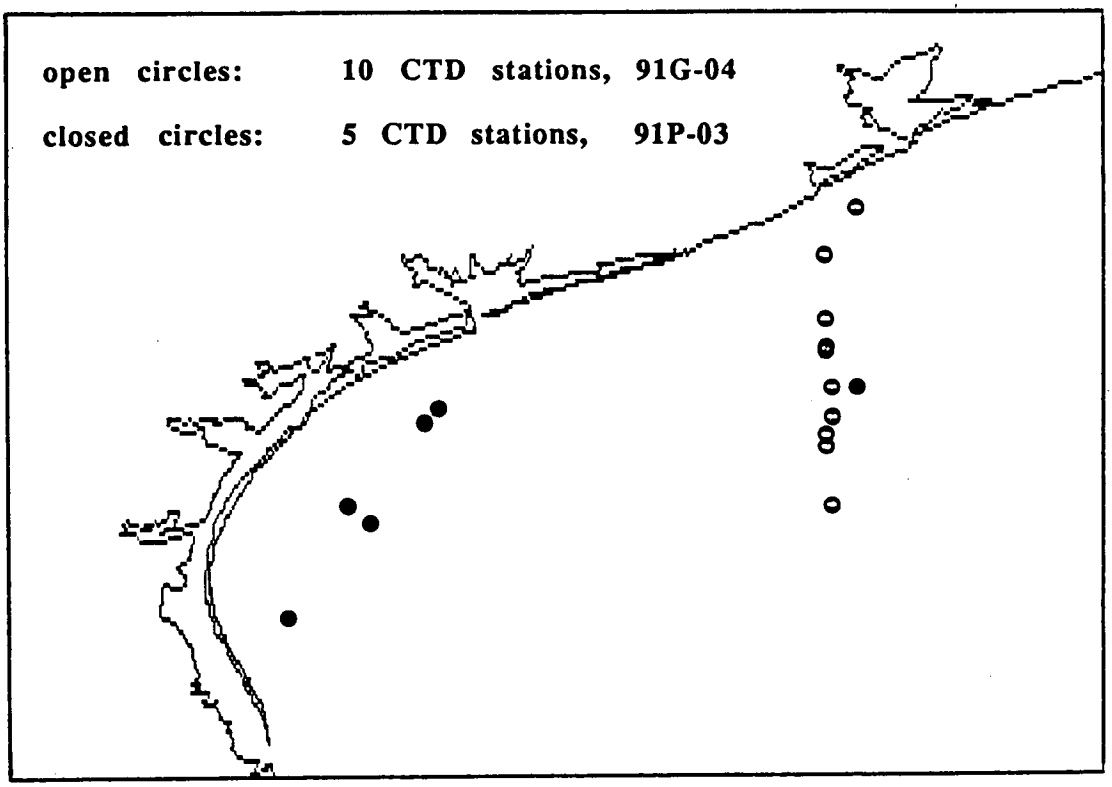
GULF OF MEXICO HYDROGRAPHIC DATA:

CTD DATA and BOTTLE DATA from R/V GYRE CRUISE 91G-04 and CTD DATA from R/V POWELL CRUISE 91P-03



Technical Report 91-05-T of the Department of Oceanography
of Texas A&M University, College Station, TX 77843

15 October 1991

D.C. Biggs, Technical Editor
TAMU Technical Support Services Group

B.1

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SUMMARY OF SCIENTIFIC PROGRAMS

Hydrographic data were collected as opportunity allowed from two vessels that were doing fieldwork for TAMU investigators in the NW Gulf of Mexico in June 1991:

R/V POWELL cruise 91P-03 was a 7-day applied research cruise (7-13 June), which carried out piston-coring and vibra-coring work sponsored by the TAMU Geochemical and Environmental Research Group (GERG). Jerry Morgan served as Chief Scientist, and Marine Technician Greg Warr participated to piggy-back CTD casts with an internal-recording Seabird "Seacat" profiler at 5 coring sites which were located west of 96°W, as well as at a sixth location that was sited SSW of Galveston, TX.

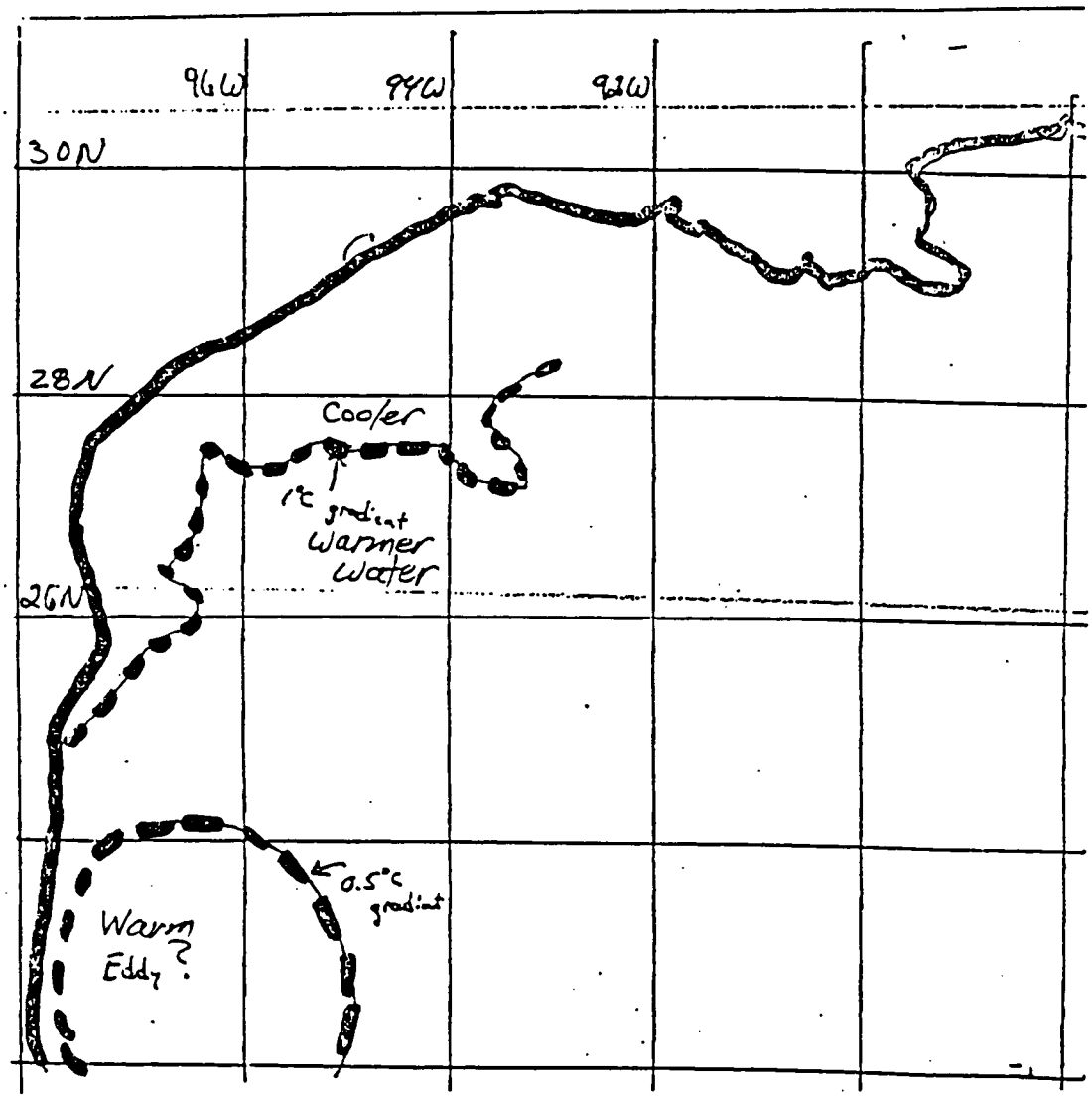
R/V GYRE cruise 91G-04 was a 5-day basic research cruise (14-18 June), which made a line of hydrographic stations along 95°W that extended from the inner continental shelf off Galveston to the upper continental slope. It combined a day of TAMU-sponsored graduate student Training & Research with 4 days of NSF-sponsored research in support of OCE-9012103: "Physiochemical processes controlling thorium behavior in the ocean" (P.Santschi, PI). CTD-rosette multisampler casts were made at 9 stations along 95°W, and as well as at a tenth site east of 95°W and north of 29°N, close off the entrance to Galveston Bay. At four of the CTD stations, radionuclides were sampled using a six-cartridge Multiple In situ Pumping System (MIPS).

91G-04 SCIENTIFIC PARTY

Chief Scientist:	Dr. M. Baskaran (TAMU Galveston)
Technicians:	Ken Bottom, Mark Spears, David Voegele, RV Pittman
Other Science Participants:	Dr. D.C. Biggs; Laodong Guo; Liang-Saw Wen; Sally-Jo Palmer; Marilyn Yeager; Jianquing Xu; Sung-Pyo Chung; John Swanson; Shaunna Asbill; Roberta Corvalio; Sarah Oktay; Matthew Quigley; Abidjat Sanyal

REGIONAL SEA SURFACE TEMPERATURES

Because the summertime surface waters of the NW Gulf of Mexico are usually warmer than 29°C, environmental satellite imagery generally offers little mesoscale detail about the regional circulation field between May and September. However, in June 1991 the shelf water in the NW corner of the Gulf was 1°C - 1.5°C cooler than the region of > 29°C temperatures over the slope. A few days before cruise 91G-04 sailed, Doug May of the US Naval Oceanographic and Atmospheric Research Laboratory (NOARL) provided us with the sketch map below, which he derived from analysis of a NOAA-10 image from 2 June 1991. Note the temperature gradient which was present over the upper and middle slope, just north of about 27° 30'N along 95°W (i.e., between the location of Sta 06 and Sta 07 which we would run on cruise 91G-04). Note, as well, that south of 24°N the remnant of warm-core ring "Quiet Eddy" had anomalously warm surface temperature.



RECORD OF POSITIONS AND STATIONS

HYDROGRAPHIC STATIONS, R/V POWELL cruise 91P-03:

Date	GMT	CTD	Sampling Location		Water Depth	Surface Salinity
06-08	2010		26 50	96 18	550 m	32.95 PSU
06-09	1030		26 55	96 15	600 m	32.03 PSU
06-10	1730	01	26 53	96 58	64 m	33.62 PSU
06-11	0528	02	27 22	96 40	67 m	28.92 PSU
	2240		27 23	96 41	59 m	28.44 PSU
06-12	0156	03	27 27	96 45	51 m	29.06 PSU
	1330		27 50	96 22	42 m	35.02 PSU
	1907		27 52	96 28	40 m	34.02 PSU
	2332	04	27 53	96 28	39 m	33.98 PSU
06-13	0450	05	27 57	96 25	38 m	34.48 PSU
	1640	06	28 04	94 53	66 m	34.03 PSU

HYDROGRAPHIC STATIONS, R/V GYRE cruise 91G-04:

Date	GMT	Start Station Work		Finish Station Work		Station	Depth
06-15	0724 - 0732	28 45.7	95 00.3	28 45.8	95 00.4	CTD 01	21 m
	1009 - 1023	28 25.2	95 00.0	28 25.5	95 00.1	CTD 02	37 m
	1222 - 1256	28 16.5	94 59.9	28 16.2	94 59.1	CTD 03	45 m
	1417 - 1432	28 05.0	94 59.7	28 05.1	94 59.5	CTD 04	60 m
	1559 - 1622	27 55.8	94 59.7	27 55.8	94 59.2	CTD 05	97 m
	2010 - 2105	27 27.4	94 59.3	27 27.2	94 58.5	CTD 06	993 m
06-16	1626 - 1729	27 27.4	94 59.7	27 28.2	94 58.4	CTD 06A	955 m
06-17	0938 - 1000	27 27.6	94 59.3	27 27.6	94 59.3	CTD 06B	990 m
	1609 - 1642	27 46.3	94 59.4	27 45.9	94 58.9	CTD 07	380 m
06-18	0019 - 0047	27 44.7	94 59.9	27 44.4	95 00.1	CTD 07A	300 m
	0748 - 0806	27 50.8	95 00.8	27 51.1	95 01.0	CTD 08	203 m
	1346 - 1404	28 15.4	95 00.1	28 15.7	94 59.8	CTD 09	43 m
	2123 - 2130	28 59.9	94 43.7	28 59.9	94 43.8	CTD 10	11 m

NOAA FORM 72-5b (4-74)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

FORM APPROVED
O.M.B. No. 41-R2734

MARINE COASTAL WEATHER LOG — SHIP STATION

SHIP NAME: R/V GYRE

RADIO CALL SIGN: WJCL

DATE (month and year): JUNE 1991

(1) DATE	(2) TIME (GMT) +5	(3) POSITION	(4) PRESENT WEATHER	(5) VISIBILITY (MI)	(6) WIND DIR. (16 pts)	(6) WIND SPEED (Kts)	(7) STATE OF SEA WAVE HEIGHT (Ft)	(7) SWELL DIRECTION (8 Pts)	(7) SWELL HEIGHT (Ft)	(8) SEA WATER TEMP. °C °F	(9) AIR TEMP. °C °F	(10) PRESSURE	(11) REMARKS (clouds, etc.)
15	0500	28°37'N ~ 94°51'W	RAIN SHOWERS	8	S	12	2-3'				82	1015.3	OCC. LIGHTNG
15	0830	28°37'N 95°00'W	PARTLY CLOUDY	8	SSE	17	2'-3'				82	1017.0	
15	1230	28°16'N ~ 95°00'W	PARTLY CLOUDY	10	S	8	2'-3'				83	1014.5	
15	1636	27°33'N ~ 94°37'W	PARTLY CLOUDY	10	S	10	2-3'	SSE	3-4'		88°	1016	
16	0035	27°26'N ~ 94°58'W	CLOUDY	10	NNE	8	2-3	NNE	2-3		80°	1015	
16	0445	27°26'N ~ 94°58'W	PTLY. CLOUDY	10	S	5	1-2'				84°	1015.1	CLEARING
16	0830	27°30'N 95°02'W	PTLY CLOUDY	8	SSE	7	1-2'				85	1015.0	OCC. LIGHTNG
16	1230	27°28'N ~ 94°58'W	PTLY CLOUDY	10	SSE	10	1-2				84°	1015.4	SCAT. SHWRS.
16	1645	27°27'N ~ 94°58'W	PTLY CLOUDY	10	S	4	1-2	SW	2-3		84	1015.9	RAIN SQUALLS
16	2030	27°27'N 94°59'W	PTLY CLOUDY	10	S	3	1-2'	SW	2-3		85	1015.5	
17	0030	27°27'N ~ 94°58'W	PTLY CLOUDY	10	SE	8	1-2				84	1013.5	
17	0445	27°28'N ~ 95°00'W	RAIN	2	NE	12	1-3				79	1016.1	THUNDER STORMS
17	0830	27°30'N 95°02'W	RAIN	3	S	3	1-3				80	1016.0	SCAT. SHOWERS
17	1230	27°29'N ~ 94°59'W	RAIN	4	W	10	2-3				80	1014.5	
17	1630	27°16'N ~ 94°59'W	PTLY CLOUDY	10	SW	10	2-3				82	1014.5	CLEARING SKIES
17	2030	27°45'N 94°57'W	PTLY CLOUDY	10	WNW	5	1-2	SW	2-3		88	1014.9	
18	0030	27°44'N ~ 95°00'W	PTLY CLOUDY	10	LT VAR	VAR AIR	0-1				84	1014.0	
18	0440	27°44'N ~ 95°02'W	PTLY CLOUDY	10	SE	10	1-2'	SE	2			1014.5	
18	0830	27°51'N 95°00'W	THUNDERSTORM	2	SW	6	1-2'	SE	2		75	1014.5	
18	1245	28°05'N ~ 94°59'W	CLEAR	10	LT VAR	VAR AIR	0-1				85	1014.5	
18	1630	28°16'N ~ 94°58'W	PTLY CLOUDY	10	LT VAR	VAR	0-1	SE	1-2		86	1015.1	

CTD DATA from cruise 91P-03

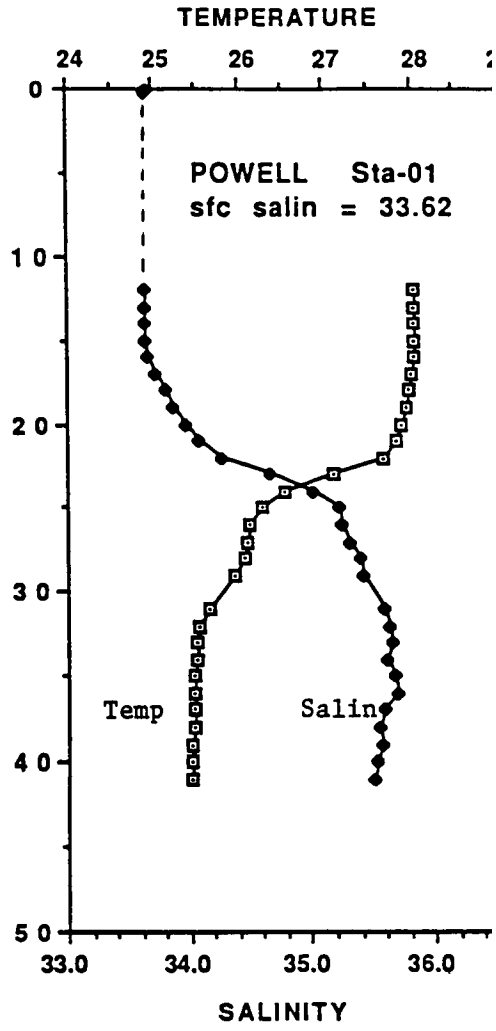
The tables and plots which follow present downcast data collected using our Seabird SBE-19 "Seacat" CTD in internal recording mode. Unfortunately, most downcasts commenced before the CTD had completed its internal initialization procedure at the surface, so most of the data start at a depth of 11-12 m. The data have been 1 m averaged, and CTD salinity was corrected by + 0.12 PSU to agree with the bottle salinity (33.62 PSU at the surface) that was sampled at Sta 01. No correction was made to CTD temperature.

All six of these CTD stations of opportunity were made over middle shelf depths (25- 66 m water depth). All show stratification in both salinity and temperature profiles, with the water at a depth of 12-13 m some 1-5^{o}C warmer and (except at Sta 04, where salinity was almost isohaline 13-39 m) some 0.3-1.3 PSU fresher than water at the bottom. Note that especially low surface salinity values occurred at Sta 02 (28.92 PSU) and at Sta 03 (29.06 PSU). This region just ESE of Corpus Christi Bay is probably the origin of the anomalously low salinity surface water over the upper slope that we encountered 3 days later at Sta 06 on GYRE cruise 91G-04.

R/V POWELL CTD STATION: 01 GMT: 17:30 June 10, 1991
LATITUDE: 26°53'N LONGITUDE: 96°58'W

STA 1

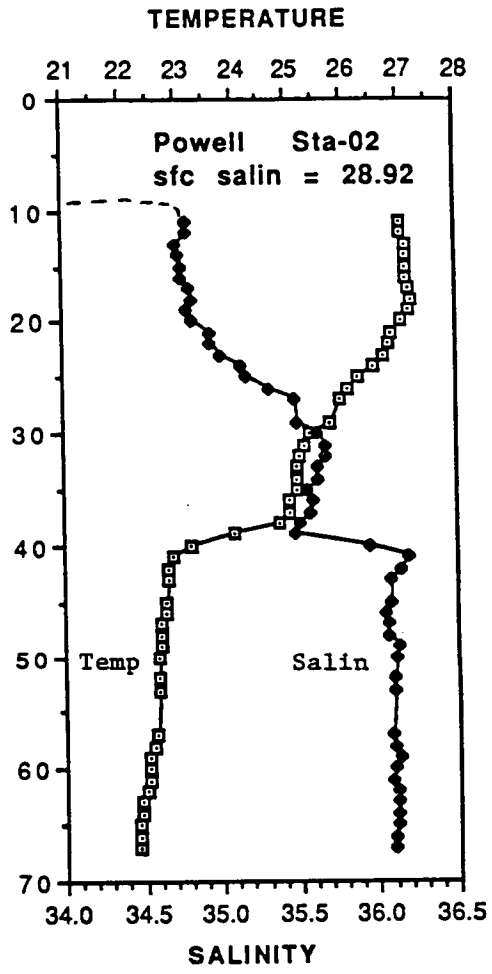
	DEPTH	TEMPERATURE	SALINITY	SIGMA-T
1	12	28.0	33.63	21.28
2	13	28.0	33.63	21.28
3	14	28.0	33.62	21.27
4	15	28.0	33.63	21.28
5	16	28.0	33.65	21.29
6	17	28.0	33.71	21.34
7	18	28.0	33.80	21.42
8	19	27.9	33.85	21.48
9	20	27.9	33.96	21.57
10	21	27.8	34.06	21.67
11	22	27.7	34.26	21.86
12	23	27.1	34.65	22.34
13	24	26.5	35.01	22.80
14	25	26.3	35.23	23.05
15	26	26.1	35.25	23.11
16	27	26.1	35.31	23.17
17	28	26.1	35.38	23.23
18	29	26.0	35.40	23.28
19	31	25.6	35.57	23.50
20	32	25.5	35.62	23.57
21	33	25.5	35.64	23.60
22	34	25.5	35.59	23.56
23	35	25.5	35.67	23.62
24	36	25.5	35.67	23.63
25	37	25.5	35.57	23.55
26	38	25.5	35.54	23.53
27	39	25.4	35.56	23.55
28	40	25.4	35.51	23.52
29	41	25.4	35.50	23.51



R/V POWELL CTD STATION: 02 GMT: 05:28 June 11, 1991
LATITUDE: 27°22'N LONGITUDE: 96°40'W

STA 2

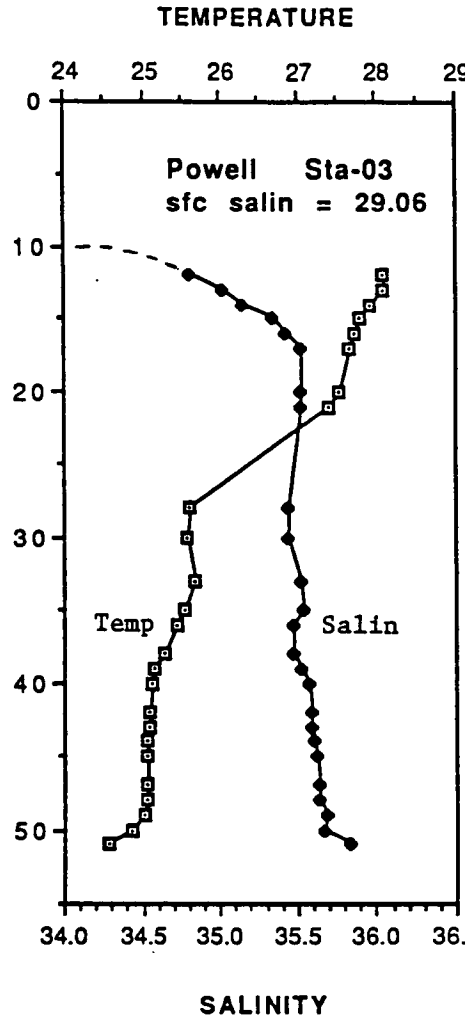
	METERS	TEMP	SALINITY	SIGMA-T
1	11	27.0	34.78	22.46
2	12	27.1	34.79	22.47
3	13	27.1	34.71	22.39
4	14	27.1	34.74	22.41
5	15	27.1	34.75	22.41
6	16	27.1	34.75	22.41
7	17	27.2	34.80	22.44
8	18	27.2	34.82	22.45
9	19	27.2	34.78	22.43
10	20	27.0	34.82	22.50
11	21	26.9	34.93	22.64
12	22	26.8	34.93	22.65
13	23	26.7	35.00	22.74
14	24	26.5	35.13	22.90
15	25	26.3	35.17	23.00
16	26	26.1	35.30	23.17
17	27	25.9	35.48	23.34
18	29	25.8	35.48	23.40
19	30	25.4	35.62	23.62
20	31	25.3	35.67	23.68
21	32	25.2	35.67	23.71
22	33	25.2	35.61	23.74
23	34	25.2	35.62	23.68
24	35	25.2	35.56	23.64
25	36	25.0	35.58	23.69
26	37	25.0	35.57	23.70
27	38	24.8	35.50	23.70
28	39	24.0	35.48	23.93
29	40	23.2	35.95	24.51
30	41	22.9	36.19	24.79
31	42	22.8	36.14	24.77
32	43	22.8	36.07	24.72
33	45	22.8	36.08	24.74
34	46	22.8	36.05	24.78
35	47	22.7	36.06	24.73
36	48	22.7	36.06	24.75
37	49	22.7	36.12	24.80
38	50	22.7	36.10	24.79
39	52	22.6	36.10	24.80
40	53	22.6	36.09	24.79
41	57	22.6	36.08	24.80
42	58	22.5	36.08	24.82
43	59	22.5	36.12	24.85
44	60	22.5	36.09	24.84
45	61	22.4	36.07	24.83
46	62	22.4	36.10	24.86
47	63	22.3	36.11	24.89
48	64	22.3	36.11	24.90
49	65	22.3	36.10	24.89
50	66	22.3	36.09	24.89
51	67	22.3	36.09	24.89



R/V POWELL CTD STATION: 03 GMT: 01:56 June 12, 1991
LATITUDE: 27°27'N LONGITUDE: 96°45'W

STA 3

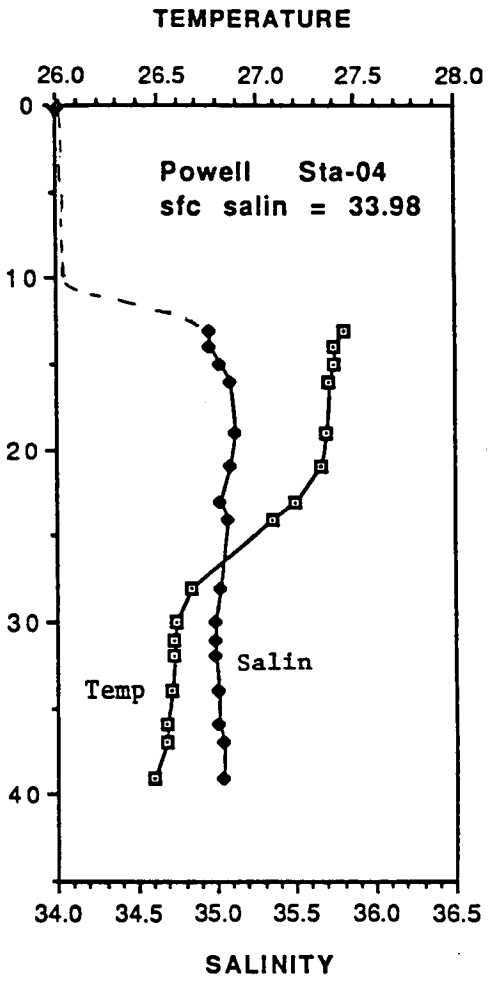
	METERS	TEMP	SALINITY	SIGMA-T
1	12	28.1	34.80	22.13
2	13	28.1	35.02	22.31
3	14	27.9	35.14	22.45
4	15	27.8	35.34	22.64
5	16	27.7	35.42	22.73
6	17	27.7	35.51	22.82
7	20	27.5	35.52	22.86
8	21	27.4	35.53	22.91
9	28	25.6	35.43	23.41
10	30	25.6	35.45	23.43
11	33	25.7	35.52	23.45
12	35	25.5	35.54	23.51
13	36	25.4	35.48	23.50
14	38	25.3	35.47	23.54
15	39	25.2	35.52	23.61
16	40	25.1	35.57	23.66
17	42	25.1	35.58	23.68
18	43	25.1	35.58	23.68
19	44	25.0	35.60	23.71
20	45	25.0	35.62	23.73
21	47	25.0	35.63	23.73
22	48	25.0	35.64	23.74
23	49	25.0	35.68	23.77
24	50	24.8	35.67	23.82
25	51	24.6	35.84	24.02



R/V POWELL CTD STATION: 04 GMT: 23:32 June 12, 1991
LATITUDE: 27°53'N LONGITUDE: 96°28'W

STA 4

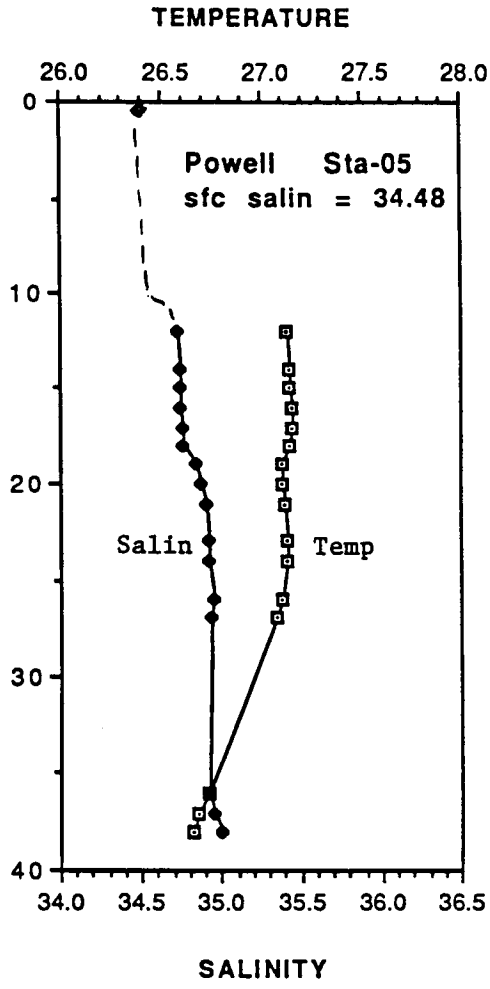
METERS	TEMP	SALINITY	SIGMA-T
13	27.4	34.95	22.46
14	27.4	34.95	22.48
15	27.4	35.02	22.54
16	27.4	35.09	22.59
19	27.4	35.11	22.61
21	27.3	35.08	22.60
23	27.2	35.02	22.60
24	27.1	35.07	22.67
28	26.7	35.01	22.76
30	26.6	34.99	22.76
31	26.6	34.98	22.76
32	26.6	34.99	22.77
34	26.6	35.01	22.79
36	26.5	35.00	22.79
37	26.5	35.03	22.81
39	26.5	35.02	22.83



R/V POWELL CTD STATION: 05 GMT: 04:50 June 13, 1991
LATITUDE: 27°57'N LONGITUDE: 96°25'W

STA 5

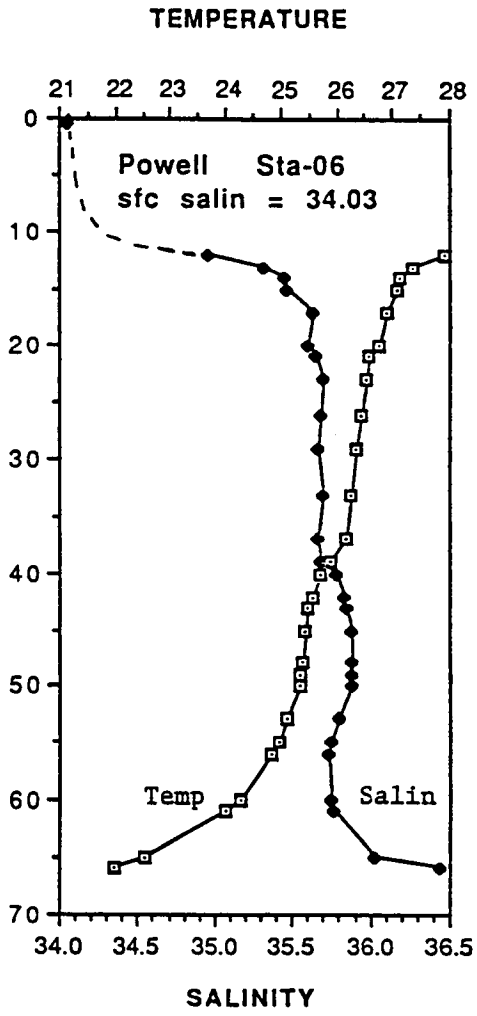
METERS	TEMP	SALINITY	SIGMA-T
12	27.1	34.73	22.40
14	27.1	34.73	22.40
15	27.1	34.73	22.40
16	27.1	34.74	22.41
17	27.1	34.75	22.41
18	27.1	34.75	22.41
19	27.1	34.83	22.48
20	27.1	34.87	22.52
21	27.1	34.90	22.54
23	27.1	34.92	22.54
24	27.1	34.92	22.54
26	27.1	34.94	22.57
27	27.1	34.93	22.57
36	26.7	34.92	22.67
37	26.7	34.95	22.71
38	26.7	35.00	22.75



R/V POWELL CTD STATION: 06 GMT: 16:40 June 13, 1991
LATITUDE: 28°04'N LONGITUDE: 94°53'W

CTD-06

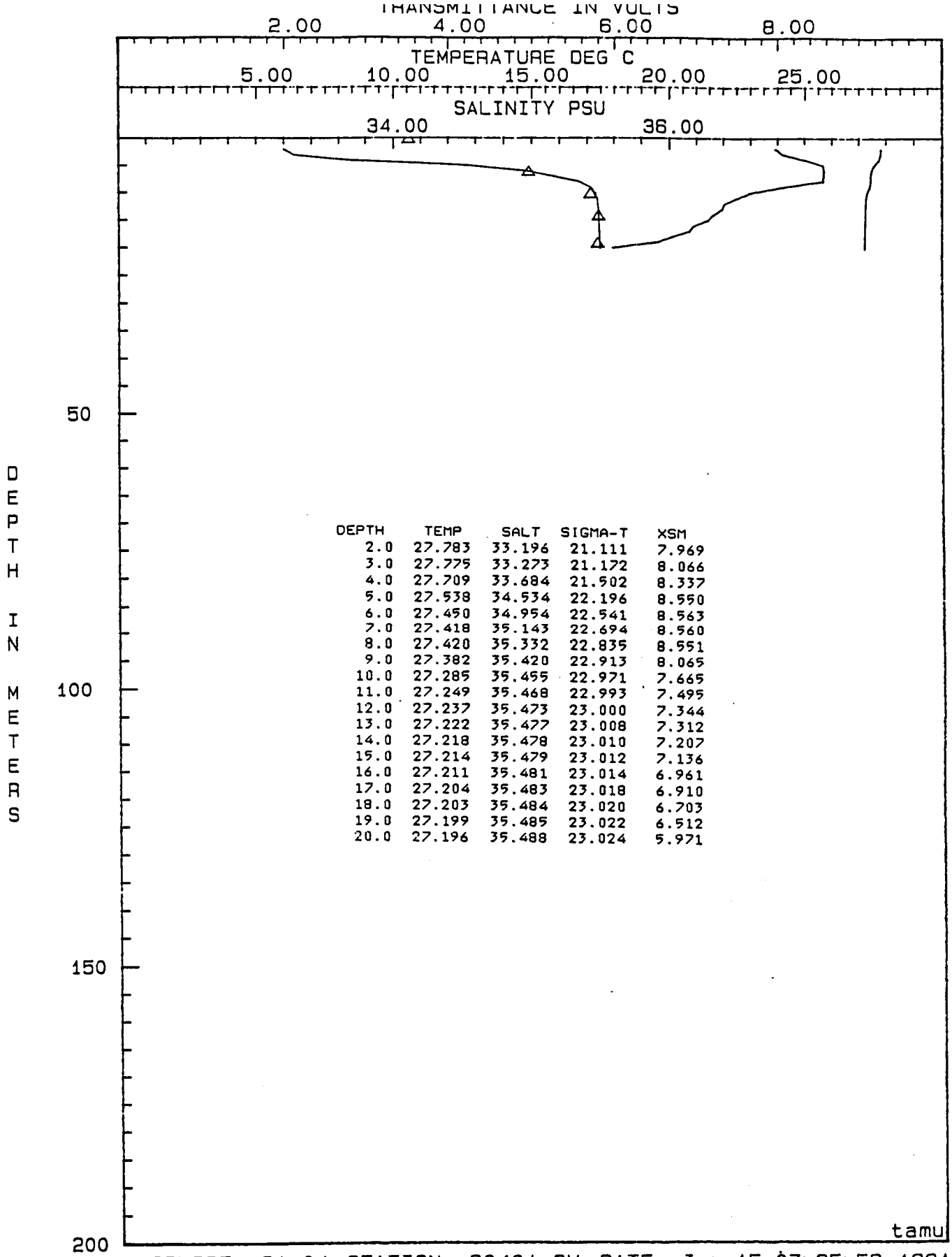
DEPTH	TEMPERATURE	SALINITY	SIGMA-T
12	27.9	34.96	22.32
13	27.3	35.31	22.76
14	27.1	35.45	22.94
15	27.1	35.47	22.96
17	26.9	35.63	23.15
20	26.8	35.60	23.17
21	26.6	35.65	23.27
23	26.5	35.69	23.31
26	26.4	35.67	23.33
29	26.3	35.67	23.36
33	26.3	35.69	23.40
37	26.1	35.65	23.41
39	25.9	35.68	23.51
40	25.7	35.77	23.64
42	25.5	35.83	23.73
43	25.5	35.85	23.76
45	25.4	35 88	23.81
48	25.4	35.87	23.82
49	25.3	35.88	23.83
50	25.3	35.88	23.83
53	25.1	35.80	23.84
55	24.9	35.74	23.84
56	24.8	35.73	23.86
60	24.2	35.75	24.06
61	24.0	35.77	24.15
65	22.5	36.03	24.78
66	22.0	36.43	25.24



CTD DATA from cruise 91G-04

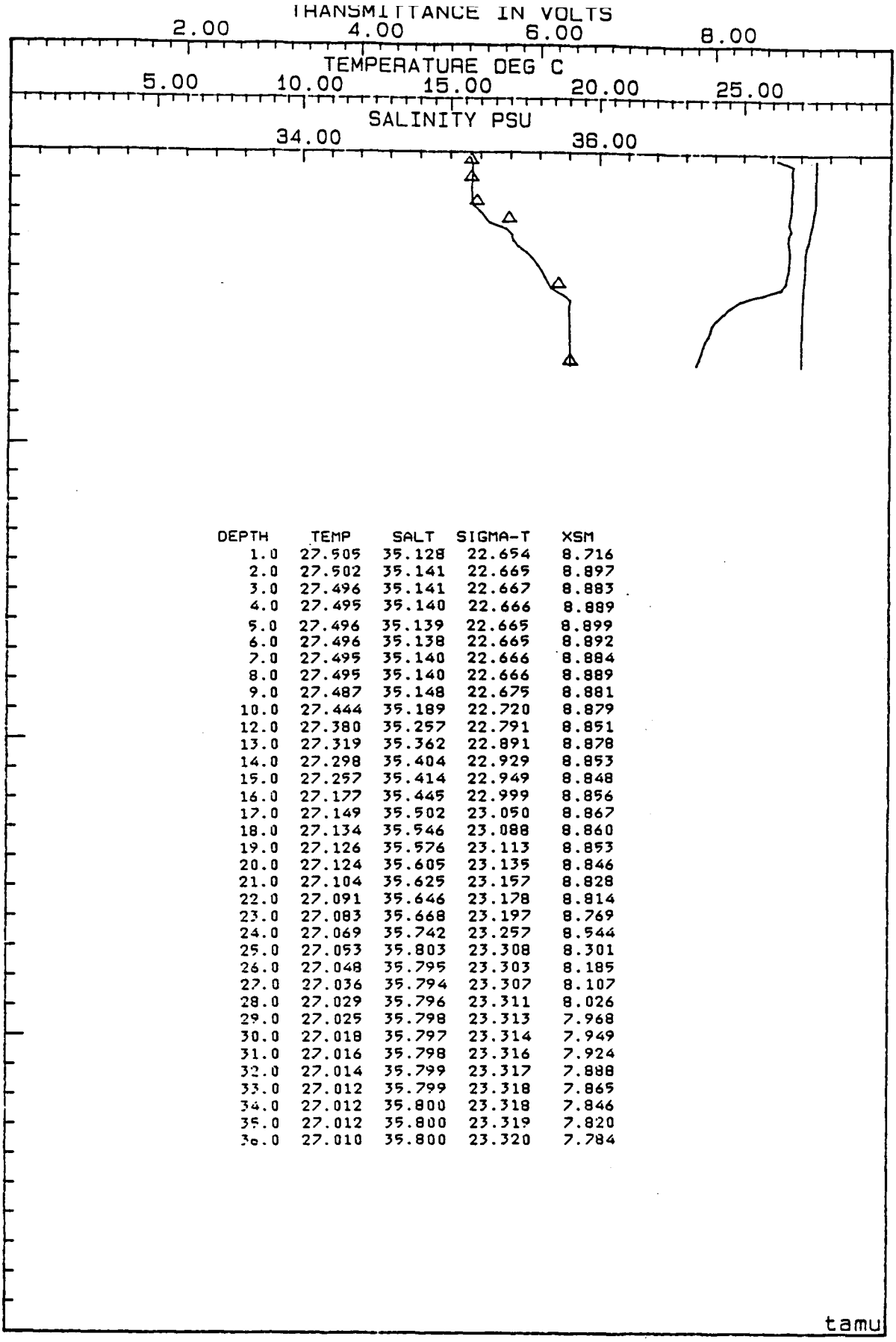
For cruise 90G-14, temperature and salinity were profiled using a Seabird SBE-09 CTD, to which we mated a SeaTech model 025D 25-cm pathlength transmissometer so we could monitor transmissivity, as well. The latter data are presented as voltage, 0-10 volts. Unfortunately, a pressure-related problem with the transmissometer created artifacts in the data below about 150-200m at Sta 06 and Sta 07. Accordingly, Xmiss data deeper than 150 m have been suppressed for CTD 06, and Xmiss data deeper than 180 m and deeper than 202 m have been suppressed for CTD 06A and CTD 07, respectively. We then changed out the instrument and used another model 025D for CTD 07A and succeeding casts, for which the data appear to be all right.

The following pages present plots of downcast temperature and salinity (and transmissometer) data, along with tables of 1 m averaged downcast CTD and transmissometer data. No correction was made to the raw data CTD temperatures or salinities, because CTD salinity generally agreed to within $\pm$ 0.005 PSU with bottle salinity determined using our Guildline model 8400A conductive salinometer. Minimum salinity values within the broad salinity minimum between 680-860 m (34.895 PSU < CTD salin < 34.905 PSU) agreed with the historical data and with our measurements from previous cruises 1987-1990. Triangles superimposed on the (downcast) CTD salinity profiles present the (upcast) bottle salinity data.



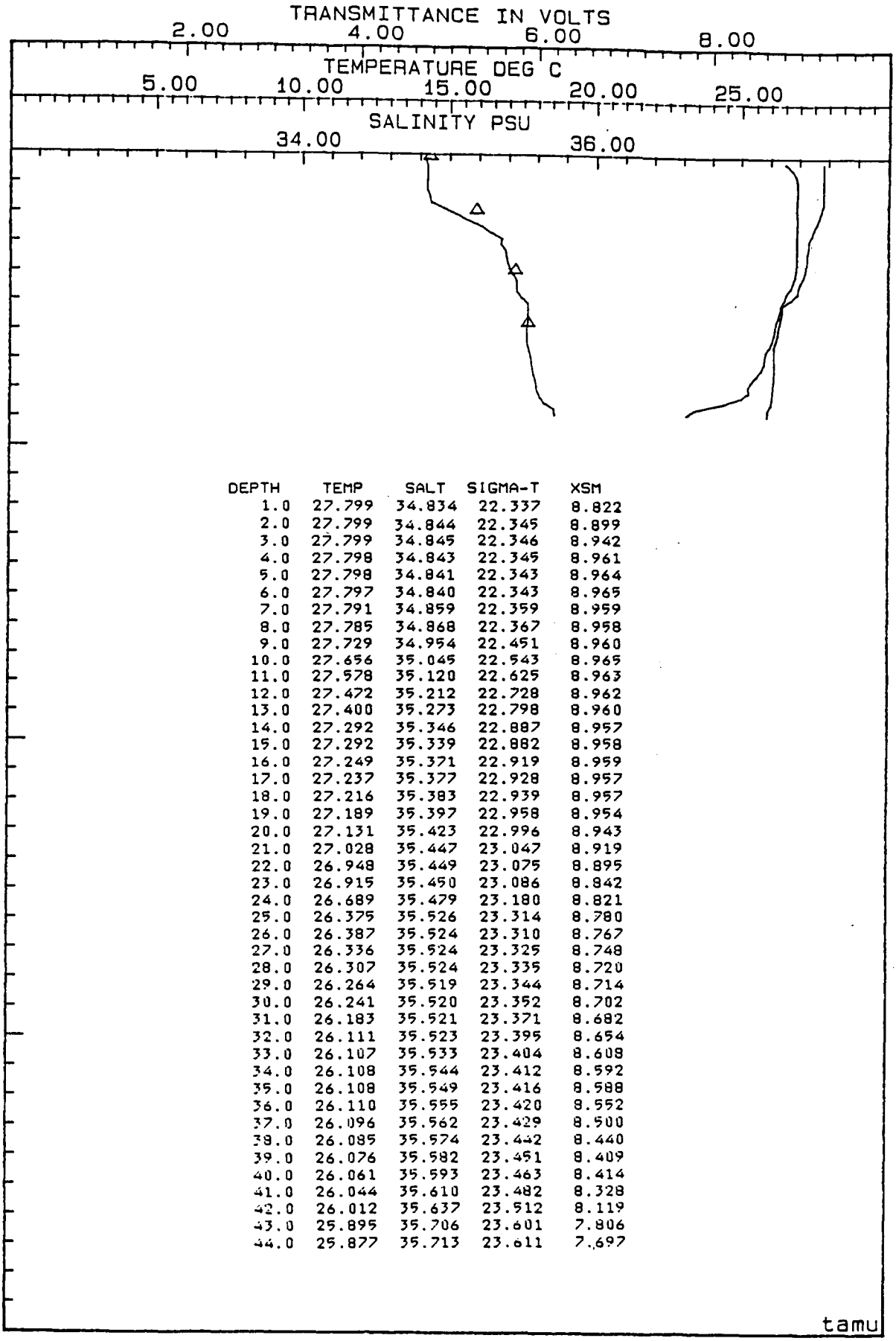
DEPTH	TEMP	SALT	SIGMA-T	XSM
2.0	27.783	33.196	21.111	7.969
3.0	27.775	33.273	21.172	8.066
4.0	27.709	33.684	21.502	8.337
5.0	27.538	34.534	22.196	8.550
6.0	27.450	34.954	22.541	8.563
7.0	27.418	35.143	22.694	8.560
8.0	27.420	35.332	22.835	8.551
9.0	27.382	35.420	22.913	8.065
10.0	27.285	35.455	22.971	7.665
11.0	27.249	35.468	22.993	7.495
12.0	27.237	35.473	23.000	7.344
13.0	27.222	35.477	23.008	7.312
14.0	27.218	35.478	23.010	7.207
15.0	27.214	35.479	23.012	7.136
16.0	27.211	35.481	23.014	6.961
17.0	27.204	35.483	23.018	6.910
18.0	27.203	35.484	23.020	6.703
19.0	27.199	35.485	23.022	6.512
20.0	27.196	35.488	23.024	5.971

CRUISE: 91g04 STATION: G0401.0U DATE: Jun 15 07:25:59 1991
LATITUDE: 28 44.277 LONGITUDE: 94 59.707
TRIANGLES DENOTE DISCRETE SAMPLES



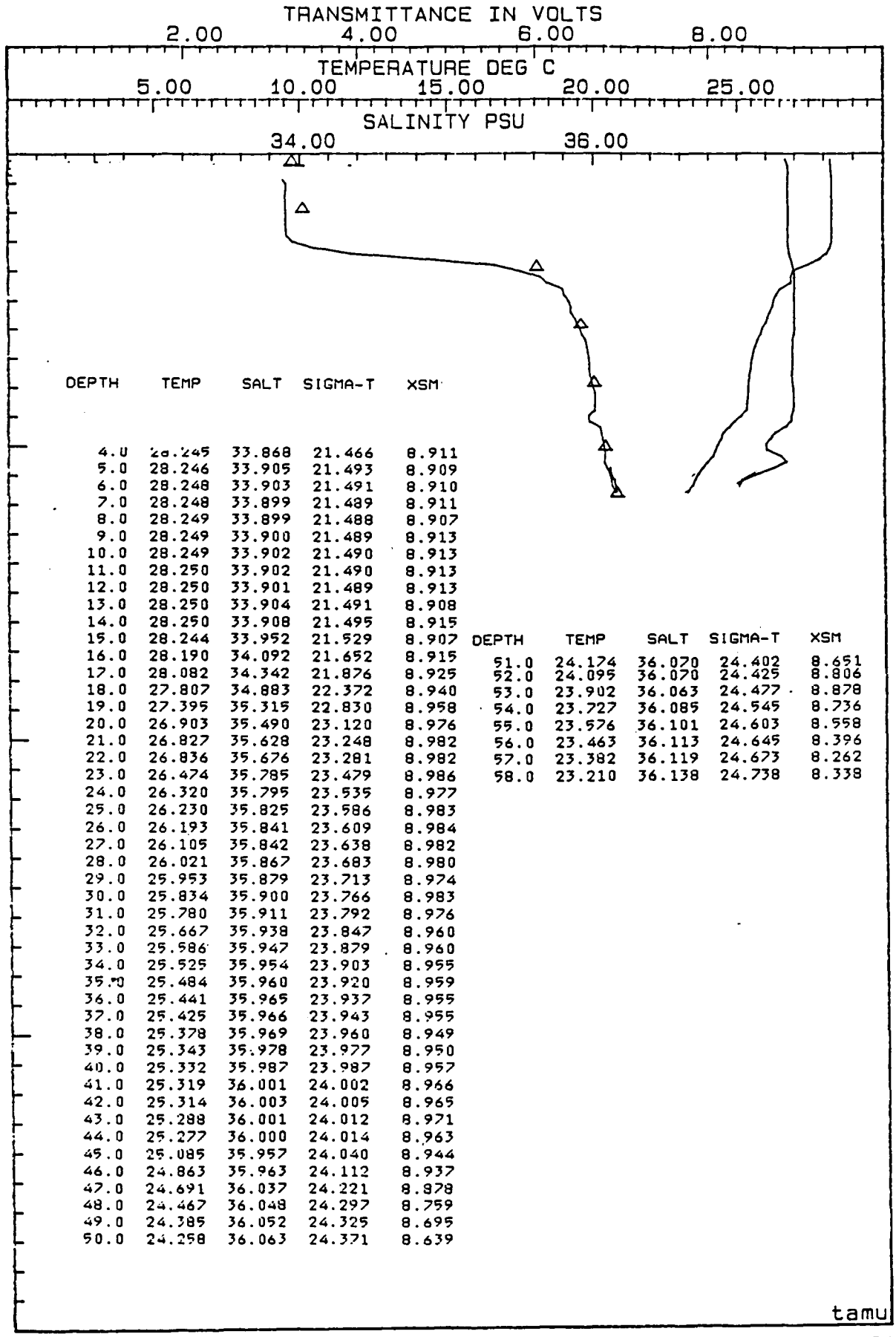
DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	27.505	35.128	22.654	8.716
2.0	27.502	35.141	22.665	8.897
3.0	27.496	35.141	22.667	8.883
4.0	27.495	35.140	22.666	8.889
5.0	27.496	35.139	22.665	8.899
6.0	27.496	35.138	22.665	8.892
7.0	27.495	35.140	22.666	8.884
8.0	27.495	35.140	22.666	8.889
9.0	27.487	35.148	22.675	8.881
10.0	27.444	35.189	22.720	8.879
12.0	27.380	35.257	22.791	8.851
13.0	27.319	35.362	22.891	8.878
14.0	27.298	35.404	22.929	8.853
15.0	27.257	35.414	22.949	8.848
16.0	27.177	35.445	22.999	8.856
17.0	27.149	35.502	23.050	8.867
18.0	27.134	35.546	23.088	8.860
19.0	27.126	35.576	23.113	8.853
20.0	27.124	35.605	23.135	8.846
21.0	27.104	35.625	23.157	8.828
22.0	27.091	35.646	23.178	8.814
23.0	27.083	35.668	23.197	8.769
24.0	27.069	35.742	23.257	8.544
25.0	27.053	35.803	23.308	8.301
26.0	27.048	35.795	23.303	8.185
27.0	27.036	35.794	23.307	8.107
28.0	27.029	35.796	23.311	8.026
29.0	27.025	35.798	23.313	7.968
30.0	27.018	35.797	23.314	7.949
31.0	27.016	35.798	23.316	7.924
32.0	27.014	35.799	23.317	7.888
33.0	27.012	35.799	23.318	7.865
34.0	27.012	35.800	23.318	7.846
35.0	27.012	35.800	23.319	7.820
36.0	27.010	35.800	23.320	7.784

CRUISE: 91g04 STATION: G0402.0U DATE: Jun 15 10: 12: 49 1991
LATITUDE: 28 25.071 LONGITUDE: 95 00.059
TRIANGLES DENOTE DISCRETE SAMPLES



DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	27.799	34.834	22.337	8.822
2.0	27.799	34.844	22.345	8.899
3.0	27.799	34.845	22.346	8.942
4.0	27.798	34.843	22.345	8.961
5.0	27.798	34.841	22.343	8.964
6.0	27.797	34.840	22.343	8.965
7.0	27.791	34.859	22.359	8.959
8.0	27.785	34.868	22.367	8.958
9.0	27.729	34.954	22.451	8.960
10.0	27.656	35.045	22.543	8.965
11.0	27.578	35.120	22.625	8.963
12.0	27.472	35.212	22.728	8.962
13.0	27.400	35.273	22.798	8.960
14.0	27.292	35.346	22.887	8.957
15.0	27.292	35.339	22.882	8.958
16.0	27.249	35.371	22.919	8.959
17.0	27.237	35.377	22.928	8.957
18.0	27.216	35.383	22.939	8.957
19.0	27.189	35.397	22.958	8.954
20.0	27.131	35.423	22.996	8.943
21.0	27.028	35.447	23.047	8.919
22.0	26.948	35.449	23.075	8.895
23.0	26.915	35.450	23.086	8.842
24.0	26.689	35.479	23.180	8.821
25.0	26.375	35.526	23.314	8.780
26.0	26.387	35.524	23.310	8.767
27.0	26.336	35.524	23.325	8.748
28.0	26.307	35.524	23.335	8.720
29.0	26.264	35.519	23.344	8.714
30.0	26.241	35.520	23.352	8.702
31.0	26.183	35.521	23.371	8.682
32.0	26.111	35.523	23.395	8.654
33.0	26.107	35.533	23.404	8.608
34.0	26.108	35.544	23.412	8.592
35.0	26.108	35.549	23.416	8.588
36.0	26.110	35.555	23.420	8.552
37.0	26.096	35.562	23.429	8.500
38.0	26.085	35.574	23.442	8.440
39.0	26.076	35.582	23.451	8.409
40.0	26.061	35.593	23.463	8.414
41.0	26.044	35.610	23.482	8.328
42.0	26.012	35.637	23.512	8.119
43.0	25.895	35.706	23.601	7.806
44.0	25.877	35.713	23.611	7.697

CRUISE: 91g04 STATION: G0403.0U DATE: Jun 15 12:22:25 1991
LATITUDE: 28 15.5 LONGITUDE: 94 59.56
TRIANGLES DENOTE DISCRETE SAMPLES



DEPTH	TEMP	SALT	SIGMA-T	XSM
4.0	28.245	33.868	21.466	8.911
5.0	28.246	33.905	21.493	8.909
6.0	28.248	33.903	21.491	8.910
7.0	28.248	33.899	21.489	8.911
8.0	28.249	33.899	21.488	8.907
9.0	28.249	33.900	21.489	8.913
10.0	28.249	33.902	21.490	8.913
11.0	28.250	33.902	21.490	8.913
12.0	28.250	33.901	21.489	8.913
13.0	28.250	33.904	21.491	8.908
14.0	28.250	33.908	21.495	8.915
15.0	28.244	33.952	21.529	8.907
16.0	28.190	34.092	21.652	8.915
17.0	28.082	34.342	21.876	8.925
18.0	27.807	34.883	22.372	8.940
19.0	27.395	35.315	22.830	8.958
20.0	26.903	35.490	23.120	8.976
21.0	26.827	35.628	23.248	8.982
22.0	26.836	35.676	23.281	8.982
23.0	26.474	35.785	23.479	8.986
24.0	26.320	35.795	23.535	8.977
25.0	26.230	35.825	23.586	8.983
26.0	26.193	35.841	23.609	8.984
27.0	26.105	35.842	23.638	8.982
28.0	26.021	35.867	23.683	8.980
29.0	25.953	35.879	23.713	8.974
30.0	25.834	35.900	23.766	8.983
31.0	25.780	35.911	23.792	8.976
32.0	25.667	35.938	23.847	8.960
33.0	25.586	35.947	23.879	8.960
34.0	25.525	35.954	23.903	8.955
35.0	25.484	35.960	23.920	8.959
36.0	25.441	35.965	23.937	8.955
37.0	25.425	35.966	23.943	8.955
38.0	25.378	35.969	23.960	8.949
39.0	25.343	35.978	23.977	8.950
40.0	25.332	35.987	23.987	8.957
41.0	25.319	36.001	24.002	8.966
42.0	25.314	36.003	24.005	8.965
43.0	25.288	36.001	24.012	8.971
44.0	25.277	36.000	24.014	8.963
45.0	25.085	35.957	24.040	8.944
46.0	24.863	35.963	24.112	8.937
47.0	24.691	36.037	24.221	8.878
48.0	24.467	36.048	24.297	8.759
49.0	24.385	36.052	24.325	8.695
50.0	24.258	36.063	24.371	8.639

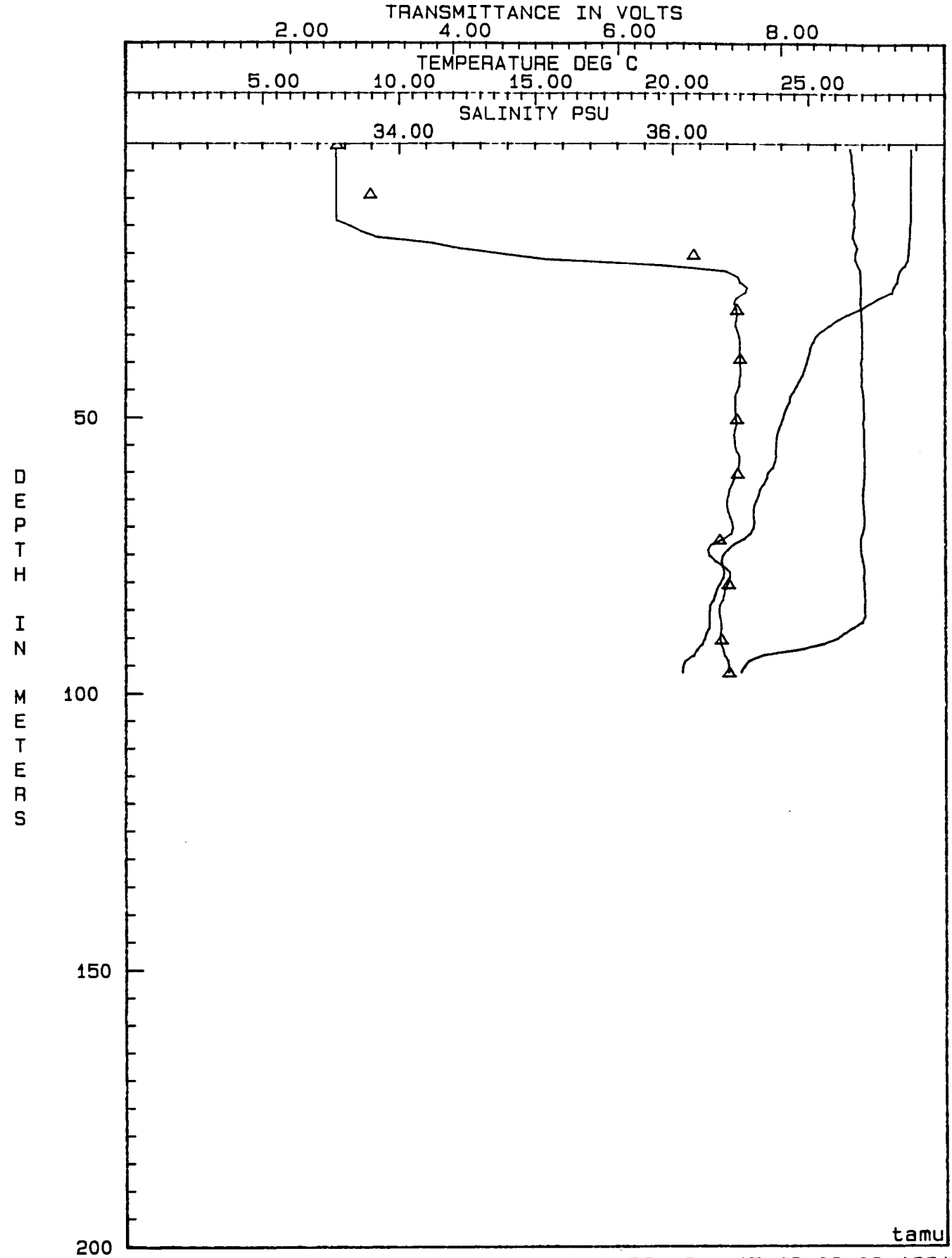
DEPTH	TEMP	SALT	SIGMA-T	XSM
51.0	24.174	36.070	24.402	8.651
52.0	24.095	36.070	24.425	8.806
53.0	23.902	36.063	24.477	8.878
54.0	23.727	36.085	24.545	8.736
55.0	23.576	36.101	24.603	8.558
56.0	23.463	36.113	24.645	8.396
57.0	23.382	36.119	24.673	8.262
58.0	23.210	36.138	24.738	8.338

CRUISE: 91g04 STATION: G0404.0U DATE: Jun 15 14:19:56 1991
LATITUDE: 28 04.146 LONGITUDE: 94 59.355
TRIANGLES DENOTE DISCRETE SAMPLES

STATION G0405.OUT CRUISE 91g04 DATE & TIME Sat Jun 15 16:03:03 1991, Julian day = 166
LAT 27 54.646n LON 94 59.18w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	28.776	33.530	21.037	8.836
2.0	28.780	33.529	21.035	8.855
3.0	28.782	33.531	21.036	8.857
4.0	28.783	33.531	21.036	8.871
5.0	28.783	33.531	21.036	8.872
6.0	28.783	33.531	21.036	8.887
7.0	28.783	33.531	21.036	8.887
8.0	28.783	33.532	21.036	8.891
9.0	28.784	33.531	21.036	8.896
10.0	28.784	33.531	21.036	8.894
11.0	28.783	33.532	21.037	8.876
12.0	28.783	33.532	21.037	8.899
13.0	28.780	33.533	21.038	8.901
14.0	28.779	33.535	21.041	8.887
15.0	28.745	33.634	21.126	8.895
16.0	28.730	33.719	21.194	8.879
17.0	28.724	33.833	21.282	8.868
18.0	28.707	34.232	21.587	8.898
19.0	28.695	34.433	21.742	8.926
20.0	28.676	34.747	21.985	8.902
21.0	28.657	35.072	22.235	8.901
22.0	28.552	35.905	22.895	8.928
23.0	28.356	36.383	23.320	8.963
24.0	28.297	36.474	23.408	8.970
25.0	28.269	36.492	23.431	8.969
26.0	28.133	36.546	23.516	8.972
27.0	28.081	36.531	23.522	8.974
28.0	27.638	36.467	23.619	8.971
29.0	27.298	36.447	23.715	8.965
30.0	26.940	36.463	23.841	8.973
31.0	26.455	36.468	24.000	8.977
32.0	26.062	36.461	24.119	8.981
33.0	25.788	36.454	24.199	8.984
34.0	25.491	36.469	24.302	8.986
35.0	25.253	36.481	24.386	8.984
36.0	25.154	36.487	24.420	8.988
37.0	25.049	36.487	24.453	8.985
38.0	25.016	36.485	24.461	8.984
39.0	24.951	36.489	24.484	8.984
40.0	24.897	36.490	24.501	8.971
41.0	24.833	36.492	24.522	8.981
42.0	24.759	36.492	24.545	8.974
43.0	24.649	36.483	24.571	8.984
44.0	24.539	36.482	24.604	8.973
45.0	24.432	36.466	24.624	8.989
46.0	24.291	36.451	24.655	8.996
47.0	24.271	36.453	24.663	9.001
48.0	24.157	36.452	24.696	8.998
49.0	24.080	36.453	24.720	9.002
50.0	24.024	36.458	24.740	9.004

DEPTH	TEMP	SALT	SIGMA-T	XSM
51.0	23.950	36.462	24.765	8.990
52.0	23.864	36.450	24.782	9.001
53.0	23.792	36.443	24.798	9.004
54.0	23.780	36.448	24.805	8.999
55.0	23.761	36.450	24.812	9.003
56.0	23.749	36.460	24.824	9.006
57.0	23.758	36.482	24.837	9.009
58.0	23.716	36.480	24.849	9.009
59.0	23.641	36.474	24.866	9.009
60.0	23.454	36.448	24.901	9.009
61.0	23.410	36.442	24.910	9.002
62.0	23.308	36.426	24.927	8.999
63.0	23.159	36.406	24.956	8.990
64.0	23.117	36.399	24.963	8.986
65.0	23.027	36.388	24.980	8.987
66.0	22.944	36.387	25.004	8.992
67.0	22.917	36.395	25.018	8.999
68.0	22.924	36.409	25.027	9.003
69.0	22.951	36.425	25.031	9.006
70.0	22.913	36.430	25.046	8.999
71.0	22.809	36.420	25.068	8.981
72.0	22.561	36.358	25.092	8.959
73.0	22.188	36.271	25.132	8.959
74.0	21.961	36.244	25.176	8.960
75.0	21.776	36.256	25.237	8.970
76.0	21.734	36.302	25.283	8.984
77.0	21.780	36.361	25.316	8.998
78.0	21.826	36.408	25.339	9.005
79.0	21.795	36.406	25.346	8.992
80.0	21.682	36.394	25.368	9.005
81.0	21.564	36.372	25.385	9.004
82.0	21.499	36.363	25.396	9.008
83.0	21.428	36.353	25.408	9.011
84.0	21.299	36.330	25.426	9.008
85.0	21.288	36.327	25.427	9.009
86.0	21.280	36.332	25.433	9.009
87.0	21.288	36.340	25.436	8.980
88.0	21.276	36.343	25.443	8.868
89.0	21.164	36.337	25.469	8.755
90.0	21.105	36.336	25.484	8.662
91.0	21.014	36.341	25.512	8.488
92.0	20.823	36.358	25.578	8.199
93.0	20.715	36.366	25.614	7.956
94.0	20.394	36.394	25.722	7.580
95.0	20.318	36.400	25.746	7.525
96.0	20.295	36.400	25.753	7.483



CRUISE: 91g04 STATION: G0405.0U DATE: Jun 15 16:03:03 1991
LATITUDE: 27 54.646n LONGITUDE: 94 59.18w
TRIANGLES DENOTE DISCRETE SAMPLES

STATION G0406.OUT CRUISE 91g04 DATE & TIME Sat Jun 15 20:12:29 1991, Julian day = 166
LAT 27 26.907n LON 94 59.325w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
3.0	29.010	32.204	19.965	8.627
4.0	29.011	32.189	19.954	8.634
5.0	29.012	32.186	19.951	8.630
6.0	29.011	32.184	19.950	8.630
7.0	29.010	32.179	19.947	8.628
8.0	29.009	32.177	19.946	8.630
9.0	29.006	32.178	19.947	8.644
10.0	28.997	32.189	19.959	8.681
11.0	28.996	32.179	19.952	8.723
12.0	28.993	32.170	19.946	8.785
13.0	28.972	32.194	19.970	8.810
14.0	28.962	32.188	19.969	8.867
15.0	28.959	32.174	19.960	8.901
16.0	28.920	32.210	20.000	8.893
17.0	28.894	32.225	20.020	8.919
18.0	28.886	32.200	20.004	8.921
19.0	28.888	32.203	20.005	8.932
20.0	28.858	32.227	20.033	8.941
21.0	28.856	32.192	20.007	8.951
22.0	28.869	32.190	20.001	8.950
23.0	28.849	32.203	20.018	8.943
24.0	28.839	32.194	20.015	8.941
25.0	28.432	34.464	21.852	8.932
26.0	27.829	36.654	23.698	8.919
27.0	27.747	36.349	23.495	8.901
28.0	27.077	36.195	23.595	8.909
29.0	26.027	35.978	23.765	8.911
30.0	24.916	35.789	23.966	8.921
31.0	24.221	35.781	24.169	8.928
32.0	23.841	35.822	24.313	8.939
33.0	23.638	35.927	24.453	8.947
34.0	23.664	36.045	24.534	8.956
35.0	23.682	36.079	24.554	8.967
36.0	23.840	36.273	24.655	8.974
37.0	23.998	36.425	24.723	8.979
38.0	24.032	36.450	24.732	8.979
39.0	24.024	36.470	24.750	8.977
40.0	24.006	36.476	24.760	8.975
41.0	24.005	36.487	24.768	8.974
42.0	23.939	36.476	24.779	8.974
43.0	23.831	36.453	24.794	8.969
44.0	23.722	36.428	24.807	8.960
45.0	23.592	36.407	24.830	8.960
46.0	23.482	36.383	24.844	8.956
47.0	23.315	36.341	24.861	8.955
48.0	23.061	36.285	24.893	8.936
49.0	22.825	36.260	24.942	8.960
50.0	22.723	36.250	24.963	8.948
51.0	22.648	36.254	24.988	8.946
52.0	22.602	36.259	25.005	8.941
53.0	22.558	36.274	25.029	8.943
54.0	22.576	36.315	25.055	8.934
55.0	22.604	36.371	25.090	8.933
56.0	22.512	36.369	25.115	8.927
57.0	22.396	36.352	25.135	8.923
58.0	22.365	36.350	25.142	8.925
59.0	22.345	36.350	25.148	8.926
60.0	22.315	36.358	25.163	8.930
61.0	22.278	36.358	25.173	8.936
62.0	22.248	36.355	25.179	8.938
63.0	22.193	36.351	25.192	8.943
64.0	22.131	36.345	25.205	8.947
65.0	22.124	36.349	25.210	8.945
66.0	22.083	36.341	25.215	8.945
67.0	22.030	36.349	25.237	8.947
68.0	21.981	36.366	25.263	8.950
69.0	21.928	36.364	25.277	8.950
70.0	21.840	36.352	25.292	8.955
71.0	21.775	36.357	25.314	8.955
72.0	21.776	36.386	25.335	8.968
73.0	21.763	36.413	25.360	8.974
74.0	21.730	36.428	25.381	8.974
75.0	21.723	36.432	25.386	8.974
76.0	21.694	36.439	25.399	8.979
77.0	21.631	36.445	25.422	8.989
78.0	21.427	36.467	25.495	8.995
79.0	21.388	36.470	25.508	8.994
80.0	21.326	36.474	25.529	9.002
81.0	21.250	36.480	25.554	9.002
82.0	21.129	36.481	25.588	9.004
83.0	21.068	36.481	25.605	9.004
84.0	21.041	36.481	25.612	9.007
85.0	20.999	36.480	25.623	9.012
86.0	20.928	36.478	25.640	9.013
87.0	20.830	36.475	25.665	9.013
88.0	20.784	36.474	25.677	9.020
89.0	20.770	36.475	25.682	9.018
90.0	20.717	36.474	25.696	9.018
91.0	20.669	36.472	25.707	9.022
92.0	20.610	36.470	25.721	9.023
93.0	20.585	36.469	25.727	9.018
94.0	20.546	36.466	25.736	9.023
95.0	20.494	36.459	25.744	9.021
96.0	20.309	36.429	25.771	9.009
97.0	20.260	36.422	25.779	9.016
98.0	20.225	36.419	25.786	9.018
99.0	20.153	36.410	25.798	9.022
100.0	20.027	36.402	25.826	9.018
101.0	20.015	36.401	25.828	9.018

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DEPTH	TEMP	SALT	SIGMA-T	XSM
102.0	20.007	36.410	25.838	9.023
103.0	20.027	36.433	25.850	9.019
104.0	20.042	36.448	25.857	9.023
105.0	20.033	36.452	25.863	9.023
106.0	19.951	36.449	25.882	9.029
107.0	19.909	36.443	25.888	9.021
109.0	19.803	36.426	25.903	9.018
110.0	19.611	36.431	25.958	9.027
111.0	19.605	36.460	25.982	9.034
112.0	19.612	36.476	25.992	9.033
113.0	19.570	36.472	26.000	9.027
114.0	19.444	36.466	26.029	9.031
115.0	19.367	36.469	26.051	9.034
116.0	19.341	36.467	26.056	9.033
117.0	19.292	36.465	26.067	9.033
118.0	19.269	36.465	26.073	9.033
119.0	19.251	36.465	26.078	9.033
120.0	19.191	36.460	26.090	9.033
121.0	18.929	36.439	26.141	9.037
122.0	18.901	36.438	26.147	9.024
123.0	18.868	36.434	26.153	9.010
124.0	18.743	36.425	26.178	8.998
125.0	18.479	36.406	26.230	9.001
126.0	18.309	36.394	26.264	8.999
127.0	18.261	36.388	26.271	8.999
128.0	18.188	36.382	26.285	8.994
129.0	18.093	36.377	26.305	9.018
130.0	18.046	36.386	26.324	9.041
131.0	18.004	36.382	26.331	9.035
132.0	17.968	36.378	26.337	9.033
133.0	17.907	36.369	26.345	9.037
134.0	17.770	36.349	26.364	9.043
135.0	17.644	36.329	26.379	9.043
136.0	17.603	36.326	26.387	9.049
137.0	17.525	36.319	26.401	9.043
138.0	17.454	36.315	26.415	9.043
139.0	17.398	36.309	26.425	9.038
140.0	17.322	36.304	26.438	9.038
141.0	17.290	36.301	26.444	9.038
142.0	17.290	36.300	26.444	9.031
143.0	17.255	36.296	26.449	9.030
144.0	17.223	36.293	26.454	9.021
145.0	17.203	36.289	26.457	9.018
146.0	17.189	36.287	26.458	9.013
147.0	17.157	36.283	26.463	9.018
148.0	17.071	36.273	26.476	9.012
149.0	17.017	36.266	26.483	9.002
150.0	16.995	36.263	26.486	8.995
151.0	16.951	36.256	26.491	
152.0	16.876	36.246	26.502	

DEPTH	TEMP	SALT	SIGMA-T
153.0	16.800	36.235	26.511
154.0	16.756	36.229	26.517
155.0	16.722	36.224	26.521
156.0	16.689	36.220	26.526
157.0	16.657	36.215	26.530
158.0	16.598	36.206	26.537
159.0	16.572	36.202	26.540
160.0	16.543	36.199	26.544
161.0	16.510	36.195	26.549
162.0	16.452	36.185	26.556
163.0	16.403	36.179	26.562
164.0	16.358	36.172	26.567
165.0	16.301	36.164	26.574
166.0	16.228	36.154	26.584
167.0	16.144	36.142	26.594
168.0	16.113	36.136	26.597
169.0	16.085	36.135	26.602
170.0	16.067	36.131	26.604
171.0	16.036	36.128	26.608
172.0	16.011	36.124	26.611
173.0	16.007	36.121	26.610
174.0	15.987	36.119	26.613
175.0	15.974	36.118	26.614
176.0	15.928	36.109	26.618
177.0	15.870	36.100	26.625
178.0	15.825	36.093	26.630
179.0	15.789	36.088	26.634
180.0	15.766	36.085	26.637
181.0	15.726	36.078	26.641
182.0	15.675	36.069	26.646
183.0	15.613	36.061	26.654
184.0	15.581	36.056	26.657
185.0	15.559	36.052	26.659
186.0	15.443	36.032	26.670
187.0	15.332	36.018	26.684
188.0	15.315	36.013	26.684
189.0	15.235	36.001	26.692
190.0	15.122	35.986	26.706
191.0	15.034	35.972	26.715
192.0	14.974	35.959	26.719
193.0	14.926	35.957	26.727
194.0	14.875	35.948	26.731
195.0	14.841	35.943	26.735
196.0	14.822	35.940	26.737
197.0	14.790	35.934	26.740
198.0	14.782	35.935	26.742
199.0	14.763	35.931	26.743
200.0	14.746	35.928	26.745
201.0	14.731	35.926	26.746
202.0	14.720	35.924	26.747

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DEPTH	TEMP	SALT	SIGMA-T
203.0	14.713	35.923	26.748
204.0	14.704	35.922	26.749
205.0	14.705	35.921	26.748
206.0	14.696	35.920	26.749
207.0	14.684	35.919	26.751
208.0	14.681	35.918	26.751
209.0	14.676	35.917	26.751
210.0	14.664	35.915	26.752
211.0	14.652	35.913	26.753
212.0	14.641	35.911	26.755
213.0	14.631	35.910	26.756
214.0	14.617	35.908	26.757
215.0	14.607	35.906	26.757
216.0	14.594	35.904	26.759
217.0	14.580	35.901	26.760
218.0	14.571	35.899	26.761
219.0	14.561	35.899	26.762
220.0	14.534	35.894	26.765
221.0	14.472	35.882	26.769
222.0	14.442	35.876	26.771
223.0	14.360	35.867	26.781
224.0	14.270	35.853	26.790
225.0	14.208	35.842	26.795
226.0	14.176	35.837	26.798
228.0	14.090	35.825	26.806
229.0	14.014	35.812	26.813
230.0	13.972	35.805	26.816
231.0	13.928	35.799	26.821
232.0	13.888	35.792	26.824
233.0	13.795	35.778	26.832
234.0	13.741	35.770	26.838
235.0	13.707	35.765	26.841
236.0	13.667	35.759	26.844
237.0	13.617	35.750	26.848
238.0	13.568	35.744	26.854
239.0	13.531	35.738	26.856
240.0	13.514	35.735	26.858
241.0	13.501	35.734	26.860
242.0	13.485	35.731	26.861
243.0	13.478	35.730	26.861
244.0	13.469	35.728	26.862
245.0	13.457	35.727	26.864
246.0	13.446	35.724	26.864
247.0	13.438	35.724	26.866
248.0	13.391	35.715	26.868
249.0	13.363	35.711	26.871
250.0	13.333	35.707	26.874
251.0	13.306	35.702	26.875
252.0	13.228	35.692	26.883
253.0	13.224	35.690	26.883
254.0	13.205	35.688	26.885
255.0	13.184	35.683	26.886
256.0	13.144	35.677	26.889
257.0	13.101	35.672	26.894
258.0	13.063	35.665	26.896
259.0	13.022	35.660	26.900
261.0	12.964	35.652	26.906
262.0	12.917	35.644	26.909
263.0	12.898	35.641	26.911
264.0	12.886	35.639	26.912
266.0	12.861	35.636	26.914
267.0	12.852	35.634	26.915
268.0	12.842	35.632	26.915
269.0	12.836	35.630	26.915
271.0	12.803	35.625	26.918
272.0	12.773	35.620	26.920
273.0	12.739	35.616	26.923
274.0	12.745	35.616	26.922
275.0	12.736	35.615	26.923
276.0	12.713	35.611	26.925
277.0	12.656	35.601	26.929
278.0	12.583	35.593	26.937
279.0	12.587	35.593	26.936
280.0	12.570	35.589	26.937
281.0	12.544	35.585	26.938
282.0	12.526	35.583	26.940
283.0	12.511	35.581	26.941
284.0	12.479	35.577	26.945
285.0	12.458	35.573	26.946
286.0	12.443	35.571	26.947
288.0	12.364	35.558	26.953
289.0	12.317	35.553	26.958
290.0	12.307	35.550	26.958
292.0	12.287	35.546	26.958
293.0	12.269	35.544	26.960
294.0	12.258	35.542	26.961
295.0	12.266	35.542	26.960
296.0	12.255	35.540	26.960
297.0	12.228	35.536	26.962
298.0	12.159	35.524	26.967
299.0	12.098	35.516	26.972
300.0	12.080	35.513	26.973
301.0	12.064	35.511	26.974
302.0	12.044	35.508	26.976
303.0	12.011	35.503	26.979
304.0	11.958	35.496	26.983
305.0	11.919	35.491	26.987
306.0	11.907	35.488	26.986
308.0	11.859	35.481	26.990
309.0	11.831	35.476	26.992
310.0	11.815	35.474	26.993
311.0	11.784	35.470	26.996
312.0	11.773	35.467	26.996
313.0	11.749	35.465	26.999
314.0	11.722	35.460	27.000
315.0	11.671	35.454	27.006
316.0	11.670	35.453	27.005
317.0	11.652	35.451	27.006
318.0	11.630	35.448	27.008
319.0	11.617	35.445	27.009
320.0	11.601	35.443	27.010
321.0	11.584	35.441	27.011
322.0	11.561	35.438	27.013
323.0	11.556	35.437	27.014
324.0	11.550	35.436	27.014
325.0	11.541	35.435	27.015
326.0	11.532	35.433	27.015
327.0	11.499	35.428	27.018
328.0	11.479	35.426	27.020
329.0	11.470	35.424	27.020
330.0	11.442	35.420	27.022
331.0	11.422	35.417	27.023
332.0	11.400	35.414	27.025
333.0	11.387	35.412	27.026
334.0	11.374	35.410	27.026
335.0	11.357	35.407	27.028
336.0	11.340	35.405	27.029
337.0	11.296	35.398	27.032
338.0	11.249	35.391	27.035
339.0	11.239	35.389	27.035
340.0	11.225	35.387	27.037
341.0	11.208	35.386	27.039
342.0	11.188	35.382	27.040
343.0	11.181	35.382	27.040
344.0	11.177	35.381	27.040
345.0	11.155	35.377	27.042
346.0	11.122	35.373	27.045
347.0	11.114	35.372	27.045
348.0	11.096	35.368	27.046
349.0	11.048	35.362	27.050
350.0	11.017	35.359	27.052
351.0	11.010	35.358	27.053
352.0	11.006	35.357	27.053
353.0	10.996	35.356	27.054
354.0	10.996	35.355	27.054
355.0	10.989	35.354	27.054
356.0	10.981	35.354	27.055
357.0	10.940	35.346	27.057
358.0	10.866	35.339	27.064
359.0	10.856	35.337	27.065

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DEPTH	TEMP	SALT	SIGMA-T
360.0	10.855	35.336	27.064
361.0	10.847	35.335	27.065
362.0	10.831	35.333	27.066
363.0	10.814	35.330	27.067
364.0	10.793	35.328	27.069
365.0	10.774	35.325	27.070
366.0	10.758	35.322	27.070
367.0	10.725	35.317	27.073
368.0	10.683	35.312	27.076
369.0	10.669	35.311	27.078
370.0	10.669	35.310	27.077
371.0	10.651	35.307	27.078
372.0	10.620	35.303	27.080
373.0	10.600	35.300	27.082
374.0	10.581	35.297	27.083
375.0	10.564	35.294	27.084
376.0	10.541	35.291	27.085
377.0	10.519	35.288	27.087
378.0	10.500	35.286	27.089
379.0	10.486	35.284	27.090
380.0	10.474	35.282	27.090
381.0	10.464	35.281	27.091
382.0	10.455	35.280	27.092
383.0	10.446	35.278	27.092
384.0	10.433	35.276	27.093
385.0	10.425	35.276	27.094
386.0	10.423	35.275	27.094
387.0	10.417	35.274	27.094
388.0	10.399	35.271	27.095
389.0	10.333	35.262	27.100
390.0	10.312	35.261	27.102
391.0	10.287	35.256	27.103
392.0	10.241	35.251	27.107
393.0	10.221	35.247	27.108
394.0	10.190	35.243	27.109
395.0	10.140	35.237	27.114
396.0	10.105	35.234	27.117
397.0	10.085	35.231	27.118
398.0	10.076	35.229	27.118
399.0	10.068	35.228	27.119
400.0	10.051	35.227	27.121
401.0	10.039	35.225	27.122
402.0	10.014	35.222	27.124
403.0	10.006	35.221	27.124
404.0	9.998	35.220	27.125
405.0	9.989	35.219	27.125
406.0	9.985	35.219	27.126
407.0	9.982	35.218	27.126
408.0	9.978	35.217	27.126
409.0	9.955	35.214	27.127

DEPTH	TEMP	SALT	SIGMA-T
410.0	9.930	35.212	27.130
411.0	9.916	35.210	27.131
412.0	9.915	35.209	27.130
413.0	9.908	35.208	27.131
414.0	9.896	35.207	27.132
415.0	9.890	35.206	27.132
416.0	9.884	35.205	27.132
417.0	9.874	35.203	27.133
418.0	9.859	35.201	27.134
419.0	9.843	35.199	27.135
420.0	9.829	35.198	27.136
421.0	9.815	35.195	27.136
422.0	9.799	35.194	27.138
423.0	9.788	35.193	27.139
424.0	9.788	35.193	27.139
425.0	9.785	35.192	27.139
426.0	9.762	35.188	27.140
427.0	9.754	35.189	27.143
428.0	9.736	35.185	27.142
429.0	9.714	35.183	27.144
431.0	9.676	35.176	27.146
432.0	9.668	35.177	27.148
433.0	9.675	35.176	27.145
435.0	9.654	35.174	27.147
436.0	9.625	35.169	27.148
437.0	9.614	35.170	27.151
438.0	9.611	35.168	27.150
440.0	9.547	35.158	27.153
441.0	9.491	35.152	27.157
442.0	9.446	35.148	27.162
443.0	9.447	35.148	27.161
445.0	9.421	35.144	27.162
446.0	9.373	35.138	27.166
447.0	9.291	35.128	27.172
448.0	9.279	35.127	27.172
449.0	9.247	35.122	27.174
450.0	9.198	35.115	27.177
451.0	9.146	35.110	27.181
452.0	9.126	35.108	27.183
453.0	9.113	35.107	27.184
454.0	9.108	35.106	27.184
455.0	9.108	35.105	27.184
456.0	9.101	35.105	27.185
457.0	9.083	35.102	27.185
458.0	9.066	35.102	27.188
459.0	9.044	35.098	27.188
460.0	9.041	35.098	27.188
461.0	9.038	35.097	27.189
462.0	9.032	35.096	27.189
463.0	9.023	35.095	27.189

DEPTH	TEMP	SALT	SIGM
464.0	9.019	35.095	27.
465.0	8.987	35.090	27.
466.0	8.961	35.087	27.
467.0	8.944	35.084	27.
469.0	8.889	35.075	27.
470.0	8.885	35.077	27.
471.0	8.882	35.076	27.
473.0	8.851	35.071	27.
474.0	8.815	35.067	27.
475.0	8.800	35.067	27.
476.0	8.799	35.065	27.
477.0	8.788	35.064	27.
479.0	8.749	35.058	27.
480.0	8.715	35.055	27.
481.0	8.706	35.056	27.
482.0	8.688	35.053	27.
483.0	8.669	35.050	27.
484.0	8.656	35.049	27.
486.0	8.638	35.046	27.
487.0	8.607	35.044	27.
488.0	8.602	35.044	27.
489.0	8.585	35.042	27.
490.0	8.566	35.040	27.
491.0	8.549	35.038	27.
493.0	8.523	35.035	27.
494.0	8.520	35.035	27.
495.0	8.521	35.035	27.
496.0	8.514	35.035	27.
497.0	8.515	35.035	27.
498.0	8.514	35.034	27.
500.0	8.506	35.033	27.
501.0	8.500	35.033	27.
502.0	8.488	35.031	27.
503.0	8.472	35.029	27.
504.0	8.452	35.027	27.
505.0	8.440	35.027	27.
506.0	8.437	35.026	27.
507.0	8.429	35.026	27.
508.0	8.427	35.025	27.
509.0	8.423	35.025	27.
510.0	8.419	35.024	27.
511.0	8.411	35.023	27.
512.0	8.401	35.022	27.
513.0	8.396	35.022	27.
514.0	8.391	35.021	27.
515.0	8.376	35.020	27.
516.0	8.355	35.019	27.
517.0	8.314	35.015	27.
518.0	8.295	35.014	27.
520.0	8.267	35.012	27.

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DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T
521.0	8.260	35.012	27.244	576.0	7.597	34.955	27.298	632.0	6.960	34.917	27.359
522.0	8.251	35.011	27.245	577.0	7.585	34.954	27.299	634.0	6.954	34.917	27.360
523.0	8.251	35.011	27.245	578.0	7.580	34.954	27.300	635.0	6.950	34.917	27.361
524.0	8.249	35.010	27.245	579.0	7.577	34.953	27.300	636.0	6.947	34.916	27.361
526.0	8.229	35.008	27.246	580.0	7.567	34.952	27.301	637.0	6.944	34.916	27.361
527.0	8.214	35.007	27.247	582.0	7.545	34.951	27.302	638.0	6.939	34.916	27.362
528.0	8.210	35.007	27.248	583.0	7.533	34.950	27.304	639.0	6.936	34.916	27.362
529.0	8.212	35.007	27.248	584.0	7.533	34.950	27.304	640.0	6.935	34.916	27.362
530.0	8.192	35.004	27.248	585.0	7.524	34.949	27.304	641.0	6.935	34.916	27.362
532.0	8.143	35.000	27.252	586.0	7.518	34.949	27.305	642.0	6.933	34.916	27.362
533.0	8.115	34.997	27.255	587.0	7.510	34.949	27.306	644.0	6.923	34.914	27.362
534.0	8.114	34.998	27.256	588.0	7.496	34.947	27.307	645.0	6.903	34.914	27.365
535.0	8.096	34.996	27.257	589.0	7.465	34.945	27.310	646.0	6.902	34.915	27.366
536.0	8.076	34.994	27.258	590.0	7.444	34.944	27.312	647.0	6.889	34.913	27.366
537.0	8.061	34.993	27.260	591.0	7.435	34.943	27.313	648.0	6.874	34.914	27.368
538.0	8.050	34.993	27.261	592.0	7.428	34.942	27.313	650.0	6.861	34.913	27.370
539.0	8.038	34.992	27.262	593.0	7.418	34.942	27.314	651.0	6.851	34.913	27.371
540.0	8.022	34.990	27.263	594.0	7.426	34.942	27.313	652.0	6.856	34.913	27.371
541.0	8.002	34.989	27.265	595.0	7.395	34.939	27.316	653.0	6.845	34.913	27.372
542.0	7.985	34.987	27.266	596.0	7.392	34.939	27.316	654.0	6.837	34.913	27.373
543.0	7.975	34.986	27.267	598.0	7.355	34.937	27.319	655.0	6.834	34.913	27.373
544.0	7.966	34.986	27.268	599.0	7.337	34.937	27.322	657.0	6.827	34.912	27.374
545.0	7.955	34.985	27.269	600.0	7.338	34.936	27.321	658.0	6.820	34.912	27.375
546.0	7.935	34.984	27.271	601.0	7.296	34.934	27.325	659.0	6.818	34.912	27.375
547.0	7.925	34.983	27.272	603.0	7.238	34.929	27.330	660.0	6.823	34.912	27.375
548.0	7.896	34.981	27.275	604.0	7.224	34.930	27.333	661.0	6.809	34.911	27.375
549.0	7.900	34.981	27.275	605.0	7.214	34.930	27.333	662.0	6.798	34.911	27.377
550.0	7.886	34.980	27.276	606.0	7.208	34.930	27.334	664.0	6.782	34.911	27.379
551.0	7.869	34.979	27.277	607.0	7.209	34.930	27.334	665.0	6.781	34.911	27.379
553.0	7.840	34.978	27.281	608.0	7.198	34.929	27.335	666.0	6.779	34.911	27.379
554.0	7.853	34.978	27.279	609.0	7.191	34.929	27.337	667.0	6.781	34.911	27.379
555.0	7.826	34.976	27.281	610.0	7.189	34.929	27.337	668.0	6.772	34.910	27.380
556.0	7.813	34.974	27.282	611.0	7.187	34.929	27.337	669.0	6.761	34.910	27.381
557.0	7.795	34.973	27.283	613.0	7.179	34.929	27.338	671.0	6.749	34.910	27.382
558.0	7.780	34.972	27.285	614.0	7.180	34.929	27.337	672.0	6.745	34.909	27.383
559.0	7.782	34.972	27.285	615.0	7.168	34.927	27.338	673.0	6.745	34.909	27.383
560.0	7.768	34.970	27.285	616.0	7.156	34.927	27.340	674.0	6.743	34.909	27.383
561.0	7.751	34.970	27.288	617.0	7.139	34.926	27.341	675.0	6.731	34.908	27.384
562.0	7.749	34.970	27.288	619.0	7.115	34.924	27.344	677.0	6.702	34.907	27.386
563.0	7.746	34.969	27.288	620.0	7.100	34.924	27.346	678.0	6.684	34.907	27.389
564.0	7.731	34.968	27.289	621.0	7.105	34.924	27.345	679.0	6.675	34.907	27.390
565.0	7.719	34.967	27.291	623.0	7.075	34.922	27.347	680.0	6.677	34.907	27.391
566.0	7.707	34.966	27.291	624.0	7.050	34.920	27.349	681.0	6.683	34.906	27.389
567.0	7.700	34.966	27.292	625.0	7.024	34.920	27.353	682.0	6.650	34.905	27.392
568.0	7.693	34.965	27.292	626.0	7.039	34.921	27.351	684.0	6.630	34.905	27.395
570.0	7.667	34.962	27.294	627.0	7.005	34.918	27.354	686.0	6.619	34.905	27.396
571.0	7.651	34.960	27.295	628.0	6.998	34.919	27.355	687.0	6.620	34.905	27.396
572.0	7.632	34.959	27.297	629.0	6.982	34.918	27.357	688.0	6.622	34.905	27.396
573.0	7.634	34.960	27.297	630.0	6.973	34.918	27.358	689.0	6.608	34.905	27.397
574.0	7.629	34.958	27.296	631.0	6.966	34.917	27.359	691.0	6.586	34.905	27.401

STATION G0406.OUT CRUISE 91g04 DATE & TIME Sat Jun 15 20:12:29 1991, Julian day = 166
LAT 27 26.907n LON 94 59.325w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T
693.0	6.567	34.905	27.403
694.0	6.565	34.905	27.404
695.0	6.558	34.904	27.404
697.0	6.526	34.904	27.408
699.0	6.516	34.904	27.410
700.0	6.511	34.904	27.410
701.0	6.510	34.904	27.410
703.0	6.495	34.903	27.412
704.0	6.490	34.904	27.413
706.0	6.483	34.903	27.414
707.0	6.479	34.904	27.415
708.0	6.485	34.903	27.413
709.0	6.472	34.903	27.415
710.0	6.467	34.904	27.416
712.0	6.463	34.903	27.416
713.0	6.460	34.904	27.417
714.0	6.461	34.903	27.417
716.0	6.437	34.903	27.419
717.0	6.437	34.903	27.419
719.0	6.424	34.902	27.421
720.0	6.419	34.903	27.422
721.0	6.423	34.902	27.420
723.0	6.406	34.902	27.423
725.0	6.398	34.902	27.424
726.0	6.388	34.902	27.425
727.0	6.391	34.902	27.425
729.0	6.359	34.900	27.427
730.0	6.352	34.901	27.429
732.0	6.336	34.901	27.431
733.0	6.331	34.901	27.432
734.0	6.337	34.901	27.431
735.0	6.317	34.900	27.433
736.0	6.305	34.900	27.435
737.0	6.292	34.901	27.437
738.0	6.282	34.900	27.438
739.0	6.270	34.900	27.439
741.0	6.250	34.900	27.442
742.0	6.247	34.901	27.442
743.0	6.240	34.900	27.443
744.0	6.232	34.900	27.444
745.0	6.225	34.900	27.445
746.0	6.219	34.900	27.446
748.0	6.217	34.900	27.446
749.0	6.214	34.900	27.446
750.0	6.211	34.900	27.446
751.0	6.208	34.900	27.447
752.0	6.206	34.900	27.447
754.0	6.203	34.900	27.448
755.0	6.200	34.900	27.448
756.0	6.203	34.900	27.448

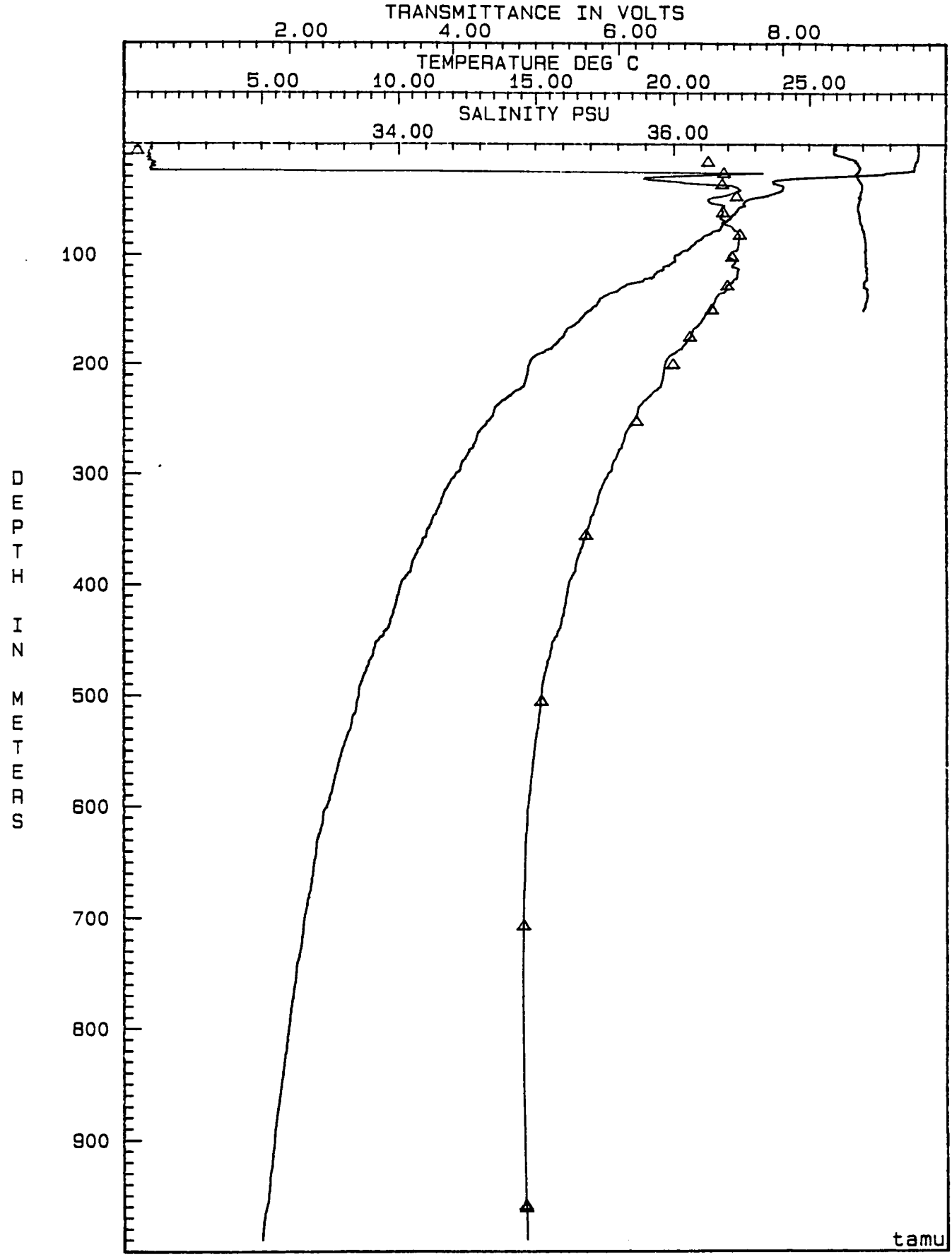
DEPTH	TEMP	SALT	SIGMA-T
757.0	6.192	34.899	27.449
758.0	6.179	34.900	27.450
759.0	6.168	34.900	27.452
761.0	6.154	34.899	27.454
762.0	6.148	34.900	27.455
763.0	6.139	34.899	27.456
764.0	6.133	34.900	27.457
765.0	6.131	34.900	27.457
766.0	6.125	34.900	27.458
768.0	6.113	34.900	27.459
769.0	6.105	34.899	27.460
770.0	6.105	34.900	27.460
771.0	6.106	34.900	27.460
772.0	6.103	34.899	27.460
773.0	6.087	34.899	27.462
775.0	6.075	34.899	27.464
776.0	6.067	34.899	27.465
777.0	6.064	34.900	27.466
778.0	6.067	34.899	27.465
779.0	6.062	34.899	27.465
780.0	6.043	34.899	27.468
782.0	6.030	34.900	27.470
783.0	6.028	34.900	27.470
784.0	6.026	34.900	27.470
785.0	6.026	34.899	27.470
786.0	6.016	34.899	27.471
787.0	6.005	34.900	27.473
789.0	5.997	34.900	27.474
790.0	5.996	34.900	27.474
791.0	5.993	34.900	27.475
792.0	5.991	34.900	27.475
793.0	5.988	34.900	27.475
795.0	5.982	34.900	27.476
796.0	5.981	34.900	27.476
797.0	5.970	34.900	27.478
798.0	5.962	34.900	27.479
800.0	5.952	34.900	27.480
801.0	5.945	34.900	27.481
802.0	5.944	34.901	27.481
804.0	5.940	34.900	27.481
805.0	5.928	34.900	27.483
807.0	5.918	34.901	27.485
809.0	5.912	34.901	27.486
810.0	5.924	34.901	27.484
811.0	5.913	34.900	27.485
813.0	5.898	34.901	27.487
815.0	5.885	34.901	27.490
816.0	5.881	34.902	27.491
817.0	5.883	34.901	27.490
819.0	5.875	34.901	27.491

DEPTH	TEMP	SALT	SIGMA-
821.0	5.856	34.901	27.49
822.0	5.847	34.902	27.49
823.0	5.834	34.902	27.49
824.0	5.828	34.902	27.49
825.0	5.829	34.902	27.49
826.0	5.824	34.902	27.49
828.0	5.807	34.902	27.50
829.0	5.802	34.903	27.50
831.0	5.795	34.903	27.50
832.0	5.793	34.903	27.50
833.0	5.792	34.903	27.50
834.0	5.790	34.902	27.50
835.0	5.784	34.903	27.50
837.0	5.766	34.903	27.50
838.0	5.759	34.903	27.50
839.0	5.754	34.904	27.50
840.0	5.751	34.904	27.50
841.0	5.751	34.903	27.50
842.0	5.748	34.903	27.50
844.0	5.733	34.903	27.51
845.0	5.726	34.904	27.51
847.0	5.712	34.904	27.51
848.0	5.705	34.904	27.51
849.0	5.706	34.904	27.51
850.0	5.702	34.904	27.51
851.0	5.698	34.904	27.51
852.0	5.690	34.904	27.51
854.0	5.677	34.905	27.51
855.0	5.668	34.905	27.52
856.0	5.664	34.905	27.52
857.0	5.666	34.905	27.52
858.0	5.660	34.905	27.52
860.0	5.646	34.905	27.52
861.0	5.638	34.906	27.52
863.0	5.625	34.906	27.52
865.0	5.618	34.907	27.52
866.0	5.614	34.906	27.52
867.0	5.606	34.907	27.52
868.0	5.599	34.907	27.53
870.0	5.586	34.908	27.53
871.0	5.573	34.908	27.53
872.0	5.568	34.908	27.53
873.0	5.568	34.908	27.53
874.0	5.558	34.909	27.53
875.0	5.554	34.909	27.53
877.0	5.547	34.909	27.53
878.0	5.535	34.909	27.54
879.0	5.533	34.910	27.54
880.0	5.543	34.909	27.53
881.0	5.527	34.909	27.54

STATION G0406.OUT CRUISE 91g04 DATE & TIME Sat Jun 15 20:12:29 1991, Julian day = 166
LAT 27 26.907n LON 94 59.325w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T
883.0	5.511	34.910	27.543
884.0	5.511	34.910	27.543
886.0	5.504	34.910	27.544
887.0	5.502	34.910	27.544
889.0	5.482	34.911	27.547
890.0	5.476	34.911	27.548
892.0	5.468	34.911	27.549
893.0	5.467	34.911	27.550
894.0	5.469	34.911	27.549
895.0	5.463	34.911	27.550
896.0	5.458	34.911	27.551
898.0	5.455	34.911	27.551
899.0	5.451	34.912	27.552
900.0	5.451	34.912	27.552
901.0	5.446	34.912	27.552
902.0	5.442	34.912	27.553
904.0	5.434	34.912	27.554
905.0	5.433	34.912	27.554
906.0	5.427	34.912	27.555
907.0	5.427	34.912	27.555
908.0	5.418	34.913	27.556
910.0	5.403	34.913	27.559
911.0	5.395	34.914	27.560
912.0	5.394	34.914	27.560
913.0	5.392	34.914	27.561
914.0	5.390	34.914	27.561
916.0	5.380	34.914	27.562
917.0	5.375	34.914	27.563
918.0	5.373	34.914	27.563
919.0	5.370	34.915	27.564
921.0	5.366	34.915	27.564
922.0	5.361	34.915	27.565
923.0	5.356	34.915	27.566
924.0	5.356	34.915	27.566
925.0	5.342	34.915	27.568
927.0	5.319	34.917	27.572
928.0	5.314	34.917	27.573
929.0	5.312	34.917	27.573
931.0	5.301	34.918	27.575
933.0	5.292	34.918	27.576
934.0	5.290	34.918	27.576
935.0	5.292	34.918	27.576
937.0	5.294	34.918	27.575
938.0	5.287	34.918	27.576
940.0	5.278	34.918	27.578
941.0	5.273	34.919	27.579
942.0	5.272	34.919	27.579
943.0	5.271	34.919	27.579
944.0	5.268	34.919	27.579
945.0	5.259	34.919	27.581

DEPTH	TEMP	SALT	SIGMA-T
946.0	5.252	34.919	27.582
948.0	5.241	34.920	27.583
949.0	5.237	34.920	27.584
951.0	5.231	34.920	27.585
952.0	5.234	34.920	27.584
954.0	5.225	34.920	27.586
955.0	5.216	34.921	27.587
956.0	5.208	34.921	27.588
957.0	5.194	34.922	27.590
958.0	5.188	34.922	27.592
959.0	5.173	34.923	27.594
960.0	5.161	34.923	27.596
961.0	5.154	34.924	27.597
962.0	5.145	34.924	27.598
963.0	5.142	34.924	27.599
964.0	5.122	34.925	27.602
965.0	5.114	34.925	27.603
966.0	5.105	34.926	27.604
967.0	5.103	34.926	27.604
968.0	5.098	34.926	27.605
969.0	5.093	34.926	27.606
970.0	5.080	34.927	27.608
971.0	5.082	34.926	27.608
972.0	5.069	34.927	27.609
973.0	5.051	34.928	27.613
974.0	5.060	34.927	27.611
975.0	5.054	34.928	27.612
976.0	5.053	34.928	27.612
977.0	5.042	34.928	27.614
978.0	5.041	34.928	27.614
979.0	5.032	34.929	27.615
980.0	5.032	34.929	27.615
981.0	5.027	34.929	27.616
982.0	5.024	34.929	27.617
984.0	5.018	34.929	27.617
985.0	5.017	34.930	27.618
987.0	5.011	34.930	27.619
989.0	5.007	34.930	27.619



CRUISE: 91g04 STATION: G0406.0U DATE: Jun 15 20: 12: 29 1991
LATITUDE: 27 26.907n LONGITUDE: 94 59.325w
TRIANGLES DENOTE DISCRETE SAMPLES

STATION G0406A.OUT CRUISE 91G04 DATE & TIME Sun Jun 16 16:31:23 1991, Julian day = 167
LAT 27 27.057N LON 94 58.795 DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	29.256	30.648	18.719	8.480
2.0	29.256	30.652	18.721	8.486
3.0	29.256	30.664	18.730	8.486
4.0	29.256	30.669	18.734	8.462
5.0	29.235	30.838	18.868	8.462
6.0	29.185	31.189	19.147	8.499
7.0	29.103	31.802	19.633	8.413
8.0	29.054	32.377	20.080	8.724
9.0	28.969	33.328	20.822	8.841
10.0	28.952	34.426	21.652	8.866
11.0	28.821	35.213	22.286	8.791
13.0	28.495	35.704	22.764	8.978
14.0	28.394	35.858	22.912	8.953
15.0	28.557	36.198	23.114	8.952
16.0	28.572	36.240	23.141	8.982
17.0	28.587	36.267	23.156	8.974
18.0	28.564	36.283	23.176	8.979
19.0	28.564	36.321	23.204	8.982
20.0	28.583	36.376	23.239	8.990
21.0	28.585	36.407	23.262	8.986
22.0	28.584	36.443	23.290	8.989
23.0	28.554	36.449	23.304	8.989
24.0	28.471	36.444	23.328	8.984
25.0	28.291	36.417	23.367	8.984
26.0	28.217	36.415	23.390	8.984
27.0	28.231	36.445	23.408	8.978
28.0	28.108	36.430	23.437	8.979
29.0	28.020	36.415	23.455	8.979
30.0	27.906	36.388	23.472	8.975
31.0	27.680	36.332	23.504	8.962
32.0	27.207	36.243	23.590	8.962
33.0	26.697	36.150	23.683	8.954
34.0	26.165	36.050	23.776	8.939
35.0	25.457	35.929	23.905	8.925
36.0	24.908	35.875	24.033	8.923
37.0	24.494	35.878	24.160	8.920
38.0	24.144	35.852	24.246	8.913
39.0	23.913	35.823	24.292	8.906
40.0	23.712	35.795	24.331	8.891
41.0	23.348	35.743	24.397	8.891
42.0	22.904	35.700	24.494	8.859
43.0	22.645	35.714	24.579	8.857
44.0	22.681	35.767	24.609	8.874
45.0	22.745	35.848	24.652	8.894
46.0	22.775	35.927	24.704	8.899
47.0	22.875	36.112	24.815	8.884
48.0	22.779	36.096	24.830	8.896
49.0	22.732	36.114	24.858	8.901
50.0	22.729	36.130	24.870	8.914
51.0	22.709	36.137	24.882	8.922
52.0	22.637	36.143	24.907	8.928
53.0	22.493	36.146	24.951	8.935
54.0	22.243	36.101	24.988	8.932
55.0	22.144	36.089	25.006	8.926
56.0	22.107	36.096	25.022	8.926
57.0	22.068	36.116	25.048	8.926
58.0	22.031	36.124	25.065	8.932
59.0	21.972	36.111	25.072	8.933
60.0	21.914	36.109	25.086	8.935
61.0	21.935	36.137	25.102	8.950
62.0	22.044	36.196	25.116	8.957
63.0	22.173	36.286	25.148	8.973
64.0	22.281	36.385	25.193	8.980
65.0	22.221	36.367	25.196	8.993
66.0	22.223	36.387	25.211	8.995
67.0	22.163	36.399	25.237	9.002
68.0	22.069	36.399	25.264	9.004
69.0	21.970	36.382	25.279	9.004
70.0	21.802	36.351	25.302	9.004
71.0	21.620	36.323	25.332	9.006
72.0	21.488	36.313	25.360	9.009
73.0	21.461	36.329	25.380	9.009
74.0	21.375	36.331	25.406	9.009
75.0	21.305	36.329	25.424	9.009
76.0	21.283	36.350	25.446	9.015
77.0	21.301	36.375	25.459	9.014
78.0	21.309	36.389	25.468	9.013
79.0	21.317	36.406	25.479	9.013
80.0	21.324	36.428	25.494	9.016
81.0	21.298	36.454	25.521	9.018
82.0	21.289	36.453	25.523	9.011
83.0	21.287	36.463	25.531	9.007
84.0	21.270	36.471	25.542	9.009
85.0	21.178	36.479	25.573	9.011
86.0	21.074	36.489	25.609	9.020
87.0	21.010	36.491	25.628	9.023
88.0	20.947	36.495	25.648	9.027
89.0	20.893	36.498	25.665	9.032
90.0	20.834	36.497	25.681	9.029
91.0	20.765	36.491	25.695	9.033
92.0	20.675	36.489	25.718	9.040
93.0	20.665	36.491	25.722	9.030
94.0	20.632	36.490	25.730	9.033
95.0	20.539	36.491	25.757	9.040
96.0	20.405	36.496	25.796	9.043
97.0	20.321	36.499	25.822	9.038
98.0	20.280	36.501	25.834	9.038
99.0	20.248	36.501	25.842	9.044
100.0	20.206	36.501	25.854	9.043
101.0	20.146	36.503	25.871	9.043

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DEPTH	TEMP	SALT	SIGMA-T	XSM
102.0	20.053	36.504	25.897	9.043
103.0	20.003	36.506	25.911	9.031
105.0	19.932	36.507	25.931	9.035
106.0	19.825	36.509	25.961	9.041
107.0	19.666	36.510	26.003	9.043
108.0	19.625	36.496	26.004	9.032
109.0	19.536	36.481	26.016	9.038
110.0	19.462	36.474	26.030	9.038
111.0	19.331	36.455	26.049	9.038
112.0	19.215	36.440	26.068	9.045
113.0	19.220	36.443	26.069	9.043
114.0	19.181	36.444	26.080	9.048
115.0	19.089	36.441	26.102	9.038
116.0	18.986	36.441	26.128	9.051
117.0	18.962	36.441	26.134	9.052
118.0	18.930	36.443	26.144	9.053
119.0	18.870	36.451	26.165	9.053
120.0	18.823	36.452	26.178	9.058
121.0	18.803	36.456	26.187	9.052
122.0	18.793	36.466	26.197	9.053
123.0	18.774	36.467	26.202	9.050
124.0	18.641	36.442	26.217	9.047
125.0	18.488	36.425	26.243	9.041
126.0	18.407	36.416	26.256	9.038
127.0	18.349	36.411	26.267	9.043
128.0	18.306	36.403	26.271	9.043
129.0	18.258	36.403	26.284	9.043
130.0	18.228	36.403	26.291	9.043
131.0	18.185	36.399	26.299	9.035
132.0	18.130	36.393	26.308	9.037
133.0	18.067	36.385	26.318	9.038
134.0	17.993	36.377	26.330	9.049
135.0	17.955	36.373	26.336	9.048
136.0	17.946	36.371	26.337	9.048
137.0	17.894	36.360	26.341	9.053
138.0	17.708	36.336	26.369	9.057
139.0	17.638	36.327	26.380	9.057
140.0	17.611	36.324	26.384	9.057
141.0	17.589	36.321	26.387	9.057
142.0	17.539	36.313	26.394	9.062
143.0	17.480	36.306	26.402	9.060
144.0	17.440	36.302	26.408	9.062
145.0	17.396	36.298	26.416	9.062
146.0	17.335	36.294	26.428	9.051
147.0	17.301	36.290	26.433	9.064
148.0	17.227	36.281	26.444	9.065
149.0	17.150	36.272	26.456	9.065
150.0	17.103	36.267	26.463	9.063
151.0	17.048	36.261	26.472	9.062
152.0	16.995	36.255	26.480	9.065

DEPTH	TEMP	SALT	SIGMA-T	XSM
153.0	16.937	36.247	26.488	9.067
154.0	16.916	36.244	26.491	9.062
155.0	16.912	36.243	26.491	9.062
156.0	16.879	36.239	26.496	9.062
157.0	16.822	36.233	26.504	9.062
158.0	16.743	36.222	26.515	9.069
159.0	16.662	36.213	26.527	9.062
160.0	16.639	36.210	26.530	9.062
162.0	16.591	36.206	26.538	9.062
163.0	16.556	36.201	26.543	9.072
164.0	16.520	36.195	26.547	9.072
165.0	16.496	36.191	26.550	9.072
166.0	16.462	36.187	26.554	9.068
167.0	16.418	36.181	26.561	9.067
168.0	16.361	36.173	26.567	9.075
169.0	16.303	36.163	26.574	9.077
170.0	16.239	36.155	26.583	9.071
171.0	16.206	36.152	26.587	9.072
172.0	16.167	36.146	26.592	9.078
173.0	16.126	36.139	26.596	9.077
174.0	16.097	36.135	26.600	9.071
175.0	16.070	36.130	26.602	9.072
176.0	15.999	36.118	26.610	9.075
177.0	15.960	36.111	26.613	9.071
178.0	15.925	36.107	26.618	9.060
179.0	15.894	36.104	26.623	9.068
180.0	15.860	36.100	26.627	9.073
181.0	15.827	36.093	26.630	
182.0	15.801	36.089	26.632	
183.0	15.770	36.084	26.635	
184.0	15.722	36.077	26.641	
185.0	15.652	36.067	26.649	
186.0	15.607	36.060	26.655	
187.0	15.585	36.057	26.657	
188.0	15.558	36.053	26.660	
189.0	15.518	36.047	26.664	
190.0	15.472	36.040	26.670	
191.0	15.443	36.037	26.673	
192.0	15.434	36.034	26.673	
193.0	15.419	36.032	26.675	
194.0	15.387	36.026	26.677	
195.0	15.329	36.019	26.685	
196.0	15.303	36.014	26.688	
197.0	15.293	36.011	26.688	
199.0	15.198	35.996	26.697	
200.0	15.147	35.989	26.703	
201.0	15.113	35.984	26.707	
202.0	15.080	35.979	26.710	
203.0	15.047	35.974	26.714	
204.0	14.999	35.967	26.719	

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DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T
205.0	14.853	35.945	26.734	256.0	13.269	35.698	26.880	307.0	11.983	35.501	26.982
206.0	14.811	35.941	26.740	257.0	13.256	35.696	26.881	308.0	11.933	35.494	26.987
207.0	14.795	35.937	26.740	258.0	13.242	35.694	26.882	309.0	11.911	35.490	26.988
208.0	14.776	35.934	26.743	259.0	13.214	35.689	26.885	310.0	11.901	35.489	26.989
209.0	14.762	35.931	26.743	260.0	13.193	35.686	26.886	311.0	11.894	35.489	26.990
210.0	14.742	35.927	26.745	261.0	13.177	35.683	26.887	312.0	11.865	35.482	26.990
212.0	14.709	35.921	26.747	262.0	13.159	35.680	26.888	313.0	11.802	35.473	26.995
213.0	14.673	35.916	26.752	263.0	13.110	35.672	26.892	314.0	11.761	35.467	26.998
214.0	14.619	35.907	26.756	264.0	13.003	35.655	26.901	315.0	11.737	35.465	27.001
215.0	14.551	35.896	26.762	265.0	12.974	35.651	26.904	316.0	11.719	35.462	27.002
216.0	14.488	35.886	26.768	266.0	12.946	35.647	26.906	317.0	11.697	35.459	27.004
217.0	14.414	35.874	26.775	267.0	12.894	35.639	26.910	318.0	11.690	35.457	27.004
218.0	14.323	35.861	26.784	268.0	12.858	35.634	26.914	319.0	11.673	35.454	27.004
219.0	14.272	35.853	26.790	269.0	12.809	35.625	26.917	320.0	11.655	35.452	27.007
220.0	14.258	35.851	26.791	270.0	12.754	35.616	26.921	321.0	11.651	35.452	27.007
221.0	14.253	35.850	26.791	271.0	12.686	35.606	26.926	322.0	11.651	35.452	27.007
222.0	14.251	35.849	26.791	272.0	12.625	35.598	26.933	323.0	11.654	35.452	27.007
223.0	14.245	35.848	26.792	273.0	12.592	35.595	26.936	324.0	11.656	35.451	27.006
224.0	14.229	35.846	26.793	274.0	12.544	35.586	26.939	325.0	11.638	35.449	27.007
225.0	14.196	35.841	26.796	275.0	12.507	35.580	26.942	326.0	11.608	35.444	27.009
226.0	14.173	35.837	26.798	276.0	12.484	35.577	26.944	327.0	11.578	35.439	27.011
227.0	14.155	35.835	26.800	277.0	12.473	35.576	26.945	328.0	11.557	35.437	27.013
228.0	14.130	35.831	26.803	278.0	12.464	35.574	26.946	329.0	11.516	35.430	27.015
229.0	14.104	35.827	26.805	279.0	12.451	35.573	26.947	330.0	11.471	35.424	27.019
230.0	14.071	35.822	26.808	280.0	12.442	35.570	26.947	331.0	11.450	35.421	27.021
231.0	14.070	35.822	26.808	281.0	12.419	35.566	26.948	332.0	11.420	35.418	27.024
232.0	14.061	35.820	26.809	282.0	12.400	35.565	26.951	333.0	11.391	35.413	27.026
233.0	14.039	35.817	26.812	283.0	12.381	35.562	26.953	334.0	11.348	35.407	27.029
234.0	14.015	35.813	26.813	284.0	12.358	35.558	26.954	335.0	11.333	35.404	27.030
235.0	13.980	35.807	26.816	285.0	12.324	35.553	26.956	336.0	11.311	35.401	27.031
236.0	13.960	35.803	26.818	286.0	12.312	35.551	26.958	337.0	11.291	35.398	27.033
237.0	13.941	35.801	26.820	287.0	12.300	35.550	26.959	338.0	11.244	35.391	27.036
238.0	13.922	35.799	26.822	288.0	12.290	35.549	26.960	339.0	11.195	35.386	27.041
239.0	13.900	35.795	26.824	289.0	12.264	35.544	26.961	340.0	11.184	35.384	27.041
240.0	13.885	35.793	26.825	290.0	12.253	35.542	26.962	341.0	11.169	35.382	27.043
241.0	13.869	35.790	26.826	291.0	12.239	35.540	26.963	342.0	11.159	35.381	27.043
242.0	13.854	35.787	26.828	292.0	12.222	35.539	26.965	343.0	11.128	35.375	27.045
243.0	13.813	35.781	26.831	293.0	12.213	35.537	26.966	344.0	11.105	35.372	27.047
244.0	13.783	35.777	26.834	294.0	12.198	35.534	26.967	345.0	11.096	35.371	27.048
245.0	13.757	35.772	26.836	295.0	12.183	35.531	26.967	346.0	11.086	35.370	27.049
246.0	13.716	35.765	26.839	296.0	12.177	35.530	26.968	347.0	11.072	35.368	27.050
247.0	13.639	35.752	26.845	297.0	12.165	35.528	26.969	348.0	11.052	35.365	27.051
248.0	13.567	35.742	26.853	298.0	12.157	35.528	26.970	349.0	11.016	35.360	27.053
249.0	13.482	35.730	26.861	299.0	12.144	35.525	26.970	350.0	10.999	35.357	27.055
250.0	13.421	35.721	26.867	301.0	12.126	35.523	26.971	351.0	10.981	35.354	27.056
251.0	13.387	35.715	26.869	302.0	12.099	35.519	26.974	352.0	10.962	35.352	27.057
252.0	13.345	35.710	26.873	303.0	12.080	35.516	26.975	353.0	10.945	35.349	27.058
253.0	13.321	35.706	26.876	304.0	12.068	35.514	26.976	354.0	10.919	35.346	27.060
254.0	13.299	35.703	26.878	305.0	12.051	35.511	26.978	355.0	10.894	35.342	27.062
255.0	13.284	35.700	26.878	306.0	12.034	35.509	26.979	356.0	10.887	35.340	27.062

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DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-
357.0	10.879	35.339	27.062	407.0	10.057	35.227	27.120	457.0	9.264	35.125	27.1
358.0	10.871	35.338	27.063	408.0	9.999	35.219	27.124	458.0	9.243	35.121	27.1
359.0	10.854	35.335	27.063	409.0	9.978	35.216	27.125	459.0	9.228	35.120	27.1
360.0	10.810	35.328	27.066	410.0	9.958	35.213	27.126	460.0	9.217	35.119	27.1
361.0	10.797	35.326	27.067	411.0	9.930	35.210	27.128	461.0	9.201	35.116	27.1
362.0	10.790	35.325	27.067	412.0	9.910	35.208	27.130	462.0	9.184	35.114	27.1
363.0	10.778	35.323	27.068	413.0	9.872	35.203	27.133	463.0	9.172	35.113	27.1
364.0	10.752	35.320	27.070	414.0	9.853	35.201	27.134	465.0	9.146	35.110	27.1
365.0	10.734	35.317	27.071	415.0	9.847	35.200	27.135	466.0	9.124	35.108	27.1
366.0	10.705	35.313	27.073	416.0	9.836	35.199	27.136	467.0	9.105	35.105	27.1
367.0	10.687	35.310	27.074	417.0	9.822	35.197	27.137	468.0	9.090	35.104	27.1
368.0	10.679	35.309	27.075	418.0	9.806	35.195	27.138	469.0	9.079	35.103	27.1
369.0	10.660	35.306	27.076	419.0	9.803	35.195	27.138	470.0	9.073	35.103	27.1
370.0	10.625	35.302	27.079	420.0	9.799	35.194	27.138	471.0	9.056	35.101	27.1
371.0	10.579	35.295	27.082	421.0	9.794	35.193	27.139	472.0	9.048	35.100	27.1
372.0	10.561	35.293	27.083	422.0	9.786	35.192	27.139	473.0	9.045	35.100	27.1
373.0	10.551	35.292	27.084	423.0	9.766	35.189	27.140	474.0	9.043	35.100	27.1
374.0	10.539	35.291	27.086	424.0	9.762	35.188	27.140	475.0	9.042	35.100	27.1
375.0	10.528	35.290	27.087	425.0	9.750	35.187	27.141	476.0	9.038	35.099	27.1
376.0	10.524	35.289	27.087	426.0	9.733	35.185	27.142	477.0	9.030	35.098	27.1
377.0	10.518	35.289	27.087	427.0	9.711	35.182	27.144	478.0	9.018	35.096	27.1
378.0	10.512	35.288	27.088	428.0	9.701	35.180	27.144	479.0	8.997	35.094	27.1
379.0	10.507	35.287	27.088	429.0	9.680	35.178	27.146	480.0	8.972	35.092	27.1
380.0	10.499	35.286	27.089	430.0	9.665	35.176	27.147	481.0	8.957	35.090	27.1
381.0	10.494	35.285	27.089	431.0	9.641	35.173	27.149	482.0	8.935	35.088	27.1
382.0	10.491	35.285	27.089	432.0	9.614	35.170	27.151	483.0	8.917	35.085	27.1
383.0	10.482	35.284	27.090	433.0	9.593	35.167	27.152	484.0	8.905	35.085	27.2
384.0	10.478	35.284	27.091	434.0	9.575	35.165	27.154	485.0	8.886	35.083	27.2
385.0	10.478	35.283	27.091	435.0	9.560	35.163	27.155	486.0	8.848	35.079	27.2
386.0	10.472	35.282	27.090	436.0	9.541	35.161	27.156	487.0	8.817	35.076	27.2
387.0	10.447	35.279	27.092	437.0	9.527	35.159	27.157	488.0	8.792	35.073	27.2
388.0	10.420	35.275	27.094	438.0	9.516	35.158	27.157	489.0	8.773	35.071	27.2
389.0	10.398	35.272	27.096	439.0	9.509	35.157	27.158	490.0	8.764	35.070	27.2
390.0	10.375	35.269	27.097	440.0	9.508	35.157	27.158	491.0	8.752	35.069	27.2
391.0	10.352	35.265	27.098	441.0	9.508	35.156	27.158	492.0	8.741	35.067	27.2
392.0	10.316	35.261	27.102	442.0	9.503	35.156	27.158	493.0	8.738	35.066	27.2
393.0	10.288	35.258	27.104	443.0	9.495	35.155	27.159	494.0	8.730	35.066	27.2
394.0	10.268	35.255	27.105	444.0	9.482	35.152	27.159	495.0	8.724	35.065	27.2
395.0	10.254	35.253	27.106	445.0	9.474	35.152	27.160	496.0	8.721	35.064	27.2
396.0	10.239	35.251	27.107	446.0	9.474	35.152	27.160	497.0	8.712	35.063	27.2
397.0	10.218	35.248	27.109	447.0	9.467	35.150	27.160	498.0	8.699	35.062	27.2
398.0	10.183	35.244	27.111	448.0	9.434	35.146	27.162	499.0	8.677	35.058	27.2
399.0	10.166	35.241	27.112	449.0	9.401	35.142	27.164	500.0	8.663	35.057	27.2
400.0	10.152	35.240	27.114	450.0	9.367	35.138	27.167	501.0	8.656	35.056	27.2
401.0	10.141	35.238	27.114	451.0	9.346	35.136	27.168	502.0	8.635	35.052	27.2
402.0	10.124	35.236	27.115	452.0	9.330	35.134	27.169	503.0	8.599	35.048	27.2
403.0	10.089	35.232	27.118	453.0	9.303	35.130	27.171	504.0	8.564	35.044	27.2
404.0	10.085	35.231	27.118	454.0	9.285	35.128	27.172	505.0	8.533	35.041	27.2
405.0	10.083	35.231	27.118	455.0	9.276	35.127	27.173	506.0	8.502	35.037	27.2
406.0	10.076	35.230	27.119	456.0	9.271	35.126	27.174	507.0	8.476	35.033	27.2

STATION G0406A.OUT CRUISE 91G04 DATE & TIME Sun Jun 16 16:31:23 1991, Julian day = 167
LAT 27 27.057N LON 94 58.795 DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

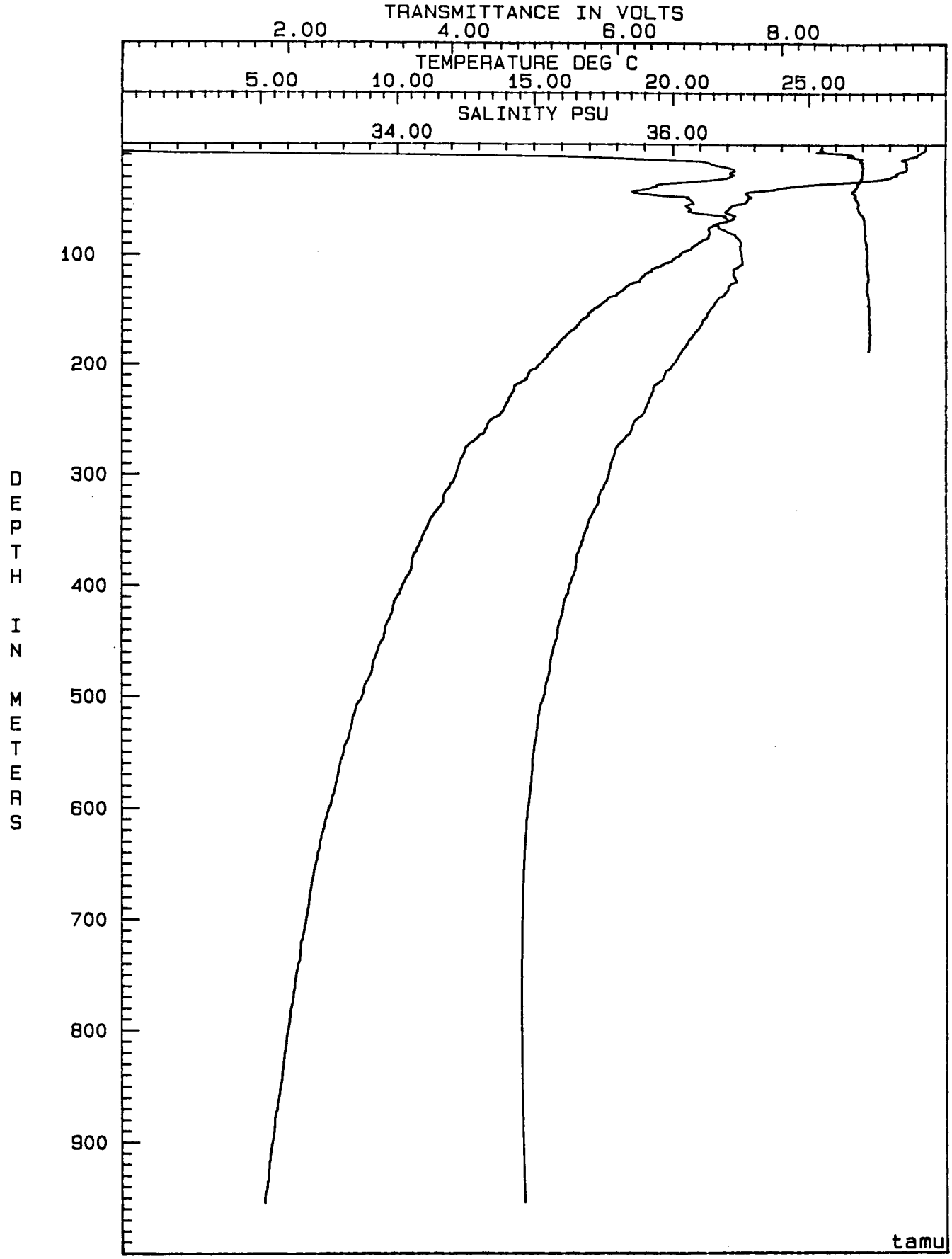
DEPTH	TEMP	SALT	SIGMA-T
508.0	8.454	35.031	27.229
509.0	8.440	35.030	27.230
510.0	8.433	35.029	27.230
511.0	8.420	35.027	27.232
512.0	8.408	35.026	27.232
513.0	8.400	35.024	27.232
514.0	8.393	35.024	27.233
515.0	8.385	35.023	27.234
516.0	8.372	35.022	27.235
517.0	8.338	35.017	27.237
518.0	8.323	35.016	27.238
519.0	8.311	35.015	27.239
520.0	8.306	35.015	27.239
521.0	8.301	35.014	27.240
522.0	8.301	35.014	27.239
523.0	8.297	35.013	27.239
524.0	8.289	35.013	27.240
525.0	8.281	35.012	27.241
526.0	8.266	35.010	27.242
527.0	8.262	35.010	27.242
528.0	8.257	35.009	27.243
529.0	8.247	35.009	27.243
530.0	8.226	35.007	27.245
531.0	8.207	35.005	27.247
532.0	8.200	35.005	27.248
533.0	8.194	35.004	27.248
534.0	8.189	35.004	27.249
535.0	8.177	35.003	27.250
536.0	8.165	35.001	27.250
537.0	8.153	35.000	27.251
538.0	8.138	34.998	27.252
539.0	8.126	34.998	27.253
540.0	8.092	34.994	27.256
541.0	8.082	34.993	27.256
542.0	8.057	34.991	27.259
543.0	8.039	34.990	27.260
544.0	8.017	34.988	27.262
545.0	8.001	34.987	27.263
546.0	8.000	34.986	27.263
547.0	7.988	34.985	27.264
548.0	7.982	34.985	27.265
549.0	7.973	34.984	27.266
550.0	7.963	34.983	27.267
551.0	7.955	34.983	27.267
552.0	7.954	34.981	27.267
553.0	7.944	34.981	27.268
554.0	7.932	34.980	27.269
555.0	7.913	34.978	27.270
556.0	7.891	34.976	27.272
557.0	7.876	34.974	27.273
558.0	7.866	34.975	27.275
559.0	7.862	34.976	27.276
560.0	7.854	34.977	27.278
561.0	7.832	34.977	27.281
562.0	7.828	34.976	27.281
564.0	7.810	34.974	27.282
565.0	7.796	34.974	27.284
566.0	7.804	34.973	27.283
567.0	7.791	34.973	27.284
568.0	7.785	34.972	27.284
569.0	7.771	34.971	27.286
570.0	7.773	34.971	27.286
572.0	7.757	34.969	27.286
573.0	7.739	34.968	27.288
574.0	7.733	34.968	27.289
575.0	7.731	34.968	27.289
576.0	7.722	34.966	27.290
577.0	7.704	34.966	27.291
578.0	7.695	34.965	27.292
579.0	7.689	34.964	27.292
580.0	7.679	34.963	27.293
581.0	7.669	34.962	27.294
582.0	7.659	34.962	27.295
583.0	7.651	34.961	27.295
584.0	7.638	34.960	27.296
585.0	7.625	34.959	27.298
586.0	7.625	34.958	27.297
587.0	7.614	34.957	27.298
588.0	7.591	34.955	27.300
589.0	7.570	34.954	27.302
590.0	7.561	34.954	27.303
591.0	7.557	34.952	27.302
592.0	7.545	34.952	27.304
593.0	7.534	34.951	27.305
594.0	7.526	34.950	27.305
595.0	7.517	34.950	27.306
596.0	7.510	34.949	27.306
597.0	7.500	34.948	27.307
598.0	7.479	34.946	27.309
599.0	7.447	34.944	27.311
600.0	7.425	34.942	27.313
601.0	7.415	34.942	27.314
602.0	7.406	34.941	27.315
603.0	7.393	34.940	27.316
604.0	7.379	34.940	27.318
605.0	7.376	34.940	27.319
606.0	7.372	34.939	27.318
607.0	7.369	34.939	27.319
608.0	7.351	34.938	27.321
609.0	7.328	34.936	27.323
610.0	7.310	34.935	27.324
611.0	7.308	34.935	27.324
613.0	7.295	34.934	27.325
614.0	7.286	34.934	27.326
615.0	7.283	34.934	27.327
616.0	7.281	34.934	27.327
618.0	7.254	34.932	27.330
619.0	7.224	34.931	27.333
620.0	7.222	34.931	27.333
621.0	7.213	34.930	27.334
622.0	7.195	34.929	27.335
623.0	7.179	34.928	27.337
624.0	7.164	34.927	27.339
625.0	7.155	34.927	27.340
626.0	7.151	34.927	27.341
627.0	7.149	34.927	27.341
628.0	7.138	34.926	27.341
629.0	7.116	34.925	27.344
630.0	7.111	34.925	27.344
631.0	7.113	34.924	27.344
632.0	7.109	34.924	27.344
633.0	7.100	34.924	27.345
634.0	7.090	34.923	27.346
635.0	7.090	34.923	27.346
636.0	7.081	34.922	27.346
637.0	7.076	34.922	27.347
638.0	7.063	34.921	27.348
639.0	7.037	34.920	27.351
640.0	7.024	34.920	27.353
641.0	7.024	34.920	27.353
642.0	7.015	34.920	27.354
643.0	7.009	34.919	27.354
644.0	7.009	34.920	27.355
645.0	7.009	34.919	27.354
646.0	7.001	34.919	27.355
647.0	6.986	34.918	27.357
648.0	6.978	34.918	27.357
650.0	6.956	34.917	27.360
651.0	6.941	34.916	27.362
652.0	6.938	34.916	27.362
653.0	6.930	34.916	27.363
654.0	6.917	34.915	27.364
655.0	6.904	34.914	27.365
656.0	6.893	34.914	27.366
657.0	6.890	34.914	27.366
658.0	6.883	34.914	27.367
659.0	6.880	34.914	27.368
660.0	6.872	34.913	27.369
661.0	6.863	34.913	27.370
662.0	6.856	34.913	27.371

STATION G0406A.OUT CRUISE 91G04 DATE & TIME Sun Jun 16 16:31:23 1991, Julian day = 167
LAT 27 27.057N LON 94 58.795 DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-
663.0	6.849	34.912	27.371	714.0	6.505	34.904	27.411	764.0	6.182	34.900	27.45
665.0	6.830	34.911	27.373	715.0	6.498	34.904	27.412	765.0	6.175	34.900	27.45
666.0	6.813	34.912	27.375	716.0	6.492	34.904	27.413	766.0	6.167	34.900	27.45
667.0	6.817	34.911	27.375	717.0	6.492	34.904	27.413	767.0	6.165	34.900	27.45
668.0	6.810	34.911	27.375	718.0	6.469	34.903	27.415	768.0	6.162	34.900	27.45
669.0	6.799	34.911	27.377	719.0	6.443	34.903	27.418	769.0	6.160	34.900	27.45
670.0	6.793	34.910	27.377	720.0	6.436	34.903	27.419	770.0	6.157	34.900	27.45
671.0	6.791	34.910	27.377	721.0	6.428	34.903	27.420	771.0	6.154	34.900	27.45
672.0	6.787	34.910	27.377	722.0	6.421	34.903	27.422	772.0	6.151	34.900	27.45
673.0	6.781	34.910	27.378	723.0	6.420	34.903	27.421	773.0	6.146	34.899	27.45
674.0	6.769	34.909	27.379	724.0	6.419	34.903	27.422	774.0	6.139	34.899	27.45
675.0	6.759	34.909	27.381	725.0	6.418	34.903	27.422	775.0	6.133	34.899	27.45
676.0	6.750	34.909	27.382	726.0	6.415	34.903	27.422	776.0	6.119	34.899	27.45
677.0	6.746	34.909	27.383	727.0	6.412	34.903	27.422	777.0	6.111	34.899	27.45
678.0	6.742	34.909	27\383	728.0	6.410	34.903	27.423	778.0	6.099	34.899	27.46
679.0	6.737	34.909	27.384	729.0	6.406	34.902	27.423	779.0	6.088	34.899	27.46
680.0	6.737	34.908	27.383	730.0	6.405	34.902	27.423	780.0	6.076	34.899	27.46
681.0	6.731	34.908	27.384	731.0	6.404	34.902	27.423	781.0	6.064	34.900	27.46
682.0	6.726	34.908	27.385	732.0	6.398	34.902	27.424	782.0	6.057	34.900	27.46
683.0	6.722	34.908	27.385	733.0	6.389	34.902	27.425	783.0	6.055	34.900	27.46
684.0	6.719	34.908	27.385	734.0	6.388	34.902	27.425	784.0	6.052	34.900	27.46
685.0	6.719	34.908	27.385	735.0	6.387	34.902	27.425	785.0	6.050	34.900	27.46
686.0	6.710	34.908	27.386	736.0	6.385	34.902	27.425	786.0	6.049	34.900	27.46
687.0	6.701	34.908	27.387	737.0	6.375	34.901	27.426	787.0	6.045	34.900	27.46
688.0	6.700	34.907	27.387	738.0	6.356	34.901	27.428	788.0	6.037	34.900	27.46
689.0	6.694	34.907	27.388	739.0	6.340	34.900	27.430	789.0	6.030	34.900	27.47
690.0	6.684	34.907	27.389	740.0	6.328	34.900	27.431	790.0	6.028	34.900	27.47
691.0	6.677	34.907	27.390	741.0	6.322	34.900	27.432	791.0	6.027	34.900	27.47
692.0	6.672	34.907	27.390	742.0	6.316	34.900	27.433	792.0	6.026	34.900	27.47
693.0	6.665	34.907	27.392	743.0	6.314	34.900	27.433	793.0	6.021	34.900	27.47
694.0	6.661	34.907	27.392	744.0	6.308	34.900	27.434	794.0	6.009	34.900	27.47
695.0	6.649	34.907	27.394	745.0	6.292	34.900	27.436	795.0	5.999	34.900	27.47
696.0	6.642	34.907	27.395	746.0	6.289	34.901	27.437	796.0	5.993	34.900	27.47
697.0	6.639	34.906	27.395	747.0	6.283	34.900	27.438	797.0	5.988	34.900	27.47
698.0	6.628	34.906	27.396	748.0	6.272	34.900	27.439	798.0	5.981	34.900	27.47
699.0	6.612	34.906	27.398	749.0	6.261	34.901	27.440	799.0	5.977	34.900	27.47
700.0	6.608	34.906	27.398	750.0	6.254	34.900	27.441	800.0	5.971	34.900	27.47
701.0	6.603	34.905	27.399	751.0	6.249	34.900	27.442	801.0	5.964	34.900	27.47
702.0	6.590	34.905	27.400	752.0	6.243	34.900	27.443	802.0	5.958	34.901	27.47
703.0	6.590	34.905	27.400	753.0	6.234	34.900	27.444	803.0	5.947	34.901	27.48
704.0	6.584	34.905	27.401	754.0	6.219	34.900	27.446	804.0	5.933	34.901	27.48
705.0	6.573	34.905	27.402	755.0	6.216	34.900	27.446	805.0	5.932	34.901	27.48
706.0	6.563	34.905	27.404	756.0	6.213	34.900	27.447	806.0	5.927	34.901	27.48
707.0	6.561	34.905	27.404	757.0	6.210	34.900	27.447	807.0	5.923	34.901	27.48
708.0	6.552	34.904	27.405	758.0	6.211	34.900	27.447	808.0	5.919	34.901	27.48
709.0	6.544	34.905	27.406	759.0	6.210	34.900	27.447	809.0	5.918	34.901	27.48
710.0	6.542	34.904	27.406	760.0	6.208	34.900	27.447	811.0	5.914	34.901	27.48
711.0	6.532	34.904	27.407	761.0	6.204	34.900	27.448	812.0	5.912	34.901	27.48
712.0	6.523	34.904	27.409	762.0	6.200	34.900	27.448	813.0	5.902	34.901	27.48
713.0	6.519	34.904	27.409	763.0	6.191	34.900	27.449	814.0	5.890	34.901	27.48

STATION G0406A.OUT CRUISE 91G04 DATE & TIME Sun Jun 16 16:31:23 1991, Julian day = 167
LAT 27 27.052N LON 94 58.795 DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

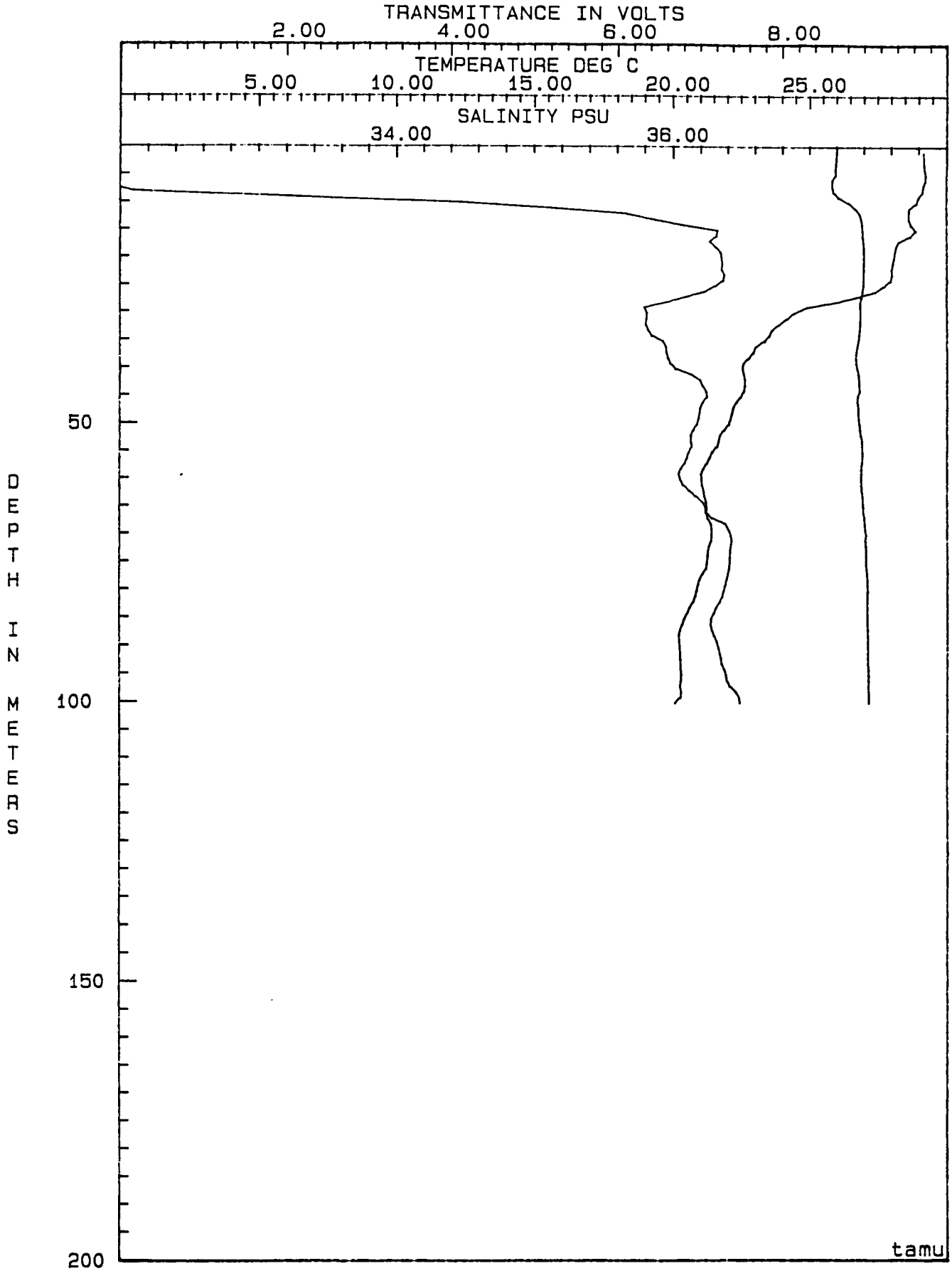
DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T	DEPTH	TEMP	SALT	SIGMA-T
815.0	5.887	34.901	27.490	866.0	5.597	34.907	27.530	916.0	5.322	34.917	27.572
816.0	5.881	34.901	27.490	867.0	5.596	34.908	27.531	917.0	5.311	34.918	27.573
817.0	5.874	34.901	27.491	868.0	5.593	34.908	27.531	918.0	5.303	34.918	27.575
818.0	5.865	34.902	27.493	869.0	5.592	34.908	27.531	919.0	5.298	34.918	27.575
819.0	5.861	34.902	27.493	870.0	5.590	34.908	27.531	920.0	5.297	34.918	27.575
820.0	5.851	34.902	27.495	871.0	5.582	34.908	27.533	921.0	5.296	34.918	27.576
821.0	5.845	34.902	27.495	872.0	5.554	34.909	27.537	922.0	5.295	34.918	27.576
822.0	5.842	34.902	27.496	873.0	5.543	34.910	27.539	923.0	5.288	34.919	27.577
823.0	5.839	34.902	27.496	874.0	5.535	34.910	27.540	924.0	5.292	34.919	27.577
824.0	5.839	34.902	27.496	875.0	5.528	34.910	27.541	925.0	5.292	34.919	27.576
825.0	5.836	34.902	27.497	876.0	5.524	34.910	27.542	926.0	5.291	34.919	27.576
826.0	5.830	34.902	27.497	877.0	5.506	34.911	27.544	927.0	5.281	34.919	27.578
827.0	5.818	34.902	27.499	878.0	5.499	34.911	27.545	928.0	5.275	34.919	27.579
828.0	5.814	34.902	27.500	879.0	5.499	34.911	27.545	929.0	5.275	34.919	27.579
829.0	5.809	34.903	27.500	880.0	5.498	34.911	27.545	930.0	5.265	34.920	27.581
830.0	5.807	34.903	27.501	881.0	5.497	34.911	27.545	931.0	5.265	34.920	27.581
831.0	5.805	34.903	27.501	882.0	5.495	34.911	27.546	932.0	5.262	34.920	27.581
832.0	5.802	34.903	27.501	883.0	5.495	34.911	27.546	933.0	5.262	34.920	27.581
833.0	5.798	34.903	27.502	884.0	5.494	34.911	27.546	934.0	5.260	34.920	27.581
834.0	5.793	34.903	27.502	885.0	5.493	34.911	27.546	935.0	5.237	34.921	27.585
835.0	5.785	34.903	27.504	886.0	5.488	34.911	27.547	936.0	5.231	34.921	27.586
836.0	5.781	34.903	27.504	887.0	5.484	34.911	27.548	937.0	5.226	34.921	27.586
837.0	5.776	34.903	27.505	888.0	5.482	34.911	27.548	938.0	5.224	34.921	27.587
838.0	5.771	34.903	27.506	889.0	5.480	34.911	27.548	939.0	5.223	34.921	27.587
839.0	5.768	34.903	27.506	890.0	5.476	34.912	27.549	940.0	5.222	34.922	27.587
840.0	5.768	34.903	27.506	891.0	5.468	34.912	27.550	941.0	5.216	34.922	27.588
841.0	5.765	34.903	27.506	892.0	5.464	34.912	27.551	942.0	5.205	34.922	27.590
842.0	5.761	34.904	27.507	893.0	5.459	34.912	27.551	943.0	5.200	34.922	27.590
843.0	5.757	34.904	27.508	894.0	5.448	34.913	27.553	944.0	5.186	34.923	27.593
844.0	5.755	34.904	27.508	895.0	5.443	34.913	27.553	945.0	5.165	34.924	27.596
846.0	5.743	34.903	27.509	896.0	5.437	34.913	27.554	946.0	5.152	34.924	27.598
847.0	5.727	34.904	27.512	897.0	5.433	34.913	27.555	947.0	5.160	34.924	27.596
848.0	5.718	34.904	27.513	898.0	5.424	34.914	27.556	948.0	5.148	34.924	27.598
849.0	5.710	34.905	27.514	899.0	5.417	34.914	27.557	949.0	5.140	34.925	27.599
850.0	5.704	34.905	27.515	900.0	5.414	34.914	27.558	950.0	5.133	34.925	27.600
851.0	5.699	34.905	27.516	901.0	5.392	34.915	27.561	951.0	5.137	34.925	27.600
852.0	5.695	34.905	27.516	902.0	5.389	34.915	27.562	952.0	5.138	34.925	27.600
853.0	5.689	34.905	27.517	903.0	5.387	34.915	27.562	953.0	5.138	34.925	27.600
854.0	5.686	34.905	27.518	904.0	5.382	34.915	27.563	954.0	5.140	34.924	27.599
855.0	5.681	34.905	27.518	905.0	5.374	34.915	27.564	954.0	5.131	34.925	27.601
856.0	5.675	34.905	27.519	906.0	5.369	34.915	27.564	953.0	5.134	34.925	27.600
857.0	5.662	34.906	27.521	907.0	5.365	34.916	27.565	952.0	5.134	34.925	27.600
858.0	5.659	34.906	27.521	908.0	5.360	34.916	27.566				
859.0	5.655	34.906	27.522	909.0	5.358	34.916	27.566				
860.0	5.647	34.906	27.523	910.0	5.346	34.916	27.568				
861.0	5.637	34.906	27.525	911.0	5.337	34.917	27.570				
862.0	5.619	34.907	27.527	912.0	5.335	34.917	27.570				
863.0	5.611	34.907	27.529	913.0	5.332	34.917	27.570				
864.0	5.608	34.907	27.529	914.0	5.330	34.917	27.571				
865.0	5.600	34.908	27.530	915.0	5.327	34.917	27.571				



CRUISE: 91G04 STATION: G0406A.0 DATE: Jun 16 16:31:23 1991
LATITUDE: 27 27.057N LONGITUDE: 94 58.795

STATION G04068.OUT CRUISE 91g04 DATE & TIME Mon Jun 17 09:40:37 1991, Julian day = 168
LAT 27 27.6 N LON 94 59.3 W DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	29.145	31.450	19.356	8.651
2.0	29.152	31.452	19.355	8.646
3.0	29.164	31.457	19.354	8.642
4.0	29.185	31.465	19.354	8.635
5.0	29.226	31.487	19.357	8.639
6.0	29.213	31.620	19.461	8.598
7.0	29.137	31.905	19.699	8.596
8.0	29.106	32.084	19.844	8.611
9.0	28.959	33.206	20.734	8.674
10.0	28.892	34.478	21.711	8.801
11.0	28.628	35.100	22.265	8.878
12.0	28.610	35.648	22.683	8.933
13.0	28.603	35.831	22.823	8.952
14.0	28.693	36.052	22.959	8.965
15.0	28.869	36.319	23.101	8.968
16.0	28.665	36.312	23.164	8.971
17.0	28.241	36.259	23.265	8.977
18.0	28.140	36.306	23.333	8.983
19.0	28.099	36.343	23.375	8.984
20.0	28.065	36.350	23.391	8.986
21.0	28.021	36.354	23.409	8.982
22.0	27.982	36.349	23.418	8.984
23.0	27.993	36.369	23.430	8.981
24.0	27.948	36.360	23.437	8.981
25.0	27.700	36.301	23.474	8.977
26.0	27.381	36.221	23.517	8.968
27.0	26.683	36.076	23.632	8.956
28.0	25.921	35.941	23.770	8.941
29.0	24.874	35.783	23.974	8.940
30.0	24.417	35.805	24.128	8.944
31.0	24.152	35.800	24.204	8.939
32.0	23.835	35.796	24.295	8.936
33.0	23.587	35.813	24.381	8.933
34.0	23.497	35.837	24.425	8.926
35.0	23.322	35.918	24.538	8.918
36.0	23.000	35.942	24.650	8.905
37.0	22.915	35.948	24.679	8.890
38.0	22.747	35.956	24.733	8.884
39.0	22.541	35.974	24.806	8.890
40.0	22.511	36.012	24.843	8.900
41.0	22.559	36.118	24.910	8.916
42.0	22.599	36.186	24.950	8.923
43.0	22.597	36.206	24.967	8.926
44.0	22.563	36.234	24.998	8.931
45.0	22.457	36.242	25.033	8.906
46.0	22.295	36.211	25.057	8.902
47.0	22.177	36.192	25.075	8.911
48.0	22.131	36.186	25.084	8.912
49.0	22.083	36.179	25.093	8.918
50.0	22.012	36.166	25.102	8.927
51.0	21.848	36.140	25.129	8.931
52.0	21.683	36.122	25.161	8.939
53.0	21.639	36.121	25.173	8.953
54.0	21.581	36.128	25.194	8.957
55.0	21.392	36.105	25.229	8.958
56.0	21.299	36.093	25.246	8.960
57.0	21.206	36.077	25.259	8.952
58.0	21.063	36.047	25.275	8.945
59.0	20.982	36.031	25.285	8.945
60.0	20.994	36.042	25.291	8.939
61.0	21.007	36.061	25.301	8.945
62.0	21.068	36.106	25.320	8.948
63.0	21.092	36.153	25.348	8.961
64.0	21.153	36.204	25.370	8.960
65.0	21.178	36.225	25.380	8.967
66.0	21.164	36.229	25.386	8.969
67.0	21.212	36.273	25.406	8.982
68.0	21.335	36.372	25.448	8.986
69.0	21.363	36.395	25.458	8.991
70.0	21.363	36.411	25.470	9.000
71.0	21.348	36.420	25.481	8.993
72.0	21.271	36.412	25.496	9.001
73.0	21.220	36.407	25.506	9.001
74.0	21.209	36.406	25.509	9.004
75.0	21.187	36.404	25.513	9.000
76.0	21.157	36.400	25.519	9.009
77.0	21.027	36.391	25.548	9.015
78.0	20.920	36.382	25.570	9.020
79.0	20.857	36.373	25.580	9.019
80.0	20.803	36.360	25.585	9.024
81.0	20.759	36.350	25.589	9.020
82.0	20.683	36.331	25.595	9.018
83.0	20.555	36.305	25.611	9.018
84.0	20.476	36.290	25.621	9.016
85.0	20.369	36.268	25.632	9.022
86.0	20.291	36.264	25.650	9.018
87.0	20.212	36.272	25.677	9.023
88.0	20.161	36.288	25.703	9.023
89.0	20.181	36.306	25.712	9.026
90.0	20.196	36.320	25.718	9.026
91.0	20.208	36.329	25.722	9.028
92.0	20.224	36.341	25.726	9.025
93.0	20.228	36.346	25.729	9.026
94.0	20.241	36.364	25.740	9.031
95.0	20.260	36.379	25.746	9.031
96.0	20.248	36.385	25.754	9.033
97.0	20.217	36.405	25.777	9.031
98.0	20.258	36.450	25.801	9.033
99.0	20.252	36.475	25.821	9.036
100.0	20.040	36.482	25.883	9.036



CRUISE: 91g04 STATION: G04068.0 DATE: Jun 17 09:40:37 1991
LATITUDE: 27 27.6 N LONGITUDE: 94 59.3 W

STATION G0407.OUT CRUISE 91g04 DATE & TIME Mon Jun 17 16:11:50 1991, Julian day = 168
LAT 27 45.827n LON 95 00.499w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	28.579	33.392	20.998	8.904
2.0	28.612	33.353	20.959	8.904
3.0	28.620	33.444	21.024	8.907
4.0	28.627	33.462	21.036	8.903
5.0	28.630	33.479	21.047	8.883
6.0	28.633	33.488	21.053	8.901
7.0	28.636	33.485	21.050	8.907
8.0	28.637	33.487	21.051	8.904
9.0	28.639	33.503	21.062	8.906
10.0	28.641	33.500	21.060	8.904
11.0	28.642	33.503	21.062	8.910
12.0	28.644	33.507	21.063	8.890
13.0	28.646	33.505	21.062	8.853
14.0	28.647	33.511	21.066	8.919
15.0	28.647	33.512	21.067	8.959
16.0	28.647	33.504	21.061	8.969
17.0	28.644	33.507	21.064	8.979
18.0	28.637	33.507	21.066	8.979
19.0	28.632	33.503	21.065	8.984
20.0	28.617	33.509	21.074	8.979
21.0	28.397	33.994	21.510	8.979
22.0	26.848	36.052	23.561	8.974
23.0	26.610	36.002	23.599	8.974
24.0	26.287	35.998	23.698	8.970
25.0	26.001	35.943	23.747	8.967
26.0	25.449	35.873	23.865	8.965
27.0	24.576	35.793	24.071	8.960
28.0	24.105	35.797	24.216	8.967
29.0	23.992	35.902	24.329	8.975
30.0	23.951	35.979	24.399	8.979
31.0	23.835	35.996	24.447	8.979
32.0	23.713	36.009	24.492	8.979
33.0	23.561	36.011	24.539	8.979
34.0	23.256	36.009	24.626	8.979
35.0	23.069	36.011	24.683	8.985
36.0	22.907	36.016	24.733	8.984
37.0	22.820	36.059	24.791	8.979
38.0	22.729	36.076	24.830	8.983
39.0	22.620	36.105	24.883	8.980
40.0	22.592	36.150	24.925	8.985
41.0	22.587	36.154	24.930	8.977
42.0	22.530	36.170	24.958	8.979
43.0	22.477	36.180	24.981	8.983
44.0	22.428	36.200	25.010	8.984
45.0	22.400	36.215	25.030	8.984
46.0	22.363	36.214	25.039	8.984
47.0	22.265	36.208	25.062	8.984
48.0	22.157	36.208	25.093	8.984
49.0	22.062	36.209	25.121	8.984
50.0	21.972	36.206	25.144	8.988
51.0	21.862	36.211	25.178	8.989
52.0	21.857	36.210	25.179	8.974
53.0	21.856	36.244	25.205	8.964
54.0	21.856	36.267	25.223	8.972
55.0	21.813	36.274	25.241	8.979
56.0	21.795	36.275	25.246	8.979
57.0	21.777	36.279	25.254	8.986
58.0	21.777	36.295	25.267	8.997
59.0	21.655	36.309	25.312	8.999
60.0	21.579	36.314	25.336	9.003
61.0	21.552	36.324	25.351	9.004
62.0	21.544	36.343	25.368	9.008
63.0	21.507	36.350	25.384	9.009
64.0	21.483	36.358	25.396	9.000
65.0	21.496	36.410	25.432	8.999
66.0	21.502	36.436	25.450	8.995
67.0	21.500	36.449	25.461	8.998
68.0	21.493	36.453	25.466	8.999
69.0	21.457	36.456	25.478	8.999
70.0	21.417	36.460	25.492	9.003
71.0	21.380	36.461	25.504	9.004
72.0	21.341	36.464	25.516	9.010
73.0	21.283	36.466	25.534	9.015
74.0	21.225	36.469	25.553	9.011
76.0	21.161	36.473	25.573	9.029
77.0	21.031	36.474	25.610	9.031
78.0	20.938	36.473	25.634	9.034
79.0	20.901	36.475	25.646	9.033
80.0	20.868	36.478	25.657	9.033
81.0	20.833	36.479	25.667	9.039
82.0	20.780	36.491	25.691	9.038
83.0	20.717	36.493	25.709	9.043
84.0	20.646	36.497	25.732	9.043
85.0	20.606	36.505	25.749	9.049
86.0	20.588	36.514	25.760	9.048
87.0	20.530	36.512	25.775	9.050
88.0	20.465	36.509	25.791	9.048
89.0	20.420	36.508	25.802	9.057
90.0	20.368	36.508	25.815	9.057
91.0	20.272	36.519	25.850	9.063
92.0	20.168	36.513	25.873	9.062
93.0	20.066	36.509	25.897	9.062
94.0	19.999	36.509	25.915	9.058
95.0	19.951	36.509	25.928	9.062
96.0	19.910	36.508	25.938	9.057
97.0	19.829	36.508	25.959	9.064
98.0	19.664	36.500	25.996	9.062
99.0	19.560	36.496	26.021	9.066
100.0	19.482	36.491	26.037	9.063
101.0	19.378	36.483	26.059	9.062

STATION G0407.OUT CRUISE 91g04 DATE & TIME Mon Jun 17 16:11:50 1991, Julian day = 168
LAT 27 45.827n LON 95 00.499w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
102.0	19.256	36.476	26.085	9.052
103.0	19.119	36.469	26.115	9.064
104.0	19.059	36.467	26.129	9.063
105.0	19.027	36.466	26.136	9.065
106.0	18.998	36.464	26.143	9.067
107.0	18.964	36.462	26.150	9.067
108.0	18.936	36.460	26.156	9.067
109.0	18.918	36.458	26.159	9.067
111.0	18.895	36.456	26.163	9.067
112.0	18.887	36.455	26.164	9.070
113.0	18.878	36.453	26.165	9.067
114.0	18.866	36.452	26.167	9.061
115.0	18.858	36.451	26.168	9.068
116.0	18.824	36.448	26.175	9.067
117.0	18.802	36.447	26.179	9.067
118.0	18.792	36.446	26.181	9.067
119.0	18.780	36.445	26.183	9.067
120.0	18.766	36.445	26.187	9.067
121.0	18.756	36.443	26.188	9.070
122.0	18.721	36.441	26.195	9.072
123.0	18.696	36.439	26.201	9.067
124.0	18.667	36.437	26.207	9.072
125.0	18.645	36.436	26.211	9.072
126.0	18.614	36.432	26.217	9.068
127.0	18.559	36.428	26.227	9.072
128.0	18.513	36.424	26.235	9.072
129.0	18.430	36.415	26.250	9.072
130.0	18.314	36.407	26.273	9.074
131.0	18.252	36.400	26.283	9.072
132.0	18.176	36.395	26.298	9.072
133.0	18.130	36.391	26.307	9.072
134.0	18.051	36.383	26.321	9.078
135.0	17.967	36.377	26.336	9.077
136.0	17.922	36.373	26.344	9.058
137.0	17.892	36.369	26.349	9.079
138.0	17.843	36.363	26.356	9.077
139.0	17.707	36.345	26.376	9.077
140.0	17.609	36.339	26.395	9.077
141.0	17.559	36.333	26.403	9.077
142.0	17.537	36.330	26.407	9.077
143.0	17.496	36.324	26.412	9.077
144.0	17.435	36.315	26.420	9.075
145.0	17.317	36.301	26.438	9.073
146.0	17.208	36.288	26.454	9.072
147.0	17.098	36.275	26.471	9.077
148.0	16.995	36.266	26.489	9.077
149.0	16.954	36.260	26.494	9.082
150.0	16.922	36.256	26.498	9.082
151.0	16.860	36.247	26.507	9.085
152.0	16.760	36.234	26.520	9.087

DEPTH	TEMP	SALT	SIGMA-T	XSM
153.0	16.624	36.218	26.540	9.092
154.0	16.573	36.210	26.546	9.092
155.0	16.527	36.204	26.552	9.092
156.0	16.492	36.199	26.557	9.092
157.0	16.466	36.195	26.559	9.092
158.0	16.441	36.190	26.562	9.092
159.0	16.393	36.183	26.567	9.092
160.0	16.329	36.172	26.574	9.092
161.0	16.254	36.162	26.584	9.092
162.0	16.196	36.155	26.592	9.092
163.0	16.165	36.151	26.596	9.096
164.0	16.134	36.146	26.599	9.090
165.0	16.115	36.142	26.601	9.094
166.0	16.079	36.136	26.604	9.092
167.0	16.030	36.128	26.610	9.095
168.0	15.972	36.119	26.616	9.092
169.0	15.894	36.105	26.623	9.098
170.0	15.791	36.092	26.637	9.094
171.0	15.756	36.087	26.641	9.096
172.0	15.729	36.082	26.643	9.096
173.0	15.703	36.077	26.646	9.092
174.0	15.674	36.073	26.649	9.092
175.0	15.592	36.060	26.657	9.095
176.0	15.551	36.053	26.662	9.092
177.0	15.530	36.051	26.665	9.092
178.0	15.513	36.049	26.667	9.092
179.0	15.496	36.046	26.669	9.094
180.0	15.466	36.041	26.672	9.096
181.0	15.434	36.036	26.675	9.096
182.0	15.402	36.032	26.679	9.096
183.0	15.378	36.028	26.681	9.090
184.0	15.332	36.020	26.686	9.094
185.0	15.277	36.010	26.690	9.096
186.0	15.221	36.003	26.697	9.096
187.0	15.177	35.994	26.700	9.090
188.0	15.148	35.991	26.704	9.092
189.0	15.114	35.985	26.708	9.092
190.0	15.072	35.979	26.712	9.092
191.0	15.019	35.970	26.717	9.092
192.0	14.948	35.958	26.724	9.092
193.0	14.870	35.948	26.732	9.094
194.0	14.815	35.940	26.739	9.092
195.0	14.790	35.936	26.741	9.092
196.0	14.757	35.930	26.743	9.092
197.0	14.677	35.918	26.752	9.096
198.0	14.637	35.913	26.756	9.093
199.0	14.615	35.909	26.759	9.092
200.0	14.598	35.907	26.760	9.096
201.0	14.577	35.902	26.762	9.096
202.0	14.549	35.898	26.764	9.096

STATION G0407.OUT CRUISE 91g04 DATE & TIME Mon Jun 17 16:11:50 1991, Julian day = 168
LAT 27 45.827n LON 95 00.499w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

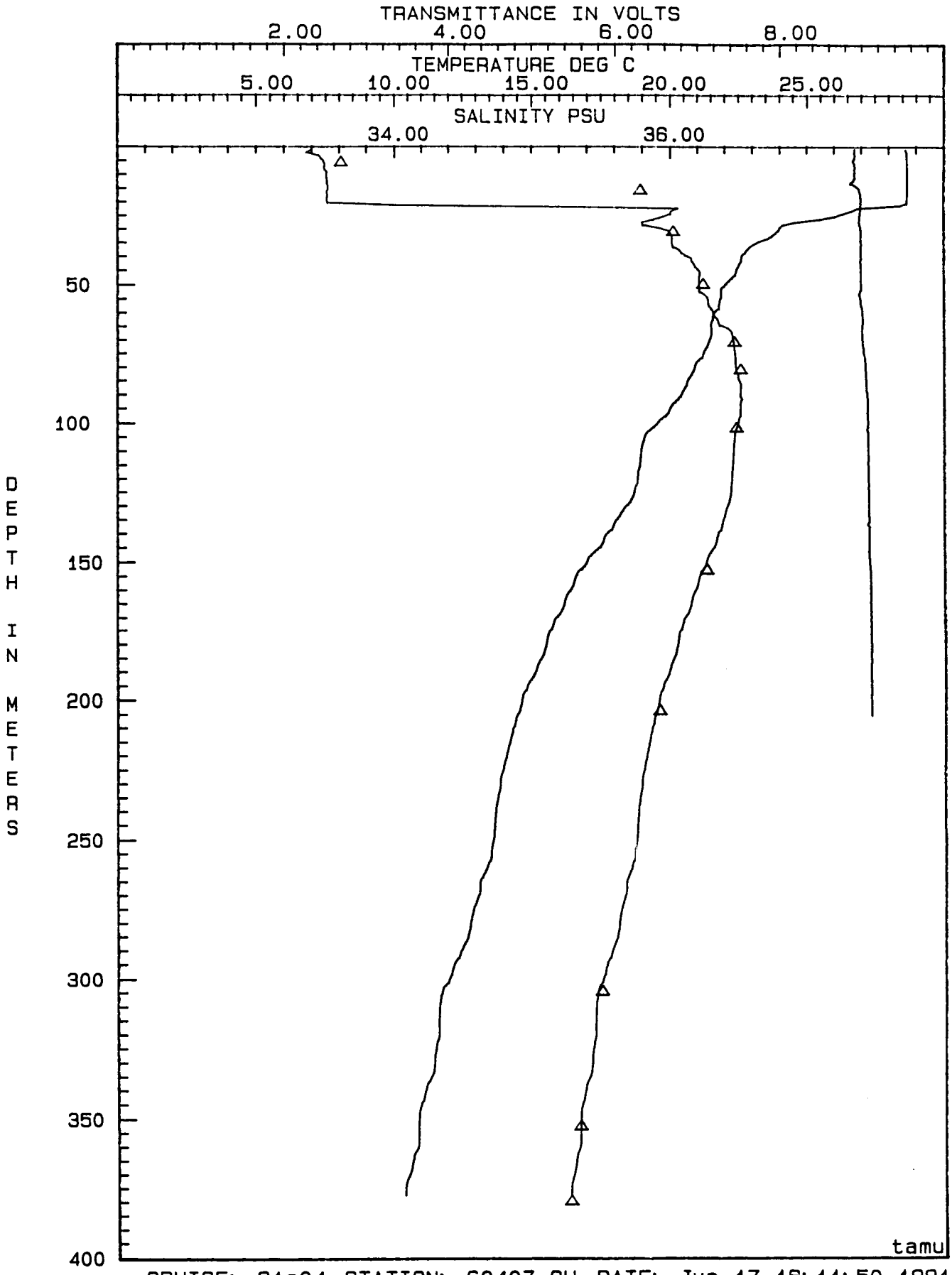
DEPTH	TEMP	SALT	SIGMA-T
203.0	14.528	35.895	26.767
204.0	14.491	35.888	26.769
205.0	14.429	35.878	26.775
206.0	14.388	35.874	26.781
207.0	14.370	35.870	26.781
208.0	14.354	35.868	26.783
209.0	14.321	35.861	26.785
210.0	14.277	35.855	26.790
211.0	14.260	35.850	26.790
212.0	14.227	35.846	26.793
213.0	14.198	35.842	26.796
214.0	14.180	35.839	26.799
215.0	14.152	35.835	26.801
216.0	14.118	35.831	26.806
217.0	14.097	35.827	26\807
218.0	14.076	35.824	26.809
219.0	14.049	35.820	26.811
220.0	14.038	35.817	26.811
221.0	13.999	35.811	26.815
222.0	13.972	35.807	26.817
223.0	13.939	35.802	26.821
224.0	13.928	35.800	26.822
225.0	13.901	35.796	26.824
226.0	13.863	35.790	26.827
227.0	13.835	35.786	26.830
228.0	13.821	35.784	26.832
229.0	13.815	35.783	26.833
230.0	13.816	35.783	26.832
231.0	13.809	35.781	26.832
232.0	13.785	35.777	26.834
233.0	13.759	35.773	26.836
234.0	13.735	35.769	26.839
235.0	13.719	35.767	26.841
236.0	13.703	35.765	26.842
237.0	13.681	35.761	26.844
238.0	13.660	35.758	26.845
239.0	13.649	35.757	26.847
240.0	13.644	35.756	26.847
241.0	13.638	35.755	26.848
242.0	13.624	35.752	26.849
243.0	13.616	35.751	26.849
244.0	13.609	35.750	26.850
245.0	13.604	35.749	26.850
246.0	13.598	35.748	26.851
247.0	13.590	35.747	26.852
248.0	13.587	35.746	26.852
249.0	13.576	35.744	26.852
250.0	13.552	35.740	26.854
251.0	13.529	35.737	26.856
252.0	13.513	35.735	26.858

DEPTH	TEMP	SALT	SIGMA-T
253.0	13.497	35.732	26.860
254.0	13.488	35.731	26.860
255.0	13.483	35.730	26.860
256.0	13.475	35.728	26.861
257.0	13.456	35.724	26.862
258.0	13.392	35.714	26.867
259.0	13.353	35.708	26.870
260.0	13.322	35.704	26.874
261.0	13.277	35.696	26.877
262.0	13.218	35.687	26.881
263.0	13.176	35.680	26.885
264.0	13.113	35.670	26.890
265.0	13.079	35.667	26.894
266.0	13.080	35.667	26.894
267.0	13.076	35.666	26.894
268.0	13.072	35.666	26.895
269.0	13.064	35.663	26.895
270.0	13.020	35.657	26.898
271.0	12.982	35.651	26.902
272.0	12.948	35.645	26.904
273.0	12.910	35.639	26.907
274.0	12.865	35.633	26.911
275.0	12.843	35.630	26.913
276.0	12.814	35.625	26.916
277.0	12.784	35.621	26.918
278.0	12.770	35.618	26.919
279.0	12.746	35.615	26.922
280.0	12.735	35.614	26.923
281.0	12.720	35.612	26.924
282.0	12.704	35.609	26.925
283.0	12.681	35.606	26.927
284.0	12.652	35.602	26.930
285.0	12.631	35.598	26.931
286.0	12.593	35.591	26.934
287.0	12.532	35.583	26.939
288.0	12.482	35.576	26.944
289.0	12.440	35.569	26.946
290.0	12.380	35.561	26.951
291.0	12.354	35.557	26.954
292.0	12.323	35.552	26.956
293.0	12.237	35.538	26.962
294.0	12.164	35.529	26.969
295.0	12.131	35.523	26.971
296.0	12.092	35.517	26.974
297.0	12.068	35.514	26.976
298.0	12.051	35.511	26.977
299.0	11.996	35.502	26.981
300.0	11.955	35.497	26.985
301.0	11.928	35.492	26.986
302.0	11.829	35.475	26.992

STATION G0407.OUT CRUISE 91g04 DATE & TIME Mon Jun 17 16:11:50 1991, Julian day = 168
LAT 27 45.827n LON 95 00.499w DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T
303.0	11.740	35.465	27.001
304.0	11.714	35.463	27.004
305.0	11.692	35.458	27.005
306.0	11.657	35.454	27.008
307.0	11.640	35.452	27.009
308.0	11.625	35.449	27.010
309.0	11.609	35.447	27.012
310.0	11.601	35.446	27.012
311.0	11.598	35.446	27.013
312.0	11.591	35.445	27.013
313.0	11.589	35.444	27.013
314.0	11.588	35.444	27.013
315.0	11.587	35.444	27.013
316.0	11.585	35.443	27.013
317.0	11.586	35.443	27.013
318.0	11.586	35.443	27.013
319.0	11.586	35.443	27.013
320.0	11.586	35.443	27.012
321.0	11.562	35.439	27.014
322.0	11.521	35.434	27.018
323.0	11.497	35.430	27.020
324.0	11.491	35.429	27.020
325.0	11.470	35.426	27.021
326.0	11.447	35.423	27.023
327.0	11.428	35.420	27.024
328.0	11.419	35.419	27.025
329.0	11.420	35.419	27.025
330.0	11.413	35.417	27.025
331.0	11.402	35.416	27.026
332.0	11.391	35.413	27.026
333.0	11.376	35.411	27.027
334.0	11.337	35.405	27.030
335.0	11.288	35.398	27.034
336.0	11.229	35.389	27.037
337.0	11.160	35.380	27.043
338.0	11.121	35.375	27.046
339.0	11.105	35.373	27.047
340.0	11.068	35.367	27.049
341.0	11.048	35.364	27.051
342.0	11.027	35.361	27.052
343.0	11.001	35.357	27.054
344.0	10.940	35.349	27.059
345.0	10.911	35.344	27.060
346.0	10.876	35.339	27.063
347.0	10.853	35.337	27.065
348.0	10.843	35.336	27.066
349.0	10.837	35.335	27.067
350.0	10.836	35.334	27.066
351.0	10.827	35.333	27.067
352.0	10.822	35.333	27.068

DEPTH	TEMP	SALT	SIGMA-T
353.0	10.821	35.333	27.068
354.0	10.822	35.333	27.068
355.0	10.821	35.333	27.068
356.0	10.819	35.332	27.068
357.0	10.818	35.332	27.068
358.0	10.817	35.332	27.068
359.0	10.812	35.331	27.068
360.0	10.793	35.328	27.069
361.0	10.749	35.321	27.072
362.0	10.674	35.312	27.078
363.0	10.641	35.308	27.081
364.0	10.629	35.306	27.081
365.0	10.601	35.302	27.083
366.0	10.586	35.300	27.084
367.0	10.571	35.298	27.085
368.0	10.541	35.294	27.087
369.0	10.510	35.289	27.089
370.0	10.475	35.284	27.092
371.0	10.424	35.278	27.096
372.0	10.385	35.273	27.099
373.0	10.357	35.269	27.101
374.0	10.343	35.267	27.102
375.0	10.343	35.267	27.102
376.0	10.334	35.266	27.102
377.0	10.330	35.265	27.102



CRUISE: 91g04 STATION: G0407.0U DATE: Jun 17 16: 11: 50 1991
LATITUDE: 27 45.827n LONGITUDE: 95 00.499w
TRIANGLES DENOTE DISCRETE SAMPLES

STATION G0407A.OUT CRUISE 91g04 DATE & TIME Tue Jun 18 00:30:30 1991, Julian day = 169
LAT 27 44.6 N LON 95 00.0 W DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	28.968	33.313	20.811	8.929
2.0	28.970	33.313	20.810	8.930
3.0	28.964	33.314	20.813	8.924
4.0	28.961	33.314	20.814	8.923
5.0	28.942	33.320	20.825	8.911
6.0	28.897	33.330	20.847	8.833
7.0	28.838	33.336	20.871	8.805
8.0	28.818	33.338	20.880	8.905
9.0	28.799	33.342	20.889	8.891
10.0	28.785	33.378	20.920	8.900
11.0	28.787	33.412	20.945	8.898
12.0	28.787	33.469	20.988	8.896
13.0	28.792	33.520	21.024	8.892
14.0	28.793	33.668	21.135	8.897
15.0	28.743	34.102	21.478	8.926
16.0	28.625	34.384	21.729	8.926
17.0	28.449	34.769	22.076	8.930
18.0	28.287	35.144	22.411	8.961
19.0	28.134	35.644	22.837	8.974
20.0	28.048	35.946	23.093	8.993
21.0	27.931	36.020	23.187	8.996
22.0	27.752	36.084	23.293	8.994
23.0	27.660	36.145	23.369	8.998
24.0	27.597	36.149	23.393	8.999
25.0	27.526	36.130	23.401	8.994
26.0	26.860	35.978	23.501	8.984
27.0	26.300	35.915	23.632	8.982
28.0	26.001	35.877	23.697	8.989
29.0	25.616	35.821	23.775	8.989
30.0	25.267	35.789	23.858	8.984
31.0	24.918	35.772	23.952	8.984
32.0	24.451	35.783	24.101	8.991
33.0	24.210	35.789	24.178	8.996
34.0	24.065	35.799	24.229	9.000
35.0	23.960	35.831	24.285	9.007
36.0	23.947	35.887	24.331	9.008
37.0	23.956	35.954	24.379	9.007
38.0	23.981	36.021	24.422	9.004
39.0	23.933	36.070	24.473	9.004
40.0	23.819	36.092	24.524	9.004
41.0	23.624	36.090	24.580	9.009
42.0	23.470	36.084	24.621	9.015
43.0	23.283	36.075	24.669	9.014
44.0	23.170	36.084	24.708	9.019
45.0	23.097	36.130	24.764	9.020
46.0	23.093	36.186	24.809	9.023
47.0	23.105	36.260	24.861	9.018
48.0	23.074	36.301	24.901	9.014
49.0	22.997	36.310	24.930	9.009
50.0	22.885	36.296	24.952	9.011

DEPTH	TEMP	SALT	SIGMA-T	XSM
51.0	22.790	36.278	24.977	9.008
52.0	22.718	36.297	25.000	9.014
53.0	22.658	36.340	25.050	9.008
54.0	22.603	36.350	25.073	9.011
55.0	22.555	36.351	25.089	9.009
56.0	22.496	36.360	25.112	8.995
57.0	22.429	36.385	25.151	8.983
58.0	22.382	36.400	25.175	8.980
59.0	22.316	36.409	25.201	8.979
60.0	22.257	36.424	25.229	8.967
61.0	22.213	36.433	25.249	8.969
62.0	22.183	36.435	25.259	8.974
63.0	22.121	36.436	25.276	8.986
64.0	22.068	36.434	25.290	8.999
65.0	21.940	36.407	25.305	9.006
66.0	21.770	36.394	25.344	9.011
67.0	21.661	36.385	25.367	9.009
68.0	21.529	36.384	25.403	9.014
69.0	21.484	36.407	25.434	9.018
70.0	21.459	36.419	25.450	9.023
71.0	21.422	36.422	25.462	9.030
72.0	21.389	36.432	25.479	9.035
73.0	21.365	36.456	25.504	9.038
74.0	21.318	36.463	25.522	9.045
75.0	21.228	36.465	25.549	9.054
76.0	21.083	36.460	25.585	9.052
77.0	21.017	36.456	25.600	9.065
78.0	20.931	36.454	25.622	9.069
79.0	20.802	36.445	25.650	9.072
80.0	20.766	36.452	25.666	9.069
81.0	20.763	36.460	25.672	9.072
82.0	20.766	36.478	25.685	9.077
83.0	20.748	36.495	25.703	9.079
84.0	20.726	36.504	25.715	9.082
85.0	20.708	36.505	25.721	9.082
86.0	20.591	36.504	25.752	9.089
87.0	20.400	36.503	25.803	9.096
88.0	20.332	36.504	25.822	9.092
89.0	20.320	36.504	25.826	9.098
90.0	20.245	36.507	25.848	9.098
91.0	20.062	36.505	25.895	9.108
92.0	19.995	36.508	25.915	9.106
93.0	19.959	36.508	25.924	9.106
94.0	19.904	36.509	25.940	9.113
95.0	19.784	36.506	25.969	9.108
96.0	19.730	36.512	25.989	9.116
97.0	19.685	36.512	26.000	9.116
98.0	19.614	36.509	26.017	9.116
99.0	19.526	36.509	26.040	9.118
100.0	19.484	36.511	26.052	9.117

STATION G0407A.OUT CRUISE 91g04 DATE & TIME Tue Jun 18 00:30:30 1991, Julian day = 169
LAT 27 44.6 N LON 95 00.0 W DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

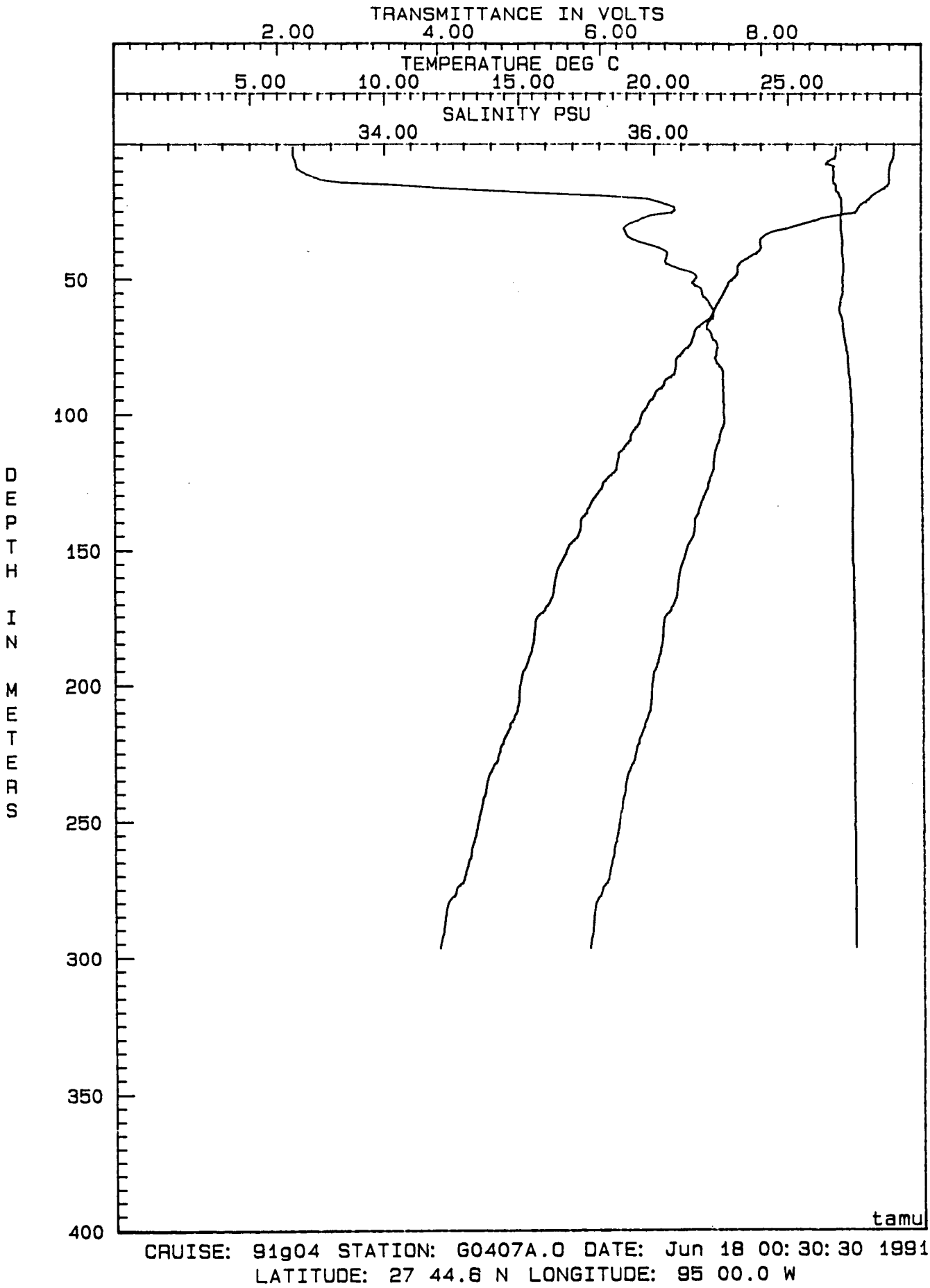
DEPTH	TEMP	SALT	SIGMA-T	XSM
101.0	19.452	36.515	26.064	9.120
102.0	19.427	36.516	26.071	9.121
103.0	19.396	36.513	26.077	9.116
104.0	19.329	36.506	26.089	9.112
105.0	19.245	36.497	26.104	9.117
106.0	19.169	36.488	26.116	9.121
107.0	19.108	36.481	26.127	9.121
108.0	19.071	36.478	26.134	9.121
109.0	19.068	36.476	26.134	9.118
110.0	18.990	36.467	26.146	9.114
111.0	18.894	36.458	26.165	9.116
112.0	18.830	36.452	26.176	9.113
113.0	18.740	36.445	26.194	9.116
114.0	18.629	36.440	26.219	9.112
115.0	18.633	36.437	26.215	9.115
116.0	18.610	36.435	26.219	9.116
117.0	18.586	36.432	26.223	9.116
118.0	18.567	36.430	26.227	9.116
119.0	18.551	36.429	26.229	9.116
120.0	18.537	36.428	26.232	9.116
121.0	18.466	36.421	26.245	9.116
122.0	18.357	36.413	26.267	9.118
123.0	18.241	36.404	26.289	9.121
124.0	18.153	36.399	26.307	9.125
125.0	18.054	36.390	26.325	9.126
126.0	18.024	36.387	26.330	9.126
127.0	17.998	36.385	26.335	9.126
128.0	17.912	36.373	26.347	9.126
129.0	17.846	36.365	26.357	9.126
130.0	17.764	36.355	26.369	9.126
131.0	17.682	36.346	26.384	9.124
132.0	17.617	36.338	26.393	9.125
133.0	17.572	36.331	26.399	9.126
134.0	17.529	36.324	26.404	9.121
135.0	17.458	36.317	26.416	9.121
136.0	17.444	36.314	26.417	9.116
137.0	17.362	36.304	26.429	9.118
138.0	17.255	36.290	26.445	9.121
139.0	17.212	36.287	26.453	9.115
140.0	17.206	36.287	26.454	9.118
141.0	17.205	36.286	26.454	9.116
142.0	17.195	36.285	26.455	9.119
143.0	17.164	36.281	26.460	9.121
144.0	17.129	36.277	26.465	9.121
145.0	17.081	36.269	26.470	9.121
146.0	16.979	36.257	26.485	9.121
147.0	16.874	36.244	26.501	9.121
148.0	16.778	36.232	26.514	9.121
149.0	16.742	36.228	26.520	9.121
150.0	16.692	36.221	26.526	9.121

DEPTH	TEMP	SALT	SIGMA-T	XSM
151.0	16.666	36.216	26.529	9.121
152.0	16.597	36.209	26.540	9.121
153.0	16.550	36.204	26.547	9.118
154.0	16.497	36.196	26.553	9.121
155.0	16.443	36.188	26.560	9.130
156.0	16.388	36.181	26.567	9.131
157.0	16.349	36.175	26.572	9.131
158.0	16.319	36.171	26.576	9.131
159.0	16.303	36.168	26.577	9.131
160.0	16.278	36.165	26.580	9.133
161.0	16.255	36.161	26.583	9.131
162.0	16.237	36.159	26.585	9.131
163.0	16.229	36.158	26.586	9.131
164.0	16.208	36.155	26.589	9.133
165.0	16.201	36.153	26.589	9.136
166.0	16.175	36.150	26.593	9.136
167.0	16.150	36.146	26.596	9.133
168.0	16.098	36.137	26.601	9.136
169.0	16.062	36.131	26.605	9.130
170.0	15.993	36.122	26.614	9.133
171.0	15.907	36.110	26.624	9.131
172.0	15.892	36.106	26.625	9.135
173.0	15.818	36.094	26.632	9.134
174.0	15.684	36.073	26.646	9.135
175.0	15.596	36.060	26.657	9.136
176.0	15.551	36.055	26.663	9.129
177.0	15.538	36.052	26.664	9.136
178.0	15.535	36.050	26.663	9.136
179.0	15.517	36.048	26.666	9.136
180.0	15.507	36.047	26.667	9.136
181.0	15.497	36.046	26.669	9.136
182.0	15.486	36.046	26.671	9.136
183.0	15.482	36.044	26.670	9.136
184.0	15.470	36.041	26.671	9.131
185.0	15.444	36.037	26.674	9.136
186.0	15.408	36.032	26.677	9.133
187.0	15.403	36.029	26.677	9.136
188.0	15.373	36.026	26.681	9.133
189.0	15.321	36.017	26.686	9.136
190.0	15.295	36.012	26.688	9.136
191.0	15.262	36.010	26.693	9.133
192.0	15.215	36.000	26.697	9.133
193.0	15.194	35.997	26.699	9.135
194.0	15.143	35.989	26.704	9.136
195.0	15.077	35.978	26.710	9.133
196.0	15.055	35.976	26.713	9.135
197.0	15.031	35.973	26.717	9.136
198.0	15.014	35.970	26.718	9.130
199.0	14.987	35.966	26.721	9.131
200.0	14.967	35.964	26.724	9.131

STATION G0407A.OUT CRUISE 91g04 DATE & TIME Tue Jun 18 00:30:30 1991, Julian day = 169
LAT 27 44.6 N LON 95 00.0 W DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
201.0	14.956	35.962	26.724	9.131
202.0	14.947	35.961	26.725	9.133
203.0	14.945	35.959	26.725	9.131
204.0	14.938	35.958	26.725	9.131
205.0	14.929	35.957	26.727	9.131
206.0	14.926	35.957	26.727	9.136
207.0	14.905	35.953	26.729	9.130
208.0	14.875	35.949	26.732	9.134
209.0	14.876	35.949	26.732	9.136
210.0	14.828	35.940	26.736	9.130
211.0	14.760	35.932	26.745	9.128
212.0	14.736	35.928	26.747	9.131
213.0	14.685	35.918	26.750	9.131
214.0	14.603	35.909	26.761	9.131
215.0	14.603	35.908	26.760	9.133
216.0	14.554	35.898	26.763	9.130
217.0	14.506	35.891	26.769	9.131
218.0	14.461	35.885	26.773	9.135
219.0	14.397	35.873	26.778	9.136
220.0	14.358	35.867	26.782	9.136
221.0	14.340	35.866	26.784	9.136
222.0	14.266	35.853	26.790	9.136
223.0	14.226	35.849	26.796	9.136
224.0	14.221	35.845	26.794	9.136
225.0	14.183	35.839	26.798	9.136
226.0	14.154	35.838	26.803	9.136
227.0	14.138	35.833	26.803	9.136
228.0	14.101	35.826	26.805	9.136
229.0	14.005	35.813	26.815	9.130
230.0	13.963	35.806	26.819	9.136
231.0	13.919	35.798	26.822	9.136
232.0	13.859	35.787	26.826	9.136
233.0	13.806	35.781	26.833	9.133
234.0	13.781	35.776	26.834	9.135
235.0	13.750	35.772	26.837	9.136
236.0	13.732	35.768	26.838	9.131
237.0	13.715	35.765	26.839	9.131
238.0	13.702	35.765	26.842	9.134
239.0	13.692	35.763	26.842	9.131
240.0	13.666	35.758	26.844	9.131
241.0	13.614	35.751	26.849	9.137
242.0	13.591	35.747	26.852	9.133
243.0	13.578	35.745	26.852	9.136
244.0	13.548	35.741	26.855	9.136
245.0	13.539	35.740	26.857	9.136
246.0	13.514	35.735	26.858	9.136
247.0	13.481	35.730	26.861	9.136
248.0	13.459	35.728	26.864	9.136
249.0	13.446	35.724	26.864	9.136
250.0	13.419	35.721	26.867	9.136

DEPTH	TEMP	SALT	SIGMA-T	XSM
251.0	13.392	35.717	26.870	9.126
252.0	13.390	35.717	26.870	9.132
253.0	13.353	35.711	26.873	9.135
254.0	13.338	35.709	26.874	9.136
255.0	13.324	35.705	26.874	9.136
256.0	13.288	35.698	26.876	9.136
257.0	13.270	35.699	26.881	9.136
258.0	13.230	35.689	26.881	9.136
259.0	13.190	35.683	26.885	9.136
260.0	13.166	35.680	26.887	9.138
261.0	13.161	35.679	26.887	9.135
262.0	13.155	35.677	26.887	9.136
263.0	13.127	35.672	26.888	9.136
264.0	13.075	35.665	26.894	9.136
265.0	13.050	35.663	26.897	9.136
266.0	13.036	35.659	26.897	9.136
267.0	12.999	35.653	26.900	9.136
268.0	12.956	35.648	26.905	9.136
269.0	12.948	35.646	26.905	9.136
270.0	12.919	35.641	26.907	9.136
271.0	12.893	35.638	26.910	9.138
272.0	12.854	35.631	26.912	9.135
273.0	12.744	35.612	26.920	9.136
274.0	12.628	35.596	26.930	9.138
275.0	12.599	35.591	26.932	9.138
276.0	12.581	35.587	26.932	9.140
277.0	12.535	35.580	26.936	9.140
278.0	12.404	35.561	26.947	9.140
279.0	12.335	35.552	26.954	9.140
280.0	12.284	35.543	26.956	9.140
281.0	12.263	35.540	26.958	9.138
282.0	12.238	35.537	26.961	9.135
283.0	12.228	35.534	26.961	9.136
284.0	12.210	35.532	26.962	9.138
285.0	12.192	35.530	26.964	9.140
286.0	12.176	35.527	26.965	9.140
287.0	12.170	35.526	26.966	9.140
288.0	12.155	35.524	26.967	9.140
289.0	12.139	35.522	26.969	9.140
290.0	12.135	35.522	26.969	9.140
291.0	12.126	35.520	26.970	9.140
292.0	12.089	35.515	26.972	9.138
293.0	12.056	35.510	26.975	9.136
294.0	12.035	35.507	26.977	9.138
295.0	12.011	35.504	26.979	9.139
296.0	11.996	35.501	26.980	9.139



CRUISE: 91g04 STATION: G0407A.0 DATE: Jun 18 00:30:30 1991
LATITUDE: 27 44.6 N LONGITUDE: 95 00.0 W

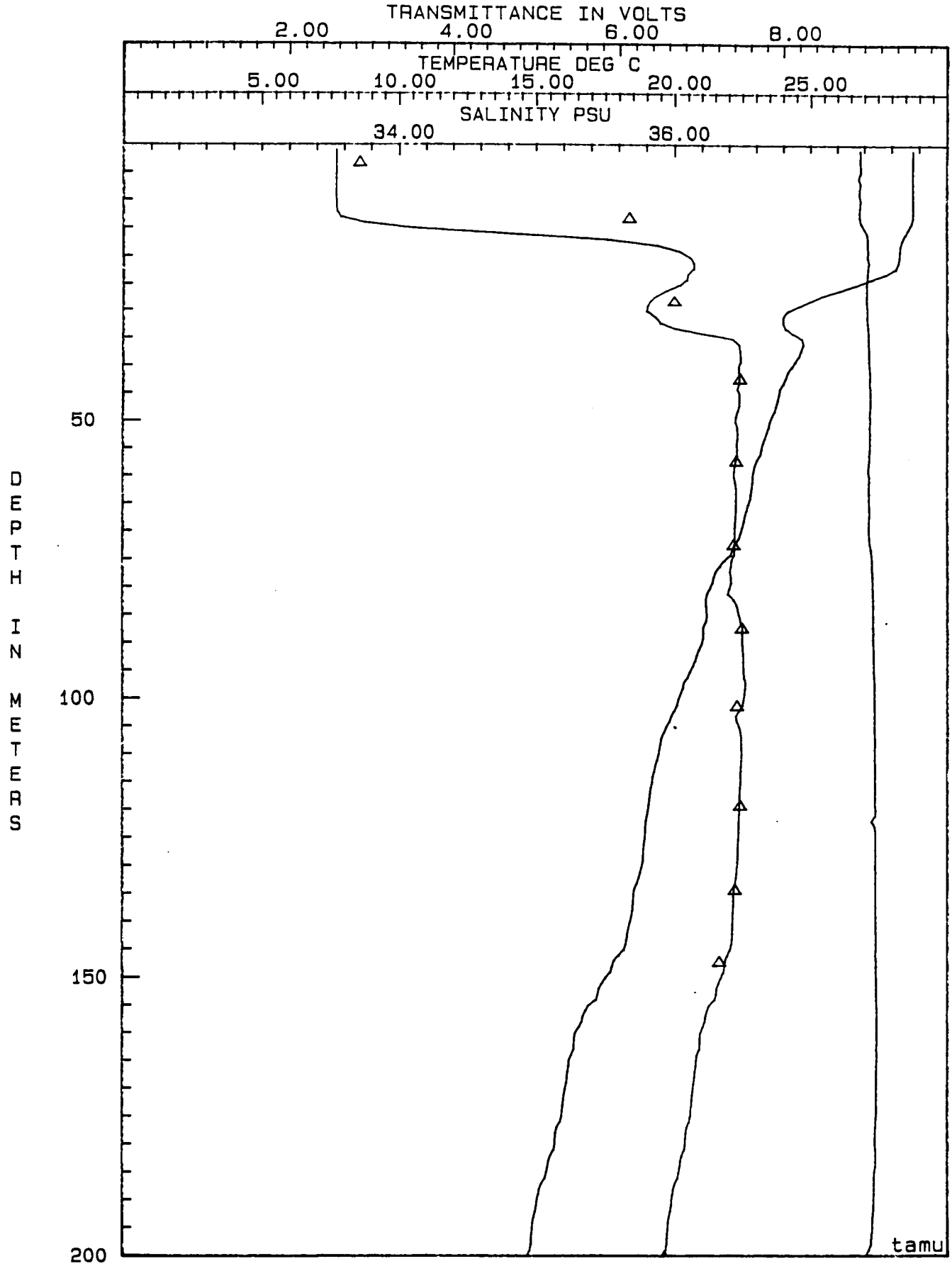
STATION G0408.OUT CRUISE 91g04 DATE & TIME Tue Jun 18 07:50:59 1991, Julian day = 169
LAT 27 49.8 N LON 95 00.0 W DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	28.738	33.536	21.055	8.933
2.0	28.737	33.536	21.055	8.937
3.0	28.736	33.536	21.055	8.931
4.0	28.737	33.536	21.055	8.941
5.0	28.738	33.536	21.054	8.938
6.0	28.738	33.536	21.054	8.915
7.0	28.741	33.536	21.053	8.938
8.0	28.741	33.536	21.053	8.930
9.0	28.743	33.537	21.054	8.924
10.0	28.745	33.539	21.054	8.939
11.0	28.746	33.540	21.055	8.933
12.0	28.745	33.544	21.058	8.926
13.0	28.741	33.570	21.079	8.926
14.0	28.685	33.737	21.223	8.940
15.0	28.579	34.094	21.526	8.978
16.0	28.466	34.811	22.102	9.016
17.0	28.348	35.510	22.666	9.028
18.0	28.286	35.872	22.959	9.023
19.0	28.259	36.031	23.087	9.031
20.0	28.248	36.107	23.148	9.024
21.0	28.205	36.138	23.185	9.041
22.0	28.124	36.140	23.214	9.031
23.0	27.756	36.096	23.301	9.028
24.0	27.196	36.088	23.477	9.023
25.0	26.651	36.034	23.611	9.012
26.0	26.048	35.941	23.731	9.017
27.0	25.436	35.869	23.867	9.014
28.0	25.032	35.824	23.956	9.013
29.0	24.613	35.800	24.065	9.018
30.0	24.149	35.790	24.197	9.027
31.0	23.973	35.854	24.298	9.021
32.0	23.966	35.892	24.329	9.028
33.0	24.049	35.995	24.382	9.035
34.0	24.317	36.194	24.452	9.038
35.0	24.657	36.415	24.518	9.038
36.0	24.710	36.469	24.542	9.038
37.0	24.627	36.475	24.572	9.043
38.0	24.546	36.479	24.599	9.043
39.0	24.416	36.479	24.639	9.043
40.0	24.289	36.464	24.666	9.048
41.0	24.134	36.466	24.714	9.052
42.0	24.057	36.470	24.739	9.053
43.0	23.972	36.466	24.762	9.050
44.0	23.840	36.454	24.792	9.056
45.0	23.804	36.470	24.815	9.057
46.0	23.756	36.470	24.829	9.057
47.0	23.704	36.468	24.843	9.057
48.0	23.649	36.457	24.851	9.051
49.0	23.552	36.443	24.869	9.048
50.0	23.467	36.438	24.891	9.053
51.0	23.422	36.451	24.914	9.047
52.0	23.347	36.456	24.939	9.050
53.0	23.279	36.454	24.957	9.050
54.0	23.199	36.449	24.976	9.048
55.0	23.151	36.450	24.992	9.048
56.0	23.112	36.452	25.005	9.041
57.0	22.985	36.441	25.033	9.038
58.0	22.898	36.434	25.052	9.032
59.0	22.861	36.427	25.058	9.028
60.0	22.823	36.426	25.069	9.040
61.0	22.815	36.436	25.078	9.038
62.0	22.786	36.442	25.091	9.033
63.0	22.758	36.443	25.100	9.037
64.0	22.725	36.441	25.108	9.034
65.0	22.656	36.441	25.128	9.038
66.0	22.595	36.440	25.145	9.043
67.0	22.531	36.438	25.161	9.043
68.0	22.496	36.435	25.169	9.036
69.0	22.442	36.432	25.182	9.034
70.0	22.380	36.431	25.200	9.036
71.0	22.318	36.430	25.217	9.041
72.0	22.189	36.429	25.252	9.047
73.0	22.077	36.429	25.284	9.060
74.0	22.014	36.425	25.299	9.070
75.0	21.775	36.408	25.353	9.073
76.0	21.619	36.403	25.393	9.074
77.0	21.458	36.396	25.432	9.077
78.0	21.387	36.402	25.456	9.082
79.0	21.343	36.405	25.471	9.082
80.0	21.256	36.392	25.486	9.082
81.0	21.143	36.379	25.507	9.086
82.0	21.098	36.422	25.552	9.087
83.0	21.108	36.444	25.565	9.087
85.0	21.145	36.465	25.571	9.087
86.0	21.104	36.474	25.589	9.088
87.0	21.005	36.487	25.626	9.086
88.0	21.007	36.487	25.626	9.093
89.0	20.996	36.486	25.628	9.086
90.0	20.952	36.487	25.641	9.091
91.0	20.854	36.492	25.671	9.092
92.0	20.780	36.495	25.694	9.092
93.0	20.721	36.496	25.711	9.096
94.0	20.632	36.496	25.735	9.096
95.0	20.527	36.498	25.765	9.096
96.0	20.438	36.502	25.792	9.101
97.0	20.304	36.511	25.835	9.105
98.0	20.266	36.510	25.844	9.106
100.0	20.101	36.499	25.880	9.106
101.0	20.057	36.492	25.886	9.106
102.0	19.960	36.467	25.894	9.106

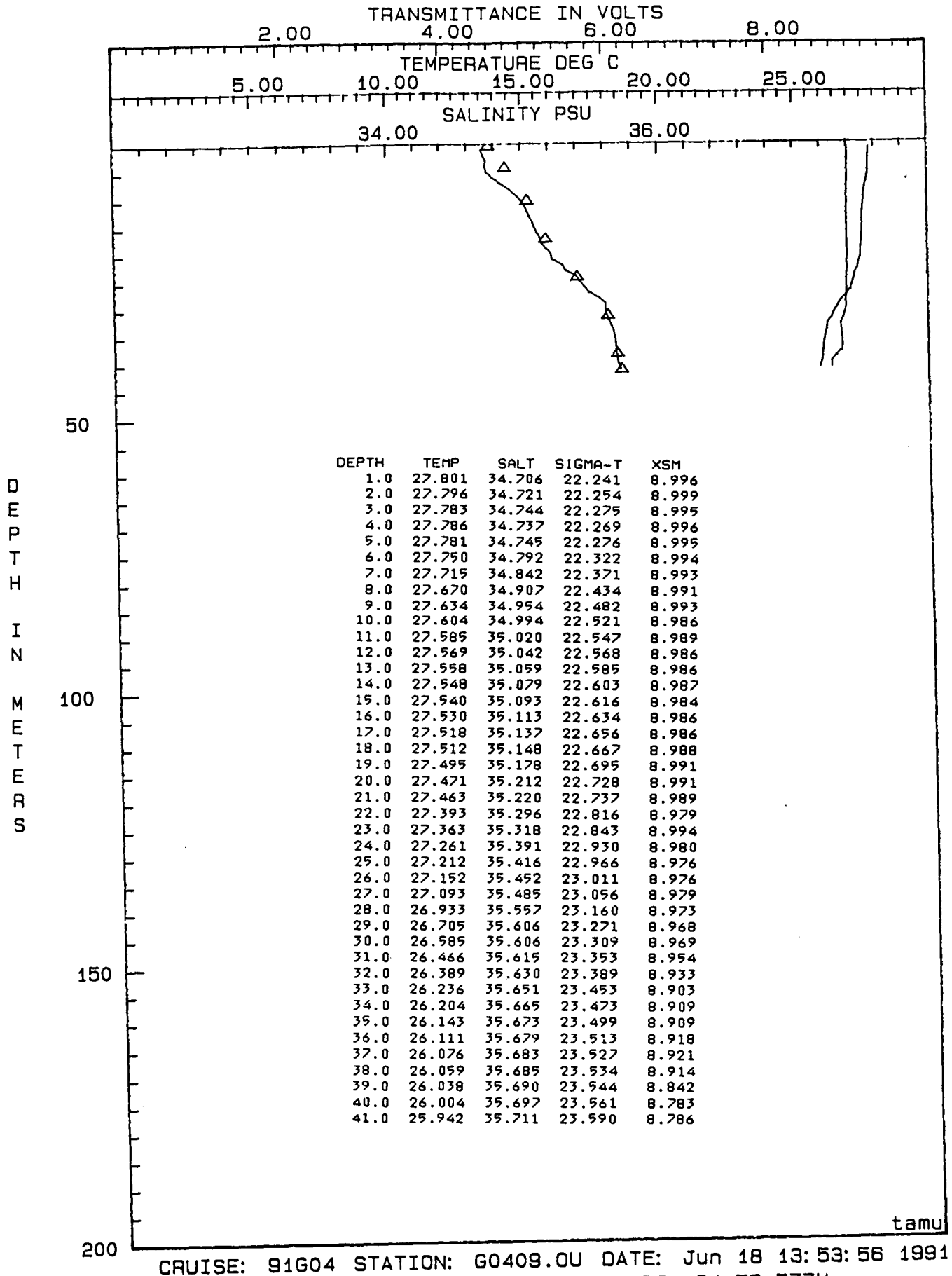
STATION G0408.OUT CRUISE 91g04 DATE & TIME Tue Jun 18 07:50:59 1991, Julian day = 169
LAT 27 49.8 N LON 95 00.0 W DEPTH OFF SET 0.0 SALINITY OFF SET 0.0

DEPTH	TEMP	SALT	SIGMA-T	XSM
103.0	19.842	36.442	25.905	9.106
104.0	19.779	36.447	25.926	9.106
105.0	19.665	36.466	25.970	9.106
106.0	19.578	36.477	26.001	9.106
107.0	19.483	36.481	26.029	9.109
108.0	19.445	36.481	26.040	9.111
109.0	19.410	36.482	26.050	9.107
110.0	19.378	36.483	26.058	9.110
111.0	19.329	36.481	26.070	9.107
112.0	19.261	36.479	26.085	9.113
113.0	19.227	36.477	26.093	9.111
114.0	19.167	36.475	26.107	9.111
115.0	19.153	36.475	26.111	9.111
116.0	19.100	36.471	26.122	9.115
117.0	19.070	36.470	26.128	9.112
118.0	19.051	36.469	26.133	9.111
119.0	19.026	36.468	26.138	9.111
120.0	18.993	36.466	26.146	9.118
121.0	18.962	36.464	26.152	9.116
122.0	18.918	36.461	26.161	9.068
123.0	18.905	36.460	26.164	9.110
124.0	18.895	36.460	26.166	9.116
125.0	18.884	36.459	26.168	9.116
126.0	18.857	36.457	26.173	9.116
127.0	18.833	36.455	26.178	9.116
128.0	18.825	36.454	26.179	9.116
129.0	18.818	36.454	26.181	9.116
130.0	18.782	36.451	26.188	9.111
131.0	18.736	36.448	26.197	9.116
132.0	18.681	36.444	26.208	9.116
133.0	18.616	36.438	26.220	9.116
134.0	18.517	36.428	26.238	9.116
135.0	18.489	36.425	26.243	9.116
136.0	18.477	36.424	26.245	9.116
137.0	18.461	36.423	26.248	9.116
138.0	18.443	36.422	26.251	9.116
139.0	18.403	36.419	26.260	9.118
140.0	18.361	36.418	26.270	9.117
141.0	18.309	36.417	26.282	9.120
142.0	18.267	36.415	26.291	9.121
143.0	18.244	36.414	26.295	9.121
144.0	18.208	36.409	26.301	9.121
145.0	18.139	36.398	26.310	9.121
146.0	17.944	36.379	26.344	9.115
147.0	17.773	36.363	26.374	9.123
148.0	17.706	36.359	26.387	9.121
149.0	17.655	36.352	26.395	9.121
150.0	17.486	36.333	26.421	9.125
151.0	17.349	36.315	26.441	9.126
152.0	17.242	36.302	26.457	9.126

DEPTH	TEMP	SALT	SIGMA-T	XSM
153.0	17.194	36.299	26.466	9.126
154.0	17.141	36.288	26.470	9.126
155.0	16.869	36.248	26.505	9.129
156.0	16.751	36.231	26.520	9.131
157.0	16.660	36.221	26.534	9.131
158.0	16.620	36.216	26.540	9.131
159.0	16.525	36.201	26.550	9.131
160.0	16.383	36.184	26.570	9.131
161.0	16.352	36.178	26.573	9.131
162.0	16.334	36.177	26.577	9.131
163.0	16.325	36.174	26.577	9.128
164.0	16.236	36.157	26.584	9.131
165.0	16.155	36.149	26.597	9.131
166.0	16.141	36.146	26.598	9.128
167.0	16.113	36.141	26.601	9.126
168.0	16.088	36.136	26.603	9.126
169.0	16.068	36.132	26.604	9.126
170.0	16.018	36.125	26.610	9.126
171.0	15.987	36.122	26.615	9.126
172.0	15.958	36.117	26.618	9.126
173.0	15.935	36.114	26.620	9.126
174.0	15.910	36.110	26.624	9.130
175.0	15.892	36.107	26.625	9.127
176.0	15.846	36.099	26.630	9.119
177.0	15.725	36.081	26.644	9.116
178.0	15.680	36.074	26.648	9.111
179.0	15.657	36.070	26.651	9.111
180.0	15.652	36.069	26.651	9.111
181.0	15.620	36.063	26.654	9.117
182.0	15.503	36.045	26.667	9.118
183.0	15.430	36.035	26.675	9.120
184.0	15.396	36.030	26.679	9.116
185.0	15.352	36.022	26.683	9.106
186.0	15.309	36.015	26.687	9.101
187.0	15.187	35.996	26.699	9.101
188.0	15.101	35.984	26.709	9.101
189.0	15.065	35.978	26.713	9.099
190.0	15.010	35.970	26.719	9.096
191.0	14.994	35.968	26.720	9.096
192.0	14.953	35.962	26.725	9.092
193.0	14.906	35.954	26.729	9.085
194.0	14.857	35.946	26.734	9.080
195.0	14.849	35.945	26.735	9.082
196.0	14.825	35.941	26.737	9.075
197.0	14.805	35.938	26.739	9.068
198.0	14.797	35.937	26.740	9.065
199.0	14.766	35.931	26.743	9.040
200.0	14.679	35.917	26.751	9.005
201.0	14.573	35.901	26.762	8.937

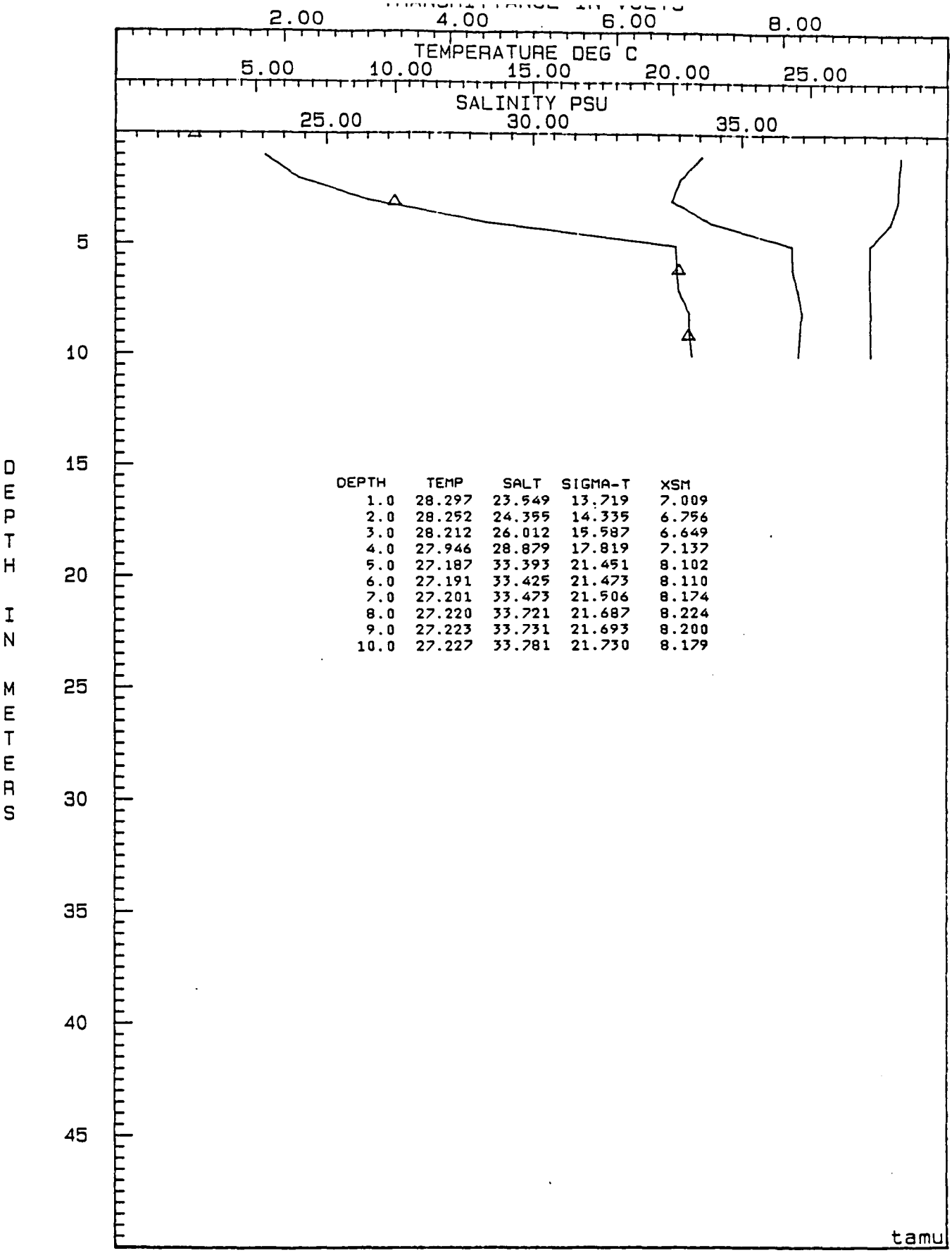


CRUISE: 91g04 STATION: G0408.0U DATE: Jun 18 07:50:59 1991
LATITUDE: 27 49.8 N LONGITUDE: 95 00.0 W
TRIANGLES DENOTE DISCRETE SAMPLES



DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	27.801	34.706	22.241	8.996
2.0	27.796	34.721	22.254	8.999
3.0	27.783	34.744	22.275	8.995
4.0	27.786	34.737	22.269	8.996
5.0	27.781	34.745	22.276	8.995
6.0	27.750	34.792	22.322	8.994
7.0	27.715	34.842	22.371	8.993
8.0	27.670	34.907	22.434	8.991
9.0	27.634	34.954	22.482	8.993
10.0	27.604	34.994	22.521	8.986
11.0	27.585	35.020	22.547	8.989
12.0	27.569	35.042	22.568	8.986
13.0	27.558	35.059	22.585	8.986
14.0	27.548	35.079	22.603	8.987
15.0	27.540	35.093	22.616	8.984
16.0	27.530	35.113	22.634	8.986
17.0	27.518	35.137	22.656	8.986
18.0	27.512	35.148	22.667	8.988
19.0	27.495	35.178	22.695	8.991
20.0	27.471	35.212	22.728	8.991
21.0	27.463	35.220	22.737	8.989
22.0	27.393	35.296	22.816	8.979
23.0	27.363	35.318	22.843	8.994
24.0	27.261	35.391	22.930	8.980
25.0	27.212	35.416	22.966	8.976
26.0	27.152	35.452	23.011	8.976
27.0	27.093	35.485	23.056	8.979
28.0	26.933	35.557	23.160	8.973
29.0	26.705	35.606	23.271	8.968
30.0	26.585	35.606	23.309	8.969
31.0	26.466	35.615	23.353	8.954
32.0	26.389	35.630	23.389	8.933
33.0	26.236	35.651	23.453	8.903
34.0	26.204	35.665	23.473	8.909
35.0	26.143	35.673	23.499	8.909
36.0	26.111	35.679	23.513	8.918
37.0	26.076	35.683	23.527	8.921
38.0	26.059	35.685	23.534	8.914
39.0	26.038	35.690	23.544	8.842
40.0	26.004	35.697	23.561	8.783
41.0	25.942	35.711	23.590	8.786

CRUISE: 91G04 STATION: G0409.0U DATE: Jun 18 13:53:56 1991
LATITUDE: 28 14.628N LONGITUDE: 94 59.577W
TRIANGLES DENOTE DISCRETE SAMPLES



DEPTH	TEMP	SALT	SIGMA-T	XSM
1.0	28.297	23.549	13.719	7.009
2.0	28.252	24.355	14.335	6.756
3.0	28.212	26.012	15.587	6.649
4.0	27.946	28.879	17.819	7.137
5.0	27.187	33.393	21.451	8.102
6.0	27.191	33.425	21.473	8.110
7.0	27.201	33.473	21.506	8.174
8.0	27.220	33.721	21.687	8.224
9.0	27.223	33.731	21.693	8.200
10.0	27.227	33.781	21.730	8.179

CRUISE: 91g04 STATION: G0410.0U DATE: Jun 18 21:25:13 1991
LATITUDE: 28 58.971n LONGITUDE: 94 52.897w
TRIANGLES DENOTE DISCRETE SAMPLES

BOTTLE DATA FROM CRUISE 91G-04

At each CTD station on cruise 91G-04, 30-liter Niskin bottles mounted on a General Oceanics 12-place rosette multisampler were tripped on the upcast for analysis of nutrients and chlorophyll + acid degradation products. Analyses for nitrate, nitrite, ammonium, phosphate, and silicate were carried out aboard ship with a Technicon AA-II six channel autoanalyzer. Chlorophyll versus phaeopigment composition was also estimated aboard ship by the "Turner" fluorometric method (see Parsons et al, 1985).

Salinity was checked at each bottle trip depth in the shipboard laboratory with Guildline Autosal model 8400A. Dissolved oxygen was also measured by a modified Winkler titration method. Subsamples were also taken for measurement of oxygen isotopic composition by Mr. A.Sanyal (University of Houston).

The following tables summarize temperature, salinity, nutrient, and chlorophyll + phaeopigment concentrations. In the tables, Temperature = CTD temp, but Salinity = bottle salinity. Concentrations of nutrients are reported as uM liter^{-1}, and of chlorophyll and phaeopigments (PHAEO) as ug liter^{-1}. At the end of this section, composite plots of NO3 v TEMP, PO4 v TEMP, DO v TEMP, and SiOH4 v TEMP are included for comparison with similar data obtained on previous TIGER cruises 87G-10, 88G-05, 89G-15, and 91G-02.

Reference:

Parsons TR, Maita Y, and Lalli CM (1985) A Manual of Chemical and Biological Methods for Seawater Analysis. Oxford (Pergamon Press).

One liter (or 500mls when concentrations of suspended particles were high) of seawater from each bottle depth was filtered onto 25 mm glass fiber GF/F filters. These were extracted in 10 ml of 90% acetone for 12h at 0°C, then centrifuged the extract for 5 min to clarify the supernatant before measuring fluorescence on a Turner Designs model 10.

BOTTLE DATA

CRUISE 91G04 STATION B91G04(1)1 DATE 15JUNE91 GMT 0724

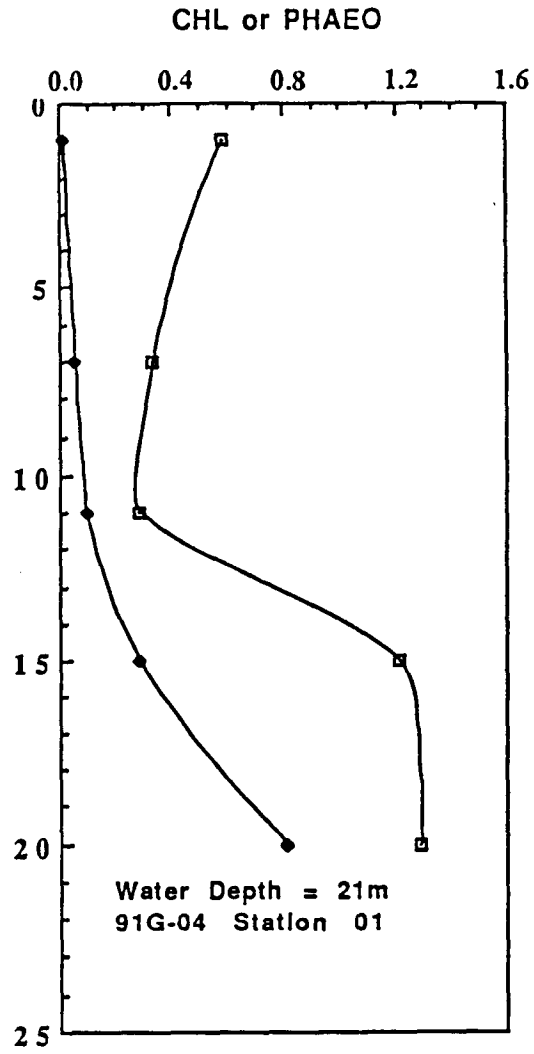
LATITUDE 28 44.3 LONGITUDE 94 59.1

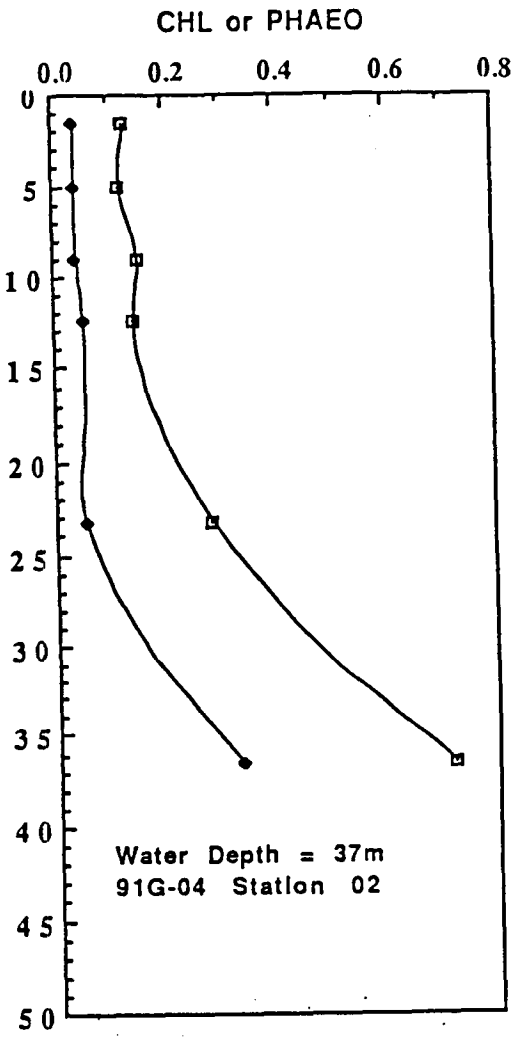
WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
0	27.78	34.110	4.768	.27	.22	8.00	.19	.06	2.20
6	27.45	34.974	4.704	.16	.17	8.30	.22	.05	1.40
10	27.29	35.417	4.605	.36	.30	9.00	.27	.05	1.50
14	27.22	35.477	4.274	.61	.29	11.10	.13	.19	2.70
19	27.20	35.470	4.251	.90	.46	11.90	.21	.36	4.60

CRUISE 91G04 STATION B91G04(2)1 DATE 15JUNE91 GMT 1002

LATITUDE 28 25.1 LONGITUDE 95 .1

WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
1	27.46	35.133	4.644	.09	.16	8.50	.19	.05	1.00
4	27.36	35.134	4.643	.23	.15	8.40	.20	.04	.80
8	27.24	35.172	4.647	.33	.14	8.00	.25	.04	.80
11	27.11	35.386	4.643	.20	.15	7.20	.21	.04	.80
22	27.04	35.721	4.556	.28	.14	5.60	.26	.03	1.20
35	27.02	35.800	4.289	.59	.20	6.30	.26	.15	1.10



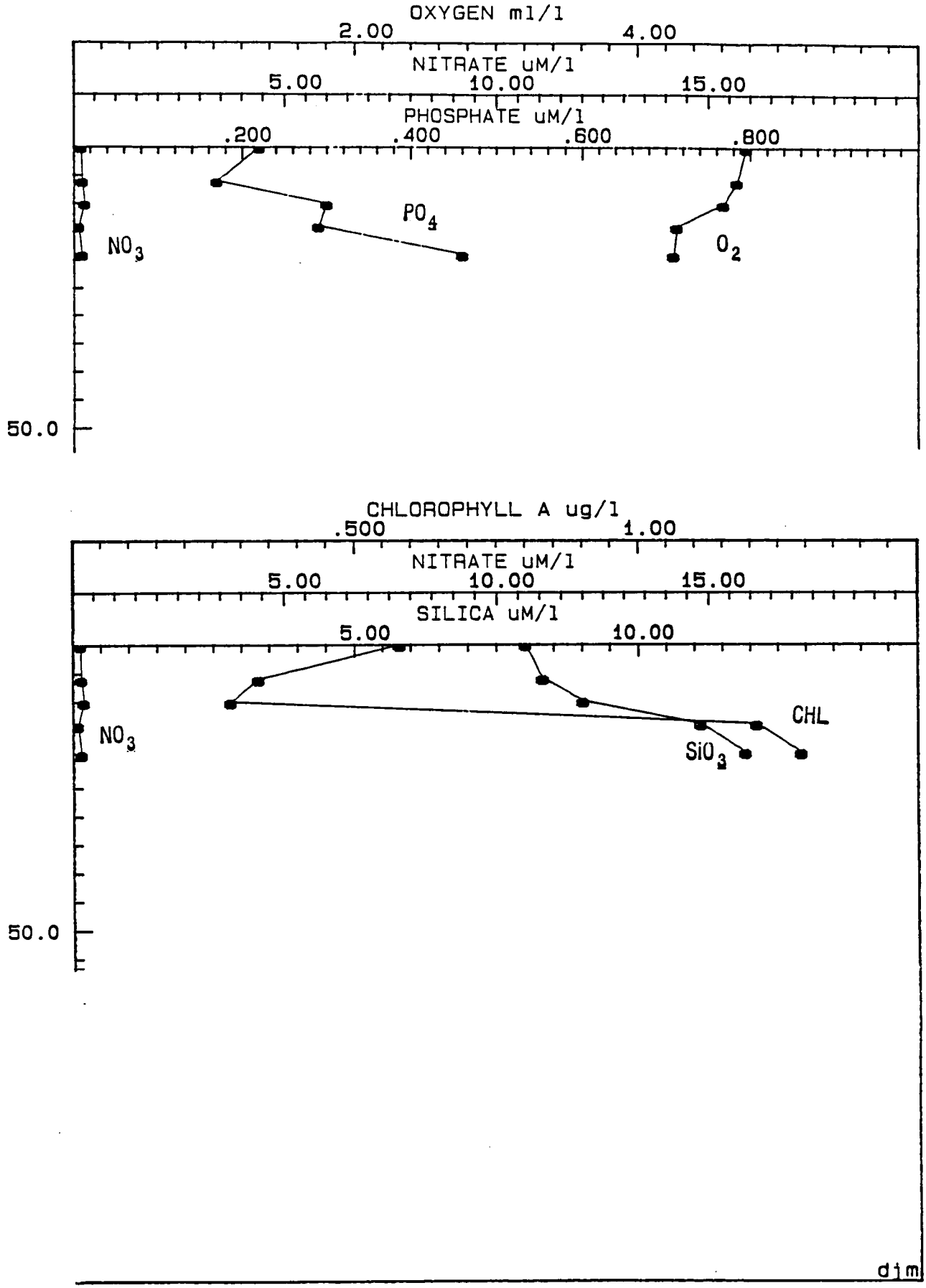


STA 01

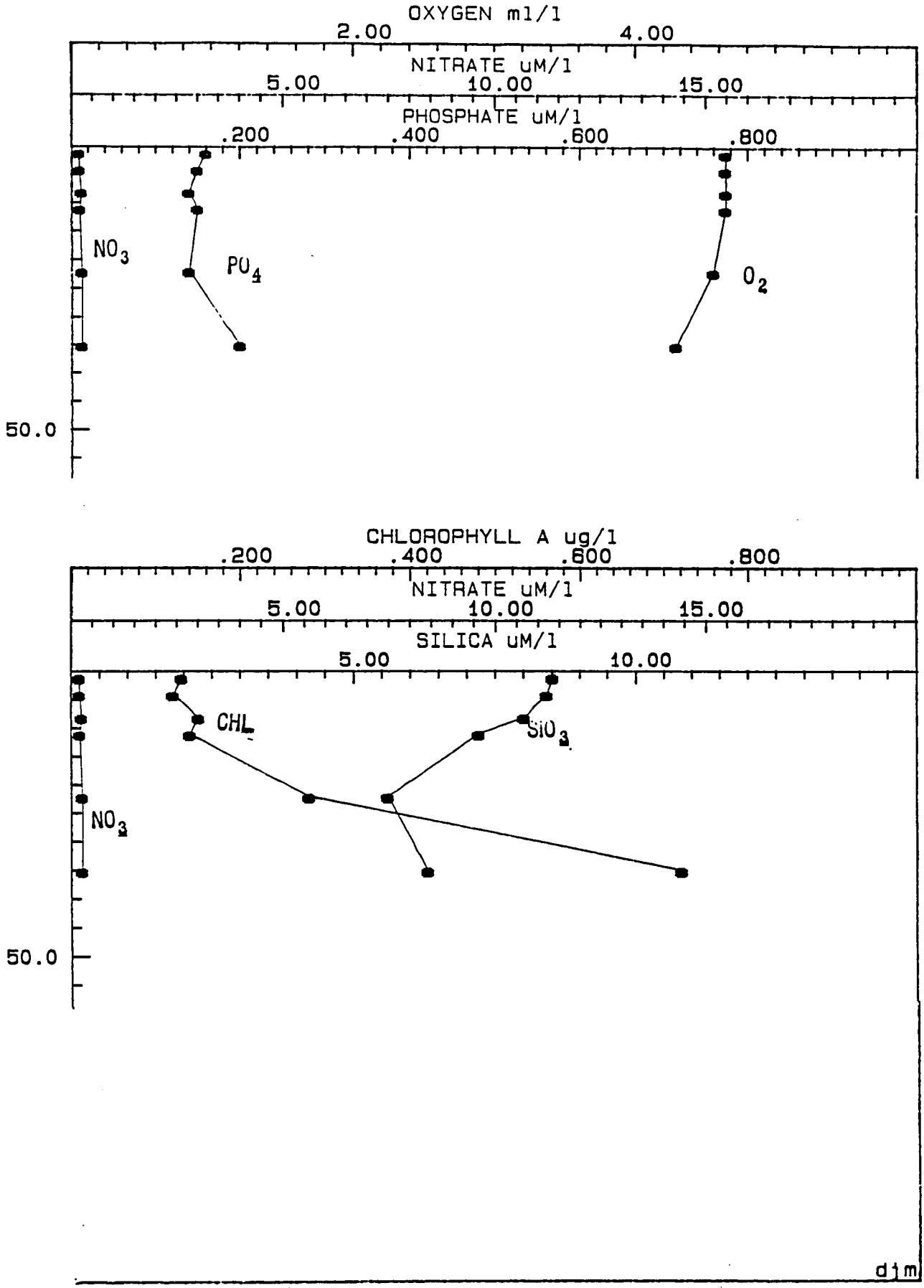
DEPTH	CHL	PHAEO
20	1.29	0.81
15	1.21	0.28
11	0.28	0.09
7	0.33	0.05
1	0.58	0.01

STA 02

DEPTH	CHL	PHAEO
36	0.72	0.33
23	0.28	0.05
12	0.14	0.05
9	0.15	0.04
5	0.12	0.04
2	0.13	0.04



CRUISE: 91G04 STATION: B91G04*1*1 DATE: 15JUNE91
LATITUDE: 28 44.3 LONGITUDE: 94 59.1



CRUISE: 91G04 STATION: B91G04*2*1 DATE: 15JUNE91
LATITUDE: 28 25.1 LONGITUDE: 95 .1

CRUISE 91G04 STATION B91G04(3)1 DATE 15JUNE91 GMT 1215

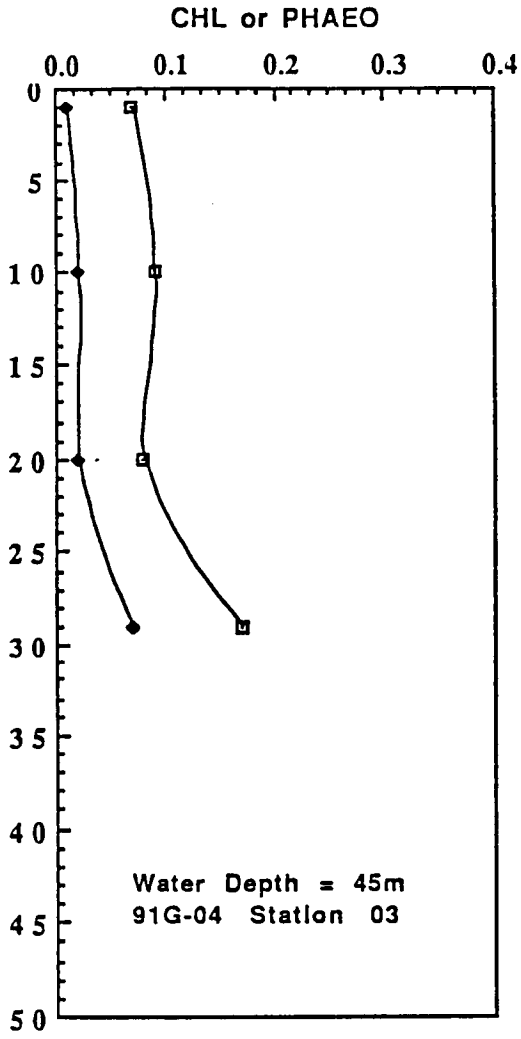
LATITUDE 28 15.5 LONGITUDE 94 59.6

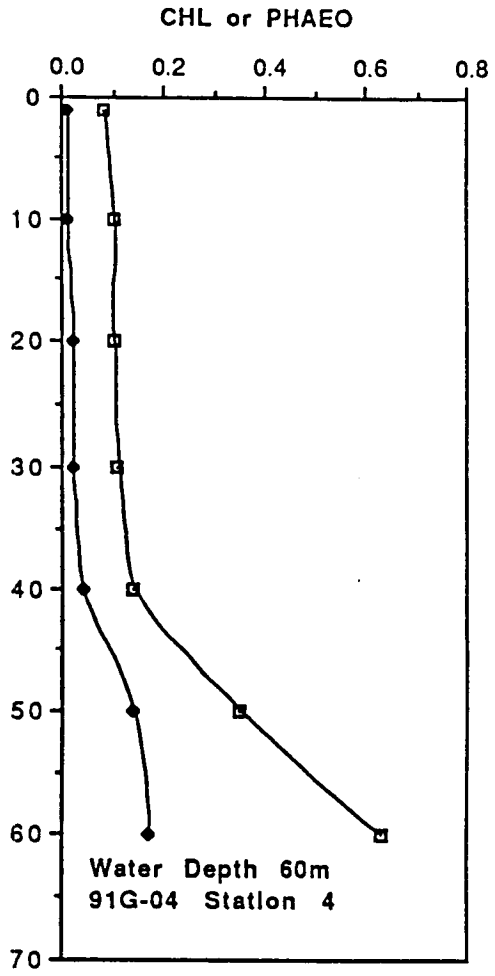
WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
0	27.80	34.864	4.628	.36	.04	1.80	.02	.01	.20
9	27.73	35.175	4.643	.19	.04	2.20	.02	.01	.30
19	27.19	35.439	4.669	.11	.06	2.60	.02	.01	.40
28	26.31	35.526	4.607	.18	.15	4.40	.01	.02	.70

CRUISE 91G04 STATION B91G04(4)1 DATE 15JUNE91 GMT 1415

LATITUDE 28 4.1 LONGITUDE 94 59.4

WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
1	28.25	33.945	4.640	.18	.03	1.80	.01	0.00	.20
9	28.22	34.018	4.613	.23	.09	1.80	.02	0.00	.10
19	26.74	35.606	4.803	.25	.03	1.60	.02	0.00	.10
29	25.73	35.908	4.784	.21	.03	1.90	.05	0.00	.10
39	25.29	35.996	4.815	.15	.05	2.00	.05	0.00	.10
50	24.16	36.071	4.592	.31	.12	3.90	.05	0.00	.20
58	23.03	36.153	4.455	.34	.12	4.20	.07	.30	.40



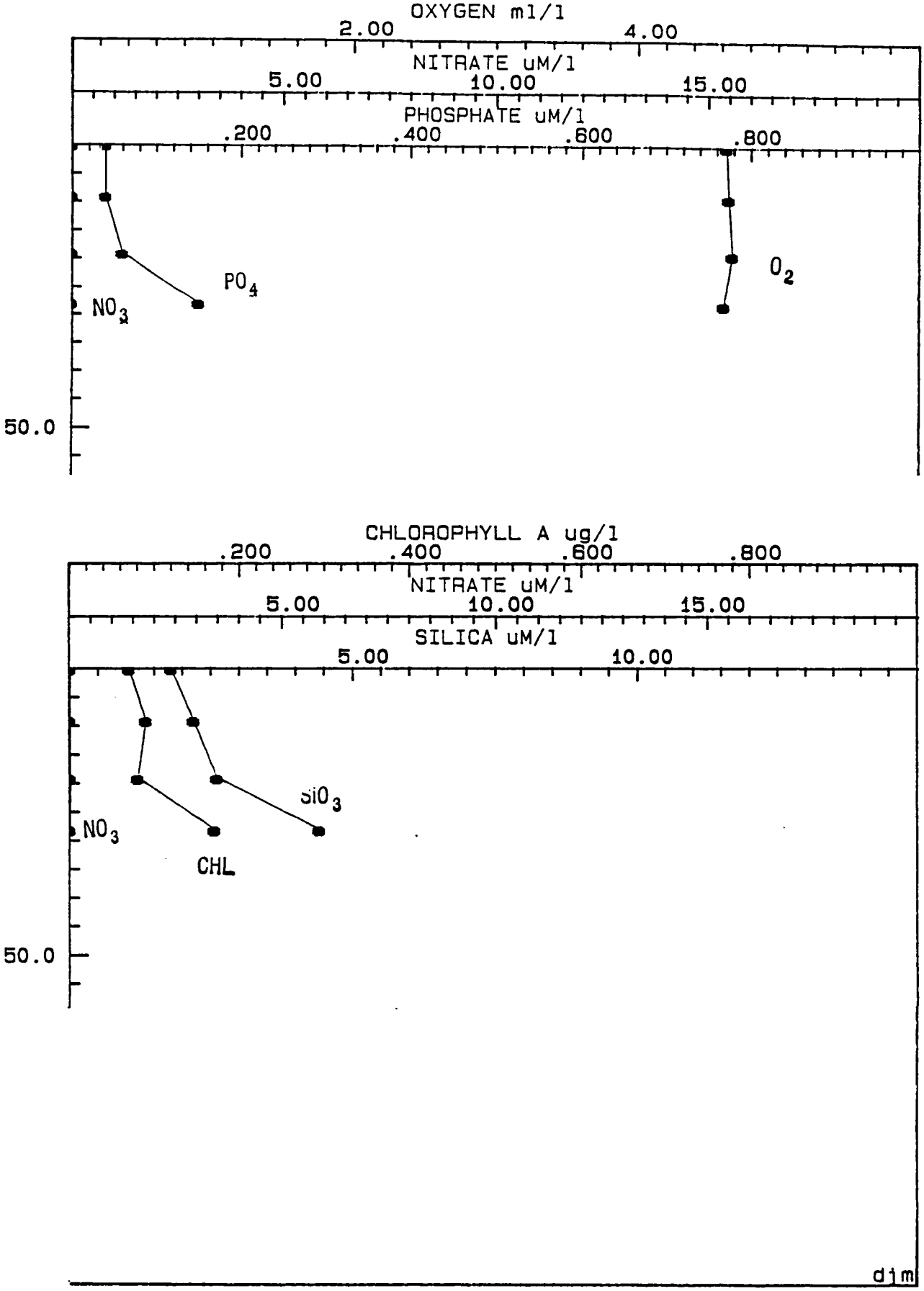


STA 03

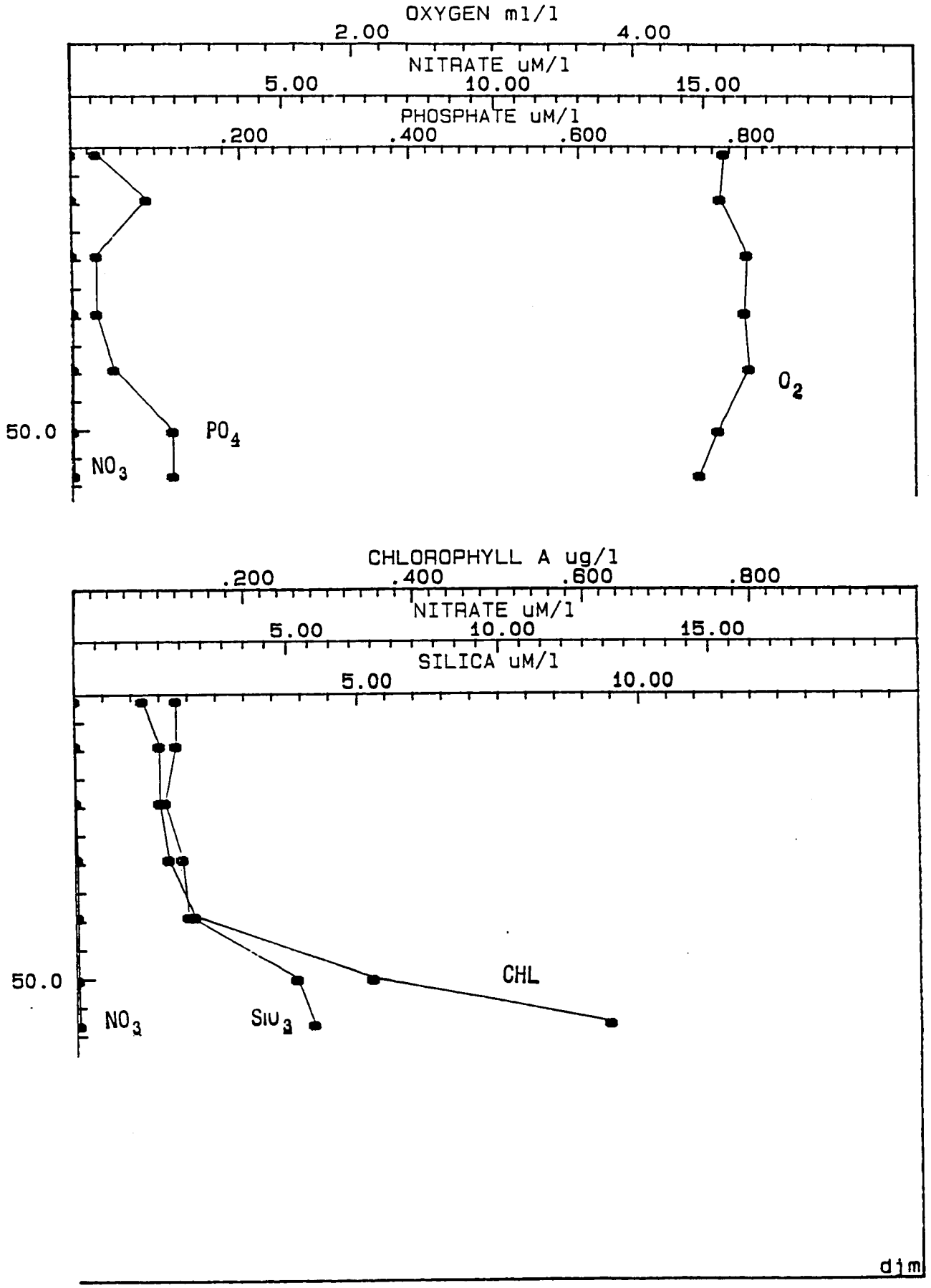
DEPTH	CHL	PHAEO
29	0.17	0.07
20	0.08	0.02
10	0.09	0.02
1	0.07	0.01

STA 04

DEPTH	CHL	PHAEO
60	0.63	0.17
50	0.35	0.14
40	0.14	0.04
30	0.11	0.02
20	0.10	0.02
10	0.10	0.01
1	0.08	0.01



CRUISE: 91G04 STATION: 891G04*3*1 DATE: 15JUNE91
LATITUDE: 28 15.5 LONGITUDE: 94 59.8

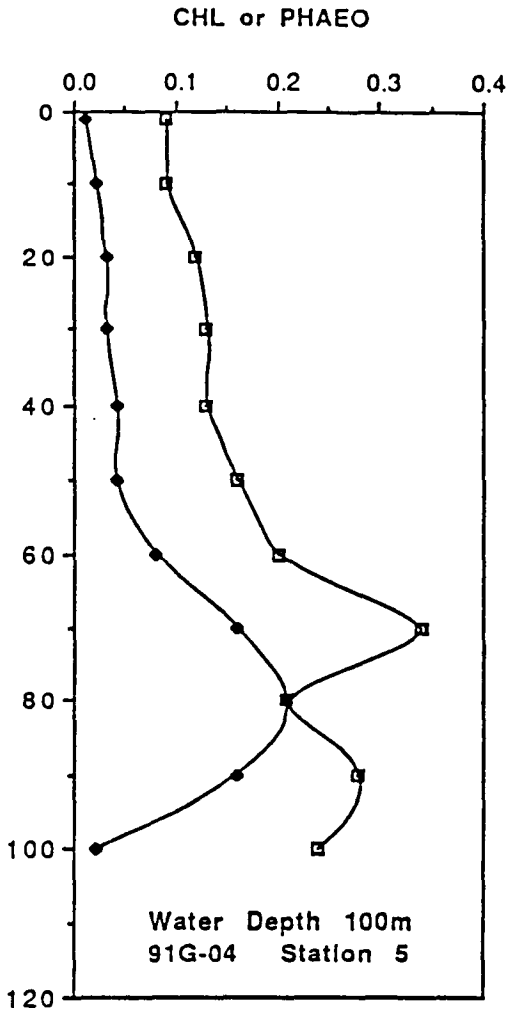


CRUISE: 91G04 STATION: 891G04*4*1 DATE: 15JUNE91
LATITUDE: 28 4.1 LONGITUDE: 94 59.4

CRUISE 91G04 STATION B91G04(6)91 DATE 15JUNE91 GMT 1555

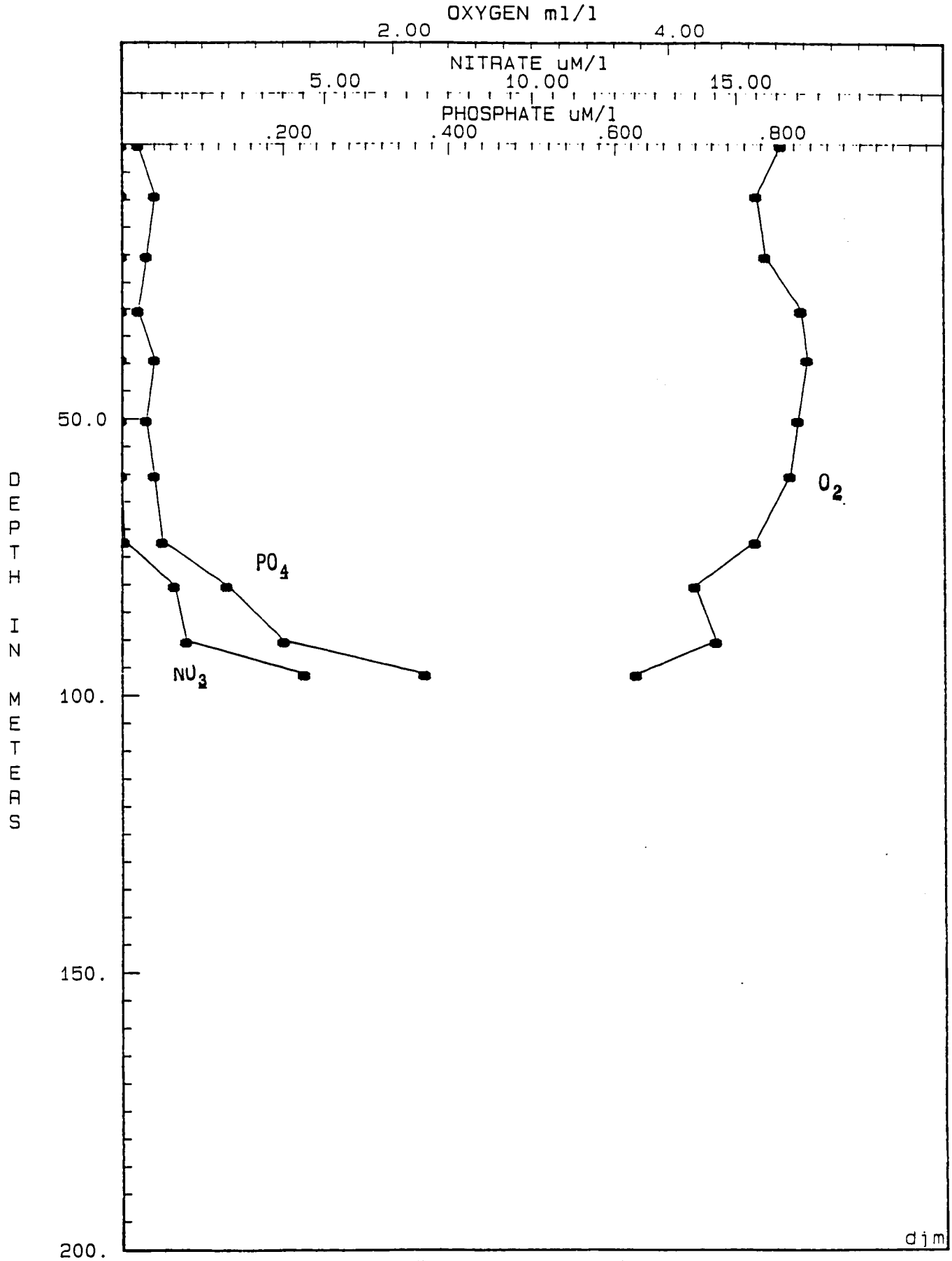
LATITUDE 27 54.7 LONGITUDE 94 59.2

WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
0	28.80	33.537	4.824	.51	.02	1.80	0.00	.01	----
9	28.73	33.784	4.648	.50	.04	2.00	0.00	.01	----
20	28.45	36.149	4.711	.32	.03	2.50	0.00	0.00	----
30	25.93	36.469	4.971	.34	.02	1.90	0.00	0.00	----
39	24.76	36.489	5.012	.28	.04	2.00	0.00	0.00	----
50	23.93	36.465	4.945	.20	.03	1.80	0.00	0.00	----
60	23.44	36.468	4.885	.41	.04	1.70	.01	.01	----
72	21.91	36.333	4.627	.52	.05	2.10	.08	.09	----
80	21.61	36.398	4.180	.25	.13	2.30	1.30	.18	----
90	20.96	36.345	4.337	.18	.20	3.20	1.60	.17	----
96	20.26	36.403	3.742	.24	.37	3.50	4.50	.15	----

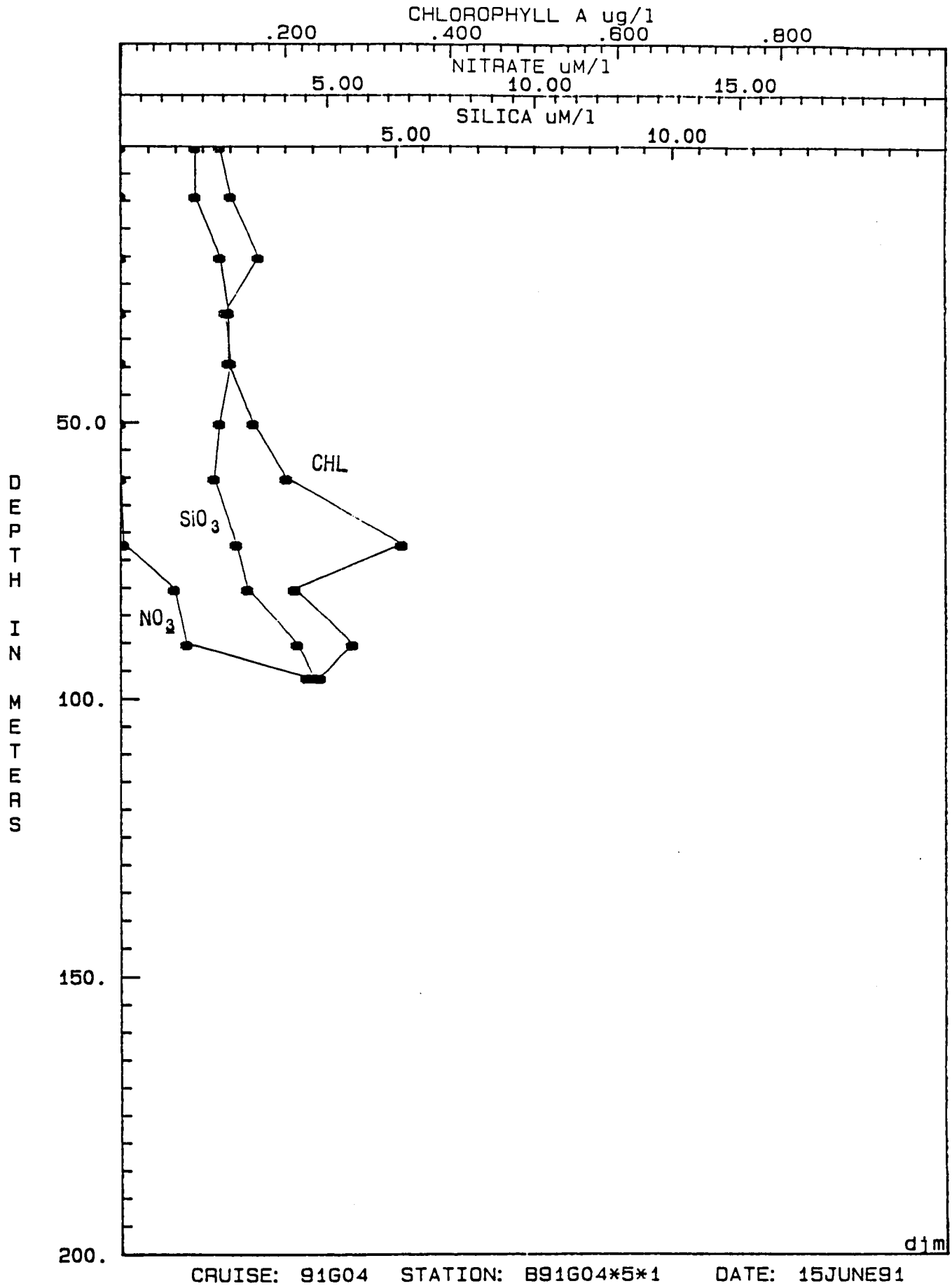


STA 05

DEPTH	CHL	PHAEO
100	0.24	0.02
90	0.28	0.16
80	0.21	0.21
70	0.34	0.16
60	0.20	0.08
50	0.16	0.04
40	0.13	4.00
30	0.13	2.00
20	0.12	0.03
10	0.09	0.02
1	0.09	0.01



CRUISE: 91G04 STATION: B91G04*5*1 DATE: 15JUNE91
LATITUDE: 27 54.7 LONGITUDE: 94 59.2

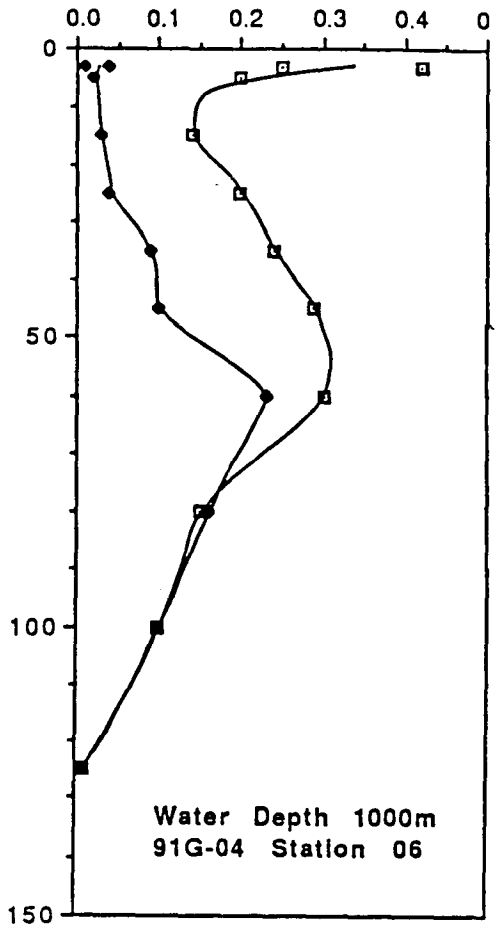


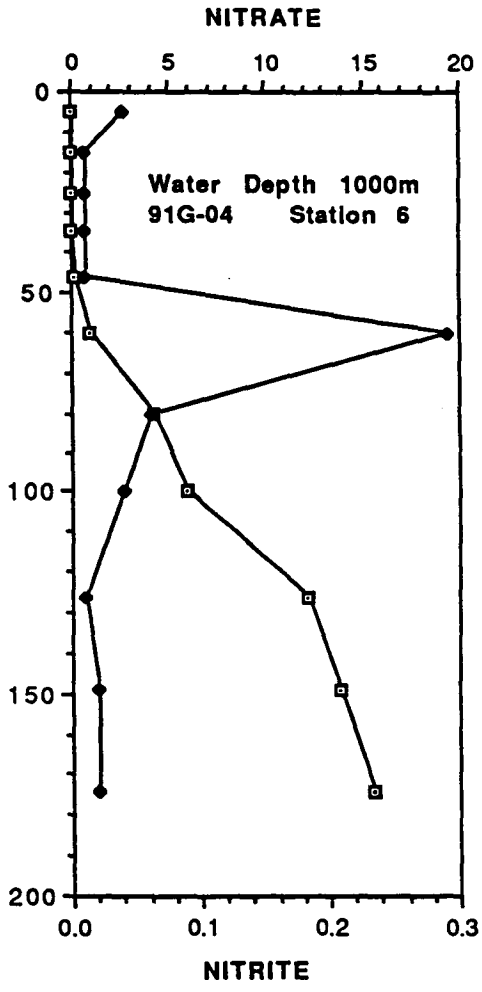
CRUISE: 91G04 STATION: B91G04*5*1 DATE: 15JUNE91
LATITUDE: 27 54.7 LONGITUDE: 94 59.2

CRUISE 91G04 STATION 891G04(6)1 DATE 15JUNE91 GMT 2010

LATITUDE 27 26.9 LONGITUDE 94 59.3

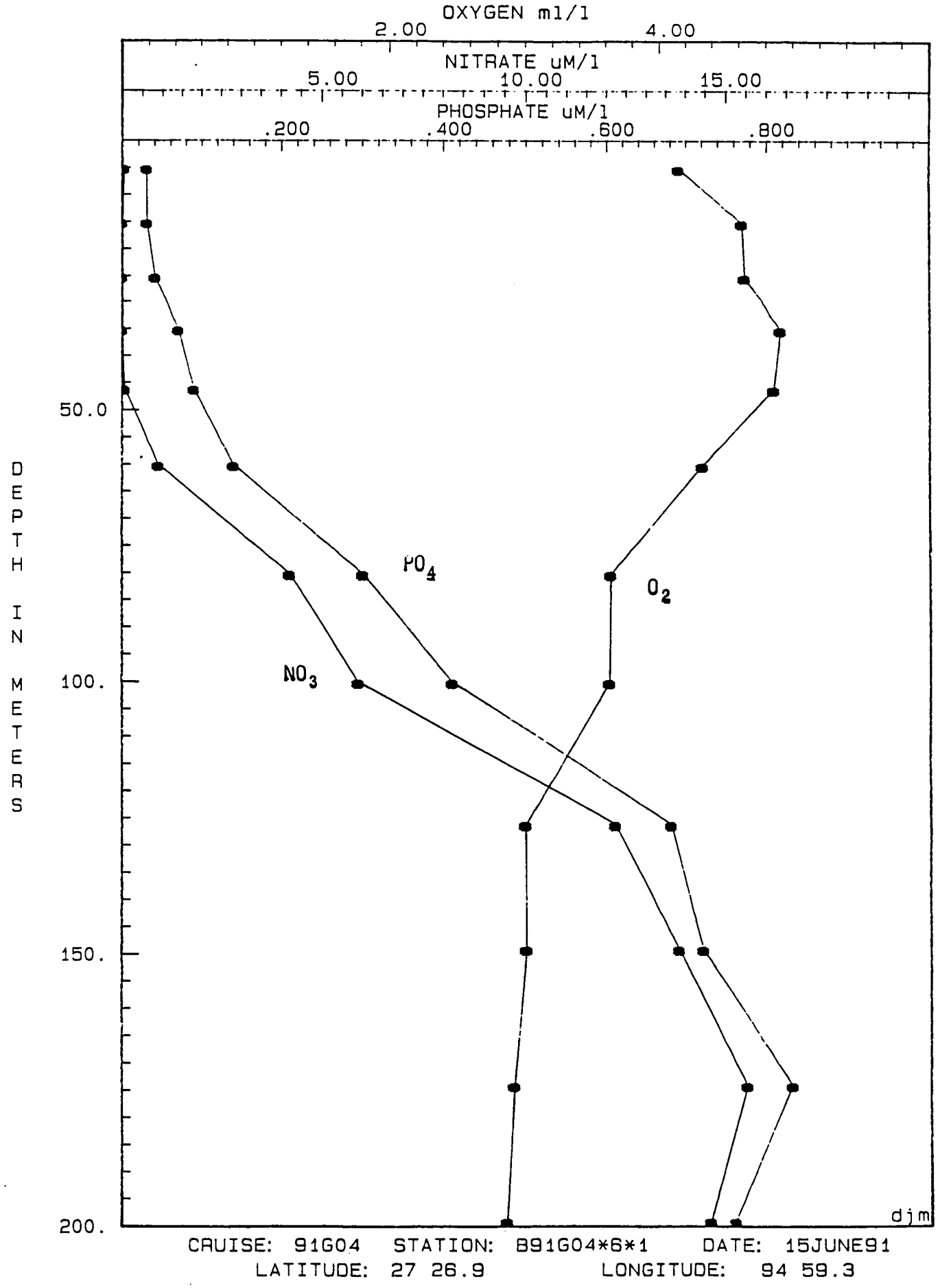
WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
5	29.01	32.099	4.145	.33	.03	1.30	.06	.04	----
15	28.62	36.251	4.617	.13	.03	2.10	0.00	.01	----
25	27.77	36.367	4.638	.07	.04	2.00	0.00	.01	----
35	23.89	36.355	4.900	.28	.07	1.80	0.00	.01	----
46	23.60	36.461	4.851	.27	.09	1.90	.07	.01	----
60	22.21	36.360	4.318	.15	.14	2.70	.90	.29	----
80	21.13	36.484	3.623	.08	.30	2.80	4.20	.06	----
100	20.00	36.427	3.613	.34	.41	3.20	5.90	0.00	49.0
126	18.22	36.392	2.991	.19	.68	4.80	12.20	.01	----
149	16.98	36.276	2.996	.21	.72	3.90	13.80	.02	----
174	15.88	36.112	2.907	----	.83	4.50	15.50	.02	----
199	15.08	35.988	2.854	.29	.76	4.40	14.60	0.00	----
251	13.39	35.720	2.723	.66	1.06	7.00	20.20	.01	----
354	10.95	35.353	2.617	.56	1.52	12.20	26.30	.01	----
504	8.48	35.032	2.735	.14	1.91	21.10	32.20	0.00	----
706	6.49	34.905	3.187	.18	1.96	26.40	32.50	0.00	----
958	5.21	34.921	3.950	.15	1.81	28.20	30.20	.01	----
960	5.15	34.924	3.995	.21	1.47	22.60	34.10	0.00	----



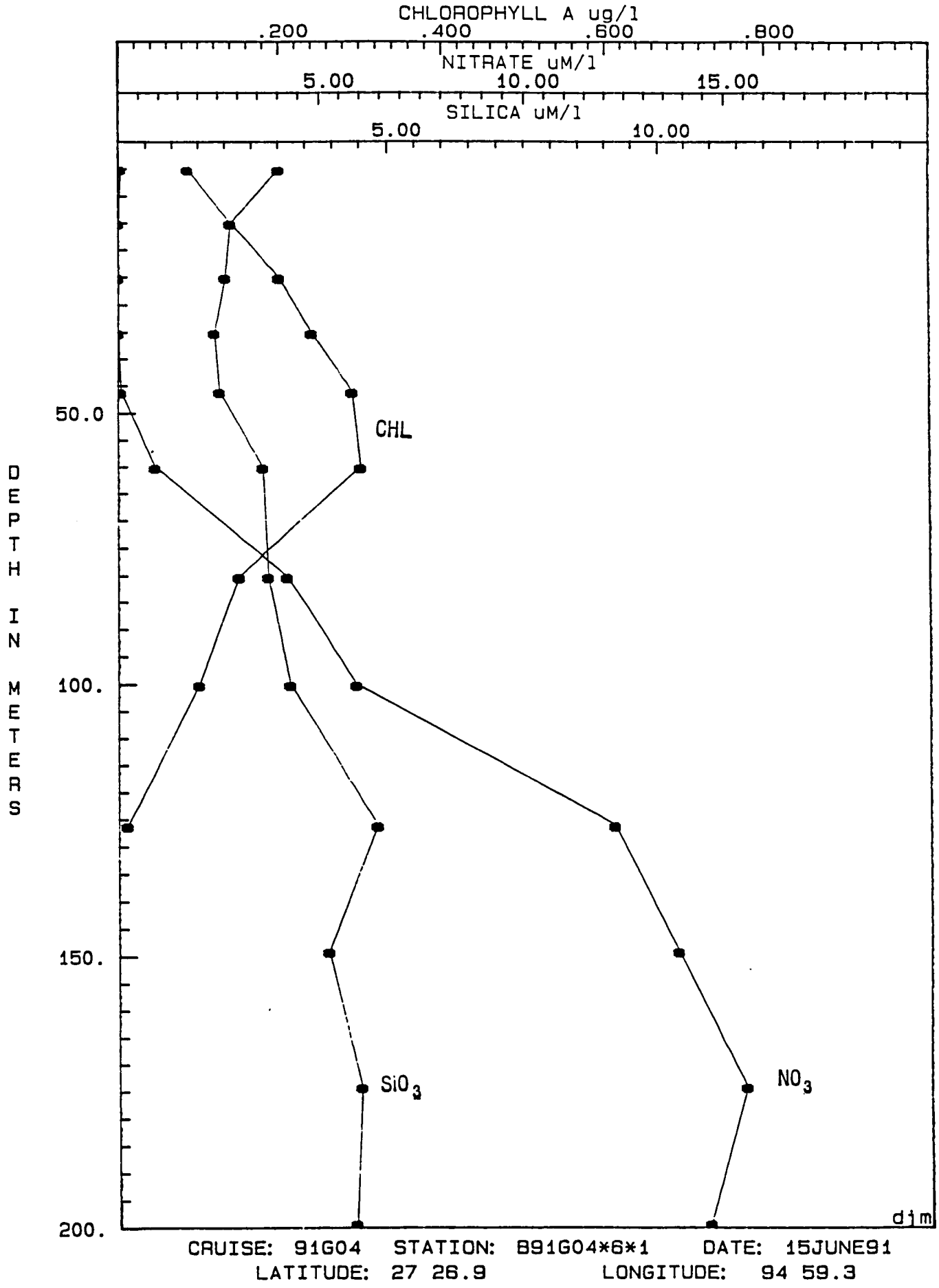


STA 06

DEPTH	CHL	PHAEO
125	0.01	0.01
100	0.10	0.10
80	0.15	0.16
60	0.30	0.23
45	0.29	0.10
35	0.24	0.09
25	0.20	0.04
15	0.14	0.03
5	0.20	0.02
3		
3	0.42	0.01
3	0.25	0.04

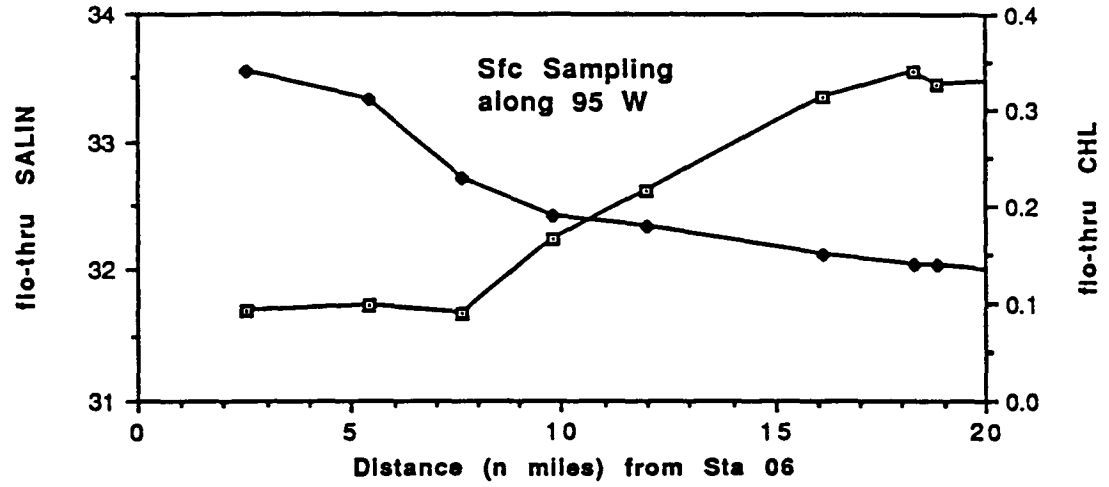


CRUISE: 91G04 STATION: B91G04*6*1 DATE: 15JUNE91
LATITUDE: 27 26.9 LONGITUDE: 94 59.3


CHLOROPHYLL A ug/l
.200
.400
.600
.800
NITRATE uM/l
5.00
10.00
15.00
SILICA uM/l
5.00
10.00
DEPTH IN METERS
50.0
100.
150.
200.
CHL
SiO3
NO3
dim
CRUISE: 91G04 STATION: 891G04*6*1 DATE: 15JUNE91
LATITUDE: 27 26.9 LONGITUDE: 94 59.3

ANOMALOUSLY LOW SALINITY OVER THE CONTINENTAL SLOPE

Because we found lower salinity in surface waters at slope Sta 06 than we had found in surface waters at the 100m Sta 05, we decided to bucket samples to monitor the gradient in salinity while GYRE steamed north from our Sta 06 in a water depth of 1 km to the next station 07, in water depth of 0.4 km. The figure below shows that a salinity gradient of almost 1.5 PSU occurred in the 18.8 nautical miles (34 km) that separated these two stations:



	GMT	LATITUDE	LONGITUDE	nmi fm Sta 6	flo-thru SALIN	flo-thru CHL	flo-thru PHAEO
1	6/17 14:15	27 30.0	94 57.9	2.5	31.70	0.34	0.03
2	14:30	27 32.9	94 58.2	5.4	31.74	0.31	0.10
3	14:45	27 35.1	94 58.7	7.6	31.68	0.23	0.06
4	15:00	27 37.3	95 00.2	9.8	32.25	0.19	0.03
5	15:15	27 39.5	95 01.1	12.0	32.61	0.18	0.03
6	15:30	27 43.6	94 59.8	16.1	33.35	0.15	0.02
7	15:45	27 45.8	94 59.9	18.3	33.54	0.14	0.02
8	16:00	27 46.3	94 59.4	18.8	33.44	0.14	0.02
9							
10	6/18 07:20	27 48.5	94 59	21.0	33.49	0.13	0.03
11	07:30	27 49.5	95 00	22.0	33.48	0.12	0.02

As for the origin of this unexpectedly low salinity surface water (< 32.3 PSU in the upper 24 m of Sta 06) over 200 km from the nearest land, the CTD stations made on POWELL cruise 91P-03 point to the middle shelf region ESE of Corpus Christi. POWELL CTD station 02 made 11 June and POWELL CTD 03 made 12 June had surface salinities of 28.92 and 29.06 PSU, respectively. However, even at these two POWELL stations, this estuarine water did not extend very deeply into the water column. In fact, salinities of 34.8 PSU were present a depth of 12 m at both POWELL CTD 02 and CTD 03 (see preceeding section of CTD DATA from cruise 91P-03).

CRUISE 91G04 STATION B91G04-7-1 DATE 17JUNE91 GMT 1610

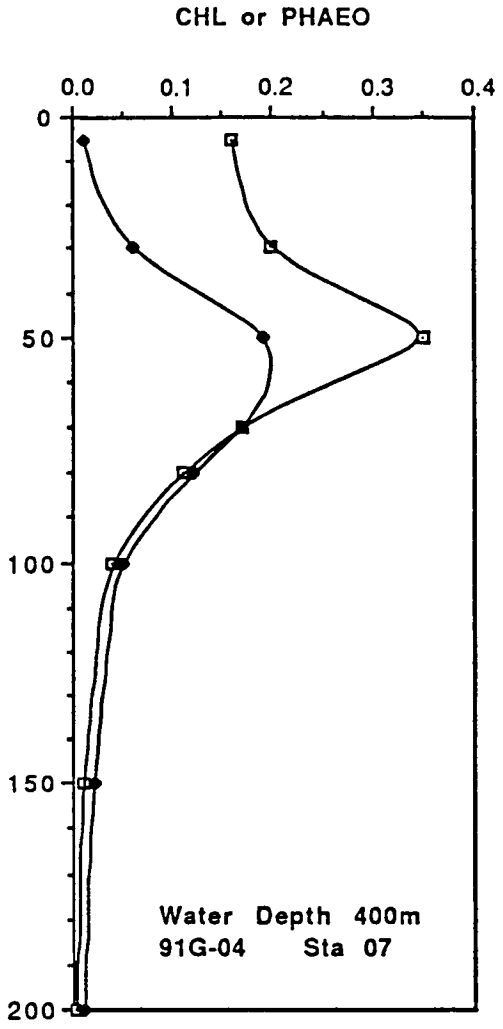
LATITUDE 27 45.8 LONGITUDE 95 .5

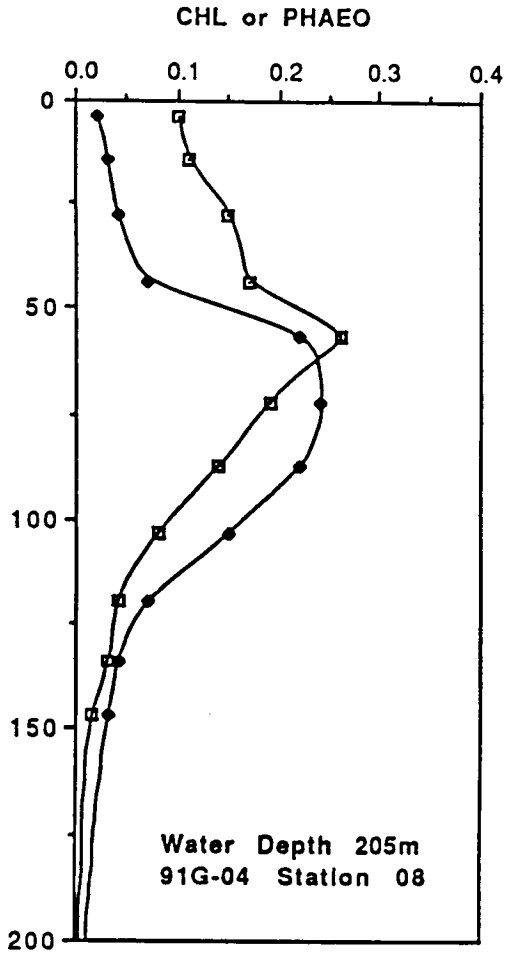
WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
5	28.66	33.607	4.587	.26	0.00	.20	.02	0.00	----
15	27.93	35.782	4.679	.75	.01	.70	.17	0.00	----
30	23.42	36.019	4.988	.14	.02	.90	.07	0.00	----
49	21.99	36.239	4.840	.79	.05	1.20	.37	.03	----
70	21.17	36.467	3.649	.22	.20	1.50	3.80	.05	----
80	20.55	36.511	3.359	.23	.32	1.80	6.30	.03	----
101	19.10	36.480	3.156	.24	.50	2.50	9.60	.02	----
152	16.87	36.259	2.986	.10	.79	4.00	15.40	.01	----
203	14.55	35.911	2.942	.11	1.09	6.40	20.40	.01	----
304	11.79	35.490	2.798	----	1.44	13.50	24.60	.07	----
352	10.81	35.334	2.610	.20	1.59	12.50	27.20	0.00	----
379	10.34	35.266	2.778	.44	1.55	13.00	25.90	.02	----

CRUISE 91G04 STATION B91G04-8-1 DATE 18JUNE91 GMT 0748

LATITUDE 27 49.8 LONGITUDE 95 0.0

WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
3	28.74	33.709	4.732	.25	.01	1.00	.11	.01	----
13	28.26	35.668	4.700	.24	.01	.80	.05	0.00	----
28	24.04	35.994	4.928	.36	.03	1.30	.05	0.00	----
42	23.85	36.474	4.930	.19	.04	.70	0.00	0.00	----
57	23.02	36.446	4.748	.10	.05	.80	.04	.01	----
72	21.64	36.423	4.057	.04	.12	1.30	1.40	.06	----
87	21.07	36.483	3.555	.09	.28	1.80	4.90	.03	----
101	19.87	36.450	3.432	.11	.40	2.30	7.30	.03	----
119	19.01	36.472	3.079	.19	.58	2.90	10.60	.01	----
134	18.49	36.435	2.983	----	.64	3.40	12.00	.02	----
147	17.41	36.321	3.019	.09	.75	3.90	14.60	.01	----
200	14.41	35.922	2.756	.08	1.10	7.00	21.00	.04	----



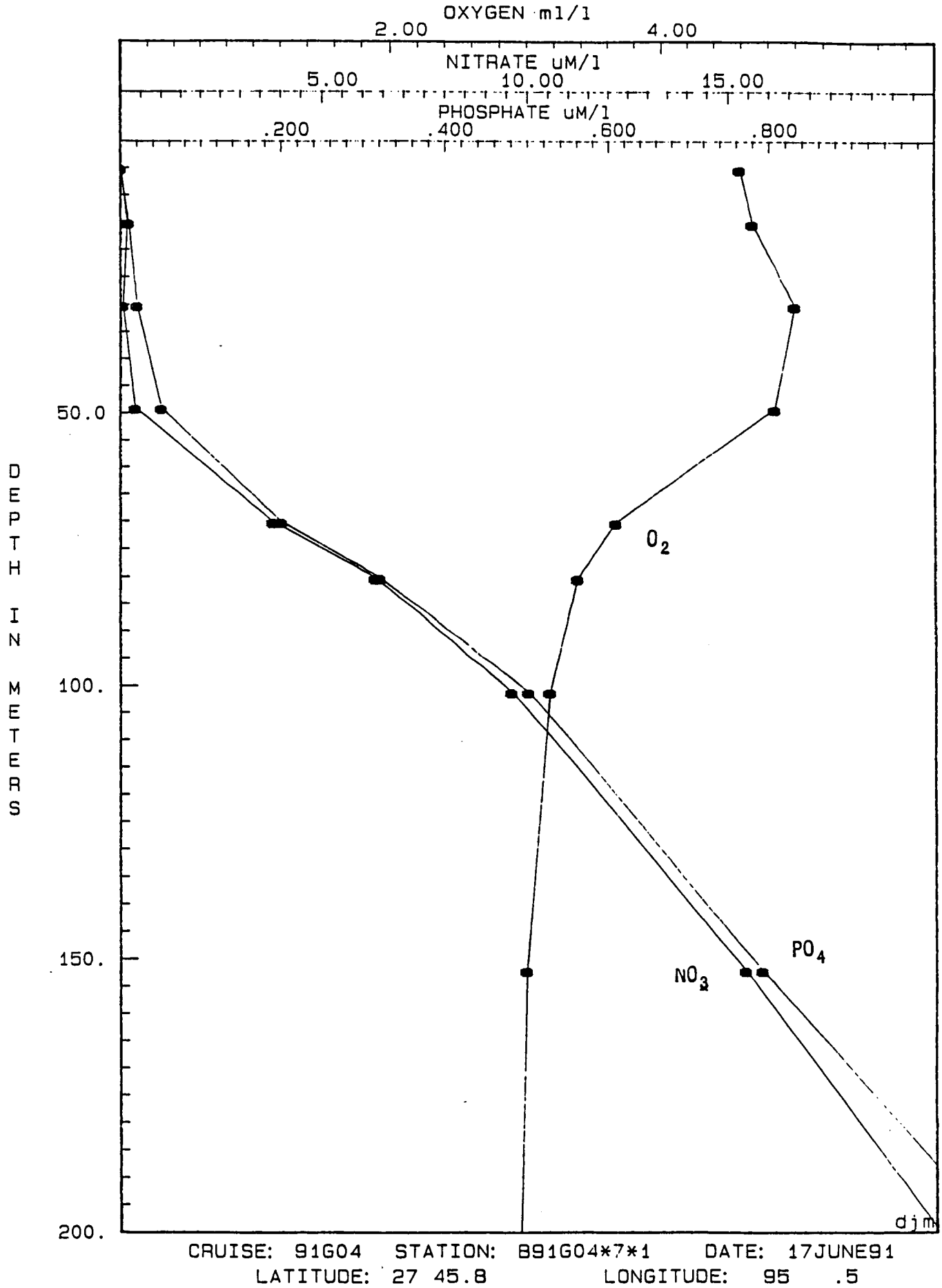


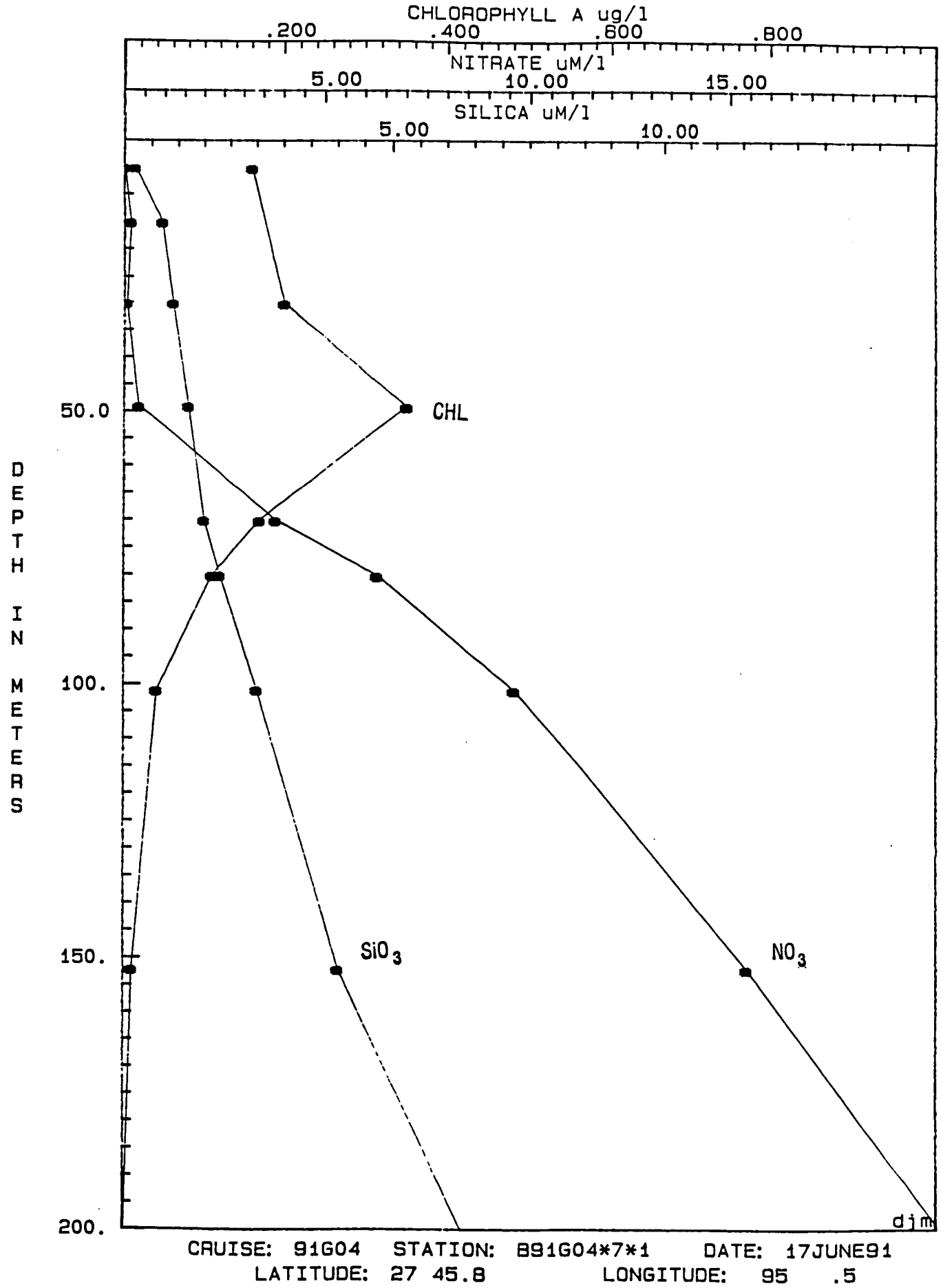
STA 07

DEPTH	CHL	PHAEO
200	0.00	0.01
150	0.01	0.02
100	0.04	0.05
80	0.11	0.12
70	0.17	0.17
50	0.35	0.19
30	0.20	0.06
15		
5	0.16	0.01

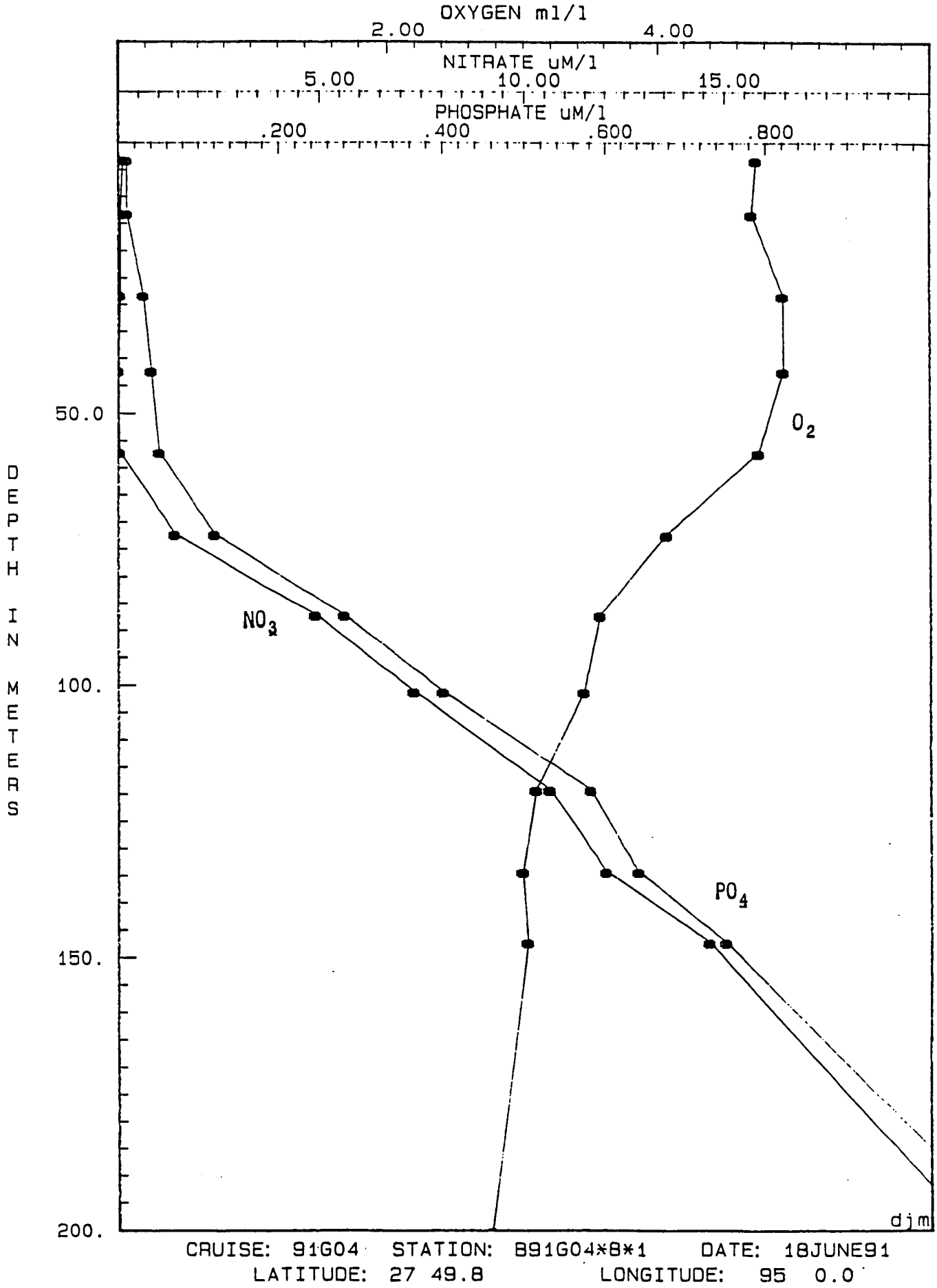
STA 08

DEPTH	CHL	PHAEO
201	0.00	0.01
147	0.01	0.03
134	0.03	0.04
119	0.04	0.07
103	0.08	0.15
87	0.14	0.22
72	0.19	0.24
57	0.26	0.22
44	0.17	0.07
28	0.15	0.04
14	0.11	0.03
4	0.10	0.02


OXYGEN ml/l
2.00
4.00
NITRATE uM/l
5.00
10.00
15.00
PHOSPHATE uM/l
.200
.400
.600
.800
50.0
100.
150.
200.
DEPTH IN METERS
O_2
PO_4
NO_3
djm
CRUISE: 91G04 STATION: 891G04*7*1 DATE: 17JUNE91
LATITUDE: 27 45.8 LONGITUDE: 95 .5



CRUISE: 91G04 STATION: B91G04*7*1 DATE: 17JUNE91
LATITUDE: 27 45.8 LONGITUDE: 95 .5



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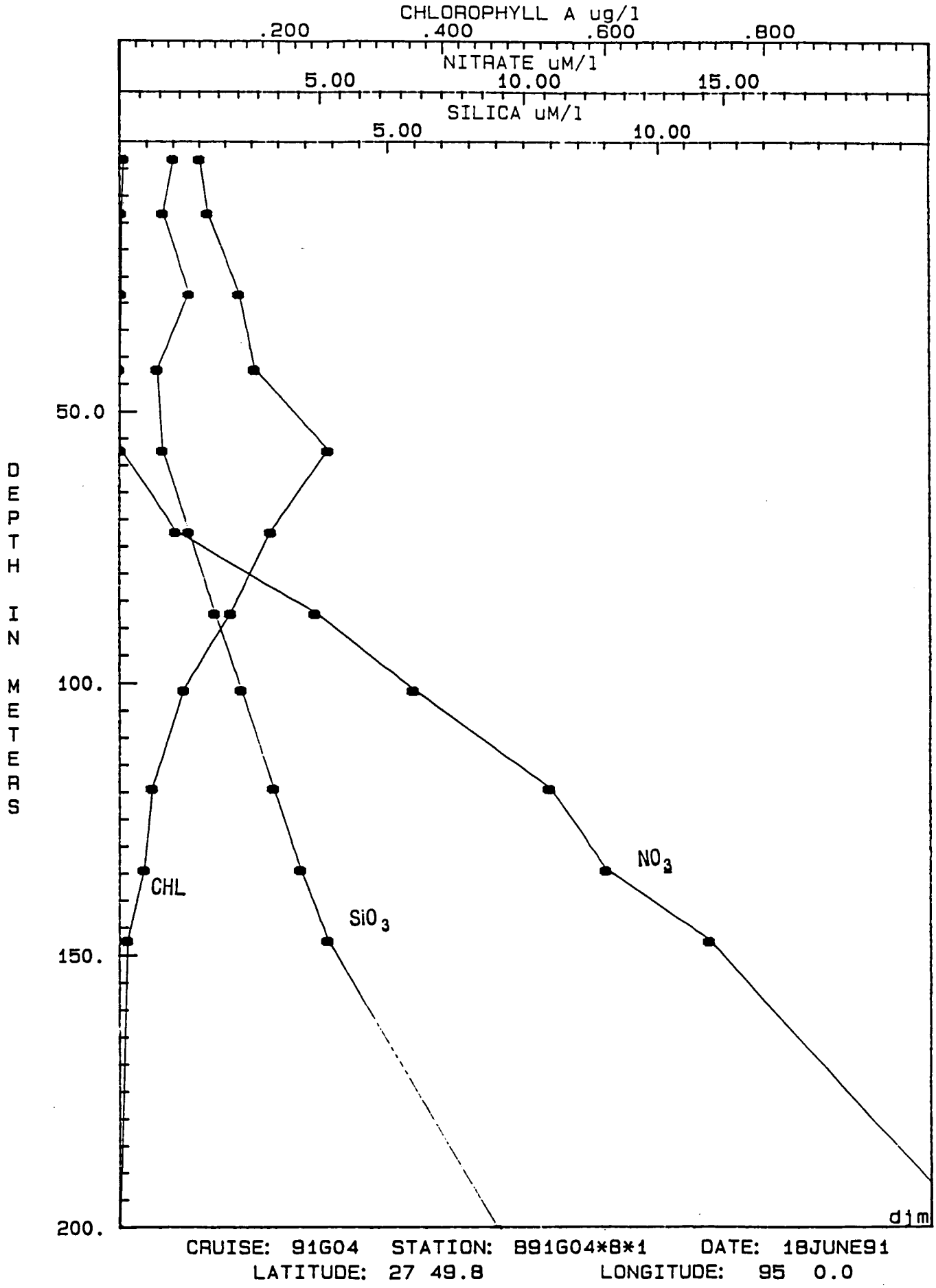
LATITUDE: 27 49.8 LONGITUDE: 95 0.0



CRUISE: 91G04 STATION: B91G04*8*1 DATE: 18JUNE91
LATITUDE: 27 49.8 LONGITUDE: 95 0.0

CRUISE 91G04 STATION 891G04-9-1 DATE 18JUNE91 GMT 1345

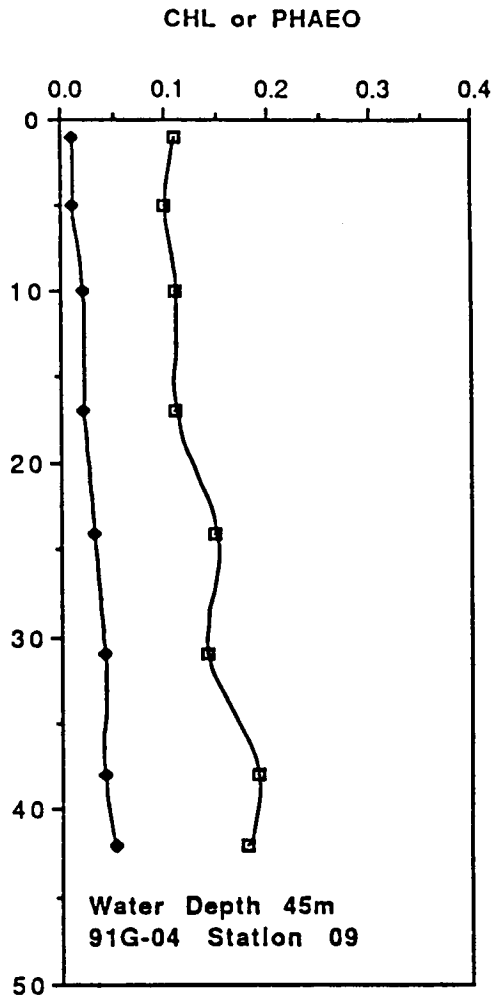
LATITUDE 28 14.6 LONGITUDE 94 59.6

WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
0	27.78	34.763	4.611	.40	.03	1.10	.09	.01	----
4	27.68	34.886	4.614	.46	.03	1.20	.01	.01	----
10	27.56	35.043	4.650	.44	.02	1.50	.01	.01	----
17	27.49	35.175	4.635	.22	.02	1.90	.04	.01	----
24	27.20	35.402	4.674	.22	.03	2.00	.06	.01	----
31	26.37	35.626	4.689	.28	.05	2.10	.04	.01	----
38	26.04	35.692	4.756	.23	.05	2.30	.06	.01	----
41	25.90	35.720	4.756	.34	.04	2.00	.09	.01	----

CRUISE 91G04 STATION 891G04-10-1 DATE 18JUNE91 GMT 2121

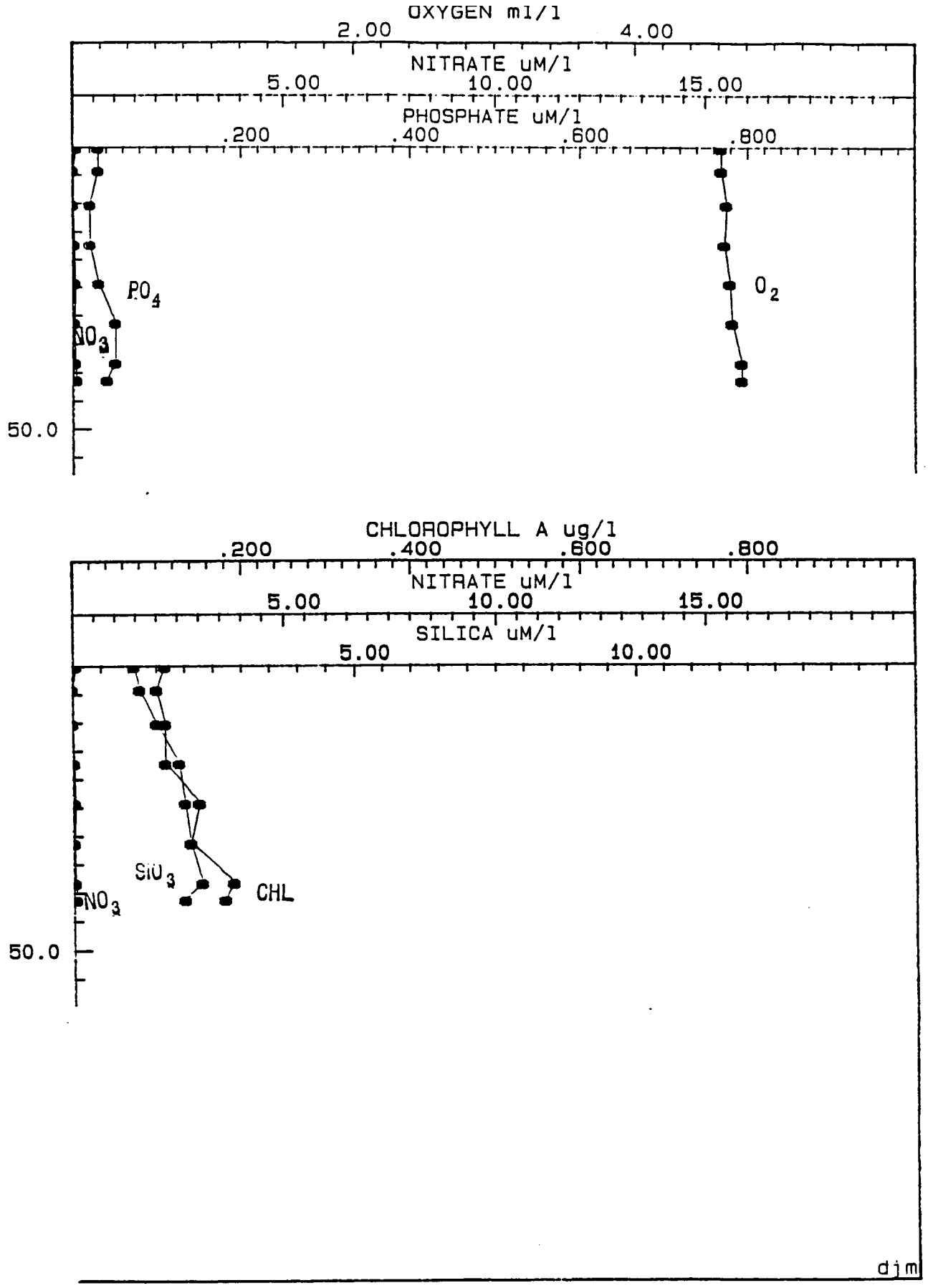
LATITUDE 28 59.0 LONGITUDE 94 52.9

WIRE LENGTH METERS	TEMPERATURE DEG C	SALINITY PPT	OXYGEN ml/l	NH4 um/l	PO4 um/l	Si(OH)4 um/l	NO3 um/l	NO2 um/l	UREA um/l
0	28.68	21.888	-----	----	----	-----	-----	----	----
3	28.12	26.644	-----	----	----	-----	-----	----	----
6	27.20	33.473	-----	----	----	-----	-----	----	----
9	27.23	33.705	-----	----	----	-----	-----	----	----

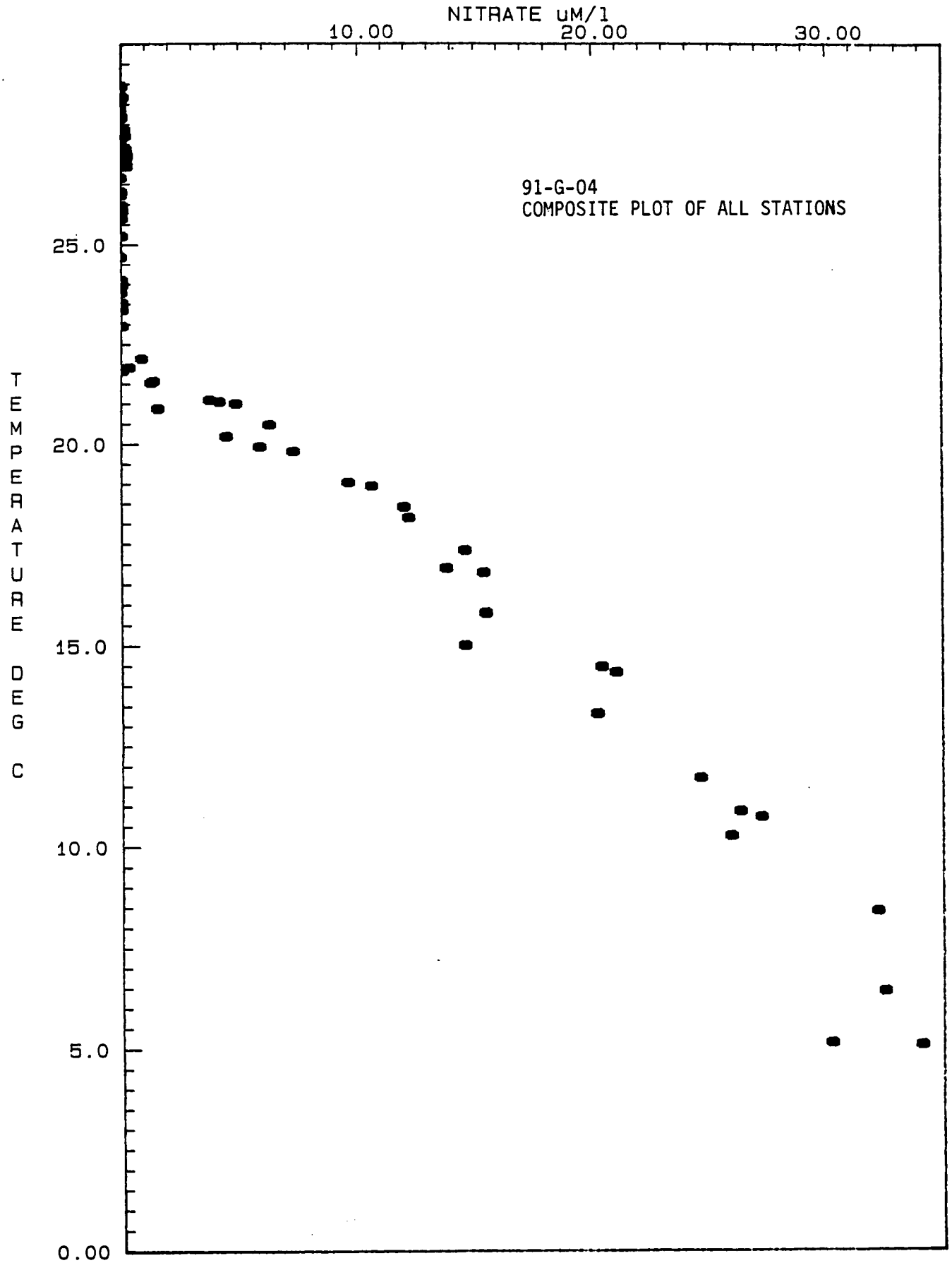


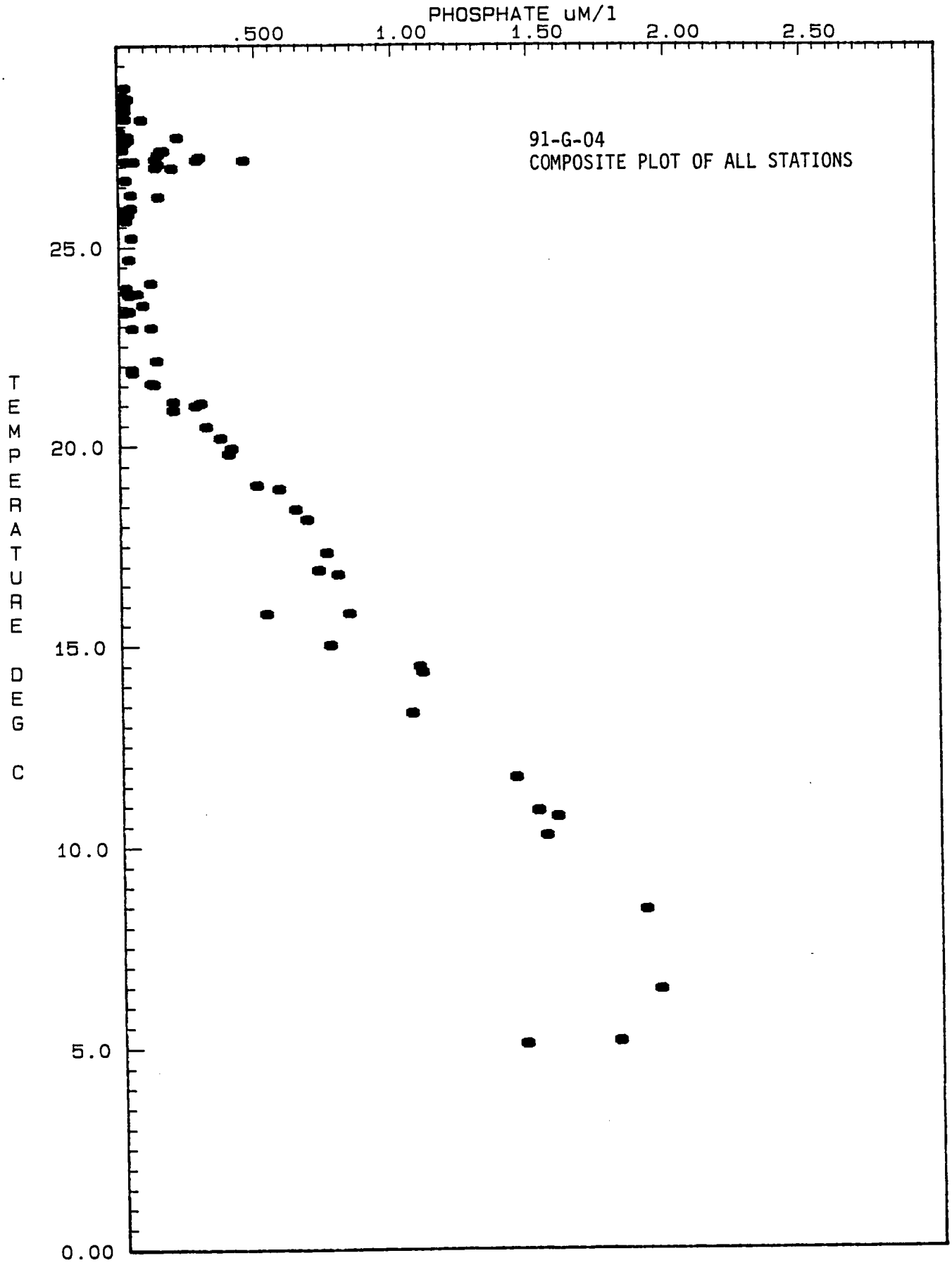
STA 09

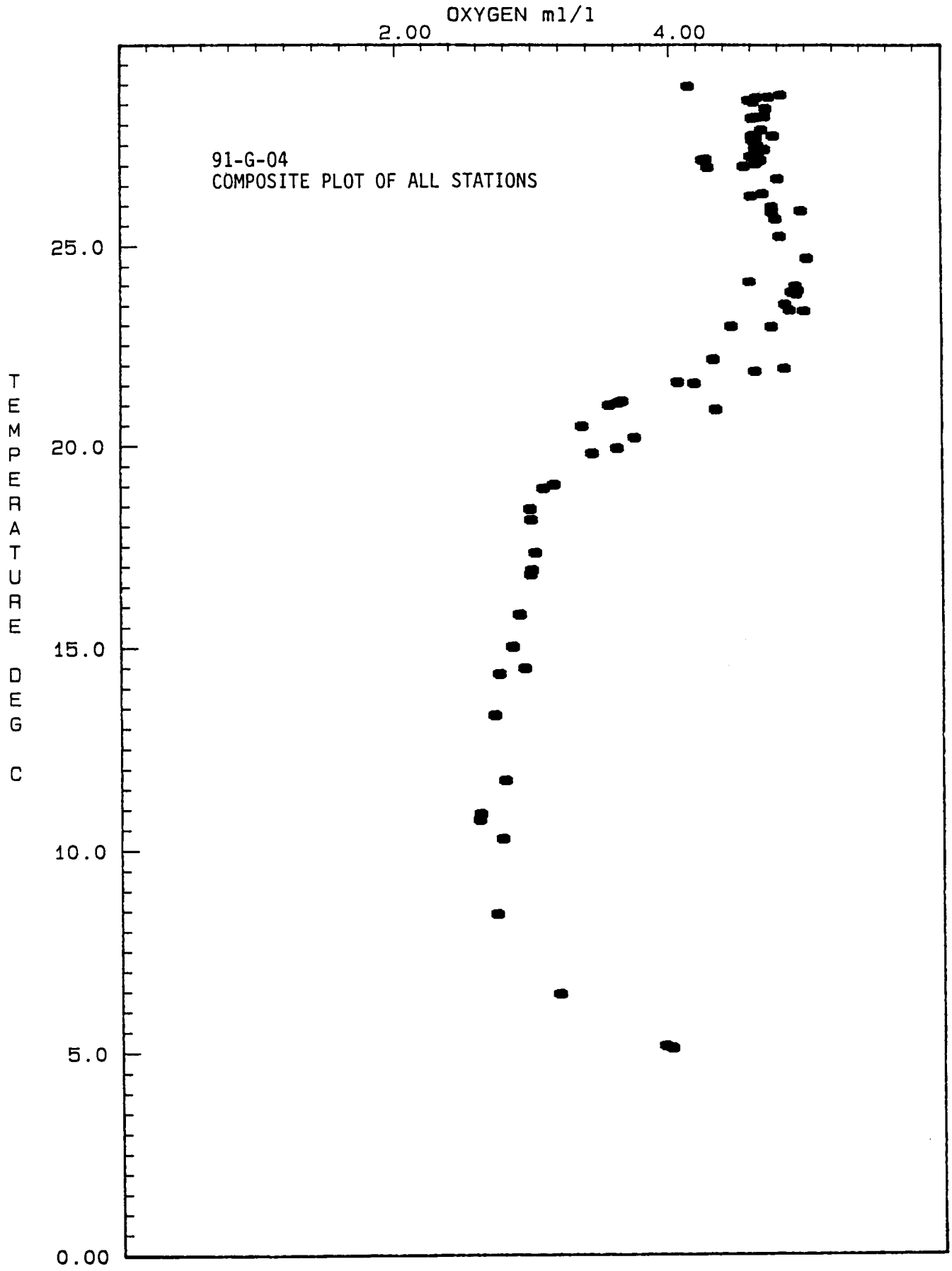
DEPTH	CHL	PHAEO
42	0.18	0.05
38	0.19	0.04
31	0.14	0.04
24	0.15	0.03
17	0.11	0.02
10	0.11	0.02
5	0.10	0.01
1	0.11	0.01

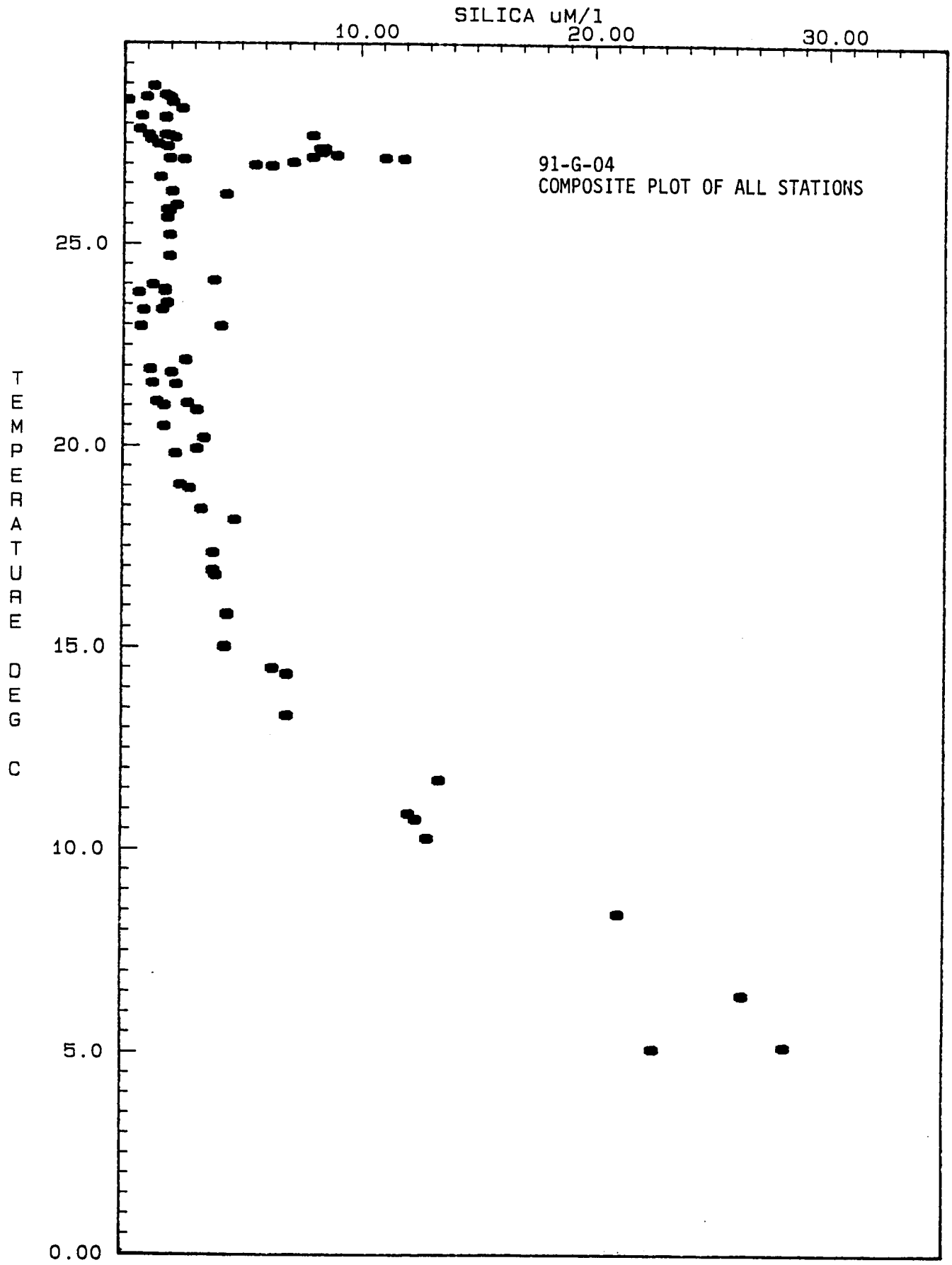


CRUISE: 91G04 STATION: 891G04*9*1 DATE: 18JUNE91
LATITUDE: 28 14.6 LONGITUDE: 94 59.6


NITRATE uM/l
10.00
20.00
30.00
91-G-04
COMPOSITE PLOT OF ALL STATIONS
TEMPERATURE DEG C
25.0
20.0
15.0
10.0
5.0
0.00


PHOSPHATE uM/1
.500
1.00
1.50
2.00
2.50
91-G-04
COMPOSITE PLOT OF ALL STATIONS
TEMPERATURE DEG C
25.0
20.0
15.0
10.0
5.0
0.00


OXYGEN ml/l
2.00
4.00
91-G-04
COMPOSITE PLOT OF ALL STATIONS
25.0
20.0
15.0
10.0
5.0
0.00
TEMPERATURE DEG C


SILICA uM/l
10.00
20.00
30.00
91-G-04
COMPOSITE PLOT OF ALL STATIONS
TEMPERATURE DEG C
25.0
20.0
15.0
10.0
5.0
0.00

GALVESTON BAY AND INNER SHELF SAMPLING

On 18 June, samples for nutrient and chlorophyll analysis were collected from a small boat by L.L. Griffin and A.M. Landry, of the Department of Marine Sciences at Texas A&M University at Galveston. They collected a dozen samples from six locations in the Houston Ship Channel, and another dozen from six locations in the Dickinson Bayou system. The mixing region between Galveston Bay and the inner shelf was sampled a week earlier, during the evening of 14-15 June, by drawing samples every 15 minutes from GYRE's flow-through seawater system in the Main laboratory, while GYRE was underway from the TAMU Marine Operations facility at Pelican Island (29°18.8'N, 94°49.1'W) to the first inner shelf station (28°44.3'N, 94°59.7'W; 21 m water depth). This flow-through system pumps water from an uncontaminated sea chest, which opens 3.5 m below the surface.

The estuarine nutrient samples from Galveston Bay were filtered through GF/F filters and then frozen for analysis two weeks later (1 July) at College Station with a Technicon AA-II six-channel autoanalyzer. The underway samples taken 14-15 June were analyzed fresh, on board ship with an Alpkem IWA-6 six-channel autoanalyzer. The chlorophyll samples from Galveston Bay (the material trapped on the GF/F filters used to filter the nutrient samples) were also frozen after collection and then thawed and analyzed at College Station within 2 weeks of their collection, following the protocol described in the "Bottle Data" section of this report.

Concentrations of CHL and PHAEO have been reported as ug liter^{-1}, though to avoid clogging the GF/F filters only 50 ml (1/20 liter) of sample was filtered for Galveston Bay sample 24, 125 ml (1/8 liter) for Galveston Bay samples 13-23 , 250 ml (1/4 liter) for Galveston Bay samples 01-12, and 500 ml (1/2 liter) for underway samples taken the evening of 14-15 June between Pelican Island and 91G-04 Station 01. Concentrations of nutrients are reported as uM liter^{-1}.

As in previous seasons for which we have CHL and nutrient samples from both the Bay and the inner shelf (Oct 88; Mar 89; May 89; Oct 89; Jul 90; Mar 91), the estuarine water of Galveston Bay and its Dickinson Bayou tributary again had markedly higher surface silicate, phosphate, and nitrate concentrations than did the inner shelf water just offshore.

Between the TAMU Marine Operations facility at Pelican Island and a water depth of 21 m on the inner shelf (91G-04 Sta 01), GYRE crossed two salinity fronts. Before reaching the first of these, surface concentrations of silicate, nitrate, and phosphate had all declined precipitously. However, CHL remained high (4-9 ug liter^{-1}) over the inner shelf until the second of these salinity fronts was crossed, after which CHL, too, declined precipitously to less than 1 ug liter^{-1}. The transit plots on page 84 illustrate these patterns. Note, however, that in the Galveston Bay outflow region that we sampled from Pelican Island to the first salinity front over the inner shelf (Bay and Inner Shelf Sampling locations 1-10), phosphate was highly correlated with silicate, as was nitrate with silicate, and nitrate with phosphate (see the property-property plots on page 85). Nitrite was highly correlated with ammonium, as well, in this zone of Galveston Bay outflow.

BAY AND INNER SHELF SAMPLING

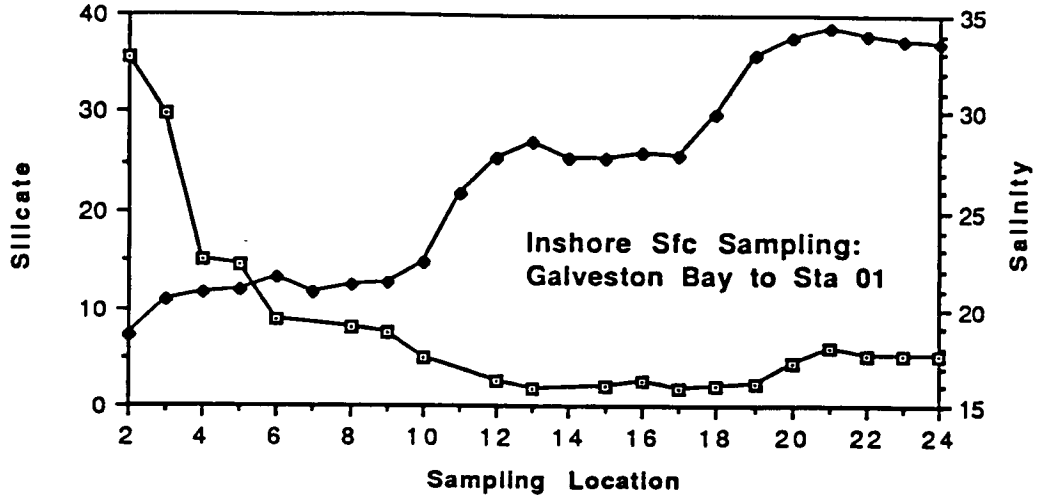
14-15 June 91

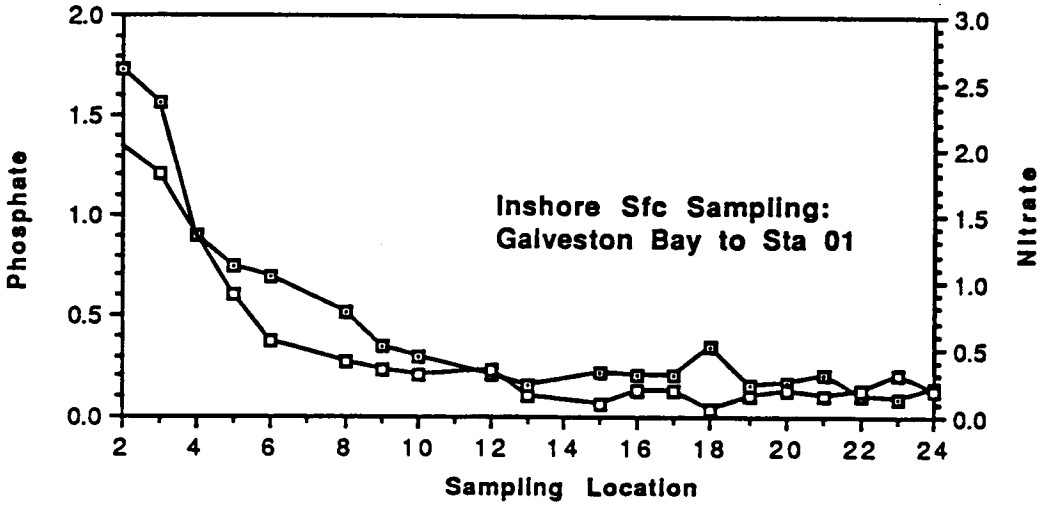
	LOCAL TIME	LATITUDE	LONGITUDE	CHL	PHAEO	Flo-Thru Temp	Flo-Thru Salin
1	19:30	29 18.8	94 49.1	8.1	1.8	28.4	19.51
2	19:45	29 18.8	94 49.1	8.8	1.8	28.8	18.70
3	20:30	29 18.7	94 48.5	5.2	0.9	28.4	20.41
4	20:45	29 19.9	94 46.5	6.0	1.2	28.0	20.82
5	21:00	29 20.7	94 43.9	6.4	1.3	28.1	20.95
6	21:15	29 20.0	94 40.6	6.8	1.5	28.3	21.62
7	21:30	29 18.6	94 40.5	4.8	1.0	28.5	20.89
8	21:45	29 16.4	94 39.6	5.2	2.3	28.3	21.20
9	22:00	29 14.3	94 40.3	5.3	1.3	28.3	21.30
10	22:15	29 12.9	94 42.6	7.0	0.1	28.3	22.39
11	22:30	29 10.1	94 43.9	4.8	0.3	27.6	25.95
12	22:45	29 08.1	94 45.4	5.2	0.2	27.9	27.78
13	23:00	29 06.1	94 46.8	7.5	0.1	27.9	28.53
14	23:15	29 04.1	94 48.1	4.5	0.8	27.8	27.67
15	23:30	29 02.1	94 49.4	6.5	0.2	27.8	27.77
16	23:45	29 00.1	94 50.6	5.5	0.1	27.7	28.03
17	00:00	28 57.8	94 51.7	9.0	0.2	27.8	27.86
18	00:15	28 56.5	94 52.3	8.8	0.5	27.9	29.93
19	00:30	28 54.3	94 54.3	6.6	0.2	27.8	32.88
20	00:45	28 51.8	94 55.4	1.2	0.1	27.7	33.82
21	01:00	28 50.0	94 56.4	0.6	0.0	27.8	34.41
22	01:15	28 47.8	94 57.6	0.4	0.0	27.8	33.96
23	01:30	28 46.0	94 58.7	0.6	0.0	27.9	33.67
24	01:45	28 44.3	94 59.1	0.7	0.1	28.0	33.56

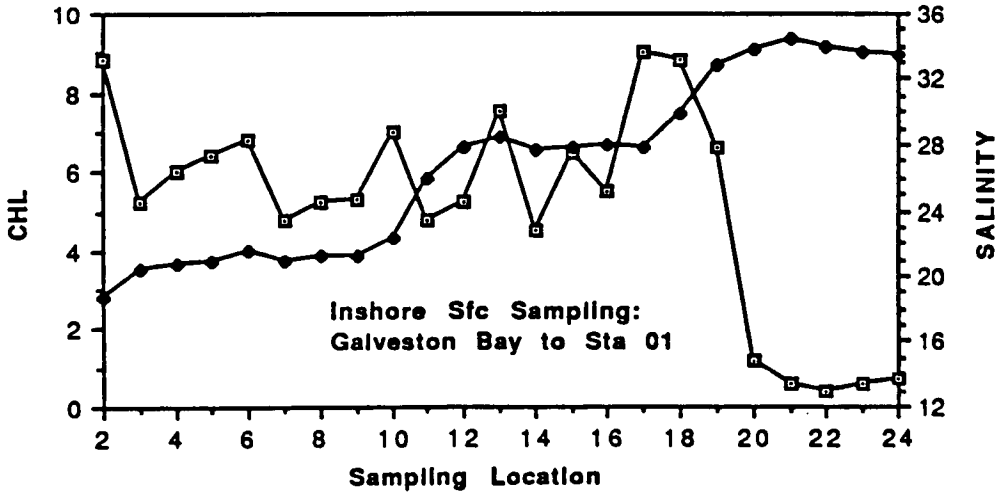
	Silicate	Phosphate	Nitrate	Nitrite	Ammonium	Urea
1	32.3	1.65	2.25	1.93	2.9	6.5
2	35.6	1.73		1.46	2.4	6.5
3	29.8	1.57	1.80	1.82	2.8	7.0
4	15.1	0.90		1.60	2.3	4.5
5	14.5	0.75	0.90	1.04	1.3	4.2
6	8.9	0.69	0.55	1.03	1.2	5.2
7						
8	8.1	0.51	0.40	0.44	0.6	3.1
9	7.5	0.34	0.35	0.52	0.4	2.4
10	4.9	0.30	0.30	0.51	0.3	1.8
11						
12	2.6	0.20	0.35	0.75	0.6	1.3
13	1.9	0.15	0.15	0.29	0.1	1.1
14						
15	2.2	0.22	0.10	0.54	0.5	2.0
16	2.5	0.20	0.20	0.59	0.4	1.5
17	1.9	0.21	0.20	0.58	0.6	1.6
18	2.1	0.34	0.05	0.48	0.8	
19	2.4	0.15	0.15	0.20	0.3	1.3
20	4.5	0.17	0.20	0.11	0.3	1.3
21	5.9	0.21	0.15	0.11	0.3	1.5
22	5.1	0.10	0.20	0.02	0.1	0.8
23	5.1	0.09	0.30	0.01	0.1	0.8
24	5.1	0.14	0.20	0.01	0.1	1.3

BAY AND INNER SHELF SAMPLING

14-15 June 91

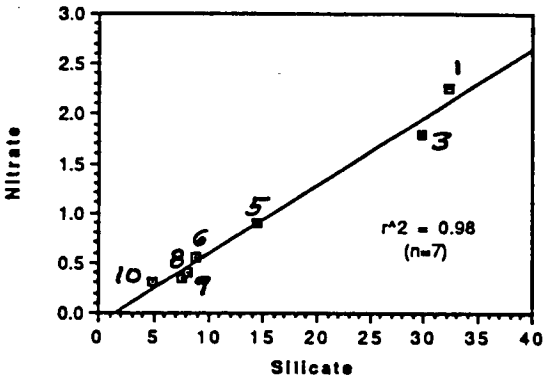


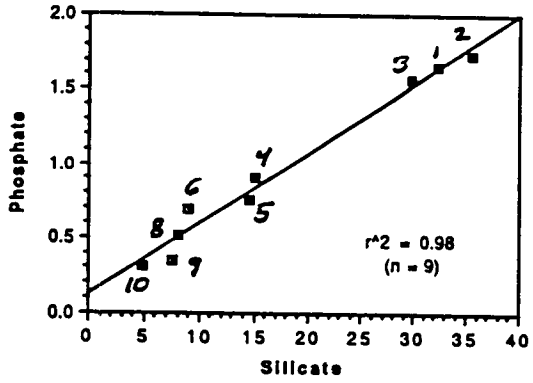


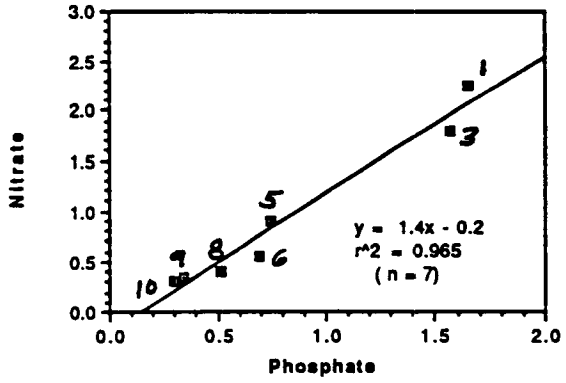


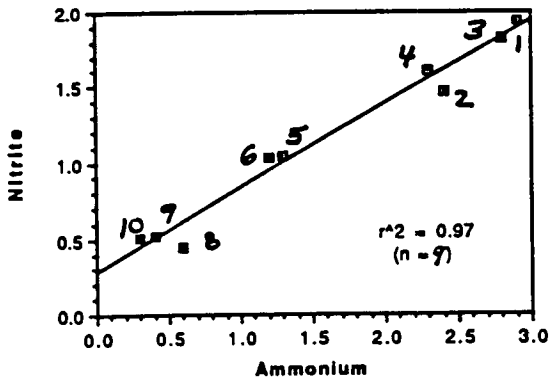
BAY AND INNER SHELF SAMPLING

14-15 June 91









GALVESTON BAY SAMPLING, 18 JUN 91

HOUSTON SHIP CHANNEL (HSC): samples 01 - 12

01 sfc sample, near HSC marker # 10
02 5 m sample, same location

03 sfc sample, near HSC marker # 16
04 5 m sample, same location

05 sfc sample, near HSC marker # 26
06 5 m sample, same location

07 sfc sample, near HSC marker # 44
08 5 m sample, same location

09 sfc sample, near HSC marker # 56
10 5 m sample, same location

11 sfc sample, near HSC marker # 62
12 5 m sample, same location

DICKINSON BAYOU: samples 13 - 34

13 sfc sample, bayou mouth in Dickinson Bay region of Galv Bay
14 sample from 1.5 m, same location

15 sfc sample, at Channel Marker # 29
16 sample from 3 m, same location

17 sfc sample, about 3 km further upstream
18 sample from 1 m, same location

19 sfc sample, about 4 km farther upstream
20 sample from 1 m, same location

21 sfc sample, about 3 km farther upstream (and near Country Club)
22 sample from 3.5 m, same location

23 sfc sample, about 3 km farther upstream, and midstream near Sewage Treatment Plant
24 sample from 2 m, same location

GALVESTON BAY SAMPLING, 18 JUN 91

	SALINITY	TEMP	CHL	PHAEO	NH4	PO4	Urea	NO3	NO2	SiOH4
1	11.8	26.0	7.5	1.6	0.5	1.28	0.4	0.7	0.17	22.8
2	13.0	27.0	2.0	0.9	2.7	0.60	0.5	1.5	0.87	14.0
3	8.5	27.5	6.6	2.0	0.2	1.35	0.3	0.1	0.16	4.1
4	16.0	27.0	0.7	1.2	2.9	0.63	1.3	1.3	0.17	14.1
5	10.5	27.0	5.5	2.1	0.2	1.35	0.2	0.1	0.16	12.4
6	17.0	27.0	0.7	0.6	3.2	0.64	0.7	1.7	0.87	16.3
7	8.0	27.5	8.1	2.2	0.1	2.30	0.2	0.1	0.16	26.0
8	9.0	27.0	4.6	3.3	2.1	1.33	0.6	2.5	0.37	28.5
9	7.5	27.0	7.8	3.0	0.2	2.47	0.3	0.5	0.23	32.4
10	9.0	27.0	5.4	3.1	1.4	2.33	0.3	1.4	0.31	40.8
11	7.0	27.0	8.6	3.6	0.1	2.86	0.3	13.7	1.16	45.6
12	8.0	27.0	4.9	3.2	1.7	2.70	0.5	12.9	1.13	52.7
13	7.0	29.0	6.4	1.5	0.1	2.24	0.4	0.1	0.03	43.0
14	5.5	27.0	4.4	4.3	0.0	2.14	0.3	0.1	0.03	50.6
15	5.5	27.0	2.3	4.1	0.3	1.72	0.8	6.1	0.80	68.7
16	7.0	27.0	3.0	1.6	0.6	1.89	0.4	0.1	0.25	53.9
17	< 1	27.0	9.6	3.1	1.3	1.26	0.9	5.0	0.72	70.8
18	< 1	25.0	5.8	3.8	3.3	1.41	1.6	6.1	0.76	55.9
19	fresh	25.0	1.1	1.7	4.5	1.60	1.5	6.5	0.53	63.0
20	fresh	24.8	1.7	2.2	5.2	1.57	1.7	6.1	0.53	59.2
21	fresh	26.0	1.5	1.5	3.3	1.39	1.6	5.0	0.48	69.7
22	fresh	25.0	0.9	3.3	4.7	1.42	1.8	6.4	0.51	52.4
23	fresh	26.0	1.5	1.4	2.9	1.27	1.6	3.4	0.45	69.4
24	fresh	25.0	2.6	12.5	4.6	1.52	1.7	6.9	0.50	61.7

ACKNOWLEDGMENTS

The US National Science Foundation provided 4 days of ship time for *Gyre* cruise 91G-04, and Texas A&M University funded an additional day of ship time to allow graduate student Training & Research to be piggy-backed on this geochemistry trip. NSF and TAMU provide salary for technical specialists in a Department of Oceanography pool comprised of autoanalyzer technicians, electronics technicians, and other marine technicians to support cruises of R/V *Gyre*. A cooperative agreement No. 14-35-0001-30501 between TAMU and the US Minerals Management Service for the collection of ship-of-opportunity hydrographic data supported the at-sea participation of one TAMU Technician on *Powell* cruise 91P-03 and of four TAMU technicians on *Gyre* cruise 91G-04. This TAMU-MMS agreement also supported the preparation costs of this technical report to archive and share the hydrographic data. The CTD data were shared 8 August 1991 with the National Oceanographic Data Center, which has assigned them Identification Number #9100152. TAMU has placed no proprietary restrictions on these hydrographic data, although Chief Scientists Jerry Morgan for *Powell* cruise 91P-03 and M. Baskaran for *Gyre* cruise 91G-04 request the courtesy of first publication.

The CTD, nutrients, oxygen, and salinity data archived in this report were collected and processed by TAMU Department of Oceanography Technicians Greg Warr (*Powell* cruise 91P-03) and Ken Bottom, Mark Spears, R.V. Pittman, and David Voegele (*Gyre* cruise 91G-04). Graduate students Sally Jo Palmer, Marilyn Yeager, Jianquing Xu, Sung-Pyo Chung, and John Swanson assisted with the CTD data collection on *Gyre* 91G-04 and pitched in to carry out the at-sea chlorophyll analyses. D.C. Biggs was responsible for quality control and served as editor-in-chief.

The Seabird Seacat CTD, Seabird CTD/rosette multisampler package, transmissometer, laboratory salinometer, dissolved oxygen titration rig, and autoanalyzer used to support these cruises were awarded to TAMU by NSF grants for Oceanographic Instrumentation for R/V *Gyre*. Fluorometers were loaned by Dr. D.R. Schink and Dr. S.Z. El-Sayed.

For allowing us to piggy-back Seacat CTD casts from *Powell* coring cruise 91P-03, we thank Dr. J.M. Brooks of GERG, Chief Scientist Jerry Morgan, and especially Mr. Eddie Voss. The crew chartered to staff *Gyre* cruise 91G-04 from Hornbeck Offshore Services once again provided cheerful and courteous support, and we especially thank the Deck Engineers from the TAMU Marine Operations Group in Galveston, who ran *Gyre*'s winches, cranes, and A-frames.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.