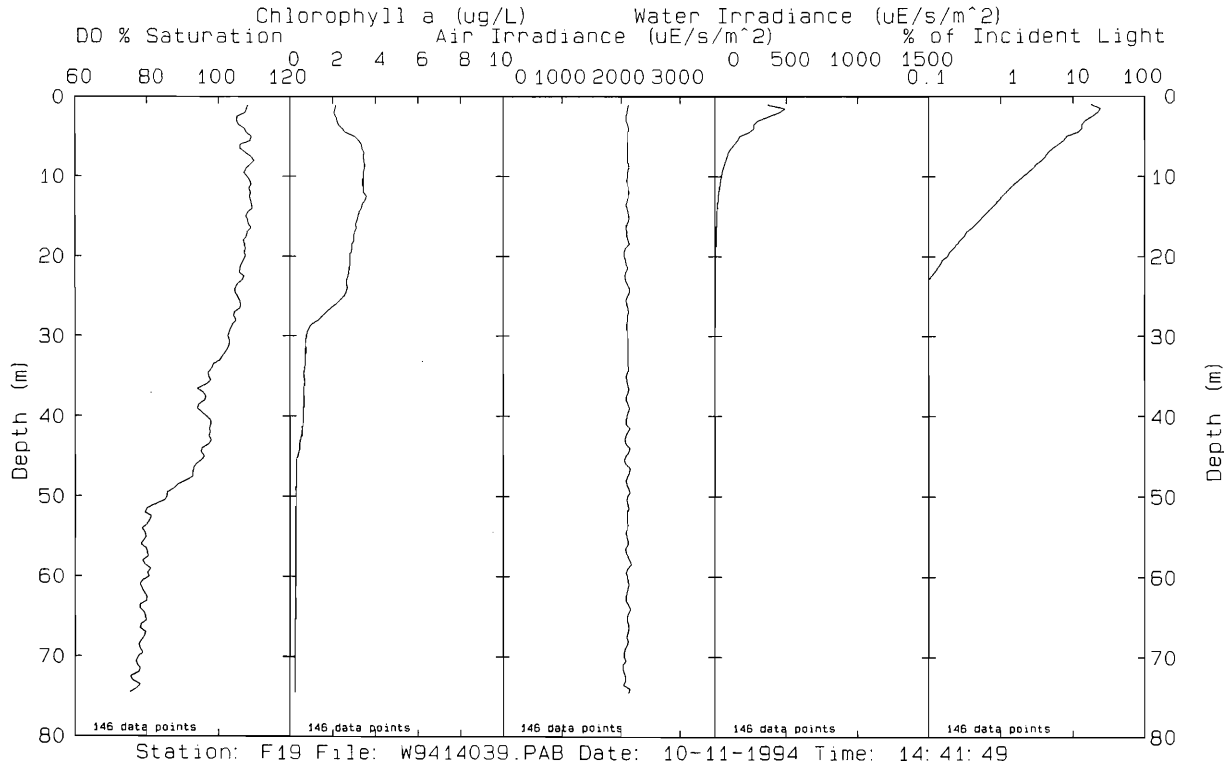
Station: F16 File: W9414042.PAB Date: 10-11-1994 Time: 15:37:45

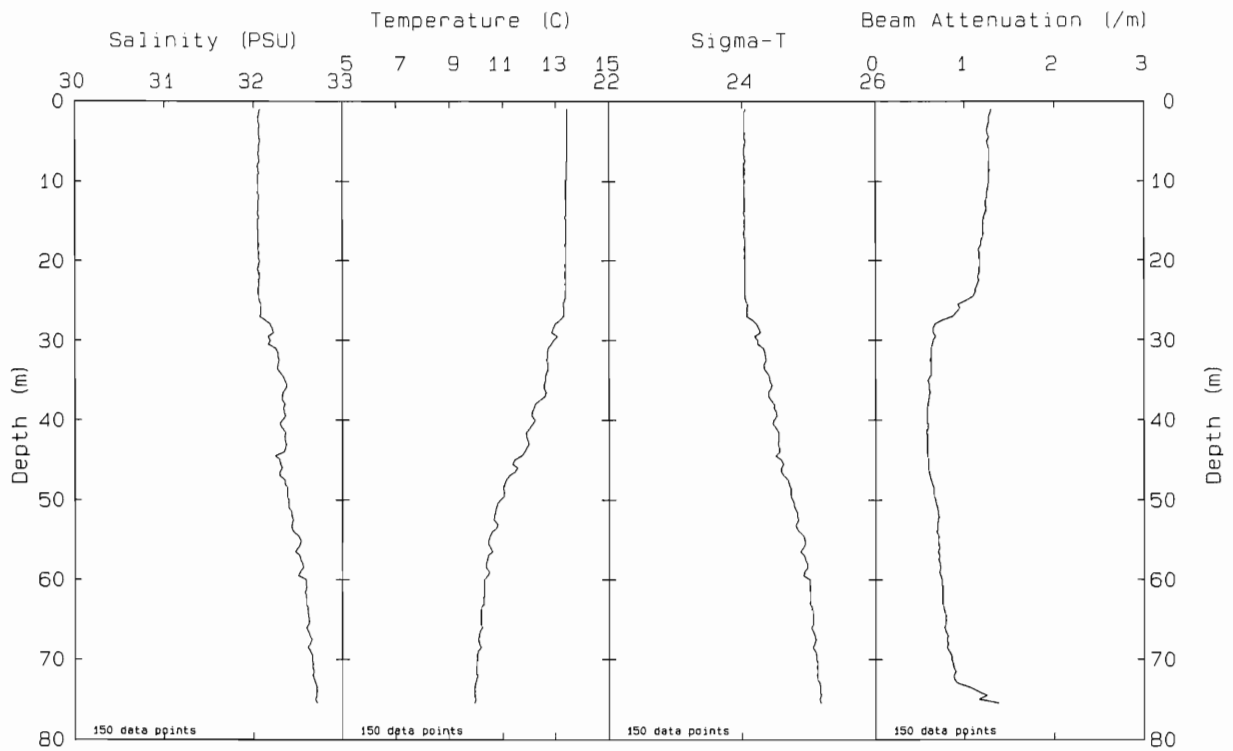


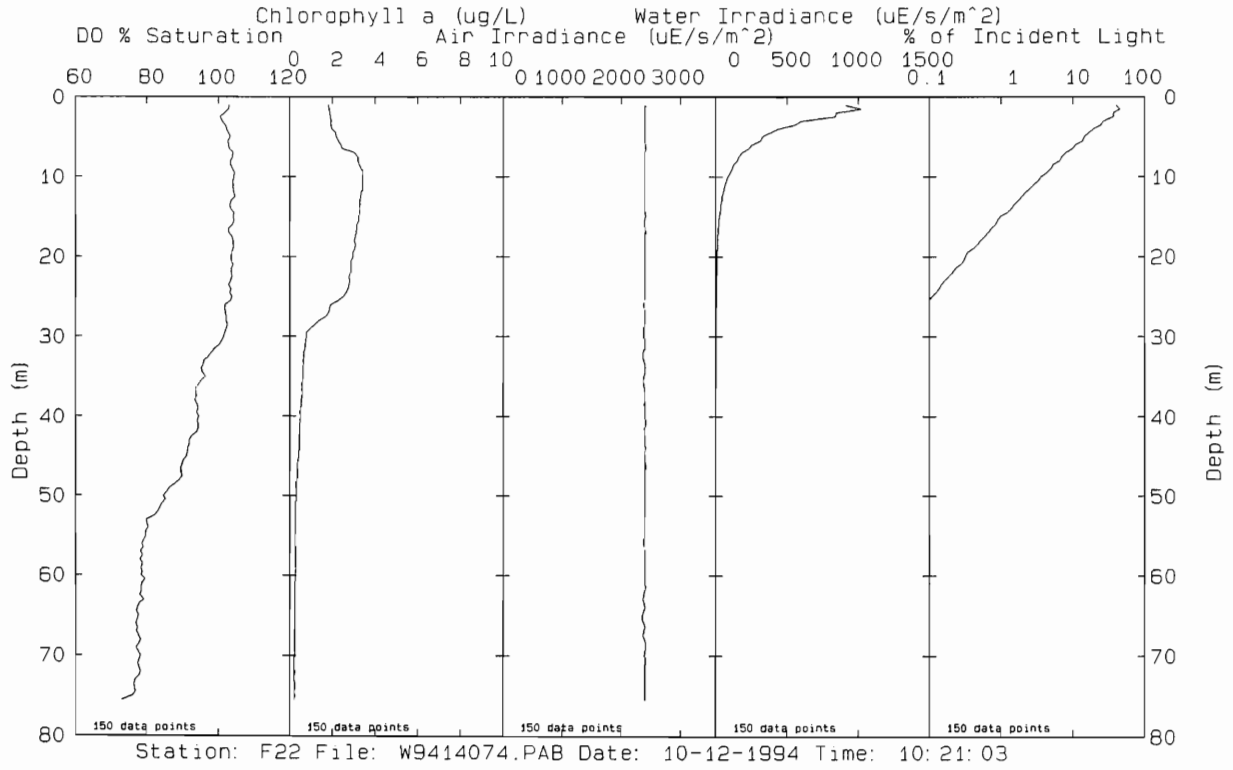


Station: F18 File: W9414065.PAB Date: 10-12-1994 Time: 07:17:44

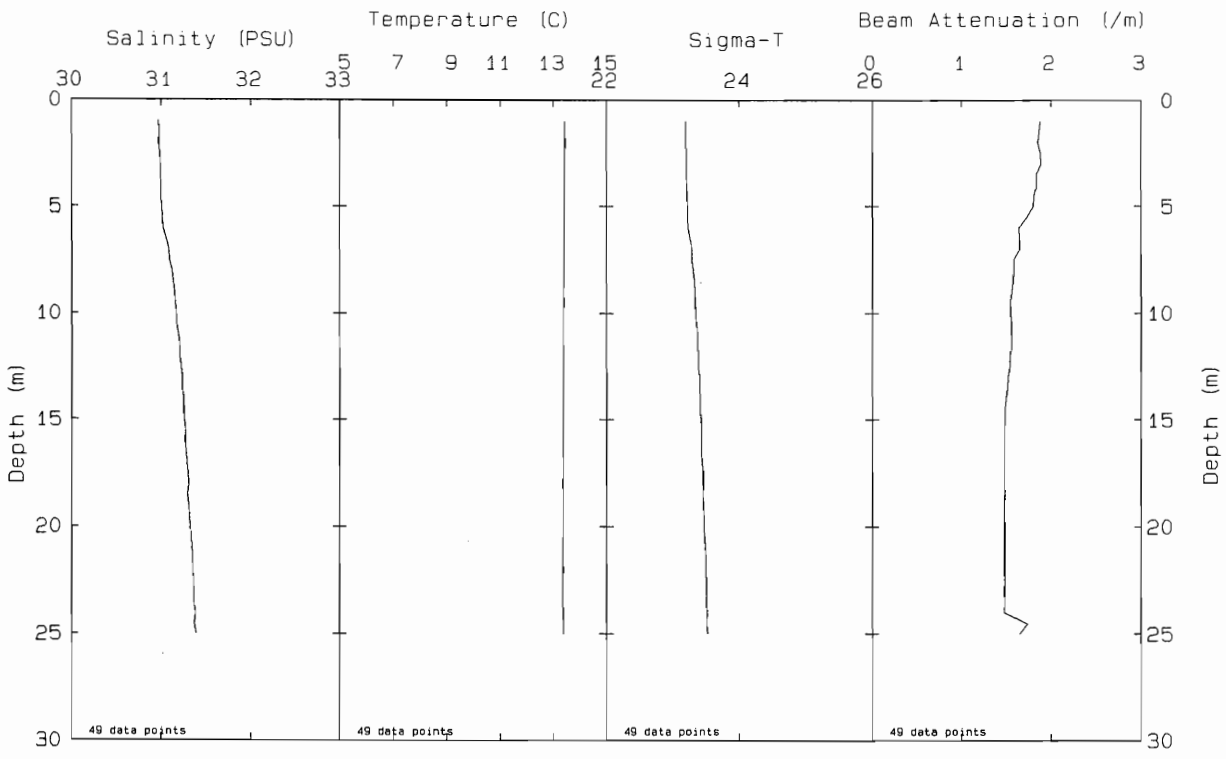

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 10 20 30 40 50 60 70 80
146 data points
146 data points
146 data points
146 data points

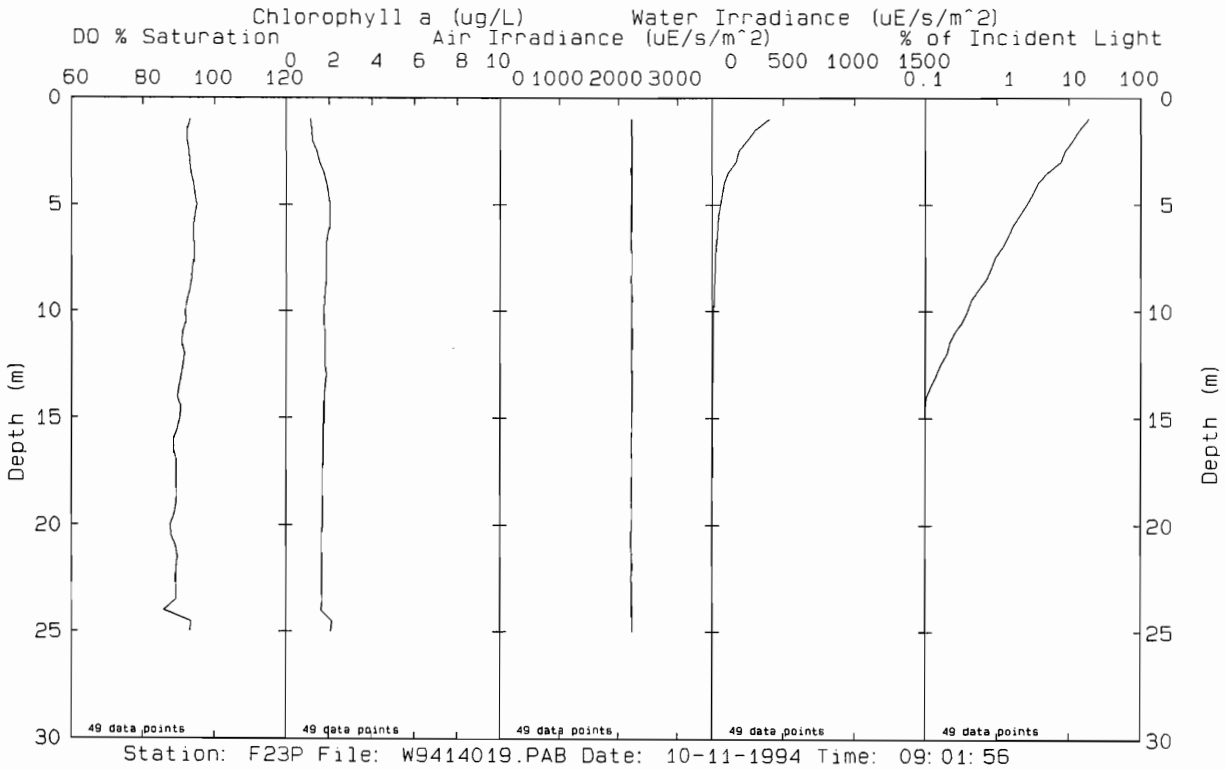

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 10 20 30 40 50 60 70 80
146 data points
146 data points
146 data points
146 data points
146 data points
Station: F19 File: W9414039.PAB Date: 10-11-1994 Time: 14:41:49



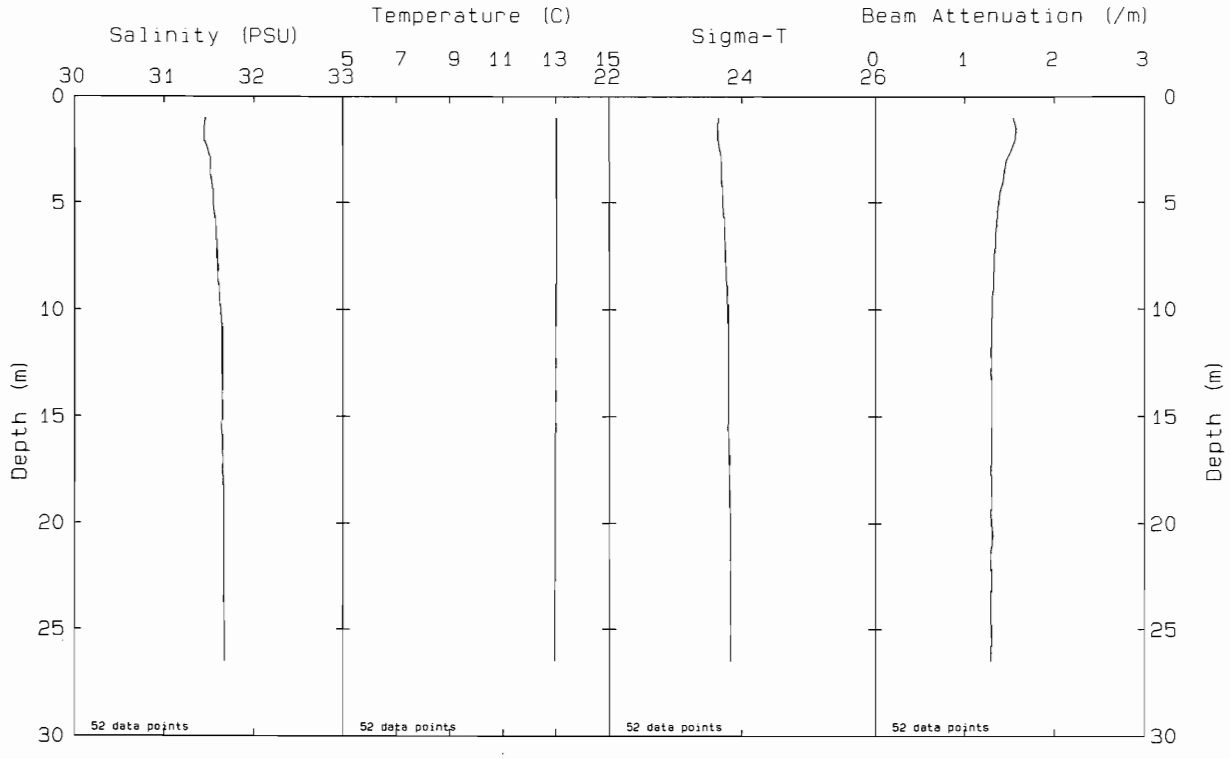


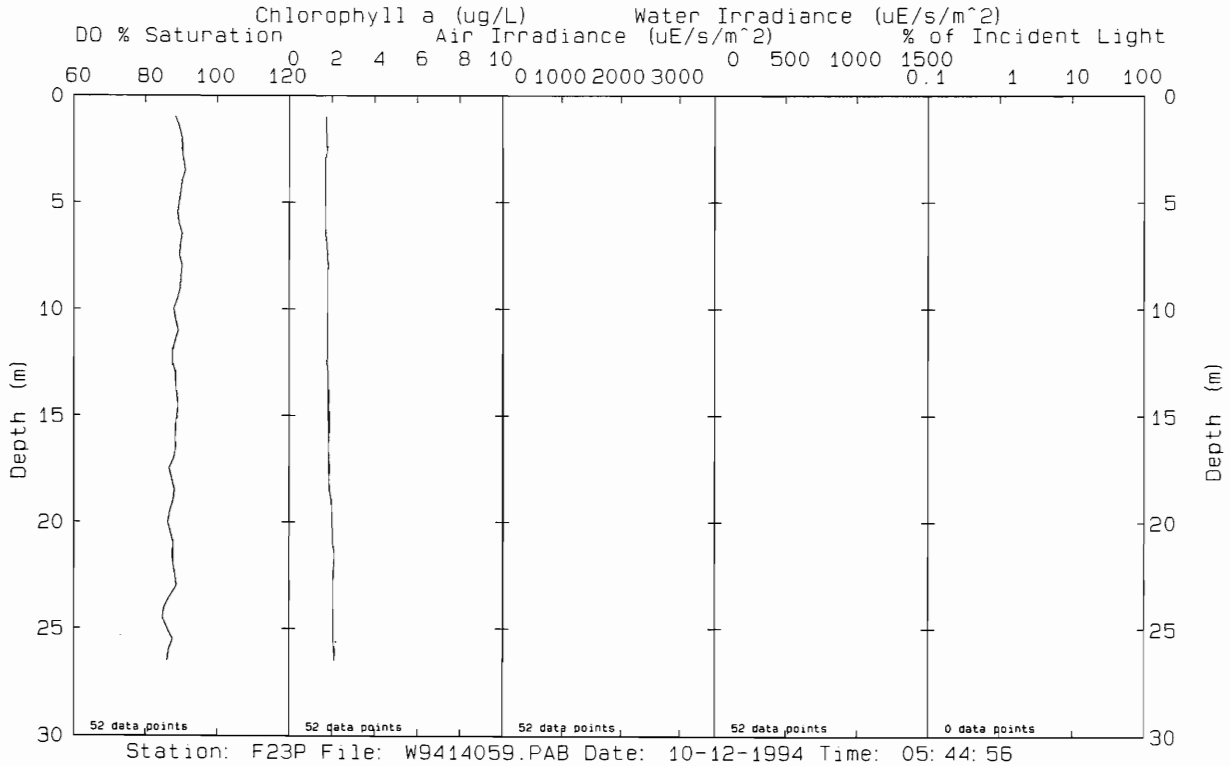
Station: F22 File: W9414074.PAB Date: 10-12-1994 Time: 10:21:03



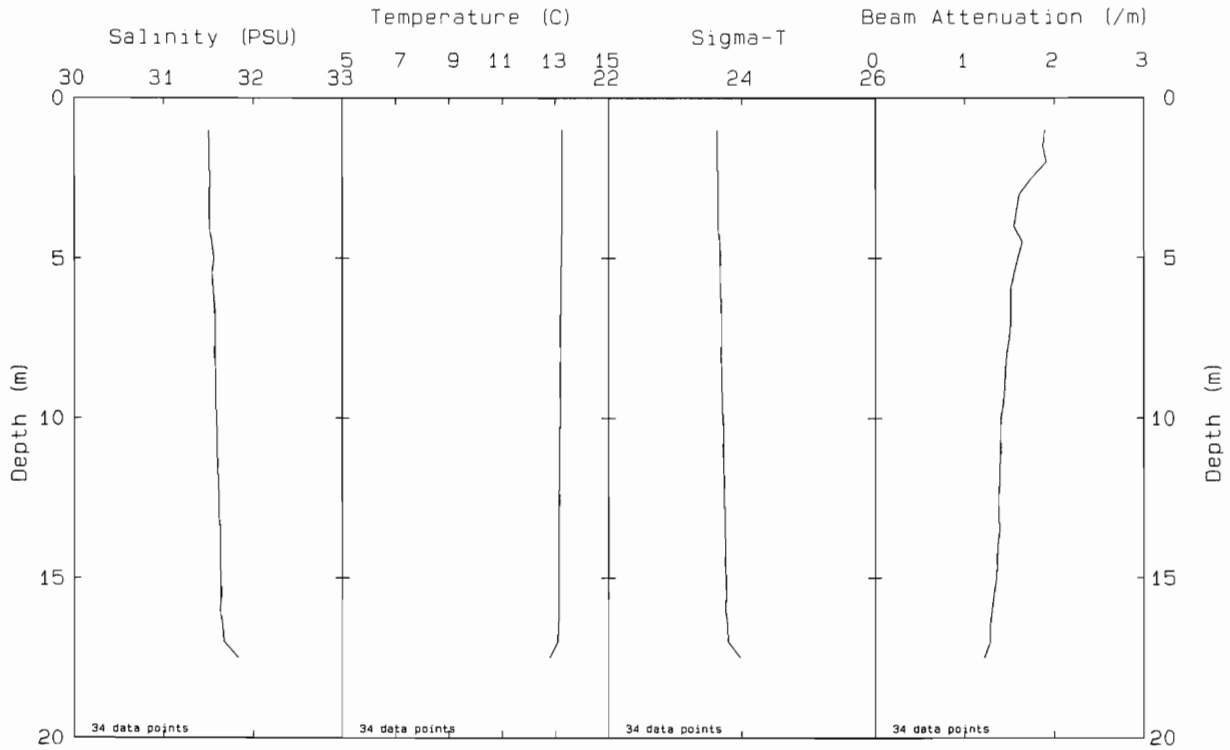


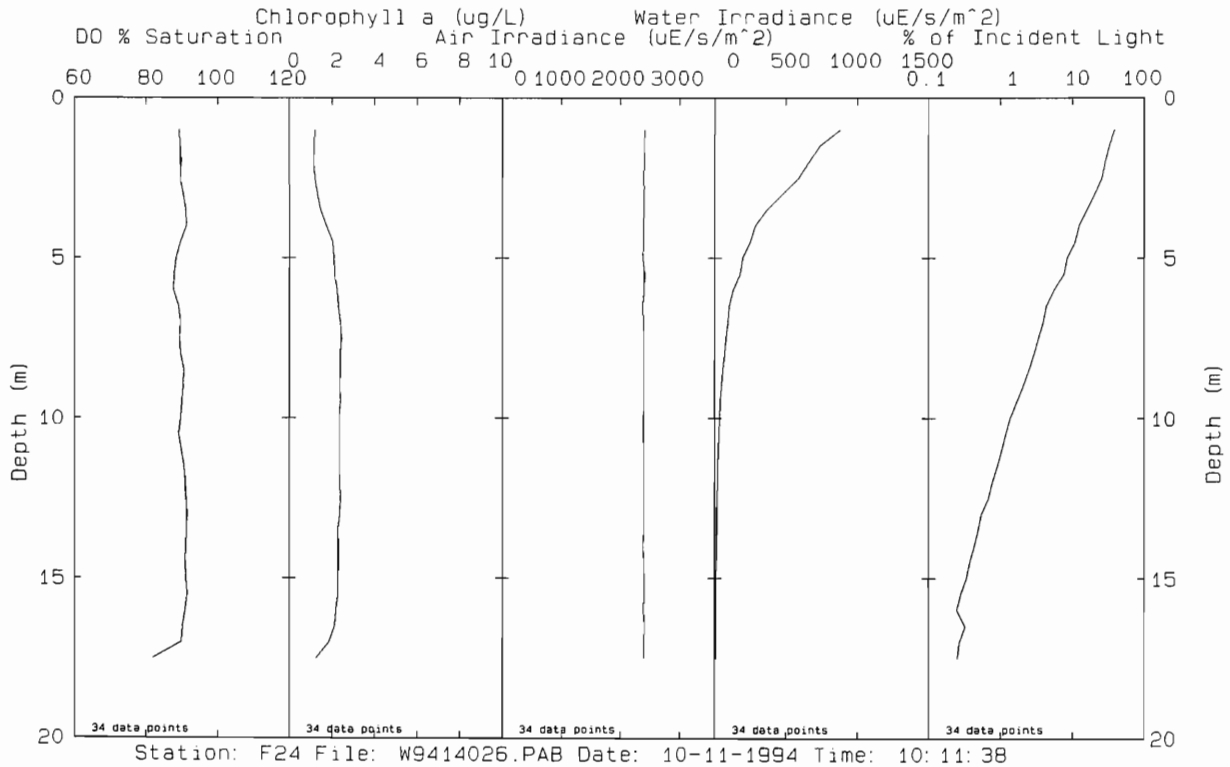
Station: F23P File: W9414019.PAB Date: 10-11-1994 Time: 09:01:56



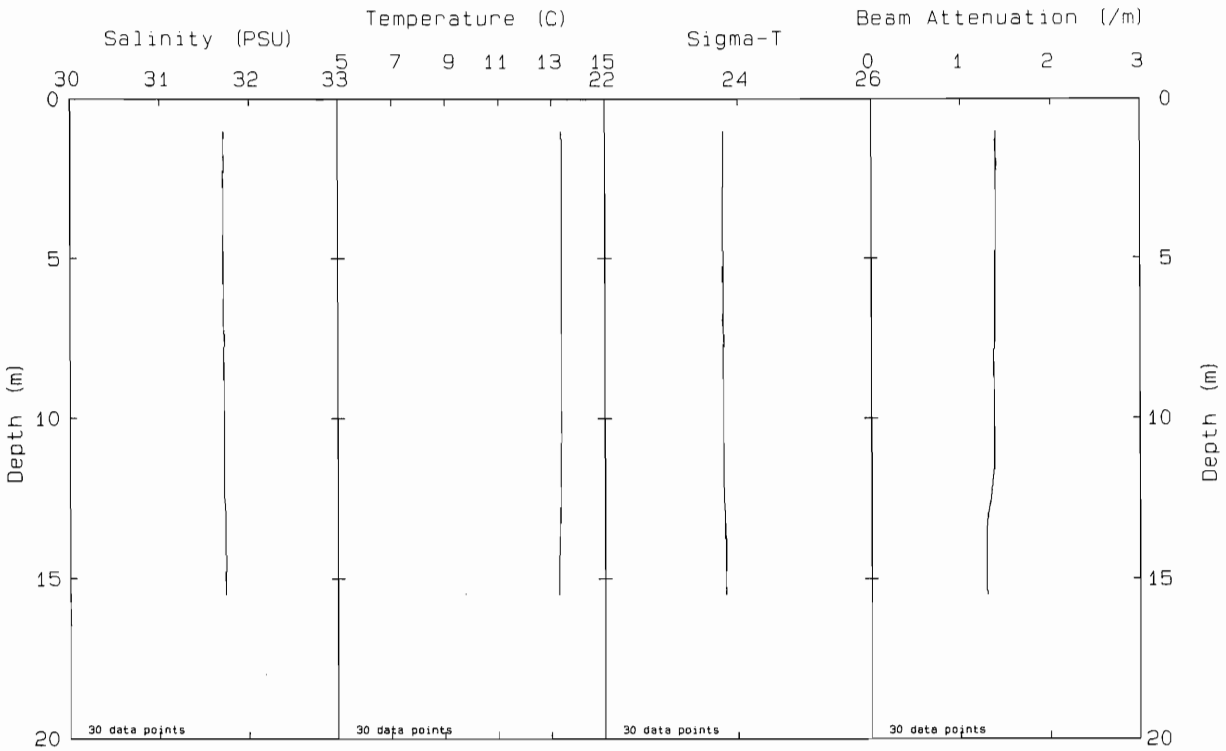


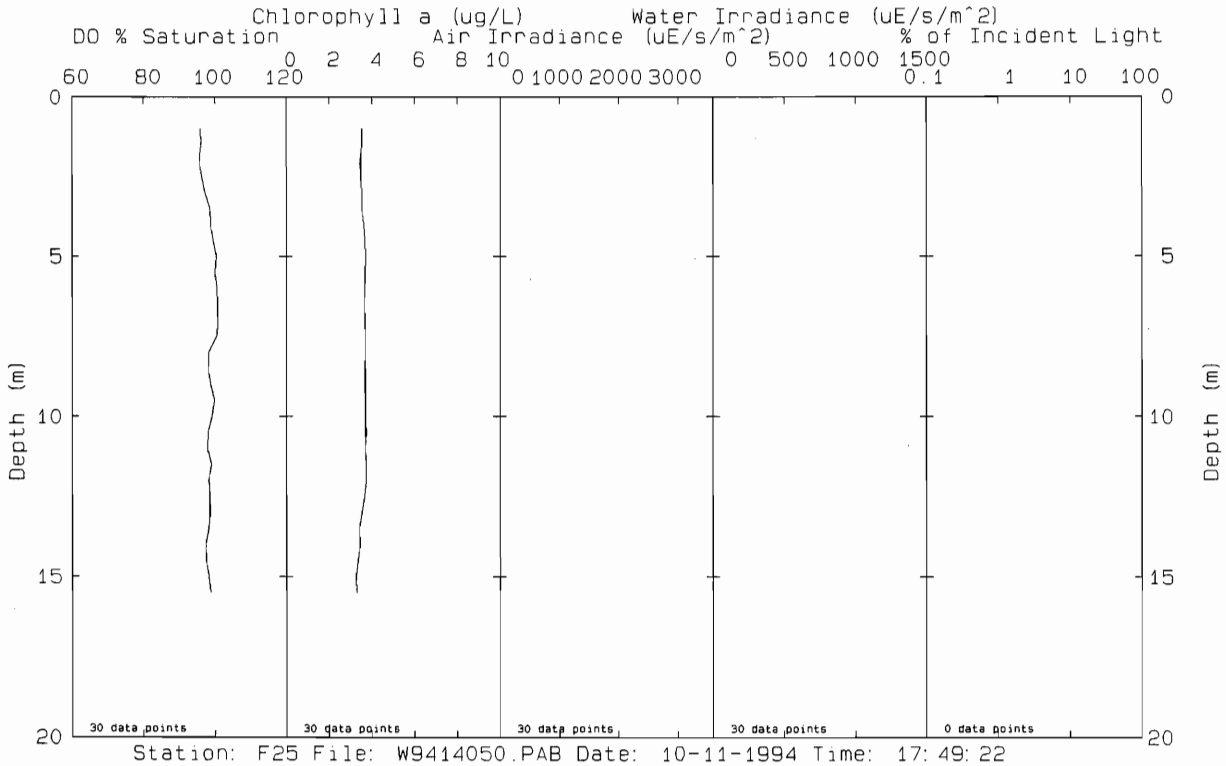
Station: F23P File: W9414059.PAB Date: 10-12-1994 Time: 05:44:56



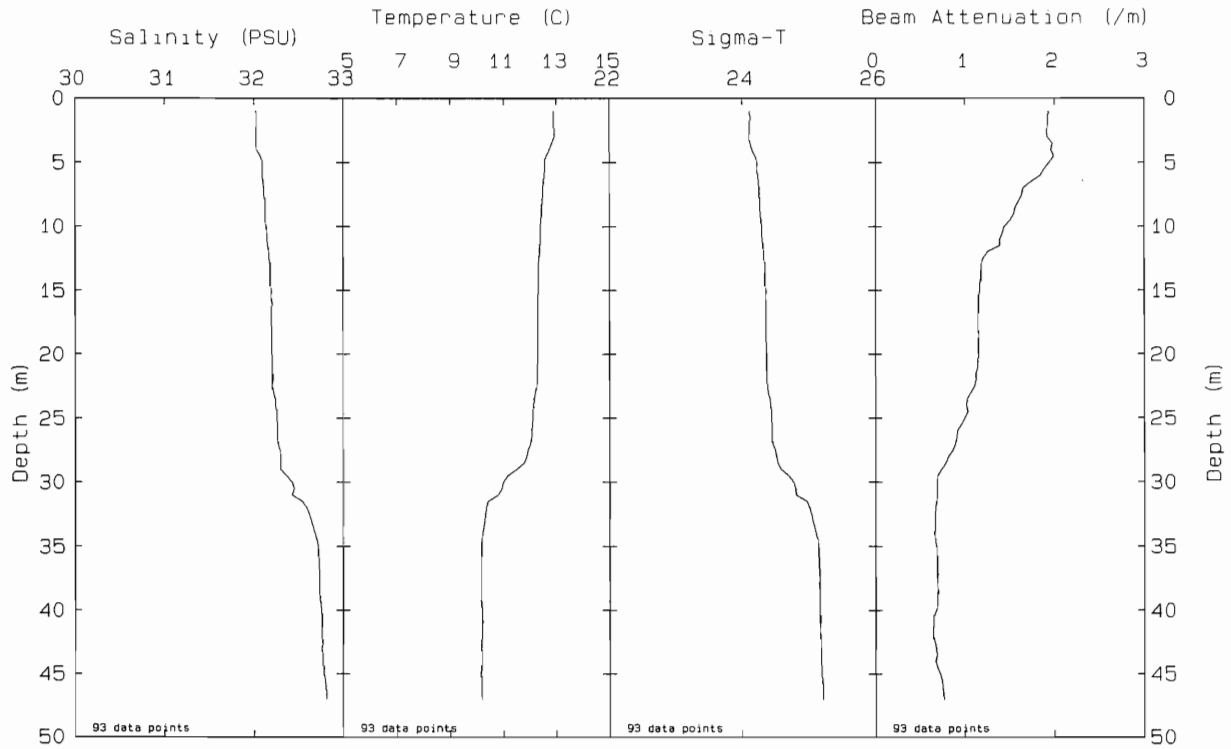


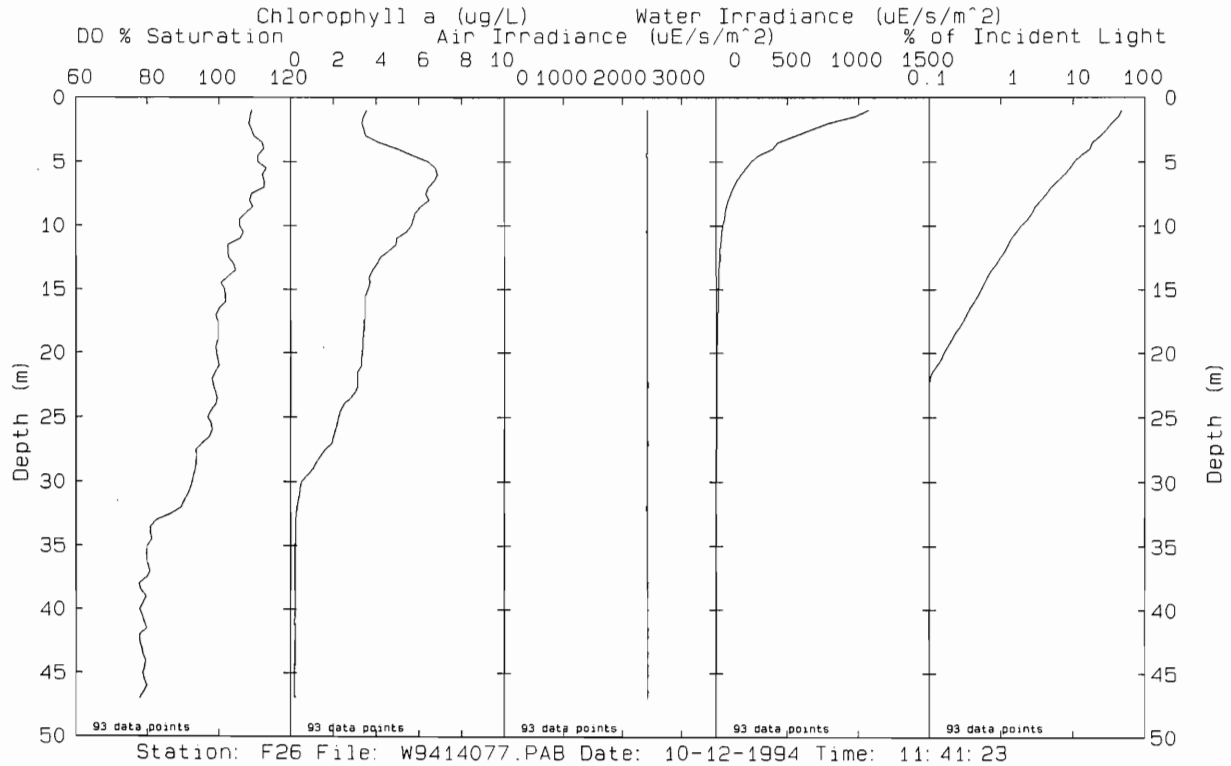
Station: F24 File: W9414026.PAB Date: 10-11-1994 Time: 10:11:38



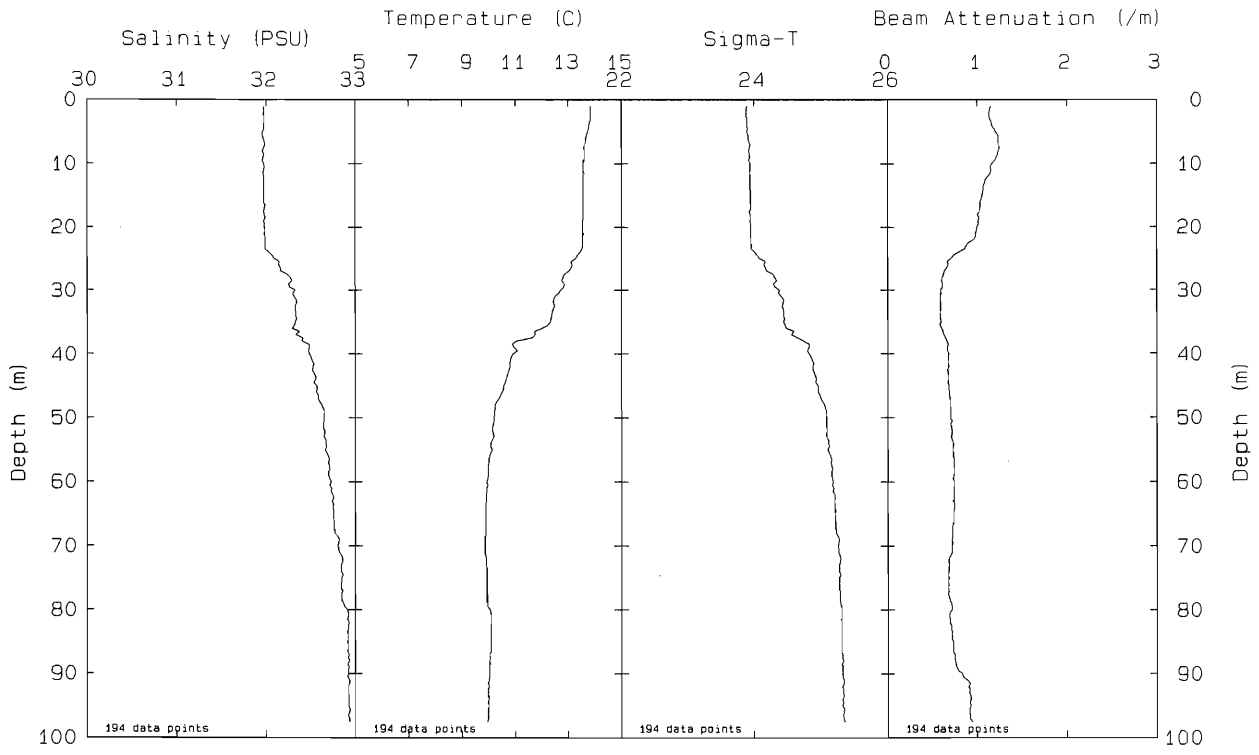


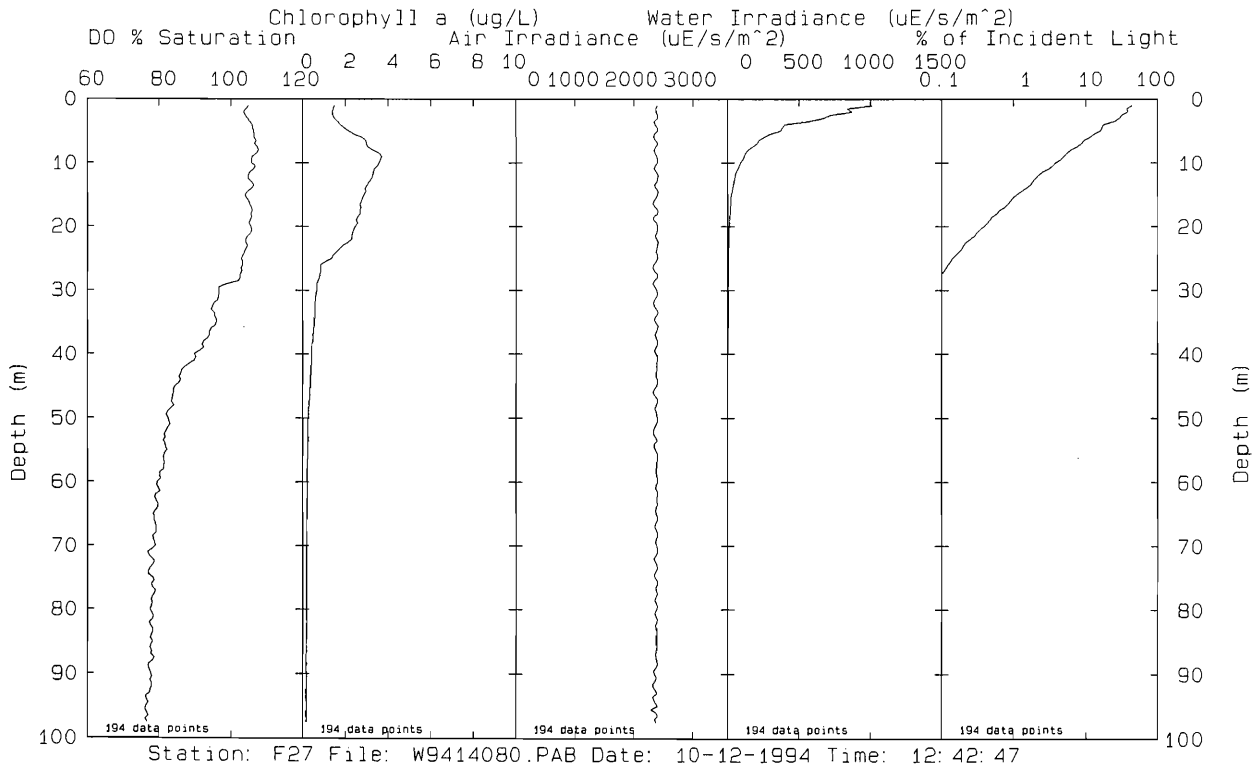
Station: F25 File: W9414050.PAB Date: 10-11-1994 Time: 17:49:22



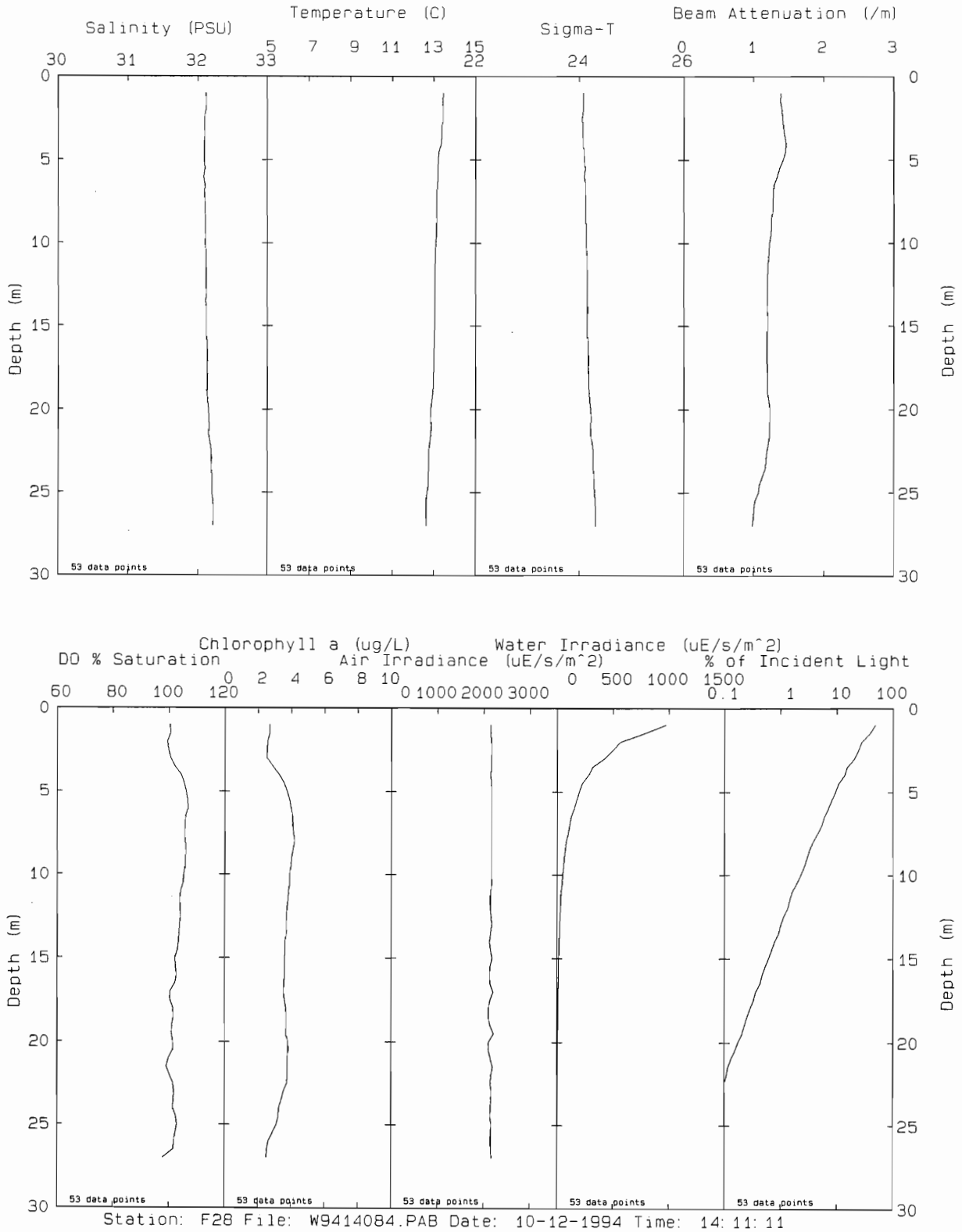


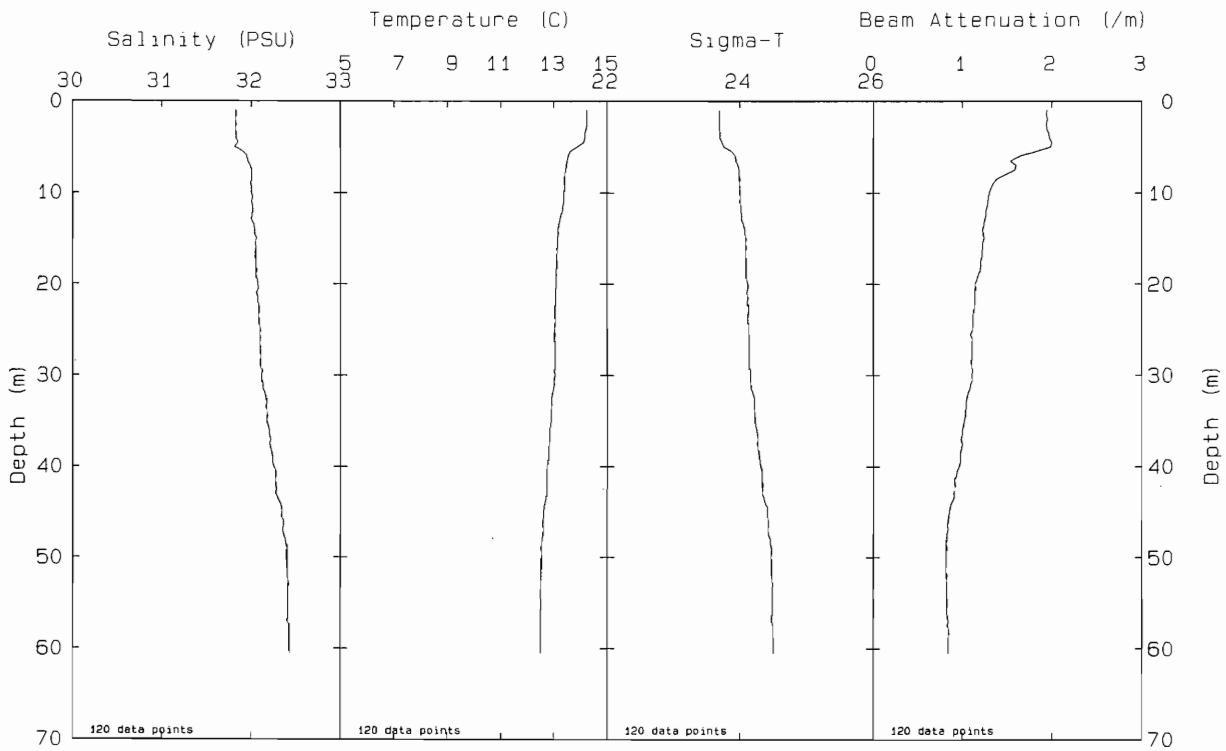
Station: F26 File: W9414077.PAB Date: 10-12-1994 Time: 11:41:23

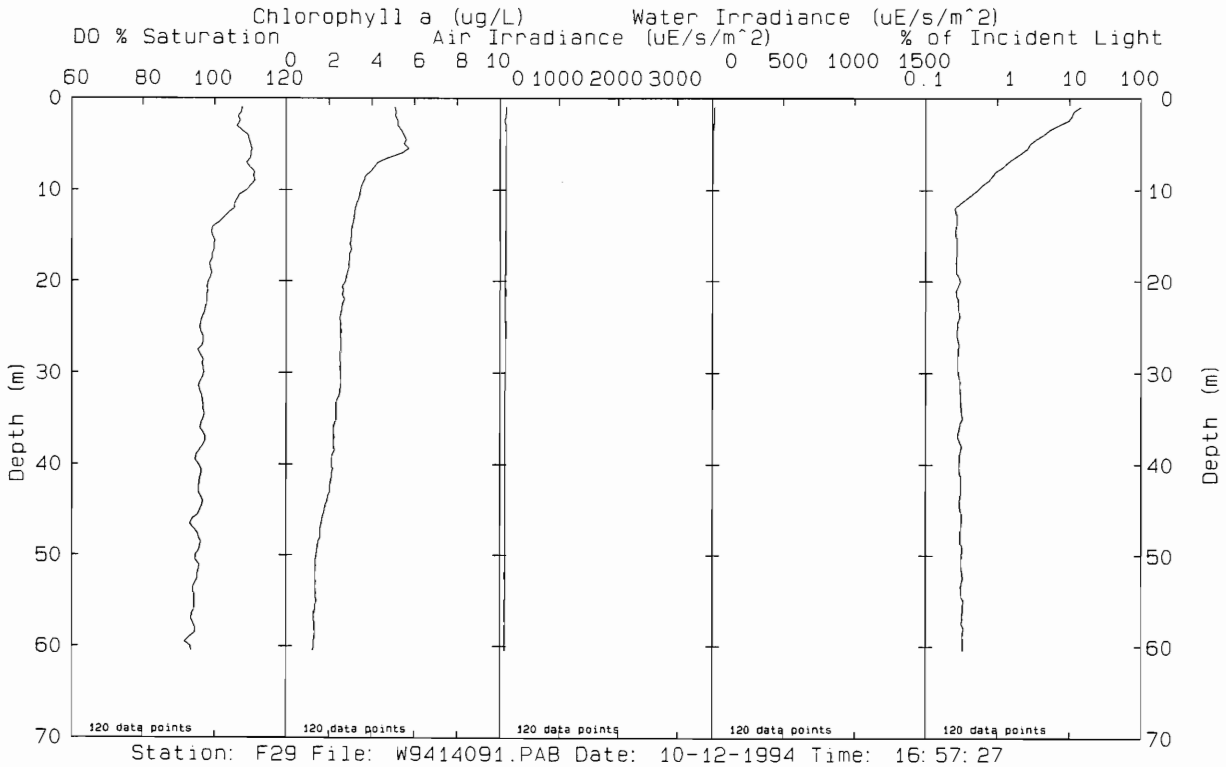




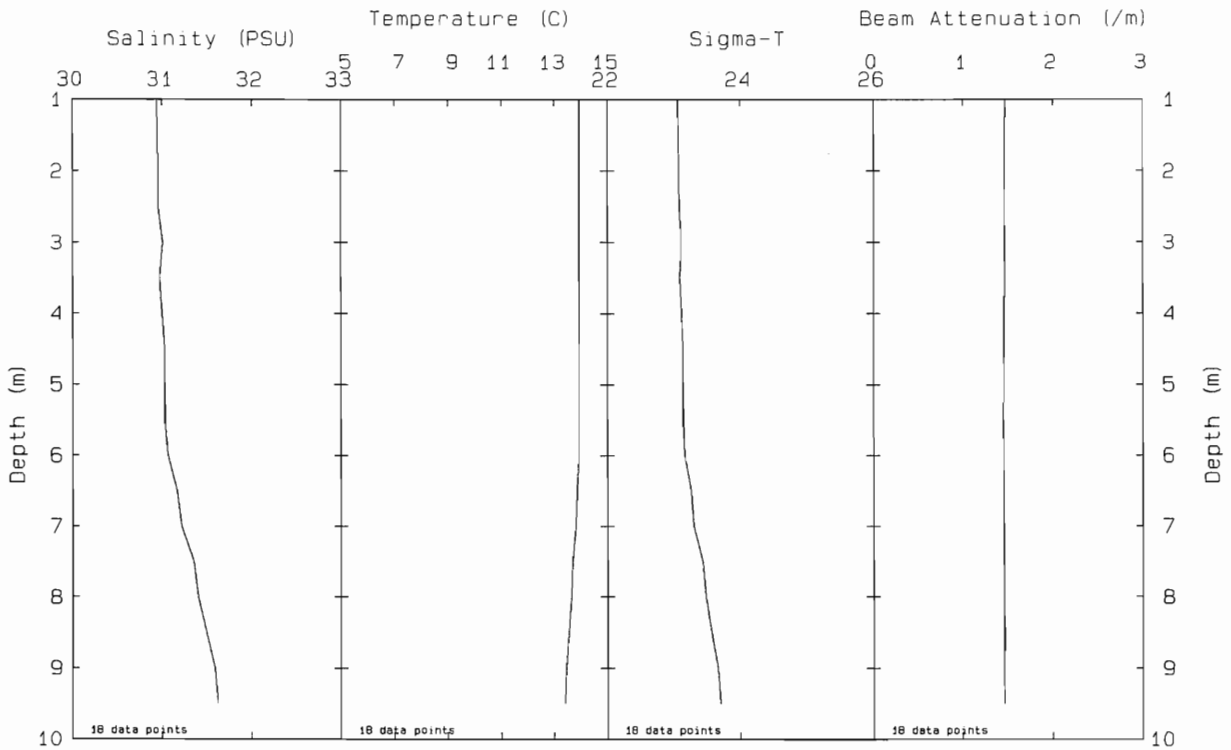
Station: F27 File: W9414080.PAB Date: 10-12-1994 Time: 12:42:47

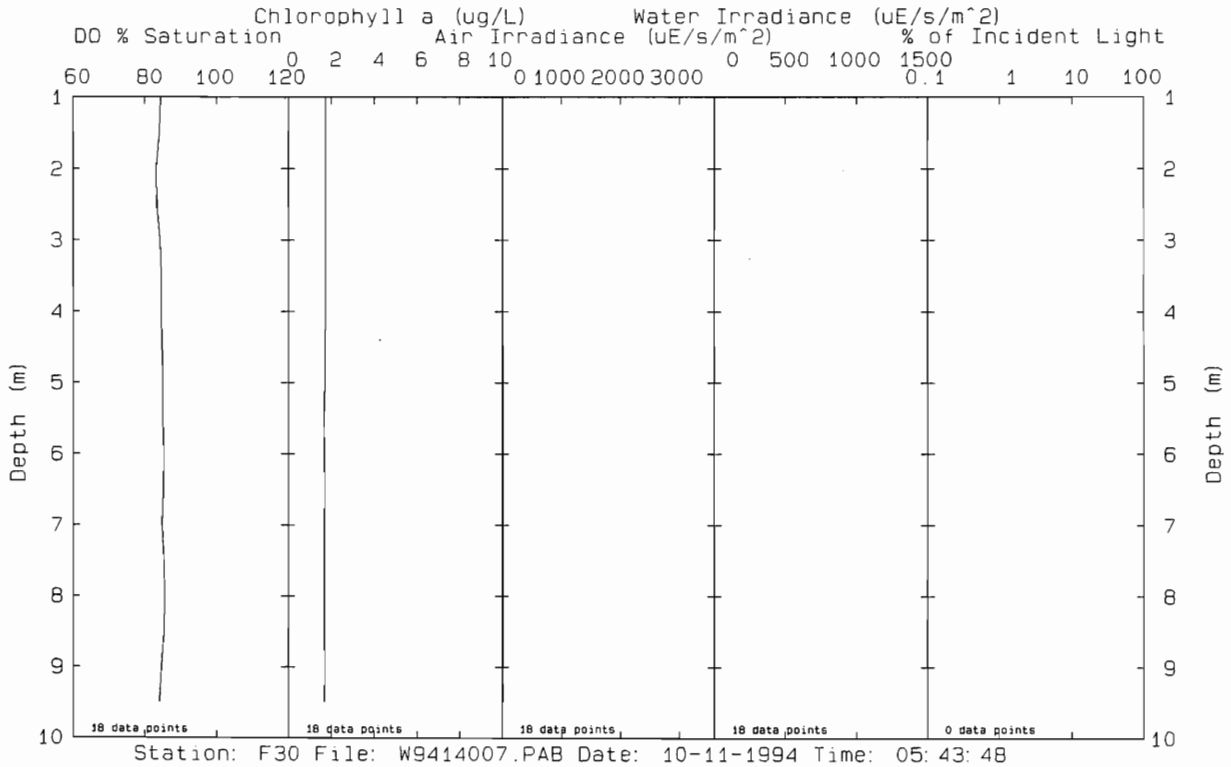

Salinity (PSU)
Temperature (C)
Sigma-T
Beam Attenuation (/m)
Depth (m)
53 data points
Chlorophyll a (ug/L)
Water Irradiance (uE/s/m^2)
DO % Saturation
Air Irradiance (uE/s/m^2)
% of Incident Light
Station: F28 File: W9414084.PAB Date: 10-12-1994 Time: 14:11:11



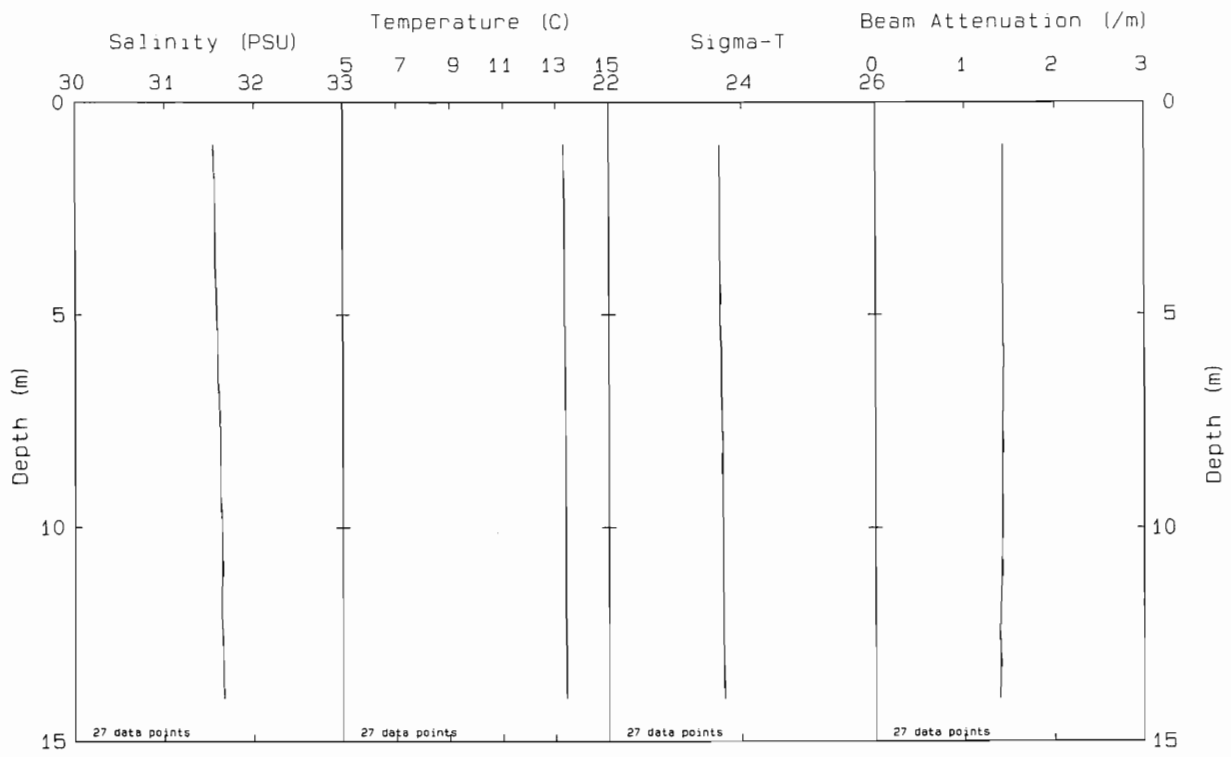


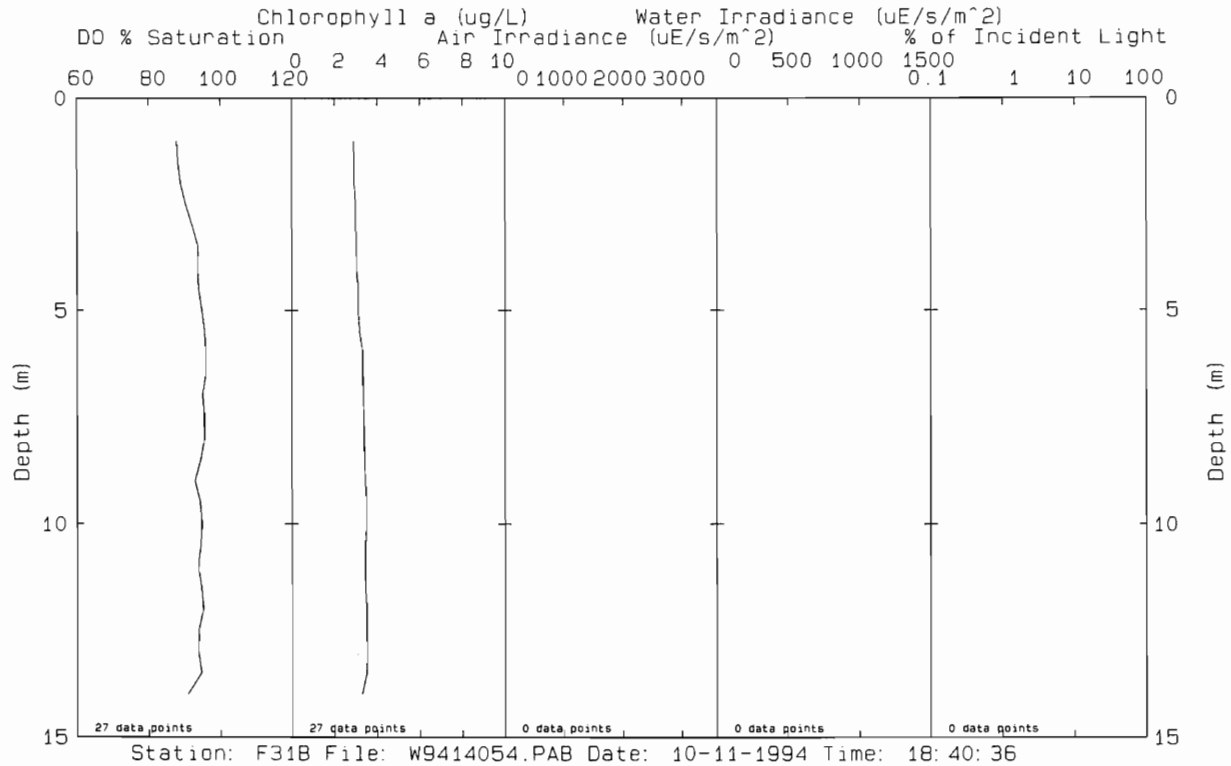
Station: F29 File: W9414091.PAB Date: 10-12-1994 Time: 16:57:27



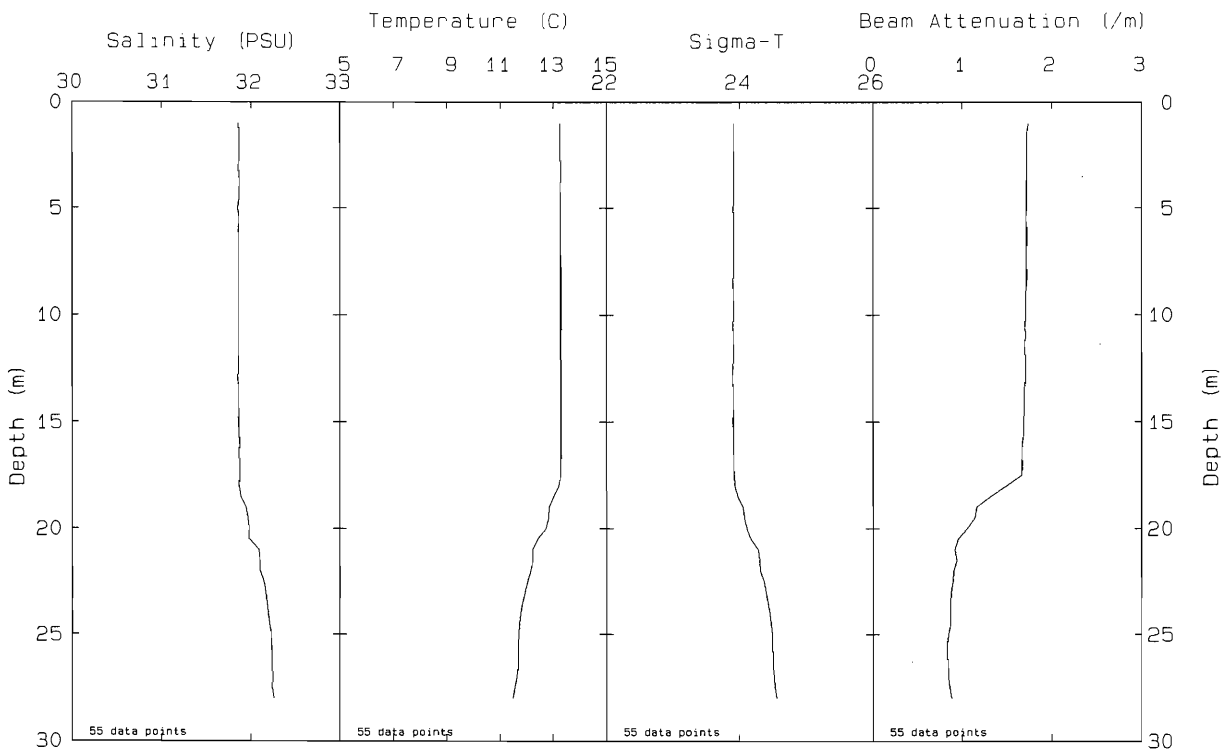


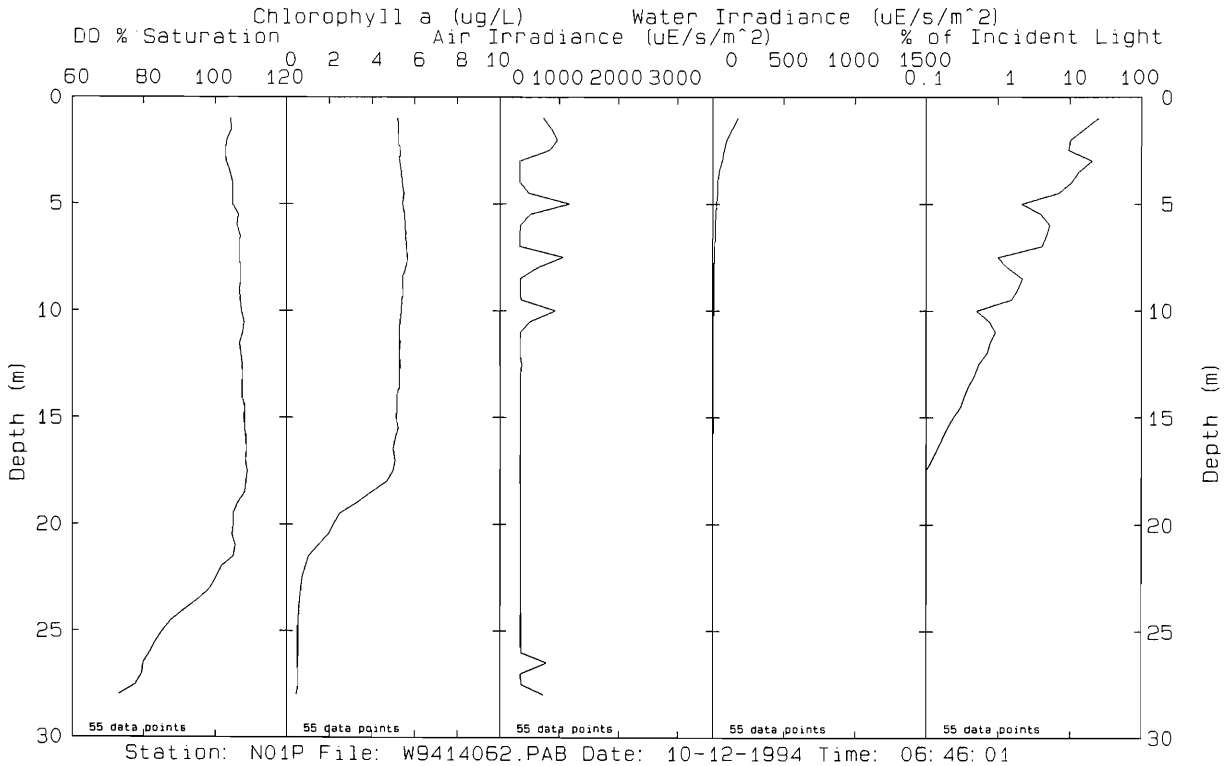
Station: F30 File: W9414007.PAB Date: 10-11-1994 Time: 05:43:48



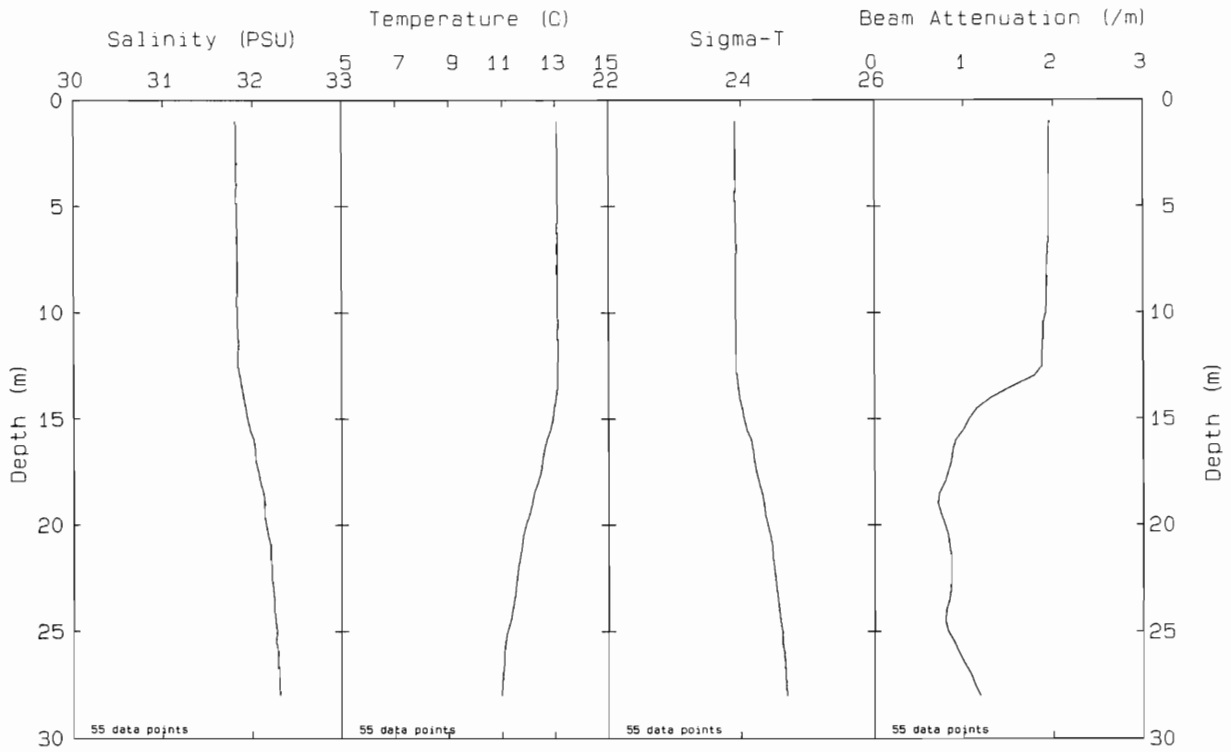


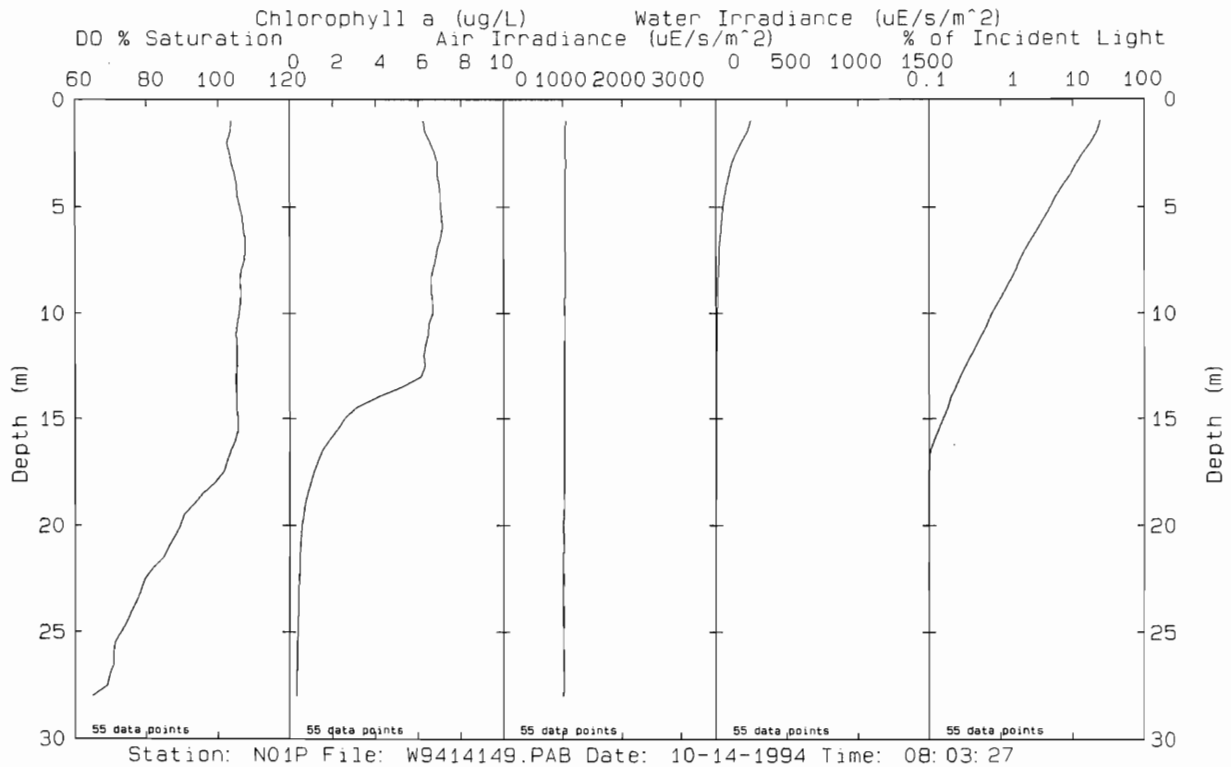
Station: F31B File: W9414054.PAB Date: 10-11-1994 Time: 18:40:36



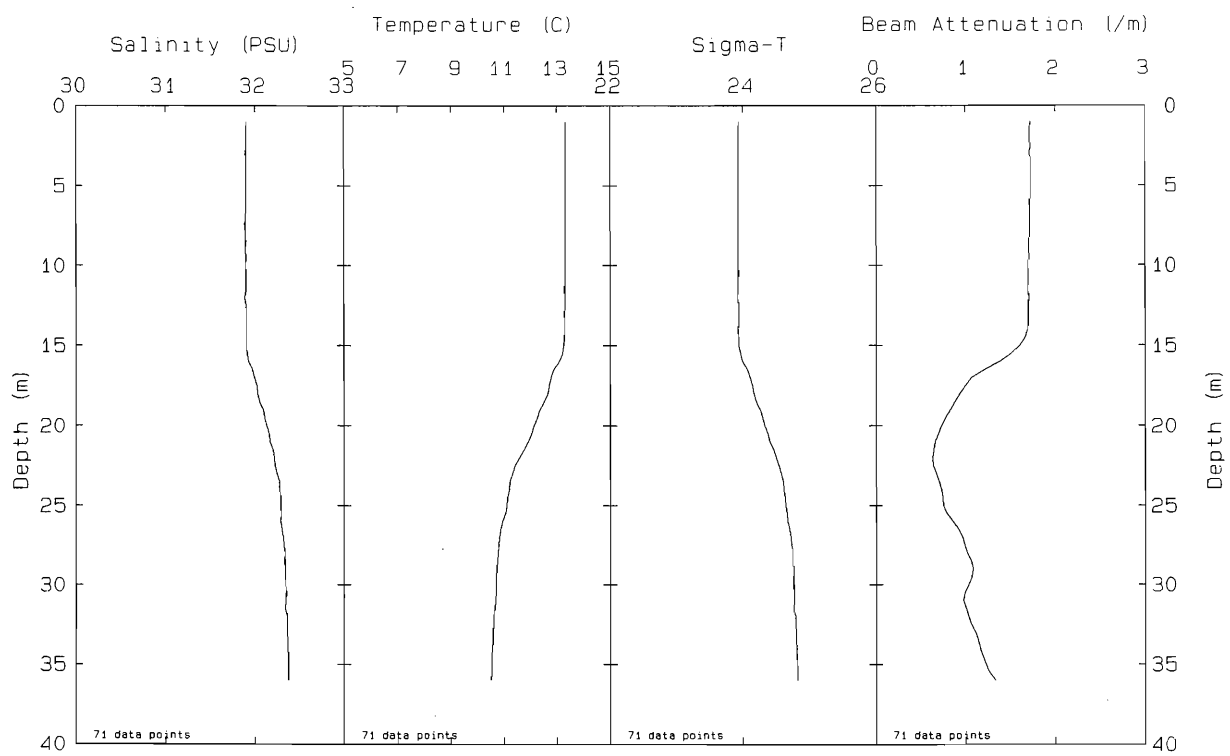


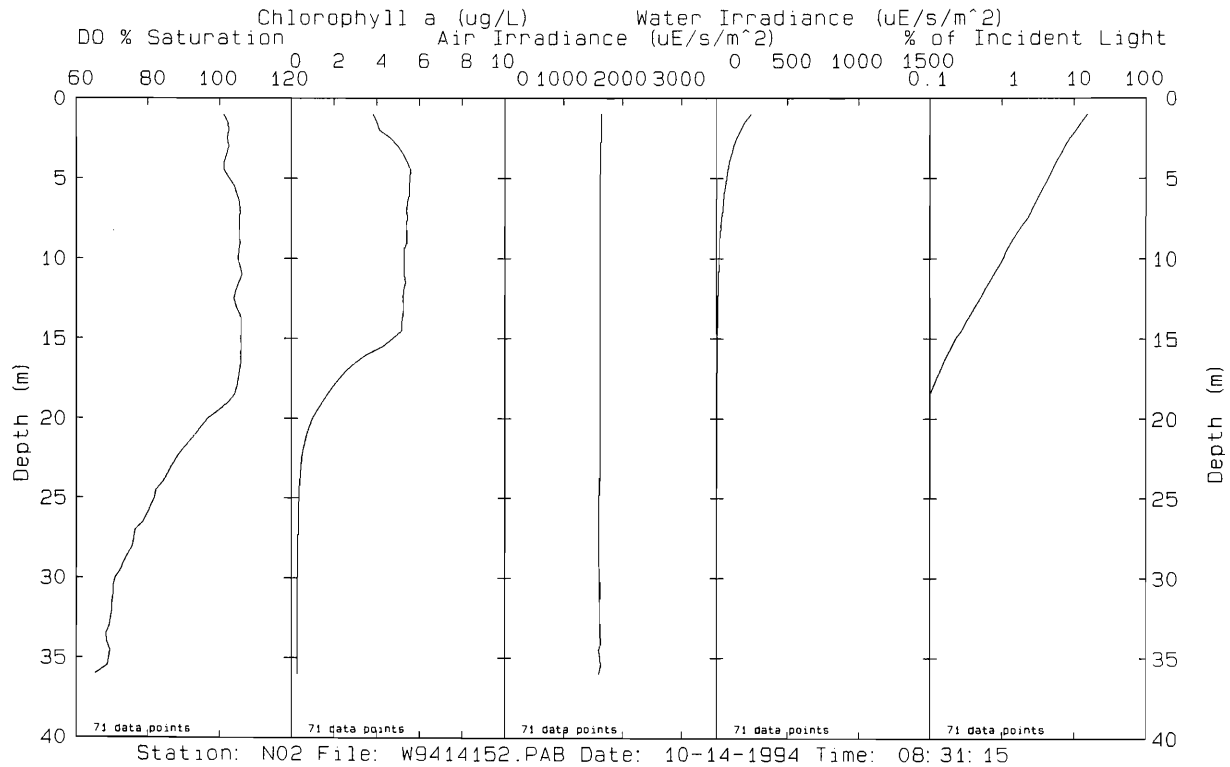
Station: N01P File: W9414062.PAB Date: 10-12-1994 Time: 06:46:01

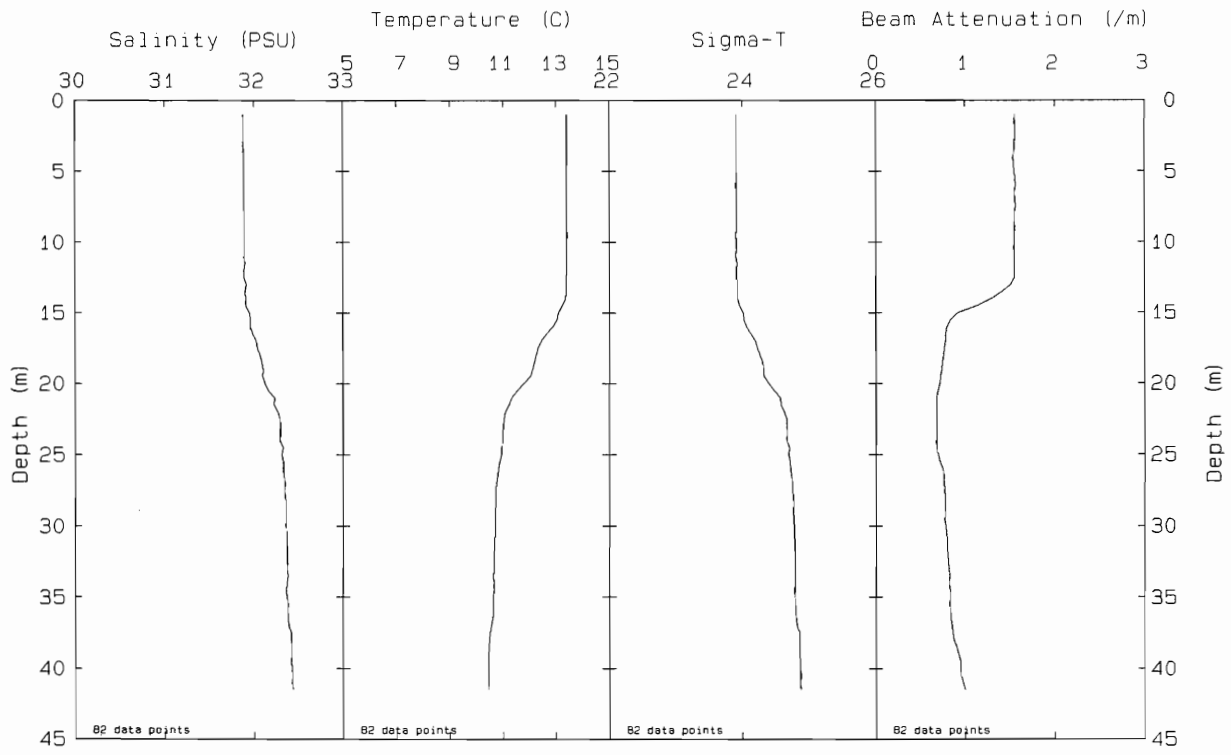


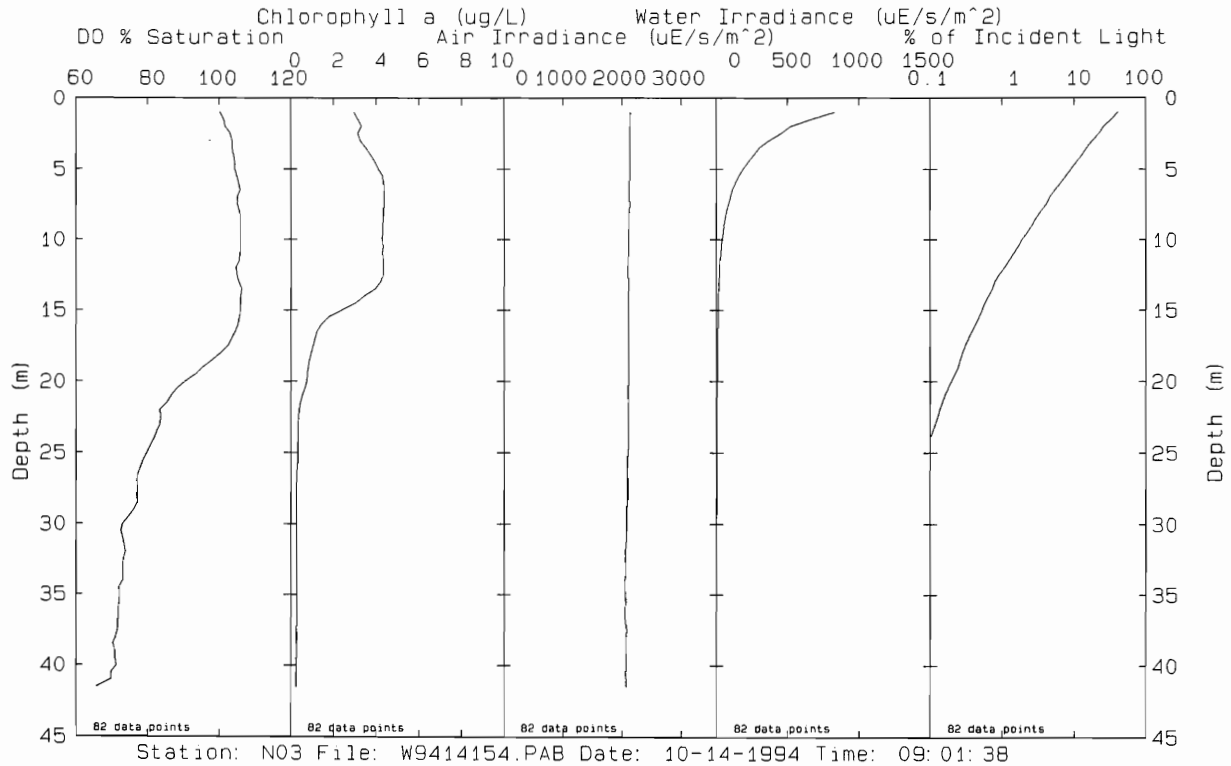


Station: N01P File: W9414149.PAB Date: 10-14-1994 Time: 08:03:27

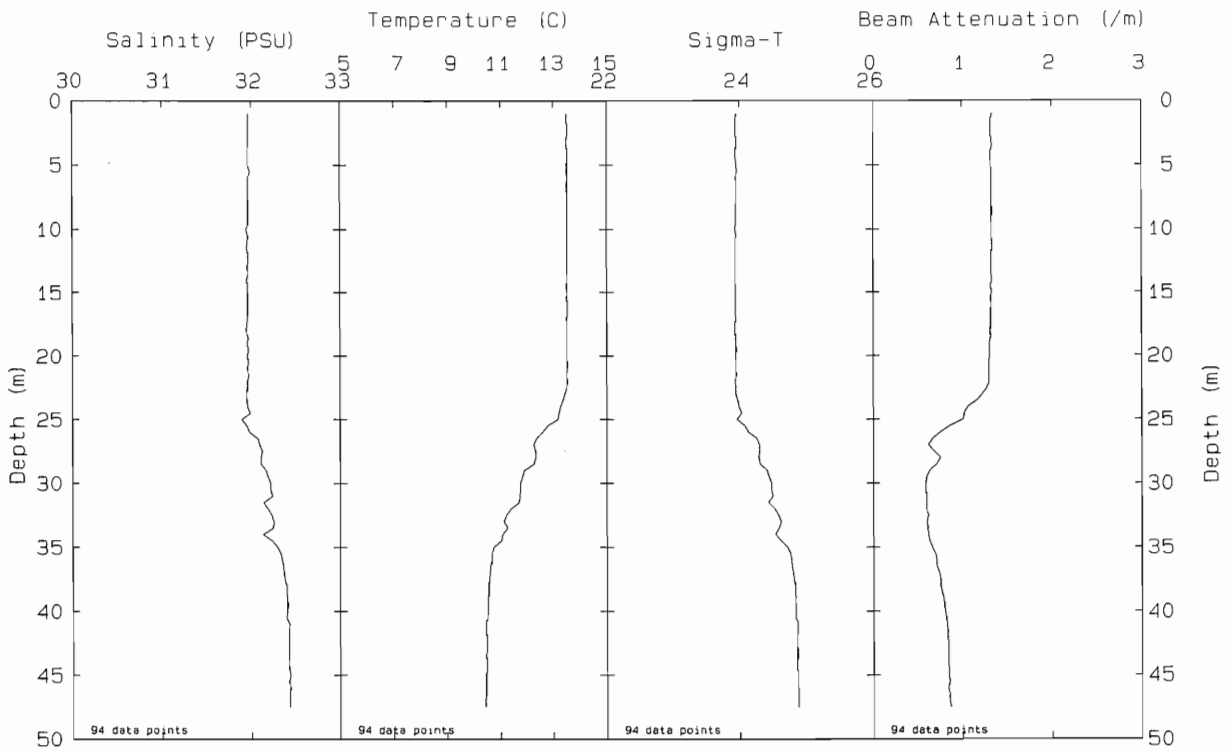

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
71 data points

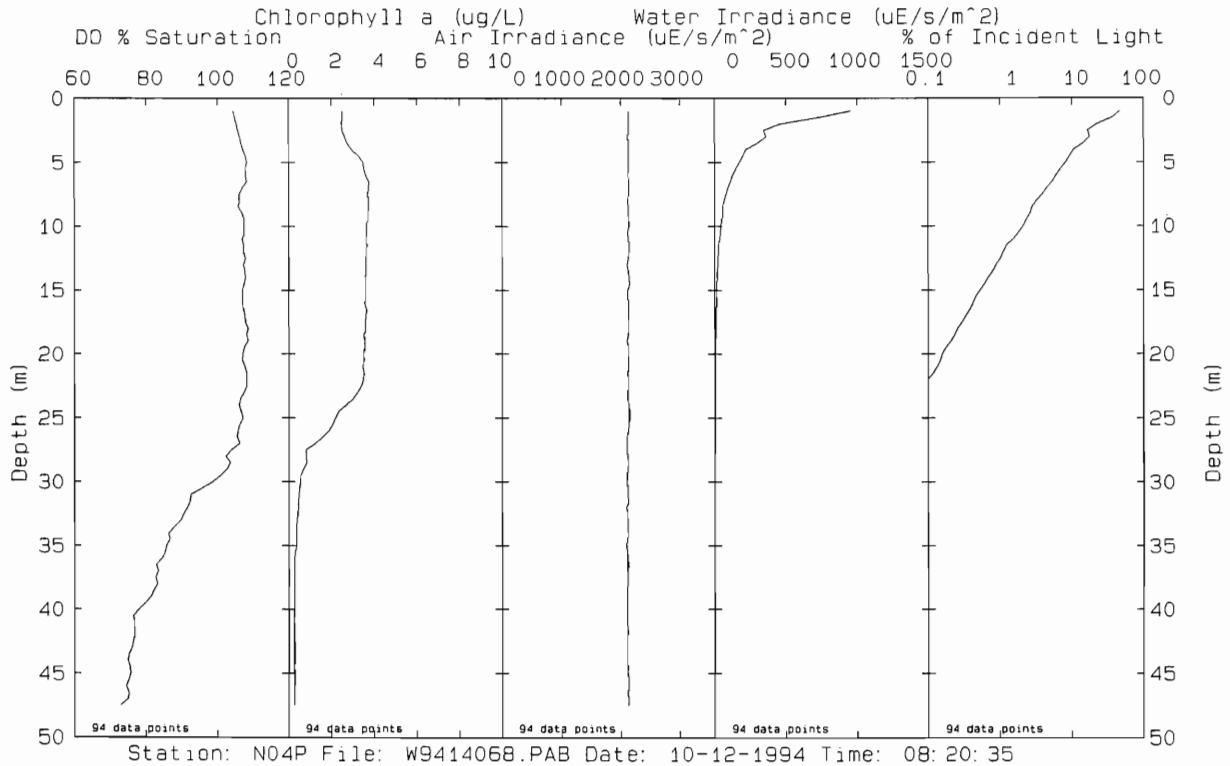

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
71 data points
Station: N02 File: W9414152.PAB Date: 10-14-1994 Time: 08:31:15

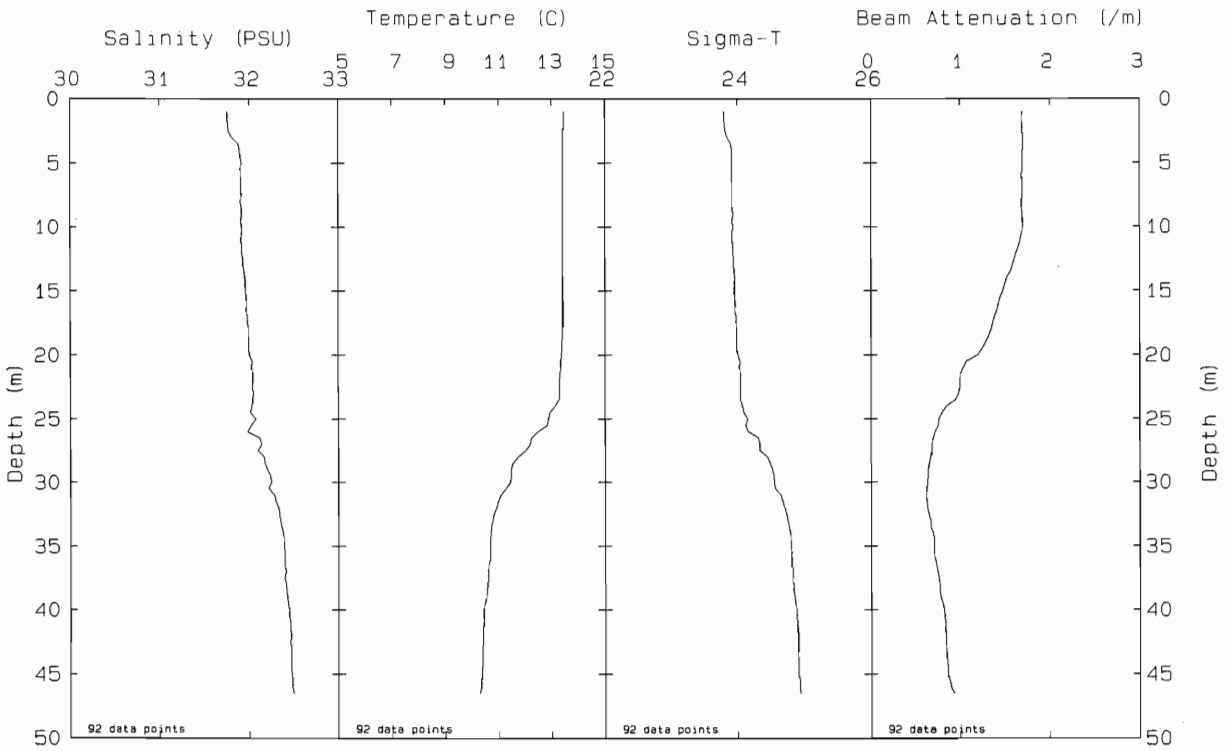


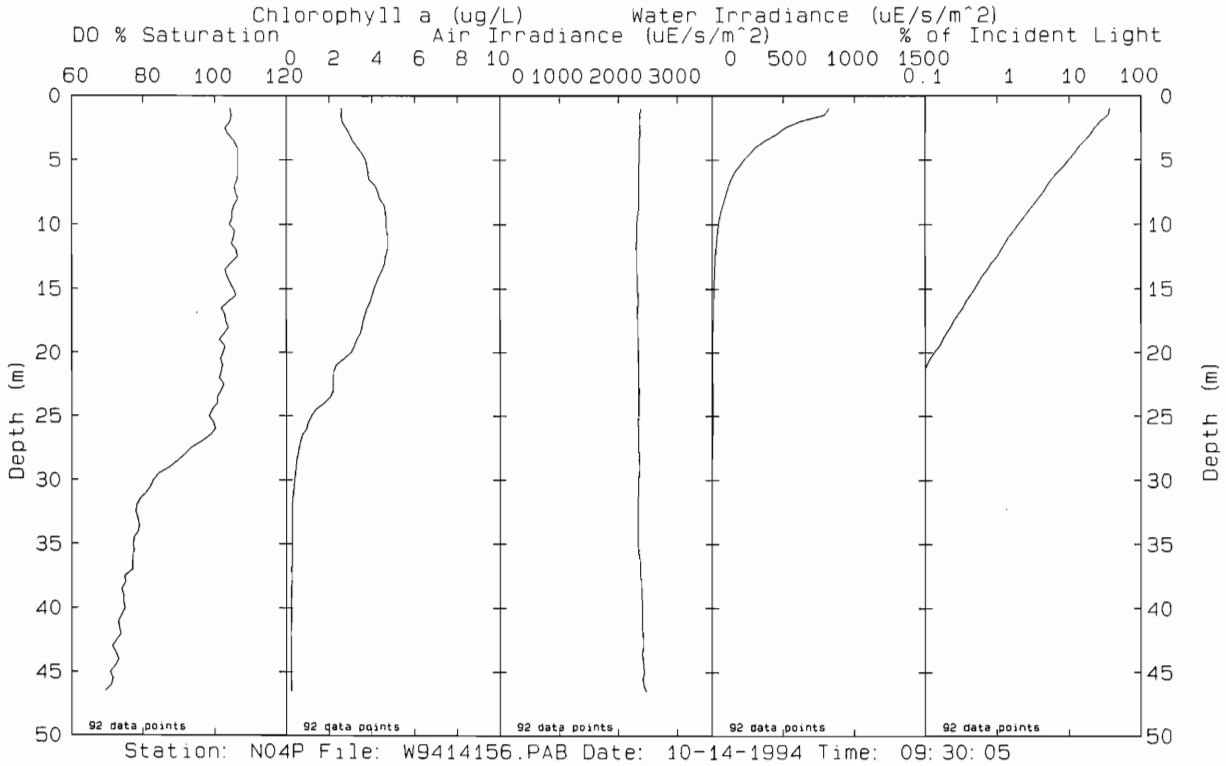


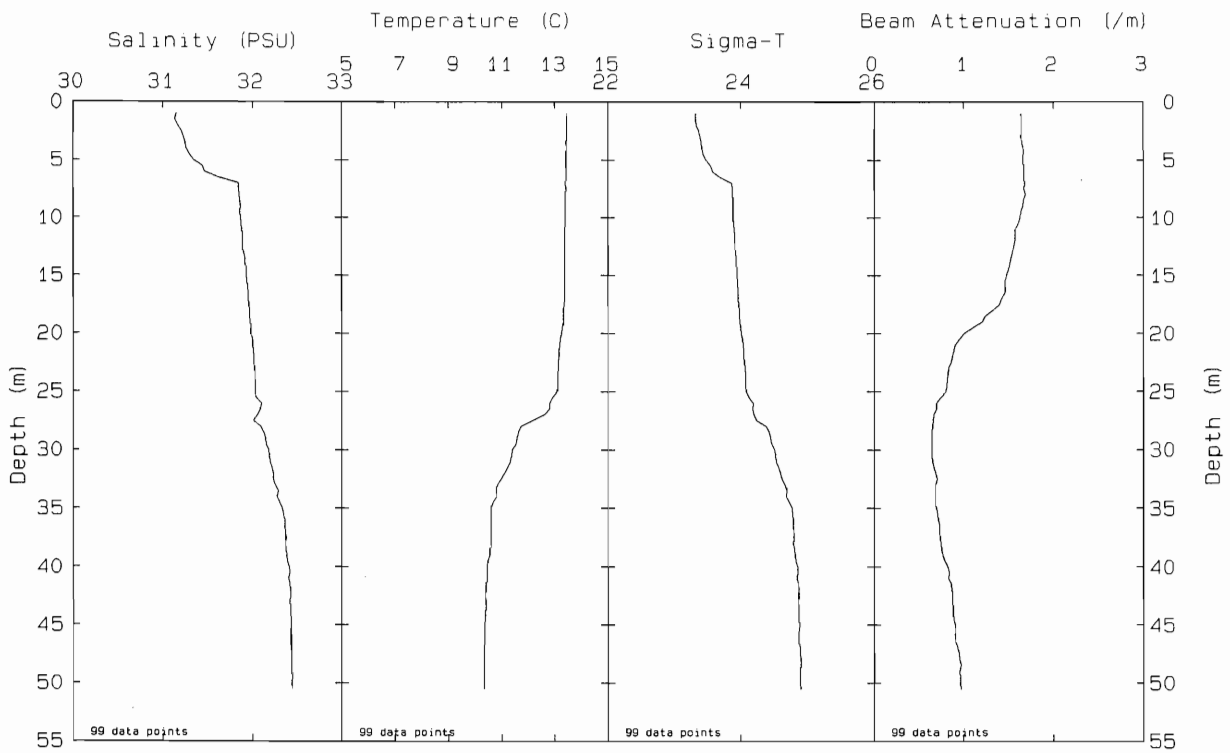
Station: N03 File: W9414154.PAB Date: 10-14-1994 Time: 09:01:38

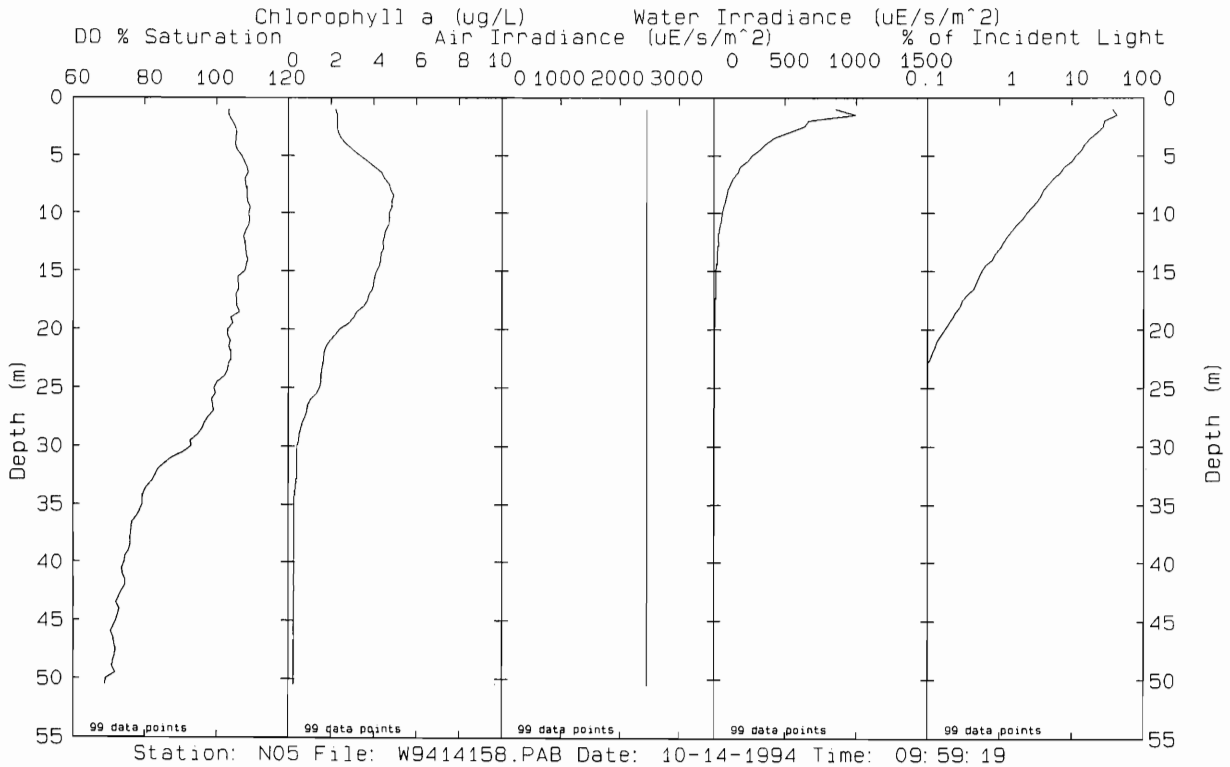

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
94 data points
94 data points
94 data points
94 data points


Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
94 data points
94 data points
94 data points
94 data points
94 data points
Station: N04P File: W9414068.PAB Date: 10-12-1994 Time: 08:20:35

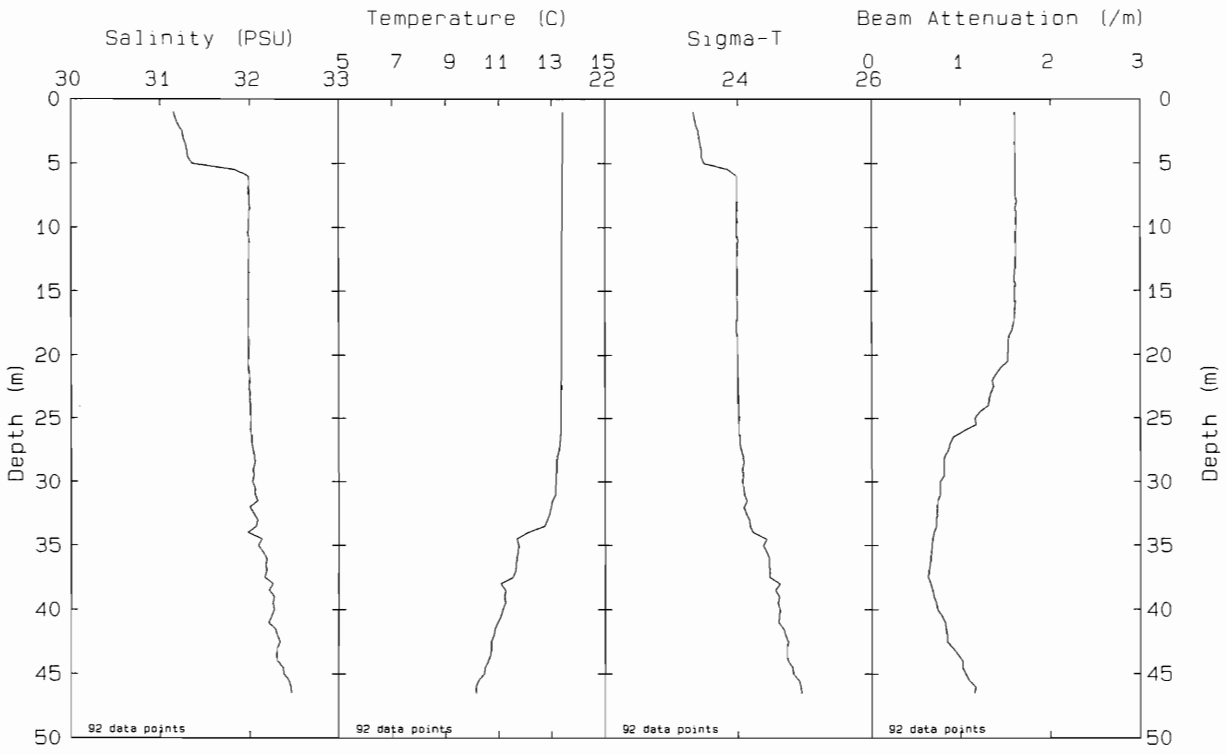

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
92 data points
92 data points
92 data points
92 data points

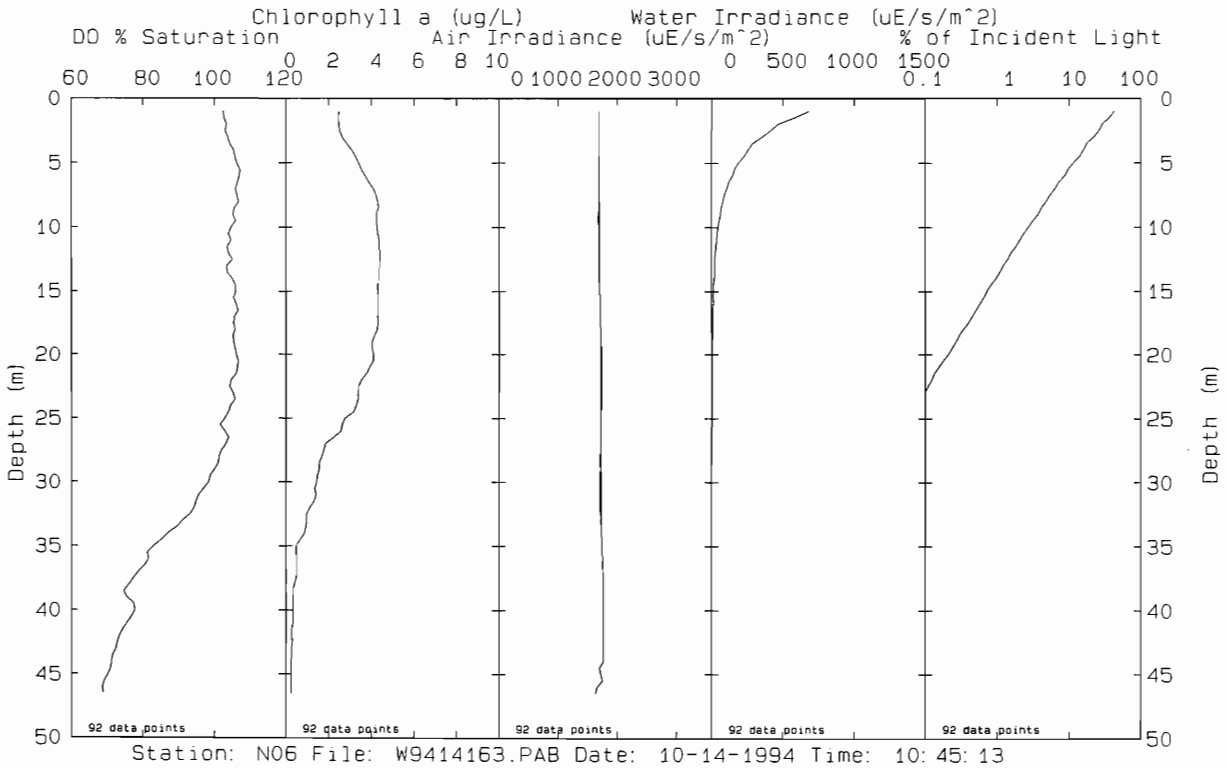

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
92 data points
92 data points
92 data points
92 data points
92 data points
Station: N04P File: W9414156.PAB Date: 10-14-1994 Time: 09:30:05



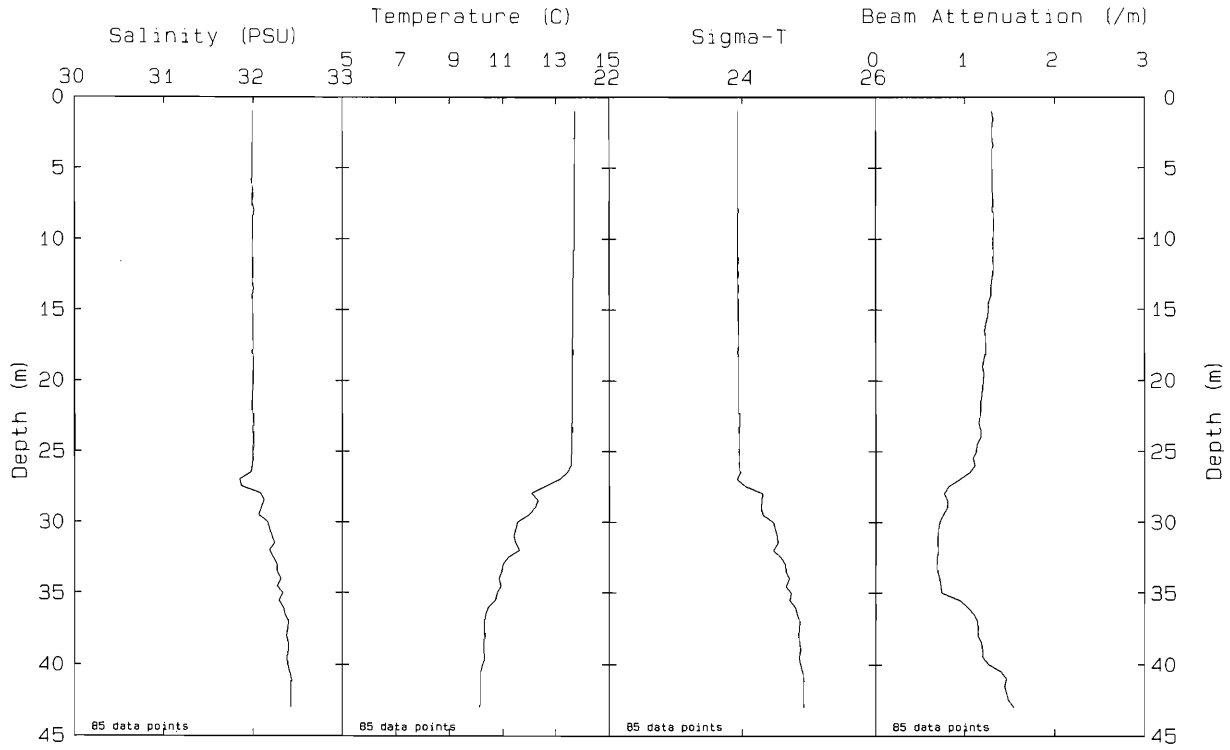


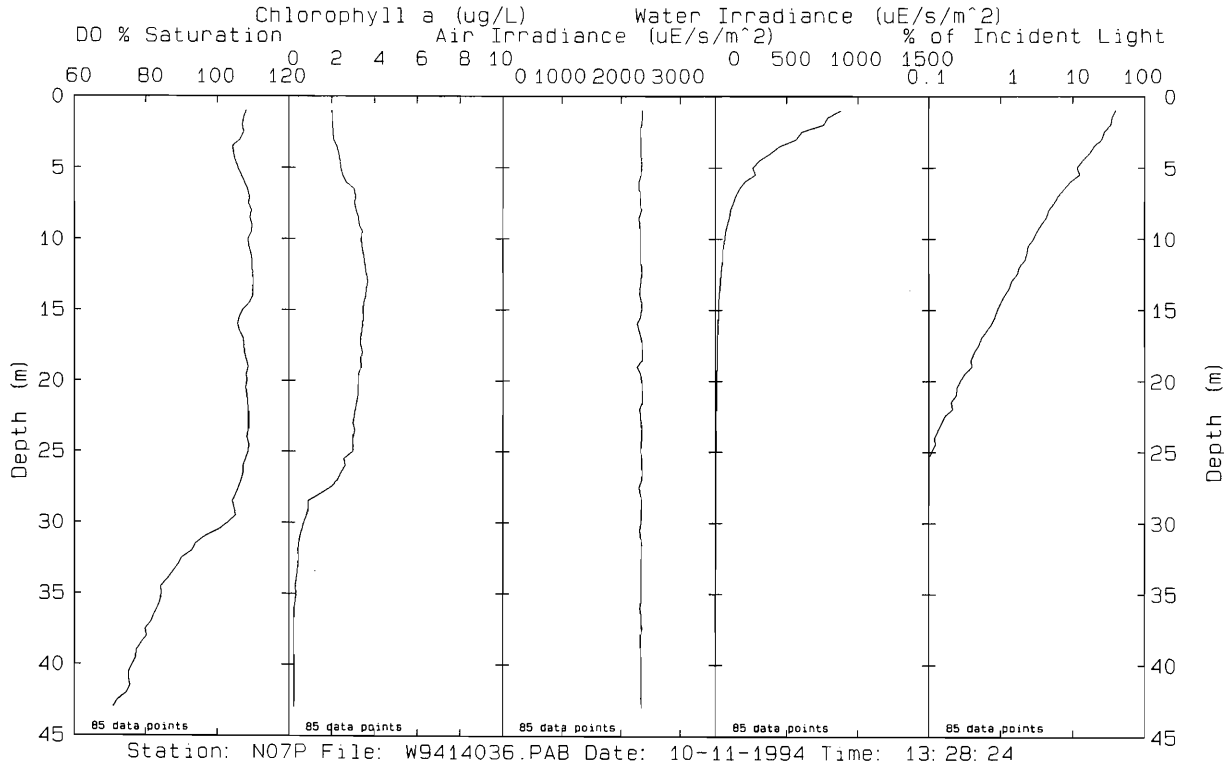
Station: N05 File: W9414158.PAB Date: 10-14-1994 Time: 09:59:19



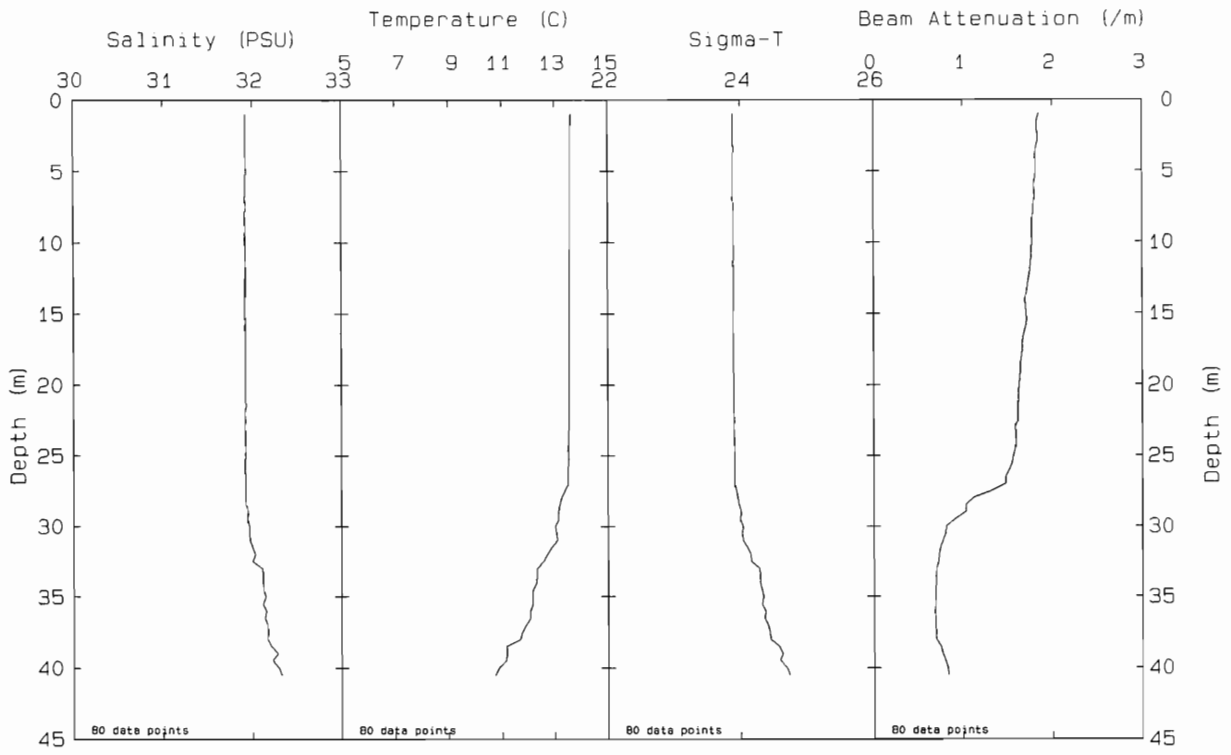


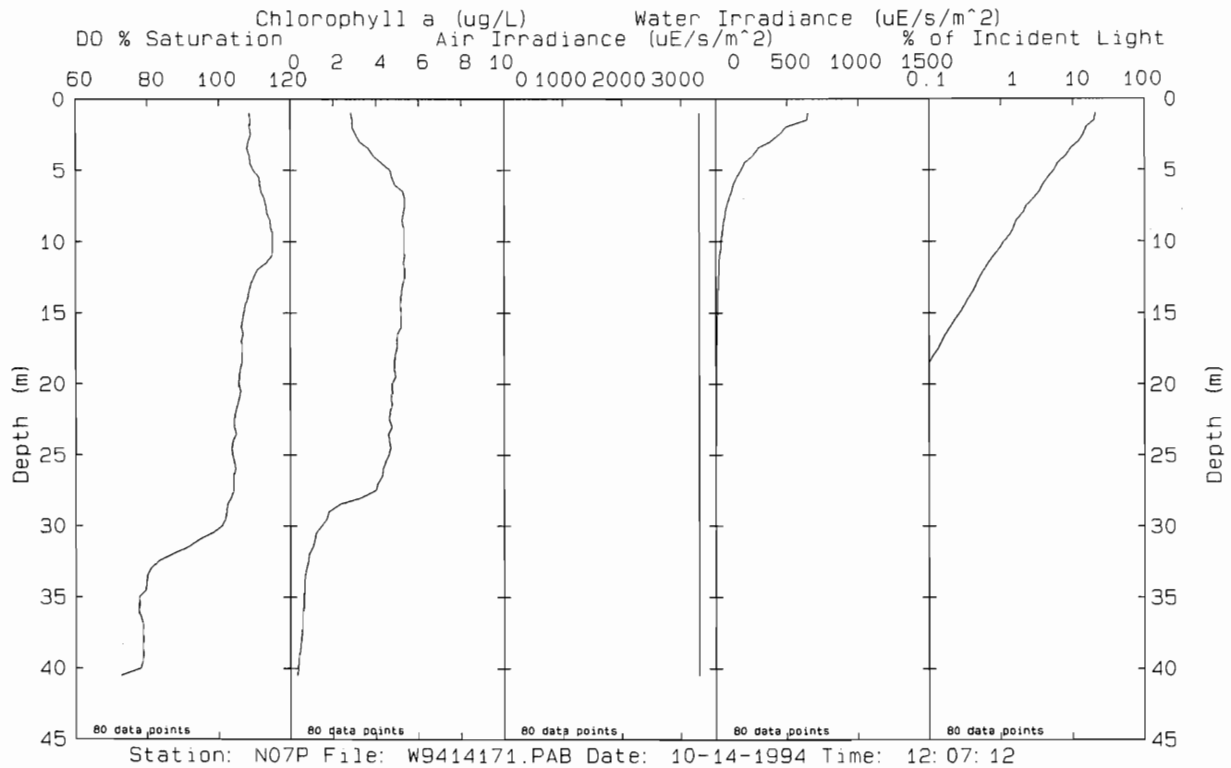
Station: N06 File: W9414163.PAB Date: 10-14-1994 Time: 10:45:13

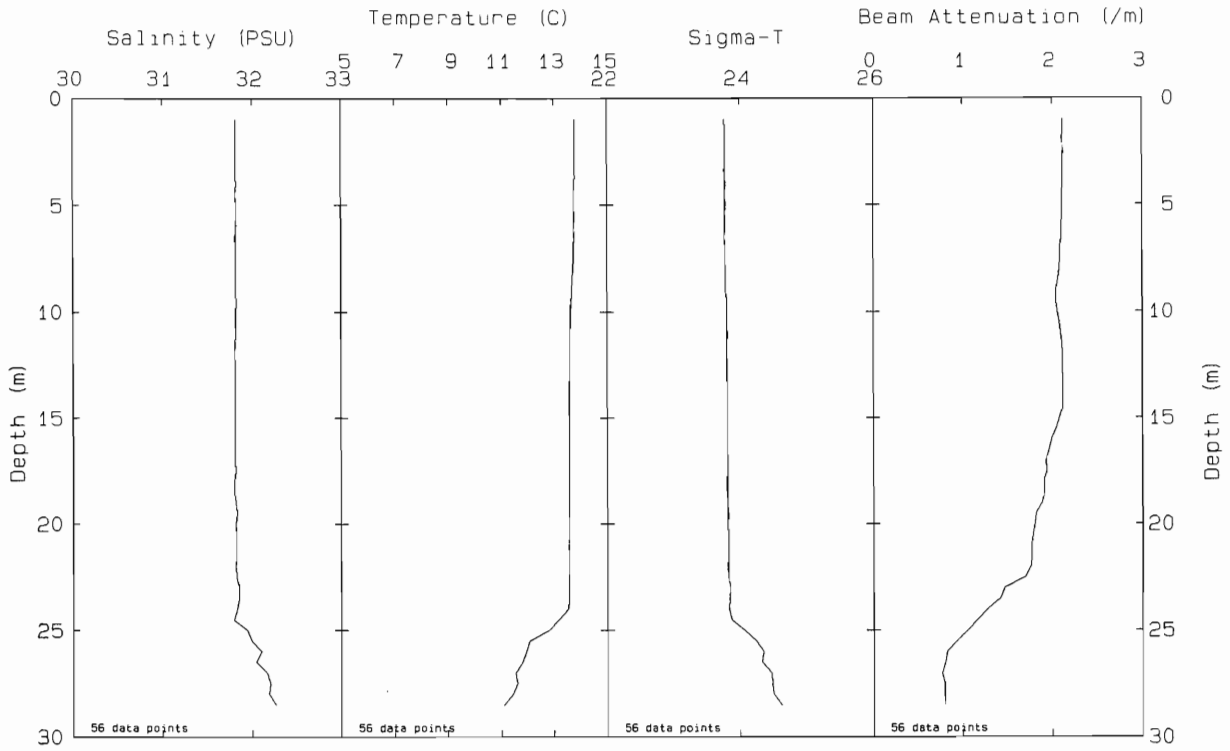


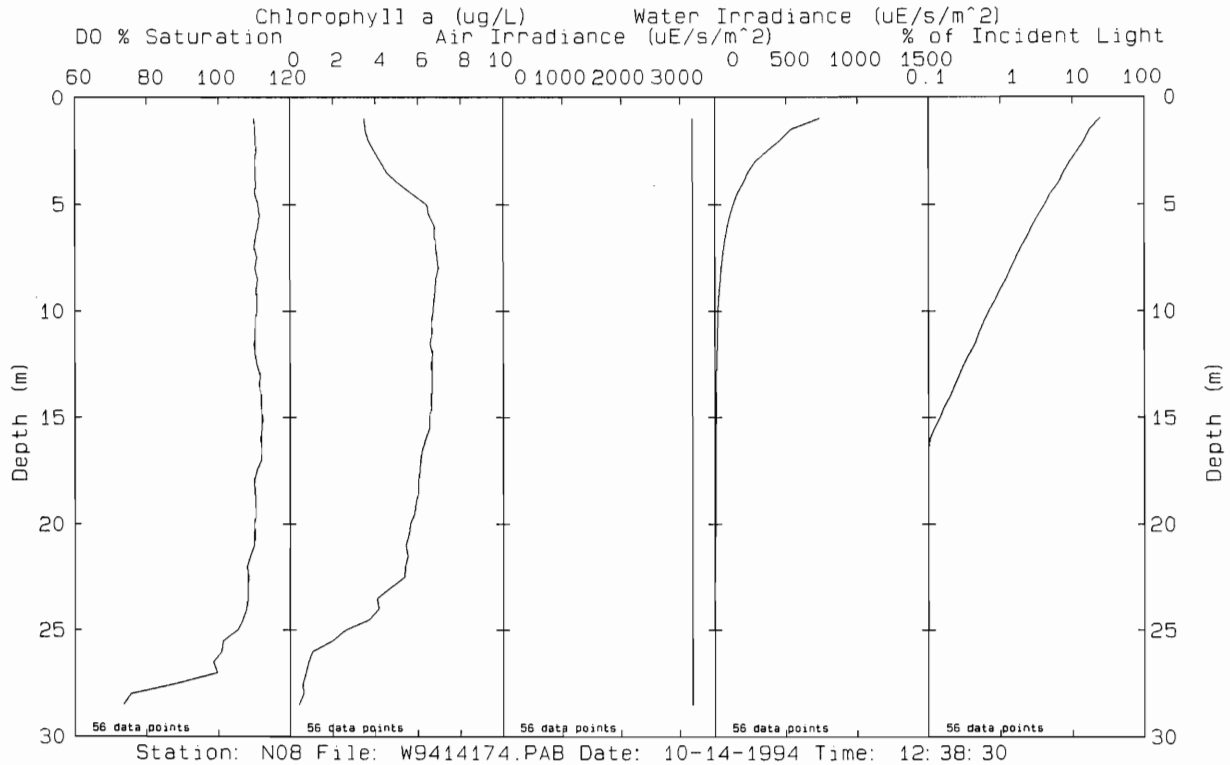


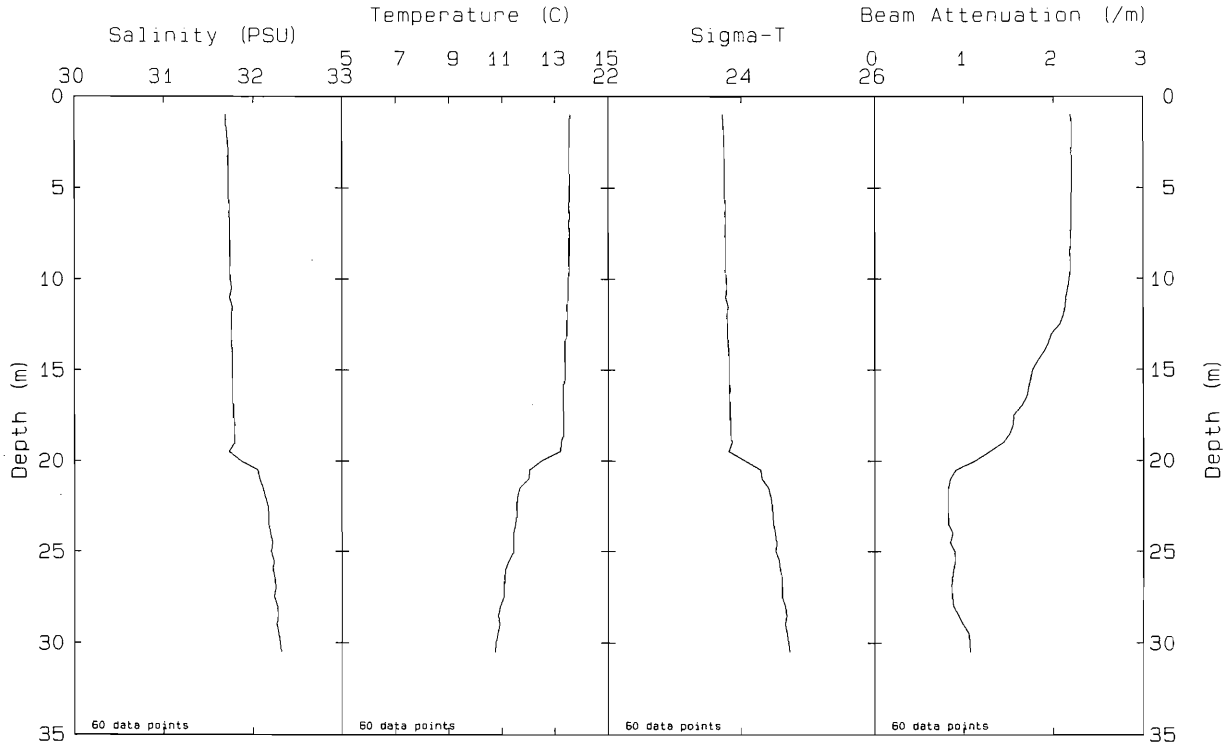
Station: N07P File: W9414036.PAB Date: 10-11-1994 Time: 13:28:24

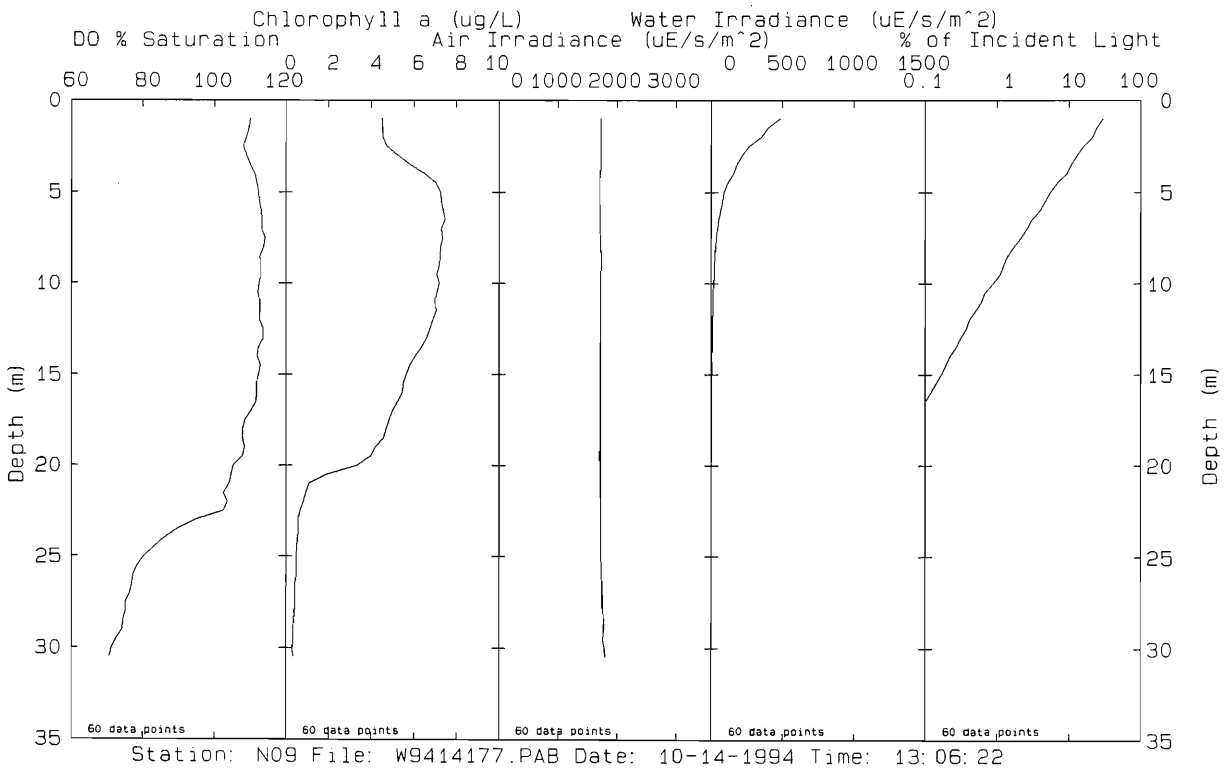

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40 45
80 data points
80 data points
80 data points
80 data points


DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45
80 data points
80 data points
80 data points
80 data points
80 data points
Station: N07P File: W9414171.PAB Date: 10-14-1994 Time: 12:07:12

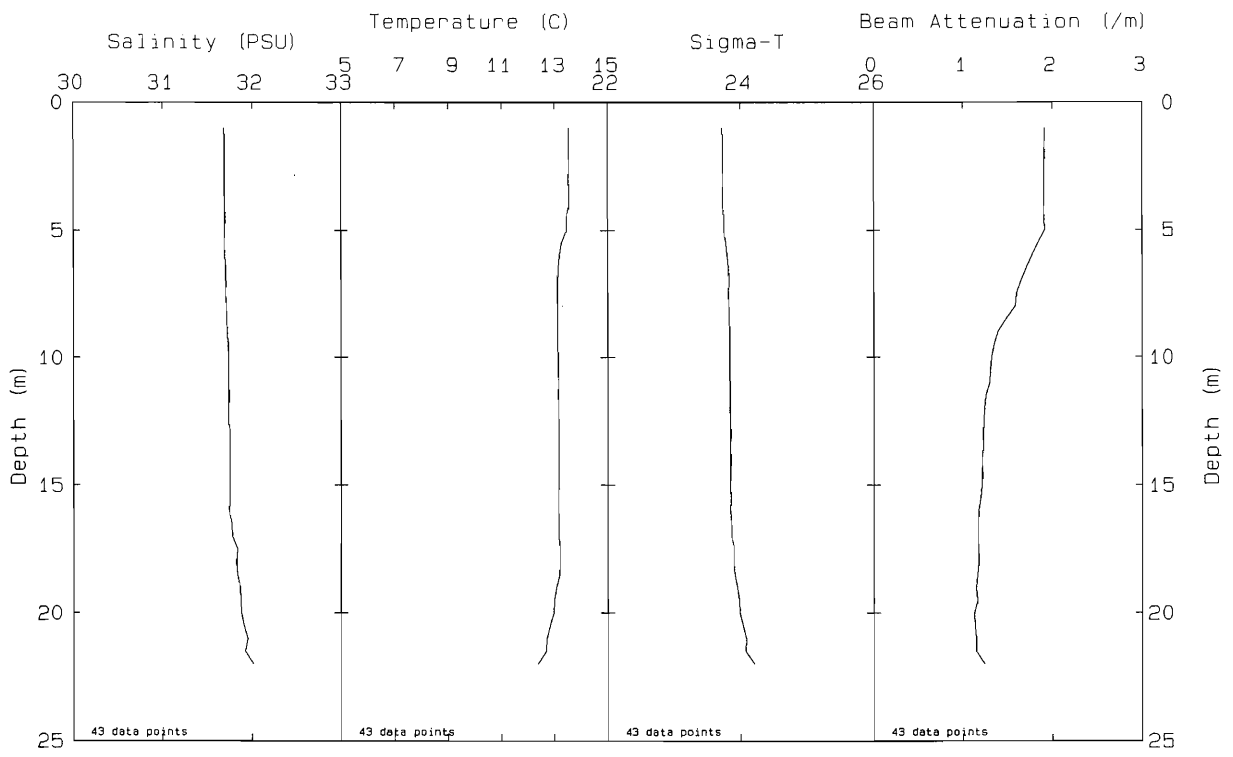

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33
22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30
56 data points
56 data points
56 data points
56 data points

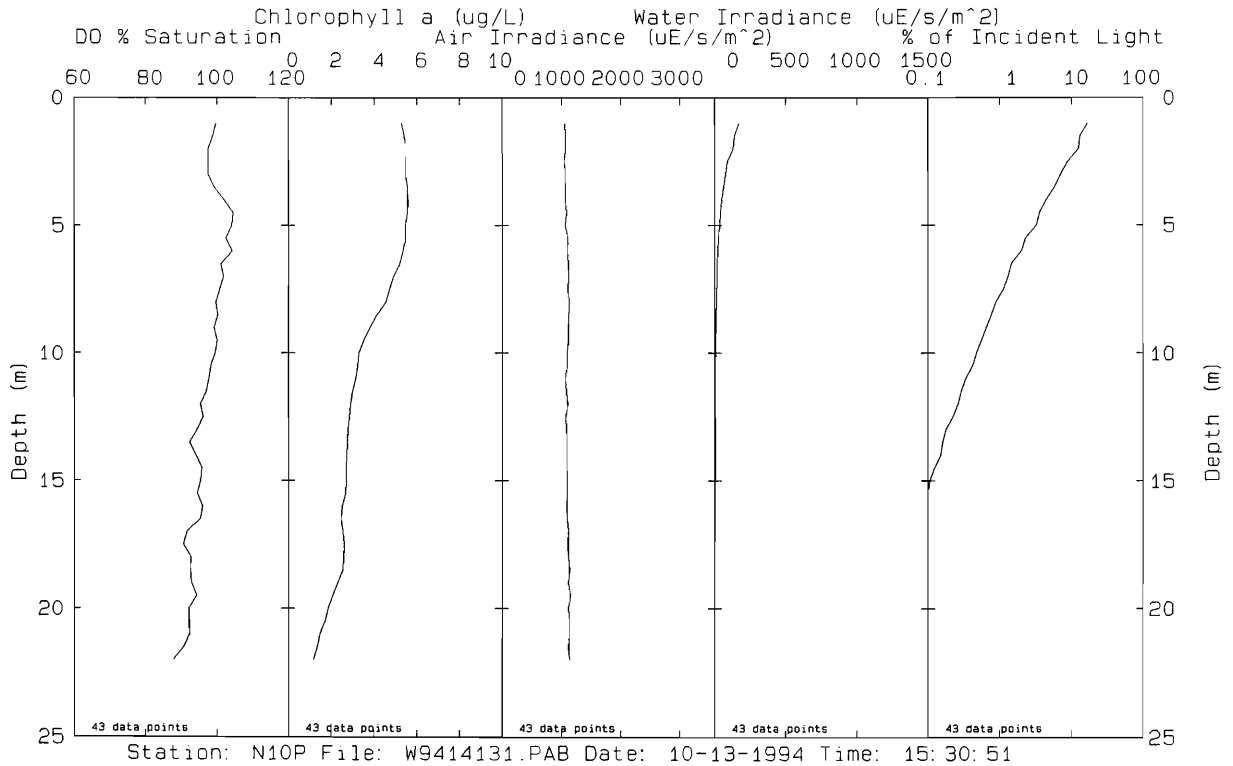

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30
56 data points
56 data points
56 data points
56 data points
56 data points
Station: N08 File: W9414174.PAB Date: 10-14-1994 Time: 12:38:30



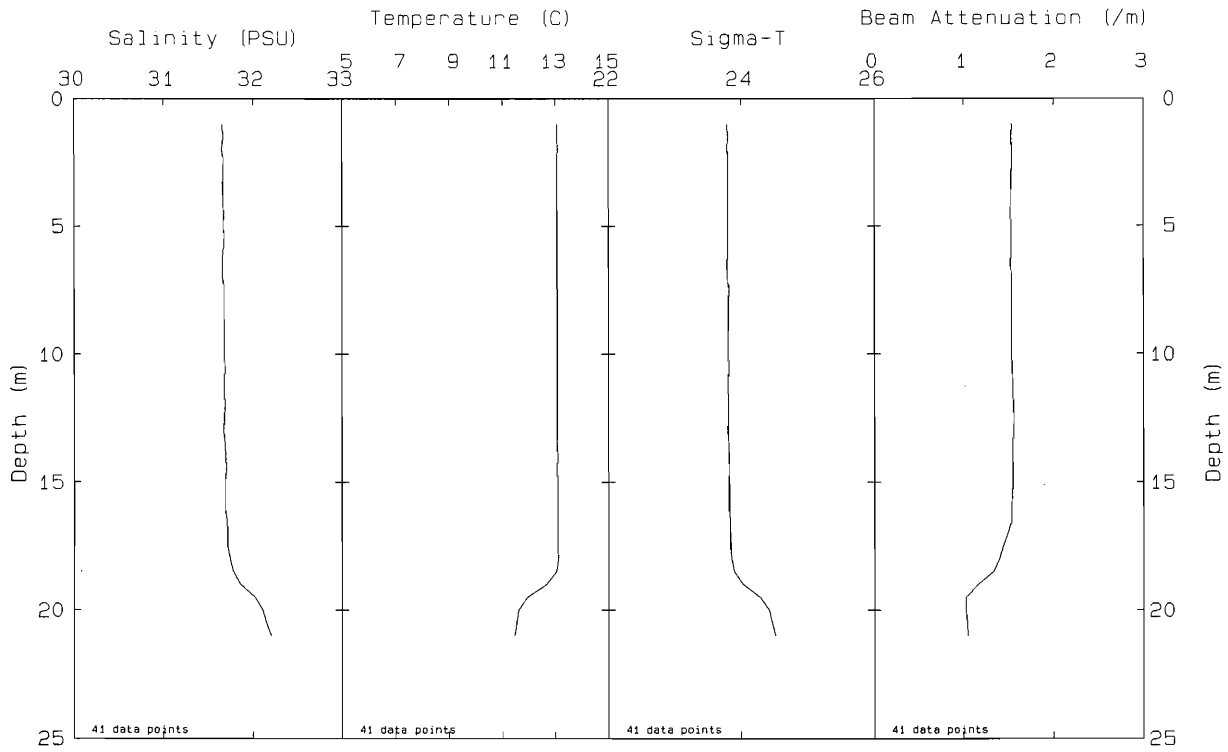


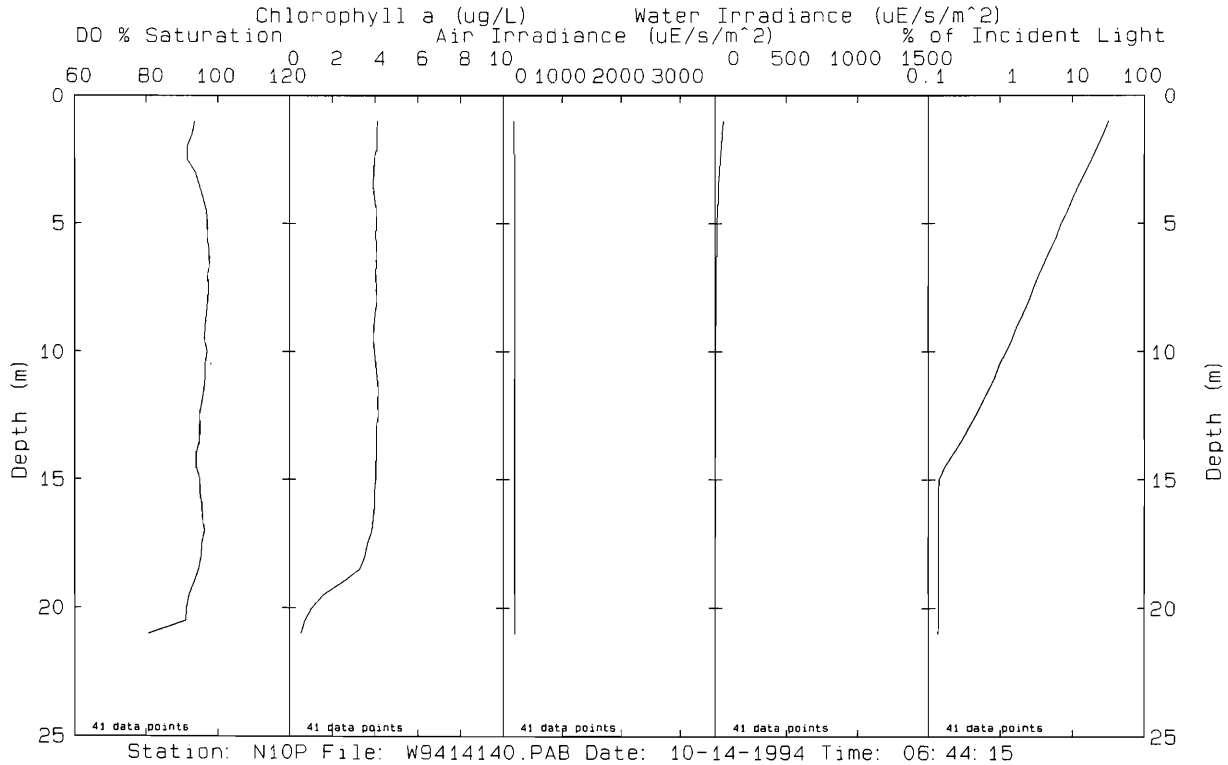
Station: N09 File: W9414177.PAB Date: 10-14-1994 Time: 13:06:22



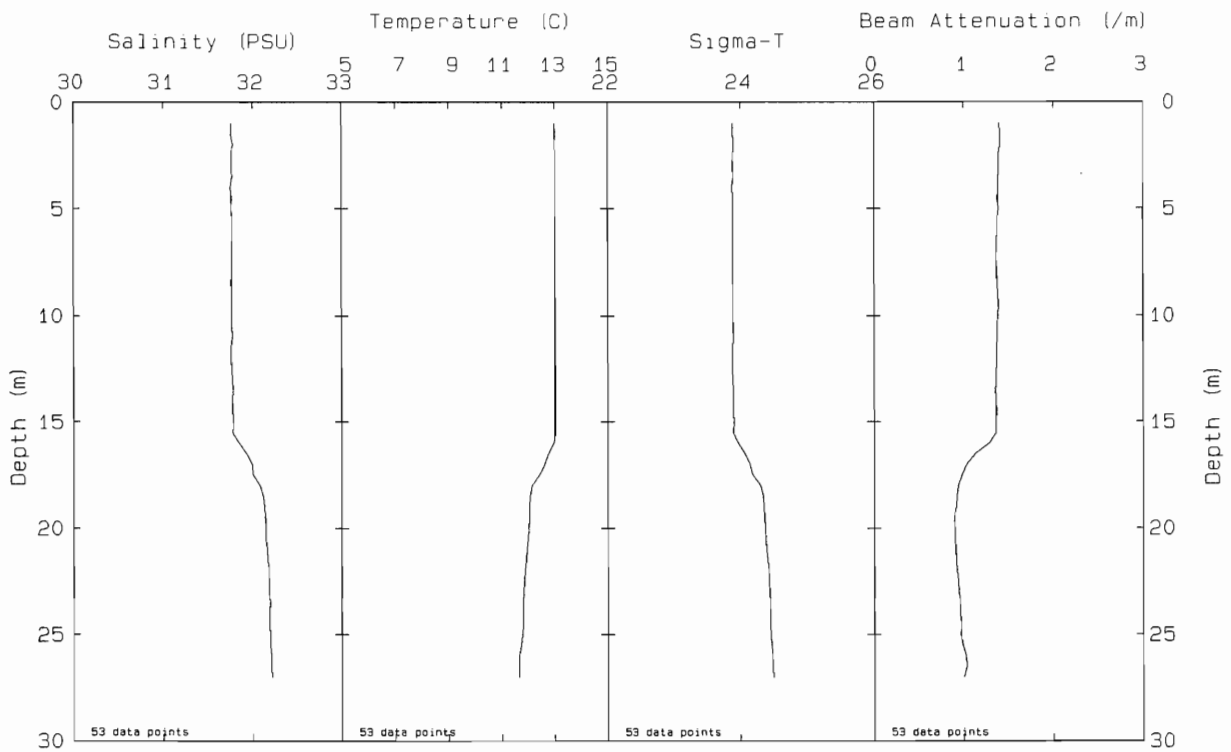


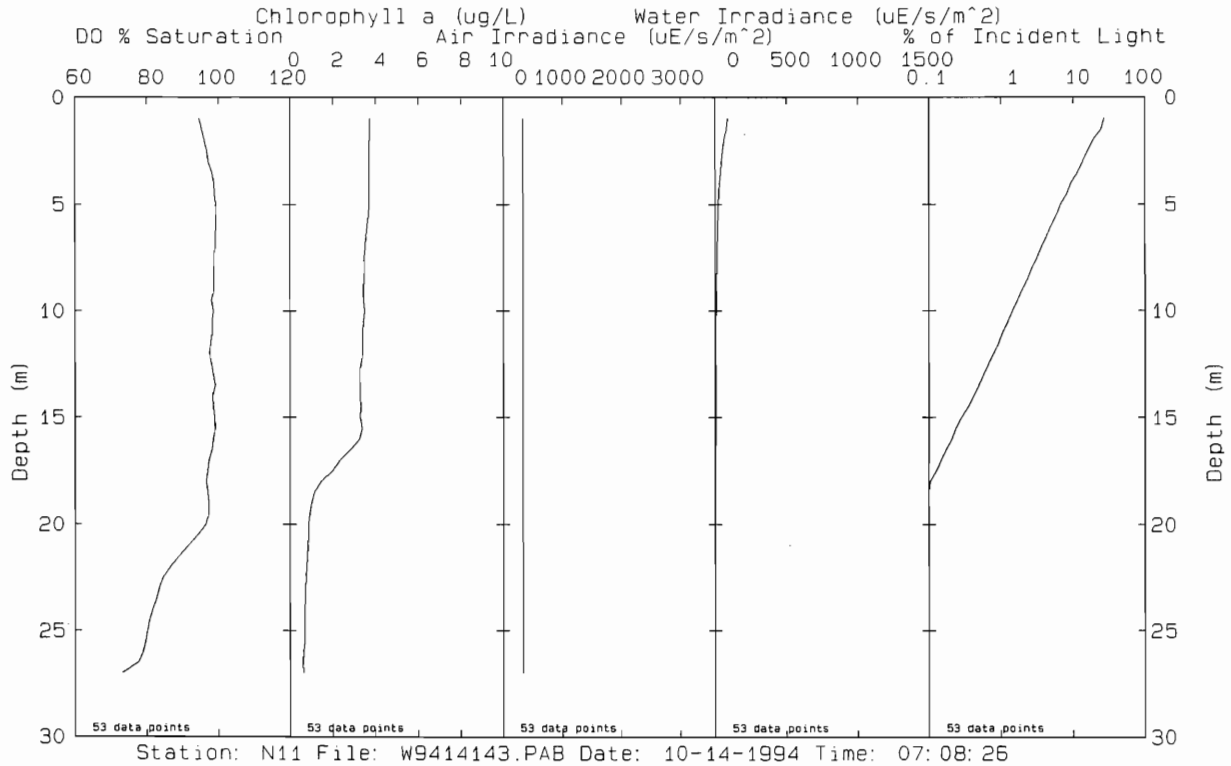
Station: N10P File: W9414131.PAB Date: 10-13-1994 Time: 15:30:51





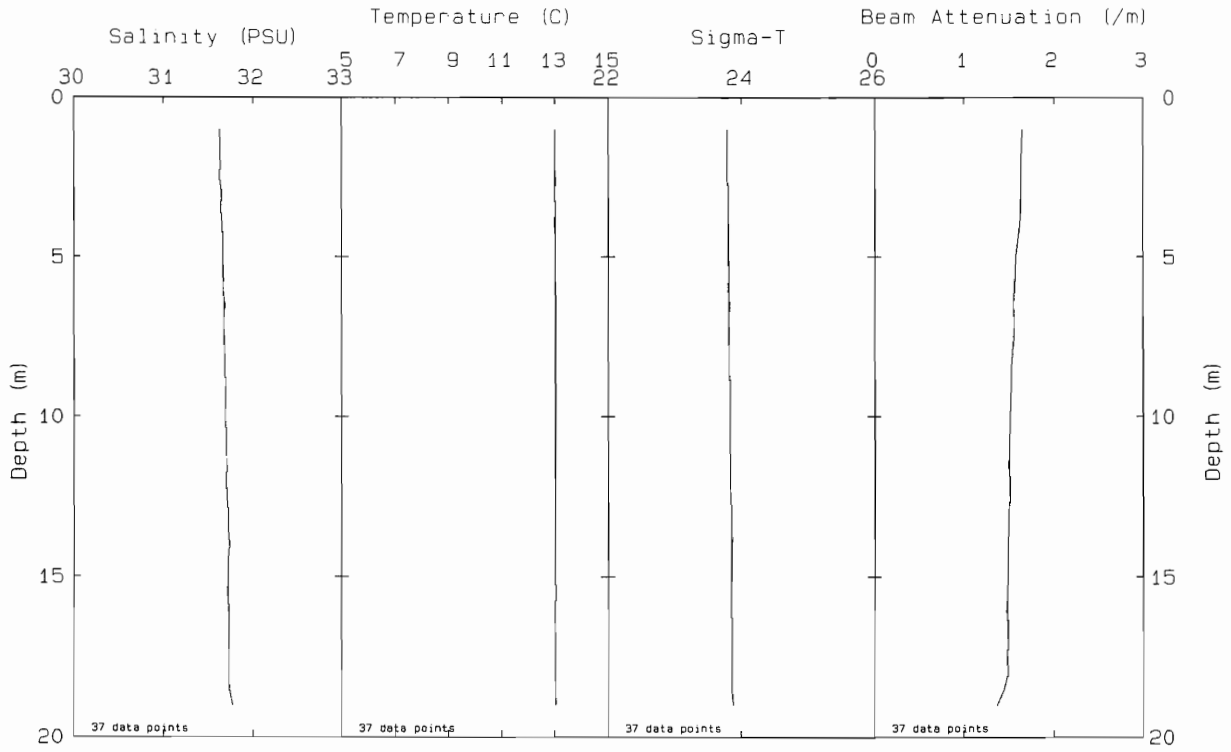
Station: N10P File: W9414140.PAB Date: 10-14-1994 Time: 06:44:15

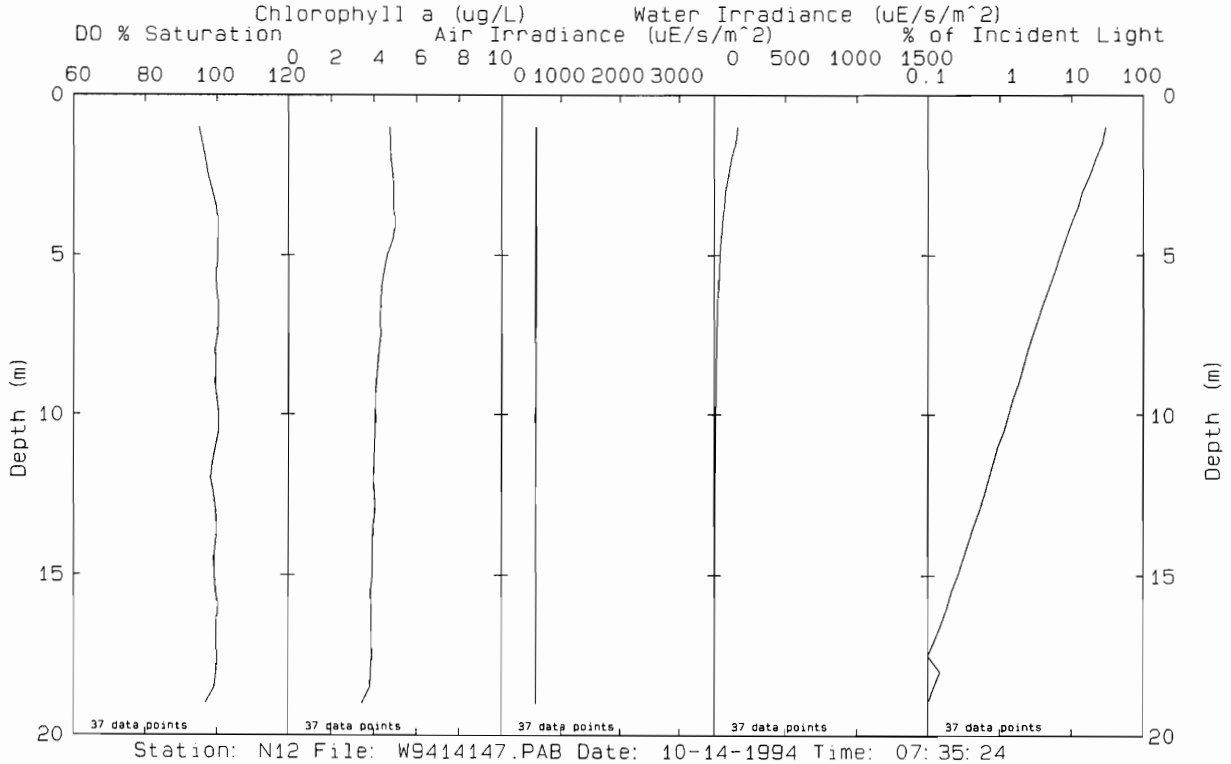


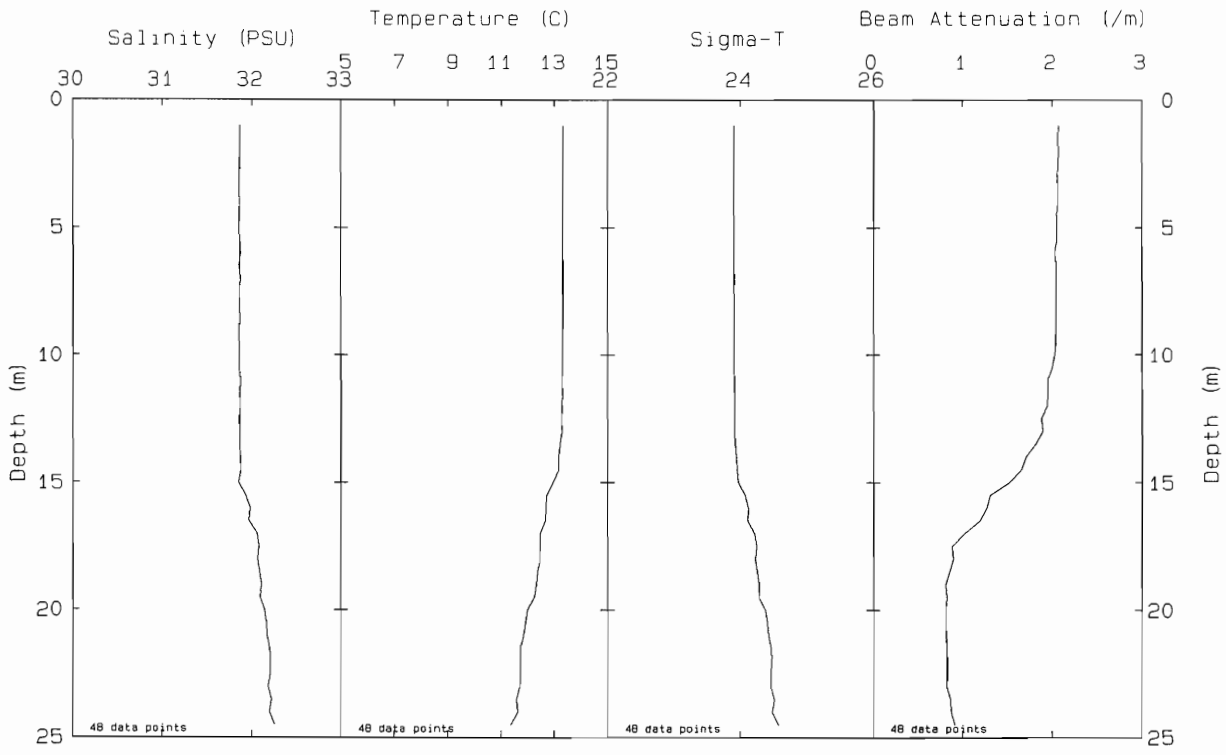


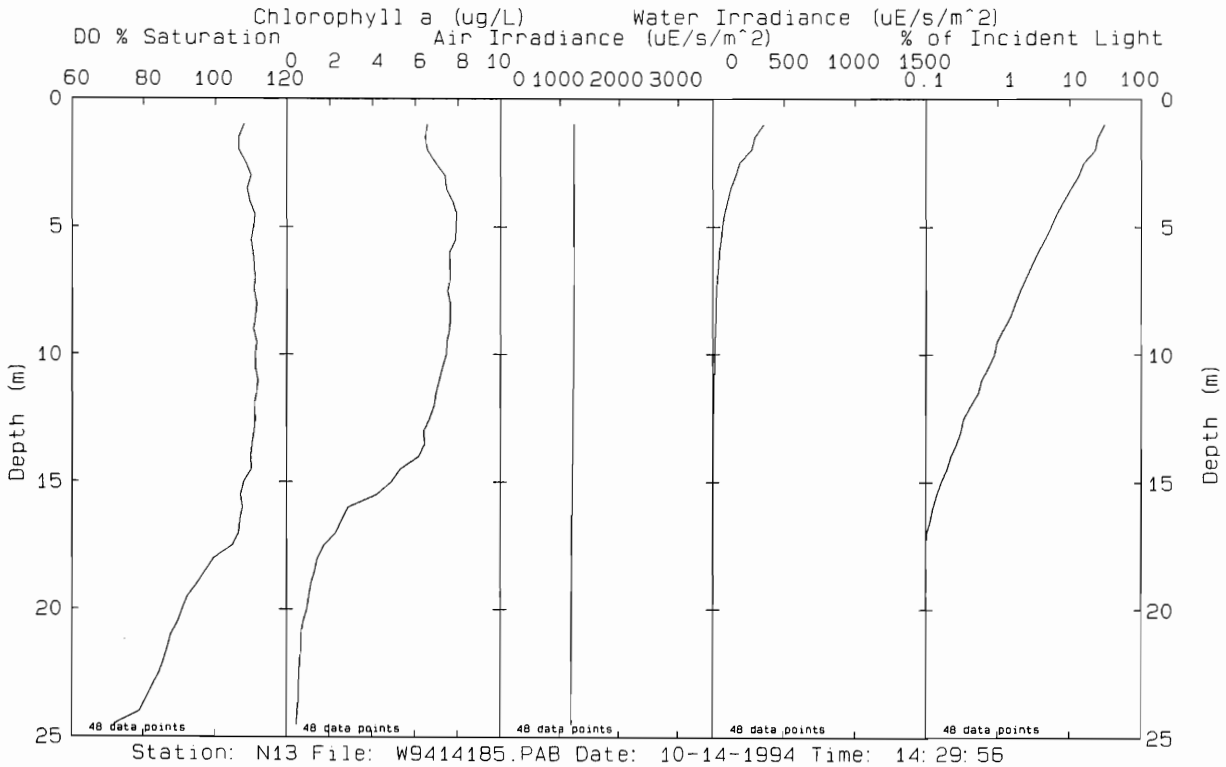
Station: N11 File: W9414143.PAB Date: 10-14-1994 Time: 07:08:26

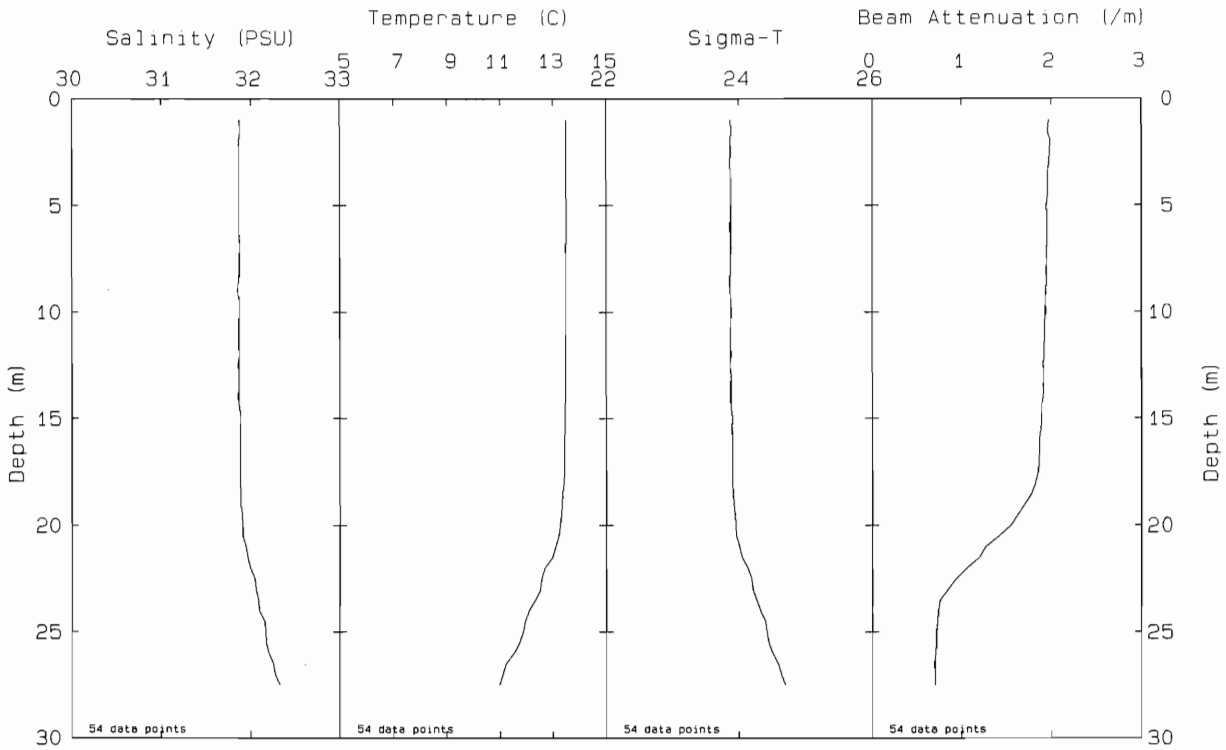
02-17-1995 11:35:44 Battelle

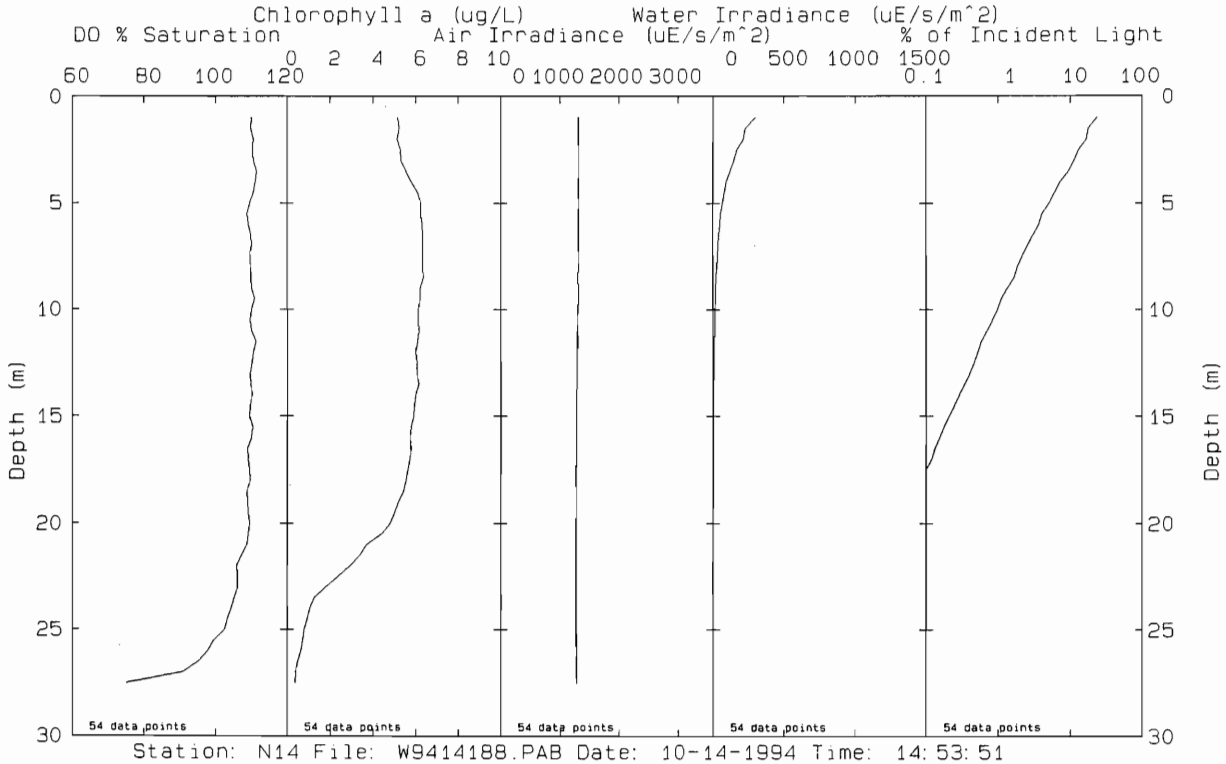

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
0 5 10 15 20
Depth (m)
37 data points
37 data points
37 data points
37 data points

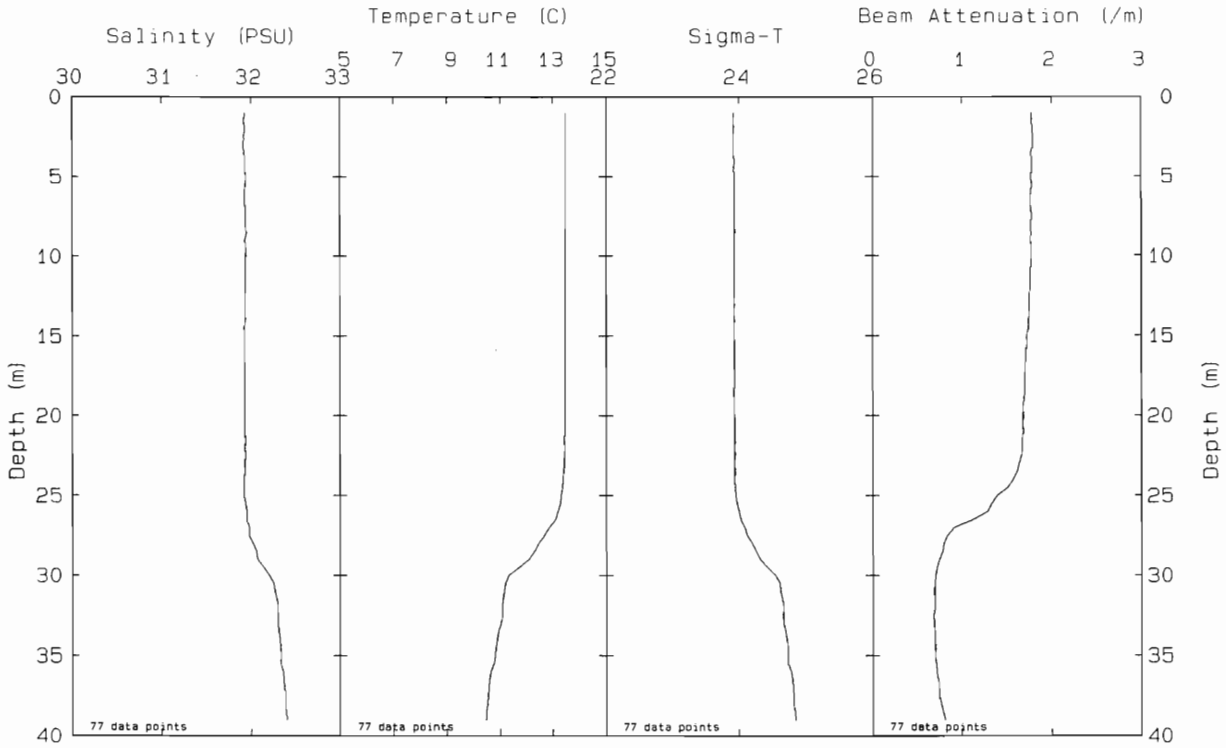

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
% of Incident Light
0 500 1000 1500
0.1 1 10 100
0 5 10 15 20
Depth (m)
37 data points
37 data points
37 data points
37 data points
37 data points
Station: N12 File: W9414147.PAB Date: 10-14-1994 Time: 07:35:24

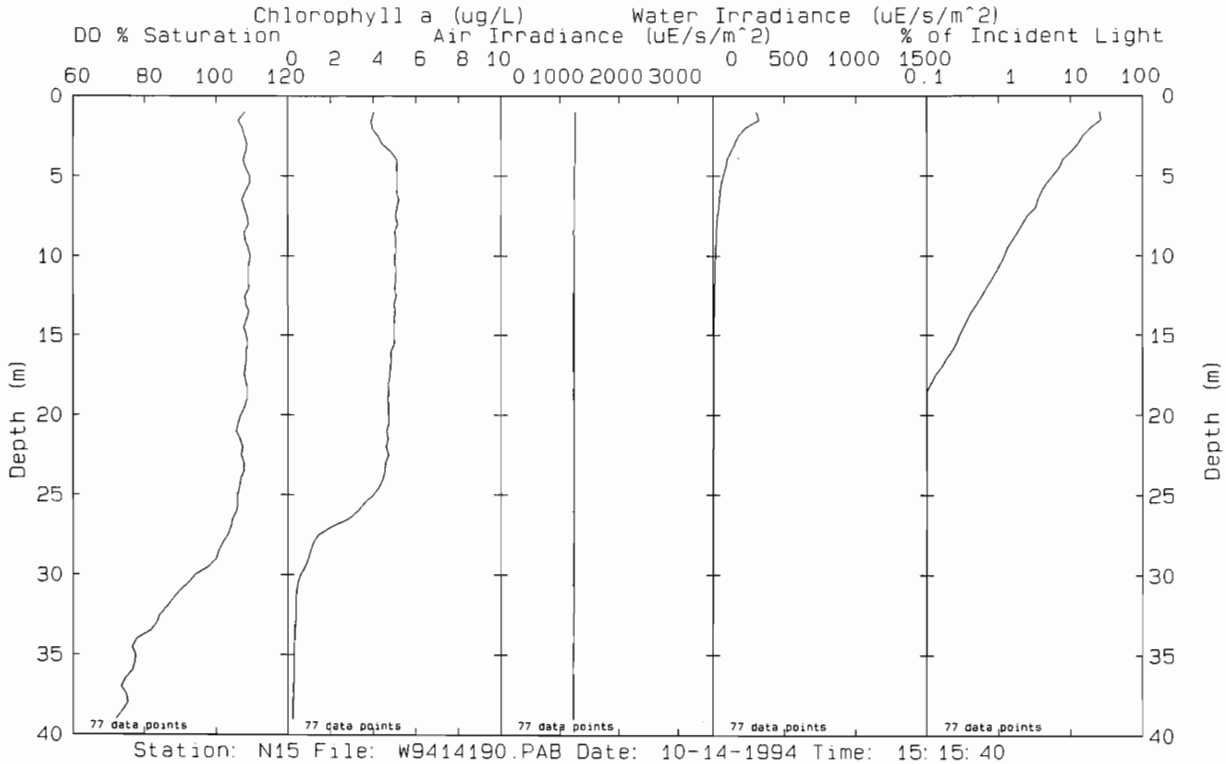

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25
48 data points
48 data points
48 data points
48 data points

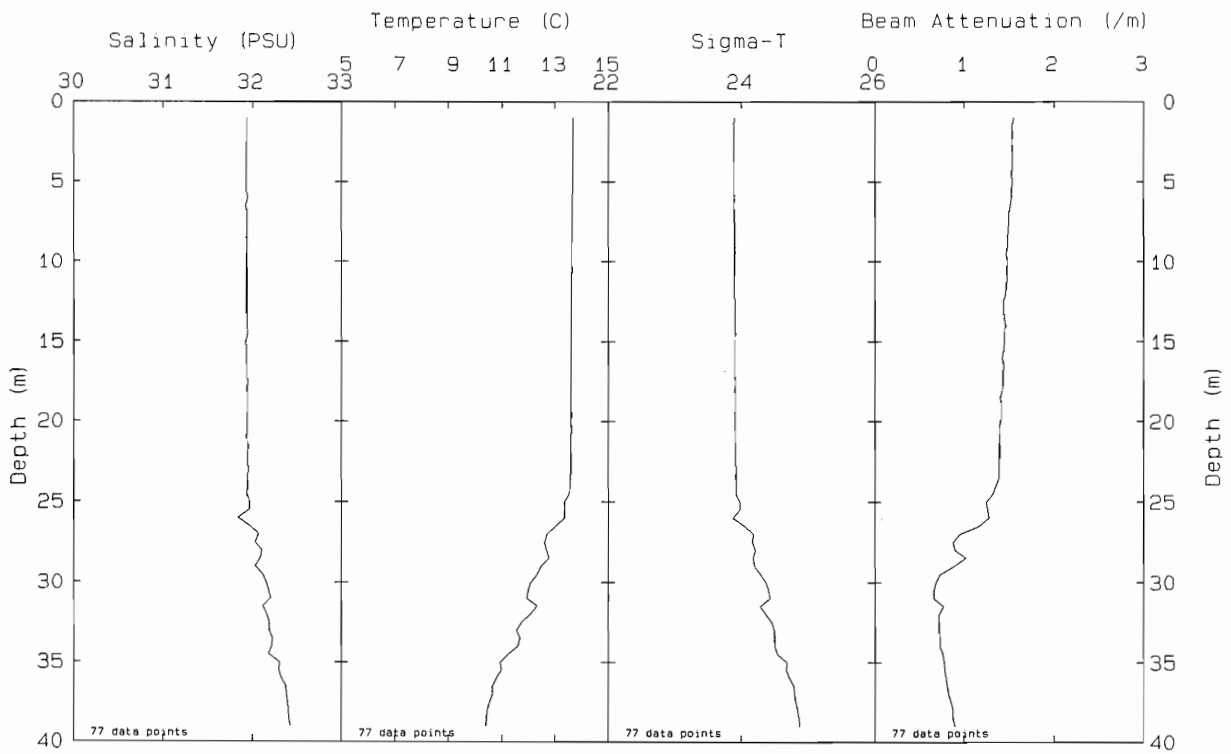

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25
48 data points
48 data points
48 data points
48 data points
48 data points
Station: N13 File: W9414185.PAB Date: 10-14-1994 Time: 14:29:56

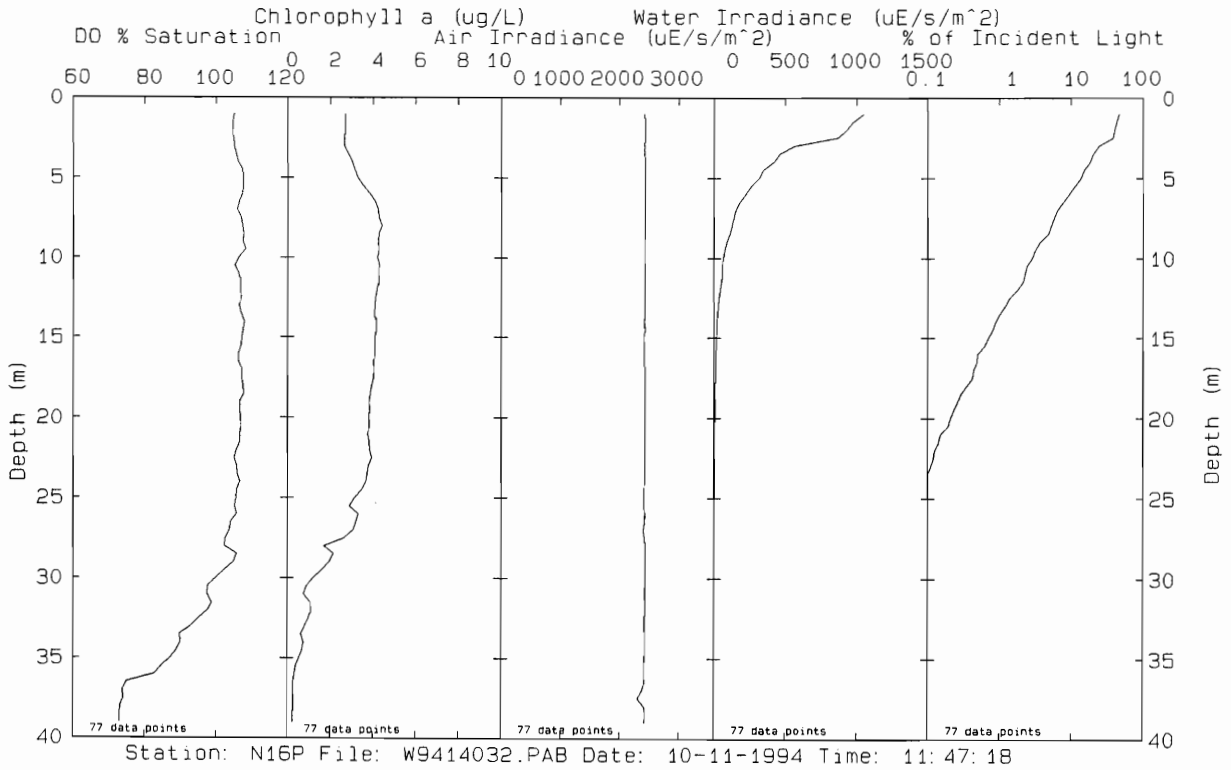

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30
54 data points
54 data points
54 data points
54 data points

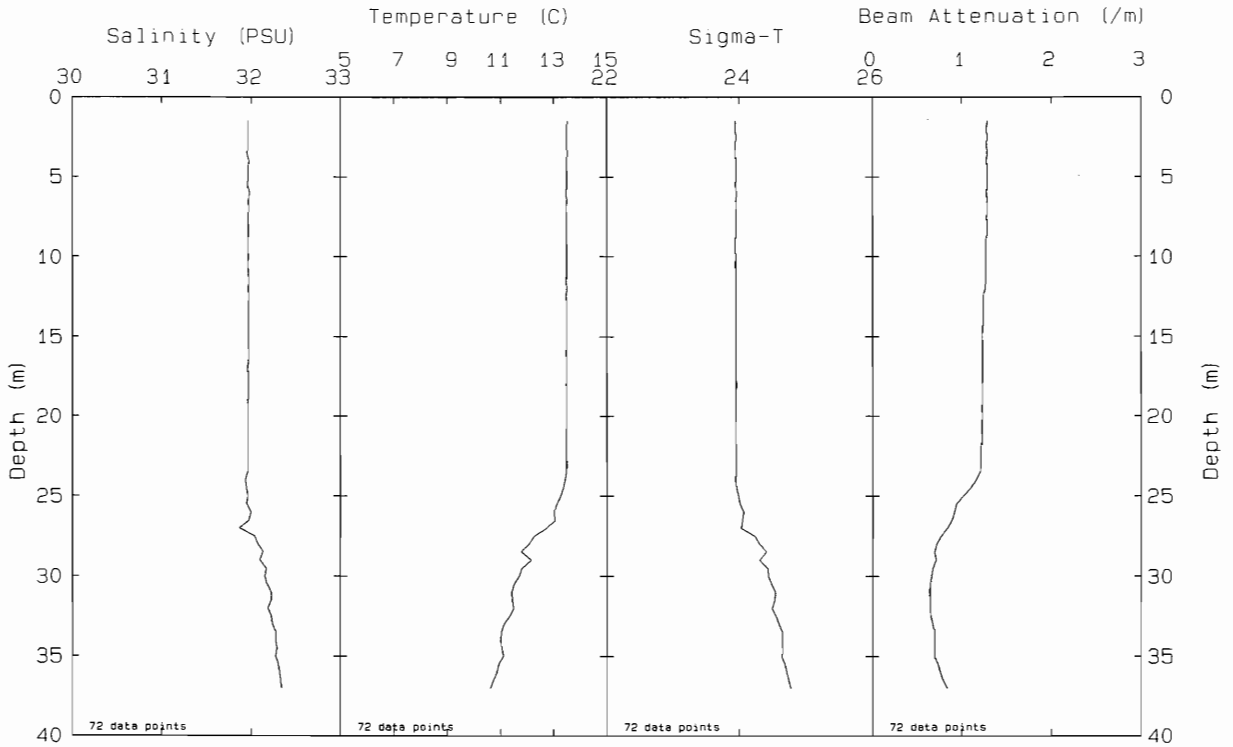

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
Air Irradiance (uE/s/m^2)
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30
54 data points
54 data points
54 data points
54 data points
54 data points
Station: N14 File: W9414188.PAB Date: 10-14-1994 Time: 14:53:51

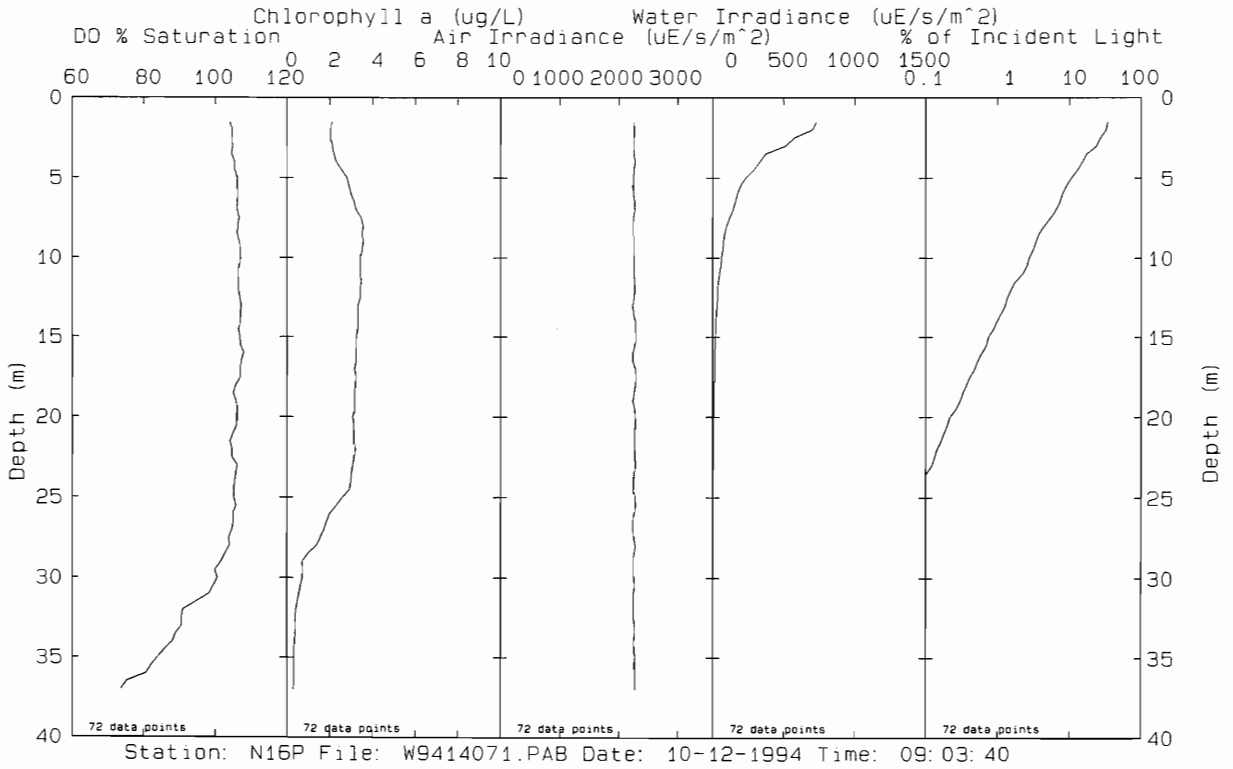

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
77 data points
77 data points
77 data points
77 data points

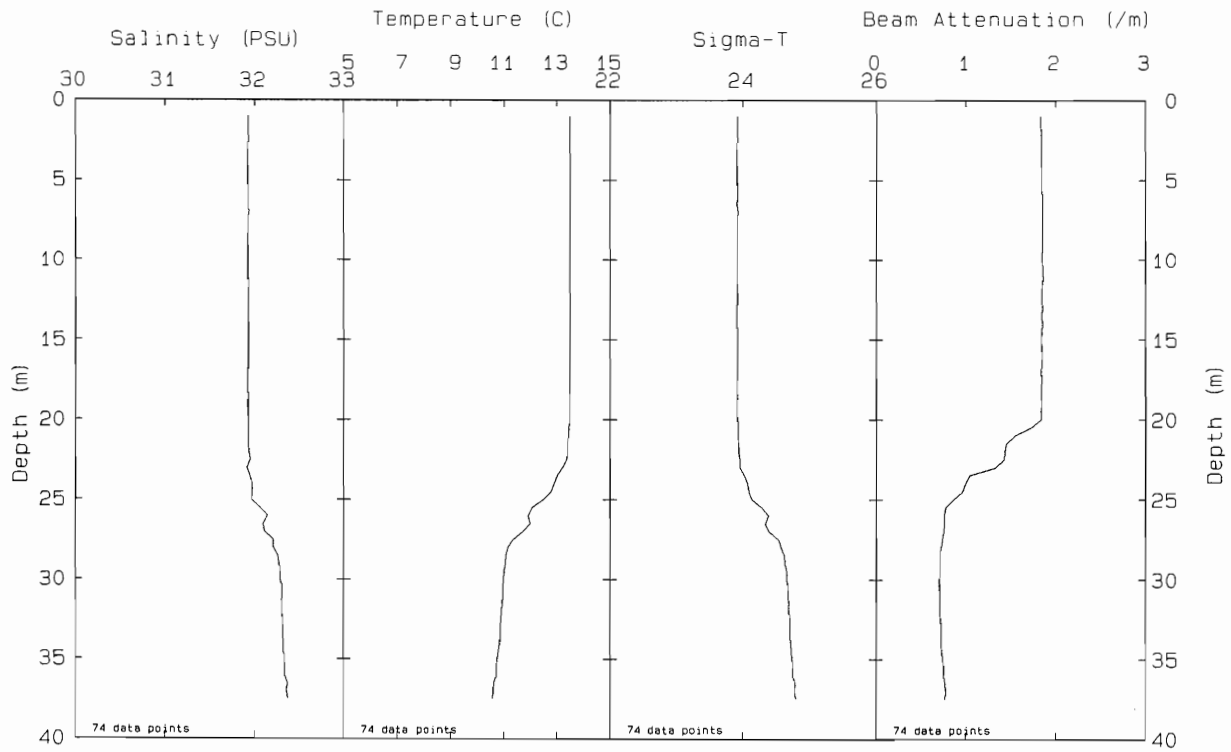

Chlorophyll a (ug/L)
Water Irradiance (uE/s/m^2)
DO % Saturation
Air Irradiance (uE/s/m^2)
% of Incident Light
60 80 100 120
0 2 4 6 8 10
0 1000 2000 3000
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
77 data points
77 data points
77 data points
77 data points
77 data points
Station: N15 File: W9414190.PAB Date: 10-14-1994 Time: 15:15:40

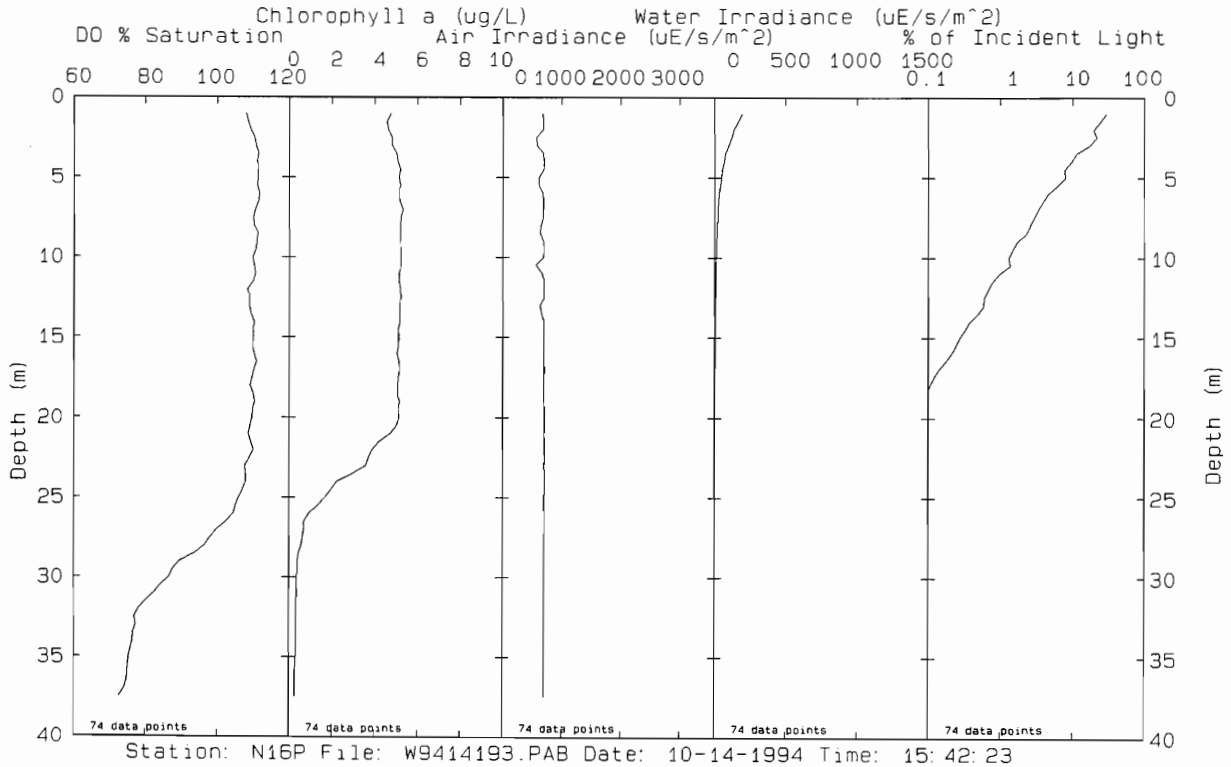

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
77 data points
77 data points
77 data points
77 data points

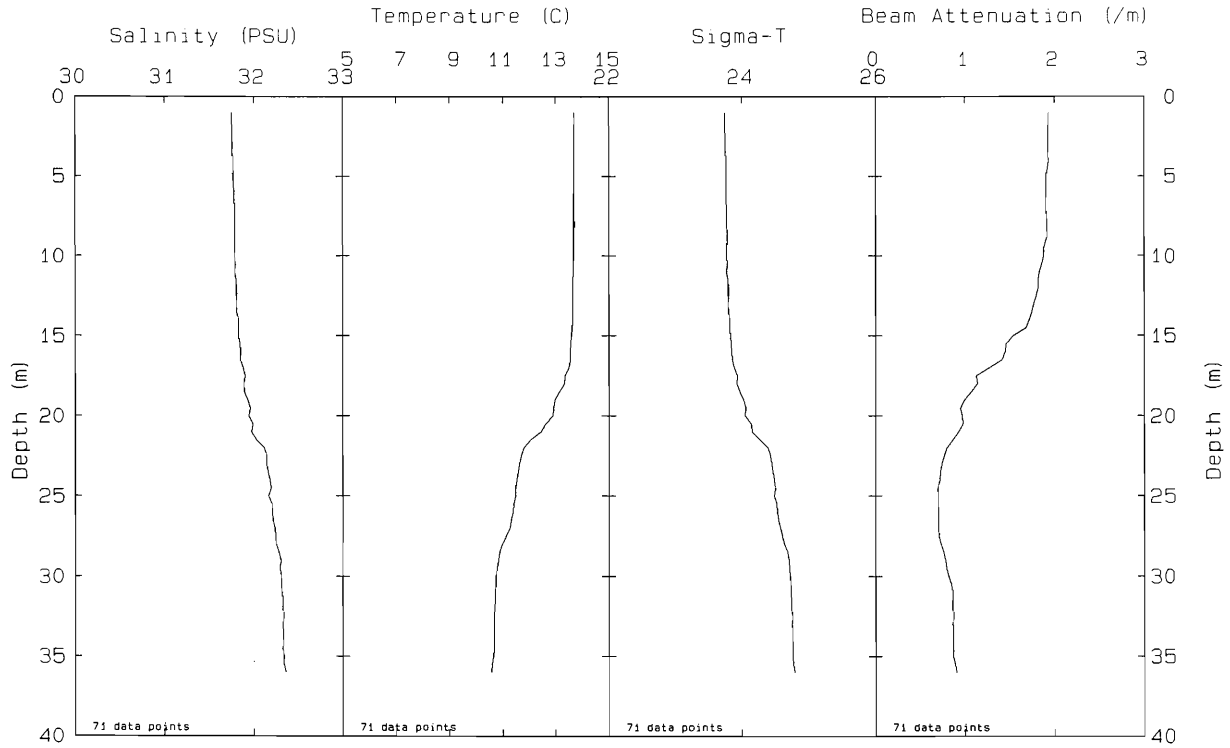

Chlorophyll a (ug/L)
Water Irradiance (uE/s/m^2)
DO % Saturation
Air Irradiance (uE/s/m^2)
% of Incident Light
60 80 100 120
0 2 4 6 8 10
0 1000 2000 3000
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
77 data points
77 data points
77 data points
77 data points
77 data points
Station: N16P File: W9414032.PAB Date: 10-11-1994 Time: 11:47:18

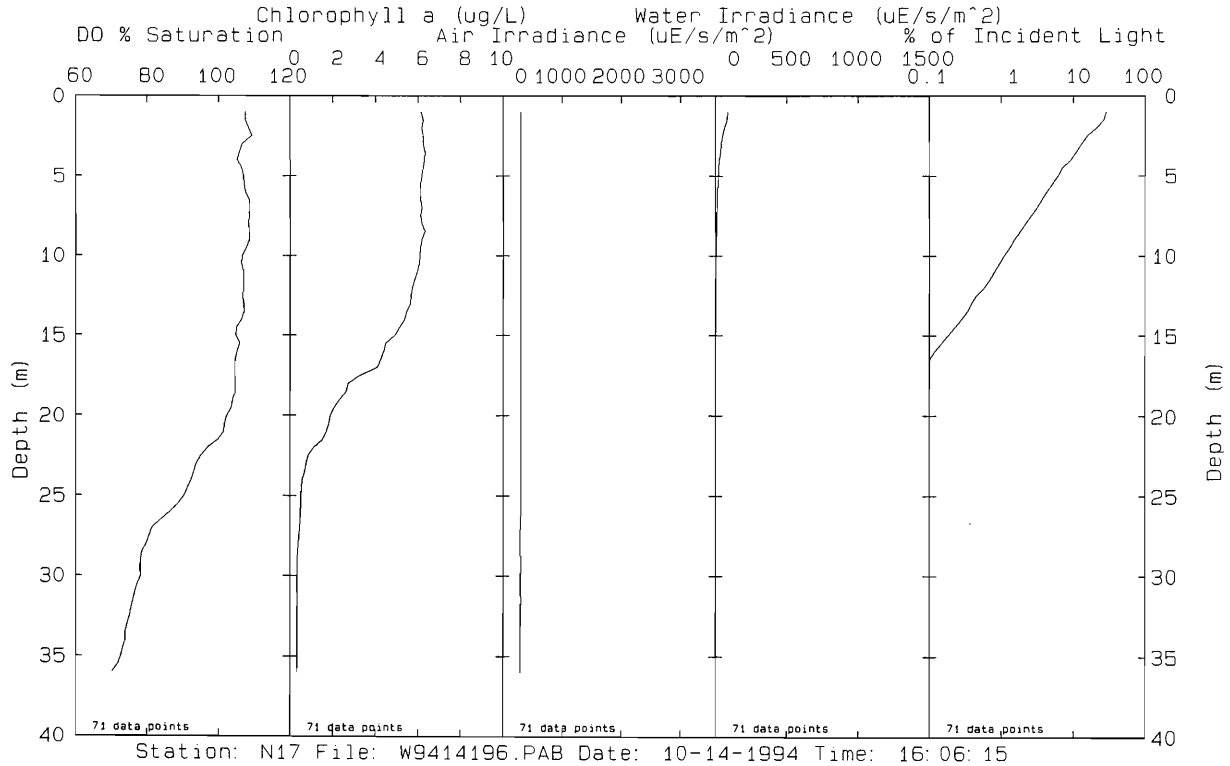

Salinity (PSU)
Temperature (C)
Sigma-T
Beam Attenuation (/m)
30 31 32
5 7 9 11 13 15
22 24 26
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40
72 data points

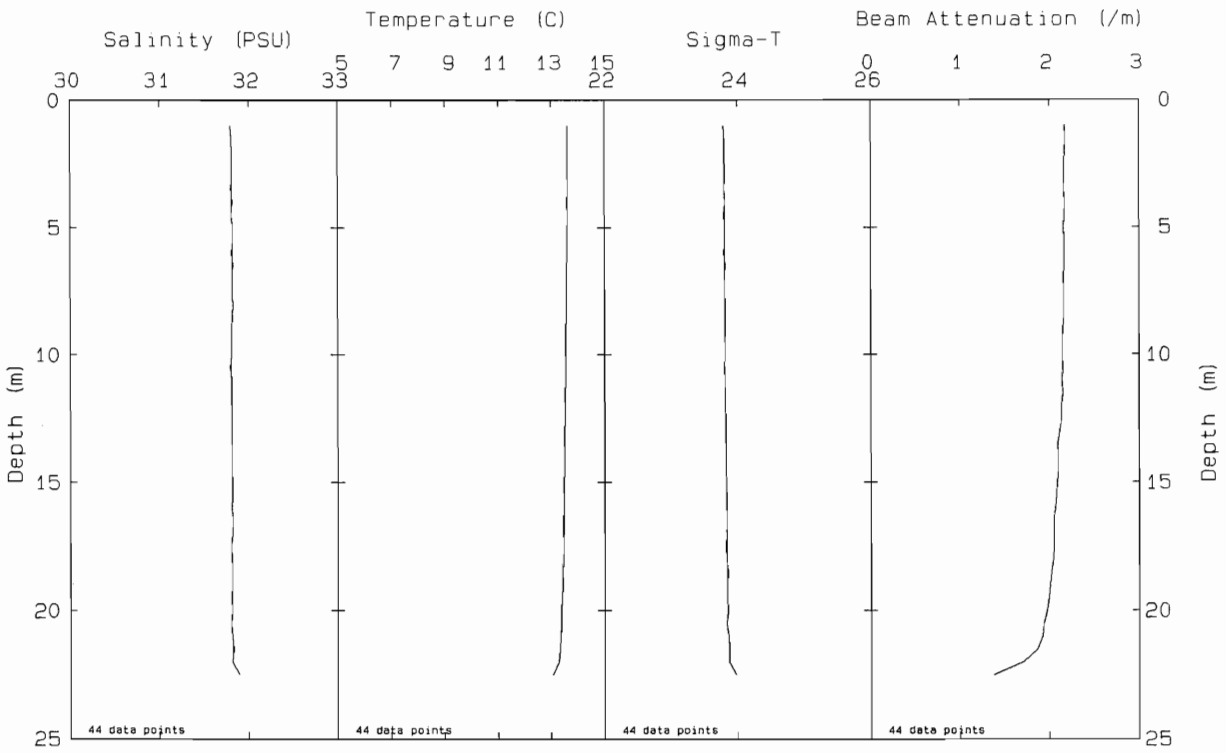

DO % Saturation
Chlorophyll a (ug/L)
Air Irradiance (uE/s/m^2)
Water Irradiance (uE/s/m^2)
% of Incident Light
60 80 100 120
0 2 4 6 8 10
0 1000 2000 3000
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
72 data points
Station: N16P File: W9414071.PAB Date: 10-12-1994 Time: 09:03:40

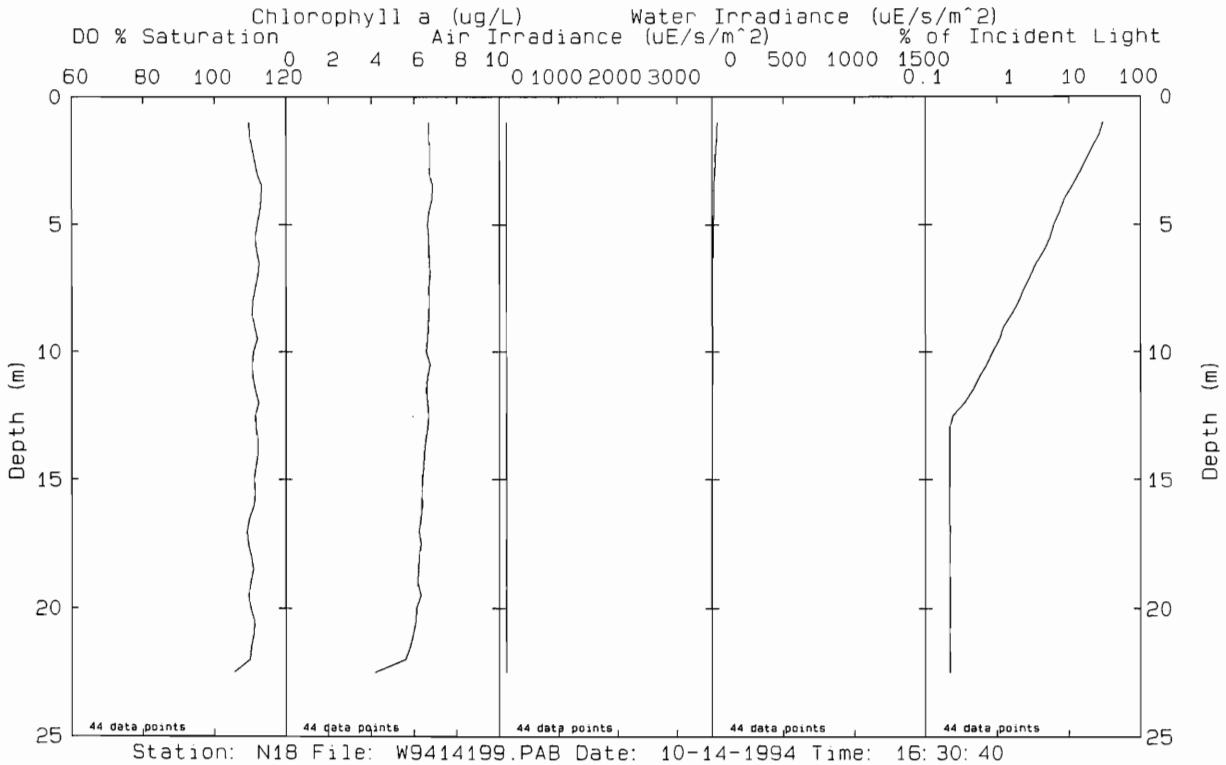

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
74 data points
74 data points
74 data points
74 data points


Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
74 data points
74 data points
74 data points
74 data points
74 data points
Station: N16P File: W9414193.PAB Date: 10-14-1994 Time: 15:42:23

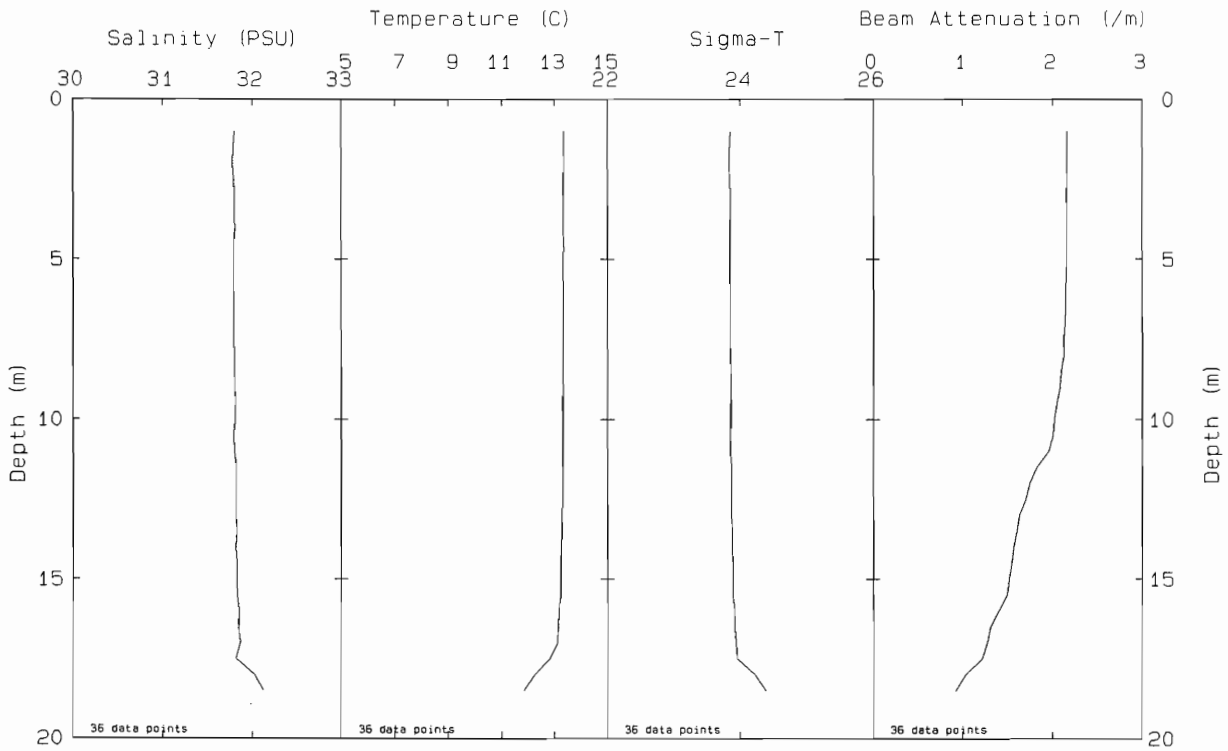

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
71 data points

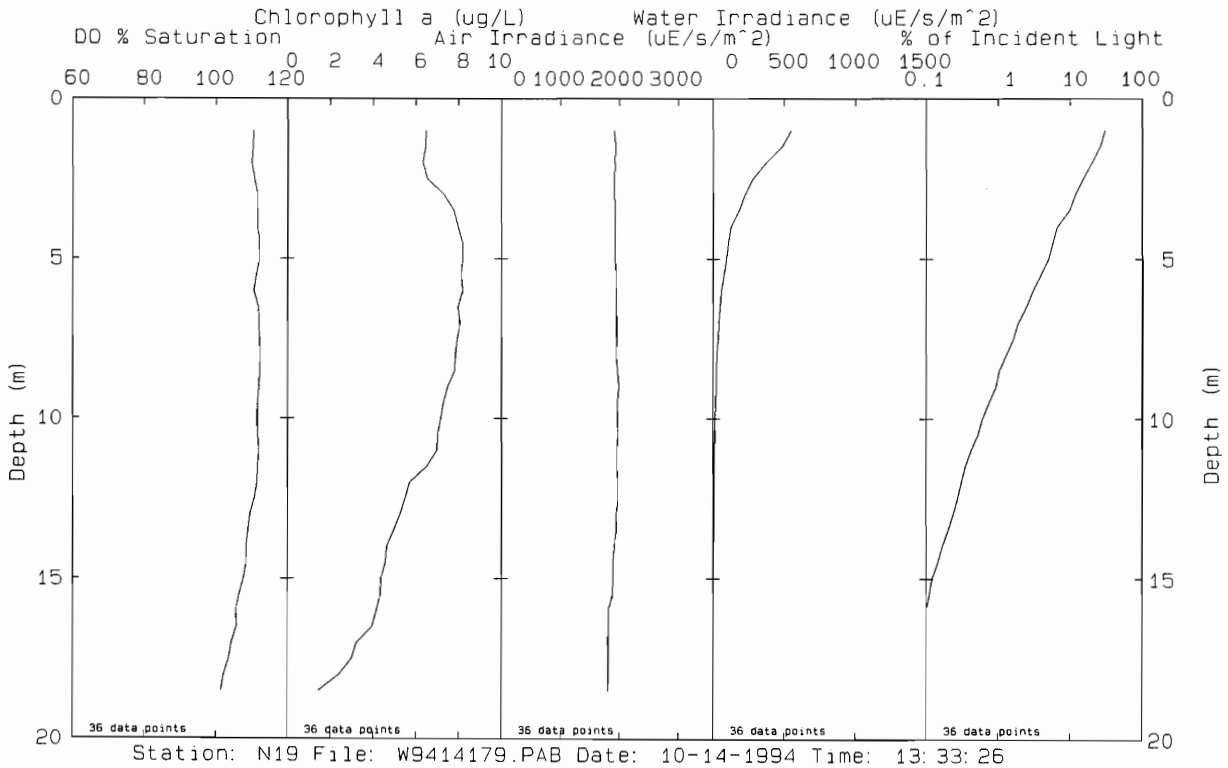

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
71 data points
Station: N17 File: W9414196.PAB Date: 10-14-1994 Time: 16:06:15



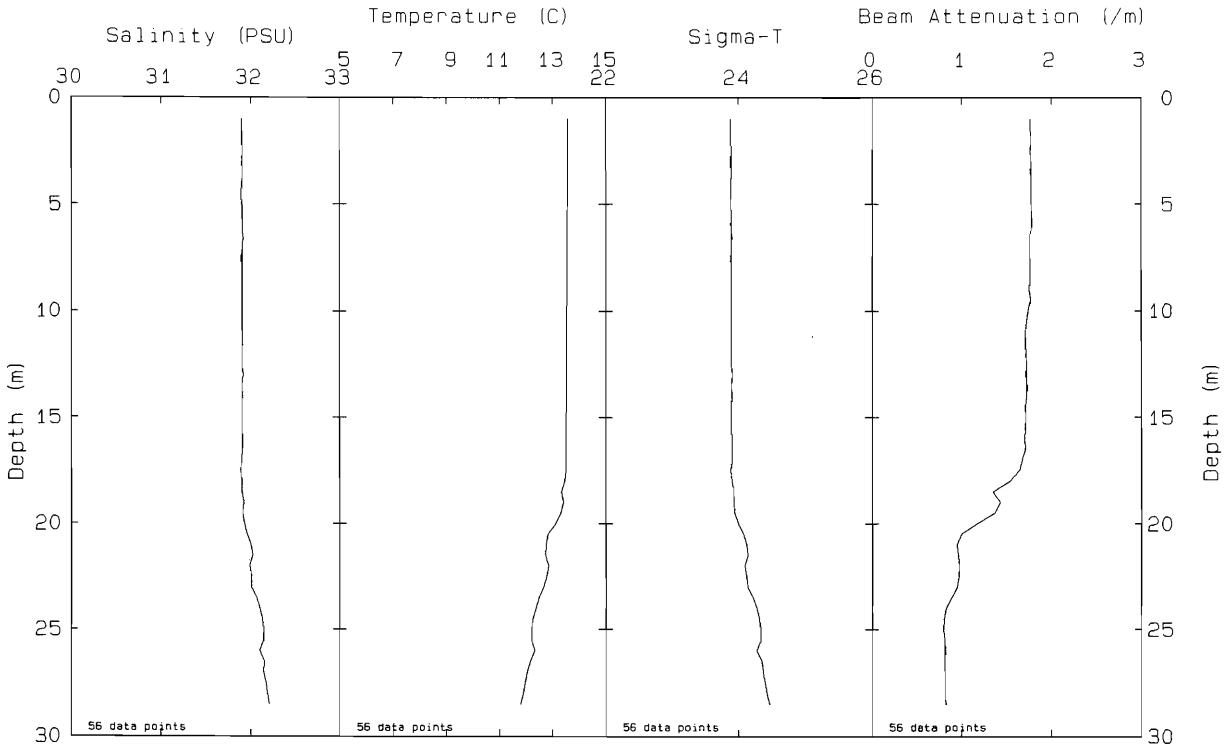


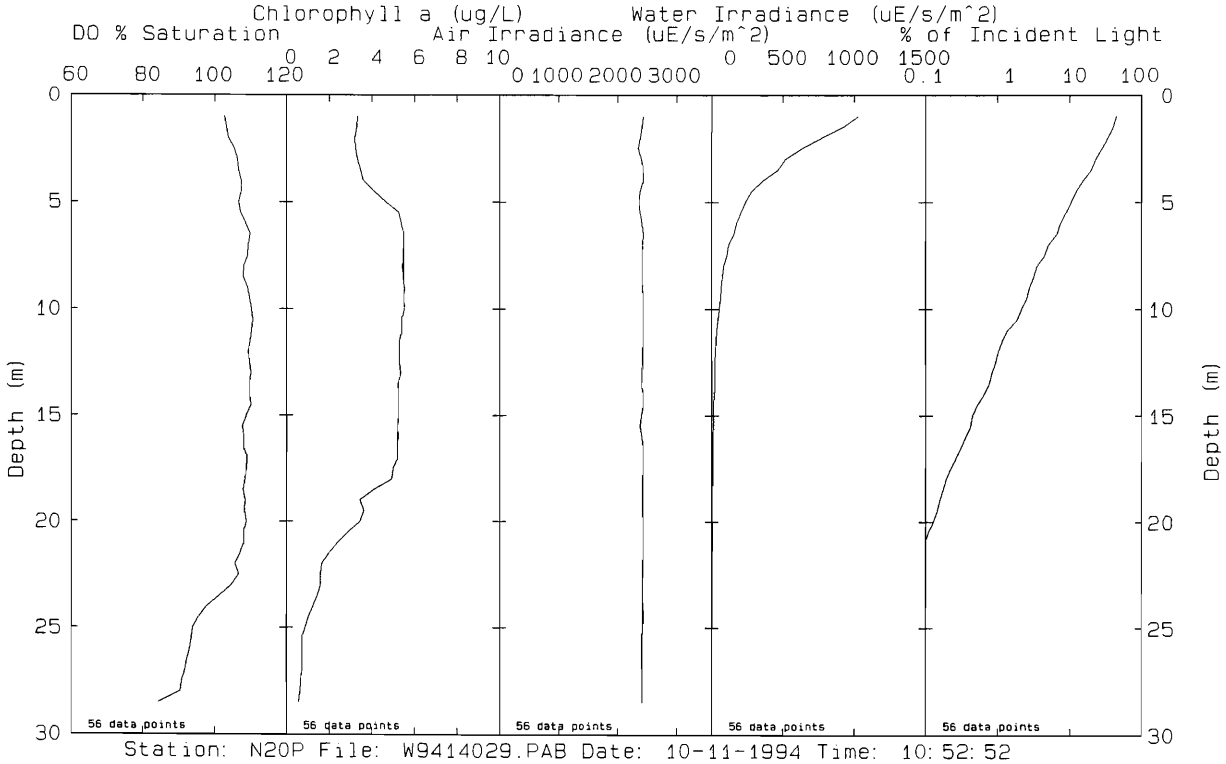
Station: N18 File: W9414199.PAB Date: 10-14-1994 Time: 16:30:40

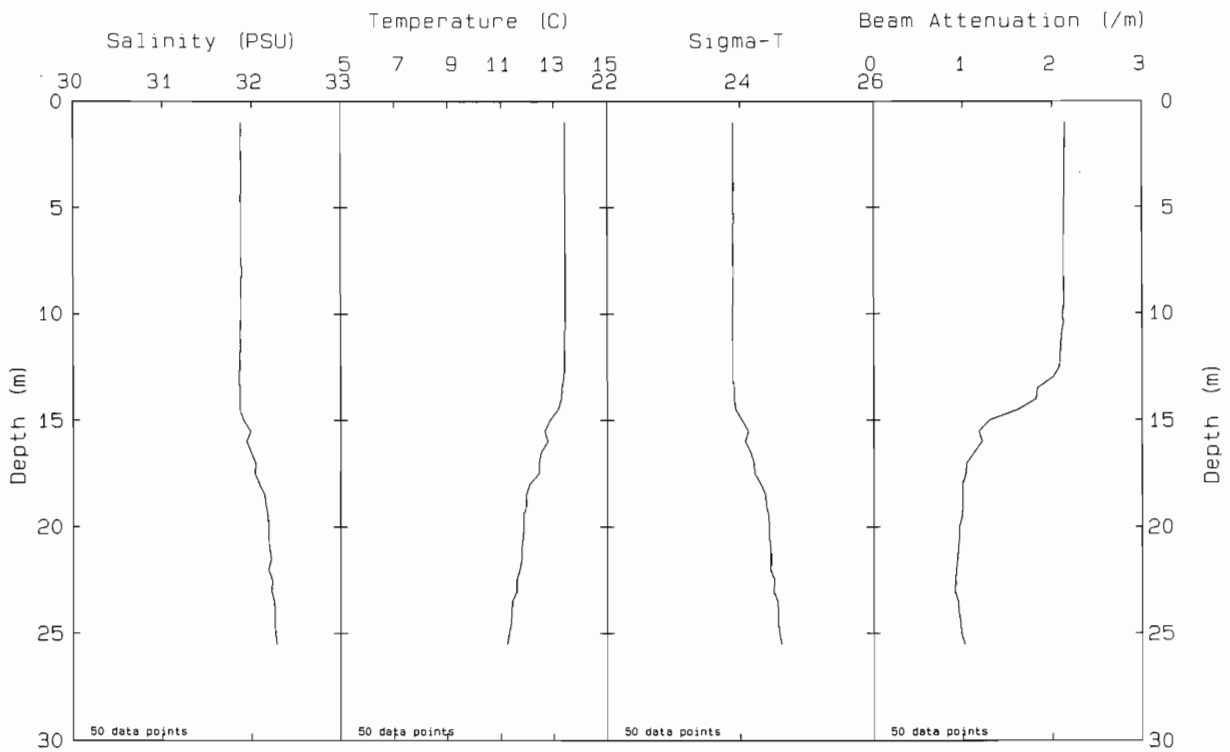


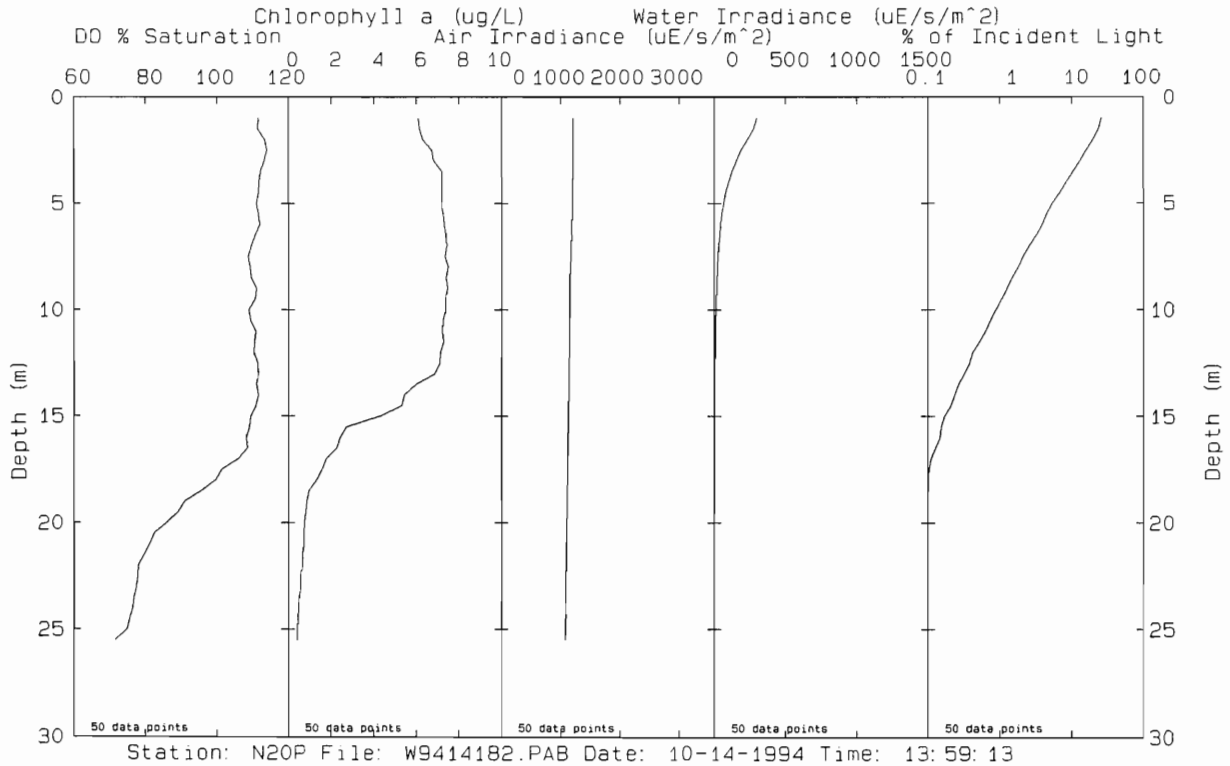


Station: N19 File: W9414179.PAB Date: 10-14-1994 Time: 13:33:26


Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30
56 data points
56 data points
56 data points
56 data points

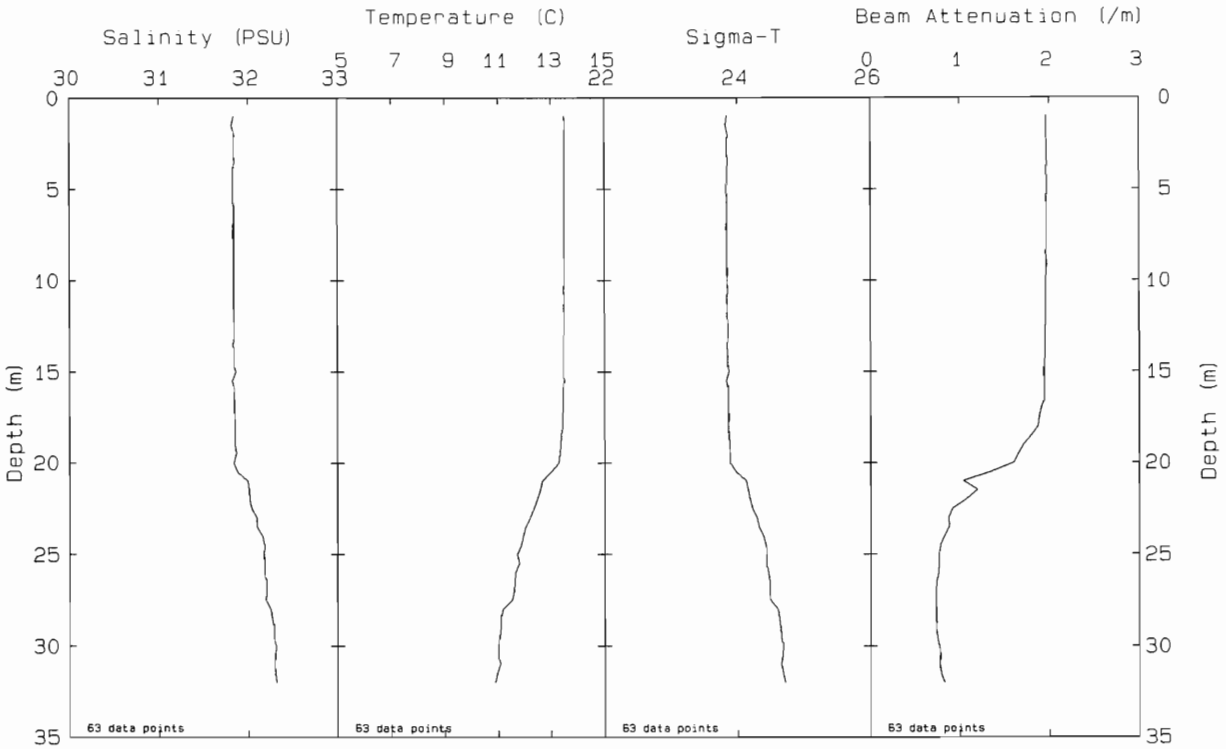

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30
56 data points
56 data points
56 data points
56 data points
56 data points
Station: N20P File: W9414029.PAB Date: 10-11-1994 Time: 10:52:52

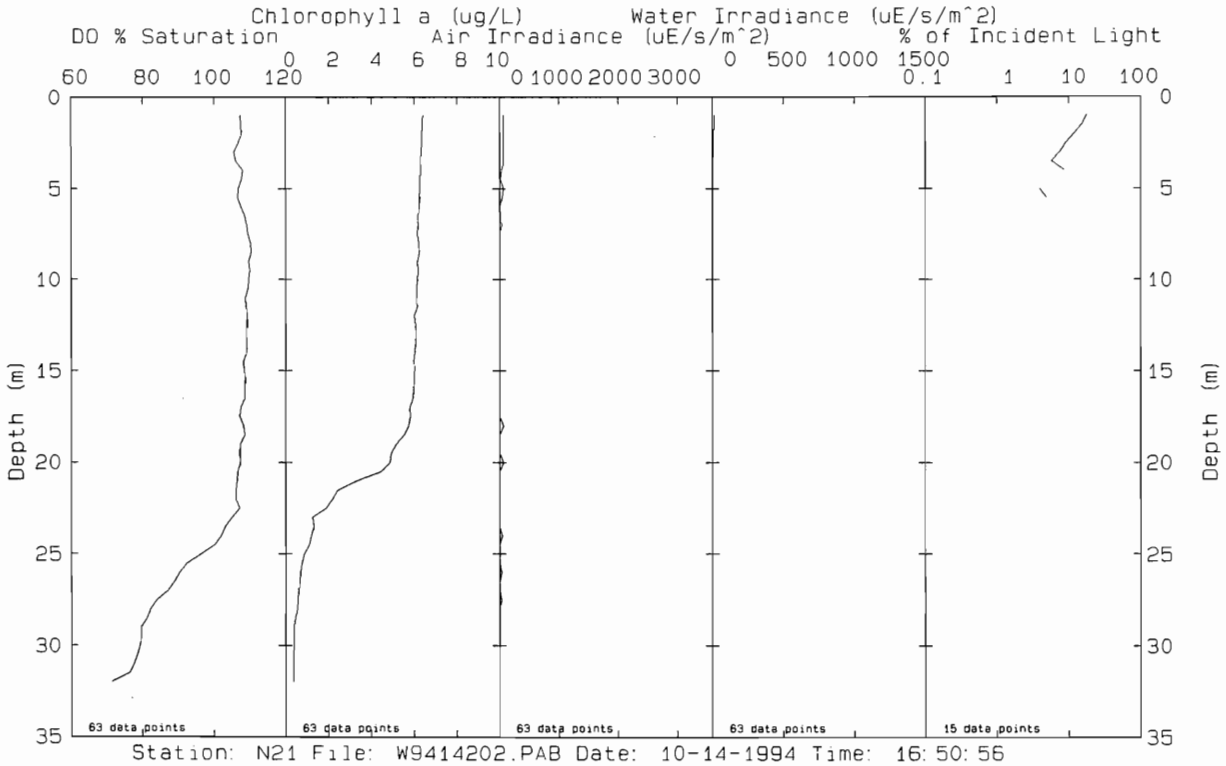




Station: N20P File: W9414182.PAB Date: 10-14-1994 Time: 13:59:13

02-17-1995 11:36:20 Battelle


Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35
63 data points
63 data points
63 data points
63 data points


Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35
63 data points
63 data points
63 data points
63 data points
15 data points
Station: N21 File: W9414202.PAB Date: 10-14-1994 Time: 16:50:56

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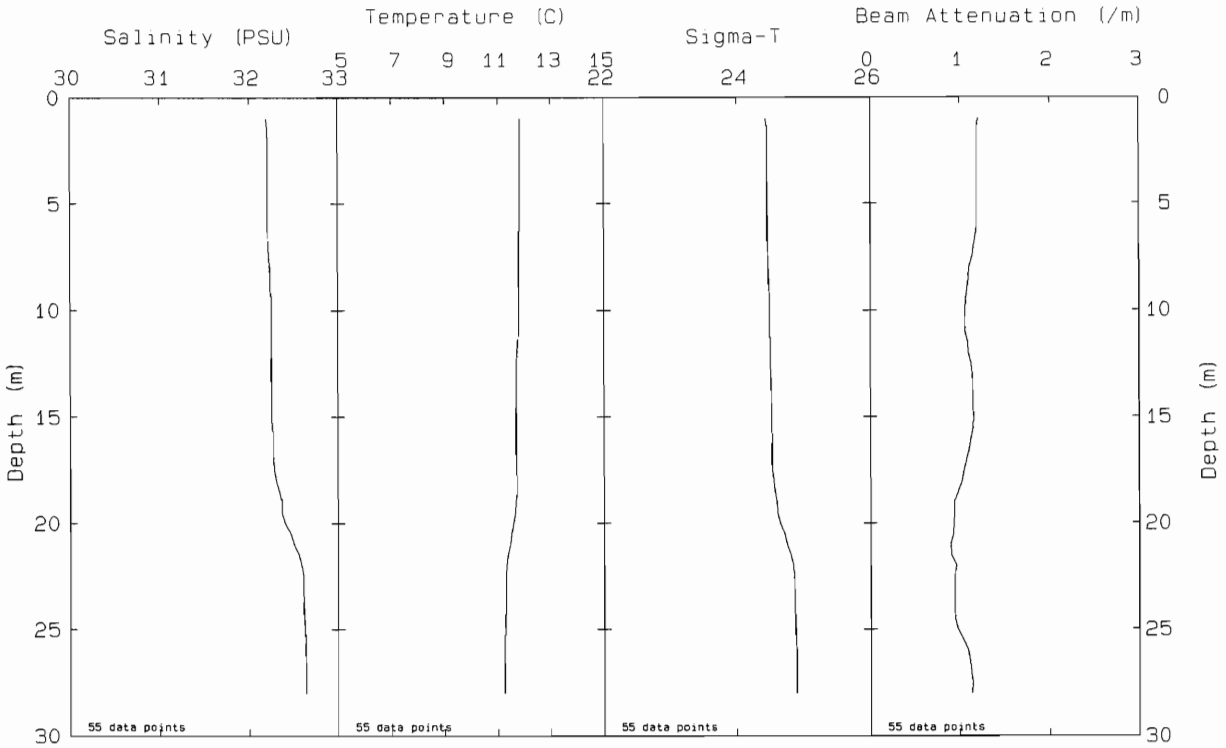
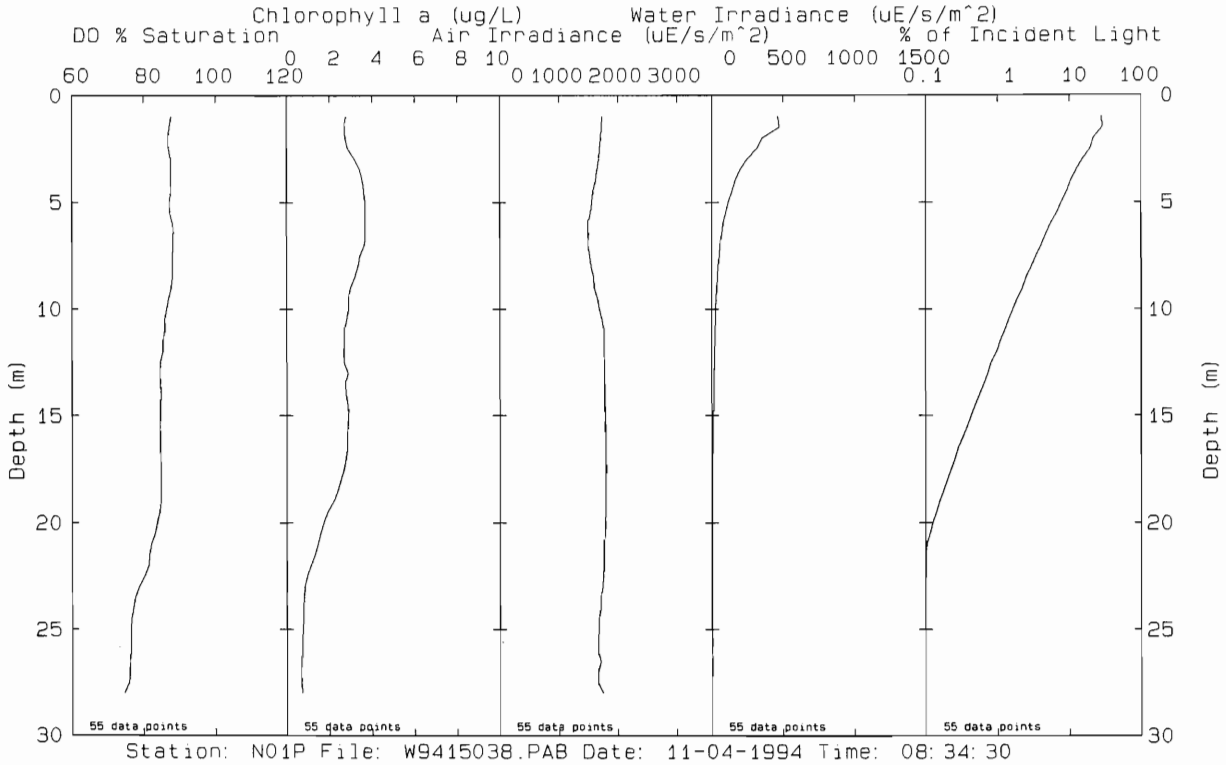
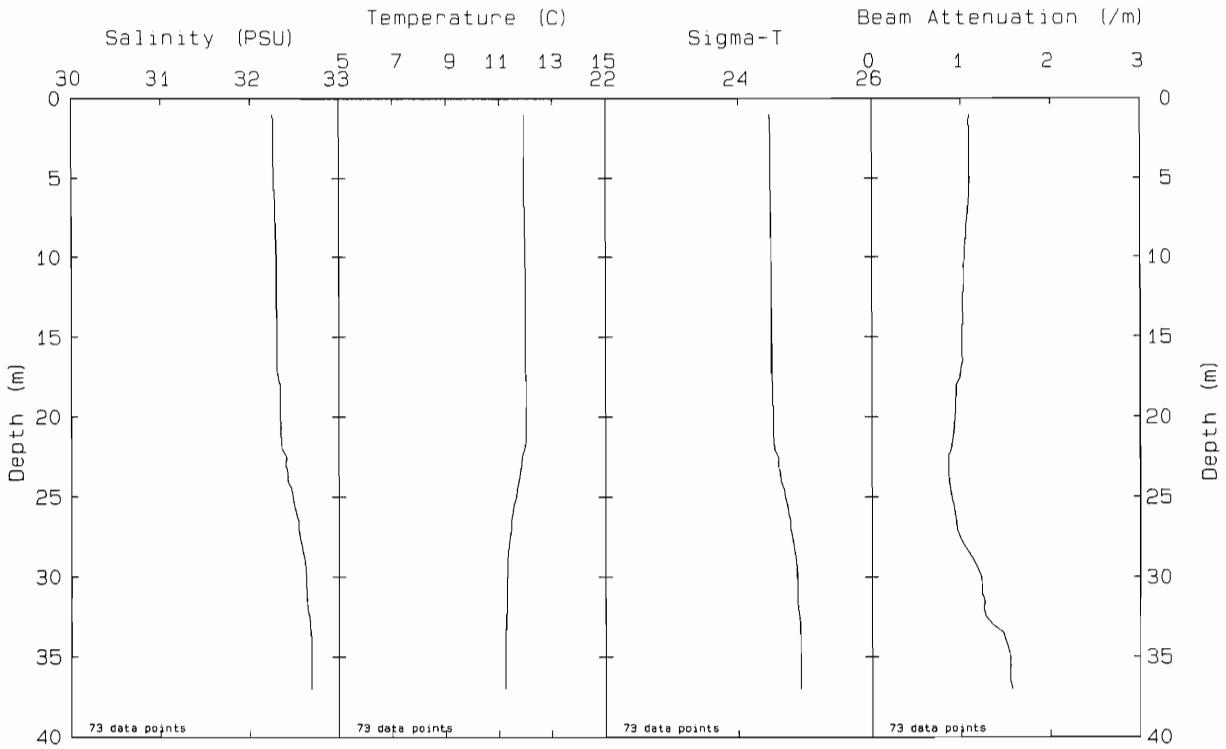
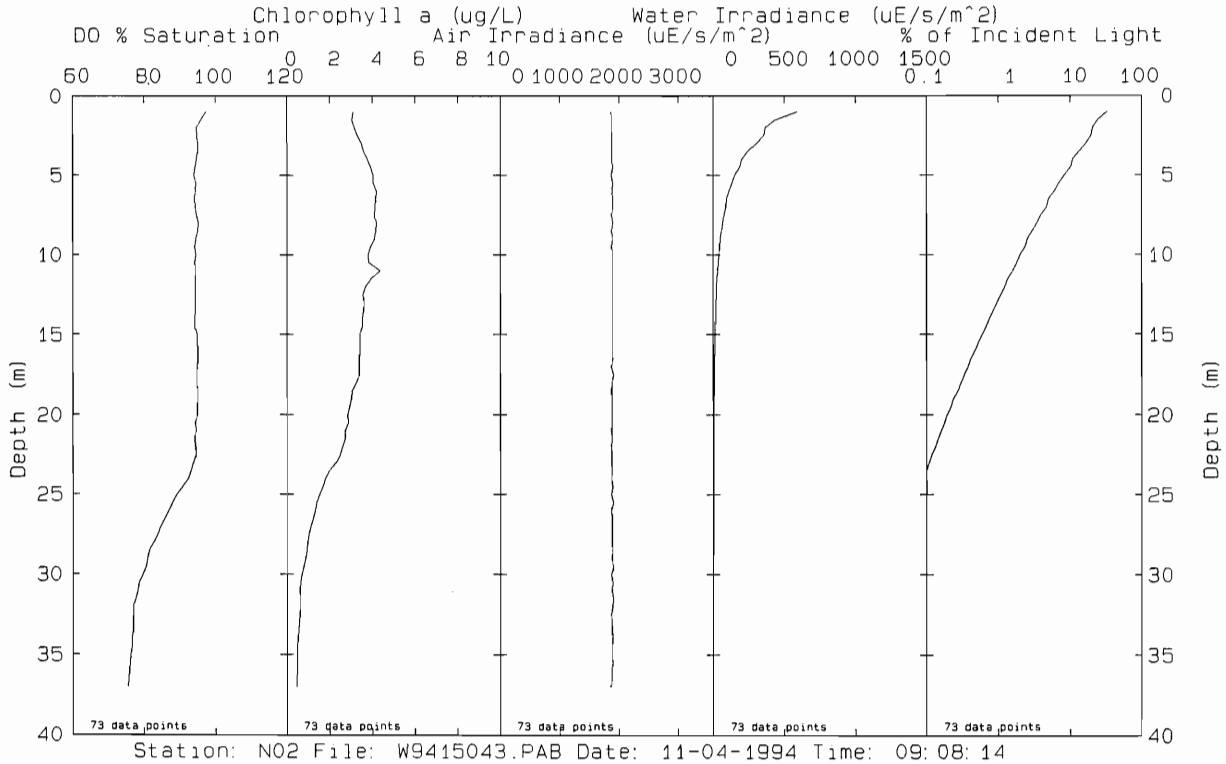


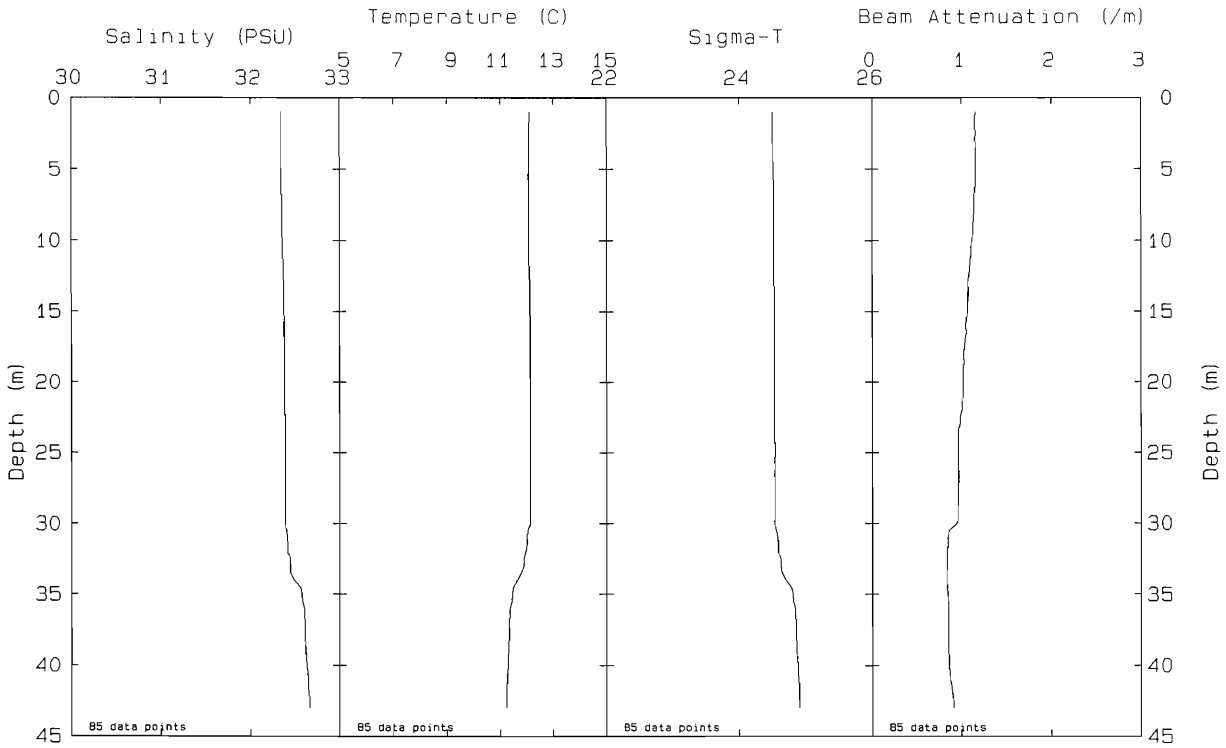


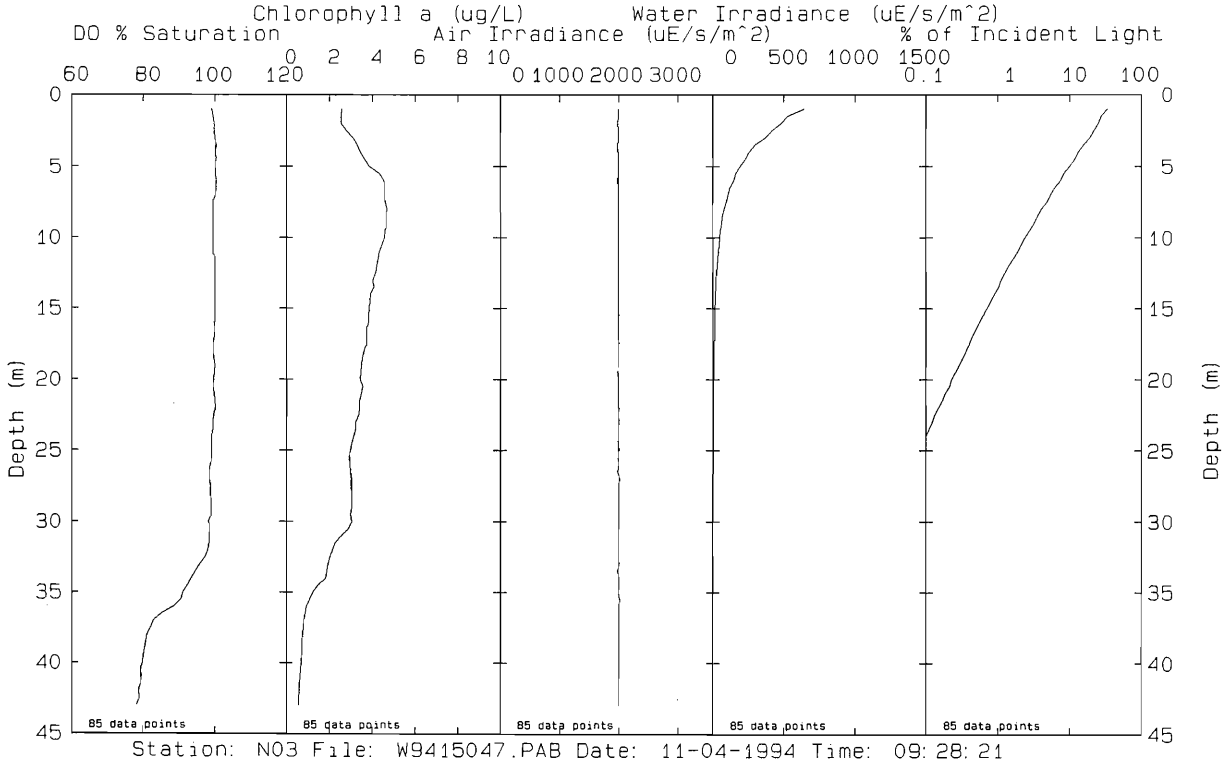
Station: N01P File: W9415038.PAB Date: 11-04-1994 Time: 08:34:30

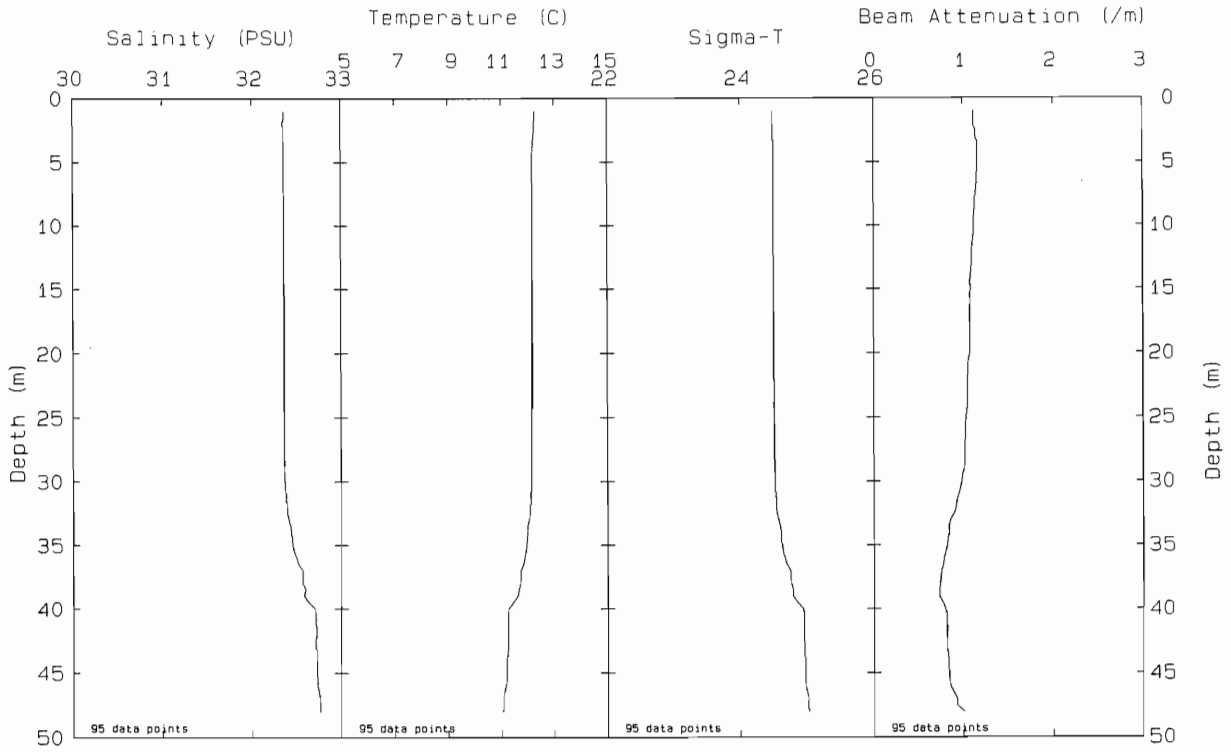
02-17-1995 11:36:47 Battelle

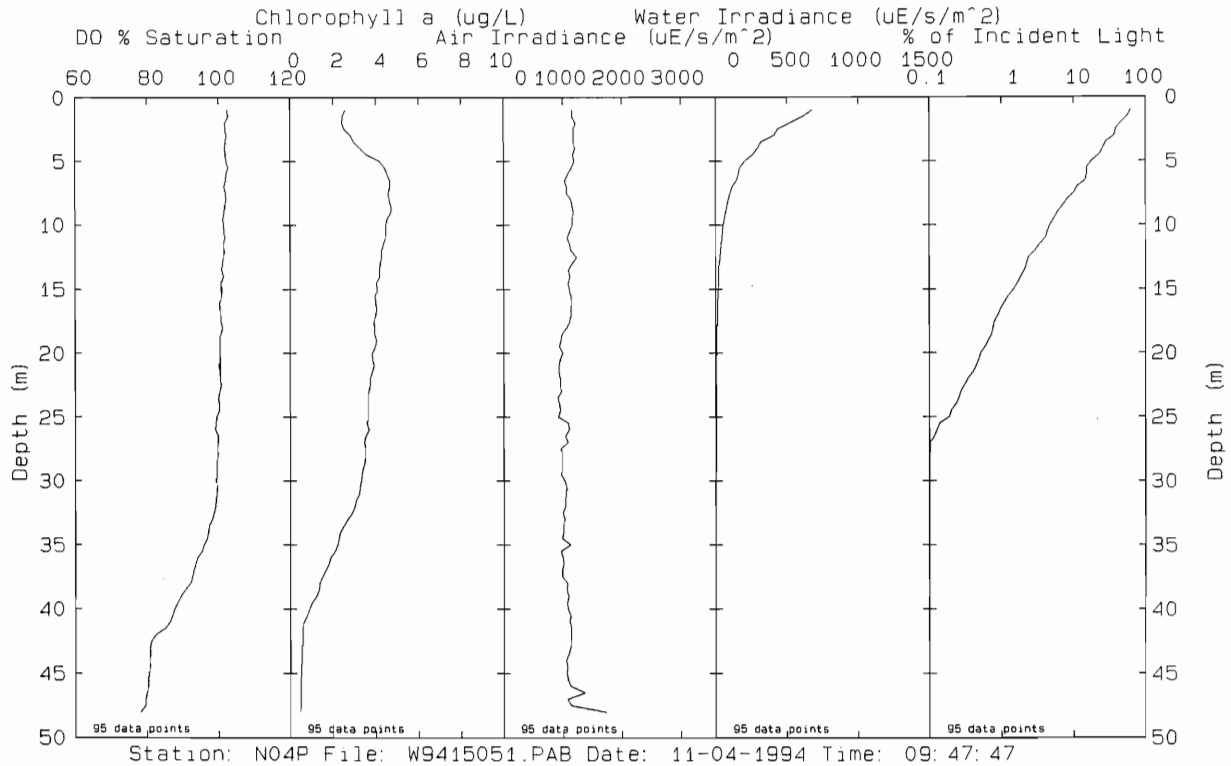

Salinity (PSU)
30 31 32 33
Temperature (C)
5 7 9 11 13 15
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40
73 data points

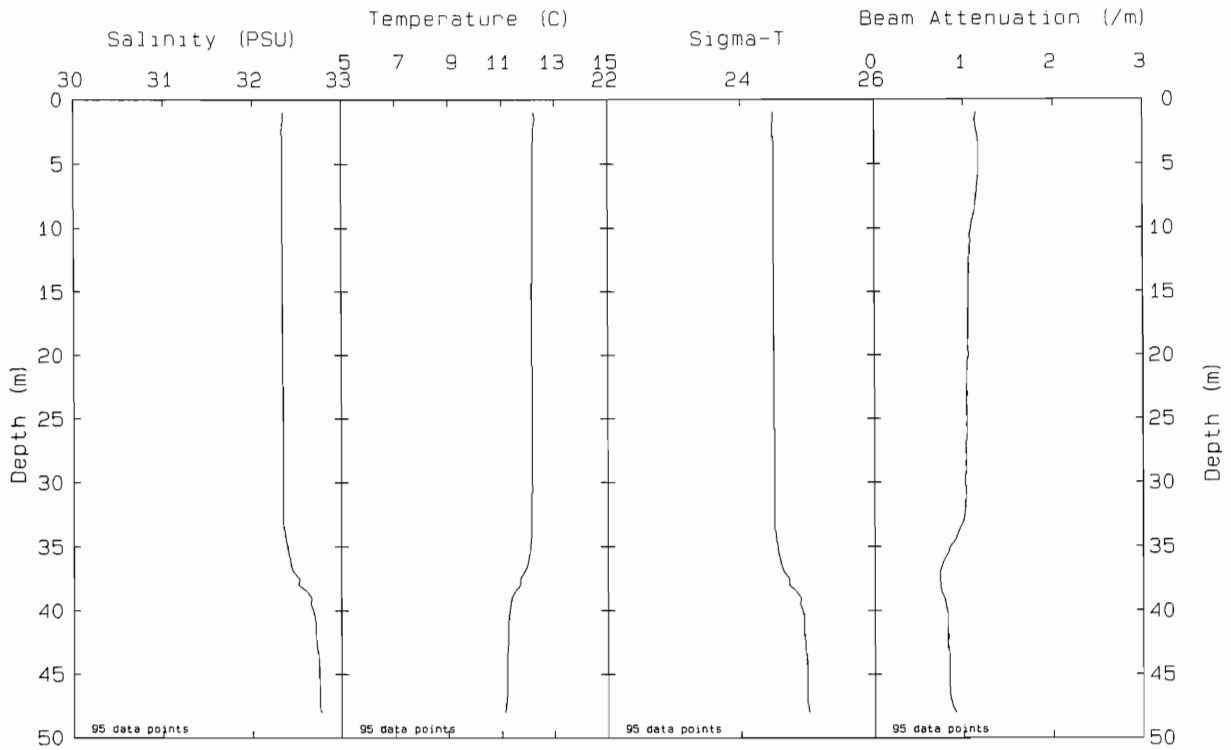

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
73 data points
Station: N02 File: W9415043.PAB Date: 11-04-1994 Time: 09:08:14

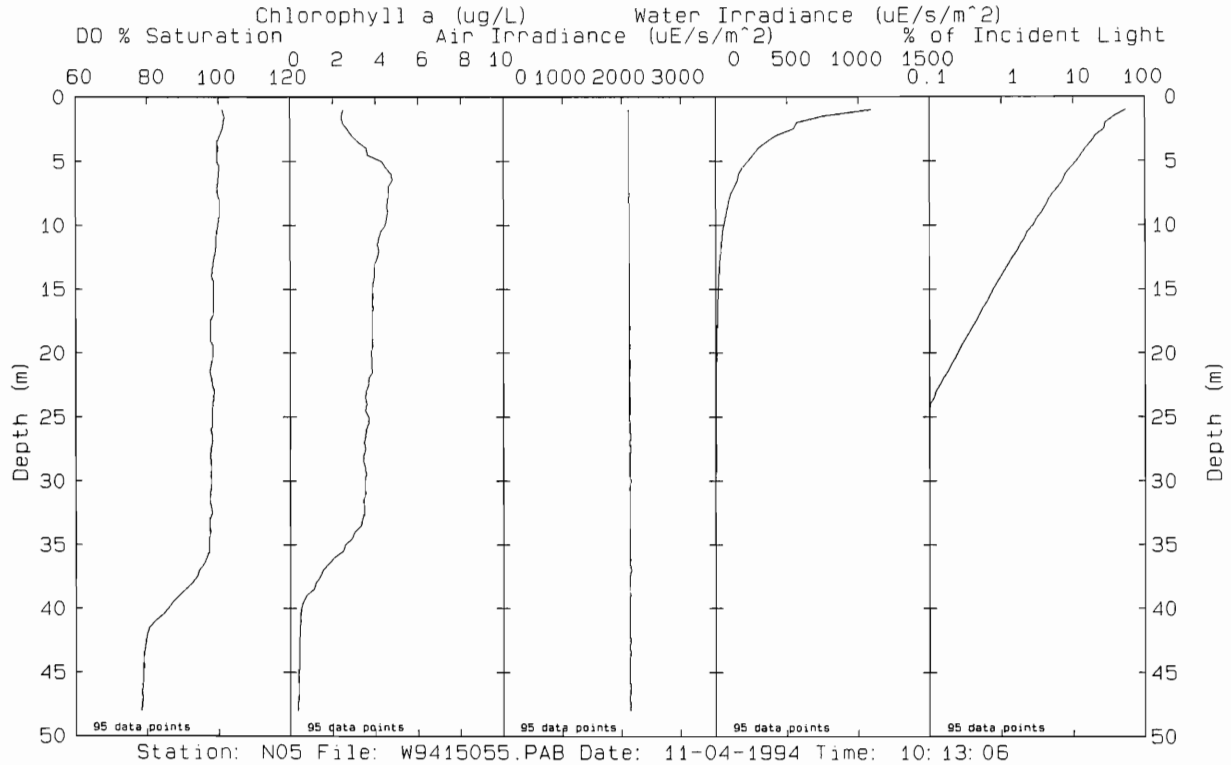

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40 45
85 data points
85 data points
85 data points
85 data points

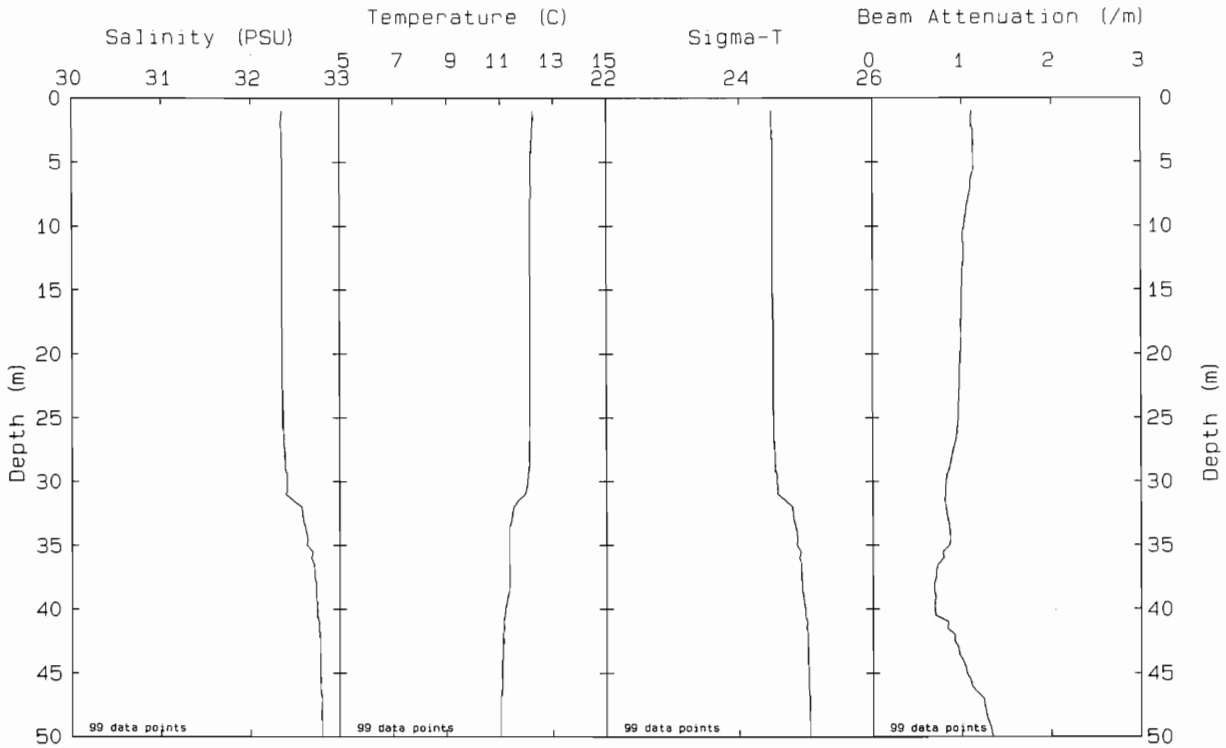

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45
85 data points
85 data points
85 data points
85 data points
85 data points
Station: N03 File: W9415047.PAB Date: 11-04-1994 Time: 09:28:21

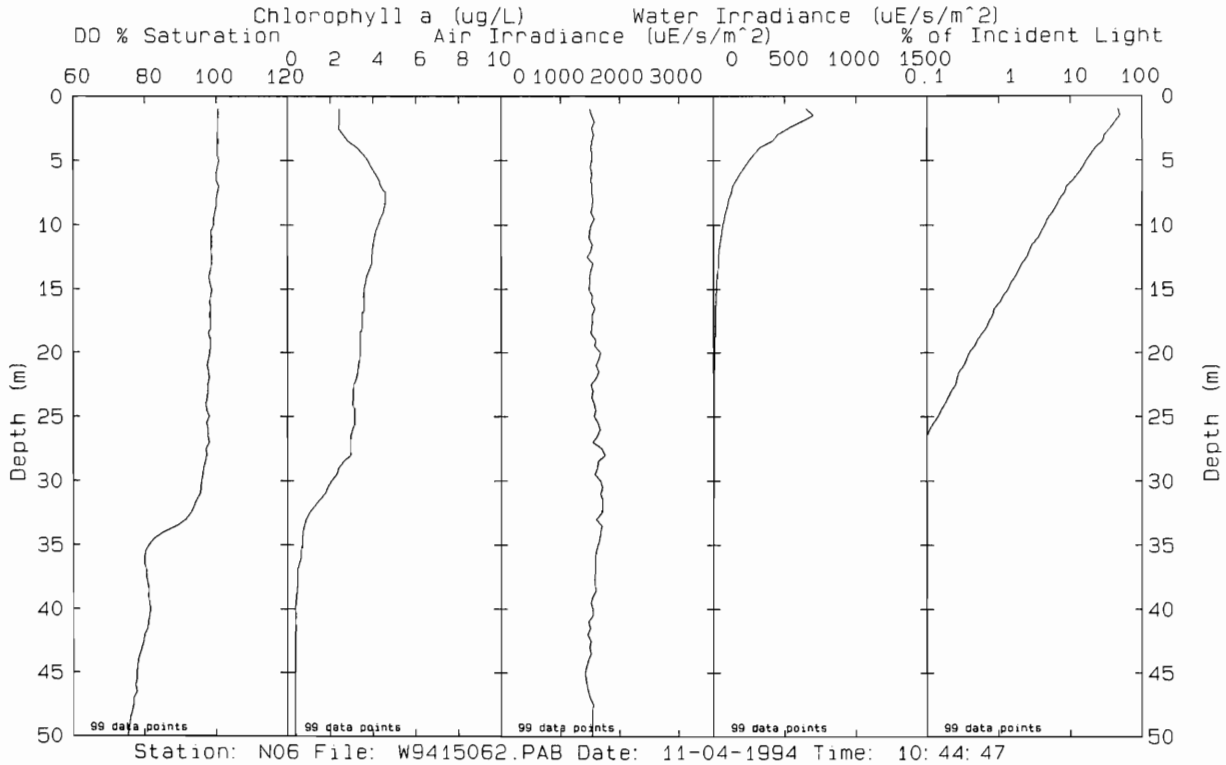

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
95 data points
95 data points
95 data points
95 data points

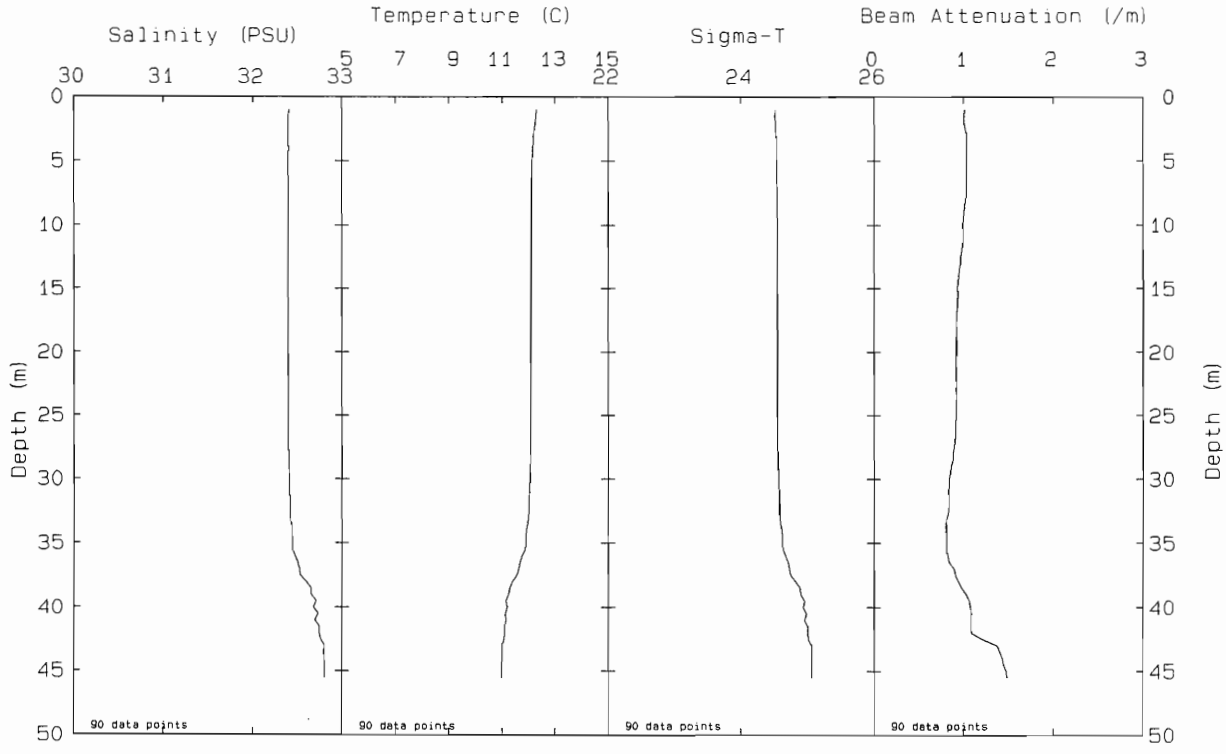

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
95 data points
95 data points
95 data points
95 data points
95 data points
Station: N04P File: W9415051.PAB Date: 11-04-1994 Time: 09:47:47

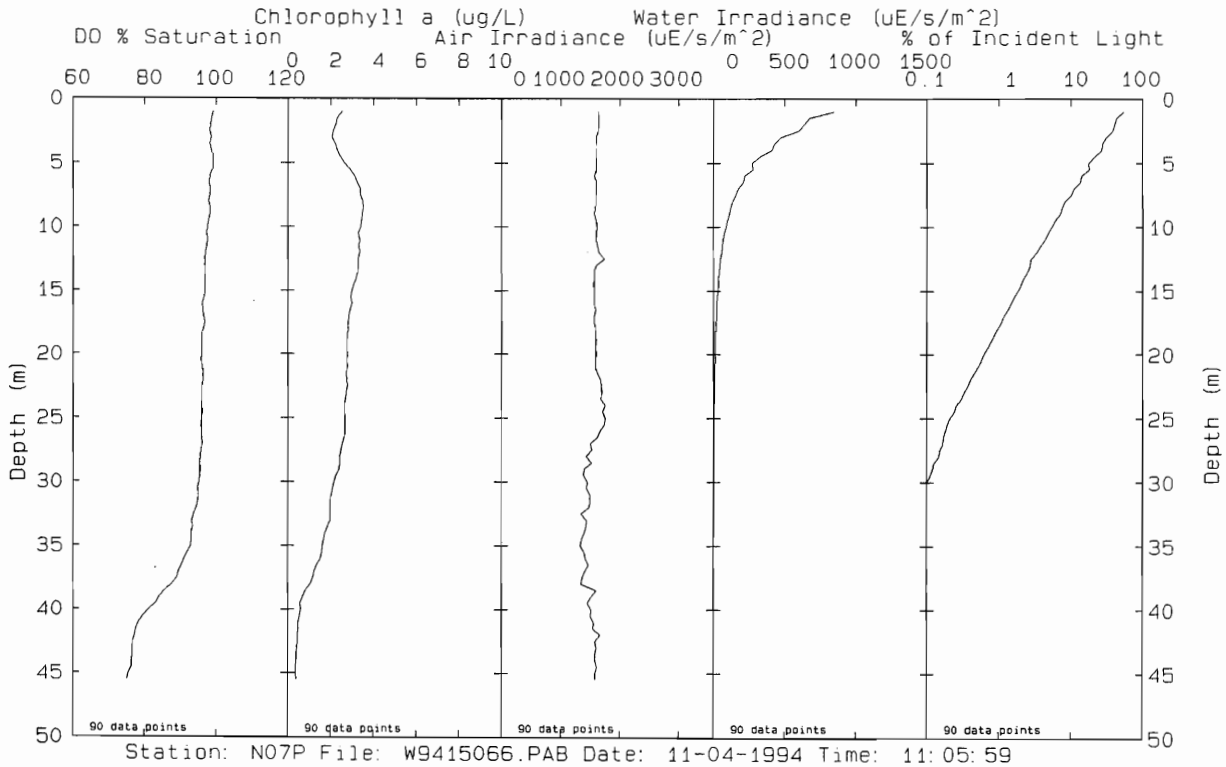

Salinity (PSU)
30 31 32 33
Temperature (C)
5 7 9 11 13 15
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
95 data points
95 data points
95 data points
95 data points


DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
95 data points
95 data points
95 data points
95 data points
95 data points
Station: N05 File: W9415055.PAB Date: 11-04-1994 Time: 10:13:06

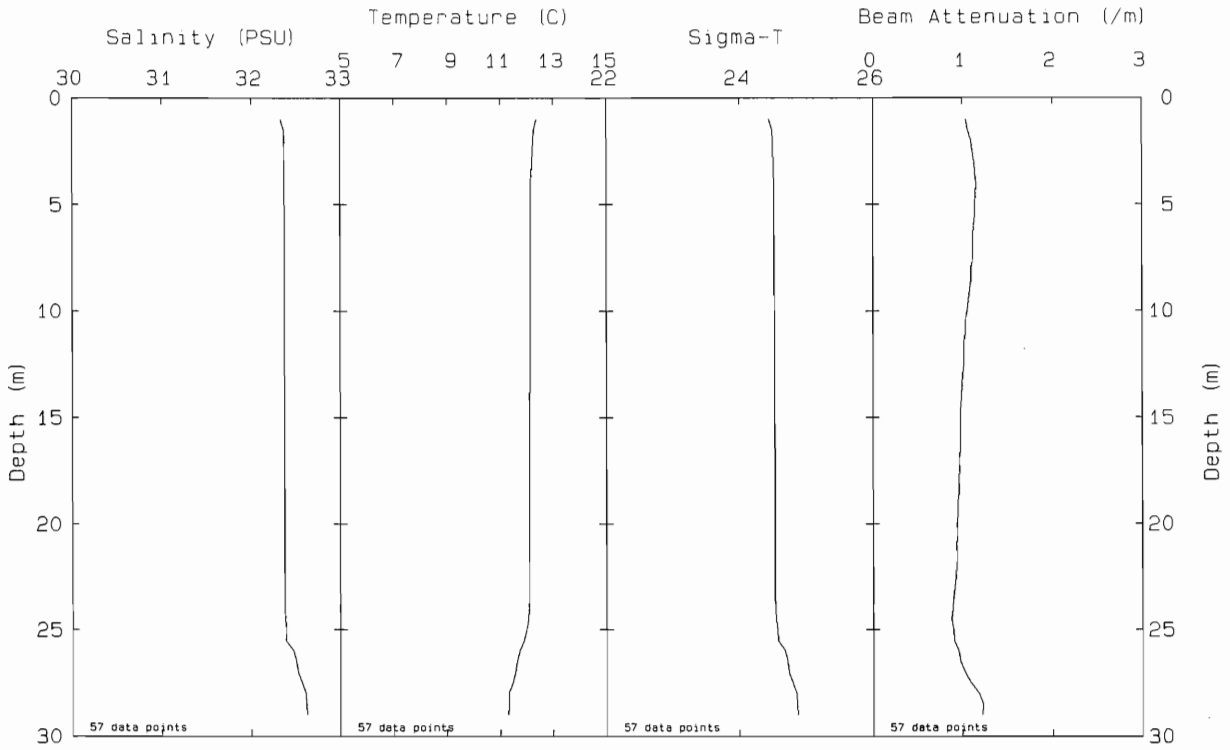

Salinity (PSU)
Temperature (C)
Sigma-T
Beam Attenuation (/m)
Depth (m)
99 data points

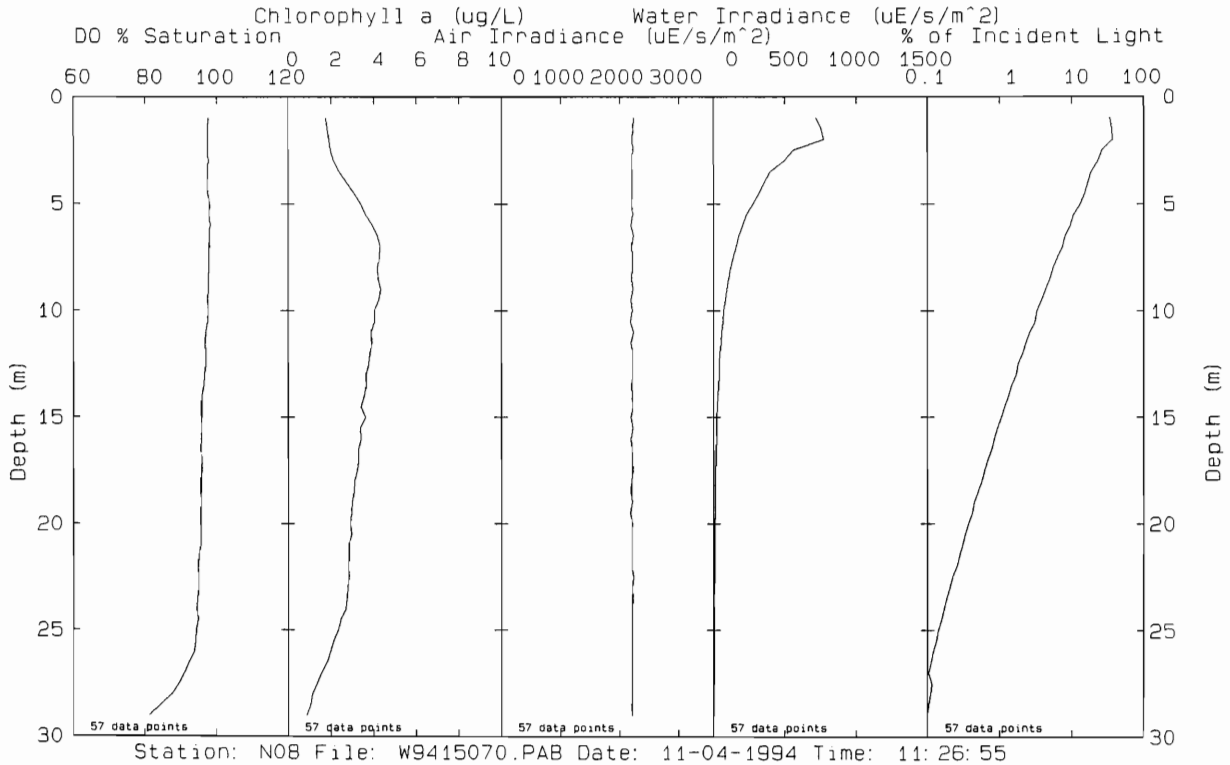

DO % Saturation
Chlorophyll a (ug/L)
Air Irradiance (uE/s/m^2)
Water Irradiance (uE/s/m^2)
% of Incident Light
Depth (m)
99 data points
Station: N06 File: W9415062.PAB Date: 11-04-1994 Time: 10:44:47



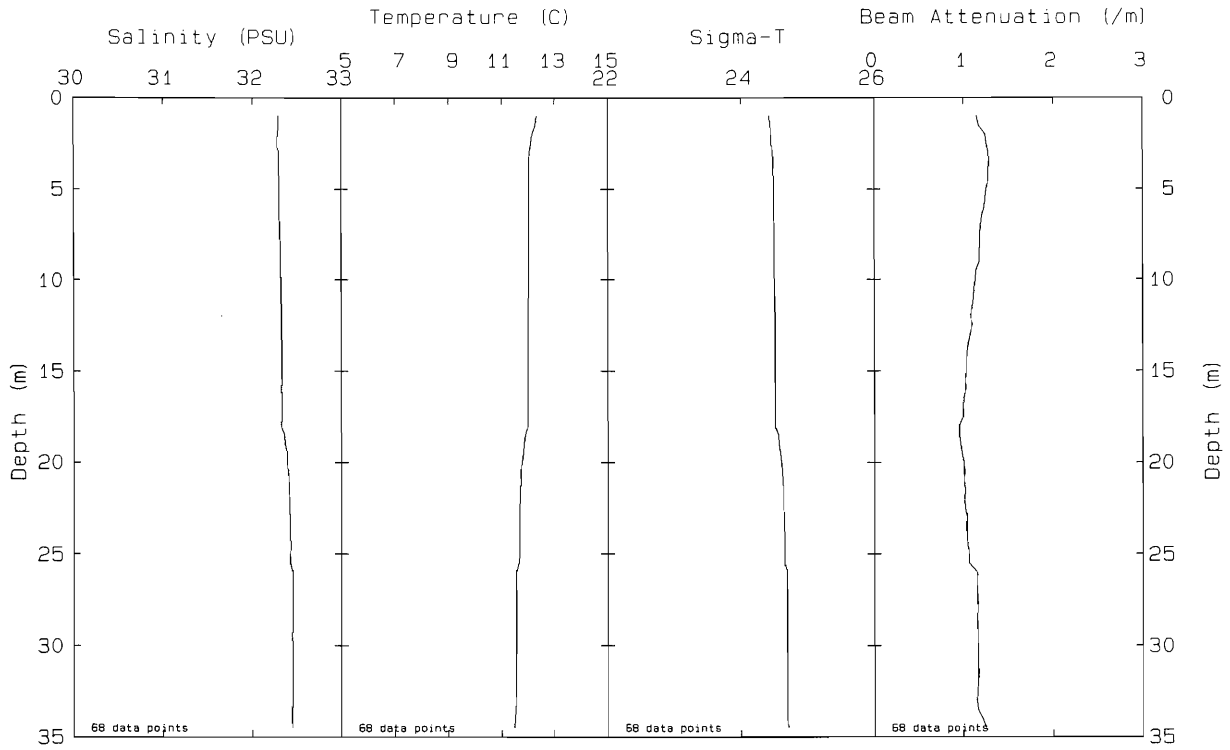


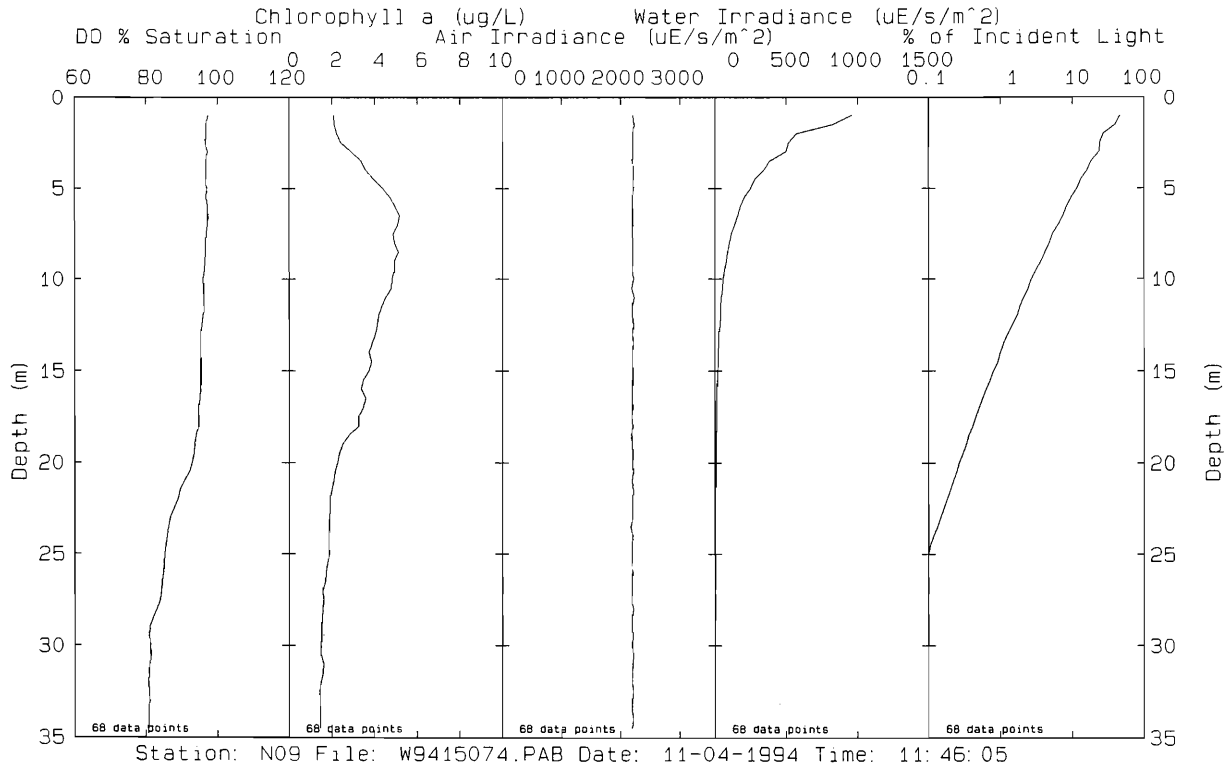
Station: N07P File: W9415066.PAB Date: 11-04-1994 Time: 11:05:59

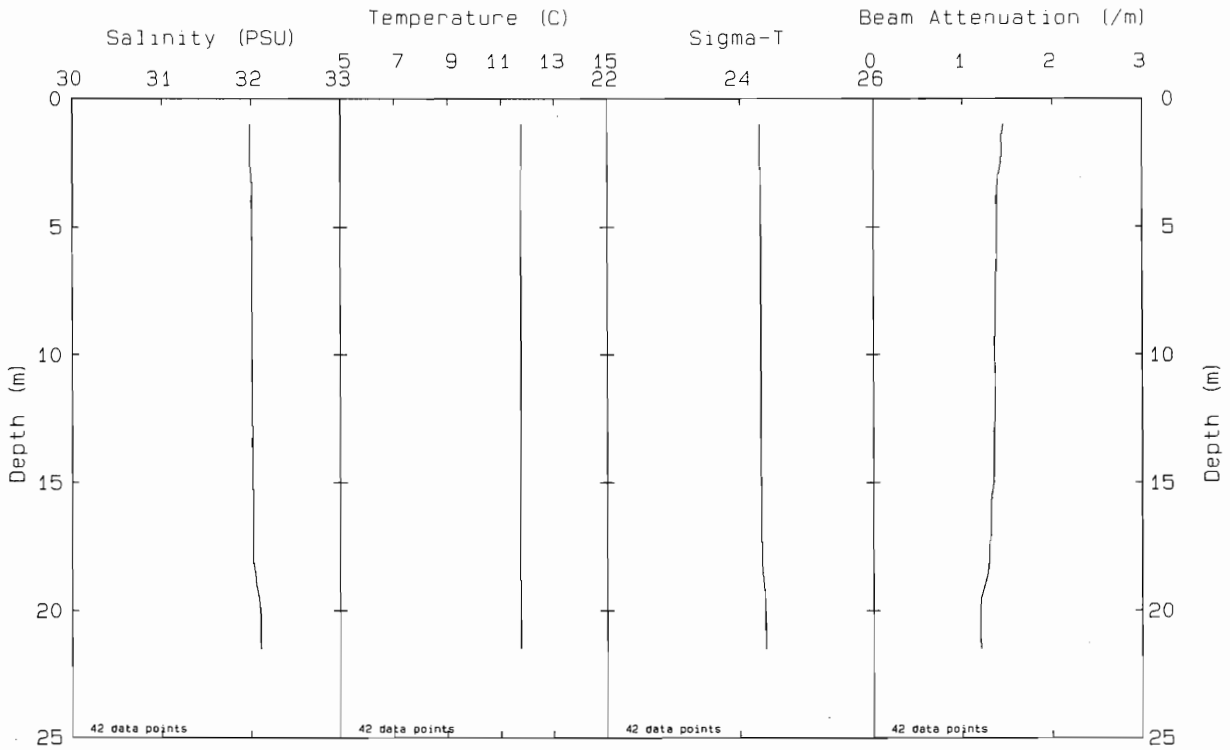


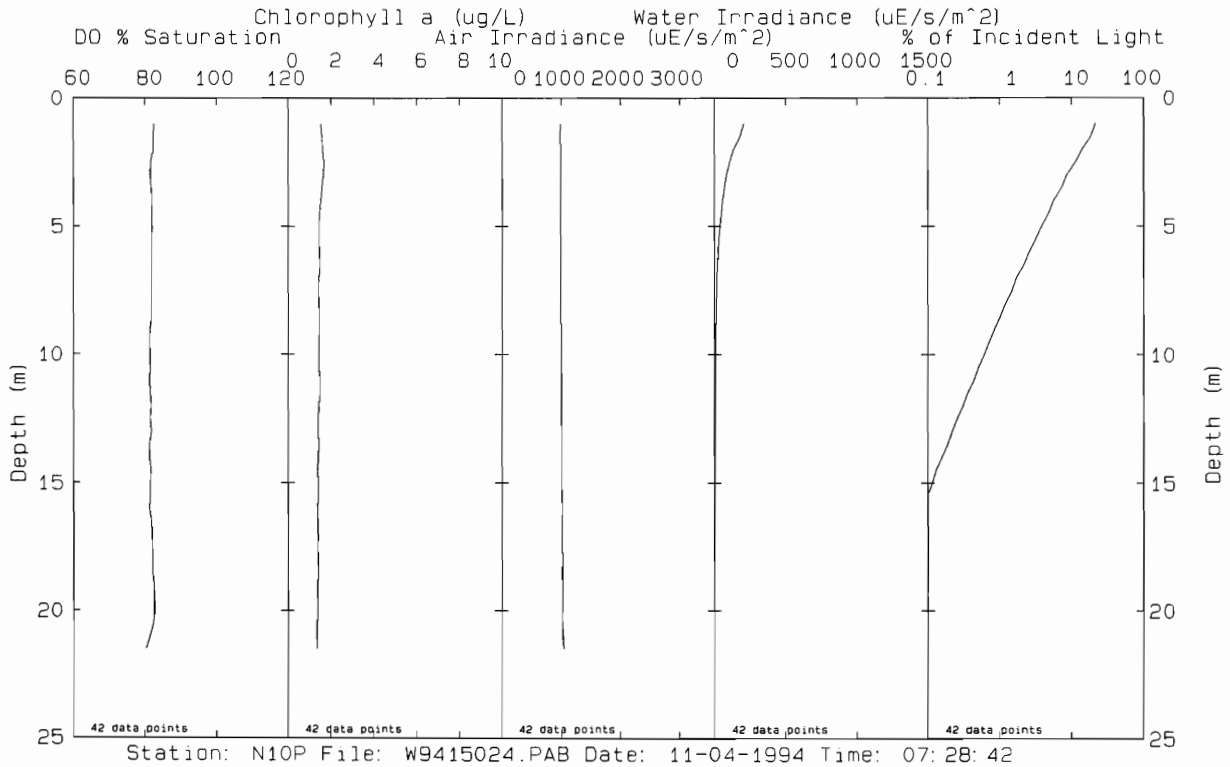


Station: N08 File: W9415070.PAB Date: 11-04-1994 Time: 11:26:55

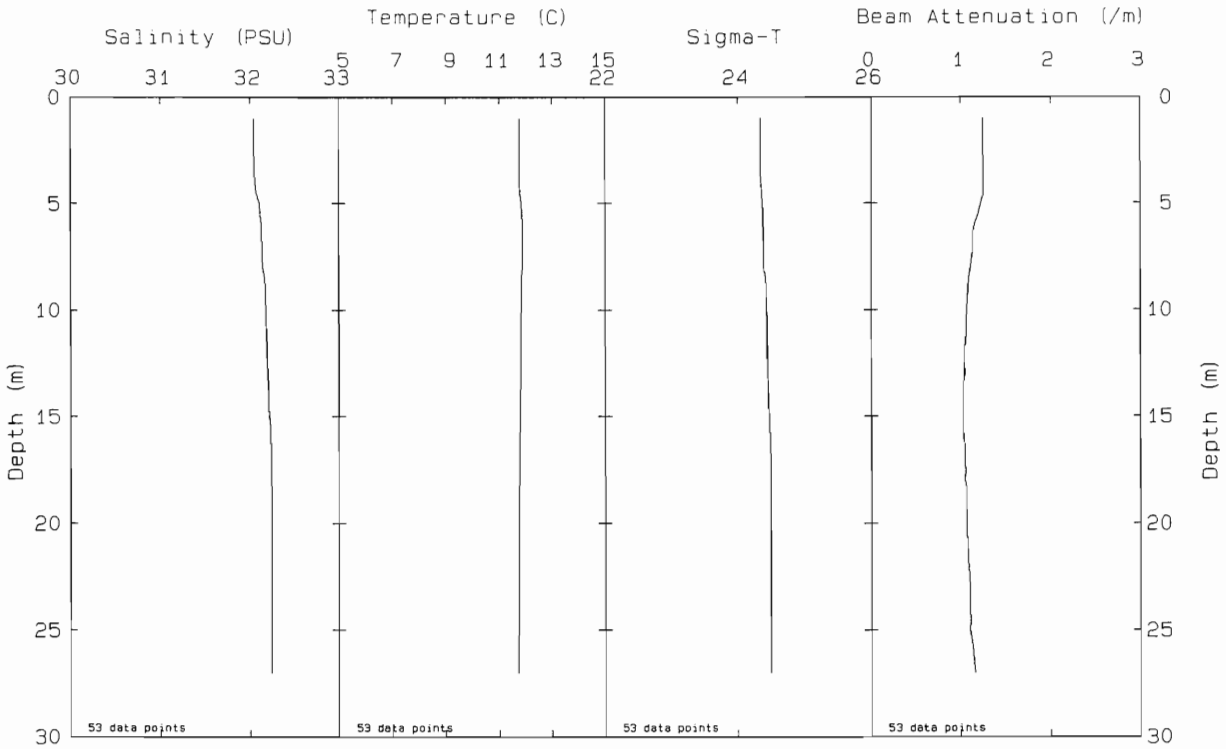

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35
68 data points
68 data points
68 data points
68 data points

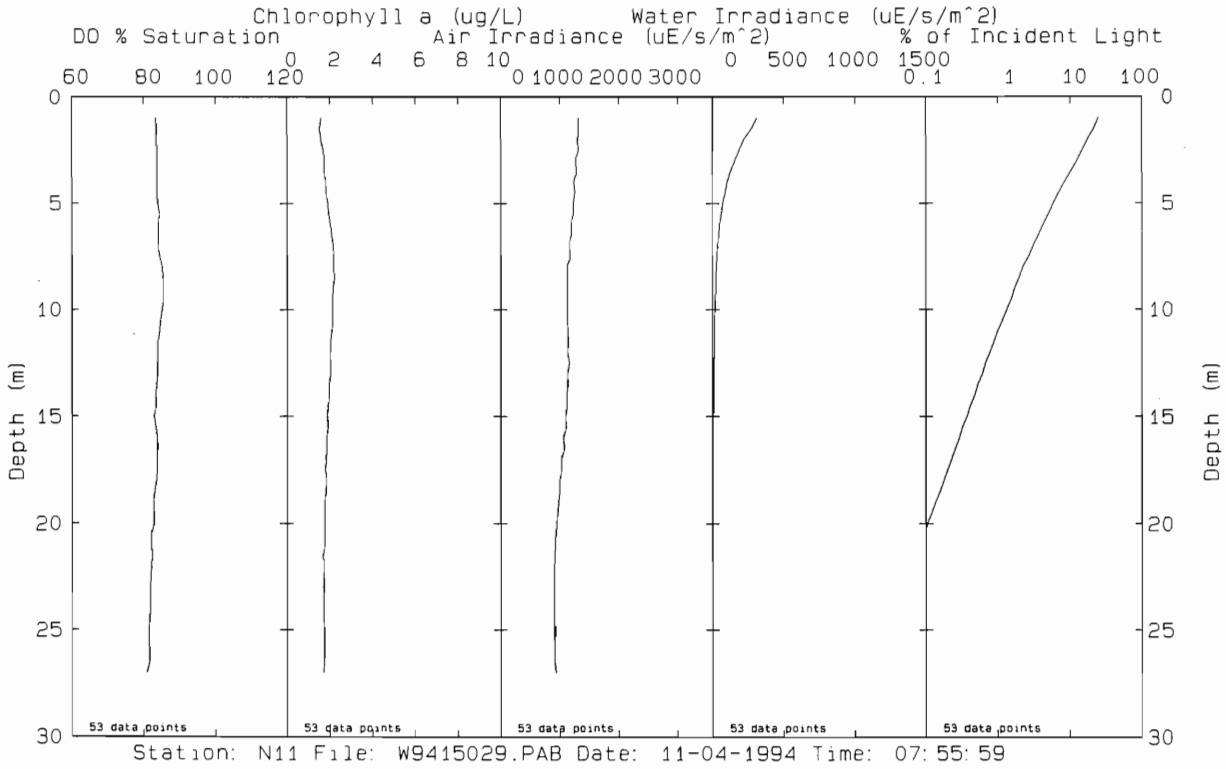

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35
68 data points
68 data points
68 data points
68 data points
68 data points
Station: N09 File: W9415074.PAB Date: 11-04-1994 Time: 11:46:05



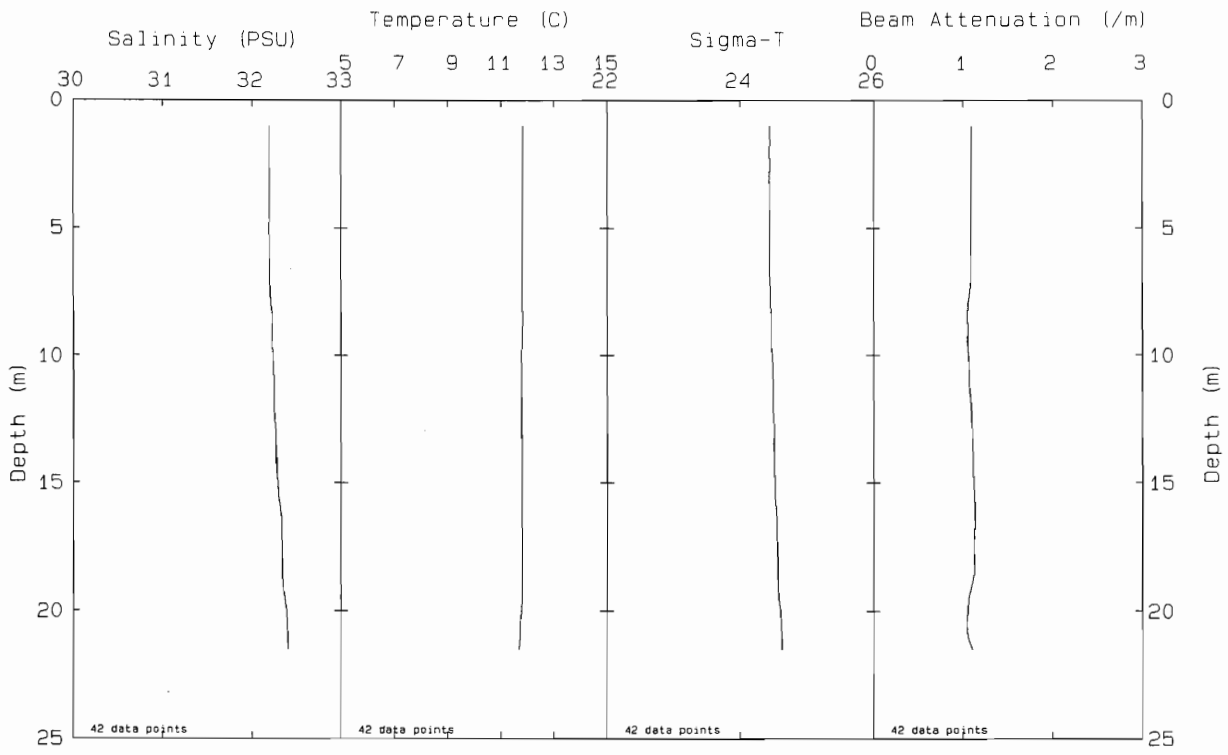


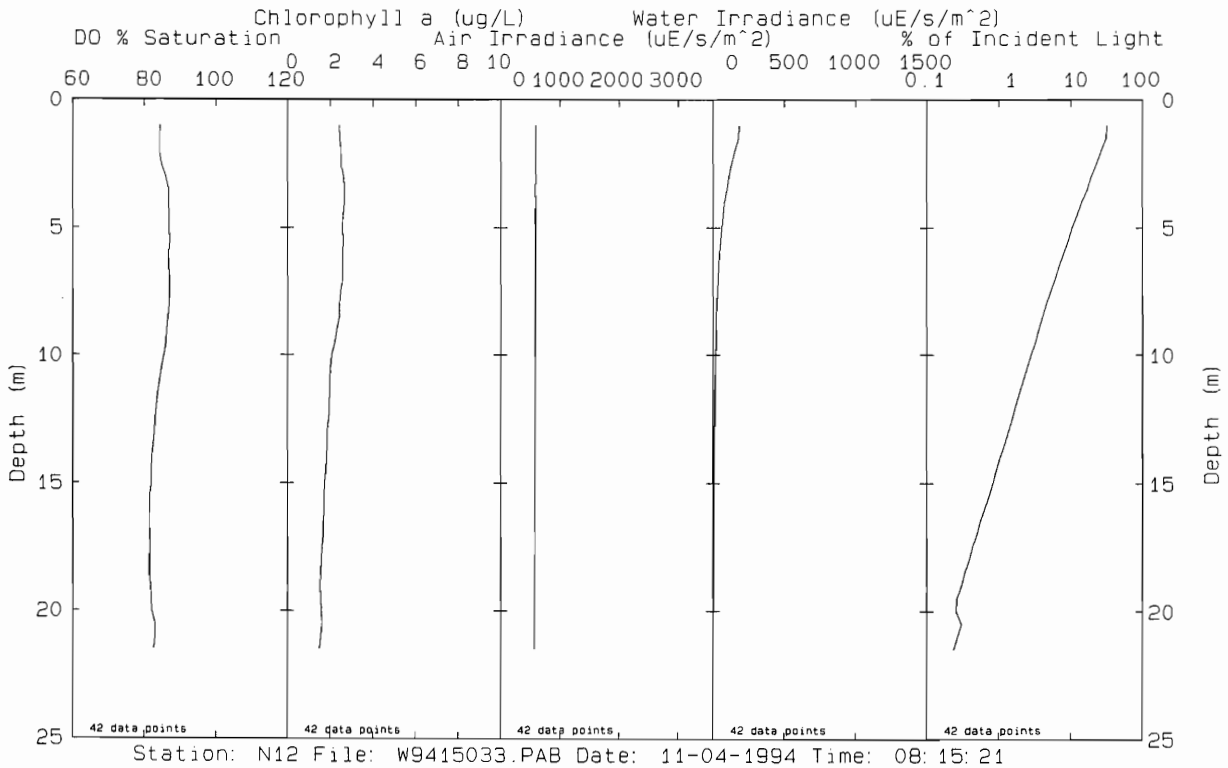
Station: N10P File: W9415024.PAB Date: 11-04-1994 Time: 07:28:42



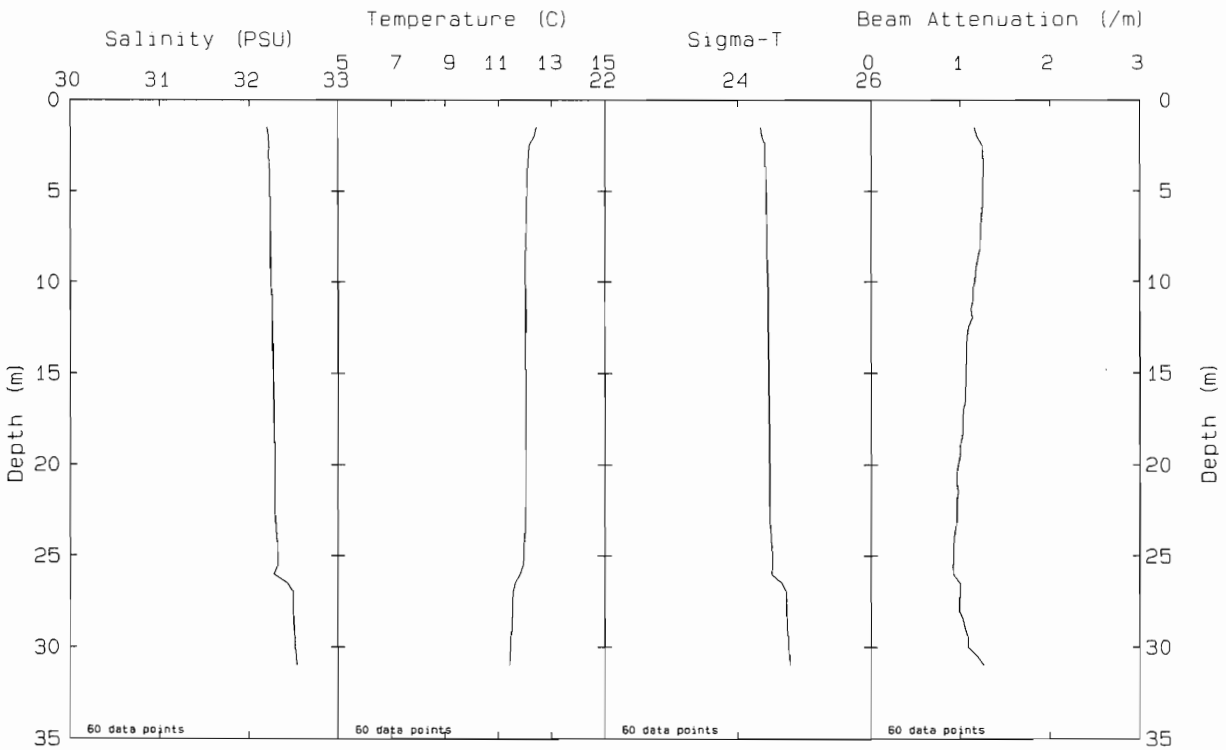


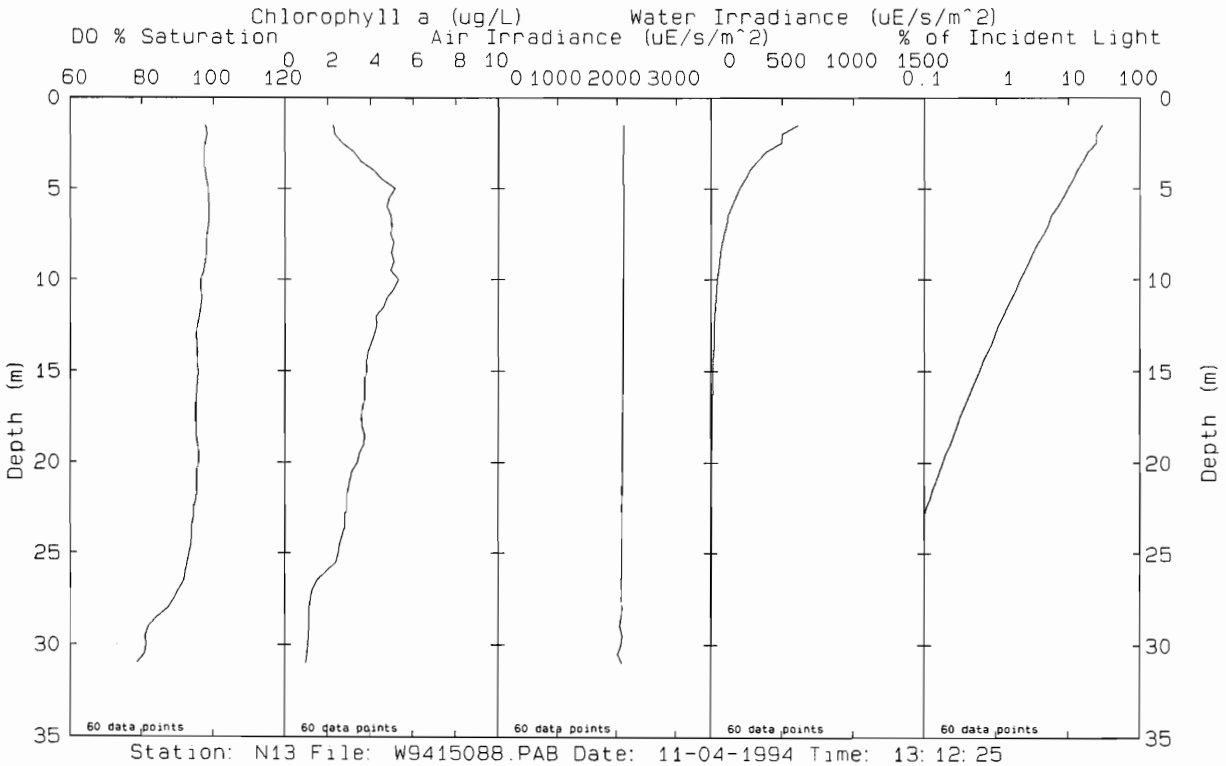
Station: N11 File: W9415029.PAB Date: 11-04-1994 Time: 07:55:59



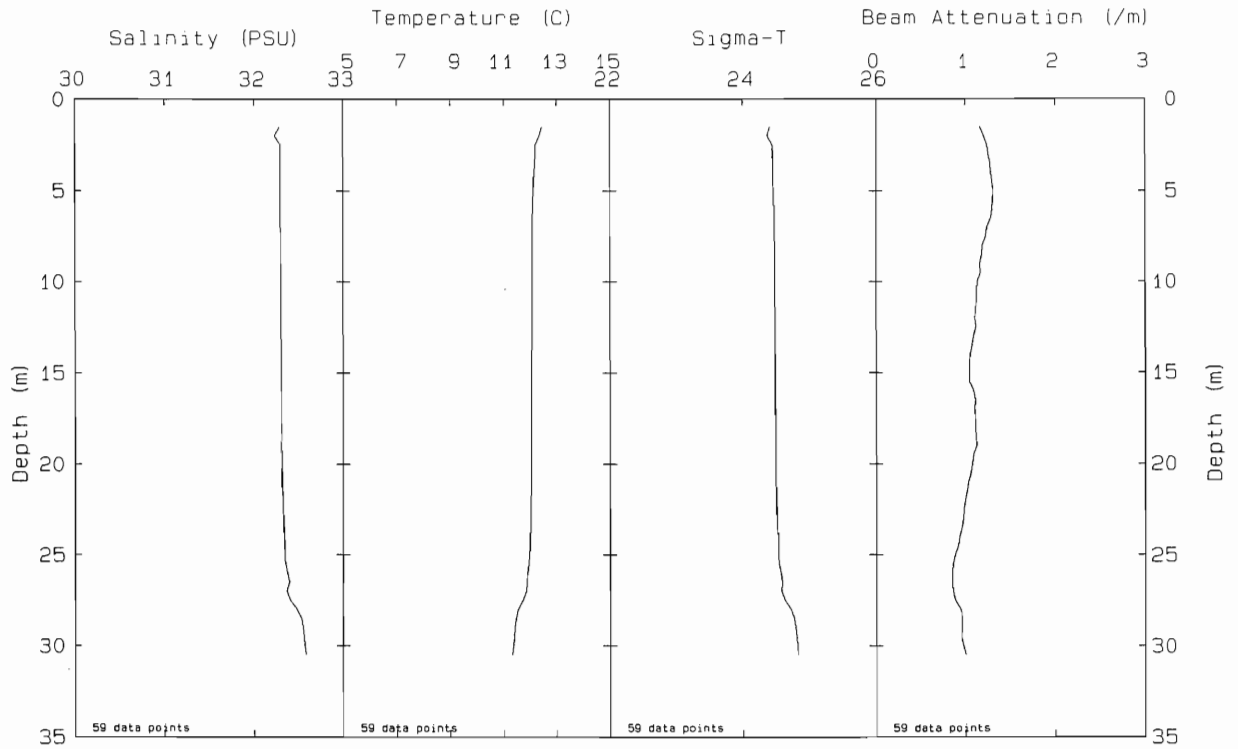


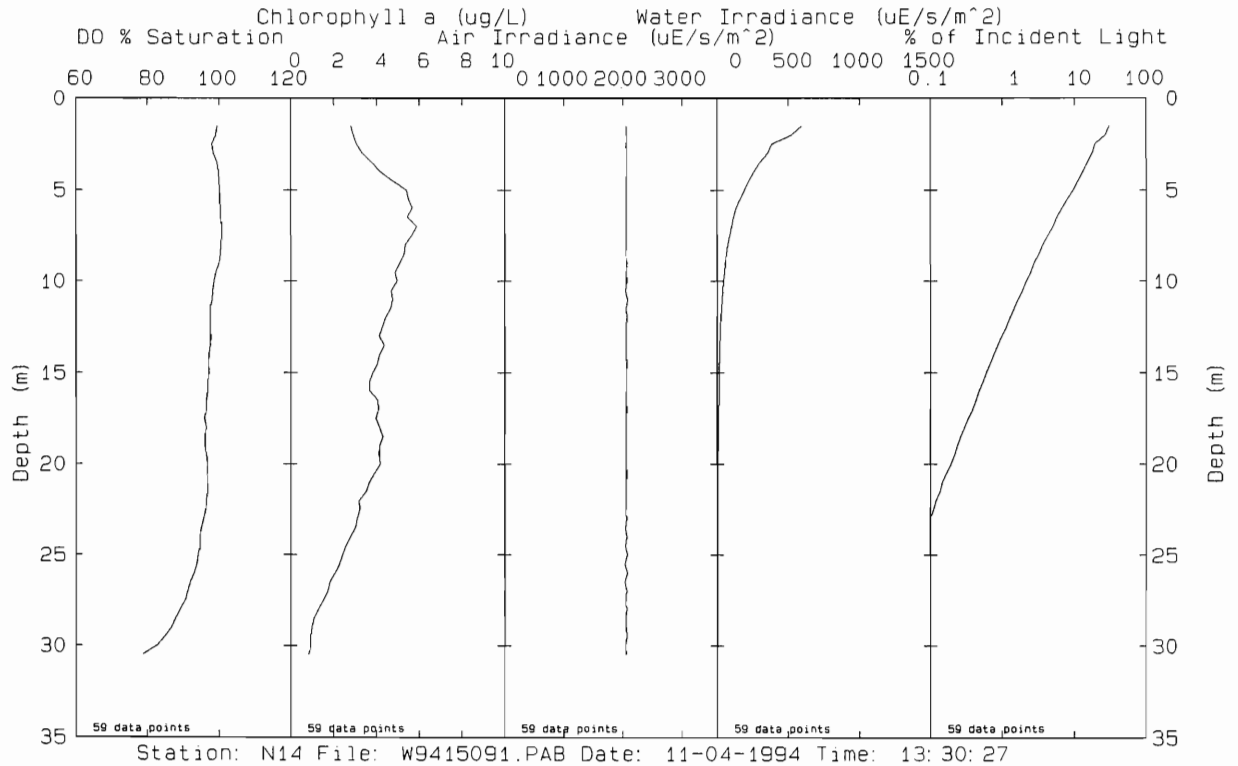
Station: N12 File: W9415033.PAB Date: 11-04-1994 Time: 08:15:21



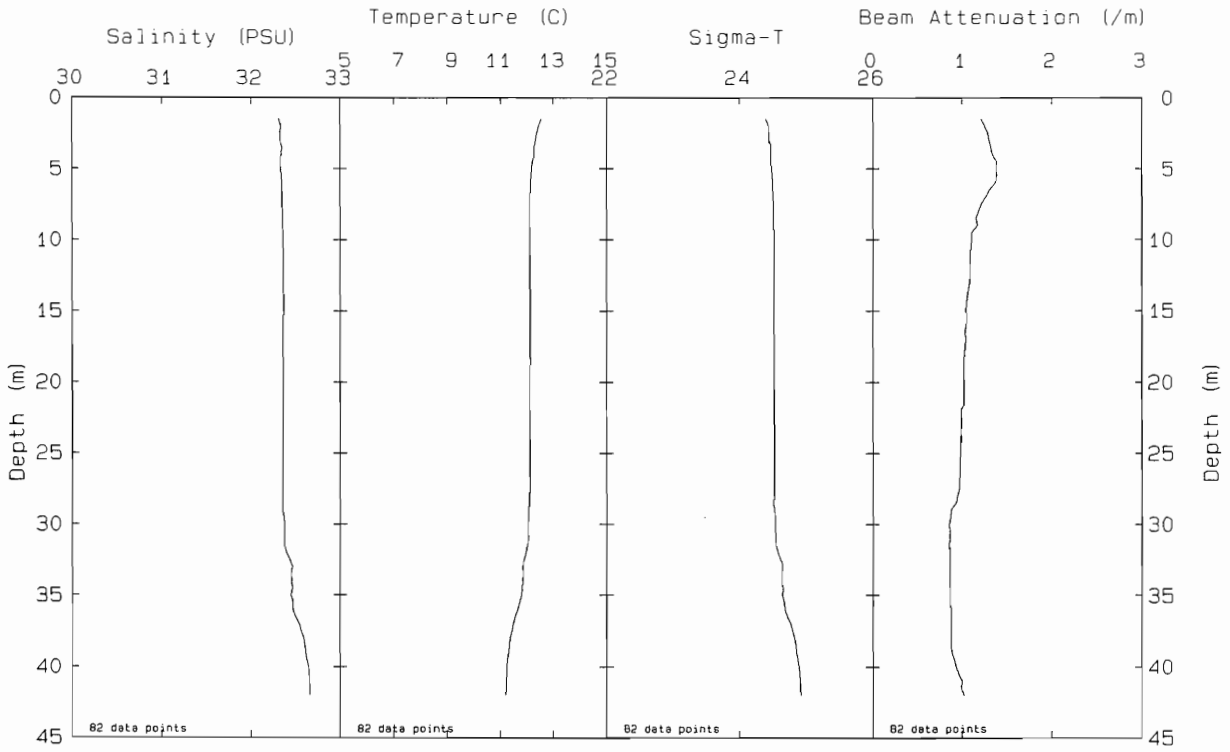


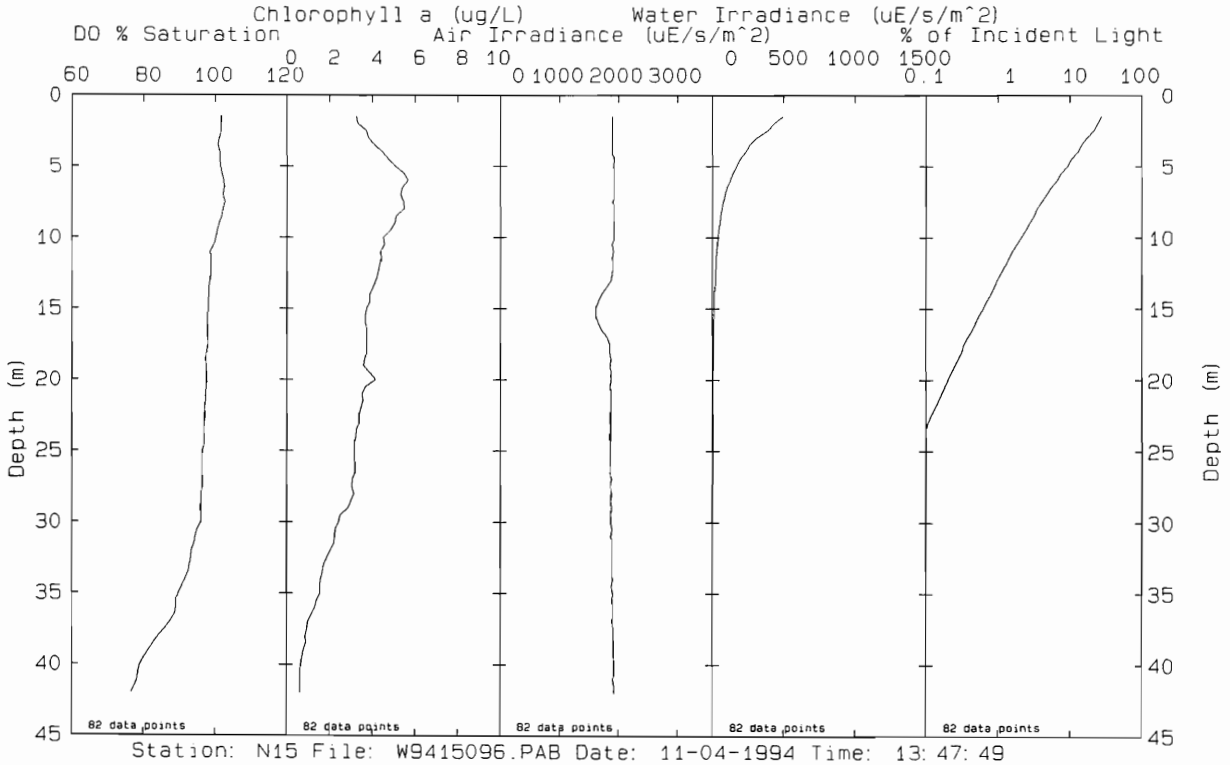
Station: N13 File: W9415088.PAB Date: 11-04-1994 Time: 13:12:25



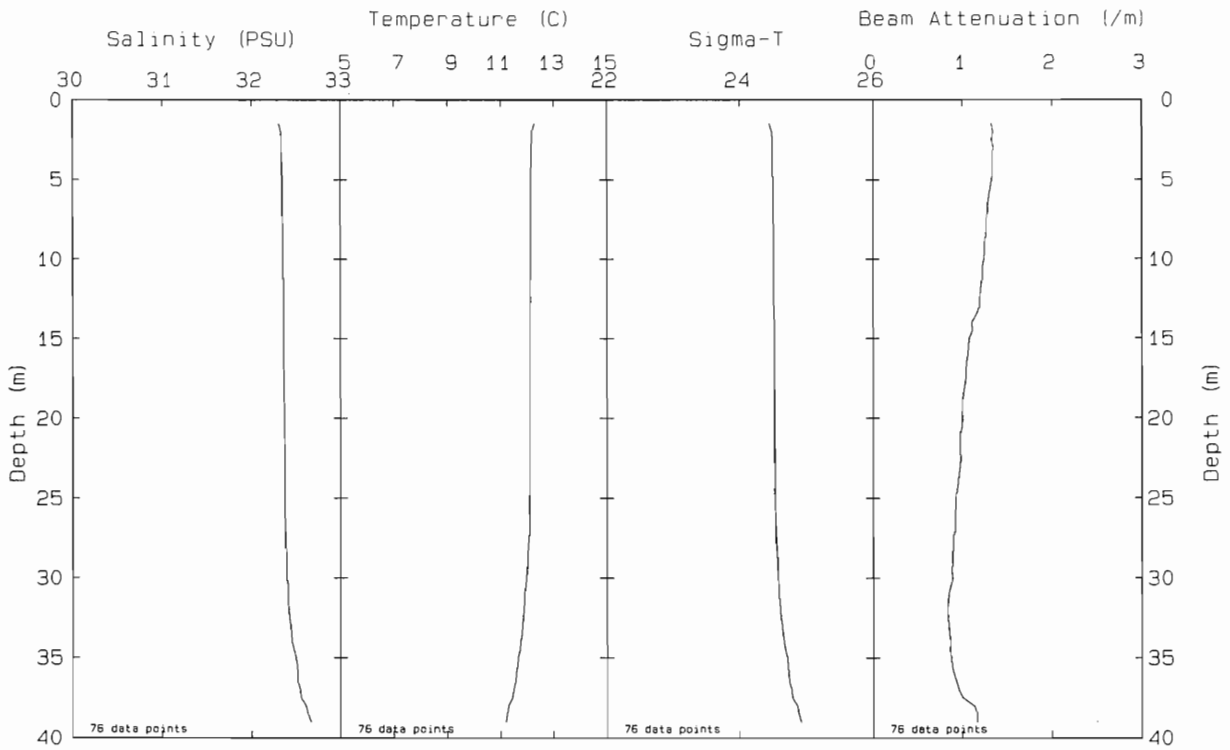


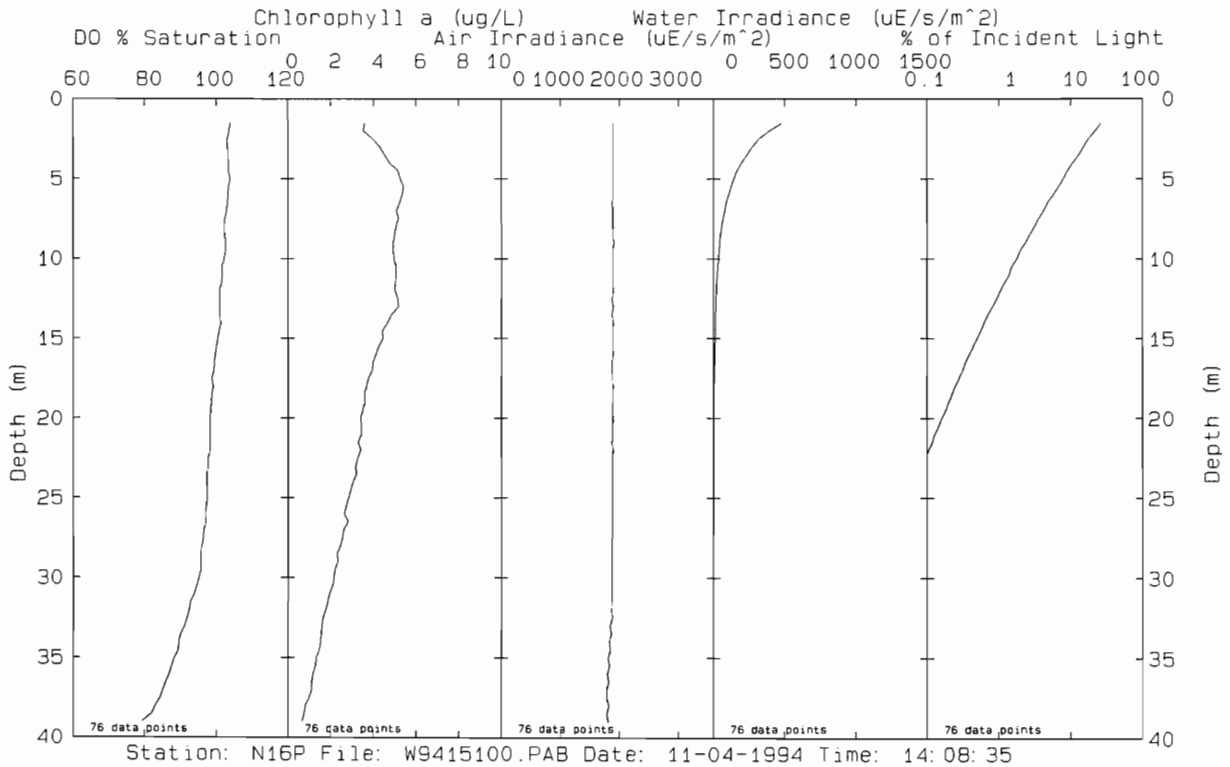
Station: N14 File: W9415091.PAB Date: 11-04-1994 Time: 13:30:27

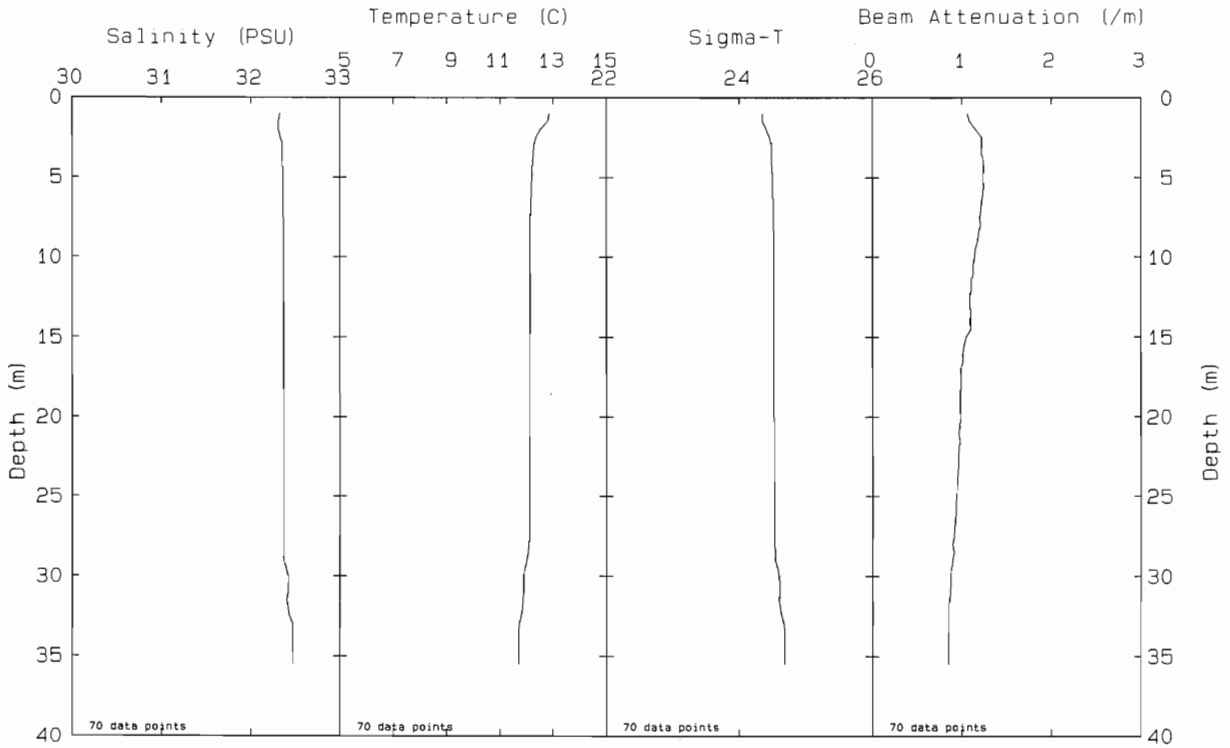


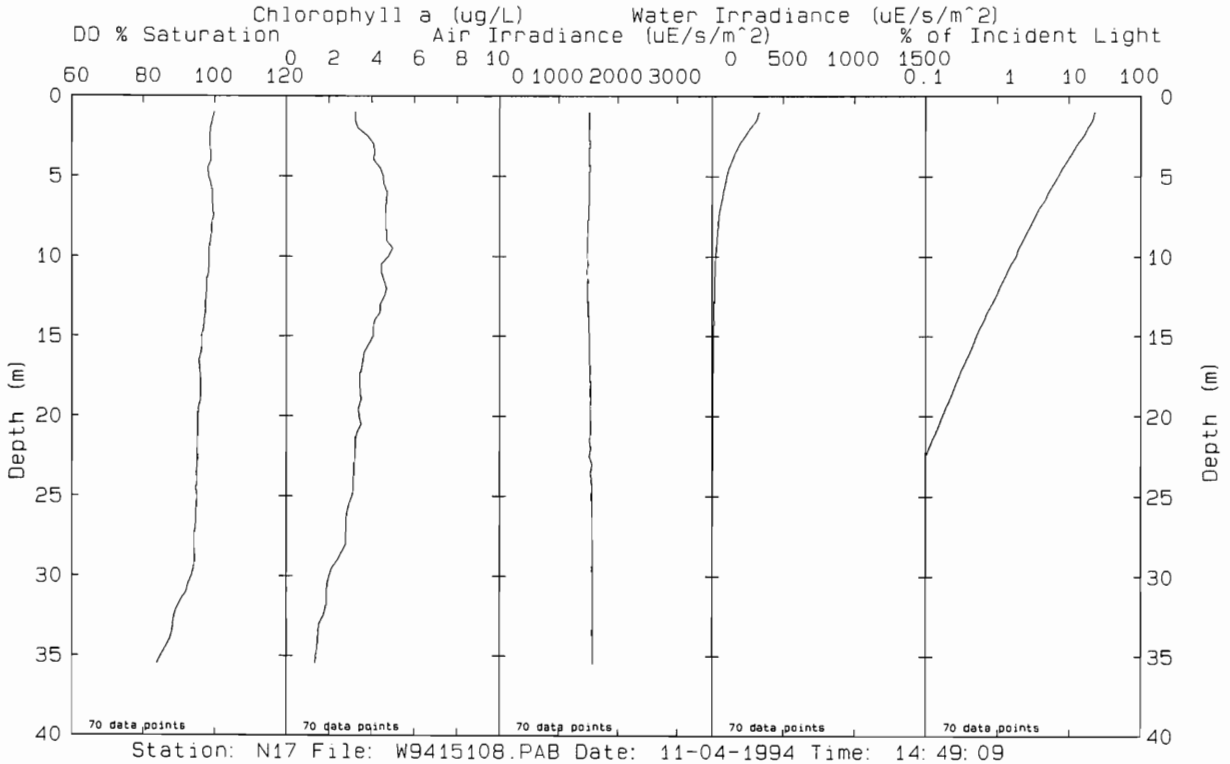


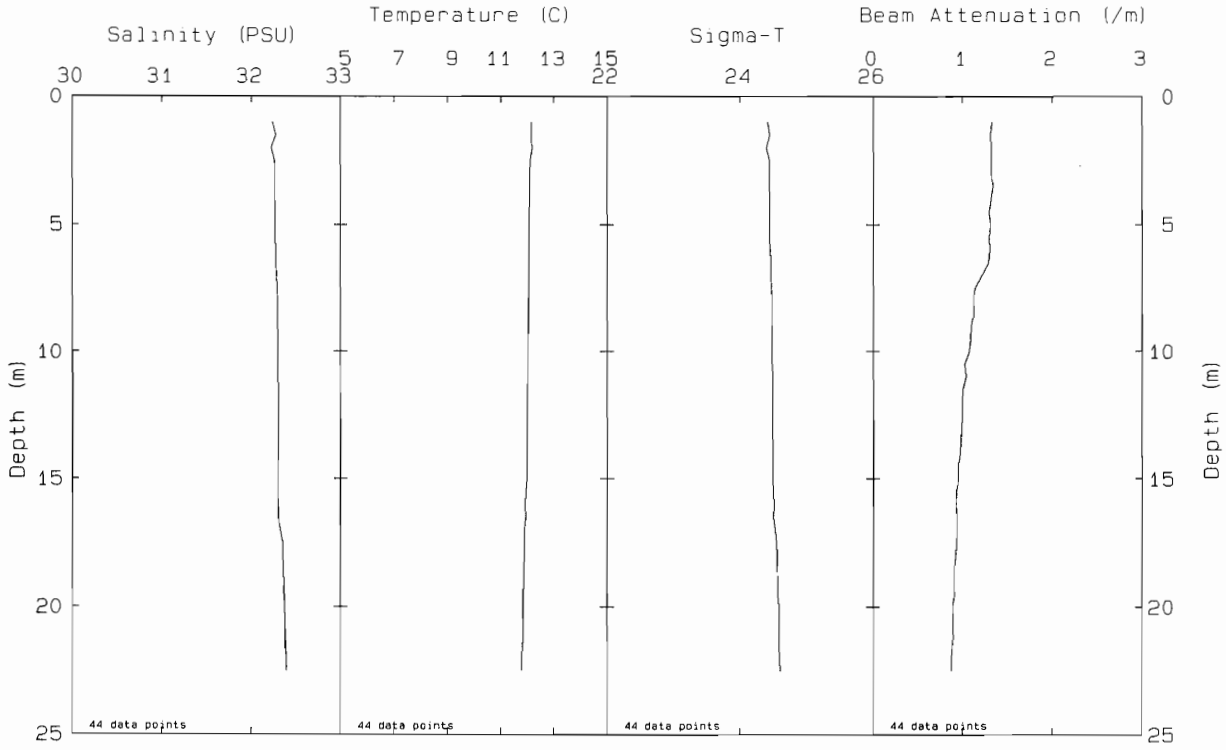
Station: N15 File: W9415096.PAB Date: 11-04-1994 Time: 13:47:49

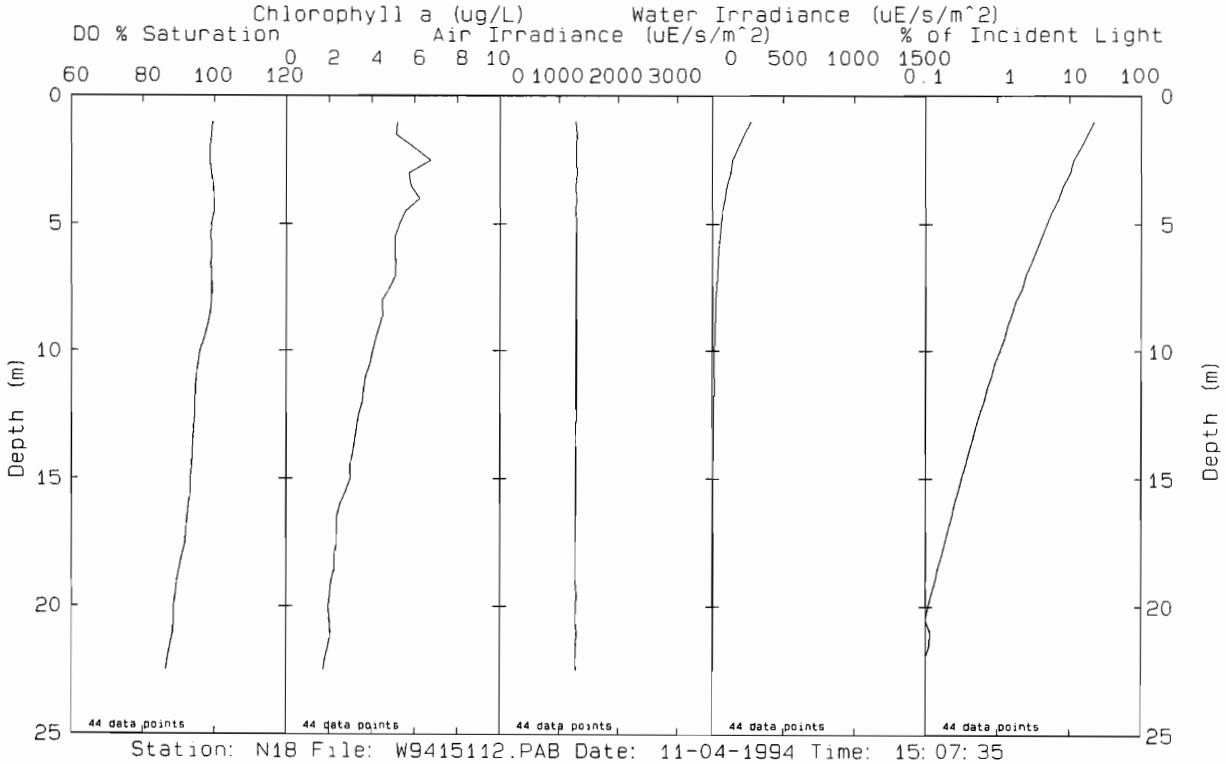

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
76 data points


Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
76 data points
Station: N16P File: W9415100.PAB Date: 11-04-1994 Time: 14:08:35

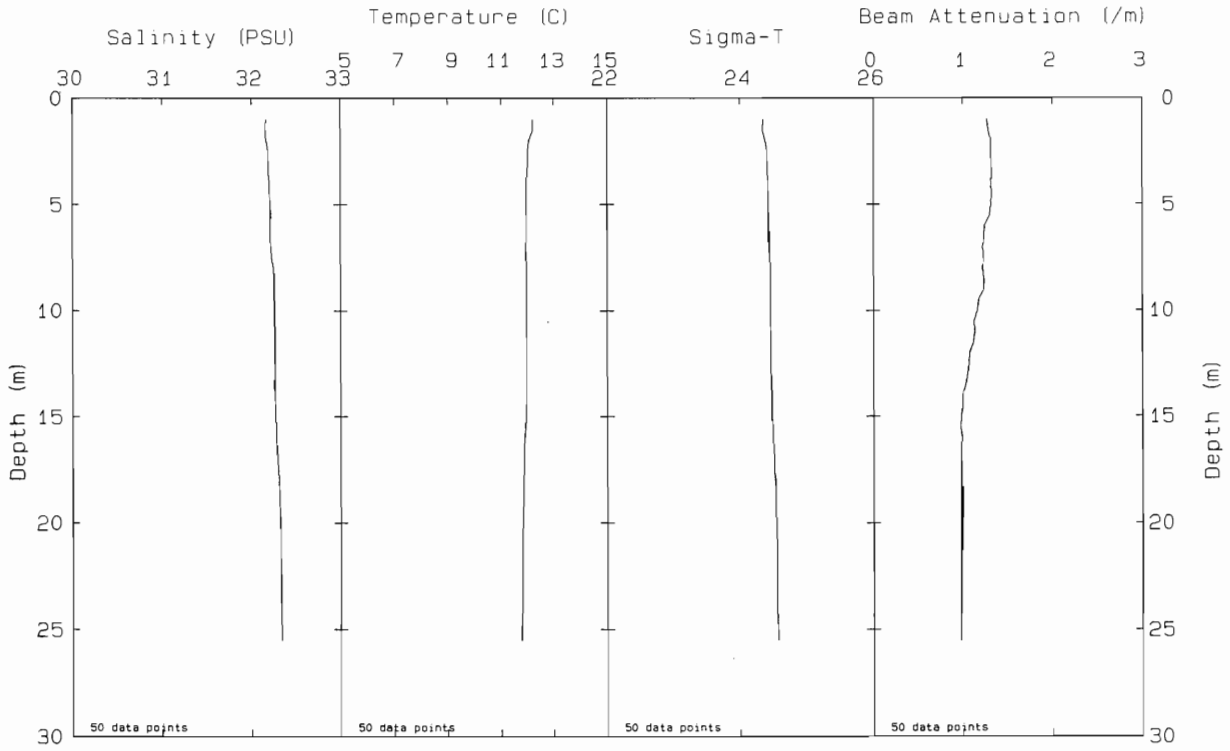

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35 40
70 data points
70 data points
70 data points
70 data points

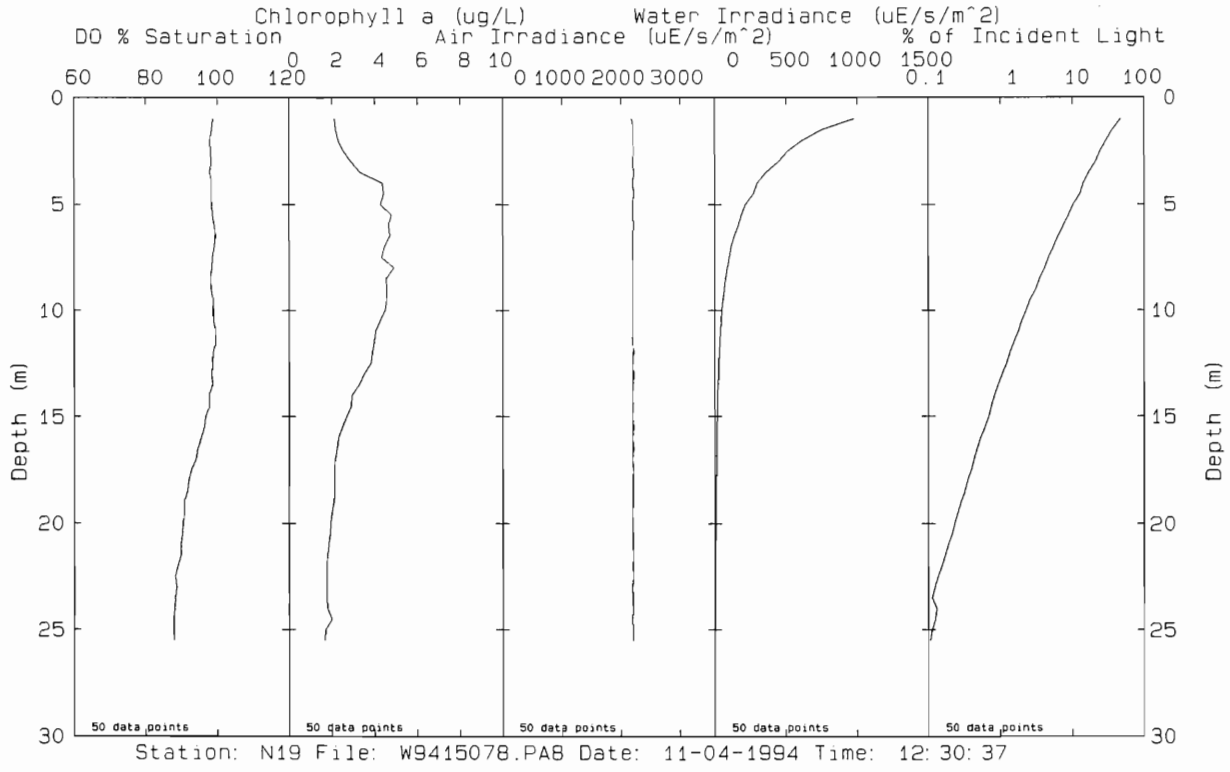

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
70 data points
70 data points
70 data points
70 data points
70 data points
Station: N17 File: W9415108.PAB Date: 11-04-1994 Time: 14:49:09



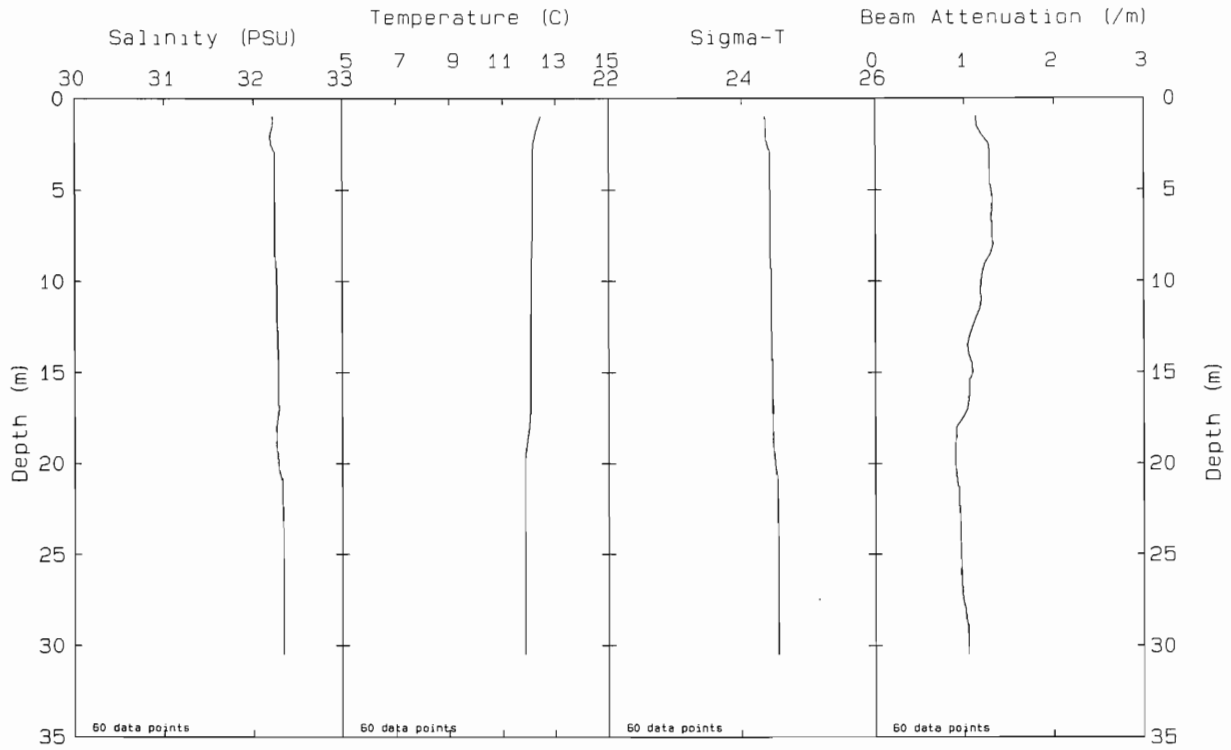


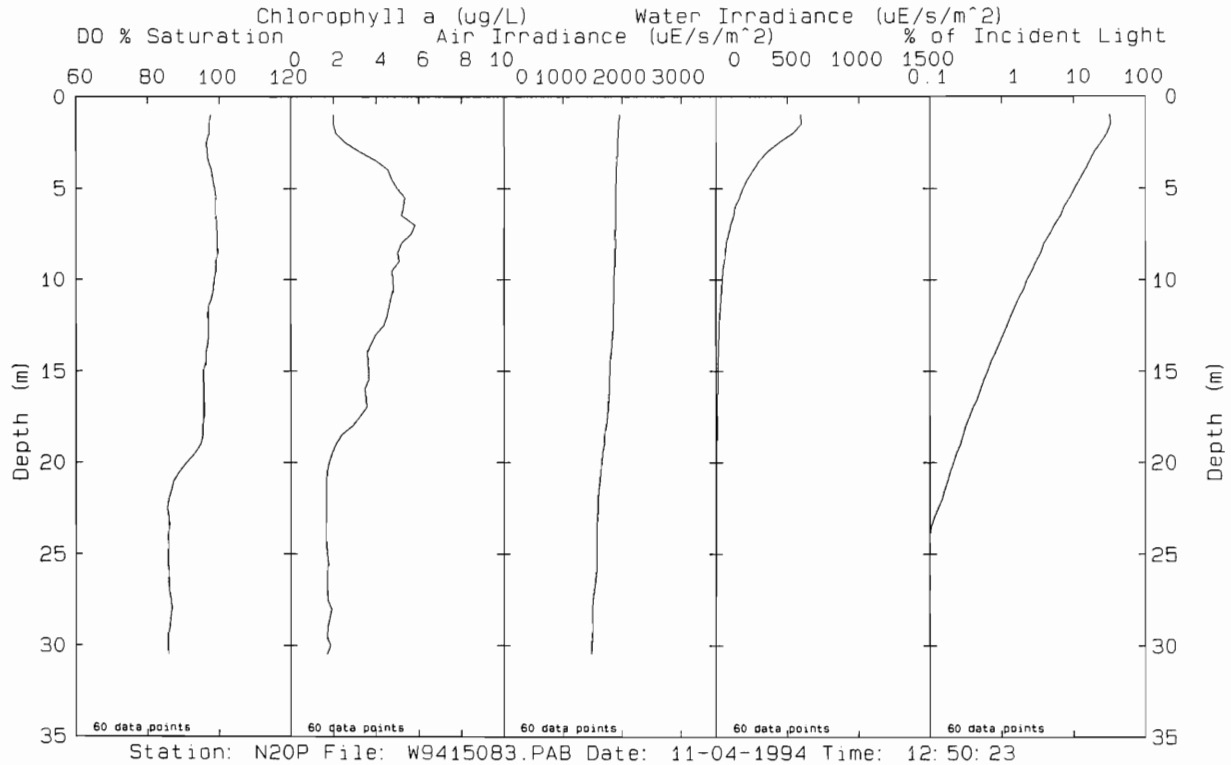
Station: N18 File: W9415112.PAB Date: 11-04-1994 Time: 15:07:35



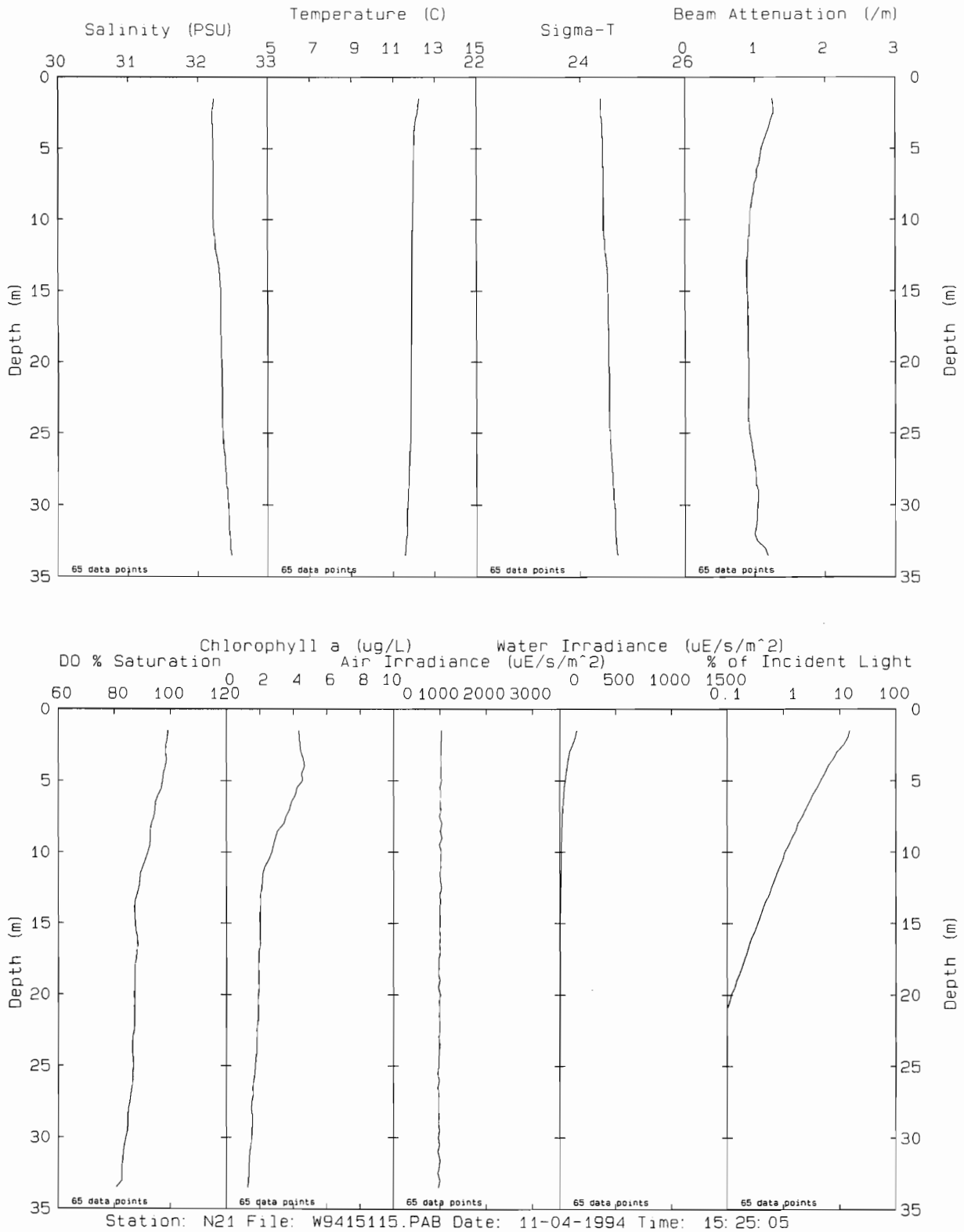


Station: N19 File: W9415078.PA8 Date: 11-04-1994 Time: 12:30:37





Station: N20P File: W9415083.PAB Date: 11-04-1994 Time: 12:50:23


Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35
65 data points
65 data points
65 data points
65 data points
Chlorophyll a (ug/L)
Water Irradiance (uE/s/m^2)
DO % Saturation
Air Irradiance (uE/s/m^2)
% of Incident Light
60 80 100 120
0 2 4 6 8 10
0 1000 2000 3000
0 500 1000 1500
0.1 1 10 100
65 data points
65 data points
65 data points
65 data points
65 data points
Station: N21 File: W9415115.PAB Date: 11-04-1994 Time: 15:25:05

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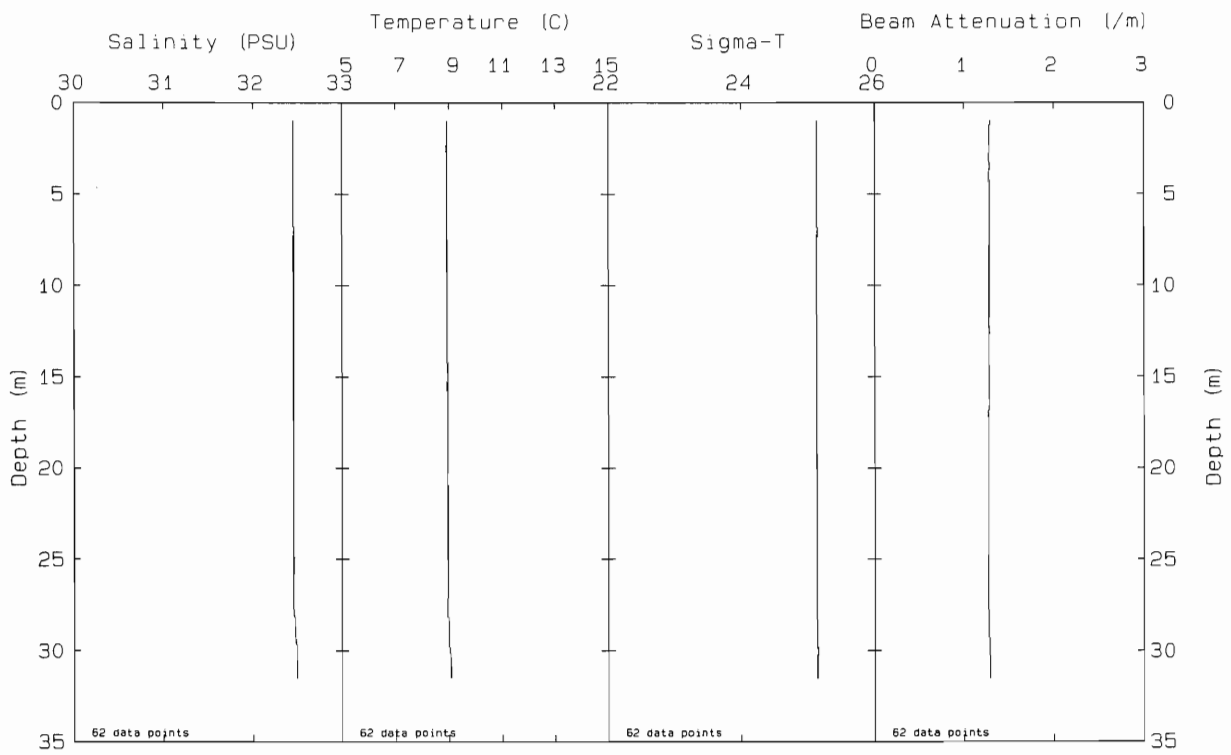
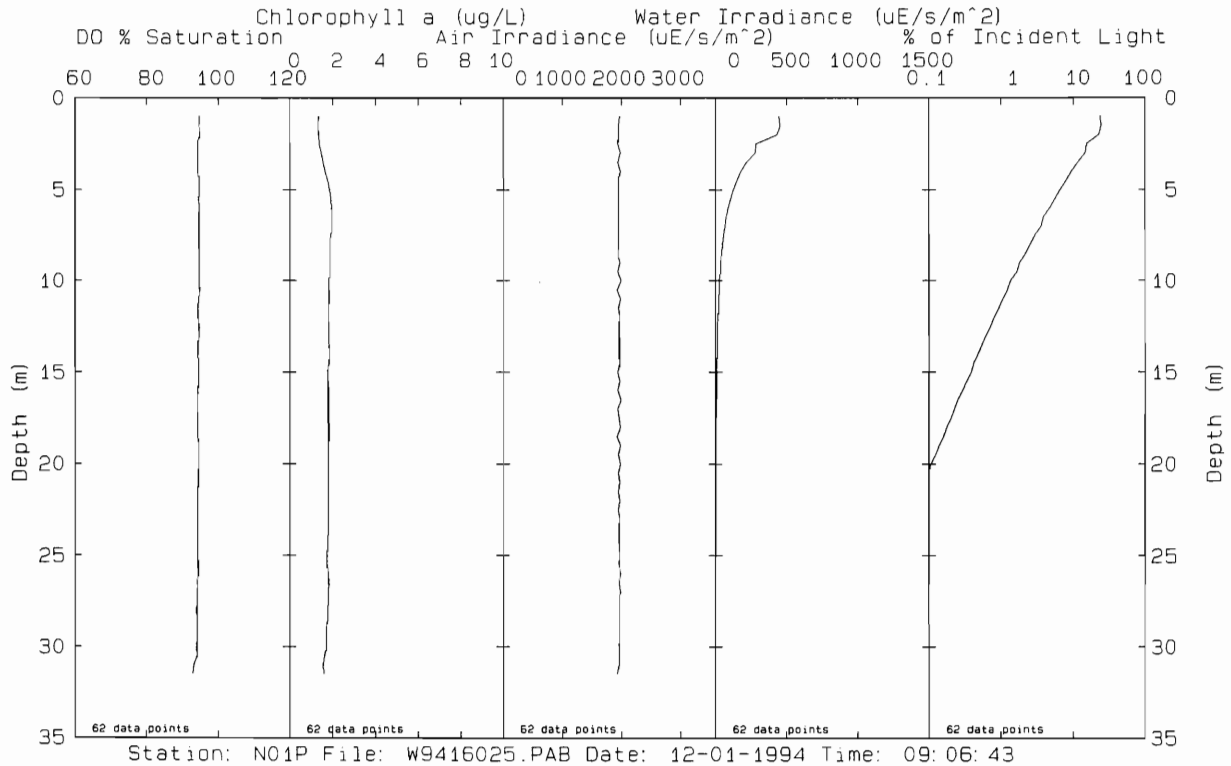
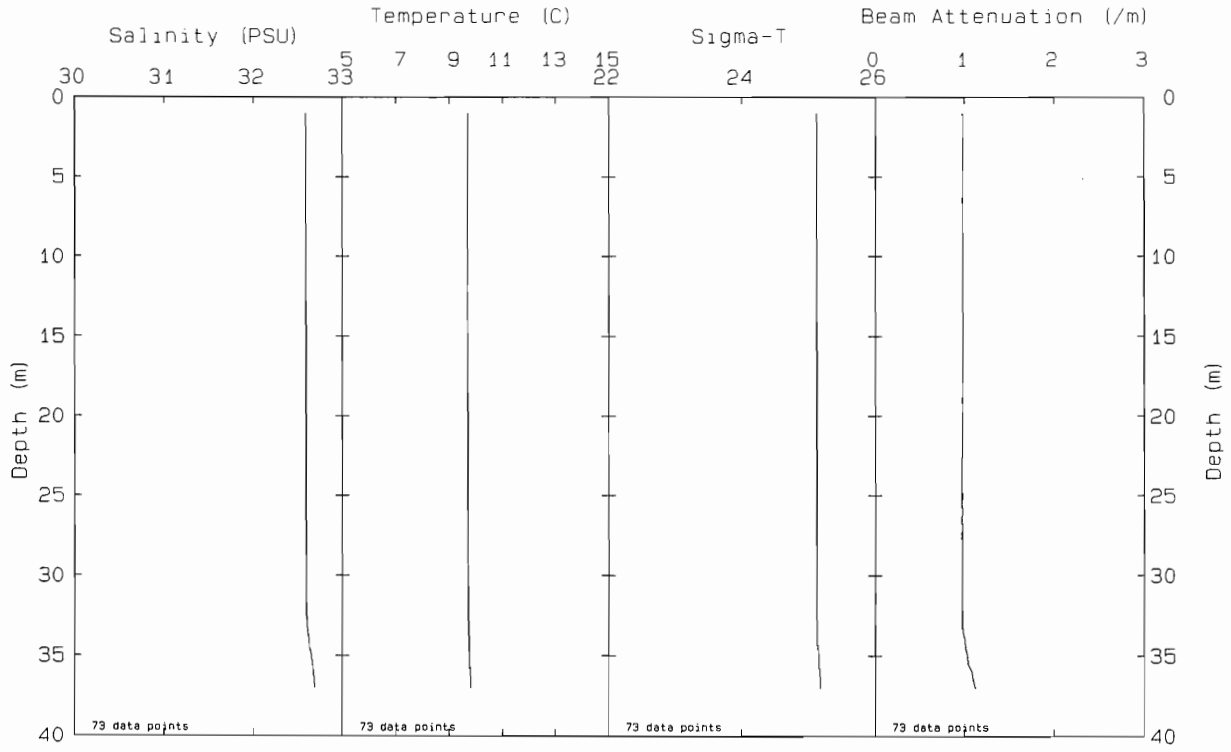
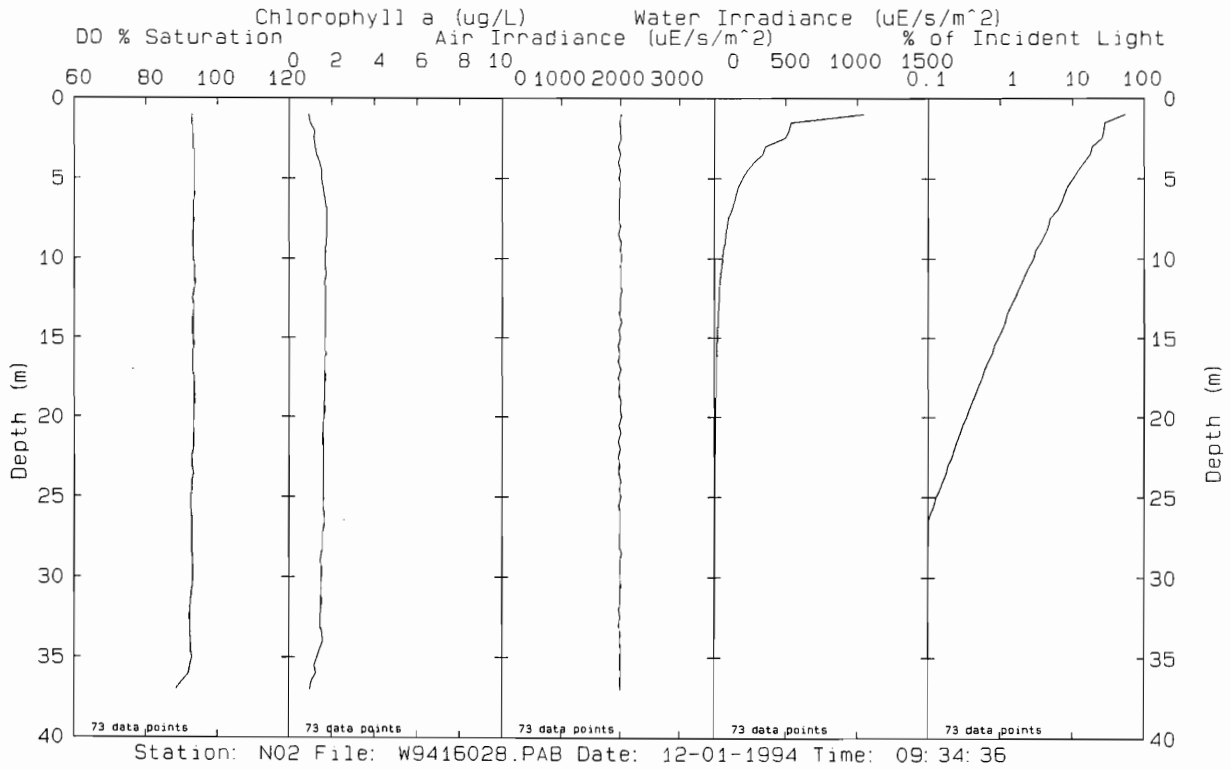
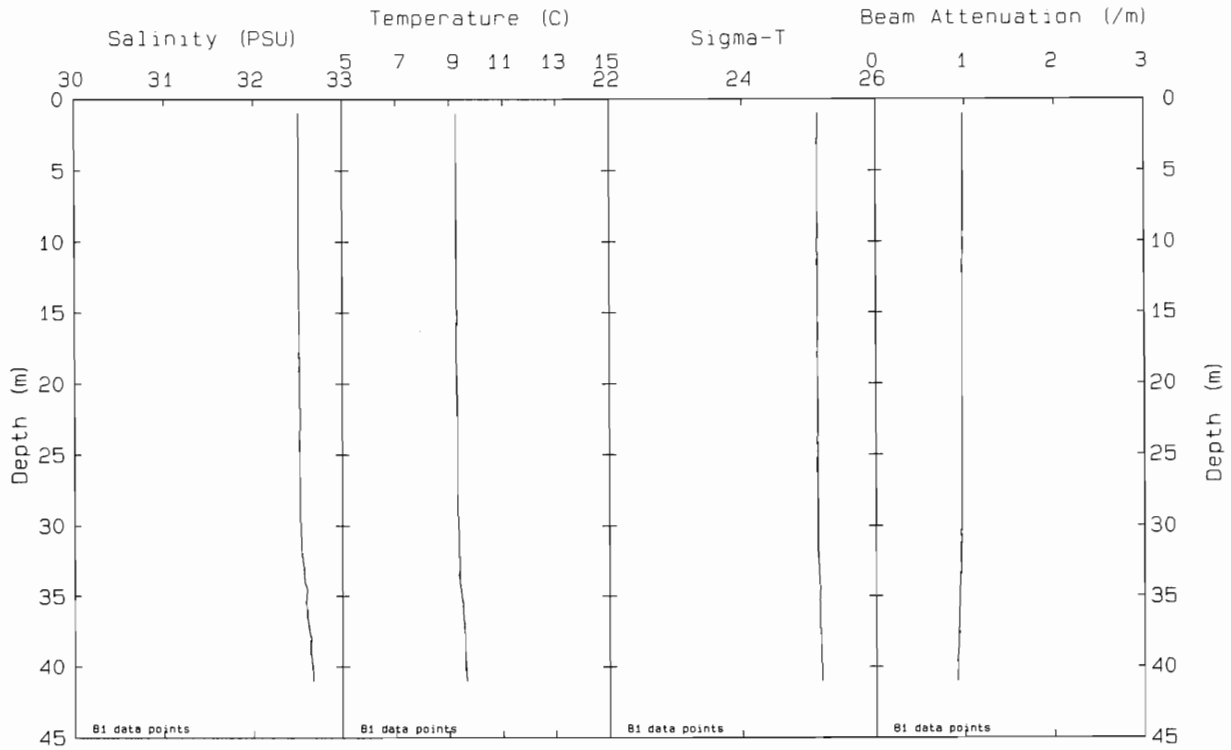
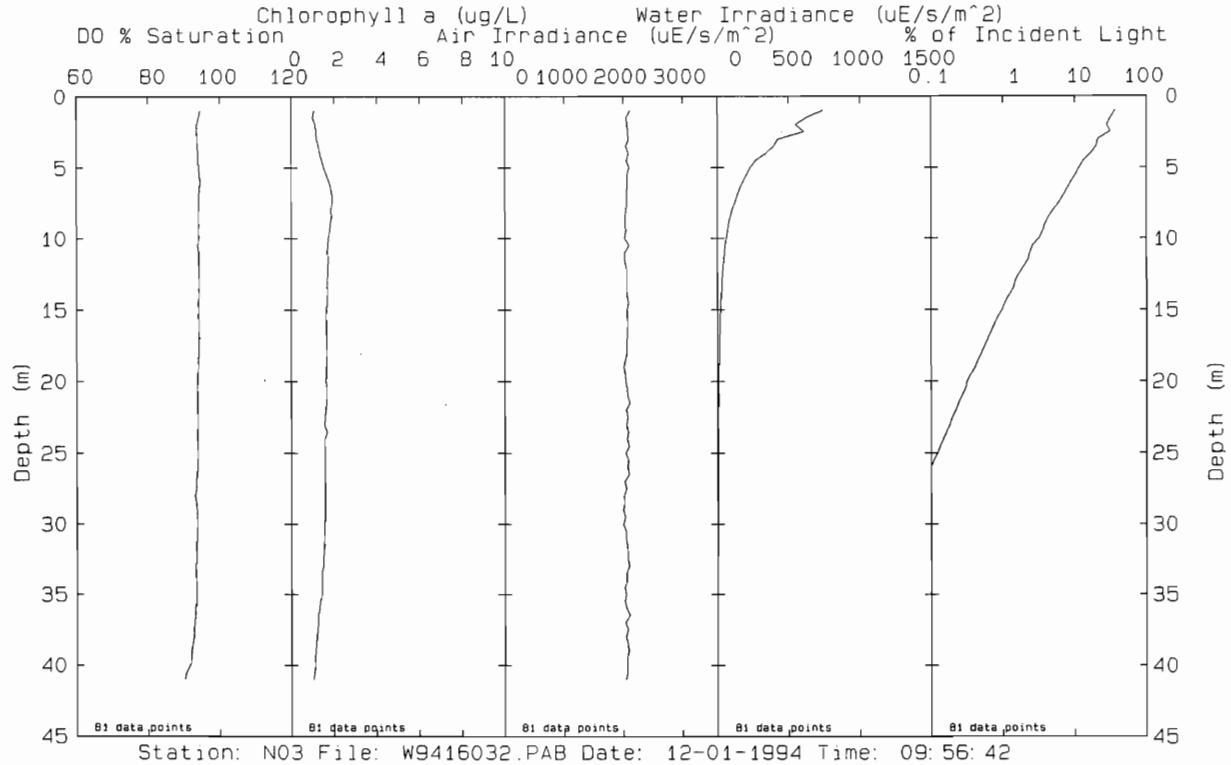

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30 35
62 data points
62 data points
62 data points
62 data points

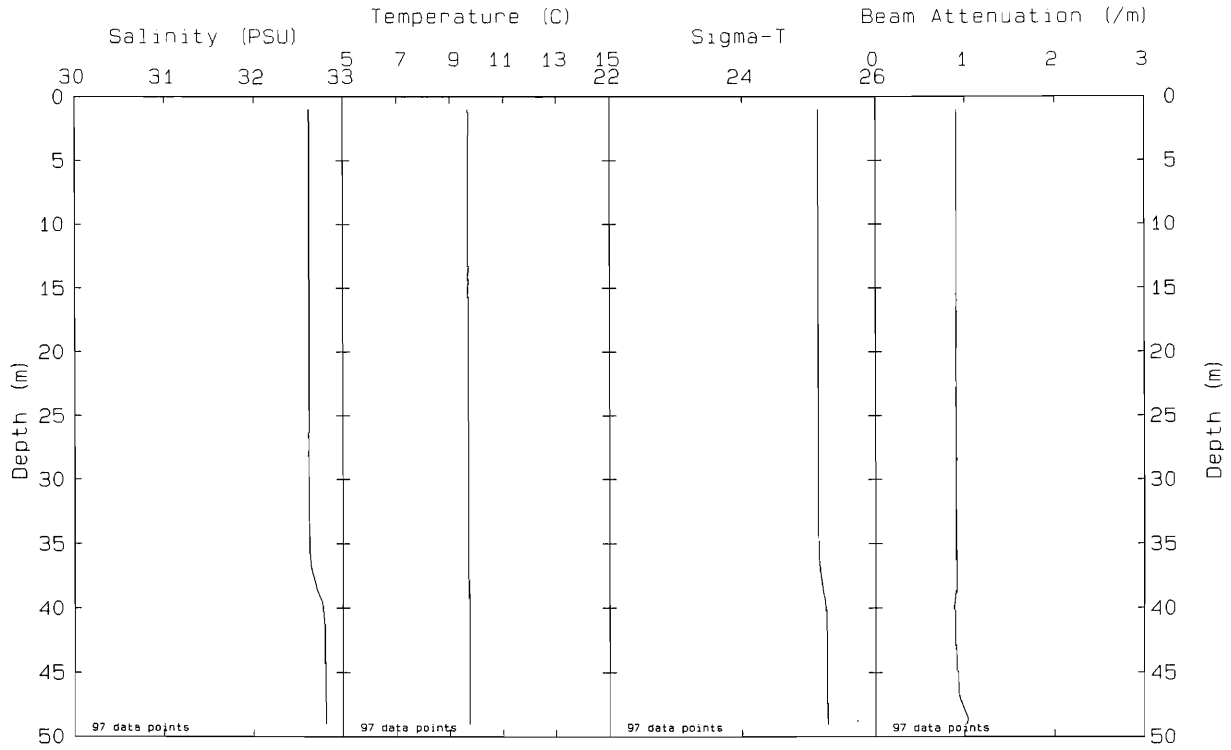

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35
62 data points
62 data points
62 data points
62 data points
62 data points
Station: N01P File: W9416025.PAB Date: 12-01-1994 Time: 09:06:43

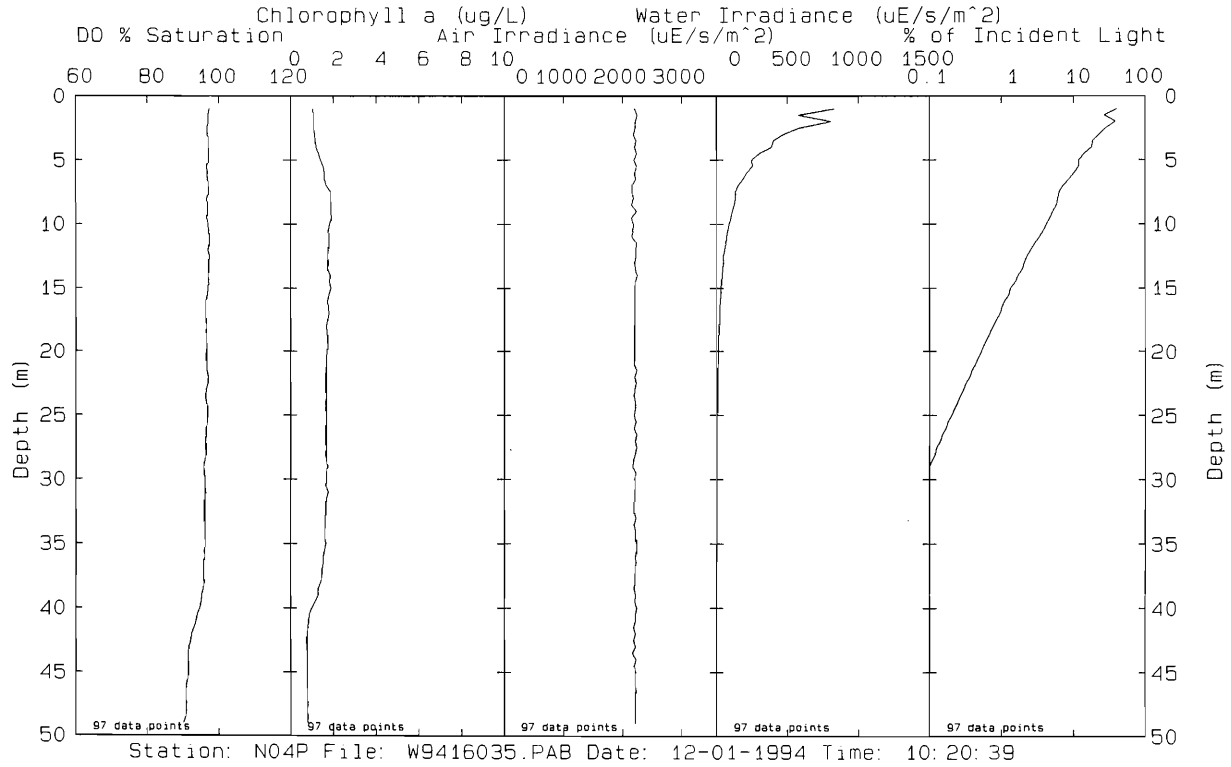

Salinity (PSU)
30 31 32 33
Temperature (C)
5 7 9 11 13 15
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40
73 data points
73 data points
73 data points
73 data points

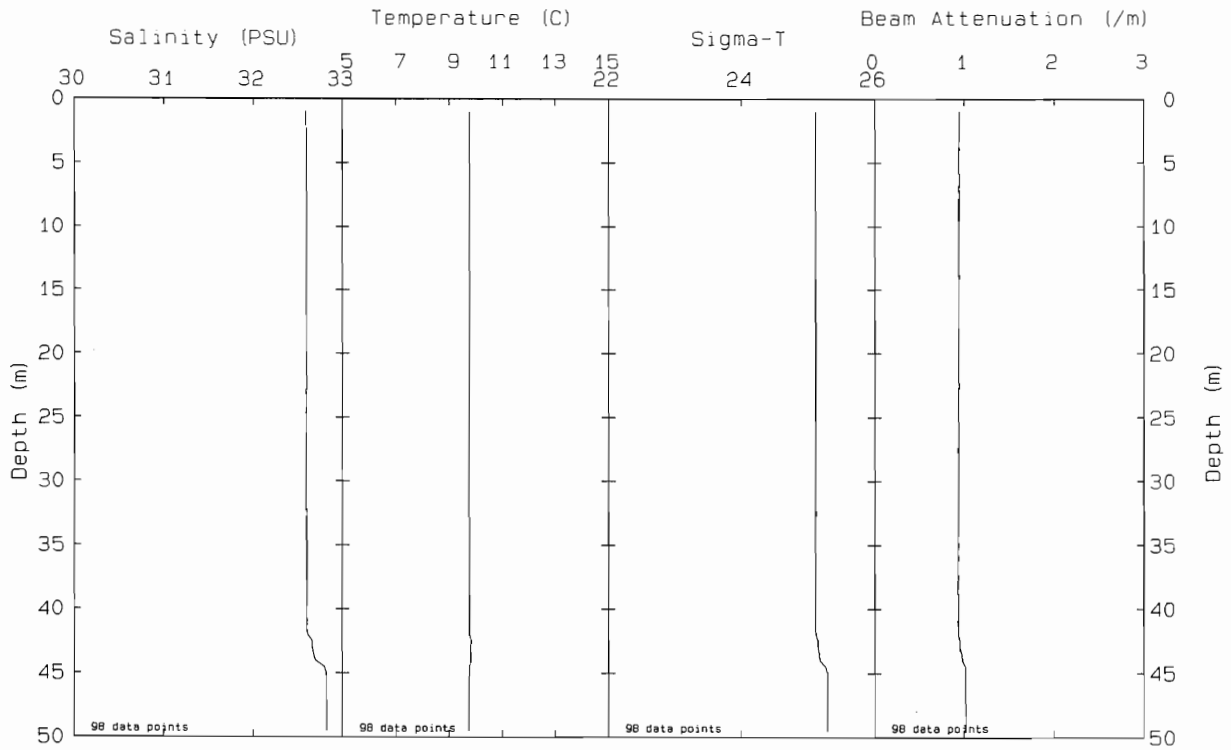

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40
73 data points
73 data points
73 data points
73 data points
73 data points
Station: N02 File: W9416028.PAB Date: 12-01-1994 Time: 09:34:36

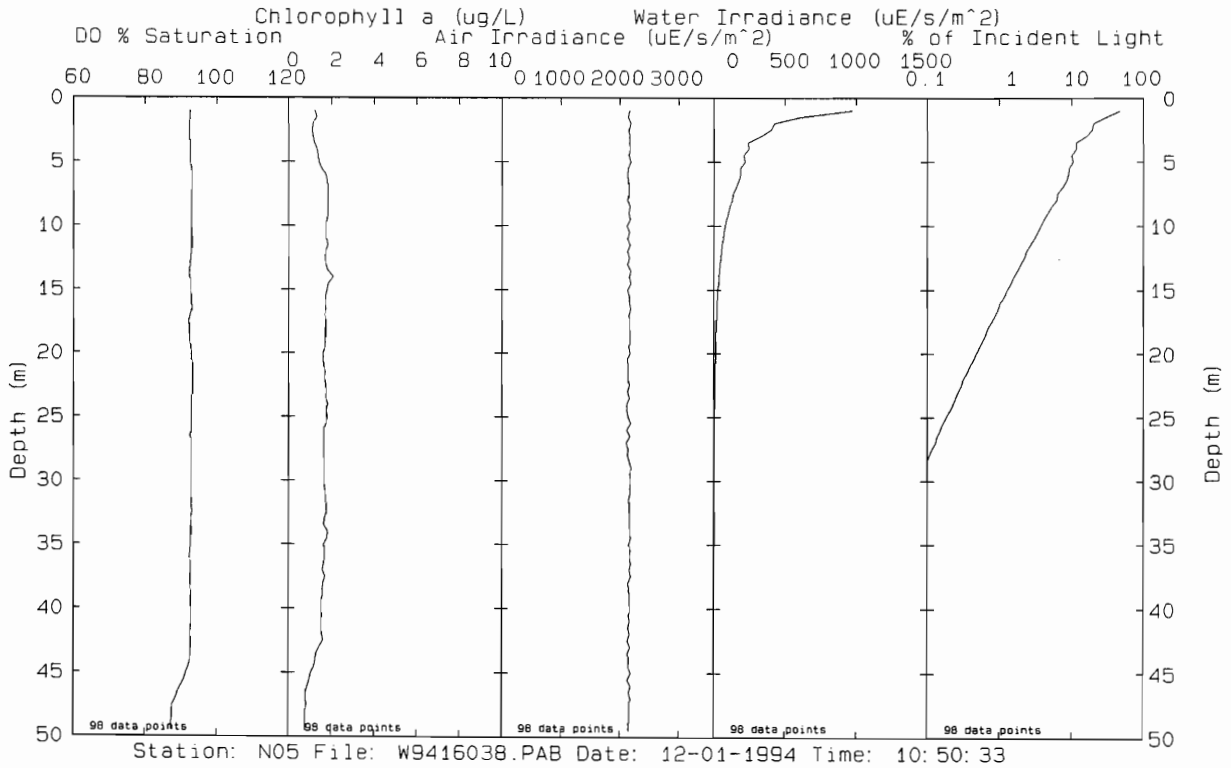

Salinity (PSU)
30 31 32 33
Temperature (C)
5 7 9 11 13 15
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40 45
81 data points


DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
0 500 1000 1500
% of Incident Light
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45
81 data points
Station: N03 File: W9416032.PAB Date: 12-01-1994 Time: 09:56:42

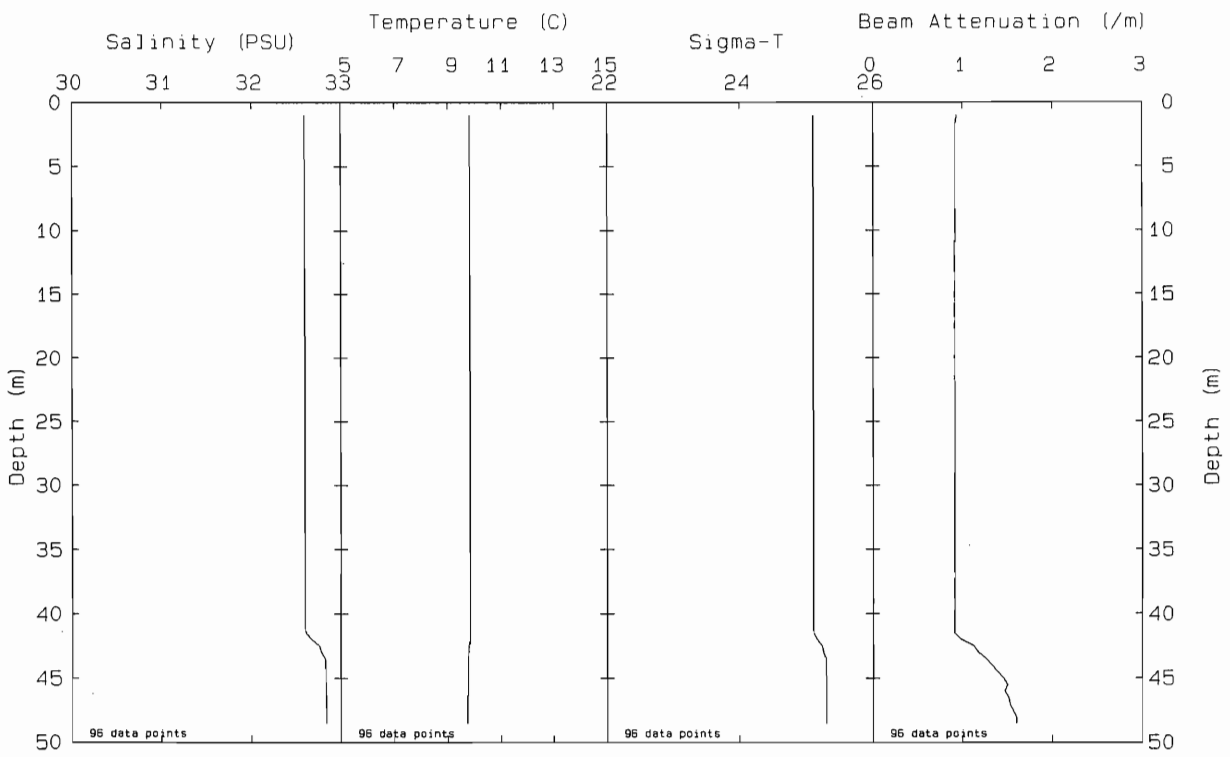

Salinity (PSU)
Temperature (C)
Sigma-T
Beam Attenuation (/m)
30 31 32
5 7 9 11 13 15
33
22 24 26
0 1 2 3
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
97 data points
97 data points
97 data points
97 data points

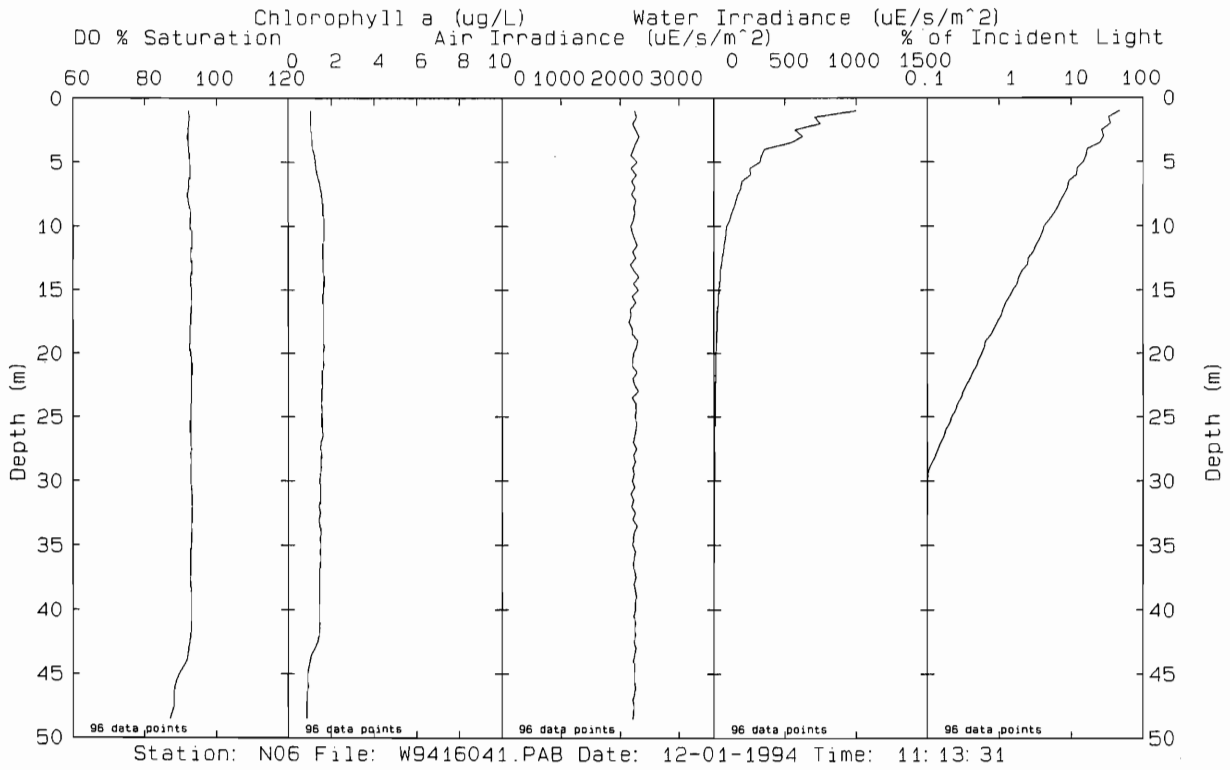

DO % Saturation
Chlorophyll a (ug/L)
Air Irradiance (uE/s/m^2)
Water Irradiance (uE/s/m^2)
% of Incident Light
60 80 100 120
0 2 4 6 8 10
0 1000 2000 3000
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30 35 40 45 50
97 data points
97 data points
97 data points
97 data points
97 data points
Station: N04P File: W9416035.PAB Date: 12-01-1994 Time: 10:20:39



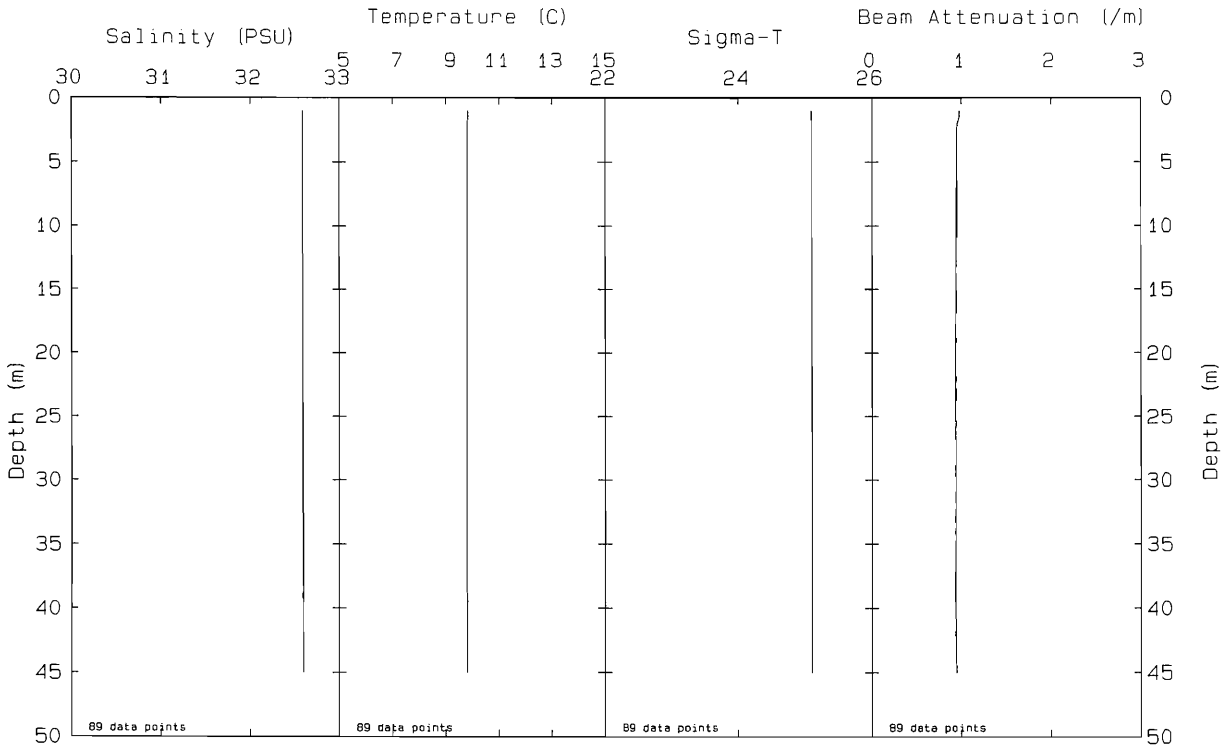


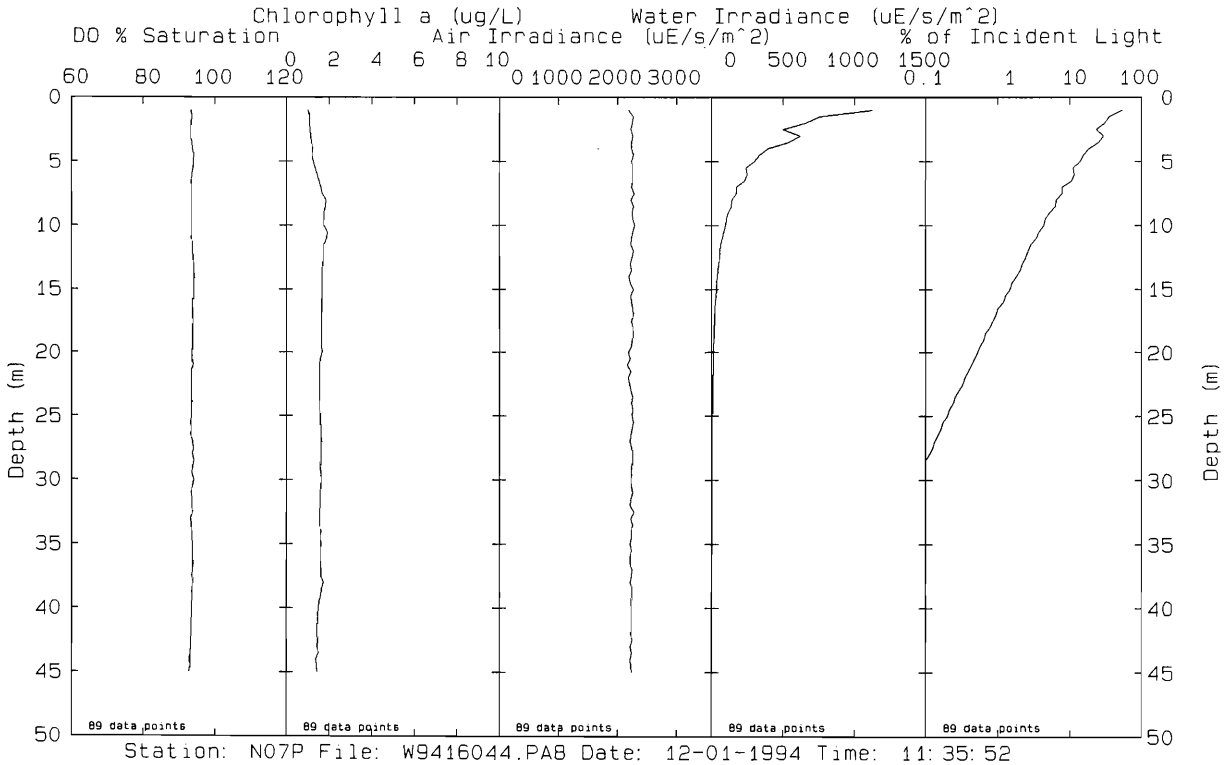
Station: N05 File: W9416038.PAB Date: 12-01-1994 Time: 10:50:33



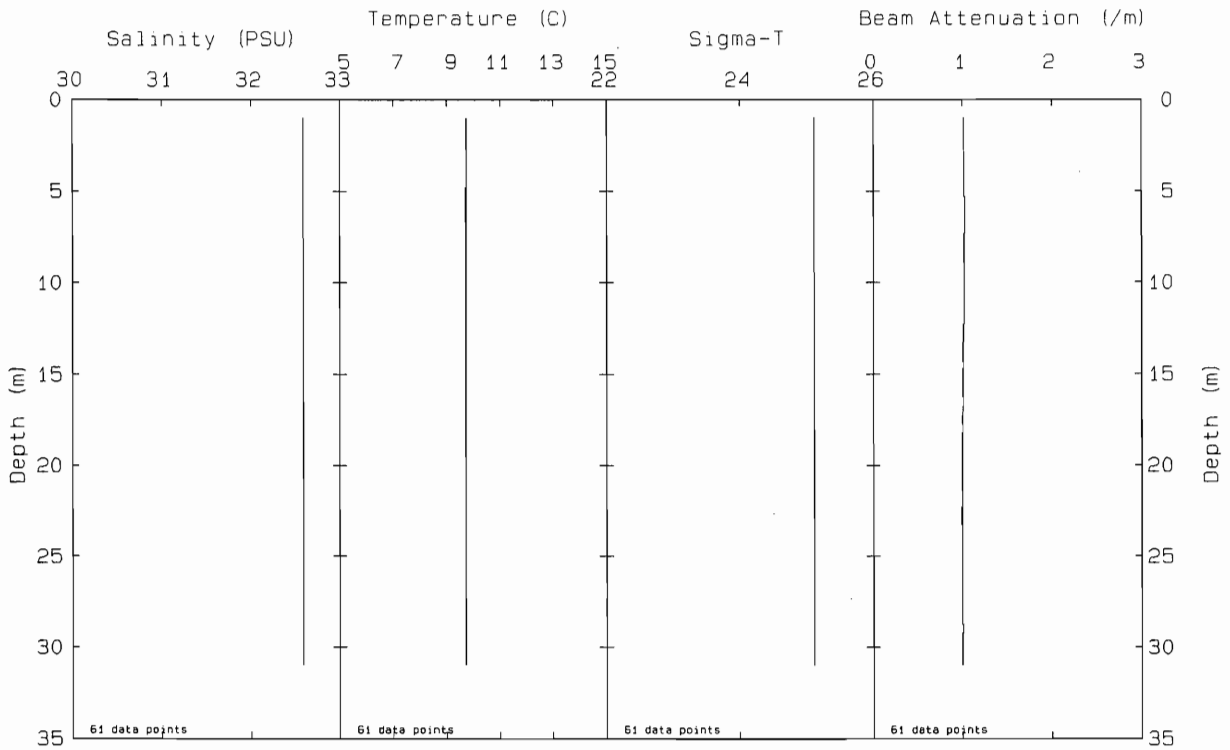


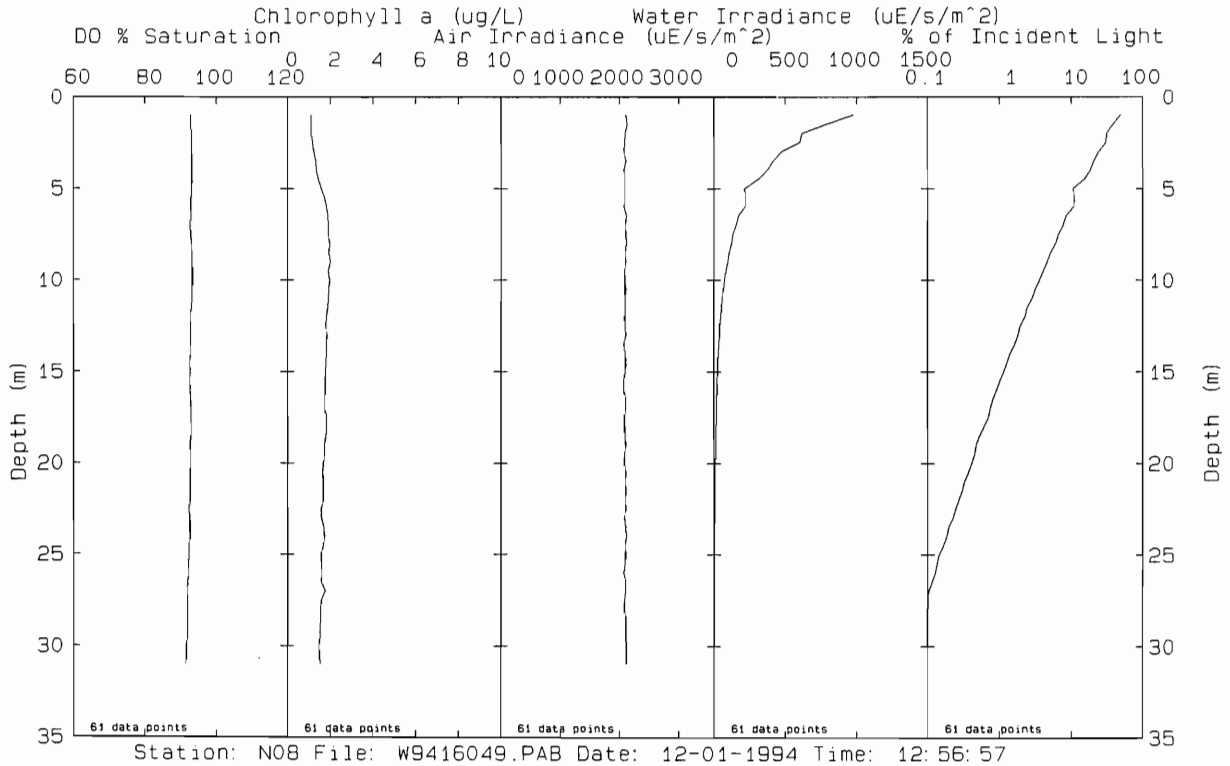
Station: N06 File: W9416041.PAB Date: 12-01-1994 Time: 11:13:31



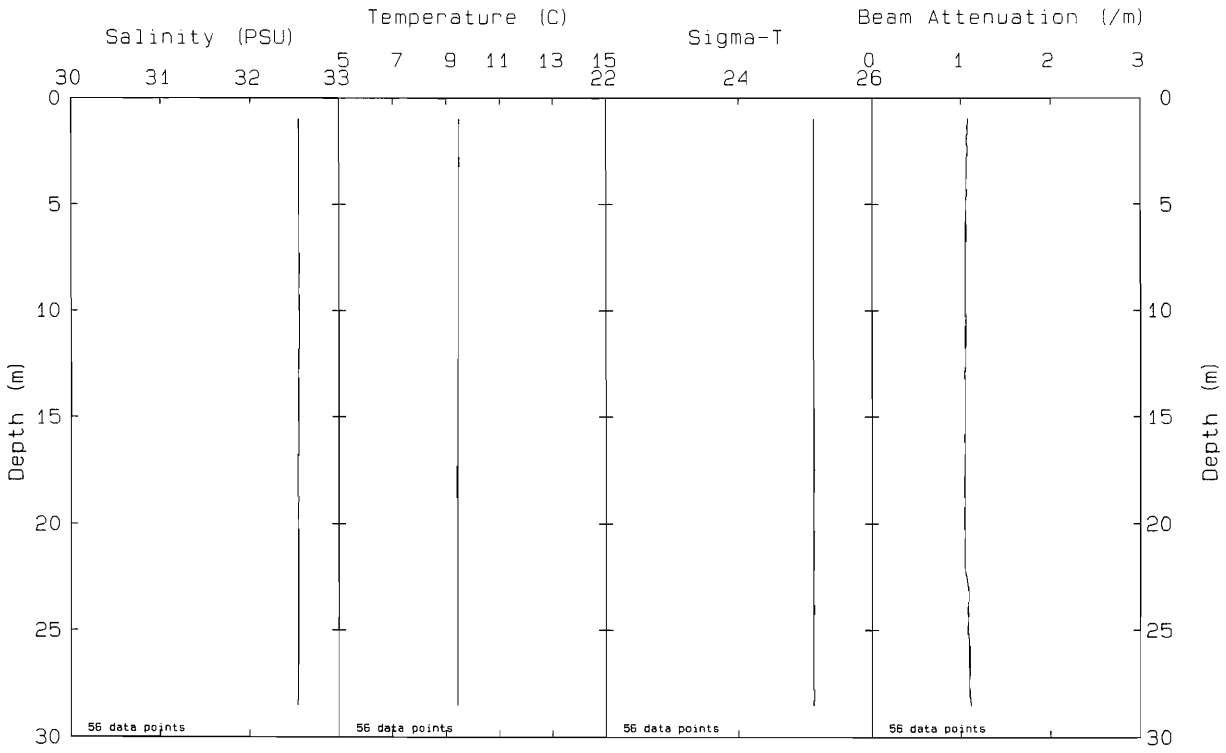


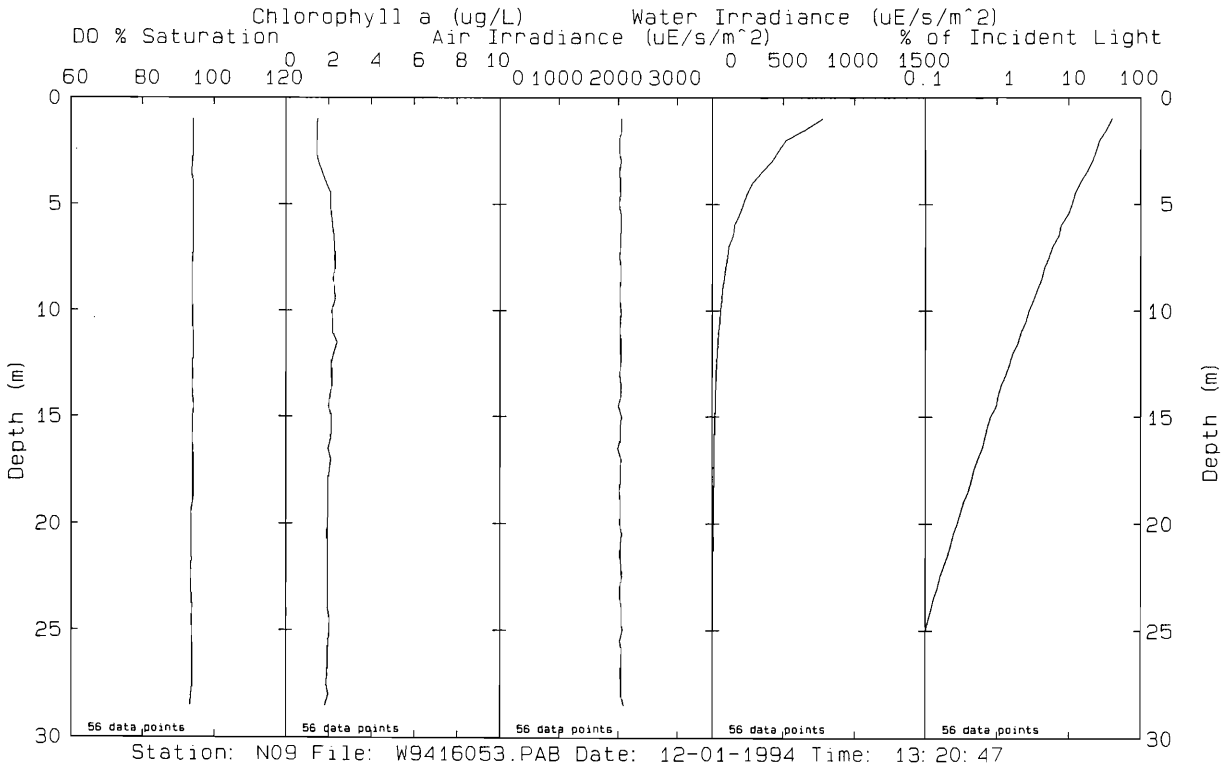
Station: N07P File: W9416044.PA8 Date: 12-01-1994 Time: 11:35:52



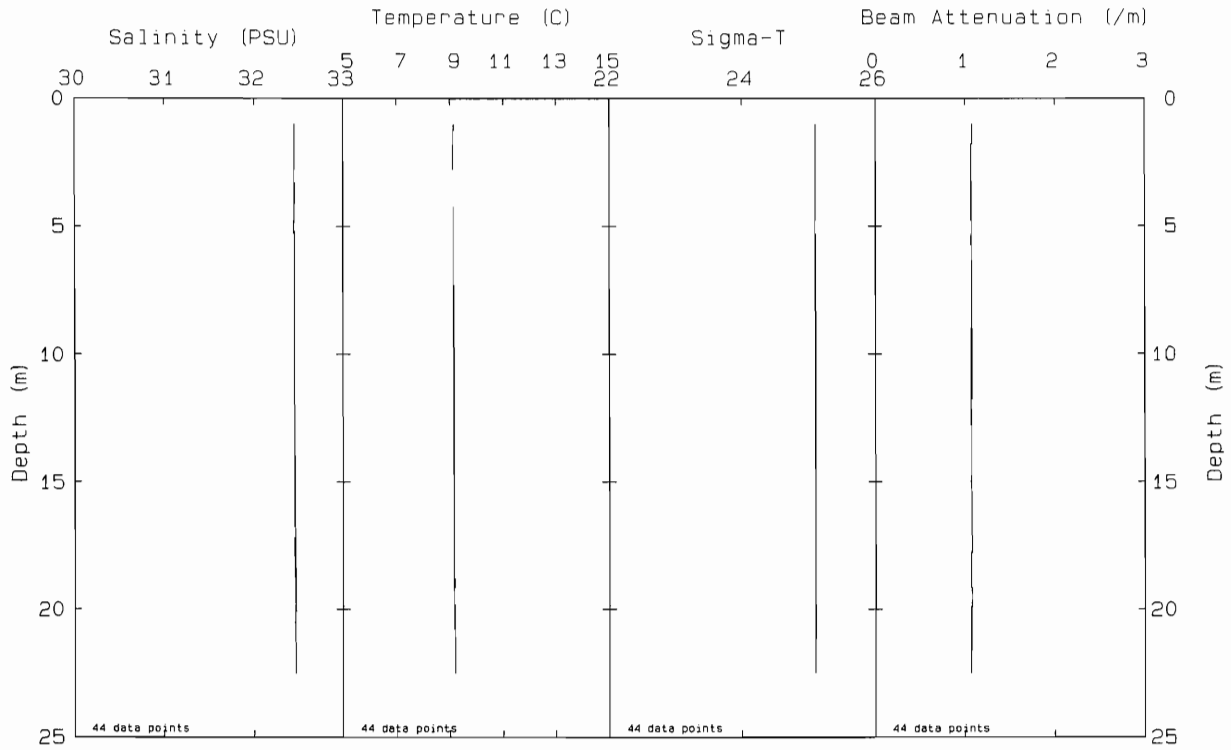


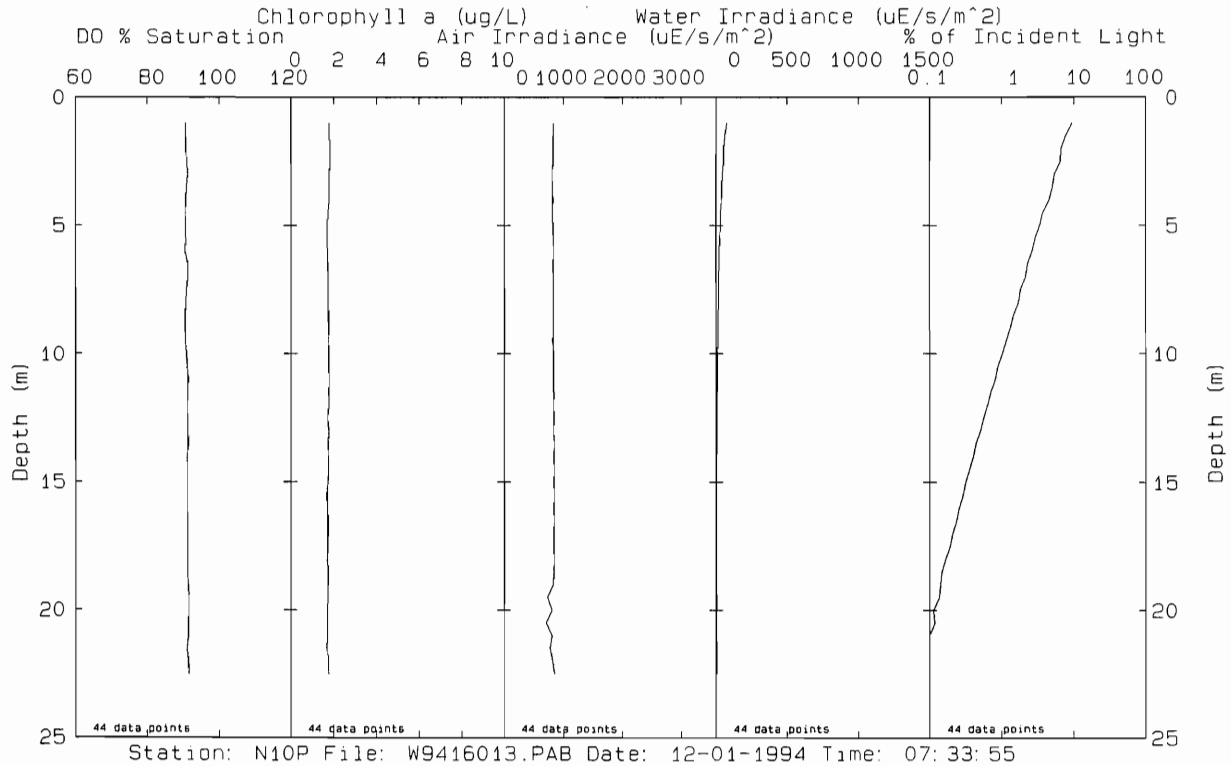
Station: N08 File: W9416049.PAB Date: 12-01-1994 Time: 12:56:57

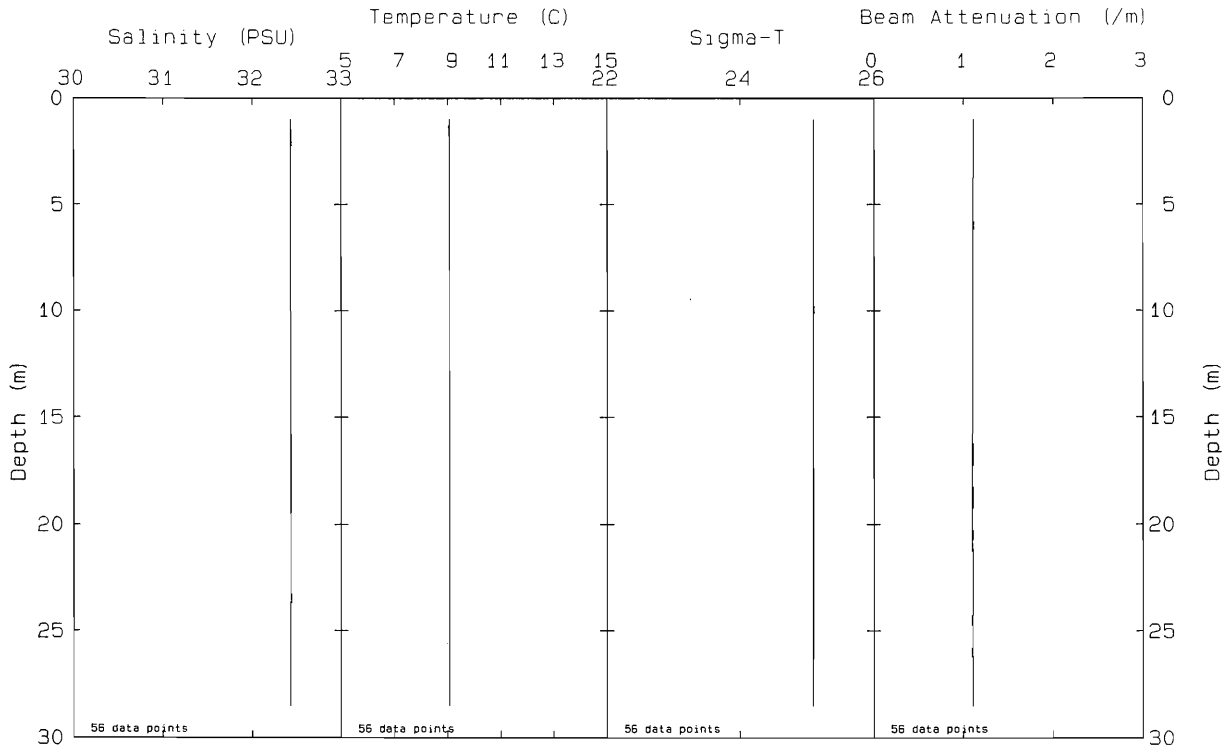


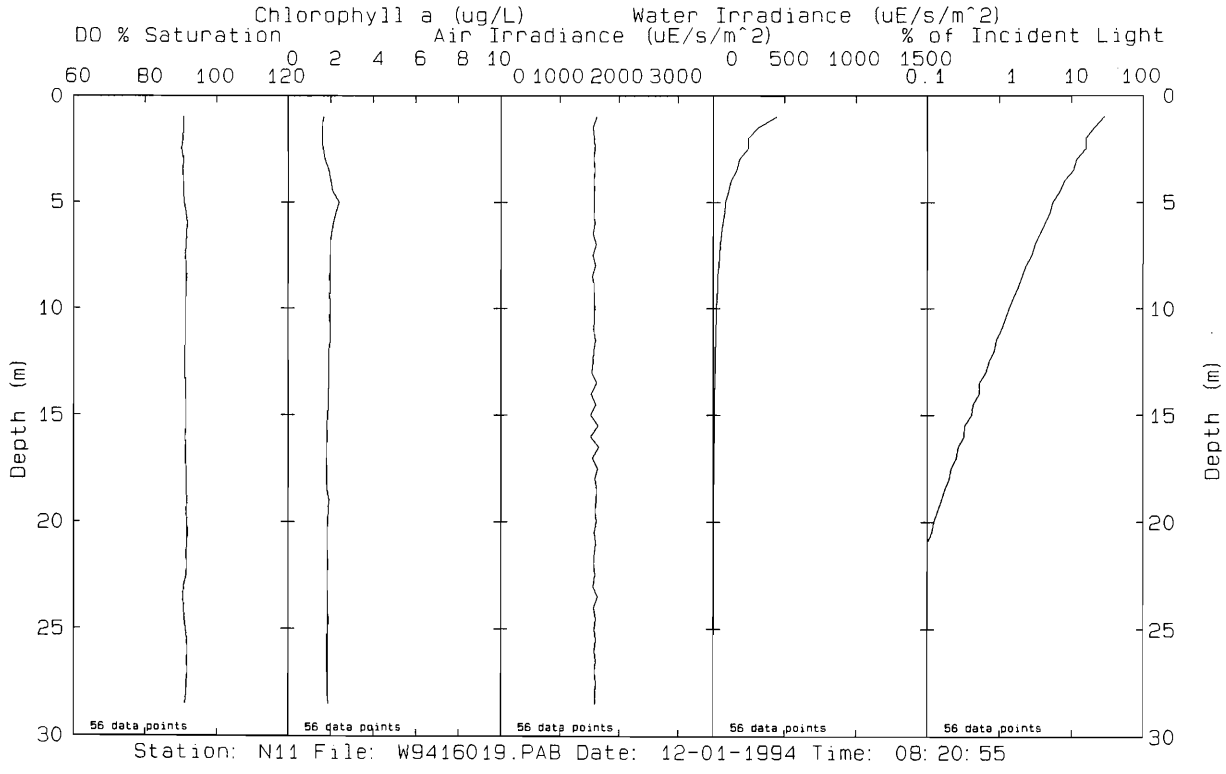


Station: N09 File: W9416053.PAB Date: 12-01-1994 Time: 13:20:47

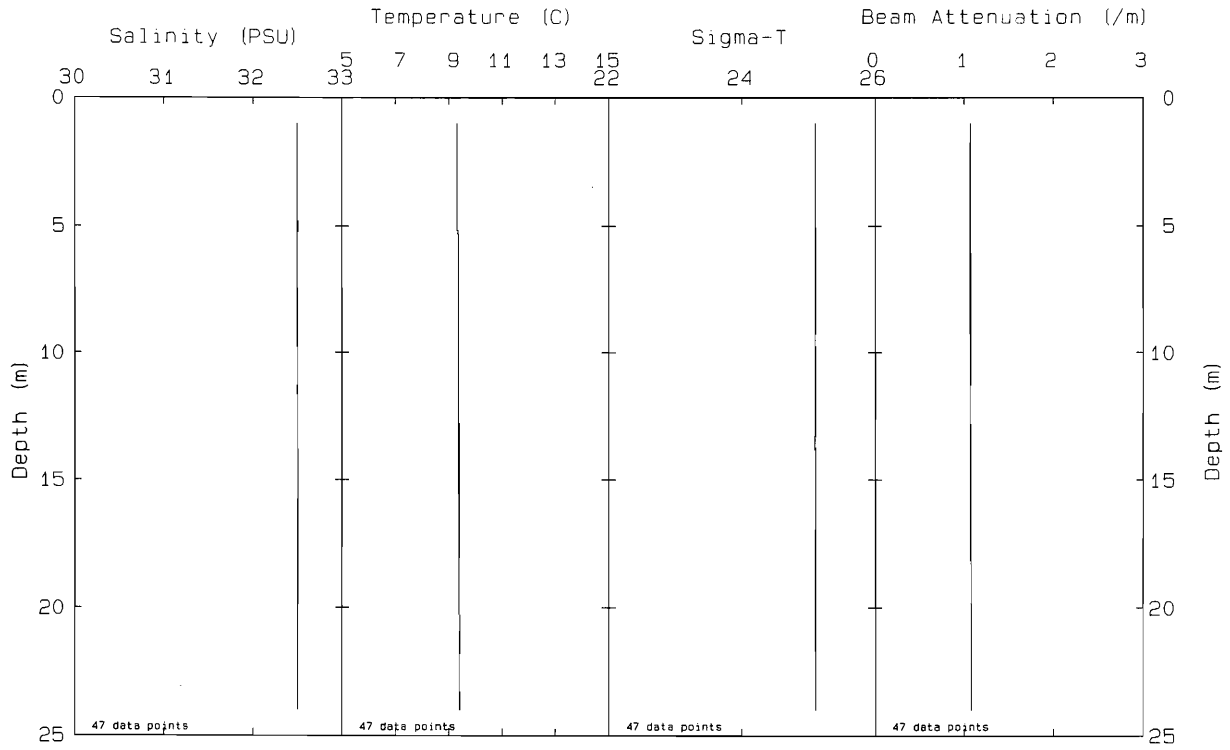

Salinity (PSU)
Temperature (C)
Sigma-T
Beam Attenuation (/m)
30 31 32
5 7 9 11 13 15
22 24 26
0 1 2 3
Depth (m)
0 5 10 15 20 25
44 data points
44 data points
44 data points
44 data points

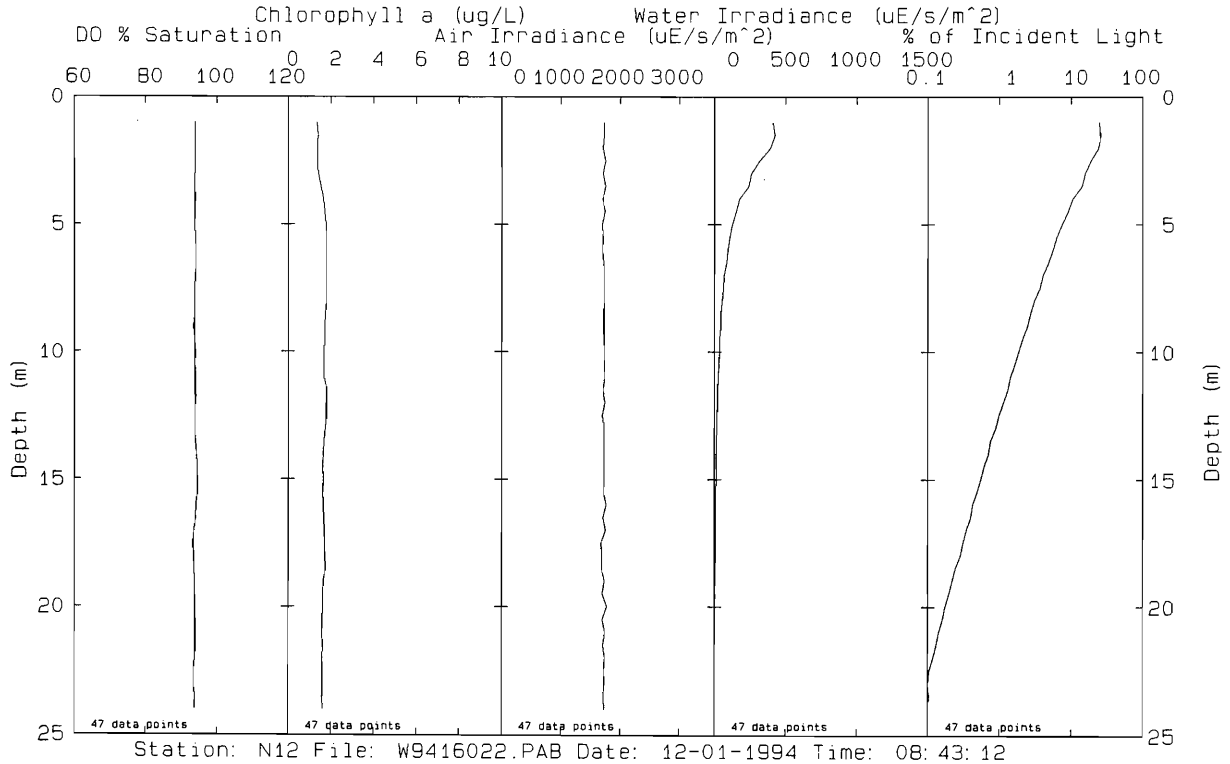

Chlorophyll a (ug/L)
Water Irradiance (uE/s/m^2)
DO % Saturation
Air Irradiance (uE/s/m^2)
% of Incident Light
60 80 100 120
0 2 4 6 8 10
0 1000 2000 3000
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25
44 data points
44 data points
44 data points
44 data points
44 data points
Station: N10P File: W9416013.PAB Date: 12-01-1994 Time: 07:33:55

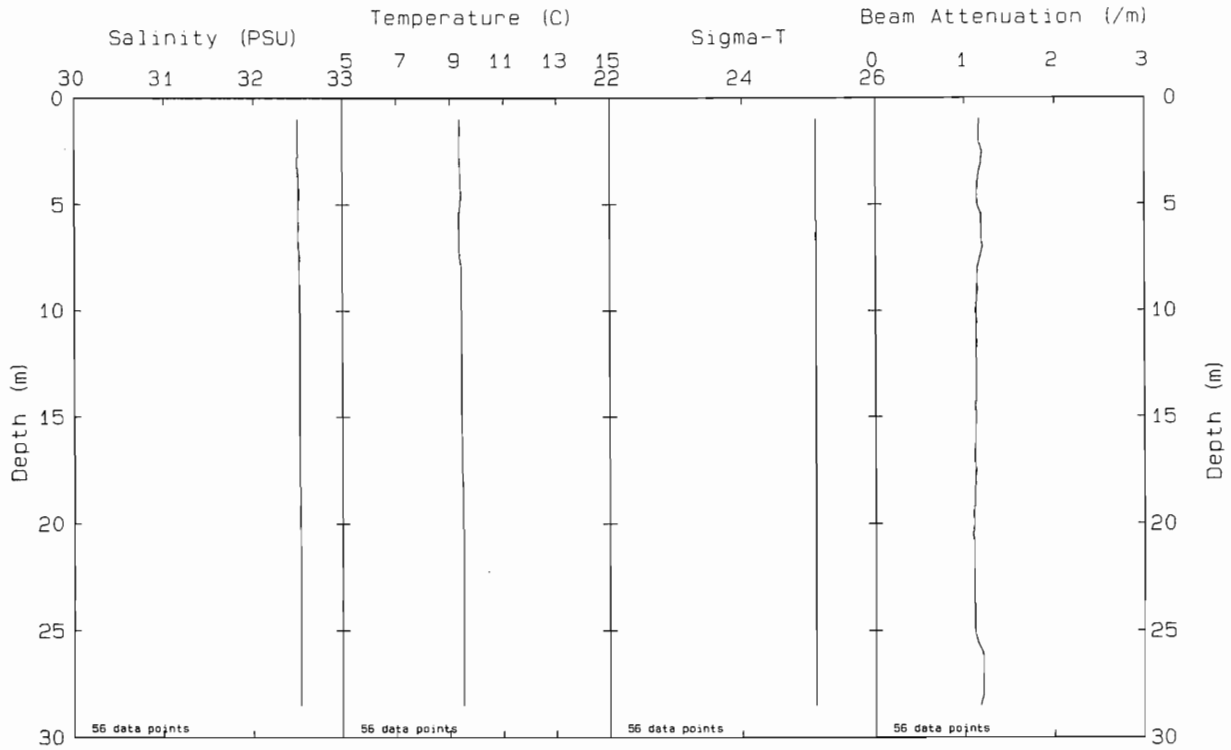


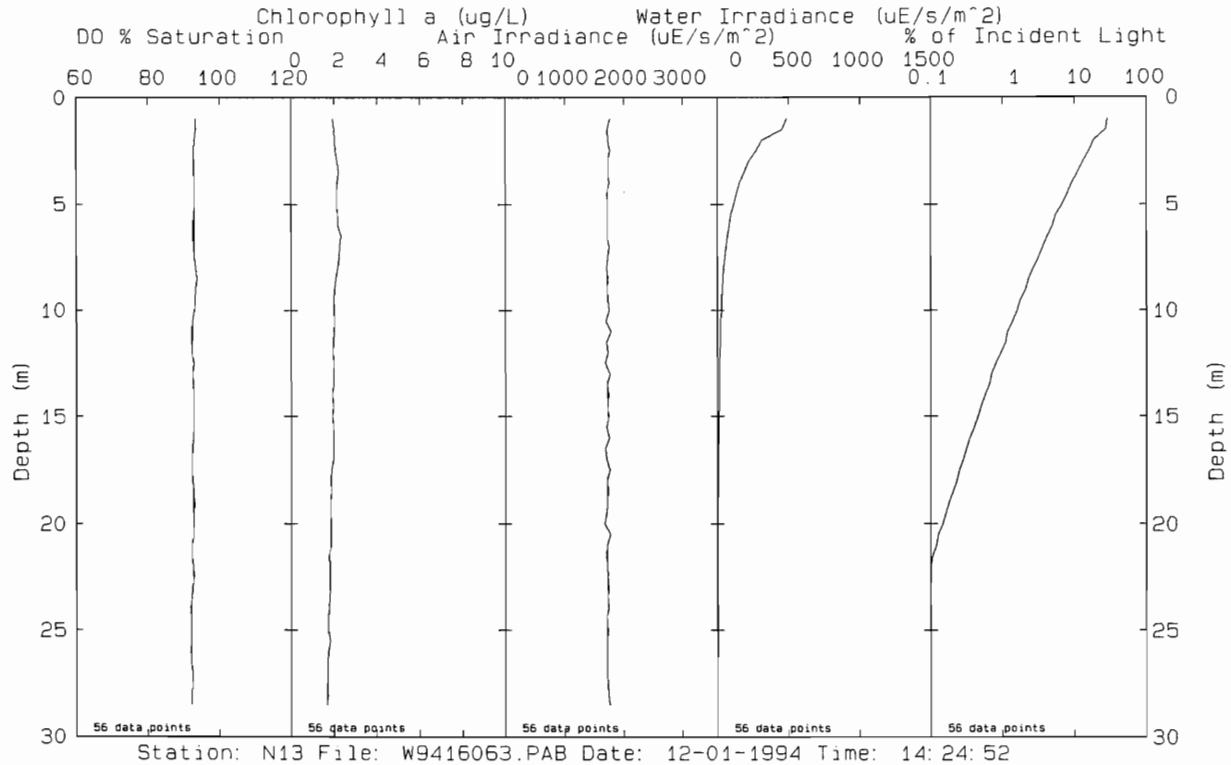


Station: N11 File: W9416019.PAB Date: 12-01-1994 Time: 08:20:55

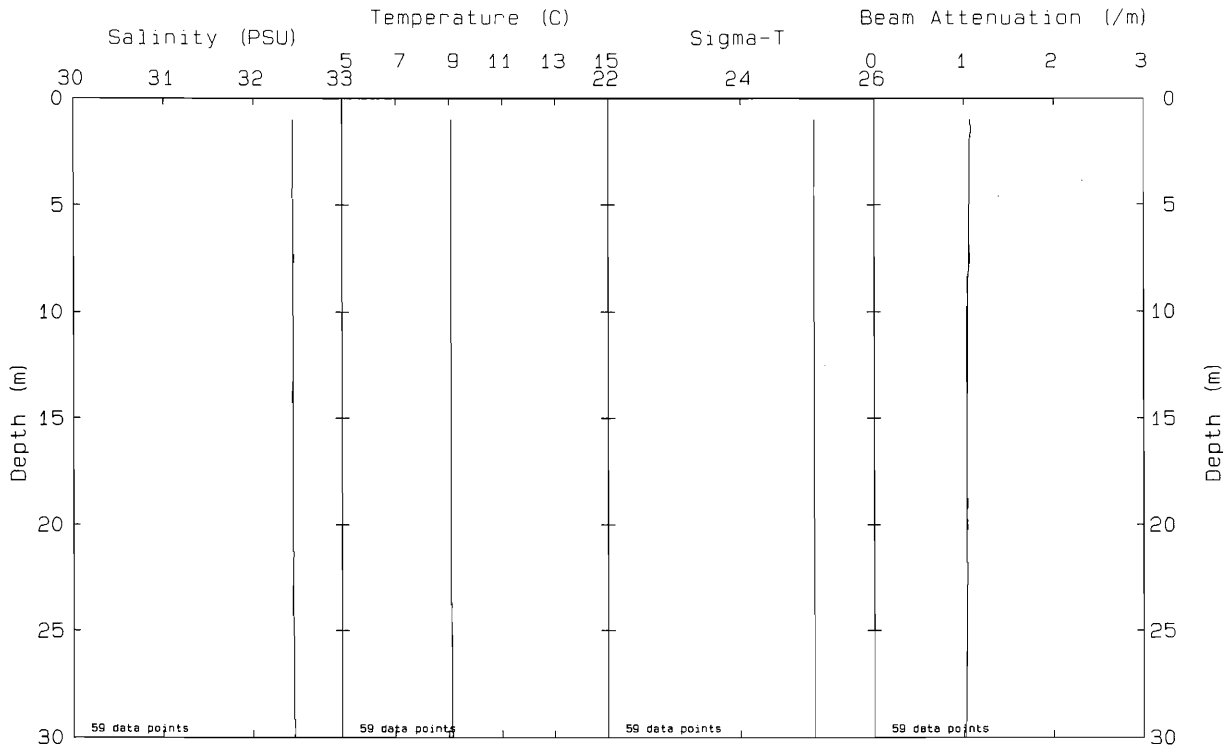

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25
47 data points
47 data points
47 data points
47 data points

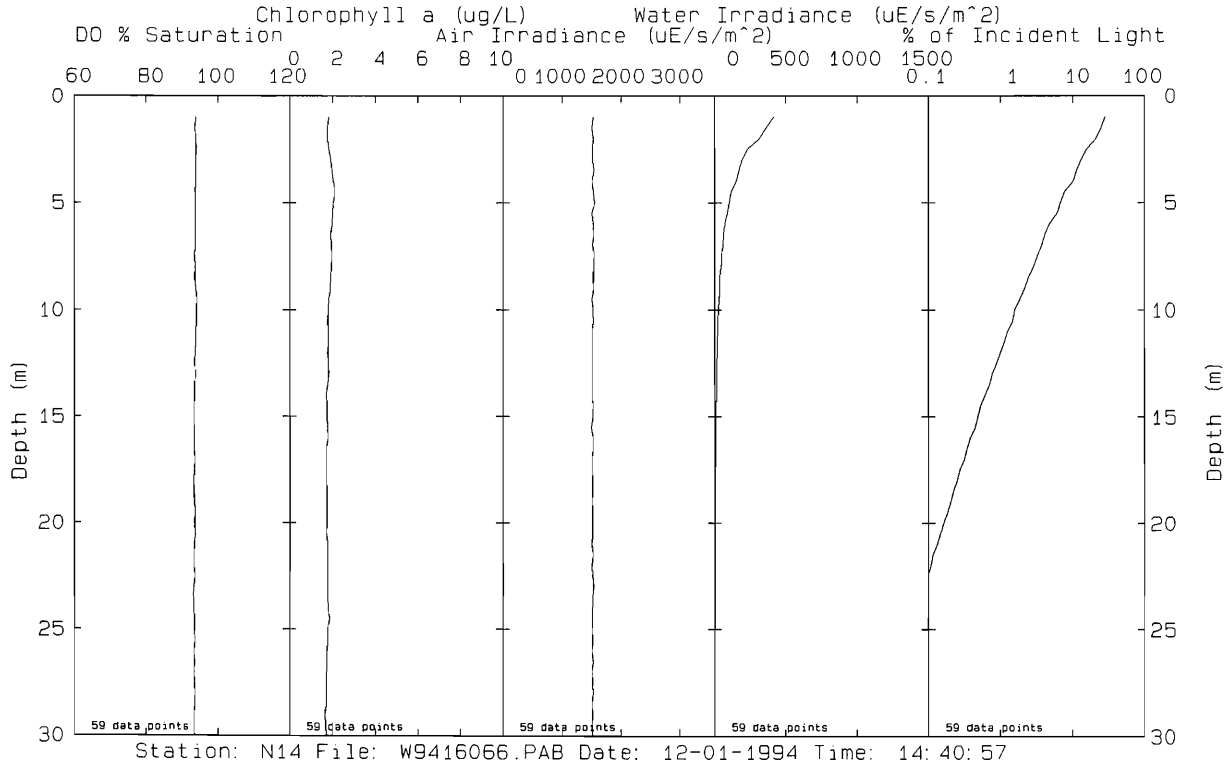

DO % Saturation
60 80 100 120
Chlorophyll a (ug/L)
0 2 4 6 8 10
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
Water Irradiance (uE/s/m^2)
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25
47 data points
47 data points
47 data points
47 data points
47 data points
Station: N12 File: W9416022.PAB Date: 12-01-1994 Time: 08:43:12

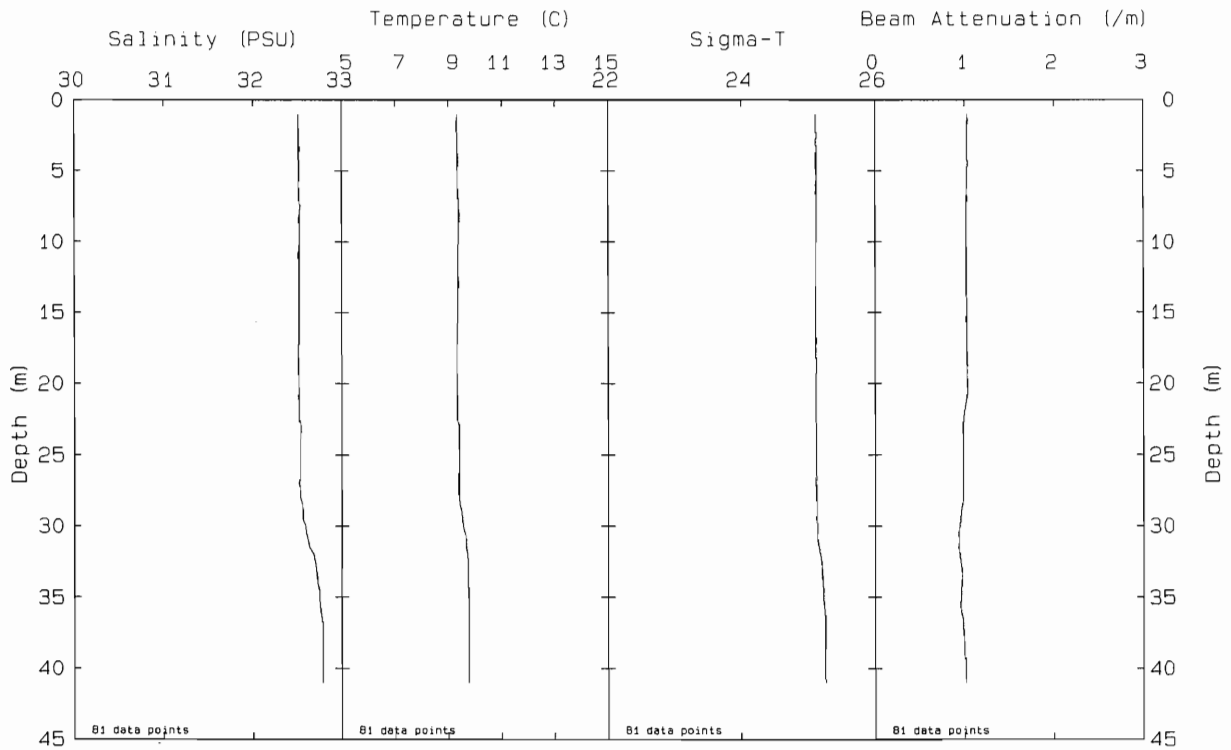


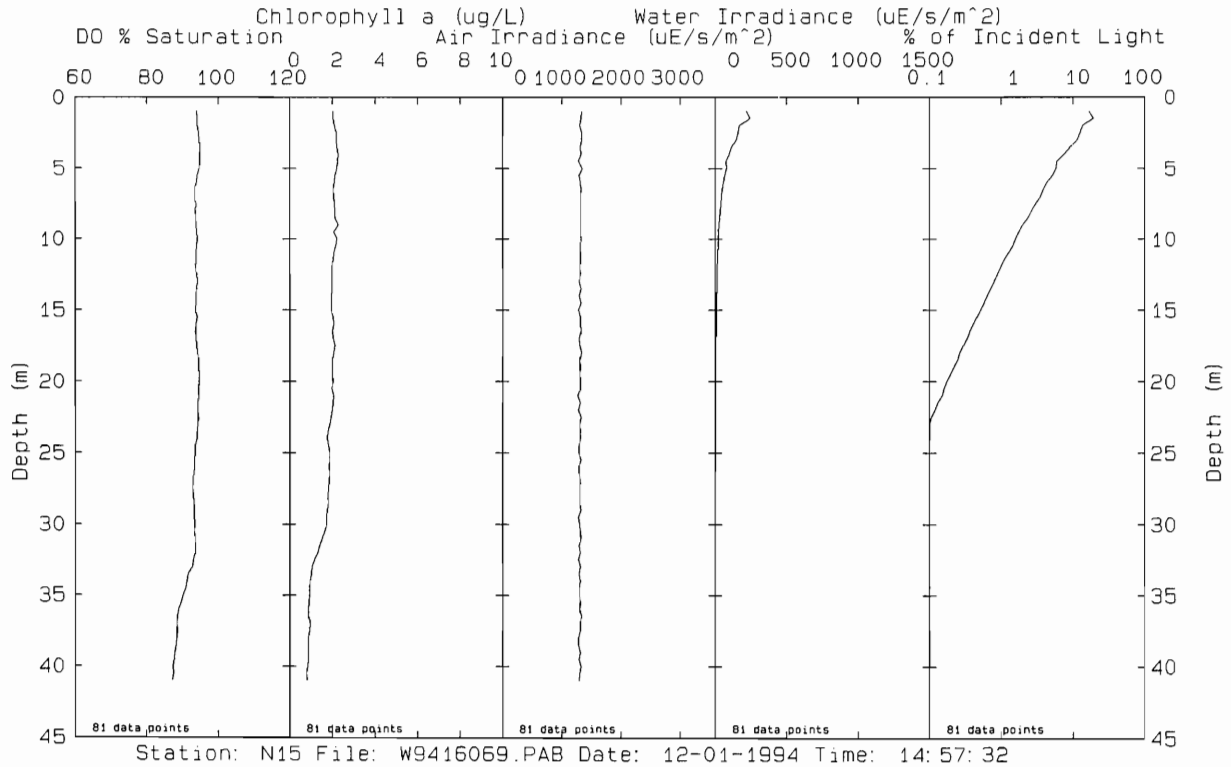


Station: N13 File: W9416063.PAB Date: 12-01-1994 Time: 14:24:52

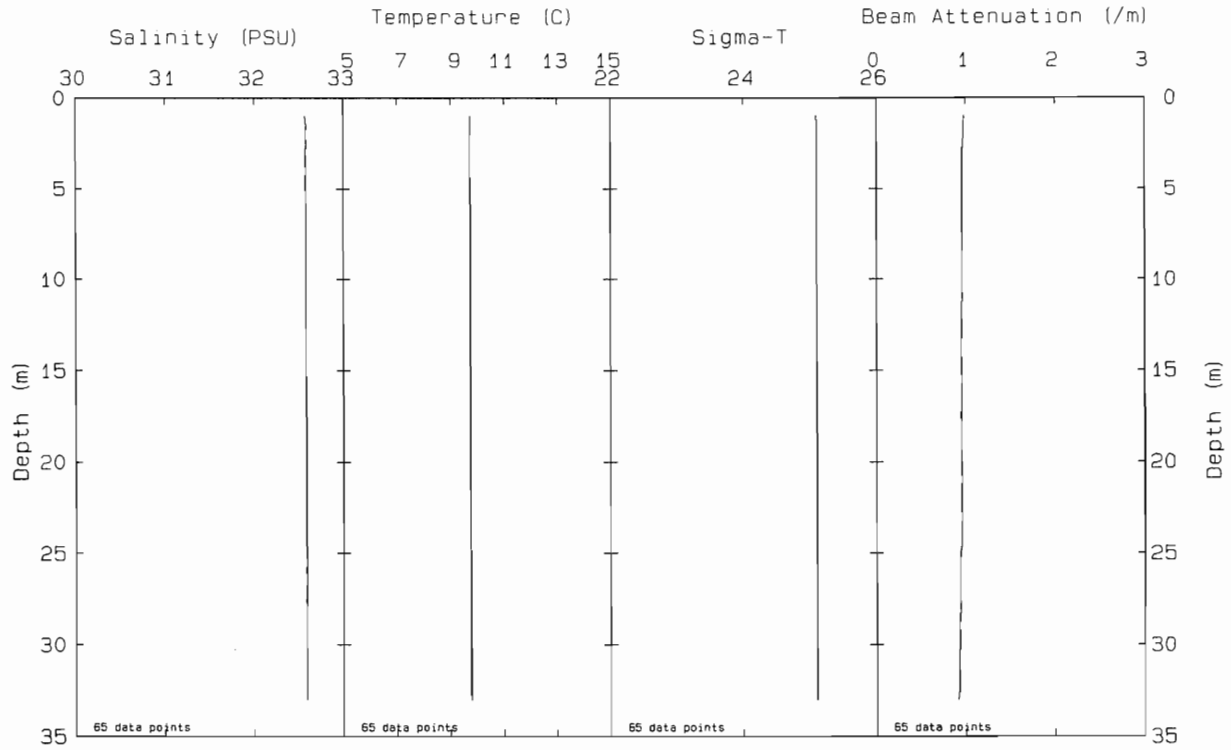

Salinity (PSU)
30 31 32
Temperature (C)
5 7 9 11 13 15
33 22
Sigma-T
24
Beam Attenuation (/m)
0 1 2 3
26
Depth (m)
0 5 10 15 20 25 30
59 data points
59 data points
59 data points
59 data points

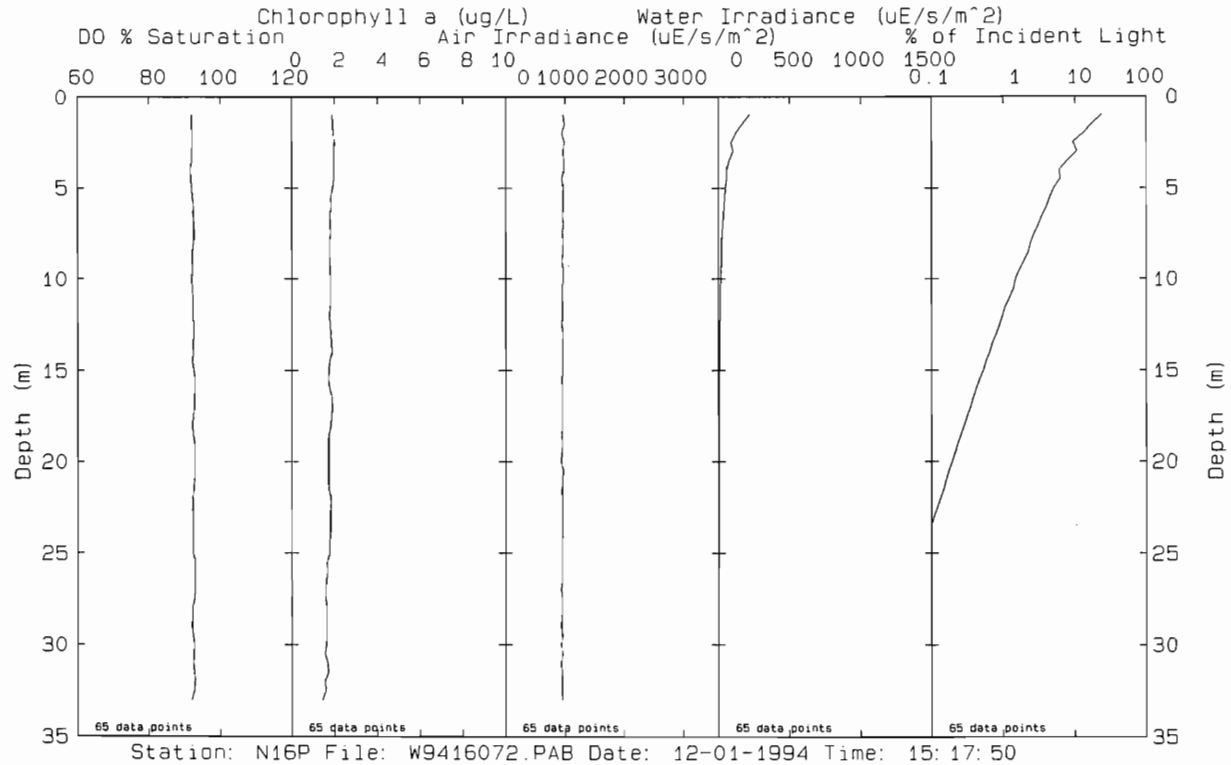

Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Depth (m)
0 5 10 15 20 25 30
59 data points
59 data points
59 data points
59 data points
59 data points
Station: N14 File: W9416066.PAB Date: 12-01-1994 Time: 14:40:57



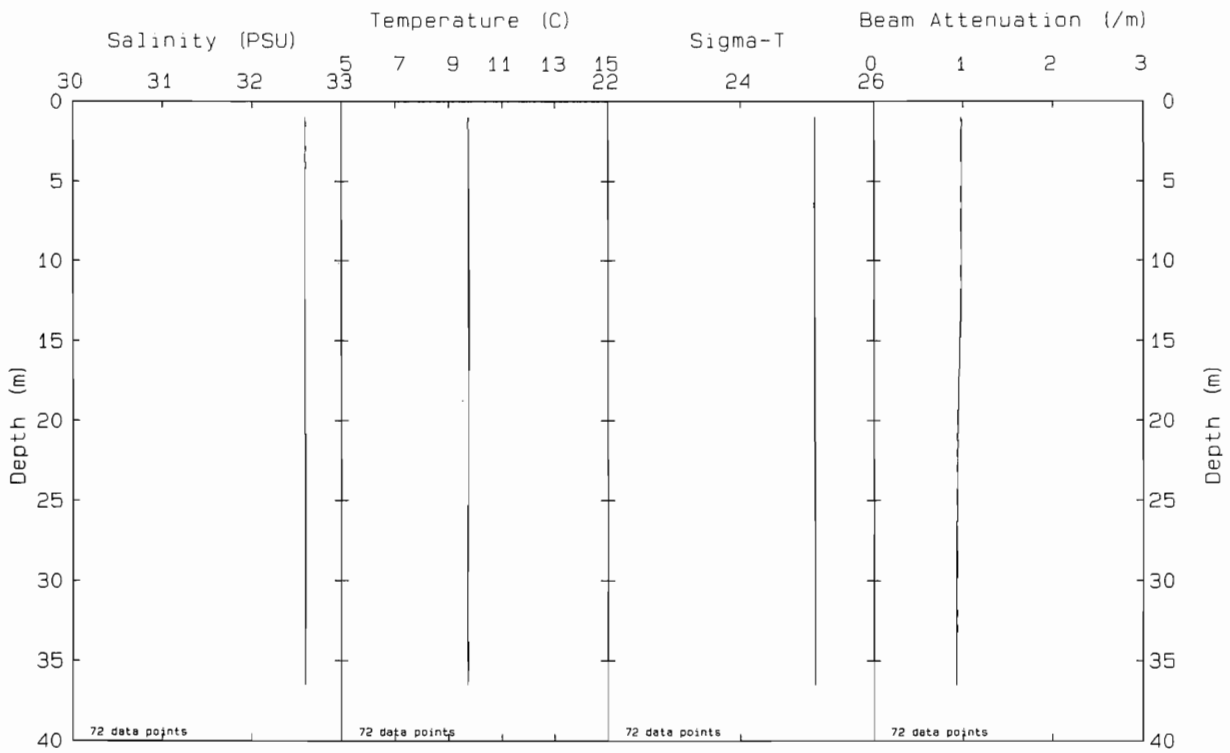


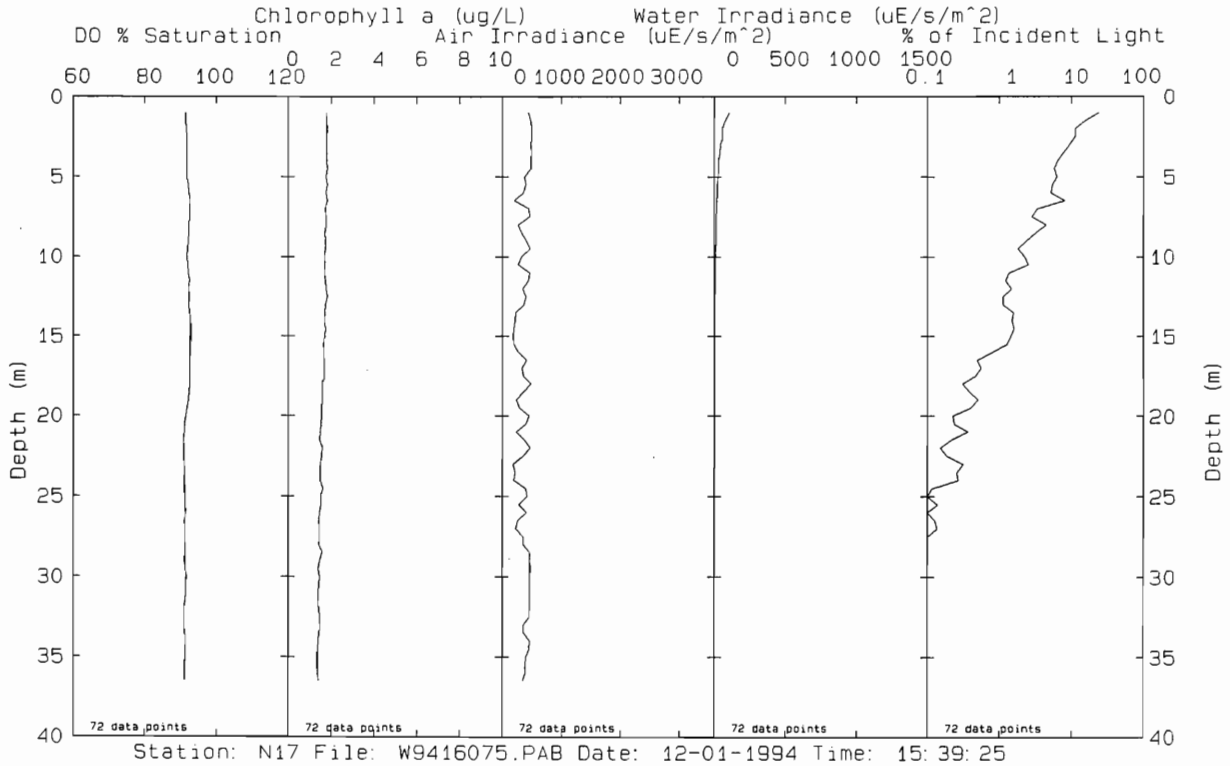
Station: N15 File: W9416069.PAB Date: 12-01-1994 Time: 14:57:32



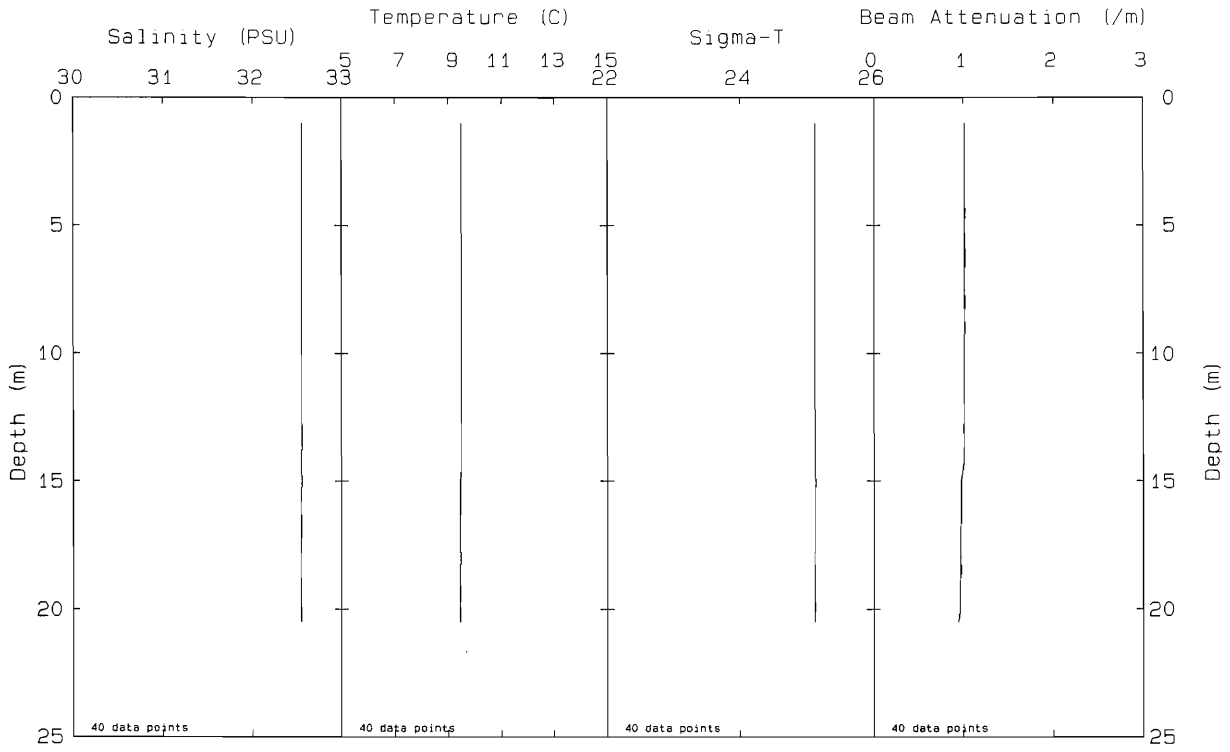


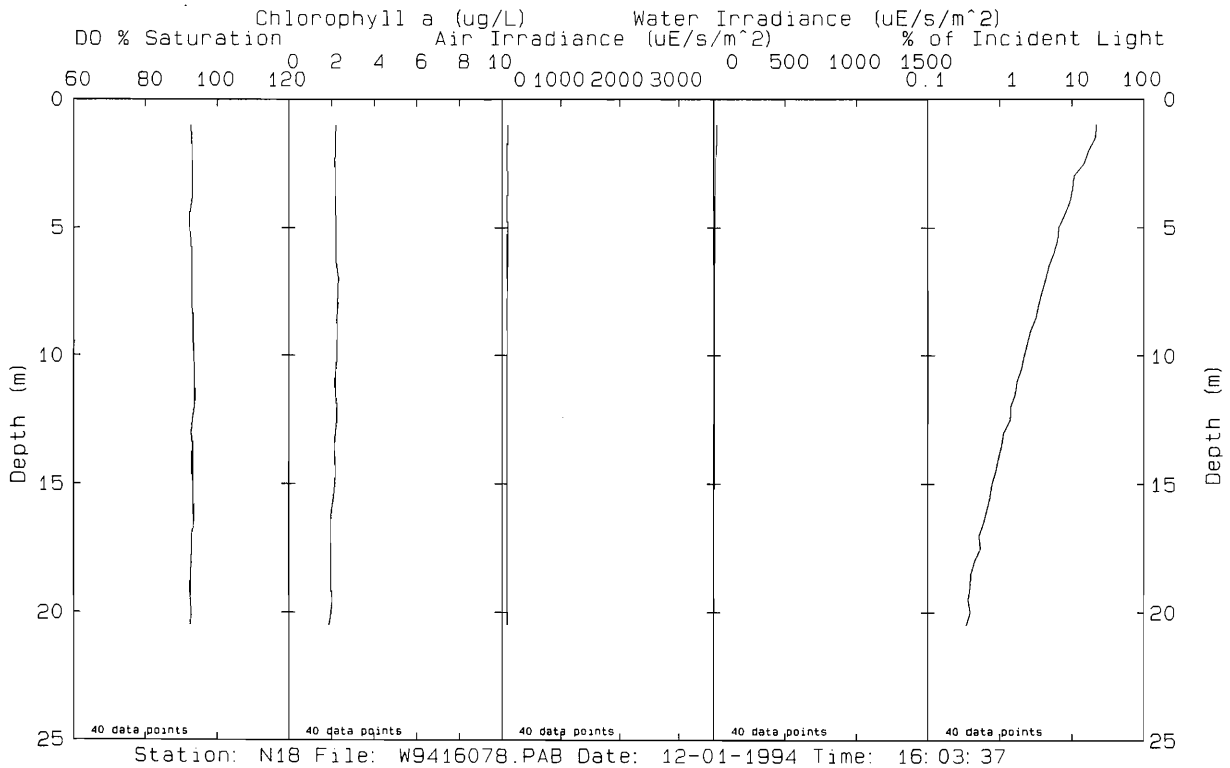
Station: N16P File: W9416072.PAB Date: 12-01-1994 Time: 15:17:50



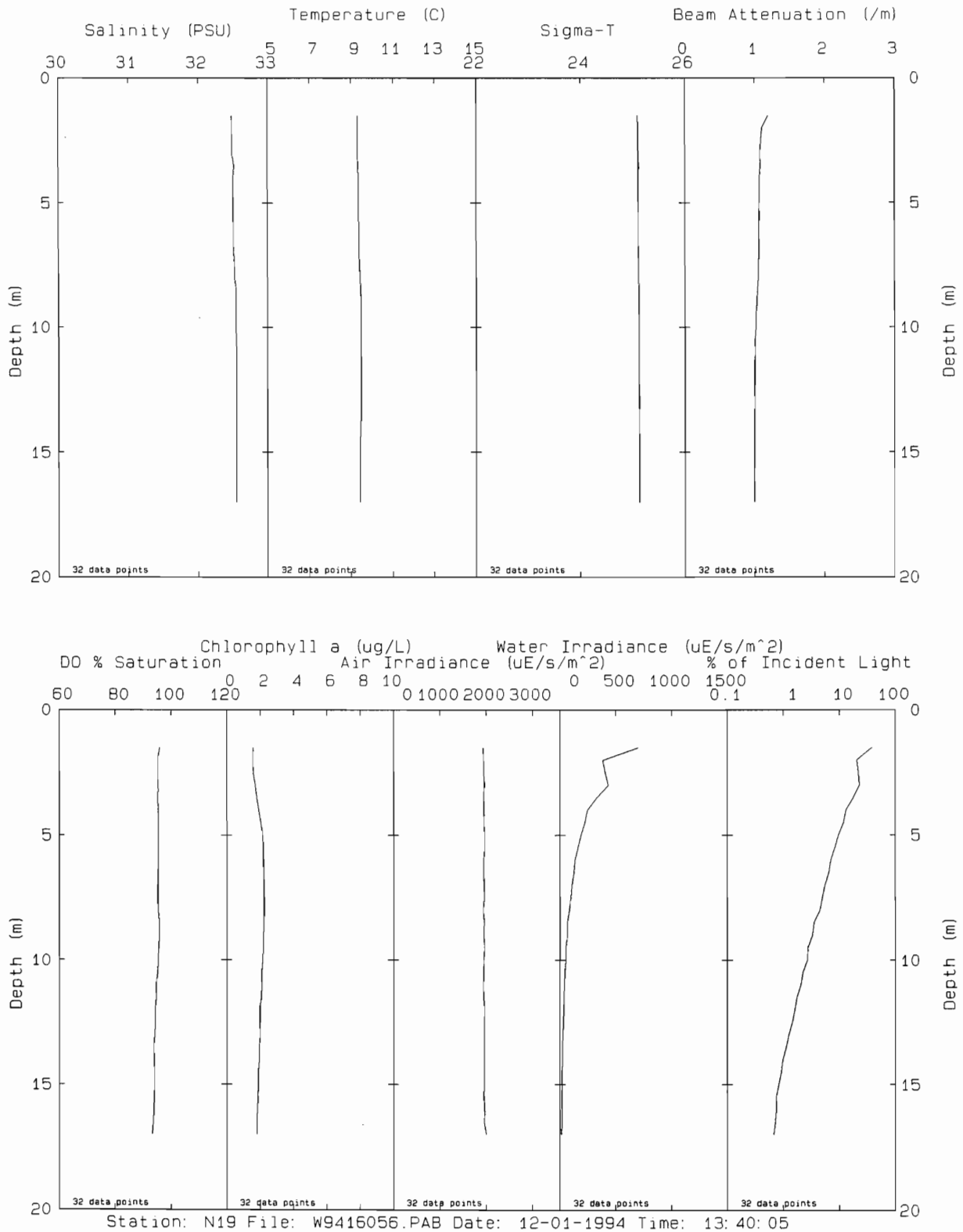


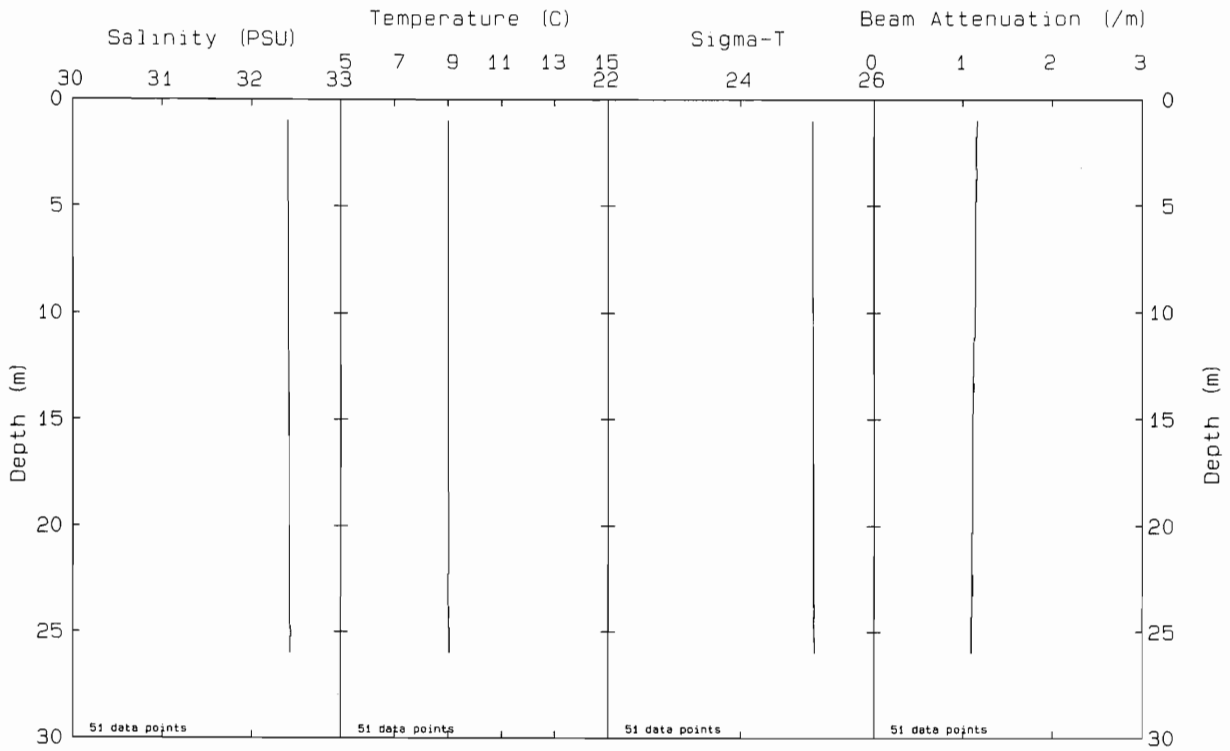
Station: N17 File: W9416075.PAB Date: 12-01-1994 Time: 15:39:25

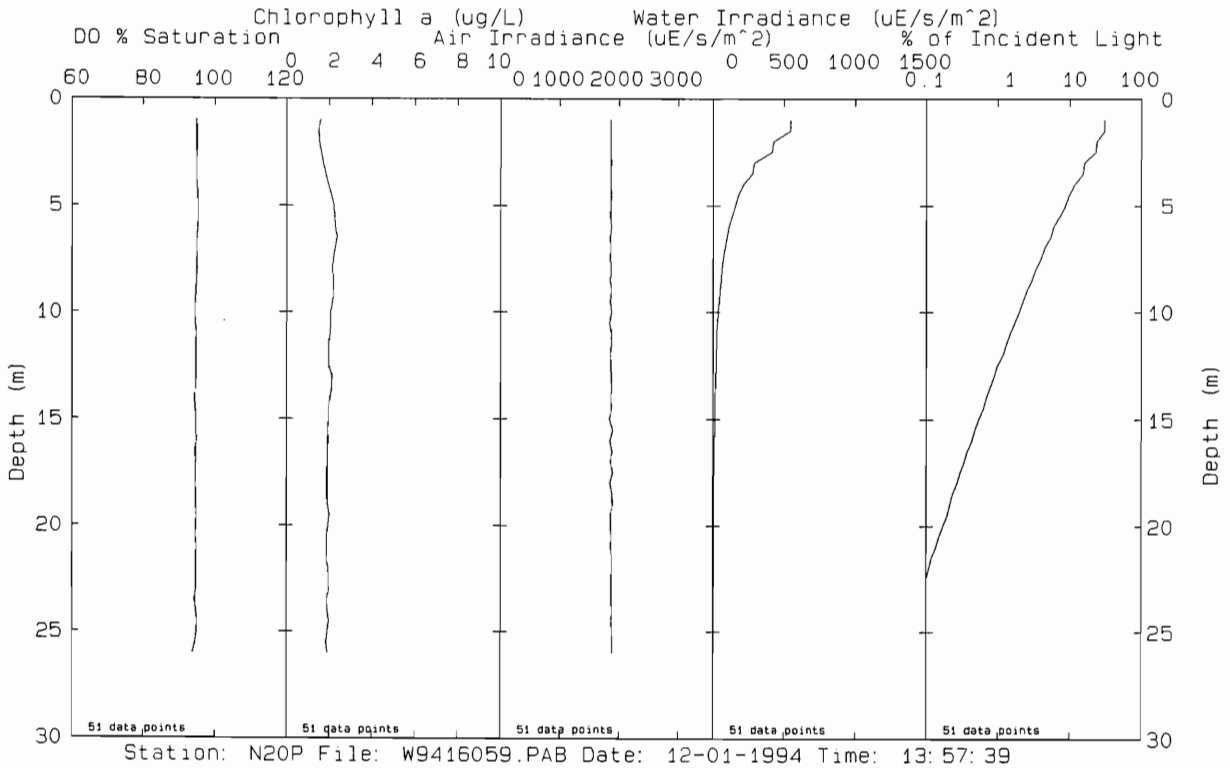




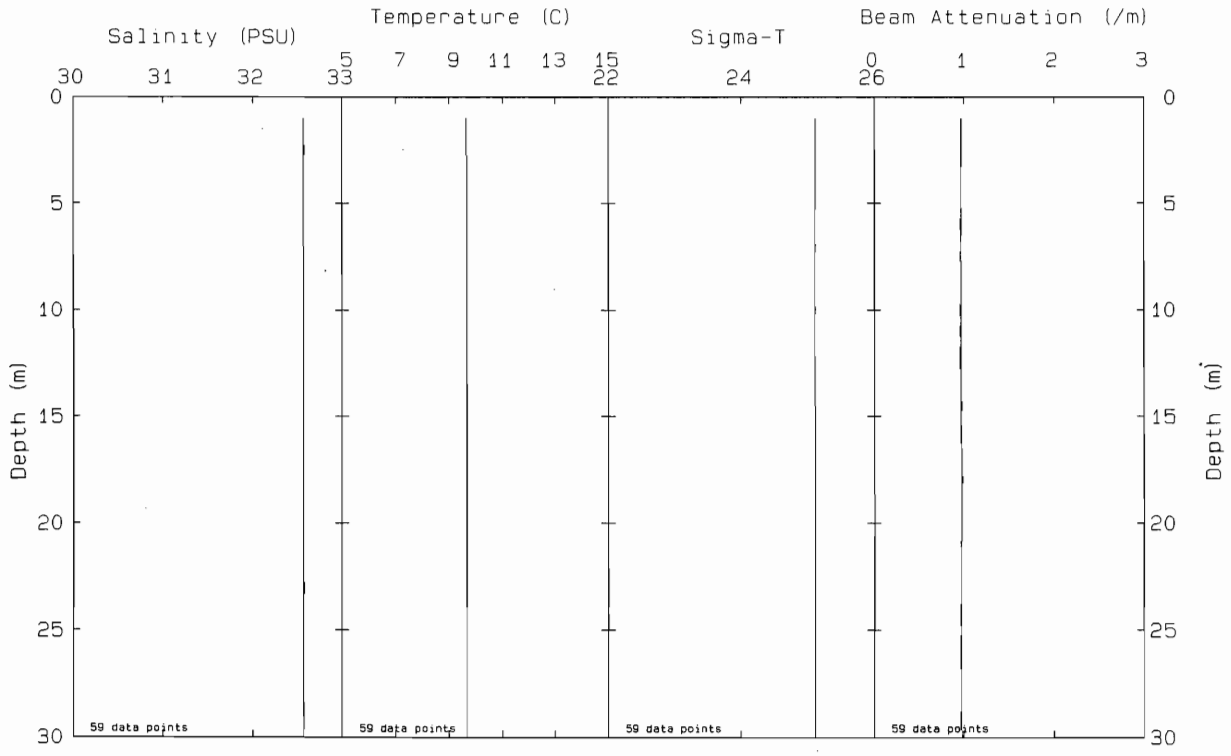
Station: N18 File: W9416078.PAB Date: 12-01-1994 Time: 16:03:37

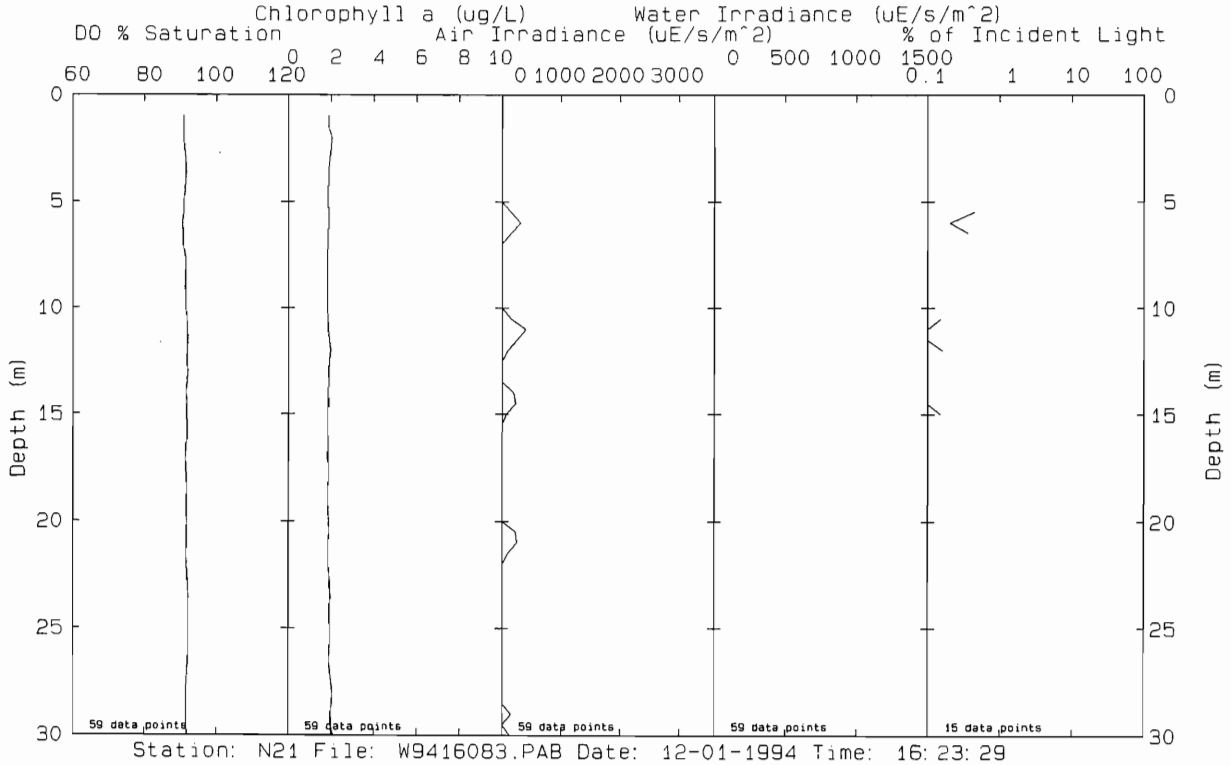

Salinity (PSU)
30 31 32 33
Temperature (C)
5 7 9 11 13 15
Sigma-T
22 24 26
Beam Attenuation (/m)
0 1 2 3
Depth (m)
0 5 10 15 20
32 data points
Chlorophyll a (ug/L)
DO % Saturation
60 80 100 120
0 2 4 6 8 10
Water Irradiance (uE/s/m^2)
Air Irradiance (uE/s/m^2)
0 1000 2000 3000
% of Incident Light
0 500 1000 1500
0.1 1 10 100
Station: N19 File: W9416056.PAB Date: 12-01-1994 Time: 13:40:05





Station: N20P File: W9416059.PAB Date: 12-01-1994 Time: 13:57:39





Station: N21 File: W9416083.PAB Date: 12-01-1994 Time: 16:23:29

APPENDIX C

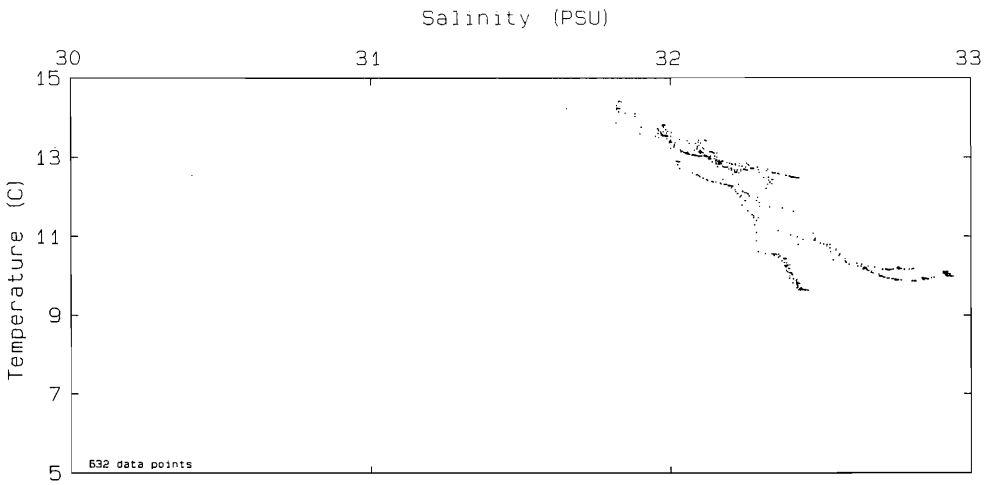
COMPARISON OF VERTICAL PROFILE DATA: SCATTER PLOTS

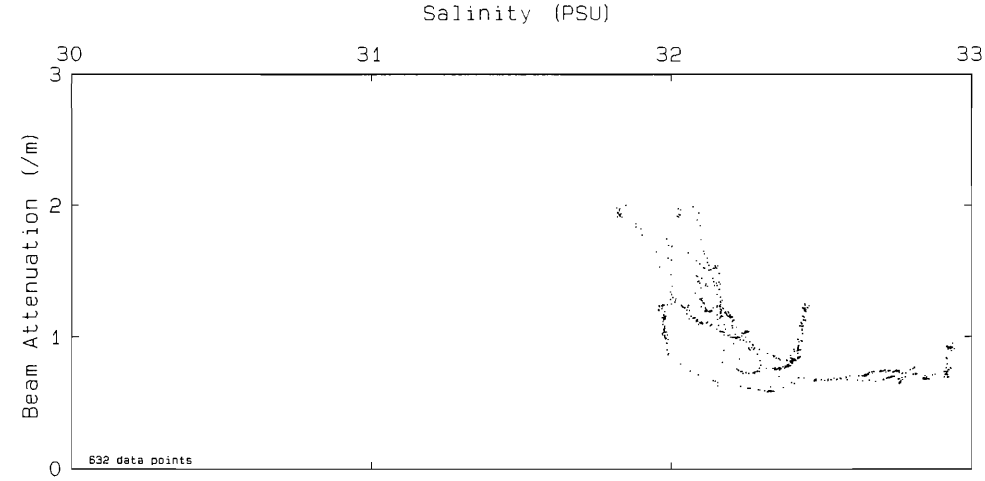
Parameter-Parameter Plots of Vertical Profile Data, Combined Surveys

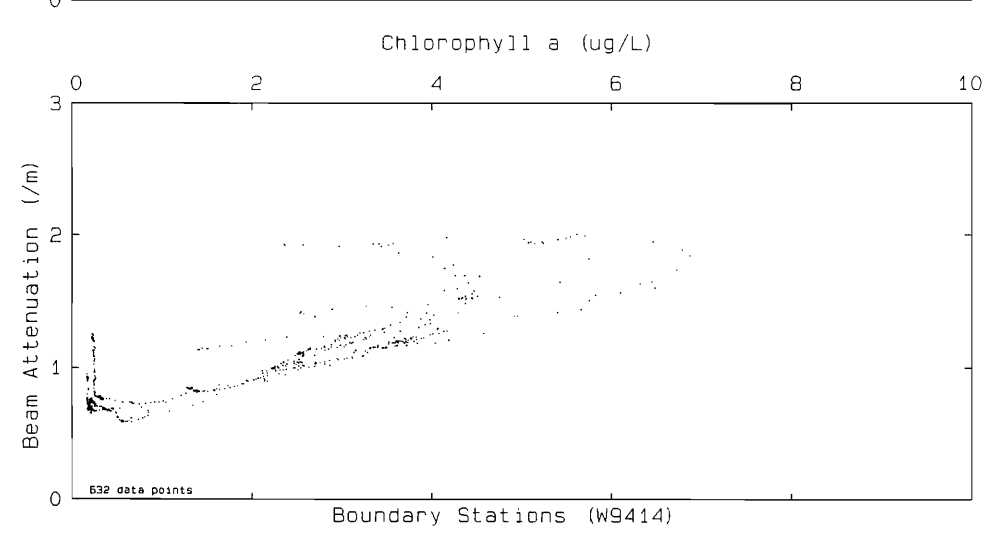
Note that for nearfield surveys, all plots are given as figures in the accompanying text report. For the combined survey, composite plots (all stations) are given as figures in the accompanying text report.

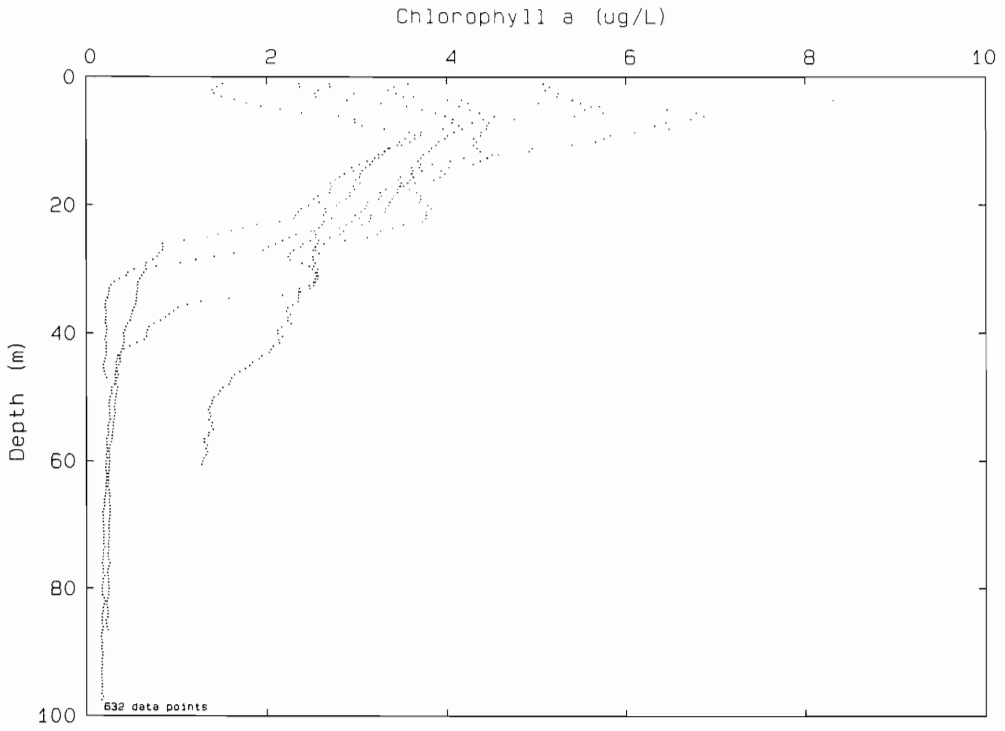
The plots for the October (W9414) survey given here separate stations by station groups as defined in the text report.

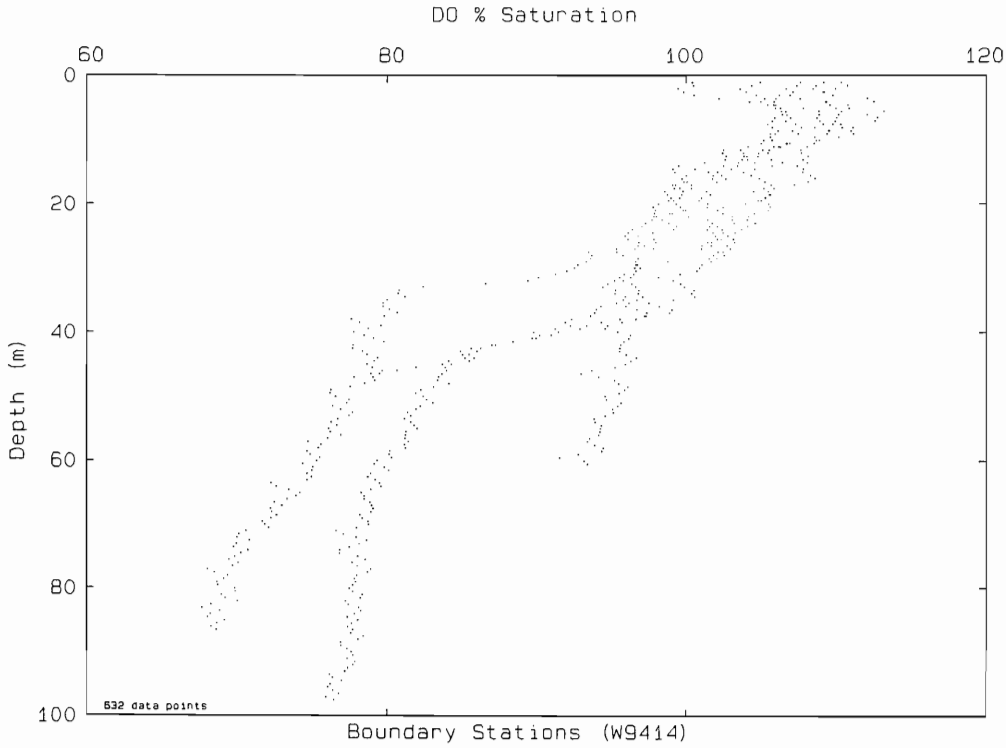
Data are as described in Appendix B and include the entire profile at each station.

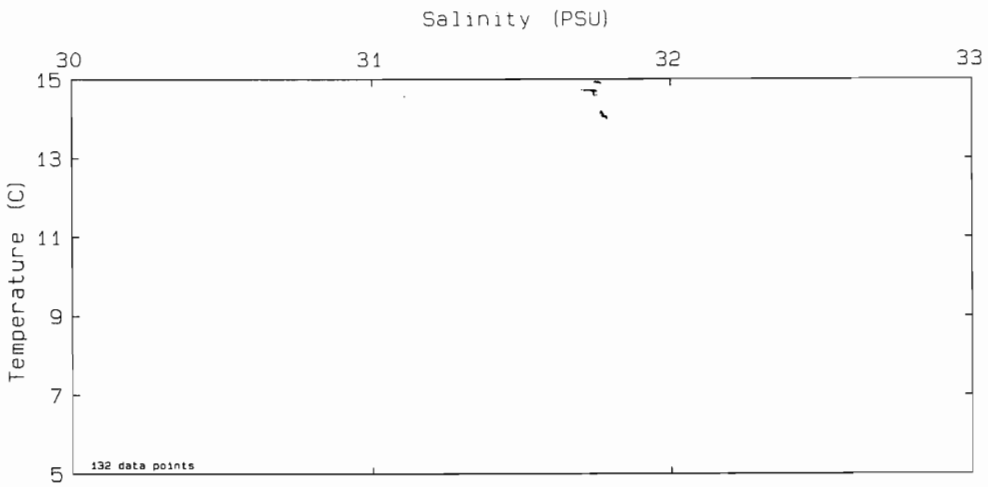

Salinity (PSU)
30
31
32
33
15
13
11
9
7
5
Temperature (C)
632 data points

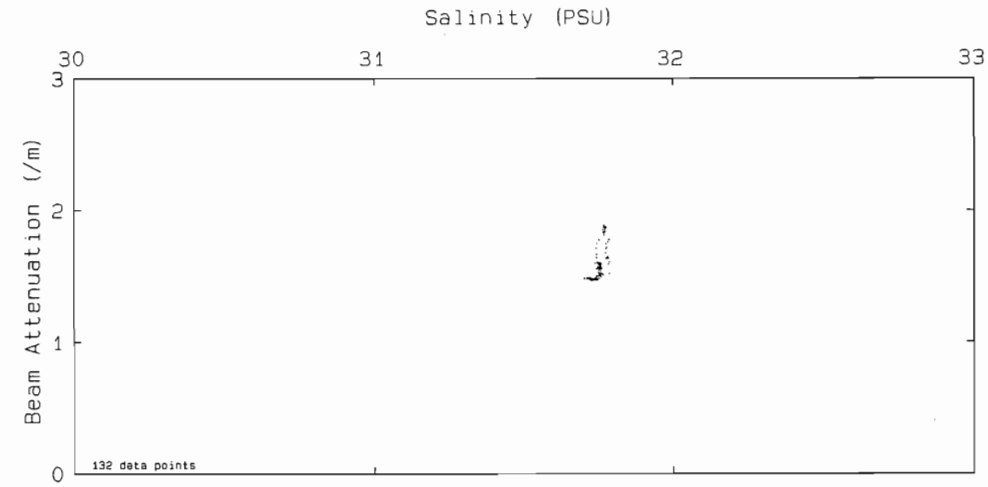

Salinity (PSU)
30
31
32
33
3
2
1
0
Beam Attenuation (/m)
632 data points

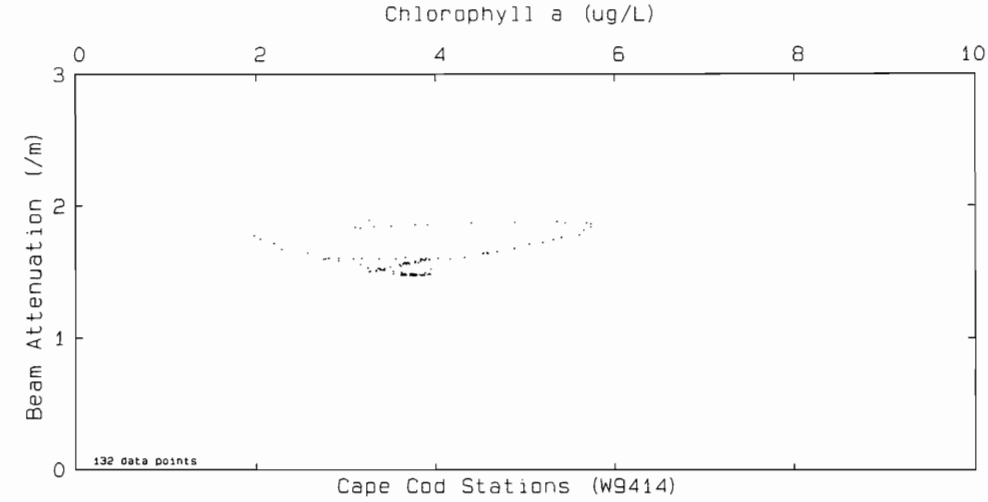

Chlorophyll a (ug/L)
0
2
4
6
8
10
3
2
1
0
Beam Attenuation (/m)
632 data points
Boundary Stations (W9414)

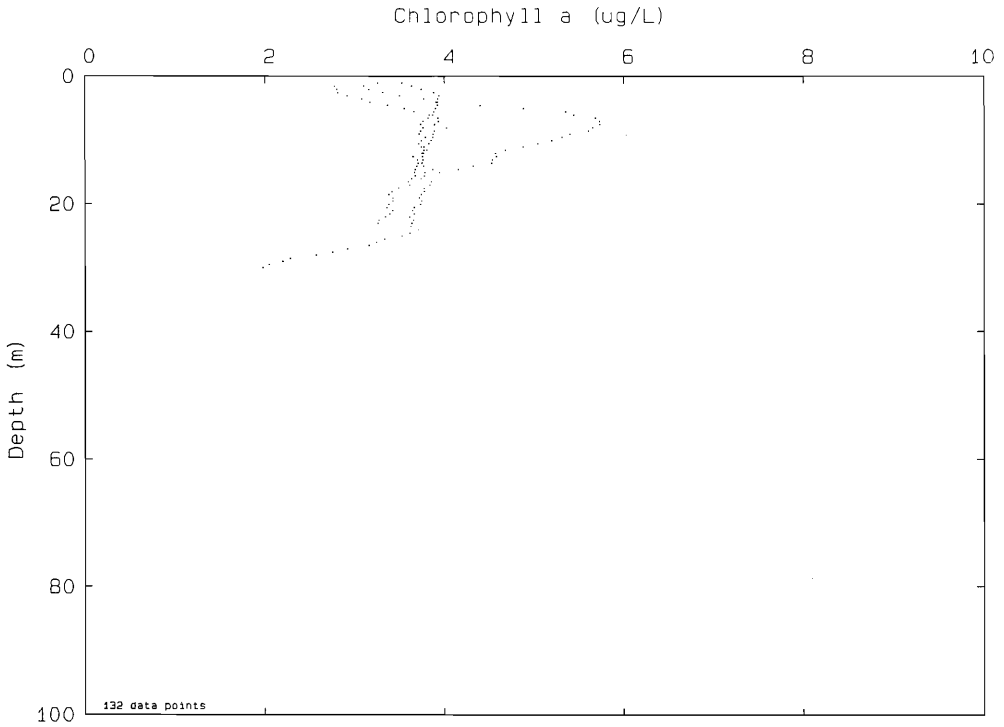

Chlorophyll a (ug/L)
0
2
4
6
8
10
0
20
40
60
80
100
Depth (m)
632 data points

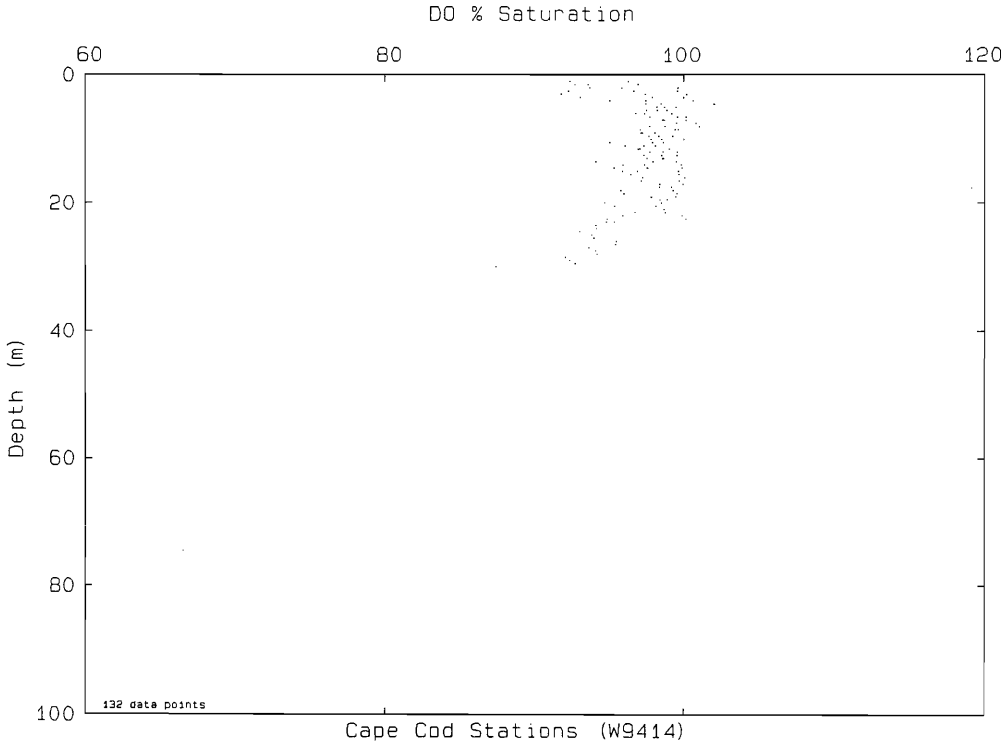

DO % Saturation
60
80
100
120
0
20
40
60
80
100
Depth (m)
632 data points
Boundary Stations (W9414)


Salinity (PSU)
30
31
32
33
15
13
11
9
7
5
Temperature (C)
132 data points


Salinity (PSU)
30
31
32
33
3
2
1
0
Beam Attenuation (/m)
132 data points


Chlorophyll a (ug/L)
0
2
4
6
8
10
3
2
1
0
Beam Attenuation (/m)
132 data points
Cape Cod Stations (W9414)





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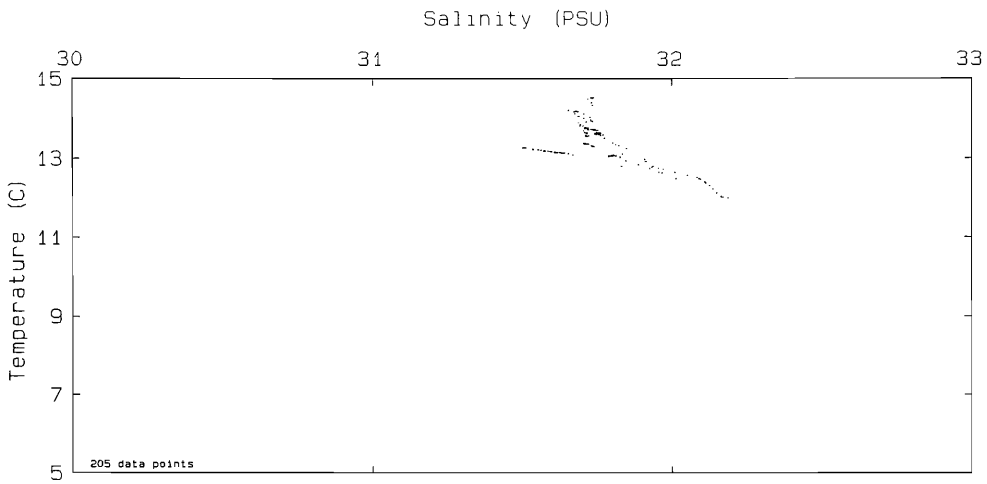
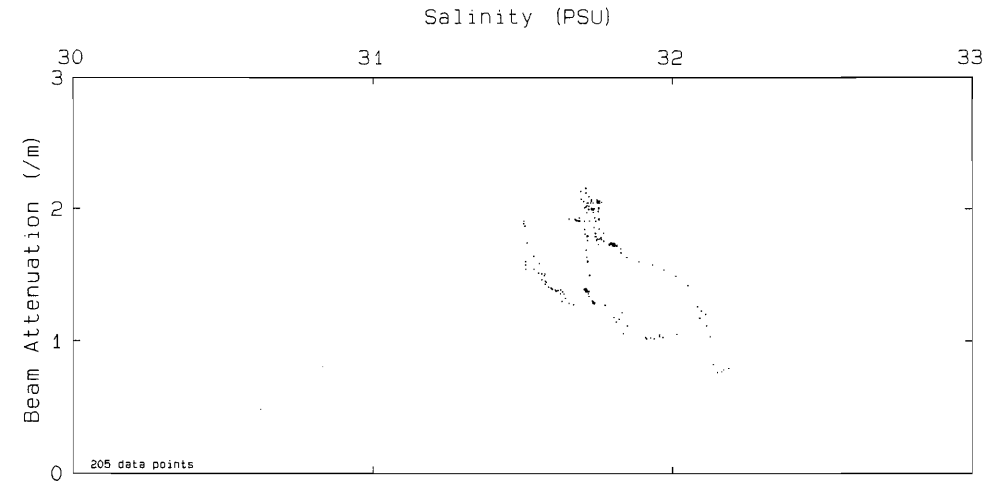
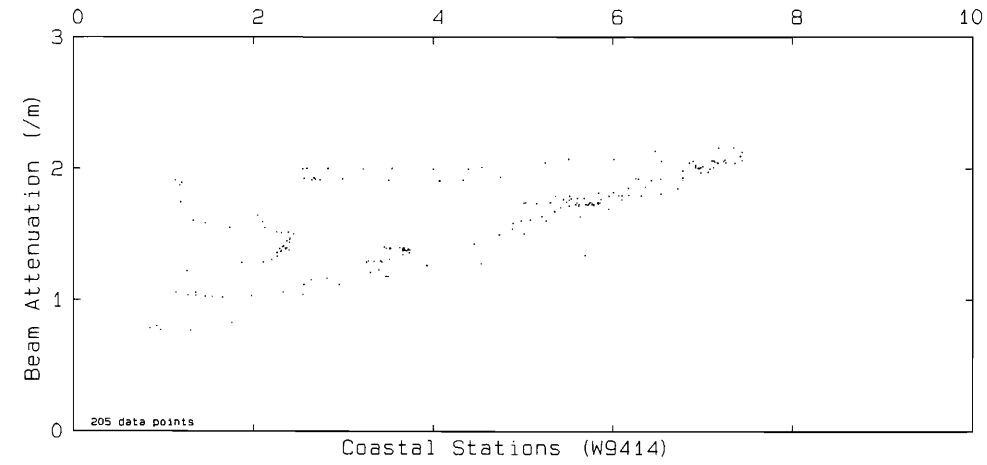
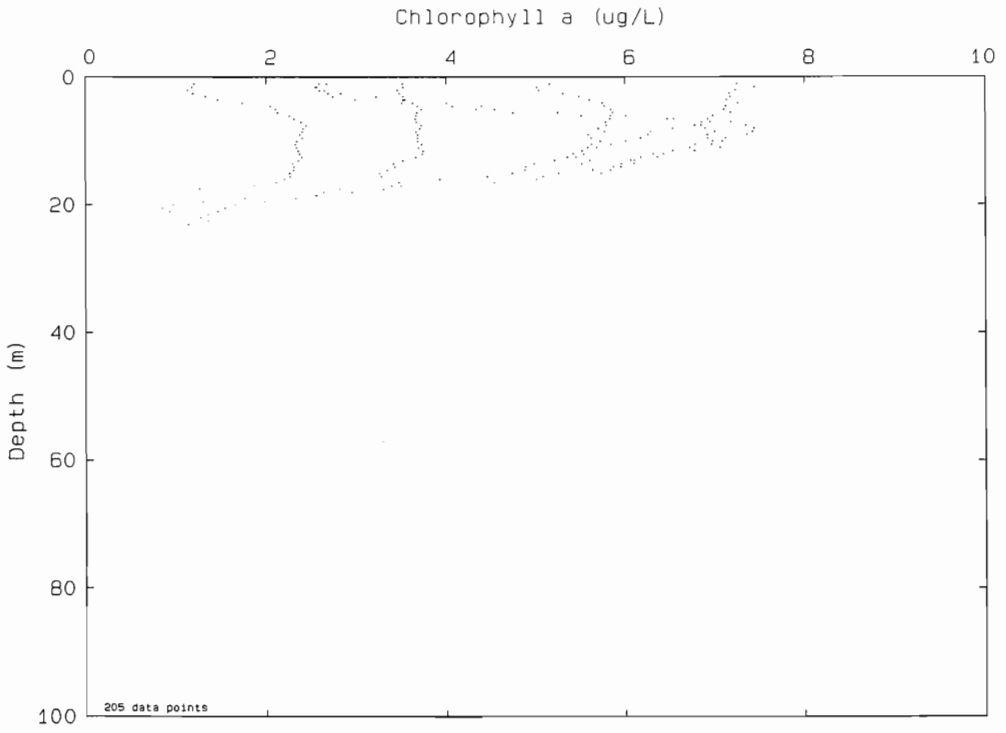
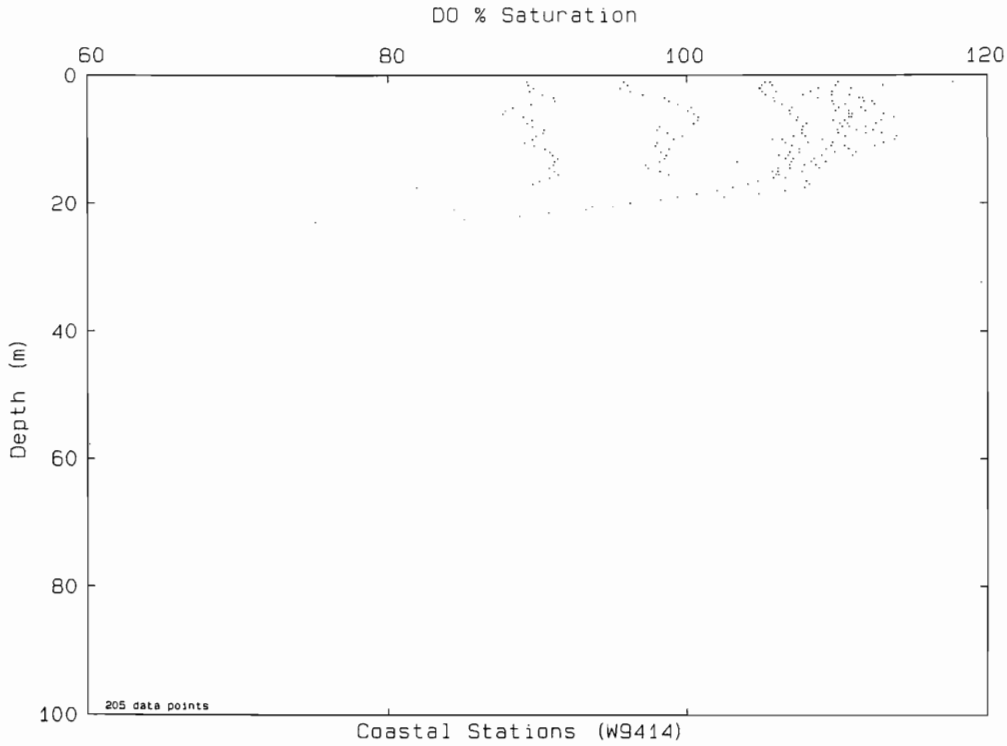
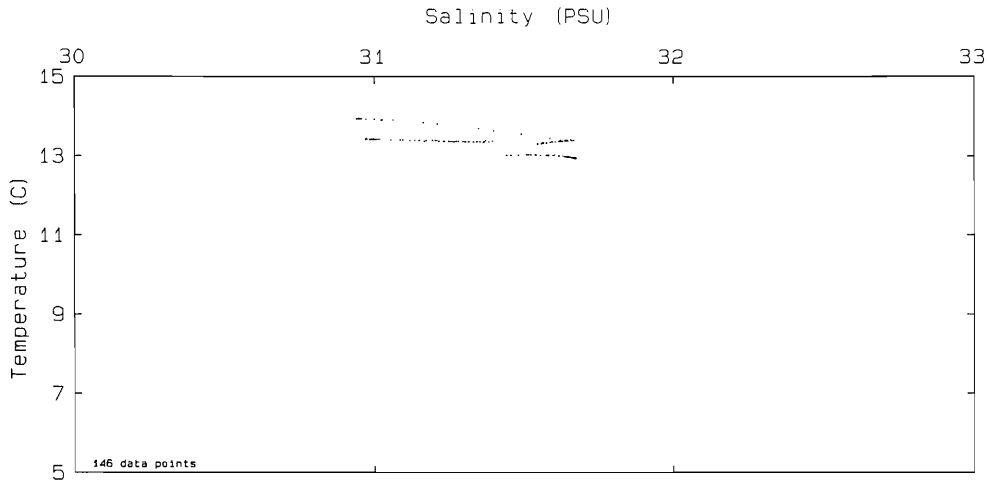

Salinity (PSU)
30
31
32
33
15
13
11
9
7
5
Temperature (C)
205 data points

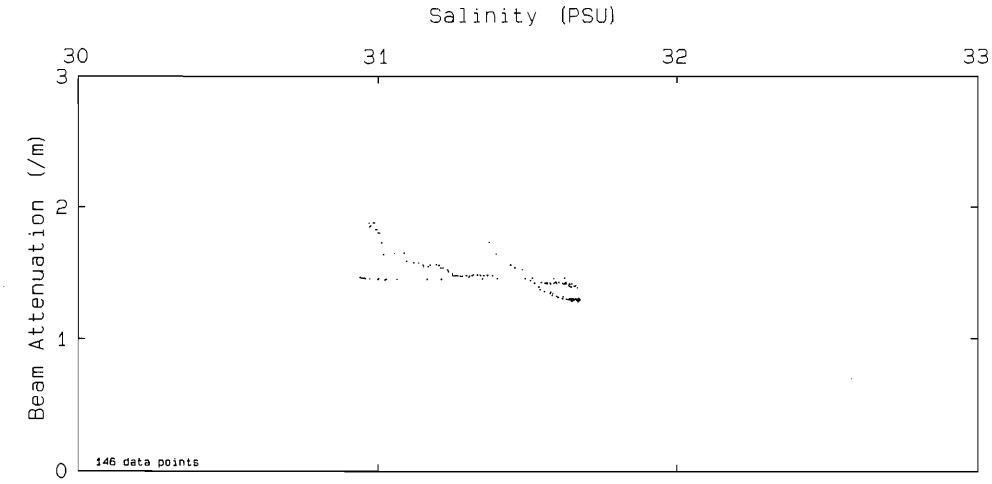

Salinity (PSU)
30
31
32
33
3
2
1
0
Beam Attenuation (/m)
205 data points

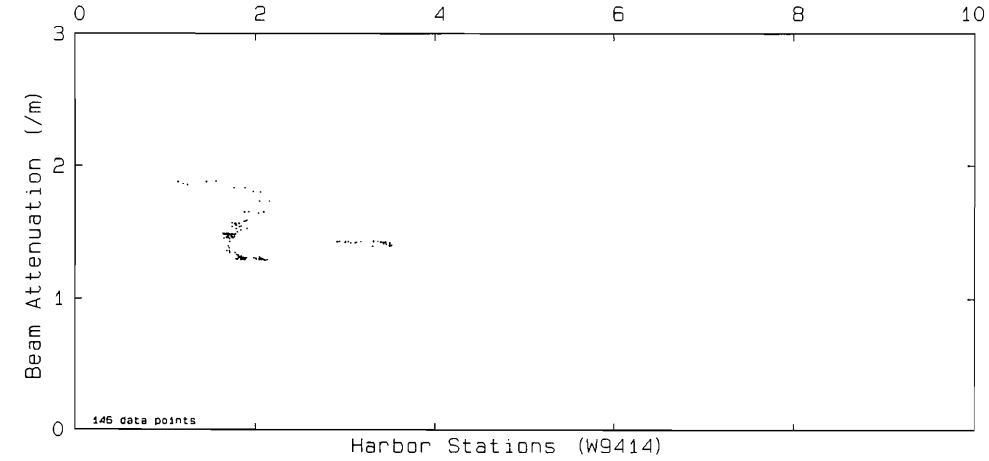

Chlorophyll a (ug/L)
0
2
4
6
8
10
3
2
1
0
Beam Attenuation (/m)
205 data points
Coastal Stations (W9414)

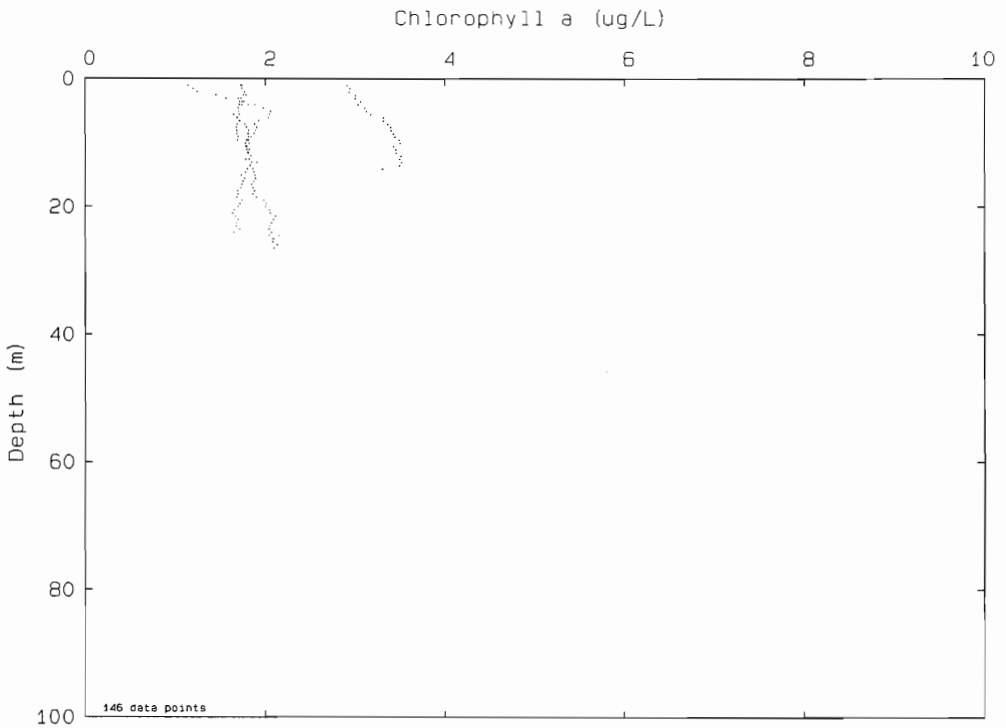

Chlorophyll a (ug/L)
0
2
4
6
8
10
0
20
40
60
80
100
Depth (m)
205 data points

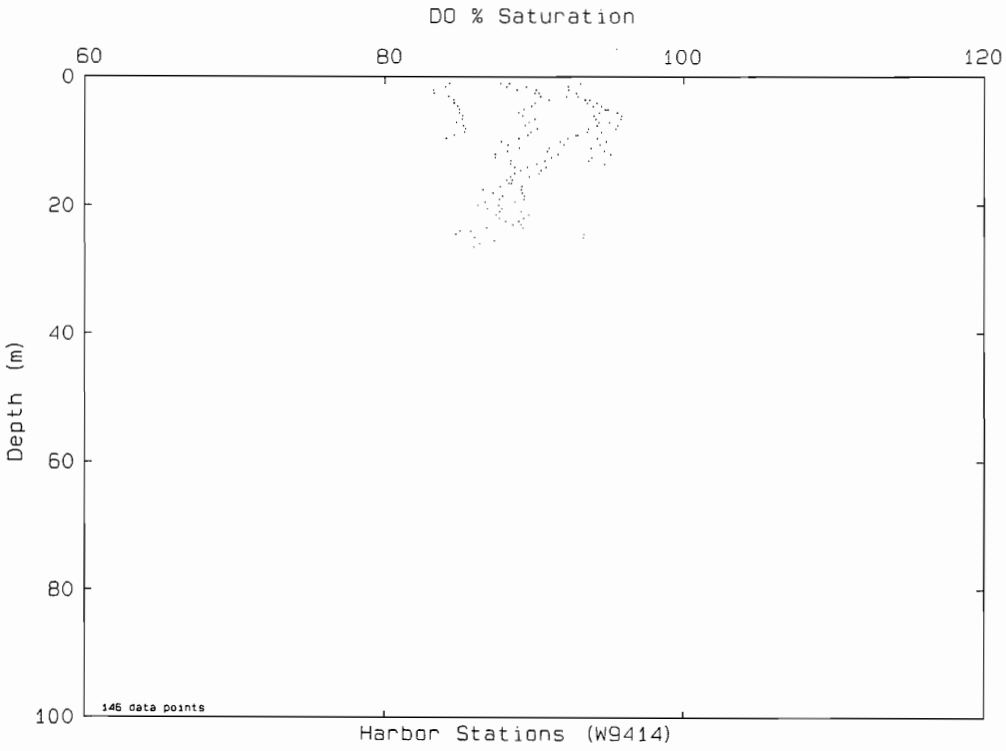

DO % Saturation
60
80
100
120
0
20
40
60
80
100
Depth (m)
205 data points
Coastal Stations (W9414)

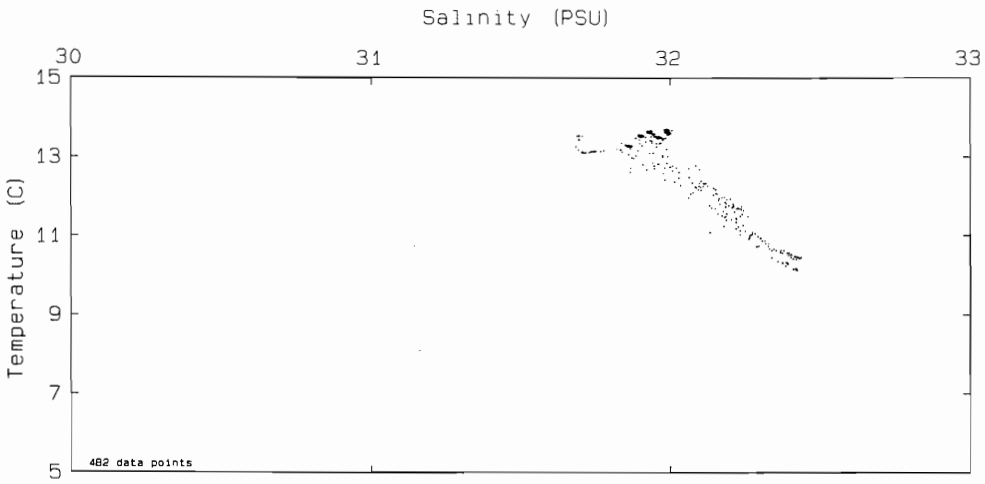

Salinity (PSU)
30
31
32
33
15
13
11
9
7
5
Temperature (C)
146 data points

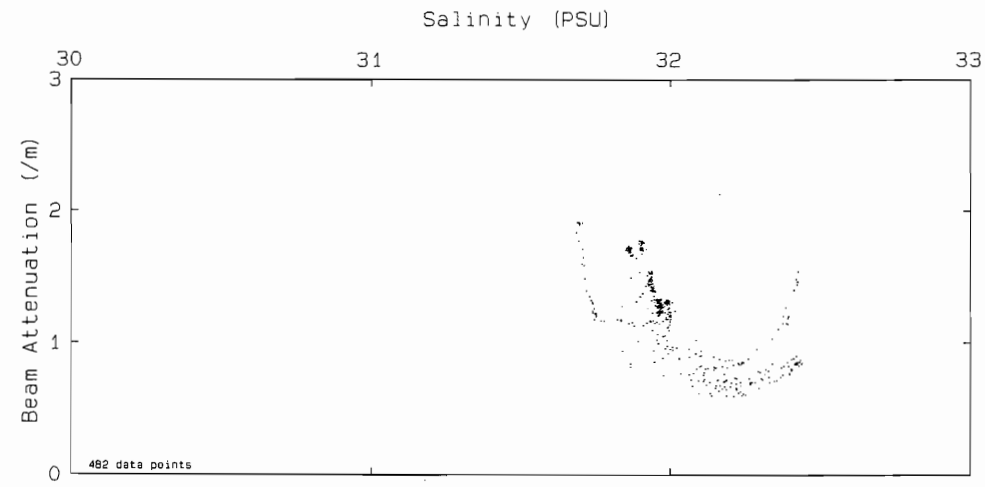

Salinity (PSU)
30
31
32
33
3
2
1
0
Beam Attenuation (/m)
146 data points

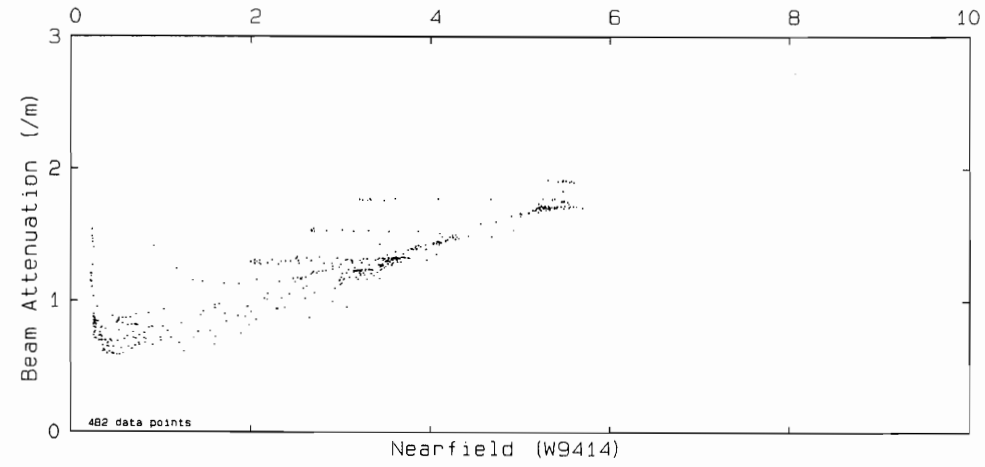

Chlorophyll a (ug/L)
0
2
4
6
8
10
3
2
1
0
Beam Attenuation (/m)
146 data points
Harbor Stations (W9414)

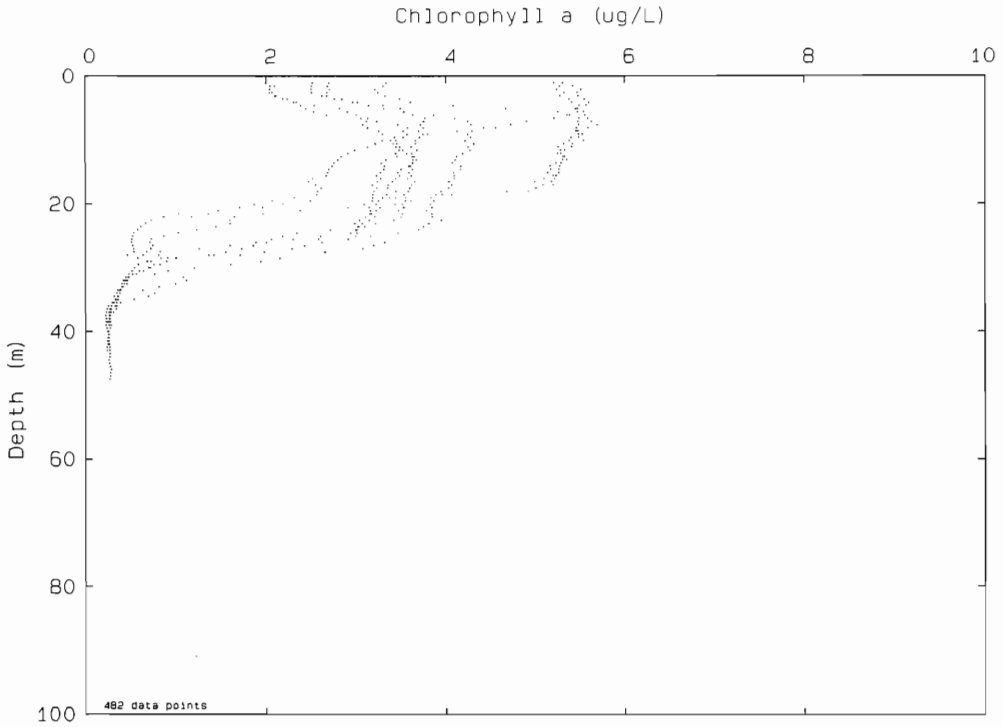

Chlorophyll a (ug/L)
0
2
4
6
8
10
0
20
40
60
80
100
Depth (m)
146 data points

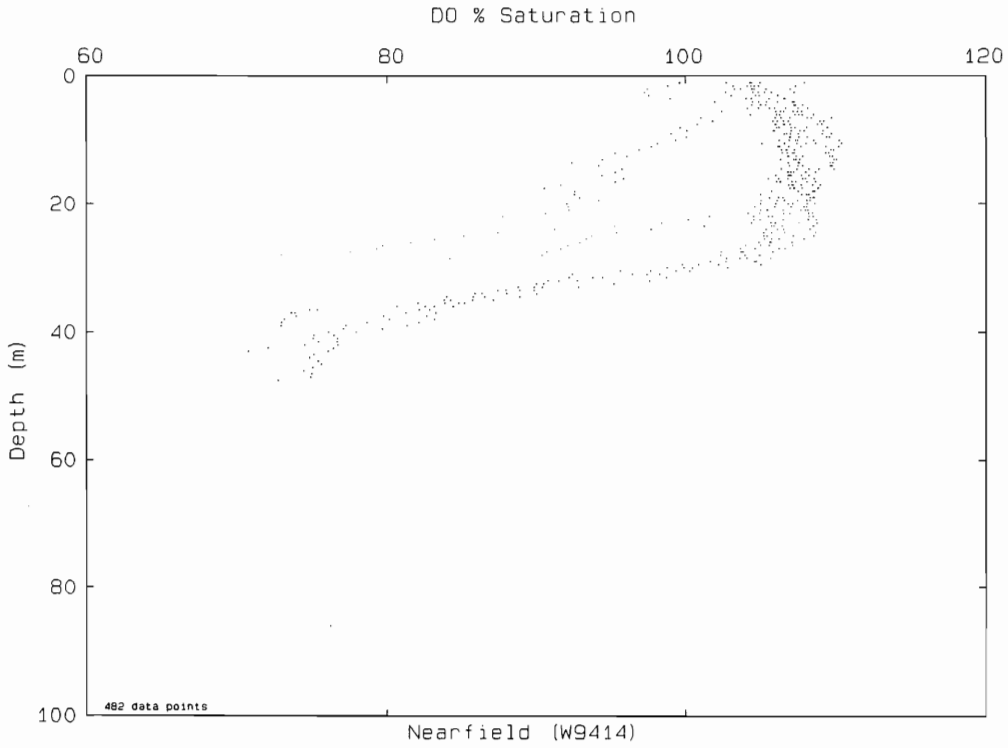

DO % Saturation
60
80
100
120
0
20
40
60
80
100
Depth (m)
146 data points
Harbor Stations (W9414)

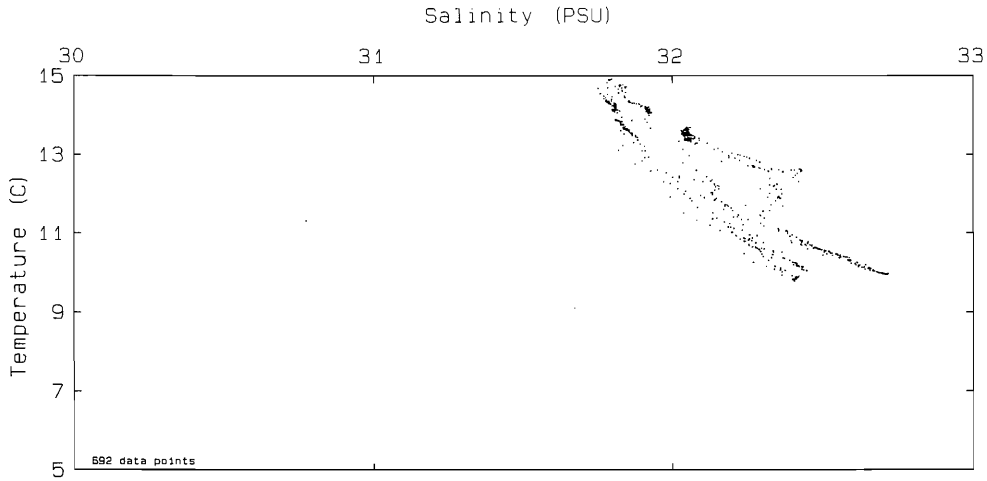

Salinity (PSU)
30
31
32
33
15
13
11
9
7
5
Temperature (C)
482 data points

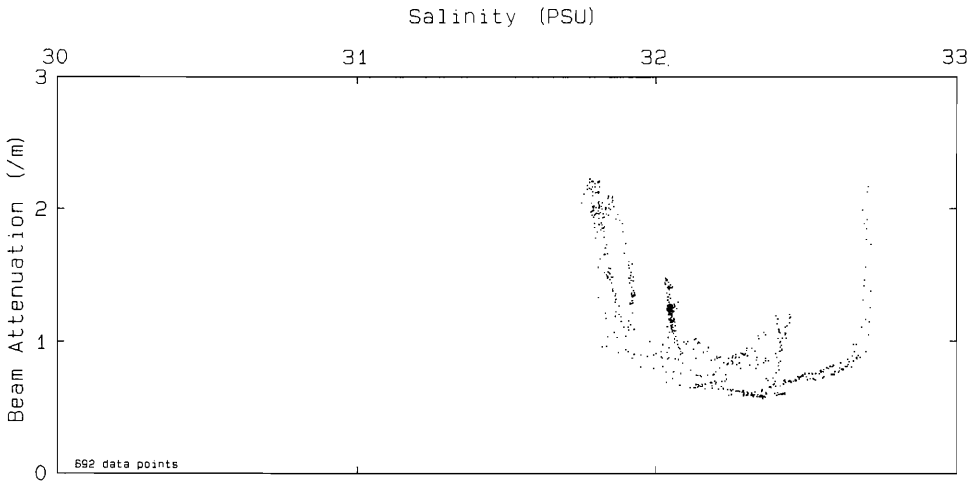

Salinity (PSU)
30
31
32
33
3
2
1
0
Beam Attenuation (/m)
482 data points

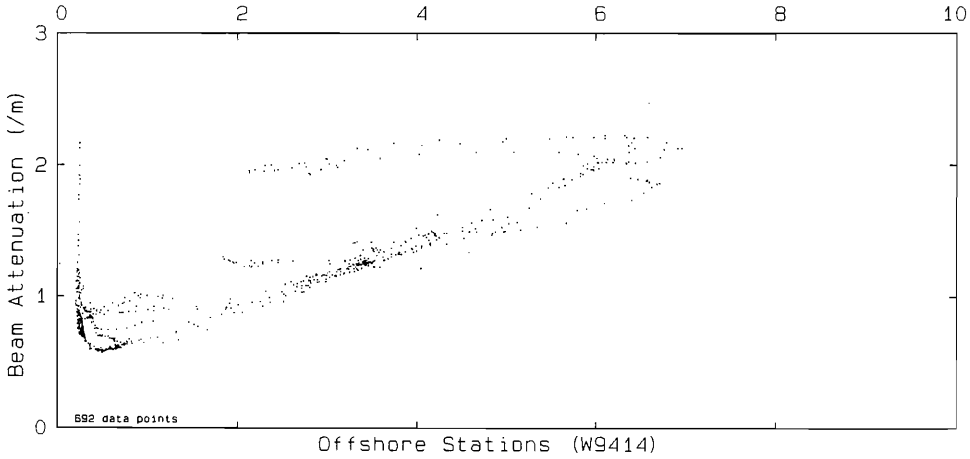

Chlorophyll a (ug/L)
0
2
4
6
8
10
3
2
1
0
Beam Attenuation (/m)
482 data points
Nearfield (W9414)


Chlorophyll a (ug/L)
0
2
4
6
8
10
0
20
40
60
80
100
Depth (m)
482 data points


DO % Saturation
60
80
100
120
0
20
40
60
80
100
Depth (m)
482 data points
Nearfield (W9414)







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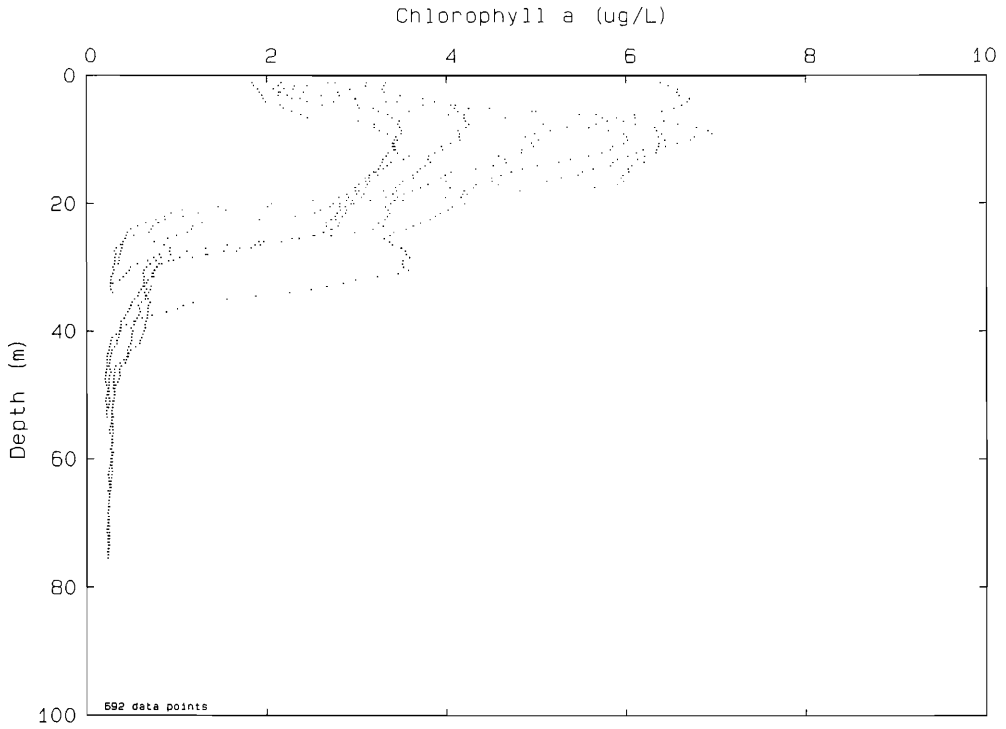
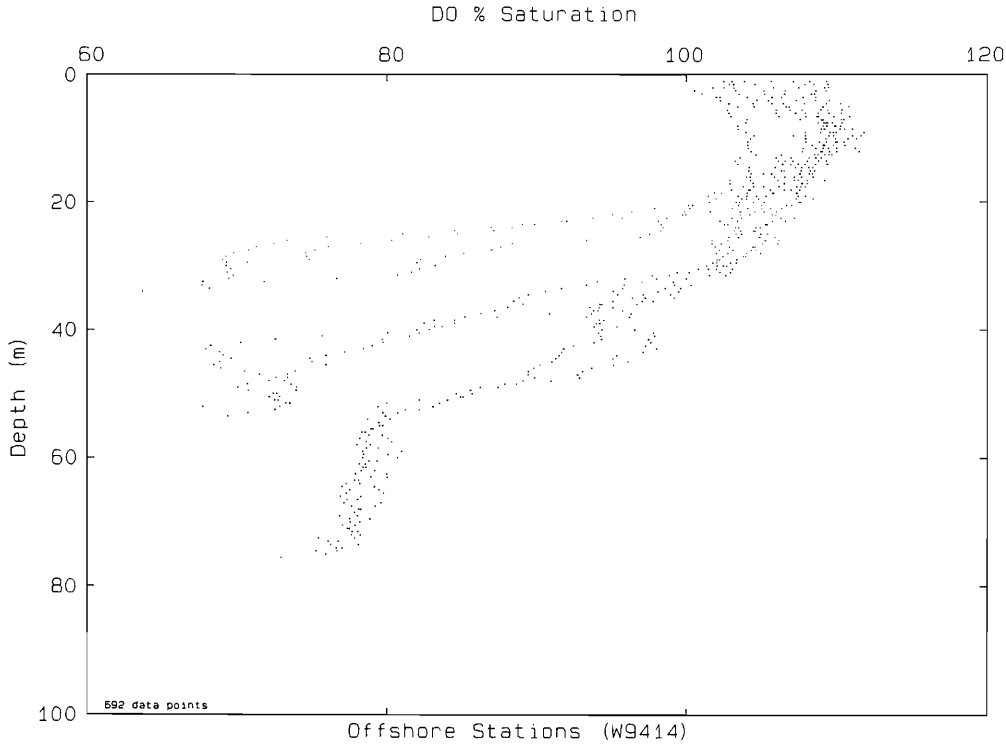

Chlorophyll a (ug/L)
0
2
4
6
8
10
0
20
40
60
80
100
Depth (m)
692 data points


DO % Saturation
60
80
100
120
0
20
40
60
80
100
Depth (m)
692 data points
Offshore Stations (W9414)

APPENDIX D

METABOLISM DATA AND PRODUCTIVITY—IRRADIANCE MODELING

Part 1

^{14}C Incubation Data

Table D1-1 includes data from the October (W9414) 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 October 1994.

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	F23P	11-OCT-94 0911	2.1	W94140041				5317083	25.78	5.75	
W9414	F23P	11-OCT-94 0911	2.1	W94140041	-3		8895.47				
W9414	F23P	11-OCT-94 0911	2.1	W94140041	-2		7543.31				
W9414	F23P	11-OCT-94 0911	2.1	W94140041	-1		1416.85				
W9414	F23P	11-OCT-94 0911	2.1	W94140041	1	907.5	38655.23				28.95
W9414	F23P	11-OCT-94 0911	2.1	W94140041	2	1287.5	40634.91				30.71
W9414	F23P	11-OCT-94 0911	2.1	W94140041	3	1776.5	32483.19				23.49
W9414	F23P	11-OCT-94 0911	2.1	W94140041	4	1078.5	41574.02				31.54
W9414	F23P	11-OCT-94 0911	2.1	W94140041	5	239.5	35861.23				26.48
W9414	F23P	11-OCT-94 0911	2.1	W94140041	6	292.99	37244.95				27.71
W9414	F23P	11-OCT-94 0911	2.1	W94140041	7	22.7	18007.3				10.67
W9414	F23P	11-OCT-94 0911	2.1	W94140041	8	24.21	15196.27				8.18
W9414	F23P	11-OCT-94 0911	2.1	W94140041	9	146	31478.53				22.6
W9414	F23P	11-OCT-94 0911	2.1	W94140041	10	35.4	12646.7				5.93
W9414	F23P	11-OCT-94 0911	2.1	W94140041	11	1.97	6324.72				0.33
W9414	F23P	11-OCT-94 0911	2.1	W94140041	12	2.88	10630.35				4.14
W9414	F23P	11-OCT-94 0910	5.5	W94140040				5317083	25.94	5.75	
W9414	F23P	11-OCT-94 0910	5.5	W94140040	-3		1810.67				
W9414	F23P	11-OCT-94 0910	5.5	W94140040	-2		3451.3				
W9414	F23P	11-OCT-94 0910	5.5	W94140040	-1		5660.73				
W9414	F23P	11-OCT-94 0910	5.5	W94140040	1	1275	32881.41				26.05
W9414	F23P	11-OCT-94 0910	5.5	W94140040	2	1714.5	30676.58				24.09
W9414	F23P	11-OCT-94 0910	5.5	W94140040	3	688.5	32364.6				25.59
W9414	F23P	11-OCT-94 0910	5.5	W94140040	4	284	28181.74				21.86
W9414	F23P	11-OCT-94 0910	5.5	W94140040	5	271	26891.21				20.71
W9414	F23P	11-OCT-94 0910	5.5	W94140040	6	254.1	28238.85				21.91
W9414	F23P	11-OCT-94 0910	5.5	W94140040	7	227	23784.03				17.95
W9414	F23P	11-OCT-94 0910	5.5	W94140040	8	329	30833.6				24.23
W9414	F23P	11-OCT-94 0910	5.5	W94140040	9	27.09	5539.97				1.69
W9414	F23P	11-OCT-94 0910	5.5	W94140040	10	11.05	3779.17				0.12
W9414	F23P	11-OCT-94 0910	5.5	W94140040	11	2.57	869				-2.47
W9414	F23P	11-OCT-94 0910	5.5	W94140040	12	0.91	943.18				-2.4
W9414	F23P	11-OCT-94 0909	11.2	W94140039				5317083	25.73	5.67	
W9414	F23P	11-OCT-94 0909	11.2	W94140039	-3		6813				
W9414	F23P	11-OCT-94 0909	11.2	W94140039	-2		3996.92				
W9414	F23P	11-OCT-94 0909	11.2	W94140039	-1		9488.91				
W9414	F23P	11-OCT-94 0909	11.2	W94140039	1	198.5	34352.72				24.72
W9414	F23P	11-OCT-94 0909	11.2	W94140039	2	361.5	32775.67				23.31
W9414	F23P	11-OCT-94 0909	11.2	W94140039	3	551.5	39699.69				29.51
W9414	F23P	11-OCT-94 0909	11.2	W94140039	4	791.5	33569.96				24.02

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

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	F23P	11-OCT-94 0909	11.2	W94140039	5	1221.5	35020.51				25.32
W9414	F23P	11-OCT-94 0909	11.2	W94140039	6	136.17	20081.17				11.93
W9414	F23P	11-OCT-94 0909	11.2	W94140039	7	14.33	4150.08				-2.34
W9414	F23P	11-OCT-94 0909	11.2	W94140039	8	9.8	4478.11				-2.05
W9414	F23P	11-OCT-94 0909	11.2	W94140039	9	203.9	24449.15				15.85
W9414	F23P	11-OCT-94 0909	11.2	W94140039	10	48.49	10702.25				3.53
W9414	F23P	11-OCT-94 0909	11.2	W94140039	11	1.4	3696.05				-2.75
W9414	F23P	11-OCT-94 0909	11.2	W94140039	12	1.62	7439.97				0.6
W9414	F23P	11-OCT-94 0908	19.6	W94140038				5317083	25.73	5.67	
W9414	F23P	11-OCT-94 0908	19.6	W94140038	-3		9465.67				
W9414	F23P	11-OCT-94 0908	19.6	W94140038	-2		8907.11				
W9414	F23P	11-OCT-94 0908	19.6	W94140038	-1		7412.29				
W9414	F23P	11-OCT-94 0908	19.6	W94140038	1	794	38058.77				26.4
W9414	F23P	11-OCT-94 0908	19.6	W94140038	2	1216.5	29018.68				18.3
W9414	F23P	11-OCT-94 0908	19.6	W94140038	3	733.5	31112.34				20.18
W9414	F23P	11-OCT-94 0908	19.6	W94140038	4	216	25980.49				15.58
W9414	F23P	11-OCT-94 0908	19.6	W94140038	5	205	26771.06				16.29
W9414	F23P	11-OCT-94 0908	19.6	W94140038	6	132.4	22787.58				12.72
W9414	F23P	11-OCT-94 0908	19.6	W94140038	7	103.2	18336.84				8.73
W9414	F23P	11-OCT-94 0908	19.6	W94140038	8	148	19745.08				9.99
W9414	F23P	11-OCT-94 0908	19.6	W94140038	9	14.65	3765.39				-4.33
W9414	F23P	11-OCT-94 0908	19.6	W94140038	10	7.22	3113.02				-4.91
W9414	F23P	11-OCT-94 0908	19.6	W94140038	11	1.72	1455.94				-6.4
W9414	F23P	11-OCT-94 0908	19.6	W94140038	12	0.75	1476.73				-6.38
W9414	F23P	12-OCT-94 0550	2.2	W94140184				5988313	25.98	6.09	
W9414	F23P	12-OCT-94 0550	2.2	W94140184	-3		1635.02				
W9414	F23P	12-OCT-94 0550	2.2	W94140184	-2		1305.22				
W9414	F23P	12-OCT-94 0550	2.2	W94140184	-1		1882.63				
W9414	F23P	12-OCT-94 0550	2.2	W94140184	1	1036.5	24847.98				17.38
W9414	F23P	12-OCT-94 0550	2.2	W94140184	2	1240	23568.38				16.43
W9414	F23P	12-OCT-94 0550	2.2	W94140184	3	1420.5	23073.76				16.06
W9414	F23P	12-OCT-94 0550	2.2	W94140184	4	2034	19732.28				13.56
W9414	F23P	12-OCT-94 0550	2.2	W94140184	5	298.5	19601.51				13.46
W9414	F23P	12-OCT-94 0550	2.2	W94140184	6	332.8	21235.39				14.68
W9414	F23P	12-OCT-94 0550	2.2	W94140184	7	27.5	4510.9				2.17
W9414	F23P	12-OCT-94 0550	2.2	W94140184	8	25.78	6196.92				3.43
W9414	F23P	12-OCT-94 0550	2.2	W94140184	9	165.87	20026.05				13.78
W9414	F23P	12-OCT-94 0550	2.2	W94140184	10	4.02	9414.03				5.84
W9414	F23P	12-OCT-94 0550	2.2	W94140184	11	3.27	1953.26				0.26
W9414	F23P	12-OCT-94 0550	2.2	W94140184	12	2.23	1517.06				-0.07

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

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	F23P	12-OCT-94 0548	7.2	W94140183				5988313	26.14	6.09	
W9414	F23P	12-OCT-94 0548	7.2	W94140183	-3		1282.04				
W9414	F23P	12-OCT-94 0548	7.2	W94140183	-2		858.65				
W9414	F23P	12-OCT-94 0548	7.2	W94140183	-1		903.7				
W9414	F23P	12-OCT-94 0548	7.2	W94140183	1	1491	27259.86				19.75
W9414	F23P	12-OCT-94 0548	7.2	W94140183	2	1930	22623.66				16.26
W9414	F23P	12-OCT-94 0548	7.2	W94140183	3	837	29002.37				21.06
W9414	F23P	12-OCT-94 0548	7.2	W94140183	4	351.5	24561.9				17.72
W9414	F23P	12-OCT-94 0548	7.2	W94140183	5	345.5	23774.05				17.13
W9414	F23P	12-OCT-94 0548	7.2	W94140183	6	288.6	22604.14				16.25
W9414	F23P	12-OCT-94 0548	7.2	W94140183	7	257.8	21795.74				15.64
W9414	F23P	12-OCT-94 0548	7.2	W94140183	8	373.7	25582.92				18.49
W9414	F23P	12-OCT-94 0548	7.2	W94140183	9	30.77	5451.73				3.34
W9414	F23P	12-OCT-94 0548	7.2	W94140183	10	12.55	3788.94				2.09
W9414	F23P	12-OCT-94 0548	7.2	W94140183	11	1.03	1619.74				0.46
W9414	F23P	12-OCT-94 0548	7.2	W94140183	12	2.92	2020.19				0.76
W9414	F23P	12-OCT-94 0548	13.3	W94140182				5988313	26.06	6.09	
W9414	F23P	12-OCT-94 0548	13.3	W94140182	-3		756.6				
W9414	F23P	12-OCT-94 0548	13.3	W94140182	-2		891.55				
W9414	F23P	12-OCT-94 0548	13.3	W94140182	-1		1150.58				
W9414	F23P	12-OCT-94 0548	13.3	W94140182	1	220	24406.88				17.61
W9414	F23P	12-OCT-94 0548	13.3	W94140182	2	1412.5	29329.42				21.31
W9414	F23P	12-OCT-94 0548	13.3	W94140182	3	887.5	33192.62				24.2
W9414	F23P	12-OCT-94 0548	13.3	W94140182	4	441.5	32258.8				23.5
W9414	F23P	12-OCT-94 0548	13.3	W94140182	5	637.5	32877.07				23.97
W9414	F23P	12-OCT-94 0548	13.3	W94140182	6	144.3	21982.5				15.79
W9414	F23P	12-OCT-94 0548	13.3	W94140182	7	51.38	7010.4				4.56
W9414	F23P	12-OCT-94 0548	13.3	W94140182	8	15.19	3185.61				1.69
W9414	F23P	12-OCT-94 0548	13.3	W94140182	9	10.39	2940.86				1.51
W9414	F23P	12-OCT-94 0548	13.3	W94140182	10	216.2	25190.81				18.2
W9414	F23P	12-OCT-94 0548	13.3	W94140182	11	1.71	967.7				0.03
W9414	F23P	12-OCT-94 0548	13.3	W94140182	12	1.48	1216.65				0.21
W9414	F23P	12-OCT-94 0547	19.9	W94140181				5988313	25.94	6.09	
W9414	F23P	12-OCT-94 0547	19.9	W94140181	-3		492.11				
W9414	F23P	12-OCT-94 0547	19.9	W94140181	-2		394.4				
W9414	F23P	12-OCT-94 0547	19.9	W94140181	-1		472.73				
W9414	F23P	12-OCT-94 0547	19.9	W94140181	1	912.5	33297.48				24.53
W9414	F23P	12-OCT-94 0547	19.9	W94140181	2	1355	31025.44				22.83
W9414	F23P	12-OCT-94 0547	19.9	W94140181	3	880	34839.84				25.68
W9414	F23P	12-OCT-94 0547	19.9	W94140181	4	240	27879.06				20.48

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

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	F23P	12-OCT-94 0547	19.9	W94140181	5	235	25268.61				18.53
W9414	F23P	12-OCT-94 0547	19.9	W94140181	6	140.3	23893.19				17.51
W9414	F23P	12-OCT-94 0547	19.9	W94140181	7	15.53	3500.58				2.28
W9414	F23P	12-OCT-94 0547	19.9	W94140181	8	7.65	2489.35				1.52
W9414	F23P	12-OCT-94 0547	19.9	W94140181	9	156.89	21104.06				15.42
W9414	F23P	12-OCT-94 0547	19.9	W94140181	10	109.4	15090.79				10.93
W9414	F23P	12-OCT-94 0547	19.9	W94140181	11	0.8	580.36				0.1
W9414	F23P	12-OCT-94 0547	19.9	W94140181	12	1.83	762.1				0.23
W9414	N16P	11-OCT-94 1155	1.9	W94140088				5317083	25.83	5.85	
W9414	N16P	11-OCT-94 1155	1.9	W94140088	-3		789.21				
W9414	N16P	11-OCT-94 1155	1.9	W94140088	-2		595.65				
W9414	N16P	11-OCT-94 1155	1.9	W94140088	-1		642.71				
W9414	N16P	11-OCT-94 1155	1.9	W94140088	1	185	22463.23				19
W9414	N16P	11-OCT-94 1155	1.9	W94140088	2	210	22690.62				19.2
W9414	N16P	11-OCT-94 1155	1.9	W94140088	3	599	27404.78				23.31
W9414	N16P	11-OCT-94 1155	1.9	W94140088	4	875	26049.49				22.12
W9414	N16P	11-OCT-94 1155	1.9	W94140088	5	1370	24458.41				20.74
W9414	N16P	11-OCT-94 1155	1.9	W94140088	6	189.5	22910.29				19.39
W9414	N16P	11-OCT-94 1155	1.9	W94140088	7	17.3	3678.05				2.62
W9414	N16P	11-OCT-94 1155	1.9	W94140088	8	272.9	23714.97				20.09
W9414	N16P	11-OCT-94 1155	1.9	W94140088	9	10.78	2206.95				1.34
W9414	N16P	11-OCT-94 1155	1.9	W94140088	10	52.3	10918.79				8.93
W9414	N16P	11-OCT-94 1155	1.9	W94140088	11	1.8	749.87				0.06
W9414	N16P	11-OCT-94 1155	1.9	W94140088	12	1.57	595.85				-0.07
W9414	N16P	11-OCT-94 1154	8.5	W94140087				5317083	25.51	5.85	
W9414	N16P	11-OCT-94 1154	8.5	W94140087	-3		380.76				
W9414	N16P	11-OCT-94 1154	8.5	W94140087	-2		916.63				
W9414	N16P	11-OCT-94 1154	8.5	W94140087	-1		792.3				
W9414	N16P	11-OCT-94 1154	8.5	W94140087	1	922.5	25911.04				21.71
W9414	N16P	11-OCT-94 1154	8.5	W94140087	2	1325	22884.5				19.11
W9414	N16P	11-OCT-94 1154	8.5	W94140087	3	855	27704.58				23.26
W9414	N16P	11-OCT-94 1154	8.5	W94140087	4	459.5	25759.35				21.58
W9414	N16P	11-OCT-94 1154	8.5	W94140087	5	215	25448.66				21.31
W9414	N16P	11-OCT-94 1154	8.5	W94140087	6	194.8	23309.35				19.47
W9414	N16P	11-OCT-94 1154	8.5	W94140087	7	184.3	23478.12				19.62
W9414	N16P	11-OCT-94 1154	8.5	W94140087	8	143.1	20262.89				16.85
W9414	N16P	11-OCT-94 1154	8.5	W94140087	9	22.24	4940.91				3.65
W9414	N16P	11-OCT-94 1154	8.5	W94140087	10	18.42	3639.76				2.53
W9414	N16P	11-OCT-94 1154	8.5	W94140087	11	1.8	1095.76				0.34
W9414	N16P	11-OCT-94 1154	8.5	W94140087	12	0.79	978.24				0.24

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

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	N16P	11-OCT-94 1152	19.6	W94140086				5317083	25.78	5.72	
W9414	N16P	11-OCT-94 1152	19.6	W94140086	-3		554.45				
W9414	N16P	11-OCT-94 1152	19.6	W94140086	-2		584.6				
W9414	N16P	11-OCT-94 1152	19.6	W94140086	-1		660.63				
W9414	N16P	11-OCT-94 1152	19.6	W94140086	1	725.5	24712.54				21.46
W9414	N16P	11-OCT-94 1152	19.6	W94140086	2	782.5	27060.38				23.55
W9414	N16P	11-OCT-94 1152	19.6	W94140086	3	1205	24344.99				21.13
W9414	N16P	11-OCT-94 1152	19.6	W94140086	4	1307.5	22699.26				19.67
W9414	N16P	11-OCT-94 1152	19.6	W94140086	5	107.5	18659.48				16.07
W9414	N16P	11-OCT-94 1152	19.6	W94140086	6	211.3	23483.6				20.37
W9414	N16P	11-OCT-94 1152	19.6	W94140086	7	29.09	6974.37				5.67
W9414	N16P	11-OCT-94 1152	19.6	W94140086	8	22	5177.51				4.07
W9414	N16P	11-OCT-94 1152	19.6	W94140086	9	158.75	17426.47				14.98
W9414	N16P	11-OCT-94 1152	19.6	W94140086	10	21.14	5128.42				4.03
W9414	N16P	11-OCT-94 1152	19.6	W94140086	11	1.34	913.69				0.28
W9414	N16P	11-OCT-94 1152	19.6	W94140086	12	1.96	660.08				0.05
W9414	N16P	11-OCT-94 1150	29	W94140085				5317083	26.53	5.72	
W9414	N16P	11-OCT-94 1150	29	W94140085	-3		607.5				
W9414	N16P	11-OCT-94 1150	29	W94140085	-2		552.69				
W9414	N16P	11-OCT-94 1150	29	W94140085	-1		556.01				
W9414	N16P	11-OCT-94 1150	29	W94140085	1	1092.5	2253.8				1.54
W9414	N16P	11-OCT-94 1150	29	W94140085	2	1283.5	1687.81				1.02
W9414	N16P	11-OCT-94 1150	29	W94140085	3	491.5	3119.59				2.33
W9414	N16P	11-OCT-94 1150	29	W94140085	4	130.5	3030.91				2.25
W9414	N16P	11-OCT-94 1150	29	W94140085	5	132	2754.4				2
W9414	N16P	11-OCT-94 1150	29	W94140085	6	164	3048.83				2.27
W9414	N16P	11-OCT-94 1150	29	W94140085	7	220.7	3489.42				2.67
W9414	N16P	11-OCT-94 1150	29	W94140085	8	263.1	3208.13				2.41
W9414	N16P	11-OCT-94 1150	29	W94140085	9	18.21	1106.22				0.49
W9414	N16P	11-OCT-94 1150	29	W94140085	10	3.79	734.43				0.15
W9414	N16P	11-OCT-94 1150	29	W94140085	11	1.71	449.99				-0.11
W9414	N16P	11-OCT-94 1150	29	W94140085	12	0.61	525.01				-0.04
W9414	N16P	12-OCT-94 0908	1.9	W94140232				5988313	25.65	6.16	
W9414	N16P	12-OCT-94 0908	1.9	W94140232	-3		757.04				
W9414	N16P	12-OCT-94 0908	1.9	W94140232	-2		330.83				
W9414	N16P	12-OCT-94 0908	1.9	W94140232	-1		360.37				
W9414	N16P	12-OCT-94 0908	1.9	W94140232	1	229.5	26682.42				19.13
W9414	N16P	12-OCT-94 0908	1.9	W94140232	2	235.5	28348.57				20.35
W9414	N16P	12-OCT-94 0908	1.9	W94140232	3	1075	30826.09				22.15
W9414	N16P	12-OCT-94 0908	1.9	W94140232	4	1713.5	20948.65				14.94

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

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	N16P	12-OCT-94 0908	1.9	W94140232	5	943	35112.5				25.28
W9414	N16P	12-OCT-94 0908	1.9	W94140232	6	232.6	27517.45				19.74
W9414	N16P	12-OCT-94 0908	1.9	W94140232	7	21.23	4739.81				3.11
W9414	N16P	12-OCT-94 0908	1.9	W94140232	8	13.24	3488.59				2.19
W9414	N16P	12-OCT-94 0908	1.9	W94140232	9	335	28693.78				20.6
W9414	N16P	12-OCT-94 0908	1.9	W94140232	10	64.25	12007				8.41
W9414	N16P	12-OCT-94 0908	1.9	W94140232	11	2.21	1172.21				0.5
W9414	N16P	12-OCT-94 0908	1.9	W94140232	12	1.93	1078.22				0.43
W9414	N16P	12-OCT-94 0907	6	W94140231				5988313	25.56	6.16	
W9414	N16P	12-OCT-94 0907	6	W94140231	-3		632.81				
W9414	N16P	12-OCT-94 0907	6	W94140231	-2		781.39				
W9414	N16P	12-OCT-94 0907	6	W94140231	-1		523.05				
W9414	N16P	12-OCT-94 0907	6	W94140231	1	1070	27871.23				19.81
W9414	N16P	12-OCT-94 0907	6	W94140231	2	1656.5	24357.64				17.25
W9414	N16P	12-OCT-94 0907	6	W94140231	3	1047.5	25920.37				18.39
W9414	N16P	12-OCT-94 0907	6	W94140231	4	554	21694.67				15.31
W9414	N16P	12-OCT-94 0907	6	W94140231	5	252.5	24105.19				17.07
W9414	N16P	12-OCT-94 0907	6	W94140231	6	239.2	23774.63				16.83
W9414	N16P	12-OCT-94 0907	6	W94140231	7	226.2	24248.3				17.17
W9414	N16P	12-OCT-94 0907	6	W94140231	8	175.6	21941.97				15.49
W9414	N16P	12-OCT-94 0907	6	W94140231	9	27.3	5254.51				3.35
W9414	N16P	12-OCT-94 0907	6	W94140231	10	22.61	3818.06				2.31
W9414	N16P	12-OCT-94 0907	6	W94140231	11	2.21	694.62				0.04
W9414	N16P	12-OCT-94 0907	6	W94140231	12	0.97	712.42				0.05
W9414	N16P	12-OCT-94 0907	17.5	W94140230				5988313	25.58	6.16	
W9414	N16P	12-OCT-94 0907	17.5	W94140230	-3		1224.01				
W9414	N16P	12-OCT-94 0907	17.5	W94140230	-2		834.88				
W9414	N16P	12-OCT-94 0907	17.5	W94140230	-1		580.09				
W9414	N16P	12-OCT-94 0907	17.5	W94140230	1	1349.5	29299.32				20.69
W9414	N16P	12-OCT-94 0907	17.5	W94140230	2	1450	28815.34				20.34
W9414	N16P	12-OCT-94 0907	17.5	W94140230	3	567.5	31769.37				22.49
W9414	N16P	12-OCT-94 0907	17.5	W94140230	4	168.5	26440.13				18.61
W9414	N16P	12-OCT-94 0907	17.5	W94140230	5	148					
W9414	N16P	12-OCT-94 0907	17.5	W94140230	6	193.3	29251.47				20.66
W9414	N16P	12-OCT-94 0907	17.5	W94140230	7	310.1	27308.45				19.24
W9414	N16P	12-OCT-94 0907	17.5	W94140230	8	260.2	25885.22				18.21
W9414	N16P	12-OCT-94 0907	17.5	W94140230	9	21.46	6361.29				3.99
W9414	N16P	12-OCT-94 0907	17.5	W94140230	10	4.47	2176.71				0.94
W9414	N16P	12-OCT-94 0907	17.5	W94140230	11	2.02	1462.91				0.42
W9414	N16P	12-OCT-94 0907	17.5	W94140230	12	0.72	1075.01				0.14

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

Event	Station	Date/Time	Depth (M)	Sample Id	Rep	Light uEm/m2/sec	C14 (DPM)	Stock (DPM)	Dissolved Inorganic Carbon (mg C/L)	Length of Incubation (hours)	Production (Dark corrected) (mg C/m3/hr)
W9414	N16P	12-OCT-94 0906	29.1	W94140229				5988313	26.74	6.16	
W9414	N16P	12-OCT-94 0906	29.1	W94140229	-3		685.84				
W9414	N16P	12-OCT-94 0906	29.1	W94140229	-2		1340.41				
W9414	N16P	12-OCT-94 0906	29.1	W94140229	-1		513.06				
W9414	N16P	12-OCT-94 0906	29.1	W94140229	1	865	3256.31				1.83
W9414	N16P	12-OCT-94 0906	29.1	W94140229	2	955.5	2597.01				1.33
W9414	N16P	12-OCT-94 0906	29.1	W94140229	3	1363	3987.31				2.39
W9414	N16P	12-OCT-94 0906	29.1	W94140229	4	1599.5	10454.13				7.31
W9414	N16P	12-OCT-94 0906	29.1	W94140229	5	110.5	7184.71				4.82
W9414	N16P	12-OCT-94 0906	29.1	W94140229	6	249.1	3036.82				1.67
W9414	N16P	12-OCT-94 0906	29.1	W94140229	7	187.1	2433.27				1.21
W9414	N16P	12-OCT-94 0906	29.1	W94140229	8	24.92	1859.71				0.77
W9414	N16P	12-OCT-94 0906	29.1	W94140229	9	25.93	1903.55				0.8
W9414	N16P	12-OCT-94 0906	29.1	W94140229	10	34.28	743.95				-0.08
W9414	N16P	12-OCT-94 0906	29.1	W94140229	11	1.58	1507.12				0.5
W9414	N16P	12-OCT-94 0906	29.1	W94140229	12	2.3	992.59				0.11

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 W9414. 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
10	SUR	surface
8	MSUR	mid-surface
6	MDEP	mid-depth
4	MBOT	mid-bottom

Table D2-1. Basis for excluding dark bottle outliers using the Dixon Criteria for high values (X_N) and low values (X_1) [Survey W9414]. Note that COL1, COL2, and COL3 are replicate dark bottle values (dpm).

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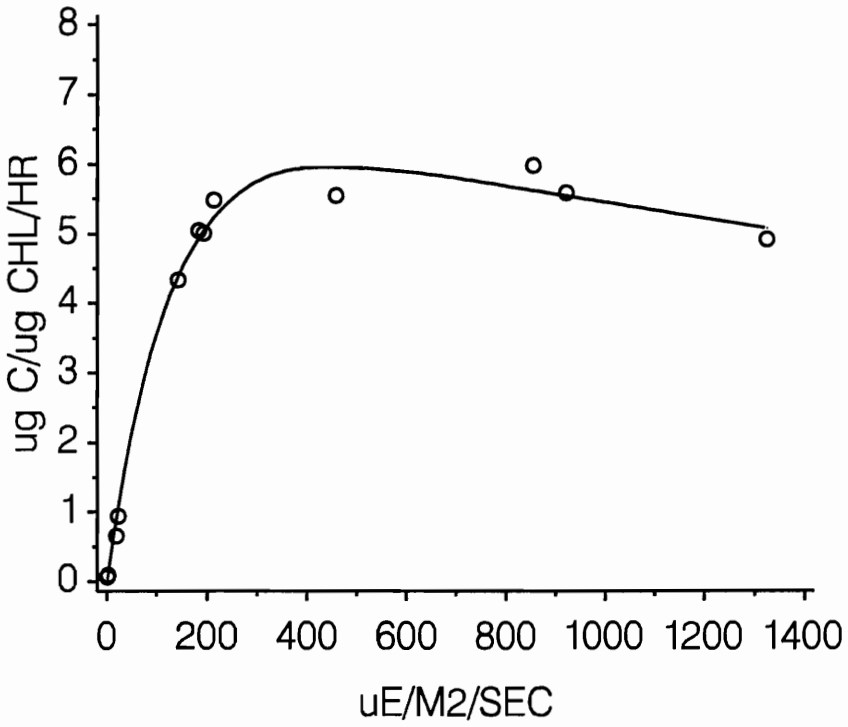
OBS	STA	DEPTH	DATE	_NAME_	COL1	COL2	COL3	X_N	X_1
1	F23P	4	10/11/94	DARKDPM	7412.29	8907.11	9465.67	0.27202	0.72798
2	F23P	4	10/12/94	DARKDPM	394.40	472.73	492.11	0.19839	0.80161
3	F23P	6	10/11/94	DARKDPM	3996.92	6813.00	9488.91	0.48724	0.51276
4	F23P	6	10/12/94	DARKDPM	756.60	891.55	1150.58	0.65747	0.34253
5	F23P	8	10/11/94	DARKDPM	1810.67	3451.30	5660.73	0.57387	0.42613
6	F23P	8	10/12/94	DARKDPM	858.65	903.70	1282.04	0.89360	0.10640
7	F23P	10	10/11/94	DARKDPM	1416.85	7543.31	8895.47	0.18080	0.81920
8	F23P	10	10/12/94	DARKDPM	1305.22	1635.02	1882.63	0.42883	0.57117
9	N16P	4	10/11/94	DARKDPM	552.69	556.01	607.50	0.93948	0.06052
10	N16P	4	10/12/94	DARKDPM	513.06	685.84	1340.41	0.79117	0.20883
11	N16P	6	10/11/94	DARKDPM	554.45	584.60	660.63	0.71601	0.28399
12	N16P	6	10/12/94	DARKDPM	580.09	834.88	1224.01	0.60431	0.39569
13	N16P	8	10/11/94	DARKDPM	380.76	792.30	916.63	0.23200	0.76800
14	N16P	8	10/12/94	DARKDPM	523.05	632.81	781.39	0.57513	0.42487
15	N16P	10	10/11/94	DARKDPM	595.65	642.71	789.21	0.75685	0.24315
16	N16P	10	10/12/94	DARKDPM	330.83	360.37	757.04	0.93069	0.06931

Table D2-2. P-I modeling using the Platt *et al.* (1980) model: October 11, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9414 OCTOBER 11, 1994
MODEL PLATT ET AL. 1980

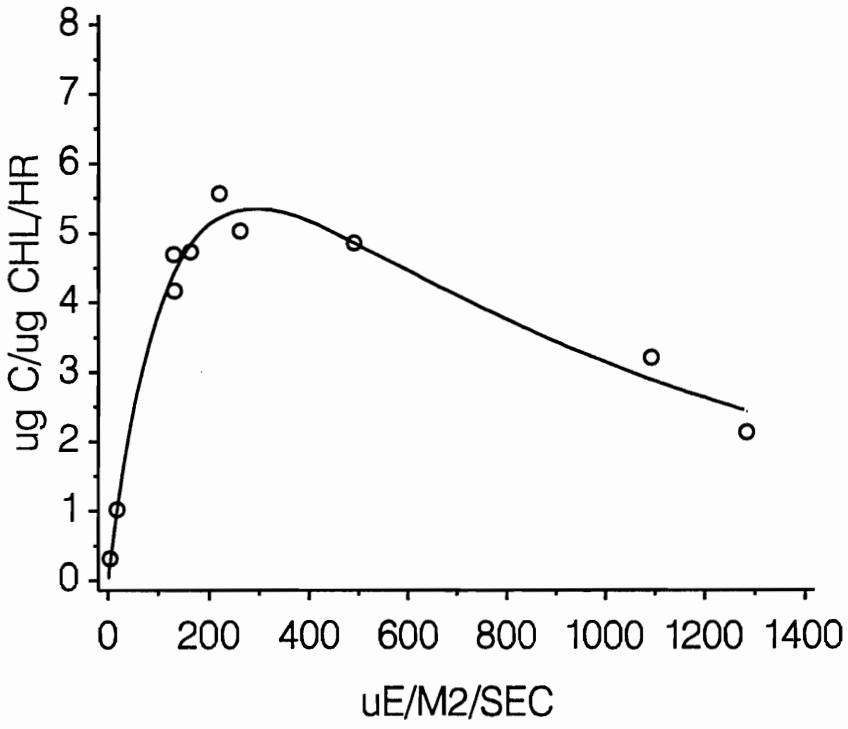
STA	DEPTH	P_SB	ALPHA	BETA	R_2
F23P	SUR	.	.	.	.
F23P	MSUR	.	.	.	.
F23P	MDEP	.	.	.	.
F23P	MBOT	.	.	.	.
N16P	SUR	.	.	.	.
N16P	MSUR	6.83(0.41)	0.052(0.001)	0.002(0.0006)	0.99
N16P	MDEP	.	.	.	.
N16P	MBOT	7.77(0.62)	0.061(0.005)	0.007(0.0010)	0.99

STATION N16P MID – SURFACE



PLATT ET AL, 1980 MODEL
SURVEY W9414 OCTOBER 11, 1994

STATION N16P MID – BOTTOM



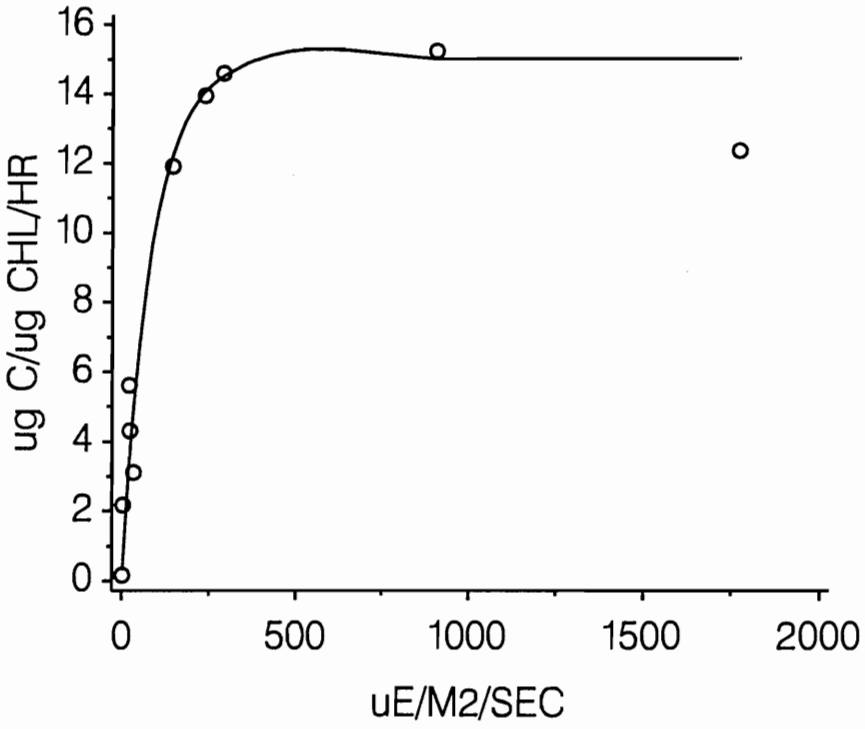
PLATT ET AL, 1980 MODEL
SURVEY W9414 OCTOBER 11, 1994

Table D2-3. P-I modeling using the Webb *et al.* (1974) model: October 11, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9414 OCTOBER 11, 1994
MODEL WEBB ET AL. 1974

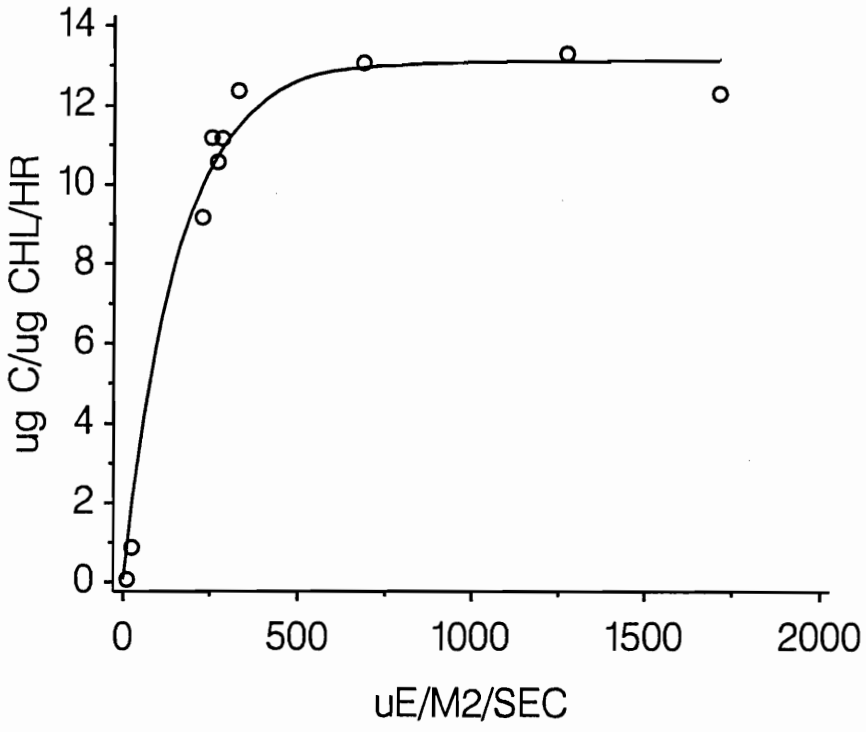
STATION	DEPTH	PMAX		ALPHA		R_2
F23P	SUR	15.03	(0.08)	0.172	(0.030)	0.95
F23P	MSUR	13.15	(0.56)	0.082	(0.010)	0.99
F23P	MDEP	13.37	(0.65)	0.075	(0.016)	0.94
F23P	MBOT	11.23	(1.46)	0.059	(0.016)	0.95
N16P	SUR	6.19	(0.00)	0.061	(0.000)	1.00
N16P	MSUR	.	.	.	.	.
N16P	MDEP	5.70	(0.04)	0.060	(0.005)	0.98
N16P	MBOT	.	.	.	.	.

STATION F23P SURFACE



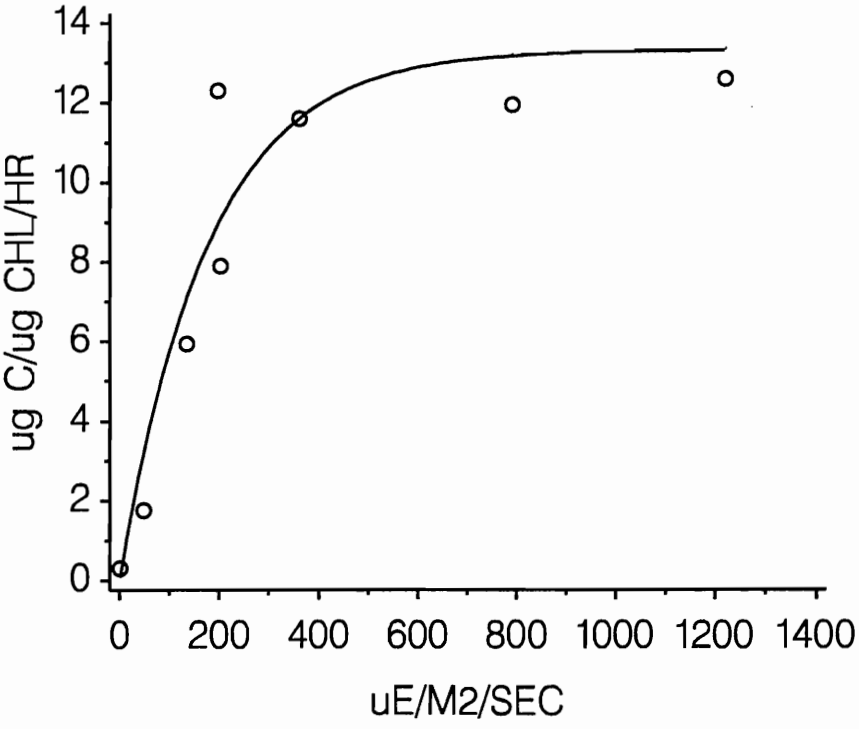
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 11, 1994

STATION F23P MID – SURFACE



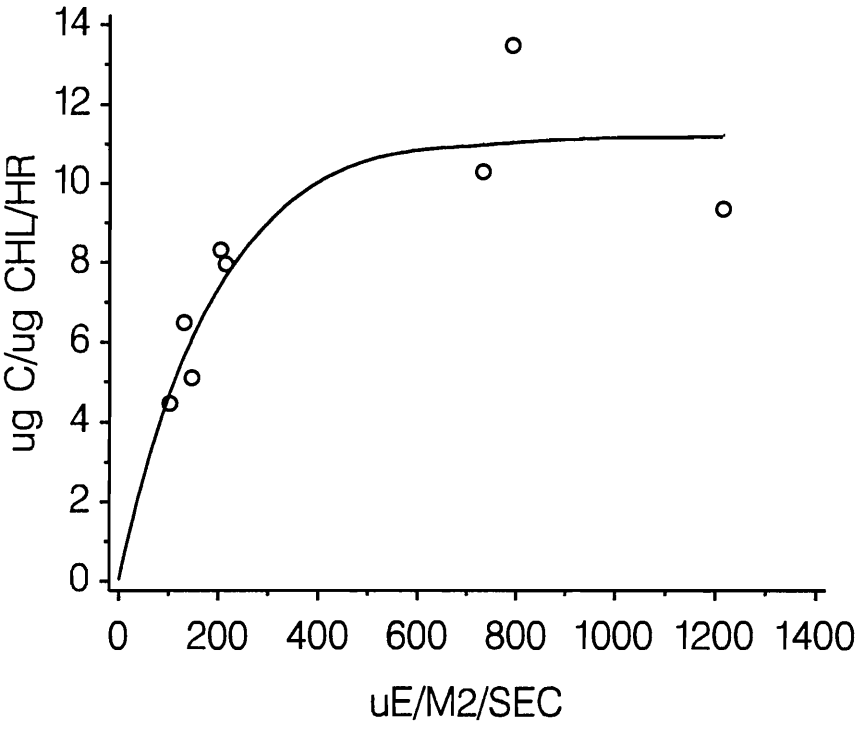
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 11, 1994

STATION F23P MID – DEPTH



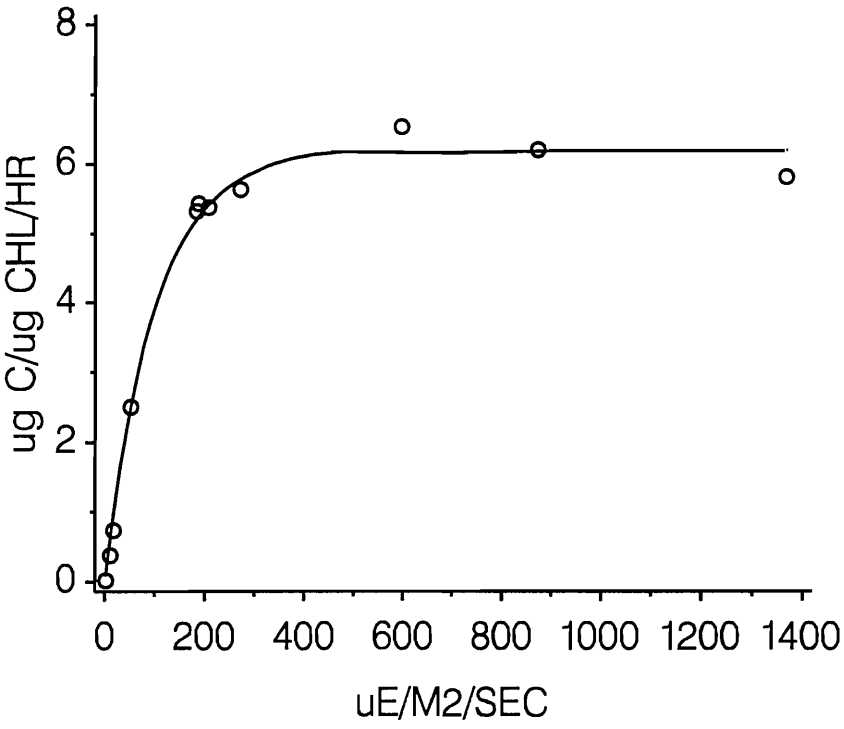
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 11, 1994

STATION F23P MID – BOTTOM



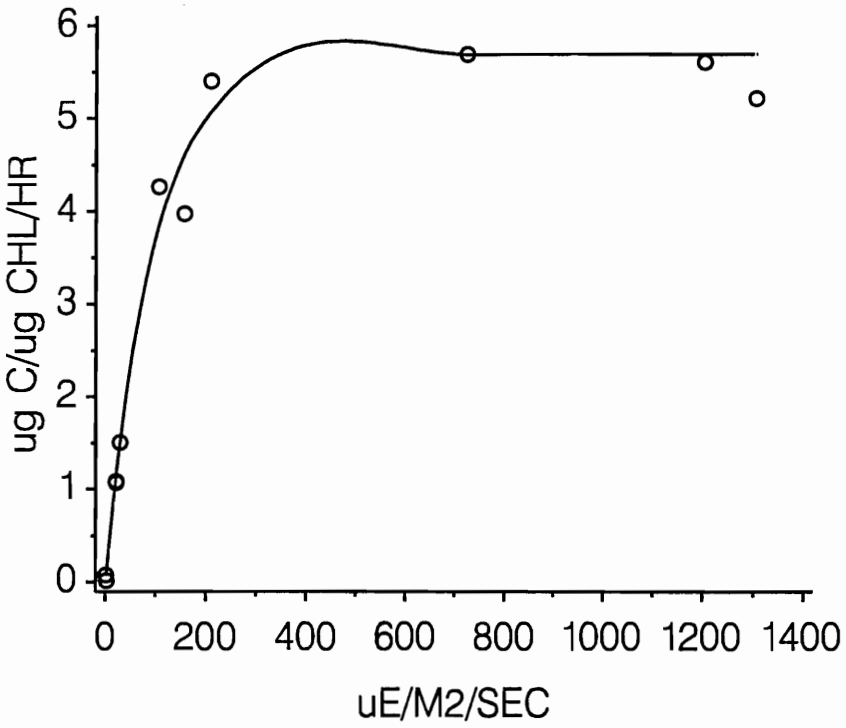
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 11, 1994

STATION N16P SURFACE



WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 11, 1994

STATION N16P MID – DEPTH



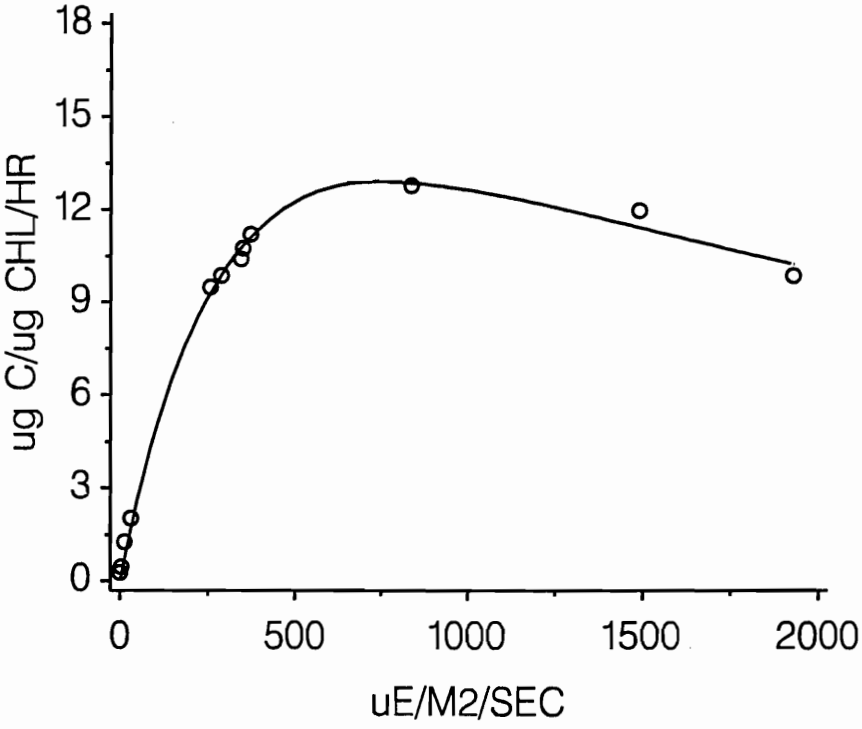
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 11, 1994

Table D2-4. P-I modeling using the Platt *et al.* (1980) model: October 12, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9414 OCTOBER 12, 1994
MODEL PLATT ET AL. 1980

STA	DEPTH	P_SB	ALPHA	BETA	R_2
F23P	SUR	. .	. .	. .	.
F23P	MSUR	17.14(1.35)	0.058(0.002)	0.005(0.0013)	1.00
F23P	MDEP	. .	. .	. .	.
F23P	MBOT	. .	. .	. .	.
N16P	SUR	. .	. .	. .	.
N16P	MSUR	. .	. .	. .	.
N16P	MDEP	. .	. .	. .	.
N16P	MBOT	. .	. .	. .	.

STATION F23P MID – SURFACE



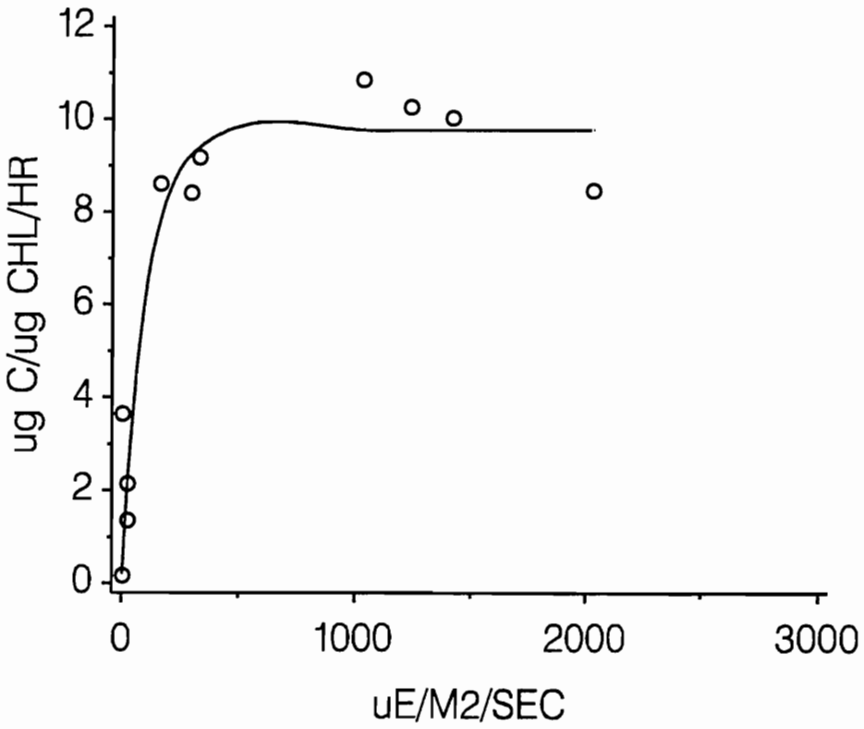
PLATT ET AL, 1980 MODEL
SURVEY W9414 OCTOBER 12, 1994

Table D2-5. P-I modeling using the Webb *et al.* (1974) model: October 12, 1994. Numbers in parentheses are standard errors of the estimates.

P VS I CURVE PARAMETERS W9414 OCTOBER 12, 1994
MODEL WEBB ET AL. 1974

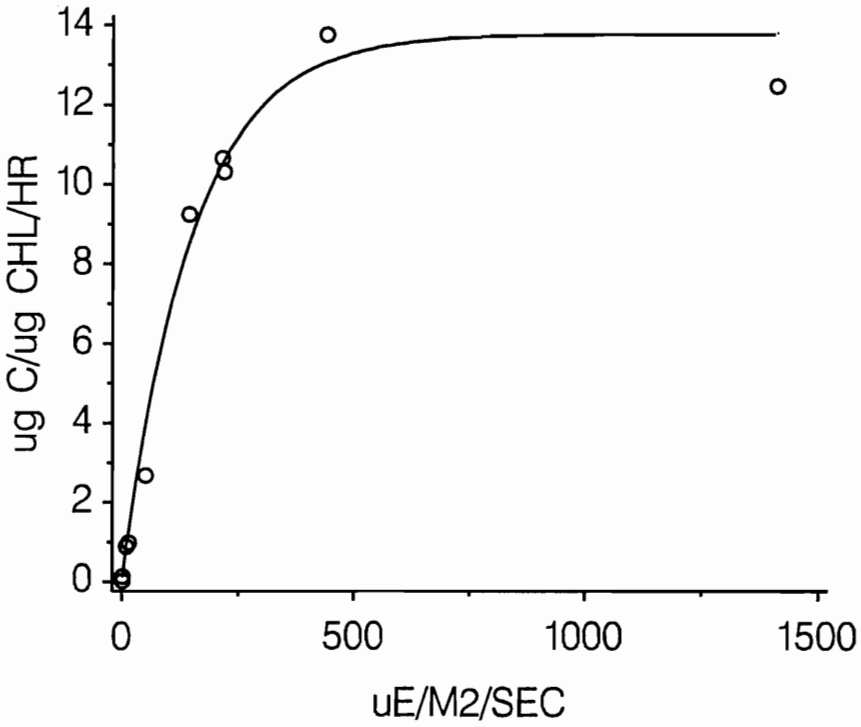
STATION	DEPTH	PMAX	ALPHA	R_2
F23P	SUR	9.78 (0.17)	0.095 (0.028)	0.92
F23P	MSUR	. .	. .	.
F23P	MDEP	13.80 (0.40)	0.092 (0.008)	0.99
F23P	MBOT	13.05 (0.22)	0.089 (0.006)	0.99
N16P	SUR	6.55 (0.23)	0.062 (0.006)	0.94
N16P	MSUR	5.94 (0.08)	0.060 (0.008)	0.98
N16P	MDEP	7.18 (0.15)	0.088 (0.003)	0.99
N16P	MBOT	6.12 (0.10)	0.088 (0.090)	0.31

STATION F23P SURFACE



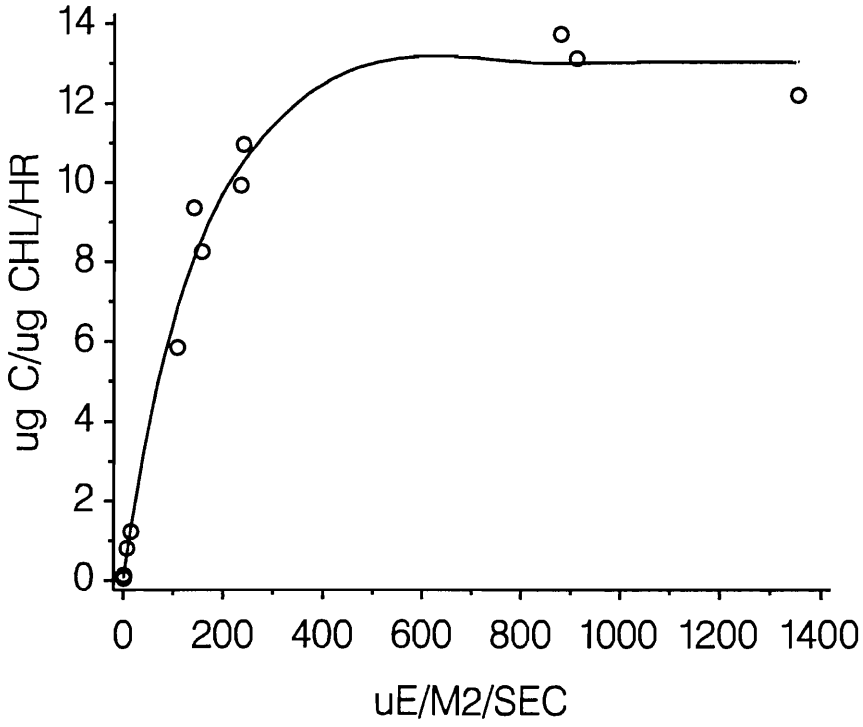
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

STATION F23P MID – DEPTH



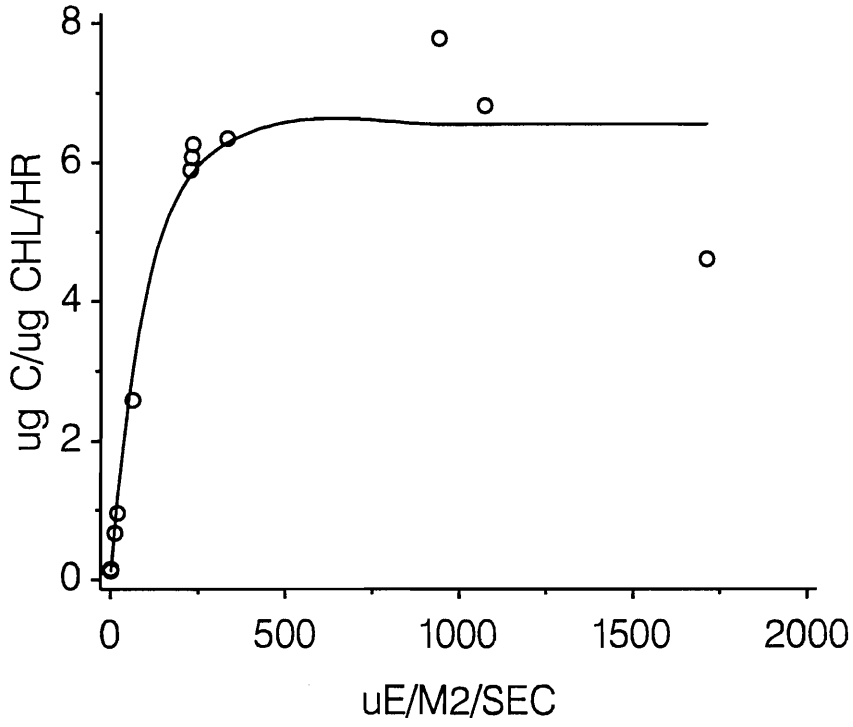
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

STATION F23P MID – BOTTOM



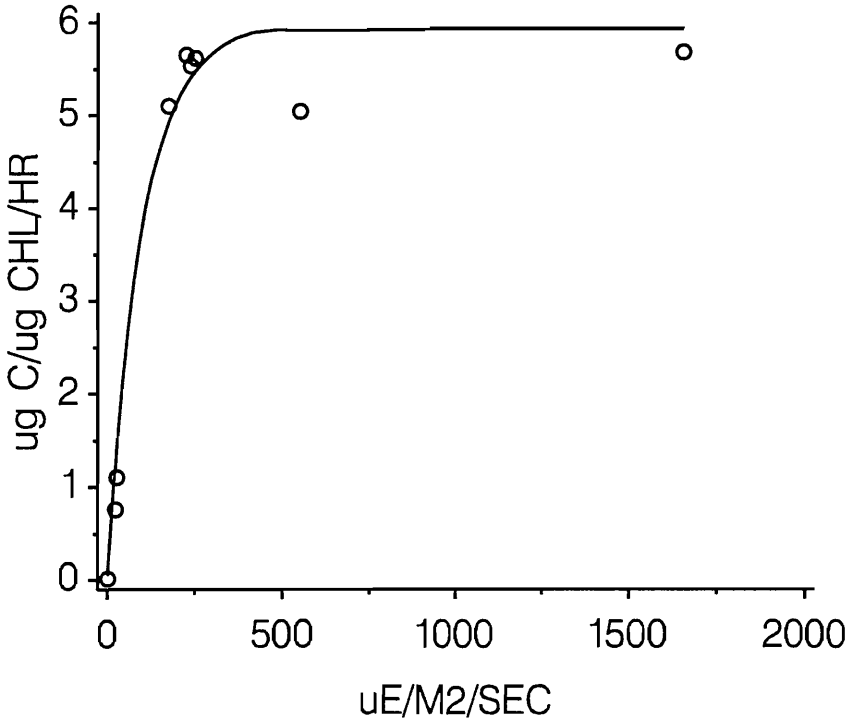
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

STATION N16P SURFACE



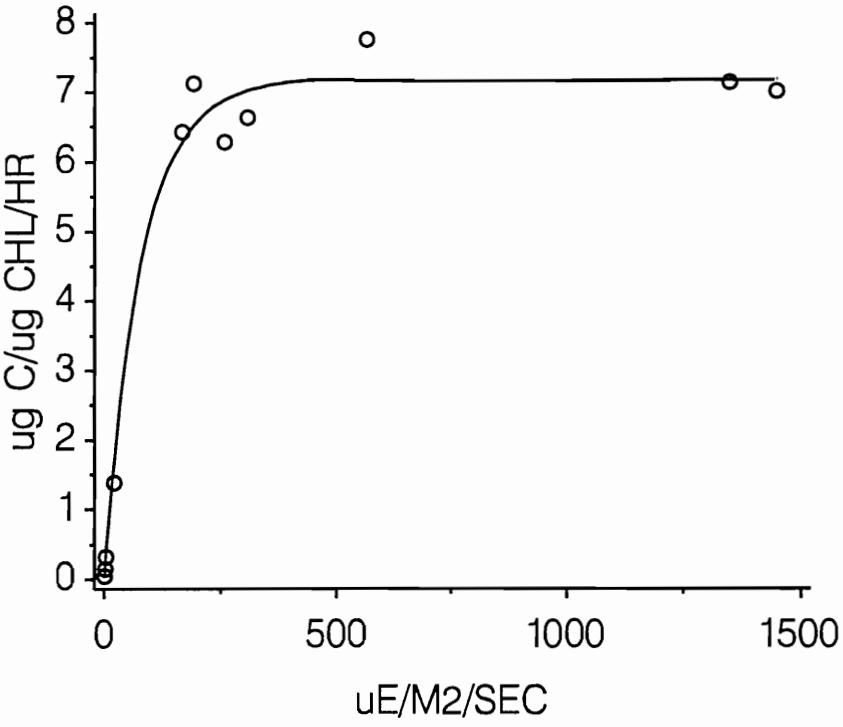
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

STATION N16P MID – SURFACE



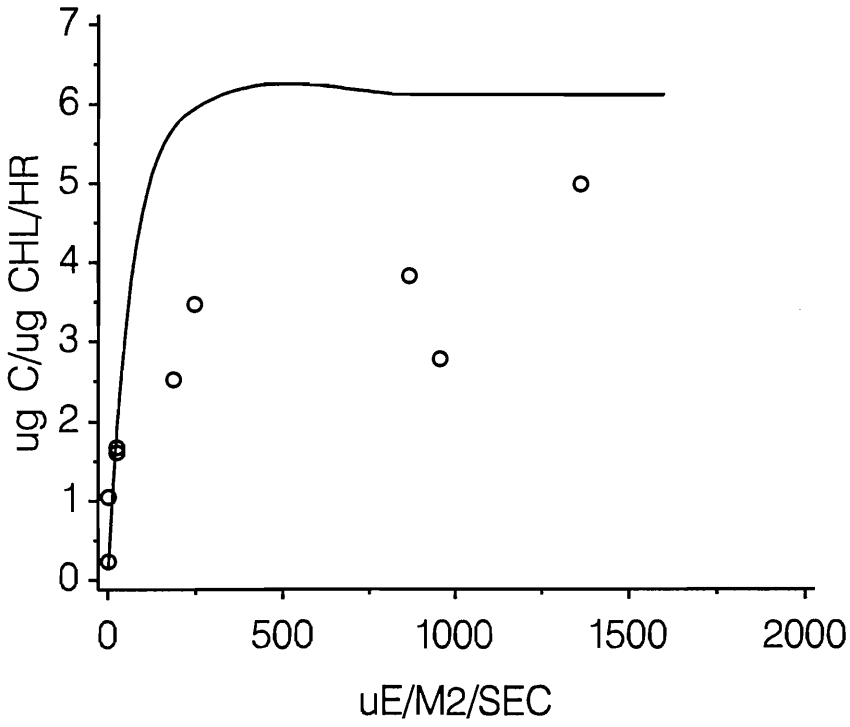
WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

STATION N16P MID – DEPTH



WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

STATION N16P MID – BOTTOM



WEBB ET AL. 1974 MODEL
SURVEY W9414 OCTOBER 12, 1994

APPENDIX D

METABOLISM DATA AND PRODUCTIVITY—IRRADIANCE MODELING

Part 3

Respiration Data

Table D3-1 includes data from the October survey (W9414). Water samples were taken at surface, mid-depth, and mid-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, F24, 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 October 1994.

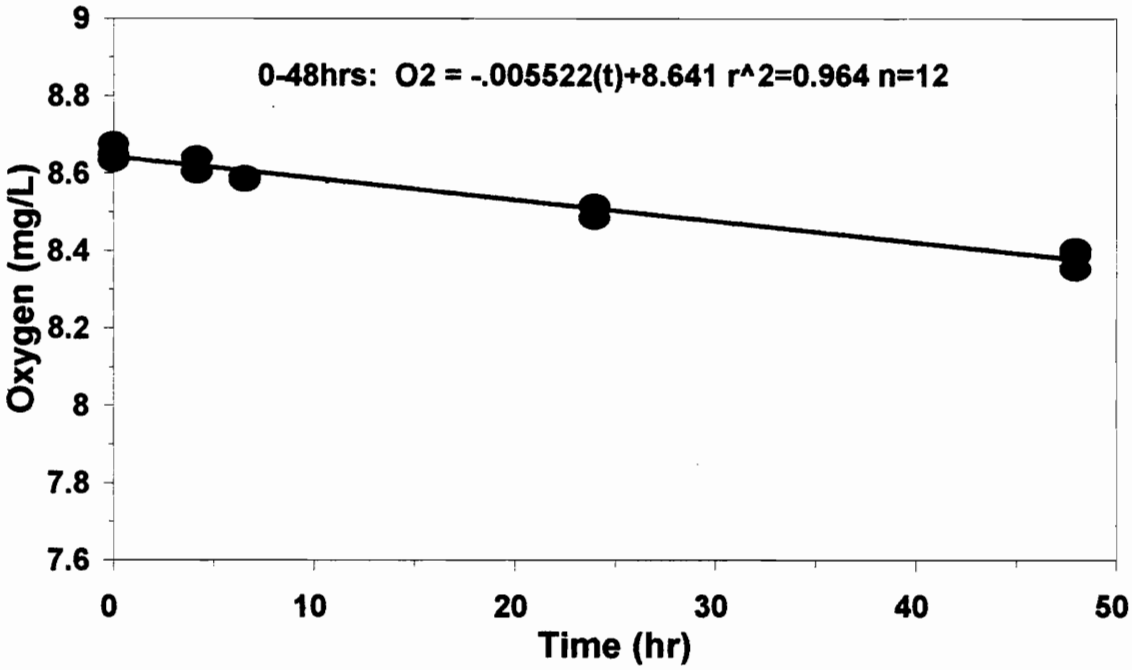
Event	Station	Date	Time	Depth (m)	Sample ID	Level	Dissolved Oxygen (mg/L)	Length of Incubation (hours)	Incubation Temperature (C)
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.6	4.17	14
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.59	6.58	14
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.48	24	14
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.52	24	14
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.58	6.58	14
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.35	48	13
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.64	4.17	14
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.4	48	13
W9414	F19	11-OCT-94	1450	2.5	W94140115	DARK	8.39	48	13
W9414	F19	11-OCT-94	1450	2.5	W94140115	INIT	8.68	0	
W9414	F19	11-OCT-94	1450	2.5	W94140115	INIT	8.65	0	
W9414	F19	11-OCT-94	1450	2.5	W94140115	INIT	8.63	0	
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.52	4.17	14
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.55	4.17	14
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.39	24	14
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.4	24	14
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.26	48	13
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.5	6.58	14
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.29	48	13
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.29	48	13
W9414	F19	11-OCT-94	1447	34.7	W94140114	DARK	8.51	6.58	14
W9414	F19	11-OCT-94	1447	34.7	W94140114	INIT	8.55	0	
W9414	F19	11-OCT-94	1447	34.7	W94140114	INIT	8.57	0	
W9414	F19	11-OCT-94	1447	34.7	W94140114	INIT	8.58	0	
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.5	168	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.43	168	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.64	48	13
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.72	6.58	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.72	6.58	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.51	168	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.72	4.17	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.69	24	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.66	24	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.63	48	13
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.58	48	13
W9414	F19	11-OCT-94	1446	47.9	W94140113	DARK	6.73	4.17	12
W9414	F19	11-OCT-94	1446	47.9	W94140113	INIT	6.46	0	
W9414	F19	11-OCT-94	1446	47.9	W94140113	INIT	6.69	0	
W9414	F19	11-OCT-94	1446	47.9	W94140113	INIT	6.73	0	
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	6.55	48	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	6.55	48	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	7.11	8	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	7.09	8	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	6.54	48	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	6.88	24	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	6.86	24	14
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	7.21	4	14.5
W9414	F24	11-OCT-94	1016	2.4	W94140065	DARK	7.19	4	14.5
W9414	F24	11-OCT-94	1016	2.4	W94140065	INIT	7.31	0	
W9414	F24	11-OCT-94	1016	2.4	W94140065	INIT	7.29	0	
W9414	F24	11-OCT-94	1016	2.4	W94140065	INIT	7.29	0	
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.73	4.08	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.33	48	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.34	48	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.42	24	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.62	24	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.71	4.08	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.71	8.08	14
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.62	8.08	14
W9414	N20P	11-OCT-94	1059	2.1	W94140076	DARK	8.35	48	14.5
W9414	N20P	11-OCT-94	1059	2.1	W94140076	INIT	8.82	0	

Table D3-1. Dark respiration at bioproductivity stations in October 1994.

Event	Station	Date	Time	Depth (m)	Sample ID	Level	Dissolved Oxygen (mg/L)	Length of Incubation (hours)	Incubation Temperature (C)
W9414	N20P	11-OCT-94	1059	2.1	W94140076	INIT	8.77	0	
W9414	N20P	11-OCT-94	1059	2.1	W94140076	INIT	8.74	0	
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.63	4.08	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.05	48	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.27	48	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.43	24	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.45	24	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.63	4.08	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.88	8.08	14
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.59	8.08	14
W9414	N20P	11-OCT-94	1057	13.7	W94140074	DARK	8.29	48	14.5
W9414	N20P	11-OCT-94	1057	13.7	W94140074	INIT	8.68	0	
W9414	N20P	11-OCT-94	1057	13.7	W94140074	INIT	8.64	0	
W9414	N20P	11-OCT-94	1057	13.7	W94140074	INIT	8.59	0	
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.11	48	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.12	48	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.13	48	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.28	4.08	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.18	24	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.22	24	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.27	4.08	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	6.85	168	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.27	8.08	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	7.32	8.08	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	6.88	168	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	DARK	6.91	168	12
W9414	N20P	11-OCT-94	1056	21.5	W94140073	INIT	7.27	0	
W9414	N20P	11-OCT-94	1056	21.5	W94140073	INIT	7.26	0	
W9414	N20P	11-OCT-94	1056	21.5	W94140073	INIT	7.02	0	

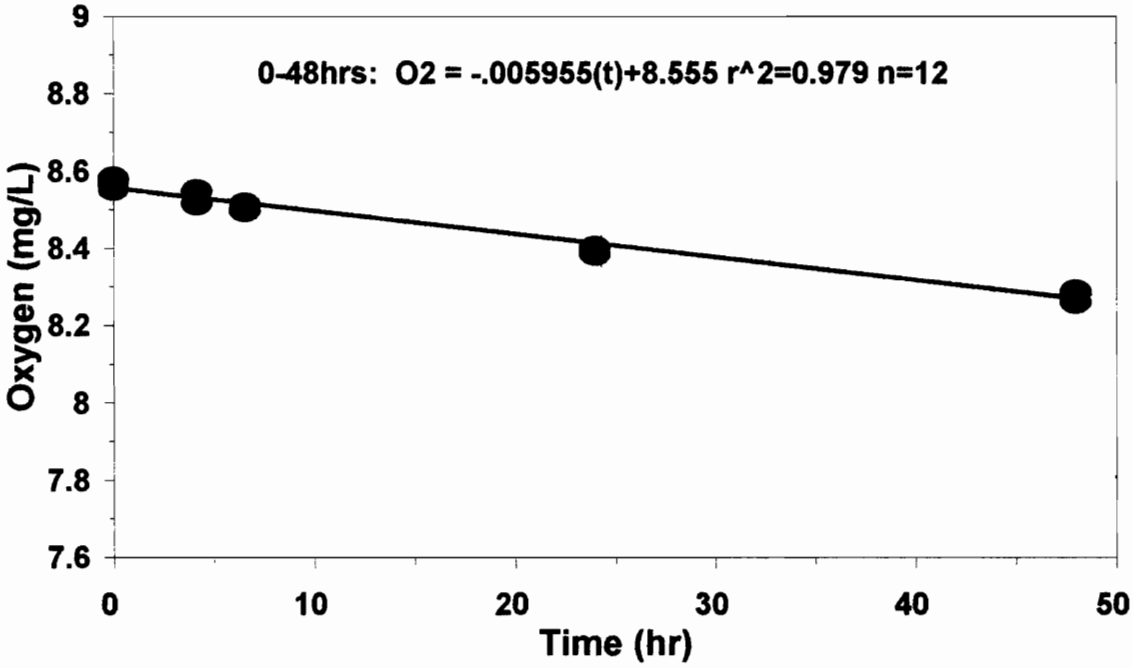
Dark Respiration, W9414

Station F19, Surface



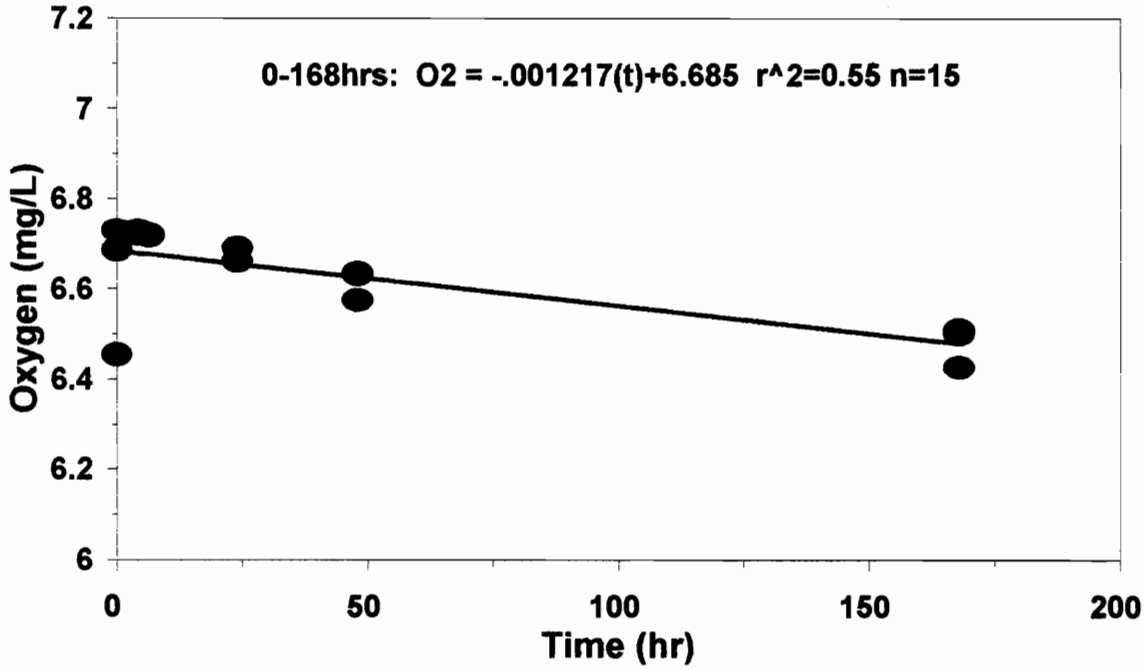
Dark Respiration, W9414

Station F19, Mid-depth



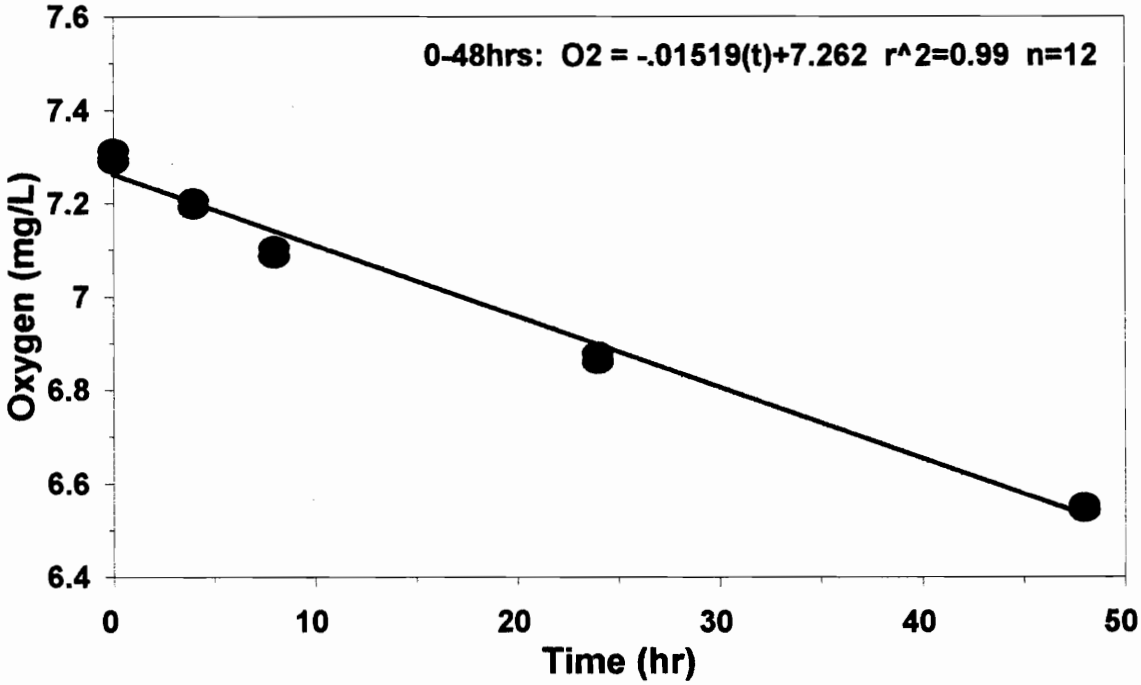
Dark Respiration, W9414

Station F19, Mid-bottom



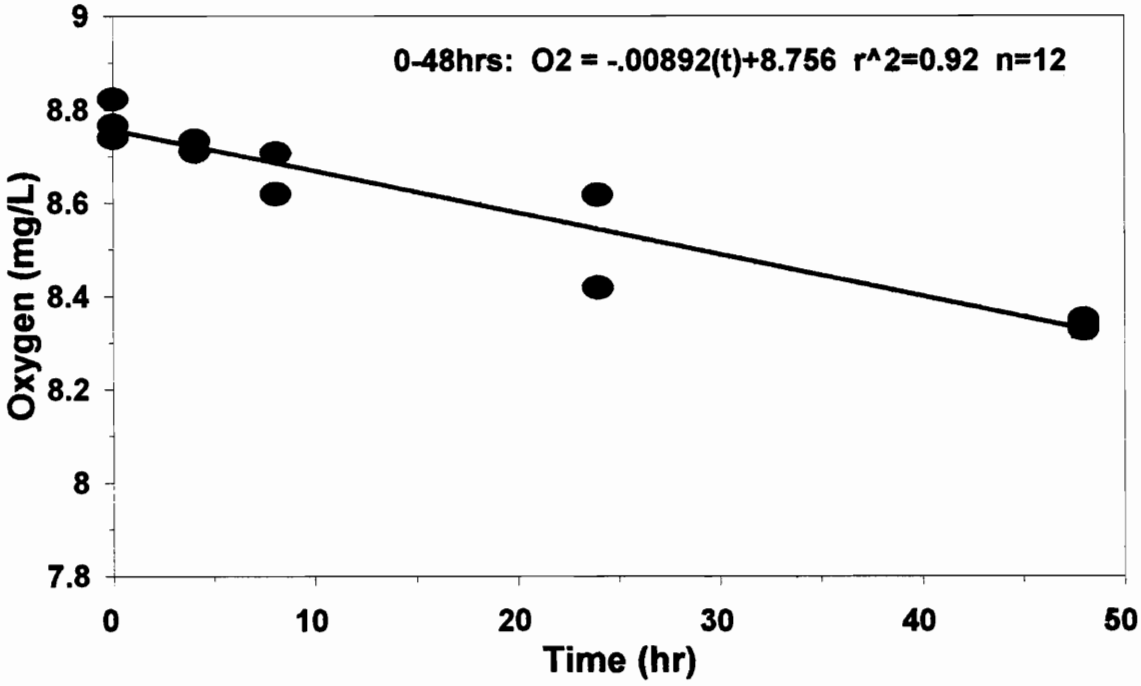
Dark Respiration, W9414

Station F24, Surface



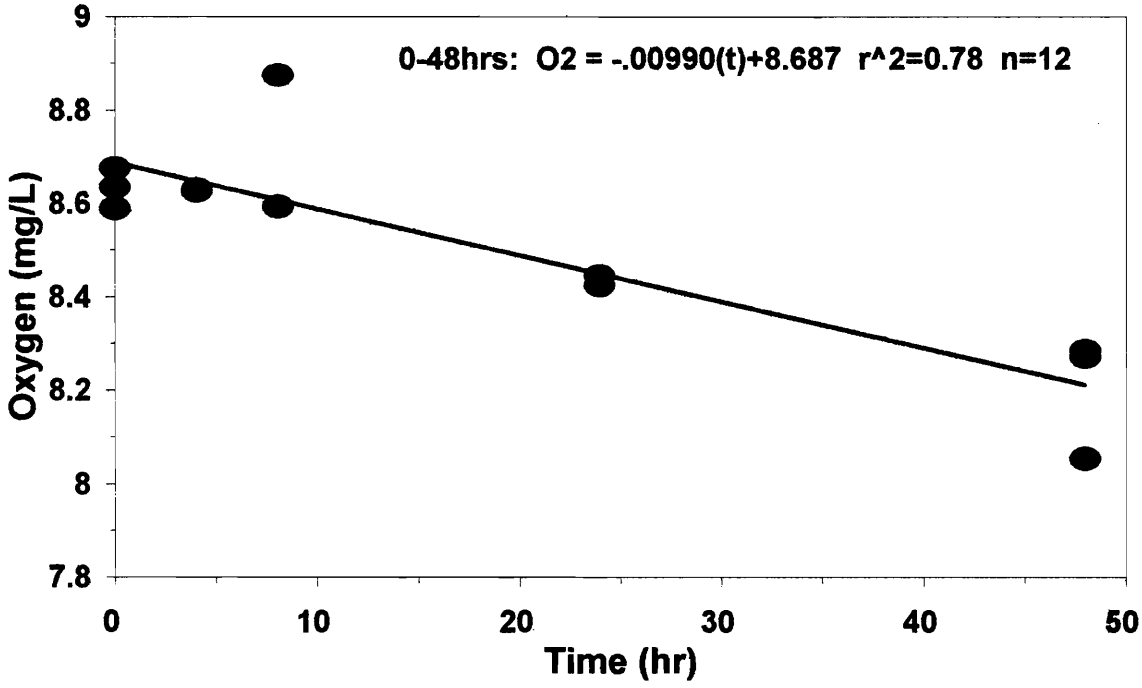
Dark Respiration, W9414

Station N20P, Surface



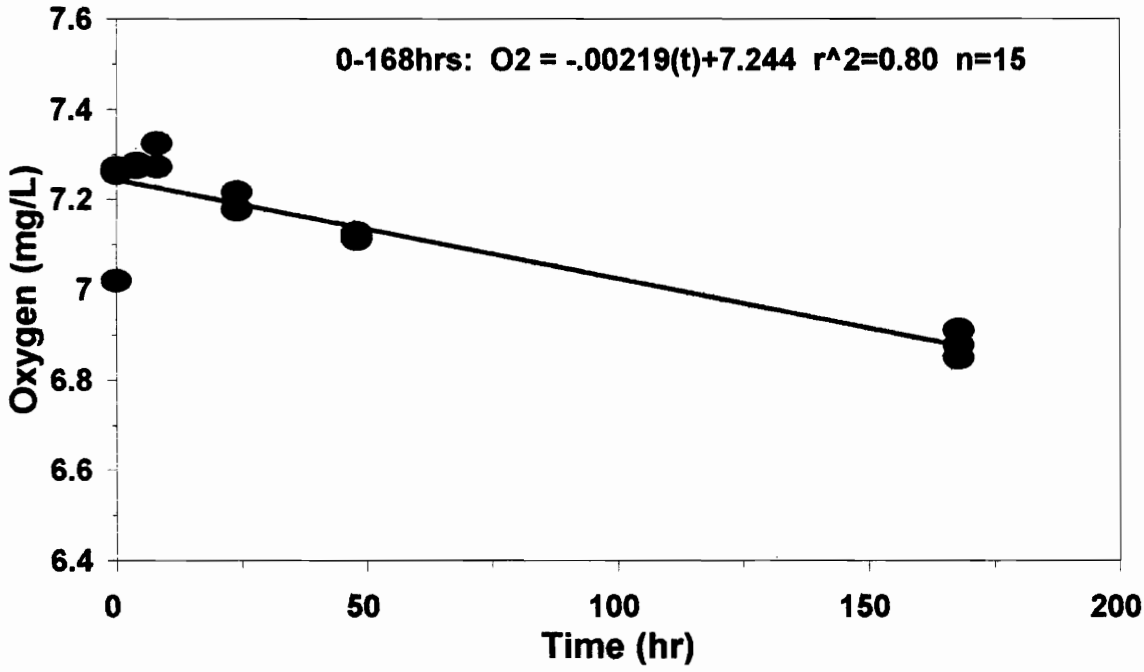
Dark Respiration, W9414

Station N20P, Mid-depth



Dark Respiration, W9414

Station N20P, Mid-bottom



APPENDIX E

PHYTOPLANKTON SPECIES DATA TABLE

A complete listing, by survey, is given for taxonomic analyses of whole-water samples analyzed for W9414, W9415, and W9416 (Table E-1). All counts for screened (20 μm) samples for W9414, W9415, and W9416 are given in the text report.

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140347	F01P	10-13-94 08:59	1.9	AMPHIDINIUM CRASSUM	0.003
W94140347	F01P	10-13-94 08:59	1.9	AMPHIDINIUM SPP.	0.003
W94140347	F01P	10-13-94 08:59	1.9	CHAETOCEROS SPP.(<10UM)	0.003
W94140347	F01P	10-13-94 08:59	1.9	CRYPTOMONADS	0.245
W94140347	F01P	10-13-94 08:59	1.9	CYLINDROTHECA CLOSTERIUM	0.003
W94140347	F01P	10-13-94 08:59	1.9	EUTREPTIA/EUTREPTIELLA SPP.	0.003
W94140347	F01P	10-13-94 08:59	1.9	GYRODINIUM SPP.	0.016
W94140347	F01P	10-13-94 08:59	1.9	LEPTOCYLINDRUS MINIMUS	0.006
W94140347	F01P	10-13-94 08:59	1.9	MICROFLAGELLATES	1.344
W94140347	F01P	10-13-94 08:59	1.9	NAVICULOID DIATOMS	0.003
W94140347	F01P	10-13-94 08:59	1.9	NITZSCHIA SPP.	0.006
W94140347	F01P	10-13-94 08:59	1.9	RHIZOSOLENIA DELICATULA	0.035
W94140347	F01P	10-13-94 08:59	1.9	RHIZOSOLENIA SETIGERA	0.022
W94140347	F01P	10-13-94 08:59	1.9	THALASSIONEMA NITZSCHOIDES	0.019
W94140347	F01P	10-13-94 08:59	1.9	THALASSIOSIRA SPP.(SOLITARY)	0.01
W94140347	F01P	10-13-94 08:59	1.9	UNID. ATHECATE DINOFLAGELLATE	0.06
W94140345	F01P	10-13-94 08:57	12.1	AMPHIDINIUM CRASSUM	0.003
W94140345	F01P	10-13-94 08:57	12.1	AMPHIDINIUM SPP.	0.003
W94140345	F01P	10-13-94 08:57	12.1	CERATAULINA PELAGICA	0.003
W94140345	F01P	10-13-94 08:57	12.1	CHAETOCEROS DIDYMUS	0.003
W94140345	F01P	10-13-94 08:57	12.1	CORETHRON CRIOPHILUM	0.003
W94140345	F01P	10-13-94 08:57	12.1	CRYPTOMONADS	0.274
W94140345	F01P	10-13-94 08:57	12.1	CYLINDROTHECA CLOSTERIUM	0.006
W94140345	F01P	10-13-94 08:57	12.1	GYRODINIUM SPIRALE	0.01
W94140345	F01P	10-13-94 08:57	12.1	MICROFLAGELLATES	1.292
W94140345	F01P	10-13-94 08:57	12.1	NAVICULOID DIATOMS	0.003
W94140345	F01P	10-13-94 08:57	12.1	RHIZOSOLENIA DELICATULA	0.029
W94140345	F01P	10-13-94 08:57	12.1	RHIZOSOLENIA SETIGERA	0.016
W94140345	F01P	10-13-94 08:57	12.1	SKELETONEMA COSTATUM	0.006
W94140345	F01P	10-13-94 08:57	12.1	THALASSIONEMA NITZSCHOIDES	0.016
W94140345	F01P	10-13-94 08:57	12.1	THALASSIOSIRA SPP.(SOLITARY)	0.01
W94140345	F01P	10-13-94 08:57	12.1	UNID. ATHECATE DINOFLAGELLATE	0.074
W94140333	F02P	10-13-94 07:24	1.7	AMPHIDINIUM SPP.	0.01
W94140333	F02P	10-13-94 07:24	1.7	CERATAULINA PELAGICA	0.01
W94140333	F02P	10-13-94 07:24	1.7	CHAETOCEROS DIDYMUS	0.017
W94140333	F02P	10-13-94 07:24	1.7	CRYPTOMONADS	0.194
W94140333	F02P	10-13-94 07:24	1.7	CYLINDROTHECA CLOSTERIUM	0.007
W94140333	F02P	10-13-94 07:24	1.7	GYRODINIUM SPIRALE	0.01
W94140333	F02P	10-13-94 07:24	1.7	LEPTOCYLINDRUS MINIMUS	0.01
W94140333	F02P	10-13-94 07:24	1.7	MICROFLAGELLATES	1.339
W94140333	F02P	10-13-94 07:24	1.7	NITZSCHIA SPP.	0.014
W94140333	F02P	10-13-94 07:24	1.7	PARALIA MARINA	0.007
W94140333	F02P	10-13-94 07:24	1.7	PLEUROSIGMA SPP.	0.003
W94140333	F02P	10-13-94 07:24	1.7	PYRAMIMONAS/TETRASELMIS SPP.	0.007
W94140333	F02P	10-13-94 07:24	1.7	RHIZOSOLENIA DELICATULA	0.083
W94140333	F02P	10-13-94 07:24	1.7	RHIZOSOLENIA SETIGERA	0.035
W94140333	F02P	10-13-94 07:24	1.7	SCRIPPSIELLA TROCHOIDEA	0.007
W94140333	F02P	10-13-94 07:24	1.7	SKELETONEMA COSTATUM	0.052
W94140333	F02P	10-13-94 07:24	1.7	THALASSIONEMA NITZSCHOIDES	0.007
W94140333	F02P	10-13-94 07:24	1.7	UNID. ATHECATE DINOFLAGELLATE	0.087
W94140333	F02P	10-13-94 07:24	1.7	UNID. CENTRALES	0.01
W94140331	F02P	10-13-94 07:21	16.1	AMPHIDINIUM SPP.	0.006
W94140331	F02P	10-13-94 07:21	16.1	ASTERIONELLOPSIS GLACIALIS	0.003
W94140331	F02P	10-13-94 07:21	16.1	CERATAULINA PELAGICA	0.006
W94140331	F02P	10-13-94 07:21	16.1	CHAETOCEROS DIDYMUS	0.01
W94140331	F02P	10-13-94 07:21	16.1	CRYPTOMONADS	0.191
W94140331	F02P	10-13-94 07:21	16.1	CYLINDROTHECA CLOSTERIUM	0.029
W94140331	F02P	10-13-94 07:21	16.1	EBRIA TRIPARTITIA	0.003
W94140331	F02P	10-13-94 07:21	16.1	GYRODINIUM SPIRALE	0.01
W94140331	F02P	10-13-94 07:21	16.1	GYRODINIUM SPP.	0.022

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140331	F02P	10-13-94 07:21	16.1	LEPTOCYLINDRUS MINIMUS	0.016
W94140331	F02P	10-13-94 07:21	16.1	MICROFLAGELLATES	1.284
W94140331	F02P	10-13-94 07:21	16.1	NAVICULOID DIATOMS	0.01
W94140331	F02P	10-13-94 07:21	16.1	NITZSCHIA SPP.	0.019
W94140331	F02P	10-13-94 07:21	16.1	PLEUROSIGMA SPP.	0.003
W94140331	F02P	10-13-94 07:21	16.1	PROBOSCIA ALATA	0.003
W94140331	F02P	10-13-94 07:21	16.1	RHIZOSOLENIA DELICATULA	0.092
W94140331	F02P	10-13-94 07:21	16.1	RHIZOSOLENIA FRAGILISSIMA	0.01
W94140331	F02P	10-13-94 07:21	16.1	RHIZOSOLENIA SETIGERA	0.038
W94140331	F02P	10-13-94 07:21	16.1	SKELETONEMA COSTATUM	0.013
W94140331	F02P	10-13-94 07:21	16.1	THALASSIONEMA NITZSCHOIDES	0.016
W94140331	F02P	10-13-94 07:21	16.1	THALASSIOSIRA SPP.(SOLITARY)	0.016
W94140331	F02P	10-13-94 07:21	16.1	UNID. ATHECATE DINOFLAGELLATE	0.048
W94140436	F13P	10-13-94 14:41	1.6	AMPHIDINIUM SPP.	0.003
W94140436	F13P	10-13-94 14:41	1.6	CHAETOCEROS SPP. (10-20UM)	0.01
W94140436	F13P	10-13-94 14:41	1.6	CRYPTOMONADS	0.256
W94140436	F13P	10-13-94 14:41	1.6	CYLINDROTHECA CLOSTERIUM	0.013
W94140436	F13P	10-13-94 14:41	1.6	DETONULA CONFERVACEA	0.007
W94140436	F13P	10-13-94 14:41	1.6	EBRIA TRIPARTITIA	0.007
W94140436	F13P	10-13-94 14:41	1.6	EUTREPTIA/EUTREPTIELLA SPP.	0.01
W94140436	F13P	10-13-94 14:41	1.6	GYRODINIUM SPP.	0.01
W94140436	F13P	10-13-94 14:41	1.6	KATODINIUM ROTUNDATUM	0.007
W94140436	F13P	10-13-94 14:41	1.6	LEPTOCYLINDRUS MINIMUS	0.017
W94140436	F13P	10-13-94 14:41	1.6	MICROFLAGELLATES	1.676
W94140436	F13P	10-13-94 14:41	1.6	NAVICULOID DIATOMS	0.003
W94140436	F13P	10-13-94 14:41	1.6	NITZSCHIA SPP.	0.007
W94140436	F13P	10-13-94 14:41	1.6	PYRAMIMONAS/TETRASELMIS SPP.	0.003
W94140436	F13P	10-13-94 14:41	1.6	RHIZOSOLENIA DELICATULA	0.105
W94140436	F13P	10-13-94 14:41	1.6	RHIZOSOLENIA SETIGERA	0.003
W94140436	F13P	10-13-94 14:41	1.6	THALASSIONEMA NITZSCHOIDES	0.017
W94140436	F13P	10-13-94 14:41	1.6	THALASSIOSIRA SPP.(SOLITARY)	0.047
W94140436	F13P	10-13-94 14:41	1.6	UNID. ATHECATE DINOFLAGELLATE	0.057
W94140436	F13P	10-13-94 14:41	1.6	UNID. CENTRALES	0.003
W94140434	F13P	10-13-94 14:38	9.3	CHAETOCEROS SPP. (10-20UM)	0.007
W94140434	F13P	10-13-94 14:38	9.3	CRYPTOMONADS	0.239
W94140434	F13P	10-13-94 14:38	9.3	CYLINDROTHECA CLOSTERIUM	0.023
W94140434	F13P	10-13-94 14:38	9.3	EUTREPTIA/EUTREPTIELLA SPP.	0.007
W94140434	F13P	10-13-94 14:38	9.3	GYMNODINIUM SPP.	0.003
W94140434	F13P	10-13-94 14:38	9.3	KATODINIUM ROTUNDATUM	0.007
W94140434	F13P	10-13-94 14:38	9.3	LEPTOCYLINDRUS MINIMUS	0.027
W94140434	F13P	10-13-94 14:38	9.3	MICROFLAGELLATES	1.787
W94140434	F13P	10-13-94 14:38	9.3	NITZSCHIA SPP.	0.02
W94140434	F13P	10-13-94 14:38	9.3	PYRAMIMONAS/TETRASELMIS SPP.	0.007
W94140434	F13P	10-13-94 14:38	9.3	RHIZOSOLENIA DELICATULA	0.116
W94140434	F13P	10-13-94 14:38	9.3	RHIZOSOLENIA SETIGERA	0.007
W94140434	F13P	10-13-94 14:38	9.3	THALASSIONEMA NITZSCHOIDES	0.013
W94140434	F13P	10-13-94 14:38	9.3	THALASSIOSIRA SPP.(SOLITARY)	0.063
W94140434	F13P	10-13-94 14:38	9.3	UNID. ATHECATE DINOFLAGELLATE	0.053
W94140434	F13P	10-13-94 14:38	9.3	UNID. CENTRALES	0.01
W94140041	F23P	10-11-94 09:11	2.1	ASTERIONELLOPSIS GLACIALIS	0.031
W94140041	F23P	10-11-94 09:11	2.1	CERATAULINA PELAGICA	0.014
W94140041	F23P	10-11-94 09:11	2.1	CHAETOCEROS COMPRESSUS	0.008
W94140041	F23P	10-11-94 09:11	2.1	CHAETOCEROS DEBILIS	0.006
W94140041	F23P	10-11-94 09:11	2.1	CHAETOCEROS DIDYMUS	0.006
W94140041	F23P	10-11-94 09:11	2.1	CHAETOCEROS SPP. (10-20UM)	0.003
W94140041	F23P	10-11-94 09:11	2.1	CRYPTOMONADS	0.311
W94140041	F23P	10-11-94 09:11	2.1	CYLINDROTHECA CLOSTERIUM	0.039
W94140041	F23P	10-11-94 09:11	2.1	DITYLUM BRIGHTWELLII	0.003
W94140041	F23P	10-11-94 09:11	2.1	EUTREPTIA/EUTREPTIELLA SPP.	0.003
W94140041	F23P	10-11-94 09:11	2.1	GYMNODINIUM SPP.	0.006

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140041	F23P	10-11-94 09:11	2.1	LEPTOCYLINDRUS MINIMUS	0.019
W94140041	F23P	10-11-94 09:11	2.1	MICROFLAGELLATES	0.488
W94140041	F23P	10-11-94 09:11	2.1	NAVICULOID DIATOMS	0.006
W94140041	F23P	10-11-94 09:11	2.1	NITZSCHIA SPP.	0.014
W94140041	F23P	10-11-94 09:11	2.1	PYRAMIMONAS/TETRASELMIS SPP.	0.003
W94140041	F23P	10-11-94 09:11	2.1	RHIZOSOLENIA DELICATULA	0.036
W94140041	F23P	10-11-94 09:11	2.1	SKELETONEMA COSTATUM	0.111
W94140041	F23P	10-11-94 09:11	2.1	THALASSIONEMA NITZSCHOIDES	0.011
W94140041	F23P	10-11-94 09:11	2.1	THALASSIOSIRA SPP.(SOLITARY)	0.069
W94140041	F23P	10-11-94 09:11	2.1	UNID. ATHECATE DINOFLAGELLATE	0.006
W94140041	F23P	10-11-94 09:11	2.1	UNID. CENTRALES	0.003
W94140184	F23P	10-12-94 05:50	2.2	CHAETOCEROS COMPRESSUS	0.01
W94140184	F23P	10-12-94 05:50	2.2	CHAETOCEROS DIDYMUS	0.003
W94140184	F23P	10-12-94 05:50	2.2	CHAETOCEROS SPP.(<10UM)	0.003
W94140184	F23P	10-12-94 05:50	2.2	CRYPTOMONADS	0.26
W94140184	F23P	10-12-94 05:50	2.2	CYLINDROTHECA CLOSTERIUM	0.01
W94140184	F23P	10-12-94 05:50	2.2	EUTREPTIA/EUTREPTIELLA SPP.	0.003
W94140184	F23P	10-12-94 05:50	2.2	LEPTOCYLINDRUS DANICUS	0.016
W94140184	F23P	10-12-94 05:50	2.2	LITHODESMIUM (cf) UNDULATUM	0.003
W94140184	F23P	10-12-94 05:50	2.2	MICROFLAGELLATES	0.738
W94140184	F23P	10-12-94 05:50	2.2	NAVICULOID DIATOMS	0.006
W94140184	F23P	10-12-94 05:50	2.2	NITZSCHIA SPP.	0.019
W94140184	F23P	10-12-94 05:50	2.2	RHIZOSOLENIA DELICATULA	0.022
W94140184	F23P	10-12-94 05:50	2.2	SKELETONEMA COSTATUM	0.215
W94140184	F23P	10-12-94 05:50	2.2	THALASSIONEMA NITZSCHOIDES	0.01
W94140184	F23P	10-12-94 05:50	2.2	THALASSIOSIRA SPP.(SOLITARY)	0.07
W94140184	F23P	10-12-94 05:50	2.2	UNID. ATHECATE DINOFLAGELLATE	0.003
W94140184	F23P	10-12-94 05:50	2.2	UNID. CENTRALES	0.01
W94140039	F23P	10-11-94 09:09	11.2	ASTERIONELLOPSIS GLACIALIS	0.005
W94140039	F23P	10-11-94 09:09	11.2	CERATAULINA PELAGICA	0.002
W94140039	F23P	10-11-94 09:09	11.2	CHAETOCEROS COMPRESSUS	0.003
W94140039	F23P	10-11-94 09:09	11.2	CHAETOCEROS DEBILIS	0.003
W94140039	F23P	10-11-94 09:09	11.2	CHAETOCEROS DIDYMUS	0.005
W94140039	F23P	10-11-94 09:09	11.2	CHAETOCEROS SPP. (10-20UM)	0.007
W94140039	F23P	10-11-94 09:09	11.2	CRYPTOMONADS	0.259
W94140039	F23P	10-11-94 09:09	11.2	CYLINDROTHECA CLOSTERIUM	0.037
W94140039	F23P	10-11-94 09:09	11.2	EUTREPTIA/EUTREPTIELLA SPP.	0.002
W94140039	F23P	10-11-94 09:09	11.2	LEPTOCYLINDRUS MINIMUS	0.005
W94140039	F23P	10-11-94 09:09	11.2	LICMOPHORA SPP.	0.002
W94140039	F23P	10-11-94 09:09	11.2	LITHODESMIUM (cf) UNDULATUM	0.008
W94140039	F23P	10-11-94 09:09	11.2	MICROFLAGELLATES	0.32
W94140039	F23P	10-11-94 09:09	11.2	NAVICULOID DIATOMS	0.012
W94140039	F23P	10-11-94 09:09	11.2	NITZSCHIA SPP.	0.007
W94140039	F23P	10-11-94 09:09	11.2	RHIZOSOLENIA DELICATULA	0.034
W94140039	F23P	10-11-94 09:09	11.2	SCENEDESMUS QUADRACAUDA	0.002
W94140039	F23P	10-11-94 09:09	11.2	SKELETONEMA COSTATUM	0.064
W94140039	F23P	10-11-94 09:09	11.2	THALASSIONEMA NITZSCHOIDES	0.005
W94140039	F23P	10-11-94 09:09	11.2	THALASSIOSIRA SPP.(SOLITARY)	0.058
W94140182	F23P	10-12-94 05:48	13.3	ASTERIONELLOPSIS GLACIALIS	0.007
W94140182	F23P	10-12-94 05:48	13.3	CERATAULINA PELAGICA	0.005
W94140182	F23P	10-12-94 05:48	13.3	CHAETOCEROS DIDYMUS	0.007
W94140182	F23P	10-12-94 05:48	13.3	CHAETOCEROS SPP. (10-20UM)	0.016
W94140182	F23P	10-12-94 05:48	13.3	CRYPTOMONADS	0.188
W94140182	F23P	10-12-94 05:48	13.3	CYLINDROTHECA CLOSTERIUM	0.041
W94140182	F23P	10-12-94 05:48	13.3	EBRIA TRIPARTITIA	0.002
W94140182	F23P	10-12-94 05:48	13.3	EUTREPTIA/EUTREPTIELLA SPP.	0.005
W94140182	F23P	10-12-94 05:48	13.3	GYMNODINIUM SPP.	0.002
W94140182	F23P	10-12-94 05:48	13.3	LITHODESMIUM (cf) UNDULATUM	0.009
W94140182	F23P	10-12-94 05:48	13.3	MICROFLAGELLATES	0.697
W94140182	F23P	10-12-94 05:48	13.3	NITZSCHIA SPP.	0.018

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140182	F23P	10-12-94 05:48	13.3	PYRAMIMONAS/TETRASELMIS SPP.	0.011
W94140182	F23P	10-12-94 05:48	13.3	RHIZOSOLENIA DELICATULA	0.02
W94140182	F23P	10-12-94 05:48	13.3	RHIZOSOLENIA FRAGILISSIMA	0.002
W94140182	F23P	10-12-94 05:48	13.3	SKELETONEMA COSTATUM	0.084
W94140182	F23P	10-12-94 05:48	13.3	THALASSIONEMA NITZSCHOIDES	0.011
W94140182	F23P	10-12-94 05:48	13.3	THALASSIOSIRA (cf) GRAVIDA	0.009
W94140182	F23P	10-12-94 05:48	13.3	THALASSIOSIRA SPP.(SOLITARY)	0.064
W94140182	F23P	10-12-94 05:48	13.3	UNID. ATHECATE DINOFLAGELLATE	0.011
W94140182	F23P	10-12-94 05:48	13.3	UNID. CENTRALES	0.007
W94140196	N01P	10-12-94 06:51	2.1	CERATIUM FUSUS	0.004
W94140196	N01P	10-12-94 06:51	2.1	CHAETOCEROS SPP. (10-20UM)	0.015
W94140196	N01P	10-12-94 06:51	2.1	CRYPTOMONADS	0.609
W94140196	N01P	10-12-94 06:51	2.1	CYLINDROTHECA CLOSTERIUM	0.015
W94140196	N01P	10-12-94 06:51	2.1	EUTREPTIA/EUTREPTIELLA SPP.	0.019
W94140196	N01P	10-12-94 06:51	2.1	GYMNODINIUM SPP.	0.012
W94140196	N01P	10-12-94 06:51	2.1	GYRODINIUM SPIRALE	0.004
W94140196	N01P	10-12-94 06:51	2.1	KATODINIUM ROTUNDATUM	0.019
W94140196	N01P	10-12-94 06:51	2.1	LITHODESMIUM (cf) UNDULATUM	0.008
W94140196	N01P	10-12-94 06:51	2.1	MICROFLAGELLATES	1.344
W94140196	N01P	10-12-94 06:51	2.1	NITZSCHIA SPP.	0.023
W94140196	N01P	10-12-94 06:51	2.1	PYRAMIMONAS/TETRASELMIS SPP.	0.008
W94140196	N01P	10-12-94 06:51	2.1	RHIZOSOLENIA DELICATULA	0.065
W94140196	N01P	10-12-94 06:51	2.1	SKELETONEMA COSTATUM	0.077
W94140196	N01P	10-12-94 06:51	2.1	THALASSIONEMA NITZSCHOIDES	0.008
W94140196	N01P	10-12-94 06:51	2.1	THALASSIOSIRA SPP.(SOLITARY)	0.123
W94140196	N01P	10-12-94 06:51	2.1	UNID. ATHECATE DINOFLAGELLATE	0.039
W94140196	N01P	10-12-94 06:51	2.1	UNID. CENTRALES	0.027
W94140194	N01P	10-12-94 06:49	12.7	AMPHIDINIUM SPP.	0.004
W94140194	N01P	10-12-94 06:49	12.7	CERATIUM LONGIPES	0.008
W94140194	N01P	10-12-94 06:49	12.7	CHAETOCEROS SPP. (10-20UM)	0.004
W94140194	N01P	10-12-94 06:49	12.7	CRYPTOMONADS	0.473
W94140194	N01P	10-12-94 06:49	12.7	CYLINDROTHECA CLOSTERIUM	0.025
W94140194	N01P	10-12-94 06:49	12.7	EUTREPTIA/EUTREPTIELLA SPP.	0.008
W94140194	N01P	10-12-94 06:49	12.7	GYMNODINIUM SPP.	0.016
W94140194	N01P	10-12-94 06:49	12.7	GYRODINIUM SPP.	0.008
W94140194	N01P	10-12-94 06:49	12.7	KATODINIUM ROTUNDATUM	0.012
W94140194	N01P	10-12-94 06:49	12.7	LITHODESMIUM (cf) UNDULATUM	0.012
W94140194	N01P	10-12-94 06:49	12.7	MICROFLAGELLATES	1.409
W94140194	N01P	10-12-94 06:49	12.7	NAVICULOID DIATOMS	0.004
W94140194	N01P	10-12-94 06:49	12.7	NITZSCHIA SPP.	0.029
W94140194	N01P	10-12-94 06:49	12.7	RHIZOSOLENIA DELICATULA	0.049
W94140194	N01P	10-12-94 06:49	12.7	SKELETONEMA COSTATUM	0.037
W94140194	N01P	10-12-94 06:49	12.7	THALASSIONEMA NITZSCHOIDES	0.012
W94140194	N01P	10-12-94 06:49	12.7	THALASSIOSIRA SPP.(SOLITARY)	0.099
W94140194	N01P	10-12-94 06:49	12.7	UNID. ATHECATE DINOFLAGELLATE	0.037
W94140219	N04P	10-12-94 08:26	2.9	AMPHIDINIUM SPP.	0.002
W94140219	N04P	10-12-94 08:26	2.9	CERATAULINA PELAGICA	0.005
W94140219	N04P	10-12-94 08:26	2.9	CERATIUM TRIPOS	0.002
W94140219	N04P	10-12-94 08:26	2.9	CRYPTOMONADS	0.187
W94140219	N04P	10-12-94 08:26	2.9	EBRIA TRIPARTITIA	0.007
W94140219	N04P	10-12-94 08:26	2.9	EUTREPTIA/EUTREPTIELLA SPP.	0.005
W94140219	N04P	10-12-94 08:26	2.9	LEPTOCYLINDRUS MINIMUS	0.005
W94140219	N04P	10-12-94 08:26	2.9	MICROFLAGELLATES	0.936
W94140219	N04P	10-12-94 08:26	2.9	PYRAMIMONAS/TETRASELMIS SPP.	0.002
W94140219	N04P	10-12-94 08:26	2.9	RHIZOSOLENIA DELICATULA	0.002
W94140219	N04P	10-12-94 08:26	2.9	SKELETONEMA COSTATUM	0.012
W94140219	N04P	10-12-94 08:26	2.9	THALASSIONEMA NITZSCHOIDES	0.007
W94140219	N04P	10-12-94 08:26	2.9	THALASSIOSIRA SPP.(SOLITARY)	0.012
W94140219	N04P	10-12-94 08:26	2.9	UNID. ATHECATE DINOFLAGELLATE	0.028
W94140219	N04P	10-12-94 08:26	2.9	UNID. CENTRALES	0.007

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140217	N04P	10-12-94 08:24	15.3	CHAETOCEROS SPP. (10-20UM)	0.009
W94140217	N04P	10-12-94 08:24	15.3	CRYPTOMONADS	0.33
W94140217	N04P	10-12-94 08:24	15.3	EBRIA TRIPARTITIA	0.006
W94140217	N04P	10-12-94 08:24	15.3	GYRODINIUM SPIRALE	0.003
W94140217	N04P	10-12-94 08:24	15.3	LEPTOCYLINDRUS MINIMUS	0.013
W94140217	N04P	10-12-94 08:24	15.3	MICROFLAGELLATES	1.318
W94140217	N04P	10-12-94 08:24	15.3	PROROCENTRUM MINIMUM	0.006
W94140217	N04P	10-12-94 08:24	15.3	PYRAMIMONAS/TETRASELMIS SPP.	0.009
W94140217	N04P	10-12-94 08:24	15.3	RHIZOSOLENIA DELICATULA	0.009
W94140217	N04P	10-12-94 08:24	15.3	THALASSIONEMA NITZSCHOIDES	0.006
W94140217	N04P	10-12-94 08:24	15.3	THALASSIOSIRA SPP.(SOLITARY)	0.016
W94140217	N04P	10-12-94 08:24	15.3	UNID. ATHECATE DINOFLAGELLATE	0.047
W94140104	N07P	10-11-94 13:35	2.1	CERATIUM TRIPOS	0.003
W94140104	N07P	10-11-94 13:35	2.1	CRYPTOMONADS	0.333
W94140104	N07P	10-11-94 13:35	2.1	CYLINDROTHECA CLOSTERIUM	0.006
W94140104	N07P	10-11-94 13:35	2.1	EUTREPTIA/EUTREPTIELLA SPP.	0.003
W94140104	N07P	10-11-94 13:35	2.1	KATODINIUM ROTUNDATUM	0.006
W94140104	N07P	10-11-94 13:35	2.1	MICROFLAGELLATES	0.979
W94140104	N07P	10-11-94 13:35	2.1	PROROCENTRUM MINIMUM	0.006
W94140104	N07P	10-11-94 13:35	2.1	RHIZOSOLENIA DELICATULA	0.011
W94140104	N07P	10-11-94 13:35	2.1	THALASSIONEMA NITZSCHOIDES	0.008
W94140104	N07P	10-11-94 13:35	2.1	THALASSIOSIRA SPP.(SOLITARY)	0.003
W94140104	N07P	10-11-94 13:35	2.1	UNID. ATHECATE DINOFLAGELLATE	0.048
W94140102	N07P	10-11-94 13:33	20.3	CHAETOCEROS SPP. (10-20UM)	0.003
W94140102	N07P	10-11-94 13:33	20.3	CRYPTOMONADS	0.197
W94140102	N07P	10-11-94 13:33	20.3	CYLINDROTHECA CLOSTERIUM	0.003
W94140102	N07P	10-11-94 13:33	20.3	EBRIA TRIPARTITIA	0.003
W94140102	N07P	10-11-94 13:33	20.3	GYMNODINIUM SPP.	0.008
W94140102	N07P	10-11-94 13:33	20.3	GYRODINIUM SPP.	0.008
W94140102	N07P	10-11-94 13:33	20.3	MICROFLAGELLATES	0.935
W94140102	N07P	10-11-94 13:33	20.3	PYRAMIMONAS/TETRASELMIS SPP.	0.003
W94140102	N07P	10-11-94 13:33	20.3	RHIZOSOLENIA DELICATULA	0.005
W94140102	N07P	10-11-94 13:33	20.3	THALASSIONEMA NITZSCHOIDES	0.003
W94140102	N07P	10-11-94 13:33	20.3	THALASSIOSIRA SPP.(SOLITARY)	0.008
W94140102	N07P	10-11-94 13:33	20.3	UNID. ATHECATE DINOFLAGELLATE	0.023
W94140448	N10P	10-13-94 15:37	1.6	ASTERIONELLOPSIS GLACIALIS	0.021
W94140448	N10P	10-13-94 15:37	1.6	CRYPTOMONADS	0.188
W94140448	N10P	10-13-94 15:37	1.6	CYLINDROTHECA CLOSTERIUM	0.004
W94140448	N10P	10-13-94 15:37	1.6	EUTREPTIA/EUTREPTIELLA SPP.	0.004
W94140448	N10P	10-13-94 15:37	1.6	KATODINIUM ROTUNDATUM	0.004
W94140448	N10P	10-13-94 15:37	1.6	LEPTOCYLINDRUS DANICUS	0.183
W94140448	N10P	10-13-94 15:37	1.6	MICROFLAGELLATES	0.45
W94140448	N10P	10-13-94 15:37	1.6	NAVICULOID DIATOMS	0.021
W94140448	N10P	10-13-94 15:37	1.6	PROROCENTRUM MINIMUM	0.004
W94140448	N10P	10-13-94 15:37	1.6	PROROCENTRUM TRIESTINUM	0.004
W94140448	N10P	10-13-94 15:37	1.6	RHIZOSOLENIA DELICATULA	0.146
W94140448	N10P	10-13-94 15:37	1.6	THALASSIONEMA NITZSCHOIDES	0.017
W94140448	N10P	10-13-94 15:37	1.6	THALASSIOSIRA SPP.(SOLITARY)	0.792
W94140448	N10P	10-13-94 15:37	1.6	UNID. ATHECATE DINOFLAGELLATE	0.017
W94140447	N10P	10-13-94 15:36	4.3	ASTERIONELLOPSIS GLACIALIS	0.026
W94140447	N10P	10-13-94 15:36	4.3	CHAETOCEROS SPP. (10-20UM)	0.01
W94140447	N10P	10-13-94 15:36	4.3	CRYPTOMONADS	0.151
W94140447	N10P	10-13-94 15:36	4.3	GYROSIGMA SPP.	0.005
W94140447	N10P	10-13-94 15:36	4.3	LEPTOCYLINDRUS DANICUS	0.13
W94140447	N10P	10-13-94 15:36	4.3	MICROFLAGELLATES	0.692
W94140447	N10P	10-13-94 15:36	4.3	NAVICULOID DIATOMS	0.005
W94140447	N10P	10-13-94 15:36	4.3	NITZSCHIA SPP.	0.016
W94140447	N10P	10-13-94 15:36	4.3	PROROCENTRUM TRIESTINUM	0.005
W94140447	N10P	10-13-94 15:36	4.3	PYRAMIMONAS/TETRASELMIS SPP.	0.005
W94140447	N10P	10-13-94 15:36	4.3	RHIZOSOLENIA DELICATULA	0.234

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140447	N10P	10-13-94 15:36	4.3	THALASSIONEMA NITZSCHOIDES	0.026
W94140447	N10P	10-13-94 15:36	4.3	THALASSIOSIRA SPP.(SOLITARY)	0.781
W94140447	N10P	10-13-94 15:36	4.3	UNID. ATHECATE DINOFLAGELLATE	0.005
W94140088	N16P	10-11-94 11:55	1.9	AMPHIDINIUM SPP.	0.003
W94140088	N16P	10-11-94 11:55	1.9	CERATAULINA PELAGICA	0.003
W94140088	N16P	10-11-94 11:55	1.9	CHAETOCEROS SPP. (10-20UM)	0.003
W94140088	N16P	10-11-94 11:55	1.9	CRYPTOMONADS	0.426
W94140088	N16P	10-11-94 11:55	1.9	CYLINDROTHECA CLOSTERIUM	0.007
W94140088	N16P	10-11-94 11:55	1.9	EBRIA TRIPARTITIA	0.003
W94140088	N16P	10-11-94 11:55	1.9	GYMNODINIUM SPP.	0.017
W94140088	N16P	10-11-94 11:55	1.9	GYRODINIUM SPIRALE	0.003
W94140088	N16P	10-11-94 11:55	1.9	GYRODINIUM SPP.	0.003
W94140088	N16P	10-11-94 11:55	1.9	MICROFLAGELLATES	1.414
W94140088	N16P	10-11-94 11:55	1.9	NAVICULOID DIATOMS	0.01
W94140088	N16P	10-11-94 11:55	1.9	NITZSCHIA (CF) DELICATISSIMA	0.003
W94140088	N16P	10-11-94 11:55	1.9	PROROCENTRUM MINIMUM	0.007
W94140088	N16P	10-11-94 11:55	1.9	PROTOPERIDINIUM BIPES	0.007
W94140088	N16P	10-11-94 11:55	1.9	PYRAMIMONAS/TETRASELMIS SPP.	0.01
W94140088	N16P	10-11-94 11:55	1.9	RHIZOSOLENIA DELICATULA	0.034
W94140088	N16P	10-11-94 11:55	1.9	SKELETONEMA COSTATUM	0.041
W94140088	N16P	10-11-94 11:55	1.9	THALASSIONEMA NITZSCHOIDES	0.003
W94140088	N16P	10-11-94 11:55	1.9	THALASSIOSIRA SPP.(SOLITARY)	0.047
W94140088	N16P	10-11-94 11:55	1.9	UNID. ATHECATE DINOFLAGELLATE	0.007
W94140088	N16P	10-11-94 11:55	1.9	UNID. CENTRALES	0.014
W94140086	N16P	10-11-94 11:52	19.6	AMPHIDINIUM SPP.	0.003
W94140086	N16P	10-11-94 11:52	19.6	CERATAULINA PELAGICA	0.013
W94140086	N16P	10-11-94 11:52	19.6	CHAETOCEROS DIDYMUS	0.003
W94140086	N16P	10-11-94 11:52	19.6	CHAETOCEROS SPP. (10-20UM)	0.003
W94140086	N16P	10-11-94 11:52	19.6	COCCOLITHOPHORID	0.003
W94140086	N16P	10-11-94 11:52	19.6	CRYPTOMONADS	0.356
W94140086	N16P	10-11-94 11:52	19.6	CYLINDROTHECA CLOSTERIUM	0.01
W94140086	N16P	10-11-94 11:52	19.6	EBRIA TRIPARTITIA	0.016
W94140086	N16P	10-11-94 11:52	19.6	GYMNODINIUM SPP.	0.01
W94140086	N16P	10-11-94 11:52	19.6	GYRODINIUM (CF) AUREOLUM	0.003
W94140086	N16P	10-11-94 11:52	19.6	GYRODINIUM SPP.	0.003
W94140086	N16P	10-11-94 11:52	19.6	KATODINIUM ROTUNDATUM	0.023
W94140086	N16P	10-11-94 11:52	19.6	LEPTOCYLINDRUS MINIMUS	0.006
W94140086	N16P	10-11-94 11:52	19.6	MICROFLAGELLATES	0.998
W94140086	N16P	10-11-94 11:52	19.6	NITZSCHIA SPP.	0.01
W94140086	N16P	10-11-94 11:52	19.6	PYRAMIMONAS/TETRASELMIS SPP.	0.01
W94140086	N16P	10-11-94 11:52	19.6	RHIZOSOLENIA DELICATULA	0.019
W94140086	N16P	10-11-94 11:52	19.6	THALASSIONEMA NITZSCHOIDES	0.019
W94140086	N16P	10-11-94 11:52	19.6	THALASSIOSIRA SPP.(SOLITARY)	0.029
W94140086	N16P	10-11-94 11:52	19.6	UNID. ATHECATE DINOFLAGELLATE	0.013
W94140086	N16P	10-11-94 11:52	19.6	UNID. CENTRALES	0.01
W94140232	N16P	10-12-94 09:08	1.9	CRYPTOMONADS	0.393
W94140232	N16P	10-12-94 09:08	1.9	CYLINDROTHECA CLOSTERIUM	0.003
W94140232	N16P	10-12-94 09:08	1.9	EUTREPTIA/EUTREPTIELLA SPP.	0.01
W94140232	N16P	10-12-94 09:08	1.9	LEPTOCYLINDRUS MINIMUS	0.01
W94140232	N16P	10-12-94 09:08	1.9	MICROFLAGELLATES	0.852
W94140232	N16P	10-12-94 09:08	1.9	RHIZOSOLENIA DELICATULA	0.006
W94140232	N16P	10-12-94 09:08	1.9	RHIZOSOLENIA FRAGILISSIMA	0.003
W94140232	N16P	10-12-94 09:08	1.9	THALASSIONEMA NITZSCHOIDES	0.003
W94140232	N16P	10-12-94 09:08	1.9	THALASSIOSIRA SPP.(SOLITARY)	0.01
W94140232	N16P	10-12-94 09:08	1.9	UNID. ATHECATE DINOFLAGELLATE	0.067
W94140230	N16P	10-12-94 09:07	17.5	AMPHIDINIUM SPP.	0.004
W94140230	N16P	10-12-94 09:07	17.5	CERATAULINA PELAGICA	0.002
W94140230	N16P	10-12-94 09:07	17.5	CERATIUM TRIPOS	0.002
W94140230	N16P	10-12-94 09:07	17.5	CRYPTOMONADS	0.362
W94140230	N16P	10-12-94 09:07	17.5	CYLINDROTHECA CLOSTERIUM	0.002

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140230	N16P	10-12-94 09:07	17.5	EBRIA TRIPARTITIA	0.004
W94140230	N16P	10-12-94 09:07	17.5	EUTREPTIA/EUTREPTIELLA SPP.	0.002
W94140230	N16P	10-12-94 09:07	17.5	GYRODINIUM SPIRALE	0.002
W94140230	N16P	10-12-94 09:07	17.5	LEPTOCYLINDRUS MINIMUS	0.004
W94140230	N16P	10-12-94 09:07	17.5	MICROFLAGELLATES	0.801
W94140230	N16P	10-12-94 09:07	17.5	NAVICULOID DIATOMS	0.004
W94140230	N16P	10-12-94 09:07	17.5	NITZSCHIA SPP.	0.002
W94140230	N16P	10-12-94 09:07	17.5	PYRAMIMONAS/TETRASELMIS SPP.	0.002
W94140230	N16P	10-12-94 09:07	17.5	RHIZOSOLENIA DELICATULA	0.01
W94140230	N16P	10-12-94 09:07	17.5	RHIZOSOLENIA SETIGERA	0.002
W94140230	N16P	10-12-94 09:07	17.5	THALASSIONEMA NITZSCHOIDES	0.008
W94140230	N16P	10-12-94 09:07	17.5	THALASSIOSIRA SPP.(SOLITARY)	0.006
W94140230	N16P	10-12-94 09:07	17.5	UNID. ATHECATE DINOFLAGELLATE	0.054
W94140230	N16P	10-12-94 09:07	17.5	UNID. CENTRALES	0.012
W94140076	N20P	10-11-94 10:59	2.1	CERATAULINA PELAGICA	0.029
W94140076	N20P	10-11-94 10:59	2.1	CHAETOCEROS DEBILIS	0.006
W94140076	N20P	10-11-94 10:59	2.1	CHAETOCEROS SPP. (10-20UM)	0.003
W94140076	N20P	10-11-94 10:59	2.1	COCCOLITHOPHORID	0.01
W94140076	N20P	10-11-94 10:59	2.1	CRYPTOMONADS	0.543
W94140076	N20P	10-11-94 10:59	2.1	CYLINDROTHECA CLOSTERIUM	0.022
W94140076	N20P	10-11-94 10:59	2.1	EBRIA TRIPARTITIA	0.006
W94140076	N20P	10-11-94 10:59	2.1	EUCAMPIA ZODIACUS	0.003
W94140076	N20P	10-11-94 10:59	2.1	EUTREPTIA/EUTREPTIELLA SPP.	0.01
W94140076	N20P	10-11-94 10:59	2.1	GYRODINIUM SPP.	0.003
W94140076	N20P	10-11-94 10:59	2.1	KATODINIUM ROTUNDATUM	0.016
W94140076	N20P	10-11-94 10:59	2.1	LEPTOCYLINDRUS MINIMUS	0.029
W94140076	N20P	10-11-94 10:59	2.1	LITHODESMIUM (cf) UNDULATUM	0.01
W94140076	N20P	10-11-94 10:59	2.1	MICROFLAGELLATES	1.227
W94140076	N20P	10-11-94 10:59	2.1	NAVICULOID DIATOMS	0.003
W94140076	N20P	10-11-94 10:59	2.1	NITZSCHIA SPP.	0.026
W94140076	N20P	10-11-94 10:59	2.1	PROROCENTRUM MINIMUM	0.01
W94140076	N20P	10-11-94 10:59	2.1	PYRAMIMONAS/TETRASELMIS SPP.	0.019
W94140076	N20P	10-11-94 10:59	2.1	RHIZOSOLENIA DELICATULA	0.039
W94140076	N20P	10-11-94 10:59	2.1	SKELETONEMA COSTATUM	0.071
W94140076	N20P	10-11-94 10:59	2.1	THALASSIONEMA NITZSCHOIDES	0.01
W94140076	N20P	10-11-94 10:59	2.1	THALASSIOSIRA SPP.(SOLITARY)	0.129
W94140076	N20P	10-11-94 10:59	2.1	UNID. ATHECATE DINOFLAGELLATE	0.039
W94140076	N20P	10-11-94 10:59	2.1	UNID. CENTRALES	0.013
W94140074	N20P	10-11-94 10:57	13.7	CHAETOCEROS COMPRESSUS	0.007
W94140074	N20P	10-11-94 10:57	13.7	CHAETOCEROS DIDYMUS	0.01
W94140074	N20P	10-11-94 10:57	13.7	CHAETOCEROS SPP. (10-20UM)	0.01
W94140074	N20P	10-11-94 10:57	13.7	CRYPTOMONADS	0.529
W94140074	N20P	10-11-94 10:57	13.7	CYLINDROTHECA CLOSTERIUM	0.027
W94140074	N20P	10-11-94 10:57	13.7	EBRIA TRIPARTITIA	0.003
W94140074	N20P	10-11-94 10:57	13.7	EUTREPTIA/EUTREPTIELLA SPP.	0.003
W94140074	N20P	10-11-94 10:57	13.7	GYMNODINIUM SPP.	0.02
W94140074	N20P	10-11-94 10:57	13.7	GYRODINIUM SPIRALE	0.003
W94140074	N20P	10-11-94 10:57	13.7	KATODINIUM ROTUNDATUM	0.01
W94140074	N20P	10-11-94 10:57	13.7	LEPTOCYLINDRUS MINIMUS	0.007
W94140074	N20P	10-11-94 10:57	13.7	LITHODESMIUM (cf) UNDULATUM	0.003
W94140074	N20P	10-11-94 10:57	13.7	MICROFLAGELLATES	1.15
W94140074	N20P	10-11-94 10:57	13.7	NITZSCHIA SPP.	0.034
W94140074	N20P	10-11-94 10:57	13.7	PROTOPERIDINIUM BIPES	0.003
W94140074	N20P	10-11-94 10:57	13.7	RHIZOSOLENIA DELICATULA	0.037
W94140074	N20P	10-11-94 10:57	13.7	SKELETONEMA COSTATUM	0.091
W94140074	N20P	10-11-94 10:57	13.7	THALASSIONEMA NITZSCHOIDES	0.013
W94140074	N20P	10-11-94 10:57	13.7	THALASSIOSIRA SPP.(SOLITARY)	0.128
W94140074	N20P	10-11-94 10:57	13.7	UNID. ATHECATE DINOFLAGELLATE	0.003
W94140074	N20P	10-11-94 10:57	13.7	UNID. CENTRALES	0.007
W94140476	N10P	10-14-94 06:49	1.8	ASTERIONELLOPSIS GLACIALIS	0.003

Table E1. Phytoplankton Species Data for October, November, December 1994.

Sample ID	Station	Date/Time (Est)	Depth (m)	Taxon	Millions of Cells per Liter
W94140476	N10P	10-14-94 06:49	1.8	CHAETOCEROS DIDYMUS	0.003
W94140476	N10P	10-14-94 06:49	1.8	CHAETOCEROS SPP. (10-20UM)	0.006
W94140476	N10P	10-14-94 06:49	1.8	CRYPTOMONADS	0.562
W94140476	N10P	10-14-94 06:49	1.8	CYLINDROTHECA CLOSTERIUM	0.049
W94140476	N10P	10-14-94 06:49	1.8	EUTREPTIA/EUTREPTIELLA SPP.	0.009
W94140476	N10P	10-14-94 06:49	1.8	LEPTOCYLINDRUS DANICUS	0.029
W94140476	N10P	10-14-94 06:49	1.8	LITHODESMIUM (cf) UNDULATUM	0.006
W94140476	N10P	10-14-94 06:49	1.8	MICROFLAGELLATES	1.329
W94140476	N10P	10-14-94 06:49	1.8	NITZSCHIA SPP.	0.046
W94140476	N10P	10-14-94 06:49	1.8	PYRAMIMONAS/TETRASELMIS SPP.	0.003
W94140476	N10P	10-14-94 06:49	1.8	RHIZOSOLENIA DELICATULA	0.084
W94140476	N10P	10-14-94 06:49	1.8	SKELETONEMA COSTATUM	0.049
W94140476	N10P	10-14-94 06:49	1.8	THALASSIONEMA NITZSCHOIDES	0.017
W94140476	N10P	10-14-94 06:49	1.8	THALASSIOSIRA SPP.(SOLITARY)	0.141
W94140476	N10P	10-14-94 06:49	1.8	UNID. ATHECATE DINOFLAGELLATE	0.052
W94140476	N10P	10-14-94 06:49	1.8	UNID. CENTRALES	0.003
W94150054	N10P	11-04-94 07:32	1.93	ASTERIONELLOPSIS GLACIALIS	0.011
W94150054	N10P	11-04-94 07:32	1.93	CERATAULINA PELAGICA	0.002
W94150054	N10P	11-04-94 07:32	1.93	CHAETOCEROS DIDYMUS	0
W94150054	N10P	11-04-94 07:32	1.93	CHAETOCEROS SPP. (10-20UM)	0
W94150054	N10P	11-04-94 07:32	1.93	CHAETOCEROS SPP.(<10UM)	0.004
W94150054	N10P	11-04-94 07:32	1.93	CRYPTOMONADS	0.236
W94150054	N10P	11-04-94 07:32	1.93	CYLINDROTHECA CLOSTERIUM	0.049
W94150054	N10P	11-04-94 07:32	1.93	EUTREPTIA/EUTREPTIELLA SPP.	0
W94150054	N10P	11-04-94 07:32	1.93	LEPTOCYLINDRUS DANICUS	0.037
W94150054	N10P	11-04-94 07:32	1.93	LICMOPHORA SPP.	0.002
W94150054	N10P	11-04-94 07:32	1.93	LITHODESMIUM (cf) UNDULATUM	0
W94150054	N10P	11-04-94 07:32	1.93	MICROFLAGELLATES	0.582
W94150054	N10P	11-04-94 07:32	1.93	NAVICULOID DIATOMS	0.009
W94150054	N10P	11-04-94 07:32	1.93	NITZSCHIA SPP.	0.007
W94150054	N10P	11-04-94 07:32	1.93	PYRAMIMONAS/TETRASELMIS SPP.	0.004
W94150054	N10P	11-04-94 07:32	1.93	RHIZOSOLENIA DELICATULA	0.013
W94150054	N10P	11-04-94 07:32	1.93	RHIZOSOLENIA SETIGERA	0.002
W94150054	N10P	11-04-94 07:32	1.93	RHIZOSOLENIA STOLTERFOTHII	0.004
W94150054	N10P	11-04-94 07:32	1.93	SKELETONEMA COSTATUM	0.004
W94150054	N10P	11-04-94 07:32	1.93	THALASSIONEMA NITZSCHOIDES	0.024
W94150054	N10P	11-04-94 07:32	1.93	THALASSIOSIRA (cf) GRAVIDA	0.007
W94150054	N10P	11-04-94 07:32	1.93	THALASSIOSIRA SPP.(SOLITARY)	0.011
W94150054	N10P	11-04-94 07:32	1.93	UNID. ATHECATE DINOFLAGELLATE	0
W94150054	N10P	11-04-94 07:32	1.93	UNID. CENTRALES	0
W94160044	N10P	12-01-94 07:38	2.34	ASTERIONELLOPSIS GLACIALIS	0.002
W94160044	N10P	12-01-94 07:38	2.34	CRYPTOMONADS	0.144
W94160044	N10P	12-01-94 07:38	2.34	CYLINDROTHECA CLOSTERIUM	0.005
W94160044	N10P	12-01-94 07:38	2.34	DICTYOCHA FIBULA	0.002
W94160044	N10P	12-01-94 07:38	2.34	KATODINIUM ROTUNDATUM	0.007
W94160044	N10P	12-01-94 07:38	2.34	MICROFLAGELLATES	0.302
W94160044	N10P	12-01-94 07:38	2.34	NAVICULOID DIATOMS	0.005
W94160044	N10P	12-01-94 07:38	2.34	PROTOPERIDINIUM SPP.	0.002
W94160044	N10P	12-01-94 07:38	2.34	RHIZOSOLENIA SETIGERA	0.012
W94160044	N10P	12-01-94 07:38	2.34	THALASSIONEMA NITZSCHOIDES	0.03
W94160044	N10P	12-01-94 07:38	2.34	THALASSIOSIRA SPP.(SOLITARY)	0.021
W94160044	N10P	12-01-94 07:38	2.34	UNID. ATHECATE DINOFLAGELLATE	0.002
W94160044	N10P	12-01-94 07:38	2.34	UNID. CENTRALES	0.005

APPENDIX F

ZOOPLANKTON SPECIES DATA TABLE

A complete listing for survey W9414 is given for taxonomic analyses of zooplankton net tow samples (Table F-1).

Table F1. Zooplankton Species Data for October, 1994.

Sample ID	Station	Date/Time (EST)	Taxon	Qual*	Individuals per M3
W94140350	F01P	10-13-94 09:02	ACARTIA TONSA	M	151.479
W94140350	F01P	10-13-94 09:02	BIVALVE VELIGER		10704.536
W94140350	F01P	10-13-94 09:02	CENTROPAGES HAMATUS	F	403.945
W94140350	F01P	10-13-94 09:02	CENTROPAGES HAMATUS	M	353.452
W94140350	F01P	10-13-94 09:02	CENTROPAGES SPP.	C	1060.355
W94140350	F01P	10-13-94 09:02	CENTROPAGES TYPICUS	F	1262.327
W94140350	F01P	10-13-94 09:02	CENTROPAGES TYPICUS	M	2019.724
W94140350	F01P	10-13-94 09:02	COPEPOD NAUPLII	N	5554.241
W94140350	F01P	10-13-94 09:02	DECAPOD LARVAE		50.493
W94140350	F01P	10-13-94 09:02	GASTROPOD VELIGER		201.972
W94140350	F01P	10-13-94 09:02	MICROSETELLA NORVEGICA		201.972
W94140350	F01P	10-13-94 09:02	OITHONA SIMILIS	C	12926.233
W94140350	F01P	10-13-94 09:02	OITHONA SIMILIS	F	12269.822
W94140350	F01P	10-13-94 09:02	OITHONA SIMILIS	M	1312.821
W94140350	F01P	10-13-94 09:02	PARACALANUS CRASSIROSTRIS	F	302.959
W94140350	F01P	10-13-94 09:02	PARACALANUS PARVUS	C	605.917
W94140350	F01P	10-13-94 09:02	PARACALANUS PARVUS	F	100.986
W94140350	F01P	10-13-94 09:02	PARACALANUS PARVUS	M	50.493
W94140350	F01P	10-13-94 09:02	PENILIA AVIROSTRIS		50.493
W94140338	F02P	10-13-94 07:29	ACARTIA TONSA	C	41.899
W94140338	F02P	10-13-94 07:29	ACARTIA TONSA	F	41.899
W94140338	F02P	10-13-94 07:29	ACARTIA TONSA	M	125.696
W94140338	F02P	10-13-94 07:29	BIVALVE VELIGER		4818.331
W94140338	F02P	10-13-94 07:29	CENTROPAGES HAMATUS	F	167.594
W94140338	F02P	10-13-94 07:29	CENTROPAGES HAMATUS	M	125.696
W94140338	F02P	10-13-94 07:29	CENTROPAGES SPP.	C	544.681
W94140338	F02P	10-13-94 07:29	CENTROPAGES TYPICUS	F	1005.565
W94140338	F02P	10-13-94 07:29	CENTROPAGES TYPICUS	M	1256.956
W94140338	F02P	10-13-94 07:29	COPEPOD NAUPLII	N	2974.795
W94140338	F02P	10-13-94 07:29	FISH LARVA		41.899
W94140338	F02P	10-13-94 07:29	GASTROPOD VELIGER		125.696
W94140338	F02P	10-13-94 07:29	MICROSETELLA NORVEGICA		167.594
W94140338	F02P	10-13-94 07:29	OIKIOPLEURA DIOICA		41.899
W94140338	F02P	10-13-94 07:29	OITHONA SIMILIS	C	3100.491
W94140338	F02P	10-13-94 07:29	OITHONA SIMILIS	F	4273.65
W94140338	F02P	10-13-94 07:29	OITHONA SIMILIS	M	754.173
W94140338	F02P	10-13-94 07:29	PARACALANUS CRASSIROSTRIS	F	335.188
W94140338	F02P	10-13-94 07:29	PARACALANUS PARVUS	F	41.899
W94140338	F02P	10-13-94 07:29	PENILIA AVIROSTRIS		125.696
W94140338	F02P	10-13-94 07:29	TORTANUS DISCAUDATUS	F	41.899
W94140439	F13P	10-13-94 14:48	ACARTIA TONSA	C	281.835
W94140439	F13P	10-13-94 14:48	BIVALVE VELIGER		40161.468
W94140439	F13P	10-13-94 14:48	CENTROPAGES HAMATUS	F	93.945
W94140439	F13P	10-13-94 14:48	CENTROPAGES HAMATUS	M	187.89
W94140439	F13P	10-13-94 14:48	CENTROPAGES SPP.	C	1878.899
W94140439	F13P	10-13-94 14:48	CENTROPAGES TYPICUS	F	1268.257
W94140439	F13P	10-13-94 14:48	CENTROPAGES TYPICUS	M	1456.147
W94140439	F13P	10-13-94 14:48	COPEPOD NAUPLII	N	6717.064
W94140439	F13P	10-13-94 14:48	EURYTEMORA HERDMANI	M	93.945
W94140439	F13P	10-13-94 14:48	GASTROPOD VELIGER		281.835
W94140439	F13P	10-13-94 14:48	HYPERIID AMPHIPOD		46.972
W94140439	F13P	10-13-94 14:48	MICROSETELLA NORVEGICA		234.862

*C=Copepidites, F=Female, M=Male, N=Nauplii

Table F1. Zooplankton Species Data for October, 1994.

Sample ID	Station	Date/Time (EST)	Taxon	Qual*	Individuals per M3
W94140439	F13P	10-13-94 14:48	OITHONA ATLANTICA	F	46.972
W94140439	F13P	10-13-94 14:48	OITHONA SIMILIS	C	12729.541
W94140439	F13P	10-13-94 14:48	OITHONA SIMILIS	F	10803.67
W94140439	F13P	10-13-94 14:48	OITHONA SIMILIS	M	1221.284
W94140439	F13P	10-13-94 14:48	PARACALANUS CRASSIROSTRIS	F	751.56
W94140439	F13P	10-13-94 14:48	PARACALANUS PARVUS	C	46.972
W94140439	F13P	10-13-94 14:48	PARACALANUS PARVUS	M	93.945
W94140439	F13P	10-13-94 14:48	PSEUDOCALANUS NEWMANI	F	46.972
W94140046	F23P	10-11-94 09:19	ACARTIA TONSA	C	1159.42
W94140046	F23P	10-11-94 09:19	ACARTIA TONSA	F	718.841
W94140046	F23P	10-11-94 09:19	ACARTIA TONSA	M	417.391
W94140046	F23P	10-11-94 09:19	BIVALVE VELIGER		997.101
W94140046	F23P	10-11-94 09:19	CENTROPAGES HAMATUS	F	23.188
W94140046	F23P	10-11-94 09:19	CENTROPAGES HAMATUS	M	185.507
W94140046	F23P	10-11-94 09:19	CENTROPAGES SPP.	C	347.826
W94140046	F23P	10-11-94 09:19	COPEPOD NAUPLII	N	2342.029
W94140046	F23P	10-11-94 09:19	EURYTEMORA HERDMANI	C	371.014
W94140046	F23P	10-11-94 09:19	EURYTEMORA HERDMANI	M	23.188
W94140046	F23P	10-11-94 09:19	GASTROPOD VELIGER		23.188
W94140046	F23P	10-11-94 09:19	MICROSETELLA NORVEGICA		69.565
W94140046	F23P	10-11-94 09:19	OITHONA SIMILIS	C	927.536
W94140046	F23P	10-11-94 09:19	OITHONA SIMILIS	F	301.449
W94140046	F23P	10-11-94 09:19	OITHONA SIMILIS	M	46.377
W94140046	F23P	10-11-94 09:19	PARACALANUS CRASSIROSTRIS	F	69.565
W94140046	F23P	10-11-94 09:19	PARACALANUS PARVUS	C	69.565
W94140046	F23P	10-11-94 09:19	POLYCHAETE LARVAE		718.841
W94140046	F23P	10-11-94 09:19	TEMORA LONGICORNIS	C	23.188
W94140046	F23P	10-11-94 09:19	UNIDENTIFIED HARPACTICOID		69.565
W94140046	F23P	10-11-94 09:19	UNIDENTIFIED LARVAE		23.188
W94140199	N01P	10-12-94 06:56	ACARTIA TONSA	C	214.226
W94140199	N01P	10-12-94 06:56	ACARTIA TONSA	F	374.895
W94140199	N01P	10-12-94 06:56	ACARTIA TONSA	M	160.669
W94140199	N01P	10-12-94 06:56	BIVALVE VELIGER		12264.435
W94140199	N01P	10-12-94 06:56	CENTROPAGES HAMATUS	F	53.556
W94140199	N01P	10-12-94 06:56	CENTROPAGES HAMATUS	M	160.669
W94140199	N01P	10-12-94 06:56	CENTROPAGES SPP.	C	1338.912
W94140199	N01P	10-12-94 06:56	CENTROPAGES TYPICUS	F	749.791
W94140199	N01P	10-12-94 06:56	CENTROPAGES TYPICUS	M	1231.799
W94140199	N01P	10-12-94 06:56	COPEPOD NAUPLII	N	12210.879
W94140199	N01P	10-12-94 06:56	EURYTEMORA HERDMANI	F	53.556
W94140199	N01P	10-12-94 06:56	GASTROPOD VELIGER		964.017
W94140199	N01P	10-12-94 06:56	MICROSETELLA NORVEGICA		267.782
W94140199	N01P	10-12-94 06:56	OITHONA ATLANTICA	F	214.226
W94140199	N01P	10-12-94 06:56	OITHONA SIMILIS	C	19976.569
W94140199	N01P	10-12-94 06:56	OITHONA SIMILIS	F	6158.996
W94140199	N01P	10-12-94 06:56	OITHONA SIMILIS	M	1285.356
W94140199	N01P	10-12-94 06:56	PARACALANUS CRASSIROSTRIS	F	53.556
W94140199	N01P	10-12-94 06:56	PARACALANUS PARVUS	C	160.669
W94140199	N01P	10-12-94 06:56	PARACALANUS PARVUS	F	535.565
W94140199	N01P	10-12-94 06:56	PARACALANUS PARVUS	M	53.556
W94140199	N01P	10-12-94 06:56	PENILIA AVIROSTRIS		53.556
W94140199	N01P	10-12-94 06:56	PODON POLYPHEMOIDES		53.556

*C=Copepidites, F=Female, M=Male, N=Nauplii

Table F1. Zooplankton Species Data for October, 1994.

Sample ID	Station	Date/Time (EST)	Taxon	Qual*	Individuals per M3
W94140223	N04P	10-12-94 08:32	ACARTIA TONSA	C	46.545
W94140223	N04P	10-12-94 08:32	ACARTIA TONSA	F	139.636
W94140223	N04P	10-12-94 08:32	ACARTIA TONSA	M	93.091
W94140223	N04P	10-12-94 08:32	BIVALVE VELIGER		5585.455
W94140223	N04P	10-12-94 08:32	CENTROPAGES HAMATUS	F	46.545
W94140223	N04P	10-12-94 08:32	CENTROPAGES SPP.	C	4375.273
W94140223	N04P	10-12-94 08:32	CENTROPAGES TYPICUS	F	1117.091
W94140223	N04P	10-12-94 08:32	CENTROPAGES TYPICUS	M	2094.545
W94140223	N04P	10-12-94 08:32	COPEPOD NAUPLII	N	4375.273
W94140223	N04P	10-12-94 08:32	FISH LARVA		46.545
W94140223	N04P	10-12-94 08:32	GAMMARID AMPHIPOD		46.545
W94140223	N04P	10-12-94 08:32	GASTROPOD VELIGER		1536
W94140223	N04P	10-12-94 08:32	OITHONA SIMILIS	C	7447.273
W94140223	N04P	10-12-94 08:32	OITHONA SIMILIS	F	1722.182
W94140223	N04P	10-12-94 08:32	OITHONA SIMILIS	M	186.182
W94140223	N04P	10-12-94 08:32	PARACALANUS CRASSIROSTRIS	F	93.091
W94140223	N04P	10-12-94 08:32	PARACALANUS PARVUS	F	605.091
W94140223	N04P	10-12-94 08:32	PARACALANUS PARVUS	M	232.727
W94140223	N04P	10-12-94 08:32	PSEUDOCALANUS NEWMANI	C	46.545
W94140107	N07P	10-11-94 13:50	ACARTIA TONSA	C	87.973
W94140107	N07P	10-11-94 13:50	ACARTIA TONSA	M	87.973
W94140107	N07P	10-11-94 13:50	BIVALVE VELIGER		703.78
W94140107	N07P	10-11-94 13:50	CENTROPAGES HAMATUS	M	175.945
W94140107	N07P	10-11-94 13:50	CENTROPAGES SPP.	C	2815.12
W94140107	N07P	10-11-94 13:50	CENTROPAGES TYPICUS	F	1759.45
W94140107	N07P	10-11-94 13:50	CENTROPAGES TYPICUS	M	2463.23
W94140107	N07P	10-11-94 13:50	COPEPOD NAUPLII	N	7917.526
W94140107	N07P	10-11-94 13:50	EURYTEMORA HERDMANI	C	87.973
W94140107	N07P	10-11-94 13:50	EURYTEMORA HERDMANI	F	87.973
W94140107	N07P	10-11-94 13:50	GASTROPOD VELIGER		967.698
W94140107	N07P	10-11-94 13:50	MICROSETELLA NORVEGICA		175.945
W94140107	N07P	10-11-94 13:50	OITHONA SIMILIS	C	5982.131
W94140107	N07P	10-11-94 13:50	OITHONA SIMILIS	F	1847.423
W94140107	N07P	10-11-94 13:50	PARACALANUS PARVUS	C	175.945
W94140107	N07P	10-11-94 13:50	PARACALANUS PARVUS	F	703.78
W94140107	N07P	10-11-94 13:50	PARACALANUS PARVUS	M	87.973
W94140107	N07P	10-11-94 13:50	PSEUDOCALANUS NEWMANI	F	87.973
W94140107	N07P	10-11-94 13:50	TEMORA LONGICORNIS	F	87.973
W94140451	N10P	10-13-94 15:41	ACARTIA TONSA	C	1196.262
W94140451	N10P	10-13-94 15:41	ACARTIA TONSA	F	358.879
W94140451	N10P	10-13-94 15:41	ACARTIA TONSA	M	1375.701
W94140451	N10P	10-13-94 15:41	BIVALVE VELIGER		11603.738
W94140451	N10P	10-13-94 15:41	CENTROPAGES HAMATUS	F	418.692
W94140451	N10P	10-13-94 15:41	CENTROPAGES HAMATUS	M	717.757
W94140451	N10P	10-13-94 15:41	CENTROPAGES SPP.	C	1794.393
W94140451	N10P	10-13-94 15:41	CENTROPAGES TYPICUS	F	2213.084
W94140451	N10P	10-13-94 15:41	CENTROPAGES TYPICUS	M	2153.271
W94140451	N10P	10-13-94 15:41	COPEPOD NAUPLII	N	6818.692
W94140451	N10P	10-13-94 15:41	EURYTEMORA HERDMANI	C	657.944
W94140451	N10P	10-13-94 15:41	EURYTEMORA HERDMANI	F	59.813
W94140451	N10P	10-13-94 15:41	EURYTEMORA HERDMANI	M	239.252
W94140451	N10P	10-13-94 15:41	GASTROPOD VELIGER		418.692

*C=Copepidites, F=Female, M=Male, N=Nauplii

Table F1. Zooplankton Species Data for October, 1994.

Sample ID	Station	Date/Time (EST)	Taxon	Qual*	Individuals per M3
W94140451	N10P	10-13-94 15:41	MICROSETELLA NORVEGICA		598.131
W94140451	N10P	10-13-94 15:41	MYSIID LARVA		179.439
W94140451	N10P	10-13-94 15:41	OITHONA SIMILIS	C	12321.495
W94140451	N10P	10-13-94 15:41	OITHONA SIMILIS	F	6758.879
W94140451	N10P	10-13-94 15:41	OITHONA SIMILIS	M	598.131
W94140451	N10P	10-13-94 15:41	PARACALANUS PARVUS	C	119.626
W94140451	N10P	10-13-94 15:41	PARACALANUS PARVUS	M	179.439
W94140451	N10P	10-13-94 15:41	PSEUDOCALANUS NEWMANI	F	59.813
W94140091	N16P	10-11-94 11:59	BIVALVE VELIGER		15389.595
W94140091	N16P	10-11-94 11:59	CENTROPAGES SPP.	C	2564.933
W94140091	N16P	10-11-94 11:59	CENTROPAGES TYPICUS	F	1529.094
W94140091	N16P	10-11-94 11:59	CENTROPAGES TYPICUS	M	1775.723
W94140091	N16P	10-11-94 11:59	COPEPOD NAUPLII	N	6757.611
W94140091	N16P	10-11-94 11:59	GASTROPOD VELIGER		542.582
W94140091	N16P	10-11-94 11:59	MICROSETELLA NORVEGICA		98.651
W94140091	N16P	10-11-94 11:59	OITHONA SIMILIS	C	12331.407
W94140091	N16P	10-11-94 11:59	OITHONA SIMILIS	F	1775.723
W94140091	N16P	10-11-94 11:59	OITHONA SIMILIS	M	98.651
W94140091	N16P	10-11-94 11:59	PARACALANUS PARVUS	C	49.326
W94140091	N16P	10-11-94 11:59	PARACALANUS PARVUS	F	295.954
W94140091	N16P	10-11-94 11:59	PARACALANUS PARVUS	M	98.651
W94140091	N16P	10-11-94 11:59	PODON POLYPHEMOIDES		49.326
W94140091	N16P	10-11-94 11:59	PSEUDOCALANUS NEWMANI	F	98.651
W94140079	N20P	10-11-94 11:10	ACARTIA TONSA	C	44.599
W94140079	N20P	10-11-94 11:10	BIVALVE VELIGER		15654.355
W94140079	N20P	10-11-94 11:10	CALANUS FINMARCHICUS	C	44.599
W94140079	N20P	10-11-94 11:10	CENTROPAGES SPP.	C	713.589
W94140079	N20P	10-11-94 11:10	CENTROPAGES TYPICUS	F	668.99
W94140079	N20P	10-11-94 11:10	CENTROPAGES TYPICUS	M	1293.38
W94140079	N20P	10-11-94 11:10	COPEPOD NAUPLII	N	8250.871
W94140079	N20P	10-11-94 11:10	GASTROPOD VELIGER		713.589
W94140079	N20P	10-11-94 11:10	MICROSETELLA NORVEGICA		133.798
W94140079	N20P	10-11-94 11:10	OITHONA ATLANTICA	F	44.599
W94140079	N20P	10-11-94 11:10	OITHONA SIMILIS	C	11685.017
W94140079	N20P	10-11-94 11:10	OITHONA SIMILIS	F	2452.962
W94140079	N20P	10-11-94 11:10	OITHONA SIMILIS	M	267.596
W94140079	N20P	10-11-94 11:10	PARACALANUS PARVUS	C	44.599
W94140079	N20P	10-11-94 11:10	PARACALANUS PARVUS	F	445.993
W94140079	N20P	10-11-94 11:10	PARACALANUS PARVUS	M	44.599
W94140079	N20P	10-11-94 11:10	PSEUDOCALANUS NEWMANI	F	44.599

*C=Copepidites, F=Female, M=Male, N=Nauplii