

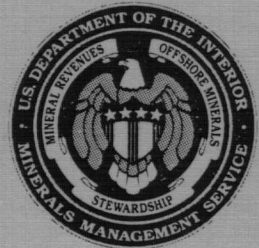
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SOUTHWEST FLORIDA SHELF BENTHIC COMMUNITIES STUDY YEAR 4 ANNUAL REPORT

VOLUME III -- APPENDICES

Prepared for:

U.S. DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
Gulf of Mexico OCS Region
Metairie, Louisiana



Prepared by:

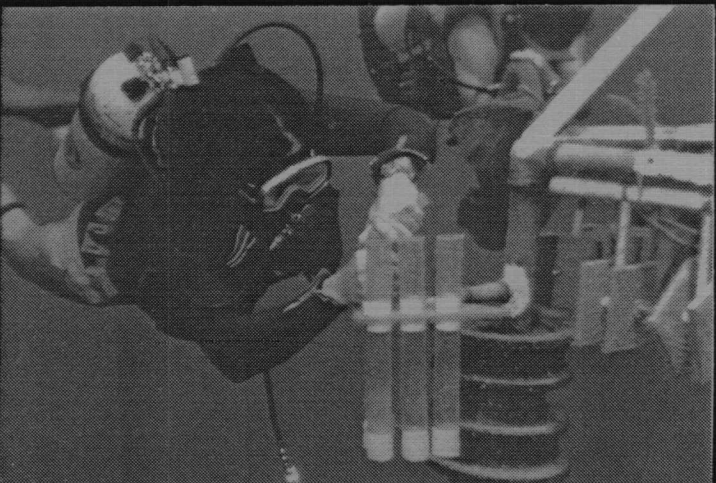
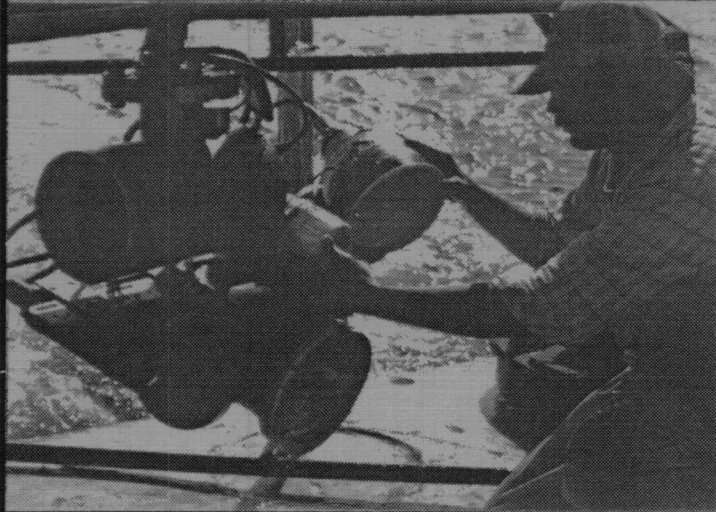
ENVIRONMENTAL SCIENCE AND
ENGINEERING, INC.
Gainesville, Florida

and

LGL ECOLOGICAL RESEARCH
ASSOCIATES, INC.
Bryan, Texas

Contract No. 14-12-0001-30071

July 1985



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AND III (MAY 1984) COLLECTIONS

INTRODUCTION

The following appendices contain data primarily collected during Year 4 of the Southwest Florida Shelf Benthic Communities Study. These data include sampling location information (Appendix A); physical oceanography (Appendix B); shipboard marine observations (Appendix C); sediments (Appendix D); benthic infauna (Appendix E); benthic epifauna, nekton, and macroalgae (Appendix F); and fouling plate collections from Cruises II and III (Appendix G). Appendix C not only presents shipboard marine observations, but also those data collected from outside sources to aid in interpreting the Year 4 data.

Each of the appendices is preceded by a brief introduction discussing content, organization, sources, station locations, and comments on specific data.

APPENDIX A
STATION SAMPLING PLOTS

APPENDIX A STATION PLOTS

Appendix A presents sampling location data for the underwater television, dredging, and trawling surveys. Hydrographic and sediment sampling locations were not indicated on the plots to keep the plots from becoming too cluttered.

The sampling tracks were usually based on the beginning and ending LORAN coordinates. The beginning and ending coordinates were defined as those coordinates during which sampling occurred (e.g., the beginning coordinate during a trawl was the position of the ship at the time the net first started fishing, not the ship's position as the net was in the water). Because certain operations such as trawling and dredging were actually conducted astern of the vessel, the layback had to be calculated and the sampling plots adjusted to reflect this layback. This was done by estimating the wire out (the vessel trawl winch was not equipped with a meter wheel), determining the depth of water, and from this, calculating the distance of the dredge or trawl from the ship. The beginning and ending coordinates (as measured from the ship) were then offset the appropriate amount.

Since underwater television surveys were conducted with the vessel either drifting or motoring slowly, the layback that was involved would have fallen within the accuracy of the LORAN; therefore, no layback was calculated.

The station plot appendix is arranged first by cruise (Cruises I through IV) and second by stations. The Group I soft-bottom stations are not presented here because no underwater television, dredging, or trawling surveys were conducted. For the stations presented (Figure A-0), the order is as follows: Group I hard-bottom Stations 44, 45, 47, 51, and 19; and Group II live-bottom Stations 52, 21, 23, 29, and 36.

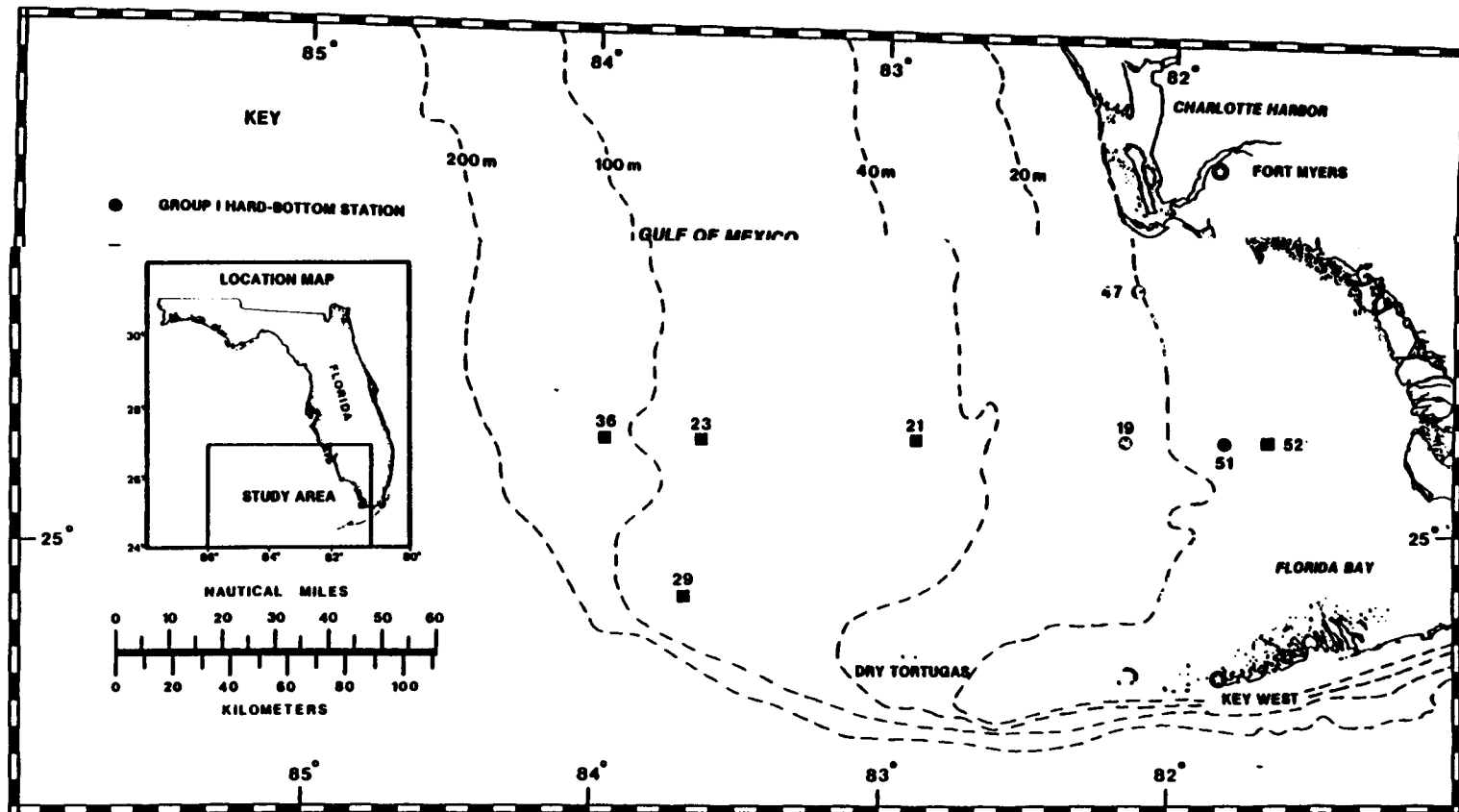


Figure A-0 GROUP I HARD-BOTTOM AND GROUP II LIVE-BOTTOM STATION LOCATIONS FOR YEAR 4 (DECEMBER 1983—1984)

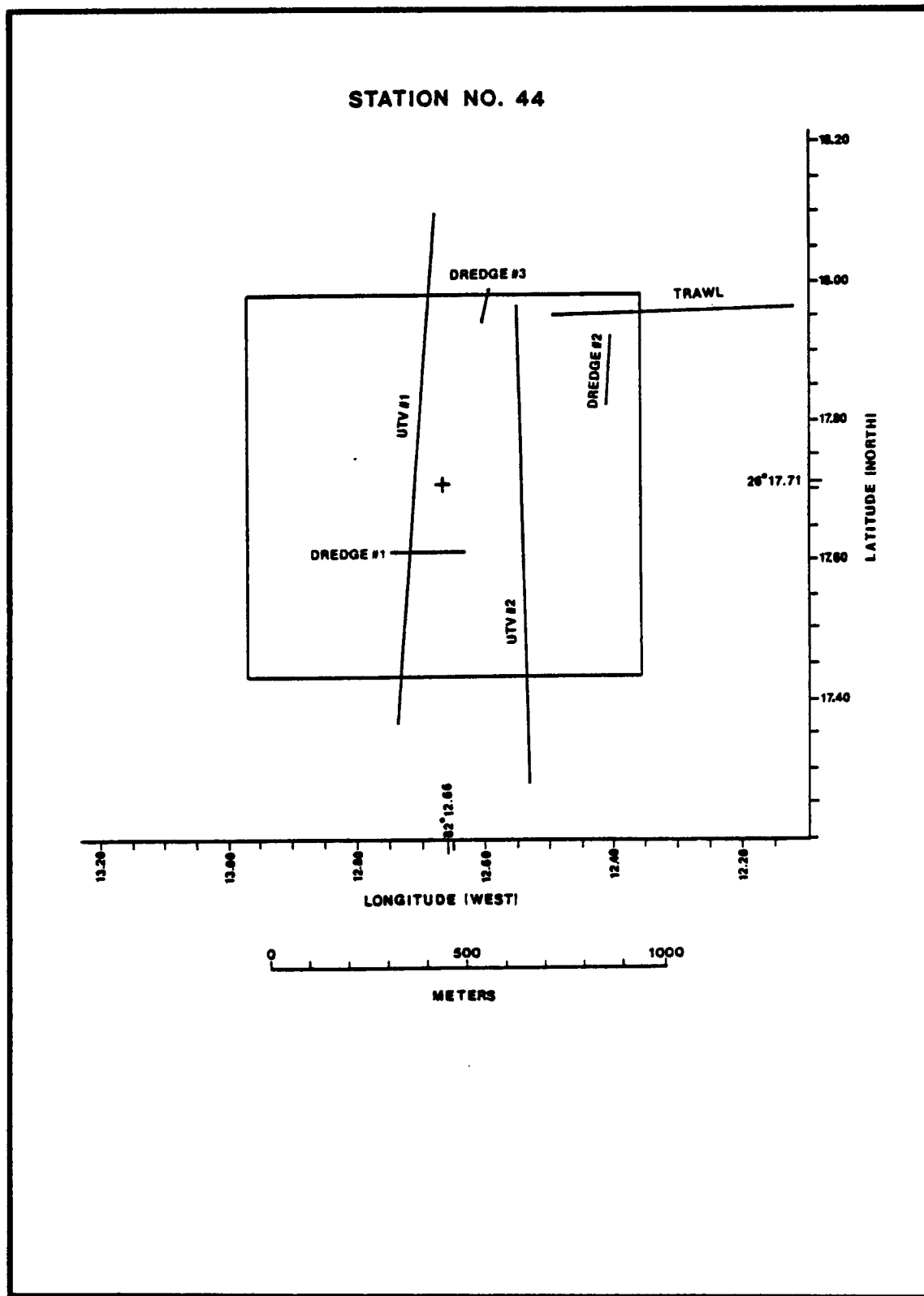


Figure A-1 STATION PLOT FOR STATION 44—YEAR 4, CRUISE I

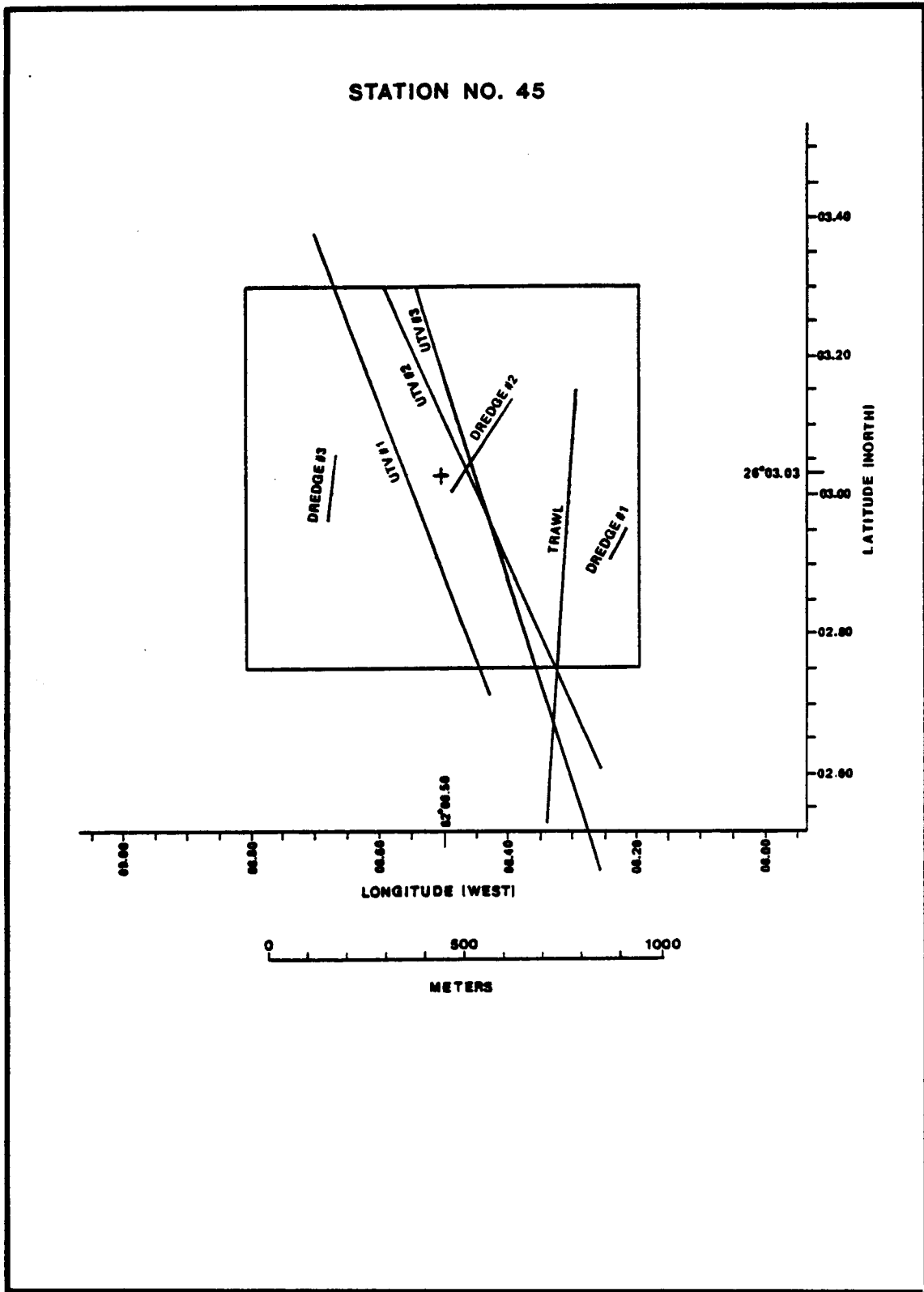


Figure A-2 STATION PLOT FOR STATION 45—YEAR 4, CRUISE I

STATION NO. 47

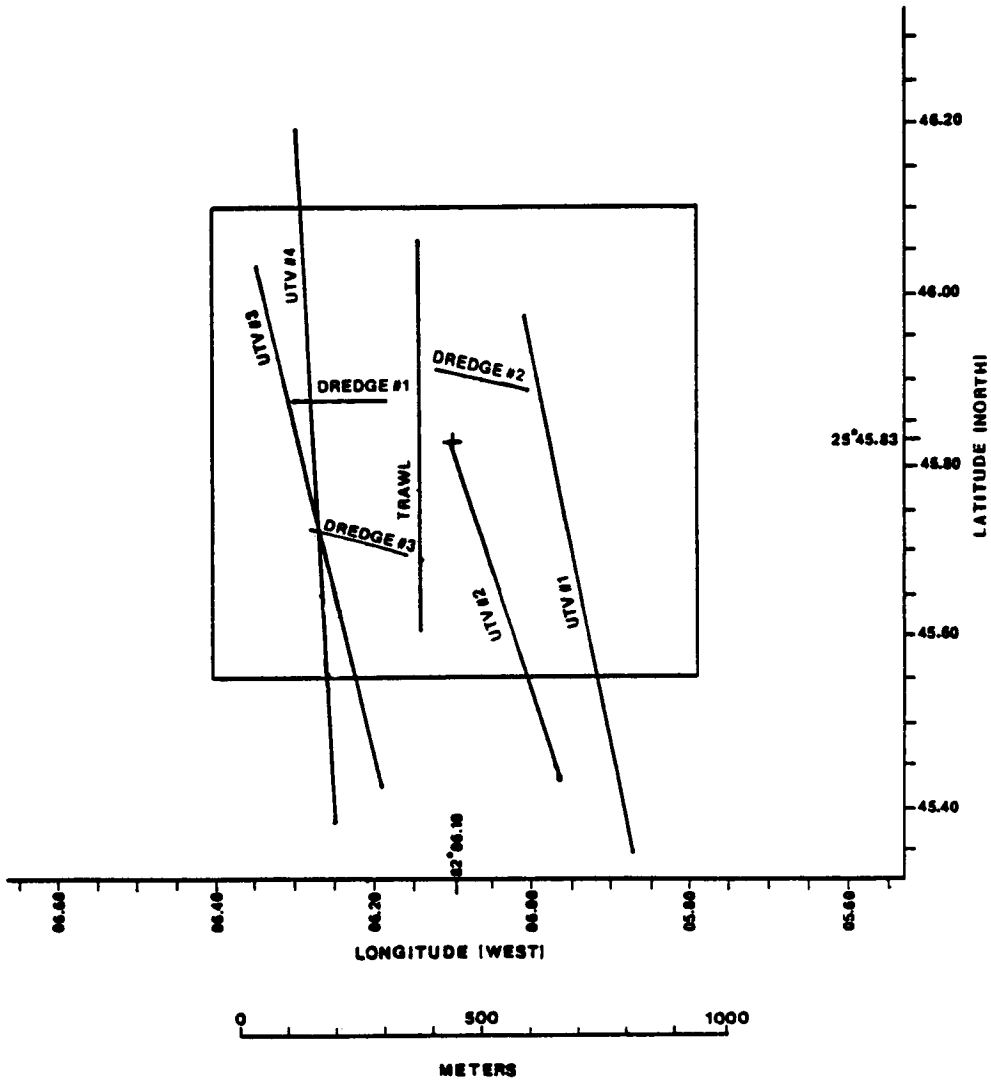


Figure A-3 STATION PLOT FOR STATION 47—YEAR 4, CRUISE I

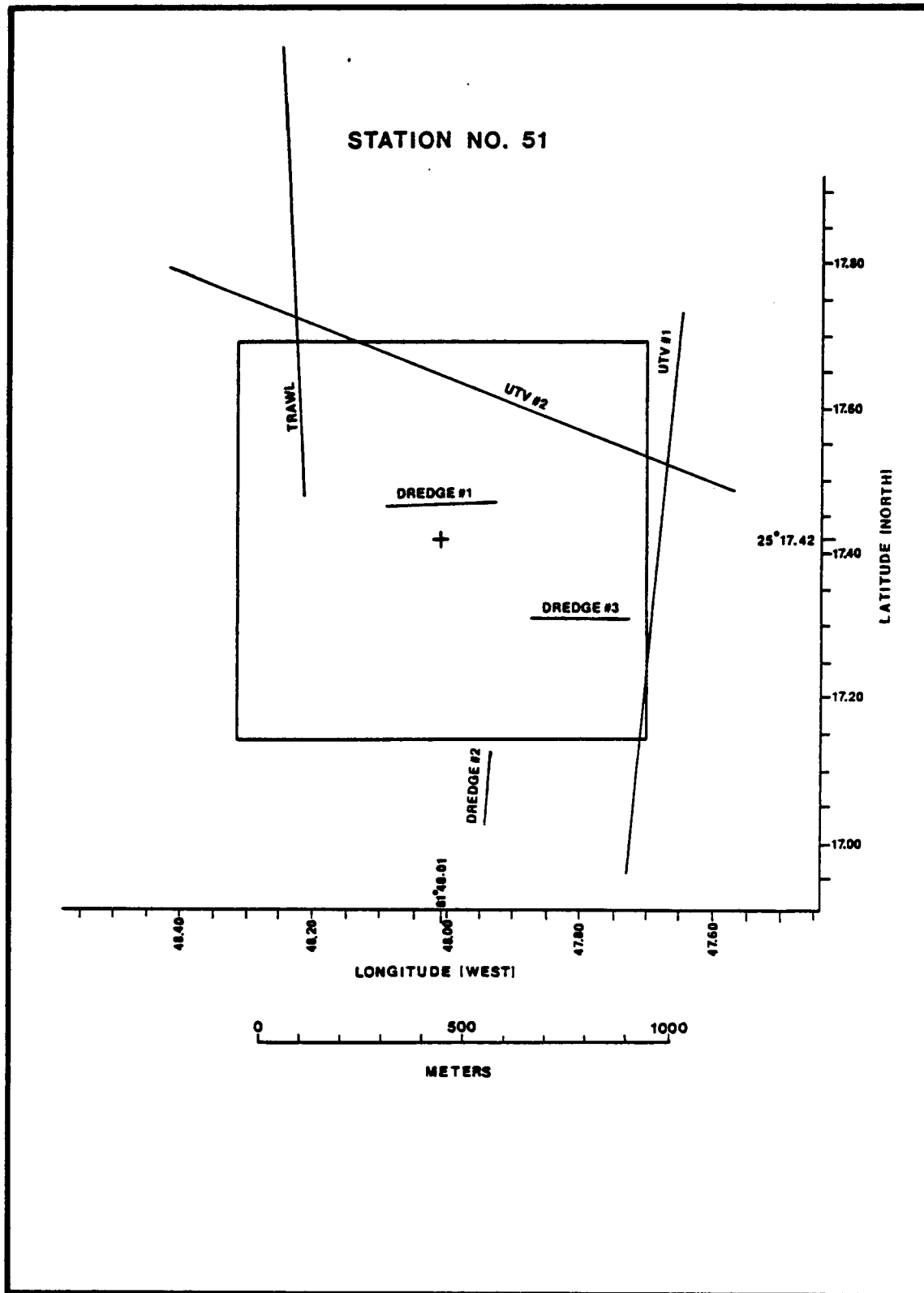


Figure A-4 STATION PLOT FOR STATION 51—YEAR 4, CRUISE I

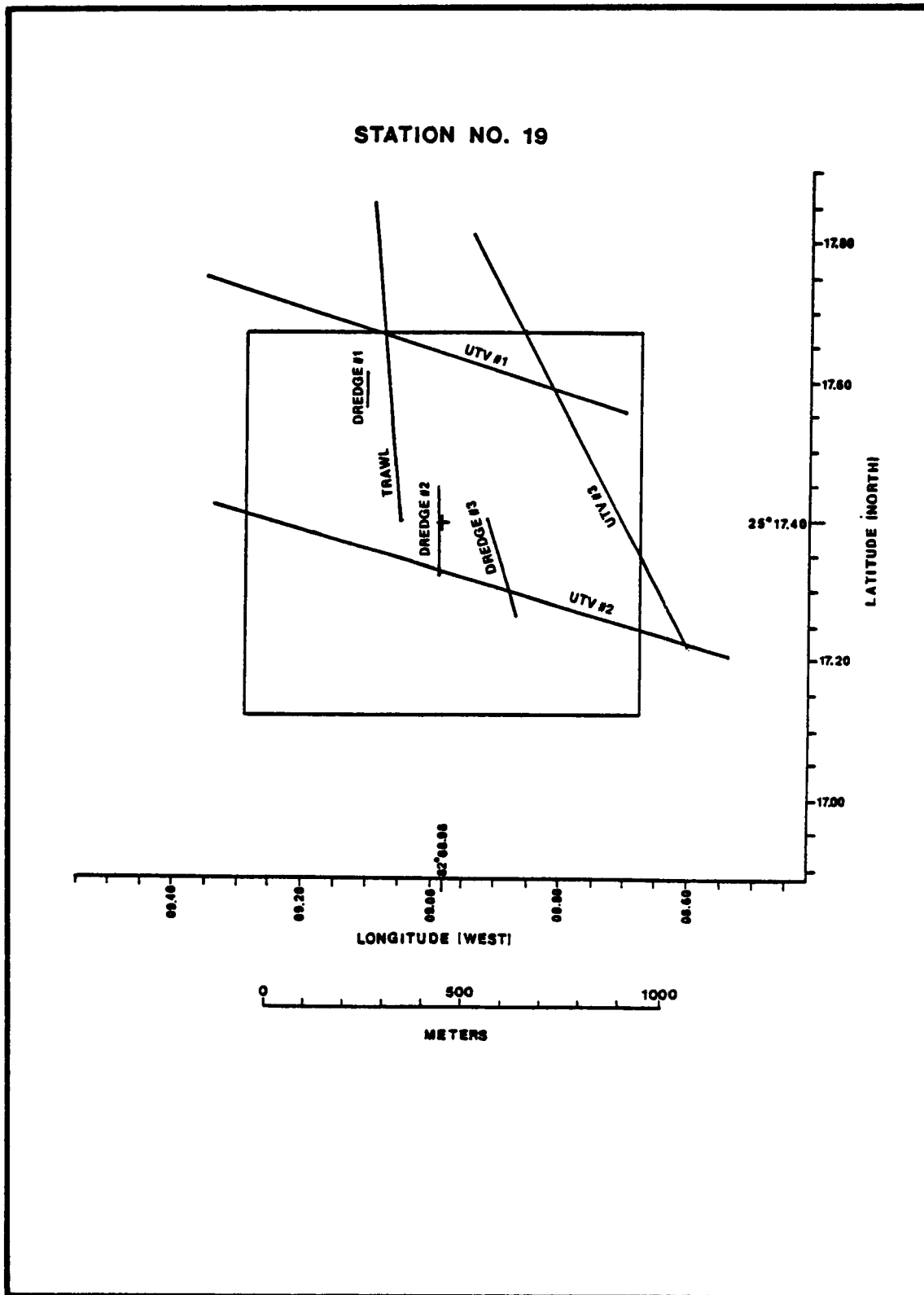


Figure A-5 STATION PLOT FOR STATION 19—YEAR 4, CRUISE I

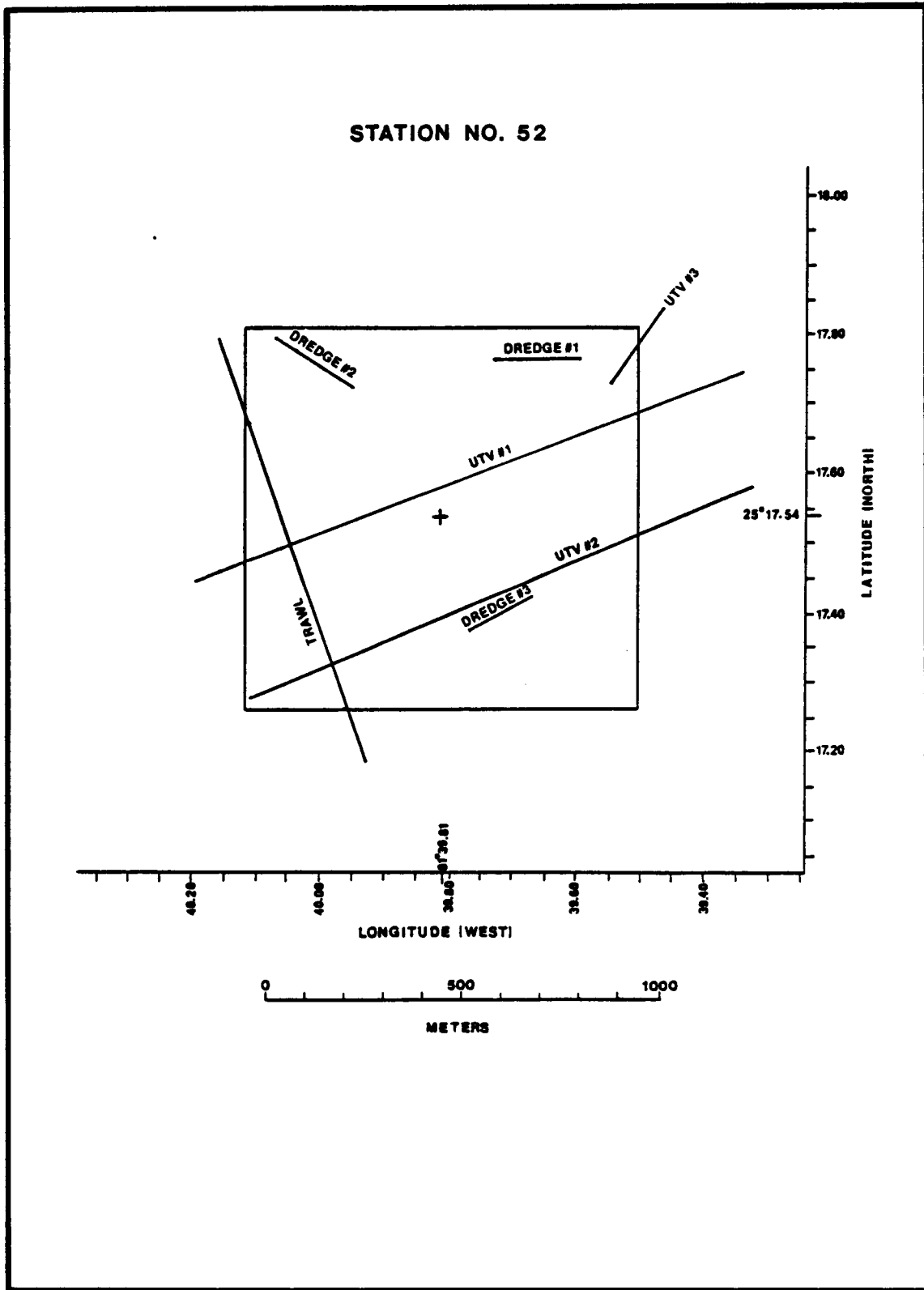


Figure A-6 STATION PLOT FOR STATION 52—YEAR 4, CRUISE I

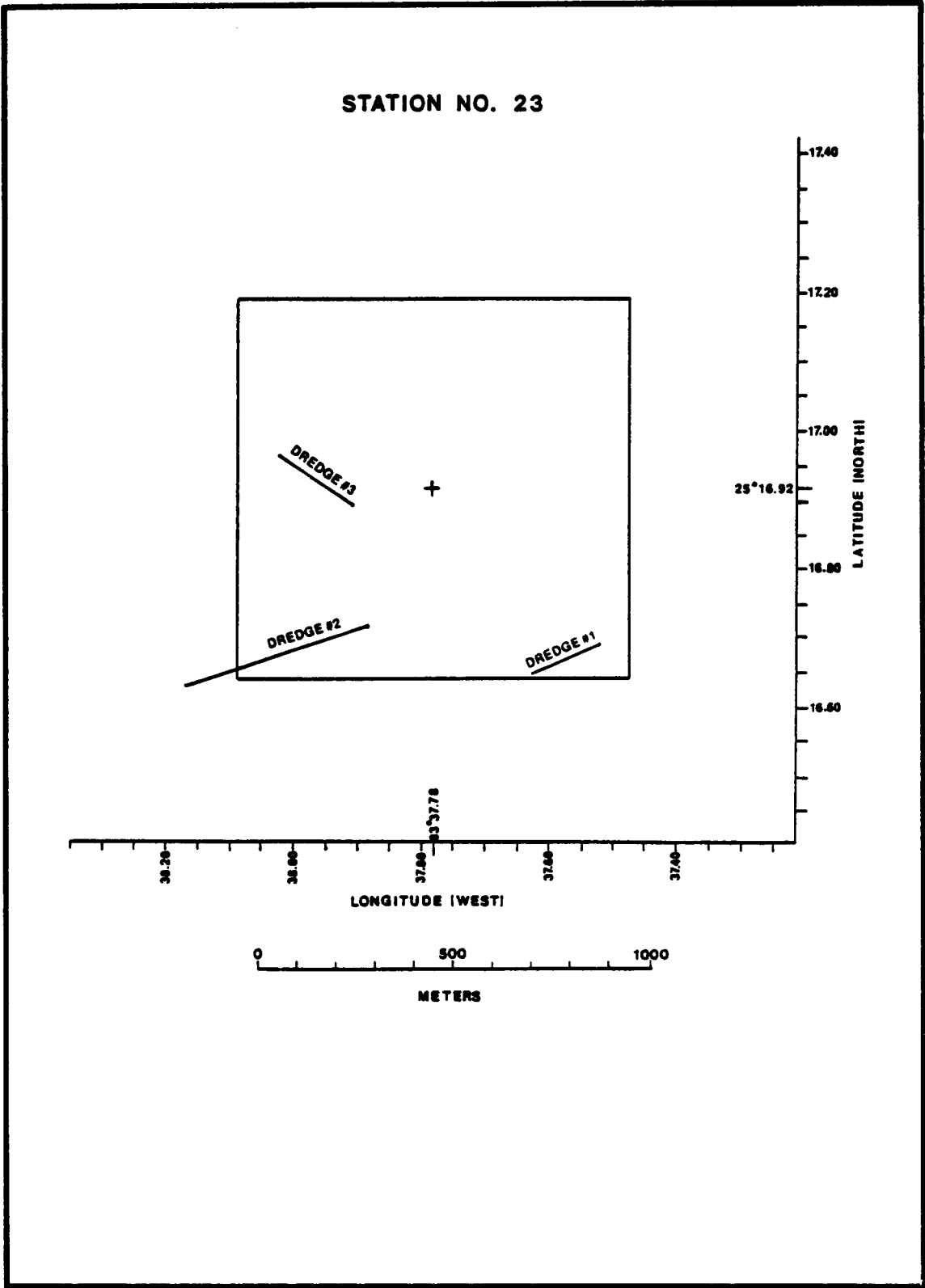


Figure A-7 STATION PLOT FOR STATION 23—YEAR 4, CRUISE I

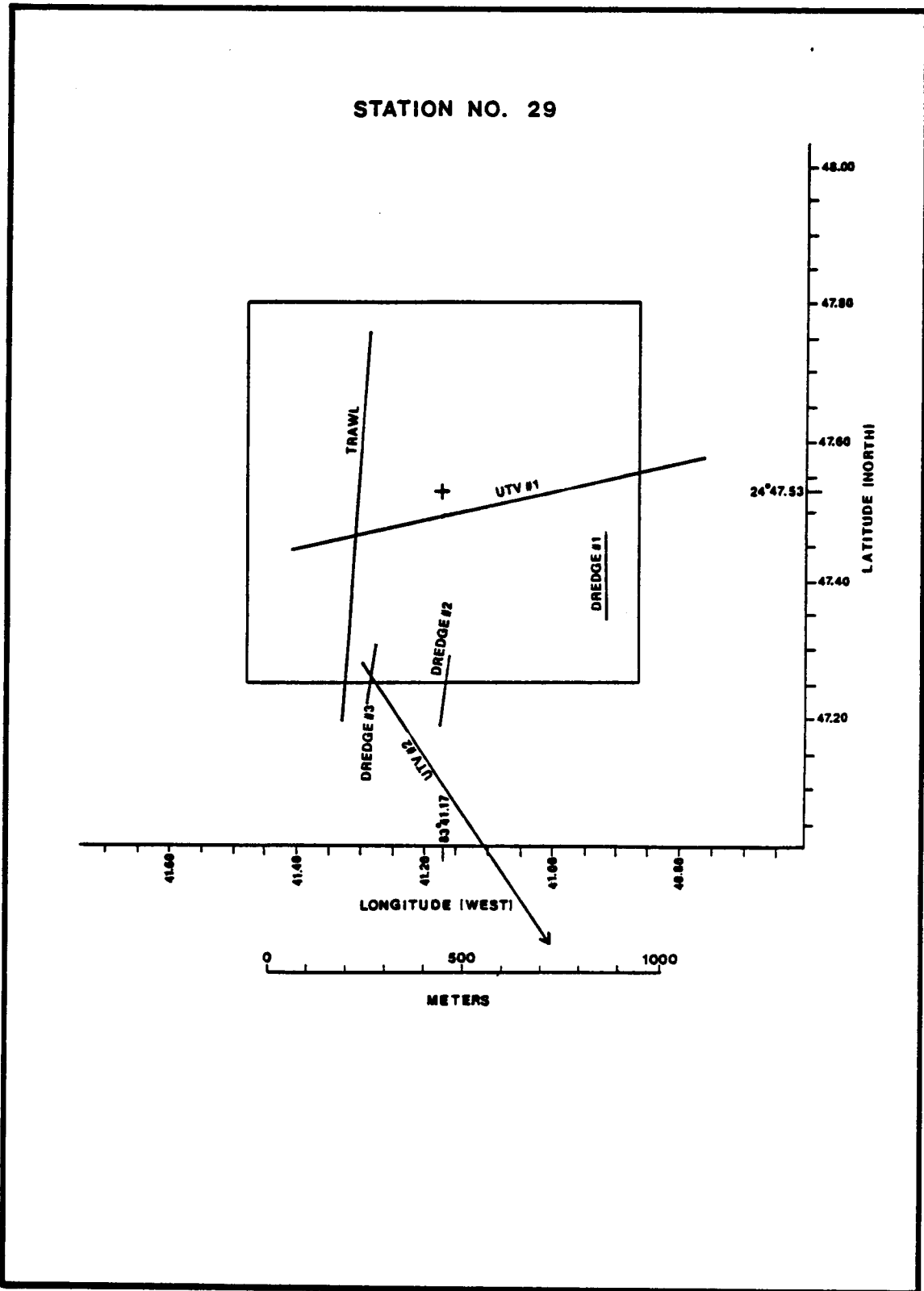


Figure A-8 STATION PLOT FOR STATION 29—YEAR 4, CRUISE I

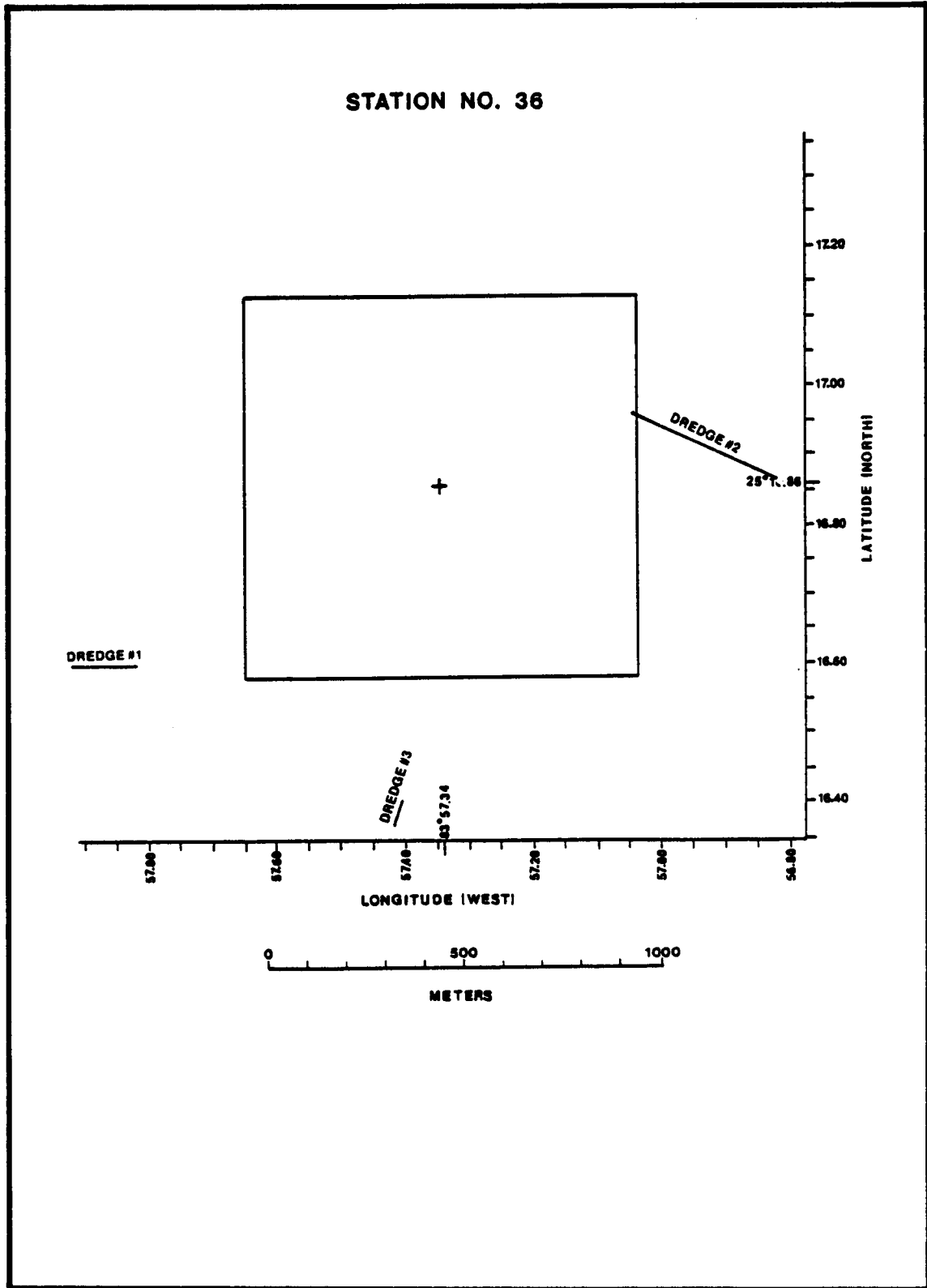


Figure A-9 STATION PLOT FOR STATION 36—YEAR 4, CRUISE I

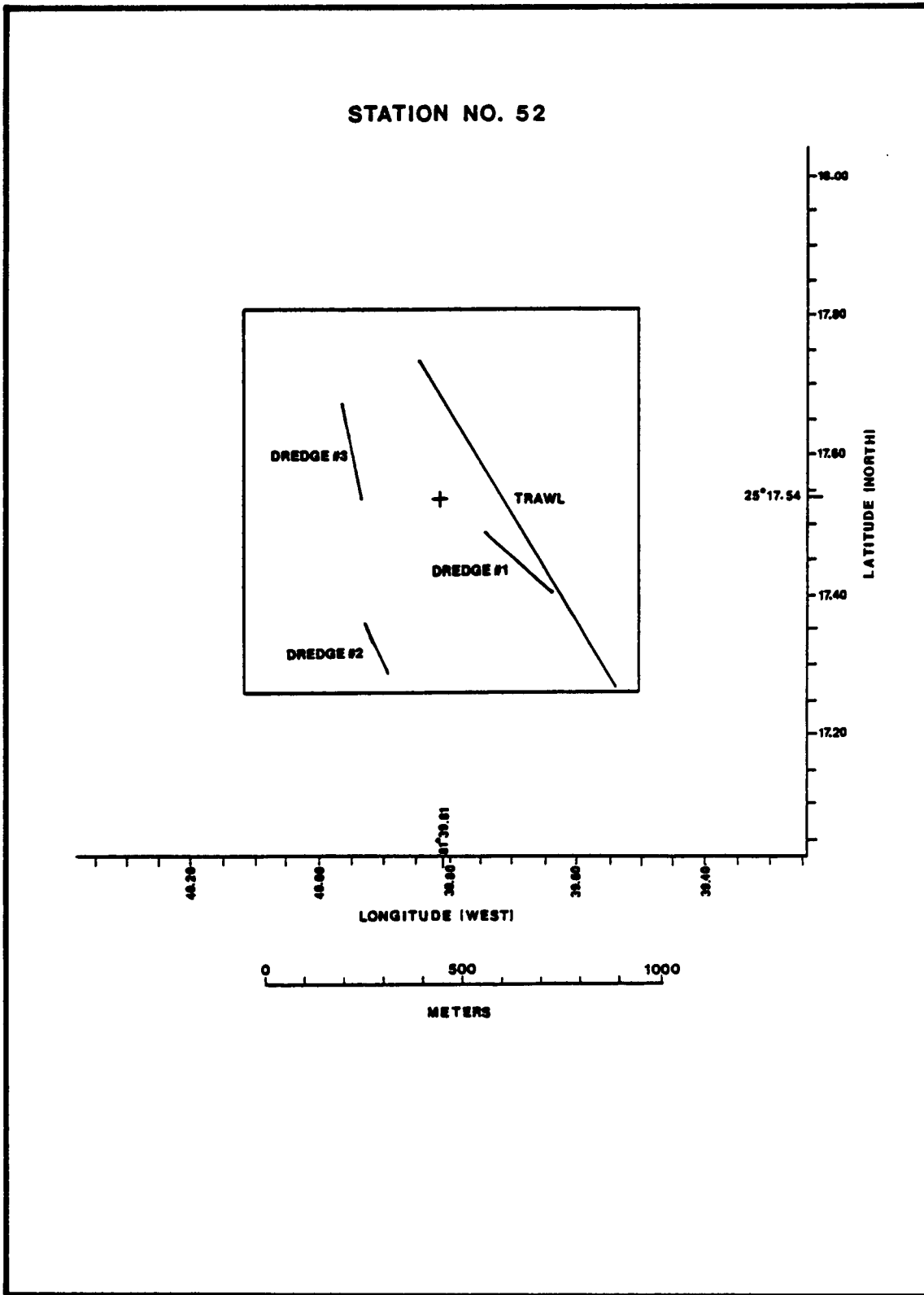


Figure A-10 STATION PLOT FOR STATION 52—YEAR 4, CRUISE II

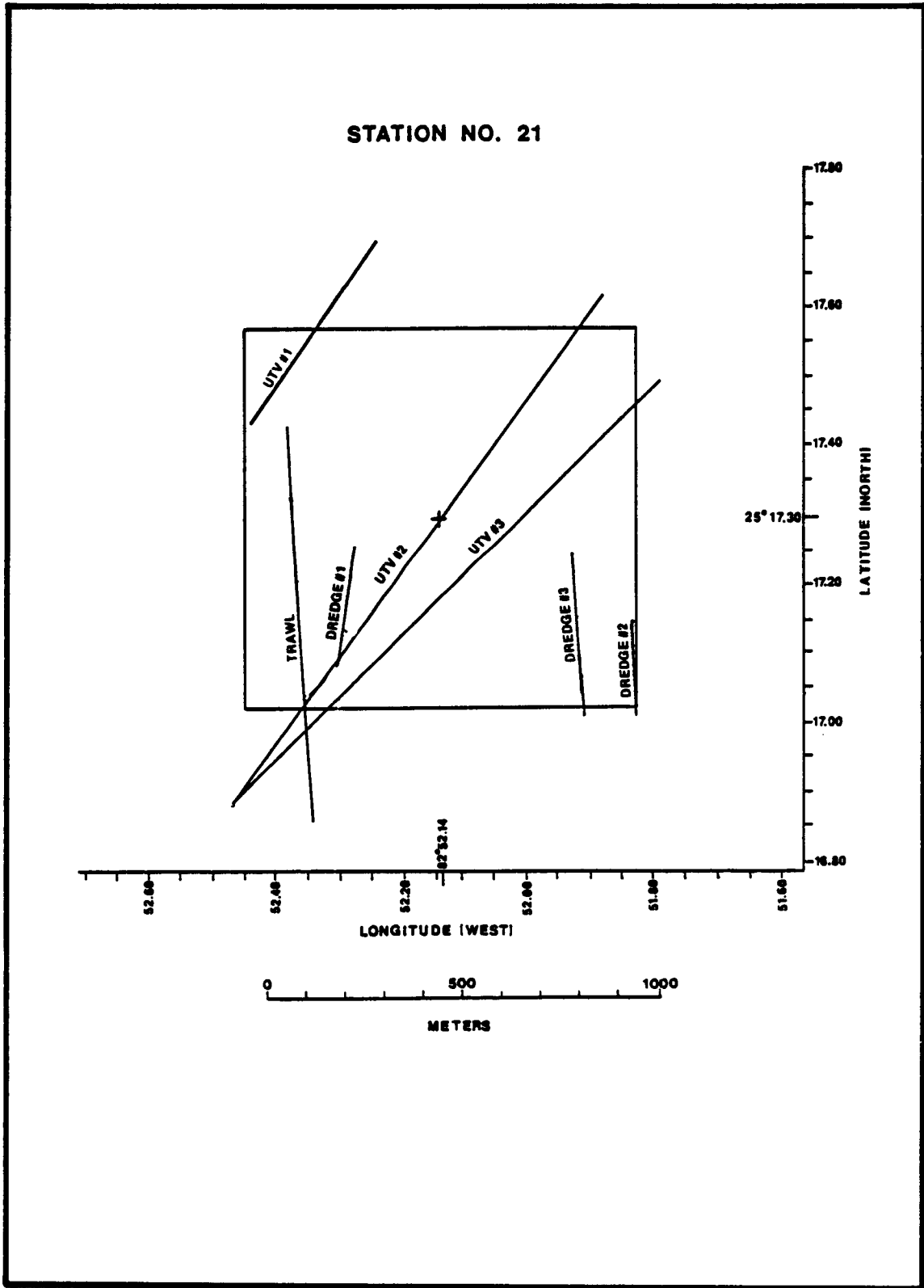


Figure A-11 STATION PLOT FOR STATION 21—YEAR 4, CRUISE II

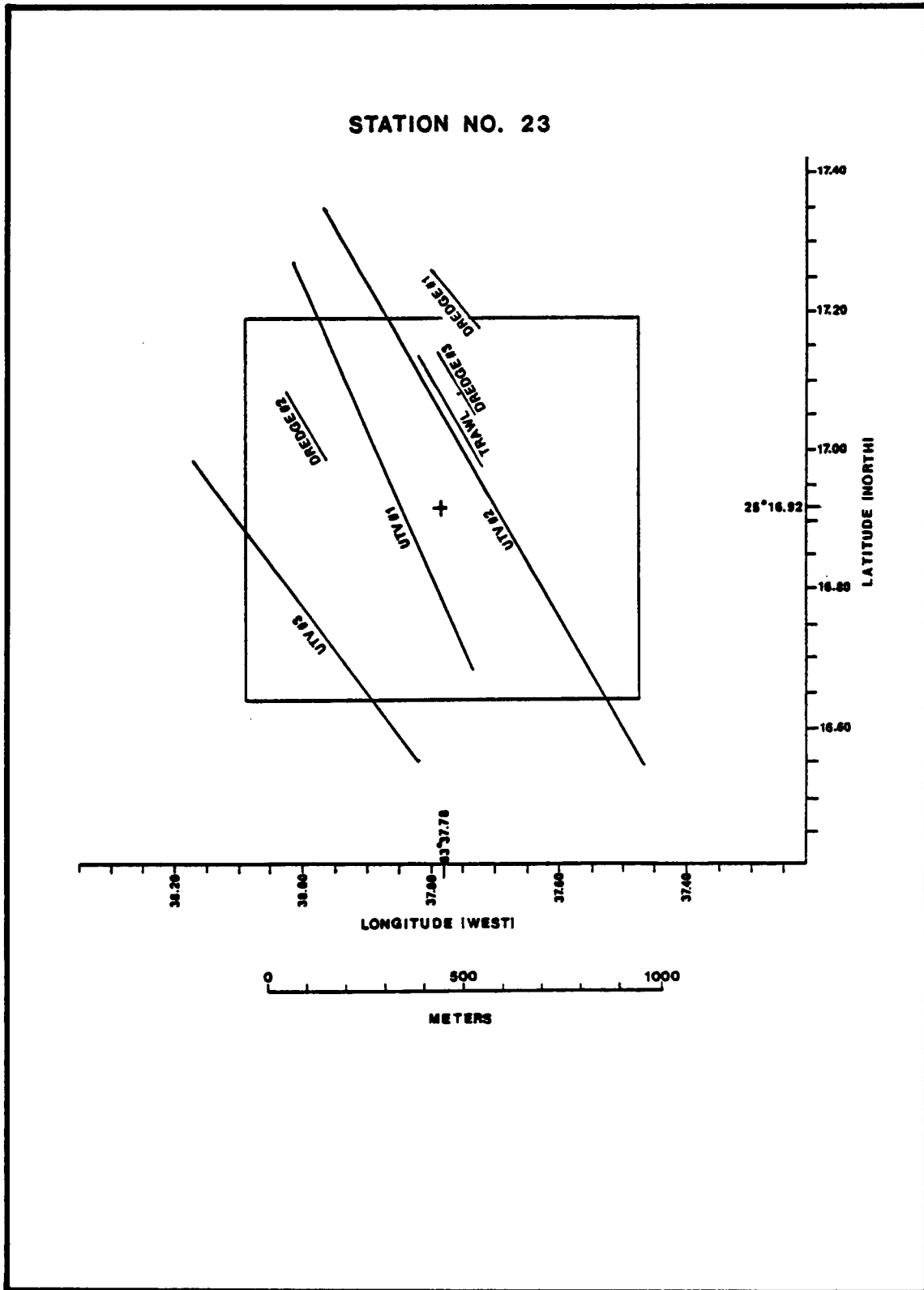


Figure A-12 STATION PLOT FOR STATION 23—YEAR 4, CRUISE II

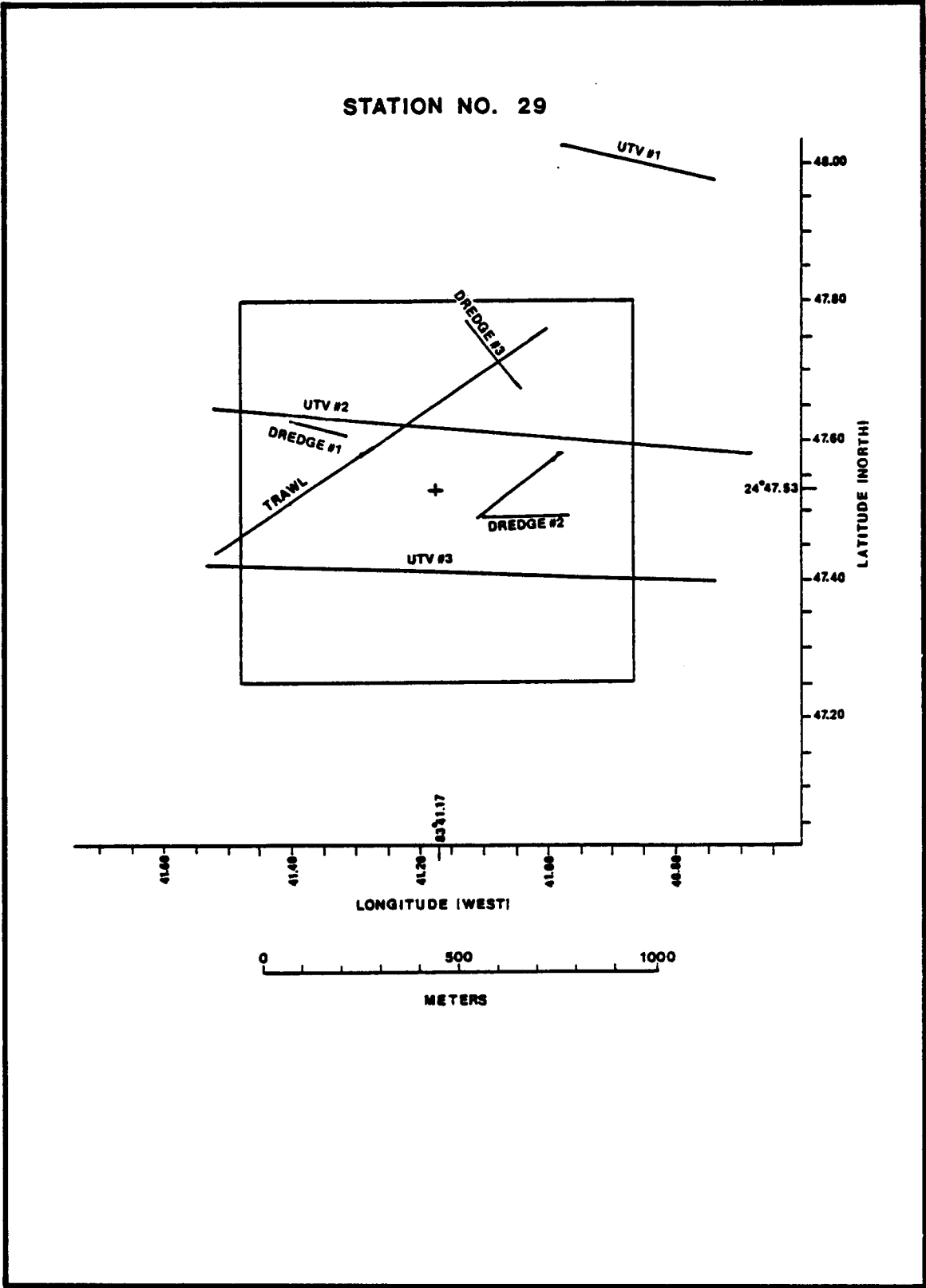


Figure A-13 STATION PLOT FOR STATION 29—YEAR 4, CRUISE II

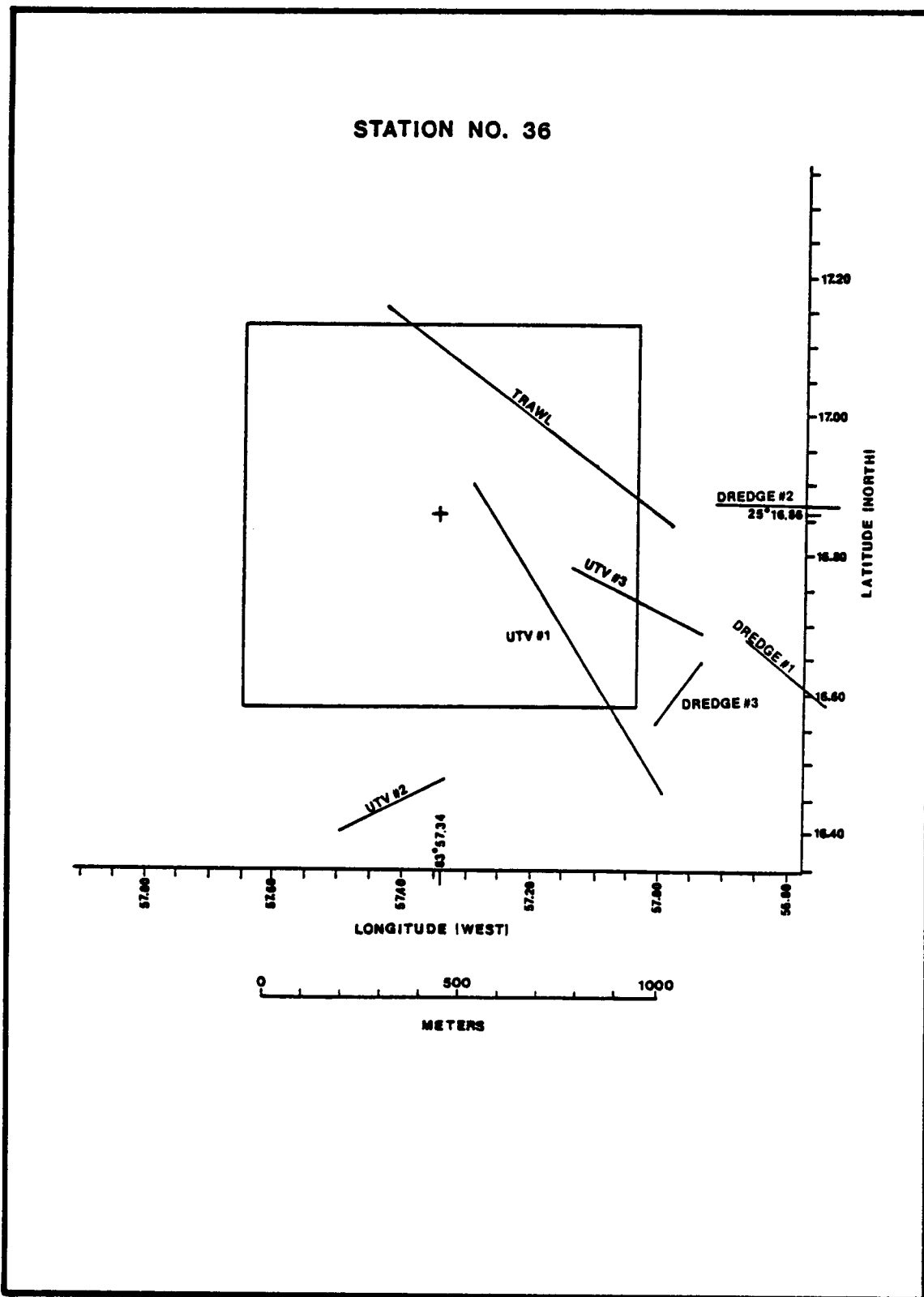


Figure A-14 STATION PLOT FOR STATION 36—YEAR 4, CRUISE II

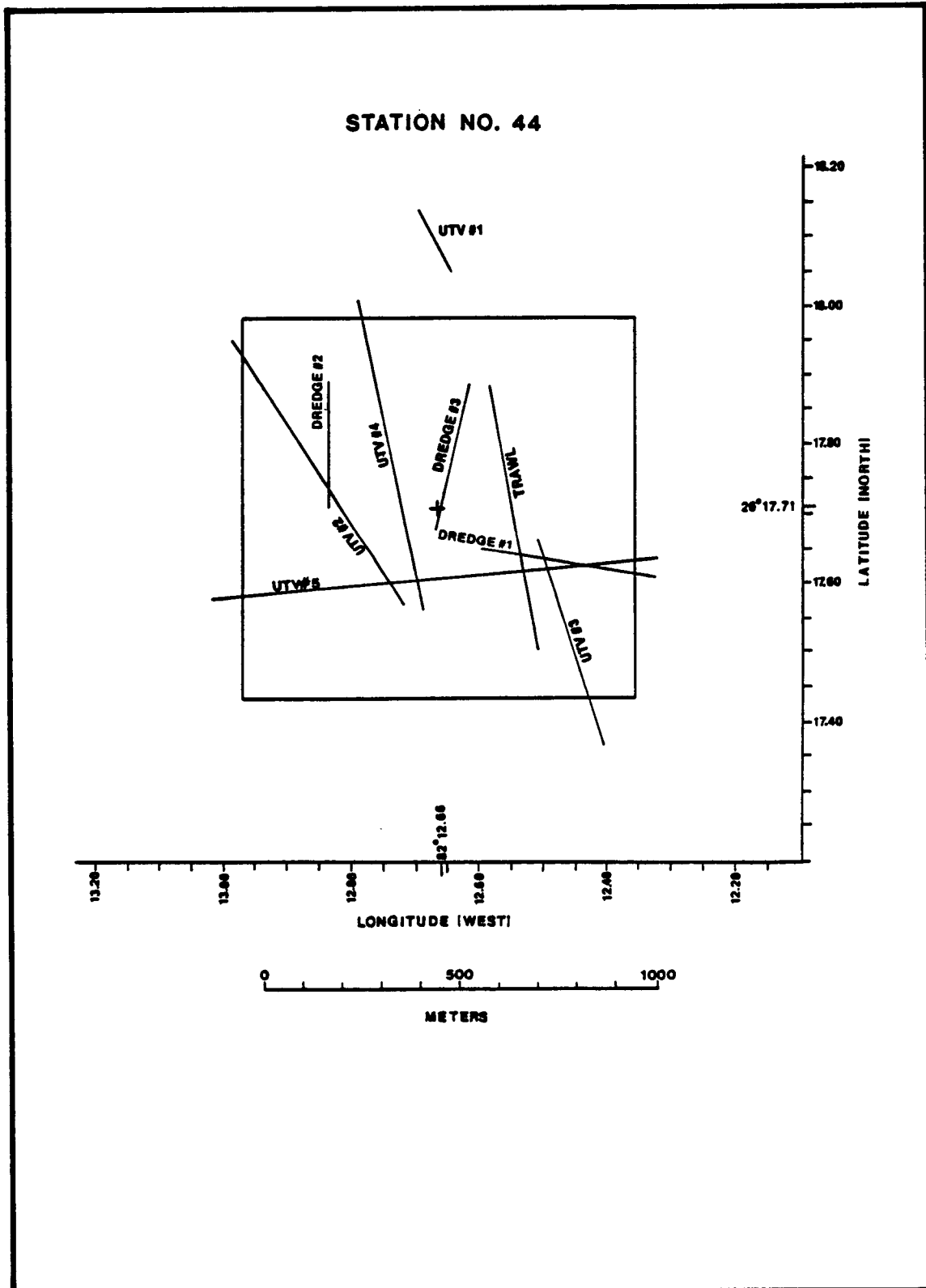


Figure A-15 STATION PLOT FOR STATION 44—YEAR 4, CRUISE III

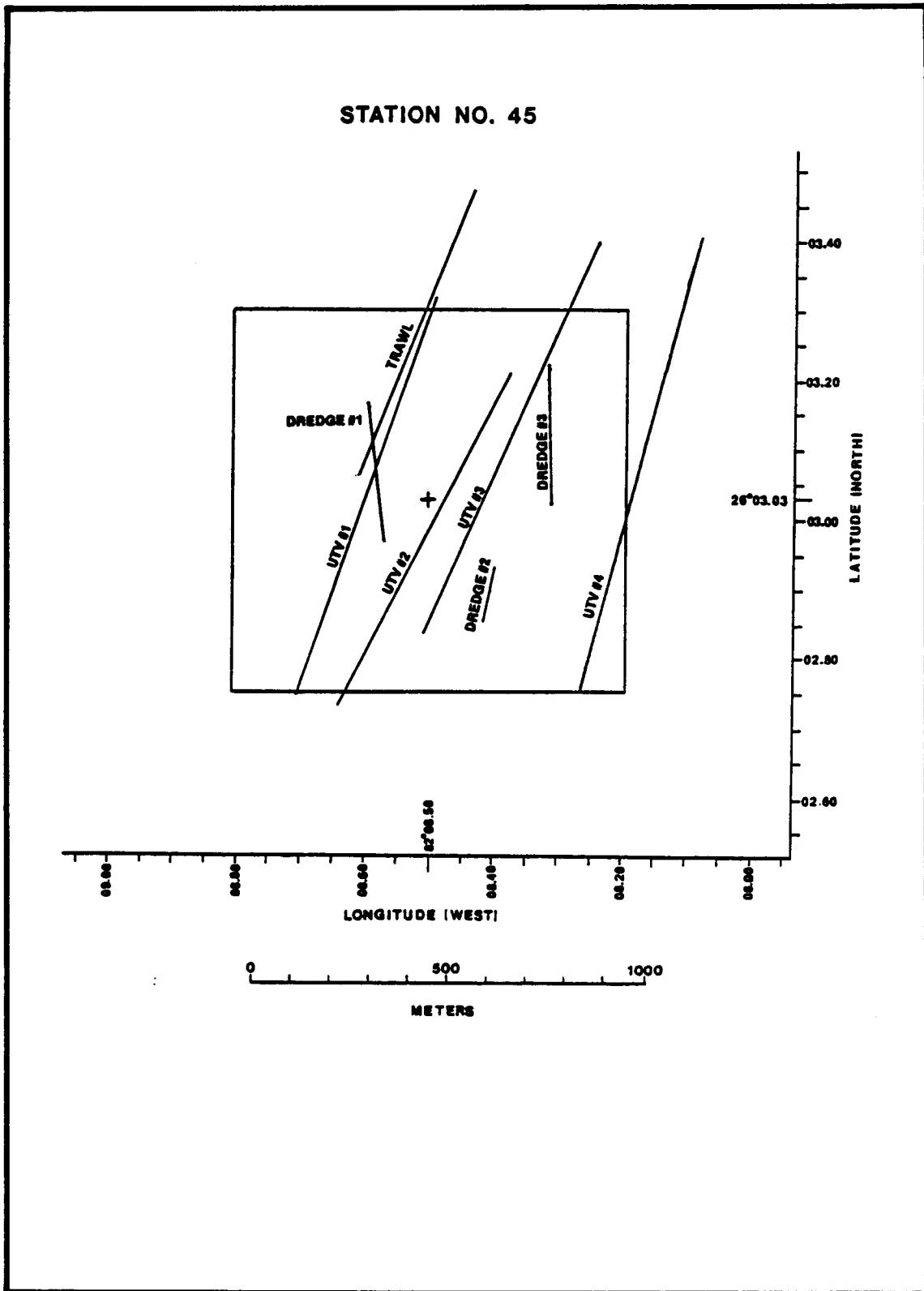


Figure A-16 STATION PLOT FOR STATION 45—YEAR 4, CRUISE III

STATION NO. 47

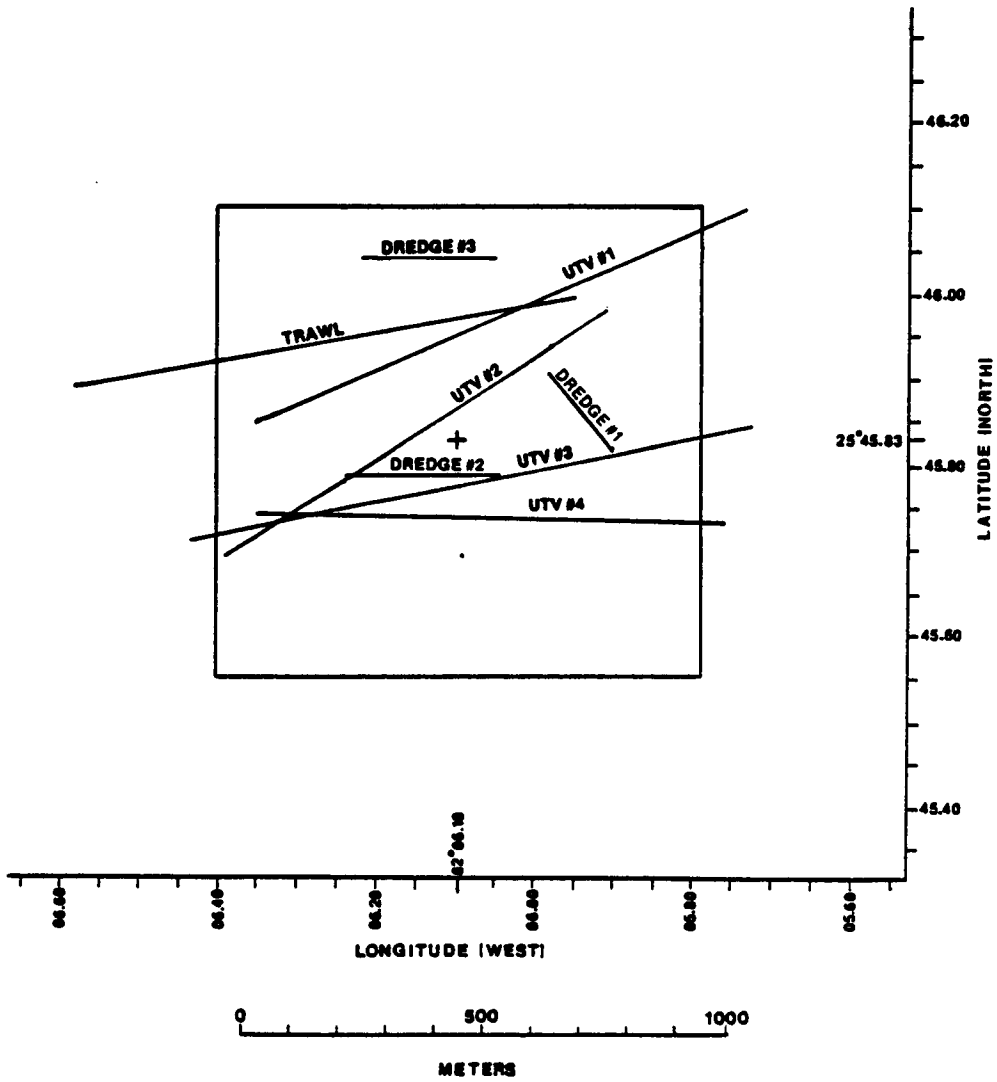


Figure A-17 STATION PLOT FOR STATION 47—YEAR 4, CRUISE III

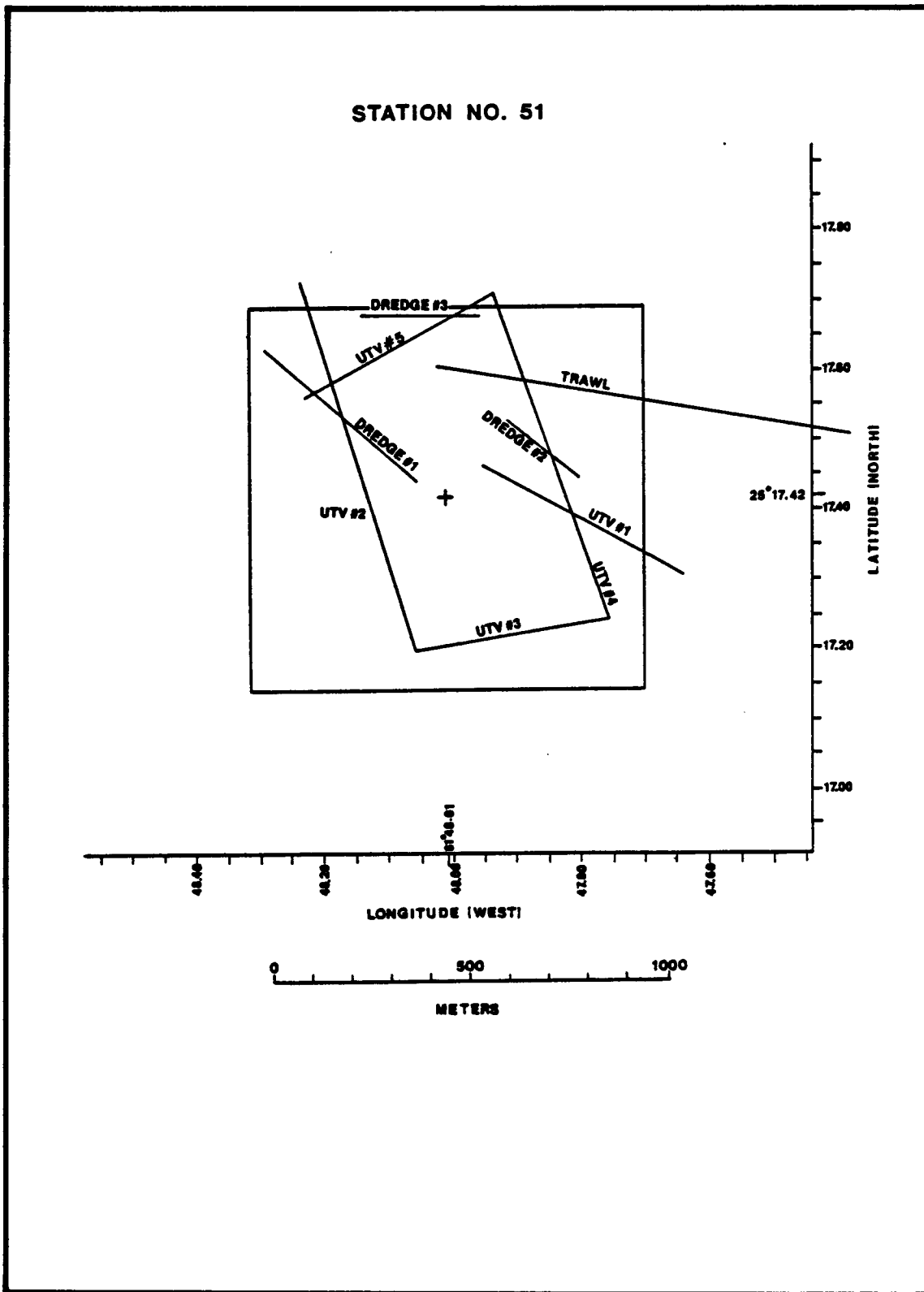


Figure A-18 STATION PLOT FOR STATION 51—YEAR 4, CRUISE III

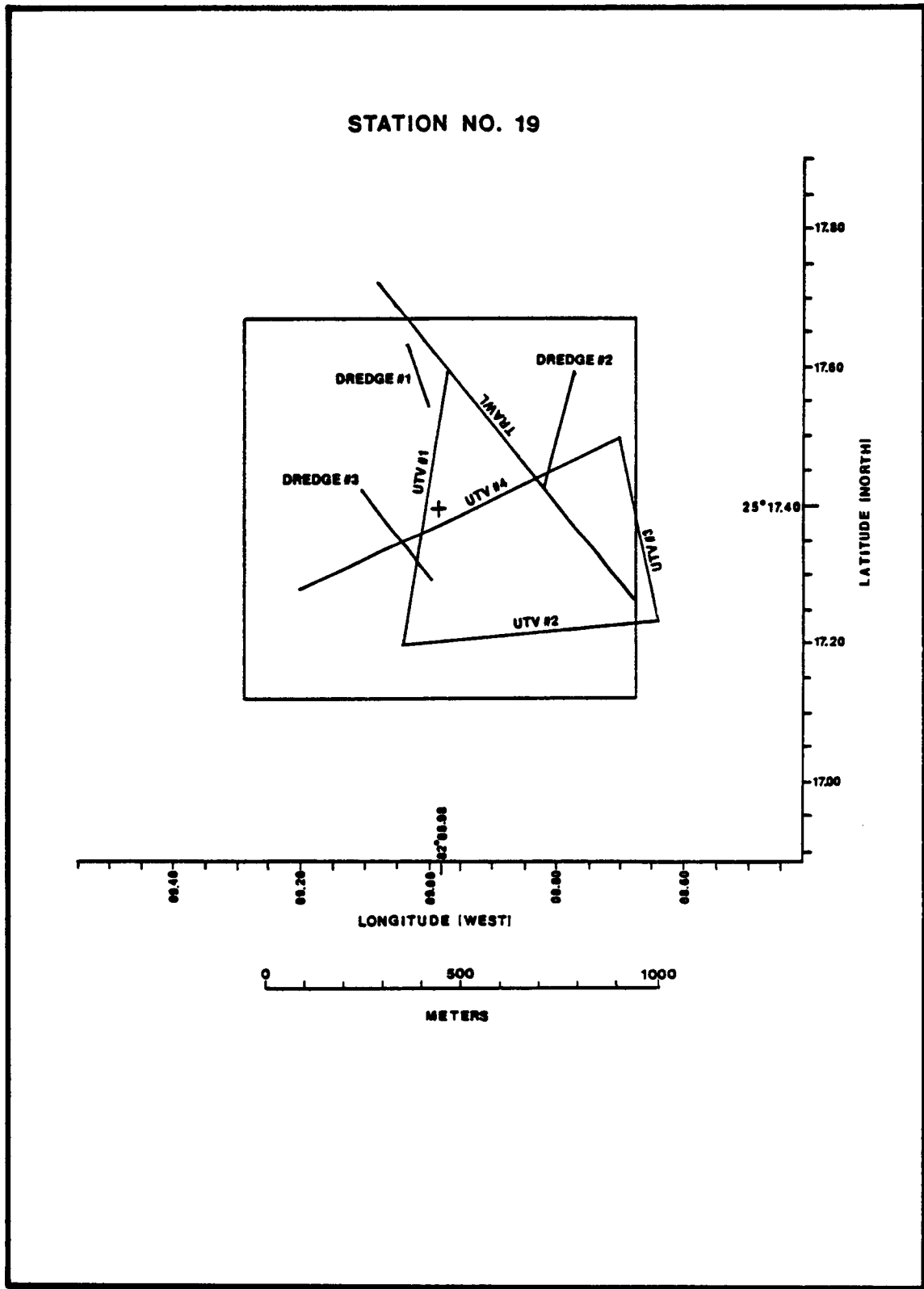


Figure A-19 STATION PLOT FOR STATION 19—YEAR 4, CRUISE III

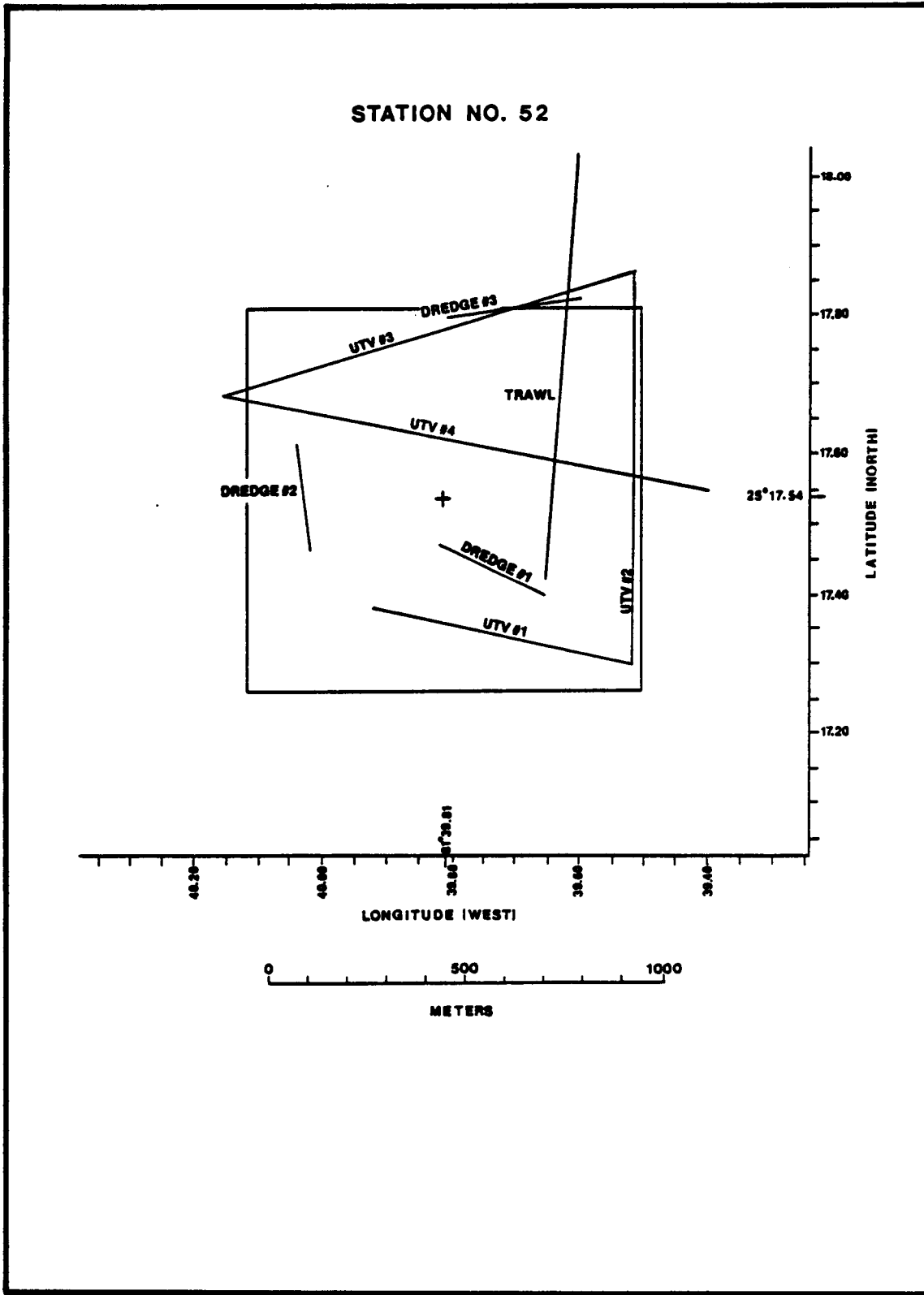


Figure A-20 STATION PLOT FOR STATION 52—YEAR 4, CRUISE III

STATION NO. 21

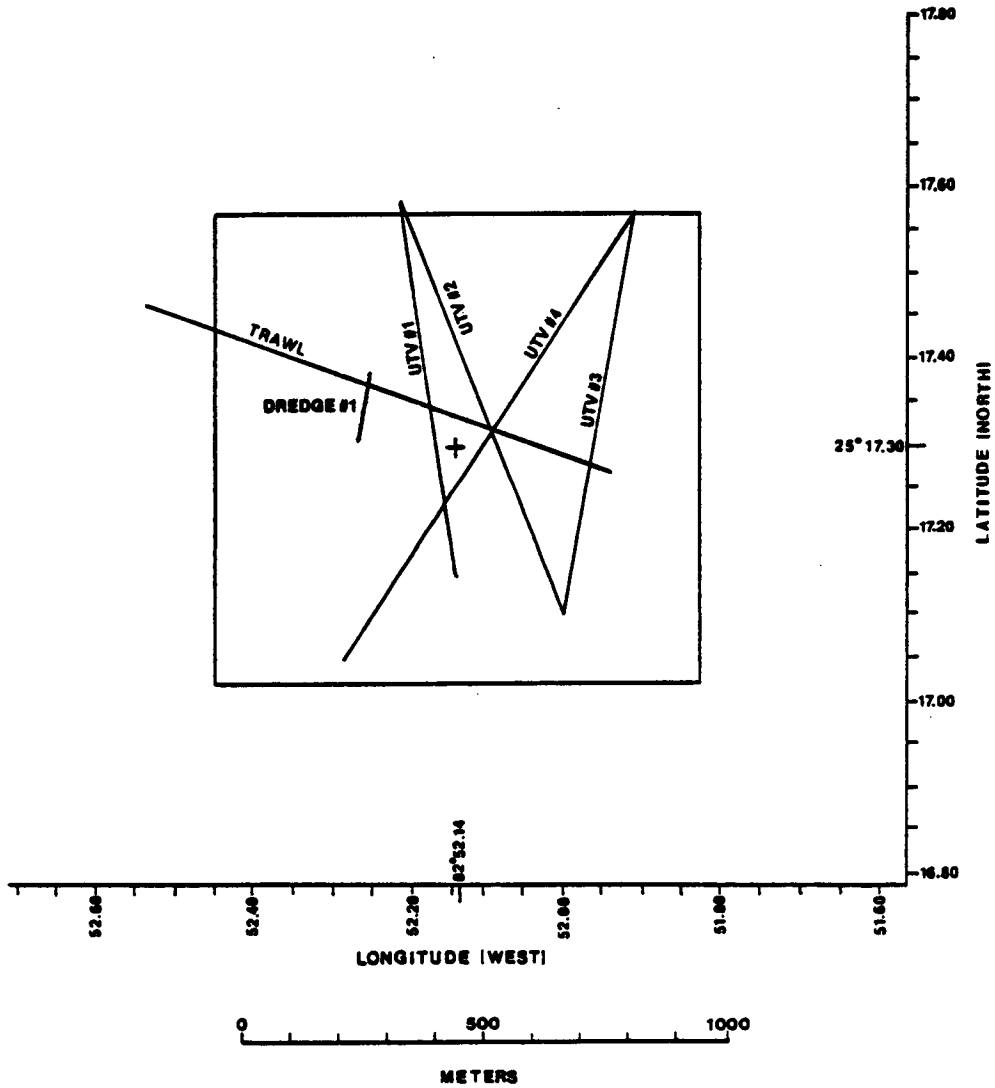


Figure A-21 STATION PLOT FOR STATION 21—YEAR 4, CRUISE III

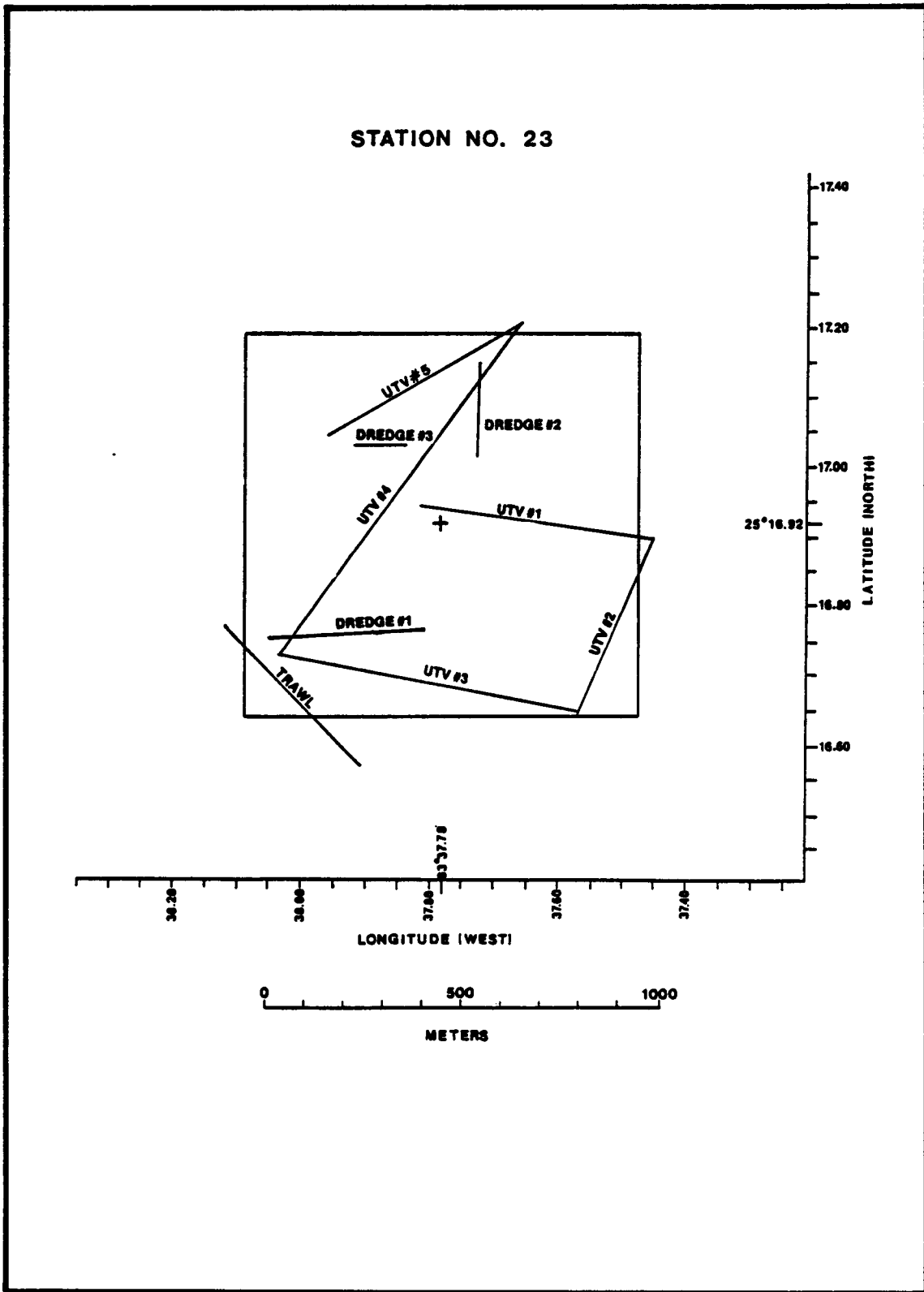


Figure A-22 STATION PLOT FOR STATION 23—YEAR 4, CRUISE III

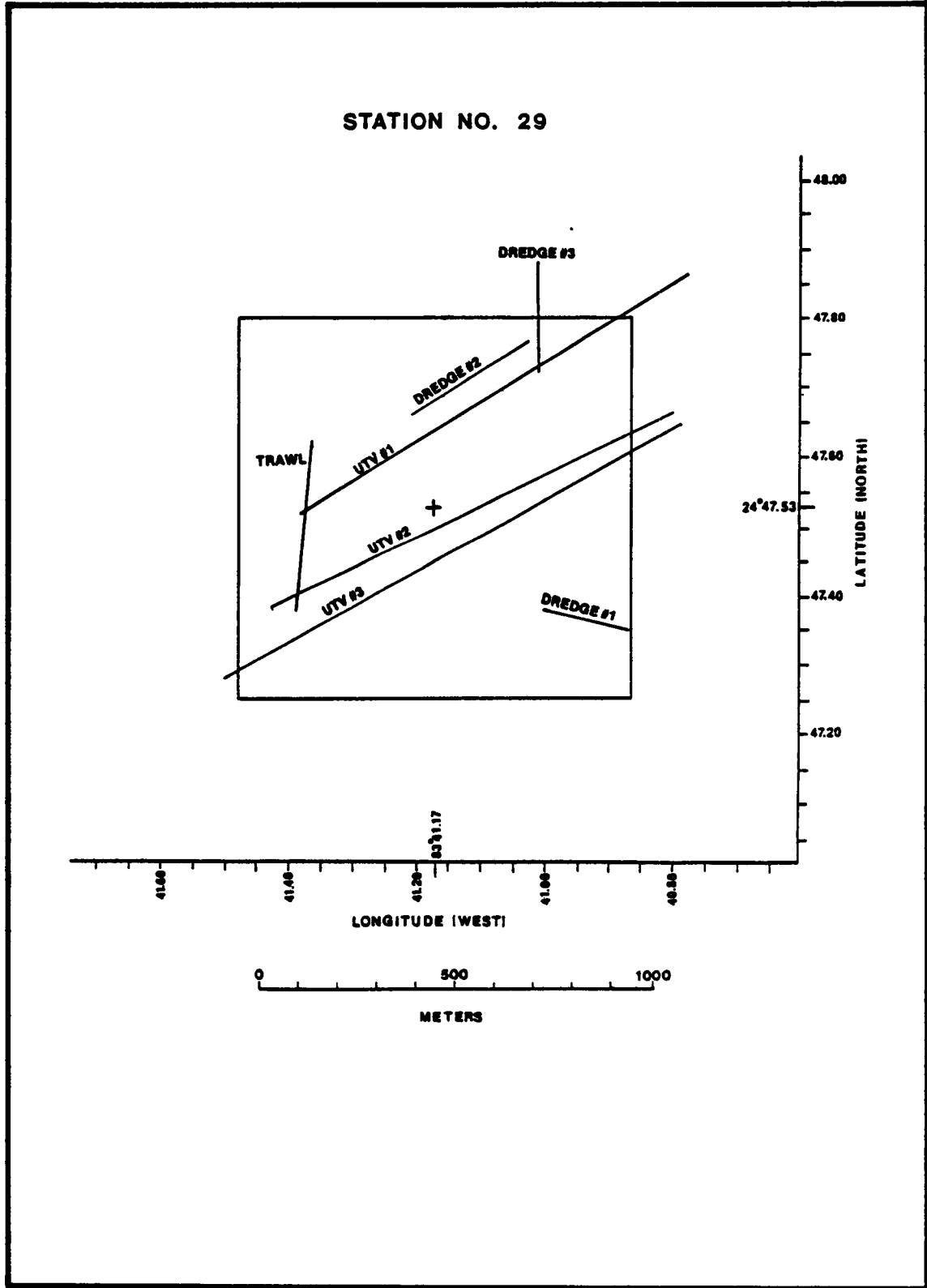


Figure A-23 STATION PLOT FOR STATION 29—YEAR 4, CRUISE III

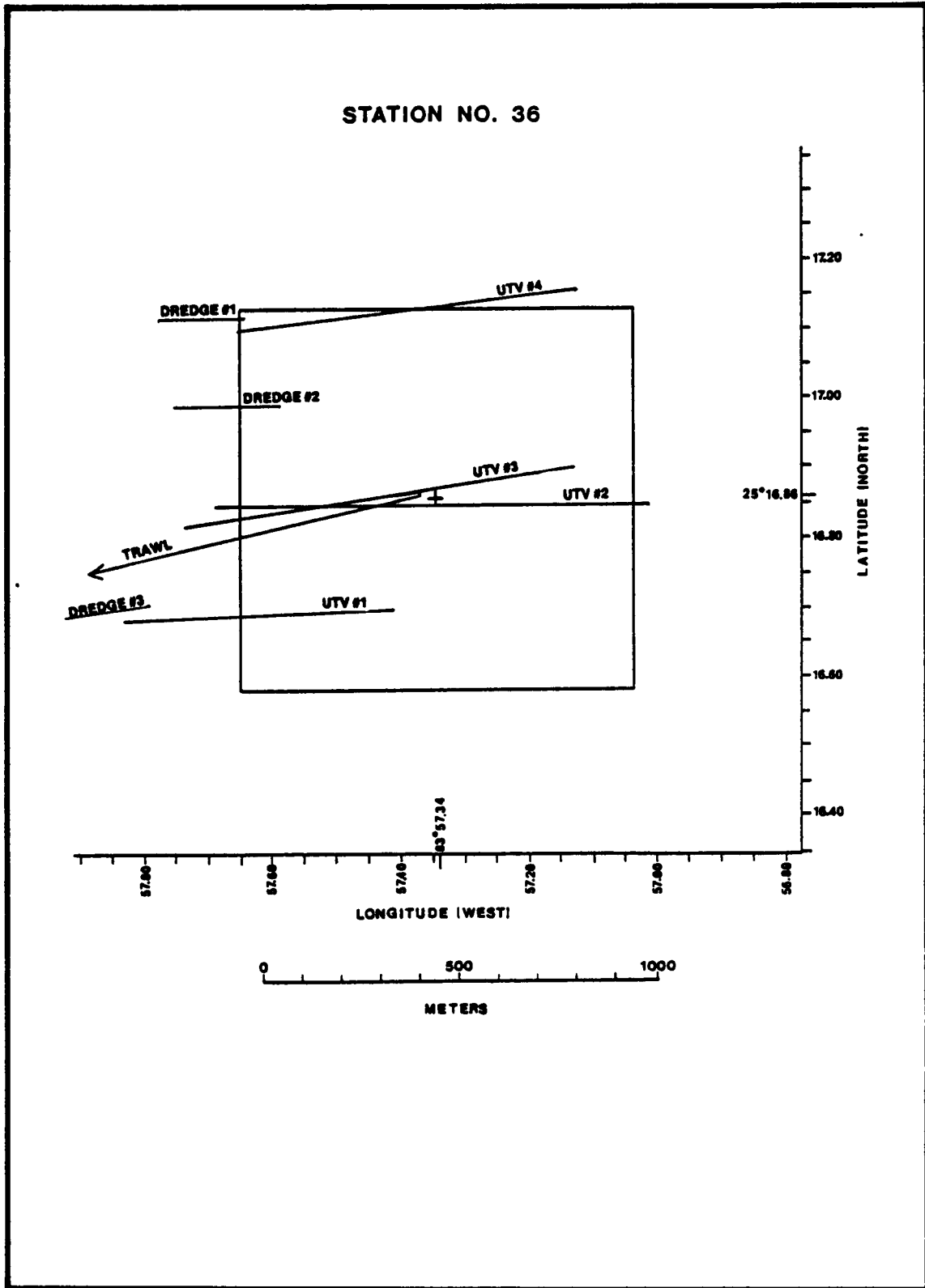


Figure A-24 STATION PLOT FOR STATION 36—YEAR 4, CRUISE III

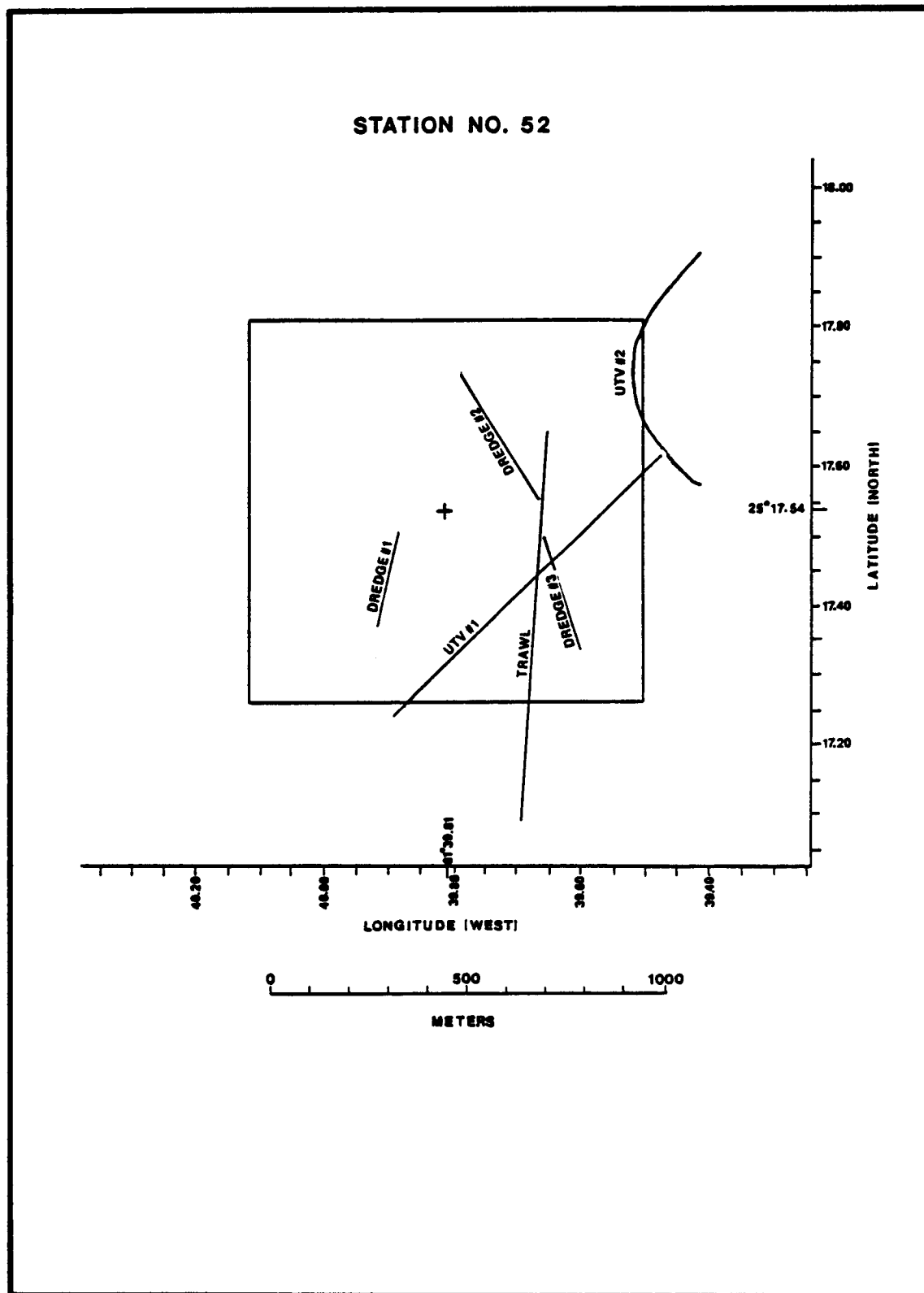


Figure A-25 STATION PLOT FOR STATION 52—YEAR 4, CRUISE IV

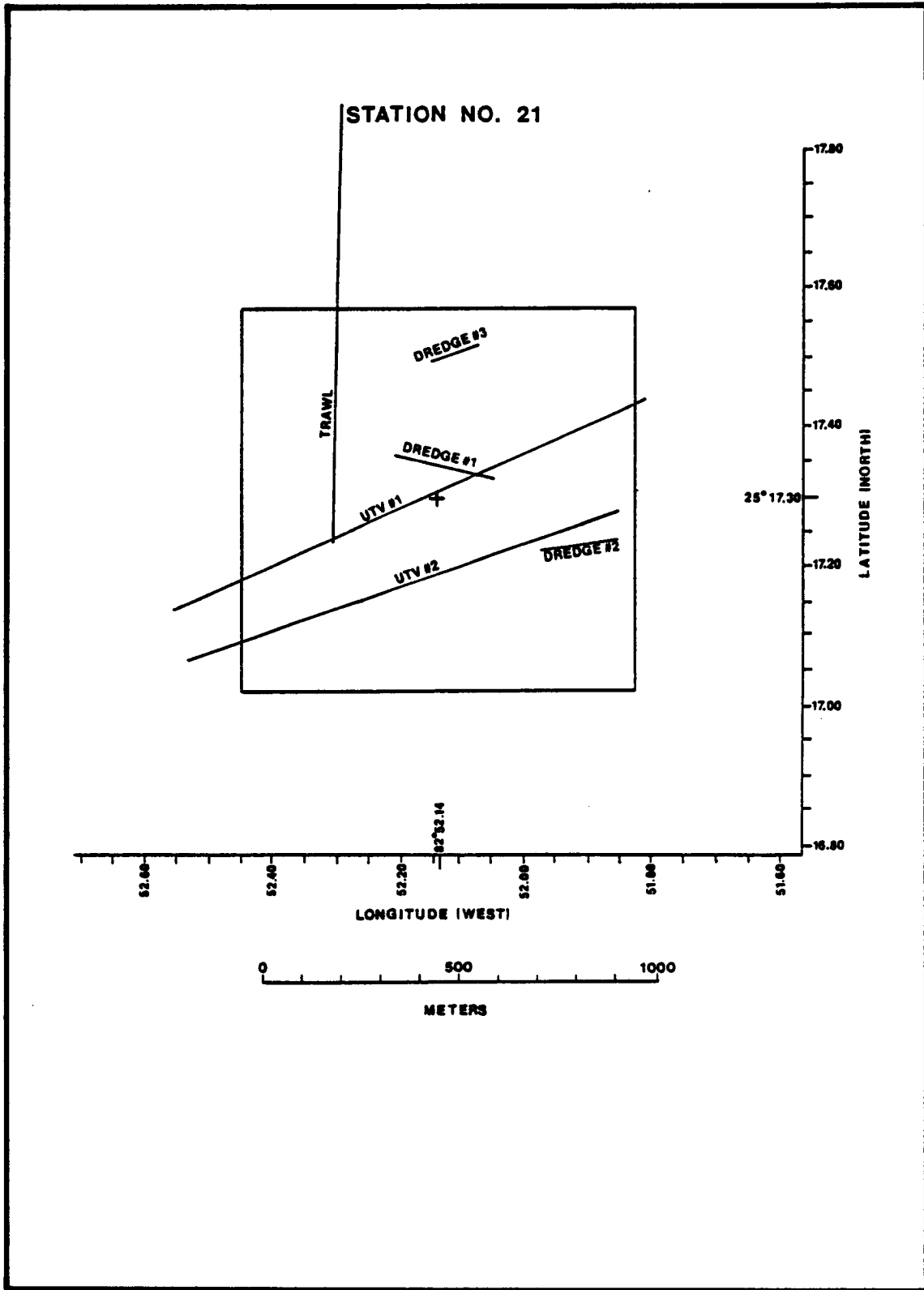


Figure A-26 STATION PLOT FOR STATION 21—YEAR 4, CRUISE IV

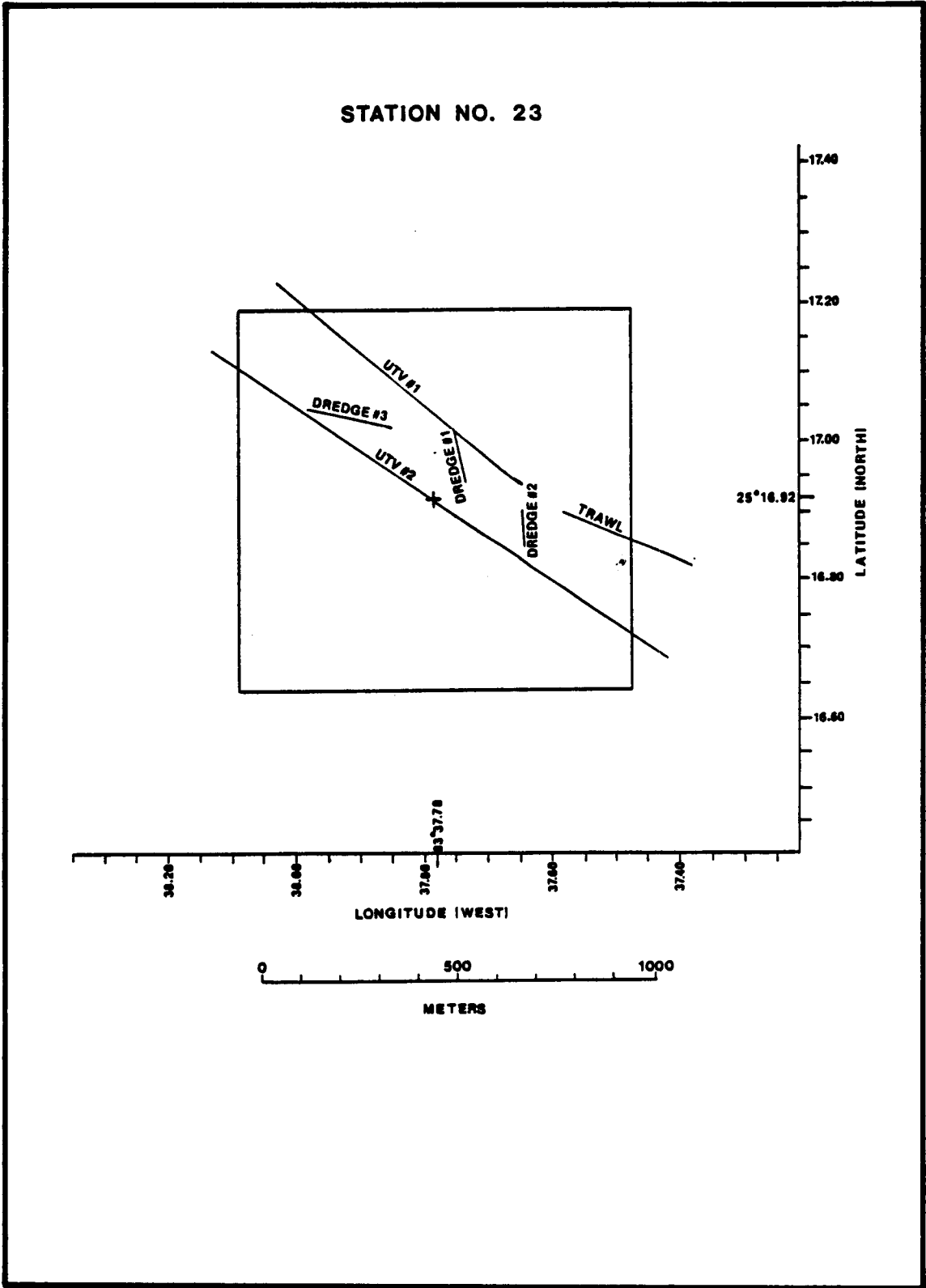


Figure A-27 STATION PLOT FOR STATION 23—YEAR 4, CRUISE IV

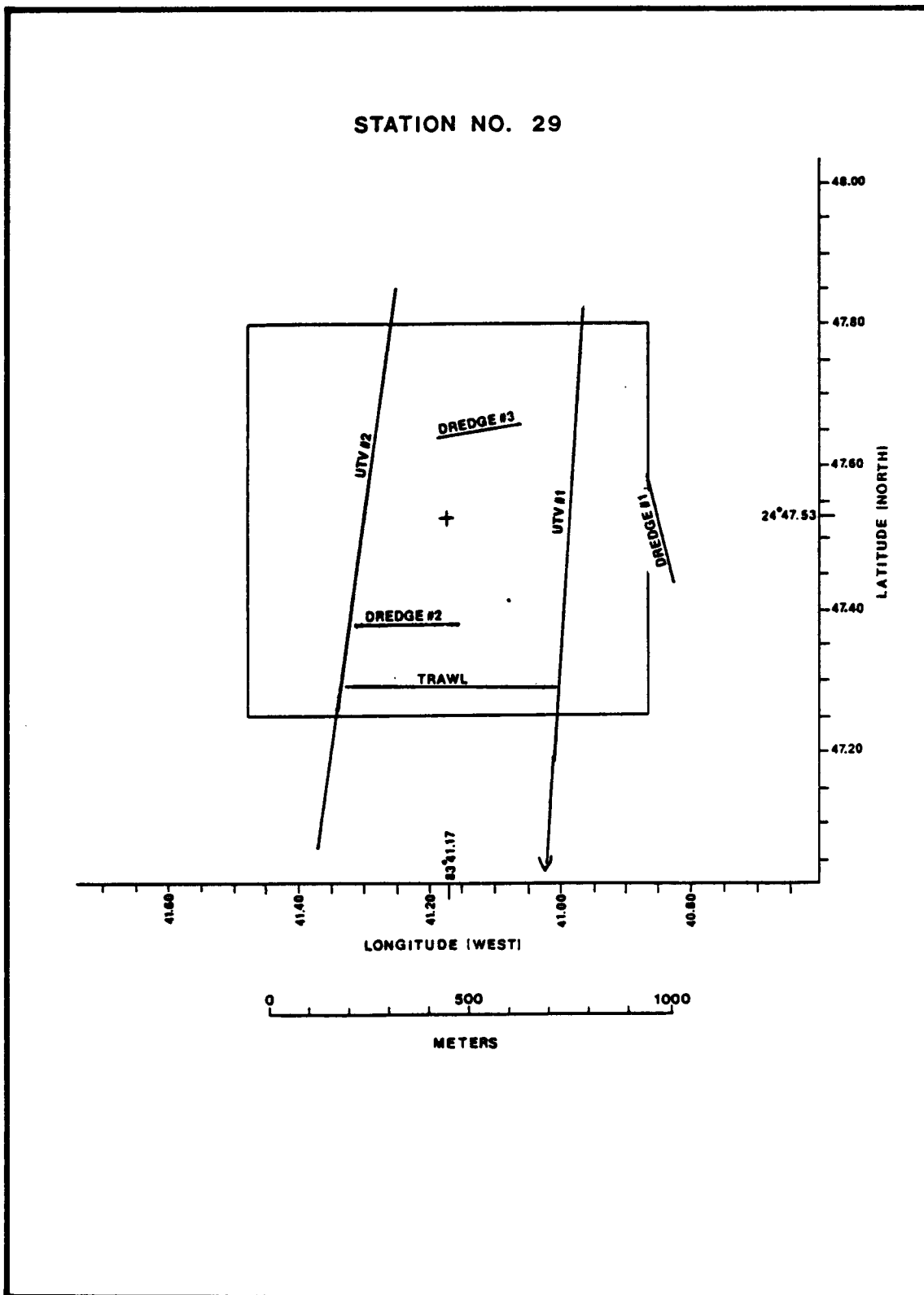


Figure A-28 STATION PLOT FOR STATION 29—YEAR 4, CRUISE IV

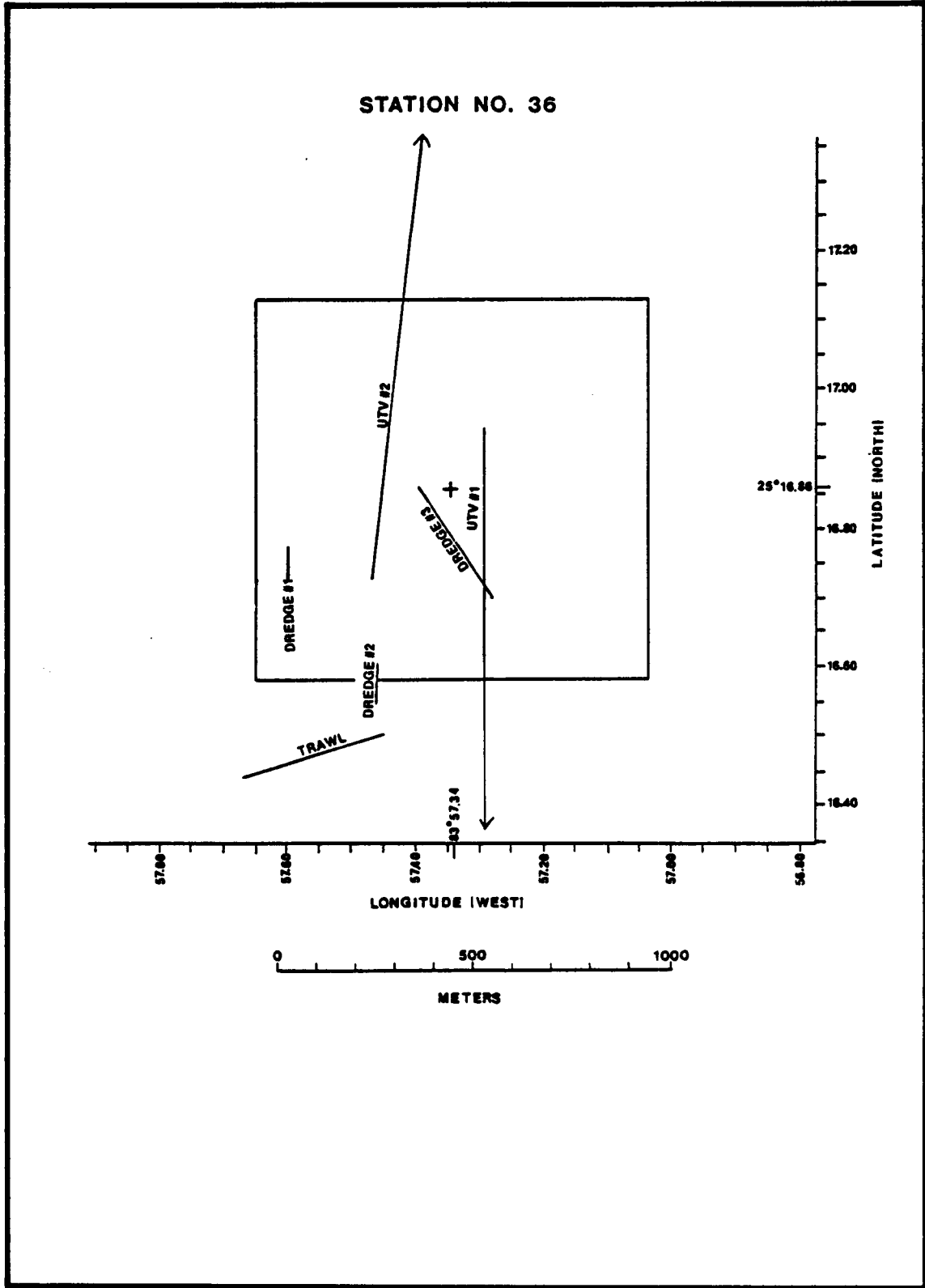


Figure A-29 STATION PLOT FOR STATION 36—YEAR 4, CRUISE IV

APPENDIX B
PHYSICAL OCEANOGRAPHIC DATA

APPENDIX B
PHYSICAL OCEANOGRAPHIC DATA

At least some physical oceanographic data were collected at all 15 stations (Figure B-0). These data included CSTD hydrographic data and data collected by the ENDECO® Type 174 Current Meter (Group II stations only).

The tabulated CSTD data (Tables B-1 through B-4) are organized by cruise (Cruises I through IV) and then by station as follows: Group I--43, 44, 45, 46, 47, 48, 49, 50, 51, and 19; and Group II--52, 21, 23, 29, and 36. The CSTD data consist of depth, conductivity, salinity, dissolved oxygen (DO), DO saturation, temperature, transparency, sigma-t, and beginning in May 1984, pH. Occasional CSTD probe malfunctions resulted in the loss of some data. Particularly, the Cruise IV (Table B-4) DO data were suspect and should be used only with caution. DO-Winkler data augmented these data to some extent.

The next section of Appendix B presents the current velocity data as monthly time-series plots of current direction and speed, and as monthly progressive vector plots. Station 52 data are presented in Figures B-1 through B-12. The September, October, and possibly November 1984 data were suspect because of the low current speeds measured. This could have been caused by biofouling (most likely) or battery depletion. Because the array at Station 21 was lost for two quarters and the current meter malfunctioned for two quarters, no Station 21 current meter data are presented. Figures B-13 through B-21 present the current meter data collected at Station 23. The fourth quarter data are missing because of damage to the array during the Cruise III retrieval. The fourth quarter of current meter data at Station 29 was lost with the loss of the array. All remaining data are presented in Figures B-22 through B-30. Figures B-31 through B-42 present the current meter data from Station 36. A brief hiatus in the data occurred during April and

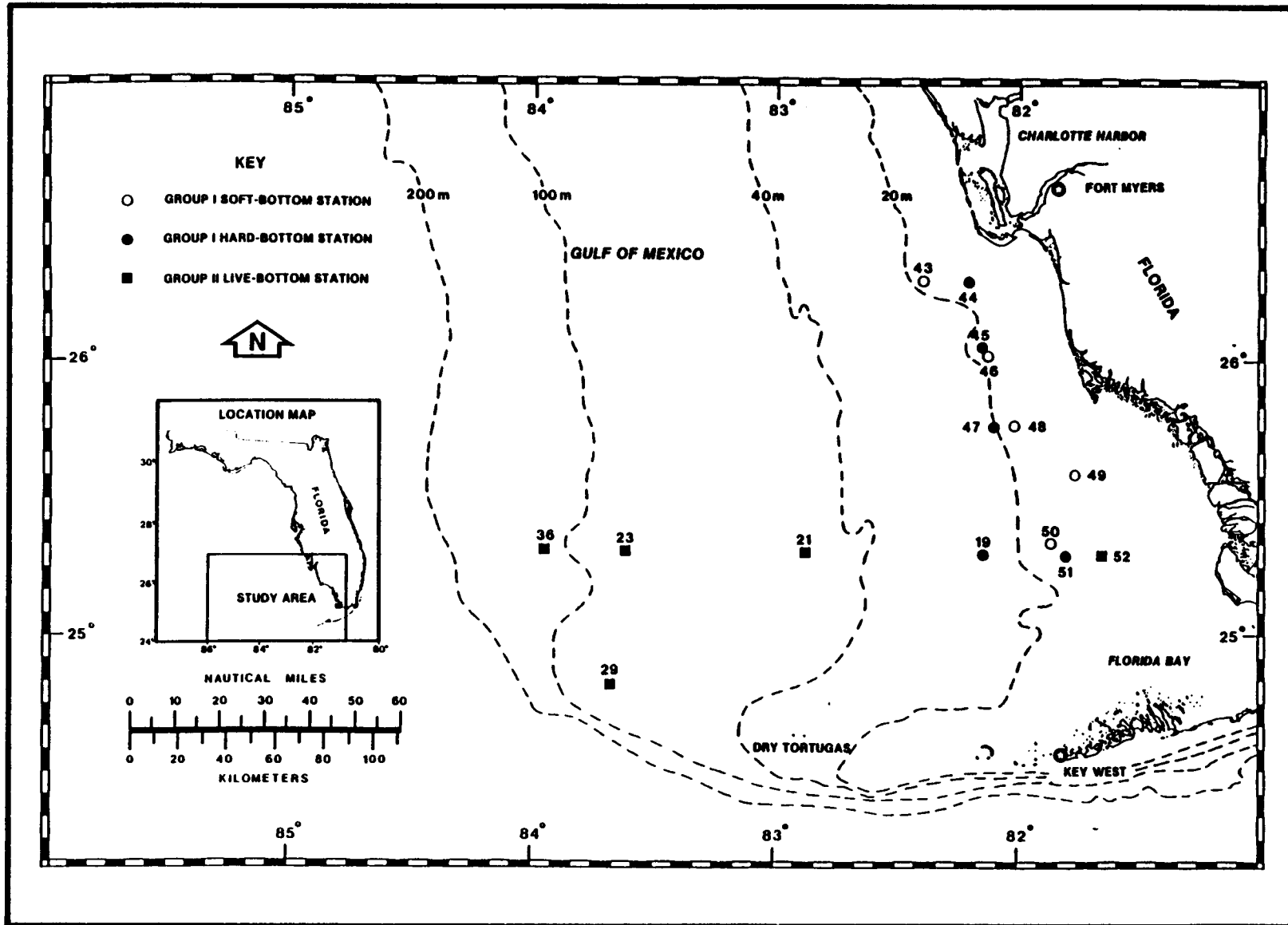


Figure B-0 GROUP I AND II STATION LOCATIONS FOR YEAR 4
(DECEMBER 1983—NOVEMBER 1984)

May 1984 because of battery depletion caused by the inability to service the array during Cruise II.

These same current velocity data are presented as monthly joint speed-direction frequency distribution tables (JFTs). Tables B-5 through B-15, B-16 through B-24, B-25 through B-33, and B-34 through B-45 present the JFTs for Stations 52, 23, 29, and 36, respectively.

The last section of Appendix B presents the continuous near-bottom temperature data collected by the current meters. These data are presented as 2-month time-series plots. Figures B-43 through B-48, B-49 through B-50, B-51 through B-55, B-56 through B-60, and B-61 through B-67 present the temperature data for Stations 52, 21, 23, 29, and 36, respectively.

Table B-1. CSTD Hydrographic Data Collected at the Group I and II Stations During Cruise I (December 1983)

STATION NUMBER: 43 TRIP NUMBER: 1 12/06/83 TIME: 1053

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
0	51.25	33.74	7.11	103.5	24.92	103.4	22.44
1	51.31	35.12	7.23	103.1	23.30	107.4	23.96
2	51.34	35.13	7.20	102.6	23.32	105.4	23.96
3	51.37	35.13	7.20	102.8	23.35	105.1	23.96
4	51.31	35.13	7.10	101.2	23.29	104.9	23.97
5	51.24	35.12	7.19	102.4	23.23	104.7	23.98
6	51.10	35.09	7.12	101.2	23.15	104.9	23.98
8	50.97	35.07	7.17	101.6	23.05	104.1	24.00
9	50.87	35.08	7.27	102.9	22.94	103.9	24.03
10	50.83	35.08	7.24	102.4	22.90	103.4	24.05
11	50.77	35.08	7.10	100.3	22.85	103.4	24.06
12	50.67	35.08	7.24	102.2	22.75	103.1	24.09
13	50.66	35.08	7.13	100.5	22.74	102.9	24.09
14	50.66	35.08	7.25	102.2	22.74	103.0	24.09

STATION NUMBER: 44 TRIP NUMBER: 1 12/06/83 TIME: 1715

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	51.26	34.88	8.94	127.8	23.55	98.37	23.71
2	51.26	34.89	8.91	127.4	23.54	98.41	23.72
3	51.29	34.99	8.95	127.8	23.45	99.41	23.82
4	51.27	35.06	8.94	127.5	23.34	100.1	23.91
5	51.23	35.12	9.00	128.2	23.23	99.72	23.98
6	51.33	35.23	9.04	128.7	23.19	98.66	24.07
7	51.31	35.22	8.99	128.0	23.19	98.14	24.07
8	51.32	35.22	8.98	127.9	23.19	98.31	24.07
9	51.32	35.22	8.88	126.4	23.19	98.37	24.07
10	51.32	35.22	8.82	125.6	23.19	98.32	24.07
11	51.32	35.22	8.78	125.0	23.19	98.14	24.07

STATION NUMBER: 45 TRIP NUMBER: 1 12/07/83 TIME: 857

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
2	52.70	35.88	6.94	100.1	23.68	108.8	24.42
3	52.69	35.88			23.67	108.6	24.43
4	52.66	35.87			23.65	108.8	24.43
5	52.67	35.88			23.65	108.8	24.44
6	52.67	35.88			23.65	108.2	24.43
7	52.66	35.87	6.92	99.77	23.65	108.6	24.43
8	52.66	35.87			23.65	108.7	24.43
9	52.67	35.88			23.65	108.7	24.43
11	52.67	35.88			23.65	108.8	24.43
12	52.66	35.87			23.65	108.3	24.43
13	52.66	35.87	6.97	100.5	23.65	108.1	24.43
14	52.68	35.88			23.65	108.0	24.44

STATION NUMBER: 46 TRIP NUMBER: 1 12/07/83 TIME: 1710

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	52.47	35.83	6.59	94.81	23.52	107.3	24.43
2	52.46	35.83	6.74	96.91	23.52	106.7	24.44
3	52.45	35.83	7.02	101.0	23.51	105.1	24.44
4	52.46	35.83	7.07	101.7	23.52	105.9	24.43
5	52.47	35.84			23.52	105.3	24.44
6	52.48	35.84			23.52	105.9	24.44
7	52.48	35.84			23.52	104.7	24.44
8	52.48	35.84			23.53	104.2	24.44
9	52.47	35.84			23.52	103.0	24.44
10	52.49	35.85			23.52	104.9	24.45
11	52.49	35.84			23.53	104.8	24.44
12	52.49	35.85			23.53	104.1	24.44
13	52.49	35.85			23.52	102.9	24.45
14	52.49	35.85			23.52	102.7	24.45
15	52.48	35.84			23.52	102.6	24.44
16	52.49	35.86			23.51	101.3	24.46

STATION NUMBER: 47 TRIP NUMBER: 1 12/08/83 TIME: 719

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	52.66	35.91	7.17	103.4	23.61	109.1	24.47
2	52.66	35.91	7.18	103.4	23.61	108.9	24.47
3	52.66	35.91	7.23	104.2	23.61	108.3	24.47
4	52.67	35.91			23.61	108.1	24.47
5	52.66	35.91			23.60	108.4	24.47
6	52.67	35.91			23.61	108.1	24.47
7	52.66	35.91			23.61	108.3	24.47
8	52.67	35.91			23.61	108.0	24.47
10	52.66	35.91			23.60	107.9	24.47
11	52.66	35.91			23.60	107.6	24.47
12	52.68	35.92			23.61	107.8	24.48
13	52.67	35.91			23.61	108.1	24.47
14	52.68	35.92			23.61	107.3	24.48
15	52.68	35.92			23.61	107.2	24.48
16	52.67	35.92			23.61	107.3	24.47
17	52.68	35.92			23.61	107.5	24.47
18	52.68	35.92			23.61	107.1	24.48

STATION NUMBER: 48 TRIP NUMBER: 1 12/08/83 TIME: 1610

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	52.27	35.81			23.37	105.5	24.46
2	52.26	35.81			23.36	105.4	24.47
3	52.25	35.80			23.36	104.3	24.46
4	52.26	35.82			23.35	104.9	24.47
5	52.26	35.81			23.36	104.6	24.46
6	52.26	35.81			23.36	104.5	24.47
7	52.26	35.81			23.36	103.9	24.47
8	52.26	35.81			23.36	104.3	24.47
10	52.26	35.81			23.36	103.9	24.46
11	52.27	35.81			23.36	103.9	24.47
13	52.26	35.81			23.36	103.0	24.46
14	52.27	35.81			23.37	103.6	24.46
15	52.27	35.81	8.69	124.6	23.37	102.9	24.46

STATION NUMBER: 49 TRIP NUMBER: 1 12/09/83 TIME: 730

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	51.33	35.42	7.19	102.0	22.96	99.53	24.29
2	51.32	35.42	7.14	101.3	22.94	98.95	24.29
3	51.31	35.43	7.18	101.9	22.93	98.72	24.30
4	51.31	35.43	7.13	101.2	22.94	98.52	24.30
5	51.31	35.42	7.15	101.4	22.94	98.14	24.29
6	51.32	35.43	7.16	101.5	22.94	98.37	24.30
7	51.31	35.42	7.07	100.4	22.94	98.37	24.29
8	51.31	35.43	7.16	101.5	22.93	97.81	24.30
9	51.31	35.43	7.16	101.5	22.93	96.08	24.30

STATION NUMBER: 50 TRIP NUMBER: 1 12/09/83 TIME: 1014

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	52.15	35.66	7.20	103.2	23.44	106.8	24.33
2	52.14	35.65	7.19	103.1	23.44	106.2	24.33
3	52.14	35.66	7.23	103.7	23.43	105.2	24.33
4	52.14	35.66	7.17	102.8	23.43	105.1	24.33
5	52.14	35.65	7.22	103.5	23.43	104.5	24.33
6	52.14	35.65	7.23	103.6	23.43	103.9	24.33
7	52.14	35.66	7.22	103.5	23.43	103.5	24.33
8	52.14	35.66	7.23	103.6	23.43	103.5	24.33
9	52.15	35.66	7.25	104.0	23.44	103.1	24.33
10	52.14	35.66	7.20	103.2	23.43	103.0	24.33
11	52.14	35.66	7.25	103.9	23.43	102.8	24.33
12	52.14	35.66	7.25	103.9	23.43	102.6	24.33
13	52.14	35.66	7.23	103.7	23.43	102.5	24.33

STATION NUMBER: 51 TRIP NUMBER: 1 12/09/83 TIME: 1651

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	52.42	35.69	7.62	109.8	23.65	101.0	24.29
2	52.40	35.70	7.58	109.1	23.62	100.9	24.31
3	52.39	35.70	7.56	108.8	23.61	100.8	24.31
4	52.40	35.70	7.59	109.2	23.61	100.7	24.31
5	52.40	35.70	7.64	109.9	23.61	100.7	24.31
6	52.40	35.71	7.63	109.9	23.61	100.4	24.31
7	52.40	35.71	7.66	110.2	23.61	100.5	24.31
8	52.40	35.71	7.68	110.5	23.61	100.1	24.31
9	52.41	35.71	7.69	110.6	23.61	100.3	24.31
10	52.40	35.70	7.68	110.5	23.62	99.76	24.30
11	52.41	35.71	7.66	110.3	23.62	99.99	24.31
12	52.41	35.71	7.61	109.6	23.61	99.86	24.32
13	52.40	35.70	7.55	108.7	23.62	99.53	24.30

STATION NUMBER: 19 TRIP NUMBER: 1 12/11/83 TIME: 853

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	53.69	36.41	7.09	103.1	23.94	98.72	24.75
2	53.68	36.41	7.06	102.7	23.94	98.20	24.75
3	53.68	36.43	7.04	102.4	23.91	97.25	24.77
4	53.66	36.42	7.04	102.4	23.91	98.00	24.76
5	53.65	36.41	7.05	102.4	23.90	97.16	24.76
6	53.65	36.42	7.02	102.1	23.90	97.44	24.77
7	53.66	36.42	7.05	102.5	23.90	97.48	24.77
8	53.66	36.41	7.00	101.8	23.91	98.89	24.76
10	53.68	36.43	7.06	102.6	23.91	100.4	24.78
11	53.68	36.43	7.06	102.6	23.91	100.1	24.77
12	53.68	36.43	7.04	102.4	23.91	100.3	24.77
13	53.69	36.44	7.02	102.0	23.91	99.45	24.78
14	53.69	36.43	7.08	103.0	23.92	98.87	24.77
15	53.72	36.45	7.08	103.0	23.92	97.90	24.79
16	53.73	36.46	7.06	102.7	23.93	98.72	24.79
17	53.74	36.46	6.99	101.6	23.93	98.52	24.79
18	53.74	36.46	7.01	101.9	23.93	98.43	24.79
19	53.75	36.47	7.06	102.6	23.93	98.14	24.80
20	53.75	36.46	7.06	102.8	23.94	97.87	24.79
21			7.08		23.93	97.85	
22			7.01		23.94	97.93	
23			7.02		23.94	97.21	

STATION NUMBER: 52 TRIP NUMBER: 1 12/10/83 TIME: 705

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	51.92	35.48	6.85	98.08	23.44	101.5	24.19
2	51.91	35.48	6.85	98.08	23.44	101.4	24.19
3	51.90	35.49	6.87	98.32	23.42	101.1	24.20
5	51.88	35.48	6.85	98.05	23.40	100.8	24.21
6	51.89	35.49	6.87	98.29	23.40	100.8	24.21
7	51.88	35.48	6.87	98.34	23.40	100.7	24.21
8	51.89	35.49	6.87	98.31	23.41	100.8	24.21
9	51.89	35.48	6.90	98.79	23.41	100.7	24.20
10	51.90	35.49	6.89	98.60	23.41	100.6	24.21
11	51.89	35.48	6.90	98.80	23.41	100.5	24.20

STATION NUMBER: 23 TRIP NUMBER: 1 12/16/83 TIME: 835

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	54.00	36.26	7.11	104.2	24.38	97.90	24.51
2	53.99	36.28	7.02	102.8	24.35	97.03	24.53
3	53.98	36.30	7.05	103.2	24.32	97.44	24.55
5	53.98	36.30	7.13	104.4	24.33	98.14	24.55
6	53.98	36.28	7.15	104.7	24.34	96.98	24.53
7	53.98	36.28	7.13	104.4	24.34	97.32	24.53
8	53.98	36.28	7.15	104.7	24.34	97.21	24.53
9	53.98	36.28	7.17	105.0	24.34	98.14	24.53
10	53.98	36.28	7.20	105.4	24.34	96.98	24.53
11	54.00	36.30	7.21	105.6	24.34	98.14	24.55
12	52.00	34.79	7.26	105.3	24.34	96.86	23.40
13	53.98	36.28	7.29	106.8	24.34	97.21	24.53
14	54.00	36.30	7.17	105.0	24.34	96.98	24.55
15	53.99	36.29	7.26	106.3	24.34	97.05	24.54
16	53.98	36.28	7.27	106.5	24.34	96.74	24.53
17	54.00	36.30	7.25	106.2	24.34	97.21	24.55
18	54.00	36.30	7.30	106.9	24.34	97.13	24.55
19	54.00	36.30	7.27	106.5	24.34	96.86	24.55
20	54.00	36.30	7.40	108.4	24.34	96.86	24.55
21	54.00	36.30	7.41	108.5	24.34	97.67	24.55
23	54.00	36.30	7.23	105.9	24.34	96.51	24.55
25	54.00	36.30	7.30	106.9	24.34	97.27	24.55
26	54.00	36.30	7.32	107.2	24.34	97.44	24.55
28	54.02	36.30	7.34	107.6	24.36	97.21	24.54
29	54.02	36.30	7.31	107.1	24.36	97.44	24.54
30	54.02	36.30	7.30	106.9	24.36	96.74	24.54
31	54.02	36.30	7.19	105.3	24.36	96.51	24.54
32	54.02	36.30	7.37	108.0	24.36	96.51	24.54
33	54.02	36.30	7.26	106.3	24.36	96.90	24.54
34	54.02	36.30	7.33	107.4	24.36	96.98	24.54
35	54.02	36.30	7.17	105.0	24.36	96.51	24.54
36	54.02	36.30	7.33	107.4	24.36	96.74	24.54
37	54.02	36.30	7.33	107.3	24.36	96.74	24.54
38	54.02	36.30	7.37	108.0	24.36	96.74	24.54
39	54.02	36.30	7.29	106.8	24.36	96.74	24.54
41	54.03	36.30	7.27	106.4	24.36	96.11	24.54
42	54.02	36.30	7.28	106.7	24.36	96.86	24.54
43	54.04	36.31	7.45	109.2	24.36	96.51	24.55
44	54.04	36.31	7.34	107.6	24.36	96.13	24.55
45	54.04	36.31	7.19	105.3	24.36	96.28	24.55
46	54.03	36.30	7.11	104.2	24.36	96.16	24.54
47	54.02	36.30	7.37	108.0	24.36	96.74	24.54
48	54.03	36.30	7.35	107.7	24.36	96.63	24.54
49	54.04	36.31	7.06	103.4	24.36	96.74	24.55
51	54.04	36.31	7.32	107.2	24.36	96.57	24.55
52	54.04	36.31	7.34	107.5	24.36	96.74	24.55
53	54.04	36.31	7.35	107.7	24.36	96.98	24.55
54	54.04	36.31	7.41	108.6	24.36	96.05	24.55

STATION NUMBER: 23 TRIP NUMBER: 1 12/16/83 TIME: 835

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
55	54.04	36.31	7.31	107.0	24.36	96.34	24.55
56	54.04	36.31	7.45	109.2	24.36	96.05	24.55
57	54.04	36.31	7.44	109.0	24.36	96.51	24.55
58	54.04	36.31	7.31	107.1	24.36	96.28	24.55
59	54.03	36.31	7.36	107.8	24.35	96.74	24.55
60	53.98	36.32	7.23	105.8	24.30	96.98	24.57
61	53.89	36.29	7.29	106.6	24.25	96.98	24.57
62	52.91	36.25	7.28	104.8	23.43	96.74	24.78
63	52.40	36.55	7.64	108.5	22.61	96.74	25.24
65	51.45	36.64	8.07	112.5	21.60	96.05	25.60
66	51.13	36.66	8.00	110.9	21.26	96.28	25.71
67	50.98	36.67	7.95	109.9	21.10	95.82	25.76
68	50.54	36.59	7.81	107.3	20.76	95.82	25.79
69	49.97	36.68	7.78	105.6	20.07	95.58	26.04
70	49.66	36.63	7.73	104.4	19.84	95.12	26.07
71	49.56	36.66	7.47	100.7	19.73	95.04	26.12
72	49.53	36.65	7.03	94.69	19.70	95.12	26.12
73	49.51	36.66	6.68	90.02	19.67	94.89	26.14
74	49.50	36.66	6.39	86.06	19.67	95.20	26.14
75	49.50	36.67	6.11	82.28	19.66	95.47	26.14

STATION NUMBER: 29 TRIP NUMBER: 1 12/15/83 TIME: 1054

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	54.22	35.94	7.12	105.2	24.94	97.67	24.09
3	54.18	35.90	7.10	104.9	24.94	97.67	24.07
4	54.16	35.89	7.05	104.1	24.94	97.67	24.06
5	54.82	36.21	7.07	105.1	25.16	97.67	24.23
7	55.01	36.33	7.01	104.3	25.20	97.67	24.30
8	54.96	36.30	7.00	104.2	25.19	97.56	24.29
9	54.90	36.24	6.95	103.4	25.20	97.67	24.24
10	54.90	36.26	7.03	104.6	25.18	97.67	24.26
11	54.93	36.28	6.97	103.7	25.19	97.52	24.27
12	54.90	36.26	7.01	104.3	25.18	97.44	24.26
13	54.96	36.30	6.94	103.3	25.18	97.44	24.29
14	54.90	36.24	7.09	105.5	25.20	97.67	24.24
15	54.89	36.25	7.00	104.2	25.18	97.44	24.26
16	54.96	36.29	6.91	102.8	25.20	97.44	24.28
17	54.90	36.24	6.89	102.5	25.20	97.44	24.24
18	54.89	36.24	6.96	103.6	25.20	97.44	24.24
19	54.90	36.25	7.02	104.4	25.19	97.44	24.25
21	54.90	36.25	7.04	104.7	25.19	97.44	24.25
22	54.90	36.26	6.85	101.9	25.18	97.44	24.26
23	54.90	36.25	6.98	103.8	25.19	97.32	24.25
24	54.90	36.24	6.91	102.8	25.20	97.21	24.24
25	54.88	36.24	7.15	106.3	25.18	97.21	24.25
26	54.89	36.25	6.97	103.7	25.18	97.32	24.25
27	54.88	36.32	6.79	100.8	25.08	97.21	24.34
28	54.88	36.23	6.88	102.3	25.20	97.21	24.23
29	54.87	36.24	7.00	104.1	25.18	97.21	24.24
30	54.86	36.23	7.12	105.9	25.18	97.21	24.24
31	54.86	36.23	6.72	99.93	25.18	96.51	24.24
32	54.86	36.23	7.05	104.8	25.18	97.21	24.24
33	54.86	36.23	6.92	102.9	25.18	97.13	24.24
34	54.86	36.23	6.94	103.3	25.18	97.05	24.24
35	54.86	36.23	7.29	108.4	25.18	95.35	24.24
36	54.86	36.23	6.89	102.5	25.18	95.35	24.24
37	54.86	36.23	6.79	101.0	25.18	95.58	24.24
39	54.85	36.22	6.90	102.6	25.18	95.51	24.23
40	54.84	36.22	6.92	102.8	25.17	95.70	24.24
41	54.83	36.22	6.99	103.9	25.16	95.82	24.24
42	54.78	36.21	7.13	105.9	25.12	96.05	24.24
43	54.77	36.21	6.93	102.9	25.12	95.82	24.24
44	54.74	36.21	7.04	104.5	25.09	96.05	24.25
45	54.72	36.20	6.90	102.4	25.08	96.05	24.25
47	54.83	36.31	6.93	102.8	25.04	95.82	24.34
48	54.80	36.29	6.95	103.1	25.04	96.05	24.33
49	54.82	36.31	7.02	104.1	25.03	95.93	24.35
50	54.77	36.28	6.87	101.9	25.02	95.70	24.33
52	54.68	36.39	7.03	104.0	24.81	95.40	24.47
53	54.64	36.40	7.02	103.7	24.77	95.35	24.49
54	54.45	36.47	7.11	104.6	24.53	95.35	24.62

STATION NUMBER: 29 TRIP NUMBER: 1 12/15/83 TIME: 1054

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
55	54.36	36.51	7.06	103.7	24.41	95.12	24.69
56			7.10		24.28	94.66	
57	53.96	36.55	7.18	104.7	24.02	94.89	24.83
58	53.94	36.64	7.12	103.7	23.90	94.71	24.94
59	53.94	36.64	7.09	103.2	23.90	94.89	24.94

STATION NUMBER: 36 TRIP NUMBER: 1 12/16/83 TIME: 10

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	54.29	36.29			24.59	97.29	24.47
2	54.28	36.30			24.58	98.37	24.47
3	54.24	36.29			24.56	97.56	24.47
4	54.26	36.30			24.56	98.14	24.48
5	54.26	36.30			24.56	98.52	24.48
6	54.26	36.30			24.56	98.60	24.48
7	54.26	36.30			24.56	98.60	24.48
8	54.27	36.31			24.56	98.60	24.49
9	54.26	36.30			24.56	98.60	24.48
10	54.26	36.28	7.36	108.3	24.58	98.60	24.46
11	54.26	36.28			24.58	98.60	24.46
12	54.26	36.30			24.56	98.60	24.48
13	54.26	36.30			24.56	98.60	24.48
14	54.28	36.32			24.56	98.60	24.49
15	54.30	36.32			24.58	98.37	24.49
17	54.29	36.30			24.58	98.37	24.48
18	54.28	36.30			24.58	98.37	24.47
19	54.28	36.30	7.36	108.3	24.58	98.37	24.47
20	54.28	36.30			24.58	98.60	24.47
21	54.28	36.30			24.58	96.98	24.47
22	54.30	36.31			24.58	98.02	24.48
24	54.30	36.32			24.58	97.32	24.49
25	54.30	36.30			24.59	97.21	24.47
27	54.32	36.31			24.60	96.86	24.48
28	54.32	36.31			24.60	96.86	24.48
29	54.32	36.31	7.37	108.5	24.60	97.03	24.48
31	54.31	36.31			24.60	96.40	24.47
32	54.31	36.31			24.60	96.40	24.47
33	54.31	36.30			24.60	96.82	24.47
35	54.30	36.32			24.58	96.98	24.49
36	54.30	36.30			24.60	96.28	24.47
37	54.34	36.33			24.60	96.86	24.49
39	54.34	36.32	7.44	109.5	24.61	96.28	24.48
40	54.30	36.32			24.58	96.74	24.49
41	54.41	36.35			24.63	96.86	24.50
42	54.41	36.35			24.64	97.21	24.49
43	54.42	36.35			24.64	97.44	24.50
44	54.39	36.35			24.62	97.44	24.50
45	54.37	36.33			24.62	97.21	24.49
46	54.46	36.37			24.66	96.05	24.50
47	54.46	36.37			24.66	96.05	24.50
48	54.48	36.36			24.68	95.58	24.49
49	54.48	36.36	7.19	106.0	24.68	96.28	24.49
50	54.50	36.38			24.68	96.28	24.50
51	54.48	36.36			24.68	95.89	24.49
52	54.48	36.36			24.68	96.05	24.49
53	54.52	36.37			24.70	95.58	24.49
54	54.50	36.38			24.68	96.16	24.50

STATION NUMBER: 36 TRIP NUMBER: 1 12/16/83 TIME: 10

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
55	54.53	36.38			24.70	96.43	24.50
56	54.54	36.39			24.70	96.51	24.51
57	54.54	36.39			24.71	96.57	24.50
58	54.54	36.39			24.70	96.74	24.51
60	54.34	36.39	7.09	104.3	24.53	96.40	24.56
61	53.86	36.42			24.08	96.28	24.72
62	52.78	36.54			22.98	96.28	25.13
63	52.28	36.64			22.40	96.28	25.37
64	52.27	36.64			22.39	95.97	25.38
65	52.04	36.68			22.12	96.05	25.48
66	52.06	36.73			22.08	95.93	25.53
67	51.86	36.72			21.90	96.05	25.57
68	51.80	36.74			21.82	96.16	25.62
69	51.74	36.74			21.76	96.28	25.63
70	51.70	36.74	5.86	82.00	21.72	96.05	25.64
71	51.65	36.77			21.64	96.05	25.68
72	50.97	36.70			21.06	95.89	25.79
73	50.64	36.70			20.72	95.82	25.89
74	50.48	36.65			20.62	95.00	25.88
76	50.41	36.65			20.55	95.58	25.90
77	50.37	36.65			20.51	95.70	25.91
78	50.18	36.71			20.24	95.58	26.02
79	50.05	36.62	5.46	74.26	20.22	95.58	25.96
81	49.85	36.62			20.02	96.16	26.01
82	49.75	36.63			19.91	95.85	26.05
83	49.66	36.61			19.86	95.12	26.05
84	49.62	36.65			19.78	95.12	26.10
85	49.59	36.65			19.76	95.97	26.10
86	49.56	36.64			19.74	96.05	26.10
87	49.48	36.66			19.66	95.82	26.13
89	49.32	36.69			19.49	95.88	26.20
90	49.22	36.67	5.54	74.27	19.42	95.78	26.21
91	49.18	36.67			19.38	95.70	26.22

**Table B-2. CSTD Hydrographic Data Collected at the Group II
Stations During Cruise II (March 1984)**

STATION NUMBER: 52 TRIP NUMBER: 2 03/02/84 TIME: 0

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1		35.13	7.62	101.0	19.37	82.16	25.04
2		35.11			19.35	81.02	25.04
3		35.09			19.30	80.19	25.03
4		35.06			19.18	79.52	25.04
5		35.10			19.17	79.00	25.08
6		35.11	7.28	96.10	19.14	78.92	25.09
7		35.12			19.12	79.07	25.10
8		35.12			19.12	78.63	25.10
9		35.13			19.12	78.70	25.11
10		35.14			19.11	77.84	25.12
11		35.14			19.10	78.07	25.12
12		35.14	7.26	95.80	19.11	66.99	25.13

STATION NUMBER: 21 TRIP NUMBER: 2 03/03/84 TIME: 1500

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1		36.22	9.42	128.5	20.52	98.64	25.58
2		36.22			20.52	98.79	25.57
3		36.20			20.50	96.99	25.56
4		36.20			20.50	93.91	25.56
5		36.20			20.46	92.29	25.58
6		36.20	9.28	126.4	20.44	91.84	25.58
7		36.25			20.49	91.39	25.60
8		36.20			20.46	90.50	25.58
9		36.22			20.47	89.83	25.59
10		36.20			20.46	89.66	25.58
11		36.16			20.40	89.60	25.56
12		36.18			20.37	89.30	25.59
13		36.20			20.36	89.53	25.60
14		36.20			20.36	89.38	25.60
15		36.22			20.35	89.68	25.62
16		36.22			20.36	89.27	25.62
17		36.22			20.35	89.45	25.62
18		36.22			20.35	89.53	25.62
19		36.20			20.34	89.38	25.61
20		36.22			20.34	88.87	25.62
21		36.22			20.33	89.08	25.62
22		36.22			20.34	88.93	25.62
23		36.22			20.33	88.93	25.63
24		36.22			20.33	88.71	25.63
25		36.22			20.32	88.93	25.63
26		36.22	9.20	125.0	20.32	88.78	25.63
27		36.22			20.32	88.82	25.63
28		36.22			20.32	89.10	25.63
29		36.22			20.32	88.71	25.63
30		36.22			20.32	89.15	25.63
31		36.22			20.32	88.65	25.63
33		36.22			20.32	89.04	25.63
34		36.22			20.32	88.86	25.63
35		36.22	9.15	124.4	20.32	88.93	25.63
36		36.22			20.32	88.99	25.63
37		36.22			20.32	88.93	25.63
38		36.22			20.32	88.80	25.63
39		36.22			20.32	88.89	25.63
40		36.22			20.32	88.93	25.63
41		36.22			20.32	88.78	25.63
42		36.22			20.32	88.84	25.63
43		36.22			20.32	88.93	25.63
44		36.22			20.32	88.75	25.63
45		36.22	9.44	128.3	20.32	88.77	25.63

STATION NUMBER: 23 TRIP NUMBER: 2 03/05/84 TIME: 2128

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	51.14	36.26	7.36	102.0	21.40	97.62	25.36
2	51.14	36.24	7.33	101.6	21.39	97.44	25.35
4	51.14	36.24	7.44	103.1	21.38	97.55	25.35
5	51.14	36.24	7.49	103.8	21.39	97.44	25.35
6	51.14	36.24	7.52	104.2	21.40	97.67	25.35
7	51.14	36.24	7.52	104.2	21.40	97.22	25.35
8	51.14	36.24	7.54	104.6	21.40	97.89	25.35
9	51.14	36.24	7.54	104.6	21.40	97.67	25.35
10	51.14	36.24	7.60	105.3	21.39	97.67	25.35
11	51.14	36.24	7.62	105.7	21.40	97.67	25.35
12	51.14	36.24	7.62	105.7	21.40	97.67	25.35
14	51.14	36.24	7.67	106.4	21.40	97.27	25.35
15	51.14	36.24	7.65	106.0	21.40	96.32	25.35
16	51.14	36.24	7.67	106.4	21.40	95.76	25.35
18	51.14	36.24	7.68	106.5	21.38	96.84	25.35
19	51.12	36.24	7.70	106.7	21.38	96.70	25.35
20	51.12	36.26	7.70	106.8	21.38	97.67	25.37
22	51.09	36.24	7.70	106.7	21.35	97.33	25.36
23	51.08	36.24	7.70	106.7	21.34	96.43	25.37
24	51.07	36.24	7.75	107.4	21.32	97.22	25.37
26	50.97	36.21	7.78	107.6	21.25	96.10	25.37
27	50.90	36.18	7.78	107.4	21.20	97.44	25.36
28	50.75	36.16	7.73	106.3	21.01	97.22	25.40
30	50.58	36.21	7.82	107.3	20.86	97.22	25.48
31	50.58	36.22	7.75	106.4	20.86	97.67	25.48
32	50.56	36.24	7.75	106.4	20.84	97.67	25.50
33	50.56	36.20	7.73	106.0	20.84	97.44	25.47
35	50.52	36.24	7.72	105.8	20.80	97.07	25.51
36	50.48	36.22	7.67	105.2	20.78	97.89	25.50
37	50.44	36.22	7.60	104.1	20.73	96.99	25.52
39	50.42	36.24	7.61	104.2	20.71	97.37	25.54
40	50.41	36.25	7.61	104.2	20.69	95.95	25.55
41	50.35	36.23	7.62	104.2	20.64	96.99	25.55
42	50.30	36.24	7.67	104.9	20.60	94.75	25.57
43	50.30	36.24	7.67	104.9	20.60	98.34	25.57
44	50.24	36.22	7.60	103.7	20.55	97.16	25.57
46	50.21	36.24	7.53	102.7	20.52	97.55	25.59
47	50.20	36.24	7.46	101.8	20.50	98.26	25.59
48	50.18	36.22	7.41	101.0	20.48	97.89	25.58
49	50.10	36.18	7.38	100.4	20.40	98.34	25.58
50	50.06	36.22	7.35	99.92	20.36	97.89	25.62
51	50.03	36.21	7.28	98.88	20.32	98.56	25.62
52	50.00	36.22	7.30	99.24	20.32	97.89	25.63
53	49.99	36.23	7.22	98.09	20.28	98.34	25.65
54	49.92	36.22	7.22	97.98	20.22	98.34	25.65
55	49.89	36.23	7.19	97.47	20.19	98.45	25.67
57	49.86	36.25	6.82	92.48	20.16	98.79	25.70
58	49.89	36.27	6.91	93.69	20.16	98.04	25.71

STATION NUMBER: 23 TRIP NUMBER: 2 03/05/84 TIME: 2120

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
59	49.90	36.27	6.89	93.39	20.16	97.89	25.71
60	49.90	36.28	6.74	91.38	20.14	97.89	25.72
61	49.88	36.29	6.76	91.63	20.12	98.34	25.73
62	49.88	36.28	6.53	88.47	20.12	98.79	25.73
63	49.88	36.28	6.66	90.27	20.12	97.89	25.73
64	49.83	36.27	6.60	89.30	20.08	97.67	25.73
65	49.78	36.24	6.55	88.54	20.03	97.74	25.72
66	49.64	36.20	6.54	88.32	19.95	97.67	25.71
67	49.27	36.21	6.60	88.42	19.57	98.45	25.81
68	49.32	36.14	6.53	87.48	19.56	97.44	25.77
69	49.24	36.23	6.57	88.03	19.54	98.34	25.84
70	49.24	36.26	6.44	86.30	19.53	97.37	25.86
71	49.24	36.26	6.45	86.30	19.45	97.80	25.89
72	49.24	36.26	6.40	85.70	19.52	98.11	25.87

STATION NUMBER: 29 TRIP NUMBER: 2 03/04/84 TIME: 1448

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
1	52.53	36.24	8.82	125.6	22.82	99.59	24.95
2	52.66	36.28	8.75	124.5	22.80	99.79	24.98
4	52.64	36.28	8.79	125.1	22.78	99.61	24.99
5	52.64	36.27	8.78	124.9	22.79	99.68	24.98
6	52.64	36.28	9.03	128.5	22.78	99.91	24.99
7	52.63	36.26	8.94	127.1	22.77	100.1	24.98
8	52.62	36.28	8.93	127.0	22.78	100.1	24.99
9	52.63	36.27	8.94	127.1	22.78	100.5	24.98
10	52.60	36.29	9.15	130.1	22.74	99.46	25.01
11	52.59	36.26	8.93	126.9	22.74	101.0	24.99
12	52.58	36.26	9.08	129.1	22.72	100.8	24.99
13	52.54	36.28	9.20	130.7	22.69	98.28	25.02
14	52.52	36.26	9.15	129.9	22.71	102.4	24.99
15	52.42	36.26	9.22	130.6	22.59	103.0	25.03
16	52.26	36.41	9.32	131.7	22.34	103.4	25.21
17	51.67	35.99	9.28	129.5	21.86	103.5	25.03
18	51.42	36.19	9.57	133.1	21.59	103.0	25.26
19	51.16	36.24	9.80	135.9	21.40	95.65	25.35
20	51.14	36.21	9.61	133.2	21.39	104.4	25.33
21	51.11	36.23	9.58	132.7	21.37	102.9	25.35
22	51.07	36.22	9.52	131.9	21.33	103.0	25.35
23	51.06	36.25	9.56	132.3	21.32	102.0	25.38
24	51.05	36.26	9.55	132.2	21.29	70.00	25.39
25	51.02	36.24	9.43	130.5	21.28	101.5	25.38
26	50.89	36.17	9.45	130.4	21.15	102.0	25.37
28	50.67	36.20	9.45	129.9	20.96	101.0	25.44
29	50.66	36.23	9.38	129.0	20.96	100.9	25.46
30	50.66	36.24	9.38	129.0	20.96	100.6	25.47
31	50.63	36.22	9.44	129.8	20.93	100.4	25.46
32	50.58	36.21	9.42	129.4	20.88	100.2	25.47
33	50.54	36.21	9.43	129.4	20.84	99.91	25.48
34	50.48	36.22	9.35	128.2	20.78	99.68	25.50
35	50.47	36.22	9.34	128.0	20.78	99.74	25.50
36	50.46	36.22	9.27	127.0	20.76	99.46	25.51
37	50.41	36.20	9.26	126.8	20.74	99.46	25.50
38	50.36	36.18	9.22	126.1	20.70	99.23	25.50
39	50.27	36.16	9.28	126.7	20.61	99.31	25.50
40	50.24	36.16	9.32	127.3	20.58	99.23	25.51
41	50.20	36.16	9.30	126.9	20.56	99.23	25.52
42	50.16	36.18	9.35	127.5	20.52	99.23	25.54
43	50.13	36.17	9.32	127.0	20.47	99.01	25.55
44	50.10	36.19	9.32	127.0	20.46	99.01	25.57
45	50.10	36.20	9.30	126.7	20.46	98.79	25.58
46	49.92	36.14	9.22	125.2	20.30	99.01	25.57
47	49.82	36.10	9.27	125.5	20.17	98.71	25.58
48	49.76	36.14	9.22	124.7	20.08	99.01	25.63
49	49.71	36.16	9.22	124.6	20.04	99.01	25.66
51	49.53	36.20	9.10	122.6	19.83	99.01	25.74

STATION NUMBER: 29 TRIP NUMBER: 2 03/04/84 TIME: 1448

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
52	49.45	36.21	9.03	121.5	19.78	99.01	25.76
53	49.39	36.19	9.02	121.2	19.72	99.01	25.77
55	49.21	36.19	8.86	118.7	19.55	99.01	25.81
56	49.18	36.22	8.77	117.4	19.53	99.01	25.84
57	49.18	36.22	8.77	117.4	19.54	99.01	25.83
58	49.18	36.24	8.69	116.3	19.52	99.01	25.85
59	49.17	36.23	8.64	115.7	19.52	99.16	25.85
60	49.01	36.33	8.66	115.5	19.28	99.14	25.99
61	48.47	36.14	8.59	113.9	18.97	99.01	25.92

STATION NUMBER: 36 TRIP NUMBER: 2 03/06/84 TIME: 2150

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
4	51.10	36.24	6.98	96.75	21.36	96.32	25.36
5	51.10	36.24	6.97	96.63	21.36	96.32	25.36
6	51.10	36.24	6.93	96.01	21.36	96.32	25.36
7	51.09	36.24	6.89	95.46	21.36	94.42	25.36
9	50.92	36.14	6.96	96.07	21.22	96.32	25.32
10	50.84	36.14	6.94	95.71	21.12	96.21	25.35
11	50.84	36.20	6.96	95.93	21.12	96.10	25.40
12	50.48	36.00	6.97	95.30	20.76	96.10	25.35
15	50.04	36.20	7.20	97.82	20.34	95.95	25.60
16	50.04	36.22	7.14	97.07	20.32	96.10	25.63
17	50.02	36.24	7.10	96.54	20.32	95.99	25.64
18	50.02	36.24	7.09	96.36	20.32	95.87	25.64
20	50.00	36.25	7.26	98.62	20.30	95.95	25.66
21	50.00	36.26	7.22	98.15	20.30	95.87	25.66
22	49.98	36.24	7.22	98.10	20.28	95.87	25.65
23	49.98	36.26	7.21	97.93	20.28	95.76	25.67
25	49.98	36.26	7.24	98.36	20.27	95.87	25.67
26	49.96	36.26	7.30	99.16	20.26	95.87	25.67
27	49.96	36.26	7.17	97.35	20.26	95.87	25.67
28	49.96	36.26	7.20	97.72	20.26	95.87	25.67
29	49.96	36.26	7.30	99.14	20.25	96.10	25.68
30	49.94	36.24	7.22	98.03	20.24	96.10	25.66
31	49.90	36.23	7.34	99.56	20.19	96.10	25.67
32	49.88	36.24	7.34	99.54	20.18	96.10	25.68
34	49.82	36.24	7.36	99.61	20.12	96.32	25.70
35	49.81	36.25	7.41	100.3	20.10	96.25	25.71
36	49.78	36.24	7.36	99.58	20.10	96.32	25.70
37	49.74	36.22	7.37	99.65	20.05	96.32	25.70
38	49.70	36.24	7.41	100.1	20.02	96.32	25.72
39	49.70	36.24	7.44	100.5	20.02	96.55	25.72
40	49.68	36.24	7.38	99.71	19.98	96.55	25.73
41	49.60	36.22	7.38	99.56	19.91	96.66	25.74
44	49.46	36.22	7.33	98.65	19.80	96.66	25.76
45	49.40	36.20	7.28	97.85	19.76	96.77	25.76
46	49.32	36.18	7.25	97.41	19.72	96.10	25.76
47	49.32	36.16	7.25	97.36	19.70	96.77	25.75
48	49.22	36.18	7.30	97.95	19.62	96.77	25.78
49	49.17	36.14	7.30	97.81	19.56	96.77	25.77
50	49.12	36.16	7.33	98.11	19.52	96.77	25.80
51	49.12	36.18	7.33	98.12	19.52	96.77	25.81
53	49.08	36.18	7.34	98.18	19.49	96.77	25.82
54	49.06	36.17	7.32	97.85	19.47	96.99	25.82
55	49.03	36.17	7.34	98.16	19.45	96.77	25.82
57	49.02	36.18	7.28	97.26	19.44	96.99	25.83
58	48.99	36.17	7.20	96.13	19.41	96.77	25.83
59		36.18	5.97	79.78	19.40	96.99	25.84
60		36.16	6.11	81.52	19.38	96.99	25.83
61	48.89	36.15	6.45	86.08	19.35	96.99	25.83

STATION NUMBER: 36 TRIP NUMBER: 2 03/06/84 TIME: 2150

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T
62	48.86	36.15	6.80	90.61	19.30	96.99	25.84
63	48.86	36.16	6.90	92.04	19.30	96.99	25.85
64	48.83	36.14	6.77	90.20	19.27	96.99	25.84
66	48.80	36.16	6.89	91.76	19.24	96.99	25.86
67	48.78	36.16	6.90	91.93	19.24	96.99	25.87
68	48.77	36.15	6.96	92.60	19.22	96.99	25.86
70	48.71	36.14	7.01	93.20	19.16	97.11	25.87
71	48.66	36.12	7.06	93.83	19.12	96.99	25.87
72	48.61	36.10	7.00	92.79	19.04	96.99	25.87
74	48.56	36.14	7.28	96.52	19.04	97.07	25.90
75	48.54	36.12	7.22	95.77	19.02	97.22	25.89
76	48.49	36.11	7.17	95.00	18.99	97.22	25.90
78	48.48	36.14	7.28	96.38	18.96	97.22	25.92
79	48.45	36.15	7.44	98.41	18.91	97.29	25.94
80	48.44	36.15	7.30	96.61	18.89	97.14	25.95
81	48.41	36.15	7.17	94.80	18.86	97.44	25.96
82	48.36	36.14	7.17	94.72	18.82	97.44	25.96
83	48.36	36.14	7.30	96.48	18.82	97.44	25.96
84	48.34	36.16	7.24	95.58	18.80	97.67	25.98
85	48.35	36.17	7.19	94.94	18.80	97.59	25.99
86	48.34	36.18	7.05	93.13	18.80	97.55	25.99
87	48.34	36.18	6.93	91.55	18.80	97.67	25.99
88	48.34	36.18	7.34	96.94	18.80	97.67	25.99
89	48.34	36.18	7.16	94.54	18.80	97.67	25.99
90	48.34	36.18	7.06	93.23	18.80	97.78	25.99
91	48.35	36.18	7.09	93.66	18.80	97.89	25.99
118		36.42			18.40		

Table B-3. CSTD Hydrographic Data Collected at the Group I and II Stations During Cruise III (May 1984)

STATION NUMBER: 43 TRIP NUMBER: 3 05/09/84 TIME: 642

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	54.49	35.06			26.38	101.9	22.98	7.83
1	54.48	35.05	6.90	104.2	26.38	101.9	22.98	7.80
2	54.46	35.06			26.36	101.2	22.99	7.78
3	54.45	35.06			26.34	101.3	23.00	7.78
4	54.46	35.06	6.90	104.1	26.35	101.0	22.99	7.78
5	54.46	35.07			26.34	101.2	23.00	7.80
6	54.46	35.07			26.34	101.1	23.00	7.80
7	54.46	35.07			26.34	101.3	23.00	7.80
8	54.46	35.07	6.90	104.1	26.34	101.4	23.00	7.80
9	54.48	35.08			26.35	101.4	23.01	7.80
10	54.48	35.07			26.36	101.4	23.00	7.83
11	54.52	35.11	6.80	102.6	26.35	101.4	23.03	7.81
13	54.69	35.15			26.45	101.4	23.03	7.83
14	54.72	35.17	6.70	101.4	26.46	101.3	23.04	7.83

STATION NUMBER: 44 TRIP NUMBER: 3 05/09/84 TIME: 904

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	54.14	34.75	7.10	107.1	26.46	102.8	22.73	7.84
1	54.19	34.78			26.46	102.7	22.75	7.83
2	54.00	34.69			26.40	102.0	22.70	7.79
3	54.02	34.69	7.00	105.5	26.41	101.9	22.70	7.80
4	54.64	35.05			26.54	101.9	22.93	7.80
5	54.68	35.07			26.55	102.0	22.94	7.80
6	54.70	35.08	7.10	107.6	26.56	101.7	22.94	7.80
7	54.70	35.08			26.56	101.9	22.94	7.80
9	54.70	35.08	7.00	106.1	26.56	101.8	22.94	7.83
10	54.70	35.08			26.56	101.8	22.94	7.83
11	54.70	35.08			26.56	101.8	22.94	7.83
12	54.70	35.08	6.90	104.5	26.56	101.5	22.94	7.83

STATION NUMBER: 45 TRIP NUMBER: 3 05/10/80 TIME: 655

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1	54.34	35.17	7.00	105.2	26.08	98.21	23.16	7.76
2	54.33	35.18			26.07	100.4	23.17	7.76
3	54.32	35.17	6.90	103.6	26.06	101.1	23.17	7.76
4	54.32	35.17			26.06	101.0	23.17	7.78
5	54.32	35.18			26.05	101.1	23.18	7.78
6	54.33	35.18	6.90	103.6	26.06	100.9	23.17	7.78
7	54.34	35.19			26.06	100.7	23.18	7.78
8	54.36	35.19	6.90	103.7	26.08	100.5	23.17	7.80
9	54.38	35.20			26.08	100.6	23.19	7.80
10	54.44	35.24			26.09	99.36	23.21	7.80
11	54.48	35.26			26.10	98.67	23.22	7.80
12	54.56	35.31	6.50	97.80	26.12	97.52	23.25	7.80
13	54.56	35.31			26.12	97.63	23.25	7.80
14	54.56	35.31			26.12	97.52	23.25	7.80
15	54.57	35.31			26.12	92.80	23.25	7.82

STATION NUMBER: 46 TRIP NUMBER: 3 05/10/84 TIME: 1705

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1	54.81	35.38	6.90	104.2	26.27	98.67	23.26	7.80
2	54.75	35.38			26.21	98.44	23.28	7.77
3	54.74	35.38	6.90	104.0	26.20	97.52	23.28	7.76
4	54.73	35.37			26.20	97.06	23.27	7.77
5	54.74	35.38			26.20	96.83	23.28	7.78
8	54.74	35.38			26.20	96.98	23.28	7.78
9	54.75	35.38	6.90	104.0	26.20	96.83	23.28	7.79
10	54.72	35.39			26.16	96.83	23.30	7.80
11	54.66	35.33			26.18	96.83	23.25	7.80
12	54.62	35.39	6.80	102.3	26.06	96.60	23.34	7.80
13	54.60	35.38			26.06	96.37	23.32	7.80
14	54.60	35.38			26.06	95.91	23.32	7.80
15	54.60	35.39	6.80	102.2	26.04	95.68	23.34	7.80
16	54.60	35.39			26.04	88.43	23.34	7.83
17	54.53	35.34	6.70	100.7	26.05	81.12	23.29	7.83

STATION NUMBER: 47 TRIP NUMBER: 3 05/11/80 TIME: 724

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	54.13	35.16	6.70	100.3	25.90	100.0	23.21	7.78
1	54.13	35.16			25.90	100.1	23.21	7.81
2	54.14	35.16			25.90	100.0	23.21	7.80
3	54.13	35.17			25.88	98.82	23.22	7.83
4	54.14	35.17			25.88	98.44	23.23	7.80
6	54.14	35.17	6.70	100.3	25.88	98.32	23.23	7.80
7	54.15	35.18			25.88	98.21	23.23	7.80
8	54.17	35.19			25.89	98.06	23.23	7.83
10	54.31	35.28	6.60	98.89	25.91	97.98	23.30	7.83
11	54.46	35.37			25.94	97.98	23.35	7.83
12	54.51	35.40			25.94	97.90	23.38	7.83
13	54.56	35.44			25.94	97.75	23.41	7.80
14	54.79	35.61	6.70	100.7	25.94	97.52	23.53	7.85
15	54.80	35.62			25.94	96.91	23.54	7.85
16	54.80	35.62			25.94	97.52	23.54	7.85
17	54.82	35.63			25.94	97.52	23.55	7.85
18	54.81	35.71			25.82	97.03	23.65	7.86
19	54.76	35.59			25.94	87.80	23.52	7.86

STATION NUMBER: 48 TRIP NUMBER: 3 05/11/84 TIME: 1418

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	54.68	35.18	6.70	101.3	26.41	122.9	23.06	7.78
1	54.72	35.19			26.43	147.0	23.06	7.82
2	54.66	35.17			26.40	117.4	23.06	7.78
3	54.61	35.17	6.70	101.2	26.35	106.8	23.08	7.78
4	54.60	35.19			26.32	103.7	23.10	7.78
5	54.55	35.18			26.28	102.6	23.11	7.78
6	54.54	35.17	6.50	98.02	26.28	102.9	23.10	7.78
7	54.52	35.18			26.25	103.3	23.12	7.79
9	54.50	35.19			26.22	103.3	23.13	7.80
10	54.50	35.20	6.50	97.89	26.21	102.9	23.14	7.80
11	54.49	35.20			26.19	103.8	23.15	7.80
12	54.54	35.25			26.17	102.7	23.20	7.80
13	54.56	35.26	6.50	97.89	26.18	102.6	23.20	7.80
14	54.63	35.32			26.17	102.1	23.24	7.81
16	54.74	35.38	6.50	97.99	26.20	99.47	23.29	7.83

STATION NUMBER: 49 TRIP NUMBER: 3 05/11/84 TIME: 1648

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1	54.83	34.57	6.80	104.3	27.36	98.60	22.31	7.85
3	54.78	34.57	6.90	105.7	27.32	100.6	22.32	7.89
6	54.76	34.57	6.90	105.7	27.30	95.22	22.32	7.89
8	54.76	34.58	6.80	104.2	27.29	92.92	22.33	7.90
9	54.73	34.58			27.26	90.39	22.34	7.85
10	54.70	34.56	6.90	105.6	27.26	90.01	22.33	7.85

STATION NUMBER: 50 TRIP NUMBER: 3 05/11/84 TIME: 1855

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	55.56	35.38	6.80	104.1	26.99	95.79	23.03	7.87
1	55.53	35.37			26.97	93.95	23.03	7.85
2	55.51	35.39	6.90	105.5	26.92	93.61	23.06	7.83
3	55.44	35.38			26.88	94.07	23.06	7.83
4	55.41	35.37	7.00	106.9	26.85	93.46	23.07	7.83
5	55.34	35.39			26.77	92.84	23.11	7.83
6	55.31	35.40			26.73	92.69	23.13	7.83
7	55.30	35.40			26.72	92.52	23.13	7.83
8	55.28	35.40	6.90	105.0	26.70	92.69	23.14	7.83
9	55.26	35.39			26.69	92.46	23.13	7.83
10	55.26	35.40			26.68	92.11	23.14	7.83
11	55.26	35.40	6.90	105.0	26.68	91.08	23.14	7.83
12	55.26	35.40			26.68	91.37	23.14	7.83
13	55.26	35.40			26.68	90.85	23.14	7.83
14	55.27	35.40	6.90	105.0	26.68	90.19	23.15	7.84

STATION NUMBER: 51 TRIP NUMBER: 3 05/12/84 TIME: 645

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	55.31	35.41	6.60	100.5	26.72	91.92	23.14	7.83
1	55.31	35.40			26.72	90.47	23.13	7.83
3	55.32	35.41	6.60	100.5	26.72	89.70	23.14	7.83
4	55.32	35.41			26.72	88.09	23.14	7.83
5	55.32	35.41	6.60	100.5	26.72	88.55	23.14	7.83
6	55.32	35.41			26.72	87.94	23.14	7.83
7	55.32	35.41	6.60	100.5	26.72	87.97	23.14	7.85
8	55.32	35.41			26.72	87.86	23.14	7.85
9	55.32	35.41			26.72	87.86	23.14	7.85
10	55.32	35.41			26.72	87.71	23.14	7.85
11	55.32	35.41	6.50	99.00	26.72	87.51	23.14	7.85
12	55.32	35.41			26.72	87.86	23.14	7.85
13	55.32	35.41			26.72	87.32	23.14	7.85
14	55.25	35.36	6.50	98.97	26.72	89.15	23.10	7.87

STATION NUMBER: 19 TRIP NUMBER: 3 05/13/84 TIME: 700

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1	54.92	35.94	6.80	101.8	25.62	93.07	23.89	7.86
2	54.92	35.95			25.61	91.92	23.90	7.84
3	54.90	35.94			25.60	91.54	23.89	7.83
4	54.88	35.94	6.90	103.2	25.58	92.46	23.90	7.83
5	54.88	35.94			25.58	93.07	23.90	7.84
6	54.88	35.94			25.58	93.38	23.90	7.85
7	54.88	35.94			25.58	91.31	23.90	7.85
8	54.88	35.94			25.58	93.26	23.90	7.85
9	54.86	35.94	6.90	103.2	25.57	95.45	23.90	7.87
10	54.86	35.94			25.56	96.37	23.91	7.89
11	54.84	35.94			25.54	94.22	23.91	7.86
12	54.80	35.94			25.51	92.57	23.92	7.87
13	54.80	35.94	6.90	103.0	25.51	94.29	23.92	7.89
14	54.66	35.94			25.38	93.61	23.96	7.88
15	54.51	35.93			25.23	91.92	24.00	7.87
16	54.51	35.95			25.20	93.49	24.02	7.89
17	54.45	35.93			25.17	93.31	24.01	7.89
18	54.45	35.93	7.00	103.9	25.17	92.86	24.02	7.88
19	54.44	35.91			25.18	90.62	24.00	7.87
20	54.44	35.92			25.17	92.37	24.01	7.88
21	54.44	35.92			25.17	91.48	24.01	7.88
22	54.44	35.92	7.00	103.9	25.17	92.58	24.00	7.88

STATION NUMBER: 52 TRIP NUMBER: 3 05/12/84 TIME: 1650

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	55.58	35.21			27.24	92.95	22.82	7.83
1	55.58	35.22	7.10	109.1	27.22	91.54	22.84	7.83
2	55.54	35.21			27.19	89.76	22.84	7.80
3	55.52	35.21	6.90	105.9	27.18	89.16	22.84	7.80
5	55.52	35.21	7.00	107.4	27.18	88.70	22.84	7.80
6	55.52	35.21			27.18	88.32	22.84	7.80
7	55.52	35.21	7.00	107.4	27.18	88.32	22.84	7.80
8	55.52	35.21			27.18	88.20	22.84	7.80
9	55.52	35.21	6.90	105.9	27.18	87.78	22.84	7.80
10	55.52	35.22			27.16	88.66	22.86	7.80
11	55.52	35.21			27.18	88.78	22.84	7.80
12	55.46	35.17	6.90	105.9	27.18	90.06	22.81	7.82

STATION NUMBER: 21 TRIP NUMBER: 3 05/14/84 TIME: 637

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	55.17	36.16	6.80	101.9	25.59	100.4	24.06	7.90
1	55.17	36.16			25.57	100.3	24.07	7.89
2	55.15	36.17			25.55	99.93	24.08	7.87
3	55.14	36.17			25.54	99.90	24.08	7.87
4	55.14	36.17			25.54	99.82	24.08	7.87
5	55.14	36.17			25.54	99.82	24.08	7.87
6	55.14	36.17	6.90	103.3	25.54	99.88	24.08	7.87
8	55.14	36.17			25.54	99.70	24.08	7.89
9	55.14	36.17			25.54	99.82	24.08	7.89
10	55.14	36.17			25.54	99.82	24.08	7.89
11	55.14	36.17			25.54	99.82	24.08	7.89
12	55.14	36.17			25.54	99.67	24.08	7.89
13	55.14	36.17			25.54	99.67	24.08	7.89
14	55.14	36.17	6.90	103.3	25.54	99.82	24.08	7.89
15	55.14	36.17			25.53	99.59	24.09	7.90
16	55.13	36.16			25.53	99.67	24.08	7.92
17	55.10	36.15			25.52	99.59	24.08	7.92
18	55.12	36.17			25.52	99.59	24.09	7.92
19	55.06	36.15			25.48	99.53	24.08	7.92
20	54.50	36.02			25.10	99.36	24.10	7.92
21	53.75	36.08			24.38	99.24	24.37	7.92
22	52.92	36.01	7.00	101.2	23.72	99.19	24.51	7.92
23	52.12	36.04			22.96	99.13	24.75	7.94
24	52.17	36.09			22.94	99.13	24.80	7.94
25	52.16	36.11			22.91	99.21	24.82	7.94
26	52.06	36.11			22.82	98.90	24.85	7.94
27	51.92	36.08			22.72	98.90	24.86	7.94
28	51.82	36.11			22.58	98.90	24.92	7.96
29	51.79	36.14			22.53	98.44	24.96	7.95
30	51.68	36.14			22.42	98.21	24.99	7.96
31	51.65	36.15			22.39	98.21	25.00	7.95
32	51.64	36.15			22.37	97.98	25.01	7.95
34	51.58	36.13			22.34	97.98	25.00	7.94
35	51.56	36.13			22.32	97.86	25.01	7.94
36	51.56	36.13			22.32	97.98	25.01	7.94
37	51.54	36.13			22.30	97.98	25.02	7.94
38	51.52	36.13			22.28	97.98	25.02	7.94
39	51.52	36.13			22.28	97.98	25.02	7.94
40	51.52	36.13			22.28	97.98	25.02	7.94
41	51.52	36.14			22.27	97.98	25.03	7.94
43	51.51	36.14			22.26	98.04	25.03	7.94
44	51.50	36.14			22.26	98.06	25.03	7.94
46	51.51	36.14	7.00	98.54	22.26	98.14	25.03	7.94

STATION NUMBER: 23 TRIP NUMBER: 3 05/15/42 TIME: 642

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
2	55.20	36.17	6.90	103.4	25.60	97.06	24.06	7.83
3	55.19	36.16			25.60	97.40	24.05	7.83
4	55.20	36.17			25.60	97.06	24.06	7.83
5	55.20	36.17			25.60	97.29	24.06	7.83
6	55.21	36.17			25.60	97.17	24.06	7.85
7	55.20	36.17			25.60	96.71	24.06	7.85
8	55.20	36.17			25.60	96.83	24.06	7.85
9	55.20	36.17			25.60	97.29	24.06	7.85
10	55.20	36.17			25.60	97.29	24.06	7.87
11	55.17	36.17	6.90	103.3	25.56	97.06	24.08	7.87
12	55.10	36.14			25.53	97.06	24.07	7.87
14	54.87	36.10			25.37	97.14	24.08	7.89
15	54.51	36.08			25.03	96.98	24.17	7.89
16	54.24	36.08			24.80	97.29	24.24	7.89
17	53.93	36.12			24.49	97.17	24.36	7.89
18	53.58	36.09	7.10	103.6	24.22	96.98	24.42	7.91
19	53.33	36.12			23.96	97.29	24.52	7.92
20	53.12	36.13			23.76	97.52	24.59	7.92
21	52.91	36.14			23.56	97.06	24.66	7.92
22	52.62	36.13			23.31	96.68	24.72	7.92
24	52.20	36.14			22.91	96.75	24.84	7.92
25	52.06	36.14			22.78	97.29	24.89	7.93
26	52.06	36.16			22.76	97.29	24.90	7.92
27	52.00	36.15			22.71	97.44	24.91	7.93
28	51.87	36.12			22.62	97.52	24.92	7.93
29	51.78	36.15			22.51	97.40	24.97	7.94
30	51.62	36.14			22.37	97.29	25.00	7.94
31	51.58	36.13			22.34	97.52	25.00	7.94
32	51.56	36.13			22.32	97.60	25.01	7.94
33	51.52	36.13			22.28	97.75	25.02	7.94
34	51.50	36.14			22.25	97.29	25.04	7.94
35	51.47	36.14			22.22	97.44	25.05	7.94
36	51.44	36.14			22.20	97.52	25.05	7.94
37	51.44	36.17			22.16	97.40	25.08	7.94
38	51.41	36.16			22.13	97.75	25.09	7.94
39	51.23	36.16			21.96	97.40	25.14	7.94
40	50.98	36.12			21.78	97.75	25.15	7.94
41	50.93	36.13			21.71	97.81	25.18	7.94
42	50.84	36.12			21.64	97.75	25.19	7.94
43	50.71	36.11			21.52	97.40	25.22	7.94
44	50.68	36.13			21.47	97.90	25.25	7.95
45	50.62	36.14	7.10	98.37	21.40	97.63	25.27	7.96
46	50.53	36.13			21.32	97.63	25.28	7.95
47	50.40	36.10			21.22	97.14	25.29	7.96
48	50.24	36.14			21.02	97.06	25.37	7.95
49	50.20	36.13			20.98	97.29	25.38	7.96
50	50.16	36.13			20.95	96.75	25.39	7.96
51	49.98	36.13			20.77	97.29	25.44	7.95

STATION NUMBER: 23 TRIP NUMBER: 3 05/15/84 TIME: 642

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
53	49.67	36.13			20.44	96.94	25.53	7.94
54	49.57	36.12			20.36	97.37	25.54	7.94
56	49.24	36.10			20.03	97.21	25.62	7.94
57	48.86	36.13			19.66	96.83	25.74	7.93
58	48.69	36.17			19.47	96.83	25.81	7.92
59	48.60	36.18			19.38	96.91	25.85	7.92
60	48.58	36.18			19.37	97.06	25.85	7.92
61	48.60	36.20			19.36	97.06	25.87	7.92
62	48.58	36.19			19.36	96.98	25.85	7.92
63	48.56	36.18			19.35	96.75	25.85	7.92
64	48.58	36.19			19.35	96.83	25.86	7.92
65	48.56	36.17			19.36	96.71	25.84	7.92
66	48.58	36.18			19.36	96.75	25.85	7.92
67	48.57	36.19			19.35	96.94	25.86	7.92
68	48.57	36.17			19.36	96.60	25.85	7.92
69	48.57	36.18			19.36	96.94	25.85	7.92
70	48.56	36.18			19.35	97.29	25.85	7.92
71	48.56	36.17			19.36	96.91	25.84	7.92
72	48.56	36.17			19.35	97.21	25.85	7.84
73	48.57	36.19			19.35	97.52	25.86	7.92
74	48.57	36.18			19.35	97.40	25.86	7.92
75	48.56	36.18			19.35	97.94	25.85	7.92
76	48.57	36.56	6.20	82.35	18.95	98.13	26.24	7.92

STATION NUMBER: 29 TRIP NUMBER: 3 05/16/84 TIME: 637

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	55.90	36.21	6.70	101.6	26.22	94.15	23.90	7.99
1	55.90	36.23			26.20	93.53	23.92	7.98
2	55.88	36.23			26.18	92.57	23.93	7.96
3	55.88	36.23			26.18	92.46	23.93	7.96
4	55.88	36.23			26.18	92.34	23.93	7.96
5	55.88	36.23			26.18	91.77	23.93	7.96
6	55.88	36.23	6.70	101.5	26.18	93.26	23.93	7.96
7	55.88	36.23			26.18	91.88	23.93	7.96
8	55.88	36.23			26.18	92.00	23.93	7.96
9	55.88	36.23			26.18	92.11	23.93	7.96
10	55.88	36.23			26.18	92.57	23.93	7.96
11	55.88	36.23			26.18	92.00	23.93	7.96
12	55.88	36.23			26.18	91.77	23.93	7.96
13	55.85	36.22			26.16	93.15	23.93	7.96
14	55.24	36.15			25.66	94.99	24.03	7.96
15	54.81	36.15			25.23	95.05	24.16	7.96
16	54.70	36.15	6.90	102.5	25.13	94.99	24.19	7.96
17	54.62	36.14			25.06	94.99	24.21	7.96
18	54.59	36.13			25.04	94.99	24.21	7.98
19	54.26	36.09			24.80	94.99	24.25	7.97
20	53.26	36.16			23.85	94.99	24.59	7.98
21	52.95	36.14			23.60	94.99	24.64	7.98
22	52.63	36.19			23.25	94.99	24.79	7.98
23	52.58	36.19			23.20	94.99	24.80	7.98
24	52.57	36.20			23.18	94.76	24.82	7.98
25	52.53	36.21			23.14	94.84	24.83	7.98
26	52.46	36.18			23.10	94.76	24.82	7.98
27	52.45	36.20			23.07	94.99	24.85	7.98
28	52.35	36.19			23.00	94.76	24.86	7.98
29	52.08	36.19			22.75	95.07	24.93	7.98
30	52.03	36.19			22.70	94.99	24.94	7.98
31	51.96	36.19			22.63	95.33	24.96	7.98
32	51.83	36.19			22.51	95.30	24.99	7.98
33	51.73	36.17			22.43	94.76	25.01	7.98
34	51.61	36.17			22.32	94.99	25.04	7.98
35	51.57	36.18			22.27	94.76	25.06	7.98
36	51.48	36.17	7.00	98.45	22.20	94.93	25.07	7.98
37	51.44	36.19			22.14	94.76	25.10	7.98
38	51.37	36.17			22.09	94.76	25.11	7.98
39	51.31	36.18			22.01	95.05	25.13	7.98
40	51.23	36.19			21.93	95.56	25.16	7.98
41	51.14	36.17			21.87	95.68	25.17	7.98
42	51.09	36.18			21.81	95.68	25.19	7.98
43	50.93	36.16			21.67	95.56	25.22	7.98
44	50.87	36.17			21.61	95.56	25.23	7.98
45	50.80	36.17			21.54	95.68	25.25	7.98
46	50.75	36.18			21.47	95.60	25.28	7.98
47	50.64	36.16			21.38	95.45	25.29	7.98

STATION NUMBER: 29 TRIP NUMBER: 3 05/16/84 TIME: 637

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
48	50.62	36.20			21.32	95.91	25.34	7.98
49	50.46	36.20			21.16	95.62	25.39	7.98
50	50.33	36.19			21.04	95.33	25.41	7.98
51	50.11	36.19			20.82	95.22	25.47	7.97
52	49.77	36.14			20.54	95.45	25.50	7.96
53	49.62	36.11			20.42	95.22	25.52	7.96
54	49.57	36.12			20.36	95.45	25.54	7.96
55	49.55	36.13			20.32	95.62	25.56	7.96
56	49.49	36.12			20.27	95.56	25.57	7.96
57	49.46	36.12			20.24	95.56	25.57	7.96
58	49.45	36.11			20.24	95.10	25.57	7.96
59	49.46	36.12			20.24	95.22	25.57	7.94
60	49.44	36.12			20.22	95.50	25.58	7.94
61	49.44	36.12			20.22	95.22	25.58	7.94
62	49.45	36.13			20.22	95.53	25.58	7.94
63	49.44	36.12			20.21	95.45	25.58	7.94
64	49.42	36.12			20.20	95.45	25.58	7.94
65	49.42	36.12			20.19	95.68	25.59	7.94
66	49.38	36.11	6.40	86.68	20.17	96.02	25.59	7.94

STATION NUMBER: 36 TRIP NUMBER: 3 05/17/84 TIME: 727

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1	55.05	36.15	7.10	106.1	25.47	94.82	24.09	7.96
2	55.04	36.17			25.44	96.22	24.11	7.94
4	55.03	36.16			25.44	95.76	24.10	7.94
5	55.00	36.14			25.44	96.14	24.09	7.94
6	55.02	36.15			25.44	96.29	24.10	7.94
8	55.03	36.16			25.44	96.06	24.11	7.94
9	55.04	36.17			25.44	96.02	24.11	7.94
10	55.03	36.16			25.44	96.48	24.11	7.94
11	55.01	36.16			25.43	96.75	24.11	7.96
12	55.04	36.17			25.44	96.37	24.11	7.96
13	54.98	36.15			25.39	96.68	24.12	7.96
15	54.70	36.10	7.10	105.5	25.19	96.68	24.13	7.96
16	54.62	36.12			25.09	96.48	24.18	7.96
17	54.63	36.14			25.07	96.48	24.20	7.96
18	54.00	35.98			24.70	96.37	24.20	7.96
19	53.66	36.12			24.24	96.71	24.44	7.96
20	53.58	36.12			24.18	96.37	24.46	7.96
21	53.57	36.14			24.15	96.14	24.48	7.96
22	53.44	36.15			24.03	96.37	24.52	7.96
23	53.40	36.13			24.01	96.37	24.52	7.96
24	52.65	36.15			23.32	96.02	24.73	7.97
25	52.55	36.16			23.21	96.14	24.78	7.97
26	52.40	36.17			23.06	96.20	24.83	7.97
27	52.36	36.17			23.02	96.60	24.84	7.96
28	52.34	36.18			23.00	95.79	24.85	7.96
29	52.15	36.17			22.83	96.22	24.89	7.98
30	52.06	36.16			22.76	96.14	24.90	7.96
31	51.91	36.17			22.60	95.79	24.96	7.98
32	51.80	36.14			22.54	95.68	24.95	7.98
33	51.76	36.18			22.45	96.08	25.01	7.98
35	51.65	36.17			22.36	95.91	25.03	7.98
36	51.57	36.18			22.27	96.14	25.06	7.98
38	51.36	36.17			22.07	95.79	25.11	7.98
39	51.32	36.16			22.06	95.68	25.10	7.98
40	51.26	36.17			21.99	95.79	25.13	7.98
41	51.08	36.16			21.82	95.22	25.17	7.98
42	50.95	36.16			21.69	95.85	25.21	7.97
43	50.92	36.17			21.66	95.22	25.22	7.96
44	50.85	36.17			21.59	95.68	25.24	7.97
45	50.79	36.16			21.53	95.45	25.26	7.96
46	50.70	36.15			21.45	95.62	25.27	7.96
47	50.48	36.15			21.24	95.22	25.33	7.96
48	50.25	36.13			21.03	95.56	25.37	7.96
49	50.14	36.12			20.94	95.60	25.38	7.96
50	50.00	36.12			20.79	95.22	25.43	7.96
52	49.92	36.14			20.69	95.33	25.46	7.96
53	49.79	36.13			20.56	94.76	25.50	7.96
54	49.52	36.14			20.27	93.95	25.58	7.96

STATION NUMBER: 36 TRIP NUMBER: 3 05/17/84 TIME: 727

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
55	49.40	36.15			20.13	93.95	25.63	7.95
56	49.36	36.16			20.08	93.84	25.65	7.94
57	49.33	36.20			20.00	94.70	25.70	7.93
58	49.32	36.21			19.98	93.95	25.71	7.93
59	49.28	36.23			19.93	94.76	25.74	7.92
60	49.23	36.26			19.85	94.99	25.78	7.91
61	49.21	36.26			19.83	94.99	25.79	7.90
62	49.13	36.33			19.69	95.68	25.88	7.89
63	49.09	36.35			19.63	95.45	25.91	7.88
64	49.01	36.35			19.56	95.87	25.93	7.87
65	48.98	36.35			19.53	95.14	25.94	7.87
66	48.84	36.36			19.41	95.96	25.98	7.87
67	48.79	36.35			19.37	94.76	25.98	7.87
68	48.77	36.37			19.33	95.07	26.00	7.87
69	48.74	36.36			19.31	96.14	26.00	7.87
70	48.64	36.37			19.21	95.79	26.04	7.87
71	48.55	36.37			19.14	96.77	26.05	7.87
72	48.48	36.38			19.06	96.70	26.08	7.87
73	48.43	36.37			19.03	96.81	26.08	7.87
74	48.38	36.38			18.98	96.37	26.10	7.87
75	48.33	36.36	5.60	74.28	18.95	97.06	26.10	7.87
76	48.26	36.39			18.85	97.14	26.14	7.86
77	48.10	36.35			18.75	96.75	26.13	7.87
78	47.89	36.33			18.59	97.29	26.16	7.85
79	47.86	36.35			18.53	97.17	26.19	7.86
80	47.84	36.35			18.52	97.17	26.19	7.87
85	47.58	36.46	5.40	70.63	18.16	97.98	26.37	
125		36.13	5.50					

Table B-4. CSTD Hydrographic Data Collected at the Group II Stations During Cruise IV (August 1984)

STATION NUMBER: 52 TRIP NUMBER: 4 8/15/84 TIME: 1922

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
0	59.98	35.83	6.22	102.7	30.62	100.7	22.05	8.62
2	59.97	35.84	6.20	102.5	30.62	100.6	22.05	8.62
3	59.91	35.78	6.23	102.8	30.58	99.96	22.02	8.58
4	59.92	35.78	6.23	102.7	30.58	100.00	22.02	8.58
5	59.92	35.79	6.24	102.9	30.58	100.0	22.03	8.58
6	59.91	35.79	6.24	103.0	30.58	100.00	22.03	8.58
7	59.92	35.79	6.24	103.0	30.58	100.0	22.03	8.58
8	59.91	35.79	6.25	103.1	30.58	99.96	22.03	8.58
9	59.92	35.79	6.26	103.3	30.58	100.00	22.03	8.58
10	59.92	35.79	6.27	103.4	30.58	99.99	22.03	8.58
11	59.91	35.78	6.27	103.4	30.56	100.0	22.03	8.58

STATION NUMBER: 21 TRIP NUMBER: 4 08/20/84 TIME: 1705

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1	59.40	36.25	6.05		29.50	96.60	22.75	8.20
2	59.40	36.20			29.48	111.3	22.71	8.20
3	59.28	36.14			29.42	94.92	22.69	8.20
4	59.36	36.19			29.42	94.44	22.73	8.22
5	59.22	36.09			29.34	94.20	22.68	8.23
6	59.30	36.21			29.34	97.00	22.77	8.25
7	59.23	36.18			29.33	98.64	22.75	8.26
8	59.20	36.21			29.24	96.60	22.80	8.28
9	59.14	36.17			29.25	95.24	22.77	8.29
10	59.18	36.22			29.24	94.44	22.81	8.30
11	59.08	36.15			29.24	94.44	22.76	8.30
12	59.14	36.15			29.24	94.20	22.76	8.32
13	59.12	36.17			29.24	94.32	22.77	8.32
14	59.12	36.18			29.23	94.20	22.79	8.32
15	59.13	36.21			29.24	94.20	22.80	8.34
17	59.15	36.19			29.22	93.96	22.80	8.35
18	59.13	36.20			29.22	94.08	22.80	8.36
19	59.13	36.20			29.22	94.08	22.80	8.36
21	59.10	36.18			29.20	93.96	22.80	8.38
22	59.00	36.12			29.13	93.88	22.78	8.38
23	58.50	35.89			28.79	93.72	22.72	8.40
28		36.11			28.18	93.24	23.08	8.44
29		36.13			28.17	93.48	23.10	8.44
30		36.05			28.08	93.48	23.07	8.44
31		36.09			27.85	93.48	23.18	8.45
32		36.01			27.44	93.48	23.25	8.46
33		36.11			27.38	93.36	23.34	8.48
34		36.01			27.05	93.56	23.37	8.49
35		36.13			26.96	93.96	23.49	8.50
36		36.23			26.80	94.08	23.62	8.50
37		36.14			26.68	94.08	23.59	8.50
38		36.17			26.54	93.96	23.66	8.52
40		36.02			26.05	93.12	23.70	8.54
41		35.99			25.63	91.80	23.81	8.54
42		35.95			25.32	91.32	23.87	8.54
43		36.18			25.30	90.84	24.05	8.56
44		36.31			25.29	90.48	24.15	8.56
45		36.31	6.35		25.29	90.52	24.15	8.56

STATION NUMBER: 23 TRIP NUMBER: 4 08/19/84 TIME: 803

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1		36.27	5.82	94.07	29.46	97.98	22.77	8.37
2		36.23	5.80	93.65	29.44	97.56	22.75	8.36
3		36.29	5.80	93.68	29.44	97.32	22.80	8.36
4		36.25	5.78	93.26	29.42	97.08	22.77	8.35
5		36.26	5.78	93.27	29.42	97.08	22.78	8.36
6		36.25	5.79	93.54	29.42	96.92	22.77	8.36
8		36.22	5.80	93.60	29.42	96.84	22.75	8.36
9		36.22	5.81	93.84	29.42	96.84	22.75	8.37
10		36.22	5.81	93.84	29.42	96.84	22.75	8.38
12		36.22	5.85	94.44	29.42	96.84	22.75	8.38
13		36.18	5.86	94.53	29.42	96.84	22.72	8.39
14		36.21	5.85	94.43	29.42	96.84	22.74	8.40
15		36.19	5.84	94.30	29.42	96.60	22.73	8.40
16		36.24	5.85	94.45	29.42	96.60	22.76	8.40
17		36.20	5.85	94.43	29.42	96.60	22.74	8.40
18		36.22	5.90	95.27	29.42	96.60	22.75	8.40
19		36.23	5.92	95.52	29.42	96.60	22.76	8.42
20		36.18	5.92	95.53	29.38	96.60	22.74	8.42
21		36.12	5.91	95.00	29.25	96.60	22.73	8.42
22		36.09	5.94	95.29	29.17	96.60	22.73	8.42
23		36.07	5.93	94.79	28.98	96.60	22.79	8.42
24		36.23	5.98	95.47	28.91	96.60	22.93	8.44
25		36.24	5.95	95.06	28.90	96.36	22.94	8.44
26		36.27	5.95	95.02	28.91	96.36	22.96	8.44
28		36.27	5.92	94.61	28.90	96.36	22.96	8.44
29		36.24	5.93	94.71	28.88	96.36	22.94	8.44
30		36.27	5.91	94.37	28.88	96.36	22.97	8.45
31		36.25	5.92	94.48	28.88	96.12	22.95	8.46
32		36.27	5.92	94.53	28.86	96.36	22.97	8.46
33		36.23	5.92	94.45	28.81	96.36	22.96	8.46
34		36.23	5.92	94.28	28.78	96.36	22.97	8.46
35		36.07	5.93	94.22	28.68	96.24	22.88	8.46
36		36.08	5.91	93.52	28.47	96.12	22.96	8.47
37		36.15	5.95	94.01	28.36	96.12	23.05	8.48
38		36.03	5.95	93.15	28.00	96.12	23.08	8.48
39		35.98	5.95	92.98	27.86	96.24	23.09	8.48
40		35.99	5.98	93.15	27.70	96.24	23.15	8.49
41		35.67	5.98	92.17	27.27	96.24	23.05	8.50
42		35.83	6.03	91.23	26.24	96.12	23.49	8.52
43		35.74	6.07	91.05	25.83	95.16	23.56	8.53
44		35.56	6.07	89.52	25.01	95.88	23.68	8.55
45		35.79	6.09	89.55	24.76	95.88	23.92	8.56
46		36.13	6.09	89.55	24.64	95.76	24.22	8.56
47		36.07	5.99	87.48	24.37	95.64	24.25	8.56
48		36.14	5.96	86.77	24.13	95.64	24.37	8.56
49		36.19	5.81	84.47	24.02	95.40	24.45	8.58
50		36.23	5.72	82.97	23.94	95.40	24.50	8.58
51		36.23	5.63	81.46	23.77	95.40	24.55	8.58

STATION NUMBER: 23 TRIP NUMBER: 4 08/19/84 TIME: 803

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
52		36.23	5.55	80.11	23.68	95.40	24.58	8.58
53		36.23	5.39	77.75	23.60	95.40	24.60	8.58
54		36.29	5.27	76.04	23.55	95.40	24.66	8.58
55		36.20	5.18	74.38	23.41	95.40	24.64	8.58
56		36.15	4.98	71.34	23.22	95.40	24.65	8.58
57		36.19	4.90	69.93	23.05	95.40	24.73	8.58
58		36.28	4.82	68.78	22.99	95.40	24.82	8.58
59		36.21	4.73	67.42	22.94	95.40	24.78	8.58
60		36.24	4.60	65.35	22.73	95.00	24.86	8.58
61	52.22	36.25	4.50	63.74	22.61	95.16	24.90	8.58
62		36.23	4.42	62.56	22.56	95.16	24.90	8.58
63	52.09	36.27	4.26	60.21	22.51	95.16	24.95	8.58
64	52.01	36.25	4.18	59.09	22.45	95.16	24.95	8.58
65	51.64	36.01	4.13	57.84	22.14	95.16	24.86	8.58
66	49.86	35.49	4.05	55.00	20.58	95.16	24.89	8.60
67	49.26	35.57	3.99	53.58	19.99	95.08	25.10	8.62
68	47.55	35.08	3.83	49.83	18.36	95.00	25.15	8.65
69	47.14	35.91	3.62	46.94	17.92	94.92	25.89	8.66
70	47.06	36.00	3.53	45.72	17.92	94.92	25.97	8.66
71	47.12	36.08	3.32	43.00	17.89	94.68	26.03	8.66
72	47.12	36.11	3.12	40.44	17.88	94.68	26.06	8.66

STATION NUMBER: 29 TRIP NUMBER: 4 8/17/84 TIME: 637

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
1		36.17	5.05	81.34	29.32	101.2	22.75	8.54
4	59.12	36.15	4.67	75.14	29.30	100.6	22.74	8.38
5	59.12	36.14	4.66	75.08	29.31	100.6	22.73	8.38
6	59.14	36.15	4.67	75.25	29.32	100.7	22.73	8.38
7	59.13	36.13	4.68	75.33	29.30	100.6	22.72	8.38
8	59.12	36.14	4.69	75.48	29.32	100.5	22.72	8.39
9	59.10	36.13	4.69	75.48	29.32	100.4	22.72	8.40
10	59.14	36.15	4.70	75.73	29.32	100.4	22.73	8.40
11	59.13	36.14	4.70	75.72	29.32	100.4	22.73	8.40
12	59.13	36.15	4.71	75.85	29.32	100.6	22.73	8.40
13	59.10	36.13	4.70	75.69	29.30	100.4	22.72	8.41
14	59.07	36.12	4.68	75.28	29.27	100.6	22.72	8.42
15	59.06	36.15	4.72	75.81	29.22	100.4	22.77	8.42
16	58.96	36.13	4.73	75.94	29.16	100.4	22.77	8.42
17	58.92	36.12	4.64	74.45	29.12	100.7	22.78	8.42
18	58.90	36.14	4.72	75.57	29.07	100.6	22.81	8.43
19	58.84	36.13	4.73	75.79	29.06	100.4	22.80	8.44
20	58.76	36.08	4.73	75.68	29.01	100.4	22.78	8.44
21	58.74	36.13	4.71	75.29	28.94	100.4	22.85	8.44
22	58.57	36.12	4.73	75.46	28.85	100.4	22.87	8.44
23	58.34	36.01	4.72	74.82	28.62	100.4	22.86	8.46
24	58.29	36.08	4.73	74.92	28.56	100.4	22.94	8.46
25	58.16	36.09	4.69	74.17	28.47	100.4	22.97	8.46
27	58.09	36.10	4.68	73.98	28.39	100.2	23.00	8.47
28	57.99	36.06	4.64	73.10	28.29	100.3	23.01	8.48
29	57.90	36.11	4.70	74.04	28.22	100.2	23.07	8.48
30	57.84	36.14	4.63	72.81	28.11	100.3	23.12	8.48
31	57.75	36.11	4.63	72.65	28.03	100.1	23.13	8.48
32	57.50	36.09	4.55	71.04	27.76	100.2	23.20	8.50
33	57.34	36.07	4.61	71.70	27.63	100.2	23.23	8.50
34	57.06	36.05	4.58	70.91	27.35	100.1	23.31	8.50
35	56.98	36.21	4.61	71.24	27.20	100.2	23.48	8.52
36	56.92	36.19	4.61	71.20	27.18	100.1	23.47	8.52
37	56.79	36.14	4.58	70.52	27.03	100.0	23.48	8.52
38	56.62	36.13	4.57	70.10	26.90	99.96	23.51	8.52
39	56.29	36.19	4.54	69.22	26.51	99.96	23.68	8.54
40	56.07	36.21	4.53	68.81	26.31	99.96	23.76	8.54
41	55.92	36.19	4.52	68.52	26.20	100.2	23.78	8.54
42	55.58	36.15	4.47	67.17	25.81	99.96	23.87	8.55
43	55.39	36.22	4.44	66.54	25.63	100.0	23.98	8.56
44	55.22	36.21	4.44	66.29	25.50	99.96	24.01	8.56
45	55.15	36.28	4.37	65.20	25.40	99.96	24.09	8.56
46	55.06	36.26	4.36	64.95	25.35	99.96	24.10	8.56
47	54.85	36.17	4.32	64.10	25.17	99.96	24.08	8.58
48	54.47	36.17	4.24	62.50	24.83	100.1	24.19	8.58
49	54.14	36.10	4.17	61.14	24.57	100.0	24.21	8.58
50	53.60	35.95	4.11	59.82	24.18	99.72	24.22	8.60
51	53.47	36.09	4.06	58.81	23.93	99.80	24.40	8.60

STATION NUMBER: 29 TRIP NUMBER: 4 08/17/84 TIME: 637

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
52	53.21	36.06	4.00	57.72	23.72	99.80	24.44	8.61
53	52.60	35.79	3.92	56.02	23.28	99.96	24.36	8.62
54	52.48	36.15	3.86	55.03	23.02	99.72	24.70	8.62
55	52.48	36.22	3.79	54.07	23.02	99.72	24.76	8.62
56	52.51	36.25	3.69	52.65	23.03	99.60	24.78	8.62
57	52.32	36.12	3.58	50.88	22.88	99.40	24.73	8.62
58	52.22	36.15	3.52	50.00	22.75	99.48	24.79	8.62
59	52.00	36.11	3.41	48.28	22.56	99.48	24.81	8.62
60	51.90	36.21	3.35	47.26	22.41	99.48	24.93	8.62
61	51.67	36.13	3.21	45.05	22.19	99.64	24.93	8.63
62	43.96	36.26	2.77	38.44	21.44	99.79	25.24	8.64
63	50.86	36.27	2.90	40.10	21.36	99.72	25.27	8.64

STATION NUMBER: 36 TRIP NUMBER: 4 8/18/84 TIME: 645

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATURATION (%)	TEMPERATURE (C)	TRANSPARENCY (%)	SIGMA-T	PH
0	58.64	35.95	5.48	87.90	29.20	98.76	22.62	8.38
1	53.40	35.93	5.47	87.76	29.19	99.24	22.61	8.37
2	58.51	35.84	5.46	87.53	29.16	98.64	22.55	8.35
3	58.56	35.85	5.46	87.38	29.14	98.68	22.57	8.34
4	58.44	35.79	5.47	87.58	29.14	98.52	22.52	8.34
5	58.51	35.86	5.45	87.30	29.16	98.52	22.56	8.36
6	58.46	35.81	5.46	87.36	29.14	97.80	22.54	8.36
7	58.56	35.88	5.48	87.73	29.15	97.96	22.58	8.36
8	58.48	35.84	5.47	87.49	29.07	97.68	22.59	8.37
9	58.54	35.91	5.49	87.75	29.06	98.04	22.64	8.38
10	58.44	35.87	5.49	87.62	29.00	98.28	22.63	8.38
11	58.39	35.85	5.49	87.60	28.93	98.76	22.63	8.38
12	58.23	35.82	5.51	87.59	28.83	98.36	22.65	8.40
13	58.18	35.85	5.50	87.41	28.76	98.52	22.69	8.40
14	58.12	35.X3	5.50	87.18	28.60	98.76	22.81	8.40
15	58.11	35.95	5.52	87.50	28.58	98.64	22.83	8.42
16	57.84	35.87	5.54	87.37	28.37	98.60	22.84	8.42
17	57.82	35.91	5.56	87.64	28.34	98.76	22.88	8.42
18	57.86	35.99	5.55	87.35	28.28	98.76	22.96	8.44
19	57.73	35.93	5.52	86.90	28.24	98.52	22.93	8.44
20	57.78	36.02	5.52	86.80	28.22	98.52	23.00	8.44
21	57.72	35.97	5.47	86.07	28.22	98.76	22.96	8.44
22	57.74	36.03	5.50	86.50	28.18	98.52	23.02	8.44
23	57.73	36.02	5.46	85.80	28.18	98.28	23.01	8.44
24	57.67	36.00	5.46	85.74	28.15	98.64	23.01	8.46
25	57.64	35.99	5.43	85.25	28.14	98.52	23.00	8.46
26	57.64	35.99	5.43	85.21	28.12	98.52	23.01	8.46
27	57.65	36.02	5.42	85.08	28.10	98.52	23.04	8.46
28	57.64	36.03	5.44	85.44	28.10	98.76	23.05	8.46
29	57.62	36.01	5.41	84.81	28.08	98.52	23.04	8.46
30	57.66	36.03	5.40	84.71	28.08	98.52	23.05	8.46
32	57.53	36.01	5.37	84.14	27.98	98.60	23.07	8.45
33	57.60	36.09	5.40	84.57	27.98	98.52	23.13	8.48
34	57.56	36.06	5.35	83.69	27.95	98.40	23.12	8.48
35	57.56	36.09	5.37	83.94	27.88	98.52	23.16	8.48
36	57.26	35.97	5.35	83.28	27.66	98.52	23.15	8.48
37	57.22	36.01	5.35	82.99	27.54	98.40	23.21	8.48
38	57.05	36.02	5.36	83.03	27.42	98.28	23.26	8.49
39	56.95	36.05	5.38	83.18	27.29	98.40	23.33	8.50
41	56.54	36.01	5.41	82.87	26.90	98.40	23.42	8.50
42	56.43	36.06	5.41	82.85	26.80	98.16	23.49	8.50
43	56.36	36.07	5.38	82.27	26.72	98.28	23.52	8.50
44	56.28	36.10	5.38	82.13	26.62	98.40	23.58	8.50
46	55.95	36.10	5.35	81.16	26.29	98.52	23.68	8.52
47	55.82	36.09	5.37	81.24	26.20	98.28	23.70	8.52
48	55.68	36.08	5.32	80.36	26.07	98.40	23.74	8.52
49	55.62	36.11	5.31	80.05	26.00	98.04	23.78	8.52
51	55.41	36.13	5.26	79.01	25.80	98.28	23.86	8.54

STATION NUMBER: 36 TRIP NUMBER: 4 8/18/84 TIME: 645

DEPTH (M)	CONDUCT. (MMHOS)	SALINITY (PPT)	D. OXYGEN (MG/L)	D. O. SATUR- ATION (%)	TEMPERA- TURE(C)	TRANSPAR- ENCY (%)	SIGMA-T	PH
52	55.26	36.09	5.21	78.00	25.68	98.28	23.87	8.54
53	55.17	36.11	5.18	77.51	25.57	98.28	23.92	8.54
54	55.12	36.13	5.16	77.09	25.50	98.04	23.95	8.54
55	55.02	36.17	5.10	76.02	25.36	98.28	24.02	8.54
56	54.82	36.11	5.05	74.99	25.20	98.28	24.03	8.54
57	54.69	36.15	5.01	74.18	25.05	98.28	24.10	8.54
58	54.46	36.09	4.95	73.14	24.90	98.04	24.11	8.54
59	54.06	36.13	4.92	72.05	24.40	98.28	24.29	8.56
60	53.88	36.07	4.91	71.75	24.36	98.28	24.25	8.56
61	53.78	36.12	4.85	70.71	24.21	98.20	24.34	8.56
62	53.54	36.11	4.84	70.29	24.06	98.28	24.37	8.56
63	53.30	35.97	4.75	68.63	23.82	98.28	24.34	8.58
64	53.27	36.17	4.64	67.06	23.69	98.16	24.53	8.58
65	53.11	36.24	4.70	67.64	23.51	98.28	24.64	8.58
66	53.08	36.25	4.67	67.28	23.50	98.04	24.64	8.58
67	53.04	36.23	4.66	67.01	23.46	98.28	24.64	8.58
68	52.92	36.24	4.46	63.99	23.33	98.28	24.68	8.58
69	52.94	36.29	4.35	62.43	23.34	98.28	24.72	8.58
70	52.96	36.34	4.31	61.88	23.26	98.28	24.78	8.58
72	52.74	36.31	4.16	59.45	23.04	98.28	24.82	8.58
73	52.67	36.32	4.10	58.48	23.02	98.04	24.84	8.58
74	52.69	36.34	4.07	58.06	23.01	98.28	24.85	8.57
75	52.66	36.39	4.01	57.15	22.94	98.28	24.91	8.56
76	52.52	36.31	3.96	56.47	22.92	98.28	24.86	8.56
77	52.39	36.30	3.90	55.35	22.74	98.28	24.90	8.57
78	52.38	36.39	3.80	53.94	22.68	98.28	24.99	8.56
79	52.29	36.33	3.76	53.32	22.66	98.40	24.95	8.56
80	52.27	36.30	3.71	52.60	22.63	98.52	24.94	8.56
84	51.47	36.35	3.21	44.93	21.89	98.76	25.18	8.56
125	0.03	36.31	4.35		17.65			

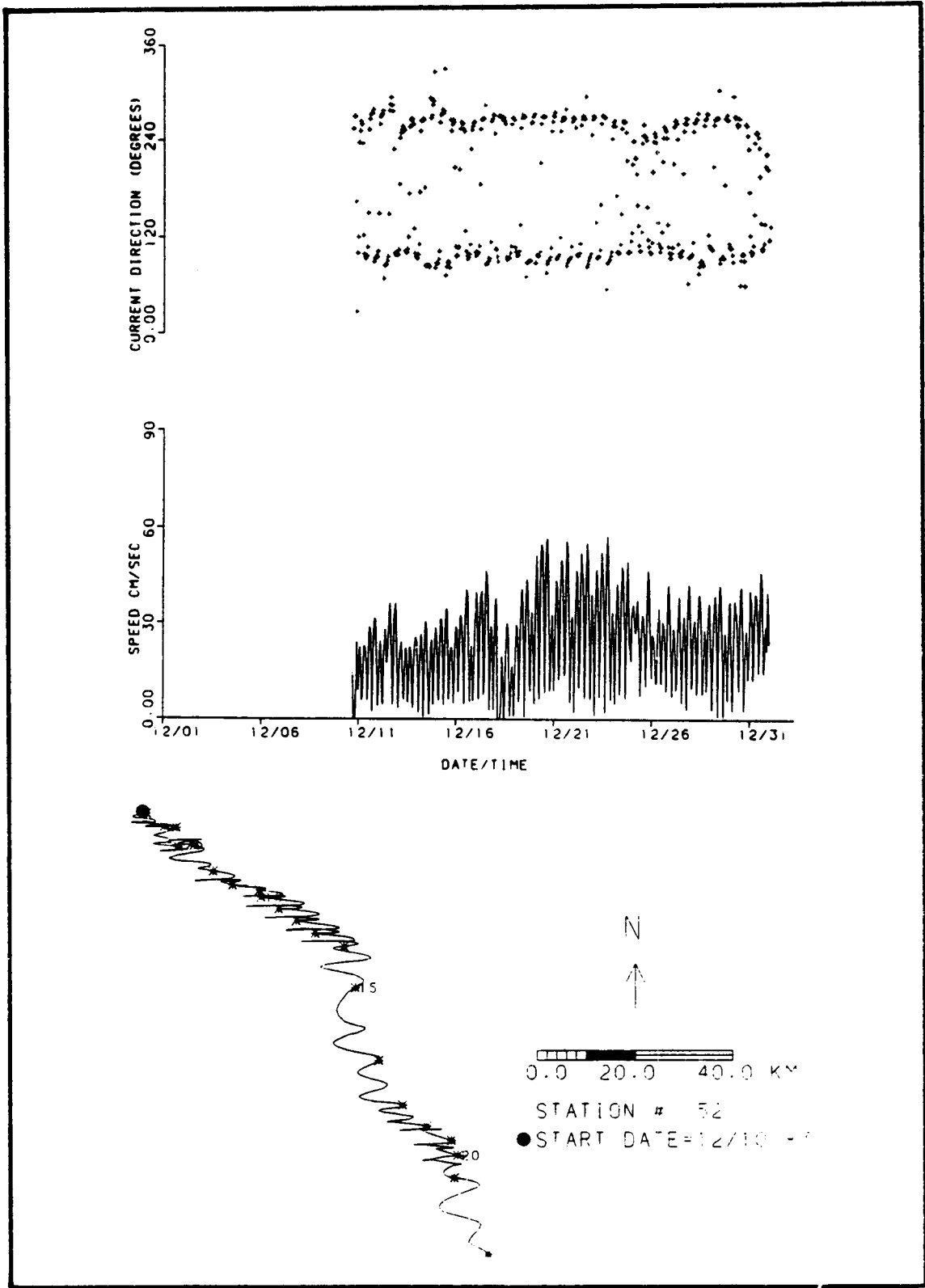


Figure B-1

STATION 52 CURRENT SPEED, DIRECTION AND PROGRESSIVE VECTOR PLOTS - DECEMBER 1983

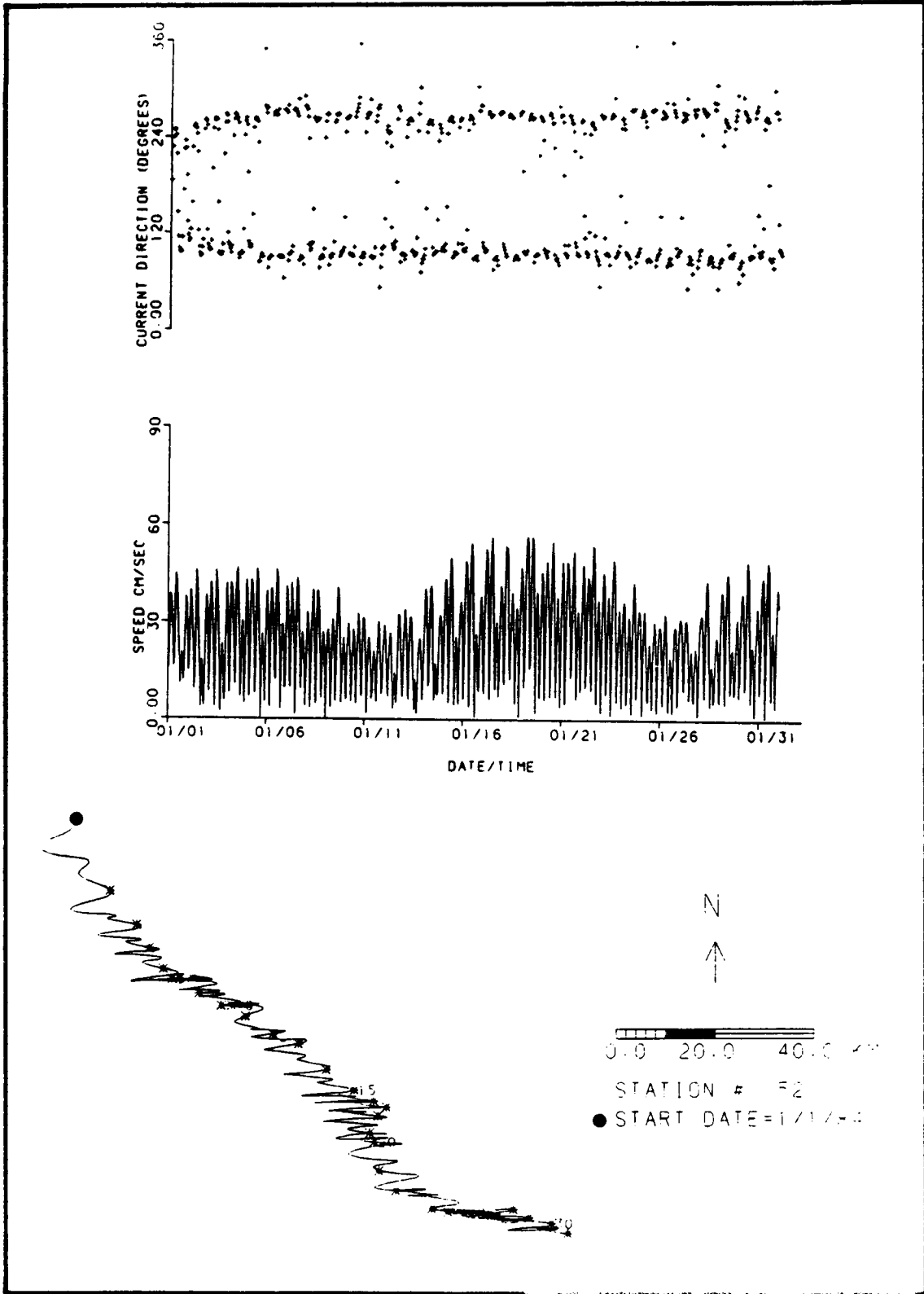


Figure B-2

STATION 52 CURRENT SPEED, DIRECTION AND PROGRESSIVE VECTOR PLOTS - JANUARY 1984

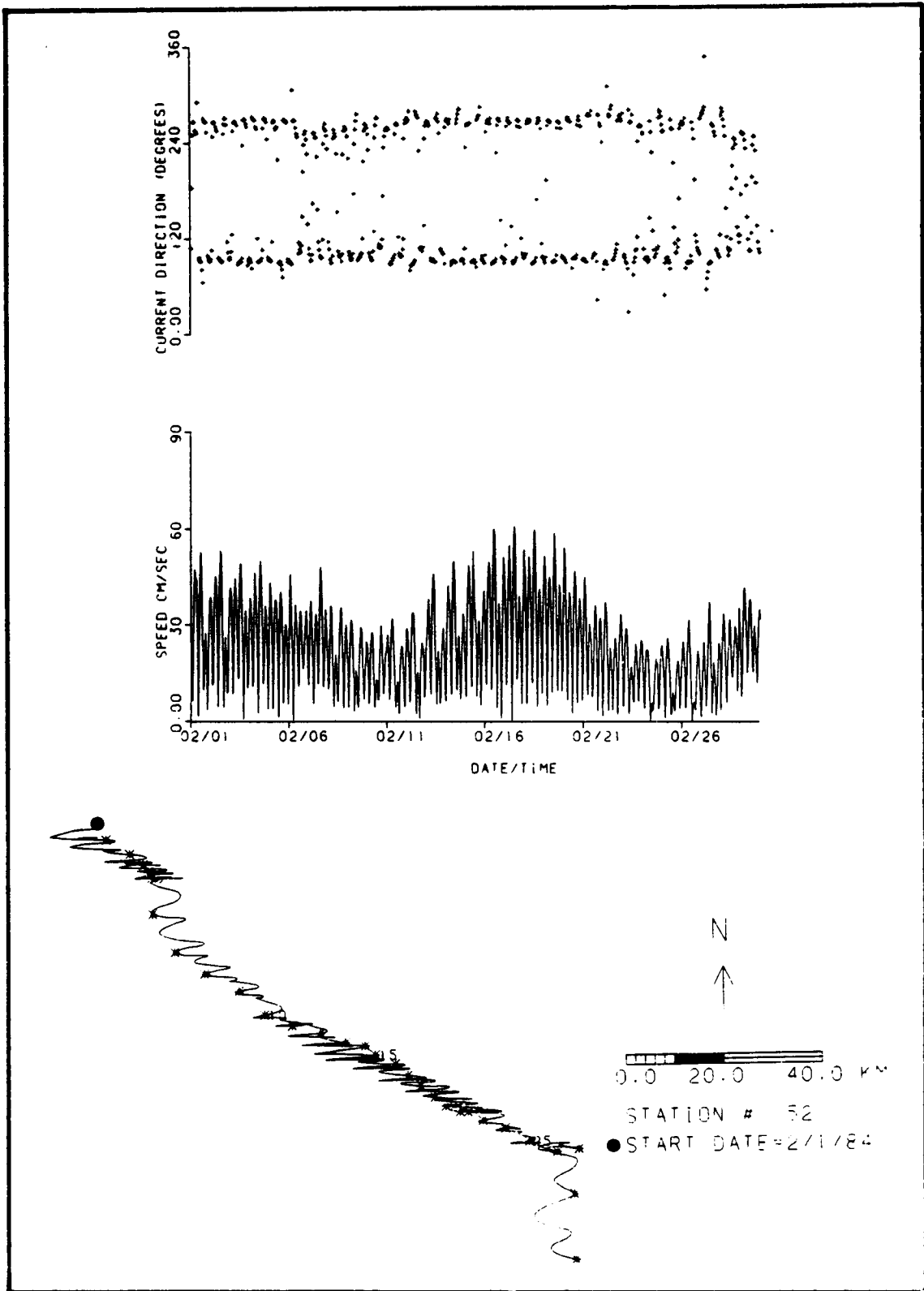


Figure B-3

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - FEBRUARY 1984

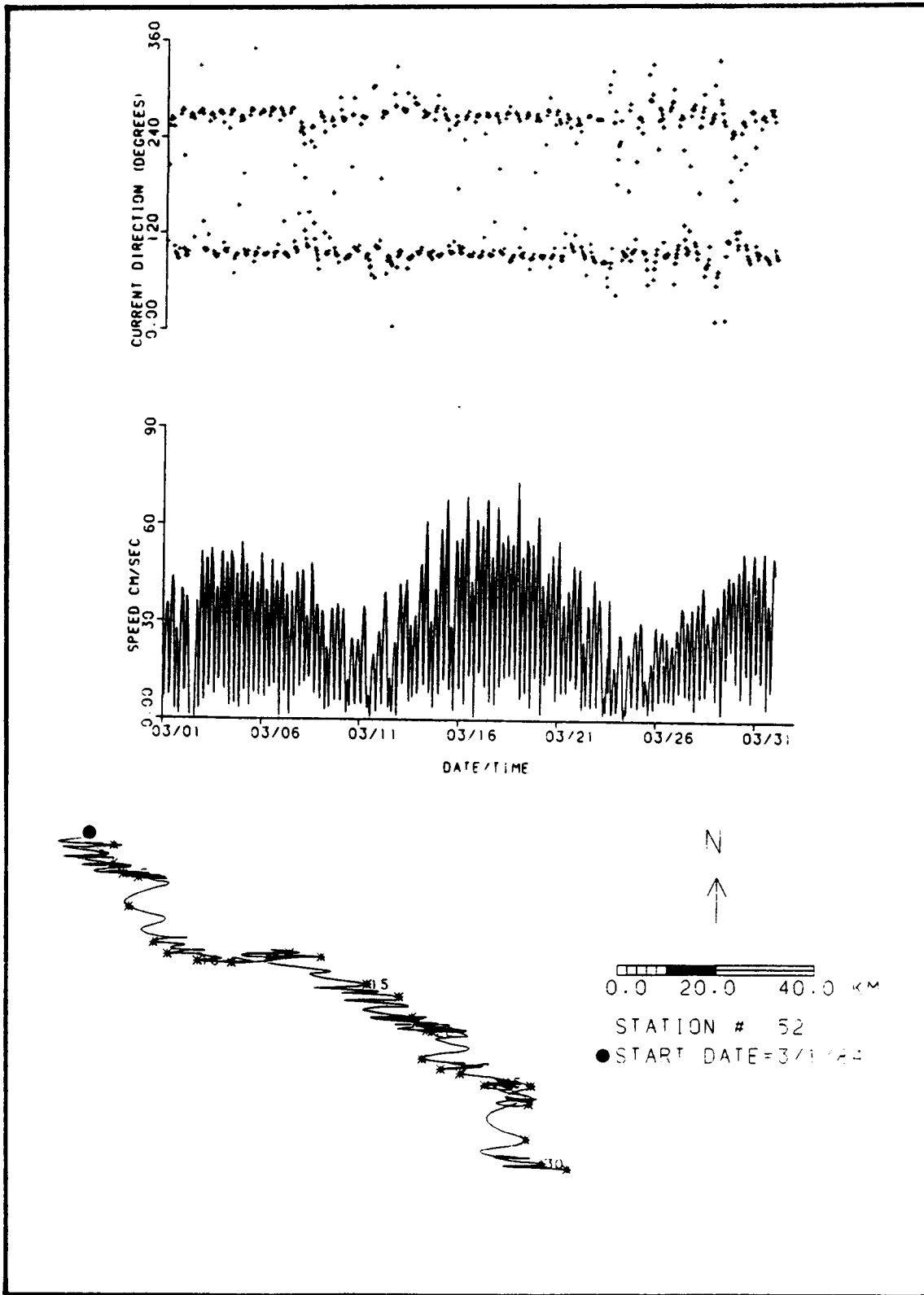


Figure B-4

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - MARCH 1984

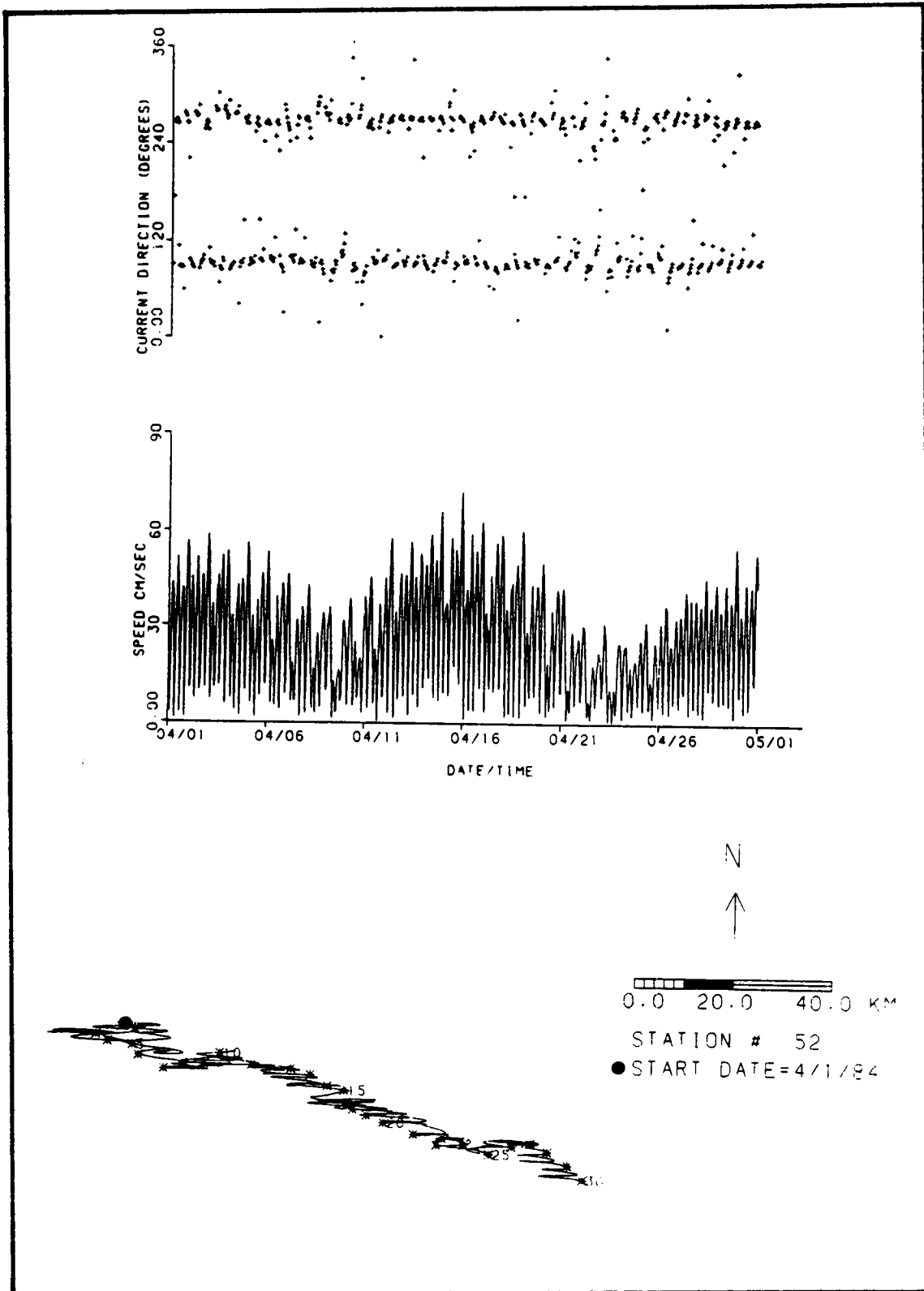


Figure B-5

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - APRIL 1984

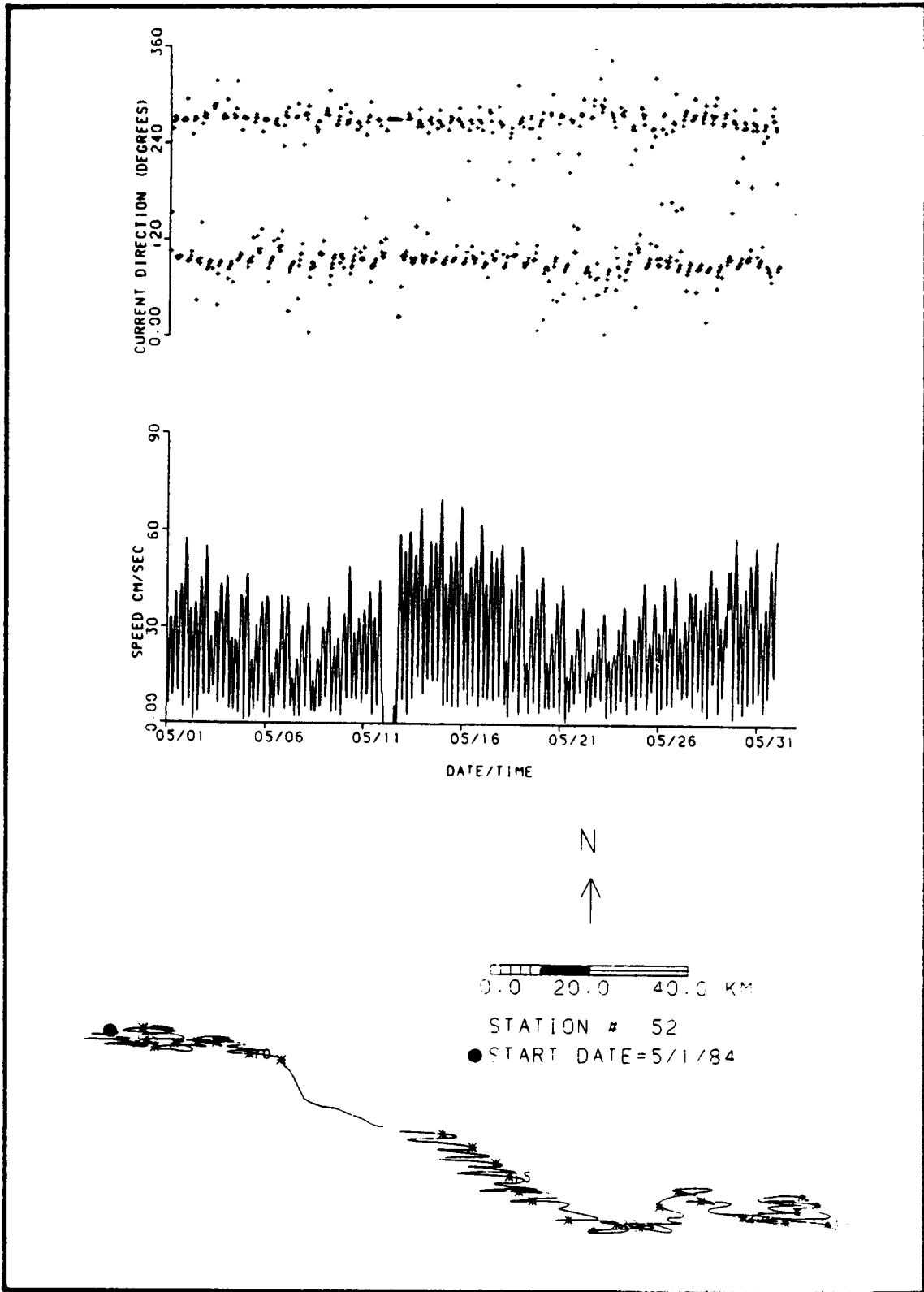


Figure B-6

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - MAY 1984

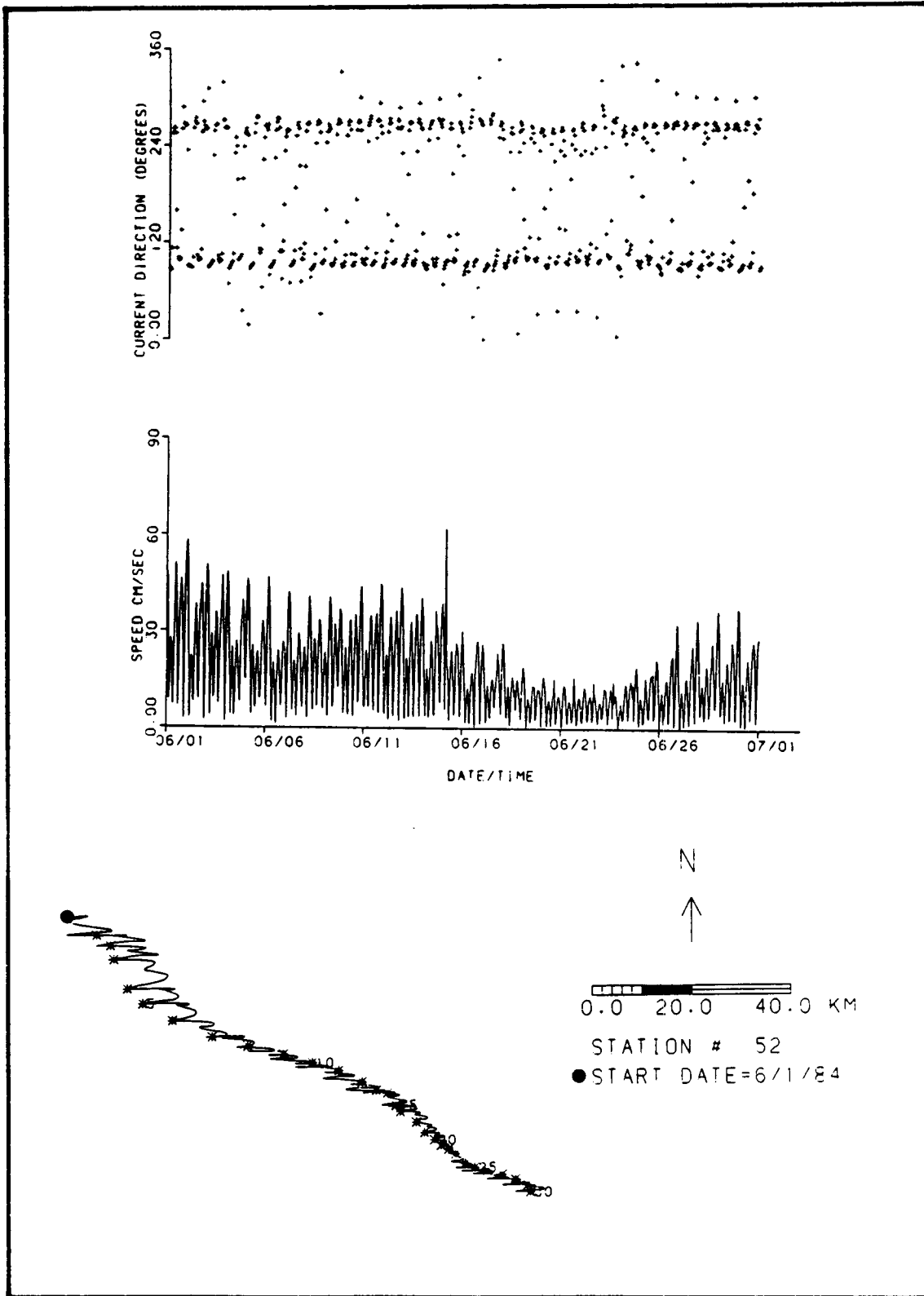


Figure B-7

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JUNE 1984

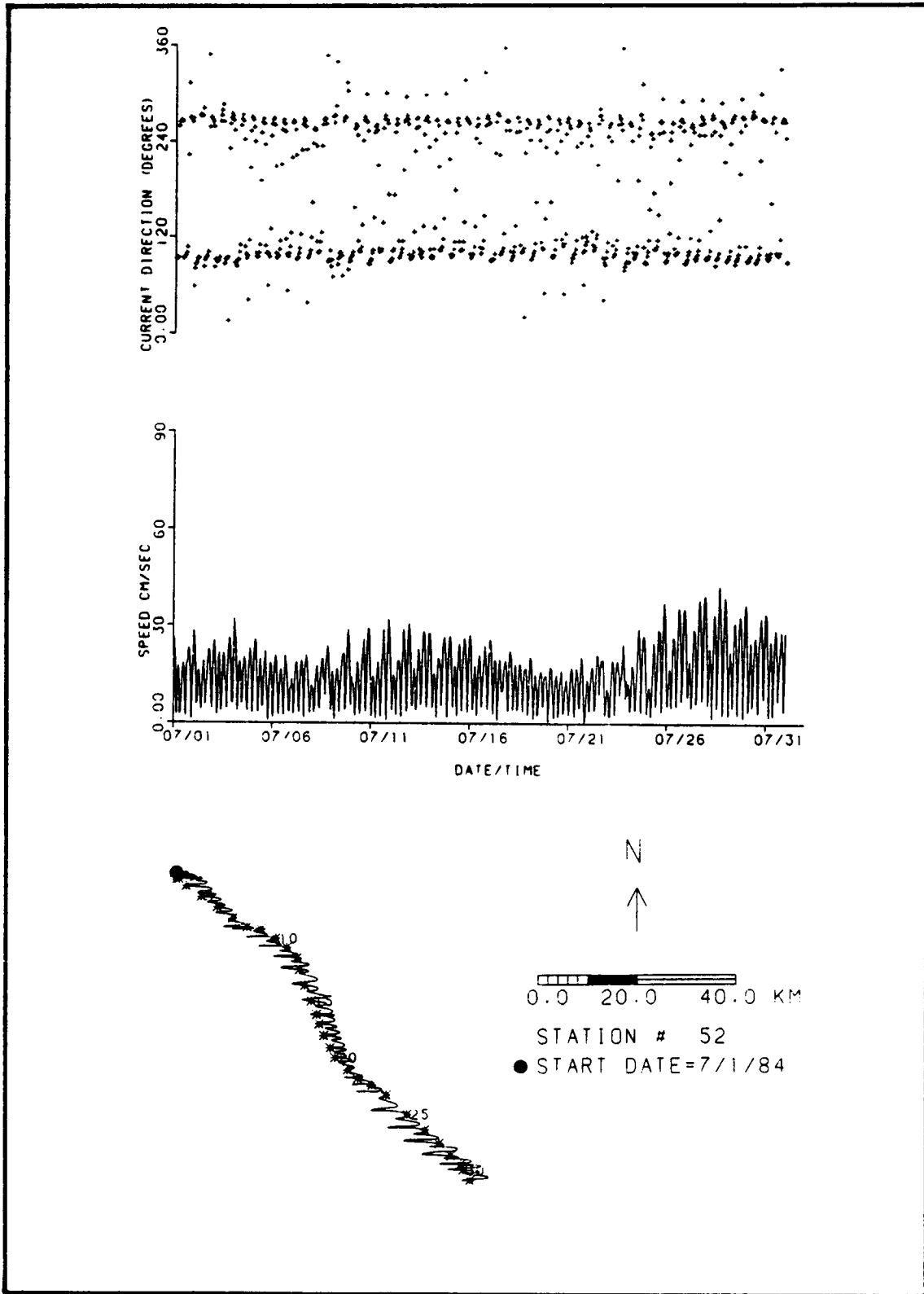


Figure B-8

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JULY 1984

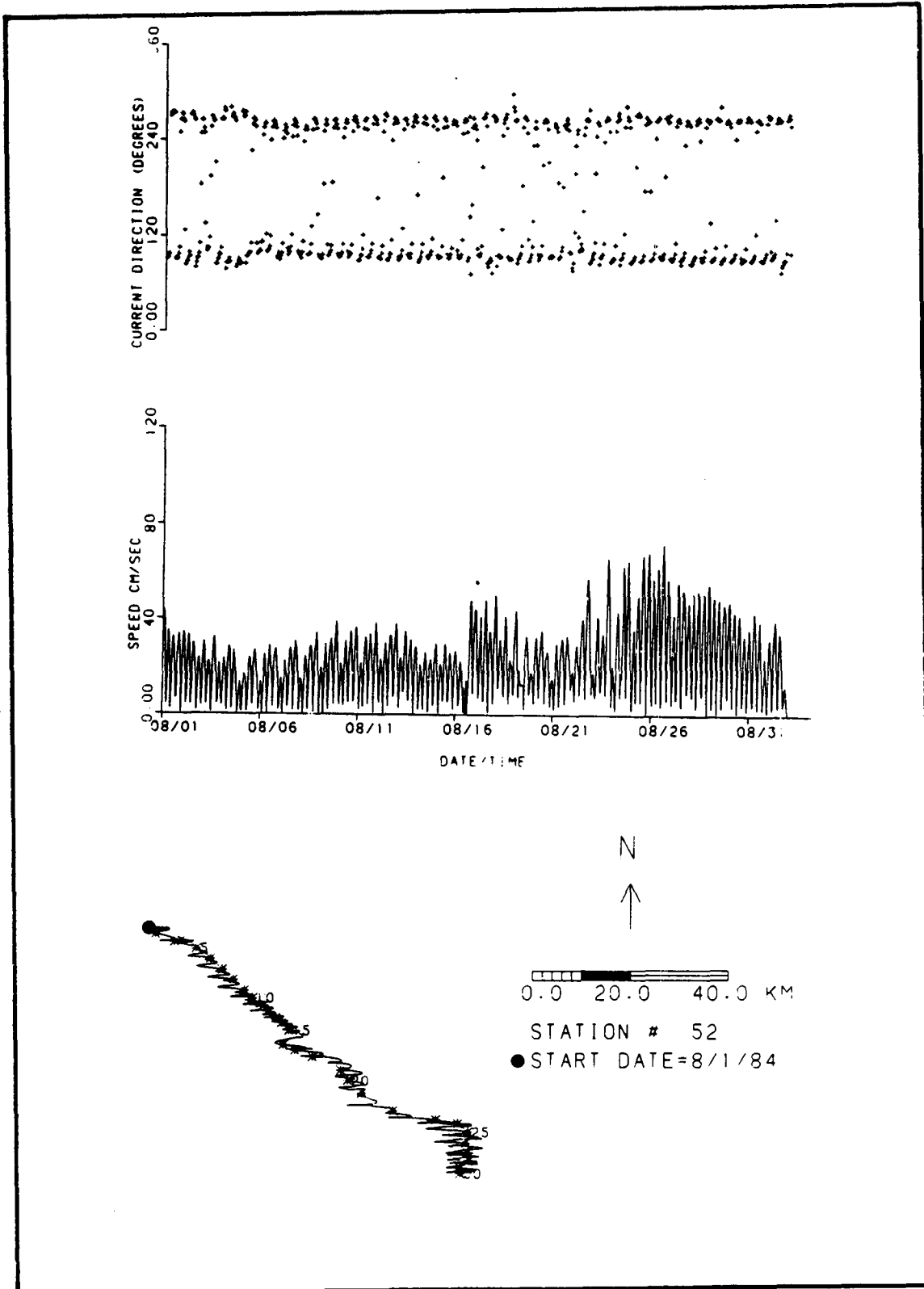


Figure B-9

STATION 52 CURRENT SPEED, DIRECTION AND
 PROGRESSIVE VECTOR PLOTS - AUGUST 1984

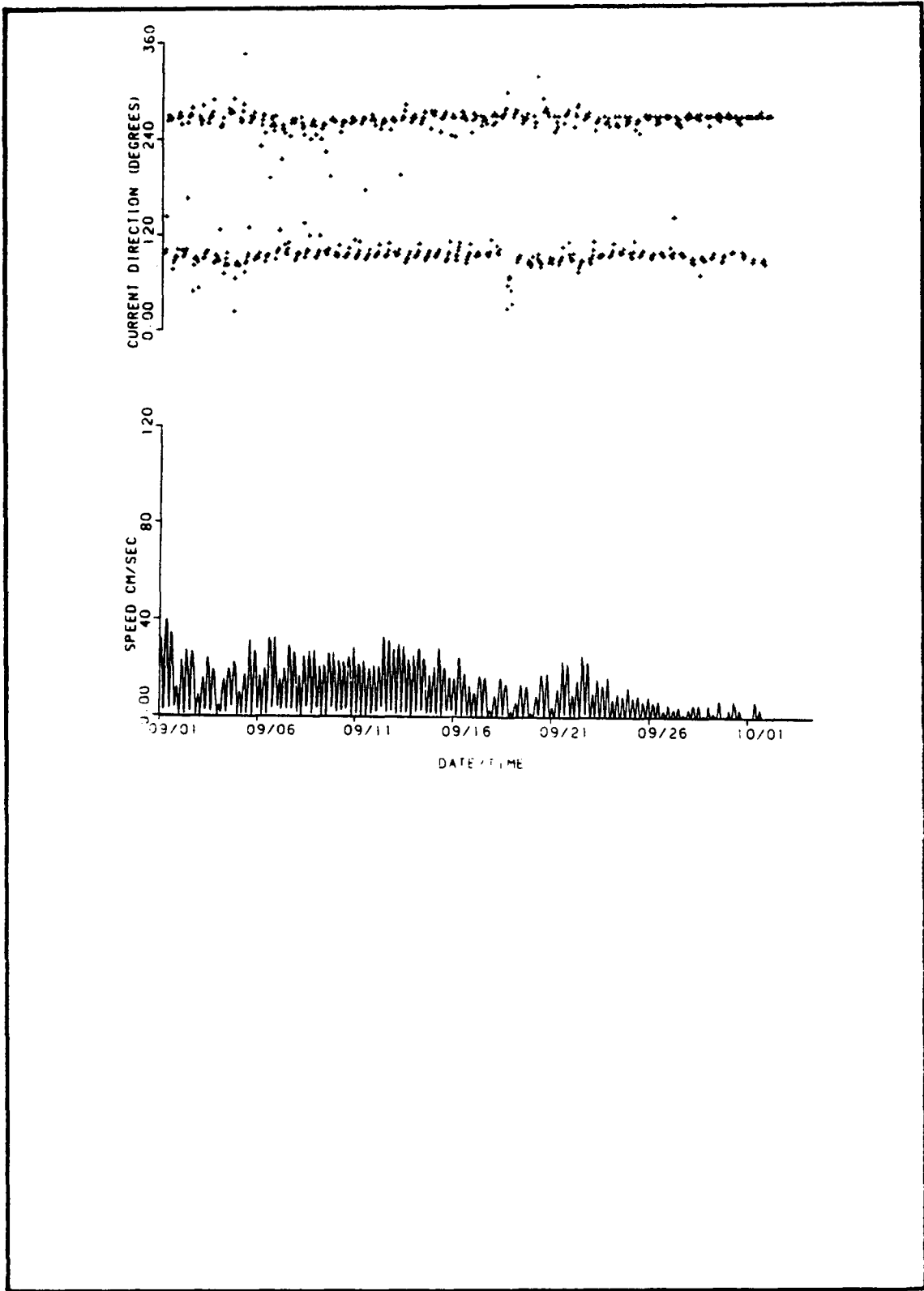


Figure B-10

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - SEPTEMBER 1984

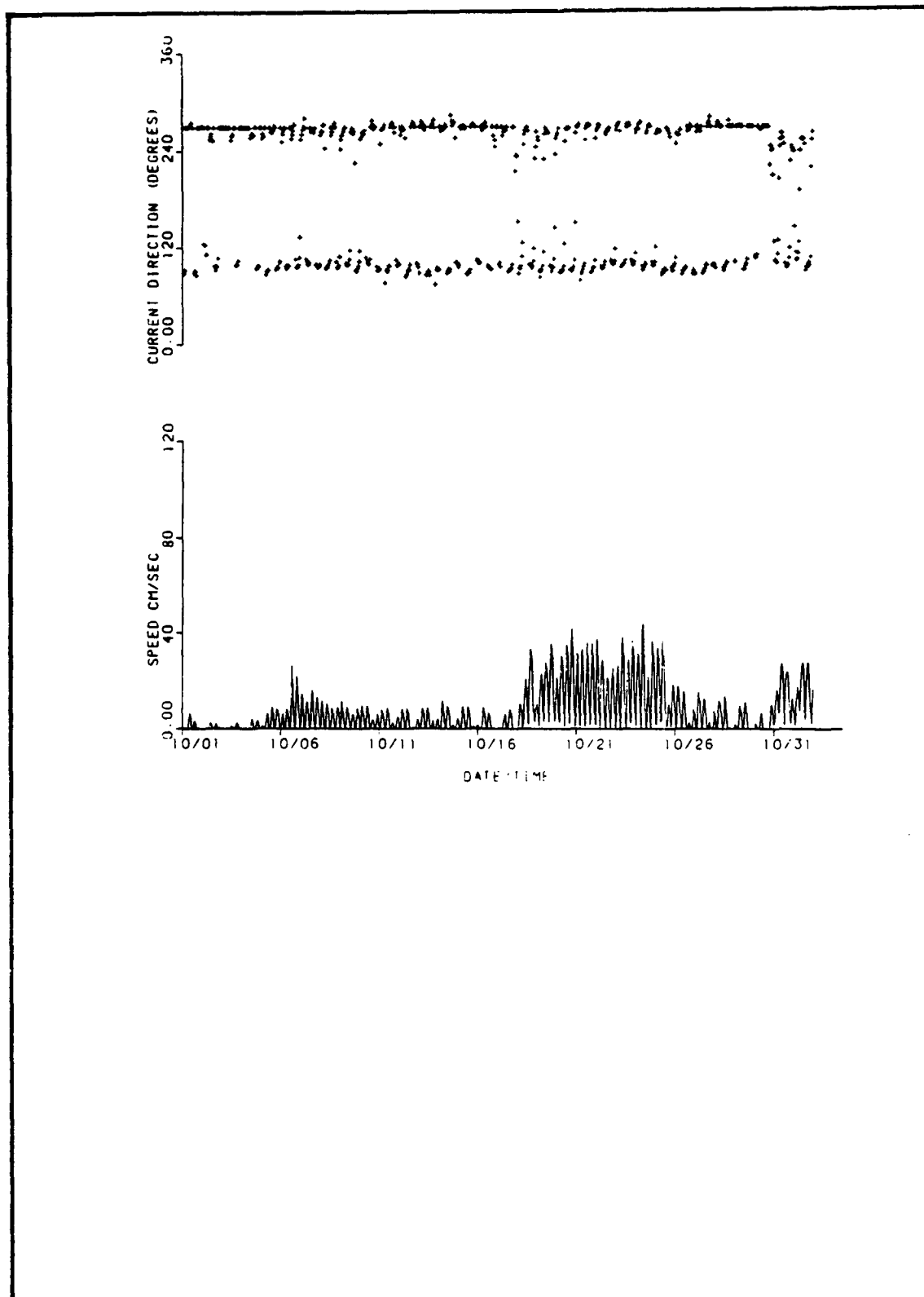


Figure B-11

STATION 52 CURRENT SPEED, DIRECTION AND
 PROGRESSIVE VECTOR PLOTS - OCTOBER 1984

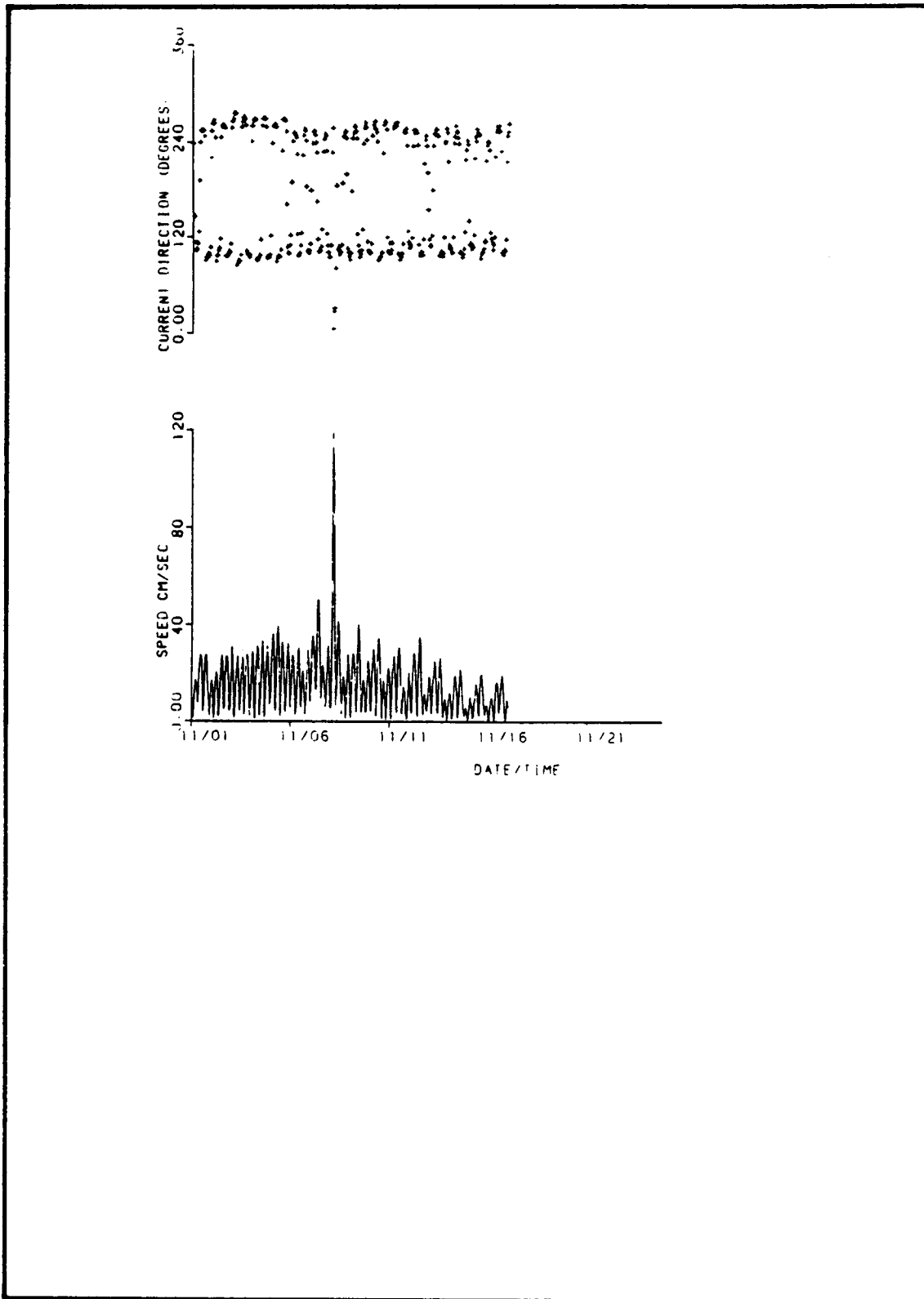


Figure B-12

STATION 52 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - NOVEMBER 1984

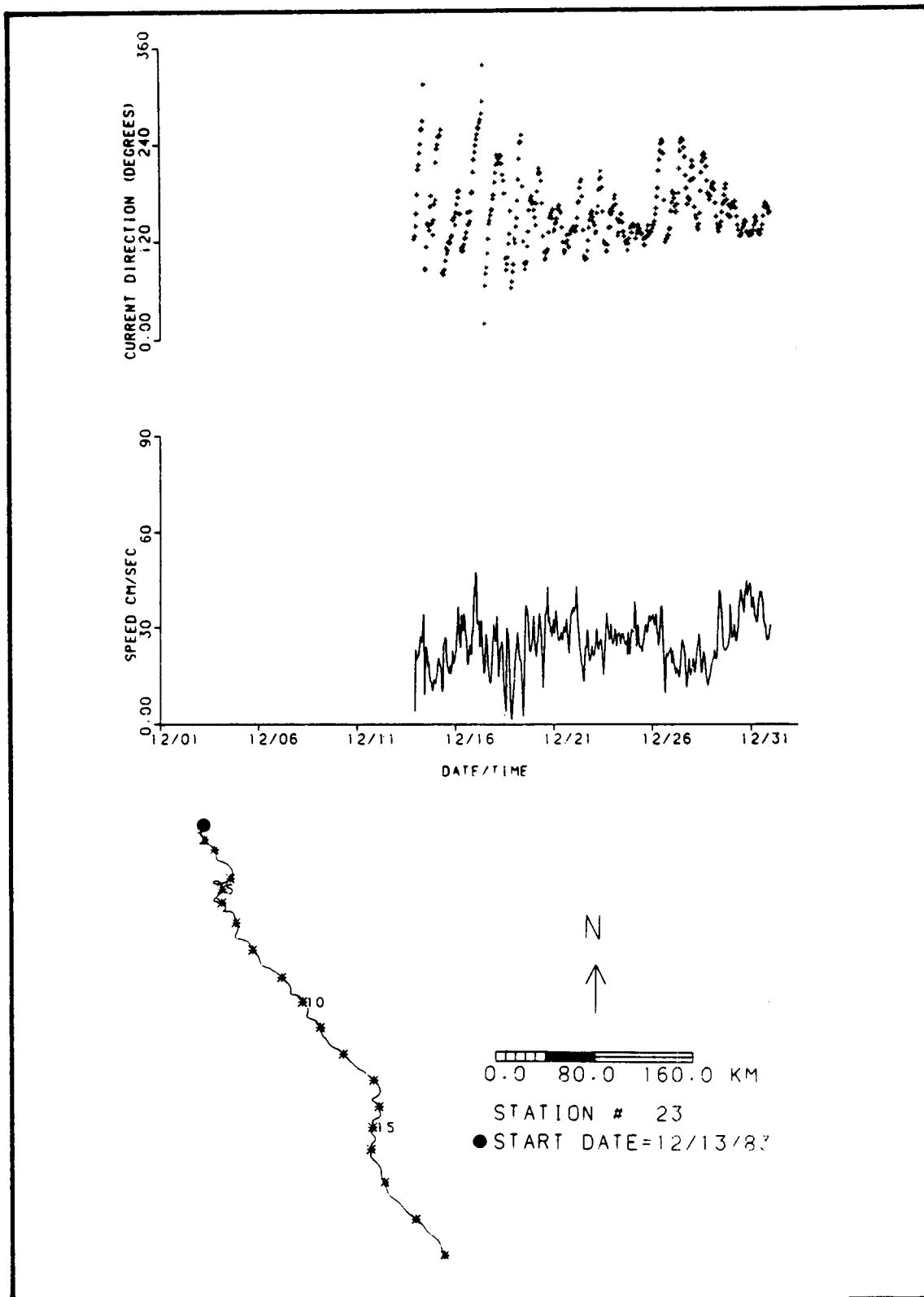


Figure B-13

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - DECEMBER 1983

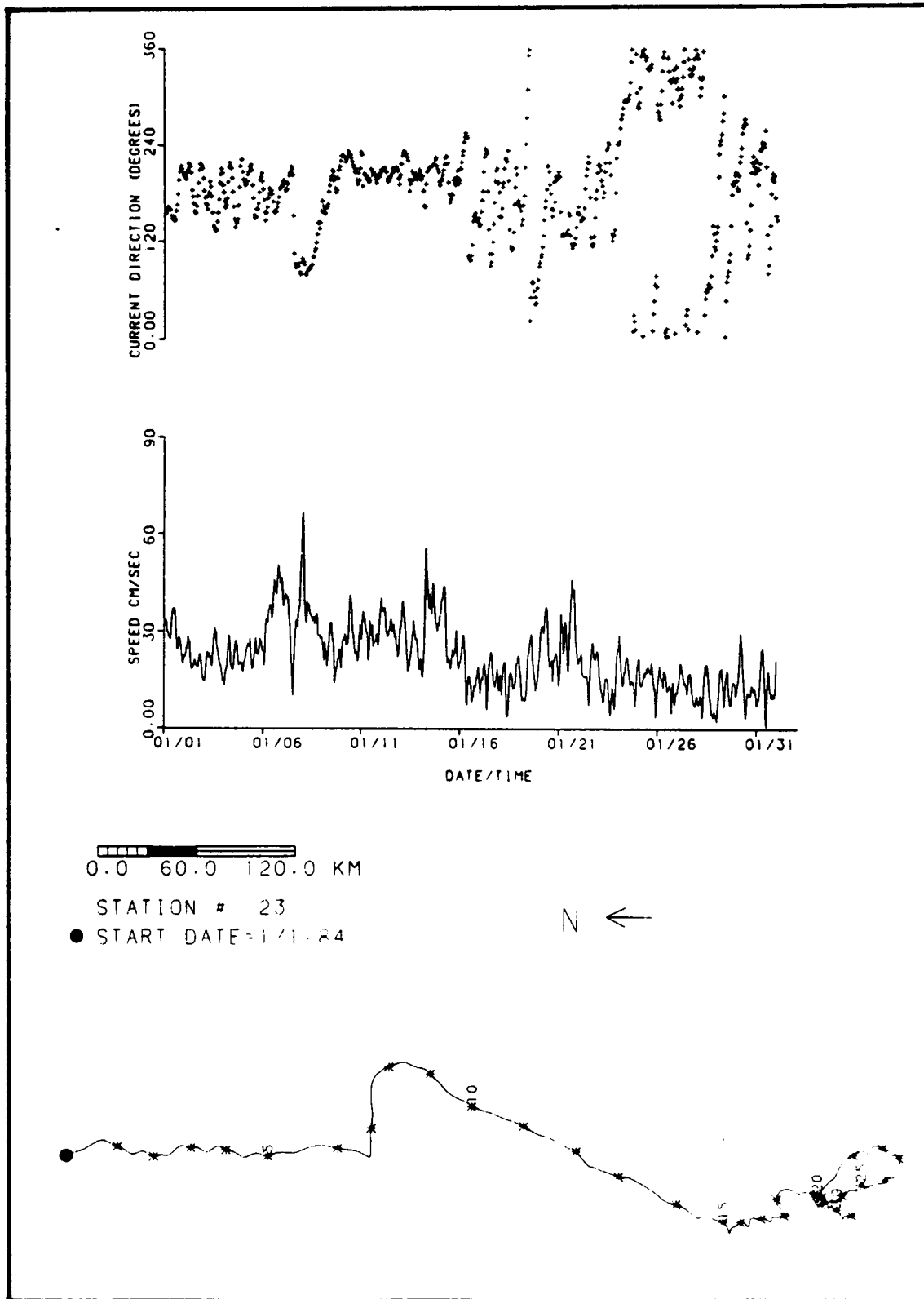


Figure B-14

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JANUARY 1984

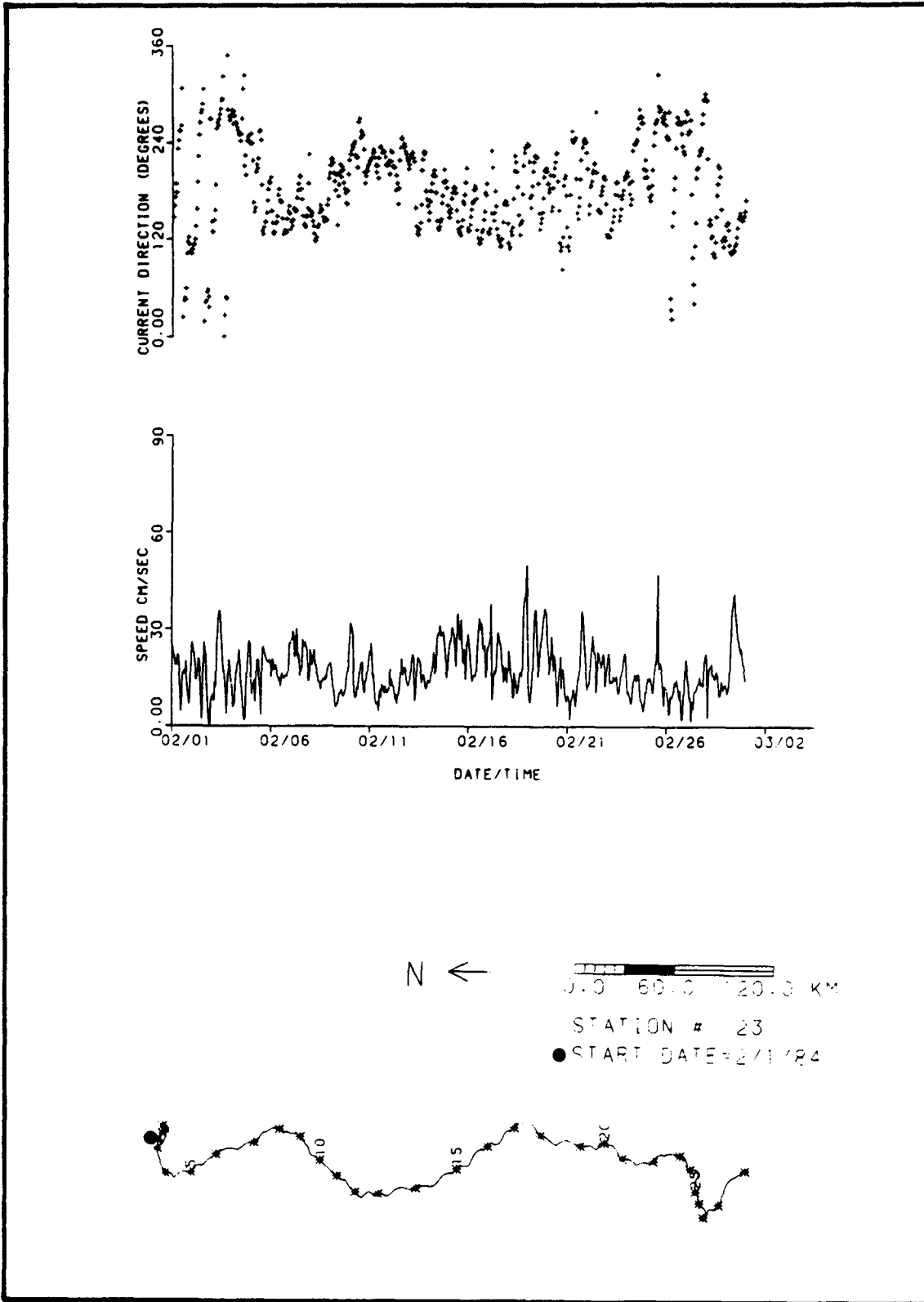


Figure B-15

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - FEBRUARY 1984

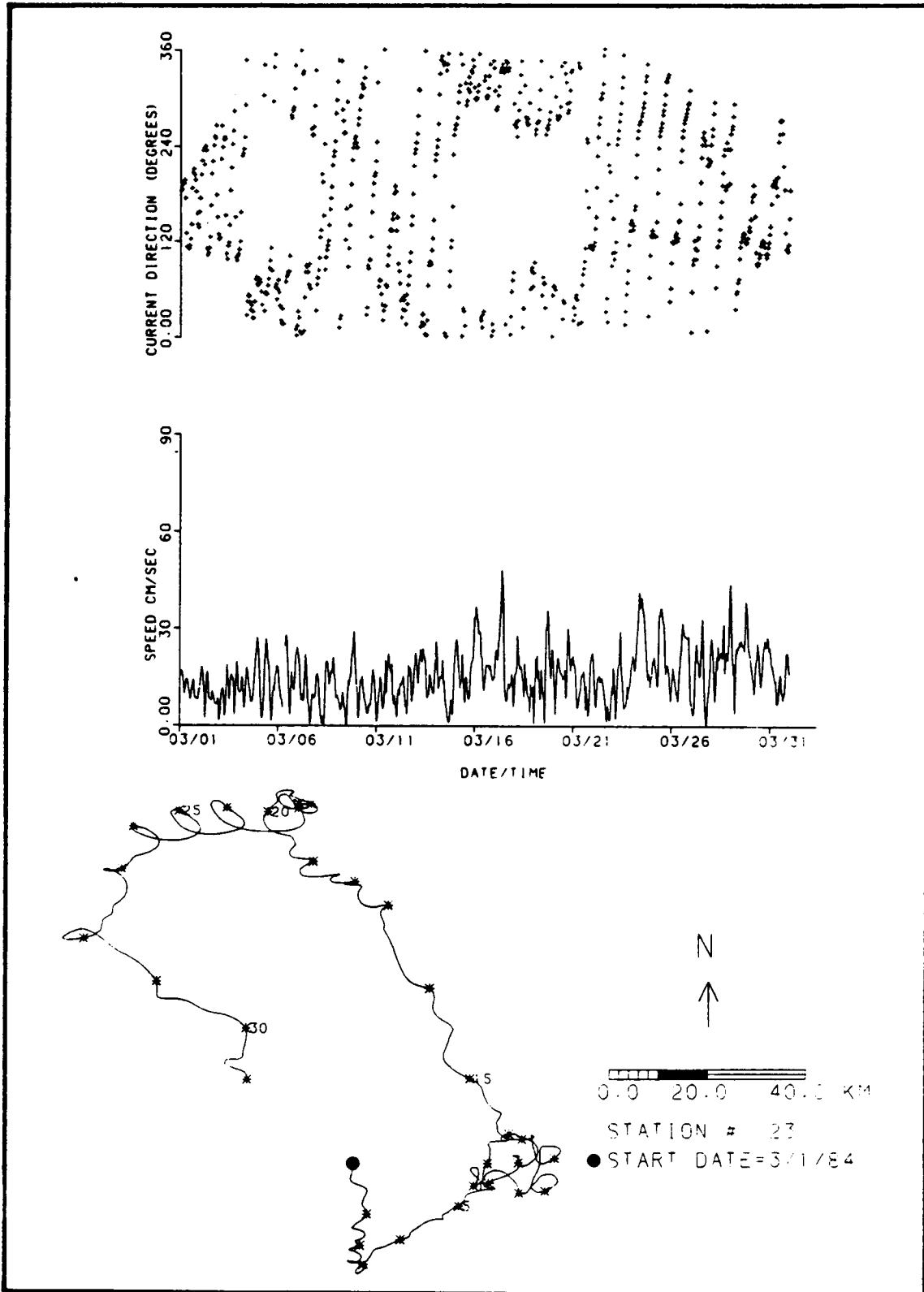


Figure B-16

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - MARCH 1984

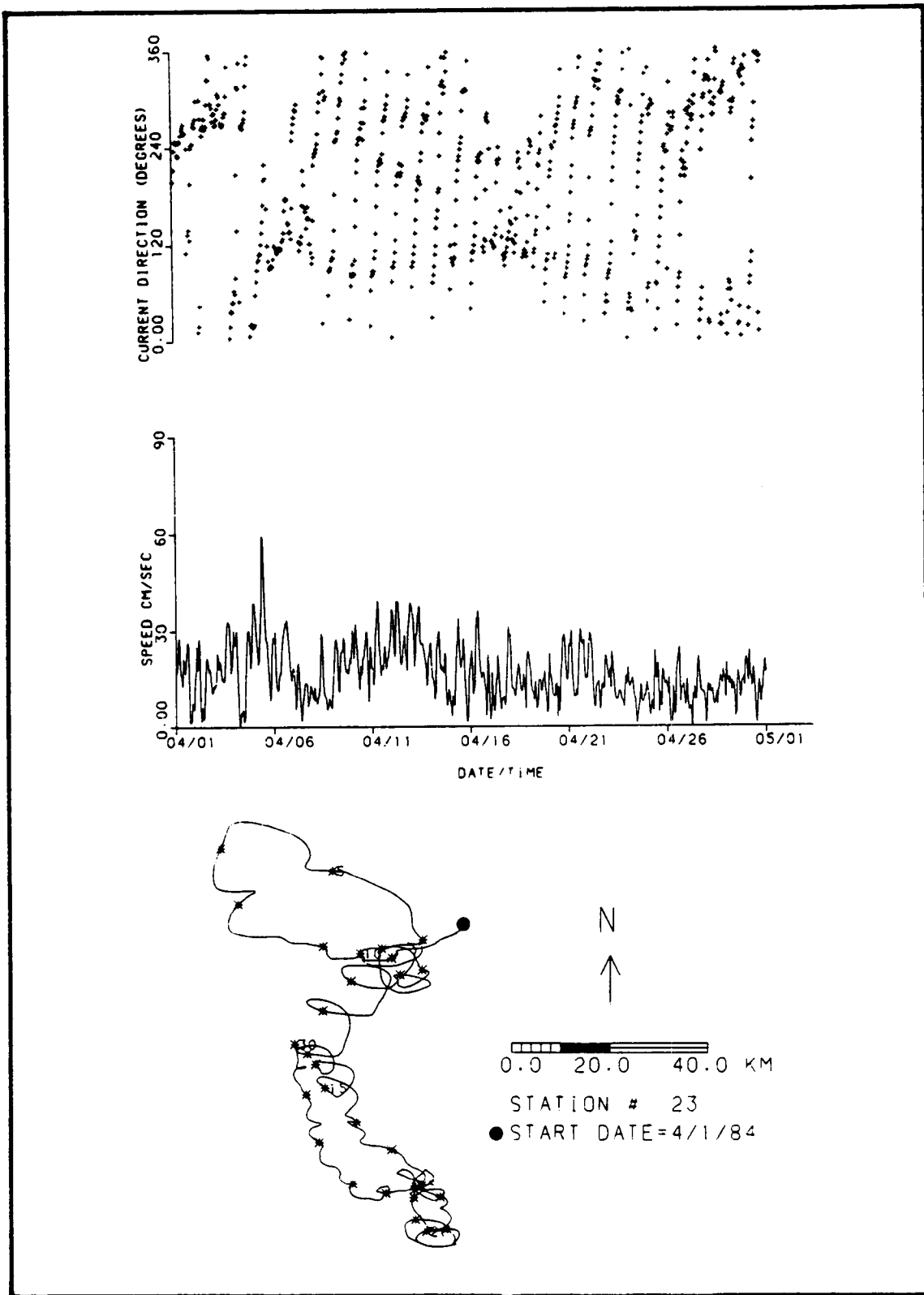


Figure B-17

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - APRIL 1984

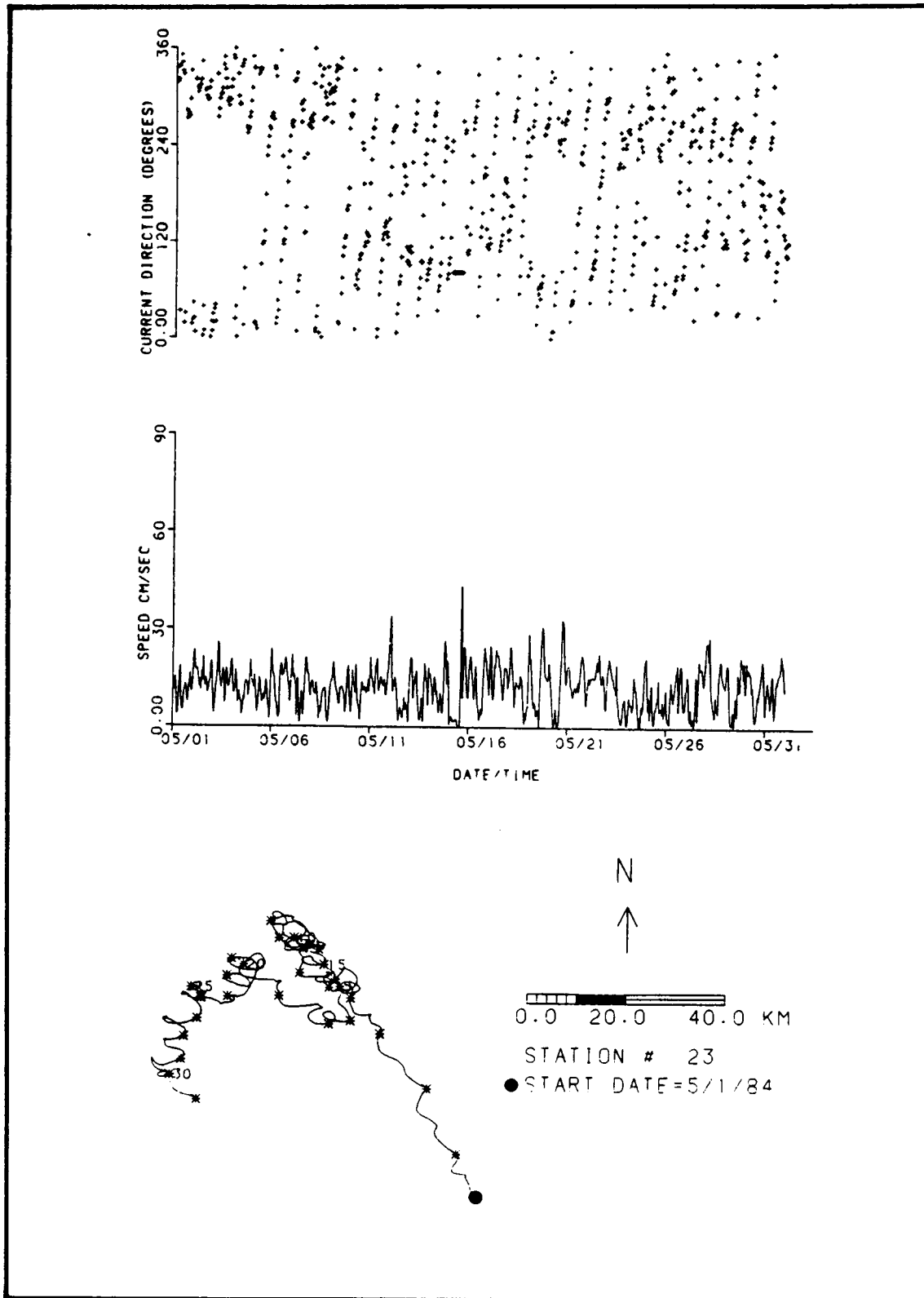


Figure B-18

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS MAY 1984

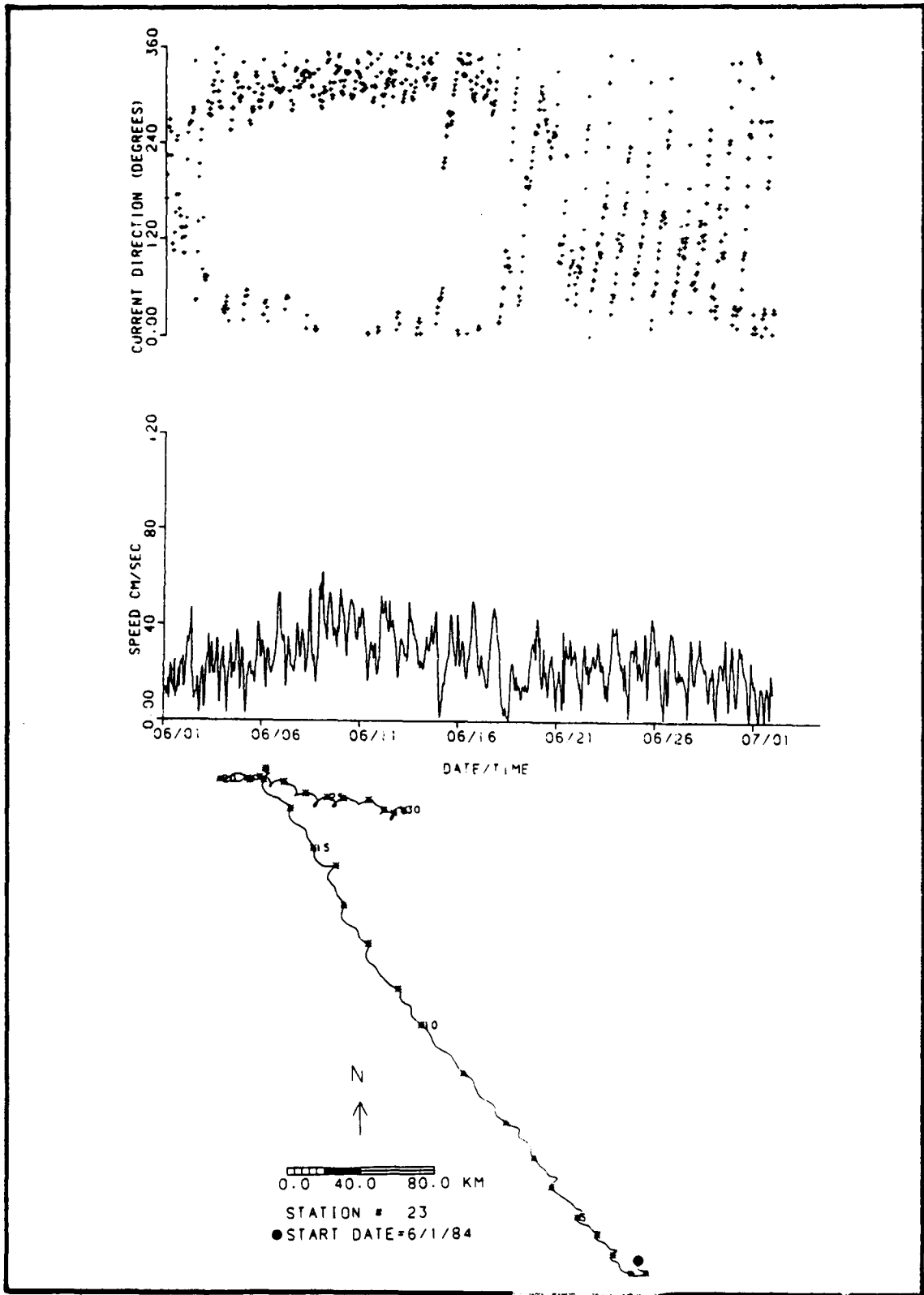


Figure B-19

STATION 23 CURRENT SPEED, DIRECTION AND PROGRESSIVE VECTOR PLOTS - JUNE 1984

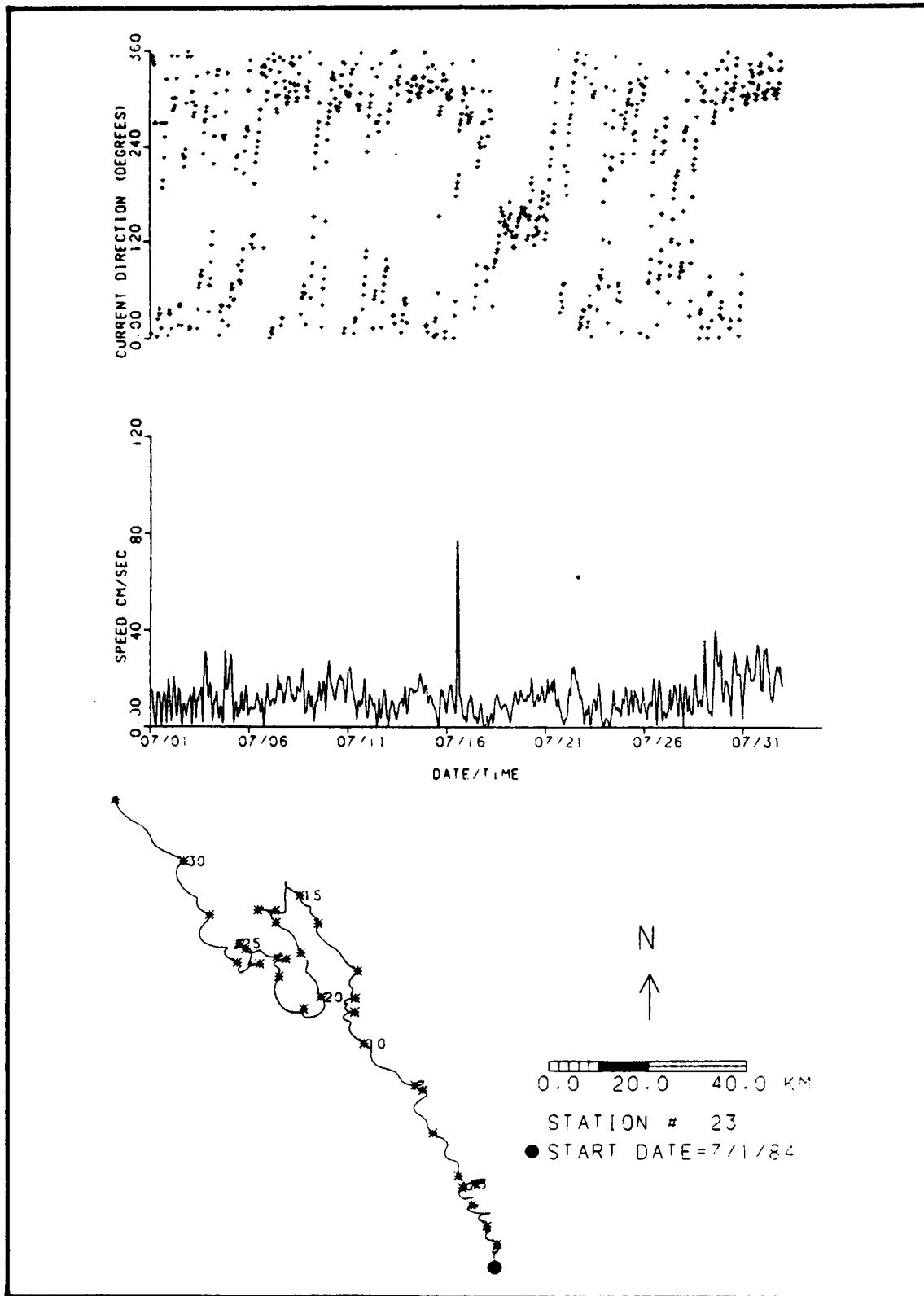


Figure B-20

STATION 23 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS · JULY 1984

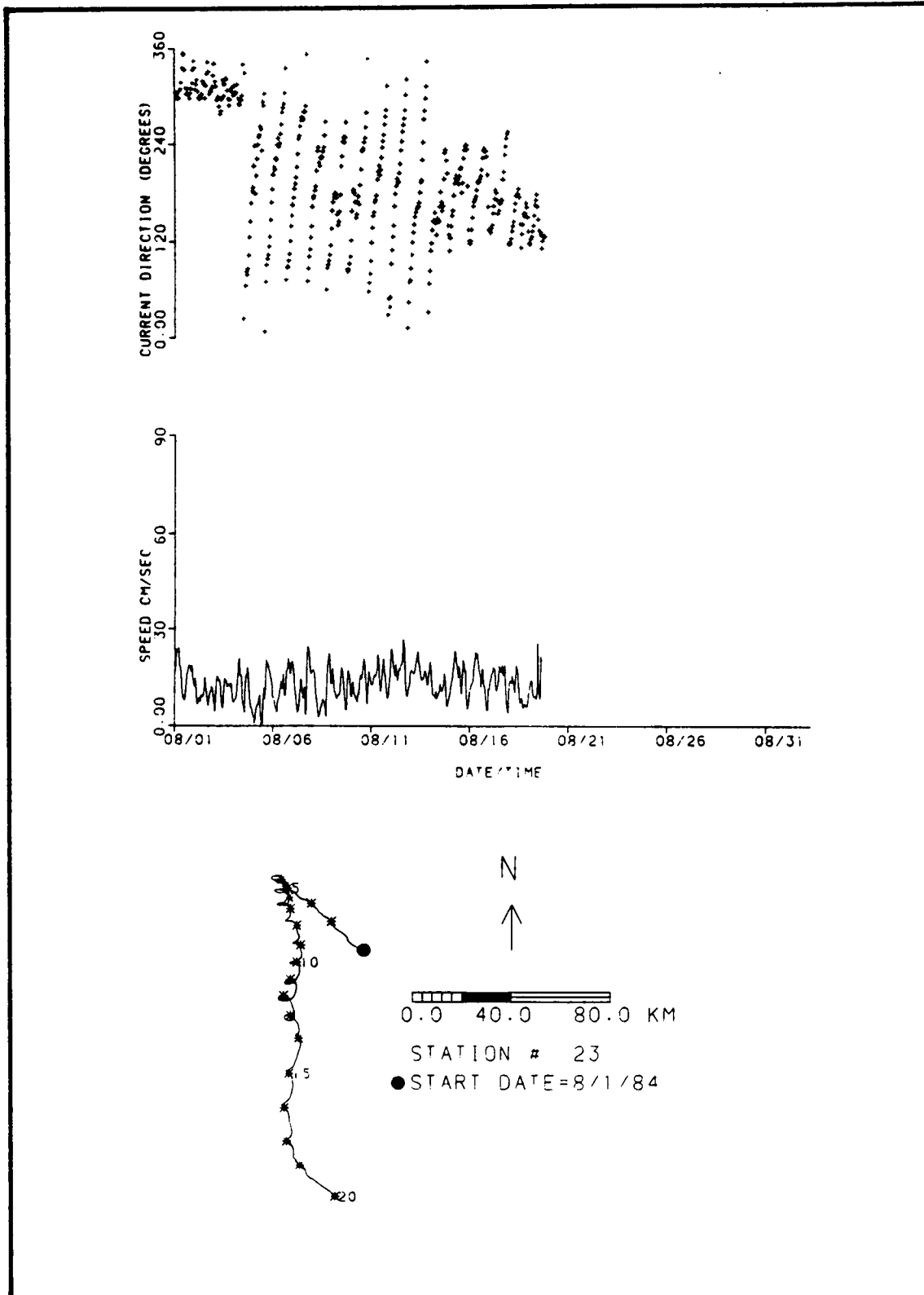


Figure B-21

STATION 23 CURRENT SPEED, DIRECTION AND
 PROGRESSIVE VECTOR PLOTS - AUGUST 1984

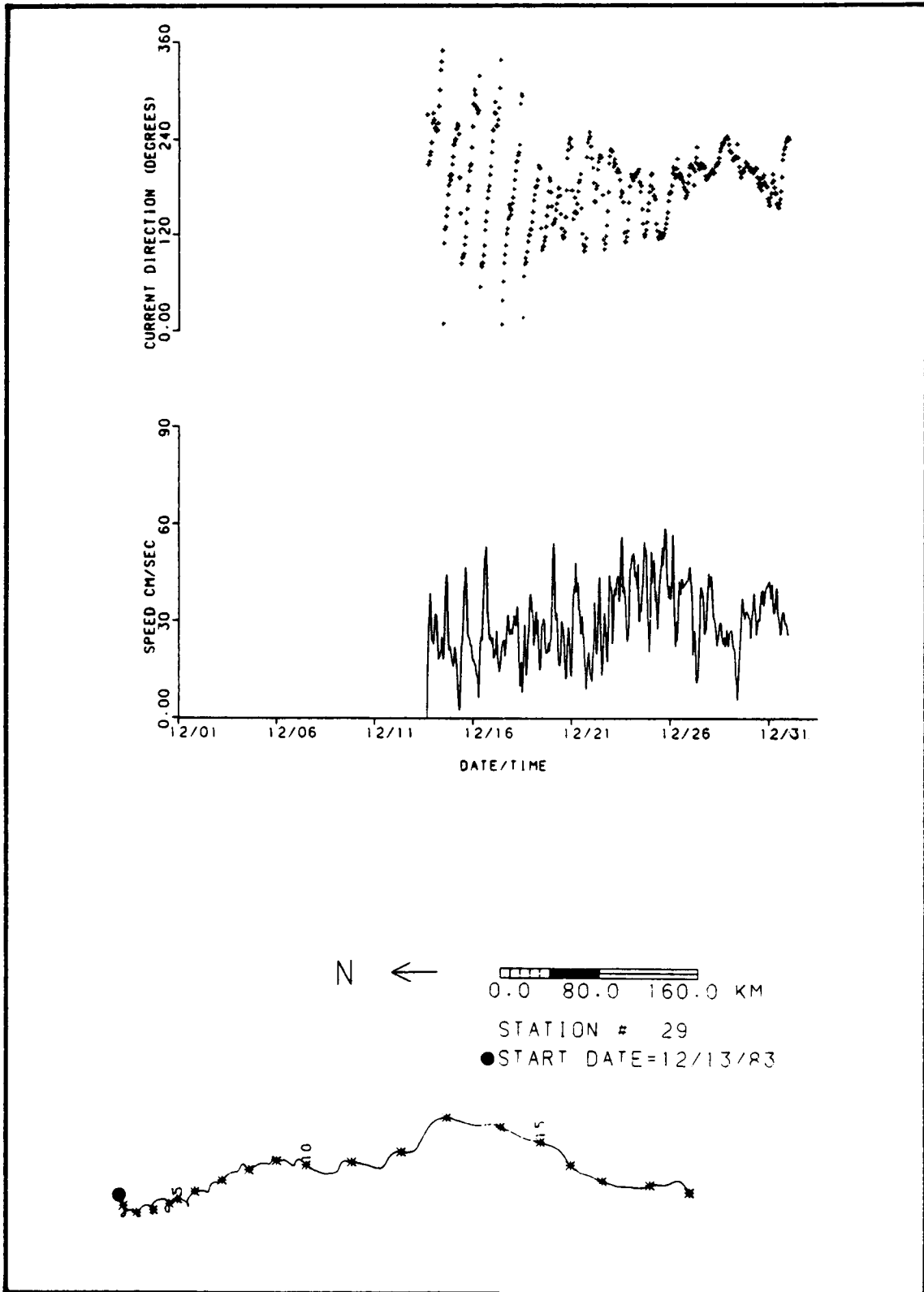


Figure B-22 **STATION 29 CURRENT SPEED, DIRECTION AND**
PROGRESSIVE VECTOR PLOTS - DECEMBER 1983

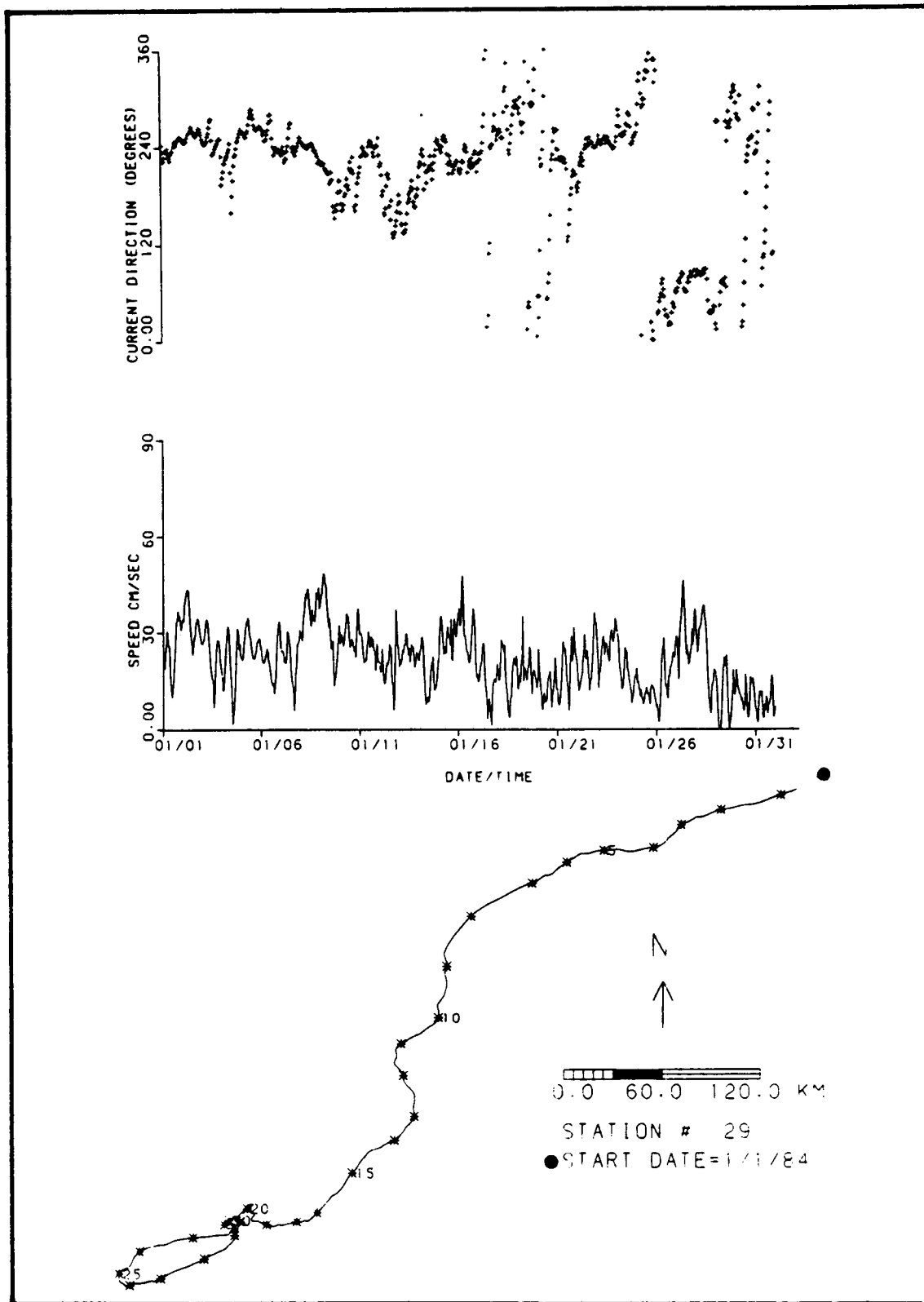


Figure B-23

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JANUARY 1984

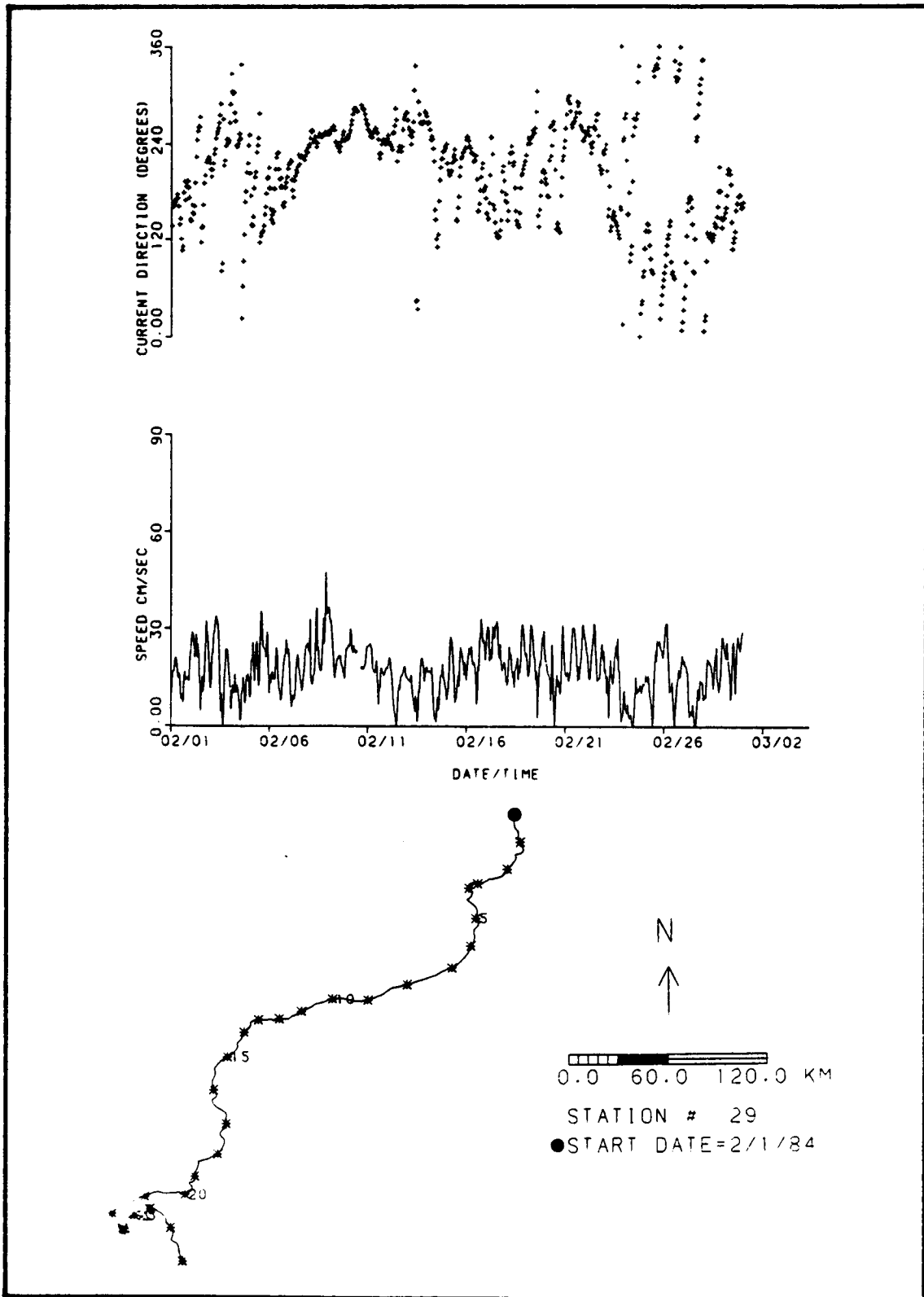


Figure B-24

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - FEBRUARY 1984

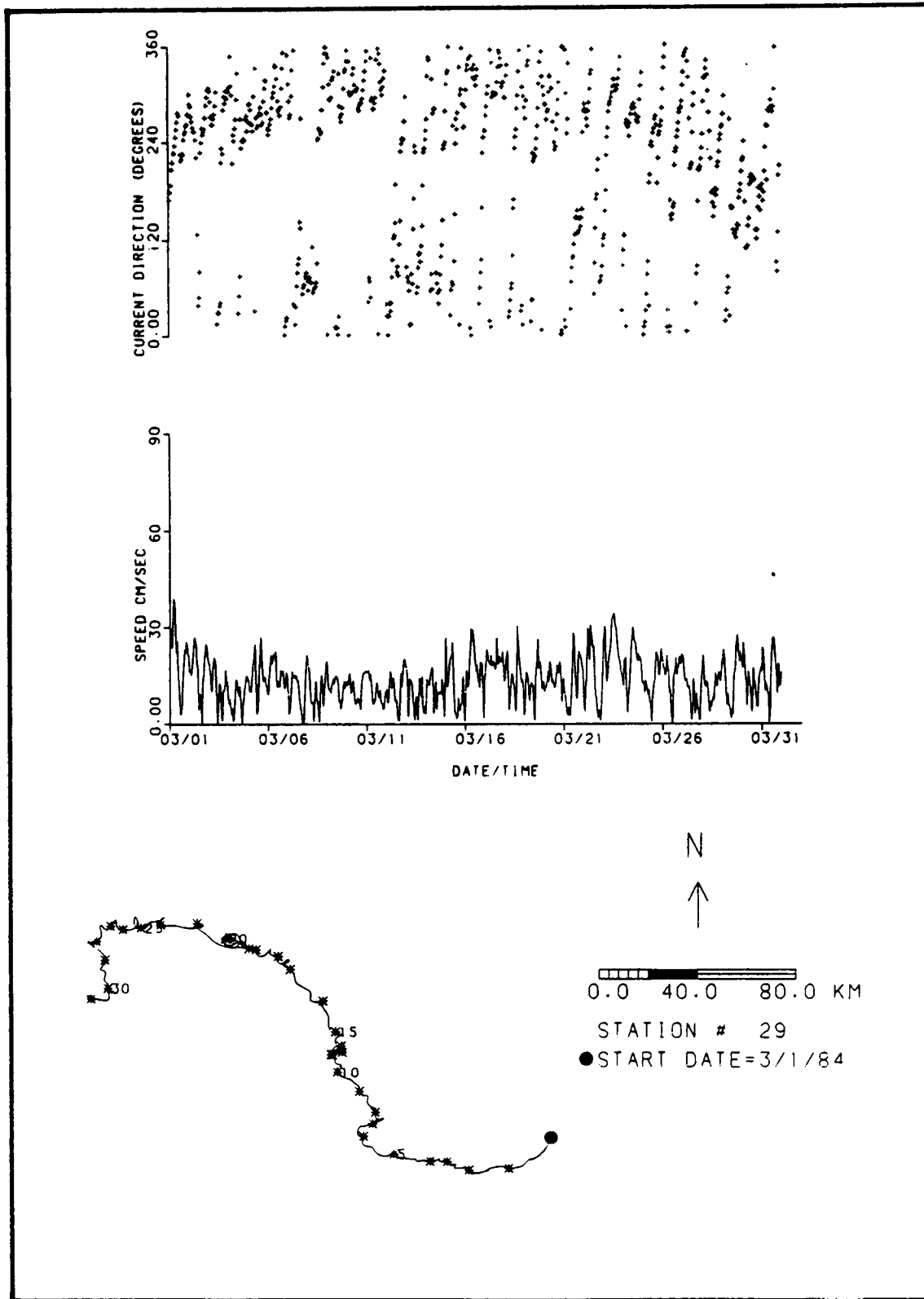


Figure B-25

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - MARCH 1984

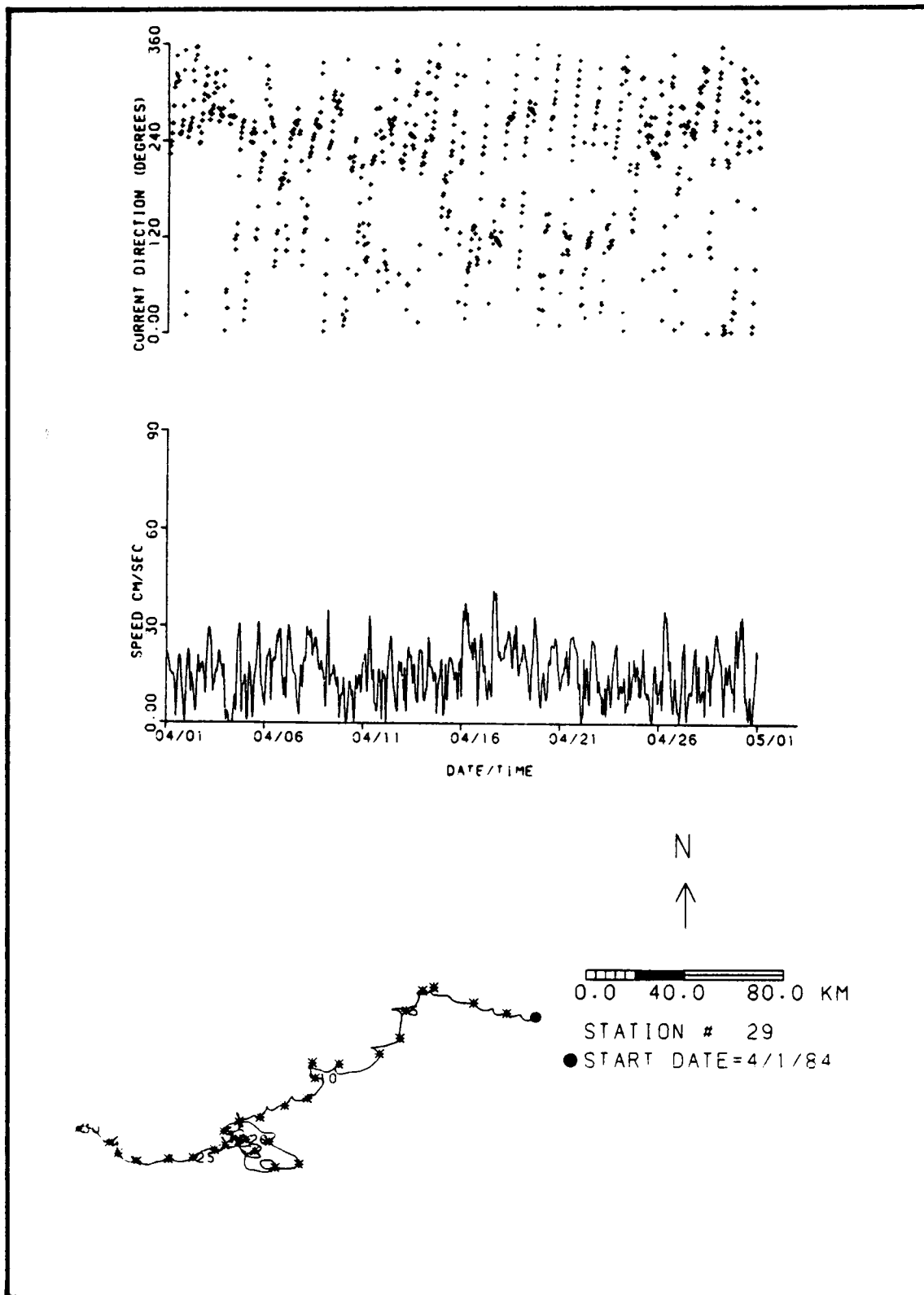


Figure B-26

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - APRIL 1984

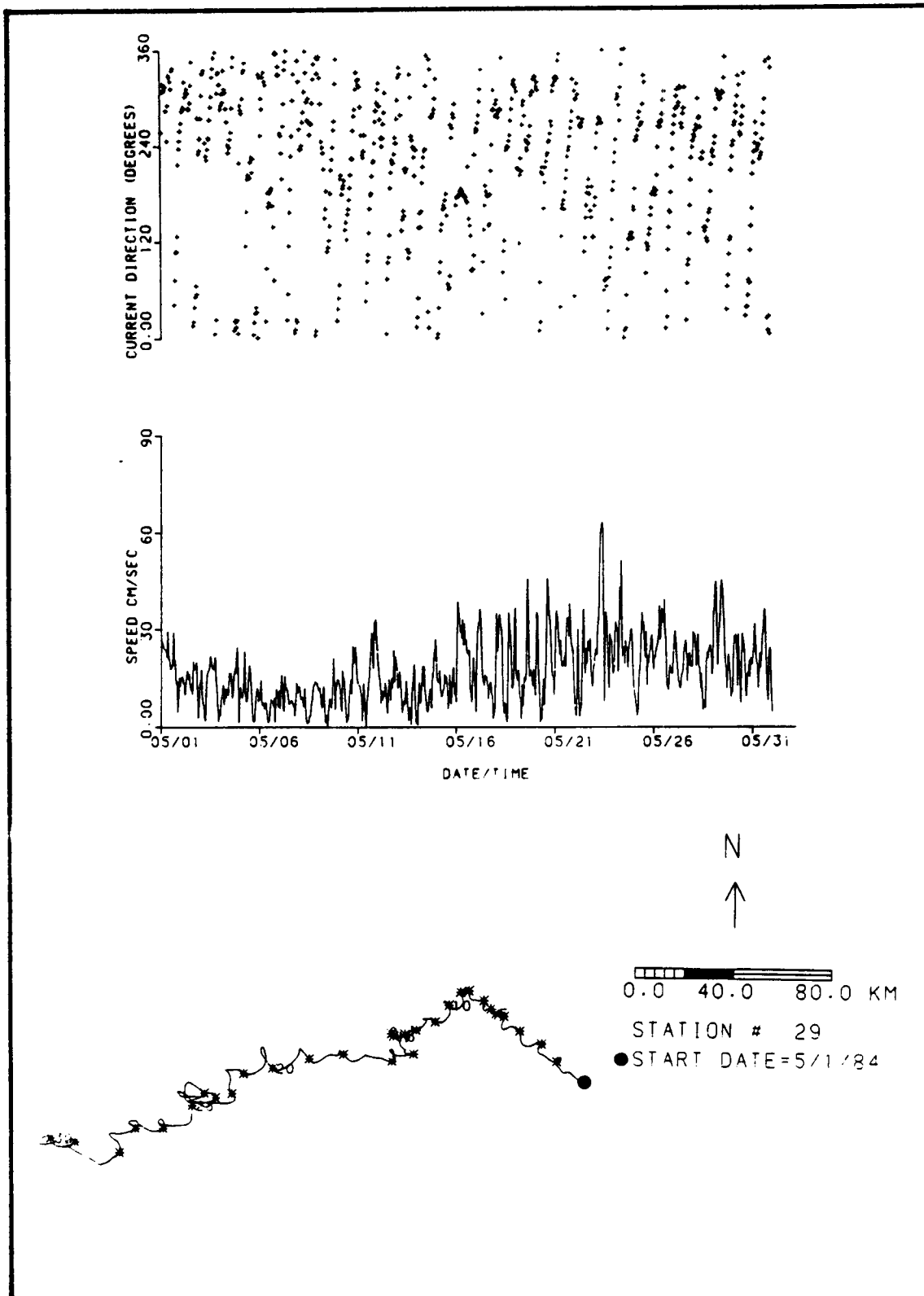


Figure B-27

STATION 29 CURRENT SPEED, DIRECTION AND
 PROGRESSIVE VECTOR PLOTS - MAY 1984

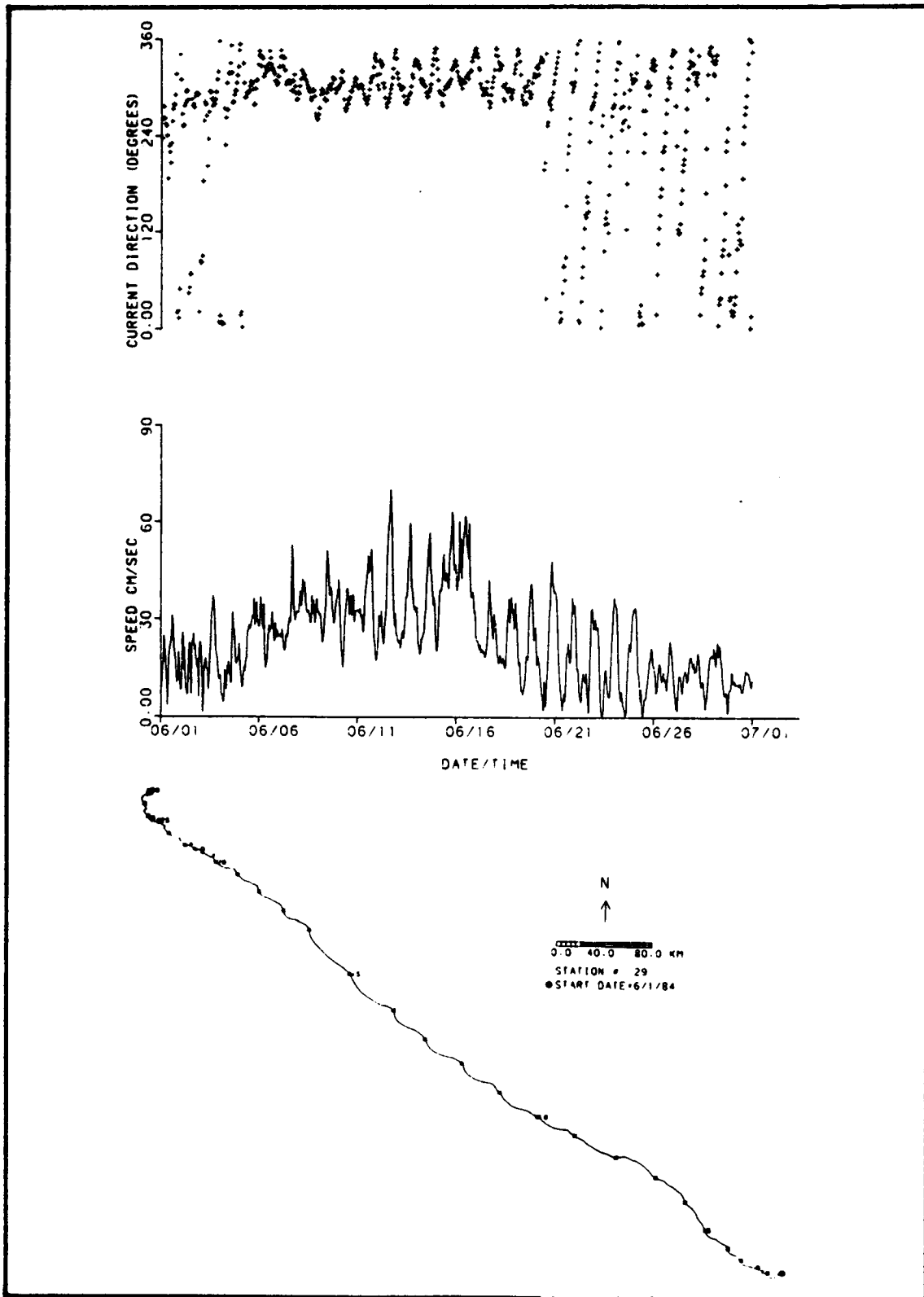


Figure B-28

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JUNE 1984

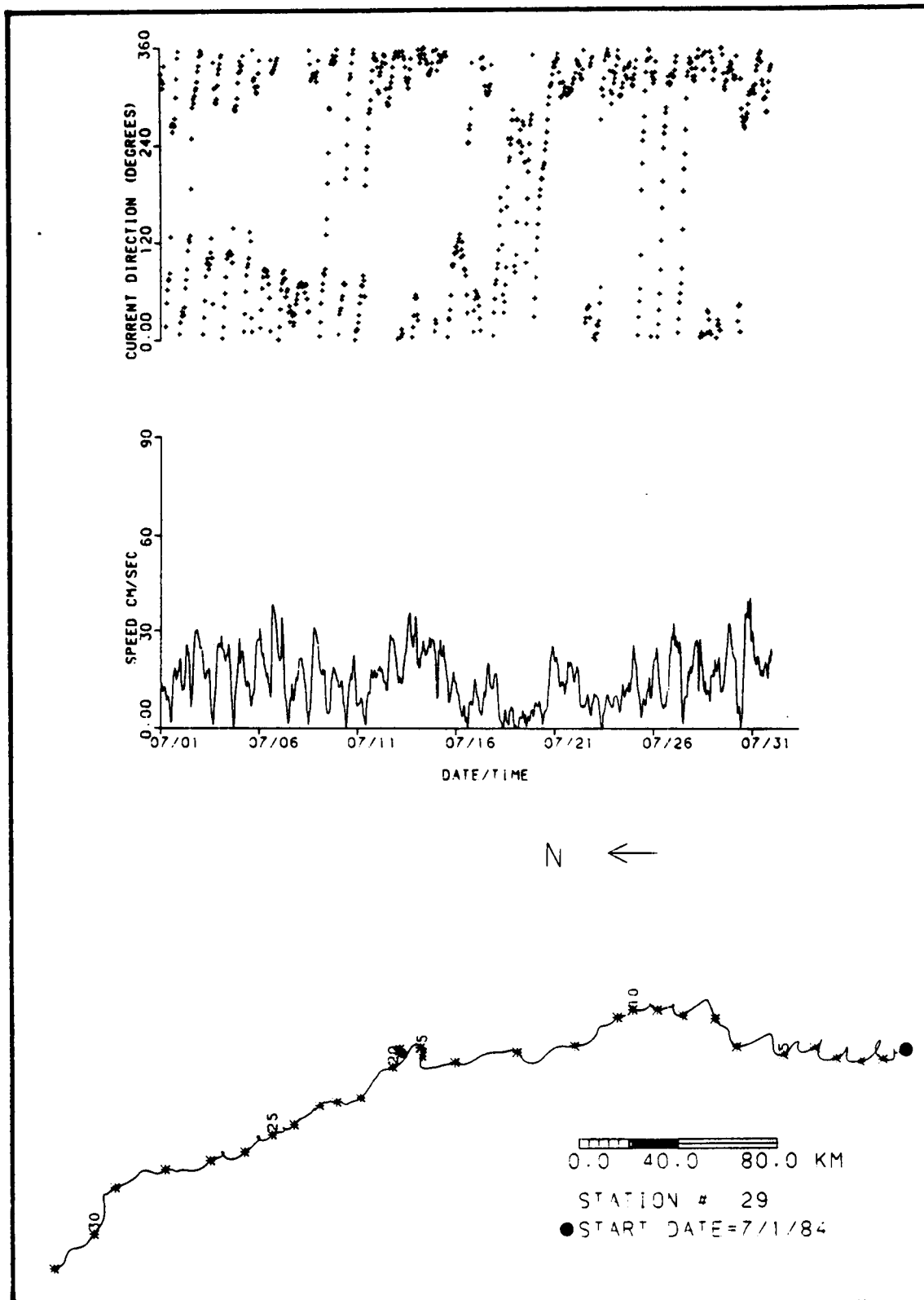


Figure B-29

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS JULY 1984

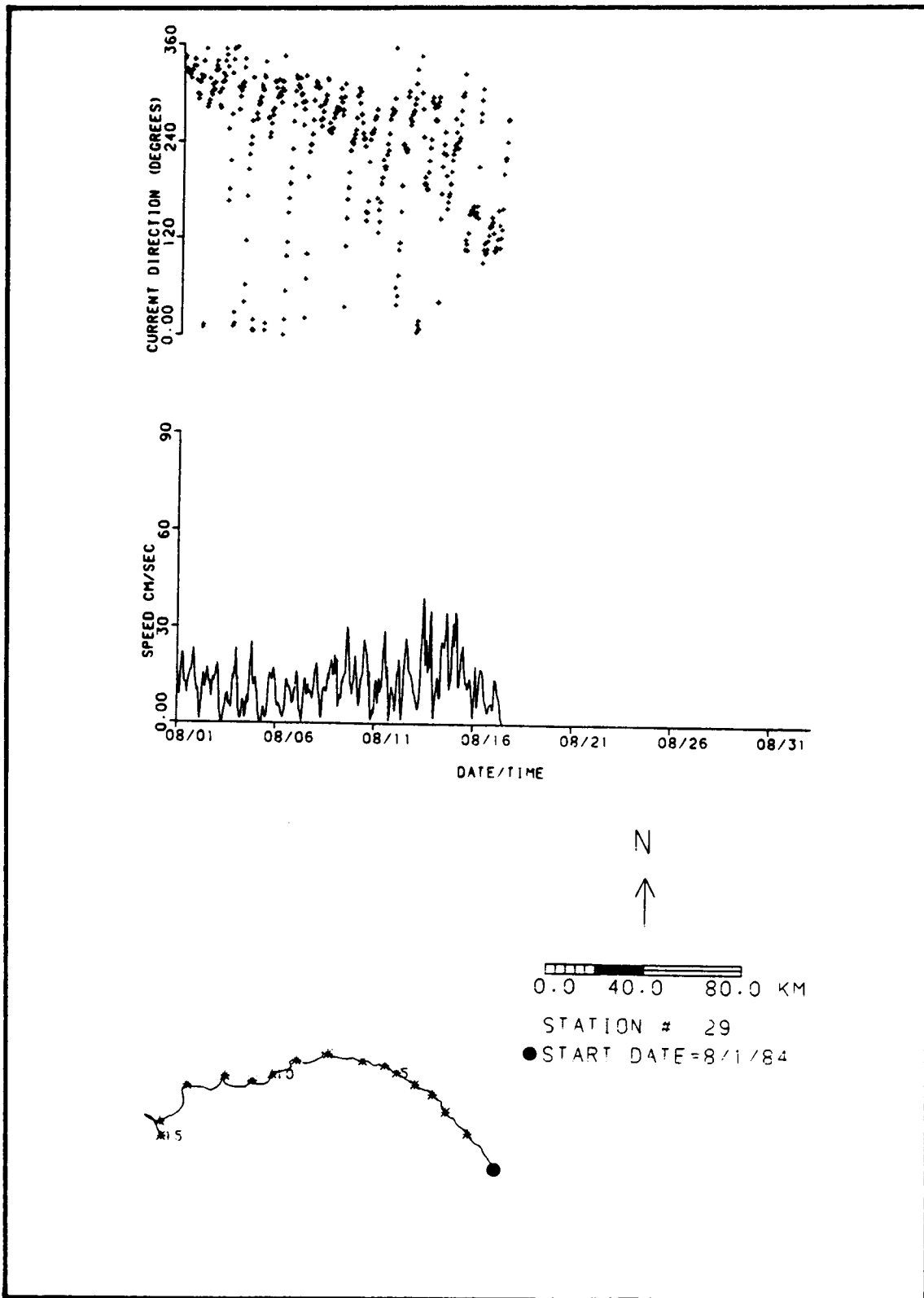


Figure B-30

STATION 29 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - AUGUST 1984

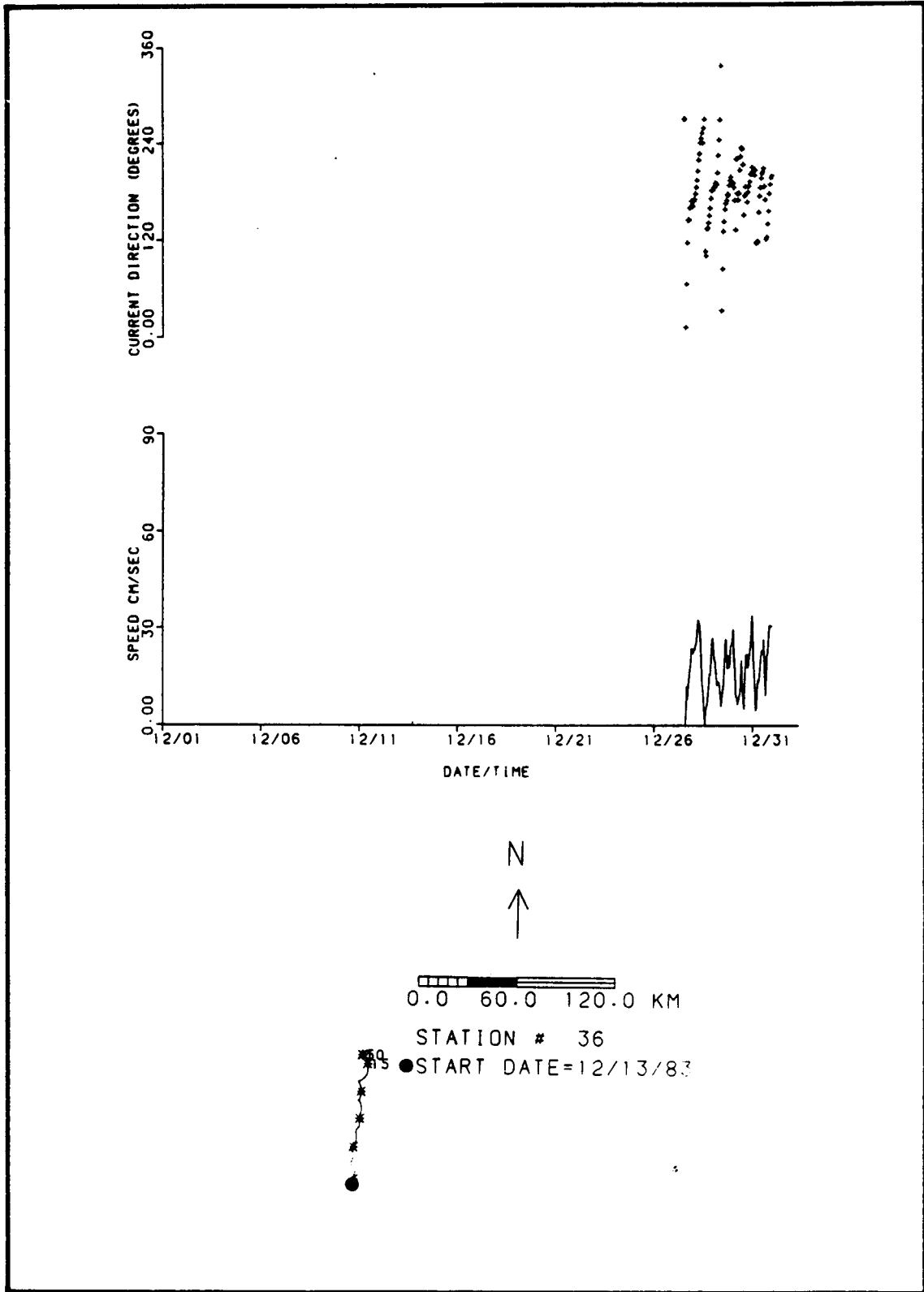


Figure B-31

STATION 36 CURRENT SPEED, DIRECTION AND
 PROGRESSIVE VECTOR PLOTS · DECEMBER 1983

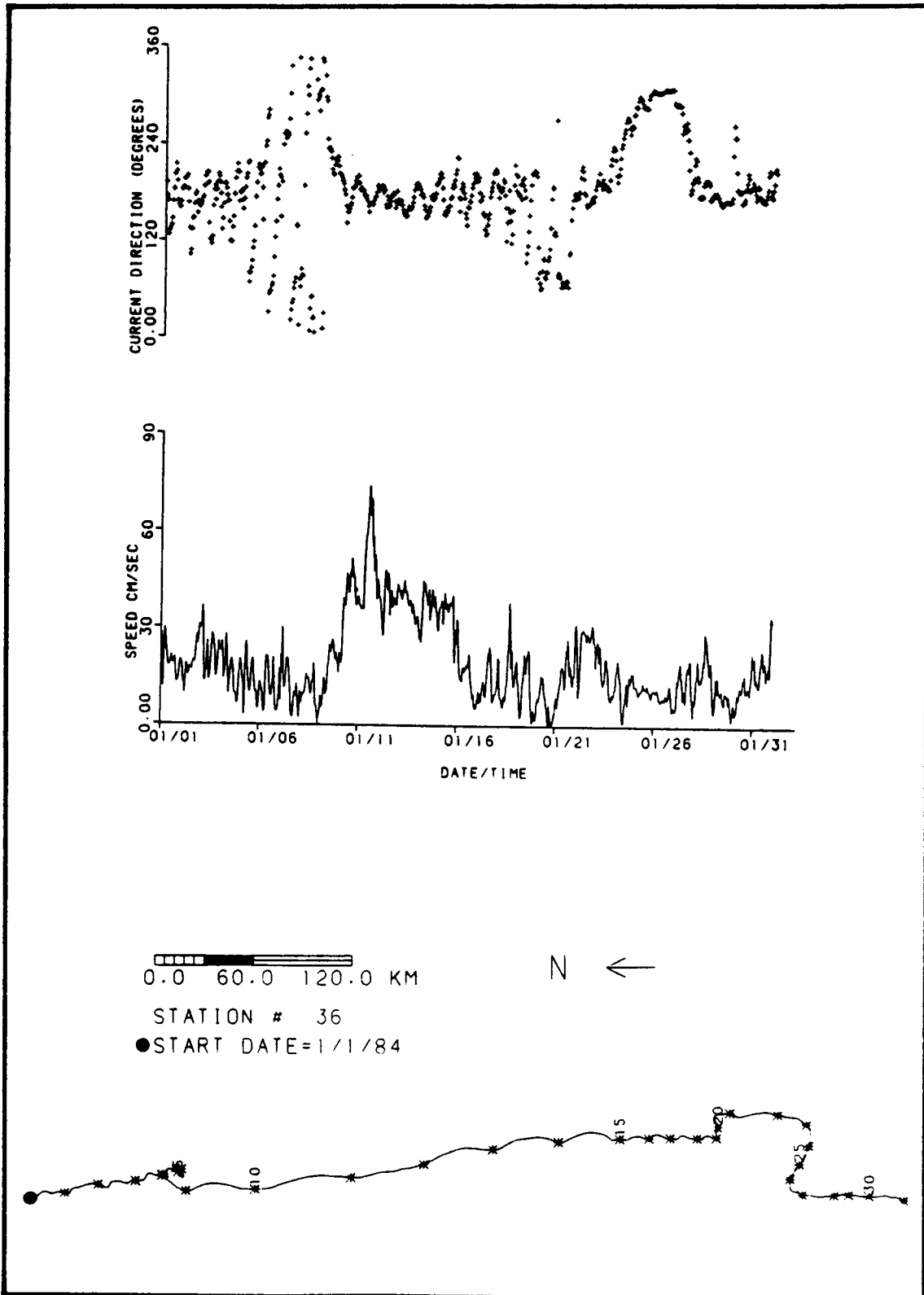


Figure B-32

STATION 36 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JANUARY 1984

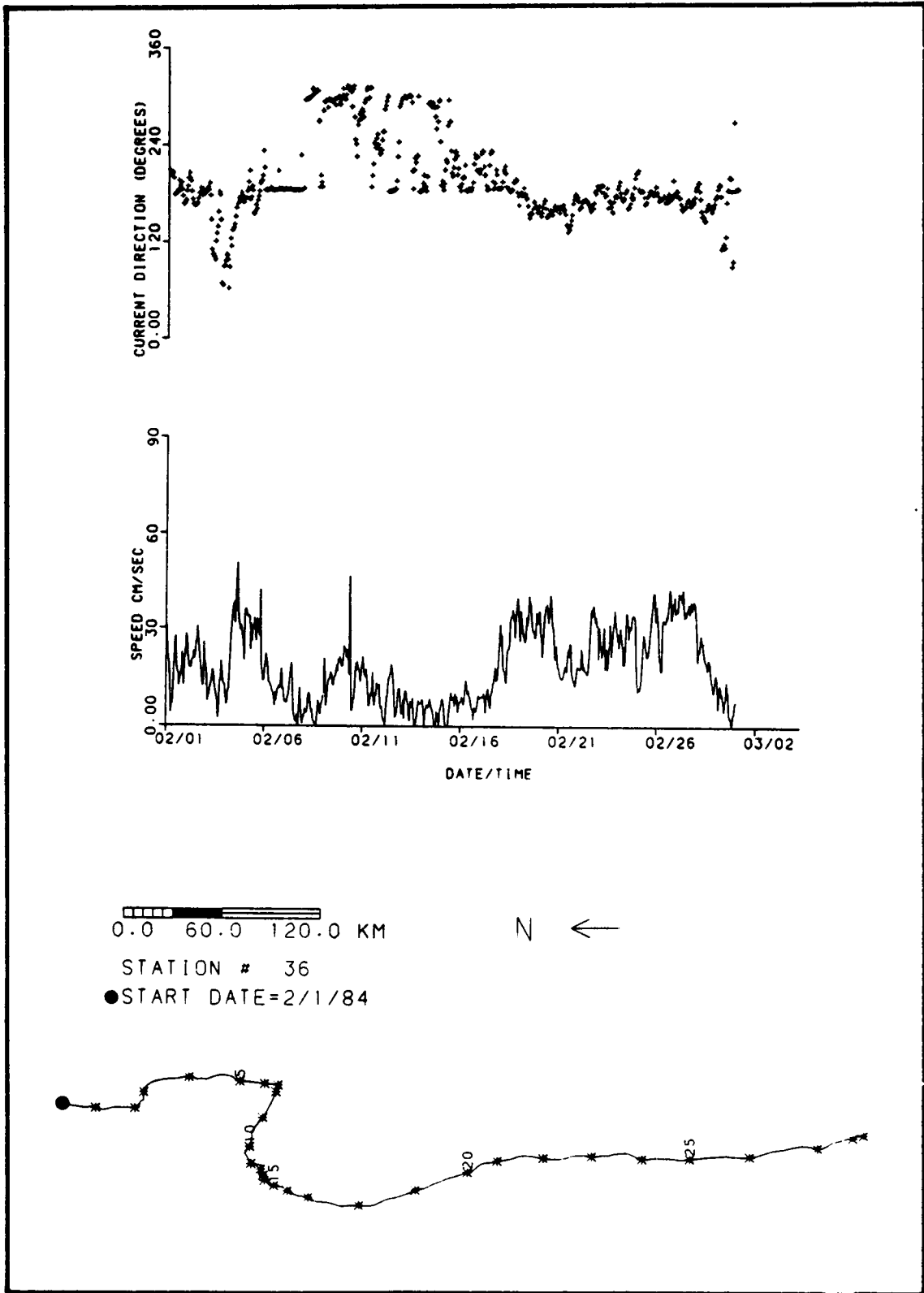


Figure B-33 **STATION 36 CURRENT SPEED, DIRECTION AND**
PROGRESSIVE VECTOR PLOTS - FEBRUARY 1984

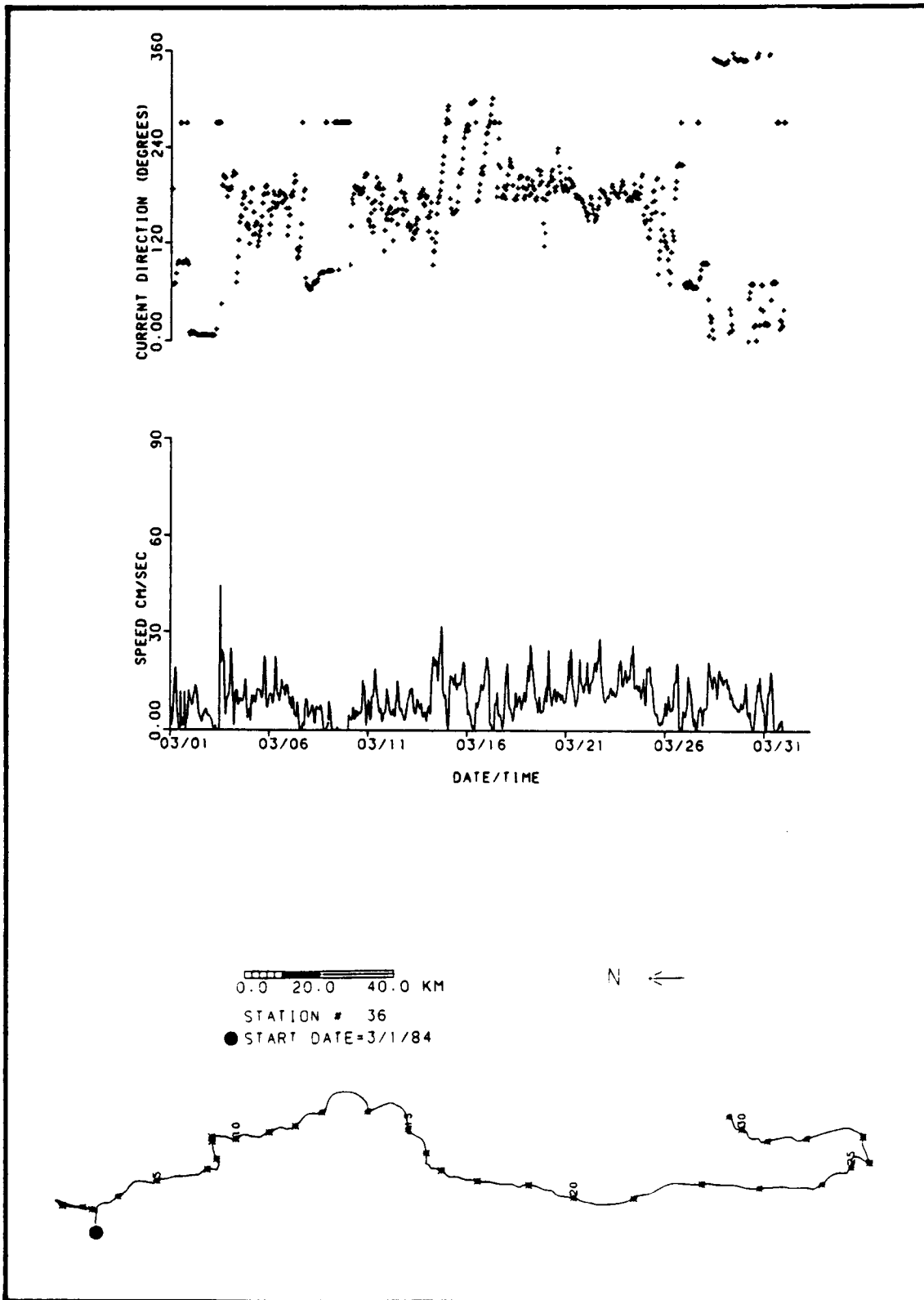


Figure B-34

STATION 36 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - MARCH 1984

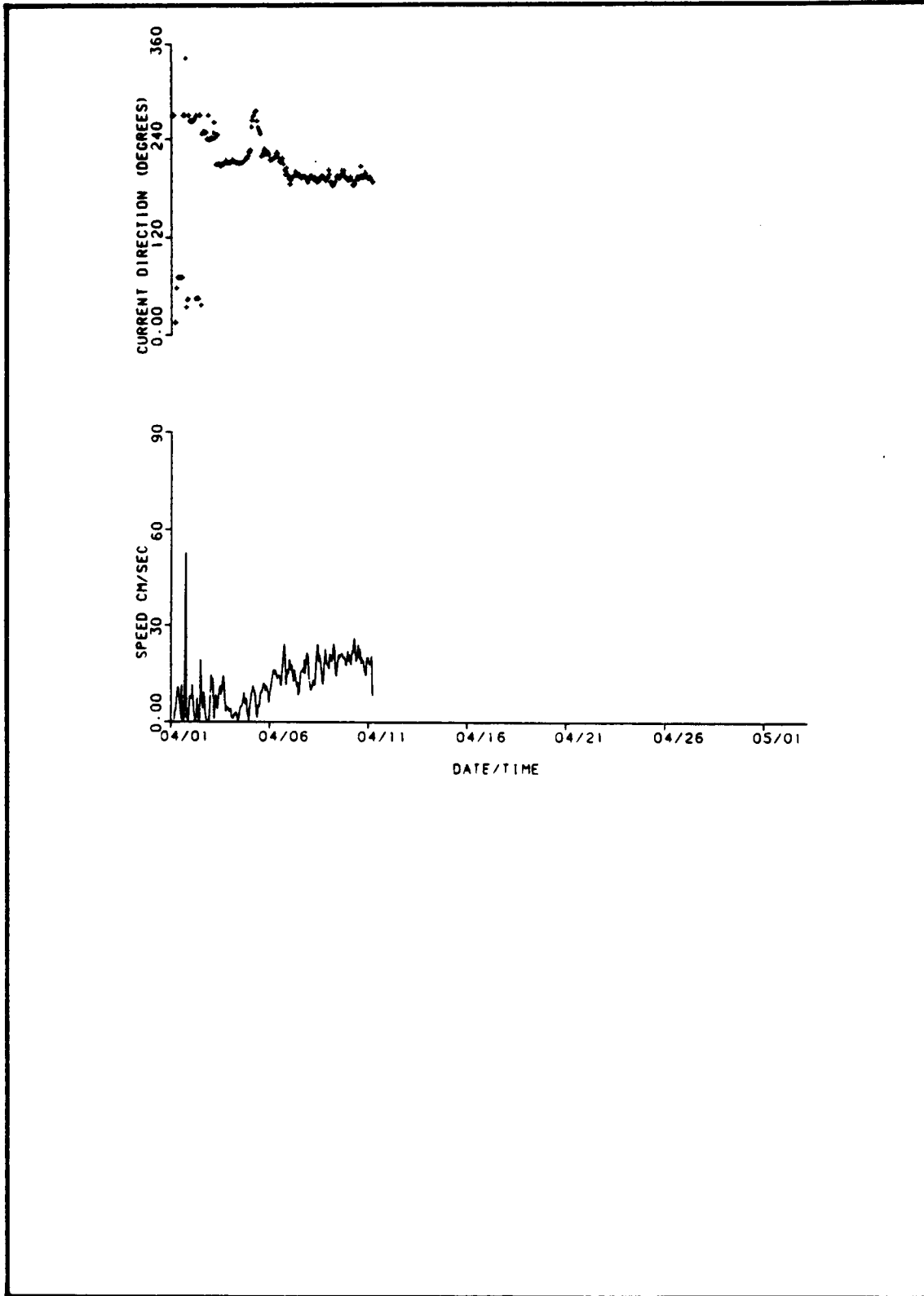


Figure B-35 **STATION 36 CURRENT SPEED, DIRECTION AND**
PROGRESSIVE VECTOR PLOTS APRIL 1984

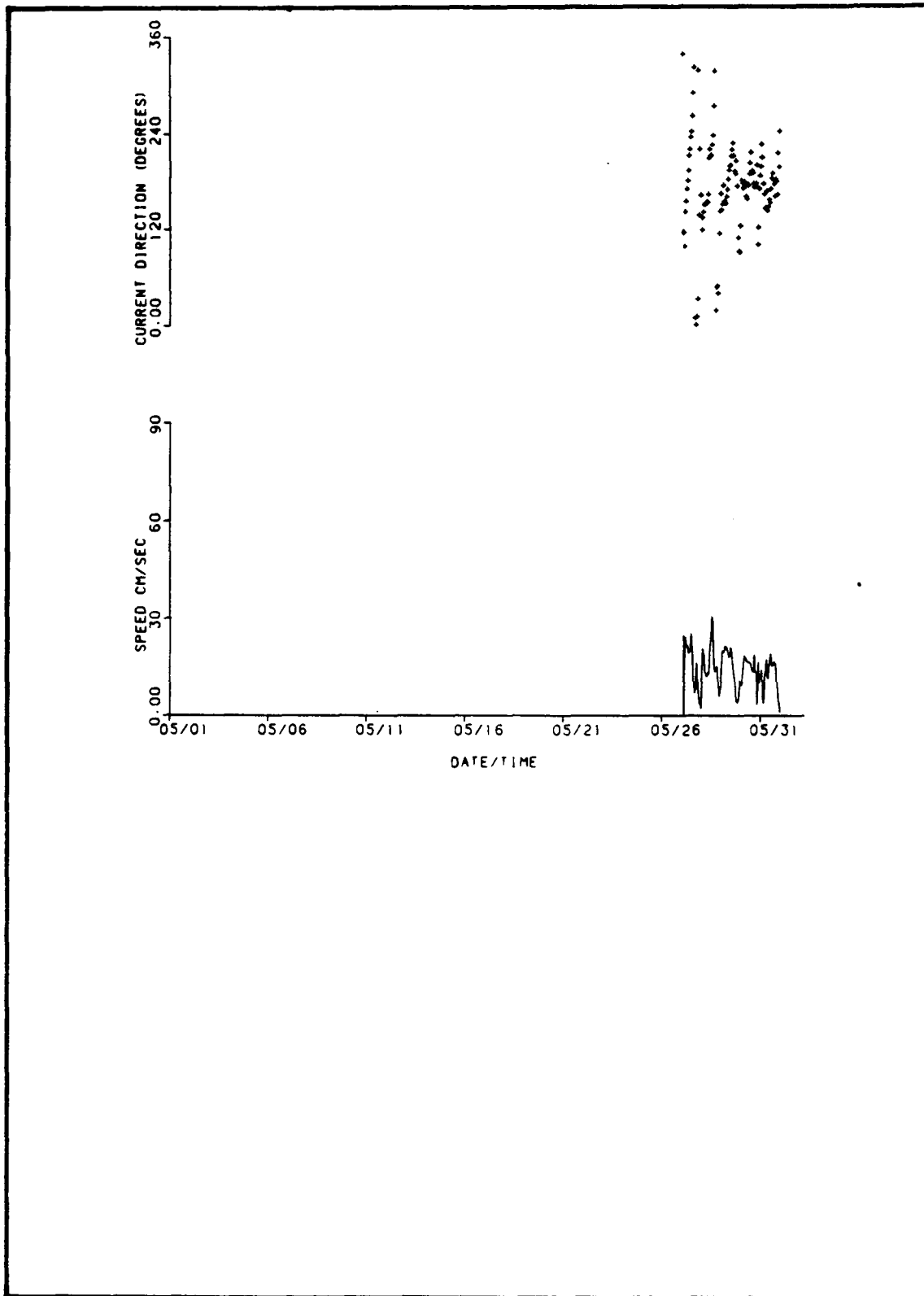


Figure B-36

STATION 36 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - MAY 1984

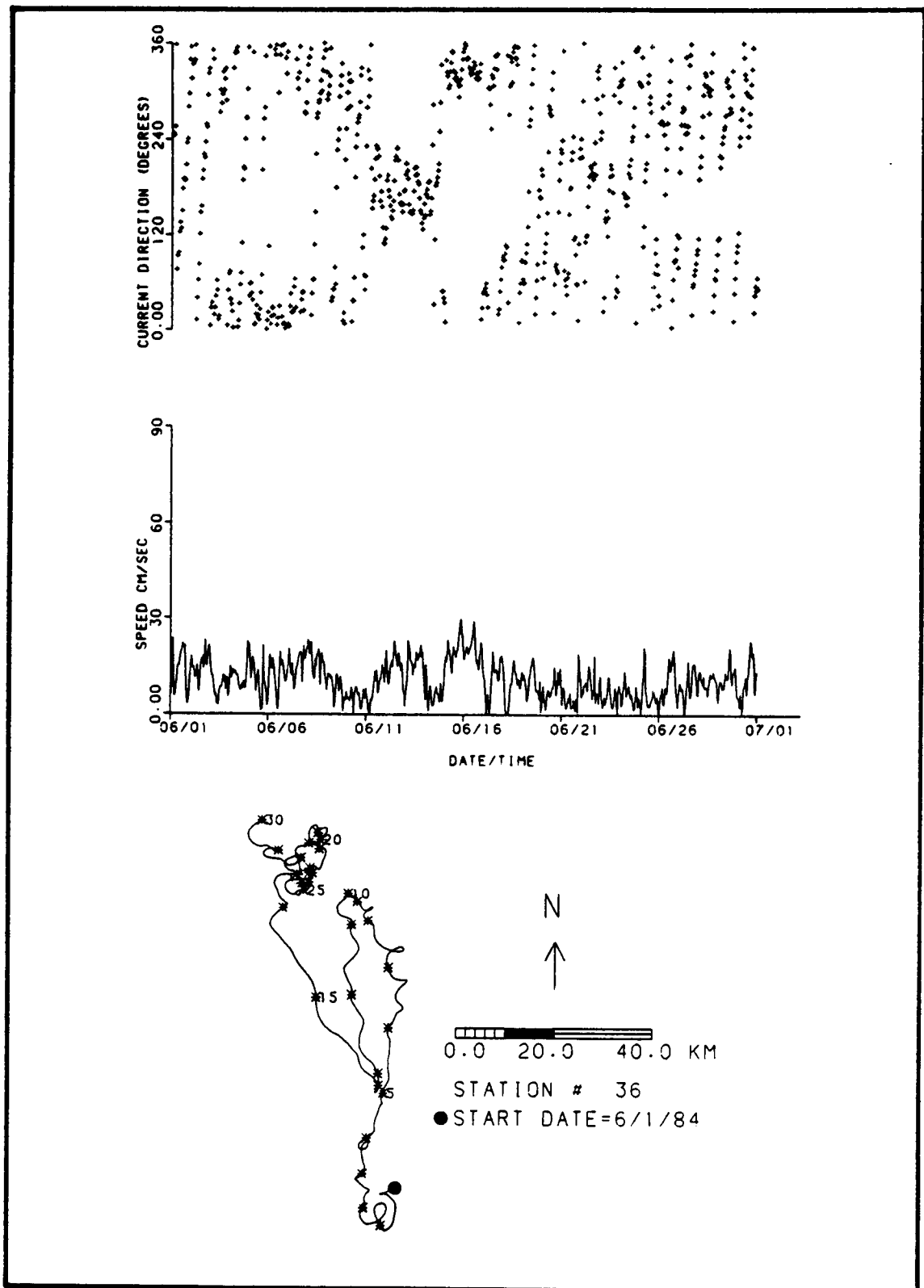


Figure B-37 **STATION 36 CURRENT SPEED, DIRECTION AND**
PROGRESSIVE VECTOR PLOTS - JUNE 1984

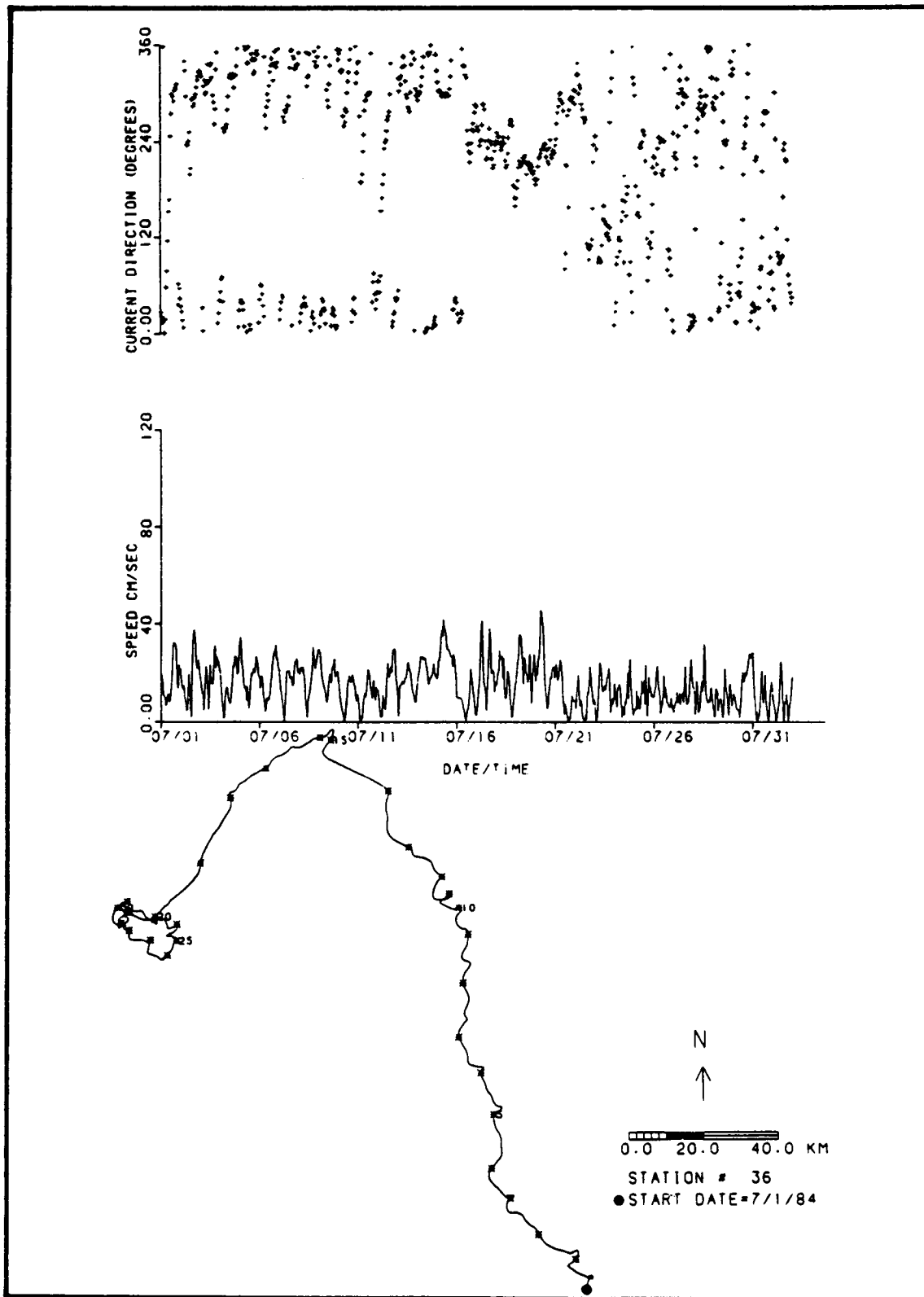


Figure B-38

STATION 36 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - JULY 1984

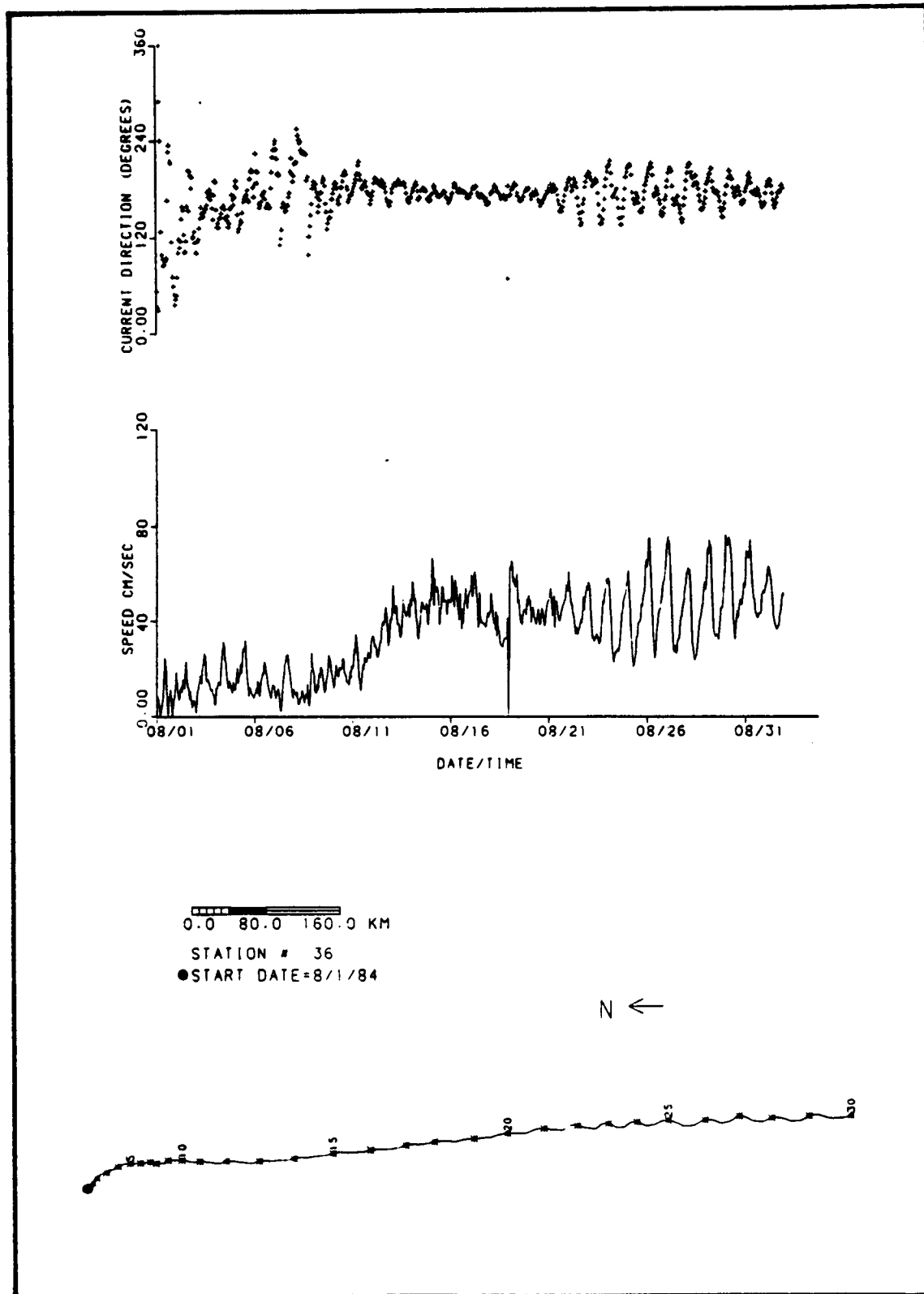


Figure B-39

STATION 36 CURRENT SPEED, DIRECTION AND PROGRESSIVE VECTOR PLOTS - AUGUST 1984

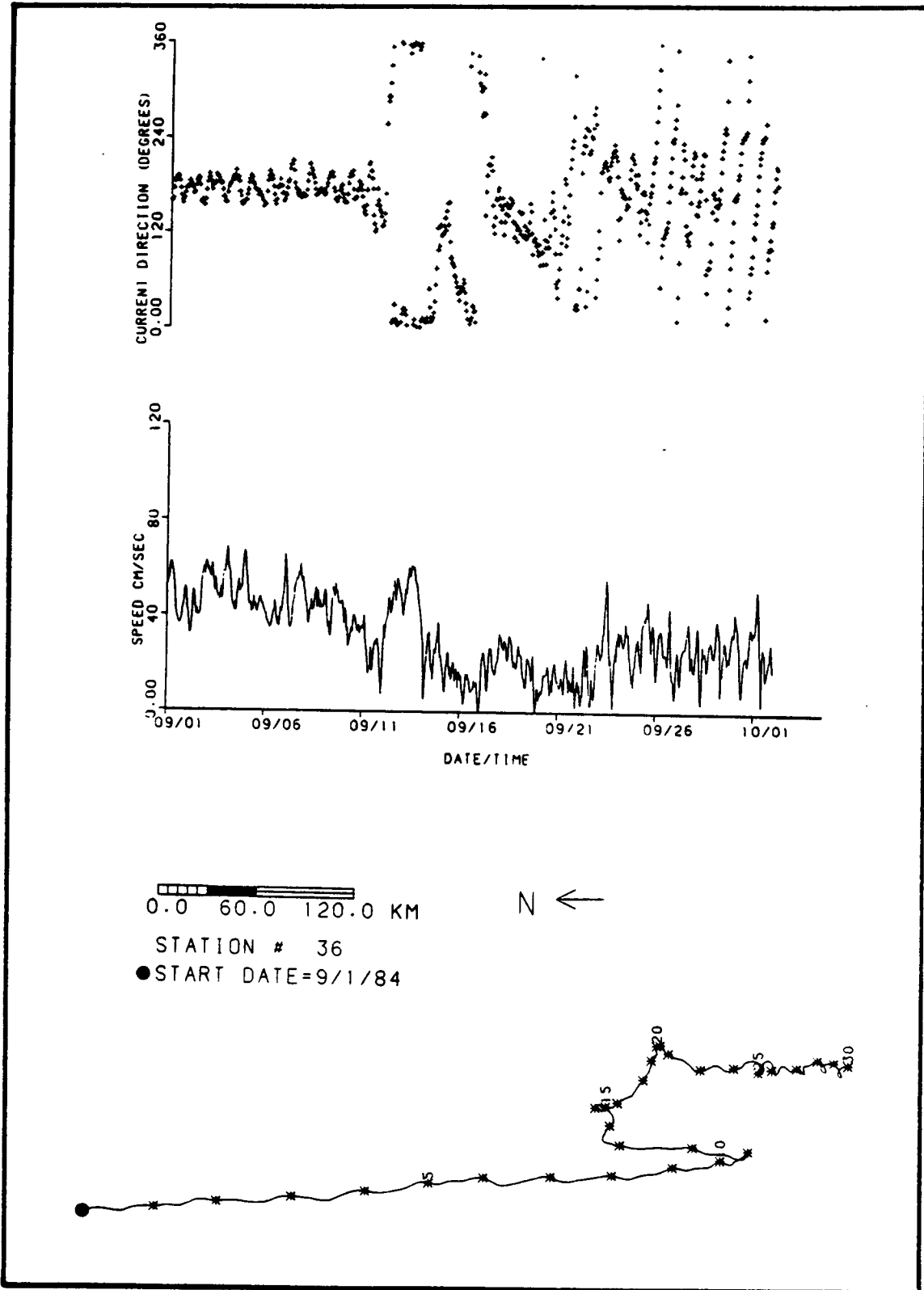


Figure B-40

STATION 36 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - SEPTEMBER 1984

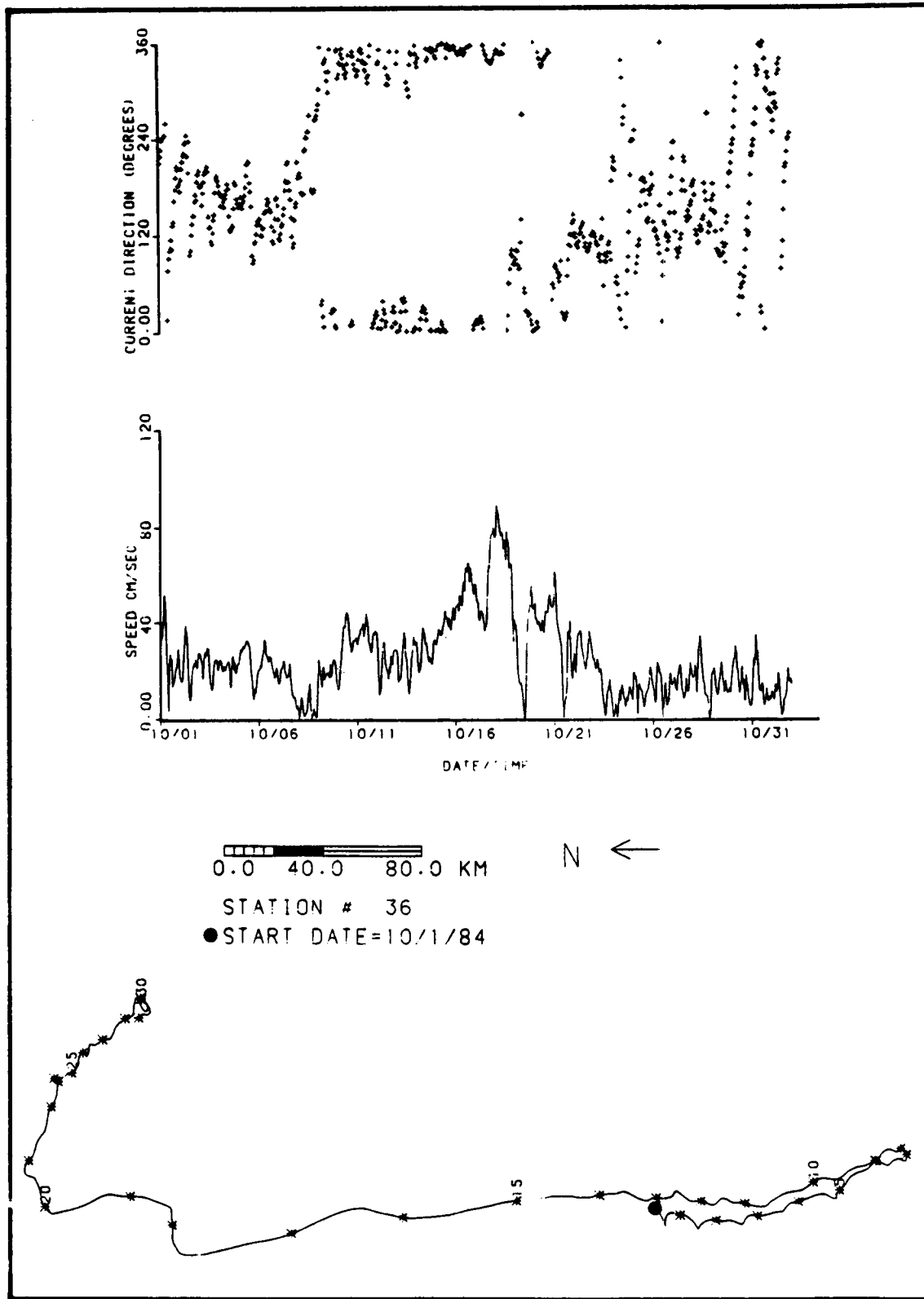


Figure B-41

STATION 36 CURRENT SPEED, DIRECTION AND
PROGRESSIVE VECTOR PLOTS - OCTOBER 1984

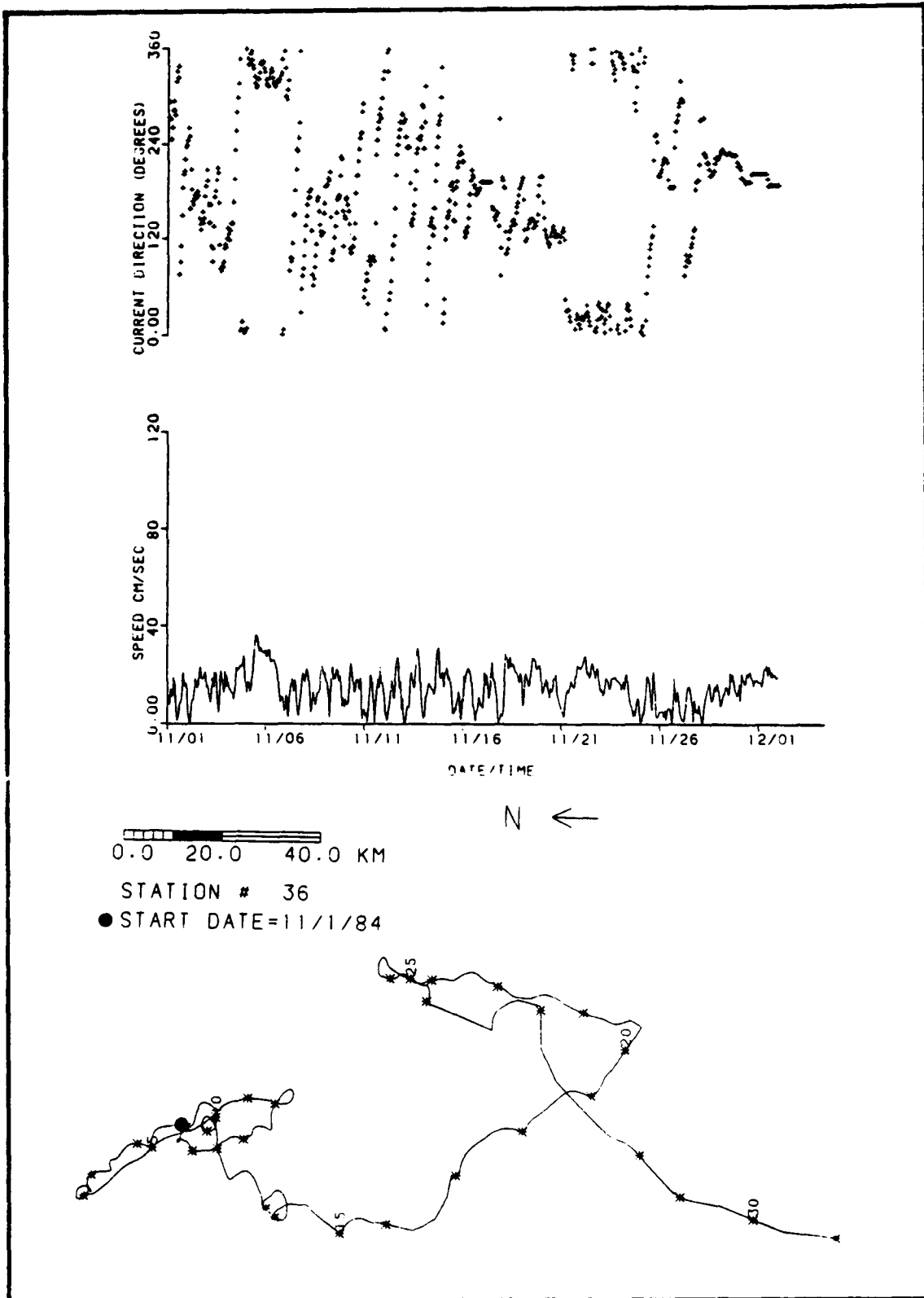


Figure B-42 STATION 36 CURRENT SPEED, DIRECTION AND
 PROGRESSIVE VECTOR PLOTS - NOVEMBER 1984

Table B-5

Station 52 Joint Frequency Distribution of Current Speed and Direction - December 1983

SPEED CM/S	DIRECTIONS ARE TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		364	6.3
5	26	6	13	22	38	30	23	25	23	25	30	60	17	5	11	10	270	4.7	
10	2	8	4	20	24	25	20	16	18	24	24	49	17	10	5	4	377	6.5	
15			6	29	59	44	21	20	10	19	41	79	38	11			431	7.5	
20			2	38	84	48	19	25	13	22	40	99	35	6			408	7.1	
25				32	90	48	12	8	3	25	26	127	35	2			556	9.7	
30				51	133	30	11	2	3	16	60	191	56	3			625	10.9	
35				44	173	40	9	3	3	14	58	209	71	1			541	9.4	
40				35	190	32	3	3	3	12	38	175	49	1			585	10.2	
45			1	42	223	34	3	2		16	32	175	57				483	8.4	
50				43	213	31	4			6	41	111	34				361	6.3	
55				30	193	22	1			2	17	61	35				302	5.2	
60				31	170	13					5	61	22				173	3.0	
65				19	101	2						31	20				120	2.1	
70				13	63							25	19				100	1.7	
75				15	42							22	21				51	0.9	
80+				12	27							7	5				13	0.2	
				4	6							1	2						
TOTAL	28	14	26	480	1829	399	126	104	76	181	412	1483	533	39	16	14	5760		
PERCENT	0.49	0.24	0.45	8.33	31.75	6.93	2.19	1.81	1.32	3.14	7.15	25.75	9.25	0.68	0.28	0.24	100.00		
STATION AVERAGE = 33.92 CM/S																			

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Table B-6 Station 52 Joint Frequency Distribution of Current Speed and Direction - January 1984

SPEED CM/S	DIRECTIONS ARE TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		584	6.3
5	25	26	45	35	32	50	36	35	34	44	49	47	35	31	41	19		505	5.5
10	6	9	28	57	63	43	23	17	25	29	42	64	59	28	7	5		652	7.1
15		1	23	81	108	58	20	9	9	26	69	117	114	15	2			719	7.8
20			6	100	154	40	15	11	6	16	47	179	143	2				614	6.7
25				75	146	35	8	6	1	17	26	160	129	3				900	9.8
30				117	275	20	5		1	5	44	236	195	2				981	10.6
35				153	324	19	4				26	275	179	1				790	8.6
40				84	304	11				2	14	234	141					901	9.8
45				113	379	15				1	13	236	144					707	7.7
50				71	319	12					11	207	87					535	5.8
55				38	268	5					10	163	51					533	5.8
60				61	287	3					4	137	41					377	4.1
65				51	195						1	103	27					199	2.2
70				29	99						1	59	11					147	1.6
75				24	66							42	15					62	0.7
80+				10	31							11	10					10	0.1
					3							6	1					9216	
TOTAL	31	36	102	1099	3053	311	111	78	76	140	357	2204	1382	82	50	24		9216	
PERCENT	0.34	0.39	1.11	11.92	33.13	3.37	1.20	0.85	0.82	1.52	3.87	24.78	15.00	0.89	0.54	0.26		100.00	
STATION AVERAGE = 33.60 CM/S																			

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Table B-7

Station 52 Joint Frequency Distribution of Current Speed and Direction - February 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		609	7.0
5	22	17	24	38	61	49	28	45	46	37	70	68	46	22	17	19		591	6.8
10	5	2	11	50	91	58	34	11	23	28	89	113	56	13	3	4		664	7.7
15		1	6	63	153	59	17	10	17	28	53	160	96			1		758	8.8
20				4	64	189	58	20	11	11	16	54	220	110	1			691	8.0
25				6	60	228	42	12	9	11	13	35	199	76				872	10.1
30				2	73	322	42	8	4	2	11	38	274	95	1			987	10.5
35					85	355	32	3	2	1	8	33	253	135				654	7.6
40					68	255	10	3		1	2	34	190	91				773	8.9
45					85	280	25	3			3	29	232	116				640	7.4
50					68	263	16	3				12	184	94				430	5.0
55					48	192	16					7	104	63				367	4.2
60					33	187	2					4	95	46				270	3.1
65					26	138						2	78	26				176	2.0
70					20	103						1	36	16				111	1.3
75					18	66							19	8				91	1.1
80+					25	55							5	6				36	0.4
					10	24								2					
TOTAL	27	20	53	834	2962	409	131	92	112	146	461	2230	1082	37	20	24		8640	
PERCENT	0.31	0.23	0.61	9.65	34.28	4.73	1.52	1.06	1.30	1.69	5.34	25.81	12.52	0.43	0.23	0.28		100.00	
STATION AVERAGE = 31.83 CM/S																			

Table B-8

Station 52 Joint Frequency Distribution of Current Speed and Direction - March 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0		73	24	40	38	41	37	31	29	33	39	44	40	54	44	42	30	639	7.0
5		7	5	27	43	71	49	32	15	16	22	43	69	62	43	15	7	526	5.7
10		1	4	17	71	136	53	20	16	19	19	53	118	96	51	3	2	679	7.4
15			2	6	85	187	42	13	1	3	9	38	152	94	24	4	3	663	7.2
20			3	1	63	189	17	4		1	7	23	123	77	5	3	1	517	5.6
25			1	3	70	259	18	4	1	5	5	21	169	126	6			688	7.5
30				3	69	300	23	3	1	1	1	10	208	174	3			796	8.7
35				1	64	212	12	3	1	1	2	9	175	181	1			662	7.2
40				5	75	272	12	2				8	210	159	3			746	8.1
45				1	70	275	11	2				8	182	190				739	8.1
50					57	192	11	1				9	112	130				512	5.6
55					45	211	14					7	158	143				578	6.3
60					33	231	12					5	110	77				468	5.1
65					35	166	4					1	55	58				319	3.5
70					32	162							25	52				271	3.0
75					17	94							25	25				161	1.8
80+					21	164							19	11				215	2.3
TOTAL		81	39	104	888	3162	315	115	64	79	104	279	1950	1709	180	67	43	9179	
PERCENT		0.88	0.42	1.13	9.67	34.45	3.43	1.25	0.70	0.86	1.13	3.04	21.24	18.62	1.96	0.73	0.47		100.00
STATION AVERAGE =		36.57 CM/S																	

Table B-9

Station 52 Joint Frequency Distribution of Current Speed and Direction - April 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		605	6.8
5	43	18	25	35	39	47	49	49	30	63	58	53	37	29	16	14		598	6.7
10	12	12	18	51	97	49	27	11	13	21	58	95	79	23	20	12		689	7.7
15	1	9	23	84	153	44	17	1	1	7	49	138	118	27	13	4		721	8.1
20			10	98	183	51	2	1		1	8	169	165	31	2			603	6.8
25			1	97	161	36					5	128	160	14	1			722	8.1
30			3	118	209	17					1	186	183	5				708	7.9
35				104	236	3						168	195	2				615	6.9
40				59	242	3						152	158	1				734	8.2
45				101	265	1						165	201	1				713	8.0
50				79	262	1					1	150	217	3				499	5.6
55				52	193	1					3	103	145	2				555	6.2
60				57	241						2	130	125					398	4.5
65				59	181	1						62	95					260	2.9
70				32	138							39	51					228	2.6
75				29	142	1						18	38					158	1.8
80+				27	109							11	11					122	1.4
				18	103								1					8928	
TOTAL	56	39	80	1100	2954	255	95	62	44	92	185	1767	1979	138	52	30			
PERCENT	0.63	0.44	0.90	12.32	33.09	2.86	1.06	0.69	0.49	1.03	2.07	19.79	22.17	1.55	0.58	0.34			100.00
STATION AVERAGE = 34.93 CM/S																			

Table B-10 Station 52 Joint Frequency Distribution of Current Speed and Direction - May 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0		35	62	30	26	38	40	52	28	22	23	28	38	28	28	24	30	532	5.8
5		14	16	26	39	64	60	41	32	33	36	38	62	51	31	24	14	581	6.3
10		10	9	31	70	104	72	31	2	8	18	48	131	97	38	20	4	693	7.6
15		1	4	17	75	133	66	19	3		2	40	158	142	25	4	1	690	7.5
20			1	14	97	170	55	14	2			21	167	167	13			721	7.9
25				4	105	312	20	14	1			15	194	213	12			890	9.7
30				4	90	210	15	2				3	186	183	5			698	7.6
35				4	103	211	8					1	153	189	4			673	7.3
40				3	169	219	2	1				1	160	205	1			761	8.3
45					177	235						1	130	149				692	7.6
50				2	133	208		1					109	140				593	6.5
55					102	171		1					74	87				435	4.7
60					65	152							93	84				394	4.3
65					49	109							69	55	1			283	3.1
70					38	106		1					29	39				213	2.3
75					27	77	1						10	9				124	1.4
80*			2		35	123	15	13					1					189	2.1
TOTAL		60	94	135	1400	2642	354	190	68	63	79	196	1764	1838	158	72	49	9162	
PERCENT		0.65	1.03	1.47	15.28	28.84	3.86	2.07	0.74	0.69	0.86	2.14	19.25	20.06	1.72	0.79	0.53		100.00
STATION AVERAGE =		35.34 CM/S																	

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Table B-11 Station 52 Joint Frequency Distribution of Current Speed and Direction - June 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337		
0	20	14	23	64	106	165	110	101	97	104	88	60	42	22	23	11	1050	11.8
5	1	2	3	72	292	139	36	29	18	45	151	319	99	18	2		1226	13.8
10			1	95	474	95	16	2	4	12	48	530	168				1445	16.3
15				58	366	45				5	16	333	104				927	10.4
20				82	428	24				3	22	290	140				989	11.1
25				80	258	9					14	268	138				767	8.6
30				88	259	9					6	191	139				692	7.8
35				52	176	2					6	117	75				428	4.8
40				83	175	1					3	104	74				440	4.9
45				72	161							58	40				331	3.7
50				60	130							47	7				244	2.7
55				29	78							30	8				145	1.6
60				23	63							23	5				114	1.3
65				16	28							7	1				52	0.6
70				5	18												23	0.3
75				6	3												9	0.1
80+				3	5												8	0.1
TOTAL	21	16	27	888	3020	489	162	132	119	169	354	2377	1040	40	25	11	8890	
PERCENT	0.24	0.18	0.30	9.99	33.97	5.50	1.82	1.48	1.34	1.90	3.98	26.74	11.70	0.45	0.28	0.12		100.00
STATION AVERAGE = 22.06 CM/S																		

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Table B-12 Station 52 Joint Frequency Distribution of Current Speed and Direction - July 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		1010	11.1
5	7	16	27	62	97	161	145	125	132	106	68	38	10	8	11	5		1051	11.4
10		1	8	68	162	204	59	34	23	77	218	168	22	7				1245	13.6
15			1	77	329	177	7			7	106	482	57	2				1206	13.1
20				61	416	61					21	553	94					1621	17.7
25				115	710	42					4	565	184	1				1259	13.7
30				134	570	2					2	343	207	1				793	8.6
35				102	334	4					2	190	161					479	5.2
40				77	227							102	73					270	2.9
45				56	120							59	35					157	1.7
50				28	83							29	17					69	0.8
55				14	33							11	11					12	0.1
60				1	6							4	1					0	0.0
65																		0	0.0
70																		0	0.0
75																		0	0.0
80+																		0	0.0
TOTAL	7	17	36	795	3087	651	211	159	155	190	421	2544	872	19	11	5		9180	
PERCENT	0.08	0.19	0.39	8.66	33.63	7.09	2.30	1.73	1.69	2.07	4.59	27.71	9.50	0.21	0.12	0.05		100.00	
STATION AVERAGE = 20.03 CM/S																			

Table B-13 Station 52 Joint Frequency Distribution of Current Speed and Direction - August 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		1198	13.0
5	9	22	35	82	125	176	112	95	104	115	154	91	48	16	7	7		882	9.6
10		1	2	83	176	89	28	21	15	30	103	233	95	6				1203	13.1
15				99	311	73	8	4	3	17	77	448	160	3				1022	11.1
20				90	341	32				1	26	409	119	4				1299	14.1
25				126	519	14					3	449	172			16		1205	13.1
30			5	130	601	10	1	1				323	132	2				902	9.8
35				113	410	7						230	142					416	4.5
40				63	192							113	48					358	3.9
45				51	157							110	40					249	2.7
50				36	107							78	28					186	2.0
55				27	91							55	13					96	1.0
60				15	44							27	10					91	1.0
65				15	34							28	14					60	0.7
70				11	25							16	8					19	0.2
75				3	8							4	4					5	0.1
80+					2							2	1					4	0.0
					2		1					1							
TOTAL	9	23	42	944	3145	401	150	121	122	163	363	2617	1034	31	7	23		9195	
PERCENT	0.10	0.25	0.46	10.27	34.20	4.36	1.63	1.32	1.33	1.77	3.95	28.46	11.25	0.34	0.08	0.25		100.00	
STATION AVERAGE = 21.98 CM/S																			

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Table B-14 Station 52 Joint Frequency Distribution of Current Speed and Direction - September 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		3865	43.3
5	29	53	85	463	789	236	96	74	85	133	281	838	534	88	38	43		1649	18.5
10		9	15	270	520	47	3			1	29	481	262	12				1127	12.6
15		1	24	238	411							3	268	180	2			839	9.4
20				136	348	1							229	125				797	8.9
25				117	289							1	242	117		31		438	4.9
30				51	152							1	162	72				155	1.7
35				19	56							2	60	18				39	0.4
40				3	17								8	11				12	0.1
45					1								9	2				3	0.0
50													2	1				0	0.0
55																		2	0.0
60													1					1	0.0
65																		1	0.0
70				1														0	0.0
75																		0	0.0
80+																		0	0.0
TOTAL	29	63	124	1298	2583	284	99	74	85	134	317	2302	1322	102	38	74		8928	
PERCENT	0.32	0.71	1.39	14.54	28.93	3.18	1.11	0.83	0.95	1.50	3.55	25.78	14.81	1.14	0.43	0.83		100.00	
STATION AVERAGE =		9.22 CM/S																	

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Table B-15 Station 52 Joint Frequency Distribution of Current Speed and Direction - October 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337		
0	12	25	34	511	1438	388	162	130	151	191	339	1088	717	43	17	15	5261	57.1
5				201	665	32	11	3	4	12	56	447	260				1691	18.3
10				59	294	30	1			4	37	224	128				777	8.4
15				24	157	7					9	126	56				379	4.1
20				28	175						3	121	44			32	403	4.4
25				25	130						4	85	51				295	3.2
30				36	119							54	37				246	2.7
35				18	54							18	14				104	1.1
40				9	21							8	2				40	0.4
45				6	10												16	0.2
50					1								1				2	0.0
55													1				1	0.0
60														1			1	0.0
65																	0	0.0
70																	0	0.0
75																	0	0.0
80+																	0	0.0
TOTAL	12	25	34	917	3064	457	174	133	155	207	448	2173	1310	43	17	47	9216	
PERCENT	0.13	0.27	0.37	9.95	33.25	4.96	1.89	1.44	1.68	2.25	4.86	23.58	14.21	0.47	0.18	0.51		100.00
STATION AVERAGE =	7.03 CM/S																	

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Table B-16 Station 23 Joint Frequency Distribution of Current Speed and Direction - December 1983

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		45	0.8
5	4	4	4	2	1	1	2	1	10	4	2	4	2	1	2	1		34	0.6
10			1	6			4		12		1	10						34	0.6
15			2	22	6	9	24	17	27	11	7	9	1	1				136	2.5
20		1		4	13	48	69	81	61	45	15	7	2		1			347	6.3
25	1			5	30	66	83	103	65	55	45	23		4	3	10		493	9.0
30	6			10	43	100	175	117	109	81	84	16	6	2				837	15.2
35	2		1	20	61	215	258	220	100	60	66	18	10	1				1032	18.8
40		2		29	82	156	259	209	45	68	29	19	8					906	16.5
45				13	98	181	273	112	27	26	15	36	7					788	14.3
50	1			5	59	111	184	32	11	17	18	15	4					457	8.3
55			1	4	19	89	74	4	3	12	10	1						217	3.9
60				1	9	85	31			7	3							136	2.5
65				1	2	21	11			4	17							56	1.0
70				2	1						7							10	0.2
75				1										1				2	0.0
80+																		0	0.0
TOTAL	14	7	9	125	424	1170	1447	896	470	390	319	158	40	10	6	11		5496	
PERCENT	0.25	0.13	0.16	2.27	7.71	21.29	26.33	16.30	8.55	7.10	5.80	2.87	0.73	0.18	0.11	0.20		100.00	
STATION AVERAGE = 34.31 CM/S																			

Table B-17 Station 23 Joint Frequency Distribution of Current Speed and Direction - January 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		129	1.4
5	2		1	4	10	18	26	11	11	6	11	8	1	4	6	10		290	3.1
10	13		3	4	26	42	27	26	35	20	7	4	7	16	29	31		873	9.5
15	38	27	25	25	46	78	69	77	128	105	40	26	22	51	48	68		1195	13.0
20	78	54	44	41	54	61	95	95	157	135	75	24	59	50	101	72		1226	13.3
25	36	41	54	49	79	38	87	148	200	144	76	35	52	42	70	75		1494	16.2
30	15	6	40	20	70	29	181	262	329	256	91	35	37	65	34	24		1223	13.3
35	10	9	7	14	38	54	153	152	307	288	101	44	15	23		8		795	8.6
40	2		10	21	18	39	98	92	186	237	69	23						695	7.5
45			2	28	49	73	85	50	127	216	52	13						539	5.8
50				45	39	49	63	45	89	168	35	6						310	3.4
55				33	26	20	30	23	48	104	26							210	2.3
60				8	8	24	6	22	53	69	20							134	1.5
65				3	5	12	9	17	46	35	7							35	0.4
70				1	6		1	1	19	7								26	0.3
75				2	12				5	7								24	0.3
80+				1	14				2	7								18	0.2
				1	17													9216	
TOTAL	194	137	186	300	517	537	930	1021	1742	1804	610	218	193	251	288	288		9216	
PERCENT	2.11	1.49	2.02	3.26	5.61	5.83	10.09	11.08	18.90	19.57	6.62	2.37	2.09	2.72	3.13	3.13		100.00	
STATION AVERAGE = 29.59 CM/S																			

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Table B-18 Station 23 Joint Frequency Distribution of Current Speed and Direction - February 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT		
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360	
0																		199	2.3	
5	10			5	2			1	6	11	14	34	25	10	24	13	33	11	455	5.3
10	6	21	11	2	13	14	46	56	76	62	35	43	45	11	9	5		1360	15.7	
15	5	10	20	8	40	133	181	185	224	226	140	98	65	18	5	2		1934	22.4	
20	3	13	21	10	50	187	290	289	250	306	245	154	98	16	2			1482	17.2	
25	11	14	32	5	49	158	220	231	261	128	181	107	79	2	2	2		1277	14.8	
30	2	10	14	1	43	164	217	127	202	158	136	112	59	21	11			878	10.2	
35		11	11	1	42	187	228	83	93	83	65	44	4	23	3			444	5.1	
40		4	1		19	101	123	46	42	41	37	15	5	10				283	3.3	
45					9	55	49	26	32	31	58	8	12	3				198	2.3	
50					16	35	10	5	16	47	36	9	16	8				72	0.8	
55					21	8	2		3	7	24	2	5					26	0.3	
60					4	7	1			3	11							5	0.1	
65											5							10	0.1	
70											9		1					6	0.1	
75											5		1					1	0.0	
80+											1							10	0.1	
TOTAL	37	83	115	29	306	1050	1373	1060	1213	1126	1014	602	419	125	68	20		8640		
PERCENT	0.43	0.96	1.33	0.34	3.54	12.15	15.89	12.27	14.04	13.03	11.74	6.97	4.85	1.45	0.79	0.23		100.00		
STATION AVERAGE =		23.02 CM/S																		

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Table B-19 Station 23 Joint Frequency Distribution of Current Speed and Direction - March 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		646	7.0
5	65	51	38	44	27	41	56	47	45	36	42	24	30	31	26	35		906	9.9
10	75	102	54	49	79	74	76	45	46	36	55	37	44	31	35	68		1580	17.2
15	99	111	97	100	112	176	118	82	72	64	82	106	75	62	116	100		1722	18.7
20	94	111	123	120	143	151	60	60	129	97	104	111	102	131	103	83		1294	14.1
25	37	50	102	89	127	111	74	44	125	48	72	96	93	74	77	75		1221	13.3
30	75	51	63	113	119	158	79	36	32	53	83	94	86	77	47	55		843	9.2
35	36	30	58	61	109	124	32	11	13	20	87	92	88	36	30	16		371	4.0
40	14	5	24	22	20	35	7	2	5	3	24	58	88	34	28	2		254	2.8
45	8	4	2	4	2	7	4		2	2	17	81	51	45	21	4		193	2.1
50		2				19	1			1	8	66	47	34	11	4		85	0.9
55	1	1	1			12					9	18	31	7	3	2		42	0.5
60			1			1					2	11	7		7	13		24	0.3
65	1				1							6	1		9	6		2	0.0
70	1						1											1	0.0
75												1						0	0.0
80+			1		1			1					1			3		7	0.1
TOTAL	506	519	563	611	739	909	509	327	469	360	585	801	752	562	513	466		9191	
PERCENT	5.51	5.65	6.13	6.65	8.04	9.89	5.54	3.56	5.10	3.92	6.36	8.72	8.18	6.11	5.58	5.07		100.00	
STATION AVERAGE = 20.94 CM/S																			

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Table B-20 Station 23 Joint Frequency Distribution of Current Speed and Direction - April 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		465	5.2
5	63	28	16	19	29	36	14	17	23	27	44	21	36	31	39	22		688	7.7
10	30	25	42	12	26	53	46	37	51	54	48	34	53	64	60	53		1588	17.8
15	77	83	56	53	71	98	134	116	68	133	128	110	120	129	119	93		1738	19.5
20	102	124	77	85	82	189	88	46	44	119	120	135	152	174	113	88		1177	13.2
25	40	43	48	50	96	104	42	46	36	71	72	117	135	116	96	65		1116	12.5
30	28	8	35	52	90	70	45	21	78	76	72	178	178	69	53	63		781	8.7
35	23	16	16	78	126	34	16	17	36	48	43	120	108	53	27	20		538	6.0
40	14	7	10	42	112	40	25	18	12	29	26	61	89	33	6	14		454	5.1
45	16	10	7	54	81	70	10			10	11	64	93	23		5		197	2.2
50	16	6	3	9	48	34	4					3	9	50	13		2	114	1.3
55	9	5		14	46	9	1							24		1	5	23	0.3
60	3			4	10	4								2				10	0.1
65				1	6	2								1				9	0.1
70					6	2						1						11	0.1
75					9	1						1						5	0.1
80*					3	2												14	0.2
					11	3												8928	
TOTAL	421	355	310	473	852	751	425	318	348	567	569	849	1041	705	514	430			
PERCENT	4.72	3.98	3.47	5.30	9.54	8.41	4.76	3.56	3.90	6.35	6.37	9.51	11.66	7.90	5.76	4.82			100.00
STATION AVERAGE = 22.41 CM/S																			

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Table B-21 Station 23 Joint Frequency Distribution of Current Speed and Direction - May 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		1084	11.8
5	50	46	47	212	43	54	59	63	58	62	79	83	75	53	51	49		1195	13.0
10	41	85	86	63	74	71	63	75	55	88	149	109	61	67	62	46		1817	19.8
15	110	80	92	115	100	133	117	109	87	91	131	161	127	109	143	112		1969	21.4
20	130	105	102	114	83	201	100	94	77	64	96	185	191	177	152	98		1571	17.1
25	43	89	85	113	129	180	111	51	70	49	49	174	150	136	100	42		985	10.7
30	15	17	32	58	125	154	28	17	25	20	51	142	144	78	59	20		329	3.6
35	4	4	3	9	46	44	4	1	1	1	25	57	79	30	20	1		133	1.4
40				6	14	4						8	43	40	13	5		65	0.7
45				1			1					4	28	25	5	1		20	0.2
50					1								5	10	4			8	0.1
55													4	3		1		0	0.0
60																		0	0.0
65																		0	0.0
70																		0	0.0
75				1														1	0.0
80+					1										1			2	0.0
										1								1	0.0
TOTAL	393	426	449	692	614	842	482	410	373	376	592	991	905	673	594	368		9180	
PERCENT	4.28	4.64	4.89	7.54	6.69	9.17	5.25	4.47	4.06	4.10	6.45	10.80	9.86	7.33	6.47	4.01		100.00	
STATION AVERAGE = 16.48 CM/S																			

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Table B-22

Station 23 Joint Frequency Distribution of Current Speed and Direction - June 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		295	3.3
5	11	17	17	38	35	11	15	11	8	24	8	21	9	7	28	35		519	5.9
10	37	41	15	31	20	24	46	37	33	38	32	33	30	25	30	47		1012	11.4
15	62	92	60	48	45	50	65	50	100	66	71	118	38	30	72	45		1108	12.5
20	51	71	87	66	74	97	61	51	40	33	60	79	60	73	139	66		1645	18.6
25	107	129	88	99	98	116	98	55	19	27	74	75	125	210	220	105		1349	15.2
30	92	125	70	105	134	82	57	15	9	12	44	77	117	155	147	108		1176	13.3
35	79	115	96	77	75	13	16	2	12	9	9	65	121	181	183	123		661	7.5
40	60	35	53	33	23	30	3		2	8	3	26	74	127	118	66		513	5.8
45	23	17	31	13	5	5	1		3	3		1	34	185	123	69		321	3.6
50	5	8	4							2	2		11	163	99	27		180	2.0
55	1	1	3							2	1		9	111	46	6		48	0.5
60										1	1		5	33	8			26	0.3
65													3	22	1			5	0.1
70														5				2	0.0
75														2				0	0.0
80+																		0	0.0
TOTAL	528	651	524	510	509	428	362	221	226	225	305	495	636	1329	1214	697		8860	
PERCENT	5.96	7.35	5.91	5.76	5.74	4.83	4.09	2.49	2.55	2.54	3.44	5.59	7.18	15.00	13.70	7.87		100.00	
STATION AVERAGE = 25.36 CM/S																			

Table B-23 Station 23 Joint Frequency Distribution of Current Speed and Direction - July 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																	TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337	360		
0	104	85	96	87	50	71	55	50	52	67	47	42	45	126	125	130	1240	13.6	
5	244	234	169	134	79	158	148	52	32	94	159	103	183	212	203	218	2422	26.6	
10	282	196	69	151	92	148	139	104	60	65	104	163	227	406	379	265	2850	31.3	
15	75	63	78	107	23	9	9	29	40	45	51	111	148	254	188	106	1336	14.7	
20	22	33	42	35			1	8	11	5	34	47	87	256	118	44	743	8.2	
25	6	25	18	4					5			10	54	128	56	8	314	3.4	
30		12	12						2			9	23	77	10		145	1.6	
35		1							1				6	16	1		25	0.3	
40													14	5			19	0.2	
45									1				2				3	0.0	
50																	0	0.0	
55									2								2	0.0	
60																	0	0.0	
65									1								1	0.0	
70									1								1	0.0	
75																	0	0.0	
80+									11								11	0.1	
TOTAL	733	649	484	518	244	386	352	243	219	276	395	485	789	1480	1080	779	9112		
PERCENT	8.04	7.12	5.31	5.68	2.68	4.24	3.86	2.67	2.40	3.03	4.33	5.32	8.66	16.24	11.85	8.55		100.00	
STATION AVERAGE = 12.42 CM/S																			

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Table B-24

Station 23 Joint Frequency Distribution of Current Speed and Direction - August 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		135	3.6
5	3	6	3	2		1	2	14	24	21	19	4	9	14	10	3		509	13.6
10	12	11	2	7	3	2	10	26	24	83	102	58	12	58	69	30		874	23.4
15	19	27	23	11	5	16	60	97	52	49	45	56	54	200	106	54		705	18.9
20	3	23	21	52	16	36	38	31	78	18	30	28	94	158	59	20		952	25.5
25		3	15	108	70	60	84	110	91	45	58	48	50	167	40	3		417	11.2
30			1	22	87	36	13	71	22	22	45	18	26	48	6			126	3.4
35			2	15	31	7		9		5		14	8	35				12	0.3
40					5							2	3	2				0	0.0
45																		0	0.0
50																		0	0.0
55																		0	0.0
60																		0	0.0
65																		0	0.0
70																		0	0.0
75																		0	0.0
80+																		0	0.0
TOTAL	37	70	67	217	217	158	207	358	291	243	299	228	256	682	290	110		3730	
PERCENT	0.99	1.88	1.80	5.82	5.82	4.24	5.55	9.60	7.80	6.51	8.02	6.11	6.86	18.28	7.77	2.95		100.00	
STATION AVERAGE = 17.32 CM/S																			

Table B-25 Station 29 Joint Frequency Distribution of Current Speed and Direction - December 1983

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT		
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360	
0																				
5			2		4	5	11	4	5	5	5	1	1				1	44	0.8	
10		2	1							3	8	8	6	2	1		2		34	0.6
15			5	3	2	2	1	3	4	5	55	26	7	11	7	2		133	2.4	
20			2	16	6	21	16	17	14	33	43	63	21	28	17	7	4	308	5.5	
25		4	2	4	5	26	15	14	12	42	31	64	27	60	28	5	6	345	6.2	
30		5	5	5	17	36	37	47	46	102	109	99	56	23	16	14	7	624	11.2	
35		1	2	10	35	62	81	43	62	137	127	142	49	10		2	8	771	13.8	
40					21	36	53	44	76	101	126	144	39				6	646	11.6	
45		2			4	32	63	51	107	167	138	84	52				1	701	12.6	
50						19	57	43	91	167	86	39	29					531	9.5	
55						26	46	52	99	126	58	12	4					423	7.6	
60						16	47	42	90	183	83	9						470	8.4	
65						2	34	36	22	68	42	5						209	3.7	
70							45	37	26	59	1							168	3.0	
75							36	35	21	18	5							115	2.1	
80+							22	11	8	3	9							53	0.9	
							2	1			1			1				5	0.1	
TOTAL	14	19	38	94	283	567	480	686	1224	927	694	287	134	68	32	33		5580		
PERCENT	0.25	0.34	0.68	1.68	5.07	10.16	8.60	12.29	21.94	16.61	12.44	5.14	2.40	1.22	0.57	0.59			100.00	
STATION AVERAGE = 39.97 CM/S																				

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Table B-26 Station 29 Joint Frequency Distribution of Current Speed and Direction - January 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		275	3.0
5	21	30	21	7	9	19	8	18	10	21	19	17	15	11	16	33	369	4.0	
10	18	37	18	11	24	28	21	24	32	20	41	22	20	19	17	17	865	9.4	
15	37	37	18	30	33	25	13	27	63	85	139	78	120	67	43	50	1158	12.6	
20	19	62	40	31	20	10	33	61	79	96	208	160	176	106	29	28	949	10.3	
25	14	57	46	29	3	12	31	66	67	80	232	180	73	38	10	11	1362	14.8	
30	20	58	53	65	1	9	49	127	57	166	326	305	100	15	3	8	1364	14.8	
35	7	26	53	65	5	12	64	81	93	178	407	303	56	12		2	996	10.8	
40	3	9	37	35	6	10	42	47	58	137	329	267	13	1		2	897	9.7	
45		2	8	89	15	13	20	38	39	125	312	230	3			3	506	5.5	
50			1	72	6	6	2	34	22	95	171	97					198	2.1	
55			1	30	5	4	1	9	7	36	79	26					168	1.8	
60				21		1			4	37	75	28		2			84	0.9	
65				7	1					46	29	1					17	0.2	
70				2						12	2			1			5	0.1	
75				2						3							2	0.0	
80+														2			1	0.0	
TOTAL	139	318	296	496	128	149	284	532	531	1137	2369	1714	576	275	118	154	9216		
PERCENT	1.51	3.45	3.21	5.38	1.39	1.62	3.08	5.77	5.76	12.34	25.71	18.60	6.25	2.98	1.28	1.67	100.00		
STATION AVERAGE = 28.71 CM/S																			

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Table B-27 Station 29 Joint Frequency Distribution of Current Speed and Direction - February 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		539	6.3
5	79	12	12	31	18	31	27	42	34	39	70	55	28	21	20	20	409	4.8	
10	9	12	6	38	33	20	28	45	44	43	34	31	23	10	22	11	844	9.8	
15	25	26	17	45	44	60	62	78	106	101	83	62	44	52	22	17	1456	16.9	
20	11	13	8	43	35	93	171	111	114	156	253	214	104	56	46	28	1528	17.8	
25	8	5	4	6	14	100	171	120	129	134	322	317	157	19	17	5	1488	17.3	
30	11	9	29	16	6	105	105	137	113	178	353	288	108	9	12	9	1095	12.7	
35	11	17	13	16	2	50	119	68	80	133	256	235	68	3	7	17	633	7.4	
40	6	2		3	6	58	72	69	57	97	84	138	25	3	9	4	424	4.9	
45					16	70	36	30	26	49	67	122	4		4		131	1.5	
50						15	1	5	2	26	8	67	7				25	0.3	
55						5				8	4	8					7	0.1	
60										3	2	2					0	0.0	
65																	0	0.0	
70																	0	0.0	
75																	0	0.0	
80*											5	7					12	0.1	
TOTAL	160	96	89	198	174	607	792	705	705	967	1541	1546	568	173	159	111	8591		
PERCENT	1.86	1.12	1.04	2.30	2.03	7.07	9.22	8.21	8.21	11.26	17.94	18.00	6.61	2.01	1.85	1.29	100.00		
STATION AVERAGE = 23.63 CM/S																			

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Table B-28

Station 29 Joint Frequency Distribution of Current Speed and Direction - March 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																	TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337	360		
0	99	45	57	46	44	58	65	72	40	49	54	80	62	65	51	52	939	10.2	
5	67	56	71	58	46	38	35	28	27	44	50	65	84	104	77	55	905	9.8	
10	124	130	93	95	45	41	41	42	39	61	95	115	196	208	154	123	1602	17.4	
15	162	86	96	80	53	31	61	52	49	73	120	208	243	294	233	172	2013	21.8	
20	67	30	52	62	23	41	51	42	48	70	111	176	220	180	131	81	1385	15.0	
25	24	9	25	63	22	45	41	31	22	52	120	329	220	116	56	91	1266	13.7	
30	13	3	5	22	8	37	15	13	23	24	69	160	122	41	39	24	618	6.7	
35	7	1	5	6	13	17	3	15	7	3	17	39	66	22	21	14	256	2.8	
40	7		2	6	10	16		5	5	7	17	5	44	19	12	2	157	1.7	
45						2				10	7		11	13			43	0.5	
50		1				1				8	6			2			18	0.2	
55										3	1						4	0.0	
60	1			1		1							1			1	5	0.1	
65																	0	0.0	
70																	1	0.0	
75																	1	0.0	
80*							1									2	3	0.0	
TOTAL	571	361	407	438	265	328	312	300	260	404	667	1178	1269	1064	776	616	9216		
PERCENT	6.20	3.92	4.42	4.75	2.88	3.56	3.39	3.26	2.82	4.38	7.24	12.78	13.77	11.55	8.42	6.68		100.00	
STATION AVERAGE = 18.60 CM/S																			

Table B-29 Station 29 Joint Frequency Distribution of Current Speed and Direction - April 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337		
0	70	35	46	48	42	57	34	31	50	40	48	69	57	39	39	53	758	8.5
5	41	29	22	26	38	58	32	21	29	46	76	60	41	38	61	34	652	7.3
10	67	58	52	49	71	108	65	55	50	107	106	138	78	104	112	66	1286	14.4
15	42	79	48	72	88	122	70	39	61	98	142	156	138	110	118	58	1441	16.1
20	37	30	37	55	55	110	46	37	31	99	134	185	172	138	108	36	1310	14.7
25	25	23	20	33	90	81	43	37	35	119	173	290	215	90	66	37	1377	15.4
30	6		15	33	49	40	23	10	25	60	134	284	160	105	93	32	1069	12.0
35	12	4	4	24	21	19	4	8	24	23	99	125	77	44	24	19	531	5.9
40	19	4	3	20	25	11			18	28	40	59	33	12	16	7	295	3.3
45		7	5	17	15	16				16	19	25		3	6	8	137	1.5
50		1	1	6	7	19					2	3		3			42	0.5
55				2	3	8					1	1		1	2		18	0.2
60						5						1					6	0.1
65														1			1	0.0
70										1		1				1	3	0.0
75																	0	0.0
80+				1							1						2	0.0
TOTAL	319	270	253	386	504	654	317	238	323	637	975	1397	971	688	646	350	8928	
PERCENT	3.57	3.02	2.83	4.32	5.65	7.33	3.55	2.67	3.62	7.13	10.92	15.65	10.88	7.71	7.24	3.92		100.00

STATION AVERAGE = 21.64 CM/S

Table B-30 Station 29 Joint Frequency Distribution of Current Speed and Direction - May 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		598	6.5
5	38	27	12	19	32	31	52	52	39	42	38	48	38	52	39	39		803	8.7
10	30	29	27	22	46	49	46	44	48	65	76	63	52	66	77	63		1498	16.3
15	75	86	39	29	51	109	126	115	91	93	101	89	132	123	134	105		1529	16.6
20	112	91	41	33	50	88	69	68	65	57	146	111	173	187	123	115		1212	13.2
25	47	62	45	34	47	59	43	70	82	61	119	114	140	134	102	53		1081	11.8
30	48	40	46	53	32	68	51	72	62	84	73	135	119	108	59	31		867	9.4
35	43	16	25	35	28	60	40	64	56	51	78	117	110	58	64	22		545	5.9
40	19	4	5	13	7	26	22	17	25	25	88	118	87	44	36	9		450	4.9
45	4		5	13	4	25	3	5	15	29	82	97	90	42	26	10		269	2.9
50				16		1		1	11	20	63	47	43	30	35	2		126	1.4
55		1		3					4	9	29	25	17	26	12			67	0.7
60									1	7	17	6	13	20	3			54	0.6
65									1	7	13	6	12	15				20	0.2
70									1	4	8	1	4	2				14	0.2
75										3	2	5	4					14	0.2
80+									1		1	3	9					45	0.5
TOTAL	416	356	245	270	298	516	452	508	502	557	935	1008	1063	907	710	449		9192	
PERCENT	4.53	3.87	2.67	2.94	3.24	5.61	4.92	5.53	5.46	6.06	10.17	10.97	11.56	9.87	7.72	4.88		100.00	
STATION AVERAGE = 23.05 CM/S																			

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Table B-31 Station 29 Joint Frequency Distribution of Current Speed and Direction - June, 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		274	3.1
5	11	21	10	18	13	30	22	29	15	9	13	17	27	18	7	14		561	6.3
10	55	40	32	34	17	38	27	14	32	38	27	41	64	39	36	27		897	10.1
15	90	69	56	64	67	54	32	21	35	42	53	43	56	90	44	81		858	9.6
20	106	44	11	20	27	45	33	17	8	34	52	52	74	129	138	68		1078	12.1
25	55	21	11	25	8	14	22	16	5	23	38	57	126	214	295	148		912	10.3
30	18	17	19	23	1			2	3	30	24	51	122	267	212	123		858	9.6
35	12	13	11	13	1				1	7	10	30	130	325	182	123		693	7.8
40		1		3						1	4	40	154	264	147	79		892	10.0
45												37	246	378	156	75		625	7.0
50												19	200	269	102	35		430	4.8
55												6	137	177	90	20		229	2.6
60												2	52	120	52	3		190	2.1
65													42	109	37	2		138	1.6
70												1	32	80	25			103	1.2
75												1	22	68	12			57	0.6
80+													9	28	20			102	1.1
													9	66	27				
TOTAL	347	226	150	200	134	181	136	99	99	184	221	397	1502	2641	1582	798		8897	
PERCENT	3.90	2.54	1.69	2.25	1.51	2.03	1.53	1.11	1.11	2.07	2.48	4.46	16.88	29.68	17.78	8.97		100.00	
STATION AVERAGE = 31.38 CM/S																			

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Table B-32 Station 29 Joint Frequency Distribution of Current Speed and Direction - July, 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		674	7.3
5	17	64	68	87	57	58	46	52	42	45	36	30	23	19	16	14		1287	14.0
10	102	145	85	68	58	74	35	33	56	86	105	94	74	70	101	101		1479	16.1
15	174	174	140	79	60	46	17	15	7	27	47	97	67	94	201	234		1236	13.5
20	133	139	98	72	63	28	1				6	10	68	156	265	197		1412	15.4
25	123	72	91	124	67	8						28	71	195	273	360		1172	12.8
30	110	46	58	86	33	17						16	29	217	240	320		1028	11.2
35	107	51	19	57	28	12						8	11	128	296	311		509	5.5
40	27	16	19	17	3							4	5	80	219	119		233	2.5
45	1	2	12	7								9	4	48	117	33		101	1.1
50			8	2								8	20	16	41	6		45	0.5
55			4	1								1	13	8	17	1		6	0.1
60														6				0	0.0
65																		0	0.0
70																		0	0.0
75																		0	0.0
80+																		0	0.0
TOTAL	794	709	602	600	369	243	99	100	105	158	194	305	385	1037	1786	1696		9182	
PERCENT	8.65	7.72	6.56	6.53	4.02	2.65	1.08	1.09	1.14	1.72	2.11	3.32	4.19	11.29	19.45	18.47		100.00	
STATION AVERAGE = 20.08 CM/S																			

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Table B-33 Station 29 Joint Frequency Distribution of Current Speed and Direction - August 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		483	9.9
5	35	7	14	14	18	52	37	44	40	21	26	39	48	34	24	30		936	19.2
10	55	33	23	26	76	76	122	40	40	55	59	59	63	91	71	47		976	20.0
15	68	15	10	8	36	51	58	43	39	55	58	87	91	203	89	65		864	17.7
20	24	7	6		13	50	72	24	36	38	57	76	129	163	126	43		774	15.9
25	12				33	40	26	10	10	17	70	60	197	186	90	23		348	7.1
30					10	5	6	4	8		50	61	105	39	57	3		247	5.1
35					4	9	17	34	19	5	17	41	61	23	17			96	2.0
40								7	5	10	12	21	25	12	4			106	2.2
45										19	42	14	23	8				30	0.6
50										1	3	1	9	16				6	0.1
55											5	1						7	0.1
60											7							4	0.1
65											4							0	0.0
70																		0	0.0
75																		0	0.0
80+																		0	0.0
TOTAL	194	62	53	48	190	283	338	206	197	221	410	460	751	775	478	211		4877	
PERCENT	3.98	1.27	1.09	0.98	3.90	5.80	6.93	4.22	4.04	4.53	8.41	9.43	15.40	15.89	9.80	4.33		100.00	
STATION AVERAGE = 16.53 CM/S																			

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Table B-34 Station 36 Joint Frequency Distribution of Current Speed and Direction - December 1983

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		116	7.1
5	22	4	4	3	5	3	5	13	10	8	2	5	3	23	1	5		75	4.6
10	1	3	1	3	10	19	6	12	5	3	4	3	2		1	2		180	11.1
15	3	4	1	8	19	34	24	16	19	21	12	10	4	3	2			237	14.6
20		2	6		3	17	49	44	56	17	34	7	2					205	12.6
25			6	1	4	4	22	74	70	12	7	4	1					330	20.3
30					2	10	34	113	126	29	14	2						230	14.2
35					3	6	31	76	91	14	6	3						110	7.3
40						14	9	19	57	15	4							112	6.9
45						3	5	9	46	38	11							16	1.0
50							1	2	2	11								1	0.1
55		1																1	0.1
60									1									1	0.1
65										1								1	0.1
70																		0	0.0
75																		0	0.0
80+																	1	2	0.1
TOTAL	26	14	10	15	46	110	186	379	483	169	94	34	12	27	4	7		1624	
PERCENT	1.60	0.86	1.11	0.92	2.83	6.77	11.45	23.34	29.74	10.41	5.79	2.09	0.74	1.66	0.25	0.43		100.00	
STATION AVERAGE = 23.84 CM/S																			

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Table B-35 Station 36 Joint Frequency Distribution of Current Speed and Direction - January 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		477	5.2
5	40	5	26	60	11	41	31	40	85	23	11	17	45	13	15	6		676	7.3
10	3	6	31	47	18	42	38	124	125	34	28	40	78	38	9	15		1667	18.1
15	12	12	45	65	51	91	72	329	302	86	60	56	132	317	20	17		1439	15.6
20	16	22	31	57	52	55	82	264	370	69	59	81	113	152	6	10		1062	11.5
25	5	12	27	49	21	30	66	261	324	105	46	58	31	24	1	2		1018	11.0
30	2	20	44	22	22	33	59	233	301	208	22	37	13	2				614	6.7
35		2	5	17	8	18	49	147	194	152	11	11						447	4.9
40				7	5	23	28	179	137	57	5	6						345	3.7
45	1			1		9	23	130	118	58	1	4						417	4.5
50						1	39	179	138	57		3						386	4.2
55							56	171	121	31	7							300	3.3
60							73	145	67	9	6							156	1.7
65							8	66	78	4								67	0.7
70							2	21	42	2								27	0.3
75							2	12	12	1								28	0.3
80+								18	10									90	1.0
							71	19										9216	
TOTAL	79	79	209	325	188	343	628	2398	2443	896	256	313	412	546	51	50		9216	
PERCENT	0.86	0.86	2.27	3.53	2.04	3.72	6.81	26.02	26.51	9.72	2.78	3.40	4.47	5.92	0.55	0.54		100.00	
STATION AVERAGE = 26.09 CM/S																			

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Table B-36 Station 36 Joint Frequency Distribution of Current Speed and Direction - February 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0	31		3	21	124	16	14	25	178	67	63	52	67	287				948	11.0
5		6	5	20	46	7	15	19	394	121	60	40	95	129				957	11.1
10	14	2	1	17	39	58	17	46	504	145	106	36	33	187				1205	13.9
15	15		8	13	69	35	28	165	397	28	70	9	38	135				1010	11.7
20				14	35	20	55	286	286	16	13	9	48	85	2			869	10.1
25				6	17	10	65	285	207	28	1	6	28	97	7			757	8.8
30				1	3	2	73	205	174	29			3	53	13			556	6.4
35							5	61	268	140	41	1	1	8				525	6.1
40								77	333	253	56		1	3	1			724	8.4
45								52	290	207	44	2	1	3				599	6.9
50								33	163	107	3	2						308	3.6
55								8	70	36	1	3		3				121	1.4
60									13	7		3		2	1			26	0.3
65									4	6		1			1			12	0.1
70									3			1						4	0.0
75									3									6	0.1
80+					2		1	6	1						3			13	0.2
TOTAL	60	8	17	92	335	153	499	2184	2897	579	327	153	317	996	23	0		8640	
PERCENT	0.69	0.09	0.20	1.06	3.88	1.77	5.78	25.28	33.53	6.70	3.78	1.77	3.67	11.53	0.27	0.00		100.00	
STATION AVERAGE = 23.96 CM/S																			

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Table B-37 Station 36 Joint Frequency Distribution of Current Speed and Direction - March 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE															TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315			337
0	394	66	170	490	164	111	86	181	114	83	2	9	20	150		42	2082	22.6
5	176	13	92	248	156	133	204	329	294	60	5	15	11	36		108	1880	20.4
10	108	18	64	141	58	81	196	454	515	207	27	50	25	3		128	2075	22.5
15	105	34	25	74	23	80	162	334	450	170	30	27	16			126	1656	18.0
20	21	14	5	40	15	23	84	114	127	55	16	28	10			119	671	7.3
25	2	14	2	18	13	18	49	94	115	45	7	45	8			16	446	4.8
30																		
35		2		1	6	10	15	43	136	48	5	12	4				282	3.1
40					1	5	1	10	38	17	2	2					76	0.8
45					2			1	9	16	4					1	33	0.4
50												1					1	0.0
55																	0	0.0
60																	0	0.0
65																	0	0.0
70																	0	0.0
75																	0	0.0
80*																	0	0.0
			1	7	1	2										3	14	0.2
TOTAL	806	162	365	1013	440	461	797	1560	1798	701	99	188	94	189	0	543	9216	
PERCENT	8.75	1.76	3.96	10.99	4.77	5.00	8.65	16.93	19.51	7.61	1.07	2.04	1.02	2.05	0.00	5.89		100.00
STATION AVERAGE = 12.68 CM/S																		

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Table B-38 Station 36 Joint Frequency Distribution of Current Speed and Direction - April 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																			
5	80	39	76	31	1					212	85	63	3			2	39	631	21.5
10	2	14	4	23						10	167	38	76	13				347	11.8
15		4	1	23						99	180	34	80	33				454	15.5
20				13						248	167	51	15	10				504	17.2
25								1	304	64	15	2						386	13.1
30								3	366	32	2							403	13.7
35								3	146	14								163	5.6
40								2	29									31	1.1
45								1	3									4	0.1
50									1									1	0.0
55									1									1	0.0
60									1									1	0.0
65																		0	0.0
70																		0	0.0
75																		0	0.0
80*																	3	10	0.3
TOTAL	82	59	85	91	1	0	0	10	1208	836	225	236	59	0	2	42	2936		
PERCENT	2.79	2.01	2.90	3.10	0.03	0.00	0.00	0.34	41.14	28.47	7.66	8.04	2.01	0.00	0.07	1.43	100.00		
STATION AVERAGE = 15.97 CM/S																			

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Table B-39 Station 36 Joint Frequency Distribution of Current Speed and Direction - June 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		959	10.8
5	65	76	48	38	55	47	46	51	46	43	50	70	79	106	76	63	1045	20.8	
10	111	123	119	101	66	100	83	129	146	94	101	158	161	133	128	92	2194	24.7	
15	166	144	174	104	100	103	90	103	139	129	120	156	124	236	176	130	1479	16.6	
20	114	167	131	85	79	43	62	39	80	65	81	52	45	114	155	167	1277	14.4	
25	122	106	82	89	36	24	82	76	66	55	38	19	45	92	156	189	784	8.8	
30	64	76	60	32	3	15	61	19	52	32	23	14	43	79	124	87	279	3.1	
35		13	22	2		4	11		19	20	13	13	13	61	50	38	51	0.6	
40									2	2	3	6	2	4	26	6	16	0.2	
45												1		3	7	5	0	0.0	
50																	0	0.0	
55																	0	0.0	
60																	0	0.0	
65																	0	0.0	
70																	0	0.0	
75																	0	0.0	
80+																	0	0.0	
TOTAL	642	705	636	451	339	336	435	417	550	440	429	489	512	828	898	777	8884		
PERCENT	7.23	7.94	7.16	5.08	3.82	3.78	4.90	4.69	6.19	4.95	4.83	5.50	5.76	9.32	10.11	8.75	100.00		
STATION AVERAGE = 14.64 CM/S																			

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Table B-40

Station 36 Joint Frequency Distribution of Current Speed and Direction - July 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337		
0	63	57	40	48	30	32	41	51	53	72	80	130	115	62	99	36	1009	11.1
5	147	181	105	81	55	48	29	40	93	80	136	131	189	161	167	139	1782	19.6
10	173	214	93	85	86	82	50	42	64	108	197	121	144	177	153	107	1896	20.8
15	155	144	67	56	50	43	28	33	50	106	132	80	134	160	181	166	1585	17.4
20	189	165	48	49	40	14	4	22	55	131	131	64	126	162	166	136	1502	16.5
25	87	76	7	19	9	1		6	36	59	34	20	37	178	137	104	810	8.9
30	19	39	1	1					6	39	36	12	32	81	2	25	293	3.2
35		10	1	1						21	35	7	21	56			152	1.7
40		1								13	35	2	5	9			65	0.7
45										10	3						13	0.1
50																	0	0.0
55																	0	0.0
60																	0	0.0
65																	0	0.0
70																	0	0.0
75																	0	0.0
80+																	0	0.0
TOTAL	833	887	362	340	270	220	152	194	357	639	819	567	803	1046	905	713	9107	
PERCENT	9.15	9.74	3.97	3.73	2.96	2.42	1.67	2.13	3.92	7.02	8.99	6.23	8.82	11.49	9.94	7.83	100.00	
STATION AVERAGE =	15.42 CM/S																	

Table B-41 Station 36 Joint Frequency Distribution of Current Speed and Direction - August 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																			
5	4	10	8	23	33	31	24	24	19	9	15	15	7			2		224	2.4
10	1	23	29	15	43	56	49	84	111	119	97	10						637	6.9
15		15	7	9	33	74	177	275	202	117	53							962	10.5
20		8	4	10	16	35	114	203	120	35	2							547	5.9
25		2	2	15	19	15	130	259	173	9								624	6.8
30				6		3	90	290	225	11								625	6.8
35							53	373	231	21								678	7.4
40						9	72	426	213	33								753	8.2
45						16	122	717	259	41						14		1169	12.7
50						10	166	636	265	31								1108	12.0
55							78	400	236	35								749	8.1
60							45	157	198	46								446	4.8
65							11	82	140	45								278	3.0
70							2	45	114	12								173	1.9
75							1	30	80	10								121	1.3
80+							1	14	37	9								61	0.7
							3	13	22	2						2		42	0.5
TOTAL	5	58	50	78	144	249	1138	4028	2645	585	167	25	7	0	4	14		9197	
PERCENT	0.05	0.63	0.54	0.85	1.57	2.71	12.37	43.80	28.76	6.36	1.82	0.27	0.08	0.00	0.04	0.15			100.00
STATION AVERAGE = 34.99 CM/S																			

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Table B-42 Station 36 Joint Frequency Distribution of Current Speed and Direction - September 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		189	2.1
5	9	19	16	11	18	15	8	7	3	1	4	8	8	24	23	15	522	5.8	
10	41	38	44	32	39	57	55	51	18	13	13	21	27	20	32	21	772	8.6	
15	41	88	83	49	46	92	80	66	41	35	38	25	37	32	10	9	789	8.8	
20	19	50	70	39	79	99	126	122	45	40	45	16	11	8	9	11	1052	11.8	
25	27	34	52	76	97	187	140	140	122	93	46	16	10	5	3	4	1032	11.6	
30	30	15	6	68	73	174	158	173	133	110	46	25	9	6	3	3	872	9.8	
35	30	4	6	15	11	128	123	248	112	107	52	15	7	3	9	2	772	8.6	
40	37	2	1	1		23	91	270	140	79	71	11	11	8	11	16	902	10.1	
45	69	10			1	11	77	368	186	51	45	15	8	4	5	52	740	8.3	
50	58	22					62	357	158	32	21	4	1			25	592	6.6	
55	89	28			1	1	30	207	163	29	12					32	357	4.0	
60	51	3					9	124	123	25	3					19	242	2.7	
65	24							62	118	9						29	65	0.7	
70								9	51	5							15	0.2	
75								1	11	3							4	0.0	
80+									4								11	0.1	
TOTAL	526	314	278	291	365	787	960	2206	1435	632	396	156	129	110	105	238	8928		
PERCENT	5.89	3.52	3.11	3.26	4.09	8.81	10.75	24.71	16.07	7.08	4.44	1.75	1.44	1.23	1.18	2.67	100.00		
STATION AVERAGE = 31.78 CM/S																			

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Table B-43

Station 36 Joint Frequency Distribution of Current Speed and Direction - October 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0																		475	5.2
5	9	19	16	40	32	40	39	125	43	32	13	9	7	5	28	18	878	9.6	
10	59	29	26	38	88	131	88	76	99	38	23	21	28	43	46	45	1319	14.3	
15	80	36	39	134	176	162	106	147	83	36	74	42	37	46	60	61	1140	12.4	
20	57	38	21	64	162	152	117	108	125	28	59	21	30	40	64	54	1472	16.0	
25	72	81	17	26	143	264	222	177	118	86	37	29	36	41	51	72	991	10.8	
30	104	76	12	23	66	166	90	102	94	77	32	23	9	23	35	59	819	8.9	
35	133	90	19	28	74	67	16	36	23	56	23	5	1	8	81	159	600	6.5	
40	141	58	4	35	53	9		2	1	19	34	4		1	75	164	510	5.5	
45	159	21		31	10	1			2	2	17	1			93	173	315	3.4	
50	92	6		15	4	1		1			13				15	168	140	1.5	
55	26	8	4	6	2	1			1		11					81	92	1.0	
60	26	7	15	5												39	118	1.3	
65	10	2	13	2											2	89	60	0.7	
70	6		12	1											3	38	70	0.8	
75	6		2	4											18	40	102	1.1	
80*	7		4												25	66	91	1.0	
	5		1	1											12	72	9192		
TOTAL	992	471	205	453	810	994	678	774	589	374	336	155	148	207	608	1398	9192		
PERCENT	10.79	5.12	2.23	4.93	8.81	10.81	7.38	8.42	6.41	4.07	3.66	1.69	1.61	2.25	6.61	15.21	100.00		
STATION AVERAGE = 25.48 CM/S																			

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Table B-44 Station 36 Joint Frequency Distribution of Current Speed and Direction - November 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337		
0	67	21	17	57	17	58	20	63	101	88	69	56	40	40	73	48	835	9.5
5	52	49	38	51	70	152	83	119	257	115	125	45	48	47	71	51	1373	15.7
10	118	113	33	67	132	234	167	133	211	205	163	75	71	30	37	87	1876	21.4
15	94	114		67	142	258	200	113	492	158	60	77	41	21	105	161	2103	24.0
20	170	130	2	41	101	168	215	164	379	83	43	44	31	26	83	46	1726	19.7
25	46	43	1		39	52	77	11	38	10	49	37	4	55	104	36	602	6.9
30	2	1			8	3				1	22	29	3	15	53	39	176	2.0
35					1	1			2					11	18	1	34	0.4
40		1						1	1							30	33	0.4
45		1			1				2								4	0.0
50																	0	0.0
55																	0	0.0
60																	0	0.0
65															1		1	0.0
70																	0	0.0
75																	0	0.0
80+																	0	0.0
TOTAL	549	473	91	283	511	926	762	604	1483	660	531	363	238	245	545	499	8763	
PERCENT	6.26	5.40	1.04	3.23	5.83	10.57	8.70	6.89	16.92	7.53	6.06	4.14	2.72	2.80	6.22	5.69		100.00
STATION AVERAGE = 15.46 CM/S																		

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Table B-45 Station 36 Joint Frequency Distribution of Current Speed and Direction - December 1984

SPEED CM/S	DIRECTIONS ARE DEGREES TRUE																TOTAL	PERCENT	
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337			360
0					1	2	4	17										24	0.9
5		7	1	2	29	9	28	52	30								8	166	5.9
10		35	14	30	54	27	149	96	42	18					7	29	501	17.8	
15		85	30	56	56	51	86	106	81	133					37	66	787	27.9	
20		38	64	59	55	24	53	60	27	158					4	67	609	21.6	
25		34	34	32	26	17	124	50	12	17					2	15	363	12.9	
30		70		1	4	1	38	10							28	23	175	6.2	
35		43				1	8			2						26	80	2.8	
40		8				1		2							18		29	1.0	
45		13													2		15	0.5	
50		21				1		1									23	0.8	
55		3						1									4	0.1	
60																	0	0.0	
65																	0	0.0	
70								1									1	0.0	
75		1					1										2	0.1	
80+						7	19	16	1								43	1.5	
TOTAL	358	143	180	225	141	510	412	193	328	0	0	0	0	0	78	254	2822		
PERCENT	12.69	5.07	6.38	7.97	5.00	18.07	14.60	6.84	11.62	0.00	0.00	0.00	0.00	0.00	2.76	9.00	100.00		
STATION AVERAGE = 22.69 CM/S																			

B-141

B-142

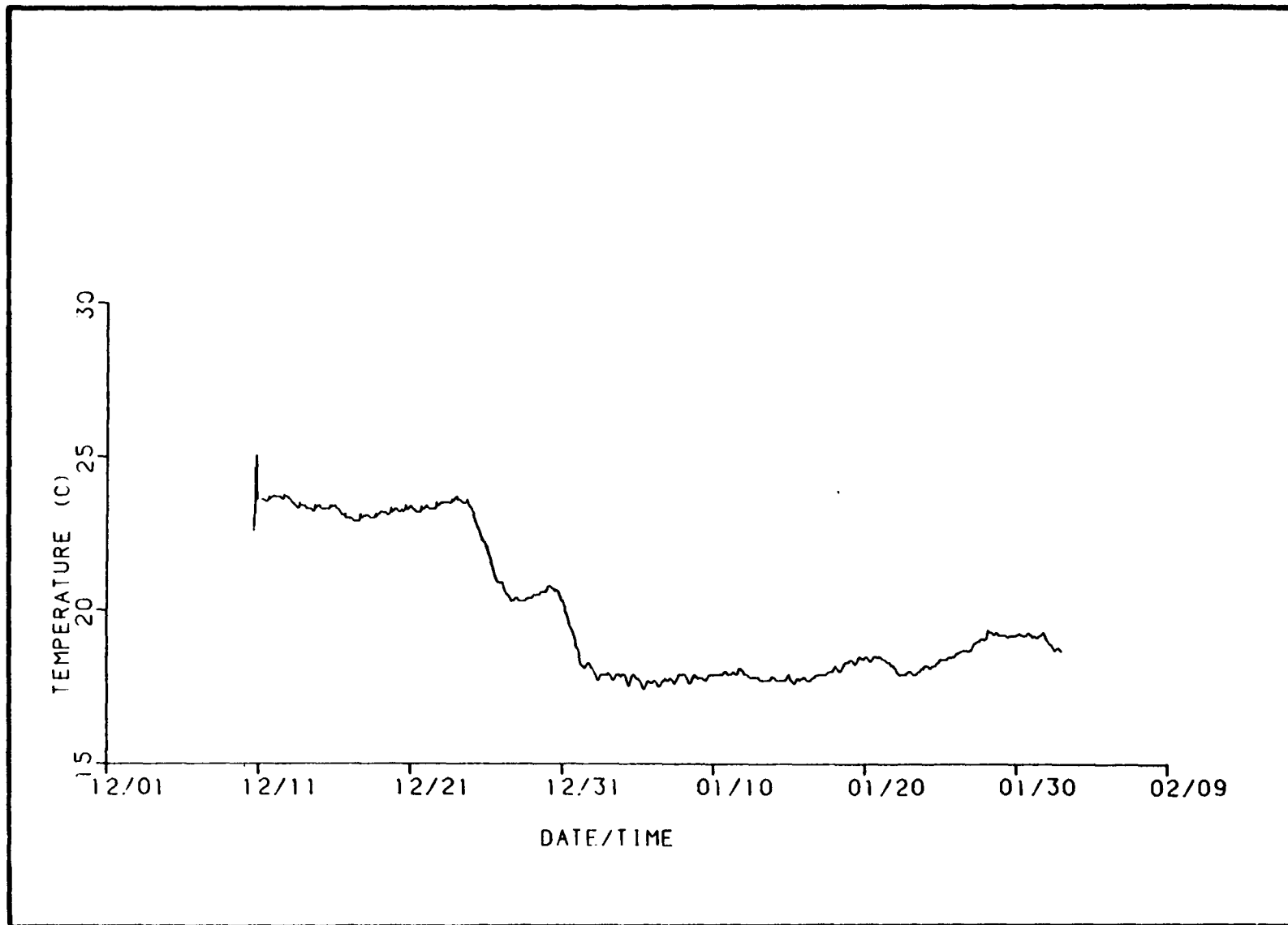


Figure B-43

STATION 52 NEAR-BOTTOM TEMPERATURES - DECEMBER 1983 - JANUARY 1984

B-143

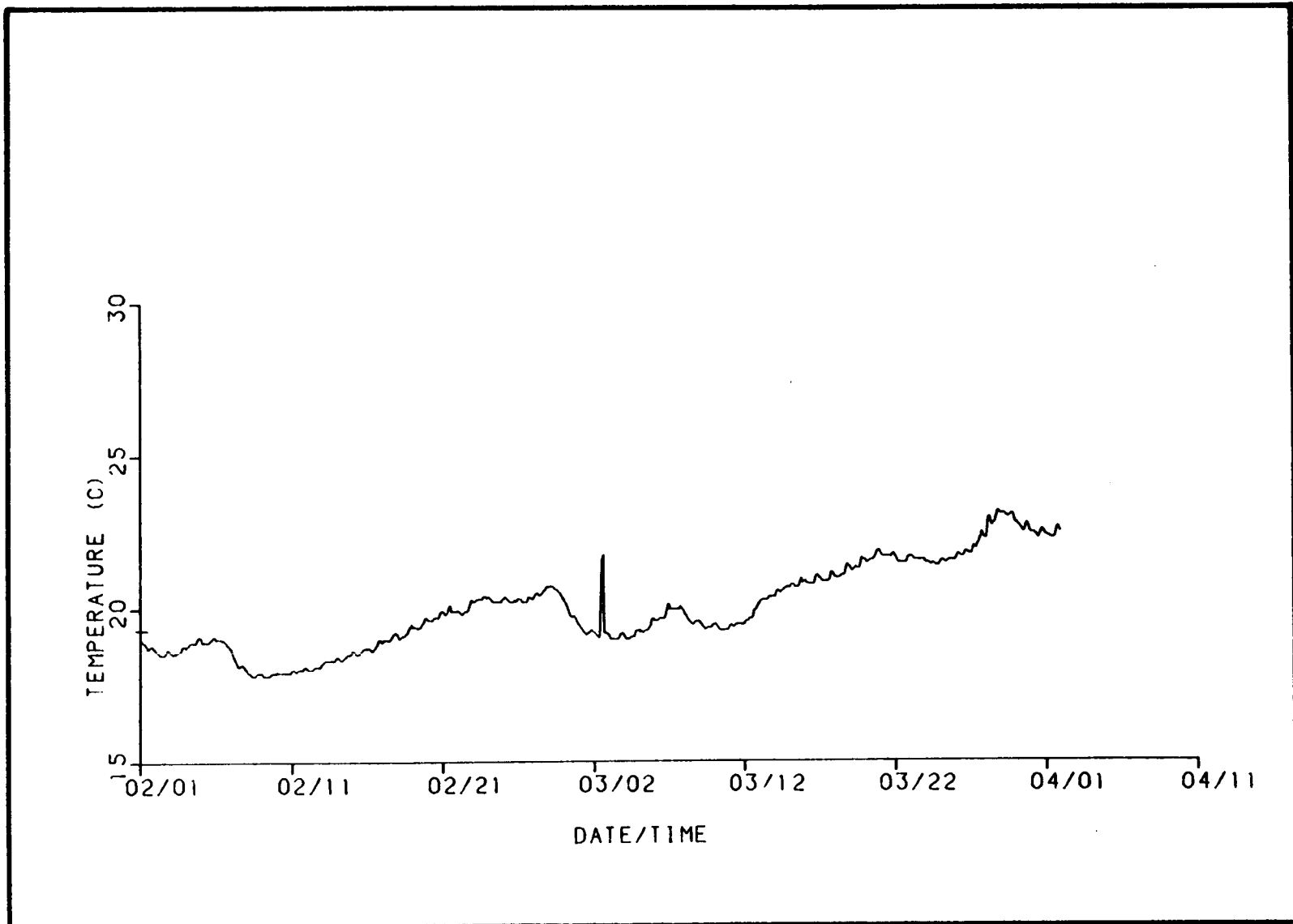


Figure B-44

STATION 52 NEAR-BOTTOM TEMPERATURES - FEBRUARY - MARCH 1984

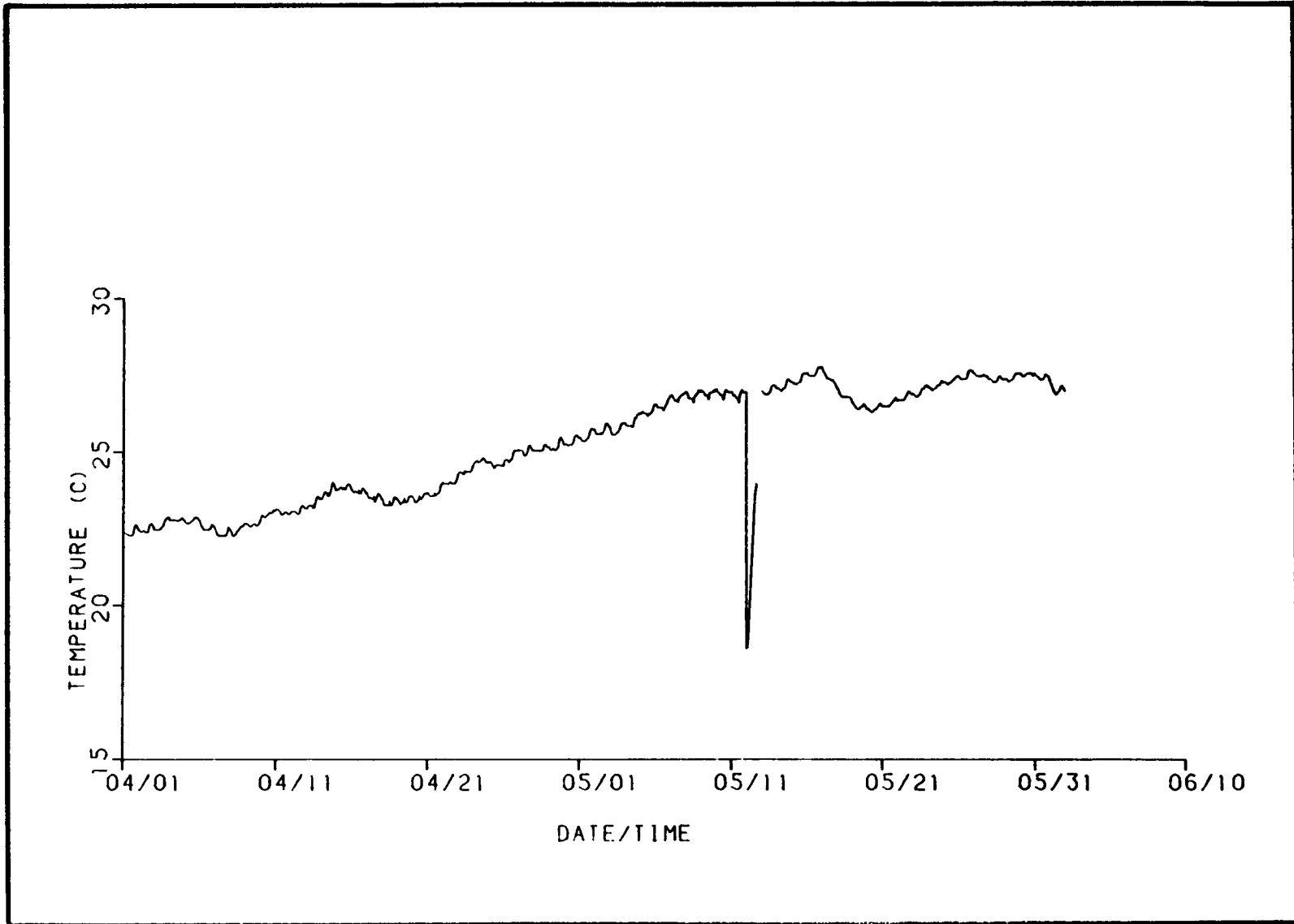


Figure B-45

STATION 52 NEAR-BOTTOM TEMPERATURES - APRIL - MAY 1984

B-145

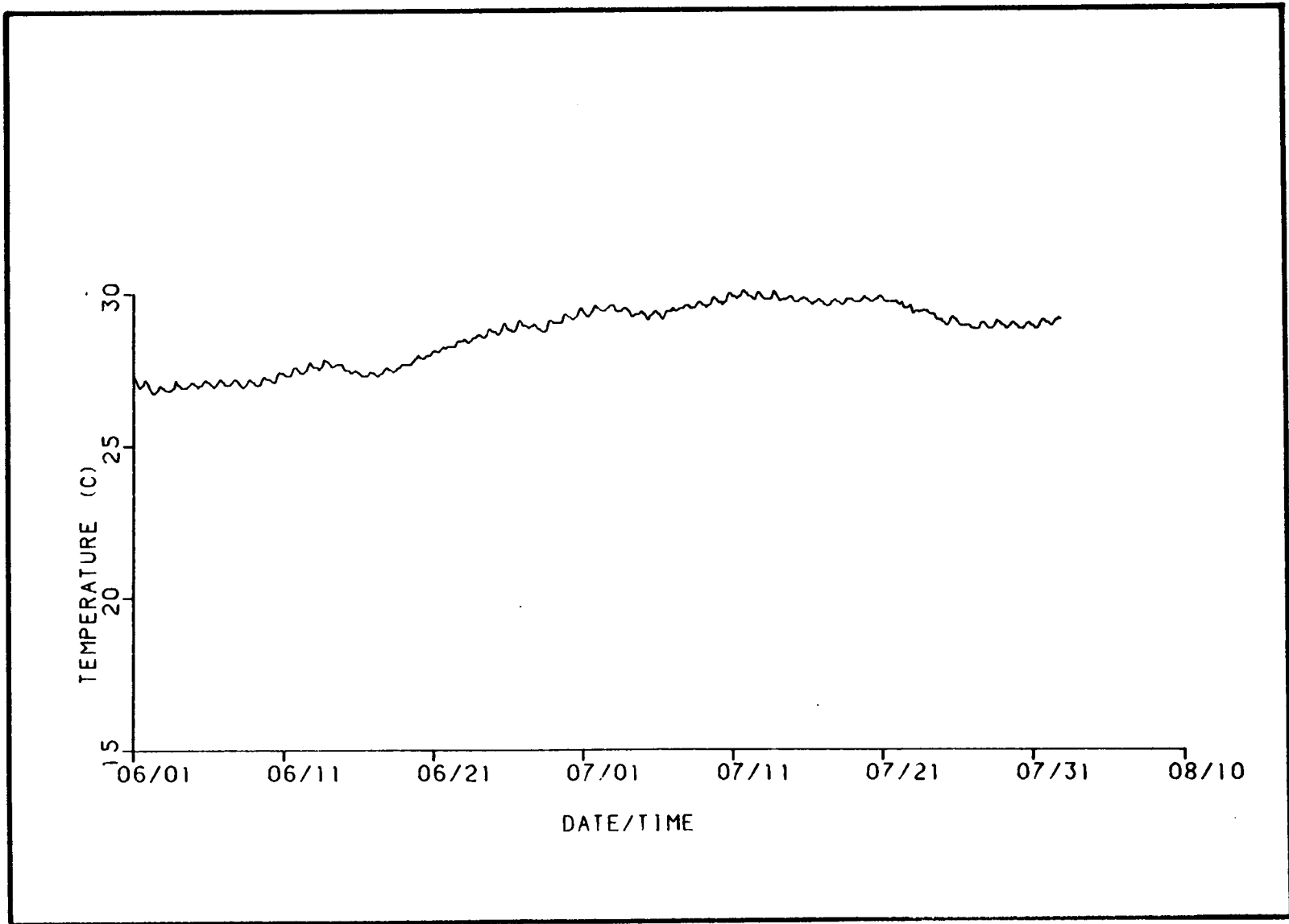


Figure B-46

STATION 52 NEAR-BOTTOM TEMPERATURES - JUNE - JULY 1984

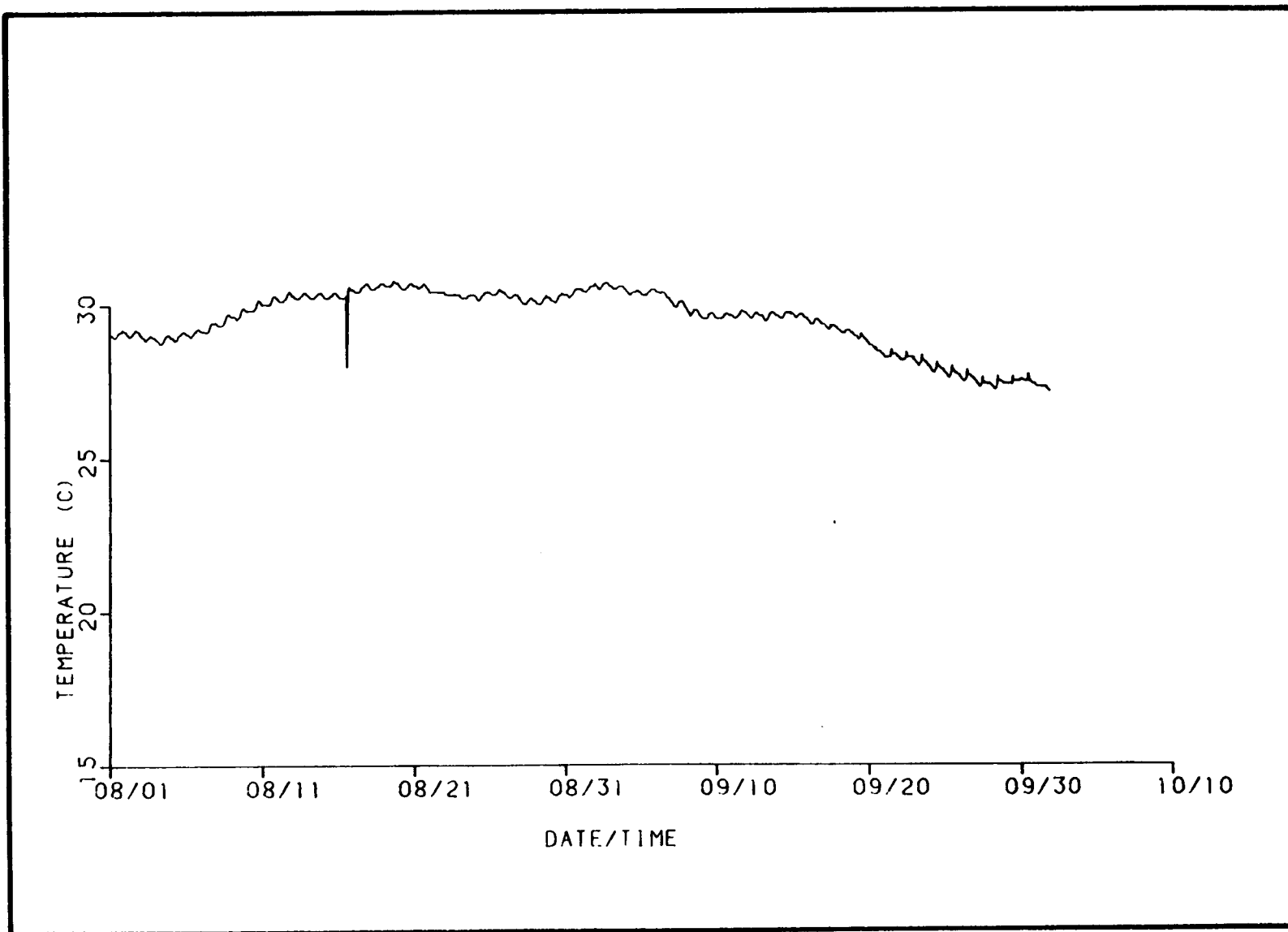


Figure B-47

STATION 52 NEAR-BOTTOM TEMPERATURES - AUGUST - SEPTEMBER 1984

B-147

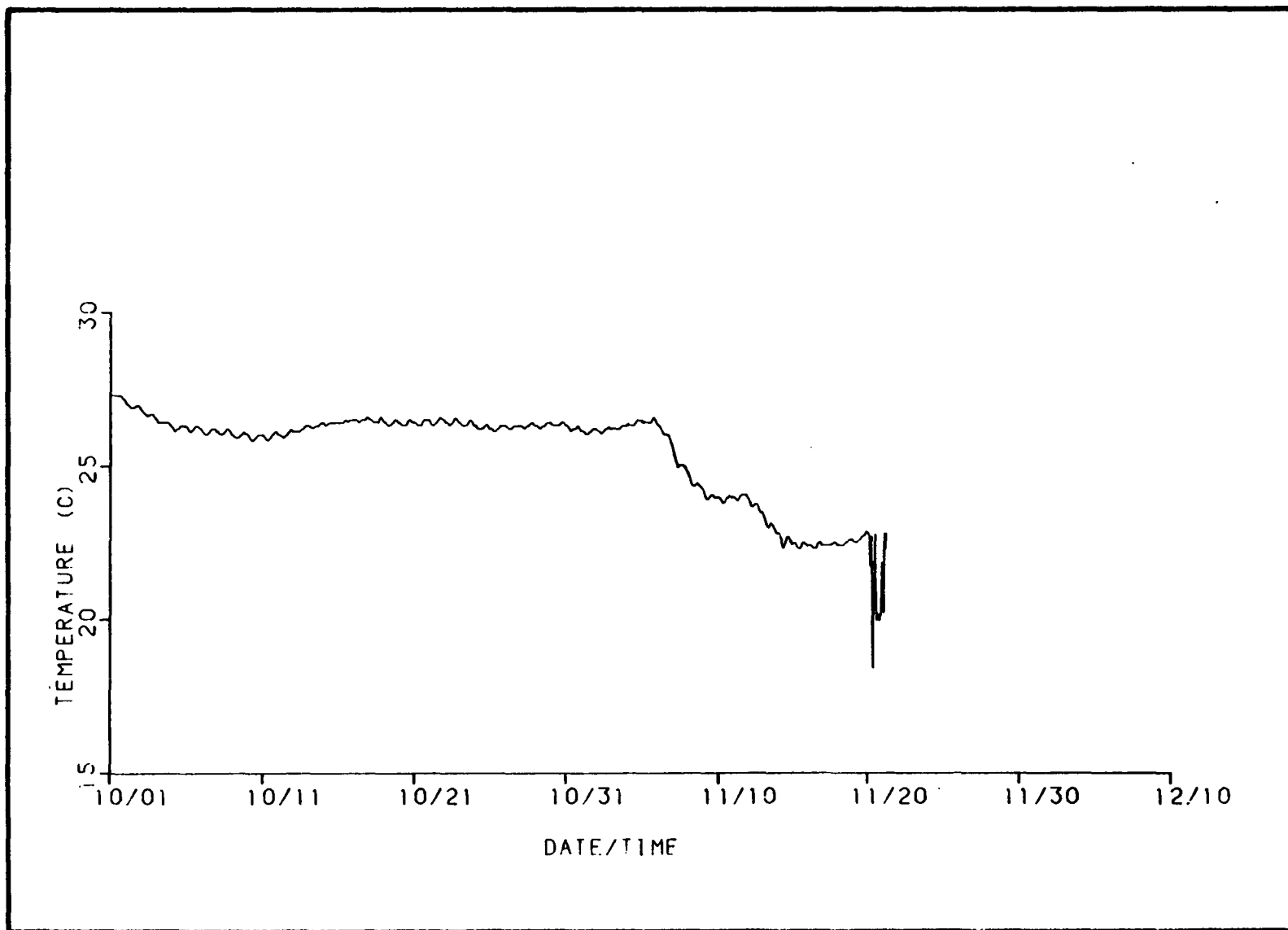


Figure B-48

STATION 52 NEAR-BOTTOM TEMPERATURES - OCTOBER - NOVEMBER 1984

B-148

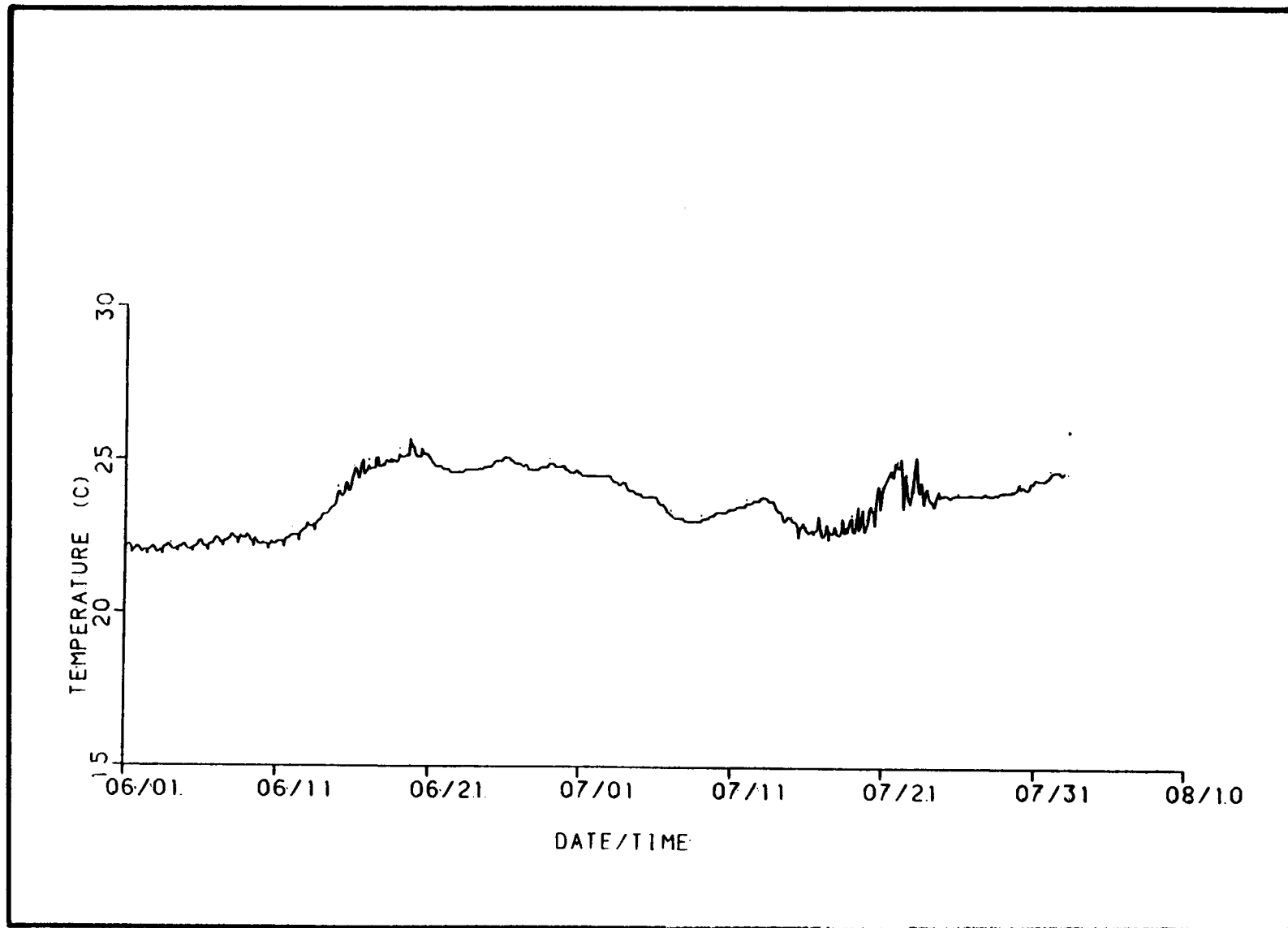


Figure B-49

STATION 21 NEAR-BOTTOM TEMPERATURES - JUNE - JULY 1984

B-149

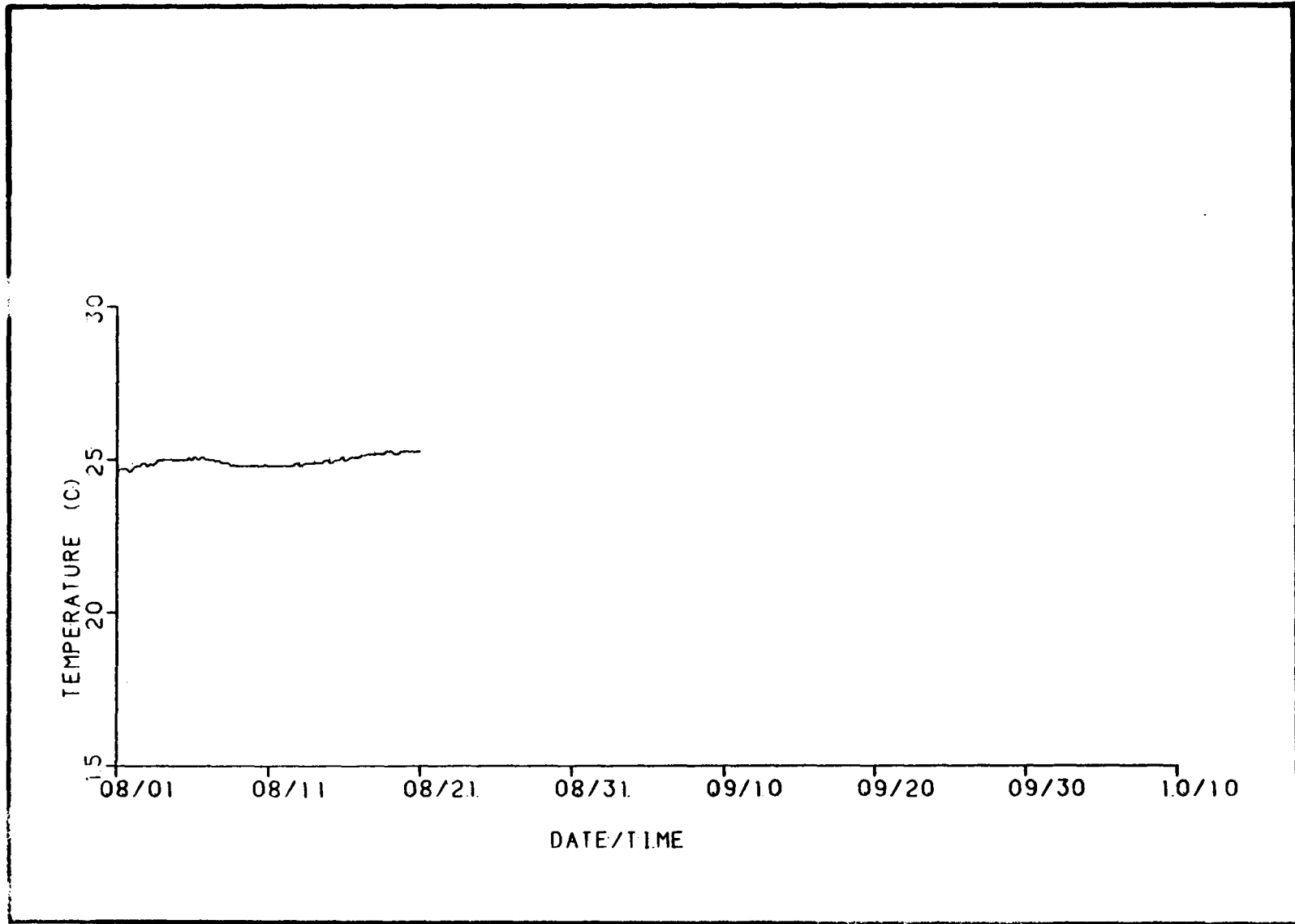


Figure B-50

STATION 21 NEAR-BOTTOM TEMPERATURES - AUGUST 1984

B-150

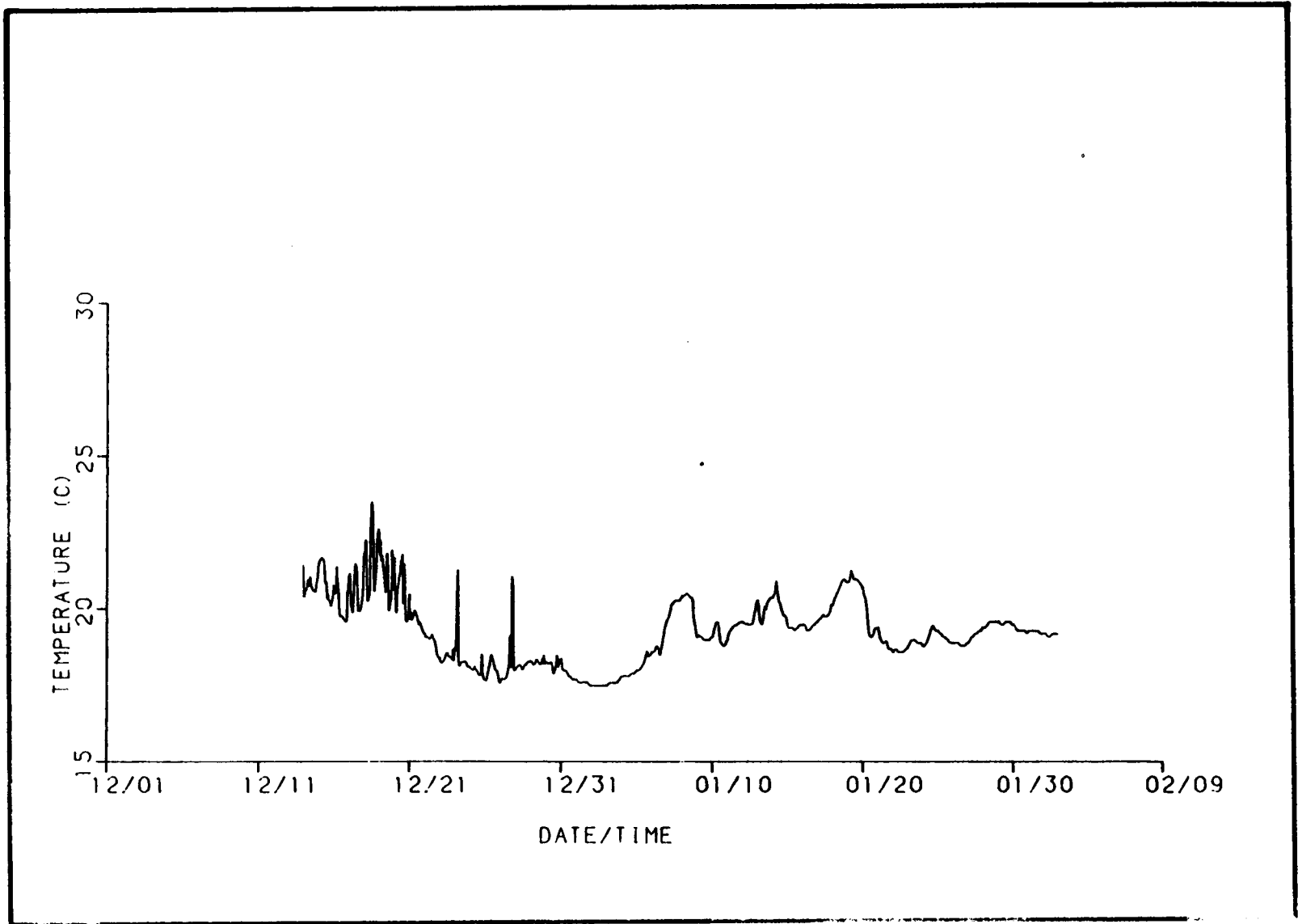


Figure B-51

STATION 23 NEAR-BOTTOM TEMPERATURES - DECEMBER 1983 - JANUARY 1984

B-151

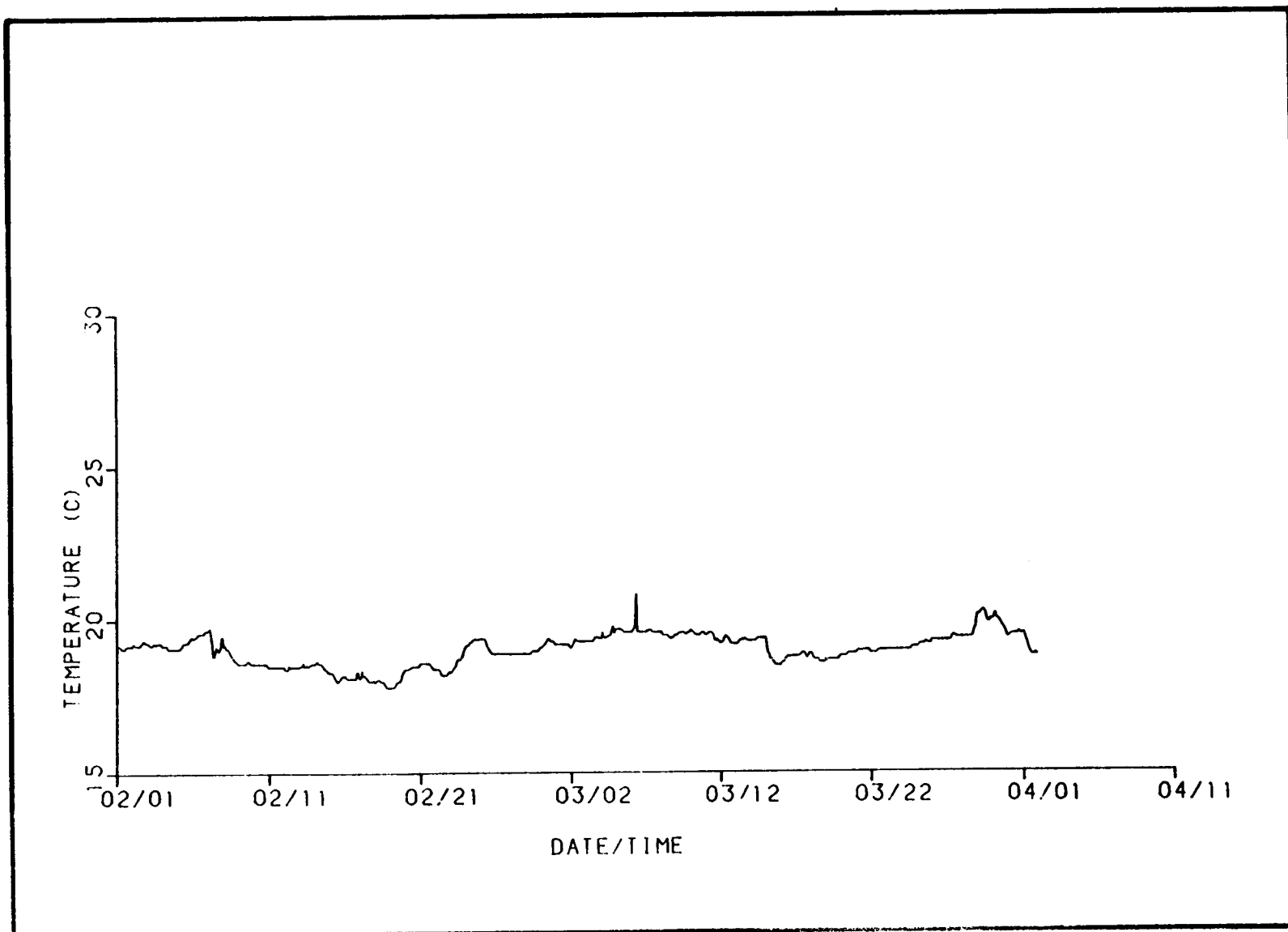


Figure B-52

STATION 23 NEAR-BOTTOM TEMPERATURES - FEBRUARY - MARCH 1984

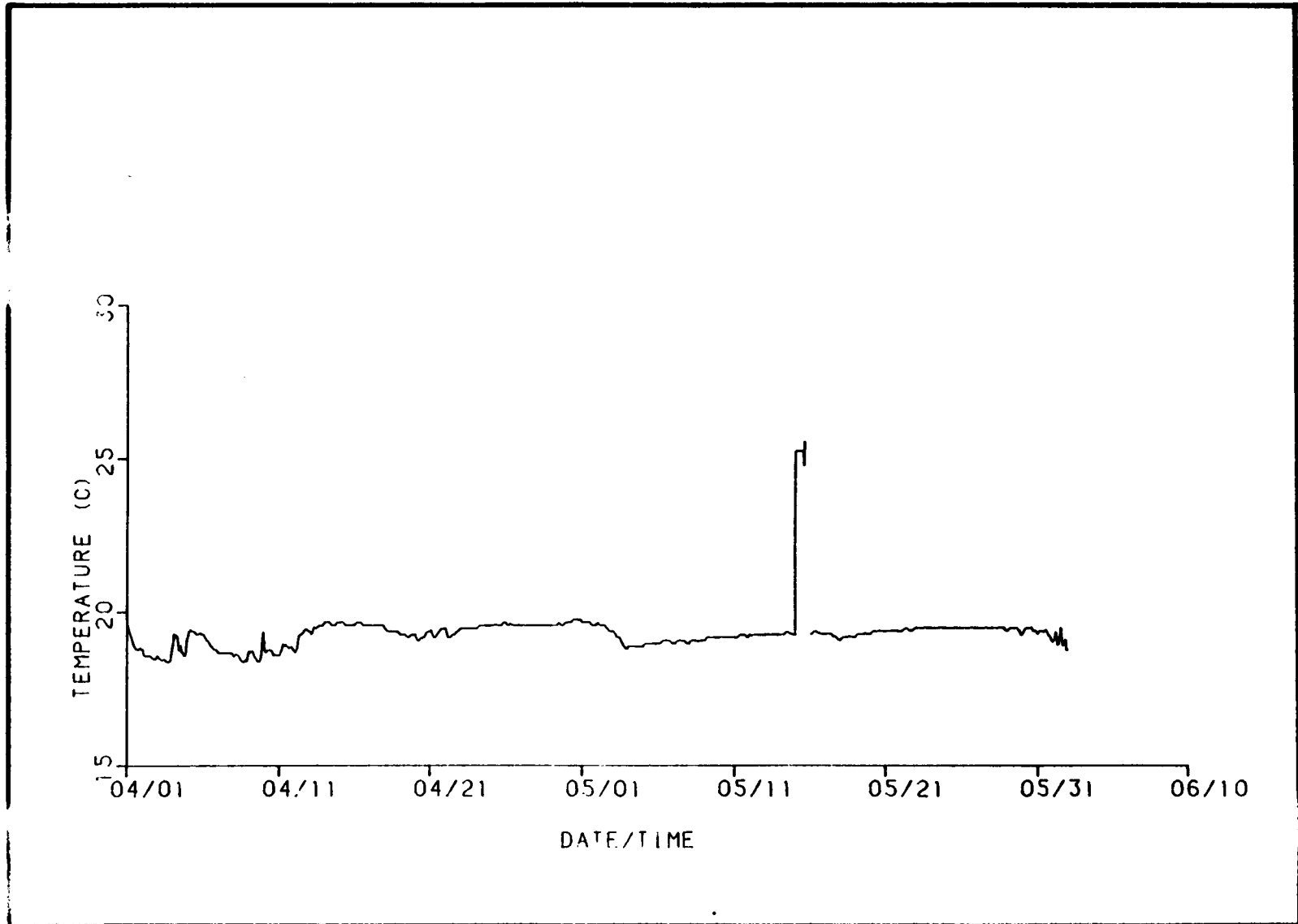


Figure B-53

STATION 23 NEAR-BOTTOM TEMPERATURES - APRIL - MAY 1984

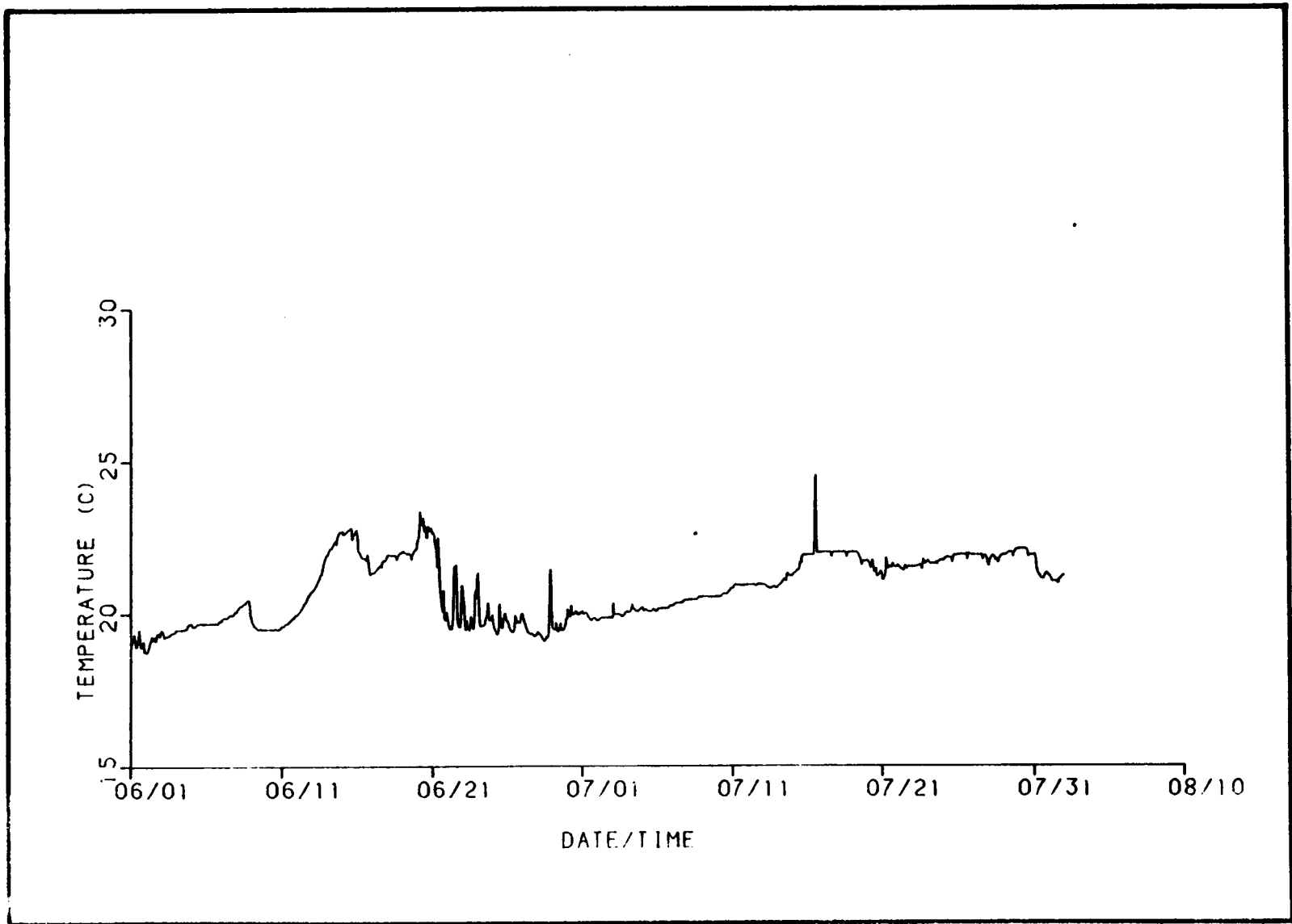


Figure B-54 STATION 23 NEAR-BOTTOM TEMPERATURES - JUNE - JULY 1984

B-154

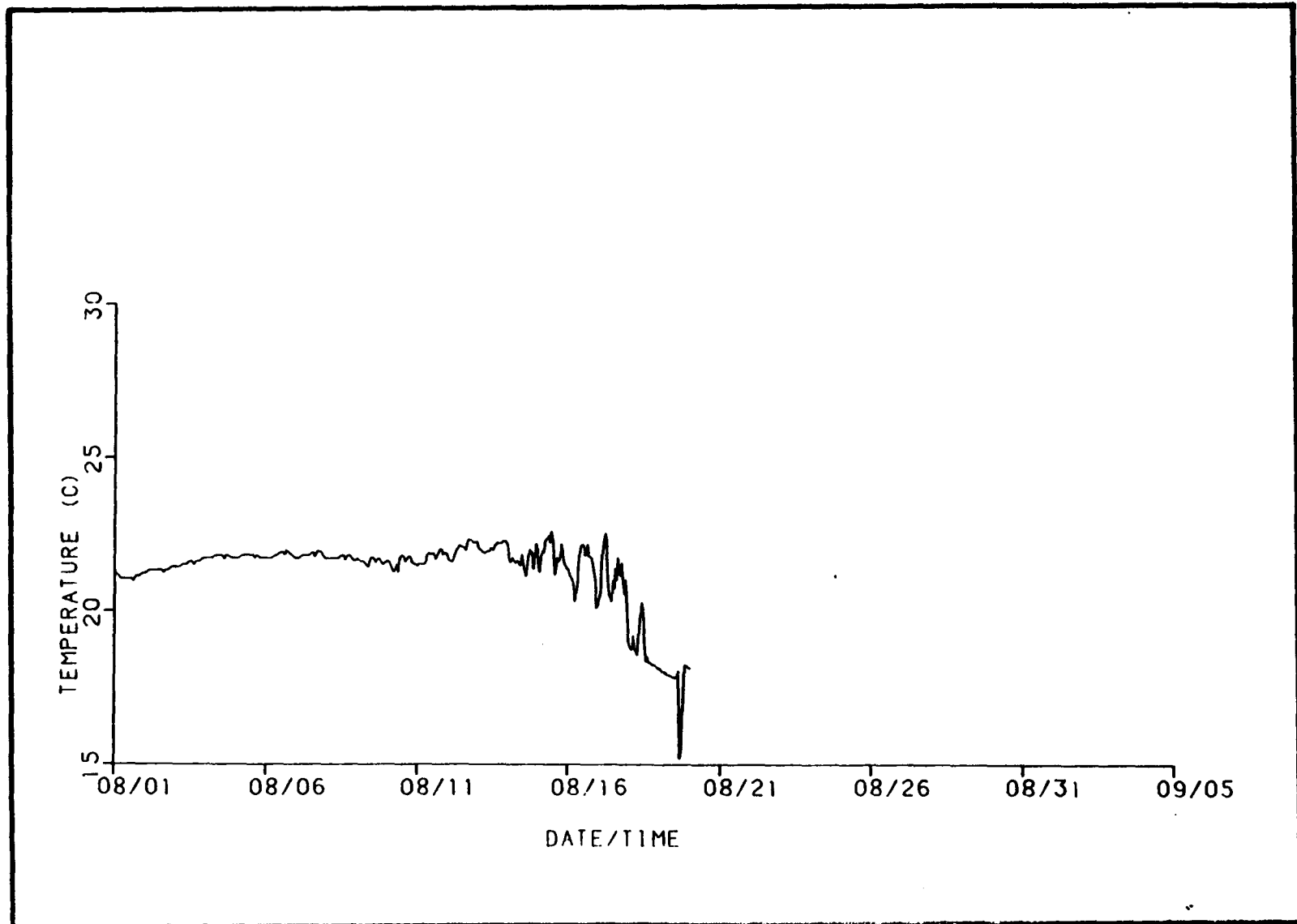


Figure B-55

STATION 23 NEAR-BOTTOM TEMPERATURES - AUGUST 1984

B-155

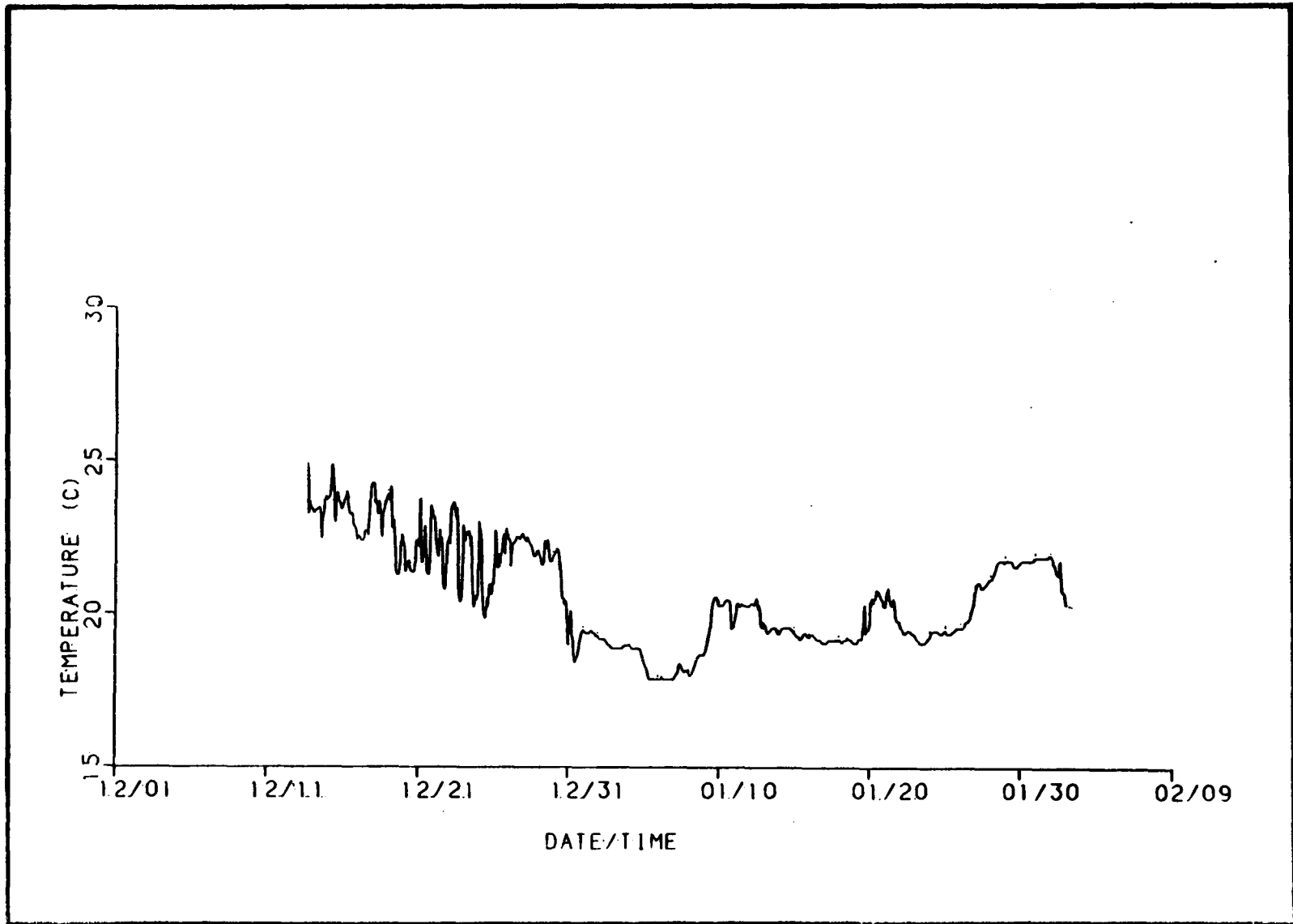


Figure B-56

STATION 29 NEAR-BOTTOM TEMPERATURES - DECEMBER 1983 - JANUARY 1984

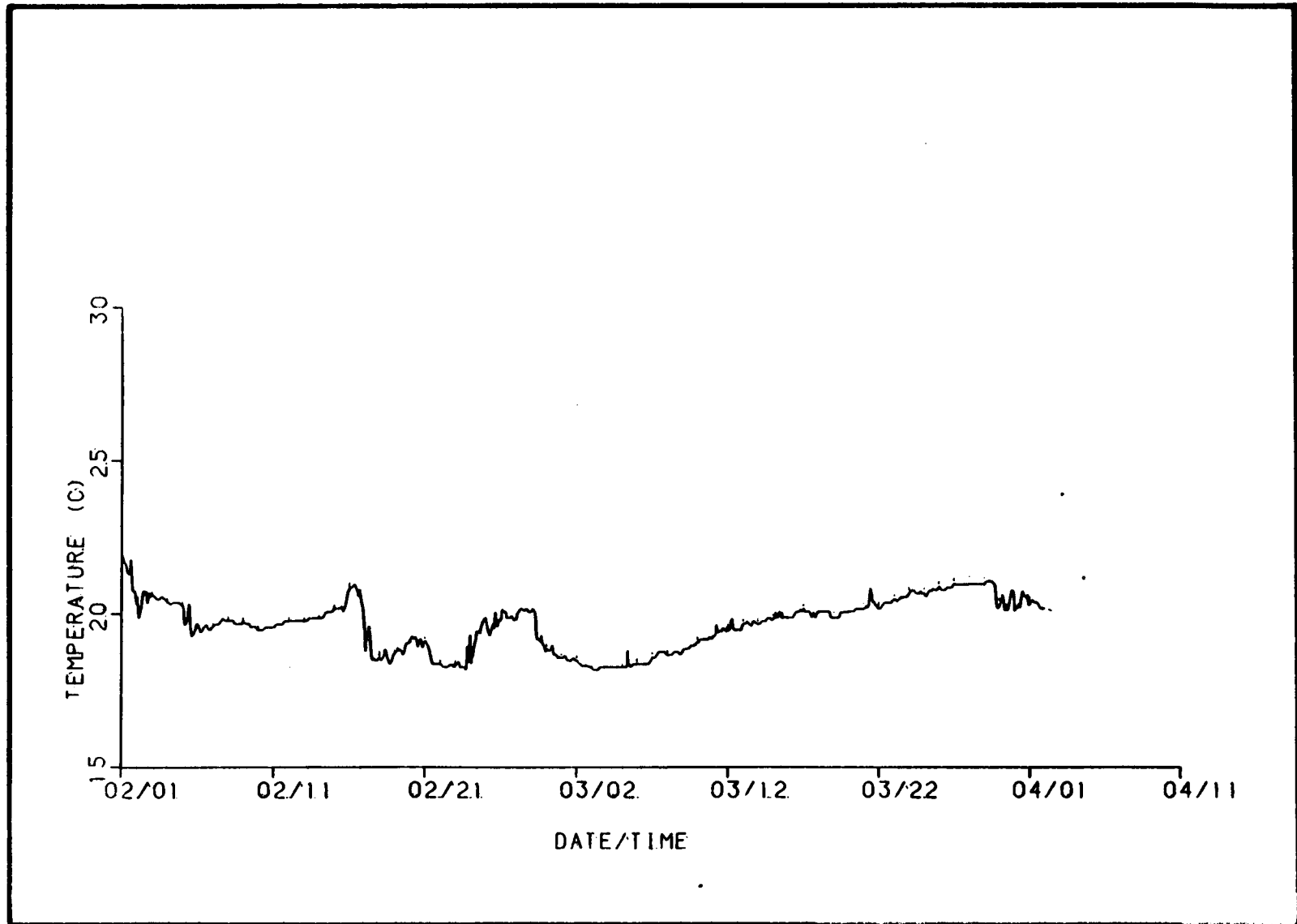


Figure B-57 STATION 29 NEAR-BOTTOM TEMPERATURES - FEBRUARY - MARCH 1984

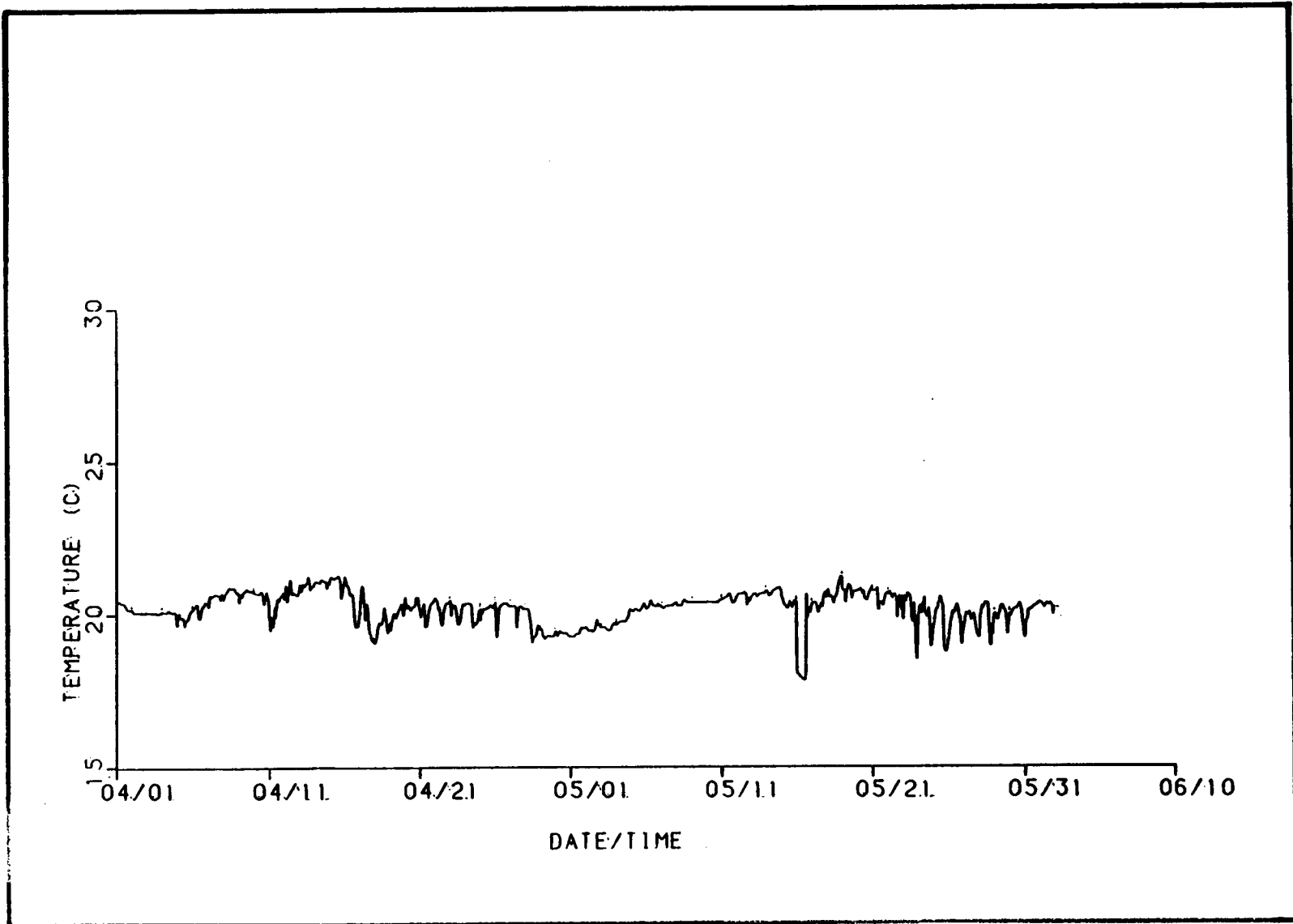


Figure B-58 STATION 29 NEAR-BOTTOM TEMPERATURES - APRIL - MAY 1984

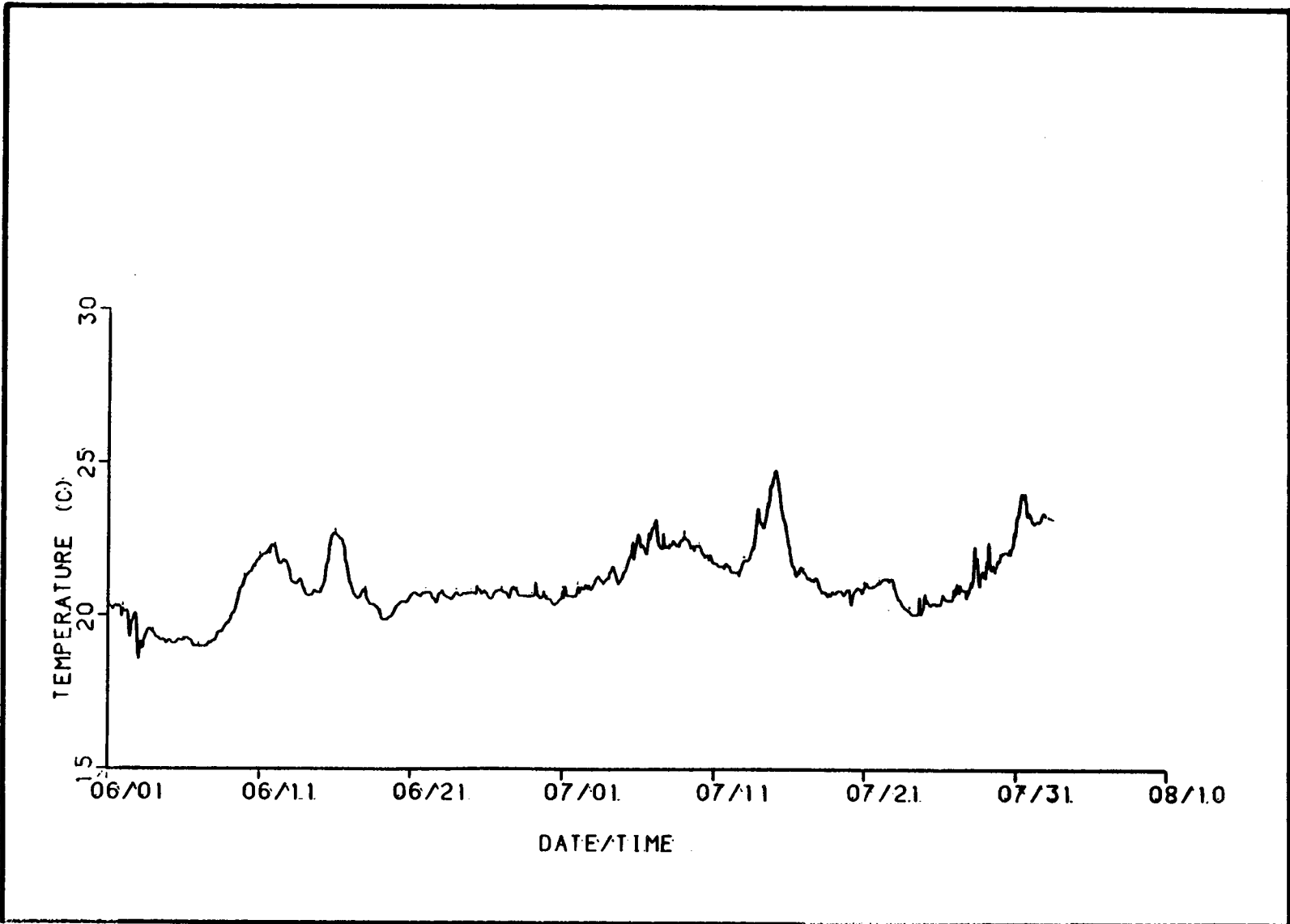


Figure B-59

STATION 29 NEAR-BOTTOM TEMPERATURES - JUNE - JULY 1984

B-159

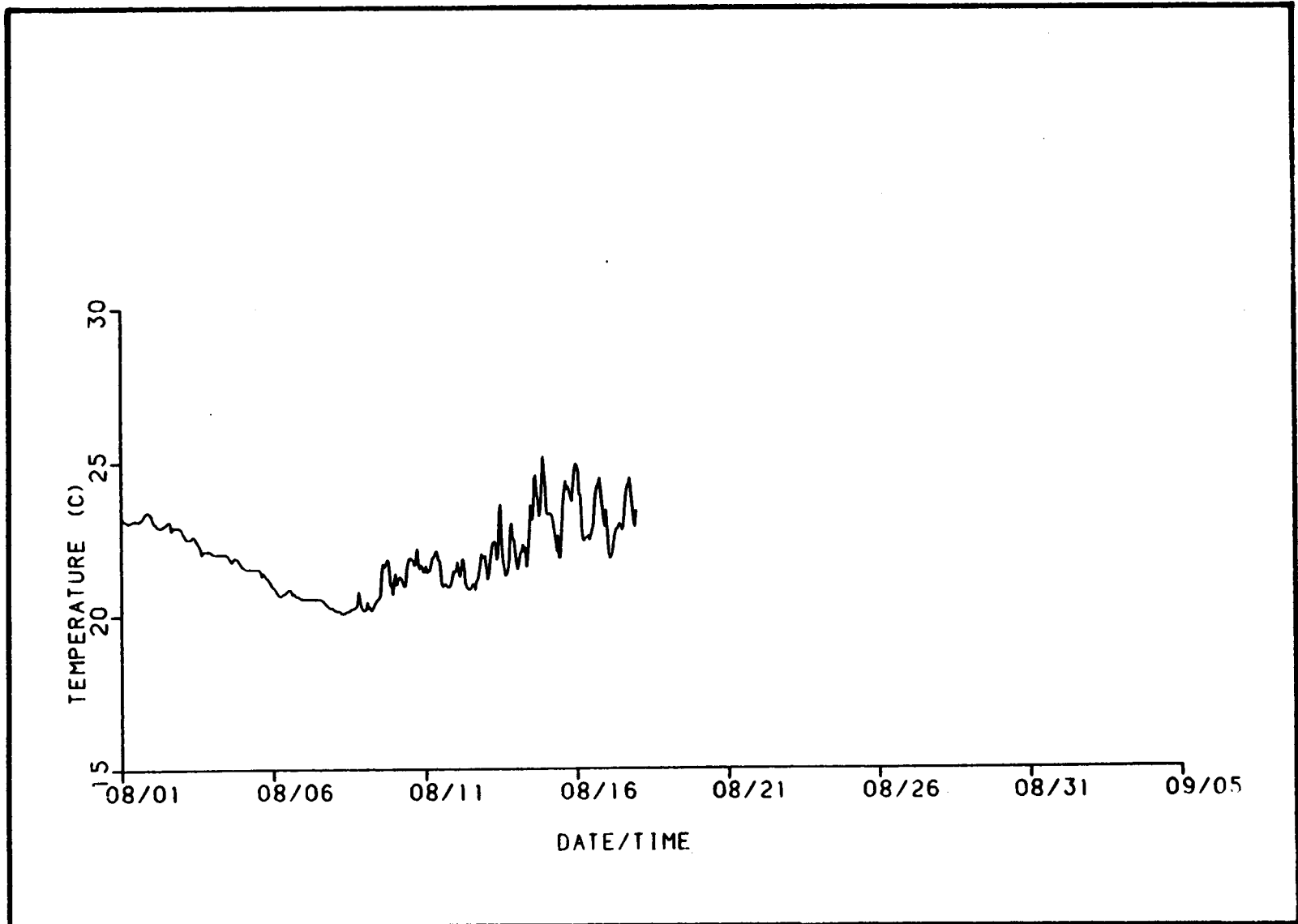


Figure B-60

STATION 29 NEAR-BOTTOM TEMPERATURES - AUGUST 1984

B-160

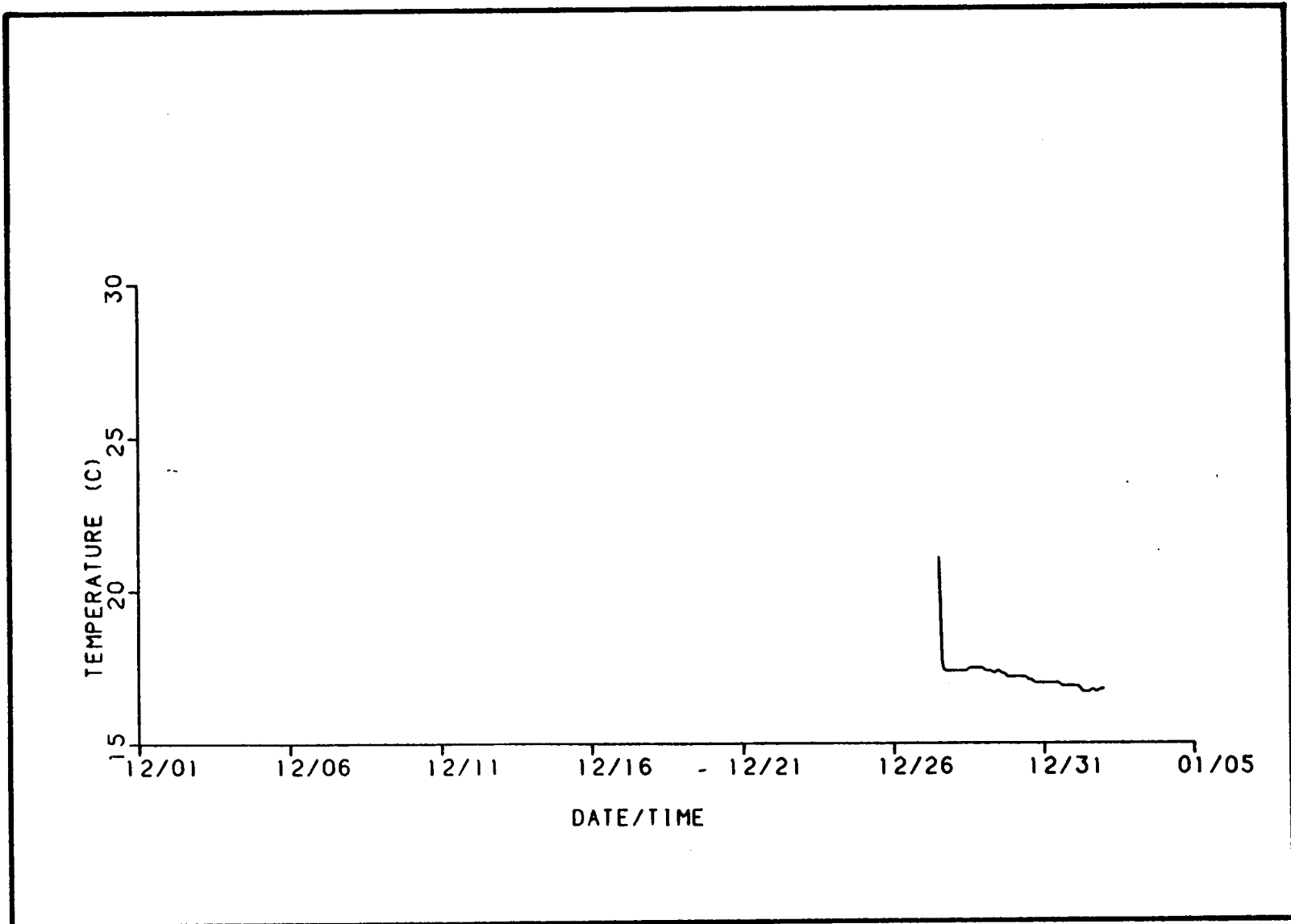


Figure B-61

STATION 36 NEAR-BOTTOM TEMPERATURES - DECEMBER 1983

B-161

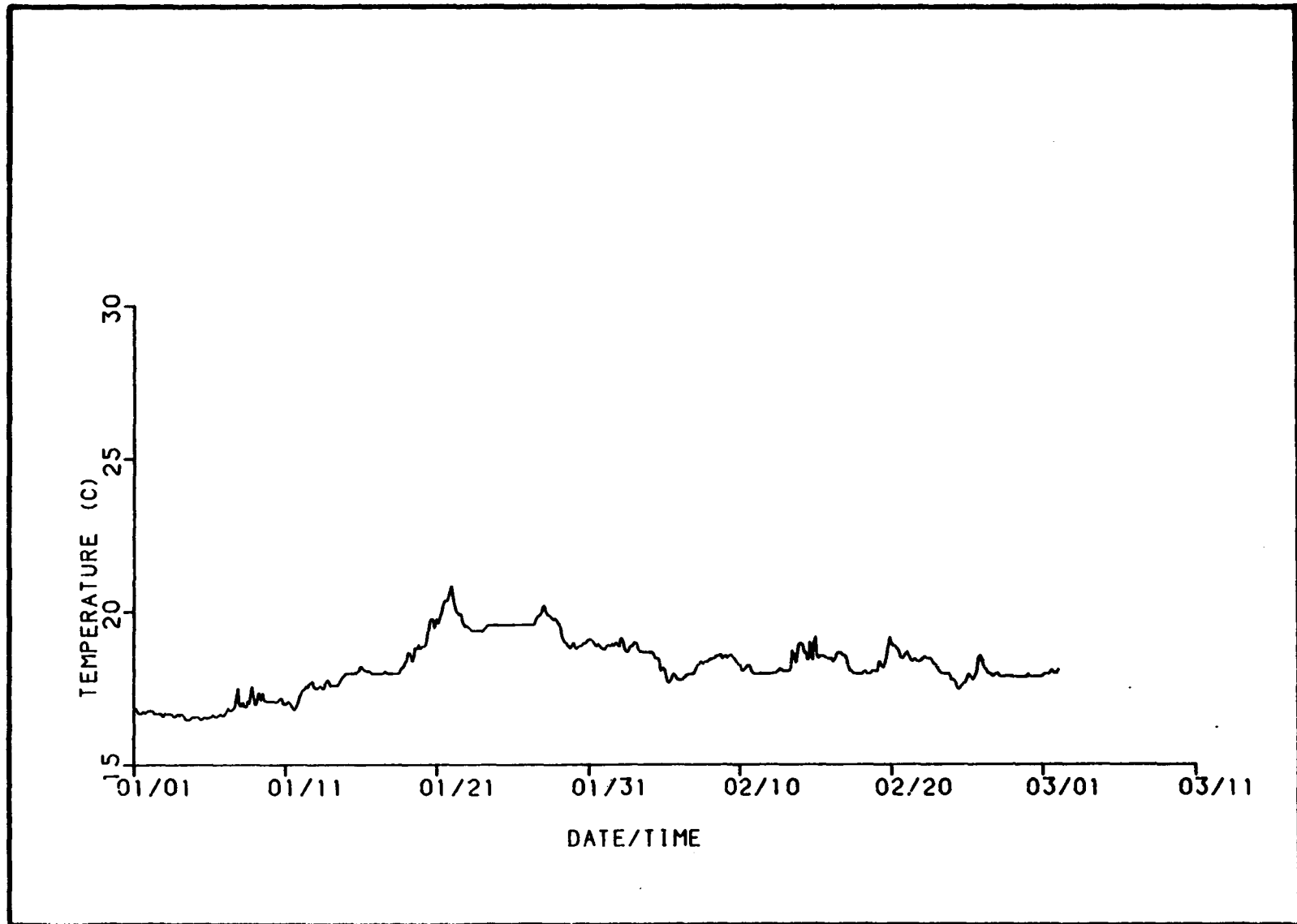


Figure B-62

STATION 36 NEAR-BOTTOM TEMPERATURES - JANUARY - FEBRUARY 1984

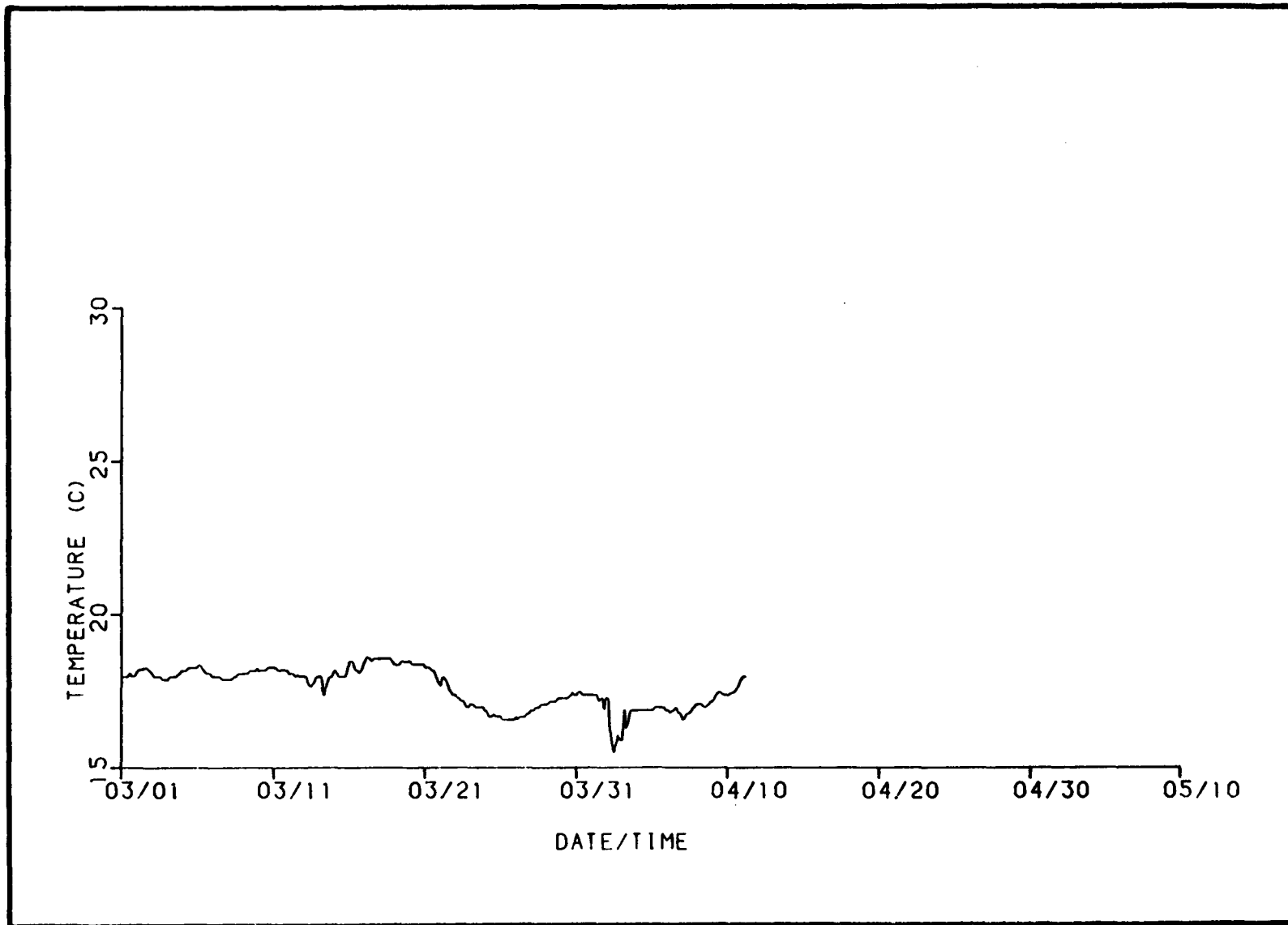


Figure B-63

STATION 36 NEAR-BOTTOM TEMPERATURES - MARCH - APRIL 1984

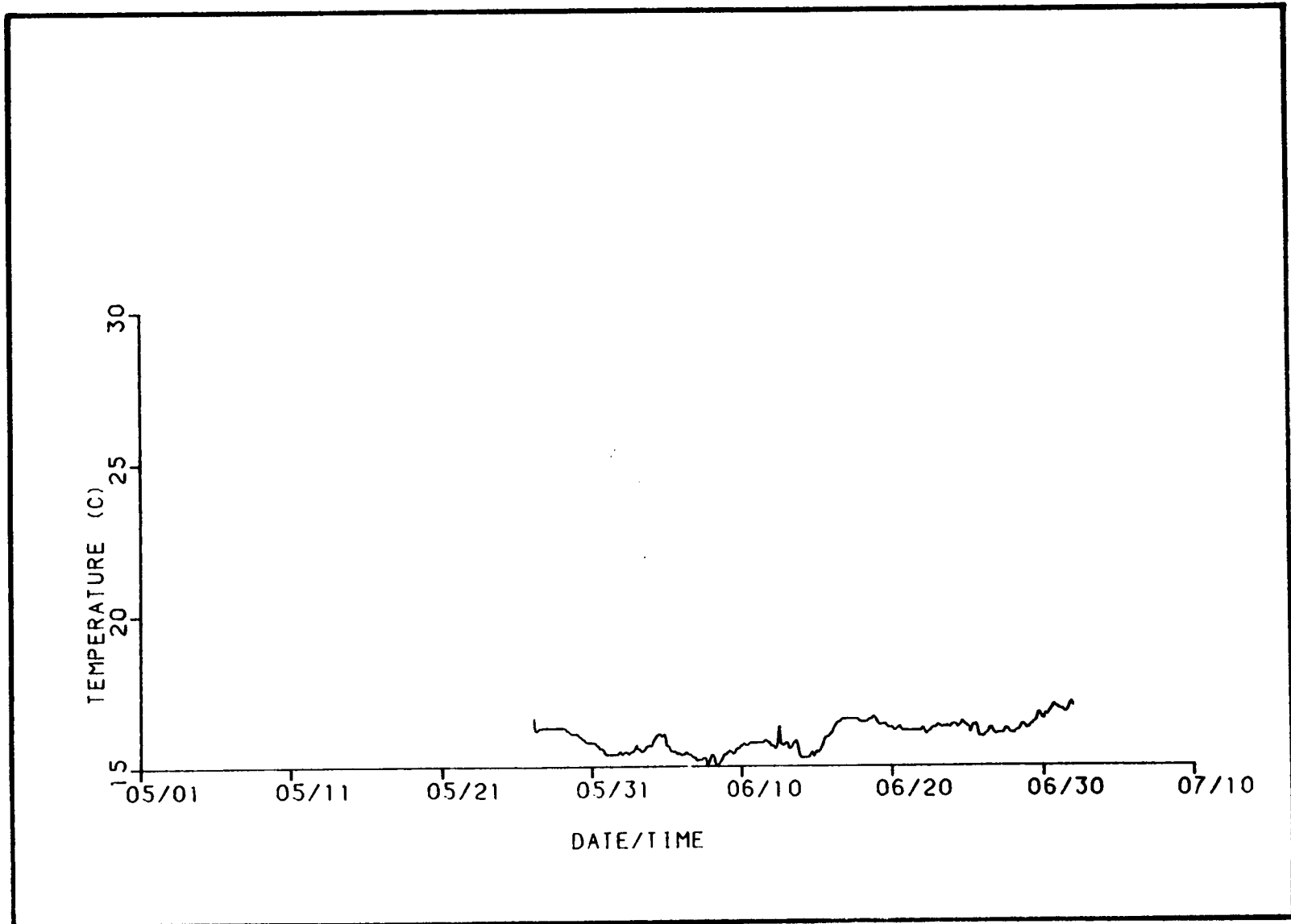


Figure B-64

STATION 36 NEAR-BOTTOM TEMPERATURES - MAY - JUNE 1984

B-164

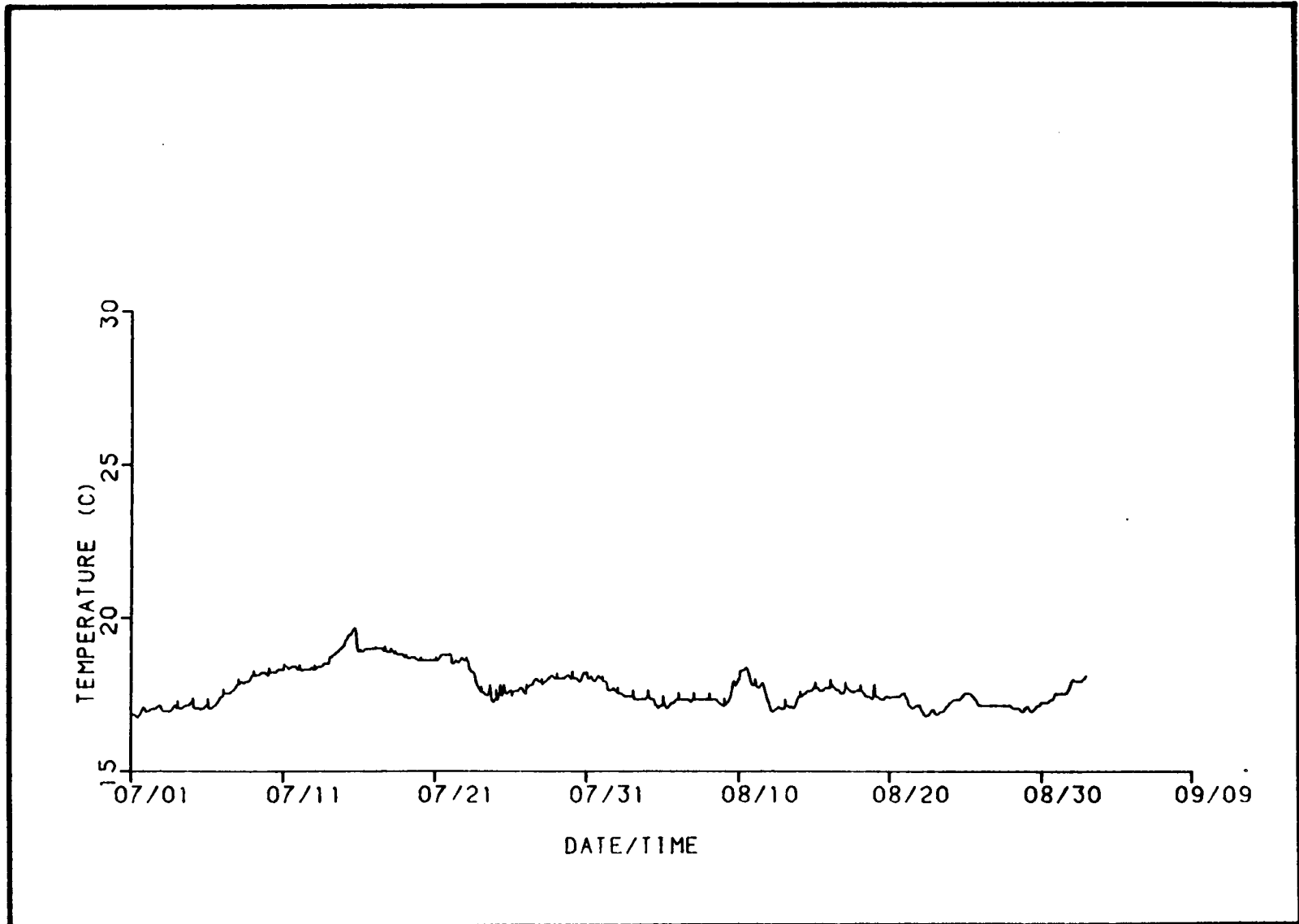


Figure B-65

STATION 36 NEAR-BOTTOM TEMPERATURES - JULY - AUGUST 1984

B-165

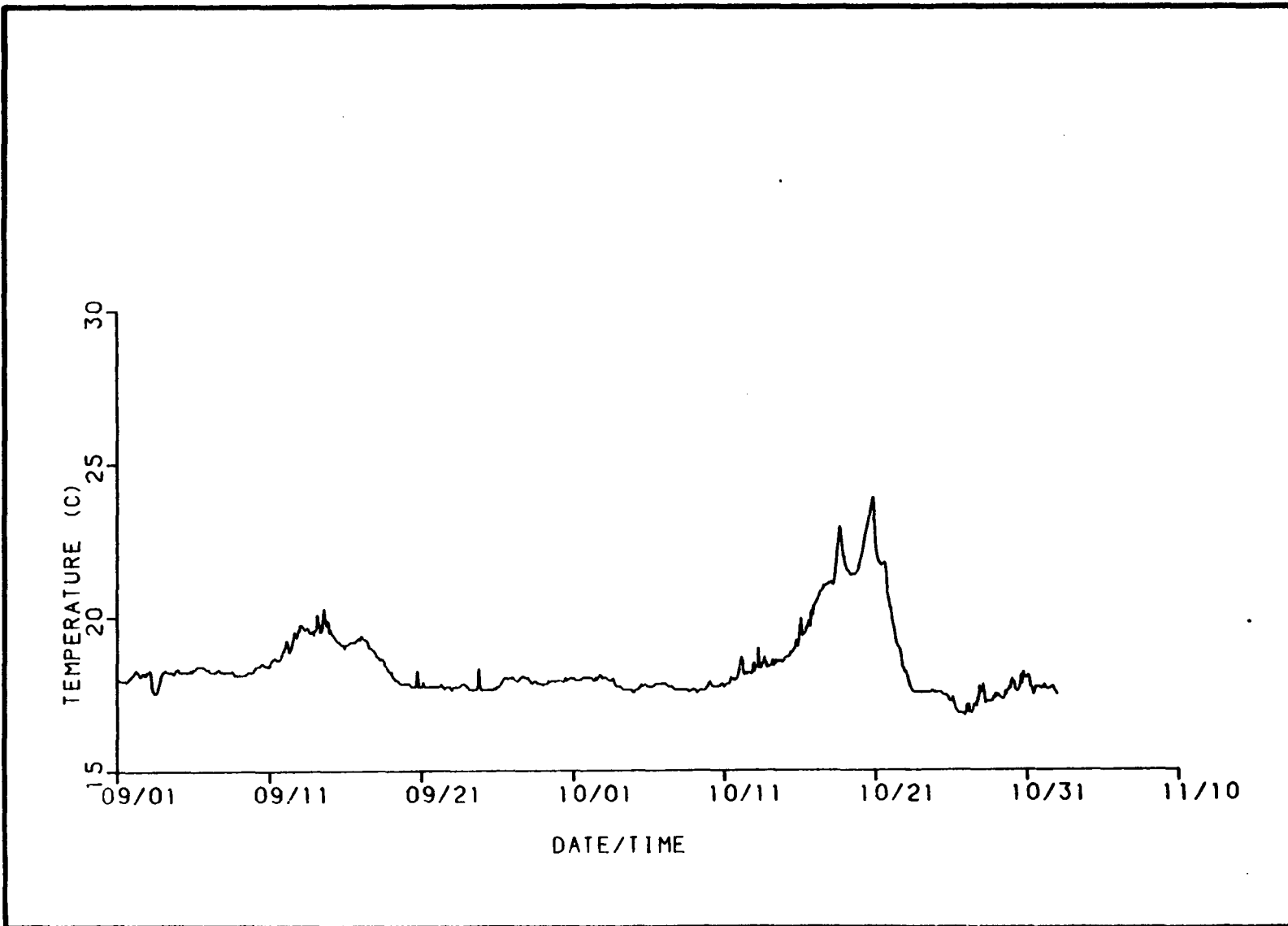


Figure B-66

STATION 36 NEAR-BOTTOM TEMPERATURES - SEPTEMBER - OCTOBER 1984

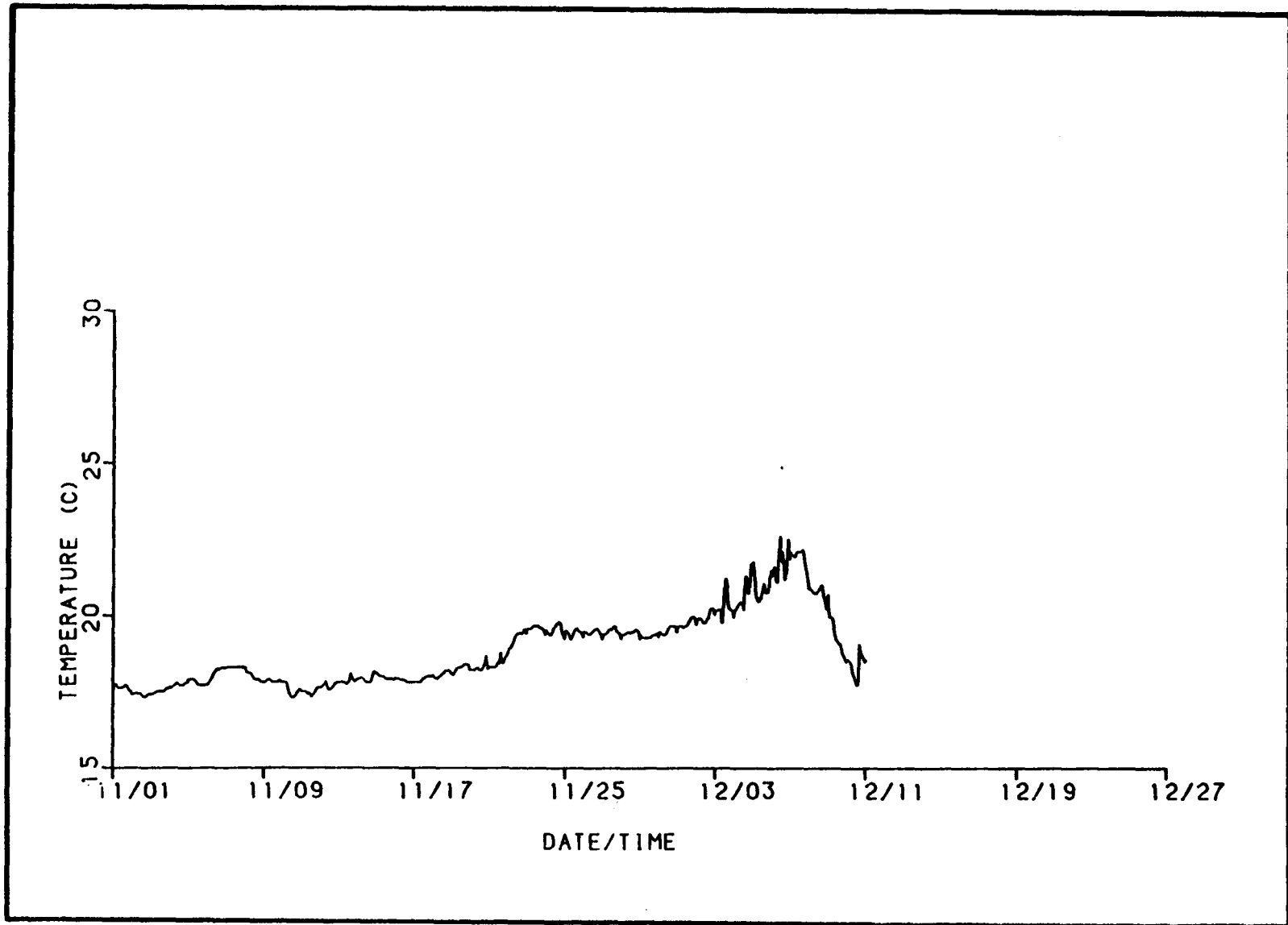


Figure B-67

STATION 36 NEAR-BOTTOM TEMPERATURES - NOVEMBER - DECEMBER 1984

APPENDIX C
ANCILLARY PHYSICAL DATA

APPENDIX C
ANCILLARY PHYSICAL DATA

Ancillary physical data either from field efforts or outside sources were collected to aid interpretation. Field data consisted of shipboard marine observations collected at the Year 4 stations (Figure C-0) and presented in Tables C-1 through C-4. Data from outside sources collected at the stations indicated in Figure C-1 consisted of primarily meteorological and wave data.

Shipboard marine observations for all four Year 4 cruises are presented in Tables C-1 through C-4. The observations include secchi depth; wave height, period, and direction; weather; cloud cover; wind speed and direction; wet and dry temperature; and barometric pressure. These data were collected at the time of the CSTD hydrocast.

Meteorological data in the form of Local Climatological Data Monthly Summaries (LCDs) were obtained for the Fort Myers and Key West, Florida stations (Figure C-1) from NCDC. These LCDs provide more complete meteorological data near the eastern boundary of the study area. Average and extreme data from the LCDs are presented in Tables C-5 and C-6.

Meteorological and wave data for the western boundary of the study area were obtained from the NDBC's Buoy #42003 (Figure C-1). The data are tabulated (Tables C-7 through C-15) and plotted (Figure C-2 through C-10) on a monthly basis. The buoy records only extend from November 1983 through September 1984 because all data later than that were not available at the time of writing.

Near-shore wave data were obtained from UFCDN's Venice and Clearwater stations (Figure C-1). The data are presented as monthly time-series plots of modal period and significant wave height. The Venice data (Figures C-11 through C-14) covered the period from April through July 1984. The Clearwater data (Figures C-15 through C-25) were more complete, extending from January through December 1984.

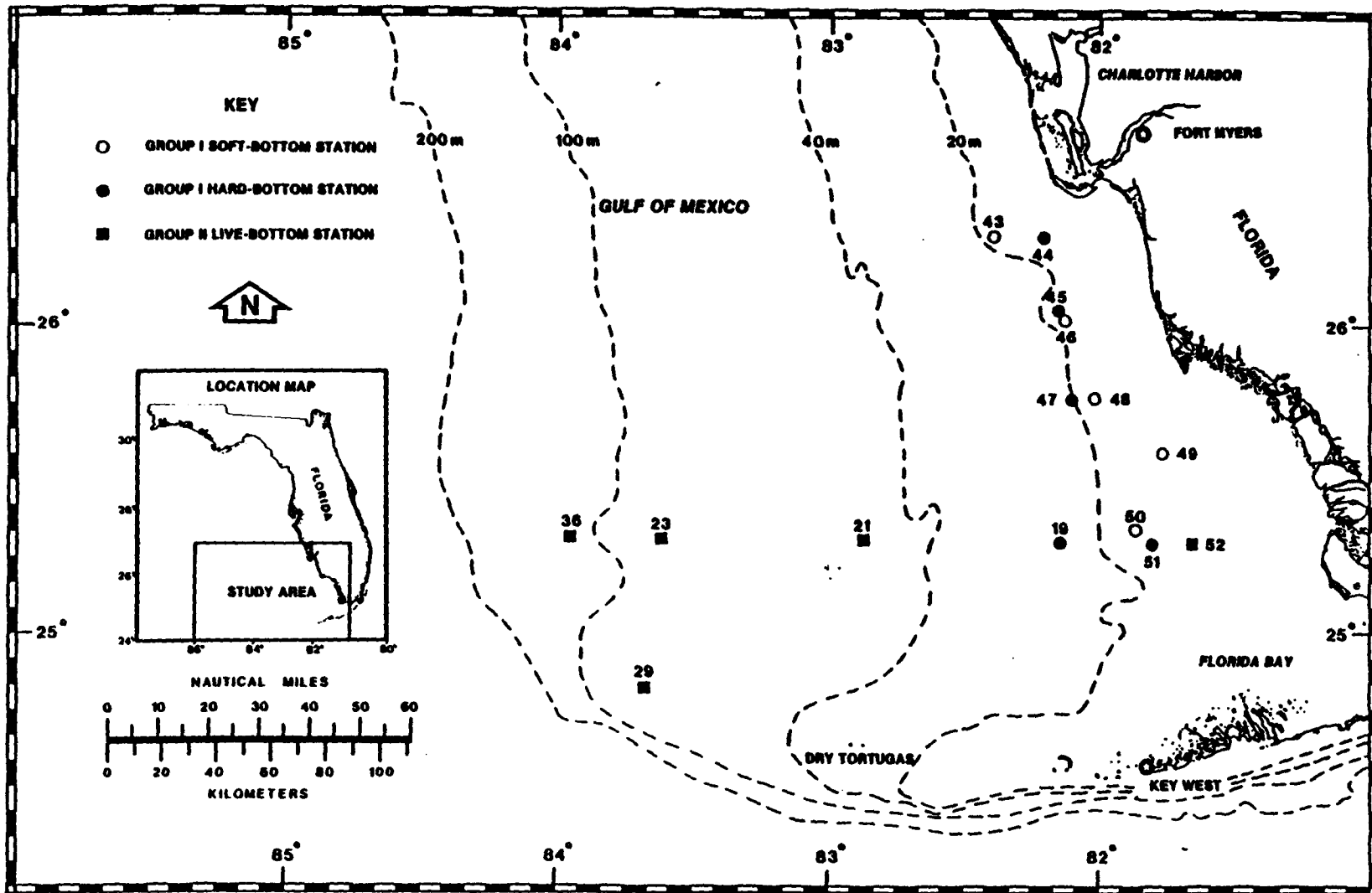


Figure C-0 SHIPBOARD MARINE OBSERVATION STATION LOCATIONS FOR YEAR 4 (DECEMBER 1983 – AUGUST 1984)

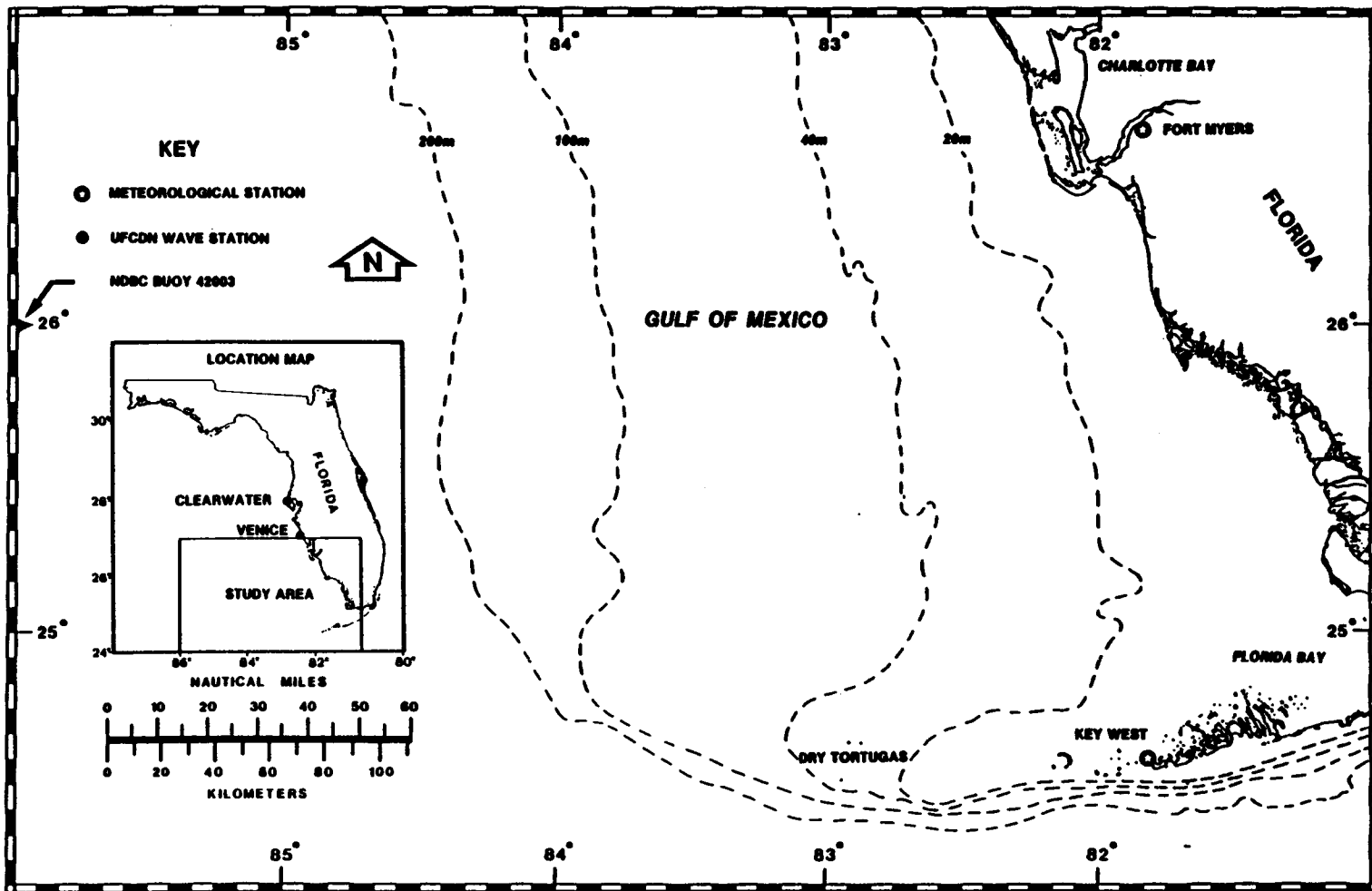


Figure C-1 OUTSIDE DATA SOURCE STATION LOCATIONS FOR YEAR 4 (DECEMBER 1983—NOVEMBER 1984)

Table C-1. Ancillary Shipboard Marine Observations for Cruise I, December 6-17, 1983

Station Number	Secchi (m)	Wave Height (*)	Wave Period (s)	Wave Direction (*)	Weather (*)	Cloud Cover (*)	Wind Speed (knots)	Wind Direction (*)	Wet Temperature (°C)	Dry Temperature (°C)	Barometric Pressure (mb)
43	—	3	4.0	02	1	1	4	02	25.0	27.0	—
44	—	3	4.0	05	1	1	5	05	23.9	25.5	1026
45	5.0	4	4.0	31	1	4	14	31	17.6	21.0	1033
46	5.0	4	4.0	05	1	6	10	05	16.0	21.0	1035
47	4.5	4	5.0	36	1	6	13	05	17.0	19.4	1036
48	5.0	3	3.0	32	0	0	8	32	19.9	23.5	1031
49	4.0	3	3.0	08	2	8	9	08	19.0	22.1	1036
50	6.0	4	3.0	07	1	6	9	07	20.8	23.9	1036
51	6.0	3	4.0	09	1	2	12	09	22.2	24.6	1032
19	8.5	2	3.0	14	0	0	6	14	23.9	26.0	1031
52	5.0	3	3.0	11	1	2	10	11	22.6	24.2	1034
21	S T A T I O N N O T O C C U P I E D										
23	—	5	5.0	04	2	8	22	04	19.6	21.8	1035
29	9.0	4	5.0	21	6	8	4	28	22.6	24.0	1033
36	—	4	4.0	34	2	8	22	34	19.5	21.2	1021

*NODC codes as follows:

WIND-WAVE DIRECTION

00 -- CALM (NO WAVES-NO MOTION)
01 -- 5 DEGREES - 14 DEGREES
02 -- 15 DEGREES - 24 DEGREES
03 -- 25 DEGREES - 34 DEGREES
04 -- 35 DEGREES - 44 DEGREES
05 -- 45 DEGREES - 54 DEGREES
06 -- 55 DEGREES - 64 DEGREES
07 -- 65 DEGREES - 74 DEGREES
08 -- 75 DEGREES - 84 DEGREES
09 -- 85 DEGREES - 94 DEGREES
10 -- 95 DEGREES - 104 DEGREES
11 -- 105 DEGREES - 114 DEGREES
12 -- 115 DEGREES - 124 DEGREES
13 -- 125 DEGREES - 134 DEGREES
14 -- 135 DEGREES - 144 DEGREES
15 -- 145 DEGREES - 154 DEGREES
16 -- 155 DEGREES - 164 DEGREES
17 -- 165 DEGREES - 174 DEGREES
18 -- 175 DEGREES - 184 DEGREES
19 -- 185 DEGREES - 194 DEGREES
20 -- 195 DEGREES - 204 DEGREES
21 -- 205 DEGREES - 214 DEGREES
22 -- 215 DEGREES - 224 DEGREES
23 -- 225 DEGREES - 234 DEGREES
24 -- 235 DEGREES - 244 DEGREES
25 -- 245 DEGREES - 254 DEGREES
26 -- 255 DEGREES - 264 DEGREES
27 -- 265 DEGREES - 274 DEGREES
28 -- 275 DEGREES - 284 DEGREES
29 -- 285 DEGREES - 294 DEGREES
30 -- 295 DEGREES - 304 DEGREES
31 -- 305 DEGREES - 314 DEGREES
32 -- 315 DEGREES - 324 DEGREES
33 -- 325 DEGREES - 334 DEGREES
34 -- 335 DEGREES - 344 DEGREES
35 -- 345 DEGREES - 354 DEGREES
36 -- 355 DEGREES - 4 DEGREES
49 -- WAVES CONFUSED, DIRECTION INDETERMINATE (WAVES EQUAL TO OR LESS THAN 4 3/4 METERS)
99 -- WAVES CONFUSED, DIRECTION INDETERMINATE (WAVES GEATER THAN 4 3/4 METERS) WINDS VARIABLE, OR ALL DIRECTIONS OR UNKNOWN

WEATHER (WMO4501)

0 -- CLEAR (NO CLOUD AT ANY LEVEL)
1 -- PARTLY CLOUDY (SCATTERED OR BROKED)
2 -- CONTINUOUS LAYER(S) OF CLOUD(S)
3 -- SANDSTORM, DUSTSTORM, OR BLOWING SNOW
4 -- FOG, THICK DUST OR HAZE
5 -- DRIZZLE
6 -- RAIN
7 -- SNOW, OR RAIN AND SNOW MIXED
8 -- SHOWER(S)
9 -- THUNDERSTORM(S)

CLOUD AMT (WMO2700)

0 -- 0 (ZERO)
1 -- 1 OKTA OR LESS, BUT NOT ZERO (1/10 OR LESS, BUT NOT ZERO)
2 -- 2 OKTAS 2/10-3/10
3 -- 3 OKTAS 4/10
4 -- 4 OKTAS 5/10
5 -- 5 OKTAS 6/10
6 -- 6 OKTAS 7/10-8/10
7 -- 7 OKTAS OR MORE, BUT NOT 8 OKTAS (9/10 OR MORE, BUT NOT 10/10)
8 -- 8 OKTAS 10/10
9 -- SKY OBSCURED, OR CLOUD AMOUNT CANNOT BE ESTIMATED

SEA STATE (WMO3700)

0 -- CALM-GLASSY 0 FT (0 METERS)
1 -- CALM-RIPPLED 0-1/3 FT (0-.1 METERS)
2 -- SMOOTH-WAVELET 1/3-1 2/3 FT (.1-.5 METERS)
3 -- SLIGHT 1 2/3 - 4 FT (.5-1.25 METERS)
4 -- MODERATE 4-8 FT (1.25-2.50 METERS)
5 -- ROUGH 8-13 FT (2.50-4.0 METERS)
6 -- VERY ROUGH 13-20 FT (4-6 METERS)
7 -- HIGH 20-30 FT (6-9 METERS)
8 -- VERY HIGH 30-45 FT (9-14 METERS)
9 -- PHENOMENAL >45 FT (>14 METERS)

Table C-2. Ancillary Shipboard Marine Observations for Cruise II, March 1-8, 1984

Station Number	Secchi (m)	Wave Height (*)	Wave Period (s)	Wave Direction (*)	Weather (*)	Cloud Cover (*)	Wind Speed (knots)	Wind Direction (*)	Wet Temperature (°C)	Dry Temperature (°C)	Barometric Pressure (mb)
52	1.5	2	6.0	33	1	6	8	33	18.2	20.8	1035
21	2.5	4	5.0	07	0	0	13	07	18.0	20.2	1033
23	—	3	5.0	18	—	9	10	18	22.0	23.2	1027
29	>17.0	4	4.5	04	1	1	12	04	22.5	24.2	1029
36	—	—	—	—	—	9	—	—	22.8	24.0	1029

*NODC codes (refer to Table C-1).

Table C-3. Ancillary Shipboard Marine Observations for Cruise III, Leg 1, May 8-25, 1984

Station Number	Secchi (m)	Wave Height (*)	Wave Period (s)	Wave Direction (*)	Weather (*)	Cloud Cover (*)	Wind Speed (knots)	Wind Direction (*)	Wet Temperature (°C)	Dry Temperature (°C)	Barometric Pressure (mb)
43	14.0	3	5.0	25	6	8	10	25	24.0	25.6	1023
44	12.0	2	4.0	23	8	8	10	14	23.0	24.5	1024
45	7.0	3	5.0	08	1	1	15	08	20.0	23.2	1026
46	8.0	2	5.5	36	1	1	11	36	21.8	27.2	1023
47	—	3	4.0	05	1	1	15	05	22.0	24.8	1025
48	7.0	2	3.5	09	1	1	10	09	24.6	30.0	1024
49	4.5	2	—	09	1	1	6	09	24.4	30.2	1029
50	5.0	2	4.0	15	0	0	10	15	24.6	27.6	1021
51	6.0	2	4.0	09	0	0	12	09	23.0	25.4	1025
19	11.0	2	4.0	10	1	1	11	10	23.0	25.0	1027
52	4.0	4	3.0	32	0	0	12	32	23.5	29.0	1023
21	17.0	3	4.0	03	1	2	10	08	24.0	26.0	1026
23	>17.0	2	4.0	06	1	1	9	06	24.0	26.0	1026
29	>17.0	2	3.5	05	1	6	9	05	23.4	26.2	1024
36	—	4	5.0	06	2	8	21	06	23.4	25.2	1025

*NODC codes (refer to Table C-1).

Table C-4. Ancillary Shipboard Marine Observations for Cruise IV, August 14-21, 1984

Station Number	Secchi (m)	Wave Height (*)	Wave Period (s)	Wave Direction (*)	Weather (*)	Cloud Cover (*)	Wind Speed (knots)	Wind Direction (*)	Wet Temperature (°C)	Dry Temperature (°C)	Barometric Pressure (mb)
52	6.0	2	4.0	49	1	5	11	11	25.8	29.2	1021
21	21.0	3	4.0	22	1	2	11	20	26.8	29.2	1021
23	21.0	3	3.0	27	1	3	10	24	26.4	29.2	1020
29	20.0	3	3.0	05	1	5	11	05	25.1	28.8	1021
36	24.0	2	5.0	04	1	2	11	36	26.2	29.0	1020

*NODC codes (refer to Table C-1).

Table C-5. Local Climatological Data Monthly Summaries from NWS Key West Station from December 1983 through November 1984

AUGUST 1984

Table for August 1984 with columns for DATE, TEMPERATURE °F (MAXIMUM, MINIMUM, AVERAGE, DEPARTURE FROM NORMAL, AVERAGE WIND POINT), DEGREE DAYS BASE 65°F (HEATING, COOLING), WEATHER TYPES (1 FOG, 2 HEAVY FOG, 3 THUNDERSTORM, 4 ICE PELLETS, 5 HAIL, 6 GLAZE, 7 DUSTSTORM, 8 SMOKE, HAZE, 9 BLOWING SNOW), SNOW ICE PELLETS OR ICE ON GROUND AT 0700 INCHES, PRECIPITATION (WATER EQUIVALENT, SNOW, ICE PELLETS), AVERAGE STATION PRESSURE IN INCHES, WIND (IN. P. M., I) (RESULTANT DIR., RESULTANT SPEED, AVERAGE SPEED, FASTEST WIND), SUNSHINE (MINUTES, PERCENT OF TOTAL POSSIBLE), SKY COVER (TENTHS), and DATE (21, 22).

SEPTEMBER 1984

Table for September 1984 with columns for DATE, TEMPERATURE °F (MAXIMUM, MINIMUM, AVERAGE, DEPARTURE FROM NORMAL, AVERAGE WIND POINT), DEGREE DAYS BASE 65°F (HEATING, COOLING), WEATHER TYPES (1 FOG, 2 HEAVY FOG, 3 THUNDERSTORM, 4 ICE PELLETS, 5 HAIL, 6 GLAZE, 7 DUSTSTORM, 8 SMOKE, HAZE, 9 BLOWING SNOW), SNOW ICE PELLETS OR ICE ON GROUND AT 0700 INCHES, PRECIPITATION (WATER EQUIVALENT, SNOW, ICE PELLETS), AVERAGE STATION PRESSURE IN INCHES, WIND (IN. P. M., I) (RESULTANT DIR., RESULTANT SPEED, AVERAGE SPEED, FASTEST WIND), SUNSHINE (MINUTES, PERCENT OF TOTAL POSSIBLE), SKY COVER (TENTHS), and DATE (21, 22).

Table C-6. Local Climatological Data Monthly Summaries from NWS Fort Myers Station from December 1983 through November 1984

DECEMBER 1983

DATE	TEMPERATURE °F					DEGREE DAYS BASE 65°F		WEATHER TYPES 1 FOG 2 HEAVY FOG 3 THUNDERSTORM 4 ICE PELLETS 5 HAIL 6 GLAZE 7 DUSTSTORM 8 SMOKE, HAZE 9 BLOWING SNOW	SNOW ICE PELLETS OR ICE ON GROUND AT 0700 INCHES	PRECIPITATION			AVERAGE STATION PRESSURE IN INCHES ELEV. FEET ABOVE M.S.L.	WIND (M.P.H.)			SUNSHINE MINUTES	SKY COVER (TENTHS)		DATE
	MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE SEA POINT	HEATING (SEASON BEGINS WITH JAN)	COOLING (SEASON BEGINS WITH JAN)			WATER EQUIVALENT (INCHES)	SNOW, ICE PELLETS (INCHES)	WIND SPEED		DIRECTION	MINUTES	PERCENT OF TOTAL POSSIBLE		SUNRISE TO SUNSET	MIDNIGHT TO MIDNIGHT	
1	62	61	72	5	64	0	7	0	0	0	0	0	0	12	07	1	1			
2	62	65	74	8	66	0	0	0	0	0	0	0	0	14	11	2	2			
3	60	76	76	10	70	0	11	2	0	0	0	0	0	16	20	3	3			
4	62	71	77	11	73	0	12	2	0	0	0	0	0	14	21	4	4			
5	64	69	77	11	71	0	12	2	0	0	0	0	0	9	20	5	5			
6	60	69	75	9	71	0	10	2	0	0	0	0	0	17	21	6	6			
7	69	53	61	-5	47	4	4	0	0	0	0	0	0	10	16	7	7			
8	72	50	61	-4	40	0	0	0	0	0	0	0	0	9	8	8	8			
9	76	54	65	0	55	0	0	0	0	0	0	0	0	15	9	9	9			
10	81	62	72	7	61	0	0	0	0	0	0	0	0	14	07	10	10			
11	82	63	73	8	65	0	0	0	0	0	0	0	0	14	20	11	11			
12	74	61	68	3	62	0	3	3	0	0	0	0	0	12	21	12	12			
13	71	56	64	-1	56	1	0	0	0	0	0	0	0	13	21	13	13			
14	77	62	70	5	63	0	5	0	0	0	0	0	0	17	17	14	14			
15	74	59	67	3	61	0	2	1	3	0	0	0	0	14	17	15	15			
16	72	59	66	2	57	0	1	1	0	0	0	0	0	17	00	16	16			
17	82	66	74	10	68	0	9	1	3	0	0	0	0	17	13	17	17			
18	81	68	75	11	69	0	10	2	0	0	0	0	0	16	09	18	18			
19	71	66	69	6	67	0	4	2	0	0	0	0	0	12	09	19	19			
20	75	64	70	5	66	0	5	1	0	0	0	0	0	14	03	20	20			
21	70	64	71	7	66	0	6	1	0	0	0	0	0	12	09	21	21			
22	80	65	73	9	69	0	8	2	0	0	0	0	0	12	10	22	22			
23	79	61	74	10	69	0	9	2	0	0	0	0	0	12	34	23	23			
24	71	66	74	10	69	0	9	2	0	0	0	0	0	12	31	24	24			
25	46	33	40	-24	16	25	0	0	0	0	0	0	0	21	35	25	25			
26	49	29	39	-25	13	26	0	0	0	0	0	0	0	14	01	26	26			
27	40	55	47	15	40	10	0	0	0	0	0	0	0	14	09	27	27			
28	60	60	71	0	66	0	0	0	0	0	0	0	0	19	14	28	28			
29	81	66	74	10	71	0	9	1	3	0	0	0	0	18	14	29	29			
30	66	44	55	-9	47	10	0	1	0	0	0	0	0	17	35	30	30			
31	60	42	51	-13	40	14	0	1	0	0	0	0	0	21	35	31	31			

JANUARY 1984

DATE	TEMPERATURE °F					DEGREE DAYS BASE 65°F		WEATHER TYPES 1 FOG 2 HEAVY FOG 3 THUNDERSTORM 4 ICE PELLETS 5 HAIL 6 GLAZE 7 DUSTSTORM 8 SMOKE, HAZE 9 BLOWING SNOW	SNOW ICE PELLETS OR ICE ON GROUND AT 0700 INCHES	PRECIPITATION			AVERAGE STATION PRESSURE IN INCHES ELEV. FEET ABOVE M.S.L.	WIND (M.P.H.)			SUNSHINE MINUTES	SKY COVER (TENTHS)		DATE
	MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE SEA POINT	HEATING (SEASON BEGINS WITH JAN)	COOLING (SEASON BEGINS WITH JAN)			WATER EQUIVALENT (INCHES)	SNOW, ICE PELLETS (INCHES)	WIND SPEED		DIRECTION	MINUTES	PERCENT OF TOTAL POSSIBLE		SUNRISE TO SUNSET	MIDNIGHT TO MIDNIGHT	
1	64	40	52	-12	42	13	0	0	0	0	0	0	0	13	4	17	05			
2	73	47	60	-4	49	5	0	0	0	0	0	0	0	10	6	13	01			
3	60	49	59	-5	44	6	0	0	0	0	0	0	0	14	35	7	02			
4	66	43	55	-9	38	10	0	0	0	0	0	0	0	12	31	6	03			
5	66	43	56	-8	48	9	0	0	0	0	0	0	0	16	28	2	04			
6	60	45	57	-7	47	8	0	0	0	0	0	0	0	7	1	11	29			
7	71	51	61	-3	52	4	0	2	8	0	0	0	0	16	30	4	06			
8	69	45	57	-7	43	8	0	0	0	0	0	0	0	12	04	8	07			
9	75	52	64	0	55	1	0	0	0	0	0	0	0	21	12	8	08			
10	74	62	68	4	65	0	3	1	0	0	0	0	0	9	5	8	09			
11	65	49	57	-7	53	8	0	0	0	0	0	0	0	13	20	9	10			
12	61	47	54	-10	46	11	0	0	0	0	0	0	0	15	36	10	11			
13	69	54	62	-1	54	3	0	1	0	0	0	0	0	15	03	2	12			
14	70	53	62	-1	54	3	0	1	0	0	0	0	0	17	03	2	13			
15	73	53	63	0	56	2	0	1	0	0	0	0	0	14	03	6	14			
16	76	50	67	4	61	0	2	2	0	0	0	0	0	11	11	9	15			
17	79	61	70	7	66	0	5	1	0	0	0	0	0	14	19	8	16			
18	81	65	73	10	68	0	8	1	0	0	0	0	0	15	21	6	17			
19	71	59	65	2	66	0	0	2	8	0	0	0	0	17	36	10	18			
20	59	53	56	-7	52	9	0	1	8	0	0	0	0	16	03	10	19			
21	56	40	52	-11	47	13	0	1	0	0	0	0	0	23	21	9	20			
22	73	40	61	-2	51	4	0	0	0	0	0	0	0	23	04	8	21			
23	70	61	70	7	61	0	5	0	0	0	0	0	0	25	07	7	22			
24	82	63	73	10	64	0	8	0	0	0	0	0	0	16	13	3	23			
25	80	62	71	8	66	0	6	2	8	0	0	0	0	18	22	5	24			
26	83	64	74	11	68	0	9	2	0	0	0	0	0	14	18	8	25			
27	79	64	72	9	68	0	7	1	0	0	0	0	0	21	23	8	26			
28	70	63	62	-1	58	3	0	1	0	0	0	0	0	17	32	7	27			
29	73	48	61	-2	48	0	0	0	0	0	0	0	0	15	32	7	28			
30	71	40	60	-3	46	5	0	0	0	0	0	0	0	18	30	2	29			
31	67	50	59	-4	44	6	0	0	0	0	0	0	0	14	31	8	30			

Table C-7

NOAA DATA BUOY 42003
MONTH: NOVEMBER YEAR: 83

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	25.93	1021.18	8.89	75.58	2.04	5.01	6.89	27.85
2	25.82	1020.94	8.72	70.79	2.23	5.30	7.05	27.85
3	25.70	1020.85	7.07	59.91	1.67	4.78	6.50	28.15
4	24.49	1018.94	2.52	52.37	0.75	4.16	4.91	28.10
5	24.32	1016.04	3.02	295.36	0.44	4.20	4.95	27.91
6	23.63	1016.34	3.45	46.02	0.58	3.04	3.90	27.73
7	25.83	1012.98	7.24	208.00	0.00	0.00	0.00	27.81
8	25.53	1011.82	4.32	276.60	0.00	0.00	0.00	27.93
9	25.20	1012.16	3.47	351.87	0.00	0.00	0.00	28.00
10	25.31	1011.45	3.59	302.76	0.00	0.00	0.00	27.88
11	22.64	1013.07	7.66	291.09	0.00	0.00	0.00	27.68
12	22.04	1015.66	3.92	301.25	0.00	0.00	0.00	27.67
13	23.17	1014.87	3.38	286.03	0.00	0.00	0.00	27.71
14	24.03	1015.40	2.37	101.94	0.00	0.00	0.00	27.66
15	24.87	972.46	6.22	188.58	0.00	0.00	0.00	26.48
16	23.30	1017.26	8.30	325.23	0.00	0.00	0.00	27.59
17	20.71	1020.59	4.90	11.89	0.00	0.00	0.00	27.38
18	21.40	1019.82	4.75	99.16	0.00	0.00	0.00	27.37
19	25.09	1015.37	9.05	127.87	0.00	0.00	0.00	27.35
20	25.10	1010.34	11.28	187.06	0.00	0.00	0.00	27.31
21	25.35	1015.64	4.25	81.26	0.00	0.00	0.00	27.40
22	26.00	1017.55	7.44	108.76	0.00	0.00	0.00	27.46
23	26.46	1013.94	9.00	134.13	0.00	0.00	0.00	27.63
24	27.02	1012.57	9.50	190.61	0.00	0.00	0.00	27.64
25	21.16	1018.49	8.56	353.87	0.00	0.00	0.00	27.51
26	22.39	1019.02	6.37	99.15	0.00	0.00	0.00	27.32
27	25.89	1014.85	9.89	137.14	0.00	0.00	0.00	27.25
28	25.03	1013.41	9.42	201.98	0.00	0.00	0.00	27.09
29	21.24	1018.49	7.26	21.15	0.00	0.00	0.00	27.04
30	22.85	1019.33	7.70	70.52	0.00	0.00	0.00	26.99
MONTHLY AVERAGE								
	24.25	1014.69	6.45	67.70	0.26	0.88	1.14	27.56
MAX. HOURLY VALUES								
	27.90	1022.80	16.56	359.90	3.00	5.90	7.70	28.95
MIN. HOURLY VALUES								
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table C-8

NOAA DATA BUOY 42003
MONTH: DECEMBER YEAR: 83

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	24.40	1020.80	6.92	88.86	0.00	0.00	0.00	27.00
2	25.11	1019.83	6.87	103.84	0.00	0.00	0.00	27.13
3	26.15	1015.68	7.64	157.05	0.00	0.00	0.00	27.18
4	26.90	1015.51	6.20	193.46	0.00	0.00	0.00	27.25
5	26.54	1016.65	5.31	162.81	0.00	0.00	0.00	26.98
6	25.96	1016.09	7.56	196.80	0.00	0.00	0.00	26.95
7	21.08	1020.53	8.69	16.78	0.00	0.00	0.00	26.90
8	19.81	1022.41	5.50	36.63	0.00	0.00	0.00	26.83
9	22.33	1022.07	5.61	81.07	0.00	0.00	0.00	26.90
10	24.60	1020.91	6.17	110.25	0.00	0.00	0.00	26.84
11	25.52	1017.35	8.18	162.48	0.00	0.00	0.00	26.71
12	24.11	1013.58	10.41	289.10	0.00	0.00	0.00	26.63
13	21.71	1012.71	3.89	258.76	0.00	0.00	0.00	26.66
14	23.92	1008.38	6.80	223.60	0.00	0.00	0.00	26.59
15	20.78	1014.16	7.39	18.05	0.00	0.00	0.00	26.51
16	21.05	1021.24	8.82	60.13	0.00	0.00	0.00	26.49
17	23.75	1020.62	5.87	64.02	0.00	0.00	0.00	26.54
18	24.24	1019.06	7.16	83.06	0.00	0.00	0.00	26.57
19	24.20	1016.31	4.09	77.35	0.00	0.00	0.00	26.43
20	23.37	1017.26	6.95	44.98	0.00	0.00	0.00	26.36
21	23.54	1019.55	7.08	74.08	0.00	0.00	0.00	26.26
22	25.58	1019.03	4.52	182.14	0.00	0.00	0.00	26.29
23	24.04	1020.03	5.56	7.94	0.00	0.00	0.00	26.31
24	21.23	1021.18	8.38	354.57	0.00	0.00	0.00	26.28
25	14.85	1024.70	12.25	345.00	0.00	0.00	0.00	26.17
29	23.80	869.90	8.94	277.46	0.00	0.00	0.00	25.20
30	15.05	1024.50	12.22	2.39	0.00	0.00	0.00	22.85
31	0.00	0.00	0.00	2.39	0.00	0.00	0.00	0.00
MONTHLY AVERAGE	22.27	976.79	6.96	65.41	0.00	0.00	0.00	25.53
MAX. HOURLY VALUES	27.40	1030.60	13.75	359.80	0.00	0.00	0.00	27.39
MIN. HOURLY VALUES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table C-9

NOAA DATA BUOY 42003
 MONTH: MARCH YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)

21	21.00	1015.30	4.38	355.50	1.20	4.80	7.70	26.19
22	22.84	1016.33	5.10	91.01	0.91	4.80	6.26	26.00
23	24.94	1013.68	7.67	91.18	1.49	5.73	6.82	26.23
24	25.42	1013.56	6.51	119.75	1.50	5.83	7.08	26.33
25	26.19	1012.17	6.87	172.34	0.82	4.54	5.29	26.10
26	27.10	1010.88	6.81	213.57	0.83	4.10	5.16	26.14
27	27.34	1007.14	11.57	183.80	1.66	4.80	6.04	26.49
28	27.62	1000.17	15.58	203.77	3.54	6.47	8.80	26.19
29	23.46	1007.89	15.48	296.58	3.95	5.78	9.36	26.26
30	22.29	1016.08	7.08	348.89	2.32	5.47	9.20	25.92
31	22.71	1017.89	3.35	32.20	0.79	4.46	5.71	25.82
MONTHLY AVERAGE	24.63	1011.92	8.22	126.61	1.73	5.16	7.04	26.15
MAX. HOURLY VALUES	28.00	1019.60	18.34	358.70	5.20	7.30	11.10	27.06
MIN. HOURLY VALUES	21.00	998.50	0.24	2.20	0.00	0.00	0.00	25.33

Table C-10

NOAA DATA BUOY 42003
MONTH: APRIL YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	23.54	1018.26	5.97	63.73	0.60	3.71	4.34	26.13
2	24.71	1017.39	8.89	105.11	1.08	4.43	5.28	26.08
3	26.92	1012.71	12.19	157.10	2.27	5.81	7.42	25.75
4	26.75	1010.17	10.22	228.31	2.24	5.66	7.56	25.70
5	24.07	1012.63	10.87	306.37	2.30	5.23	7.23	25.22
6	22.65	1016.01	5.89	341.66	1.68	5.10	6.92	25.41
7	24.12	1017.23	3.97	45.11	0.61	4.21	4.98	25.49
8	25.75	1013.74	10.23	140.61	1.38	4.82	5.69	25.34
9	27.01	1009.59	9.47	158.50	1.98	5.57	7.24	25.87
10	25.89	1009.12	3.65	333.75	1.17	5.03	7.00	26.35
11	25.76	1008.17	5.18	82.53	0.67	4.37	6.15	26.09
12	26.05	1009.23	7.35	88.50	1.21	4.80	5.55	25.80
13	27.37	1010.63	3.64	106.33	0.87	5.09	6.32	26.98
14	26.70	1011.02	6.44	172.36	1.13	4.50	5.90	26.47
15	26.25	1009.83	8.47	248.49	1.57	4.82	6.28	25.72
16	24.19	1012.43	11.61	301.37	2.33	4.99	7.18	25.06
17	24.18	1013.77	13.07	296.00	3.09	5.72	8.50	25.17
18	25.28	1016.74	7.14	297.36	2.05	5.18	7.81	24.97
19	26.40	1016.90	6.50	159.64	0.77	4.25	4.96	25.32
20	27.32	1015.35	9.58	146.77	1.37	4.95	5.97	25.50
21	27.85	1014.36	10.26	136.16	1.70	5.53	6.70	25.73
22	28.19	1013.37	8.18	152.26	1.32	5.23	6.45	26.18
23	27.94	1011.24	8.92	188.82	1.27	4.63	5.73	26.32
24	26.40	1013.59	5.46	8.51	1.09	4.47	6.07	25.99
25	26.47	1015.04	7.41	96.29	0.80	4.42	5.45	26.09
26	27.78	1014.66	8.52	131.34	1.12	4.87	5.67	25.93
27	28.46	1014.70	10.25	136.48	1.49	5.09	6.10	26.17
28	28.15	1017.22	8.72	131.59	1.67	5.55	6.70	26.36
29	28.07	1018.49	8.73	128.49	1.31	5.22	6.37	26.32
30	28.13	1019.04	8.03	136.78	1.22	5.11	6.00	26.54
MONTHLY AVERAGE								
	26.28	1013.75	8.16	131.34	1.45	4.95	6.32	25.87
MAX. HOURLY VALUES								
	28.70	1020.30	17.33	359.10	3.60	6.50	9.10	29.35
MIN. HOURLY VALUES								
	0.00	1007.10	0.00	0.00	0.00	0.00	0.00	24.48

Table C-11

NOAA DATA BUOY 42003
MONTH: MAY YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	28.20	1019.52	6.72	127.73	1.05	5.02	5.93	26.52
2	28.38	1016.10	8.76	143.44	1.27	5.02	6.14	26.40
3	28.68	1009.71	12.53	173.32	2.17	5.49	6.90	26.32
4	28.80	1009.24	9.95	192.44	2.06	5.59	7.65	26.32
5	28.79	1012.39	6.27	153.18	1.24	5.30	7.05	26.68
6	29.04	1015.37	8.67	137.00	1.35	5.32	6.72	27.24
7	29.25	1016.97	8.97	134.75	1.35	5.18	6.32	27.31
8	29.03	1016.10	6.72	160.48	1.10	5.18	6.34	27.23
9	27.22	1016.47	8.74	6.60	1.61	4.87	6.49	27.03
10	25.97	1018.05	8.77	37.30	1.50	4.79	6.42	26.47
11	26.36	1017.34	4.46	53.46	0.56	3.95	4.55	26.74
12	28.02	1017.62	4.76	95.88	0.82	4.70	5.89	27.07
13	28.11	1018.97	6.59	76.67	0.79	4.38	5.38	26.86
14	28.09	1018.38	5.68	72.87	0.57	3.88	4.73	27.00
15	28.33	1016.98	5.07	73.72	0.44	3.63	4.34	27.18
16	28.41	1016.57	5.40	52.75	0.46	3.64	4.35	27.13
17	28.36	1017.84	8.95	73.06	1.28	4.40	5.38	26.62
18	27.57	1020.43	9.91	83.25	1.75	5.23	7.10	26.25
19	27.63	1019.05	8.56	114.19	1.35	5.13	6.40	26.42
20	27.97	1015.34	8.11	137.72	1.28	5.17	6.24	26.64
21	28.60	1014.75	8.43	136.13	1.11	4.91	5.72	26.64
22	28.29	1015.79	9.21	114.52	1.32	4.78	5.75	26.51
23	28.42	1016.59	5.87	157.16	1.02	4.82	5.72	26.70
24	28.74	1016.22	4.43	99.33	0.90	5.38	7.18	27.10
25	28.98	1015.15	6.89	113.59	0.88	4.81	6.29	27.20
26	28.87	1016.10	6.95	102.60	0.85	4.59	5.34	27.14
27	28.78	1016.49	6.26	78.67	0.72	4.32	5.04	27.36
28	28.84	1016.24	4.84	102.18	0.72	4.54	5.52	27.73
29	28.89	1015.28	3.41	40.21	0.63	4.50	5.45	27.84
30	28.32	1013.75	8.86	14.96	1.38	4.45	6.24	27.35
31	26.53	1014.87	10.32	29.29	2.10	5.29	7.63	26.31
MONTHLY AVERAGE	28.24	1016.12	7.39	100.46	1.15	4.78	6.01	26.88
MAX. HOURLY VALUES	29.60	1021.90	15.28	359.20	2.90	6.00	8.30	28.80
MIN. HOURLY VALUES	25.00	1007.50	0.90	4.70	0.30	0.32	2.70	25.97

Table C-12

 NOAA DATA BUOY 42003
 MONTH: JUNE YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	26.35	1016.78	9.69	52.79	1.80	5.16	6.78	26.19
2	27.50	1017.82	6.65	77.16	1.01	4.64	5.85	26.68
3	27.96	1017.25	5.90	99.54	0.91	4.87	5.99	26.98
4	27.99	1015.71	5.96	99.59	0.65	4.53	5.55	26.80
5	28.41	1016.42	8.14	105.50	0.94	4.70	5.59	26.87
6	28.86	1018.07	9.96	113.14	1.48	5.31	6.61	26.79
7	28.83	1018.69	8.68	110.58	1.37	5.42	6.73	26.74
8	28.76	1017.58	8.18	101.63	1.06	4.91	6.03	27.08
9	29.01	1016.30	10.05	98.25	1.47	5.39	6.87	26.97
10	28.65	1016.53	7.45	113.30	1.07	5.01	6.14	27.17
11	28.74	1017.34	5.34	75.75	0.67	4.62	5.25	26.98
12	29.07	1017.28	6.05	63.14	0.59	4.13	4.92	26.98
13	28.94	1017.88	5.41	72.62	0.65	4.48	5.32	27.26
14	27.55	1016.85	5.14	52.86	0.49	3.92	5.82	27.38
15	26.17	1016.76	5.78	97.79	0.68	4.75	5.36	27.36
16	26.25	1017.71	7.23	97.44	1.00	5.20	6.27	27.53
17	26.27	1017.83	4.51	125.39	0.85	5.19	6.04	27.40
18	26.44	1016.92	3.65	97.66	0.58	5.02	5.54	27.97
19	26.55	1017.01	4.09	75.90	0.48	5.06	6.85	28.06
20	26.57	1017.59	3.50	70.87	0.36	5.07	5.95	28.24
21	26.58	1017.10	2.38	90.03	0.31	5.01	5.64	28.49
22	26.57	1015.52	1.51	15.20	0.30	5.10	5.61	28.89
23	26.57	1014.82	3.65	296.83	0.22	4.49	5.42	28.84
24	26.72	1015.30	6.10	277.96	0.48	2.88	2.74	28.26
25	26.91	1014.65	6.16	288.18	0.65	3.11	3.15	28.26
26	26.18	1013.26	3.97	275.35	0.47	3.45	3.87	28.47
27	27.01	1013.43	1.91	268.06	0.35	4.02	4.93	29.40
28	27.12	1015.80	4.32	232.61	0.33	3.72	5.25	29.02
29	27.13	1016.21	5.55	227.63	0.48	3.41	3.54	28.81
30	27.18	1014.85	4.89	215.74	0.61	3.92	4.38	28.64
MONTHLY AVERAGE	27.43	1016.51	5.73	91.01	0.74	4.55	5.47	27.68
MAX. HOURLY VALUES	29.40	1020.10	14.24	359.30	2.10	5.90	9.10	30.98
MIN. HOURLY VALUES	23.50	1011.30	0.00	0.00	0.00	0.00	0.00	25.89

Table C-13

NOAA DATA BUOY 42003
MONTH: JULY YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	27.30	1015.32	3.75	134.95	0.58	4.49	5.07	29.08
2	27.30	1017.63	3.57	126.27	0.50	4.78	5.64	29.07
3	27.30	1018.25	5.05	62.63	0.53	4.50	5.22	29.25
4	25.77	1016.61	4.20	96.02	0.80	5.25	6.11	29.11
5	26.33	1015.47	4.68	139.63	0.70	5.17	6.23	28.65
6	26.29	1015.08	2.33	99.79	0.46	4.80	5.53	28.31
7	26.90	1015.96	3.28	98.06	0.31	4.33	5.20	28.72
8	26.94	1017.44	2.98	100.12	0.56	5.10	5.97	28.87
9	27.21	1018.26	3.41	70.92	0.43	4.53	5.30	29.10
10	27.30	1018.12	4.59	88.81	0.33	3.56	4.83	29.08
11	26.75	1017.05	3.17	50.08	0.42	4.11	5.30	29.05
12	27.11	1015.38	3.44	107.46	0.31	3.84	4.80	29.37
13	27.20	1017.27	4.54	107.49	0.32	3.77	5.06	29.22
14	27.34	1019.67	3.48	107.54	0.39	3.92	4.81	29.27
15	27.40	1019.73	2.73	67.18	0.33	4.20	5.69	29.70
16	26.56	1016.72	2.49	118.57	0.34	3.97	5.03	29.46
17	25.38	1014.93	6.30	187.00	0.51	4.16	4.39	29.00
18	26.83	1016.41	6.23	202.30	0.75	4.55	5.19	28.73
19	26.89	1017.11	1.44	278.06	0.60	4.61	5.68	28.98
20	26.67	1016.35	3.07	103.97	0.49	4.32	5.53	28.62
21	26.83	1015.62	2.45	76.11	0.41	4.19	5.52	28.83
22	26.48	1015.07	2.93	8.62	0.41	4.13	5.10	28.95
23	26.18	1015.35	4.45	165.03	0.34	4.16	5.46	28.45
24	27.31	1017.12	5.36	97.34	0.46	3.80	4.17	28.84
25	27.16	1017.48	6.04	105.49	0.82	4.60	5.49	28.59
26	26.25	1017.20	6.47	81.98	0.83	4.76	5.70	28.57
27	27.10	1016.30	5.57	103.15	0.95	5.19	6.12	28.66
28	27.20	1016.24	6.62	96.44	1.07	5.39	6.25	28.43
29	26.89	1015.89	6.75	129.04	1.17	5.37	6.39	28.20
30	25.51	1014.92	5.11	66.38	0.95	5.56	7.20	27.86
31	26.86	1013.86	7.79	103.59	1.04	5.29	6.06	27.93
MONTHLY AVERAGE								
	26.79	1016.57	4.33	102.38	0.59	4.53	5.49	28.84
MAX. HOURLY VALUES								
	28.30	1021.70	13.54	359.00	1.50	6.40	9.10	30.84
MIN. HOURLY VALUES								
	0.00	1012.70	0.21	0.10	0.00	0.00	0.00	27.43

Table C-14

NOAA DATA BUOY 42003
MONTH: AUGUST YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	27.44	1014.83	9.50	126.33	1.28	5.19	6.01	28.07
2	27.34	1018.49	7.80	127.36	1.31	5.46	6.35	28.05
3	26.94	1018.39	7.16	89.19	1.17	5.56	6.47	28.05
4	26.93	1017.29	5.39	99.56	1.12	5.58	6.69	28.19
5	27.16	1019.07	3.81	129.10	0.59	4.87	5.45	28.66
6	27.27	1019.58	4.70	81.05	0.49	4.57	4.67	28.68
7	27.25	1018.20	3.94	48.51	0.50	4.72	5.79	28.84
8	27.36	1016.29	3.52	32.87	0.34	4.00	4.80	28.92
9	27.45	1016.50	5.28	46.26	0.36	3.76	4.46	28.87
10	27.39	1016.95	4.54	43.30	0.35	3.74	4.52	28.89
11	27.32	1016.02	2.49	29.61	0.26	3.73	4.26	29.22
12	27.30	1016.42	2.60	156.58	0.20	3.96	4.44	29.34
13	27.35	1017.10	3.14	160.75	0.20	4.01	4.66	29.50
14	27.37	1017.62	2.81	95.64	0.18	3.72	4.92	29.38
15	27.50	1018.28	3.58	65.41	0.36	4.05	4.60	29.27
16	27.67	1017.96	5.08	38.06	0.48	4.42	5.03	29.29
17	27.58	1015.99	4.36	359.13	0.41	4.19	5.06	29.22
18	27.47	1013.49	4.42	276.73	0.29	3.43	4.02	29.27
19	27.44	1012.32	6.81	247.45	0.62	3.12	3.57	29.00
20	27.47	1012.99	6.35	240.19	0.60	3.31	3.89	28.93
21	27.07	1016.07	4.26	222.00	0.32	3.39	4.38	29.09
22	27.19	1018.08	2.57	2.07	0.22	3.89	4.55	28.94
23	27.28	1015.65	3.20	346.29	0.22	4.08	4.47	29.22
24	26.84	1013.95	2.85	166.05	0.35	4.22	4.78	29.16
25	27.46	1016.76	4.14	144.73	0.29	3.75	4.03	29.24
26	27.63	1019.03	3.52	86.84	0.33	4.23	6.46	29.18
27	27.22	1018.32	4.69	82.82	0.60	4.09	5.18	28.81
28	26.50	1017.07	3.01	82.74	0.58	4.47	5.41	28.66
29	26.69	1016.72	3.81	76.70	0.59	4.25	5.00	28.70
30	27.22	1016.33	3.63	111.48	0.39	4.05	4.55	28.61
31	27.24	1016.74	4.31	130.55	0.46	3.61	4.39	28.53
MONTHLY AVERAGE	27.27	1016.73	4.43	88.41	0.50	4.18	4.93	28.90
MAX. HOURLY VALUES	28.90	1020.80	13.79	359.50	1.60	6.10	9.10	30.55
MIN. HOURLY VALUES	24.90	1010.90	0.00	0.00	0.00	0.00	0.00	27.59

Table C-15

NOAA DATA BUOY 42003
MONTH: SEPTEMBER YEAR: 84

DAY	AIR TEMP. (C)	BAROMET. PRESSURE (MB)	WIND SPEED (M/S)	WIND DIRECTION (TRUE)	SIG. WAVE HEIGHT (M)	AVERAGE PERIOD (SEC)	DOMINANT PERIOD (SEC)	SEA SURFACE TEMP. (C)
1	24.35	1016.85	5.06	343.92	0.72	3.80	5.30	24.40
2	24.13	1018.65	2.68	217.68	0.41	4.08	7.03	24.23
3	25.73	1013.09	4.70	220.24	0.52	3.47	6.98	24.78
4	24.57	1012.07	5.27	258.77	0.80	3.98	6.13	24.80
5	21.07	1017.94	6.46	10.89	1.19	4.11	5.22	23.71
6	20.90	1022.31	4.64	26.15	0.95	4.32	5.08	23.14
7	19.89	1027.92	5.38	25.61	1.00	4.34	5.57	23.02
8	20.96	1030.47	5.24	75.14	1.07	4.58	6.68	22.81
9	22.42	1025.87	6.26	82.25	1.41	4.91	6.82	22.71
10	22.40	1018.30	5.14	100.72	1.37	5.09	7.54	22.71
11	23.28	1015.72	2.07	102.10	1.11	5.29	7.53	23.03
12	23.90	1016.52	4.64	82.92	1.09	5.11	7.17	23.33
13	23.27	1019.56	6.10	78.10	1.38	4.78	6.05	23.21
14	23.30	1013.22	6.87	111.80	1.22	4.73	6.76	23.23
15	23.12	1010.62	5.87	285.21	1.11	4.65	6.77	23.12
16	18.06	1021.83	9.00	14.56	1.69	4.56	5.88	22.64
17	18.10	1028.21	7.62	33.90	1.59	4.70	6.02	21.86
18	18.80	1026.95	6.75	41.00	1.46	4.87	8.22	21.61
19	18.47	1020.35	3.71	13.20	1.29	5.68	9.70	21.43
20	19.86	1015.11	4.72	206.11	0.98	5.76	10.17	21.37
21	20.96	1014.71	5.36	241.54	0.75	4.31	9.72	21.26
22	21.14	1024.82	4.45	69.39	0.73	4.20	6.62	21.47
23	22.00	1026.92	2.98	133.58	0.79	5.12	7.36	21.87
24	22.39	1023.36	4.60	197.55	0.70	4.45	8.36	22.22
25	22.60	1019.32	4.55	194.82	0.62	4.39	9.30	22.44
26	22.83	1017.07	6.00	212.28	0.68	3.74	6.66	22.55
27	17.65	1024.39	9.18	22.79	1.86	4.74	6.43	21.63
28	17.15	1020.83	8.31	17.09	1.92	5.04	6.44	20.83
29	17.83	1016.76	8.56	11.21	1.83	5.05	7.87	20.37
30	18.36	1016.33	10.69	25.30	2.63	5.61	8.12	19.99
MONTHLY								
AVERAGE	21.32	1019.87	5.76	52.93	1.16	4.65	7.12	22.53
MAX. HOURLY								
VALUES	28.50	1031.80	12.33	359.50	2.90	7.00	14.30	26.92
MIN. HOURLY								
VALUES	15.80	1007.10	0.00	0.30	0.00	0.00	0.00	19.82

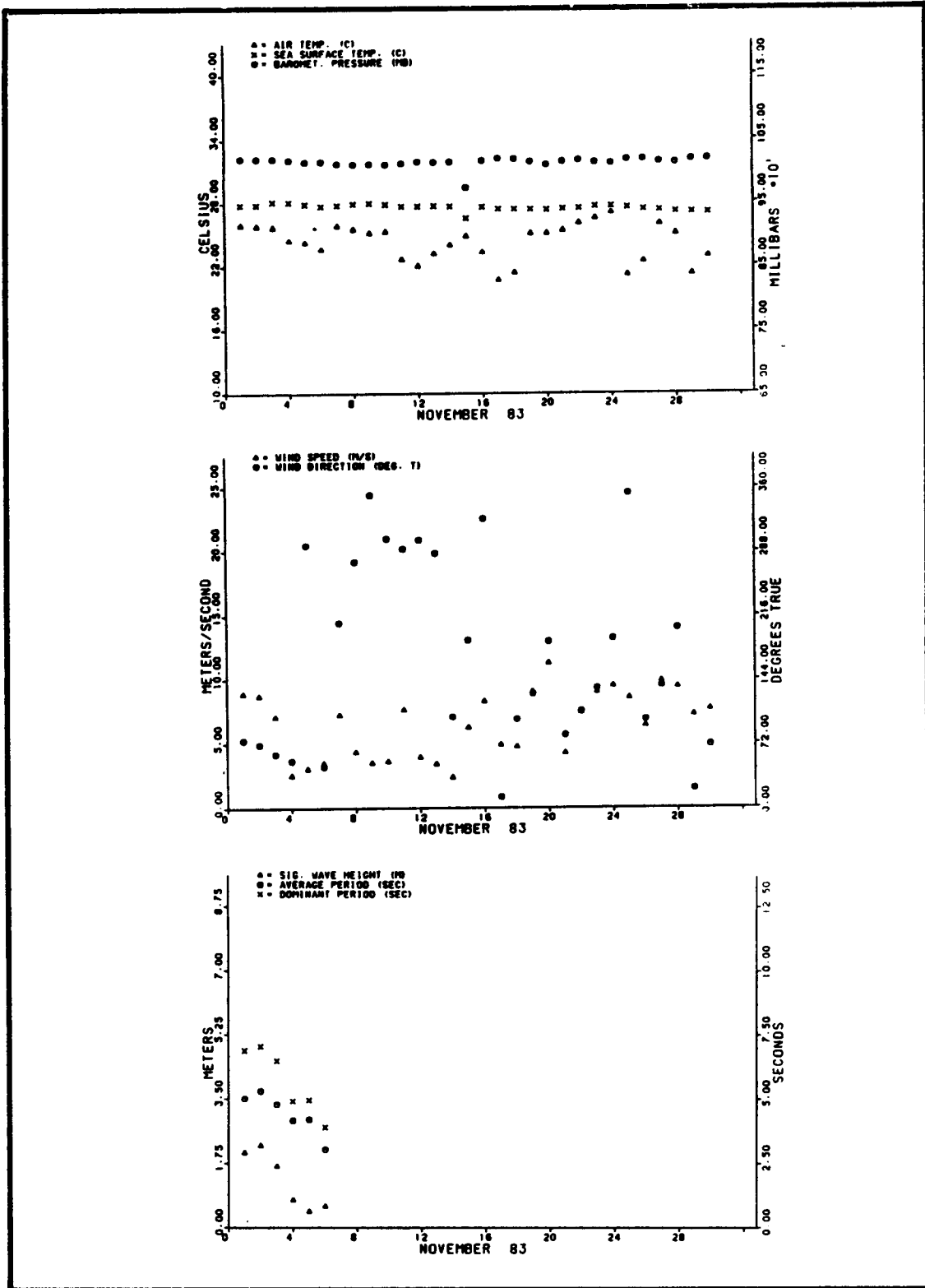


Figure C-2

METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - NOV83

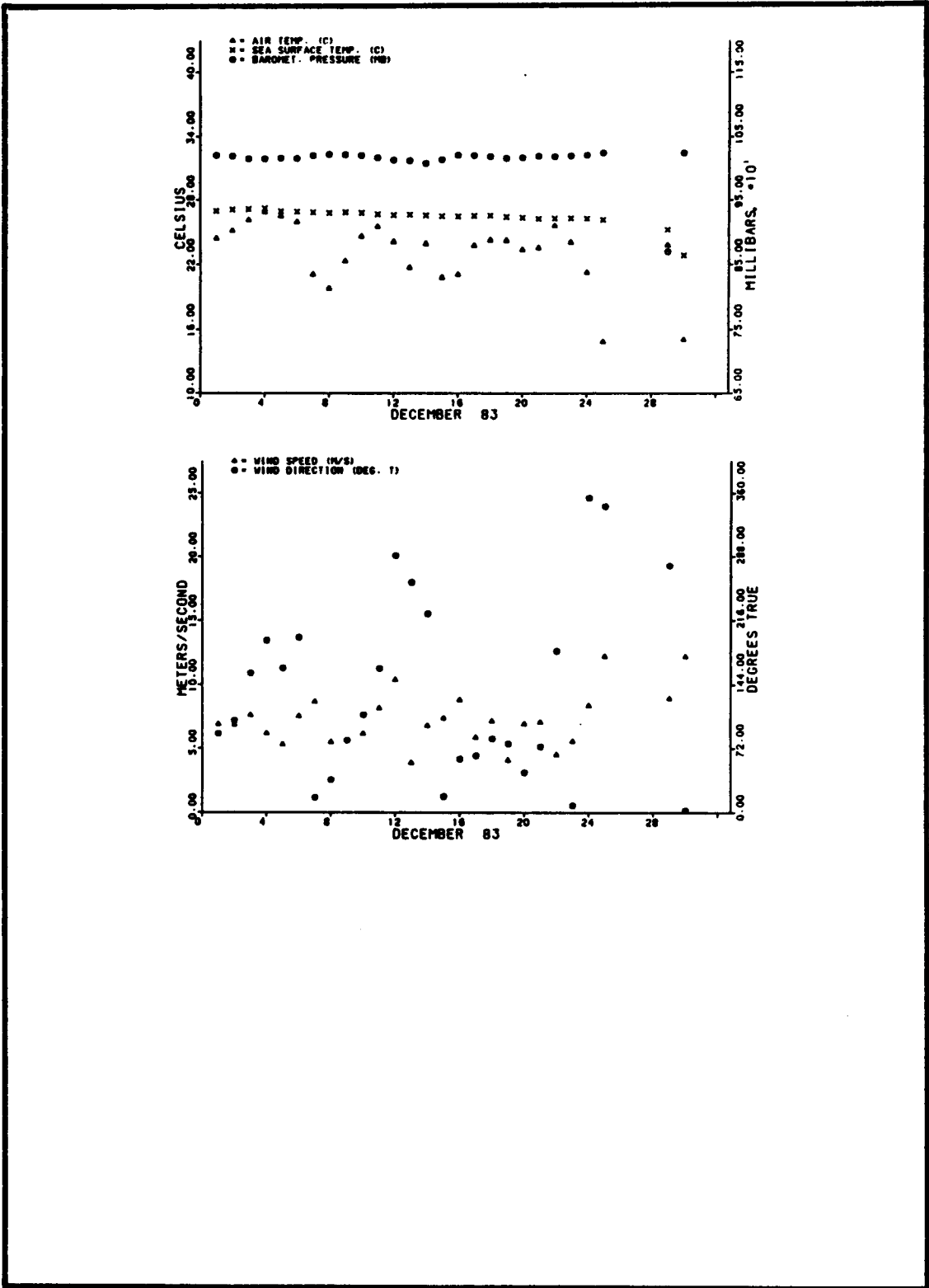


Figure C-3 METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - DEC83

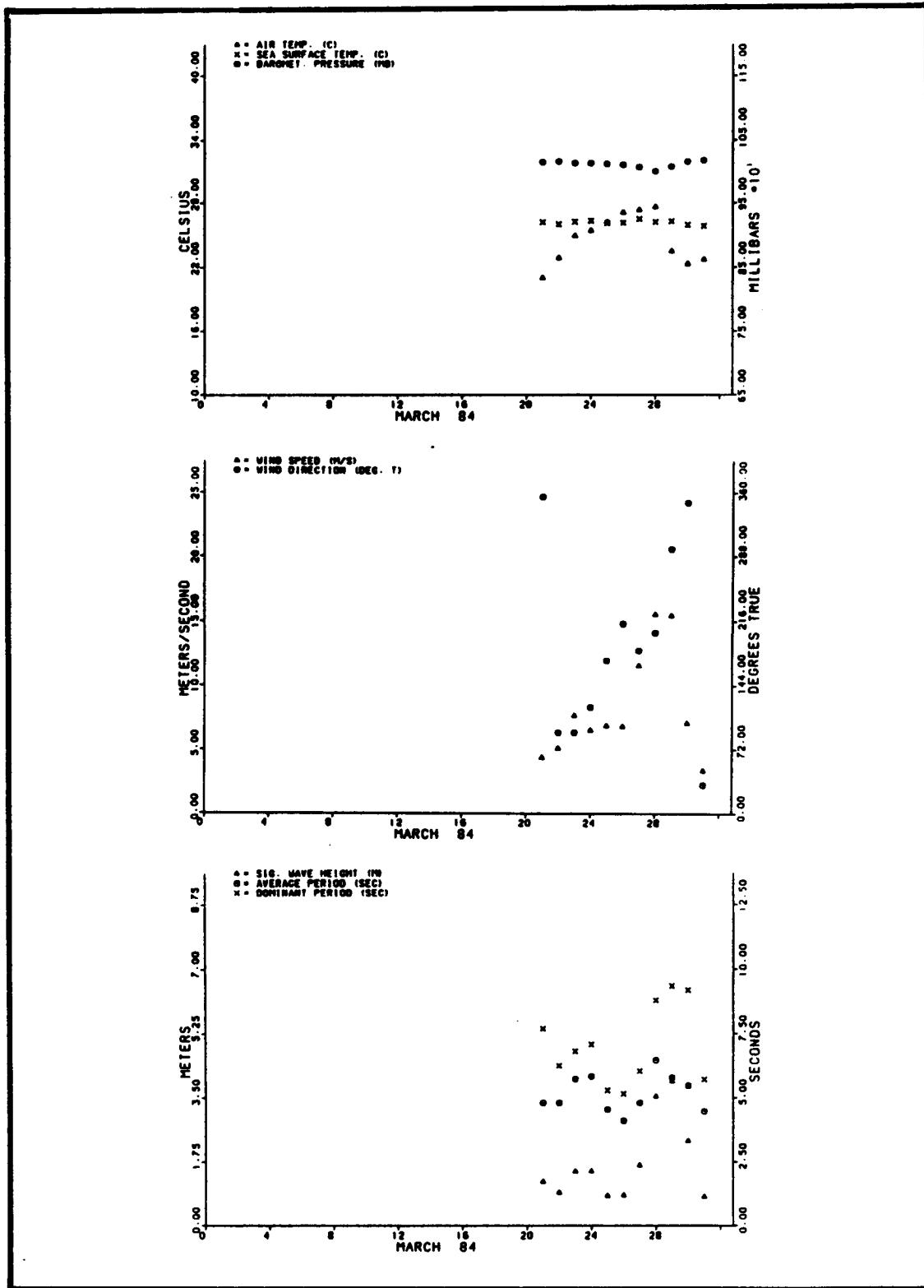


Figure C-4

METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - MAR84

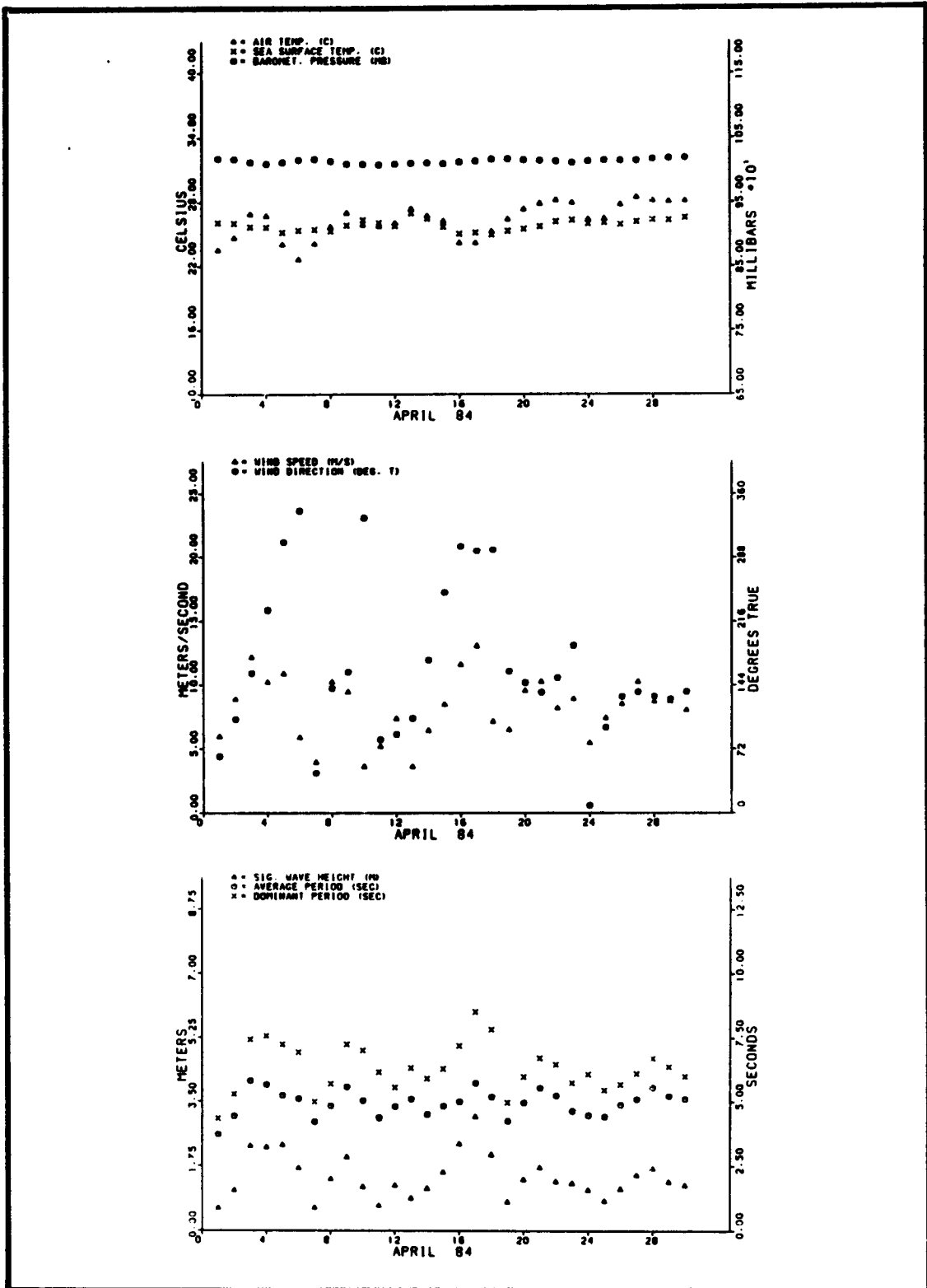


Figure C-5 METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - APR84

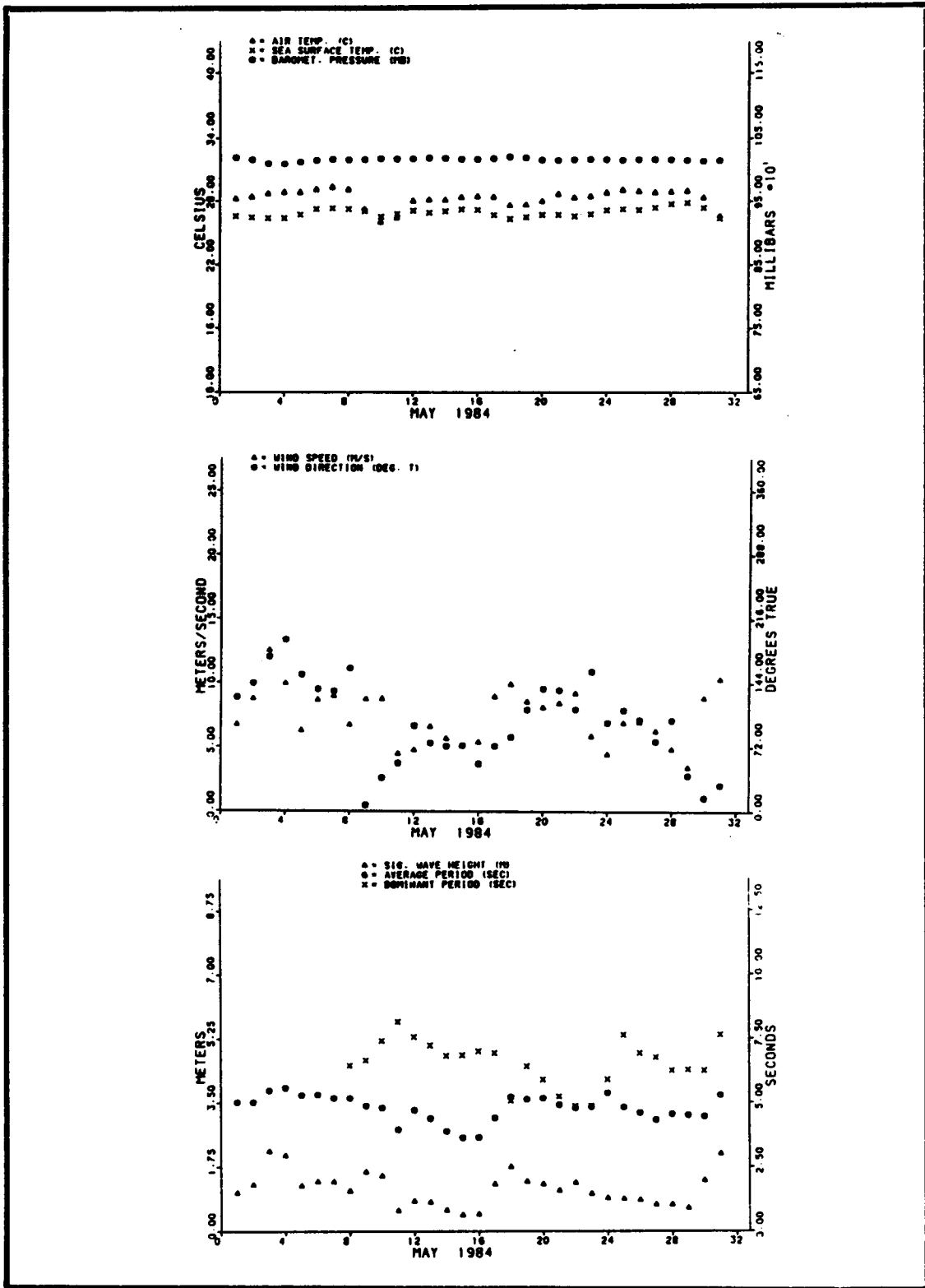


Figure C-6

METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - MAY84

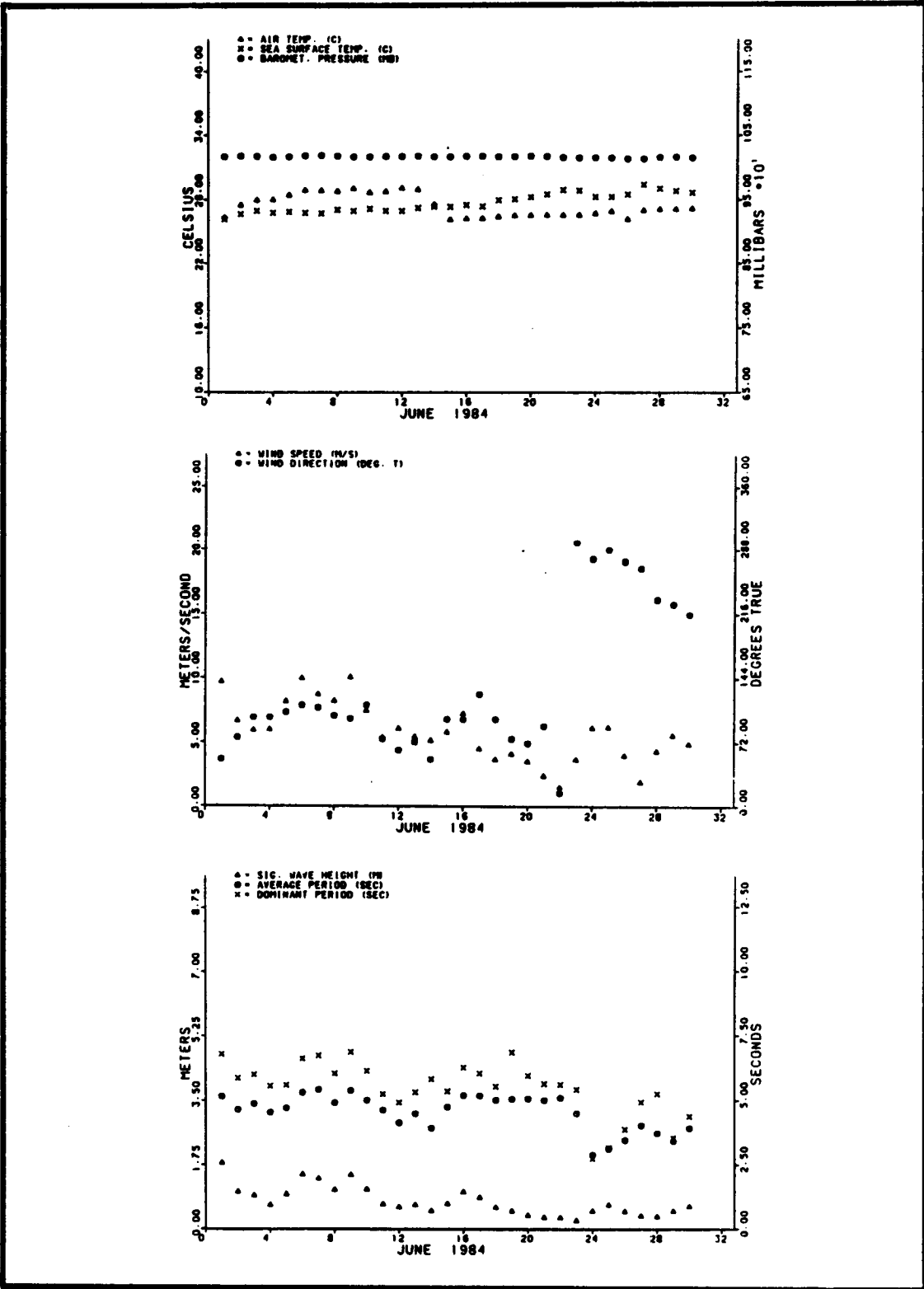


Figure C-7 METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 JUN84

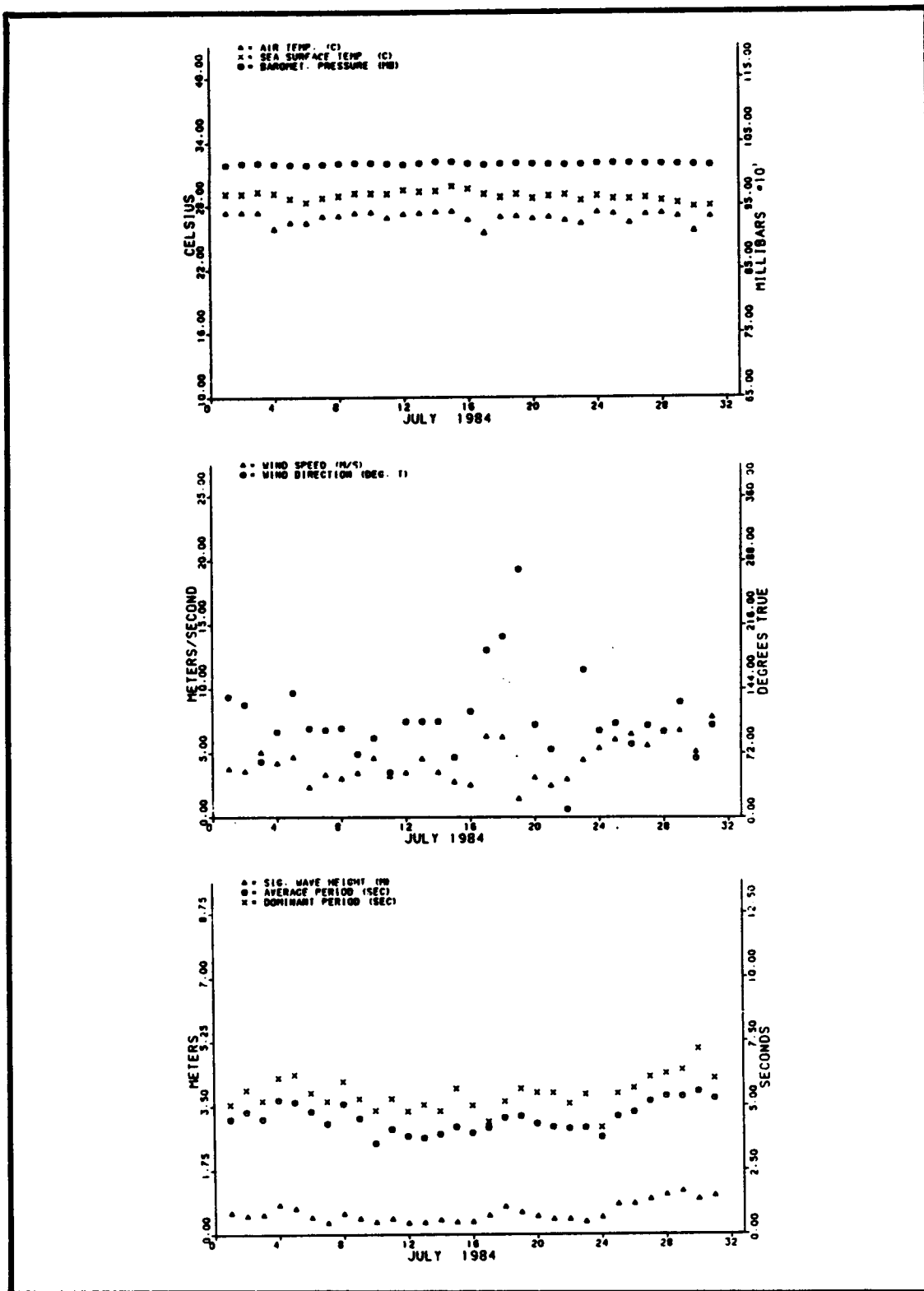


Figure C-8

METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - JUL84

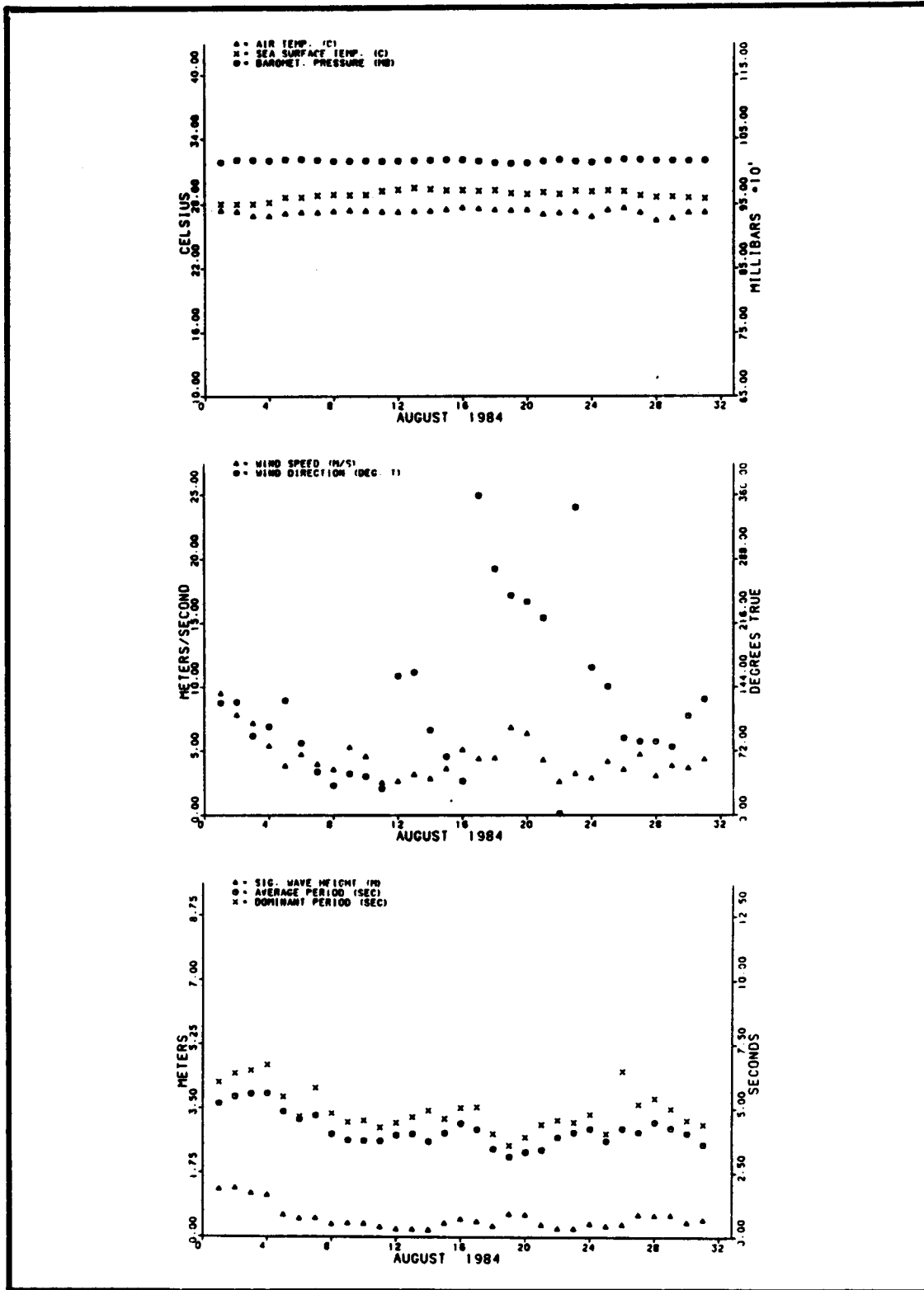


Figure C-9 METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - AUG84

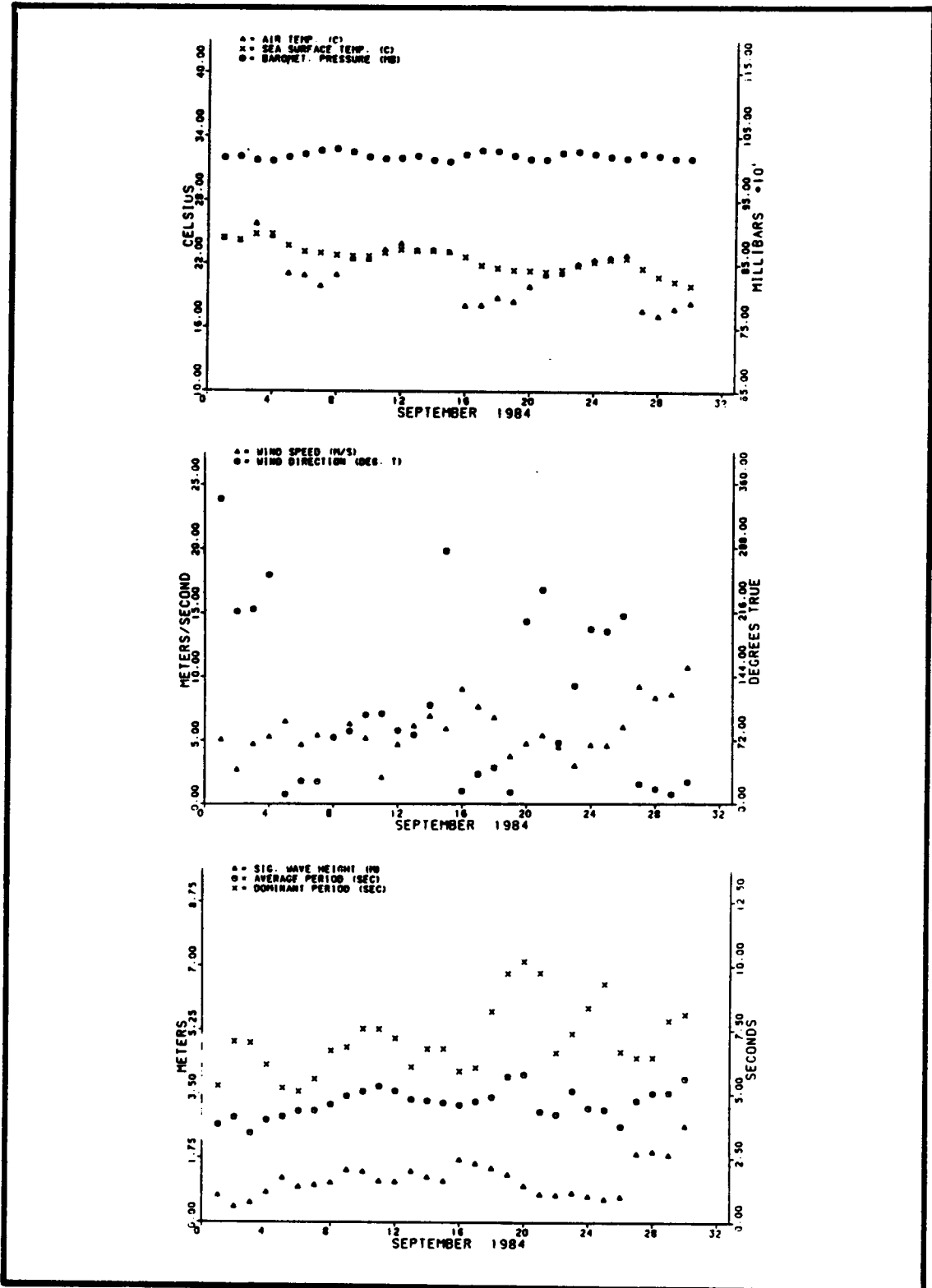


Figure C-10

METEOROLOGICAL, SEA SURFACE TEMPERATURE, AND WAVE DATA FROM NDBC BUOY NUMBER 42003 - SEP84

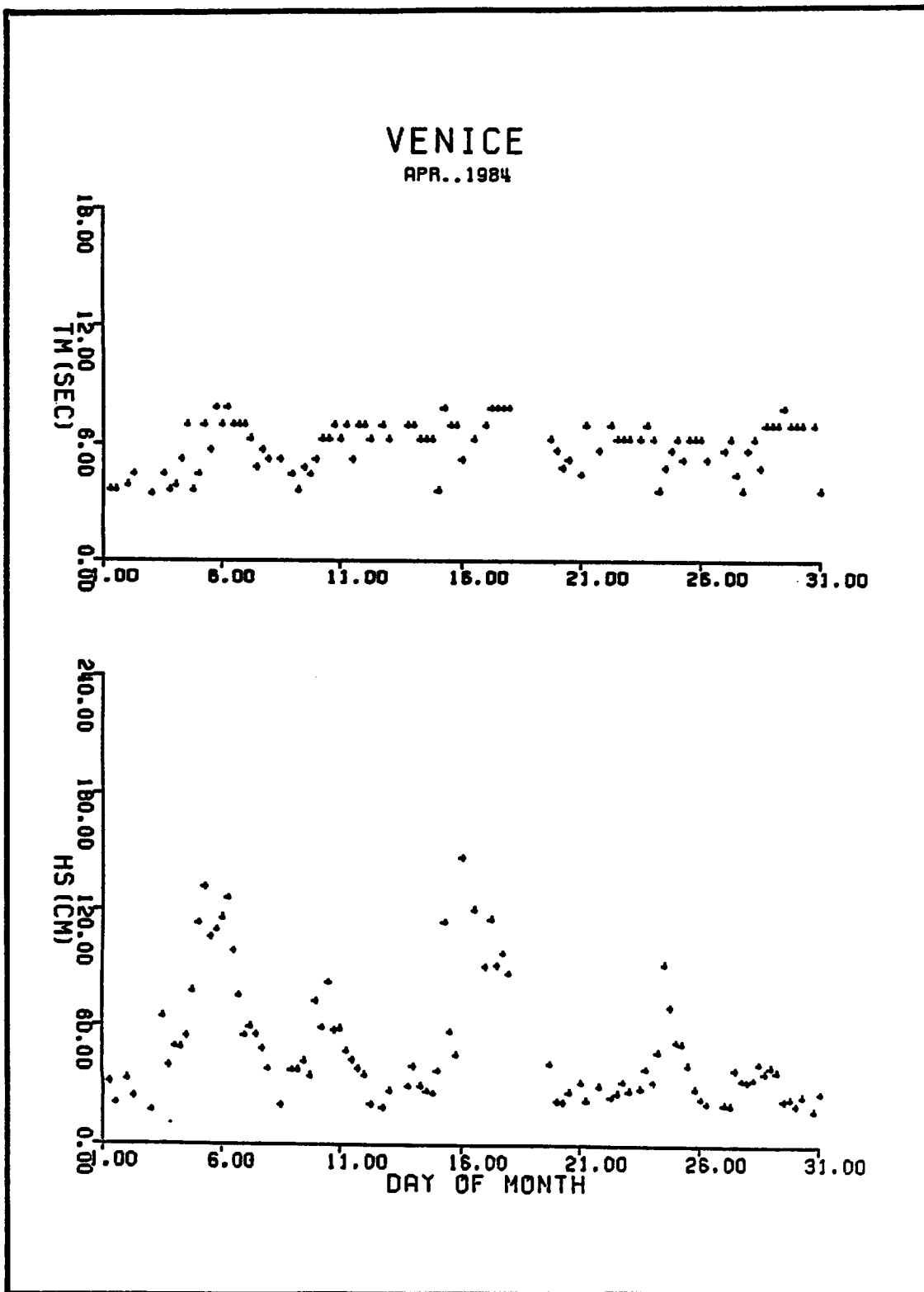


Figure C-11 WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, VENICE STATION - APR84

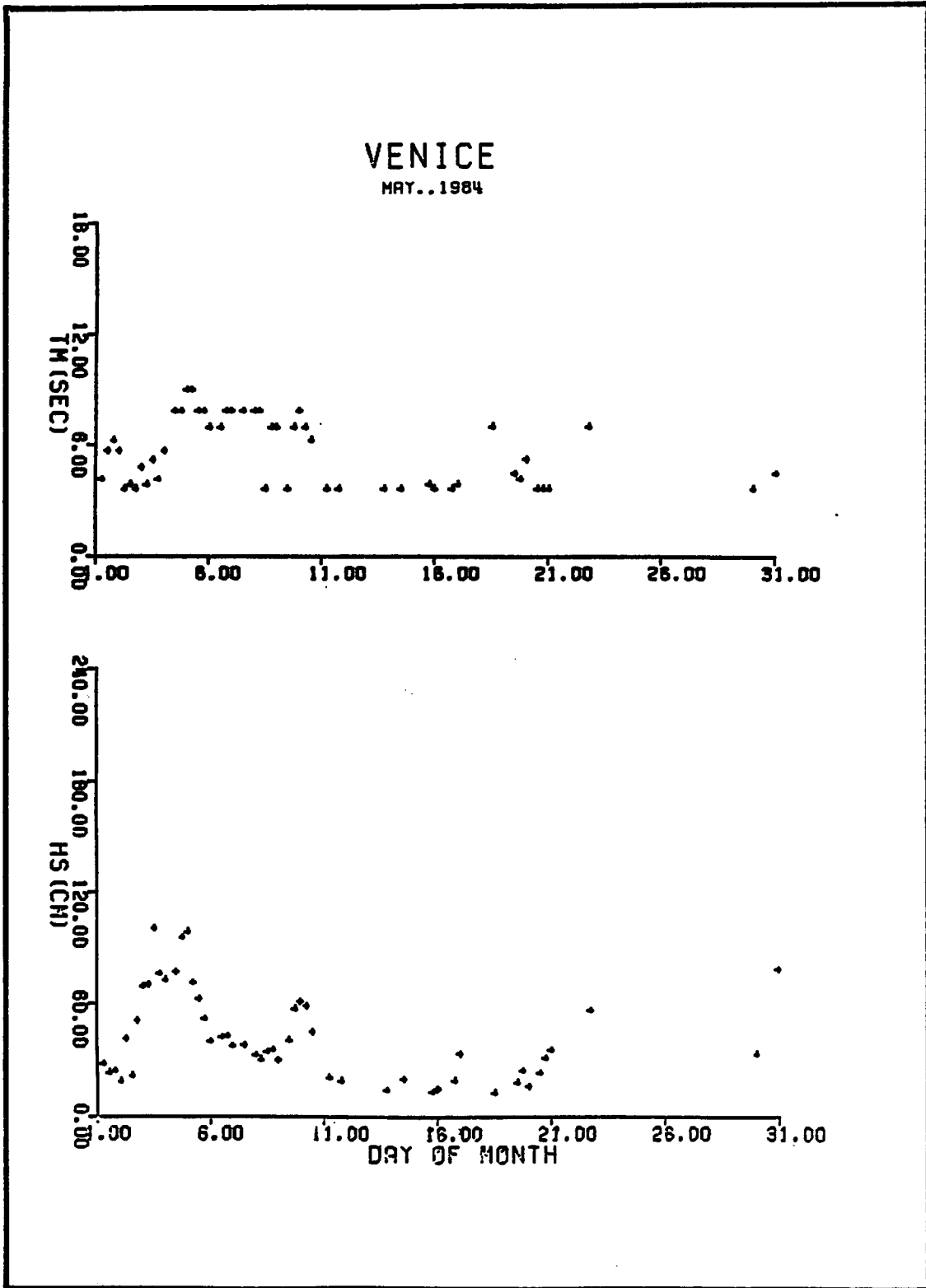


Figure C-12 WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, VENICE STATION - MAY84

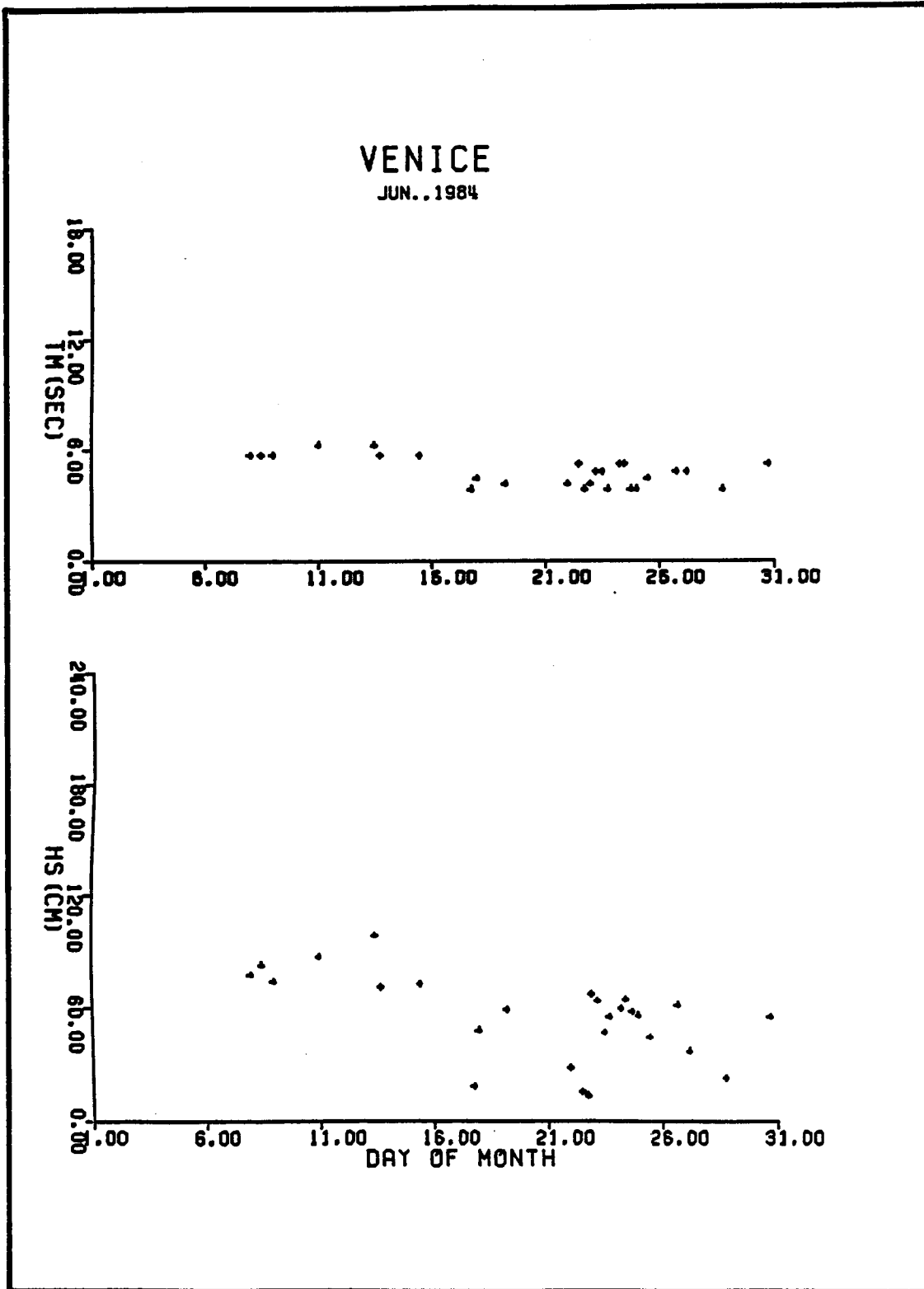


Figure C-13 WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, VENICE STATION - JUN84

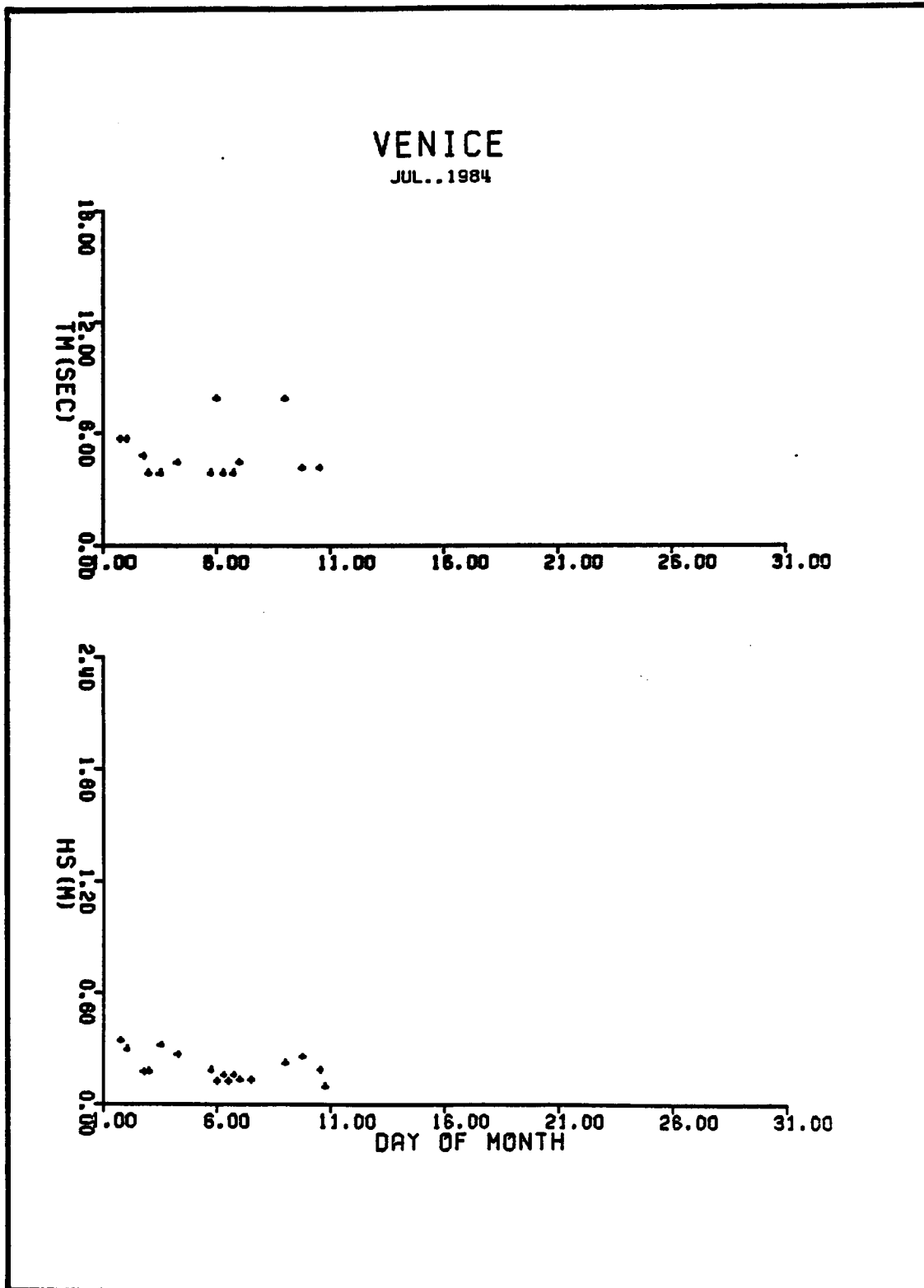


Figure C-14 WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, VENICE STATION - JUL84

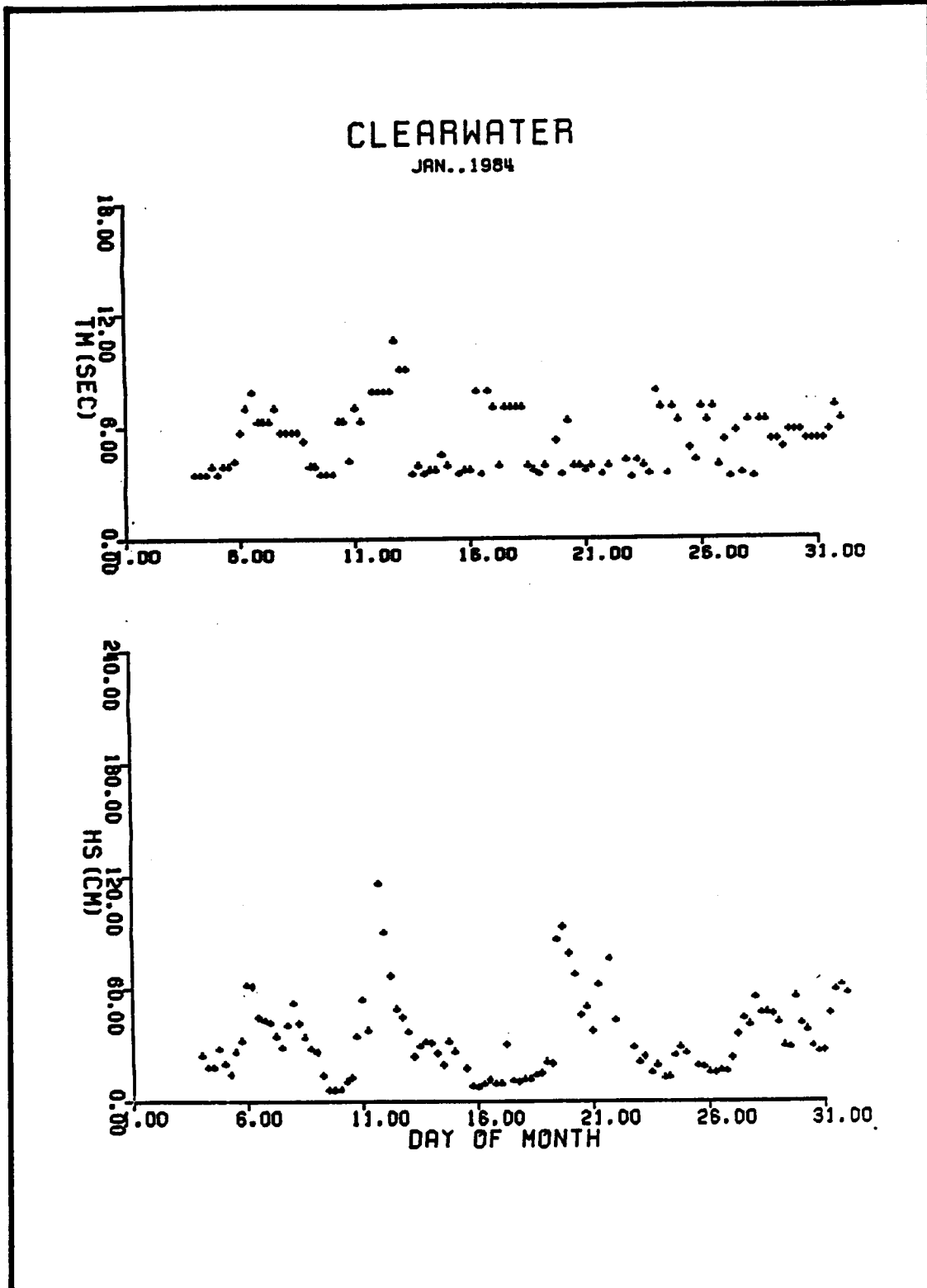


Figure C-15 **WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, CLEARWATER STATION - JAN84**

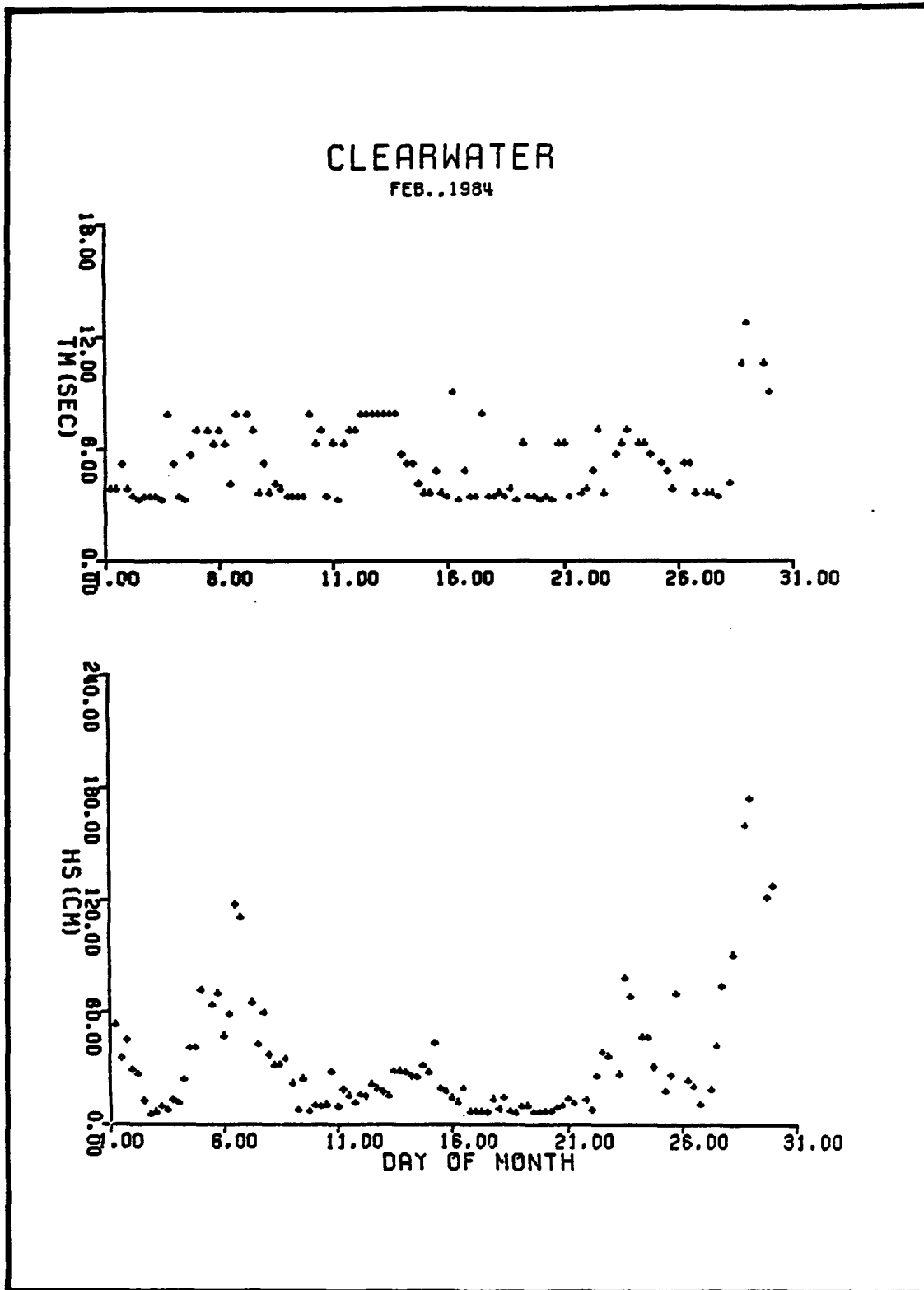


Figure C-16

**WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT
FROM UFCDN DATA, CLEARWATER STATION - FEB84**

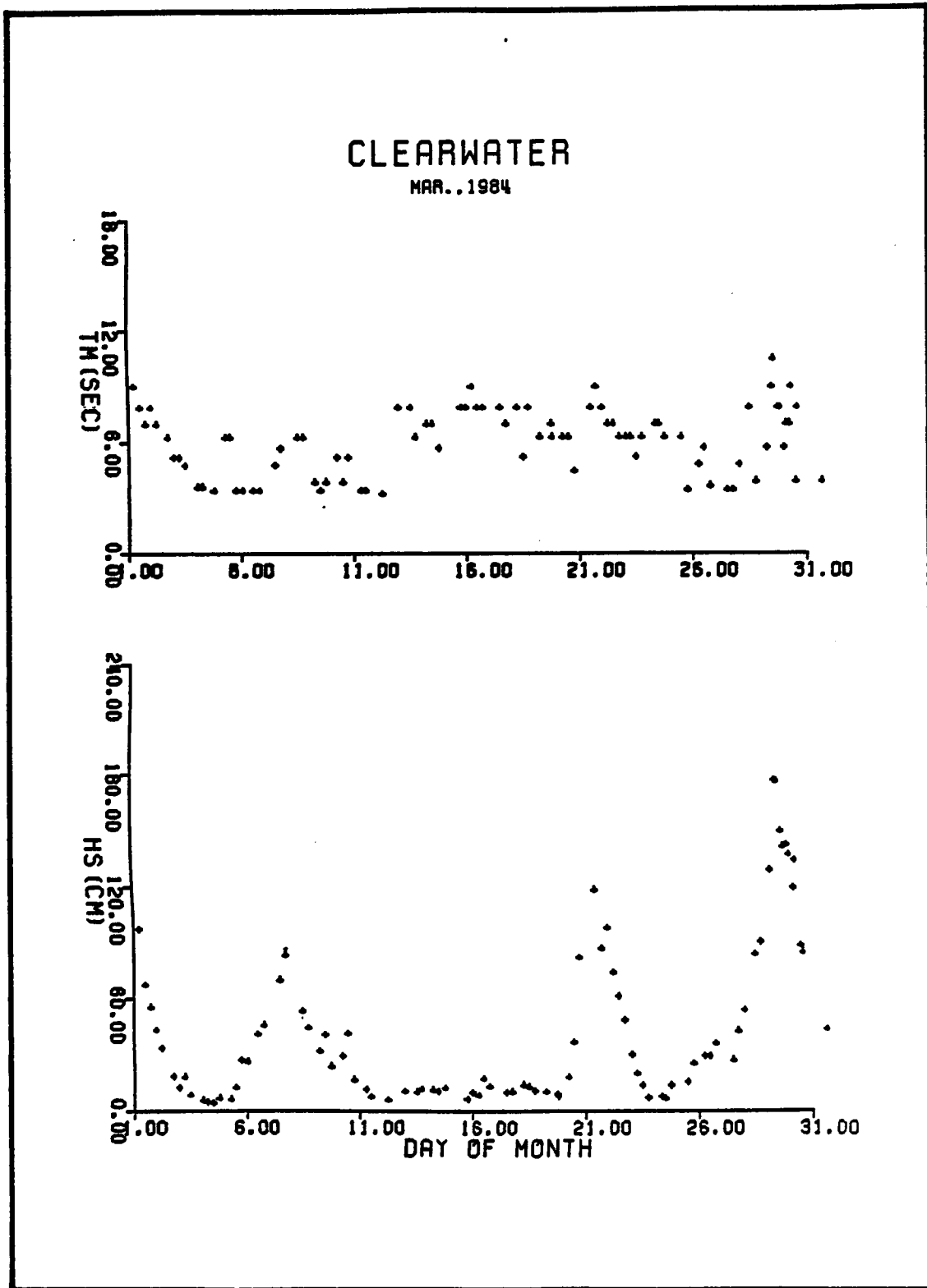


Figure C-17 **WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT**
FROM UFCDN DATA, CLEARWATER STATION - MAR84

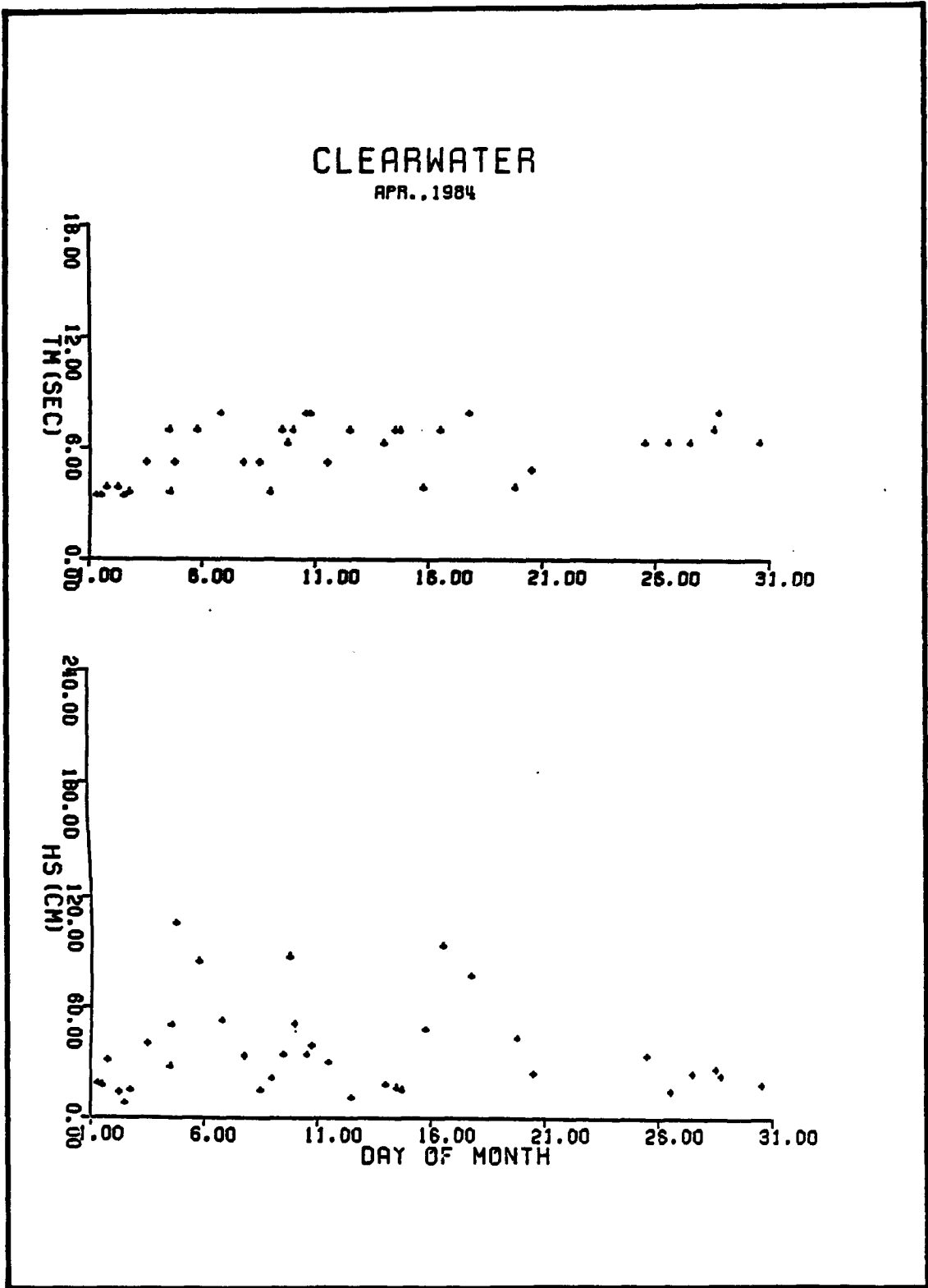


Figure C-18

WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, CLEARWATER STATION - APR84

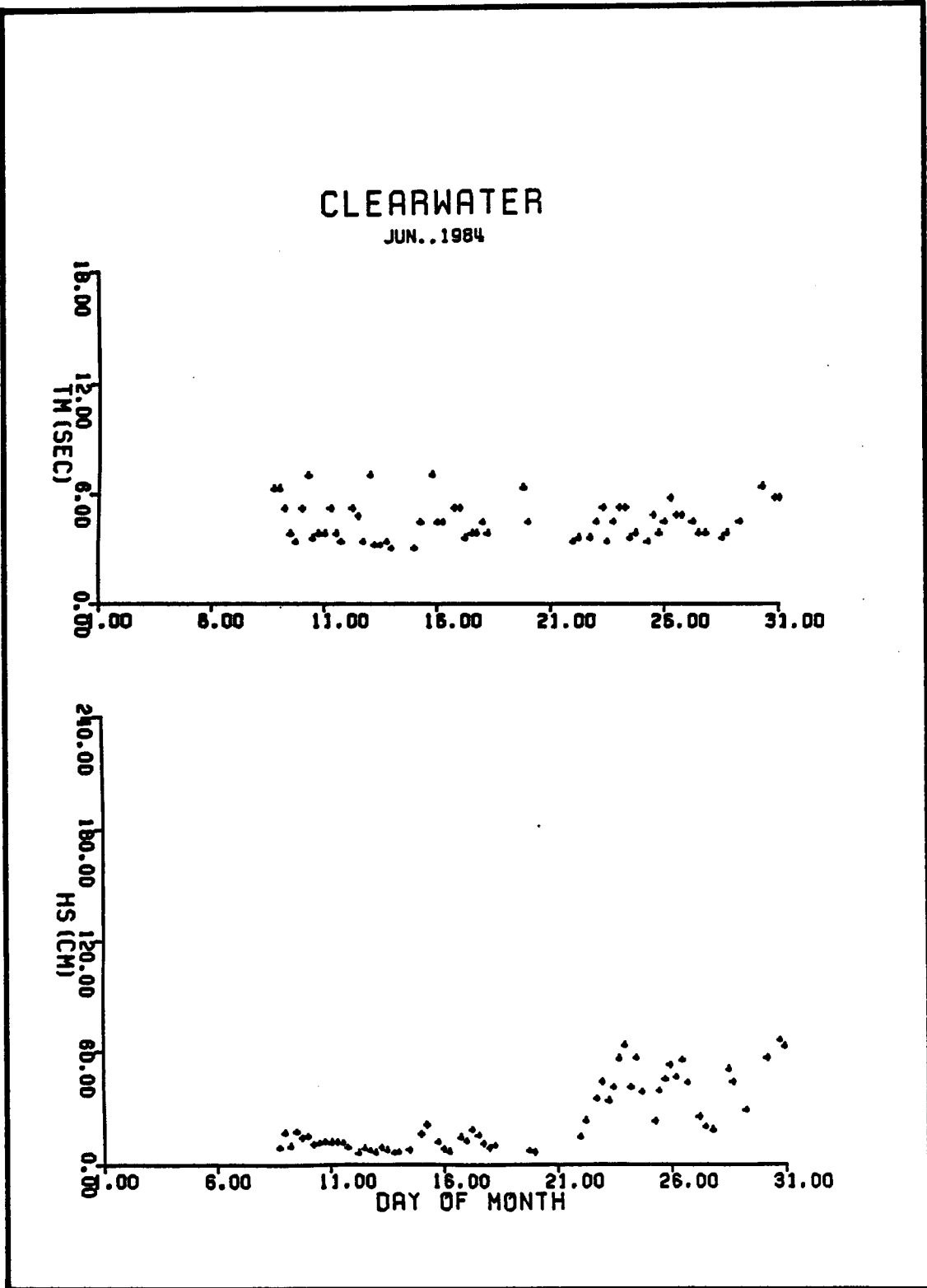


Figure C-19 **WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT**
FROM UFCDN DATA, CLEARWATER STATION - JUN84

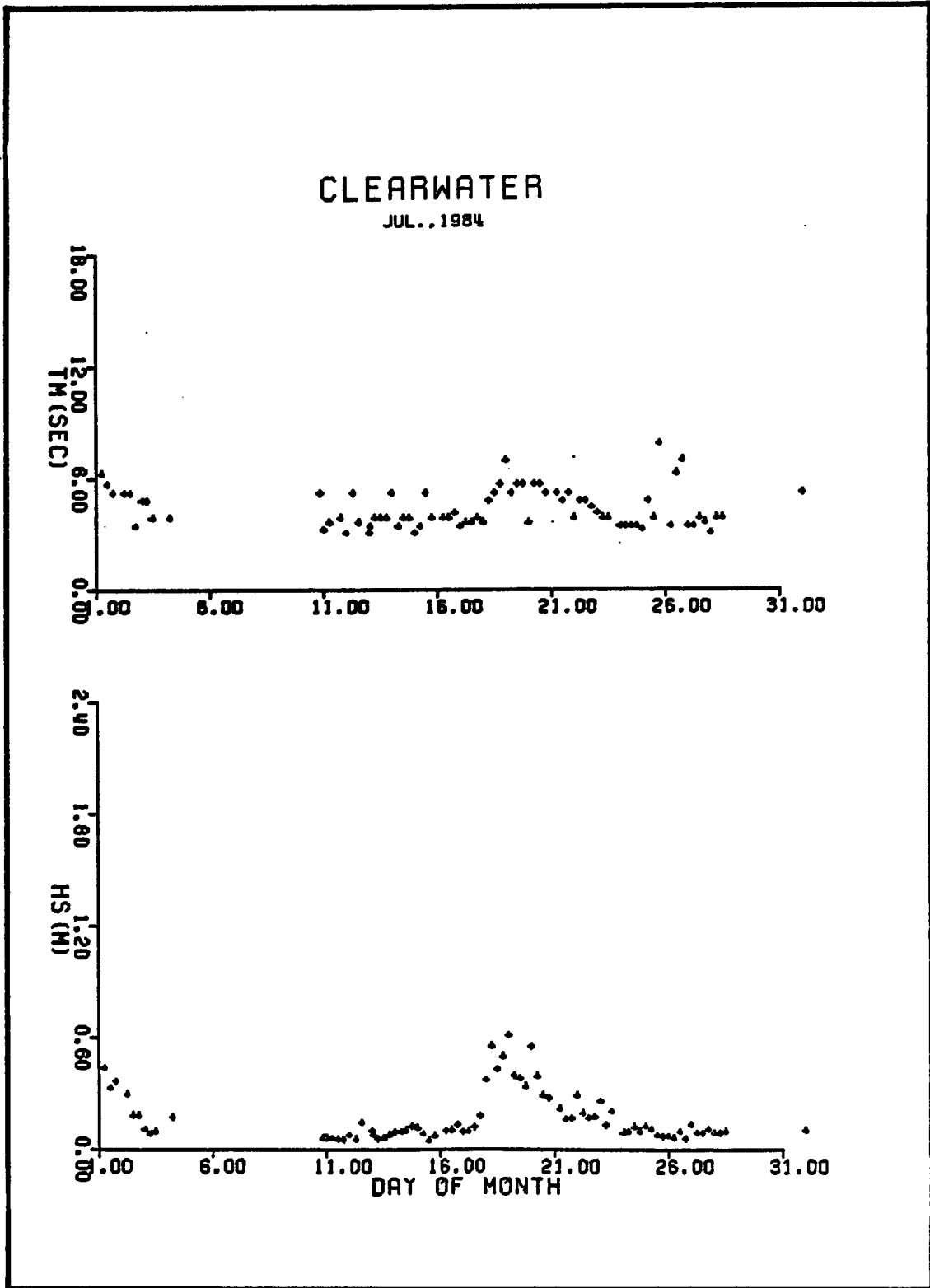


Figure C-20

WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, CLEARWATER STATION - JUL84

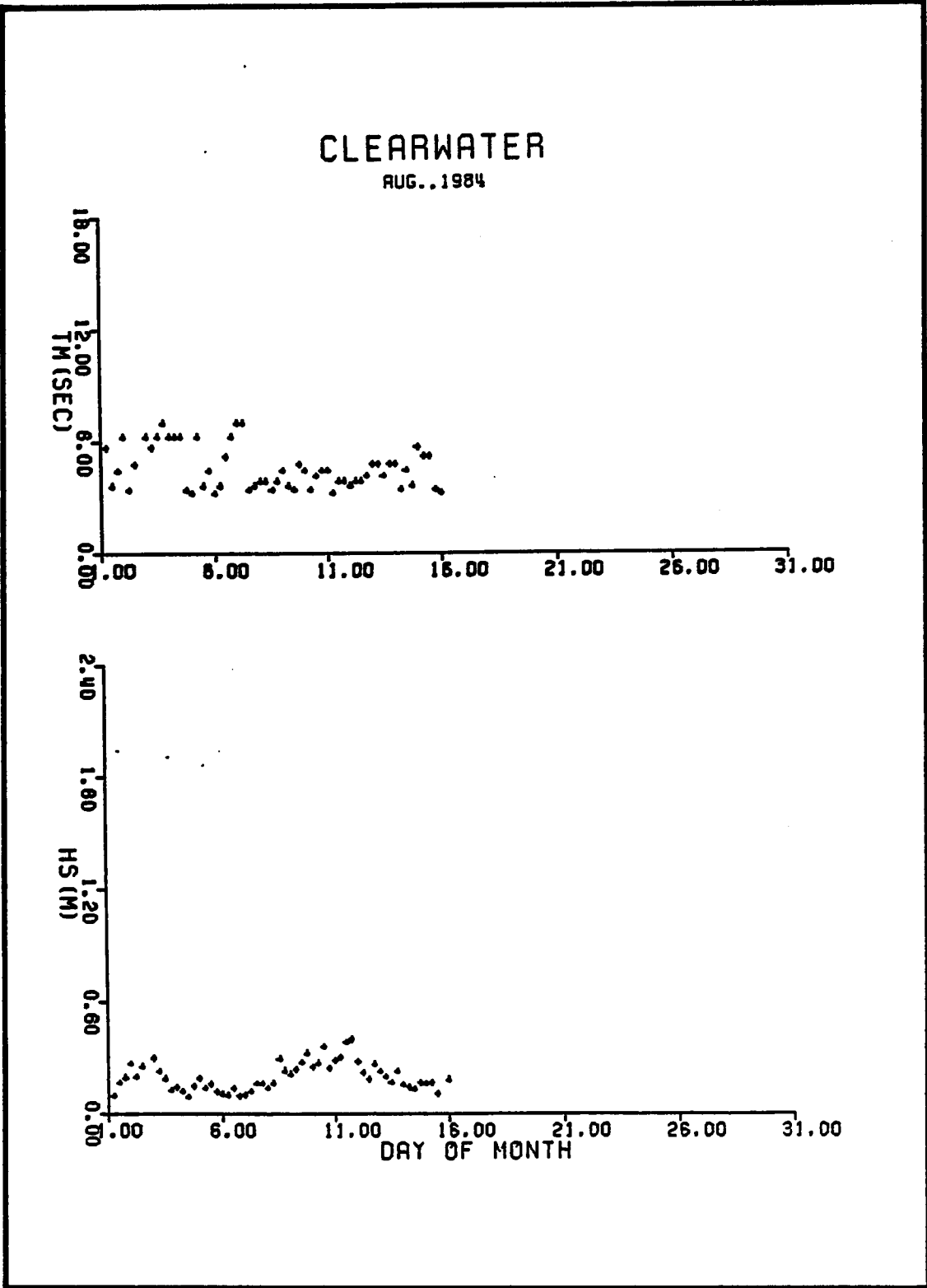


Figure C-21 **WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, CLEARWATER STATION - AUG84**

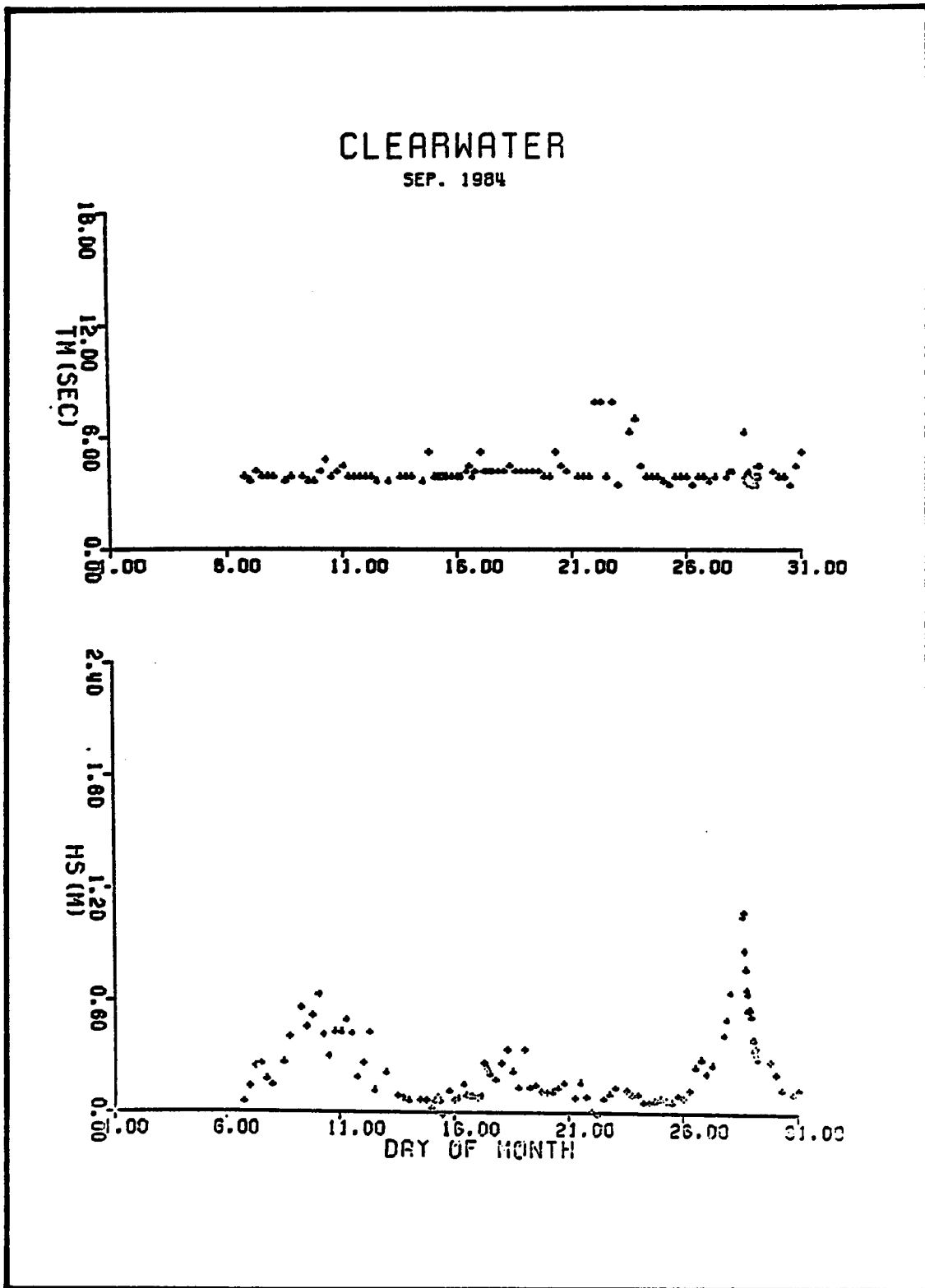


Figure C-22 WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, CLEARWATER STATION - SEP84

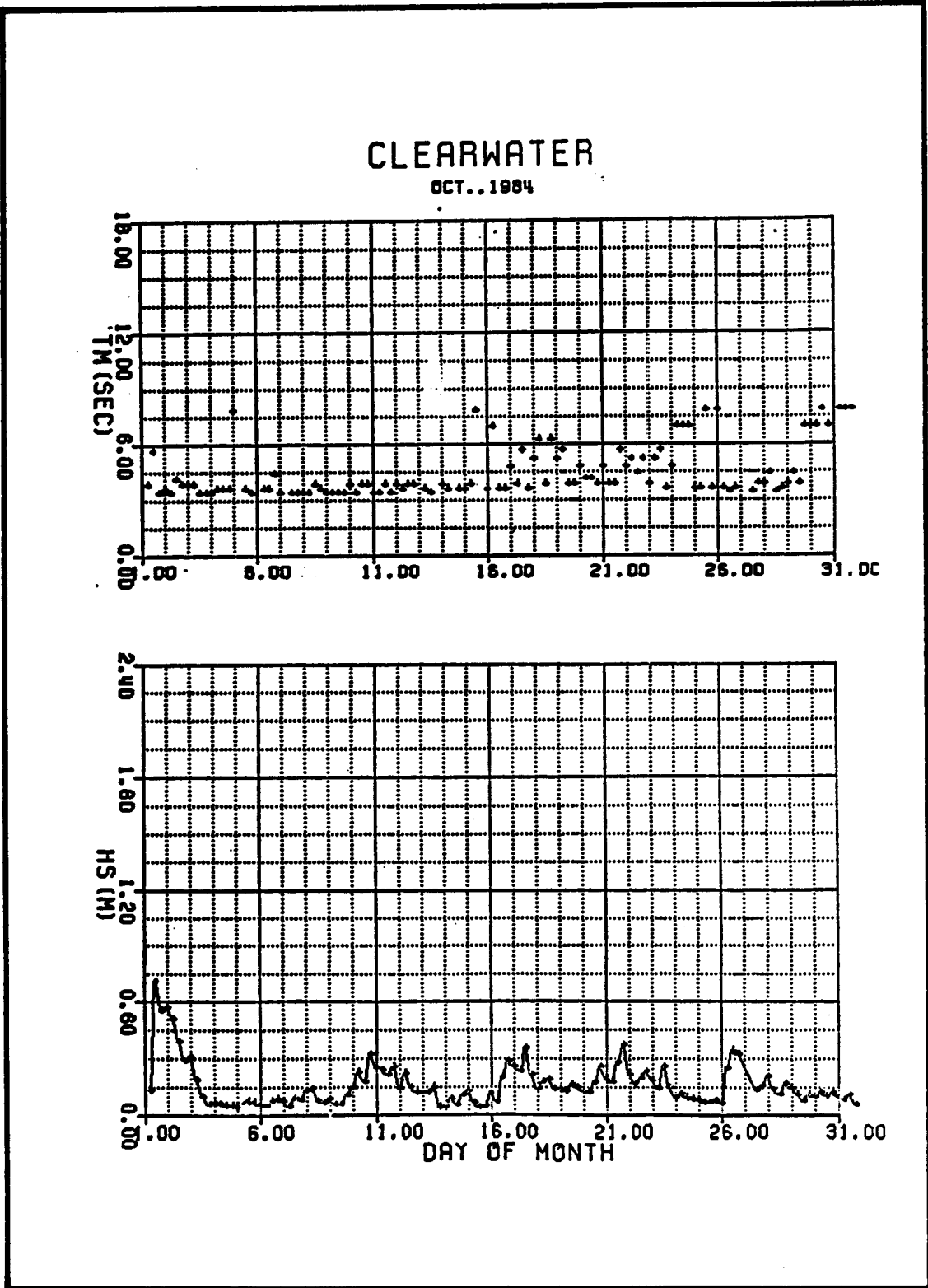


Figure C-23 WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT FROM UFCDN DATA, CLEARWATER STATION - OCT84

CLEARWATER

NOV..1984

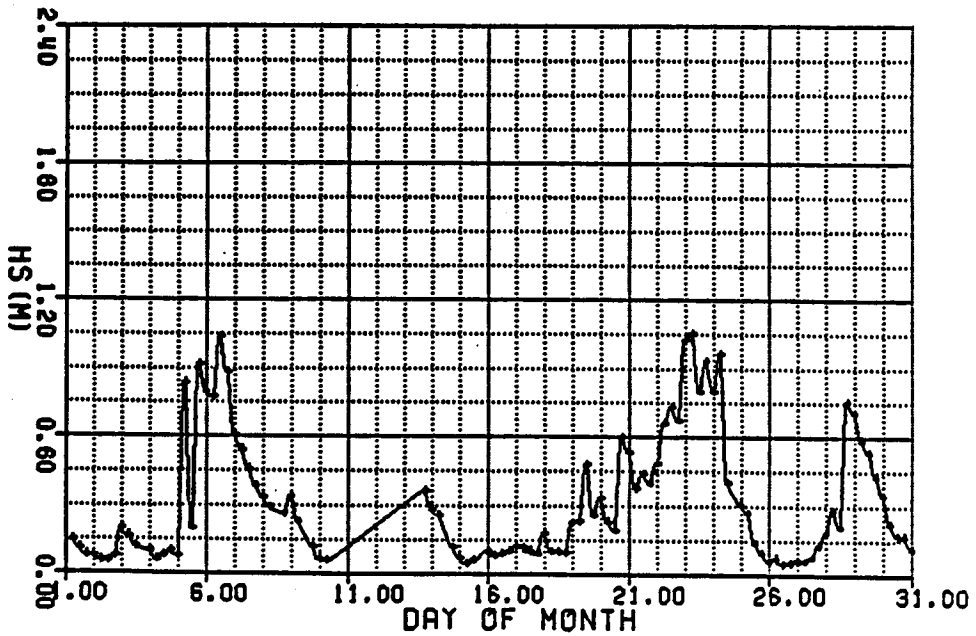
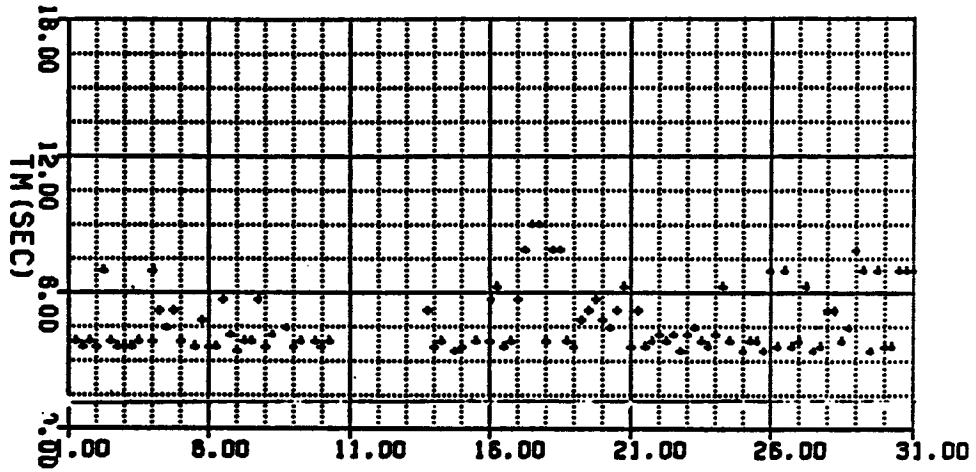


Figure C-24

WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT
FROM UFCDN DATA, CLEARWATER STATION - NOV84

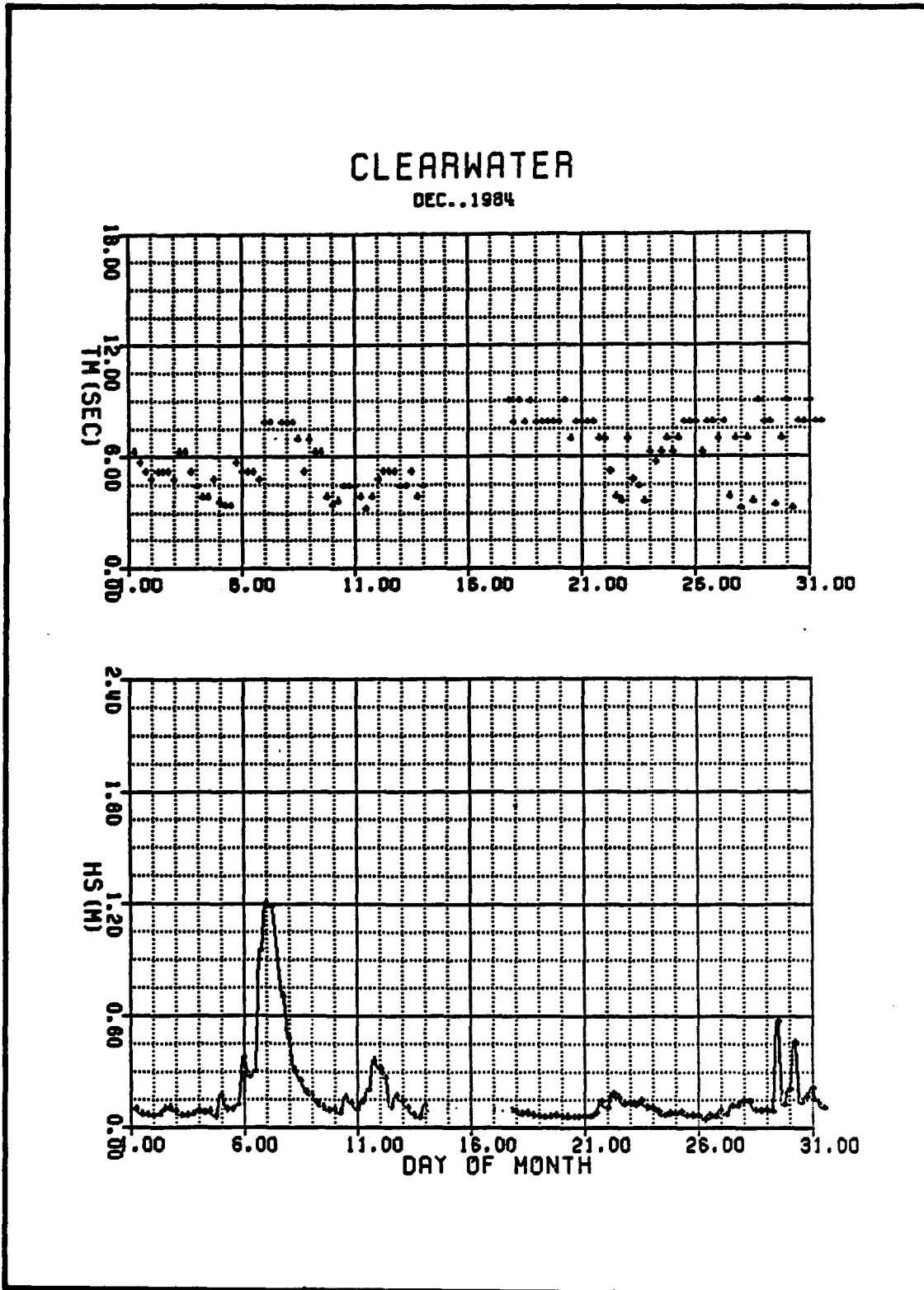


Figure C-25 **WAVE MODAL PERIOD AND SIGNIFICANT WAVE HEIGHT**
FROM UFCDN DATA, CLEARWATER STATION - DEC84

APPENDIX D
SEDIMENTS

APPENDIX D
SEDIMENTS

Three distinct methods were used to study sediment characteristics and dynamics on the southwest Florida shelf--grab samples, sediment traps, and time-lapse photography. Only data from sediment grab samples are presented in Appendix D. The data collected using the remaining two methods are presented in the text.

Two replicate sediment samples were obtained at all 15 stations (Figure D-0). These samples were analyzed for grain size, the results of which are presented in Figures D-1 through D-14. The figures include a cumulative frequency curve of grain size (in ϕ units). Tabulated directly below the cumulative frequency curve are cumulative percent weights of the whole ϕ sizes and statistical parameters (median, mean, deviation, skewness, and kurtosis) derived from these curves. The statistics were derived according to Inman (1952). The choice of Inman statistics was based on the preliminary assumption that grain-size distributions would be near-normal. This did not prove to be the case for all samples; therefore, the statistical analyses for these samples as well as those to be collected during Year 5 will be done according to Folk and Ward (1957).

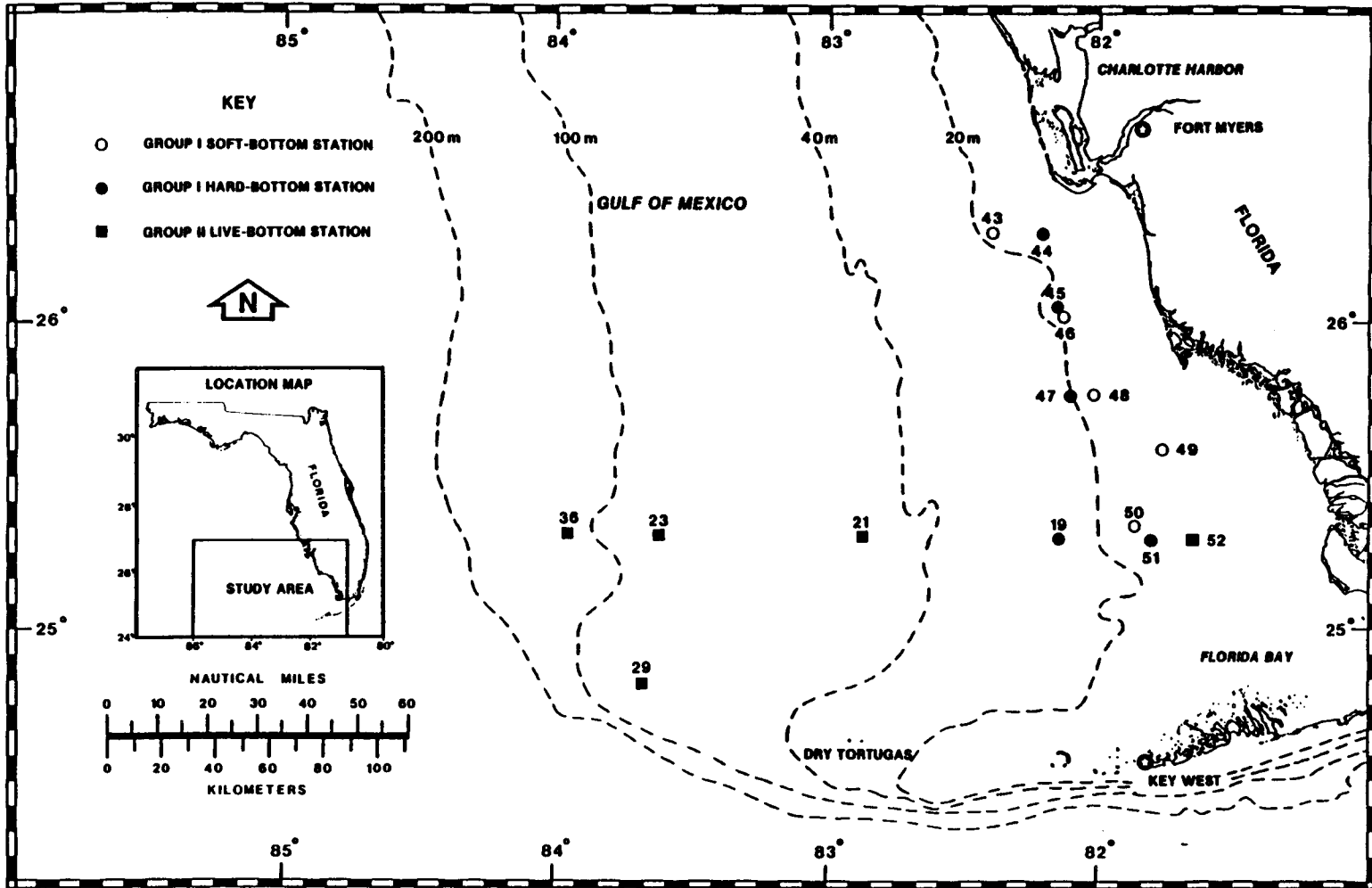


Figure D-0 SEDIMENT GRAB SAMPLE STATION LOCATIONS FOR YEAR 4 (DECEMBER 1983)

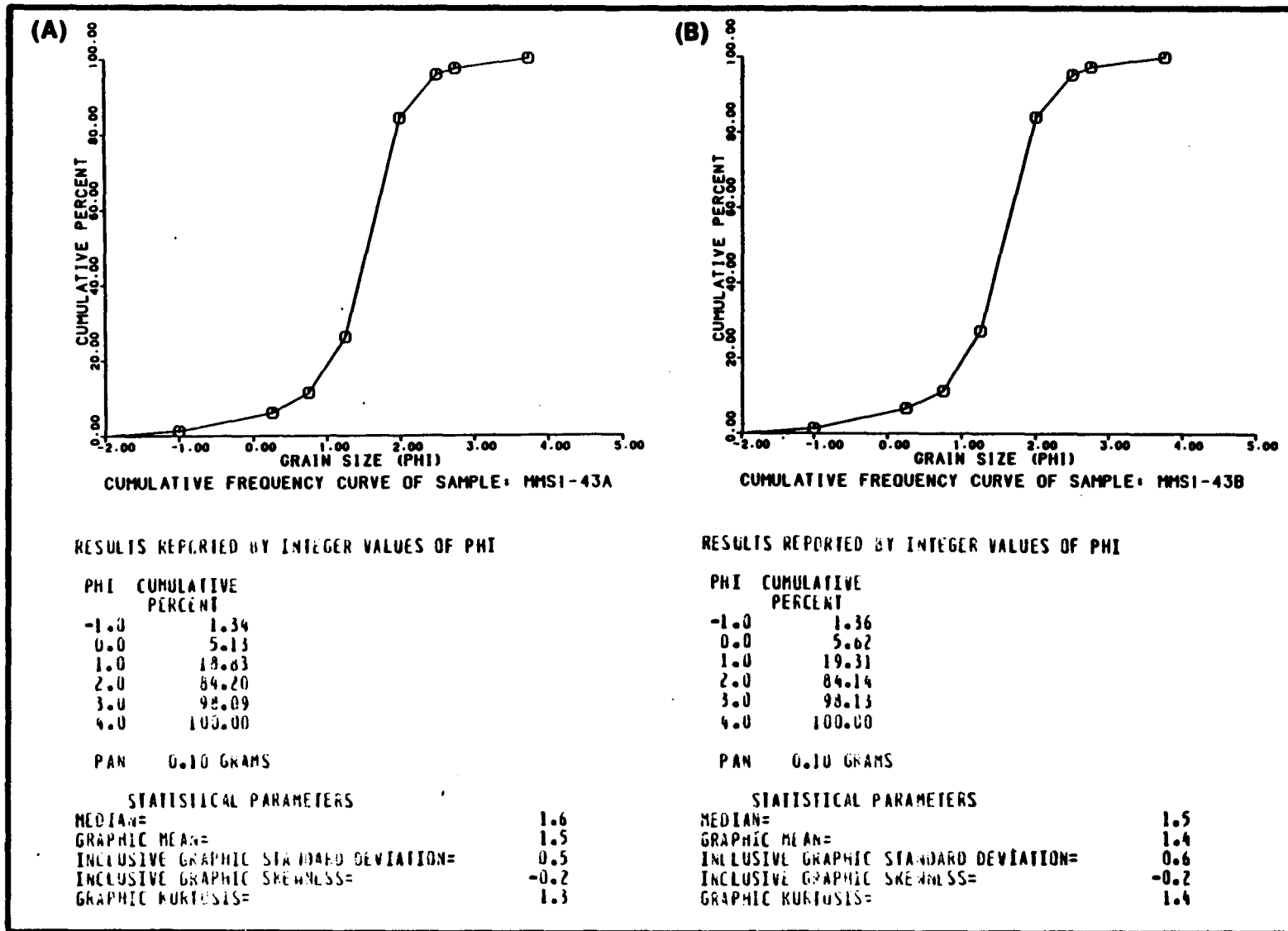


Figure D-1 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 43

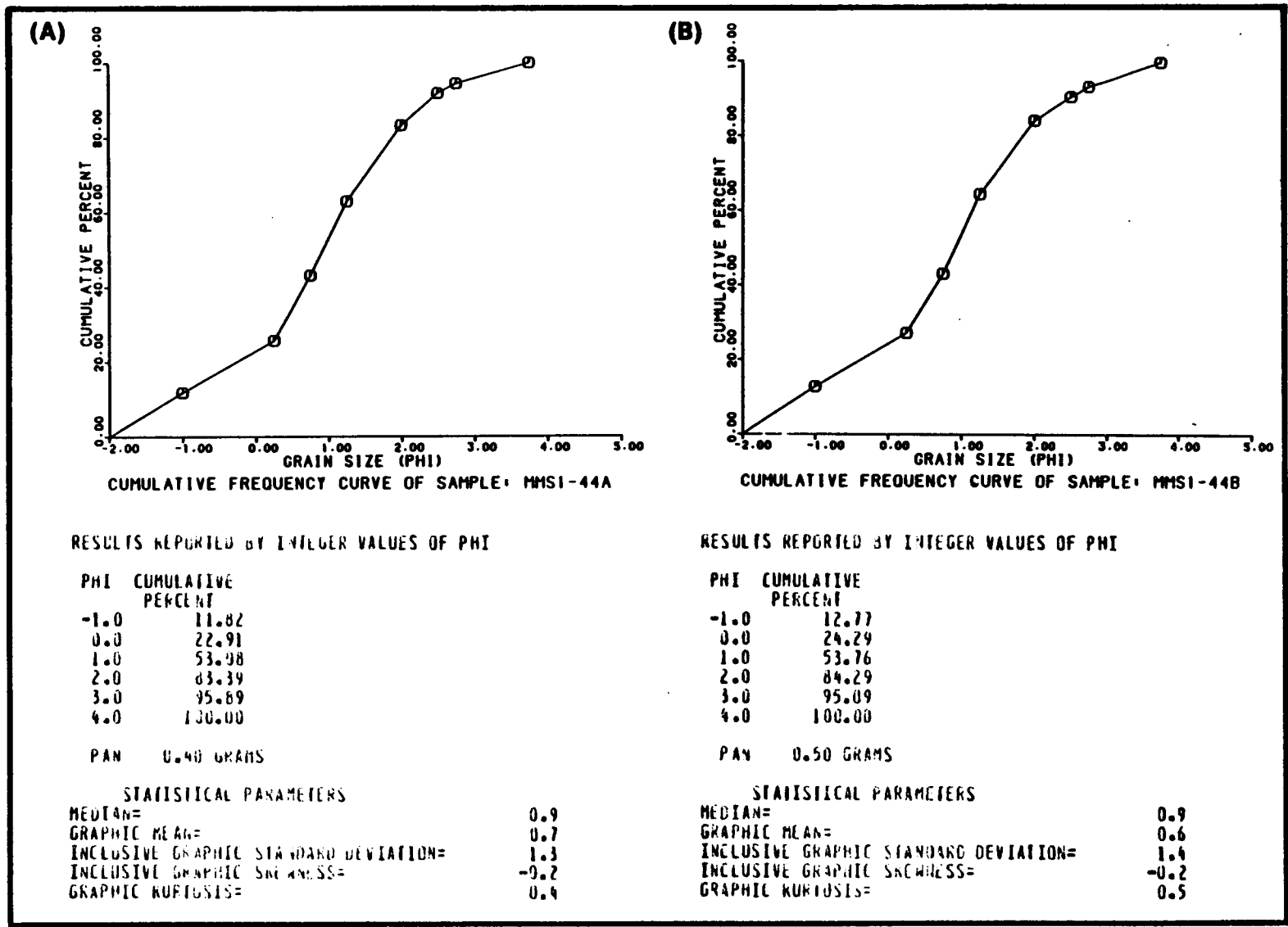


Figure D-2 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 44

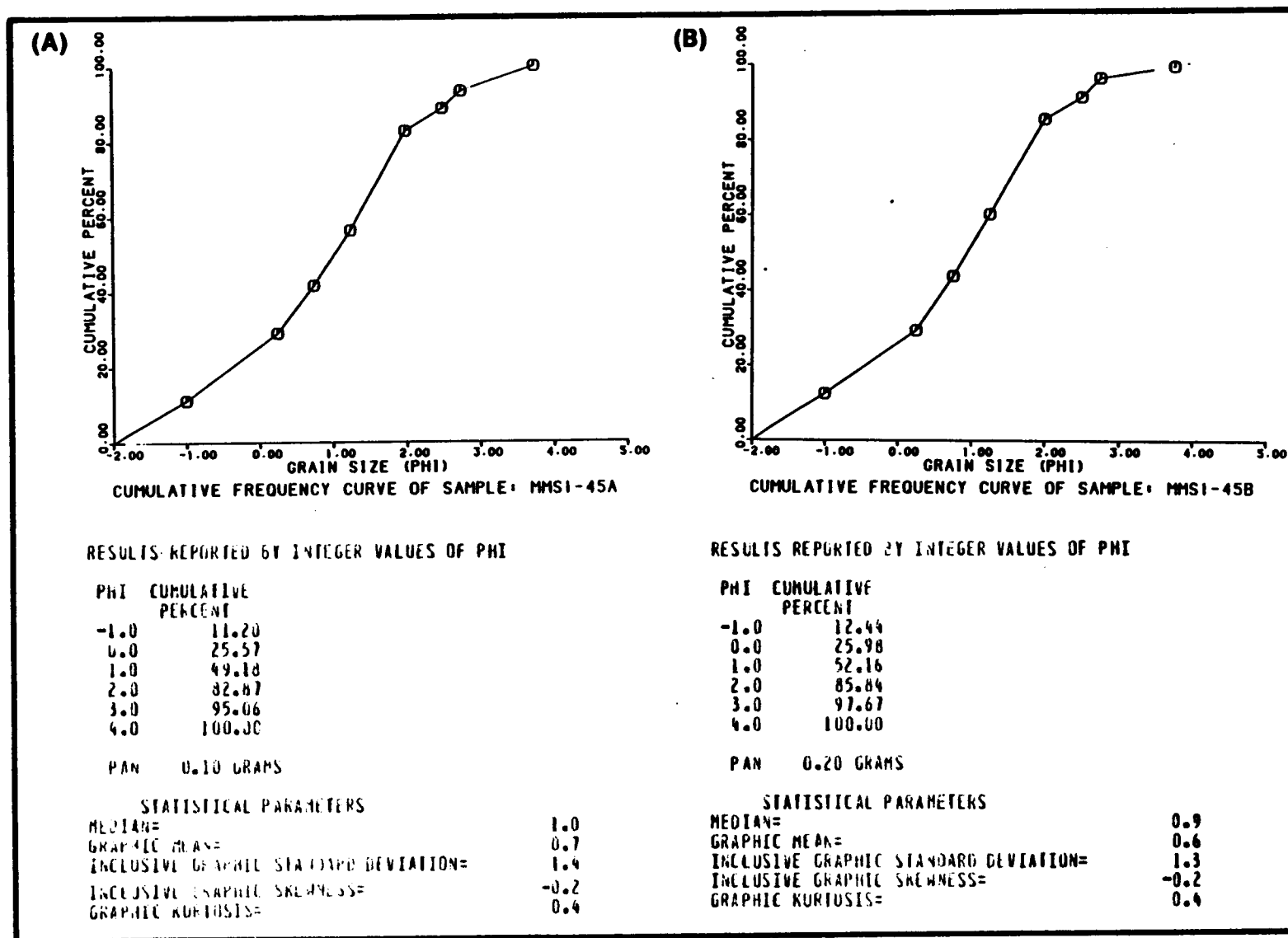


Figure D-3

SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 45

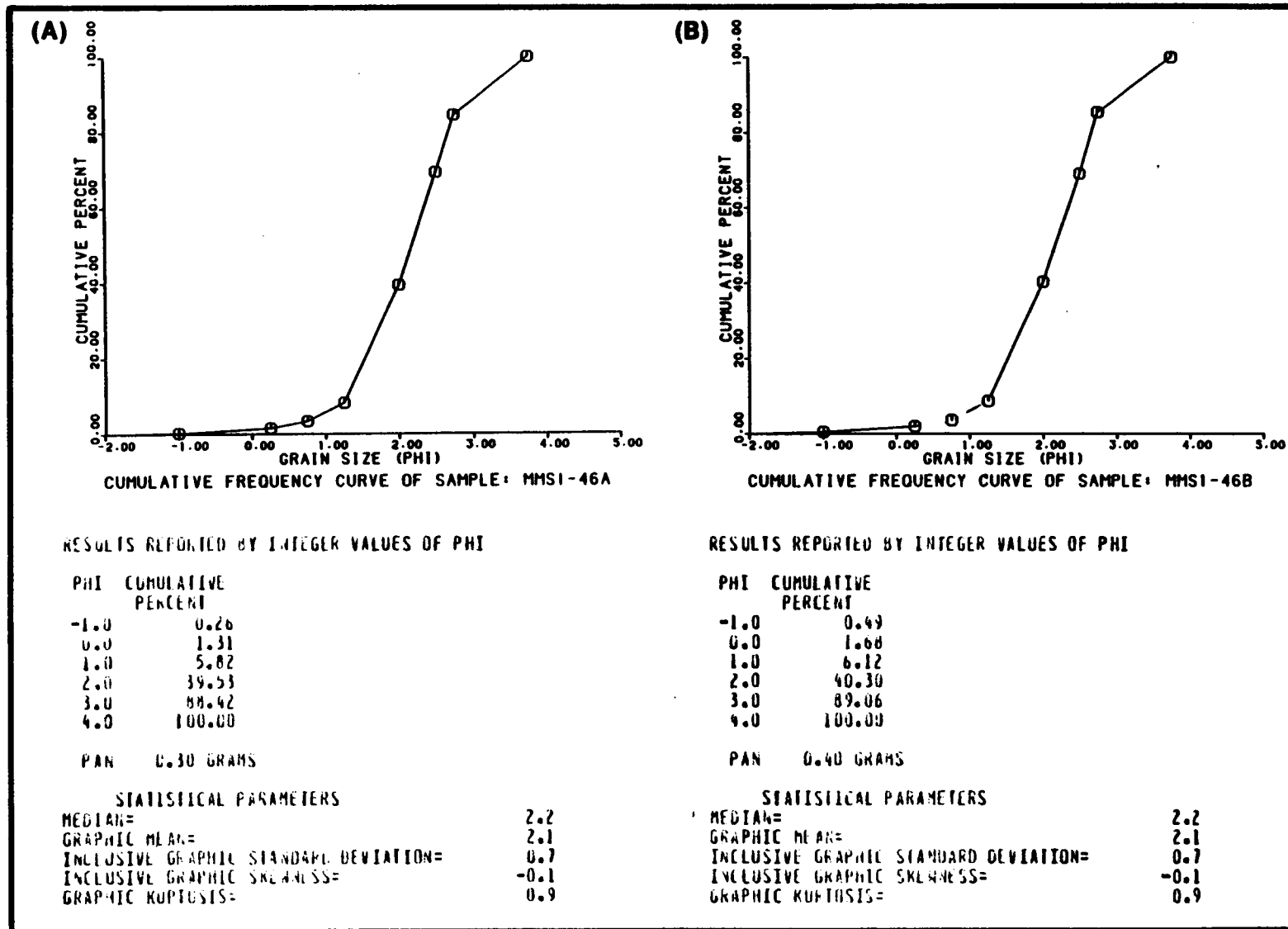


Figure D-4 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 46

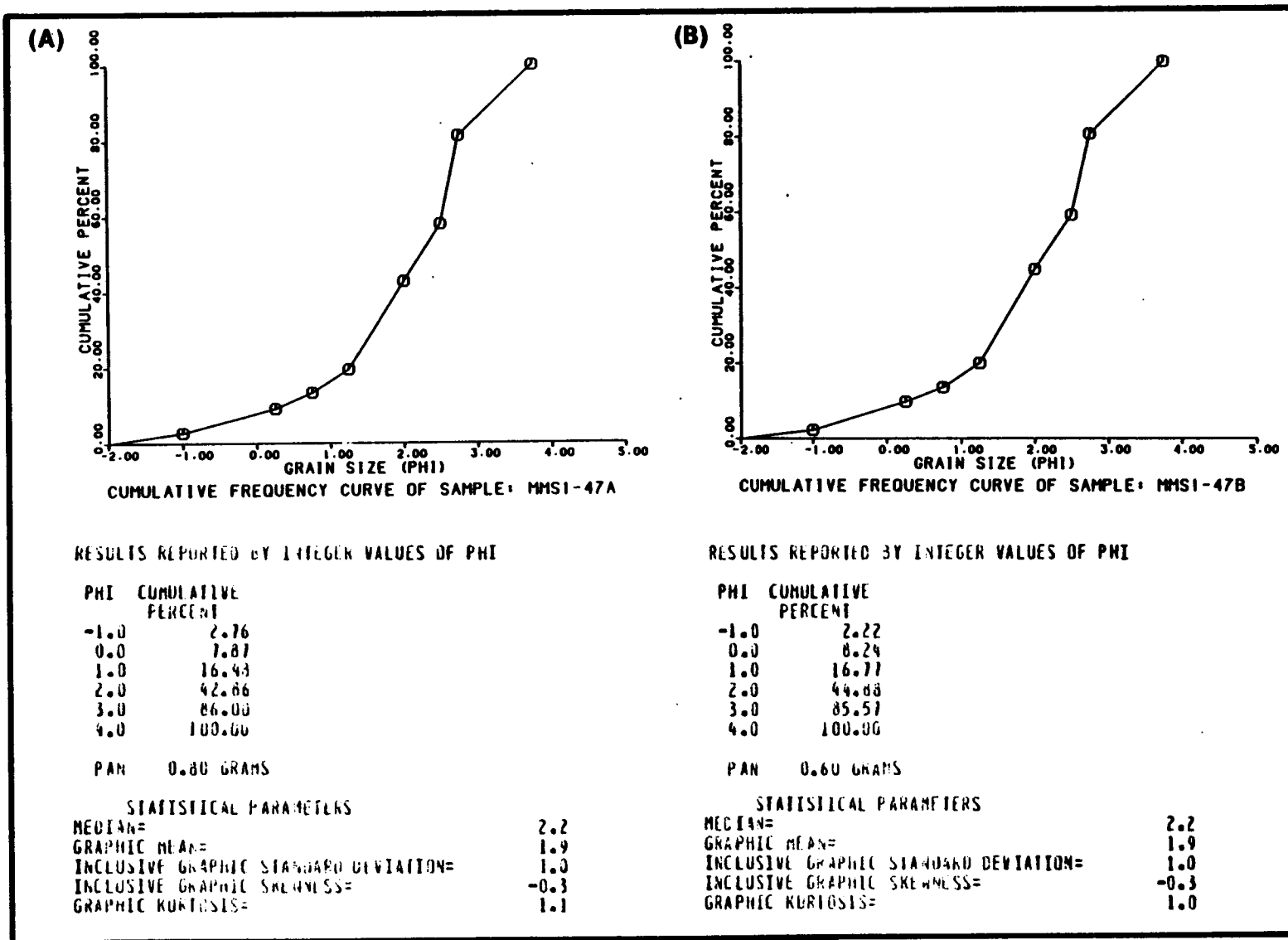


Figure D-5 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 47

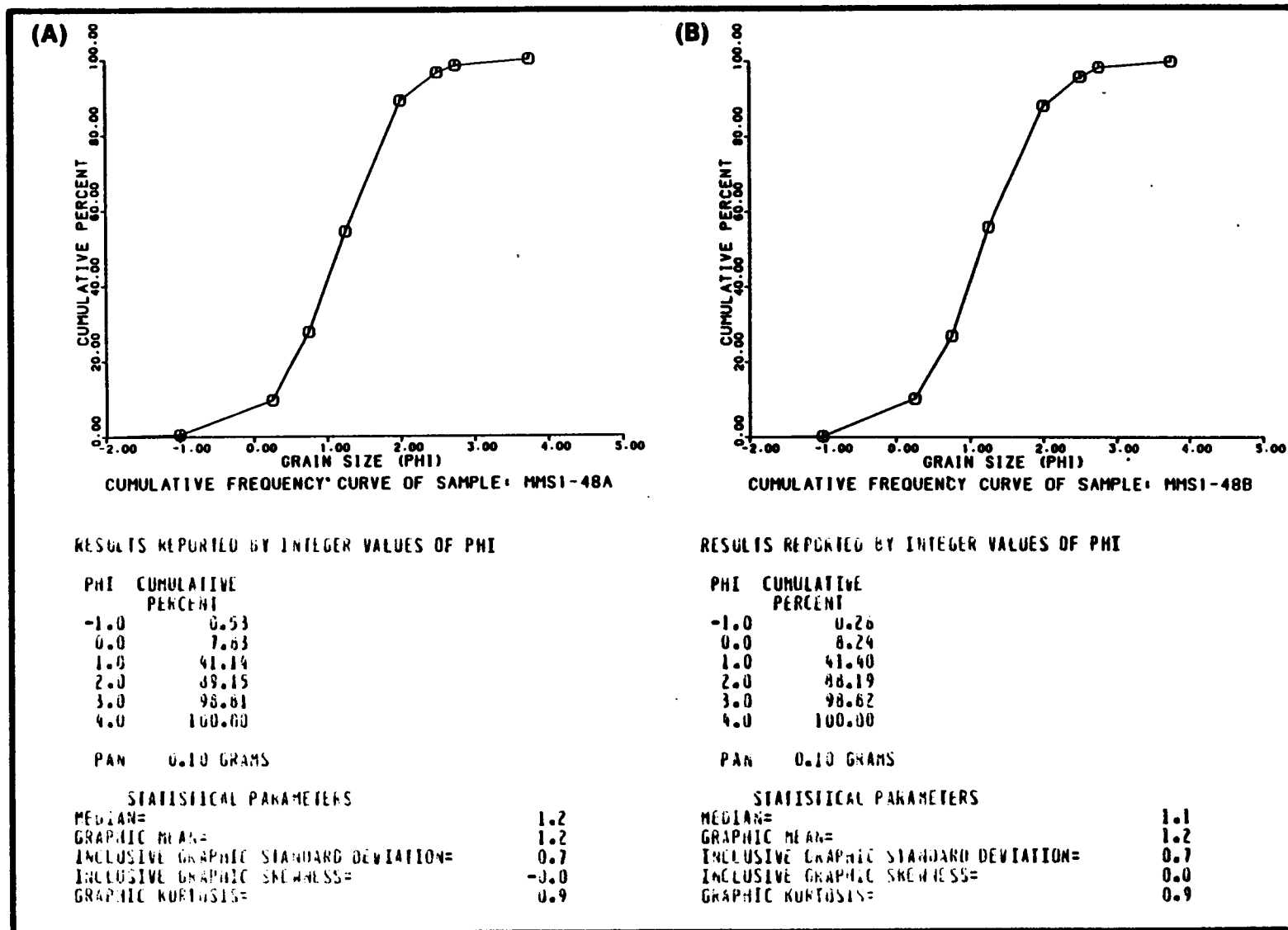


Figure D-6 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 48

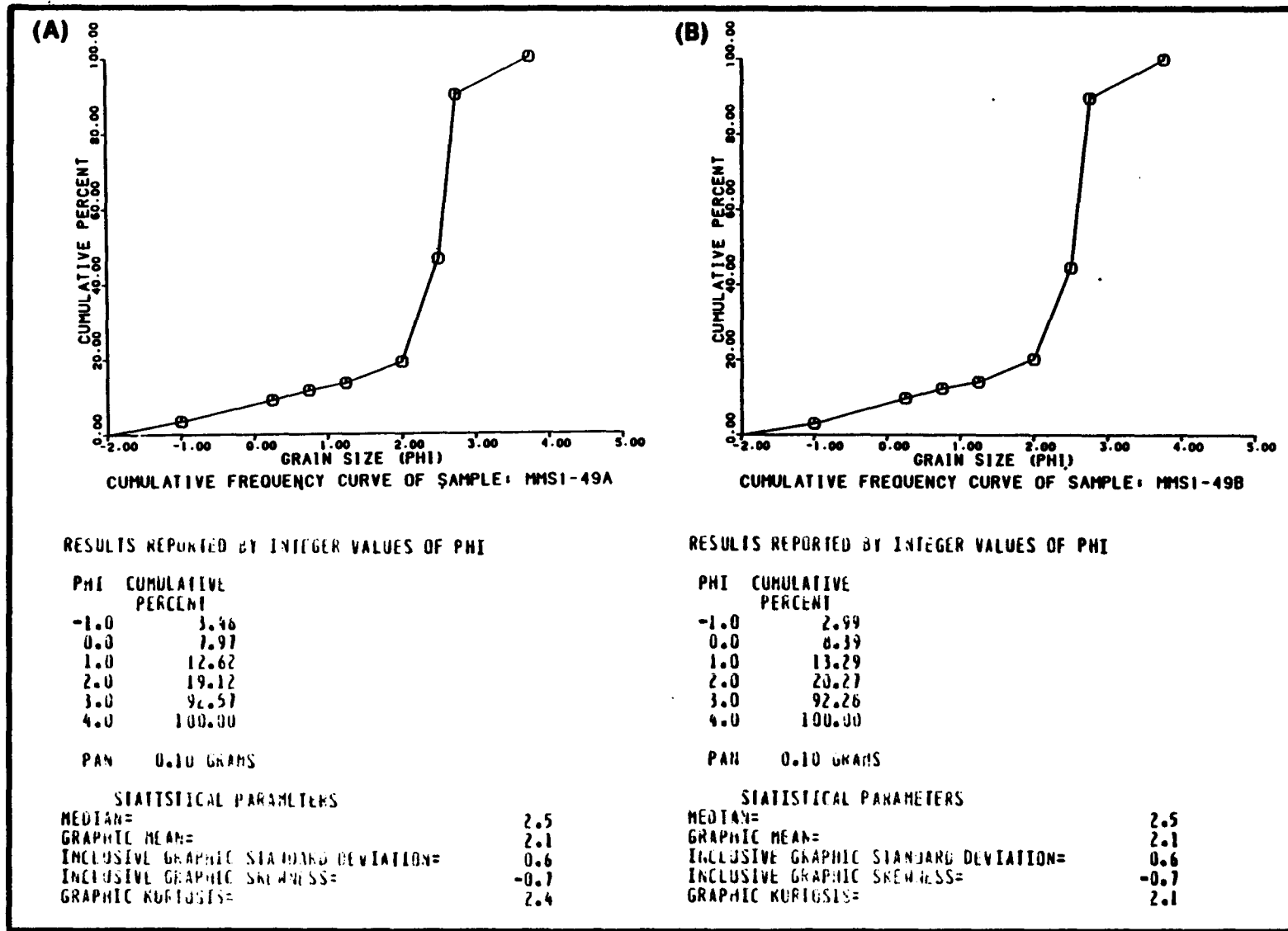


Figure D-7 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 49

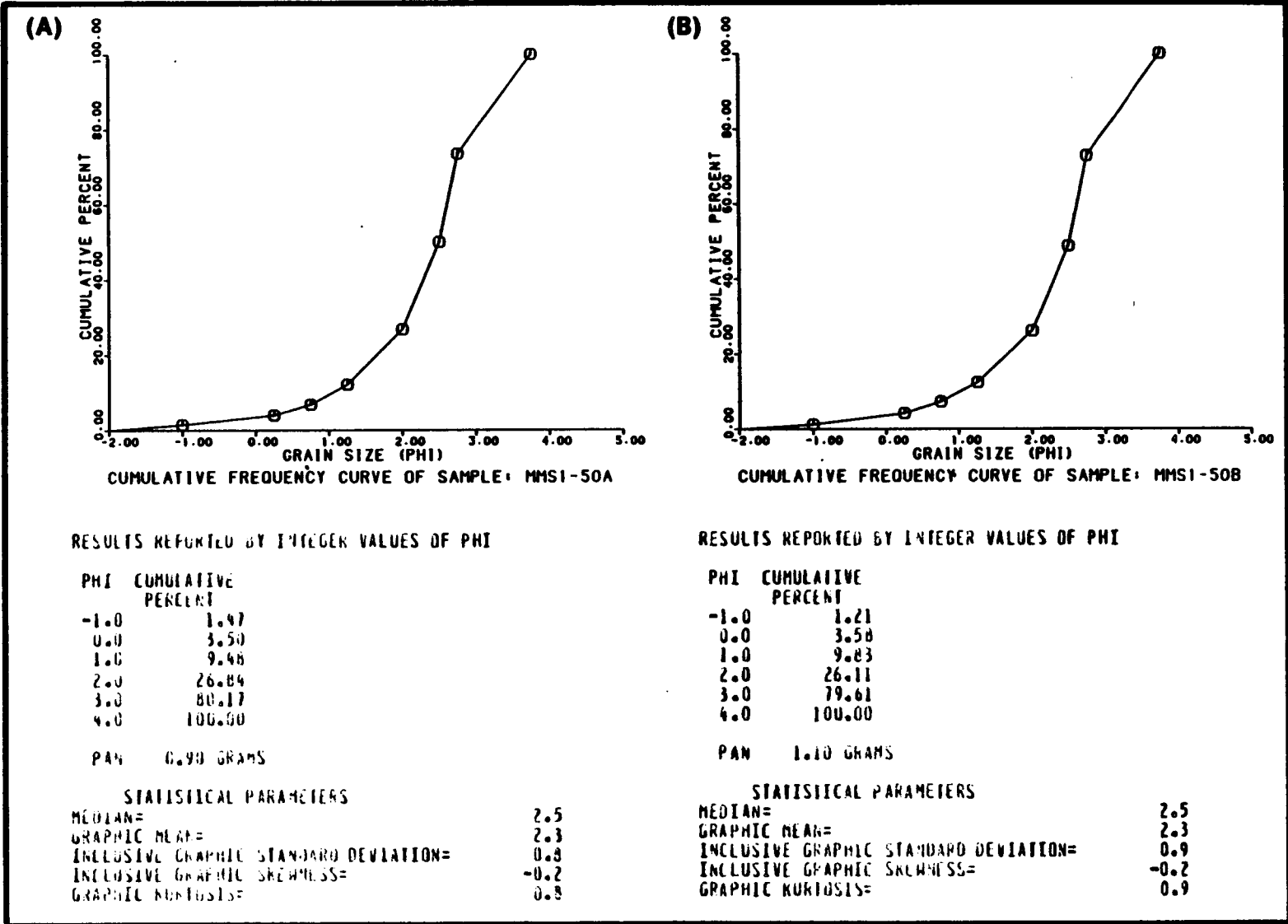


Figure D-8 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 50

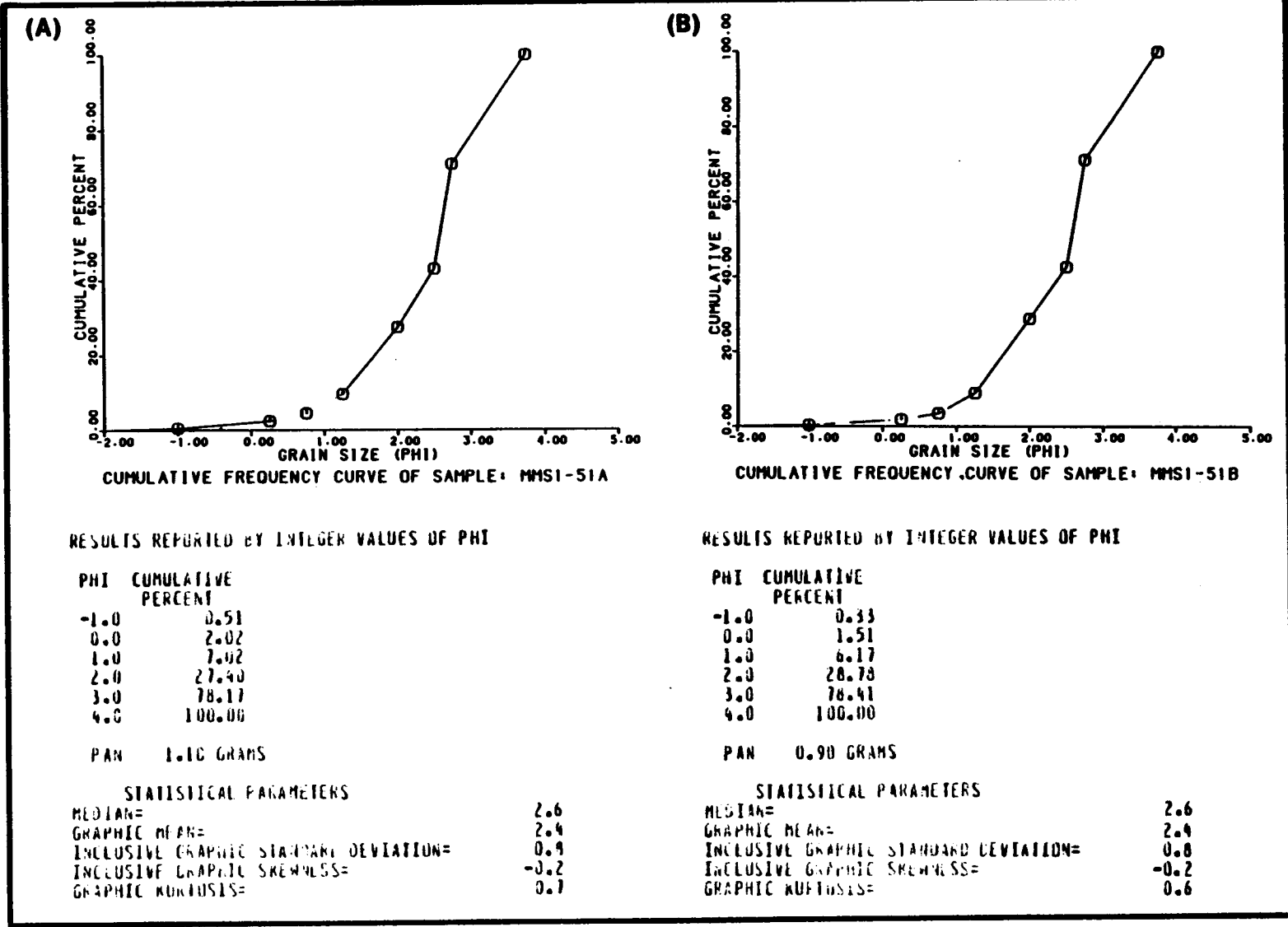


Figure D-9 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 51

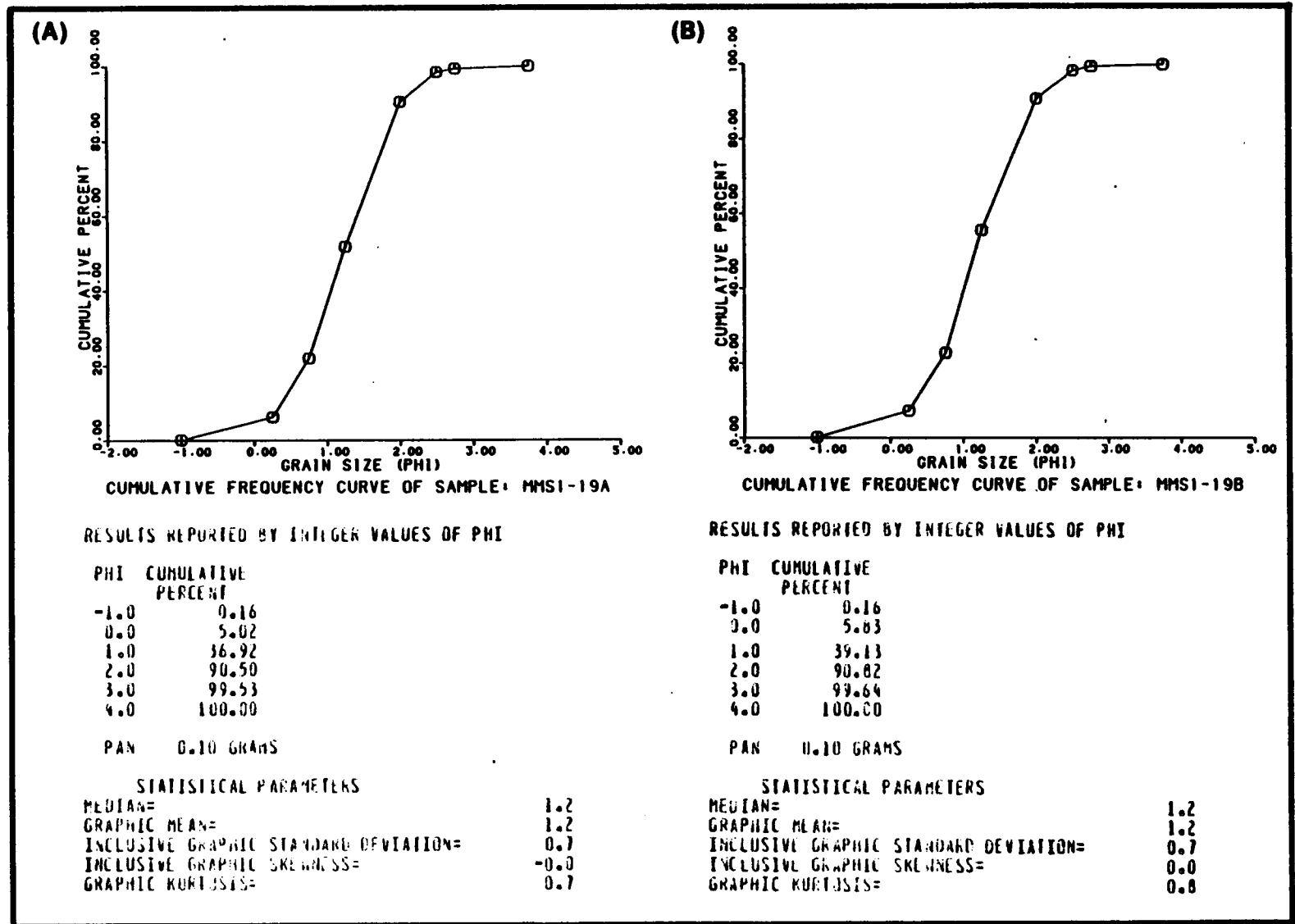


Figure D-10 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 19

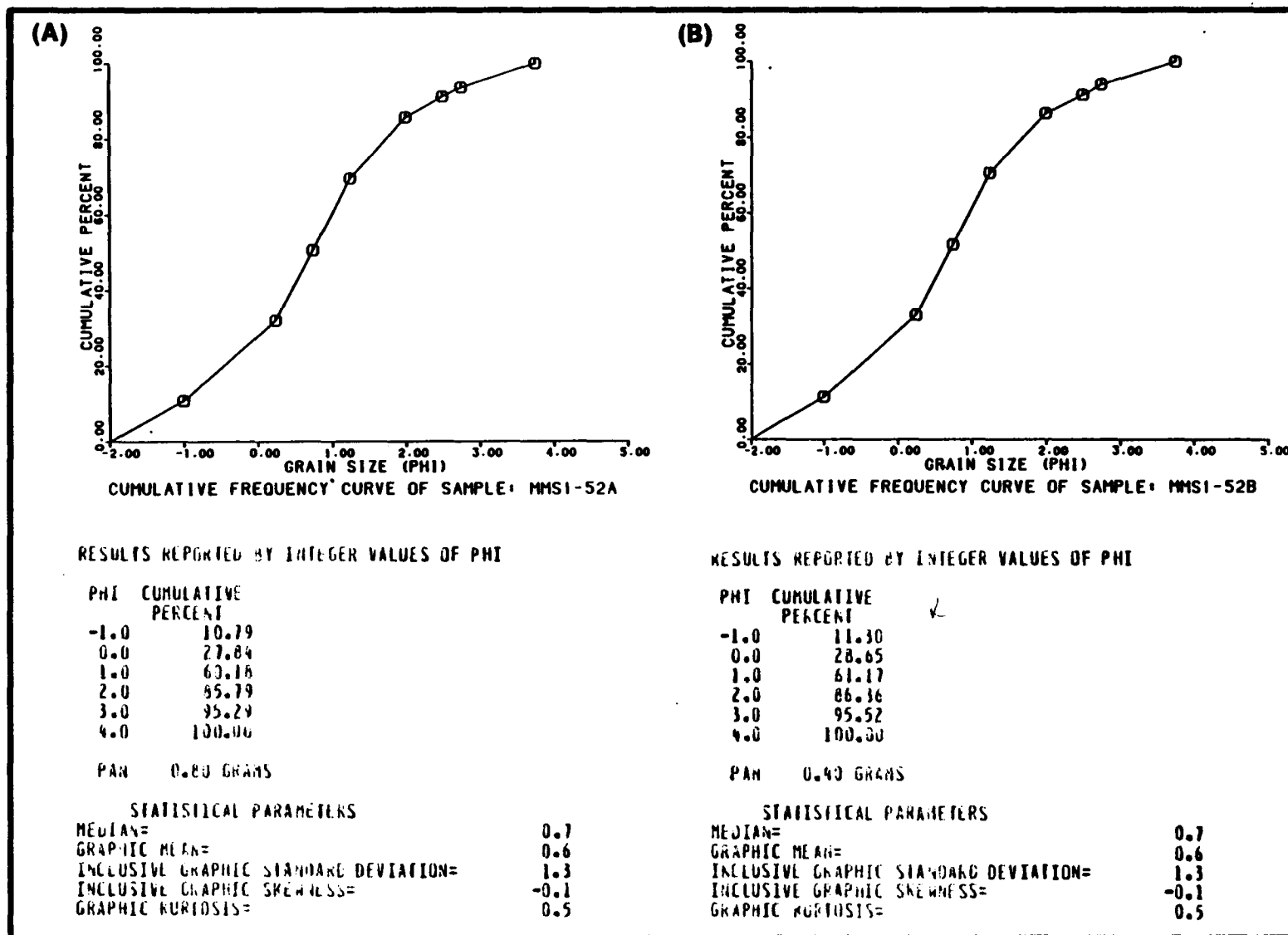


Figure D-11 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 52

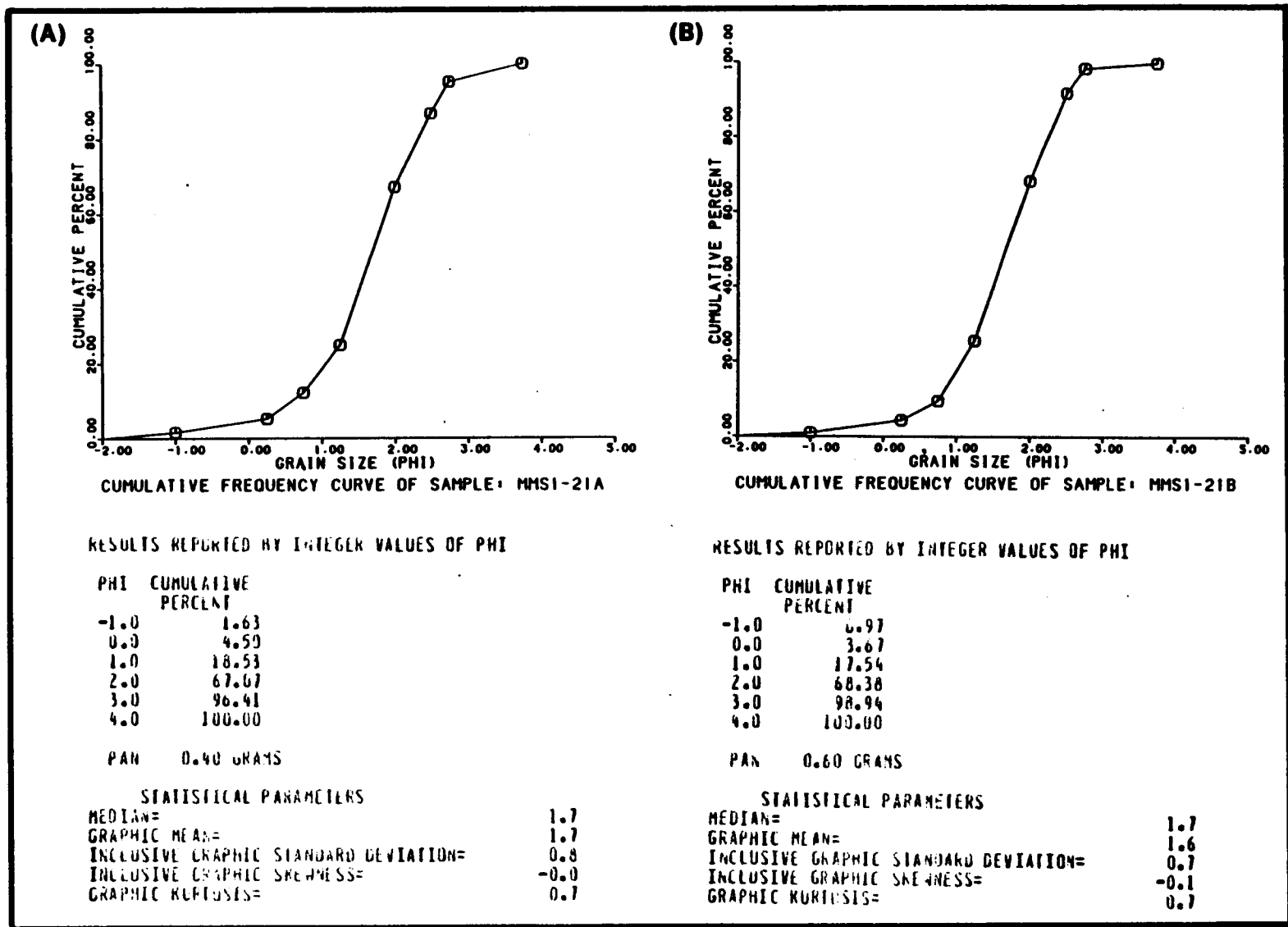


Figure D-12 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 21

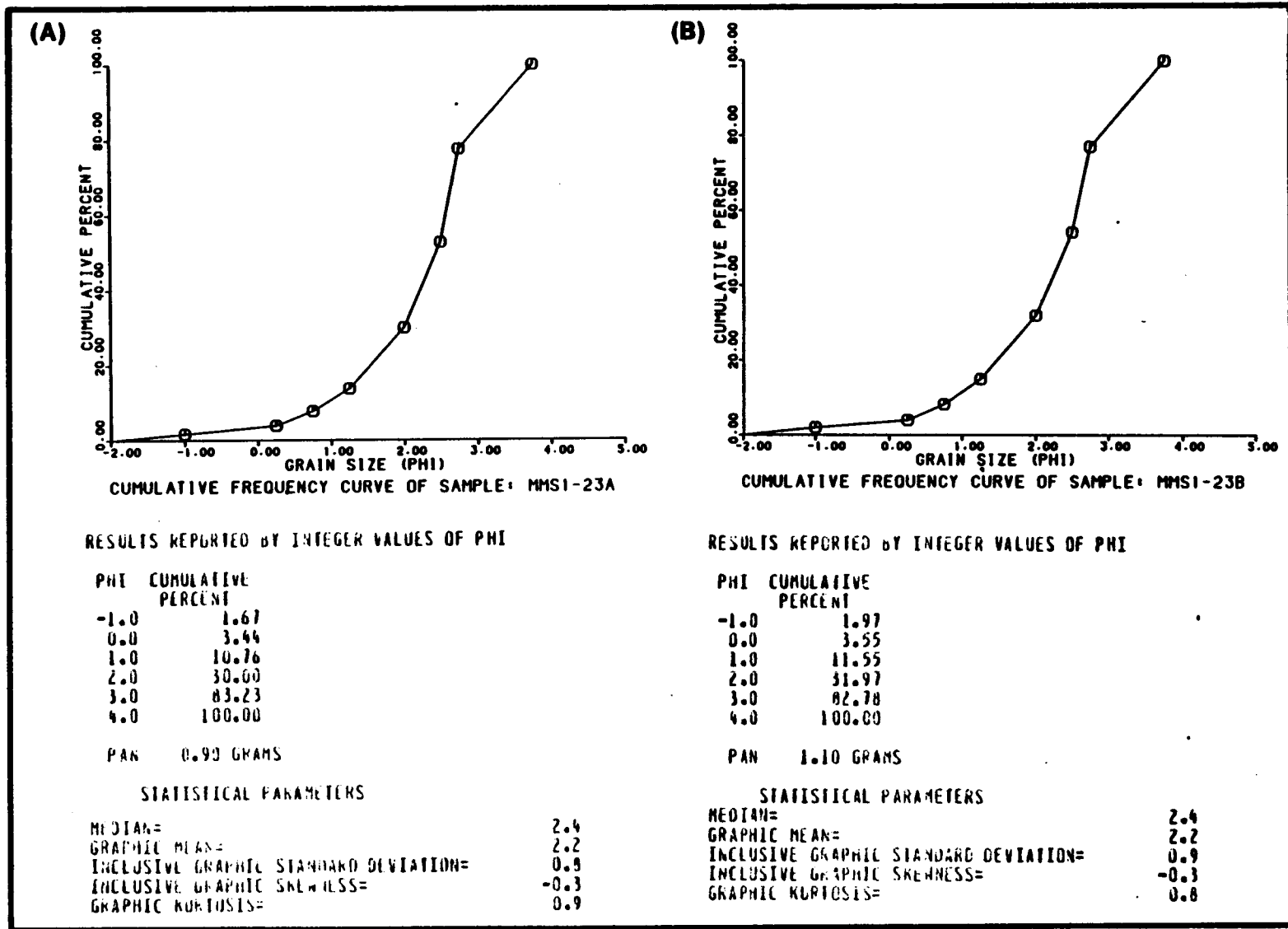


Figure D-13 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 23

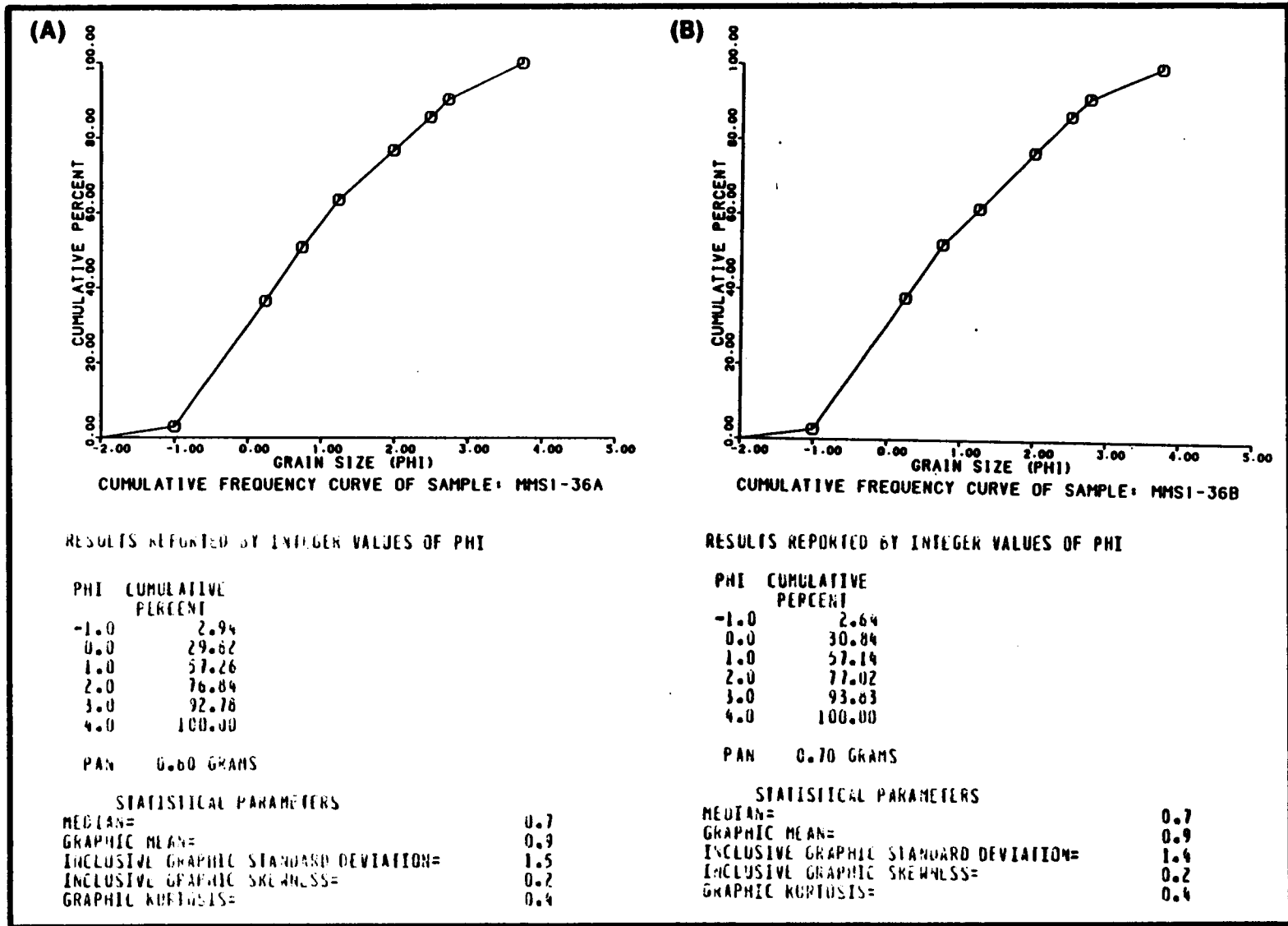


Figure D-14 SEDIMENT GRAIN SIZE DISTRIBUTION AND RELATED STATISTICS FOR GRAB SAMPLES (TWO REPLICATES, A AND B) OBTAINED DURING YEAR 4 AT STATION 36

APPENDIX E
BENTHIC INFAUNA

APPENDIX E
BENTHIC INFAUNA

Benthic infauna were sampled at the Group I soft-bottom stations (Figure E-0) during Cruises I (December 1983) and III (May 1984). The enumerated species data were entered into the Biological Data Management System to aid in interpreting the data. The output for the Biological Data Management System is presented in this appendix.

Table E-1 presents the cluster analysis (CLUSTAN) species list for abundances greater than 0.9 percent; Table E-2, the log transformed mean densities; and Table E-3, the entire species list for all stations, both cruises. Taxonomic composition by station and cruise is presented in Tables E-4 through E-13 and ranked abundance by station and cruise in Tables E-14 through E-23. The last table, E-24, is a presence-absence table which allows rudimentary comparison of the differences or similarities between stations and cruises.

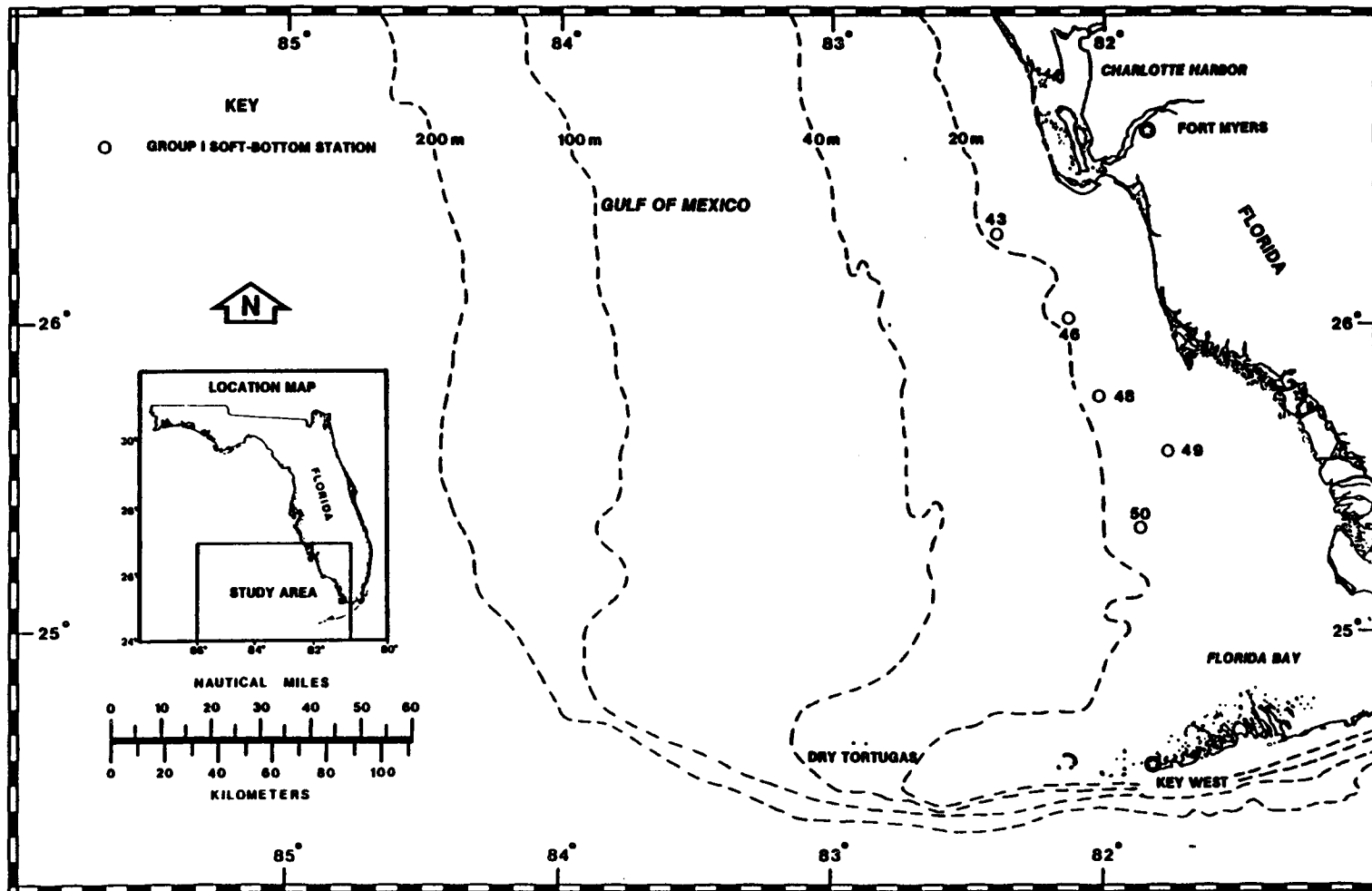


Figure E-0 BENTHIC INFAUNA SAMPLING STATION LOCATIONS FOR YEAR 4 (DECEMBER 1983 AND MAY 1984)

Table E-1. List of Taxa Included in Numeric Normal Cluster Analysis
 CLUSTAN SPECIES LIST - ABUNDANCE GT 0.9%

CLUSTAN SPECIES LIST - ABUNDANCE GT 0.9%

43	RHYNCHOCOELA
50010601	PHOLOE
50012111	HETEROPODARKE
50012201G2	ANCISTROSYLLIS HARTMANAE
50012205	SYNELMIS
50012209	LITOCORSA
500123	SYLLIDAE
5001230701	EXOgone DISPAR
50012308	SPHAEROSYLLIS
5001230807	SPHAEROSYLLIS ACICULATA
5001231605	STREPTOSYLLIS PETTIBONEAE
5001232602	PLAKOSYLLIS QUADRTOCULATA
500124	NEREIDAE
50012404	NEREIS
5001240603	CERATOCEPHALE OCULATA
500125	NEPHTYIDAE
5001250303	AGLAOPHAMUS VERRILLI
50012701	GLYCERA
5001280501	GONIADIDES CAROLINAE
5001310124	LUMBPINERIS VERRILLI
5001360203	PROTODORVILLEA KEFERSTEINI
5001360504	SCHISTOMERINGOS RUDOLPHI
50014001	HAPLOSCOLOPLOS
50014102	ARICIDEA
5001410208	ARICIDEA CATHERINEA
5001410221	ARICIDEA PHILBINA
5001410222	ARICIDEA TAYLORI
5001410225	ARICIDEA FINITIMA
50014106	CIRROPHORUS
50014305	MINUSPIO
5001430510	PRIONOSPIC CRISTATA
5001430511	PRIONOSPIC DAYI
5001430706	SPIO PETTIBONEAE
5001431701	PARAPRIONOSPIC PINNATA
50014401	MAGELONA
5001440106	MAGELONA PETTIBONEAE
5001460101	POECILOCHAETUS JOHNSONI
50015002	CAULLERIELLA
5001500202	CAULLERIELLA ALATA
5001580204	ARMANDIA MACULATA
50015806	OPHELINA
5001600402	MEDICMASTUS CALIFORNIENSIS
500163	MALDANIDAE
5001630803	AXIOTHELLA MUCOSA
50016401	CHENIA
500168	TEREBELLIDAE
500170	SABELLIDAE
50017001	CHONE
5001730909	HYDROIDES BISPINOSA
50017320	PSEUDOVERMILIA
50020501	POLYGORDIUS
5004	OLIGOCHAETA
5105030207	MITRELLA LUNATA
55	BIVALVIA

Table E-1. Continued

CLUSTAN SPECIES LIST - ABUNDANCE GT 0.9%

55153102	TELLINA
6110	OSTRACODA
6153012105	MYSIDOPSIS FURCA
6153012801	ANCHIALINA TYPICA
6154050801	XYRUPSTYLIS SMITHI
61540902	CYCLASPIS
6154090203	CYCLASPIS UNICORNIS
61560301	APSEUDES
61570201	LEPTOCHELIA
6160010701	XENANTHURA BREVITELSON
61690201	AMPELISCA
616906	AORIDAE
61690603	LEMBOS
6169060307	LEMBS UNIFASCIATUS UNIFASCIATUS
61691501	CERAFUS
6169151001	CHEVALIA AVICULAE
6169260212	PHOTIS MACROMANUS
61693453	LYSIANOPSIS
6169370823	MCNOCULODES NYEI
6169371401	SYNHELIDIUM AMERICANUM
61694211	PLATYISCHNOPUS
6169421403	METHARPINIA FLORIDANA
61694404	PODOCERUS
6169500505	TIRON TROPAKIS
6177020201	LUCIFER FAXONI
72	SIPUNCULA
78	PRYZOA
8002010101	GLOTTIDIA PYRAMIDATA
8120	OPHIURCIDEA
8136	ECHINOIDEA
81550402	ENCOPE
8500010101	BRANCHIOSTOMA CARIBAEUM

Table E-2. Log Transformed ($Y = \log(x + 1)$) Mean Densities of 86 Taxa Included in Numeric Normal Cluster Analysis

E-5

15:33 THURSDAY, MARCH 14, 1985 3

OBS	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15
1	1.81291	0.00000	1.13988	1.13988	1.42488	0.00000	0.00000	1.71767	0.00000	0.00000	0.00000	0.00000	1.51851	0.00000	0.00000
2	2.18921	0.00000	0.00000	0.00000	1.89098	0.00000	0.00000	2.29683	0.00000	0.00000	0.00000	0.00000	1.71767	0.00000	1.51851
3	2.18921	0.00000	1.13988	1.66087	0.86923	2.13162	1.89098	2.17085	1.13988	0.00000	0.00000	0.00000	1.51851	0.00000	0.00000
4	2.37621	0.00000	0.00000	0.00000	0.00000	0.00000	1.42488	1.59550	0.86923	1.51851	1.30535	0.00000	1.30535	0.00000	0.00000
5	2.32675	0.00000	0.00000	0.00000	0.86923	0.00000	1.42488	2.11059	0.00000	0.00000	0.00000	0.00000	0.00000	1.85370	0.00000
6	2.82802	0.00000	2.24005	2.22376	0.86923	1.13988	2.36436	1.59550	2.32675	0.00000	0.00000	1.66087	0.86923	0.00000	0.00000
7	2.28556	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.46894	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.67892
8	1.89098	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.42488	0.00000	0.00000	0.00000	0.00000	0.86923	0.00000	2.32675
9	2.17085	0.00000	0.00000	0.00000	0.00000	0.00000	0.86923	0.00000	2.01452	2.28556	2.81968	0.00000	0.00000	0.00000	0.00000
10	1.85370	2.47041	1.30535	0.00000	0.00000	0.00000	2.24005	1.98677	2.28556	2.27591	1.30535	2.18921	0.00000	0.00000	0.00000
OBS	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28	S29	

Table E-2. Continued

1	0.00000	0.00000	1.66087	1.13988	0.00000	0.00000	0.00000	0.00000	1.51851	0.00000	0.00000	0.00000	0.00000	2.08849
2	0.00000	1.51851	0.00000	0.00000	1.66087	0.00000	0.00000	0.00000	2.15168	1.42488	1.59550	1.51851	1.30535	1.30535
3	0.00000	0.00000	0.00000	2.54777	1.71767	1.30535	0.00000	0.00000	1.92531	0.00000	0.00000	0.00000	0.00000	1.81291
4	0.00000	1.13988	0.00000	0.00000	1.42488	0.00000	0.00000	1.13988	1.30535	0.00000	1.92531	0.00000	0.00000	1.89058

Table 4. Continued

5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.24005	0.00000	1.85370	1.92531	1.81291	1.85370	2.01452	2.06521
6	2.11059	0.00000	0.00000	2.80250	0.00000	2.45117	0.00000	0.00000	1.92531	0.00000	0.00000	0.00000	0.00000	2.58546
7	1.64018	1.97053	0.00000	0.00000	0.90902	0.00000	0.00000	0.00000	1.76260	0.00000	1.18241	1.46894	0.00000	1.34889
8	0.00000	2.33965	1.13988	0.00000	1.66087	0.00000	0.00000	0.00000	1.42488	1.13988	0.00000	1.42488	1.13988	1.42488
9	0.00000	1.13988	0.00000	0.00000	1.30535	0.00000	0.00000	2.01452	1.30535	0.00000	2.11059	0.00000	0.00000	2.17085
10	1.13988	0.00000	1.30535	2.78462	1.13988	2.08849	0.00000	0.00000	0.00000	0.00000	0.00000	1.98677	0.86923	2.08849

OBS	S30	S31	S32	S33	S34	S35	S36	S37	S38	S39	S40	S41	S42	S43	S44
1	0.00000	0.00000	0.00000	0.00000	1.51851	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000	1.13988	1.51851	1.89098
2	2.38775	2.08849	0.00000	0.00000	2.59966	1.39535	0.00000	0.00000	0.00000	0.00000	1.76790	0.000	2.28556	1.13988	1.81291
3	1.13988	1.13988	0.00000	0.00000	0.00000	1.42488	0.00000	0.86923	0.00000	0.00000	1.95713	0.000	1.42488	1.30535	1.76790
4	2.39898	1.76790	1.66087	0.00000	0.86923	2.53983	0.86923	0.00000	2.85211	0.00000	2.13162	0.000	2.11059	0.00000	2.24005
5	2.83213	2.47041	0.00000	0.00000	0.00000	0.86923	1.76790	0.00000	0.00000	2.20683	2.50651	0.000	1.30535	1.30535	1.81291
6	0.00000	0.00000	0.00000	2.37621	0.86923	0.00000	0.86923	0.00000	0.00000	1.13988	2.99414	0.000	2.06521	0.00000	2.01452
7	1.18241	1.64618	2.31643	1.56301	3.24488	0.00000	0.00000	1.89883	0.00000	0.00000	2.26926	0.000	2.26926	0.90902	0.90902
8	0.86923	1.71767	0.00000	0.00000	3.00251	0.00000	1.13988	0.00000	0.00000	0.00000	1.98677	0.000	3.09878	0.86923	1.13988
9	0.00000	1.98677	0.00000	3.05208	2.06521	1.42488	2.11059	1.42488	0.00000	2.81117	2.47972	0.000	1.81291	0.00000	2.17085
10	1.81291	2.47972	0.00000	2.56324	1.42488	0.00000	0.86923	0.00000	0.00000	2.01452	2.68215	3.008	1.51851	0.00000	0.00000

OBS	S45	S46	S47	S48	S49	S50	S51	S52	S53	S54	S55	S56	S57	S58	S59
1	0.00000	2.25575	1.13988	0.00000	0.00000	1.5955	0.86923	1.51851	1.42488	2.01452	1.95713	2.57078	0.00000	1.42488	1.71767
2	0.86923	0.00000	2.61342	0.00000	0.00000	0.00000	3.10971	2.46090	1.85370	0.86923	0.86923	1.95713	0.00000	0.00000	0.00000
3	0.00000	0.00000	1.71767	0.00000	0.00000	0.00000	1.13988	2.65839	0.00000	0.86923	0.86923	2.29973	1.13988	0.00000	0.86923
4	1.42488	0.86923	1.71767	0.00000	2.01452	1.7679	2.04060	2.85986	0.00000	0.00000	0.00000	2.25575	0.00000	1.13988	1.76790
5	0.00000	0.00000	3.01343	0.00000	0.00000	0.00000	0.00000	2.95895	0.00000	0.00000	1.42488	2.20683	0.86923	0.00000	0.00000
6	0.00000	0.00000	2.39898	0.00000	0.00000	0.00000	0.00000	2.78003	0.00000	0.00000	2.13162	2.59966	0.00000	1.13988	1.13988
7	2.03209	0.00000	1.70569	0.00000	0.00000	0.00000	2.61641	2.28556	1.18241	2.05987	0.90902	2.63827	1.70569	1.34889	1.76260
8	1.42488	0.00000	2.59262	0.00000	0.00000	0.00000	2.94340	2.97100	0.00000	0.00000	1.76790	2.72607	2.06521	2.06521	2.25575
9	0.86923	0.00000	1.30535	0.00000	0.86923	0.00000	1.92531	2.84819	0.00000	2.15168	1.42488	2.58546	1.76790	0.00000	1.13988
10	1.13988	0.00000	2.75143	2.45117	0.00000	0.00000	0.86923	3.20957	1.13988	2.01452	2.24005	3.42544	1.66087	2.06521	1.95713

OBS	S60	S61	S62	S63	S64	S65	S66	S67	S68	S69	S70	S71	S72	S73	S74
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E-7

Table E-2. Continued

1	2.50651	1.51851	0.00000	1.71767	0.00000	1.51851	1.51851	0.00000	0.0000	0.86923	1.51851	1.13988	0.0000	0.00000	1.13988
2	1.89098	1.51851	0.00000	2.04060	1.89098	1.42488	0.00000	0.86923	1.7679	0.00000	0.00000	1.13988	1.7679	0.86923	0.86923
3	1.42488	1.51851	1.89098	1.92531	1.13988	1.66087	1.51851	1.59550	0.0000	0.00000	0.00000	1.30535	0.0000	0.00000	1.30535
4	2.44122	1.13988	1.85370	3.10537	1.30535	1.71767	0.00000	0.00000	0.0000	2.08849	0.00000	2.90709	0.0000	0.00000	0.86923
5	1.59550	0.00000	0.86923	2.25575	0.86923	1.71767	0.00000	2.08849	0.0000	0.00000	0.00000	0.00000	1.8537	0.86923	0.86923
6	2.17085	0.00000	0.00000	0.86923	0.86923	1.13988	1.81291	0.00000	0.0000	0.86923	2.64601	1.42488	0.0000	0.00000	1.81291
7	2.17765	1.18241	0.00000	0.00000	2.03209	2.03209	1.64018	0.00000	0.0000	1.18241	0.00000	1.56301	0.0000	1.97053	1.56301
8	2.97690	1.59550	0.00000	0.00000	1.66087	1.85370	2.04060	1.51851	0.0000	1.30535	0.00000	1.81291	0.0000	2.27051	2.06521
9	2.40993	0.00000	0.00000	0.00000	0.86923	0.86923	0.86923	0.00000	0.0000	0.00000	0.00000	1.13988	0.0000	2.52349	1.71767
10	2.40993	1.59550	1.51851	0.00000	2.40993	1.92531	2.62014	0.00000	0.0000	0.86923	0.00000	1.59550	0.0000	1.13988	1.51851

OBS	S75	S76	S77	S78	S79	S80	S81	S82	S83	S84	S85	S86	TRIPSITE
1	1.66087	1.59550	0.00000	1.51851	1.81291	1.71767	2.15168	1.42488	0.00000	0.86923	0.00000	1.98677	143
2	1.13988	1.30535	0.00000	0.00000	0.00000	0.00000	2.31345	1.92531	1.30535	0.00000	0.00000	1.13988	146
3	0.00000	0.86923	0.00000	0.00000	0.00000	1.51851	3.13893	1.59550	1.30535	1.51851	0.00000	2.28556	148
4	2.22376	0.86923	0.00000	1.71767	1.30535	1.13988	0.86923	1.13988	1.66087	0.00000	0.00000	0.86923	149
5	1.81291	0.00000	1.13988	0.00000	0.86923	1.42488	2.77539	0.00000	1.85370	0.00000	0.00000	0.86923	151
6	0.00000	1.13988	1.30535	0.00000	1.13988	1.51851	2.06521	0.00000	2.38775	2.47041	0.00000	2.01452	243
7	1.34889	1.85800	0.00000	0.00000	0.00000	1.56301	1.18241	0.00000	1.85800	2.28556	0.90902	1.46894	246
8	1.85370	1.89098	0.00000	0.00000	0.00000	1.59550	2.63969	1.13988	2.28556	1.98677	0.00000	1.13988	248
9	2.01452	1.13988	0.00000	1.66087	0.86923	1.13988	0.00000	0.00000	1.51851	0.00000	0.00000	0.86923	249
10	0.00000	1.30535	2.36436	1.13988	0.86923	2.36436	2.87495	0.00000	2.32675	0.00000	2.29973	2.39898	250

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CCCC LL      U  UU  SSSS  TTTTT  AAAAA  NN   N      22222
CC   C LL    U  UU  SS   S   TT   A   AA  NNN  N      22  22
CC   LL      U  UU  SSS   TT   A   AA  N  NN  N      222
CC   LL      U  UU  SSSS  TT   A   AA  N  NN  N      22
CC   LL      U  UU      SSS  TT   AAAAAA N  NNN      22
CC   C LL    U  UU  S   SS  TT   A   AA  N   NN      222
CCCC LLLLLL  UUUUU  SSSS  TT   A   AA  N   N      2222222

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JANUARY 1982

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UNIVERSITY OF ST ANDREWS
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SCOTLAND

PROCEDURE FILE
=====

Table E-3. List of Taxa Identified from December 1983 and May 1984

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PAGE

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

DEMOSPONGIAE

HYDROZOA

TURBELLARIA

ARCHOOPHORA POLYCLADIDA ACOTYLEA

RHYNCHOCOELA

POLYNOIDAE

EULEPETHIDAE

GRUBEULEPIS

GRUBEULEPIS MEXICANA

SIGALIONIDAE

PHOLOE

STHENELAIS

STHENELAIS BOA

SIGALION

FIMBRIOSTHENELAIS

PISICNE REMOTA

CHRYSOPETALIDAE

PALEANOTUS

PALEANOTUS HETEROSETA

LINOPHERUS

PARAMPHINOME

EURYTHOE COMPLANATA

PHYLLODOCIDAE

ANAITIDES

ANAITIDES MUCOSA

ANAITIDES LONGIPES

MYSTIDES BOREALIS

GENETYLLIS

GENETYLLIS CASTANEA

EUMIDA SANGUINEA

PROTOMYSTIDES BIDENTATA

PHYLLODOCE ARENAE

PTEROCIRRUS MACROCEROS

HESIONIDAE

GYPTIS BREVIPALPA

MICROPHTHALMUS

HETEROPODARKE

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BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

PODARKE AGILIS
PILARGIDAE
ANCISTROSYLLIS
ANCISTROSYLLIS HARTMANAE
SIGAMBRA TENTACULATA
SIGAMBRA BASSI
CABIRA INCERTA
SYNELMIS
LITOCORSA
SYLLIDAE
PROCERAEA
PIONOSYLLIS
SYLLIS
SYLLIS CORNUTA
SYLLIS REGULATA CAROLINAE
TRYPANOSYLLIS
TRYPANOSYLLIS COELIACA
TYPOSYLLIS
EXOGONE
EXOGONE DISPAR
EXOGONE LOUREI
EXOGONE VERUGERA
EXOGONE ATLANTICA
SPHAEROSYLLIS
SPHAEROSYLLIS ACICULATA
SPHAEROSYLLIS GLANDULATA
SPHAEROSYLLIS TAYLORI
BRANIA
SYLLIDES FULVA
STREPTOSYLLIS PETTIBONEAE
PARAPTONOSYLLIS
PLAKOSYLLIS QUADRIOCULATA
NEREIDAE
CERATONEREIS IRRITABILIS
CERATONEREIS LONGICIRRATA
NEREIS
NEREIS SUCCINEA
NEREIS LAMELLOSA
NEREIS RIISEI
CERATOCEPHALE OCULATA
WEBSTERINEREIS TRIDENTATA
NICON
RULLIERINEREIS MEXICAVA
NEPHTYIDAE
NEPHTYS
NEPHTYS PICTA

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BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

NEPHTYS SQUAMOSA
NEPHTYS SIMONI
AGLAOPHAMUS VERRILLI
GLYCERIDAE
GLYCERA
GLYCERA DIBRANCHIATA
GONIADIDES CAROLINAE
ONUPHIDAE
ONUPHIS
ONUPHIS ERIMITA
ONUPHIS NEBULOSA
DIOPATRA CUPREA
DIOPATRA PAPILLATA
NOTHRIA
NOTHRIA PALLIDA
EUNICIDAE
EUNICE
EUNICE VITTATA
LYSIDICE
LYSIDICE NINETTA
NEMATONEREIS UNICORNIS
LUMBRINERIDAE
LUMBRINERIS LATREILLI
LUMBRINERIS INFLATA
LUMBRINERIS VERRILLI
LUMBRINERIS COCCINEA

LUMBRINERIS CANDIDA
ARABELLA
DORVILLEIDAE
PROTODORVILLEA KEFERSTEINI
STAUONEREIS (PART)
SCHISTOMERINGOS PECTINATA
SCHISTOMERINGOS RUDOLPHI
MEIODORVILLEA
ORBINIIDAE
HAPLOSCOLOPLOS
HAPLOSCOLOPLOS ROBUSTUS
HAPLOSCOLOPLOS FRAGILIS
NAINERIS BICORNIS
SCOLOPLOS RUBRA
PARAONIDAE
ARICIDEA
ARICIDEA WASSI
ARICIDEA CATHERINEA
ARICIDEA CERRUTI

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

ARICIDEA FRAGILIS
ARICIDEA PHILBINA
ARICIDEA TAYLORI
ARICIDEA FINITIMA
PARAONIS PYGOENIGMATICA
CIRROPHORUS
CIRROPHORUS LYRIFORMIS
CIRROPHORUS BRANCHIATUS
LEVINSENIA
TAUBERIA GRACILIS
PARADONEIS LYRA
SPIONIDAE
LAONICE CIRRATA
POLYDORA
MINUSPIO
PRIONOSPIO CIRRIFERA
PRIONOSPIO CRISTATA
PRIONOSPIO DAYI
SPIO PETTIBONEAE
SPIOPHANES
SPIOPHANES BOMBYX
SPIOPHANES MISSIONENSIS
PARAPRIONOSPIO PINNATA
SCOLELEPIS SQUAMATA
MICROSPPIO PIGMENTATA
MAGELONA
MAGELONA PETTIBONEAE
MAGELONA RIOJAI
POECILOCHAETUS JOHNSONI
MESOCHAETOPTERUS
CIRRATULIDAE
CAULLERIELLA
CAULLERIELLA ALATA
THARYX
THARYX ANNULOSUS
CHAETAZONE
DODECACERIA
FLABELLIGERIDAE
THEROCHEATA
OPHELIIDAE
ARMANDIA AGILIS
ARMANDIA MACULATA
TRAVISIA HOBSONAE
OPHELINA
CAPITELLIDAE
CAPITELLA

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BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

NOTOMASTUS
NOTOMASTUS TENUIS
NOTOMASTUS LATERICEUS
NOTOMASTUS HEMIPODUS
NOTOMASTUS LOBATUS
NOTOMASTUS AMERICANUS
MEDIOMASTUS CALIFORNIENSIS
BARANTOLLA
LEIOCAPITELLA
DASYBRANCHUS
MASTOBRANCHUS
MALDANIDAE
ASYCHIS ELONGATA
AXIOHELLA
AXIOHELLA MUCOSA
PRAXILLELLA
MACROCLYMENE ZONALIS
OWENIA
MYRIOCHELE
MYRIOCHELE OCULATA
SABELLARIIDAE
SABELLARIA
AMPHICTENE
AMPHARETIDAE
AMPHICTEIS GUNNERI
AMPHICTEIS SCAPHOBRANCHIATA
ISOLDA PULCHELLA
TEREBELLIDAE
PISTA CRISTATA
POLYCIRRUS
POLYCIRRUS HAEMATODES
POLYCIRRUS PLUMOSUS
LYSILLA
LOIMIA MEDUSA
STREBLOSOMA HARTMANAE
TEREBELLIDES STROEMII
SABELLIDAE
CHONE
CHONE AMERICANA
MEGALOMMA BIOCULATA
MEGALOMMA VESICULOSUM
FABRICIA
FABRISABELLA
POTAMETHUS
SERPULIDAE
SERPULA

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PAGE

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

HYDROIDES PROTULICOLA
HYDROIDES BISPINOSA
HYDROIDES MICROTIS
PSEUDOVERMILIA
PSEUDOVERMILIA OCCIDENTALIS
QUESTA CAUDICIRRA
POLYGORDIUS
OLIGOCHAETA

GASTROPODA

CERITHIOPSIS EMERSONI
MELANELLA
STROMBIFORMIS
STROMBIFORMIS BILINEATUS
CALYPTRAEA CENTRALIS
NATICA PUSILLA
MITRELLA LUNATA
BAILYA PARVA
FASCIOLARIA
OLIVELLA
OLIVELLA MINUTA
OLIVA SAYANA
TURRIDAE
TEREBRA
TURBONILLA
CEPHALASPIDEA
ACTEOCINA CANDEI
CYLICHNELLA BIDENTATA
HAMINOEAE
ATYS CARIBAEA
VOLVULELLA PERSIMILIS
PLEUROBRANCHIDAE

POLYPLACOPHORA

BIVALVIA

SOLEMYA OCCIDENTALIS
GLYCYMERIS
PARVILUCINA MULTILINEATA
LUCINA NASSULA
DIVARICELLA QUADRISULCATA
GLANS DOMINGUENSIS
CRASSINELLA LUNULATA

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PAGE

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

PAPYRIDEA HIATUS
SPISULA SOLIDISSIMA
TELLINIDAE
TELLINA
TELLINA AEQUISTRIATA
TELLINA PROBRINA
ABRA AEQUALIS
VENERIDAE
DOSINIA DISCUS
GEMMA GEMMA
CHIONE
GOULDIA CERINA
CHAMIDAE
CHAMA CONGREGATA
CORBULA
LYONIA
VERTICORDIA ORNATA

DENTALIUM
DENTALIUM EBOREUM
DENTALIUM ANTILLARUM
DENTALIUM SEMISTRIOLATUM
CADULUS

ARTHROPODA PYCNOGONIDA

ARTHROPODA MANDIBULATA CRUSTACEA

OSTRACODA
PARANEBALIA LONGIPES
MYSIDOPSIS
MYSIDOPSIS FURCA
BOWMANIELLA
BOWMANIELLA PORTORICENSIS
BOWMANIELLA MEXICANA
ANCHIALINA TYPICA
AMATHIMYSIS BRATTEGARDI
OXYUROSTYLIS SMITHI
CAMPYLASPIS
CUMELLA
CYCLASPIS
CYCLASPIS UNICORNIS
CYCLASPIS BACESCUT
PERACARIDA TANAICACEA

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PAGE

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

APSEUDIDAE
APSEUDES
KALLIAPSEUDES
LEPTOCHELIA
NOTOTANAIDAE
APANTHURA
APANTHURA SIGNATA
XENANTHURA BREVITELSON
ACCALATHURA CREMULATA
MESANTHURA
EURYDICE LITTORALIS
SEROLIS MGRAYI
EDOTEA
EDOTEA TRILOBA
STENETRIUM
MUNNA
PERACARIDA AMPHIPODA
PERACARIDA AMPHIPODA GAMMARIDEA
AMPELISCA
AMPELISCA VADORUM
AMPELISCA VERRILLI
AMPELISCA AGASSIZI
AMPHILOCHIDAE
AMPHILOCHUS
AMPITHOE
AORIDAE
LEMBOS
LEMBOS SMITHI
LEMBOS UNIFASCIATUS UNIFASCIATUS
LEMBOS SPINICARPUS SPINICARPUS
MICRODEUTOPUS
MICRODEUTOPUS MYERSI
ACUMINODEUTOPUS
ACUMINODEUTOPUS NAGLEI
ARGISSA HAMATIPES
BATEIDAE (AMPHIPODA)
BATEA
CERAPUS
ERICHTHONIUS
ERICHTHONIUS BRASILIENSIS
CHEVALIA AVICULAE
GAMMARIDAE
ELASMOPUS
MAERA
DULICHIELLA APPENDICULATA
ACANTHOHAUSTORIUS

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

PHOTIS
PHOTIS MACROMANUS
PHOTIS MELANICUS
LISTRIELLA
LISTRIELLA BARNARDI
HIPPOMEDON
LYSIANOPSIS
OEDICEROTIDAE
MONOCULODES NYEI
SYNCHELIDIUM AMERICANUM
PLATYISCHNOPUS
METHARPINIA FLORIDANA
RHEPOXYNIUS EPISTOMUS
PLEUSTIDAE
PODOCERIDAE
PODOCERUS
STENOTHOIDAE
TIRON
TIRON TROPAKIS
GAROSYRRHOE
NEOMEGAMPHOPUS
NEOMEGAMPHOPUS ROOSEVELTI
LESTRIGONUS
CAPRELLIDAE
LUCONACIA
LUCONACIA INCERTA
PHTISICA MARINA
SICYONIA TYPICA
LUCIFER FAXONI
EUCARIDA DECAPODA PLEOCYEMATA CARIDEA
LEPTOCHELA SERRATORBITA
PERICLIMENES
PERICLIMENES AMERICANUS
NEOPONTONIDES
ALPHEIDAE
AUTOMATE EVERMANNI
OGYRIDES ALPHAERCSTRIS
LATREUTES
LATREUTES PARVULUS
PROCESSA
PROCESSA HEMPHILLI
CALLIANASSA
DIOGENIDAE
PAGUPISTES
PAGURUS
ALBUNEA PARETII

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PAGE 1

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA DISCIPLINE SPECIES LIST

EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA
HYPOCONCHA SPINOSISSIMA
EBALIA CARIOSA
EBALIA STIMPSONI
HETEROCRYPTA GRANULATA
MACROCOELOMA
EURYPLAX NITIDA
PINNIXA

SIPUNCULA

PRIAPULIDA

PHORONIS ARCHITECTA

BRYOZOA

GLOTTIDIA PYRAMIDATA

ASTEROIDEA
OPHIUROIDEA
ECHINOIDEA
ENCOPE
ENCOPE ABERRANS
MOIRA ATROPOS
HOLOTHUROIDEA

BRANCHIOSTOMA CARIBAEUM

Table E-4. Taxonomic Composition of Station 43 in December 1983

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 1 SITE=43

TAXO	TAXON NAME	FREQ COUN
3901	TURBELLARIA	1
43	RHYNCHOCOELA	1
5001	POLYCHAETA	47
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	2
5105	NEOGASTROPODA STENOGLOSSA	3
5106	NEOGASTROPODA TOXOGLOSSA	1
5110	CEPHALASPIDEA	2
55	BIVALVIA	1
5515	VENEROIDA	7
5600	DENTALIIDAE	3
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	2
6154	PERACARIDA CUMACEA	5
6157	PERACARIDA TANAIDACEA DIKONOPHORA	1
6163	PERACARIDA ISOPODA ASELLOTA	2
6169	PERACARIDA AMPHIPODA GAMMARIDEA	20
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	1
6177	EUCARIDA DECAPODA DENDROBRANCHIATA PENAE	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	3
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	2
6187	EUCARIDA DECAPODA PLEOCYEMATA BRAC. OXYR	1
6189	EUCARIDA DECAPODA PLEOCYEMATA BRAC. BRAC	1
72	SIPUNCULA	1
79	BRYOZOA	1
8002	INARTICULATA LINGULIDA	1
8104	ASTEROIDEA	1
9136	ECHINOIDEA	1
9500	BRANCHIOSTOMIDAE	1

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Table E-5. Taxonomic Composition of Station 46 in December 1983

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 1 SITE=46

TAXO	TAXON NAME	FREQ COUN
43	RHYNCHOCOELA	1
5001	POLYCHAETA	60
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
51	GASTROPODA	1
5103	MESOGASTROPODA	2
5105	NEOGASTROPODA STENOGLLOSSA	1
5106	NEOGASTROPODA TOXOGLLOSSA	1
5110	CEPHALASPIDEA	1
55	BIVALVIA	1
5515	VENEROIDA	5
5520	PHOLADOMYOIDA	1
6110	OSTRACODA	1
6154	PERACARIDA CUMACEA	4
6156	PERACARIDA TANAIIDACEA MONOKONOPHORA	2
6157	PERACARIDA TANAIIDACEA DIKONOPHORA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	1
6161	PERACARIDA ISOPODA FLABELLIFERA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	23
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	1
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	2
6189	EUCARIDA DECAPODA PLEOCYEMATA BRAC. BRAC	1
7700	PHORONIDAE	1
78	BRYOZOA	1
8002	INARTICULATA LINGULIDA	1
8120	OPHIUROIDEA	1
8170	HOLOTHUROIDEA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-6. Taxonomic Composition of Station 48 in December 1983

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 1 SITE=48

TAXO	TAXON NAME	FREQ COUN
43	RHYNCHOCOELA	1
3001	POLYCHAETA	56
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5126	NOTASPIDEA	1
53	POLYPLACOPHORA	1
55	BIVALVIA	1
5515	VENEROIDA	3
5520	PHOLADOMYOIDA	1
5600	DENTALIIDAE	1
60	ARTHROPODA PYCNOGONIDA	1
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	1
6154	PERACARIDA CUMACEA	5
6155	PERACARIDA TANAIDACEA	1
6156	PERACARIDA TANAIDACEA MONOKONOPHORA	2
6157	PERACARIDA TANAIDACEA DIKONOPHORA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	3
6161	PERACARIDA ISOPODA FLABELLIFERA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	13
6170	PERACARIDA AMPHIPODA HYPERIIDEA	1
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	2
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	3
6186	EUCARIDA DECAPODA PLEOCYEMATA BRAC. OXYS	1
72	SIPUNCULA	1
78	BRYOZOA	1
9002	INARTICULATA LINGULIDA	1
8120	OPHIUROIDEA	1
8136	ECHINOIDEA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-7. Taxonomic Composition of Station 49 in December 1983

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 1 SITE=49

TAXO	TAXON NAME	FREQ COUN
43	RHYNCHOCOELA	1
5001	POLYCHAETA	60
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	2
53	POLYPLACOPHORA	1
5515	VENEROIDA	3
5500	DENTALIIDAE	1
60	ARTHROPODA PYCNOGONIDA	1
6110	OSTRACODA	1
6145	MALACOSTRACA PHYLLOCARIDA LEPTOSTRACA NE	1
6153	PERACARIDA MYSIDACEA MYSIDA	1
6154	PERACARIDA CUMACEA	5
6156	PERACARIDA TANAIDACEA MONOKOMOPHORA	2
6157	PERACARIDA TANAIDACEA DIKONOPHORA	2
6160	PERACARIDA ISOPODA ANTHURIDEA	2
6161	PERACARIDA ISOPODA FLABELLIFERA	1
6168	PERACARIDA AMPHIPODA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	17
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	2
6177	EUCARIDA DECAPODA DENDROBRANCHIATA PENAE	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	3
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	1
72	SIPUNCULA	1
7700	PHORONIDAE	1
78	BRYOZOA	1
8002	INARTICULATA LINGULIDA	1
8120	OPHIUROIDEA	1
8162	ECHINOIDEA SPATANGOIDA HEMIASTERINA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-8. Taxonomic Composition of Station 50 in December 1983

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 1 SITE=50

TAXO	TAXON NAME	FREQ COUN
3560	DEMOSPONGIAE	1
3701	HYDROZOA	1
43	RHYNCHOCOELA	1
5001	POLYCHAETA	68
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	1
5106	NEOGASTROPODA TOXOGLOSSA	1
3515	VENEROIDA	4
5500	DENTALIIDAE	2
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	2
6154	PERACARIDA CUMACEA	3
5155	PERACARIDA TANAIDACEA	1
6156	PERACARIDA TANAIDACEA MONOKONOPHORA	2
6157	PERACARIDA TANAIDACEA DIKONOPHORA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	2
6161	PERACARIDA ISOPODA FLABELLIFERA	1
5168	PERACARIDA AMPHIPODA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	17
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	1
6177	EUCARIDA DECAPODA DENDROBRANCHIATA PENAE	2
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	4
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	1
6189	EUCARIDA DECAPODA PLEOCYEMATA BRAC. BRAC	1
72	SIPUNCULA	1
78	BRYOZOA	1
8120	OPHIUROIDEA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-9. Taxonomic Composition of Station 43 in May 1984

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 2 SITE=43

TAXO	TAXON NAME	FREQ COUN
3906	ARCHOOPHORA POLYCLADIDA ACOTYLEA	1
43	RHYNCHOCOELA	1
5901	POLYCHAETA	57
5004	OLIGOCHAETA	1
5105	NEOGASTROPODA STENOGLOSSA	2
5108	ENTOMCTAENIATA	1
5110	CEPHALASPIDEA	1
5515	VENEROIDA	6
5517	MYOIDA MYINA	1
5520	PHOLADOMYOIDA	1
61	ARTHROPODA MANDIBULATA CRUSTACEA	1
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	2
6154	PERACARIDA CUMACEA	5
6155	PERACARIDA TANAIDACEA	1
6156	PERACARIDA TANAIDACEA MONOKONOPHORA	1
6157	PERACARIDA TANAIDACEA DIKONOPHORA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	1
6161	PERACARIDA ISOPODA FLABELLIFERA	1
6163	PERACARIDA ISOPODA ASELLOTA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	12
6177	EUCARIDA DECAPODA DENDROBRANCHIATA PENAE	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	1
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	1
72	SIPUNCULA	1
79	BRYOZOA	1
8120	OPHIUROIDEA	1
8136	ECHINOIDEA	1
8155	ECHINOIDEA CLYPEASTEROIDA SCUTELLINA	1
8170	HOLOTHURIDEA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-10 Taxonomic Composition of Station 46 in May 1984

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 2 SITE=46

TAXO	TAXON NAME	FREQ COUN
43	RHYNCHOCOELA	1
5001	POLYCHAETA	48
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	1
5105	NEOGASTROPODA STENOGLOSSA	2
5110	CEPHALASPIDEA	1
55	BIVALVIA	1
5504	SOLEMYOIDA	1
5515	VENEROIDA	5
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	3
6154	PERACARIDA CUMACEA	4
6156	PERACARIDA TANAIDACEA MONOKONOPHCRA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	1
6168	PERACARIDA AMPHIPODA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	19
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	2
6184	EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA	1
72	SIPUNCULA	1
7700	PHORONIDAE	1
79	BRYOZOA	1
8120	OPHIUROIDEA	1
8136	ECHINOIDEA	1
8155	ECHINOIDEA CLYPEASTEROIDA SCUTELLINA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-11 Taxonomic Composition of Station 48 in May 1984

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 2 SITE=48

TAXO	TAXON NAME	FREQ COUN
43	RHYNCHOCOELA	1
5001	POLYCHAETA	43
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	2
5105	NEOGASTROPODA STENOGLOSSA	2
5110	CEPHALASPIDEA	2
55	BIVALVIA	1
5504	SOLEMYOIDA	1
5515	VENEROIDA	2
5500	DENTALIIDAE	2
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	5
6154	PERACARIDA CUMACEA	5
6156	PERACARIDA TANAIDACEA MONOKONOPHORA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	1
6162	PERACARIDA ISOPODA VALVIFERA	2
6168	PERACARIDA AMPHIPODA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	22
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	2
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	2
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	1
72	SIPUNCULA	1
7700	PHORONIDAE	1
78	BRYOZOA	1
8002	INARTICULATA LINGULIDA	1
8120	OPHIUROIDEA	1
8136	ECHINOIDEA	1
8170	HOLOTHUROIDEA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-12 Taxonomic Composition of Station 49 in May 1984

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FREQUENCY OF SPECIES OCCURANCE - TRIP= 2 SITE=49

TAXO	TAXON NAME	FREQ COUN
43	RHYNCHOCOELA	1
5001	POLYCHAETA	39
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	1
5105	NEOGASTROPODA STENOGLOSSA	2
5110	CEPHALASPIDEA	1
55	BIVALVIA	1
5515	VENEROIDA	4
5600	DENTALIIDAE	1
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	2
6154	PERACARIDA CUMACEA	3
6157	PERACARIDA TANAIDACEA DIKONOPHORA	1
6160	PERACARIDA ISOPODA ANTHURIDEA	3
6169	PERACARIDA AMPHIPODA GAMMARIDEA	13
6177	EUCARIDA DECAPODA DENDROBRANCHIATA PENAE	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	2
6184	EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA	1
6189	EUCARIDA DECAPODA PLEOCYEMATA BRAC. BRAC	1
72	SIPUNCULA	1
8120	OPHIUROIDEA	1
8500	BRANCHIOSTOMIDAE	1

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Table E-13 Taxonomic Composition of Station 50 in May 1984

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FREQUENCY OF SPECIES OCCUPANCE - TRIP= 2 SITE=50

TAXO	TAXON NAME	FREQ COUN
3701	HYDROZOA	1
3906	ARCHOOPHORA POLYCLADIDA ACOTYLEA	1
43	RHYNCHOCOELA	1
5001	POLYCHAETA	65
5002	ARCHIANNELIDA	1
5004	OLIGOCHAETA	1
5103	MESOGASTROPODA	2
5105	NEOGASTROPODA STENOGLOSSA	2
5110	CEPHALASPIDEA	1
53	POLYPLACOPHORA	1
55	BIVALVIA	1
5506	ARCOIDA	1
5515	VENEROIDA	7
5520	PHOLADOMYOIDA	1
5600	DENTALIIDAE	2
6110	OSTRACODA	1
6153	PERACARIDA MYSIDACEA MYSIDA	5
6154	PERACARIDA CUMACEA	6
6155	PERACARIDA TANAIDACEA	1
6156	PERACARIDA TANAIDACEA MONOKONOPHORA	2
6160	PERACARIDA ISOPODA ANTHURIDEA	2
6161	PERACARIDA ISOPODA FLABELLIFERA	2
6163	PERACARIDA ISOPODA ASELLOTA	1
6168	PERACARIDA AMPHIPODA	1
6169	PERACARIDA AMPHIPODA GAMMARIDEA	22
6171	PERACARIDA AMPHIPODA CAPRELLIDEA	4
6177	EUCARIDA DECAPODA DENDROBRANCHIATA PENAE	1
6179	EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	4
6183	EUCARIDA DECAPODA PLEOCYEMATA ANOMURA	1
6184	EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA	1
6185	EUCARIDA DECAPODA PLEOCYEMATA BRAC. DROM	1
6186	EUCARIDA DECAPODA PLEOCYEMATA BRAC. OXYS	1
6187	EUCARIDA DECAPODA PLEOCYEMATA BRAC. OXYR	1
6189	EUCARIDA DECAPODA PLEOCYEMATA BRAC. BRAC	2
72	SIPUNCULA	1
74	PRIAPULIDA	1
78	BRYOZOA	1
8120	OPHIUROIDEA	1
8155	ECHINOIDEA CLYPEASTEROIDA SCUTELLINA	2
8500	BRANCHIOSTOMIDAE	1

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Table E-14 Tanked Abundance of Benthic Infauna from Station 43, December 1983

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 43

SPECIES NAME	#/M ²	PCT	CUM_PCT
OSTRACODA	371.20	11.44	11.44
CYCLASPIS	320.00	9.86	21.30
TEREBELLIDAE	179.20	5.52	26.82
BRYOZOA	140.80	4.34	31.16
CIRROPHORUS	121.60	3.75	34.91
BIVALVIA	102.40	3.16	38.07
BRANCHIOSTOMA CARIBAEUM	96.00	2.96	41.03
TELLINA	89.60	2.76	43.79
AXIOHELLA MUCOSA	76.80	2.37	46.16
RHYNCHOCELA	64.00	1.97	48.13
LUCIFER FAXONI	64.00	1.97	50.10
EXOGONE DISPAR	51.20	1.58	51.68
OKYUROSTYLIS SMITHI	51.20	1.58	53.26
LEPTOCHELIA	51.20	1.58	54.84
SIPUNCULA	51.20	1.58	56.42
GLYCERA	44.80	1.38	57.80
PLATYISCHNOPUS	44.80	1.38	59.18
PSEUDOVERMILIA	38.40	1.18	60.36
METHARPINIA FLORIDANA	38.40	1.18	61.54
NEREIDAE	32.00	0.99	62.53
ARICIDEA	32.00	0.99	63.52
PARAPRIONOSPIO PINNATA	32.00	0.99	64.51
MALDANIDAE	32.00	0.99	65.50
OLIGOCHAETA	32.00	0.99	66.49
CYCLASPIS UNICORNIS	32.00	0.99	67.48
AMPELTISCA	32.00	0.99	68.47
ADRIDAE	32.00	0.99	69.46
CHEVALIA AVICULAE	32.00	0.99	70.45
TIRON TROPAKIS	32.00	0.99	71.44
SYNELMIS	25.60	0.79	72.23
EUNICE VITTATA	25.60	0.79	73.02
MITRELLA LUNATA	25.60	0.79	73.81
DENTALIUM ANTILLARUM	25.60	0.79	74.60
ANCHIALINA TYPICA	25.60	0.79	75.39
GLOTTIDIA PYRAMIDATA	25.60	0.79	76.18
SPIONIDAE	19.20	0.59	76.77
CIRRATULIDAE	19.20	0.59	77.36
CHIONE	19.20	0.59	77.95
CAMPYLASPIS	19.20	0.59	78.54
LISTRIELLA BARNARDI	19.20	0.59	79.13
STENOTHOIDAE	19.20	0.59	79.72
PINNIXA	19.20	0.59	80.31
HETEROPODARKE	12.80	0.39	80.71
ANCISTROSYLLIS HARTMANAE	12.80	0.39	81.09
CERATONEREIS IRRITABILIS	12.80	0.39	81.48
GONIADIDES CAROLINAE	12.80	0.39	81.87

Table E-14 Continued

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 43

SPECIES NAME	#/M ²	PCT	CUM_PCT
CHAETZONE	12.80	0.39	82.26
MEDIOMASTUS CALIFORNIENSIS	12.80	0.39	82.65
ASYCHIS FLONGATA	12.80	0.39	83.04
ISOLDA PULCHELLA	12.80	0.39	83.43
SABELLIDAE	12.80	0.39	83.82
HYDROIDES MICROTIS	12.80	0.39	84.21
CALYPTRAEA CENTRALIS	12.80	0.39	84.60
ACTEOCINA CANDEI	12.80	0.39	84.99
SPISULA SOLIDISSIMA	12.80	0.39	85.38
TELLINIDAE	12.80	0.39	85.77
DENTALIUM	12.80	0.39	86.16
DENTALIUM EBOREUM	12.80	0.39	86.55
BOWMANIELLA	12.80	0.39	86.94
MUNNA	12.80	0.39	87.33
ELASMOPUS	12.80	0.39	87.72
MAERA	12.80	0.39	88.11
ACANTHOHAUSTORIUS	12.80	0.39	88.50
PHOTIS MACROMANUS	12.80	0.39	88.89
SYNCHELIDIUM AMERICANUM	12.80	0.39	89.28
LATREUTES PARVULUS	12.80	0.39	89.67
PAGURUS	12.80	0.39	90.06
HETEROCRYPTA GRANULATA	12.80	0.39	90.45
TURBELLARIA	6.40	0.20	90.65
PHYLLODOCE ARENAE	6.40	0.20	90.85
EXOgone VERUGERA	6.40	0.20	91.05
EXOgone ATLANTICA	6.40	0.20	91.25
SYLLIDES FULVA	6.40	0.20	91.45
RULLIERINEREIS MEXICANA	6.40	0.20	91.65
NEPHTYS SIMONI	6.40	0.20	91.85
GLYCERIDAE	6.40	0.20	92.05
ONUPHIDAE	6.40	0.20	92.25
ONUPHIS EPIMITA	6.40	0.20	92.45
ONUPHIS NEBULOSA	6.40	0.20	92.65
DIOPATRA CUPREA	6.40	0.20	92.85
DIOPATRA PAPILLATA	6.40	0.20	93.05
NOTHRIA PALLIDA	6.40	0.20	93.25
LUMBRINERIS LATREILLI	6.40	0.20	93.45
LUMBRINERIS COCCINEA	6.40	0.20	93.65
ORBINTIDAE	6.40	0.20	93.85
SPIOPHANES MISSIONENSIS	6.40	0.20	94.05
FLABELLIGERIDAE	6.40	0.20	94.25
MYRIOCHELE	6.40	0.20	94.45
AMPHARETIDAE	6.40	0.20	94.65
POLYCIRRUS HAEMATODES	6.40	0.20	94.85
CHONE AMERICANA	6.40	0.20	95.05
SERPULIDAE	6.40	0.20	95.25

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 43

SPECIES NAME	N/M+2	PCT	CUM_PCT
POLYGORDIUS	6.40	0.20	95.45
MELANELLA	6.40	0.20	95.65
BAILYA PARVA	6.40	0.20	95.85
OLIVELLA	6.40	0.20	96.05
TURRIDAE	6.40	0.20	96.25
CEPHALASPIDEA	6.40	0.20	96.45
TELLINA AEQUISTRIATA	6.40	0.20	96.65
DOSINIA DISCUS	6.40	0.20	96.85
GJULDIA CERINA	6.40	0.20	97.05
CUMELLA	6.40	0.20	97.25
STENETRIUM	6.40	0.20	97.45
AMPHILOCHIDAE	6.40	0.20	97.65
MICRODEUTOPUS MYERSI	6.40	0.20	97.85
ACUMINODEUTOPUS	6.40	0.20	98.05
ACUMINODEUTOPUS NAGLET	6.40	0.20	98.25
CERAPUS	6.40	0.20	98.45
DULICHIELLA APPENDICULATA	6.40	0.20	98.65
GAROSYRRHOE	6.40	0.20	98.85
CAPRELLIDAE	6.40	0.20	99.05
LEPTOCHELA SERRATORBITA	6.40	0.20	99.25
PROCESSA	6.40	0.20	99.45
DIOGENIDAE	6.40	0.20	99.65
ASTEROIDEA	6.40	0.20	99.85
ECHINOIDEA	6.40	0.20	100.05

	3.245	100.05	

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Table E-15 Ranked Abundance of Benthic Infauna from Station 46, December 1983

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 46

SPECIES NAME	#/M**2	PCT	CUM_PCT
POLYGORDIUS	1286.40	21.78	21.78
SABELLIDAE	409.50	6.93	28.71
PARAPRIONOSPIO PINNATA	396.80	6.72	35.43
OLIGOCHAETA	288.00	4.88	40.31
MINUSPIO	243.20	4.12	44.43
BRYOZOA	204.80	3.47	47.90
MEDIOMASTUS CALIFORNIENSIS	192.00	3.25	51.15
EXOGONE DISPAR	160.00	2.71	53.86
RHYNCHOCOELA	153.60	2.60	56.46
ARICIDEA	140.80	2.38	58.84
PRIONOSPIO CRISTATA	121.60	2.06	60.90
LEPTOCHELIA	108.80	1.84	62.74
OSTRACODA	89.60	1.52	64.26
GLOTTIDIA PYRAMIDATA	83.20	1.41	65.67
SYNELMIS	76.80	1.30	66.97
CYCLASPIS	76.80	1.30	68.27
XENANTHURA BREVITELSON	76.80	1.30	69.57
MITRELLA LUNATA	70.40	1.19	70.76
AXIOTHELLA MUCOSA	64.00	1.08	71.84
ARMANDIA MACULATA	57.60	0.96	72.80
LEMBOS UNIFASCIATUS UNIFASCIATUS	57.60	0.96	73.80
LYSIANOPSIS	57.60	0.96	74.78
NEREIDAE	51.20	0.87	75.65
ARICIDEA WASSI	51.20	0.87	76.52
CHONE AMERICANA	51.20	0.87	77.39
LUMBRINERIS HEBES	44.80	0.76	78.15
MYRIOCHELE	44.80	0.76	78.91
ARICIDEA PHILBINA	38.40	0.65	79.56
SPIONIDAE	38.40	0.65	80.21
TEREBELLIDES STROEMII	38.40	0.65	80.86
GOULDIA CERINA	38.40	0.65	81.51
AMPITHOE	38.40	0.65	82.16
ACUMINODEUTOPUS NAGLEI	38.40	0.65	82.81
CERATOCEPHALE OCVLATA	32.00	0.54	83.35
AGLAOPHAMUS VERRILLI	32.00	0.54	83.89
ARICIDEA TAYLORI	32.00	0.54	84.43
CAPITELLIDAE	32.00	0.54	84.97
CYCLASPIS UNICORNIS	32.00	0.54	85.51
ARICIDEA CATHERINEA	25.60	0.43	85.94
TELLINIDAE	25.60	0.43	86.37
AMPELISCA	25.60	0.43	86.80
PHTISICA MARINA	25.60	0.43	87.23
GYPTIS BREVIPALPA	19.20	0.33	87.56
ARICIDEA FINITIMA	19.20	0.33	87.89
CIRROPHORUS	19.20	0.33	88.22
MAGELONA	19.20	0.33	88.55

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 46

SPECIES NAME	#/M**2	PCT	CUM_PCT
OPHELIIDAE	19.20	0.33	88.88
CUMELLA	19.20	0.33	89.21
APSEUDIDAE	19.20	0.33	89.54
AMPELISCA VERRILLI	19.20	0.33	89.87
AMPELISCA AGASSIZI	19.20	0.33	90.20
METHARPINIA FLORIDANA	19.20	0.33	90.53
PHORONIS ARCHITECTA	19.20	0.33	90.86
OPHIUROIDEA	19.20	0.33	91.19
HOLOTHUROIDEA	19.20	0.33	91.52
ONUPHIS NEBULOSA	12.80	0.22	91.74
PARAONIDAE	12.80	0.22	91.96
TAUBERIA GRACILIS	12.80	0.22	92.18
MALDANIDAE	12.80	0.22	92.40
HYDROIDES PROTULICOLA	12.80	0.22	92.62
CHIONE	12.80	0.22	92.84
PHOTIS MACROMANUS	12.80	0.22	93.06
PLATYISCHNOPUS	12.80	0.22	93.28
GAROSYRRHOE	12.80	0.22	93.50
NEOMEGAMPHOPUS ROOSEVELTI	12.80	0.22	93.72
AUTOMATE EVERMANNI	12.80	0.22	93.94
CALLIANASSA	12.80	0.22	94.16
EURYPLAX NITIDA	12.80	0.22	94.38
BRANCHIOSTOMA CARIBAEUM	12.90	0.22	94.60
GRUBEULEPIS	6.40	0.11	94.71
STHENELAIS BOA	6.40	0.11	94.82
ANAITIDES LONGIPES	6.40	0.11	94.93
HESIONIDAE	6.40	0.11	95.04
BRANIA	6.40	0.11	95.15
CERATONEREIS IRRITABILIS	6.40	0.11	95.25
CERATONEREIS LONGICIRRATA	6.40	0.11	95.37
NEPHTYS	6.40	0.11	95.48
NEPHTYS PICTA	6.40	0.11	95.59
NEPHTYS SIMONI	6.40	0.11	95.70
ONUPHIS	6.40	0.11	95.81
ONUPHIS ERIMITA	6.40	0.11	95.92
EUNICE VITTATA	6.40	0.11	96.03
LUMBRINERIS VERRILLI	6.40	0.11	96.14
ARABELLA	6.40	0.11	96.25
SCOLOPLOS RUBRA	6.40	0.11	96.36
ARICIDEA CERRUTI	6.40	0.11	96.47
PARAONIS PYGOENIGMATICA	6.40	0.11	96.58
CIRROPHORUS LYRIFORMIS	6.40	0.11	96.69
PARADONEIS LYRA	6.40	0.11	96.80
LAONICE CIRRATA	6.40	0.11	96.91
SCOLELEPIS SQUAMATA	6.40	0.11	97.02
MESOSCHAETOPTERUS	6.40	0.11	97.13

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 46

SPECIES NAME	#/M**2	PCT	CUM_PCT
OWENIA	6.40	0.11	97.24
AMPHARETIDAE	6.40	0.11	97.35
POLYCIRRUS HAEMATODES	6.40	0.11	97.46
LOIMIA MEDUSA	6.40	0.11	97.57
GASTROPODA	6.40	0.11	97.68
CALYPTRAEA CENTRALIS	6.40	0.11	97.79
NATICA PUSILLA	6.40	0.11	97.90
TEREBRA	6.40	0.11	98.01
VOLVULELLA PERSIMILIS	6.40	0.11	98.12
BIVALVIA	6.40	0.11	98.23
TELLINA	6.40	0.11	98.34
VENERIDAE	6.40	0.11	98.45
LYONIA	6.40	0.11	98.56
CYCLASPIS BACESCUI	6.40	0.11	98.67
KALLIAPSEUDES	6.40	0.11	98.78
EURYDICE LITTORALIS	6.40	0.11	98.89
AMPELISCA VADORUM	6.40	0.11	99.00
LEMBOS	6.40	0.11	99.11
LEMBOS SPINICARPUS SPINICARPUS	6.40	0.11	99.22
MICRODEUTOPUS	6.40	0.11	99.33
BATEIDAE (AMPHIPODA)	6.40	0.11	99.44
MAERA	6.40	0.11	99.55
DULICHIELLA APPENDICULATA	6.40	0.11	99.66
PHOTIS MELANICUS	6.40	0.11	99.77
HIPPOMEDON	6.40	0.11	99.88
MONOCULODES NYEI	6.40	0.11	99.99
SYNHELIDIUM AMERICANUM	6.40	0.11	100.10
DIAGENIDAE	6.40	0.11	100.21
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	5,907	100.21	

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 48

SPECIES NAME	#/M**2	PCT	CUM_PCT
BRYOZOA	1376.00	27.18	27.18
OLIGOCHAETA	454.40	8.98	36.16
GONIADIDES CAROLINAE	352.00	6.95	43.11
OSTRACODA	198.40	3.92	47.03
BRANCHIOSTOMA CARIBAEUM	192.00	3.79	50.82
RHYNCHOCOELA	153.60	3.03	53.85
EXOGONE DISPAR	147.20	2.91	56.76
LITOCORSA	134.40	2.65	59.41
ARMANDIA MACULATA	89.50	1.77	61.18
ARICIDEA	83.20	1.64	62.82
LEPTOCHELIA	83.20	1.64	64.46
SYLLIDAE	76.80	1.52	65.98
APSEUDES	76.80	1.52	67.50
CIRROPHORUS	64.00	1.26	68.76
AXIOTHELLA MUCOSA	57.60	1.14	69.90
LUMBRINERIS VERRILLI	51.20	1.01	70.91
SABELLIDAE	51.20	1.01	71.92
ANCISTROSYLLIS HARTMANAE	44.80	0.88	72.80
AMPELISCA	44.80	0.88	73.68
PALEANOTUS	38.40	0.76	74.44
EUNICE VITTATA	38.40	0.76	75.20
CAMPYLASPIS	38.40	0.76	75.96
LEMBOS	38.40	0.76	76.72
ELASMOPUS	38.40	0.76	77.48
GLOTTIDIA PYRAMIDATA	38.40	0.76	78.24
SIGALIONIDAE	32.00	0.63	78.87
NEREIDAE	32.00	0.63	79.50
CYCLASPIS UNICORNIS	32.00	0.63	80.13
AORIDAE	32.00	0.63	80.76
GAROSYRRHOE	32.00	0.63	81.39
PAGURISTES	32.00	0.63	82.02
SIPUNCULA	32.00	0.63	82.65
ECHINOIDEA	32.00	0.63	83.28
MAGELONA	25.60	0.51	83.79
MEDIOMASTUS CALIFORNIENSIS	25.60	0.51	84.30
ARTHROPODA PYCNOGONIDA	25.60	0.51	84.81
CYCLASPIS	25.60	0.51	85.32
KALLIAPSEUDES	25.60	0.51	85.83
EURYDICE LITTORALIS	25.60	0.51	86.34
STHENELAIS BOA	19.20	0.38	86.72
ANCISTROSYLLIS	19.20	0.38	87.10
SYLLIS REGULATA CAROLINAE	19.20	0.38	87.48
PARAPIONOSYLLIS	19.20	0.38	87.86
DORVILLEIDAE	19.20	0.38	88.24
PROTODORVILLEA KEFERSTEINI	19.20	0.38	88.62
MALDANIDAE	19.20	0.38	89.00

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 48

SPECIES NAME	#/M**2	PCT	CUM_PCT
APANTHURA SIGNATA	19.20	0.38	89.38
PHOTIS MACROMANUS	19.20	0.38	89.76
SYNCHELIDIUM AMERICANUM	19.20	0.38	90.14
LUCONACIA INCERTA	19.20	0.38	90.52
OPHIUROIDEA	19.20	0.38	90.90
PISIONE REMOTA	12.80	0.25	91.15
HETEROPODARKE	12.80	0.25	91.40
SPHAEROSYLLIS	12.80	0.25	91.65
CERATONEREIS IRRITABILIS	12.80	0.25	91.90
MEIODORVILLEA	12.80	0.25	92.15
MINUSPIO	12.80	0.25	92.40
PRIONOSPPIO CIRRIFERA	12.80	0.25	92.65
PRIONOSPPIO CRISTATA	12.80	0.25	92.90
DASYBRANCHUS	12.80	0.25	93.15
POLYGORDIUS	12.80	0.25	93.40
MYSIDOPSIS FURCA	12.80	0.25	93.65
XENANTHURA BREVITELSON	12.80	0.25	93.90
PAGURUS	12.80	0.25	94.15
POLYNOIDAE	6.40	0.13	94.28
EULEPETHIDAE	6.40	0.13	94.41
CHRYSOPETALIDAE	6.40	0.13	94.54
PALEANOTUS HETEROSETA	6.40	0.13	94.67
PHYLLODOCE ARENAE	6.40	0.13	94.80
PTEROCIRRUS MACROCEROS	6.40	0.13	94.93
HESIONIDAE	6.40	0.13	95.06
SYNELMIS	6.40	0.13	95.19
PROCERAEA	6.40	0.13	95.32
EXOgone	6.40	0.13	95.45
EXOgone VERUGERA	6.40	0.13	95.58
CERATONEREIS LONGICIRRATA	6.40	0.13	95.71
NICON	6.40	0.13	95.84
NEPHTYS SIMONI	6.40	0.13	95.97
EUNICIDAE	6.40	0.13	96.10
LUMBRINERIDAE	6.40	0.13	96.23
LUMBRINERIS LATREILLI	6.40	0.13	96.36
SPIONIDAE	6.40	0.13	96.49
LAONICE CIRRATA	6.40	0.13	96.62
POECILOCHAETUS JOHNSONI	6.40	0.13	96.75
THARYX ANNULOSUS	6.40	0.13	96.88
FLABELLIGERIDAE	6.40	0.13	97.01
NOTOMASTUS HEMIPODUS	6.40	0.13	97.14
PLEUROBRANCHIDAE	6.40	0.13	97.27
POLYPLACOPHORA	6.40	0.13	97.40
BIVALVIA	6.40	0.13	97.53
TELLINA	6.40	0.13	97.66
CHIONE	6.40	0.13	97.79

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 1 GROUP = 48

SPECIES NAME	#/M**2	PCT	CUM_PCT
CHAMIDAE	6.40	0.13	97.92
VERTICORDIA ORNATA	6.40	0.13	98.05
DENTALIUM ANTILLARUM	6.40	0.13	98.18
OXYUROSTYLIS SMITHI	6.40	0.13	98.31
CUMELLA	6.40	0.13	98.44
PERACARIDA TANAIIDACEA	6.40	0.13	98.57
ACCALATHURA CREMULATA	6.40	0.13	98.70
AMPELISCA AGASSIZI	6.40	0.13	98.83
ACUMINODEUTOPUS NAGLEI	6.40	0.13	98.96
BATEIDAE (AMPHIPODA)	6.40	0.13	99.09
MAERA	6.40	0.13	99.22
METHARPINIA FLORIDANA	6.40	0.13	99.35
NEOMEGAMPHOPUS ROOSEVELTI	6.40	0.13	99.48
LESTRIGONUS	6.40	0.13	99.61
EUCARIDA DECAPODA PLEOCYEMATA CARIDEA	6.40	0.13	99.74
PROCESSA HEMPHILLI	6.40	0.13	99.87
CALLIANASSA	6.40	0.13	100.00
EBALIA CARIOSA	6.40	0.13	100.13
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	5.062	100.13	

Table E-17. Ranked Abundance of Benthic Infauna from Station 49, December 1983

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 49

SPECIES NAME	#/M**2	PCT	CUM_PCT
LEPTOCHELIA	1273.60	15.04	15.04
PHOTIS MACROMANUS	806.40	9.52	24.56
OLIGOCHAETA	723.20	8.54	33.10
CAULLERIELLA	710.40	8.39	41.49
SABELLIDAE	505.60	5.97	47.46
MAGELONA	345.60	4.08	51.54
CYCLASPIS	275.20	3.25	54.79
MINUSPIO	249.60	2.95	57.74
RHYNCHOCOELA	236.80	2.80	60.54
OSTRACODA	179.20	2.12	62.66
AXIOTHELLA MUCOSA	172.80	2.04	64.70
PLATYISCHNOPUS	166.40	1.97	66.67
ARMANDIA MACULATA	134.40	1.59	68.26
MEDIOMASTUS CALIFORNIENSIS	128.00	1.51	69.77
CERAPUS	121.60	1.44	71.21
POLYGORDIUS	108.80	1.28	72.49
HYDROIDES BISPINOSA	102.40	1.21	73.70
ARICIDEA PHILBINA	83.20	0.98	74.68
CIRROPHORUS	76.80	0.91	75.59
APSEUDES	70.40	0.83	76.42
PRIONOSPPIO CRISTATA	57.60	0.68	77.10
PSEUDOVERMILIA	57.60	0.68	77.78
OXYUROSTYLIS SMITHI	57.60	0.68	78.46
AMPELISCA AGASSIZI	57.60	0.68	79.14
LUCONACIA INCERTA	57.60	0.68	79.82
SPIOPHANES BOMBYX	51.20	0.60	80.42
MYRIOCHELE	51.20	0.60	81.02
FABRISABELLA	51.20	0.60	81.62
POLYPLACOPHORA	51.20	0.60	82.22
AMPELISCA	51.20	0.60	82.82
ACUMINODEUTOPUS NAGLEI	51.20	0.60	83.42
TIRON TROPAKIS	51.20	0.60	84.02
MICROPHTHALMUS	44.80	0.53	84.55
PRIONOSPPIO DAYI	44.80	0.53	85.08
TELLINIDAE	44.80	0.53	85.61
CUMELLA	44.80	0.53	86.14
OPHIUROIDEA	44.80	0.53	86.67
EXOgone DISPAR	38.40	0.45	87.12
GLYCERA DIBRANCHIATA	38.40	0.45	87.57
SPIONIDAE	38.40	0.45	88.02
LEMBOS SMITHI	38.40	0.45	88.47
SPHAEROSYLLIS ACICULATA	32.00	0.38	88.85
CAPITELLIDAE	32.00	0.38	89.23
NOTOTANAIDAE	32.00	0.38	89.61
ELASMOPUS	32.00	0.38	89.99
EULEPETHIDAE	25.60	0.30	90.29

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 1 GROUP = 49

SPECIES NAME	#/M**2	PCT	CUM_PCT
SYLLIDAE	25.60	0.30	90.59
LUMBRINERIS VERRILLI	25.60	0.30	90.89
OWENIA	25.60	0.30	91.19
CALYPTRAEA CENTRALIS	25.60	0.30	91.49
KALLIAPSEUDES	25.60	0.30	91.79
PERACARIDA AMPHIPODA	25.60	0.30	92.09
MAERA	25.60	0.30	92.39
SIGAMBRA BASSI	19.20	0.23	92.62
PROCERAEA	19.20	0.23	92.85
STREPTOSYLLIS PETTIBONEAE	19.20	0.23	93.08
NEREIDAE	19.20	0.23	93.31
ARICIDEA	19.20	0.23	93.54
SERPULIDAE	19.20	0.23	93.77
XENANTHURA BREVITELSON	19.20	0.23	94.00
PERACARIDA AMPHIPODA GAMMARIDEA	19.20	0.23	94.23
LUCIFER FAXONI	19.20	0.23	94.46
CALLIANASSA	19.20	0.23	94.69
STHENELAIS BOA	12.80	0.15	94.84
NEPHTYS PICTA	12.80	0.15	94.99
AGLAOPHAMUS VERRILLI	12.80	0.15	95.14
DORVILLEIDAE	12.80	0.15	95.29
HAPLOSCOLOPLOS	12.80	0.15	95.44
ARTHROPODA PYCNOGONIDA	12.80	0.15	95.59
ANCHIALINA TYPICA	12.80	0.15	95.74
CYCLASPIS UNICORNIS	12.80	0.15	95.89
SEROLIS MGRAYI	12.80	0.15	96.04
BATEA	12.80	0.15	96.19
LISTRIELLA BARNARDI	12.80	0.15	96.34
PROCESSA HEMPHILLI	12.80	0.15	96.49
SIPUNCULA	12.80	0.15	96.64
PHORONIS ARCHITECTA	12.80	0.15	96.79
GLOTTIDIA PYRAMIDATA	12.80	0.15	96.94
POLYNOIDAE	6.40	0.08	97.02
LINOPHERUS	6.40	0.08	97.10
PHYLLODOCIDAE	6.40	0.08	97.18
PTEROCIRRUS MACROCEROS	6.40	0.08	97.26
PILARGIDAE	6.40	0.08	97.34
EXOGONE	6.40	0.08	97.42
EXOGONE VERUGERA	6.40	0.08	97.50
SPHAEROSYLLIS	6.40	0.08	97.58
NEREIS RIISEI	6.40	0.08	97.66
WEBSTERINEREIS TRIDENTATA	6.40	0.08	97.74
NEPHTYS SIMONI	6.40	0.08	97.82
DIOPATRA CUPREA	6.40	0.08	97.90
LUMBRINERIS CANDIDA	6.40	0.08	97.98
PARAPRIONOSPPIO PINNATA	6.40	0.08	98.06

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 49

SPECIES NAME	#/M**2	PCT	CUM_PCT
SCOLELEPIS SQUAMATA	6.40	0.08	98.14
MAGELONA PETTIBONEAE	6.40	0.08	98.22
ARMANDIA AGILIS	6.40	0.08	98.30
MASTOBRANCHUS	6.40	0.08	98.38
SABELLARIA	6.40	0.08	98.46
TEREBELLIDAE	6.40	0.08	98.54
LYSILLA	6.40	0.08	98.62
CHONE AMERICANA	6.40	0.08	98.70
SERPULA	6.40	0.08	98.78
CERITHIOPSIS EMERSONI	6.40	0.08	98.86
PARVILUCINA MULTILINEATA	6.40	0.08	98.94
CHIONE	6.40	0.08	99.02
DENTALIUM EBOREUM	6.40	0.08	99.10
PARANEBALIA LONGIPES	6.40	0.08	99.18
CAMPYLASPIS	6.40	0.08	99.26
MESANTHURA	6.40	0.08	99.34
AMPHILOCHUS	6.40	0.08	99.42
ERICHTHONIUS BRASILIENSIS	6.40	0.08	99.50
SYNHELIDIUM AMERICANUM	6.40	0.08	99.58
METHARPINIA FLORIDANA	6.40	0.08	99.66
CAPRELLIDAE	6.40	0.08	99.74
LEPTOCHELA SERRATORBITA	6.40	0.08	99.82
PERICLIMENES	6.40	0.08	99.90
BRYOZOA	6.40	0.08	99.98
MOIRA ATROPOS	6.40	0.08	100.06
BRANCHIOSTOMA CARIBAEUM	6.40	0.08	100.14
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	8,467	100.14	

Table E-18 Ranked Abundance of Benthic Infauna from Station 50, December 1983

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
FABRISABELLA	1030.40	14.30	14.30
OLIGOCHAETA	908.80	12.61	26.91
MINUSPIO	678.40	9.41	36.32
BRYOZOA	595.20	8.26	44.58
ARMANDIA MACULATA	320.00	4.44	49.02
PRIONOSPIO CRISTATA	294.40	4.09	53.11
RHYNCHOCOELA	211.20	2.93	56.04
LEPTOCHELIA	179.20	2.49	58.53
SCHISTOMERINGOS RUDOLPHI	172.80	2.40	60.93
CAULLERIELLA ALATA	160.00	2.22	63.15
OSTRACODA	160.00	2.22	65.37
EXOgone DISPAR	128.00	1.78	67.15
LEMBOS	121.60	1.69	68.84
CIRROPHORUS	115.20	1.60	70.44
ARICIDEA FINITIMA	102.40	1.42	71.86
ARICIDEA CATHERINEA	83.20	1.15	73.01
NEREIS	76.40	0.98	73.99
ARICIDEA	70.40	0.98	74.97
ARICIDEA TAYLORI	70.40	0.98	75.95
LYSIANOPSIS	70.40	0.98	76.93
OPHIUROIDEA	70.40	0.98	77.91
ARICIDEA PHILBINAЕ	64.00	0.89	78.80
AXIOTHELLA MUCOSA	64.00	0.89	79.69
PLATYISCHNOPUS	64.00	0.89	80.58
MAGELONA PETTIBONEAE	57.60	0.80	81.38
AMPELISCA	51.20	0.71	82.09
LEPTOCHELA SERRATORBITA	44.80	0.62	82.71
SPIONIDAE	38.40	0.53	83.24
ISOLDA PULCHELLA	38.40	0.53	83.77
CYCLASPIS	38.40	0.53	84.30
ARICIDEA FRAGILIS	32.00	0.44	84.74
LAONICE CIRRATA	32.00	0.44	85.18
NOTOMASTUS	32.00	0.44	85.62
SYLLIDAE	25.60	0.36	85.99
BARANTOLLA	25.60	0.36	86.34
MYRIOCHELE	25.60	0.36	86.70
POTAMETHUS	25.60	0.36	87.06
TELLINA	25.60	0.36	87.42
GOULDIA CERINA	25.60	0.36	87.78
AMPELISCA AGASSIZI	25.60	0.36	88.14
ACUMINODEUTOPUS NAGLEI	25.60	0.36	88.50
SIPUNCULA	25.60	0.36	88.86
PARAMPHINOME	19.20	0.27	89.13
SCHISTOMERINGOS PECTINATA	19.20	0.27	89.40
SCOLOPLOS RUBRA	19.20	0.27	89.67
SCOLELEPIS SQUAMATA	19.20	0.27	89.94

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
THARYX	19.20	0.27	90.21
NOTOMASTUS AMERICANUS	19.20	0.27	90.48
MEDIOMASTUS CALIFORNIENSIS	19.20	0.27	90.75
MALDANIDAE	19.20	0.27	91.02
HYDROIDES PROTULICOLA	19.20	0.27	91.29
DENTALIUM	19.20	0.27	91.56
CUMELLA	19.20	0.27	91.83
AMPITHOE	19.20	0.27	92.10
GAMMARIDAE	19.20	0.27	92.37
DULICHIELLA APPENDICULATA	19.20	0.27	92.64
LUCONACIA INCERTA	19.20	0.27	92.91
DEMOSPONGIAE	12.80	0.18	93.09
PODARKE AGILIS	12.80	0.18	93.27
ONUPHIS NEBULOSA	12.80	0.18	93.45
CHAETOZONE	12.80	0.18	93.63
NOTOMASTUS TENUIS	12.80	0.18	93.81
NOTOMASTUS HEMIPODUS	12.80	0.18	93.99
PRAXILLELLA	12.80	0.18	94.17
POLYCIRRUS HAEMATODES	12.80	0.18	94.35
LOIMIA MEDUSA	12.80	0.18	94.53
DENTALIUM SEMISTRIOLATUM	12.80	0.18	94.71
PERACARIDA TANAIIDACEA	12.80	0.18	94.89
APANTHURA	12.80	0.18	95.07
PERACARIDA AMPHIPODA	12.80	0.18	95.25
PODOCERUS	12.80	0.18	95.43
PERICLIMENES AMERICANUS	12.80	0.18	95.61
HYDROZOA	6.40	0.09	95.70
GRUBEULEPIS MEXICANA	6.40	0.09	95.79
SIGALION	6.40	0.09	95.88
PALEANOTUS	6.40	0.09	95.97
EUMIDA SANGUINEA	6.40	0.09	96.06
SYNELMIS	6.40	0.09	96.15
TRYPANOSYLLIS COELIACA	6.40	0.09	96.24
NEREIS LAMELLOSA	6.40	0.09	96.33
GLYCERA DIBRANCHIATA	6.40	0.09	96.42
DIOPATRA CUPREA	6.40	0.09	96.51
LYSIDICE	6.40	0.09	96.60
LUMBRINERIS LATREILLI	6.40	0.09	96.69
ARICIDEA WASSI	6.40	0.09	96.78
SPIOPHANES BOMBYX	6.40	0.09	96.87
MAGELONA	6.40	0.09	96.96
CAPITELLIDAE	6.40	0.09	97.05
CAPITELLA	6.40	0.09	97.14
NOTOMASTUS LOBATUS	6.40	0.09	97.23
MACROCLYMENE ZONALIS	6.40	0.09	97.32
AMPHICTEIS SCAPHOBRANCHIATA	6.40	0.09	97.41

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 1 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
POLYCIRRUS	6.40	0.09	97.50
POLYCIRRUS PLUMOSUS	6.40	0.09	97.59
STREBLOSOMA HARTMANAE	6.40	0.09	97.68
MEGALOMMA BIOCULATA	6.40	0.09	97.77
MEGALOMMA VESICULOSUM	6.40	0.09	97.86
SERPULA	6.40	0.09	97.95
STROMBIFORMIS BILINEATUS	6.40	0.09	98.04
TEREBRA	6.40	0.09	98.13
LUCINA NASSULA	6.40	0.09	98.22
PAPYRIDEA HIATUS	6.40	0.09	98.31
MYSIDOPSIS FURCA	6.40	0.09	98.40
BOWMANIELLA MEXICANA	6.40	0.09	98.49
CAMPYLASPIS	6.40	0.09	98.58
APSEUDES	6.40	0.09	98.67
KALLIAPSEUDES	6.40	0.09	98.76
XENANTHURA BREVITELSON	6.40	0.09	98.85
SEROLIS MGRAYI	6.40	0.09	98.94
ERICHTHONIUS	6.40	0.09	99.03
ERICHTHONIUS BRASILIENSIS	6.40	0.09	99.12
MONOCULODES NYEI	6.40	0.09	99.21
SYNCHELIDIUM AMERICANUM	6.40	0.09	99.30
PODOCERIDAE	6.40	0.09	99.39
TIRON	6.40	0.09	99.48
NEOMEGAMPHOPUS	6.40	0.09	99.57
SICYONIA TYPICA	6.40	0.09	99.66
LUCIFER FAXONI	6.40	0.09	99.75
OGYRIDES ALPHAEROSTRIS	6.40	0.09	99.84
LATREUTES	6.40	0.09	99.93
DIOGENIDAE	6.40	0.09	100.02
EURYPLAX NITIDA	6.40	0.09	100.11
BRANCHIOSTOMA CARIBAEUM	6.40	0.09	100.20
SYLLIS	6.4	0.09	100.20

	7,262	100.20	

	29,888	500.73	

Table E-12 Ranked Abundance of Benthic Infauna from Station 43, May 1984

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 43

SPECIES NAME	#/M**2	PCT	CUM_PCT
ARMANDIA MACULATA	985.50	11.25	11.25
RHYNCHOCOELA	672.00	7.67	18.92
GONIADIDES CAROLINAE	633.50	7.23	26.15
OLIGOCHAETA	601.60	6.87	33.02
CHEVALIA AVICULAE	441.60	5.04	38.06
OSTRACODA	396.80	4.53	42.59
CIRROPHORUS	384.00	4.38	46.97
ECHINOIDEA	294.40	3.36	50.33
PROTODORVILLEA KEFERSTEINI	281.50	3.21	53.54
SABELLIDAE	256.00	2.92	56.46
FABRISABELLA	249.60	2.85	59.31
OPHIUROIDEA	243.20	2.78	62.09
SPIO PETTIBONEAE	236.80	2.71	64.79
SYLLIDAE	230.40	2.63	67.42
SPHAEROSYLLIS	211.20	2.41	69.83
HETEROPODARKE	172.80	1.97	71.80
ANCISTROSYLLIS HARTMANAE	166.40	1.90	73.70
CYCLASPIS	147.20	1.68	75.38
TELLINA	134.40	1.53	76.91
NEPHTYIDAE	128.00	1.46	78.37
MEDIOMASTUS CALIFORNIENSIS	115.20	1.31	79.68
BRYOZOA	115.20	1.31	80.99
AXIOTHELLA MUCOSA	102.40	1.17	82.16
BRANCHIOSTOMA CARIBAEUM	102.40	1.17	83.33
ARICIDEA	83.20	0.95	84.28
DORVILLEIDAE	76.80	0.88	85.16
SIGALIONIDAE	64.00	0.73	85.89
ADRIDAE	64.00	0.73	86.62
SYNCHELIDIUM AMERICANUM	64.00	0.73	87.35
SYLLIS CORNUTA	51.20	0.58	87.93
MUNNA	51.20	0.58	88.51
PLAKOSYLLIS QUADRIOCULATA	44.80	0.51	89.02
ONUPHIDAE	44.80	0.51	89.53
ACANTHOHAUSTORIUS	44.80	0.51	90.04
EXOgone DISPAR	38.40	0.44	90.48
MYRIOCHELE	32.00	0.37	90.85
AMPHILOCHIDAE	32.00	0.37	91.22
SIPUNCULA	32.00	0.37	91.59
FIMBRIOSTHENELAIS	25.60	0.29	91.88
EXOgone LOUREI	25.60	0.29	92.17
QUESTA CAUDICIRRA	25.60	0.29	92.46
GOULDIA CERINA	25.60	0.29	92.75
PHOTIS MACROMANUS	25.60	0.29	93.04
ARCHOOPHORA POLYCLADIDA ACOTYLEA	19.20	0.22	93.26
ACTEOCINA CANDEI	19.20	0.22	93.48
CAMPYLASPIS	19.20	0.22	93.70

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 2 GROUP = 43

SPECIES NAME	#/M**2	PCT	CUM_PCT
PODOCERUS	19.20	0.22	93.92
PALEANOTUS HETEROSETA	12.80	0.15	94.07
LITOCORSA	12.80	0.15	94.22
SPHAEROSYLLIS TAYLORI	12.80	0.15	94.37
CAULLERIELLA ALATA	12.80	0.15	94.52
THARYX ANNULOSUS	12.80	0.15	94.67
MYRIOCHELE OCULATA	12.80	0.15	94.82
SABELLARIIDAE	12.80	0.15	94.97
CORBULA	12.80	0.15	95.12
ANCHIALINA TYPICA	12.80	0.15	95.27
OXYUROSTYLIS SMITHI	12.80	0.15	95.42
CYCLASPIS BACESCUI	12.80	0.15	95.57
PERACARIDA TANAIIDACEA	12.80	0.15	95.72
KALLIAPSEUDES	12.80	0.15	95.87
EURYDICE LITTORALIS	12.80	0.15	96.02
AMPELISCA	12.80	0.15	96.17
AMPHILOCHUS	12.80	0.15	96.32
ARGISSA HAMATIPES	12.80	0.15	96.47
METHARPINIA FLORIDANA	12.80	0.15	96.62
LUCIFER FAXONI	12.80	0.15	96.77
PAGURUS	12.80	0.15	96.92
ENCOPE ABERRANS	12.80	0.15	97.07
HOLOTHUROIDEA	12.80	0.15	97.22
PALEANOTUS	6.40	0.07	97.29
EURYTHOE COMPLANATA	6.40	0.07	97.36
ANAITIDES LONGIPES	6.40	0.07	97.43
SYNELMIS	6.40	0.07	97.50
PIONOSYLLIS	6.40	0.07	97.57
SYLLIS	6.40	0.07	97.64
PARAPIONOSYLLIS	6.40	0.07	97.71
NEREIDAE	6.40	0.07	97.78
NEPHTYS	6.40	0.07	97.85
NEPHTYS SIMONI	6.40	0.07	97.92
GLYCERIDAE	6.40	0.07	97.99
NEMATONEREIS UNICORNIS	6.40	0.07	98.06
SCHISTOMERINGOS PECTINATA	6.40	0.07	98.13
MEIODORVILLEA	6.40	0.07	98.20
ORBINIIDAE	6.40	0.07	98.27
ARICIDEA CERRUTI	6.40	0.07	98.34
SPIONIDAE	6.40	0.07	98.41
PARAPRIONOSPION PINNATA	6.40	0.07	98.48
MAGELONA PETTIBONEAE	6.40	0.07	98.55
MAGELONA RIOJAI	6.40	0.07	98.62
CAPITELLIDAE	6.40	0.07	98.69
SABELLARIA	6.40	0.07	98.76
AMPHARETIDAE	6.40	0.07	98.83

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 43

SPECIES NAME	#/M**2	PCT	CUM_PCT
POLYCI RRUS	6.40	0.07	98.90
SERPULA	6.40	0.07	98.97
FASCIOLARIA	6.40	0.07	99.04
OLIVELLA	6.40	0.07	99.11
TURBONILLA	6.40	0.07	99.18
SPISULA SOLIDISSIMA	6.40	0.07	99.25
VENERIDAE	6.40	0.07	99.32
GEMMA GEMMA	6.40	0.07	99.39
CHIONE	6.40	0.07	99.46
ARTHROPODA MANDIBULATA CRUSTACEA	6.40	0.07	99.53
BOWMANIELLA PORTORICENSIS	6.40	0.07	99.60
CUMELLA	6.40	0.07	99.67
LEPTOCHELIA	6.40	0.07	99.74
XENANTHURA BREVITELSON	6.40	0.07	99.81
CERAPUS	6.40	0.07	99.88
PROCESSA HEMPHILLI	6.40	0.07	99.95
VERTICORDIA ORNATA	0.00		99.95

	8.762	99.95	

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 46

SPECIES NAME	#/M**2	PCT	CUM_PCT
PARAPRIONOSPIO PINNATA	1756.44	22.52	22.52
SABELLIDAE	931.56	11.94	34.45
CERATOCEPHALE OCOLATA	476.44	6.11	40.57
OSTRACODA	433.78	5.56	46.13
POLYGORDIUS	412.44	5.29	51.42
PRIONOSPIO DAYI	206.22	2.64	54.06
RHYNCHOCOELA	192.00	2.46	56.52
OLIGOCHAETA	192.00	2.46	58.98
ECHINOIDEA	192.00	2.46	61.44
ARMANDIA MACULATA	184.89	2.37	63.81
MEDIOMASTUS CALIFORNIENSIS	184.89	2.37	66.19
CYCLASPIS	149.33	1.91	68.09
BIVALVIA	113.78	1.46	69.55
OWENIA	106.67	1.37	70.92
XENANTHURA BREVITELSON	106.67	1.37	72.29
AMPELISCA	106.67	1.37	73.66
AGLAOPHAMUS VERRILLI	92.44	1.19	74.85
MONOCULODES NYEI	92.44	1.19	76.04
POECILOCHAETUS JOHNSONI	78.22	1.00	77.04
METHARPINIA FLORIDANA	71.11	0.91	77.95
OPHIUROIDEA	71.11	0.91	78.86
LEVINSENIA	64.00	0.82	79.68
ARICIDEA	56.89	0.73	80.41
MYRIOCHELE OCOLATA	56.89	0.73	81.14
OXYUROSTYLIS SMITHI	56.89	0.73	81.87
FABRICIA	49.78	0.64	82.51
FABRISABELLA	49.78	0.64	83.15
MYSIDOPSIS FURCA	49.78	0.64	83.79
CUMELLA	49.78	0.64	84.43
NEPHTYIDAE	42.67	0.55	84.98
PRIONOSPIO CRISTATA	42.67	0.55	85.53
BOWMANIELLA	42.67	0.55	86.08
AORIDAE	42.67	0.55	86.63
NEOMEGAMPHOPUS ROOSEVELTI	42.67	0.55	87.18
SPIO PETTIBONEAE	35.56	0.46	87.64
PHOTIS MACROMANUS	35.56	0.46	88.10
SYNCHELIDIUM AMERICANUM	35.56	0.46	88.56
SIPUNCULA	35.56	0.46	89.02
STHENELAIS	28.44	0.36	89.38
GYPTIS BREVIPALPA	28.44	0.36	89.74
EXOgone DISPAR	28.44	0.36	90.10
ONUPHIS	28.44	0.36	90.46
ARICIDEA WASSI	28.44	0.36	90.82
ARICIDEA TAYLORI	28.44	0.36	91.18
MYRIOCHELE	28.44	0.36	91.54
BRANCHIOSTOMA CARIBAEUM	28.44	0.36	91.90

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 2 GROUP = 46

SPECIES NAME	#/M**2	PCT	CUM_PCT
CIRROPHORUS	21.33	0.27	92.17
MEGALOMMA BIOCULATA	21.33	0.27	92.44
VOLVULELLA PERSIMILIS	21.33	0.27	92.71
ANCHIALINA TYPICA	21.33	0.27	92.98
AMPHILOCHIDAE	21.33	0.27	93.25
LISTRIELLA	21.33	0.27	93.52
PLATYISCHNOPUS	21.33	0.27	93.79
GENETYLLIS	14.22	0.18	93.97
NAINERIS BICORNIS	14.22	0.18	94.15
ARICIDEA PHILBINA	14.22	0.18	94.33
MINUSPIO	14.22	0.18	94.51
THARYX ANNULOSUS	14.22	0.18	94.69
CAPITELLIDAE	14.22	0.18	94.87
AMPHICTENE	14.22	0.18	95.05
NATICA PUSILLA	14.22	0.18	95.23
MITRELLA LUNATA	14.22	0.18	95.41
OLIVELLA	14.22	0.18	95.59
LUCINA NASSULA	14.22	0.18	95.77
CYCLASPIS UNICORNIS	14.22	0.18	95.95
BATEIDAE (AMPHIPODA)	14.22	0.18	96.13
CERAPUS	14.22	0.18	96.31
ERICHTHONIUS BRASILIENSIS	14.22	0.18	96.49
LISTRIELLA BARNARDI	14.22	0.18	96.67
NEOPONTONIDES	14.22	0.18	96.85
EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA	14.22	0.18	97.03
BRYOZOA	14.22	0.18	97.21
GRUBEULEPIS MEXICANA	7.11	0.09	97.30
MYSTIDES BOREALIS	7.11	0.09	97.39
SIGAMBRA BASSI	7.11	0.09	97.48
CABIRA INCERTA	7.11	0.09	97.57
NEPHTYS SIMONI	7.11	0.09	97.66
ONUPHIDAE	7.11	0.09	97.75
LUMBRINERIS VERRILLI	7.11	0.09	97.84
SPIOPHANES BOMBYX	7.11	0.09	97.93
CIRRATULIDAE	7.11	0.09	98.02
THEROCHEATA	7.11	0.09	98.11
TRAVISIA HOBSONAE	7.11	0.09	98.20
NOTOMASTUS HEMIPODUS	7.11	0.09	98.29
MALDANIDAE	7.11	0.09	98.38
AXIOTHELLA MUCOSA	7.11	0.09	98.47
SERPULIDAE	7.11	0.09	98.56
SOLEMYA OCCIDENTALIS	7.11	0.09	98.65
DIVARICELLA QUADRISULCATA	7.11	0.09	98.74
SPISULA SOLIDISSIMA	7.11	0.09	98.83
TELLINA	7.11	0.09	98.92
GOULDIA CERINA	7.11	0.09	99.01

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 46

SPECIES NAME	#/M**2	PCT	CUM_PCT
APSEUDIDAE	7.11	0.09	99.10
PERACARIDA AMPHIPODA	7.11	0.09	99.19
ARGISSA HAMATIPES	7.11	0.09	99.28
ACANTHOHAUSTORIUS	7.11	0.09	99.37
PHOTIS MELANICUS	7.11	0.09	99.46
HIPPOMEDON	7.11	0.09	99.55
TIRON	7.11	0.09	99.64
PROCESSA HEMPHILLI	7.11	0.09	99.73
PHORONIS ARCHITECTA	7.11	0.09	99.82
ENCOPE	7.11	0.09	99.91
	-----	-----	
	7,801	99.91	

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 2 GROUP = 48

SPECIES NAME	#/M**2	PCT	CUM_PCT
MEDIOMASTUS CALIFORNIENSIS	1254.40	12.79	12.79
PARAPRIONOSPIO PINNATA	1004.80	10.24	23.03
CYCLASPIS	947.20	9.65	32.69
OLIGOCHAETA	934.40	9.52	42.20
POLYGORDIUS	876.80	8.94	51.14
OSTRACODA	531.20	5.41	56.55
BRYOZOA	435.20	4.44	60.99
SABELLIDAE	390.40	3.98	64.97
AGLAOPHAMUS VERRILLI	217.60	2.22	67.19
CERATOCEPHALE OCVLATA	211.20	2.15	69.34
OPHIUROIDEA	192.00	1.96	71.30
MONOCULODES NYEI	185.60	1.89	73.19
OXYUROSTYLIS SMITHI	179.20	1.83	75.02
MYSIDOPSIS FURCA	115.20	1.17	76.19
ANCHIALINA TYPICA	115.20	1.17	77.36
SYNHELIDIUM AMERICANUM	115.20	1.17	78.53
AORIDAE	108.80	1.11	79.64
ARMANDIA MACULATA	96.00	0.98	80.62
ECHINOIDEA	96.00	0.98	81.60
RHYNCHOCOELA	76.80	0.78	82.38
ARICIDEA FRAGILIS	76.80	0.78	83.16
CUMELLA	76.80	0.78	83.94
METHARPINIA FLORIDANA	76.80	0.78	84.72
AMPELISCA	70.40	0.72	85.44
PLATYISCHNOPUS	70.40	0.72	86.16
PHOTIS MACROMANUS	64.00	0.65	86.81
TELLINA	57.60	0.59	87.40
PRIONOSPIO CRISTATA	51.20	0.52	87.92
BOWMANIELLA	51.20	0.52	88.44
LUMBRINERIS VERRILLI	44.80	0.46	88.90
XENANTHURA BREVI TELSON	44.80	0.46	89.36
ACANTHOHAUSTORIUS	44.80	0.46	89.82
CYCLASPIS UNICORNIS	38.40	0.39	90.21
SIPUNCULA	38.40	0.39	90.60
MYRIOCHELE OCVLATA	32.00	0.33	90.93
AMPHILOCHIDAE	32.00	0.33	91.26
LEMBOS	32.00	0.33	91.59
EXOgone DISPAR	25.60	0.26	91.85
ARICIDEA	25.60	0.26	92.11
ARICIDEA TAYLORI	25.60	0.26	92.37
CIRROPHORUS	25.60	0.26	92.63
OWENIA	25.60	0.26	92.89
NATICA PUSILLA	25.60	0.26	93.15
OLIVELLA	25.60	0.26	93.41
HAMINOEA	25.60	0.26	93.67
LISTRIELLA BARNARDI	25.60	0.26	93.93

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 48

SPECIES NAME	#/M**2	PCT	CUM_PCT
CAPRELLIDAE	25.60	0.26	94.19
ONUPHIS NEBULOSA	19.20	0.20	94.39
THARYX	19.20	0.20	94.59
AMPELISCA AGASSIZI	19.20	0.20	94.79
ARGISSA HAMATIPES	19.20	0.20	94.99
CERAPUS	19.20	0.20	95.19
ERICHTHONIUS BRASILIENSIS	19.20	0.20	95.39
PODOCERIDAE	19.20	0.20	95.59
PROCESSA HEMPHILLI	19.20	0.20	95.79
SIGAMBRA TENTACULATA	12.80	0.13	95.92
GLYCERA	12.80	0.13	96.05
ARICIDEA CATHERINEA	12.80	0.13	96.18
ARICIDEA FINITIMA	12.80	0.13	96.31
SPIONIDAE	12.80	0.13	96.44
SPIOPHANES BOMBYX	12.80	0.13	96.57
MAGELONA PETTIBONEAE	12.80	0.13	96.70
AXIOTHELLA MUCOSA	12.80	0.13	96.83
SERPULA	12.80	0.13	96.96
DENTALIUM	12.80	0.13	97.09
KALLIAPSEUDES	12.80	0.13	97.22
BATEIDAE (AMPHIPODA)	12.80	0.13	97.35
RHEPOXYNIUS EPISTOMUS	12.80	0.13	97.48
GLOTTIDIA PYRAMIDATA	12.80	0.13	97.61
BRANCHIOSTOMA CARIBAEUM	12.80	0.13	97.74
POLYNOIDAE	6.40	0.07	97.81
GRUBEULEPIS MEXICANA	6.40	0.07	97.88
ANAITIDES MUCOSA	6.40	0.07	97.95
NEREIDAE	6.40	0.07	98.02
EUNICE	6.40	0.07	98.09
HAPLOSCOLOPLOS FRAGILIS	6.40	0.07	98.15
MINUSPID	6.40	0.07	98.23
SPIOPHANES	6.40	0.07	98.30
THEROCHEATA	6.40	0.07	98.37
NOTOMASTUS HEMIPODUS	6.40	0.07	98.44
LEIOCAPITELLA	6.40	0.07	98.51
MALDANIDAE	6.40	0.07	98.58
AMPHICTEIS GUNNERT	6.40	0.07	98.65
AMPHICTEIS SCAPHOBRANCHIATA	6.40	0.07	98.72
ISOLDA PULCHELLA	6.40	0.07	98.79
POLYCIRRUS	6.40	0.07	98.85
CALYPTRAEA CENTRALIS	6.40	0.07	98.93
OLIVA SAYANA	6.40	0.07	99.00
ATYS CARIBAEA	6.40	0.07	99.07
DENTALIUM EBOREUM	6.40	0.07	99.14
MYSIDOPSIS	6.40	0.07	99.21
AMATHIMYSIS BRATTEGARDI	6.40	0.07	99.28

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 48

SPECIES NAME	#/M**2	PCT	CUM_PCT
CAMPYLASPIS	6.40	0.07	99.35
EDOTEA	6.40	0.07	99.42
EDOTEA TRILOBA	6.40	0.07	99.49
PERACARIDA AMPHIPODA	6.40	0.07	99.56
PHOTIS	6.40	0.07	99.63
PLEUSTIDAE	6.40	0.07	99.70
TIRON	6.40	0.07	99.77
GAROSYRRHOE	6.40	0.07	99.84
PHTISICA MARINA	6.40	0.07	99.91
LEPTOCHELA SERRATORBITA	6.40	0.07	99.98
ALBUNEA PARETII	6.40	0.07	100.05
PHORONIS ARCHITECTA	6.40	0.07	100.12
HOLOTHUROIDEA	6.40	0.07	100.19
SCOLOPLOS RUBRA	64 0.00		100.19
BIVALVIA	0.00		100.19
SOLEMYA OCCIDENTALIS	0.00		100.19
CRASSINELLA LUNULATA	0.00		100.19

	9,811	100.19	
	9,817		

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 2 GROUP = 49

SPECIES NAME	#/M**2	PCT	CUM_PCT
SPIO PETTIBONEAE	1126.40	15.41	15.41
OLIGOCHAETA	704.00	9.63	25.04
STREPTOSYLLIS PETTIBONEAE	659.20	9.02	34.06
CAULLERIELLA ALATA	646.40	8.84	42.90
STRACODA	384.00	5.25	48.15
SABELLIDAE	377.60	5.17	53.32
MONOCULODES NYEI	332.80	4.55	57.87
ARMANDIA MACULATA	300.80	4.12	61.99
CYCLASPIS	256.00	3.50	65.49
SPHAEROSYLLIS ACICULATA	192.00	2.63	68.12
PHYNCHOCOELA	147.20	2.01	70.13
CIRROPHORUS	147.20	2.01	72.14
OXIOTHELLA MUCOSA	147.20	2.01	74.15
BIVALVIA	140.80	1.93	76.08
TRICIDEA PHILBINA	128.00	1.75	77.83
MAGELONA PETTIBONEAE	128.00	1.75	79.58
PARAPRIONOSPIO PINNATA	115.20	1.58	81.16
SPHAEROSYLLIS	102.40	1.40	82.56
APLOSCOLOPLOS	102.40	1.40	83.96
PLATYISCHNOPUS	102.40	1.40	85.36
PRIONOSPIO CRISTATA	96.00	1.31	86.67
POLYGORDIUS	83.20	1.14	87.81
MEDIOMASTUS CALIFORNIENSIS	64.00	0.88	88.69
YSIDOPSIS FURCA	57.60	0.79	89.48
SYNCHELIDIUM AMERICANUM	51.20	0.70	90.18
IRON TROPAKIS	44.80	0.61	90.79
ANUPHIDAE	38.40	0.53	91.32
TRICIDEA WASSI	38.40	0.53	91.85
PHIUROIDEA	32.00	0.44	92.29
APLOSCOLOPLOS ROBUSTUS	25.60	0.35	92.64
MAGELONA	25.60	0.35	92.99
DECILOCHAETUS JOHNSONI	25.60	0.35	93.34
LIVELLA	25.60	0.35	93.69
ELLINA	25.60	0.35	94.04
UMBRINERIS VERRILLI	19.20	0.26	94.30
TRICIDEA	19.20	0.26	94.56
ABRISABELLA	19.20	0.26	94.82
NAITIDES	12.80	0.18	95.00
GLAOPHAMUS VERRILLI	12.80	0.18	95.18
UMBRINERIDAE	12.80	0.18	95.36
PHARYX	12.80	0.18	95.54
YSILLA	12.80	0.18	95.72
LYLICHNELLA BIDENTATA	12.80	0.18	95.90
PHAMA CONGREGATA	12.80	0.18	96.08
PHOMANIELLA	12.80	0.18	96.26
XYUROSTYLIS SMITHI	12.80	0.18	96.44

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 2 GROUP = 49

SPECIES NAME	#/M**2	PCT	CUM_PCT
PHOTIS MACROMANUS	12.80	0.18	96.62
METHARPINIA FLORIDANA	12.80	0.18	96.80
EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA	12.80	0.18	96.98
SIPUNCULA	12.80	0.18	97.16
PHYLLODOCE ARENAE	6.40	0.09	97.25
SIGAMBRA BASSI	6.40	0.09	97.34
SYLLIDAE	6.40	0.09	97.43
TYPOSYLLIS	6.40	0.09	97.52
NEPHTYS SIMONI	6.40	0.09	97.61
LYSIDICE NINETTA	6.40	0.09	97.70
POLYDORA	6.40	0.09	97.79
SCOLELEPIS SQUAMATA	6.40	0.09	97.88
CAPITELLIDAE	6.40	0.09	97.97
OWENIA	6.40	0.09	98.06
HYDROIDES BISPINOSA	6.40	0.09	98.15
CALYPTRAEA CENTRALIS	6.40	0.09	98.24
OLIVELLA MINUTA	6.40	0.09	98.33
PARVILUCINA MULTILINEATA	6.40	0.09	98.42
TELLINA PROBRINA	6.40	0.09	98.51
DENTALIUM ANTILLARUM	6.40	0.09	98.60
CUMELLA	6.40	0.09	98.69
NOTOTANAIDAE	6.40	0.09	98.78
APANTHURA	6.40	0.09	98.87
XENANTHURA BREVITELSON	6.40	0.09	98.96
MESANTHURA	6.40	0.09	99.05
AMPELISCA	6.40	0.09	99.14
AMPELISCA AGASSIZI	6.40	0.09	99.23
AMPHILOCHIDAE	6.40	0.09	99.32
AORIDAE	6.40	0.09	99.41
ARGISSA HAMATIPES	6.40	0.09	99.50
OEDICEROTIDAE	6.40	0.09	99.59
GAROSYRRHOE	6.40	0.09	99.68
LUCIFER FAXONI	6.40	0.09	99.77
LEPTOCHELA SERRATORBITA	6.40	0.09	99.86
PROCESSA HEMPHILLI	6.40	0.09	99.95
PINNIXA	6.40	0.09	100.04
BRANCHIOSTOMA CARIBAEUM	6.40	0.09	100.13
	-----	-----	
	7,309	100.13	

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
OSTRACODA	2662.40	16.83	16.83
OLIGOCHAETA	1619.20	10.23	27.06
OPHELINA	1017.60	6.43	33.49
BRYOZOA	748.80	4.73	38.22
GONIADIDES CAROLINAE	608.00	3.84	42.06
SABELLIDAE	563.20	3.56	45.62
ARMANDIA MACULATA	480.00	3.03	48.65
AORIDAE	416.00	2.63	51.28
SPIO PETTIBONEAE	364.80	2.31	53.59
PRIONOSPIO CRISTATA	300.80	1.90	55.49
PHOLOE	294.40	1.86	57.35
CHONE	281.60	1.78	59.13
CYCLASPIS	256.00	1.62	60.75
XENANTHURA BREVITELSON	256.00	1.62	62.37
BRANCHIOSTOMA CARIBAEUM	249.60	1.58	63.95
PODOCERUS	230.40	1.46	65.41
SIPUNCULA	230.40	1.46	66.87
DPHIUROIDEA	211.20	1.33	68.20
ENCOPE	198.40	1.25	69.45
SPHAEROSYLLIS	192.00	1.21	70.66
SPHAEROSYLLIS ACICULATA	185.60	1.17	71.83
SYLLIDAE	172.80	1.09	72.92
PELLINA	172.80	1.09	74.01
PLAKOSYLLIS QUADRIOCULATA	153.60	0.97	74.98
AMPHILOCHIDAE	140.80	0.89	75.87
PROTODORVILLEA KEFERSTEINI	121.60	0.77	76.64
CIRROPHORUS	121.60	0.77	77.41
CIRROPHORUS BRANCHIATUS	121.60	0.77	78.18
CAMPYLASPIS	121.60	0.77	78.95
INCHIALINA TYPICA	115.20	0.73	79.68
SYLLIS	108.80	0.69	80.37
CAULLERIELLA ALATA	102.40	0.65	81.02
TRIVALVIA	102.40	0.65	81.67
EXOGONE DISPAR	96.00	0.61	82.28
TRICIDEA TAYLORI	96.00	0.61	82.89
AXIOTHELLA	96.00	0.61	83.50
XYUROSTYLIS SMITHI	89.60	0.57	84.07
CTEOCINA CANDEI	83.20	0.53	84.60
EMPELISCA	83.20	0.53	85.13
HYNCHOCOELA	70.40	0.44	85.57
URYDICE LITTORALIS	70.40	0.44	86.01
ISTRIELLA BARNARDI	70.40	0.44	86.45
THENELAIS	64.00	0.40	86.85
SPHAEROSYLLIS GLANDULATA	64.00	0.40	87.25
TAURONEREIS (PART)	64.00	0.40	87.65
INUSPIO	64.00	0.40	88.05

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
TRIP = 2 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
ARCHOOPHORA POLYCLADIDA ACOTYLEA	57.60	0.36	88.41
PERACARIDA TANAIDACEA	51.20	0.32	88.73
ELASMOPUS	51.20	0.32	89.05
PINNIXA	51.20	0.32	89.37
SYLLIS REGULATA CAROLINAE	44.80	0.28	89.65
GOULDIA CERINA	44.80	0.28	89.93
MYSIDOPSIS FURCA	44.80	0.28	90.21
BOWMANIELLA PORTORICENSIS	44.80	0.28	90.49
NEOMEGAMPHOPUS ROOSEVELTI	44.80	0.28	90.77
SCOLOPLOS RUBRA	38.40	0.24	91.01
ARICIDEA CERRUTI	38.40	0.24	91.25
CYCLASPIS UNICORNIS	38.40	0.24	91.49
PHOTIS MACROMANUS	38.40	0.24	91.73
TIRON	38.40	0.24	91.97
EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA	38.40	0.24	92.21
MEDIOMASTUS CALIFORNIENSIS	32.00	0.20	92.41
DENTALIUM ANTILLARUM	32.00	0.20	92.61
BOWMANIELLA	32.00	0.20	92.81
APSEUDES	32.00	0.20	93.01
SYNCHELIDIUM AMERICANUM	32.00	0.20	93.21
EXOgone ATLANTICA	25.60	0.16	93.37
PARAPRIONOSPPIO PINNATA	25.60	0.16	93.53
PISTA CRISTATA	25.60	0.16	93.69
CRASSINELLA LUNULATA	25.60	0.16	93.85
ABRA AEQUALIS	25.60	0.16	94.01
AMATHIMYSIS BRATTEGARDI	25.60	0.16	94.17
KALLIAPSEUDES	25.60	0.16	94.33
MUNNA	25.60	0.16	94.49
ARGISSA HAMATIPES	25.60	0.16	94.65
PHYSISICA MARINA	25.60	0.16	94.81
FIMBRIOSTHENELAIS	19.20	0.12	94.93
PALEANOTUS	19.20	0.12	95.05
HETEROPODARKE	19.20	0.12	95.17
STREPTOSYLLIS PETTIBONEAE	19.20	0.12	95.29
GLYCERA	19.20	0.12	95.41
ONUPHIDAE	19.20	0.12	95.53
SERPULA	19.20	0.12	95.65
CUMELLA	19.20	0.12	95.77
CYCLASPIS BACESCUI	19.20	0.12	95.89
APANTHURA	19.20	0.12	96.01
LEMBOS SMITHI	19.20	0.12	96.13
ACANTHOHAUSTORIUS	19.20	0.12	96.25
METHARPINIA FLORIDANA	19.20	0.12	96.37
GAROSYRRHOE	19.20	0.12	96.49
ANAITIDES LONGIPES	12.80	0.08	96.57
GENETYLLIS	12.80	0.08	96.65

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
PARAPIONOSYLLIS	12.80	0.08	96.73
NEPHTYIDAE	12.80	0.08	96.81
ONUPHIS NEBULOSA	12.80	0.08	96.89
LUMBRINERIS VERRILLI	12.80	0.08	96.97
MICROSPIO PIGMENTATA	12.80	0.08	97.05
CIRRATULIDAE	12.80	0.08	97.13
NOTOMASTUS LATERICEUS	12.80	0.08	97.21
OWENIA	12.80	0.08	97.29
MEGALOMMA BIOCULATA	12.80	0.08	97.37
MITRELLA LUNATA	12.80	0.08	97.45
OLIVELLA	12.80	0.08	97.53
CHIONE	12.80	0.08	97.61
SEROLIS MGRAYI	12.80	0.08	97.69
AMPHILOCHUS	12.80	0.08	97.77
MONOCULODES NYEI	12.80	0.08	97.85
TIRON TROPAKIS	12.80	0.08	97.93
LUCONACIA INCERTA	12.80	0.08	98.01
PROCESSA HEMPHILLI	12.80	0.08	98.09
HYDROZOA	6.40	0.04	98.13
GENETYLLIS CASTANEA	6.40	0.04	98.17
PROTOMYSTIDES BIDENTATA	6.40	0.04	98.21
TRYPANOSYLLIS	6.40	0.04	98.25
BRANIA	6.40	0.04	98.29
NEREIS SUCCINEA	6.40	0.04	98.33
NEPHTYS SQUAMOSA	6.40	0.04	98.37
NOTHRIA	6.40	0.04	98.41
LUMBRINERIS INFLATA	6.40	0.04	98.45
ARICIDEA FINITIMA	6.40	0.04	98.49
MAGELONA PETTIBONEAE	6.40	0.04	98.53
DODECACERIA	6.40	0.04	98.57
NOTOMASTUS TENUIS	6.40	0.04	98.61
LEIOCAPITELLA	6.40	0.04	98.65
POLYCIRRUS PLUMOSUS	6.40	0.04	98.69
HYDROIDES PROTULICOLA	6.40	0.04	98.73
PSEUDOVERMILIA OCCIDENTALIS	6.40	0.04	98.77
POLYGORDIUS	6.40	0.04	98.81
MELANELLA	6.40	0.04	98.85
STROMBIFORMIS	6.40	0.04	98.89
POLYPLACOPHORA	6.40	0.04	98.93
GLYCYMERIS	6.40	0.04	98.97
GLANS DOMINGUENSIS	6.40	0.04	99.01
TELLINA PROBRINA	6.40	0.04	99.05
LYONSIA	6.40	0.04	99.09
CADULUS	6.40	0.04	99.13
PERACARIDA AMPHIPODA	6.40	0.04	99.17
AMPELISCA AGASSIZI	6.40	0.04	99.21

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA SPECIES ABUNDANCE -DESCENDING ORDER
 TRIP = 2 GROUP = 50

SPECIES NAME	#/M**2	PCT	CUM_PCT
MICRODEUTOPUS MYERSI	6.40	0.04	99.25
CERAPUS	6.40	0.04	99.29
PODOCERIDAE	6.40	0.04	99.33
CAPRELLIDAE	6.40	0.04	99.37
LUCONACIA	6.40	0.04	99.41
LUCIFER FAXONI	6.40	0.04	99.45
LEPTOCHELA SERRATORBITA	6.40	0.04	99.49
PERICLIMENES	6.40	0.04	99.53
ALPHEIDAE	6.40	0.04	99.57
PAGURUS	6.40	0.04	99.61
HYPOCONCHA SPINOSISSIMA	6.40	0.04	99.65
EBALIA STIMPSONI	6.40	0.04	99.69
MACROCOELOMA	6.40	0.04	99.73
EURYPLAX NITIDA	5.40	0.04	99.77
PRIAPULIDA	6.40	0.04	99.81
ENCOPE ABERRANS	6.40	0.04	99.85
	-----	-----	
	15,821	99.85	
	-----	-----	
	49,503	500.03	
	=====	=====	
	79,391	1000.7*	

Table E-24 Presence-Absence of Benthic Infaunal Taxa Collected in December 1983 and May 1984
2/14/85

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
TRIP = 0

	43	46	48	49	50	43	45	48	49	50
DEMOSPONGIAE					X					
HYDROZOA					X					X
TURBELLARIA	X									
ARCHOOPHORA POLYCLADIDA ACOTYLEA						X				X
RHYNCHOCOELA	Y	Y	X	X	Y	X	X	X	X	X
POLYNOIDAE			X	X				X		
EULEPETHIDAE			X	X						
GRUBEULEPIS		X								
GRUBEULEPIS MEXICANA					X		X	X		
SIGALIONIDAE			X			X				
PHOLOE										X
STHENELAIS							X			X
STHENELAIS BOA		Y	X	X						
SIGALION					X					
FIMBRIOSTHENELAIS						X				X
PISIONE PEMOTA			X							
CHRYSOPETALIDAE			X							
PALEANOTUS			X		X	X				X
PALEANOTUS HETEROSETA			X			X				
LINOPHERUS				X						
PARAPHINOME					X					
EURYTHOE COMPLANATA						X				
PHYLLODOCIDAE				X						
ANAITIDES									X	
ANAITIDES MUCCOSA								Y		
ANAITIDES LONGIPES		X				X				X
MYSTIDES BOREALIS							X			
GENETYLLIS							X			X
GENETYLLIS CASTANEA							X			X
EUMIDA SANGUINEA					Y					
PROTOMYSTIDES BIDENTATA										X
PHYLLODOCE ARENAE	Y		X						Y	
PTEROCIRPUS MACROCEPOS			X	X						
HESIONIDAE		X	X							
GYPTIS BREVIPALPA		X					X			
MICROPTHALMUS				X						

Table E-24 Continued

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 0

	43	46	48	49	50	43	46	48	49	50
HETEROPODARKE	X		X			X				X
PODARKE AGILIS					Y					
PILARGIDAE				X						
ANCISTROSYLLIS			X							
ANCISTROSYLLIS HARTMANAE	X		X			X				
SIGAMBRA TENTACULATA								X		
SIGAMBRA BASSI				X			X		X	
CABIRA INCERTA							X			
SYNELMIS	X	X	X		Y	X				
LITOCORSA			X			X				
SYLLIDAE			Y	X	X	X			X	X
PROCERAEA			X	X						
PIDNOSYLLIS						X				
SYLLIS					Y	X				X
SYLLIS CORNUTA						X				
SYLLIS REGULATA CAROLINAE			X							X
TRYPANDOSYLLIS										X
TRYPANDOSYLLIS COELIACA					X					
TYPOSYLLIS									X	
EXOgone			X	X						
EXOgone DISPAR	X	X	X	X	X	X	X	X		X
EXOgone LOURFI						X				
EXOgone VERUGERA	X		X	X						
EXOgone ATLANTICA	X									X
SPHAEROSYLLIS			X	X		X			X	X
SPHAEROSYLLIS ACICULATA				X					X	X
SPHAEROSYLLIS GLANDULATA										X
SPHAEROSYLLIS TAYLORI						X				
GRANIA		X								X
SYLLIDES FULVA	X									
STREPTOSYLLIS PETTIBONEAE				X					X	X
PARAPIDNOSYLLIS			X			X				X
PLAKOSYLLIS QUADRIOCULATA						X				X
NEREIDAE	X	X	X	X		X		X		
CERATONEREIS IRRITABILIS	X	X	X							
CERATONEREIS LONGICIPRATA		X	X							
NEREIS					Y					
NEREIS SUCCINEA										X
NEREIS LAMELLOSA					X					
NEREIS RIISEI				X						
CERATOCEPHALE OCULATA		X					X	X		
WEBSTERINEREIS TPIDENTATA				X						
NICON			Y							
RULLIERINEREIS MEXICANA	Y									
VEPHTYIDAE						X	Y			X

BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
TRIP = 0

	43	46	48	49	50	43	45	48	49	50
NEPHTYS		X				X				
NEPHTYS PICTA		X		X						
NEPHTYS SQUAMOSA										X
NEPHTYS SIMONI	X	X	X	X		X	X		X	
AGLAOPHAMUS VERRILLI		Y		X			Y	X	X	
GLYCERIDAE	X					X				
GLYCERA	X							X		X
GLYCERA DIBRANCHIATA				X	X					
GONIADIDES CAROLINAE	X		X			X				X
ONUPHIDAE	X					X	X		X	X
ONUPHIS		X					X			
ONUPHIS FRIMITA	X	X								
ONUPHIS NEBULOSA	X	X			Y			X		X
DIOPATRA CUPREA	Y			X	X					
DIOPATRA PAPILLATA	X									
NOTHRIA										X
NOTHRIA PALLIDA	Y									
EUNICIDAE			Y							
EUNICE								X		
EUNICE VITTATA	X	X	X							
LYSIDICE					Y					
LYSIDICE NINETTA									X	
NEMATONEREIS UNICORNIS						Y				
LUMBRINERIDAE			Y						X	
LUMBRINERIS LATREILLI	X		X		X					
LUMBRINERIS INFLATA										X
LUMBRINERIS VERRILLI		Y	X	X			Y	X	X	X
LUMBRINERIS COCCINEA	X									
LUMBRINERIS HEBES		X								
LUMBRINERIS CANDIDA				X						
ARABELLA		Y								
DORVILLEIDAE			Y	X		X				
PROTODORVILLEA KEFERSTEINI			X			X				X
STAUDNEREIS (PART)										X
SCHISTOMERINGOS PECTINATA					Y	X				
SCHISTOMERINGOS RUDOLPHI					Y					
MEIODORVILLEA			X			X				
ORBINIIDAE	X					X				
HAPLOSCOLOPLOS				Y						X
HAPLOSCOLOPLOS ROBUSTUS									X	
HAPLOSCOLOPLOS FRAGILIS								Y		
NAINERIS BICORNIS						X				
SCOLOPLOS RUPRA		X			Y			X		X
PARAONIDAE		Y								
ARICIDEA	X	X	X	X	X	X	X	X	X	

Table E-24 Continued

2/14/85

BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 0

	43	46	48	49	52	43	46	48	49	50
ARICIDEA WASST		X			X		X		X	
ARICIDEA CATHERINEA		X			X			X		
ARICIDEA CERRUTI		X				X				X
ARICIDEA FRAGILIS					X			X		
ARICIDEA PHILBINA		X		X	X		X		X	
ARICIDEA TAYLORI		X			X		X	X		X
ARICIDEA FINITIMA		X			X			X		X
PARADONIS PYGOENIGMATICA		X								
CIRROPHORUS	X	X	X	X	X	X	X	X	X	X
CIRROPHORUS LYRIFORMIS		X								
CIRROPHORUS BRANCHIATUS										X
LEVINSENIA							X			
TAUBERIA GRACILIS		X								
PARADONIS LYRA		X								
SPIONIDAE	X	X	X	X	X	X		X		
LAONICE CIRRATA		X	X		X					
POLYDORA									X	
MINUSPIO		X	X	X	X		X	X		X
PRIONOSPIO CIRRIFERA			X							
PRIONOSPIO CRISTATA		X	X	X	X		X	X	X	X
PRIONOSPIO DAYI				X			X			
SPIO PETTIBONEAE						X	X		X	X
SPIOPHANES								X		
SPIOPHANES BOMBYX				X	X		X	X		
SPIOPHANES MISSIONENSIS	X									
PARAPRIONOSPIO PINNATA	X	X		X		X	X	X	X	X
SCOLELEPIS SQUAMATA		X		X	X				X	
MICROSPPIO PIGMENTATA										X
MAGELONA		X	X	X	X				X	
MAGELONA PETTIBONEAE				X	X	X		X	X	X
MAGELONA RIOJAI						X				
POECILOCHAETUS JOHNSONI			X				X		X	
MESOCHAETOPTERUS		X								
CIRRATULIDAE	X						X			X
CAULLERIELLA				X						
CAULLERIELLA ALATA					X	X			X	X
THARYX					X			X	X	
THARYX ANNULOSUS			X			X	X			
CHAETAZONE	X				X					
DODECACERIA										X
FLABELLIGERIDAE	X		X							
THEROCHEATA							X	X		
OPHELIIDAE		X								
ARMANDIA AGILIS				X						
ARMANDIA MACULATA		X	X	X	X	X	X	X	X	X

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 BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 0

	43	46	48	49	50	43	45	48	49	50
TRAVISIA HOBSONAE							X			
OPHELINA										X
CAPITELLIDAE		X		X	X	X	X		X	
CAPITELLA					X					
NOTOMASTUS					X					
NOTOMASTUS TENUIS					X					X
NOTOMASTUS LATERICEUS										X
NOTOMASTUS HEMIPODUS			X		X		X	X		
NOTOMASTUS LOBATUS					X					
NOTOMASTUS AMERICANUS					X					
MEDIOMASTUS CALIFORNIENSIS	X	X	X	X	X	X	X	X	X	X
BARANTOLLA					X					
LEIOCAPITELLA								X		X
DASYBRANCHUS			X							
MASTOBRANCHUS				X						
HALDANIDAE	X	X	X		Y		X	Y		
ASYCHIS FLONGATA	X									
AXIOTHELLA										X
AXIOTHELLA MUCOSA	X	X	X	X	X	X	X	X	X	
PRAXILLELLA					X					
MACROCLYMENE ZONALIS					X					
OWENIA		X		X			X	X	X	X
MYRIOCHELE	X	X		X	X	X	X			
MYRIOCHELE OCULATA						X	X	X		
SABELLARIIDAE						X				
SABELLARIA				Y		X				
AMPHICTENE							X			
AMPHARETIDAE	X	X				X				
AMPHICTEIS GUNNERI								X		
AMPHICTEIS SCAPHOBRANCHIATA					X			X		
ISOLDA PULCHELLA	X				Y			X		
TEREBELLIDAE	Y			X						
PISTA CRISTATA										X
POLYCIRRUS					X	X		X		
POLYCIRRUS HAEMATODES	X	X			Y					
POLYCIRRUS PLUMOSUS					X					Y
LYSILLA				X					X	
LOIMIA MEDUSA		Y			Y					
STREBLOSOMA HARTMANAE					Y					
TEREBELLIDES STROEMII		Y								
SABELLIDAE	Y	X	X	X		X	X	X	X	X
CHONE										X
CHONE AMERICANA	X	X		X						
MEGALOMMA BIOCULATA					Y		Y			X
MEGALOMMA VESTICULOSUM					Y					

Table E-24 Continued
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BIOLOGICAL DATA MANAGEMENT SYSTEM
BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
TRIP = 0

	43	46	48	49	50	43	45	48	49	50
FABRICIA								X		
FABRISABELLA				X	X	X	X		X	
POTAMETHUS					X					
SERPULIDAE	X			X			X			
SERPULA				X	X	X		X		X
HYDROIDES PROTULICOLA		X			Y					X
HYDROIDES BISPINOSA				X					X	
HYDROIDES MICROTIS	X									
PSEUDOVERMILIA	X			X						
PSEUDOVERMILIA OCCIDENTALIS										X
QUESTA CAUDICIRRA						X				
POLYGORDIUS	Y	X	Y	X			Y	X	X	Y
OLIGOCHAETA	X	Y	Y	X	Y	X	X	X	X	X
GASTROPODA		X								
CERITHIOPSIS EMERSONI				X						
MELANELLA	X									X
STROMBIFORMIS										Y
STROMBIFORMIS BILINEATUS					X					
CALYPTRAEA CENTRALIS	X	X		X				X	X	
NATICA PUSILLA		X					X	X		
MITRELLA LUNATA	X	X					X			X
BAILYA PARVA	Y									
FASCIOLARIA						X				
OLIVELLA	Y					X	X	X	X	X
OLIVELLA MINUTA									X	
OLIVA SAYANA								X		
TURRIDAE	X									
TEREBRA		X			X					
TURBONILLA						X				
CEPHALASPIDEA	X									
ACTEOCINA CANDEI	X					X				X
CYLICHNELLA BIDENTATA									X	
HAMINOEA								X		
ATYS CARIBAEA								X		
VOLVULELLA PERSIMILIS		X					X			
PLEUROBRANCHIDAE			X							
POLYPLACOPHORA			Y	X						X
BIVALVIA	Y	X	Y				Y	X	Y	X
SOLEMYA OCCIDENTALIS							Y	X		

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 0

	43	46	48	49	50	43	45	48	49	50
GLYCYMERIS										Y
PARVILUCINA MULTILINEATA				X					X	
LUCINA NASSULA					X		X			
DIVARICELLA QUADRISULCATA							X			
GLANS DOMINGUENSIS										X
CRASSINELLA LUNULATA								Y		X
PAPYRIDEA HIATUS					Y					
SPISULA SOLIDISSIMA	X					X	Y			
TELLINIDAE	Y	X		X						
TELLINA	X	X	X		X	X	X	X	X	X
TELLINA AEQUISTRIATA	Y									
TELLINA PROBRINA									Y	X
ABRA AEQUALIS										X
VENERIDAE		X				X				
JOSTINIA DISCUS	Y									
GEMMA GEMMA						X				
CHIONE	X	X	X	X		X				X
GOULDIA CERINA	X	X			X	X	X			X
CHAMIDAE			X							
CHAMA CONGREGATA									X	
CORBULA						X				
LYONSIA		X								X
VERTICORDIA ORNATA			X			X				
DENTALIUM	X				X			X		
DENTALIUM EBOREUM	X			X				X		
DENTALIUM ANTILLARUM	X		X						X	X
DENTALIUM SEMISTRIOLATUM					Y					
CADULUS										Y
ARTHROPODA PYCNOGONIDA			X	X						
ARTHROPODA MANDIBULATA CRUSTACEA						X				
OSTRACODA	X	X	X	X	X	X	X	Y	X	X
PARANEBALIA LONGIPES				Y						
MYSIDOPSIS								X		
MYSIDOPSIS FURCA			X		X		X	X	X	X
BOWMANIELLA	X						X	X	X	X
BOWMANIELLA PORTORICENSIS						X				X
BOWMANIELLA MEXICANA					X					
ANCHIALINA TYPICA	X			X		X	Y	X		X
AMATHIMYSIS BRATTEGARDI								Y		X

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Table E-24 Continued

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 9

	43	46	48	49	50	43	46	48	49	50
OXYUROSTYLIS SMITHI	X		X	Y		X	X	X	X	X
CAMPYLASPIS	X		X	X	X	X		X		X
CUMELLA	X	X	X	X	X	X	Y	X	X	X
CYCLASPIS	X	X	X	X	X	X	X	X	X	X
CYCLASPIS UNICORNIS	Y	X	X	Y			X	X		Y
CYCLASPIS BACESCUI			X			X				X
PERACARIDA TANAIIDACEA			X		Y	X				X
APSEUDIDAE		X					X			
APSEUDES			X	X	X					X
KALLIAPSEUDES		X	X	X	X	X		Y		X
LEPTOCHELIA	X	X	X	Y	Y	X				
NOTOTANAIIDAE				X					X	
APANTHURA					Y				X	X
APANTHURA SIGNATA			X							
XENANTHURA BREVITELSON		X	X	X	X	X	X	X	X	X
ACCALATHURA CREMULATA			X							
MESANTHURA				X					Y	
EURYDICE LITTORALIS		Y	X			X				X
SEROLIS MGRAYI				Y	Y					X
EDDTEA								X		
EDDTEA TRILOBA								X		
STENETRIUM	X									
MUNNA	Y					X				X
PERACARIDA AMPHIPODA				X	X		X	X		
PERACARIDA AMPHIPODA GAMMARIDEA				X						
AMPELISCA	Y	X	X	X	X	X	X	X	Y	Y
AMPELISCA VADORUM		X								
AMPELISCA VERRILLI		Y								
AMPELISCA AGASSIZI		Y	Y	X	Y			X	Y	X
AMPHILOCHIDAE	X					X	Y	X	X	X
AMPHILOCHUS				X		X				X
AMPITHOE		X			X					
AORIDAE	X		X			Y	X	X	X	X
LEMBOS		X	X		X			X		
LEMBOS SMITHI				Y						X
LEMBOS UNIFASCIATUS UNIFASCIATUS		X								
LEMBOS SPINICARPUS SPINICARPUS		Y								
MICRODEUTOPUS		X								
MICRODEUTOPUS MYERSI	X									X
ACUMINODEUTOPUS	X									
ACUMINODEUTOPUS NAGLEI	Y	X	X	Y	Y					
ARGISSA HAMATIPES						Y	X	X	X	X
BATEIDAE (AMPHIPODA)		Y	X				X	X		
BATEA				Y						
CERAPUS	X			X		Y	Y	Y		X

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BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 0

	43	46	48	49	50	43	46	48	49	50
ERICHTHONIUS					Y					
ERICHTHONIUS BRASILIENSIS				X	X		X	Y		
CHEVALIA AVICULAE	Y					Y				
GAMMARIDAE					Y					
ELASMOPUS	X		X	X						Y
MAERA	X	X	X	X						
DULICHTIELLA APPENDICULATA	X	X			Y					
ACANTHOHAUSTORIUS	X					Y	X	Y		X
PHOTIS								X		
PHOTIS MACROMANUS	Y	X	X	X		X	X	X	Y	X
PHOTIS MELANICUS		X					X			
LISTRIELLA							Y			
LISTRIELLA BARNARDI	Y			X			X	X		X
HIPPOMEDON		Y					Y			
LYSIANOPSIS		X			X					
DEDICEROTIDAE									X	
MONOCULODES NYEI		X			X		X	X	X	Y
SYNCHELIDIUM AMERICANUM	X	X	X	X	X	X	X	X	X	X
PLATYISCHNOPUS	X	X		X	X		X	X	X	
METHARPINIA FLORIDANA	X	X	X	X		X	X	X	Y	Y
RHEPOXYNIUS EPISTOMUS								Y		
PLEUSTIDAE								Y		
PODOCERIDAE					X			X		X
PODOCERUS					X	X				X
STENOTHOIDAE	X									
TIRON					Y		Y	X		Y
TIRON TROPAKIS	Y			X					X	X
GAROSYRRHOE	X	X	X					X	X	X
NEOMEGAMPHOPUS					X					
NEOMEGAMPHOPUS ROOSEVELTI		X	X				X			X
LESTRIGONUS			X							
CAPRELLIDAE	X			X				X		X
LUCONACIA										X
LUCONACIA INCERTA			X	X	Y					X
PHYTISICA MARINA		X						X		X
SICYONIA TYPICA					X					
LUCIFER FAXONI	X			X	X	X			X	X
EUCARIDA DECAPODA PLEOCYEMATA CARIDEA			Y							
LEPTOCHELA SERRATORRITA	Y			X	Y			X	X	X
PERICLIMENES				X						X
PERICLIMENES AMERICANUS					X					
NEOPONTOMIDES							Y			
ALPHEIDAE										X
AUTOMATE EVERMANNI		X								

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Table E-24 Continued

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 BIOLOGICAL DATA MANAGEMENT SYSTEM
 BENTHIC INFAUNA PRESENCE/ABSENCE MATRIX
 TRIP = 0

	43	46	48	49	50	43	46	48	49	50
OGYRIDES ALPHAPOSTRIS					Y					
LATREUTES					Y					
LATREUTES PARVULUS	X									
PROCESSA	X									
PROCESSA HEMPHILLI			X	X		X	X	X	X	X
CALLIANASSA		X	X	X						
DIAGENIDAE	X	X			Y					
PAGURISTES			X							
PAGURUS	X		X			X				X
ALBUNEA PARETII								X		
EUCARIDA DECAPODA PLEOCYEMATA BRACHYURA							X		X	X
HYPOCONCHA SPINOSISSIMA										X
EBALIA CARIOSA			X							
EBALIA STIMPSONI										X
HETEROCRYPTA GRANULATA	X									
MACROCOELOMA										X
EURYPLAX NITIDA		X			X					X
PINNIXA	X								X	X
SIPUNCULA	X		X	X	X	X	X	X	X	X
PRIAPULIDA										X
PHORONIS ARCHITECTA		X		X			X	X		
BRYOZOA	X	X	X	X	X	X	X	X		X
GLOTTIDIA PYRAMIDATA	Y	X	X	X				X		
ASTEROIDFA	X									
OPHIUROIDEA		X	X	X	X	X	X	X	X	X
ECHINOIDEA	Y		X			X	X	X		
ENCOPE							X			Y
ENCOPE ABERRANS						X				X
MOIRA ATROPOS				Y						
HOLOTHUROIDEA		X				Y		X		
BRANCHIOSTOMA CARIBAEUM	Y	X	X	X	X	X	X	X	X	X

APPENDIX F
BENTHIC EPIFAUNA, NEKTON, AND MACROALGAE

APPENDIX F
BENTHIC EPIFAUNA, NEKTON, AND MACROALGAE

Benthic epifauna, nekton, and macroalgae were studied at the Group I hard-bottom and Group II live-bottom stations (Figure F-0) with a variety of techniques. These techniques included UTV surveys, trawling with an otter trawl, and dredging. The Group I hard-bottom stations were surveyed during Cruises I (December 1983) and III (May 1984), and the Group II live-bottom stations on Cruises I, II, III, and IV (December 1983, March, May, and August 1984, respectively).

Tables F-1 through F-10 present presence/absence data for invertebrates, fish, and plants by station for all cruises. Interstation comparisons are facilitated by the remaining tables. Table F-11 presents presence/absence data for all taxa, all stations (Group I and II), and all cruises. It should be remembered, however, that Group I stations were sampled two times and Group II stations four times. This is true for all remaining tables. Tables F-12 and F-13 present presence/absence data for invertebrates and fish, respectively; Table F-14--density of fish; Figure F-1--fish length frequencies; and Table F-15--presence/absence data for plants.

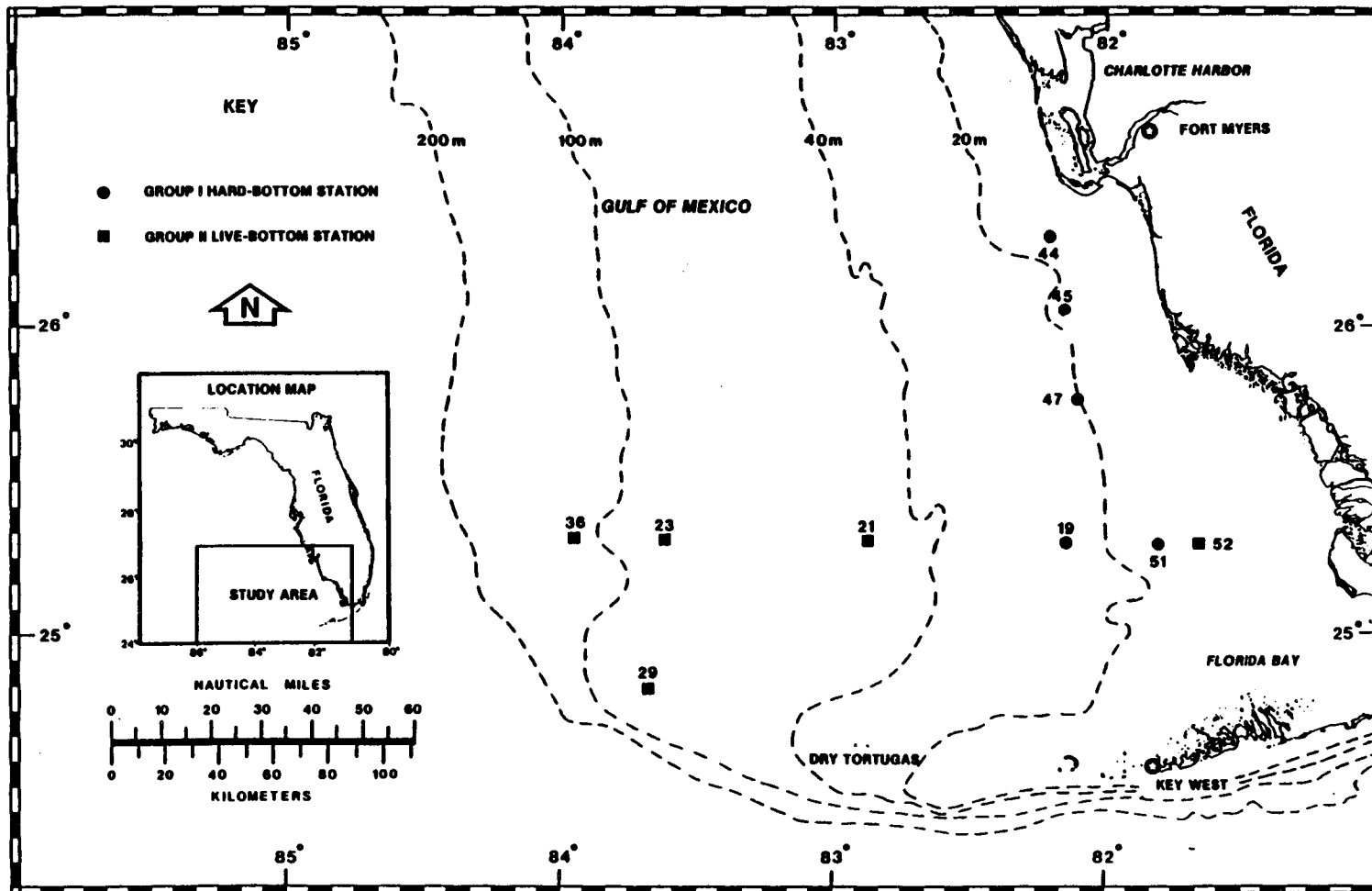


Figure F-0 EPIFAUNA, NEKTON, AND MACROALGAE SAMPLING STATION LOCATION FOR YEAR 4 (DECEMBER 1983—AUGUST 1984)

Table F-1. Presence/Absence and Abundance Data for Invertebrates and Plants (a) and Fish (b) Collected by Dredging and Trawling at Station 44 by Cruise

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 44

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
CNIDARIA			
ZOANTHARIA			
<u>SIDERASTREA SIDEREA</u>	+		1
<u>MONTASTREA CAVERNOSA</u>	+		1
<u>FAVIA GRAVIDA</u>	+		1
<u>OGULINA TENELLA</u>	+		1
<u>PHYLLANGIA AMERICANA</u>	+		1
ALCYONARIA			
<u>PSEUDOPLEXAURA POROSA</u>	+		1
<u>PSEUDOPLEXAURA FULSIFERA</u>	+		1
<u>LEPTOGORGIA EURYALE</u>	+		1
<u>LEPTOGORGIA VIRGULATA</u>	+		1
<u>PTEROGORGIA GUADALUPENSIS</u>	+		1
ECHINODERMATA			
ASTEROIDEA			
<u>ASTROPECTEN DUPLICATUS</u>		+	1
<u>ECHINASTER SPINULOSUS</u>	+		1
OPHIUROIDEA			
<u>OPHIODERMA BREVISPIA</u>	+		1
<u>OPHIACTIS SAVIGNYI</u>	+		1
<u>OPHIOTHRIX ANGULATA</u>	+		1
<u>OPHIOTHRIX LINEATA</u>	+	+	2
ECHINOIDEA			
<u>DIADEMA ANTILLARUM</u>	+		1
<u>LYTECHINUS VARIEGATUS</u>	+		1
<u>CLYPEASTER SUBDEPRESSUS</u>		+	1
<u>ENCOPE ABERRANS</u>		+	1
<u>ENCOPE MICHELINI</u>		+	1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 44

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
CRUSTACEA			
ISOPODA			
<u>PARACERCEIS CAUDATA</u>	+		1
BRACHYURA			
<u>HYPOCONCHA ARCUATA</u>		+	1
<u>CALAPPA SULCATA</u>		+	1
<u>STENORYNCHUS SETICORNIS</u>	+		1
<u>PODOCHELA SIDNEYI</u>	+		1
<u>MITHRAX HISPIDUS</u>	+		1
<u>MITHRAX FORCEPS</u>	+		1
<u>MITHRAX PLEURACANTHUS</u>	+		1
<u>PORTUNUS ANCEPS</u>	+		1
<u>PORTUNUS DEPRESSIFRONS</u>		+	1
<u>PILUMNUS SAYI</u>	+	+	2
ANOMURA			
<u>PAGURISTES SERICEUS</u>		+	1
<u>PETROLISTHES GALATHINUS</u>	+		1
<u>MEGALOBRACHIUM SORIATUM</u>	+		1
PENAEIDEA			
<u>PENAEUS AZTECUS</u>	+		1
<u>PENAEUS SETIFERUS</u>	+		1
CARIDEA			
<u>PALAEEMONIDAE UNIDENT</u>	+		1
<u>ALPHEIDAE UNIDENT</u>	+		1
<u>ALPHEIDAE SP. 6</u>	+		1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 44

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
MOLLUSCA			
BIVALVIA			
<u>ANADARA NOTABILIS</u>	+		1
<u>ARCA ZEBRA</u>	+		1
<u>BARBATTIA CANDIDA</u>		+	1
<u>LITHOPHAGA BISULCATA</u>	+		1
<u>PINCTADA IMBRICATA</u>	+		1
<u>ARCINELLA CORNUTA</u>		+	1
GASTROPODA			
<u>DIODORA CAYENENSIS</u>	+		1
<u>LUCAPINA SOWERBII</u>		+	1
<u>STROMBUS FUGILIS</u>		+	1
<u>CREPIDULA ACULEATA</u>	+		1
<u>CREPIDULA MACULOSA</u>		+	1
<u>CANCELLARIA RETICULATA</u>		+	1
RHODOPHYCEAE			
<u>EUCHEUMA NUDUM</u>	+		1
<u>GRACILARIA MAMILLARIS</u>	+		1
<u>BOTRYOCLADIA OCCIDENTALIS</u>	+		1
<u>RHODOPHYTA SP. 9</u>	+		1

b. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 44

<u>TAXA</u>	<u>CRUISE</u>	
	<u>1</u>	<u>TOTAL</u>
SYNODONTIDAE		
SYNODONTIDAE UNIDENT	3	3
HAEMULIDAE		
<u>HAEMULON AUROLINEATUM</u>	4	4
OSTRACHIDAE		
<u>LACTOPHRYS QUADRICORNIS</u>	4	4
NUMBER OF SPECIES	3	
NUMBER OF FAMILIES	3	

**Table F-2. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 45**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 45

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
CNIDARIA			
ZOANTHARIA			
<u>STEPHANOCOENIA MICHELINI</u>		+	1
<u>HELIOSERIS CUCULLATA</u>	+		1
<u>SIDERASTREA SIDEREA</u>	+	+	2
<u>PORITES DIVARICATA</u>	+		1
<u>MONTASTREA CAVERNOSA</u>	+	+	2
<u>FAVIA GRAVIDA</u>	+	+	2
<u>MUSSA ANGULOSA</u>		+	1
<u>ISOPHYLLIA SINUOSA</u>	+	+	2
ALCYONARIA			
<u>PSEUDOPLEXAURA POROSA</u>	+	+	2
<u>MURICEA ELONGATA</u>	+	+	2
<u>PSEUDOPLEXAURA FULSIFERA</u>	+	+	2
<u>EUNICEA SP.</u>		+	1
<u>EUNICEA CALYCVLATA</u>	+	+	2
<u>ELEXAURELLA NUTANS</u>	+	+	2
<u>ELEXAURELLA PUMILA</u>	+		1
<u>PSEUDOPLEXAURA SP. 2</u>		+	1
<u>MURICEPA PINNATA</u>	+		1
<u>LEPTOGORGIA SETACEA</u>		+	1
<u>PSEUDOPTEROGORGIA ACEROSA</u>	+	+	2
<u>PSEUDOPTEROGORGIA RIGIDA</u>		+	1
<u>PSEUDOPTEROGORGIA POROSA</u>	+		1
<u>PTEROGORGIA GUADALUPENSIS</u>	+	+	2

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 45

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
MOLLUSCA			
BIVALVIA			
<u>ANADARA NOTABILIS</u>	+		1
<u>ARCA ZEBRA</u>	+	+	2
<u>ARCA IMBRICATA</u>	+		1
<u>BARBATTIA DOMINGENSIS</u>	+		1
<u>LITHOPHAGA BISULCATA</u>		+	1
<u>LITHOPHAGA ARISTATA</u>	+		1
<u>PINCTADA IMBRICATA</u>	+		1
<u>PTERIA COLYMBUS</u>		+	1
<u>PTERIA UNIDENT</u>	+		1
<u>SPONDYLUS AMERICANUS</u>		+	1
<u>SPONDYLUS ICTERICUS</u>		+	1
<u>CHAMA MACEROPHYLLA</u>		+	1
GASTROPODA			
<u>DIODORA LISTERI</u>		+	1
<u>ASTRAEA PHOEBIA</u>		+	1
<u>CERITHIUM ATRATUM</u>		+	1
<u>STROMBUS COSTATUS</u>		+	1
<u>STROMBUS GIGAS</u>		+	1
<u>CREPIDULA PLANA</u>		+	1
<u>CREPIDULA ACULEATA</u>	+	+	2
<u>TRIVIA PEDICULUS</u>		+	1
<u>OCENEBRA INTERFOSSA</u>	+		1
<u>MUREX FLORIFER</u>		+	1
<u>FASCIOLARIIDAE UNIDENT</u>		+	1
<u>LATIRUS ANGULATUS</u>		+	1
<u>LATIRUS CARINIFERUS</u>		+	1
ECHINODERMATA			
ASTEROIDEA			
<u>ECHINASTER SPINULOSUS</u>		+	1
<u>ECHINASTER UNIDENT</u>		+	1
OPHIUROIDEA			
<u>OPHIODERMA RUBICUNDAM</u>		+	1
<u>OPHIOTHRIX ANGULATA</u>	+	+	2
<u>OPHIOTHRIX SUIENSONII</u>	+	+	2
ECHINOIDEA			
<u>ARBACIA PUNCTULATA</u>		+	1
HOLOTHUROIDEA			
<u>ISTICHOPUS BADIONOTUS</u>		+	1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 45

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
CRUSTACEA			
ISOPODA			
<u>FLABELLIFERA UNIDENT</u>	+		1
<u>PARACERCEIS CAUDATA</u>	+		1
BRACHYURA			
<u>HYPOCONCHA SABULOSA</u>		+	1
<u>DROMIDIA ANTILLENIS</u>	+		1
<u>MACROCOELOMA TRISPINOSUM</u>		+	1
<u>MITHRAX HISPIDUS</u>	+		1
<u>MITHRAX FORCEPS</u>	+	+	2
<u>MITHRAX PLEURACANTHUS</u>	+	+	2
<u>MITHRAX TURCEPS</u>	+		1
<u>PILUMNUS FLORIDANUS</u>	+		1
<u>PILUMNUS SAYI</u>		+	1
<u>PILUMNUS DASYPODUS</u>	+		1
<u>LOBOPTILUMNUS AGASSIZI</u>	+		1
STOMATOPODA			
<u>GONODACTYLUS BREDINI</u>	+	+	2
ANOMJRA			
<u>PAGURISTES SERICEUS</u>	+		1
<u>PAGURISTES TORTUGAE</u>	+		1
<u>PETROLISTHES GALATHINUS</u>	+	+	2
<u>MEGALOBRACHIUM SORIATUM</u>	+		1
CARIDEA			
<u>PERICLIMENES AMERICANUS</u>	+		1
<u>ALPHEUS NORMANNI</u>	+		1
<u>SYNALPHEUS TOWNSENDI</u>		+	1
<u>SYNALPHEUS MINUS</u>	+		1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 45

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
CHLOROPHYCEAE			
<u>CODIUM ISTHMOCLADUM</u>	+		1
<u>HALIMEDA DISCOIDEA</u>	+		1
<u>HALIMEDA TUNA</u>	+		1
<u>HALIMEDA CF. MONILE</u>	+		1
<u>UDOTEA CYATHIFORMIS</u>		+	1
<u>CAULERPA PELTATA</u>	+		1
PHAEOPHYCEAE			
<u>DICTYOPTERIS CF. MEMBRANACEA</u>	+		1
<u>DICTYOTA BARTAYRESII</u>	+		1
<u>SARAGASSUM CF. HYSTRIX</u>	+	+	2
<u>SARAGASSUM HYSTRIX V. BUXIFOLIUM</u>	+		1
<u>SARGASSUM FILIPENDULA</u>	+		1
RHODOPHYCEAE			
<u>EUCHEUMA NUDUM</u>	+		1
<u>BOTRYOCLADIA OCCIDENTALIS</u>	+	+	2
<u>POLYSIPHONIA UNIDENT</u>	+		1
<u>LAURENCIA CF. ORTUSA</u>	+		1
<u>LAURENCIA GEMMIFERA</u>	+		1
<u>LAURENCIA INTRICATA</u>	+		1
<u>RHODOPHYTA SP. 19</u>		+	1
<u>RHODOPHYTA SP. 18</u>		+	1
<u>RHODOPHYTA SP. 7</u>	+		1
<u>RHODOCHYTA SP. 3</u>	+		1
<u>RHODOPHYTA SP. 2</u>	+		1
<u>RHODOPHYTA SP. 1</u>	+		1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 45

<u>TAXA</u>	<u>CRUISE</u>		<u>TOTAL</u>
	<u>1</u>	<u>3</u>	
<u>SYNOdontidae</u>			
<u>SYNOdus ROETENS</u>	1		1
<u>SYNOdus INTERMEDIUS</u>	1	2	3
<u>OGCOCEPHALIDAE</u>			
<u>OGCOCEPHALUS RADIATUS</u>		1	1
<u>SERRANIDAE</u>			
<u>EPINEPHELUS MORIO</u>		1	1
<u>GRAMMISTIDAE</u>			
<u>RYPTICUS MACULATUS</u>	1	1	2
<u>HAEMULIDAE</u>			
<u>HAEMULON AUROLINEATUM</u>	2	2	4
<u>HAEMULON PLUMIERI</u>		14	14
<u>SPARIDAE</u>			
<u>CALAMUS BAJONADO</u>	2		2
<u>CALAMUS CALAMUS</u>		1	1
<u>CALAMUS PENNA</u>		1	1
<u>EPHIPPIDAE</u>			
<u>CHAETODIPTERUS FABER</u>	19	1	20
<u>CHAETODONTIDAE</u>			
<u>HOLACANTHUS BERMUDENSIS</u>		2	2
<u>LABRIDAE</u>			
<u>HALICHOERES BIVITTATUS</u>		6	6
<u>LACHNOLAIMUS MAXIMUS</u>	1	2	3
<u>OSTRACHIDAE</u>			
<u>LACTOPHRYS QUADRICORNIS</u>	1		1
<u>TETRAODONTIDAE</u>			
<u>SPHOEROIDES SPENGLERI</u>	1	3	4
<u>DIODONTIDAE</u>			
<u>CHILOMYCTERUS SCHOEPEI</u>		3	3
NUMBER OF SPECIES	9	14	
NUMBER OF FAMILIES	8	11	

**Table F-3. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 47**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 47

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
CNIDARIA			
ZOANTHARIA			
<u>SIDERASTREA SIDEREA</u>		+	1
<u>MONTASTREA CAVERNOSA</u>		+	1
<u>FAVIA GRAVIDA</u>	+	+	2
ALCYONARIA			
<u>PSEUDOPLEXAURA POROSA</u>		+	1
<u>PSEUDOPLEXAURA FULSIFERA</u>	+		1
<u>EUNICEA SP.</u>		+	1
<u>PLEXAURELLA DICHOTOMA</u>	+	+	2
<u>PSEUDOPTEROGORGIA ACEROSA</u>	+	+	2
<u>PTEROGORGIA GUADALUPENSIS</u>		+	1
MOLLUSCA			
BIVALVIA			
<u>ANADARA NOTABILIS</u>		+	1
<u>ARCA IMBRICATA</u>	+		1
<u>AEQUIPECTEN ACANTHODES</u>	+		1
<u>SPONDYLUS ICTERICUS</u>		+	1
<u>LAEVICARDIUM LAEVIGATUM</u>		+	1
<u>CHIONE PAPHIA</u>		+	1
<u>ARCINELLA UNIDENT</u>		+	1
GASTROPODA			
<u>PSEUDOSTOMATELLA ERYTHROCOMA</u>		+	1
<u>STROMBUS GIGAS</u>		+	1
<u>CREPIDULA ACULEATA</u>	+	+	2
<u>PHALIIUM GRANULATUM</u>	+		1
<u>MUREX BREVIIFONS</u>		+	1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 47

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
<u>CRUSTACEA</u>			
<u>BRACHYURA</u>			
<u>HOMOLA UNIDENT</u>	+		1
<u>HYPOCONCHA SABULOSA</u>	+		1
<u>DROMIDIA ANTILLENIS</u>		+	1
<u>CALAPPA FLAMMEA</u>		+	1
<u>ILIACANTHA INTERMEDIA</u>		+	1
<u>STENORYNCHUS SETICORNIS</u>	+	+	2
<u>METOPORHAPHIS CALCARATA</u>	+		1
<u>PODOCHELA SIDNEYI</u>	+		1
<u>PODOCHELA RIISEI</u>	+	+	2
<u>MACROCOELOMA TRISPINOSUM</u>	+		1
<u>MACROCOELOMA CAMPTOCERUM</u>	+		1
<u>MITHRAX FLEURACANTHUS</u>	+		1
<u>PITHO UNIDENT</u>	+		1
<u>PORTUNUS SPINIMANUS</u>		+	1
<u>PORTUNUS ANCEPS</u>	+		1
<u>PILUMNUS SXYI</u>	+	+	2
<u>PILUMNUS DASYPODUS</u>	+	+	2
<u>LOBOPILUMNUS AGASSIZI</u>	+		1
<u>STOMATOPODA</u>			
<u>GONODACTYLUS BREDINI</u>	+		1
<u>ANOMURA</u>			
<u>PAGURISTES SERICEUS</u>		+	1
<u>PETROLISTHES GALATHINUS</u>	+	+	2
<u>PENAEIDEA</u>			
<u>SICYONIA TYPICA</u>	+		1
<u>SICYONIA LAEVIGATA</u>	+		1
<u>CARIDEA</u>			
<u>ALPHEUS NORMANNI</u>	+		1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 47

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
ECHINODERMATA			
ASTEROIDEA			
<u>LUIDIA ALTERNATA</u>	+	+	2
<u>ASTROPECTEN DUPLICATUS</u>		+	1
<u>ASTROPECTEN ARTICULATUS</u>	+		1
<u>ASTROPECTEN COMPTUS</u>		+	1
OPHIUROIDEA			
<u>ASTROCYCLUS CAECILIA</u>		+	1
<u>OPHIOLEPIS ELEGANS</u>	+	+	2
<u>OPHIOTHRIX ANGULATA</u>	+		1
<u>OPHIOTHRIX LINEATA</u>	+		1
ECHINOIDEA			
<u>GLYPEASTER SUBDEPRESSUS</u>		+	1
<u>ENCOPE ABERRANS</u>		+	1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 47

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
CHLOROPHYCEAE			
<u>CODIUM ISTHMOCLADUM</u>	+		1
<u>HALIMEDA CF. SIMULANS</u>	+		1
<u>UDOTEA CONGLUTINATA</u>	+		1
<u>CAULERPA SERTULARIODES</u>	+		1
<u>CAULERPA MEXICANA</u>	+		1
PHAEOPHYCEAE			
<u>DICTYOTA BARTAYRESII</u>	+		1
<u>SARAGASSUM CF. HYSTRIX</u>	+	+	2
RHODOPHYCEAE			
<u>EUCHEUMA NUDUM</u>		+	1
<u>GRACILARIA UNIDENT</u>		+	1
<u>GRACILARIA CYLINDRICA</u>	+		1
<u>GRACILARIA ARMATA</u>	+		1
<u>JANIA PUMILA</u>		+	1
<u>CHAMPIA PARVULA</u>	+		1
<u>BOTRYOCLADIA OCCIDENTALIS</u>	+		1
<u>SPYRIDIA FILAMENTOSA</u>	+		1
<u>WRIGHTIELLA TUMANOWICZI</u>		+	1
<u>RHODOPHYTA SP. 10</u>	+		1
<u>RHODOPHYTA SP. 9</u>	+		1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 47

TAXA	CRUISE		TOTAL
	<u>1</u>	<u>3</u>	
MURAENIDAE			
<u>GYMNOTHORAX NIGROMARGINATUS</u>		1	1
SYNODONTIDAE			
<u>SYNODUS INTERMEDIUS</u>		1	1
OGCOCEPHALIDAE			
<u>OGCOCEPHALUS CUBIFRONS</u>		1	1
SERRANIDAE			
<u>EPINEPHELUS MORIO</u>		1	1
<u>DIPLECTRUM FORMOSUM</u>		1	1
LUTJANIDAE			
<u>LUTJANUS SYNAGRIS</u>	2	2	4
HAEMULIDAE			
<u>HAEMULON AUROLINEATUM</u>	6		6
<u>HAEMULON PLUMIERI</u>	6	2	8
SCIAENIDAE			
<u>EQUETUS LANCEOLATUS</u>		2	2
MULLIDAE			
<u>MULLIDAE UNIDENT</u>		1	1
CHAETODONTIDAE			
<u>POMACANTHUS ARCUATUS</u>		3	3
BOTHIDAE			
<u>CYCLOPSETTA FIMBRIATA</u>		1	1
BALISTIDAE			
<u>BALISTES CAPRISCUS</u>		2	2
<u>MONACANTHUS CILIATUS</u>		2	2
<u>MONACANTHUS HISPIDUS</u>		2	2
OSTRACHIDAE			
<u>LACTOPHRYS QUADRICORNIS</u>	1		1
NUMBER OF SPECIES	4	14	
NUMBER OF FAMILIES	3	11	

**Table F-4. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 51**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 51

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
MOLLUSCA			
BIVALVIA			
<u>PINCTADA IMERICATA</u>	+		1
<u>PTERIA COLYMBUS</u>		+	1
<u>SPONDYLUS AMERICANUS</u>		+	1
GASTROPODA			
<u>CREPIDULA PLANA</u>		+	1
<u>MUREX POMUM</u>		+	1
ECHINODERMATA			
ASTEROIDEA			
<u>LUIDIA ALTERNATA</u>		+	1
<u>ASTROPECTEN AMERICANUS</u>		+	1
<u>ASTROPECTEN DUPLICATUS</u>	+		1
<u>ECHINASTER SPINULOSUS</u>		+	1
OPHIUROIDEA			
<u>OPHIACTIS SAVIGNYI</u>	+		1
<u>AMPHIPHOLIS SQUAMATA</u>	+		1
<u>OPHIOTHRIX ANGULATA</u>	+		1
ECHINOIDEA			
<u>LYTECHINUS VARIEGATUS</u>		+	1
<u>CLYPEASTER SUBDEPRESSUS</u>		+	1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 51

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
CRUSTACEA			
BRACHYURA			
<u>PODOCHELA SIDNEYI</u>	+		1
<u>MITHRAX HISPIDUS</u>	+		1
<u>PITHO UNIDENT</u>		+	1
<u>PILUMNUS PANNOSUS</u>		+	1
<u>PILUMNUS DASYPODUS</u>	+		1
ANOMURA			
<u>PETROLISTHES GALATHINUS</u>	+		1
PENAEIDEA			
<u>PENAEUS AZTECUS</u>	+		1
<u>METAPENAEOPSIS GOODEI</u>	+		1
CARIDEA			
<u>SYNALPHEUS TOWNSENDI</u>	+		1
<u>SYNALPHEUS MINUS</u>		+	1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 51

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
CHLOROPHYCEAE			
<u>HALIMEDA</u> CF. <u>SIMULANS</u>	+	+	2
<u>HALIMEDA</u> CF. <u>MONILE</u>	+		1
<u>UDOTEA</u> <u>CONGLUTINATA</u>	+	+	2
PHAEOPHYCEAE			
<u>DICTYOPTERIS</u> UNIDENT		+	1
<u>DICTYOPTERIS</u> CF. <u>MEMBRANACEA</u>	+		1
RHODOPHYCEAE			
<u>GRACILARIA</u> <u>VERRUCOSA</u>	+		1
<u>SPYRIDIA</u> <u>FILAMENTOSA</u>	+		1
<u>RHODOPHYTA</u> SP. 17	+		1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 51

<u>TAXA</u>	<u>CRUISE</u>		<u>TOTAL</u>
	<u>1</u>	<u>3</u>	
<u>MURAENIDAE</u>			
<u>GYMNOTHORAX NIGROMARGINATUS</u>	1		1
<u>SYNODONTIDAE</u>			
<u>SYNODUS INTERMEDIUS</u>		2	2
<u>SERRANIDAE</u>			
<u>EPINOPHELUS MORIO</u>		1	1
<u>DIPLECTRUM FORMOSUM</u>		1	1
<u>HAEMULIDAE</u>			
<u>HAEMULON FLUMIERI</u>	6	2	8
<u>ANISOTREMUS VIRGINICUS</u>		1	1
<u>SCIAENIDAE</u>			
<u>EQUETUS LANCEOLATUS</u>		1	1
<u>LABRIDAE</u>			
<u>LACHNOLAIMUS MAXIMUS</u>		1	1
NUMBER OF SPECIES	2	7	
NUMBER OF FAMILIES	2	5	

**Table F-5. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 19**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 19

TAXA	CRUISE		NUMBER OF OCCURRENCES
	1	3	
CNIDARIA			
ALCYONARIA			
<u>LOPHOGORGIA PUNICEA</u>	+		1
<u>PSEUDOPTEROGORGIA ACEROSA</u>	+		1
<u>PTEROGORGIA GUADALUPENSIS</u>	+		1
MOLLUSCA			
BIVALVIA			
<u>AEQUIPECTEN MUSCOSUS</u>	+		1
<u>ARGOPECTEN GIBBUS</u>		+	1
<u>AEQUIPECTEN ACANTHODES</u>	+		1
<u>LAEVICARDIUM LAEVIGATUM</u>	+	+	2
<u>TELLINA AEQUISTRIATA</u>		+	1
<u>CHIONE CANCELLATA</u>		+	1
<u>CHIONE PAPHIA</u>		+	1
<u>MACROCALLISTA MACULATA</u>		+	1
<u>ARCINELLA CORNUTA</u>		+	1
GASTROPODA			
<u>DIODORA CAYENENSIS</u>		+	1
<u>CALLIOSTOMA JAVANICUM</u>		+	1
<u>STROMBUS PUGILIS</u>		+	1
<u>CREPIDULA ACULEATA</u>	+	+	2
<u>MUREX BREVIFORMIS</u>		+	1
<u>FASCIOLARIA LILIUM</u>		+	1
ECHINODERMATA			
ASTEROIDEA			
<u>ASTROPECTEN DUPLICATUS</u>		+	1
<u>ASTROPECTEN COMPTUS</u>		+	1
<u>ECHINASTER SPINULOSUS</u>	+	+	2
OPHIUROIDEA			
<u>ASTROCYCLUS CAECILIA</u>		+	1
<u>OPHIOTHRIX ANGULATA</u>		+	1
ECHINOIDEA			
<u>ENCOPE MICHELINI</u>		+	1
HOLOTHUROIDEA			
<u>THYONELLA PERVICAX</u>		+	1
<u>ISTICHOPUS BADIONOTUS</u>	+	+	2

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 19

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>3</u>	
CRUSTACEA			
ISOPODA			
<u>PARACERCEIS CAUDATA</u>	+		1
BRACHYURA			
<u>CALAPPA SULCATA</u>		+	1
<u>ILIACANTHA INTERMEDIA</u>	+		1
<u>STENORYNCHUS SETICORNIS</u>		+	1
<u>MACROCOELOMA CAMPTOCERUM</u>	+		1
<u>SETENOCIONOPS FURCATA</u>	+		1
<u>MITHRAX PLEURACANTHUS</u>	+	+	2
<u>PITHO LHERMINIERI</u>	+		1
<u>PORTUNUS UNIDENT</u>	+		1
<u>PILUMNUS SAYI</u>		+	1
<u>PILUMNUS DASYPODUS</u>	+	+	2
STOMATOPODA			
<u>GONODACTYLUS BREDINI</u>		+	1
<u>GONODACTYLUS UNIDENT</u>	+		1
ANOMURA			
<u>PAGURISTES MOOREI</u>		+	1
<u>PAGURISTES SERICEUS</u>		+	1
<u>PAGURUS IMPRESSUS</u>		+	1
<u>PETROLISTHES GALATHINUS</u>	+	+	2
PENAEIDEA			
<u>SICYONIA LAEVIGATA</u>	+		1
CARIDEA			
<u>SYNALPHEUS FRITZMUELLERI</u>	+		1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 19

CRUISE

<u>TAXA</u>	<u>1</u>	<u>NUMBER OF OCCURRENCES</u>
CHLOROPHYCEAE		
<u>UDOTEA CYATHIFORMIS</u>	+	1
<u>UDOTEA CONGLUTINATA</u>	+	1
<u>CAULERPA SERTULARIOIDES</u>	+	1
PHAEOPHYCEAE		
<u>DICTYOTA BARTAYRESII</u>	+	1
RHODOPHYCEAE		
<u>LITHOTHAMNIUM OCCIDENTALE</u>	+	1
<u>CHAMPIA PARVULA</u>	+	1
ANGIOSPERMAE		
<u>HALOPHILA BAILLONIS</u>	+	1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 19

TAXA	CRUISE		TOTAL
	<u>1</u>	<u>3</u>	
SYNODONTIDAE			
<u>SYNODUS FOETENS</u>		1	1
<u>SYNODUS INTERMEDIUS</u>	2		2
BATRACHOIDIDAE			
<u>OPSANUS PARDUS</u>	2	1	3
OGCOCKPHALIDAE			
<u>OGCOCKPHALUS RADIATUS</u>		1	1
SERRANIDAE			
<u>DIPLECIUM FORMOSUM</u>	2	1	3
LUTJANIDAE			
<u>LUTJANUS SYNAGRIS</u>	4	1	5
HAEMULIDAE			
<u>HAEMULON PLUMIERI</u>	2	1	3
BLENNIDAE			
<u>PARABLENNIUS MARMOREUS</u>		1	1
BALISTIDAE			
<u>MONACANTHUS CILIATUS</u>	4	3	7
DIODONTIDAE			
<u>CHILOMYCTERUS SCHOEPEI</u>	2		2
NUMBER OF SPECIES	7	8	
NUMBER OF FAMILIES	7	8	

**Table F-6. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 52**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 52

TAXA	CRUISE				NUMBER OF OCCURRENCES
	1	2	3	4	
CNIDARIA					
ZOANTHARIA					
<u>SIDERASTREA SIDEREA</u>				+	1
<u>FAVIA GRAVIDA</u>	+	+	+	+	4
<u>PHYLLANGIA AMERICANA</u>	+	+	+	+	4
ALCYONARIA					
<u>PSEUDOPLEXAURA POROSA</u>	+		+		2
<u>MURICEA ELONGATA</u>	+	+	+	+	4
<u>EUNICEA KNIGHTI</u>		+			1
<u>PSEUDOPLEXAURA FULSIFERA</u>		+	+	+	3
<u>EUNICEA SP.</u>				+	1
<u>EUNICEA FUSCA</u>			+	+	2
<u>EUNICEA ASPERULA</u>				+	1
<u>PLEXAURELLA NUTANS</u>		+		+	2
<u>PLEXAURELLA FUSIFERA</u>		+			1
<u>PLEXAURELLA FUSCA</u>	+				1
<u>PLEXAURELLA PUMILA</u>			+	+	2
<u>LOPHOGORGIA BARBADENSIS</u>		+			1
<u>PTEROGORGIA GUADALUPENSIS</u>		+	+	+	3
MOLLUSCA					
BIVALVIA					
<u>ANADARA NOTABILIS</u>		+			1
<u>ANADARA UNIDENT</u>		+	+		2
<u>ARCA ZEBRA</u>				+	1
<u>BARBATIA TENERA</u>		+			1
<u>BARBATIA CANDIDA</u>		+			1
<u>LIOBERUS CASTANEUS</u>		+			1
<u>LITHOPHAGA BISULCATA</u>		+	+	+	3
<u>PINCTADA IMBRICATA</u>	+	+			2
<u>PINCTADA RADIATA</u>		+			1
<u>PTERIA COLYMBUS</u>	+	+	+		3
<u>PTERIA UNIDENT</u>				+	1
<u>SPONDYLUS AMERICANUS</u>			+		1
<u>OSTREA PERMOLIS</u>		+			1
<u>SOLENI OBLIQUUS</u>			+		1
<u>CHIONE CANCELLATA</u>	+				1
<u>CHAMA MACROPHYLLA</u>		+	+	+	3
<u>CHAMA CONGREGATA</u>		+			1
<u>CHAMA FLORIDA</u>			+		1
<u>CHAMA SP. 1</u>		+		+	2

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 52

<u>TAXA</u>	<u>CRUISE</u>				<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
<u>GASTROPODA</u>					
<u>DIODORA CAYENENSIS</u>				+	1
<u>DIODORA LISTERI</u>			+		1
<u>LUCAPINA SOWERBII</u>		+			1
<u>VERMICULARIA KNORRI</u>		+	+	+	3
<u>CERITHIUM ALGICOLA</u>			+		1
<u>STROMBUS ALATUS</u>				+	1
<u>STROMBUS GIGAS</u>			+	+	2
<u>CREPIDULA FORNICATA</u>		+			1
<u>CREPIDULA CONVEXA</u>				+	1
<u>CREPIDULA PLANA</u>				+	1
<u>CREPIDULA ACULEATA</u>	+	+		+	3
<u>CREPIDULA MACULOSA</u>		+			1
<u>MUREX FLORIFER</u>		+			1
<u>MUREX BREVIFORNIS</u>			+		1
<u>CANTHARUS CANCELLARIUS</u>		+			1
<u>PISANIA TINCTA</u>		+		+	2
<u>FASCIOLARIA LILIUM</u>			+	+	2
<u>PLEUROFLOCA GIGANTEA</u>				+	1
<u>LATIRUS INFUNDIMULUM</u>			+		1
<u>CEPHALOPODA</u>					
<u>OCIOPIUS UNIDENT</u>				+	1
<u>ECHINODERMATA</u>					
<u>ASTEROIDEA</u>					
<u>ASTROPECTEN DUPLICATUS</u>			+		1
<u>ECHINASTER MODESTUS</u>				+	1
<u>ECHINASTER SPINULOSUS</u>	+			+	2
<u>OPHIUROIDEA</u>					
<u>OPHIACTIS SAVIGNYI</u>	+	+			2
<u>OPHIOSTIGMA ISACANTHUM</u>		+			1
<u>OPHIOTHRIX ANGULATA</u>	+	+	+		3
<u>ECHINOIDEA</u>					
<u>ARBACIA PUNCTULATA</u>			+	+	2
<u>LYTECHINUS VARIEGATUS</u>	+	+	+	+	4
<u>CLYPEASTER SUBDEPRESSUS</u>				+	1
<u>CLYPEALTER ROSACEUS</u>				+	1

a.PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 52

TAXA	CRUISE				NUMBER OF OCCURRENCES
	1	2	3	4	
CRUSTACEA					
BRACHYURA					
<u>HYPOCONCHA SABULOSA</u>			+		1
<u>DROMIDIA ANTILLENIS</u>		+	+	+	3
<u>STENORYNCHUS SETICORNIS</u>	+	+			2
<u>PODOCHELA SIDNEYI</u>		+			1
<u>MACROCOELOMA TRISPINOSUM</u>		+		+	2
<u>MACROCOELOMA CAMPTOCERUM</u>		+		+	2
<u>MITHRAX HISPIDUS</u>		+			1
<u>MITHRAX PLEURACANTHUS</u>	+	+	+	+	4
<u>MITHRAX TURCEPS</u>		+			1
<u>PITHO LHERMINIERI</u>				+	1
<u>PORTUNUS GIBBESI</u>	+				1
<u>PORTUNUS FLORIDANUS</u>				+	1
<u>PANOPEUS TURGIDUS</u>		+			1
<u>PANOPEUS OCCIDENTALIS</u>				+	1
<u>PILUMNUS SAYI</u>		+	+	+	3
<u>PILUMNUS DASYPODUS</u>	+	+			2
<u>PILUMNUS LACTEUS</u>	+				1
<u>EURYPLAX NITIDA</u>	+			+	2
<u>PANOPLAX DEPRESSA</u>				+	1
STOMATOPODA					
<u>GONODACTYLUS BREDINI</u>		+	+	+	3
<u>GONODACTYLUS UNIDENT</u>		+			1
ANOMURA					
<u>PAGURISTES SERICEUS</u>			+		1
<u>PAGURISTES TORTUGAE</u>	+			+	2
<u>PETROLISTHES GALATHINUS</u>	+	+	+	+	4
<u>PORCELLANA SAYANA</u>				+	1
<u>MEGALOBRACTIUM SORIATUM</u>	+				1
PENAEIDEA					
<u>PENAEUS DUORARUM</u>		+			1
<u>SICYONIA LAEVIGATA</u>				+	1
CARIDEA					
<u>PERICLIMENES AMERICANUS</u>	+				1
<u>PERICLIMENAEUS CARAIBICUS</u>				+	1
<u>ANCHISTIODES ANTIGUENSIS</u>	+				1
<u>SYNALPHEUS TOWNSENDI</u>				+	1
<u>SYNALPHEUS LONGICARPUS</u>		+			1
<u>SYNALPHEUS MINUS</u>			+	+	2
<u>HIPPOLYTE UNIDENT</u>		+			1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 52

<u>TAXA</u>	<u>CRUISE</u>		<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>4</u>	
<u>CHLOROPHYCEAE</u>			
<u>UDOTEA FLABELLUM</u>		+	1
<u>CAULERPA SERTULARIOIDES</u>		+	1
<u>PHAEOPHYCEAE</u>			
<u>DICTYOPTERIS CF. MEMBRANACEA</u>	+	+	2
<u>DICTYOTA LINEARIS</u>		+	1
<u>DICTYOTA BARTAYRESII</u>		+	1
<u>RHODOPHYCEAE</u>			
<u>AGARDHIELLA RAMOSISSIMA</u>		+	1
<u>GRACILARIA FOLLIFERA</u>		+	1
<u>GRACILARIA CYLINDRICA</u>		+	1
<u>GRACILARIA SP. 1</u>		+	1
<u>CHAMPIA PARVULA</u>		+	1
<u>BOTRYOCLADIA OCCIDENTALIS</u>		+	1
<u>SPYRIDIA FILAMENTOSA</u>	+	+	2
<u>LAURENCIA SP. 1</u>	+		1
<u>RHODOPHYTA SP. 17</u>		+	1
<u>RHODOPHYTA SP. 16</u>		+	1
<u>RHODOPHYTA SP. 15</u>		+	1
<u>RHODOPHYTA SP. 14</u>		+	1
<u>RHODOPHYTA SP. 13</u>		+	1
<u>RHODOPHYTA SP. 8</u>	+		1
<u>RHODOPHYTA SP. 6</u>		+	1
<u>RHODOPHYTA SP. 5</u>		+	1
<u>RHODOPHYTA SP. 4</u>		+	1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 52

<u>TAXA</u>	<u>CRUISE</u>			<u>TOTAL</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
CLUPEIDAE				
<u>HARENGULA JAGUANA</u>	10			10
SYNODONTIDAE				
<u>SYNODUS INTERMEDIUS</u>			2	2
TRIGLIDAE				
<u>PRIONOTUS MARTIS</u>		1		1
SERRANIDAE				
<u>EPINEPHELUS MORIO</u>		1	1	2
<u>SERRANUS SUBLIGARIUS</u>	2			2
GRAMMISTIDAE				
<u>RYPTICUS MACULATUS</u>	4	1		5
CARANGIDAE				
<u>CARANX CRYOS</u>	4			4
LUTJANIDAE				
<u>LUTJANUS SYNAGRIS</u>		2		2
HAEMULIDAE				
<u>HAEMULON PLUMIERI</u>	44	23		67
SPARIDAE				
<u>LAGODON RHOMBOIDES</u>	8			8
<u>CALAMUS ARCTIFRONS</u>	30			30
SCIAENIDAE				
<u>EQUETUS LANCEOLATUS</u>		8		8
EPHIPPIDAE				
<u>CHAETODIPTERUS FABER</u>	4	2		6
CHAETODONTIDAE				
<u>CHAETODON OCELLATUS</u>		1		1
LABRIDAE				
<u>LACHNOLAIMUS MAXIMUS</u>	12	4	1	17
BALISTIDAE				
<u>MONACANTHUS CILIATUS</u>		1		1
<u>MONACANTHUS HISPIDUS</u>	2		1	3
NUMBER OF SPECIES	10	10	4	
NUMBER OF FAMILIES	9	10	4	

**Table F-7. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 21**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 21

TAXA	CRUISE			NUMBER OF OCCURRENCES
	2	3	4	
CNIDARIA				
ZOANTHARIA				
<u>STEPHANOCOENIA MICHELINI</u>		+		1
<u>SIDERASTREA SIDEREA</u>	+	+	+	3
<u>OCULINA TENELLA</u>		+		1
<u>OCULINA VARICOSA</u>		+		1
<u>SCOLYMIA UNIDENT</u>		+		1
<u>MISSA ANGULOSA</u>		+	+	2
MOLLUSCA				
BIVALVIA				
<u>CHLAMYS UNIDENT</u>	+			1
<u>SPONDYLUS AMERICANUS</u>			+	1
<u>PODODESMIS UNIDENT</u>	+			1
<u>EUCRASSATELLA SPECIOSA</u>			+	1
<u>NEMOCARDIUM PERAMABILE</u>			+	1
<u>PERIGLYPTA LISTERI</u>			+	1
<u>CHAMA MACROPHYLLA</u>			+	1
GASTROPODA				
<u>CALLIOSTOMA PULCHRUM</u>			+	1
<u>CALLIOSTOMA JAVANICUM</u>			+	1
<u>VERMICULARIA KNORRI</u>	+			1
<u>STROMBUS COSTATUS</u>			+	1
<u>XENOPHORA CONCHYLIOPHORA</u>	+			1
<u>TRIVIA PEDICULUS</u>			+	1
<u>CYPRAEA ZEBRA</u>	+			1
<u>PHALIUM GRANULATUM</u>		+		1
<u>MUREX FLORIFER</u>		+		1
<u>LATIRUS CARINIFERUS</u>	+			1
<u>OLIYA SAYANA</u>	+			1
<u>SCAPHELLA JUNONIA</u>		+		1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 21

<u>TAXA</u>	<u>CRUISE</u>			<u>NUMBER OF OCCURRENCES</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
ECHINODERMATA				
ASTEROIDEA				
<u>LUIDIA ALTERNATA</u>		+		1
<u>ASTROPECTEN DUPLICATUS</u>			+	1
<u>ASTROPECTEN NITIDUS</u>	+			1
<u>OREASTER RETICULATUS</u>		+		1
OPHIUROIDEA				
<u>OPHIODERMA BREVISPIA</u>	+	+	+	3
<u>OPHIOTHRIX ANGULATA</u>		+		1
<u>OPHIOTHRIX LINEATA</u>			+	1
ECHINOIDEA				
<u>EUCIDARIS TRIBULOIDES</u>	+			1
<u>ARBACIA PUNCTULATA</u>		+	+	2
<u>LYTECHINUS VARIEGATUS</u>		+	+	2
<u>CLYPEASTER SUBDEPRESSUS</u>	+	+	+	3
<u>CLYPEALTER ROSACEUS</u>	+			1
<u>MEOMA VENTRICOSA</u>			+	1
HOLOTHUROIDEA				
<u>ISTICHOPUS RADIONOTUS</u>	+			1
<u>HOLOTHUROIDEA SP. A</u>	+			1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 21

TAXA	CRUISE			NUMBER OF OCCURRENCES
	2	3	4	
CRUSTACEA				
BRACHYURA				
<u>DROMIDIA ANTILLENIS</u>	+		+	2
<u>CALAPPA FLAMMEA</u>	+			1
<u>CALAPPA SULGATA</u>	+			1
<u>SPELOEOPHORUS NODOSUS</u>		+		1
<u>CALLIDACTYLUS ASPER</u>			+	1
<u>RANINOIDES LOUISIANENSIS</u>	+			1
<u>STENORYNCHUS SETICORNIS</u>	+		+	2
<u>MACROCOELOMA TRISPINOSUM</u>			+	1
<u>SETENOCIONOPS FURCATA</u>	+	+		2
<u>MITHRAX FLEURACANTHUS</u>	+			1
<u>MITHRAX ACUTICORNIS</u>			+	1
<u>PARTHENOPE GRANULATA</u>			+	1
<u>PORTUNUS SPINICARPUS</u>			+	1
<u>PORTUNUS ORDWAYI</u>	+			1
<u>PARACTAEA RUFOPUNCTATA NODOSA</u>			+	1
<u>PALICUS ALTERNATUS</u>			+	1
STOMATOPODA				
<u>GONODACTYLUS BREDINI</u>		+	+	2
<u>EURYSQUILLA PLUMATA</u>			+	1
ANOMURA				
<u>PAGURISTES SERICEUS</u>		+		1
<u>PAGURUS DEFENSUS</u>			+	1
<u>DARDANUS FUCOSUS</u>	+		+	2
<u>MUNIDA PUSILLA</u>		+	+	2
<u>GALATHEA ROSTRATA</u>	+			1
PENAEIDEA				
<u>SICYONIA BREVIROSTRIS</u>	+			1
<u>PARAPENAEUS POLITUS</u>			+	1
CARIDEA				
<u>ALPHEUS NORMANNI</u>			+	1
<u>SYNALPHEUS TOWNSENDI</u>		+		1
<u>SYNALPHEUS MINUS</u>		+		1
STENOPODIDEA				
<u>STENOPUS SCUTELLATUS</u>			+	1
PALINURA				
<u>SCYLLARIDES MODIFER</u>			+	1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 21

<u>TAXA</u>	<u>CRUISE</u>			<u>NUMBER OF OCCURRENCES</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
<u>CHLOROPHYCEAE</u>				
<u>PSEUDOCODIUM FLORIDANUM</u>			+	1
<u>CAULERPA RACEMOSA-V. MACROPHYSA</u>			+	1
<u>PHAEOPHYCEAE</u>				
<u>DICTYOTA BARTAYRESII</u>			+	1
<u>SARAGASSUM CF. HYSTRIX</u>		+		1
<u>SPOROCHNUS PENDUNCULATUS</u>			+	1
<u>NERSTETIA TROPICA</u>			+	1
<u>PHAEOPHYTA SP. 1</u>			+	1
<u>RHODOPHYCEAE</u>				
<u>AGARDHIELLA RAMOSISSIMA</u>			+	1
<u>GRACILARIA MAMMILLARIS</u>	+			1
<u>GRACILARIA CYLINDRICA</u>			+	1
<u>KALLYMENIA WESTII</u>			+	1
<u>CHAMPIA PARVULA</u>			+	1
<u>FAUCHEA HASSLERI</u>			+	1
<u>HYPOGLOSSUM TENUIFOLIUM</u>			+	1
<u>POLYSIPHONIA UNIDENT</u>			+	1
<u>RHODOPHYTA SP. 12</u>			+	1
<u>RHODOPHYTA SP. 11</u>			+	1
<u>RHODOPHYTA SP. 10</u>			+	1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 21

TAXA	CRUISE			TOTAL
	<u>2</u>	<u>3</u>	<u>4</u>	
SYNODONTIDAE				
<u>SYNODUS INTERMEDIUS</u>	2	1		3
<u>SYNODUS PUEYI</u>			1	1
GOBIESOCIDAE				
<u>GOBIESOX STRUMOSUS</u>		1		1
SCORPAENIDAE				
<u>SCORPAENA BRASILIENSIS</u>			1	1
<u>SCORPAENA DISPAR</u>	4			4
<u>SCORPAENA PLUMIERI</u>	4			4
SERRANIDAE				
<u>SERRANUS PHOEBE</u>	2	2	6	10
PRIACANTHIDAE				
<u>PRIACANTHUS ALTA</u>	2			2
APOGONIDAE				
<u>APOGON AFFINIS</u>	2			2
<u>APOGON PSEUDOMACULATUS</u>	4		1	5
LUTJANIDAE				
<u>LUTJANUS GRISEUS</u>	2	1		3
<u>LUTJANUS SYNAGRIS</u>	2			2
GERREIDAE				
<u>EUCINOSTOMUS UNIDENT</u>	1			1
<u>EUCINOSTOMUS JONESI</u>	1			1
HAEMULIDAE				
<u>HAEMULON AUROLINEATUM</u>	4			4
SPARIDAE				
<u>CALAMUS UNIDENT</u>	1			1
<u>CALAMUS CALAMUS</u>		2		2

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 21

TAXA	CRUISE			TOTAL
	<u>2</u>	<u>3</u>	<u>4</u>	
APOGONIDAE				
<u>EMBLEMARIA PANDIONIS</u>	2			2
<u>CALAMUS PENNATULA</u>	2			2
MULLIDAE				
<u>PSEUDUPENEUS MACULATUS</u>			1	1
CHAETODONTIDAE				
<u>CHAETODON OCELLATUS</u>	11	1		12
<u>CHAETODON SEDENTARIUS</u>	8	3		11
POMACENTRIDAE				
<u>CHROMIS UNIDENT</u>	2			2
<u>CHROMIS ENCHRYSURUS</u>			1	1
SCARIDAE				
<u>SPARISOMA UNIDENT</u>			3	3
CLINIDAE				
<u>EMBLEMARIA PANDIONIS</u>	2			2
BOTHIDAE				
<u>CYCLOPSETTA FIMBRIATA</u>	2			2
<u>SYACIUM PAPILLOSUM</u>	4	1	3	8
BALISTIDAE				
<u>MONACANTHUS CILIATUS</u>			1	1
<u>MONACANTHUS HISPIDUS</u>	2			2
TETRAODONTIDAE				
<u>SPHOEROIDES SPENGLERI</u>	2			2
DIODONTIDAE				
<u>DIODON HOLOCANTHUS</u>		1	1	2
NUMBER OF SPECIES	23	9	10	
NUMBER OF FAMILIES	15	8	10	

**Table F-8. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 29**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 29

TAXA	CRUISE				NUMBER OF OCCURRENCES
	1	2	3	4	
CNIDARIA					
ZOANTHARIA					
<u>MADRACIS ASPERULA</u>			+		1
<u>MADRACIS DECACTIS</u>	+	+	+	+	4
<u>MADRACIS FORMOSA</u>	+	+	+	+	4
<u>MADRACIS MIRABILIS</u>	+				1
<u>AGARICIA FRAGILIS</u>		+	+	+	3
<u>AGARICIA AGARICITES</u>	+	+	+	+	4
<u>HELIOSERIS CUCULLATA</u>	+	+	+	+	4
<u>PORITES ASTREOIDES</u>	+	+			2
<u>SOLENASTREA HYADES</u>	+	+	+	+	4
<u>MANICINA AREOLATA</u>			+		1
<u>SCOLYMIA UNIDENT</u>		+			1
ALCYONARIA					
<u>THESEA SP.</u>			+	+	2
MOLLUSCA					
BIVALVIA					
<u>ARCA UNIDENT</u>		+			1
GASTROPODA					
<u>CYPRAEA UNIDENT</u>		+			1
<u>CYPRAEA CINEREA</u>		+			1
<u>SILIQVARIA SQUAMATA</u>			+		1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 29

<u>TAXA</u>	<u>CRUISE</u>				<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
<u>ECHINODERMATA</u>					
<u>ASTEROIDEA</u>					
<u>FORANIELLA REGULARIS</u>	+	+	+	+	4
<u>OPHIUROIDEA</u>					
<u>OPHIOMYXIDAE</u>		+			1
<u>OPHIOMYXA FLACCIDA</u>			+	+	2
<u>OPHIOCOMA UNIDENT</u>		+	+	+	3
<u>OPHIOPSILA UNIDENT</u>				+	1
<u>OPHIODERMA BREVISPIA</u>		+		+	2
<u>OPHIODERMA RUBICUNDAM</u>	+	+	+	+	4
<u>OPHIACTIS SAVIGNYI</u>		+	+	+	3
<u>OPHIACTIS UNIDENT</u>			+	+	2
<u>OPHIONEREIS RETICULATA</u>			+		1
<u>OPHIONEREIS OLIVACEA</u>			+	+	2
<u>OPHIONEREIS UNIDENT</u>		+			1
<u>OPHIOTHRIX ANGULATA</u>			+	+	2
<u>OPHIOTHRIX SUENSONII</u>		+	+	+	3
<u>ECHINOIDEA</u>					
<u>EUCIDARIS TRIBULOIDES</u>				+	1
<u>STYLOCIDARIS AFFINIS</u>				+	1
<u>DIADEMA ANTILLARUM</u>			+		1
<u>ARRACIA PUNCTULATA</u>				+	1
<u>HOLOTHUROIDEA</u>					
<u>THYONELLA GEMMATA</u>	+				1
<u>CRINOIDEA</u>					
<u>COMATULIDA UNIDENT</u>		+	+	+	3

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 29

<u>TAXA</u>	<u>CRUISE</u>				<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
CRUSTACEA					
BRACHYURA					
<u>MITHRAX ACUTICORNIS</u>			+	+	2
<u>MICROPHRYS UNIDENT</u>		+			1
<u>MICROPANOPE SPINIPES</u>			+	+	2
<u>PARACTAEA RUFOPUNCTATA NODOSA</u>	+		+	+	3
STOMATOPODA					
<u>GONODACTYLUS BREDINI</u>			+	+	2
<u>GONODACTYLUS TORUS</u>				+	1
<u>GONODACTYLUS UNIDENT</u>		+			1
ANOMURA					
<u>MUNIDA PUSILLA</u>				+	1
CARIDEA					
<u>SYNALPHEUS TOWNSENDI</u>				+	1
<u>LYSMATA RATHBUNAE</u>				+	1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 29

TAXA	CRUISE			NUMBER OF OCCURRENCES
	2	3	4	
CHLOROPHYCEAE				
<u>ANADYOMENE MENZIESII</u>	+	+	+	3
<u>PSEUDOTETRASPORA ANTILLARUM</u>	+		+	2
PHAEOPHYCEAE				
<u>LOPHOPHORA VARIEGATA</u>	+			1
<u>PHAEOPHYTA SP. 2</u>			+	1
RHODOPHYCEAE				
<u>PEYSSONNELIA UNIDENT</u>	+		+	2
<u>PEYSSONNELIA RUBRA</u>	+			1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 29

<u>TAXA</u>	<u>CRUISE</u>				<u>TOTAL</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
<u>SCORPAENIDAE</u>					
<u>SCORPAENA DISPAR</u>			1	1	2
<u>SERRANIDAE</u>					
<u>SERRANUS ANNULARIS</u>			1	1	2
<u>SCHULTZEA BETA</u>	1				1
<u>CHAETODONTIDAE</u>					
<u>CHAETODON OCELLATUS</u>			1		1
<u>CHAETODON SEDENTARIUS</u>		2			2
<u>POMACENTRIDAE</u>					
<u>CHROMIS ENCHRYSURUS</u>	2	4			6
<u>CHROMIS SCOTTI</u>	1			2	3
<u>BALISTIDAE</u>					
<u>MONACANTHUS CILIATUS</u>			1		1
<u>MONACANTHUS TUCKERI</u>		2			2
NUMBER OF SPECIES	3	3	4	3	
NUMBER OF FAMILIES	2	3	4	3	

**Table F-9. Presence/Absence and Abundance Data for Invertebrates (a),
Plants (b), and Fish (c) by Cruise for Station 23**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 23

<u>TAXA</u>	<u>CRUISE</u>				<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
<u>CNIDARIA</u>					
<u>ZOANTHARIA</u>					
<u>MADRACIS ASPERULA</u>				+	1
<u>ALCYONARIA</u>					
<u>NICELLA SCHMITTI</u>				+	1
<u>MOLLUSCA</u>					
<u>BIVALVIA</u>					
<u>PECTINIDAE UNIDENT</u>				+	1
<u>CHLAMYS BENEDICTI</u>				+	1
<u>AEQUIPECTEN MUSCOSUS</u>				+	1
<u>CHAMA CONGREGATA</u>				+	1
<u>GASTROPODA</u>					
<u>HALIOTIS POURTALESII</u>				+	1
<u>TURBO CASTANEA</u>	+	+	+	+	4
<u>ASTRAEA PHOEBIA</u>				+	1
<u>ASTRAEA LONGISPINA</u>				+	1
<u>DISTORSIO CLATHRATA</u>				+	1
<u>SILIQUARIA SQUAMATA</u>				+	2
<u>MUREX FLORIFER</u>				+	1
<u>MUREX BREVIFORMS</u>				+	1
<u>PLEUROPLOCA GIGANTEA</u>				+	1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 23

TAXA	CRUISE				NUMBER OF OCCURRENCES
	1	2	3	4	
ECHINODERMATA					
ASTEROIDEA					
<u>LUIDIA BARBADENSIS</u>	+				1
<u>TOSIA PARVA</u>	+	+	+	+	4
<u>NARCISSIA TRIGONARIA</u>		+	+	+	3
<u>LINCKIA NODOSA</u>				+	1
<u>PORANIELLA REGULARIS</u>		+	+	+	3
<u>HENRICIA ANTILLARUM</u>				+	1
<u>ECHINASTER MODESTUS</u>		+			1
OPHIUROIDEA					
<u>OPHIOMYXA FLACCIDA</u>	+			+	2
<u>OPHIODERMA BREVISPIA</u>				+	1
<u>OPHIODERMA UNIDENT</u>		+			1
<u>OPHIODERMA RUBICUNDAM</u>	+	+	+	+	4
<u>OPHIACTIS SAVIGNYI</u>		+			1
<u>OPHIOTHRIX ANGULATA</u>		+		+	2
<u>OPHIOTHRIX SIMPSONII</u>	+	+	+	+	4
<u>MACROPHIOTHRIX UNIDENT</u>		+			1
ECHINOIDEA					
<u>EUCLIDARIS TRIBULOIDES</u>	+	+	+	+	4
<u>STYLOCIDARIS AFFINIS</u>	+	+	+	+	4
<u>ARBACIA PUNCTULATA</u>			+	+	2
<u>LYTECHINUS EUERGES</u>	+	+	+		3
<u>LYTECHINUS CALLIPEPLUS</u>		+			1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 23

<u>TAXA</u>	<u>CRUISE</u>				<u>NUMBER OF OCCURRENCES</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
CRUSTACEA					
BRACHYURA					
<u>ILIACANTHA SUBGLOBOSA</u>			+		1
<u>NIBILIA ANTILOCAPRA</u>	+				1
<u>MACROCOELOMA EUTHECA</u>				+	1
<u>PYROMAIA UNIDENT</u>	+				1
<u>MITHRAX ACUTICORNIS</u>			+	+	2
<u>MITHRAX TURCEPS</u>		+			1
<u>PARTHENOPE FRATERCULUS</u>			+	+	2
<u>PORTUNUS ORDWAYI</u>		+			1
<u>MICROPANOPE SPINIPES</u>	+		+	+	3
<u>PARACTAEA RUFOPUNCTATA NODOSA</u>			+	+	2
<u>EUCHIROGRAPSUS AMERICANUS</u>	+		+	+	3
<u>PALICUS ALTERNATUS</u>				+	1
<u>PALICUS FAXONI</u>			+		1
STOMATOPODA					
<u>SQUILLA PRASINOLINEATA</u>		+			1
<u>GONODACTYLUS BREDINI</u>			+	+	2
<u>GONODACTYLUS UNIDENT</u>	+	+			2
ANOMURA					
<u>PAGURUS ACADIANUS</u>			+		1
<u>DARDANUS FUCOSUS</u>				+	1
<u>MUNIDA FUSILLA</u>			+	+	2
<u>GALATHEA ROSTRATA</u>		+			1
CARIDEA					
<u>PALAEONETES INTERMEDIUS</u>	+				1
<u>ANCHISTIOIDES ANTIGUENSIS</u>			+		1
<u>SYNALPHEUS TOWNSENDI</u>			+		1
<u>SYNALPHEUS LONGICARPUS</u>				+	1
<u>SYNALPHEUS GOODEI</u>			+		1

b. PRESENCE/ABSENCE TABLE FOR PLANTS BY CRUISE FOR STATION: 23

TAXA	CRUISE				NUMBER OF OCCURRENCES
	1	2	3	4	
CHLOROPHYCEAE					
<u>ANADYOMENE MENZIESII</u>	+	+	+	+	4
<u>PSEUDOTETRASPORA ANTILLARUM</u>		+		+	2
PHAEOPHYCEAE					
<u>DICTYOPTERIS SP. 1</u>				+	1
<u>PHAEOPHYTA SP. 2</u>				+	1

c. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 23

TAXA	CRUISE			TOTAL
	<u>2</u>	<u>3</u>	<u>4</u>	
MURAENIDAE				
<u>GYMNOTHORAX NIGROMARGINATUS</u>			2	2
SYNODONTIDAE				
<u>SYNODUS INTERMEDIUS</u>	2	2	3	7
<u>SYNODUS POEYI</u>		1	11	12
<u>SYNODUS SYNODUS</u>			1	1
LOPHIIDAE				
<u>LOPHIODES RETICULATUS</u>			1	1
OGCOCEPHALIDAE				
<u>OGCOCEPHALUS CUBIFRONS</u>			1	1
<u>OGCOCEPHALUS PARVUS</u>		1		1
SCORPAENIDAE				
<u>SCORPAENA DISPAR</u>		4		4
<u>SCORPAENA PLUMIERI</u>			13	13
<u>SCORPAENODES TREDECIMSPINOSUS</u>	1			1
TRIGLIDAE				
<u>BELLATOR MILITARIS</u>		1		1
SERRANIDAE				
<u>CENTROPOMISTIS PHILADELPHICA</u>		1		1
<u>SERRANUS ANNULARIS</u>	5			5
<u>SERRANUS ATROBARANCHUS</u>	4		30	34
<u>SERRANUS PHOEBE</u>	33	35	21	89
GRAMMISTIDAE				
<u>RYPTICUS BISTRISPINUS</u>		2	3	5
POMACENTRIDAE				
<u>CHROMIS ENCHRYSURUS</u>	1			1
APOGONIDAE				
BALISTIDAE				
<u>EMBLEMARIA PANDIONIS</u>				0
OSTRACHIDAE				
<u>LACTOPHRYX POLYGONIA</u>		1		1
NUMBER OF SPECIES	6	10	11	
NUMBER OF FAMILIES	4	8	8	

**Table F-10. Presence/Absence and Abundance Data for Invertebrates (a)
and Fish (b) by Cruise for Station 36**

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 36

TAXA	CRUISE			NUMBER OF OCCURRENCES
	2	3	4	
CNIDARIA				
ZOANTHARIA				
<u>RHIZOSMILIA GERDAE</u>	+			1
<u>DESMOPHYLLUM CRISTAGALLI</u>			+	1
<u>SOLENOSMILIA VARIABILIS</u>	+		+	2
<u>PARACYATHUS PULCHELLUS</u>			+	1
ALCYONARIA				
<u>PARAMURICEA MULTISPINA</u>			+	1
<u>THESEA SP.</u>			+	1
<u>ELLISELLA ATLANTICA</u>	+		+	2
<u>ELLISELLA ELONGATA</u>			+	1
MOLLUSCA				
GASTROPODA				
<u>STHENORYTIS FERNOBILIS</u>	+			1
<u>FASCIOLARIA LILIUM</u>		+		1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 36

<u>TAXA</u>	<u>CRUISE</u>			<u>NUMBER OF OCCURRENCES</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
ECHINODERMATA				
ASTEROIDEA				
<u>PECTINASTER GRACILIS</u>	+			1
<u>TOSIA PARVA</u>	+		+	2
<u>ROSASTER ALEXANDRI</u>			+	1
<u>SCLERASTERIAS CONTORTA</u>			+	1
OPHIUROIDEA				
<u>ASTEROSHEMA NUTTINGII</u>	+			1
<u>ASTROPORPA ANNULATA</u>			+	1
<u>OPHIURA UNIDENT</u>			+	1
<u>OPHIOZONA UNIDENT</u>	+			1
<u>OPHURIDAE UNIDENT</u>	+			1
<u>OPHIOPAEPALE UNIDENT</u>	+			1
<u>OPHIOTHRIX SIENSONII</u>	+		+	2
<u>MACROPHIOTHRIX UNIDENT</u>	+			1
ECHINOIDEA				
<u>STYLOCIDARIS AFFINIS</u>	+		+	2
<u>STYLOCIDARIS LINEATA</u>			+	1
<u>COELOPLEURUS FLORIDANUS</u>	+		+	2
<u>CLYPEASTER RAVENELII</u>	+	+	+	3
<u>ECHINOLAMPAS DEPRESSA</u>			+	1
CRINOIDEA				
<u>COMATULIDA UNIDENT</u>	+	+	+	3
<u>COMACTINA UNIDENT</u>		+		1

a. PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY CRUISE FOR STATION: 36

<u>TAXA</u>	<u>CRUISE</u>			<u>NUMBER OF OCCURRENCES</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
CRUSTACEA				
BRACHYURA				
<u>CALAPPA ANGUSTA</u>		+	+	2
<u>ILIACANTHA SUBGLOBOSA</u>	+			1
<u>STENORYNCHUS SETICORNIS</u>	+	+		2
<u>PODOCHELA UNIDENT</u>	+			1
<u>PODOCHELA RIISEI</u>	+			1
<u>ANASIMUS UNIDENT</u>	+			1
<u>SETENOCIONOPS FURCATA</u>		+		1
<u>MITHRAX ACUTICORNIS</u>		+		1
<u>PARTHENOPE POURTALESI</u>		+		1
<u>PARTHENOPE FRATERCULUS</u>			+	1
<u>PORTUNUS SPINICARPUS</u>	+		+	2
<u>MICROPANOPE SPINIPES</u>			+	1
<u>PALICUS ALTERNATUS</u>			+	1
ANOMURA				
<u>PAGURUS POLITUS</u>			+	1
<u>PAGURUS IMPRESSUS</u>	+			1
<u>MUNIDA PUSILLA</u>			+	1
<u>MUNIDIA UNIDENT</u>	+			1

b. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 36

<u>TAXA</u>	<u>CRUISE</u>			<u>TOTAL</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
<u>MURAENIDAE</u>				
<u>GYMNOTHORAX NIGROMARGINATUS</u>			1	1
<u>SYNODONTIDAE</u>				
<u>SYNODUS UNIDENT</u>	2			2
<u>SYNODUS INTERMEDIUS</u>		1		1
<u>SYNODUS POEYI</u>		12	111	123
<u>SAURDIA NORMANI</u>		1	1	2
<u>SAURDIA UNIDENT</u>			38	38
<u>TRACHINOCEPHALUS MYOPS</u>	2			2
<u>ANTENNARIIDAE</u>				
<u>ANTENNARIUS RADIOSUS</u>			2	2
<u>OGCOCEPHALIDAE</u>				
<u>OGCOCEPHALUS PARVUS</u>	2		1	3
<u>OGCOCEPHALUS DECLIVIROSTRIS</u>			9	9
<u>HALLEUTICHTHYS ACULEATUS</u>	4	2	1	7
<u>CAPROIDAE</u>				
<u>ANTIGONIA CAPROS</u>	2			2
<u>SCORPAENIDAE</u>				
<u>PONTINUS RATHBUNI</u>	6			6
<u>SCORPAENA AGASSIZI</u>	8	6	4	18
<u>TRIGLIDAE</u>				
<u>PRIONOTUS STEARNSI</u>	28	20	6	54
<u>BELLATOR BRACHYCHIR</u>		5	5	10
<u>BELLATOR EGRETTE</u>	10	4	19	33

b. ABUNDANCE FOR FISH FOUND IN THE TRAWL FOR STATION: 36

<u>TAXA</u>	<u>CRUISE</u>			<u>TOTAL</u>
	<u>2</u>	<u>3</u>	<u>4</u>	
<u>APOGONIDAE</u>				
<u>EMBLEMARIA PANDIONIS</u>				0
<u>SERRANIDAE</u>				
<u>SERRANUS ATROBARANCHUS</u>	48	27	88	163
<u>SERRANUS PHOEBE</u>	28		1	29
<u>PLECTRANTHIAS GARRUFELLUS</u>	4	1		5
<u>HOLANTHIAS MARTINICENSIS</u>		4		4
<u>PRACANTHIDAE</u>				
<u>PRISTIGENYS ALTA</u>	4	2		6
<u>CHAETODONTIDAE</u>				
<u>CHAETODON AXA</u>	4	1		5
<u>POMACENTRIDAE</u>				
<u>CHROMIS SCOTTI</u>			1	1
<u>LABRIDAE</u>				
<u>DECODON PUELLARIS</u>			2	2
<u>LABRIDAE UNIDENT</u>	1			1
<u>OPISTOGNATHIDAE</u>				
<u>OPISTOGNATHUS UNIDENT</u>		1		1
<u>BOTHIDAE</u>				
<u>CITHARICHTHUS UNIDENT</u>	3			3
<u>CITHARICHTHYS CORNUTUS</u>		3	38	41
<u>ANCYLOPSETTA DILECTA</u>		1	1	2
<u>SYACIUM PAPILLOSUM</u>		1		1
<u>TRIACANTHODIDAE</u>				
<u>PARAHOLLARDIA LINEATA</u>		2	1	3
NUMBER OF SPECIES	16	18	20	
NUMBER OF FAMILIES	10	10	11	

Table F-11. Presence/Absence Table for All Taxa Surveyed by Underwater
Television, for All Cruises Together, by Station

UNDERWATER TELEVISION PRESENCE/ABSENCE TABLE FOR ALL TAXA BY STATION.

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
CHLOROPHYTA												
<u>CAULERPA UNIDENT</u>					+							1
<u>CHLOROPHYTA UNIDENT</u>	+	+	+			+	+		+			6
<u>ANADYOMENE UNIDENT</u>									+	+		2
PHAEOPHYTA												
<u>SARGASSUM UNIDENT</u>	+											1
PORIFERA												
<u>DEMOSPONGIAE UNIDENT</u>	+	+	+	+	+	+	+	+	+	+		10
<u>IRGINIA CAMPANA</u>	+	+	+	+	+	+	+	+	+			9
<u>IRGINIA STROBILINA</u>	+	+	+	+	+	+	+	+	+			9
<u>IRGINIA FELIX</u>								+				1
<u>DEMOSPONGIAE SP. 1</u>									+			1
<u>DEMOSPONGIAE SP. 2</u>									+			1
<u>HOMAXINELLA UNIDENT</u>										+		1
CNIDARIA												
HYDROIDA												
<u>HYDROIDA UNIDENT</u>	+	+	+	+	+	+	+	+		+		9
ALCYONARIA												
<u>PTEROGORGIA GUADALUPENSIS</u>	+		+	+		+						4
<u>LOPHOGORGIA UNIDENT</u>	+	+		+								3
<u>PLEXAURIDAE UNIDENT</u>	+	+	+	+	+	+						6
<u>PSEUDOPTEROGORGIA UNIDENT</u>	+	+	+	+	+	+						6
<u>GORGONIIDAE UNIDENT</u>							+					1
<u>GORGONACGA UNIDENT</u>	+							+				2
<u>ELLISELLA UNIDENT</u>								+	+	+		3
ZOANTHARIA												
<u>SOLENASTREA UNIDENT</u>					+							1
<u>SOLENASTREA HYADES</u>	+		+	+	+							4
<u>SCLERACTINIA UNIDENT</u>					+	+						2
<u>MUSSA ANGULOSA</u>					+	+						2
<u>ACTINIARIA UNIDENT</u>	+		+			+			+			4
<u>AGARICIIDAE UNIDENT</u>									+			1
<u>AGARICIA UNIDENT</u>									+			1
<u>MADRACIS UNIDENT</u>									+			1
MOLLUSCA												
GASTROPODA												
<u>STROMBUS UNIDENT</u>					+	+	+					3
<u>PYRENIDAE UNIDENT</u>				+								1

UNDERWATER TELEVISION PRESENCE/ABSENCE TABLE FOR ALL TAXA BY STATION.

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
MOLLUSCA												
BIVALVIA												
<u>ATRINA UNIDENT</u>					+							1
CEPHALOPODA												
CEPHALOPODA UNIDENT										+		1
CHELICERATA												
<u>LIMULUS POLYPHEMUS</u>											+	1
CRUSTACEA												
PALINURA												
<u>PANULIRUS ARGUS</u>											+	1
ANOMURA												
DIOGENIDAE UNIDENT					+		+				+	3
BRACHYURA												
<u>CALAPPA UNIDENT</u>					+	+						2
PORTUNIDAE UNIDENT					+					+		2
ECHINODERMATA												
ASTEROIDEA												
<u>CHAETASTER NODOSUS</u>					+		+					2
<u>ASTROPECTEN UNIDENT</u>											+	1
<u>ECHINASTER UNIDENT</u>							+				+	2
ASTEROIDEA UNIDENT					+	+	+	+	+	+		7
<u>PAXILLOSIDA DIPLOZONINA</u>											+	1
<u>OREASTER RETICULATUS</u>											+	2
ECHINOIDEA												
<u>CLYPEASTER UNIDENT</u>											+	1
MELLITIDAE UNIDENT											+	3
ECHINOIDEA UNIDENT					+	+	+	+	+		+	6
CLYPEASTERIDAE UNIDENT											+	1
HOLOTHUROIDEA												
<u>ASTICHOPUS MULTIFIDUS</u>					+	+	+	+	+			5
HOLOTHUROIDEA UNIDENT					+		+	+	+	+		6
CRINOIDEA												
COMATULIDA UNIDENT										+	+	2

UNDERWATER TELEVISION PRESENCE/ABSENCE TABLE FOR ALL TAXA BY STATION.

TAXA	STATION										NUMBER OF OCCURRENCES
	52	44	51	45	47	19	21	29	23	36	
FISHES											
ORECTOLOBIDAE											
<u>GINGLYMOSTOMA CIRRATUM</u>									+		1
RHINOBATIDAE											
<u>RHINOBATOS LENTIGINOSUS</u>				+							1
CLUPEIDAE											
<u>CLUPEIDAE UNIDENT</u>	+										1
SYNODONTIDAE											
<u>SYNODUS INTERMEDIUS</u>			+	+		+			+		4
<u>SYNODONTIDAE UNIDENT</u>	+					+			+		3
<u>SYNODUS UNIDENT</u>	+								+		2
<u>TRACHINOCEPHALUS MYOPS</u>									+		1
HOLOCENTRIDAE											
<u>HOLOCENTRIDAE UNIDENT</u>							+	+	+		3
SYNGNATHIDAE											
<u>HIPPOCAMPUS REIDI</u>						+					1
SCORPAENIDAE											
<u>SCORPAENIDAE UNIDENT</u>		+							+		2
PERCIFOMES											
<u>PERCIFORMES UNIDENT</u>	+			+		+			+		4
SERRANIDAE											
<u>EPINEPHELUS GUTTATUS</u>				+							1
<u>MYCTEROPERCA INTERSTITIAL</u>				+							1
<u>DIPLECTRUM FORNOSUM</u>				+							1
<u>DIPLECTRUM UNIDENT</u>	+	+	+		+	+	+				6
<u>SERRANUS SUBLIGARIUS</u>									+		1
<u>EPINEPHELUS MORIO</u>	+		+	+	+	+	+	+	+		8
<u>LIOPROPOMA EUKRINES</u>									+	+	2
<u>MYCTEROPERCA UNIDENT</u>			+			+			+	+	4
<u>SERRANUS UNIDENT</u>									+		1
<u>HYPOLECTRUS UNIDENT</u>									+		1
<u>SERRANUS ANNULARIS</u>									+	+	2
<u>SERRANIDAE UNIDENT</u>	+	+		+			+	+	+	+	7
<u>MYCTEROPERCA PHENAX</u>										+	1
<u>EPINEPHELUS FULVUS</u>										+	1
<u>SERRANUS PHOEBE</u>							+	+	+	+	4
PRIACANTHIDAE											
<u>PRISTIGENYS ALTA</u>									+		1
<u>PRIACANTHUS UNIDENT</u>									+		1

UNDERWATER TELEVISION PRESENCE/ABSENCE TABLE FOR ALL TAXA BY STATION.

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
FISHES												
PRIACANTHIDAE												
<u>PRIACANTHUS CRUENTATUS</u>									+			1
<u>PRIACANTHUS ARENATUS</u>								+	+	.		3
APOGONIDAE												
<u>APOGON PSEUDOMACULATUS</u>									+			1
MALACANTHIDAE												
<u>MALACANTHUS UNIDENT</u>										+		1
ECHENEIDAE												
<u>ECHENEIS NAUCRATES</u>	+											1
CARANGIDAE												
<u>CARANX RUBER</u>	+											1
<u>CARANX BARTHOLOMAEI</u>	+											1
<u>CARANX HIPPOS</u>	+											1
<u>CARANX CRYSOS</u>	+	+	+	+	+	+	+					7
<u>DECAPTERUS PUNCTATUS</u>		+	+	+						+		4
<u>SERIOLA DUMERILI</u>							+	+	+	+		4
EMMELICHTHYDAE												
<u>INERMIA VITTATA</u>									+	+		2
LUTJANIDAE												
<u>LUTJANUS SYNAGRIS</u>	+	+	+	+	+	+						6
<u>LUTJANUS APODUS</u>					+	+						2
<u>LUTJANUS MAHOGONI</u>							+					1
<u>LUTJANIDAE UNIDENT</u>	+	+						+				3
GERRIDAE												
<u>EUCINOSTOMUS UNIDENT</u>					+							1
HAEMULIDAE												
<u>ANISOTREMUS VIRGINICUS</u>	+		+									2
<u>ORTHOPRISTIS CHRYSOPTERA</u>	+		+									2
<u>HAEMULON PLUMIERI</u>	+	+	+	+	+	+						6
<u>HAEMULON UNIDENT</u>			+	+	+		+					4
<u>HAEMULON AUROLINEATUM</u>	+	+	+	+	+	+						6
SPARIDAE												
<u>ARCHOSARGUS PROBATOCEPHAL</u>	+											1
<u>CALAMUS ARCTIFRONS</u>				+								1
<u>SPARIDAE UNIDENT</u>				+								1
<u>CALAMUS CALAMUS</u>			+	+	+	+	+	+	+			6
<u>CALAMUS UNIDENT</u>	+			+		+	+	+	+	+		6
SCIAENIDAE												
<u>EQUETUS UNIDENT</u>					+							1

UNDERWATER TELEVISION PRESENCE/ABSENCE TABLE FOR ALL TAXA BY STATION.

TAXA	STATION										NUMBER OF OCCURRENCES
	52	44	51	45	47	19	21	29	23	36	
FISHES											
SCIAENIDAE											
<u>EQUETUS LANCEOLATUS</u>	+	+	+		+	+			+		6
<u>EQUETUS UMBROSUS</u>			+		+				+		3
MULLIDAE											
<u>MULLIDAE UNIDENT</u>									+		1
EPHIPPIDAE											
<u>CHAETODIPTERUS FABER</u>					+						1
CHAETODOTIDAE											
<u>CHAETODON UNIDENT</u>					+						1
<u>HOLACANTHUS CILIARIS</u>					+						1
<u>POMACANTHUS UNIDENT</u>	+					+			+		3
<u>HOLACANTHUS UNIDENT</u>				+		+	+	+			4
<u>POMACANTHUS ARCIATUS</u>			+	+	+	+	+	+			7
<u>CHAETODONTIDAE UNIDENT</u>								+	+		2
<u>HOLACANTHUS BERMUDENSIS</u>						+	+	+	+		4
<u>CHAETODON SEDENTARIUS</u>		+				+	+	+	+	+	6
<u>HOLACANTHUS TRICOLOR</u>									+		1
<u>CHAETODON OCELLATUS</u>								+	+		2
<u>CHAETODON AYA</u>										+	1
POMACENTRIDAE											
<u>EUPOMACENTRUS UNIDENT</u>				+							1
<u>EUPOMACENTRUS VARIABILIS</u>						+					1
<u>CHROMIS UNIDENT</u>					+		+	+			3
<u>EUPOMACENTRUS PARTITUS</u>					+			+			2
<u>CHROMIS ENCHRYSURUS</u>							+	+	+		3
<u>CHROMIS MULTILINEATUS</u>									+		1
<u>POMACENTRIDAE UNIDENT</u>							+	+	+		3
<u>CHROMIS INSOLATUS</u>								+	+		2
LABRIDAE											
<u>LACHNOLAIMUS MAXIMUS</u>	+	+	+	+							4
<u>HALICHOERES CAUDALIS</u>						+			+		2
<u>LABRIDAE UNIDENT</u>	+					+	+		+		4
<u>HALICHOERES UNIDENT</u>	+								+		2
<u>BODIANUS PULCHELLUS</u>									+		1
GOBIIDAE											
<u>IOGLOSSUS CALLIURUS</u>						+	+				2
BALISTIDAE											
<u>ALUTERUS SCHOEPPF</u>	+			+							2
<u>ALUTERUS SCRIPTUS</u>				+							1
<u>MONACANTHUS UNIDENT</u>	+				+	+					3
<u>CANTHERHINES MACROCERUS</u>					+	+					2

UNDERWATER TELEVISION PRESENCE/ABSENCE TABLE FOR ALL TAXA BY STATION.

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
FISHES												
BALISTIDAE												
<u>CANTHERHINES PULLUS</u>							+					1
<u>MONACANTHUS HISPIDUS</u>							+	"				1
BALISTIDAE UNIDENT							+					1
<u>BALISTES CAPRISCUS</u>		+		+			+			+		4
OSTRACIONTIDAE												
<u>LACTOPHRYS QUADRICORNIS</u>		+	+	+	+		+	+	+			7
LACTOPHRYS UNIDENT				+					+			2
TETRAODONTIDAE												
TETRAODONTIDAE UNIDENT		+										1
<u>SPHOEROIDES UNIDENT</u>				+								1
<u>SPHOEROIDES SPENGLERI</u>		+								+		2
DIODONTIDAE												
<u>CHILOMYCTERUS SCHOEPFI</u>			+									1
DIODON UNIDENT									+			1
SUBSTRATE												
SAND		+	+	+	+	+	+	+	+	+	+	10
REEF ROCK							+		+			2
ALGAL RUBBLE										+		1

**Table F-12. Presence/Absence Table for Invertebrates
Collected by Dredging by Station, for All
Cruises Together**

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION											NUMBER OF OCCURRENCES
	52	44	51	45	47	19	21	29	23	36		
CNIDARIA												
ZOANTHARIA												
<u>PHYLLANGIA AMERICANA</u>	+	+										2
<u>FAVIA GRAVIDA</u>	+	+			+							4
<u>PORITES DIVARICATA</u>					+							1
<u>ISOPHYLLIA SINUOSA</u>					+							1
<u>MONTASTREA CAVERNOSA</u>					+							3
<u>SIDERASTREA SIDEREA</u>	+	+			+							5
<u>OGULINA TENELLA</u>		+						+				2
<u>MOSSA ANGULOSA</u>					+			+				2
<u>STEPHANOCOENIA MICHELINI</u>					+			+				2
<u>HELIOSERIS CUCULLATA</u>					+				+			2
<u>OGULINA VARICOSA</u>								+				1
<u>SCOLYMIA UNIDENT</u>								+				2
<u>MADRACIS DECACTIS</u>									+			1
<u>MADRACIS FORMOSA</u>									+			1
<u>MADRACIS MIRABILIS</u>									+			1
<u>SOLENASTREA HYADES</u>									+			1
<u>AGARICIA FRAGILIS</u>									+			1
<u>MANICINA AREOLATA</u>									+			1
<u>AGARICIA AGARICITES</u>									+			1
<u>PORITES ASTREOIDES</u>									+			1
<u>MADRACIS ASPERULA</u>									+	+		2
<u>DESMOPHYLLUM CRISTAGALLI</u>											+	1
<u>SOLENOSMILIA VARIABILIS</u>											+	1
<u>PARACYATHUS FULCHELLUS</u>											+	1
<u>RHIZOSMILIA GERDAE</u>											+	1
ALCYONARIA												
<u>PLEXAURELLA FUSIFERA</u>	+											1
<u>LOPHOGORGIA BARBADENSIS</u>	+											1
<u>EUNICEA KNIGHTI</u>	+											1
<u>LEPTOGORGIA EURYALE</u>		+										1
<u>LEPTOGORGIA VIRGULATA</u>		+										1
<u>EUNICEA ASPERULA</u>	+											1
<u>PLEXAURELLA FUSCA</u>	+											1
<u>EUNICEA FUSCA</u>	+											1
<u>MURICEA ELONGATA</u>	+				+							2
<u>PLEXAURELLA FUMILA</u>	+				+							2
<u>PLEXAURELLA NUTANS</u>	+				+							2
<u>PSEUDOPLEXAURA FULSIFERA</u>	+	+			+	+						4
<u>PSEUDOPLEXAURA POROSA</u>	+	+			+	+						4
<u>PSEUDOPTEROGORGIA POROSA</u>					+							1
<u>PSEUDOPTEROGORGIA RIGIDA</u>					+							1
<u>LEPTOGORGIA SETACEA</u>					+							1
<u>EUNICEA CALYCVLATA</u>					+							1
<u>PSEUDOPLEXAURA SP. 2</u>					+							1
<u>MURICEA PINNATA</u>					+							1
<u>EUNICEA SP.</u>	+				+	+						3
<u>PTEROGORGIA GUADALUPENSIS</u>	+	+			+	+	+					5
<u>PSEUDOPTEROGORGIA ACEROSA</u>					+	+	+					3

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
CNIDARIA												
ALCYONARIA												
<u>ALEXAURELLA DICHOTOMA</u>					+							1
<u>LOPHOGORGIA PUNICEA</u>						+						1
<u>NICELLA SCHMITTI</u>									+			1
<u>THESEA SP.</u>								+		+		2
<u>ELLISELLA ATLANTICA</u>										+		1
<u>ELLISELLA ELONGATA</u>										+		1
<u>PARAMURICEA MULTISPINA</u>										+		1

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
MOLLUSCA												
BIVALVIA												
<u>BARBATIO CANDIDA</u>	+	+										2
<u>PINCTADA RADIATA</u>	+											1
<u>OSTREA PERMOLIS</u>	+											1
<u>LIOBERUS CASTANEUS</u>	+											1
<u>SOLENI OBLIQUUS</u>	+											1
<u>BARBATIO TENERA</u>	+											1
<u>CHAMA FLORIDA</u>	+											1
<u>CHAMA SP. 1</u>	+											1
<u>ANADARA UNIDENT</u>	+											1
<u>ARCA ZEBRA</u>	+	+		+								3
<u>LITHOPHAGA BISULCATA</u>	+	+		+								3
<u>PINCTADA IMBRICATA</u>	+	+	+	+								4
<u>PTERIA UNIDENT</u>	+			+								2
<u>PTERIA COLYMBUS</u>	+		+	+								3
<u>ANADARA NOTABILIS</u>	+	+		+	+							4
<u>LITHOPHAGA ARISTATA</u>				+								1
<u>BARBATIO DOMINGENSIS</u>				+								1
<u>SPONDYLUS ICTERICUS</u>				+	+							2
<u>ARCA IMBRICATA</u>				+	+							2
<u>CHIONE CANCELLATA</u>	+						+					2
<u>ARCNELLA CORNUTA</u>		+					+					2
<u>ARCNELLA UNIDENT</u>							+					1
<u>AEQUIPECTEN ACANTHODES</u>							+					2
<u>CHIONE PAPHIA</u>							+	+				2
<u>LAEYICARDIUM LAEYIGATUM</u>							+	+				2
<u>SPONDYLUS AMERICANUS</u>	+		+	+					+			4
<u>ARGOPECTEN GIBBUS</u>								+				1
<u>MACROCALLISTA MACULATA</u>								+				1
<u>TELLINA AEQUISTRIATA</u>								+				1
<u>CHAMA MACROPHYLLA</u>	+			+					+			3
<u>CHAMA CONGREGATA</u>	+									+		2
<u>NEMOCARDIUM PERAMABILE</u>									+			1
<u>CHLAMYD UNIDENT</u>									+			1
<u>PERIGLYPTA LISTERI</u>									+			1
<u>EUCRASSATELLA SPECIOSA</u>									+			1
<u>PODODESMIS UNIDENT</u>									+			1
<u>AEQUIPECTEN MUSCOSUS</u>							+			+		2
<u>ARCA UNIDENT</u>									+			1
<u>CHLAMYD BENEDICTI</u>										+		1
<u>PECTINIDAE UNIDENT</u>										+		1
GASTROPODA												
<u>PISANIA TINCTA</u>	+											1
<u>CERITHIUM ALGICOLA</u>	+											1
<u>CANTHARUS CANCELLARIUS</u>	+											1
<u>CREPIDULA FORNICATA</u>	+											1
<u>CREPIDULA MACULOSA</u>	+	+										2
<u>LUCAPINA SOWERBII</u>	+	+										2
<u>LATICRURA INFUNDIMULUM</u>	+											1

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
MOLLUSCA												
GASTROPODA												
<u>CANCELLARIA RETICULATA</u>		+										1
<u>STROMBUS ALATUS</u>	+											1
<u>CREPIDULA CONVEXA</u>	+											1
<u>DIODORA LISTERI</u>	+			+								2
<u>CREPIDULA FLAVA</u>	+		+	+								3
<u>MUREX POMM</u>			+									1
<u>FASCIOLARIIDAE UNIDENT</u>				+								1
<u>CERITHIUM ATRATUM</u>				+								1
<u>LATIRUS ANGULATUS</u>				+								1
<u>OGNEBRA INTERFOSSA</u>				+								1
<u>STROMBUS GIGAS</u>	+			+	+							3
<u>DIODORA CAYENENSIS</u>	+	+				+						3
<u>CREPIDULA ACULEATA</u>	+	+		+	+	+						5
<u>STROMBUS PUGILIS</u>		+				+						2
<u>PSEUDOSTOMATELLA ERYTHROCOMA</u>					+							1
<u>VERMICULARIA KNORRI</u>	+							+				2
<u>STROMBUS COSTATUS</u>				+				+				2
<u>LATIRUS CARINIFERUS</u>				+				+				2
<u>TRIVIA PEDICULUS</u>				+				+				2
<u>MUREX BREVIFORMIS</u>	+				+	+			+			4
<u>PHALNUM GRANULATUM</u>					+			+				2
<u>CALLIOSTOMA JAVANICUM</u>						+		+				2
<u>MUREX FLORIFER</u>	+			+				+		+		4
<u>PLEUROPLOCA GIGANTEA</u>	+								+			2
<u>ASTRAEA PHOEBIA</u>				+					+			2
<u>CALLIOSTOMA PULCHRUM</u>								+				1
<u>CYPRAEA ZEBRA</u>								+				1
<u>OLIVA SAXANA</u>								+				1
<u>XENOPIORA CONCHYLIOPHORA</u>								+				1
<u>SCAPHELLA JUNONIA</u>								+				1
<u>FASCIOLARIA LILIUM</u>	+					+				+		3
<u>CYPRAEA UNIDENT</u>									+			1
<u>CYPRAEA CINEREA</u>									+			1
<u>SILICULARIA SQUAMATA</u>								+	+			2
<u>HALIOTIS POURTALESII</u>									+			1
<u>ASTRAEA LONGISPINA</u>									+			1
<u>TURBO CASTANEA</u>									+			1
<u>DISTORSIO CLATHRATA</u>									+			1
<u>STHENORITIS FERNOBILIS</u>										+		1
CEPHALOPODA												
<u>OCTOPUS UNIDENT</u>	+											1

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
ECHINODERMATA												
ASTEROIDEA												
<u>ASTROPECTEN AMERICANUS</u>			+									1
<u>ECHINASTER UNIDENT</u>					+							1
<u>ECHINASTER SPINULOSUS</u>	+	+	+	+		+						5
<u>ASTROPECTEN ARTICULATUS</u>					+							1
<u>ASTROPECTEN COMPTUS</u>					+	+						2
<u>ASTROPECTEN DUPLICATUS</u>	+	+	+		+	+	+					6
<u>LUIDIA ALTERNATA</u>			+		+		+					3
<u>ECHINASTER MODESTUS</u>	+								+			2
<u>ASTROPECTEN NITIDUS</u>							+					1
<u>OREASTER RETICULATUS</u>							+					1
<u>PORANIELLA REGULARIS</u>									+	+		2
<u>LUIDIA BARBADENSIS</u>										+		1
<u>LINCKIA NODOSA</u>										+		1
<u>NARCISSIA TRIGONARIA</u>										+		1
<u>HENRICIA ANTILLARUM</u>										+		1
<u>TOSIA PARVA</u>										+	+	2
<u>SCLERASTERIAS CONTORTA</u>											+	1
<u>ROSASTER ALEXANDRI</u>											+	1
<u>PECTINASTER GRACILIS</u>											+	1
OPHUROIDEA												
<u>OPHIOSTIGMA ISACANTHUM</u>	+											1
<u>AMPHIPHOLIS SQUAMATA</u>			+									1
<u>OPHIOLEPIS ELEGANS</u>					+							1
<u>ASTROCYCLUS CAECILIA</u>					+	+						2
<u>OPHIOTHRIX LINEATA</u>		+			+		+					3
<u>OPHIOTHRIX ANGULATA</u>	+	+	+	+	+	+	+	+	+			9
<u>OPHIACTIS SAVIGNYI</u>	+	+	+					+	+			5
<u>OPHIODERMA BREVISPINA</u>		+					+	+	+			4
<u>OPHIODERMA RUBICUNDAM</u>				+				+	+			3
<u>OPHIOPSILA UNIDENT</u>								+				1
<u>OPHIOMYXIDAE</u>								+				1
<u>OPHIONEREIS UNIDENT</u>								+				1
<u>OPHIOCOMA UNIDENT</u>								+				1
<u>OPHIONEREIS RETICULATA</u>								+				1
<u>OPHIACTIS UNIDENT</u>								+				1
<u>OPHIONEREIS OLIVACEA</u>								+				1
<u>OPHIOMYXA FLACCIDA</u>								+	+			2
<u>OPHIOTHRIX SIMPSONII</u>				+				+	+	+		4
<u>OPHIODERMA UNIDENT</u>									+			1
<u>MACROPHIOTHRIX UNIDENT</u>									+	+		2
<u>OPHIOTHRIX UNIDENT</u>										+		1
<u>ASTROFORPA ANNULATA</u>										+		1
<u>OPHIURA UNIDENT</u>										+		1
<u>ASTEROSHEMA NUTTINGII</u>										+		1
<u>OPHIOPARPALE UNIDENT</u>										+		1
<u>OPHURIDAE UNIDENT</u>										+		1
ECHINOIDEA												
<u>ENCOPE ABERRANS</u>		+			+							2

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
ECHINODERMATA												
ECHINOIDEA												
<u>ENCOPE MICHELINI</u>		+				+						2
<u>CLYPEASTER SUBDEPRESSUS</u>	+	+	+		+		+					5
<u>LYTECHINUS VARIEGATUS</u>	+	+	+				+					4
<u>CLYPEALTER ROSACEUS</u>	+						+					2
<u>DIADEMA ANTILLARUM</u>		+							+			2
<u>ARBACIA PUNCTULATA</u>	+			+			+	+	+			5
<u>MEOMA VENTRICOSA</u>							+					1
<u>EUCIDARIS TRIBULOIDES</u>							+	+	+			3
<u>LYTECHINUS EUERGES</u>									+			1
<u>LYTECHINUS CALLIPEPLUS</u>									+			1
<u>STYLOCIDARIS AFFINIS</u>								+	+	+		3
<u>ECHINOLAMPAS DEPRESSA</u>										+		1
<u>STYLOCIDARIS LINEATA</u>										+		1
<u>COELOPLEURUS FLORIDANUS</u>										+		1
<u>CLYPEASTER RAVENELII</u>										+		1
HOLOTHUROIDEA												
<u>THYONELLA PERVICAX</u>						+						1
<u>ISTICHOPUS RADIONOTUS</u>				+		+	+					3
<u>HOLOTHUROIDEA SP. A</u>							+					1
<u>THYONELLA GEMMATA</u>								+				1
CRINOIDEA												
<u>COMATULIDA UNIDENT</u>								+		+		2
<u>COMACTINA UNIDENT</u>										+		1

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
CRUSTACEA												
ISOPODA												
<u>FLABELLIFERA UNIDENT</u>				+								1
<u>PARACERCEIS CAUDATA</u>		+		+		+						3
BRACHYURA												
<u>EURYPLAX NITIDA</u>	+											1
<u>PORTUNUS GIBBESI</u>	+											1
<u>PILMNUM LACTEUS</u>	+											1
<u>HYPOCONCHA ARGIATA</u>		+										1
<u>PORTUNUS DEPRESSIFRONS</u>		+										1
<u>PORTUNUS FLORIDANUS</u>	+											1
<u>PANOPEUS OCCIDENTALIS</u>	+											1
<u>PANOPEUS TURGIDUS</u>	+											1
<u>PANOPLAX DEPRESSA</u>	+											1
<u>MITHRAX HISPIDUS</u>	+	+	+	+								4
<u>MITHRAX FORCEPS</u>		+		+								2
<u>PILUMNUS PANNOSUS</u>			+									1
<u>PODOCHELA SIDNEYI</u>	+	+	+		+							4
<u>PILUMNUS FLORIDANUS</u>					+							1
<u>HYPOCONCHA SABULOSA</u>	+				+	+						3
<u>PORTUNUS ANCEPS</u>		+			+							2
<u>PILUMNUS SAYI</u>	+	+			+	+	+					5
<u>PITHO UNIDENT</u>			+		+							2
<u>PILUMNUS DASYPODUS</u>	+		+	+	+	+						5
<u>LOPOPILUMNUS AGASSIZI</u>				+	+							2
<u>PITHO LHERMINIERI</u>	+						+					2
<u>MACROCOELOMA CAMPTOCERUM</u>	+				+	+						3
<u>METOPORHAPHIS CALCARATA</u>					+							1
<u>HOMOLA UNIDENT</u>					+							1
<u>PORTUNUS SPINIMANUS</u>					+							1
<u>ILIACANTHA INTERMEDIA</u>					+	+						2
<u>MITHRAX EURACANTHUS</u>	+	+		+	+	+	+					6
<u>DROMIDIA ANTILLENIS</u>	+			+	+		+					4
<u>PORTUNUS UNIDENT</u>						+						1
<u>MACROCOELOMA TRISPINOSUM</u>	+			+	+		+					4
<u>CALAPPA SILCATA</u>		+					+	+				3
<u>CALAPPA FLAMMEA</u>					+		+					2
<u>MITHRAX TURCEPS</u>	+			+					+			3
<u>STENORYNCHUS SETICORNIS</u>	+	+			+	+	+			+		6
<u>PARTHENOPE GRANULATA</u>							+					1
<u>SPELUEOPHORUS NODOSUS</u>							+					1
<u>CALLIDACTYLUS ASPER</u>							+					1
<u>RANINOIDES LOUISIANENSIS</u>							+					1
<u>PORTUNUS ORDWAYI</u>							+		+			2
<u>PARACTAEA RUOPUNCTATA NODOSA</u>							+		+			3
<u>MICROPHRYX UNIDENT</u>								+				1
<u>SETENOCLONOPS FURCATA</u>						+	+				+	3
<u>PODOCHELA RIISEI</u>					+						+	2
<u>PALICUS FAXONI</u>									+			1
<u>EUCHIROGRAPSUS AMERICANUS</u>									+			1

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES
	52	44	51	45	47	19	21	29	23	36	
CRUSTACEA											
BRACHYURA											
<u>PYROMAIA UNIDENT</u>									+		1
<u>NIBILIA ANTILOCAPRA</u>									+		1
<u>MACROCOELOMA EUTHECA</u>									+		1
<u>MITHRAX ACUTICORNIS</u>							+	+	+	+	4
<u>PALICUS ALTERNATUS</u>							+		+	+	3
<u>PORTUNUS SPINICARPUS</u>							+			+	2
<u>MICROPANOPE SPINIPES</u>								+	+	+	3
<u>PARTHENOPE FRATERCULUS</u>									+	+	2
<u>ILLACANTHA SUBGLOBSA</u>									+	+	2
<u>PARTHENOPE FOURTALESI</u>										+	1
<u>CALAPPA ANGUSTA</u>										+	1
<u>PODOCHELA UNIDENT</u>										+	1
<u>ANASIMUS UNIDENT</u>										+	1
STOMATOPODA											
<u>GONODACTYLUS BREDINI</u>	+			+	+	+	+	+	+		7
<u>GONODACTYLUS UNIDENT</u>	+						+		+	+	4
<u>EURYSQUILLA FLUMATA</u>							+				1
<u>GONODACTYLUS TORUS</u>								+			1
<u>SQUILLA PRASINOLINEATA</u>									+		1
ANOMURA											
<u>PORCELLANA SAYANA</u>	+										1
<u>MEGALOBRACHIUM SORIATUM</u>	+	+		+							3
<u>PAGURISTES TORTUGAE</u>	+			+							2
<u>PETROLISTHES GALATHINUS</u>	+	+	+	+	+	+					6
<u>PAGURISTES SERICEUS</u>	+	+		+	+	+	+				6
<u>PAGURISTES MOOREI</u>						+					1
<u>PAGURUS DEFENSUS</u>								+			1
<u>GALATHEA ROSTRATA</u>								+		+	2
<u>DARDANUS FICOSUS</u>								+		+	2
<u>PAGURUS ACADIANUS</u>										+	1
<u>PAGURUS IMPRESSUS</u>						+				+	2
<u>MUNIDA FUSILLA</u>							+	+	+	+	4
<u>MUNIDIA UNIDENT</u>										+	1
<u>PAGURUS POLITUS</u>										+	1
PENAEIDEA											
<u>PENAEUS DUORARUM</u>	+										1
<u>PENAEUS SETIFERUS</u>		+									1
<u>PENAEUS AZTECUS</u>		+	+								2
<u>METAPENAEOPSIS GOODEI</u>			+								1
<u>SICYONIA LAEVIGATA</u>	+				+	+					3
<u>SICYONIA TYPICA</u>					+						1
<u>SICYONIA BREVIROSTRIS</u>									+		1
<u>PARAPENAEUS POLITUS</u>									+		1
CARIDEA											
<u>ALPHEIDAE UNIDENT</u>		+									1

PRESENCE/ABSENCE TABLE FOR INVERTEBRATES BY STATION FOR ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	52	44	51	45	47	19	21	29	23	36		
CRUSTACEA												
CARIDEA												
<u>HIPPOLYTE UNIDENT</u>	+											1
<u>PERICLIMENAEUS CARAIBICUS</u>	+											1
<u>ALPHEIDAE SP. 6</u>			+									1
<u>PALAEEMONIDAE UNIDENT</u>			+									1
<u>PERICLIMENES AMERICANUS</u>	+			+								2
<u>SYNALPHEUS MINUS</u>	+		+	+				+				4
<u>SYNALPHEUS FRITZMUELLERI</u>						+						1
<u>ALPHEUS NORMANNI</u>				+	+			+				3
<u>SYNALPHEUS TOWNSENDI</u>	+		+	+				+	+	+		6
<u>SYNALPHEUS LONGICARPUS</u>	+									+		2
<u>ANCHISTIODES ANTIGUENSIS</u>	+									+		2
<u>LYSMATA RATHBUNAE</u>									+			1
<u>PALAEEMONETES INTERMEDIUS</u>										+		1
<u>SYNALPHEUS GOODEI</u>										+		1
STENOPODIDEA												
<u>STENOPUS SCUTELLATUS</u>								+				1
PALINURA												
<u>SCYLLARIDES NODIFER</u>								+				1

**Table F-13. Presence/Absence Table for Fish Collected by
Trawling for All Cruises Together, by Station**

PRESENCE/ABSENCE TABLE FOR FISH FOUND IN TRAWL ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	44	52	51	45	47	19	21	29	23	36		
CARANGIDAE												
<u>CARANX CRYSOS</u>		+										1
CLUPEIDAE												
<u>HARENGULA JAGUANA</u>		+										1
EPHIPPIDAE												
<u>CHAETODIPTERUS FABER</u>		+		+								2
SCIAENIDAE												
<u>EQUETUS LANCEOLATUS</u>		+	+		+							3
HAEMULIDAE												
<u>ANISOTREMUS VIRGINICUS</u>				+								1
<u>HAEMULON PLUMIERI</u>		+	+	+	+	+						5
<u>HAEMULON AUROLINEATUM</u>	+			+	+		+					4
BATRACHOIDIDAE												
<u>OPSANUS PARDUS</u>							+					1
BLENNIDAE												
<u>PARABLENNIUS MARMOREUS</u>							+					1
SPARIDAE												
<u>CALAMUS ARCTIFRONS</u>		+										1
<u>LAGODON RHOMBOIDES</u>		+										1
<u>CALAMUS BAJONADO</u>				+								1
<u>CALAMUS PENNA</u>				+								1
<u>CALAMUS CALAMUS</u>				+				+				2
<u>CALAMUS PENNATULA</u>								+				1
<u>CALAMUS UNIDENT</u>								+				1
<u>CALAMUS NODOSUS</u>								+				1
LUTJANIDAE												
<u>LUTJANUS SYNAGRIS</u>		+			+	+	+					4
<u>LUTJANUS GRISEUS</u>								+				1
DIODONTIDAE												
<u>CHILOMYCTERUS SCHOEFFI</u>				+		+						2
<u>DIODON HOLOCANTHUS</u>								+				1
OSTRACHIDAE												
<u>LACTOPHRYS QUADRICORNIS</u>	+			+	+							3
<u>LACTOPHRYS POLYGONIA</u>									+			1
TETRAODONTIDAE												
<u>SPHOEROIDES SPENGLERI</u>				+				+				2
MULLIDAE												
<u>MULLIDAE UNIDENT</u>					+							1

PRESENCE/ABSENCE TABLE FOR FISH FOUND IN TRAWL ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	44	52	51	45	47	19	21	29	23	36		
MULLIDAE												
<u>PSEUDUPENEUS MACULATUS</u>								+				1
GRAMMISTIDAE												
<u>RYPTICUS MACULATUS</u>		+		+								2
<u>RYPTICUS BISTRISPINUS</u>									+			1
SYNODONTIDAE												
<u>SYNODONTIDAE UNIDENT</u>	+											1
<u>SYNODUS FOETENS</u>				+		+						2
<u>SYNODUS INTERMEDIUS</u>		+	+	+	+	+			+	+		8
<u>SYNODUS SYNODUS</u>									+			1
<u>SYNODUS POEYI</u>							+		+	+		3
<u>SAURDIA UNIDENT</u>										+		1
<u>SYNODUS UNIDENT</u>										+		1
<u>SAURDIA NORMANI</u>										+		1
<u>TRACHINOCEPHALUS MYOPS</u>										+		1
BALISTIDAE												
<u>BALISTES CAPRISCUS</u>						+						1
<u>MONACANTHUS HISPIDUS</u>		+				+		+				3
<u>MONACANTHUS CILIATUS</u>		+				+	+	+	+	+		6
<u>MONACANTHUS TICKERI</u>									+			1
LABRIDAE												
<u>LACHNOLAIMUS MAXIMUS</u>		+	+	+								3
<u>HALICHOERES BIVITTATUS</u>				+								1
<u>LABRIDAE UNIDENT</u>										+		1
<u>DECODON PUELLARIS</u>										+		1
SERRANIDAE												
<u>SERRANUS SUBLIGARIUS</u>		+										1
<u>EPINEPHELUS MORIO</u>		+	+	+	+							4
<u>DIPLECTRUM FORMOSUM</u>			+		+	+						3
<u>SCHULTZEA BETA</u>									+			1
<u>SERRANUS ANNULARIS</u>								+	+			2
<u>CENTROPRISTIS PHILADELPHICA</u>									+			1
<u>SERRANUS PHOEBE</u>							+		+	+		3
<u>SERRANUS ATROPHORANCUS</u>									+	+		2
<u>PLECTRANTHIAS GARRUPELLUS</u>										+		1
<u>HOLANTHIAS MARTINICENSIS</u>										+		1
CLINIDAE												
<u>EMBLEMARIA PANDIONIS</u>								+				1
GOBIESOCIDAE												
<u>GOBIESOX STRUMOSUS</u>								+				1
APOGONIDAE												
<u>APOGON AFFINIS</u>								+				1
<u>APOGON PSEUDOMACULATUS</u>								+				1

PRESENCE/ABSENCE TABLE FOR FISH FOUND IN TRAWL ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES	
	44	52	51	45	47	19	21	29	23	36		
GERREIDAE												
<u>EUCINOSTOMUS JONESI</u>							+					1
<u>EUCINOSTOMUS UNIDENT</u>							+					1
SCARIDAE												
<u>SPARISOMA UNIDENT</u>							+					1
CHAETODONTIDAE												
<u>HOLACANTHUS BERMUDENSIS</u>				+								1
<u>POMACANTHUS ARCUATUS</u>					+							1
<u>CHAETODON OCELLATUS</u>		+					+	+				3
<u>CHAETODON SEDENTARIUS</u>							+	+				2
<u>CHAETODON AYA</u>										+		1
OGCOEPHALIDAE												
<u>OGCOEPHALUS RADIATUS</u>				+		+						2
<u>OGCOEPHALUS CUBIFRONS</u>					+				+			2
<u>OGCOEPHALUS PARVUS</u>									+	+		2
<u>HALTEUTHICHTHYS ACULEATUS</u>										+		1
<u>OGCOEPHALUS DECLIVIROSTRIS</u>										+		1
MURAENIDAE												
<u>GYMNOTHORAX NIGROMARGINATUS</u>			+		+				+	+		4
BOTHIDAE												
<u>CYCLOPSETTA FIMBRIATA</u>					+		+					2
<u>SYACIUM PAPILLOSUM</u>							+			+		2
<u>CITHARICHTHYS UNIDENT</u>										+		1
<u>ANCYLOPSETTA DILECTA</u>										+		1
<u>CITHARICHTHYS CORNUTUS</u>										+		1
TRIGLIDAE												
<u>PRIONOTUS MARTIS</u>		+										1
<u>BELLATOR MILITARIS</u>									+	+		2
<u>BELLATOR BRACHYCHIR</u>										+		1
<u>PRIONOTUS STEARNSI</u>										+		1
<u>BELLATOR EGRETTA</u>										+		1
LOPHIIDAE												
<u>LOPHIODES RETICULATUS</u>									+			1
POMACENTRIDAE												
<u>CHROMIS UNIDENT</u>							+					1
<u>CHROMIS ENCHRYSURUS</u>							+	+	+			3
<u>CHROMIS SCOTTI</u>								+		+		2
SCORPAENIDAE												
<u>SCORPAENA BRASILIENSIS</u>							+					1
<u>SCORPAENA PLUMIERI</u>							+		+			2
<u>SCORPAENA DISPAR</u>							+	+	+			3

PRESENCE/ABSENCE TABLE FOR FISH FOUND IN TRAWL ALL CRUISES

TAXA	STATION										NUMBER OF OCCURRENCES
	44	52	51	45	47	19	21	29	23	36	
SCORPAENIDAE											
SCORPAENODES TREDECIMSPINOSUS									+		1
SCORPAENA AGASSIZI										+	1
PONTINUS RATHBUNI										+	1
PRIACANTHIDAE											
PRISTIGENYS ALTA							+			+	2
OPISTOGNATHIDAE											
OPISTOGNATHUS UNIDENT										+	1
TRIACANTHODIDAE											
PARAHOLLARDIA LINEATA										+	1
CAPROIDAE											
ANTIGONIA CAPROS										+	1
ANTENNARIIDAE											
ANTENNARIUS RADIOSUS										+	1
NUMBER OF SPECIES	3	17	8	17	16	10	32	9	19	33	
NUMBER OF FAMILIES	3	14	6	12	12	9	19	5	11	15	

**Table F-14. Density (Number per 10-Minute Trawl) of
Fishes for All Cruises Together, by Station**

DENSITY (NO. PER 10-MINUTE TRAWL) OF FISHES BY STATION FOR ALL CRUISES

TAXA	STATION										TOTAL
	44	52	51	45	47	19	21	29	23	36	
CARANGIDAE											
<u>CARANX CRYSOS</u>		1.3									.1
CLUPEIDAE											
<u>HARENGULA JAGUANA</u>		3.3									.3
EPHIPPIDAE											
<u>CHAETODIPTERUS FABER</u>		2.0		10.0							1.2
SCIAENIDAE											
<u>EQUETUS LANCEOLATUS</u>		2.7	.5		1.0						.4
HAEMULIDAE											
<u>ANISOTREMUS VIRGINICUS</u>				.5							.1
<u>HAEMULON PLUMIERI</u>		22.3	4.0	7.0	4.0	1.5					3.9
<u>HAEMULON AUROLINEATUM</u>	4.0			2.0	3.0		1.3				1.0
BATRACHOIDIDAE											
<u>OPSANUS PARDUS</u>						1.5					.2
BLENNIDAE											
<u>PARABLENNIUS MARMOREUS</u>						.5					.1
SPARIDAE											
<u>CALAMIS ARCTIFRONS</u>	10.0										1.0
<u>LAGODON RHOMBOIDES</u>	2.7										.3
<u>CALAMIS BALONADO</u>				1.0							.1
<u>CALAMIS PENNA</u>				.5							.1
<u>CALAMIS CALAMIS</u>				.5			.7				.1
<u>CALAMIS PENNATULA</u>							.7				.1
<u>CALAMIS UNIDENT</u>							.3				.0
<u>CALAMIS NODOSUS</u>							.7				.1
LUTJANIDAE											
<u>LUTJANUS SYNAGRIS</u>		.7			2.0	2.5	.7				.6
<u>LUTJANUS GRISEUS</u>							1.0				.1
DIODONTIDAE											
<u>CHILOMYCTERUS SCHOEPEI</u>				1.5		1.0					.3
<u>DIODON HOLOCANTHUS</u>							.7				.1
OSTRACHIDAE											
<u>LACTOPHRYS QUADRICORNIS</u>	4.0			.5	.5						.5
<u>LACTOPHRYS POLYGONIA</u>								.3			.0
TETRAODONTIDAE											
<u>SPHOEROIDES SPENGLERI</u>				2.0			.7				.3
MULLIDAE											
<u>MULLIDAE UNIDENT</u>					.5						.1

DENSITY (NO. PER 10-MINUTE TRAWL) OF FISHES BY STATION FOR ALL CRUISES

TAXA	STATION										TOTAL
	44	52	51	45	47	19	21	29	23	36	
MULLIDAE											
<u>PSEUDUPENEUS MACULATUS</u>									.3		.0
GRAMMISTIDAE											
<u>RYPTICUS MACULATUS</u>		1.7		1.0							.3
<u>RYPTICUS BISTRISPINUS</u>									1.7		.2
SYNODONTIDAE											
SYNODONTIDAE UNIDENT	3.0										.3
<u>SYNODUS FOETENS</u>				.5		.5					.1
<u>SYNODUS INTERMEDIUS</u>		.7	1.0	1.5	.5	1.0	1.0		2.3	.3	.8
<u>SYNODUS SYNODUS</u>									.3		.0
<u>SYNODUS POEYI</u>							.3		4.0	41.0	4.5
<u>SAURDIA UNIDENT</u>										12.7	1.3
<u>SYNODUS UNIDENT</u>										.7	.1
<u>SAURDIA NORMANI</u>										.7	.1
<u>TRACHINOCEPHALUS MYOPS</u>										.7	.1
BALISTIDAE											
<u>BALISTES CAPRISCUS</u>					1.0						.1
<u>MONACANTHUS HISPIDUS</u>	1.0				1.0		.7				.3
<u>MONACANTHUS CILIATUS</u>	.3				1.0	3.5	.3	.3	6.3		1.2
<u>MONACANTHUS TUCKERI</u>								.5			.1
LABRIDAE											
<u>LACHNOLAIMUS MAXIMUS</u>	5.7	.5	1.5								.8
<u>HALICHOERES BIVITTATUS</u>			3.0								.3
LABRIDAE UNIDENT										.3	.0
<u>DECODON PUELLARIS</u>										.7	.1
SERRANIDAE											
<u>SERRANUS SUBLIGARIUS</u>	.7										.1
<u>EPINEPHELUS MORIO</u>	.7	.5	.5	.5							.2
<u>DIPLECTRUM FORMOSUM</u>		.5		.5	1.5						.3
<u>SCHULTZEA BETA</u>								.3			.0
<u>SERRANUS ANNULARIS</u>								.5	1.7		.2
<u>CENTROPRISTIS PHILADELPHICA</u>									.3		.0
<u>SERRANUS PHOEBE</u>							3.3		29.7	9.7	4.3
<u>SERRANUS ATROBARANCHUS</u>									11.3	54.3	6.6
<u>PLECTRANTHIAS GARRUFELLUS</u>										1.7	.2
<u>HOLANTHIAS MARTINICENSIS</u>										1.3	.1
CLINIDAE											
<u>EMBLEMARIA PANDIONIS</u>								.7			.1
GOBIESOCIDAE											
<u>GOBIESOX STRUMOSUS</u>								.3			.0
APOGONIDAE											
<u>APOGON AFFINIS</u>								.7			.1
<u>APOGON PSEUDOMACULATUS</u>								1.7			.2

DENSITY (NO. PER 10-MINUTE TRAWL) OF FISHES BY STATION FOR ALL CRUISES

TAXA	STATION										TOTAL
	44	52	51	45	47	19	21	29	23	36	
GERREIDAE											
<u>EUCINOSTOMIS JONESI</u>							.3				.0
<u>EUCINOSTOMIS UNIDENT</u>							.3				.0
SCARIDAE											
<u>SPARISOMA UNIDENT</u>							1.0				.1
CHAETODONTIDAE											
<u>HOLACANTHUS BERMUDENSIS</u>				1.0							.1
<u>POMACANTHUS ARCUATUS</u>					1.5						.2
<u>CHAETODON OCELLATUS</u>		.3					4.0	.3			.5
<u>CHAETODON SEDENTARIUS</u>							3.7	.5			.4
<u>CHAETODON AXA</u>									1.7		.2
OGCOEPHALIDAE											
<u>OGCOEPHALUS RADIATUS</u>				.5		.5					.1
<u>OGCOEPHALUS CUBIFRONS</u>					.5				.3		.1
<u>OGCOEPHALUS PARVUS</u>									.3	1.0	.1
<u>HALIENICHTHYS ACULEATUS</u>										2.3	.2
<u>OGCOEPHALUS DECLIVIROSTRIS</u>										3.0	.3
MURAENIDAE											
<u>GYMNOTHORAX NIGROMARGINATUS</u>			.5		.5				.7	.3	.2
BOTHIDAE											
<u>CYCLOPSETTA FIMBRIATA</u>					.5		.7				.1
<u>SYACIUM PAPILLOSUM</u>							2.7			.3	.3
<u>CITHARICHTHYS UNIDENT</u>										1.0	.1
<u>ANCYLOPSETTA DILECTA</u>										.7	.1
<u>CITHARICHTHYS CORNUTUS</u>										13.7	1.4
TRIGLIDAE											
<u>PRIONOTUS MARTIS</u>		.3									.0
<u>BELLATOR MILITARIS</u>									.3	.3	.1
<u>BELLATOR BRACHYCHIR</u>										3.3	.3
<u>PRIONOTUS STEARNSI</u>										18.0	1.8
<u>BELLATOR EGRETTE</u>										11.0	1.1
LOPHIIDAE											
<u>LOPHIODES RETICULATUS</u>									.3		.0
POMACENTRIDAE											
<u>CHROMIS UNIDENT</u>							.7				.1
<u>CHROMIS ENCHRYSURUS</u>							.3	1.5	.3		.2
<u>CHROMIS SCOTTI</u>								.8		.3	.1
SCORPAENIDAE											
<u>SCORPAENA BRASILIENSIS</u>							.3				.0
<u>SCORPAENA FLUMIERI</u>							1.3		4.3		.6
<u>SCORPAENA DISPAR</u>							1.3	.5	1.3		.3
<u>SCORPAENODES TREDECIMSPINOSUS</u>									.3		.0

DENSITY (NO. PER 10-MINUTE TRAWL) OF FISHES BY STATION FOR ALL CRUISES

TAXA	STATION										TOTAL	
	44	52	51	45	47	19	21	29	23	36		
SCORPAENIDAE												
SCORPAENA AGASSIZI											6.0	.6
PONTINUS RATHBUNI											2.0	.2
PRIACANTHIDAE												
PRISTIGENYS ALTA							.7				2.0	.3
OPISTOGNATHIDAE												
OPISTOGNATHUS UNIDENT											.3	.0
TRIACANTHODIDAE												
PARAHOLLARDIA LINEATA											1.0	.1
CAPROIDAE												
ANTIGONIA CAPROS											.7	.1
ANTENNARIIDAE												
ANTENNARIUS RADIOSUS											.7	.1
TOTAL	11.0	56.3	8.0	34.5	18.5	14.0	33.3	5.0	66.3	194.	44.1	
NUMBER OF SPECIES	3	17	8	17	16	10	32	9	19	33	98	
NUMBER OF FAMILIES	3	14	6	12	12	9	19	5	11	15	36	

Figure F-1. Fish Length Frequencies (fork length in mm).
Fish length frequencies are shown by cruise for all stations combined for species which were represented by at least 10 individuals. Intervals shown are in 10-mm increments (e.g., 140 interval represents lengths from 131 to 140 mm). A length of 5 (interval 0 to 5) indicates no length measurement was made (usually incomplete or damaged specimen).

LEN	CRUISE		TOTAL
FREQUENCY	3	4	
40	0	1	1
90	0	4	4
90	1	0	1
70	1	0	1
80	3	0	3
TOTAL	5	5	10

Bellator braachyohir

LEN	CRUISE			TOTAL
FREQUENCY	2	3	4	
60	2	0	2	4
70	0	0	4	4
90	0	0	1	1
100	0	0	1	1
110	0	0	3	3
120	0	0	3	3
130	4	1	1	6
140	2	3	4	9
170	2	0	0	2
TOTAL	10	4	19	33

Bellator egretta

LEN	CRUISE	TOTAL
FREQUENCY	2	
160	4	4
170	5	5
180	5	5
200	1	1
TOTAL	15	15

Calamus acrotifrons

LEN	CRUISE			TOTAL
FREQUENCY	1	2	3	
130	1	0	1	2
140	7	2	1	10
180	5	0	0	5
160	2	0	1	3
170	4	2	0	6
TOTAL	19	4	3	26

Chastodipterus faber

LEN	CRUISE		TOTAL
FREQUENCY	2	3	
80	0	1	1
100	0	1	1
140	7	0	7
150	4	1	5
TOTAL	11	3	14

Chaetodon ocellatus

LEN	CRUISE		TOTAL
FREQUENCY	2	3	
90	2	0	2
110	2	2	4
120	6	1	7
TOTAL	10	3	13

Chaetodon sedentarius

LEN	CRUISE			TOTAL
FREQUENCY	1	2	3	
5	1	0	0	1
40	1	0	0	1
120	0	1	0	1
160	0	1	0	1
170	4	2	0	6
180	3	0	0	3
190	1	0	1	2
200	2	0	1	3
TOTAL	12	4	2	18

Haemulon carolineatum

LEN	CRUISE	TOTAL
FREQUENCY	2	
140	8	8
150	2	2
TOTAL	10	10

Harengula jaguana

LEN	CRUISE			TOTAL
FREQUENCY	1	2	3	
130	0	2	0	2
140	0	4	0	4
150	2	4	2	8
160	3	14	3	20
170	0	2	8	10
180	5	2	3	10
190	0	6	4	10
200	0	2	5	7
210	2	4	8	14
220	0	2	2	4
230	2	2	3	7
250	0	0	1	1
280	0	0	1	1
TOTAL	14	44	40	98

Haemulon plumieri

LEN	CRUISE				TOTAL
FREQUENCY	1	2	3	4	
180	0	2	2	0	4
190	0	8	3	0	10
200	0	0	1	0	1
210	1	0	1	1	3
240	0	2	0	0	2
280	0	0	1	0	1
TOTAL	1	12	7	1	21

Laoholaimus maximus

LEN	CRUISE				TOTAL
FREQUENCY	2	3	4		
50	4	0	0		4
60	4	1	0		5
70	6	1	0		7
80	0	11	0		11
90	2	5	3		10
100	8	2	3		13
110	2	0	0		2
120	2	0	0		2
TOTAL	28	20	6		54

Prionotus stearnsi

LEN	CRUISE				TOTAL
FREQUENCY	1	2	3	4	
160	1	0	0	0	1
170	1	0	3	0	4
180	0	0	5	1	6
190	1	2	6	0	9
200	1	0	1	0	2
210	0	0	2	0	2
220	0	0	1	0	1
290	1	0	0	0	1
240	0	2	0	0	2
TOTAL	5	4	18	1	28

Laotophrys quadrilobis

LEN	CRUISE	TOTAL
FREQUENCY	4	
30	2	2
40	6	6
50	7	7
60	17	17
70	5	5
140	1	1
TOTAL	38	38

Saurdia unidentified

LEN	CRUISE			TOTAL
FREQUENCY	1	2	3	
180	2	0	0	2
190	0	0	2	2
200	2	0	0	2
210	2	0	0	2
220	0	2	0	2
240	0	0	1	1
TOTAL	6	2	3	11

Lutjanus synagris

LEN	CRUISE			TOTAL
FREQUENCY	2	3	4	
5	4	0	0	4
50	0	1	11	12
60	0	0	30	30
70	4	2	7	13
80	25	18	55	98
90	16	5	15	36
100	2	1	0	3
TOTAL	52	27	118	197

Serranus atrobaranichus

LEN	CRUISE			TOTAL
FREQUENCY	1	3	4	
40	0	0	1	1
50	0	0	2	2
60	0	1	2	3
70	0	0	2	2
100	0	0	2	2
110	0	3	4	7
120	4	6	1	11
TOTAL	4	10	14	28

Monacanthus ciliatus

LEN	CRUISE			TOTAL
FREQUENCY	2	3	4	
50	2	0	1	3
60	0	0	2	2
70	3	1	2	6
80	3	1	3	7
90	4	2	4	10
100	3	1	3	7
110	1	7	2	10
120	1	6	2	9
130	3	4	3	10
140	4	5	0	9
150	5	4	0	13
160	22	5	0	27
170	8	1	0	9
TOTAL	63	37	22	122

Serranus phoebe

LEN	CRUISE			TOTAL
	2	3	4	
60	0	2	0	2
70	0	0	1	1
80	0	0	1	1
100	0	0	1	1
140	0	1	0	1
160	2	1	0	3
170	6	2	1	9
TOTAL	8	6	4	18

Scorpaena agassizi

LEN	CRUISE		TOTAL
	3	4	
60	0	1	1
80	0	2	2
70	1	17	18
80	3	17	20
90	5	14	19
100	3	8	11
110	0	2	2
120	1	1	2
130	0	1	1
TOTAL	13	63	76

Synodus poeyi

LEN	CRUISE		TOTAL
	2	4	
70	0	2	2
110	0	1	1
120	0	1	1
130	0	2	2
140	0	2	2
150	0	4	4
160	0	1	1
210	2	0	2
280	2	0	2
TOTAL	4	13	17

Scorpaena plumieri

LEN	CRUISE				TOTAL
	1	2	3	4	
80	0	0	1	0	1
110	0	0	0	1	1
130	0	0	2	0	2
140	0	0	0	1	1
170	0	0	1	0	1
180	0	2	0	0	2
200	0	0	0	1	1
220	0	0	1	1	2
230	0	1	0	0	1
240	2	1	1	0	4
250	0	0	0	1	1
260	0	0	1	0	1
380	1	0	0	0	1
390	0	0	1	0	1
TOTAL	3	4	8	5	20

Synodus intermedius

**Table F-15. Presence/Absence Table for Plants Collected
by Dredging for All Cruises Together,
by Station**

PRESENCE/ABSENCE TABLE FOR PLANTS BY STATION FOR ALL CRUISES

TAXA	STATION									NUMBER OF OCCURRENCES	
	44	52	51	45	47	19	21	29	23		
CHLOROPHYCEAE											
<u>UDOTEA FLABELLUM</u>		+									1
<u>HALIMEDA CF. MONILE</u>			+	+							2
<u>HALIMEDA DISCOLDEA</u>				+							1
<u>HALIMEDA TUNA</u>				+							1
<u>CAULERPA PELTATA</u>				+							1
<u>HALIMEDA CF. SIMULANS</u>			+		+						2
<u>GODIUM ISTHMOCLADUM</u>				+	+						2
<u>CAULERPA SERTULARIOIDES</u>		+			+	+					3
<u>UDOTEA CONGLUTINATA</u>			+		+	+					3
<u>UDOTEA CYATHIFORMIS</u>				+		+					2
<u>CAULERPA MEXICANA</u>					+						1
<u>CAULERPA RACEMOSA V. MACROPHYSA</u>								+			1
<u>PSEUDOGODIUM FLORIDANUM</u>								+			1
<u>PSEUDOTETRASPORA ANTILLARUM</u>									+	+	2
<u>ANADYOMENE MENZIESII</u>									+	+	2
PHAEOPHYCEAE											
<u>DICTYOTA LINEARIS</u>		+									1
<u>DICTYOPTERIS CF. MEMBRANACEA</u>		+	+	+							3
<u>DICTYOPTERIS UNIDENT</u>			+								1
<u>SARGASSUM FILIPENDULA</u>				+							1
<u>SARAGASSUM HYSTRIX V. BUXTIFOLIUM</u>				+							1
<u>DICTYOTA BARTAYRESII</u>		+		+	+	+	+				5
<u>SARAGASSUM CF. HYSTRIX</u>				+	+			+			3
<u>SPOROCHNUS PENDUNCULATUS</u>								+			1
<u>NERSTETIA TROPICA</u>								+			1
<u>PHAEOPHYTA SP. 1</u>								+			1
<u>LOBOPHORA VARIEGATA</u>									+		1
<u>PHAEOPHYTA SP. 2</u>									+	+	2
<u>DICTYOPTERIS SP. 1</u>										+	1

PRESENCE/ABSENCE TABLE FOR PLANTS BY STATION FOR ALL CRUISES

TAXA	STATION								NUMBER OF OCCURRENCES	
	44	52	51	45	47	19	21	29		23
RHODOPHYCEAE										
GRACILARIA SP. 1		+								1
RHODOPHYTA SP. 4		+								1
RHODOPHYTA SP. 15		+								1
GRACILARIA FOLIIFERA		+								1
RHODOPHYTA SP. 5		+								1
RHODOPHYTA SP. 6		+								1
RHODOPHYTA SP. 14		+								1
RHODOPHYTA SP. 13		+								1
RHODOPHYTA SP. 16		+								1
RHODOPHYTA SP. 8		+								1
LAURENCIA SP. 1		+								1
RHODOPHYTA SP. 17		+	+							2
GRACILARIA VERRUCOSA			+							1
ROTRYOCLADIA OCCIDENTALIS	+	+		+	+					4
RHODOPHYTA SP. 19				+						1
PHODOPHYTA SP. 18				+						1
LAURENCIA INTRICATA				+						1
LAURENCIA GEMMIFERA				+						1
LAURENCIA CF. OBTUSA				+						1
RHODOPHYTA SP. 1				+						1
RHODOPHYTA SP. 2				+						1
RHODOPHYTA SP. 3				+						1
SEYRIDIA FILAMENTOSA		+	+		+					3
RHODOPHYTA SP. 7				+						1
EUCHEIMA NUDUM	+			+	+					3
RHODOPHYTA SP. 9	+				+					2
JANIA FUMILA					+					1
WRIGHTIELLA TUMANOWICZI					+					1
GRACILARIA ARMATA					+					1
GRACILARIA UNIDENT					+					1
LITHOTHAMNIUM OCCIDENTALE						+				1
CHAMPTA PARVULA		+			+	+	+			4
GRACILARIA CYLINDRICA		+			+		+			3
AGARDHIELLA RAMOSISSIMA		+					+			2
GRACILARIA MAMMILLARIS	+						+			2
POLYSIPHONIA UNIDENT				+			+			2
RHODOPHYTA SP. 10					+		+			2
HYPOGLOSSUM TENNIFOLIUM							+			1
RHODOPHYTA SP. 11							+			1
RHODOPHYTA SP. 12							+			1
KALLYMENTIA WESTII							+			1
FAUCHEA HASSLERI							+			1
PEYSSONNELIA UNIDENT								+		1
PEYSSONNELIA RUBRA								+		1
ANGIOSPERMAE										
HALOPHILA BAILLONIS						+				1

APPENDIX G
FOULING PLATES, CRUISES II (MARCH 1984)
AND III (MAY 1984) COLLECTIONS

APPENDIX G
FOULING PLATES, CRUISES II (MARCH 1984)
AND III (MAY 1984) COLLECTIONS

Appendix G was compiled while this report was in final production and is intended to provide an overview of preliminary findings for Year 4 fouling plate studies conducted at Group II stations (52, 21, 23, 29, and 36). Laboratory analyses have been completed for all of the fouling plates collected during Year 4. Data entry and verification entry are finished for plates collected on Cruises II (March 1984) and III (May 1984) although still underway for plates collected on Cruise IV. None of the fouling plate data have yet been analyzed statistically.

In the interests of brevity, this appendix emphasizes graphical products (histograms) illustrating density (numbers of individuals per plate) and biomass (wet weight in grams per plate). Summaries are provided for major groups of fouling organisms on plates installed on Cruise I (December 1983) and Cruise II and collected in March and May. Percentage cover estimates will be summarized graphically in a similar manner and included in the Final Report for Year 5, along with tabulated data, species lists, abundance estimates for individual replicates, and statistical analyses. The data will be highly amenable to statistical analyses, because there was remarkably little variability in abundance between individual plates. A typical example of the excellent replication found thus far is provided as Figure G-1.

When each plate was removed from the water, it was bagged to capture motile invertebrates that might not remain on the plate during the preservation process. Each bag contained organisms from only one plate. It is thus possible to associate bag data with plate data for each sample. The raw abundance figures for animals found in bags cannot be related directly to the abundance of organisms on plates, however, since

bags sampled over twice the 225-cm² surface area analyzed per plate. The number of organisms in bags and their biomass can be divided by two for qualitative comparisons to the same parameters for organisms on plates, but readers are cautioned not to attempt quantitative comparisons between bag and plate data. The two data sets will be combined during Year 5 for statistical analysis.

DECEMBER TO MARCH SAMPLES (CRUISE I TO CRUISE II)

Plates installed in December 1983 and collected in March 1984 were exposed for approximately 3 months. Both steel and tile plates were used. Four types of samples were collected: steel plates, tile plates, bags from steel plates, and bags from tile plates. Samples were collected at Stations 52, 29, and 23.

DENSITY

Major differences in numbers of individual (counted) organisms were evident between stations. Tile plates at Station 52, closest to shore, collected more individuals than did either Station 29 or Station 23 (Figure G-2). The most abundant organisms on tile plates at all three stations were serpulid polychaetes; other common groups at Station 52 included barnacles (especially Balanus trigonus and B. venustus) and pteriod bivalves (oysters and their relatives). Steel plates collected far fewer individuals than did tile plates, but, in general, the same groups of organisms were present (Figure G-3).

Bag samples had large numbers of several groups of motile invertebrates that were relatively poorly represented on tile and steel plates (Figures G-4 and G-5). These groups include tanaidaceans, isopods, caprellid amphipods, various decapods, pycnogonids, sipunculids, and gastropods.

BIOMASS

Tile plates collected more than twice as much biomass than did steel plates at every station. Plates at Station 52 collected several orders

of magnitude more material than did Stations 29 and 23 (Figures G-6 and G-7, Tables G-1 and G-2). Both steel and tile plates from Station 29 had the least biomass. Hydroids, serpulid polychaetes, pteroid bivalves, and barnacles accounted for most of the biomass on tile and steel plates at Station 52. Hydroids and serpulid polychaetes were also abundant on tile plates at Stations 29 and 23. Steel plates were nearly bare at Station 29, but some hydroids settled on steel plates at Station 23.

At all three stations, significant quantities of material fell off or were abraded into bags (Figures G-8 and G-9, Tables G-1 and G-2). While many motile animals were seen to leave the plate during preservation, other losses were due to mechanical disturbance, e.g., on board or while the bags were being shipped from Florida to LGL for analysis. In addition, "rust bubbles" had formed on the surfaces of the steel plates and flaked off easily, taking with them any attached fauna.

There was more material in bags that surrounded both tile and steel plates collected from Station 52 than at Station 29 or Station 23. Caprellid amphipods were responsible for the greatest biomass in bags from Station 52, and hydroids were the main component of bag samples from Stations 29 and 23. The biomass of animals retained in the bags surrounding steel plates at Stations 29 and 23 was greater than the biomass left on the plates.

MARCH TO MAY SAMPLES (CRUISE II TO CRUISE III)

Plates installed in March 1984 and collected in May 1984 were exposed for approximately 3 months. Both steel and tile plates were used. Four types of samples were collected: steel and tile plates, and bags from each type of plate. Samples were collected at Stations 52, 29, and 23.

DENSITY

Major differences in numbers of individual (counted) organisms were evident between stations. Tile and steel plates at Station 52 collected

more individuals than did those at either Station 29 or Station 23 (Figures G-10 and G-11). The most abundant organisms on tile plates at Station 52 were serpulid polychaetes, barnacles (Balanus trigonus), and pterioid bivalves; and at Stations 29 and 23, serpulids. Steel plates at Station 52 were similar to tile plates in terms of numerically dominant organisms. At Stations 29 and 23, steel plates sampled only hydroids and bryozoans.

Bag samples surrounding tile plates for this period included large numbers of amphipods (mainly gammarids) and gastropods (Mitrella lunata), which were virtually absent from corresponding plates (Figures G-12 and G-13). Bag samples from tile plates at Stations 29 and 23 also contained more bivalves than did the plates themselves, suggesting that the bivalves there may have been recently settled and thus prone to removal during preservation. Bag samples from steel plates showed higher density than plate counts for several motile forms; isopods, amphipods (mainly caprellids), and gastropods were more common in bag samples than on the plates themselves.

BIOMASS

As during the first sampling period, tile plates were more effective collectors of fouling organisms than were steel plates. Much more material was present on both tile and steel fouling plates at Station 52 than at either Station 29 or 23 for this sampling period (Figures G-14 and G-15, Tables G-1 and G-2). At Station 52, the most abundant organisms were barnacles, serpulid polychaetes, pterioid bivalves, and amphipod tubes. At Stations 29 and 23, hydroids accounted for the majority of the biomass. Steel plates were better collectors than were tile plates for hydroids and bryozoans at Station 52, but not at Stations 29 and 23.

Bags surrounding tile plates at Station 52 contained many amphipod tubes, gastropods, and bivalves (Figure G-16). At Station 23, bags from tile plates contained mostly hydroids. Bags surrounding steel plates

included many amphipods at Station 52, and hydroids at Stations 29 and 23 (Figure G-17). More material was retained by bags at Stations 29 and 23 than by their corresponding steel plates (Table G-2). This demonstrates (1) the propensity of steel plates to flake and shed sample material, and (2) the necessity for bagging fouling plates during retrieval to prevent sample loss.

DECEMBER TO MAY SAMPLES (CRUISE I TO CRUISE III)

Plates installed in December 1983 and collected in May 1984 were exposed for 5 months. The data set includes only tile plates and their bags, except at Station 36, where steel plates were inadvertently exposed for 5 months. Data for this sample period are available for Stations 52, 29, 23, and 36.

DENSITY

There were more individuals on tile plates at Station 52 than at any of the other stations (Figure G-18). At Station 52, the numerically dominant organisms were serpulid polychaetes; barnacles (Balanus trigonus), pteriod bivalves, and bryozoans were also common at Station 52. At deeper stations, polychaetes and bryozoans were important. On the steel plates at Station 36, only hydroids were recorded.

Bags surrounding these plates contained many motile organisms that were scarce on the plates themselves. Bag samples from Station 52 were rich in tanaidaceans, isopods, amphipods (both gammarids and caprellids); and bag samples from Stations 29 and 23 contained many bivalves, polychaetes, and foraminiferans (Figure G-19). Bags from the tile and steel plates at Station 36 contained only a few forams, hydroids, polychaetes, and bivalves.

BIOMASS

Samples exposed for this 5-month period included two to three times more biomass than did those from 3-month plates (Table G-2). Tile plates

from Station 52 had two orders of magnitude more material on them than did tile plates from the other stations. Plates at Station 52 were heavily overgrown with hydroids, serpulid polychaetes, barnacles (mainly Balanus trigonus), pteriod bivalves, and ascidians. At Station 29, hydroids, bryozoans, and ascidians were most abundant. At Station 23, serpulid polychaetes and hydroids accounted for most of the biomass. At Station 36, hydroids were abundant.

At Station 52, plates collected more material for every abundant taxon except hydroids and bryozoans than did plates from any other station (Figure G-20, Table G-1). December to May biomass averages (g/plate) at Stations 52, 29, 23, and 36 for polychaetes (mainly serpulids) were 6.6, 0.03, 0.17, and 0.002, respectively. Similar figures for barnacles were 10.3, 0.0001, 0.0005, and 0; and for bivalves, 5.9, 0.001, 0.007, and 0.002, respectively. Hydroid biomass was rather constant between stations, on the other hand; 5-month samples averaged 0.09, 0.11, 0.10, and 0.13 g/plate.

More material was present in bags from plates exposed during this sampling period than from the 3-month plates, probably because the plates themselves were more heavily overgrown (Table G-2). Most of the biomass in bags from Stations 23 and 36 was attributable to hydroids (Figure G-21). At Station 52, gammarid and caprellid amphipods, decapods, gastropods, and bivalves were biomass dominants.

SUMMARY

Major differences in biofouling growth occurred between sampling periods. Five-month exposures (December to May) produced greater amounts of fouling material on substrates at every station than did 3-month exposures. Except at Station 23, the second sampling period (March to May) had greater settlement and growth of fouling organisms than did the sampling period between December and March.

The most striking differences between stations are those separating Station 52 from the other four Group II stations. Lying close to shore in shallow water, fouling plates at Station 52 consistently had much more material (both in terms of numbers of individuals and biomass) on them in every sampling period for all taxa together. Although abundance of fouling organisms was greatest at Station 52 and least at Station 36, plates at Station 29 (at 66 m) often had fewer individuals and less material on them than did plates at Station 23 (at 75 m). Plates at Station 36, the deepest station, were virtually bare after a 5-month exposure. Within taxa, the average numbers of individuals and biomass per plate generally decreased with depth and distance offshore. The abundance of most taxonomic groups was several orders of magnitude greater at Station 52 than at any other station.

The absolute amount of material on fouling plates at the deeper stations was minimal. After being exposed for 5 months, biomass on plates at every station other than Station 52 averaged one-third of a gram or less, even taking into account the bagged material. One side of a plate has an area of approximately 225 cm²; by extrapolation, similar substrates would collect less than 15 g/m² total biofouling material after a 5-month exposure.

There were major differences between sampling periods in terms of the kinds of organisms settling. For example, at Station 52 there was a heavy settlement of hydroids between December and March, and of barnacles and bivalves between March and May. At Stations 29, 23, and 36, hydroids accounted for the greatest biomass during all sampling periods. Other groups such as foraminiferans, sponges, and ascidians did not settle in significant quantities at any station during the first sampling period, but were present either between March and May, or on 5-month plates collected in May. Their absence from 3-month plates exposed between December and March and their presence on 5-month plates confirmed that many biofouling organisms settled best on pre-existing communities.

Table G-1. Average Biomass (g/plate) for Major Taxa of Invertebrates on Tile Fouling Plates, by Station and Exposure Period

Taxon	Station			
	52	29	23	36
Foraminiferida	-/-/-	-/-/+	-/+/+	-/-/-
Porifera	-/-/-	-/-/0.01	-/+/+	-/-/-
Hydroida	0.49/-/0.09	+/0.02/0.11	0.04/0.04/0.10	-/-/0.13
Bryozoa	+/+0.02	+/+0.04	+/+0.02	-/-/-
Polychaeta	2.1/1.6/6.6	+/+0.03	0.02/+0.17	-/-/+
Cirripedia	0.10/9.6/10.3	-/+/+	+/-/+	-/-/-
Amphipoda	0.15/0.50/0.54	-/-/-	-/-/+	-/-/-
Bivalvia	0.12/0.88/5.9	-/+/+	-/+/+	-/-/+
Ascidiacea	-/-/0.39	-/-/0.06	-/-/-	-/-/-

Note: Exposure periods are shown separated by slashes (/) as follows:
 Cruises I-II (approximately 3-month exposure, December to March)/
 Cruises II-III (approximately 3-month exposure, March to May)/
 Cruises I-III (5-month exposure, December to May). Weights averaging less than 0.01 g/plate are shown by a plus (+). A minus (-) indicates zero values.

Table G-2. Average Total Biomass (g) per Plate, by Plate Type and Sample Type (Either Plate Surface or Bag Surrounding Plate)

Station	Season		
	December- March	March- May	December- May
<u>Tile Fouling Plates</u>			
52	2.9345	12.6058	24.2852
29	0.0101	0.0223	0.2635
23	0.0584	0.0503	0.3088
36			0.1326
<u>Steel Fouling Plates</u>			
52	1.3562	9.8394	
29	0.0000	0.0031	
23	0.0136	0.0081	
36			0.0029
<u>Bag Surrounding Tile Fouling Plates</u>			
52	0.4894	0.3836	1.4930
29	0.0087	0.0070	
23	0.0316	0.0264	0.0401
36			0.0587
<u>Bag Surrounding Steel Fouling Plates</u>			
52	0.3151	1.6065	
29	0.0256	0.0122	
23	0.0162	2.6872	
36			0.0041

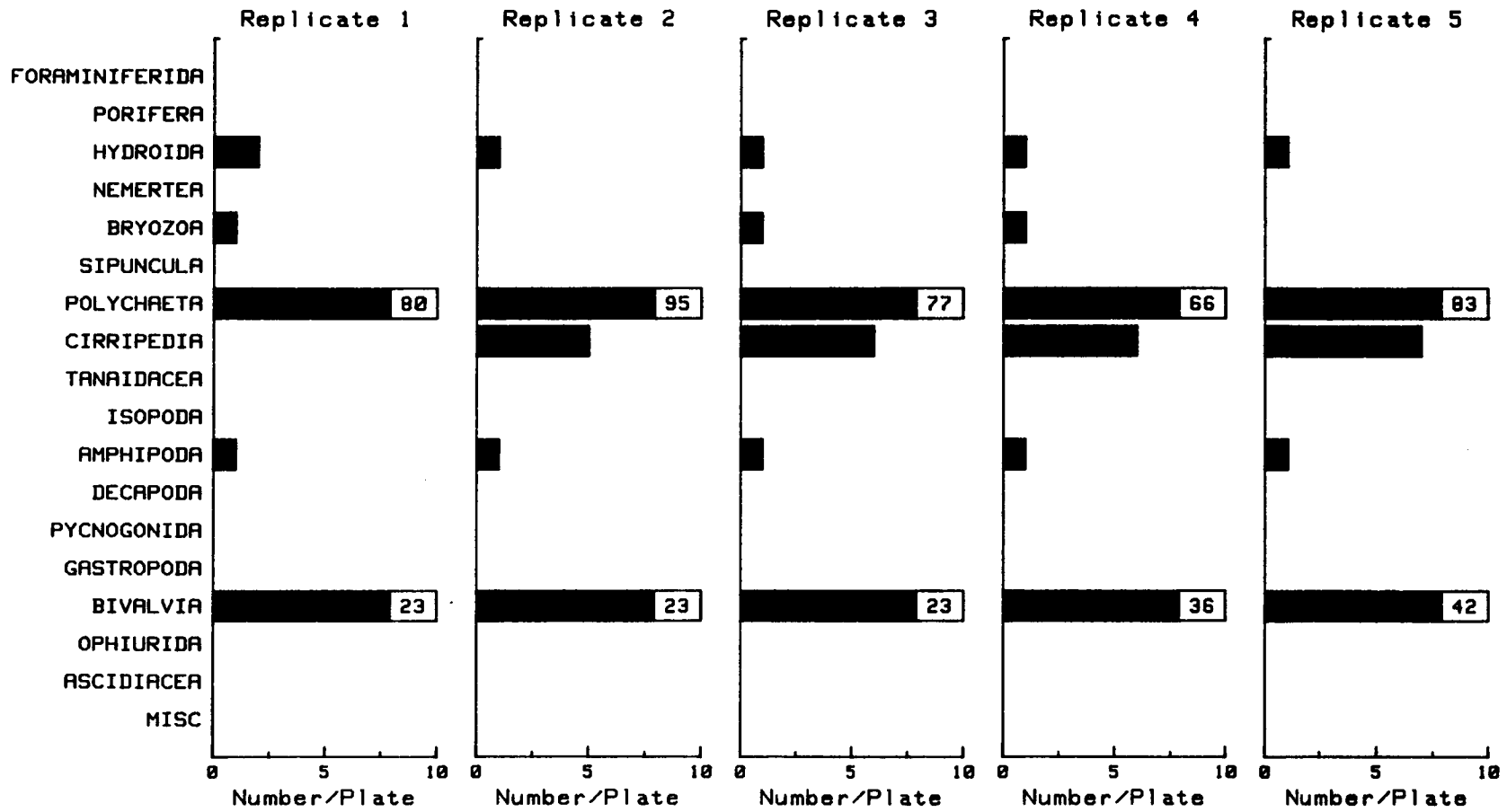


Figure G-1 ABUNDANCE OF FOULING ORGANISMS ON REPLICATE TILE PLATES EXPOSED FOR 3 MONTHS AT STATION 52, COLLECTED ON CRUISE II

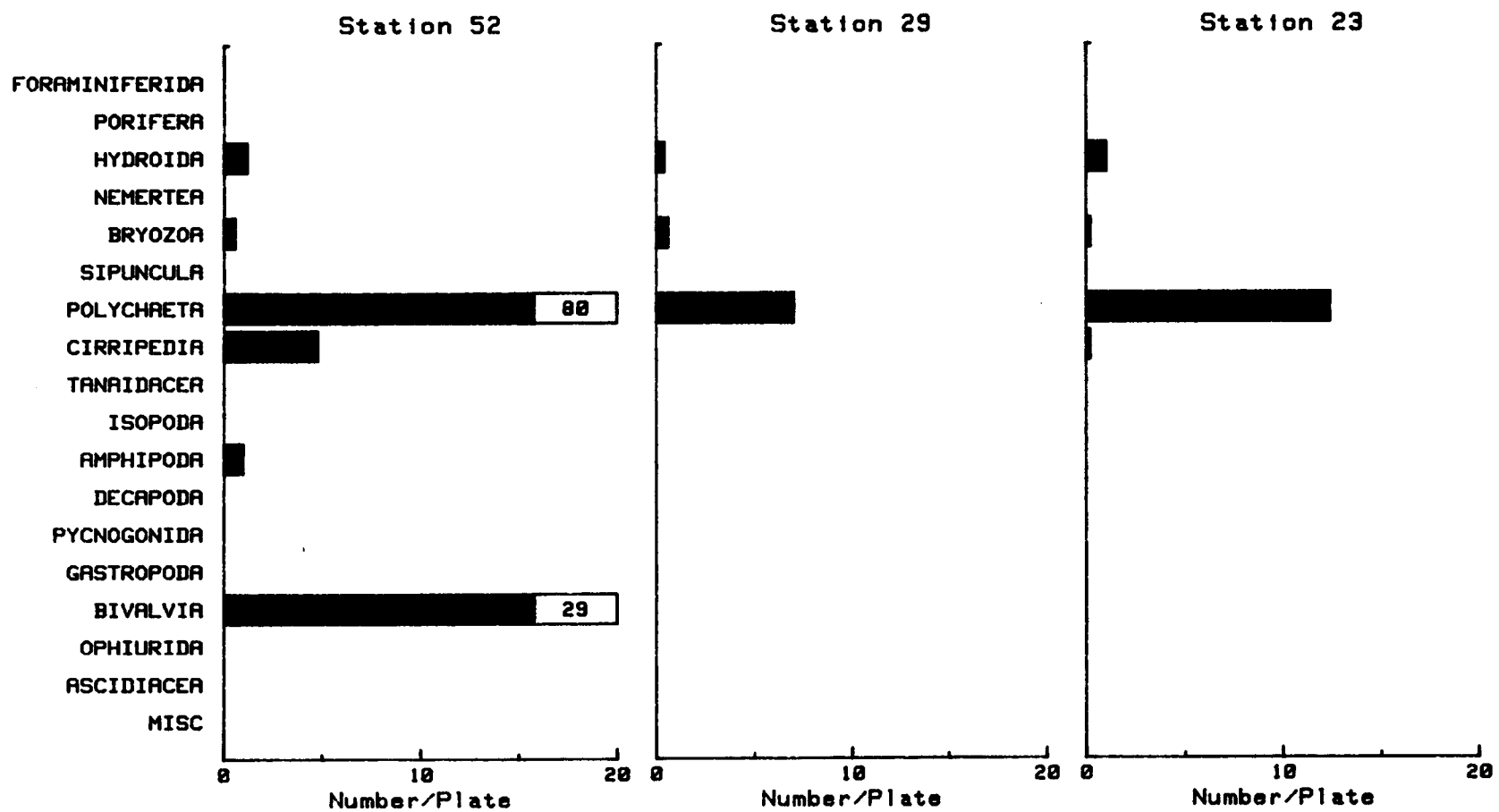


Figure G-2 MEAN ABUNDANCE OF FOULING ORGANISMS ON TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

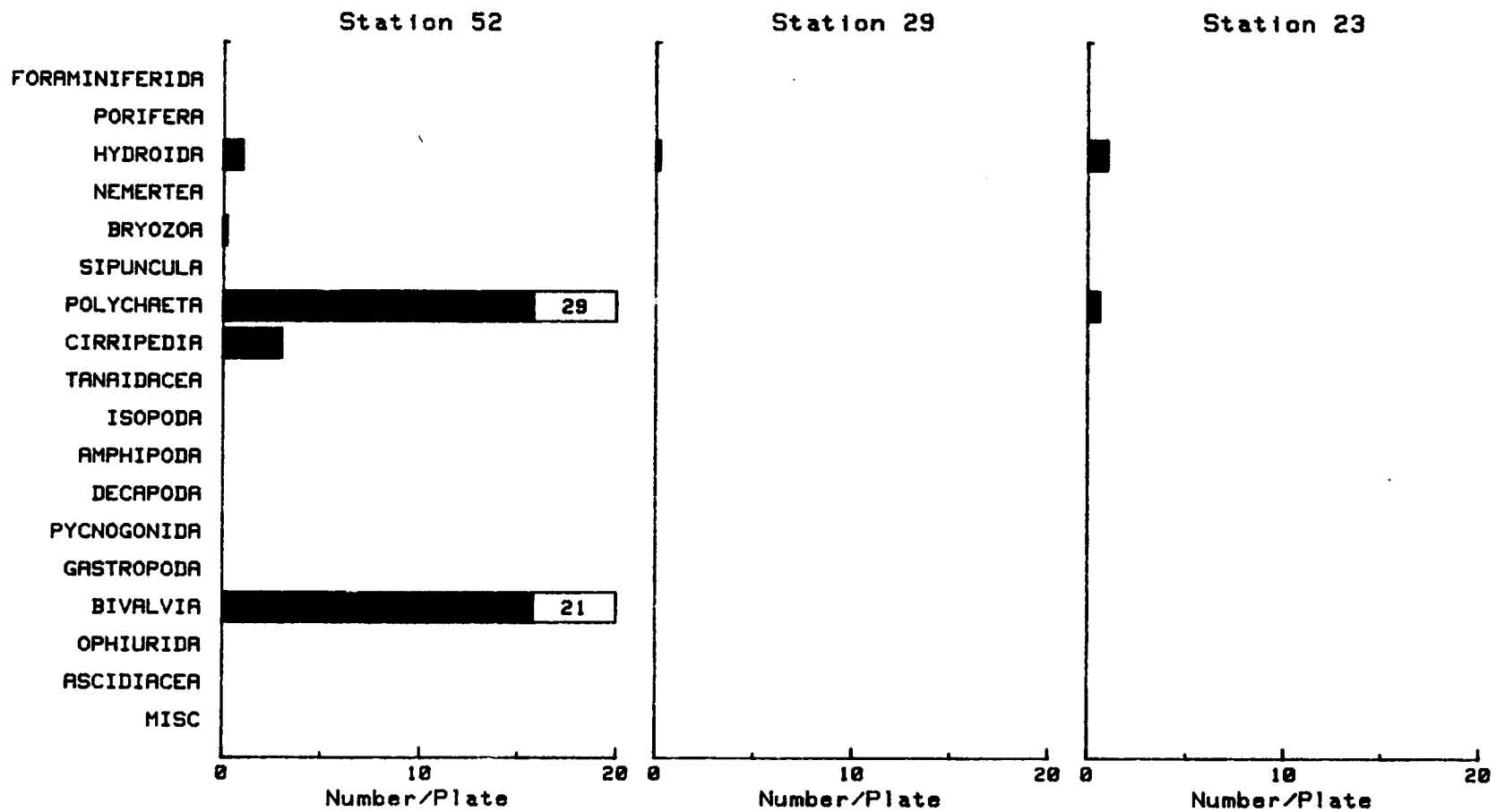


Figure G-3 MEAN ABUNDANCE OF FOULING ORGANISMS ON STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

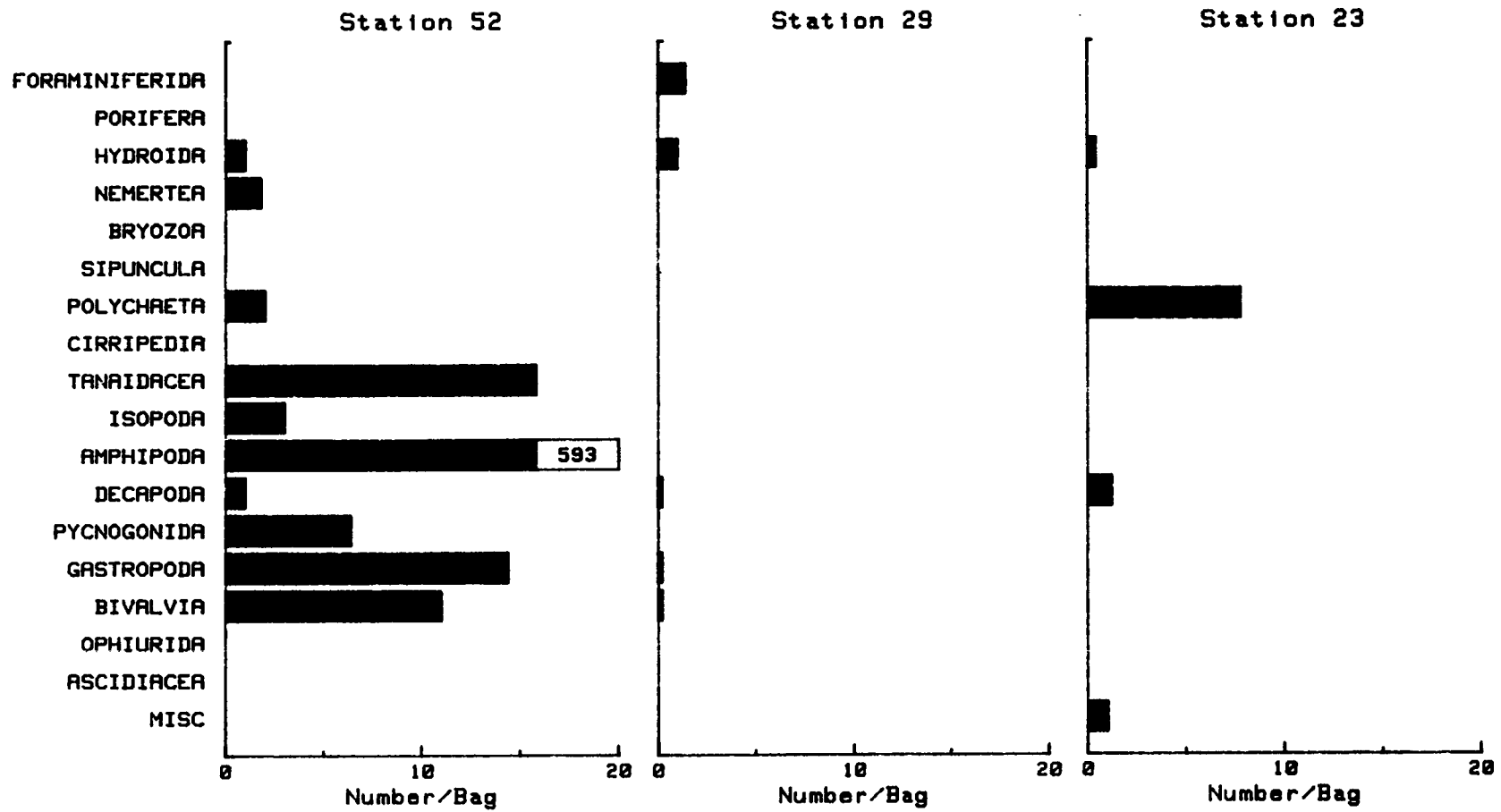


Figure G-4 MEAN ABUNDANCE OF FOULING ORGANISMS IN BAGS FROM TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

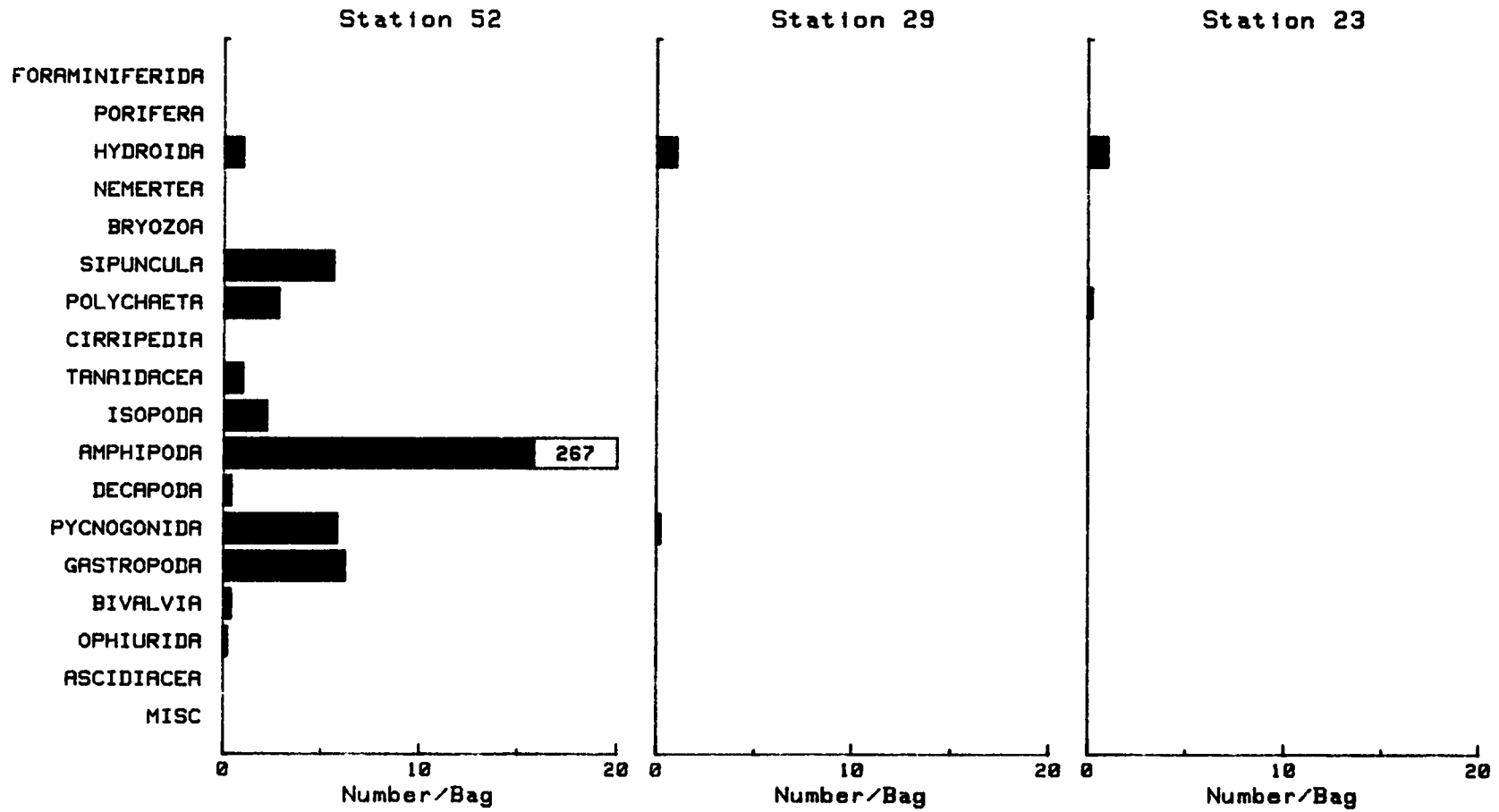


Figure G-5 MEAN ABUNDANCE OF FOULING ORGANISMS IN BAGS FROM STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

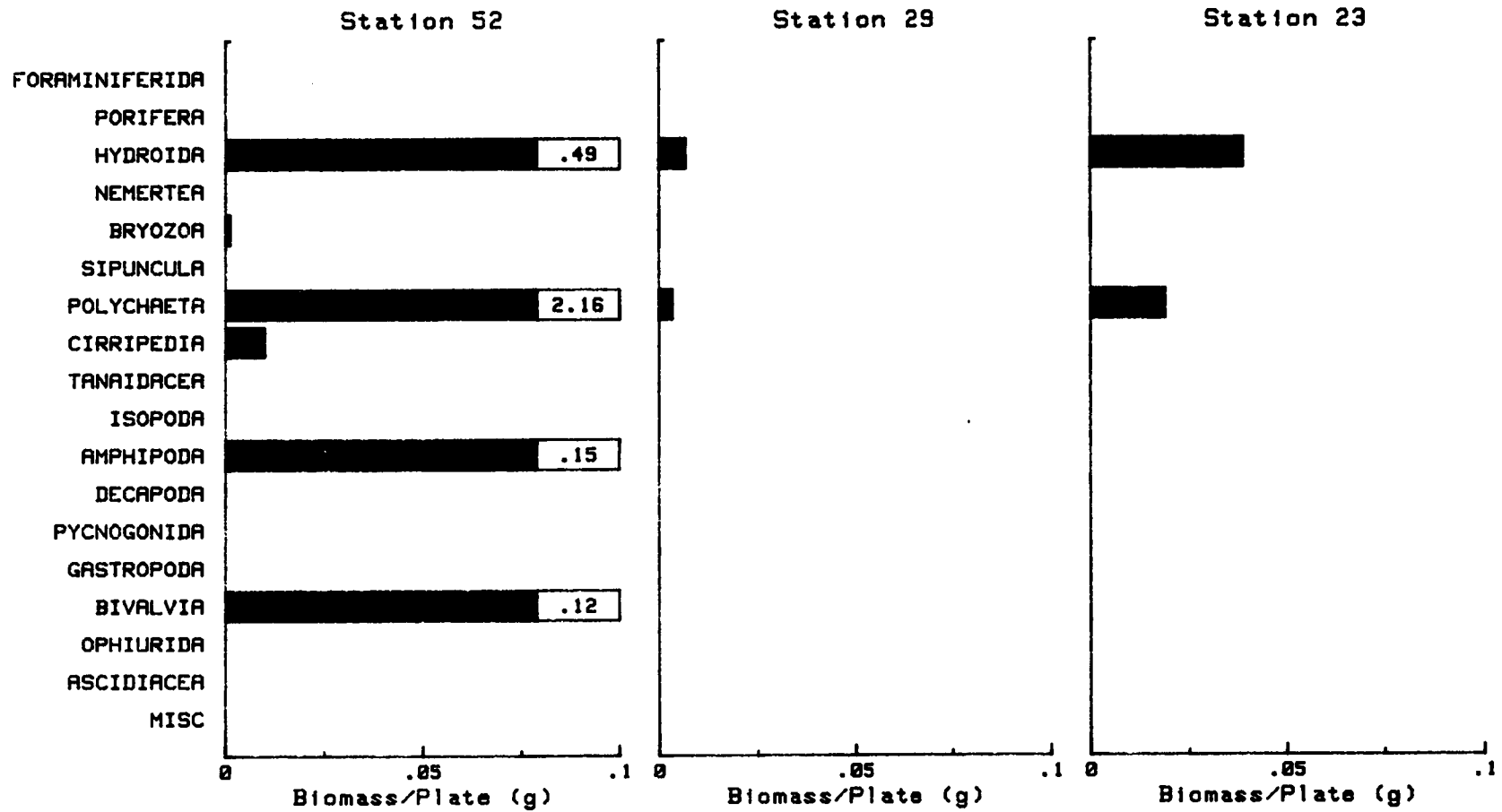


Figure G-6 MEAN BIOMASS OF FOULING ORGANISMS ON TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

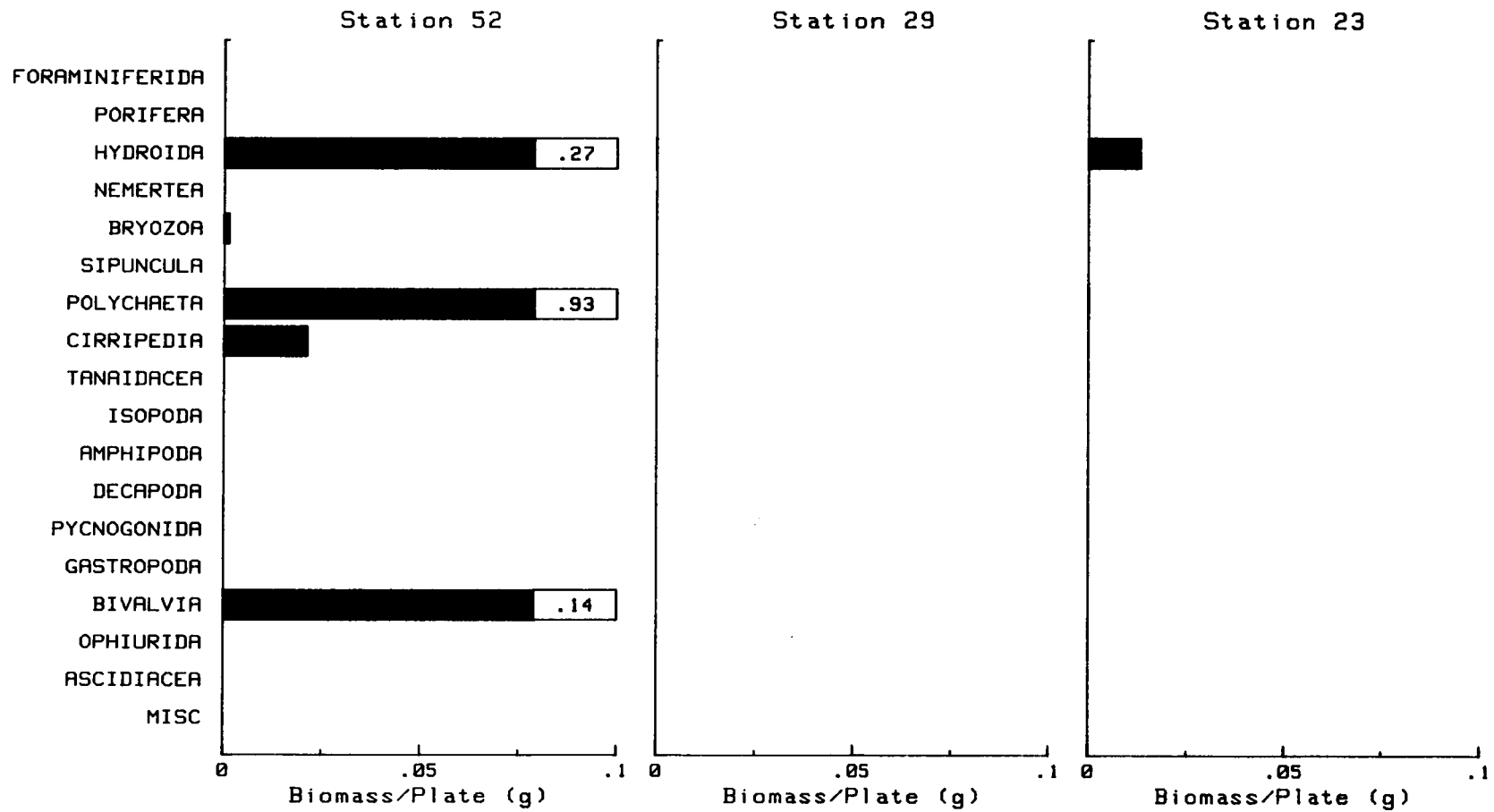


Figure G-7 MEAN BIOMASS OF FOULING ORGANISMS ON STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

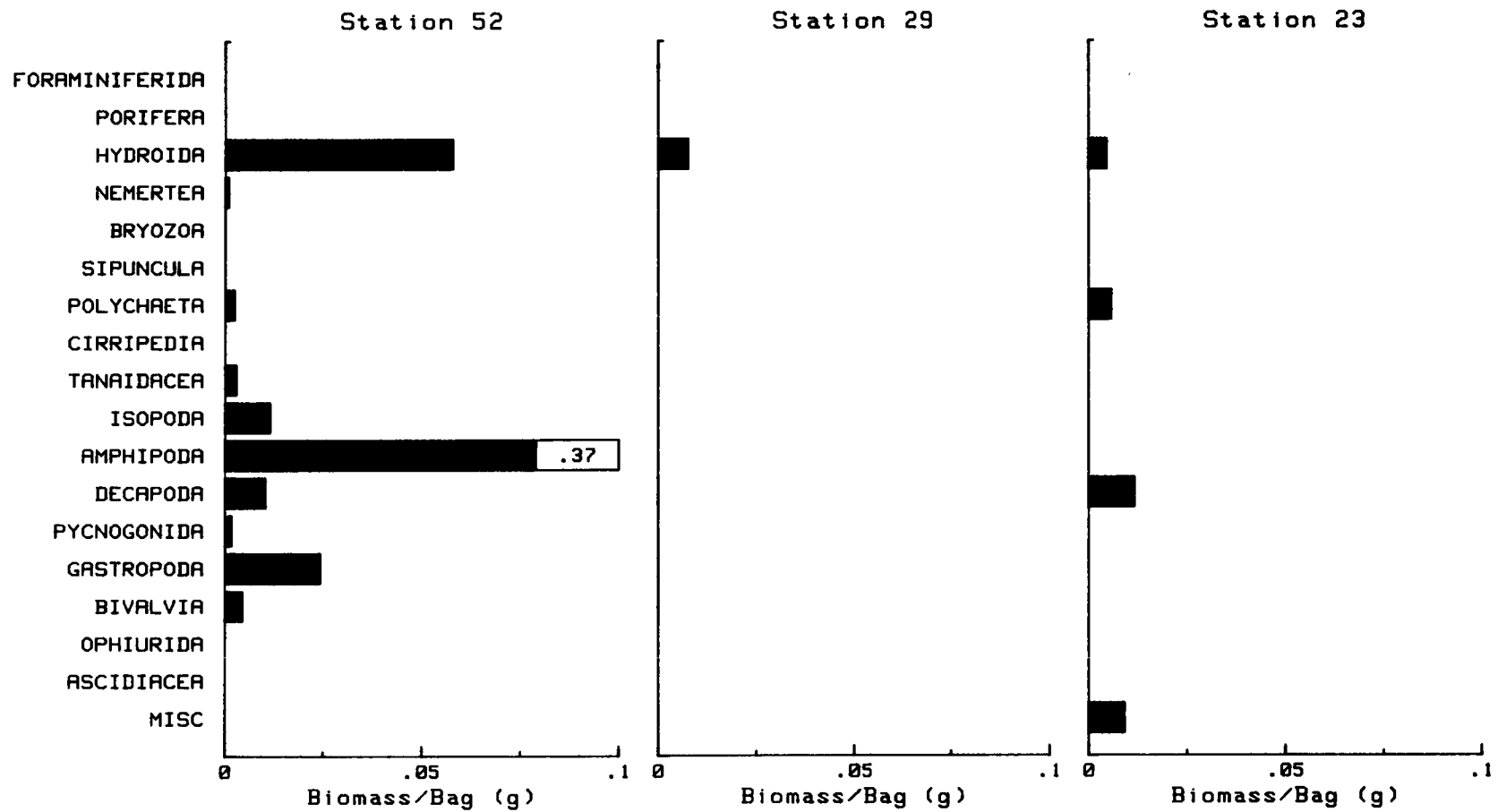


Figure G-8 MEAN BIOMASS OF FOULING ORGANISMS IN BAGS FROM TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

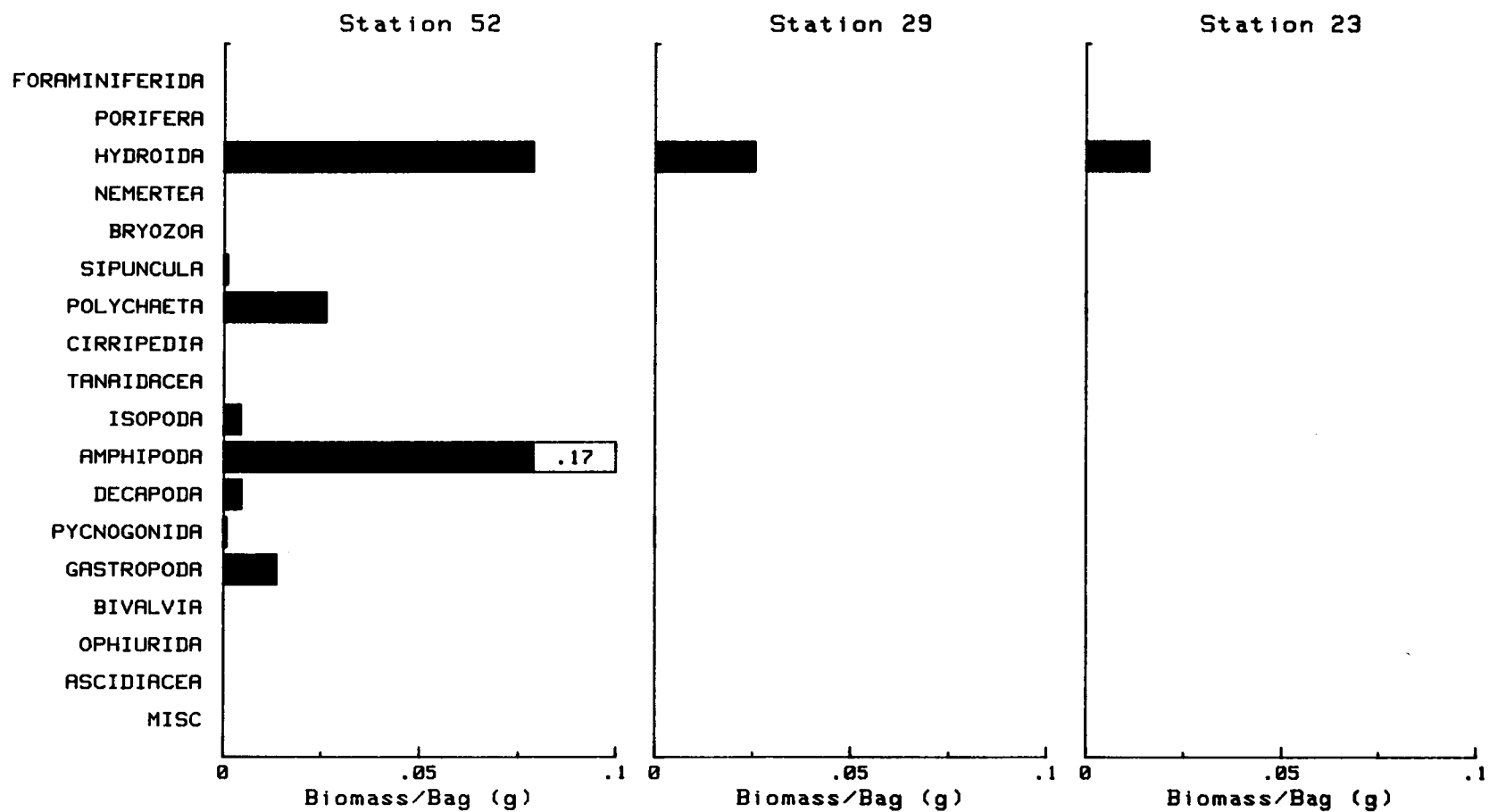


Figure G-9 MEAN BIOMASS OF FOULING ORGANISMS IN BAGS FROM STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE II, BY STATION

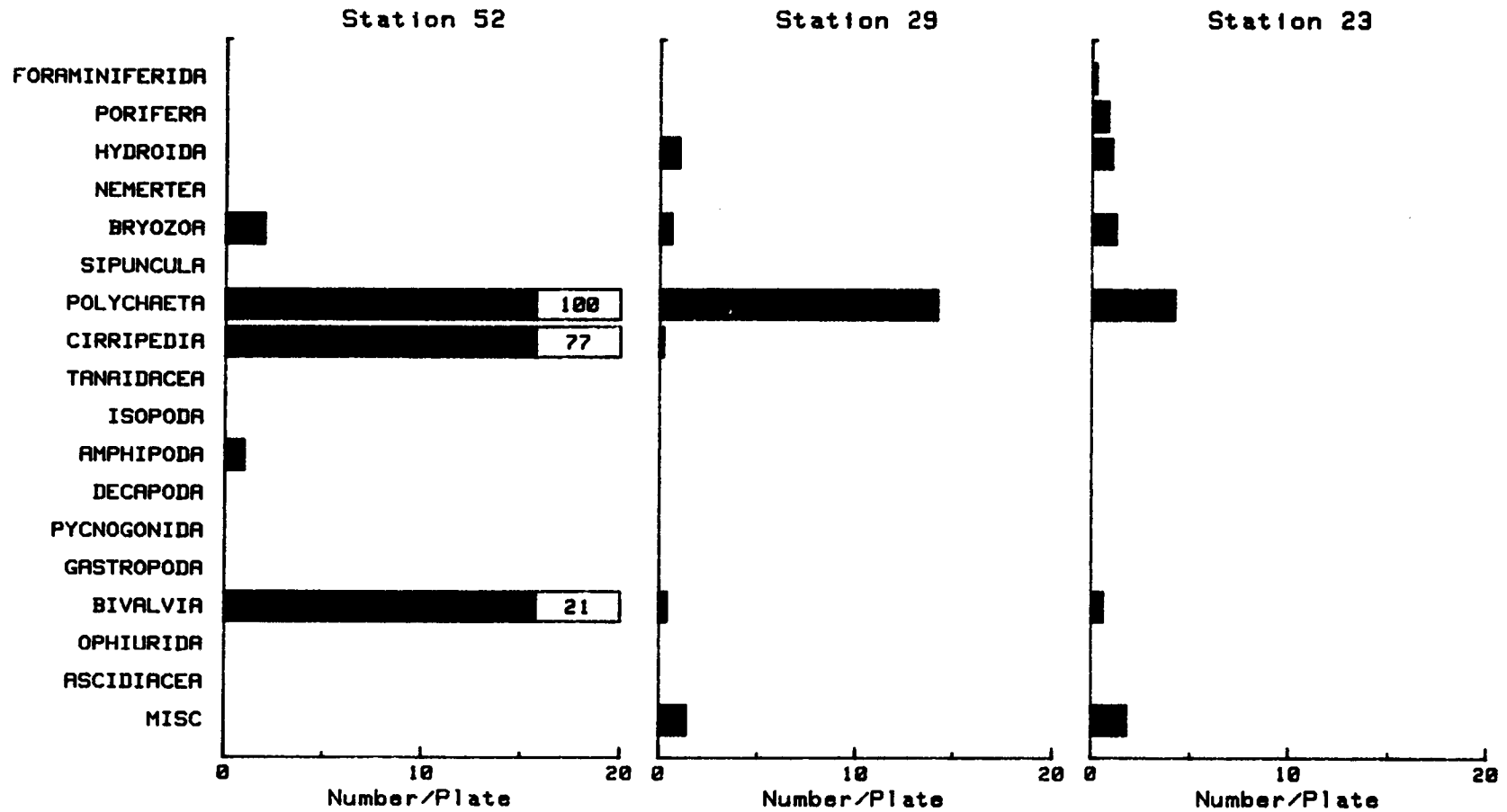


Figure G-10 MEAN ABUNDANCE OF FOULING ORGANISMS ON TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

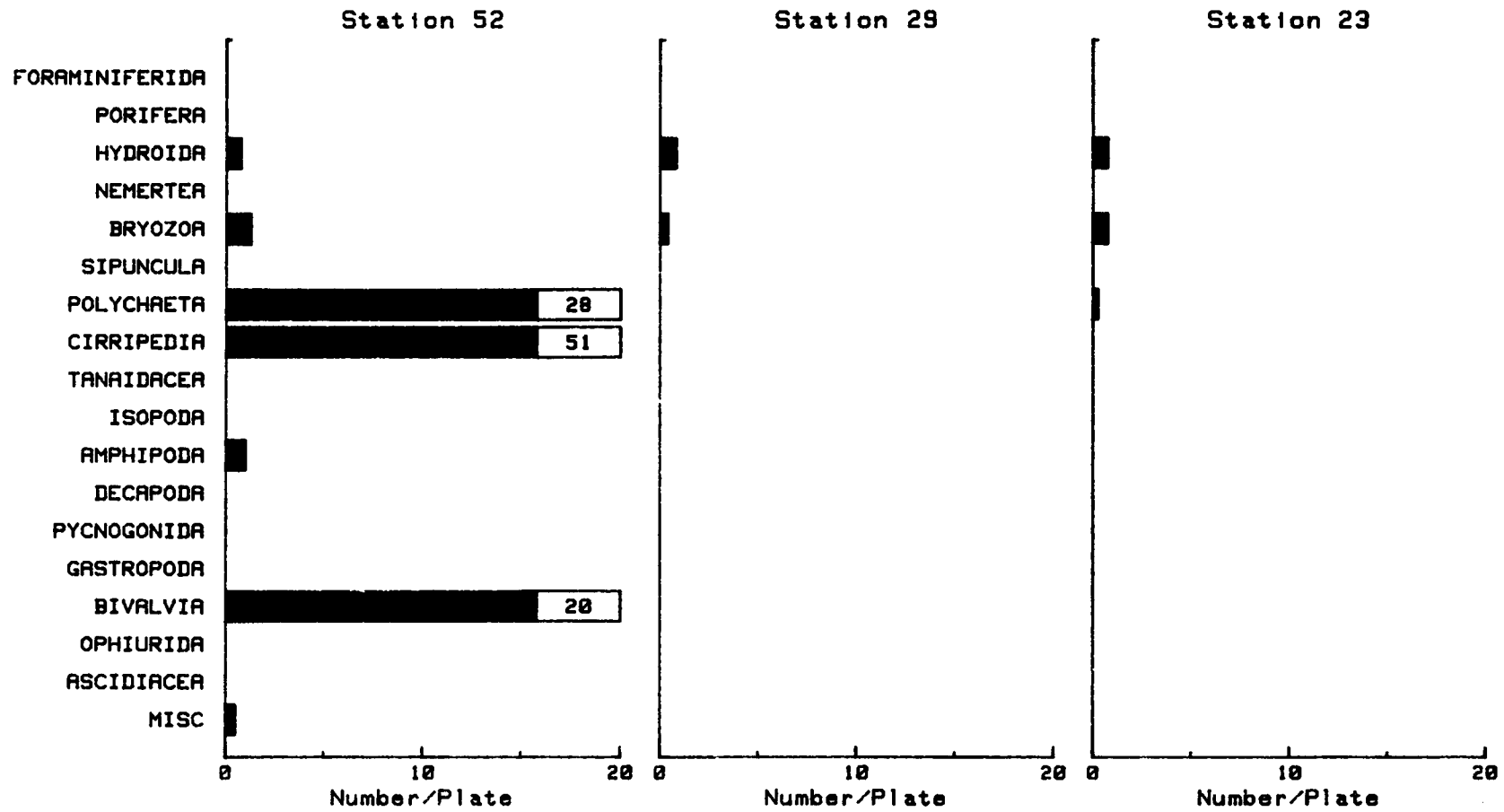


Figure G-11 MEAN ABUNDANCE OF FOULING ORGANISMS ON STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

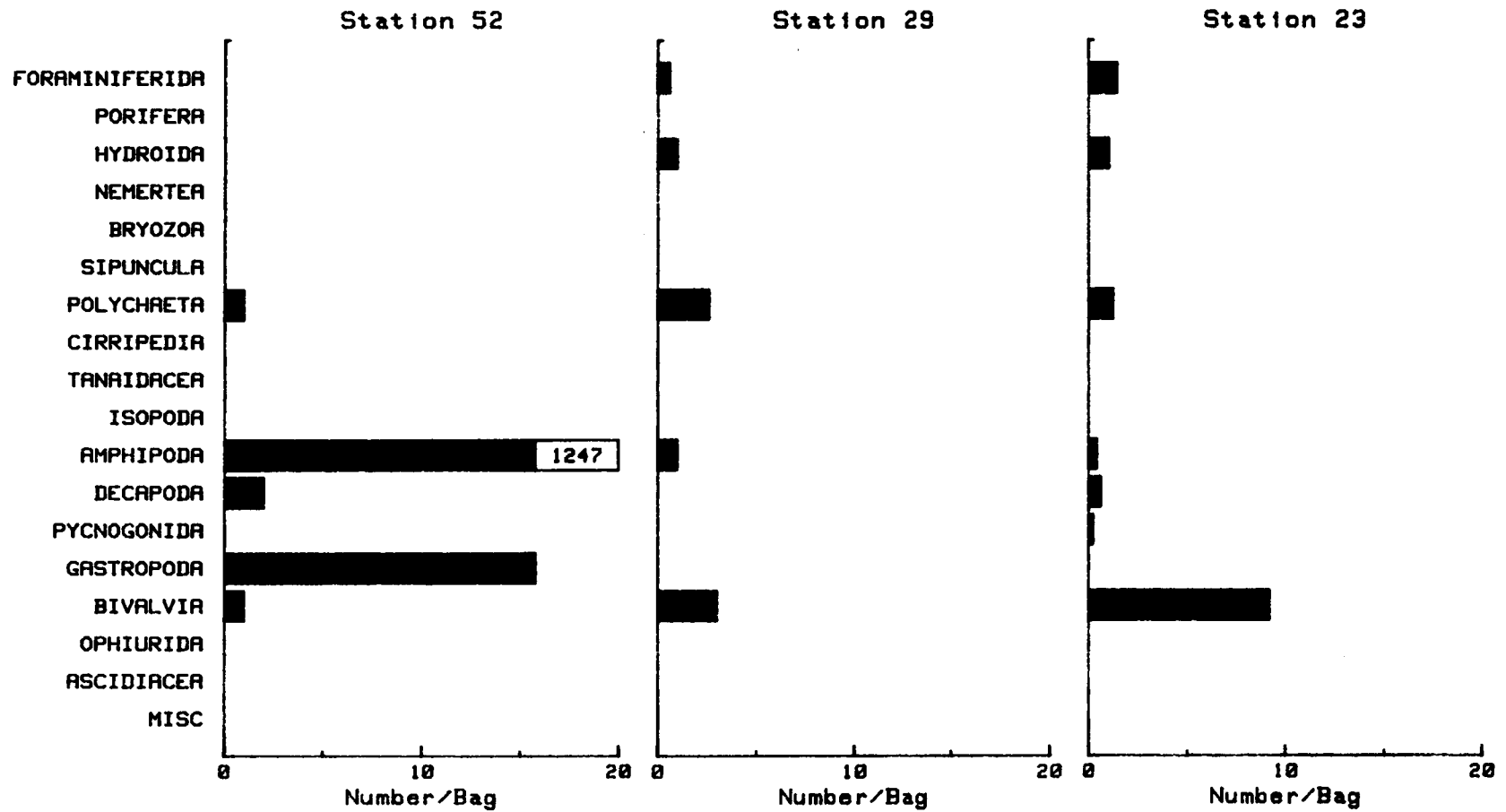


Figure G-12 MEAN ABUNDANCE OF FOULING ORGANISMS IN BAGS FROM TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

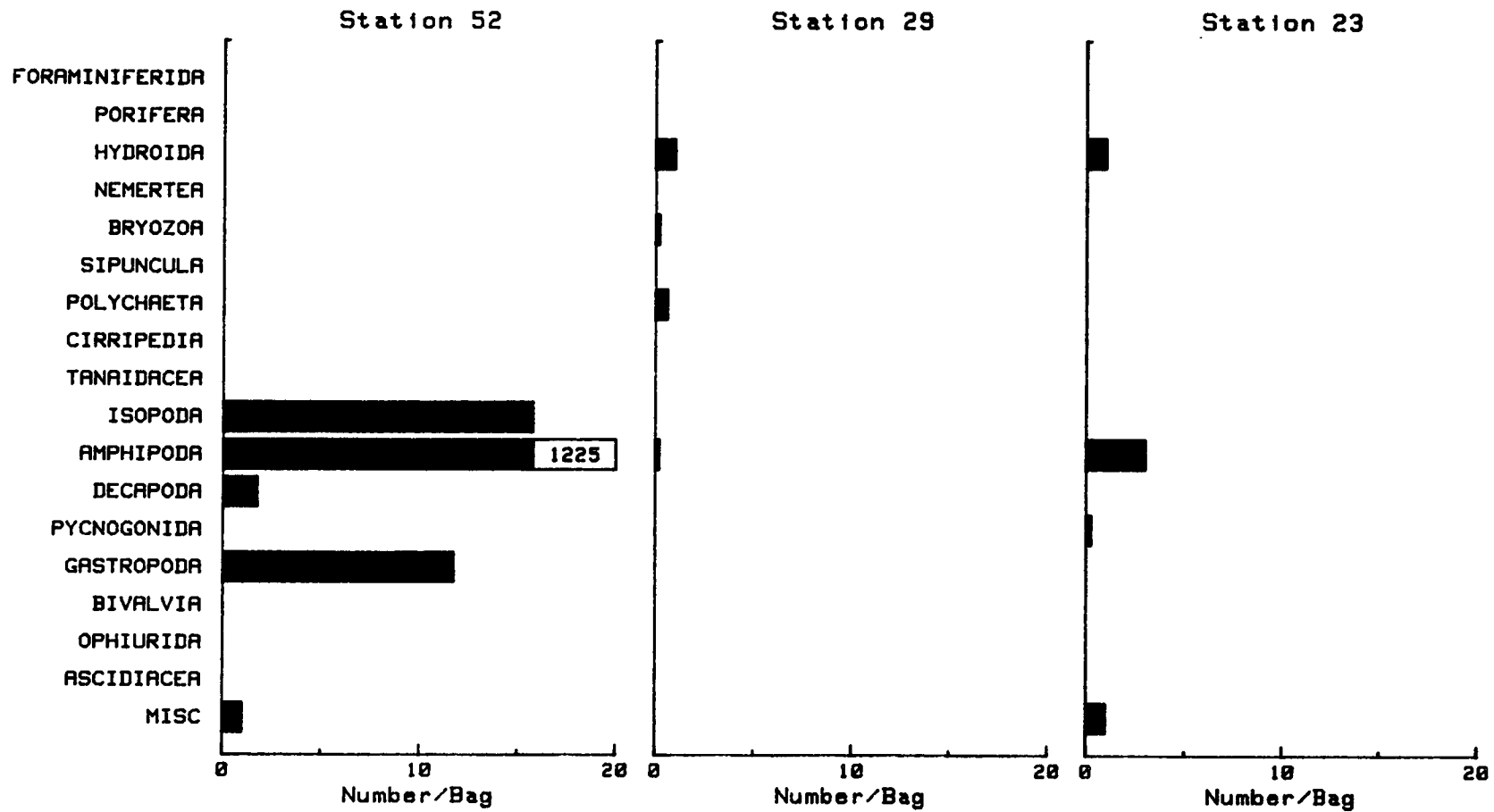


Figure G-13 MEAN ABUNDANCE OF FOULING ORGANISMS IN BAGS FROM STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

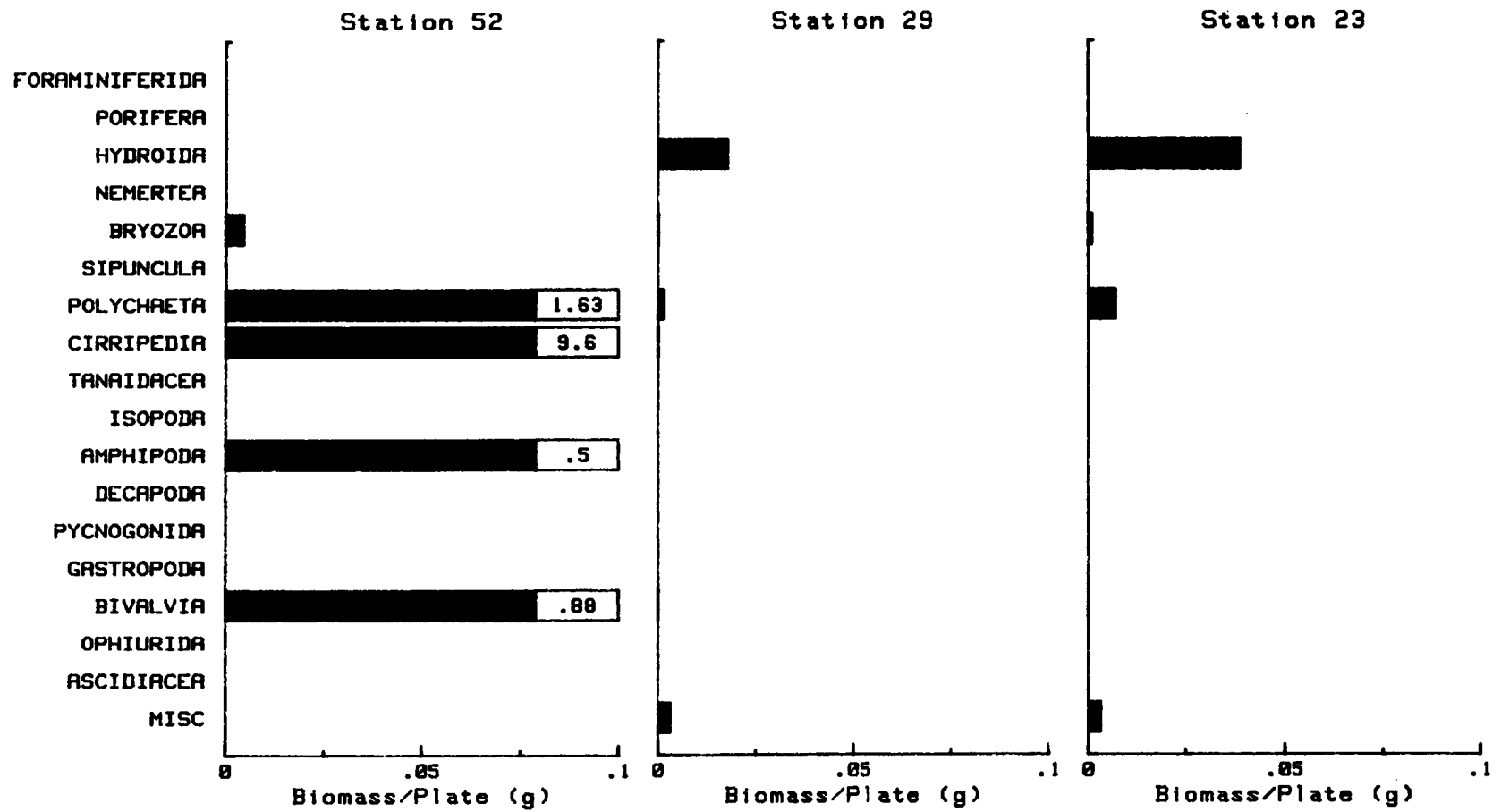


Figure G-14 MEAN BIOMASS OF FOULING ORGANISMS ON TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

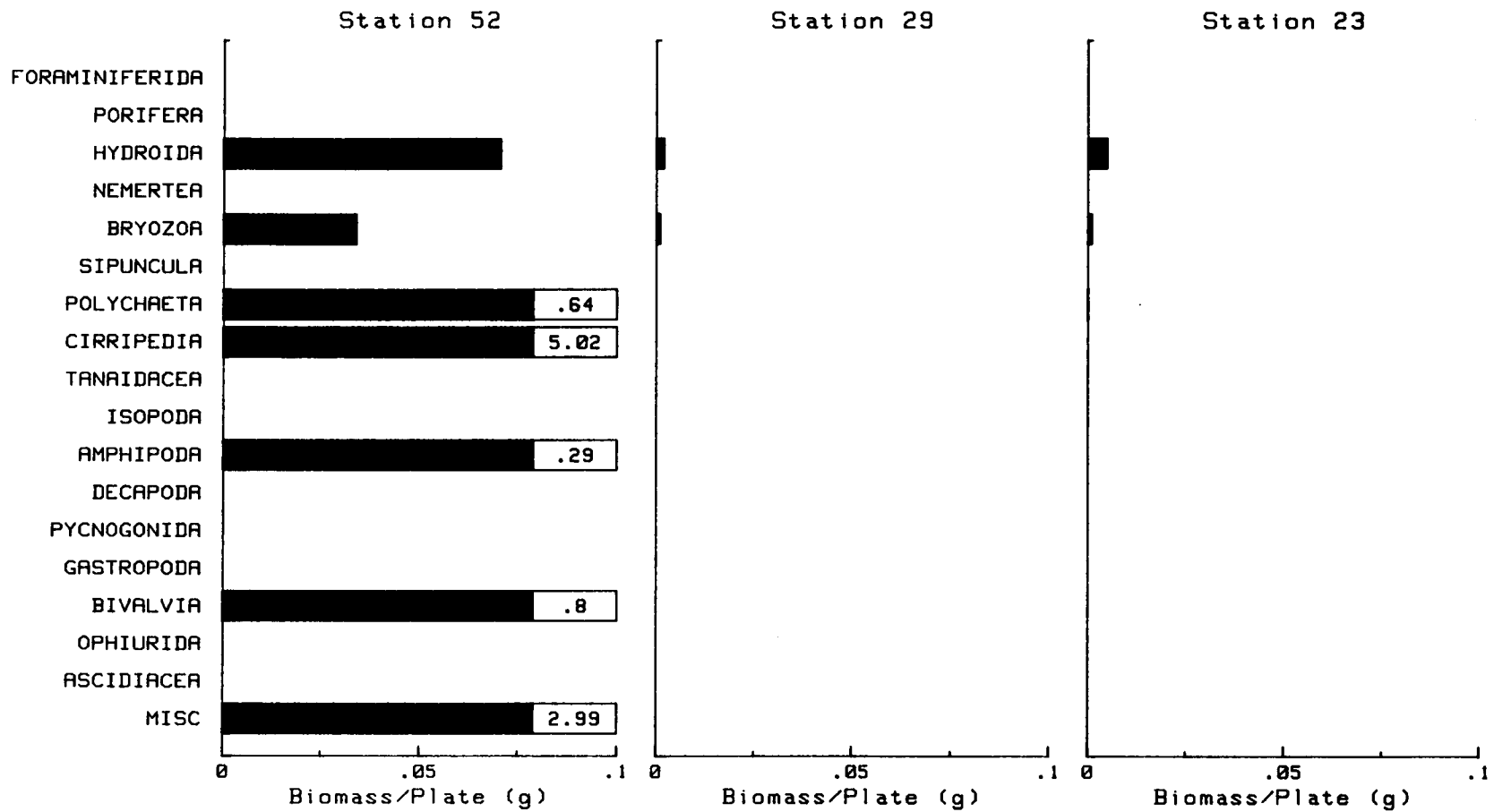


Figure G-15 MEAN BIOMASS OF FOULING ORGANISMS ON STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

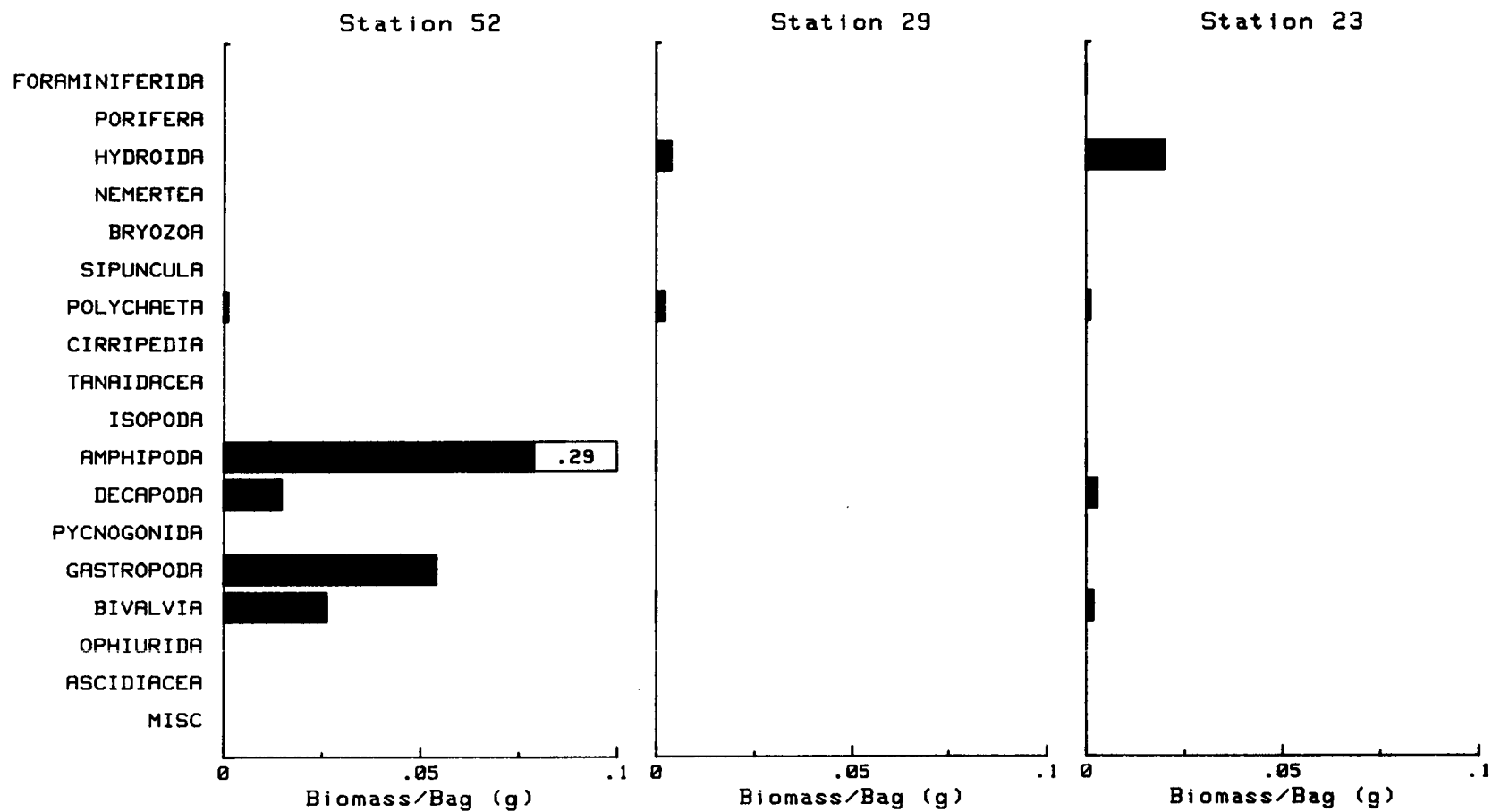


Figure G-16 MEAN BIOMASS OF FOULING ORGANISMS IN BAGS FROM TILE PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

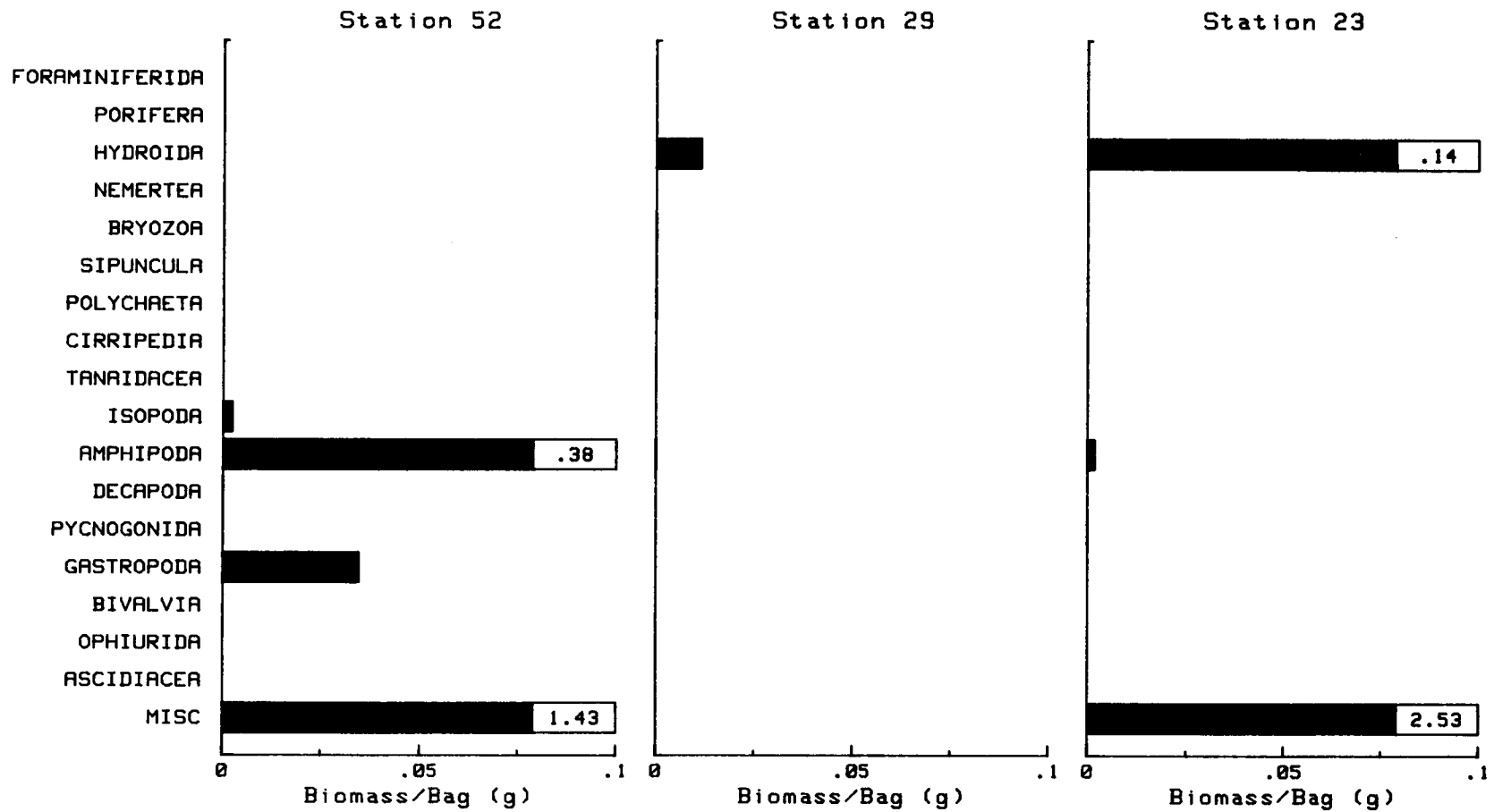


Figure G-17 MEAN BIOMASS OF FOULING ORGANISMS IN BAGS FROM STEEL PLATES EXPOSED FOR 3 MONTHS AND COLLECTED ON CRUISE III, BY STATION

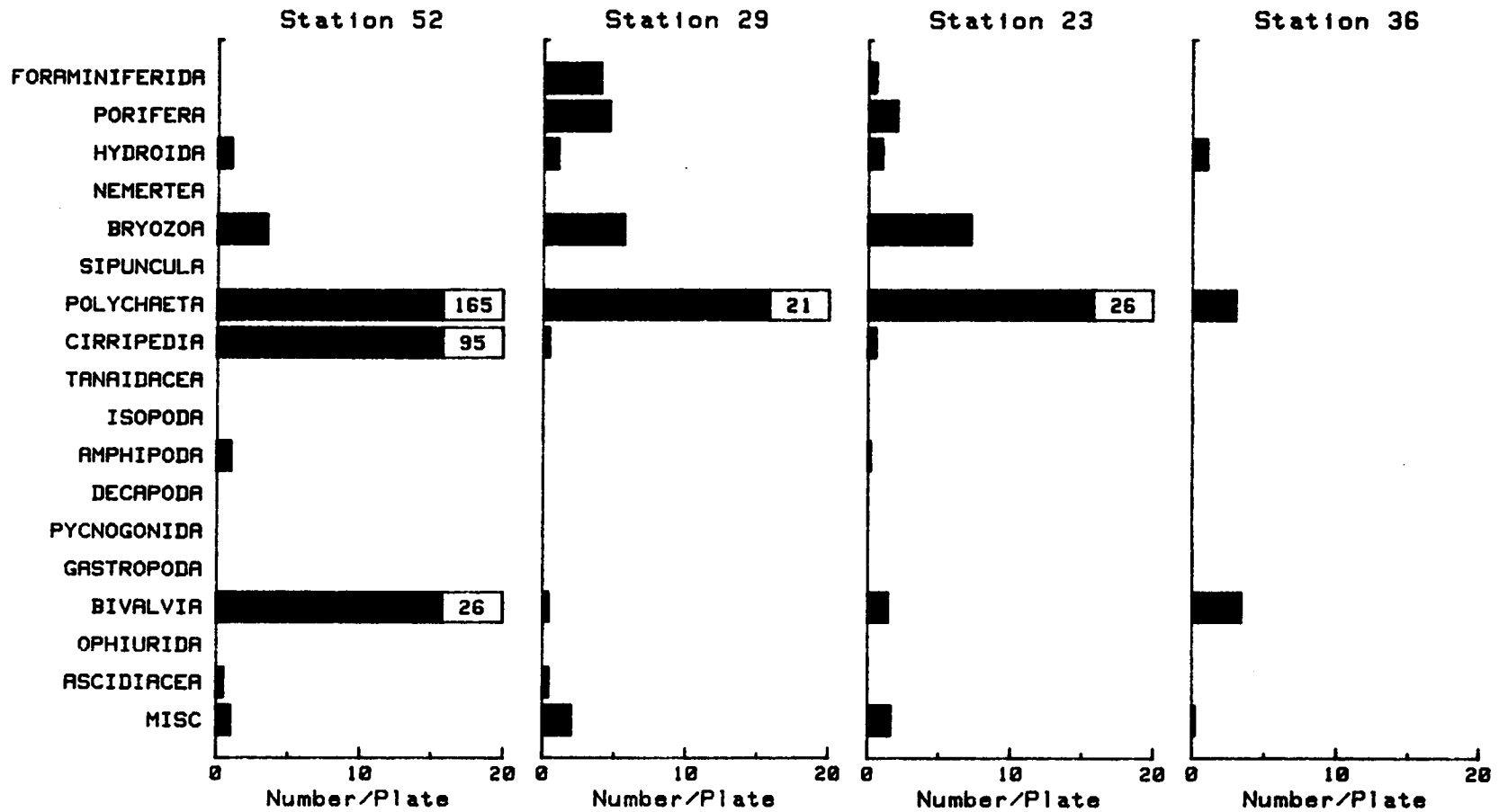


Figure G-18 MEAN ABUNDANCE OF FOULING ORGANISMS ON TILE PLATES EXPOSED FOR 5 MONTHS AND COLLECTED ON CRUISE III, BY STATION

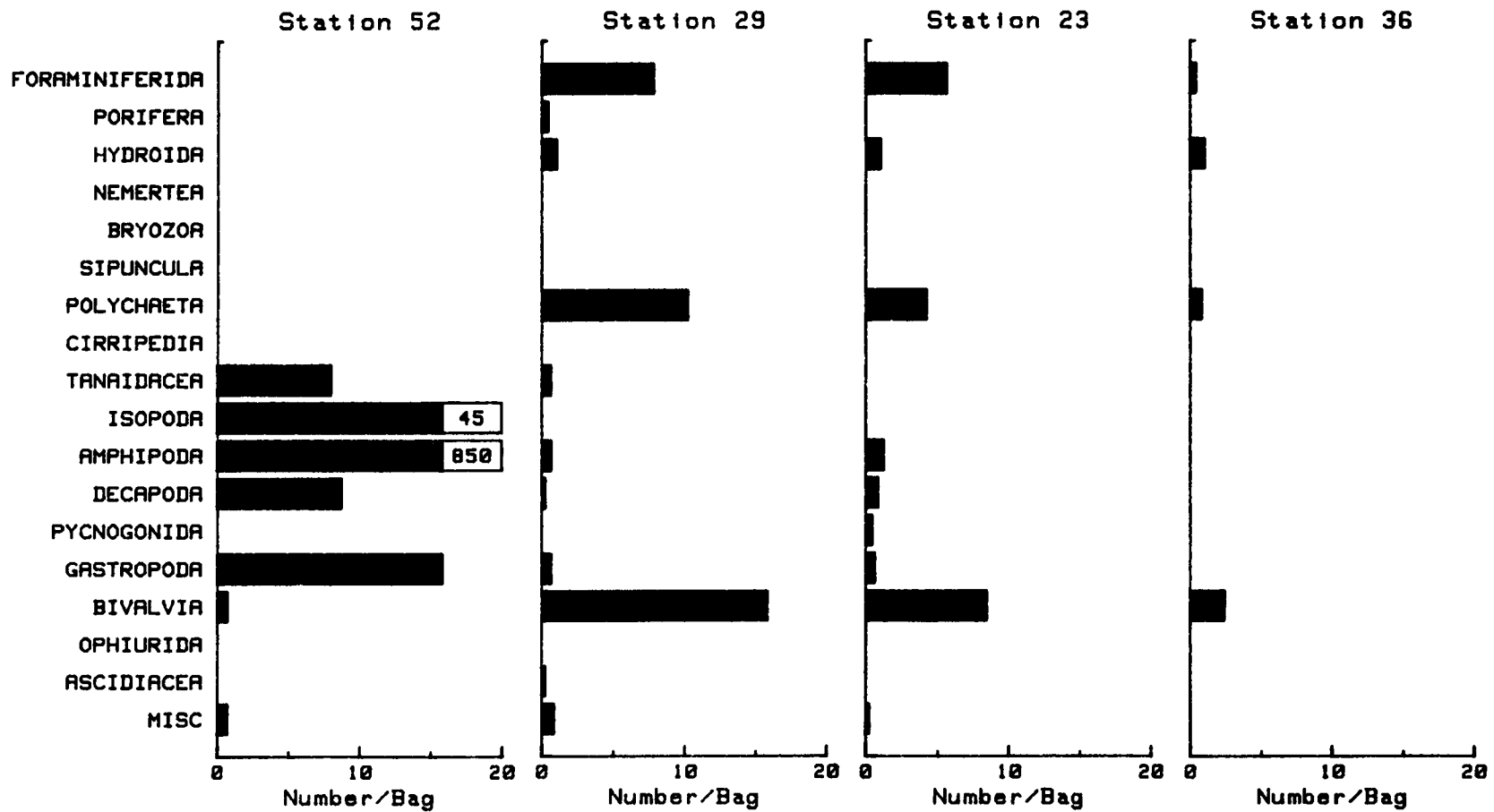


Figure G-19 MEAN ABUNDANCE OF FOULING ORGANISMS IN BAGS FROM TILE PLATES EXPOSED FOR 5 MONTHS AND COLLECTED ON CRUISE III, BY STATION

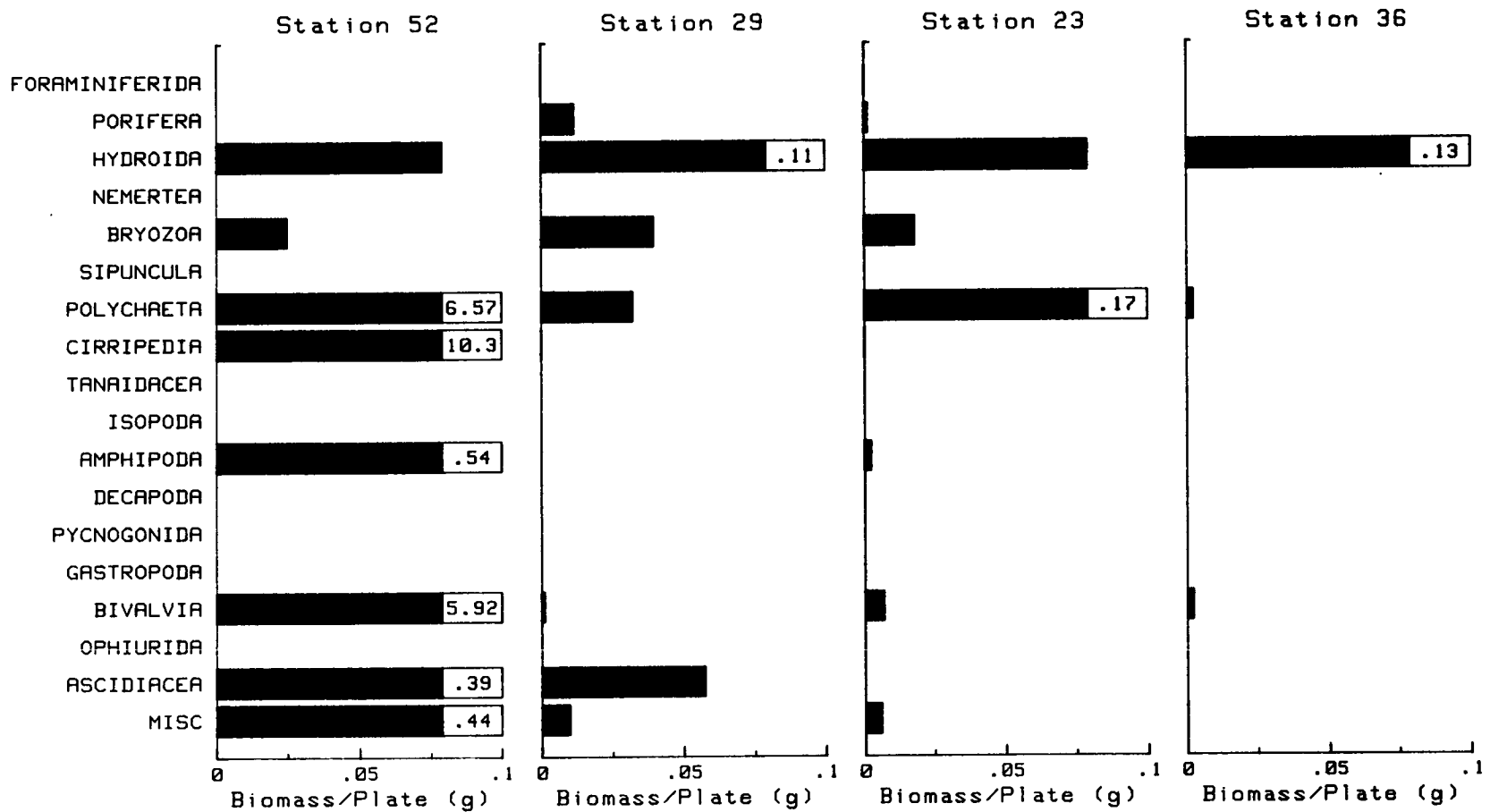


Figure G-20 MEAN BIOMASS OF FOULING ORGANISMS ON TILE PLATES EXPOSED FOR 5 MONTHS AND COLLECTED ON CRUISE III, BY STATION

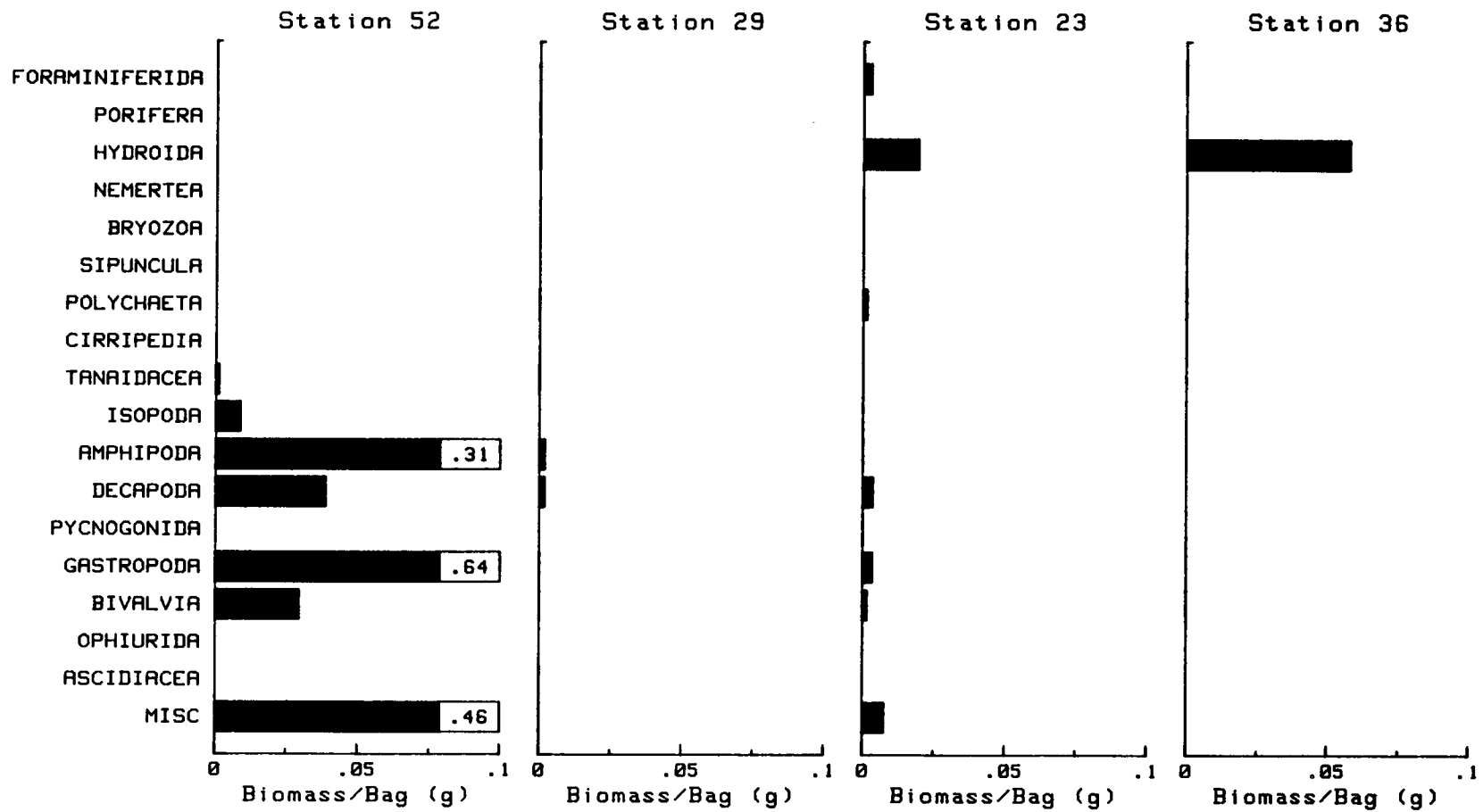


Figure G-21 MEAN BIOMASS OF FOULING ORGANISMS IN BAGS FROM TILE PLATES EXPOSED FOR 5 MONTHS AND COLLECTED ON CRUISE III, BY STATION



The Department of the Interior Mission

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 sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; 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 ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.



The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Minerals Revenue Management** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.