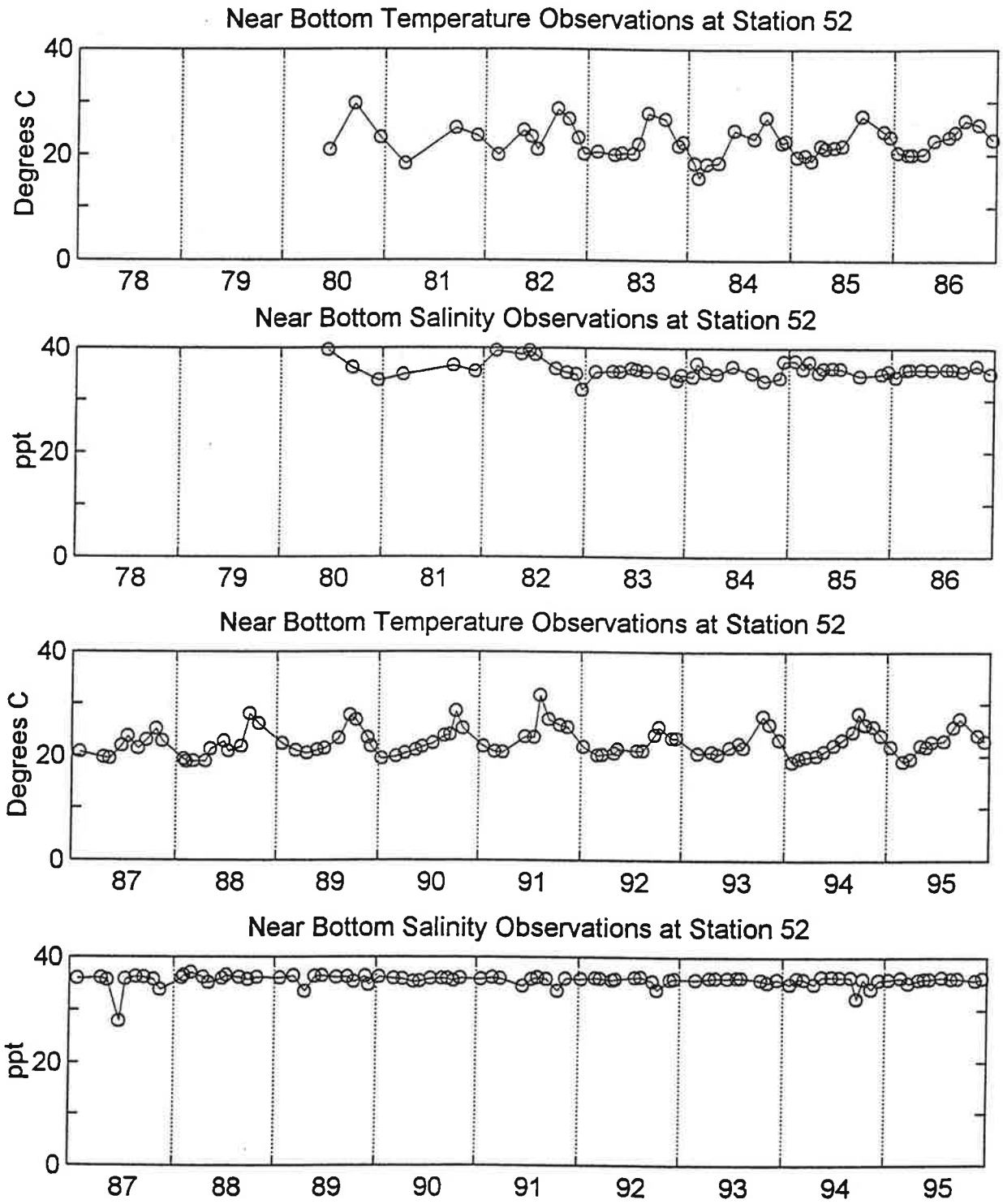

Figure B45. Station 52 monthly physical hydrography data: bottom temperatures and salinities.

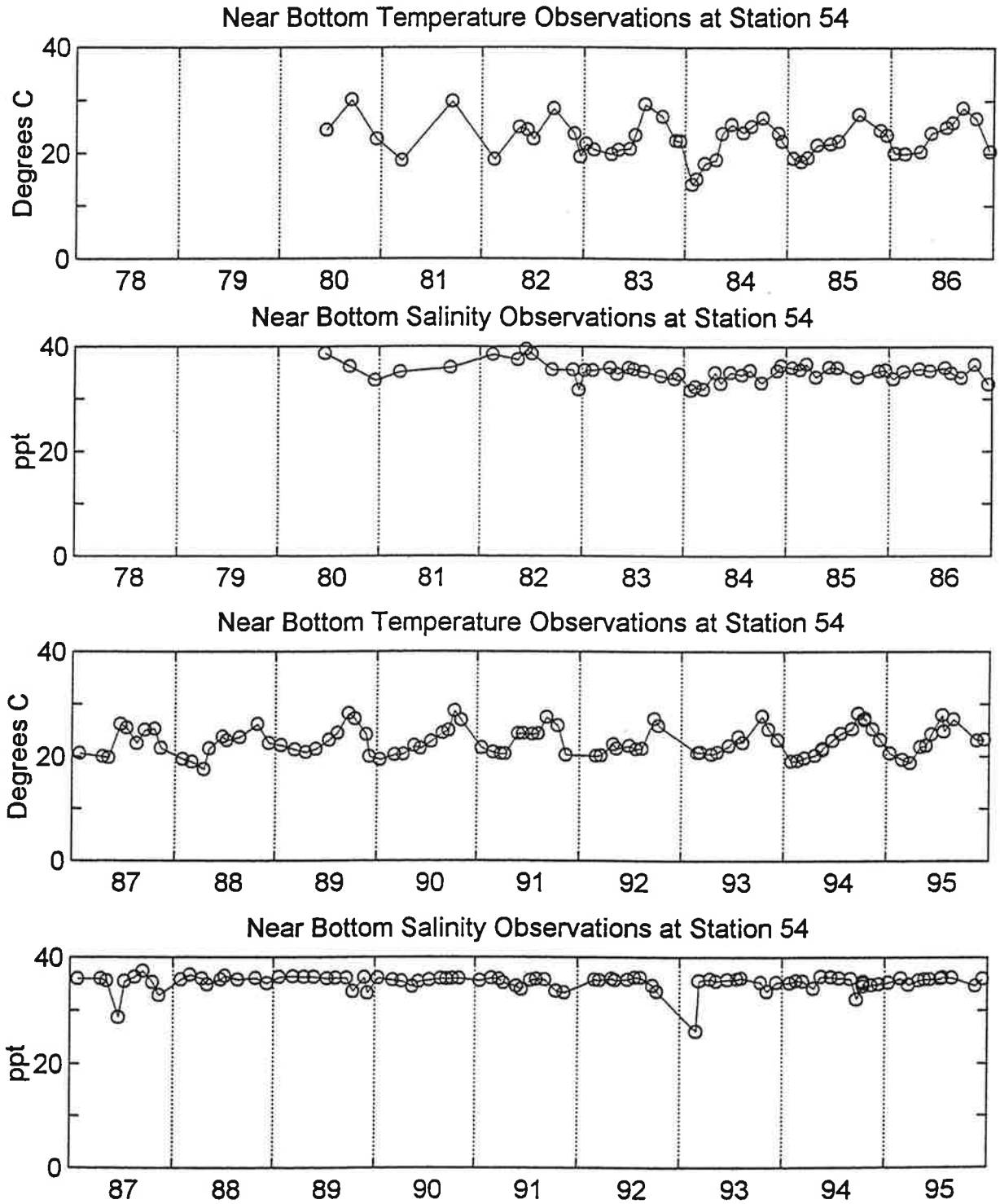

Figure B47. Station 54 monthly physical hydrography data: bottom temperatures and salinities.

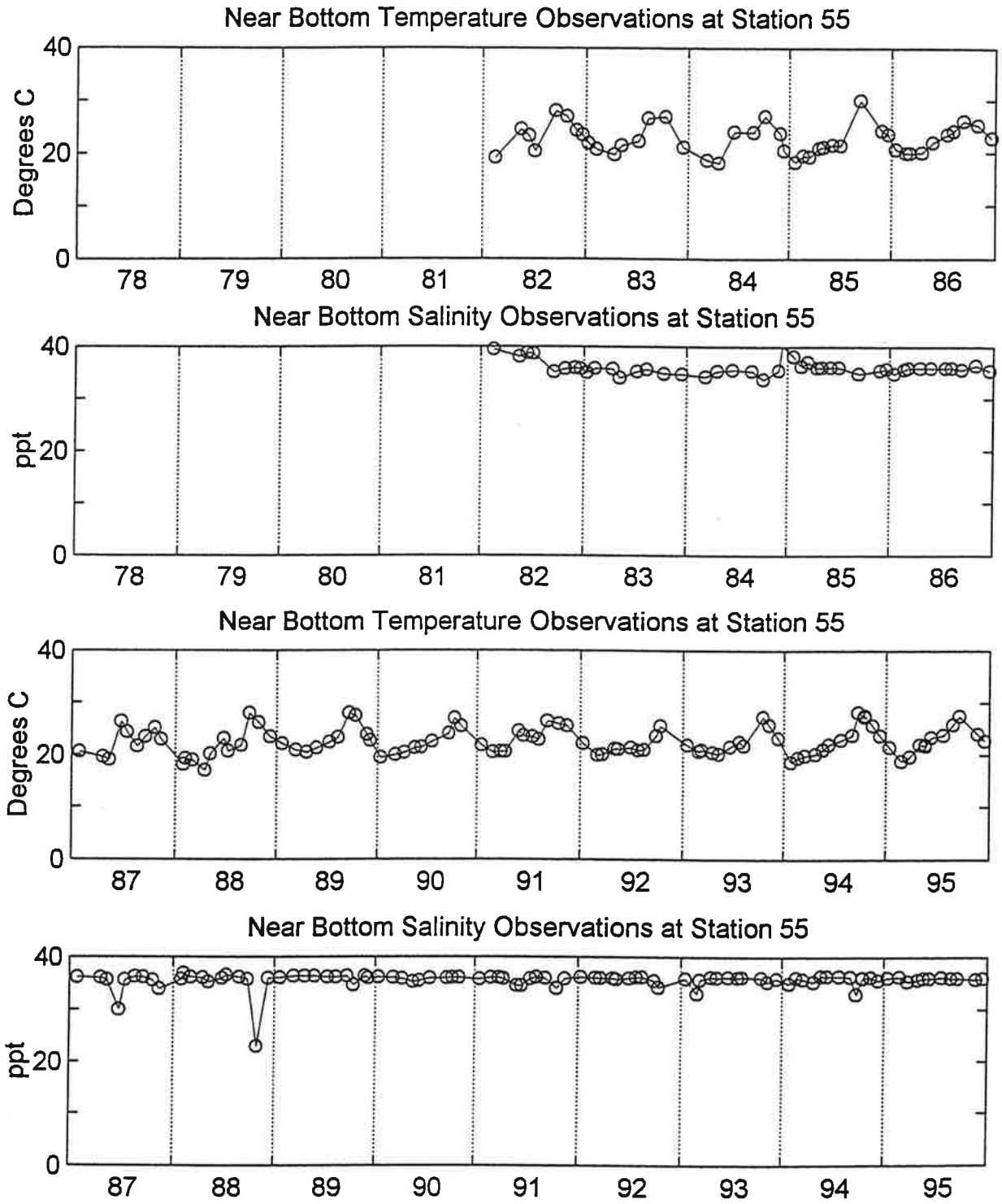

Figure B48. Station 55 monthly physical hydrography data: bottom temperatures and salinities.

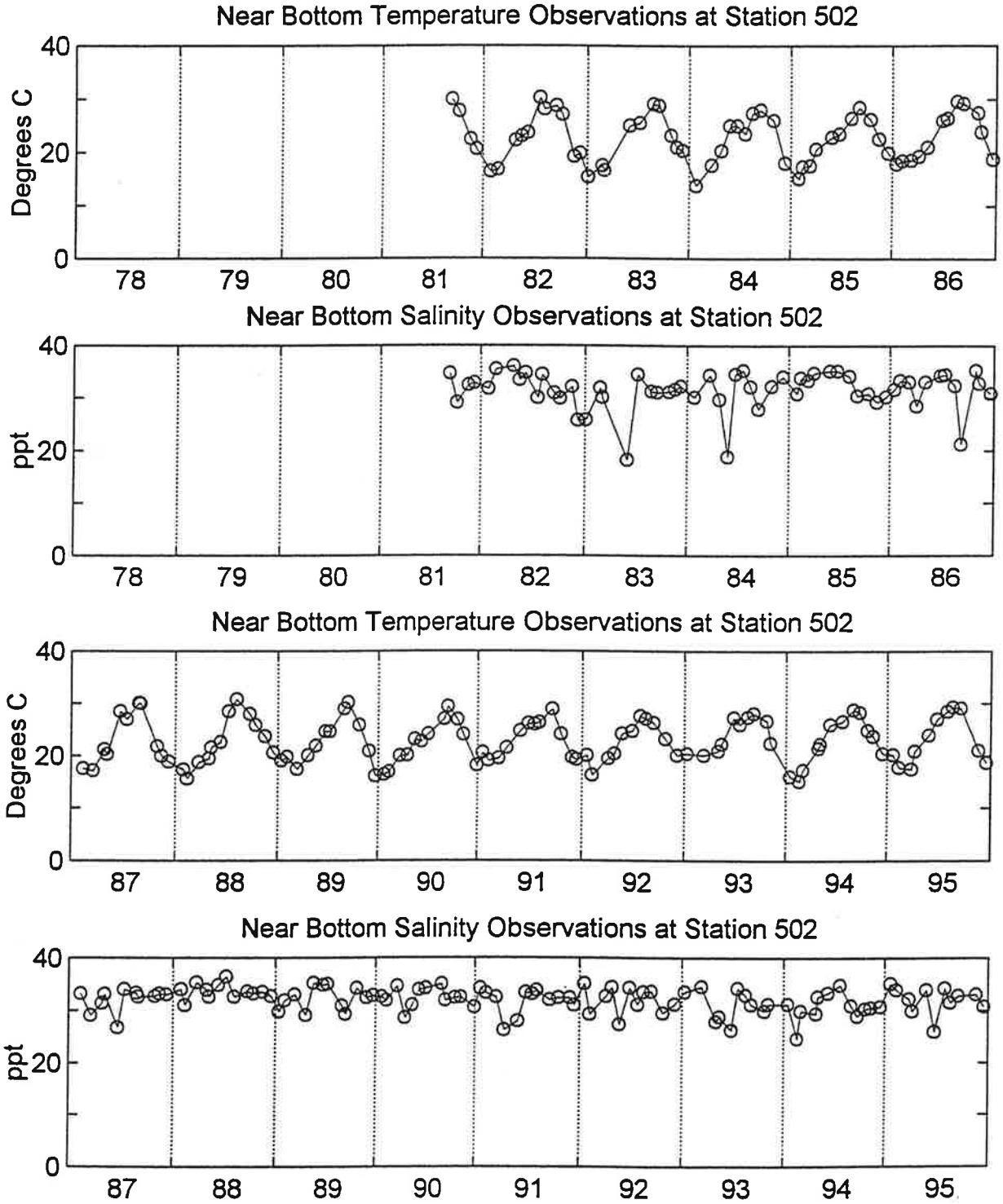

Figure B49. Station 502 monthly physical hydrography data: bottom temperatures and salinities.

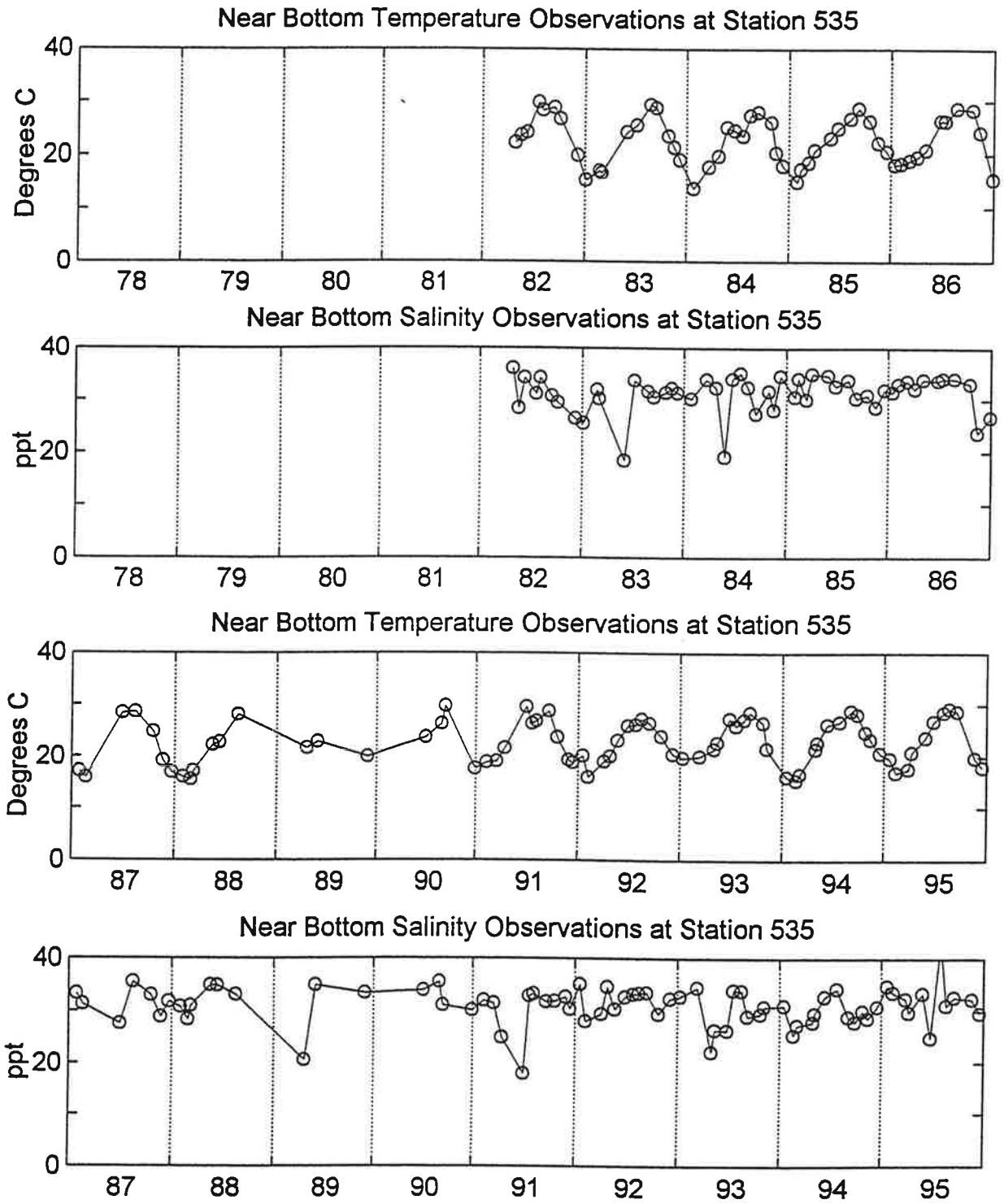

Figure B50. Station 535 monthly physical hydrography data: bottom temperatures and salinities.

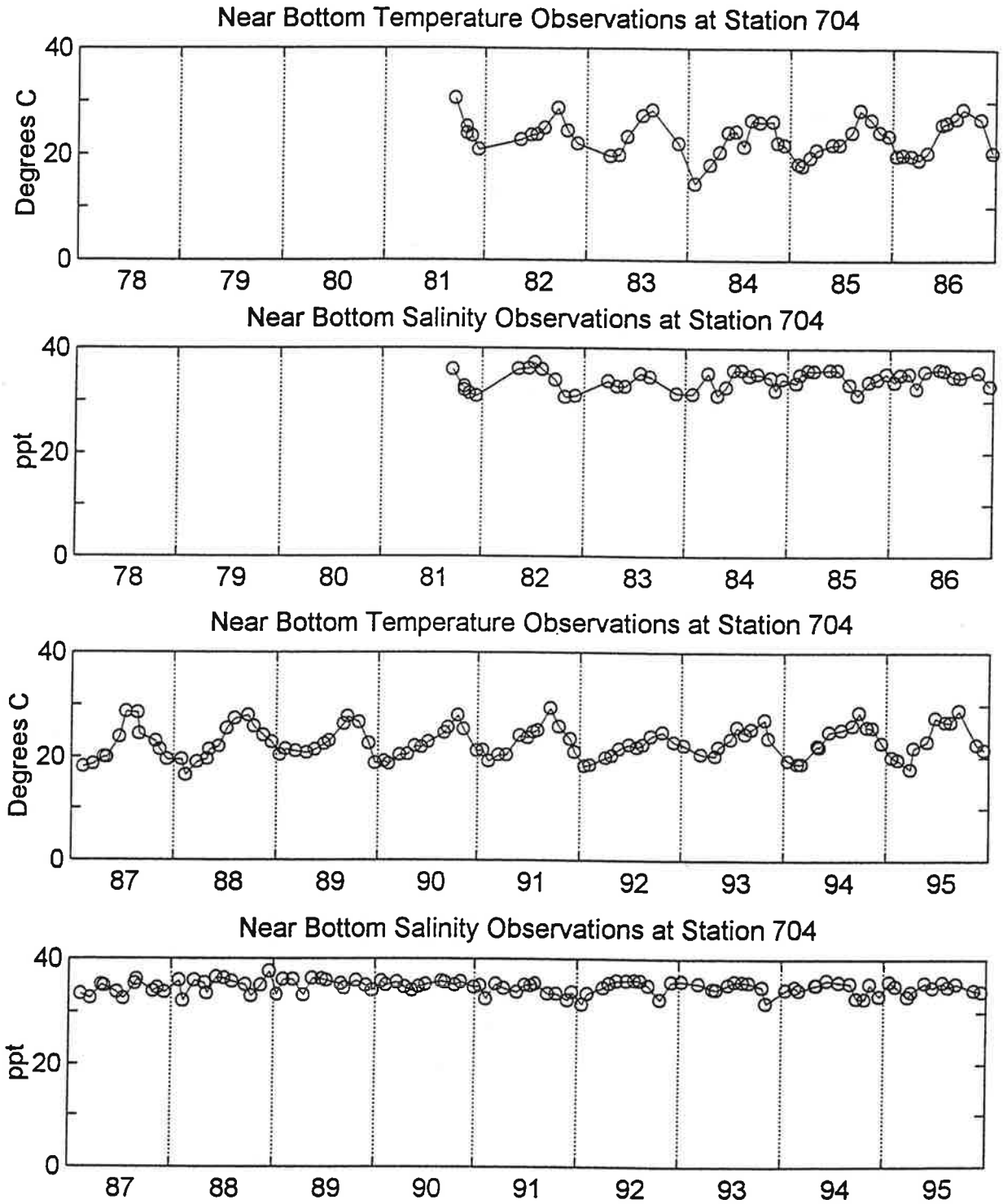

Figure B51. Station 704 monthly physical hydrography data: bottom temperatures and salinities.

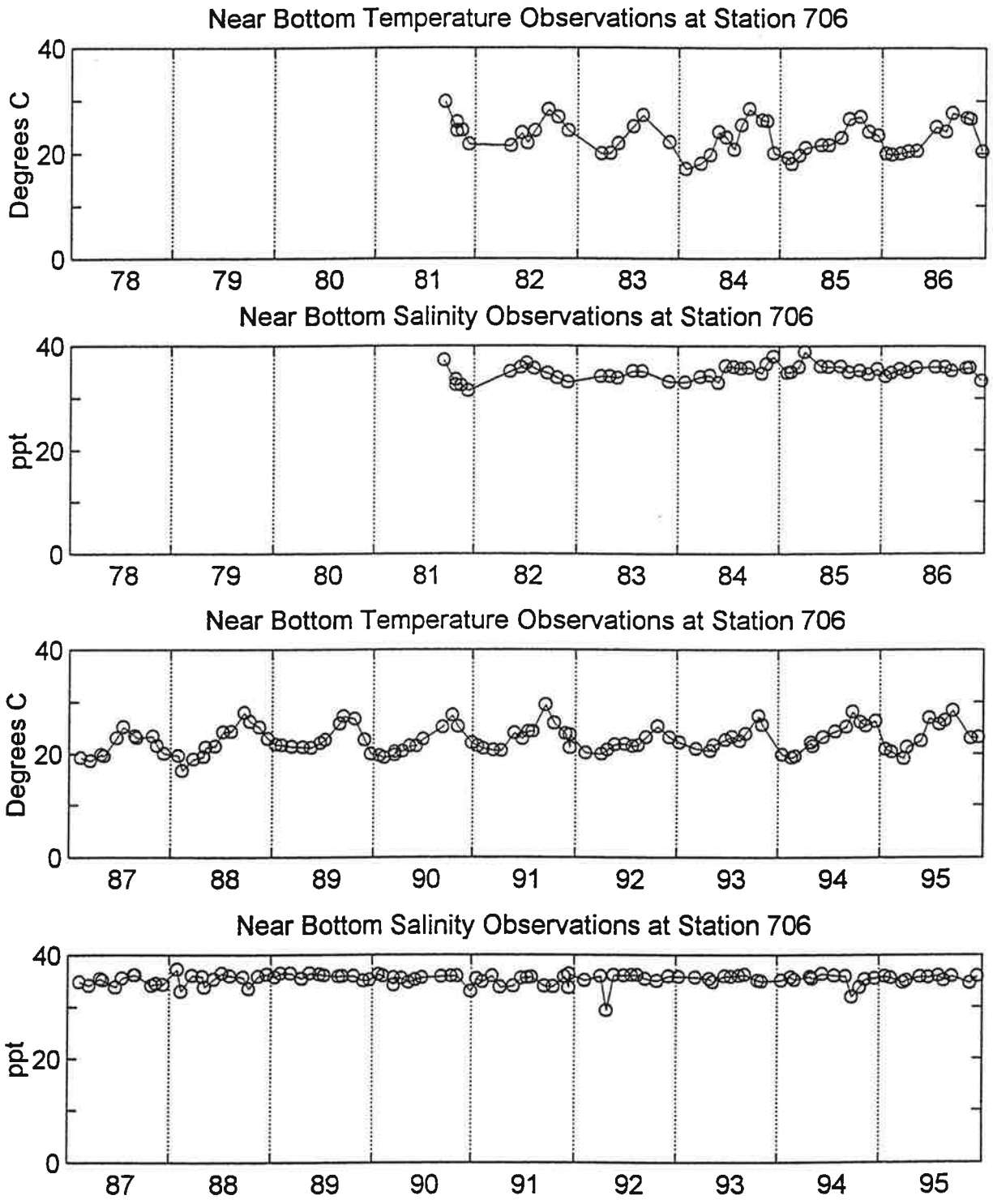

Figure B52. Station 706 monthly physical hydrography data: bottom temperatures and salinities.

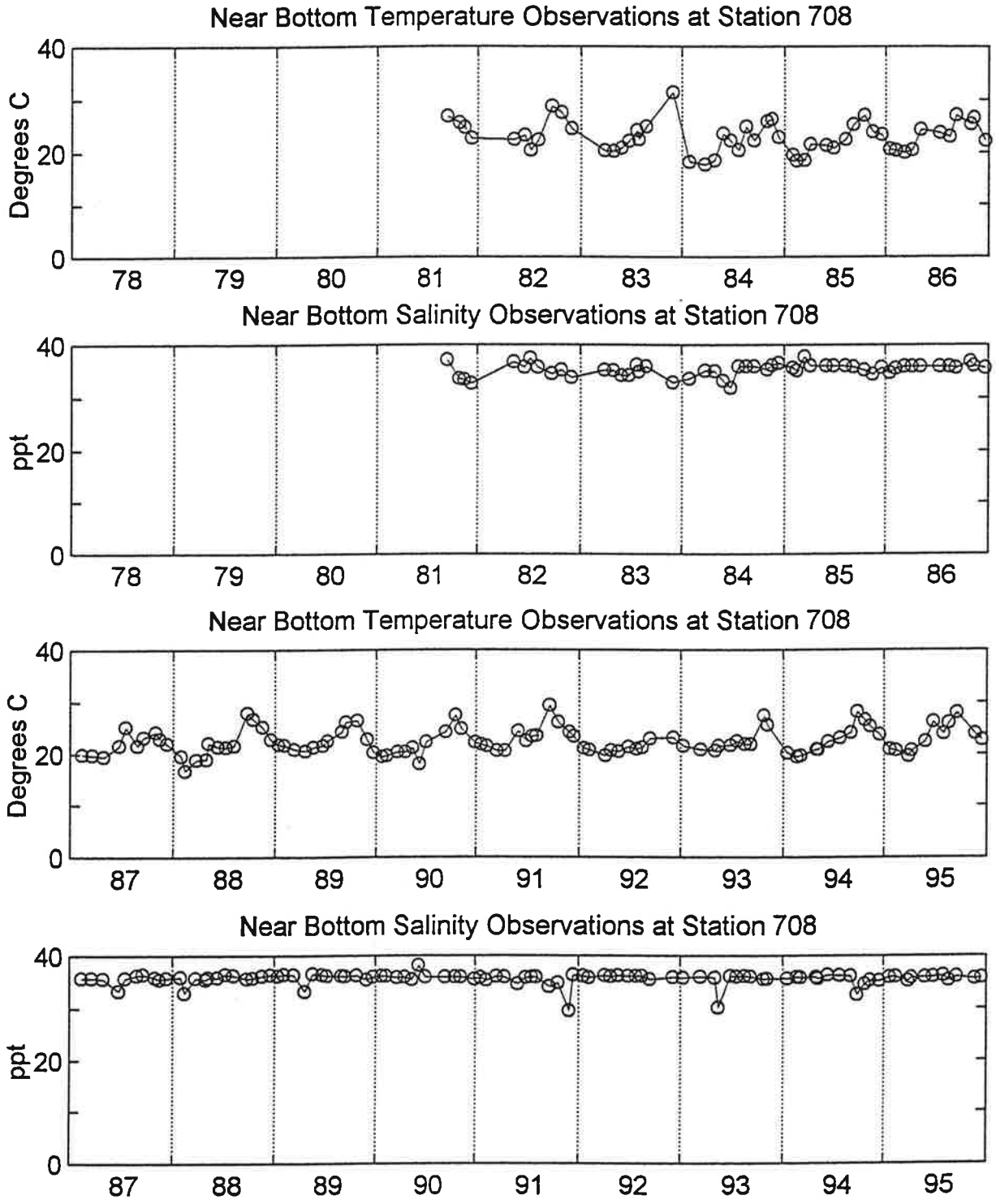

Figure B53. Station 708 monthly physical hydrography data: bottom temperatures and salinities.

APPENDIX C

WATER CHEMISTRY PLOTS OF MONTHLY SALINITY OBSERVATIONS

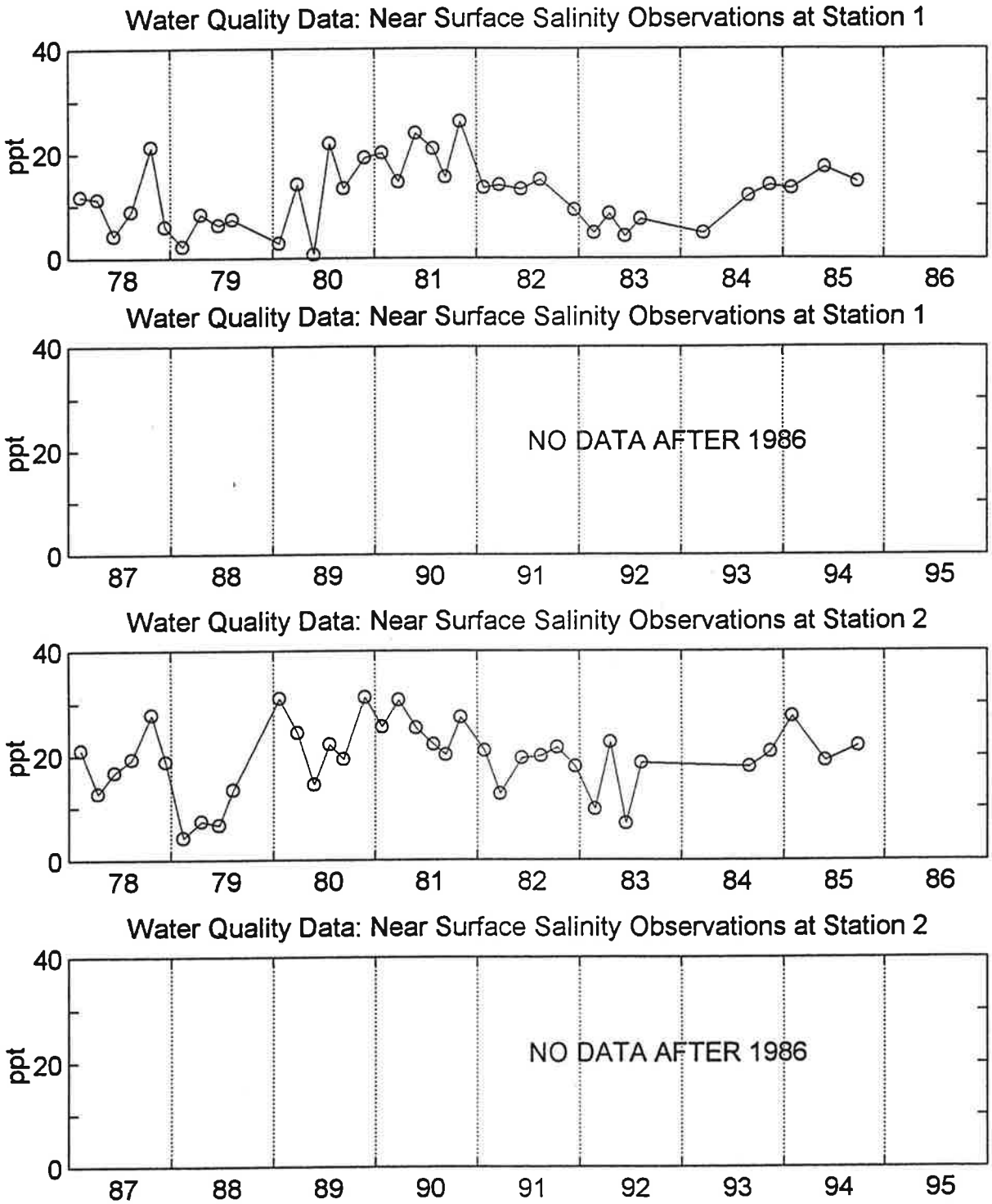

Figure C1. Monthly water chemistry data: top salinities, stations 1 and 2.

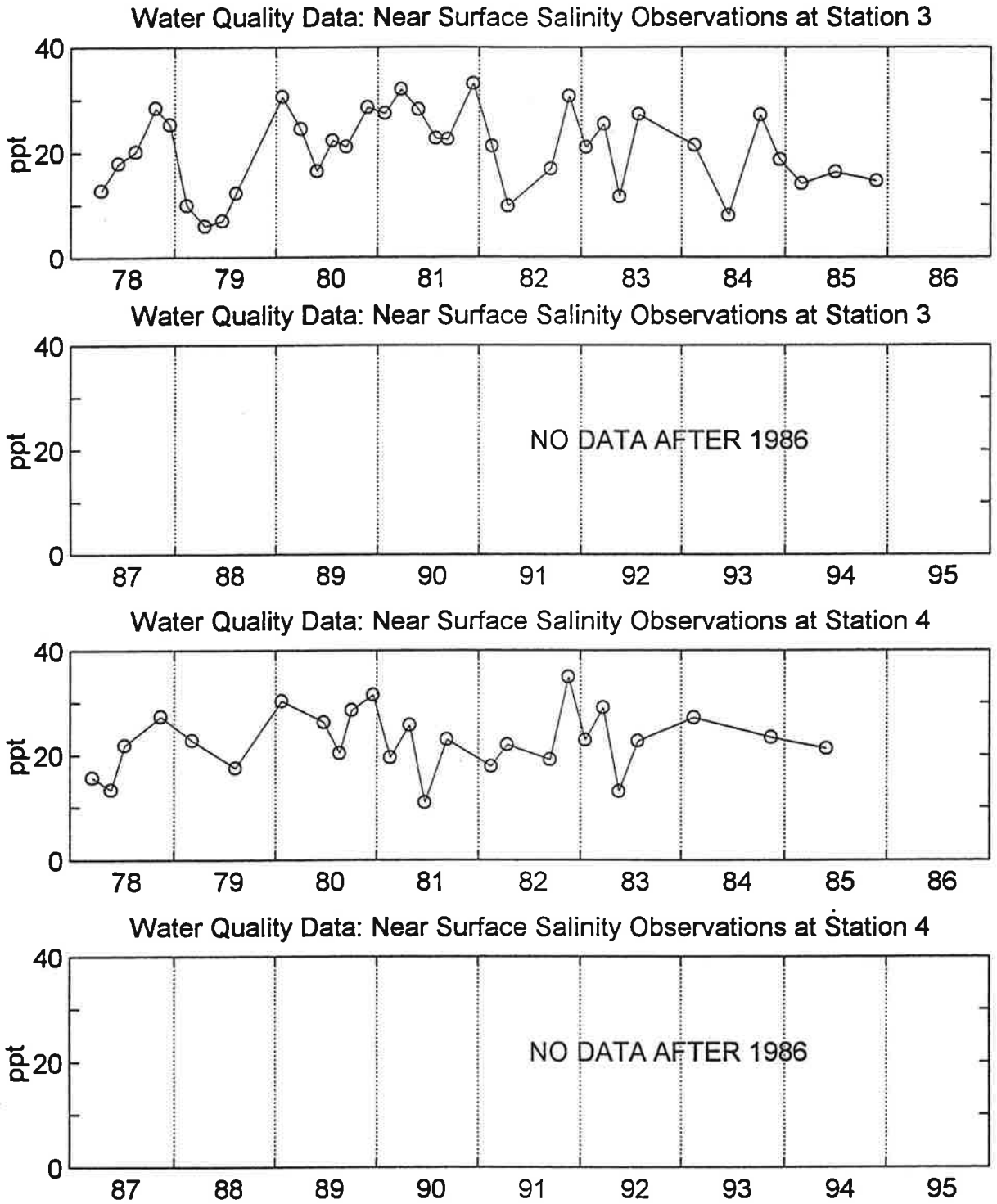

Figure C2. Monthly water chemistry data: top salinities, stations 3 and 4.

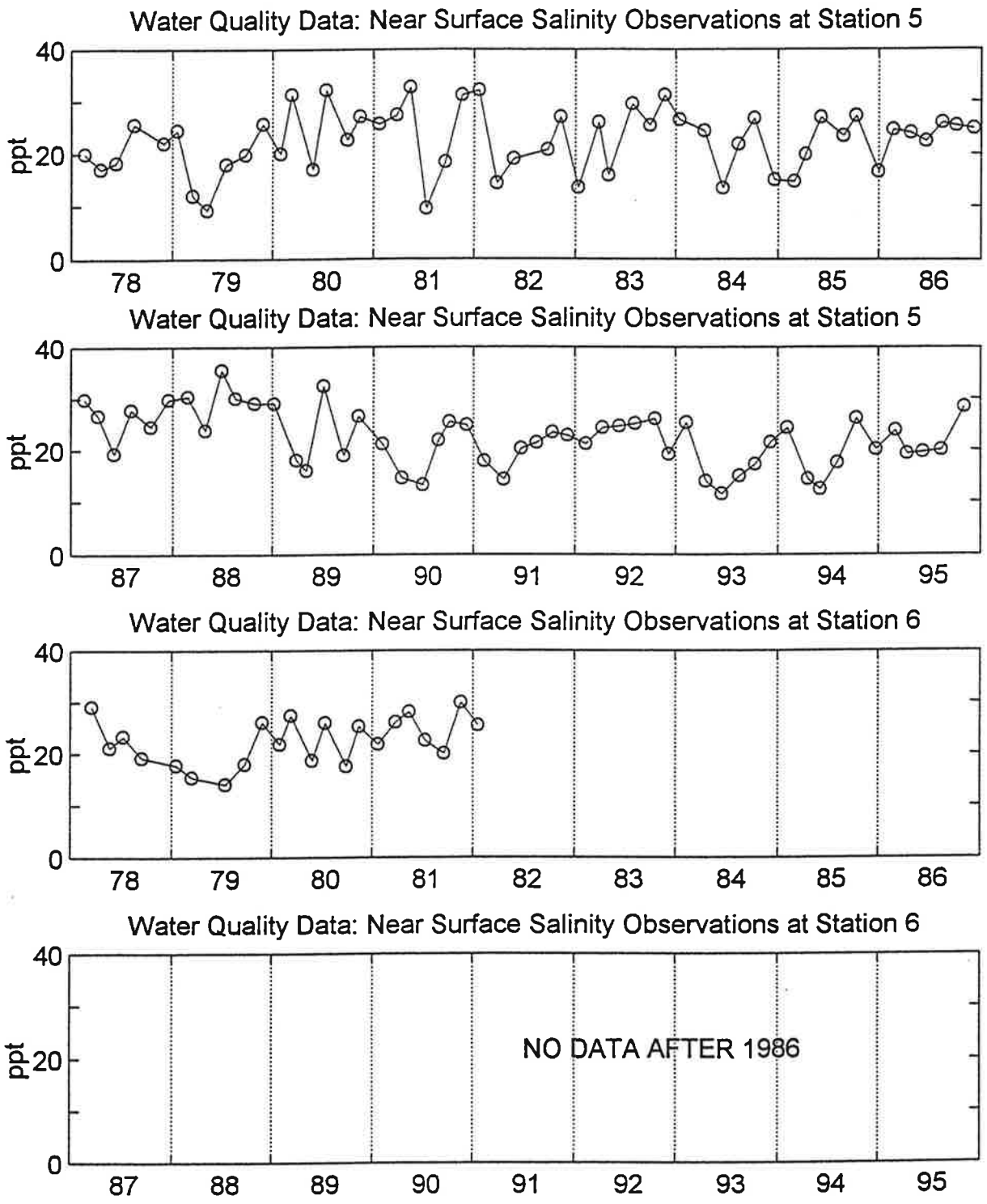

Figure C3. Monthly water chemistry data: top salinities, stations 5 and 6.

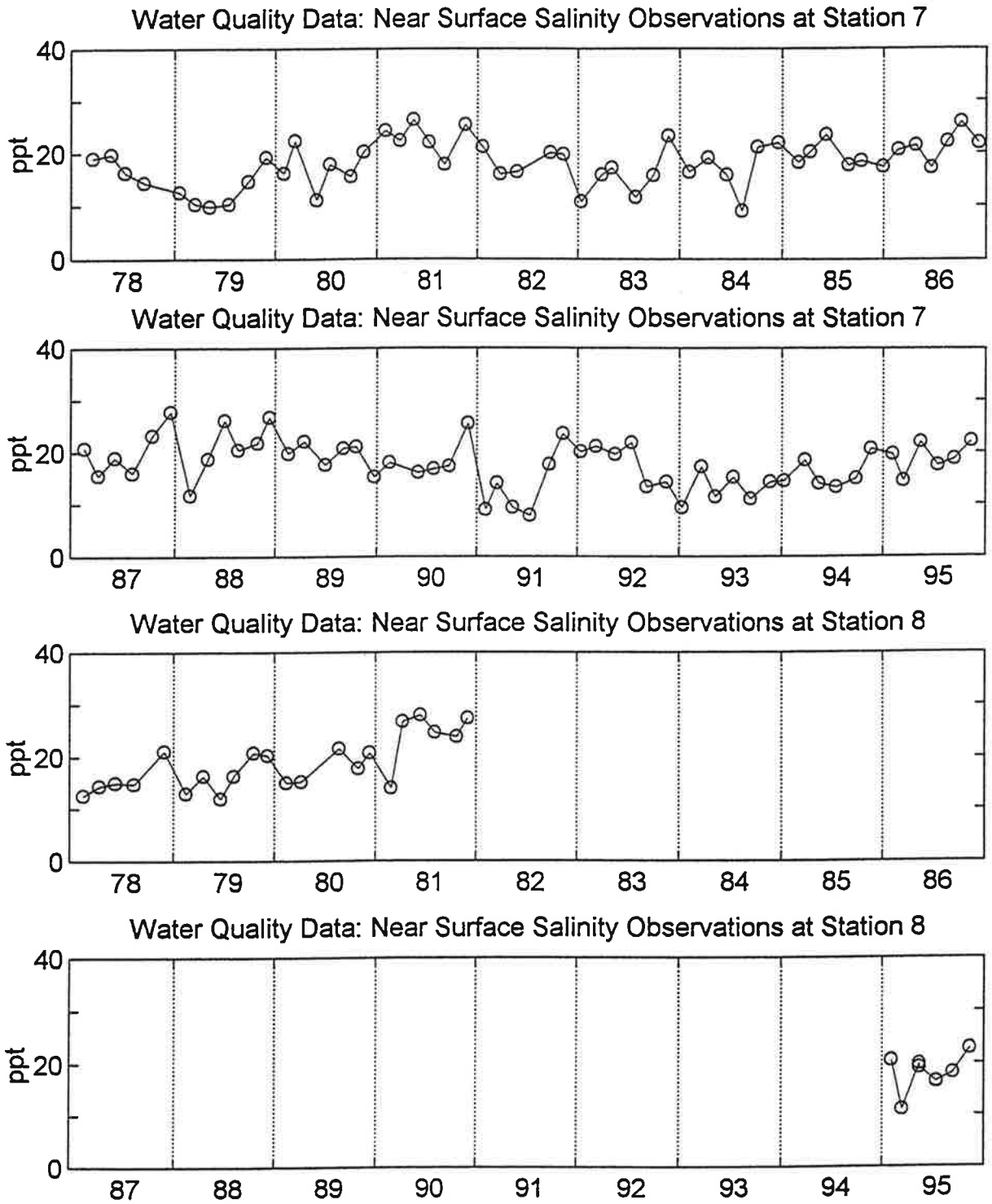

Figure C4. Monthly water chemistry data: top salinities, stations 7 and 8.

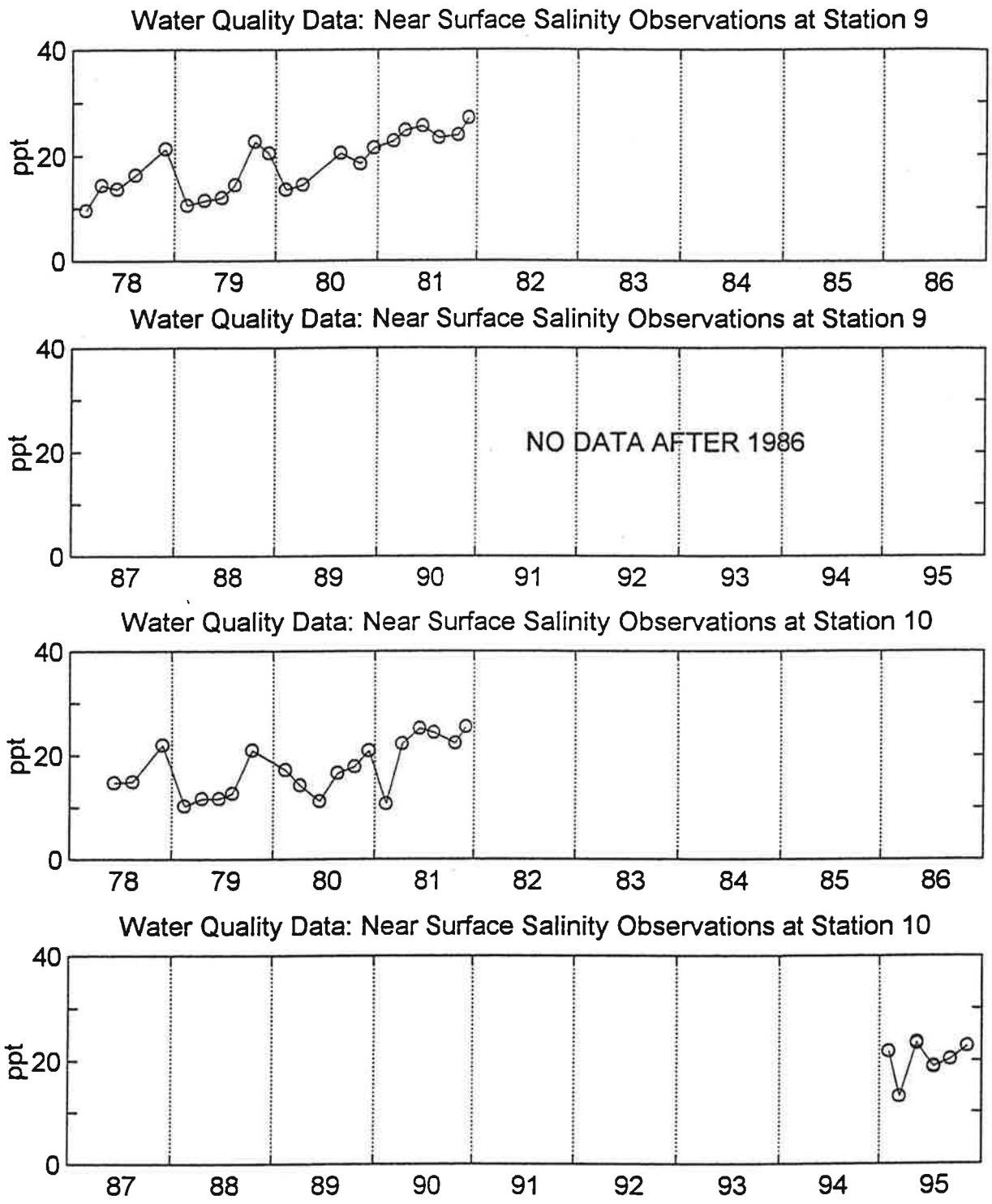

Figure C5. Monthly water chemistry data: top salinities, stations 9 and 10.

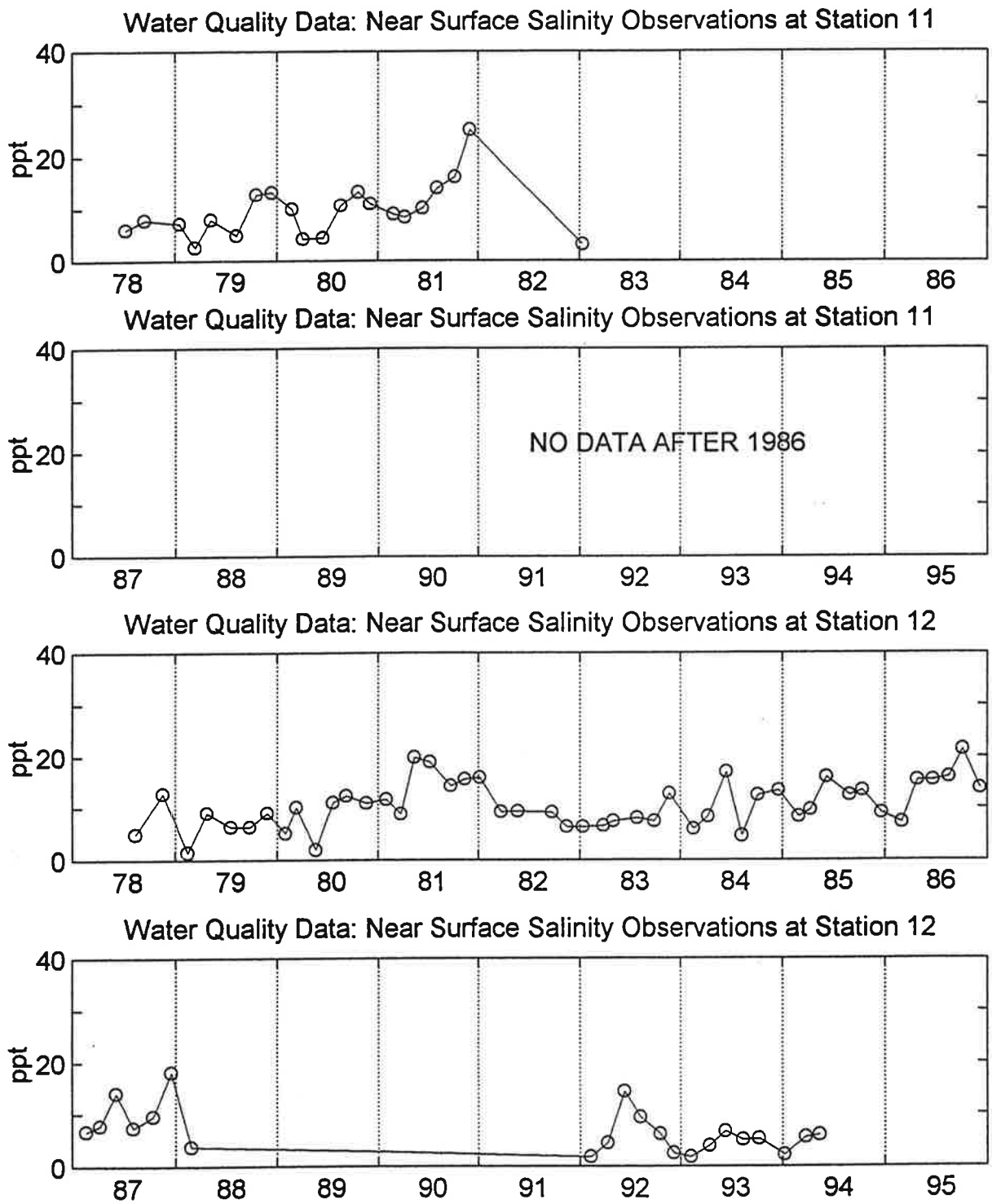

Figure C6. Monthly water chemistry data: top salinities, stations 11 and 12.

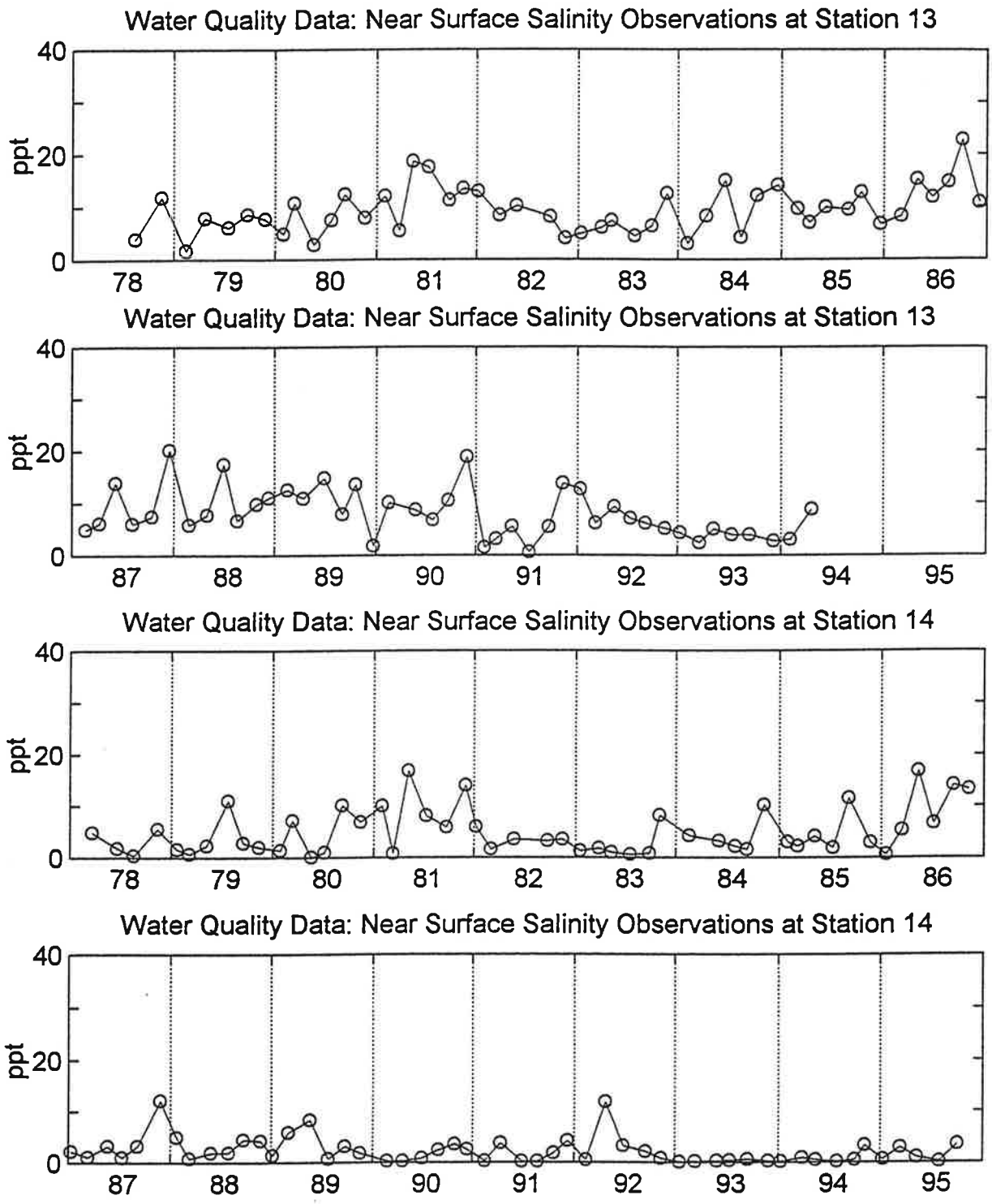

Figure C7. Monthly water chemistry data: top salinities, stations 13 and 14.

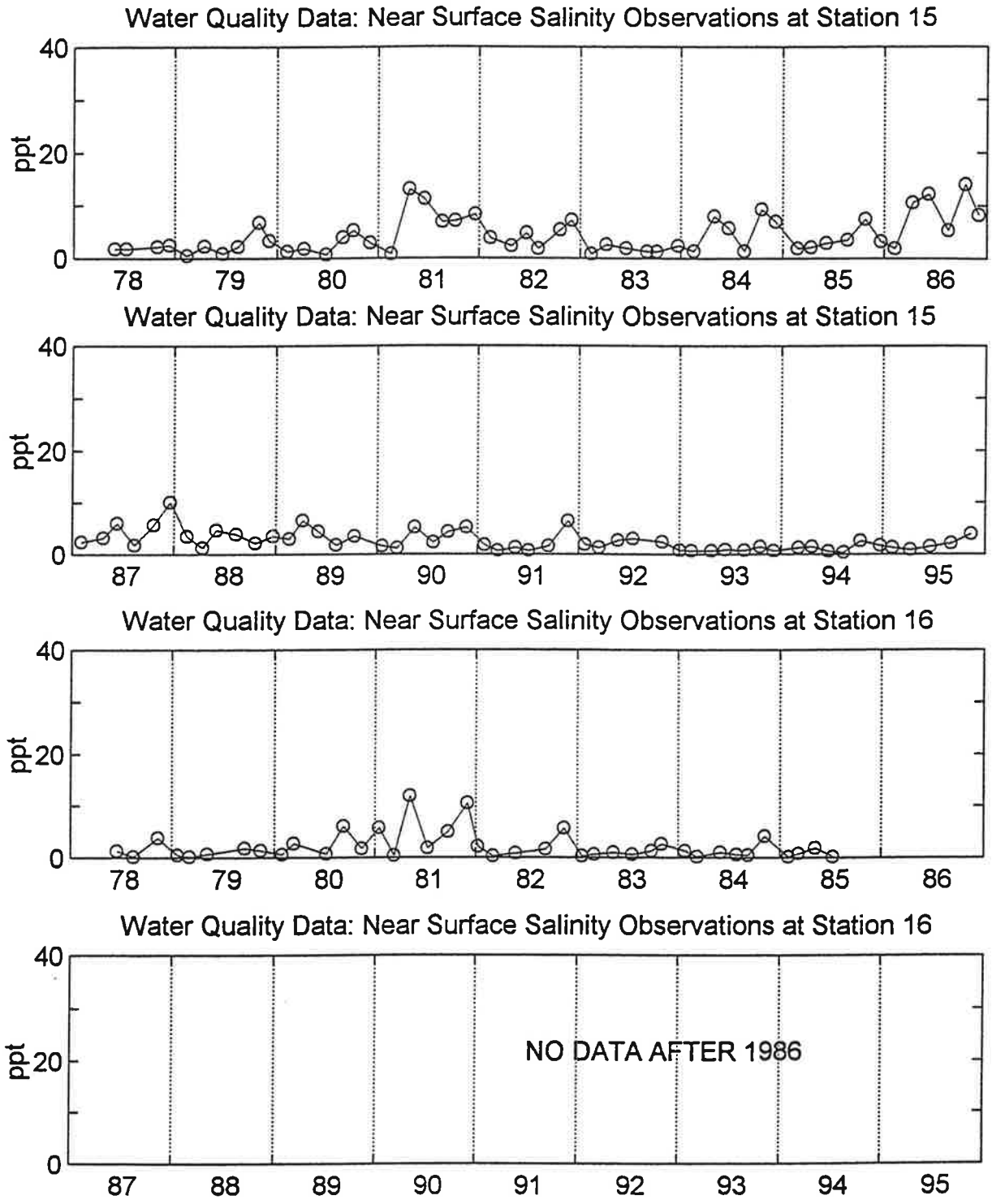

Figure C8. Monthly water chemistry data: top salinities, stations 15 and 16.

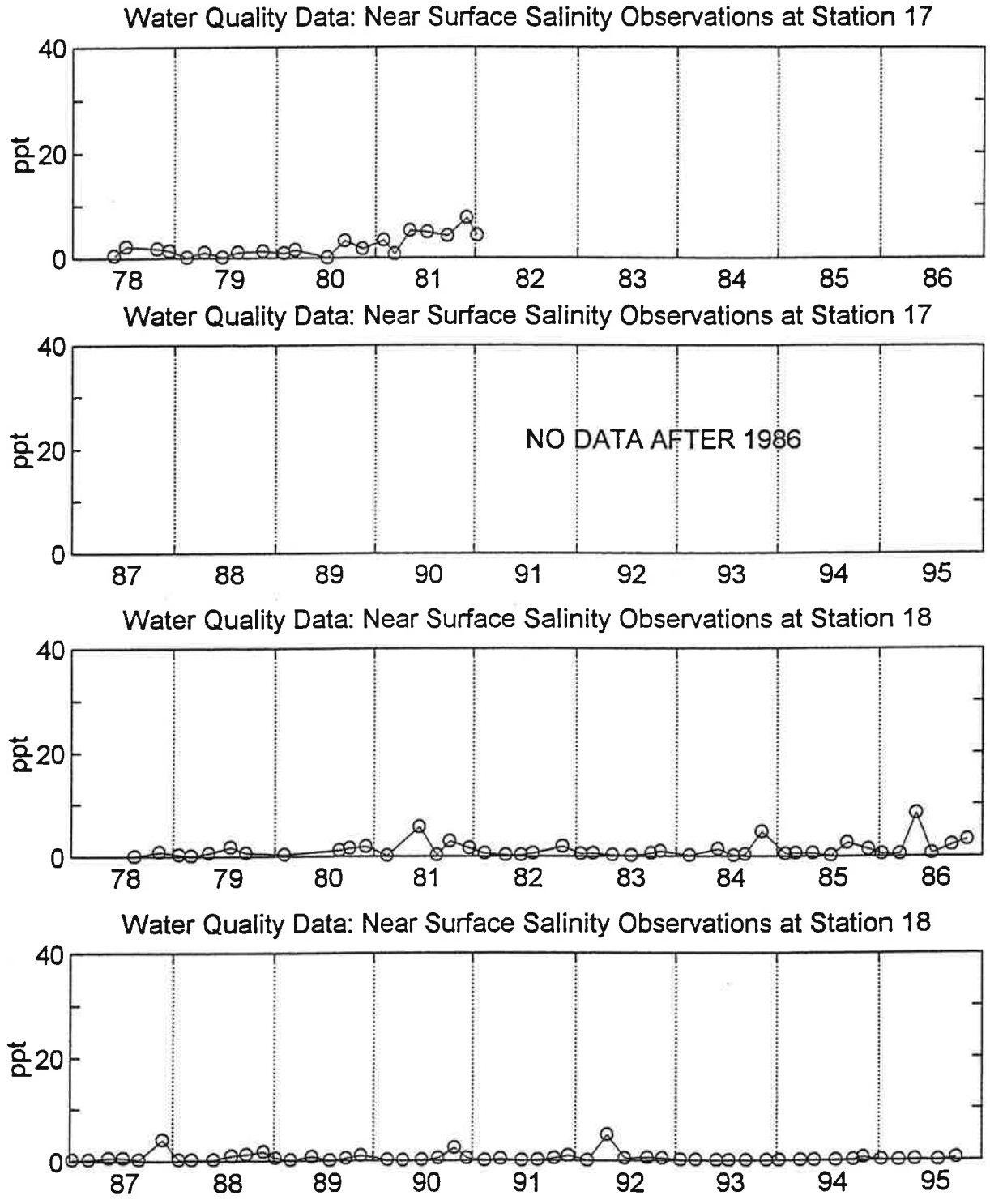

Figure C9. Monthly water chemistry data: top salinities, stations 17 and 18.

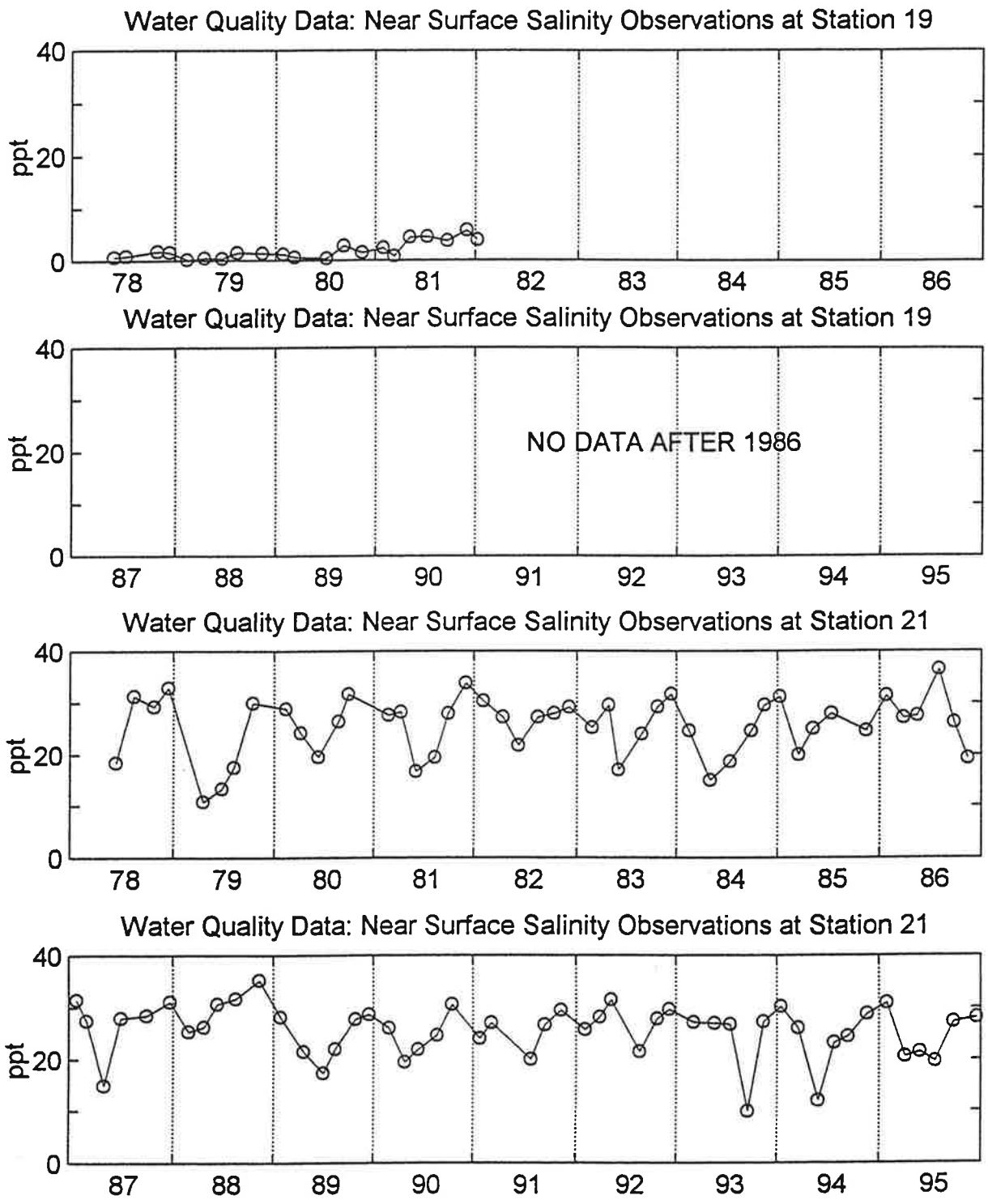

Figure C10. Monthly water chemistry data: top salinities, stations 19 and 21.

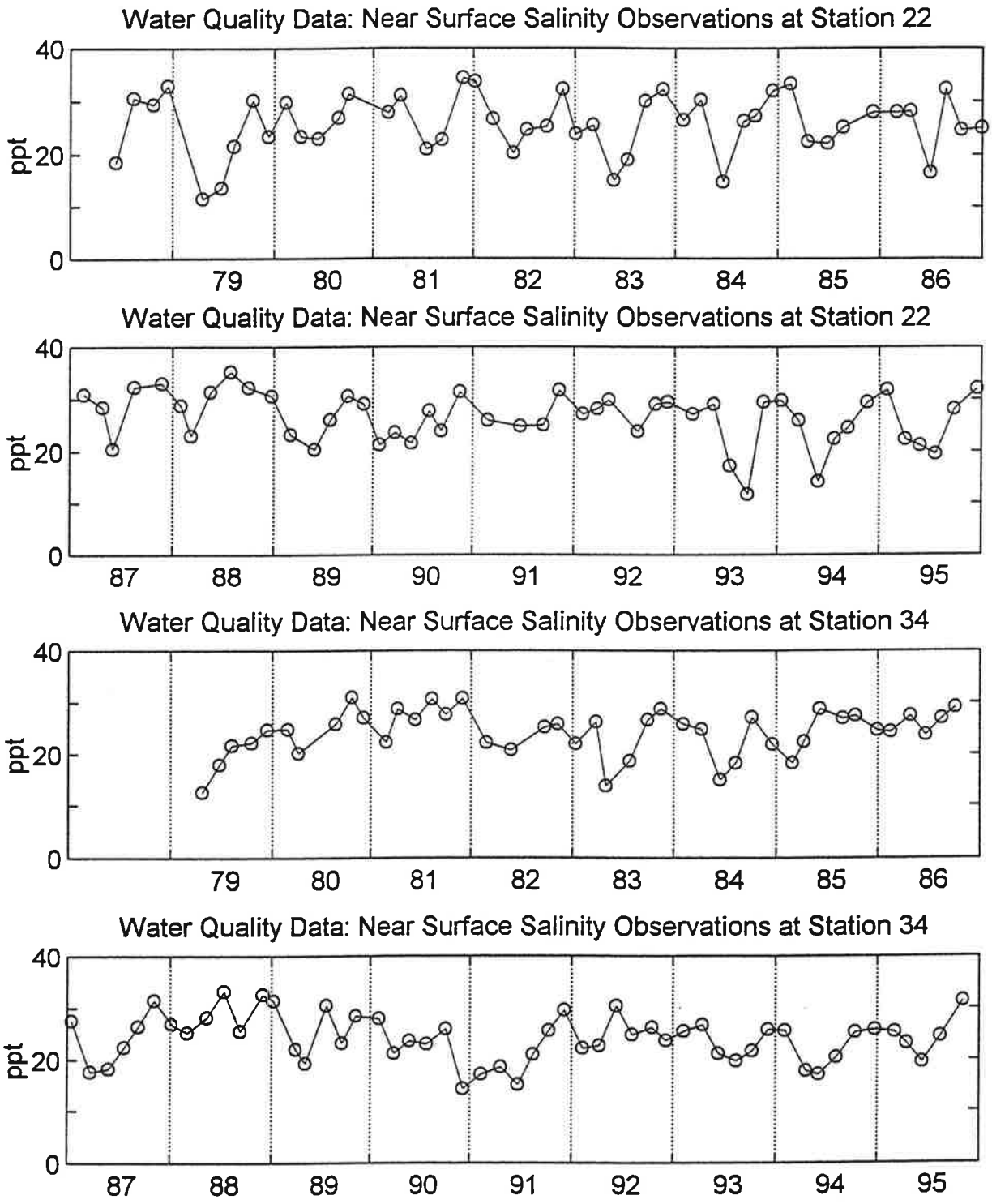

Figure C11. Monthly water chemistry data: top salinities, stations 22 and 34.

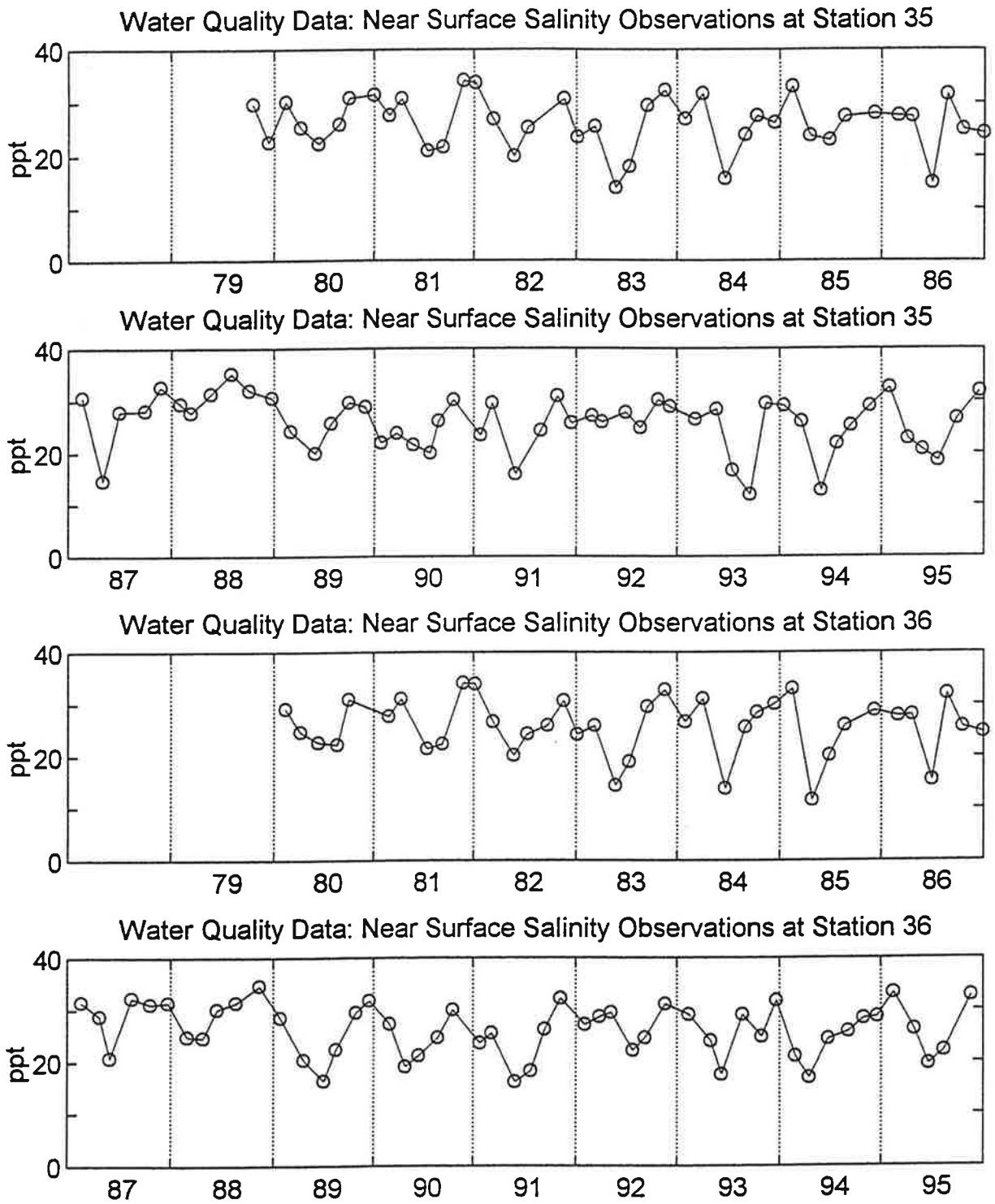

Figure C12. Monthly water chemistry data: top salinities, stations 35 and 36.

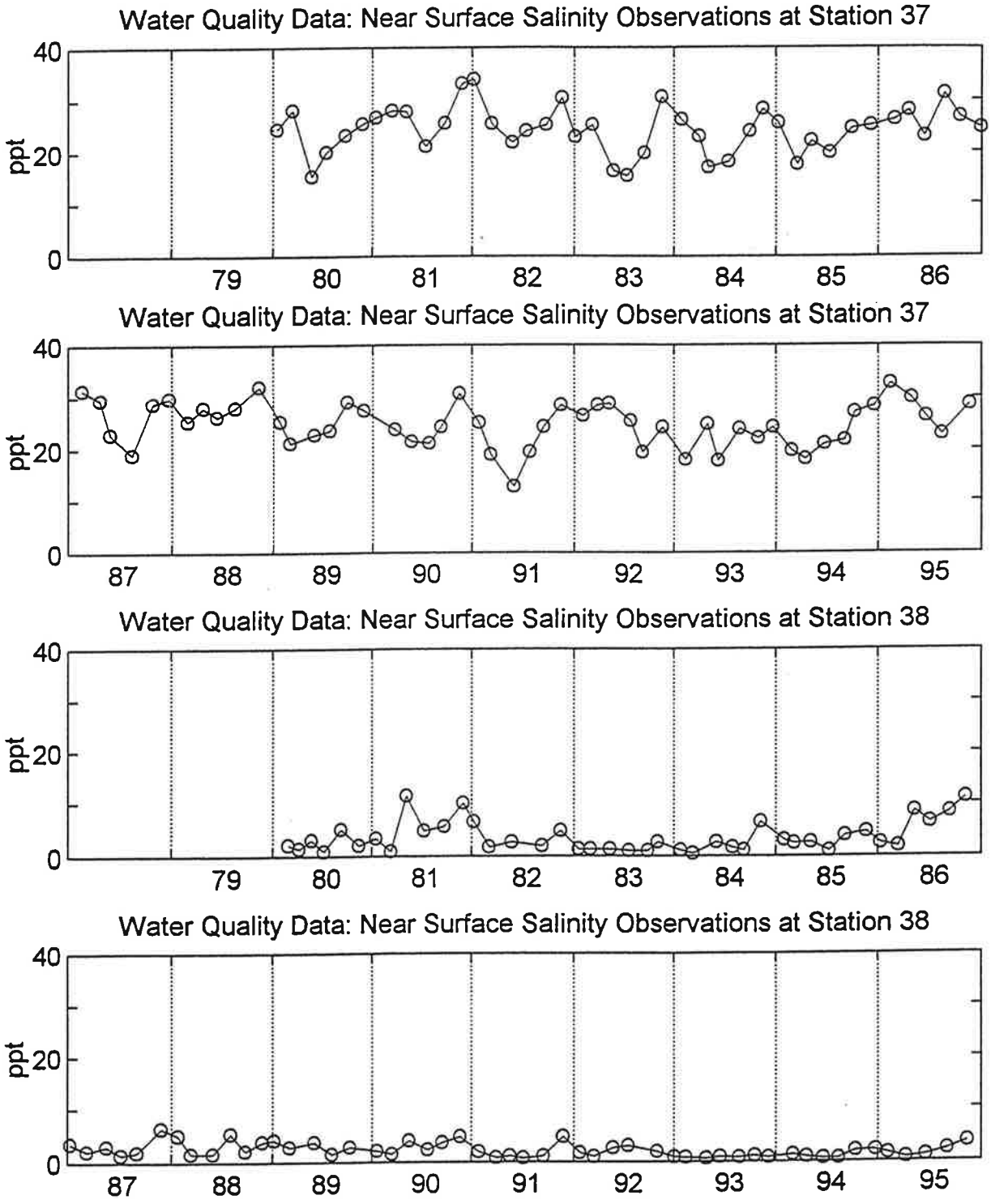

Figure C13. Monthly water chemistry data: top salinities, stations 37 and 38.

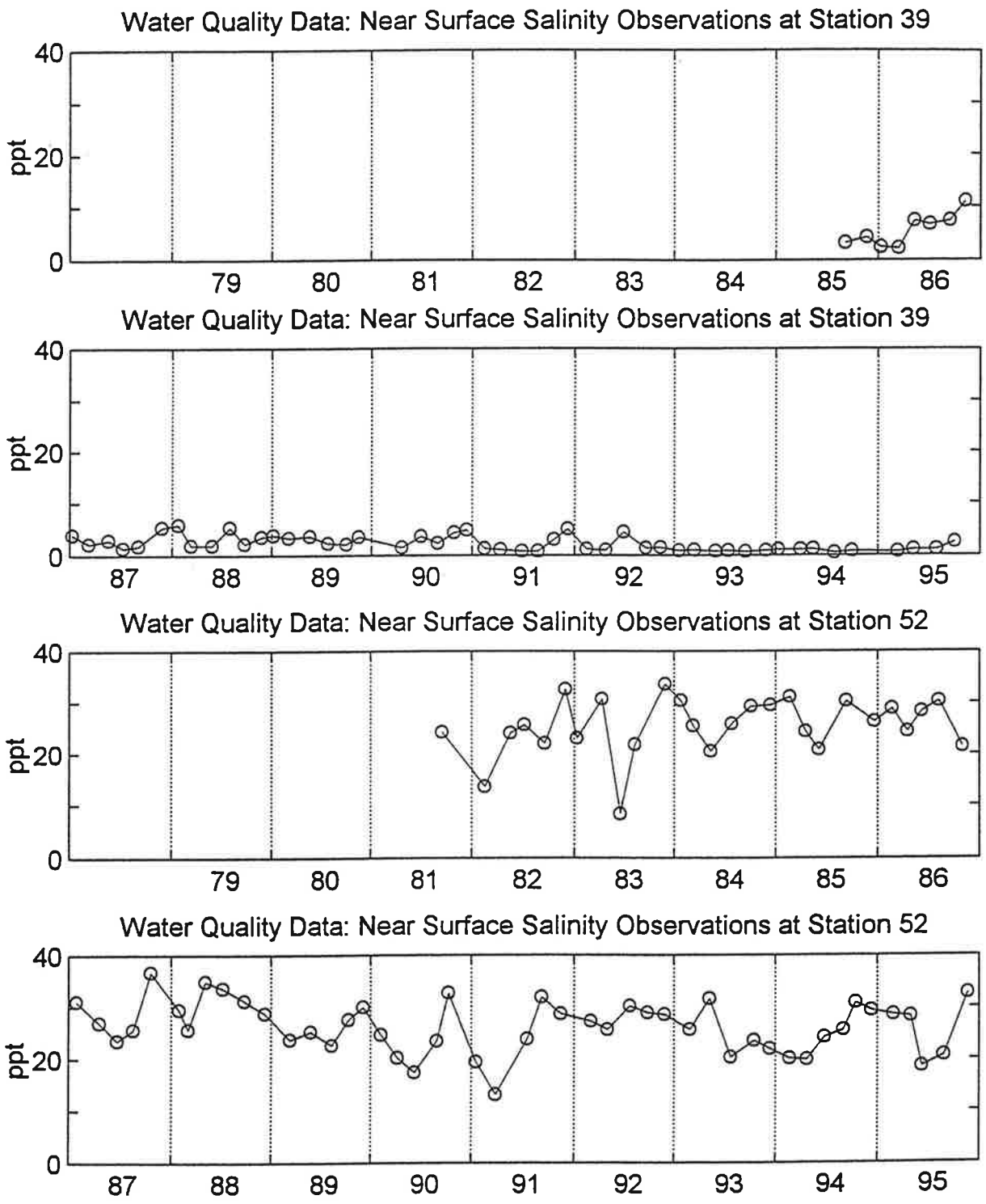

Figure C14. Monthly water chemistry data: top salinities, stations 39 and 52.

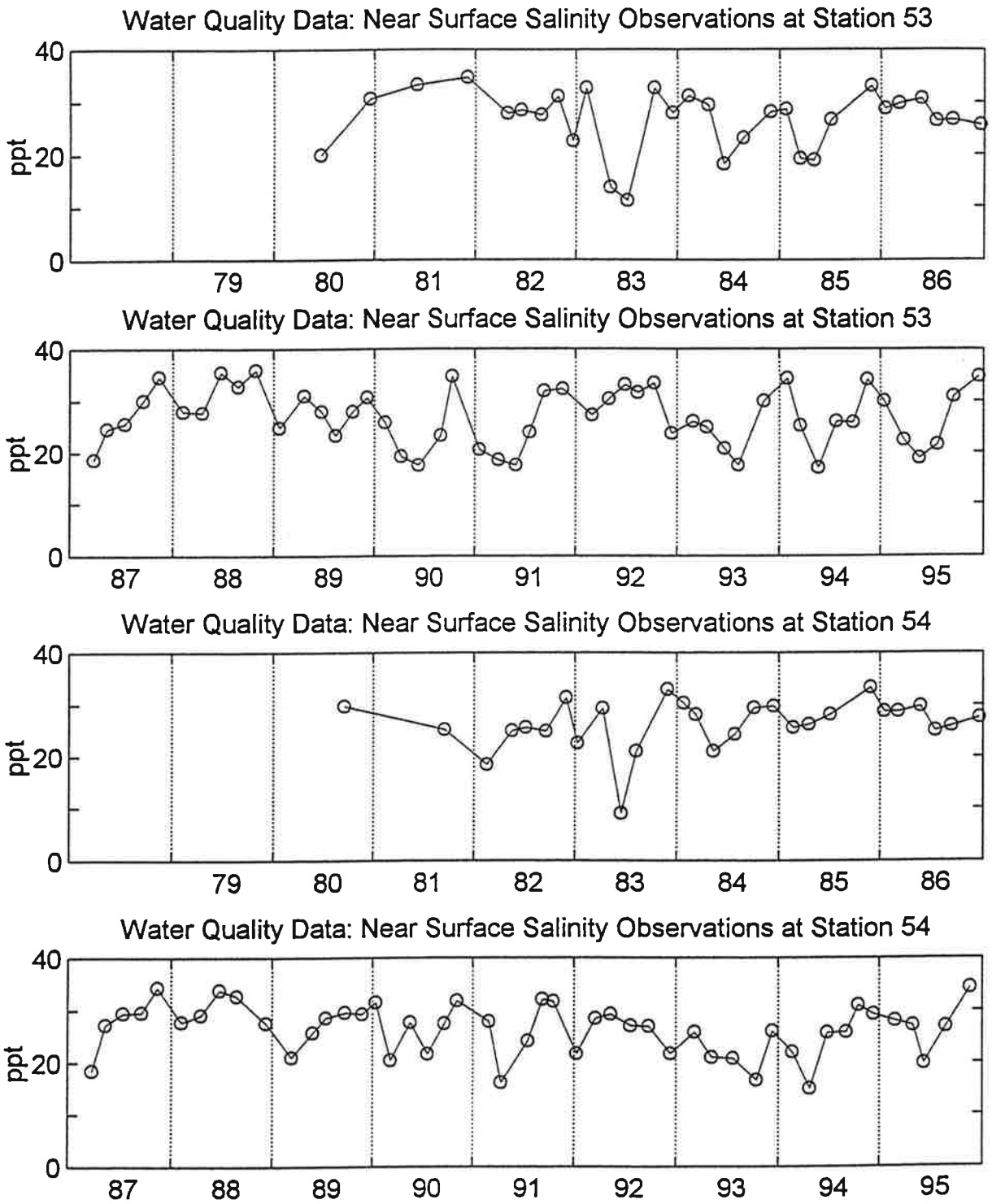

Figure C15. Monthly water chemistry data: top salinities, stations 53 and 54.

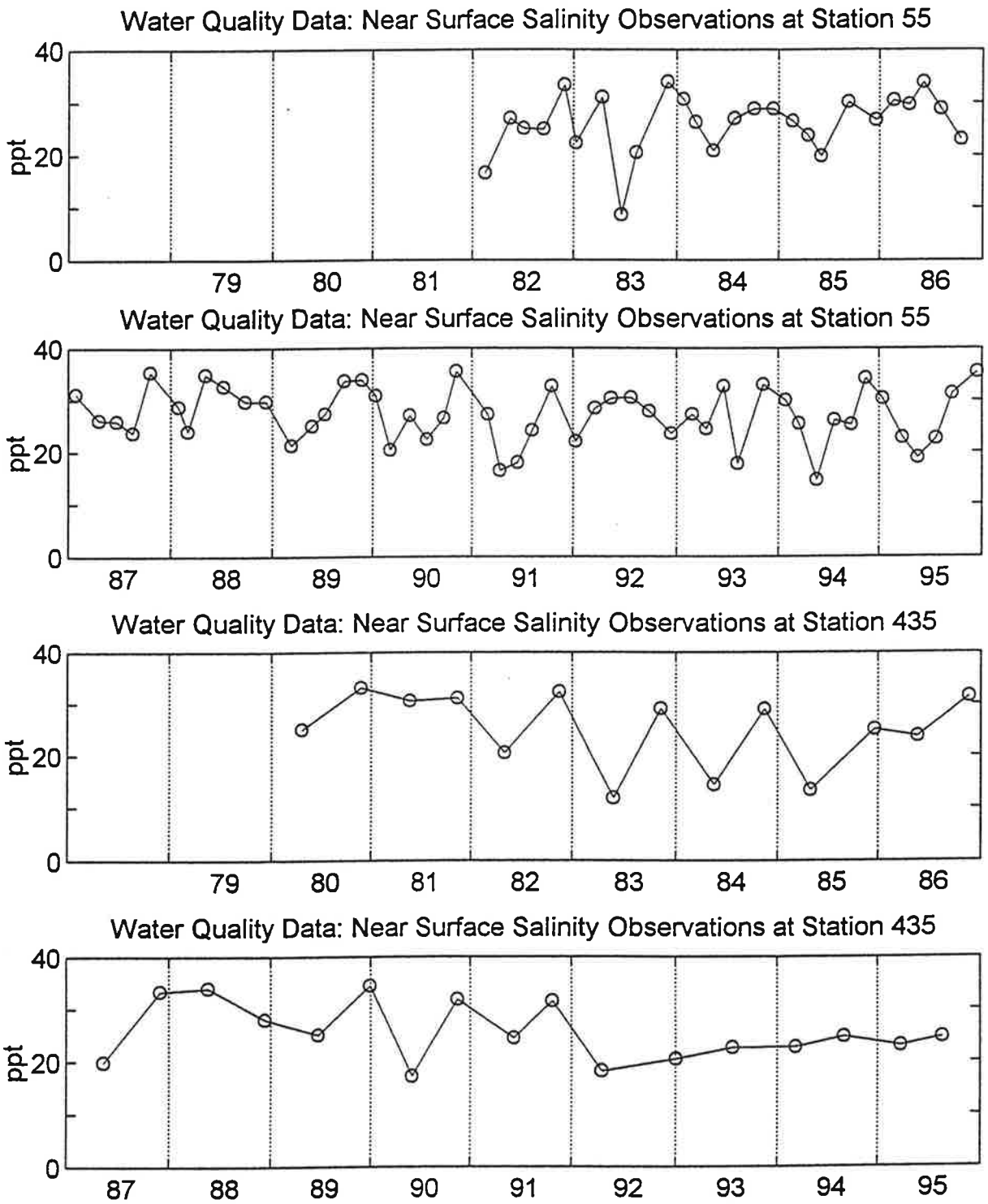

Figure C16. Monthly water chemistry data: top salinities, stations 55 and 435.

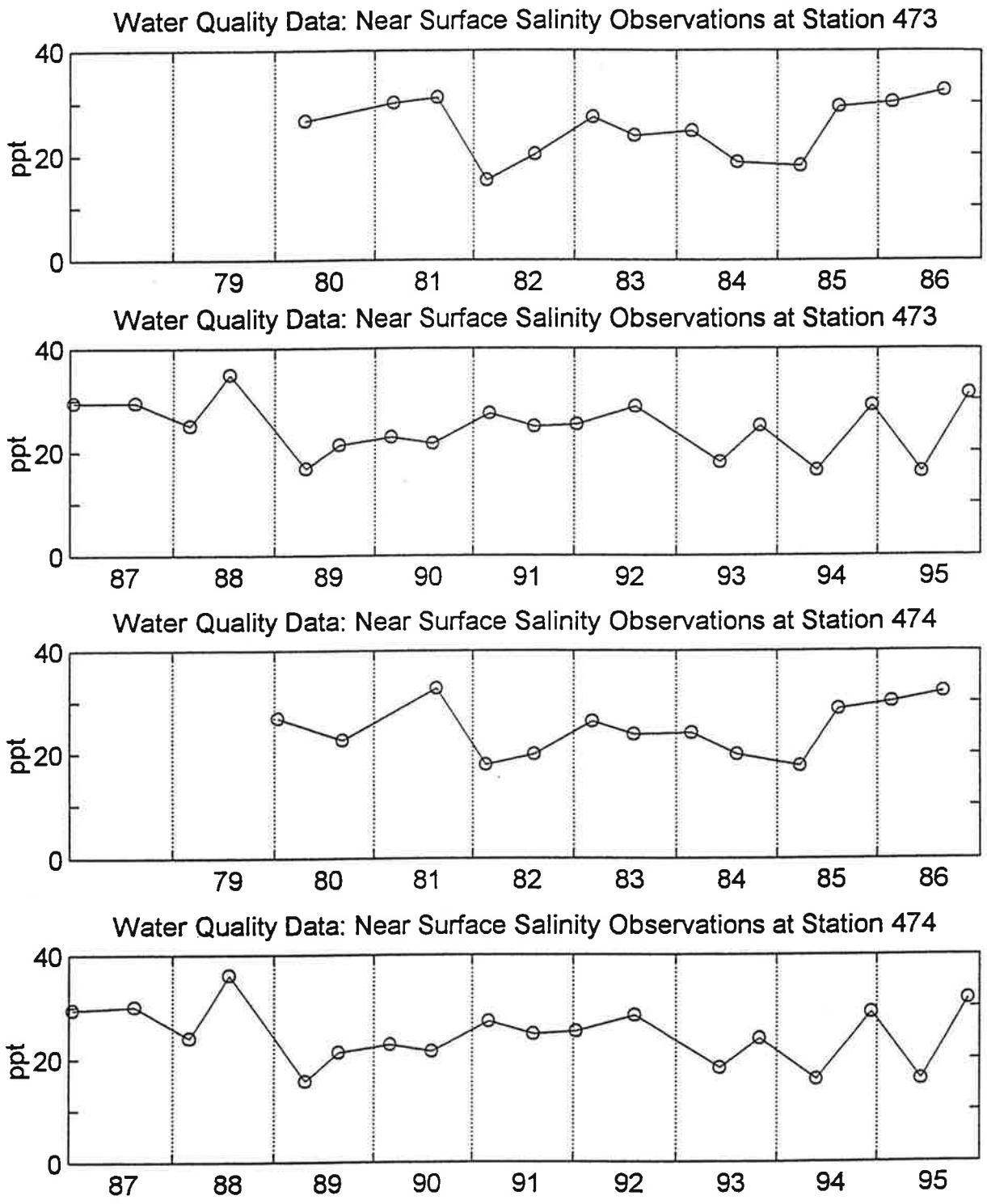

Figure C17. Monthly water chemistry data: top salinities, stations 473 and 474.

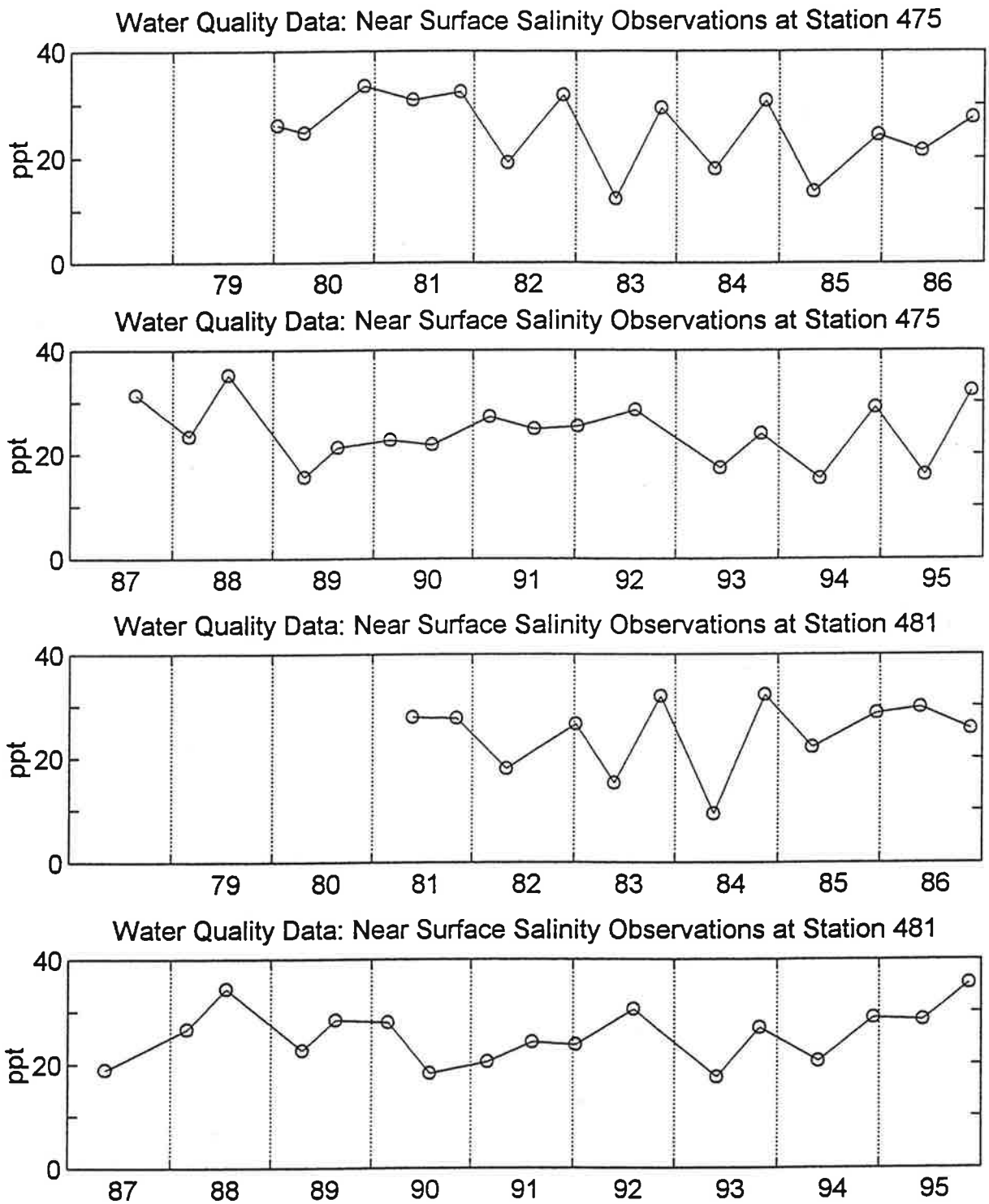

Figure C18. Monthly water chemistry data: top salinities, stations 475 and 481.

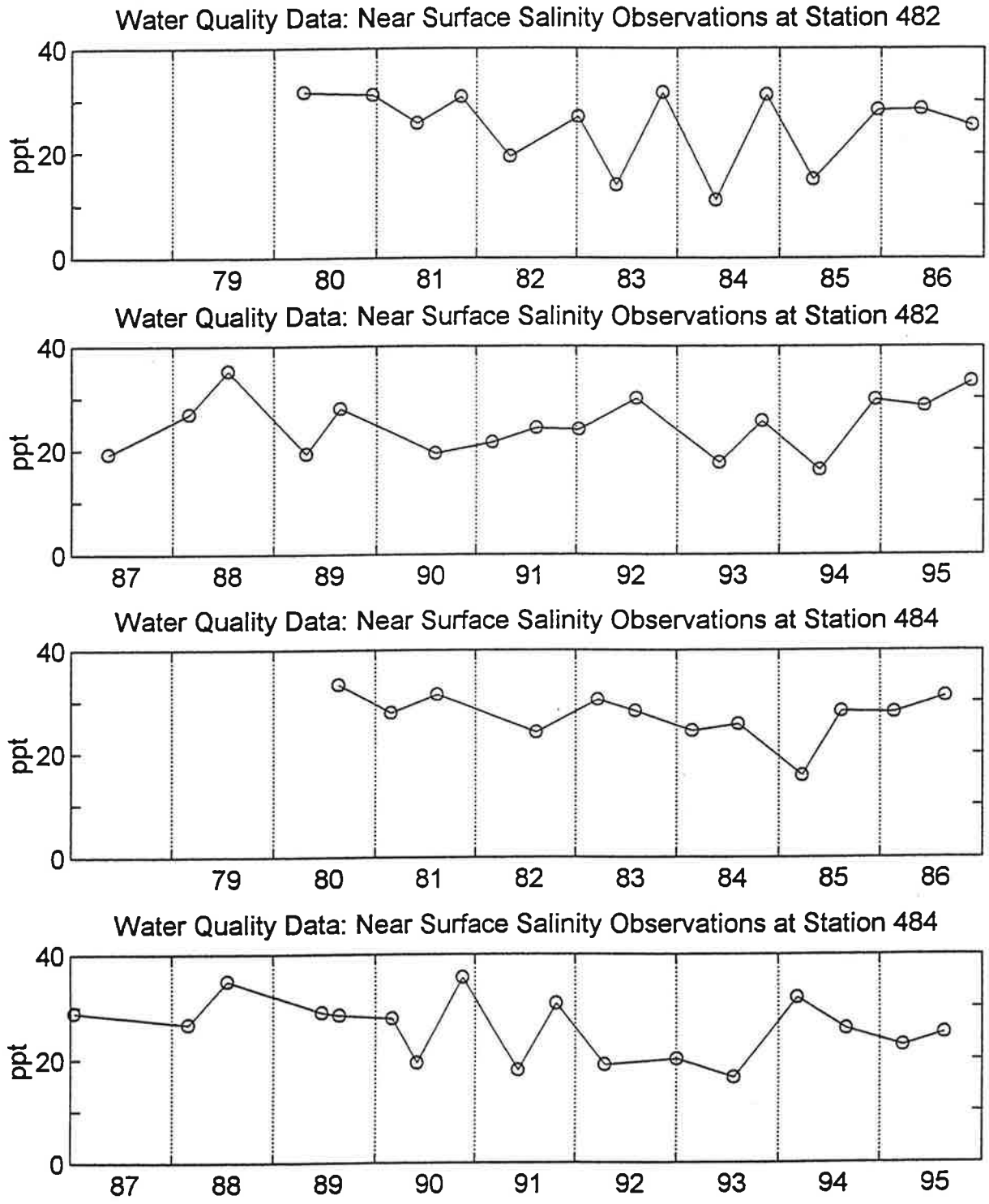

Figure C19. Monthly water chemistry data: top salinities, stations 482 and 484.

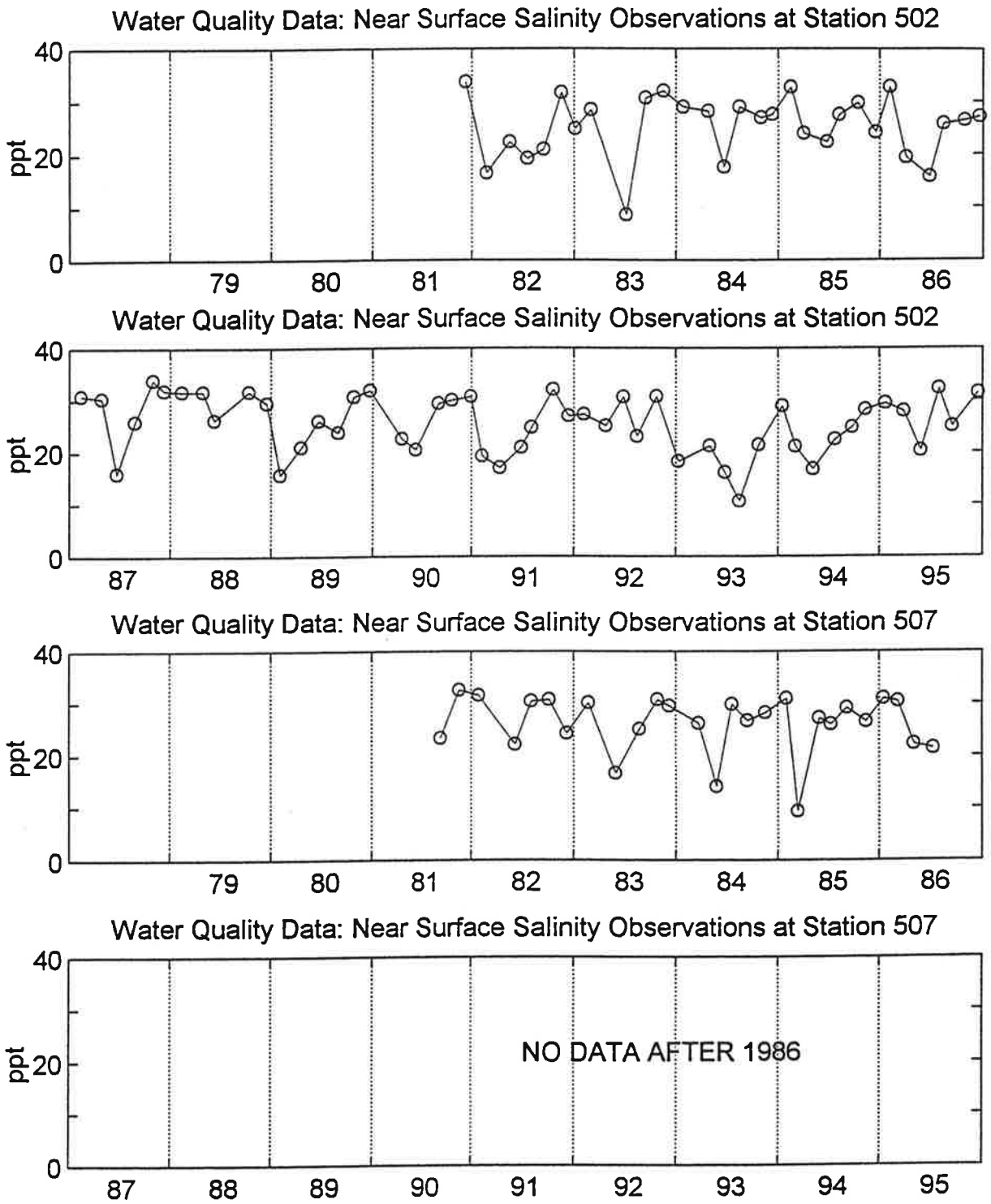

Figure C20. Monthly water chemistry data: top salinities, stations 502 and 507.

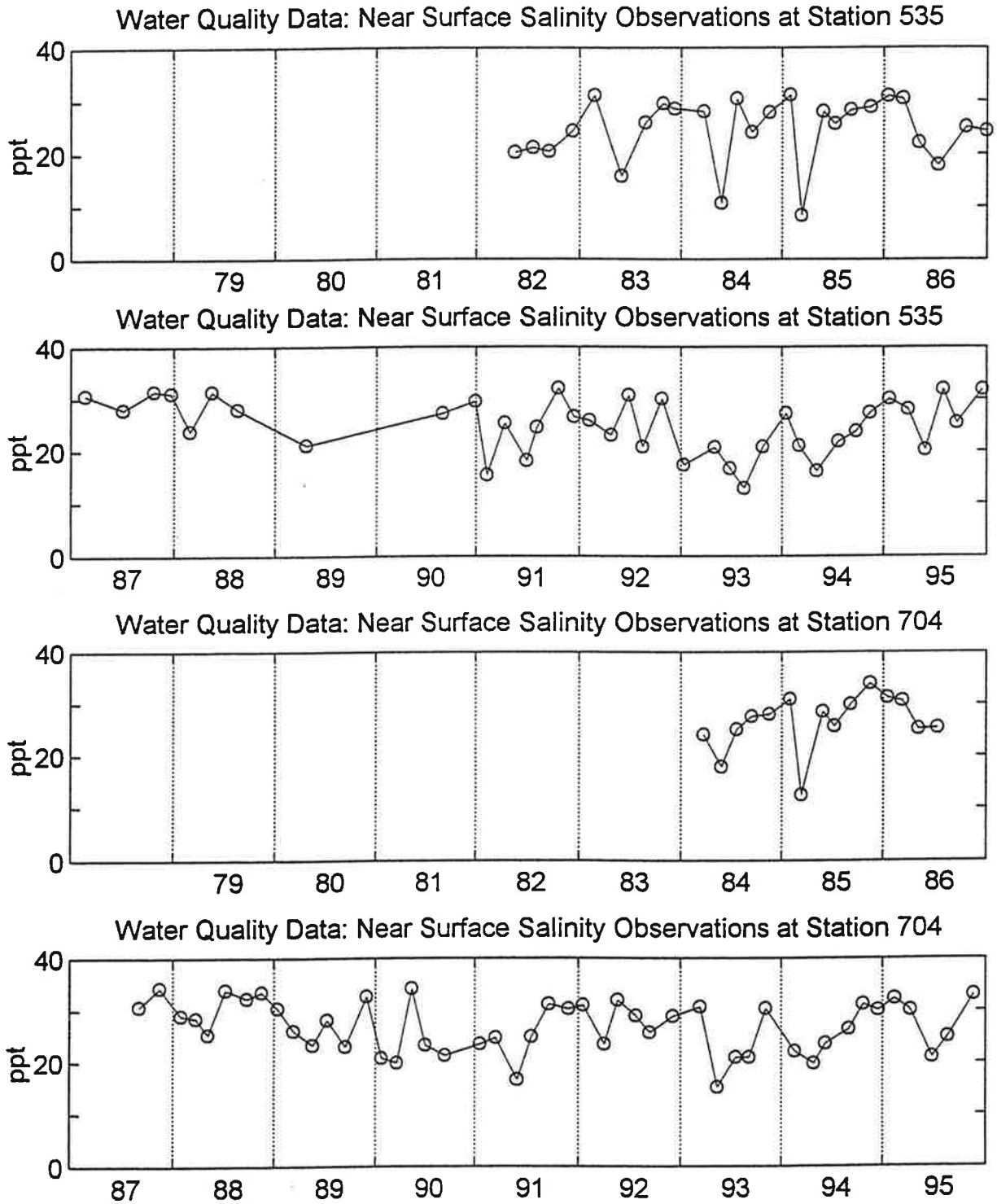

Figure C21. Monthly water chemistry data: top salinities, stations 535 and 704.

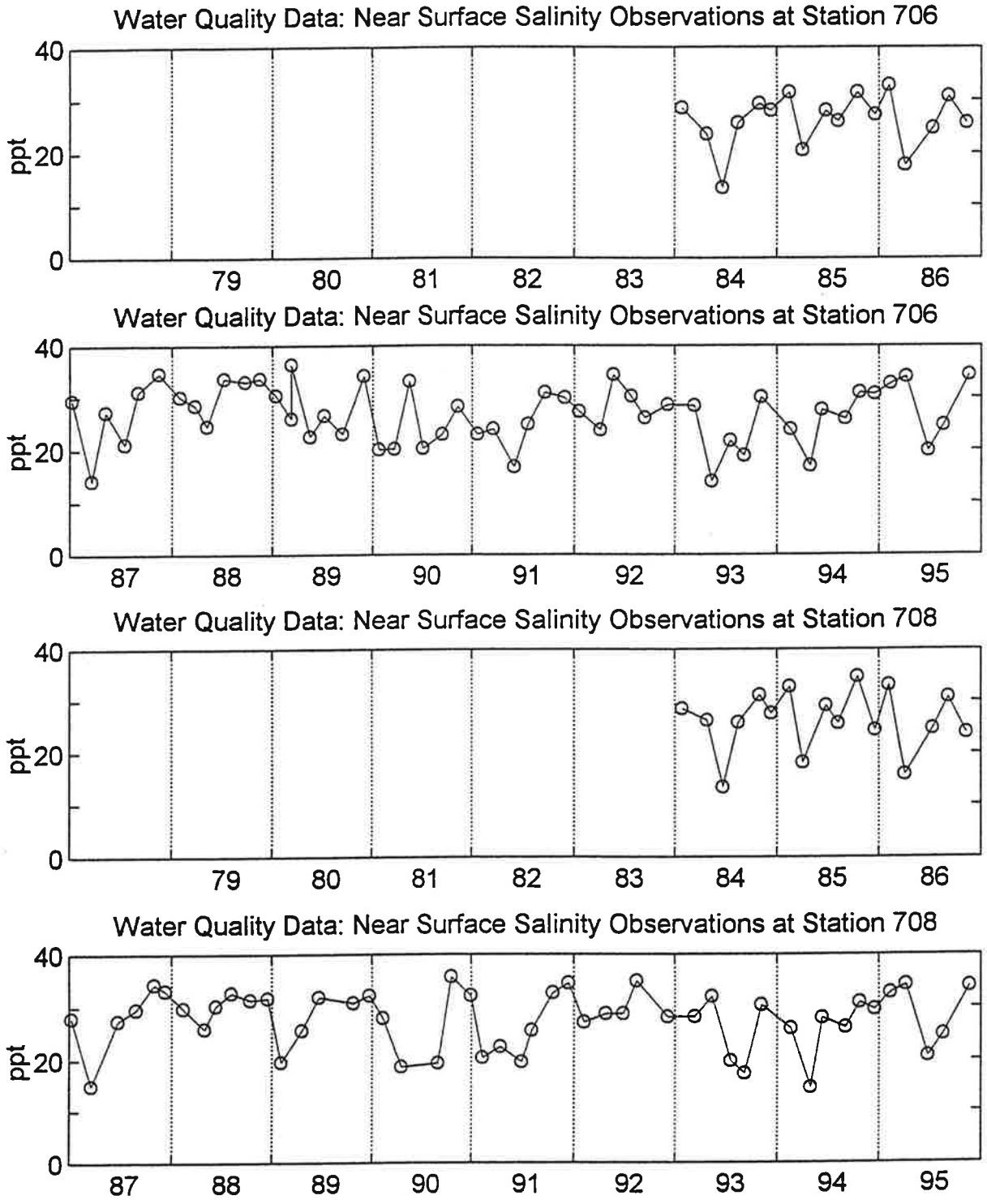

Figure C22. Monthly water chemistry data: top salinities, stations 706 and 708.

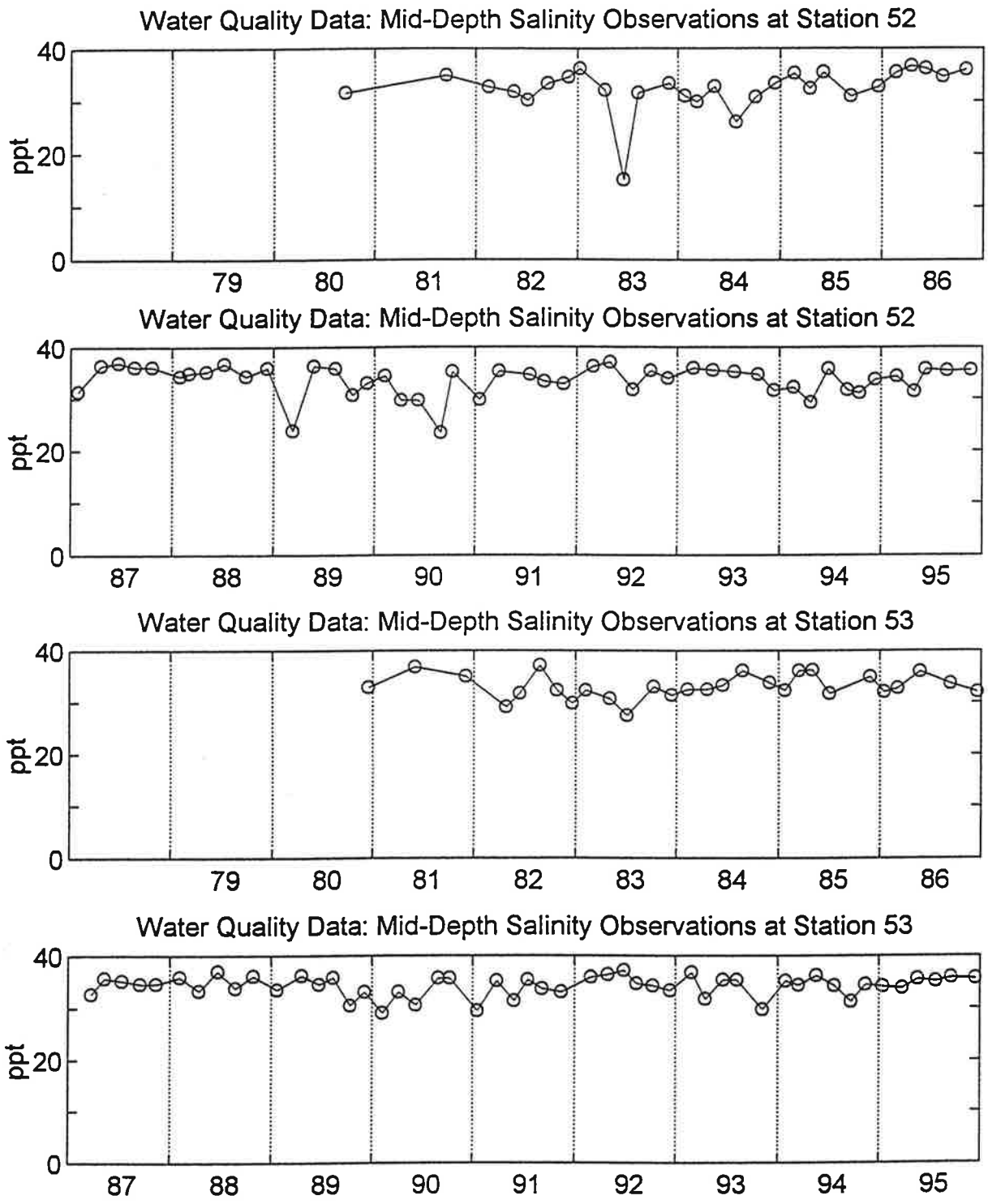

Figure C23. Monthly water chemistry data: middle salinities, stations 52 and 53.

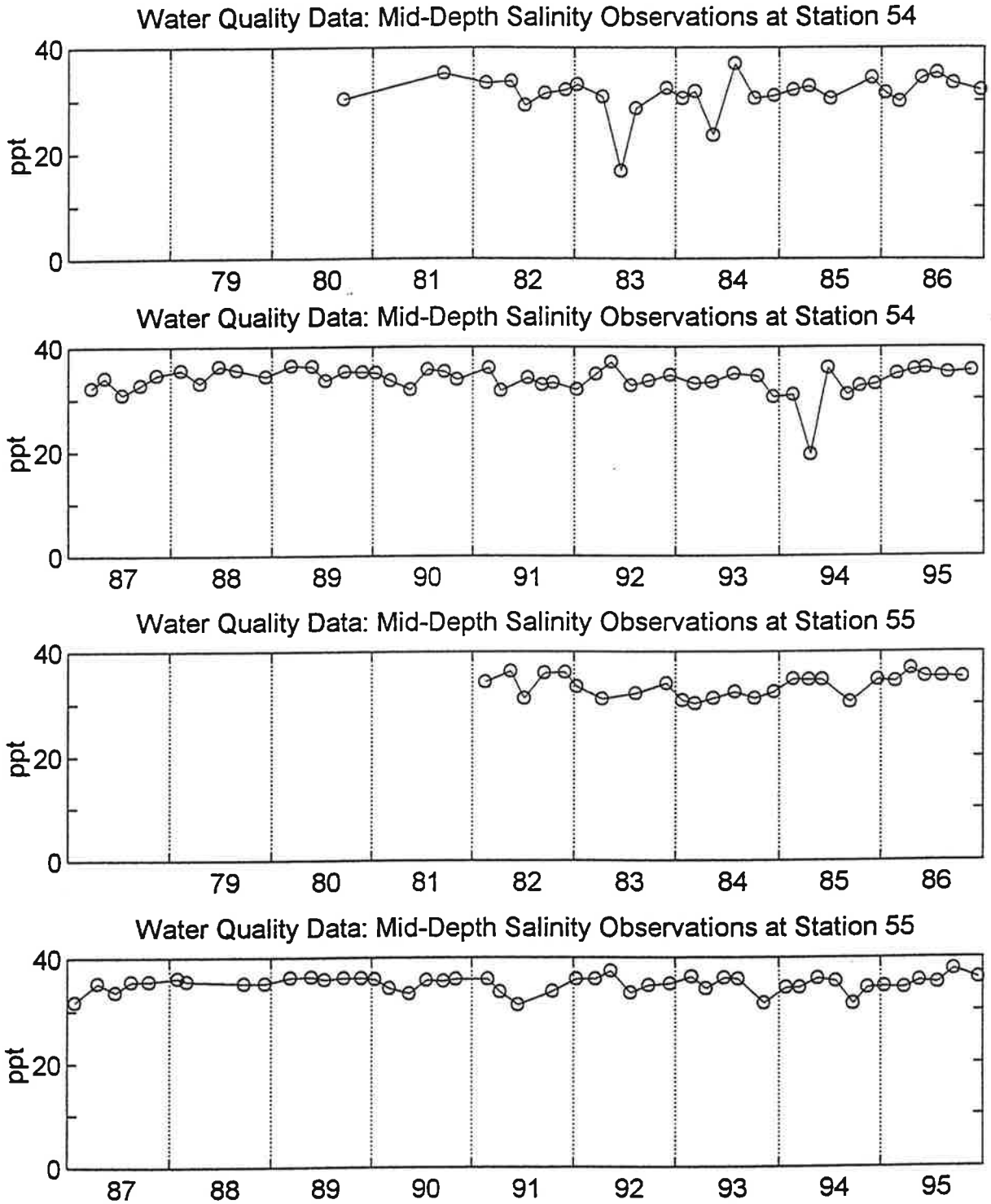

Figure C24. Monthly water chemistry data: middle salinities, stations 54 and 55.

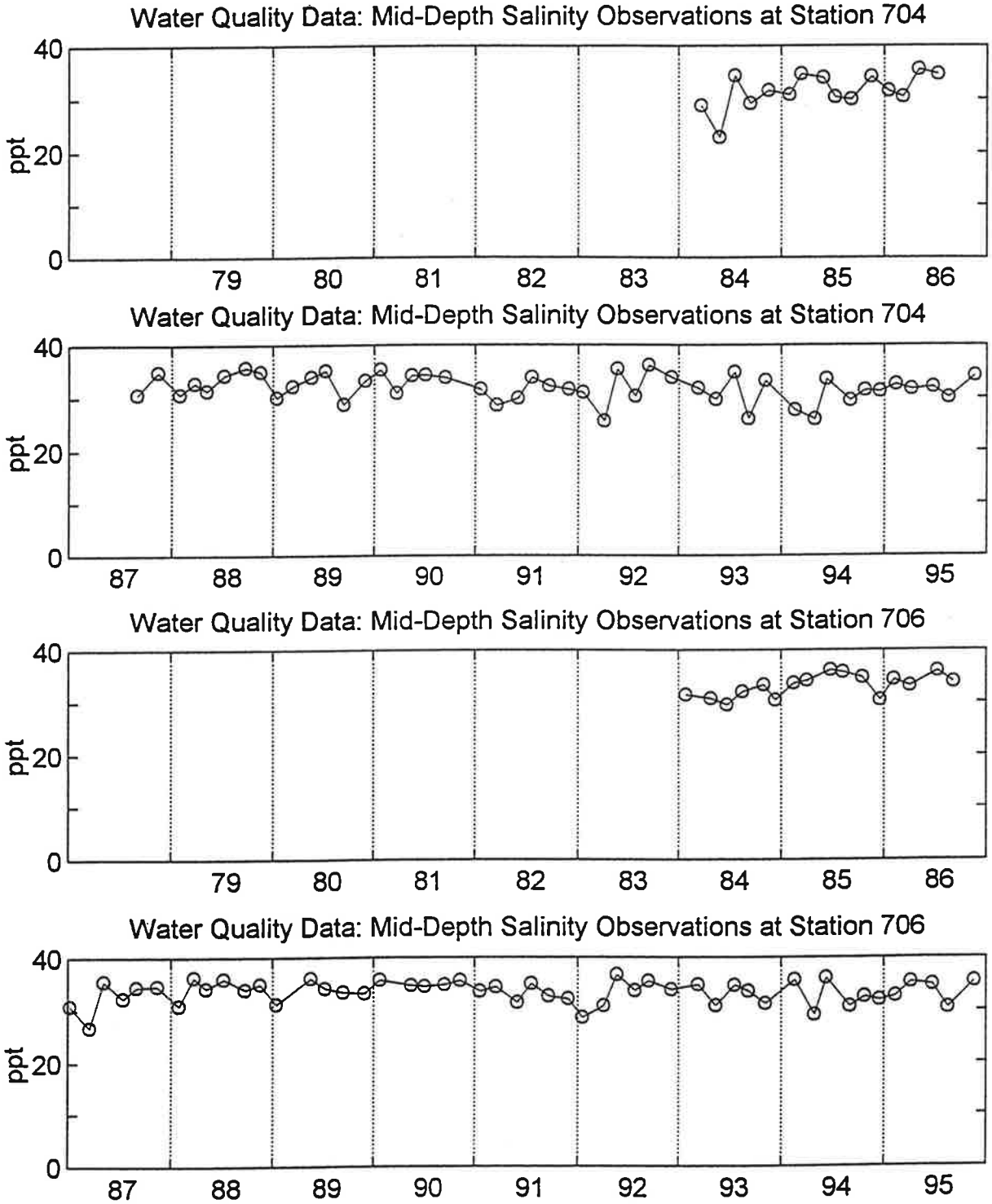

Figure C25. Monthly water chemistry data: middle salinities, stations 704 and 706.

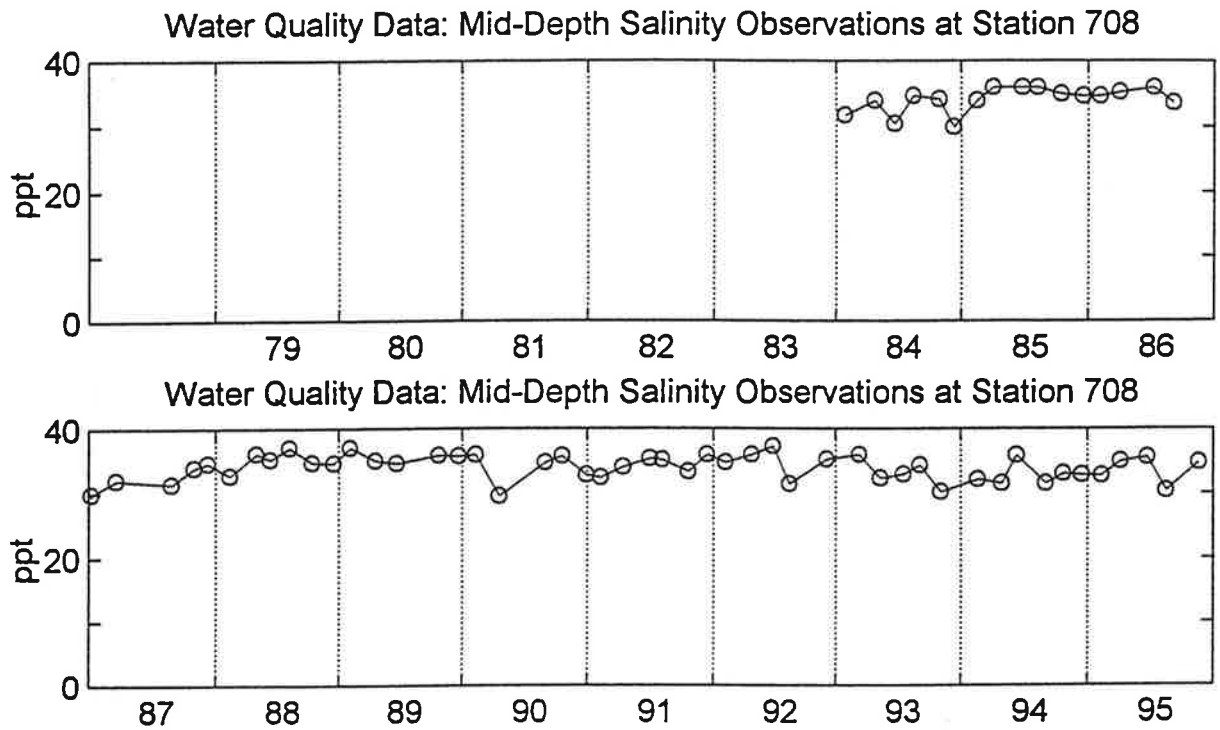

Figure C26. Monthly water chemistry data: middle salinities, station 708.

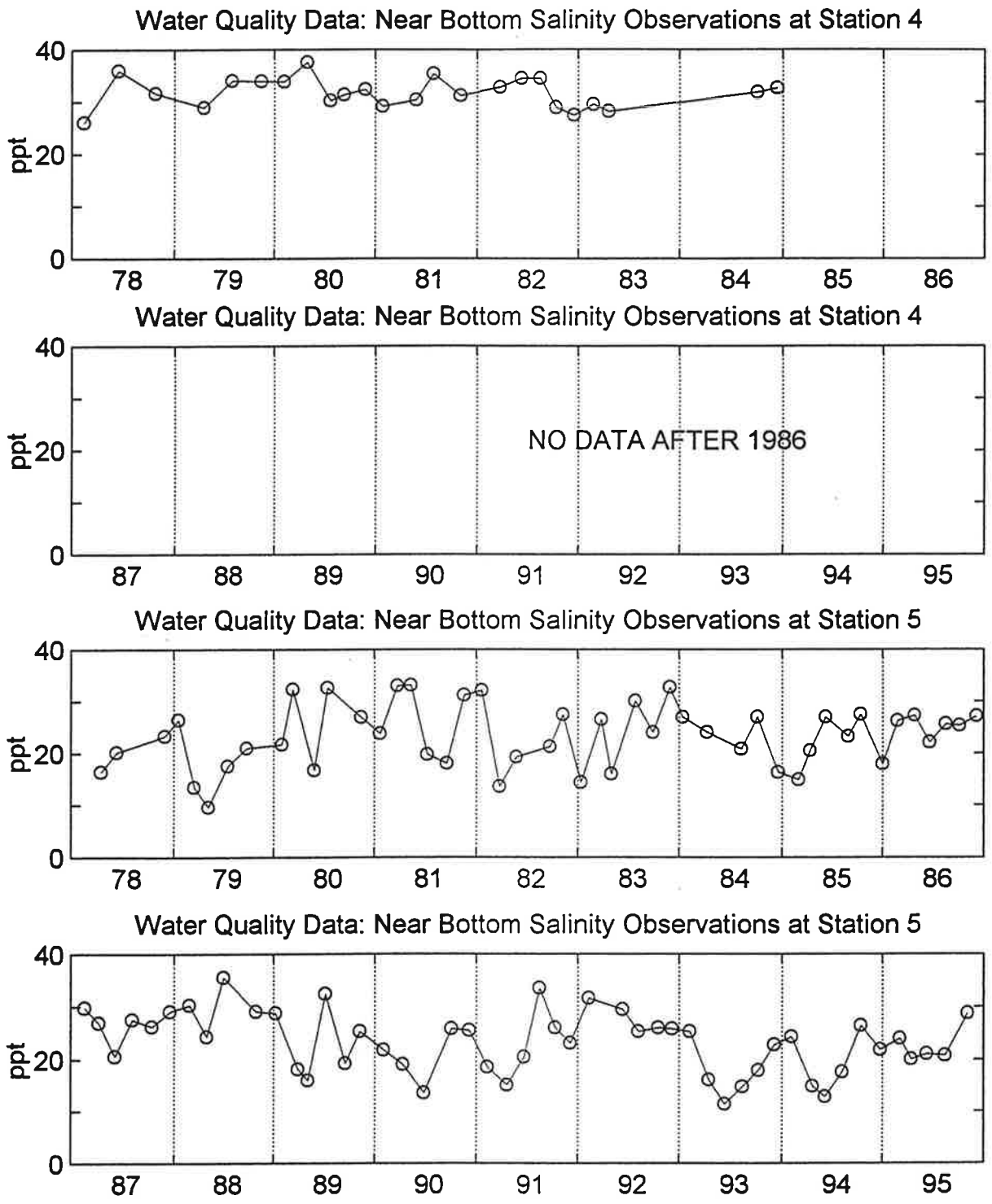

Figure C27. Monthly water chemistry data: bottom salinities, stations 4 and 5.

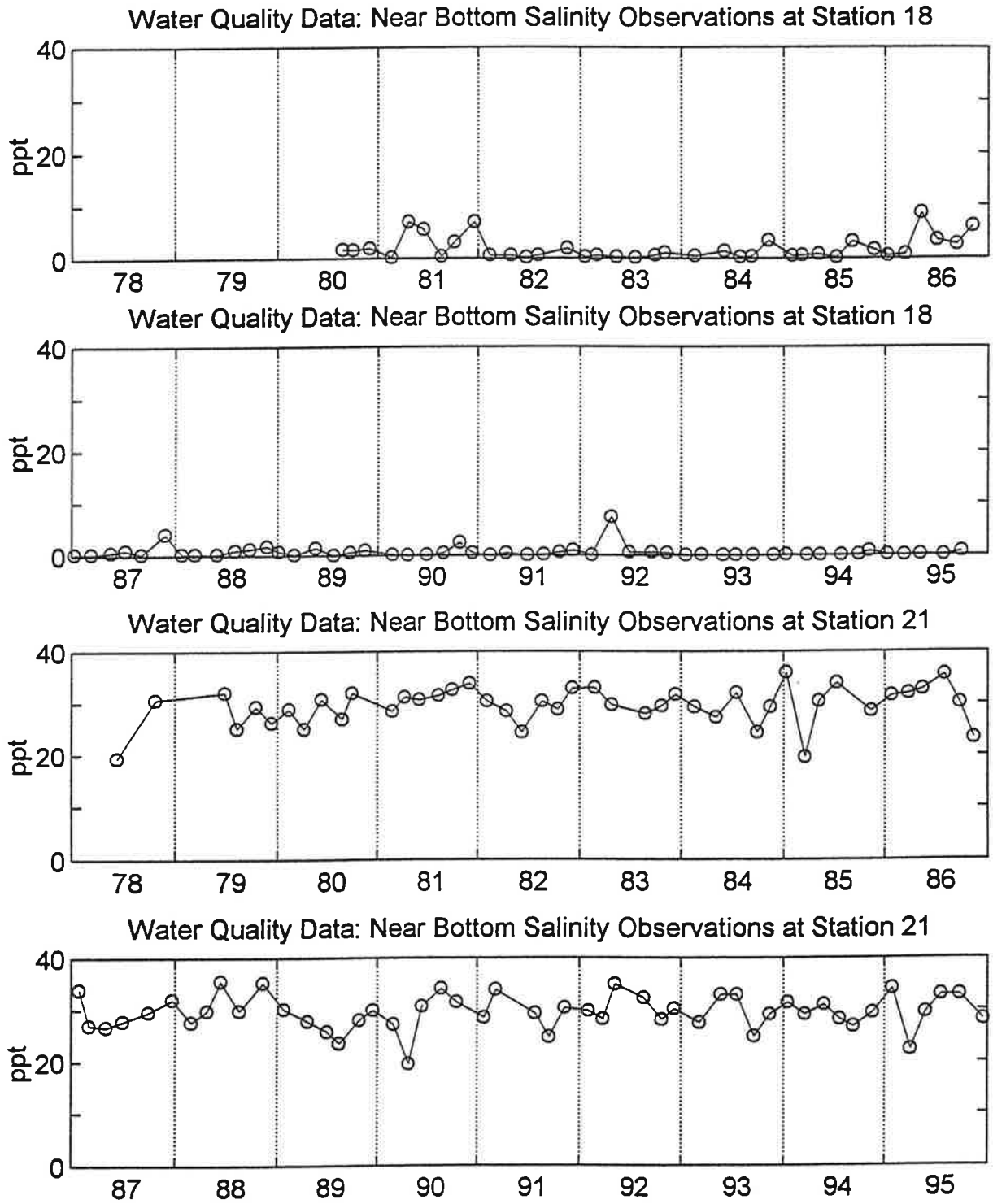

Figure C28. Monthly water chemistry data: bottom salinities, stations 18 and 21.

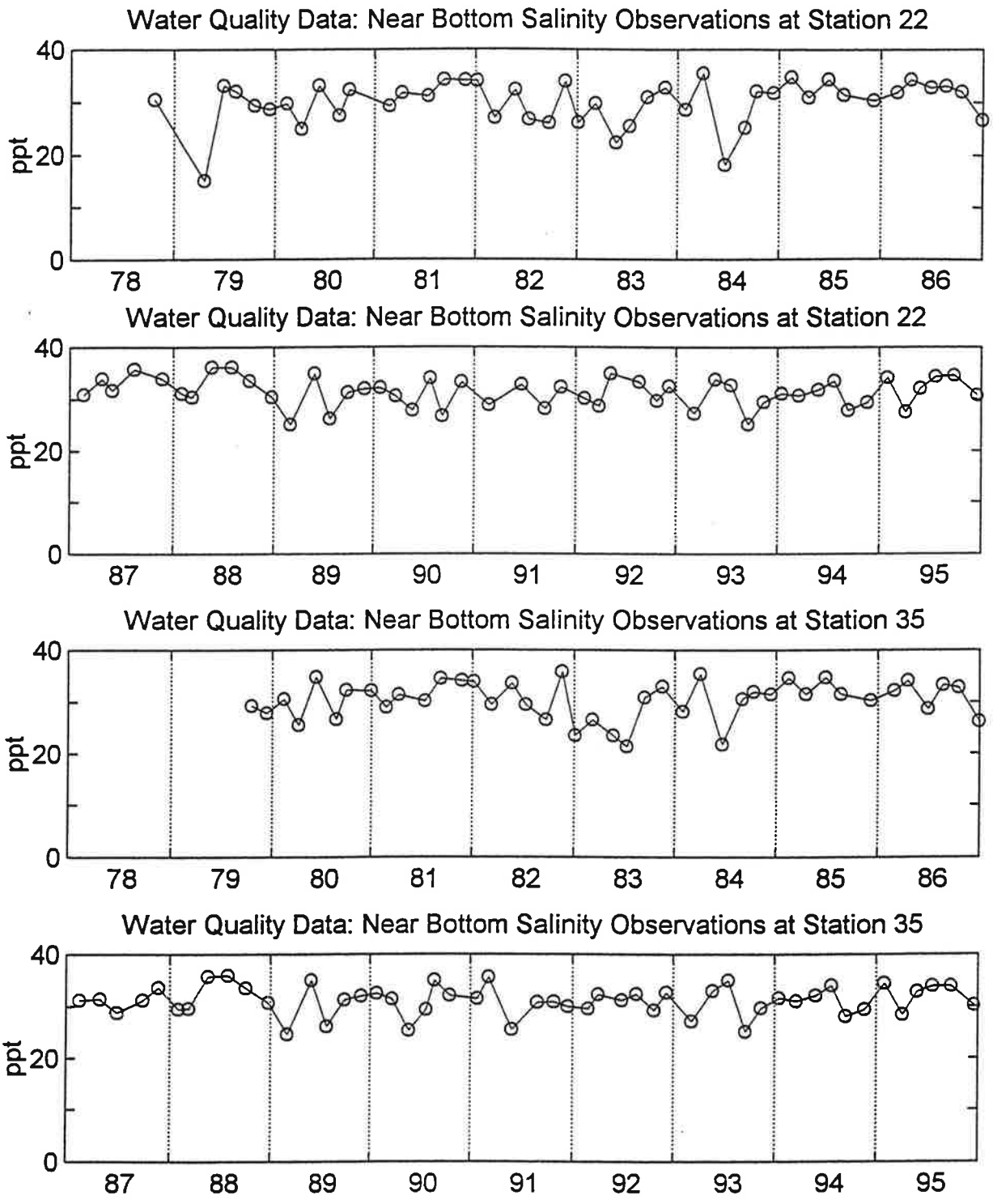

Figure C29. Monthly water chemistry data: bottom salinities, stations 22 and 35.

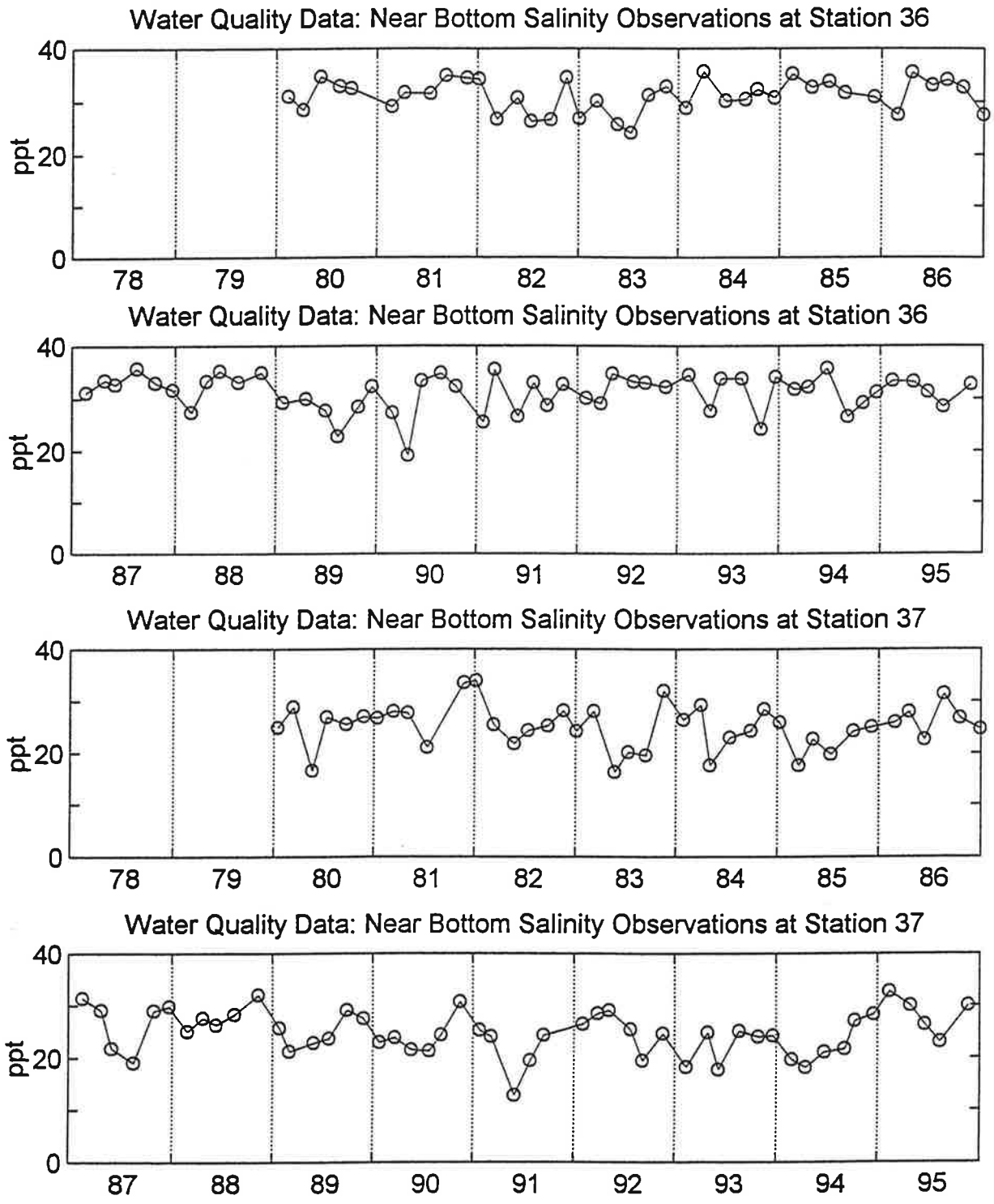

Figure C30. Monthly water chemistry data: bottom salinities, stations 36 and 37.

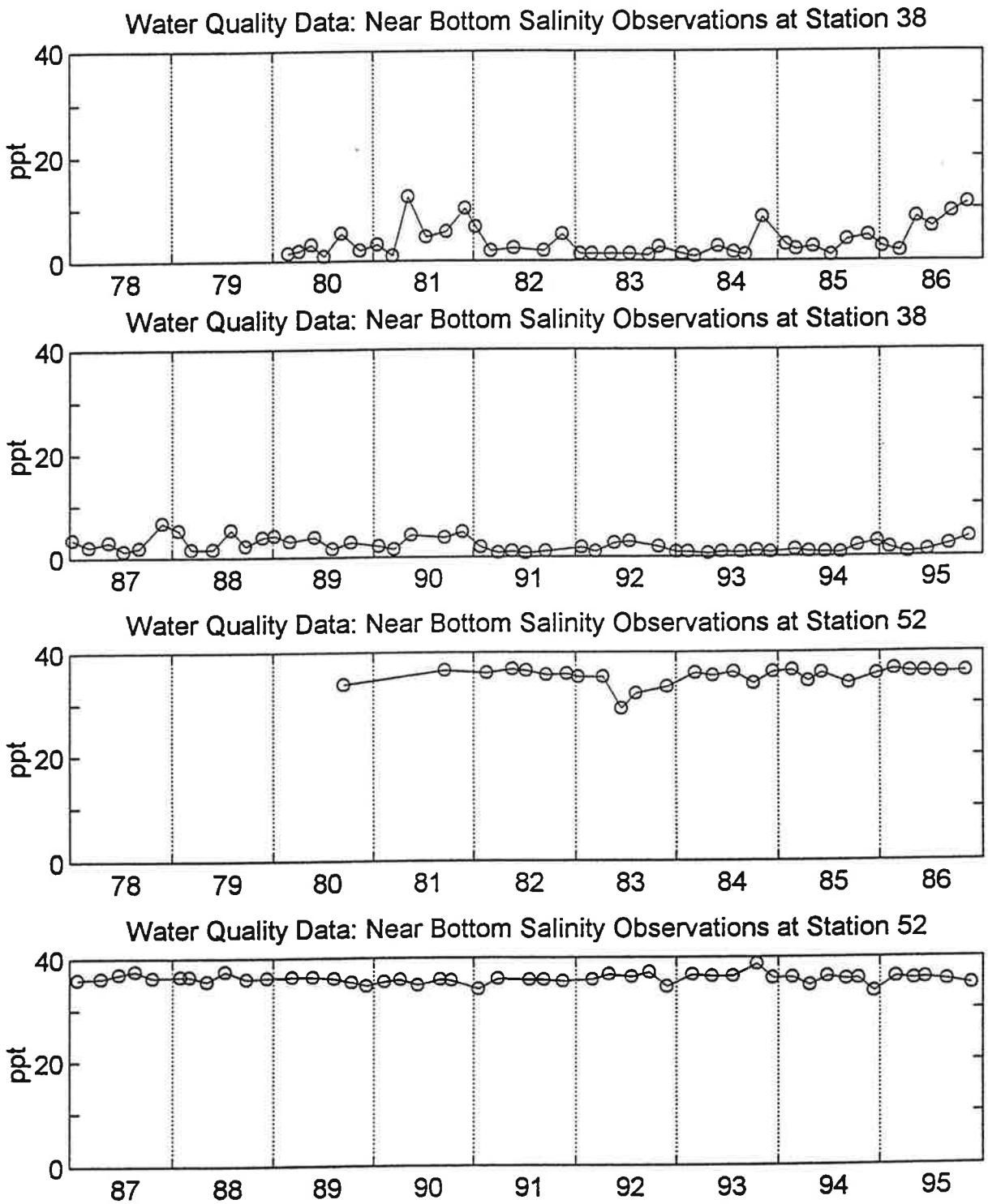

Figure C31. Monthly water chemistry data: bottom salinities, stations 38 and 52.

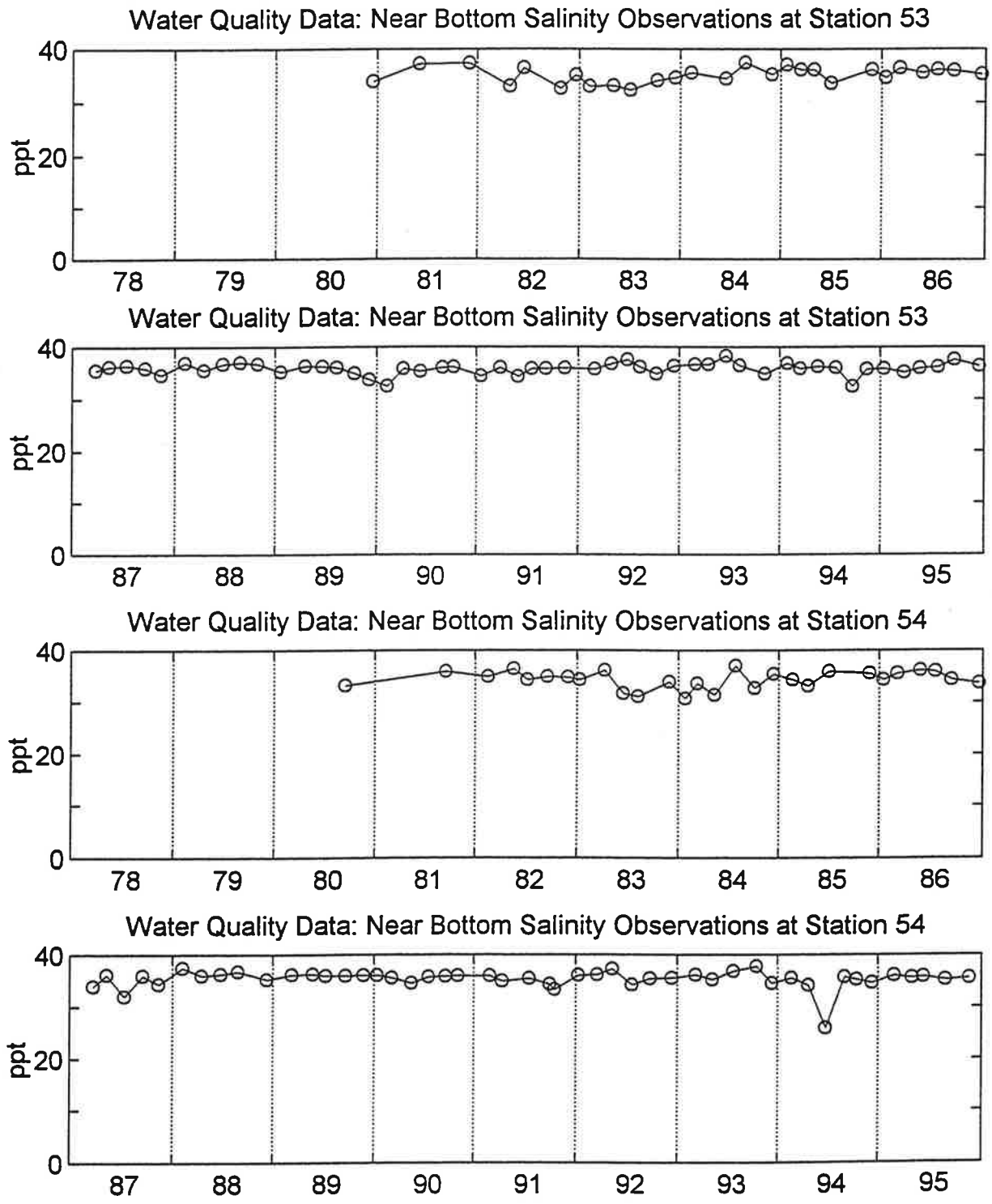

Figure C32. Monthly water chemistry data: bottom salinities, stations 53 and 54.

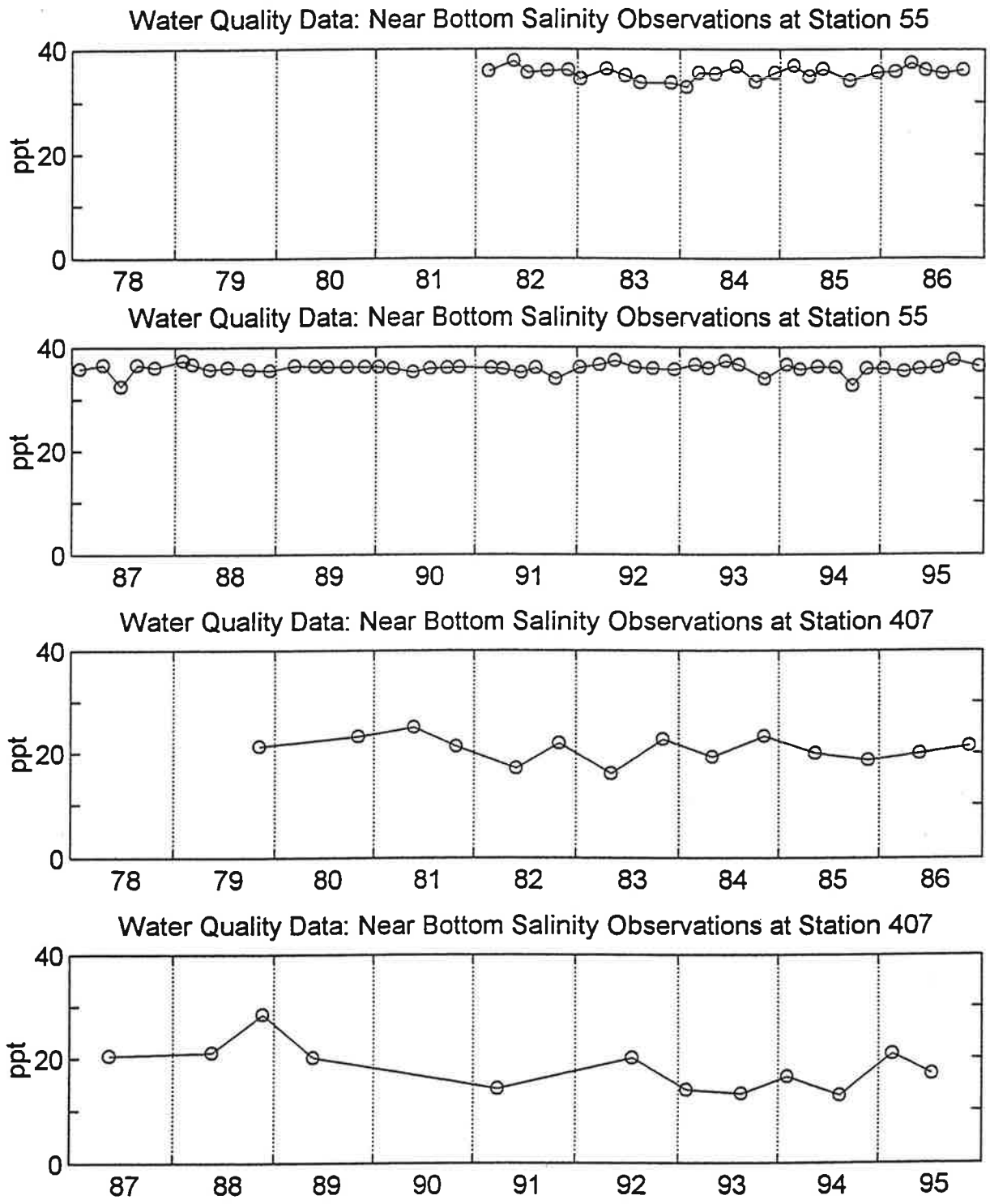

Figure C33. Monthly water chemistry data: bottom salinities, stations 55 and 407.

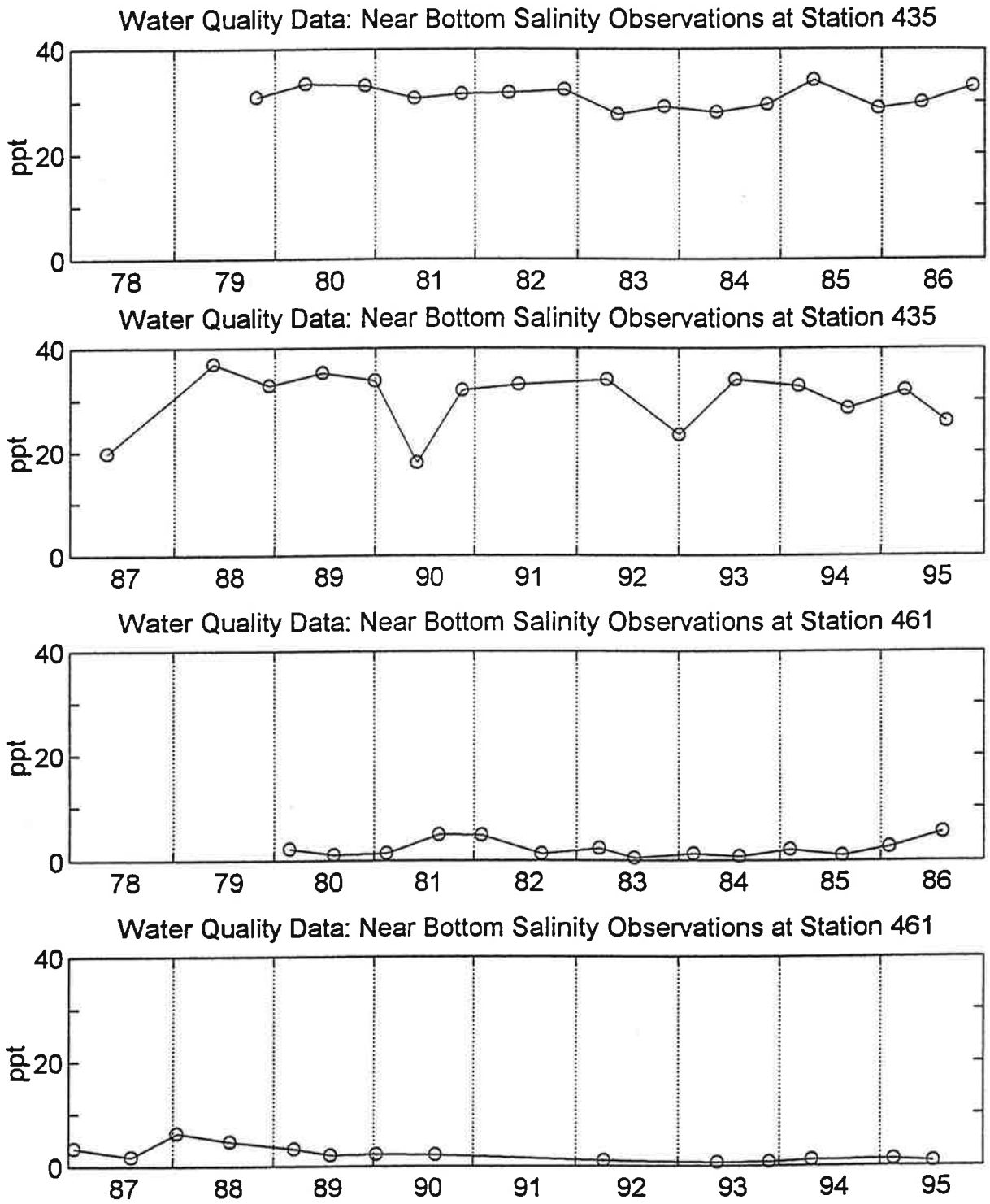

Figure C34. Monthly water chemistry data: bottom salinities, stations 435 and 461.

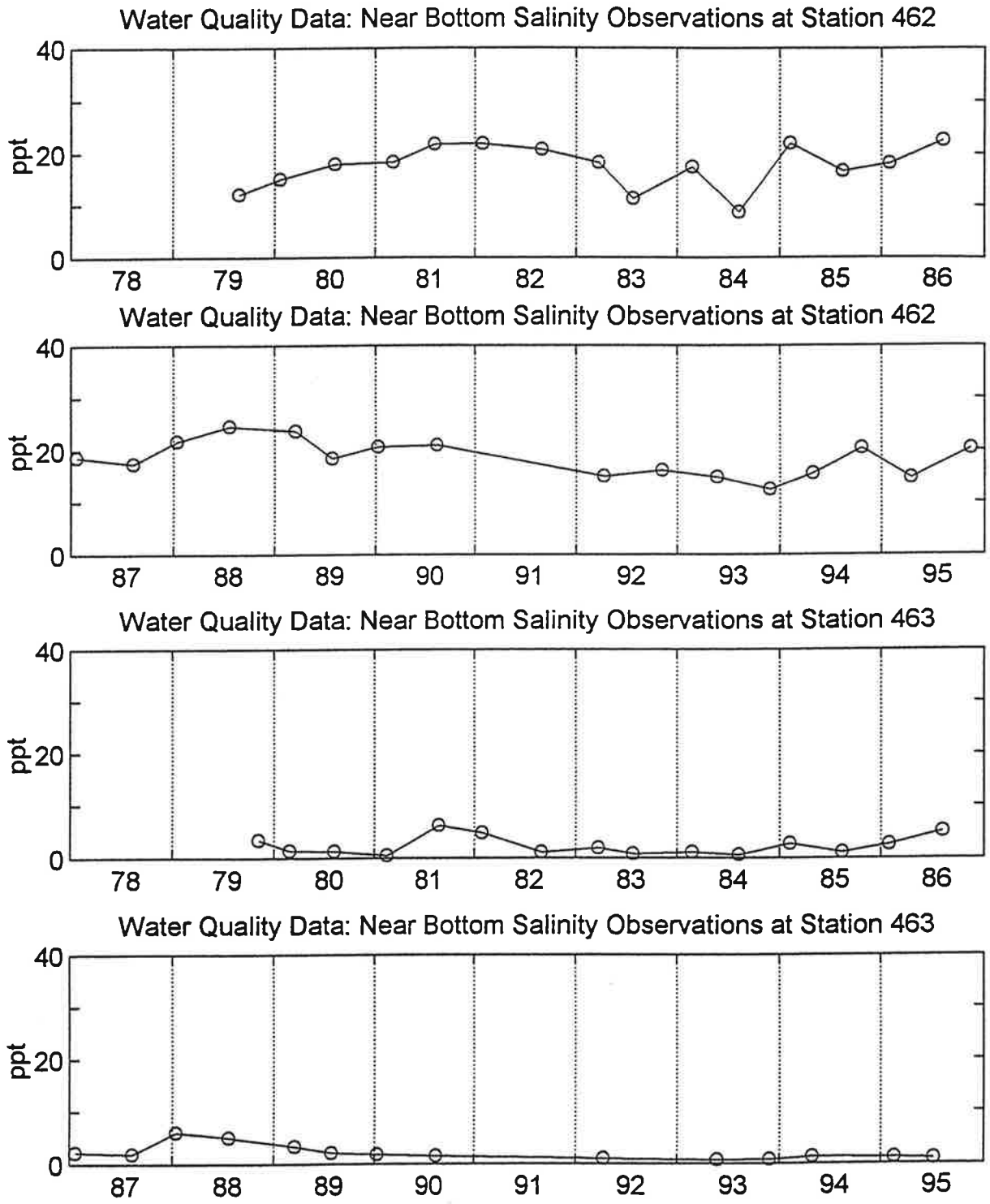

Figure C35. Monthly water chemistry data: bottom salinities, stations 462 and 463.

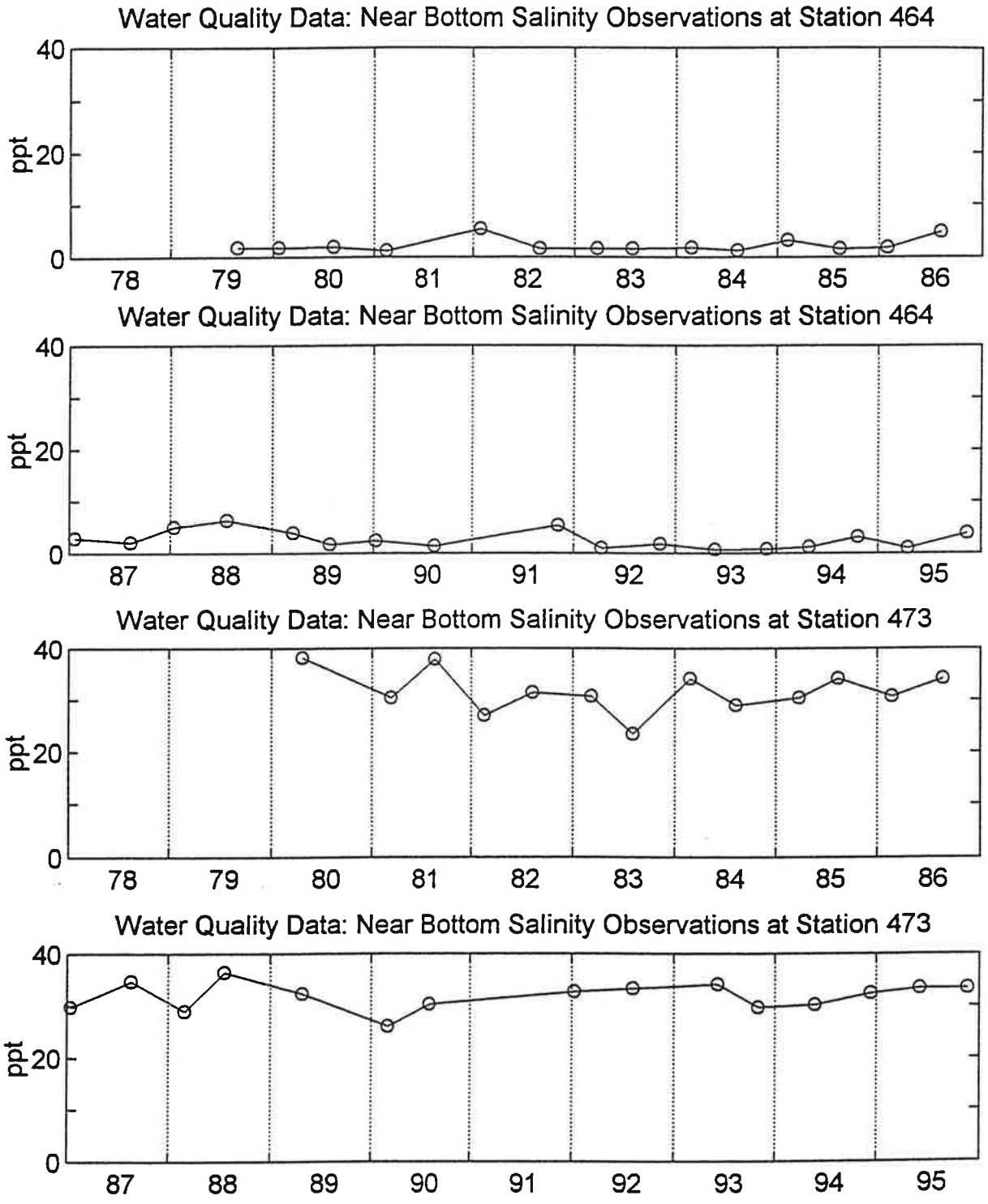

Figure C36. Monthly water chemistry data: bottom salinities, stations 464 and 473.

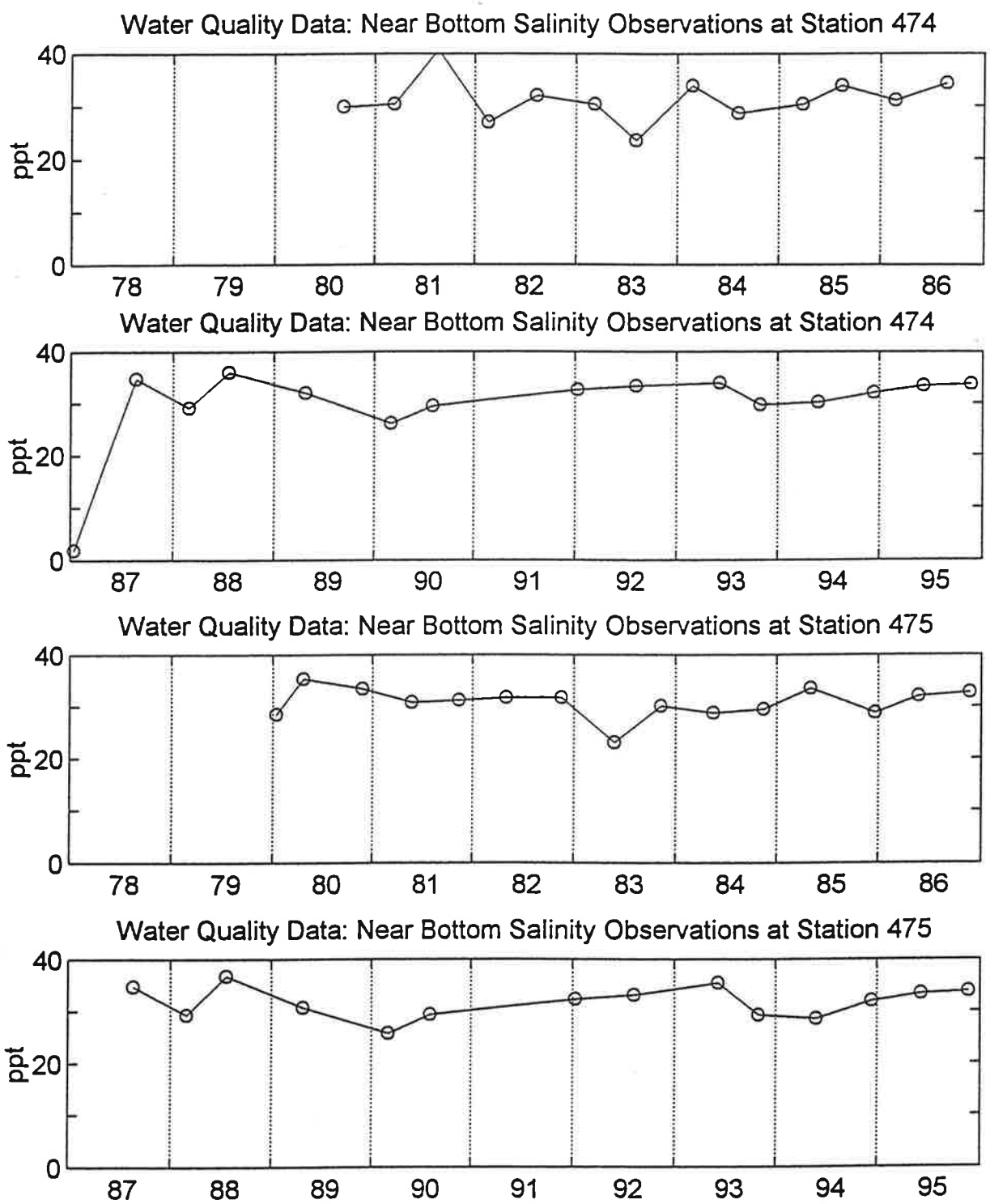

Figure C37. Monthly water chemistry data: bottom salinities, stations 474 and 475.

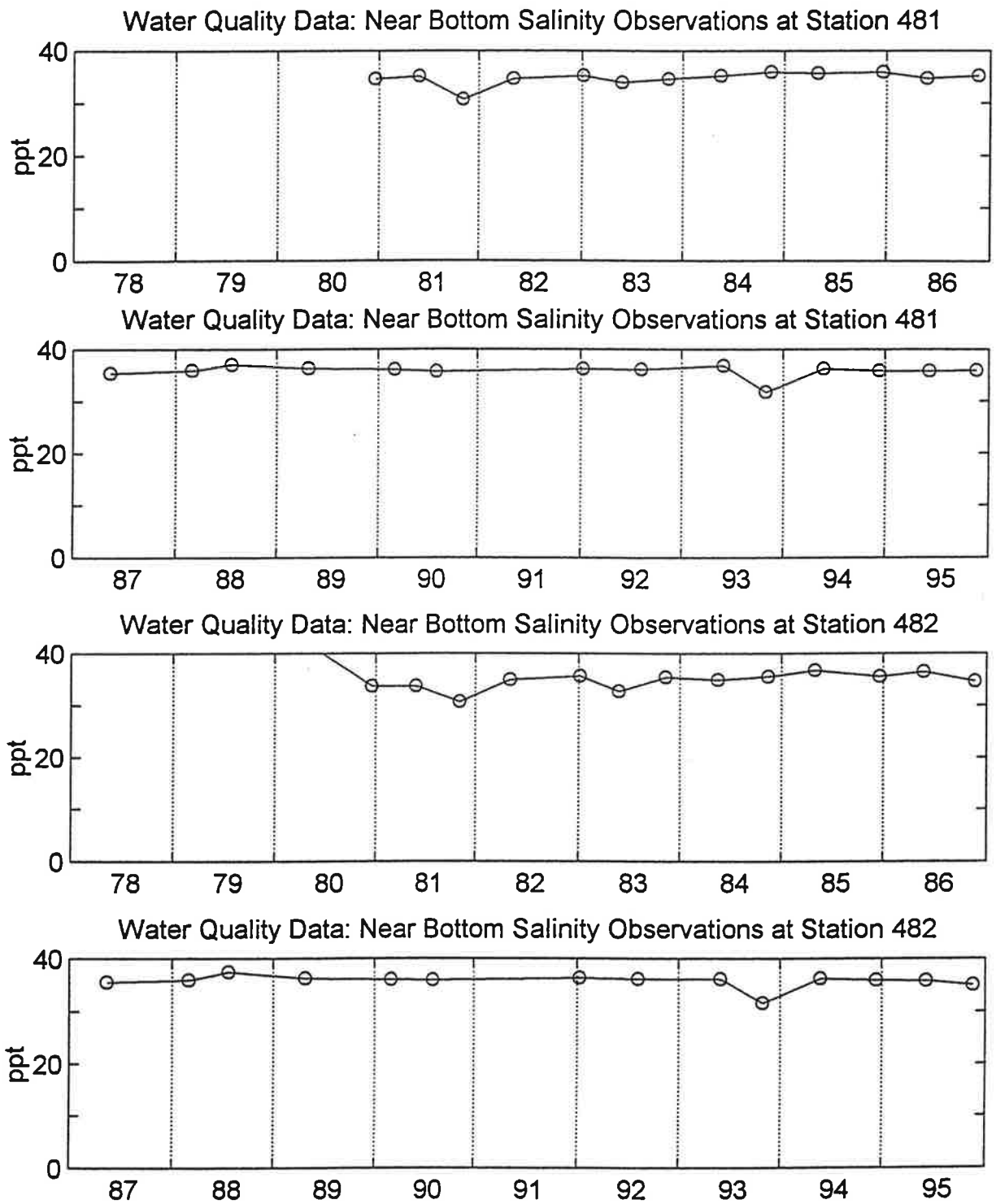

Figure C38. Monthly water chemistry data: bottom salinities, stations 481 and 482.

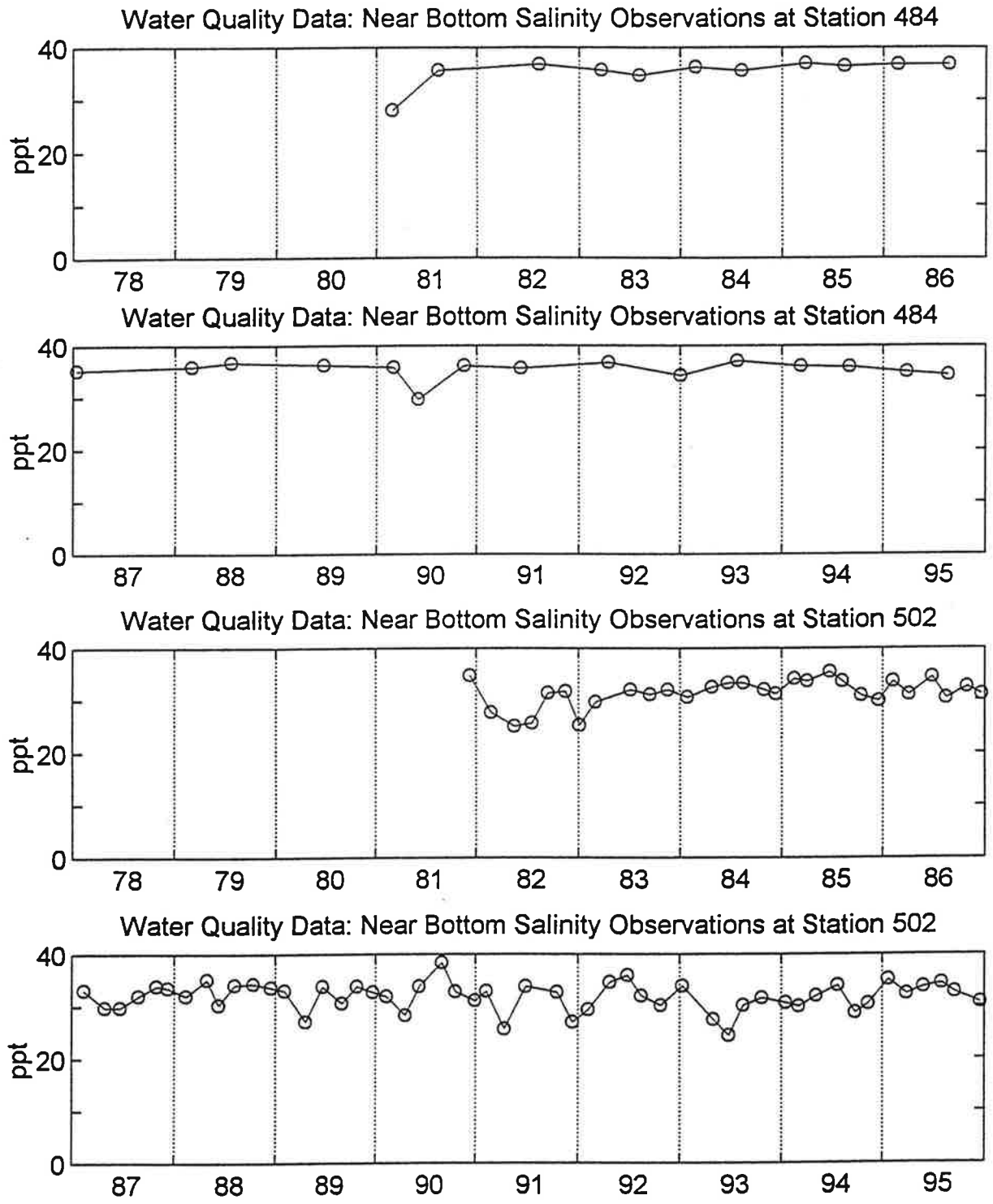

Figure C39. Monthly water chemistry data: bottom salinities, stations 484 and 502.

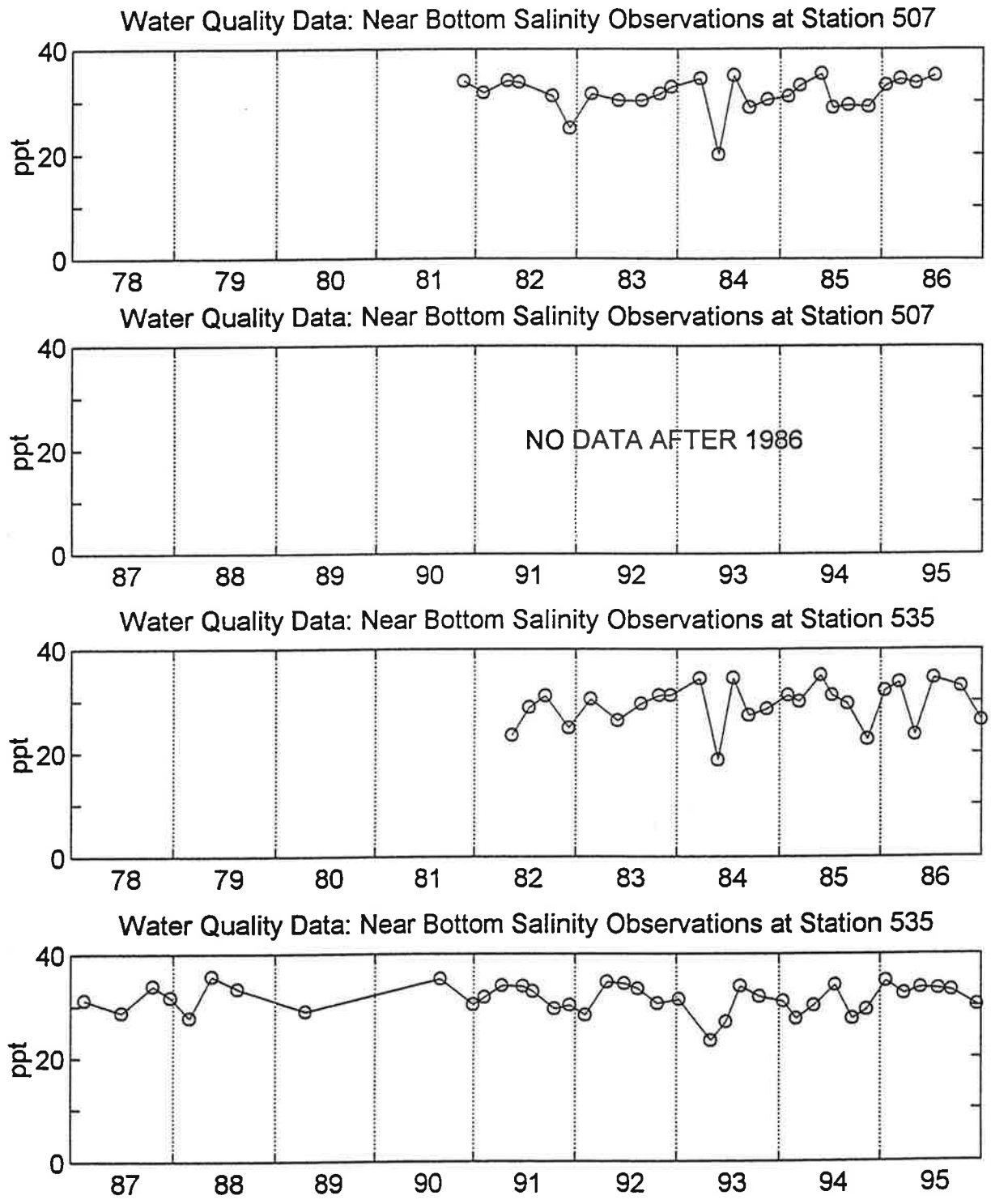

Figure C40. Monthly water chemistry data: bottom salinities, stations 507 and 535.

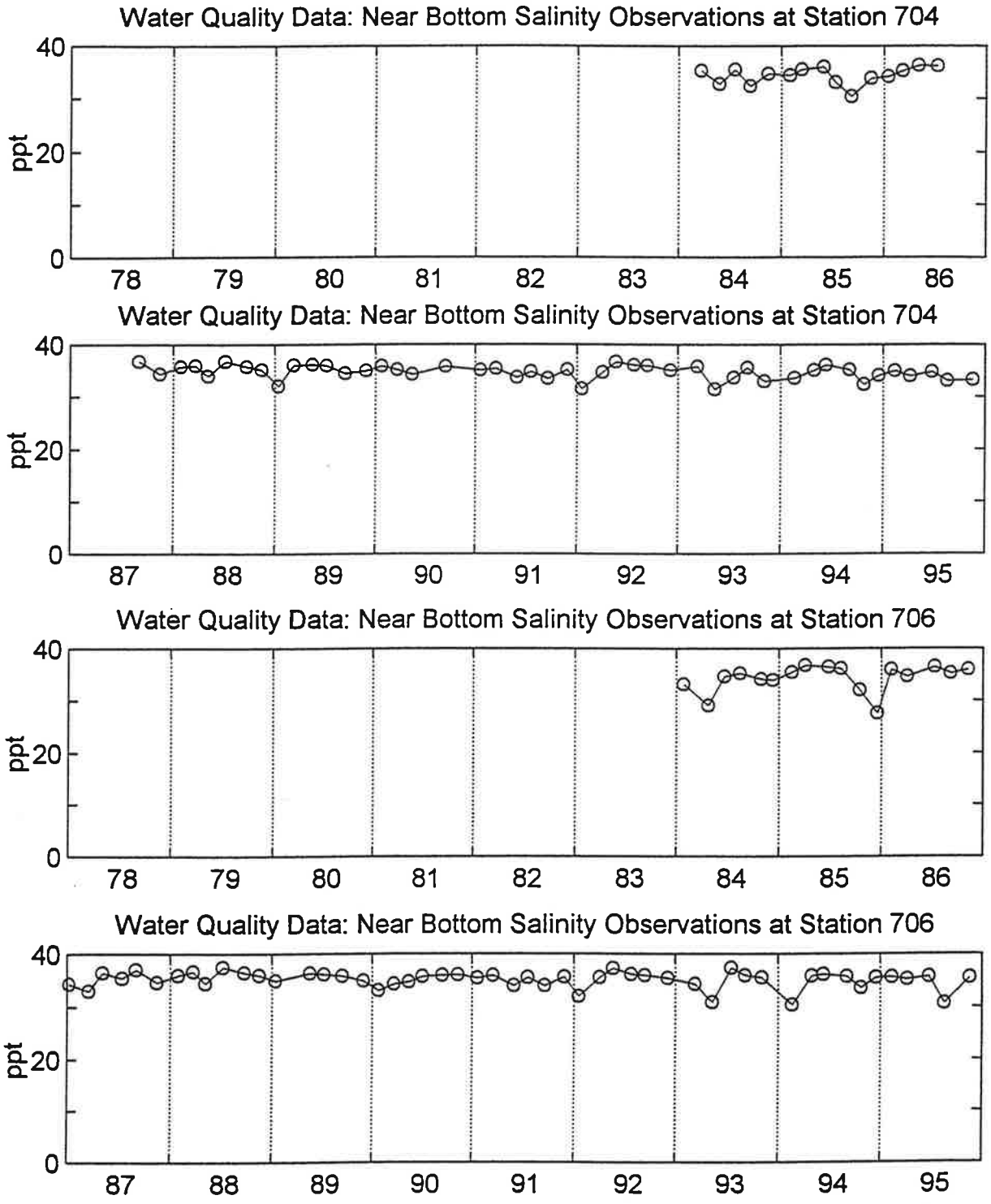

Figure C41. Monthly water chemistry data: bottom salinities, stations 704 and 706.

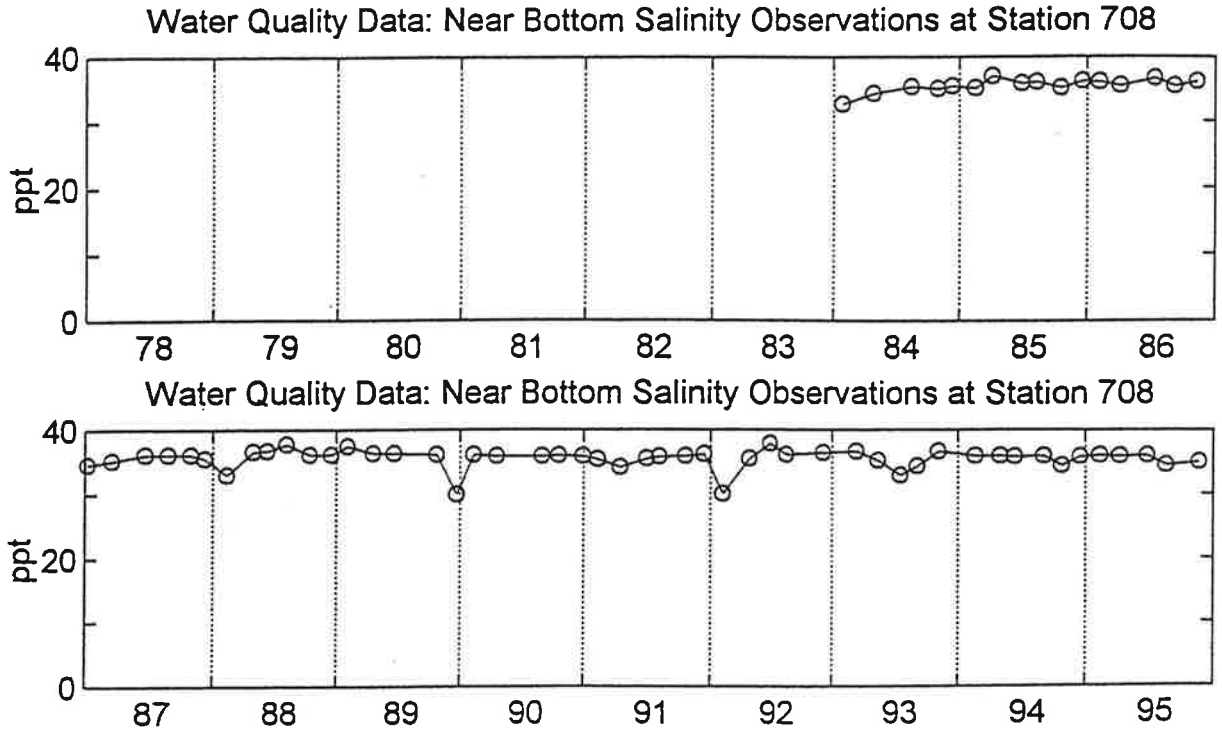

Figure C42. Monthly water chemistry data: bottom salinities, station 708.

APPENDIX D

MONTHLY STATISTICAL MOMENTS AT FIXED STATIONS

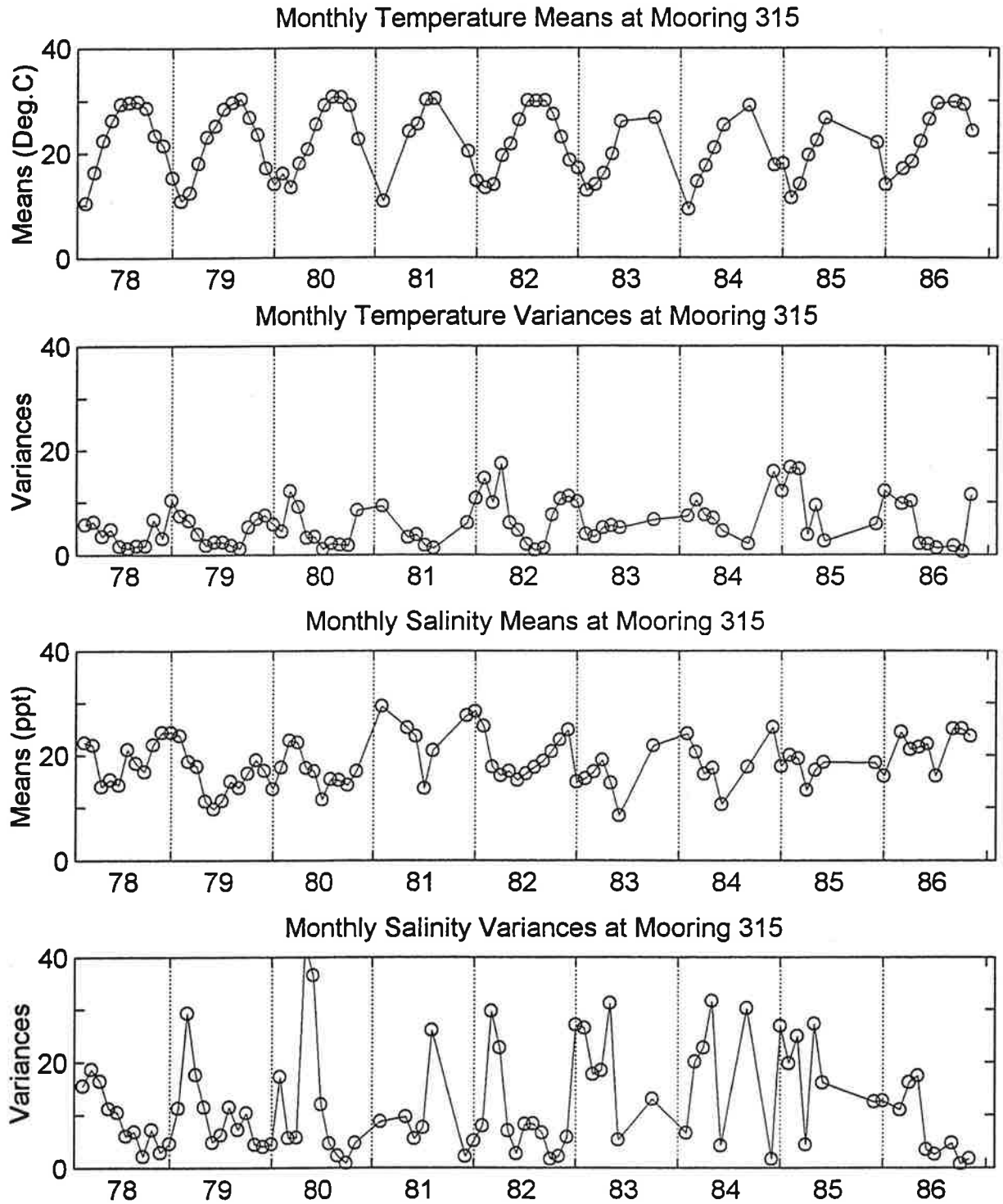

Figure D1. Monthly temperature and salinity means and variances at station 315, 1978-1986.

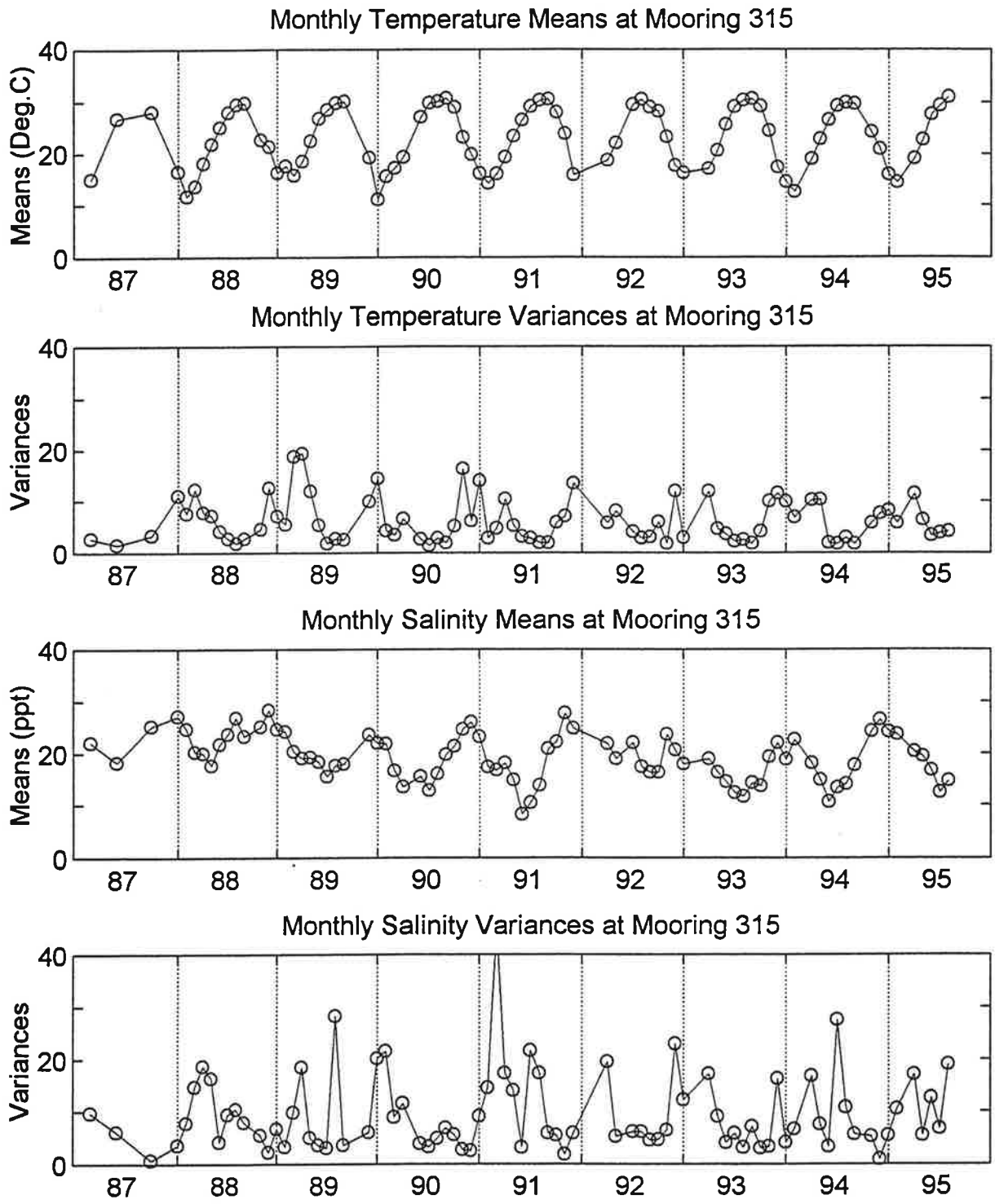

Figure D2. Monthly temperature and salinity means and variances at station 315, 1987-1995.

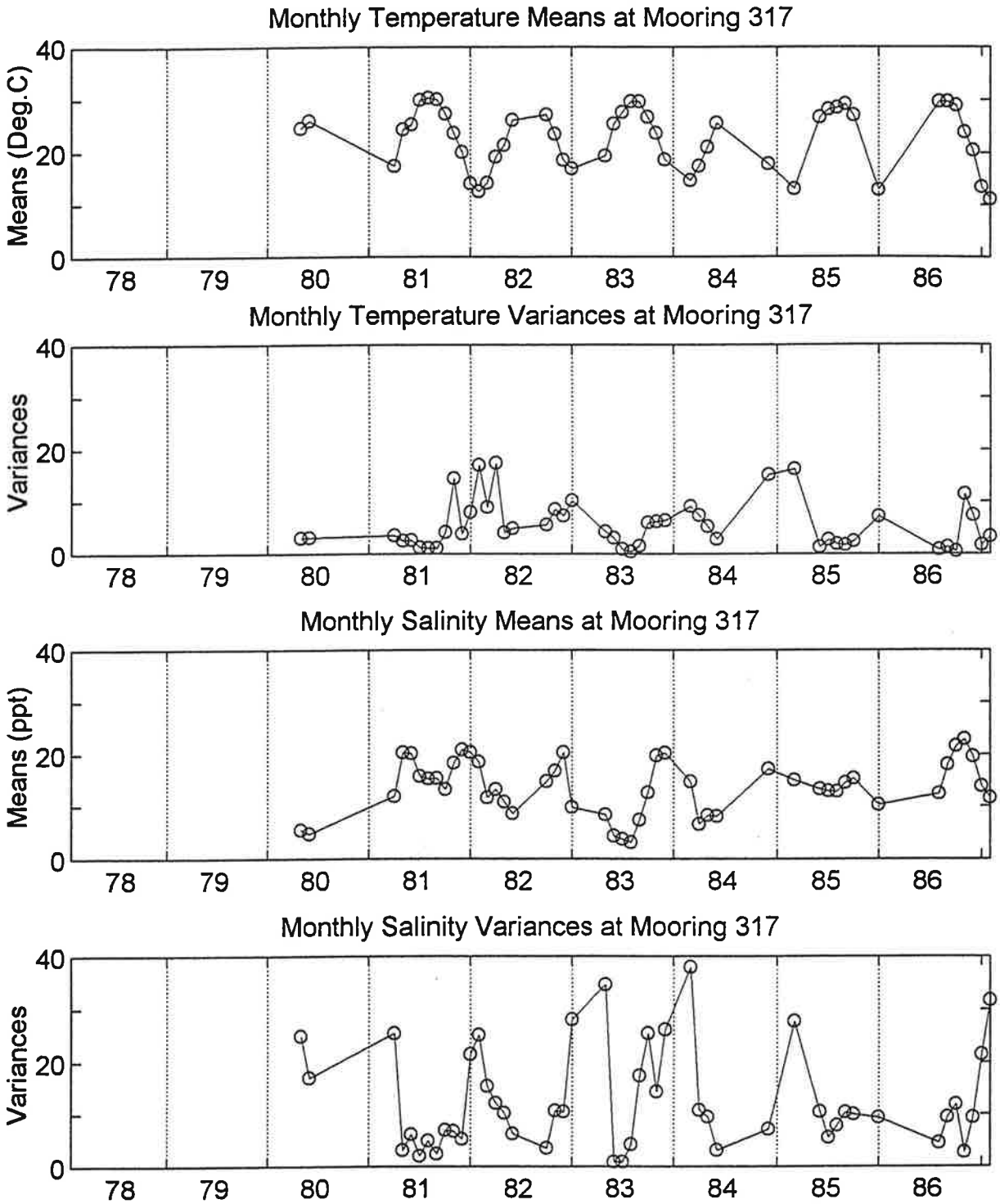

Figure D3. Monthly temperature and salinity means and variances at station 317, 1980-1986.

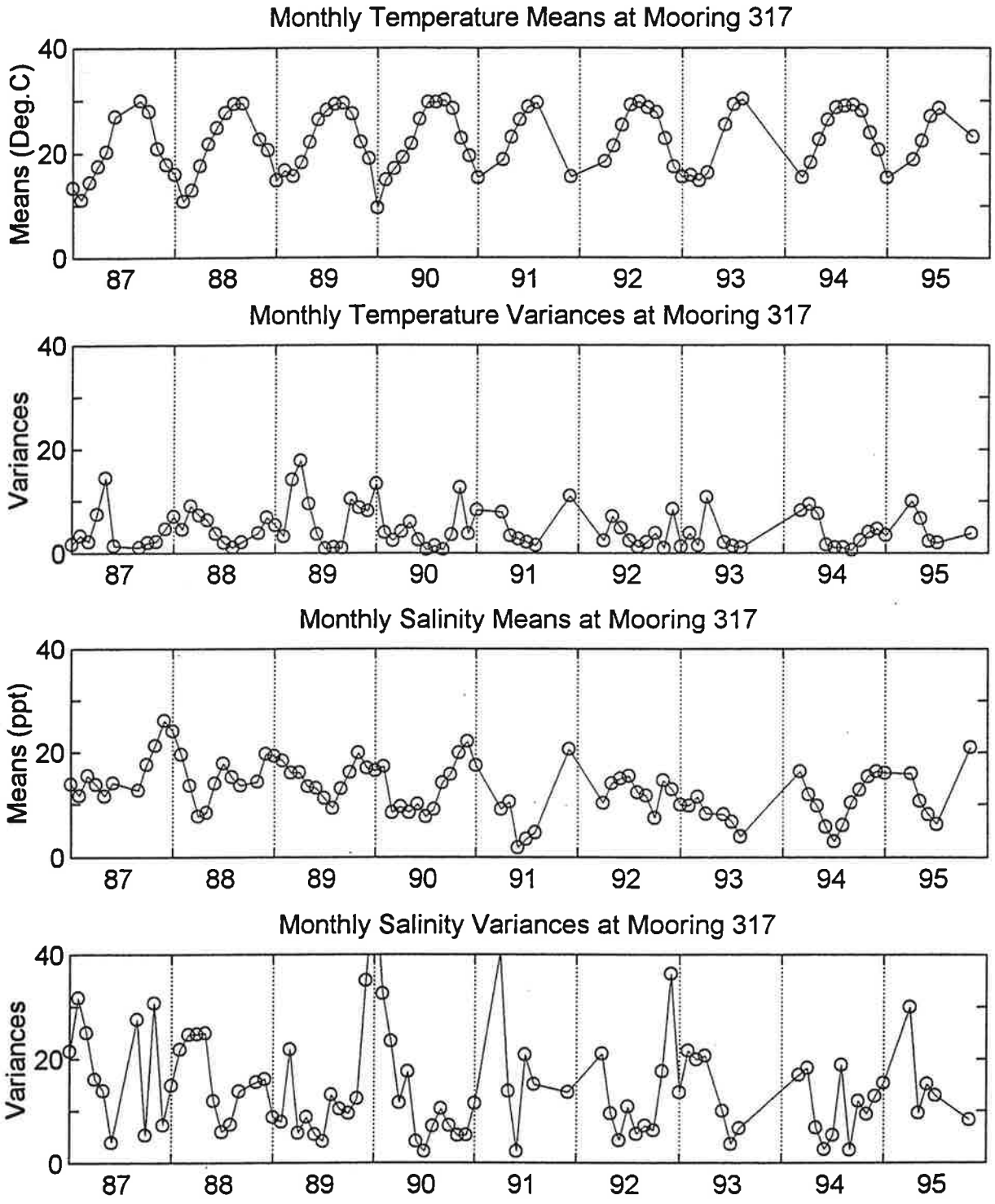

Figure D4. Monthly temperature and salinity means and variances at station 317, 1987-1995.

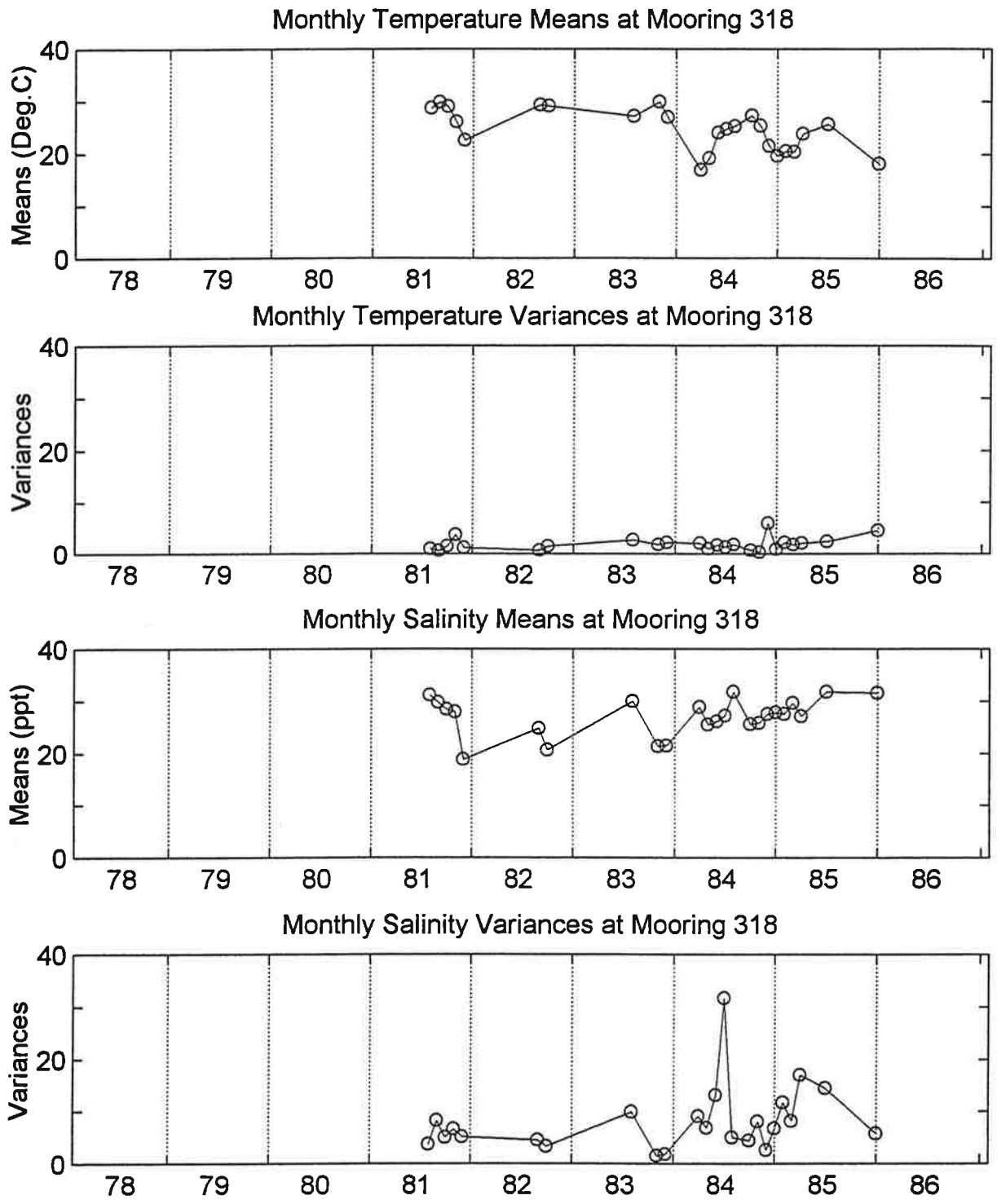

Figure D5. Monthly temperature and salinity means and variances at station 318.

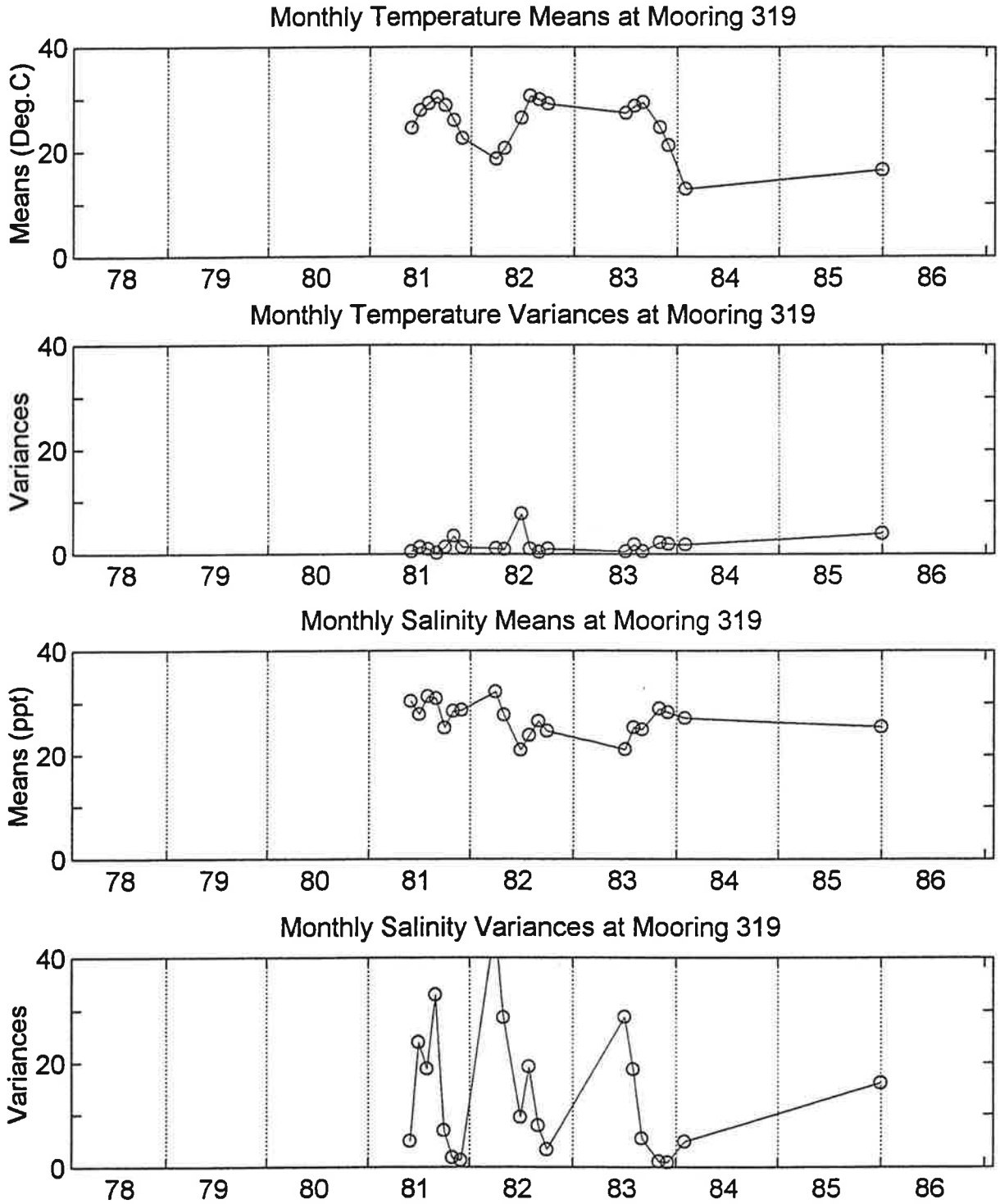

Figure D6. Monthly temperature and salinity means and variances at station 319.

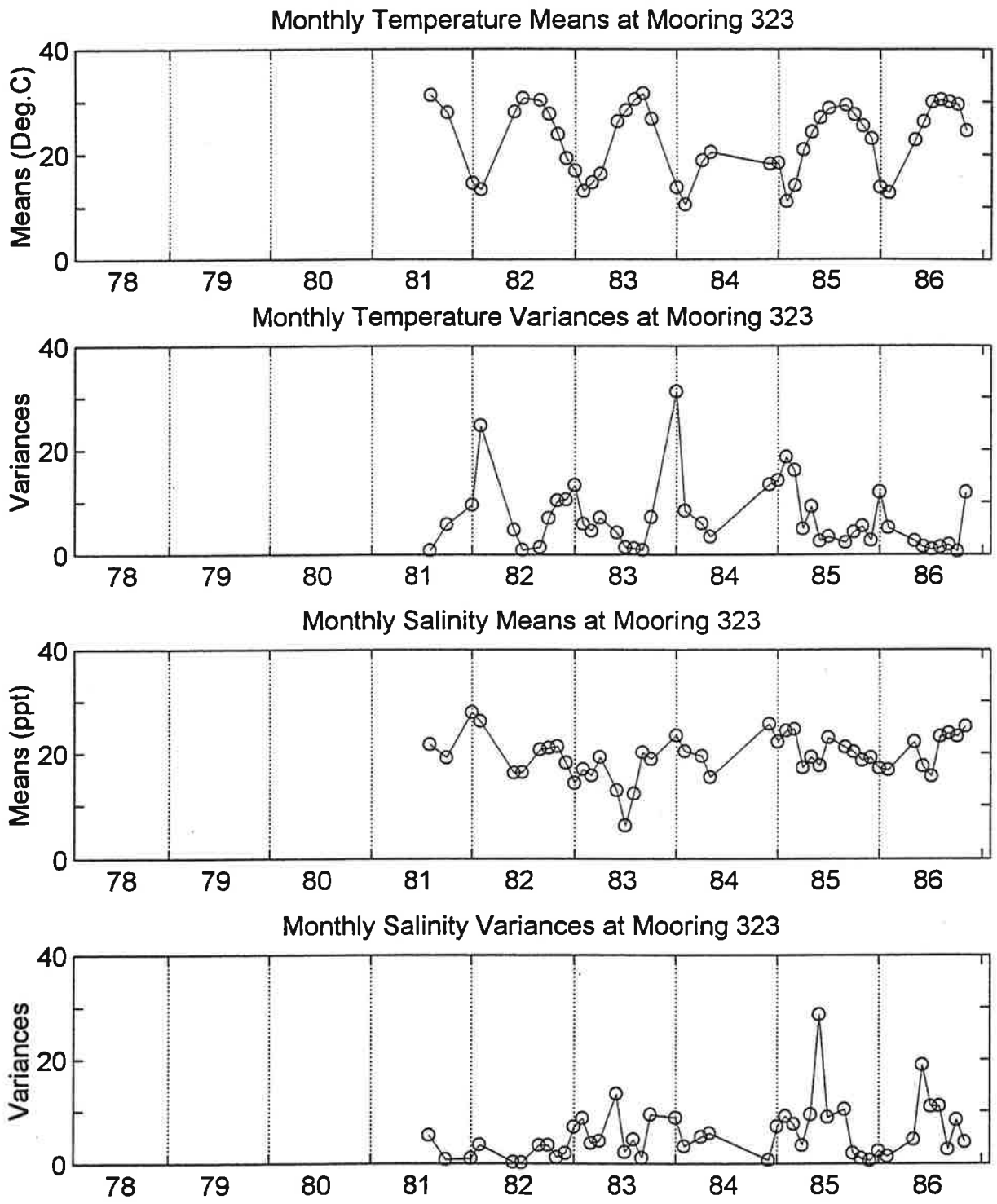

Figure D7. Monthly temperature and salinity means and variances at station 323, 1981-1986.

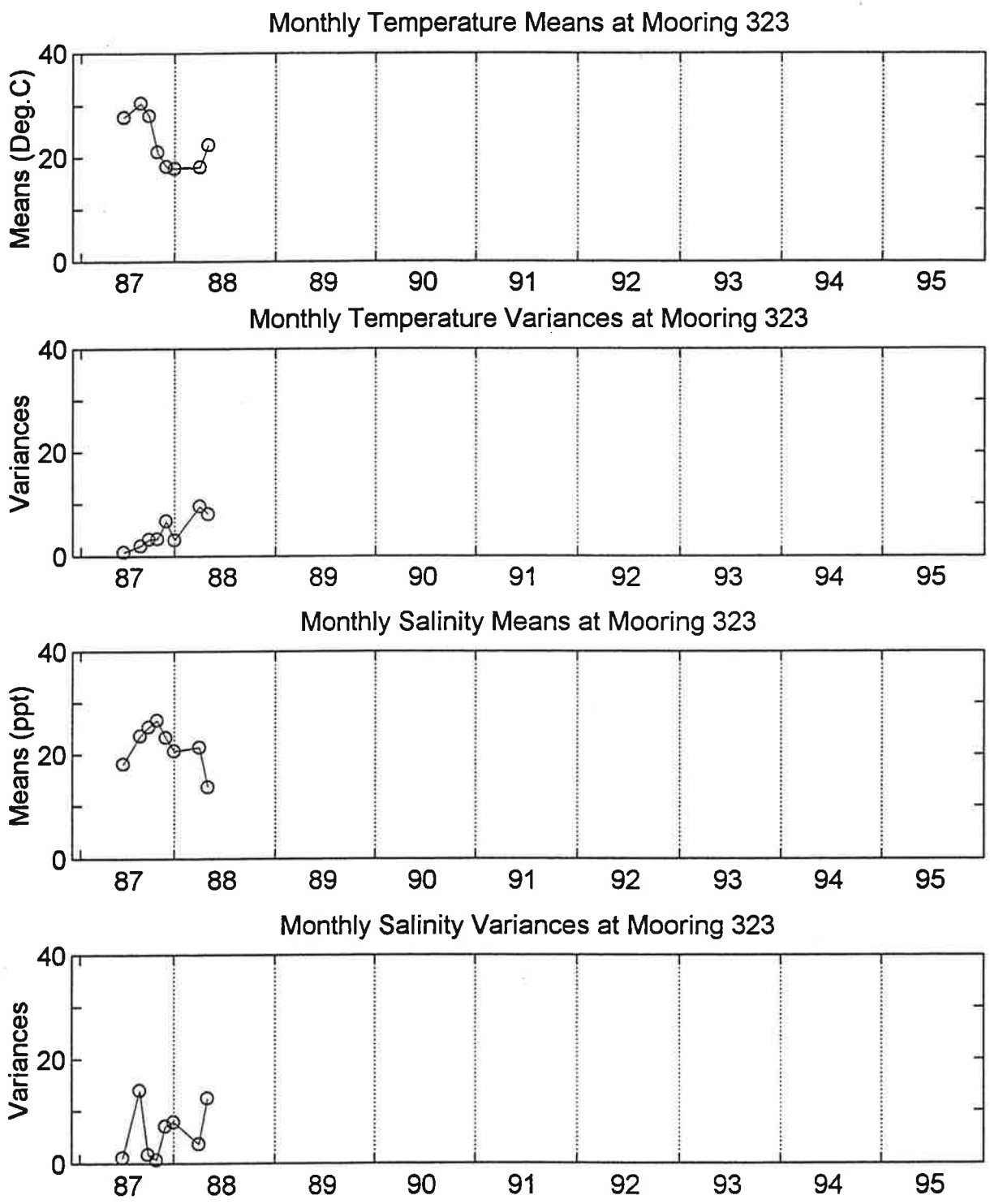

Figure D8. Monthly temperature and salinity means and variances at station 323, 1987-1988.

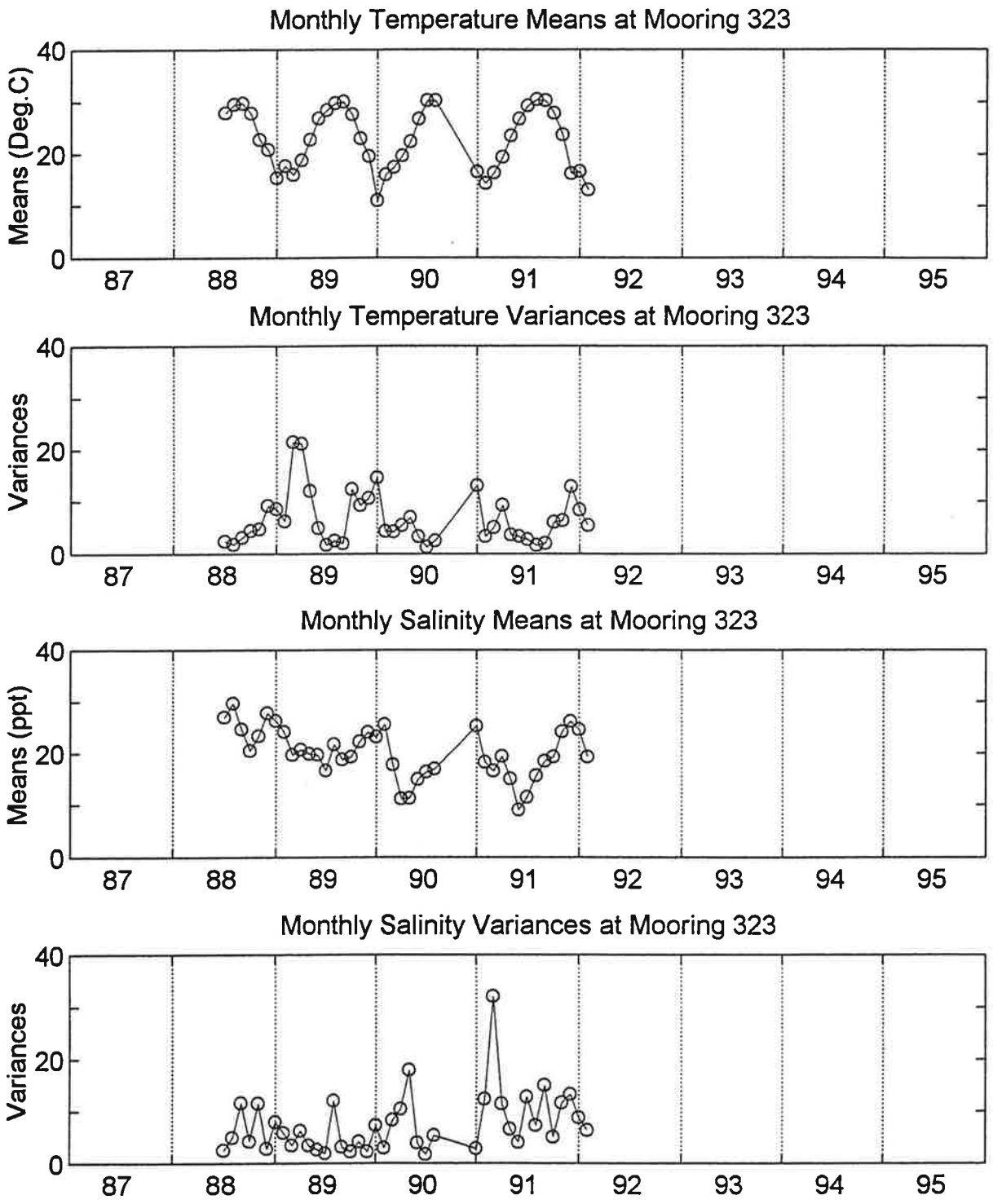

Figure D9. Monthly temperature and salinity means and variances at station 323, 1988-1992.

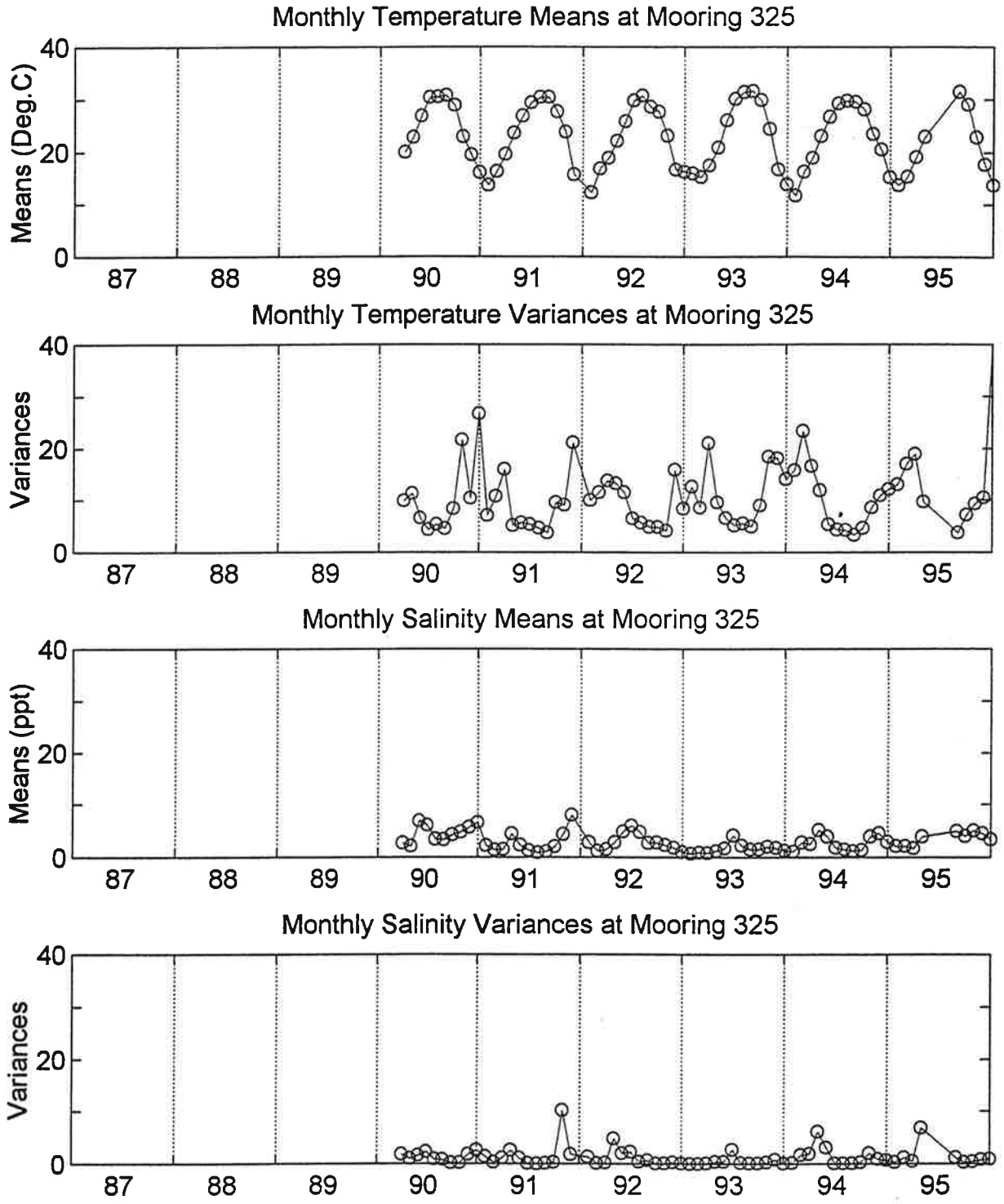

Figure D10. Monthly temperature and salinity means and variances at station 325.

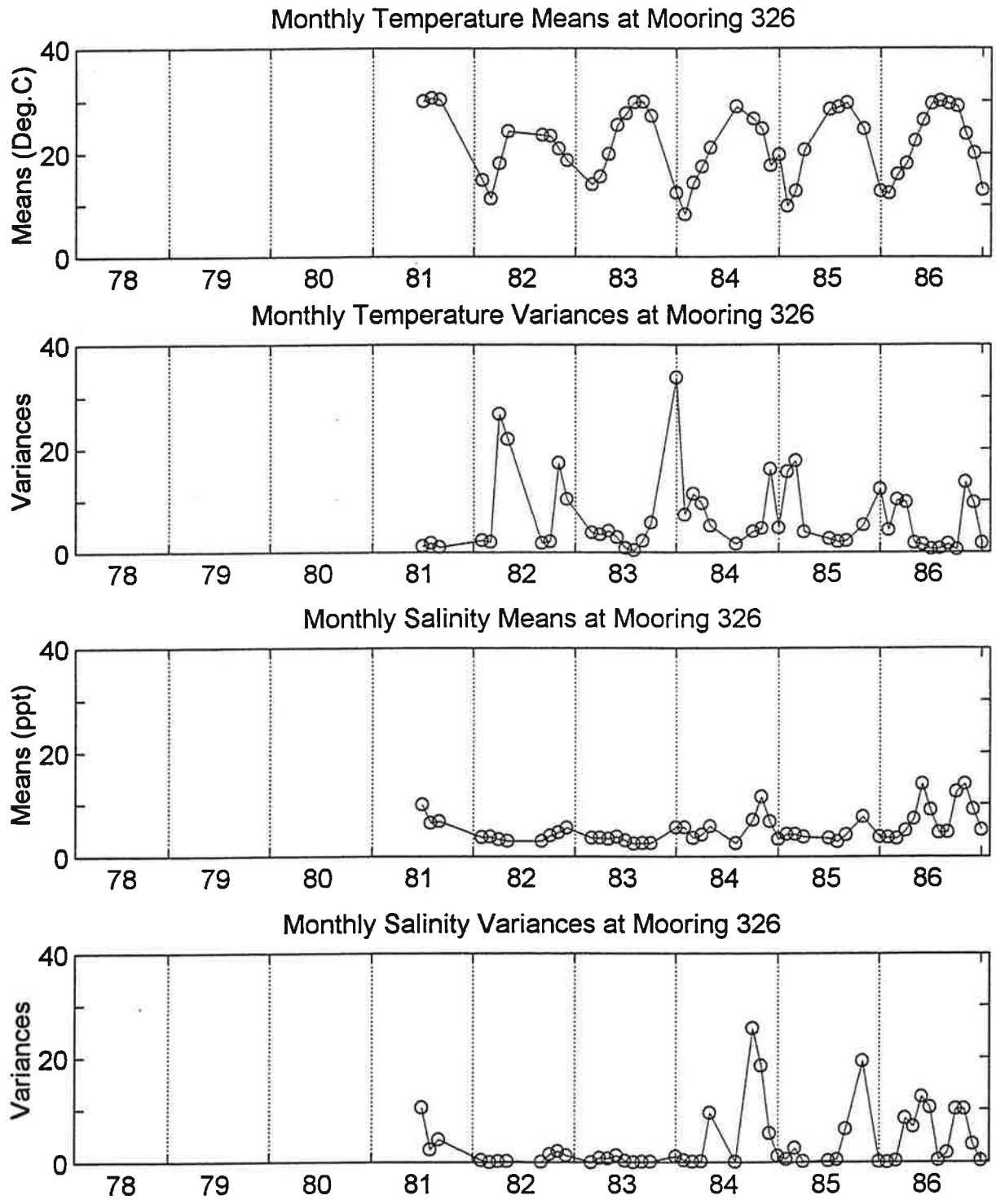

Figure D11. Monthly temperature and salinity means and variances at station 326, 1981-1986.

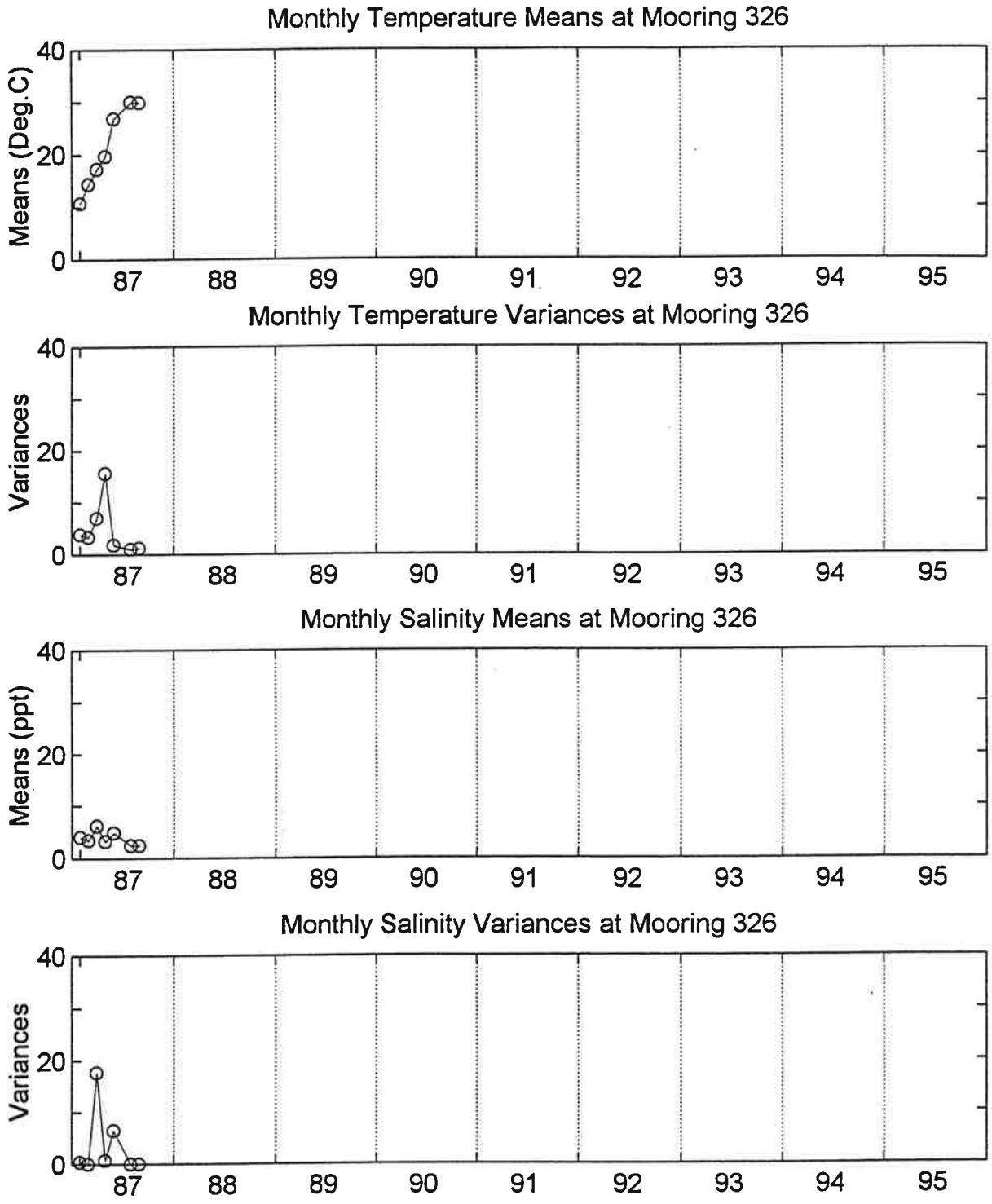

Figure D12. Monthly temperature and salinity means and variances at station 326, 1987.

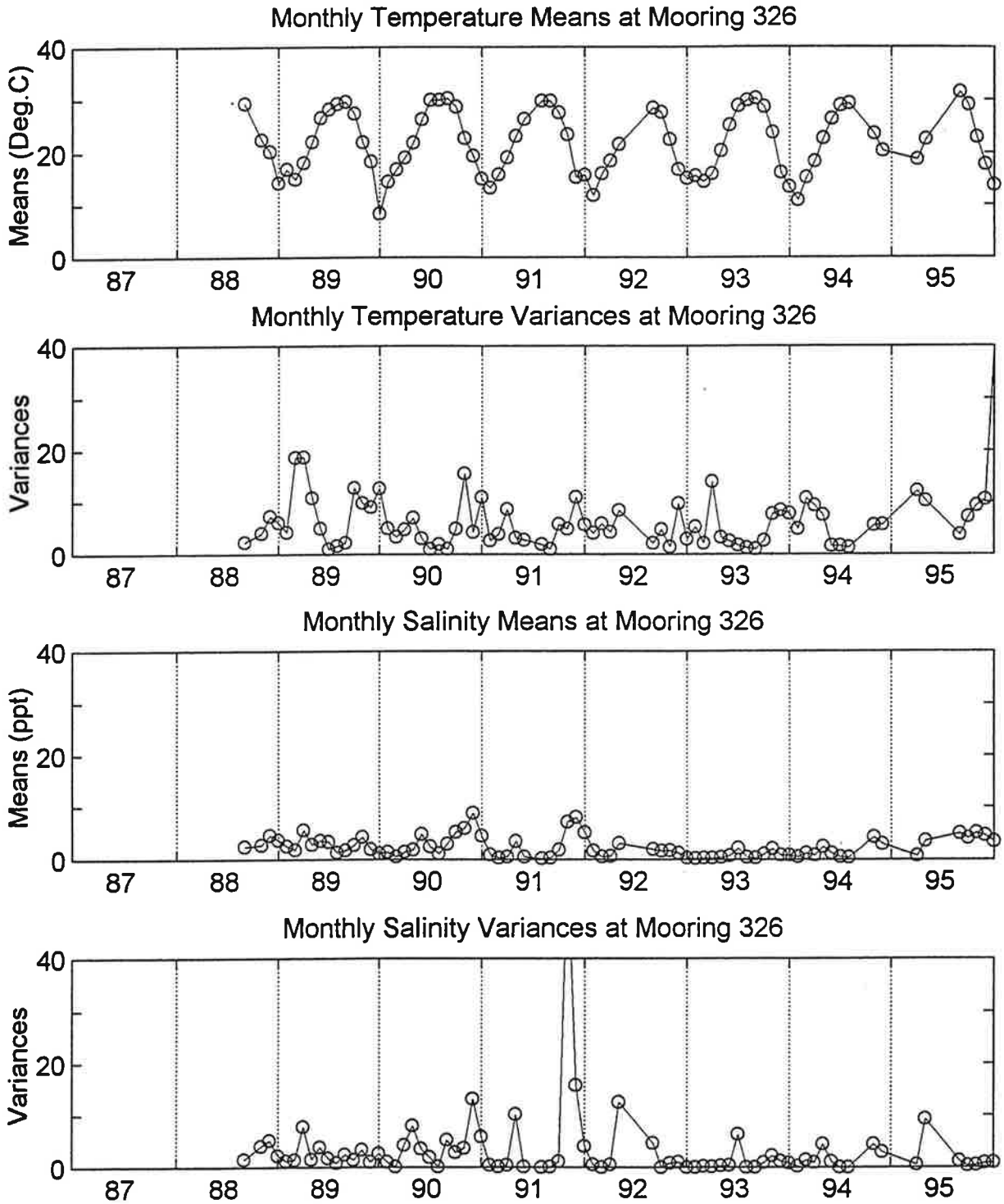

Figure D13. Monthly temperature and salinity means and variances at station 326, 1988-1995.

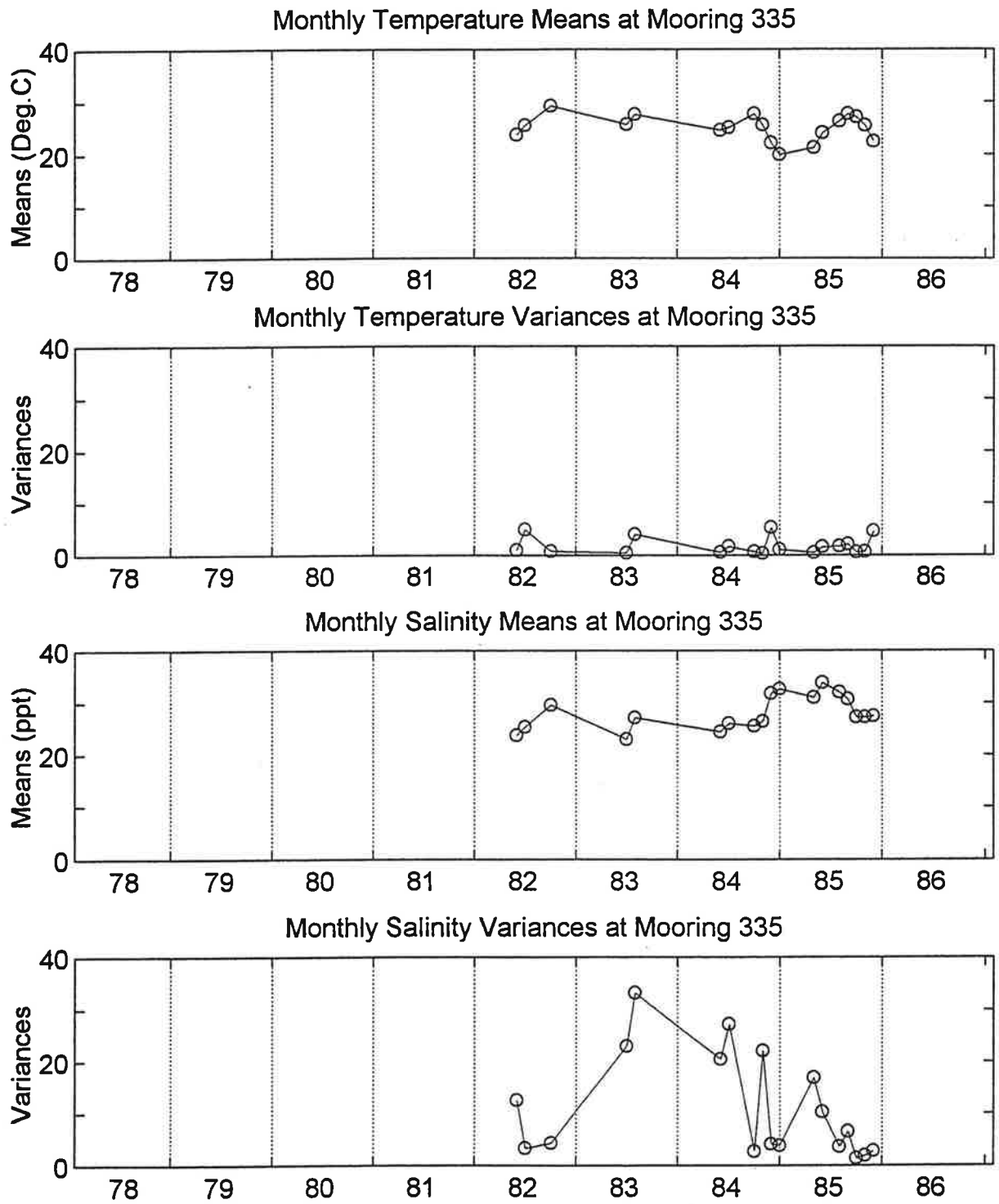

Figure D14. Monthly temperature and salinity means and variances at station 335.

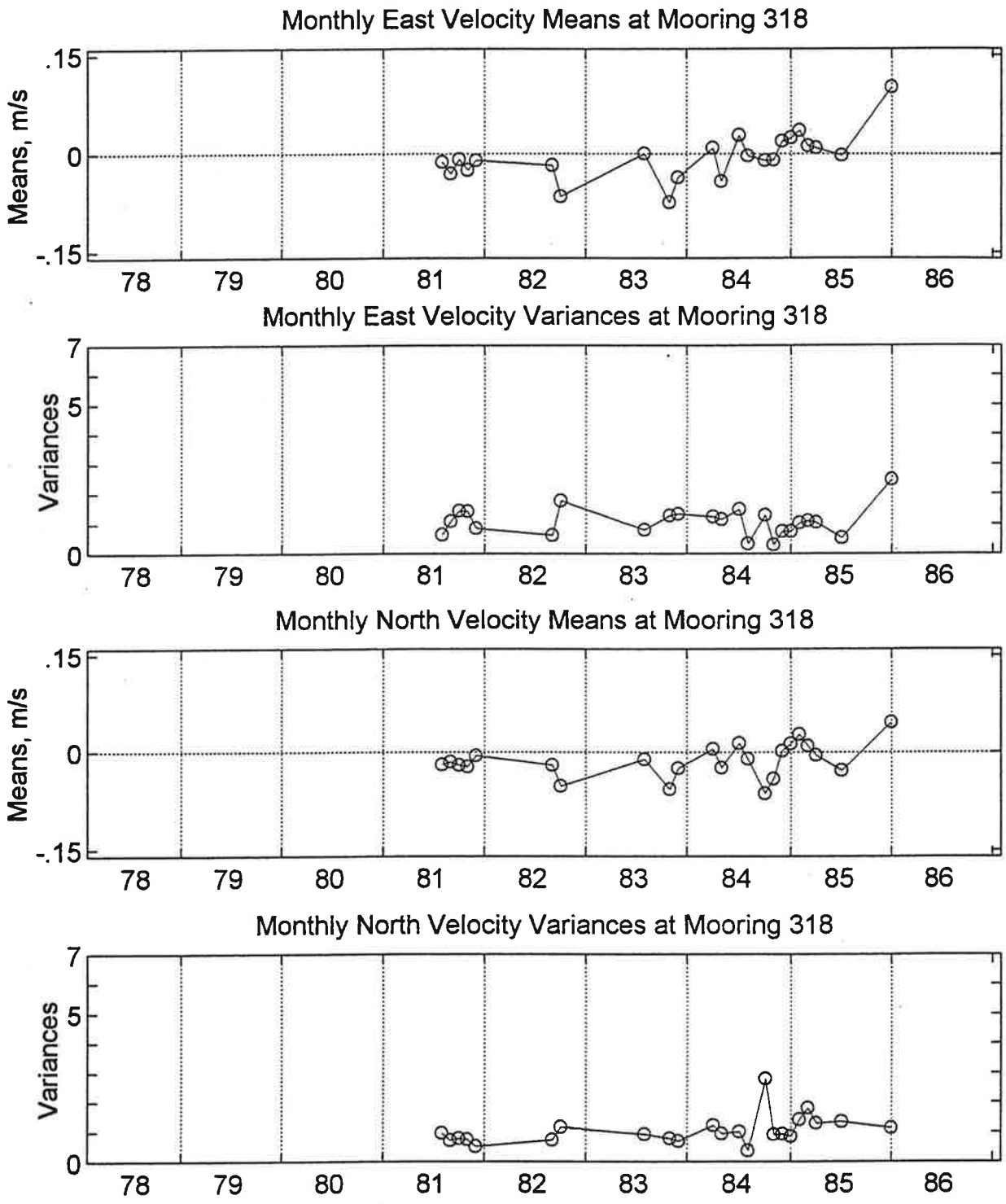

Figure D15. Monthly east and north velocity means and variances at station 318.

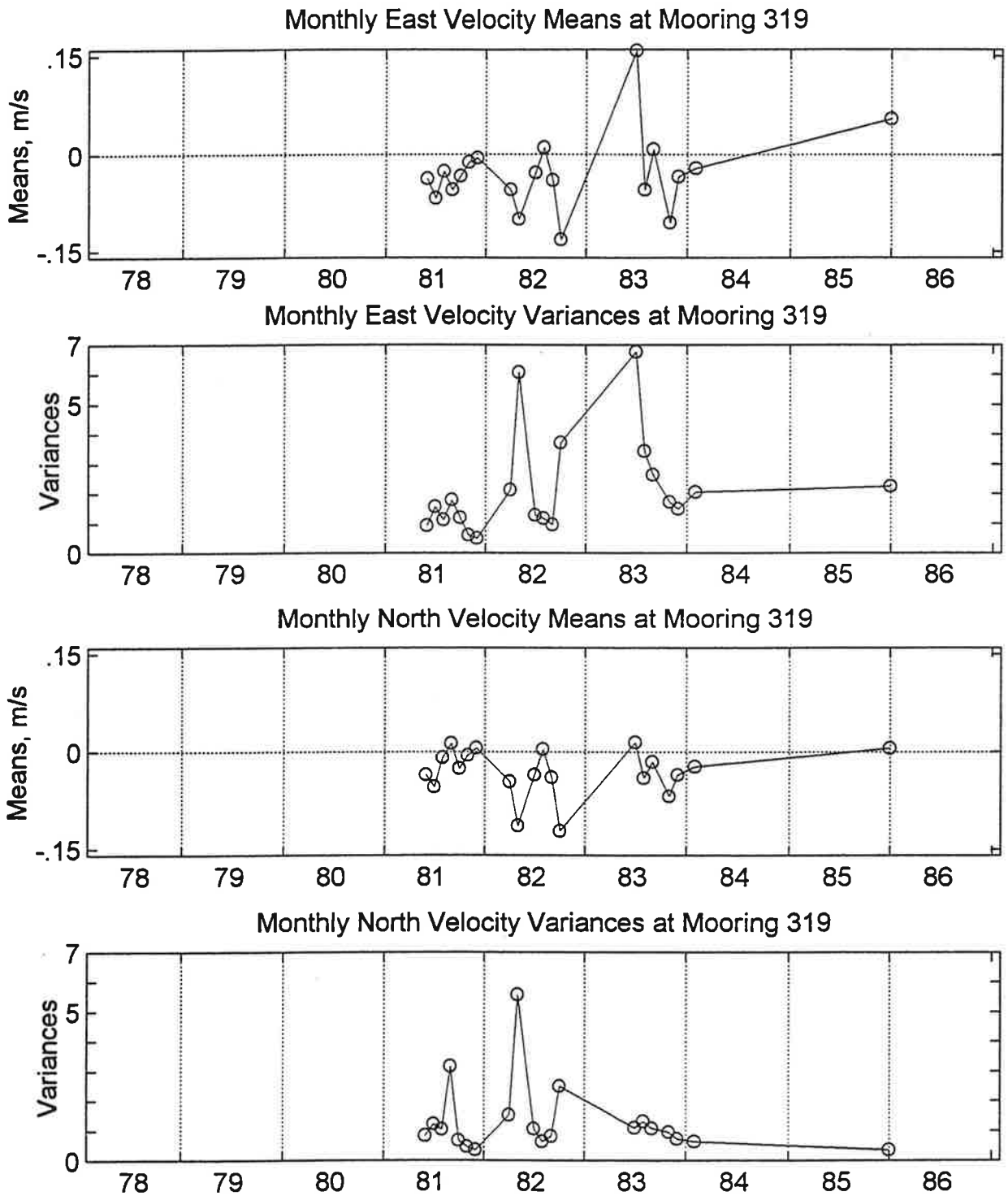

Figure D16. Monthly east and north velocity means and variances at station 319.

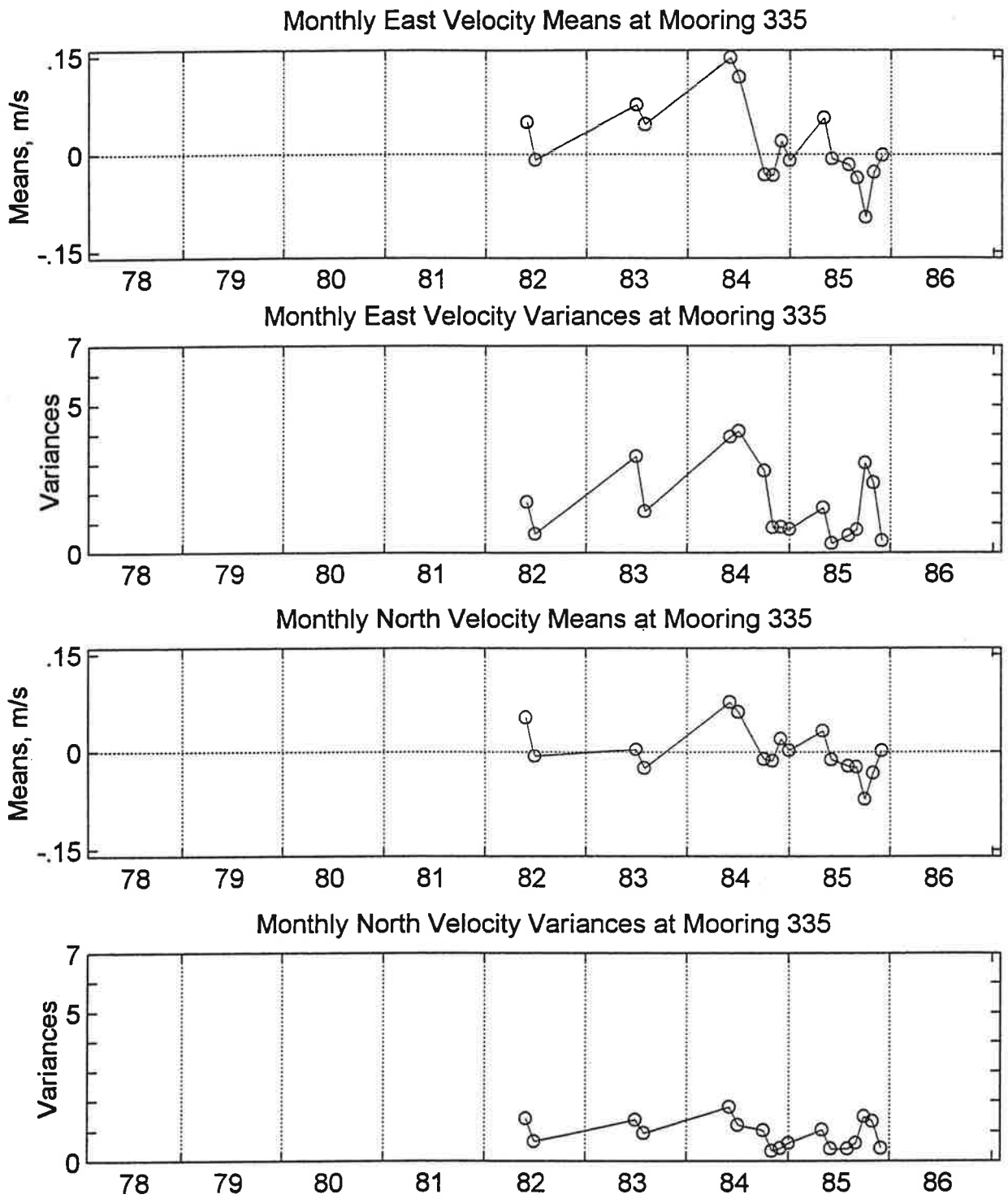

Figure D17. Monthly east and north velocity means and variances at station 335.

APPENDIX E

TREND ANALYSIS TABLES

TABLE E1

TREND ANALYSIS FOR ALL MONTHLY NEAR BOTTOM SALINITIES 1/1/78-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.1731	-0.1067	22.6462	6.0715	0.02	0.09	199
18	-0.0433	-0.1187	1.2697	1.8442	0.01	0.01	156
21	0.0076	0.0450	29.7569	3.6703	0.57	0.69	186
22	0.0667	0.0892	31.3007	3.3119	0.89	0.94	180
35	0.0020	0.0257	31.3611	2.9998	0.58	0.72	183
36	-0.0288	-0.0146	31.8404	2.9697	0.25	0.34	175
37	-0.1500	-0.1558	25.0743	4.0637	0.01	0.01	168
38	-0.1134	-0.1656	3.0842	2.4791	0.01	0.01	175
52	0.0033	-0.0208	35.8187	1.0619	0.69	0.63	147
53	0.0220	0.0007	35.8187	0.9950	0.93	0.95	154
54	0.0093	-0.0034	35.3818	1.2182	0.69	0.65	147
55	0.0071	-0.0226	35.8780	0.9162	0.82	0.82	142
502	-0.0496	0.0015	31.8349	2.9054	0.11	0.21	161
535	-0.0160	-0.0072	31.0886	3.6905	0.43	0.27	125
704	0.0167	0.0546	34.6071	1.4007	0.77	0.83	154
706	0.0375*	0.0492	35.2771	1.0854	0.99	0.97	156
708	0.0250*	0.0457	35.6937	0.9136	0.97	0.97	153

TABLE E2

TREND ANALYSIS FOR ALL MONTHLY NEAR BOTTOM TEMPERATURES
1/1/78-12/31/95

Results of analysis for selected stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0203	0.0275	22.8077	6.2201	0.79	0.54	199
18	-0.0200	0.0212	22.5976	6.8099	0.35	0.55	156
21	0.0000	-0.0157	22.7750	4.9987	0.45	0.36	186
22	-0.0085	-0.0176	22.6105	4.5897	0.33	0.34	180
35	0.0000	0.0435	22.7798	4.5021	0.57	0.70	183
36	-0.0156	0.0066	22.6899	4.4173	0.29	0.50	175
37	0.0121	-0.0097	23.3281	6.2262	0.62	0.44	168
38	-0.0313	-0.0343	23.0223	6.6050	0.20	0.37	175
52	0.0642*	0.0522	22.5626	2.7692	0.99	0.91	147
53	0.0525*	0.0409	22.4373	2.6884	0.97	0.89	154
54	0.0489	0.0368	22.8125	2.9966	0.92	0.81	147
55	0.0456*	0.0421	22.5204	2.6416	0.98	0.86	142
502	0.0280	0.0389	22.8109	4.2514	0.81	0.76	161
535	0.0317	0.0475	22.6662	4.3466	0.77	0.72	125
704	0.0608*	0.0089	22.8970	3.1369	0.96	0.64	154
706	0.0567*	0.0179	22.8024	2.7646	0.98	0.75	156
708	0.0459*	0.0025	22.6431	2.6574	0.96	0.56	153

TABLE E3

TREND ANALYSIS FOR ALL MONTHLY NEAR SURFACE SALINITIES 1/1/78-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.2238	-0.1727	21.8226	6.0945	0.01	0.02	204
7	-0.1000	-0.1053	17.4242	5.0330	0.09	0.14	200
12	-0.1750	-0.2682	9.5735	4.7920	0.06	0.05	126
13	-0.1400	-0.1337	8.7191	4.9149	0.06	0.06	176
14	-0.1000	-0.1688	3.7817	4.0910	0.01	0.01	195
15	-0.0933	-0.1523	3.4588	2.9921	0.01	0.01	199
16	-0.0333	-0.0437	2.0401	2.4152	0.05	0.01	174
18	-0.0200	-0.0523	1.0406	1.5271	0.01	0.01	181
21	-0.0500	0.0003	25.8094	5.2099	0.25	0.33	187
22	-0.1239	-0.0671	26.2096	5.1686	0.02	0.10	180
34	-0.2183	-0.1782	23.9319	5.0572	0.01	0.01	184
35	-0.2027	-0.2563	25.8888	5.3533	0.01	0.01	182
36	-0.2050	-0.2418	26.0373	5.1965	0.01	0.01	176
37	-0.1333	-0.1009	24.6654	4.1861	0.01	0.08	170
38	-0.1200	-0.1740	2.9465	2.4843	0.01	0.01	182
52	-0.1500	-0.1014	26.0192	5.6350	0.08	0.17	152
53	-0.0783	-0.0239	26.7594	5.3654	0.16	0.25	158
54	-0.0333	-0.0235	26.1726	5.1625	0.33	0.29	151
55	0.0063	0.0726	26.7445	5.3101	0.50	0.54	151
502	-0.0945	-0.0980	25.6114	5.3748	0.17	0.09	161
535	-0.1220	-0.0529	25.3783	5.6076	0.11	0.19	126
704	-0.0845	-0.1381	26.1527	5.1044	0.08	0.10	154
706	-0.0239	-0.0700	26.6139	5.2095	0.26	0.30	157
708	-0.0714	-0.0782	26.6451	5.4211	0.19	0.26	153

TABLE E4

TREND ANALYSIS FOR ALL MONTHLY NEAR SURFACE TEMPERATURES
1/1/78-12/31/95

Results of analysis for selected stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0292	0.0449	22.7975	6.4091	0.77	0.62	204
7	-0.0683	-0.0549	22.5832	6.9144	0.03	0.25	200
12	-0.0587	-0.1615	22.3280	6.9894	0.27	0.20	126
13	0.0111	0.0072	22.7050	7.2115	0.60	0.53	176
14	0.0400	0.0666	22.1139	7.1412	0.85	0.80	195
15	0.0400	0.0629	22.3868	7.1573	0.89	0.73	199
16	0.1273*	0.1125	23.6461	7.0119	0.98	0.84	174
18	-0.0100	0.0577	22.5751	6.9474	0.38	0.66	181
21	-0.0250	-0.0315	23.0361	5.6372	0.14	0.30	187
22	-0.0200	-0.0206	23.1394	5.5076	0.19	0.36	180
34	0.0400	-0.0669	23.0612	7.1260	0.81	0.31	184
35	-0.0020	0.0437	23.1729	5.4158	0.40	0.70	182
36	-0.0367	0.0002	23.5048	5.4124	0.05	0.43	176
37	0.0117	-0.0124	23.4339	6.2519	0.59	0.39	170
38	0.0550	0.0590	23.6731	6.9941	0.84	0.71	182
52	0.0567*	0.1028	23.4929	5.4660	0.97	0.82	152
53	0.0507*	0.0897	23.5198	5.4029	0.97	0.82	158
54	0.0713*	0.1233	23.9066	5.4735	0.99	0.85	151
55	0.0755*	0.1221	23.5531	5.3684	0.99	0.83	151
502	0.0105	0.0641	23.3915	5.5123	0.63	0.79	161
535	0.0050	0.0182	23.3748	5.7023	0.67	0.62	126
704	0.0200	-0.0192	23.7551	5.3483	0.78	0.49	154
706	0.0167	-0.0172	23.5841	5.1780	0.75	0.47	157
708	-0.0111	-0.0350	23.6967	5.1895	0.33	0.39	153

TABLE E5

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS PRECEDING THE 1985 HURRICANE SEASON 1/1/78-12/31/84

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1125	0.3517	22.7147	6.3014	0.67	0.86	75
18	-0.1000	-0.3543	1.7067	2.1917	0.06	0.01	45
21	0.1250	0.3172	29.5365	3.8980	0.76	0.79	74
22	0.0000	-0.0007	30.5721	3.7697	0.50	0.35	68
35	-0.3167	-0.4583	30.9250	3.2597	0.11	0.07	60
36	-1.2000	-0.8095	31.6389	3.3025	0.01	0.01	54
37	-0.2000	-0.5654	25.9273	3.8971	0.13	0.06	55
38	-0.1000	-0.2870	3.5582	2.9624	0.38	0.13	55
52	-0.3250	-0.4772	35.8452	1.8631	0.18	0.03	32
53	-0.5500	-0.5383	35.6103	1.7969	0.21	0.01	34
54	-1.2333	-0.6701	35.2935	1.9385	0.02	0.01	33
55	-1	-0.7374	35.9800	1.8458	0.04	0.01	23
502	-0.2000	-0.6142	31.1257	4.0203	0.50	0.22	35
535	0.7000	-0.0142	30.5517	4.1690	0.65	0.67	29
704	-0.4000	0.0239	33.9462	1.8921	0.27	0.35	29
706	0.3500	0.3811	34.7222	1.5111	0.89	0.92	29
708	-0.1500	0.0485	35.1296	1.3931	0.13	0.63	30

TABLE E6

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS PRECEDING THE 1985 HURRICANE SEASON 1/1/78-12/31/84

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0800	0.5707	22.7493	6.4643	0.61	0.91	75
18	-0.4500	0.2785	22.7022	7.2349	0.03	0.50	45
21	-0.1500	-0.2016	22.8554	5.3516	0.20	0.26	74
22	0.0000	0.0292	22.9132	5.2807	0.45	0.50	68
35	-0.1333	0.2720	22.6950	5.2230	0.15	0.72	60
36	-0.2000	0.2255	22.9389	5.2067	0.24	0.66	54
37	-0.1000	0.3178	23.4636	6.4031	0.44	0.63	55
38	-0.2750	-0.1623	22.9709	6.8248	0.02	0.32	55
52	-0.1500	-0.4306	22.4938	3.3583	0.38	0.19	32
53	-0.5500	-0.7336	22.3765	3.4504	0.05	0.03	34
54	-0.2250	-0.5845	22.7545	3.8699	0.17	0.33	33
55	-0.5000	-0.0534	22.8261	2.8886	0.40	0.37	23
502	-0.7000	-0.1610	22.9600	4.6691	0.01	0.47	35
535	-0.8000	-0.7083	23.0276	4.5767	0.09	0.28	29
704	0.1750	-0.6430	23.4379	3.3355	0.80	0.24	29
706	0.2000	-0.6240	23.5552	3.1779	0.57	0.27	29
708	0.0500	-0.5702	23.3067	3.1145	0.56	0.24	30

TABLE E7

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS PRECEDING THE 1985 HURRICANE SEASON 1/1/78-12/31/84

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1500	0.3466	22.1623	6.2093	0.71	0.88	77
7	0.2750	0.4050	17.0658	4.6707	0.93	0.90	73
12	0.2125	0.4918	9.7884	4.6365	0.83	0.84	69
13	0.2350	0.4993	8.5377	4.5733	0.83	0.93	69
14	0.1750	0.2234	4.2554	4.4152	0.86	0.71	74
15	0.1550	0.2950	3.9027	3.3668	0.91	0.79	74
16	0.0000	0.0249	2.0733	2.4069	0.54	0.55	75
18	0.0000	0.1213	1.2134	1.6242	0.50	0.52	67
21	-0.0250	0.4442	25.7635	5.9039	0.50	0.84	74
22	-0.0667	0.4731	26.5779	5.6387	0.33	0.85	68
34	-0.3000	-0.0633	24.1524	4.7810	0.20	0.47	63
35	-0.6000	-0.9298	26.9700	5.3901	0.02	0.03	60
36	-0.8500	-0.9628	27.2759	5.1195	0.02	0.05	54
37	-0.6500	-0.5183	25.0518	4.1008	0.06	0.08	56
38	-0.1500	-0.2012	3.3643	2.8794	0.35	0.24	56
52	-1.1750	-0.6860	25.5556	6.0915	0.18	0.23	36
53	-0.9000	-0.5439	26.3417	6.0416	0.12	0.23	36
54	-0.5000	-0.1105	25.7771	6.1246	0.44	0.57	35
55	0.0500	1.3393	25.5724	6.5484	0.50	0.67	29
502	-0.2667	-0.3192	25.8429	5.5552	0.39	0.54	35
535	0.3000	0.7112	25.4172	5.5696	0.50	0.91	29
704	-0.6167	-1.4073	26.3103	4.8037	0.12	0.06	29
706	-1	-1.6994	26.5966	4.7450	0.01	0.03	29
708	-1.3000	-2.0008	26.2400	5.6413	0.02	0.01	30

TABLE E8

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS PRECEDING THE 1985 HURRICANE SEASON 1/1/78-12/31/84

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1292	0.4878	22.5455	6.6517	0.66	0.86	77
7	-0.0500	0.2069	22.9781	6.7950	0.42	0.68	73
12	0.1083	0.2999	23.0986	6.4527	0.71	0.79	69
13	0.0000	0.1921	22.7029	7.1020	0.50	0.66	69
14	0.0900	0.1869	21.8135	7.2773	0.66	0.65	74
15	0.0833	0.0551	21.8581	7.6166	0.76	0.48	74
16	0.2333	0.1720	22.6080	7.3182	0.80	0.59	75
18	-0.0750	0.3175	22.4448	7.4657	0.41	0.72	67
21	0.0000	-0.0403	23.2703	5.8620	0.50	0.45	74
22	0.0250	0.0627	23.3676	5.8900	0.65	0.54	68
34	0.2000	0.2198	23.5540	6.8254	0.86	0.73	63
35	0.1000	0.4836	23.1283	5.7891	0.75	0.85	60
36	-0.1000	0.3221	23.7426	5.8411	0.22	0.66	54
37	0.1000	0.3335	23.6714	6.4080	0.59	0.64	56
38	-0.0667	0.0916	22.9893	7.2023	0.18	0.47	56
52	-0.5000	-0.8588	22.8889	6.0082	0.03	0.15	36
53	-0.5750	-0.8617	23.0028	5.7938	0.02	0.13	36
54	-0.2750	-0.7486	23.2286	6.0646	0.24	0.22	35
55	-0.7500	-0.5713	22.8345	5.8670	0.05	0.23	29
502	-0.8000	-0.1519	23.4343	5.5516	0.01	0.36	35
535	-0.7000	-1.2575	23.9655	5.7102	0.03	0.12	29
704	-0.1000	-0.5850	24.6207	4.8460	0.43	0.22	29
706	-0.0250	-0.8553	24.4276	4.8229	0.43	0.16	29
708	-0.2500	-0.6329	25.0033	4.8727	0.07	0.19	30

TABLE E9

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS AFTER THE 1985 HURRICANE SEASON 1/1/86-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.0721	-0.2062	1.0644	1.6971	0.01	0.01	99
21	-0.2125	-0.0075	29.9117	3.4458	0.16	0.39	102
22	-0.1317	-0.0244	31.7581	2.7793	0.07	0.26	102
35	-0.1000	0.0162	31.4892	2.9004	0.14	0.49	113
36	-0.0650	-0.0071	31.8610	2.8722	0.16	0.60	111
37	-0.3000	-0.2358	24.7950	4.0865	0.04	0.07	102
38	-0.3659	-0.4217	2.8672	2.2793	0.01	0.01	109
52	0.0000	-0.0180	35.7953	0.6742	0.37	0.25	105
53	0.0000	-0.0209	35.8709	0.6508	0.33	0.30	110
54	0.0000	-0.0045	35.4150	0.9456	0.49	0.27	105
55	0.0000	-0.0027	35.8299	0.6022	0.50	0.44	109
502	-0.1267	-0.1290	31.9871	2.5242	0.01	0.03	115
535	-0.2050	-0.0904	31.1468	3.6803	0.08	0.08	85
704	-0.0110	-0.0038	34.7594	1.2150	0.33	0.38	114
706	0.0120	0.0212	35.3667	0.9022	0.80	0.66	116
708	-0.0025	-0.0019	35.8257	0.6951	0.31	0.45	112

TABLE E10

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS AFTER THE 1985 HURRICANE SEASON 1/1/86-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.0267	0.0689	22.5841	6.6451	0.33	0.67	99
21	0.0523	0.0222	22.7289	4.8588	0.82	0.59	102
22	0.0325	0.0760	22.4587	4.2171	0.63	0.72	102
35	0.0360	0.0608	22.8859	4.2089	0.71	0.66	113
36	0.0100	0.0901	22.6094	4.1160	0.57	0.77	111
37	-0.0300	-0.0127	23.2433	6.1629	0.35	0.50	102
38	-0.1750	-0.1573	23.0477	6.5944	0.01	0.25	109
52	0.0700*	0.1123	22.6448	2.6068	0.98	0.95	105
53	0.0892*	0.1112	22.4985	2.4649	0.99	0.94	110
54	0.0600	0.0623	22.9137	2.6933	0.91	0.84	105
55	0.0844*	0.1192	22.5091	2.5314	0.99	0.95	109
502	0.0367	0.0900	22.8543	4.1486	0.81	0.88	115
535	0.0829	0.2075	22.6044	4.3222	0.84	0.94	85
704	0.0875	0.1350	22.8030	3.0790	0.91	0.95	114
706	0.1000*	0.1972	22.6653	2.6341	0.99	0.99	116
708	0.0775*	0.1377	22.5250	2.5084	0.99	0.94	112

TABLE E11

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS AFTER THE 1985 HURRICANE SEASON 1/1/86-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.9000	-0.8045	21.5668	5.9904	0.01	0.01	117
7	-0.9373	-0.8555	17.5193	5.4107	0.01	0.01	116
12	-3	-1.1905	8.7317	5.2785	0.01	0.01	46
13	-1.0617	-1.1651	8.7392	5.3768	0.01	0.01	96
14	-0.3633	-0.5878	3.4122	3.8744	0.01	0.01	109
15	-0.4187	-0.5542	3.1283	2.8288	0.01	0.01	113
16	-0.1925	-0.3016	2.0458	2.5281	0.01	0.01	89
18	-0.0500	-0.1635	0.9044	1.4831	0.01	0.01	102
21	-0.3420	-0.2262	25.9375	4.6952	0.06	0.11	103
22	-0.3250	-0.2656	26.0258	4.9611	0.01	0.06	102
34	-0.7500	-0.6149	23.7070	5.3062	0.01	0.01	110
35	-0.4140	-0.4184	25.3426	5.3811	0.01	0.01	112
36	-0.3417	-0.3643	25.5907	5.0939	0.01	0.02	112
37	-0.3600	-0.2867	24.6632	4.1722	0.01	0.04	103
38	-0.3571	-0.4637	2.7492	2.3466	0.01	0.01	115
52	-0.4013	-0.4257	26.1766	5.5699	0.01	0.03	106
53	-0.3610	-0.2581	27.0114	5.1708	0.03	0.08	112
54	-0.1700	-0.1963	26.2996	4.8962	0.16	0.18	107
55	-0.3220	-0.1926	27.1591	4.9986	0.05	0.13	112
502	-0.2050	-0.2262	25.5803	5.2214	0.09	0.06	115
535	-0.3775	-0.2088	25.4415	5.5146	0.90	0.06	86
704	-0.4160	-0.2417	26.0519	5.1879	0.01	0.10	114
706	-0.1700	-0.0519	26.4965	5.3518	0.14	0.37	117
708	-0.2454	-0.1679	26.6330	5.4220	0.11	0.24	112

TABLE E12

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS AFTER THE 1985 HURRICANE SEASON 1/1/86-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.1200	-0.0339	22.8684	6.3719	0.08	0.36	117
7	-0.1535	-0.1195	22.3839	6.8557	0.02	0.30	116
12	0.1000	-0.1561	21.2746	7.4899	0.58	0.28	46
13	-0.0667	-0.1700	22.8519	7.2460	0.24	0.28	96
14	-0.0427	0.0599	22.3369	7.0961	0.44	0.70	109
15	-0.1559	-0.0185	22.6573	6.8914	0.09	0.58	113
16	-0.4785	-0.4520	24.4902	6.7262	0.01	0.05	89
18	-0.0560	0.1021	22.6696	6.6251	0.26	0.71	102
21	0.0600	-0.0001	22.8850	5.5492	0.84	0.60	103
22	0.0000	0.0198	23.0009	5.3095	0.51	0.64	102
34	-0.1800	-0.1358	22.8924	7.2879	0.07	0.34	110
35	0.0683	0.0712	23.2255	5.2764	0.94	0.77	112
36	0.0167	0.0581	23.4085	5.2317	0.57	0.72	112
37	-0.0200	0.0397	23.2812	6.1806	0.42	0.57	103
38	-0.1633	-0.1295	24.0227	6.9892	0.02	0.35	115
52	0.0461	0.1093	23.7945	5.2840	0.88	0.68	106
53	0.0710*	0.1272	23.7378	5.2939	0.96	0.77	112
54	0.0660*	0.1039	24.2804	5.2116	0.96	0.69	107
55	0.0475	0.1092	23.8136	5.2482	0.94	0.68	112
502	0.0100	0.1538	23.4333	5.5370	0.62	0.83	115
535	0.0462	0.2083	23.2305	5.7680	0.79	0.90	86
704	-0.0024	0.1153	23.6104	5.4786	0.44	0.73	114
706	0.0000	0.1689	23.3719	5.2788	0.46	0.81	117
708	-0.0075	0.2096	23.3848	5.2548	0.38	0.87	112

TABLE E13

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS PRECEDING 1990 CESSATION OF BRINE DISCHARGE
1/1/78-12/31/89

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*). Those B values associated with the probability $p_{seasonal} >$ 0.9500 for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.2818*	0.3732	23.5615	6.0107	0.97	0.99	130
18	-0.0250	-0.1197	1.5959	1.9843	0.24	0.17	98
21	0.1111	0.1281	29.7452	3.8561	0.92	0.85	124
22	0.2375*	0.1657	31.1322	3.5722	0.98	0.96	118
35	0.1000	0.0359	31.3252	3.1039	0.82	0.72	111
36	-0.0764	-0.0280	31.9683	3.0824	0.30	0.29	104
37	-0.0429	-0.0840	25.6557	3.8487	0.29	0.22	106
38	0.1400*	0.0023	3.7509	2.6938	0.98	0.86	108
52	0.0500	-0.0258	35.8910	1.2892	0.85	0.92	80
53	0.1500*	0.0234	35.8368	1.2400	0.99	0.99	84
54	0.0900	-0.0171	35.3840	1.4771	0.85	0.86	79
55	0.1000*	-0.0369	35.9682	1.1452	0.97	0.97	72
502	0.1000	0.2213	31.9516	3.2017	0.85	0.91	93
535	0.2200	0.1539	31.2134	3.6668	0.92	0.88	67
704	0.1775*	0.1841	34.5171	1.5898	0.99	0.99	86
706	0.1667*	0.1577	35.2084	1.2430	0.99	0.99	87
708	0.1000*	0.1389	35.5899	1.0673	0.99	0.99	86

TABLE E14

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS PRECEDING 1990 CESSATION OF BRINE DISCHARGE
1/1/78-12/31/89

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0778	0.1105	22.7838	6.3810	0.85	0.71	130
18	-0.0500	0.0129	22.5398	6.9000	0.43	0.46	98
21	-0.0750	-0.0491	22.7952	5.1519	0.11	0.29	124
22	-0.0833	-0.0717	22.6254	4.8774	0.07	0.24	118
35	-0.1000	0.0446	22.6523	4.8500	0.09	0.56	111
36	-0.1225	-0.0451	22.6615	4.7474	0.10	0.31	104
37	-0.0333	0.0126	23.3783	6.2656	0.36	0.44	106
38	0.0667	0.1106	23.2093	6.5829	0.69	0.68	108
52	0.0267	-0.0142	22.3350	2.8575	0.27	0.56	80
53	-0.0200	-0.0152	22.3048	2.9154	0.47	0.58	84
54	-0.0650	-0.0070	22.6886	3.2770	0.37	0.60	79
55	-0.0250	0.0013	22.4194	2.8250	0.36	0.53	72
502	0.0000	0.0094	22.7419	4.5098	0.46	0.57	93
535	-0.1125	-0.3414	22.2881	4.5075	0.30	0.42	67
704	0.0000	-0.1103	22.8919	3.3343	0.50	0.26	86
706	-0.0500	-0.1641	22.7253	2.9663	0.23	0.18	87
708	-0.1000	-0.1486	22.6523	2.7751	0.19	0.17	86

TABLE E15

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS PRECEDING 1990 CESSATION OF BRINE DISCHARGE
1/1/78-12/31/89

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.3375*	0.3864	23.1067	5.9392	0.99	0.99	134
7	0.5600*	0.5470	18.6244	4.6125	0.99	0.99	131
12	0.2600*	0.4202	10.5314	4.5133	0.99	0.99	105
13	0.4000*	0.3912	9.6421	4.7026	0.99	0.99	126
14	0.1063*	0.0744	4.5045	4.3642	0.97	0.83	132
15	0.1523*	0.1135	4.2053	3.2471	0.99	0.98	132
16	0.1000*	0.0975	2.2762	2.4398	0.99	0.96	122
18	0.0000	0.0043	1.2371	1.6266	0.51	0.45	124
21	0.2100	0.2363	26.1177	5.6219	0.91	0.90	124
22	0.1000	0.1627	26.7144	5.3673	0.82	0.81	118
34	0.2714*	0.2726	24.9042	5.0010	0.99	0.99	120
35	-0.0800	-0.1201	26.8919	5.2281	0.39	0.21	111
36	-0.0375	-0.1336	27.0076	5.2425	0.46	0.29	105
37	0.0000	0.0392	25.1528	4.0061	0.50	0.56	108
38	0.1613*	0.0406	3.6637	2.7374	0.99	0.94	113
52	0.2125	0.4313	26.8753	5.0342	0.91	0.95	85
53	0.1667	0.3743	27.3195	4.9955	0.84	0.87	87
54	0.1500	0.3154	26.7695	4.8877	0.73	0.83	82
55	0.6000*	0.7061	27.1937	5.1844	0.97	0.97	80
502	0.2000	0.2803	26.3574	5.4609	0.83	0.90	94
535	0.5000	0.4769	25.8388	5.5776	0.89	0.96	67
704	0.2500	0.1526	27.0721	4.8560	0.89	0.81	86
706	0.0800	0.0528	27.1955	5.0022	0.65	0.70	88
708	0.0200	0.2108	27.2576	5.0842	0.53	0.81	85

TABLE E16

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS PRECEDING 1990 CESSATION OF BRINE DISCHARGE
1/1/78-12/31/89

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1286	0.1518	22.7515	6.5245	0.89	0.77	134
7	0.0000	0.0057	22.7893	6.9065	0.52	0.52	131
12	-0.0500	-0.1547	22.6076	6.7810	0.35	0.33	105
13	0.0400	0.0545	22.6841	7.1911	0.67	0.65	126
14	0.0690	0.1202	21.9545	7.0970	0.82	0.72	132
15	0.1100*	0.1623	22.2886	7.1681	0.96	0.75	132
16	0.4250*	0.4226	23.6926	7.1090	0.99	0.98	122
18	0.0000	0.0940	22.4903	7.0919	0.54	0.64	124
21	-0.0750	-0.0281	23.1476	5.6840	0.04	0.32	124
22	-0.0500	-0.0055	23.2517	5.5912	0.15	0.39	118
34	0.1667*	0.0136	23.2983	7.0802	0.97	0.53	120
35	-0.0750	0.0897	23.1090	5.5342	0.08	0.64	111
36	-0.1000	0.0093	23.5581	5.5667	0.03	0.38	105
37	-0.0556	-0.0244	23.4583	6.2817	0.41	0.35	108
38	0.1775*	0.2835	23.6044	6.9003	0.95	0.88	113
52	-0.0071	0.1026	23.2118	5.6082	0.35	0.61	85
53	-0.0250	0.0916	23.3126	5.5096	0.36	0.62	87
54	0.0000	0.0854	23.4573	5.7213	0.50	0.59	82
55	0.0875	0.2054	23.2737	5.5460	0.83	0.72	80
502	-0.1500	-0.0804	23.1277	5.4770	0.04	0.40	94
535	-0.1500	-0.4021	23.1149	5.7000	0.12	0.13	67
704	0.0000	-0.2141	23.7547	5.2117	0.52	0.24	86
706	0.0000	-0.2294	23.6091	5.0707	0.39	0.21	88
708	-0.0750	-0.2873	23.8141	5.1964	0.21	0.12	85

TABLE E17

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS AFTER 1990 CESSATION OF BRINE DISCHARGE 1/1/91-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.0142	-0.1985	0.6387	1.5516	0.90	0.11	46
21	0.0838	0.0874	29.9300	2.9736	0.60	0.67	53
22	0.0850	0.1286	31.7175	2.2681	0.63	0.79	53
35	0.0483	0.2680	31.4441	2.5013	0.64	0.90	63
36	0.2200*	0.5354	31.6769	2.6168	0.99	0.99	62
37	-0.1900	0.2193	23.9863	4.3665	0.01	0.58	52
38	0.0510	0.0538	1.7112	1.4778	0.90	0.90	56
52	0.0100	0.0349	35.7100	0.7323	0.72	0.75	57
53	0.0350	0.0115	35.7916	0.6358	0.75	0.69	61
54	0.0300	0.0619	35.3416	0.8910	0.70	0.79	58
55	0.0293	0.0629	35.7790	0.6422	0.92	0.83	61
502	0.1729	-0.1166	31.5129	2.5547	0.70	0.30	56
535	0.2925	0.2772	30.8163	3.8072	0.71	0.52	54
704	0.0533	0.0871	34.6155	1.2045	0.65	0.72	56
706	0.0587	0.0416	35.3722	0.8418	0.73	0.62	57
708	0.0250	0.0104	35.7623	0.6387	0.84	0.53	56

TABLE E18

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS AFTER 1990 CESSATION OF BRINE DISCHARGE 1/1/91-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.2200	0.1726	22.6485	6.8185	0.18	0.54	46
21	0.2075	0.3852	22.5066	4.6970	0.85	0.83	53
22	0.3150*	0.5175	22.3602	3.9882	0.98	0.94	53
35	0.0987	0.3107	22.8637	3.8920	0.91	0.87	63
36	0.2000	0.4497	22.5942	3.8813	0.93	0.93	62
37	0.0608	0.3910	22.9235	6.2194	0.50	0.75	52
38	-0.3725	-0.2661	22.5446	6.6730	0.42	0.37	56
52	0.0425	0.0307	22.8667	2.6503	0.69	0.78	57
53	0.0904	0.2666	22.6285	2.3819	0.83	0.74	61
54	0.1040*	0.2427	22.9300	2.6061	0.95	0.92	58
55	0.0857	0.2653	22.6621	2.4574	0.75	0.95	61
502	0.1663	0.2305	23.0188	3.8736	0.84	0.88	56
535	0.1308	0.1282	23.0161	4.1142	0.68	0.78	54
704	0.3450*	0.4284	22.9882	2.9223	0.99	0.97	56
706	0.1400	0.3329	23.0716	2.4761	0.77	0.94	57
708	0.0955	0.3957	22.7929	2.4645	0.86	0.97	56

TABLE E19

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS AFTER 1990 CESSATION OF BRINE DISCHARGE 1/1/91-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.2000	0.0316	19.0851	5.6128	0.56	0.55	59
7	0.9133*	0.9369	14.3921	4.7925	0.97	0.99	58
12	0.1875	-1.1930	4.7838	2.9489	0.62	0.67	21
13	-0.1500	-0.2355	5.1836	3.9396	0.40	0.50	39
14	0.0283	-0.3355	1.8280	2.6371	0.75	0.36	51
15	-0.0050	-0.0856	1.5909	1.3179	0.47	0.44	55
16	-0.0850	-0.3877	1.0195	1.5720	0.03	0.15	40
18	-0.0050	-0.1459	0.5293	1.2603	0.38	0.29	46
21	0.0700	0.0008	25.3326	4.2867	0.50	0.64	54
22	-0.1700	-0.1996	25.3175	4.7192	0.37	0.49	53
34	0.1000	-0.1974	21.5206	4.7839	0.63	0.25	52
35	-0.6680	-0.4149	24.3237	5.3475	0.08	0.20	62
36	0.0000	-0.1439	24.6800	4.9639	0.50	0.48	62
37	0.4817	0.3279	23.7137	4.5534	0.66	0.70	52
38	0.0188	0.0134	1.4239	1.1082	0.59	0.73	57
52	0.5438	0.0700	24.9740	6.3040	0.84	0.64	57
53	0.5933	0.5758	26.0916	5.6855	0.78	0.84	62
54	0.4486*	0.8739	25.5603	5.4210	0.95	0.97	59
55	0.2367	0.9574	26.3003	5.2584	0.75	0.97	62
502	0.7050	0.4698	24.6262	5.3239	0.93	0.88	55
535	0.1950	0.0180	24.7957	5.7915	0.56	0.43	54
704	0.3667	0.4585	25.3611	5.2958	0.70	0.92	56
706	0.6367	0.4830	26.3016	5.3526	0.77	0.89	57
708	0.0000	0.1834	26.0667	5.6982	0.47	0.71	57

TABLE E20

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS AFTER 1990 CESSATION OF BRINE DISCHARGE 1/1/91-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1400	0.0790	22.5085	6.1240	0.61	0.59	59
7	-0.0283	-0.0636	21.8747	7.0884	0.47	0.44	58
12	0.7650	0.9677	20.9300	7.9844	0.64	0.58	21
13	-0.0400	-0.3928	22.1072	7.3971	0.35	0.39	39
14	-0.2237	-0.1122	22.3278	7.4387	0.27	0.50	51
15	-0.4750	0.0063	22.3924	7.2481	0.04	0.51	55
16	-0.5800	-0.2716	23.2832	7.0484	0.07	0.32	40
18	-0.3333	0.2584	22.8413	6.8120	0.16	0.64	46
21	0.2333	0.3911	22.5565	5.5514	0.87	0.78	54
22	0.4600*	0.6561	22.6357	5.3554	0.95	0.92	53
34	-0.5100	0.3914	21.9742	7.2400	0.11	0.72	52
35	0.1895*	0.5471	23.1010	5.2248	0.99	0.92	62
36	0.2200*	0.5300	23.2395	5.1878	0.98	0.91	62
37	0.2283	0.4345	23.0492	6.2748	0.77	0.76	52
38	-0.5125	-0.3399	23.4914	7.2358	0.03	0.33	57
52	0.2375*	0.8003	23.6319	5.2942	0.96	0.92	57
53	0.3400*	0.6546	23.7198	5.3232	0.96	0.92	62
54	0.0200	0.3433	24.3271	5.1621	0.53	0.81	59
55	0.1100	0.4733	23.8326	5.1719	0.91	0.85	62
502	-0.0875	0.1990	23.8242	5.6048	0.35	0.73	55
535	0.0675	0.3693	23.4800	5.7303	0.78	0.81	54
704	-0.0033	0.3807	23.7730	5.5754	0.56	0.76	56
706	0.0200	0.3707	23.7160	5.3747	0.62	0.73	57
708	0.0000	0.4476	23.8404	5.2124	0.47	0.83	57

TABLE E21

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS PRECEDING THE APPROACH OF HURRICANE ANDREW
1/1/78-8/10/92

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1437	0.1715	23.4235	5.9849	0.88	0.93	159
18	-0.0200	-0.0856	1.5105	1.9825	0.08	0.03	125
21	0.0400	0.0498	29.6783	3.7818	0.66	0.65	149
22	0.0875	0.1008	31.1509	3.5157	0.84	0.91	142
35	-0.0050	-0.0164	31.2315	3.1590	0.41	0.46	139
36	-0.1525	-0.1001	31.7330	3.1300	0.03	0.06	132
37	-0.0500	-0.1136	25.4168	3.9599	0.18	0.14	135
38	0.0155	-0.0782	3.5454	2.5503	0.62	0.35	136
52	0.0000	-0.0237	35.8596	1.1515	0.50	0.77	106
53	0.0333	0.0123	35.8401	1.0843	0.91	0.98	111
54	0.0083	-0.0032	35.3952	1.3194	0.61	0.80	107
55	0.0040	-0.0375	35.9071	1.0085	0.73	0.84	100
502	0.0000	0.1117	31.9943	2.9901	0.53	0.75	124
535	0.1000	0.0357	31.1899	3.6982	0.79	0.74	88
704	0.0571	0.0923	34.5604	1.4790	0.91	0.90	117
706	0.0667*	0.0765	35.2232	1.1636	0.99	0.98	118
708	0.0667*	0.0893	35.6666	0.9896	0.99	0.99	115

TABLE E22

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS PRECEDING THE APPROACH OF HURRICANE ANDREW
1/1/78-8/10/92

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0739	0.1118	22.9288	6.2691	0.91	0.77	159
18	0.0450	-0.0248	22.4822	6.8511	0.63	0.42	125
21	-0.0322	-0.0390	22.7705	5.0957	0.28	0.31	149
22	-0.0400	-0.0653	22.5677	4.7571	0.19	0.20	142
35	0.0000	0.0397	22.7012	4.7229	0.45	0.60	139
36	-0.0500	-0.0415	22.6099	4.6203	0.19	0.28	132
37	0.0500	0.0244	23.4379	6.2220	0.79	0.55	135
38	0.0950	0.0922	23.2922	6.6751	0.85	0.74	136
52	0.0750	0.0370	22.4427	2.8811	0.92	0.70	106
53	0.0350	-0.0089	22.2975	2.7557	0.77	0.57	111
54	-0.0350	-0.0106	22.6752	3.0772	0.36	0.53	107
55	0.0258	-0.0111	22.3895	2.6490	0.72	0.52	100
502	0.0500	-0.0143	22.6734	4.3124	0.82	0.53	124
535	0.0033	-0.0462	22.4267	4.4204	0.58	0.34	88
704	0.0250	-0.1104	22.7357	3.1996	0.66	0.15	117
706	0.0390	-0.0978	22.6410	2.8285	0.82	0.21	118
708	0.0000	-0.1139	22.5228	2.7104	0.57	0.09	115

TABLE E23

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS PRECEDING THE APPROACH OF HURRICANE ANDREW
1/1/78-8/10/92

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0536	0.0852	22.6826	5.9442	0.68	0.83	164
7	0.2056*	0.1627	18.2006	4.9816	0.99	0.99	161
12	0.2586*	0.4157	10.5604	4.5016	0.99	0.99	106
13	0.1333	0.0968	9.3243	4.8292	0.94	0.90	156
14	0.0077	-0.0235	4.3122	4.2640	0.59	0.35	162
15	0.0317	-0.0272	3.9560	3.0810	0.83	0.52	162
16	0.0300	0.0453	2.2653	2.5072	0.88	0.66	150
18	0.0000	-0.0110	1.1936	1.6238	0.13	0.11	151
21	0.0300	0.0875	25.9809	5.3233	0.62	0.62	149
22	-0.0156	0.0315	26.5270	5.1274	0.44	0.41	142
34	0.1100	0.1333	24.8265	4.7958	0.92	0.89	145
35	-0.1475	-0.1812	26.5376	5.0548	0.10	0.03	138
36	-0.1636	-0.2276	26.5368	5.0531	0.07	0.02	133
37	-0.0400	-0.0418	24.9466	4.1245	0.29	0.37	137
38	0.0183	-0.0753	3.4241	2.5664	0.66	0.39	143
52	0.0167	0.0751	26.4953	5.1741	0.55	0.64	111
53	0.0333	0.1018	27.0604	5.1562	0.62	0.66	114
54	-0.0250	0.0076	26.3427	5.0990	0.48	0.41	109
55	0.1500	0.1725	26.8081	5.4151	0.82	0.73	108
502	0.0236	-0.0338	25.9137	5.3508	0.51	0.25	125
535	0.3000	0.1575	25.8574	5.4017	0.83	0.78	90
704	-0.0033	-0.1111	26.4932	4.9449	0.42	0.19	117
706	0.0000	-0.1031	26.7285	5.1075	0.53	0.30	120
708	-0.0083	0.0022	26.9131	5.2672	0.47	0.50	115

TABLE E24

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS PRECEDING THE APPROACH OF HURRICANE ANDREW
1/1/78-8/10/92

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1000	0.1306	22.8913	6.4501	0.90	0.81	164
7	-0.0211	0.0071	22.7993	6.8425	0.36	0.50	161
12	-0.0725	-0.2538	22.4991	6.8406	0.27	0.25	106
13	0.0413	0.0862	22.8572	7.1508	0.77	0.74	156
14	0.1000*	0.1149	22.0927	7.1230	0.97	0.82	162
15	0.1268*	0.1515	22.4669	7.2355	0.99	0.87	162
16	0.2837*	0.2561	23.8019	7.1317	0.99	0.97	150
18	0.0182	0.0236	22.4142	6.9841	0.64	0.51	151
21	-0.0400	-0.0419	23.0832	5.7081	0.13	0.32	149
22	-0.0268	-0.0439	23.1503	5.5887	0.15	0.31	142
34	0.1571*	-0.0046	23.2819	7.0696	0.99	0.51	145
35	-0.0257	0.0355	23.0857	5.5400	0.20	0.62	138
36	-0.0800	-0.0272	23.4779	5.5383	0.03	0.34	133
37	0.0464	0.0114	23.5309	6.2323	0.79	0.49	137
38	0.2000*	0.2445	23.8720	7.0567	0.99	0.95	143
52	0.0000	0.0897	23.3137	5.5773	0.53	0.68	111
53	0.0133	0.0979	23.4124	5.5023	0.62	0.72	114
54	0.0500	0.1836	23.7870	5.6662	0.89	0.85	109
55	0.0750*	0.1722	23.4367	5.5138	0.95	0.81	108
502	-0.0279	0.0099	23.2082	5.5120	0.35	0.59	125
535	-0.0429	-0.0832	23.1967	5.7098	0.32	0.34	90
704	0.0400	-0.1245	23.6484	5.4012	0.84	0.29	117
706	0.0208	-0.1500	23.4371	5.2090	0.70	0.21	120
708	0.0000	-0.2115	23.5330	5.2968	0.47	0.12	115

TABLE E25

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS FOLLOWING HURRICANE ANDREW 8/30/92-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	0.0100	0.1372	0.2990	0.3329	0.81	0.55	31
21	-0.4300	-0.0764	30.0075	3.2293	0.29	0.48	36
22	-0.1000	0.0848	31.8030	2.3620	0.39	0.61	37
35	-0.0113	-0.0202	31.7081	2.4086	0.42	0.52	43
36	0.1083	0.2725	32.1214	2.4226	0.82	0.84	42
37	1.6800	1.0785	23.6319	4.3033	0.91	0.87	32
38	0.6217*	0.6450	1.4759	1.2731	0.99	0.99	39
52	0.0100	0.1121	35.7035	0.7570	0.65	0.83	41
53	0.1000*	0.1152	35.7605	0.7072	0.96	0.82	43
54	-0.0225	0.1837	35.3453	0.9026	0.42	0.79	40
55	0.0100	0.1023	35.8079	0.6478	0.70	0.60	42
502	0.4750	0.3111	31.2392	2.5757	0.94	0.79	36
535	0.8725	0.7137	30.7753	3.7374	0.84	0.77	36
704	-0.1075	-0.0780	34.7150	1.1308	0.24	0.24	36
706	-0.0650	-0.0974	35.4219	0.7934	0.24	0.37	37
708	0.0000	-0.0367	35.7646	0.6481	0.45	0.65	37

TABLE E26

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS FOLLOWING HURRICANE ANDREW 8/30/92-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.2600	-0.7799	23.0629	6.7314	0.36	0.27	31
21	0.9000	0.7266	22.6319	4.6134	0.92	0.85	36
22	0.7500	0.6265	22.6643	3.9536	0.95	0.79	37
35	0.2963*	0.6797	22.9612	3.7752	0.97	0.90	43
36	0.1592	0.5726	22.8540	3.7720	0.76	0.86	42
37	0.7767	1.8590	22.6819	6.3166	0.84	0.95	32
38	-0.7150	0.1499	22.0810	6.3478	0.26	0.61	39
52	0.2200*	0.2663	22.8724	2.4624	0.98	0.81	41
53	0.2262*	0.4907	22.7981	2.5010	0.95	0.95	43
54	0.2225*	0.2189	23.1797	2.7729	0.99	0.88	40
55	0.2375*	0.5916	22.8319	2.6291	0.99	0.97	42
502	0.6433*	0.2624	23.1661	4.0692	0.97	0.78	36
535	0.4000	0.0596	23.1231	4.1708	0.92	0.68	36
704	0.6750*	0.4190	23.4367	2.9479	0.98	0.81	36
706	0.5300*	0.5547	23.3465	2.5463	0.98	0.92	37
708	0.6550*	0.9223	23.0554	2.5054	0.98	0.97	37

TABLE E28

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS FOLLOWING HURRICANE ANDREW 8/30/92-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.0900	0.0961	22.4130	6.3037	0.50	0.57	40
7	-0.2167	-0.0423	21.6908	7.2261	0.31	0.52	39
12	0.2500	-1.6118	21.4215	7.8592	0.50	0.41	20
13	-0.0400	-1.1879	21.5175	7.7576	0.50	0.34	20
14	-0.3200	-0.5665	22.2185	7.3406	0.50	0.46	33
15	-0.2700	0.7811	22.0362	6.8894	0.25	0.72	37
16	0.2200	0.5609	22.6729	6.2591	0.50	0.64	24
18	-0.3400	-1.0579	23.3853	6.8170	0.23	0.26	30
21	0.2600	0.5698	22.7092	5.4224	0.95	0.79	37
22	0.5100*	0.8447	22.9549	5.2617	0.97	0.86	37
34	-0.4533	-0.2450	22.2408	7.3672	0.13	0.46	39
35	0.2325*	0.7881	23.3302	5.0577	0.99	0.66	43
36	0.2200*	0.8163	23.4688	5.0644	0.99	0.91	42
37	0.8500	1.9284	22.8366	6.4170	0.91	0.94	32
38	-0.4517	0.0743	22.9441	6.7988	0.26	0.61	39
52	0.5200*	1.2630	23.9780	5.1879	0.97	0.91	41
53	0.6067*	1.5076	23.7982	5.1875	0.99	0.96	44
54	0.3000*	1.1815	24.2171	4.9901	0.96	0.93	42
55	0.2625*	1.3492	23.8456	5.0351	0.99	0.93	43
502	0.0075	0.2836	23.8286	5.4915	0.56	0.64	35
535	0.3500	0.4050	23.6140	5.6868	0.91	0.72	35
704	0.5200	0.5446	23.9075	5.1854	0.90	0.73	36
706	0.3500	0.4926	23.8878	5.0785	0.84	0.66	36
708	0.0850	0.7250	24.0281	4.8446	0.60	0.82	37

TABLE E29

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS BEFORE START OF HEAVY BRINE DISPOSAL 1/1/78 - 3/31/80

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-1.8000	2.1761	20.3375	6.5474	0.40	0.83	24
21	3.1000	3.0534	27.5714	4.9543	0.75	0.98	21
22	3.7000	3.7225	29.5000	3.9694	0.94	0.99	18
35	0.0000	3.2571	31.2143	1.7883	0.50	0.82	7
36	0.0000	3.2571	31.2143	1.7883	0.50	0.82	3

TABLE E30

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS BEFORE START OF HEAVY BRINE DISPOSAL 1/1/78 - 3/31/80

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.7500	-0.4605	21.1083	7.8193	0.90	0.52	24
21	-1.3000	-4.1660	22.7048	5.6588	0.25	0.03	21
22	-0.7000	-3.8640	22.0611	5.6380	0.22	0.01	18
35	0.0000	-19.7571	19.5571	4.1259	0.50	0.02	7
36	0.0000	3.2571	31.2143	1.7883	0.50	0.82	3

TABLE E31

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS BEFORE START OF HEAVY BRINE DISPOSAL 1/1/78 - 3/31/80

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-2.2000	2.1578	19.7208	5.6327	0.40	0.85	24
7	0.5000	2.0378	14.9545	4.3083	0.60	0.83	22
12	0.8000	1.8994	7.3187	3.4668	0.66	0.78	16
13	1.8500	2.2341	6.2812	3.0703	0.89	0.96	16
14	0.6000	1.6343	2.9714	3.2874	0.87	0.67	21
15	0.7000*	1.0198	2.5000	1.5550	0.98	0.79	21
16	0.3000	-0.2243	1.5810	1.2372	0.75	0.46	21
18	0.2000	0.1349	0.7278	0.8498	0.65	0.66	18
21	-0.6000	2.6999	23.4429	6.6035	0.37	0.87	21
22	-3.1000	2.5715	24.4050	6.7934	0.14	0.84	20
34	15.9000	13.5709	22	5.2796	0.50	0.99	12
35	0.0000	4.9714	29.1000	3.6185	0.50	0.82	7

TABLE E32

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS BEFORE START OF HEAVY BRINE DISPOSAL 1/1/78 - 3/31/80

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	1.1500	-1.7515	20.9167	8.0063	0.78	0.29	24
7	0.2000	-2.8011	21.5818	8.0492	0.50	0.21	22
12	1.3000	-4.3819	21.9625	7.2006	0.50	0.18	16
13	-0.0500	-5.2869	21.8437	8.0117	0.50	0.17	16
14	-1	-5.8093	20.2571	8.0738	0.25	0.02	21
15	0.3000	-5.7740	20.5333	8.2903	0.50	0.04	21
16	-0.2000	-5.4935	21.2762	7.7518	0.25	0.02	21
18	0.0000	-4.5281	20.4056	7.6803	0.50	0.18	18
21	-1	-4.7671	22.9714	6.0759	0.25	0.03	21
22	-0.9500	-4.8356	22.4650	6.1403	0.24	0.03	20
34	-0.4000	-12.8722	21.8333	7.0484	0.50	0.07	12
35	0.0000	-19.1143	18.9429	4.3231	0.50	0.04	7

TABLE E33

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS AFTER HEAVY BRINE DISPOSAL CEASED 1/1/83 - 12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.4382	-0.3075	22.5632	6.0253	0.01	0.01	144
18	-0.0300	-0.0966	1.0960	1.6941	0.01	0.01	131
21	0.0000	0.0396	29.7819	3.4513	0.47	0.67	133
22	0.0575	0.1289	31.3724	3.2295	0.76	0.91	133
35	0.0710	0.0906	31.2848	3.0109	0.82	0.91	146
36	0.0729	0.0860	31.6424	2.8908	0.80	0.96	143
37	-0.0689	-0.0661	24.6777	4.0773	0.15	0.30	135
38	-0.1067	-0.1486	2.7981	2.2119	0.01	0.01	143
52	0.0171	0.0120	35.7451	0.7742	0.92	0.83	133
53	0.0350*	0.0470	35.7348	0.8149	0.99	0.99	139
54	0.0300*	0.0457	35.2909	1.0305	0.96	0.93	135
55	0.0200	0.0131	35.8061	0.7990	0.94	0.95	134
502	-0.0500	0.0259	31.7960	2.9246	0.13	0.31	146
535	-0.0450	-0	31.0725	3.7283	0.39	0.30	117
704	0.0250	0.0543	34.6334	1.3185	0.86	0.86	142
706	0.0255*	0.0321	35.3329	1.0133	0.98	0.90	144
708	0.0189	0.0422	35.7194	0.8354	0.94	0.97	142

TABLE E34

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS AFTER HEAVY BRINE DISPOSAL CEASED 1/1/83 - 12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.0125	-0.0929	23.0183	6.0304	0.43	0.26	144
18	0.0111	0.0489	22.5621	6.7294	0.57	0.64	131
21	0.0400	0.0678	22.5974	4.7701	0.81	0.74	133
22	0.0000	0.0429	22.4488	4.2242	0.50	0.63	133
35	0.0220	0.0738	22.7720	4.2609	0.72	0.75	146
36	-0.0067	0.0372	22.6213	4.1639	0.45	0.67	143
37	-0.0120	-0.0398	23.3372	6.1132	0.43	0.40	135
38	-0.0315	-0.0165	22.9350	6.6082	0.30	0.47	143
52	0.0867*	0.1230	22.4692	2.7012	0.99	0.99	133
53	0.0857*	0.1300	22.2981	2.5971	0.99	0.99	139
54	0.0600*	0.1039	22.7151	2.8897	0.98	0.94	135
55	0.0543*	0.0854	22.4529	2.6174	0.99	0.96	134
502	0.0710*	0.1060	22.7120	4.2104	0.98	0.91	146
535	0.0957	0.1353	22.4792	4.3466	0.95	0.93	117
704	0.0629	0.0902	22.7630	3.1433	0.94	0.91	142
706	0.0688*	0.1187	22.6381	2.7254	0.99	0.98	144
708	0.0608*	0.0796	22.5007	2.6232	0.98	0.92	142

TABLE E35

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS AFTER HEAVY BRINE DISPOSAL CEASED 1/1/83 - 12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.4875	-0.3770	21.5881	6.1367	0.01	0.01	149
7	-0.3286	-0.3115	17.3696	5.1679	0.01	0.01	150
12	-0.6432	-0.5936	9.3195	4.8800	0.01	0.01	80
13	-0.3333	-0.4026	8.6935	5.0551	0.01	0.01	130
14	-0.1675	-0.2793	3.4911	3.9383	0.01	0.01	143
15	-0.2000	-0.2666	3.2000	2.7966	0.01	0.01	147
16	-0.0671	-0.0608	1.9089	2.2820	0.01	0.01	122
18	-0.0286	-0.0948	0.9735	1.5312	0.01	0.01	134
21	-0.0667	-0.0619	25.8034	4.8383	0.21	0.27	135
22	-0.1480	-0.1343	26.0514	4.8870	0.06	0.11	131
34	-0.3000	-0.2284	23.6137	5.1659	0.01	0.01	144
35	-0.1721	-0.1733	25.2998	5.3425	0.09	0.05	145
36	-0.1189	-0.1473	25.5115	5.2284	0.09	0.07	144
37	-0.0411	-0.0151	24.3390	4.2131	0.33	0.48	136
38	-0.1250	-0.1862	2.7031	2.2782	0.01	0.01	149
52	-0.1475	-0.0756	25.8899	5.7398	0.11	0.26	137
53	-0.0800	0.0278	26.6404	5.4737	0.22	0.38	143
54	-0.0269	0.0068	26.0953	5.2748	0.40	0.33	137
55	-0.0333	0.0723	26.7706	5.3068	0.43	0.51	142
502	-0.1227	-0.1004	25.5523	5.4689	0.16	0.08	146
535	-0.1444	-0.0913	25.4447	5.7441	0.09	0.07	118
704	-0.1050	-0.0678	25.9551	5.2153	0.14	0.28	142
706	-0.0050	0.0289	26.4068	5.3250	0.34	0.59	145
708	-0.0271	0.0269	26.4099	5.5212	0.39	0.60	142

TABLE E36

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS AFTER HEAVY BRINE DISPOSAL CEASED 1/1/83 - 12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.0167	-0.0368	22.9946	6.2585	0.37	0.39	149
7	-0.0767	-0.0657	22.4489	6.9534	0.06	0.31	150
12	0.0312	-0.2155	22.0004	7.2873	0.57	0.21	80
13	0.0400	0.0001	22.7298	7.3205	0.72	0.47	130
14	0.0329	0.0626	22.2666	7.0645	0.64	0.74	143
15	-0.0050	0.0546	22.5216	6.9831	0.44	0.68	147
16	-0.0500	-0.0320	24.1314	6.8642	0.21	0.41	122
18	0.0000	0.0633	22.6597	6.7410	0.53	0.66	134
21	-0.0150	0.0243	22.8559	5.4949	0.38	0.64	135
22	-0.0375	0.0189	22.9953	5.3115	0.11	0.61	131
34	-0.0250	-0.0531	22.9074	7.3058	0.36	0.39	144
35	0.0000	0.0560	23.1825	5.3089	0.51	0.74	145
36	-0.0333	0.0232	23.4337	5.2606	0.17	0.61	144
37	-0.0270	-0.0372	23.4299	6.1385	0.28	0.39	136
38	0.0000	0.0341	23.7927	7.0030	0.46	0.61	149
52	0.0767*	0.1894	23.4147	5.4054	0.99	0.93	137
53	0.0770*	0.1755	23.4359	5.3575	0.99	0.93	143
54	0.0888*	0.2119	23.8387	5.3865	0.99	0.95	137
55	0.0833*	0.1701	23.5079	5.2995	0.99	0.91	142
502	0.0433	0.1315	23.3064	5.5757	0.90	0.89	146
535	0.0650	0.1226	23.1400	5.7313	0.88	0.88	118
704	0.0180	0.0663	23.5922	5.4444	0.72	0.72	142
706	0.0176	0.0799	23.4028	5.2594	0.72	0.75	145
708	0.0000	0.0490	23.5183	5.2541	0.44	0.69	142

TABLE E37

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS PRECEDING YEARS OF HEAVY RIVER FLOW 1/1/78 - 12/31/82

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.9000*	1.3103	22.8636	6.2418	0.97	0.99	55
18	-0.5000	-1.2050	2.1800	2.3220	0.31	0.04	25
21	0.9000*	1.2715	29.6943	4.2053	0.99	0.99	53
22	0.9833*	1.0913	31.0979	3.5632	0.98	0.99	47
35	0.0000	0.1728	31.6622	2.9773	0.50	0.70	37
36	-1.4000	-0.3590	32.7250	3.1989	0.09	0.04	32
37	0.3500	-0.1374	26.6970	3.6312	0.56	0.40	33
38	0.3500	0.5663	4.3625	3.1658	0.89	0.84	32
52	-0.1000	-0.3760	36.4857	2.4089	0.24	0.13	14
53	-0.1000	0.1884	36.8091	2.0305	0.50	0.50	15
54	-0.3500	-0.2090	36.3583	2.3228	0.20	0.29	12
55	0.0000	-5.3314	37.4000	1.7776	0.50	0.02	8
502	-2.0000	-2.5315	32.2133	2.7785	0.31	0.13	15
535	0.0000	-9.5820	31.3250	3.2932	0.50	0.04	8
704	-0.5000	1.0135	34.2400	2.3391	0.50	0.50	12
706	0.6000	0.3799	34.5727	1.6722	0.80	0.38	12
708	1.6000	1.7085	35.3111	1.7424	0.50	0.50	11

TABLE E38

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS PRECEDING YEARS OF HEAVY RIVER FLOW 1/1/78 - 12/31/82

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1417	0.5201	22.2564	6.7181	0.70	0.76	55
18	-0.6000	1.0581	22.7840	7.3598	0.16	0.61	25
21	0.0000	-0.0275	23.2208	5.5543	0.50	0.51	53
22	0.0417	0.2835	23.0681	5.5207	0.54	0.67	47
35	-0.1333	1.0930	22.8108	5.4170	0.50	0.86	37
36	-0.5000	1.1386	22.9969	5.4758	0.20	0.86	32
37	-0.4500	1.1967	23.2909	6.7684	0.21	0.82	33
38	-0.6250	0.2299	23.4125	6.6816	0.11	0.42	32
52	-0.5000	0.1517	23.4500	3.3316	0.50	0.50	14
53	0.6000	0.6198	23.7267	3.2442	0.73	0.77	15
54	-0.8500	-0.8264	23.9083	4.0044	0.10	0.27	12
55	0.0000	6.2038	23.6500	2.9751	0.50	0.73	8
502	-1.0500	0.1898	23.7733	4.6760	0.07	0.50	15
535	0.0000	-0.0481	25.4000	3.5315	0.50	0.64	8
704	-0.7000	-0.9377	24.4833	2.6907	0.50	0.37	12
706	0.9000	-0.5603	24.7750	2.5567	0.50	0.45	12
708	1.9000	-0.0772	24.4818	2.5123	0.50	0.32	11

TABLE E39

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS PRECEDING YEARS OF HEAVY RIVER FLOW 1/1/78 - 12/31/82

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	1.0125*	1.3915	22.4582	5.9877	0.98	0.99	55
7	0.9250*	1.7247	17.5880	4.6505	0.99	0.99	50
12	1.0625*	1.5283	10.0152	4.6546	0.99	0.99	46
13	1.3167*	1.5436	8.7913	4.5472	0.99	0.99	46
14	0.6000*	0.8691	4.5808	4.4261	0.98	0.98	52
15	0.7500*	1.0908	4.1904	3.4101	0.99	0.99	52
16	0.1000	0.4802	2.3481	2.7008	0.84	0.88	52
18	0.1000	0.2395	1.2319	1.5153	0.93	0.95	47
21	0.9000*	1.5067	25.8250	6.1224	0.96	0.98	52
22	0.6750	1.3549	26.6327	5.8897	0.81	0.97	49
34	0.9000	1.6501	25.0775	4.5206	0.95	0.99	40
35	0.5000	-0.2865	28.1973	4.7999	0.70	0.36	37
36	-0.4000	-0.5925	28.4031	4.3910	0.63	0.22	32
37	1.1500	0.7014	25.9706	3.8644	0.83	0.78	34
38	0.4000	0.5864	4.0455	3.0633	0.80	0.88	33
52	-2	0.0278	27.2000	4.5591	0.27	0.58	15
53	-1.8000	0.4316	27.8933	4.1736	0.50	0.62	15
54	-3.2500	0.2761	26.9286	3.9702	0.24	0.61	14
55	0.0000	11.0816	26.3333	5.6697	0.50	0.77	9
502	-1.0500	-0.9981	26.1867	4.4716	0.50	0.48	15
535	0.0000	0.2887	24.4000	2.9771	0.50	0.50	8
704	-0.4000	-2.2808	28.4917	2.6976	0.34	0.21	12
706	-0.9000	-2.2530	29.1167	2.5059	0.34	0.17	12
708	1	-1.8220	29.6818	2.4400	0.50	0.20	11

TABLE E40

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS PRECEDING YEARS OF HEAVY RIVER FLOW 1/1/78 - 12/31/82

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1542	0.5186	22.2636	6.8314	0.73	0.73	55
7	0.3150	0.3100	22.9860	6.8496	0.82	0.64	50
12	0.0500	0.1089	22.8978	6.4766	0.50	0.55	46
13	-0.2000	0.0023	22.6348	6.9725	0.35	0.44	46
14	0.4000	0.1470	21.6942	7.4017	0.85	0.60	52
15	0.3000	0.3484	22.0058	7.6865	0.88	0.60	52
16	0.3333	0.2130	22.5077	7.2875	0.63	0.50	52
18	0.2333	0.5355	22.3340	7.5766	0.68	0.76	47
21	0.0000	0.0979	23.5038	6.0214	0.50	0.59	52
22	0.0125	0.3971	23.5245	6.0419	0.64	0.73	49
34	0.2167	0.1177	23.6150	6.4935	0.63	0.49	40
35	0.3000	1.6455	23.1351	5.8933	0.94	0.95	37
36	0.2000	1.4715	23.8250	6.1305	0.50	0.84	32
37	-0.2000	1.1074	23.4500	6.7839	0.38	0.77	34
38	-0.5000	0.5110	23.1333	7.0361	0.12	0.43	33
52	-0.3500	-1.0555	24.2067	6.1488	0.27	0.31	15
53	-0.5500	-1.0998	24.3200	5.9557	0.27	0.24	15
54	-0.2500	-0.9740	24.5714	6.4516	0.50	0.27	14
55	0.0000	2.3732	24.2667	6.6905	0.50	0.30	9
502	-0.6000	1.1026	24.2200	4.9453	0.31	0.52	15
535	0.0000	-4.4962	26.8375	4.1210	0.50	0.27	8
704	0.0000	1.7483	25.6833	3.6764	0.50	0.50	12
706	-0.0500	1.5576	25.7750	3.5302	0.20	0.37	12
708	0.5000	1.5027	26	3.7175	0.50	0.50	11

TABLE E41

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS DURING YEARS OF HEAVY RIVER FLOW 7/1/83-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.5129	-0.3888	22.6714	5.9609	0.01	0.01	140
18	-0.0429	-0.1242	1.1292	1.7188	0.01	0.01	126
21	-0.0029	0.0400	29.7928	3.5158	0.47	0.60	127
22	0.0086	0.0946	31.4768	3.1777	0.54	0.76	128
35	0.0167	0.0555	31.3827	2.9536	0.55	0.76	140
36	0.0201	0.0549	31.7280	2.8528	0.56	0.89	138
37	-0.0536	-0.0722	24.6785	4.0653	0.22	0.28	131
38	-0.1558	-0.1918	2.8531	2.2318	0.01	0.01	138
52	0.0100	0.0097	35.7523	0.7834	0.83	0.73	129
53	0.0283*	0.0318	35.7762	0.7693	0.97	0.97	134
54	0.0329*	0.0555	35.2841	1.0469	0.96	0.94	130
55	0.0067	0.0026	35.8283	0.7917	0.82	0.85	130
502	-0.0750	-0.0481	31.9452	2.6808	0.04	0.09	142
535	-0.0929	-0.0675	31.2343	3.5562	0.20	0.10	113
704	0.0150	0.0394	34.6684	1.3093	0.72	0.73	139
706	0.0217	0.0187	35.3623	1.0044	0.93	0.77	141
708	0.0083	0.0303	35.7515	0.8232	0.83	0.85	138

TABLE E42

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS DURING YEARS OF HEAVY RIVER FLOW 7/1/83-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.0750	-0.1327	23.0789	6.0641	0.19	0.18	140
18	-0.0200	-0.0075	22.6828	6.6991	0.38	0.50	126
21	0.0431	0.0175	22.7177	4.7948	0.81	0.56	127
22	0.0000	0.0233	22.4984	4.2249	0.50	0.53	128
35	0.0150	0.0181	22.9044	4.2339	0.63	0.50	140
36	0.0000	0.0151	22.6742	4.1591	0.51	0.56	138
37	-0.0288	-0.0361	23.3208	6.1595	0.33	0.40	131
38	-0.0800	-0.0663	23.0283	6.5901	0.14	0.35	138
52	0.0840*	0.1015	22.5380	2.7136	0.99	0.95	129
53	0.1000*	0.1163	22.3578	2.6237	0.99	0.98	134
54	0.0600*	0.0786	22.7934	2.9141	0.96	0.84	130
55	0.0650*	0.0689	22.5015	2.6385	0.99	0.92	130
502	0.0727*	0.0552	22.8271	4.1645	0.97	0.79	142
535	0.0908	0.0844	22.6281	4.2991	0.94	0.82	113
704	0.0667	0.0752	22.8032	3.1552	0.94	0.87	139
706	0.0825*	0.1050	22.6800	2.7360	0.99	0.97	141
708	0.0714*	0.0642	22.5457	2.6444	0.98	0.85	138

TABLE E43

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS DURING YEARS OF HEAVY RIVER FLOW 7/1/83-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.5957	-0.5294	21.7841	6.0582	0.01	0.01	143
7	-0.4667	-0.4396	17.5413	5.1327	0.01	0.01	144
12	-1.0400	-0.7443	9.5157	4.9985	0.01	0.01	74
13	-0.5200	-0.5656	8.8650	5.0974	0.01	0.01	124
14	-0.2500	-0.3662	3.5915	3.9927	0.01	0.01	137
15	-0.2343	-0.3228	3.2549	2.8286	0.01	0.01	142
16	-0.1000	-0.0966	1.9639	2.3134	0.01	0.01	117
18	-0.0350	-0.1188	1.0004	1.5543	0.01	0.01	129
21	-0.0667	-0.1002	25.8664	4.8309	0.21	0.18	129
22	-0.1450	-0.2102	26.1748	4.7544	0.06	0.06	126
34	-0.3625	-0.3461	23.7976	5.0227	0.01	0.01	138
35	-0.1850	-0.2392	25.3912	5.2740	0.06	0.02	139
36	-0.1051	-0.1768	25.5407	5.2289	0.14	0.04	139
37	-0.0250	-0.0291	24.3660	4.2150	0.38	0.44	132
38	-0.1667	-0.2332	2.7581	2.2960	0.01	0.01	144
52	-0.1750	-0.1622	26.0562	5.5513	0.07	0.15	132
53	-0.1000	-0.0385	26.7868	5.2222	0.20	0.31	138
54	-0.0600	-0.0882	26.2936	4.9976	0.27	0.19	132
55	-0.0988	-0.0268	26.9877	5.0091	0.26	0.34	137
502	-0.1230	-0.0948	25.5235	5.5352	0.16	0.08	142
535	-0.1381	-0.0764	25.3892	5.8122	0.09	0.08	114
704	-0.1021	-0.0918	25.9915	5.1857	0.17	0.23	139
706	-0.0025	0.0153	26.4373	5.3201	0.41	0.55	142
708	-0.0250	-0.0281	26.5268	5.4122	0.40	0.48	138

TABLE E44

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS DURING YEARS OF HEAVY RIVER FLOW 7/1/83-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.0833	-0.1427	23.1860	6.2348	0.09	0.15	143
7	-0.1071	-0.1497	22.5940	6.9893	0.01	0.14	144
12	-0.0850	-0.3310	22.2274	7.3908	0.36	0.05	74
13	0.0000	-0.1279	22.9426	7.3250	0.46	0.23	124
14	-0.0200	-0.0125	22.4272	7.0275	0.39	0.57	137
15	-0.0700	0.0014	22.6351	6.9723	0.19	0.55	142
16	-0.2170	-0.1129	24.2738	6.8004	0.07	0.27	117
18	-0.0250	0.0087	22.7798	6.7090	0.33	0.52	129
21	-0.0225	-0.0336	22.9787	5.5048	0.34	0.45	129
22	-0.0367	0.0002	23.0356	5.3398	0.16	0.54	126
34	-0.1000	-0.1603	23.1084	7.3175	0.11	0.18	138
35	0.0105	0.0082	23.2940	5.3090	0.69	0.60	139
36	-0.0218	-0.0010	23.4874	5.2836	0.28	0.53	139
37	-0.0283	-0.0232	23.3929	6.1878	0.27	0.41	132
38	-0.0562	-0.0198	23.9035	6.9559	0.21	0.49	144
52	0.0667*	0.1564	23.5267	5.4103	0.98	0.86	132
53	0.0714*	0.1430	23.5401	5.3675	0.99	0.87	138
54	0.0750*	0.1724	23.9682	5.3808	0.99	0.89	132
55	0.0683*	0.1275	23.6301	5.2971	0.99	0.82	137
502	0.0420	0.0771	23.4326	5.5316	0.88	0.78	142
535	0.0586	0.0711	23.2844	5.6872	0.84	0.76	114
704	0.0200	0.0551	23.6215	5.4661	0.72	0.68	139
706	0.0055	0.0656	23.4395	5.2781	0.64	0.70	142
708	0.0000	0.0498	23.5239	5.2796	0.46	0.68	138

TABLE E45

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS PRECEDING THE BIG FREEZE OF 1989 1/1/78-12/1/89

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.3050*	0.3730	23.5442	6.0309	0.97	0.99	129
18	-0.0250	-0.1197	1.5959	1.9843	0.24	0.17	98
21	0.1000	0.1190	29.7228	3.8638	0.89	0.81	123
22	0.2333*	0.1624	31.1179	3.5842	0.97	0.96	117
35	0.0929	0.0253	31.3064	3.1117	0.77	0.67	110
36	-0.0833	-0.0298	31.9670	3.0975	0.29	0.28	103
37	-0.0464	-0.0886	25.6524	3.8670	0.28	0.22	105
38	0.1400*	0.0023	3.7509	2.6938	0.98	0.86	108
52	0.0633	-0.0161	35.9065	1.2904	0.89	0.95	79
53	0.1500*	0.0255	35.8387	1.2482	0.99	0.99	83
54	0.1000	0.0017	35.4135	1.4648	0.88	0.92	78
55	0.1333*	-0.0389	35.9677	1.1541	0.95	0.97	71
502	0.1000	0.2216	31.9424	3.2180	0.82	0.91	92
535	0.2200	0.1539	31.2134	3.6668	0.92	0.88	67
704	0.1800*	0.1934	34.5222	1.5990	0.99	0.99	85
706	0.1667*	0.1629	35.2085	1.2507	0.99	0.99	86
708	0.1167*	0.1411	35.5859	1.0736	0.99	0.99	85

TABLE E46

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS PRECEDING THE BIG FREEZE OF 1989 1/1/78-12/1/89

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.0800	0.1632	22.8837	6.3030	0.12	0.79	129
18	-0.0500	0.0129	22.5398	6.9000	0.43	0.46	98
21	-0.0613	-0.0176	22.8537	5.1314	0.14	0.37	123
22	-0.0800	-0.0459	22.6761	4.8671	0.10	0.29	117
35	-0.1000	0.0735	22.6964	4.8498	0.10	0.62	110
36	-0.1000	-0.0136	22.7117	4.7429	0.12	0.38	103
37	-0.0134	0.0909	23.5010	6.1664	0.44	0.55	105
38	0.0667	0.1106	23.2093	6.5829	0.69	0.68	108
52	0.0400	-0.0102	22.3418	2.8751	0.70	0.56	79
53	0.0000	-0.0157	22.3048	2.9332	0.50	0.56	83
54	-0.0167	0.0164	22.7231	3.2838	0.46	0.67	78
55	-0.0225	-0.0016	22.4155	2.8449	0.39	0.52	71
502	0.0000	0.0606	22.8141	4.4801	0.54	0.68	92
535	-0.1125	-0.3414	22.2881	4.5075	0.30	0.12	67
704	0.0333	-0.0794	22.9412	3.3224	0.60	0.36	85
706	-0.0400	-0.1470	22.7570	2.9688	0.30	0.23	86
708	-0.1000	-0.1337	22.6800	2.7796	0.26	0.22	85

TABLE E47

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS PRECEDING THE BIG FREEZE OF 1989 1/1/78-12/1/89

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.3556*	0.4129	23.1429	5.9468	0.99	0.99	133
7	0.5804*	0.5709	18.6485	4.6221	0.99	0.99	130
12	0.2600*	0.4202	10.5314	4.5133	0.99	0.99	105
13	0.4000*	0.4308	9.7000	4.6761	0.99	0.99	125
14	0.1063*	0.0744	4.5045	4.3642	0.97	0.83	132
15	0.1523*	0.1135	4.2053	3.2471	0.99	0.98	132
16	0.1000*	0.0975	2.2762	2.4398	0.99	0.96	122
18	0.0000	0.0043	1.2371	1.6266	0.51	0.45	124
21	0.1929	0.2137	26.0659	5.6150	0.88	0.86	123
22	0.0929	0.1391	26.6624	5.3605	0.76	0.74	117
34	0.2732*	0.2682	24.8840	5.0172	0.99	0.99	119
35	-0.1250	-0.1521	26.8464	5.2299	0.31	0.15	110
36	-0.1000	-0.1750	26.9510	5.2354	0.38	0.21	104
37	-0.0000	0.0348	25.1439	4.0239	0.50	0.54	107
38	0.1613*	0.0406	3.6637	2.7374	0.99	0.94	113
52	0.2000	0.4225	26.8405	5.0541	0.89	0.95	84
53	0.1667	0.3620	27.2826	5.0128	0.78	0.84	86
54	0.0833	0.2990	26.7284	4.9039	0.65	0.79	81
55	0.5583	0.6957	27.1456	5.1995	0.95	0.96	79
502	0.1500	0.2596	26.3161	5.4757	0.79	0.88	93
535	0.5000	0.4769	25.8388	5.5776	0.89	0.96	67
704	0.2600	0.1416	27.0494	4.8802	0.90	0.81	85
706	0.0857	0.0317	27.1632	5.0220	0.67	0.67	87
708	0.0200	0.1941	27.2250	5.1058	0.53	0.79	84

TABLE E48

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS PRECEDING THE BIG FREEZE OF 1989 1/1/78-12/1/89

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1429	0.2104	22.8624	6.4211	0.91	0.84	133
7	0.0125	0.0628	22.9038	6.8072	0.58	0.62	130
12	-0.0500	-0.1547	22.6076	6.7810	0.34	0.33	105
13	0.0500	0.1217	22.8088	7.0820	0.73	0.74	125
14	0.0690	0.1202	21.9545	7.0970	0.82	0.72	132
15	0.1100*	0.1623	22.2886	7.1681	0.96	0.75	132
16	0.4250*	0.4226	23.6926	7.1090	0.99	0.98	122
18	0.0000	0.0940	22.4903	7.0919	0.54	0.64	124
21	-0.0708	0.0054	23.2089	5.6658	0.06	0.40	123
22	-0.0500	0.0268	23.3120	5.5766	0.17	0.47	117
34	0.1789*	0.0805	23.4202	6.9827	0.98	0.63	119
35	-0.0667	0.1378	23.1818	5.5058	0.10	0.73	110
36	-0.1000	0.0534	23.6250	5.5510	0.04	0.47	104
37	-0.0167	0.0517	23.5794	6.1833	0.49	0.45	107
38	0.1775*	0.2835	23.6044	6.9003	0.95	0.88	113
52	0.0000	0.1501	23.2750	5.6113	0.37	0.68	84
53	0.0000	0.1371	23.3767	5.5092	0.39	0.69	86
54	0.0000	0.1347	23.5272	5.7216	0.50	0.66	81
55	0.0675	0.2634	23.3405	5.5490	0.81	0.78	79
502	-0.1333	-0.0193	23.2172	5.4371	0.07	0.51	93
535	-0.1500	-0.4021	23.1149	5.7000	0.12	0.13	67
704	0.0250	-0.1457	23.8624	5.1455	0.61	0.33	85
706	0.0000	-0.1668	23.7080	5.0139	0.48	0.30	87
708	-0.0500	-0.2195	23.9202	5.1341	0.28	0.19	84

TABLE E49

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS AFTER THE BIG FREEZE OF 1989 1/1/90 - 12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.0300	-0.1595	0.7186	1.4338	0.01	0.01	58
21	-0.1180	0.2068	29.7805	3.2973	0.47	0.66	62
22	-0.0600	0.1815	31.6215	2.7481	0.30	0.67	62
35	-0.0500	0.2104	31.4164	2.8526	0.36	0.74	72
36	0.1100	0.3776	31.6531	2.8074	0.88	0.96	71
37	-0.0960	0.0969	24.0805	4.2569	0.37	0.62	62
38	-0.1350	-0.2046	2.0094	1.5934	0.10	0.12	67
52	0.0067	0.0025	35.7290	0.6836	0.67	0.71	67
53	0.0145	0.0016	35.7974	0.6025	0.78	0.76	70
54	0.0186	0.0041	35.3792	0.8441	0.66	0.64	68
55	0.0058	0.0292	35.7893	0.6092	0.73	0.81	70
502	-0.0217	-0.1981	31.6753	2.4574	0.41	0.16	68
535	0.1175	0.0677	30.9445	3.7444	0.64	0.32	58
704	-0.0417	-0.0302	34.7157	1.1340	0.24	0.36	68
706	0.0500	0.0274	35.3622	0.8525	0.72	0.61	69
708	0.0000	-0.0427	35.8219	0.6638	0.43	0.35	67

TABLE E50

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS AFTER THE BIG FREEZE OF 1989 1/1/90 - 12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.1650	0.0614	22.6953	6.7134	0.15	0.52	58
21	0.0350	0.0643	22.7347	4.7178	0.53	0.63	62
22	0.1100	0.1375	22.5821	4.0230	0.70	0.72	62
35	0.0375	0.1242	22.9765	3.9305	0.60	0.71	72
36	0.0100	0.1922	22.7315	3.9164	0.58	0.80	71
37	-0.2238	-0.0173	23.2423	6.2082	0.05	0.40	62
38	-0.5633	-0.3062	22.7209	6.6791	0.01	0.27	67
52	0.0650	0.0752	22.8343	2.6557	0.88	0.85	67
53	0.0988*	0.2180	22.5963	2.3988	0.95	0.96	70
54	0.0967	0.1497	22.9565	2.6509	0.93	0.90	68
55	0.0850	0.2241	22.6241	2.4548	0.95	0.96	70
502	0.1690	0.2621	22.9051	3.9014	0.94	0.92	68
535	0.2325	-0.0080	23.1029	4.1489	0.87	0.68	58
704	0.2300*	0.3490	22.9035	2.8924	0.99	0.98	68
706	0.1587*	0.3613	22.8997	2.5053	0.98	0.99	69
708	0.1500*	0.3920	22.6313	2.5190	0.99	0.99	67

TABLE E51

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS AFTER THE BIG FREEZE OF 1989 1/1/90 - 12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.3200	-0.1565	19.3646	5.6525	0.14	0.40	70
7	-0.1600	-0.0437	15.1455	5.0411	0.41	0.65	69
12	0.1875	-1.1930	4.7838	2.9489	0.62	0.67	21
13	-0.9100	-1.2646	6.3932	4.7061	0.01	0.02	50
14	-0.1867	-0.5071	2.2671	2.9466	0.10	0.02	63
15	-0.2540	-0.3524	1.9881	1.6188	0.01	0.01	67
16	-0.1000	-0.5220	1.4862	2.2843	0.01	0.01	52
18	-0.0300	-0.1417	0.6132	1.1888	0.01	0.01	57
21	0.3288	0.1600	25.2025	4.2616	0.67	0.81	63
22	-0.1700	-0.0101	25.2489	4.6588	0.35	0.65	62
34	-0.4000	-0.5740	22.1089	4.6768	0.14	0.03	64
35	-0.3575	-0.2202	24.3207	5.2017	0.13	0.36	71
36	0.1400	0.0111	24.6023	4.8142	0.60	0.67	71
37	0.0700	0.1520	23.8163	4.3869	0.53	0.68	62
38	-0.2000	-0.2641	1.7719	1.3533	0.01	0.02	69
52	0.3625	0.1038	24.9331	6.1849	0.79	0.72	67
53	0.4167	0.3964	26.0730	5.7481	0.70	0.82	71
54	0.2100	0.6120	25.4632	5.4215	0.91	0.96	69
55	0.1175	0.6813	26.2383	5.4405	0.66	0.96	71
502	0.4625	0.3657	24.5648	5.1095	0.90	0.89	67
535	-0.0600	-0.0322	24.8554	5.6432	0.45	0.38	59
704	0.6667	0.6066	24.9900	5.2082	0.91	0.98	68
706	0.7700*	0.6760	25.8723	5.4083	0.97	0.98	69
708	0.1883	0.3187	25.8794	5.7614	0.77	0.83	68

TABLE E52

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS AFTER THE BIG FREEZE OF 1989 1/1/90 - 12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.2700	-0.2553	22.8857	6.2277	0.05	0.26	70
7	-0.2167	-0.2847	22.1917	6.9630	0.06	0.25	69
12	0.7650	0.9677	20.9300	7.9844	0.62	0.58	21
13	-0.5067	-0.8592	22.7576	7.3358	0.05	0.15	50
14	-0.2820	-0.1637	22.4479	7.2789	0.07	0.45	63
15	-0.4700	-0.1599	22.5803	7.1861	0.01	0.39	67
16	-0.4000	-0.4158	23.5371	6.8453	0.04	0.24	52
18	-0.2650	0.2075	22.7596	6.6800	0.17	0.66	57
21	-0.0225	0.0344	22.8167	5.5828	0.45	0.53	63
22	0.0525	0.1551	22.9256	5.3835	0.63	0.72	62
34	-1.0267	-0.3381	22.6166	7.2462	0.01	0.32	64
35	0.1210	0.2090	23.2727	5.2628	0.94	0.79	71
36	0.0600	0.1937	23.4261	5.2141	0.80	0.77	71
37	-0.2213	-0.0090	23.3913	6.2507	0.15	0.42	62
38	-0.5300	-0.4429	23.7857	7.1948	0.01	0.18	69
52	0.1600	0.3012	23.8496	5.3005	0.08	0.22	67
53	0.2600*	0.3914	23.7737	5.2970	0.97	0.89	71
54	0.0520	0.1436	24.4406	5.1540	0.77	0.72	69
55	0.1100	0.3067	23.8679	5.1821	0.93	0.82	71
502	-0.0233	0.2003	23.7616	5.5816	0.50	0.78	67
535	0.0700	0.0678	23.6698	5.7394	0.80	0.63	59
704	-0.0263	0.2740	23.7557	5.5552	0.32	0.74	68
706	0.0000	0.3853	23.5523	5.3489	0.50	0.84	69
708	0.0250	0.5425	23.5500	5.2157	0.65	0.94	68

TABLE E53

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS BEFORE THE OIL SPILL OF APRIL, 1990 1/1/78-3/31/90

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.2333	0.3400	23.5265	5.9721	0.95	0.98	132
18	0.0000	-0.1180	1.5812	1.9596	0.37	0.20	101
21	0.1000	0.1080	29.7206	3.8556	0.89	0.81	126
22	0.2000*	0.1614	31.1408	3.5436	0.98	0.96	120
35	0.1000	0.0424	31.3398	3.0788	0.84	0.73	113
36	-0.0806	-0.0349	31.9547	3.0586	0.24	0.24	106
37	-0.0667	-0.1041	25.6139	3.8254	0.20	0.15	108
38	0.1333*	-0.0165	3.7189	2.6649	0.98	0.83	111
52	0.0600	-0.0199	35.8975	1.2737	0.88	0.93	82
53	0.1333*	0.0260	35.8436	1.2246	0.99	0.99	86
54	0.0900	-0.0086	35.3961	1.4600	0.88	0.89	81
55	0.1000*	-0.0303	35.9735	1.1284	0.97	0.98	74
502	0.1000	0.2248	31.9854	3.1629	0.90	0.92	96
535	0.2200	0.1539	31.2134	3.6668	0.92	0.88	67
704	0.1775*	0.1902	34.5518	1.5727	0.99	0.99	89
706	0.1500*	0.1476	35.2218	1.2273	0.99	0.99	91
708	0.1000*	0.1368	35.6073	1.0518	0.99	0.99	89

TABLE E54

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS BEFORE THE OIL SPILL OF APRIL, 1990 1/1/78-3/31/90

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1000	0.0677	22.7045	6.3664	0.92	0.61	132
18	0.0646	-0.0737	22.3990	6.8639	0.58	0.38	101
21	-0.0600	-0.0936	22.7063	5.1589	0.14	0.19	126
22	-0.0600	-0.1066	22.5508	4.8751	0.12	0.16	120
35	-0.0633	-0.0082	22.5664	4.8546	0.15	0.43	113
36	-0.1000	-0.0994	22.5689	4.7533	0.17	0.20	106
37	-0.0134	-0.0550	23.2667	6.2605	0.44	0.34	108
38	0.0792	0.0400	23.1036	6.5413	0.80	0.55	111
52	0.0267	-0.0555	22.2683	2.8539	0.60	0.39	82
53	-0.0333	-0.0534	22.2419	2.9101	0.42	0.41	86
54	-0.0500	-0.0520	22.6173	3.2680	0.38	0.44	81
55	-0.0250	-0.0504	22.3459	2.8216	0.38	0.36	74
502	0.0000	-0.0923	22.5865	4.5314	0.50	0.34	96
535	-0.1125	-0.3414	22.2881	4.5075	0.30	0.12	67
704	0.0333	-0.1772	22.7730	3.3418	0.59	0.11	89
706	-0.0225	-0.2293	22.5934	2.9662	0.34	0.05	91
708	-0.1000	-0.1982	22.5562	2.7772	0.19	0.06	89

TABLE E55

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS BEFORE THE OIL SPILL OF APRIL, 1990 1/1/78-3/31/90

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.2438*	0.3212	23.0044	5.9875	0.97	0.99	136
7	0.5500*	0.5343	18.6459	4.5864	0.99	0.99	133
12	0.2600*	0.4202	10.5314	4.5133	0.99	0.99	105
13	0.3861*	0.3552	9.6047	4.6938	0.99	0.99	128
14	0.1000*	0.0637	4.4926	4.3439	0.97	0.81	135
15	0.1500*	0.0855	4.1644	3.2228	0.99	0.97	135
16	0.1000*	0.0803	2.2584	2.4149	0.99	0.95	125
18	0.0000	0.0029	1.2346	1.6100	0.68	0.54	127
21	0.1414	0.1904	26.0540	5.6027	0.84	0.83	126
22	0.0750	0.1177	26.6425	5.3535	0.72	0.70	120
34	0.2714*	0.2540	24.9049	4.9582	0.99	0.99	123
35	-0.1437	-0.1578	26.8159	5.2148	0.25	0.13	113
36	-0.1000	-0.1784	26.9215	5.2335	0.35	0.19	107
37	-0.0208	0.0174	25.1200	3.9770	0.44	0.47	110
38	0.1333*	0.0187	3.6319	2.7092	0.99	0.91	116
52	0.2000	0.3699	26.8276	5.0552	0.89	0.94	87
53	0.1667	0.3269	27.2831	5.0060	0.84	0.84	89
54	0.1600	0.2802	26.7488	4.9052	0.77	0.81	84
55	0.5500*	0.6278	27.1549	5.1932	0.96	0.96	82
502	0.1000	0.1667	26.2206	5.4344	0.67	0.75	97
535	0.5000	0.4769	25.8388	5.5776	0.89	0.96	67
704	0.1500	0.0219	26.8899	4.8877	0.79	0.58	89
706	0.0000	-0.1197	26.9348	5.0780	0.50	0.38	92
708	-0.0400	0.0718	27.0784	5.1556	0.38	0.38	88

TABLE E56

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS BEFORE THE OIL SPILL OF APRIL, 1990 1/1/78-3/31/90

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	0.1472	0.1066	22.6699	6.5114	0.93	0.67	136
7	0.0250	-0.0270	22.7211	6.8806	0.65	0.42	133
12	-0.0500	-0.1547	22.6076	6.7810	0.34	0.33	105
13	0.0750	0.0161	22.6125	7.1663	0.78	0.56	128
14	0.1000	0.0749	21.8800	7.0512	0.91	0.62	135
15	0.1333*	0.1150	22.2156	7.1236	0.98	0.65	135
16	0.4500*	0.3706	23.6576	7.0407	0.99	0.97	125
18	0.0333	0.0365	22.3882	7.0525	0.70	0.53	127
21	-0.0750	-0.0826	23.0421	5.7000	0.04	0.21	126
22	-0.0500	-0.0579	23.1483	5.6015	0.15	0.27	120
34	0.2000*	-0.0325	23.2098	7.0182	0.99	0.42	123
35	-0.0667	0.0179	22.9956	5.5509	0.07	0.50	113
36	-0.1000	-0.0655	23.4374	5.5841	0.03	0.25	107
37	0.0000	-0.0867	23.3518	6.2740	0.50	0.25	110
38	0.2000*	0.2155	23.5259	6.8460	0.98	0.81	116
52	0.0000	-0.0074	23.0529	5.6398	0.40	0.43	87
53	-0.0125	-0.0149	23.1517	5.5503	0.38	0.43	89
54	0.0000	-0.0249	23.2893	5.7546	0.53	0.41	84
55	0.0708	0.0650	23.0951	5.5938	0.84	0.52	82
502	-0.1417	-0.2022	22.9309	5.5086	0.05	0.20	97
535	-0.1500	-0.4021	23.1149	5.7000	0.12	0.13	67
704	0.0000	-0.3462	23.5202	5.2803	0.55	0.08	89
706	0.0000	-0.3780	23.3359	5.1280	0.41	0.06	92
708	-0.0667	-0.4171	23.5795	5.2679	0.23	0.04	88

TABLE E57

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM SALINITY:

MEASUREMENTS FOLLOWING THE OIL SPILL OF APRIL, 1990 5/1/90-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.0300	-0.1789	0.7052	1.4744	0.01	0.01	54
21	-0.1650	-0.0195	30.0100	3.0024	0.36	0.47	59
22	-0.1000	-0.0356	31.8344	2.2661	0.24	0.49	59
35	-0.0517	0.0577	31.5751	2.4857	0.33	0.64	69
36	0.1067	0.2526	31.8113	2.5858	0.85	0.92	68
37	-0.4350	-0.0044	24.1829	4.3181	0.16	0.45	59
38	-0.0350	-0.2242	1.9894	1.6353	0.31	0.24	63
52	0.0242	0.0204	35.7138	0.6956	0.15	0.16	64
53	0.0283	0.0145	35.7876	0.6143	0.87	0.82	67
54	0.0300	0.0226	35.3640	0.8588	0.73	0.71	65
55	0.0200	0.0480	35.7778	0.6200	0.88	0.90	67
502	-0.0233	-0.2162	31.6597	2.4742	0.43	0.15	64
535	0.1175	0.0677	30.9445	3.7444	0.64	0.32	58
704	-0.0100	0.0043	34.6792	1.1545	0.50	0.52	64
706	0.0537	0.0472	35.3511	0.8624	0.80	0.70	64
708	0.0038	-0.0366	35.8083	0.6822	0.58	0.49	63

TABLE E58

TREND ANALYSIS FOR MONTHLY NEAR BOTTOM TEMPERATURE:

MEASUREMENTS FOLLOWING THE OIL SPILL OF APRIL, 1990 5/1/90-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
18	-0.1100	-0.1940	22.9598	6.8204	0.29	0.27	54
21	0.0575	-0.1508	22.9212	4.7232	0.58	0.42	59
22	0.1550	-0.0238	22.7303	4.0284	0.84	0.56	59
35	0.0587	-0.0519	23.1320	3.9027	0.70	0.50	69
36	0.0633	0.0272	22.8888	3.8983	0.73	0.61	68
37	-0.1875	-0.2321	23.4190	6.2664	0.10	0.26	59
38	-0.4700	-0.5337	22.8571	6.8153	0.01	0.15	63
52	0.0533	-0.0736	22.9719	2.6362	0.83	0.58	64
53	0.0812	0.1051	22.7170	2.3793	0.90	0.83	67
54	0.0940	0.0185	23.0929	2.6299	0.93	0.69	65
55	0.0826	0.1154	22.7446	2.4389	0.91	0.84	67
502	0.1933	-0.0004	23.1898	3.8212	0.89	0.67	64
535	0.2325	-0.0080	23.1029	4.1489	0.87	0.68	58
704	0.3200*	0.1929	23.1069	2.8531	0.98	0.85	64
706	0.1450	0.1876	23.1356	2.4443	0.87	0.86	64
708	0.1375*	0.2830	22.8016	2.4996	0.96	0.92	63

TABLE E59

TREND ANALYSIS FOR MONTHLY NEAR SURFACE SALINITY:

MEASUREMENTS FOLLOWING THE OIL SPILL OF APRIL, 1990 5/1/90-12/31/95

Results of analysis for selected stations (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.4833	-0.3694	19.5376	5.6437	0.11	0.22	67
7	-0.0100	0.0196	15.0915	5.0137	0.50	0.28	66
12	0.1875	-1.1930	4.7838	2.9489	0.62	0.67	21
13	-1.2000	-1.5694	6.4226	4.7815	0.01	0.02	47
14	-0.1420	-0.5513	2.2141	2.9155	0.19	0.02	59
15	-0.2540	-0.4084	1.9762	1.6640	0.02	0.01	63
16	-0.1000	-0.6737	1.5079	2.3673	0.01	0.02	48
18	-0.0300	-0.1502	0.5915	1.2169	0.03	0.01	53
21	0.0235	-0.0556	25.4043	4.2486	0.50	0.59	60
22	-0.3850	-0.2586	25.4514	4.6663	0.16	0.38	59
34	-0.4950	-0.6124	22.0362	4.7187	0.17	0.04	60
35	-0.5217	-0.4201	24.4525	5.2598	0.06	0.17	68
36	-0.0375	-0.1640	24.7479	4.8524	0.50	0.48	68
37	-0.0900	0.0750	23.9053	4.4606	0.44	0.54	59
38	-0.1671	-0.2855	1.7455	1.3846	0.03	0.04	65
52	0.3367	0.0046	25.0409	6.1971	0.76	0.62	64
53	0.4283	0.3307	26.1865	5.7419	0.69	0.75	68
54	0.2050	0.6195	25.5494	5.3983	0.89	0.95	66
55	0.1350	0.6495	26.3635	5.4107	0.68	0.94	68
502	0.3343	0.2640	24.7244	5.2228	0.83	0.79	63
535	-0.0600	-0.0322	24.8554	5.6432	0.44	0.62	59
704	0.5200	0.4916	25.2019	5.2784	0.81	0.95	64
706	0.6883	0.4186	26.2577	5.3814	0.88	0.88	64
708	0.0250	0.0626	26.1703	5.7233	0.55	0.64	64

TABLE E60

TREND ANALYSIS FOR MONTHLY NEAR SURFACE TEMPERATURE:

MEASUREMENTS FOLLOWING THE OIL SPILL OF APRIL, 1990 5/1/90-12/31/95

Results of analysis for monthly means from selected fixed stations (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
5	-0.2700	-0.5207	23.0866	6.2802	0.07	0.13	67
7	-0.2067	-0.4821	22.3292	7.0770	0.11	0.14	66
12	0.7650	0.9677	20.9300	7.9844	0.62	0.58	21
13	-0.4533	-1.3657	22.9570	7.4816	0.05	0.05	47
14	-0.2654	-0.3966	22.6342	7.4358	0.14	0.25	59
15	-0.4500	-0.3836	22.7473	7.3296	0.02	0.24	63
16	-0.3000	-0.5374	23.5485	7.0677	0.23	0.17	48
18	-0.0812	0.0016	22.9981	6.8012	0.40	0.46	53
21	0.0021	-0.2199	23.0275	5.5988	0.50	0.33	60
22	0.2050	-0.0655	23.1253	5.4074	0.74	0.53	59
34	-0.9400	-0.6172	22.7843	7.4488	0.01	0.16	60
35	0.1233*	-0.0105	23.4729	5.2521	0.95	0.61	68
36	0.0672	-0.0107	23.6154	5.2117	0.90	0.58	68
37	-0.0900	-0.2196	23.5654	6.3133	0.26	0.28	59
38	-0.4600	-0.6695	23.9063	7.3469	0.02	0.11	65
52	0.1783	0.0354	24.1175	5.2424	0.91	0.54	64
53	0.2485	0.1089	24.0504	5.2260	0.95	0.70	68
54	0.0750	-0.1540	24.7152	5.0656	0.76	0.45	66
55	0.0875	-0.0034	24.1621	5.0832	0.88	0.56	68
502	-0.0783	-0.1602	24.1306	5.5212	0.37	0.44	63
535	0.0700	0.0678	23.6698	5.7394	0.80	0.63	59
704	-0.0425	-0.0803	24.1264	5.4931	0.33	0.40	64
706	0.0000	0.0043	23.9830	5.2954	0.50	0.45	64
708	0.0050	0.2483	23.9109	5.1386	0.55	0.75	64

TABLE E61

TREND ANALYSIS AT FIXED STATIONS FOR ALL MONTHLY SALINITIES, 1/1/78-12/31/95

Results of analysis monthly means from selected fixed moorings (Sta); B = trend (ppt/yr) found by seasonal Kendall Tau analysis; B_1 = trend (ppt/yr) found by linear regression; μ = mean salinity, ppt; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
315	0.0091	0.0584	19.5368	4.7286	0.56	0.79	209
317	-0.1774*	-0.0990	13.3693	5.0674	0.99	0.91	168
318	0.4030	0.5545	27.3836	3.6805	0.81	0.83	36
319	-0.8910*	-0.1404	27.1941	3.5376	0.99	0.72	31
323	0.5006	0.0922	20.1976	4.2329	0.88	0.74	66
326	0.0824	0.0781	5.3622	3.0429	0.82	0.73	69
335	0.7584	0.8732	28.8729	3.8050	0.94	0.98	30
319	-1.7032	-5.1215	21.5716	5.7800	0.93	0.97	16
323	-1.2631*	-1.5713	20.5479	4.7863	0.99	0.99	46
325	-0.1067	-0.0868	3.0409	1.7895	0.84	0.60	70
326	-0.1425	-0.1029	2.3222	1.9276	0.86	0.93	87

TABLE E62

TREND ANALYSIS AT FIXED STATIONS FOR ALL MONTHLY TEMPERATURES
1/1/78-12/31/95

Results of analysis for monthly means from selected fixed moorings (Sta); B = trend (°C /yr) found by seasonal Kendall Tau analysis; B_1 = trend (°C/yr) found by linear regression; μ = mean temperature, °C; σ = standard deviation; $p_{seasonal}$ is probability that a trend exists found by seasonal Kendall Tau test; $p_{nonseasonal}$ is probability that a trend exists found by standard (nonseasonal) Kendall Tau test; n = number of months during which data was collected at that station for this time span. Those B values associated with the probability $p_{seasonal} > 0.9500$ for existence of trend by the seasonal Kendall Tau method are followed by an asterisk (*).

Sta	B	B_1	μ	σ	$p_{seasonal}$	$p_{nonseasonal}$	n
315	0.0897*	0.0926	22.4721	6.1517	0.99	0.88	209
317	0.0859*	0.0022	22.4138	5.8598	0.99	0.54	168
318	-0.3871*	-1.4011	25.1690	3.8959	0.96	0.99	36
319	-0.8514*	-1.1423	24.2791	5.0747	0.99	0.96	31
323	-0.2874*	0.0565	23.4521	6.0720	0.99	0.54	66
326	0.0535	0.0828	22.0900	6.5435	0.74	0.66	69
335	-0.4649*	-0.4252	24.2457	4.0650	0.95	0.73	30
319	-0.5610	-0.0370	21.4648	5.1018	0.76	0.50	16
323	0.1565	-0.9063	22.9305	5.8964	0.82	0.81	46
325	-0.0565	-0.1444	22.8294	6.1247	0.77	0.64	70
326	0.0188	-0.0105	22.1959	6.1419	0.69	0.51	87

APPENDIX F

SQUARED COHERENCE BETWEEN MISSISSIPPI RIVER OUTFLOW

AND PHYSICAL HYDROGRAPHY SALINITY RECORDS

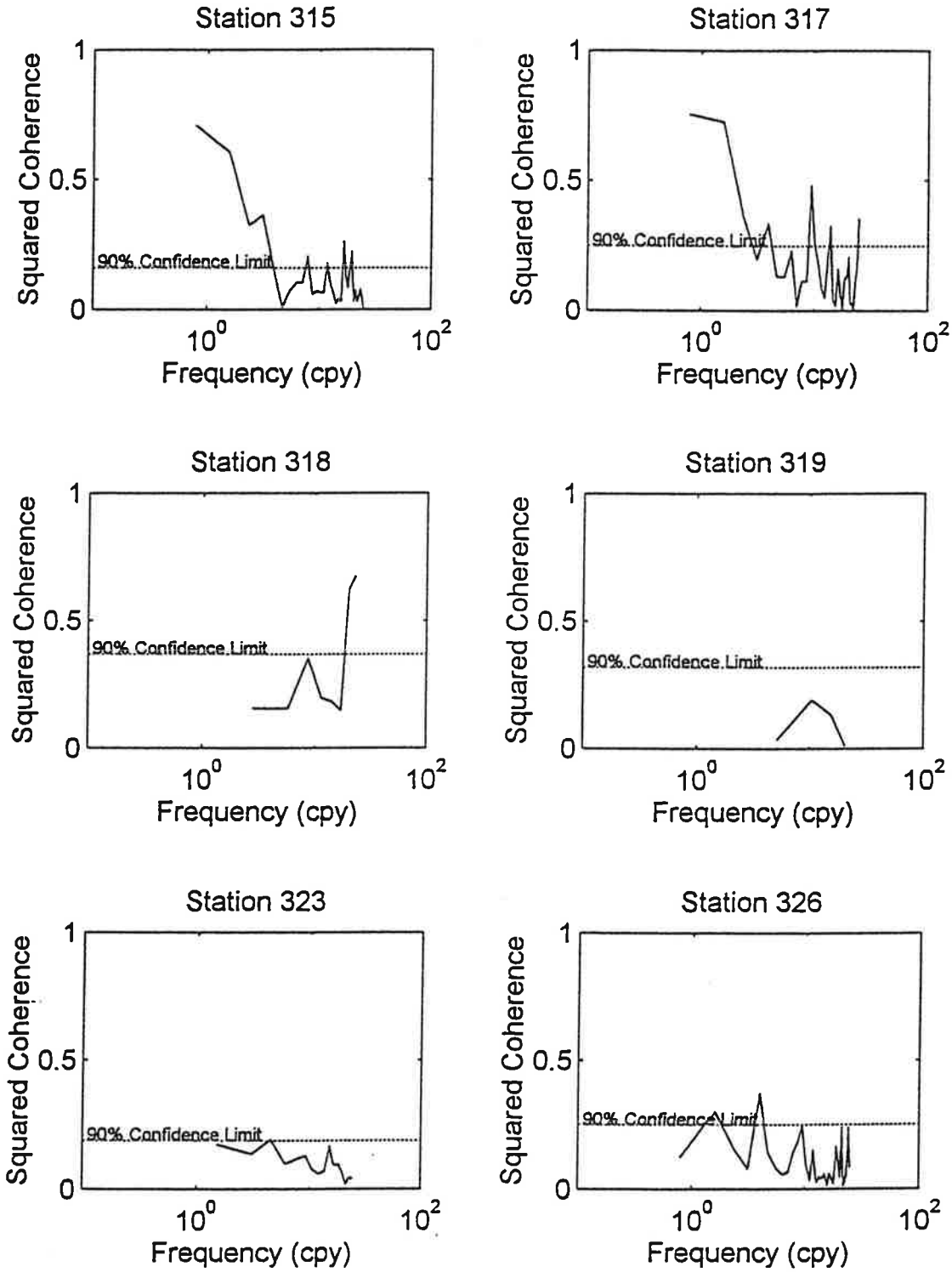

Figure F1. Coherence of weekly mean salinities at fixed moorings and weekly mean Mississippi river discharge. Frequency is in units of cycles per year.

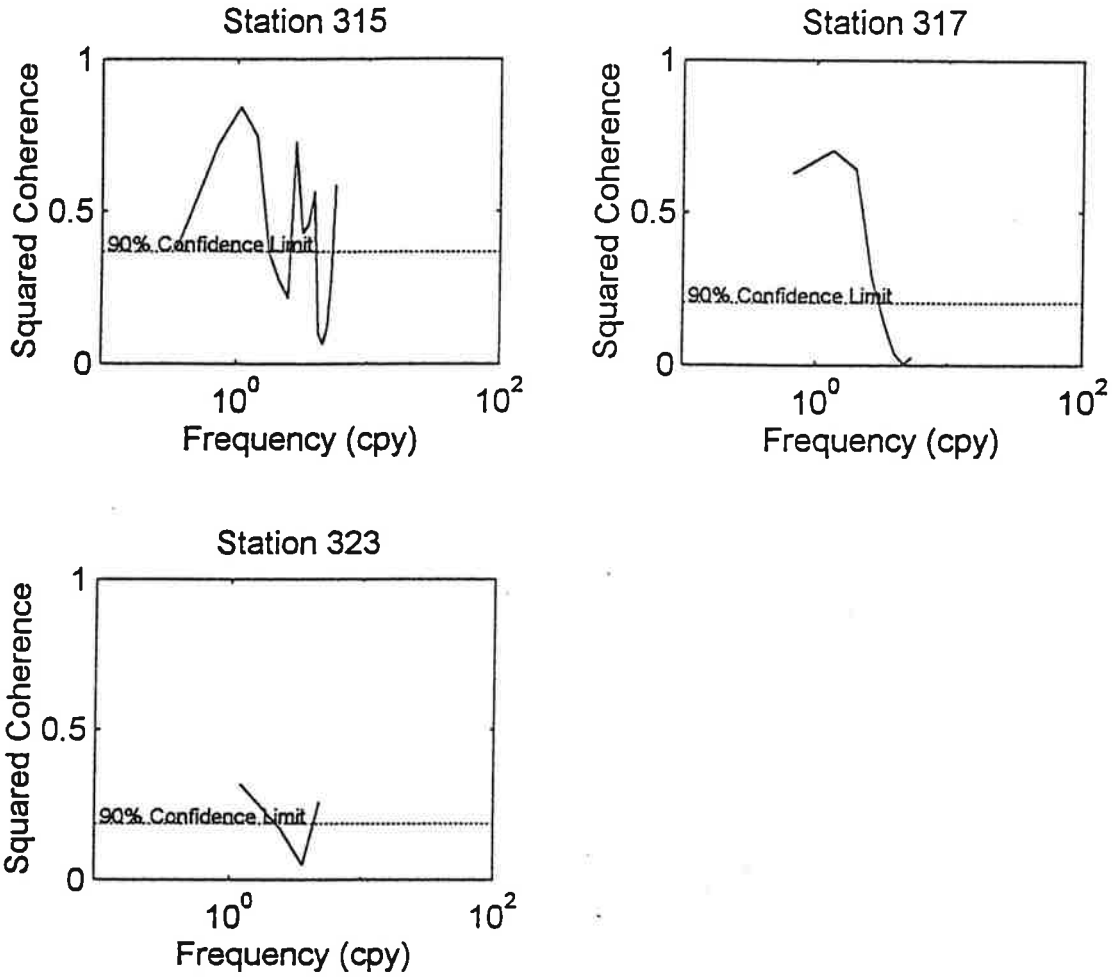

Figure F2. Coherence of monthly mean salinities at fixed moorings and monthly mean Mississippi river discharge.Frequency is in units of cycles per year.

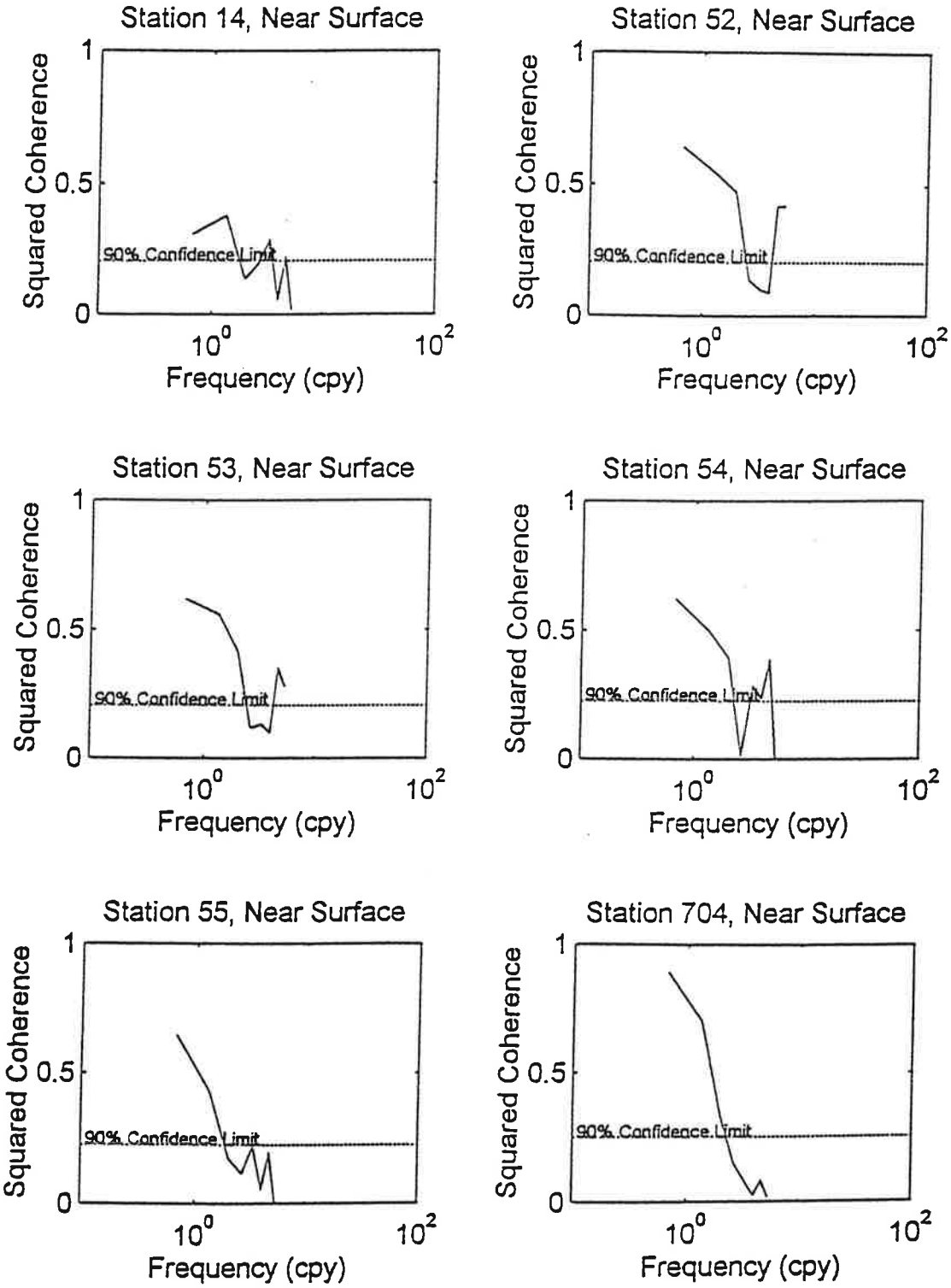

Figure F3. Coherence of monthly surface samples of salinity and monthly mean Mississippi river discharge. Frequency is in units of cycles per year.

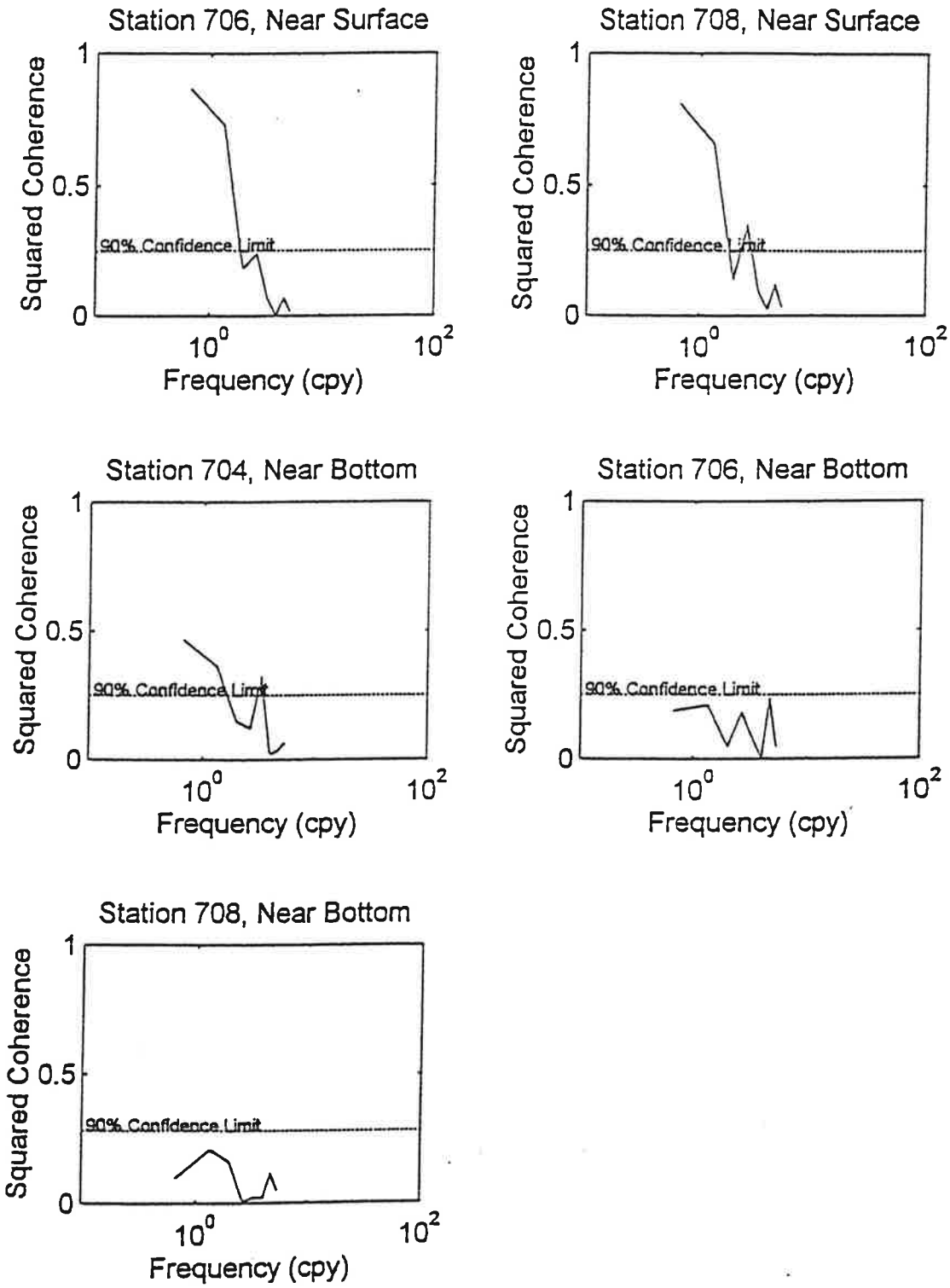

Figure F4. Coherence of monthly surface and bottom samples of salinity and monthly mean Mississippi river discharge. Frequency is in units of cycles per year.