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CURRENT METER MOORINGS IN THE REGION OF PRYDZ BAY, ANTARCTICA, 1986

by

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ABSTRACT

Four moorings were deployed during 1986 to collect information at four depths at four sites on water speed, direction, temperature, and in some cases, conductivity. The reduced data and notes on the data acquisition methods and locations are presented. Some initial comments on the characteristics of the data are given and some speculation on the implication of the data are included.

Data are available in other forms at the cost of reproduction from the Assistant Director of Science, Antarctic Division, Kingston, Tasmania, Australia.

1. INTRODUCTION

These data have been collected as part of a program between the Victorian Institute of Marine Sciences and the Antarctic Division. This work is relevant to much of the marine scientific work being undertaken in Antarctica, and to the understanding of the water movements in the area.

The objectives of the data acquisition were to characterise the physical oceanography of the area, and to provide a database of sufficient integrity for use in the development of a two and three dimensional numerical model of the circulation in Prydz Bay. This is the second, in a phased collection program, to be sustained over several years. The data from the first year are available in the *ANARE Research Notes* series (Hodgkinson et al. 1988).

The data in this report are from January 1986 to February 1987.

These moorings, each with three or four current meters, were deployed with each meter monitoring water temperature, speed and direction, and for some meters, conductivity.

2. PRYDZ BAY AND MOORING LOCATIONS

The study region is bordered by the 60° E and 85° E meridians, the 60° S parallel, and by the antarctic continent to the south. The region is almost 700 km along the northern boundary, and 200 km from north to south. Water depths vary from 150 m to almost 1300 m. Figure 1 shows the bay, its bathymetry, the location of the current meters, and relevant features of the region.

Mooring 1 was located on comparatively flat bottom at the edge of the continental shelf to the north of Prydz Bay in 566 m of water.

Mooring 2 was deployed in the south-west part of Prydz Bay. The seabed is relatively flat in this area, with the bottom at 655 m depth. This mooring was not recovered during the equipment retrieval cruise. Many large icebergs are produced by the actively calving Amery Ice Shelf in the south-west of Prydz Bay (Figure 1). Most icebergs have sufficient draft and are of such a size that they could foul and remove a current meter mooring. The West Ice Shelf to the east of Prydz Bay also regularly produces icebergs which are carried into this region. The mooring placed in this position of Prydz Bay during 1985 was also not recovered (Hodgkinson et al. 1988).

Mooring 3 was deployed in the south-east of Prydz Bay in 640 m of water.

Table 1 lists the locations and periods of measurement of the current meters.

3. MOORING CONFIGURATIONS

Moorings 1 and 2 consisted of four Aanderaa current meters with target meter deployment depths of 200, 350 and 500 m and near bottom.

Mooring 3 carried three Aanderaa current meters, set for depths of 200 and 350 m and near bottom.

Buoyancy was provided with Ferranti glass floats, and the whole string was held to a railway wheel anchor by an E.G. & G. acoustic release.

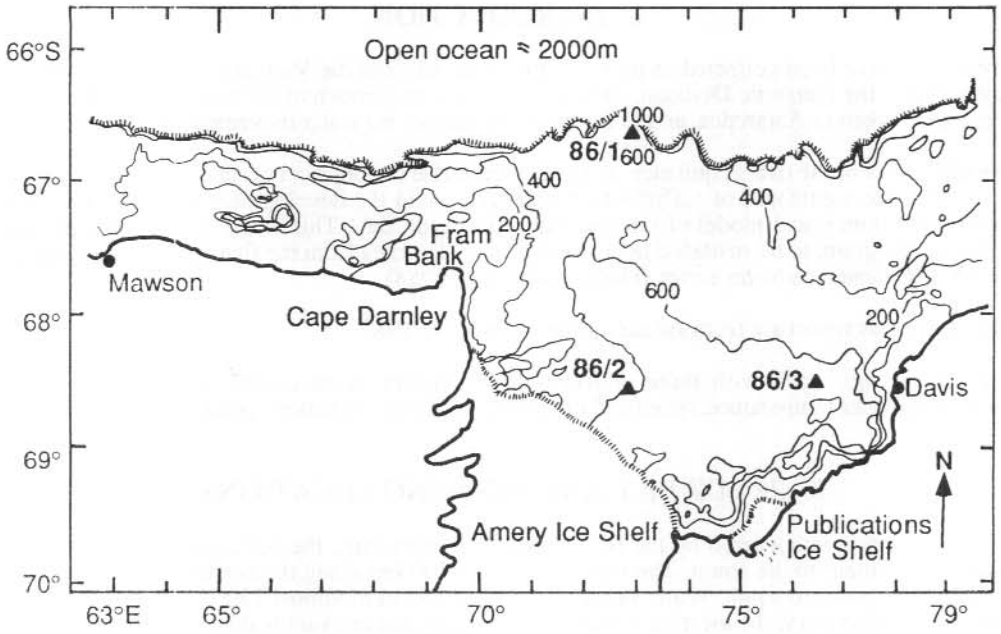

Figure 1. Prydz Bay showing bathymetry and location of current meters.

Of the 11 current meters deployed —

- Six were recovered with all data intact. All meters recorded time, direction, speed and temperature.
- The acoustic release of string #2 failed to respond to either interrogation or release commands, and there is a potential for the loss of the entire string and thus the data.
- Instrument 7621 failed due to a fault in the tape drive.

The recording periods and parameters recorded for the recovered current meters are summarised in Table 2.

4. REDUCTION OF DATA

The data were read from the Aanderaa tapes, and processed to produce a calibrated data file suitable for archiving. All data flagged as faulty were removed from the files before processing was attempted. 'Scatter', progressive-vector, temperature/time and vector/time ('stick') plots were produced. Some files had suspect data, not flagged as faulty on the tape. These suspect data were removed creating truncated files, suitable for further processing which consisted of tidal height and spectral analyses. Comments on the edited file data are given in the next section.

The period of good data for each meter is listed in Figure 2.

These calibrated files consist of five lines of header information, giving details of start times, number of records, locations, etc., followed by the data in 14 column format. A listing of the first 30 lines of CM61483C.DAT and a full explanation of the header information is included in Appendix 1.

Table. 1. Location, depths and periods of current meters, Prydz Bay, Antarctica, 1986

Meter Num	Tape Num	Instr Depth (m)	Ocean Depth (m)	Latitude (deg. S)	Longitude (deg. E)	Number Recs.	Inter (Min.)	Period From		To
7725	1	102	566	66 29.9'	72 50.1'	2328	60	28/1/86	-	4/5/86
7826	3	405	566	66 29.9'	72 50.1'	4882	60	28/1/86	-	8/8/86
7728	1	554	566	66 29.9'	72 50.1'	9412	60	28/1/86	-	24/2/87
7735	2	210	640	68 32.0'	76 29.9'	4534	60	29/1/86	-	6/8/86
7794	2	311	640	68 32.0'	76 29.9'	3504	60	29/1/86	-	23/6/86
7623	3	633	640	68 32.0'	76 29.9'	5845	60	29/1/86	-	29/9/86

Table 2. Summary of data collected by each current meter.

Instr. Number	Tape Number	Recording Interval			Temp	Sensors Enabled				NRECS
						Speed	Press	Cond	Direction	
7725	1	1:25 28/1/86	-	0:25 4/5/86	Yes	Yes	No	No	Yes	2328
7826	3	1:22 28/1/86	-	10:22 19/8/86	Yes	Yes	No	No	Yes	4882
7728	1	1:22 28/1/86	-	4:22 24/2/87	Yes	Yes	No	No	Yes	9412
7735	2	1:40 29/1/86	-	22:40 5/8/86	Yes	Yes	No	No	Yes	4534
7794	2	1:46 29/1/86	-	0:46 23/6/86	Yes	Yes	No	No	Yes	3504
7623	3	1:49 29/1/86	-	13:49 29/9/86	Yes	Yes	No	No	Yes	5845

This report includes 'scatter' plots of U and V velocity, progressive-vector plots, temperature/time plots, 'stick' plots, tidal current analyses, residual time series and power spectra.

5. PLOTS

5.1 SCATTER PLOTS (Appendix 2)

In these plots of U velocity (due east) against V velocity (due north), a blank wedge of 3°, has been produced because the calibration coefficients constrain the direction to vary between 1.5°and 358.5°. As a result this blank wedge at magnetic north appears on all of the scatter plots. On all scatter diagrams, true north is to the top of the page.

5.2 PROGRESSIVE-VECTOR PLOTS (Appendix 3)

These plot the progressive displacement of a particle starting at time zero and the location of the mooring and subject to the currents recorded by the current meter during the time period indicated. Care must be taken not to confuse this type of plot with an actual track plot taken by a 'parcel of water' in this area; the current at the indicated location in space is not necessarily the same to that at the location of the current meter at this later time. On all of these diagrams true north is to the top of the page and east is to the right.

5.3 TEMPERATURE/TIME PLOTS (Appendix 4)

These are direct plots of temperature against time using unfiltered data, so that diurnal fluctuations are evident as well as seasonal trends.

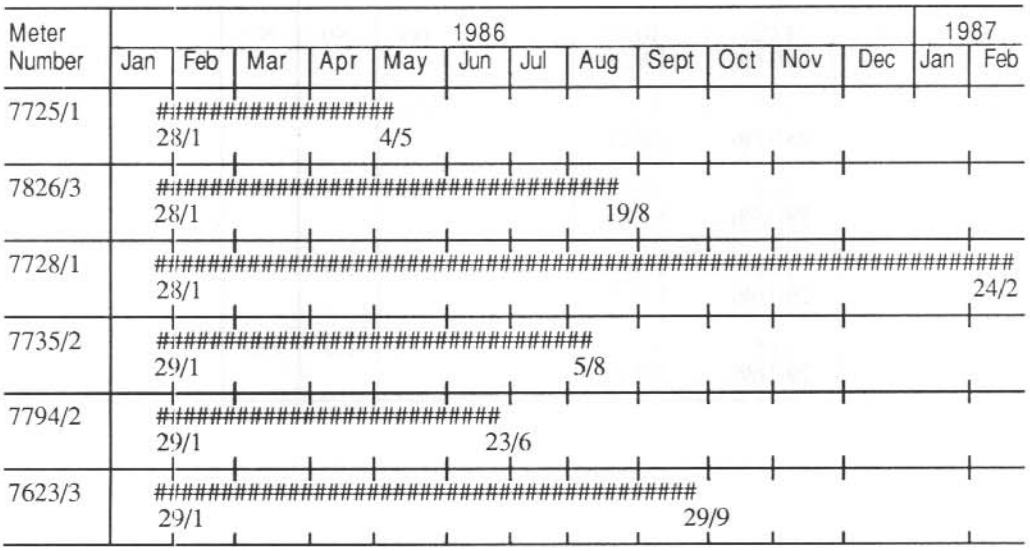

Figure 2. Periods of good data for each current meter.

5.4 'STICK PLOTS' (Appendix 5)

These plots illustrate the way in which current vectors change with time; vectors at two hourly intervals are plotted. The length of the stick represents the speed of the current, while the stick indicates the direction of the currents with true north at the top.

5.5 TIDAL ANALYSES (Appendix 6)

Tidal current analyses were obtained by separate analysis of the U (due east) and V (due north) columns, which are then combined to produce ellipse parameters for each constituent. The output consists of a table listing the identity of the constituent, its period (hours), major axis of the ellipse, minor axis of the ellipse, inclination of the ellipse, the phase of the constituent at 0:00 1 January 1976 and the direction of rotation.

5.6 RESIDUAL TIME SERIES (Appendix 7)

Residual time series are produced by subtracting a predicted time series from the original time series. The predicted time series is reconstructed from the table of constituents obtained from the tidal current analysis.

5.7 POWER SPECTRA (Appendix 8)

These were performed using the U velocity as for the tidal analyses. In this case, however, the data were passed through a four point moving average filter. Peaks have been labelled with the corresponding component's name, obtained by comparison of the periods at which peaks occur with the table output during the tidal analysis.

6. NOTES ON THE INDIVIDUAL DATA RECORDS

The magnetic declination for True North varied by 5° between the locations of the two retrieved moorings. Because of this variability, the magnetic declination recorded at Mawson does not apply to all the strings.

Unfortunately, magnetic variation data for the area are scarce and the latest survey to cover the area of the moorings was taken by the Bureau of Mineral Resources in 1975. These data have been extrapolated to 1985, by applying the rate of variation of declination measured at Mawson (R. Hutchinson, Bureau of Mineral Resources, pers. comm.). Because the rate of variation changes with location, the values of declination can be regarded as accurate only to within half a degree. This is well within the accuracy of the current meter compass, which is $\pm 5°$ (Aanderaa Instruments 1981).

However, further complicating the correction for magnetic declination is the diurnal variation in position of the south magnetic pole. The diameter of the path traced out daily by each of the poles ranges from as little as 15 km on magnetically quiet days to many hundreds of kilometres on days when the magnetic field is highly disturbed by the sun (Barton and Quilty 1986).

Because of the proximity of Prydz Bay to the south magnetic pole, this can translate to an error of up to $\pm 5°$ in the direction measurement.

No detailed data are available on the diurnal movements of the pole, so no provision can be made for the inaccuracies this produces. The values of declination applied to the data are listed in Table 1.

7. SUMMARY OF DATA

One of the most striking points to come out of this preliminary review of the data is the difference in the character of the data from each string. Because of this variability, summary descriptions of the results are given for each mooring separately.

Mooring 1 was situated on the edge of the continental shelf. This string was characterised by a strong diurnal tidal flow, overlying a well defined spring/neap tidal cycle. The second meter on the string (i.e. the one below the top meter) failed to collect data due to a problem with the tape drive. The compass in the top meter was faulty. Due to a bit error, the directions readings were restricted to a 22.5° segment.

Current velocities are similar at the lower two meters (7728, 7826), typically 35 cm/s, but top meter currents were less at 15-20 cm/s.

Temperature records of the lower two meters (7826 and 7728) are very similar. Strong diurnal oscillations of 0.5°C, with occasional oscillations of 1.5° or 2.0°C at the lower meter (7728). Diurnal variation at these meters diminished to almost nothing later in the year (September to January). Average temperature for these meters is 0°C in February rising to 0.5°C in September, before dropping back to 0°C in January. The top meter (7725) also showed diurnal variation, but this was less marked than the deeper meters, the changes being masked by high frequency fluctuations. The average temperature at this meter was 1°C colder at -0.5°C.

There is a strong correlation between currents and tides for all of the meters, temperatures varying diurnally and with the spring/neap cycle also. Warmer water occurs with northerly currents, while the coldest temperatures are found during west to south-westerly flows. Water is colder during neap periods because the northerly flows are weaker at this time.

As would be expected with strong diurnal currents, the tidal constituents O1, K1, M2 and S2 are the largest. At the top of the water column M2 and S2 are higher than at the bottom, while the reverse holds true for O1 and K1. Further analysis of the complicated circulation at the edge of the shelf needs to be undertaken, and will be the subject of a later paper. It appears likely that vertical mixing of the off-shelf waters that encroach onto the shelf is causing the rapid changes in temperature.

Mooring 2 was not recovered.

Mooring 3 meters recorded the lowest currents and the coldest water of the 1986 deployment. These weak flows meandered in a south to south-easterly direction with little diurnal variation. Not far from this mooring, and also to the south-east, is the deepest part of Prydz Bay (Figure 1). This depression drops more than 300 m from the surrounding seabed and net water movement is towards this area. The strongest flows were recorded at the top meter, on rare occasions reaching 50 cm/s. The rest of the time currents, at all meters, were in the range 0-15 cm/s. Currents were slow to alter direction, regularly staying constant in direction for up to seven days.

Two of the scatter plots (7735 and 7623), show lopsided distributions, although the other scatter plot (7794), showed a complete ellipses. All of these current meters were used on the same mooring during the 1985 deployment. Meters 7623 and 7735 recorded similar lopsided ellipses during that deployment also. In the case of meter 7735, the depth at which it was deployed was switched with 7794, which recorded full ellipses during both years, indicating a likely fault with the compass of 7735. The case for 7623 is not so clear cut however, as this meter was deployed at the same depth both years; no measurement from any other meter exists to verify or disprove the validity of these data. Meter 7623 has been deployed since in warmer climates without exhibiting any compass error, so at this stage the data are assumed correct. On this basis currents are possibly consistent with an intermittent flow of a cold hypersaline density current towards the

deep depression, caused by formation of ice at the surface or nearby and this is a possible explanation.

Because the currents at this meter were so low, the vector-sum diagrams show considerable meander, and the net excursion shown is less than the other strings.

There is no evidence from the temperature records of when ice formed at the surface.

Temperatures at this string were very cold, and very stable throughout the year, with little seasonal variation. The temperatures at these three meters were very similar with the upper two at -1.8°C and meter 7623 at -1.9°C.

The net flow at this string is southerly at the top meter (7794), but south-easterly for the rest of the meters.

The major characteristics of currents recorded at this string are cold slow moving waters, topographically influenced, with general motion towards the deep pool nearer the coast. In particular the bottom meter may have consistent hypersaline density currents moving towards the deeper water.

ACKNOWLEDGMENTS

The authors would like to acknowledge the cooperation of Dr K.P. Black and Dr L.S. Hammond of the Victorian Institute of Marine Sciences, Rod Hutchinson of the Bureau of Mineral Resources, and the personnel of the Antarctic Division Computer Section in the realisation of this report. The assistance of the Captain and crew of the *Nella Dan*, particularly Arne Sorenson, Benny Neilsen and Peter Granholm is greatly appreciated.

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Hodgkinson, R.P., Colman, R.S., Kerry, K.R. *and* Robb, M.S. (1988). Water currents in Prydz Bay, Antarctica during 1985. *ANARE Research Notes Number 59.* Pp. 127.

APPENDIX I. EXAMPLE OF A CALIBRATED DATA FILE

Mooring 3 - Prydz Bay, Antarctica

6148 6148 3 66 44.20 63 17.00 580.0 275.0 277.9 345 60 8255

GMT 1 0 27 2 1985
GMT 23 0 5 2 1986

DAYS	SPEED	DIRN	U.VEL	V.VEL	TEMP	PRESS	COND	SALIN	HR	MN	DY	MO	YR
.0000	11.2	289.8	-10.5	3.8	-1.57	285.94	27.51	34.56	1	0	27	2	85
.0417	16.6	290.5	-15.6	5.8	-1.57	285.94	27.51	34.56	2	0	27	2	85
.0833	10.8	272.0	-10.8	.4	-1.57	285.94	27.51	34.56	3	0	27	2	85
.1250	18.5	294.7	-16.8	7.7	-1.57	285.94	27.51	34.56	4	0	27	2	85
.1667	11.8	293.6	-10.8	4.7	-1.57	285.94	27.51	34.56	5	0	27	2	85
.2083	25.2	294.7	-22.9	10.5	-1.57	286.33	27.51	34.56	6	0	27	2	85
.2500	27.4	292.2	-25.4	10.4	-1.57	286.71	27.51	34.56	7	0	27	2	85
.2917	34.4	295.0	-31.1	14.5	-1.57	287.48	27.51	34.56	8	0	27	2	85
.3333	27.8	290.1	-26.1	9.6	-1.57	290.17	27.51	34.56	9	0	27	2	85
.3750	41.8	295.0	-37.9	17.7	-1.57	293.24	27.51	34.56	10	0	27	2	85
.4167	42.8	295.0	-38.7	18.1	-1.57	294.01	27.51	34.55	11	0	27	2	85
.4583	44.1	295.0	-39.9	18.6	-1.57	294.01	27.51	34.55	12	0	27	2	85
.5000	38.1	294.0	-34.8	15.5	-1.57	294.01	27.51	34.55	13	0	27	2	85
.5417	54.7	295.0	-49.6	23.1	-1.57	295.17	27.51	34.55	14	0	27	2	85
.5833	41.4	295.0	-37.6	17.5	-1.59	293.63	27.43	34.48	15	0	27	2	85
.6250	57.7	299.4	-50.3	28.3	-1.59	293.63	27.51	34.58	16	0	27	2	85
.6667	66.5	299.4	-57.9	32.6	-1.59	295.55	27.43	34.47	17	0	27	2	85
.7083	73.4	316.1	-50.8	52.9	-1.59	294.78	27.51	34.58	18	0	27	2	85
.7500	52.8	309.5	-40.8	33.6	-1.59	295.17	27.51	34.58	19	0	27	2	85

Header Information:

Line 1: Station name and relevant details. (Format: a80)

Line 2: Station number, meter number, tape number, degrees of latitude, minutes of latitude, degrees of longitude, minutes of longitude, ocean depth, instrument depth, average pressure, number of days of data, interval between readings (minutes), number of records.
(Format: 2(1x, A4), 2I5, F6.2, I5, F6.2, 3F6.1, 2I5, I10)

Line 3: Time zone, time of first record (hours, minutes, day, month, year)
(Format: 1x, a4, 5I5)

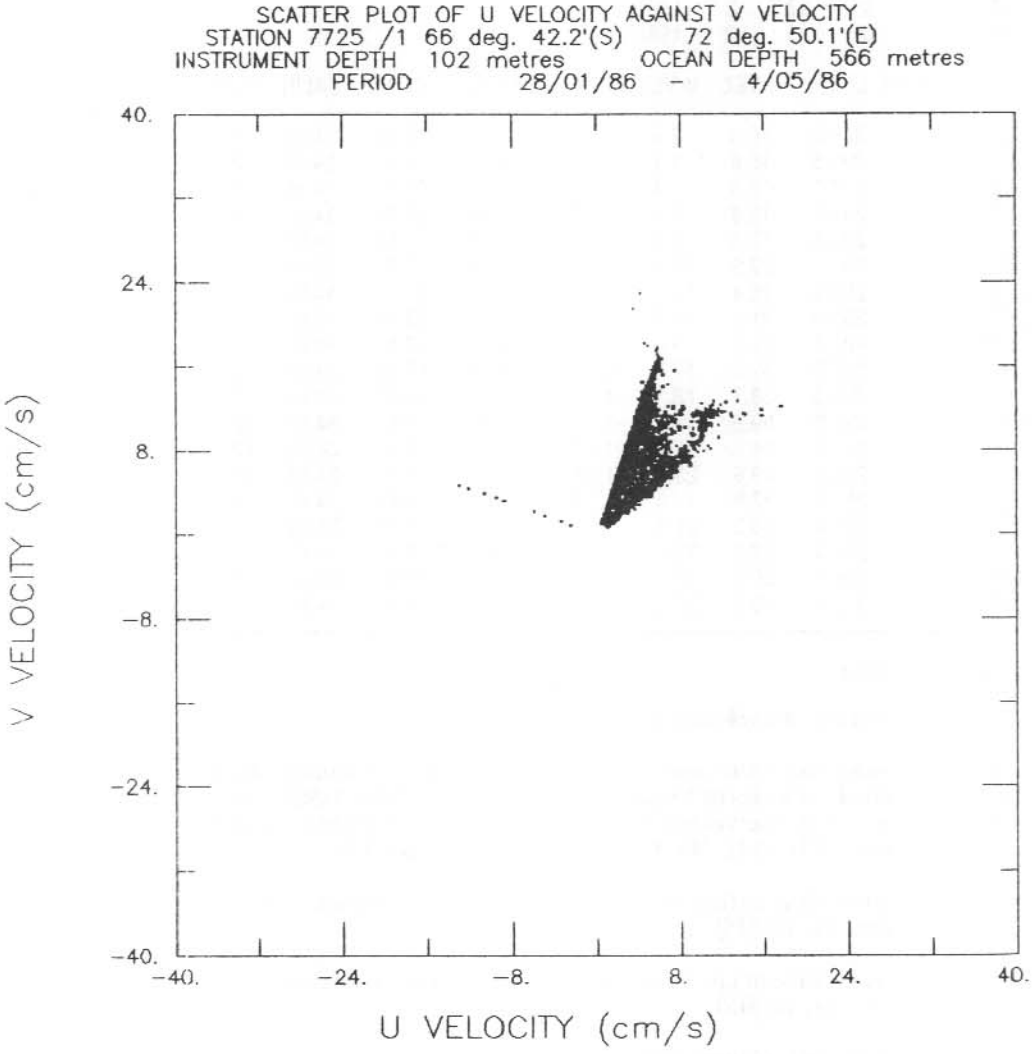
Line 4: Time zone, time of last record (hours, minutes, day, month, year)
(Format: 1x, a4, 5I5)

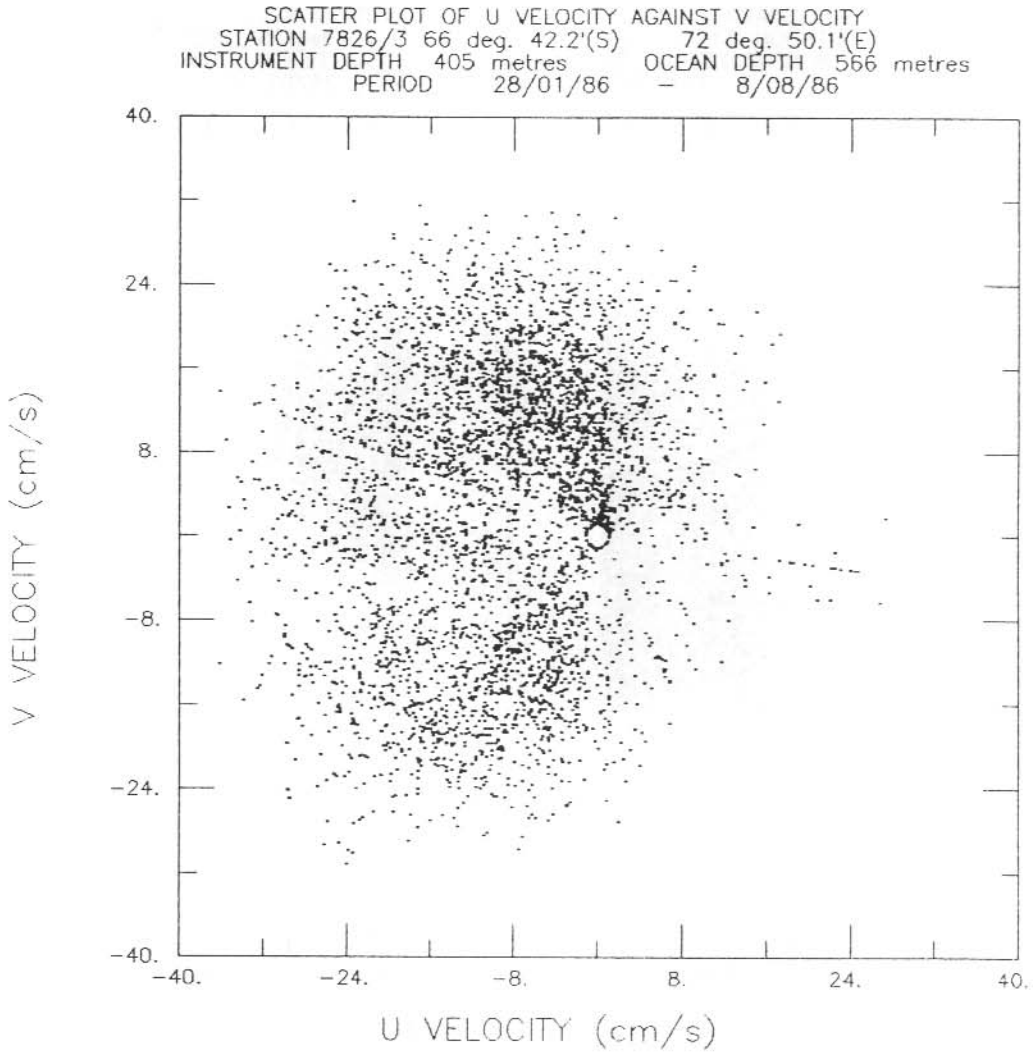
Line 5: Labels for data columns (Format: A80)

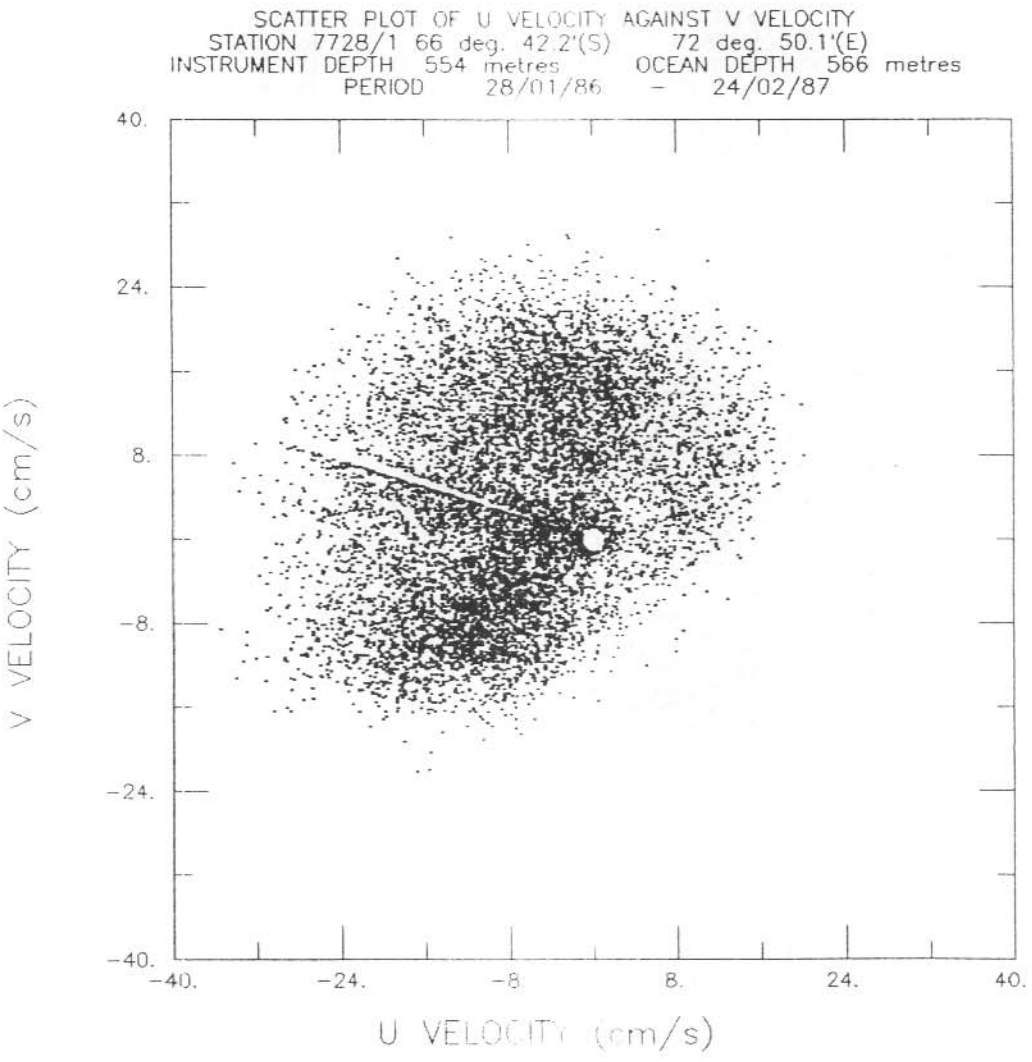
Line 6: To end of file ..... Data.
Time elapsed (hours), speed (cm/s), direction (degrees), U velocity (cm/s), V velocity (cm/s), temperature (degrees C), pressure (metres of water), conductivity (mmho), salinity (parts per 1000), date (hours, minutes, day, date, year)
(Format: F8.4, F7.1, F6.1, 2F7.1, 4F7.2, 5(1X, I2))

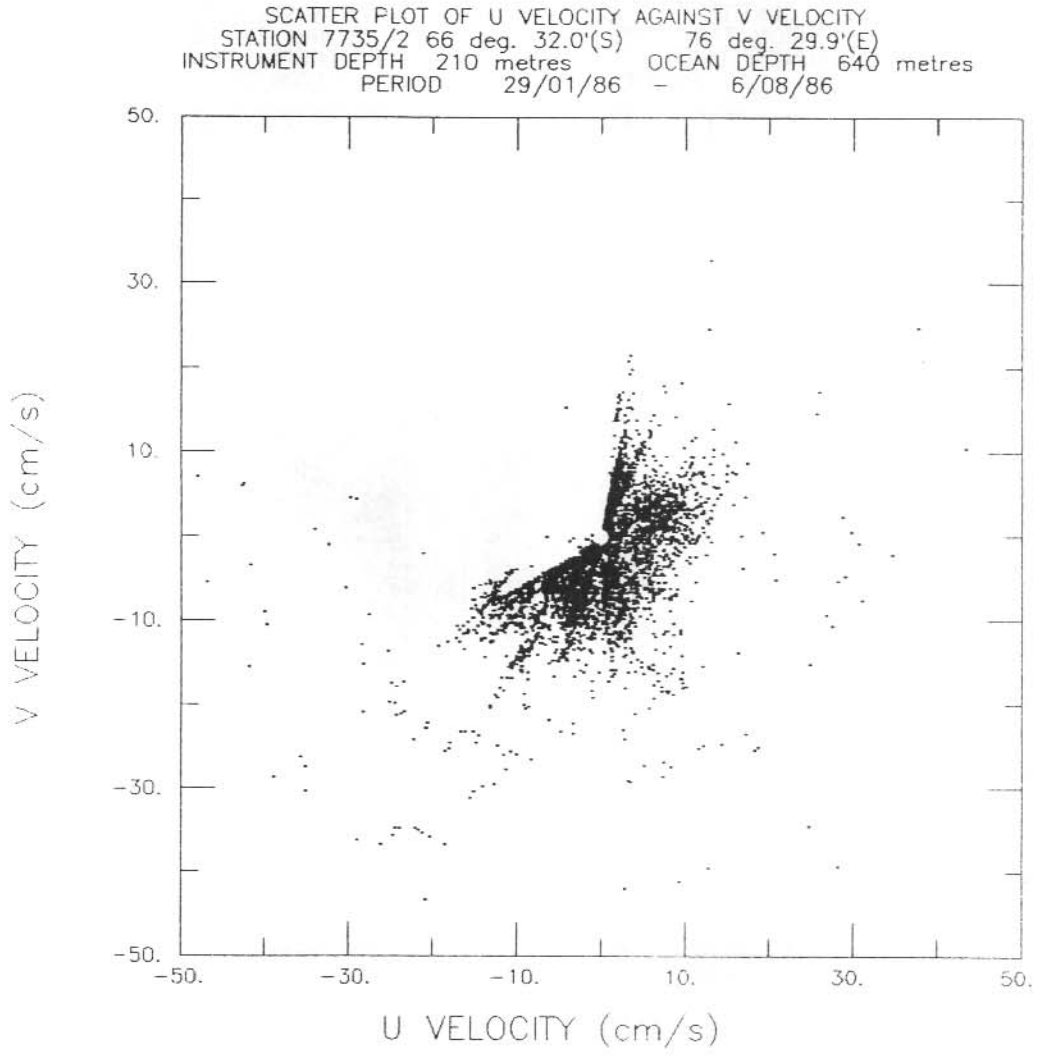
APPENDIX II. SCATTER PLOTS FOR THE CURRENT METER DATA

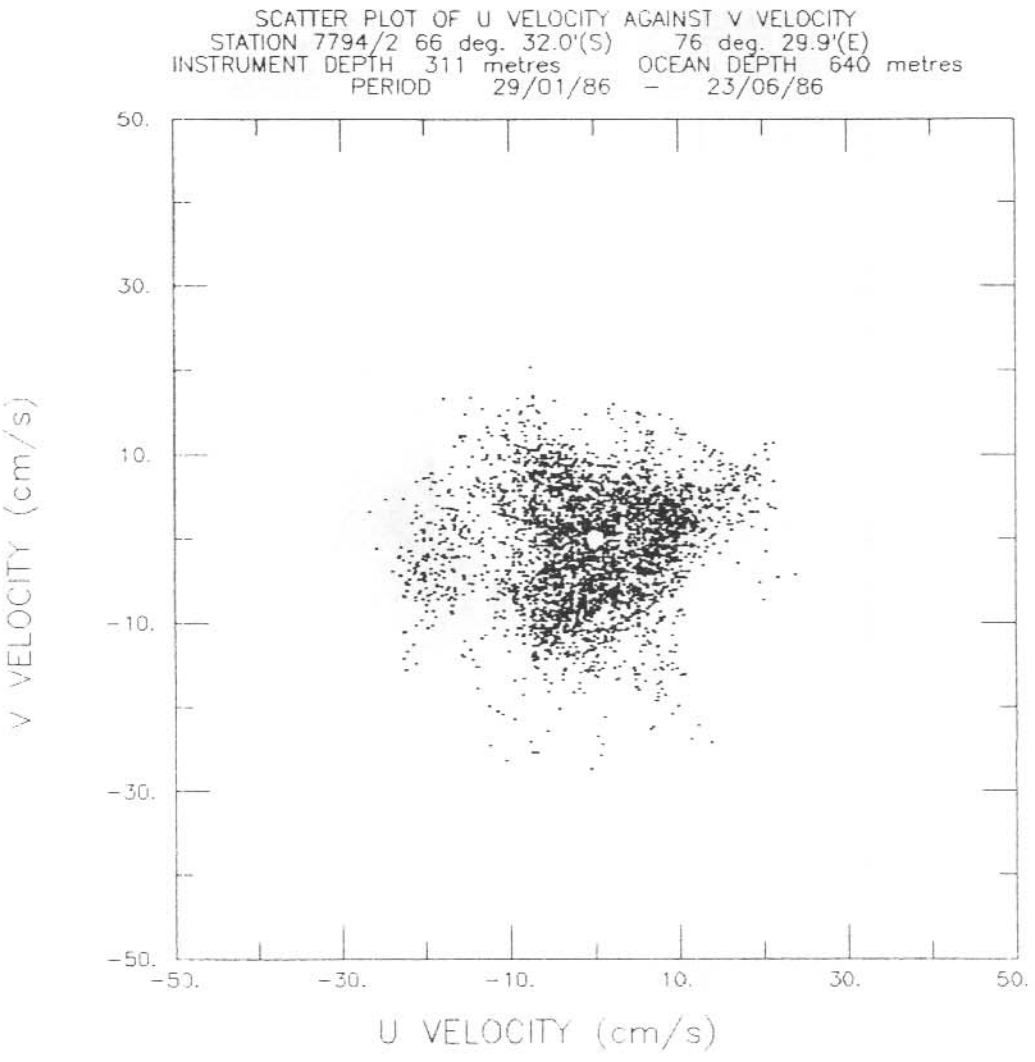
Plots are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.

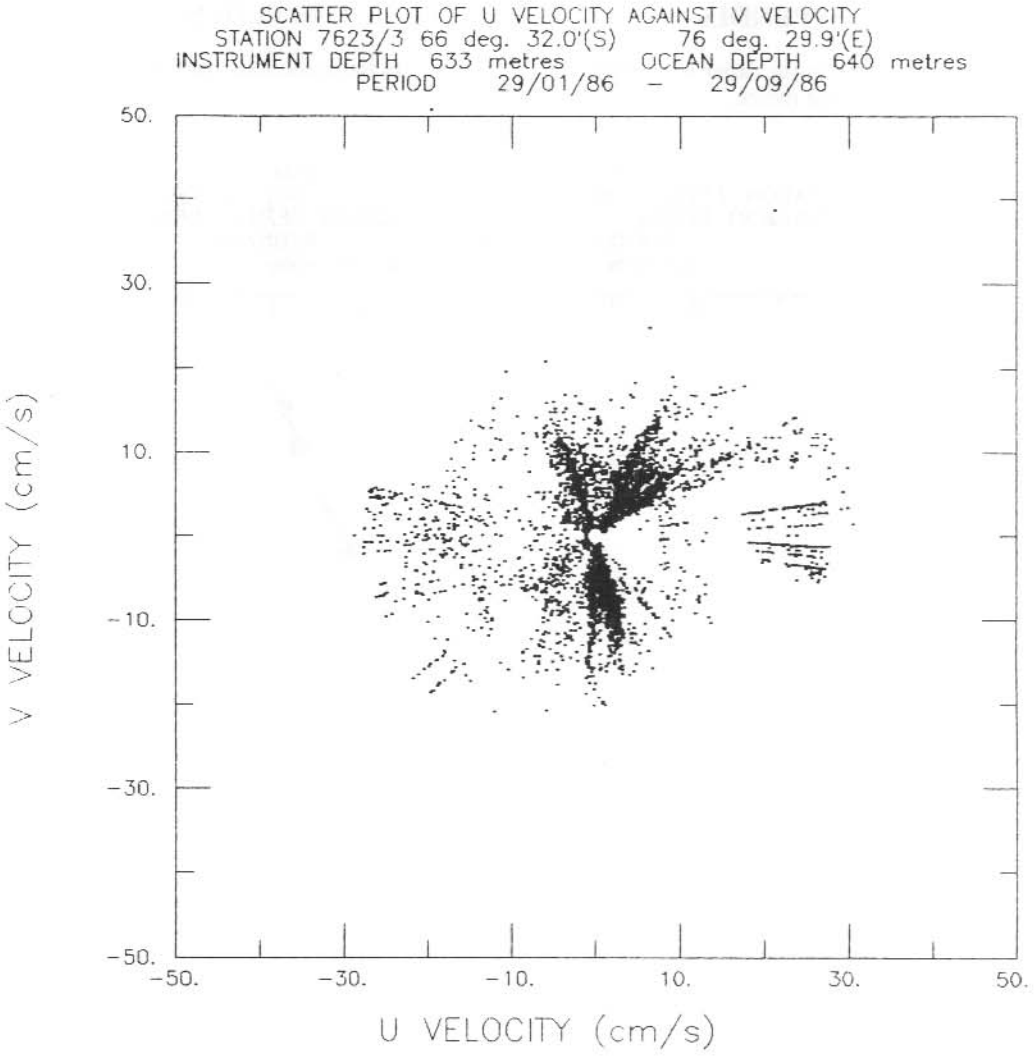



SCATTER PLOT OF U VELOCITY AGAINST V VELOCITY
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 8/08/86
40.
24.
8.
-8.
-24.
-40.
-40.
-24.
-8.
8.
24.
40.
V VELOCITY (cm/s)
U VELOCITY (cm/s)


SCATTER PLOT OF U VELOCITY AGAINST V VELOCITY
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87
40.
24.
8.
-8.
-24.
-40.
-40.
-24.
-8
8.
24.
40.
V VELOCITY (cm/s)
U VELOCITY (cm/s)

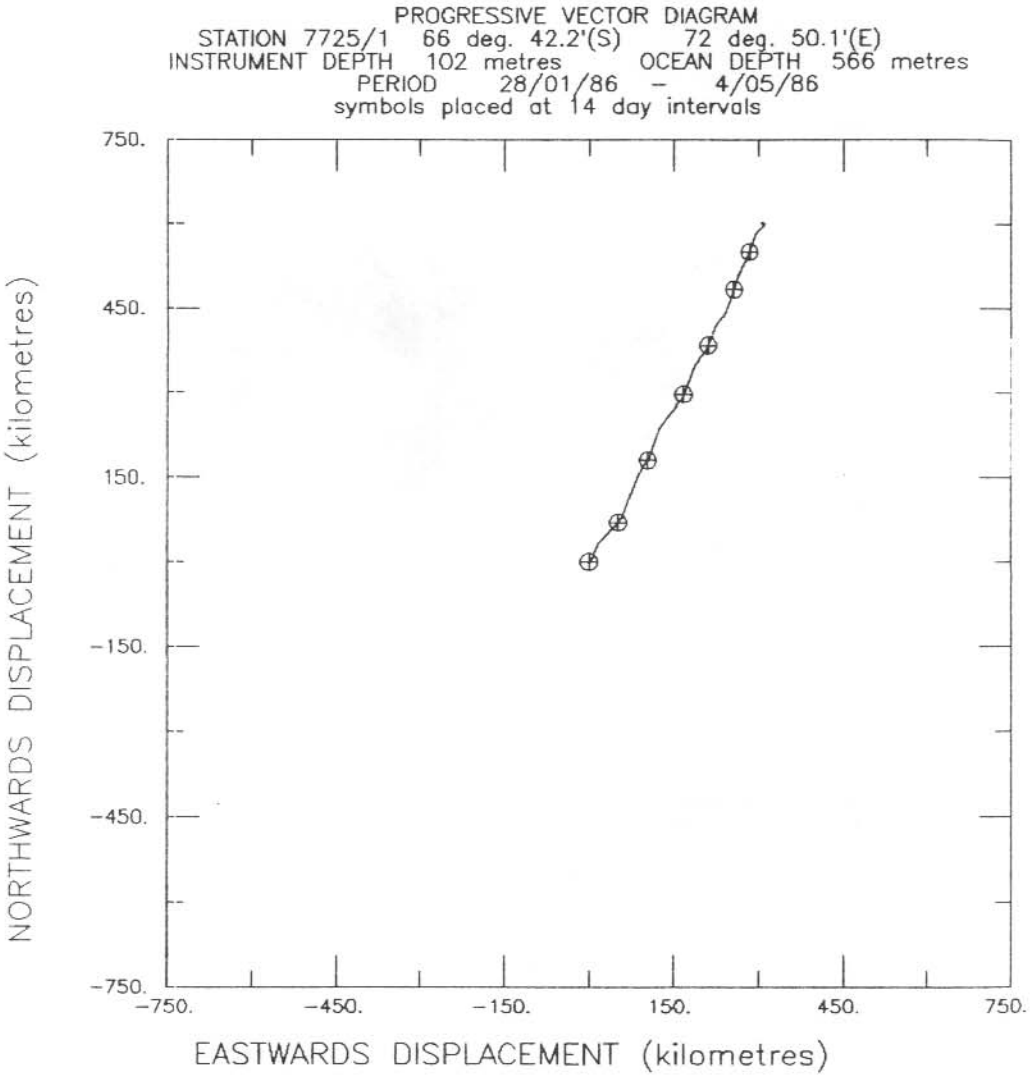

SCATTER PLOT OF U VELOCITY AGAINST V VELOCITY
STATION 7735/2 66 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 6/08/86
50.
30.
10.
-10.
-30.
-50.
-50.
-30.
-10.
10.
30.
50.
V VELOCITY (cm/s)
U VELOCITY (cm/s)

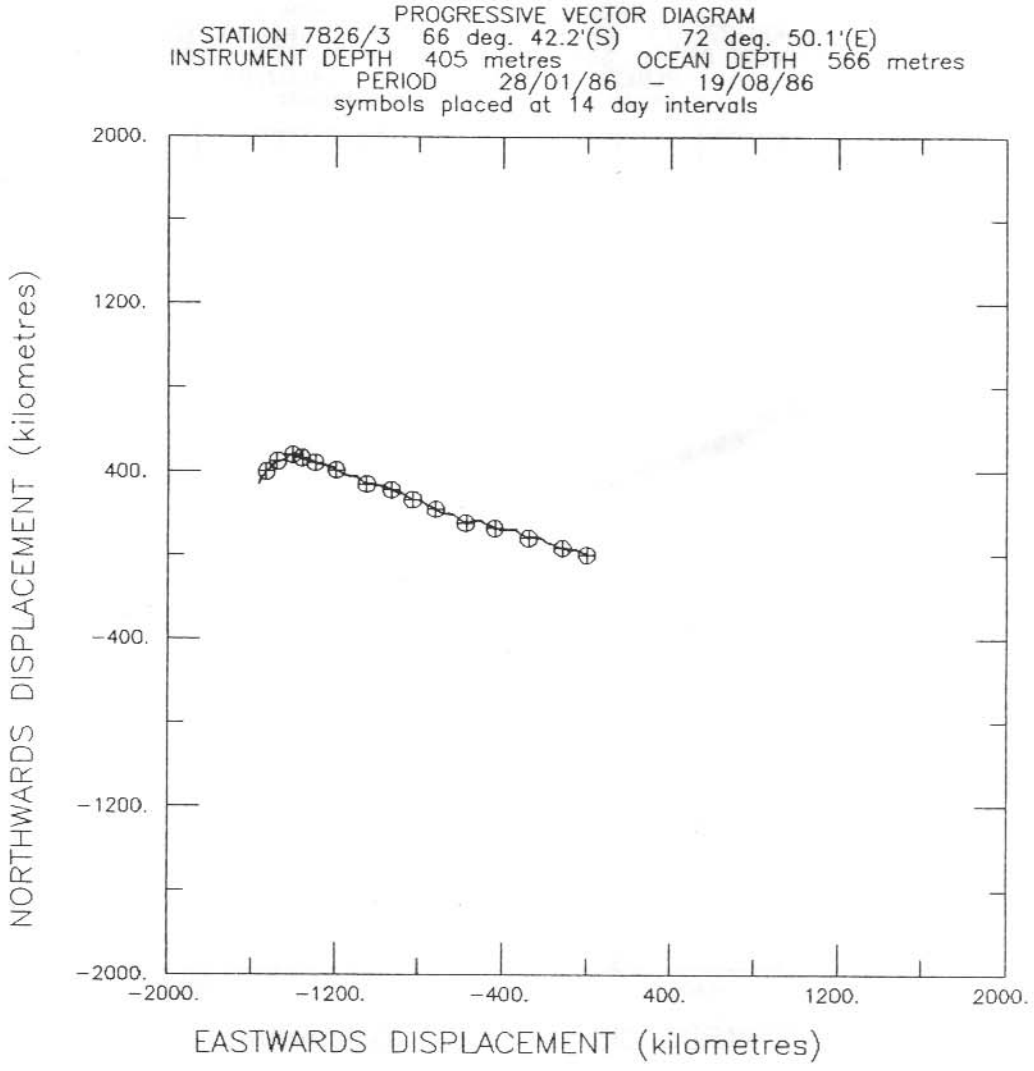

SCATTER PLOT OF U VELOCITY AGAINST V VELOCITY
STATION 7794/2 66 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86
50.
30.
10.
-10.
-30.
-50.
V VELOCITY (cm/s)
-50.
-30.
-10.
10.
30.
50.
U VELOCITY (cm/s)

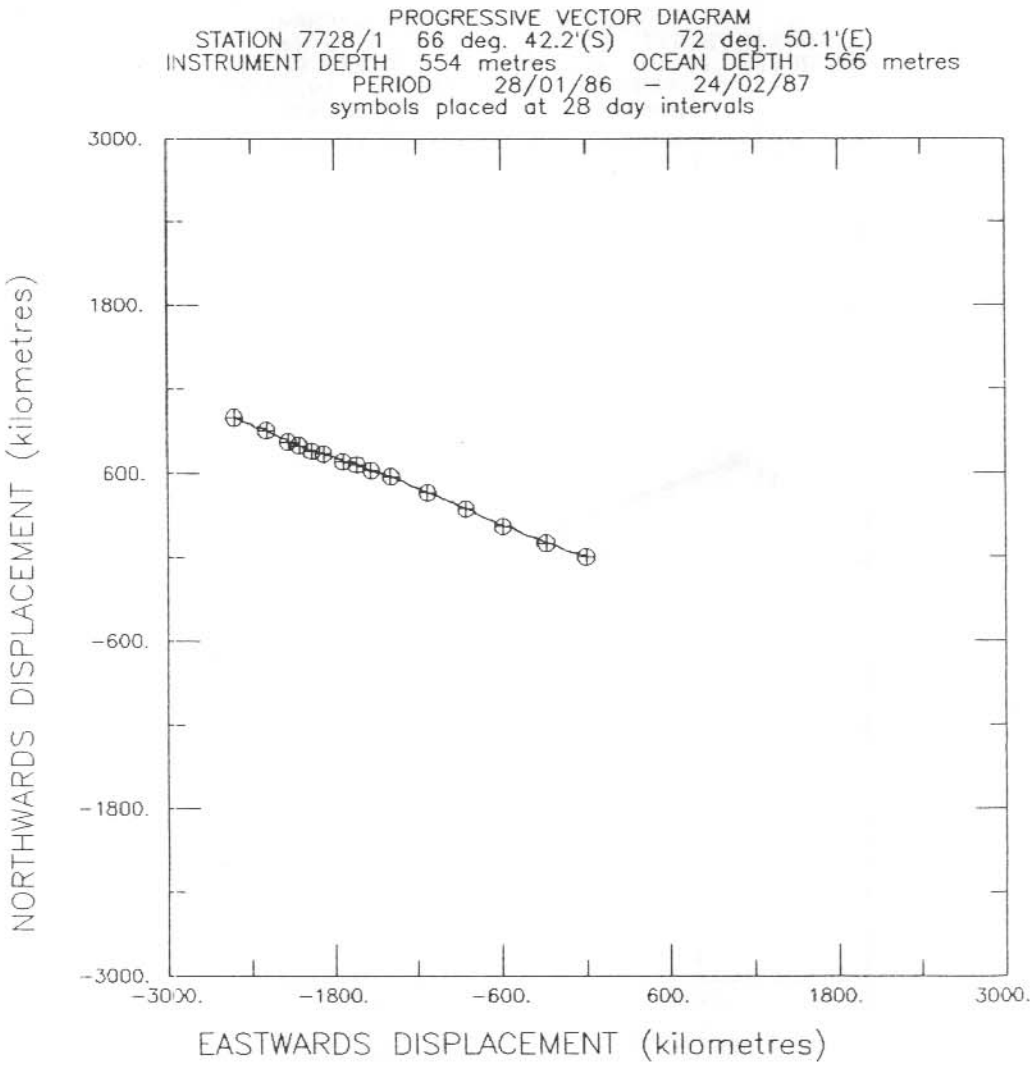

SCATTER PLOT OF U VELOCITY AGAINST V VELOCITY
STATION 7623/3 66 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86
50.
30.
10.
-10.
-30.
-50.
V VELOCITY (cm/s)
-50.
-30.
-10.
10.
30.
50.
U VELOCITY (cm/s)

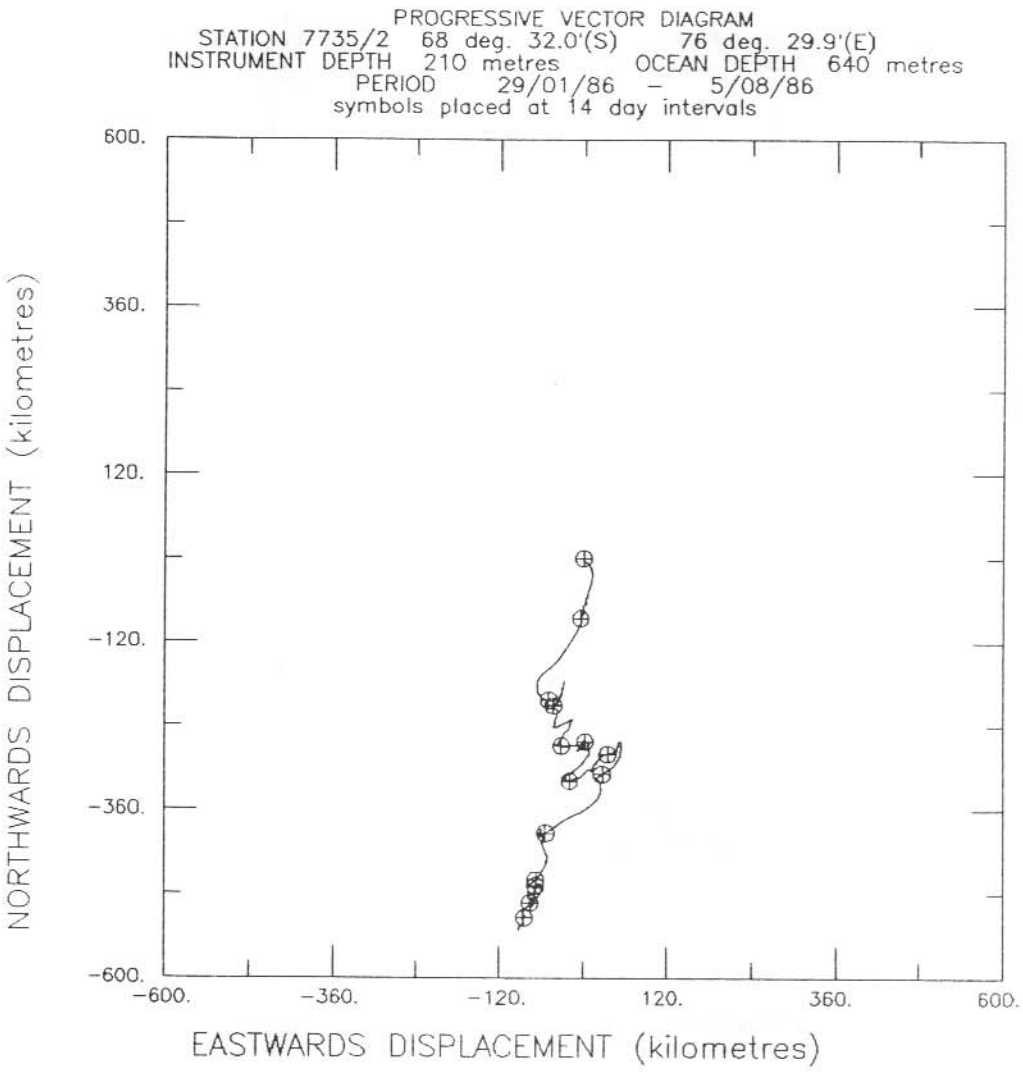
APPENDIX III. PROGRESSIVE VECTOR PLOTS

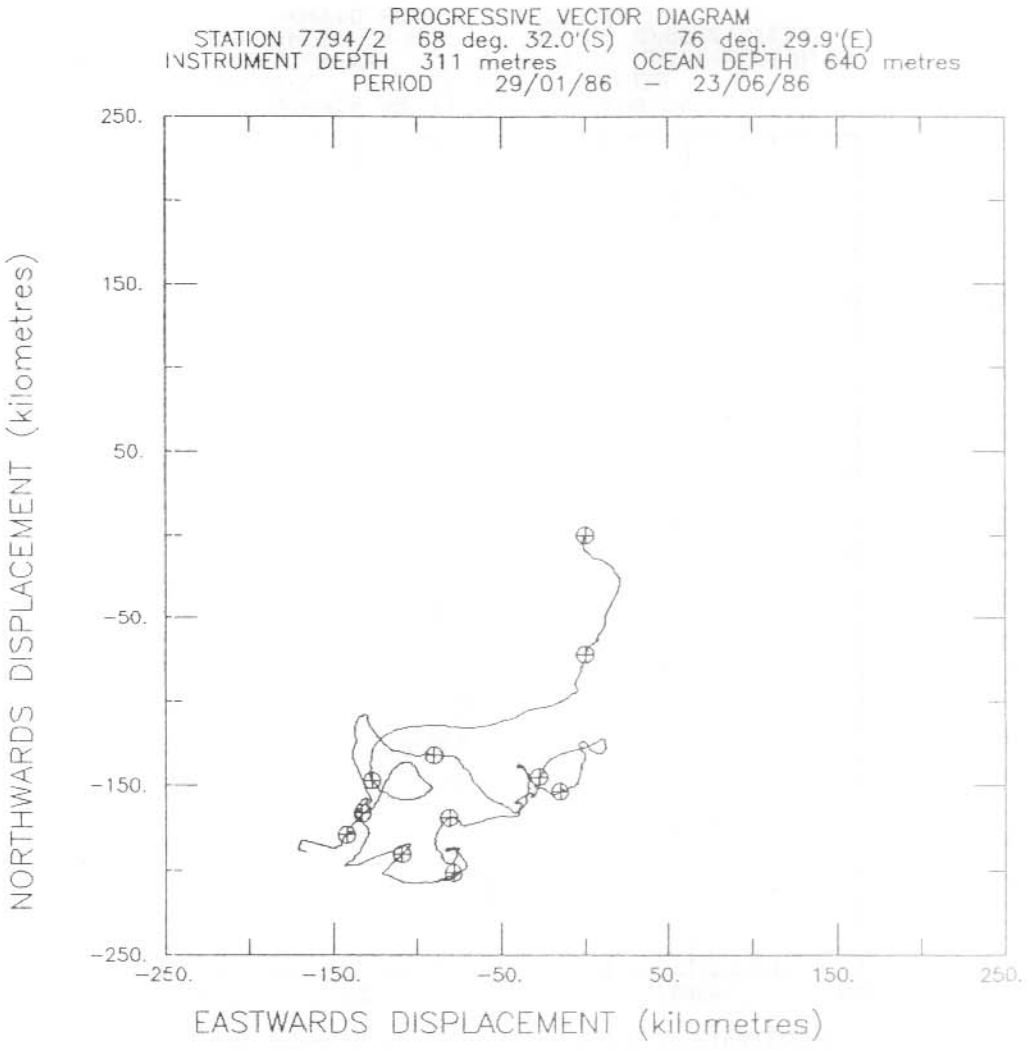
Plots are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.

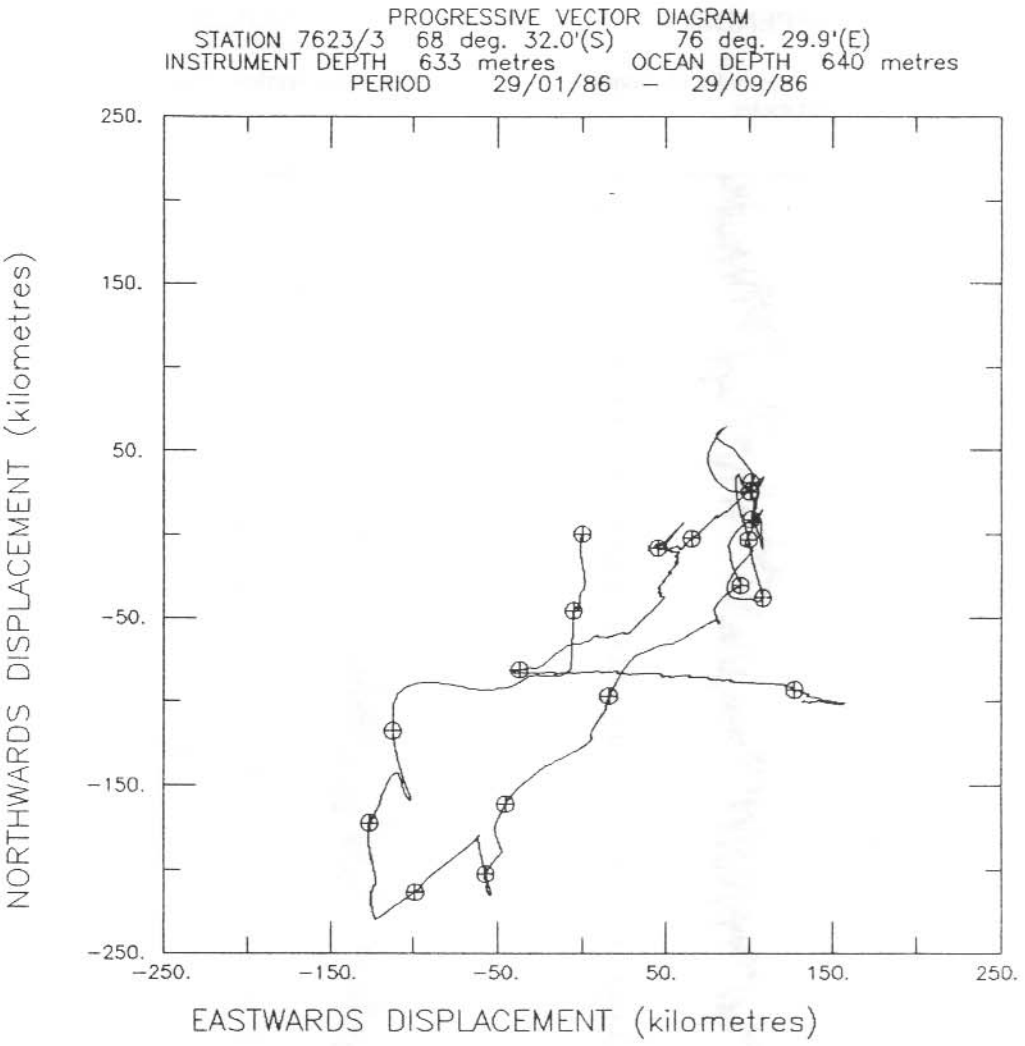



PROGRESSIVE VECTOR DIAGRAM
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 19/08/86
symbols placed at 14 day intervals
2000.
1200.
400.
-400.
-1200.
-2000.
-2000.
-1200.
-400.
400.
1200.
2000.
NORTHWARDS DISPLACEMENT (kilometres)
EASTWARDS DISPLACEMENT (kilometres)


PROGRESSIVE VECTOR DIAGRAM
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87
symbols placed at 28 day intervals
3000.
1800.
600.
-600.
-1800.
-3000.
-3000.
-1800.
-600.
600.
1800.
3000.
NORTHWARDS DISPLACEMENT (kilometres)
EASTWARDS DISPLACEMENT (kilometres)

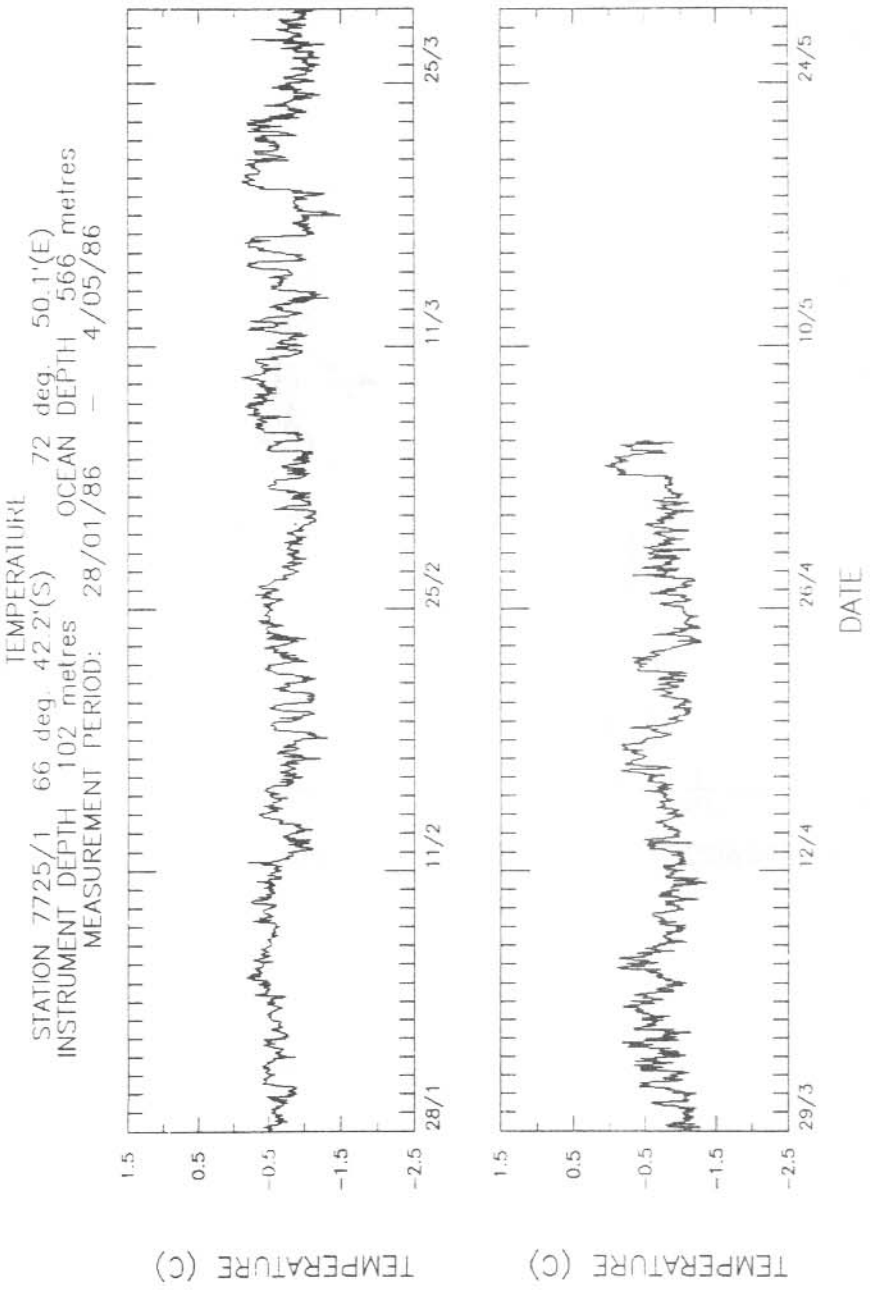

PROGRESSIVE VECTOR DIAGRAM
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 5/08/86
symbols placed at 14 day intervals
NORTHWARDS DISPLACEMENT (kilometres)
600.
360.
120.
-120.
-360.
-600.
-600.
-360.
-120.
120.
360.
600.
EASTWARDS DISPLACEMENT (kilometres)

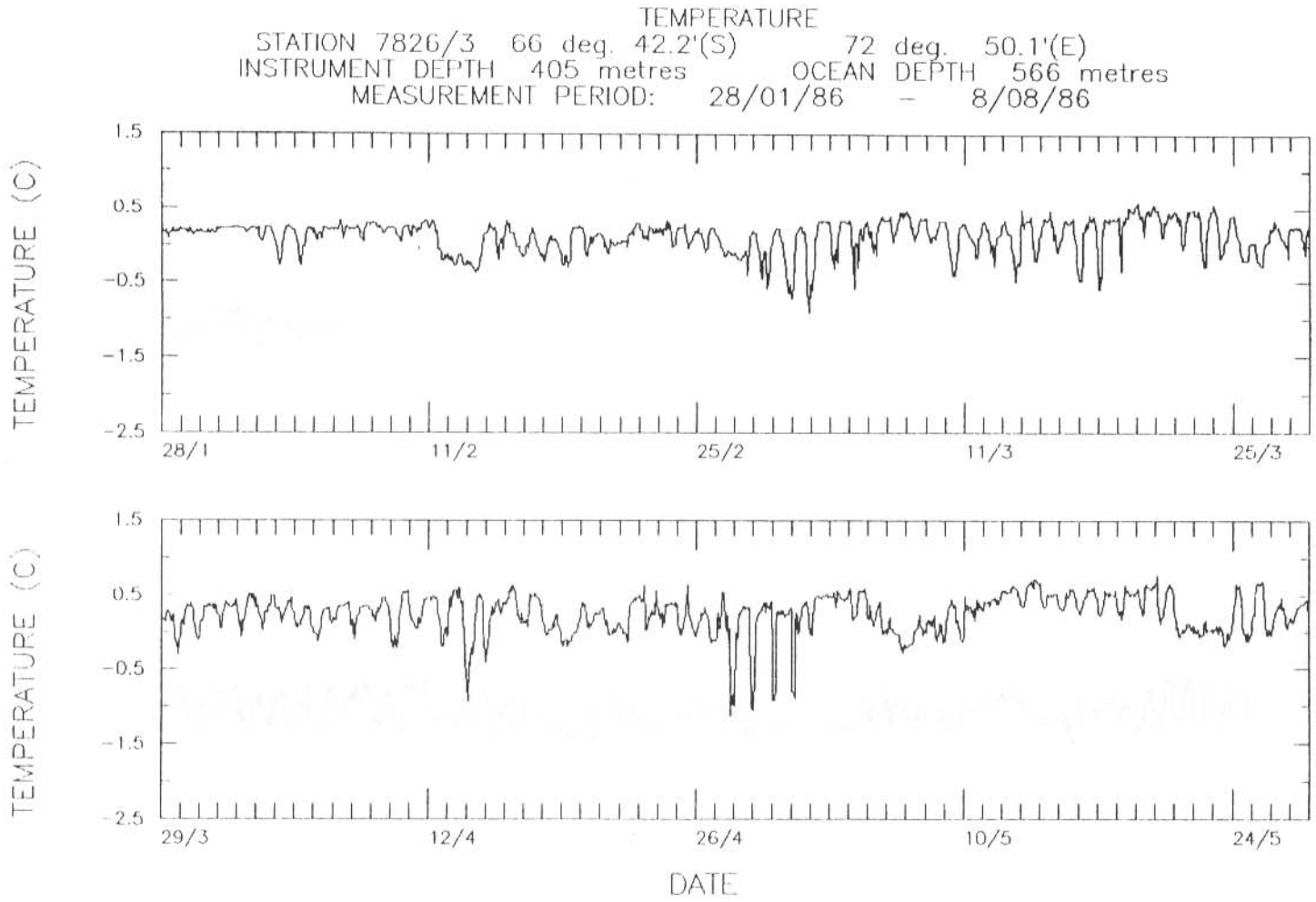

PROGRESSIVE VECTOR DIAGRAM
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86
250.
150.
50.
-50.
-150.
-250.
-250.
-150.
-50.
50.
150.
250.
NORTHWARDS DISPLACEMENT (kilometres)
EASTWARDS DISPLACEMENT (kilometres)

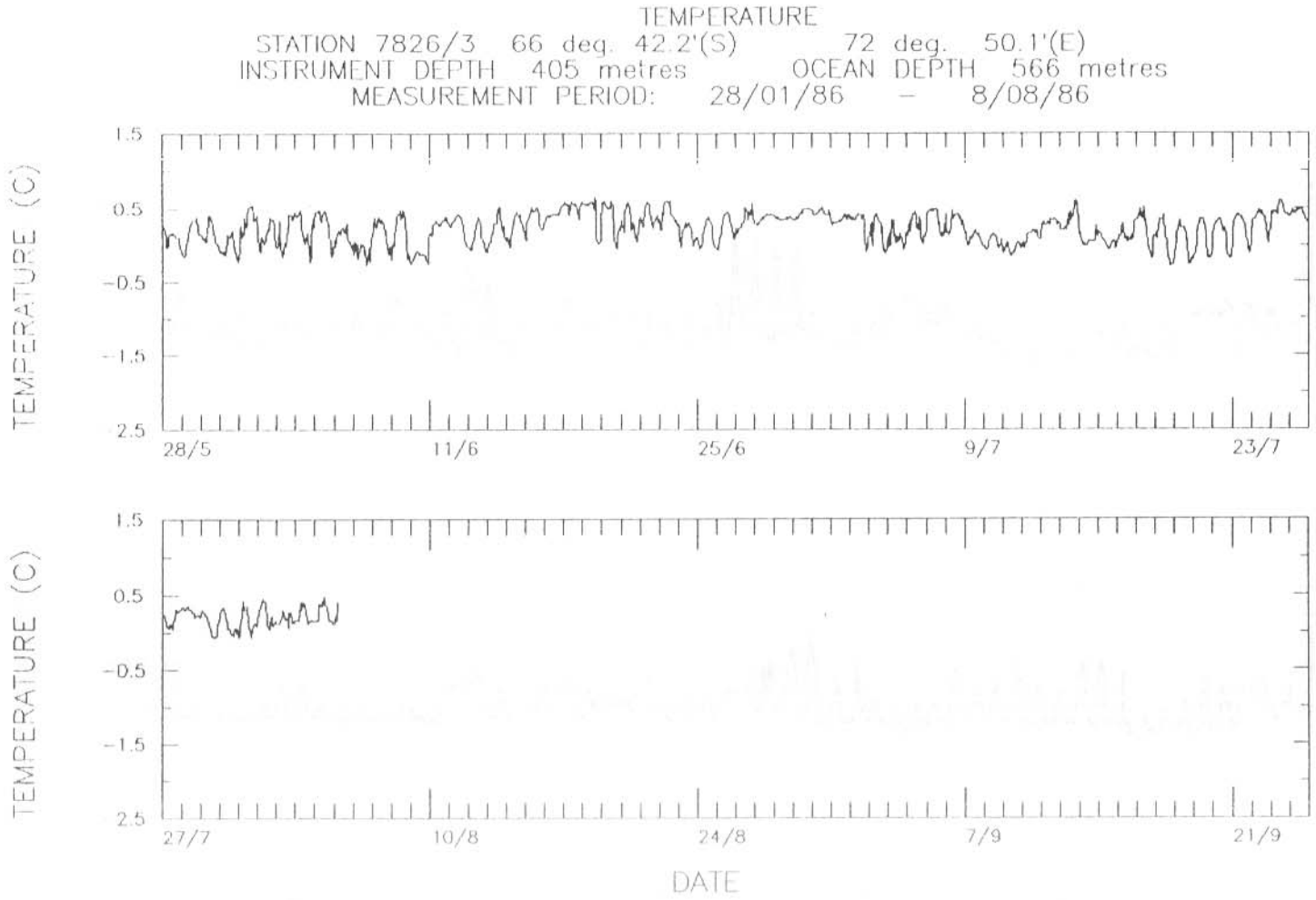

PROGRESSIVE VECTOR DIAGRAM
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86
250.
150.
50.
-50.
-150.
-250.
-250.
-150.
-50.
50.
150.
250.
NORTHWARDS DISPLACEMENT (kilometres)
EASTWARDS DISPLACEMENT (kilometres)

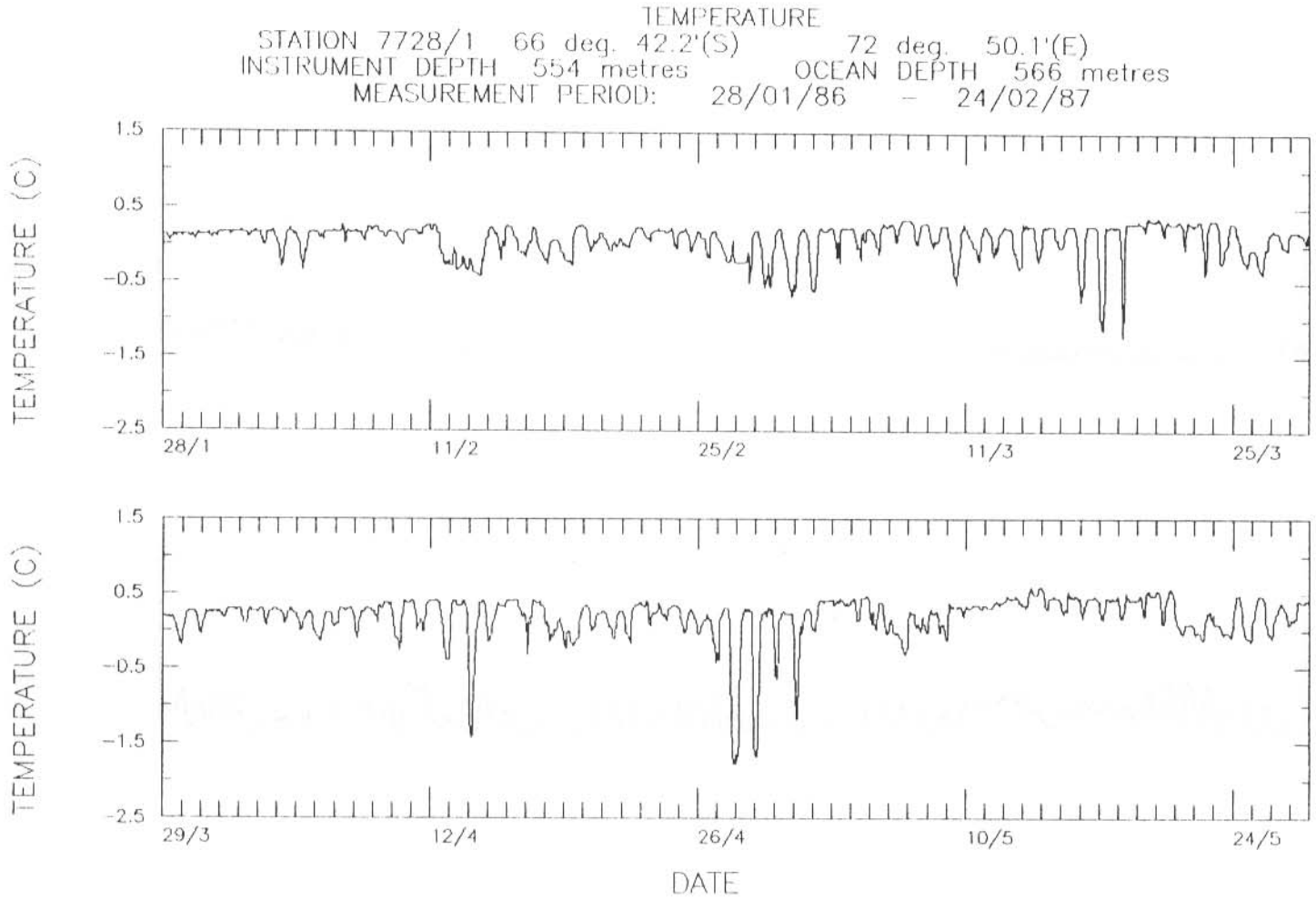
APPENDIX IV. TEMPERATURE TIME SERIES

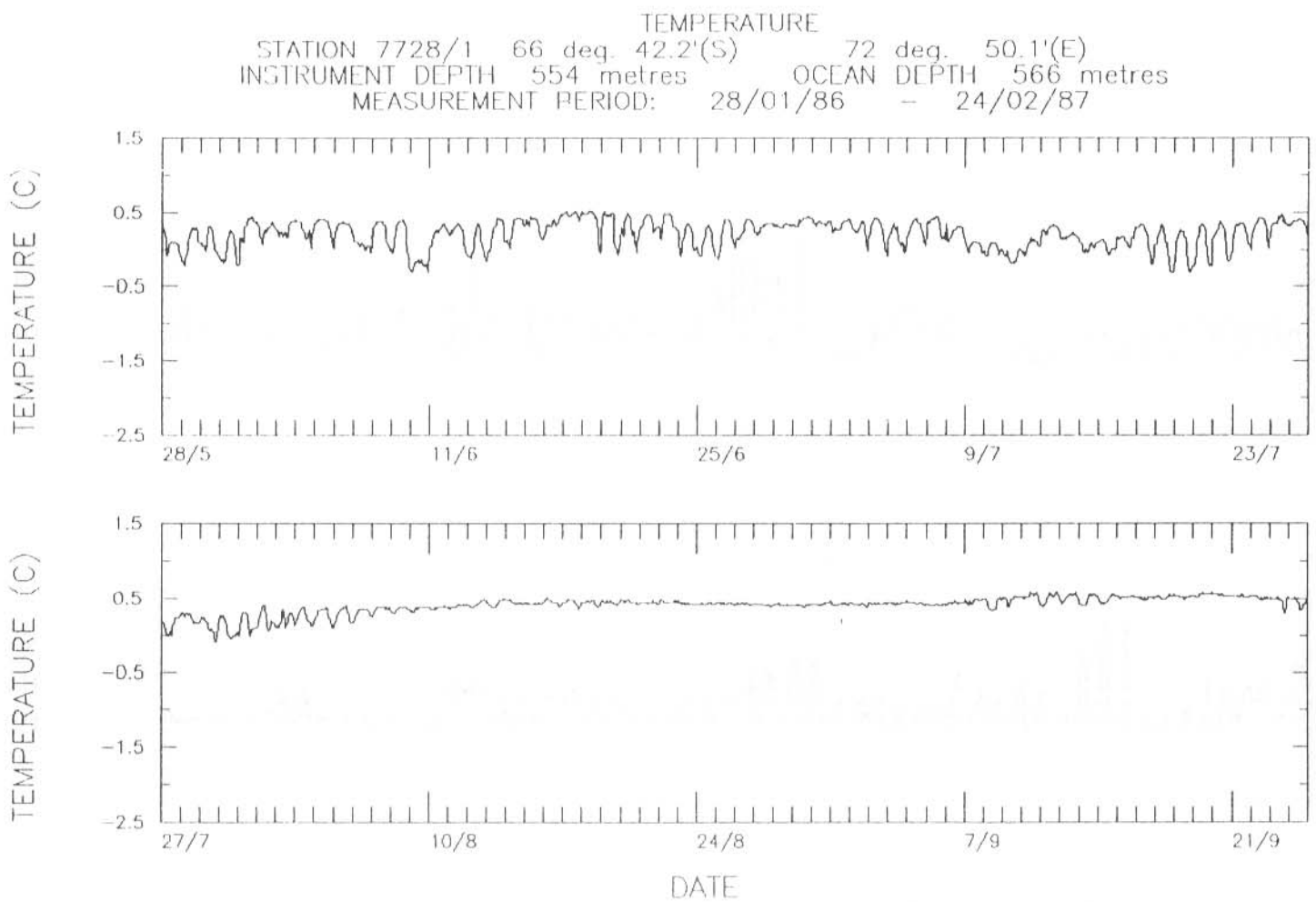
Plots are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.

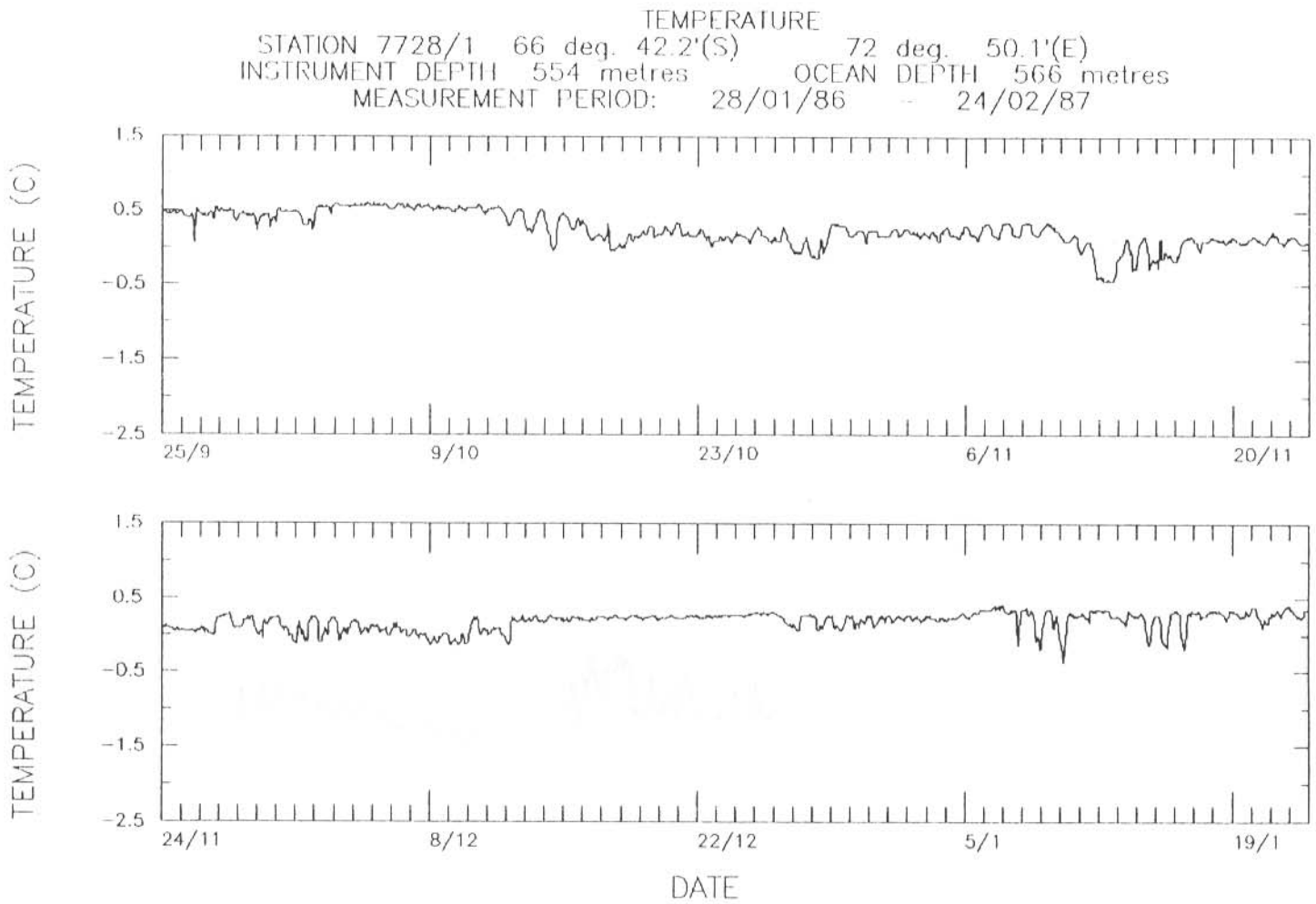


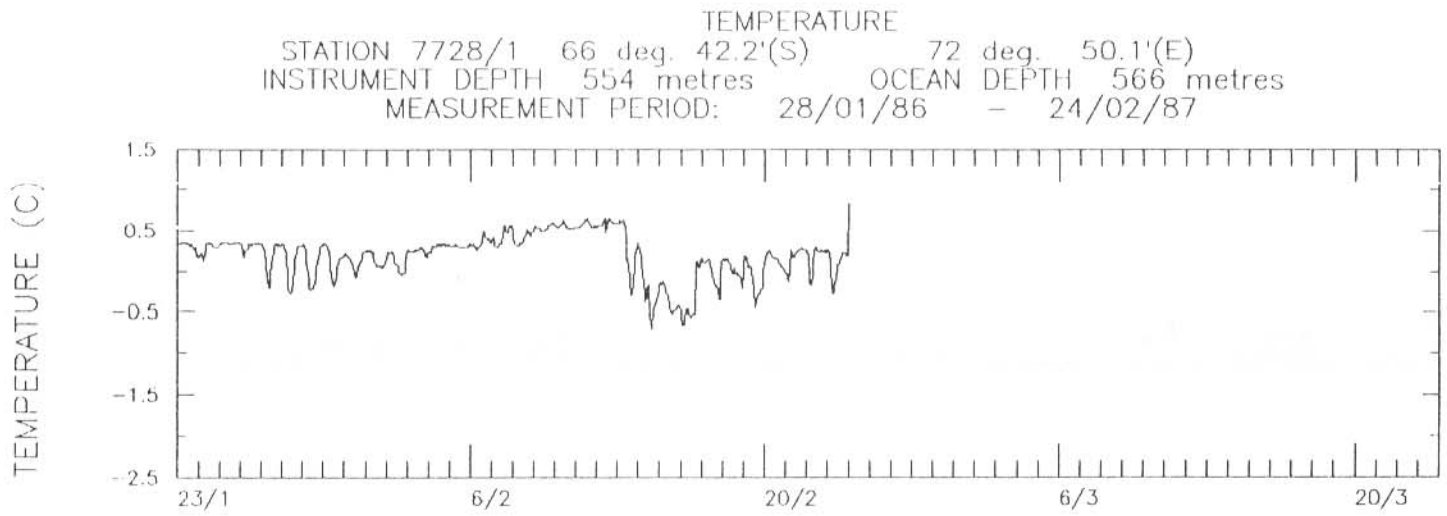

TEMPERATURE
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 8/08/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
28/1
11/2
25/2
11/3
25/3
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/3
12/4
26/4
10/5
24/5
DATE

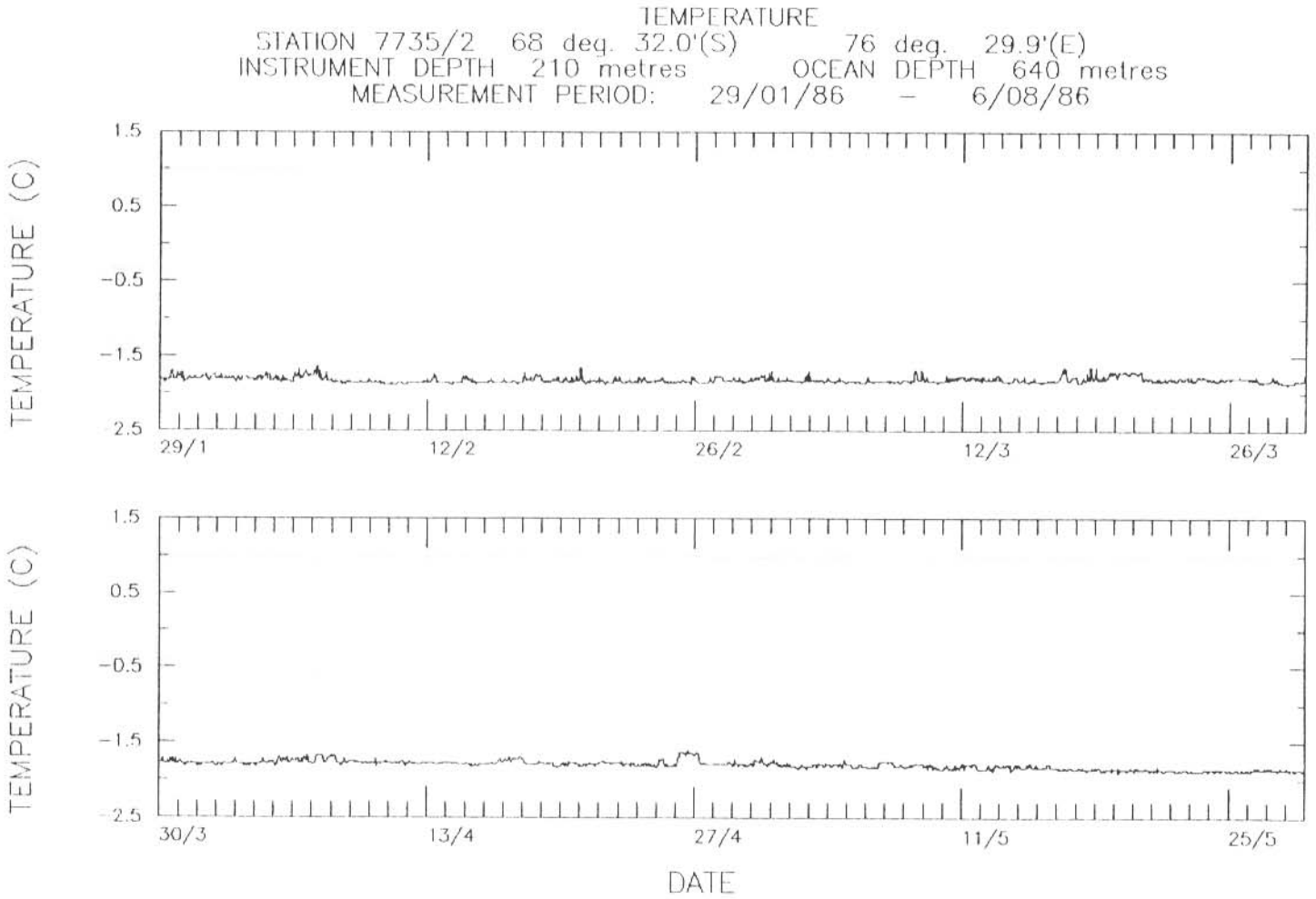

TEMPERATURE
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 8/08/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
2.5
28/5
11/6
25/6
9/7
23/7
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
2.5
27/7
10/8
24/8
7/9
21/9
DATE

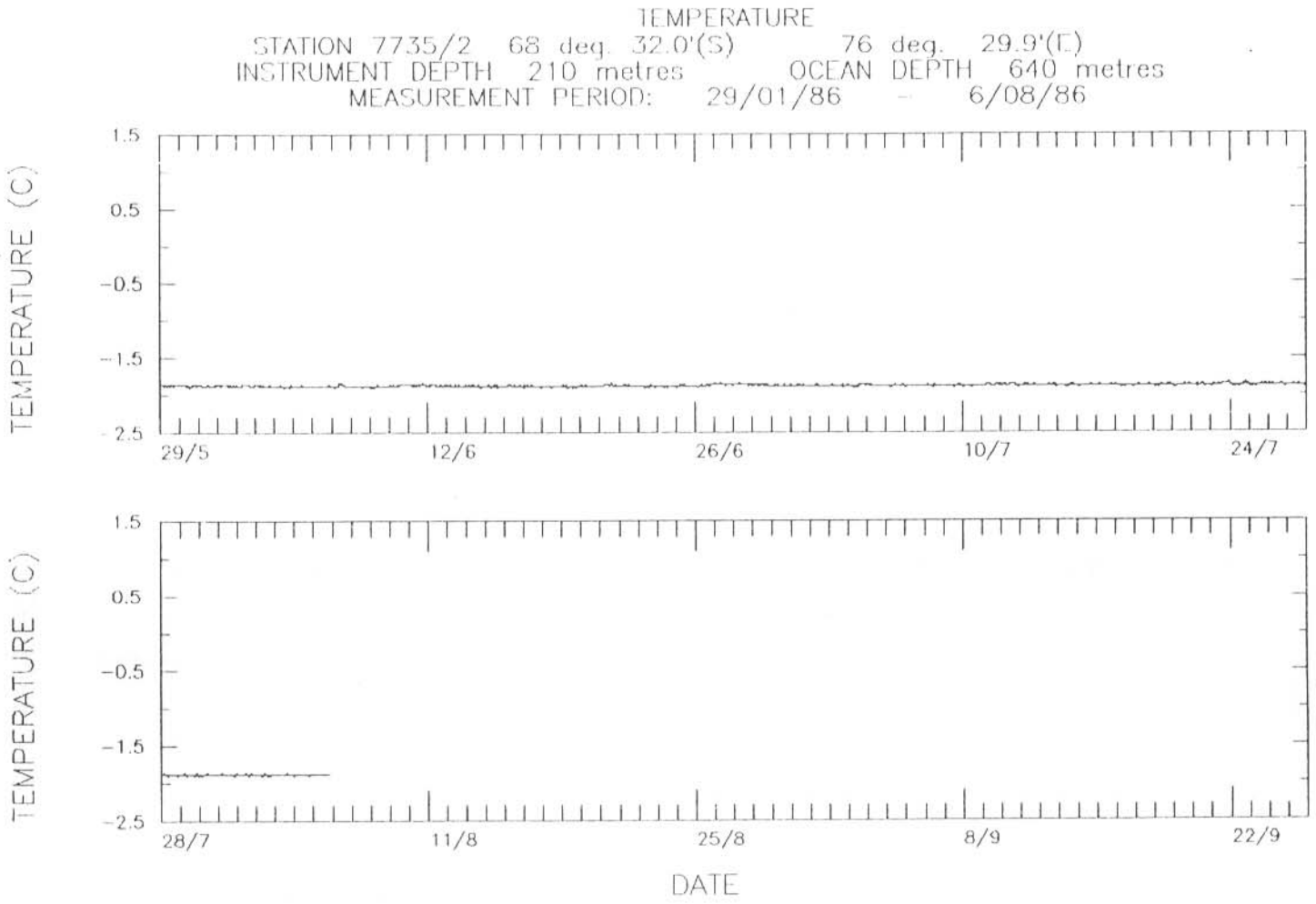

TEMPERATURE
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
28/1
11/2
25/2
11/3
25/3
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/3
12/4
26/4
10/5
24/5
DATE

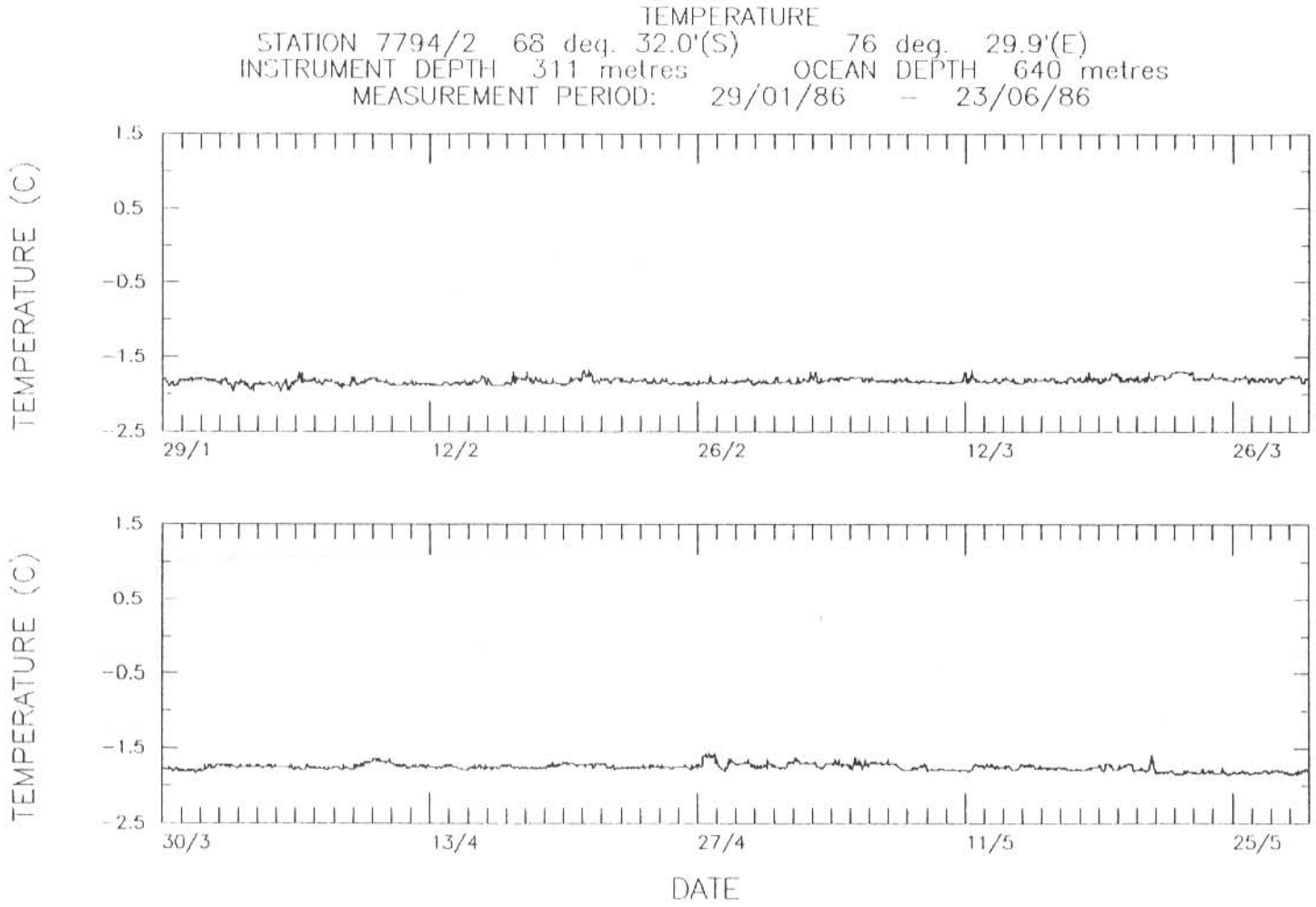

TEMPERATURE
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
28/5
11/6
25/6
9/7
23/7
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
27/7
10/8
24/8
7/9
21/9
DATE

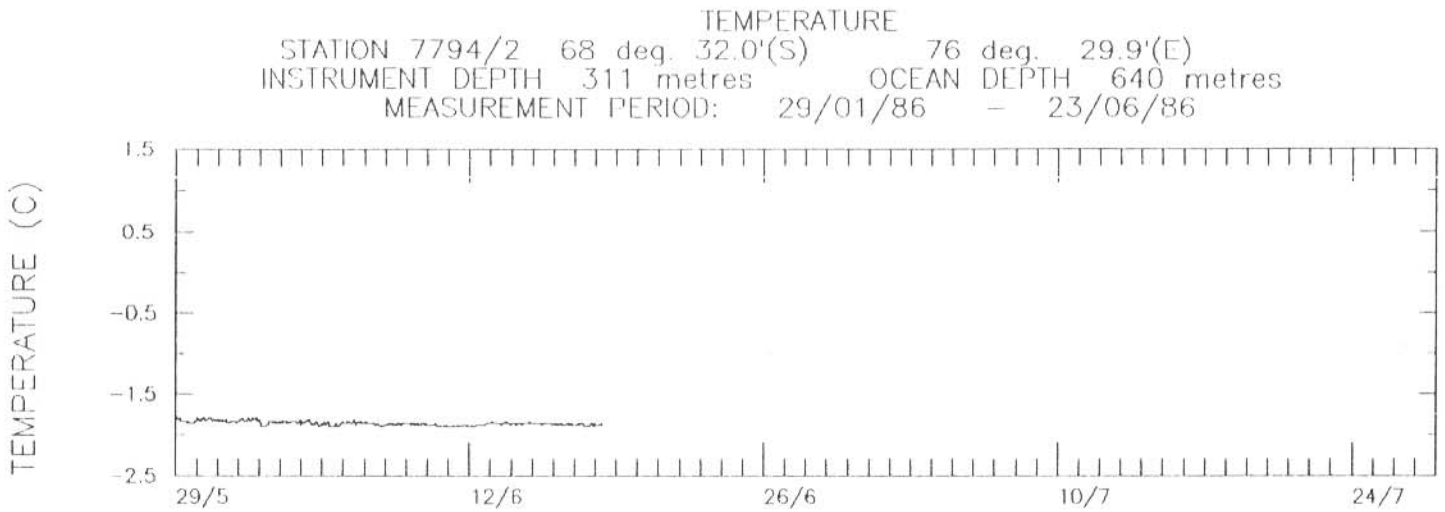

TEMPERATURE
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
25/9
9/10
23/10
6/11
20/11
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
24/11
8/12
22/12
5/1
19/1
DATE

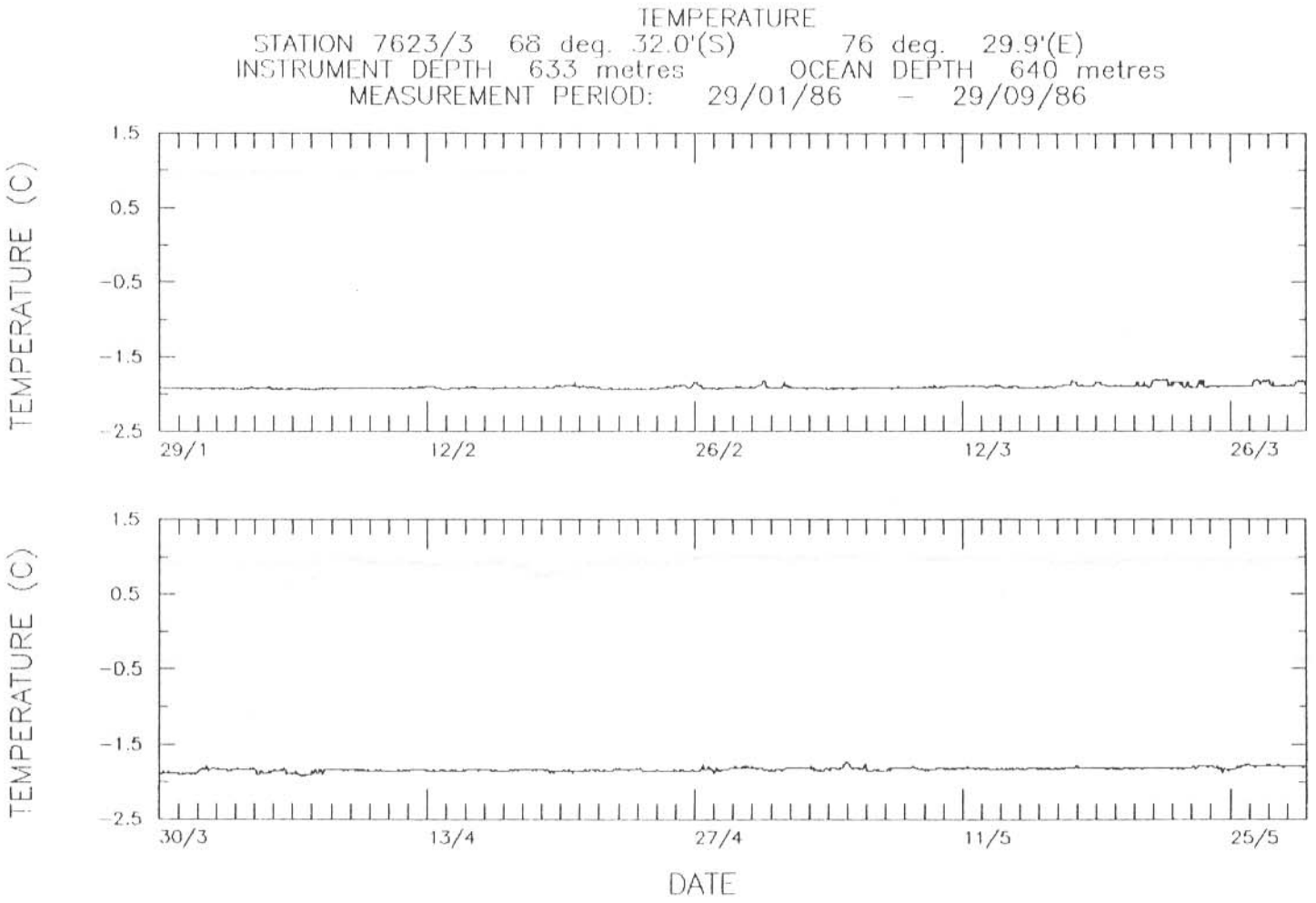

TEMPERATURE
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
23/1
6/2
20/2
6/3
20/3

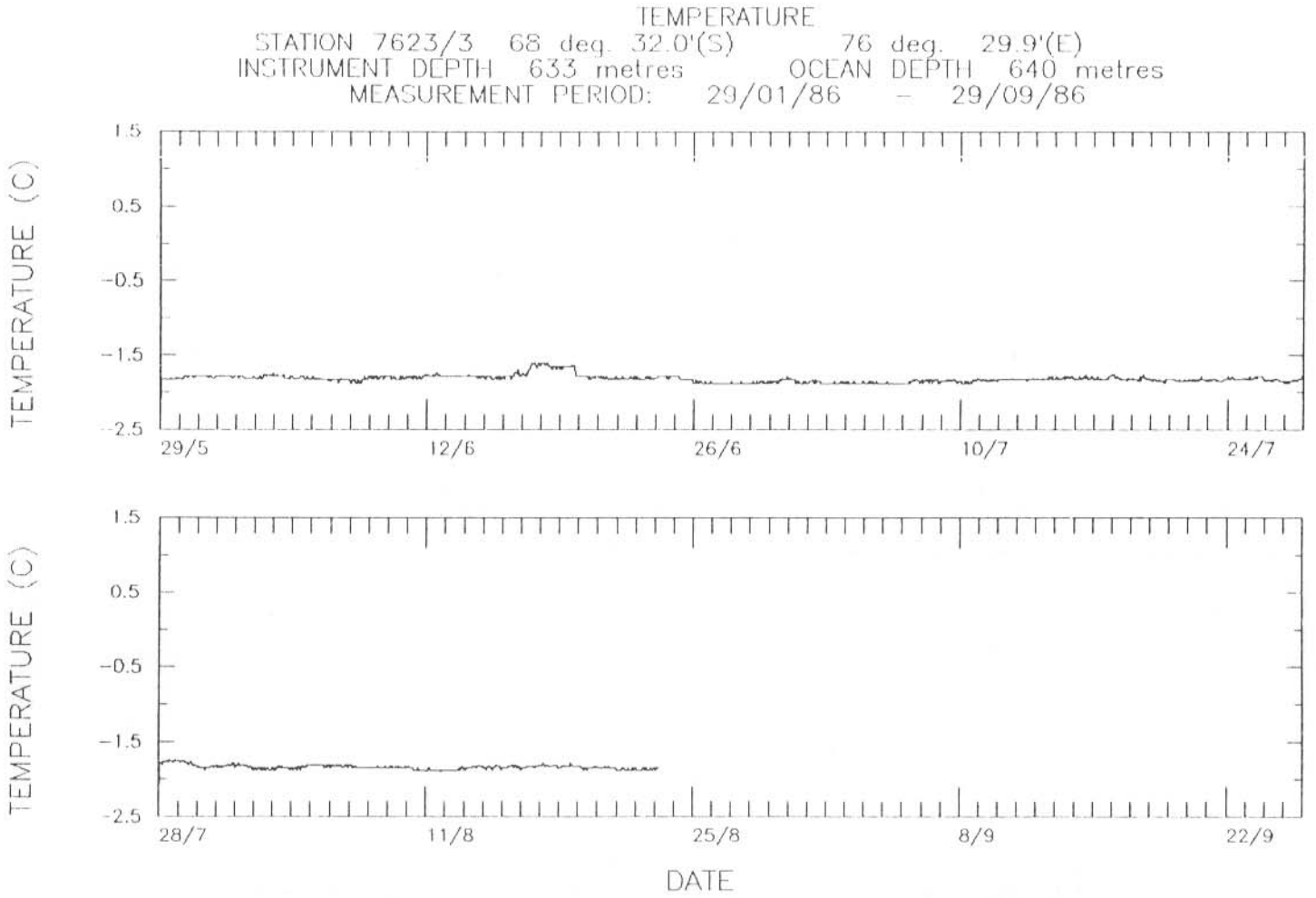

TEMPERATURE
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 6/08/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/1
12/2
26/2
12/3
26/3
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
30/3
13/4
27/4
11/5
25/5
DATE


TEMPERATURE
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 6/08/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/5
12/6
26/6
10/7
24/7
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
28/7
11/8
25/8
8/9
22/9
DATE


TEMPERATURE
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 23/06/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/1
12/2
26/2
12/3
26/3
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
30/3
13/4
27/4
11/5
25/5
DATE

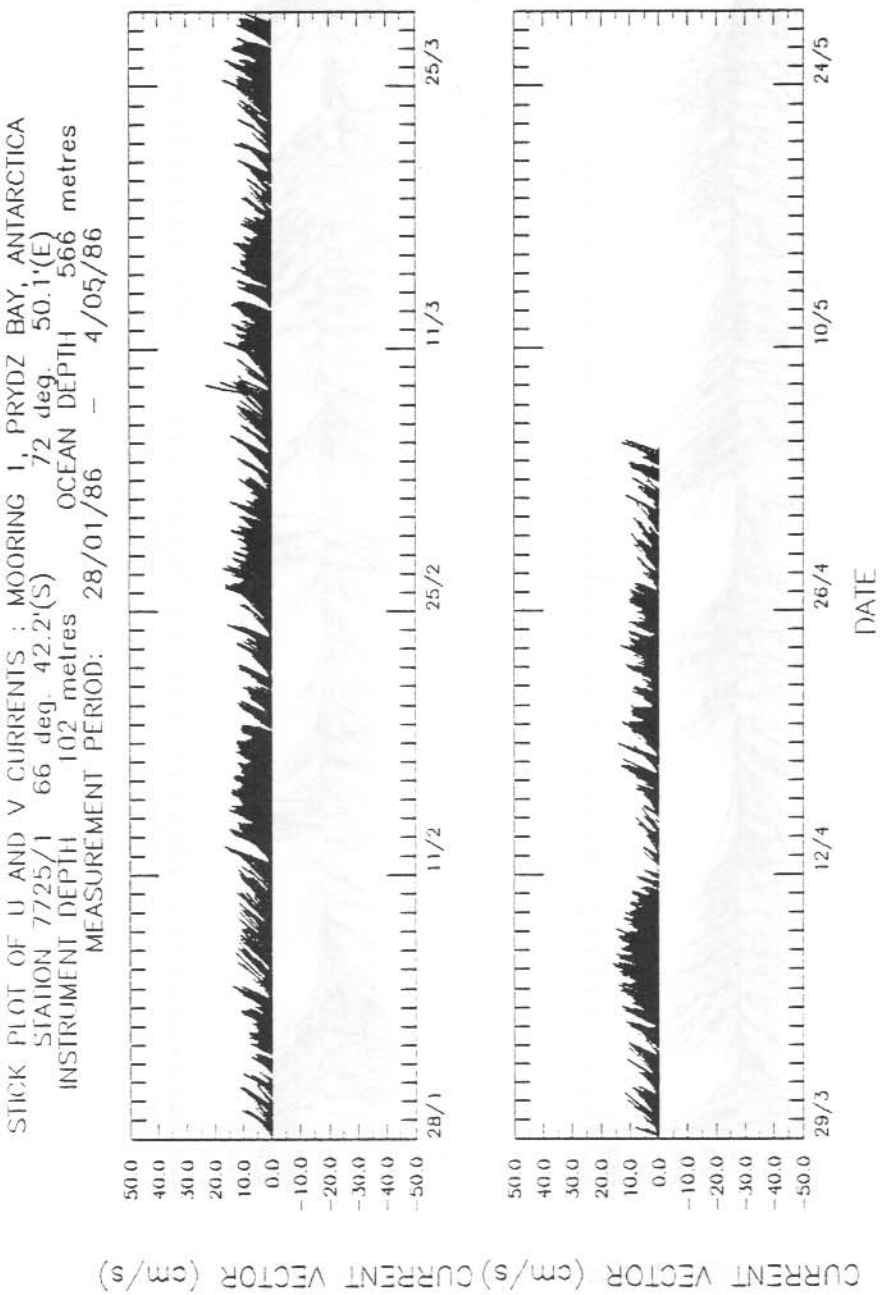

TEMPERATURE
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 23/06/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/5
12/6
26/6
10/7
24/7

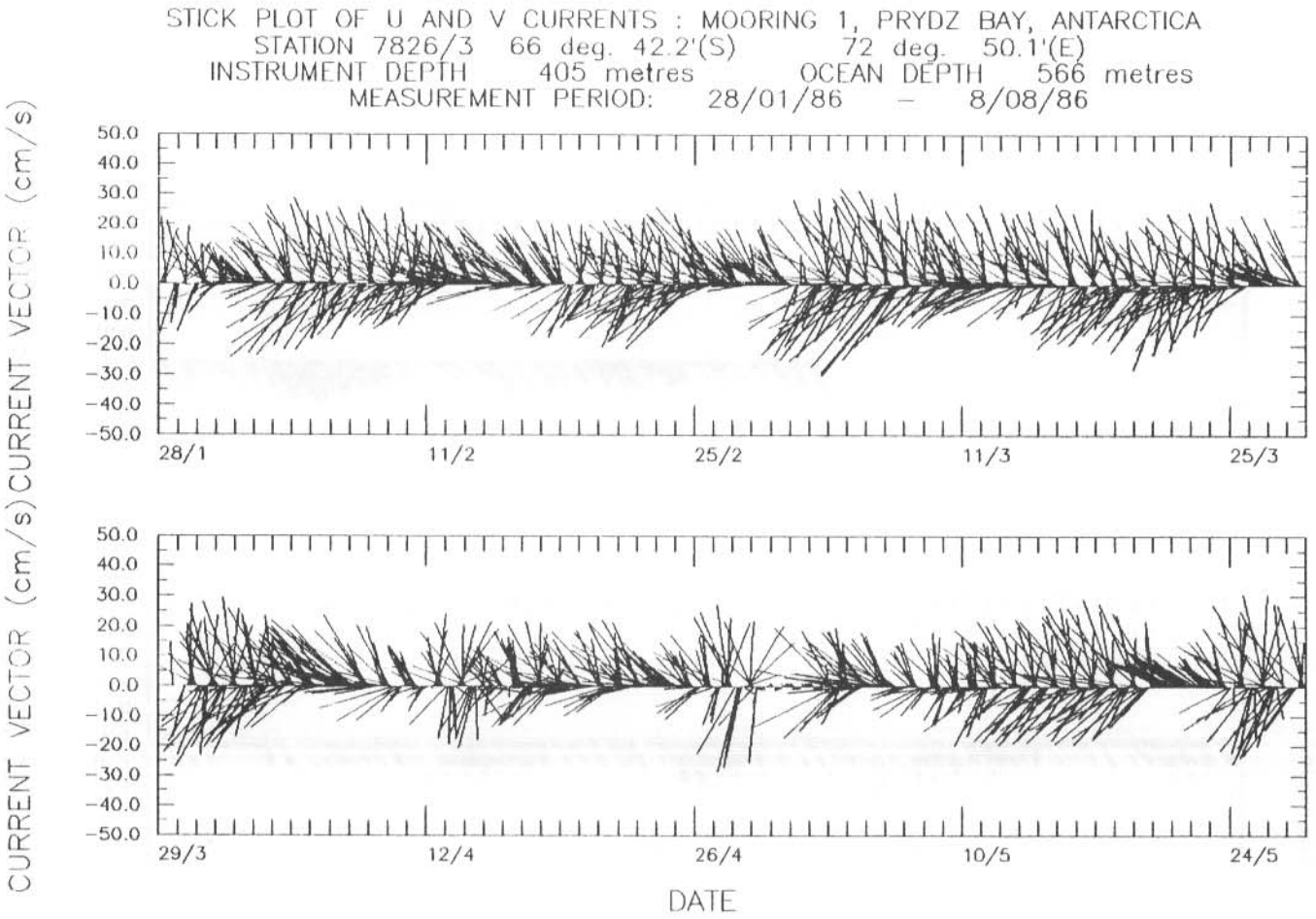

TEMPERATURE
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 29/09/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/1
12/2
26/2
12/3
26/3
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
30/3
13/4
27/4
11/5
25/5
DATE

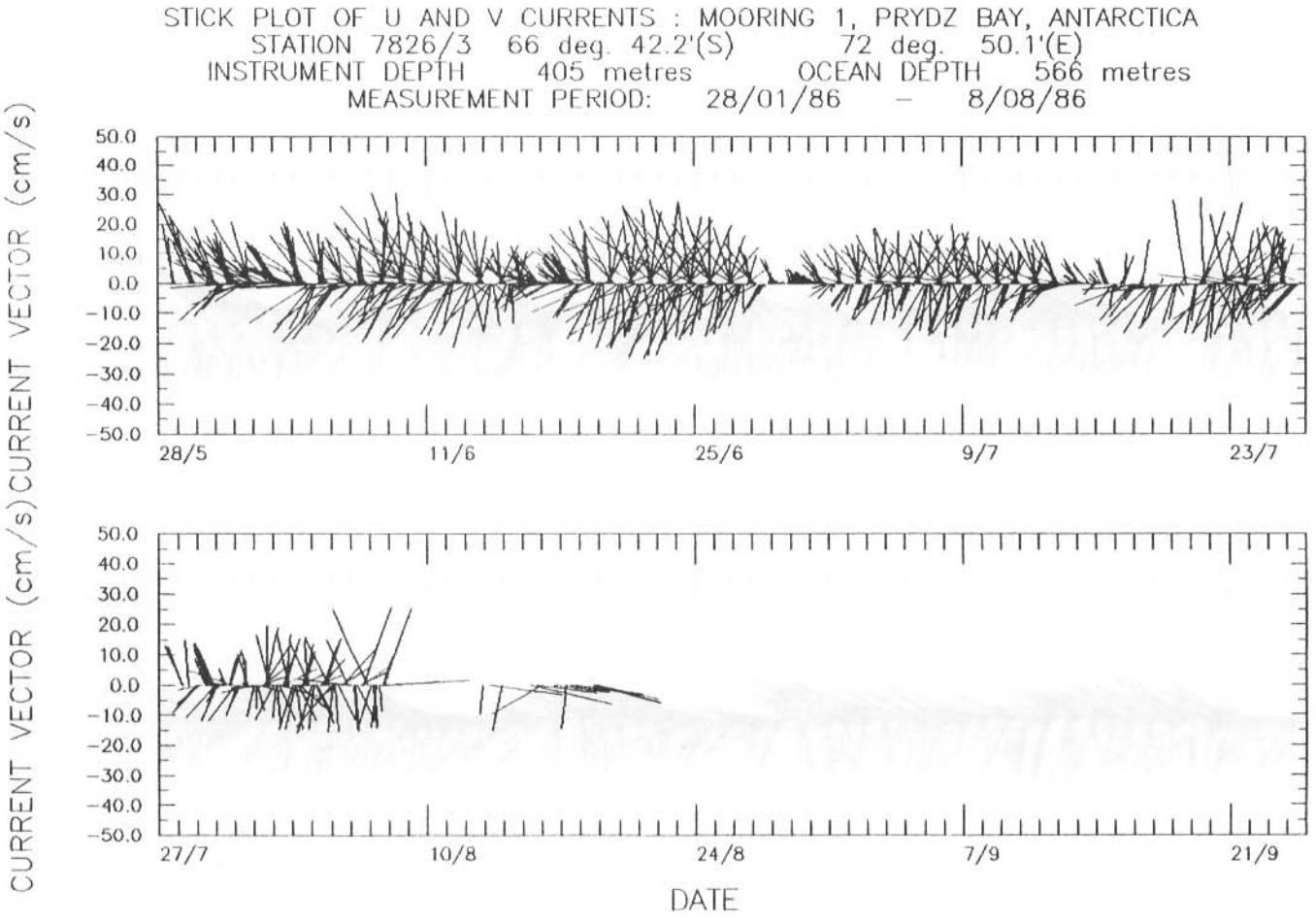

TEMPERATURE
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 29/09/86
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
29/5
12/6
26/6
10/7
24/7
TEMPERATURE (C)
1.5
0.5
-0.5
-1.5
-2.5
28/7
11/8
25/8
8/9
22/9
DATE

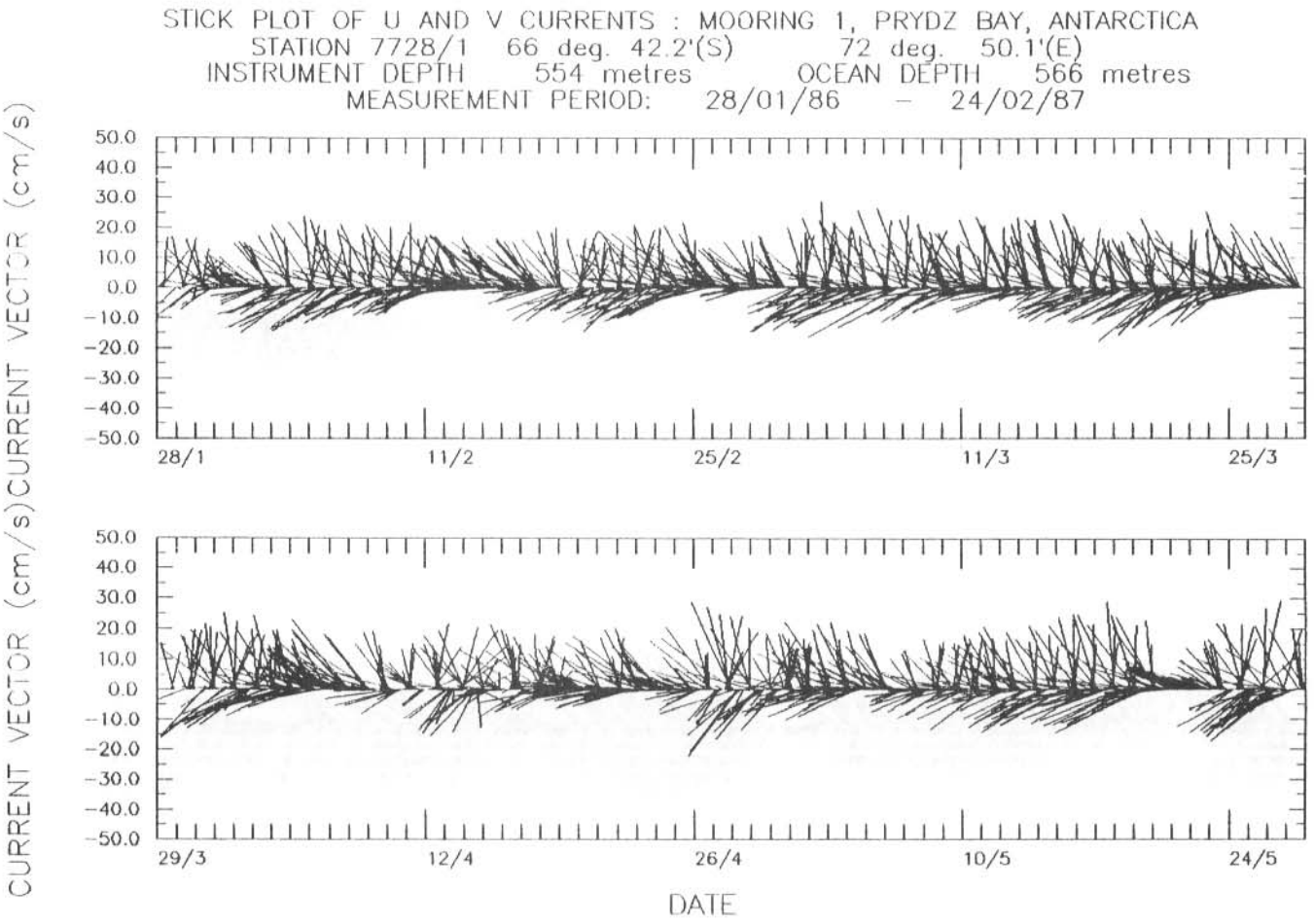
APPENDIX V. 'STICK' PLOTS

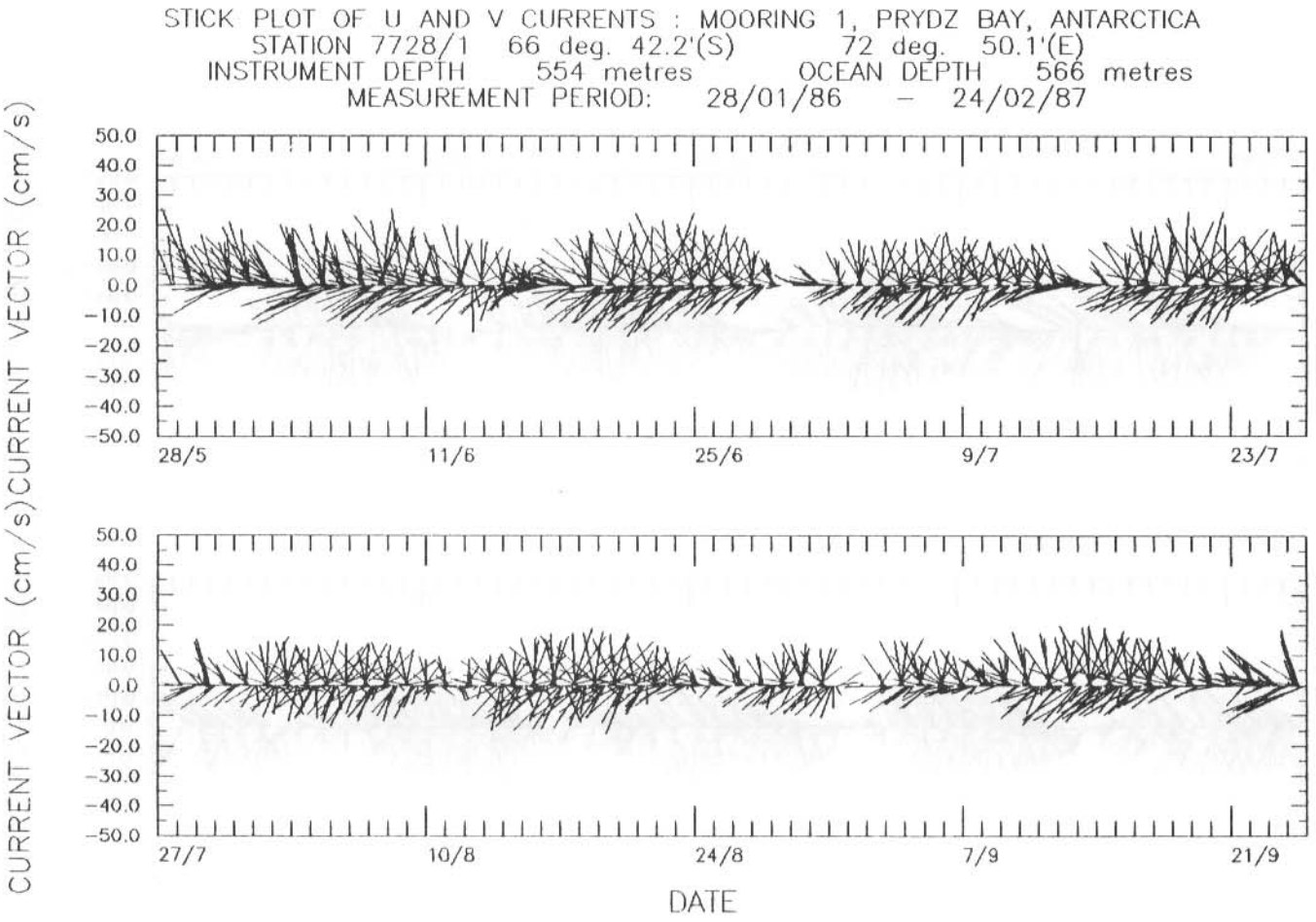
Plots are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.

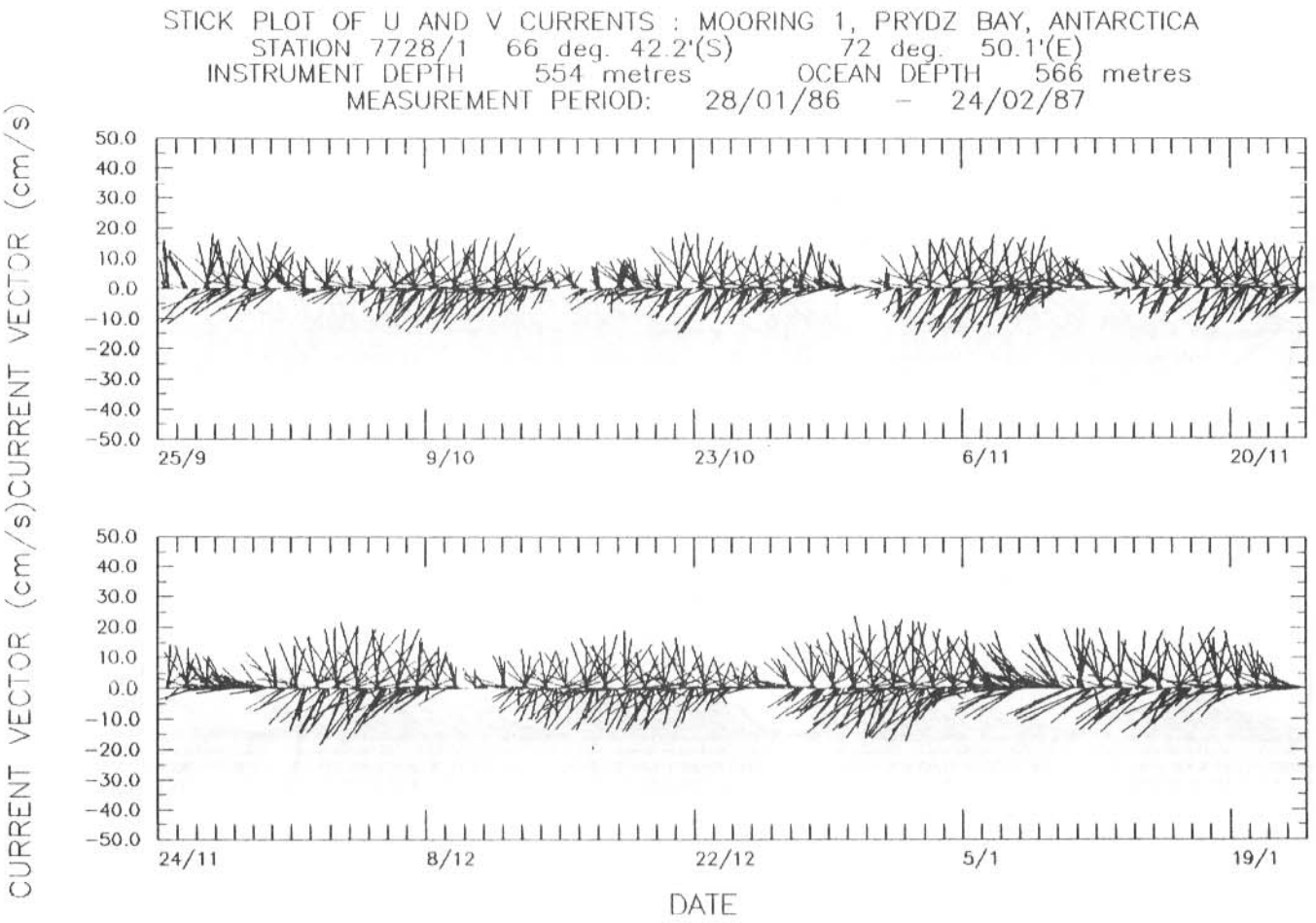



STICK PLOT OF U AND V CURRENTS : MOORING 1, PRYDZ BAY, ANTARCTICA
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 8/08/86
CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
28/1
11/2
25/2
11/3
25/3
29/3
12/4
26/4
10/5
24/5
DATE

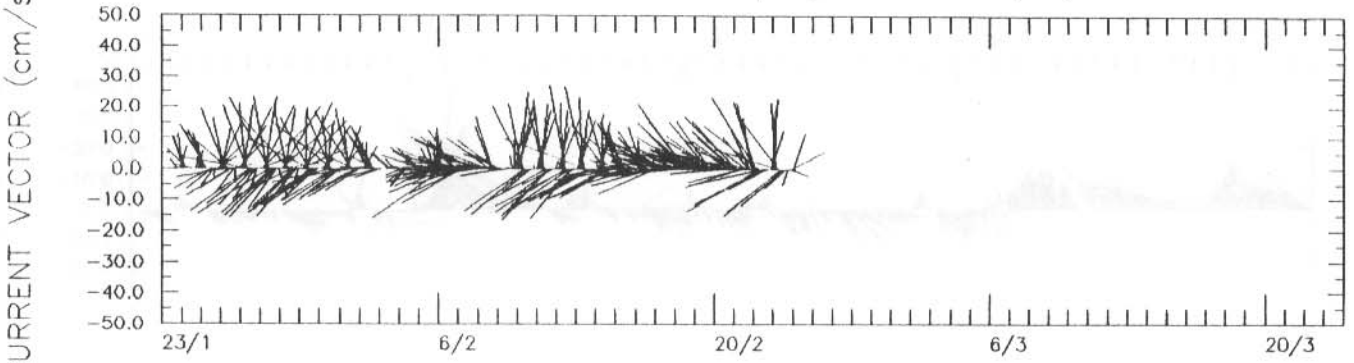

STICK PLOT OF U AND V CURRENTS : MOORING 1, PRYDZ BAY, ANTARCTICA
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 8/08/86
CURRENT VECTOR (cm/s)
CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
28/5
11/6
25/6
9/7
23/7
27/7
10/8
24/8
7/9
21/9
DATE

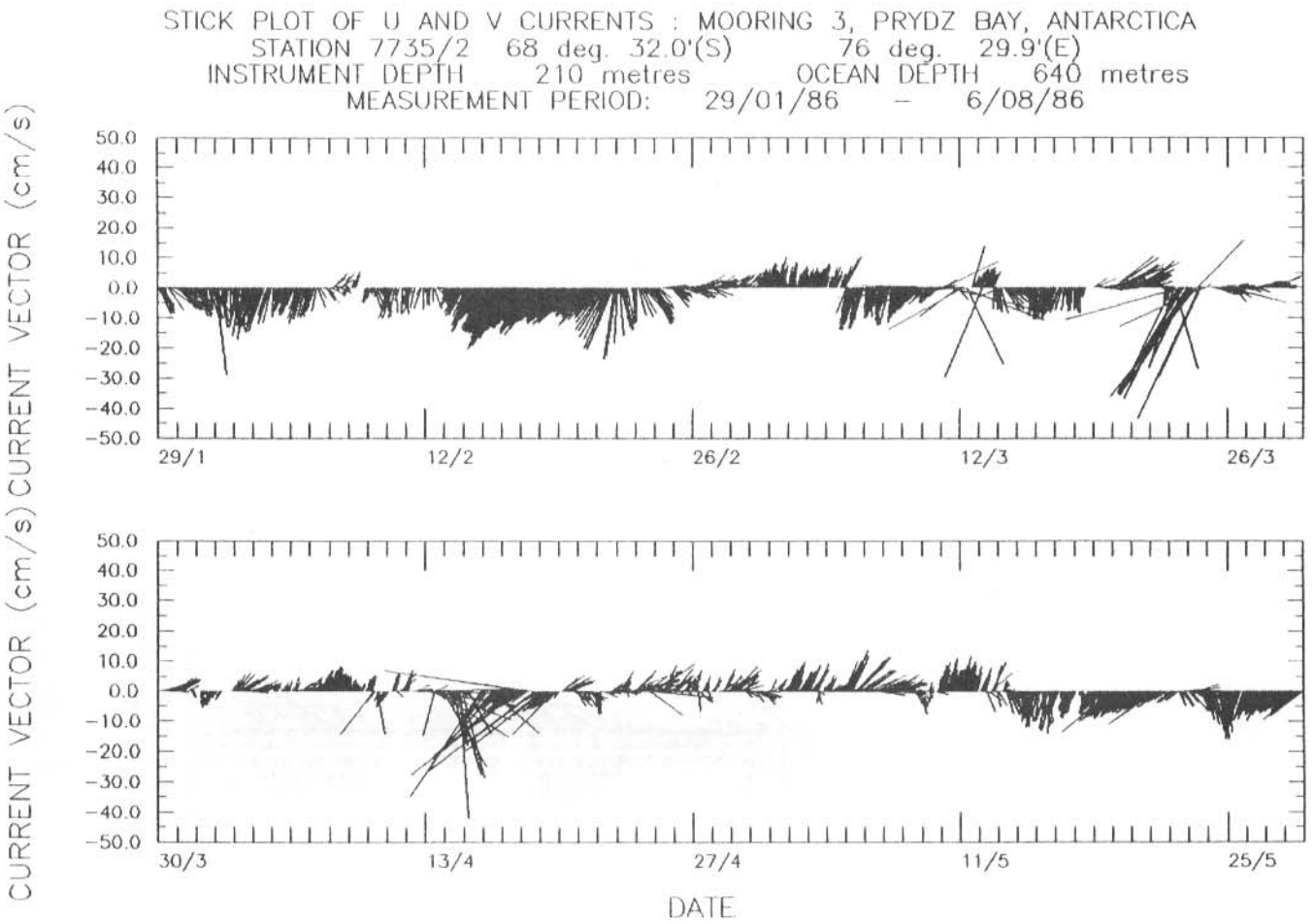

STICK PLOT OF U AND V CURRENTS : MOORING 1, PRYDZ BAY, ANTARCTICA
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
CURRENT VECTOR (cm/s)CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
28/1
11/2
25/2
11/3
25/3
29/3
12/4
26/4
10/5
24/5
DATE

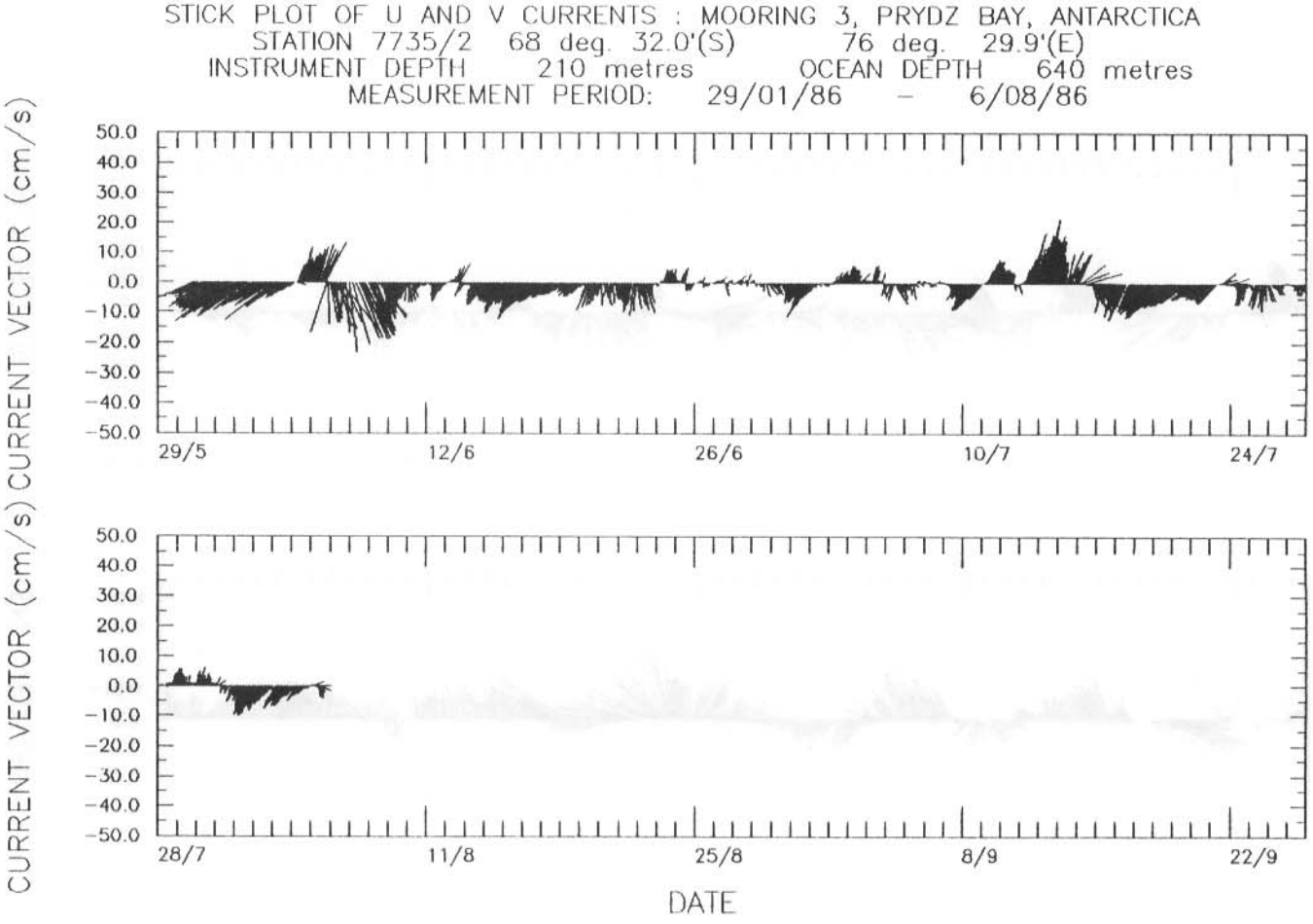

STICK PLOT OF U AND V CURRENTS : MOORING 1, PRYDZ BAY, ANTARCTICA
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
CURRENT VECTOR (cm/s)CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
28/5
11/6
25/6
9/7
23/7
27/7
10/8
24/8
7/9
21/9
DATE

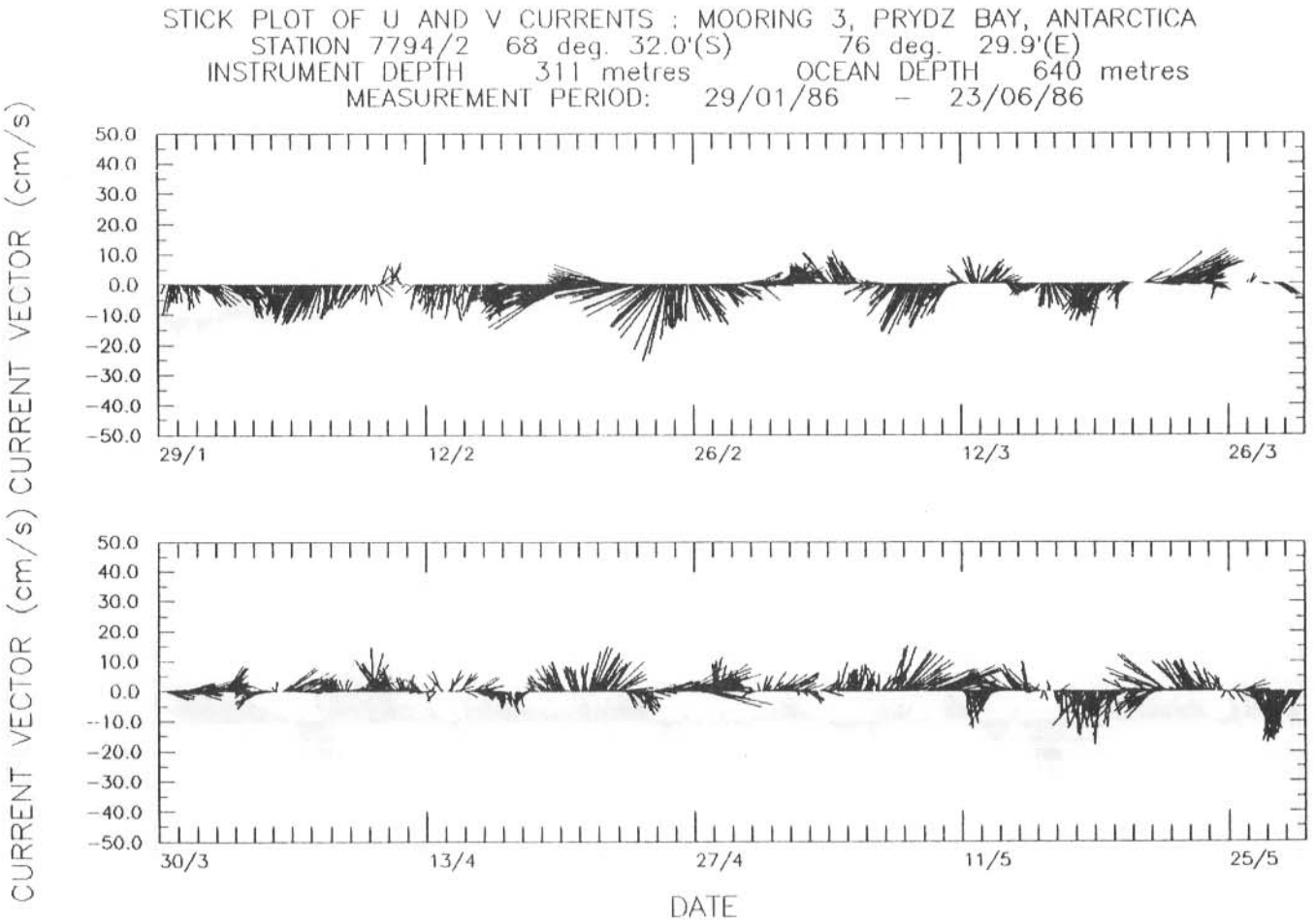

STICK PLOT OF U AND V CURRENTS : MOORING 1, PRYDZ BAY, ANTARCTICA
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 - 24/02/87
CURRENT VECTOR (cm/s)CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
25/9
9/10
23/10
6/11
20/11
24/11
8/12
22/12
5/1
19/1
DATE

STICK PLOT OF U AND V CURRENTS : MOORING 1, PRYDZ BAY, ANTARCTICA
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
MEASUREMENT PERIOD: 28/01/86 – 24/02/87

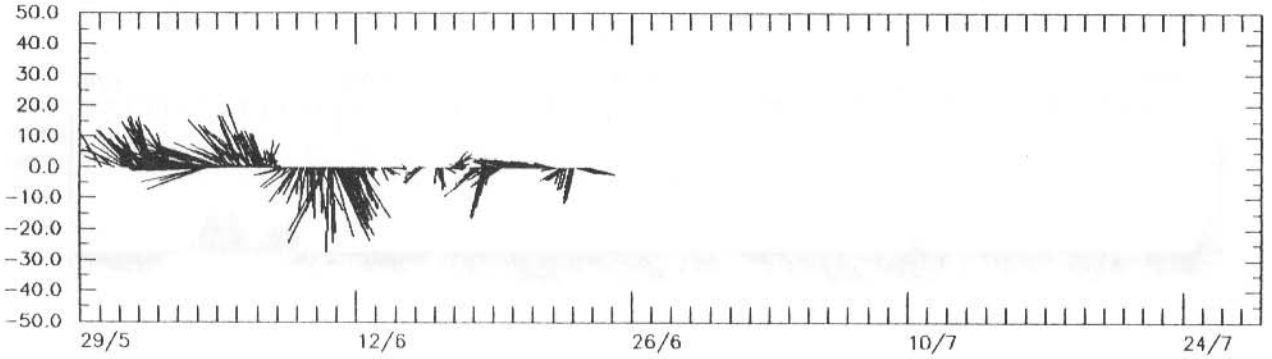


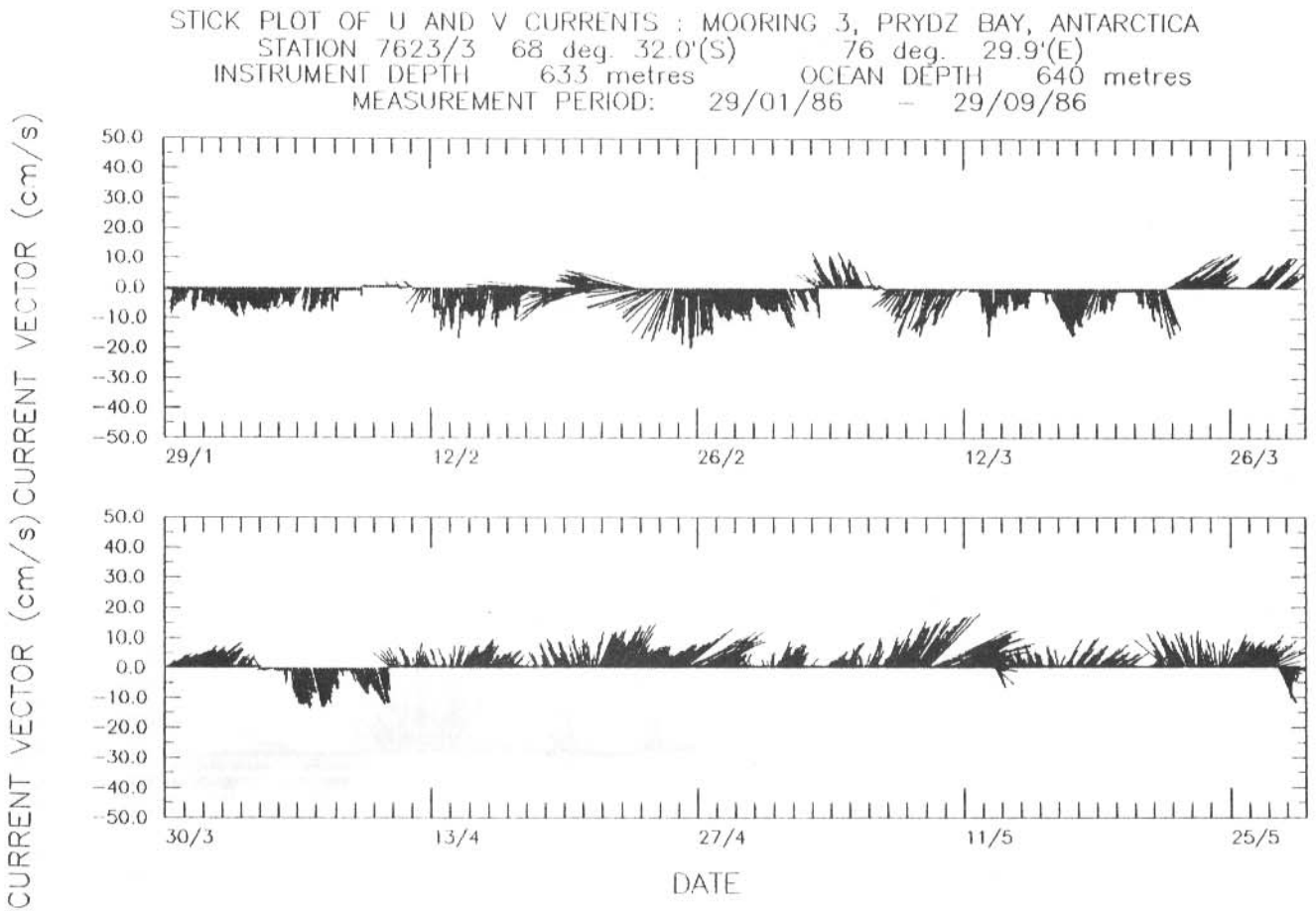

STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 6/08/86
CURRENT VECTOR (cm/s) CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
29/1
12/2
26/2
12/3
26/3
30/3
13/4
27/4
11/5
25/5
DATE

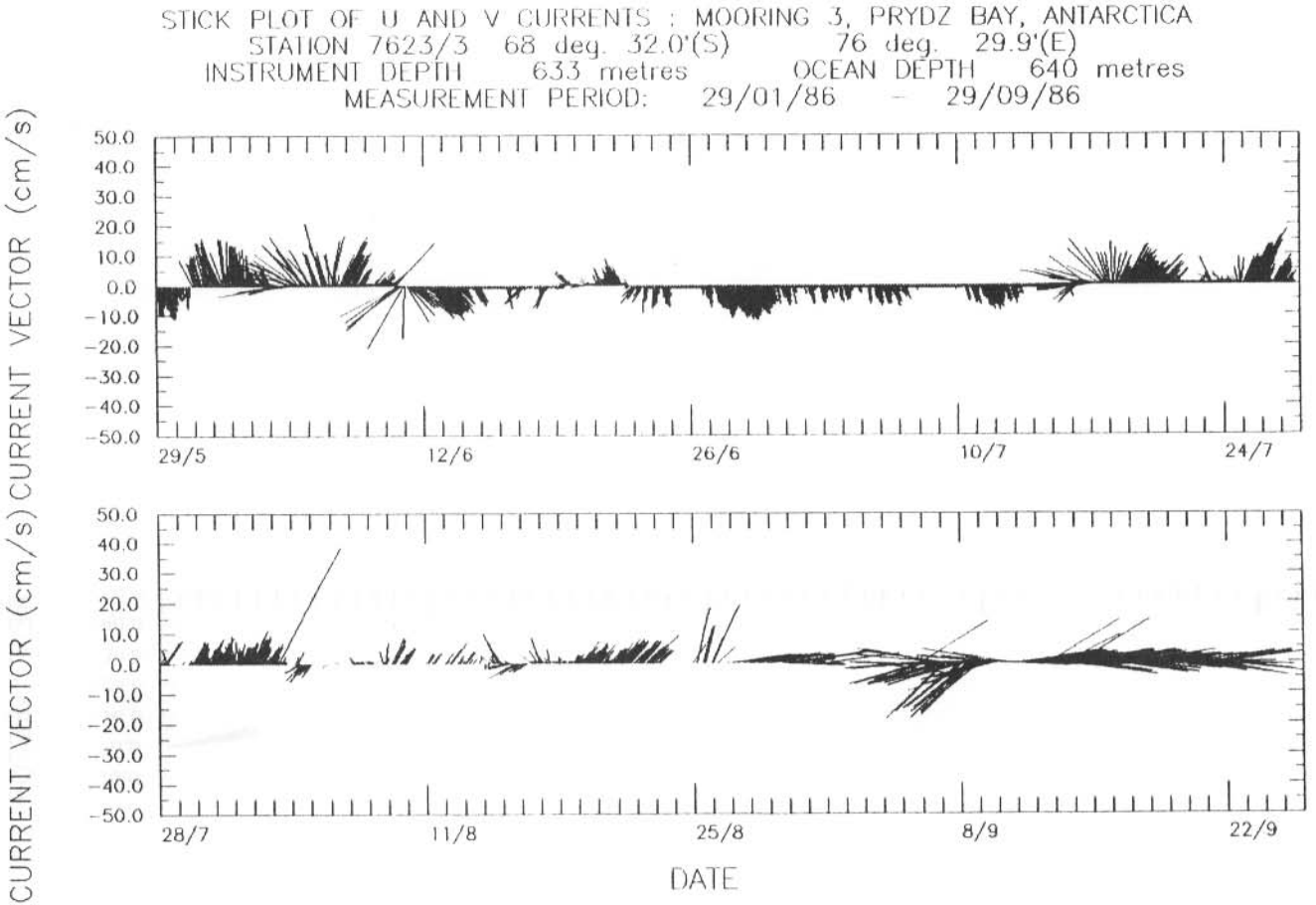

STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 6/08/86
CURRENT VECTOR (cm/s) CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
29/5
12/6
26/6
10/7
24/7
28/7
11/8
25/8
8/9
22/9
DATE

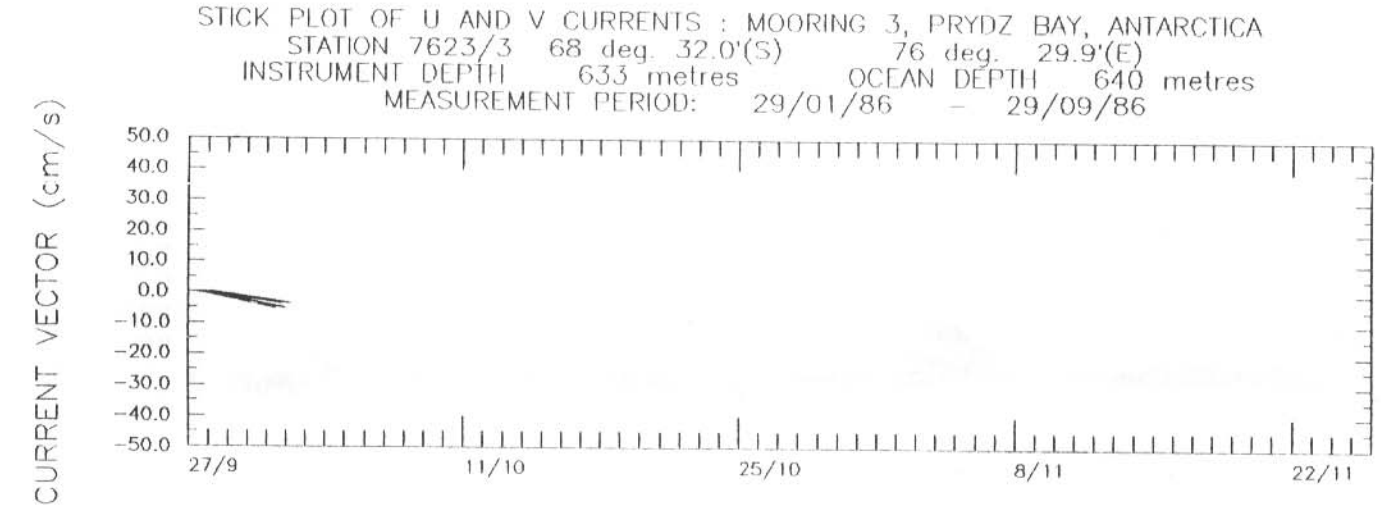

STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 23/06/86
CURRENT VECTOR (cm/s) CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
29/1
12/2
26/2
12/3
26/3
30/3
13/4
27/4
11/5
25/5
DATE

STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 – 23/06/86




STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 29/09/86
CURRENT VECTOR (cm/s) CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
29/1
12/2
26/2
12/3
26/3
30/3
13/4
27/4
11/5
25/5
DATE


STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 29/09/86
CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
29/5
12/6
26/6
10/7
24/7
28/7
11/8
25/8
8/9
22/9
DATE


STICK PLOT OF U AND V CURRENTS : MOORING 3, PRYDZ BAY, ANTARCTICA
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
MEASUREMENT PERIOD: 29/01/86 - 29/09/86
CURRENT VECTOR (cm/s)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
27/9
11/10
25/10
8/11
22/11

APPENDIX VI. TIDAL CURRENT ANALYSES

Tables are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.

TIDAL CURRENT ANALYSIS USING ROTARY VECTORS FOR; CM77251C.DAT
GMT 1 0 28 1 1986
GMT 24 0 4 5 1986
Analysis using rotary vectors.
All angles measured anticlockwise from 90 deg.

constit	period	major axis	minor axis	inclin.	phase	dir
O1	25.82	1.974	0.313	65.8	150.7	c
K1	23.93	1.434	0.215	57.8	-136.3	c
MSF	354.37	1.109	0.189	64.6	-8.9	a
MM	661.31	0.722	0.545	52.5	95.5	a
S2	12.00	0.349	0.111	68.0	-2.0	a
M2	12.42	0.343	0.198	117.2	16.4	c
Q1	26.87	0.286	0.019	68.1	-169.3	c
MU2	12.87	0.220	0.096	60.7	-91.2	c
MK3	8.18	0.205	0.022	57.5	-45.7	c
NO1	24.83	0.190	0.032	21.3	90.7	c
2Q1	28.01	0.189	0.023	141.9	-90.9	a
J1	23.10	0.179	0.044	174.0	66.6	c
UPS1	21.58	0.153	0.069	59.4	-153.8	a
N2	12.66	0.137	0.072	71.4	2.6	a
SK3	7.99	0.137	0.008	40.8	-143.4	a
EPS2	13.13	0.137	0.011	0.6	-25.3	a
MN4	6.27	0.120	0.022	60.1	-26.0	c
OO1	22.31	0.119	0.056	31.6	146.9	a
M3	8.28	0.109	0.034	56.2	-94.5	c
M8	3.11	0.101	0.031	69.2	115.8	a
ETA2	11.75	0.098	0.018	86.2	119.9	a
3MK7	3.53	0.095	0.006	85.3	-7.3	c
ALP1	29.07	0.092	0.063	138.1	-95.7	c
2MN6	4.17	0.069	0.001	74.8	-123.6	c
L2	12.19	0.067	0.007	157.1	80.6	a
SN4	6.16	0.066	0.016	88.4	-31.8	a
S4	6.00	0.063	0.024	59.8	-153.4	c
M6	4.14	0.062	0.001	38.9	-84.2	a
MS4	6.10	0.060	0.013	41.5	73.8	a
2SK5	4.80	0.055	0.002	40.8	122.8	c
2SM6	4.05	0.053	0.005	52.2	-73.8	c
MO3	8.39	0.047	0.026	170.6	-71.8	a
2MS6	4.09	0.038	0.005	24.5	47.4	c
M4	6.21	0.028	0.002	104.6	77.6	a
2MK5	4.93	0.018	0.017	98.3	24.0	c

TIDAL CURRENT ANALYSIS USING ROTARY VECTORS FOR; cm78263c.dat
GMT 1 0 28 1 1986
GMT 24 0 13 7 1986
Analysis using rotary vectors.
All angles measured anticlockwise from 90 deg.

constit	period	major axis	minor axis	inclin.	phase	dir
O1	25.82	10.634	5.628	78.3	75.7	a
K1	23.93	8.812	4.439	72.1	125.4	a
MF	327.86	3.216	1.767	129.1	21.3	c
M2	12.42	2.957	1.229	130.5	-17.3	a
SSA	4382.91	2.742	0.500	161.7	9.3	c
P1	24.07	2.504	1.425	90.4	122.6	a
TAU1	25.67	2.248	0.985	83.6	-101.8	a
Q1	26.87	1.897	1.163	73.0	49.8	a
2Q1	28.01	1.619	0.440	72.2	88.4	a
MM	661.31	1.560	0.356	154.5	65.6	c
PHI1	23.80	1.446	0.571	50.6	-174.9	a
S2	12.00	0.968	0.407	176.4	40.1	c
RHO1	26.72	0.926	0.695	61.8	44.2	a
MSF	354.37	0.913	0.480	45.1	100.4	c
SIG1	27.85	0.878	0.359	54.3	-85.3	a
J1	23.10	0.827	0.402	96.9	147.8	a
NO1	24.83	0.823	0.299	53.4	59.9	a
MO3	8.39	0.791	0.438	75.5	92.2	a
MSM	763.49	0.742	0.301	166.4	-47.5	c
2N2	12.91	0.699	0.036	121.6	-126.5	a
THE1	23.21	0.690	0.352	50.8	-81.5	a
K2	11.97	0.689	0.020	102.1	131.4	c
ALP1	29.07	0.681	0.565	83.1	-134.6	a
MK3	8.18	0.649	0.325	95.8	151.4	a
M4	6.21	0.608	0.278	85.3	-16.8	a
N2	12.66	0.604	0.100	112.4	-30.8	a
SO1	22.42	0.591	0.177	38.8	28.9	a
CHI1	24.71	0.511	0.303	99.1	-96.7	a
OQ2	13.16	0.491	0.165	110.7	169.4	a
SO3	8.19	0.412	0.044	46.3	105.3	a
MU2	12.87	0.405	0.216	47.2	138.4	a
MKS2	12.39	0.395	0.101	164.3	16.1	a
BET1	24.97	0.324	0.172	178.6	-27.7	a
UPS1	21.58	0.324	0.166	74.7	148.3	a
LDA2	12.22	0.315	0.021	87.4	-4.0	a
OO1	22.31	0.261	0.144	42.9	58.9	a
L2	12.19	0.253	0.187	80.1	-55.8	a
NU2	12.63	0.252	0.019	88.1	-137.9	a
MS4	6.10	0.250	0.072	90.8	64.9	a
EPS2	13.13	0.220	0.184	31.8	-35.7	a
MN4	6.27	0.210	0.079	99.2	-13.0	a
S4	6.00	0.200	0.026	101.7	-87.1	a
SN4	6.16	0.194	0.005	82.9	-171.7	c
MSN2	11.79	0.185	0.139	50.8	51.5	c
2MK5	4.93	0.185	0.030	119.1	-154.5	a
MK4	6.09	0.185	0.030	91.6	-142.5	a
M3	8.28	0.174	0.057	71.6	-20.1	c
SK3	7.99	0.158	0.029	73.6	114.1	a
M6	4.14	0.152	0.068	110.0	54.7	a
M8	3.11	0.120	0.006	98.8	66.9	a
2SK5	4.80	0.118	0.046	57.2	81.8	a
3MK7	3.53	0.112	0.003	95.0	-102.5	a
ETA2	11.75	0.099	0.010	77.6	-19.1	a
SK4	5.99	0.090	0.013	85.5	29.4	c
2SM6	4.05	0.088	0.018	90.9	-81.3	a

2MK6	4.09	0.050	0.003	152.8	-47.4	c
MSK6	4.04	0.077	0.004	58.7	26.2	c
2MN6	4.17	0.053	0.021	140.0	46.8	a
2MS6	4.09	0.051	0.021	169.9	-152.0	a

TIDAL CURRENT ANALYSIS USING ROTARY VECTORS FOR; cm77281c.dat

GMT 1 0 28 1 1986

GMT 24 0 23 2 1987

Analysis using rotary vectors.

All angles measured anticlockwise from 90 deg.

constit	period	major axis	minor axis	inclin.	phase	dir
O1	25.82	8.532	4.371	57.3	81.0	a
K1	23.93	6.931	3.519	52.6	129.5	a
SA	8766.23	5.155	0.027	161.2	91.5	c
M2	12.42	2.282	0.831	134.9	-5.5	a
P1	24.07	2.002	1.186	55.0	123.0	a
MF	327.86	1.690	0.295	153.3	37.3	c
Q1	26.87	1.542	0.847	52.1	55.0	a
SSA	4382.91	1.490	0.061	160.0	11.4	c
TAU1	25.67	1.046	0.417	83.9	-125.3	a
2Q1	28.01	0.956	0.563	59.5	87.6	a
S2	12.00	0.943	0.376	170.1	46.2	c
PSI1	23.87	0.910	0.414	44.9	-104.6	a
MSF	354.37	0.716	0.020	176.7	-112.7	a
MM	661.31	0.664	0.046	142.8	103.3	c
S1	24.00	0.630	0.355	174.9	-94.7	a
RHO1	26.72	0.627	0.221	30.0	45.3	a
PHI1	23.80	0.616	0.257	41.7	-142.6	a
MO3	8.39	0.516	0.225	63.6	144.3	a
2N2	12.91	0.498	0.110	118.8	-93.9	a
N2	12.66	0.476	0.218	124.2	-25.7	a
K2	11.97	0.470	0.087	75.9	172.2	c
J1	23.10	0.447	0.178	53.5	130.3	a
SIG1	27.85	0.432	0.243	51.9	-44.2	a
CHI1	24.71	0.384	0.242	72.2	-130.5	a
MSM	763.49	0.370	0.070	178.6	14.5	a
MK3	8.18	0.365	0.204	66.6	-152.6	a
NO1	24.83	0.345	0.057	16.6	79.0	a
BET1	24.97	0.328	0.042	9.0	94.0	a
THE1	23.21	0.309	0.163	47.6	-56.4	a
SO1	22.42	0.305	0.166	52.9	89.7	a
PI1	24.13	0.285	0.146	120.8	-131.0	a
ALP1	29.07	0.272	0.076	26.7	-149.8	a
H2	12.40	0.269	0.008	19.8	-14.2	c
M4	6.21	0.252	0.115	87.8	47.0	a
H1	12.44	0.220	0.031	62.2	-155.9	a
NU2	12.63	0.216	0.079	121.6	-64.3	a
R2	11.98	0.198	0.047	48.5	-159.1	a
EPS2	13.13	0.196	0.099	34.7	74.3	a
MKS2	12.39	0.192	0.120	4.8	-114.0	a
M3	8.28	0.183	0.039	71.4	-25.8	c
SO3	8.19	0.180	0.040	45.6	168.1	a
OQ2	13.16	0.179	0.068	129.9	-149.8	a
MU2	12.87	0.172	0.011	164.6	-48.8	c
L2	12.19	0.166	0.032	99.1	39.7	a
OO1	22.31	0.166	0.061	139.9	-138.1	a
MSN2	11.79	0.158	0.045	51.9	-144.1	a
UPS1	21.58	0.157	0.123	105.9	-131.2	a
T2	12.02	0.153	0.061	71.3	106.1	c
LDA2	12.22	0.116	0.068	93.4	-8.3	a
MN4	6.27	0.112	0.040	75.1	13.6	a
SK3	7.99	0.067	0.021	68.8	117.5	c
2MN6	4.17	0.058	0.009	62.6	168.0	c
MK4	6.09	0.055	0.019	87.4	-76.4	a
ETA2	11.75	0.053	0.004	98.2	153.8	a
2MS6	4.09	0.052	0.020	65.6	-41.1	c

3MK7	3.53	0.050	0.017	99.0	-119.9	c
SN4	6.16	0.046	0.007	150.7	-67.8	a
2SM6	4.05	0.042	0.019	25.2	179.2	c
2SK5	4.80	0.041	0.014	177.2	147.4	c
2MK5	4.93	0.041	0.008	51.6	-145.6	a
M8	3.11	0.039	0.008	89.5	-21.7	a
M6	4.14	0.032	0.029	13.3	-17.1	c
MSK6	4.04	0.030	0.019	168.0	-40.3	a
MS4	6.10	0.028	0.006	130.2	133.7	a
S4	6.00	0.024	0.004	50.8	48.4	c
2MK6	4.09	0.017	0.011	146.6	-135.4	a
SK4	5.99	0.016	0.000	114.9	79.5	a

TIDAL CURRENT ANALYSIS USING ROTARY VECTORS FOR; CM77352C.DAT

GMT 1 0 29 1 1986

GMT 24 0 4 8 1986

Analysis using rotary vectors.

All angles measured anticlockwise from 90 deg.

constit	period	major axis	minor axis	inclin.	phase	dir
MSF	354.37	2.546	0.440	14.0	60.4	a
SSA	4382.91	2.345	1.053	35.6	30.8	a
MF	327.86	1.921	0.642	55.1	70.2	c
MM	661.31	1.537	0.813	95.5	67.4	a
O1	25.82	0.557	0.139	47.8	155.5	c
S2	12.00	0.450	0.006	78.3	170.2	a
K1	23.93	0.442	0.016	51.9	-65.6	c
MU2	12.87	0.404	0.165	44.6	17.4	a
Q1	26.87	0.392	0.119	22.1	-100.3	a
N2	12.66	0.320	0.105	118.6	69.5	a
M2	12.42	0.306	0.077	68.3	-11.8	c
PHI1	23.80	0.290	0.046	46.1	-128.1	c
P1	24.07	0.287	0.106	20.7	17.2	c
SO1	22.42	0.279	0.017	23.9	92.7	c
M3	8.28	0.262	0.039	44.5	160.0	c
L2	12.19	0.229	0.031	51.0	169.7	c
EPS2	13.13	0.217	0.019	67.1	114.5	c
OO1	22.31	0.205	0.057	19.5	127.8	c
M6	4.14	0.198	0.019	25.1	-156.7	a
ALP1	29.07	0.198	0.010	176.2	72.7	a
2MS6	4.09	0.189	0.035	151.8	-42.1	a
MK3	8.18	0.186	0.007	40.4	171.4	c
SK3	7.99	0.185	0.073	43.8	179.5	a
SO3	8.19	0.178	0.007	15.6	-2.1	a
2MK6	4.09	0.177	0.011	5.8	159.3	c
3MK7	3.53	0.176	0.001	37.6	119.1	a
K2	11.97	0.174	0.062	115.2	164.7	a
J1	23.10	0.168	0.051	33.3	116.9	c
M8	3.11	0.161	0.031	174.9	159.6	a
MKS2	12.39	0.153	0.054	91.2	66.0	a
MSN2	11.79	0.144	0.026	14.3	-38.7	a
BET1	24.97	0.134	0.012	50.8	8.7	c
MS4	6.10	0.133	0.038	51.6	-85.6	a
2SM6	4.05	0.127	0.015	132.6	-13.8	a
NO1	24.83	0.125	0.014	14.5	6.3	a
2SK5	4.80	0.118	0.004	95.3	161.7	c
2Q1	28.01	0.115	0.061	33.8	20.0	a
2MK5	4.93	0.114	0.004	43.3	-158.9	a
ETA2	11.75	0.109	0.010	101.4	-147.4	a
SK4	5.99	0.107	0.019	72.9	-161.2	a
MO3	8.39	0.100	0.056	60.5	74.8	a
MSK6	4.04	0.090	0.021	26.0	151.8	c
SN4	6.16	0.084	0.051	156.8	93.4	c
M4	6.21	0.082	0.016	83.3	-152.4	c
MK4	6.09	0.078	0.033	73.5	-156.4	c
UPS1	21.58	0.078	0.009	177.8	-145.8	a
S4	6.00	0.075	0.020	31.0	41.6	c
TAU1	25.67	0.064	0.001	80.3	-68.3	c
MN4	6.27	0.061	0.023	5.8	129.8	c
2MN6	4.17	0.038	0.005	14.7	30.1	a

TIDAL CURRENT ANALYSIS USING ROTARY VECTORS FOR; cm77942c.dat
GMT 1 0 29 1 1986
GMT 24 0 23 6 1986
Analysis using rotary vectors.
All angles measured anticlockwise from 90 deg.

constit	period	major axis	minor axis	inclin.	phase	dir
MSF	354.37	4.559	0.589	155.6	-86.4	c
MM	661.31	2.897	1.832	166.2	165.8	a
K1	23.93	1.086	0.259	43.6	105.5	c
S2	12.00	1.054	0.258	70.7	142.5	c
O1	25.82	0.990	0.476	36.8	-89.7	c
M2	12.42	0.741	0.083	95.3	173.8	c
NO1	24.83	0.359	0.041	151.4	123.0	a
N2	12.66	0.357	0.131	57.1	-103.4	a
2Q1	28.01	0.342	0.012	10.2	37.0	a
MU2	12.87	0.330	0.195	58.2	-78.8	a
Q1	26.87	0.328	0.040	36.5	-52.0	c
L2	12.19	0.305	0.201	84.4	111.5	a
ALP1	29.07	0.215	0.002	49.9	-107.5	c
EPS2	13.13	0.177	0.123	2.7	-177.4	a
M3	8.28	0.169	0.028	90.5	177.0	a
J1	23.10	0.169	0.019	47.3	-28.0	a
ETA2	11.75	0.134	0.091	53.1	94.7	a
OO1	22.31	0.125	0.004	22.3	32.7	a
MK3	8.18	0.115	0.041	65.7	105.9	c
UPS1	21.58	0.102	0.020	137.0	80.9	c
MO3	8.39	0.095	0.044	18.5	54.1	a
SK3	7.99	0.093	0.021	53.1	48.7	a
2MN6	4.17	0.077	0.014	32.0	171.7	a
M6	4.14	0.069	0.006	22.1	-43.3	a
S4	6.00	0.060	0.018	113.3	-54.5	a
2MK5	4.93	0.055	0.004	24.0	155.8	c
2SM6	4.05	0.051	0.004	126.7	11.7	c
M4	6.21	0.051	0.011	157.3	-25.6	a
MN4	6.27	0.050	0.023	143.9	-52.2	c
3MK7	3.53	0.042	0.001	178.2	-68.0	c
SN4	6.16	0.039	0.016	87.2	39.2	a
2SK5	4.80	0.036	0.007	153.4	-114.8	a
2MS6	4.09	0.030	0.004	175.0	31.7	a
M8	3.11	0.027	0.015	130.8	31.8	a
MS4	6.10	0.026	0.007	137.5	63.8	a

TIDAL CURRENT ANALYSIS USING ROTARY VECTORS FOR; cm76233c.dat

GMT 1 0 29 1 1986

GMT 24 0 19 7 1986

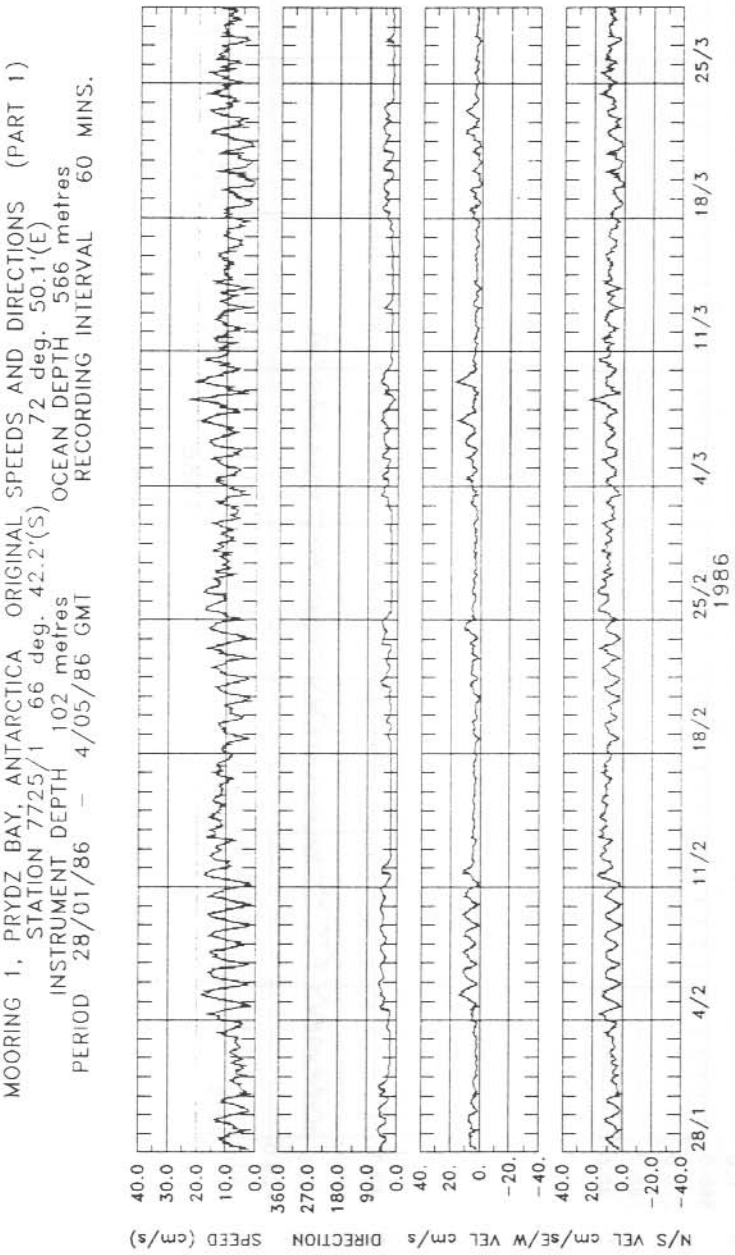
Analysis using rotary vectors.

All angles measured anticlockwise from 90 deg.

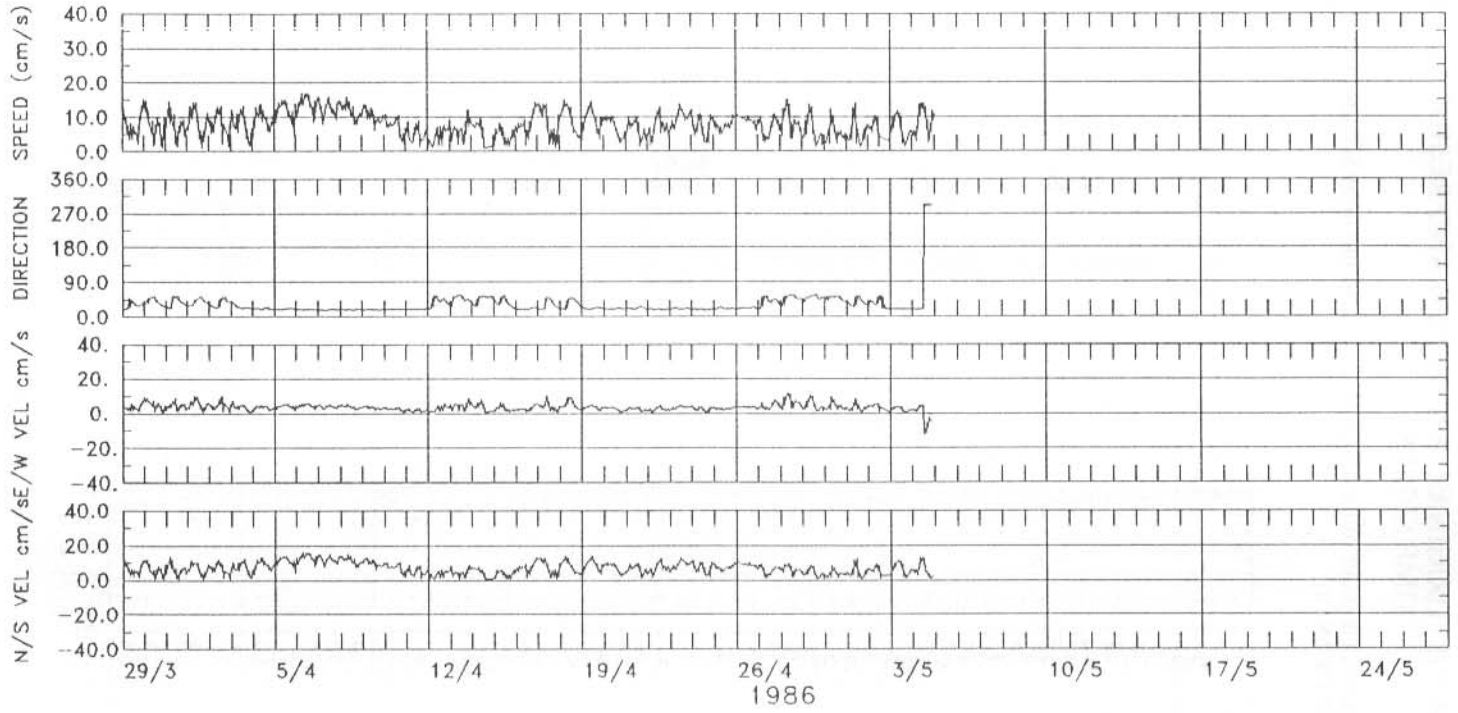
constit	period	major axis	minor axis	inclin.	phase	dir
MSF	354.37	3.243	1.818	145.3	-77.5	c
MM	661.31	1.500	0.401	43.1	-5.7	c
M2	12.42	0.470	0.028	104.5	-114.9	c
O1	25.82	0.459	0.193	37.5	-69.2	c
Q1	26.87	0.255	0.093	34.2	28.4	a
S2	12.00	0.254	0.246	98.6	-148.8	c
NO1	24.83	0.243	0.108	150.4	-153.6	a
K1	23.93	0.233	0.153	165.6	57.7	c
EPS2	13.13	0.228	0.010	44.0	56.2	a
MU2	12.87	0.157	0.097	93.9	4.6	a
J1	23.10	0.156	0.043	2.8	176.3	a
MO3	8.39	0.154	0.007	57.3	-172.4	a
M3	8.28	0.143	0.017	56.9	-55.0	a
OO1	22.31	0.127	0.033	115.8	-165.7	a
S4	6.00	0.124	0.018	69.6	69.7	c
2Q1	28.01	0.111	0.078	167.3	-51.9	a
N2	12.66	0.105	0.020	100.9	-128.5	a
MK3	8.18	0.098	0.024	81.5	-118.6	c
ETA2	11.75	0.096	0.009	76.4	89.7	a
L2	12.19	0.084	0.022	156.5	144.7	c
ALP1	29.07	0.075	0.023	33.2	15.0	c
2MS6	4.09	0.073	0.006	74.2	25.8	c
MS4	6.10	0.069	0.010	101.8	-178.0	c
M6	4.14	0.062	0.022	81.5	31.4	a
2MK5	4.93	0.052	0.019	94.6	-139.9	a
SN4	6.16	0.046	0.028	70.4	155.2	c
2SM6	4.05	0.042	0.007	120.3	172.1	c
2MN6	4.17	0.041	0.003	95.4	147.0	a
3MK7	3.53	0.039	0.001	90.5	15.4	c
UPS1	21.58	0.032	0.005	60.7	176.3	a
MN4	6.27	0.032	0.007	27.9	-39.3	c
M8	3.11	0.032	0.003	30.6	42.5	a
2SK5	4.80	0.028	0.010	90.4	136.6	a
M4	6.21	0.024	0.000	81.3	138.2	c
SK3	7.99	0.016	0.010	157.3	136.4	c

APPENDIX VII. ORIGINAL, PREDICTED AND RESIDUAL CURRENT TIME SERIES

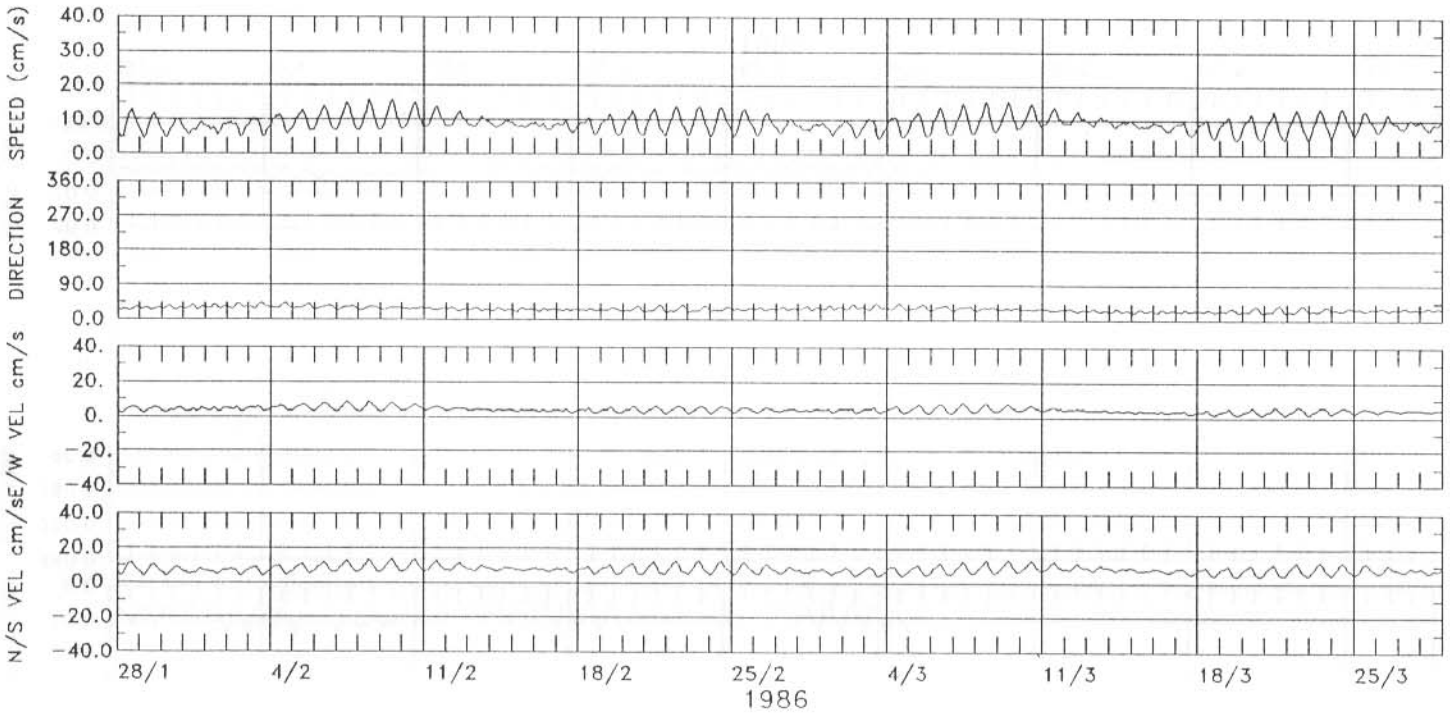
Plots are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.



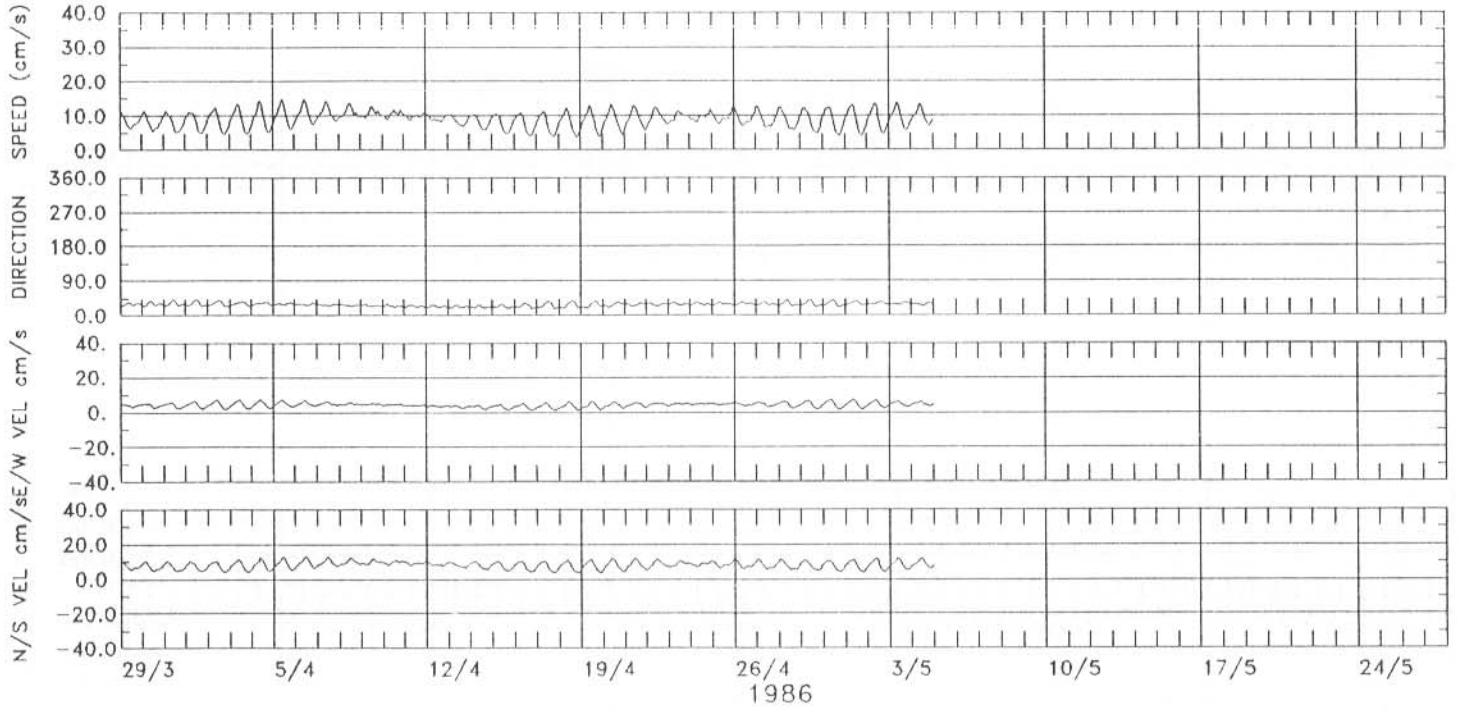
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7725/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 102 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 4/05/86 GMT RECORDING INTERVAL 60 MINS.



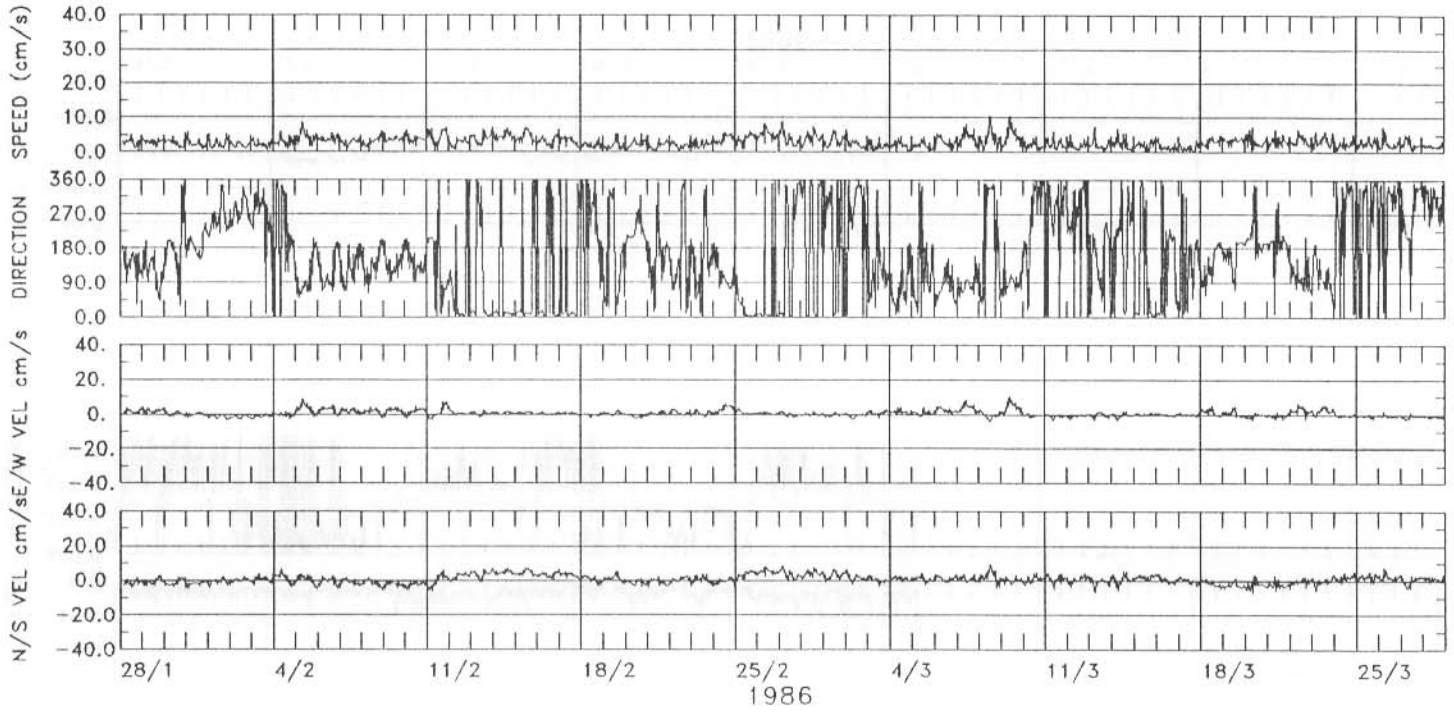
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 1)
STATION 7725/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 102 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 4/05/86 GMT RECORDING INTERVAL 60 MINS.



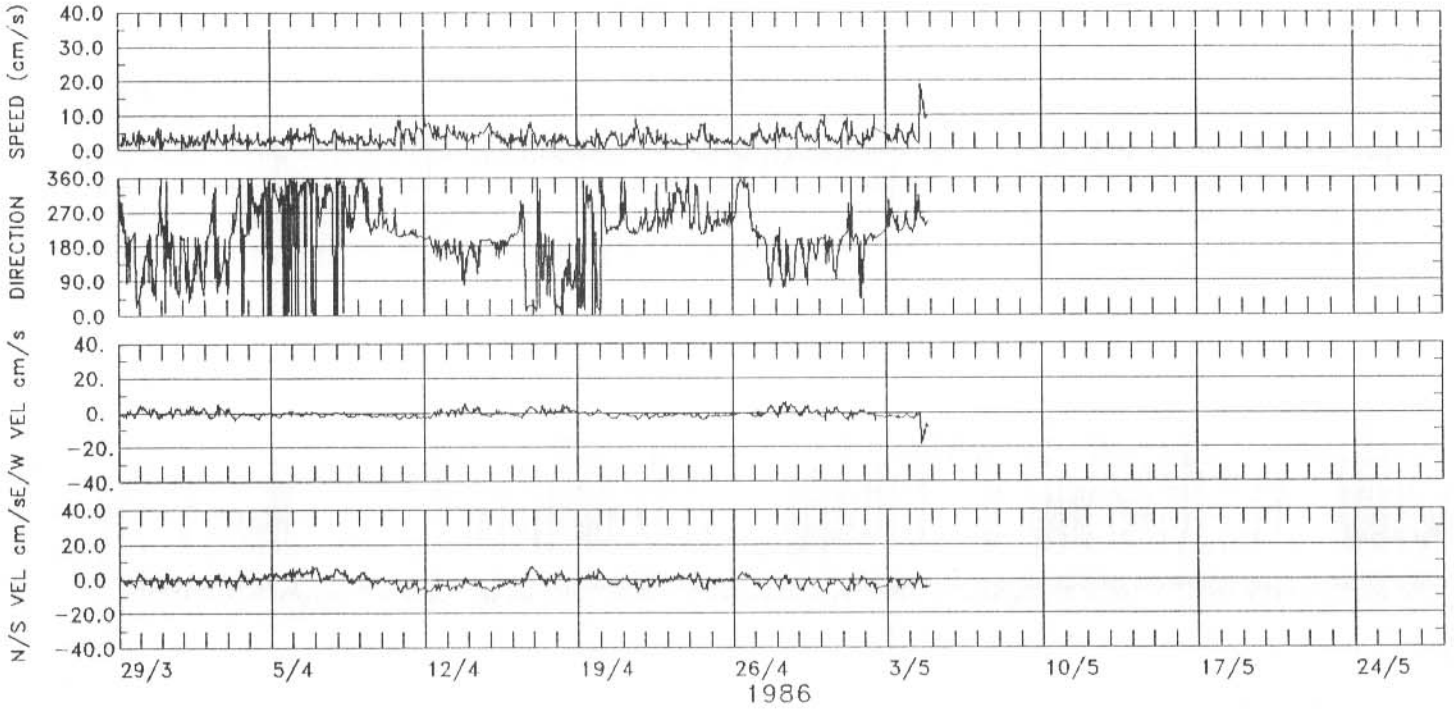
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 2)
STATION 7725/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 102 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 4/05/86 GMT RECORDING INTERVAL 60 MINS.



MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 1)
STATION 7725/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 102 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 4/05/86 GMT RECORDING INTERVAL 60 MINS.

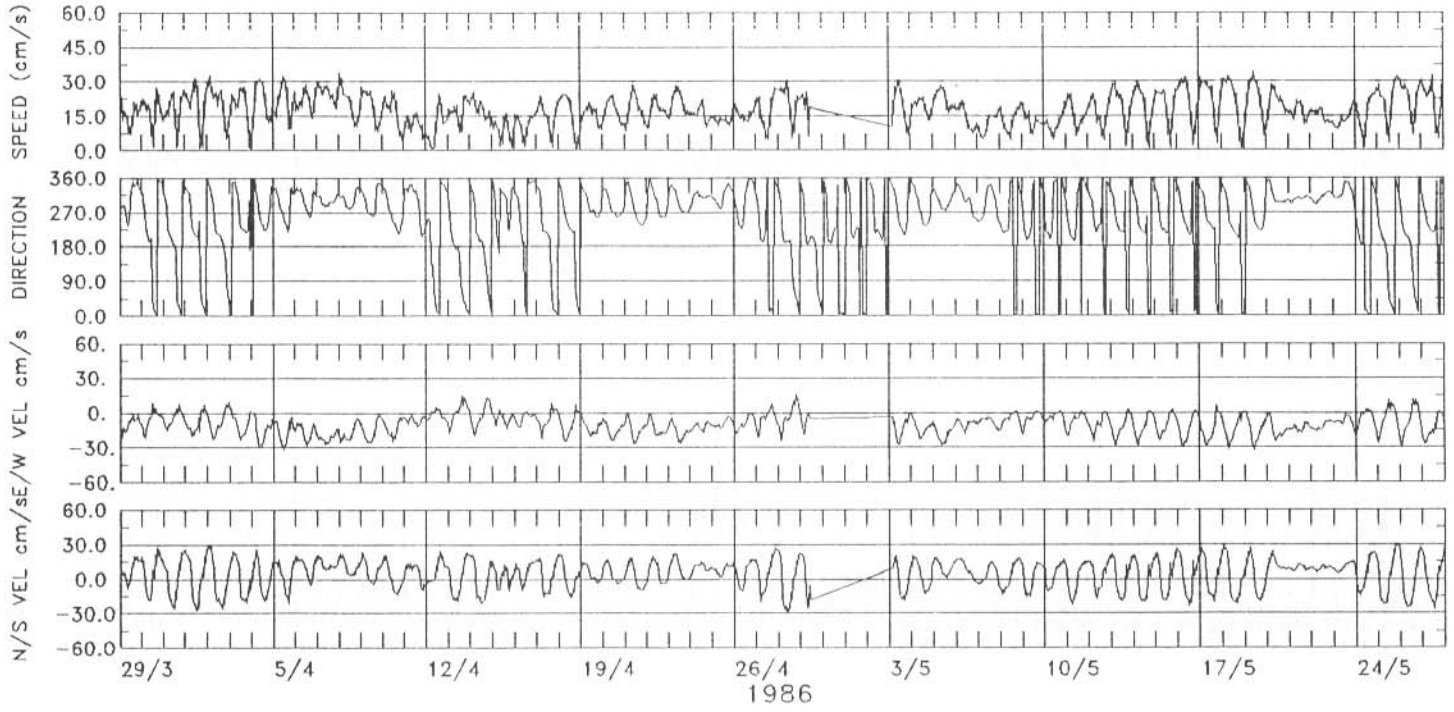


MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 2)
STATION 7725/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 102 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 4/05/86 GMT RECORDING INTERVAL 60 MINS.

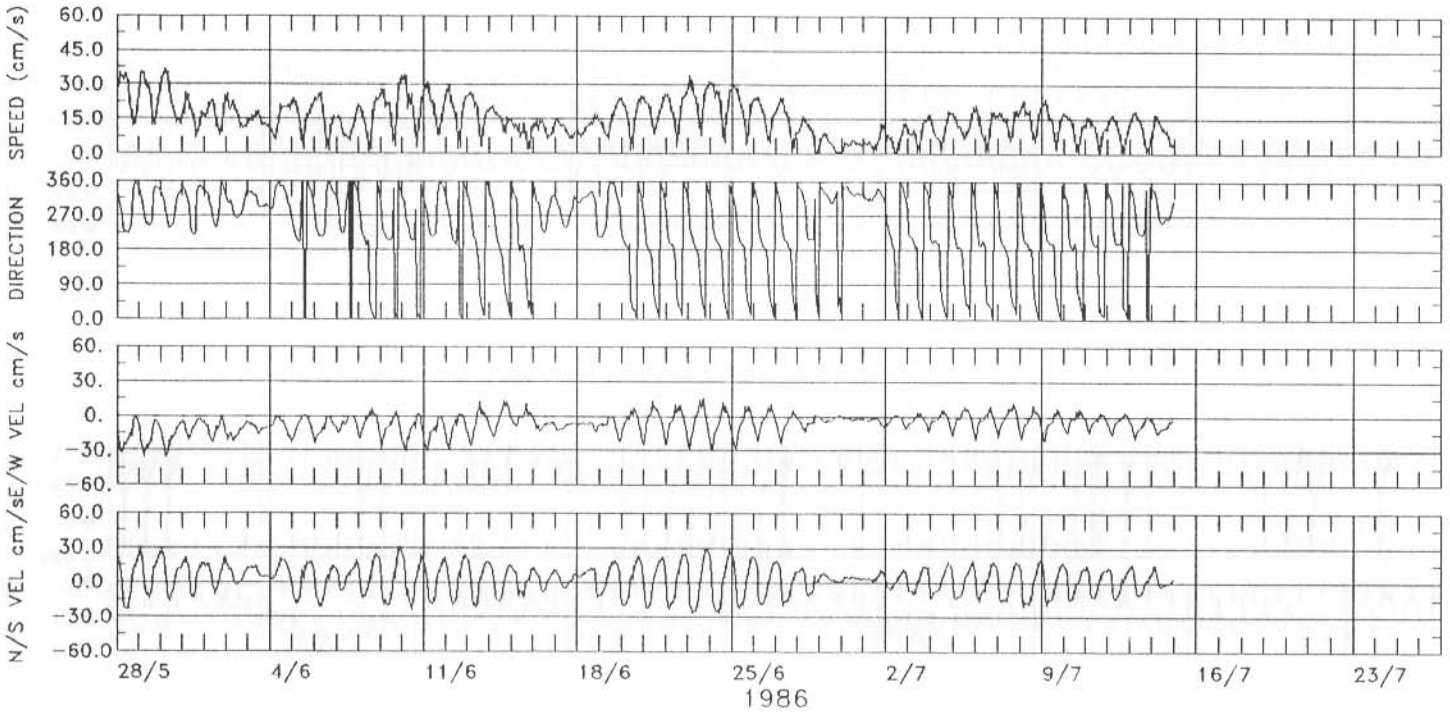


MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 14/07/86 GMT RECORDING INTERVAL 60 MINS.

MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 14/07/86 GMT RECORDING INTERVAL 60 MINS.



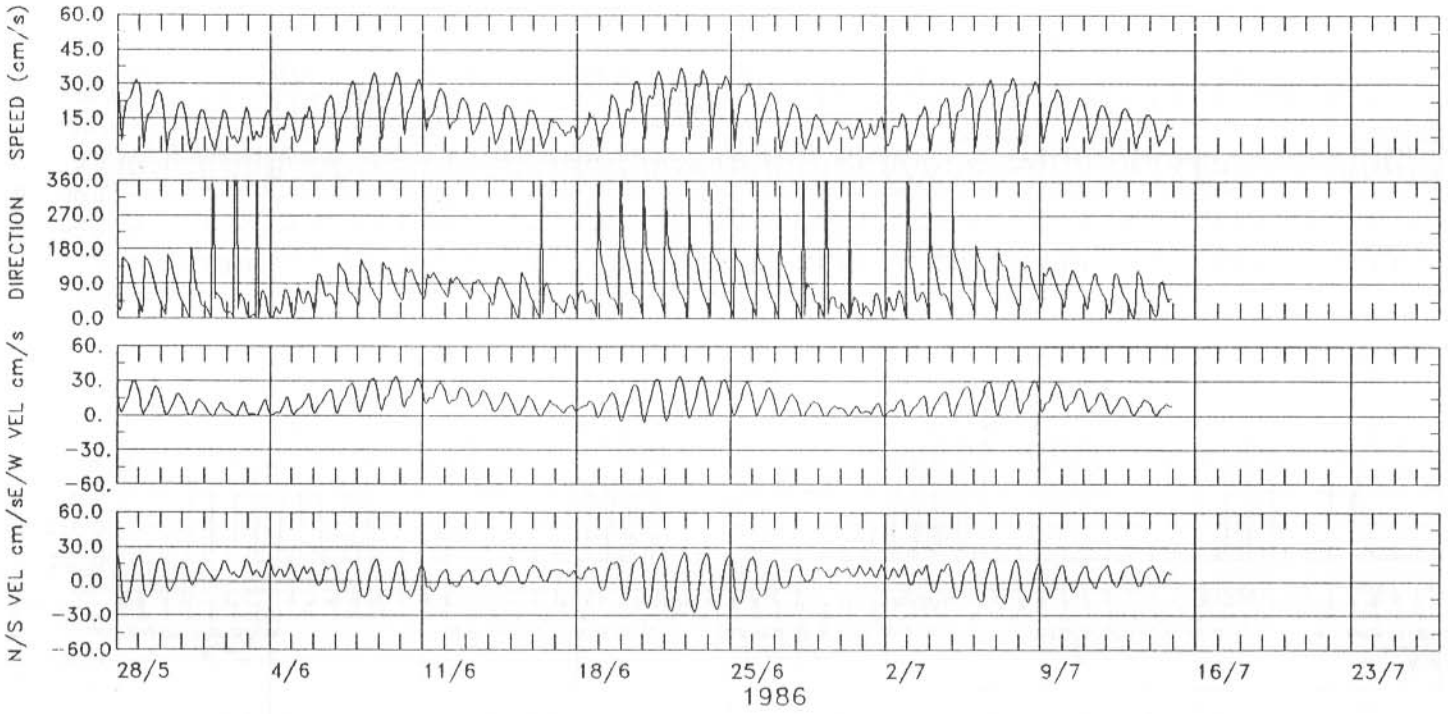
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 14/07/86 GMT RECORDING INTERVAL 60 MINS.



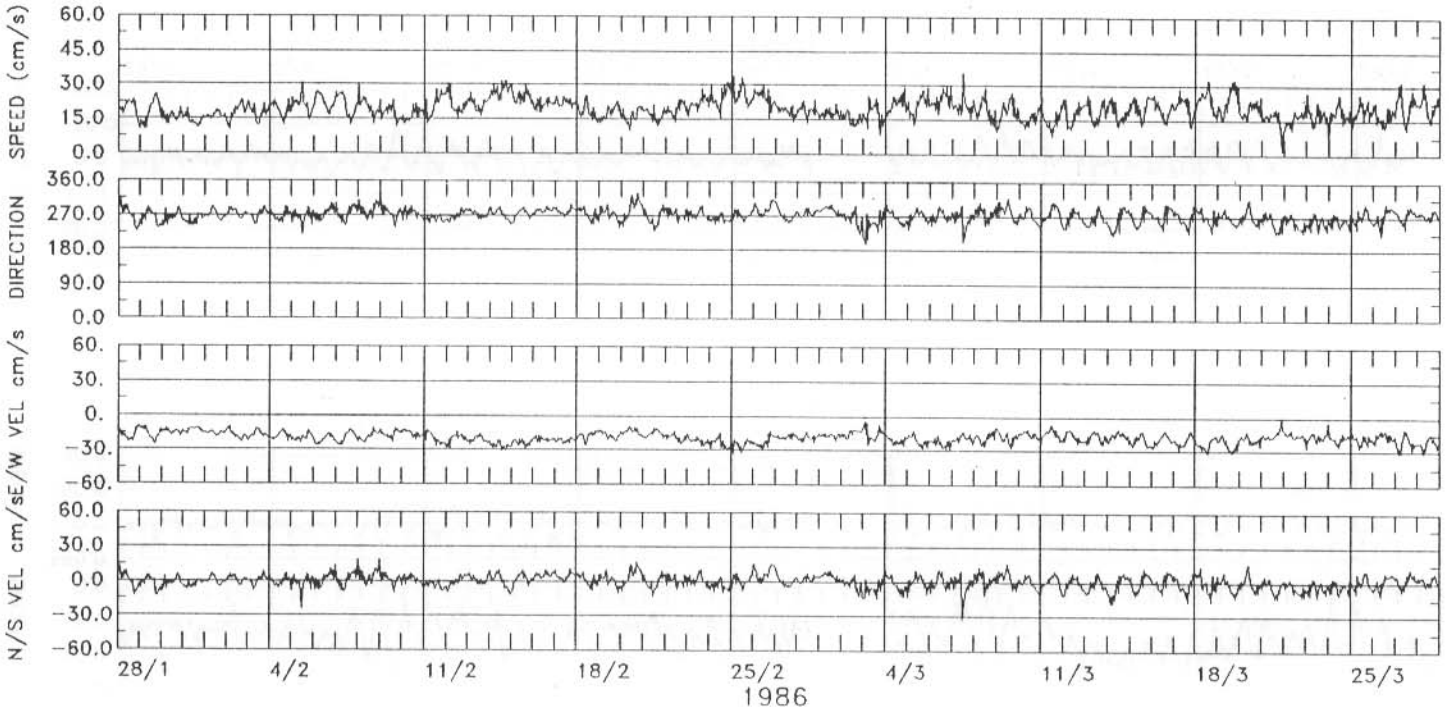
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTIONS (PART 1)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 14/07/86 GMT RECORDING INTERVAL 60 MINS.

MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTIONS (PART 2)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 14/07/86 GMT RECORDING INTERVAL 60 MINS.

MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTIONS (PART 3)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 14/07/86 GMT RECORDING INTERVAL 60 MINS.

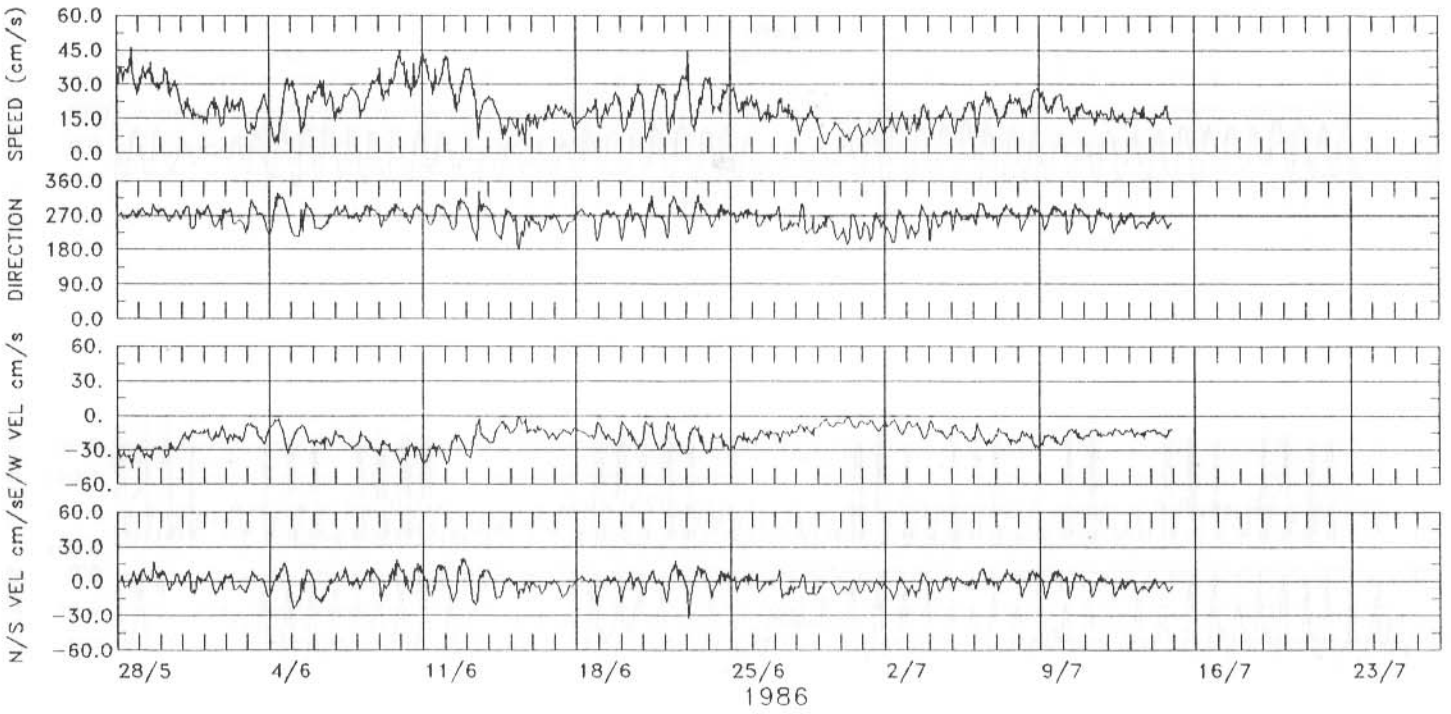


MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 14/07/86 GMT RECORDING INTERVAL 60 MINS.

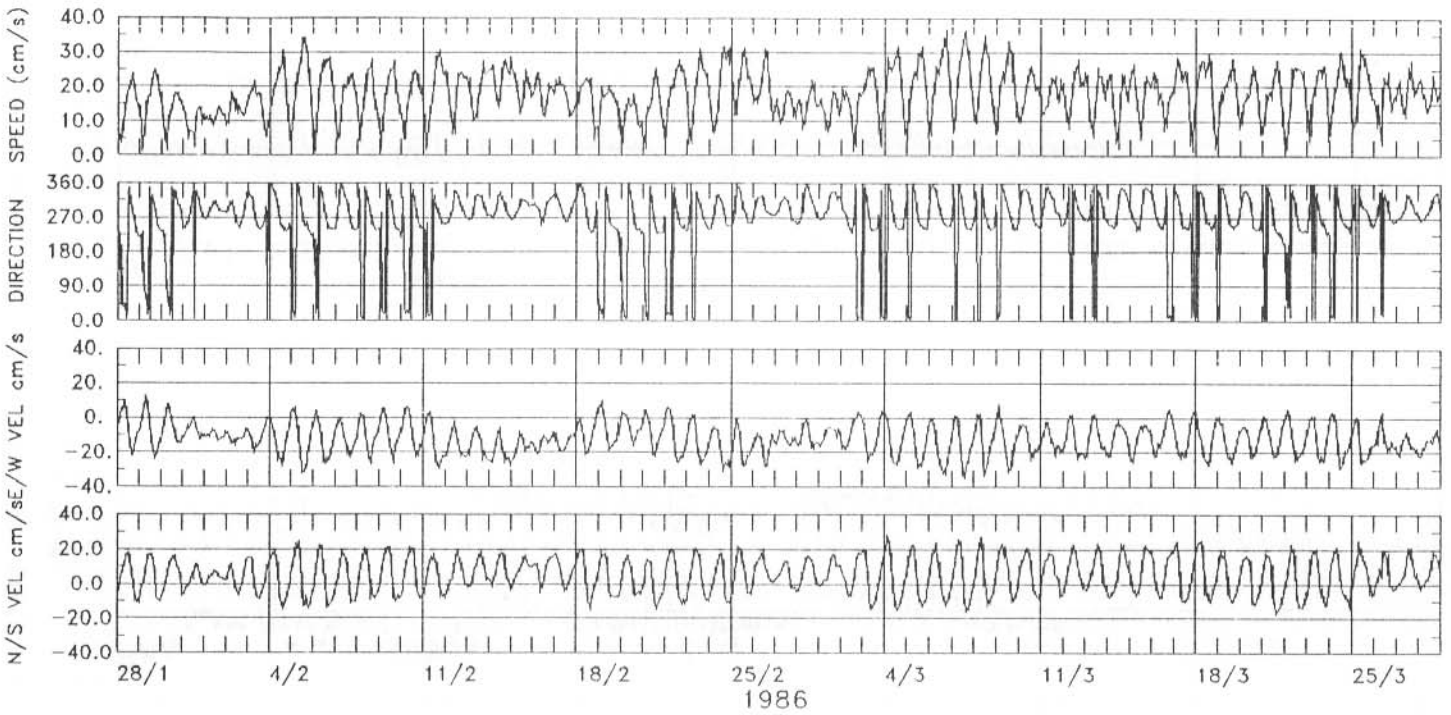


MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 14/07/86 GMT RECORDING INTERVAL 60 MINS.

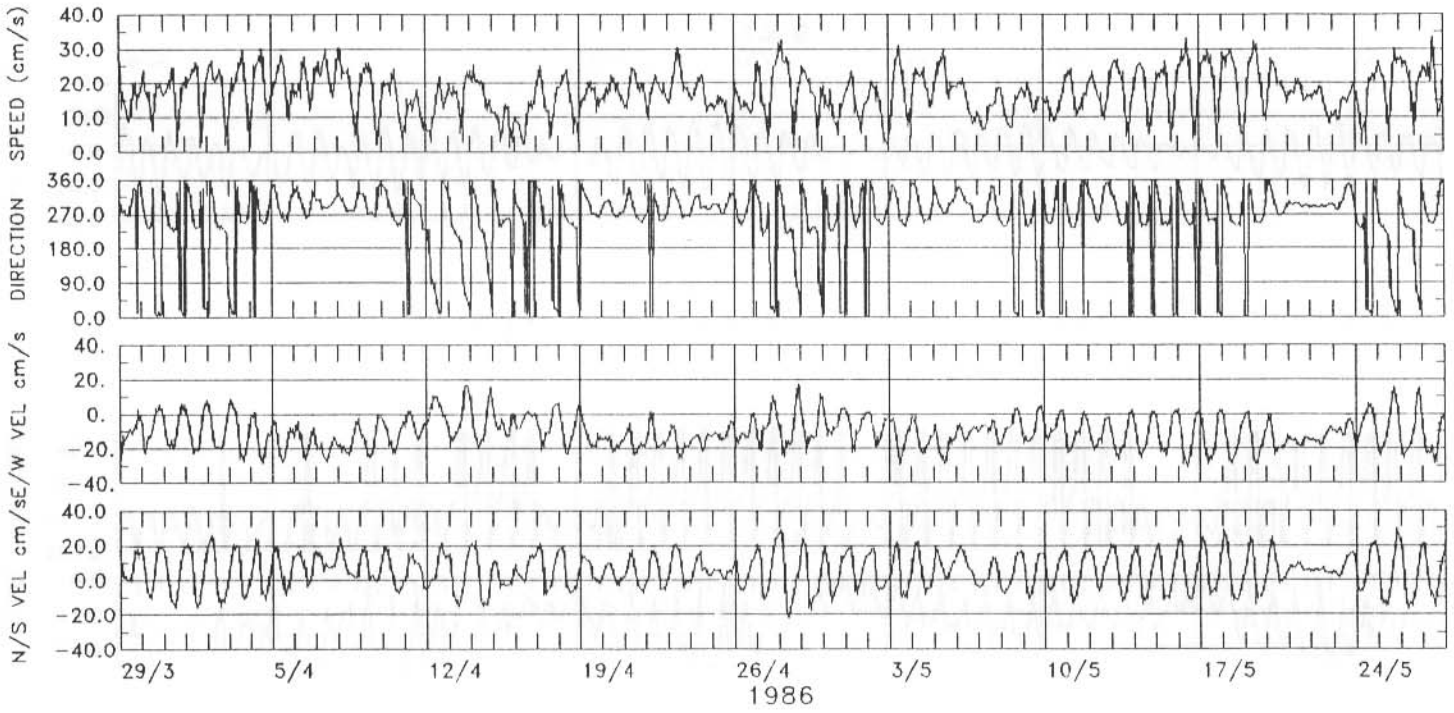
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7826/3 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 405 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 14/07/86 GMT RECORDING INTERVAL 60 MINS.



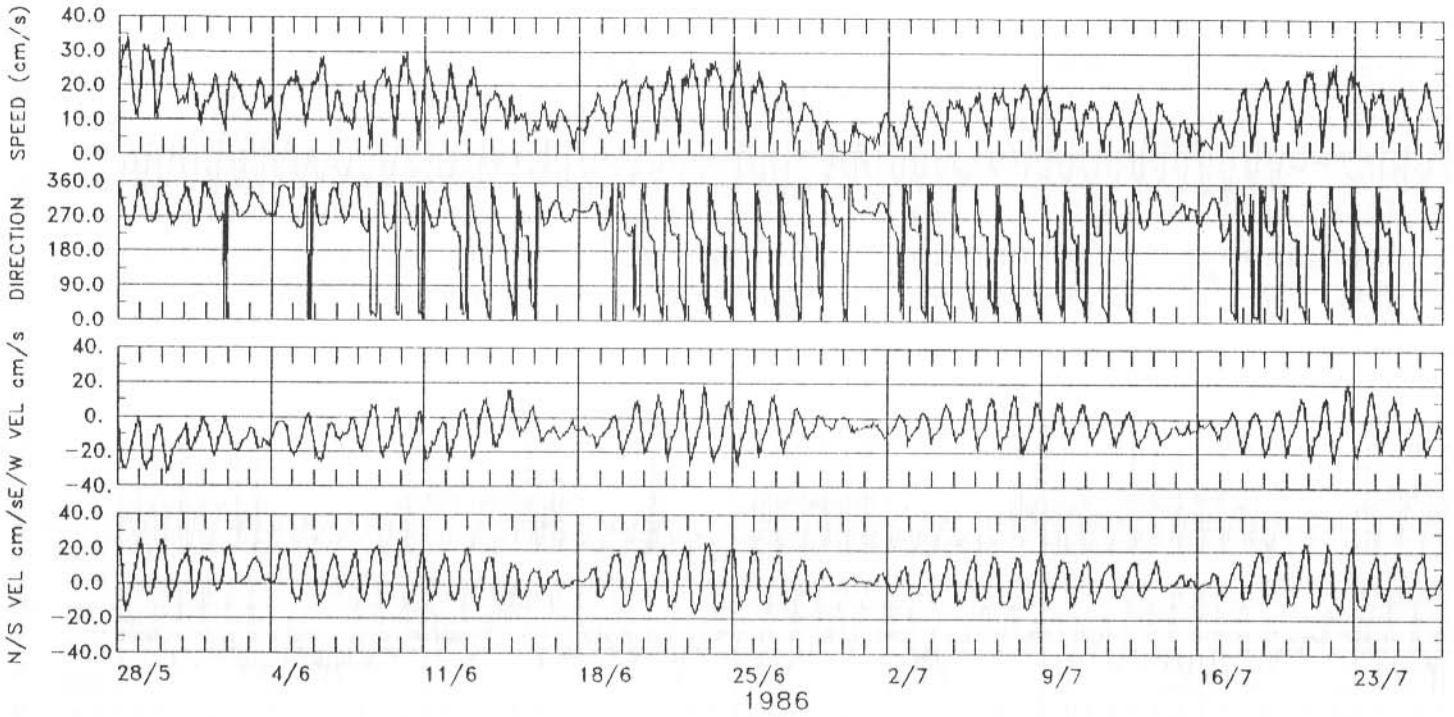
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



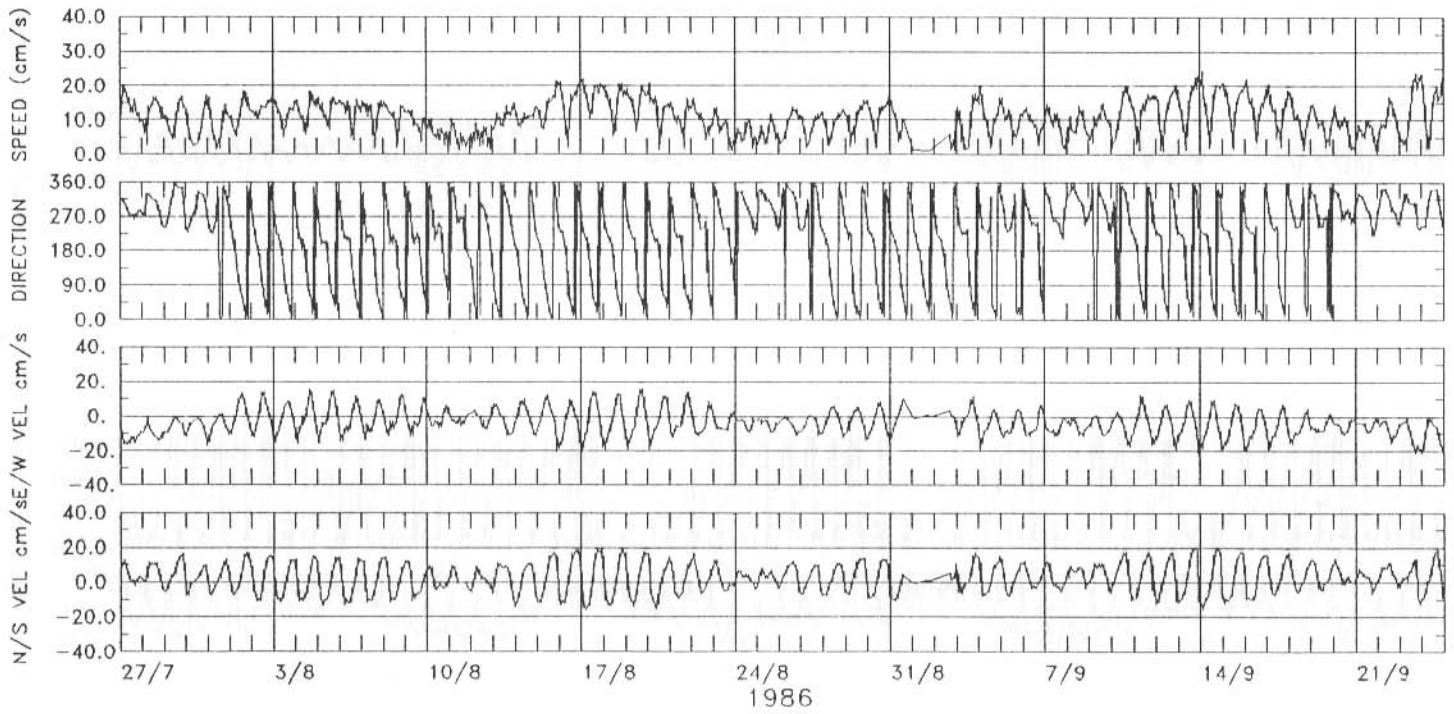
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.



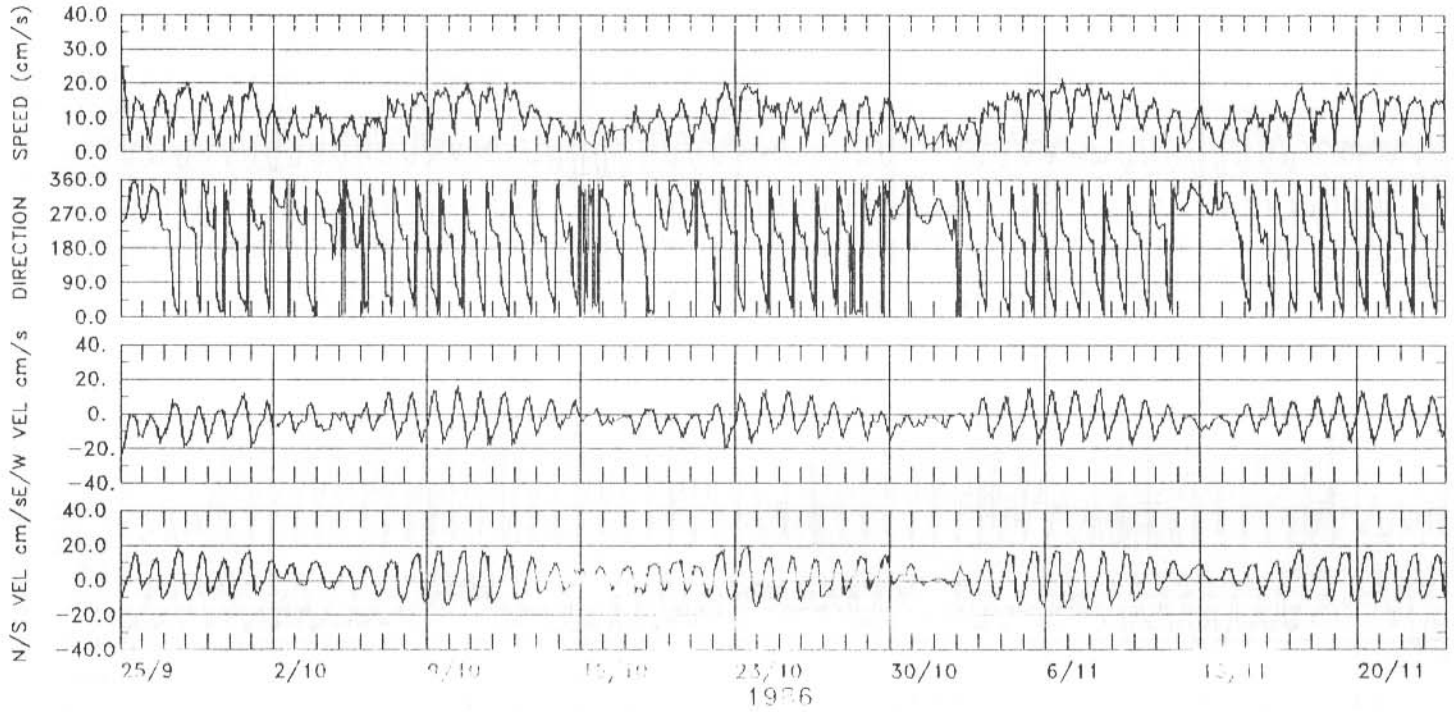
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.



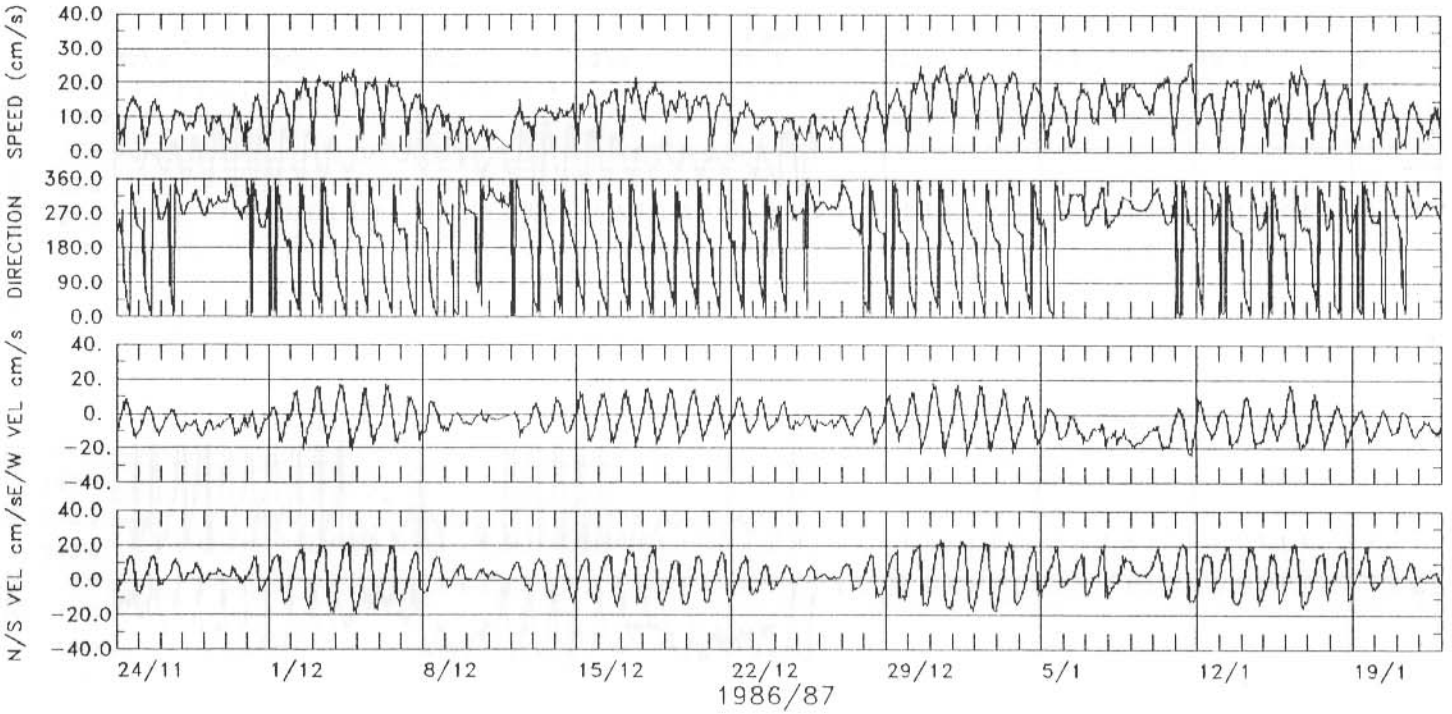
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 4)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.



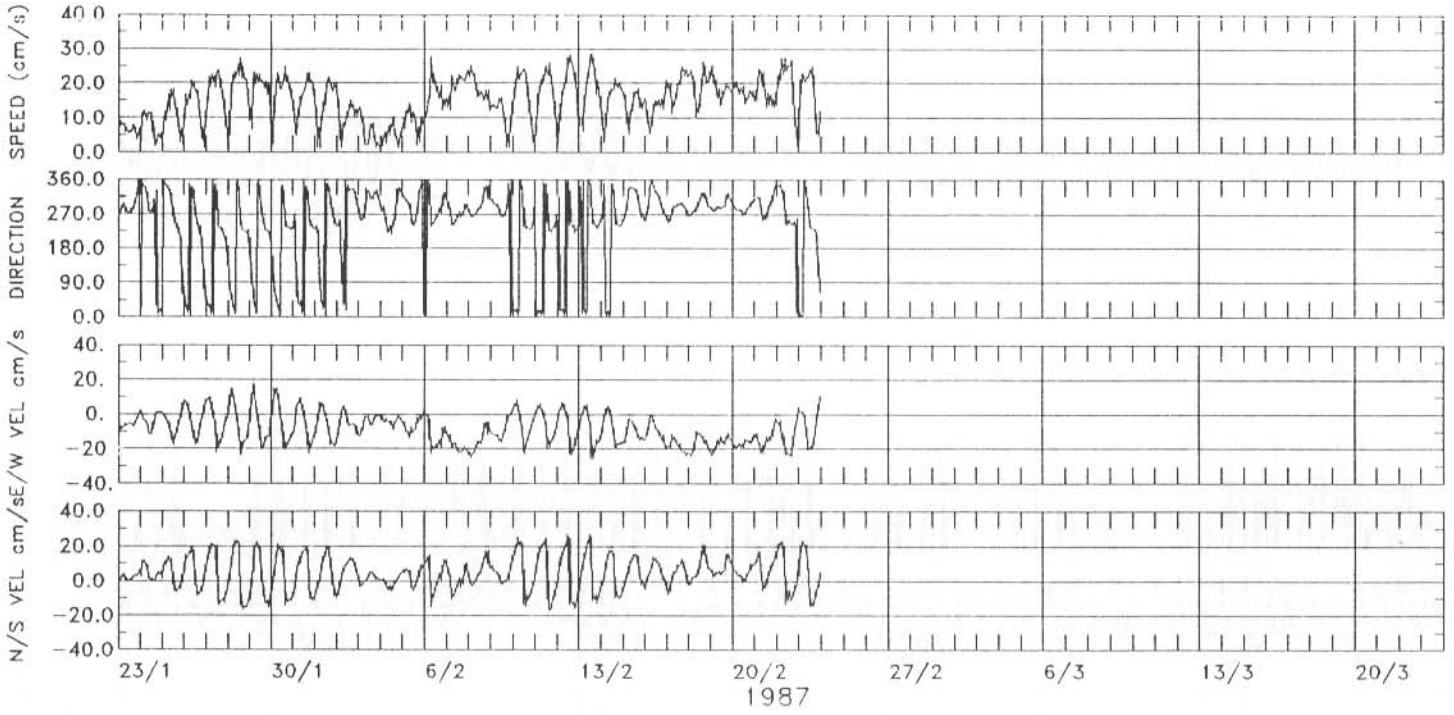
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 5)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



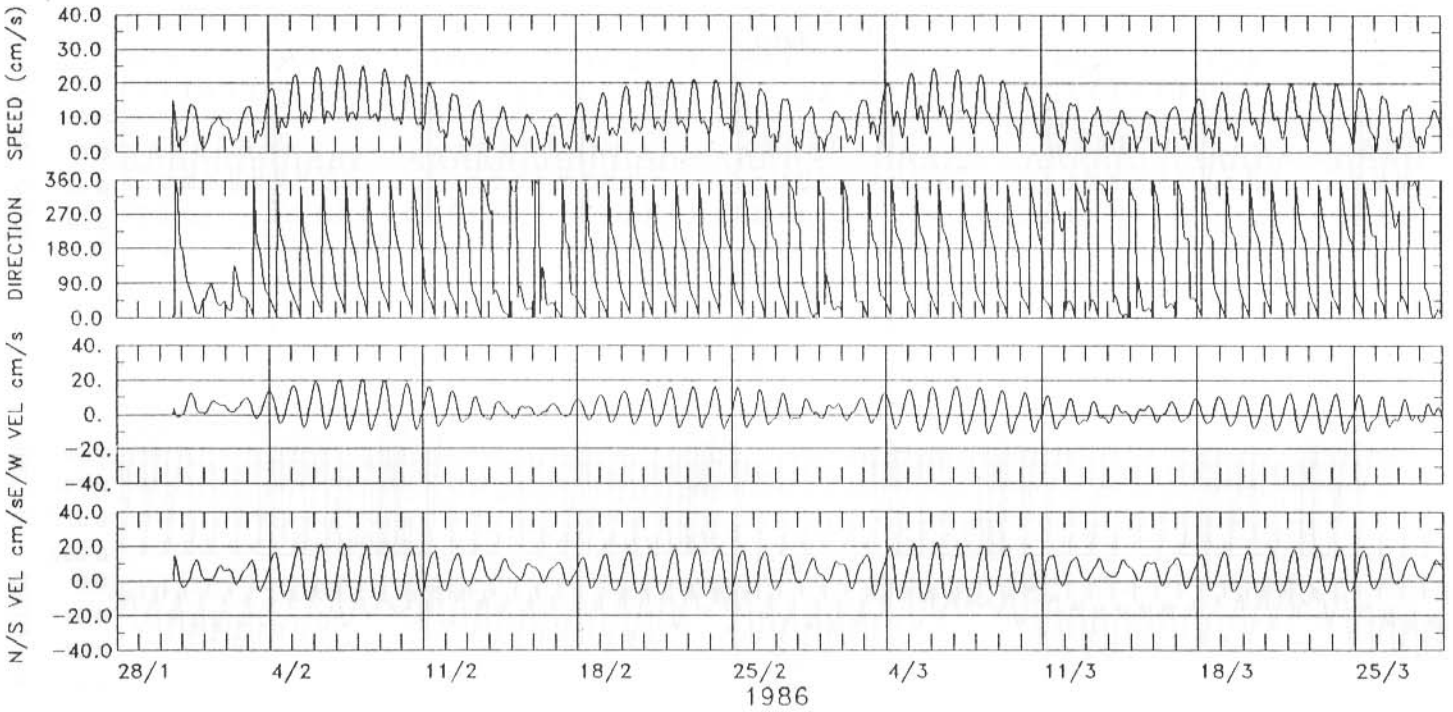
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 6)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



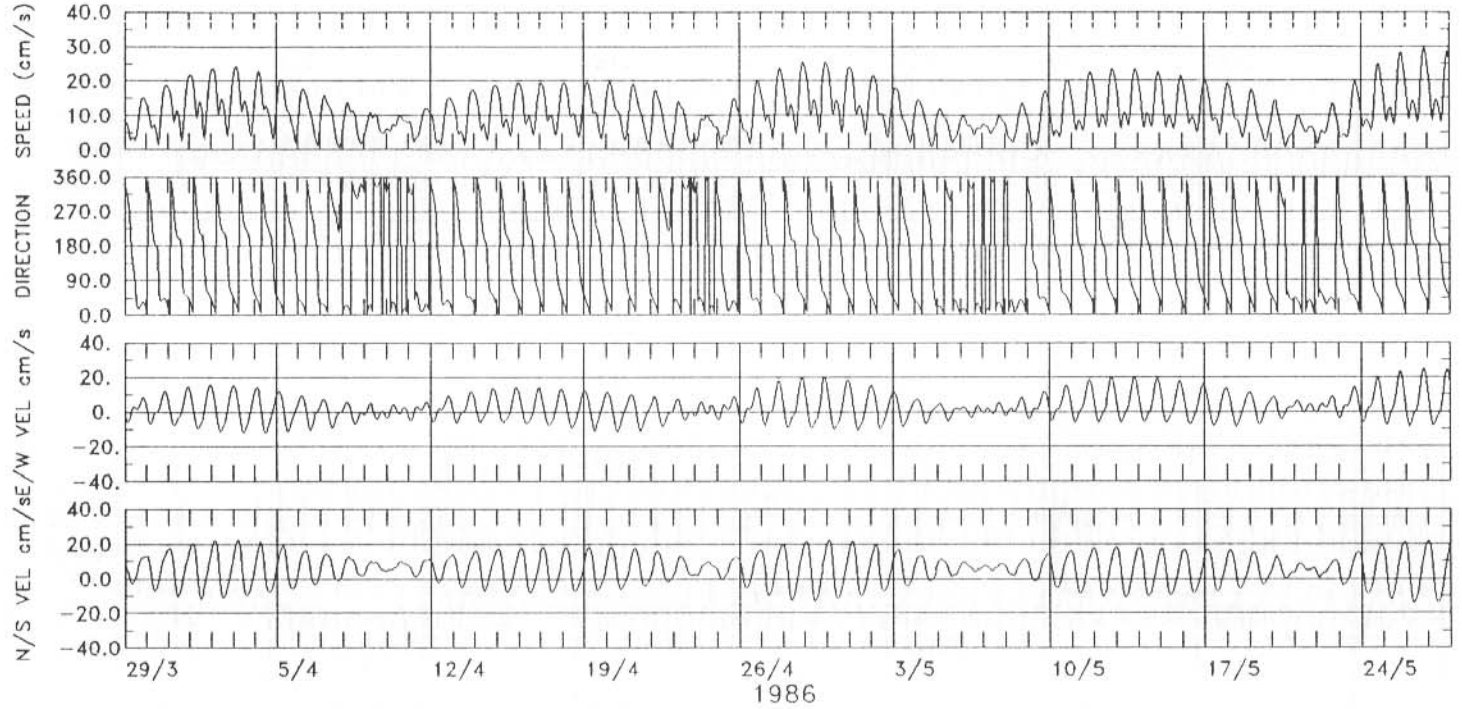
MOORING 1, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 7)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.



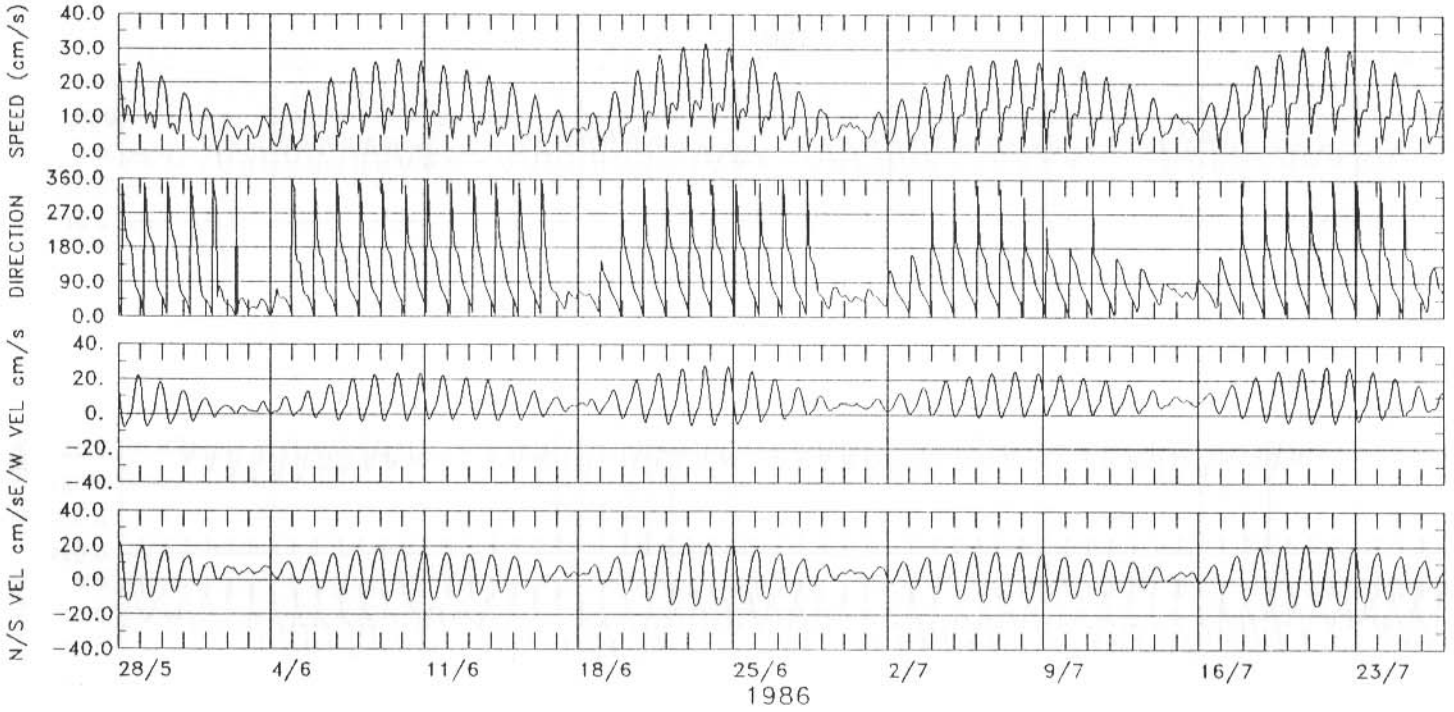
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 1)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



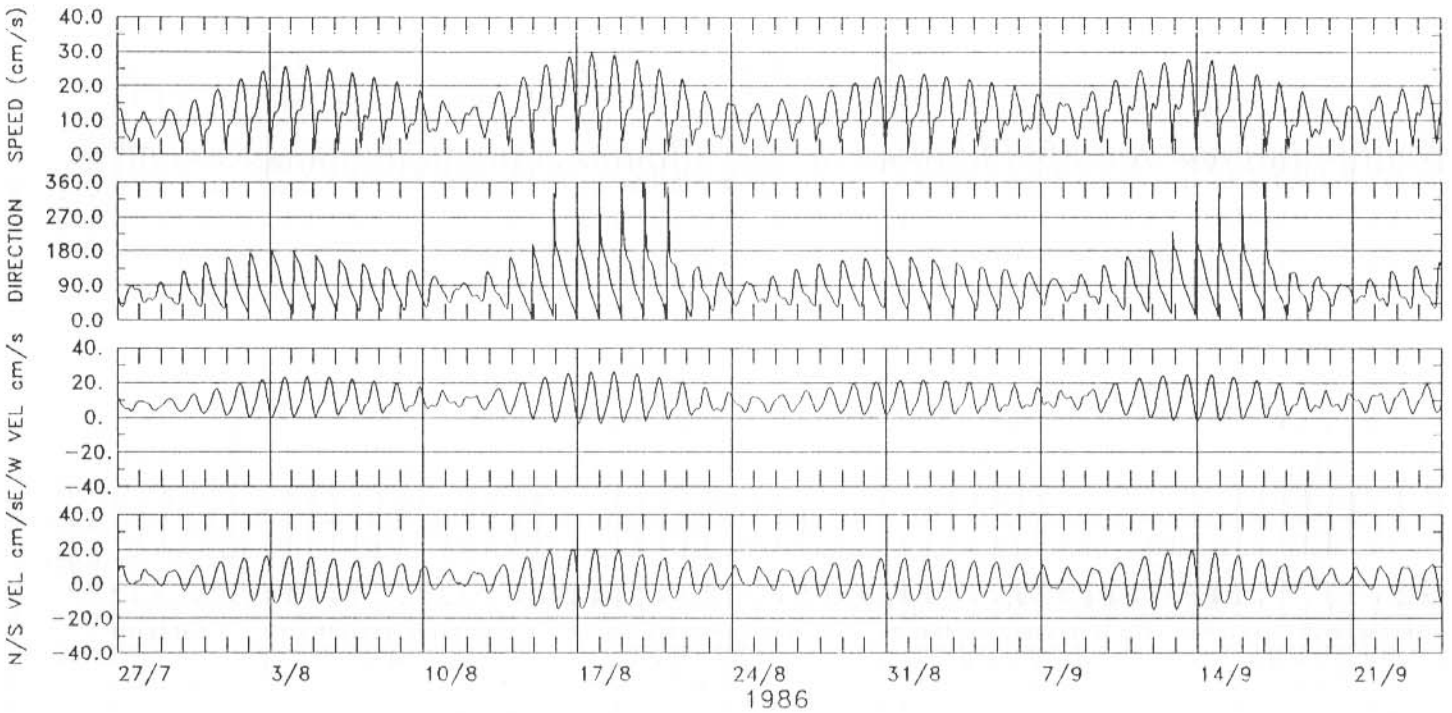
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 2)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



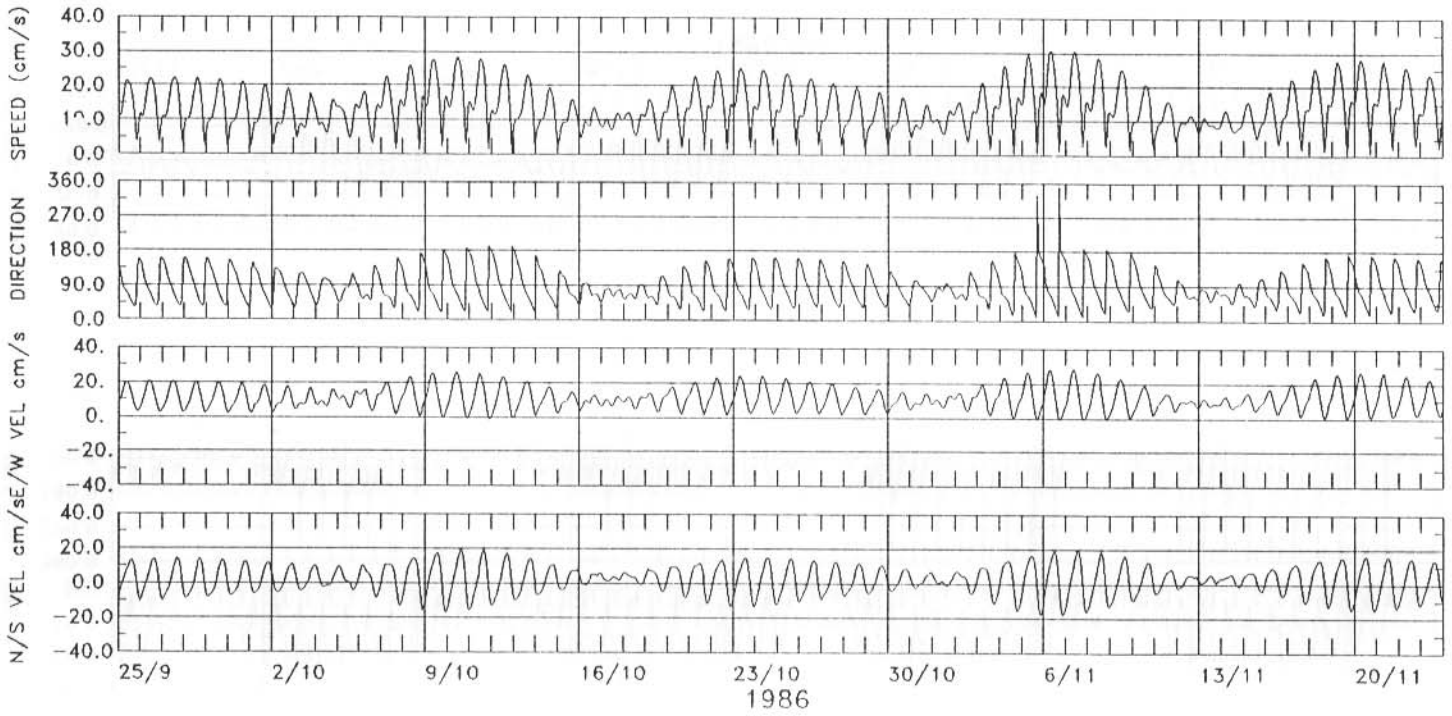
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 3)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.



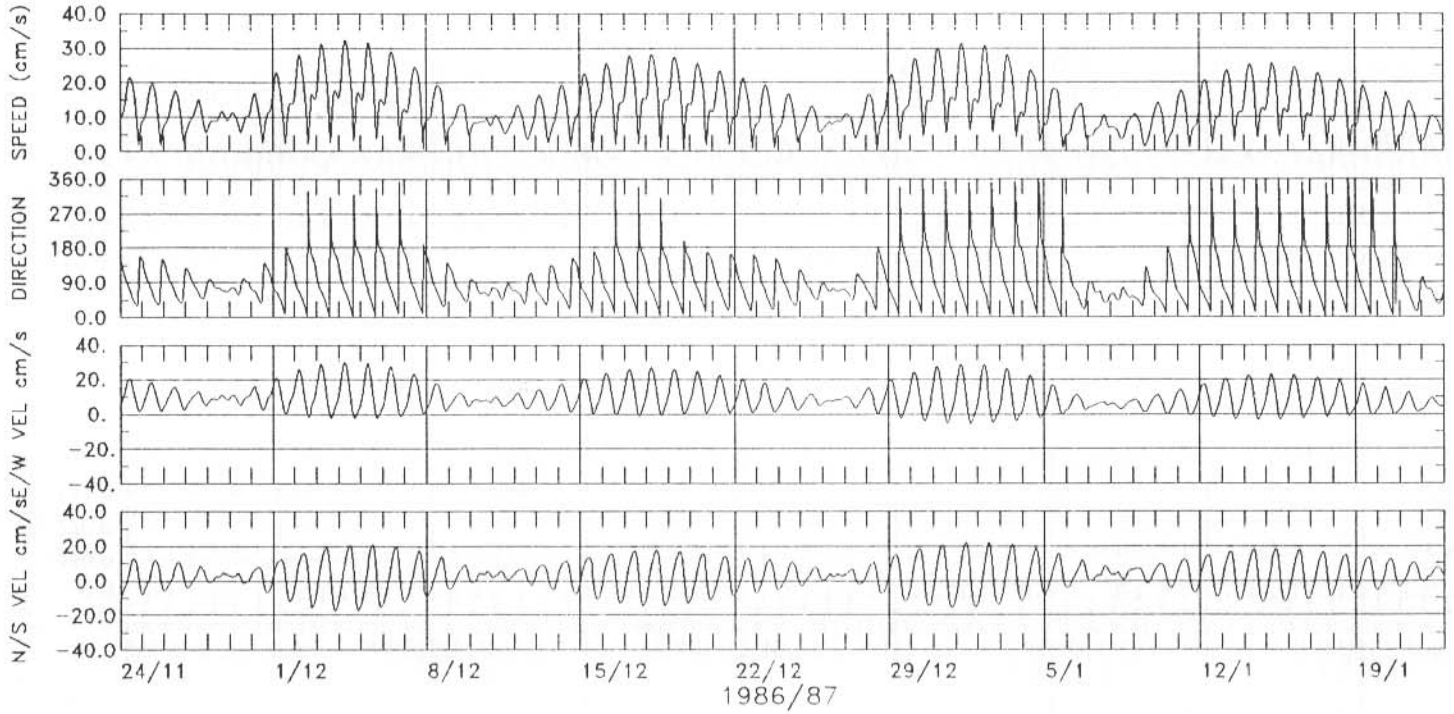
MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 4)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 5)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.

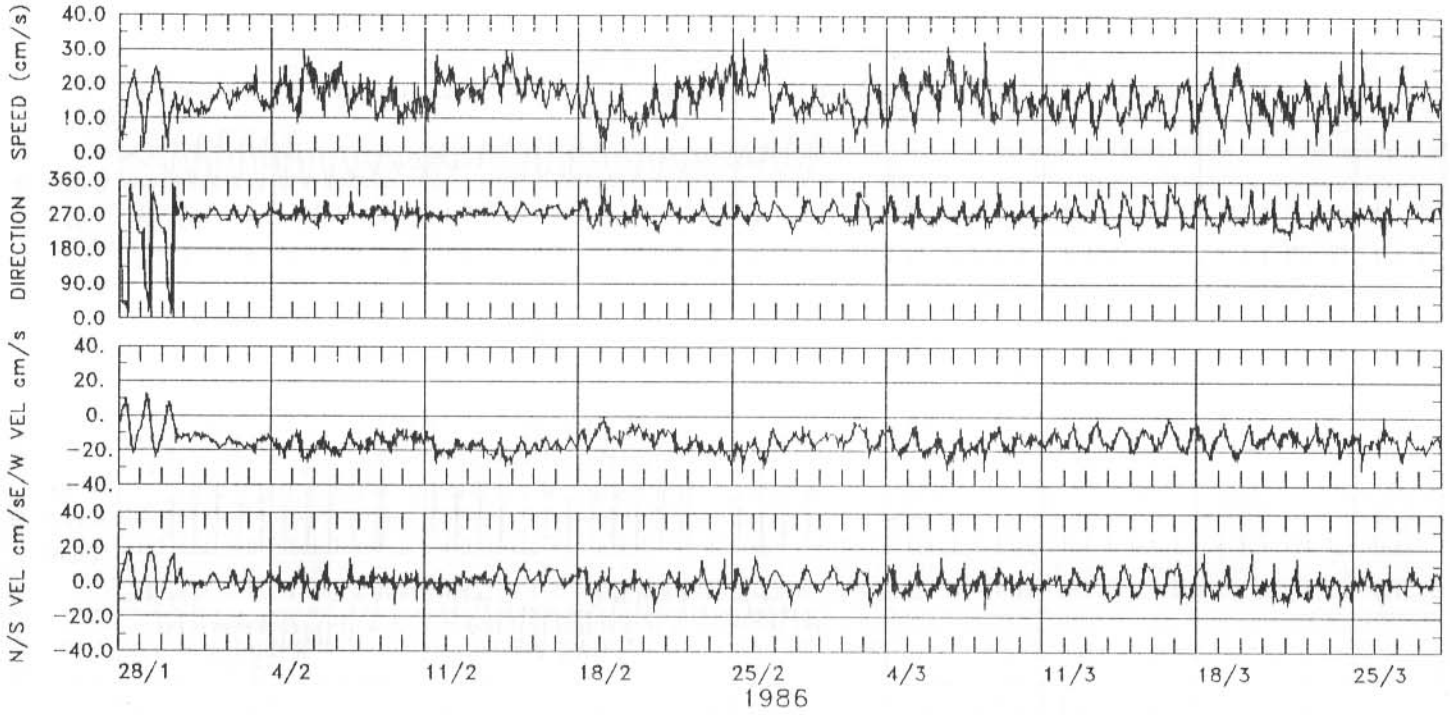


MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 6)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.

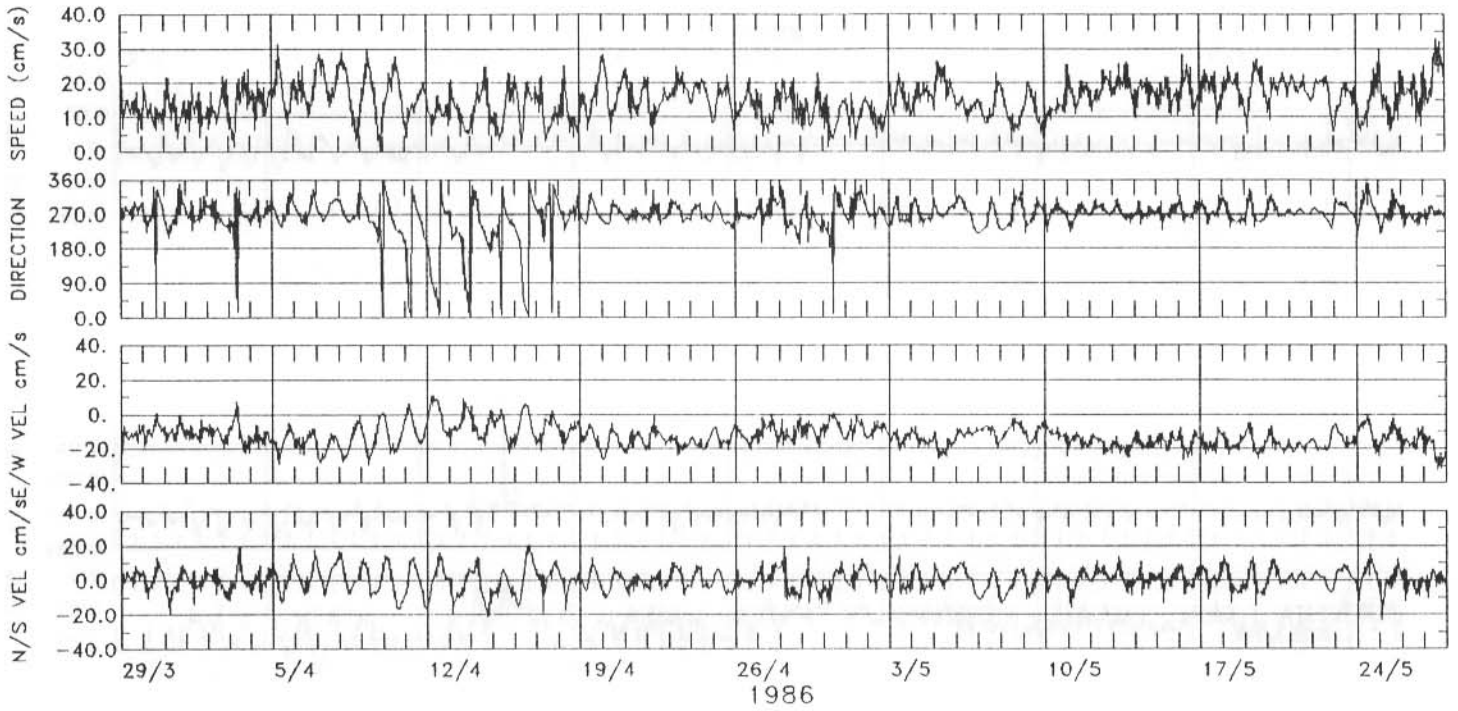


MOORING 1, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTION (PART 7)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.

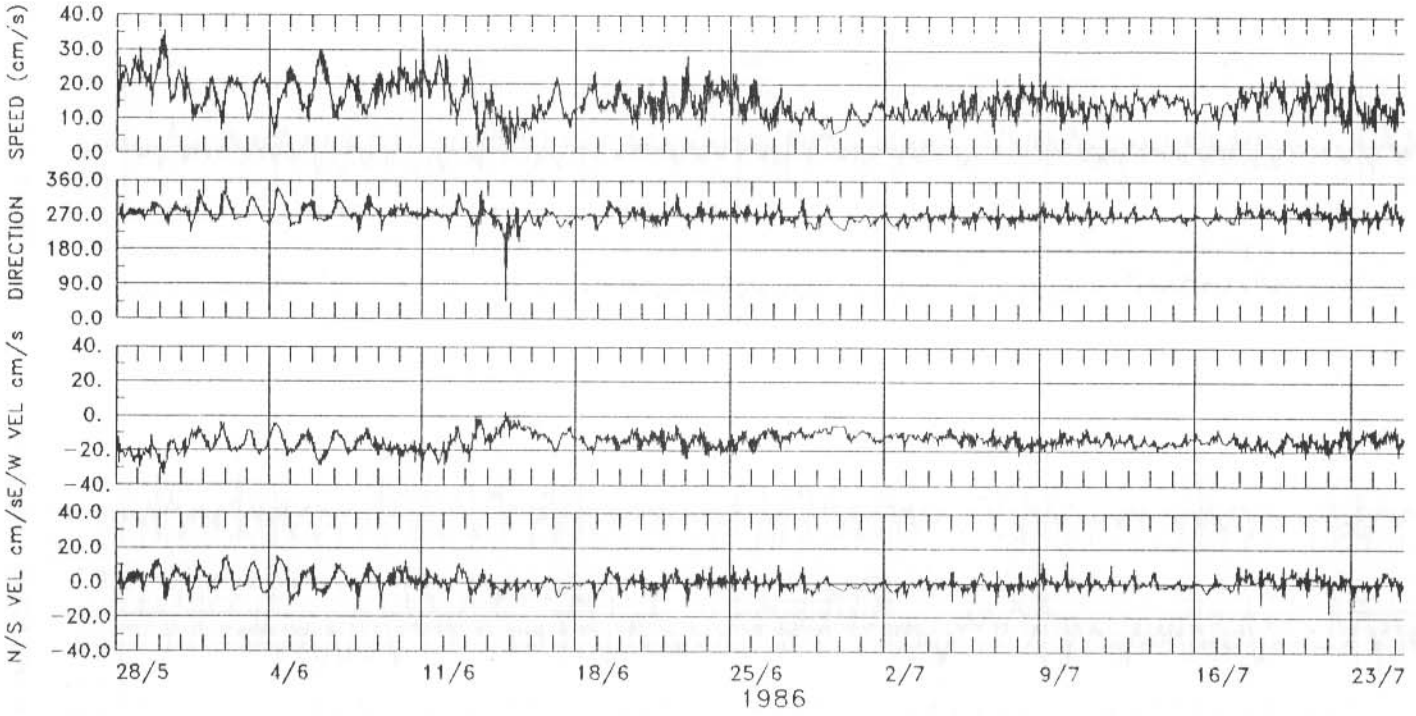
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 1)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 – 24/02/87 GMT RECORDING INTERVAL 60 MINS.



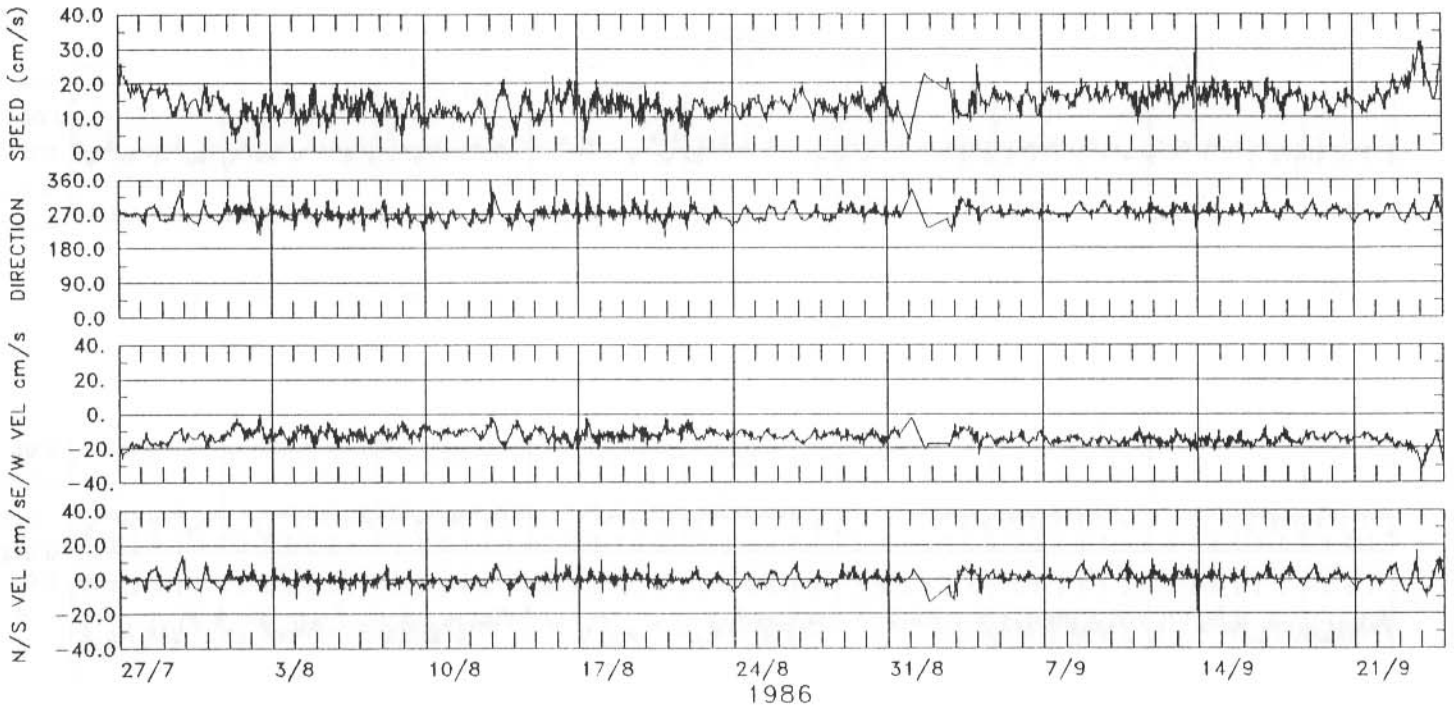
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 2)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



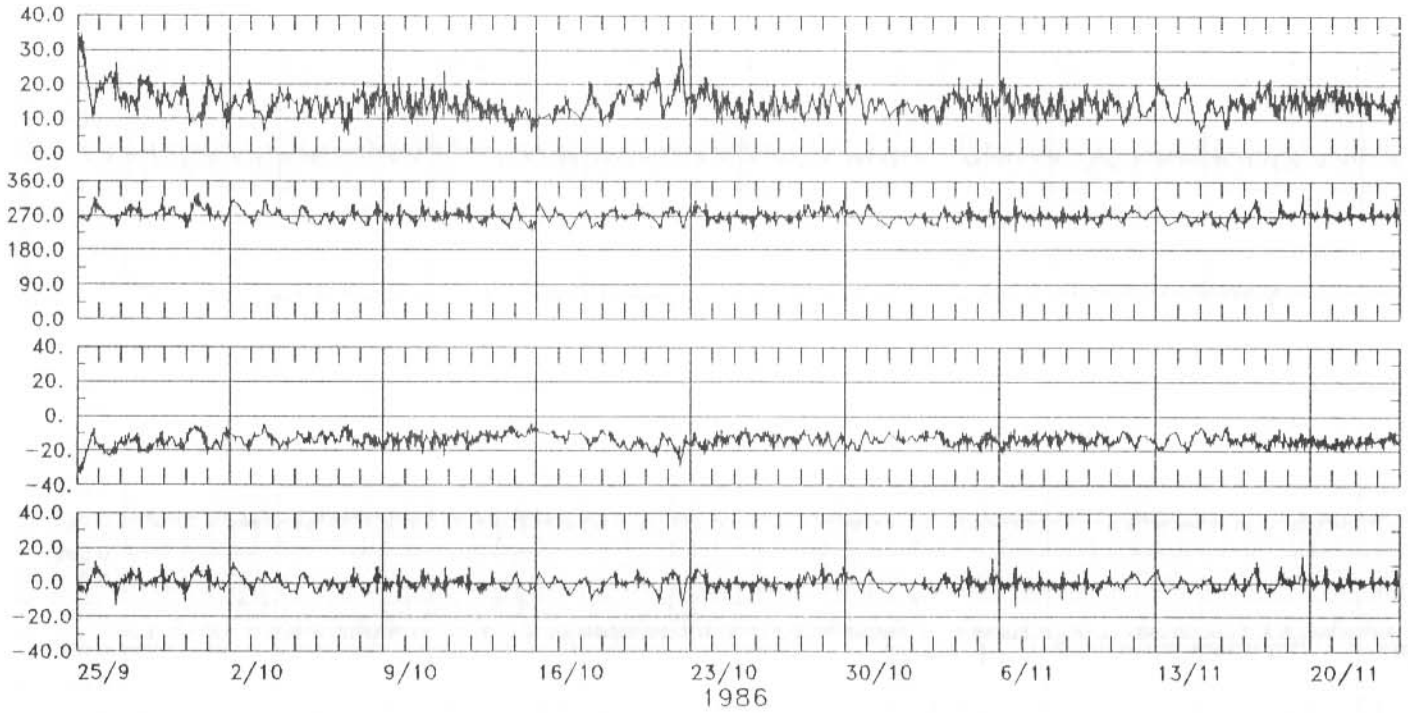
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 3)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



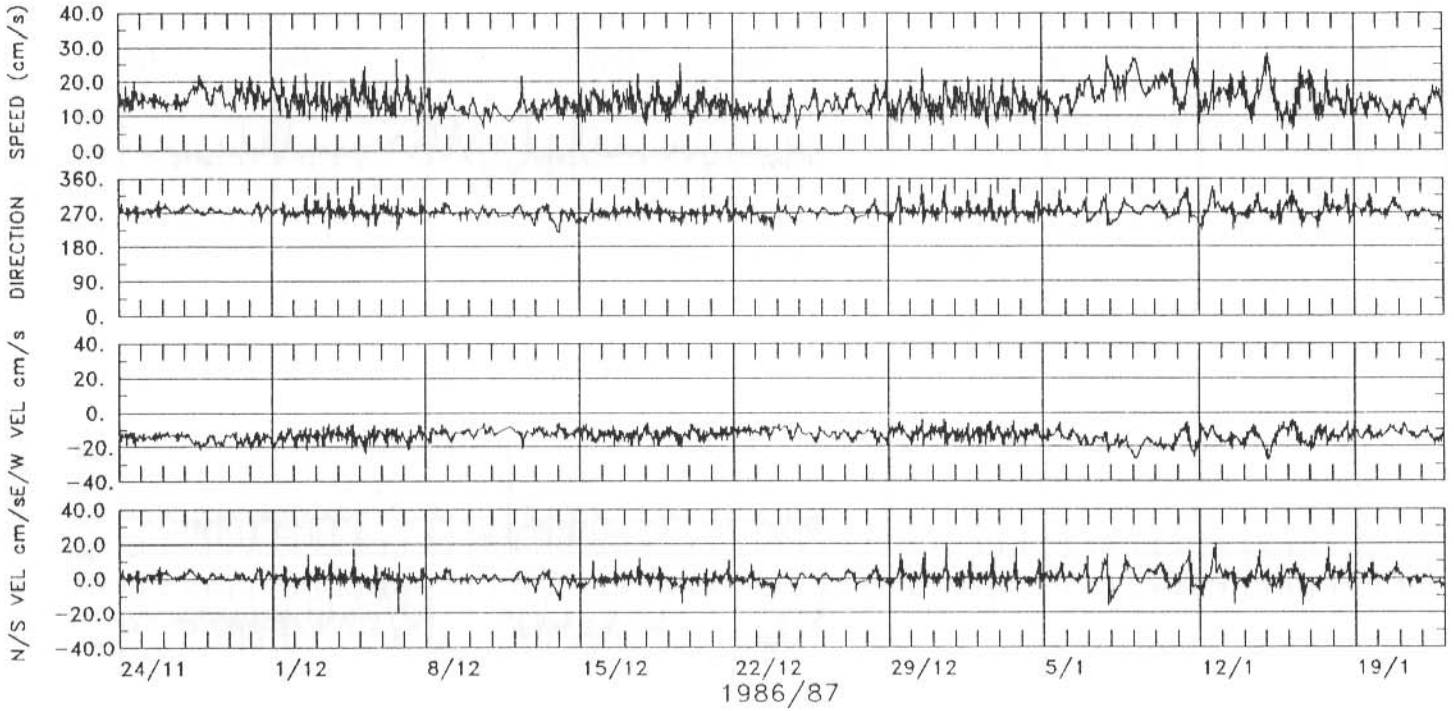
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 4)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



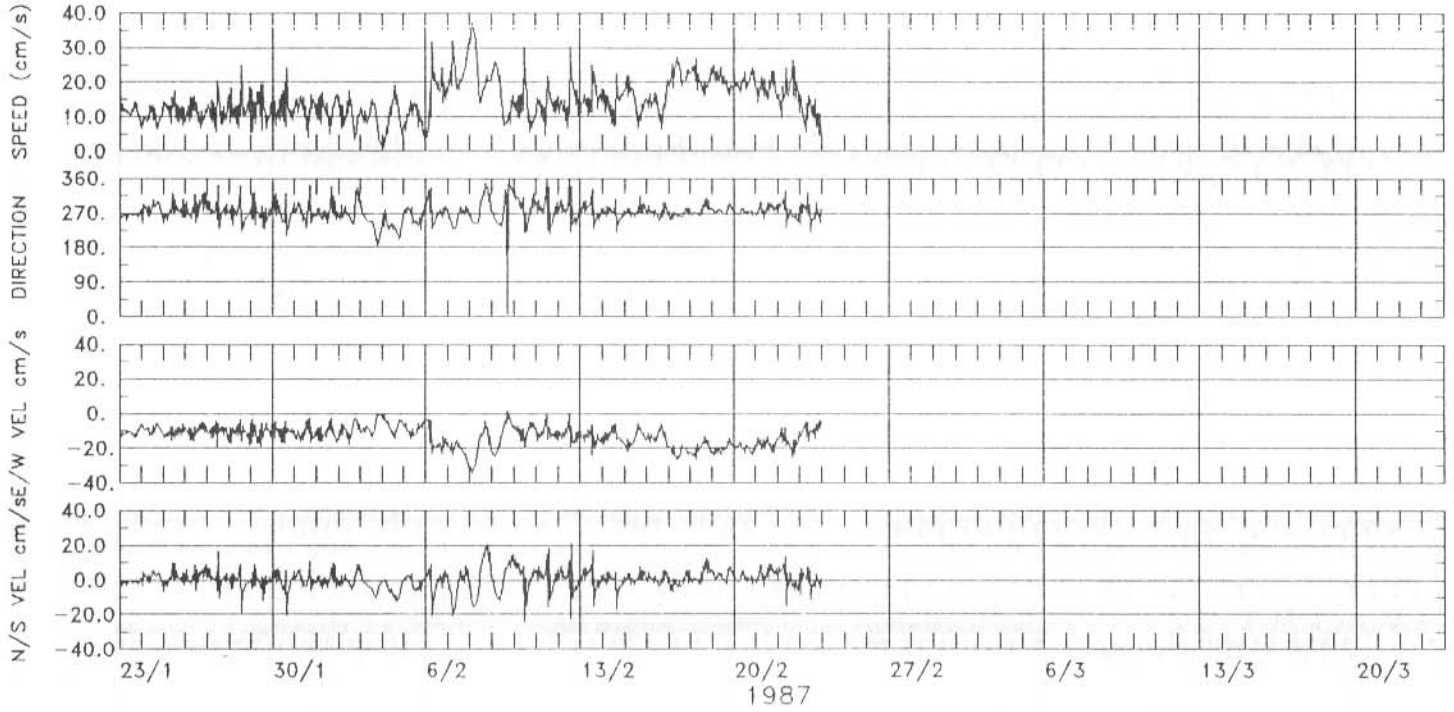
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 5)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



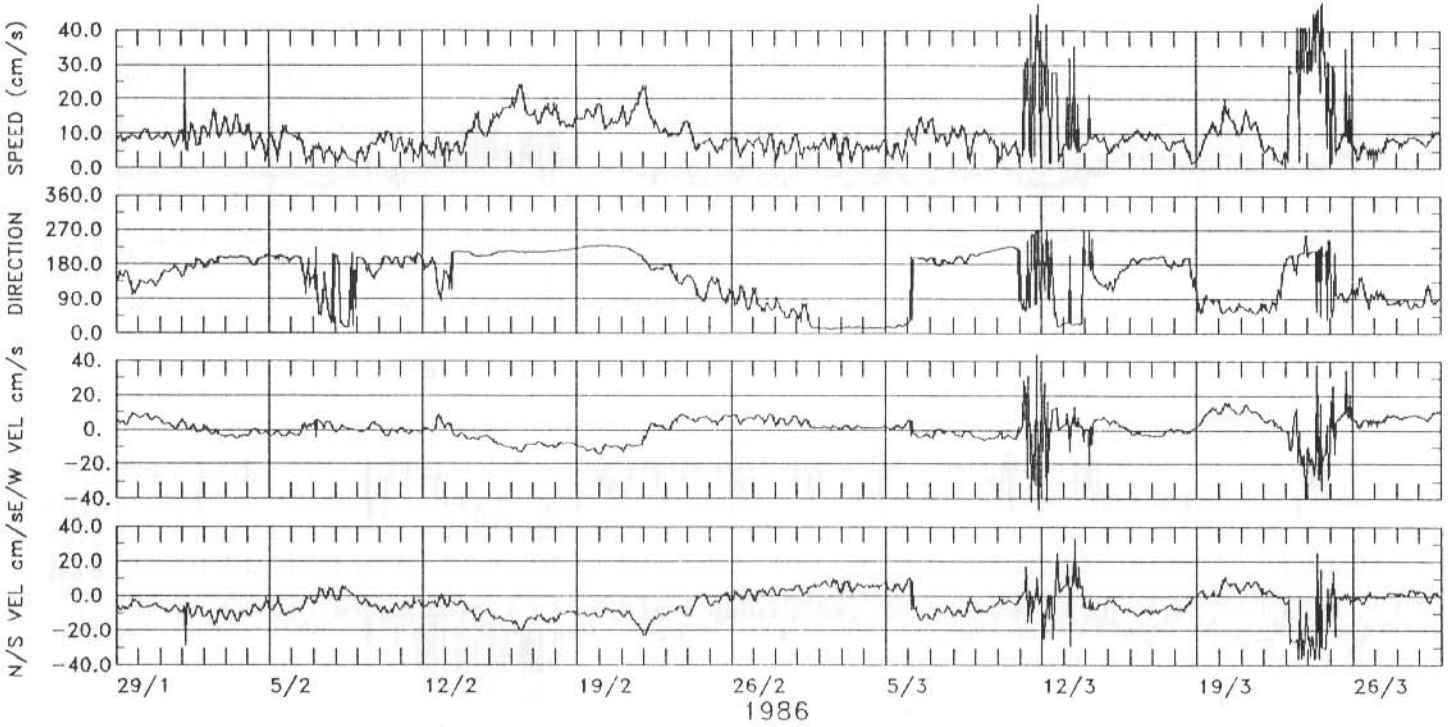
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 6)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



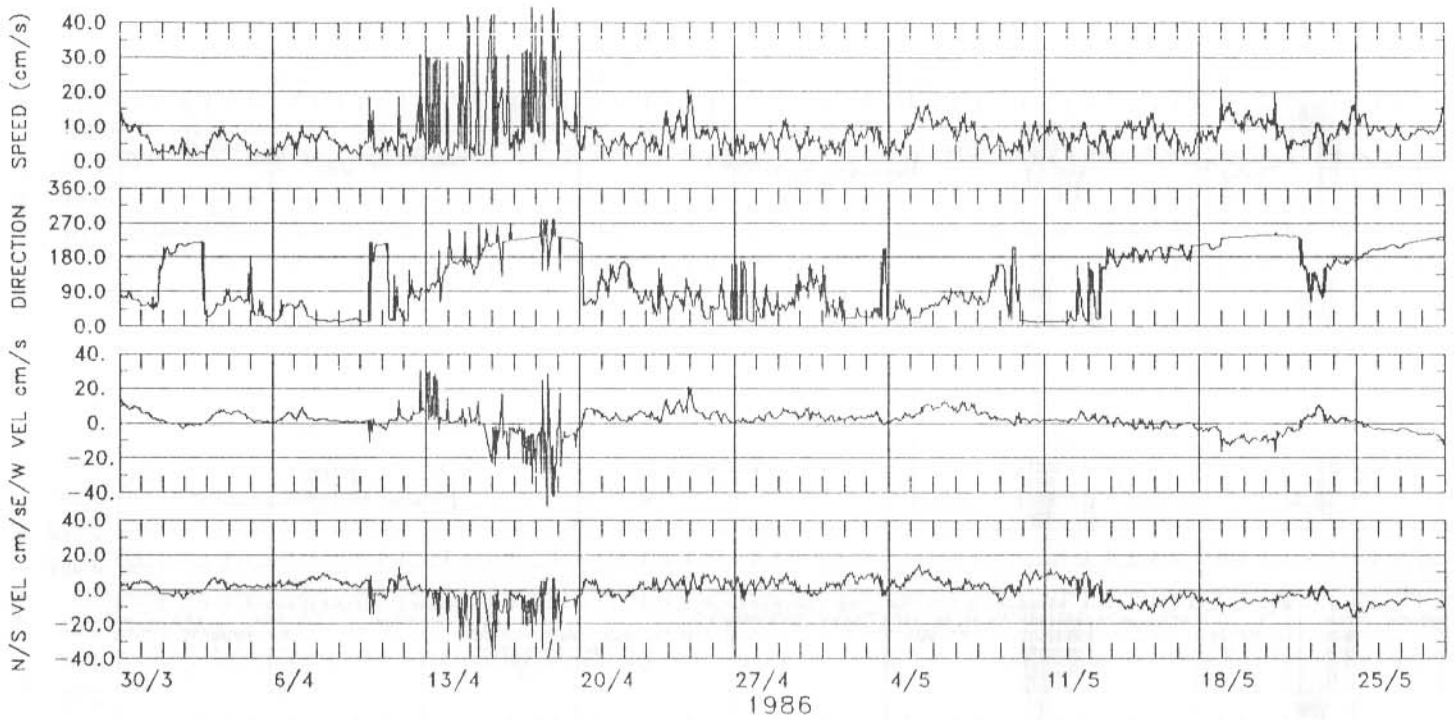
MOORING 1, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTION (PART 7)
STATION 7728/1 66 deg. 42.2'(S) 72 deg. 50.1'(E)
INSTRUMENT DEPTH 554 metres OCEAN DEPTH 566 metres
PERIOD 28/01/86 - 24/02/87 GMT RECORDING INTERVAL 60 MINS.



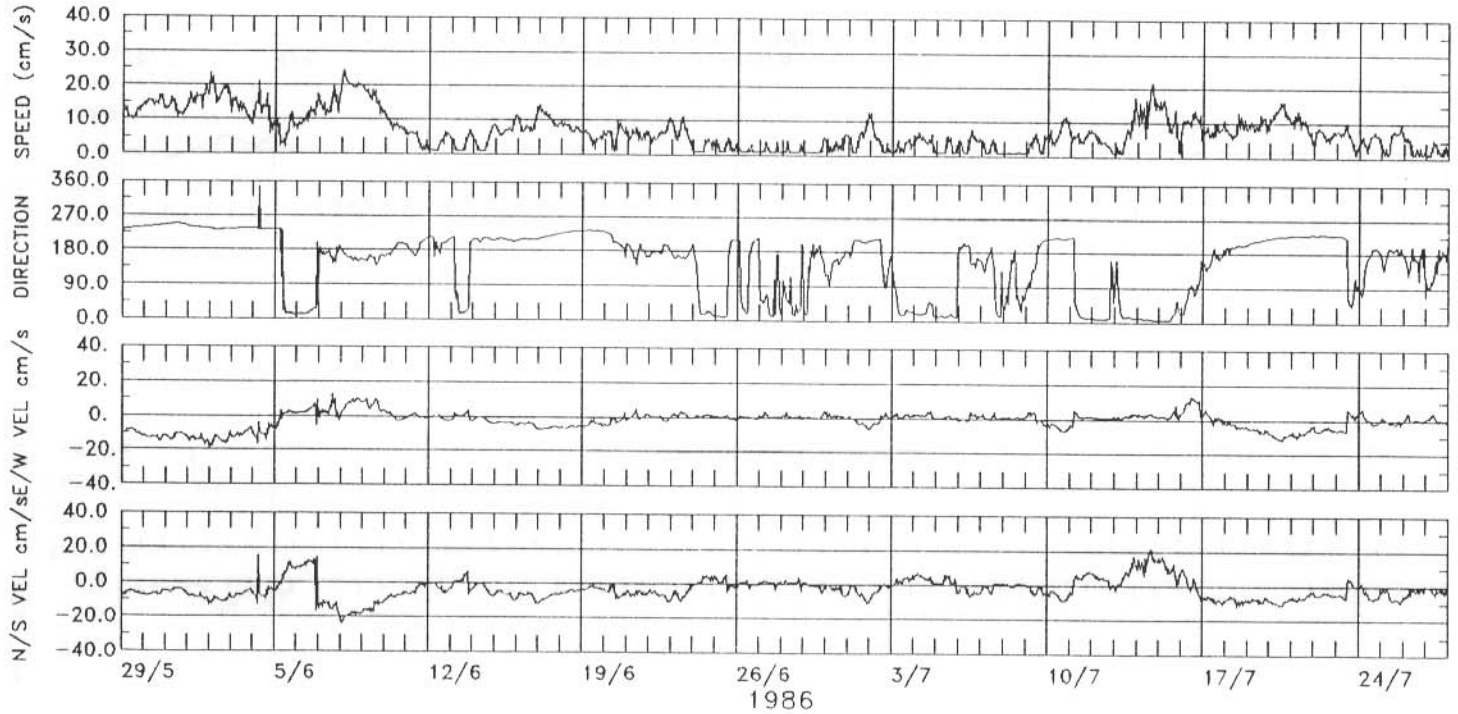
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



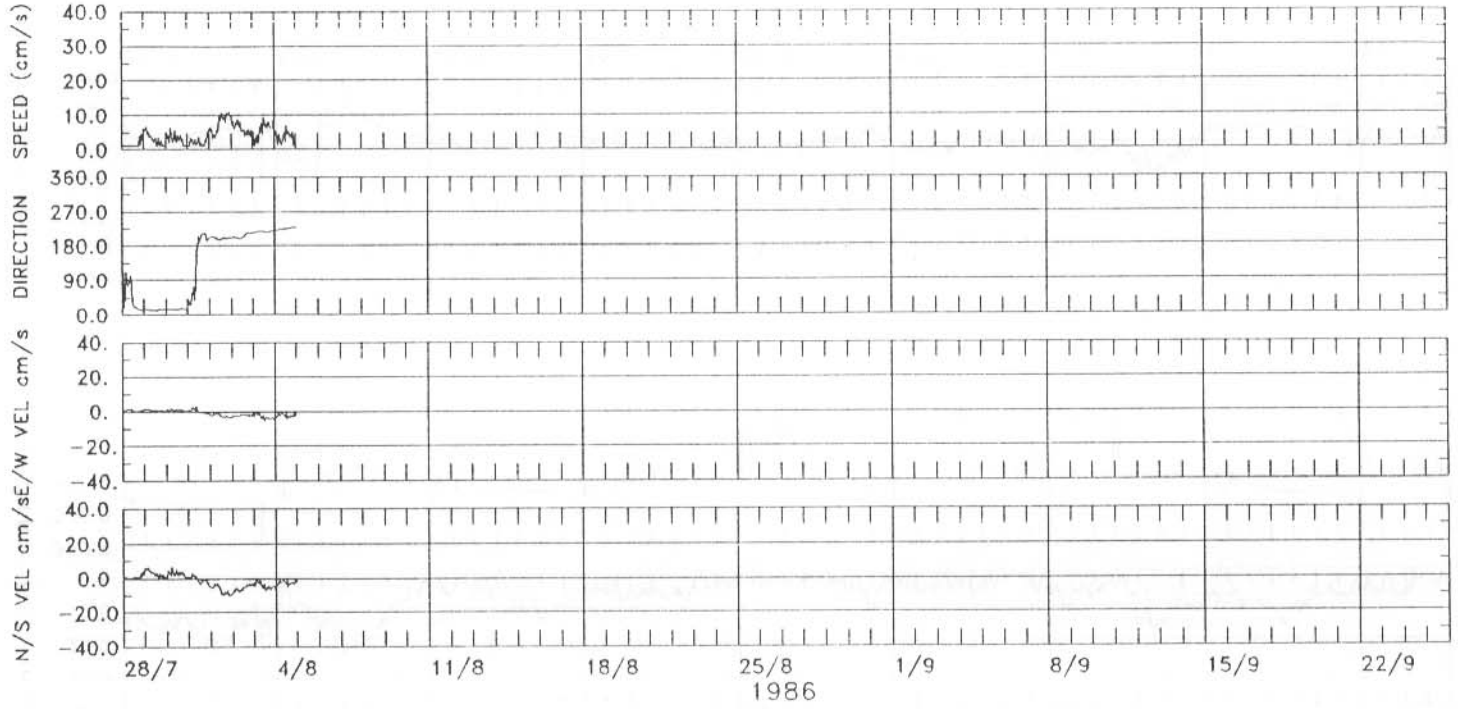
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



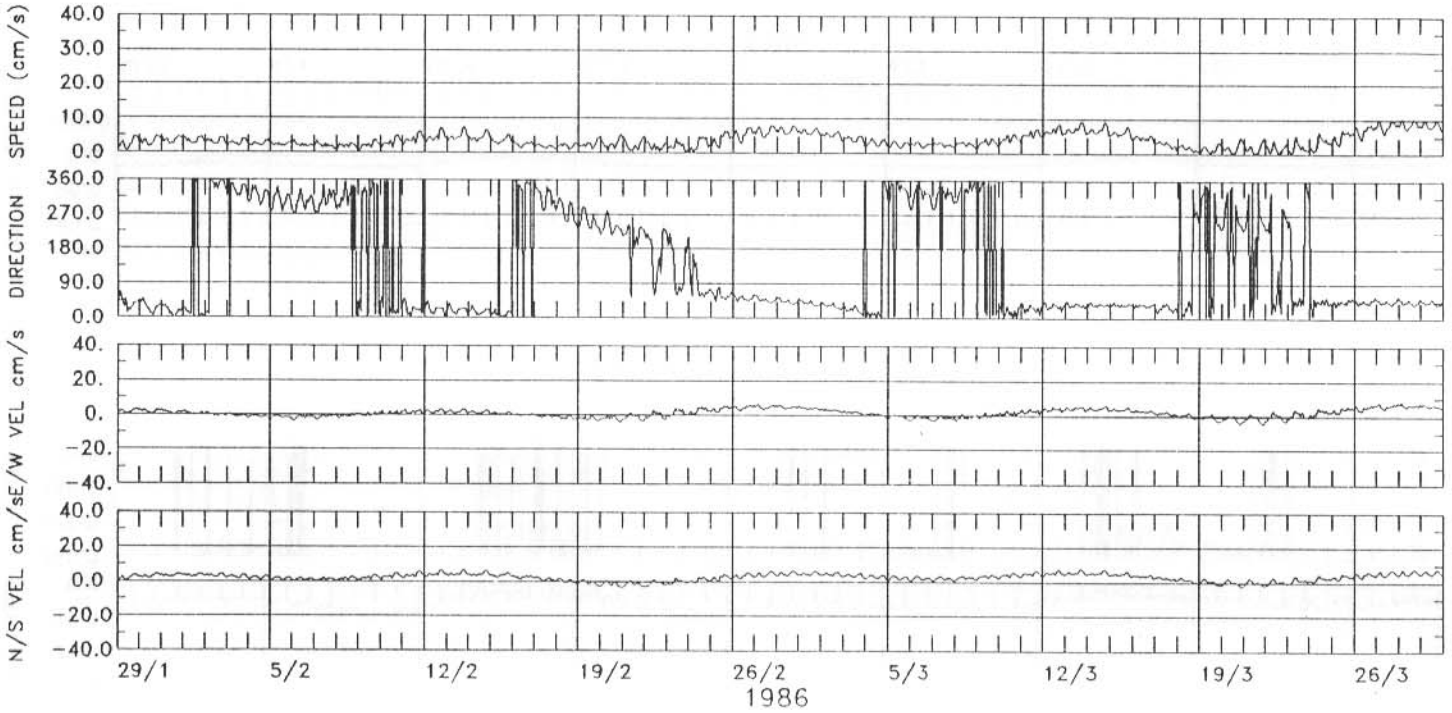
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



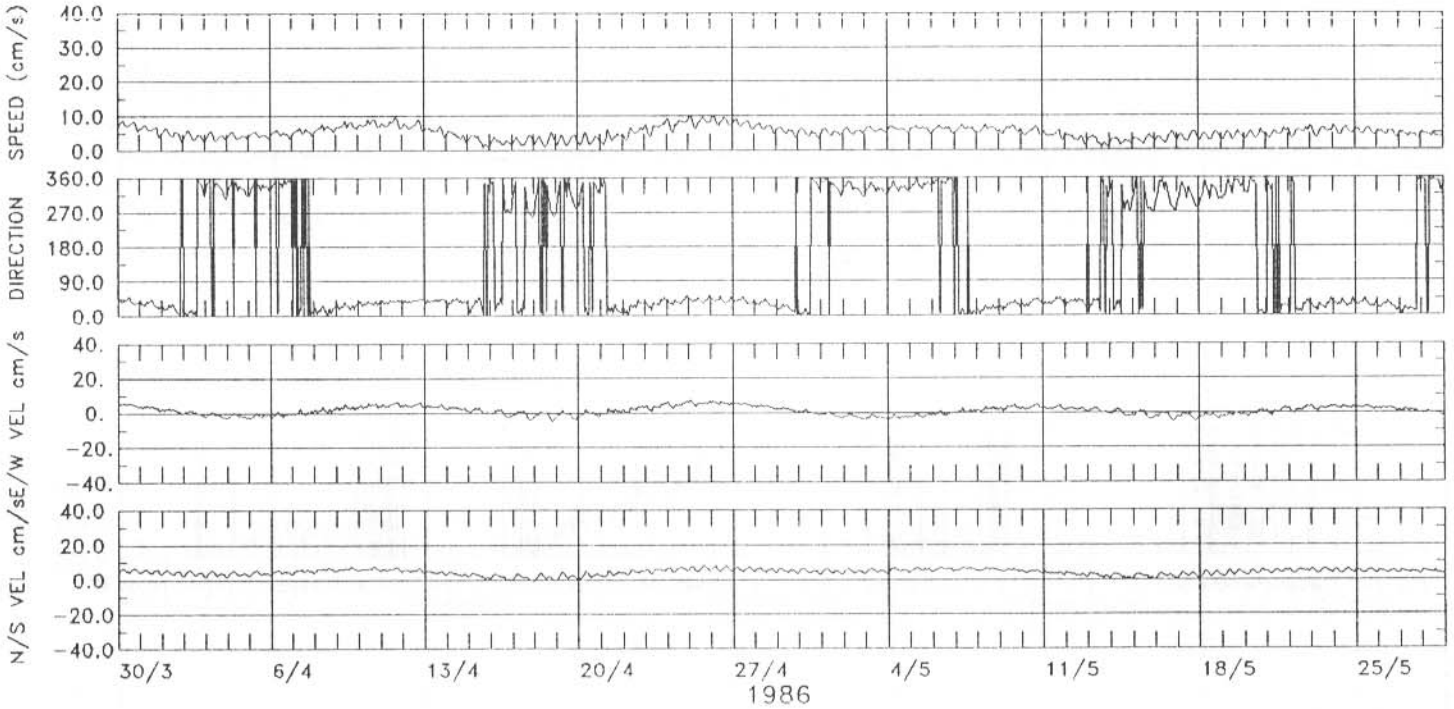
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 4)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



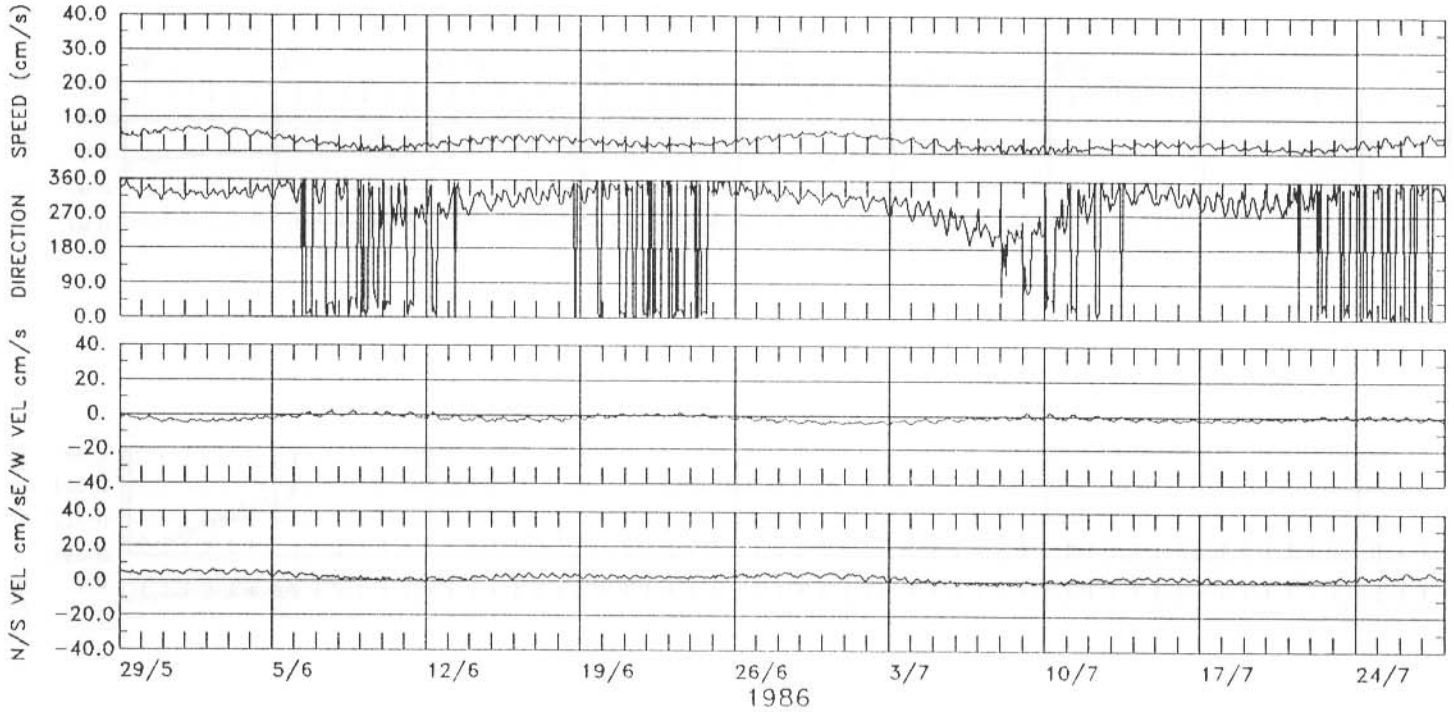
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 1)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



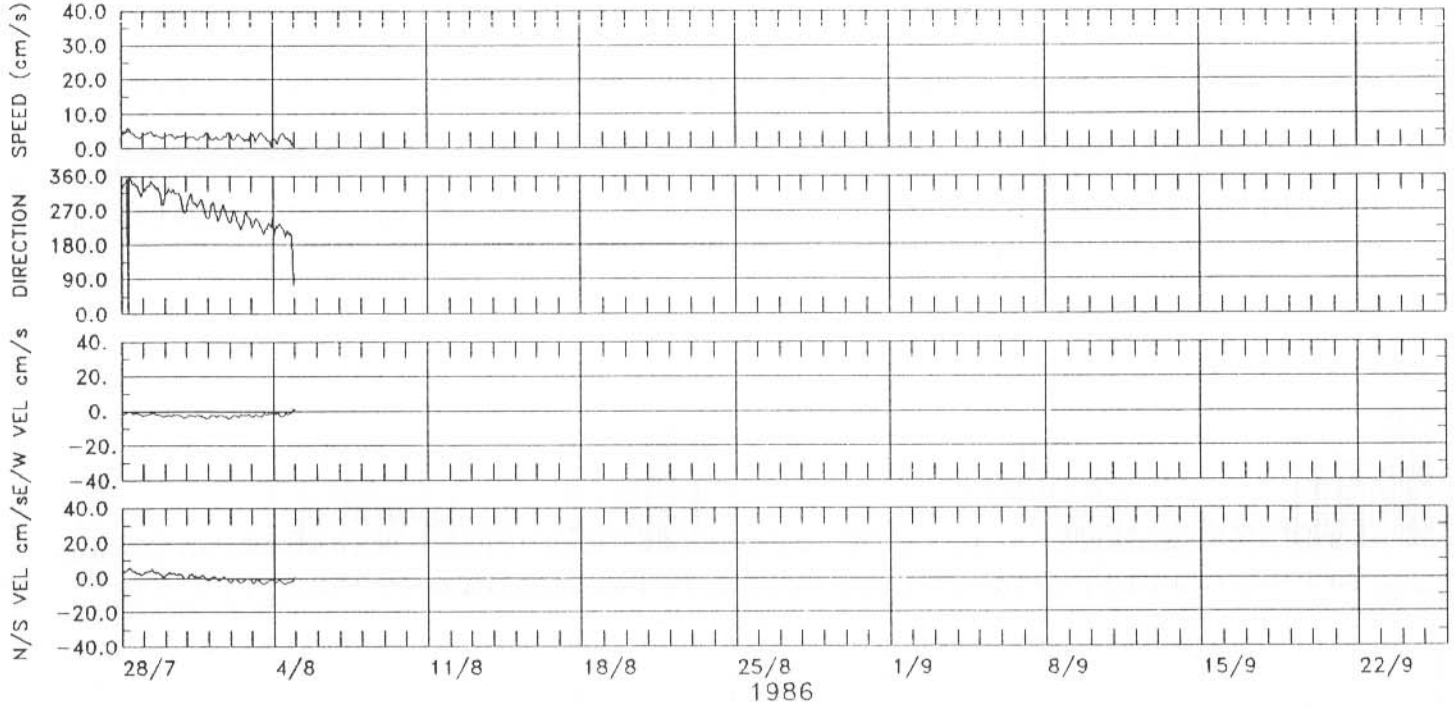
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 2)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 6/08/86 GMT RECORDING INTERVAL 60 MINS.



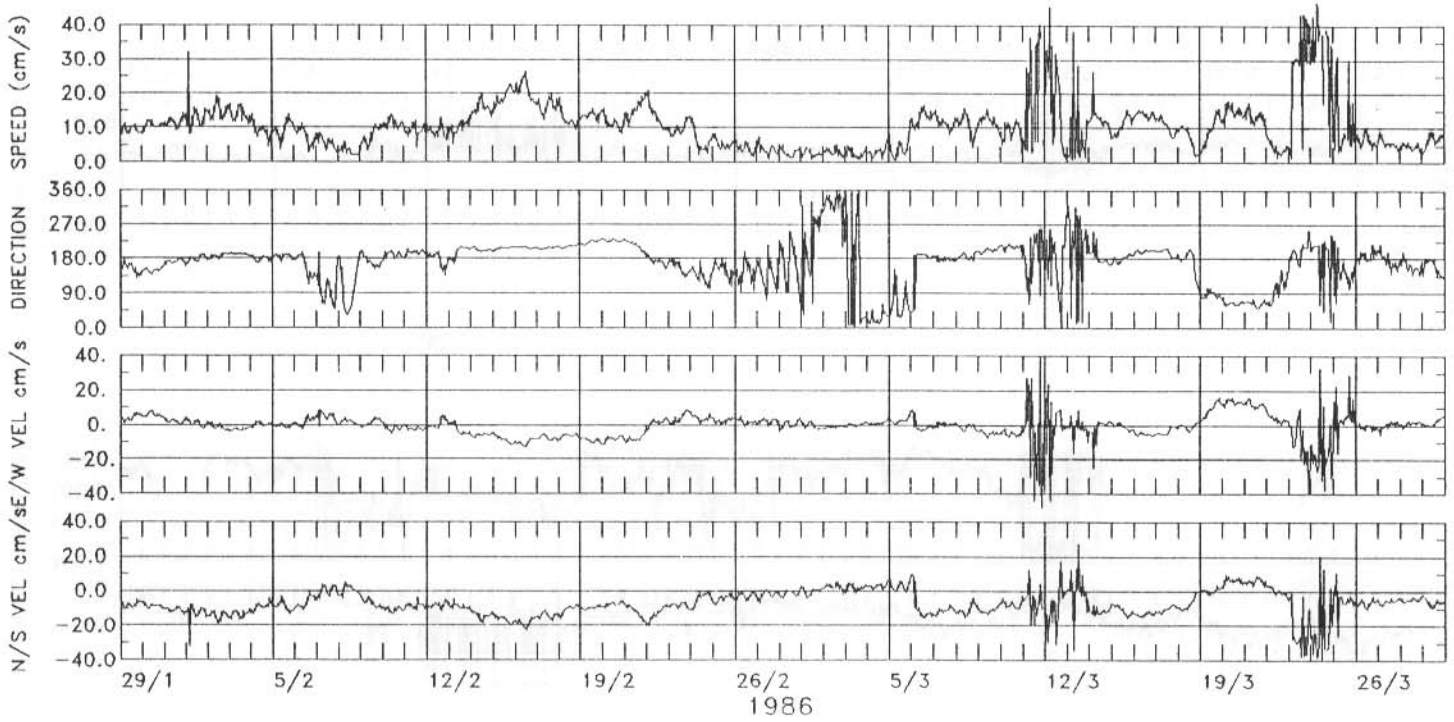
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 3)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



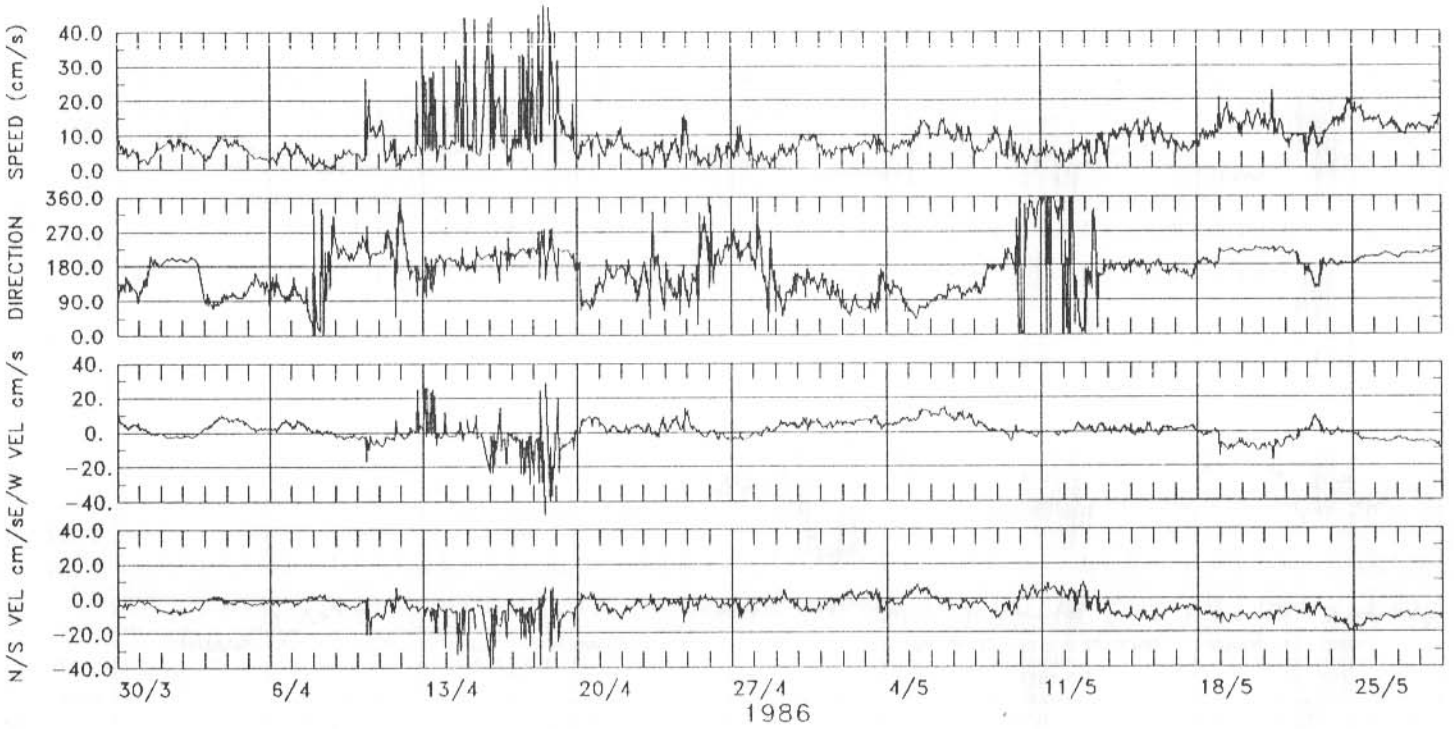
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 4)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 6/08/86 GMT RECORDING INTERVAL 60 MINS.



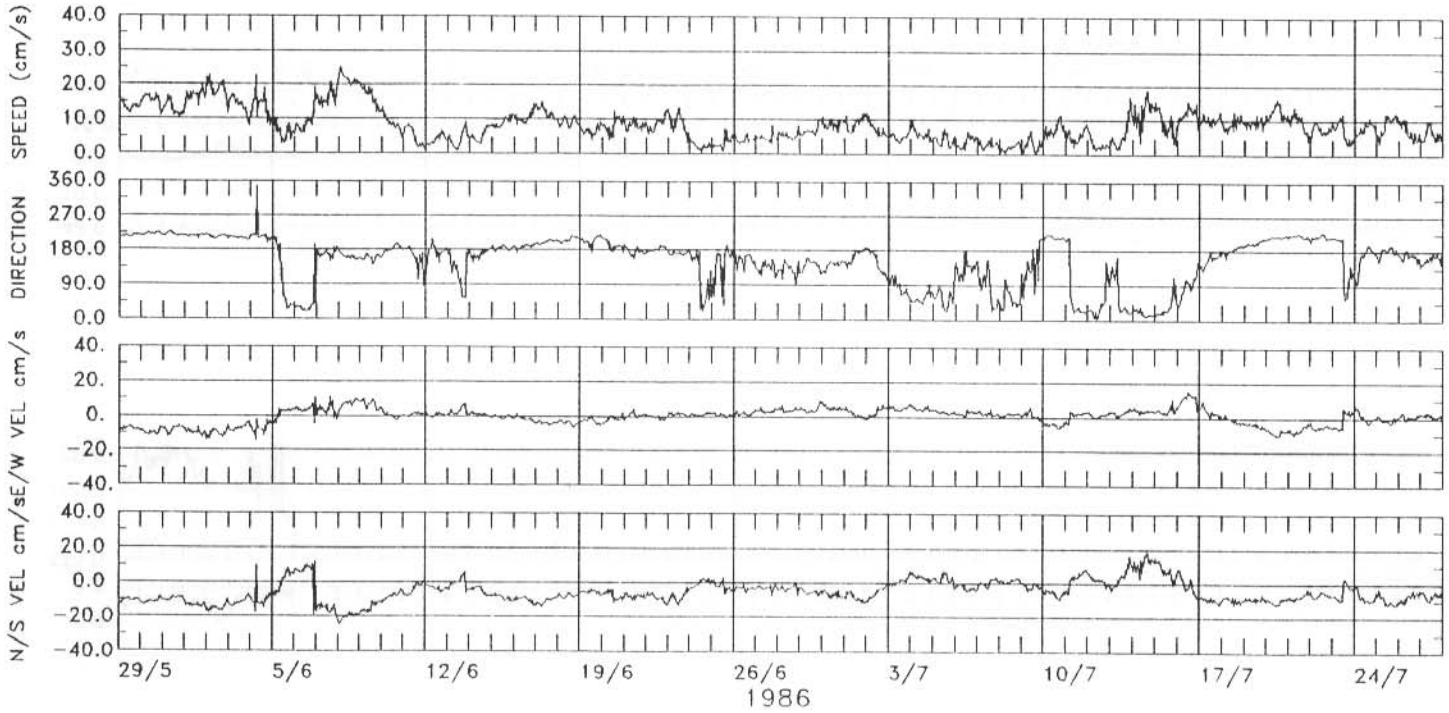
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 1)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



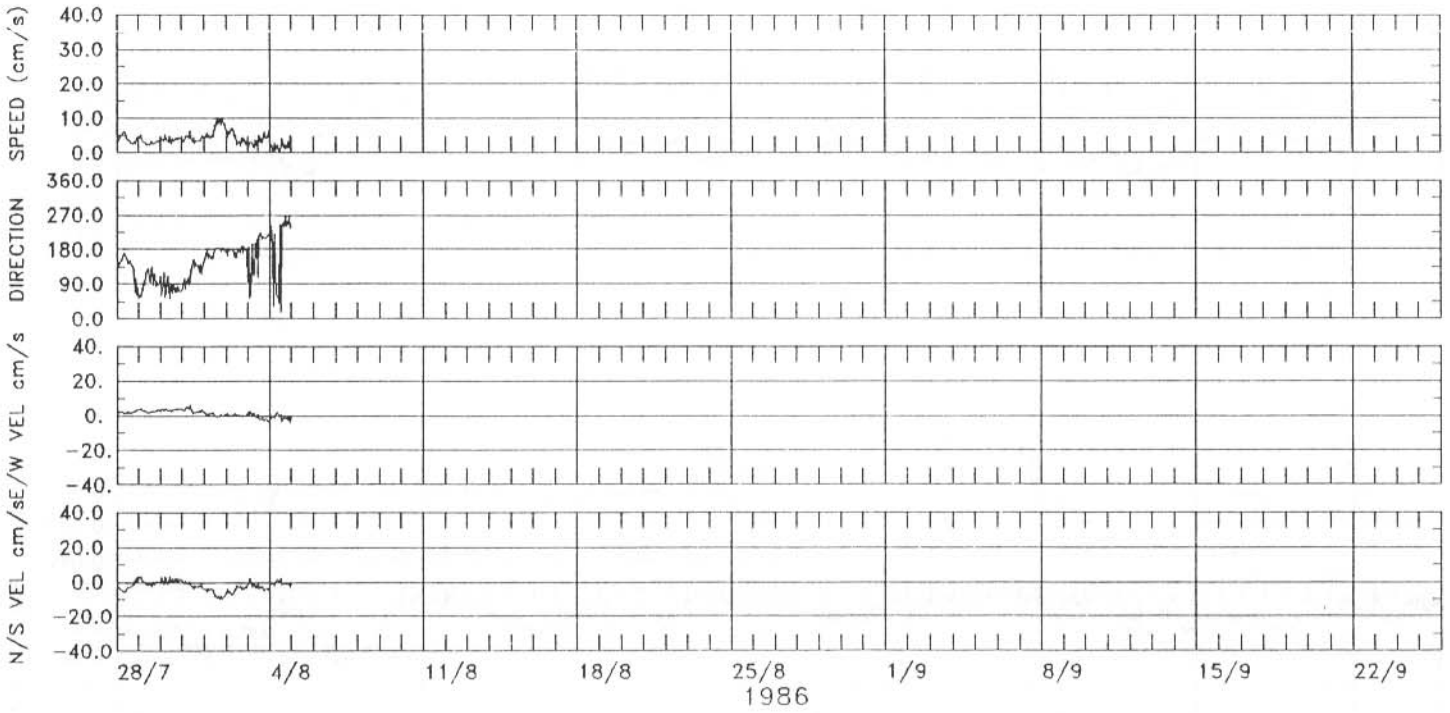
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 2)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



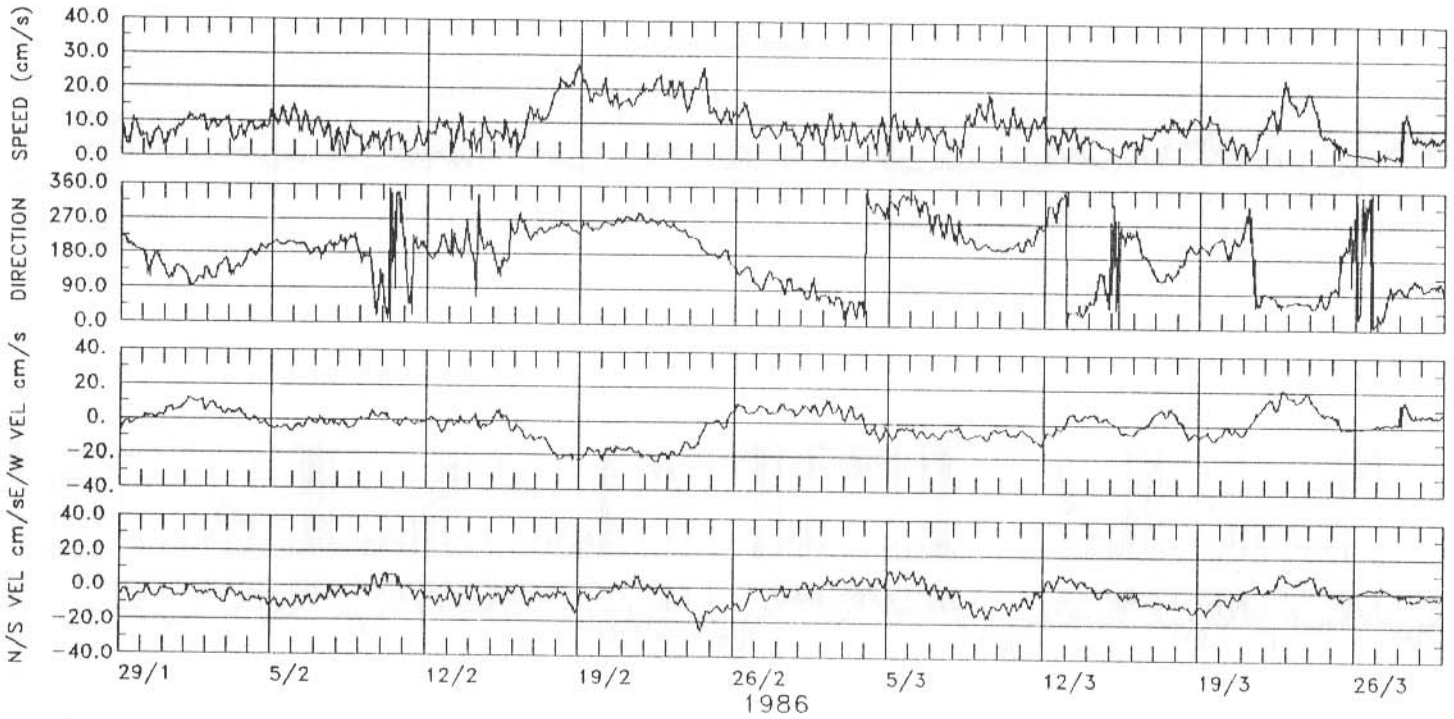
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 3)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



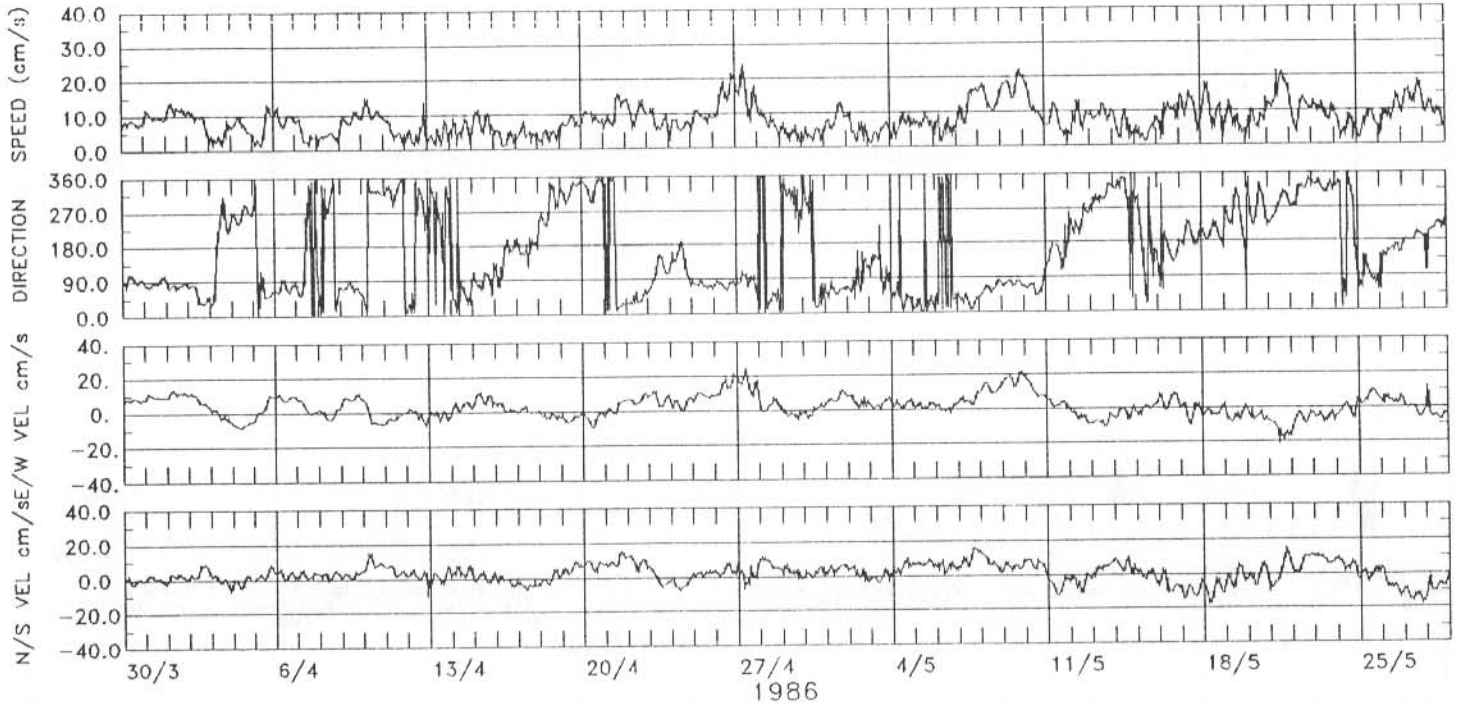
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 4)
STATION 7735/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 6/08/86 GMT RECORDING INTERVAL 60 MINS.



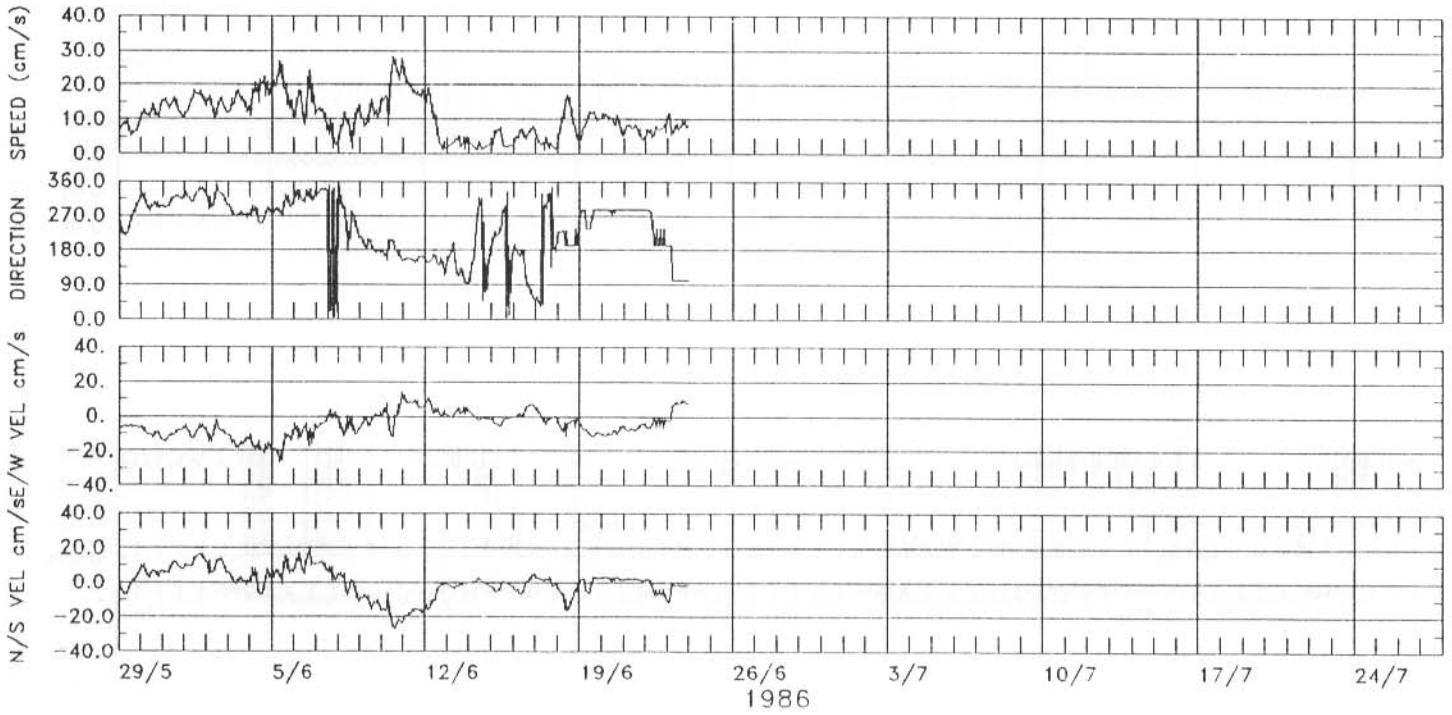
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



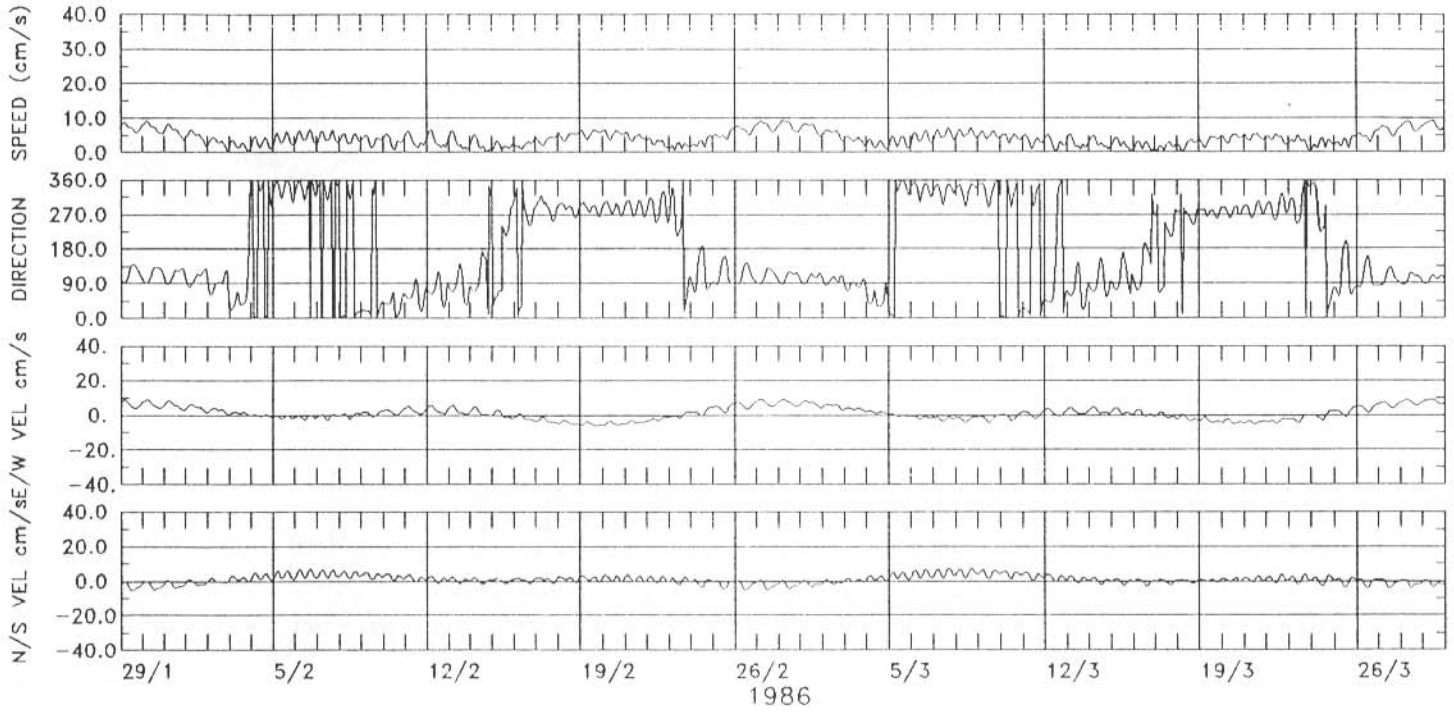
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



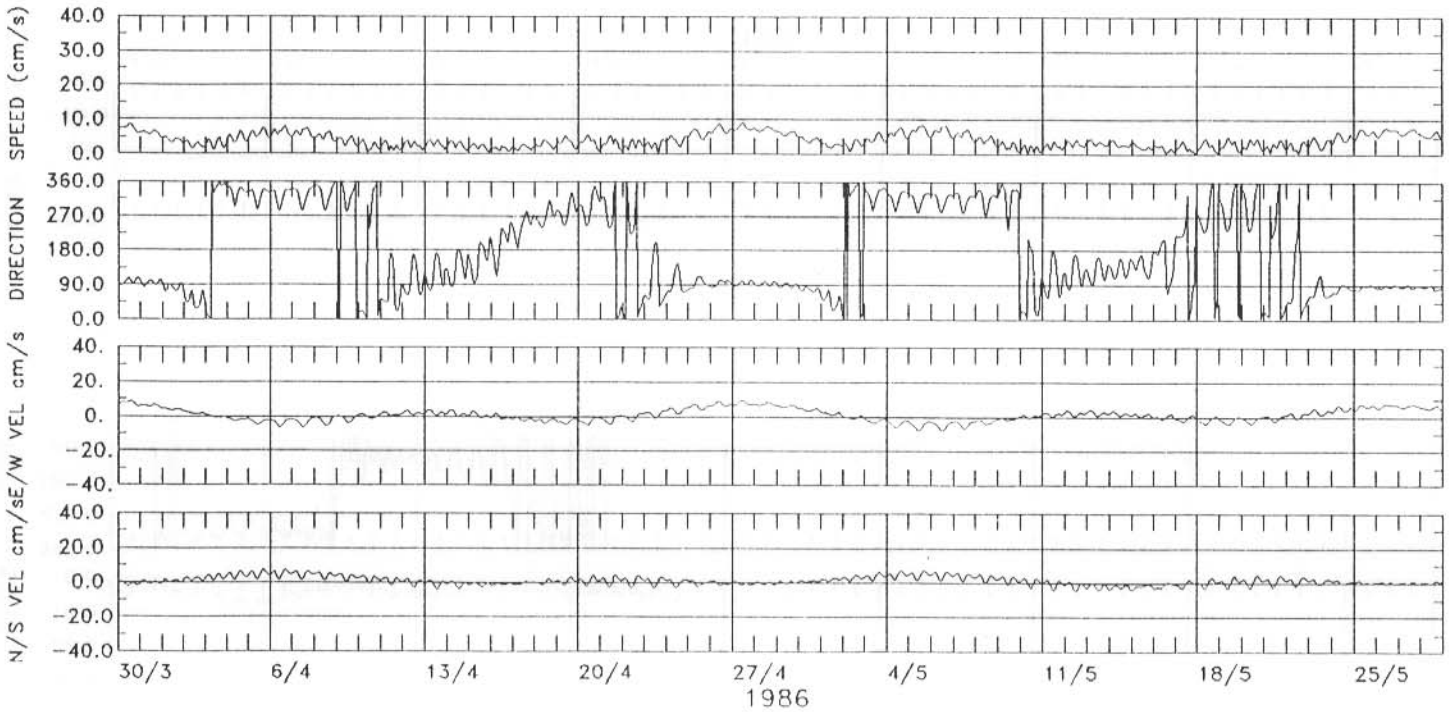
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



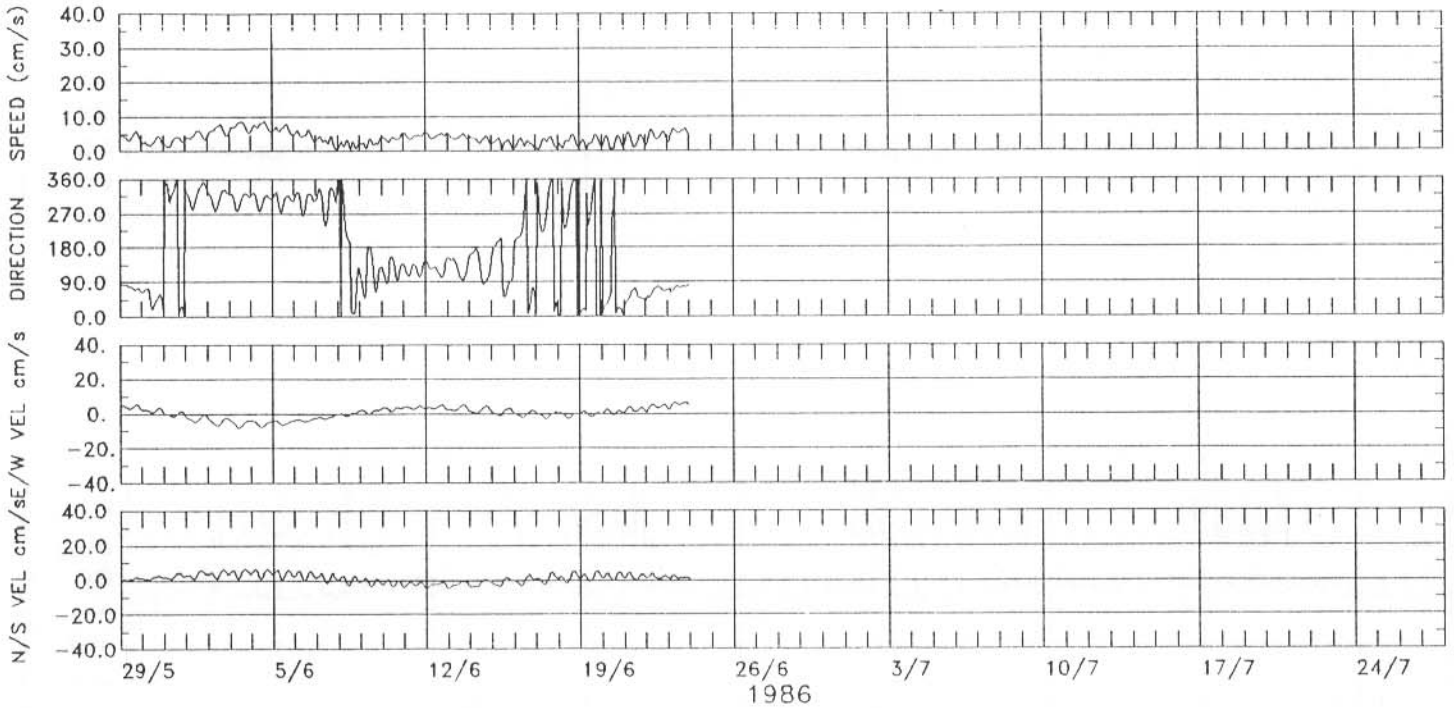
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTIONS (PART 1)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



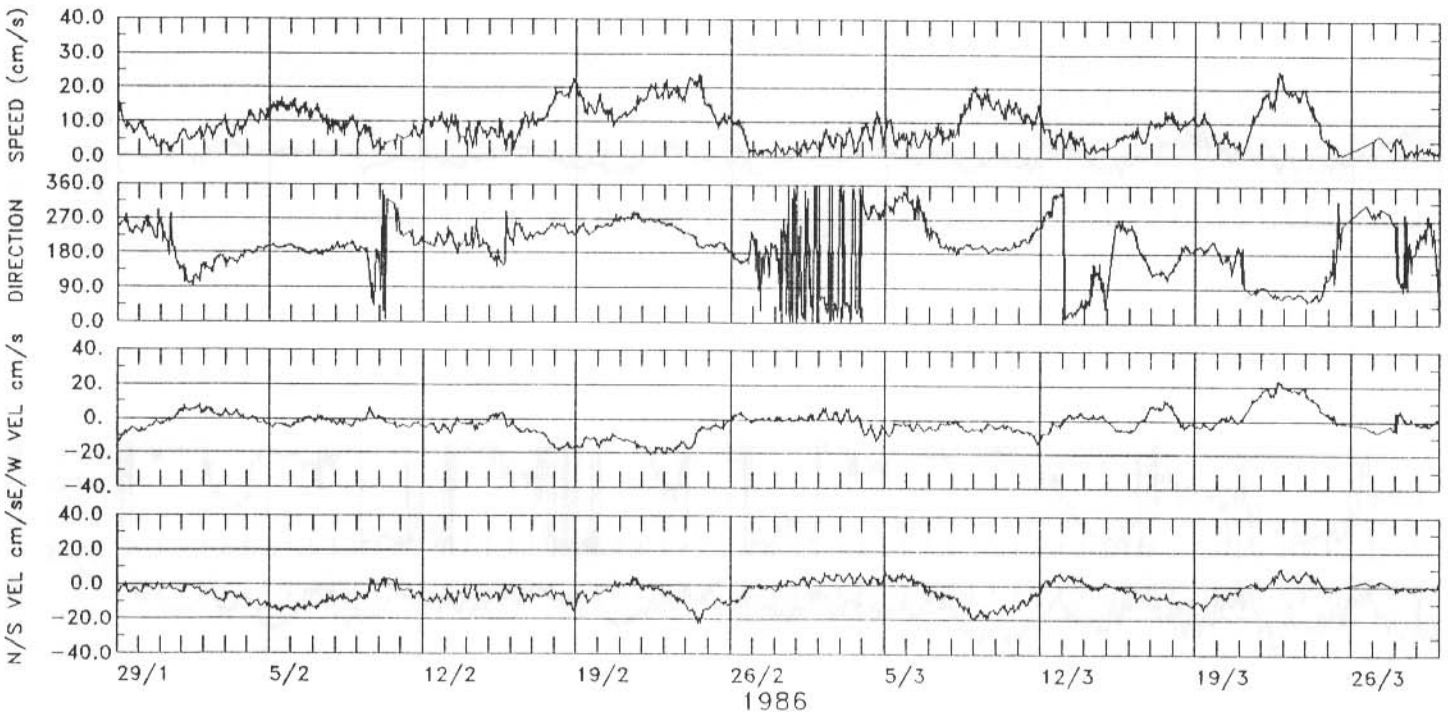
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTIONS (PART 2)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



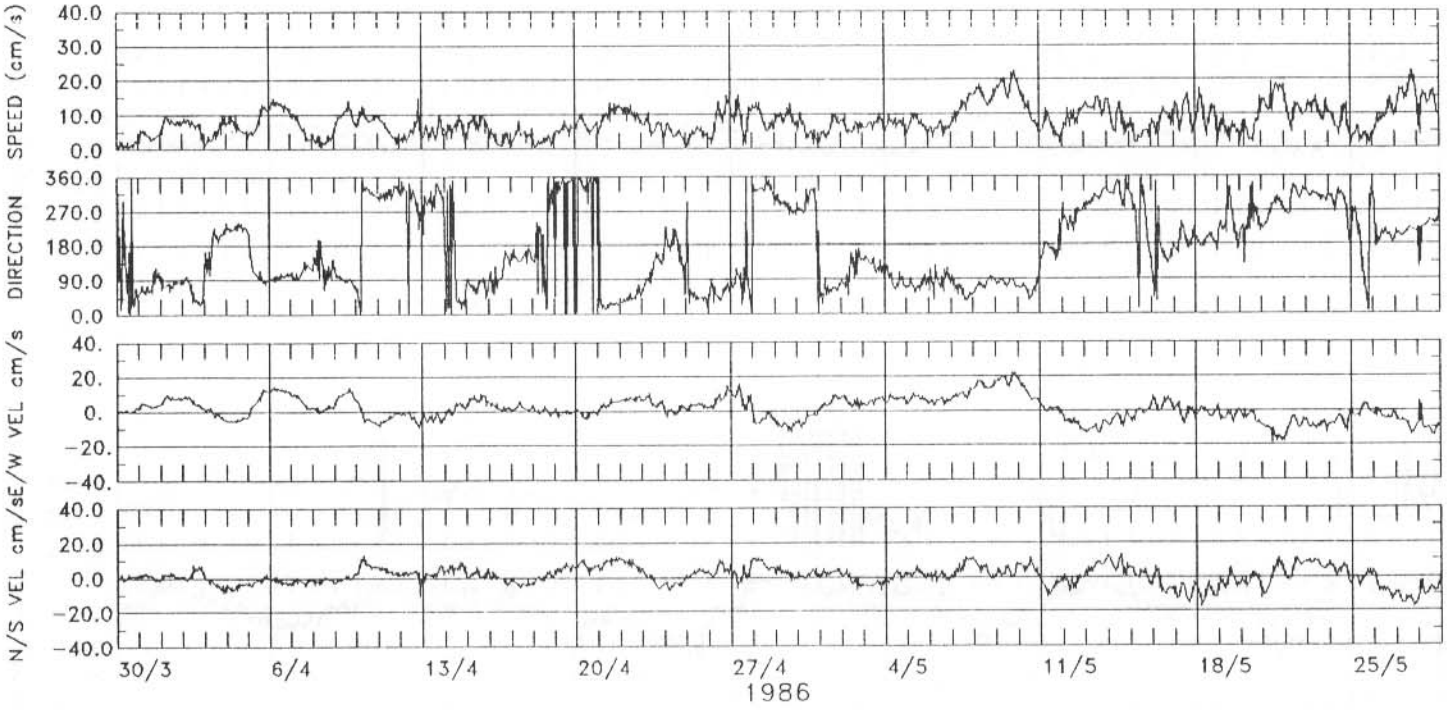
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND DIRECTIONS (PART 3)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



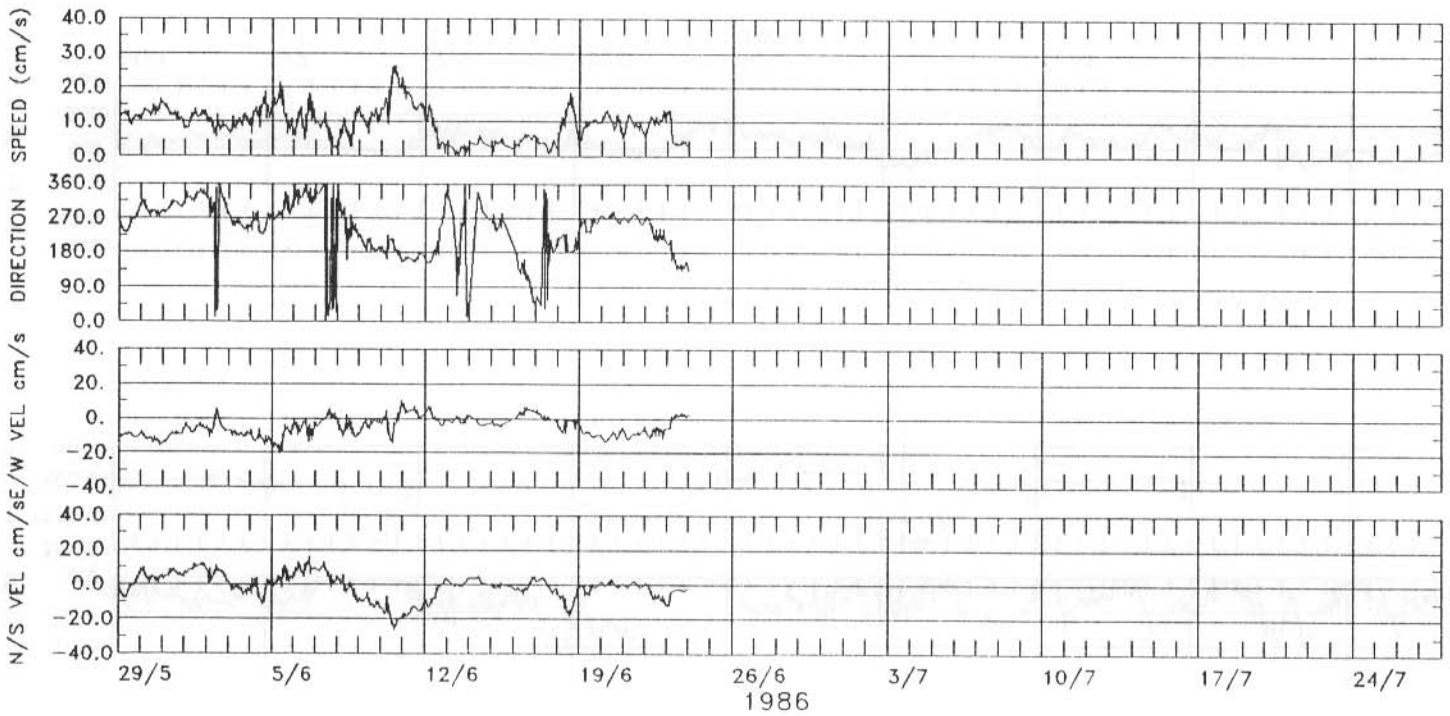
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



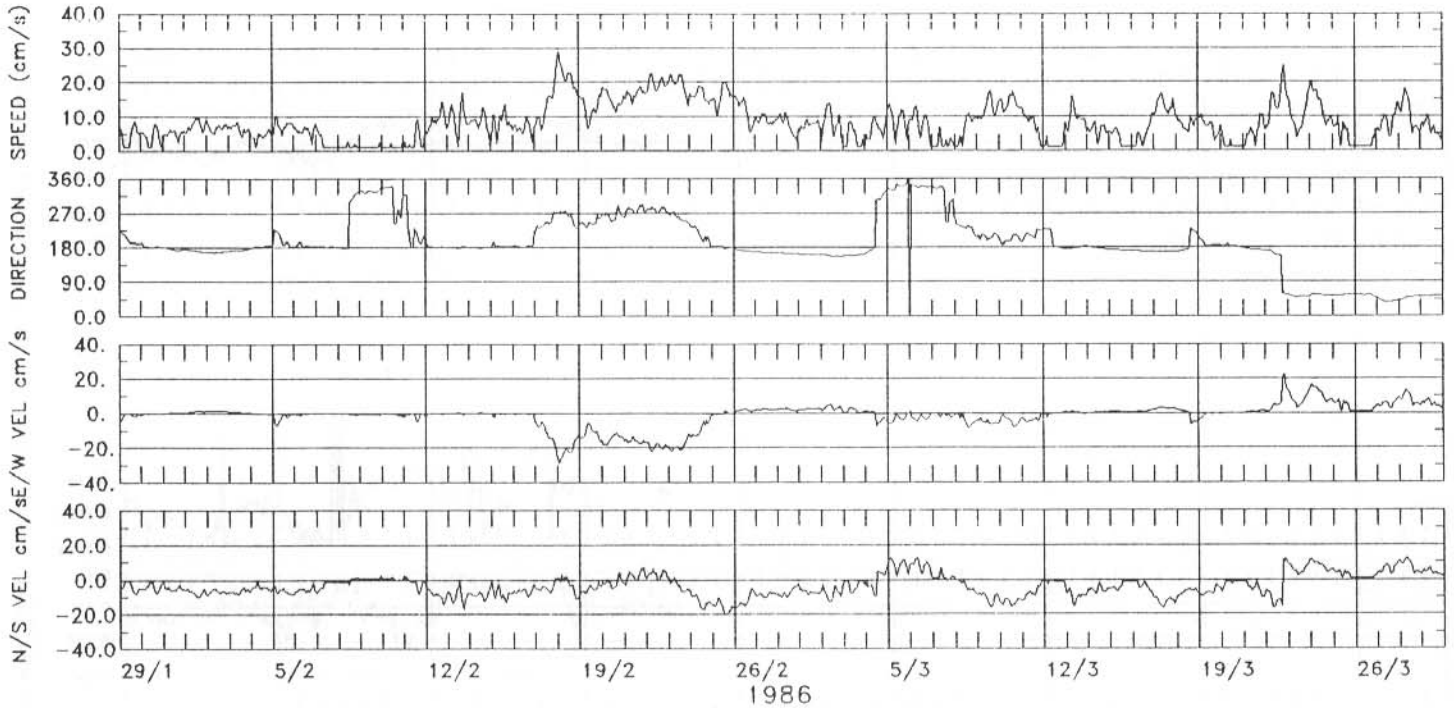
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 23/06/86 GMT RECORDING INTERVAL 60 MINS.



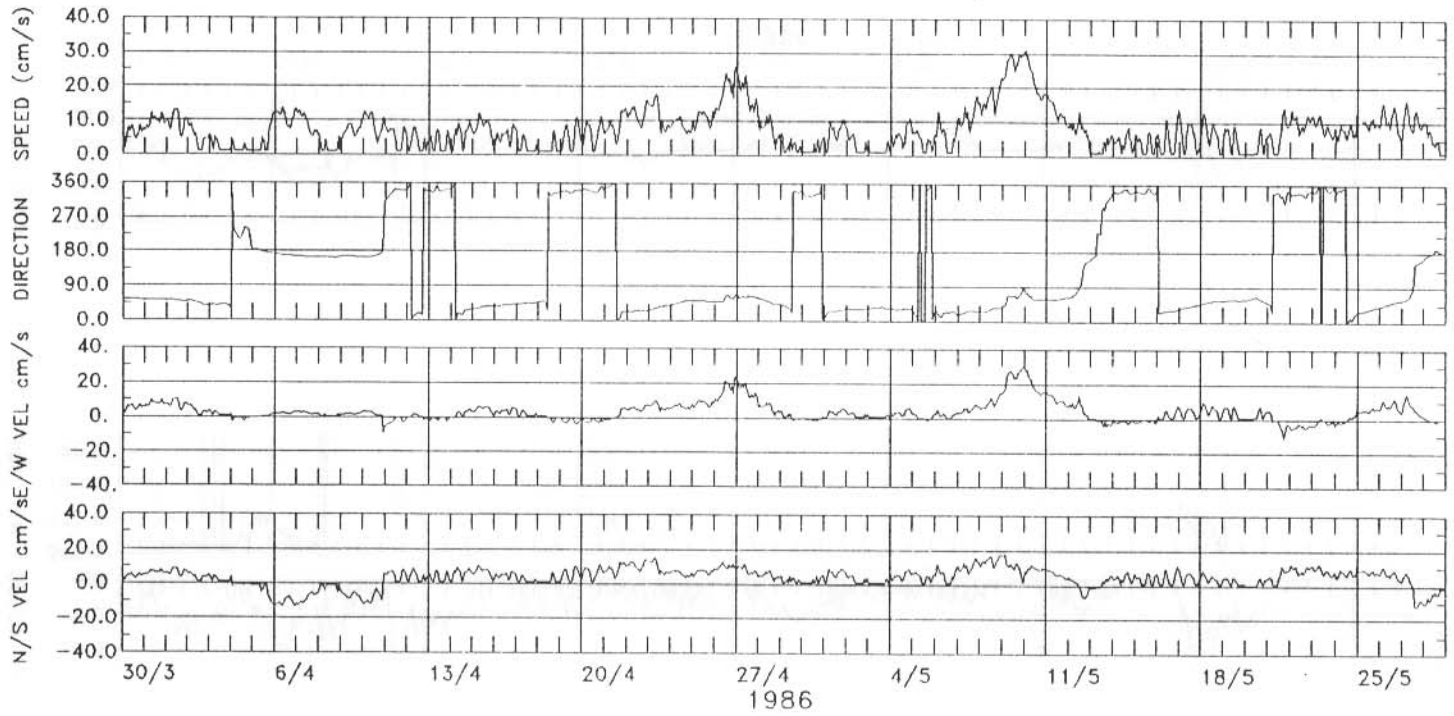
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7794/2 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 23/06/86 GMT RECORDING INTERVAL 60 MINS.



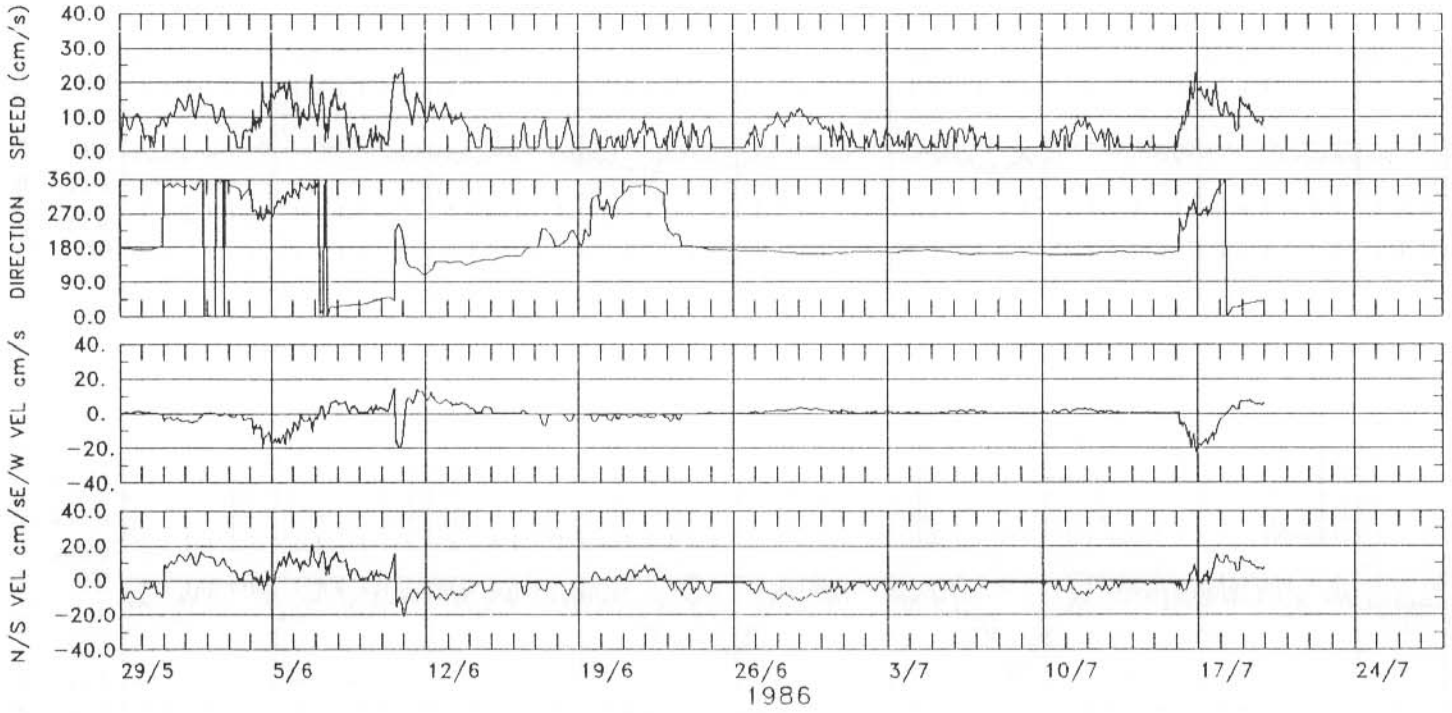
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 1)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.



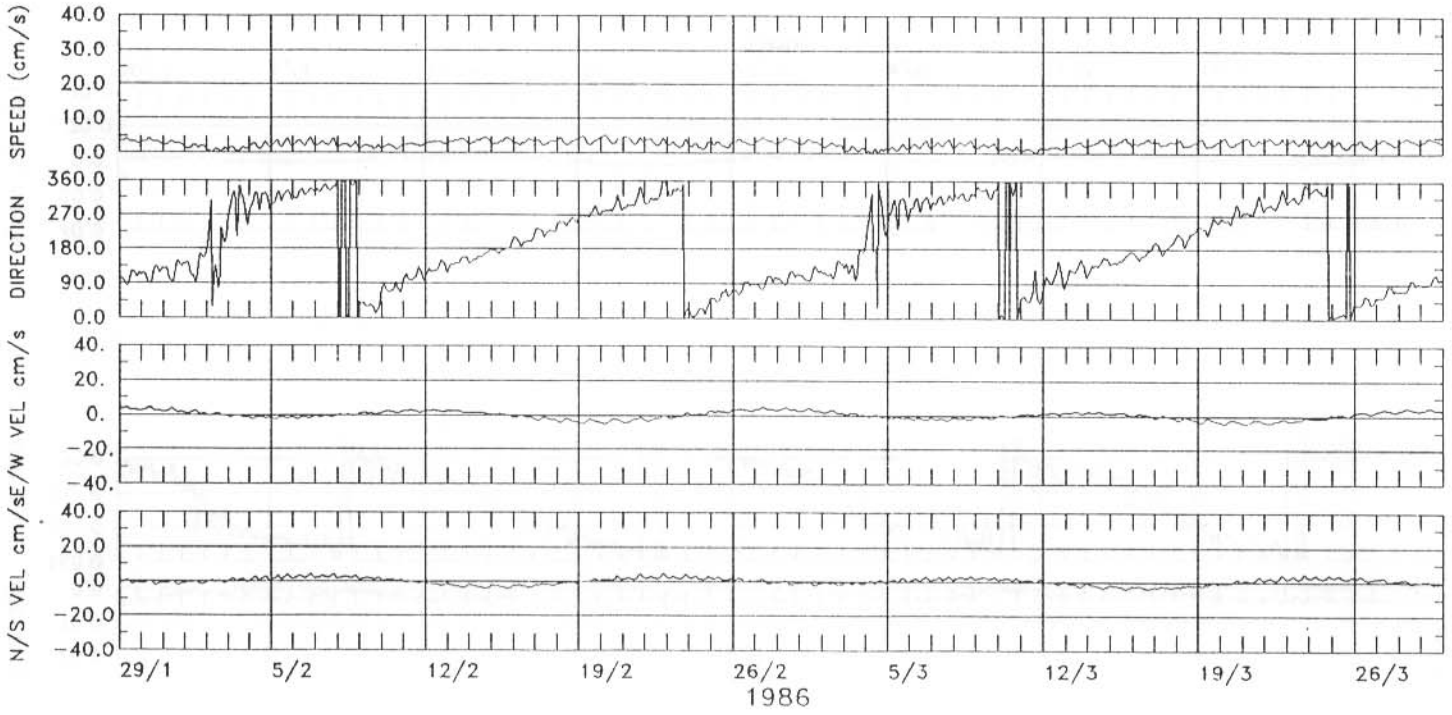
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 2)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.



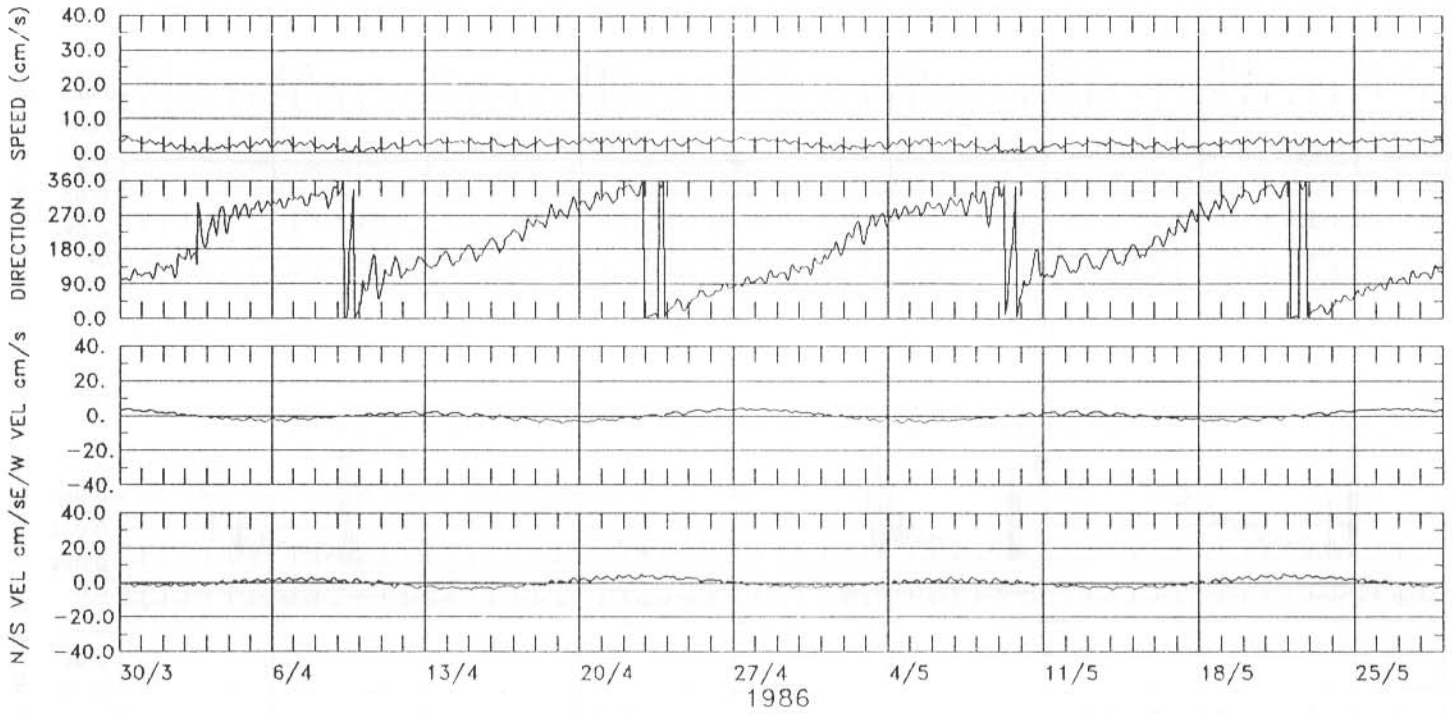
MOORING 3, PRYDZ BAY, ANTARCTICA ORIGINAL SPEEDS AND DIRECTIONS (PART 3)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.



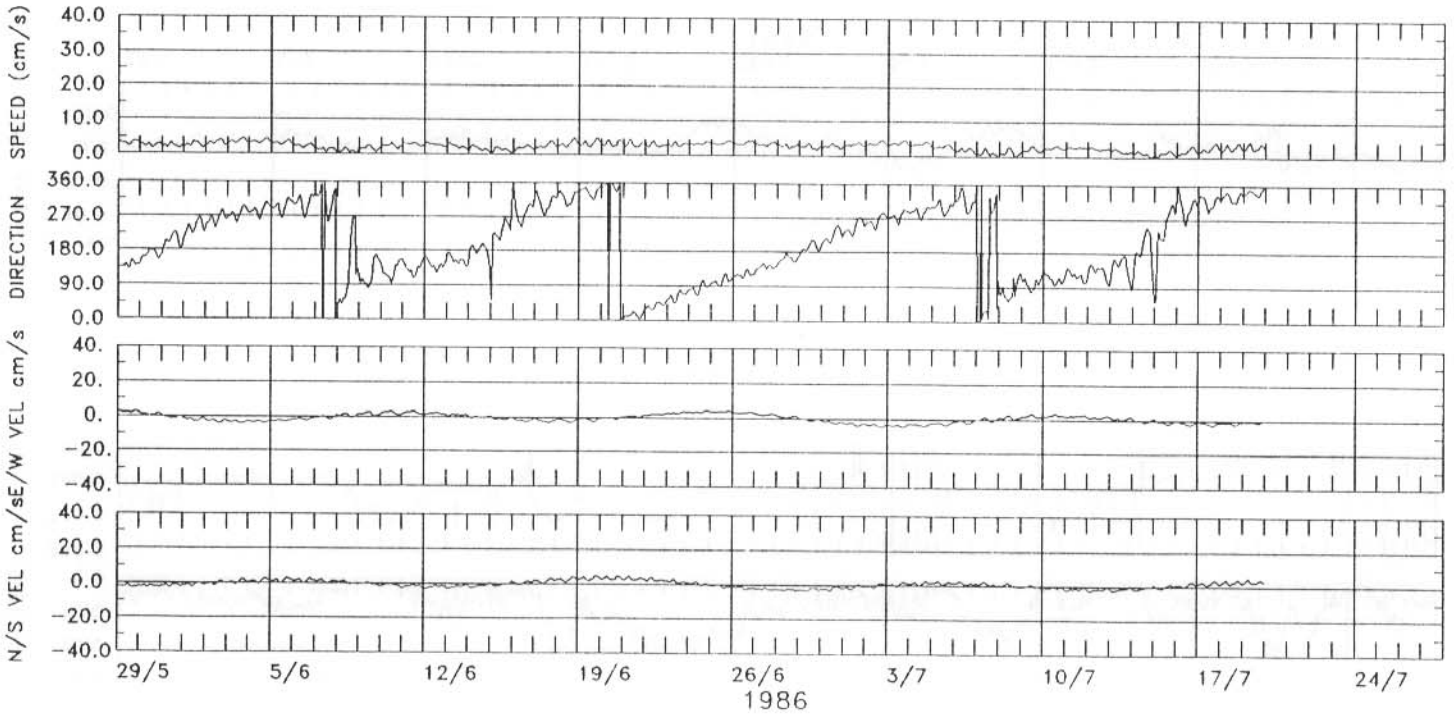
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 1)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.



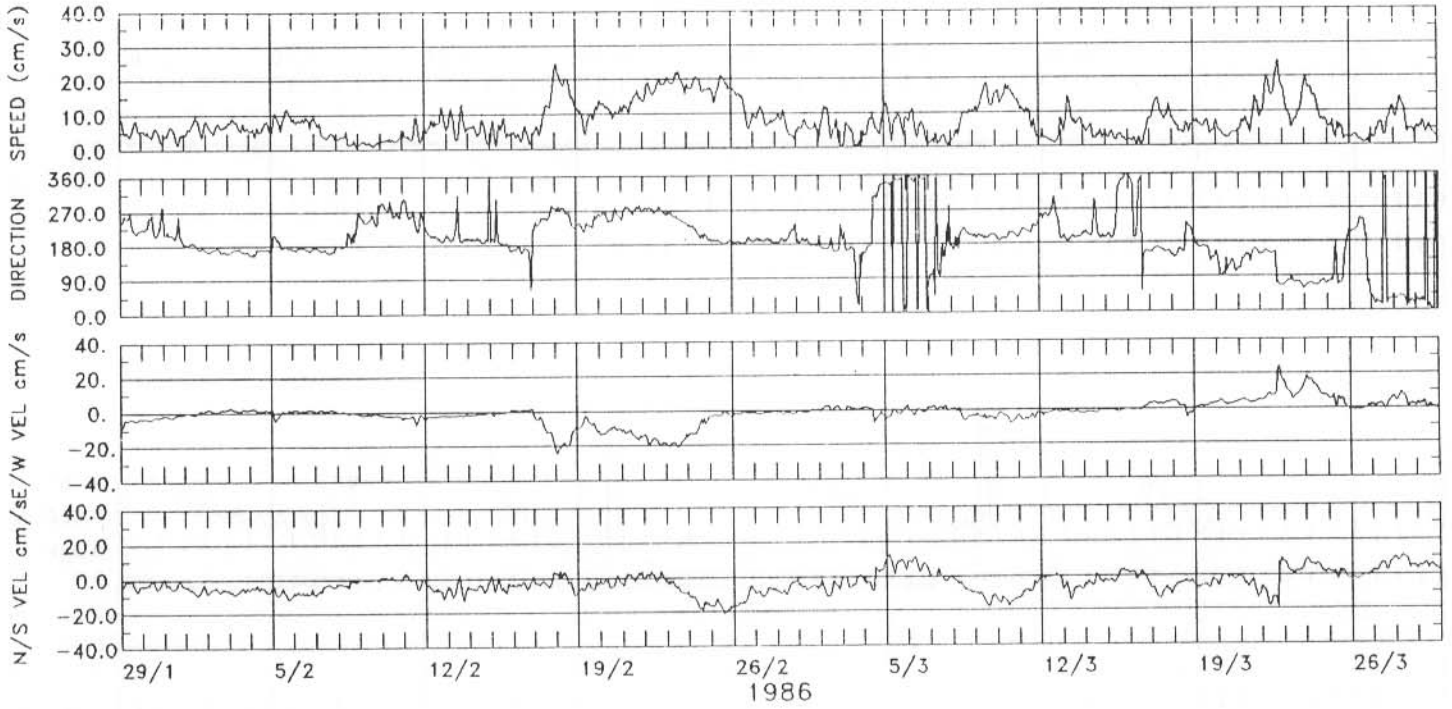
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 2)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 – 29/09/86 GMT RECORDING INTERVAL 60 MINS.



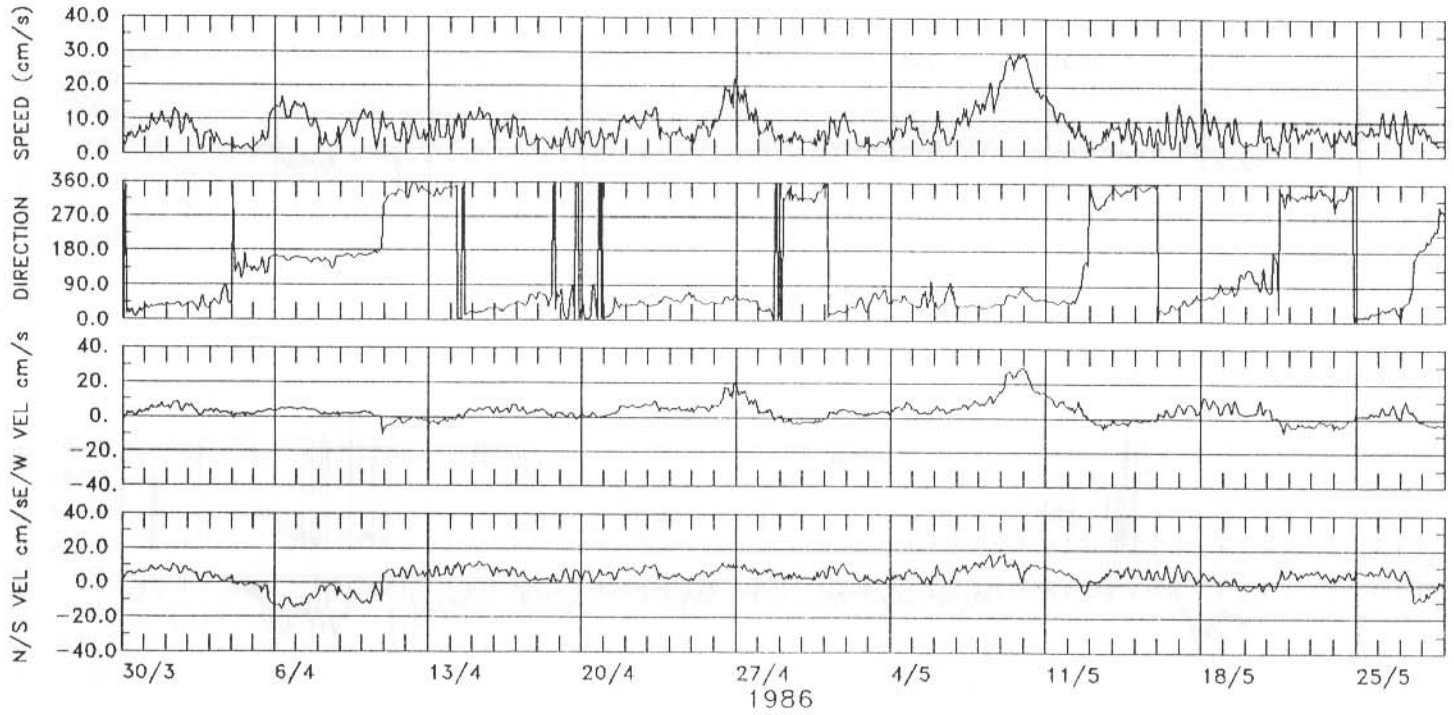
MOORING 3, PRYDZ BAY, ANTARCTICA PREDICTED SPEEDS AND VELOCITIES (PART 3)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.



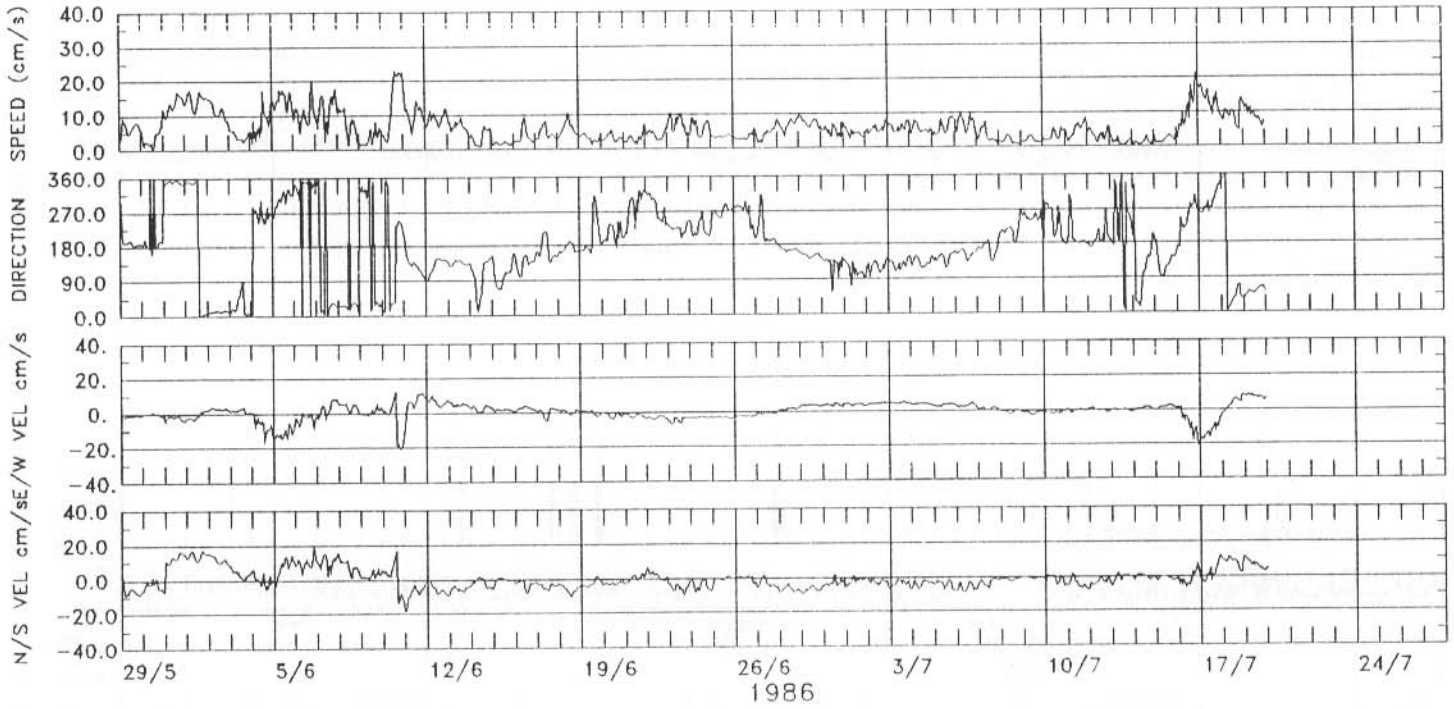
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 1)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.



MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 2)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.

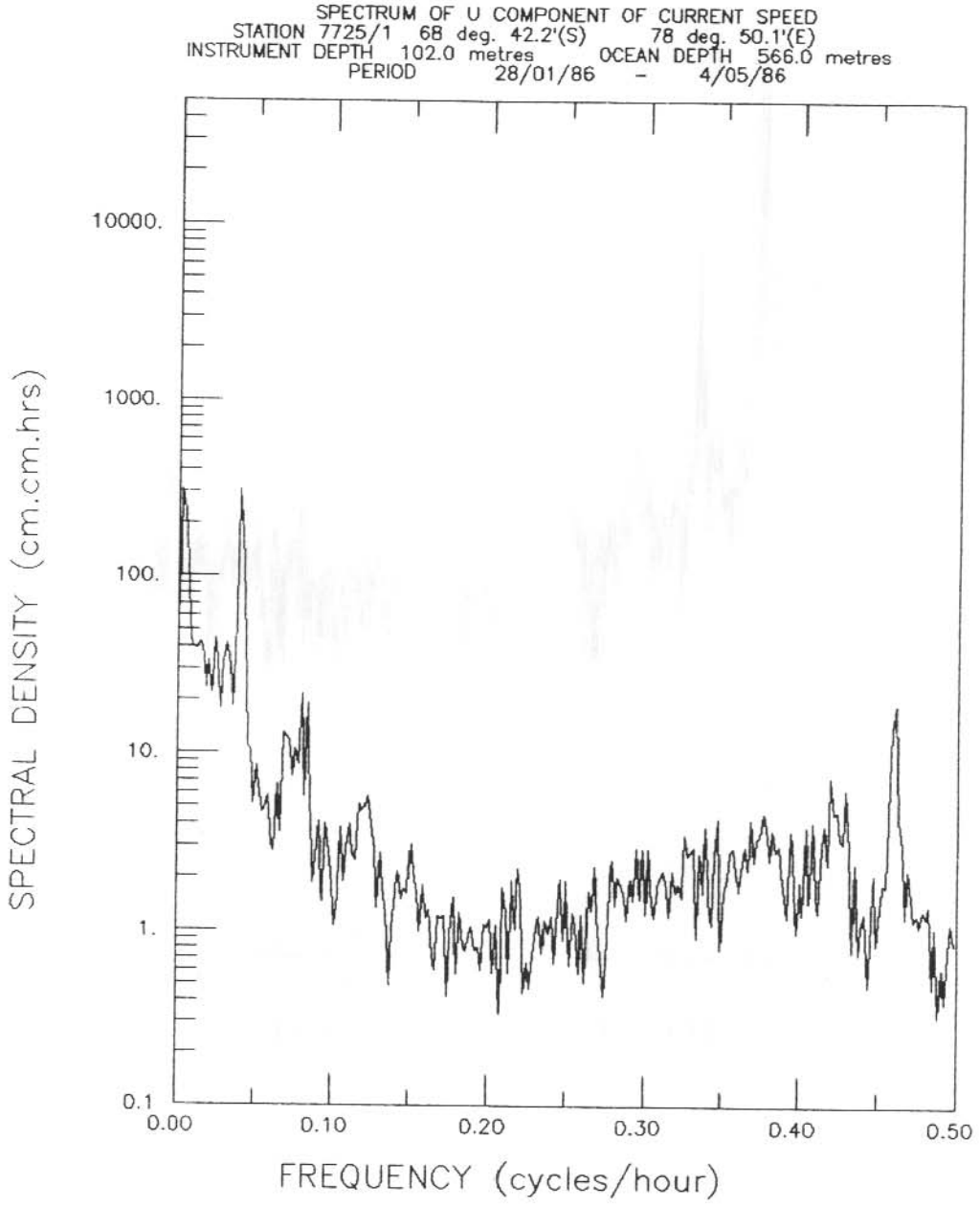


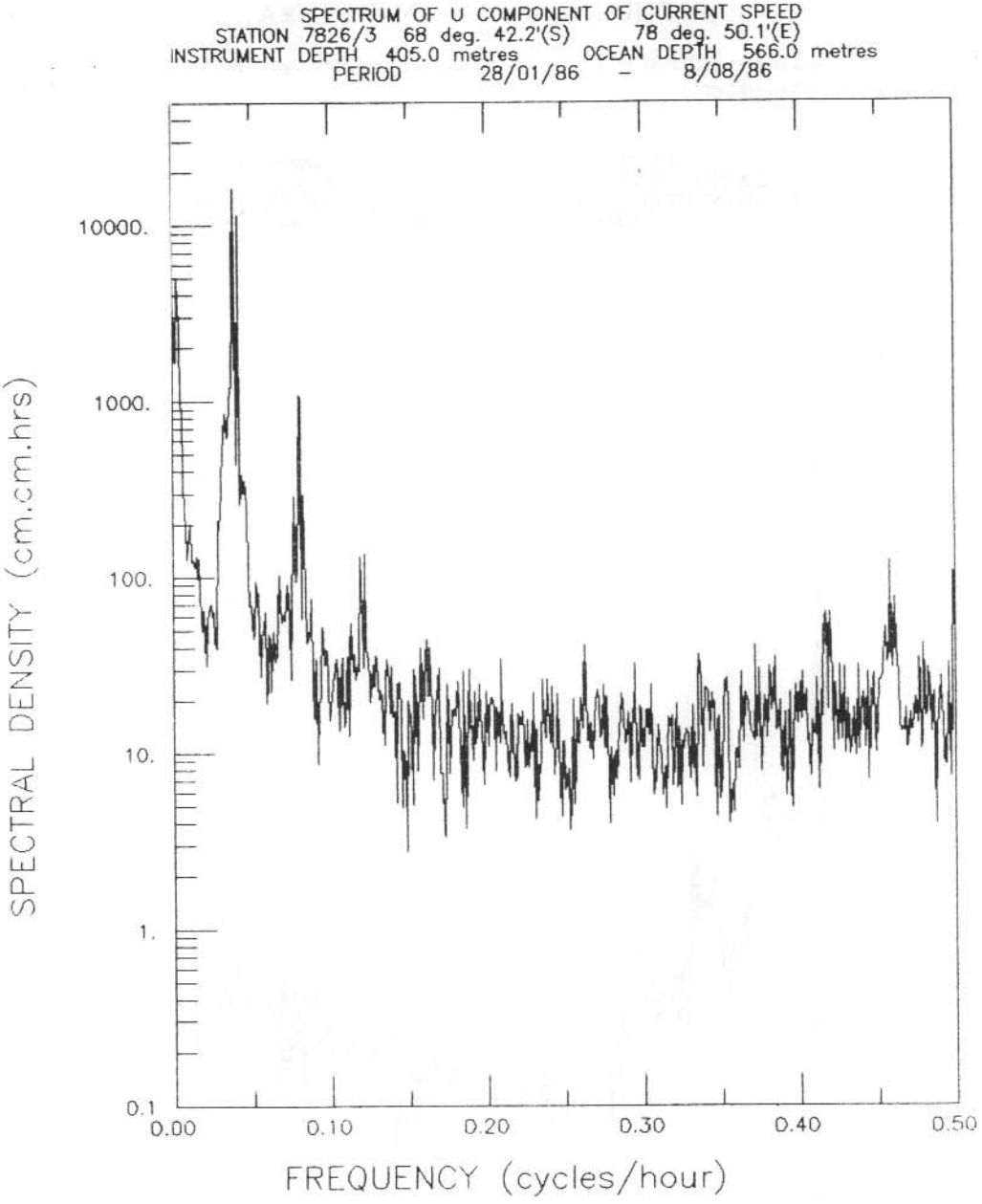
MOORING 3, PRYDZ BAY, ANTARCTICA RESIDUAL SPEEDS AND VELOCITIES (PART 3)
STATION 7623/3 68 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633 metres OCEAN DEPTH 640 metres
PERIOD 29/01/86 - 29/09/86 GMT RECORDING INTERVAL 60 MINS.

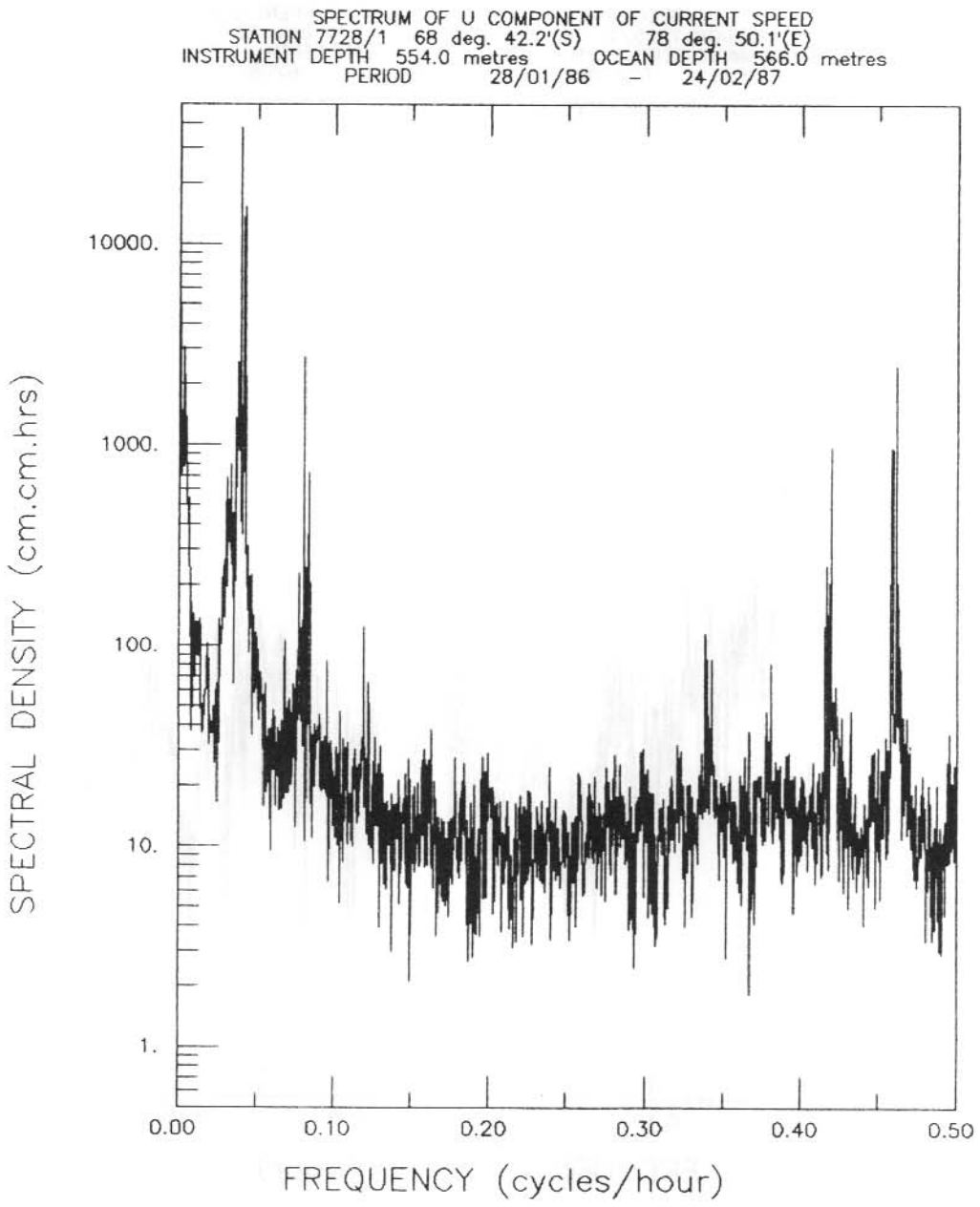


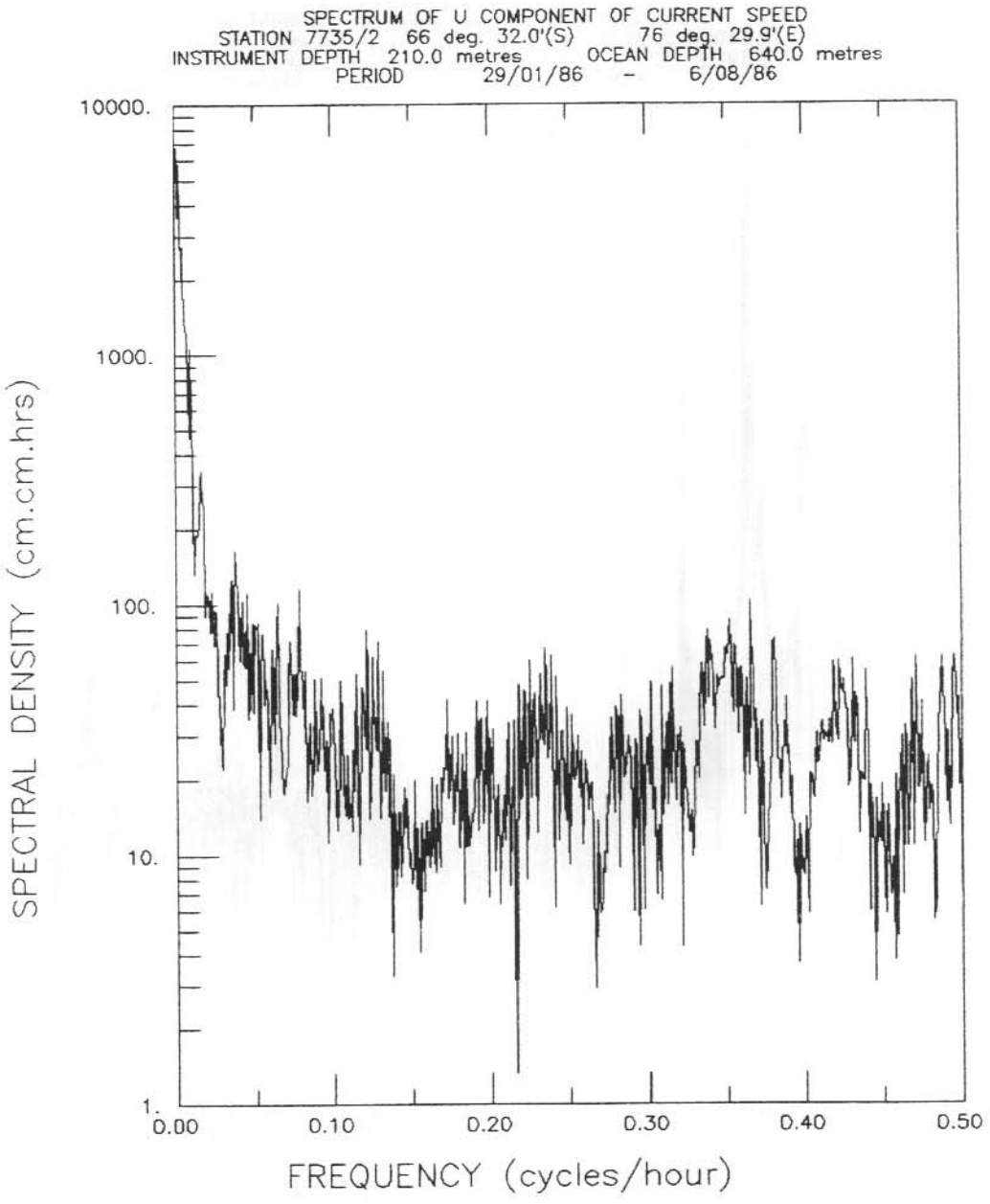
APPENDIX VIII. POWER SPECTRA

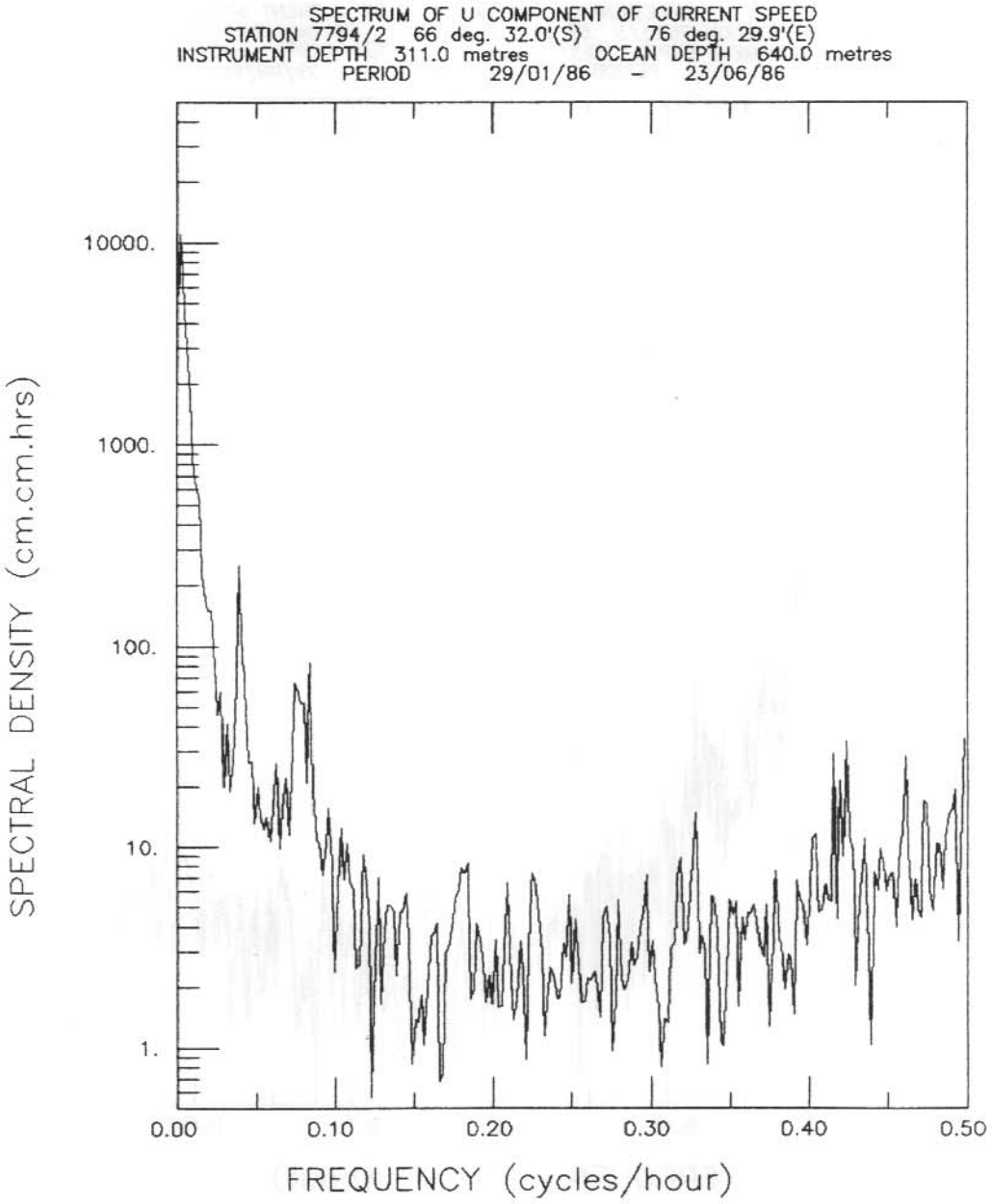
Plots are arranged in the order of moorings (1, 3) and within these sections from the shallowest to the deepest current meter.

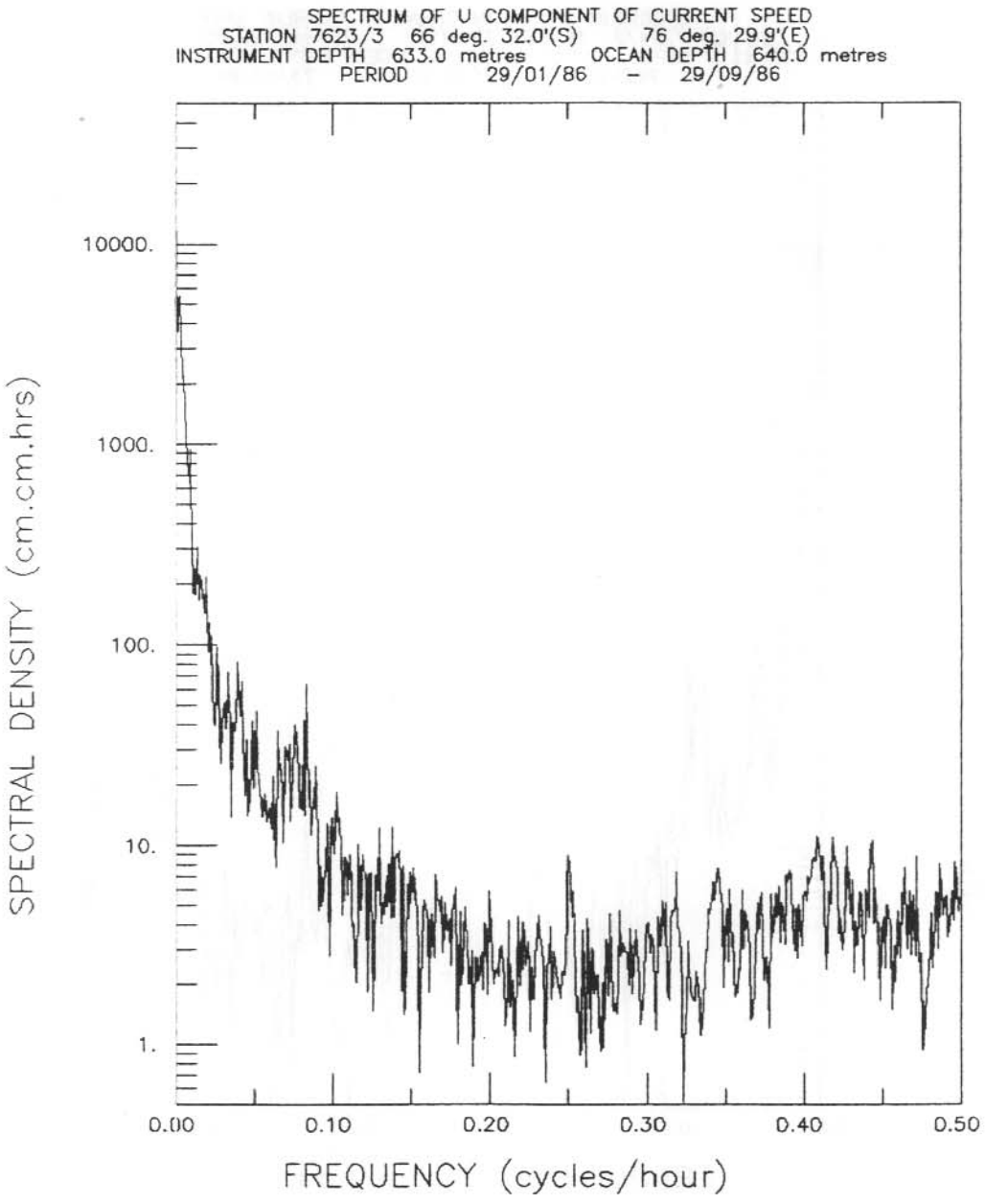



SPECTRUM OF U COMPONENT OF CURRENT SPEED
STATION 7826/3 68 deg. 42.2'(S) 78 deg. 50.1'(E)
INSTRUMENT DEPTH 405.0 metres OCEAN DEPTH 566.0 metres
PERIOD 28/01/86 - 8/08/86
SPECTRAL DENSITY (cm.cm.hrs)
10000.
1000.
100.
10.
1.
0.1
0.00
0.10
0.20
0.30
0.40
0.50
FREQUENCY (cycles/hour)


SPECTRUM OF U COMPONENT OF CURRENT SPEED
STATION 7728/1 68 deg. 42.2'(S) 78 deg. 50.1'(E)
INSTRUMENT DEPTH 554.0 metres OCEAN DEPTH 566.0 metres
PERIOD 28/01/86 - 24/02/87
SPECTRAL DENSITY (cm.cm.hrs)
10000.
1000.
100.
10.
1.
0.00
0.10
0.20
0.30
0.40
0.50
FREQUENCY (cycles/hour)


SPECTRUM OF U COMPONENT OF CURRENT SPEED
STATION 7735/2 66 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 210.0 metres OCEAN DEPTH 640.0 metres
PERIOD 29/01/86 - 6/08/86
SPECTRAL DENSITY (cm.cm.hrs)
10000.
1000.
100.
10.
1.
0.00
0.10
0.20
0.30
0.40
0.50
FREQUENCY (cycles/hour)


SPECTRUM OF U COMPONENT OF CURRENT SPEED
STATION 7794/2 66 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 311.0 metres OCEAN DEPTH 640.0 metres
PERIOD 29/01/86 - 23/06/86
SPECTRAL DENSITY (cm.cm.hrs)
10000.
1000.
100.
10.
1.
0.00
0.10
0.20
0.30
0.40
0.50
FREQUENCY (cycles/hour)


SPECTRUM OF U COMPONENT OF CURRENT SPEED
STATION 7623/3 66 deg. 32.0'(S) 76 deg. 29.9'(E)
INSTRUMENT DEPTH 633.0 metres OCEAN DEPTH 640.0 metres
PERIOD 29/01/86 - 29/09/86
SPECTRAL DENSITY (cm.cm.hrs)
10000.
1000.
100.
10.
1.
0.00
0.10
0.20
0.30
0.40
0.50
FREQUENCY (cycles/hour)