



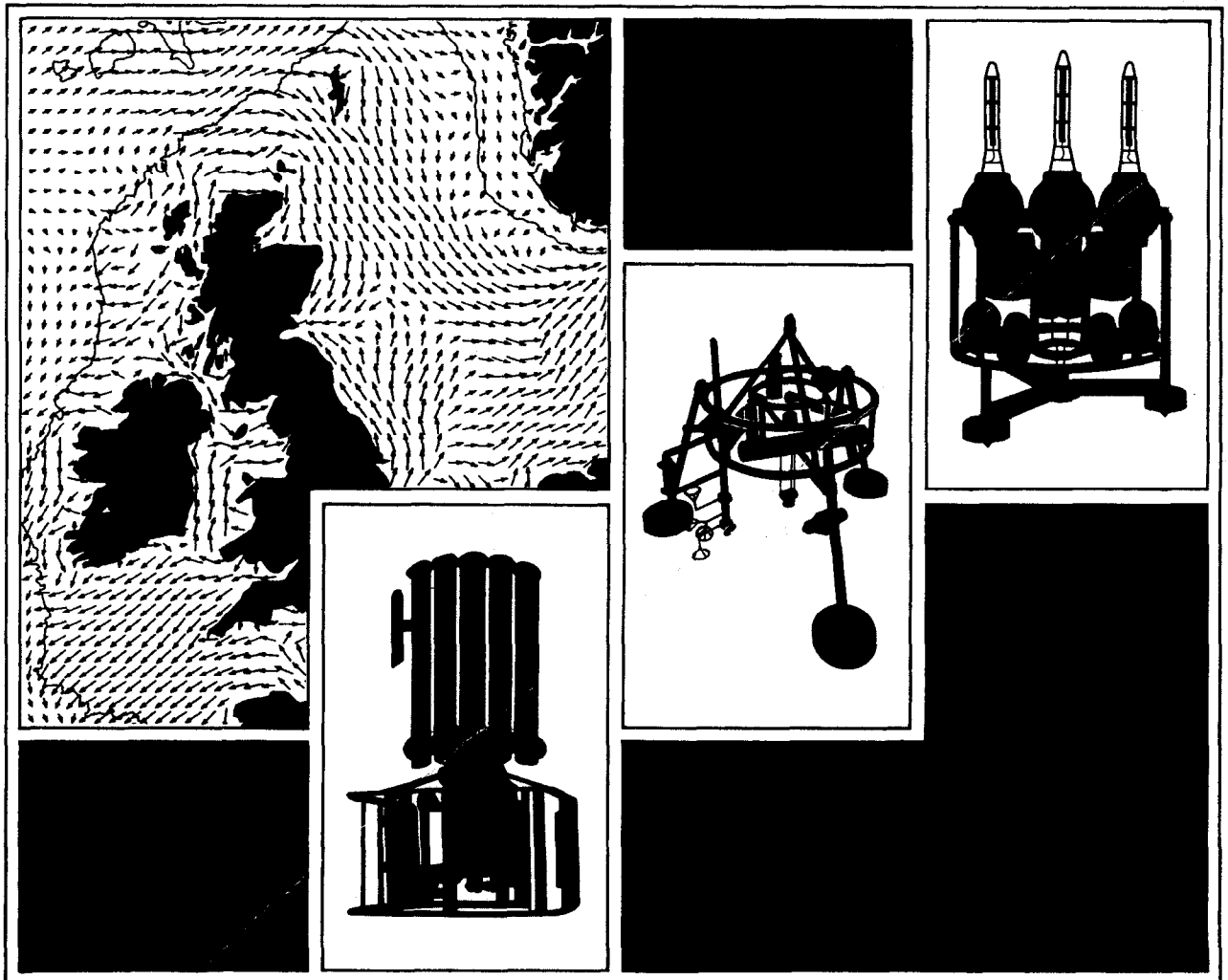
**Proudman
Oceanographic
Laboratory**

Current meter records Site E 52° 43'N 02° 25'E

August 1988 – September 1989 North Sea Project

PJ Knight J Falconer and MJ Howarth

Report No 12 1990



PROUDMAN OCEANOGRAPHIC LABORATORY

**Bidston Observatory,
Birkenhead, Merseyside, L43 7RA, U.K.**

**Telephone: 051 653 8633
Telex 628591 OCEANB G
Telefax 051 653 6269**

Director: Dr. B.S. McCartney

Natural Environment Research Council

PROUDMAN OCEANOGRAPHIC LABORATORY

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DOCUMENT DATA SHEET

<p><i>AUTHOR</i> KNIGHT, P.J., FALCONER, J. & HOWARTH M.J.</p>	<p><i>PUBLICATION DATE</i> 1990</p>
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<p><i>ABSTRACT</i></p> <p>This report describes results from a current meter rig positioned at site E during the North Sea Project. Site E was one of six current meter sites used throughout the survey part of the experiment. Standard plots are shown as well as statistical output from the calibrated current meter records.</p>	
<p><i>ISSUING ORGANISATION</i> Proudman Oceanographic Laboratory Bidston Observatory Birkenhead, Merseyside L43 7RA UK</p> <p>Director: Dr B S McCartney</p>	<p><i>TELEPHONE</i> 051 653 8633</p> <p><i>TELEX</i> 628591 OCEAN BG</p> <p><i>TELEFAX</i> 051 653 6269</p>
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1 INTRODUCTION

Fifteen months of data were gathered in the southern North Sea as part of the North Sea Project, a NERC Community Research Project. Each month the RRS Challenger ship time was split between a two week survey and a two week process cruise.

This report describes the results from a current meter mooring at 52° 43'N 02° 25'E deployed during the survey cruises. The mooring was first deployed on survey cruise Challenger C33/88 and subsequently re-deployed during follow up cruises between August 1988 and September 1989.

Figure 1 shows the position of the mooring, site E, and its relative position to other sites in the North Sea. It was one of six current meter moorings deployed during the North Sea Survey, and was situated in a region of strong tidal currents, up to a maximum of 1.5 m s⁻¹, and in relatively shallow water; the depth was 49m. These two factors produced well mixed conditions through the water column, throughout the year.

The mooring, Figure 2, contained three current meters, an InterOcean S4 current meter at 35m from the bottom, another S4 at 20m from the bottom and an Aanderaa RCM 7 current meter at 7m from the bottom. The S4's, electromagnetic current meter's, measured vector averaged North and East components of current velocity. The RCM 7, a rotor/paddle current meter, sampled the current every 1/50th of the recording interval and parameters every recording interval. It was primarily used to measure conductivity, pressure and temperature, although averaged current speed and direction were also recorded. The pressure sensor, not of tide gauge quality, was used as an indication of mooring stability.

After calibration statistics were calculated from the data and a low pass filter was applied to produce six hourly values which were also statistically analysed. Finally standard current meter plots were produced in order to check data quality and aid in interpretation of the data.

The data return from these deployments was above average, although one mooring was lost completely and other moorings suffered losses due to trawling and recovery damage. The mooring was not deployed during cruises C39/88 and C43/89 due to losses and lack of equipment. Also, the mooring on cruises C47/89 and C49/89 only had RCM 7's fitted, because of problems with the S4's lithium batteries, and C53/89 only had S4's fitted, because a RCM 7 was not available due to the previous mooring at this site being trawled up. The current meters on the mooring returned 67% good data when deployed, although the percentage reduces to 51% when non-deployed meters are included.

2 SUMMARY OF DEPLOYMENTS

The following information gives an overview of the data processed at site E during the North Sea project.

Mooring	Meter No	Deployment	Recovery	Meter Ht(m)	Data length	Comments
C33EC	1115	04-AUG-88	15-SEP-88	30	41.3 days	Good data set
C33EC	1116	04-AUG-88	15-SEP-88	20	0.0 days	Corrupted data
C33EC	9353	04-AUG-88	15-OCT-88	7	41.3 days	Speeds larger than expected
C35EC	1117	15-SEP-88	02-OCT-88	30	0.0 days	Set up wrong
C35EC	1114	15-SEP-88	02-OCT-88	20	17.0 days	Good data set
C35EC	9347	15-SEP-88	02-OCT-88	7	17.0 days	Good data set
C37EC	1116	02-OCT-88	-----	30	0.0 days	Lost
C37EC	1115	02-OCT-88	-----	20	0.0 days	Lost
C37EC	9353	02-OCT-88	-----	7	0.0 days	Lost
C41EC	1119	01-DEC-88	30-DEC-88	30	28.9 days	Good data set
C41EC	1118	01-DEC-88	30-DEC-88	20	28.9 days	Good data set
C41EC	9069	01-DEC-88	30-DEC-88	7	28.9 days	Good data set
C45EC	1119	28-JAN-89	11-MAR-89	30	41.9 days	Good data set
C45EC	1118	28-JAN-89	11-MAR-89	20	41.9 days	Good data set
C45EC	9069	28-JAN-89	11-MAR-89	7	41.9 days	Good data set
C47EC	9347	11-MAR-89	29-MAR-89	7	18.0 days	Good data set
C49EC	9579	29-MAR-89	09-MAY-89	7	40.3 days	Good data set
C51EC	1262	09-MAY-89	-----	30	48.8 days	Trawled
C51EC	1117	09-MAY-89	-----	20	48.8 days	Trawled
C51EC	9414	09-MAY-89	-----	7	0.0 days	Lost

Mooring	Meter No	Deployment	Recovery	Meter Ht(m)	Data length	Comments
C53EC	1264	06-JUN-89	24-JUN-89	30	18.0 days	Good data set
C53EC	1265	06-JUN-89	24-JUN-89	20	18.0 days	Good data set
C55EC	1263	24-JUN-89	24-JUL-89	30	0.0 days	S4 damaged
C55EC	1261	24-JUN-89	24-JUL-89	20	2.9 days	Short by 27.1 days
C55EC	9378	24-JUN-89	24-JUL-89	7	2.9 days 30.0 days	N/E/S/P Short by 27.1 days T Good data set
C57EC	1112	02-AUG-89	23-AUG-89	30	29.9 days	Good data set
C57EC	1118	02-AUG-89	23-AUG-89	20	0.0 days	Corrupted data
C57EC	9579	02-AUG-89	23-AUG-89	7	21.9 days 29.9 days	N/E Short by 8.0 days T/S Good data set
C59EC	1263	23-AUG-89	16-SEP-89	30	28.9 days	Good data set
C59EC	1112	23-AUG-89	16-SEP-89	20	23.9 days	Short by 5.0 days
C59EC	9378	23-AUG-89	16-SEP-89	7	7.2 days	Short by 21.7 days

3 RIG SYSTEM DESCRIPTION

The mooring was deployed in a water depth of 49m at latitude of 52° 43'N and longitude 02° 25'E. It consisted of three current meters at 7m, 20m and 35m above the sea bed. Figure 2 shows a schematic diagram of the mooring which is a standard 'U' shape

4 CURRENT METER SPECIFICATIONS

The top two meter's used were InterOcean System Model S4's and the bottom meter was a RCM 7 Aanderaa. The primary reason for deploying the Aanderaa was to measure parameters such as conductivity, temperature and pressure. The RCM 7 also measured speed and direction, but this type of meter does not perform well in the wave zone and its velocity should be treated with circumspection.

4.1 S4 current meter

The InterOcean Systems Model S4 electromagnetic current meter is a self contained 0.25 diameter sphere, with no protruding sensors. It measures current by creating a magnetic field and sensing the voltage induced in two orthogonal directions, by the movement of the sea water, an electrical conductor, through the field. This information is combined with the instrument orientation, sensed by a Flux-Gate compass, and the North and East components computed. The S4's at this site were used in vector average mode throughout the survey. They sampled every $\frac{1}{2}$ a second and averaged the vectors over a 10 minute recording interval.

4.2 S4 specification

Speed	Range	0 to 350 cm s ⁻¹
	Accuracy	±2 cm s ⁻¹
Direction	Range	0 to 360°
	Accuracy	±2°

4.3 RCM 7 current meter

The Aanderaa RCM 7 current meter is a self-recording current meter. Temperature is measured by a thermistor fitted into a stud extending into the water. Conductivity is measured by an electrodeless induction conductivity cell and pressure is measured by a sensor consisting of a potentiometer driven by a Bourdon tube. A vane is attached to the meter in order to align the compass with current flow and keep the meter in an upright position. The velocity of the current is measured with a half shrouded paddle wheel situated on top of the meter. During the selected recording interval of 10 minutes the number of rotor revolutions and the direction of the compass are sampled every 12 seconds and broken up into North-South and East-West components. When the 10 minute recording interval has elapsed, the resultant average vector and its angle is calculated and recorded.

4.4 RCM 7 specification

Speed	Range	2 to 250 cm s ⁻¹
	Accuracy	±2 cm s ⁻¹
Direction	Range	0 to 360°
	Accuracy	±5°
Temperature	Range	-2.46 to 21.4°C
	Accuracy	±0.05°C
Conductivity	Range	21 to 51 mmho cm ⁻¹
	Accuracy	±0.025 mmho cm ⁻¹
Pressure	Range	0 to 100 PSI or 0 to 200 PSI
	Accuracy	±1%

5 DATA PROCESSING STEPS

Data from the different meters were handled in similar ways. The S4 and RCM 7 data were transferred from the recovered meter directly to an IBM PS/2 on board RRS Challenger and then loaded onto a 3.5 inch floppy disk which was brought back to the Proudman Oceanographic Laboratory. Both types of data were then transferred again, to the IBM 4381 mainframe via a 3270 terminal emulator on the IBM PS/2.

Two software systems, CALT and CALP, were developed at POL for quick and efficient processing and display of times series data, such as current meter data. The CALT system calibrates and checks for errors and the CALP system produces standard graphical output, filtered and non-filtered statistical analyses.

Before calibrating the data, all the information required for processing were input into an ORACLE data base. All the information can be accessed easily with FORTRAN programs.

Processing was then initiated by CALTUX, which calls a suite of FORTRAN programs for error checking and producing calibrated data. Any errors found from the initial run were edited out of the raw data and CALTUX run again.

After successful completion of the CALTUX stage another suite of FORTRAN programs initiated by CALPTX were used to produce standard current meter graphical output, low pass filtered output and statistics for non-filtered and filtered data. The types of plot obtained, details of filtering and statistics are explained in more detail in the following sections.

6 DETAILS OF STATISTICS AND FILTERING

6.1 Simple statistics

A simple statistical analysis was carried out on each calibrated data set. The following statistics were calculated :-

- (1) Mean, variance and standard deviation of the East and North components of velocity.
- (2) The mean vector speed and direction were calculated from the above statistics.
- (3) The maximum ten and minimum ten Northings and Eastings and the top speeds.

6.2 Variance ellipse statistics

Statistical analysis was also carried out on the ellipse which can be graphically represented by a scatter plot. The following statistics were calculated :-

- (1) The maximum and minimum variances and their ratio (minimum/maximum). If the ratio is near to one the currents have no preferred direction, whilst if it is near to zero the flow is rectilinear.
- (2) The direction associated with the maximum and minimum variance, in the range of -180° to $+180^{\circ}$.
- (3) The total variance which equals the sum of the North and East component variances or the sum of the maximum and minimum variances.
- (4) The average direction for each half of the ellipse, related to the directions of maximum variance. If these directions differ by 180° the scatter plot is symmetrical.

6.3 Filtering

The ten minute calibrated data were also low pass filtered, see Figure 3 which shows the filters response function, and sub-sampled every 6 hours. Three days of data are lost at the beginning and the end of the record. The statistical analysis was repeated on the filtered data set.

7 FORMAT OF DATA OUTPUT

All speeds and velocities are in m/s, directions in degrees true and time in GMT. The results are ordered by mooring number (See page 8). Each mooring result is made up of mooring information, meter information, graphical output, statistics (unfiltered and filtered) and additional graphical output with the S4's first followed by the RCM 7.

7.1 Mooring information

Position latitude	: Latitude of deployment
Position longitude	: Longitude of deployment
Water depth(m)	: Depth measured from ship's echo sounder
Deployed on cruise	: Cruise identifier
Recovered on cruise	: Cruise identifier
Site name identification	: Additional site identifier
Magnetic deviation	: Taken from charts
Rig deployed on	: Time surface buoy released
Rig recovered on	: Time release fired on rig
Period of deployment	: Total time of deployment
Comments	: Details regarding mooring

7.2 Meter information

Rig number	: Unique POL mooring/rig reference
Meter number	: Four digit current meter number
Sample interval	: Sampling interval in seconds
Meter height from bottom	: Height in metres
Position of meter on rig	: T for top B for bottom M for middle
Meter type	: S4 for InterOcean AS for Aanderaa RCM 7
Meter started	: Date and time
Meter stopped	: Date and time
Time of last valid scan	: Used when good data ends before switch off
Period in days on record	: Total time meter switched on
Total number of scans	: Used to check timing
Timing error	: Error in seconds
Comments	: Details regarding meter

7.3 Graphical output

- (1) North and East components of velocity against time. The semi-diurnal nature of the tides can be seen as well as the Spring/Neap cycle in both components of velocity.
- (2) Histograms of speed and direction. Indicates the spread of speeds and directions throughout the deployment period.
- (3) Scatter diagram of North component of velocity against the East component. Shows the direction and magnitudes of the currents. This plot is often a good check on the quality of the data, in particular regarding direction and possible problems at low speeds.
- (4) Eulerian progressive vector plot. The nature of the residual flow is emphasised, although the semi-diurnal tides are also apparent.
- (5) Temperature, salinity and pressure against time (only for RCM 7's). Salinity is calculated from temperature, conductivity and pressure.

7.4 Statistics of unfiltered and filtered data

This is followed by simple statistics of the calibrated data and filtered data. The filtered statistics page is indicated by the letter 'F' at the end of the file type printed at the top of the page. The section is finished with the following plot using the filtered data.

7.5 Additional graphical output

- (6) Stacked filtered stick plot. The filtered data can be displayed in a stick type way in order to see the change of the residual flow with time and through the vertical.

ACKNOWLEDGEMENTS

The authors would like to thank RVS Barry and POL engineers for setting up, deploying and recovering the instruments. The survey on such a large scale and with quick turn around of equipment needed would not have yielded such excellent returns without their effort and it is to their credit. We would also like to thank Steve Loch of BODC for undertaking part of the CALTUX software development.

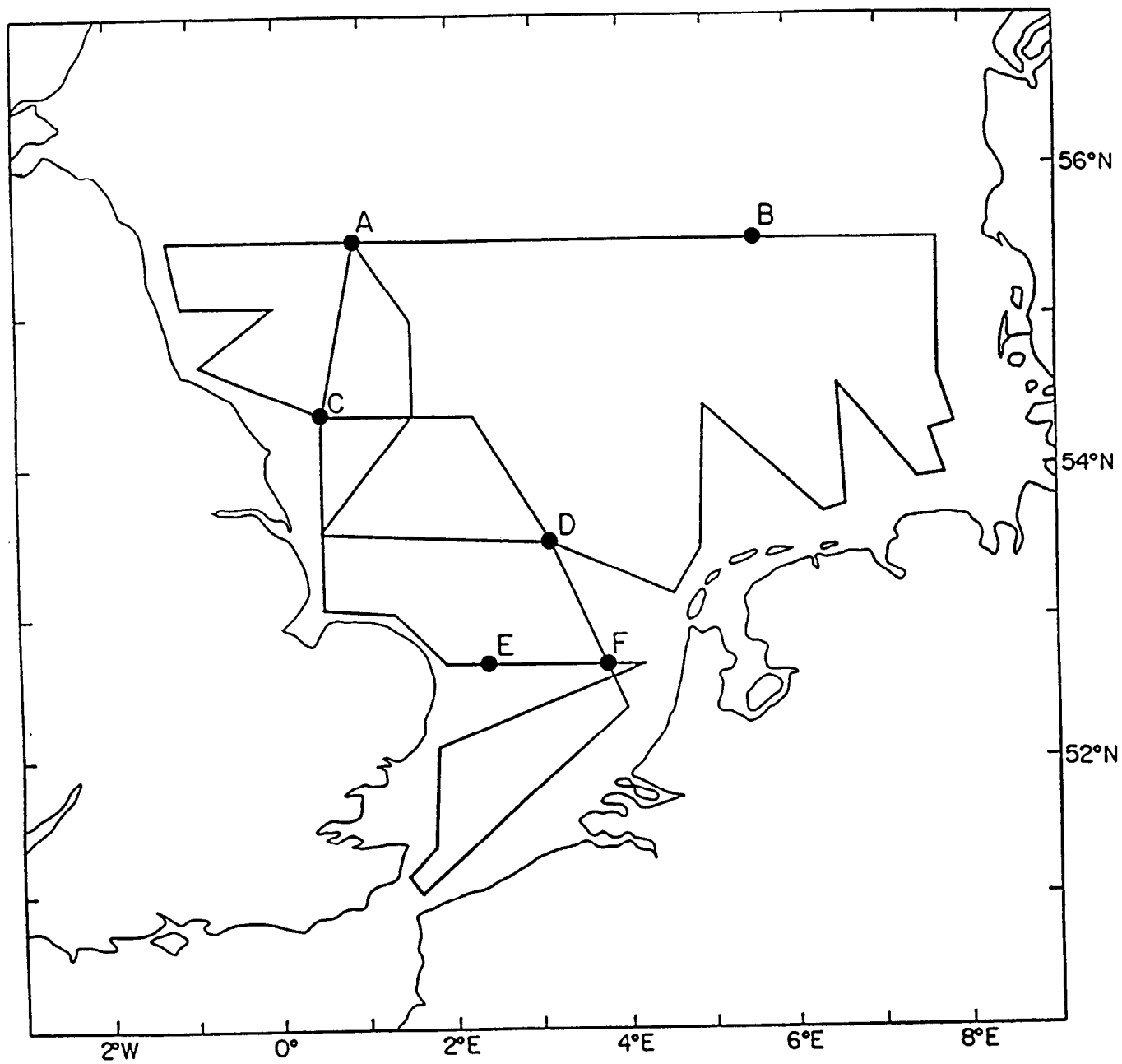


FIGURE 1 Positions of North Sea Project current meter rigs.

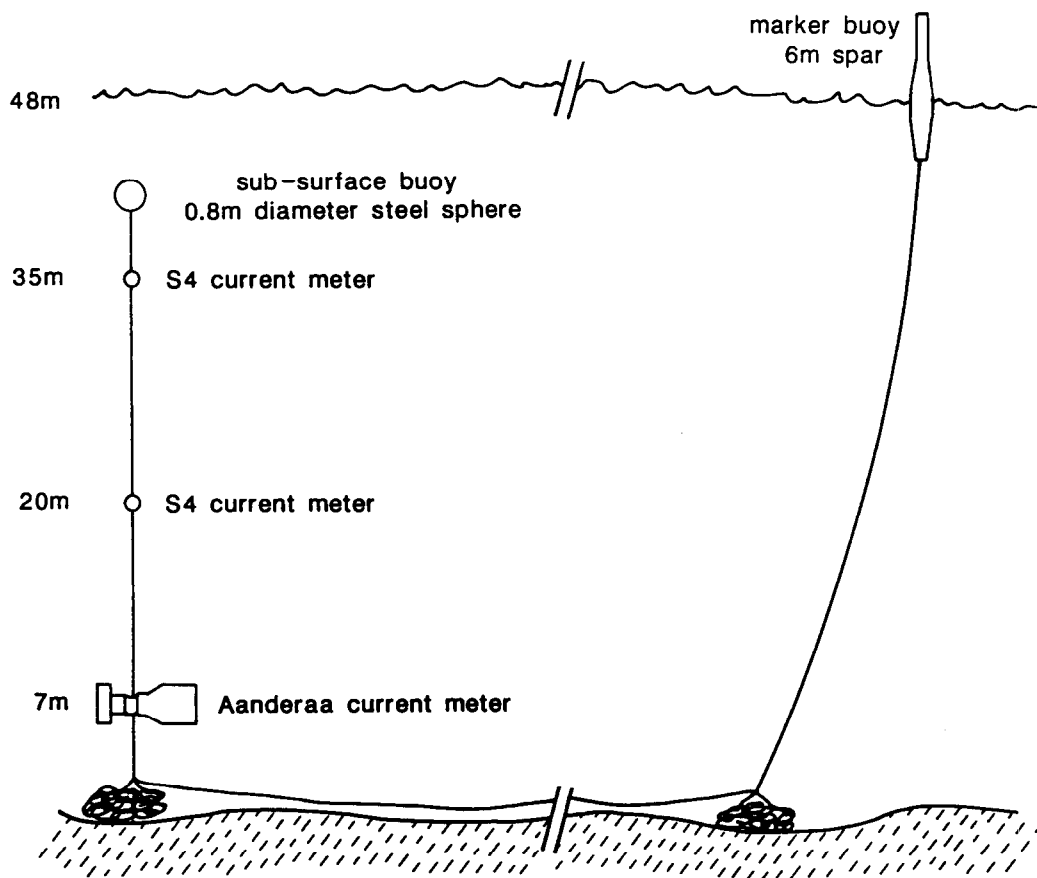


FIGURE 2 Mooring system schematic description.

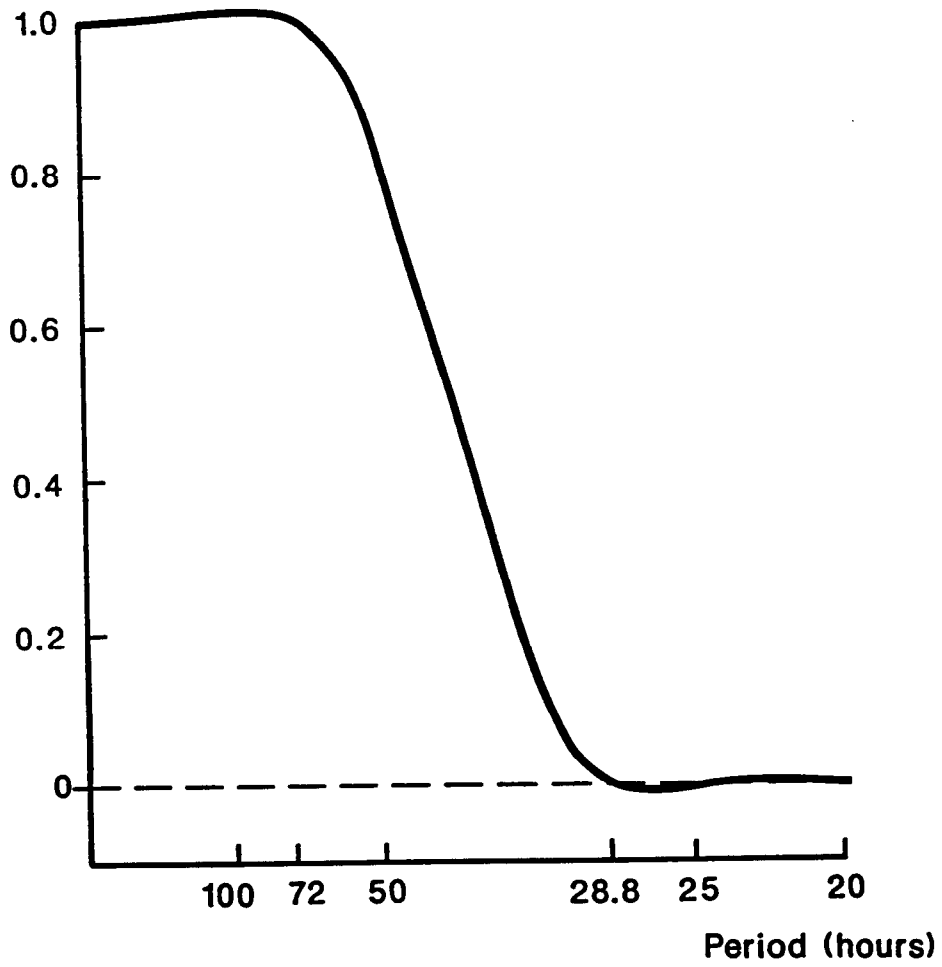


FIGURE 3 Response to low pass filter.

Rig information details for C33EC

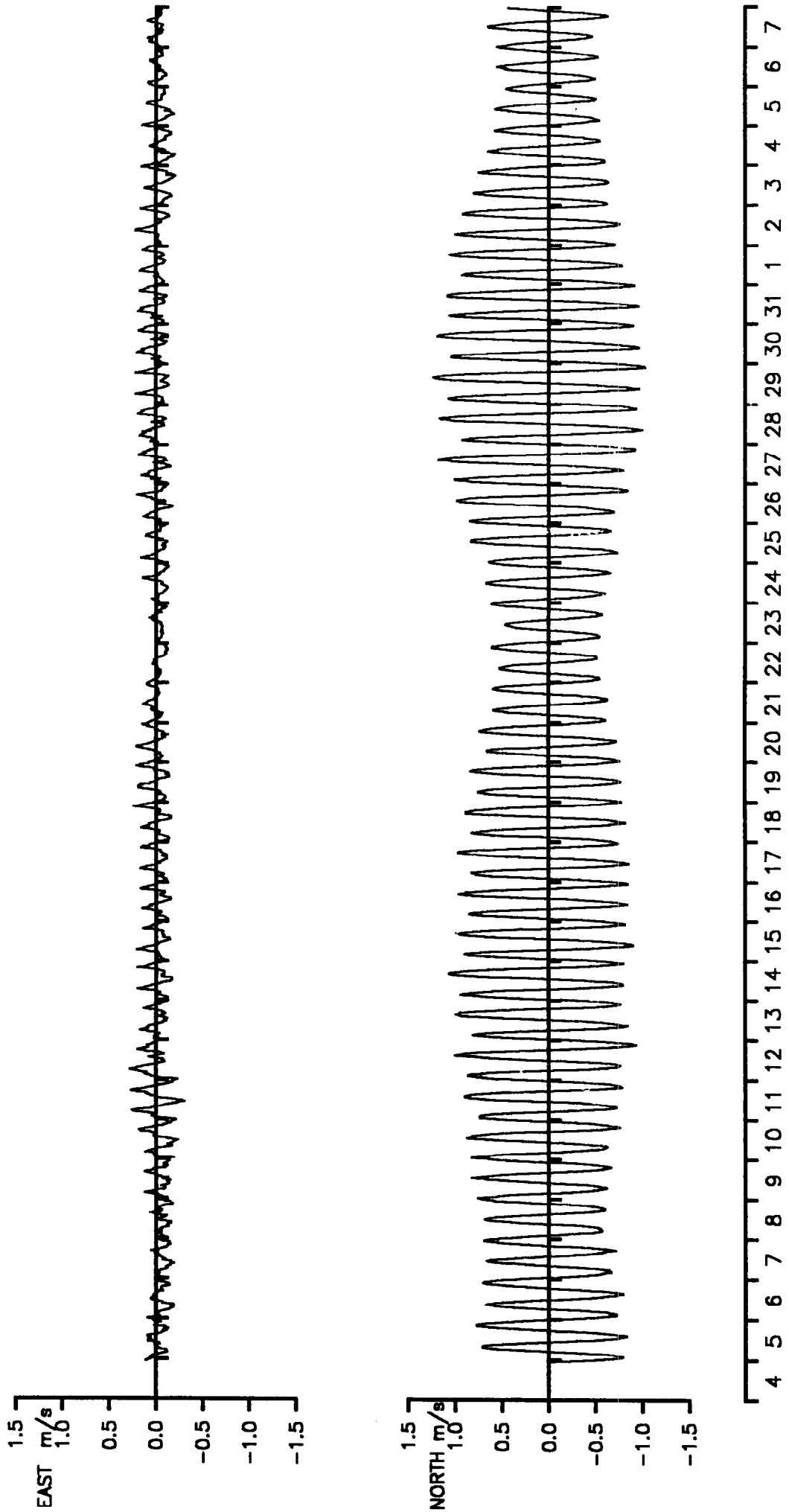
Position Latitude	:	52 42.90N
Position Longitude	:	02 25.30E
Water depth	:	49.0 m
Deployed on cruise	:	C33
Recovered on cruise	:	C35
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	04-AUG-88 22:51:00
Rig recovered on	:	15-SEPT-88 06:37:00
Period of deployment	:	41.3 days
Comments	:	Launch and recovery successful

Meter information details for 1115

Rig No	:	C33EC
Meter No	:	1115
Recording interval	:	600.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	04-AUG-88 12:00:00
Meter stopped	:	15-SEPT-88 12:10:00
Period switched on	:	42.0 days
Period of good data	:	41.3 days
Total number of scans	:	5950
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1115 Rig no. C33EC Depth of water(m) 49.0
Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
Position 52 42.90N 02 25.30E Meter Height(m) 35.0

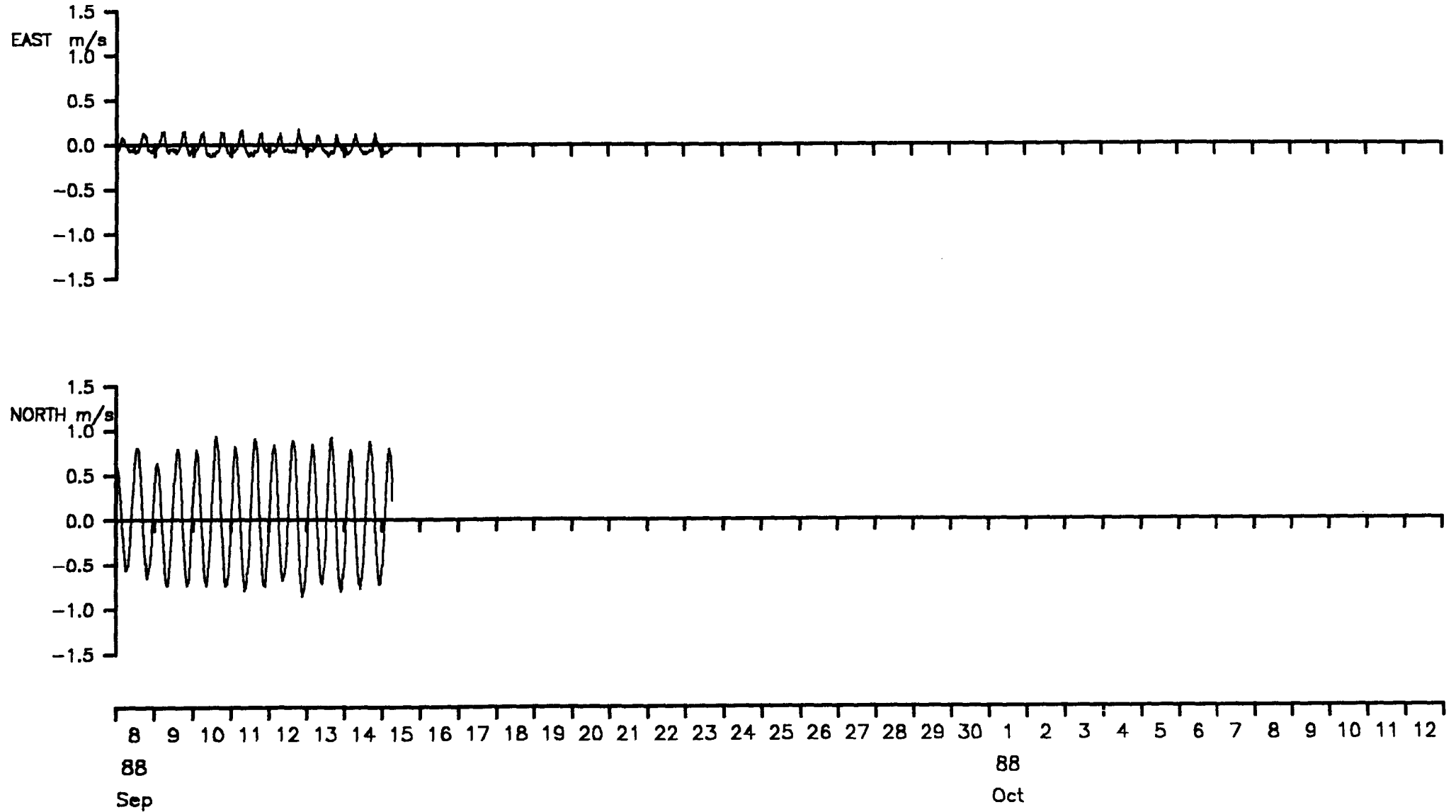


VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1115 Rig no. C33EC Depth of water(m) 49.0

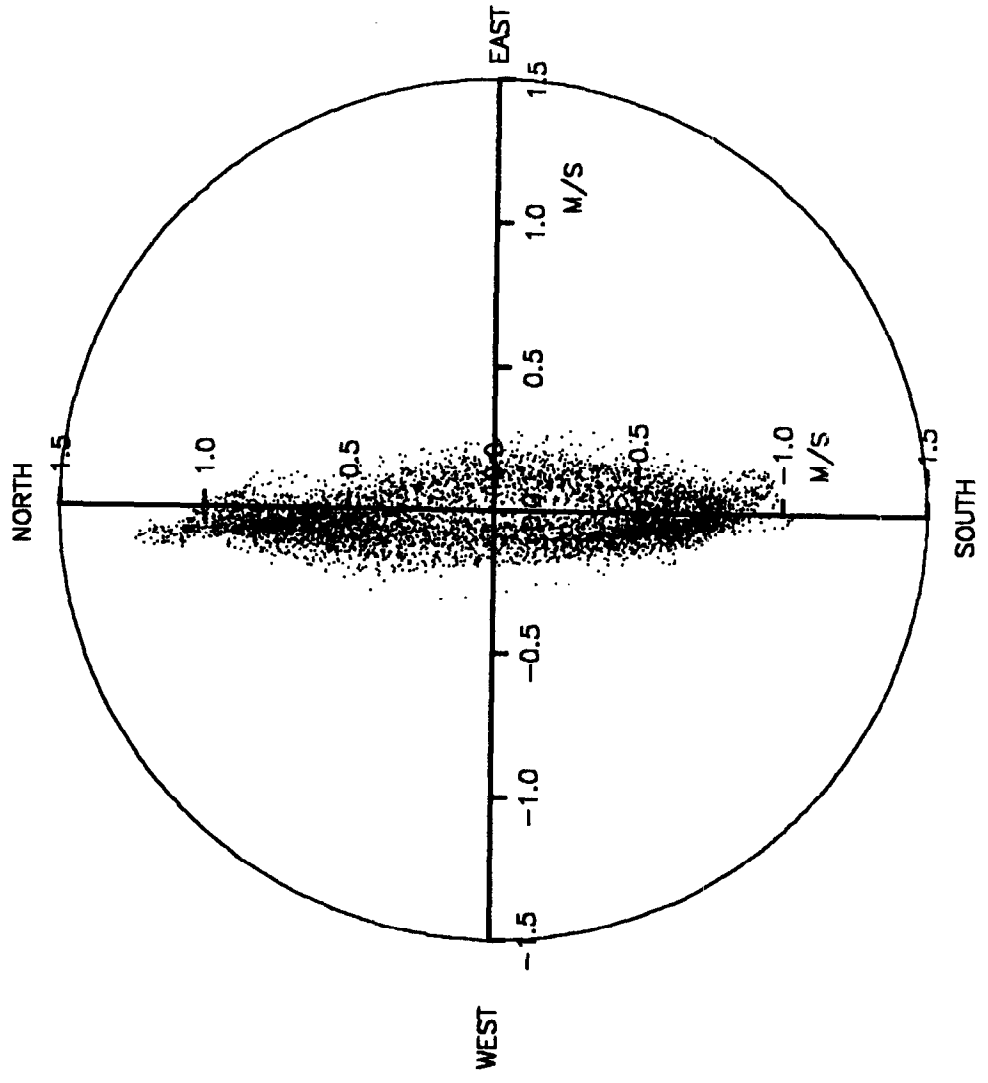
Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00

Position 52 42.90N 02 25.30E Meter Height(m) 35.0



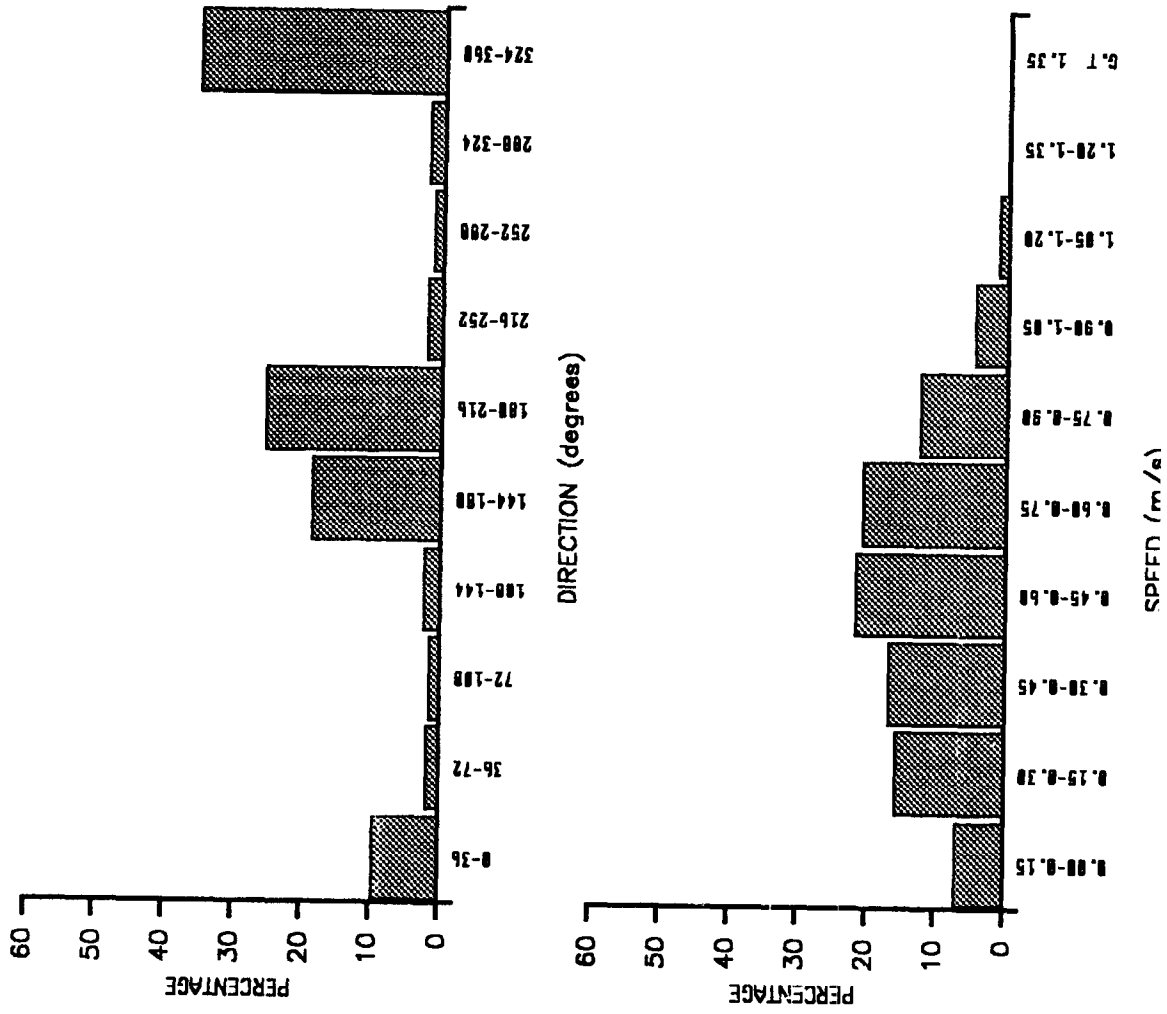
SCATTER PLOT

Meter no. 1115 Rig no. C33EC Depth of water(m) 49.0
 Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
 Position 52 42.90N 02 25.30E Meter Height(m) 35.0



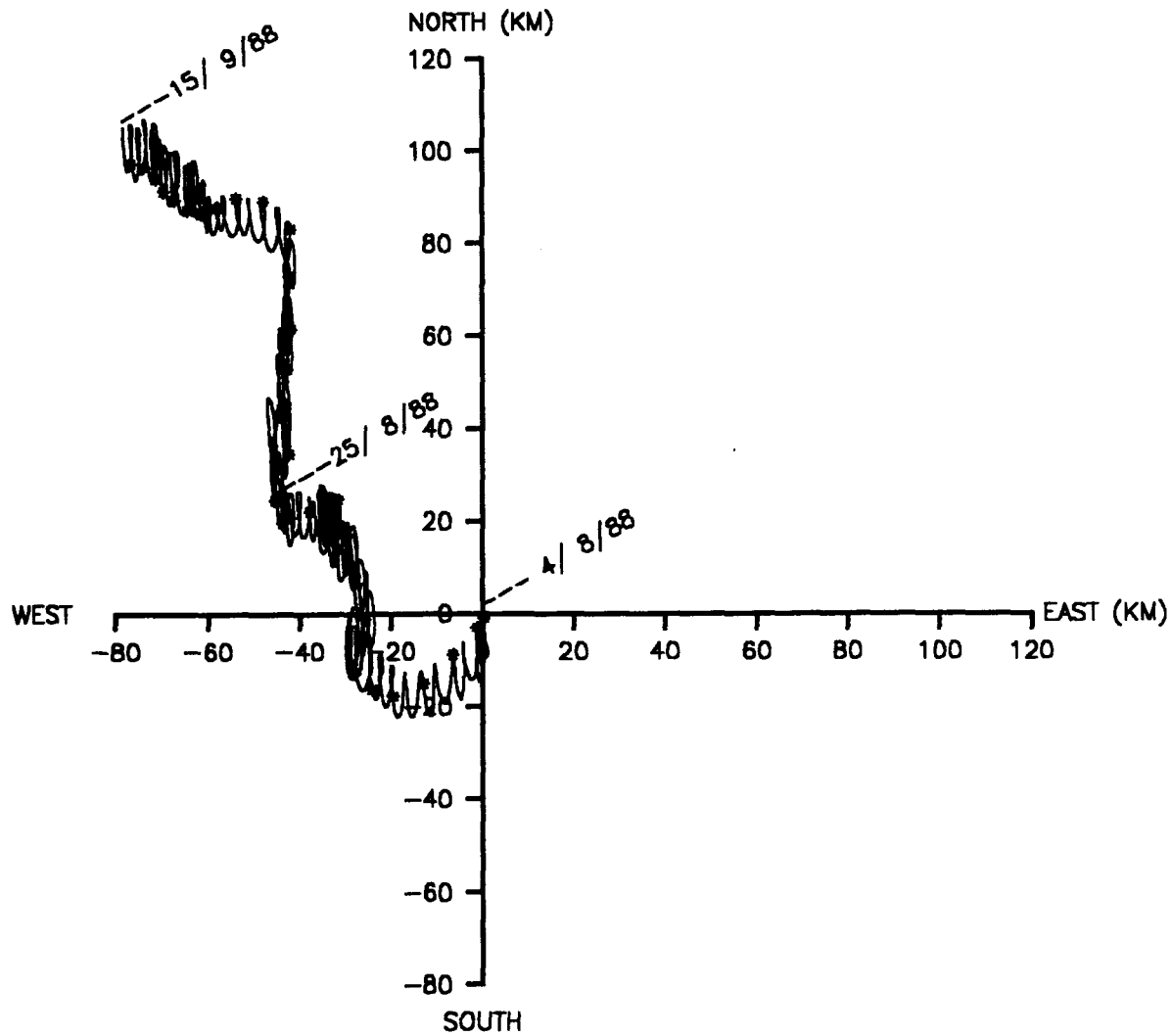
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1115 Rig no. C33EC Depth of water(m) 49.0
 Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
 Position 52 42.90N 02 25.30E Meter Height(m) 35.0



VECTOR PLOT

Meter no. 1115 Rig no. C33EC Depth of water(m) 49.0
Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
Position 52 42.90N 02 25.30E Meter Height(m) 35.0



STATISTICS FOR S41115T C33ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0221	0.73562786E-02	0.85768700E-01
Northings	0.0293	0.32009703E+00	0.56577116E+00
Speed	0.5182	0.60247973E-01	0.24545455E+00

Vector mean speed 0.0367
 Vector Mean Direction -36.9

Maximum ten values

Eastings					Northings				
0.280	0.277	0.274	0.265	0.264	1.235	1.235	1.224	1.222	1.221
0.263	0.262	0.256	0.253	0.250	1.212	1.208	1.202	1.189	1.189

Minimum ten values

Eastings					Northings				
-0.234	-0.240	-0.251	-0.254	-0.255	-0.981	-0.983	-0.999	-1.001	-1.007
-0.255	-0.284	-0.286	-0.307	-0.312	-1.018	-1.018	-1.019	-1.024	-1.033

Maximum speeds

1.240	1.240	1.228	1.226	1.224	1.216	1.215	1.206	1.192	1.192
1.189	1.188	1.179	1.178	1.176	1.176	1.174	1.174	1.170	1.169
1.166	1.164	1.153	1.150	1.149	1.149	1.147	1.146	1.144	1.141
1.136	1.133	1.129	1.129	1.126	1.124	1.118	1.118	1.118	1.114
1.109	1.108	1.098	1.096	1.088	1.087	1.086	1.085	1.084	1.083
1.083	1.083	1.082	1.081	1.079	1.074	1.074	1.072	1.071	1.070
1.068	1.068	1.066	1.066	1.064	1.064	1.064	1.064	1.062	1.062
1.061	1.060	1.060	1.058	1.058	1.057	1.056	1.054	1.054	1.054
1.054	1.052	1.048	1.048	1.046	1.046	1.044	1.044	1.044	1.042
1.042	1.042	1.042	1.041	1.040	1.037	1.036	1.036	1.036	1.034

Variance ellipse statistics

Maximum variance 0.3206E+00	Direction	-2.3
Minimum variance 0.6833E-02	Direction	87.7
Total variance 0.3275E+00	Ratio of variances	0.2131E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-2.3
Average direction. maxdir +PI/2 to maxdir -PI/2		182.5

STATISTICS FOR S41115T C33ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0193	0.75790635E-03	0.27530096E-01
Northings	0.0373	0.14422298E-02	0.37976701E-01
Speed	0.0555	0.87277312E-03	0.29542729E-01

Vector mean speed 0.0420
 Vector Mean Direction -27.3

Maximum ten values									
Eastings					Northings				
0.042	0.041	0.040	0.038	0.033	0.137	0.132	0.131	0.127	0.127
0.030	0.030	0.026	0.024	0.023	0.116	0.111	0.110	0.106	0.102

Minimum ten values									
Eastings					Northings				
-0.063	-0.064	-0.066	-0.067	-0.069	-0.010	-0.013	-0.014	-0.014	-0.014
-0.071	-0.072	-0.075	-0.078	-0.079	-0.017	-0.017	-0.017	-0.022	-0.027

Maximum speeds									
0.138	0.133	0.132	0.129	0.127	0.116	0.111	0.111	0.109	0.107
0.106	0.102	0.101	0.101	0.100	0.100	0.099	0.092	0.092	0.089
0.089	0.088	0.086	0.085	0.084	0.083	0.082	0.080	0.078	0.077
0.077	0.077	0.076	0.075	0.075	0.073	0.072	0.072	0.072	0.070
0.070	0.070	0.069	0.069	0.068	0.068	0.068	0.066	0.066	0.066
0.066	0.066	0.064	0.061	0.061	0.060	0.058	0.058	0.057	0.057
0.056	0.055	0.054	0.052	0.052	0.052	0.052	0.051	0.050	0.049
0.048	0.047	0.047	0.047	0.046	0.046	0.046	0.044	0.044	0.043
0.043	0.043	0.042	0.042	0.041	0.041	0.041	0.041	0.040	0.039
0.039	0.039	0.039	0.038	0.038	0.038	0.038	0.037	0.036	0.036

Variance ellipse statistics

Maximum variance	0.1488E-02	Direction	14.0
Minimum variance	0.7125E-03	Direction	104.0
Total variance	0.2200E-02	Ratio of variances	0.4790E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		-32.7
Average direction. maxdir	+PI/2 to maxdir -PI/2		216.5

Meter information details for 1116

Rig No	:	C33EC
Meter No	:	1116
Recording interval	:	600.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	04-AUG-88 12:00:00
Meter stopped	:	15-SEPT-88 12:20:00
Period switched on	:	42.0 days
Period of good data	:	0.0 days
Comments	:	Meter not recording correctly

Meter information details for 9353

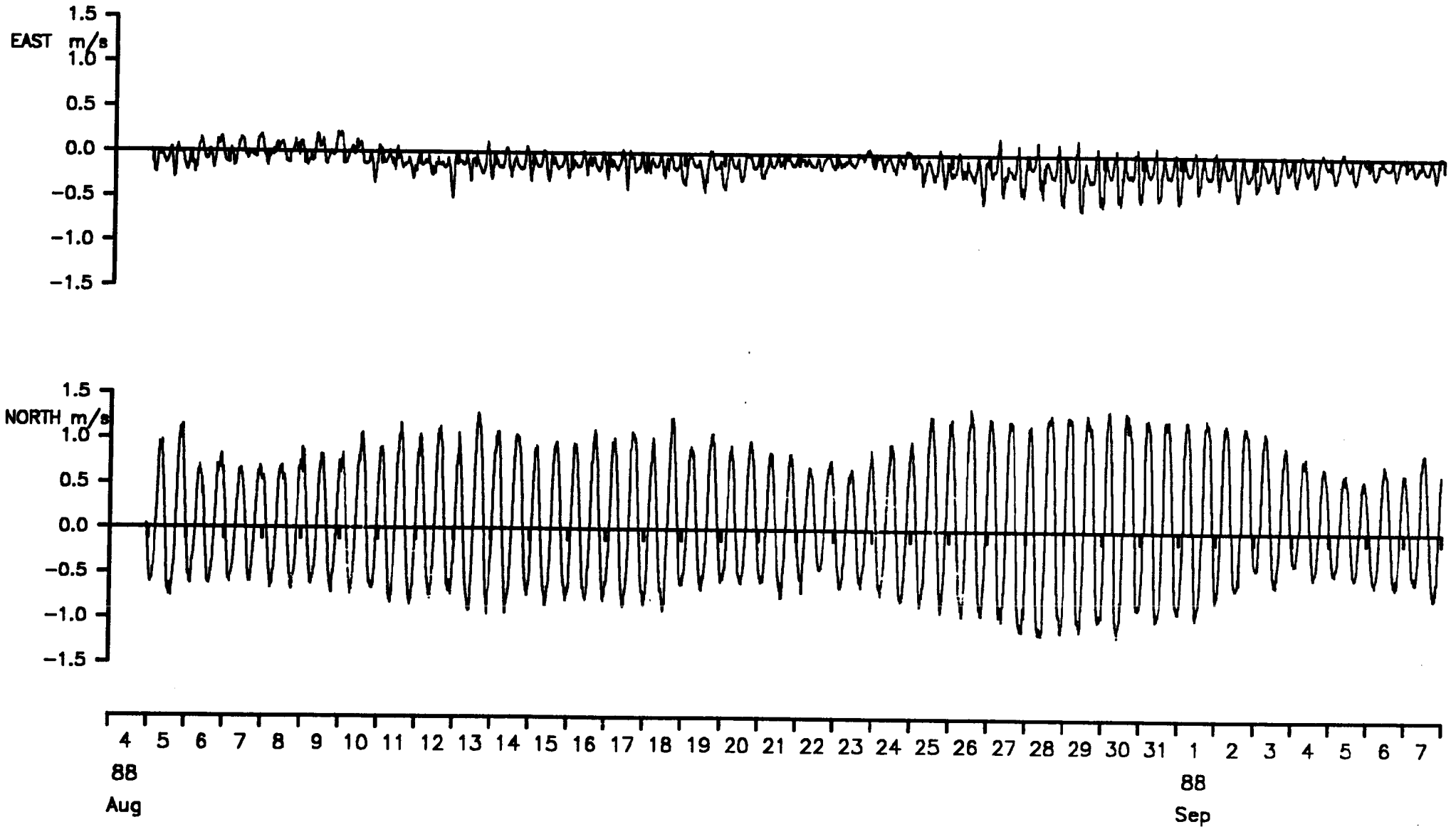
Rig No	:	C33EC
Meter No	:	9353
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	04-AUG-88 21:30:00
Meter stopped	:	15-SEPT-88 12:40:01
Period switched on	:	41.6 days
Period of good data	:	41.3 days
Total number of scans	:	5950
Timing error	:	1 second slow
Comments	:	On this deployment the meter gave a larger percentage of higher speeds than the S4 above Pressure sensor indicates some instability between 27-AUG-88 and 02-SEPT-88 and towards the end of the deployment

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0

Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00

Position 52 42.90N 02 25.30E Meter Height(m) 7.0

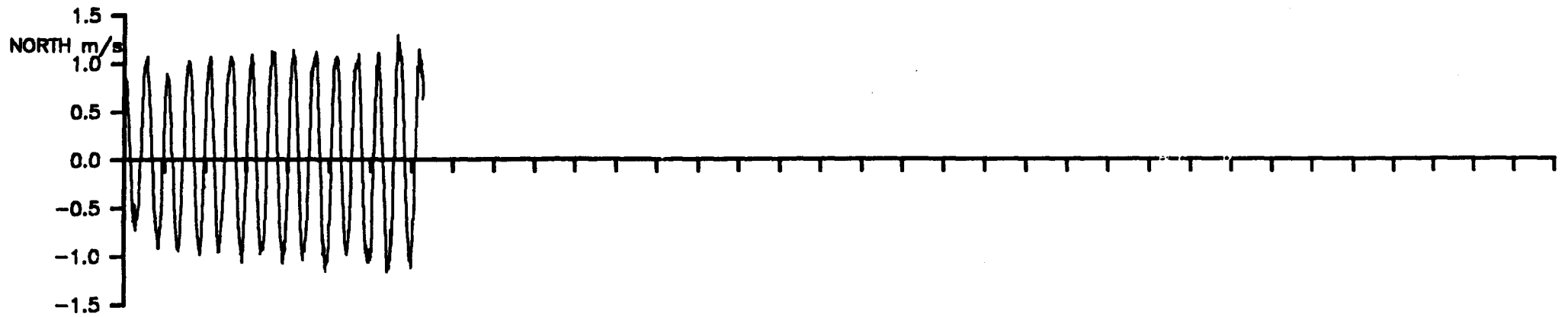
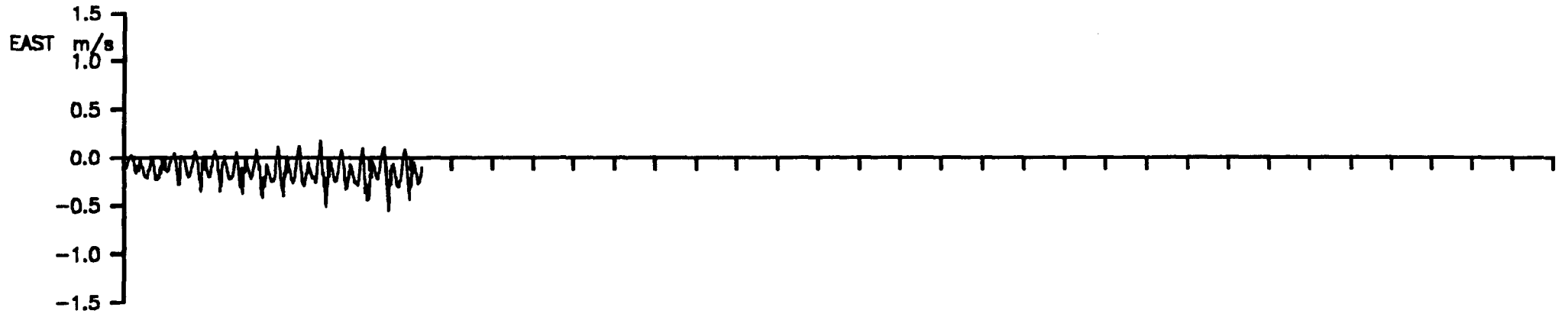


VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0

Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00

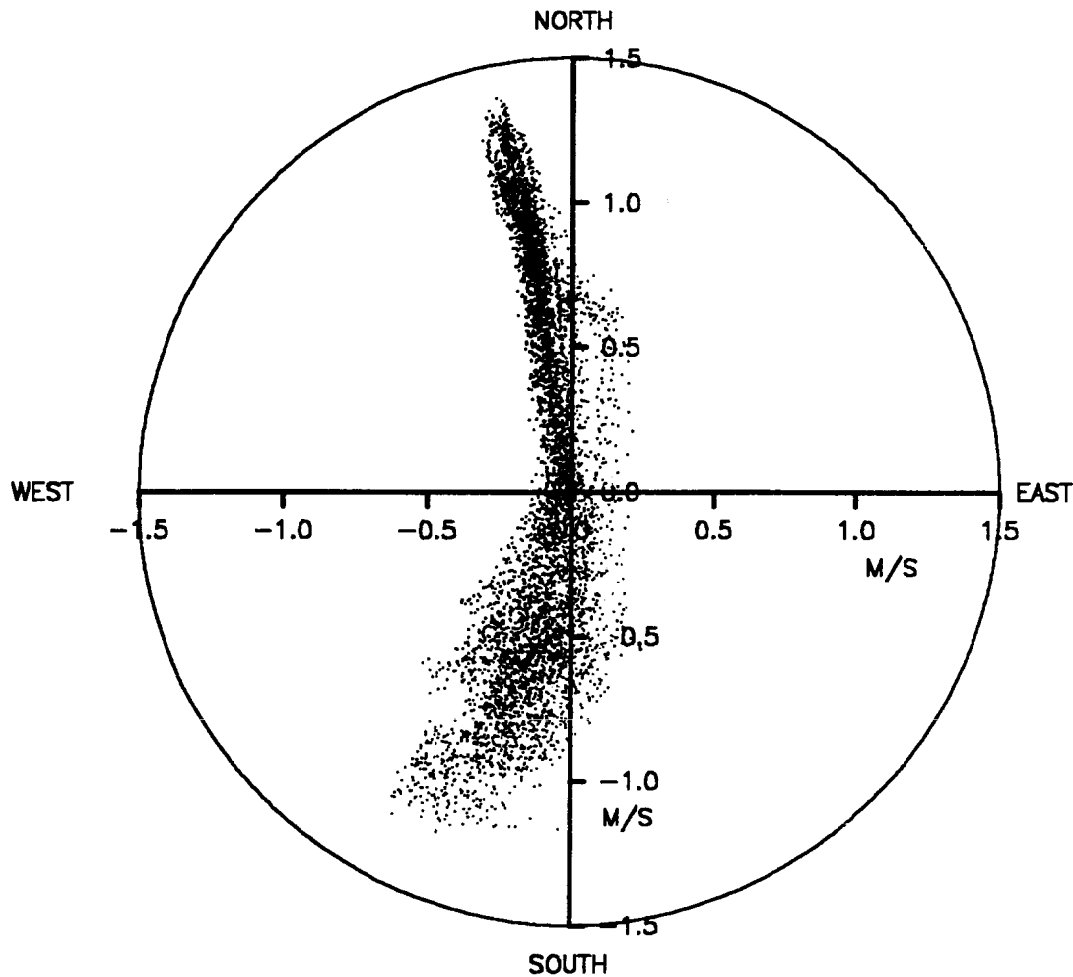
Position 52 42.90N 02 25.30E Meter Height(m) 7.0



8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12
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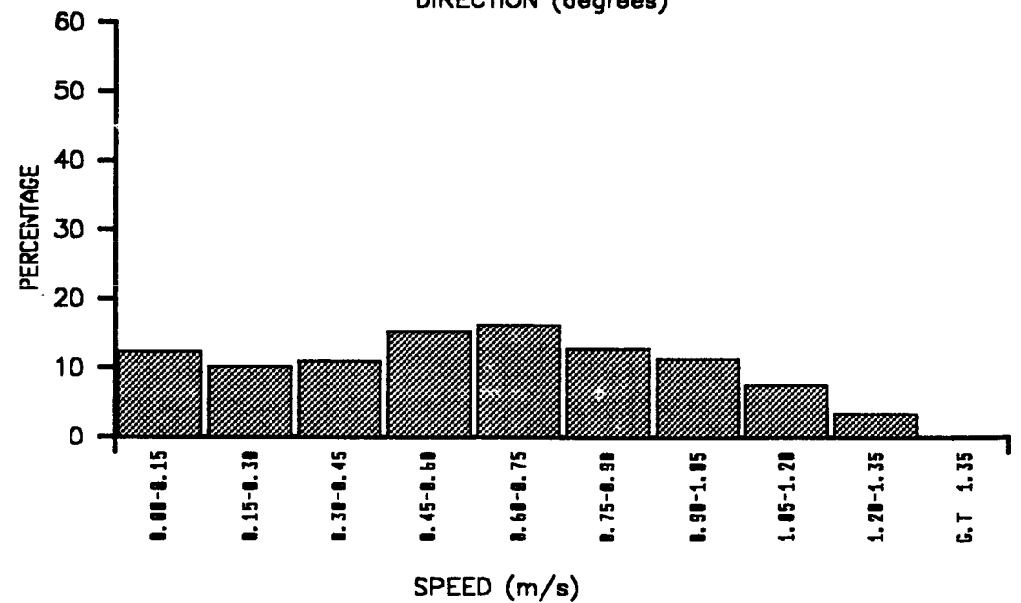
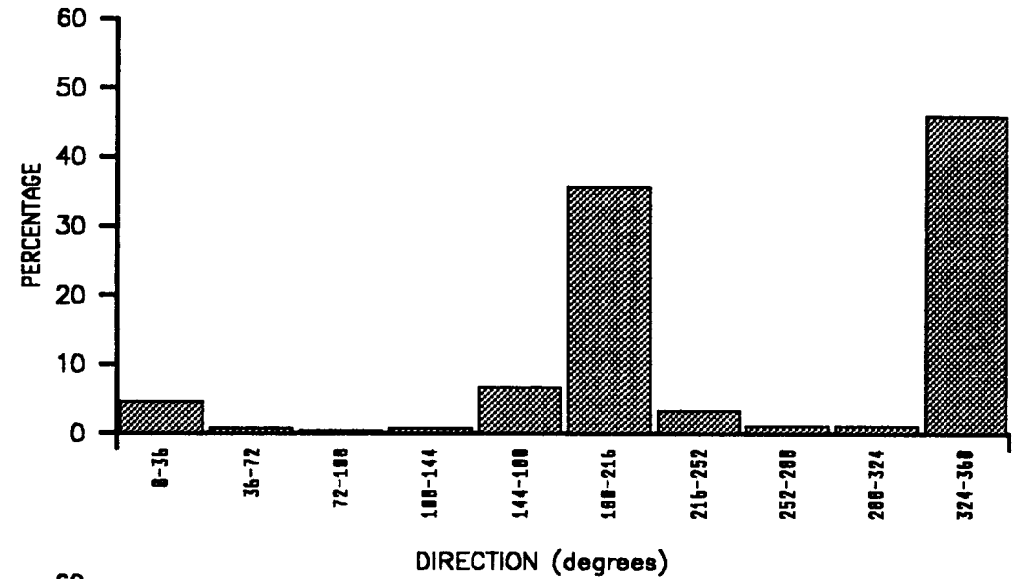
SCATTER PLOT

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0
 Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
 Position 52 42.90N 02 25.30E Meter Height(m) 7.0



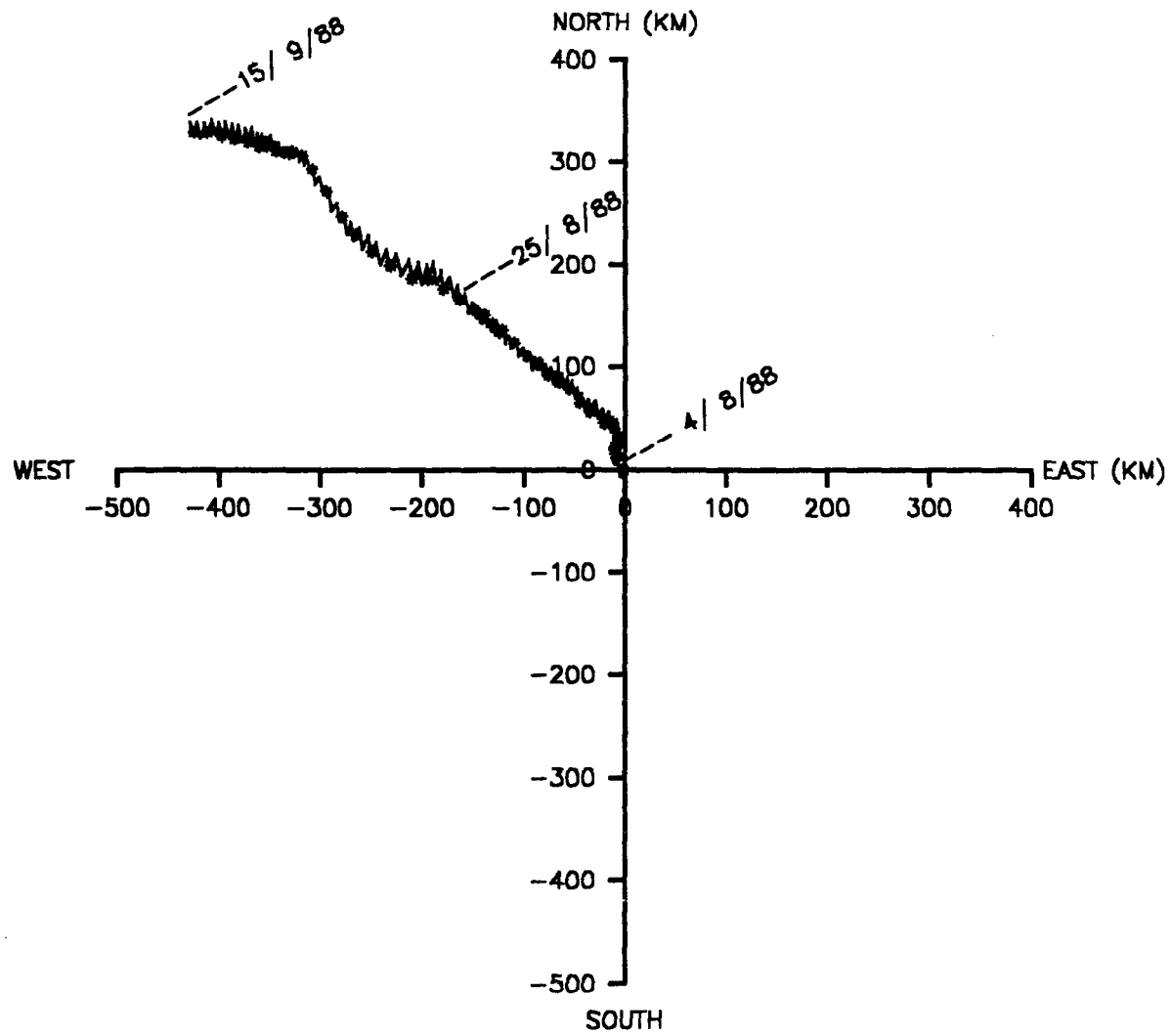
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0
 Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
 Position 52 42.90N 02 25.30E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0
Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
Position 52 42.90N 02 25.30E Meter Height(m) 7.0

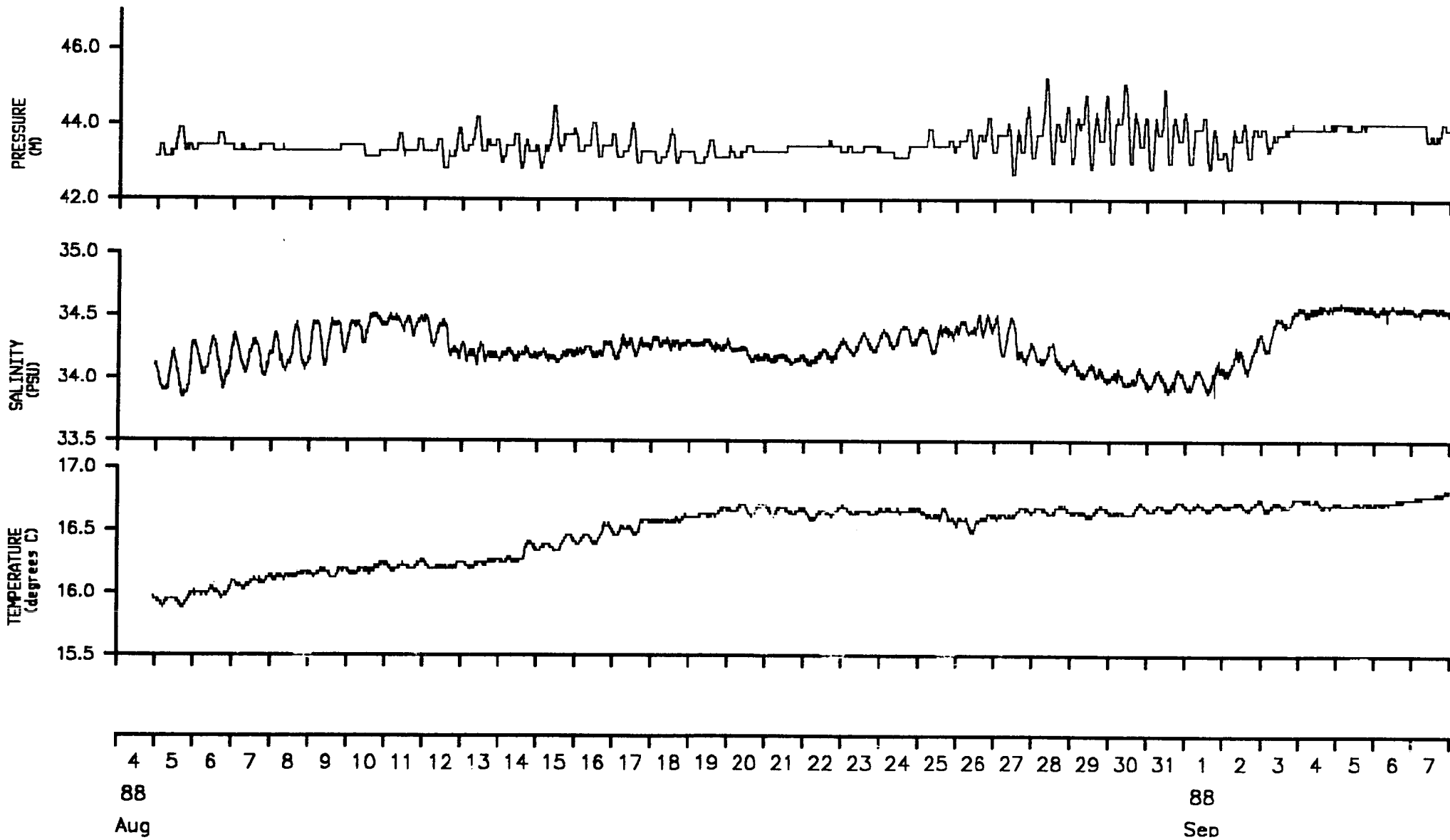


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0

Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00

Position 52 42.90N 02 25.30E Meter Height(m) 7.0

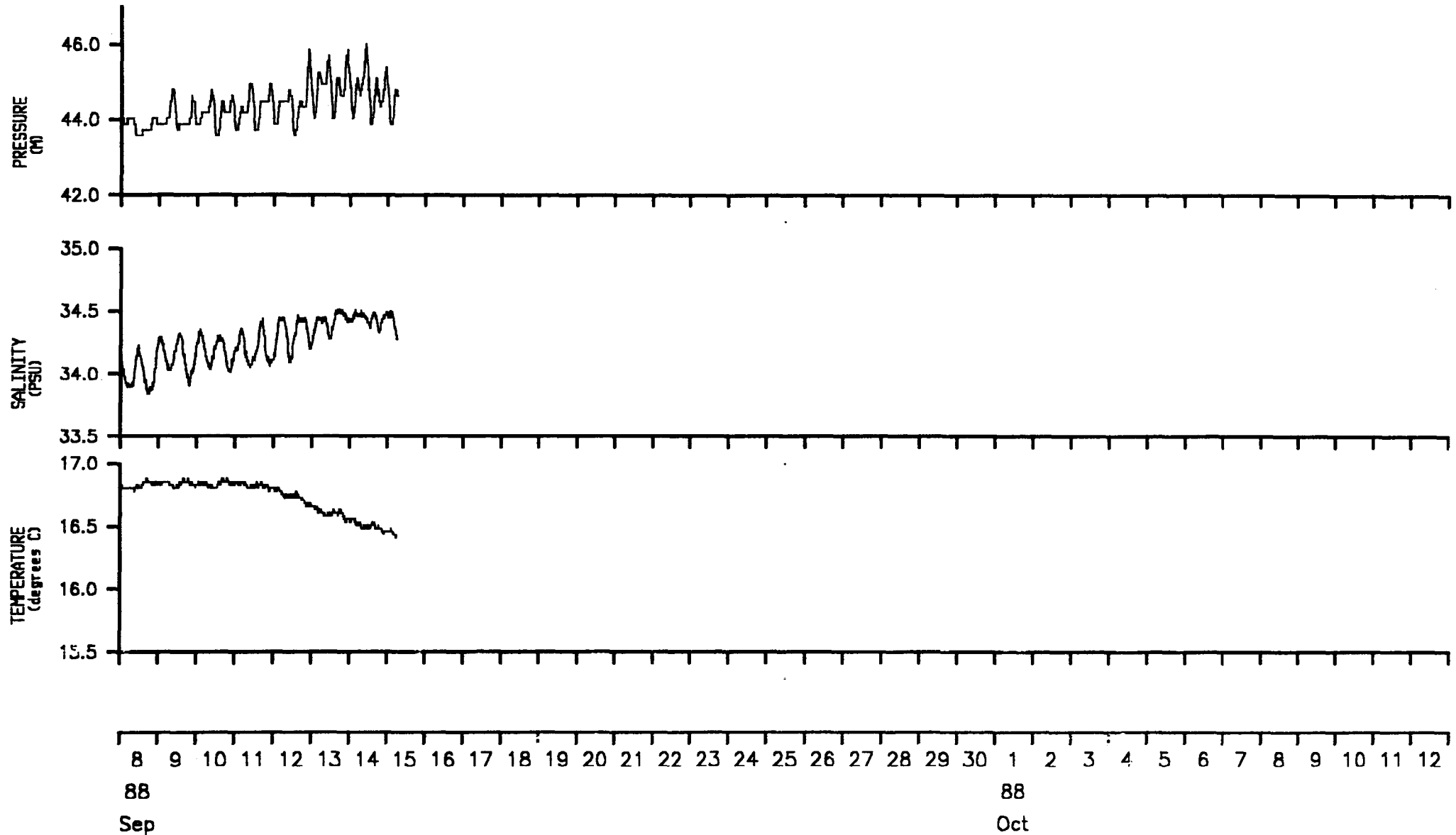


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9353 Rig no. C33EC Depth of water(m) 49.0

Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00

Position 52 42.90N 02 25.30E Meter Height(m) 7.0



STATISTICS FOR AS9353B C33ECS A

	Mean	Variance	Standard deviation
Eastings	-0.1203	0.14453791E-01	0.12022388E+00
Northings	0.0949	0.44310308E+00	0.66565990E+00
Speed	0.6053	0.11468488E+00	0.33865154E+00

Vector mean speed 0.1532
 Vector Mean Direction -51.7

Maximum ten values

Eastings					Northings				
0.214	0.212	0.200	0.200	0.200	1.359	1.351	1.341	1.338	1.331
0.198	0.197	0.197	0.195	0.189	1.328	1.328	1.318	1.316	1.315

Minimum ten values

Eastings					Northings				
-0.569	-0.580	-0.584	-0.587	-0.592	-1.147	-1.150	-1.151	-1.153	-1.158
-0.595	-0.605	-0.606	-0.614	-0.614	-1.158	-1.158	-1.167	-1.173	-1.178

Maximum speeds

1.386	1.374	1.362	1.359	1.354	1.348	1.348	1.348	1.339	1.336
1.333	1.330	1.330	1.330	1.327	1.325	1.322	1.322	1.322	1.319
1.310	1.307	1.307	1.307	1.307	1.307	1.304	1.304	1.301	1.301
1.301	1.298	1.298	1.295	1.295	1.295	1.293	1.293	1.287	1.287
1.284	1.284	1.284	1.284	1.284	1.284	1.281	1.281	1.281	1.281
1.278	1.278	1.278	1.278	1.275	1.275	1.275	1.275	1.275	1.272
1.272	1.272	1.272	1.272	1.272	1.269	1.269	1.269	1.266	1.266
1.266	1.266	1.266	1.263	1.263	1.261	1.261	1.261	1.258	1.258
1.258	1.258	1.258	1.258	1.258	1.258	1.258	1.255	1.255	1.255
1.255	1.255	1.252	1.252	1.252	1.252	1.252	1.252	1.249	1.249

Variance ellipse statistics

Maximum variance	0.4433E+00	Direction	1.2
Minimum variance	0.1427E-01	Direction	91.2
Total variance	0.4576E+00	Ratio of variances	0.3218E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-9.9
Average direction. maxdir	+PI/2 to maxdir -PI/2		193.5

STATISTICS FOR AS9353B C33ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.1236	0.32237060E-02	0.56777686E-01
Northings	0.1015	0.37342529E-02	0.61108530E-01
Speed	0.1684	0.41666180E-02	0.64549327E-01

Vector mean speed 0.1600
 Vector Mean Direction -50.6

Maximum ten values

Eastings					Northings				
0.032	0.029	0.023	0.011	0.010	0.290	0.283	0.283	0.266	0.263
0.009	0.008	0.006	0.001	0.001	0.245	0.234	0.224	0.204	0.200

Minimum ten values

Eastings					Northings				
-0.196	-0.198	-0.198	-0.210	-0.216	0.022	0.019	0.018	0.017	0.014
-0.225	-0.239	-0.240	-0.251	-0.251	0.000	-0.002	-0.004	-0.013	-0.032

Maximum speeds

0.351	0.344	0.340	0.324	0.315	0.297	0.284	0.282	0.275	0.271
0.269	0.261	0.261	0.259	0.255	0.254	0.254	0.250	0.250	0.249
0.248	0.248	0.247	0.246	0.245	0.244	0.237	0.236	0.233	0.232
0.226	0.223	0.223	0.221	0.221	0.214	0.214	0.210	0.206	0.200
0.197	0.196	0.196	0.195	0.193	0.192	0.190	0.189	0.189	0.185
0.182	0.177	0.176	0.176	0.174	0.168	0.168	0.168	0.167	0.165
0.165	0.164	0.164	0.161	0.160	0.159	0.159	0.159	0.159	0.157
0.156	0.155	0.153	0.153	0.151	0.151	0.150	0.147	0.146	0.146
0.146	0.143	0.142	0.139	0.138	0.137	0.136	0.135	0.135	0.134
0.133	0.132	0.132	0.132	0.130	0.126	0.124	0.123	0.122	0.122

Variance ellipse statistics

Maximum variance	0.4795E-02	Direction	-39.4
Minimum variance	0.2163E-02	Direction	50.6
Total variance	0.6958E-02	Ratio of variances	0.4511E+00
Average direction. maxdir -PI/2 to maxdir +PI/2			-9.2
Average direction. maxdir +PI/2 to maxdir -PI/2			0.0

STICK TIME SERIES PLOT

Rig no. C33EC Depth of water(m) 49.0
Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
Position 52 42.90N 02 25.30E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9353	7.0 M
1115	35.0 M

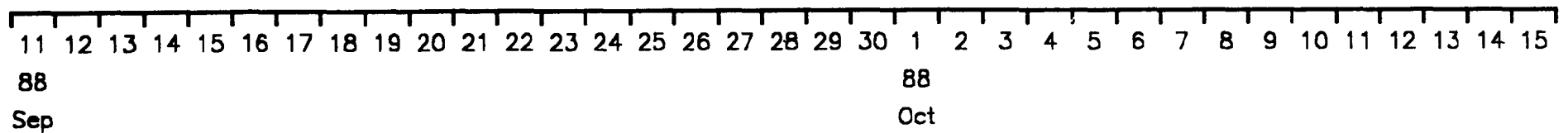
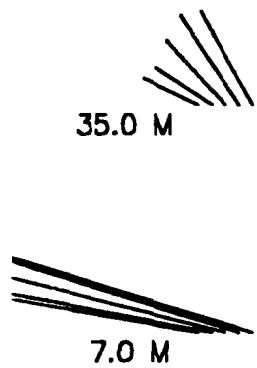


7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10
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STICK TIME SERIES PLOT

Rig no. C33EC Depth of water(m) 49.0
Start/End 1988/08/04 AT 22:51:00 1988/09/15 AT 06:37:00
Position 52 42.90N 02 25.30E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9353	7.0 M
1115	35.0 M



Rig information details for C35EC

Position Latitude	:	52 42.55N
Position Longitude	:	02 25.66E
Water depth	:	49.0 m
Deployed on cruise	:	C35
Recovered on cruise	:	C37
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	15-SEPT-88 07:25:00
Rig recovered on	:	02-OCT-88 07:07:00
Period of deployment	:	17.0 days
Comments	:	Launch and recovery successful

Meter information details for 1117

Rig No : C35EC
Meter No : 1117
Recording interval : 600.0 seconds
Meter height from bottom : 35.0 m
Position of meter on rig : T
Meter type : S4
Period of good data : 0.0 days
Comments : Meter still had data from previous deployment in memory

Meter information details for 1114

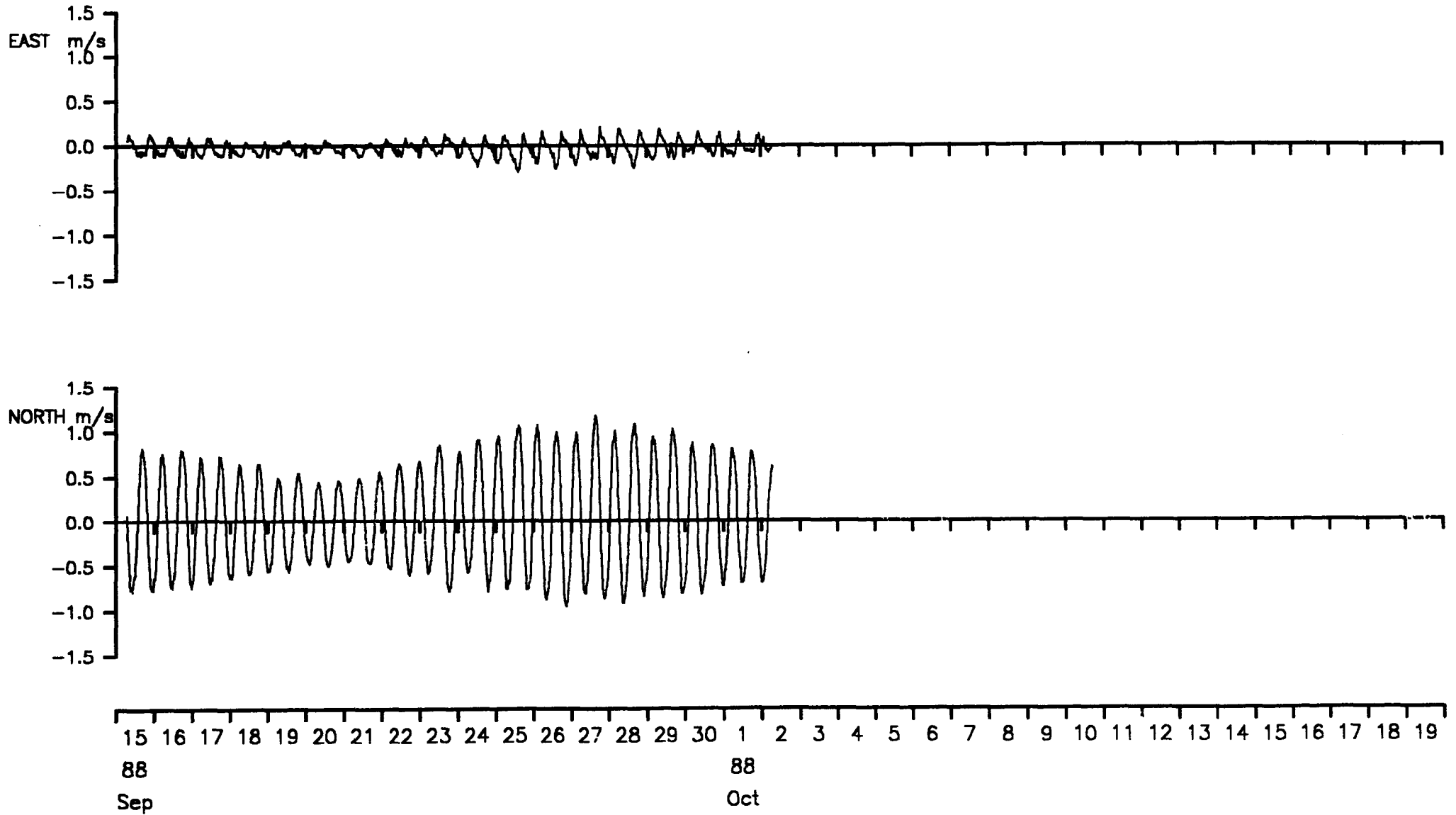
Rig No	:	C35EC
Meter No	:	1114
Recording interval	:	600.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	15-SEPT-88 05:00:00
Meter stopped	:	04-OCT-88 02:30:00
Period switched on	:	18.9 days
Period of good data	:	17.0 days
Total number of scans	:	2446
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1114 Rig no. C35EC Depth of water(m) 49.0

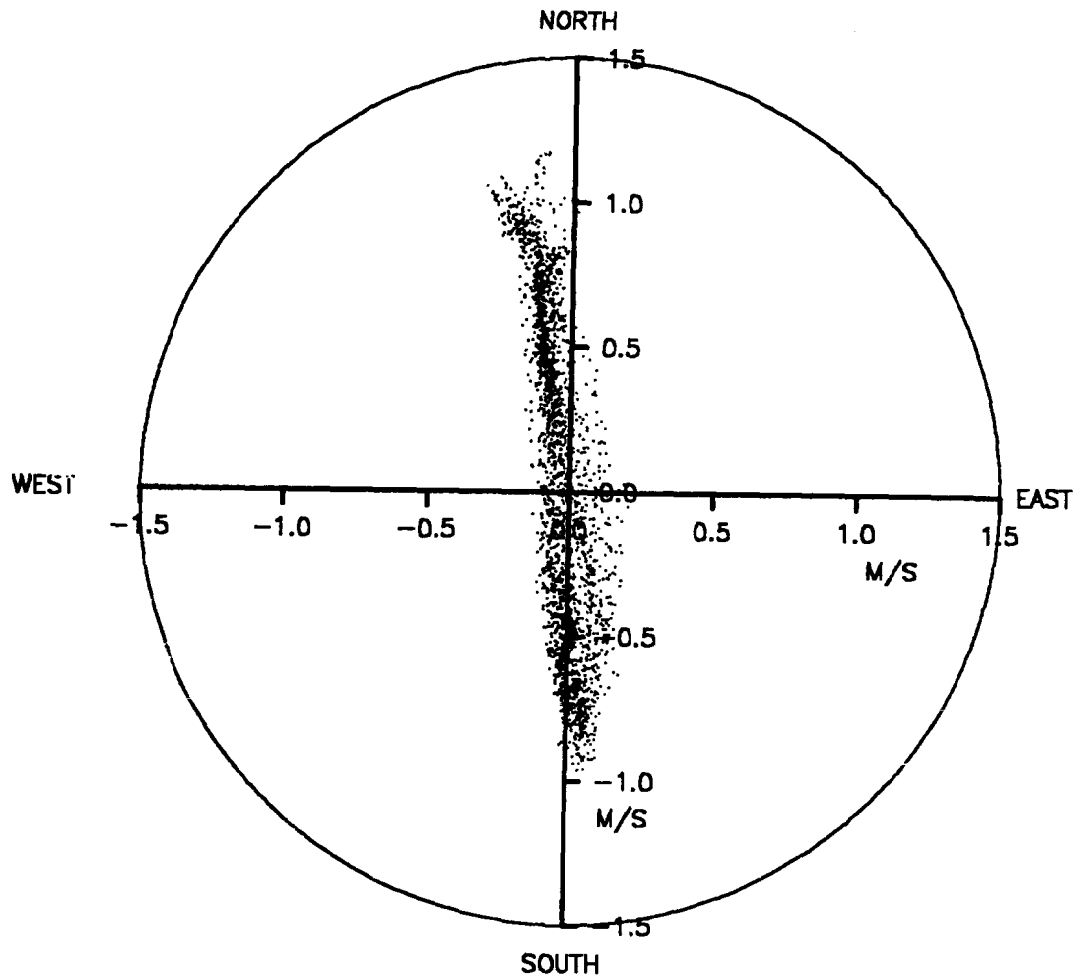
Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00

Position 52 42.55N 02 25.66E Meter Height(m) 20.0



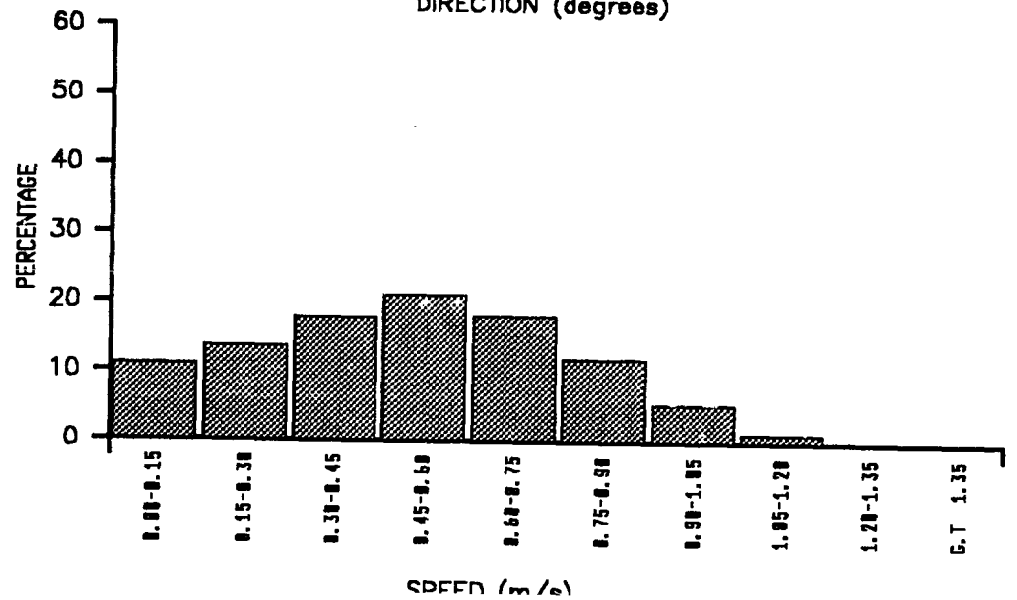
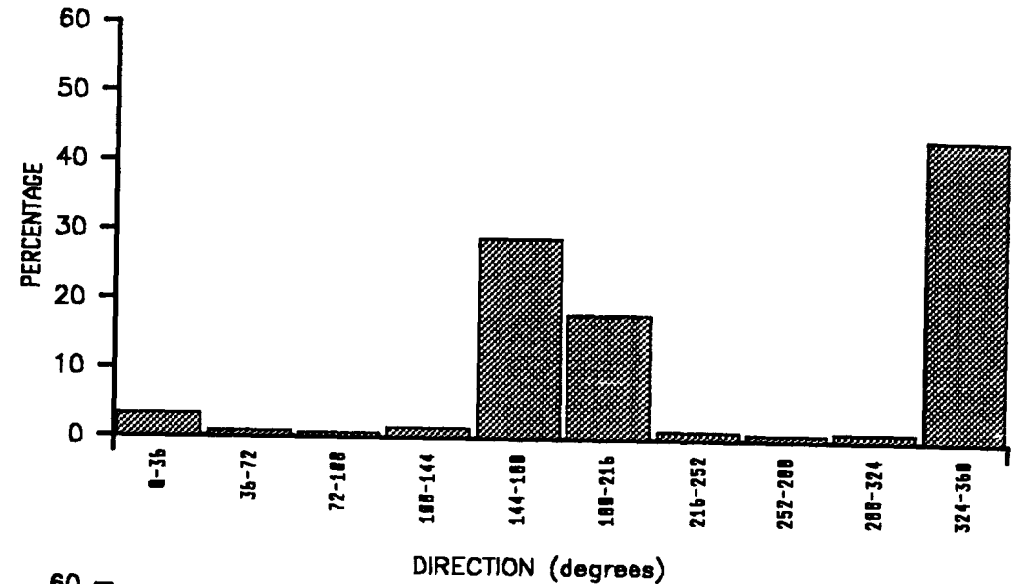
SCATTER PLOT

Meter no. 1114 Rig no. C35EC Depth of water(m) 49.0
 Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
 Position 52 42.55N 02 25.66E Meter Height(m) 20.0



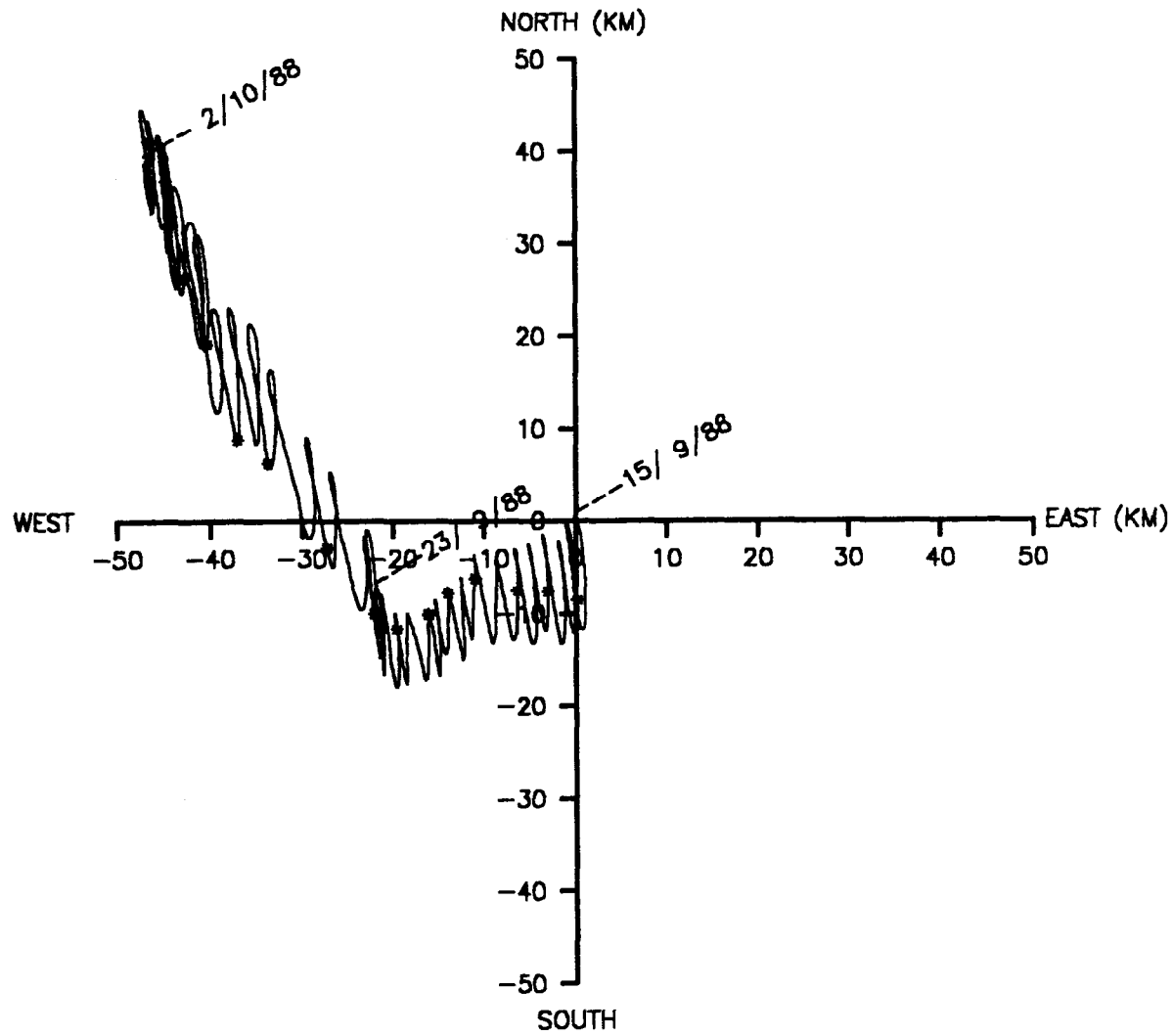
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1114 Rig no. C35EC Depth of water(m) 49.0
 Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
 Position 52 42.55N 02 25.66E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1114 Rig no. C35EC Depth of water(m) 49.0
Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
Position 52 42.55N 02 25.66E Meter Height(m) 20.0



STATISTICS FOR S41114M C35ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0321	0.66617802E-02	0.81619740E-01
Northings	0.0264	0.30905294E+00	0.55592525E+00
Speed	0.5014	0.65953612E-01	0.25681442E+00

Vector mean speed 0.0416
 Vector Mean Direction -50.6

Maximum ten values

Eastings					Northings				
0.206	0.191	0.187	0.186	0.185	1.173	1.168	1.164	1.158	1.146
0.184	0.181	0.180	0.174	0.170	1.138	1.130	1.117	1.101	1.093

Minimum ten values

Eastings					Northings				
-0.272	-0.277	-0.277	-0.278	-0.280	-0.917	-0.922	-0.924	-0.925	-0.928
-0.283	-0.284	-0.287	-0.291	-0.307	-0.930	-0.939	-0.940	-0.958	-0.963

Maximum speeds

1.176	1.172	1.168	1.165	1.153	1.146	1.137	1.123	1.114	1.111
1.107	1.102	1.098	1.092	1.092	1.087	1.076	1.074	1.072	1.070
1.069	1.069	1.067	1.060	1.058	1.056	1.056	1.055	1.055	1.045
1.045	1.045	1.045	1.038	1.038	1.037	1.035	1.032	1.030	1.026
1.025	1.022	1.018	1.017	1.016	1.014	1.012	1.011	1.010	1.010
1.009	1.009	1.009	1.007	1.006	1.006	1.004	1.000	0.999	0.998
0.996	0.995	0.994	0.991	0.991	0.988	0.988	0.985	0.983	0.981
0.978	0.978	0.978	0.977	0.976	0.976	0.974	0.973	0.969	0.968
0.966	0.966	0.965	0.964	0.963	0.961	0.960	0.959	0.959	0.958
0.957	0.956	0.955	0.954	0.954	0.953	0.953	0.952	0.952	0.951

Variance ellipse statistics

Maximum variance 0.3128E+00	Direction	-6.3
Minimum variance 0.2925E-02	Direction	83.7
Total variance 0.3157E+00	Ratio of variances	0.9351E-02
Average direction. maxdir -PI/2 to maxdir +PI/2		-3.4
Average direction. maxdir +PI/2 to maxdir -PI/2		183.9

STATISTICS FOR S41114M C35ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0383	0.29989984E-03	0.17317619E-01
Northings	0.0413	0.27224564E-02	0.52177161E-01
Speed	0.0697	0.12938753E-02	0.35970476E-01

Vector mean speed 0.0564
 Vector Mean Direction -42.9

Maximum ten values									
Eastings					Northings				
-0.008	-0.009	-0.013	-0.019	-0.020	0.142	0.134	0.133	0.117	0.109
-0.024	-0.024	-0.024	-0.025	-0.026	0.109	0.102	0.101	0.091	0.088

Minimum ten values									
Eastings					Northings				
-0.051	-0.052	-0.052	-0.057	-0.064	-0.011	-0.020	-0.022	-0.026	-0.026
-0.066	-0.072	-0.073	-0.076	-0.076	-0.027	-0.027	-0.027	-0.029	-0.029

Maximum speeds									
0.160	0.153	0.149	0.139	0.125	0.116	0.115	0.113	0.109	0.094
0.094	0.091	0.075	0.074	0.072	0.071	0.069	0.067	0.064	0.060
0.059	0.058	0.057	0.052	0.052	0.051	0.049	0.048	0.047	0.045
0.045	0.043	0.041	0.041	0.040	0.040	0.039	0.038	0.038	0.037
0.036	0.036	0.034	0.033						

Variance ellipse statistics

Maximum variance	0.2782E-02	Direction	-8.8
Minimum variance	0.2404E-03	Direction	81.2
Total variance	0.3022E-02	Ratio of variances	0.8640E-01
Average direction. maxdir -PI/2 to maxdir +PI/2			-24.7
Average direction. maxdir +PI/2 to maxdir -PI/2			242.6

Meter information details for 9347

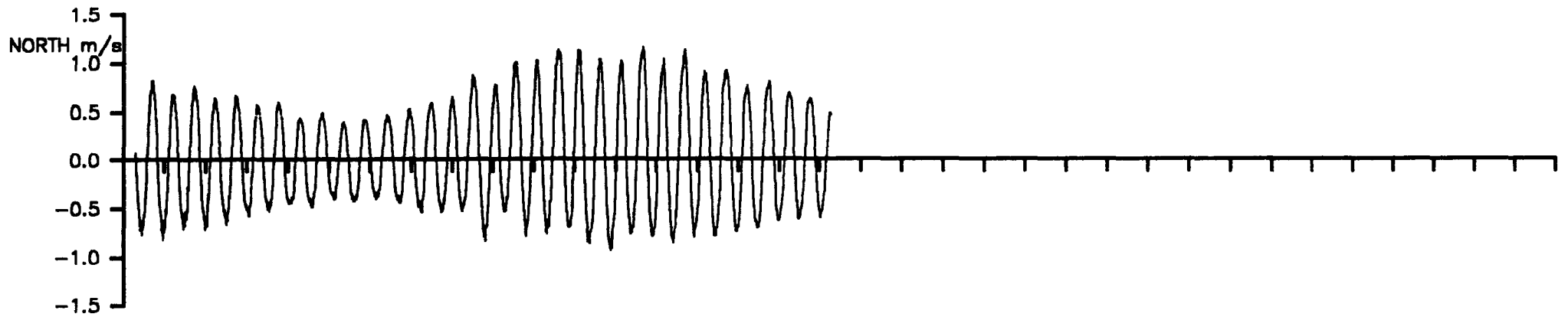
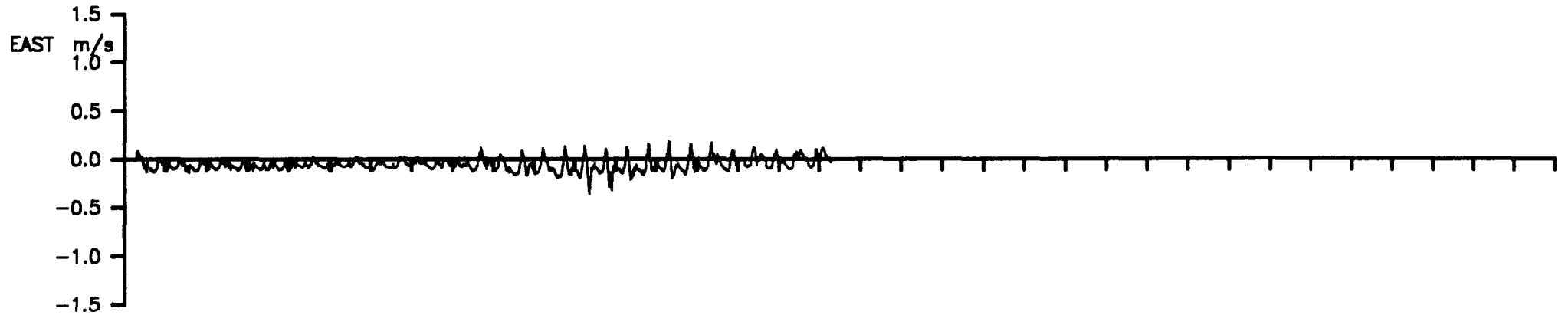
Rig No	:	C35EC
Meter No	:	9347
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	15-SEPT-88 04:10:00
Meter stopped	:	04-OCT-88 01:00:00
Period switched on	:	18.9 days
Period of good data	:	17.0 days
Total number of scans	:	2446
Timing error	:	None
Comments	:	Pressure sensor indicates some instability between 23-SEPT-88 until the end of the deployment on 02-OCT-88

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9347 Rig no. C35EC Depth of water(m) 49.0

Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00

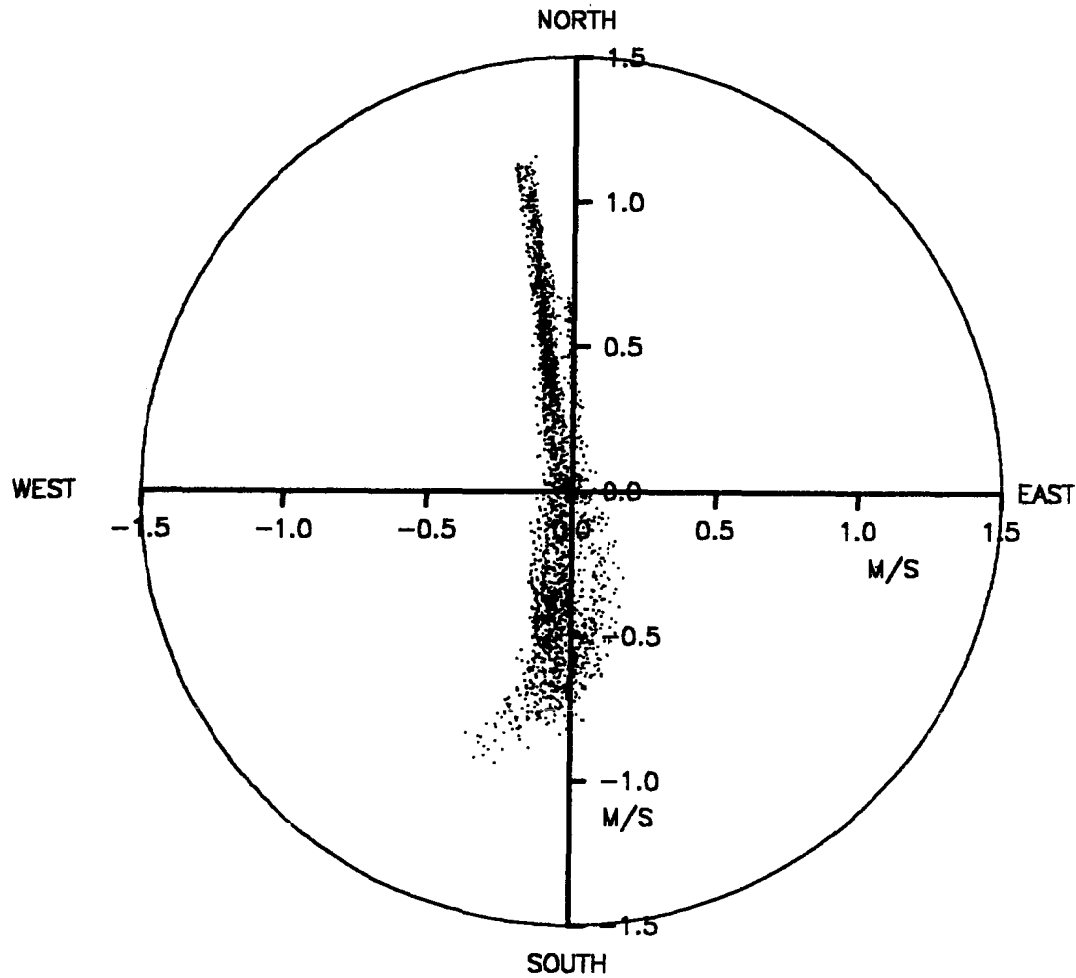
Position 52 42.55N 02 25.66E Meter Height(m) 7.0



15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
88 88
Sep Oct

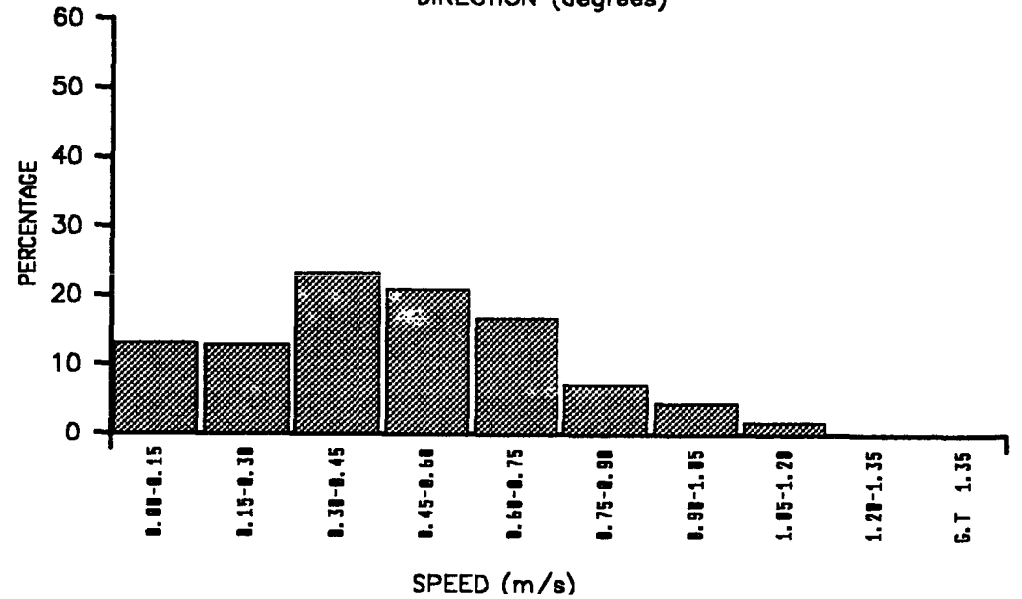
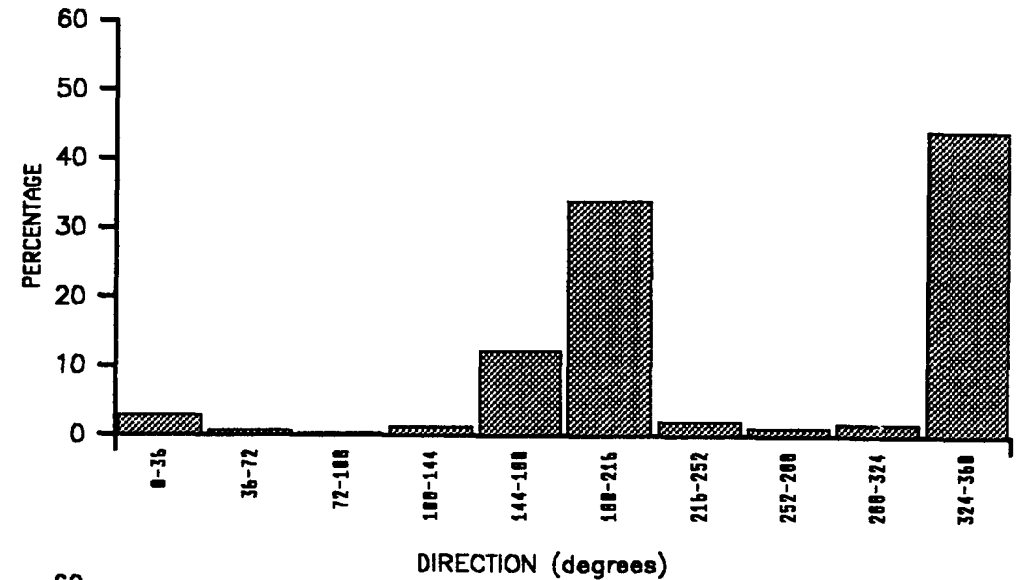
SCATTER PLOT

Meter no. 9347 Rig no. C35EC Depth of water(m) 49.0
 Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
 Position 52 42.55N 02 25.66E Meter Height(m) 7.0



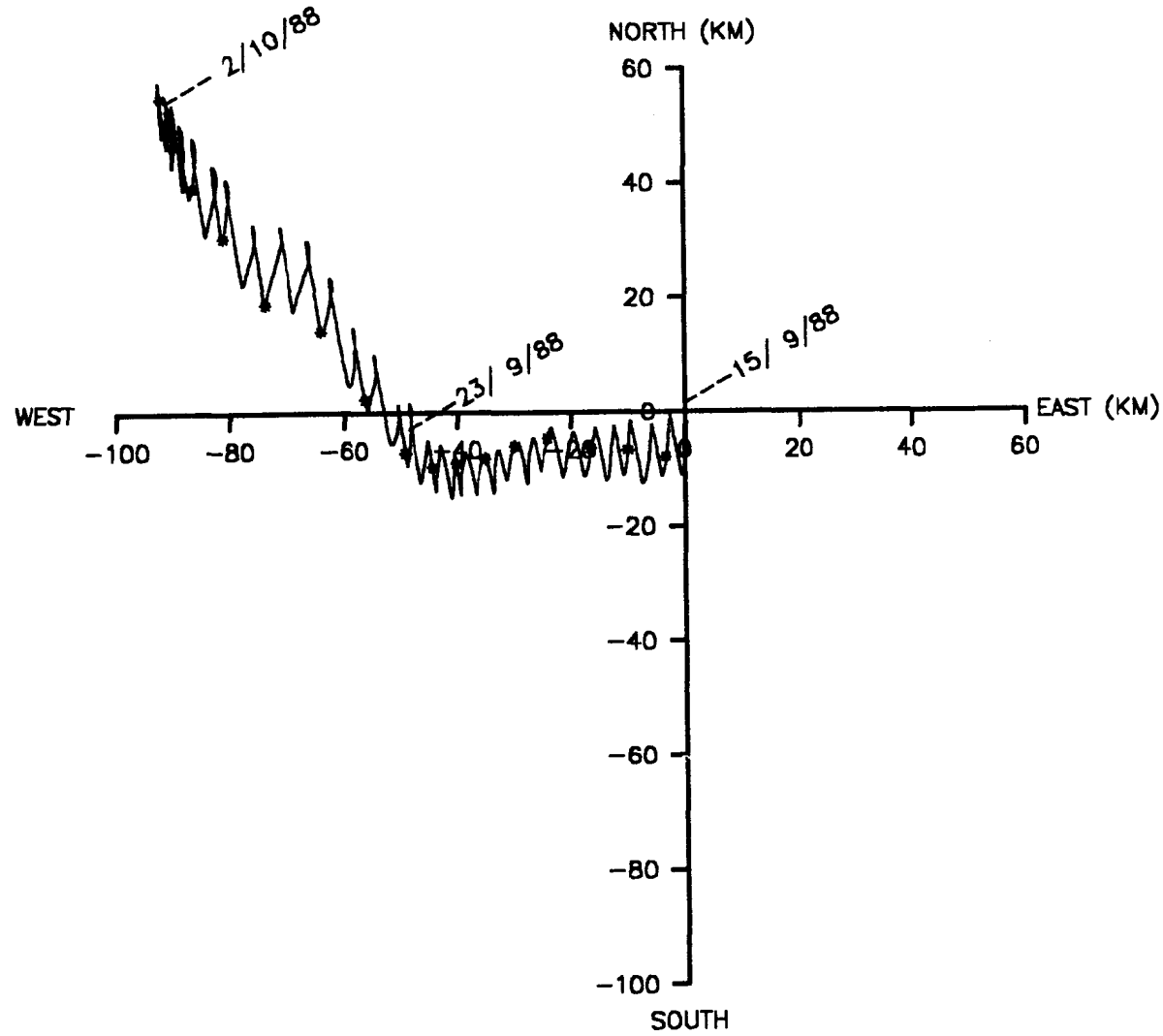
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9347 Rig no. C35EC Depth of water(m) 49.0
 Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
 Position 52 42.55N 02 25.66E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9347 Rig no. C35EC Depth of water(m) 49.0
Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
Position 52 42.55N 02 25.66E Meter Height(m) 7.0

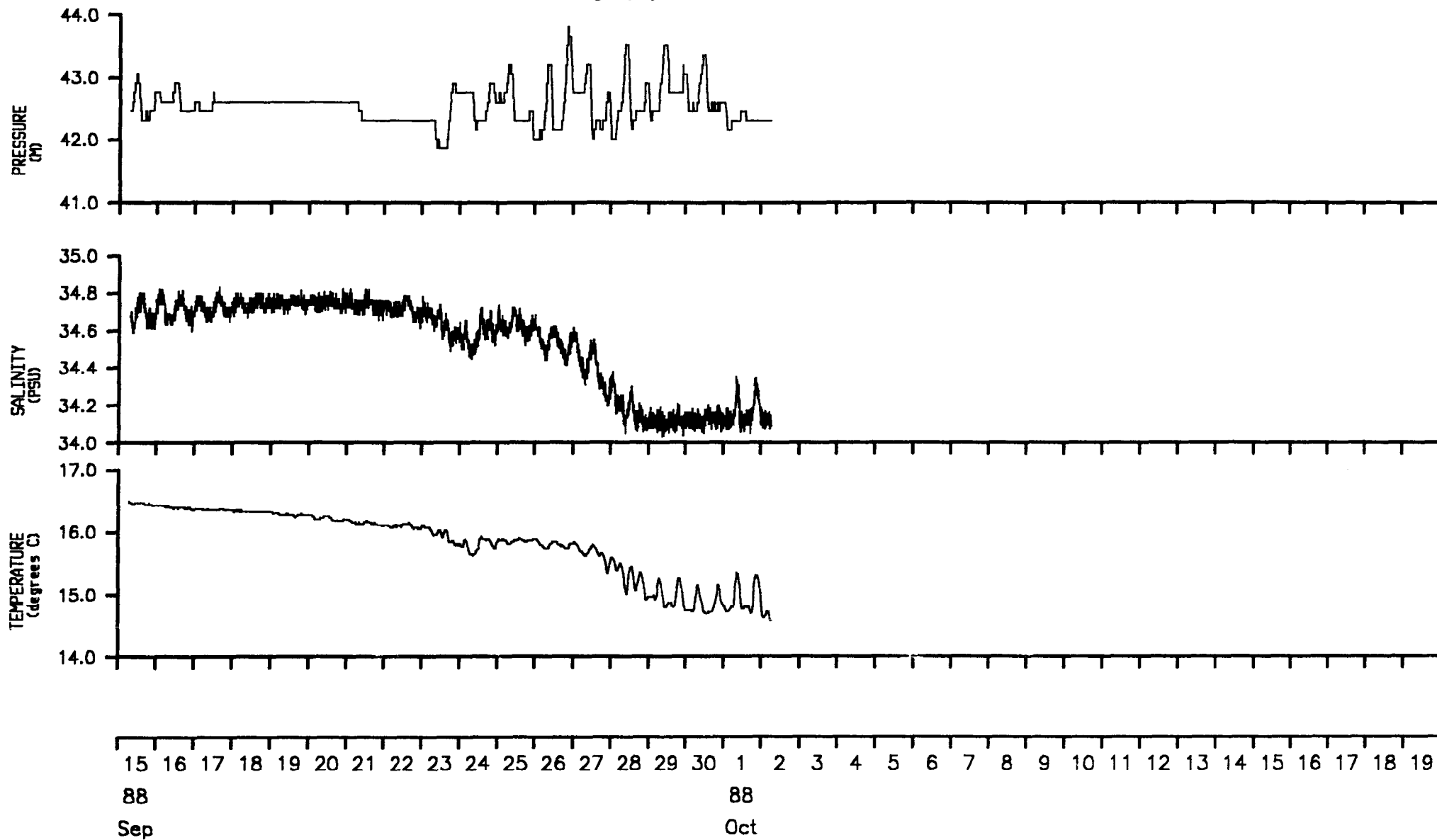


TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9347 Rig no. C35EC Depth of water(m) 49.0

Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00

Position 52 42.55N 02 25.66E Meter Height(m) 7.0



STATISTICS FOR AS9347B C35ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0620	0.44972412E-02	0.67061424E-01
Northings	0.0360	0.27494144E+00	0.52434856E+00
Speed	0.4688	0.64755917E-01	0.25447184E+00

Vector mean speed 0.0718
 Vector Mean Direction -59.9

Maximum ten values

Eastings					Northings				
0.179	0.170	0.163	0.160	0.159	1.157	1.134	1.127	1.121	1.120
0.157	0.153	0.152	0.148	0.148	1.120	1.119	1.117	1.115	1.114

Minimum ten values

Eastings					Northings				
-0.277	-0.282	-0.291	-0.295	-0.303	-0.860	-0.863	-0.867	-0.882	-0.888
-0.304	-0.310	-0.314	-0.329	-0.362	-0.893	-0.894	-0.912	-0.922	-0.939

Maximum speeds

1.165	1.144	1.144	1.136	1.133	1.133	1.133	1.133	1.130	1.127
1.127	1.118	1.118	1.115	1.115	1.112	1.109	1.107	1.107	1.107
1.104	1.104	1.104	1.101	1.095	1.095	1.092	1.092	1.089	1.086
1.083	1.083	1.078	1.072	1.072	1.069	1.066	1.063	1.060	1.060
1.057	1.054	1.048	1.043	1.043	1.043	1.040	1.040	1.037	1.034
1.034	1.031	1.031	1.031	1.028	1.022	1.022	1.019	1.019	1.019
1.019	1.016	1.016	1.014	1.014	1.014	1.011	1.002	1.002	1.002
0.999	0.999	0.999	0.999	0.996	0.996	0.993	0.993	0.993	0.993
0.990	0.990	0.990	0.990	0.990	0.985	0.982	0.979	0.979	0.976
0.976	0.976	0.976	0.973	0.973	0.970	0.967	0.964	0.961	0.961

Variance ellipse statistics

Maximum variance 0.2756E+00	Direction	-2.8
Minimum variance 0.3824E-02	Direction	87.2
Total variance 0.2794E+00	Ratio of variances	0.1388E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-8.7
Average direction. maxdir +PI/2 to maxdir -PI/2		189.1

STATISTICS FOR AS9347B C35ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0733	0.32398128E-03	0.17999485E-01
Northings	0.0534	0.36721709E-02	0.60598437E-01
Speed	0.1025	0.16672316E-02	0.40831745E-01

Vector mean speed 0.0907
 Vector Mean Direction -53.9

Maximum ten values

Eastings					Northings				
-0.045	-0.047	-0.049	-0.051	-0.053	0.173	0.166	0.162	0.145	0.132
-0.055	-0.055	-0.056	-0.059	-0.059	0.131	0.124	0.119	0.117	0.110

Minimum ten values

Eastings					Northings				
-0.087	-0.089	-0.090	-0.095	-0.098	-0.003	-0.013	-0.013	-0.021	-0.022
-0.101	-0.106	-0.107	-0.110	-0.110	-0.024	-0.024	-0.025	-0.026	-0.026

Maximum speeds

0.195	0.191	0.184	0.169	0.167	0.156	0.148	0.146	0.142	0.135
0.134	0.131	0.124	0.118	0.117	0.114	0.114	0.105	0.104	0.100
0.096	0.091	0.089	0.087	0.086	0.085	0.082	0.082	0.076	0.073
0.072	0.072	0.071	0.070	0.069	0.067	0.066	0.064	0.060	0.058
0.056	0.049	0.048	0.045						

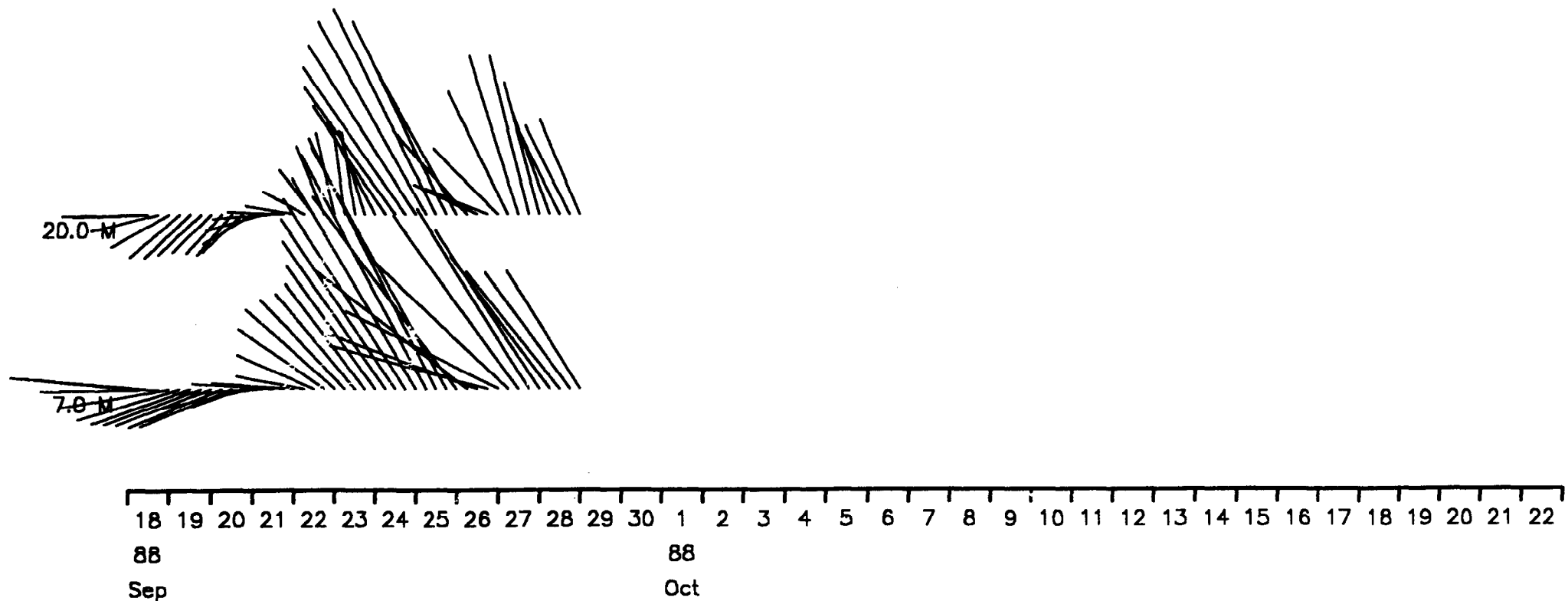
Variance ellipse statistics

Maximum variance	0.3731E-02	Direction	-7.5
Minimum variance	0.2653E-03	Direction	82.5
Total variance	0.3996E-02	Ratio of variances	0.7111E-01
Average direction. maxdir -PI/2 to maxdir +PI/2			-42.4
Average direction. maxdir +PI/2 to maxdir -PI/2			259.4

STICK TIME SERIES PLOT

Rig no. C35EC Depth of water(m) 49.0
Start/End 1988/09/15 AT 07:25:00 1988/10/02 AT 07:07:00
Position 52 42.55N 02 25.66E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9347	7.0 M
1114	20.0 M



Rig information details for C37EC

Position Latitude	:	52 42.55N
Position Longitude	:	02 25.66E
Water depth	:	49.0 m
Deployed on cruise	:	C37
Recovered on cruise	:	LOST
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	02-OCT-88 10:14:00
Comments	:	No sign of buoy on surface and no response to acoustic search during recovery attempt on 12/13-NOV-88

Rig information details for C41EC

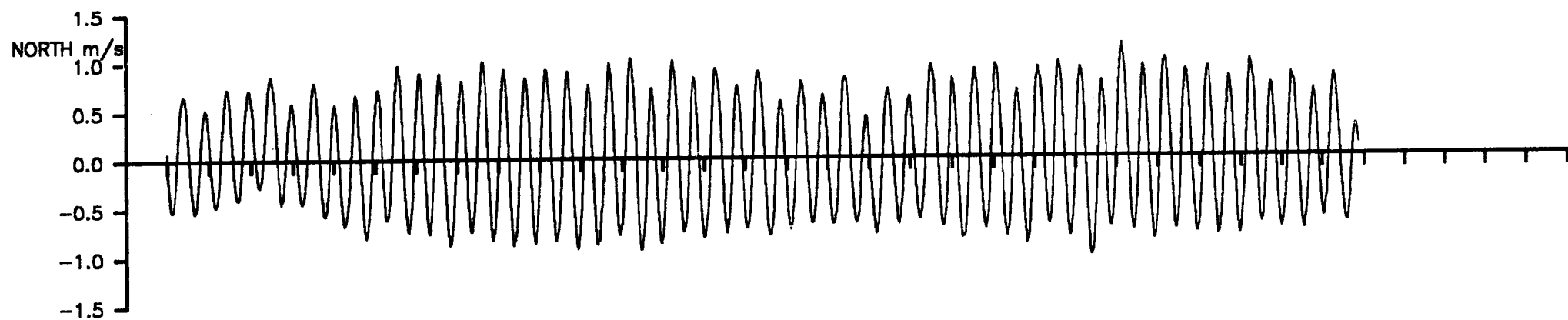
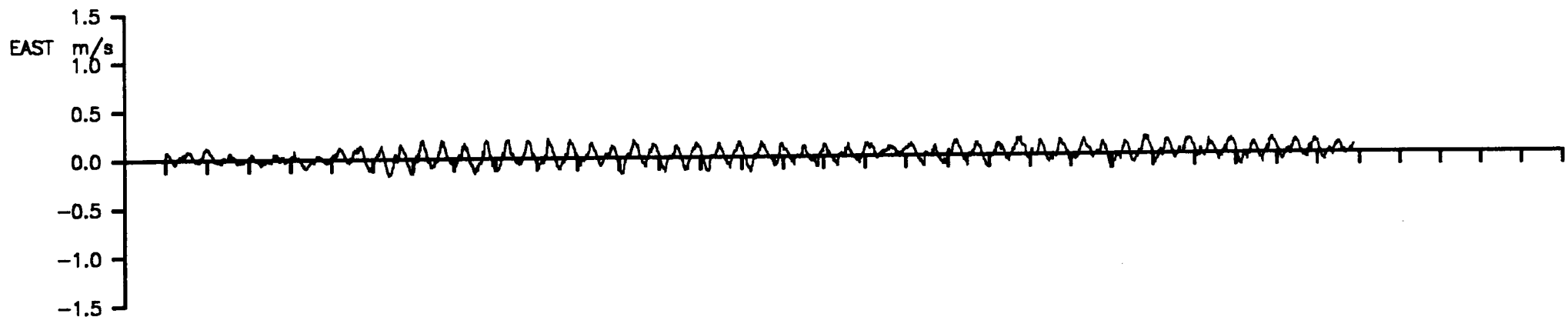
Position Latitude	:	52 41.23N
Position Longitude	:	02 25.71E
Water depth	:	49.0 m
Deployed on cruise	:	C41
Recovered on cruise	:	C43
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	01-DEC-88 23:45:00
Rig recovered on	:	30-DEC-88 21:00:00
Period of deployment	:	28.9 days
Comments	:	Launch and recovery successful

Meter information details for 1119

Rig No	:	C41EC
Meter No	:	1119
Recording interval	:	600.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	01-DEC-88 20:20:00
Meter stopped	:	31-DEC-88 16:40:00
Period switched on	:	29.8 days
Period of good data	:	28.9 days
Total number of scans	:	4159
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

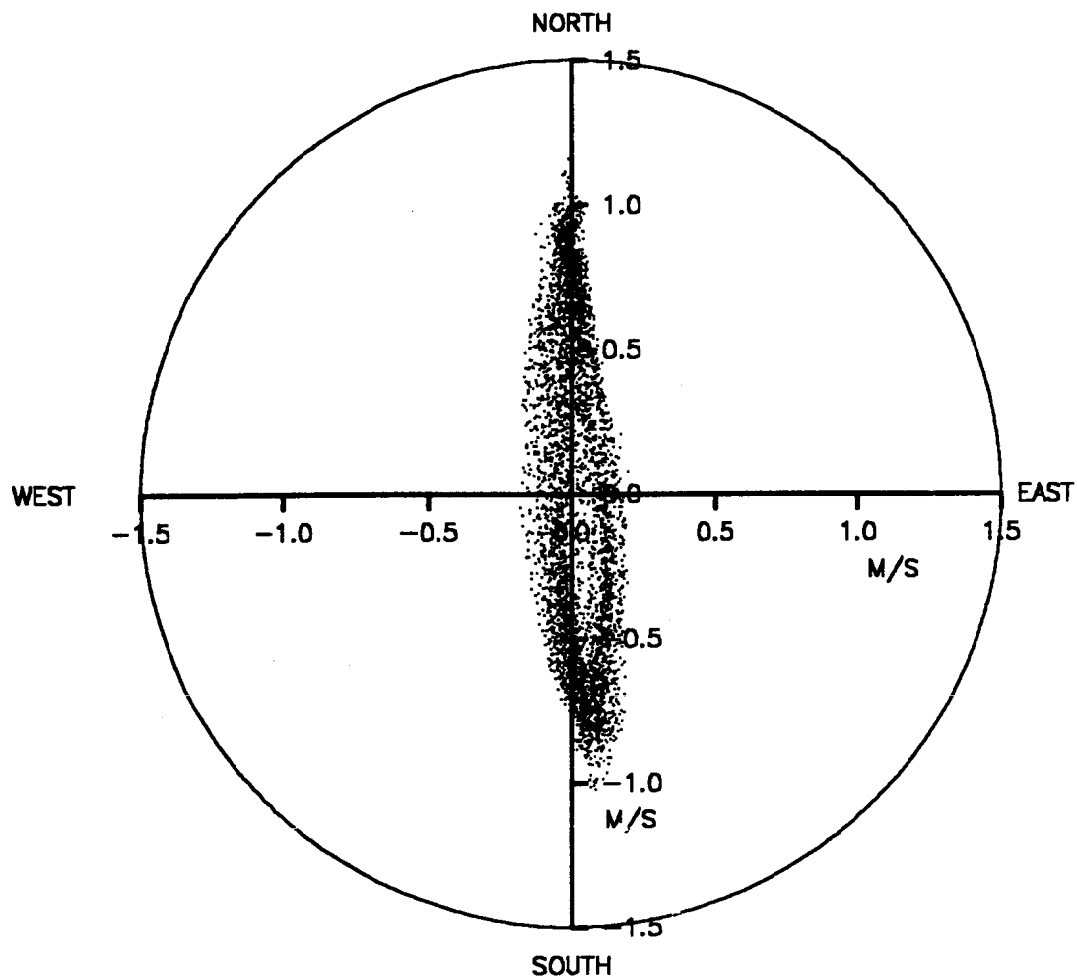
Meter no. 1119 Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E Meter Height(m) 35.0



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4

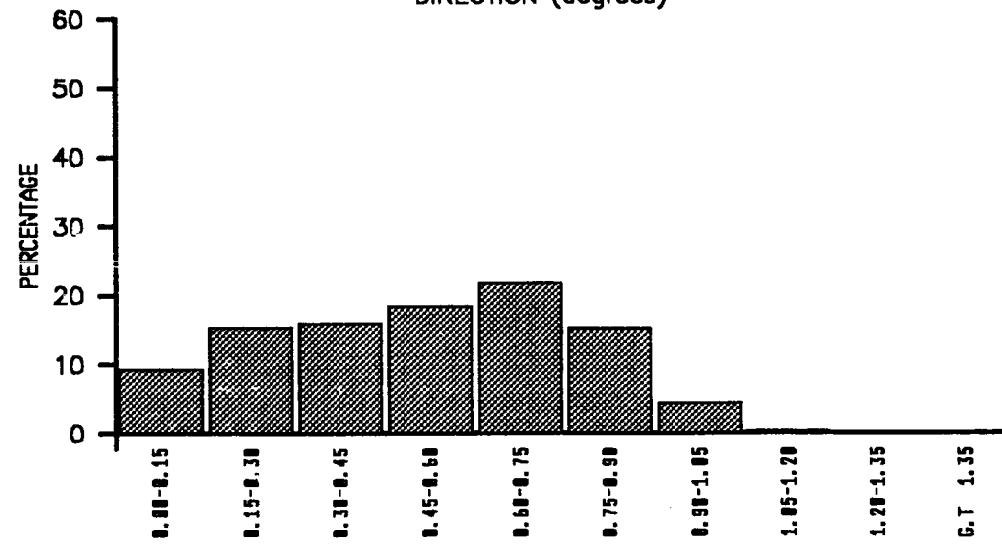
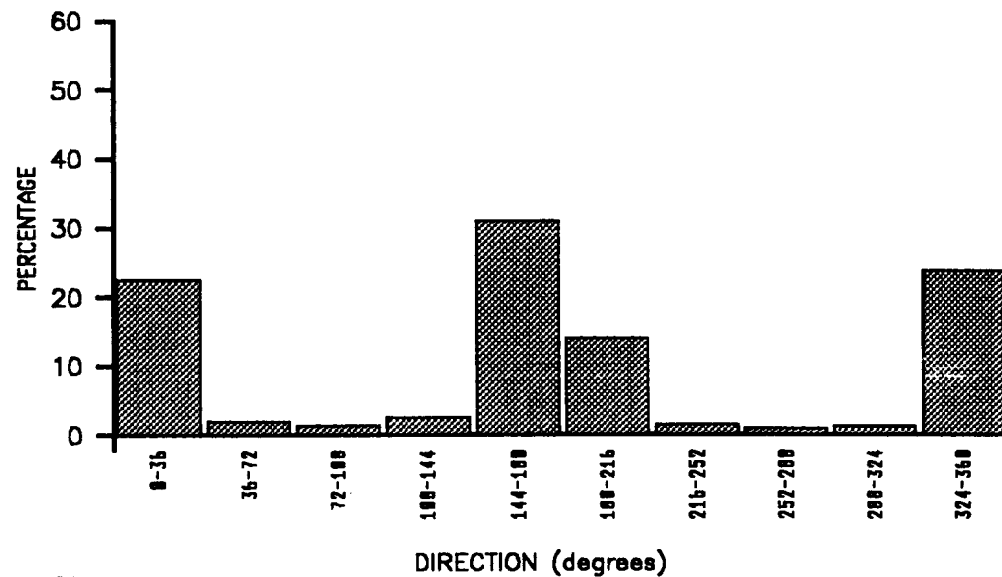
SCATTER PLOT

Meter no. 1119 Rig no. C41EC Depth of water(m) 49.0
 Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
 Position 52 41.23N 02 25.71E Meter Height(m) 35.0



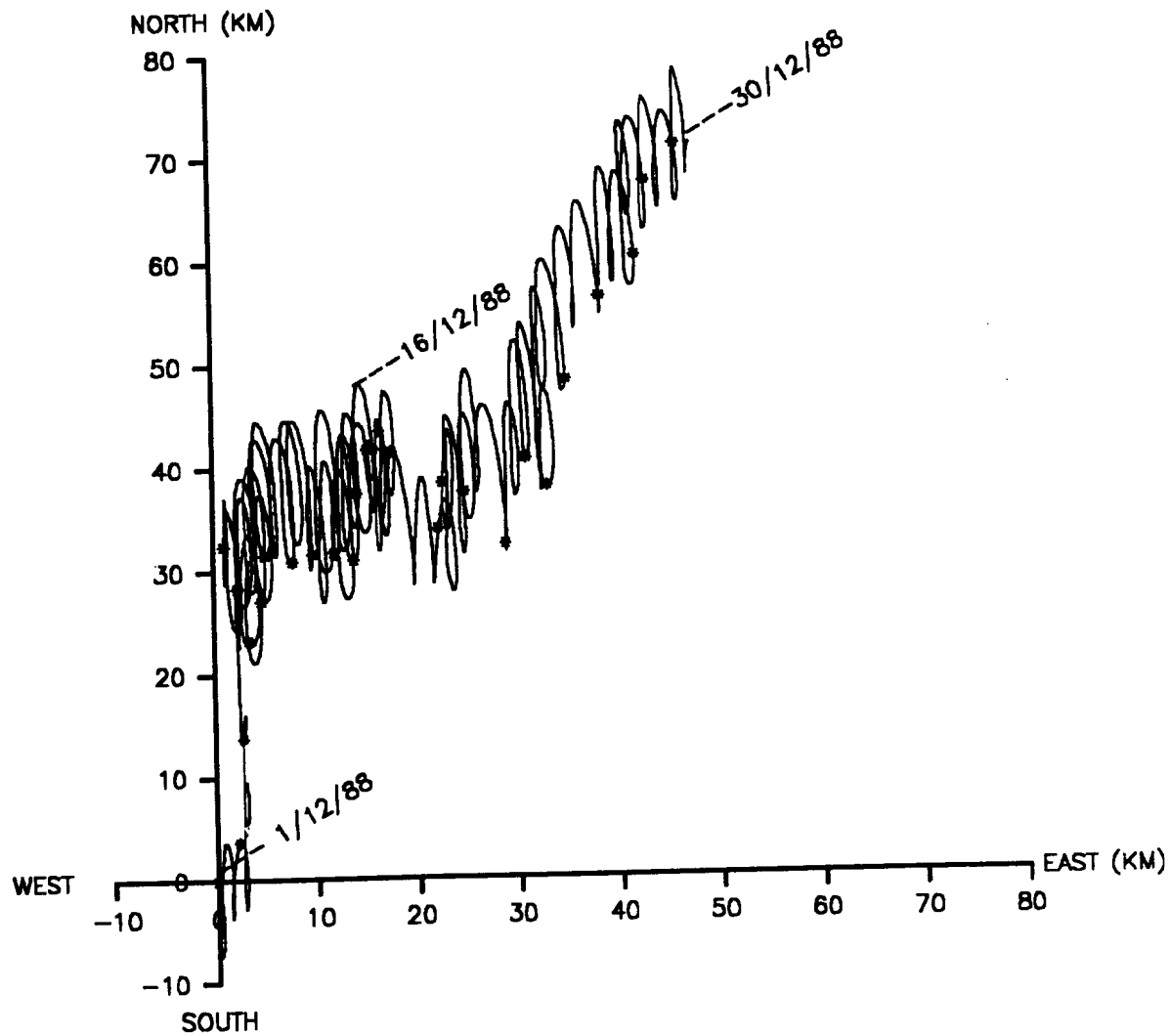
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1119 Rig no. C41EC Depth of water(m) 49.0
 Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
 Position 52 41.23N 02 25.71E Meter Height(m) 35.0



VECTOR PLOT

Meter no. 1119 Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E Meter Height(m) 35.0



STATISTICS FOR S41119T C41ECS A

	Mean	Variance	Standard deviation
Eastings	0.0191	0.50346553E-02	0.70955276E-01
Northings	0.0285	0.31883168E+00	0.56465179E+00
Speed	0.5130	0.61830517E-01	0.24865735E+00

Vector mean speed 0.0343
 Vector Mean Direction 33.8

Maximum ten values

Eastings					Northings				
0.193	0.193	0.188	0.186	0.184	1.158	1.115	1.105	1.102	1.096
0.184	0.182	0.182	0.181	0.181	1.077	1.068	1.066	1.058	1.054

Minimum ten values

Eastings					Northings				
-0.162	-0.165	-0.166	-0.168	-0.169	-0.964	-0.972	-0.986	-0.987	-0.990
-0.169	-0.169	-0.171	-0.171	-0.177	-0.995	-0.997	-1.009	-1.014	-1.023

Maximum speeds

1.158	1.115	1.105	1.103	1.096	1.077	1.068	1.066	1.058	1.054
1.038	1.030	1.030	1.026	1.024	1.023	1.017	1.016	1.013	1.012
1.011	1.008	1.005	1.005	1.004	1.004	1.003	1.002	1.000	0.998
0.997	0.996	0.996	0.993	0.992	0.992	0.990	0.990	0.990	0.990
0.989	0.989	0.988	0.987	0.987	0.985	0.983	0.981	0.980	0.979
0.978	0.978	0.978	0.977	0.976	0.976	0.974	0.974	0.973	0.972
0.972	0.970	0.969	0.968	0.966	0.966	0.966	0.965	0.965	0.964
0.964	0.961	0.961	0.961	0.957	0.957	0.957	0.956	0.955	0.951
0.950	0.949	0.948	0.947	0.947	0.947	0.946	0.945	0.944	0.942
0.941	0.940	0.940	0.939	0.938	0.937	0.937	0.937	0.936	0.936

Variance ellipse statistics

Maximum variance	0.3194E+00	Direction	-2.5
Minimum variance	0.4425E-02	Direction	87.5
Total variance	0.3239E+00	Ratio of variances	0.1385E-01
Average direction. maxdir	-PI/2 to maxdir	+PI/2	3.3
Average direction. maxdir	+PI/2 to maxdir	-PI/2	177.7

STATISTICS FOR S41119T C41ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0193	0.26379526E-03	0.16241778E-01
Northings	0.0189	0.27527953E-02	0.52467085E-01
Speed	0.0536	0.85464236E-03	0.29234264E-01

Vector mean speed 0.0270
 Vector Mean Direction 45.5

Maximum ten values					Northings				
Eastings									
0.055	0.051	0.050	0.049	0.049	0.133	0.132	0.113	0.108	0.100
0.047	0.047	0.046	0.044	0.043	0.099	0.094	0.089	0.087	0.084

Minimum ten values					Northings				
Eastings									
0.002	0.000	-0.001	-0.003	-0.012	-0.047	-0.050	-0.057	-0.066	-0.067
-0.013	-0.014	-0.015	-0.019	-0.019	-0.071	-0.089	-0.089	-0.099	-0.112

Maximum speeds									
0.133	0.132	0.123	0.113	0.111	0.106	0.104	0.103	0.100	0.096
0.096	0.085	0.089	0.086	0.084	0.082	0.081	0.081	0.080	0.079
0.078	0.074	0.074	0.073	0.071	0.070	0.070	0.065	0.064	0.063
0.062	0.060	0.060	0.059	0.058	0.058	0.054	0.054	0.052	0.050
0.050	0.050	0.049	0.049	0.049	0.048	0.047	0.046	0.046	0.042
0.042	0.041	0.041	0.040	0.039	0.038	0.037	0.037	0.037	0.037
0.034	0.034	0.033	0.032	0.031	0.031	0.031	0.030	0.030	0.030
0.030	0.029	0.028	0.028	0.028	0.028	0.028	0.027	0.027	0.026
0.026	0.025	0.024	0.024	0.022	0.020	0.018	0.017	0.016	0.013
0.012	0.011								

Variance ellipse statistics

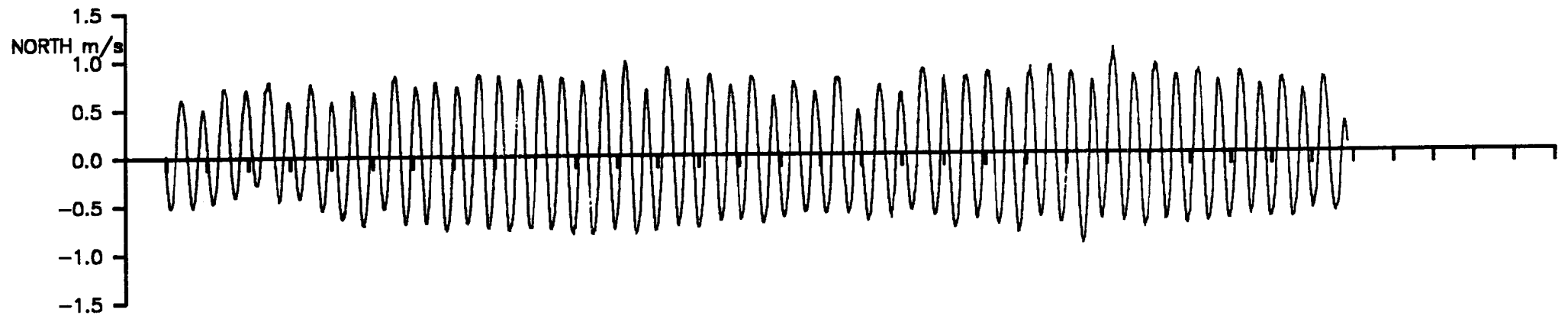
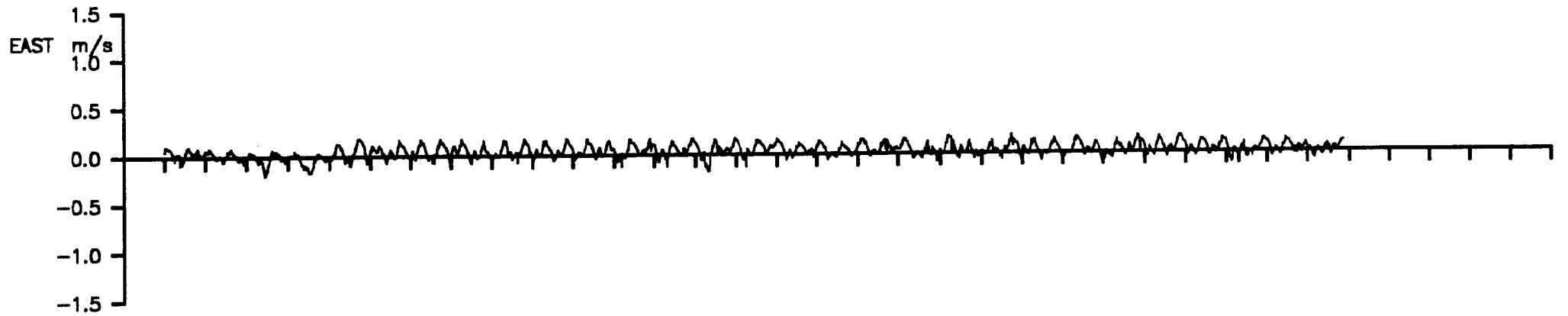
Maximum variance 0.2820E-02	Direction	-9.2
Minimum variance 0.1964E-03	Direction	80.8
Total variance 0.3017E-02	Ratio of variances	0.6964E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		31.5
Average direction. maxdir +PI/2 to maxdir -PI/2		146.9

Meter information details for 1118

Rig No	:	C41EC
Meter No	:	1118
Recording interval	:	600.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	01-DEC-88 20:50:00
Meter stopped	:	31-DEC-88 09:10:00
Period switched on	:	29.5 days
Period of good data	:	28.9 days
Total number of scans	:	4159
Timing error	:	None
Comments	:	Good record obtained

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1118 Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E Meter Height(m) 20.0



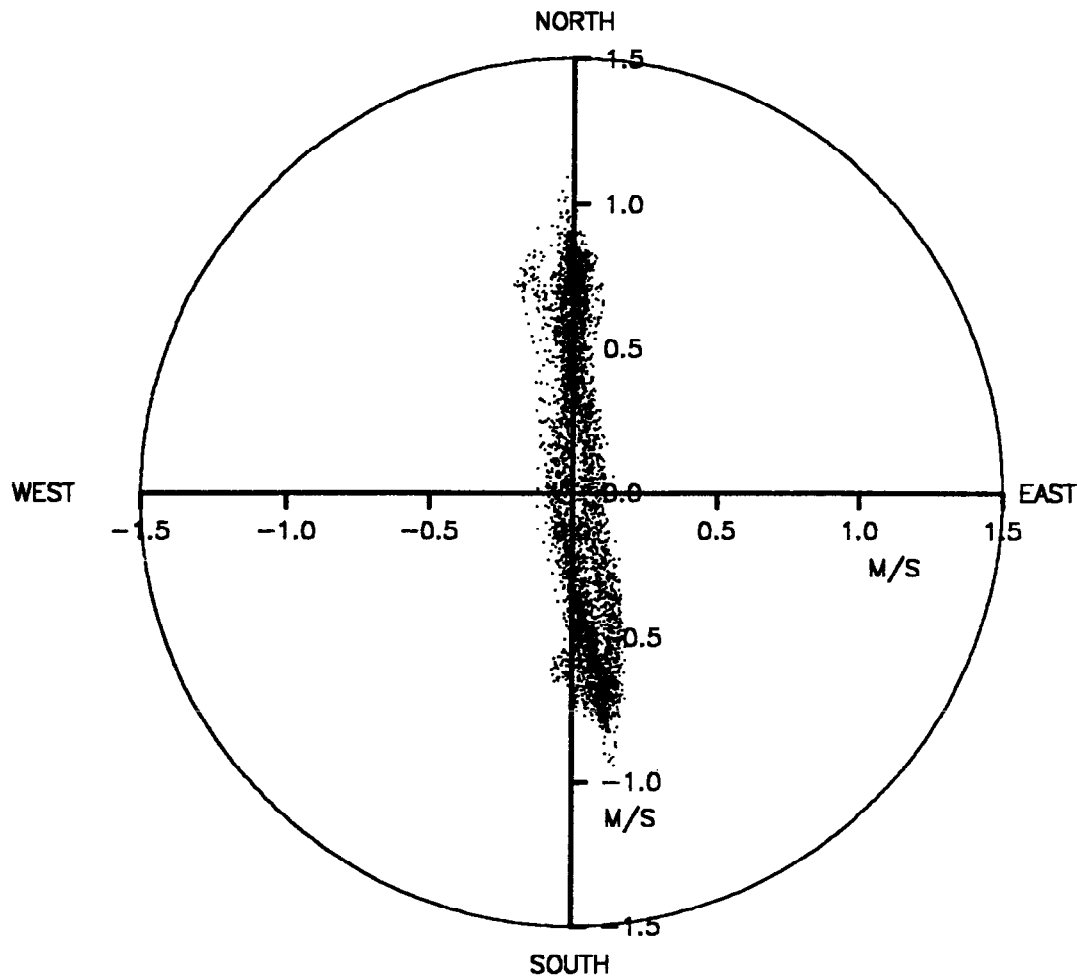
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88

Dec

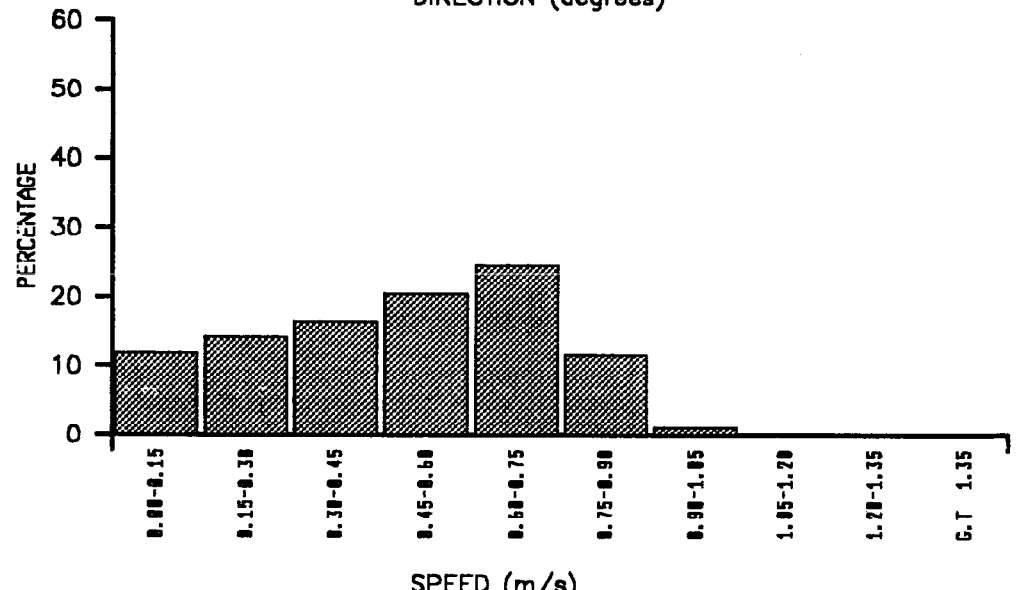
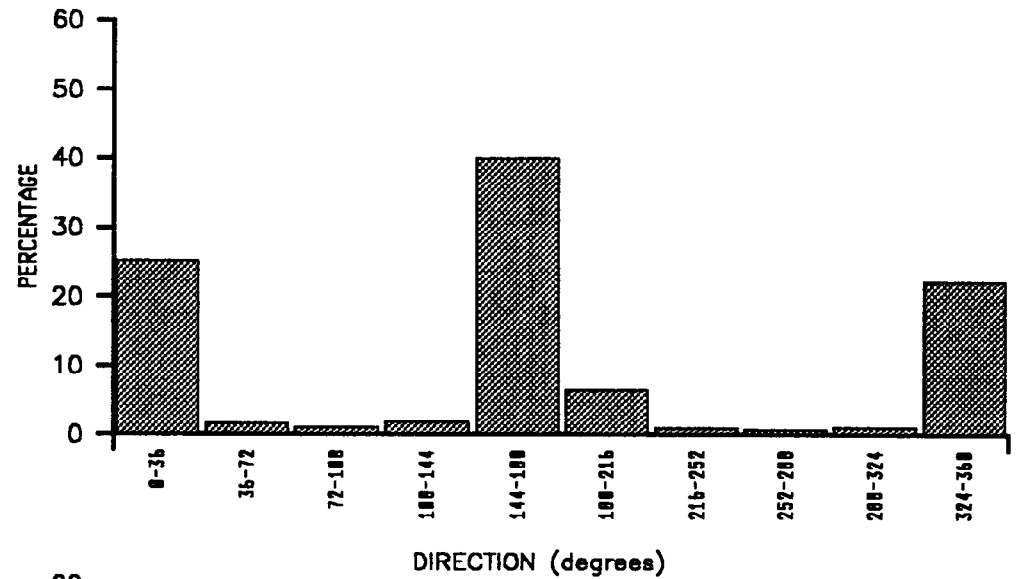
SCATTER PLOT

Meter no. 1118 Rig no. C41EC Depth of water(m) 49.0
 Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
 Position 52 41.23N 02 25.71E Meter Height(m) 20.0



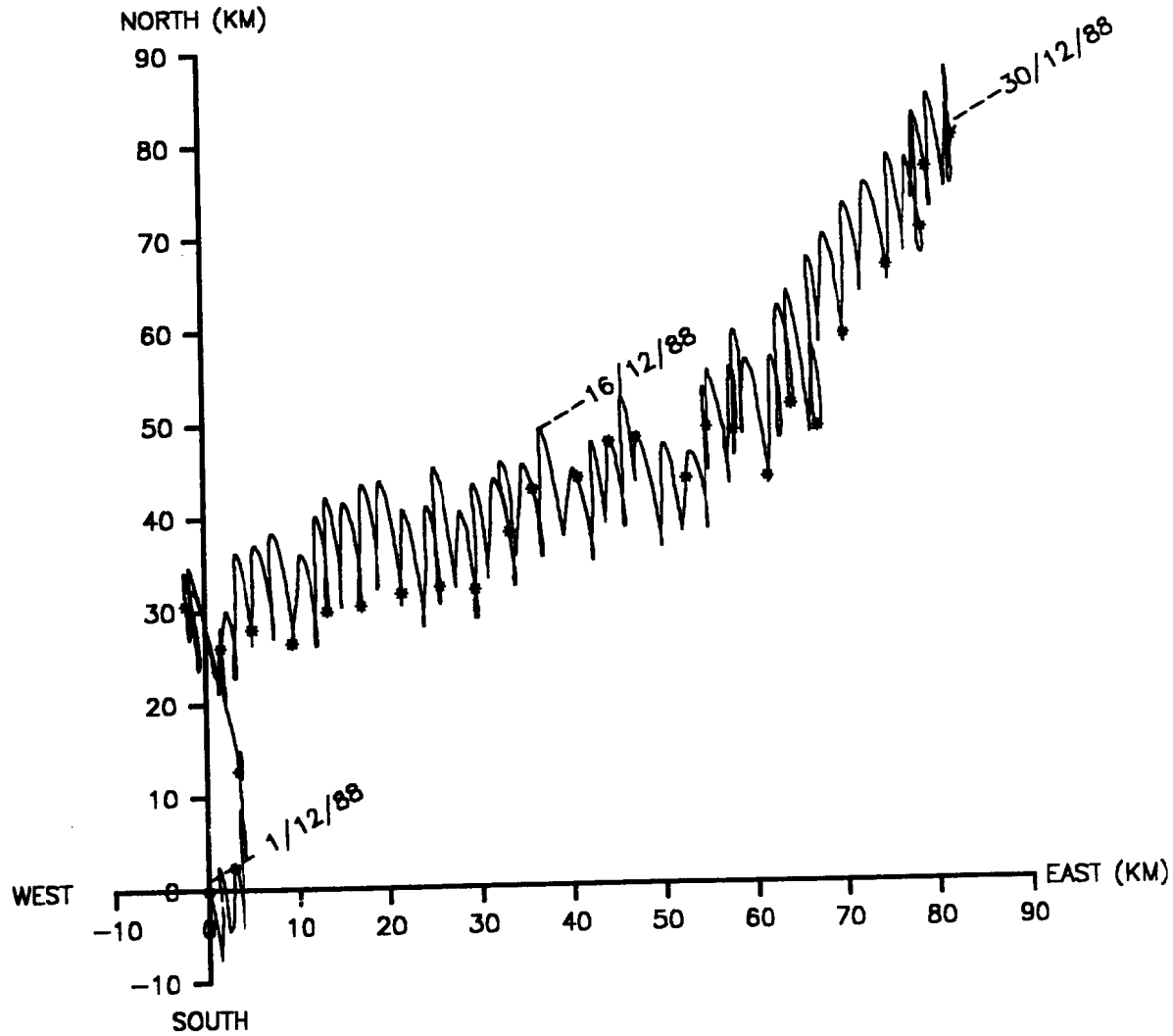
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1118 Rig no. C41EC Depth of water(m) 49.0
 Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
 Position 52 41.23N 02 25.71E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1118 Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E Meter Height(m) 20.0



STATISTICS FOR S41118M C41ECS A

	Mean	Variance	Standard deviation
Eastings	0.0333	0.39573237E-02	0.62907219E-01
Northings	0.0324	0.27972853E+00	0.52889371E+00
Speed	0.4809	0.54502219E-01	0.23345715E+00

Vector mean speed 0.0465
 Vector Mean Direction 45.8

Maximum ten values

Eastings					Northings				
0.184	0.184	0.183	0.180	0.180	1.091	1.046	1.024	1.023	1.011
0.176	0.176	0.176	0.175	0.175	1.010	0.977	0.975	0.973	0.972

Minimum ten values

Eastings					Northings				
-0.174	-0.175	-0.176	-0.176	-0.179	-0.874	-0.880	-0.900	-0.900	-0.905
-0.184	-0.186	-0.195	-0.196	-0.206	-0.908	-0.917	-0.927	-0.929	-0.942

Maximum speeds

1.091	1.046	1.025	1.023	1.012	1.011	0.977	0.975	0.973	0.972
0.970	0.969	0.958	0.956	0.954	0.954	0.953	0.945	0.943	0.939
0.938	0.937	0.927	0.926	0.924	0.924	0.924	0.920	0.920	0.919
0.915	0.914	0.912	0.910	0.908	0.908	0.906	0.906	0.905	0.905
0.903	0.901	0.901	0.900	0.899	0.899	0.898	0.897	0.897	0.896
0.894	0.893	0.893	0.891	0.891	0.891	0.891	0.890	0.890	0.887
0.884	0.883	0.882	0.881	0.880	0.879	0.877	0.877	0.876	0.875
0.873	0.873	0.873	0.872	0.871	0.870	0.870	0.866	0.864	0.864
0.863	0.862	0.862	0.862	0.859	0.859	0.859	0.858	0.857	0.856
0.853	0.853	0.852	0.851	0.850	0.850	0.850	0.848	0.847	0.846

Variance ellipse statistics

Maximum variance 0.2811E+00	Direction	-4.0
Minimum variance 0.2617E-02	Direction	86.0
Total variance 0.2837E+00	Ratio of variances	0.9310E-02
Average direction. maxdir -PI/2 to maxdir +PI/2		4.8
Average direction. maxdir +PI/2 to maxdir -PI/2		175.1

STATISTICS FOR S41118M C41ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0382	0.44872169E-03	0.21183051E-01
Northings	0.0250	0.20248215E-02	0.44998016E-01
Speed	0.0639	0.44524902E-03	0.21100931E-01

Vector mean speed 0.0456
 Vector Mean Direction 56.9

Maximum ten values

Eastings					Northings				
0.065	0.064	0.064	0.061	0.061	0.129	0.127	0.110	0.101	0.096
0.059	0.058	0.058	0.058	0.058	0.094	0.092	0.090	0.088	0.084

Minimum ten values

Eastings					Northings				
0.024	0.023	0.017	0.016	0.016	-0.036	-0.039	-0.040	-0.047	-0.049
-0.014	-0.033	-0.037	-0.043	-0.047	-0.050	-0.055	-0.062	-0.070	-0.072

Maximum speeds

0.130	0.130	0.115	0.106	0.104	0.100	0.099	0.098	0.094	0.093
0.093	0.089	0.085	0.084	0.083	0.083	0.082	0.081	0.081	0.080
0.080	0.078	0.077	0.076	0.076	0.075	0.074	0.073	0.072	0.070
0.070	0.069	0.068	0.066	0.066	0.065	0.064	0.064	0.063	0.063
0.062	0.061	0.060	0.058	0.058	0.058	0.057	0.057	0.057	0.057
0.057	0.056	0.056	0.055	0.055	0.055	0.054	0.054	0.054	0.054
0.054	0.052	0.051	0.051	0.051	0.050	0.050	0.050	0.049	0.049
0.049	0.049	0.048	0.048	0.048	0.048	0.048	0.048	0.047	0.045
0.044	0.044	0.043	0.043	0.041	0.041	0.039	0.035	0.035	0.031
0.029	0.020								

Variance ellipse statistics

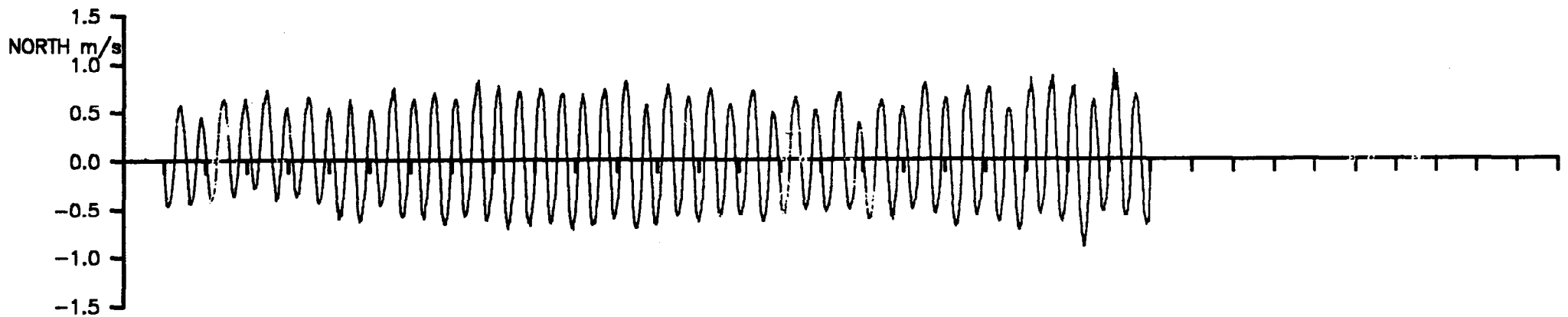
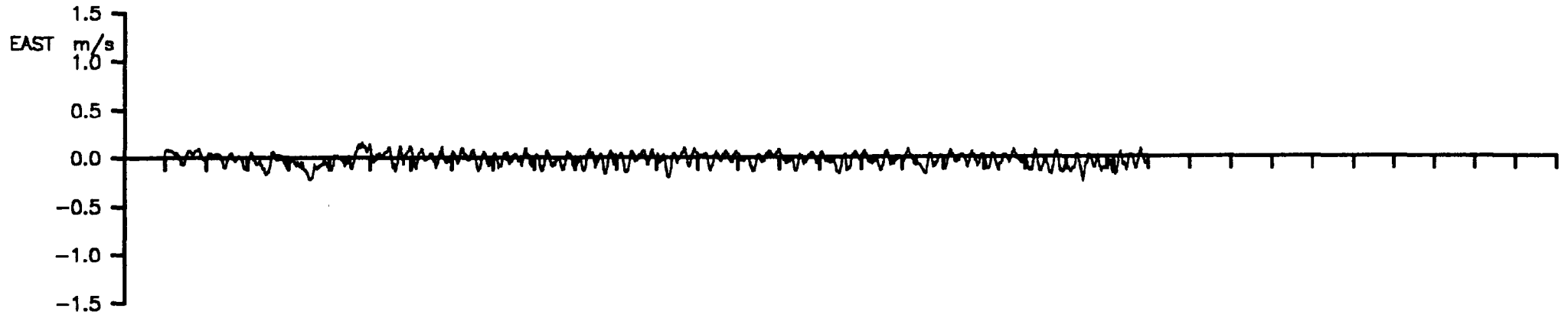
Maximum variance	0.2104E-02	Direction	-12.4
Minimum variance	0.3693E-03	Direction	77.6
Total variance	0.2474E-02	Ratio of variances	0.1755E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		51.0
Average direction. maxdir	+PI/2 to maxdir -PI/2		132.6

Meter information details for 9069

Rig No	:	C41EC
Meter No	:	9069
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	01-DEC-88 22:20:00
Meter stopped	:	30-DEC-88 22:00:01
Period switched on	:	29.0 days
Period of good data	:	28.9 days
Total number of scans	:	4159
Timing error	:	1 second slow
Comments	:	Spikes are present in parameter data and temperature values are a few degrees higher than CTD cast comparisons

VELOCITY COMPONENT TIME SERIES PLOT

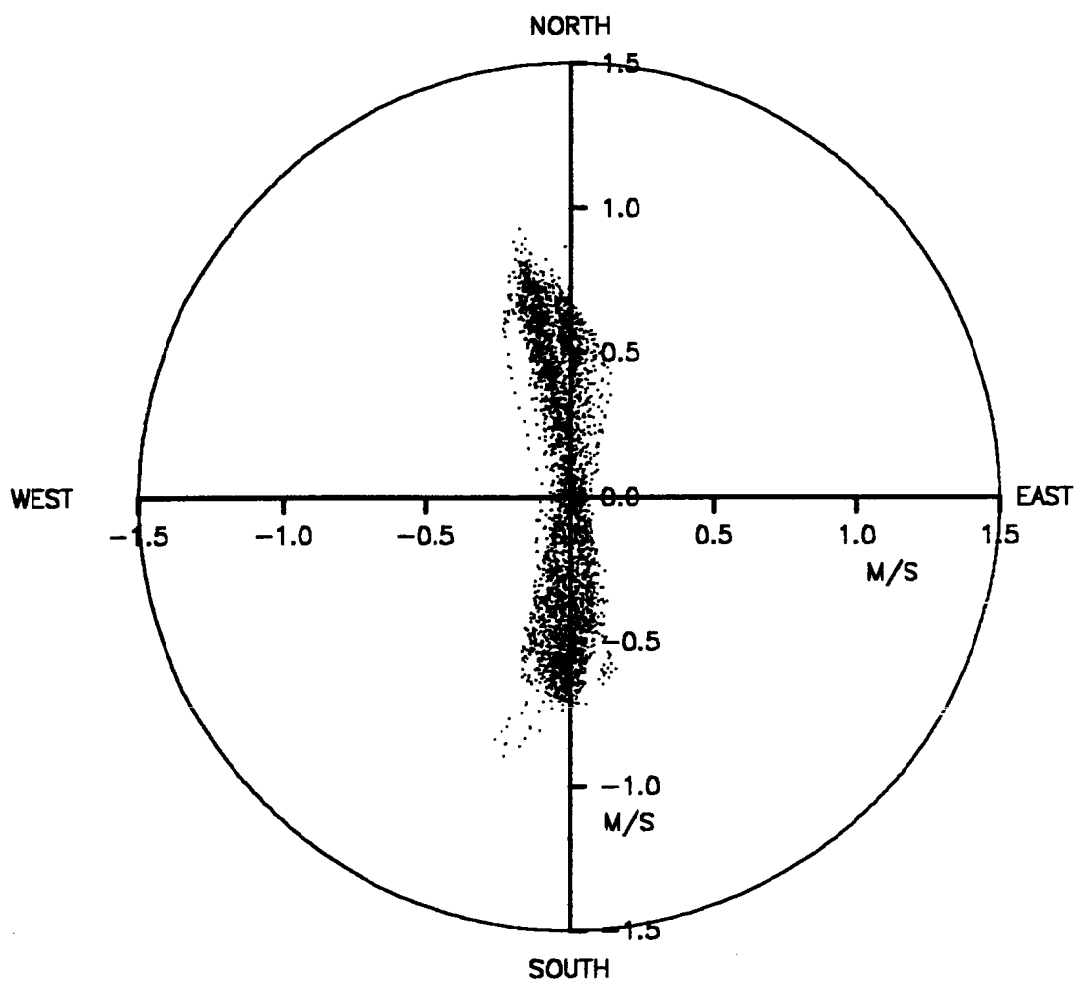
Meter no. 9069 Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E Meter Height(m) 7.0



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4

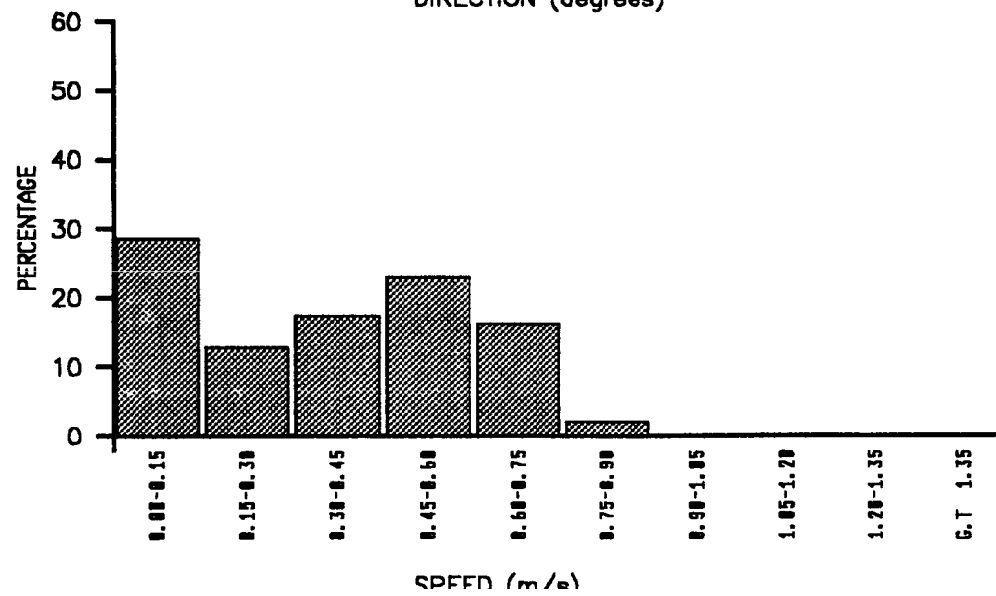
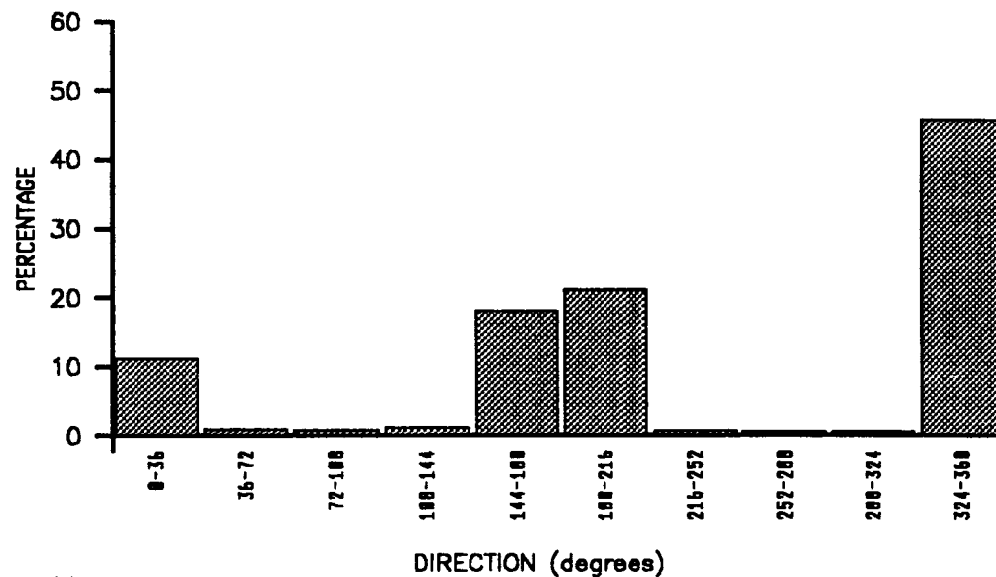
SCATTER PLOT

Meter no. 9069 Rig no. C41EC Depth of water(m) 49.0
 Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
 Position 52 41.23N 02 25.71E Meter Height(m) 7.0



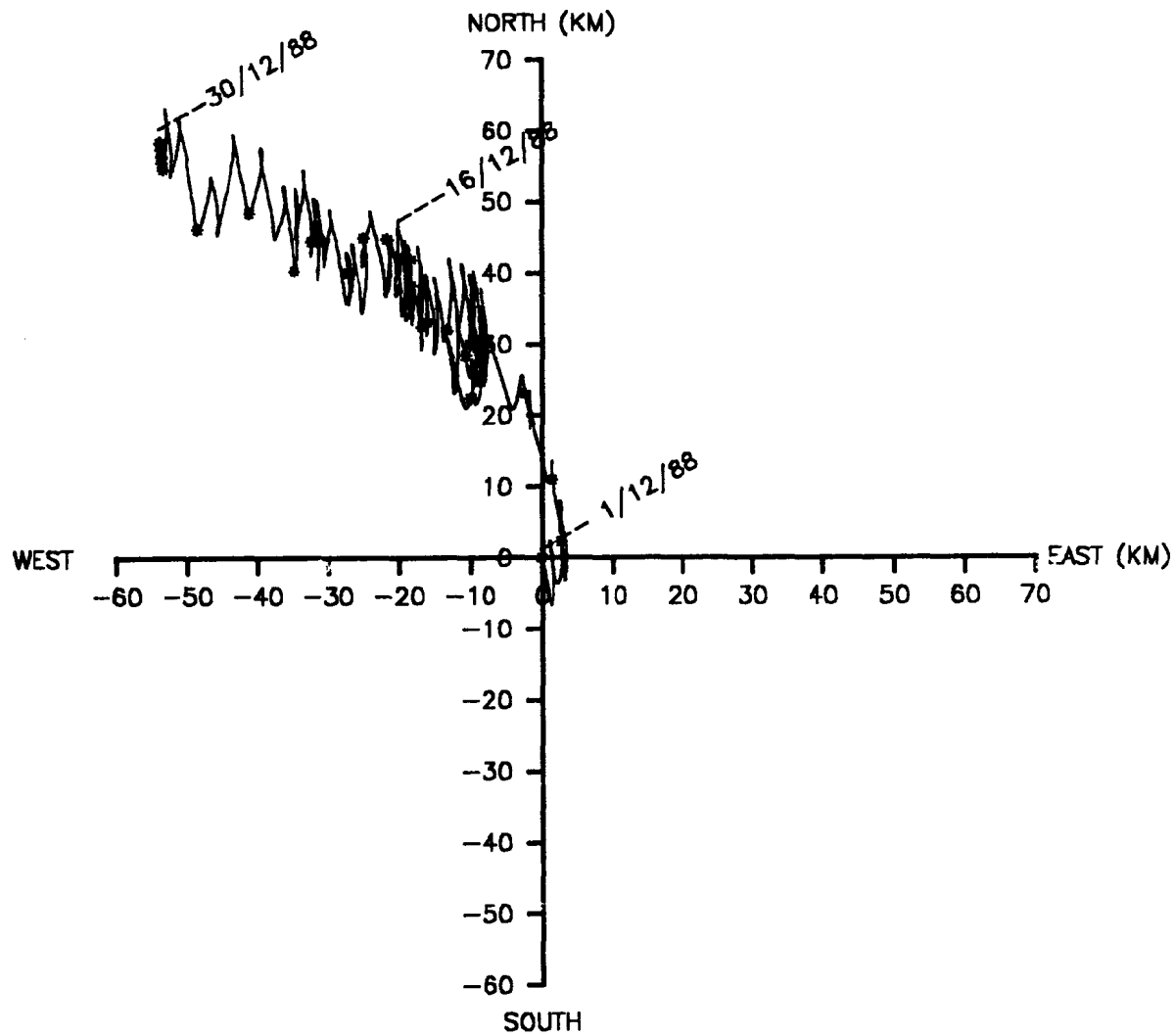
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9069 Rig no. C41EC Depth of water(m) 49.0
 Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
 Position 52 41.23N 02 25.71E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9069 Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E Meter Height(m) 7.0

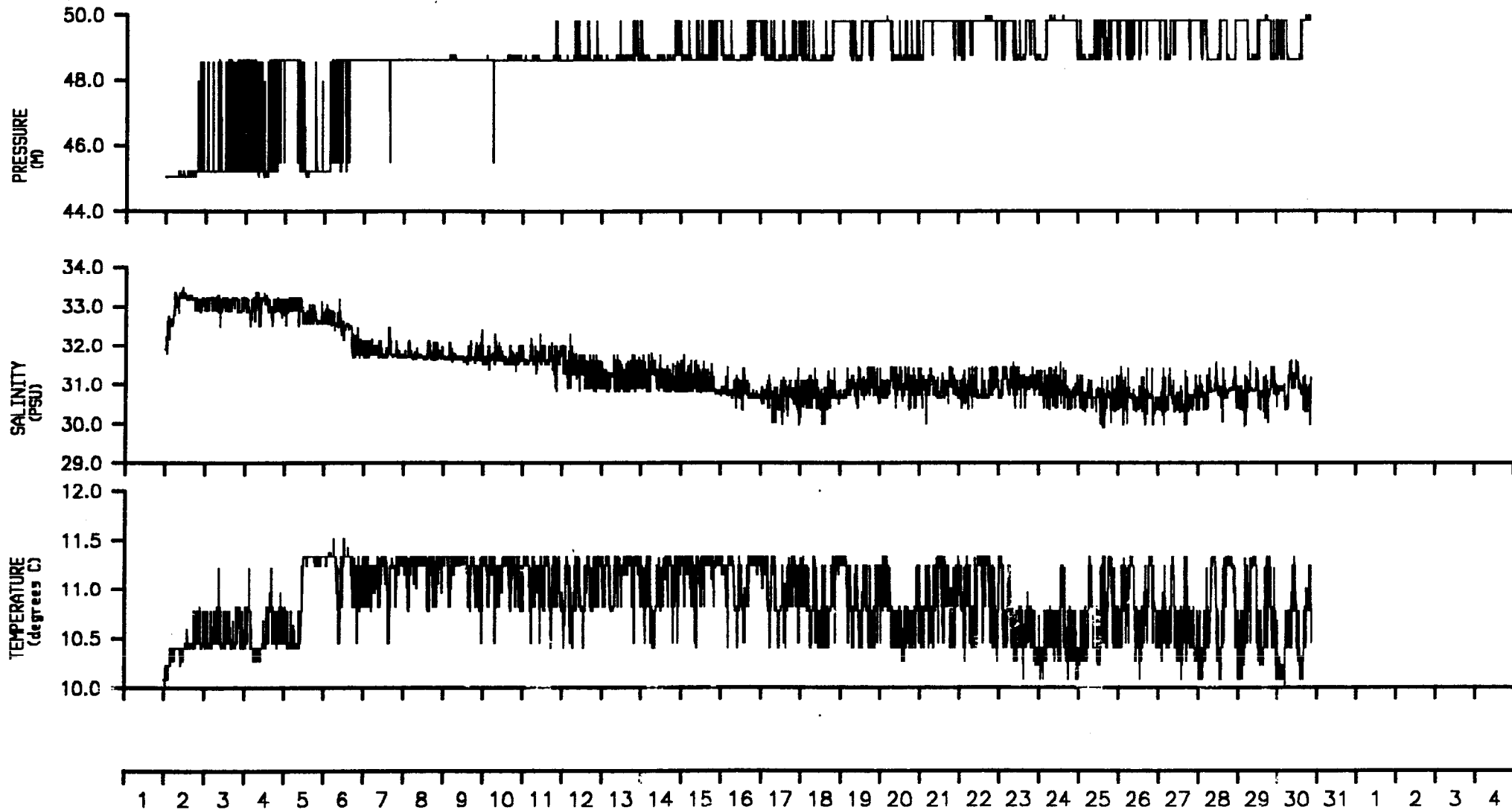


TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9069 Rig no. C41EC Depth of water(m) 49.0

Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00

Position 52 41.23N 02 25.71E Meter Height(m) 7.0



STATISTICS FOR AS9069B C41ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0217	0.36819349E-02	0.60678948E-01
Northings	0.0237	0.17737496E+00	0.42115903E+00
Speed	0.3511	0.58814865E-01	0.24251765E+00

Vector mean speed 0.0321
 Vector Mean Direction -42.5

Maximum ten values

Eastings					Northings				
0.158	0.141	0.141	0.140	0.139	0.928	0.893	0.883	0.873	0.865
0.138	0.138	0.134	0.134	0.132	0.858	0.857	0.855	0.846	0.843

Minimum ten values

Eastings					Northings				
-0.216	-0.219	-0.219	-0.221	-0.222	-0.799	-0.807	-0.810	-0.835	-0.839
-0.222	-0.223	-0.229	-0.230	-0.255	-0.850	-0.853	-0.863	-0.897	-0.908

Maximum speeds

0.944	0.926	0.923	0.906	0.903	0.889	0.880	0.880	0.877	0.877
0.877	0.874	0.871	0.865	0.862	0.854	0.851	0.848	0.842	0.842
0.833	0.830	0.828	0.828	0.825	0.825	0.822	0.822	0.816	0.816
0.816	0.813	0.813	0.813	0.810	0.807	0.804	0.804	0.804	0.801
0.801	0.801	0.799	0.796	0.796	0.793	0.793	0.793	0.790	0.790
0.787	0.787	0.787	0.787	0.784	0.784	0.784	0.784	0.781	0.781
0.781	0.778	0.778	0.775	0.772	0.772	0.769	0.769	0.767	0.767
0.767	0.764	0.761	0.761	0.758	0.758	0.758	0.755	0.755	0.755
0.755	0.755	0.755	0.755	0.752	0.752	0.752	0.749	0.749	0.749
0.749	0.746	0.746	0.746	0.746	0.743	0.743	0.743	0.743	0.743

Variance ellipse statistics

Maximum variance	0.1778E+00	Direction	-2.7
Minimum variance	0.3294E-02	Direction	87.3
Total variance	0.1810E+00	Ratio of variances	0.1853E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-2.0
Average direction. maxdir	+PI/2 to maxdir -PI/2		181.7

STATISTICS FOR AS9069B C41ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0261	0.95574511E-03	0.30915126E-01
Northings	0.0177	0.16685622E-02	0.40848035E-01
Speed	0.0511	0.99461898E-03	0.31537578E-01

Vector mean speed 0.0316
 Vector Mean Direction -55.9

Maximum ten values

Eastings					Northings				
0.047	0.041	0.036	0.027	0.014	0.110	0.107	0.100	0.093	0.083
0.006	0.004	0.004	0.004	0.003	0.082	0.077	0.077	0.075	0.073

Minimum ten values

Eastings					Northings				
-0.082	-0.083	-0.085	-0.086	-0.087	-0.036	-0.037	-0.037	-0.040	-0.050
-0.088	-0.089	-0.090	-0.105	-0.106	-0.052	-0.055	-0.058	-0.060	-0.068

Maximum speeds

0.132	0.131	0.128	0.125	0.123	0.117	0.117	0.111	0.099	0.098
0.095	0.092	0.090	0.090	0.088	0.086	0.083	0.073	0.072	0.072
0.070	0.068	0.065	0.065	0.063	0.060	0.059	0.058	0.058	0.056
0.055	0.055	0.054	0.054	0.053	0.052	0.051	0.050	0.050	0.050
0.047	0.047	0.047	0.045	0.044	0.044	0.044	0.042	0.042	0.042
0.041	0.041	0.040	0.040	0.040	0.040	0.038	0.037	0.037	0.037
0.036	0.035	0.031	0.030	0.029	0.029	0.027	0.027	0.026	0.026
0.026	0.025	0.024	0.024	0.024	0.024	0.023	0.023	0.022	0.022
0.021	0.019	0.018	0.018	0.017	0.016	0.016	0.012	0.011	0.008
0.005	0.004								

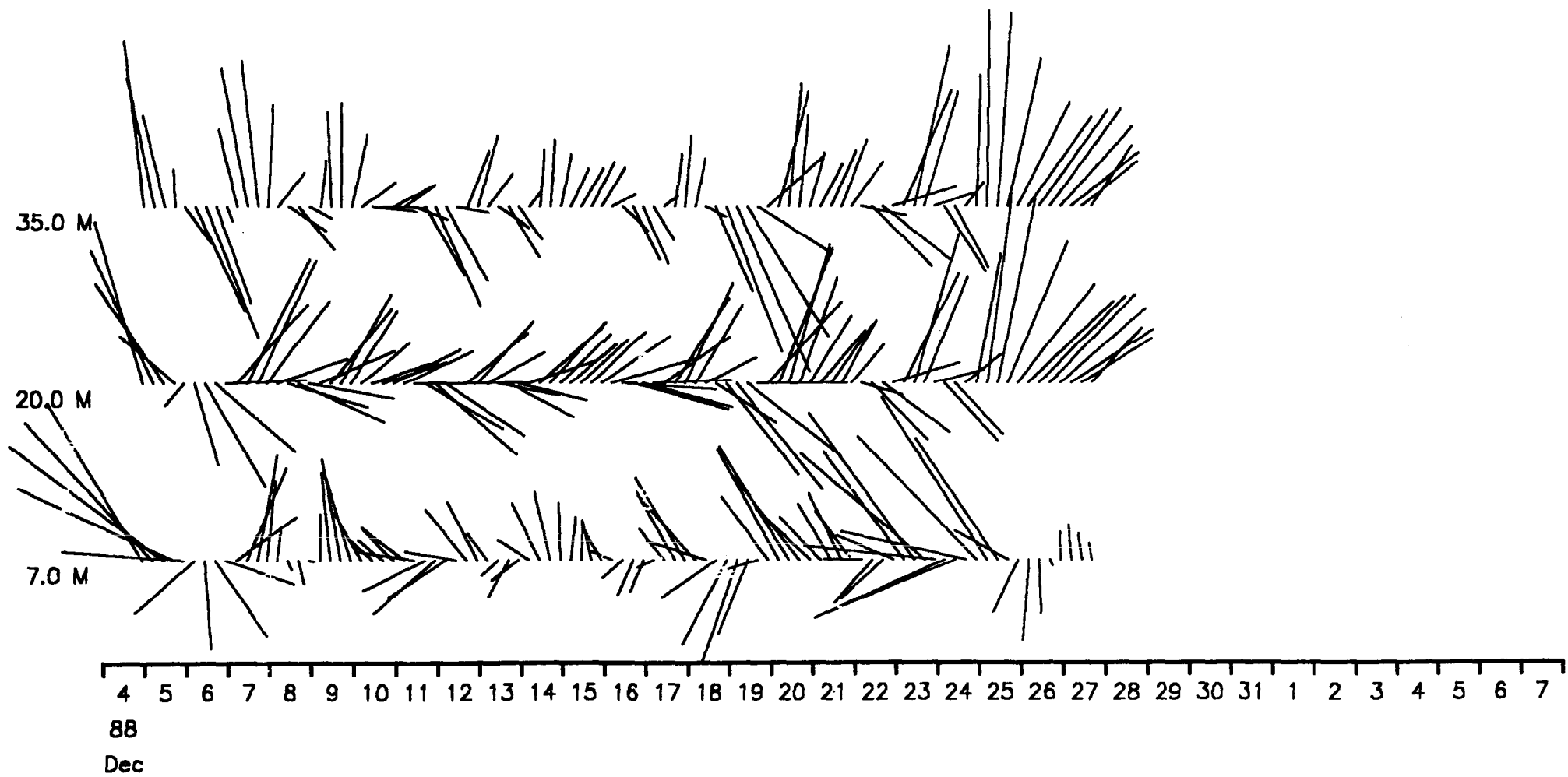
Variance ellipse statistics

Maximum variance 0.1830E-02	Direction	-23.2
Minimum variance 0.7945E-03	Direction	66.8
Total variance 0.2624E-02	Ratio of variances	0.4342E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-10.3
Average direction. maxdir +PI/2 to maxdir -PI/2		223.3

STICK TIME SERIES PLOT

Rig no. C41EC Depth of water(m) 49.0
Start/End 1988/12/01 AT 23:45:00 1988/12/30 AT 21:00:00
Position 52 41.23N 02 25.71E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9069	7.0 M
1118	20.0 M
1119	35.0 M



Rig information details for C45EC

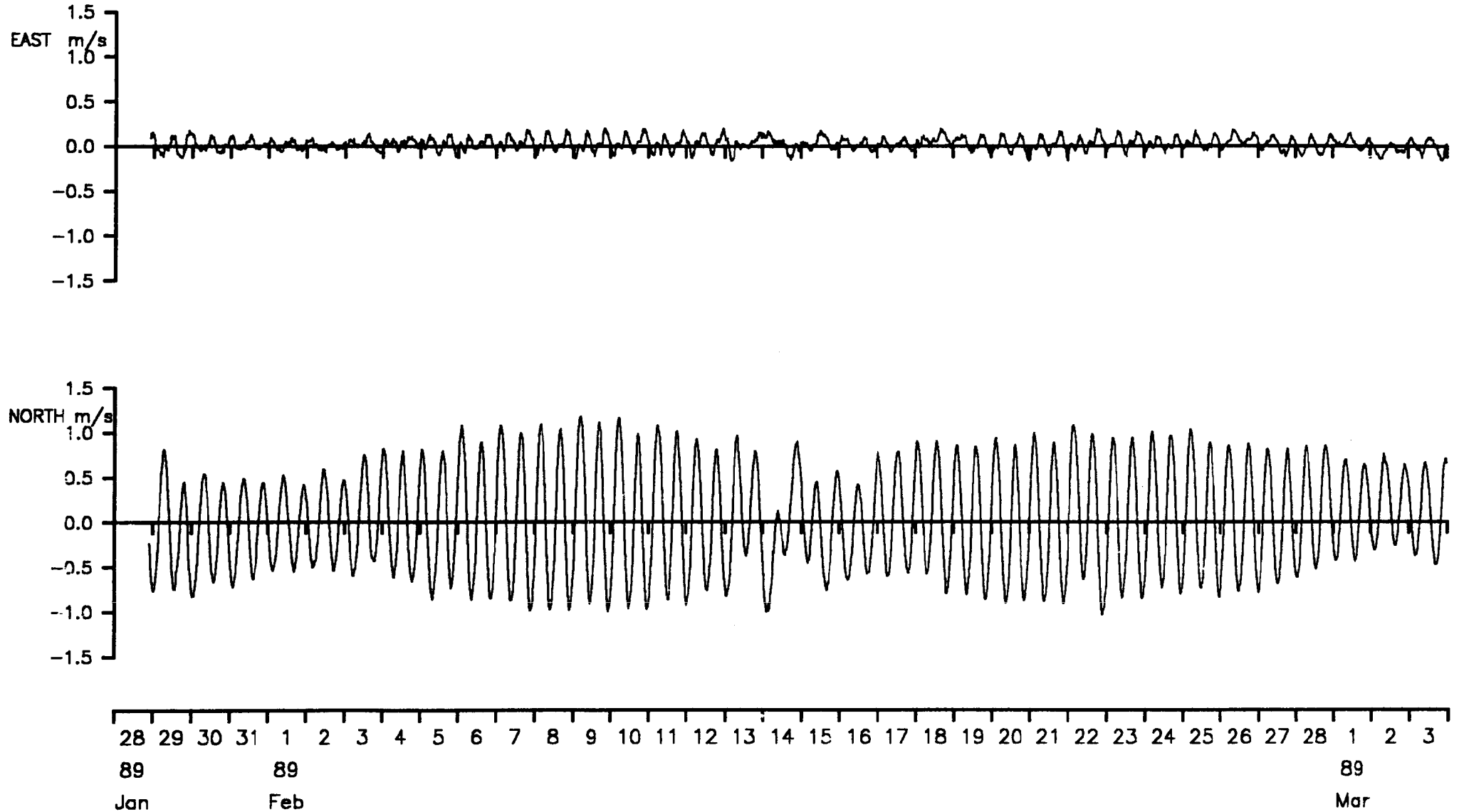
Position Latitude	:	52 40.78N
Position Longitude	:	02 25.40E
Water depth	:	49.0 m
Deployed on cruise	:	C45
Recovered on cruise	:	C47
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	28-JAN-89 21:50:00
Rig recovered on	:	11-MAR-89 19:33:00
Period of deployment	:	41.9 days
Comments	:	Launch and recovery successful

Meter information details for 1119

Rig No	:	C45EC
Meter No	:	1119
Recording interval	:	600.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	28-JAN-89 10:30:00
Meter stopped	:	14-MAR-89 09:41:00
Period switched on	:	45.0 days
Period of good data	:	41.9 days
Total number of scans	:	6035
Timing error	:	60 seconds slow
Comments	:	Hourly time stamp has jumped by one minute at: (1) 24-FEB-89 19:30 to 20:31

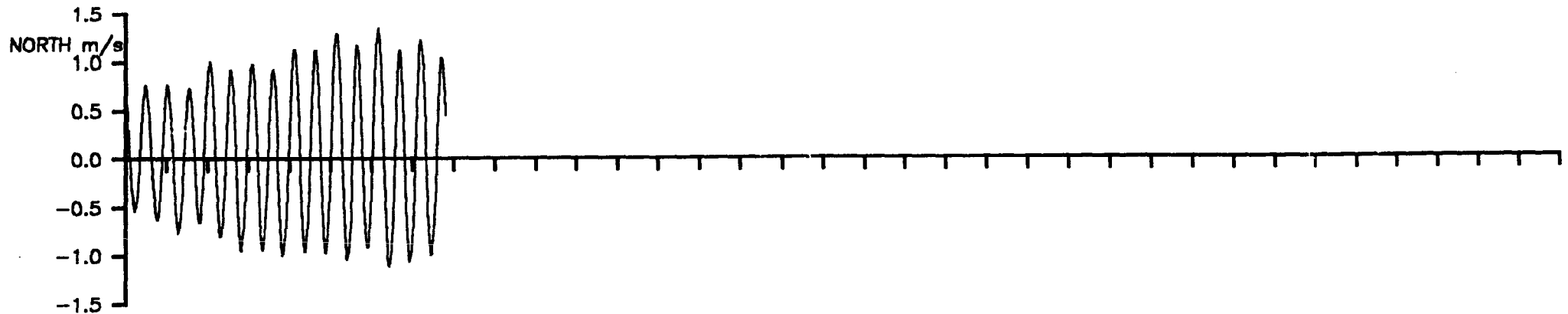
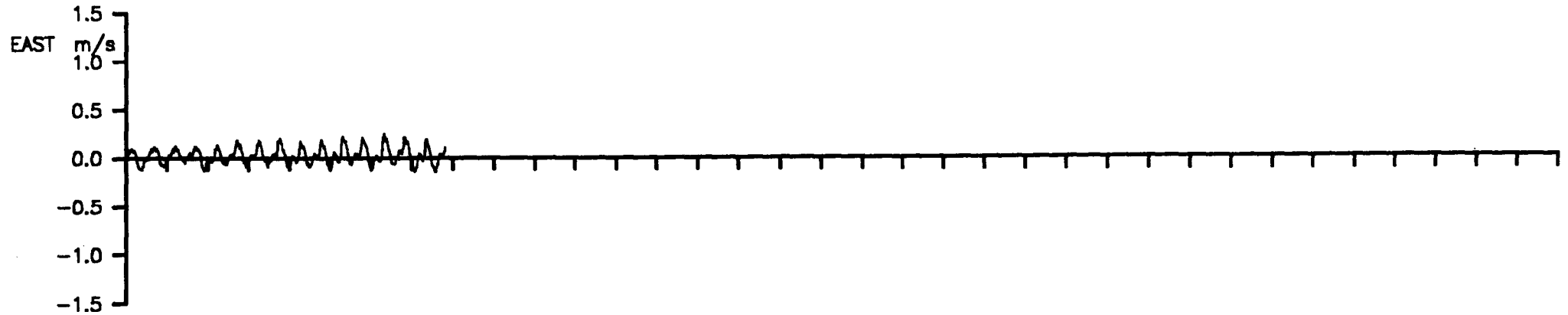
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1119 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 35.0



VELOCITY COMPONENT TIME SERIES PLOT

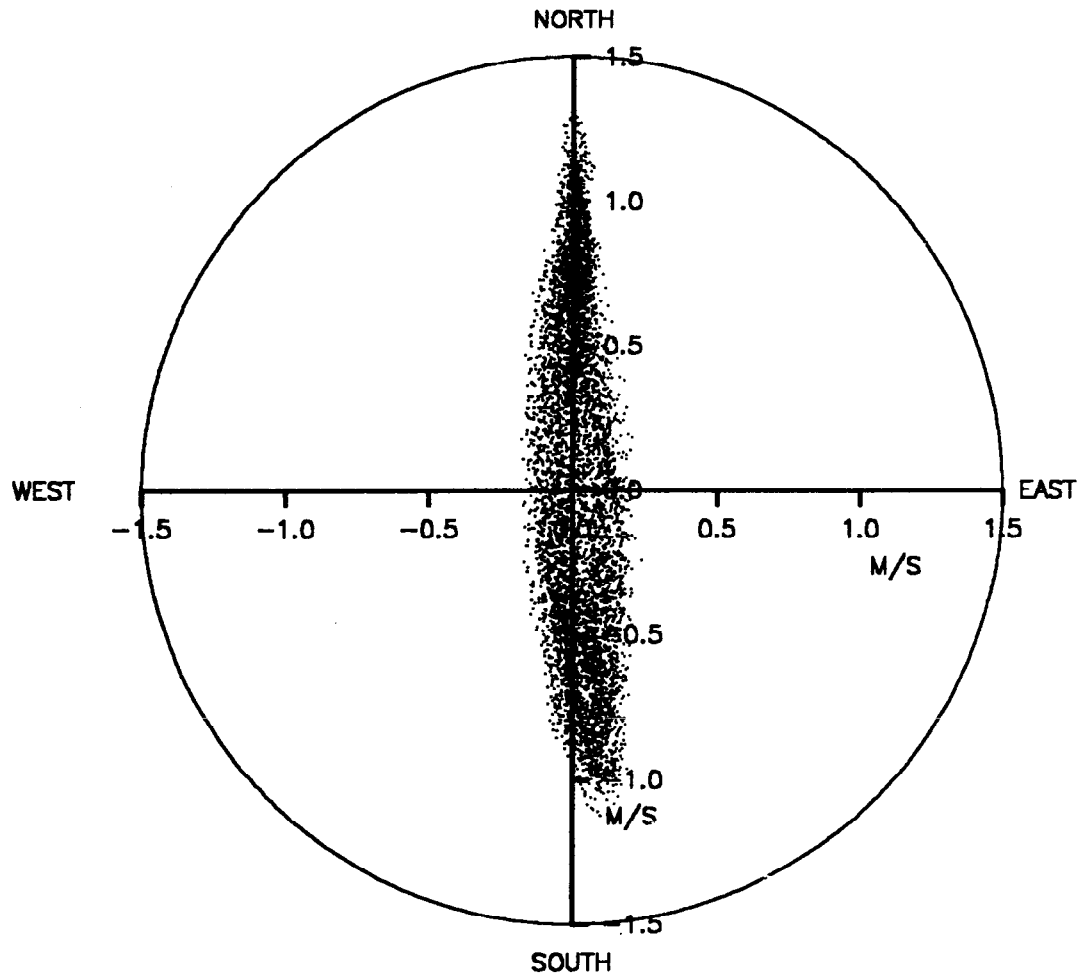
Meter no. 1119 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 35.0



4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7
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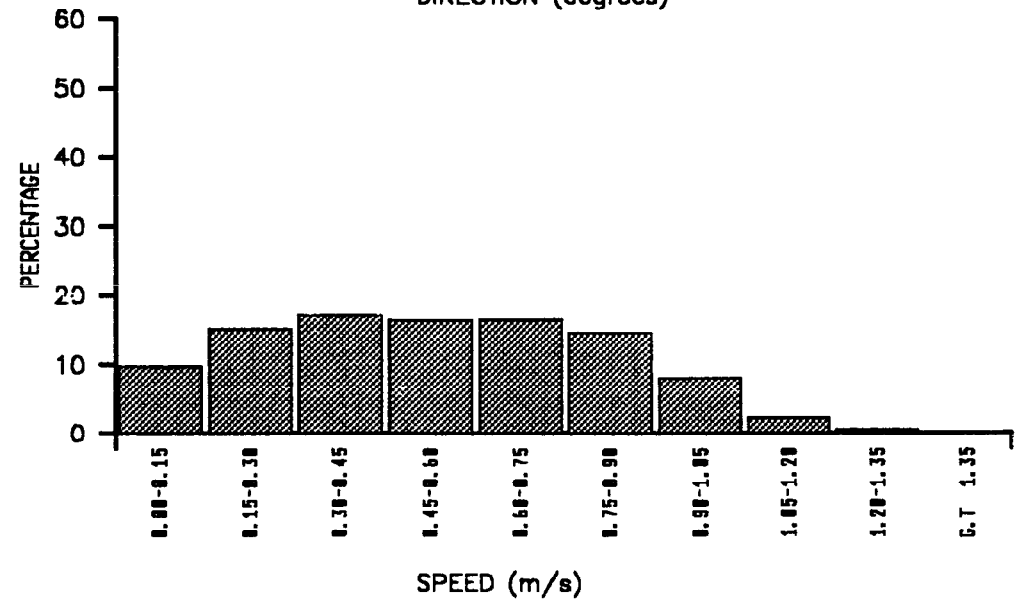
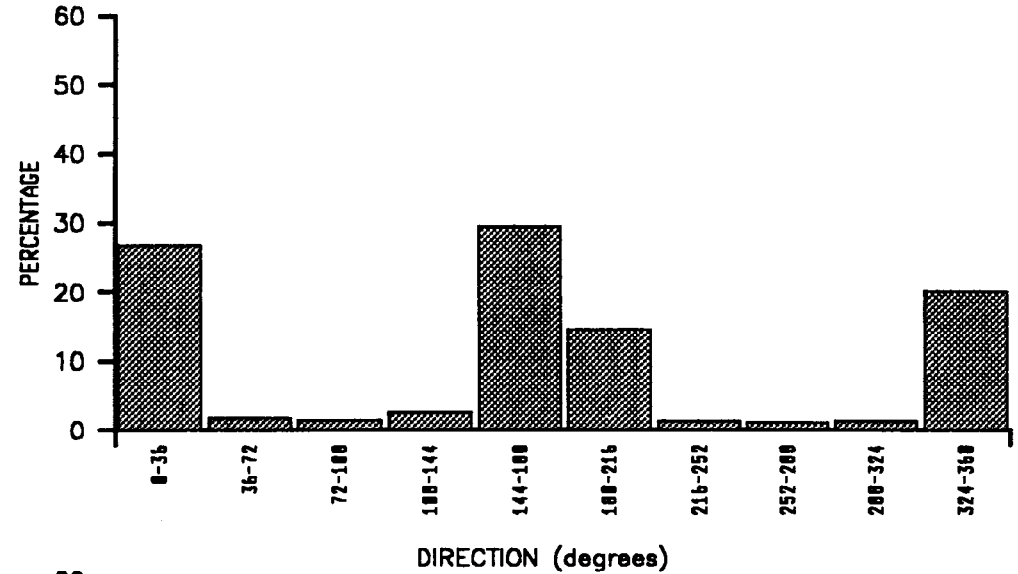
SCATTER PLOT

Meter no. 1119 Rig no. C45EC Depth of water(m) 49.0
 Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
 Position 52 40.78N 02 25.40E Meter Height(m) 35.0



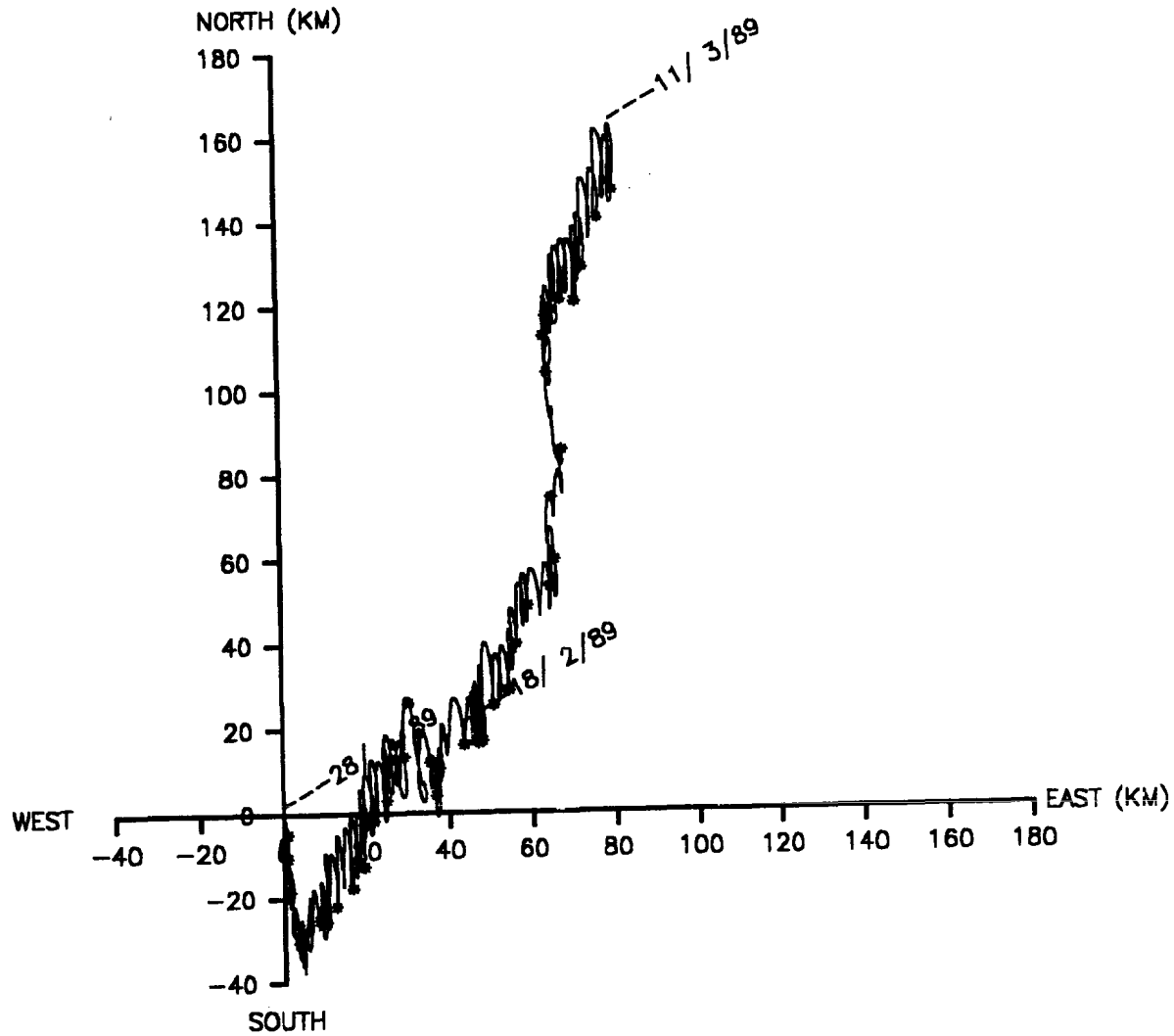
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1119 Rig no. C45EC Depth of water(m) 49.0
 Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
 Position 52 40.78N 02 25.40E Meter Height(m) 35.0



VECTOR PLOT

Meter no. 1119 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 35.0



STATISTICS FOR S41119T C45ECS A

	Mean	Variance	Standard deviation
Eastings	0.0224	0.50552711E-02	0.71100414E-01
Northings	0.0448	0.35293263E+00	0.59408140E+00
Speed	0.5309	0.78635573E-01	0.28042036E+00

Vector mean speed 0.0501
 Vector Mean Direction 26.5

Maximum ten values									
Eastings					Northings				
0.238	0.215	0.212	0.207	0.206	1.341	1.323	1.317	1.305	1.301
0.205	0.204	0.204	0.203	0.203	1.292	1.289	1.287	1.286	1.282

Minimum ten values									
Eastings					Northings				
-0.159	-0.159	-0.162	-0.163	-0.164	-1.062	-1.067	-1.070	-1.083	-1.085
-0.164	-0.166	-0.169	-0.169	-0.174	-1.096	-1.104	-1.110	-1.120	-1.124

Maximum speeds									
1.341	1.323	1.317	1.305	1.301	1.292	1.289	1.287	1.286	1.282
1.271	1.268	1.266	1.264	1.263	1.263	1.263	1.242	1.239	1.235
1.234	1.227	1.221	1.219	1.206	1.205	1.203	1.197	1.195	1.190
1.189	1.188	1.179	1.174	1.172	1.170	1.169	1.169	1.167	1.164
1.162	1.162	1.160	1.159	1.158	1.157	1.154	1.153	1.147	1.147
1.143	1.142	1.141	1.140	1.139	1.136	1.134	1.134	1.134	1.133
1.132	1.128	1.128	1.127	1.127	1.127	1.126	1.125	1.124	1.123
1.123	1.122	1.121	1.121	1.120	1.119	1.116	1.116	1.116	1.116
1.114	1.112	1.112	1.109	1.109	1.109	1.107	1.106	1.106	1.105
1.105	1.104	1.104	1.104	1.102	1.100	1.100	1.098	1.092	1.092

Variance ellipse statistics

Maximum variance	0.3533E+00	Direction	-1.9
Minimum variance	0.4679E-02	Direction	88.1
Total variance	0.3580E+00	Ratio of variances	0.1324E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		3.2
Average direction. maxdir	+PI/2 to maxdir -PI/2		177.2

STATISTICS FOR S41119T C45ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0226	0.43800054E-03	0.20928469E-01
Northings	0.0524	0.45588575E-02	0.67519307E-01
Speed	0.0781	0.21352523E-02	0.46208791E-01

Vector mean speed 0.0571
 Vector Mean Direction 23.3

Maximum ten values

Eastings					Northings				
0.078	0.076	0.070	0.066	0.066	0.221	0.216	0.199	0.188	0.171
0.062	0.061	0.060	0.058	0.055	0.168	0.162	0.151	0.151	0.148

Minimum ten values

Eastings					Northings				
-0.006	-0.009	-0.010	-0.011	-0.015	-0.035	-0.038	-0.058	-0.077	-0.080
-0.018	-0.019	-0.030	-0.033	-0.039	-0.099	-0.108	-0.140	-0.149	-0.151

Maximum speeds

0.224	0.220	0.200	0.190	0.171	0.170	0.162	0.156	0.156	0.154
0.152	0.152	0.151	0.139	0.135	0.134	0.133	0.132	0.132	0.130
0.128	0.125	0.121	0.120	0.119	0.118	0.117	0.117	0.117	0.114
0.114	0.113	0.113	0.111	0.110	0.109	0.108	0.107	0.107	0.107
0.107	0.105	0.103	0.101	0.101	0.100	0.098	0.098	0.097	0.093
0.091	0.089	0.089	0.088	0.088	0.088	0.087	0.086	0.085	0.084
0.084	0.083	0.080	0.080	0.079	0.078	0.076	0.075	0.074	0.072
0.072	0.071	0.070	0.068	0.068	0.066	0.065	0.064	0.063	0.063
0.062	0.062	0.061	0.060	0.060	0.060	0.060	0.059	0.058	0.057
0.057	0.054	0.054	0.054	0.053	0.051	0.050	0.050	0.050	0.050

Variance ellipse statistics

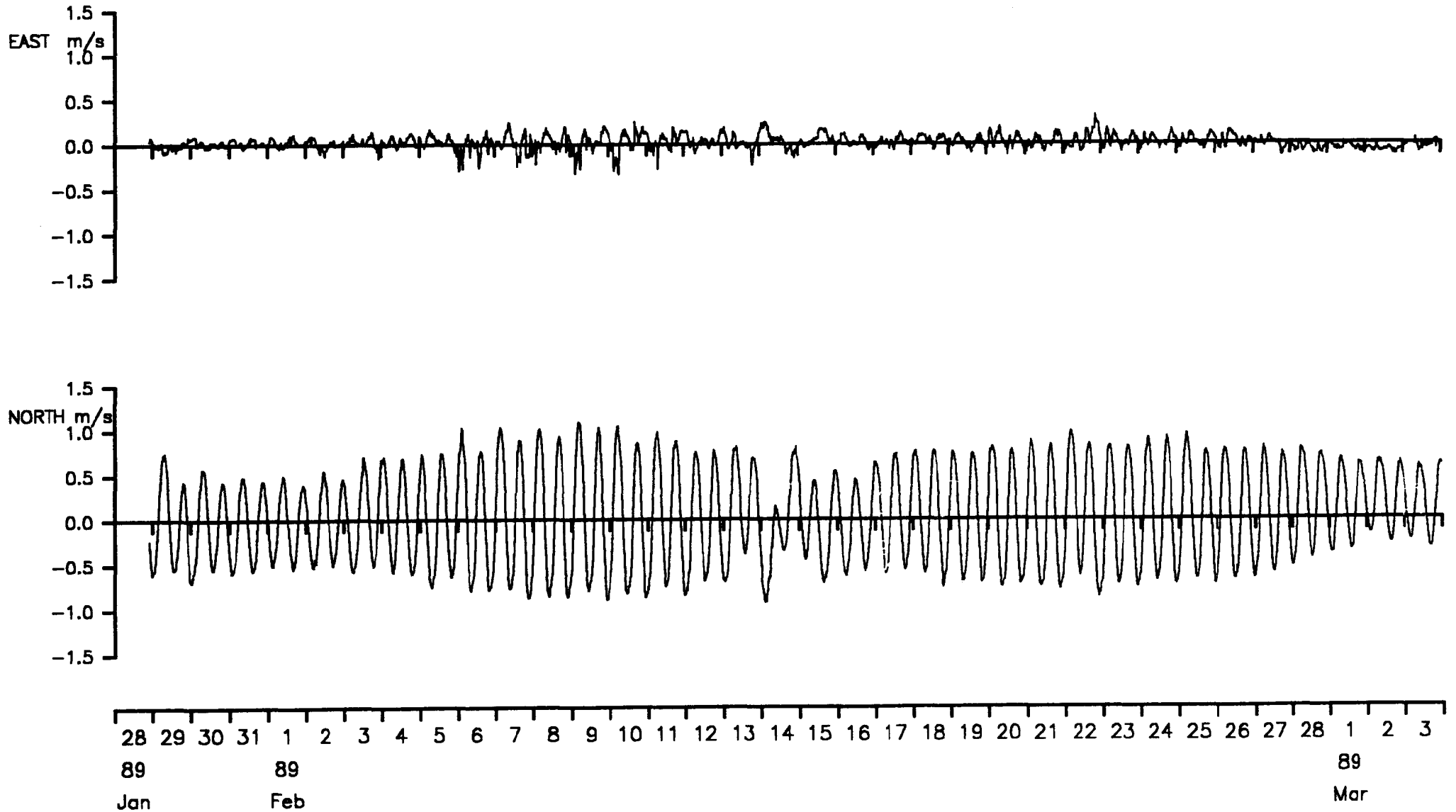
Maximum variance	0.4637E-02	Direction	-7.8
Minimum variance	0.3594E-03	Direction	82.2
Total variance	0.4997E-02	Ratio of variances	0.7751E-01
Average direction. maxdir -PI/2 to maxdir +PI/2			32.4
Average direction. maxdir +PI/2 to maxdir -PI/2			152.4

Meter information details for 1118

Rig No	:	C45EC
Meter No	:	1118
Recording interval	:	600.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	28-JAN-89 10:50:00
Meter stopped	:	14-MAR-89 10:00:00
Period switched on	:	45.0 days
Period of good data	:	41.9 days
Total number of scans	:	6034
Timing error	:	None
Comments	:	Good record obtained

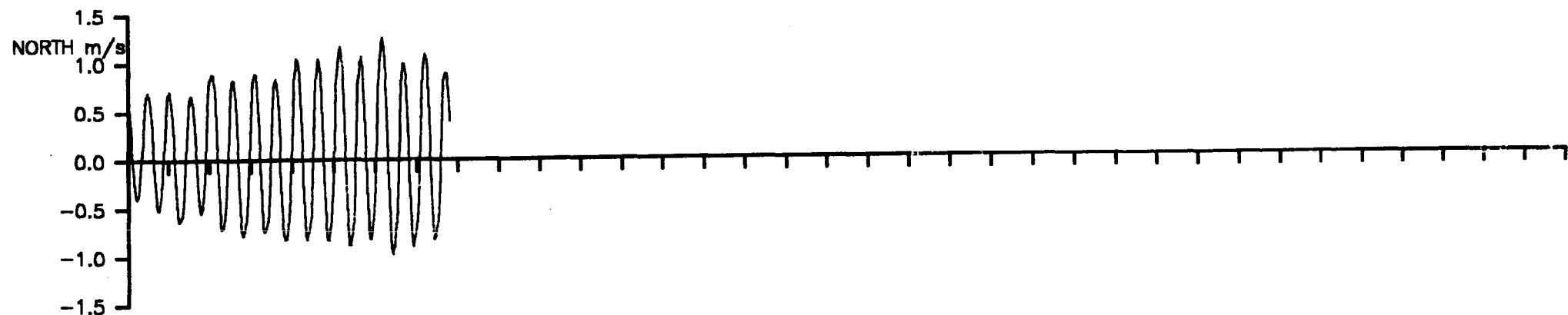
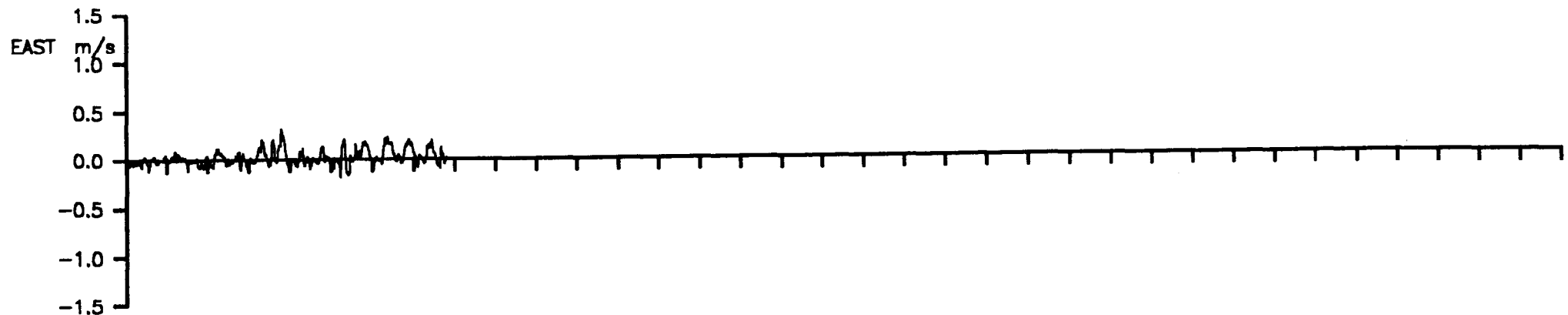
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1118 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 20.0



VELOCITY COMPONENT TIME SERIES PLOT

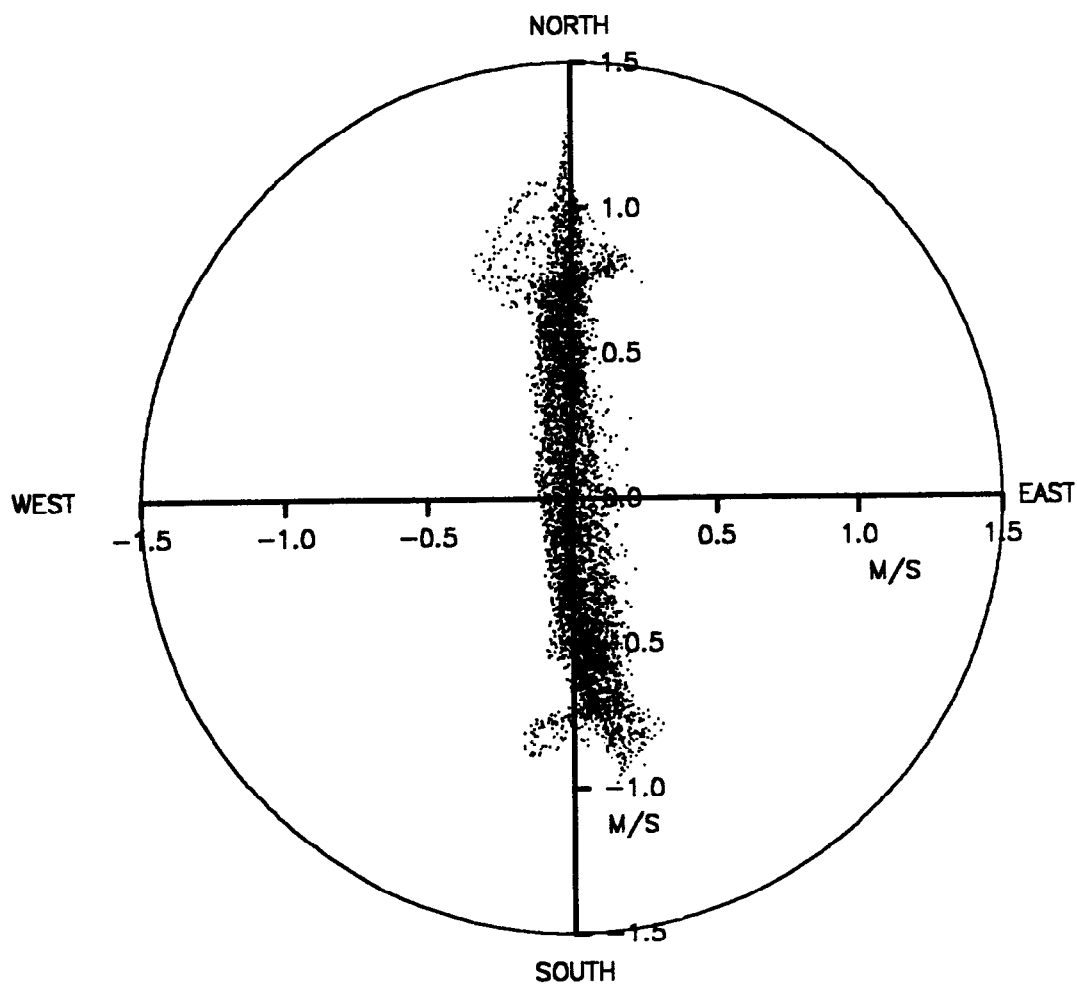
Meter no. 1118 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 20.0



4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7
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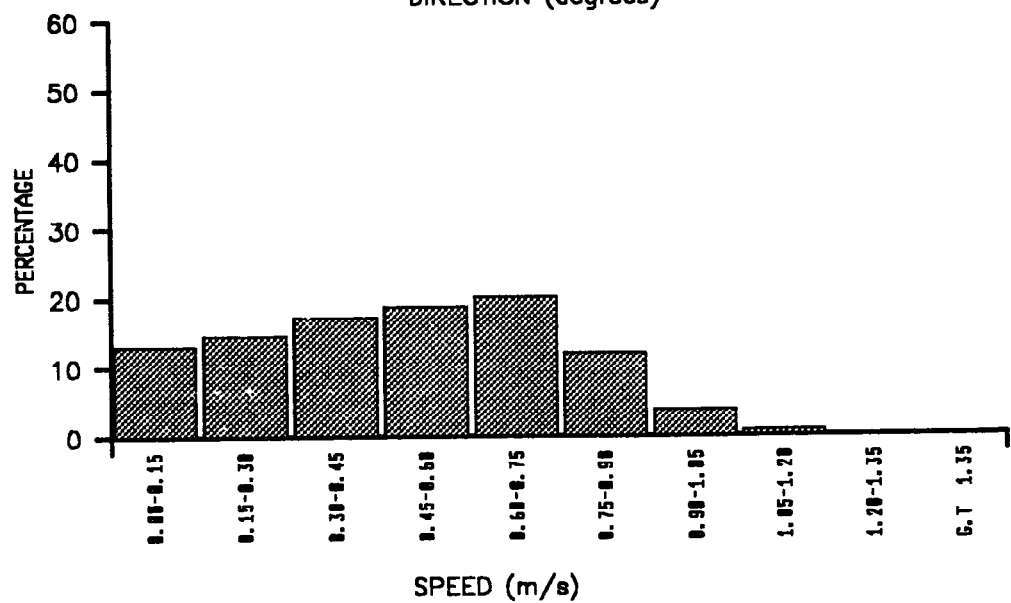
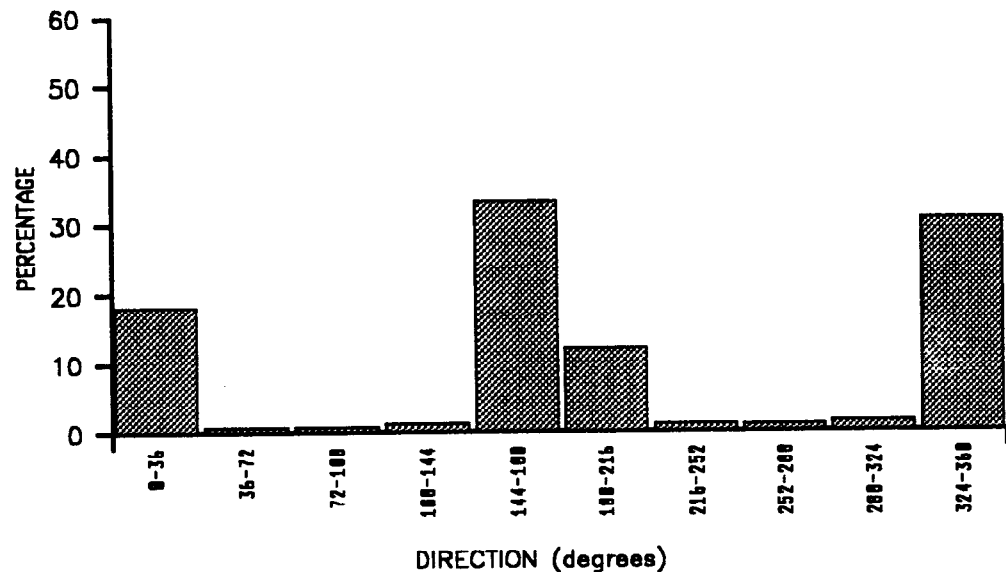
SCATTER PLOT

Meter no. 1118 Rig no. C45EC Depth of water(m) 49.0
 Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
 Position 52 40.78N 02 25.40E Meter Height(m) 20.0



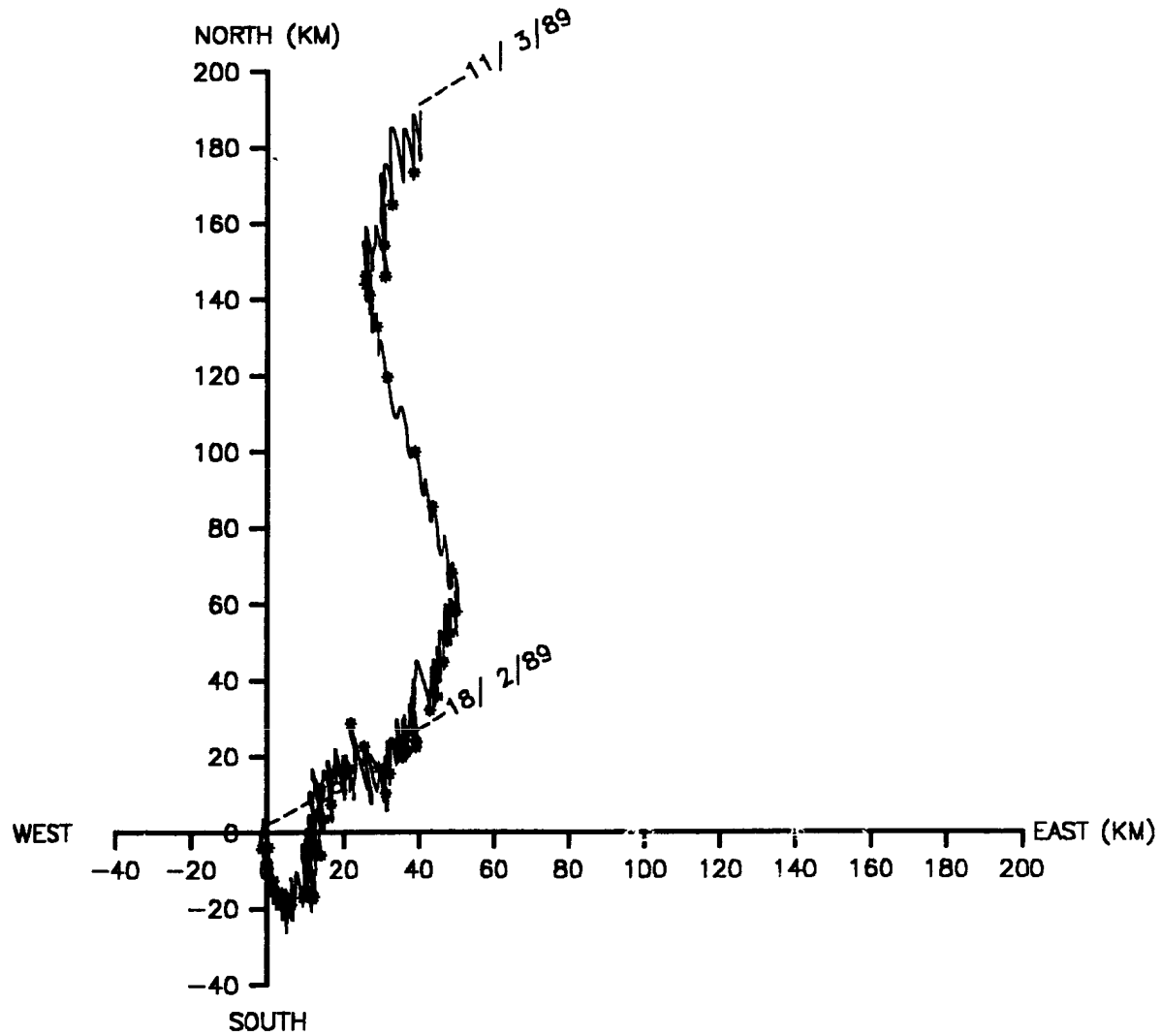
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1118 Rig no. C45EC Depth of water(m) 49.0
 Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
 Position 52 40.78N 02 25.40E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1118 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 20.0



STATISTICS FOR S41118M C45ECS A

	Mean	Variance	Standard deviation
Eastings	0.0111	0.57055466E-02	0.75535059E-01
Northings	0.0523	0.29381114E+00	0.54204345E+00
Speed	0.4857	0.66461205E-01	0.25780070E+00

Vector mean speed 0.0535
 Vector Mean Direction 12.0

Maximum ten values

Eastings					Northings				
0.309	0.308	0.300	0.291	0.277	1.258	1.244	1.227	1.215	1.210
0.276	0.266	0.258	0.257	0.255	1.205	1.192	1.181	1.157	1.157

Minimum ten values

Eastings					Northings				
-0.287	-0.290	-0.299	-0.299	-0.302	-0.919	-0.921	-0.924	-0.930	-0.931
-0.309	-0.316	-0.328	-0.334	-0.337	-0.937	-0.943	-0.953	-0.958	-0.980

Maximum speeds

1.258	1.244	1.227	1.216	1.210	1.205	1.192	1.181	1.157	1.157
1.156	1.151	1.141	1.141	1.135	1.129	1.117	1.115	1.106	1.103
1.102	1.098	1.094	1.091	1.089	1.088	1.082	1.080	1.078	1.078
1.073	1.071	1.068	1.067	1.065	1.061	1.060	1.058	1.058	1.058
1.056	1.055	1.055	1.055	1.051	1.049	1.047	1.046	1.045	1.042
1.041	1.041	1.041	1.038	1.037	1.034	1.033	1.033	1.031	1.030
1.029	1.027	1.027	1.026	1.026	1.025	1.025	1.023	1.023	1.022
1.022	1.020	1.020	1.018	1.018	1.017	1.017	1.016	1.016	1.014
1.013	1.012	1.012	1.011	1.010	1.008	1.008	1.008	1.007	1.006
1.006	1.005	1.004	1.004	1.003	1.003	1.002	1.000	0.999	0.998

Variance ellipse statistics

Maximum variance 0.2952E+00	Direction	-3.9
Minimum variance 0.4337E-02	Direction	86.1
Total variance 0.2995E+00	Ratio of variances	0.1469E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		0.6
Average direction. maxdir +PI/2 to maxdir -PI/2		179.4

STATISTICS FOR S41118M C45ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0095	0.10540357E-02	0.32465912E-01
Northings	0.0561	0.47213584E-02	0.68712115E-01
Speed	0.0795	0.26646957E-02	0.51620692E-01

Vector mean speed 0.0569
 Vector Mean Direction 9.6

Maximum ten values

Eastings					Northings				
0.067	0.065	0.060	0.059	0.058	0.232	0.225	0.224	0.204	0.202
0.056	0.055	0.055	0.053	0.053	0.185	0.183	0.180	0.178	0.176

Minimum ten values

Eastings					Northings				
-0.056	-0.057	-0.059	-0.065	-0.065	-0.033	-0.033	-0.038	-0.064	-0.074
-0.067	-0.069	-0.080	-0.081	-0.086	-0.077	-0.091	-0.122	-0.123	-0.124

Maximum speeds

0.247	0.239	0.238	0.215	0.214	0.196	0.192	0.190	0.187	0.186
0.173	0.172	0.171	0.170	0.165	0.161	0.152	0.140	0.139	0.135
0.133	0.127	0.121	0.116	0.114	0.113	0.113	0.112	0.111	0.110
0.109	0.109	0.107	0.106	0.105	0.104	0.103	0.101	0.097	0.097
0.092	0.092	0.092	0.089	0.089	0.089	0.088	0.088	0.088	0.087
0.087	0.086	0.086	0.084	0.083	0.083	0.083	0.083	0.082	0.082
0.080	0.079	0.078	0.077	0.074	0.071	0.070	0.069	0.068	0.068
0.068	0.065	0.065	0.064	0.063	0.061	0.061	0.061	0.060	0.060
0.059	0.058	0.057	0.056	0.056	0.055	0.054	0.054	0.053	0.052
0.052	0.051	0.050	0.050	0.049	0.048	0.046	0.045	0.045	0.045

Variance ellipse statistics

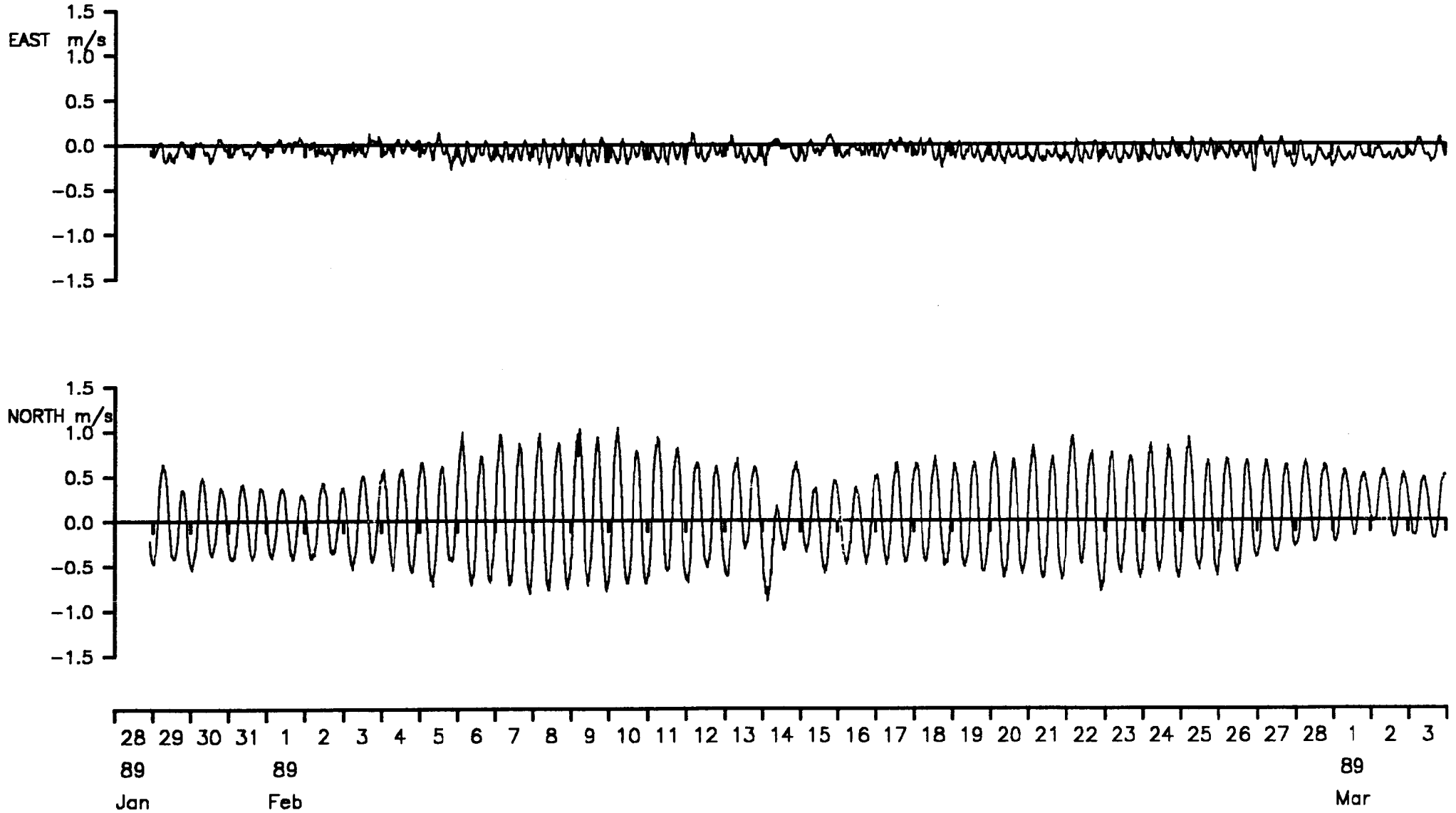
Maximum variance 0.5383E-02	Direction	-21.4
Minimum variance 0.3924E-03	Direction	68.6
Total variance 0.5775E-02	Ratio of variances	0.7291E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		32.8
Average direction. maxdir +PI/2 to maxdir -PI/2		148.2

Meter information details for 9069

Rig No	:	C45EC
Meter No	:	9069
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	28-JAN-89 13:30:00
Meter stopped	:	11-MAR-89 20:40:00
Period switched on	:	42.3 days
Period of good data	:	41.9 days
Total number of scans	:	6034
Timing error	:	None
Comments	:	Spikes are present in parameter data and temperature values are a few degrees higher than CTD cast comparisons Pressure sensor indicates some instability on 14-FEB-89

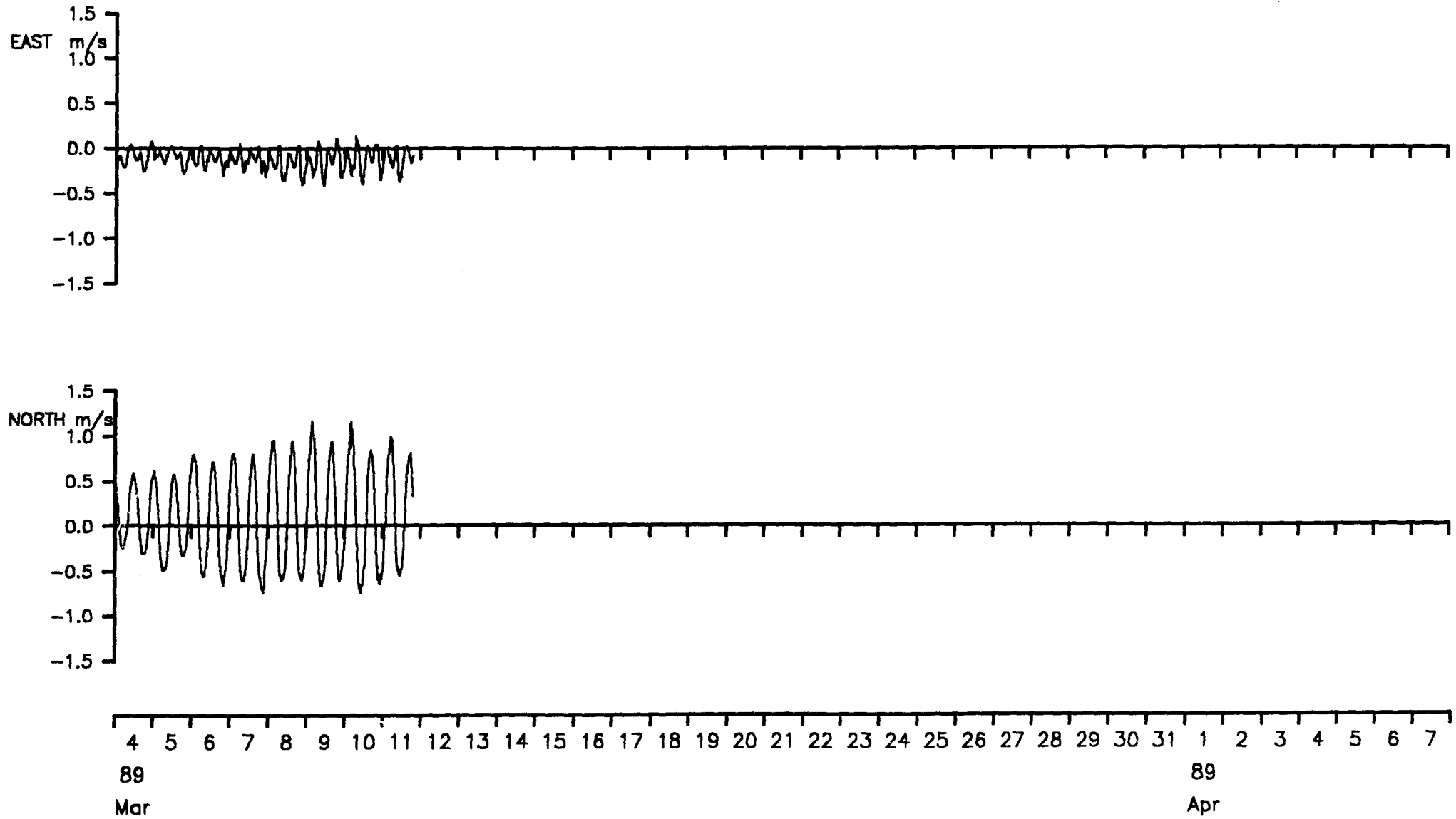
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 7.0



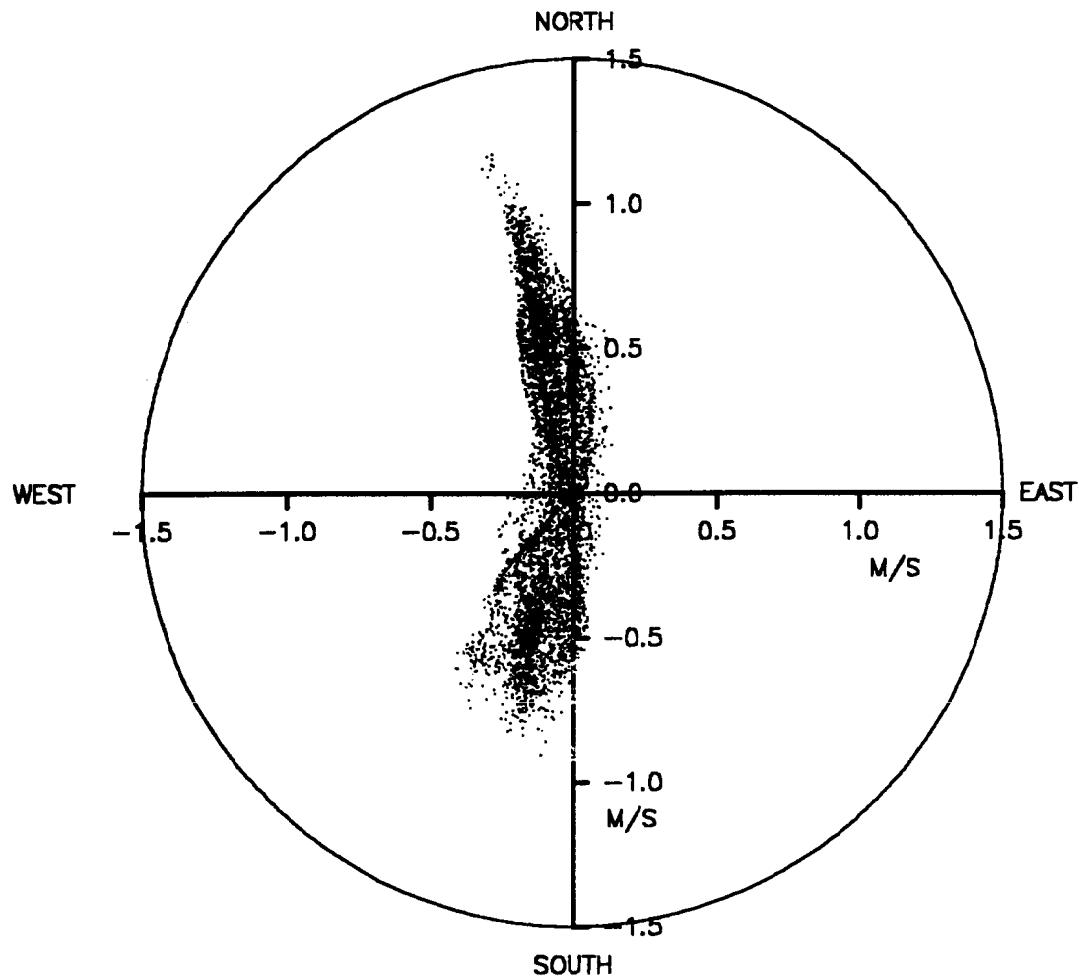
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 7.0



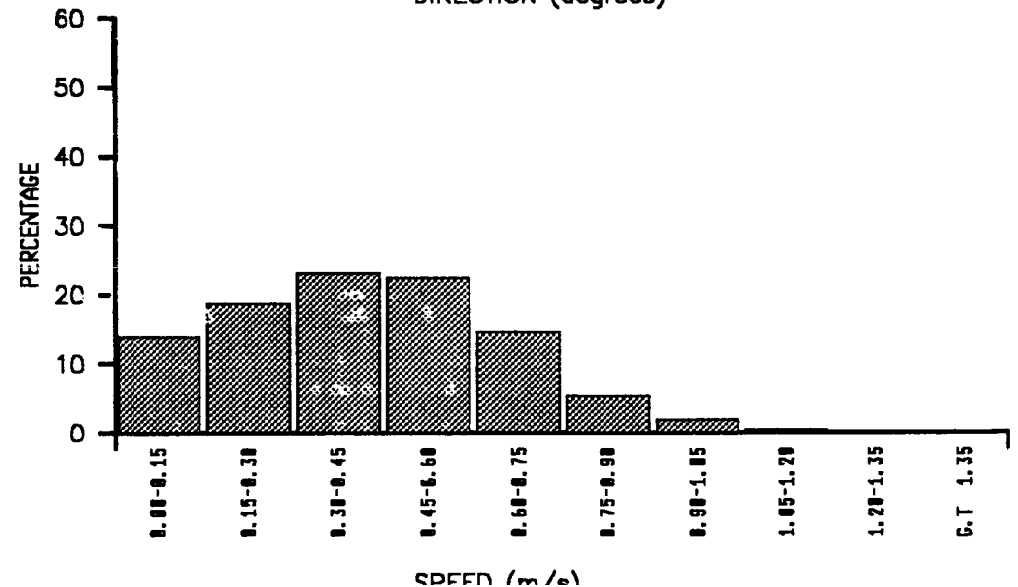
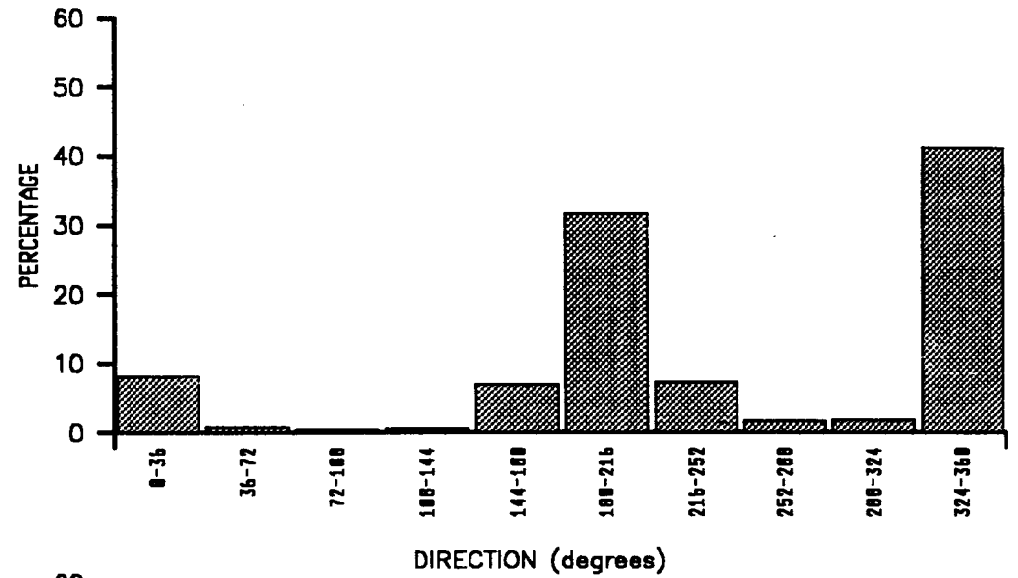
SCATTER PLOT

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0
 Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
 Position 52 40.78N 02 25.40E Meter Height(m) 7.0



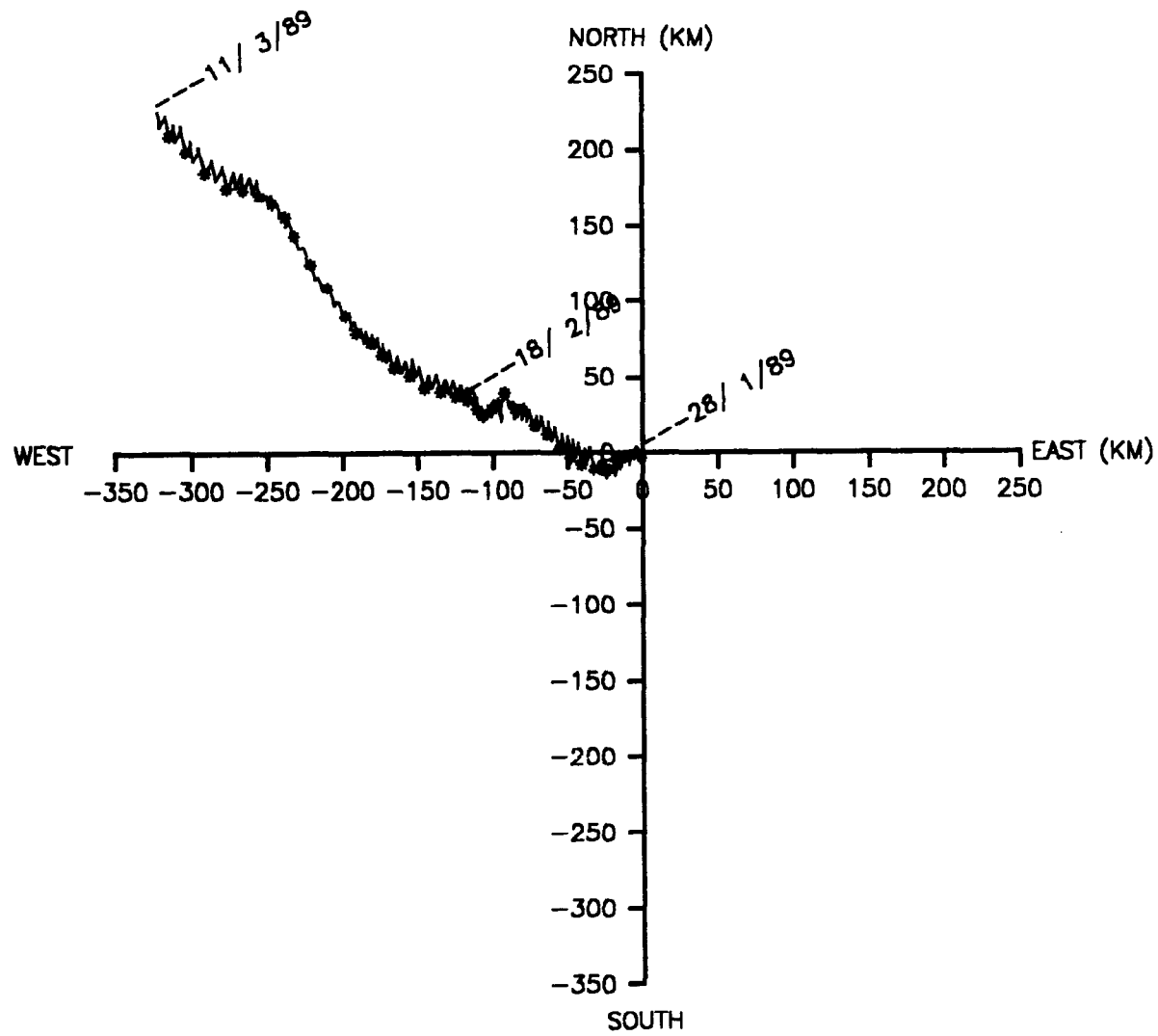
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0
 Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
 Position 52 40.78N 02 25.40E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E Meter Height(m) 7.0

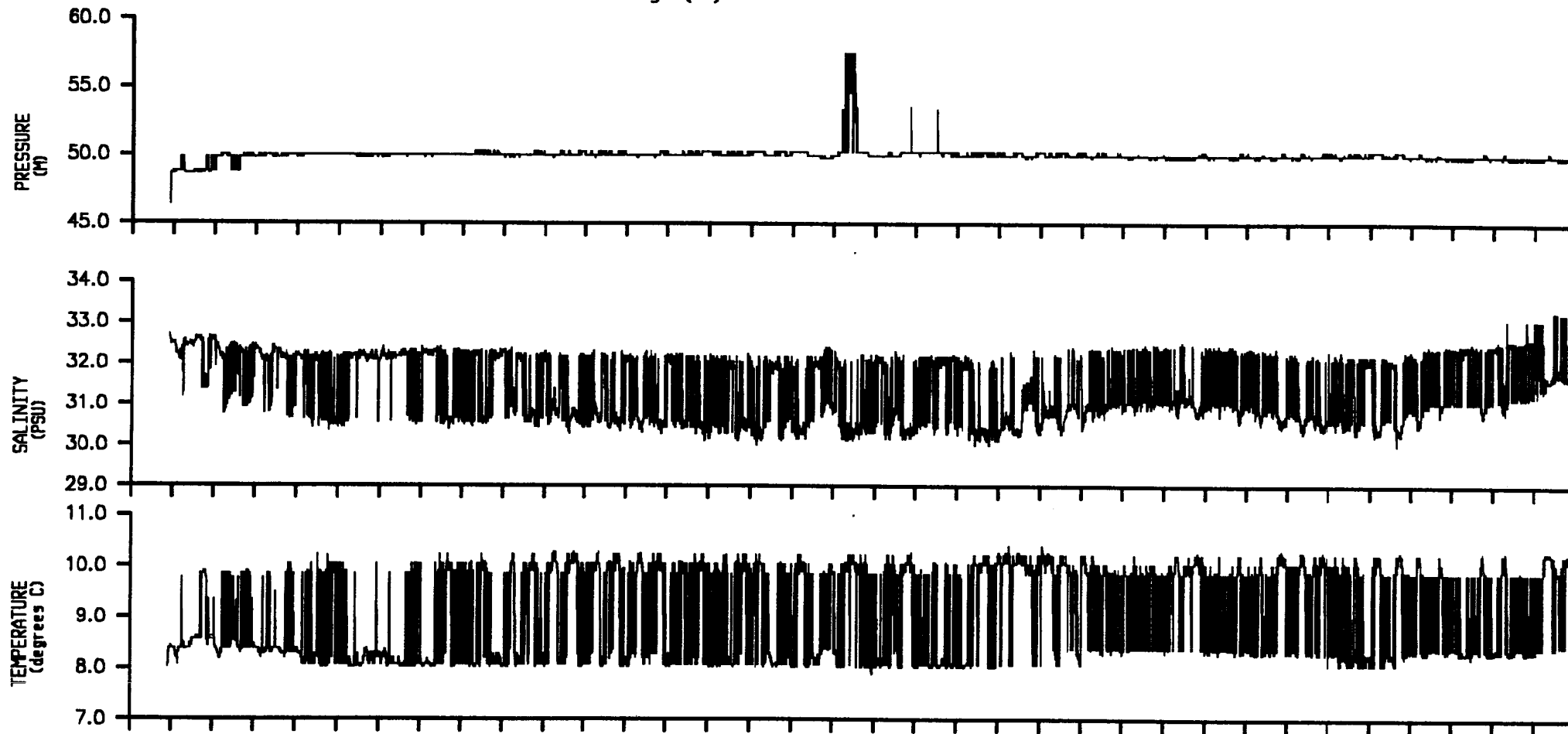


TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0

Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00

Position 52 40.78N 02 25.40E Meter Height(m) 7.0



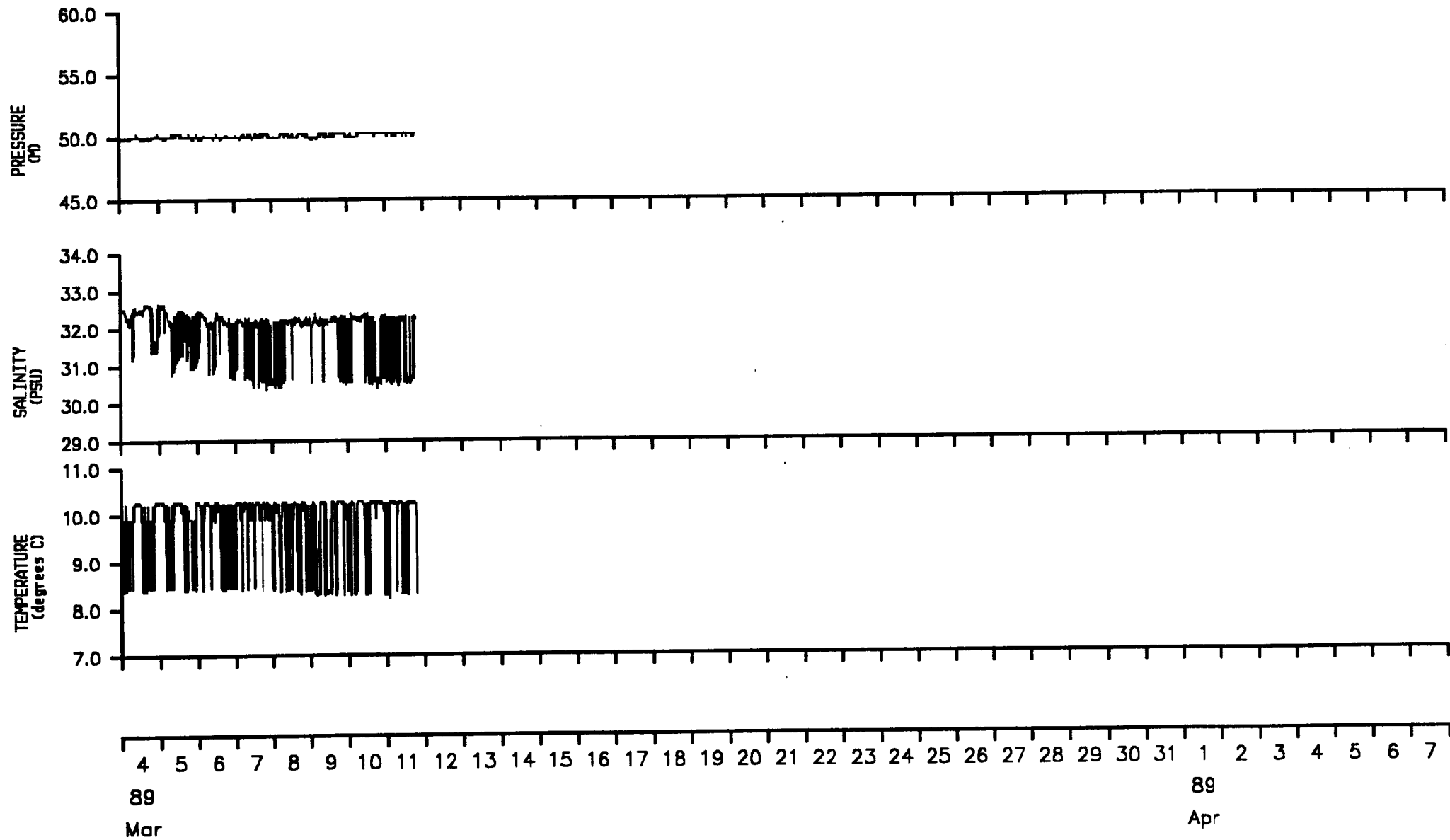
28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 1 2 3
89 89 89
Jan Feb Mar

TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9069 Rig no. C45EC Depth of water(m) 49.0

Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00

Position 52 40.78N 02 25.40E Meter Height(m) 7.0



STATISTICS FOR AS9069B C45ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0889	0.68917088E-02	0.83016276E-01
Northings	0.0621	0.20711505E+00	0.45509899E+00
Speed	0.4174	0.51530417E-01	0.22700316E+00

Vector mean speed 0.1085
 Vector Mean Direction -55.1

Maximum ten values

Eastings					Northings				
0.134	0.130	0.128	0.123	0.122	1.171	1.160	1.152	1.133	1.129
0.117	0.117	0.116	0.114	0.112	1.129	1.129	1.127	1.119	1.118

Minimum ten values

Eastings					Northings				
-0.382	-0.383	-0.390	-0.395	-0.398	-0.812	-0.816	-0.820	-0.823	-0.823
-0.401	-0.402	-0.403	-0.405	-0.411	-0.834	-0.838	-0.860	-0.885	-0.908

Maximum speeds

1.205	1.200	1.188	1.170	1.165	1.165	1.165	1.165	1.162	1.156
1.133	1.124	1.098	1.089	1.086	1.080	1.069	1.063	1.054	1.043
1.019	1.016	1.014	1.011	1.008	1.005	1.002	1.002	0.999	0.999
0.996	0.996	0.996	0.993	0.990	0.985	0.982	0.979	0.979	0.976
0.973	0.970	0.970	0.970	0.967	0.964	0.964	0.964	0.964	0.961
0.961	0.958	0.958	0.958	0.958	0.955	0.955	0.955	0.955	0.955
0.955	0.953	0.953	0.953	0.950	0.950	0.947	0.947	0.947	0.947
0.947	0.947	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.941
0.941	0.941	0.941	0.941	0.938	0.938	0.938	0.938	0.935	0.935
0.929	0.929	0.929	0.929	0.926	0.926	0.926	0.926	0.926	0.926

Variance ellipse statistics

Maximum variance 0.2072E+00	Direction	0.9
Minimum variance 0.6842E-02	Direction	90.9
Total variance 0.2140E+00	Ratio of variances	0.3303E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-10.3
Average direction. maxdir +PI/2 to maxdir -PI/2		197.0

STATISTICS FOR AS9069B C45ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0871	0.12873861E-02	0.35880163E-01
Northings	0.0629	0.43427199E-02	0.65899312E-01
Speed	0.1198	0.28045257E-02	0.52957773E-01

Vector mean speed 0.1074
 Vector Mean Direction -54.2

Maximum ten values

Eastings					Northings				
0.008	0.003	-0.004	-0.015	-0.015	0.231	0.226	0.219	0.207	0.199
-0.016	-0.017	-0.017	-0.017	-0.024	0.193	0.193	0.184	0.182	0.181

Minimum ten values

Eastings					Northings				
-0.132	-0.132	-0.142	-0.145	-0.148	-0.031	-0.034	-0.035	-0.036	-0.050
-0.156	-0.157	-0.157	-0.171	-0.177	-0.065	-0.082	-0.083	-0.093	-0.114

Maximum speeds

0.258	0.256	0.249	0.246	0.243	0.241	0.238	0.230	0.229	0.223
0.223	0.221	0.211	0.202	0.195	0.185	0.176	0.176	0.175	0.169
0.169	0.169	0.168	0.164	0.162	0.161	0.158	0.155	0.155	0.151
0.150	0.148	0.144	0.143	0.143	0.143	0.142	0.140	0.140	0.140
0.140	0.138	0.137	0.136	0.135	0.133	0.133	0.133	0.133	0.132
0.132	0.132	0.131	0.131	0.130	0.129	0.129	0.129	0.128	0.127
0.126	0.125	0.124	0.124	0.123	0.123	0.122	0.122	0.119	0.118
0.118	0.113	0.113	0.112	0.111	0.110	0.109	0.109	0.109	0.109
0.107	0.107	0.107	0.106	0.106	0.105	0.105	0.104	0.102	0.100
0.100	0.100	0.099	0.099	0.099	0.098	0.097	0.097	0.096	0.096

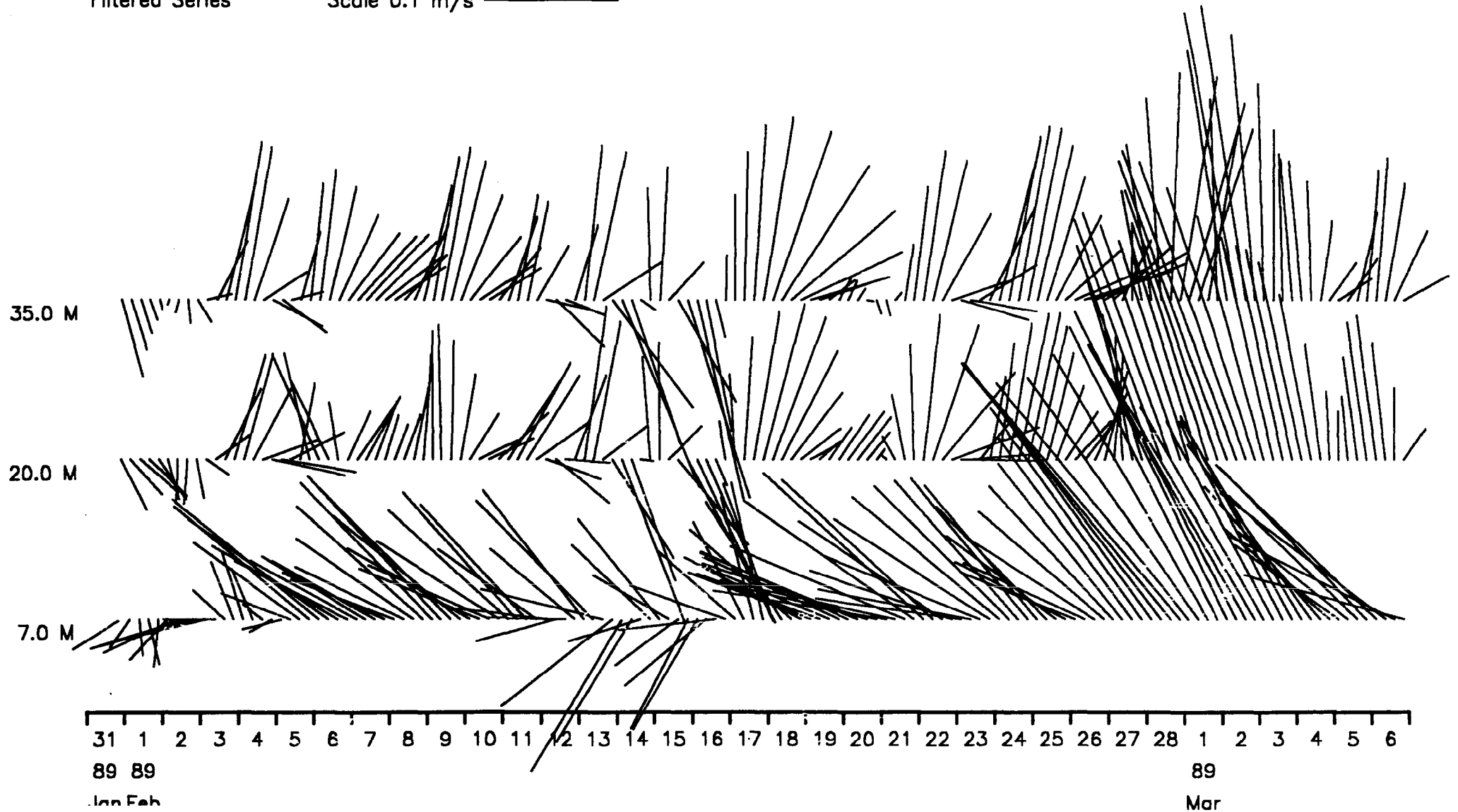
Variance ellipse statistics

Maximum variance	0.4810E-02	Direction	-20.0
Minimum variance	0.8200E-03	Direction	70.0
Total variance	0.5630E-02	Ratio of variances	0.1705E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		-31.7
Average direction. maxdir	+PI/2 to maxdir -PI/2		234.9

STICK TIME SERIES PLOT

Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E
Filtered Series Scale 0.1 m/s

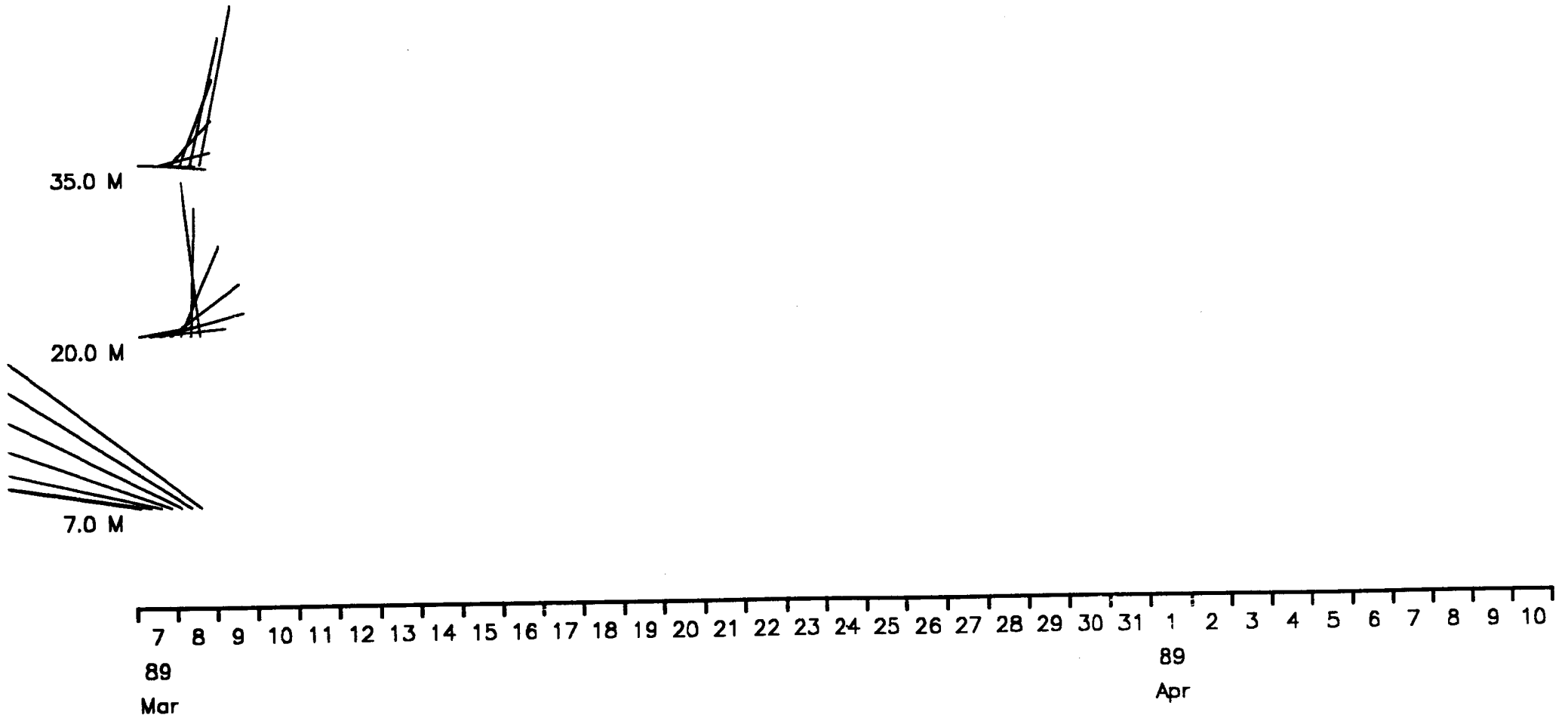
Meter No.	Meter Height
9069	7.0 M
1118	20.0 M
1119	35.0 M



STICK TIME SERIES PLOT

Rig no. C45EC Depth of water(m) 49.0
Start/End 1989/01/28 AT 21:50:00 1989/03/11 AT 19:33:00
Position 52 40.78N 02 25.40E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9069	7.0 M
1118	20.0 M
1119	35.0 M



Rig information details for C47EC

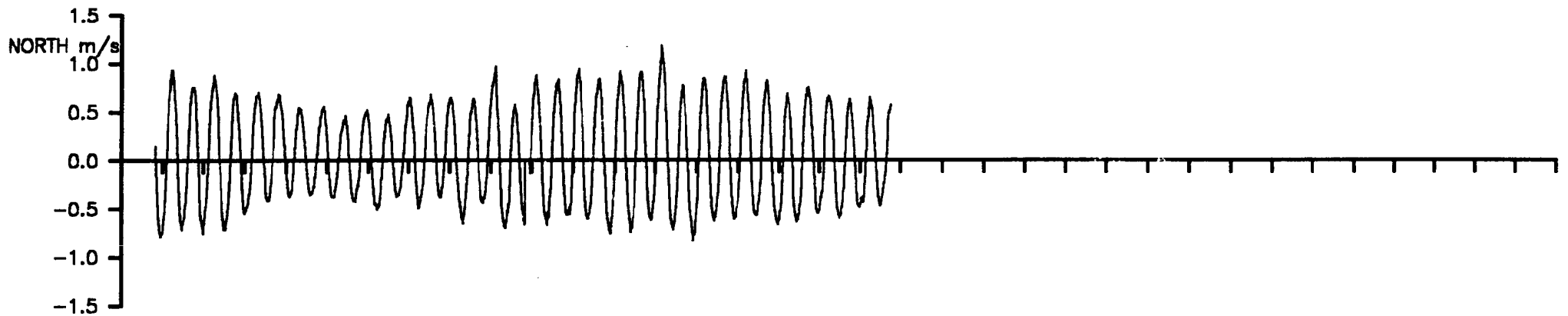
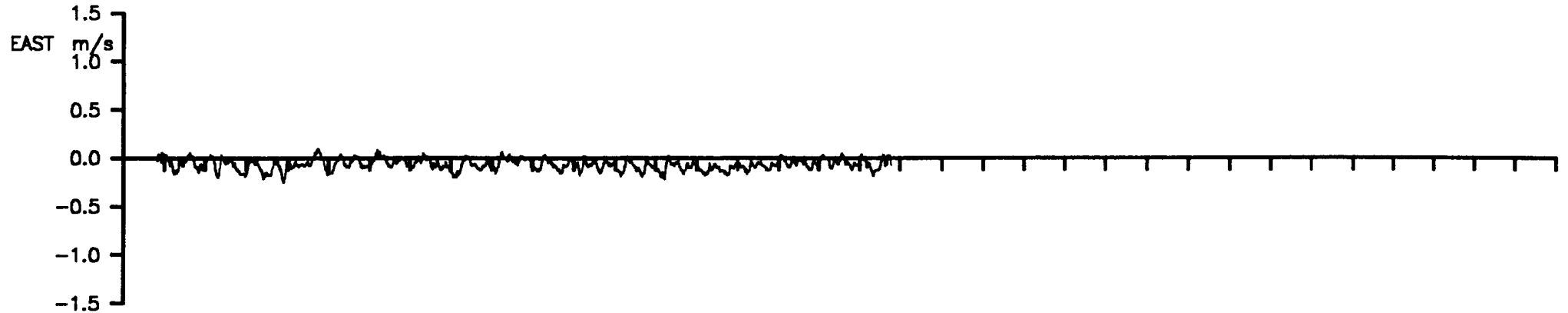
Position Latitude	:	52 41.02N
Position Longitude	:	02 25.42E
Water depth	:	49.0 m
Deployed on cruise	:	C47
Recovered on cruise	:	C49
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	11-MAR-89 19:52:00
Rig recovered on	:	29-MAR-89 18:50:00
Period of deployment	:	18.0 days
Comments	:	Launch and recovery successful

Meter information details for 9347

Rig No : C47EC
Meter No : 9347
Recording interval : 600.0 seconds
Meter height from bottom : 7.0 m
Position of meter on rig : B
Meter type : AS
Meter started : 11-MAR-89 14:10:00
Meter stopped : 30-MAR-89 20:40:00
Period switched on : 19.3 days
Period of good data : 18.0 days
Total number of scans : 2586
Timing error : None
Comments : Corrupted data for 14 recording intervals at :
(1) 20:00 20-MAR-89

VELOCITY COMPONENT TIME SERIES PLOT

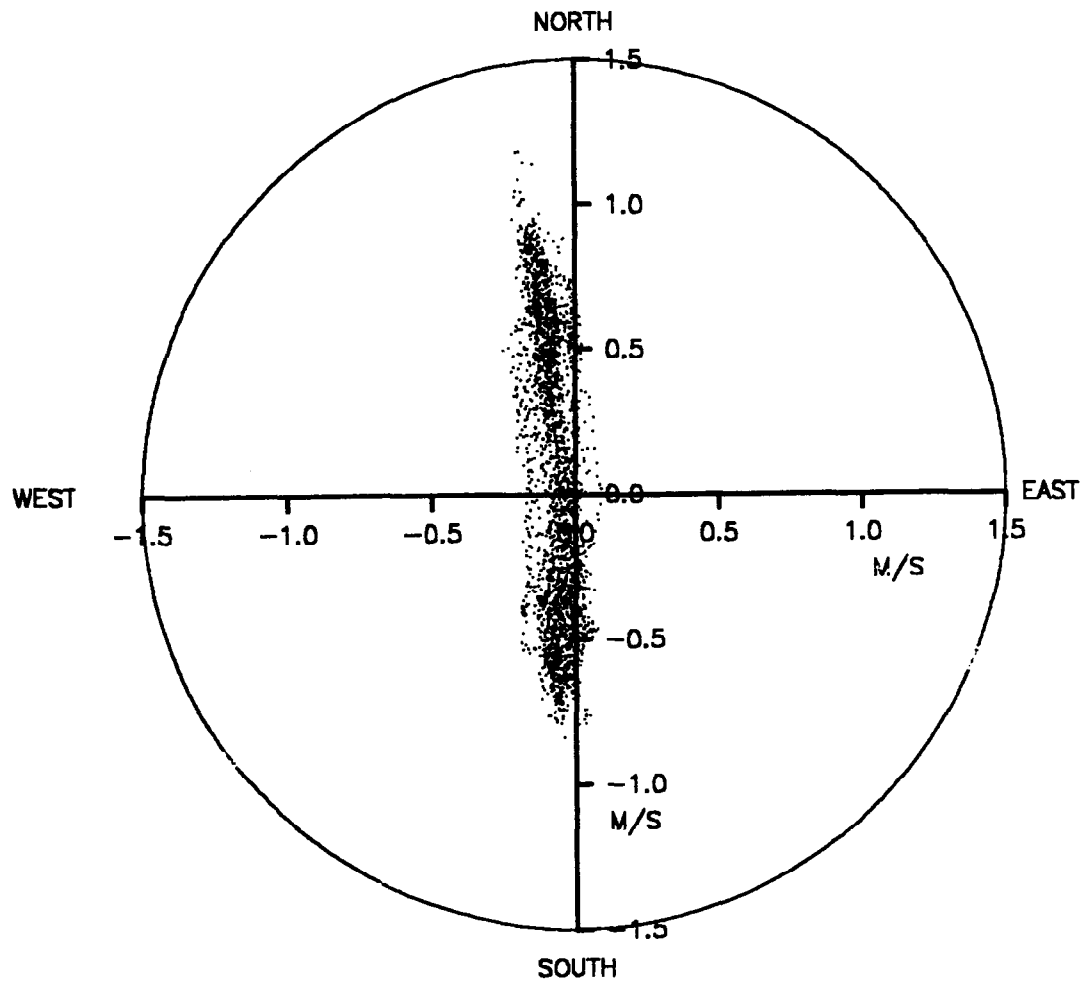
Meter no. 9347 Rig no. C47EC Depth of water(m) 49.0
Start/End 1989/03/11 AT 19:52:00 1989/03/29 AT 18:50:00
Position 52 41.02N 02 25.42E Meter Height(m) 7.0



11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14
89 89
Mar Apr

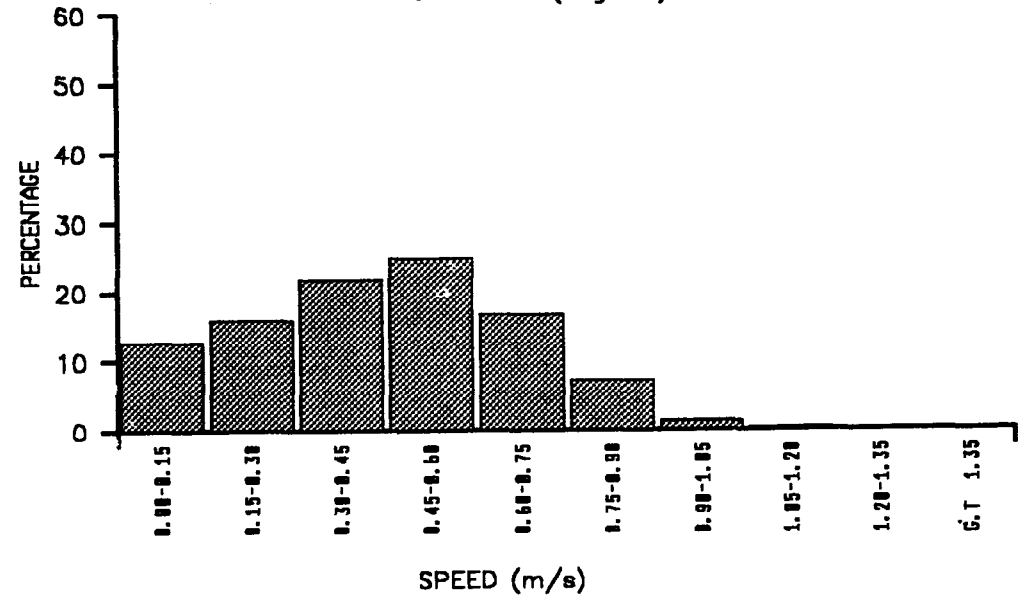
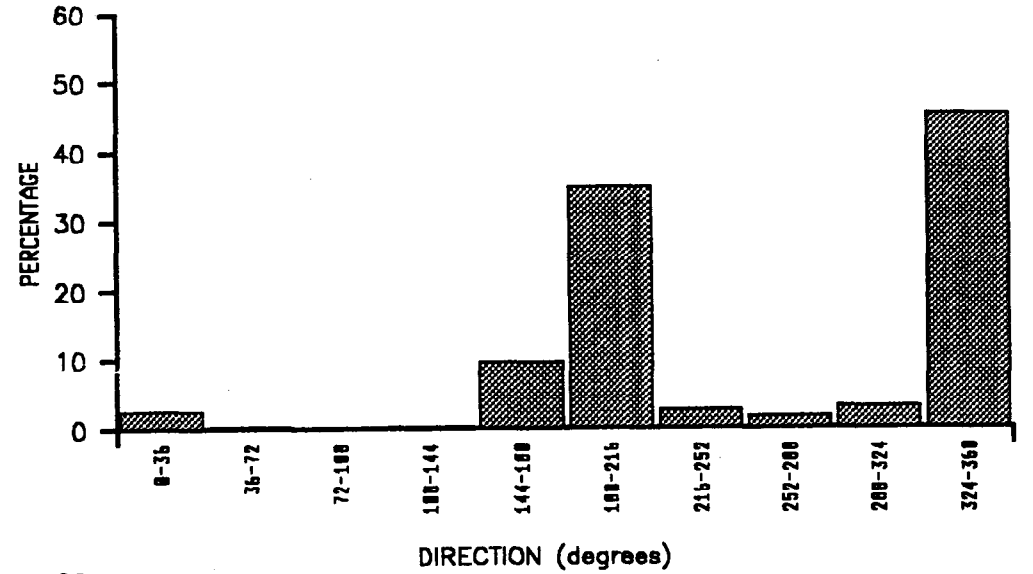
SCATTER PLOT

Meter no. 9347 Rig no. C47EC Depth of water(m) 49.0
 Start/End 1989/03/11 AT 19:52:00 1989/03/29 AT 18:50:00
 Position 52 41.02N 02 25.42E Meter Height(m) 7.0



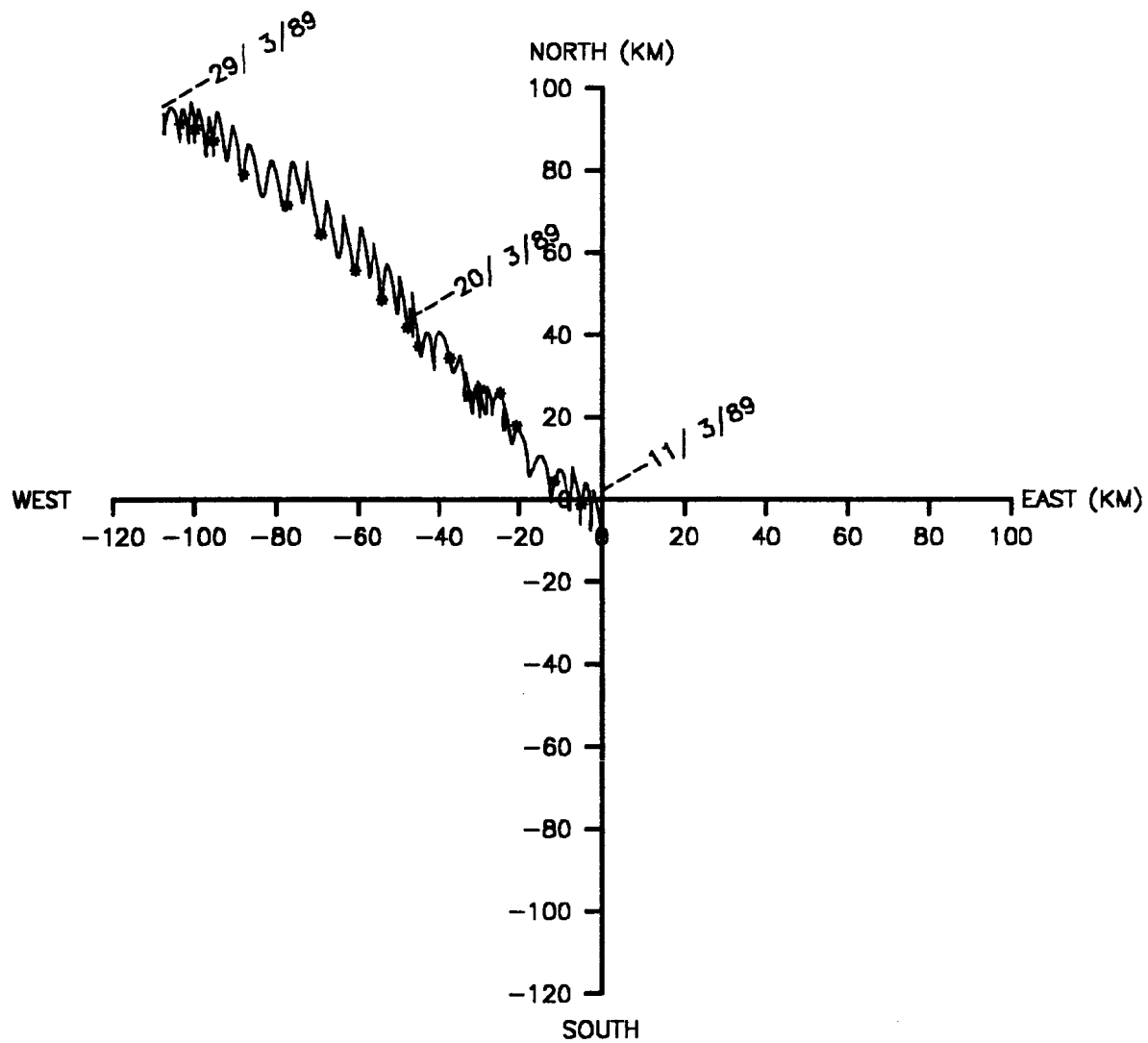
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9347 Rig no. C47EC Depth of water(m) 49.0
 Start/End 1989/03/11 AT 19:52:00 1989/03/29 AT 18:50:00
 Position 52 41.02N 02 25.42E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9347 Rig no. C47EC Depth of water(m) 49.0
Start/End 1989/03/11 AT 19:52:00 1989/03/29 AT 18:50:00
Position 52 41.02N 02 25.42E Meter Height(m) 7.0

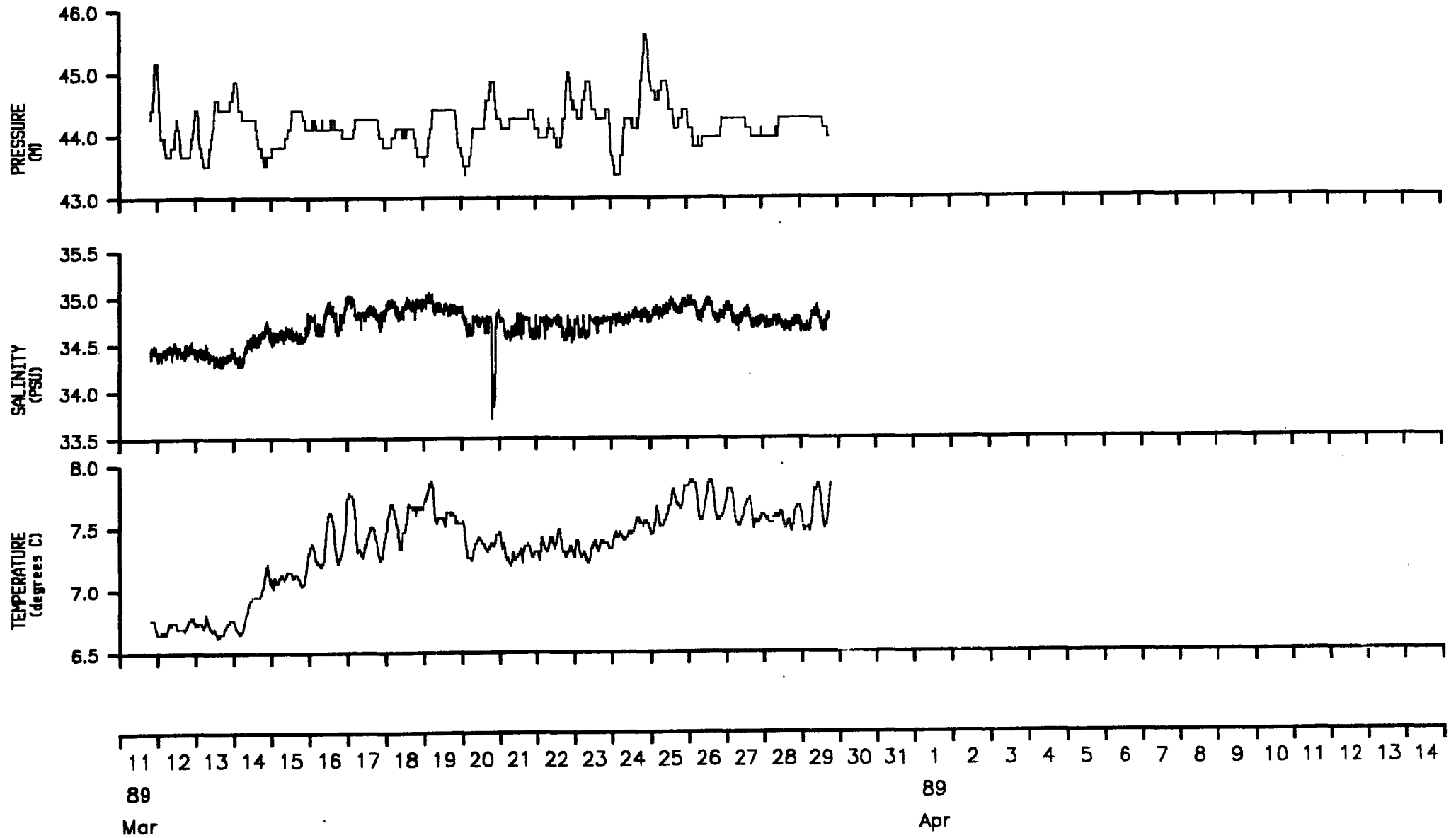


TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9347 Rig no. C47EC Depth of water(m) 49.0

Start/End 1989/03/11 AT 19:52:00 1989/03/29 AT 18:50:00

Position 52 41.02N 02 25.42E Meter Height(m) 7.0



STATISTICS FOR AS9347B C47ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0694	0.32873137E-02	0.57335097E-01
Northings	0.0603	0.23304433E+00	0.48274672E+00
Speed	0.4405	0.50662402E-01	0.22508311E+00

Vector mean speed 0.0920
 Vector Mean Direction -49.0

Maximum ten values

Eastings					Northings				
0.094	0.091	0.087	0.081	0.079	1.181	1.179	1.145	1.138	1.083
0.079	0.078	0.077	0.071	0.069	1.045	1.043	1.027	1.018	1.017

Minimum ten values

Eastings					Northings				
-0.208	-0.210	-0.213	-0.214	-0.217	-0.769	-0.771	-0.772	-0.775	-0.778
-0.221	-0.221	-0.224	-0.233	-0.253	-0.781	-0.788	-0.789	-0.790	-0.838

Maximum speeds

1.197	1.197	1.159	1.147	1.101	1.066	1.060	1.048	1.034	1.034
1.025	1.016	1.014	0.976	0.970	0.961	0.953	0.944	0.944	0.941
0.938	0.935	0.935	0.932	0.929	0.926	0.923	0.923	0.921	0.918
0.918	0.915	0.915	0.912	0.906	0.906	0.906	0.903	0.903	0.900
0.897	0.894	0.894	0.894	0.892	0.892	0.892	0.889	0.889	0.883
0.883	0.880	0.880	0.880	0.880	0.877	0.877	0.874	0.874	0.874
0.871	0.871	0.868	0.868	0.868	0.868	0.865	0.865	0.862	0.862
0.862	0.860	0.860	0.860	0.860	0.860	0.857	0.854	0.854	0.854
0.854	0.854	0.854	0.854	0.854	0.854	0.851	0.851	0.851	0.848
0.848	0.845	0.845	0.845	0.845	0.845	0.845	0.842	0.842	0.842

Variance ellipse statistics

Maximum variance	0.2337E+00	Direction	-3.0
Minimum variance	0.2638E-02	Direction	87.0
Total variance	0.2363E+00	Ratio of variances	0.1129E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-10.8
Average direction. maxdir	+PI/2 to maxdir -PI/2		192.9

STATISTICS FOR AS9347B C47ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0731	0.77210646E-03	0.27786806E-01
Northings	0.0750	0.18902204E-02	0.43476667E-01
Speed	0.1097	0.15680026E-02	0.39598014E-01

Vector mean speed 0.1047
 Vector Mean Direction -44.3

Maximum ten values

Eastings					Northings				
-0.027	-0.029	-0.030	-0.031	-0.032	0.156	0.155	0.150	0.143	0.124
-0.034	-0.035	-0.038	-0.042	-0.046	0.119	0.119	0.118	0.113	0.112

Minimum ten values

Eastings					Northings				
-0.100	-0.102	-0.102	-0.103	-0.105	0.049	0.037	0.032	0.016	0.009
-0.106	-0.109	-0.115	-0.117	-0.119	0.007	0.003	-0.005	-0.017	-0.019

Maximum speeds

0.189	0.186	0.180	0.166	0.161	0.160	0.159	0.144	0.142	0.136
0.135	0.134	0.132	0.130	0.130	0.130	0.129	0.127	0.125	0.122
0.121	0.117	0.116	0.115	0.109	0.108	0.106	0.105	0.104	0.101
0.100	0.098	0.098	0.098	0.090	0.089	0.080	0.072	0.072	0.069
0.063	0.063	0.058	0.051	0.042	0.040	0.035	0.030		

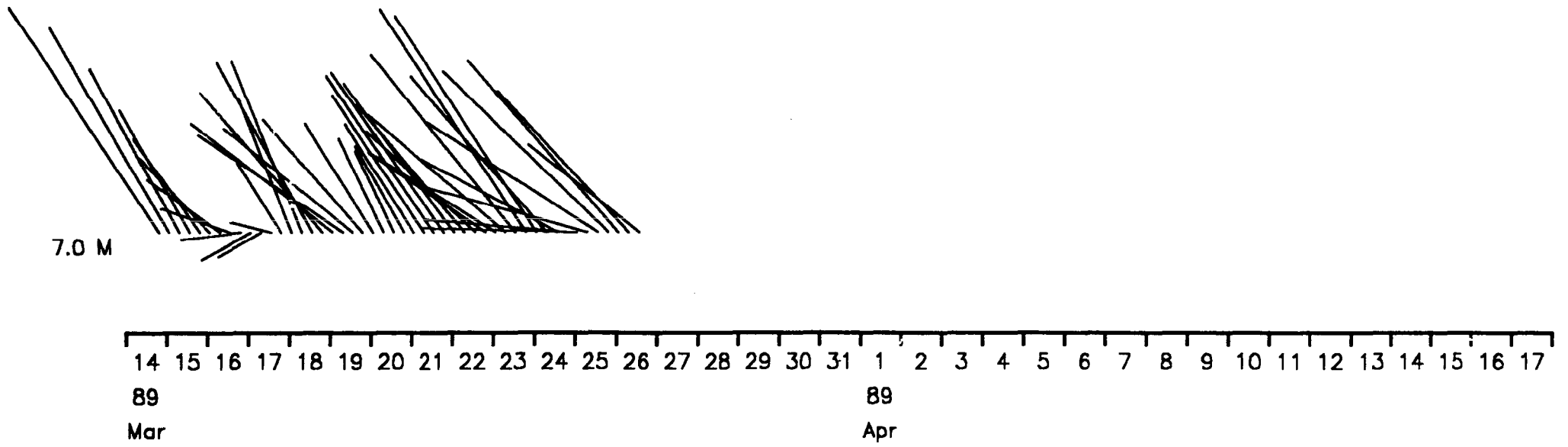
Variance ellipse statistics

Maximum variance	0.2077E-02	Direction	-20.7
Minimum variance	0.5855E-03	Direction	69.3
Total variance	0.2662E-02	Ratio of variances	0.2819E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		-23.6
Average direction. maxdir	+PI/2 to maxdir -PI/2		261.6

STICK TIME SERIES PLOT

Rig no. C47EC Depth of water(m) 49.0
Start/End 1989/03/11 AT 19:52:00 1989/03/29 AT 18:50:00
Position 52 41.02N 02 25.42E
Filtered Series Scale 0.1 m/s _____

Meter No. Meter Height
9347 7.0 M



Rig information details for C49EC

Position Latitude	:	52 41.22N
Position Longitude	:	02 24.92E
Water depth	:	49.0 m
Deployed on cruise	:	C49
Recovered on cruise	:	C51
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	29-MAR-89 20:52:00
Rig recovered on	:	09-MAY-89 04:23:00
Period of deployment	:	40.3 days
Comments	:	Launch and recovery successful

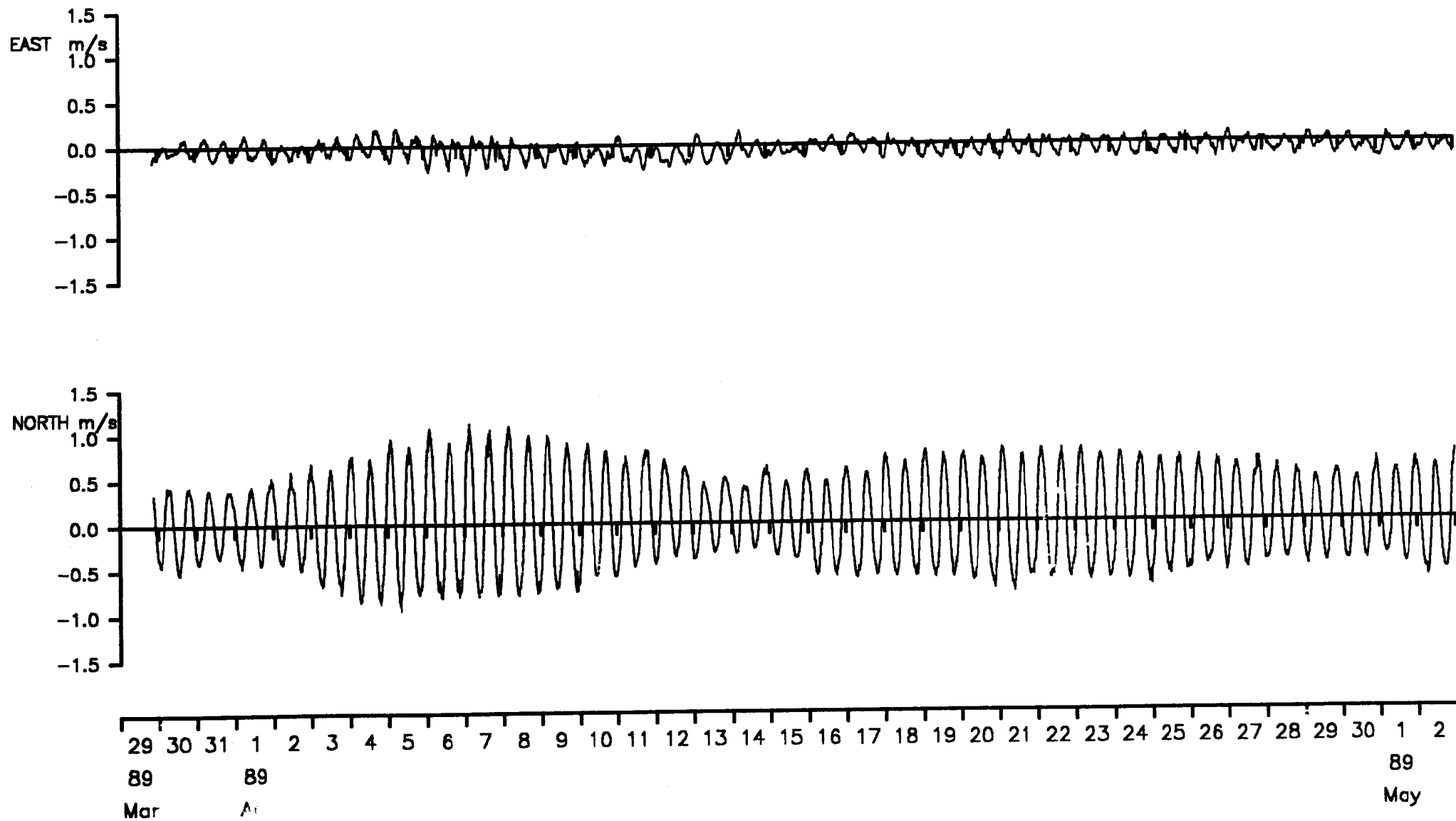
Meter information details for 9579

Rig No	:	C49EC
Meter No	:	9579
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	29-MAR-89 17:19:00
Meter stopped	:	09-MAY-89 10:59:00
Period switched on	:	40.7 days
Period of good data	:	40.3 days
Total number of scans	:	5805
Timing error	:	None
Comments	:	Good record obtained

No PRESSURE sensor fitted to meter

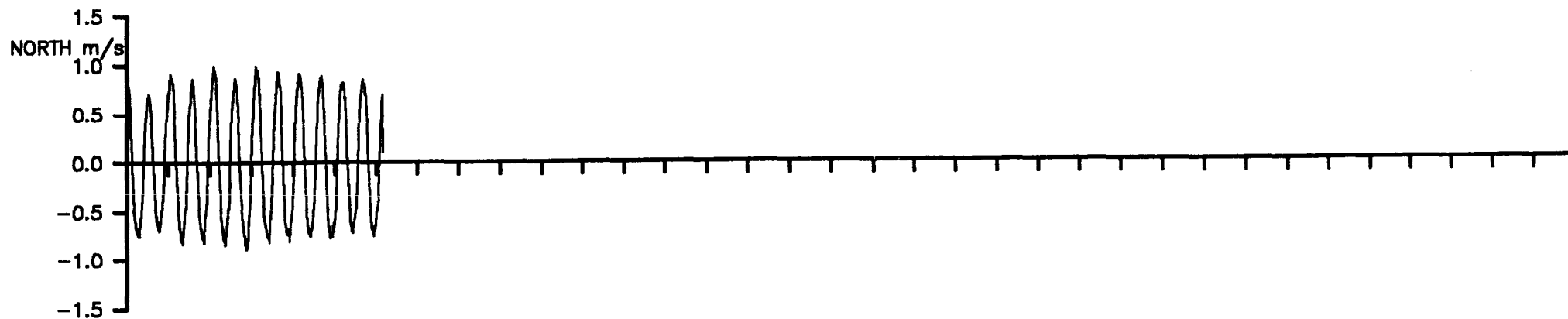
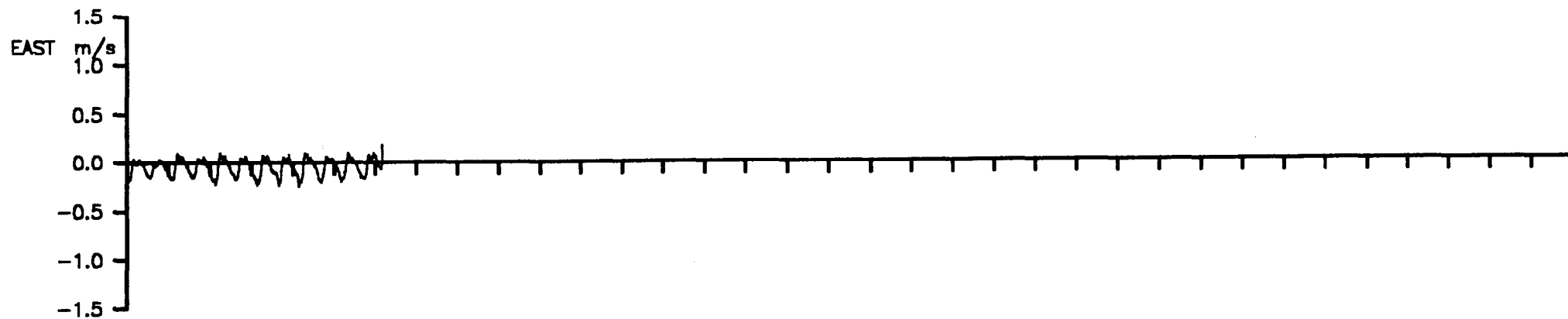
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0
Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00
Position 52 41.22N 02 24.92E Meter Height(m) 7.0



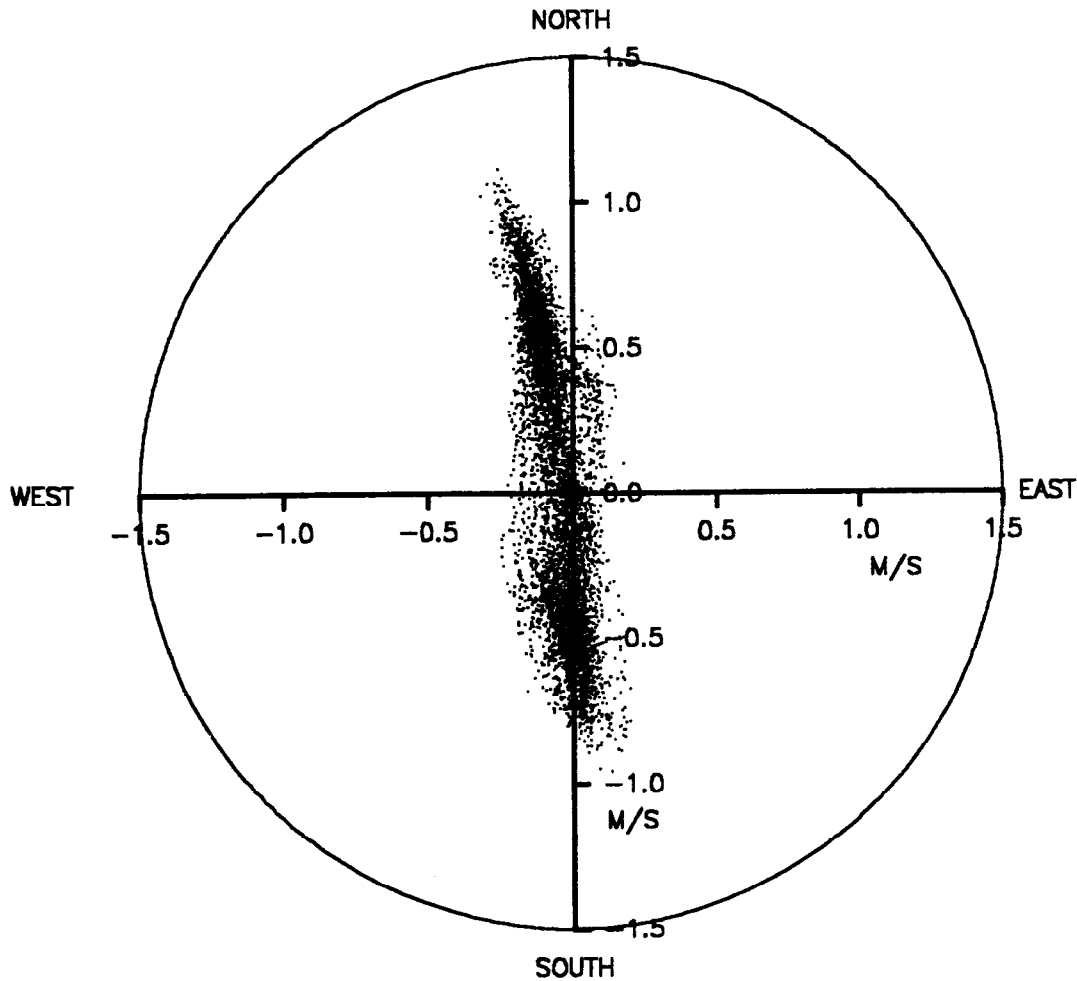
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0
Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00
Position 52 41.22N 02 24.92E Meter Height(m) 7.0



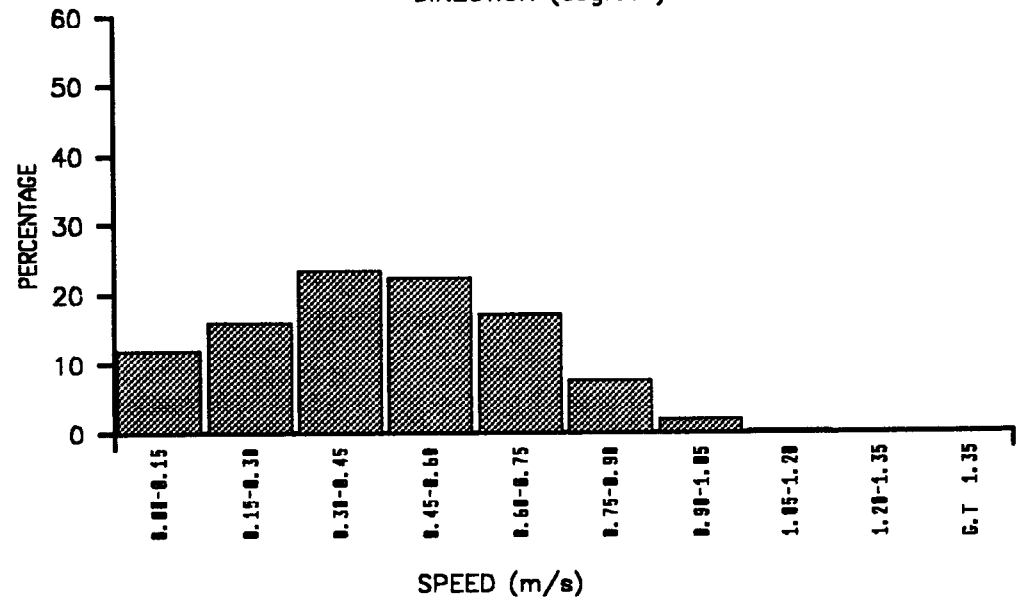
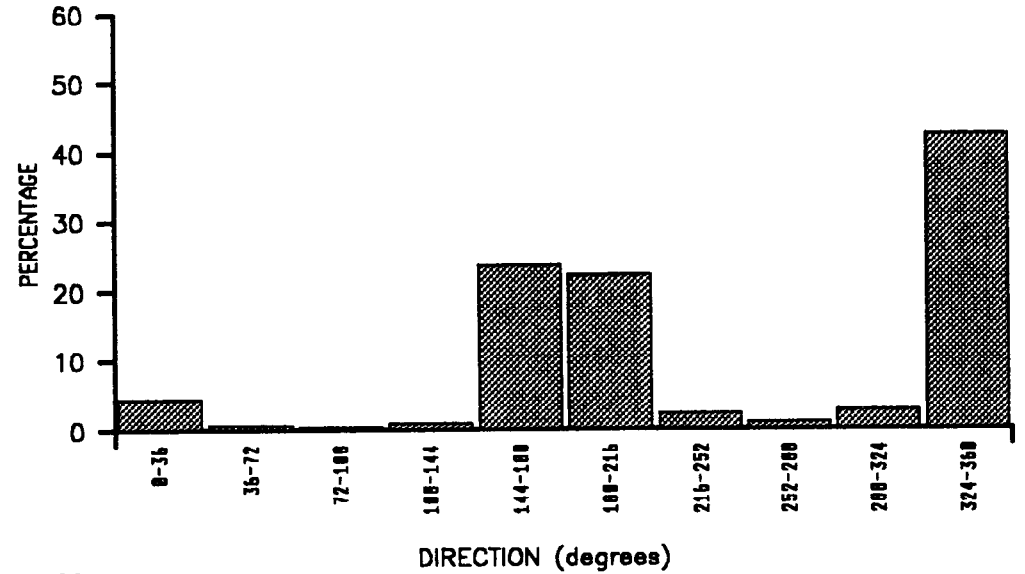
SCATTER PLOT

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0
 Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00
 Position 52 41.22N 02 24.92E Meter Height(m) 7.0



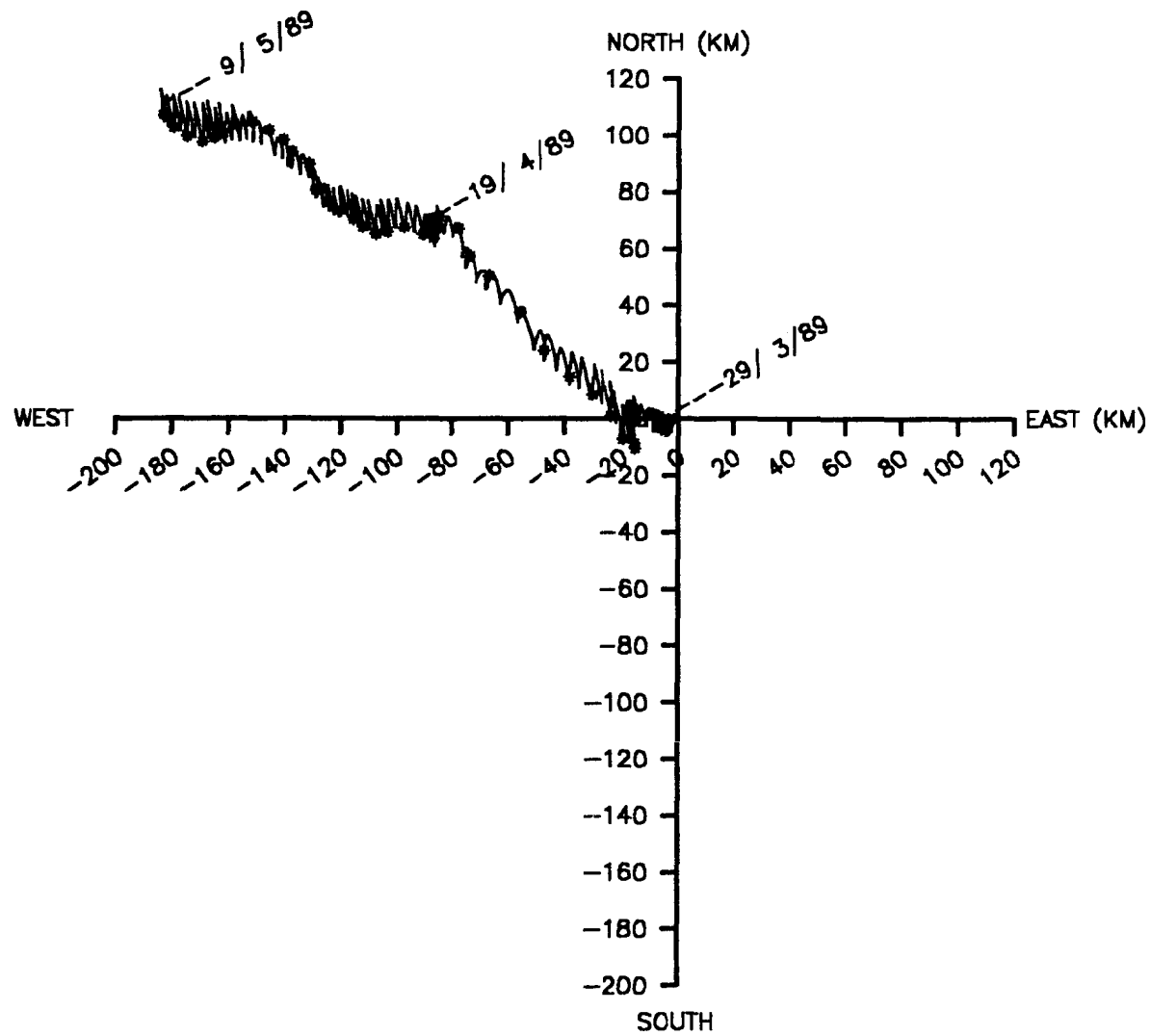
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0
 Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00
 Position 52 41.22N 02 24.92E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0
Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00
Position 52 41.22N 02 24.92E Meter Height(m) 7.0

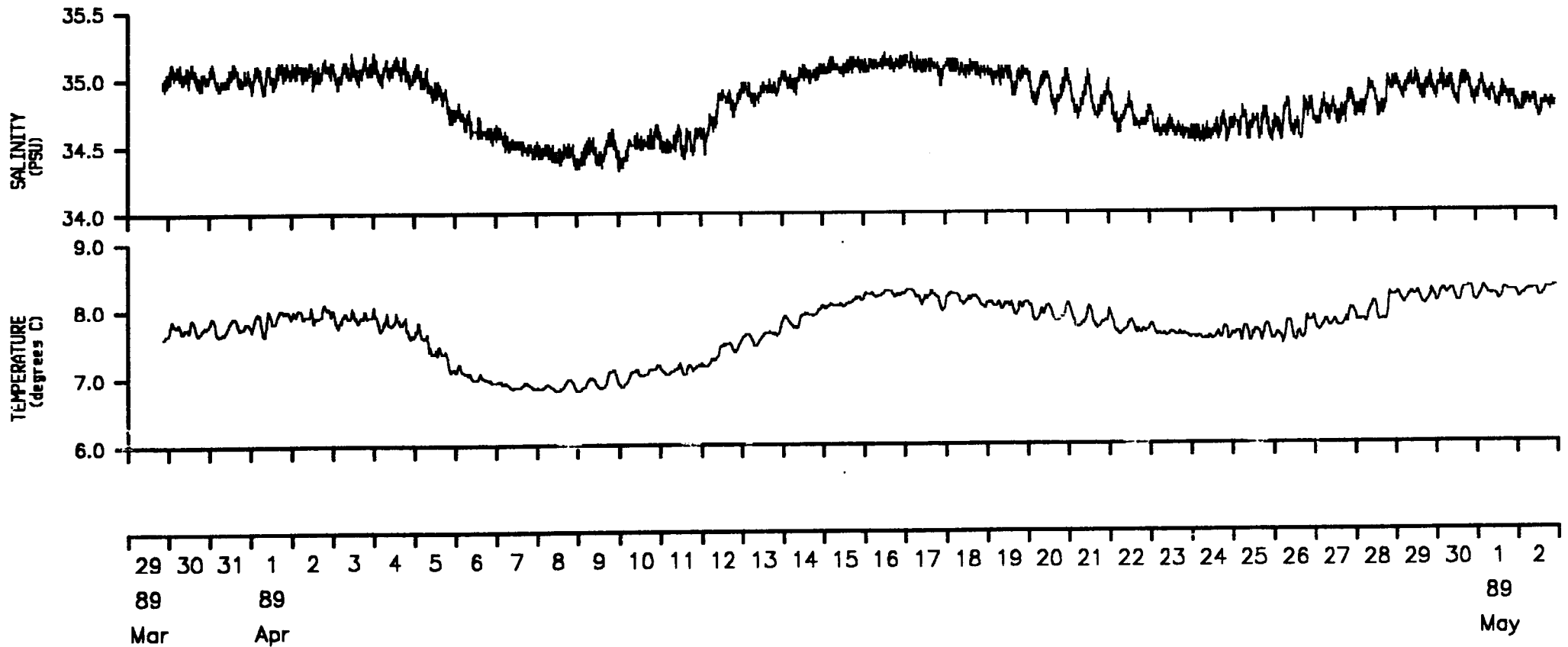


TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0

Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00

Position 52 41.22N 02 24.92E Meter Height(m) 7.0

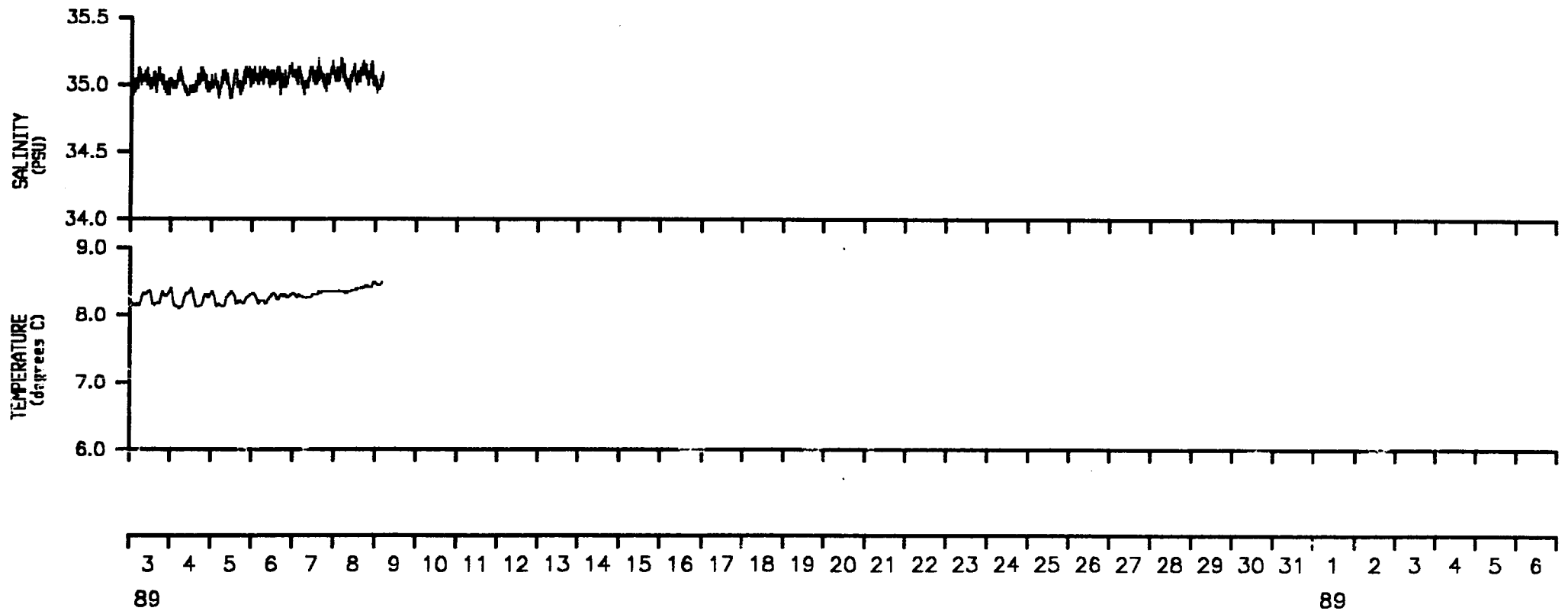


TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9579 Rig no. C49EC Depth of water(m) 49.0

Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00

Position 52 41.22N 02 24.92E Meter Height(m) 7.0



STATISTICS FOR AS9579B C49ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0527	0.65904297E-02	0.81181467E-01
Northings	0.0310	0.24117845E+00	0.49109924E+00
Speed	0.4467	0.51930930E-01	0.22788358E+00

Vector mean speed 0.0611
 Vector Mean Direction -59.6

Maximum ten values

Eastings					Northings				
0.199	0.196	0.184	0.180	0.180	1.115	1.082	1.065	1.061	1.059
0.179	0.177	0.177	0.177	0.175	1.056	1.055	1.044	1.041	1.037

Minimum ten values

Eastings					Northings				
-0.268	-0.270	-0.271	-0.271	-0.278	-0.873	-0.873	-0.875	-0.877	-0.884
-0.278	-0.282	-0.284	-0.295	-0.317	-0.885	-0.890	-0.896	-0.951	-0.958

Maximum speeds

1.144	1.109	1.101	1.098	1.086	1.086	1.083	1.069	1.069	1.069
1.066	1.066	1.060	1.040	1.040	1.037	1.031	1.031	1.028	1.025
1.022	1.022	1.011	1.008	1.008	1.005	1.005	1.005	1.005	1.002
0.999	0.993	0.990	0.990	0.987	0.987	0.985	0.976	0.976	0.976
0.976	0.973	0.970	0.970	0.970	0.967	0.967	0.967	0.964	0.964
0.964	0.964	0.961	0.961	0.961	0.961	0.955	0.955	0.953	0.950
0.950	0.950	0.947	0.947	0.947	0.944	0.944	0.944	0.944	0.944
0.944	0.941	0.941	0.938	0.938	0.938	0.938	0.938	0.938	0.935
0.935	0.932	0.929	0.926	0.926	0.926	0.926	0.923	0.923	0.923
0.923	0.923	0.921	0.921	0.921	0.918	0.918	0.918	0.918	0.918

Variance ellipse statistics

Maximum variance	0.2441E+00	Direction	-6.4
Minimum variance	0.3631E-02	Direction	83.6
Total variance	0.2478E+00	Ratio of variances	0.1487E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-6.5
Average direction. maxdir	+PI/2 to maxdir -PI/2		189.3

STATISTICS FOR AS9579B C49ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0548	0.78479853E-03	0.28014258E-01
Northings	0.0355	0.21366591E-02	0.46224009E-01
Speed	0.0759	0.14130319E-02	0.37590321E-01

Vector mean speed 0.0653
 Vector Mean Direction -57.1

Maximum ten values

Eastings					Northings				
0.019	0.017	0.014	0.009	0.004	0.183	0.176	0.162	0.147	0.130
-0.004	-0.005	-0.005	-0.005	-0.009	0.128	0.125	0.119	0.116	0.110

Minimum ten values

Eastings					Northings				
-0.090	-0.091	-0.096	-0.096	-0.107	-0.034	-0.035	-0.043	-0.043	-0.049
-0.112	-0.122	-0.129	-0.134	-0.138	-0.049	-0.051	-0.057	-0.059	-0.060

Maximum speeds

0.229	0.219	0.211	0.185	0.174	0.146	0.143	0.139	0.139	0.137
0.125	0.125	0.121	0.117	0.117	0.115	0.114	0.113	0.112	0.111
0.108	0.107	0.106	0.105	0.104	0.104	0.103	0.102	0.102	0.100
0.100	0.100	0.100	0.099	0.098	0.097	0.096	0.095	0.093	0.091
0.089	0.088	0.087	0.085	0.085	0.083	0.082	0.081	0.080	0.079
0.077	0.077	0.076	0.075	0.075	0.074	0.074	0.073	0.072	0.072
0.069	0.069	0.067	0.066	0.065	0.065	0.065	0.064	0.064	0.063
0.063	0.063	0.063	0.062	0.061	0.061	0.061	0.061	0.061	0.060
0.060	0.059	0.059	0.058	0.057	0.057	0.057	0.056	0.056	0.056
0.055	0.055	0.054	0.054	0.054	0.054	0.054	0.054	0.053	0.052

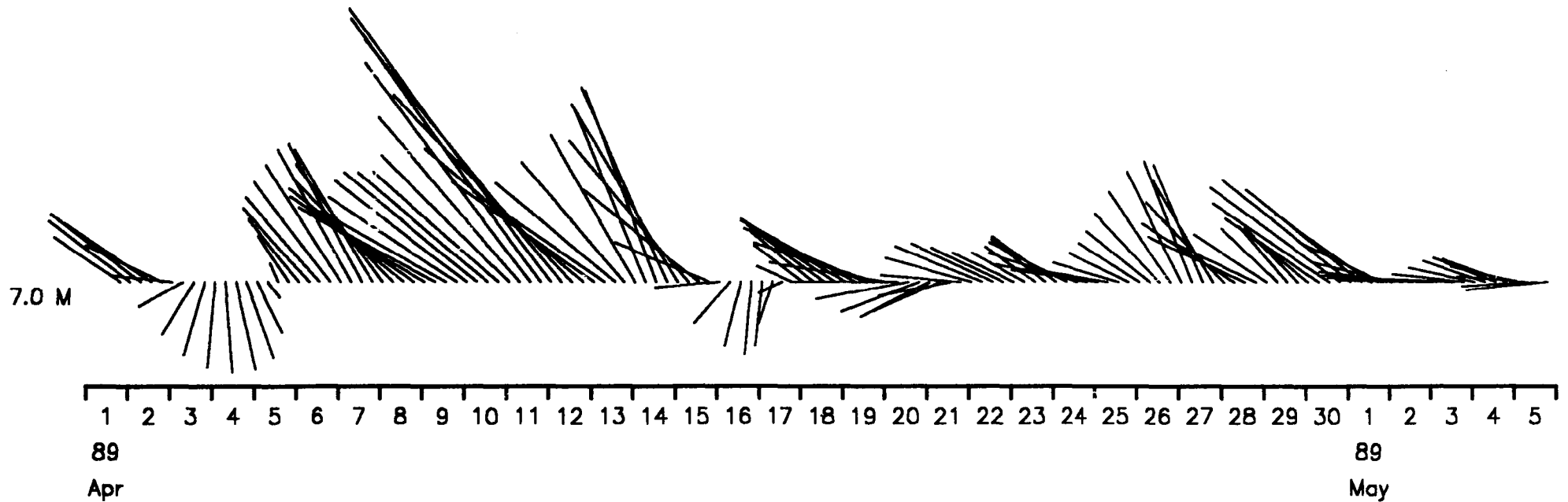
Variance ellipse statistics

Maximum variance	0.2610E-02	Direction	-27.0
Minimum variance	0.3114E-03	Direction	63.0
Total variance	0.2921E-02	Ratio of variances	0.1193E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		-28.5
Average direction. maxdir	+PI/2 to maxdir -PI/2		217.6

STICK TIME SERIES PLOT

Rig no. C49EC Depth of water(m) 49.0
Start/End 1989/03/29 AT 20:52:00 1989/05/09 AT 04:23:00
Position 52 41.22N 02 24.92E
Filtered Series Scale 0.1 m/s —————

Meter No. Meter Height
9579 7.0 M



Rig information details for C51EC

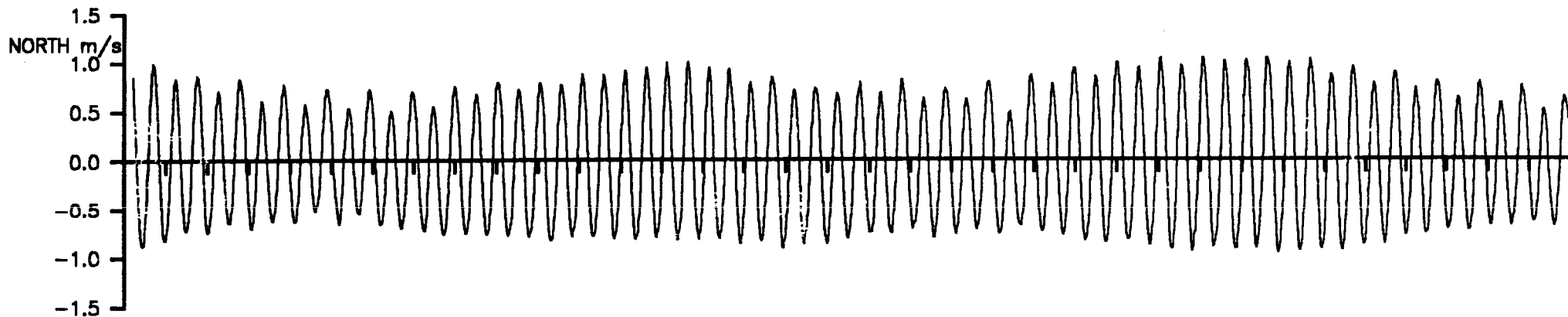
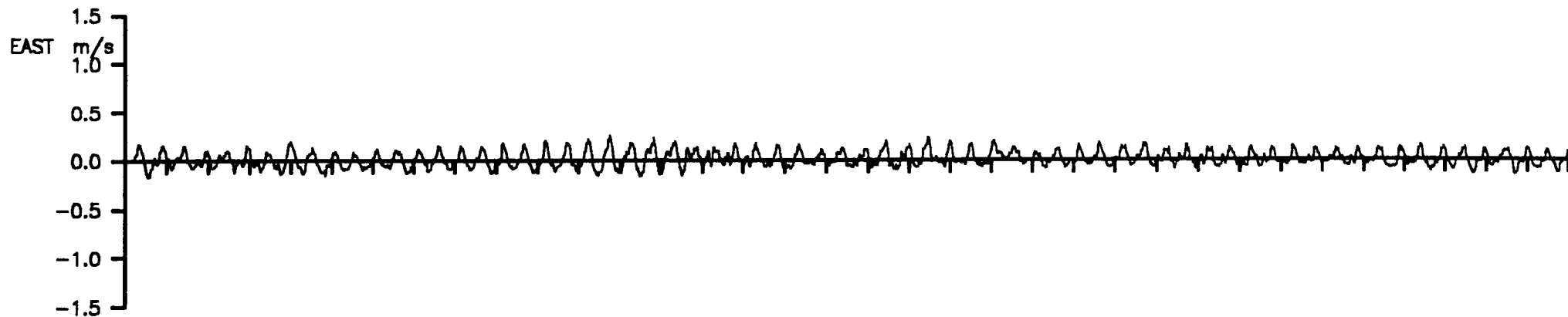
Position Latitude	:	52 41.22N
Position Longitude	:	02 24.92E
Water depth	:	49.0 m
Deployed on cruise	:	C51
Recovered on cruise	:	TRAWLED
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	09-MAY-89 05:47:00
Rig recovered on	:	27-JUNE-89 00:00:00
Period of deployment	:	48.8 days
Comments	:	No spar buoy or subsurface pellets sited during recovery attempt on 06-JUNE-89 Rig eventually trawled up on 27-JUNE-89

Meter information details for 1262

Rig No	:	C51EC
Meter No	:	1262
Recording interval	:	1800.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	07-MAY-89 21:30:00
Meter stopped	:	27-JUNE-89 14:40:00
Period switched on	:	50.7 days
Period of good data	:	48.8 days
Total number of scans	:	2341
Timing error	:	600 seconds slow
Comments	:	Good record obtained until trawled up on 27-JUNE-89

VELOCITY COMPONENT TIME SERIES PLOT

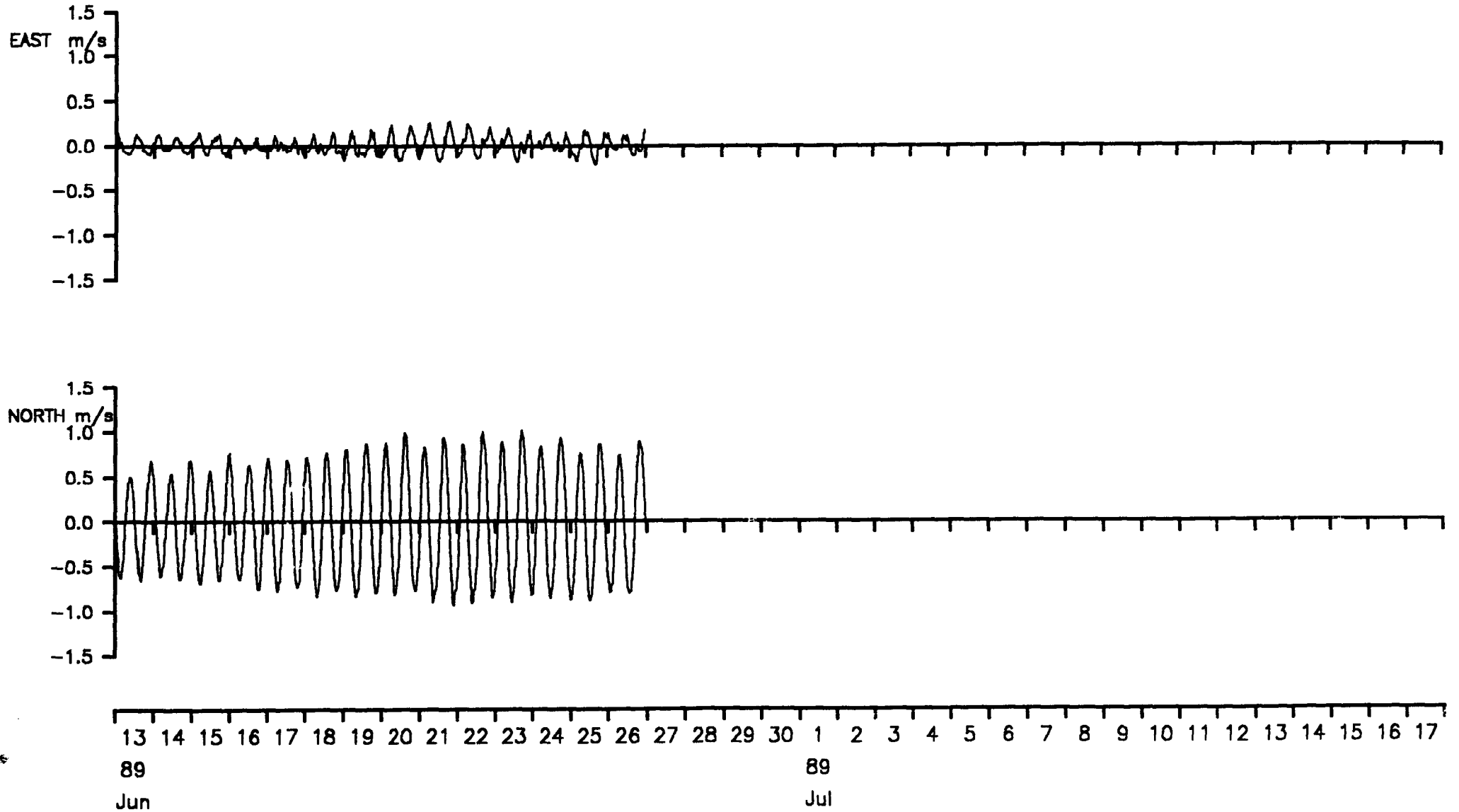
Meter no. 1262 Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E Meter Height(m) 35.0



9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12
89 89

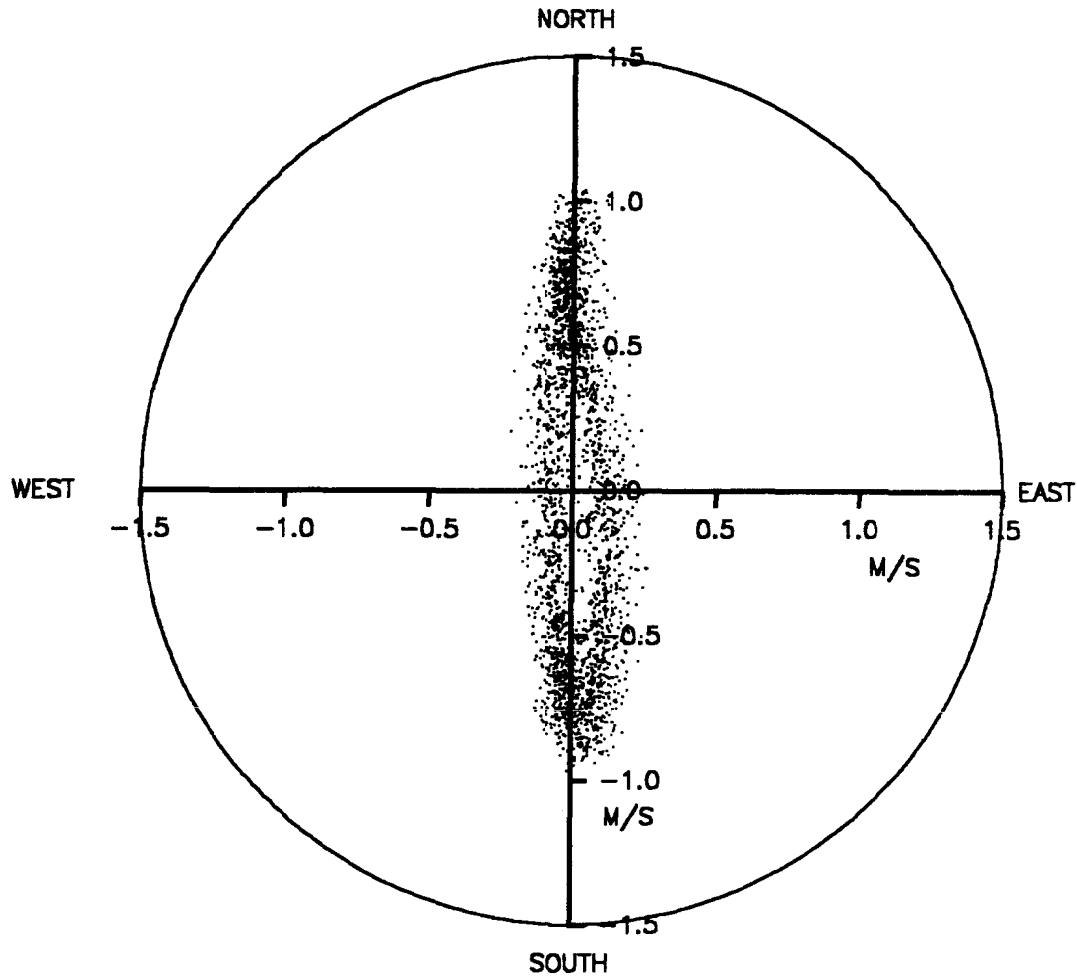
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1262 Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E Meter Height(m) 35.0



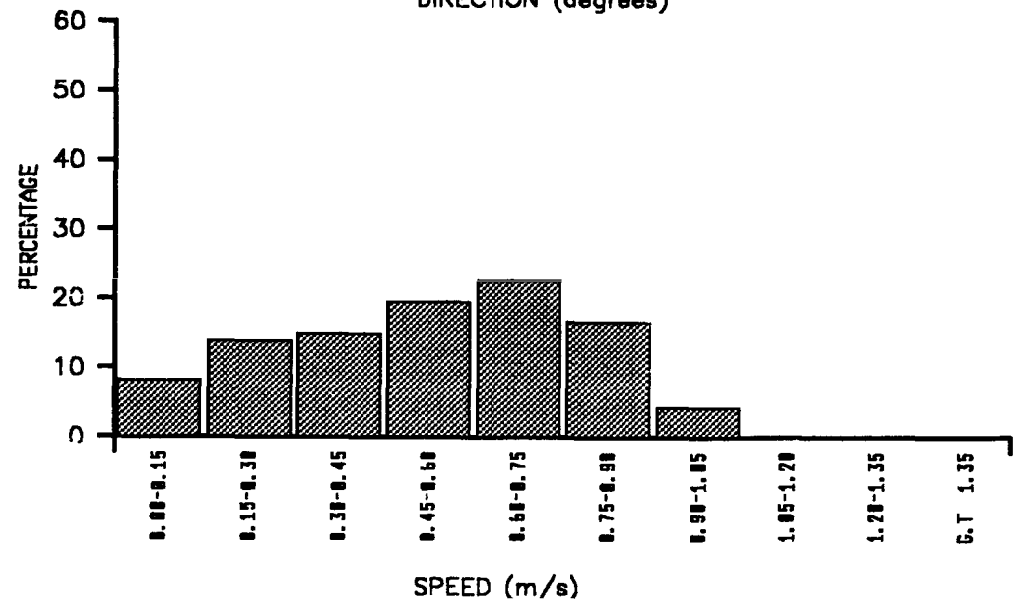
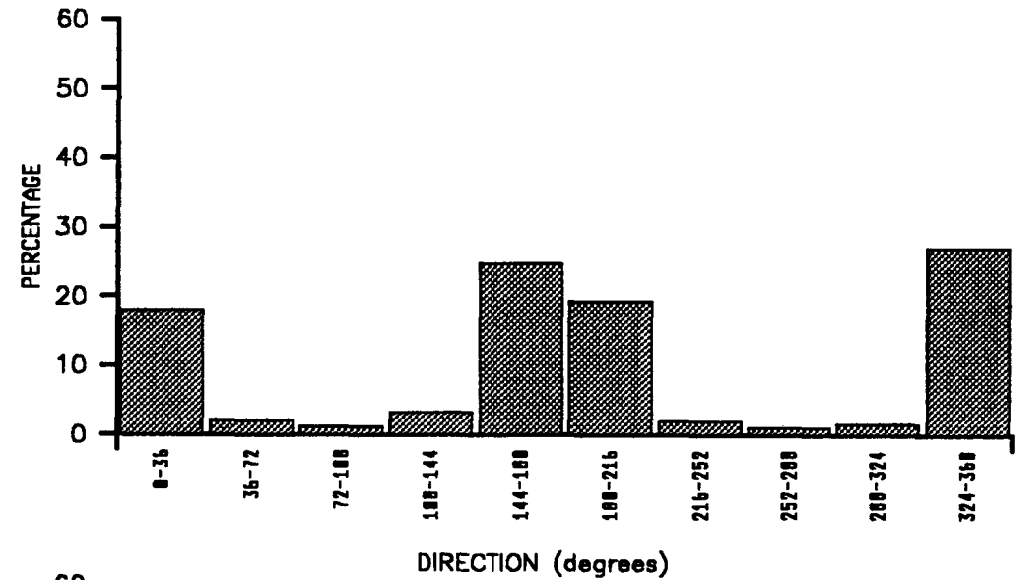
SCATTER PLOT

Meter no. 1262 Rig no. C51EC Depth of water(m) 49.0
 Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
 Position 52 41.22N 02 24.92E Meter Height(m) 35.0



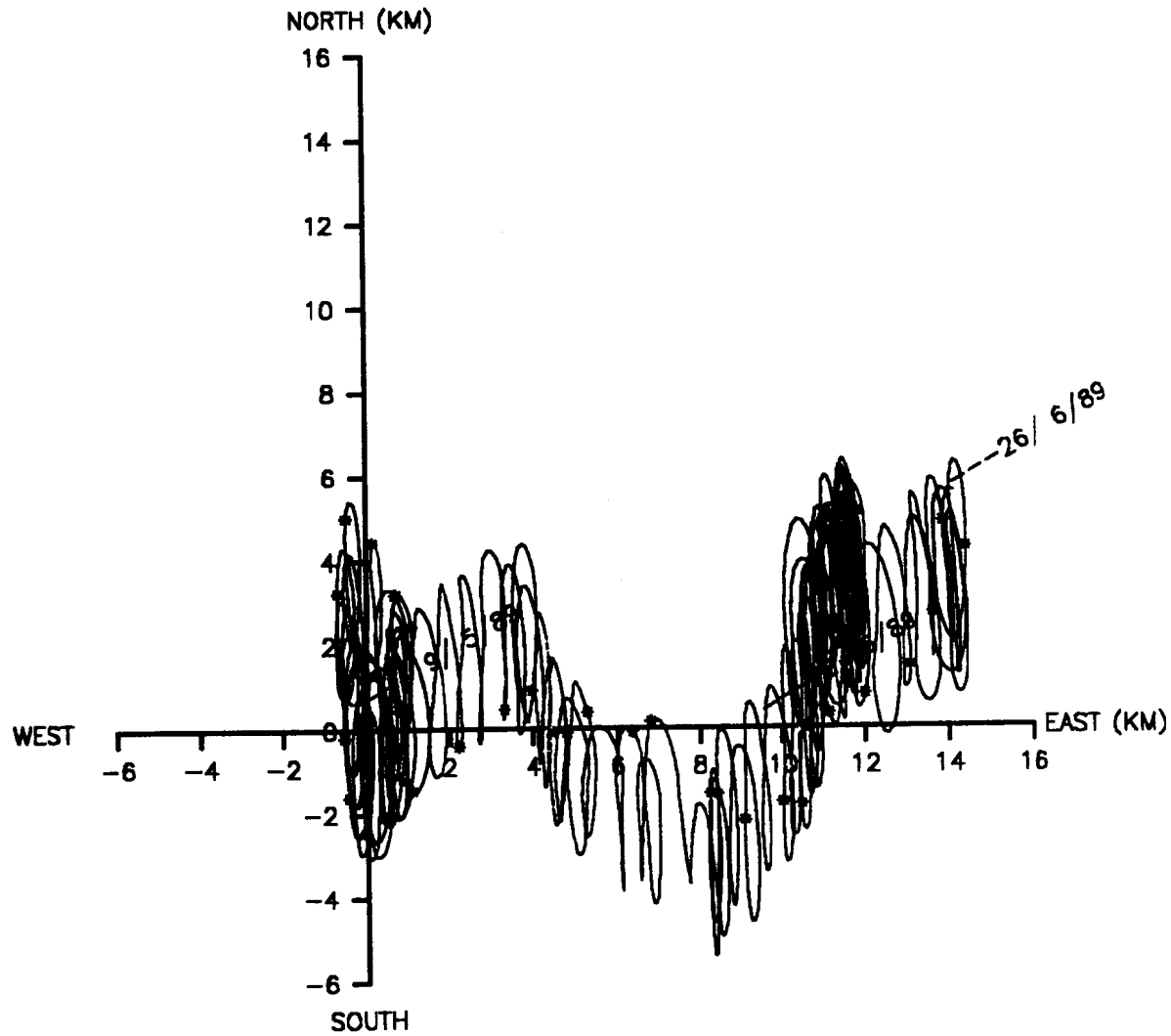
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1262 Rig no. C51EC Depth of water(m) 49.0
 Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
 Position 52 41.22N 02 24.92E Meter Height(m) 35.0



VECTOR PLOT

Meter no. 1262 Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E Meter Height(m) 35.0



STATISTICS FOR S41262T C51ECS A

	Mean	Variance	Standard deviation
Eastings	0.0101	0.67706481E-02	0.82283914E-01
Northings	0.0040	0.32913536E+00	0.57370329E+00
Speed	0.5269	0.58316674E-01	0.24148846E+00

Vector mean speed 0.0108
 Vector Mean Direction 68.5

Maximum ten values

Eastings					Northings				
0.264	0.258	0.249	0.247	0.246	1.037	1.036	1.034	1.032	1.029
0.243	0.236	0.236	0.233	0.231	1.026	1.022	1.021	1.012	1.007

Minimum ten values

Eastings					Northings				
-0.171	-0.172	-0.172	-0.174	-0.178	-0.921	-0.921	-0.927	-0.931	-0.931
-0.182	-0.183	-0.196	-0.208	-0.216	-0.940	-0.940	-0.946	-0.949	-0.967

Maximum speeds

1.038	1.036	1.034	1.033	1.030	1.026	1.023	1.022	1.012	1.008
1.008	1.007	1.006	1.004	1.001	1.000	0.998	0.996	0.996	0.995
0.995	0.991	0.988	0.987	0.986	0.984	0.979	0.977	0.976	0.976
0.970	0.968	0.967	0.965	0.964	0.962	0.961	0.961	0.961	0.960
0.951	0.949	0.948	0.946	0.946	0.944	0.943	0.940	0.940	0.940
0.940	0.940	0.938	0.937	0.936	0.933	0.932	0.932	0.932	0.932
0.931	0.928	0.928	0.927	0.927	0.925	0.925	0.924	0.924	0.923
0.922	0.921	0.921	0.920	0.919	0.918	0.918	0.918	0.915	0.914
0.914	0.914	0.914	0.913	0.913	0.912	0.912	0.911	0.910	0.910
0.910	0.910	0.909	0.909	0.908	0.907	0.906	0.903	0.903	0.903

Variance ellipse statistics

Maximum variance 0.3294E+00	Direction	-1.8
Minimum variance 0.6465E-02	Direction	88.2
Total variance 0.3359E+00	Ratio of variances	0.1962E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		1.6
Average direction. maxdir +PI/2 to maxdir -PI/2		178.4

STATISTICS FOR S41262T C51ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0129	0.16626701E-03	0.12894455E-01
Northings	0.0022	0.56280615E-03	0.23723535E-01
Speed	0.0264	0.19281825E-03	0.13885897E-01

Vector mean speed 0.0131
 Vector Mean Direction 80.3

Maximum ten values

Eastings					Northings				
0.035	0.034	0.033	0.033	0.031	0.041	0.040	0.039	0.038	0.037
0.030	0.028	0.027	0.026	0.023	0.034	0.033	0.032	0.031	0.026

Minimum ten values

Eastings					Northings				
0.003	0.003	0.001	-0.001	-0.004	-0.017	-0.018	-0.020	-0.024	-0.024
-0.005	-0.007	-0.007	-0.007	-0.016	-0.028	-0.034	-0.034	-0.036	-0.038

Maximum speeds

0.048	0.047	0.043	0.043	0.042	0.041	0.041	0.040	0.040	0.040
0.039	0.039	0.039	0.038	0.037	0.035	0.035	0.034	0.032	0.031
0.028	0.027	0.026	0.025	0.024	0.022	0.020	0.019	0.018	0.014
0.013	0.012	0.011	0.010	0.009	0.009	0.009	0.008	0.007	0.006
0.005	0.003								

Variance ellipse statistics

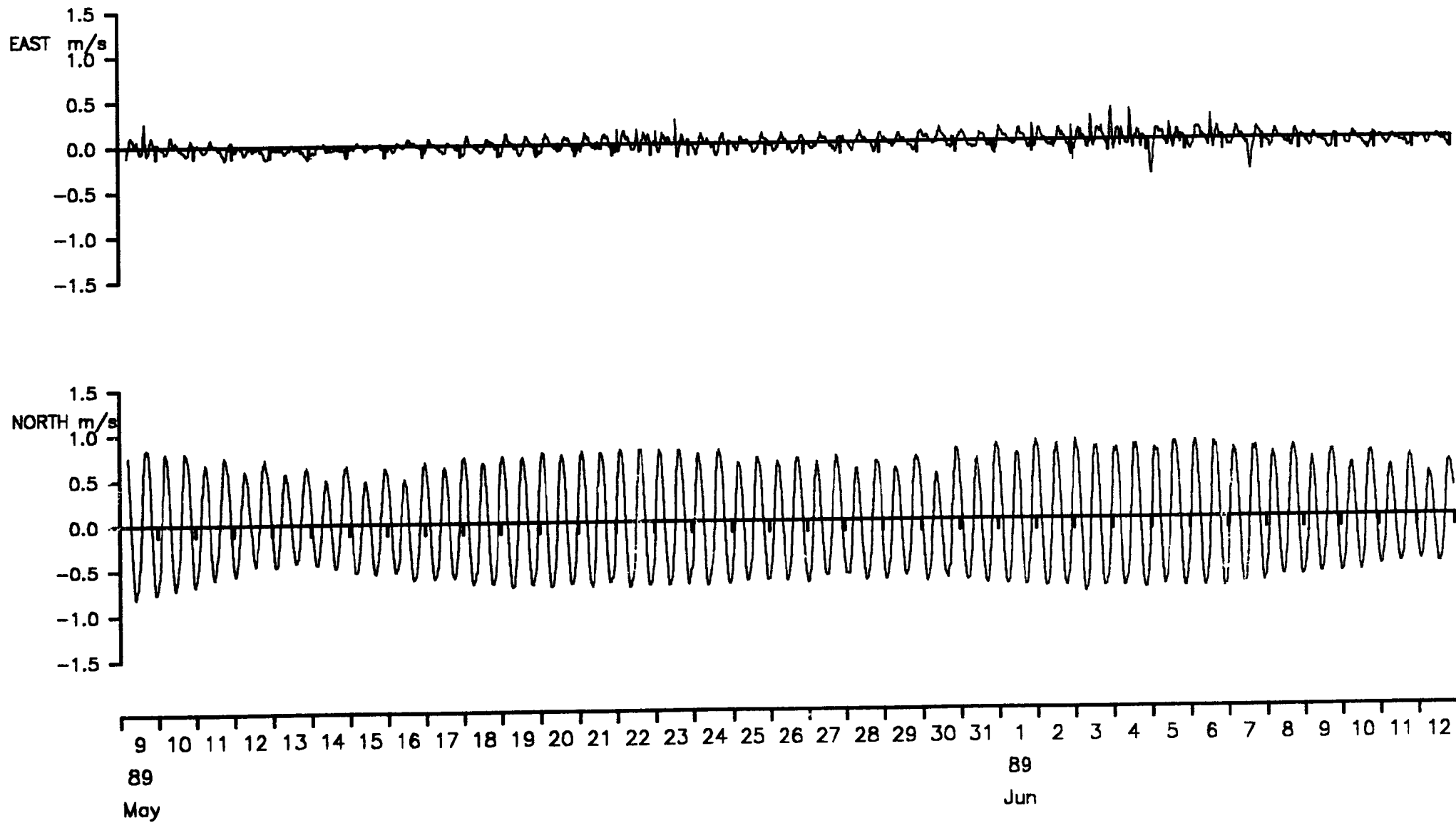
Maximum variance	0.5682E-03	Direction	6.6
Minimum variance	0.1608E-03	Direction	96.6
Total variance	0.7291E-03	Ratio of variances	0.2830E+00
Average direction. maxdir -PI/2 to maxdir +PI/2			29.6
Average direction. maxdir +PI/2 to maxdir -PI/2			156.3

Meter information details for 1117

Rig No	:	C51EC
Meter No	:	1117
Recording interval	:	1800.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	07-MAY-89 21:30:00
Meter stopped	:	27-JUNE-89 14:40:00
Period switched on	:	50.7 days
Period of good data	:	48.8 days
Total number of scans	:	2341
Timing error	:	600 seconds slow
Comments	:	Good record obtained until trawled up on 27-JUNE-89

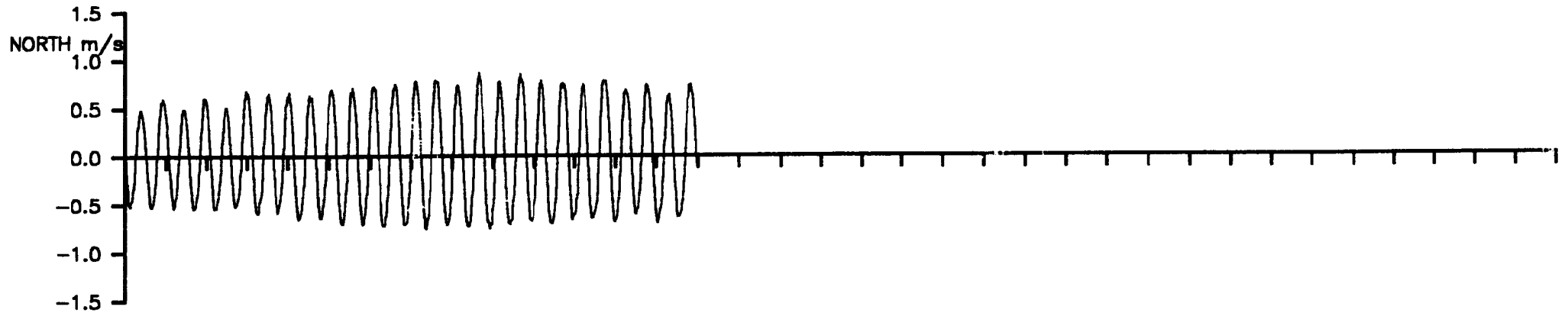
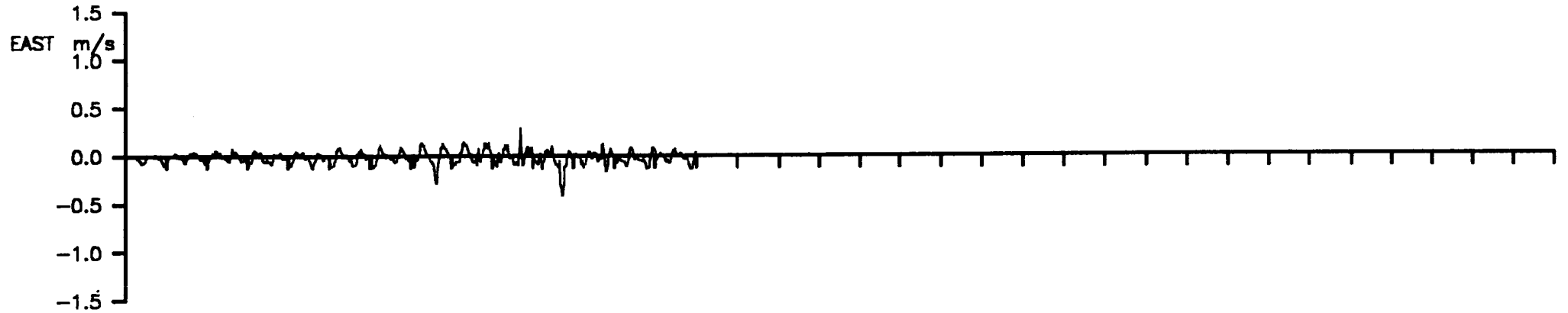
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1117 Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E Meter Height(m) 20.0



VELOCITY COMPONENT TIME SERIES PLOT

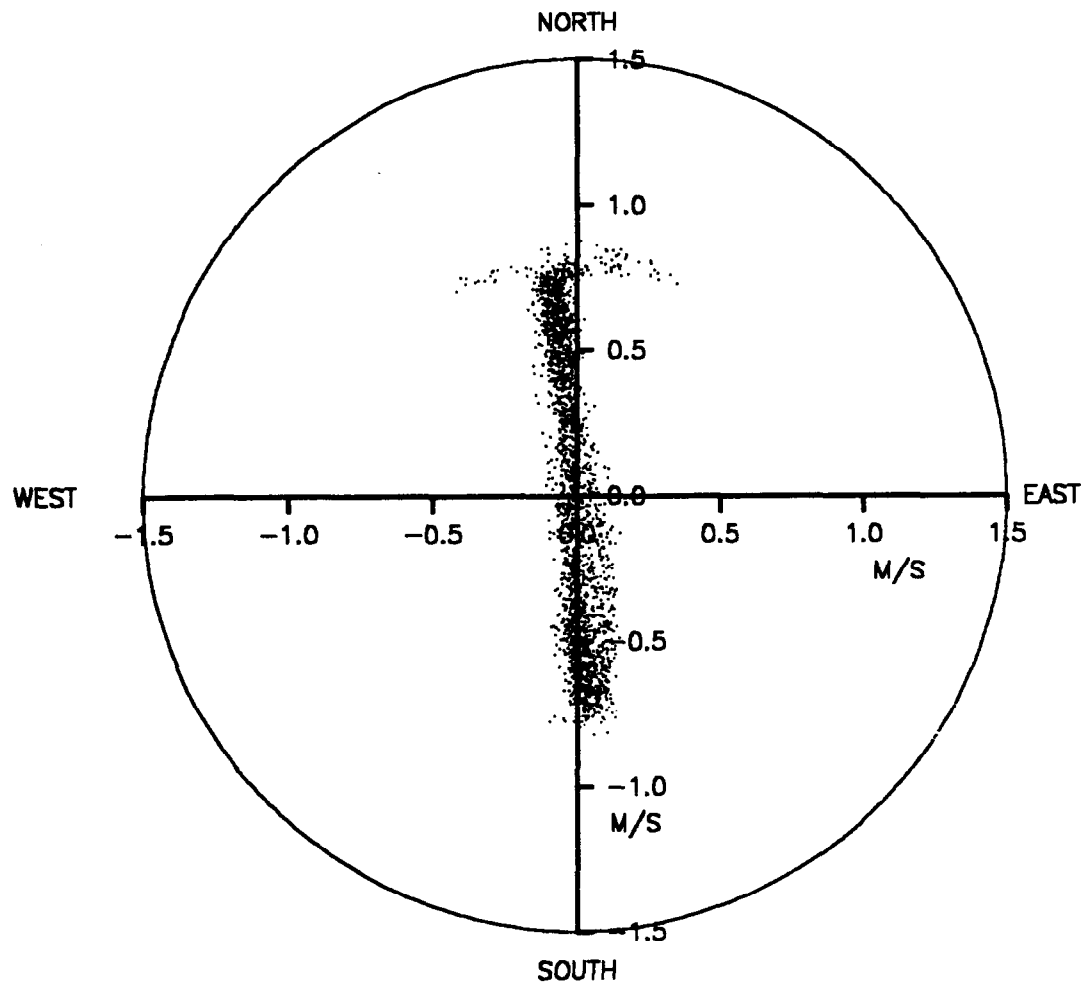
Meter no. 1117 Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E Meter Height(m) 20.0



13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

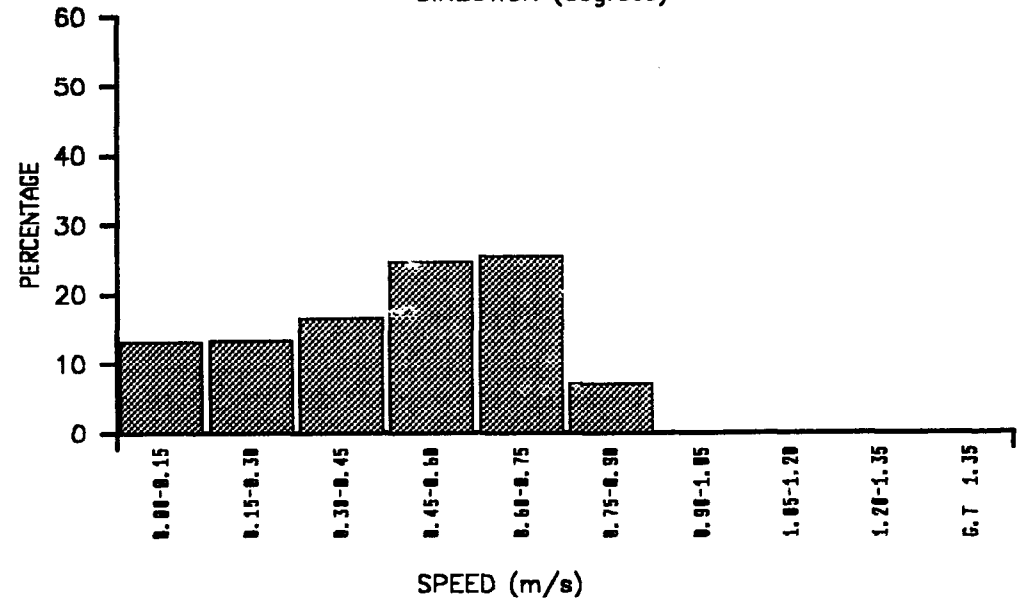
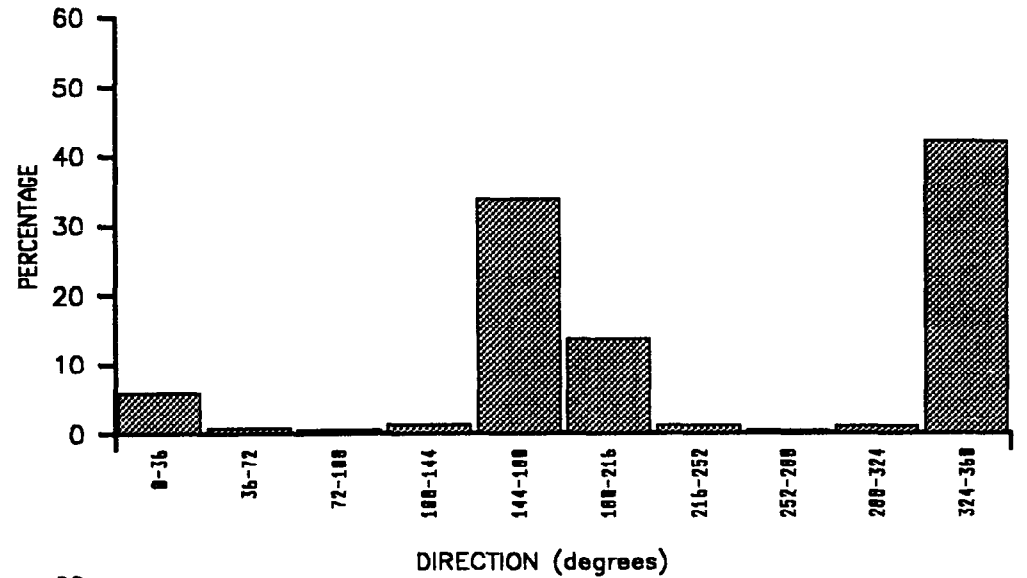
SCATTER PLOT

Meter no. 1117 Rig no. C51EC Depth of water(m) 49.0
 Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
 Position 52 41.22N 02 24.92E Meter Height(m) 20.0



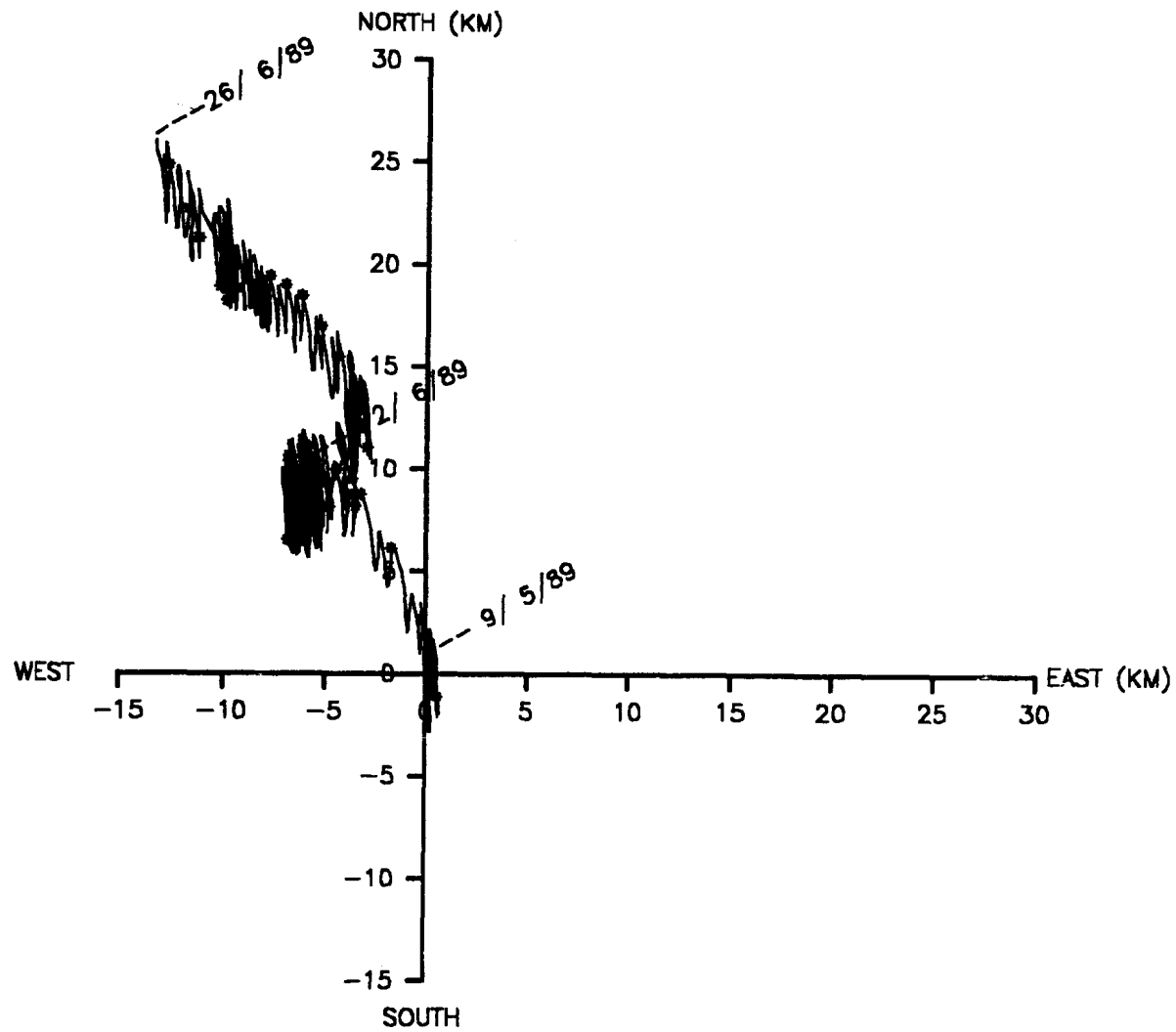
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1117 Rig no. C51EC Depth of water(m) 49.0
 Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
 Position 52 41.22N 02 24.92E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1117 Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E Meter Height(m) 20.0



STATISTICS FOR S41117M C51ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0096	0.45521520E-02	0.67469597E-01
Northings	0.0184	0.25618374E+00	0.50614607E+00
Speed	0.4608	0.48692212E-01	0.22066313E+00

Vector mean speed 0.0208
 Vector Mean Direction -27.4

Maximum ten values

Eastings					Northings				
0.351	0.331	0.286	0.284	0.271	0.873	0.863	0.856	0.849	0.846
0.260	0.259	0.258	0.257	0.217	0.844	0.843	0.840	0.839	0.831

Minimum ten values

Eastings					Northings				
-0.292	-0.294	-0.301	-0.320	-0.340	-0.772	-0.775	-0.776	-0.777	-0.778
-0.351	-0.384	-0.389	-0.405	-0.417	-0.780	-0.788	-0.797	-0.815	-0.820

Maximum speeds

0.873	0.864	0.859	0.858	0.855	0.855	0.851	0.850	0.848	0.845
0.845	0.845	0.843	0.840	0.839	0.838	0.837	0.835	0.834	0.831
0.831	0.830	0.828	0.828	0.827	0.826	0.825	0.824	0.823	0.822
0.822	0.822	0.822	0.822	0.819	0.819	0.818	0.818	0.817	0.815
0.814	0.813	0.813	0.812	0.812	0.811	0.807	0.805	0.805	0.804
0.804	0.804	0.803	0.803	0.802	0.802	0.801	0.800	0.800	0.798
0.798	0.798	0.797	0.797	0.797	0.797	0.797	0.797	0.796	0.795
0.794	0.794	0.794	0.793	0.792	0.792	0.789	0.789	0.788	0.788
0.788	0.787	0.785	0.784	0.783	0.783	0.782	0.781	0.780	0.780
0.780	0.780	0.778	0.778	0.777	0.777	0.777	0.776	0.776	0.776

Variance ellipse statistics

Maximum variance	0.2576E+00	Direction	-4.3
Minimum variance	0.3092E-02	Direction	85.7
Total variance	0.2607E+00	Ratio of variances	0.1200E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-1.0
Average direction. maxdir	+PI/2 to maxdir -PI/2		181.1

STATISTICS FOR S41117M C51ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0041	0.23979806E-03	0.15485410E-01
Northings	0.0130	0.23807067E-03	0.15429534E-01
Speed	0.0234	0.10492810E-03	0.10243442E-01

Vector mean speed 0.0136
 Vector Mean Direction -17.6

Maximum ten values									
Eastings					Northings				
0.021	0.020	0.019	0.016	0.015	0.037	0.036	0.035	0.031	0.030
0.014	0.012	0.012	0.012	0.010	0.030	0.029	0.028	0.028	0.028

Minimum ten values									
Eastings					Northings				
-0.017	-0.017	-0.018	-0.018	-0.023	0.001	0.000	-0.004	-0.006	-0.008
-0.024	-0.028	-0.029	-0.031	-0.032	-0.012	-0.014	-0.016	-0.019	-0.019

Maximum speeds									
0.048	0.048	0.043	0.043	0.036	0.035	0.034	0.033	0.033	0.030
0.030	0.030	0.028	0.028	0.027	0.024	0.024	0.022	0.021	0.021
0.021	0.020	0.020	0.020	0.019	0.019	0.019	0.018	0.017	0.017
0.016	0.015	0.015	0.015	0.014	0.014	0.014	0.012	0.011	0.011
0.011	0.007								

Variance ellipse statistics

Maximum variance	0.2696E-03	Direction	-45.8
Minimum variance	0.2083E-03	Direction	44.2
Total variance	0.4779E-03	Ratio of variances	0.7726E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		32.2
Average direction. maxdir	+PI/2 to maxdir -PI/2		195.7

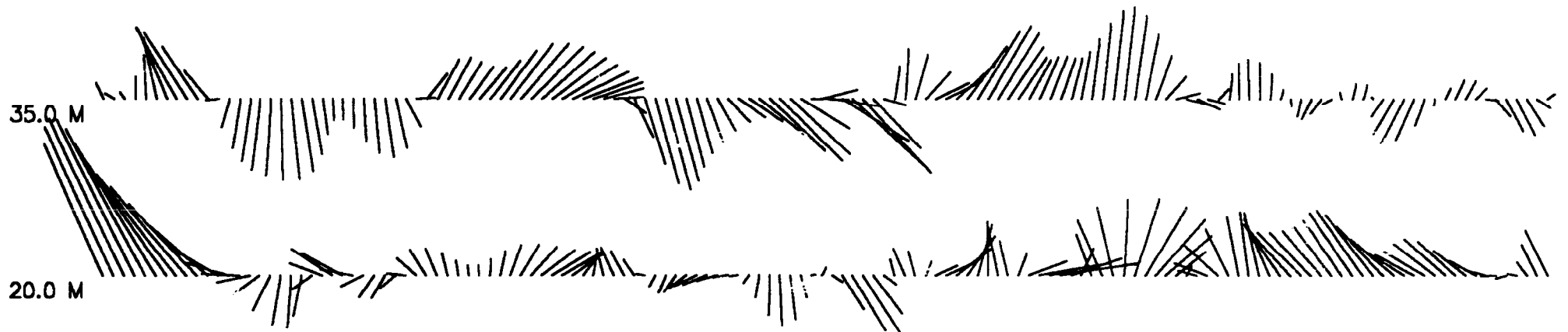
Meter information details for 9414

Rig No	:	C51EC
Meter No	:	9414
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter was	:	LOST
Comments	:	Meter never recovered from trawling incident

STICK TIME SERIES PLOT

Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
1117	20.0 M
1262	35.0 M

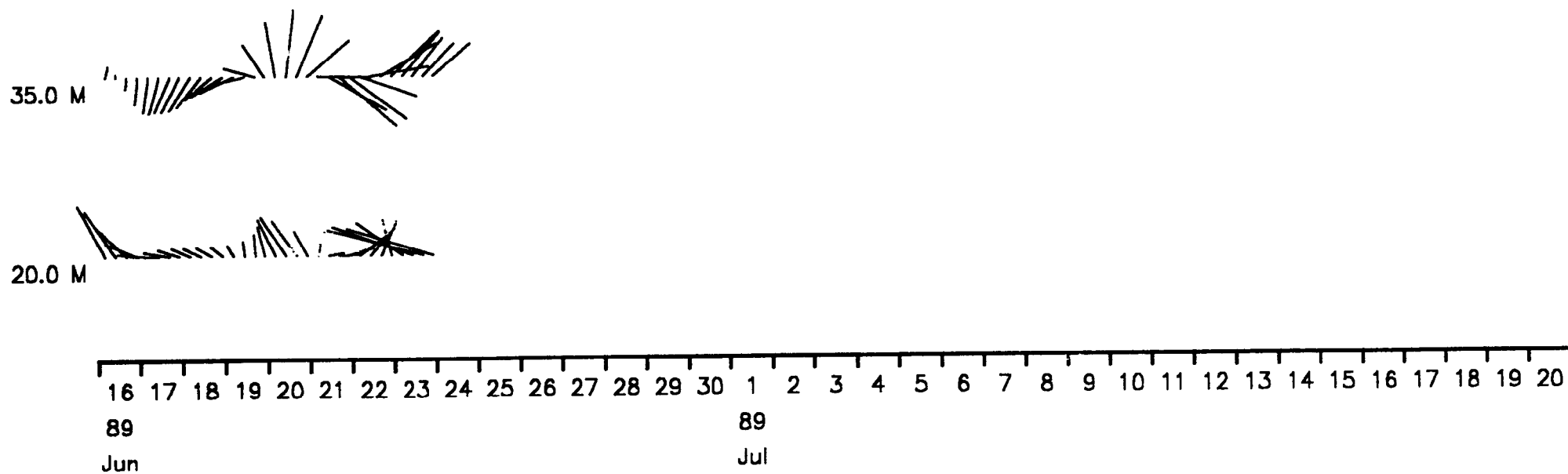


12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

STICK TIME SERIES PLOT

Rig no. C51EC Depth of water(m) 49.0
Start/End 1989/05/09 AT 05:47:00 1989/06/27 AT 00:00:00
Position 52 41.22N 02 24.92E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
1117	20.0 M
1262	35.0 M



Rig information details for C53EC

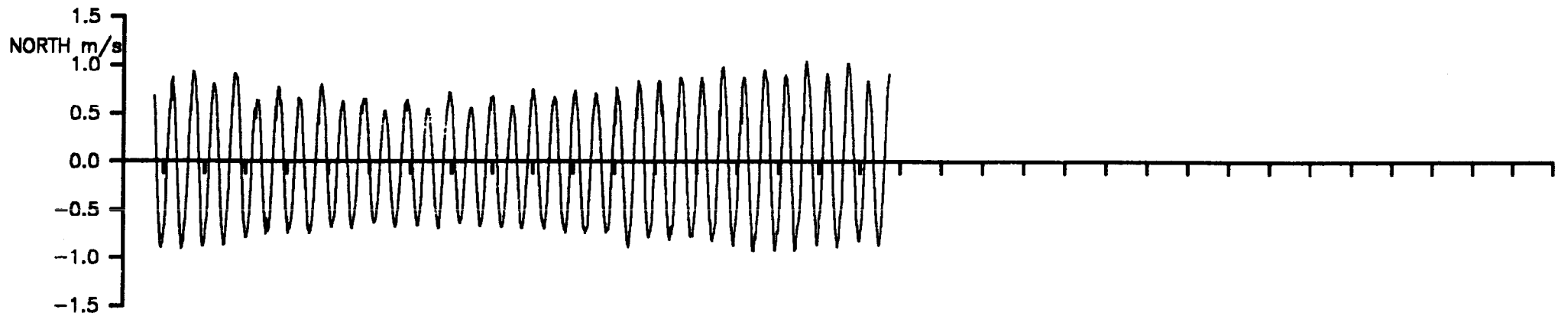
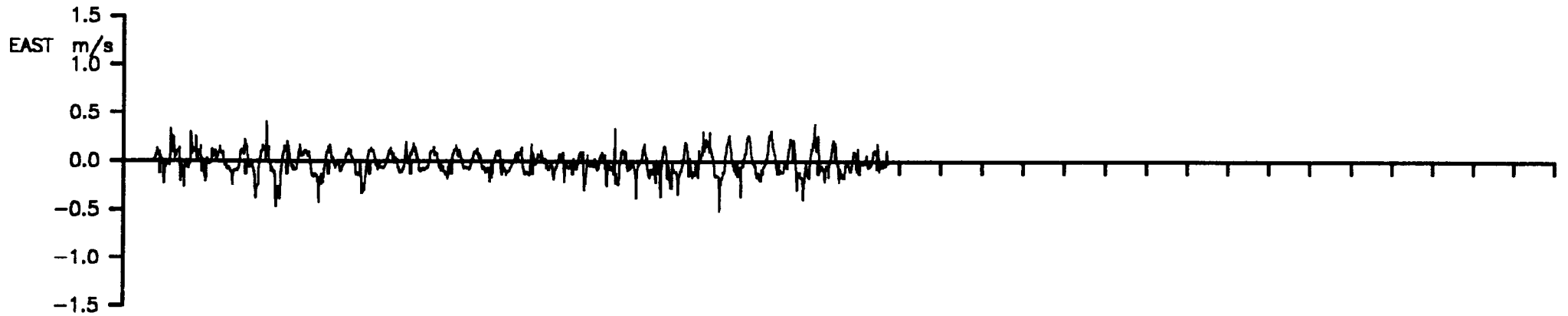
Position Latitude	:	52 41.05N
Position Longitude	:	02 25.22E
Water depth	:	49.0 m
Deployed on cruise	:	C53
Recovered on cruise	:	C55
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	06-JUNE-89 18:10:00
Rig recovered on	:	24-JUNE-89 18:00:00
Period of deployment	:	18.0 days
Comments	:	Launch and recovery successful

Meter information details for 1264

Rig No	:	C53EC
Meter No	:	1264
Recording interval	:	600.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	04-JUNE-89 22:00:00
Meter stopped	:	24-JUNE-89 19:30:00
Period switched on	:	19.9 days
Period of good data	:	18.0 days
Total number of scans	:	2590
Timing error	:	None
Comments	:	Good record obtained

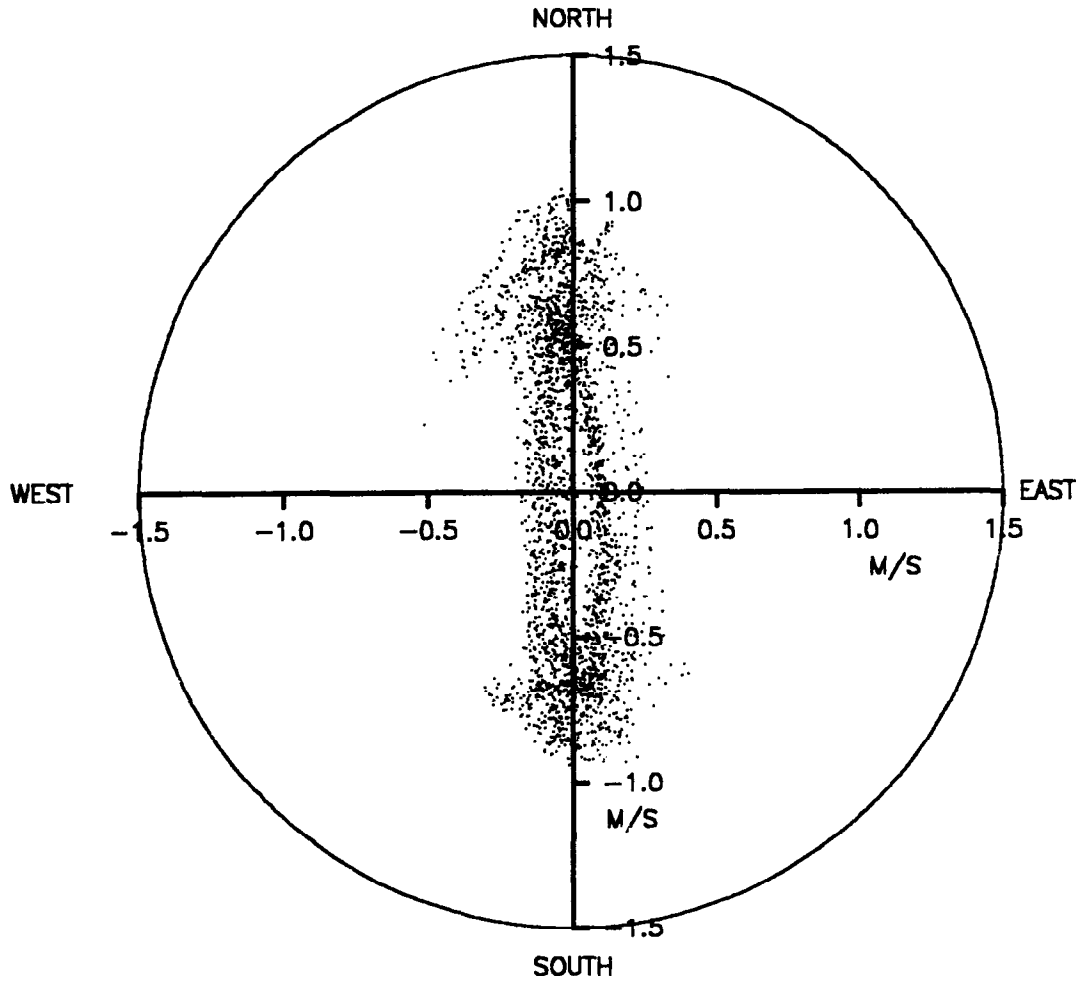
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1264 Rig no. C53EC Depth of water(m) 49.0
Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
Position 52 41.05N 02 25.22E Meter Height(m) 35.0



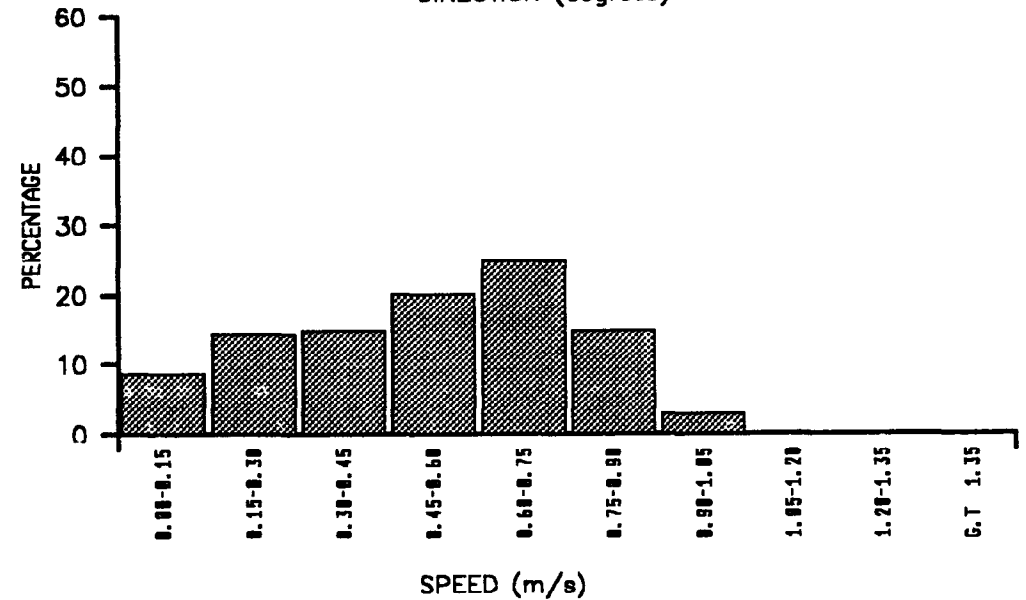
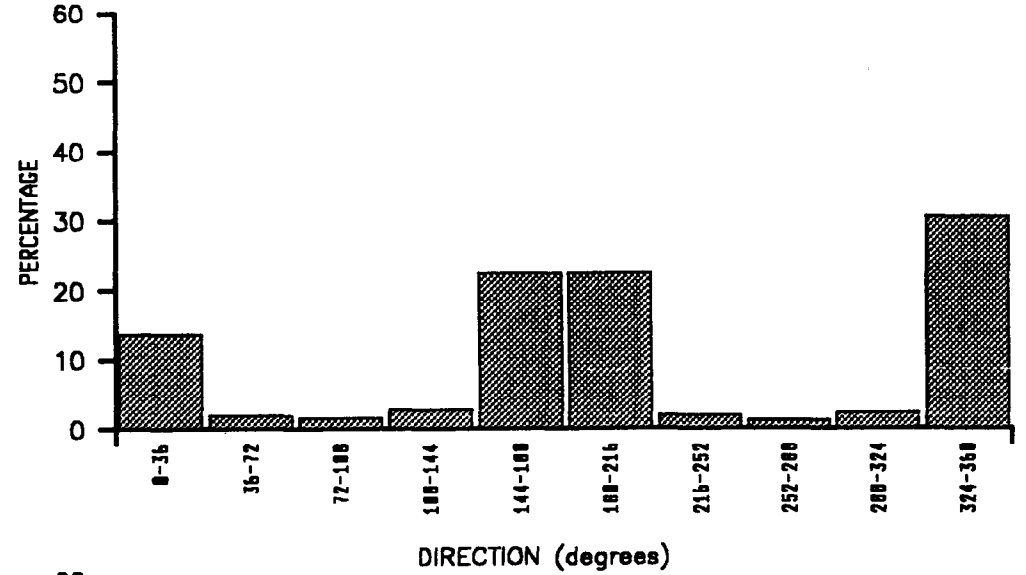
SCATTER PLOT

Meter no. 1264 Rig no. C53EC Depth of water(m) 49.0
 Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
 Position 52 41.05N 02 25.22E Meter Height(m) 35.0



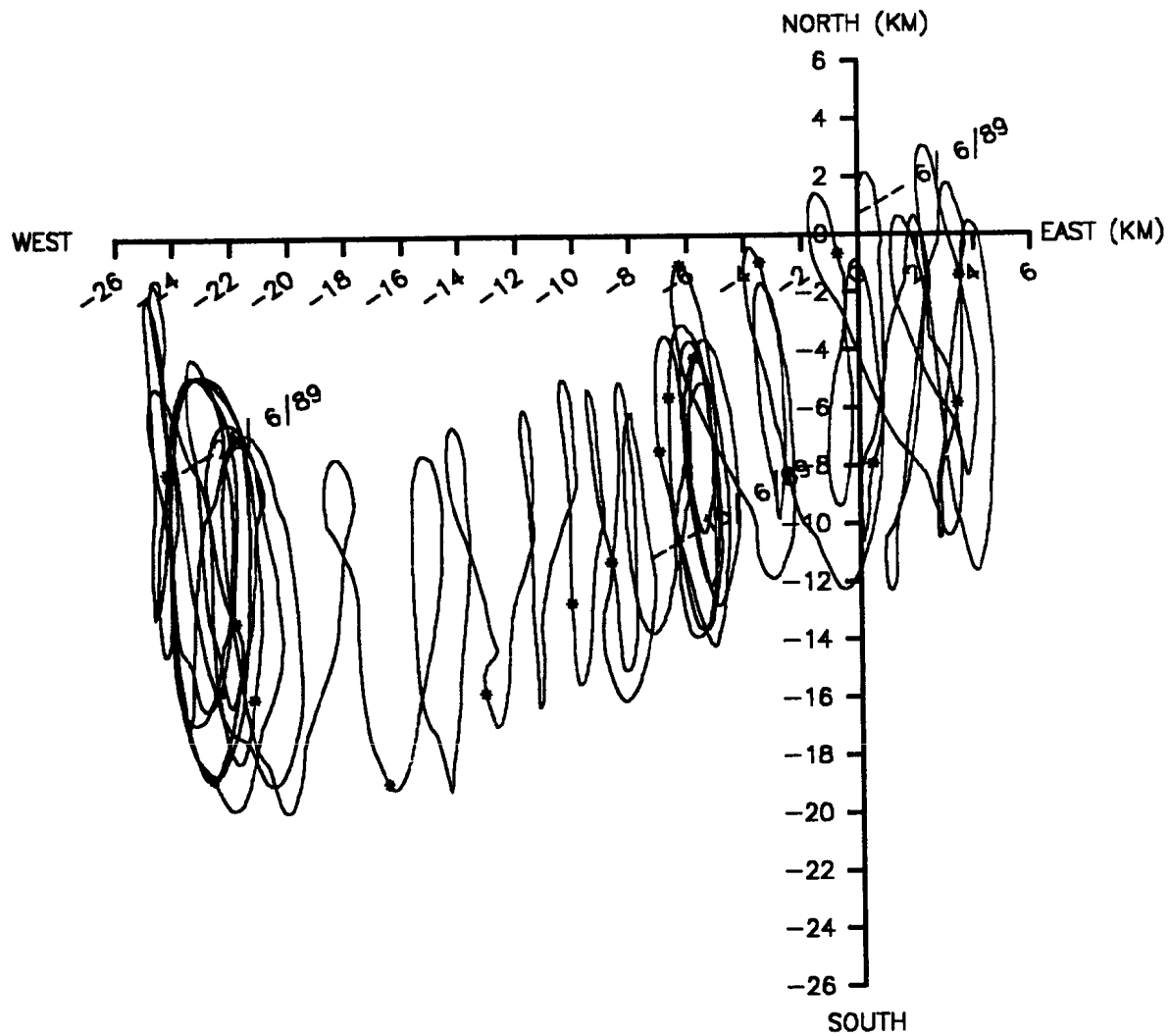
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1264 Rig no. C53EC Depth of water(m) 49.0
 Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
 Position 52 41.05N 02 25.22E Meter Height(m) 35.0



VECTOR PLOT

Meter no. 1264 Rig no. C53EC Depth of water(m) 49.0
Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
Position 52 41.05N 02 25.22E Meter Height(m) 35.0



STATISTICS FOR S41264T C53ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0156	0.13408959E-01	0.11579704E+00
Northings	-0.0055	0.30997592E+00	0.55675489E+00
Speed	0.5180	0.55215795E-01	0.23498046E+00

Vector mean speed 0.0166
 Vector Mean Direction -109.6

Maximum ten values

Eastings					Northings				
0.400	0.388	0.381	0.340	0.333	1.040	1.020	1.018	1.015	1.012
0.330	0.322	0.313	0.310	0.309	1.010	1.006	1.005	1.000	0.993

Minimum ten values

Eastings					Northings				
-0.383	-0.386	-0.387	-0.392	-0.402	-0.913	-0.914	-0.917	-0.919	-0.921
-0.424	-0.450	-0.473	-0.483	-0.512	-0.921	-0.924	-0.927	-0.928	-0.941

Maximum speeds

1.040	1.020	1.019	1.016	1.014	1.012	1.008	1.005	1.000	0.993
0.992	0.988	0.985	0.983	0.982	0.982	0.980	0.980	0.976	0.972
0.972	0.971	0.964	0.962	0.959	0.954	0.953	0.948	0.946	0.946
0.942	0.942	0.942	0.941	0.940	0.940	0.940	0.937	0.933	0.932
0.932	0.930	0.929	0.927	0.926	0.926	0.924	0.924	0.924	0.923
0.920	0.917	0.917	0.916	0.915	0.915	0.914	0.914	0.912	0.910
0.909	0.909	0.909	0.908	0.907	0.906	0.905	0.905	0.905	0.904
0.904	0.902	0.902	0.898	0.897	0.896	0.896	0.895	0.894	0.893
0.892	0.892	0.892	0.891	0.891	0.891	0.890	0.887	0.885	0.885
0.885	0.885	0.881	0.880	0.880	0.880	0.880	0.879	0.879	0.879

Variance ellipse statistics

Maximum variance	0.3107E+00	Direction	-2.8
Minimum variance	0.1270E-01	Direction	87.2
Total variance	0.3234E+00	Ratio of variances	0.4086E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-1.1
Average direction. maxdir	+PI/2 to maxdir -PI/2		181.0

STATISTICS FOR S41264T C53ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0231	0.37765666E-03	0.19433390E-01
Northings	-0.0071	0.27399976E-03	0.16552944E-01
Speed	0.0313	0.25001029E-03	0.15811708E-01

Vector mean speed 0.0242
 Vector Mean Direction -107.1

Maximum ten values					Northings				
Eastings					Northings				
0.009	0.008	0.008	0.004	-0.002	0.029	0.026	0.024	0.018	0.015
-0.002	-0.003	-0.003	-0.003	-0.005	0.014	0.012	0.010	0.010	0.008

Minimum ten values					Northings				
Eastings					Northings				
-0.036	-0.037	-0.037	-0.037	-0.040	-0.024	-0.025	-0.025	-0.026	-0.026
-0.043	-0.057	-0.063	-0.071	-0.075	-0.027	-0.029	-0.030	-0.031	-0.033

Maximum speeds									
0.075	0.071	0.063	0.059	0.047	0.044	0.044	0.044	0.043	0.043
0.042	0.042	0.041	0.038	0.037	0.036	0.036	0.035	0.035	0.034
0.034	0.033	0.032	0.031	0.031	0.030	0.029	0.028	0.028	0.027
0.026	0.025	0.024	0.022	0.021	0.021	0.021	0.020	0.016	0.015
0.015	0.015	0.013	0.010	0.007	0.007	0.007	0.006		

Variance ellipse statistics

Maximum variance 0.3995E-03	Direction	67.4
Minimum variance 0.2522E-03	Direction	157.4
Total variance 0.6517E-03	Ratio of variances	0.6314E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-33.6
Average direction. maxdir +PI/2 to maxdir -PI/2		184.2

Meter information details for 1265

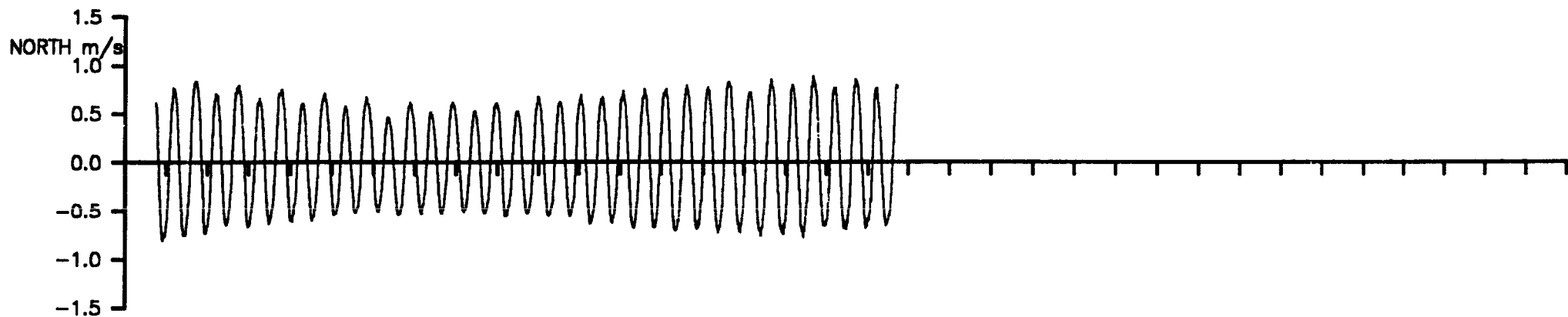
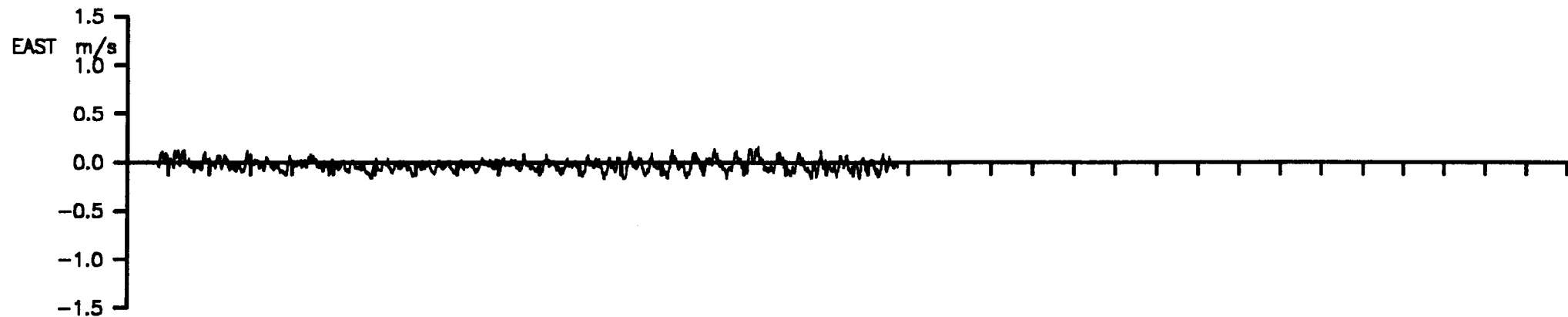
Rig No : C53EC
Meter No : 1265
Recording interval : 600.0 seconds
Meter height from bottom : 20.0 m
Position of meter on rig : M
Meter type : S4
Meter started : 05-JUNE-89 03:49:00
Meter stopped : 24-JUNE-89 20:21:00
Period switched on : 19.7 days
Period of good data : 18.0 days
Total number of scans : 2591
Timing error : 120 seconds slow
Comments : Hourly time stamp has jumped by one
minute at:
(1) 05-JUNE-89 03:49 to 04:10
(2) 19-JUNE-89 03:50 to 04:51

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1265 Rig no. C53EC Depth of water(m) 49.0

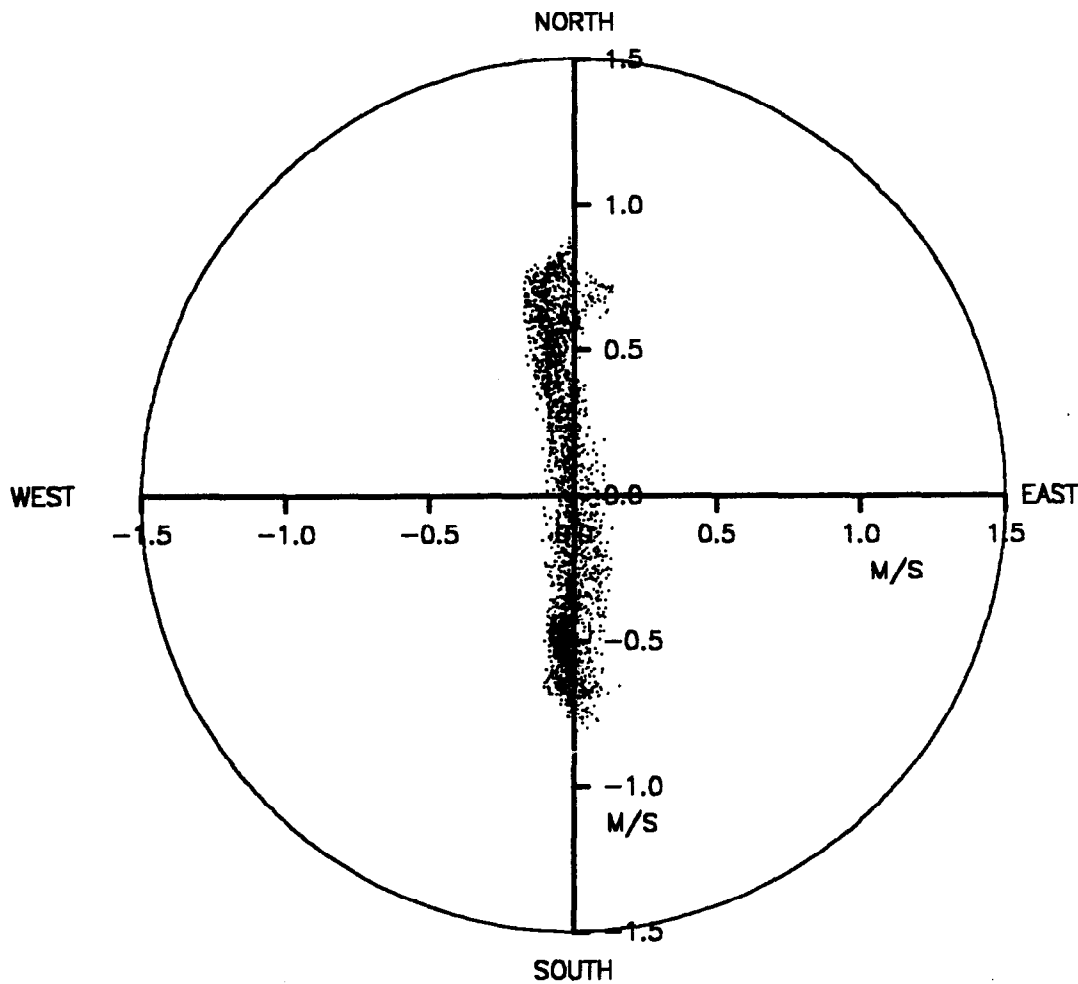
Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00

Position 52 41.05N 02 25.22E Meter Height(m) 20.0



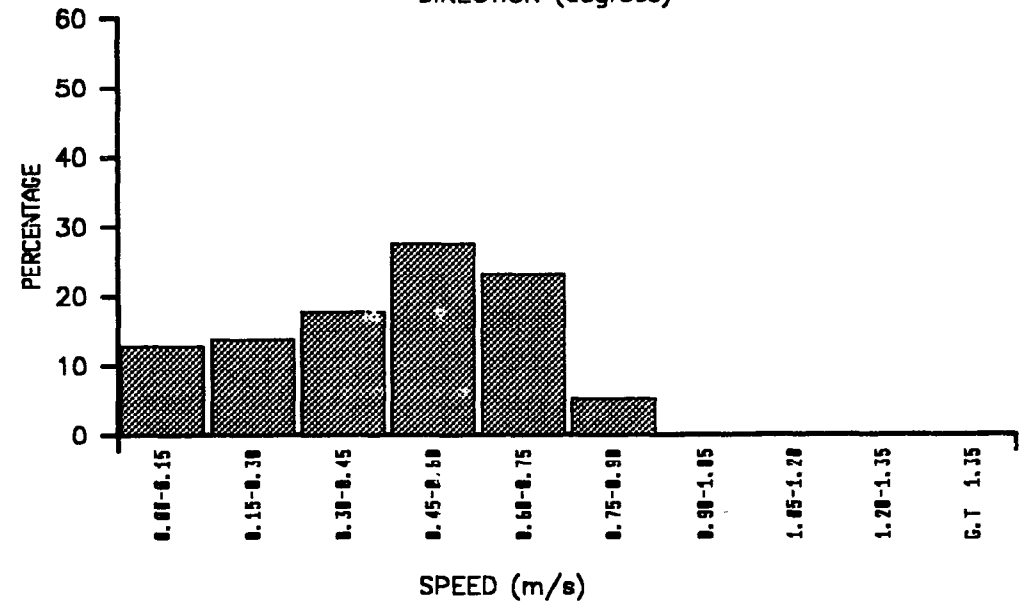
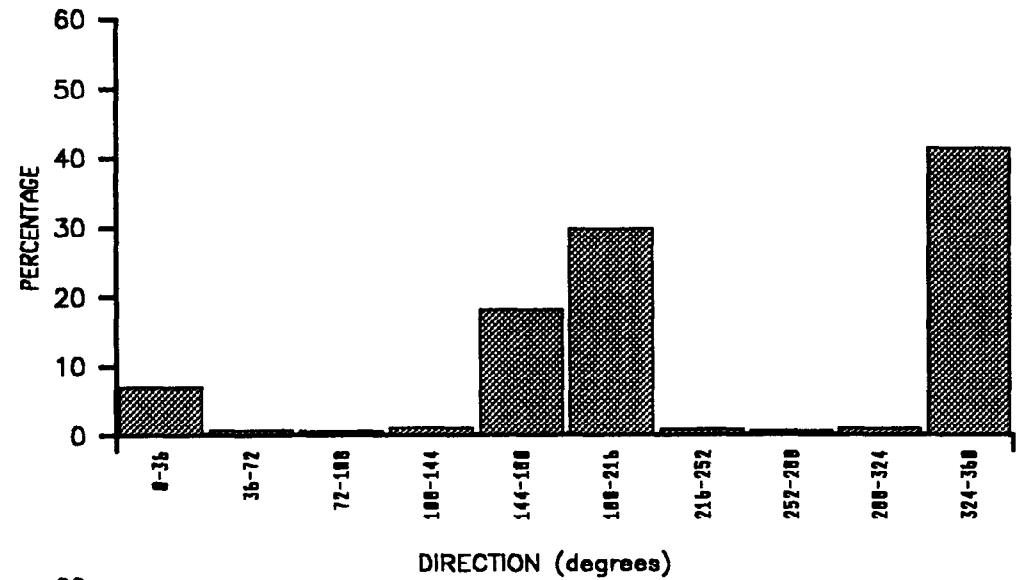
SCATTER PLOT

Meter no. 1265 Rig no. C53EC Depth of water(m) 49.0
 Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
 Position 52 41.05N 02 25.22E Meter Height(m) 20.0



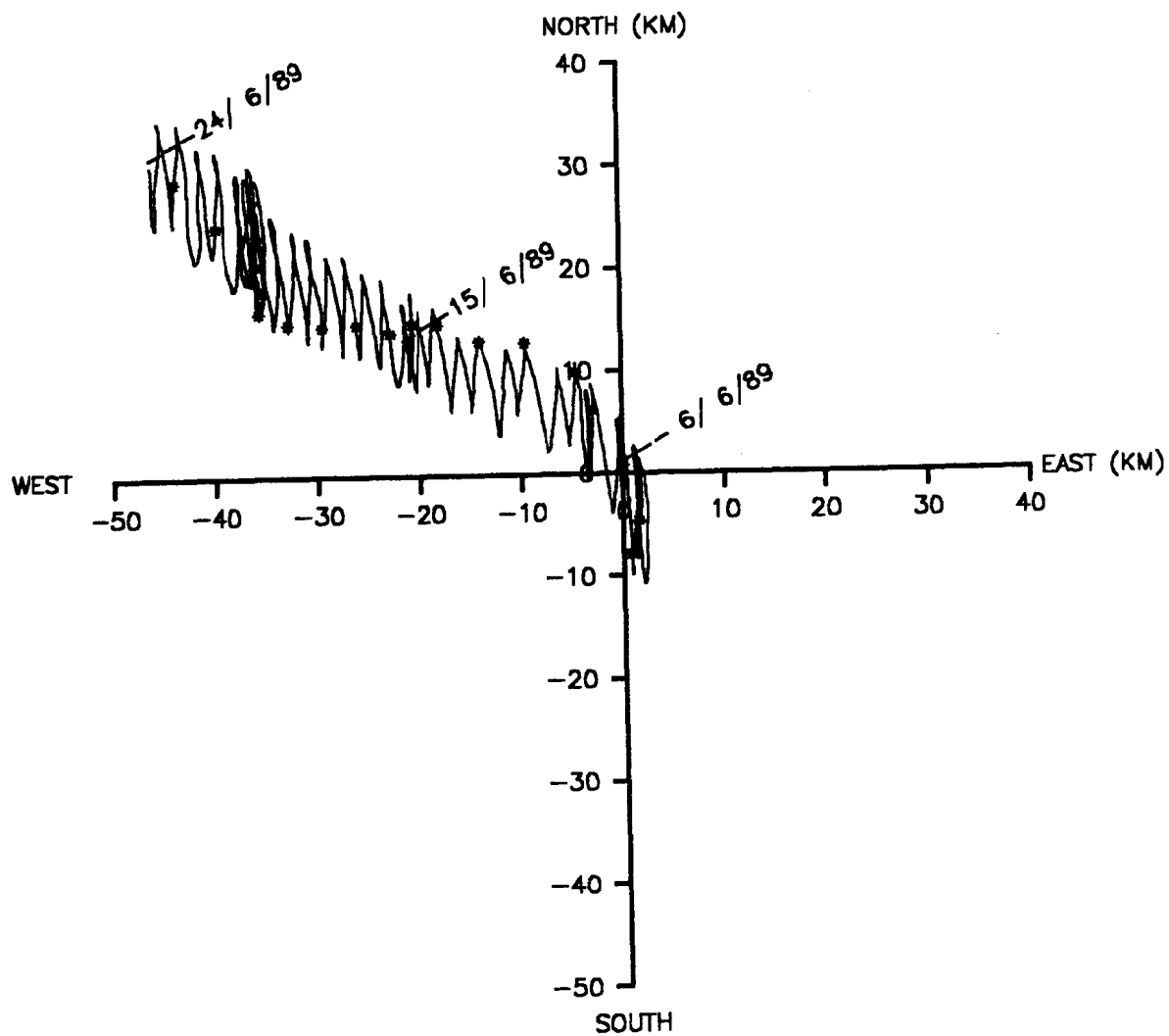
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1265 Rig no. C53EC Depth of water(m) 49.0
 Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
 Position 52 41.05N 02 25.22E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1265 Rig no. C53EC Depth of water(m) 49.0
Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
Position 52 41.05N 02 25.22E Meter Height(m) 20.0



STATISTICS FOR S41265M C53ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0297	0.31290953E-02	0.55938318E-01
Northings	0.0195	0.24284065E+00	0.49278867E+00
Speed	0.4495	0.45121238E-01	0.21241760E+00

Vector mean speed 0.0355
 Vector Mean Direction -56.7

Maximum ten values

Eastings					Northings				
0.160	0.135	0.134	0.134	0.131	0.885	0.869	0.862	0.858	0.855
0.131	0.131	0.129	0.124	0.124	0.854	0.853	0.851	0.850	0.833

Minimum ten values

Eastings					Northings				
-0.166	-0.166	-0.167	-0.167	-0.169	-0.761	-0.764	-0.768	-0.770	-0.774
-0.169	-0.170	-0.170	-0.173	-0.174	-0.777	-0.784	-0.799	-0.807	-0.811

Maximum speeds

0.885	0.869	0.862	0.858	0.856	0.854	0.853	0.851	0.850	0.833
0.832	0.832	0.832	0.832	0.830	0.828	0.827	0.826	0.826	0.826
0.824	0.824	0.822	0.821	0.818	0.814	0.814	0.814	0.812	0.811
0.810	0.808	0.808	0.807	0.806	0.804	0.802	0.802	0.802	0.801
0.800	0.800	0.800	0.800	0.799	0.798	0.798	0.798	0.796	0.795
0.794	0.792	0.792	0.792	0.791	0.790	0.790	0.790	0.789	0.789
0.789	0.788	0.787	0.786	0.786	0.786	0.785	0.784	0.784	0.783
0.783	0.783	0.783	0.782	0.782	0.782	0.781	0.781	0.779	0.778
0.777	0.777	0.775	0.774	0.774	0.774	0.773	0.772	0.772	0.771
0.771	0.770	0.770	0.770	0.770	0.768	0.768	0.766	0.766	0.766

Variance ellipse statistics

Maximum variance	0.2434E+00	Direction	-2.7
Minimum variance	0.2578E-02	Direction	87.3
Total variance	0.2460E+00	Ratio of variances	0.1059E-01
Average direction. maxdir -PI/2 to maxdir +PI/2			-4.0
Average direction. maxdir +PI/2 to maxdir -PI/2			183.1

STATISTICS FOR S41265M C53ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0331	0.28871419E-03	0.16991593E-01
Northings	0.0212	0.10316572E-03	0.10157049E-01
Speed	0.0414	0.21504211E-03	0.14664315E-01

Vector mean speed 0.0393
 Vector Mean Direction -57.4

Maximum ten values					Northings				
Eastings									
0.007	0.004	0.002	-0.002	-0.008	0.037	0.036	0.033	0.033	0.033
-0.012	-0.015	-0.015	-0.016	-0.017	0.033	0.033	0.033	0.032	0.032

Minimum ten values					Northings				
Eastings									
-0.050	-0.050	-0.051	-0.051	-0.052	0.012	0.011	0.008	0.008	0.007
-0.052	-0.054	-0.057	-0.058	-0.060	0.005	0.005	0.002	0.002	-0.001

Maximum speeds									
0.067	0.066	0.062	0.062	0.062	0.057	0.057	0.056	0.056	0.054
0.053	0.052	0.052	0.051	0.051	0.048	0.048	0.047	0.045	0.045
0.044	0.043	0.043	0.043	0.043	0.043	0.042	0.042	0.041	0.040
0.037	0.036	0.035	0.034	0.034	0.034	0.033	0.032	0.032	0.030
0.029	0.024	0.022	0.019	0.016	0.015	0.010	0.002		

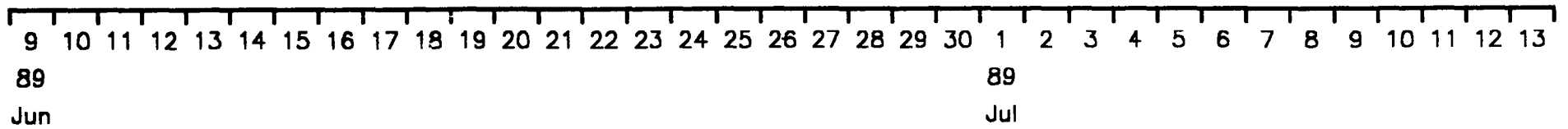
Variance ellipse statistics

Maximum variance 0.2963E-03	Direction -78.8
Minimum variance 0.9555E-04	Direction 11.2
Total variance 0.3919E-03	Ratio of variances 0.3225E+00
Average direction. maxdir -PI/2 to maxdir +PI/2	21.6
Average direction. maxdir +PI/2 to maxdir -PI/2	137.7

STICK TIME SERIES PLOT

Rig no. C53EC Depth of water(m) 49.0
Start/End 1989/06/06 AT 18:10:00 1989/06/24 AT 18:00:00
Position 52 41.05N 02 25.22E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
1265	20.0 M
1264	35.0 M



Rig information details for C55EC

Position Latitude	:	52 41.00N
Position Longitude	:	02 24.60E
Water depth	:	49.0 m
Deployed on cruise	:	C55
Recovered on cruise	:	C57
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	24-JUNE-89 19:05:00
Rig recovered on	:	24-JULY-89 19:14:00
Period of deployment	:	30.0 days
Comments	:	Sub-surface buoy missing on recovery

Meter information details for 1263

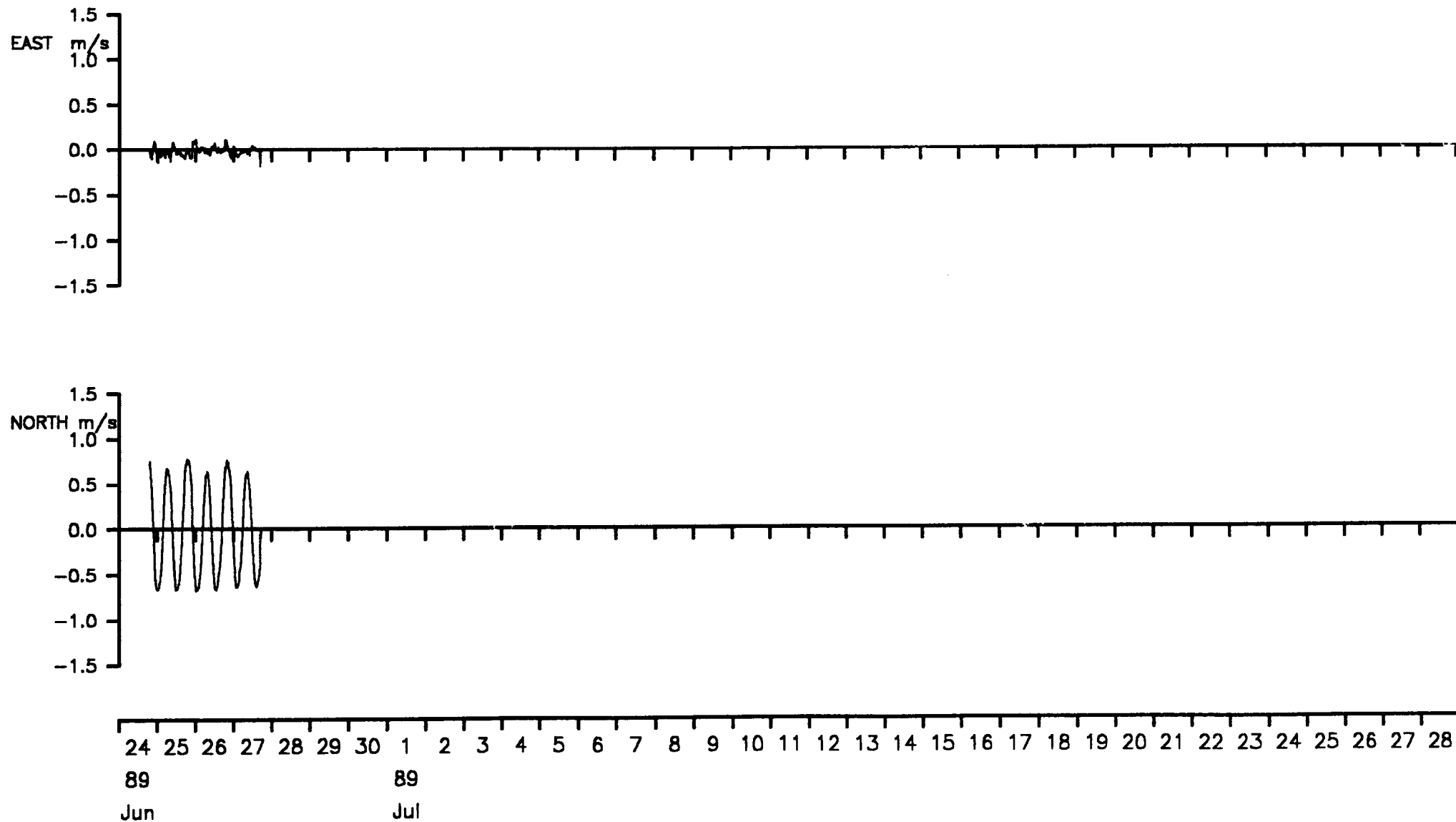
Rig No	:	C55EC
Meter No	:	1263
Recording interval	:	600.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Period of good data	:	0.0 days
Comments	:	Damage to S4 noted on recovery

Meter information details for 1261

Rig No : C55EC
Meter No : 1261
Recording interval : 600.0 seconds
Meter height from bottom : 20.0 m
Position of meter on rig : M
Meter type : S4
Meter started : 24-JUNE-89 17:00:00
Time of last valid scan : 27-JUNE-89 17:50:00
Period of good data : 3.0 days short record
Total number of scans : 425
Timing error : None
Comments : Hourly time stamp has jumped by one
minute at:
(1) 09-JULY-89 19:00 to 20:01

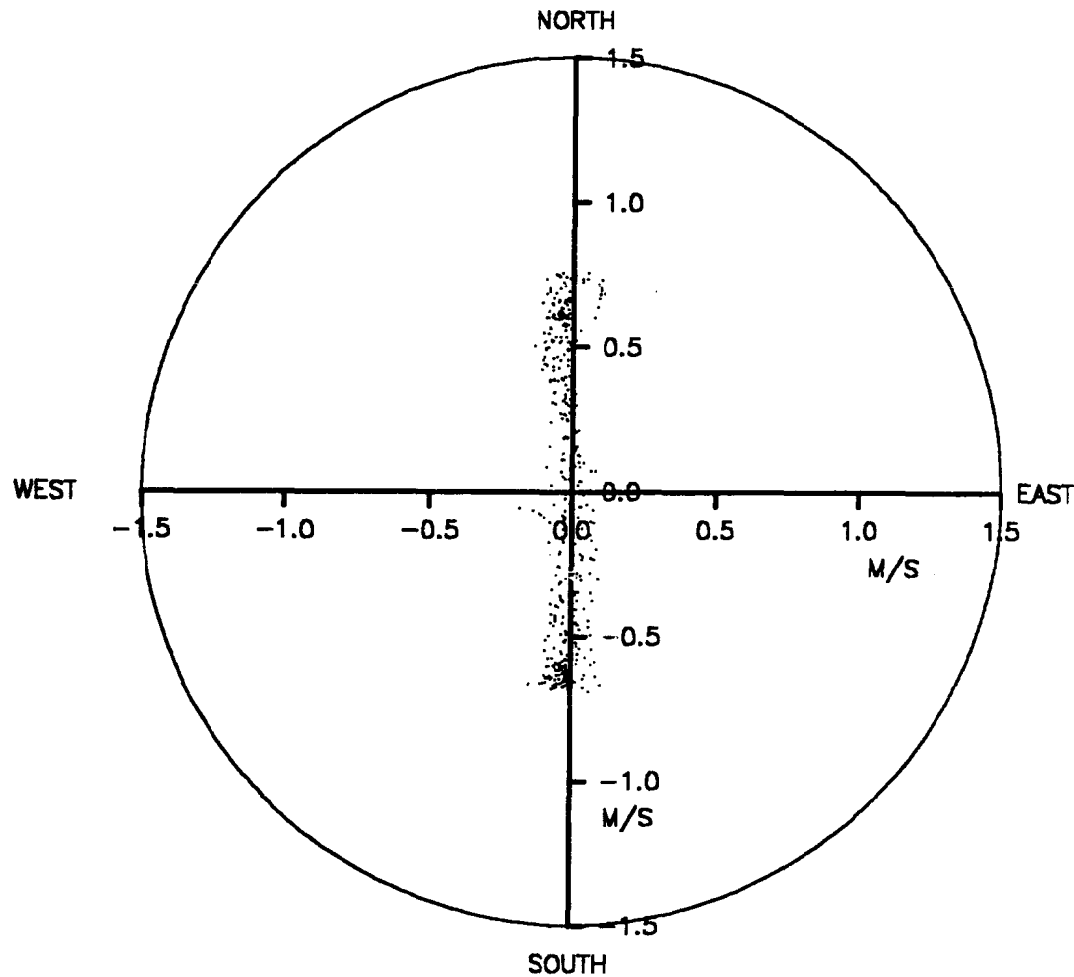
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1261 Rig no. C55EC Depth of water(m) 49.0
Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
Position 52 41.00N 02 24.60E Meter Height(m) 20.0



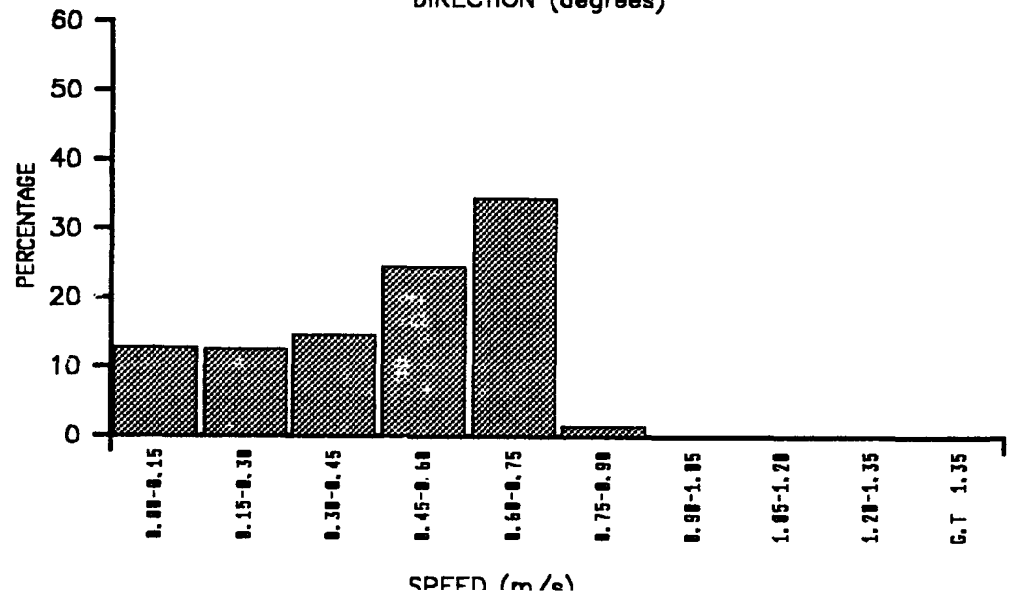
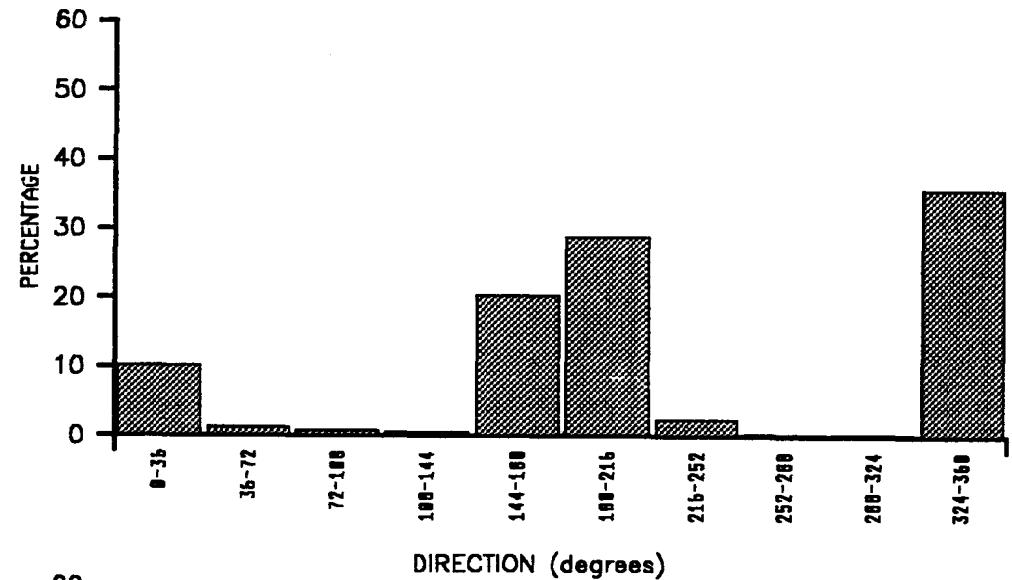
SCATTER PLOT

Meter no. 1261 Rig no. C55EC Depth of water(m) 49.0
 Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
 Position 52 41.00N 02 24.60E Meter Height(m) 20.0



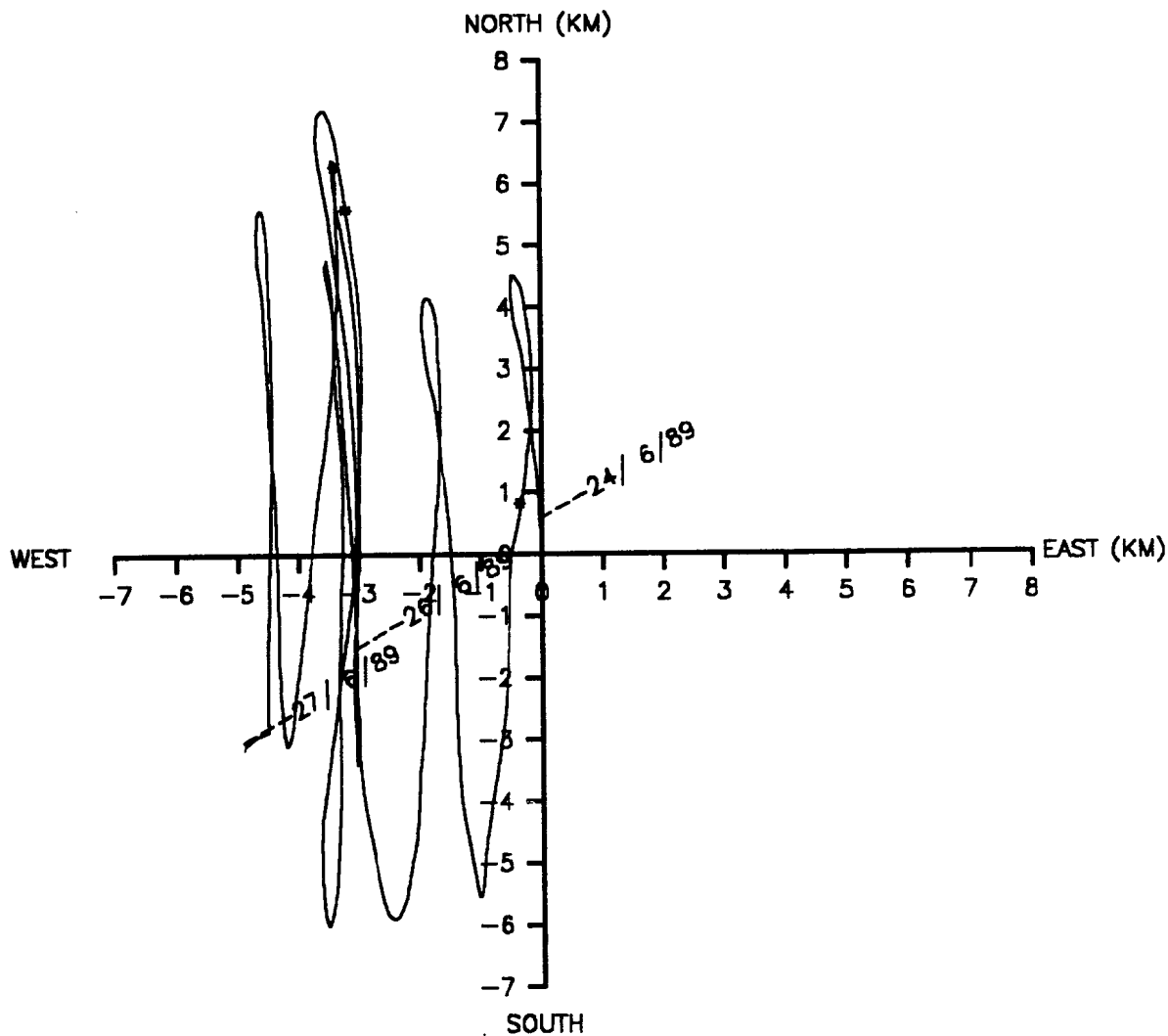
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1261 Rig no. C55EC Depth of water(m) 49.0
 Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
 Position 52 41.00N 02 24.60E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1261 Rig no. C55EC Depth of water(m) 49.0
Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
Position 52 41.00N 02 24.60E Meter Height(m) 20.0



STATISTICS FOR S41261M C55ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0191	0.22765975E-02	0.47713708E-01
Northings	-0.0124	0.25287795E+00	0.50286967E+00
Speed	0.4601	0.43472946E-01	0.20850170E+00

Vector mean speed 0.0228
 Vector Mean Direction -122.9

Maximum ten values

Eastings					Northings				
0.109	0.105	0.102	0.098	0.098	0.768	0.764	0.755	0.755	0.750
0.095	0.094	0.092	0.091	0.087	0.750	0.748	0.746	0.742	0.742

Minimum ten values

Eastings					Northings				
-0.103	-0.105	-0.106	-0.107	-0.108	-0.671	-0.671	-0.675	-0.675	-0.677
-0.115	-0.134	-0.138	-0.148	-0.184	-0.679	-0.679	-0.680	-0.680	-0.691

Maximum speeds

0.768	0.764	0.757	0.756	0.752	0.750	0.748	0.748	0.744	0.742
0.742	0.739	0.737	0.737	0.736	0.735	0.733	0.730	0.730	0.729
0.723	0.722	0.720	0.719	0.712	0.711	0.707	0.704	0.701	0.697
0.694	0.693	0.691	0.690	0.688	0.686	0.683	0.682	0.680	0.680
0.679	0.679	0.677	0.677	0.676	0.674	0.674	0.673	0.673	0.671
0.671	0.671	0.670	0.669	0.669	0.669	0.667	0.666	0.665	0.664
0.664	0.663	0.662	0.662	0.661	0.661	0.660	0.660	0.660	0.659
0.659	0.658	0.656	0.655	0.655	0.655	0.655	0.654	0.653	0.652
0.651	0.650	0.649	0.649	0.648	0.647	0.647	0.646	0.646	0.645
0.644	0.644	0.644	0.643	0.641	0.641	0.640	0.637	0.636	0.636

Variance ellipse statistics

Maximum variance 0.2529E+00	Direction	-0.7
Minimum variance 0.2241E-02	Direction	89.3
Total variance 0.2552E+00	Ratio of variances	0.8861E-02
Average direction. maxdir -PI/2 to maxdir +PI/2		-1.5
Average direction. maxdir +PI/2 to maxdir -PI/2		182.9

Meter information details for 9378

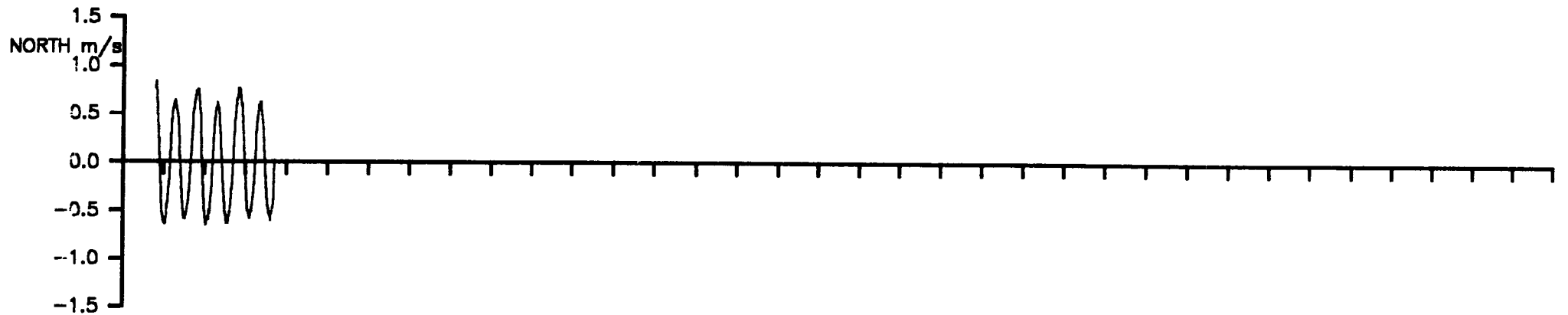
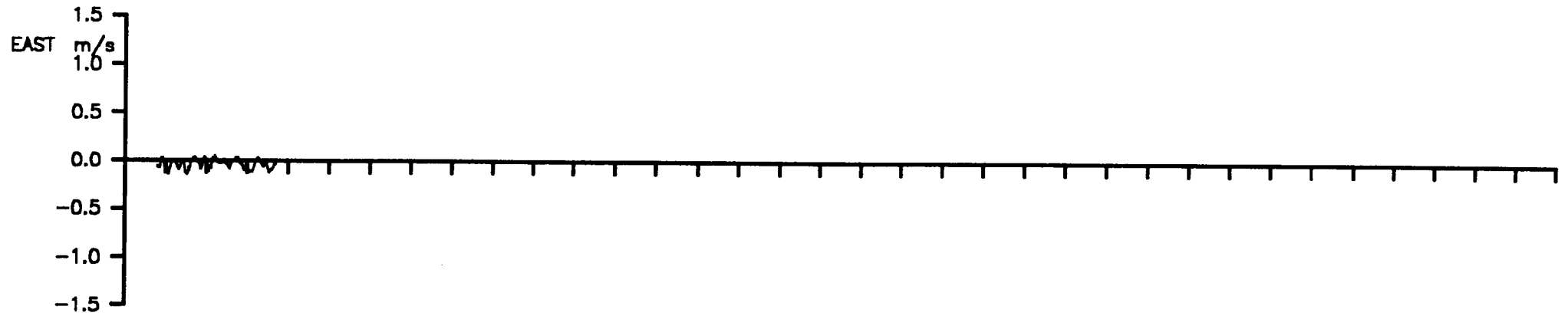
Rig No	:	C55EC
Meter No	:	9378
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	24-JUNE-89 17:00:00
Time of last valid scan	:	27-JULY-89 17:10:00 N/E components C/P parameters
Time of last valid scan	:	24-JULY-89 19:14:00 T parameter
Period of good data	:	2.9 days short record for N/E/C/P
Period of good data	:	30.0 days T parameter
Timing error	:	None
Comments	:	Good record up to meter malfunction

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9378 Rig no. C55EC Depth of water(m) 49.0

Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00

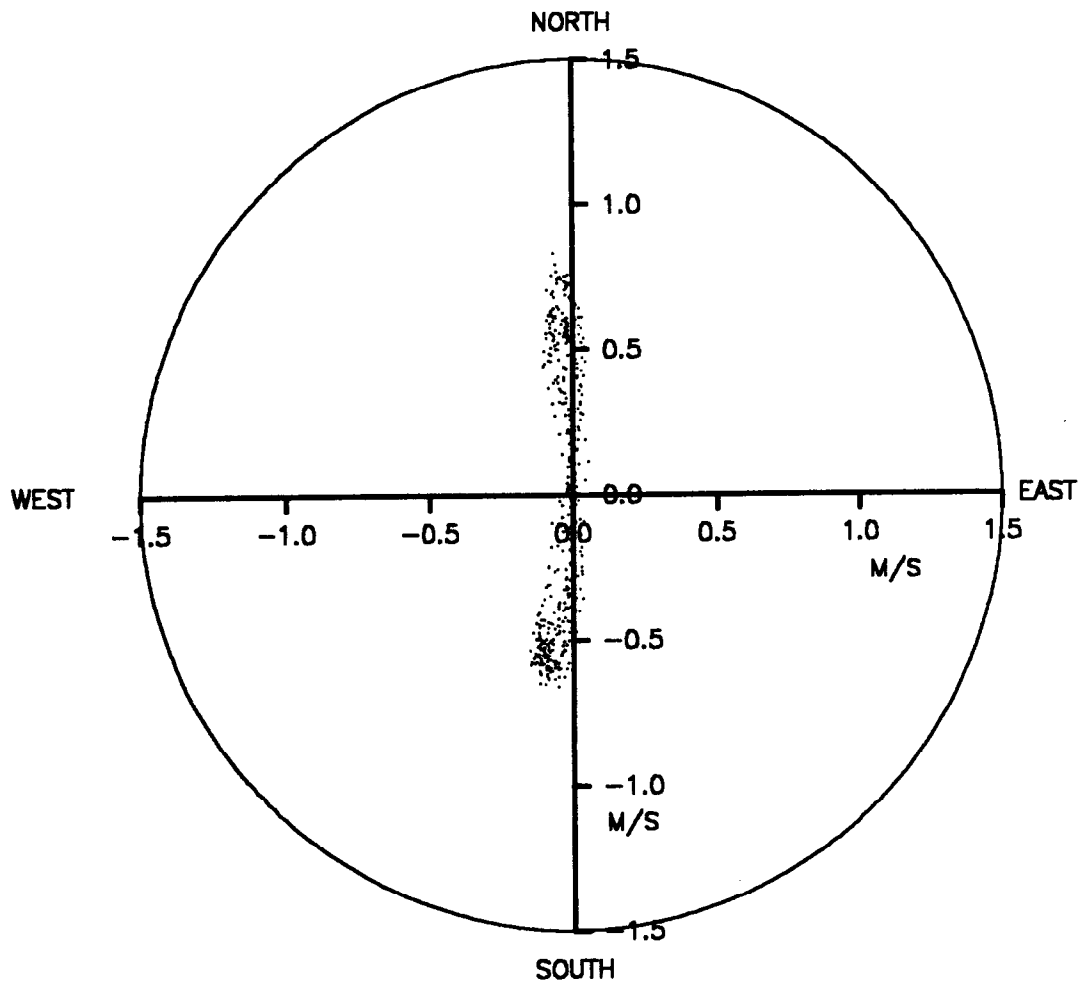
Position 52 41.00N 02 24.60E Meter Height(m) 7.0



24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
89 89

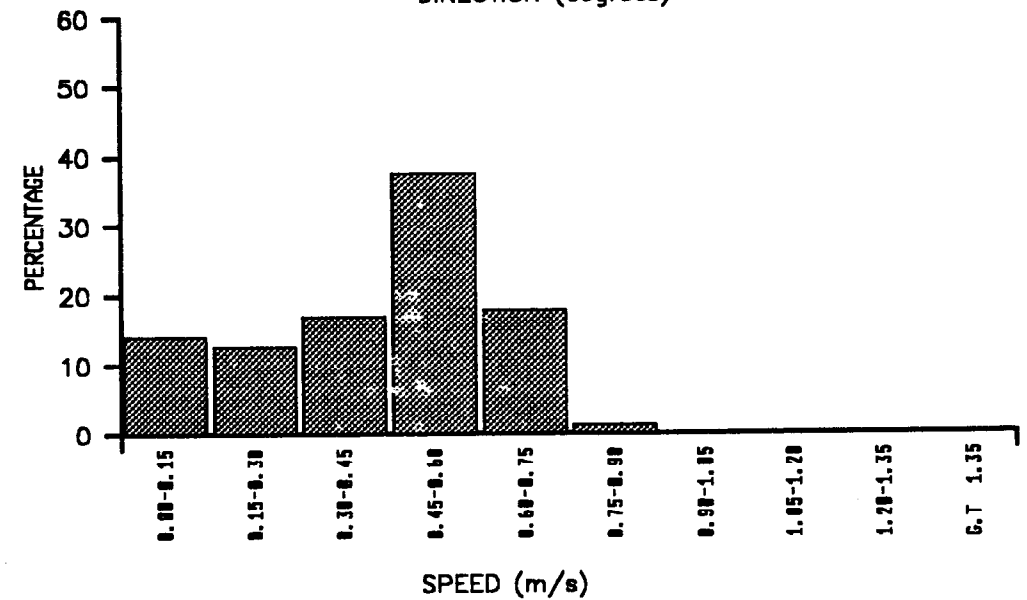
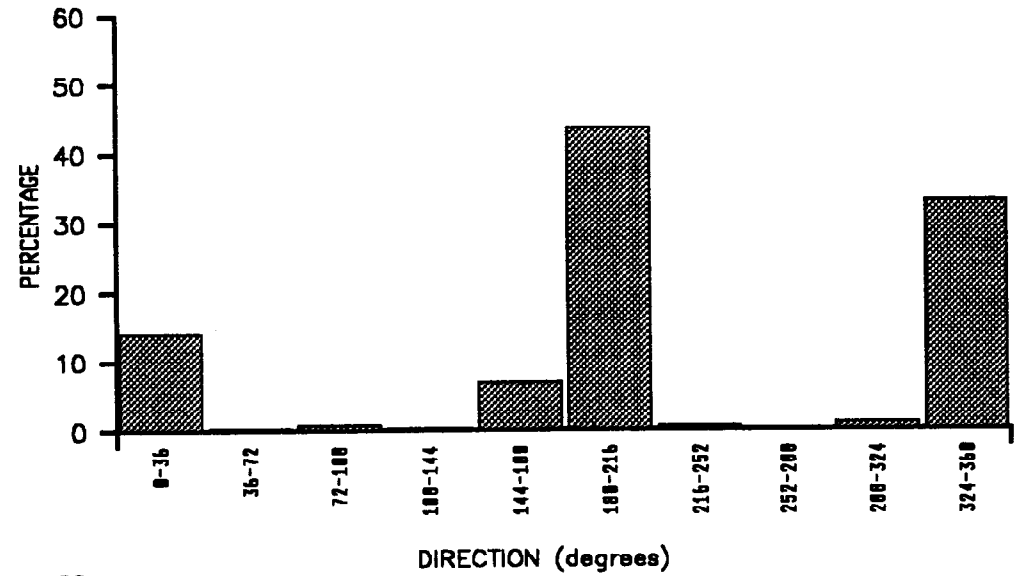
SCATTER PLOT

Meter no. 9378 Rig no. C55EC Depth of water(m) 49.0
 Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
 Position 52 41.00N 02 24.60E Meter Height(m) 7.0



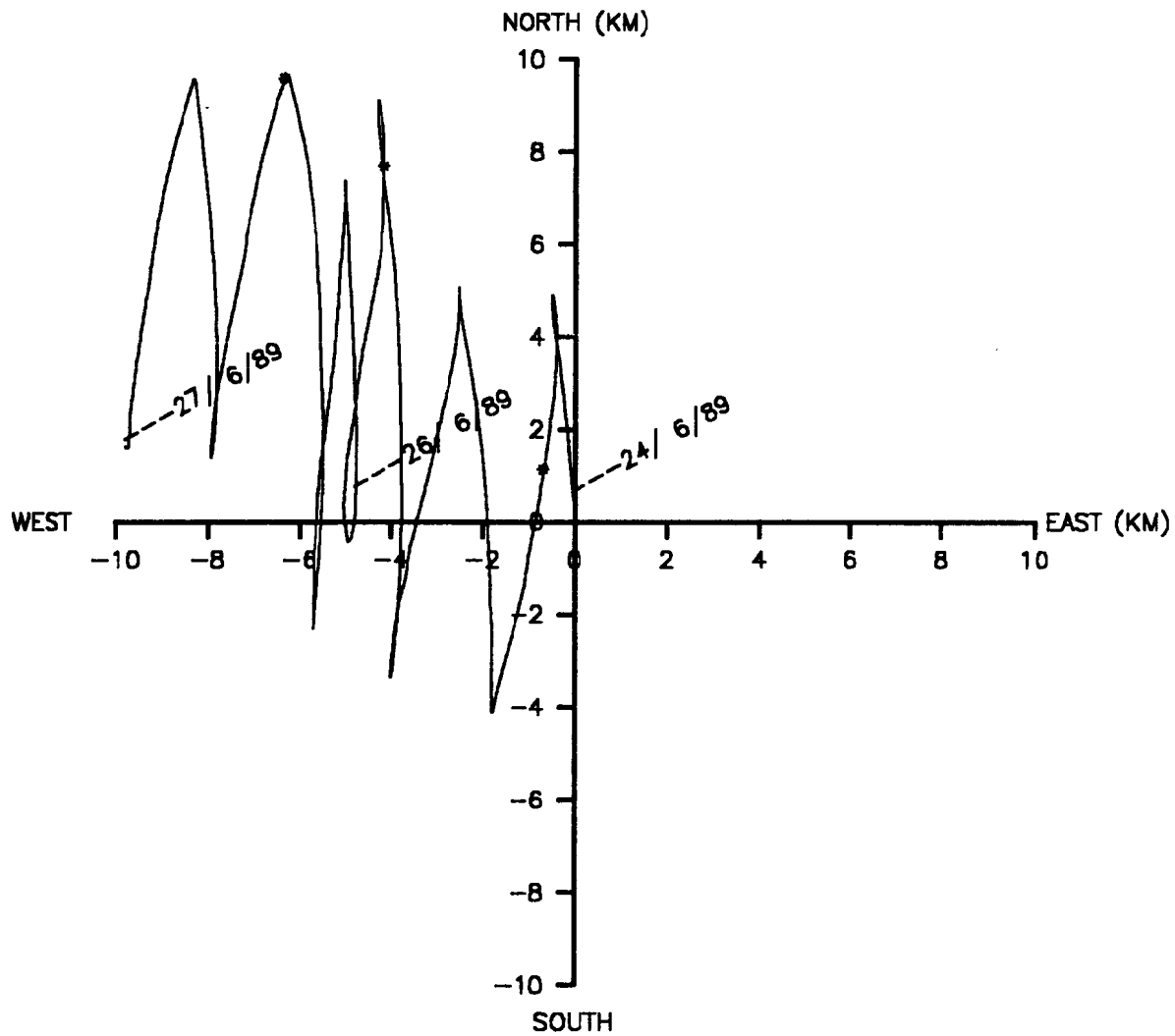
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9378 Rig no. C55EC Depth of water(m) 49.0
 Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
 Position 52 41.00N 02 24.60E Meter Height(m) 7.0



VECTOR PLOT

Meter no. 9378 Rig no. C55EC Depth of water(m) 49.0
Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00
Position 52 41.00N 02 24.60E Meter Height(m) 7.0

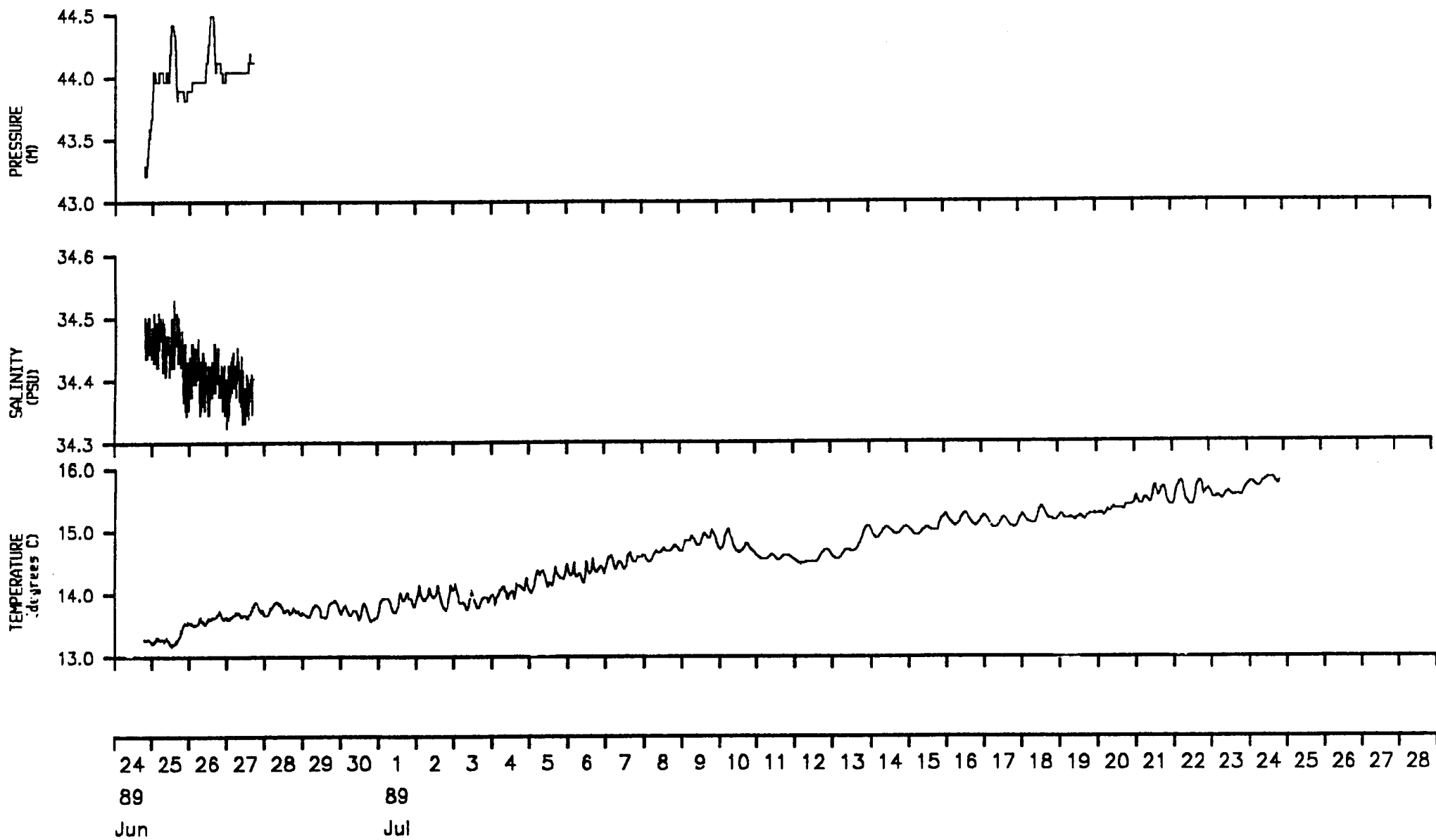


TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9378 Rig no. C55EC Depth of water(m) 49.0

Start/End 1989/06/24 AT 19:05:00 1989/07/24 AT 19:14:00

Position 52 41.00N 02 24.60E Meter Height(m) 7.0



STATISTICS FOR AS9378B C55ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0387	0.21580413E-02	0.46454724E-01
Northings	0.0064	0.22076941E+00	0.46986109E+00
Speed	0.4291	0.39928295E-01	0.19982070E+00

Vector mean speed 0.0393
 Vector Mean Direction -80.6

Maximum ten values

Eastings					Northings				
0.056	0.046	0.046	0.044	0.043	0.831	0.791	0.767	0.755	0.751
0.041	0.040	0.040	0.039	0.038	0.749	0.749	0.748	0.745	0.739

Minimum ten values

Eastings					Northings				
-0.129	-0.129	-0.130	-0.132	-0.133	-0.619	-0.626	-0.628	-0.629	-0.630
-0.136	-0.138	-0.146	-0.148	-0.149	-0.635	-0.636	-0.649	-0.652	-0.660

Maximum speeds

0.833	0.793	0.769	0.755	0.755	0.749	0.749	0.749	0.746	0.740
0.740	0.732	0.729	0.726	0.726	0.723	0.720	0.717	0.717	0.714
0.708	0.708	0.703	0.700	0.694	0.688	0.682	0.682	0.679	0.676
0.671	0.662	0.659	0.659	0.659	0.653	0.650	0.642	0.642	0.642
0.642	0.639	0.639	0.636	0.636	0.633	0.633	0.630	0.630	0.630
0.627	0.627	0.624	0.624	0.621	0.618	0.618	0.615	0.615	0.613
0.613	0.613	0.613	0.610	0.610	0.610	0.610	0.610	0.607	0.604
0.604	0.604	0.604	0.604	0.601	0.601	0.601	0.601	0.601	0.601
0.598	0.598	0.598	0.598	0.598	0.595	0.595	0.595	0.592	0.592
0.592	0.589	0.589	0.589	0.586	0.586	0.583	0.583	0.583	0.581

Variance ellipse statistics

Maximum variance 0.2211E+00	Direction	2.3
Minimum variance 0.1793E-02	Direction	92.3
Total variance 0.2229E+00	Ratio of variances	0.8109E-02
Average direction. maxdir -PI/2 to maxdir +PI/2		-4.3
Average direction. maxdir +PI/2 to maxdir -PI/2		184.2

Rig information details for C57EC

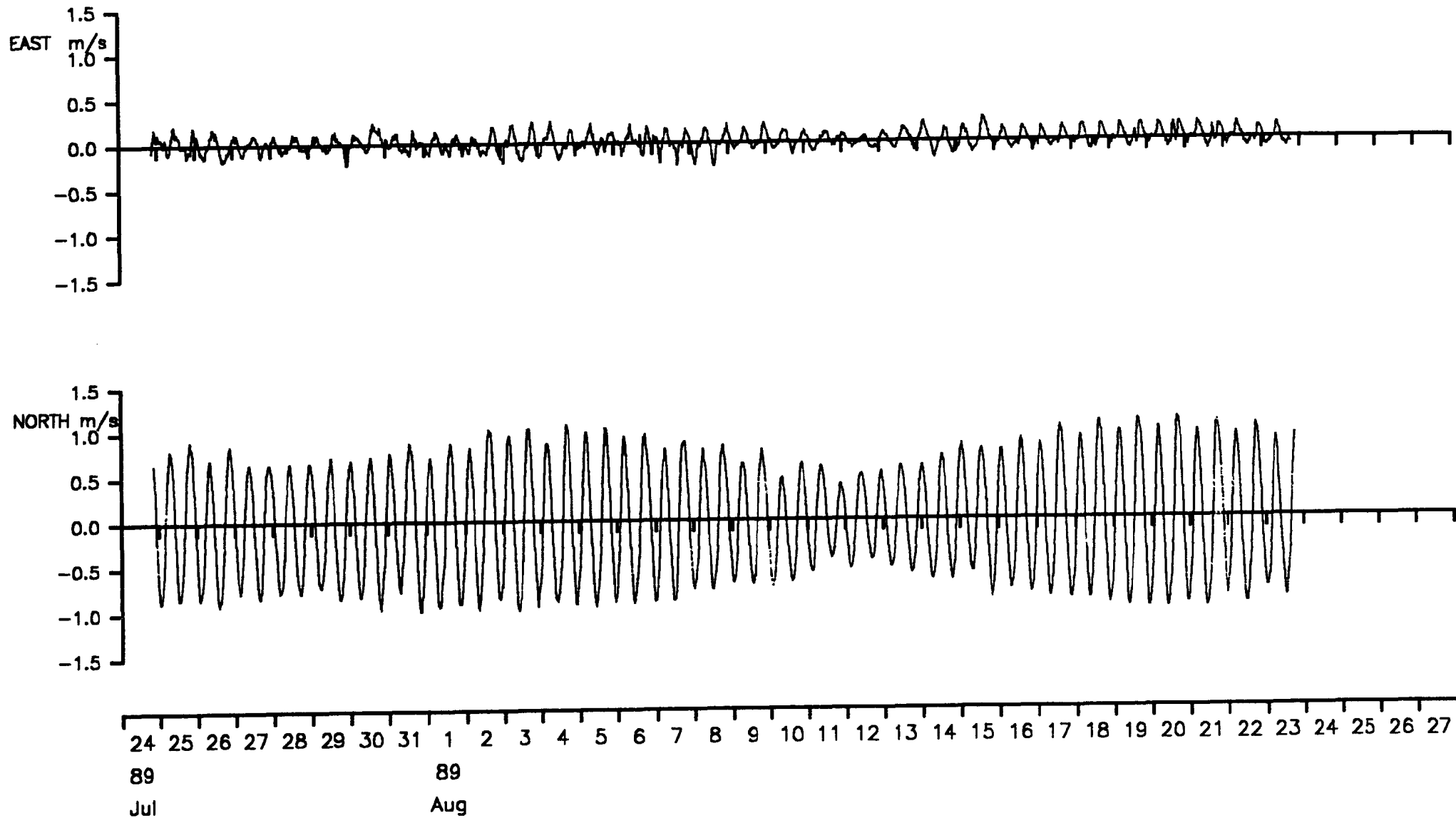
Position Latitude	:	52 41.10N
Position Longitude	:	02 24.80E
Water depth	:	49.0 m
Deployed on cruise	:	C57
Recovered on cruise	:	C59
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	24-JULY-89 20:45:00
Rig recovered on	:	23-AUG-89 18:36:00
Period of deployment	:	29.9 days
Comments	:	Launch and recovery successful

Meter information details for 1112

Rig No	:	C57EC
Meter No	:	1112
Recording interval	:	600.0 seconds
Meter height from bottom	:	35.0 m
Position of meter on rig	:	T
Meter type	:	S4
Meter started	:	24-JULY-89 15:00:00
Meter stopped	:	23-AUG-89 19:10:00
Period switched on	:	30.2 days
Period of good data	:	29.9 days
Total number of scans	:	4307
Timing error	:	None
Comments	:	Good record obtained

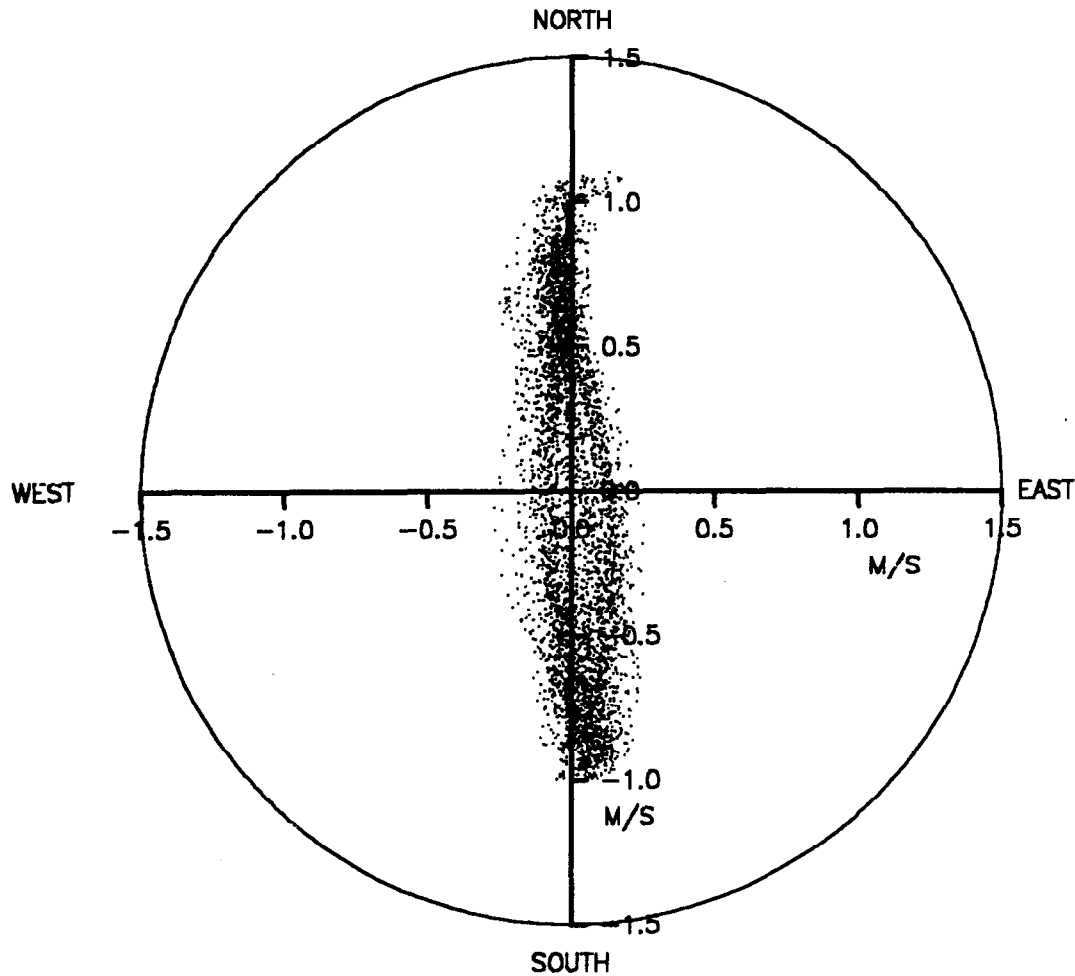
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1112 Rig no. C57EC Depth of water(m) 49.0
Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
Position 52 41.10N 02 24.80E Meter Height(m) 35.0



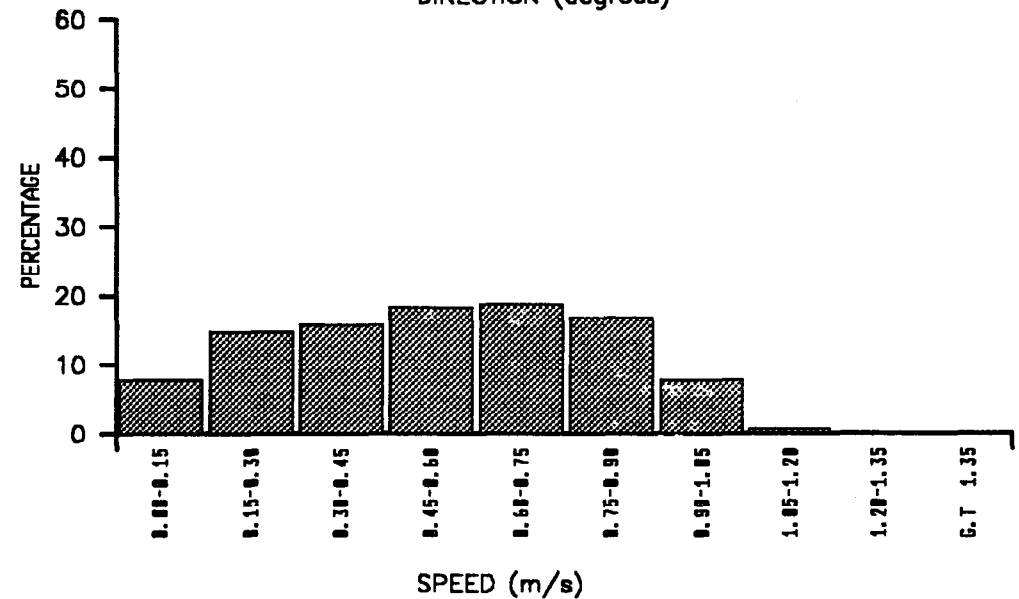
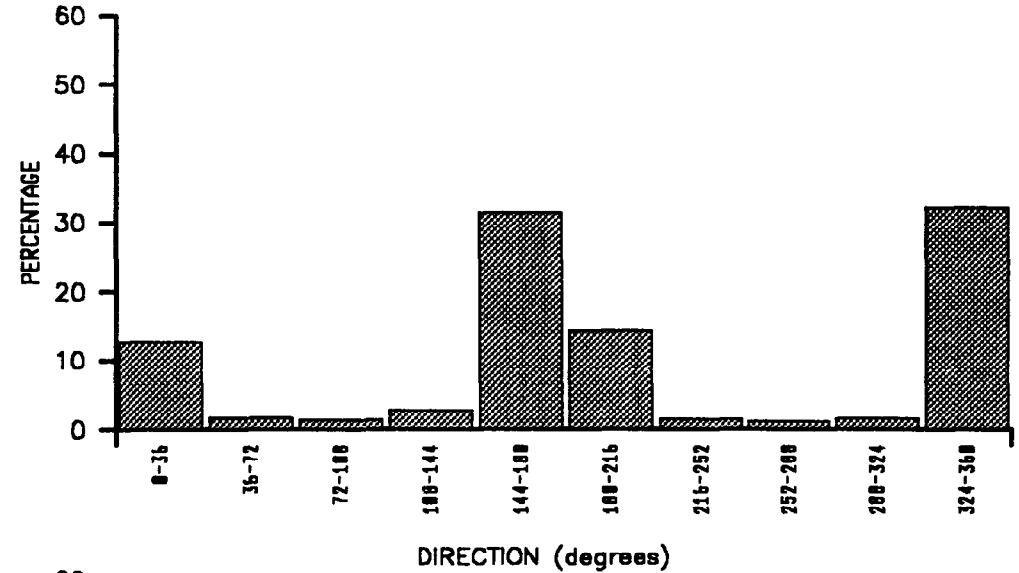
SCATTER PLOT

Meter no. 1112 Rig no. C57EC Depth of water(m) 49.0
 Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
 Position 52 41.10N 02 24.80E Meter Height(m) 35.0



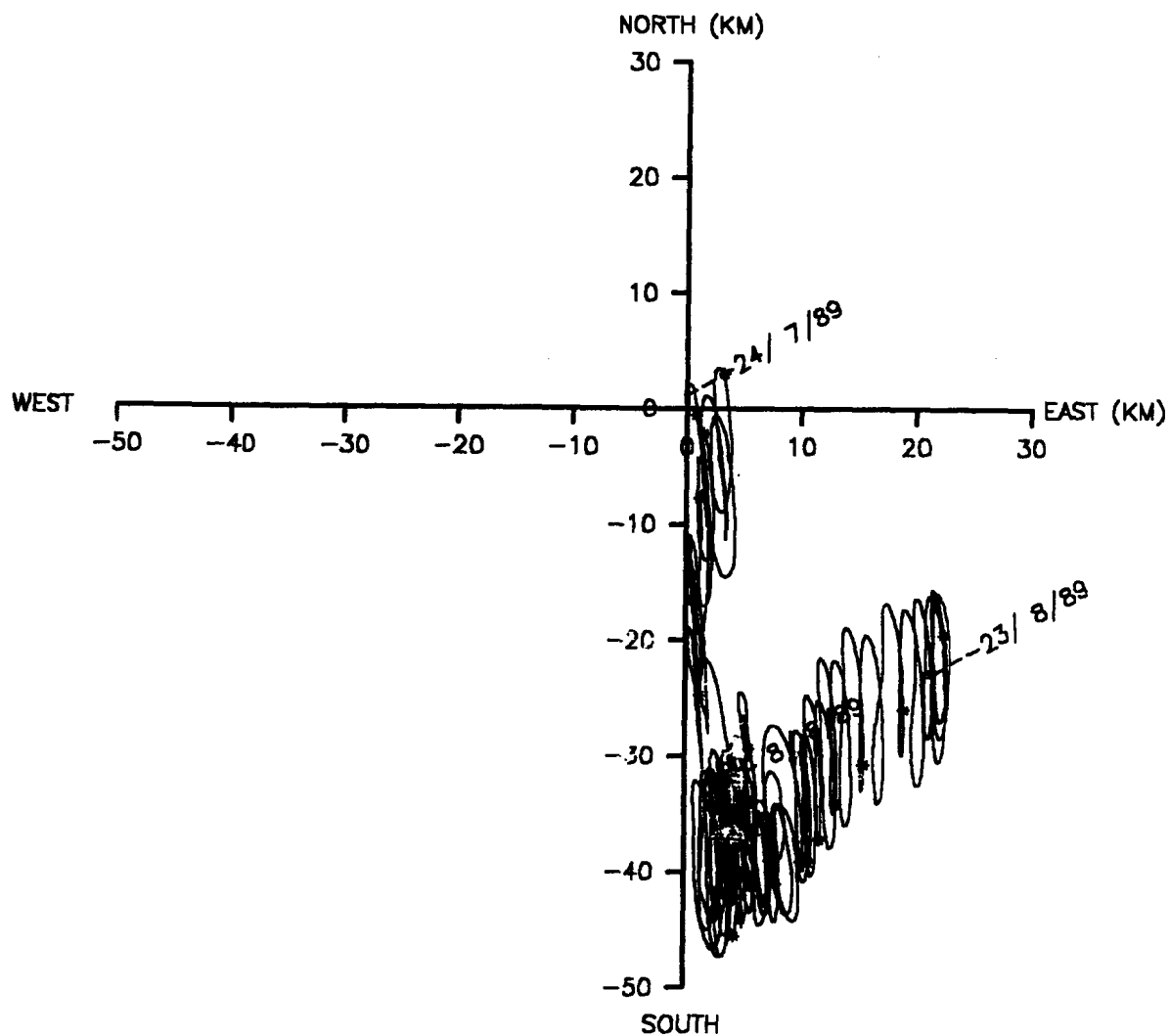
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1112 Rig no. C57EC Depth of water(m) 49.0
 Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
 Position 52 41.10N 02 24.80E Meter Height(m) 35.0



VECTOR PLOT

Meter no. 1112 Rig no. C57EC Depth of water(m) 49.0
Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
Position 52 41.10N 02 24.80E Meter Height(m) 35.0



STATISTICS FOR S41112T C57ECS A

	Mean	Variance	Standard deviation
Eastings	0.0083	0.73201470E-02	0.85557818E-01
Northings	-0.0091	0.35093170E+00	0.59239483E+00
Speed	0.5395	0.67303181E-01	0.25942850E+00

Vector mean speed 0.0124
 Vector Mean Direction 137.7

Maximum ten values

Eastings					Northings				
0.252	0.252	0.251	0.243	0.241	1.103	1.089	1.085	1.082	1.080
0.237	0.235	0.235	0.235	0.233	1.080	1.077	1.075	1.073	1.070

Minimum ten values

Eastings					Northings				
-0.240	-0.240	-0.241	-0.241	-0.243	-0.991	-0.992	-0.992	-0.994	-0.995
-0.246	-0.250	-0.254	-0.266	-0.269	-0.995	-0.996	-0.997	-0.998	-1.000

Maximum speeds

1.111	1.097	1.096	1.090	1.086	1.086	1.081	1.080	1.075	1.075
1.071	1.071	1.070	1.069	1.066	1.065	1.063	1.062	1.058	1.057
1.056	1.055	1.054	1.054	1.052	1.051	1.050	1.046	1.045	1.043
1.041	1.040	1.040	1.039	1.039	1.036	1.032	1.031	1.028	1.027
1.025	1.025	1.024	1.024	1.024	1.023	1.023	1.022	1.022	1.021
1.021	1.020	1.018	1.017	1.017	1.016	1.016	1.016	1.016	1.016
1.014	1.013	1.012	1.012	1.011	1.010	1.010	1.010	1.008	1.008
1.007	1.006	1.004	1.004	1.003	1.002	1.002	1.002	1.001	1.001
1.000	1.000	0.999	0.998	0.998	0.998	0.995	0.995	0.995	0.994
0.994	0.994	0.994	0.994	0.993	0.992	0.992	0.991	0.991	0.991

Variance ellipse statistics

Maximum variance	0.3522E+00	Direction	-3.5
Minimum variance	0.6027E-02	Direction	86.5
Total variance	0.3583E+00	Ratio of variances	0.1711E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		1.2
Average direction. maxdir	+PI/2 to maxdir -PI/2		178.4

STATISTICS FOR S41112T C57ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0077	0.32636430E-03	0.18065557E-01
Northings	-0.0070	0.16056518E-02	0.40070578E-01
Speed	0.0382	0.56821178E-03	0.23837194E-01

Vector mean speed 0.0104
 Vector Mean Direction 132.0

Maximum ten values

Eastings					Northings				
0.058	0.054	0.044	0.041	0.039	0.074	0.061	0.060	0.039	0.033
0.036	0.035	0.033	0.033	0.032	0.033	0.032	0.031	0.031	0.030

Minimum ten values

Eastings					Northings				
-0.017	-0.017	-0.017	-0.018	-0.018	-0.071	-0.078	-0.080	-0.081	-0.083
-0.019	-0.020	-0.021	-0.025	-0.027	-0.085	-0.088	-0.092	-0.098	-0.099

Maximum speeds

0.106	0.105	0.099	0.089	0.089	0.087	0.084	0.083	0.080	0.078
0.076	0.075	0.069	0.068	0.067	0.063	0.062	0.062	0.059	0.059
0.055	0.052	0.050	0.050	0.049	0.048	0.047	0.045	0.044	0.043
0.039	0.038	0.037	0.037	0.036	0.036	0.035	0.034	0.034	0.034
0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.031
0.031	0.030	0.030	0.030	0.028	0.027	0.027	0.027	0.027	0.027
0.026	0.026	0.025	0.025	0.025	0.024	0.023	0.023	0.023	0.022
0.022	0.021	0.020	0.020	0.019	0.019	0.018	0.018	0.018	0.017
0.017	0.017	0.017	0.017	0.017	0.016	0.016	0.015	0.014	0.014
0.013	0.011	0.009	0.008	0.008	0.006				

Variance ellipse statistics

Maximum variance 0.1607E-02	Direction	-1.7
Minimum variance 0.3253E-03	Direction	88.3
Total variance 0.1932E-02	Ratio of variances	0.2024E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		16.3
Average direction. maxdir +PI/2 to maxdir -PI/2		165.2

Meter information details for 1118

Rig No	:	C57EC
Meter No	:	1118
Recording interval	:	600.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	24-JULY-89 15:00:00
Meter stopped	:	23-AUG-89 19:00:00
Period switched on	:	30.2 days
Period of good data	:	0.0 days
Comments	:	Corrupted data

Meter information details for 9579

Rig No : C57EC
Meter No : 9579
Recording interval : 600.0 seconds
Meter height from bottom : 7.0 m
Position of meter on rig : B
Meter type : AS
Meter started : 24-JULY-89 15:20:00
Time of last valid scan : 15-AUG-89 17:20:00 N/E components
Time of last valid scan : 23-AUG-89 18:36:00 T/C parameters
Period of good data : 21.9 days short record for N/E
Period of good data : 29.9 days for T/C
Timing error : None
Comments : Fishing line found wrapped around
rotor/paddle

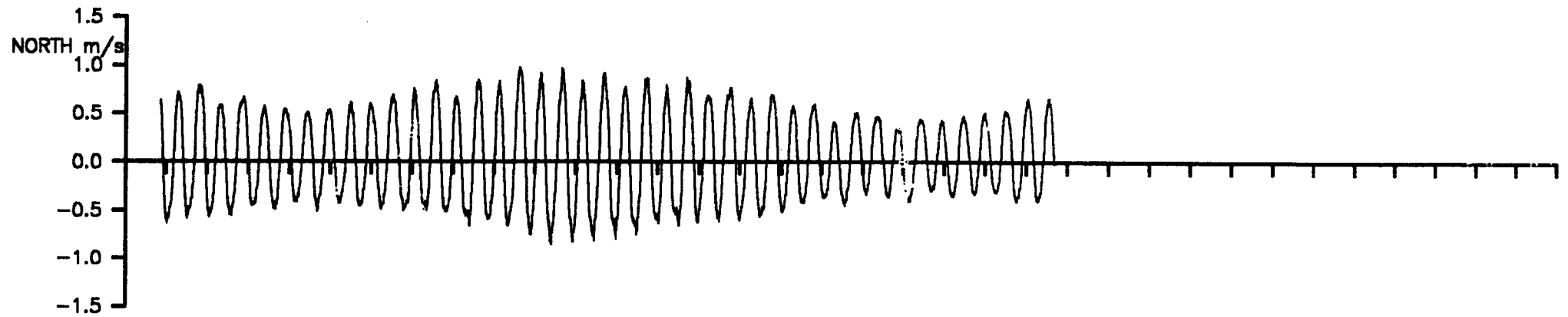
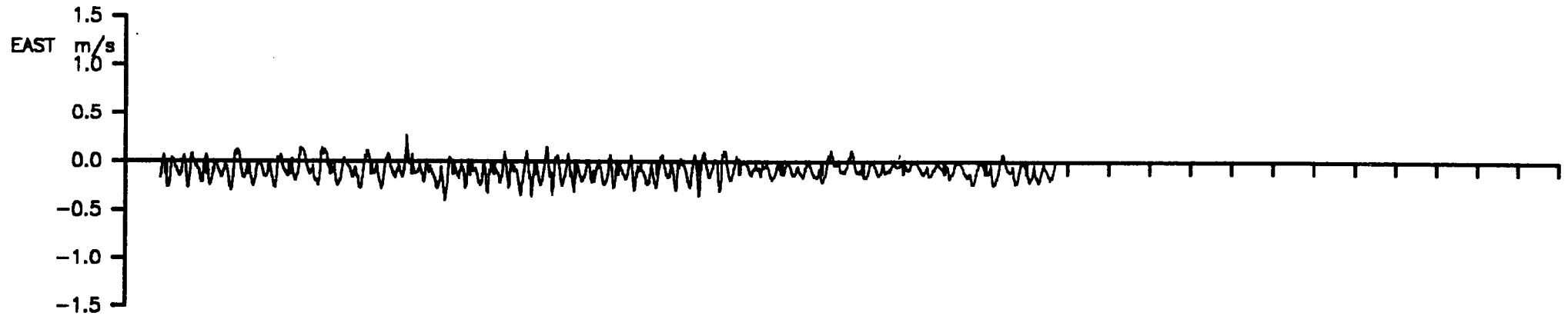
No PRESSURE sensor fitted to meter

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9579 Rig no. C57EC Depth of water(m) 49.0

Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00

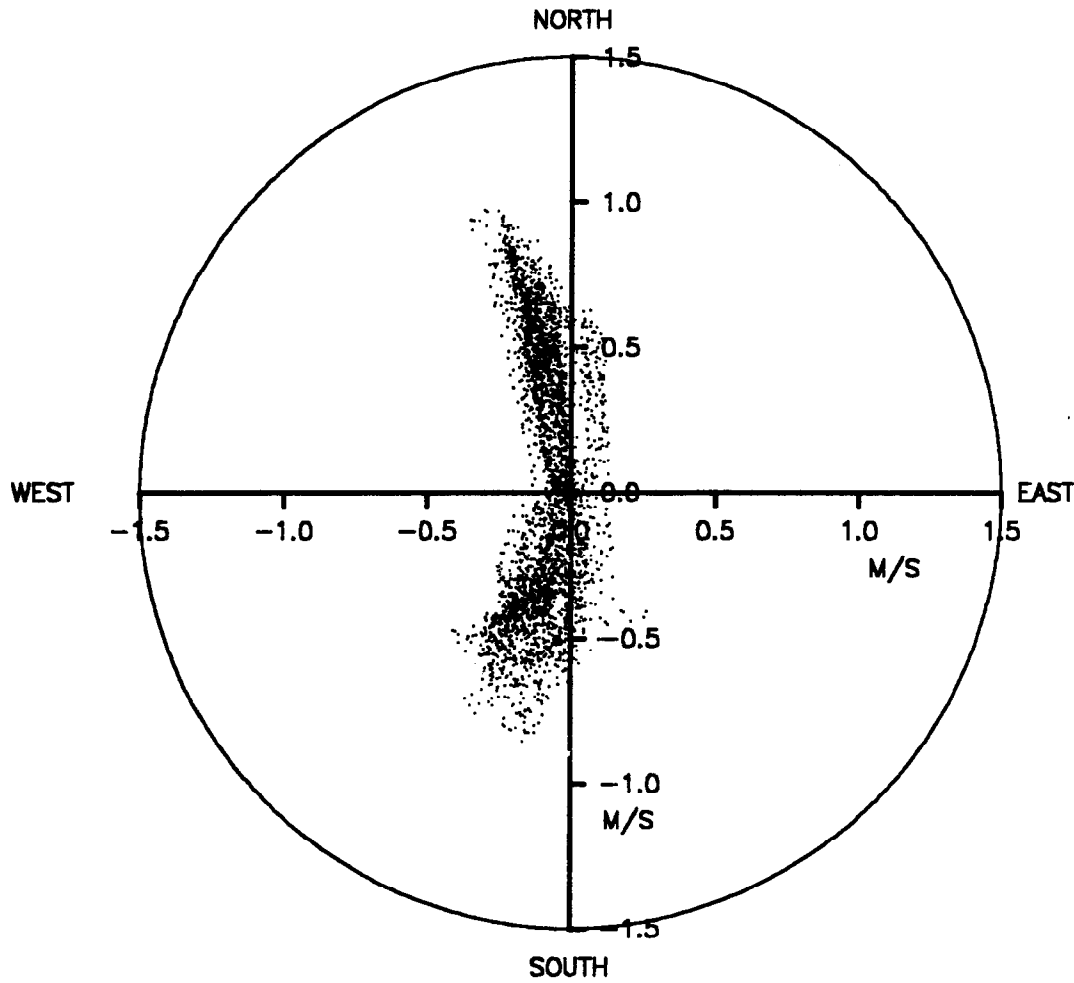
Position 52 41.10N 02 24.80E Meter Height(m) 7.0



24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
89 89

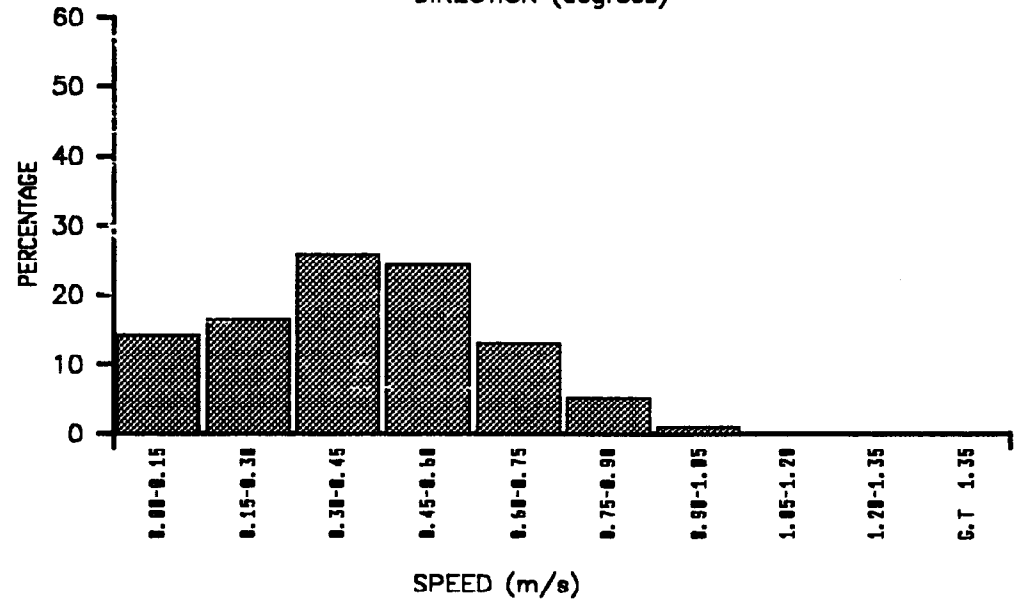
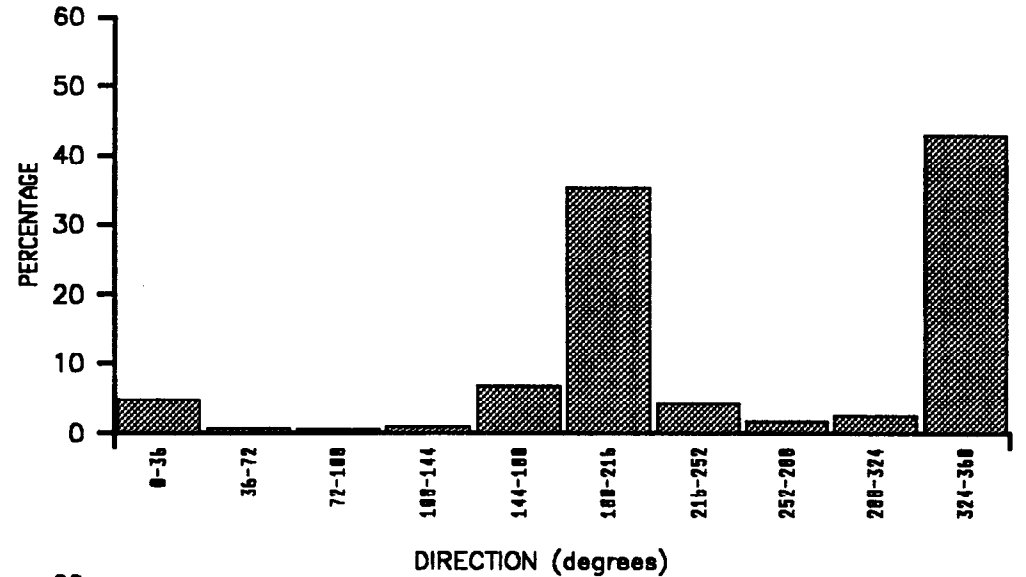
SCATTER PLOT

Meter no. 9579 Rig no. C57EC Depth of water(m) 49.0
 Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
 Position 52 41.10N 02 24.80E Meter Height(m) 7.0



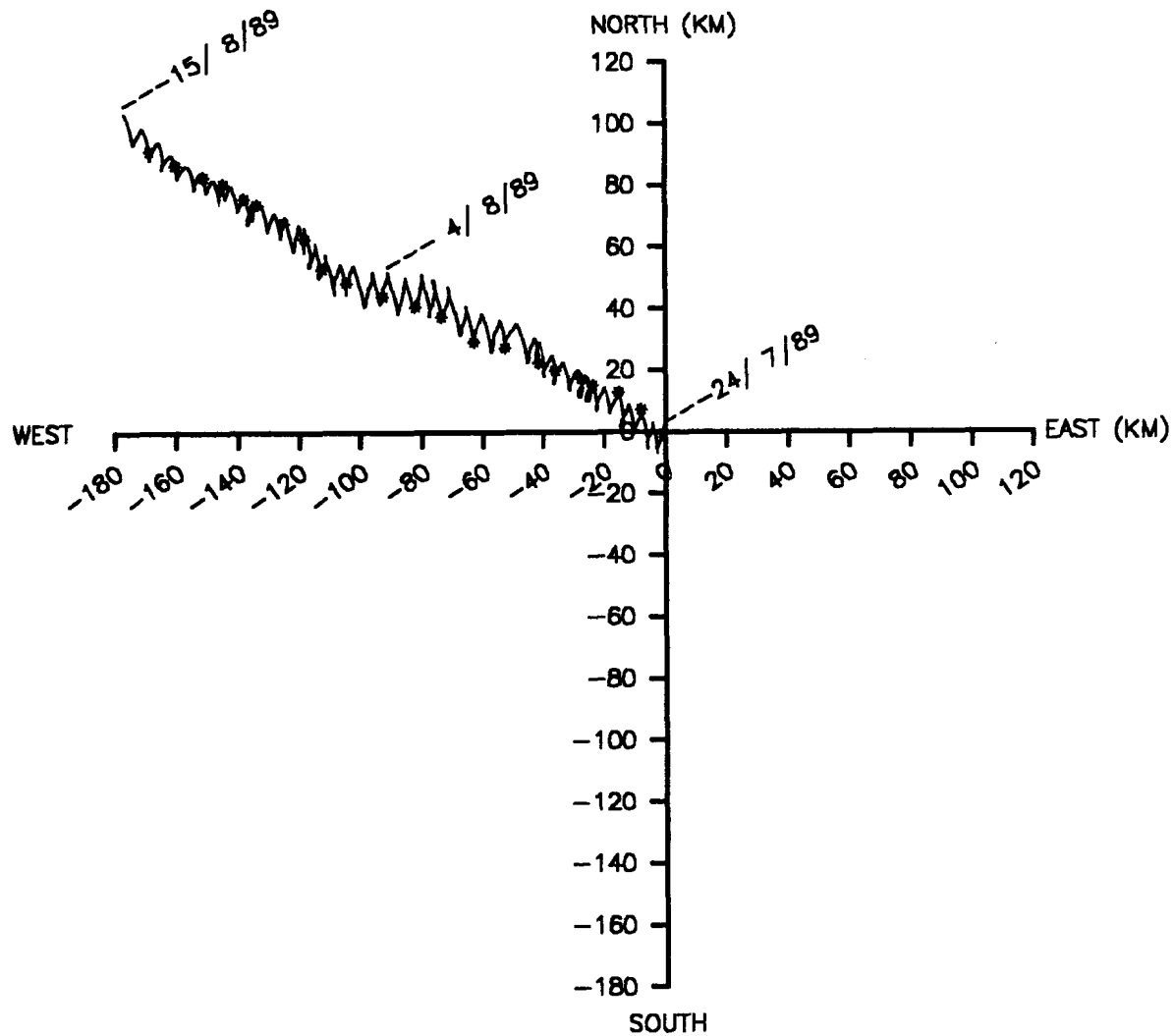
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9579 Rig no. C57EC Depth of water(m) 49.0
 Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
 Position 52 41.10N 02 24.80E Meter Height(m) 7.0



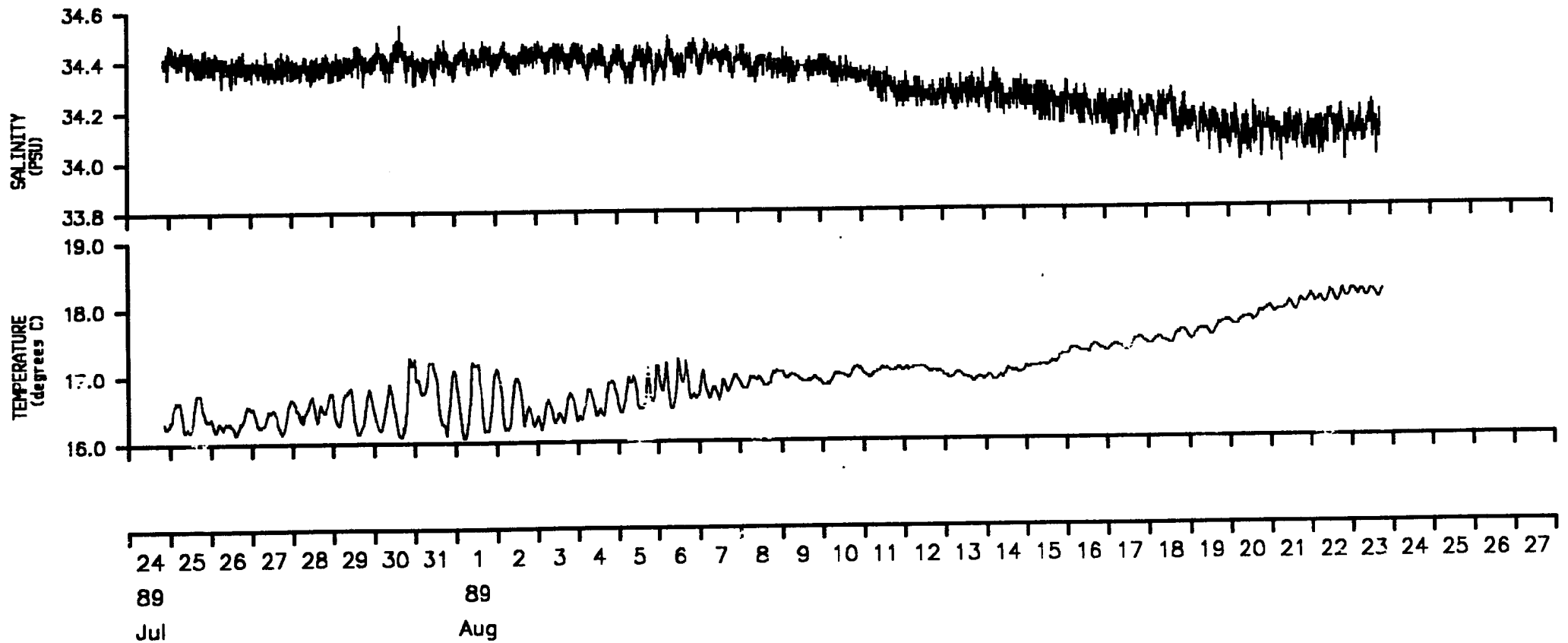
VECTOR PLOT

Meter no. 9579 Rig no. C57EC Depth of water(m) 49.0
Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
Position 52 41.10N 02 24.80E Meter Height(m) 7.0



TEMPERATURE,SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9579 Rig no. C57EC Depth of water(m) 49.0
Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
Position 52 41.10N 02 24.80E Meter Height(m) 7.0



STATISTICS FOR AS9579B C57ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0937	0.81078373E-02	0.90043485E-01
Northings	0.0547	0.19461989E+00	0.44115752E+00
Speed	0.4106	0.45902122E-01	0.21424770E+00

Vector mean speed 0.1085
 Vector Mean Direction -59.7

Maximum ten values

Eastings					Northings				
0.264	0.255	0.211	0.185	0.177	0.971	0.969	0.964	0.952	0.952
0.150	0.148	0.148	0.140	0.136	0.942	0.937	0.936	0.936	0.934

Minimum ten values

Eastings					Northings				
-0.350	-0.354	-0.357	-0.359	-0.365	-0.803	-0.804	-0.809	-0.815	-0.818
-0.370	-0.390	-0.392	-0.402	-0.410	-0.819	-0.826	-0.827	-0.828	-0.858

Maximum speeds

1.016	1.008	1.002	1.002	0.996	0.987	0.982	0.982	0.973	0.967
0.967	0.961	0.961	0.950	0.950	0.944	0.944	0.944	0.932	0.929
0.929	0.926	0.923	0.912	0.906	0.906	0.903	0.900	0.897	0.894
0.892	0.889	0.886	0.883	0.883	0.883	0.880	0.877	0.874	0.874
0.874	0.874	0.871	0.871	0.871	0.868	0.868	0.868	0.865	0.865
0.862	0.862	0.860	0.860	0.860	0.857	0.857	0.854	0.854	0.854
0.851	0.848	0.848	0.845	0.845	0.842	0.842	0.842	0.842	0.842
0.839	0.839	0.839	0.836	0.836	0.836	0.836	0.836	0.833	0.833
0.833	0.833	0.833	0.833	0.830	0.830	0.830	0.828	0.828	0.828
0.825	0.825	0.825	0.825	0.825	0.822	0.822	0.822	0.822	0.822

Variance ellipse statistics

Maximum variance 0.1946E+00	Direction	0.5
Minimum variance 0.8093E-02	Direction	90.5
Total variance 0.2027E+00	Ratio of variances	0.4158E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		-13.0
Average direction. maxdir +PI/2 to maxdir -PI/2		195.9

STATISTICS FOR AS9579B C57ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0920	0.69513870E-03	0.26365489E-01
Northings	0.0494	0.66518621E-03	0.25791205E-01
Speed	0.1076	0.67052781E-03	0.25894552E-01

Vector mean speed 0.1044
 Vector Mean Direction -61.8

Maximum ten values

Eastings					Northings				
-0.046	-0.048	-0.053	-0.054	-0.054	0.108	0.107	0.102	0.102	0.097
-0.056	-0.057	-0.057	-0.059	-0.060	0.095	0.084	0.080	0.077	0.074

Minimum ten values

Eastings					Northings				
-0.123	-0.124	-0.124	-0.124	-0.125	0.024	0.019	0.018	0.018	0.014
-0.125	-0.126	-0.132	-0.136	-0.140	0.014	0.013	0.010	0.003	0.002

Maximum speeds

0.160	0.159	0.149	0.146	0.145	0.144	0.140	0.132	0.128	0.128
0.128	0.128	0.128	0.128	0.127	0.127	0.126	0.126	0.126	0.126
0.125	0.123	0.122	0.121	0.121	0.120	0.120	0.118	0.118	0.116
0.115	0.113	0.111	0.110	0.108	0.107	0.107	0.106	0.104	0.104
0.102	0.095	0.093	0.092	0.092	0.090	0.089	0.087	0.085	0.084
0.083	0.081	0.078	0.077	0.077	0.073	0.071	0.069	0.068	0.067
0.064	0.063	0.063	0.057						

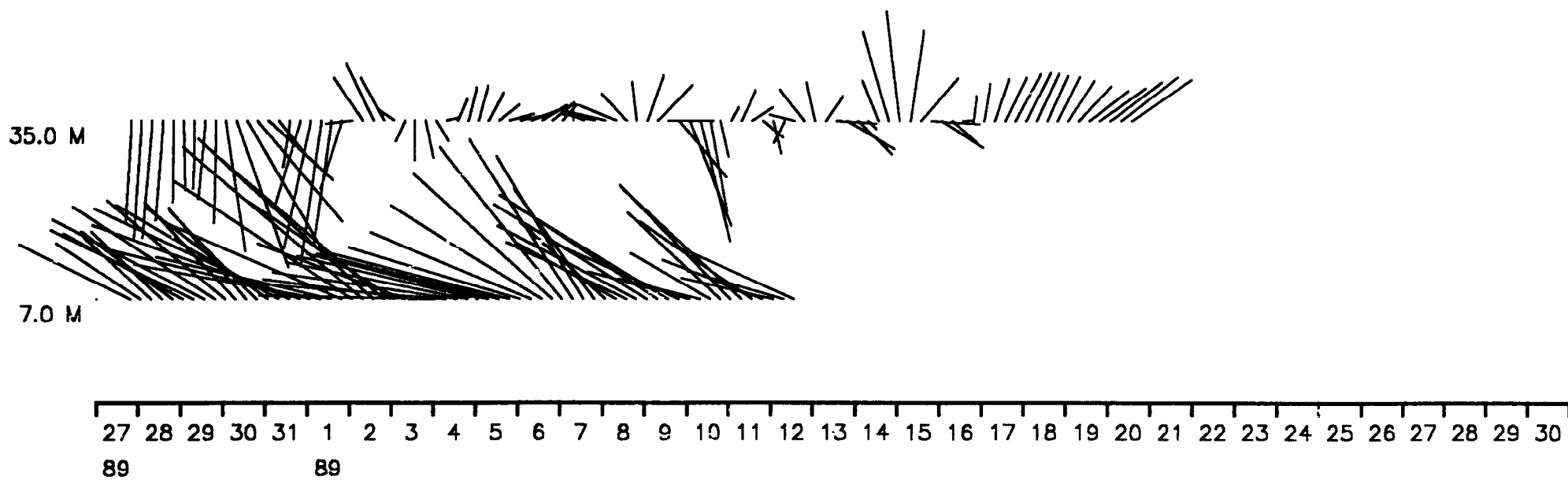
Variance ellipse statistics

Maximum variance 0.7437E-03	Direction	51.8
Minimum variance 0.6165E-03	Direction	141.8
Total variance 0.1360E-02	Ratio of variances	0.8290E+00
Average direction. maxdir -PI/2 to maxdir +PI/2		-85.3
Average direction. maxdir +PI/2 to maxdir -PI/2		245.3

STICK TIME SERIES PLOT

Rig no. C57EC Depth of water(m) 49.0
Start/End 1989/07/24 AT 20:45:00 1989/08/23 AT 18:36:00
Position 52 41.10N 02 24.80E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9579	7.0 M
1112	35.0 M



Rig information details for C59EC

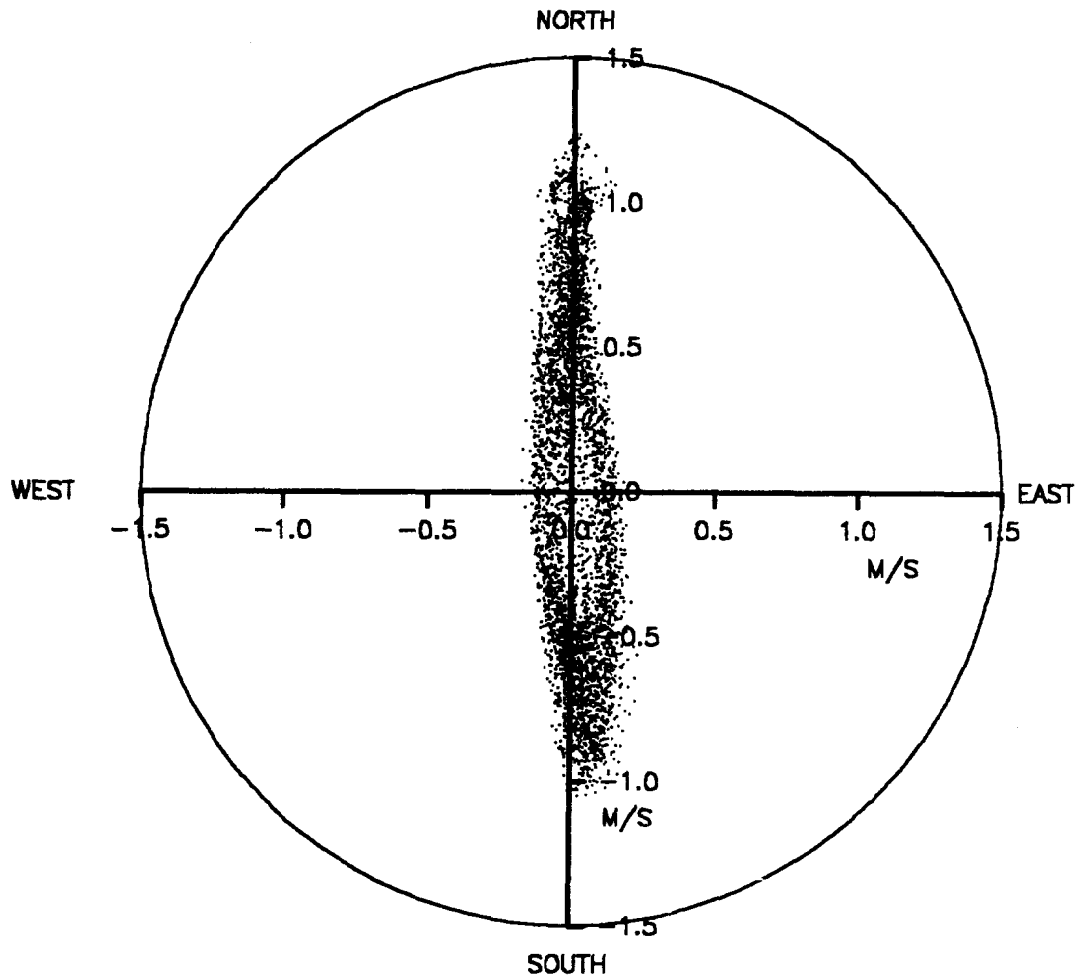
Position Latitude	:	52 41.02N
Position Longitude	:	02 24.67E
Water depth	:	49.0 m
Deployed on cruise	:	C59
Recovered on cruise	:	C61
Site name identification	:	E
Magnetic deviation	:	3.8 degrees west
Rig deployed on	:	23-AUG-89 20:23:00
Rig recovered on	:	22-SEPT-89 18:50:00
Period of deployment	:	29.9 days
Comments	:	Spar buoy ruptured and almost submerged

Meter information details for 1263

Rig No : C59EC
Meter No : 1263
Recording interval : 600.0 seconds
Meter height from bottom : 35.0 m
Position of meter on rig : T
Meter type : S4
Meter started : 23-AUG-89 17:39:00
Time of last valid scan : 21-SEPT-89 18:31:00
Period of good data : 28.9 days short record
Total number of scans : 4165
Timing error : 120 seconds slow
Comments : Hourly time stamp has jumped by one
minute at:
(1) 23-AUG-89 17:39 to 18:40
(2) 13-SEPT-89 08:40 to 09:41

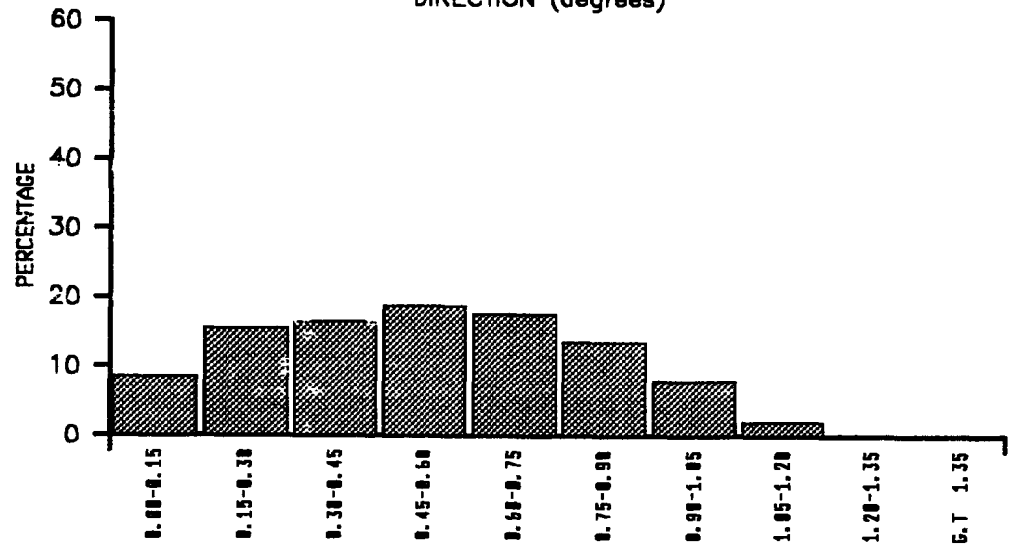
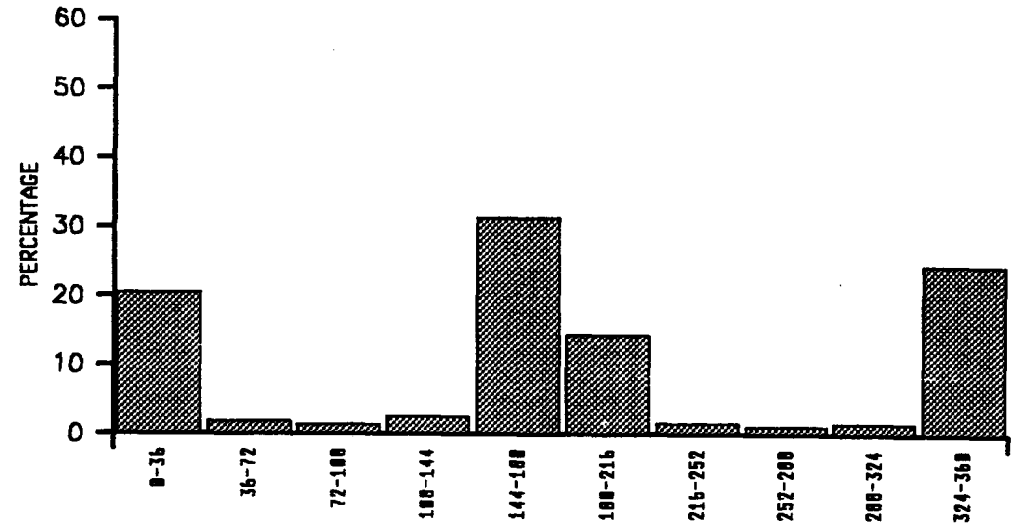
SCATTER PLOT

Meter no. 1263 Rig no. C59EC Depth of water(m) 49.0
 Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
 Position 52 41.02N 02 24.67E Meter Height(m) 35.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

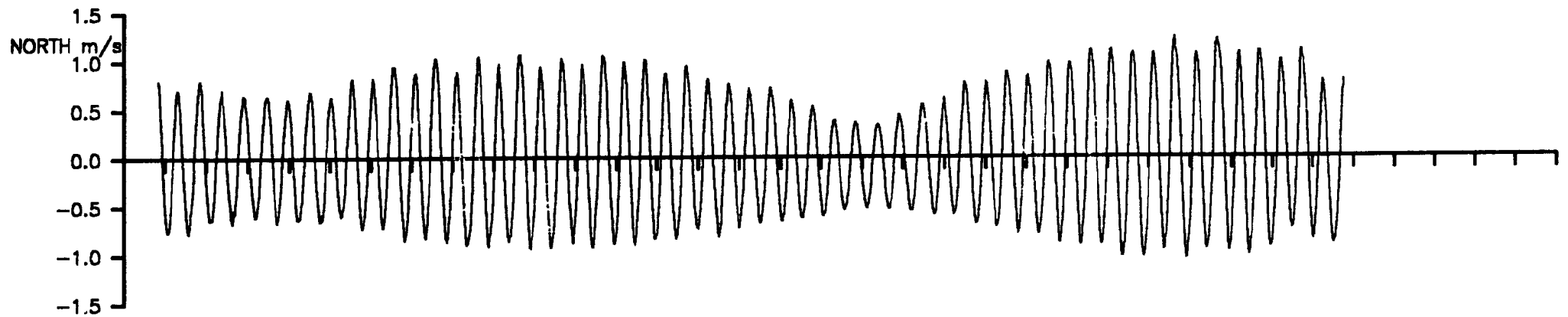
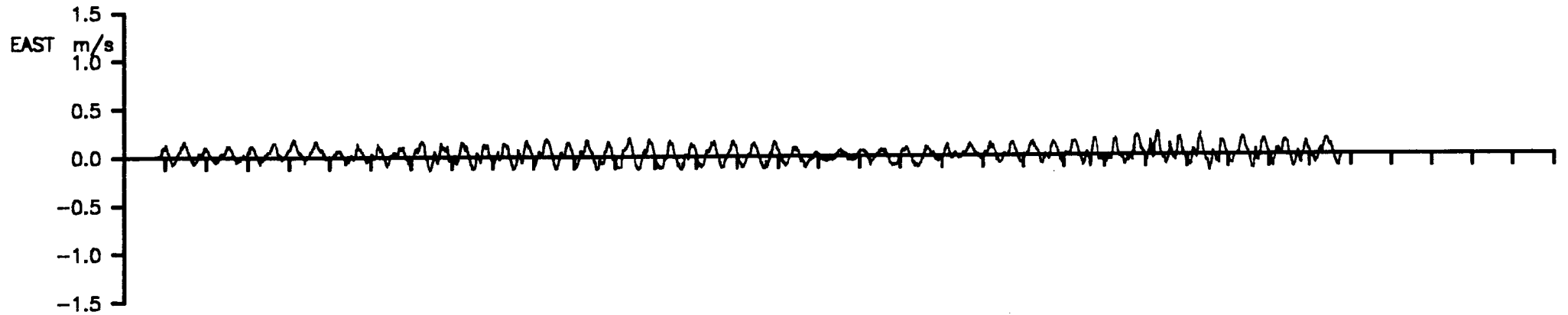
Meter no. 1263 Rig no. C59EC Depth of water(m) 49.0
 Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
 Position 52 41.02N 02 24.67E Meter Height(m) 35.0



SPEED (m/s)

VELOCITY COMPONENT TIME SERIES PLOT

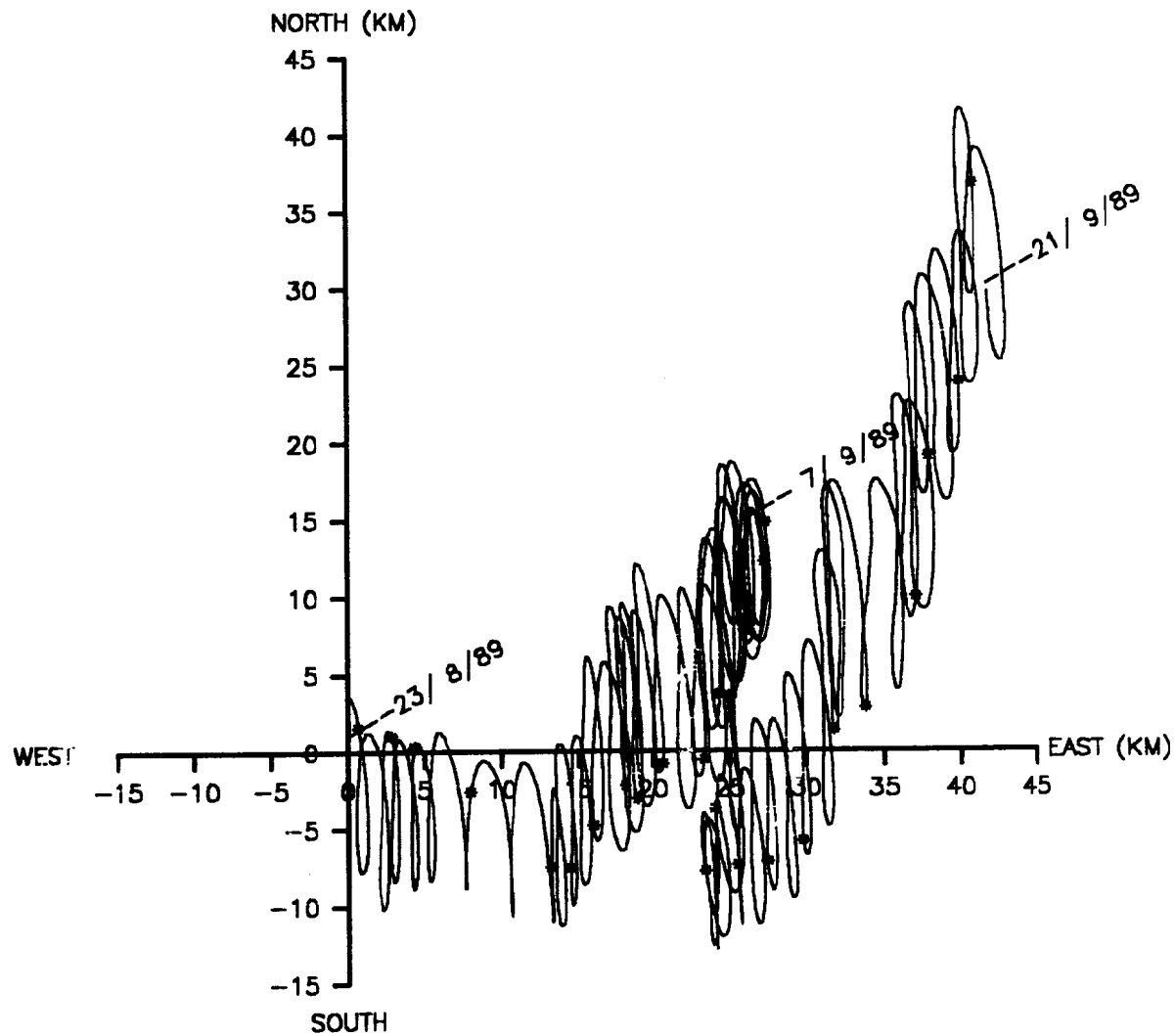
Meter no. 1263 Rig no. C59EC Depth of water(m) 49.0
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
Position 52 41.02N 02 24.67E Meter Height(m) 35.0



23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
89 89
Aug Sep

VECTOR PLOT

Meter no. 1263 Rig no. C59EC Depth of water(m) 49.0
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
Position 52 41.02N 02 24.67E Meter Height(m) 35.0



STATISTICS FOR S41263T C59ECS A

	Mean	Variance	Standard deviation
Eastings	0.0168	0.56086443E-02	0.74890852E-01
Northings	0.0119	0.34932083E+00	0.59103376E+00
Speed	0.5316	0.72664499E-01	0.26956356E+00

Vector mean speed 0.0206
 Vector Mean Direction 54.7

Maximum ten values

Eastings					Northings				
0.234	0.229	0.227	0.223	0.222	1.234	1.222	1.216	1.208	1.205
0.214	0.211	0.205	0.203	0.201	1.201	1.199	1.192	1.191	1.185

Minimum ten values

Eastings					Northings				
-0.143	-0.143	-0.143	-0.144	-0.146	-1.022	-1.023	-1.027	-1.028	-1.029
-0.146	-0.161	-0.161	-0.170	-0.173	-1.030	-1.035	-1.038	-1.046	-1.050

Maximum speeds

1.235	1.222	1.216	1.208	1.206	1.201	1.200	1.193	1.191	1.186
1.183	1.180	1.171	1.167	1.165	1.164	1.158	1.153	1.151	1.146
1.122	1.120	1.118	1.116	1.111	1.111	1.105	1.104	1.102	1.098
1.098	1.098	1.094	1.094	1.092	1.091	1.090	1.090	1.089	1.088
1.086	1.083	1.082	1.081	1.079	1.079	1.078	1.076	1.075	1.074
1.074	1.074	1.074	1.074	1.073	1.073	1.073	1.072	1.068	1.068
1.068	1.066	1.066	1.066	1.066	1.065	1.063	1.062	1.061	1.061
1.060	1.060	1.058	1.058	1.058	1.058	1.058	1.058	1.056	1.055
1.053	1.053	1.052	1.052	1.051	1.051	1.050	1.050	1.049	1.049
1.048	1.048	1.048	1.047	1.047	1.046	1.045	1.044	1.044	1.044

Variance ellipse statistics

Maximum variance 0.3499E+00	Direction	-2.4
Minimum variance 0.4999E-02	Direction	87.6
Total variance 0.3549E+00	Ratio of variances	0.1429E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		1.9
Average direction. maxdir +PI/2 to maxdir -PI/2		177.9

STATISTICS FOR S41263T C59ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0152	0.31944504E-03	0.17873026E-01
Northings	0.0120	0.21000381E-02	0.45826174E-01
Speed	0.0457	0.68490836E-03	0.26170757E-01

Vector mean speed 0.0194
 Vector Mean Direction 51.7

Maximum ten values

Eastings					Northings				
0.067	0.064	0.062	0.053	0.048	0.114	0.105	0.101	0.092	0.083
0.046	0.041	0.038	0.036	0.035	0.081	0.072	0.067	0.067	0.062

Minimum ten values

Eastings					Northings				
-0.009	-0.010	-0.011	-0.013	-0.017	-0.057	-0.064	-0.074	-0.078	-0.085
-0.018	-0.018	-0.020	-0.021	-0.021	-0.090	-0.093	-0.096	-0.097	-0.099

Maximum speeds

0.115	0.107	0.101	0.099	0.097	0.096	0.093	0.092	0.090	0.087
0.085	0.083	0.079	0.077	0.074	0.073	0.072	0.071	0.071	0.068
0.067	0.066	0.066	0.062	0.060	0.058	0.057	0.056	0.055	0.054
0.052	0.049	0.047	0.046	0.045	0.044	0.044	0.044	0.043	0.043
0.041	0.041	0.041	0.040	0.039	0.039	0.039	0.038	0.038	0.037
0.037	0.035	0.035	0.035	0.034	0.034	0.034	0.034	0.033	0.033
0.033	0.032	0.032	0.032	0.031	0.030	0.030	0.030	0.029	0.028
0.028	0.026	0.026	0.026	0.025	0.024	0.023	0.022	0.019	0.019
0.018	0.017	0.014	0.014	0.013	0.013	0.011	0.010	0.009	0.009
0.005	0.003								

Variance ellipse statistics

Maximum variance	0.2131E-02	Direction	7.4
Minimum variance	0.2888E-03	Direction	97.4
Total variance	0.2419E-02	Ratio of variances	0.1355E+00
Average direction. maxdir	-PI/2 to maxdir +PI/2		22.0
Average direction. maxdir	+PI/2 to maxdir -PI/2		148.4

Meter information details for 1112

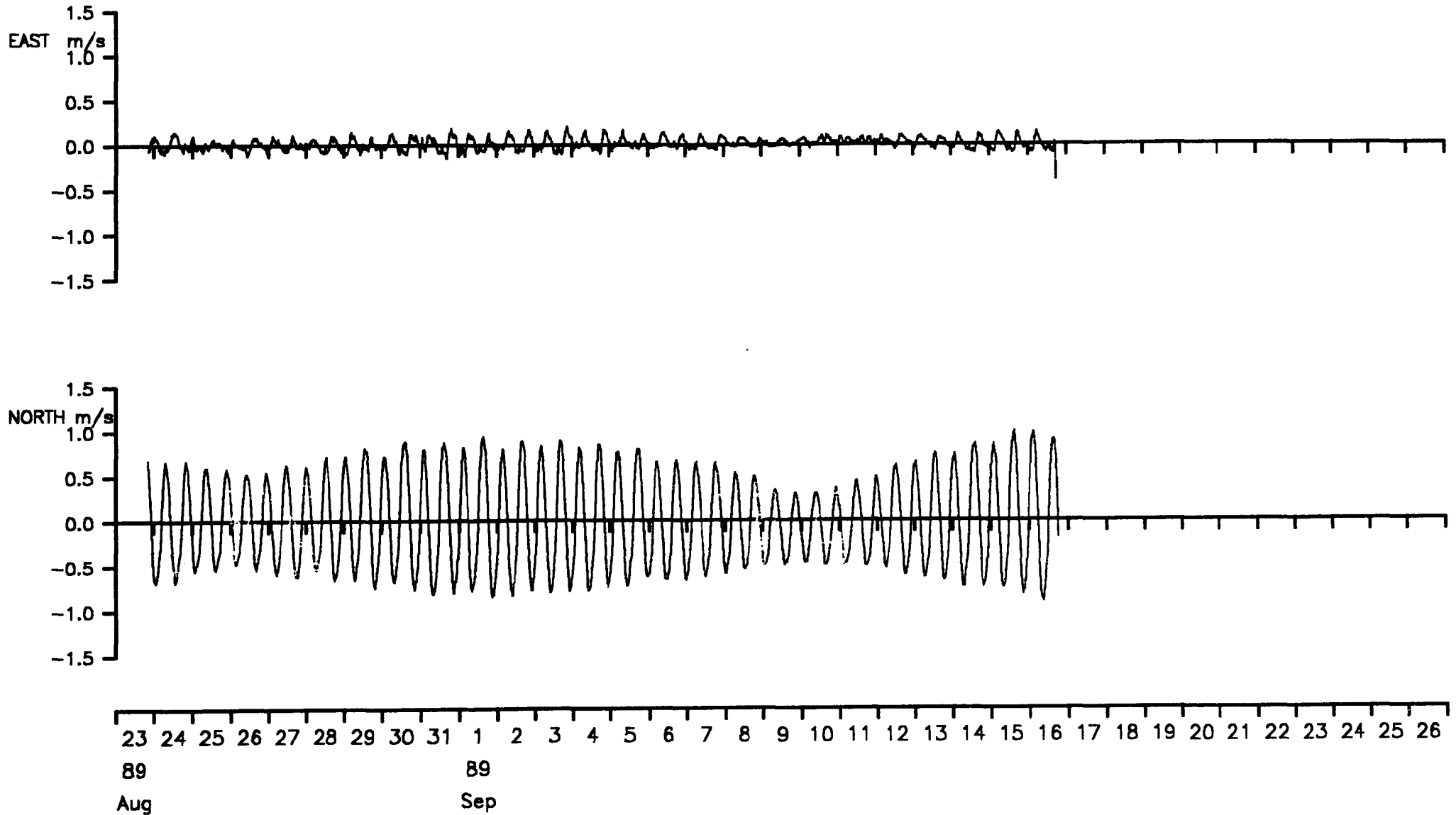
Rig No	:	C59EC
Meter No	:	1112
Recording interval	:	600.0 seconds
Meter height from bottom	:	20.0 m
Position of meter on rig	:	M
Meter type	:	S4
Meter started	:	23-AUG-89 19:33:00
Time of last valid scan	:	16-SEPT-89 17:53:00
Period of good data	:	23.9 days short record
Total number of scans	:	3441
Timing error	:	None
Comments	:	Meter stop recording towards end of deployment

VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 1112 Rig no. C59EC Depth of water(m) 49.0

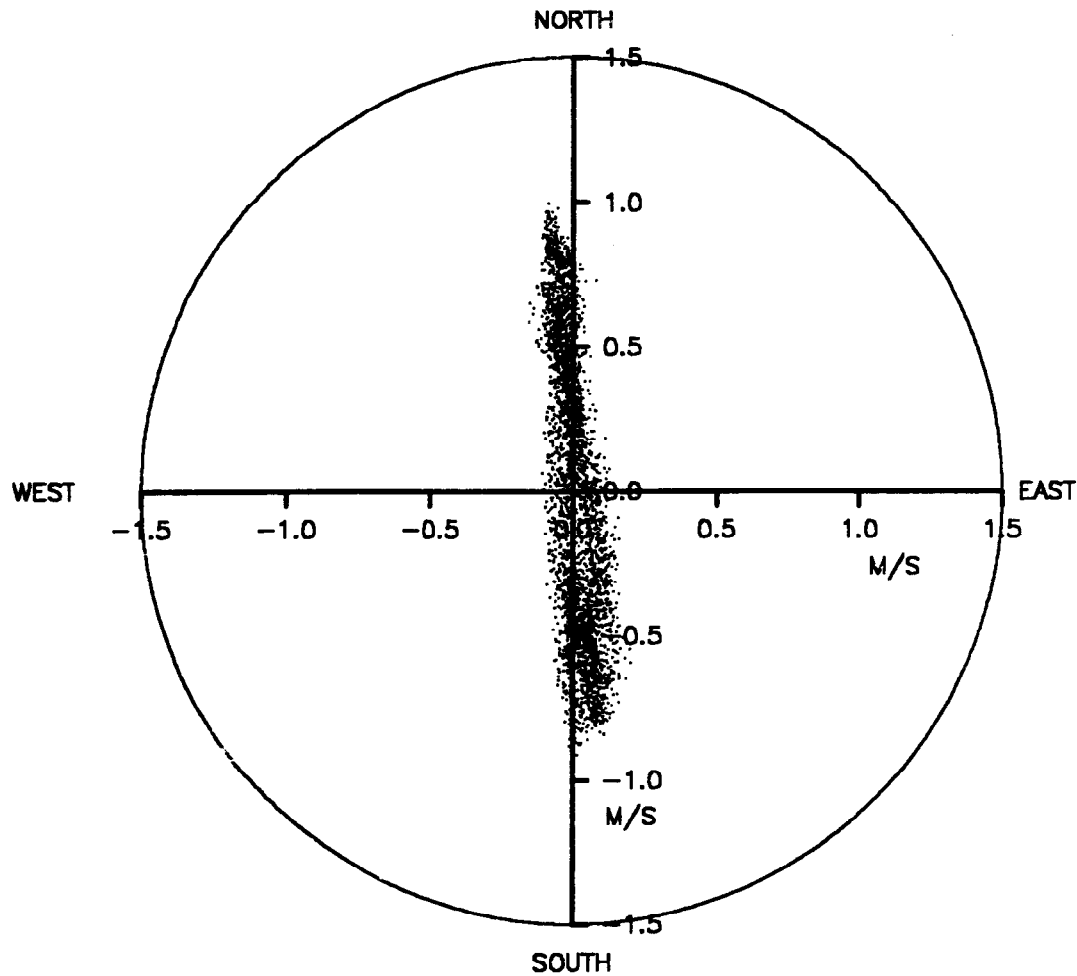
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00

Position 52 41.02N 02 24.67E Meter Height(m) 20.0



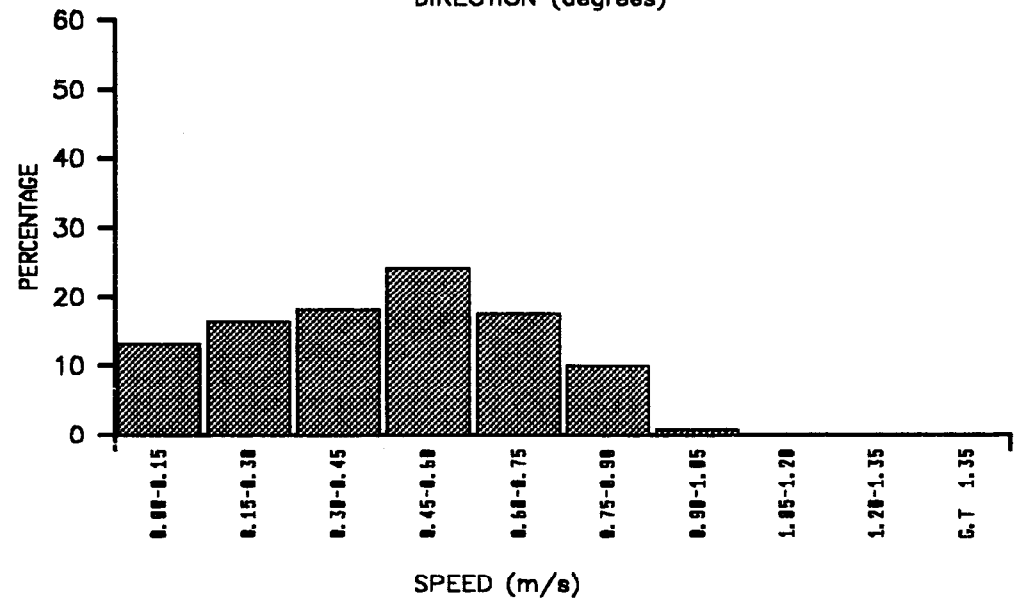
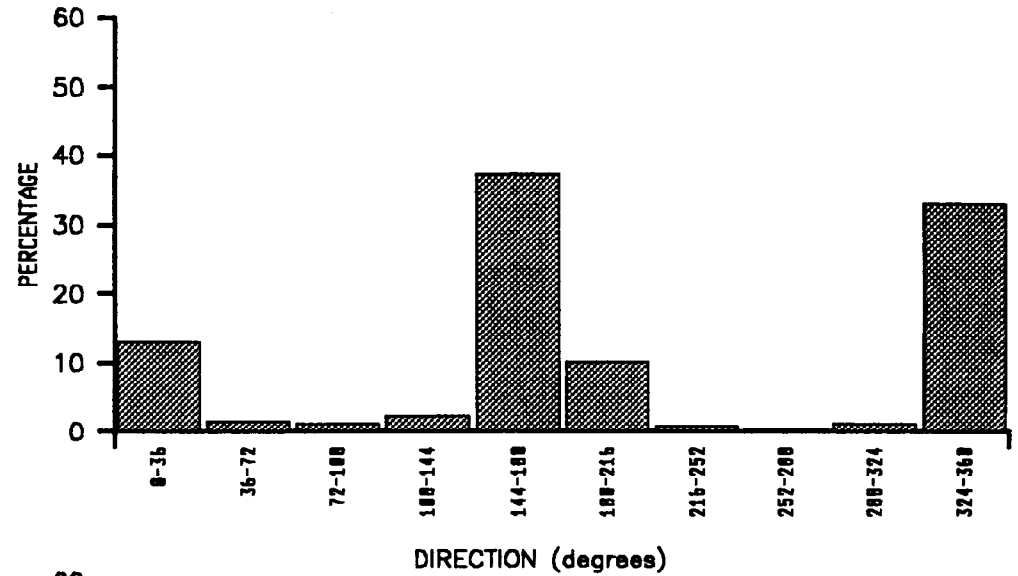
SCATTER PLOT

Meter no. 1112 Rig no. C59EC Depth of water(m) 49.0
 Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
 Position 52 41.02N 02 24.67E Meter Height(m) 20.0



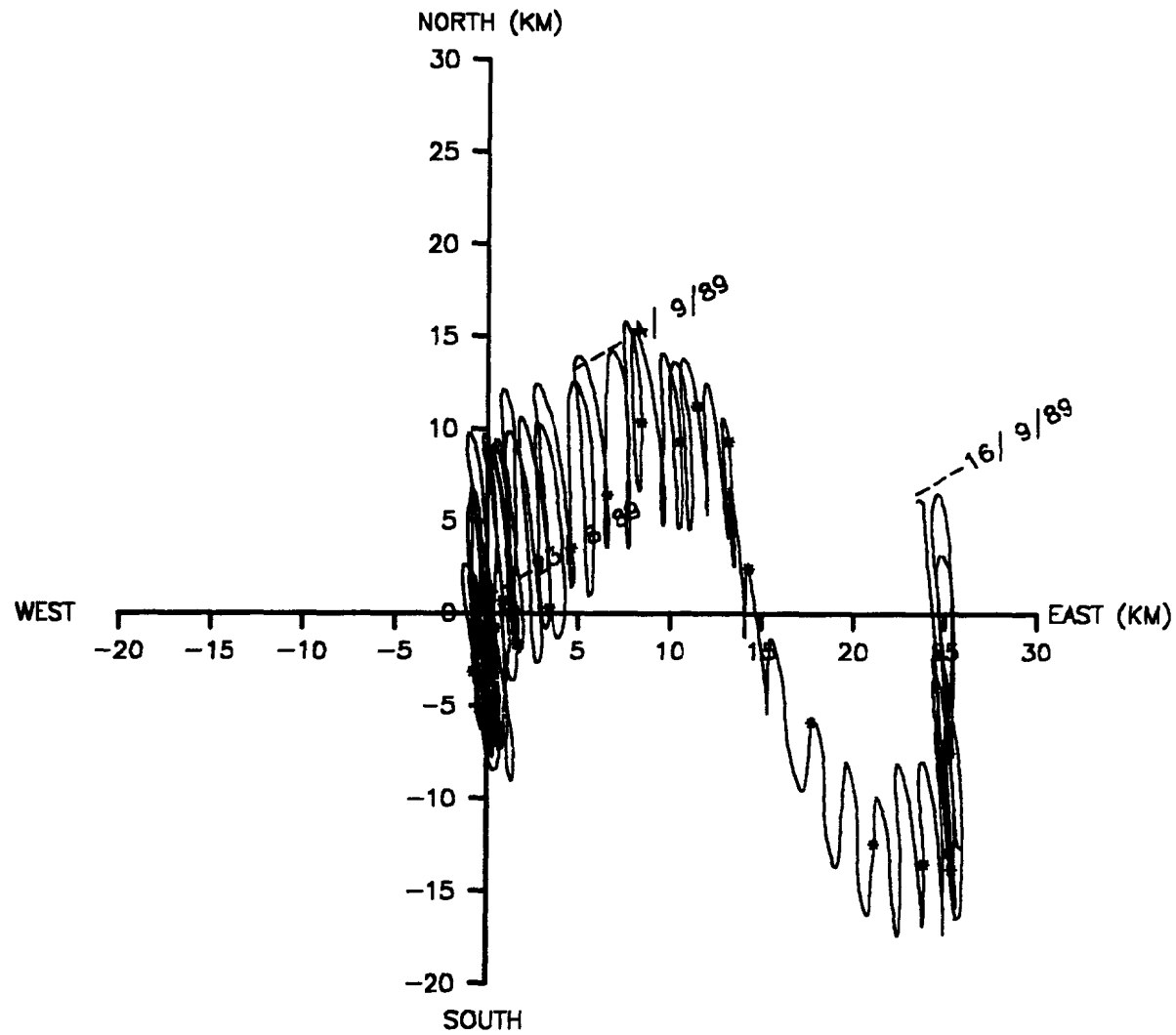
HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 1112 Rig no. C59EC Depth of water(m) 49.0
 Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
 Position 52 41.02N 02 24.67E Meter Height(m) 20.0



VECTOR PLOT

Meter no. 1112 Rig no. C59EC Depth of water(m) 49.0
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
Position 52 41.02N 02 24.67E Meter Height(m) 20.0



STATISTICS FOR S41112M C59ECS A

	Mean	Variance	Standard deviation
Eastings	0.0114	0.35672393E-02	0.59726369E-01
Northings	0.0029	0.24973315E+00	0.49973309E+00
Speed	0.4485	0.52227609E-01	0.22853363E+00

Vector mean speed 0.0117
 Vector Mean Direction 75.5

Maximum ten values

Eastings					Northings				
0.204	0.199	0.188	0.183	0.174	0.994	0.979	0.968	0.966	0.966
0.166	0.165	0.165	0.162	0.161	0.965	0.955	0.954	0.950	0.950

Minimum ten values

Eastings					Northings				
-0.125	-0.127	-0.127	-0.129	-0.136	-0.858	-0.860	-0.869	-0.870	-0.872
-0.139	-0.151	-0.153	-0.214	-0.402	-0.872	-0.876	-0.878	-0.881	-0.913

Maximum speeds

0.998	0.980	0.972	0.970	0.970	0.968	0.958	0.958	0.954	0.952
0.948	0.946	0.946	0.942	0.937	0.936	0.930	0.930	0.923	0.922
0.918	0.915	0.914	0.913	0.908	0.908	0.906	0.904	0.900	0.898
0.895	0.892	0.892	0.891	0.890	0.890	0.887	0.886	0.886	0.883
0.882	0.882	0.881	0.881	0.880	0.880	0.878	0.878	0.877	0.877
0.876	0.876	0.875	0.874	0.874	0.873	0.872	0.872	0.872	0.872
0.870	0.870	0.869	0.869	0.868	0.868	0.864	0.864	0.864	0.864
0.864	0.864	0.864	0.864	0.863	0.862	0.862	0.862	0.862	0.858
0.858	0.858	0.858	0.858	0.857	0.857	0.857	0.856	0.854	0.853
0.852	0.852	0.850	0.849	0.849	0.848	0.848	0.846	0.846	0.845

Variance ellipse statistics

Maximum variance 0.2512E+00	Direction	-4.4
Minimum variance 0.2098E-02	Direction	85.6
Total variance 0.2533E+00	Ratio of variances	0.8353E-02
Average direction. maxdir -PI/2 to maxdir +PI/2		3.1
Average direction. maxdir +PI/2 to maxdir -PI/2		176.8

STATISTICS FOR S41112M C59ECSF A

	Mean	Variance	Standard deviation
Eastings	0.0164	0.16130485E-03	0.12700584E-01
Northings	-0.0059	0.14381788E-02	0.37923325E-01
Speed	0.0360	0.59061567E-03	0.24302587E-01

Vector mean speed 0.0174
 Vector Mean Direction 110.0

Maximum ten values

Eastings					Northings				
0.044	0.044	0.042	0.042	0.038	0.043	0.041	0.038	0.036	0.035
0.036	0.035	0.033	0.032	0.030	0.034	0.034	0.033	0.032	0.031

Minimum ten values

Eastings					Northings				
0.002	0.002	0.001	0.000	-0.002	-0.066	-0.069	-0.078	-0.081	-0.086
-0.003	-0.006	-0.006	-0.009	-0.009	-0.088	-0.091	-0.091	-0.092	-0.092

Maximum speeds

0.100	0.099	0.098	0.097	0.093	0.092	0.087	0.080	0.079	0.067
0.063	0.054	0.046	0.044	0.041	0.041	0.041	0.039	0.038	0.038
0.036	0.036	0.035	0.035	0.034	0.034	0.033	0.033	0.033	0.033
0.032	0.032	0.032	0.032	0.031	0.031	0.031	0.031	0.031	0.030
0.028	0.028	0.027	0.027	0.027	0.024	0.024	0.024	0.024	0.023
0.023	0.022	0.021	0.021	0.020	0.020	0.019	0.019	0.019	0.017
0.017	0.016	0.014	0.014	0.014	0.013	0.013	0.010	0.010	0.009
0.008	0.002								

Variance ellipse statistics

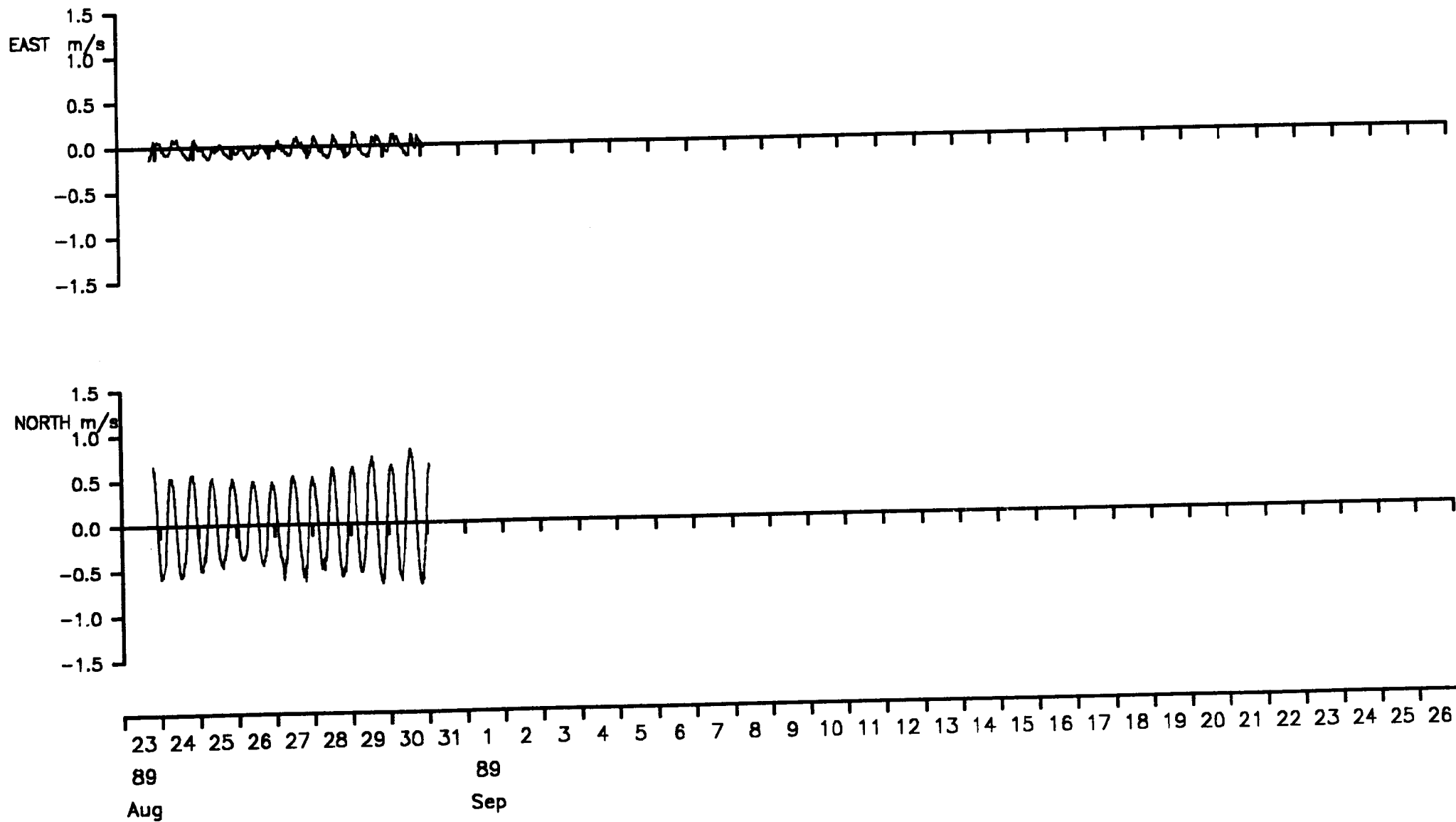
Maximum variance 0.1483E-02	Direction	-10.5
Minimum variance 0.1160E-03	Direction	79.5
Total variance 0.1599E-02	Ratio of variances	0.7821E-01
Average direction. maxdir -PI/2 to maxdir +PI/2		37.1
Average direction. maxdir +PI/2 to maxdir -PI/2		148.0

Meter information details for 9378

Rig No	:	C59EC
Meter No	:	9378
Recording interval	:	600.0 seconds
Meter height from bottom	:	7.0 m
Position of meter on rig	:	B
Meter type	:	AS
Meter started	:	23-AUG-89 17:10:00
Time of last valid scan	:	31-AUG-89 02:10:00
Period of good data	:	7.2 days short record
Total number of scans	:	1043
Timing error	:	None
Comments	:	Fishing line found wrapped around rotor/paddle

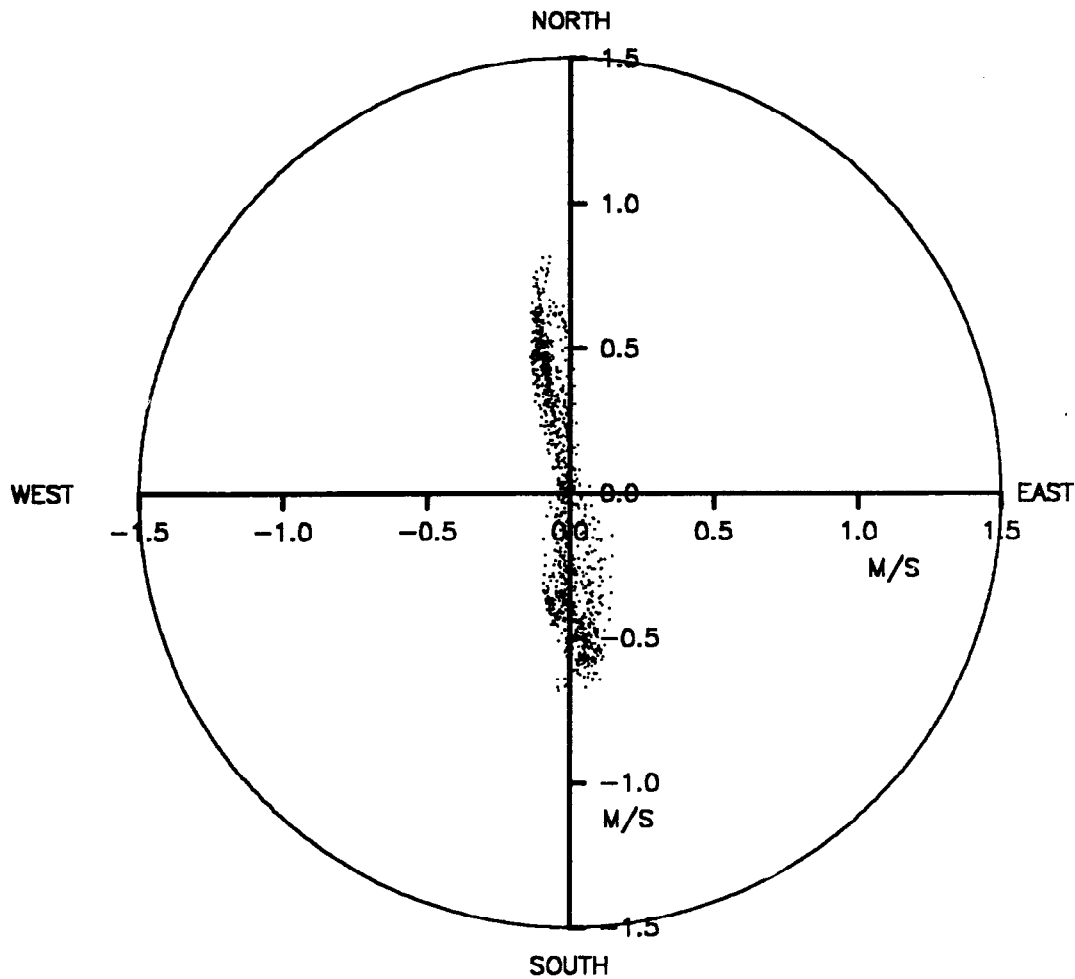
VELOCITY COMPONENT TIME SERIES PLOT

Meter no. 9378 Rig no. C59EC Depth of water(m) 49.0
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
Position 52 41.02N 02 24.67E Meter Height(m) 7.0



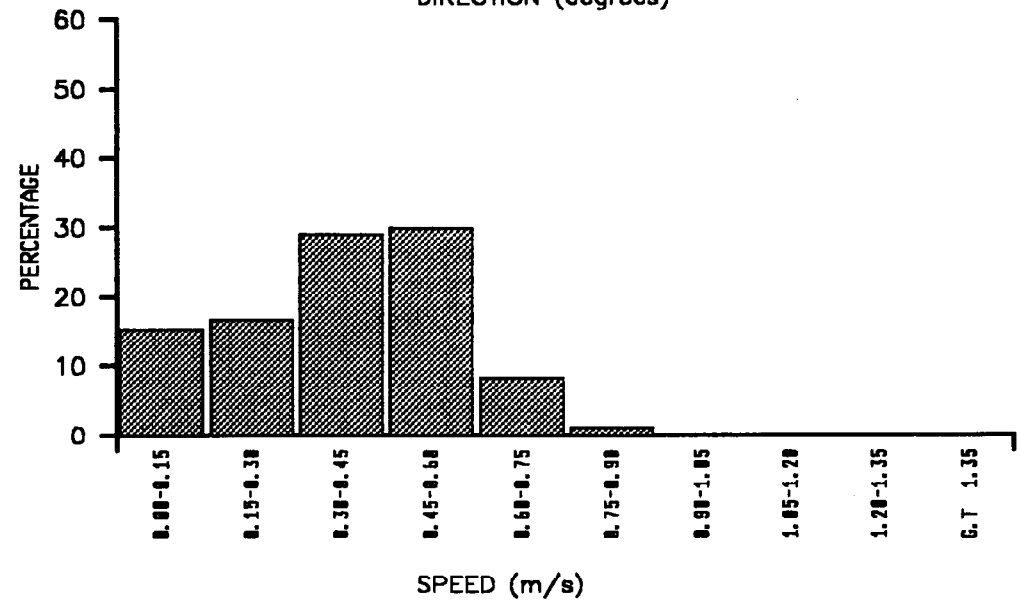
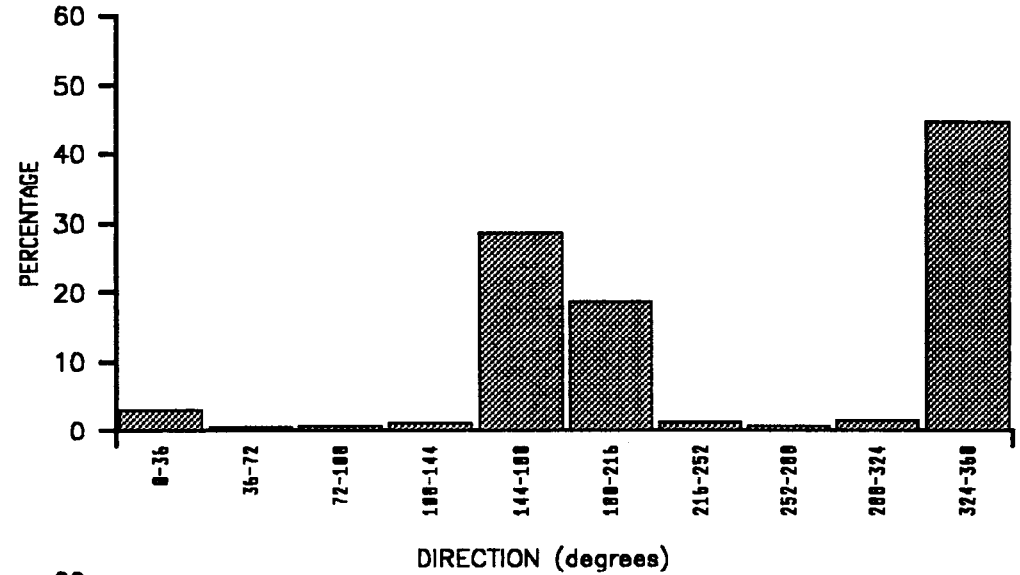
SCATTER PLOT

Meter no. 9378 Rig no. C59EC Depth of water(m) 49.0
 Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
 Position 52 41.02N 02 24.67E Meter Height(m) 7.0



HISTOGRAMS FOR SPEEDS AND DIRECTIONS

Meter no. 9378 Rig no. C59EC Depth of water(m) 49.0
 Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
 Position 52 41.02N 02 24.67E Meter Height(m) 7.0

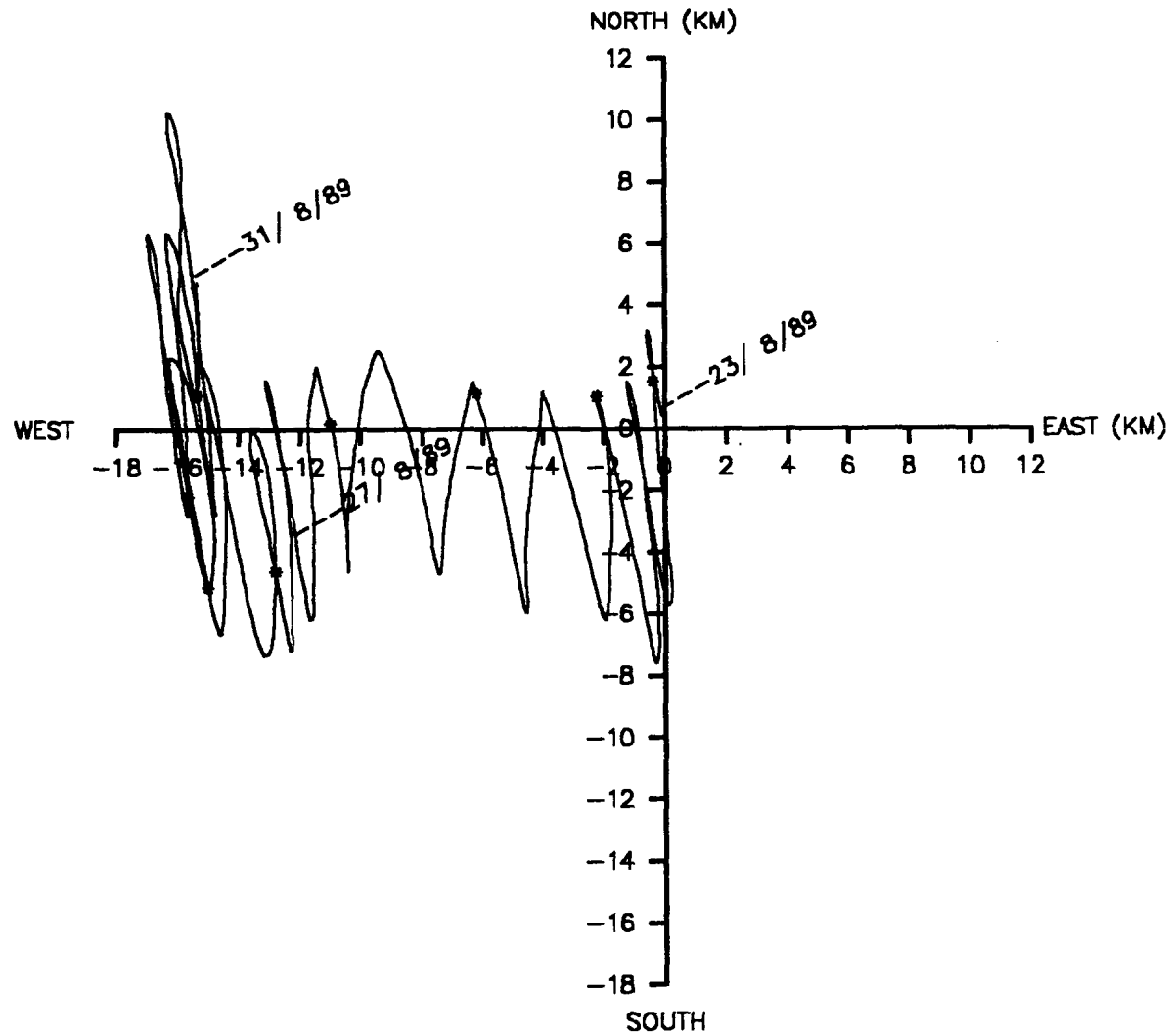


VECTOR PLOT

Meter no. 9378 Rig no. C59EC Depth of water(m) 49.0

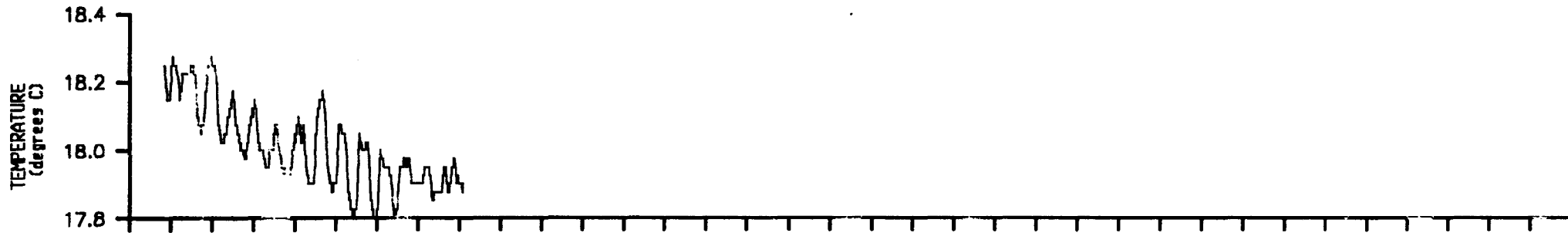
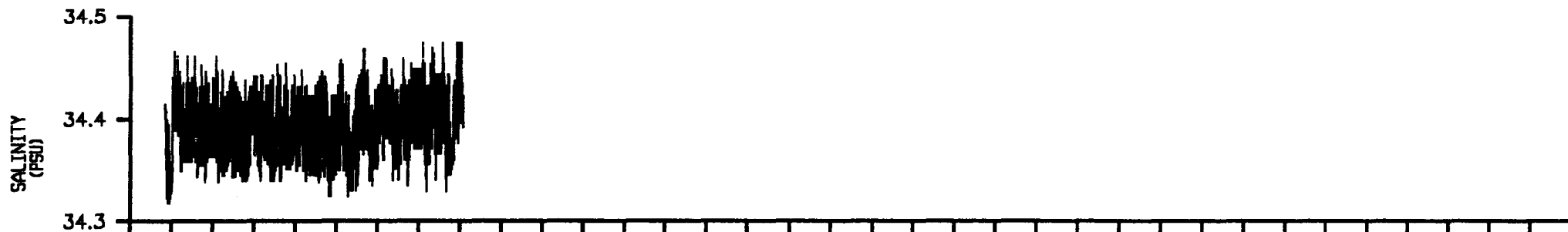
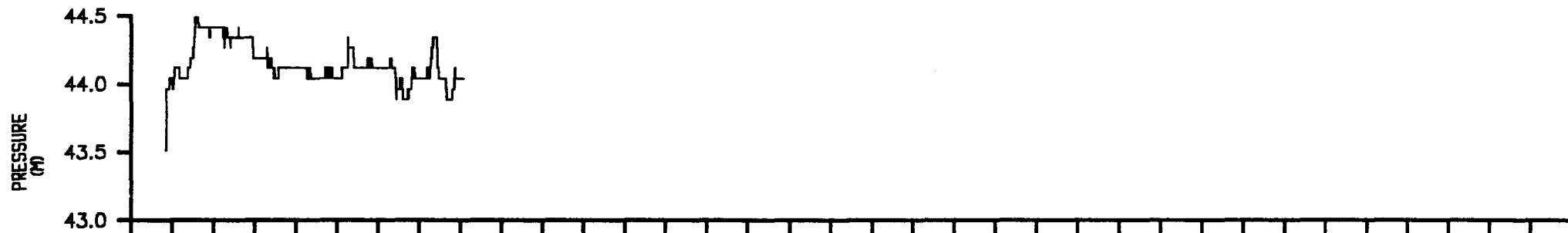
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00

Position 52 41.02N 02 24.67E Meter Height(m) 7.0



TEMPERATURE, SALINITY AND PRESSURE TIME SERIES PLOTS

Meter no. 9378 Rig no. C59EC Depth of water(m) 49.0
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
Position 52 41.02N 02 24.67E Meter Height(m) 7.0



23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
89 89
Aug Sep

STATISTICS FOR AS9378B C59ECS A

	Mean	Variance	Standard deviation
Eastings	-0.0246	0.42975619E-02	0.65555811E-01
Northings	0.0076	0.17044365E+00	0.41284817E+00
Speed	0.3773	0.32875512E-01	0.18131602E+00

Vector mean speed 0.0257
 Vector Mean Direction -72.9

Maximum ten values

Eastings					Northings				
0.147	0.147	0.145	0.143	0.140	0.813	0.810	0.792	0.774	0.771
0.138	0.123	0.122	0.122	0.117	0.766	0.760	0.760	0.753	0.747

Minimum ten values

Eastings					Northings				
-0.132	-0.132	-0.132	-0.133	-0.133	-0.642	-0.643	-0.645	-0.647	-0.648
-0.134	-0.135	-0.135	-0.138	-0.140	-0.665	-0.671	-0.671	-0.672	-0.684

Maximum speeds

0.816	0.816	0.796	0.781	0.775	0.772	0.769	0.764	0.758	0.752
0.752	0.746	0.732	0.732	0.723	0.720	0.711	0.708	0.703	0.700
0.697	0.697	0.688	0.685	0.679	0.679	0.674	0.674	0.674	0.671
0.668	0.668	0.665	0.656	0.653	0.653	0.653	0.647	0.647	0.647
0.647	0.645	0.645	0.645	0.645	0.642	0.642	0.642	0.642	0.639
0.639	0.636	0.636	0.636	0.633	0.630	0.630	0.630	0.630	0.630
0.630	0.630	0.630	0.627	0.627	0.624	0.624	0.624	0.624	0.621
0.621	0.621	0.618	0.618	0.618	0.618	0.615	0.615	0.615	0.615
0.613	0.613	0.613	0.613	0.613	0.613	0.610	0.607	0.607	0.604
0.604	0.604	0.604	0.604	0.601	0.601	0.601	0.598	0.598	0.598

Variance ellipse statistics

Maximum variance	0.1729E+00	Direction	-6.9
Minimum variance	0.1813E-02	Direction	83.1
Total variance	0.1747E+00	Ratio of variances	0.1049E-01
Average direction. maxdir	-PI/2 to maxdir +PI/2		-3.6
Average direction. maxdir	+PI/2 to maxdir -PI/2		184.4

STATISTICS FOR AS9378B C59ECSF A

	Mean	Variance	Standard deviation
Eastings	-0.0264	0.19113168E-03	0.13825033E-01
Northings	-0.0203	0.60109014E-04	0.77529997E-02
Speed	0.0353	0.85029358E-04	0.92211366E-02

Vector mean speed 0.0333
 Vector Mean Direction -127.6

Maximum ten values					Northings				
Eastings									
-0.015	-0.015	-0.021	-0.033	-0.047	-0.008	-0.018	-0.021	-0.026	-0.028
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Minimum ten values					Northings				
Eastings									
-0.015	-0.015	-0.021	-0.033	-0.047	-0.008	-0.018	-0.021	-0.026	-0.028
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Maximum speeds
 0.048 0.039 0.035 0.030 0.024

Variance ellipse statistics

Maximum variance 0.2297E-03 Direction -64.5
 Minimum variance 0.2149E-04 Direction 25.5
 Total variance 0.2512E-03 Ratio of variances 0.9355E-01
 Average direction. maxdir -PI/2 to maxdir +PI/2 0.0
 Average direction. maxdir +PI/2 to maxdir -PI/2 0.0

STICK TIME SERIES PLOT

Rig no. C59EC Depth of water(m) 49.0
Start/End 1989/08/23 AT 20:23:00 1989/09/22 AT 18:50:00
Position 52 41.02N 02 24.67E
Filtered Series Scale 0.1 m/s

Meter No.	Meter Height
9378	7.0 M
1112	20.0 M
1263	35.0 M

