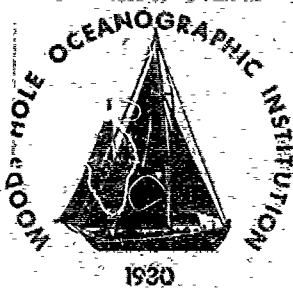


12

WHOI-81-45

Woods Hole Oceanographic Institution



A COMPILATION OF MOORED CURRENT METER AND
WIND RECORDER OBSERVATIONS
VOLUME XXVI (1972 MEASUREMENTS)

by

DeLores Chausse
and
Richard Fayne

May 1981

TECHNICAL REPORT

*Prepared for the Office of Naval Research
under Contracts N00014-66-C-6211; NR 083-
004 and N00014-76-C-0197; NR 08J-400 and
for the Applied Physics Laboratory of the
John Hopkins University under Contract
379115.*

*Approved for public release; distribution
unlimited.*

WOODS HOLE, MASSACHUSETTS 02543

82 07 13 013

DTIC FILE COPY

DTIC

TE

JUL 13 1982

**Best
Available
Copy**

UNCLASSIFIED 5/81

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER WHOI-81-45	2. GOVT ACCESSION NO. ADA117081	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A COMPILATION OF MOORED CURRENT METER AND WIND RECORDER OBSERVATIONS - VOLUME XXVI (1972 MEASUREMENTS)		5. TYPE OF REPORT & PERIOD COVERED Technical
7. AUTHOR(s) Dolores Chausse and Richard Payne		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Woods Hole Oceanographic Institution Woods Hole, Massachusetts 02543		8. CONTRACT OR GRANT NUMBER(s) *N00014-66-C-0241; NR 083- 004 and N00014-76-C-0197; NR 083-400
11. CONTROLLING OFFICE NAME AND ADDRESS NORDA/National Space Technology Laboratory Bay St. Louis, MS 39529		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS * NR 083-004 NR 083-400
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE May 1981
		13. NUMBER OF PAGES 295 pages
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES This report was also supported by funds from the Applied Physics Laboratory of the John Hopkins University under Contract 372115.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Moorings 2. Current meter data 3. Gulf Stream		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Summaries of moored current meter and associated oceanographic data collected in 1972 in the Atlantic Ocean by the Woods Hole Oceanographic Insti- tution are presented. The averaged current, wind and temperature data are pre- sented as STATISTICS, PROGRESSIVE VECTORS, SPECIAL DIAGRAMS and VECTOR and SCALAR PLOTS versus TIME. The associated hydrostation data are presented as TEMPERATURE and SALINITY plotted against DEPTH.		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-014-6601UNCLASSIFIED 5/81
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

WHOI-81-45

A COMPILATION OF MOORED CURRENT METER AND
WIND RECORDER OBSERVATIONS
VOLUME XXVI (1972 MEASUREMENTS)

by

Dolores Chausse
and
Richard Payne

WOODS HOLE OCEANOGRAPHIC INSTITUTION
Woods Hole, Massachusetts 02543

May 1981

TECHNICAL REPORT

*Prepared for the Office of Naval Research under Contracts
N00014-66-C-0241; NR 083-004, N00014-76-C-0197; NR 083-400
and for the Applied Physics Laboratory of The John Hopkins
University under Contract 372115.*

*Reproduction in whole or in part is permitted for any pur-
pose of the United States Government. This report should
be cited as: Woods Hole Oceanog. Inst. Tech. Rept. WHOI-
81-45.*

Approved for public release; distribution unlimited.

Approved for Distribution:

Valentine Worthington
Valentine Worthington, Chairman
Department of Physical Oceanography

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Special
A	



ABSTRACT

Summaries of moored current meter and associated oceanographic data collected in 1972 in the Atlantic Ocean by the Woods Hole Oceanographic Institution are presented. The averaged current, wind and temperature data are presented as STATISTICS, PROGRESSIVE VECTORS, SPECTRAL DIAGRAMS and VECTOR and SCALAR PLOTS versus TIME. The associated hydrostation data are presented as TEMPERATURE and SALINITY plotted against DEPTH.

Table of Contents

	Page	Fiche #/Row/Col.
Abstract	i	1-A-2
Table of Contents	ii	1-A-3
Preface	iii	1-A-5
Acknowledgments	iv	1-A-4
Introduction	1	1-B-1
Instrumentation	4	1-B-2
Data Quality	4	1-B-2
Data Processing	4	1-B-2
Data Presentation	5	1-B-3
1. Time Series	5	1-B-3
2. Progressive Vectors	5	1-B-3
3. Spectra	5	1-B-3
4. Mean Statistics	6	1-B-4
Hydrographic Data	6	1-B-4
Fiche Presentation	7	1-C-3
Bibliography	8	1-B-5
Mooring 422		1-D-1
423		1-F-1
429		1-A-8
437		2-A-1
438		2-B-1
440		2-C-1
441		2-D-1
442		2-F-1
443		2-A-8
444		2-C-8
445		2-E-8
446		2-F-8
447		2-G-8
449		3-A-1
450		3-C-1
456		3-E-1
462		3-F-1
465		3-A-8
466		3-C-8
468		3-D-8
469		4-A-1
477		4-A-8
478		4-D-8
479		4-F-8

Preface

This volume is the twenty-sixth in a series of Data Reports presenting moored current meter and associated data collected by the WHOI Buoy Group.

Volumes I through XXV present data obtained during the years 1963-1978, arranged either by year or experiment (see notes).

A data directory and bibliography for the years 1963-1978 has been published as WHOI Technical Report 79-88.

Volume XXVI presents data from 1972.

Volume No.	WHOI Ref. No.		Notes	
			Year	Experiment
I	65-44	Webster, F. and N. P. Fofonoff		
II	66-60	Webster, F. and N. P. Fofonoff		
III	67-66	Webster, F. and N. P. Fofonoff		
IV	70-40	Pollard, R. T.		
V	71-50	Tarbell, S. and F. Webster		
VI	74-4	Tarbell, S.	1967	measurements
VII	74-52	Chausse, D. and S. Tarbell	1968	measurements
VIII	75-7	Pollard, R. T. and S. Tarbell	1970	Array Data
IX	75-68	Tarbell, S., M. G. Briscoe and D. Chausse	1973	IWEX Array
X	76-40	Tarbell, S.	1969a	measurements
XI	76-41	Tarbell, S.	1969b	measurements
XII	76-101	Chausse, D. and S. Tarbell	1973	MODE Array
XIII	77-18	Tarbell, S. and A. W. Whitlatch	1970	measurements
XIV	77-41	Tarbell, S., R. Payne and R. Walden	1976	mooring 592 Saint Croix
XV	77-56	Tarbell, S. and A. W. Whitlatch	1971	measurements
XVI	78-5	Tarbell, S. and A. Spencer	1971-1975	MODE Site
XVII	78-49	Tarbell, S., A. Spencer and R. E. Payne	1975-1977	POLYMODE Array II
XVIII	79-65	Tarbell, S., M. G. Briscoe and R. A. Weller	1978	JASIN
XIX	79-34	Spencer, A., C. Mills and R. Payne	1974-1975	POLYMODE Array I
XX	79-56	Spencer, A.	1974	Rise Array
XXI	79-85	Mills, C. and P. Rhines	1978	W.B.U.C.
XXII	79-87	Tarbell, S. and R. Payne	1973	measurements
XXIII	80-40	Tarbell, S. and R. Payne	1978	POLYMODE Array III
XXIV	80-41	Spencer, A., K. O'Neill and J. R. Luyten	1976	INDEX
XXV		Spencer, A., E. D'Asaro and L. Armi	The Benthic Boundary Layer Experiment on the Hatteras Abyssal Plain: current and temperature observat.	

Acknowledgments

The Office of Naval Research under contracts N00014-66-C-0241 NR 083-004 and N00014-76-C-0197, NR 083-400 supported the experiments and data preparation for most of this report. Mooring 462 was supported by the Applied Physics Laboratory of The Johns Hopkins University under contract number 372115.

Introduction

This report includes current meter data from a number of moorings set in 1972 by the Buoy Group of the Woods Hole Oceanographic Institution. Also included are hydrographic data where available and appropriate. Data from other moorings set in 1972 have been reported in SCOR Working Group 21, 1972 (1975) and in Chausse and Tarbell (1976). Table 1 lists some information about the moorings included in this report.

Several distinct experiments are represented in this report as well as some moorings which are part of the long series which the Buoy Group maintained at Site D.

Moorings 422, 423, 429, 449, 450, 465, 466, 468, 474, 478, 479 were part of a 1 year-long array set in the vicinity of Site D. Previous moorings from single moorings had yielded results consistent with a hypothesis of barotropic waves below the thermocline. The Site D Spatial Array was set to examine the spatial structure of the low frequency fluctuations. The data were used to determine wave numbers directly and show that energy is propagated from the region of the Gulf Stream to Site D in the form of topographic Rossby waves (Thompson, 1977).

A line of current meters, moorings 437-447, was set on bottom moorings upstream of the Kelvin Seamount in support of a program to determine the influence of the Seamount on the Gulf Stream.

Moorings 456 was set on the Muir Seamount to investigate the existence of trapped waves driven by the diurnal tide.

Moorings 462 was set as the field work part of the Cape Cod Experiment (Zenk and Briscoe, 1974). The Experiment was to observe and interpret internal wave motions near the sea surface in a high frequency range including the limiting Brunt-Väisälä frequency.

Moorings 469 was set for 6 days to provide data for a theoretical treatment of mooring dynamics (Chhabra, 1976), (Chhabra *et al.*, 1974). Because of the rapid recording rate of the current meters on mooring 469, the results of digitization errors are apparent at high frequencies in the spectra (Payne and Smith, 1980).

Figure 1 and Table 1 give pertinent data on the twenty-four moorings included in this report.

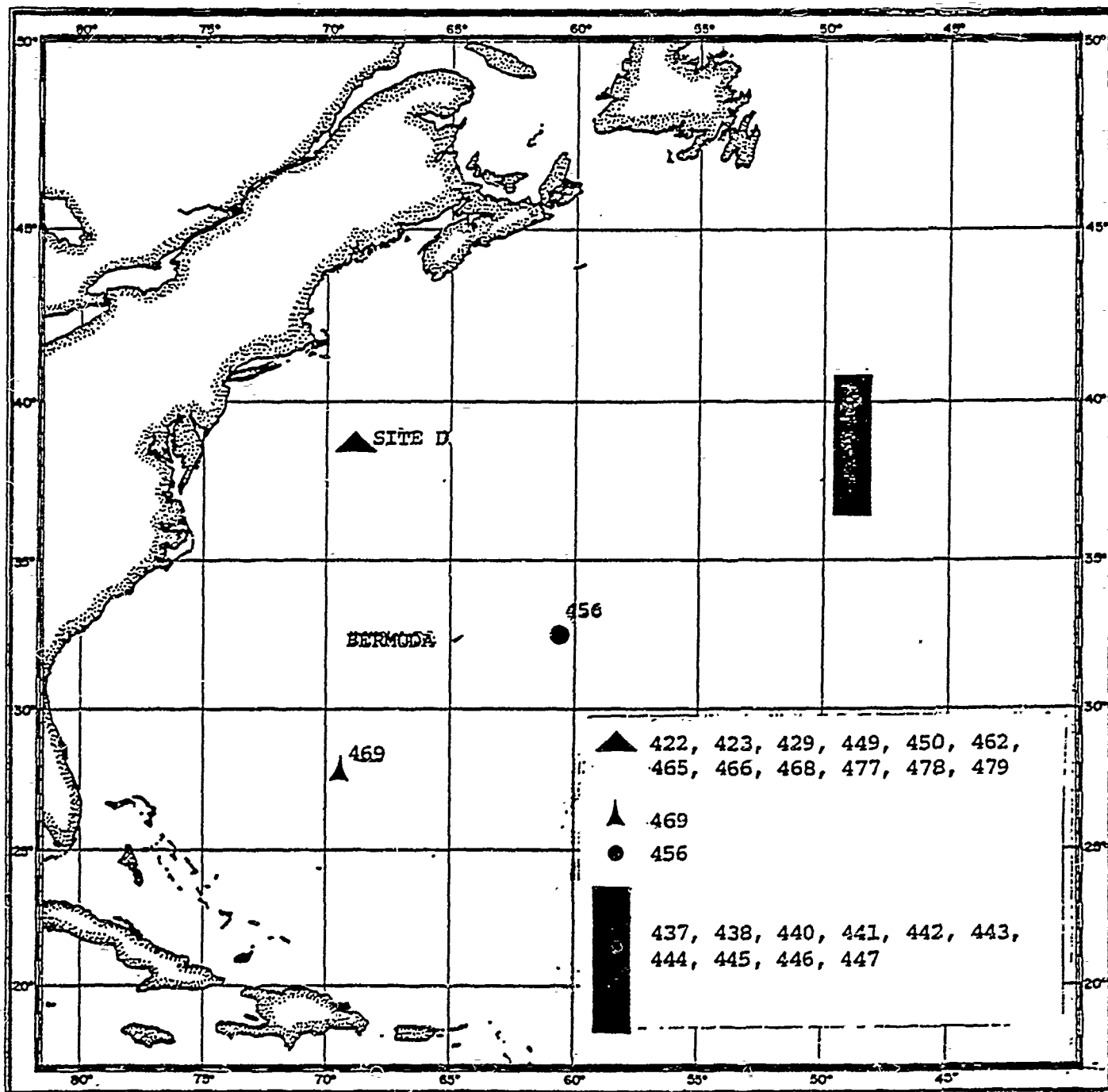


Figure 1. Location of moorings included in this report

Table 1

<u>Month</u>		<u>Duration</u>		<u>Notes</u>
<u>No.</u>	<u>Set</u>	<u>Location</u>	<u>Type</u>	
422	Feb	Site D	Inter *	Site D Spatial Array
423	Feb	Site D	Inter	Site D Spatial Array
429	Mar	Site D	Surface	Site D Spatial Array
437	Apr	Gulf Stream	Bottom	Gulf Stream Array
438	Apr	Gulf Stream	Bottom	Gulf Stream Array
440	Apr	Gulf Stream	Bottom	Gulf Stream Array
441	Apr	Gulf Stream	Bottom	Gulf Stream Array
442	Apr	Gulf Stream	Bottom	Gulf Stream Array
443	Apr	Gulf Stream	Bottom	Gulf Stream Array
444	Apr	Gulf Stream	Bottom	Gulf Stream Array
445	Apr	Gulf Stream	Bottom	Gulf Stream Array
446	Apr	Gulf Stream	Bottom	Gulf Stream Array
447	Apr	Gulf Stream	Bottom	Gulf Stream Array
449	May	Site D	Inter	Site D Spatial Array
450	May	Site D	Inter	Site D Spatial Array
456	May	Muir S. M.	Inter	Muir Seamount Study
462	July	N. E. Slope	Bottom	Internal Wave Experiment
465	Aug	Site D	Inter	Site D Spatial Array
466	Aug	Site D	Inter	Site D Spatial Array
468	Sep	Site D	Inter	Site D Spatial Array
469	Oct	MODE	Inter	Mooring Dynamics Experiment
477	Dec	Site D	Inter	Site D Spatial Array
478	Dec	Site D	Inter	Site D Spatial Array
479	Dec	Site D	Inter	Site D Spatial Array

* Intermediate

Instrumentation

The instruments represented in this data report are the Vector Averaging Current Meter (VACM) and the EG&G Model 850. Both instruments use a Savonius rotor to measure water speed and a vane and internal compass to measure direction. In the VACM, East and North components are calculated from the compass and vane values 8 times per rotor revolution. The components are accumulated over the recording interval resulting in vector averaged velocities. In the 850 a series of 5 second samples of speed and instantaneous direction samples are recorded at the beginning of each recording interval.

The VACM has a thermistor embedded in its end cap just above the vane. Temperature accuracy is approximately $.01^{\circ}\text{C}$ (Payne *et al.*, 1976).

Both the VACM and 850 use a crystal oscillator with an accuracy of ± 1 second per day to set the time base. The VACM records on Phillips-type cassettes with Sea-Data recorders. The 850 records on endless loop magnetic tape cartridges.

Data Quality

The current meters performed well in all deployments but one. In 4297, an 850 current meter, the recorded compass and vane output registered 0 for 16 days in the middle of the record. The time series plots show a gap in direction and the stick plots. The PROVEC is in two pieces. The kinetic energy spectrum represents the longer of the two pieces. The mean statistics show speed for the whole record and East and North for only the good data with the 16 day gap removed.

Data Processing

The cassettes and cartridges were transcribed to 9-track computer compatible tapes, and the data were converted to scientific units, edited to remove launch and retrieval transients, and linearly interpolated across missing or erroneous data cycles.

The data are identified by a mooring number (here 422-479), a sequential instrument numbered from the surface down (e.g., 4293 is the third instrument down on mooring 429), a letter to indicate the data version (e.g., 4293B has been through two editing steps), and a number to indicate the data interval in seconds for that version (e.g., 4293B1800 is the basic data series). LH in place of the B1800 indicates a one-hour averaged version, 24 GAU indicates a 24 hour subsampled version of a Gaussian filtered series.

Data Presentation

The presentations in this report are time series, progressive vector plots, spectra and mean statistics. Additional details are below.

Time Series

The presentations use either the basic series or a 24 hour series. To make the 24 hour series, the basic time series is first filtered using a symmetrical running Gaussian filter with a half width of 24 hours. The filtering is sequential and the resultant time series is 48 hours shorter than the input time series. A simple running hat filter is then applied to form a series with one data point per day, the point representing the average from midnight to midnight.

Variables versus time and current vectors ("stick plots") versus time are presented. The former are based on the basic series, the latter on the 24 hour series.

Progressive Vectors

Based on the basic series, the current vectors are placed tail-to-head so as to show the path that a neutrally buoyant particle in a perfectly homogeneous fluid would have traveled. The plots are useful for giving an idea of the flow regimes and low frequency behavior. Symbols denote the beginning of a month.

Spectra

The horizontal kinetic energy (HKE) and (where available) the temperature series are displayed as spectra computed from the basic series.

The horizontal kinetic energy spectrum is half the sum of the spectra of the east and north components: it has the advantage of not being tied to a particular coordinate system.

The HKE and temperature spectra have units of $(\text{cm}^2/\text{sec}^2)/\text{cph}$ or $(^\circ\text{C})^2/\text{cph}$, respectively. The spectra are all one-sided, i.e. the area under the spectrum is equal to the variance of the original record. The spectra are presented as log-log plots ("not variance preserving").

The VACM spectra are all calculated based on averaging across four data segments of 4000 points each, followed by frequency-band averaging across three frequencies with a recording interval of 900 s. This gives a lowest frequency of $(666.7\text{h})^{-1}$ and a highest frequency of $(0.5\text{h})^{-1}$. The

850 spectra are based on averaging across a single data segment of up to 4000 points, followed by frequency band averaging across eight frequencies. With a recording interval of 1800 s this gives a lowest frequency of as low as $(500h)^{-1}$ and a maximum frequency of $(1h)^{-1}$. No data-windowing or prewhitening has been done.

TIMSAN, the W.H.O.I. program (Hunt, 1978) used to produce the spectra, additionally averages the spectra in increasing groups at the higher frequencies to prevent having to plot thousands of points; this gives few degrees of freedom (d.o.f.) at the lowest frequencies, many at the highest frequencies. For spectra calculated from 4 pieces with 3 frequencies averaged, there are 24 d.o.f. in the 40 lowest frequencies and 1200 d.o.f. in the two highest frequencies; the 95% confidence limits corresponding to these two extremes are (.61, 1.94) and (.97, 1.03).

Mean Statistics

The statistics for each variable for the time period shown are given for the basic series, also the east and north covariance, correlation, and vector statistics.

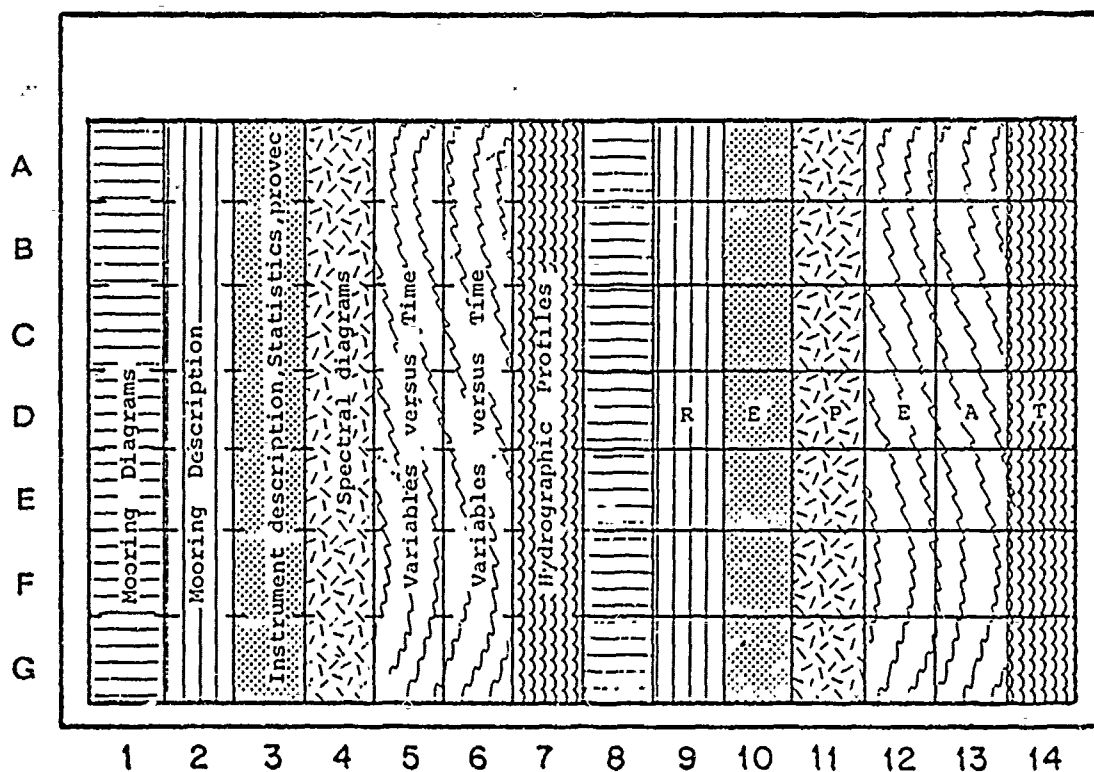
For reference note that a Gaussian random variable would have a kurtosis of 3 and a skewness of zero.

Hydrographic Data

Plots of temperature and salinity vs. depth are shown where there was a Nansen bottle cast near a mooring location.

Fiche Presentation

The entire report is presented on four fiche pages. The text, which is also printed, is reproduced on the first fiche page. A diagram of the fiche layout is below. Basically, each column shows the same type of information for each data series. Each row of 14 blocks includes two data sets, and, for every data set, there is a Provec, Stats, Spectra and Variable Time plot. Also included are mooring diagrams and mooring summary information. Some moorings have a plot of temperature and salinity vs. depth taken from Nansen bottle casts.



Bibliography

- Chhabra, N. K., J. M. Dahlen and M. R. Froidevaux, 1974
Mooring Dynamics Experiment. C. S. Draper Laboratory, Inc.
Report R-823.
- Chhabra, N. K., 1976
Mooring Mechanics -- A Comprehensive Computer Study -- Volume II --
Three Dimensional Dynamic Analysis of Moored and Drifting Buoy
Systems. C. S. Draper Laboratory, Inc. Report R-1066, uses data
from mooring 469 for model validation.
- Chausse, D. and S. Tarbell, 1976
A compilation of moored current data and associated oceanographic
observations. Volume XII (1973 Mid-Ocean Dynamics Experiment (MODE)).
Woods Hole Oceanographic Institution Technical Report WHOI Ref. 76-40.
- Hunt, M., 1978
A program for spectral analysis of time series. Woods Hole
Oceanographic Institution Technical Memorandum WHOI Ref. 2-77.
- Payne, R. E., A. Bradshaw, J. P. Dean and K. E. Schleicher, 1976
Accuracy of temperature measurements with the VACM. Woods Hole
Oceanographic Institution Technical Report WHOI Ref. 76-94.
- Payne, R. E. and W. Smith, 1980
Spectra of frequency counting digitization errors. Deep-Sea
Research, 27A, 583-589.
- SCOR Working Group 21-1972, 1975
An intercomparison of some current meters, III. UNESCO Technical
Papers in Marine Science, 23, UNESCO, Paris, 42 pp.
- Thompson, R.O.R.Y., 1977
Observations of Rossby waves near Site D. Progress in Oceanography,
7, 135-162.
- Zenk, W. and M. G. Briscoe, 1974
The Cape Cod Experiment on near-surface internal waves. Woods Hole
Oceanographic Institution Technical Report WHOI Ref. 74-87.

MANDATORY DISTRIBUTION LIST
FOR UNCLASSIFIED TECHNICAL REPORTS, REPRINTS, AND FINAL REPORTS
PUBLISHED BY OCEANOGRAPHIC CONTRACTORS
OF THE OCEAN SCIENCE AND TECHNOLOGY DIVISION
OF THE OFFICE OF NAVAL RESEARCH

(REVISED NOVEMBER 1978)

- 1 Deputy Under Secretary of Defense
(Research and Advanced Technology)
Military Assistant for Environmental Science
Room 3D129
Washington, D.C. 20301
- Office of Naval Research
800 North Quincy Street
Arlington, VA 22217
- 3 ATTN: Code 483
- 1 ATTN: Code 420C
- 2 ATTN: 102B
- 1 CDR Joe Spigai, (USN)
ONR Representative
Woods Hole Oceanographic Inst.
Woods Hole, MA 02543
- Commanding Officer
Naval Research Laboratory
Washington, D.C. 20375
- 6 ATTN: Library, Code 2627
- 12 Defense Technical Information Center
Cameron Station
Alexandria, VA 22314
ATTN: DCA
- Commander
Naval Oceanographic Office
NSTL Station
Bay St. Louis, MS 39522
- 1 ATTN: Code 8100
- 1 ATTN: Code 6000
- 1 ATTN: Code 3300
- 1 NODC/NOAA
Code D781
Wisconsin Avenue, N.W.
Washington, D.C. 20235
- 1 Mr. Michael H. Kelly
Administrative Contracting Officer
Department of the Navy
Office of Naval Research
Eastern/Central Regional Office
Building 114, Section D
666 Summer Street
Boston, MA 02210

Woods Hole Oceanographic Institution WHOI-81-45	1. Moorings 2. Current meter data 3. Gulf Stream I. Chausse, Dolores II. Payne, Richard III. H00014-66-C-0241; MR 083-004 IV. H00014-76-C-0197; MR 083-400 V. 372115	Woods Hole Oceanographic Institution WHOI-81-45	1. Moorings 2. Current meter data 3. Gulf Stream I. Chausse, Dolores II. Payne, Richard III. H00014-66-C-0241; MR 083-004 IV. H00014-76-C-0197; MR 083-400 V. 372115
A COMPILATION OF MOORED CURRENT METER AND WIND RECORDED OBSERVATIONS - VOLUME XXVI (1972 MEASUREMENTS) by Dolores Chausse and Richard Payne. 295 pages. May 1981. Prepared for the Office of Naval Research under Contracts H00014-66-C-0241; MR 083-004 and H00014-76-C-0197; MR 083-400 and for the Applied Physics Laboratory of The John Hopkins University under Contract 372115. Summaries of moored current meter and associated oceanographic data collected in 1972 in the Atlantic Ocean by the Woods Hole Oceanographic Institution are presented. The averaged current, wind and temperature data are presented as STATISTICS, PROGRESSIVE VECTORS, SPECIAL DIAGRAMS and VECTOR and SCALAR PLOTS versus TIME. The associated hydrostation data are presented as TEMPERATURE and SALINITY plotted against DEPTH. This report is UNCLASSIFIED		A COMPILATION OF MOORED CURRENT METER AND WIND RECORDED OBSERVATIONS - VOLUME XXVI (1972 MEASUREMENTS) by Dolores Chausse and Richard Payne. 295 pages. May 1981. Prepared for the Office of Naval Research under Contracts H00014-66-C-0241; MR 083-004 and H00014-76-C-0197; MR 083-400 and for the Applied Physics Laboratory of The John Hopkins University under Contract 372115. Summaries of moored current meter and associated oceanographic data collected in 1972 in the Atlantic Ocean by the Woods Hole Oceanographic Institution are presented. The averaged current, wind and temperature data are presented as STATISTICS, PROGRESSIVE VECTORS, SPECIAL DIAGRAMS and VECTOR and SCALAR PLOTS versus TIME. The associated hydrostation data are presented as TEMPERATURE and SALINITY plotted against DEPTH. This report is UNCLASSIFIED	

7

WHOI-81-45

A COMPILATION OF MOORED CURRENT METER AND
WIND RECORDER OBSERVATIONS
VOLUME XXVI (1972 MEASUREMENTS)

by

Dolores Chausse
and
Richard Payne

WOODS HOLE OCEANOGRAPHIC INSTITUTION
Woods Hole, Massachusetts 02543

May 1981

TECHNICAL REPORT

*Prepared for the Office of Naval Research under Contract
N00014-77-2-0011; N00014-78-2-0011; N00014-79-2-0011; N00014-80-2-0011
and for the Applied Physics Laboratory of The Johns Hopkins
University under Contract F44621.*

*Reproduction in whole or in part is permitted for any purpose
of the United States Government. This report should be
reproduced as: Woods Hole Oceanographic Institution, WHOI-81-45.*

Approved for public release; distribution unlimited.

Approved for Distribution:

Valentine Worthington
Valentine Worthington, Chairman
Department of Physical Oceanography

ABSTRACT

Summaries of moored current meter and associated oceanographic data collected in 1972 in the Atlantic Ocean by the Woods Hole Oceanographic Institution are presented. The averaged current, wind and temperature data are presented as STATISTICS, PROGRESSIVE VECTORS, SPECTRAL DIAGRAMS and VECTOR and SCALAR PLOTS versus TIME. The associated hydrostation data are presented as TEMPERATURE and SALINITY plotted against DEPTH.

Table of Contents

	Page	Fiche #/Row/Col.
Abstract	i	1-A-2
Table of Contents	ii	1-A-3
Preface	iii	1-A-5
Acknowledgments	iv	1-A-4
Introduction	1	1-B-1
Instrumentation	4	1-B-2
Data Quality	4	1-B-2
Data Processing	4	1-B-2
Data Presentation	5	1-B-3
1. Time Series	5	1-B-3
2. Progressive Vectors	5	1-B-3
3. Spectra	5	1-B-3
4. Mean Statistics	6	1-B-4
Hydrographic Data	6	1-B-4
Fiche Presentation	7	1-C-3
Bibliography	8	1-B-5
Mooring 422		1-D-1
423		1-F-1
429		1-A-8
437		2-A-1
438		2-B-1
440		2-C-1
441		2-D-1
442		2-F-1
443		2-A-8
444		2-C-8
445		2-E-8
446		2-F-8
447		2-G-8
449		3-A-1
450		3-C-1
456		3-E-1
462		3-F-1
465		3-A-8
466		3-C-8
468		3-D-8
469		4-A-1
477		4-A-8
478		4-D-8
479		4-F-8

Acknowledgments

The Office of Naval Research under contracts N00014-66-C-0241 NR 083-004 and N00014-76-C-0197, NR 083-400 supported the experiments and data preparation for most of this report. Mooring 462 was supported by the Applied Physics Laboratory of The Johns Hopkins University under contract number 372115.

Preface

This volume is the twenty-sixth in a series of Data Reports presenting moored current meter and associated data collected by the WHOI Buoy Group.

Volumes I through XXV present data obtained during the years 1963-1970, arranged either by year or experiment (see notes).

A data directory and bibliography for the years 1963-1978 has been published as WHOI Technical Report 79-88.

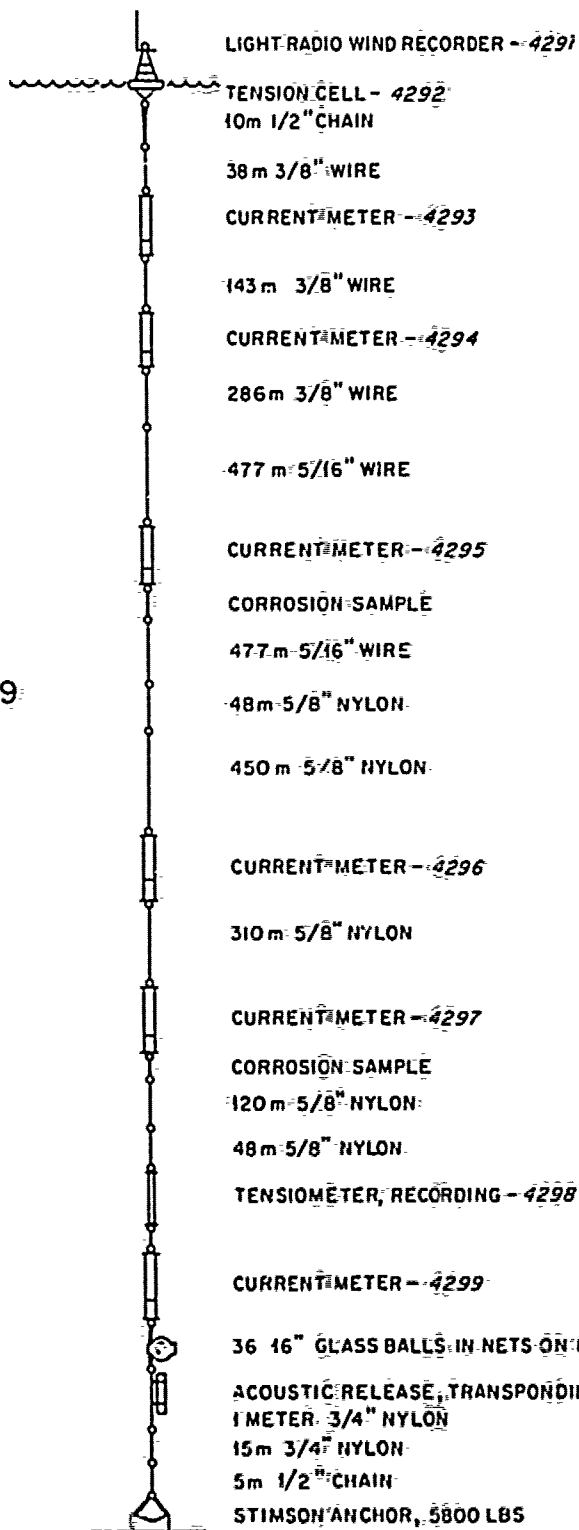
Volume XXVI presents data from 1972.

Volume No.	WHOI Ref. No.		Notes	
			Year	Experiment
I	65-44	Webster, E. and N. P. Fofonoff		
II	66-60	Webster, E. and N. P. Fofonoff		
III	67-66	Webster, E. and N. P. Fofonoff		
IV	70-40	Pollard, R. T.		
V	71-50	Tarbell, S. and F. Webster		
VI	74-4	Tarbell, S.	1967	measurements
VII	74-52	Chausse, D. and S. Tarbell	1968	measurements
VIII	75-7	Pollard, R. T. and S. Tarbell	1970	Array Data
IX	75-68	Tarbell, S., M. G. Briscoe and D. Chausse	1973	IWEX Array
X	76-40	Tarbell, S.	1969a	measurements
XI	76-41	Tarbell, S.	1969b	measurements
XII	76-101	Chausse, D. and S. Tarbell	1973	MODE Array
XIII	77-18	Tarbell, S. and A. W. Whitlatch	1970	measurements
XIV	77-41	Tarbell, S., R. Payne and R. Walden	1976	mooring 592 Saint Croix
XV	77-56	Tarbell, S. and A. W. Whitlatch	1971	measurements
XVI	78-5	Tarbell, S. and A. Spencer	1971-1975	MODE Site
XVII	78-49	Tarbell, S., A. Spencer and R. E. Payne	1975-1977	POLYMODE Array II
XVIII	79-65	Tarbell, S., M. G. Briscoe and R. A. Weller	1978	JASIN
XIX	79-34	Spencer, A., C. Mills and R. Payne	1974-1975	POLYMODE Array I
XX	79-56	Spencer, A.	1974	Rise Array
XXI	79-35	Mills, C. and P. Rhines	1978	W.B.U.C.
XXII	79-87	Tarbell, S. and R. Payne	1973	measurements
XXIII	80-40	Tarbell, S. and R. Payne	1978	POLYMODE Array III
XXIV	80-41	Spencer, A., K. O'Neill and J. R. Luyten	1976	INDEX
XXV		Spencer, A., E. D'Asaro and L. Armi	The Benthic Boundary Layer Experiment on the Hatteras Abyssal Plain: current and temperature observations	

1-A-6

1-A-7

STATION 429



Mooring No. 429

Set 72 March 13 39°10.1'N 69° 59.3'W
Year Month Day Latitude Longitude

Set by Moller Ship CHAIN Cruise #103

Retrieved 72 September 01
Year Month Day

Retrieved by Moller Ship ATLANTIS-II Cruise #69

Purpose of Mooring: Long-term current measurements at Site D

Mooring Type:

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4291	W-169X	Wind Rec.	0	
4292		Tension Cell	-	
4293	M-259	CM	52	
4294	M-215	CM	197	
4295	M-276	CM	962	
4296	M-227	CM	1998	
4297	M-270	CM	2347	
4299	M-261	CM	2536	No data

COMMENTS ON MOORING:

DATA NUMBER 4291

Instrument No. W-169X

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 0

Comments:

The direction is
oceanographic convention.



0 100.

KILOMETERS

4291WB1800

01M

72- 111-13 TO 72- 1X -01



DATA/ 4291WB1800

VARIABLE	EAST	NORTH	SPEED
UNITS	CM/SEC	CM/SEC	CM/SEC
MEAN	10.042	2.707	71.002
STD. ERR.	.574	.636	.367
VARIANCE	2717.340	3326.253	111.225
STD. DEV.	52.128	57.674	33.335
KURTOSIS	2.762	2.667	2.870
SKEWNESS	.250	.351	.509
MINIMUM	-151.295	-205.204	1.281
MAXIMUM	167.361	195.795	206.457

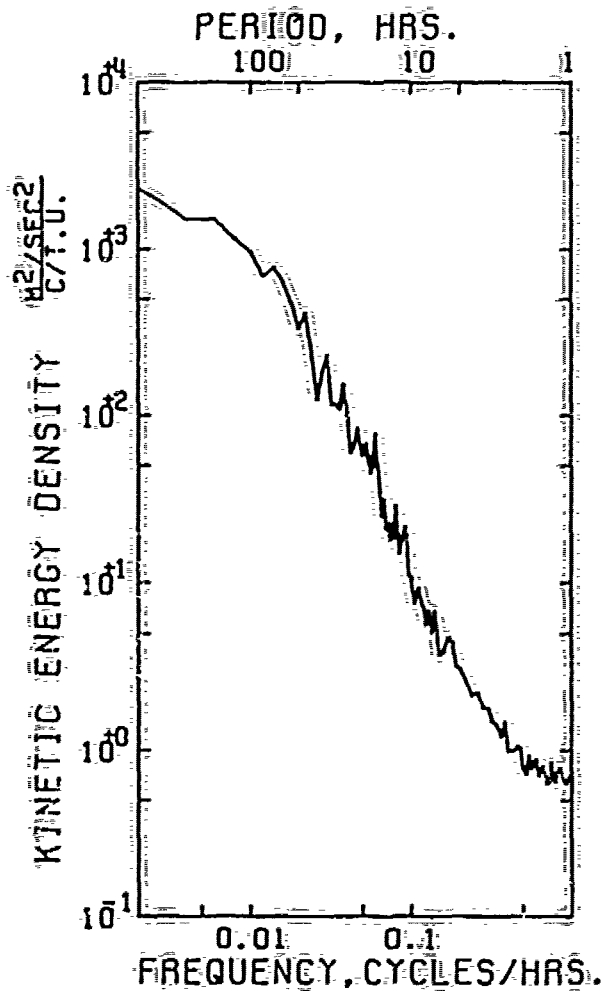
EAST & NORTH

COVARIANCE	338.116
STD. ERR. OF COVARIANCE	33.158
STD. DEV. OF COVARIANCE	3008.610
CORRELATION COEFFICIENT	.112
VECTOR MEAN	10.439
VECTOR VARIANCE	3021.796
VECTOR STD. DEV.	54.971

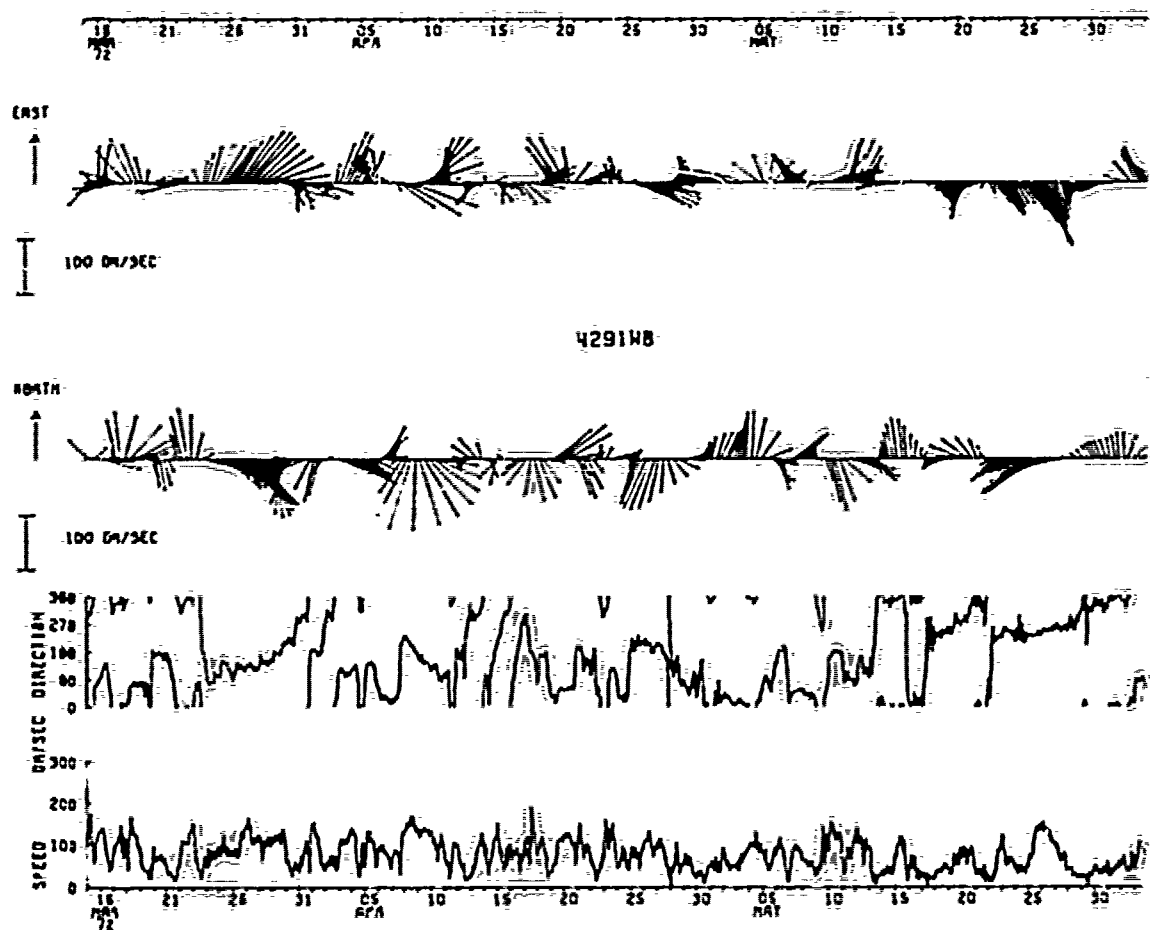
SAMPLE SIZE	8234 POINTS
SPANNING RANGE	
FROM	72- 111-13 15.30.37
TO	72- 1X -01 04.00.37
DURATION	171.52 DAYS

I-A-10

AUTO SPECTRUM
4291W81800 EAST COMP
4291W81800 NORTH COMP



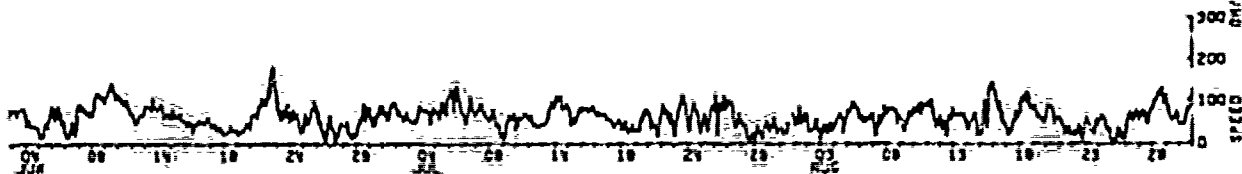
WIND
72-III-13 TO 72-VIII-27
1 PIECES WITH 4000 ESTIMATES
PER PIECE, AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

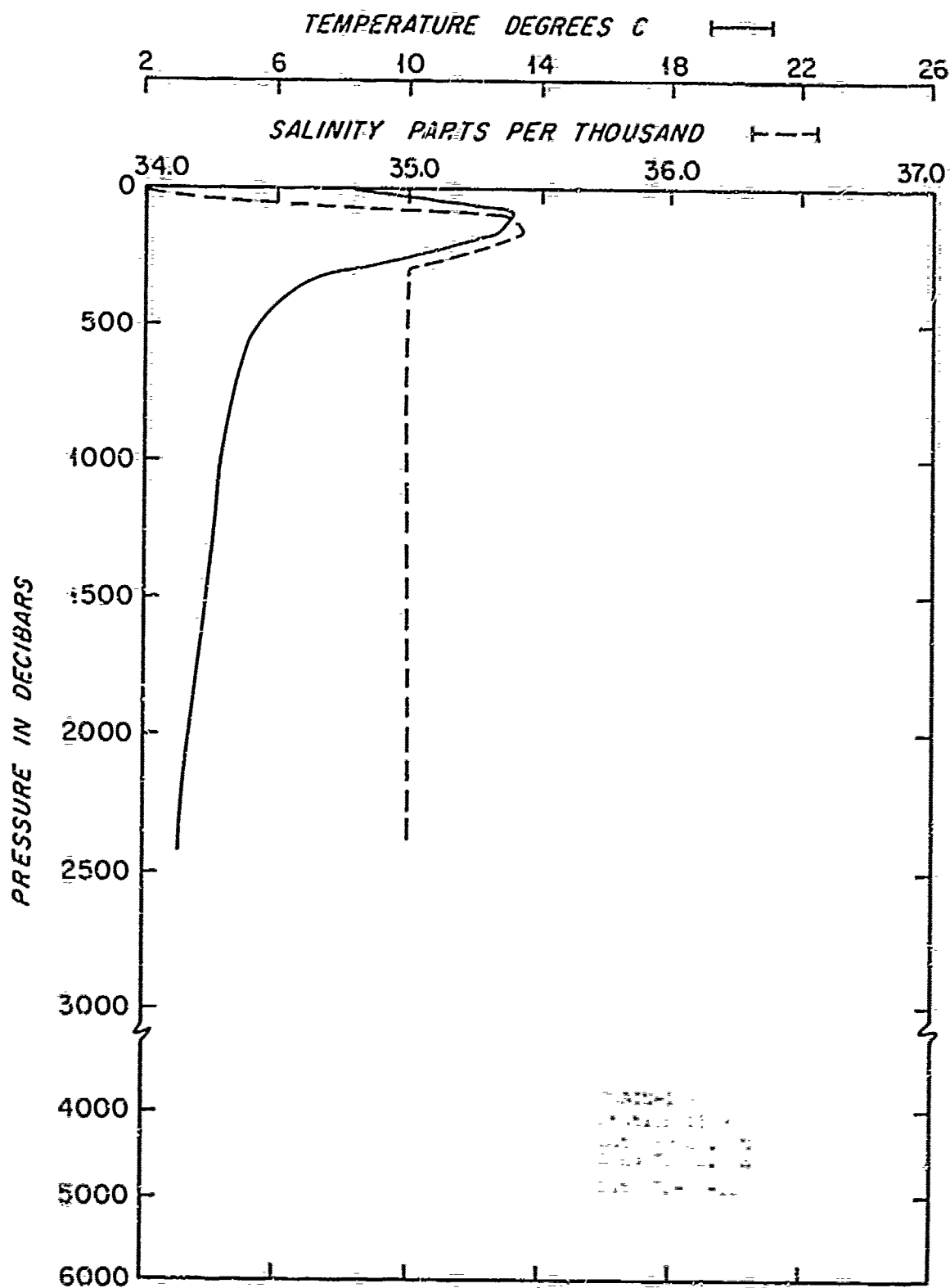


00 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000



429148





Introduction

This report includes current meter data from a number of moorings set in 1972 by the Buoy Group of the Woods Hole Oceanographic Institution. Also included are hydrographic data where available and appropriate. Data from other moorings set in 1972 have been reported in SCOR Working Group 21, 1972 (1975) and in Chausse and Tarbell (1976). Table 1 lists some information about the moorings included in this report.

Several distinct experiments are represented in this report as well as some moorings which are part of the long series which the Buoy Group maintained at Site D.

Moorings 422, 423, 429, 449, 450, 465, 466, 468, 474, 478, 479 were part of a 1 year-long array set in the vicinity of Site D. Previous moorings from single moorings had yielded results consistent with a hypothesis of barotropic waves below the thermocline. The Site D Spatial Array was set to examine the spatial structure of the low frequency fluctuations. The data were used to determine wave numbers directly and show that energy is propagated from the region of the Gulf Stream to Site D in the form of topographic Rossby waves (Thompson, 1977).

A line of current meters, moorings 437-447, was set on bottom moorings upstream of the Kelvin Seamount in support of a program to determine the influence of the Seamount on the Gulf Stream.

Moorings 456 was set on the Muir Seamount to investigate the existence of trapped waves driven by the diurnal tide.

Moorings 462 was set as the field work part of the Cape Cod Experiment (Zenk and Briscoe, 1974). The Experiment was to observe and interpret internal wave motions near the sea surface in a high frequency range including the limiting Brunt-Väisälä frequency.

Moorings 469 was set for 6 days to provide data for a theoretical treatment of mooring dynamics (Chhabra, 1976), (Chhabra *et al.*, 1974). Because of the rapid recording rate of the current meters on mooring 469, the results of digitization errors are apparent at high frequencies in the spectra (Payne and Smith, 1980).

Figure 1 and Table 1 give pertinent data on the twenty-four moorings included in this report.

Instrumentation

The instruments represented in this data report are the Vector Averaging Current Meter (VACM) and the EG&G Model 850. Both instruments use a Savonius rotor to measure water speed and a vane and internal compass to measure direction. In the VACM, East and North components are calculated from the compass and vane values 8 times per rotor revolution. The components are accumulated over the recording interval resulting in vector averaged velocities. In the 850 a series of 5 second samples of speed and instantaneous direction samples are recorded at the beginning of each recording interval.

The VACM has a thermistor embedded in its end cap just above the vane. Temperature accuracy is approximately $.01^{\circ}\text{C}$ (Payne *et al.*, 1976).

Both the VACM and 850 use a crystal oscillator with an accuracy of ± 1 second per day to set the time base. The VACM records on Phillips-type cassettes with Sea-Data recorders. The 850 records on endless loop magnetic tape cartridges.

Data Quality

The current meters performed well in all deployments but one. In 4297, an 850 current meter, the recorded compass and vane output registered 0 for 16 days in the middle of the record. The time series plots show a gap in direction and the stick plots. The PROVEC is in two pieces. The kinetic energy spectrum represents the longer of the two pieces. The mean statistics show speed for the whole record and East and North for only the good data with the 16 day gap removed.

Data Processing

The cassettes and cartridges were transcribed to 9-track computer compatible tapes, and the data were converted to scientific units, edited to remove launch and retrieval transients, and linearly interpolated across missing or erroneous data cycles.

The data are identified by a mooring number (here 422-479), a sequential instrument numbered from the surface down (e.g., 4293 is the third instrument down on mooring 429), a letter to indicate the data version (e.g., 4293B has been through two editing steps), and a number to indicate the data interval in seconds for that version (e.g., 4293B1800 is the basic data series). 1H in place of the B1800 indicates a one-hour averaged version, 24 GAU indicates a 24 hour subsampled version of a Gaussian filtered series.

Data Presentation

The presentations in this report are time series, progressive vector plots, spectra and mean statistics. Additional details are below.

Time Series

The presentations use either the basic series or a 24 hour series. To make the 24 hour series, the basic time series is first filtered using a symmetrical running Gaussian filter with a half width of 24 hours. The filtering is sequential and the resultant time series is 48 hours shorter than the input time series. A simple running hat filter is then applied to form a series with one data point per day, the point representing the average from midnight to midnight.

Variables versus time and current vectors ("stick plots") versus time are presented. The former are based on the basic series, the latter on the 24 hour series.

Progressive Vectors

Based on the basic series, the current vectors are placed tail-to-head so as to show the path that a neutrally buoyant particle in a perfectly homogeneous fluid would have traveled. The plots are useful for giving an idea of the flow regimes and low frequency behavior. Symbols denote the beginning of a month.

Spectra

The horizontal kinetic energy (HKE) and (where available) the temperature series are displayed as spectra computed from the basic series.

The horizontal kinetic energy spectrum is half the sum of the spectra of the east and north components: it has the advantage of not being tied to a particular coordinate system.

The HKE and temperature spectra have units of $(\text{cm}^2/\text{sec}^2)/\text{cph}$ or $(^\circ\text{C})^2/\text{cph}$, respectively. The spectra are all one-sided, i.e. the area under the spectrum is equal to the variance of the original record. The spectra are presented as log-log plots ("not variance preserving").

The VACM spectra are all calculated based on averaging across four data segments of 4000 points each, followed by frequency-band averaging across three frequencies with a recording interval of 900 s. This gives a lowest frequency of $(666.7\text{h})^{-1}$ and a highest frequency of $(0.5\text{h})^{-1}$. The

850 spectra are based on averaging across a single data segment of up to 4000 points, followed by frequency band averaging across eight frequencies. With a recording interval of 1800 s this gives a lowest frequency of as low as $(500h)^{-1}$ and a maximum frequency of $(1h)^{-1}$. No data-windowing or prewhitening has been done.

" SAN, the W.H.O.I. program (Hunt, 1978) used to produce the spectra, additionally averages the spectra in increasing groups at the higher frequencies to prevent having to plot thousands of points; this gives few degrees of freedom (d.o.f.) at the lowest frequencies, many at the highest frequencies. For spectra calculated from 4 pieces with 3 frequencies averaged, there are 24 d.o.f. in the 40 lowest frequencies and 1200 d.o.f. in the two highest frequencies; the 95% confidence limits corresponding to these two extremes are (.61, 1.94) and (.97, 1.03).

Mar. Statistics

The statistics for each variable for the time period shown are given for the basic series, also the east and north covariance, correlation, and vector statistics.

For reference note that a Gaussian random variable would have a kurtosis of 3 and a skewness of zero.

Hydrographic Data

Plots of temperature and salinity vs. depth are shown where there was a Nansen bottle cast near a mooring location.

Bibliography

- Chhabra, N. K., J. M. Dahlen and M. R. Froidevaux, 1974
Mooring Dynamics Experiment. C. S. Draper Laboratory, Inc.
Report R-823.
- Chhabra, N. K., 1976
Mooring Mechanics — A Comprehensive Computer Study — Volume II —
Three Dimensional Dynamic Analysis of Moored and Drifting Buoy
Systems. C. S. Draper Laboratory, Inc. Report R-1066, uses data
from mooring 469 for model validation.
- Chausse, D. and S. Tarbell, 1976
A compilation of moored current data and associated oceanographic
observations. Volume XII (1973 Mid-Ocean Dynamics Experiment (MODE)).
Woods Hole Oceanographic Institution Technical Report WHOI Ref. 76-40.
- Hunt, M., 1978
A program for spectral analysis of time series. Woods Hole
Oceanographic Institution Technical Memorandum WHOI Ref. 2-77.
- Payne, R. E., A. Bradshaw, J. P. Dean and K. E. Schleicher, 1976
Accuracy of temperature measurements with the VACM. Woods Hole
Oceanographic Institution Technical Report WHOI Ref. 76-94.
- Payne, R. E. and W. Smith, 1980
Spectra of frequency counting digitization errors. Deep-Sea
Research, 27A, 583-589.
- SCOR Working Group 21-1972, 1975
An intercomparison of some current meters, III. UNESCO Technical
Papers in Marine Science, 23, UNESCO, Paris, 42 pp.
- Thompson, R.O.R.Y., 1977
Observations of Rossby waves near Site D. Progress in Oceanography,
7, 135-162.
- Lenk, W. and N. G. Briscoe, 1974
The Cape Cod Experiment on near-surface internal waves. Woods Hole
Oceanographic Institution Technical Report WHOI Ref. 74-87.

1-B-6

1-4-7

L

1

1-1-5

DATA NUMBER 4293

Instrument No. M-259

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec
15 samples
at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 52 m

Comments:



0. 300.

KILOMETERS

429381800

52 M

72- 111-14 TO 72- VII-14



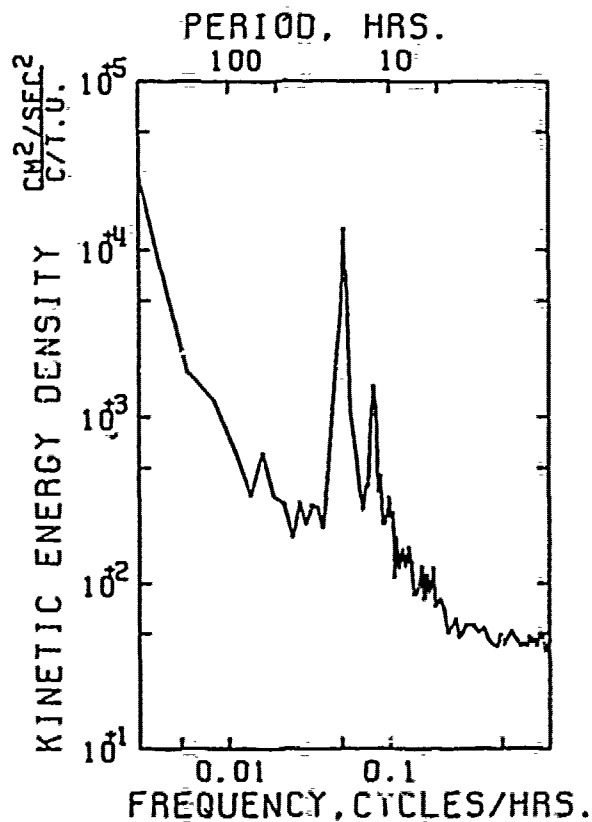
DATA/ 429381800

VARIABLE	EAST COMP	NORTH COMP	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	67.272	7.561	229.954
STD. ERR.	2.227	2.439	1.723
VARIANCE	29255.798	36546.529	17505.001
STD. DEV.	171.043	191.173	132.306
KURTOSIS	4.021	3.086	3.955
SKEWNESS	.376	.311	.928
MINIMUM	-534.634	-738.371	1.000
MAXIMUM	743.705	644.909	784.000

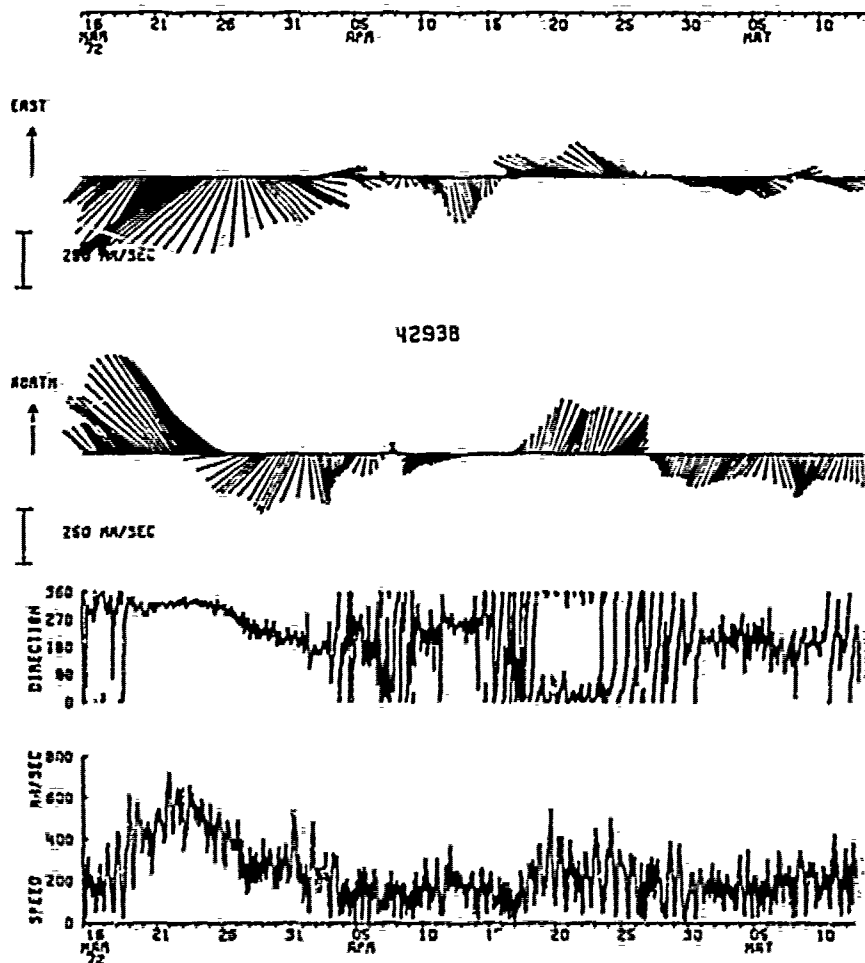
EAST COMP & NORTH COMP

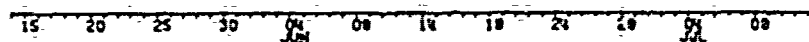
COVARIANCE	-3607.390	SAMPLE SIZE	5898 POINTS
STD. ERR. OF COVARIANCE	548.992		
STD. DEV. OF COVARIANCE	42161.739	SPANNING RANGE	
CORRELATION COEFFICIENT	-.110	FROM 72- 111-14	02.30.37
VECTOR MEAN	67.696	TO 72- VII-14	23.00.37
VECTOR VARIANCE	32901.394		
VECTOR STD. DEV.	181.387	DURATION	122.85 DAYS

AUTO SPECTRUM
429381800 EAST COMP
429381800 NORTH COMP

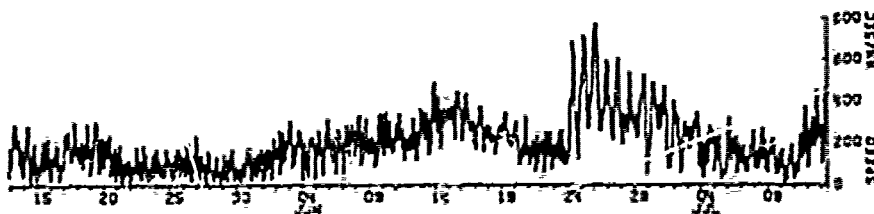
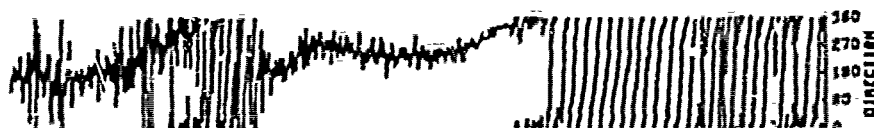


52 METERS
72-III-14 TO 72-VII-13
1 PIECES WITH 2916 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





42938



1-2-11

7

Table 1

<u>No.</u>	<u>Month</u>		<u>Type</u>	<u>Duration</u>		<u>Notes</u>
	<u>Set</u>	<u>Location</u>		<u>Days</u>		
422	Feb	Site D	Inter*	108		Site D Spatial Array
423	Feb	Site D	Inter	108		Site D Spatial Array
429	Mar	Site D	Surface	172		Site D Spatial Array
437	Apr	Gulf Stream	Bottom	59		Gulf Stream Array
438	Apr	Gulf Stream	Bottom	58		Gulf Stream Array
440	Apr	Gulf Stream	Bottom	56		Gulf Stream Array
441	Apr	Gulf Stream	Bottom	56		Gulf Stream Array
442	Apr	Gulf Stream	Bottom	56		Gulf Stream Array
443	Apr	Gulf Stream	Bottom	55		Gulf Stream Array
444	Apr	Gulf Stream	Bottom	54		Gulf Stream Array
445	Apr	Gulf Stream	Bottom	54		Gulf Stream Array
446	Apr	Gulf Stream	Bottom	53		Gulf Stream Array
447	Apr	Gulf Stream	Bottom	52		Gulf Stream Array
449	May	Site D	Inter	102		Site D Spatial Array
450	May	Site D	Inter	102		Site D Spatial Array
456	May	Muir S. M.	Inter	147		Muir Seamount Study
462	July	N. E. Slope	Bottom	21		Internal Wave Experiment
465	Aug	Site D	Inter	103		Site D Spatial Array
466	Aug	Site D	Inter	101		Site D Spatial Array
468	Sep	Site D	Inter	99		Site D Spatial Array
469	Oct	MODE	Inter	6		Mooring Dynamics Experiment
477	Dec	Site D	Inter	108		Site D Spatial Array
478	Dec	Site D	Inter	109		Site D Spatial Array
479	Dec	Site D	Inter	105		Site D Spatial Array

* Intermediate

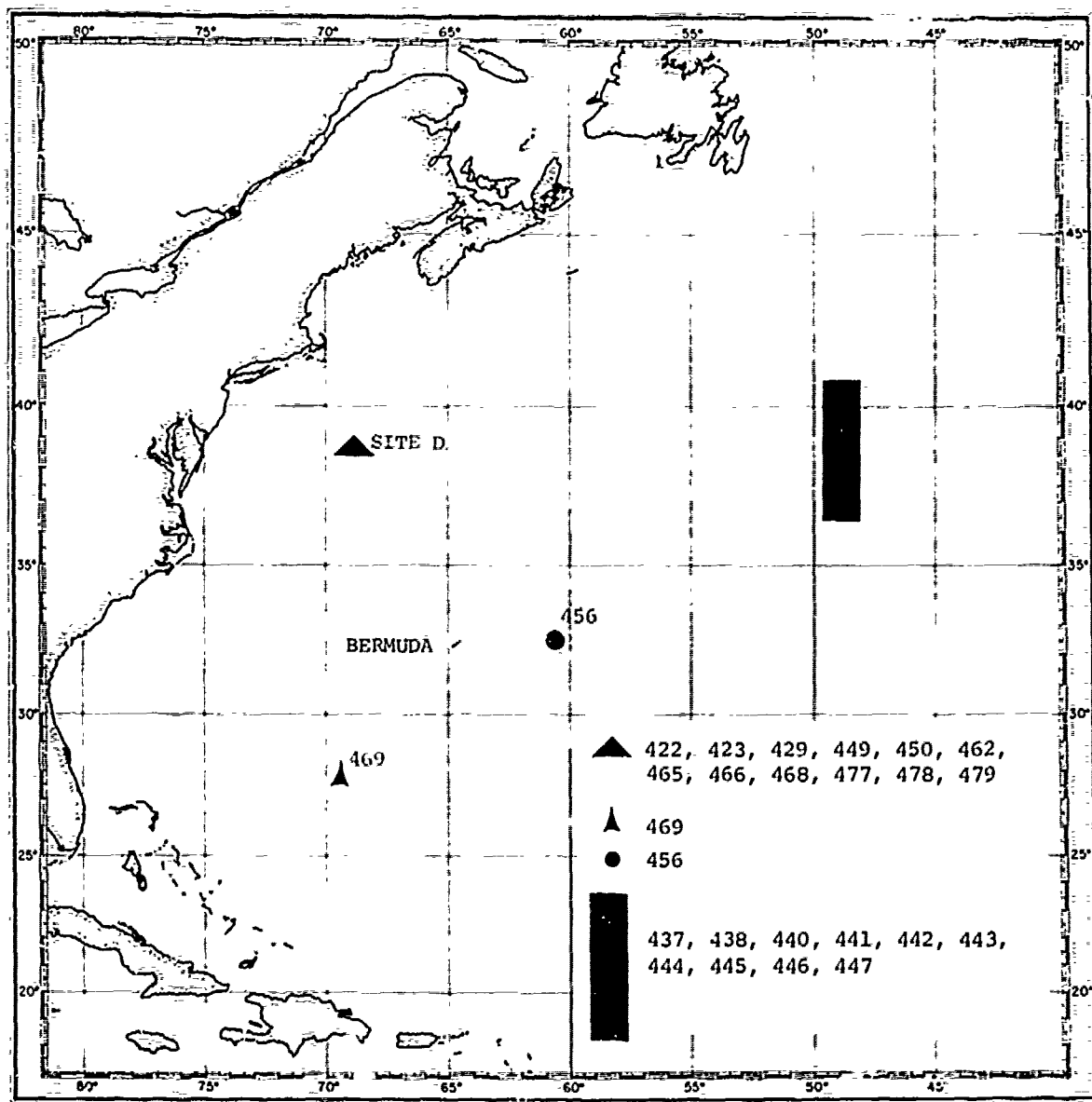
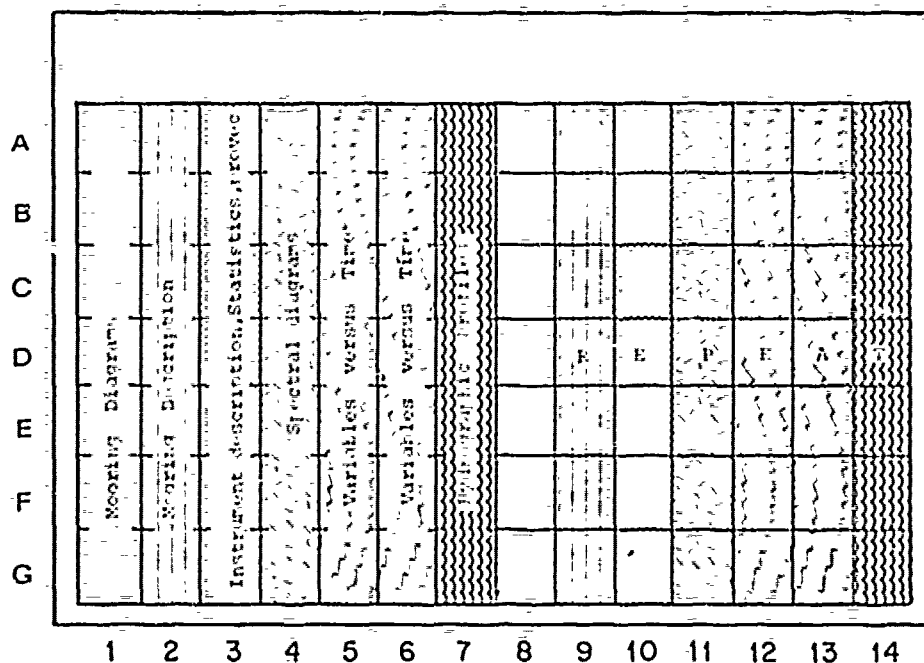


Figure 1. Location of moorings included in this report

Fiche Presentation

The entire report is presented on four fiche pages. The text, which is also printed, is reproduced on the first fiche page. A diagram of the fiche layout is below. Basically, each column shows the same type of information for each data series. Each row of 14 blocks includes two data sets, and, for every data set, there is a Provec, Stats, Spectra and Variable Time plot. Also included are mooring diagrams and mooring summary information. Some moorings have a plot of temperature and salinity vs. depth taken from Nansen bottle casts.

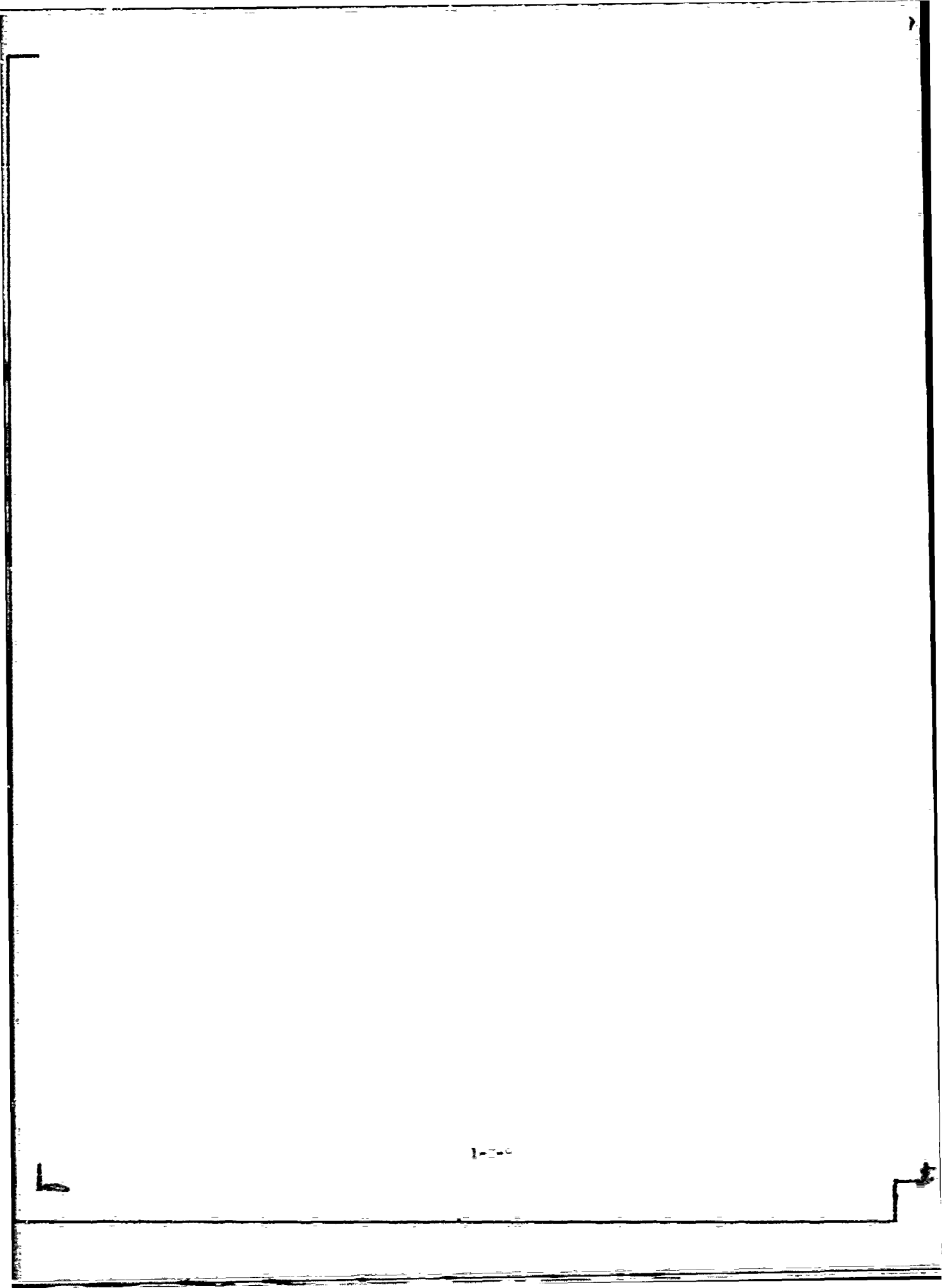


1-C-4

1-C-5

1-C-6

1-C-7



DATA NUMBER 4294

Instrument No. M-215

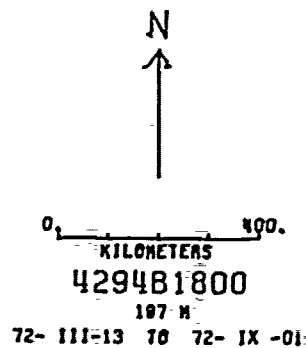
Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec
15 samples
at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 197 m

Comments:



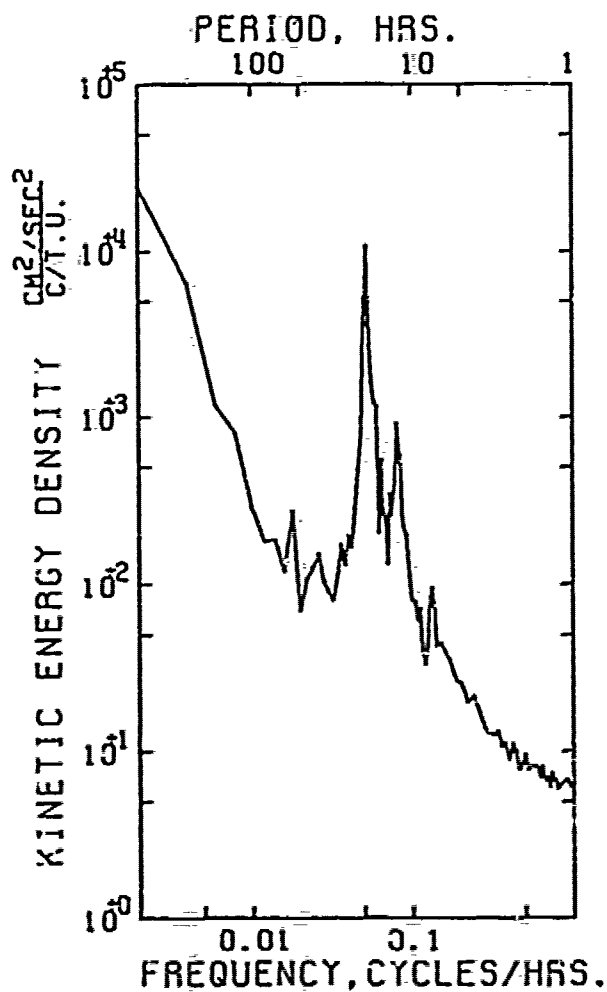
DATA/ 4294B1800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-71.730	10.452	181.738
STD. ERR.	1.313	1.636	1.012
VARIANCE	14175.210	22025.519	8425.417
STD. DEV.	119.060	148.407	91.790
KURTOSIS	2.829	2.741	4.929
SKEWNESS	-.071E+1	.350	1.085
MINIMUM	-441.585	-368.711	3.638
MAXIMUM	288.873	516.992	623.073

EAST & NORTH

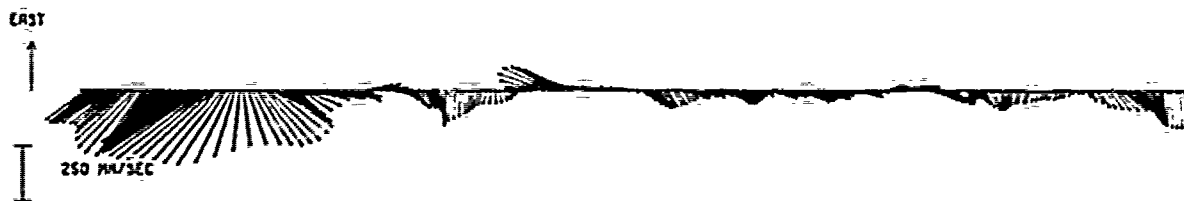
COVARIANCE	-1376.350	SAMPLE SIZE = 8224 POINTS
STD. ERR. OF COVARIANCE	277.232	
STD. DEV. OF COVARIANCE	25141.103	SPANNING RANGE
CORRELATION COEFFICIENT	-.079E-1	FROM 72- 111-13 20.00.37
VECTOR MEAN	72.087	TO 72- 1X -01 03.30.37
VECTOR VARIANCE	18099.863	
VECTOR STD. DEV.	134.536	DURATION 171.31 DAYS

AUTO SPECTRUM
429481800 EAST COMP
429481800 NORTH COMP

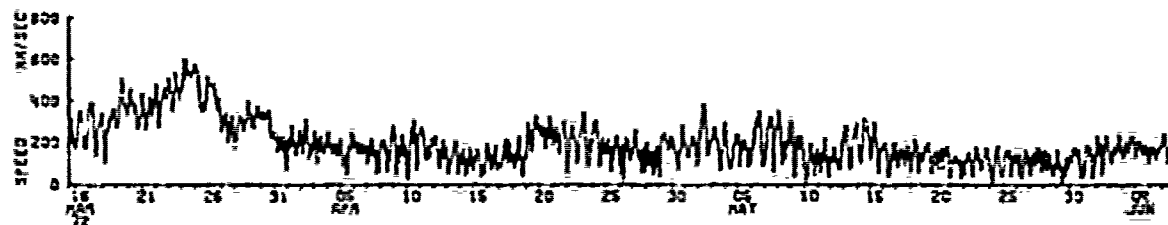
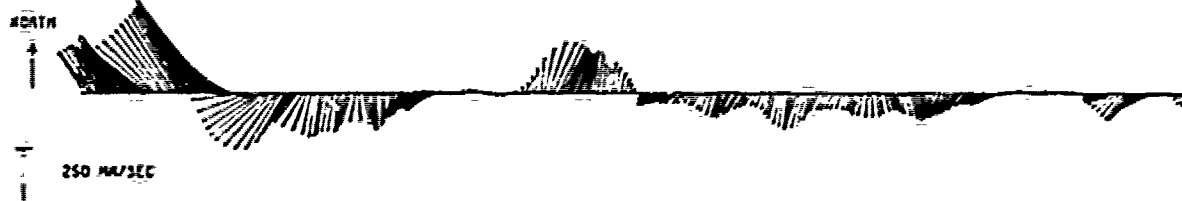


197 METERS
72-III-13 TO 72-VIII-27
1 PIECES WITH 4000 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

16 21 26 31 05 10 15 20 25 30 05 10 15 20 25 30
MAY 72 APR MAY JUN



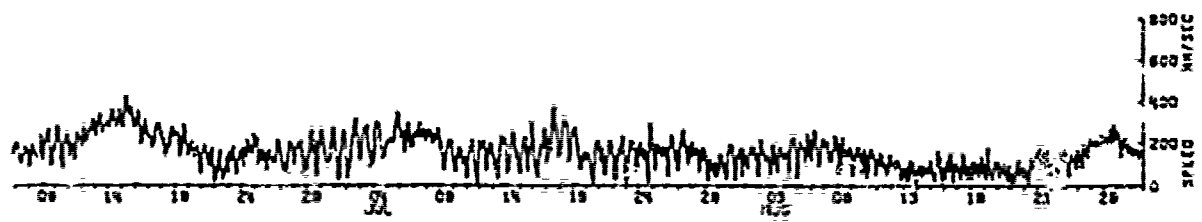
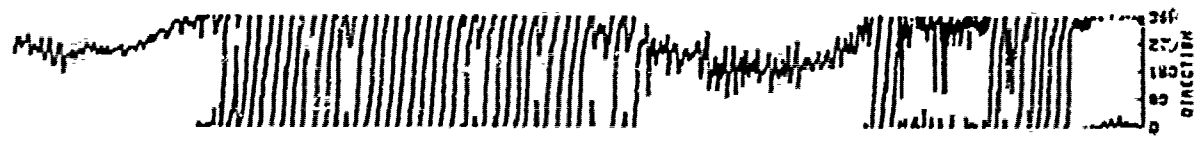
42946

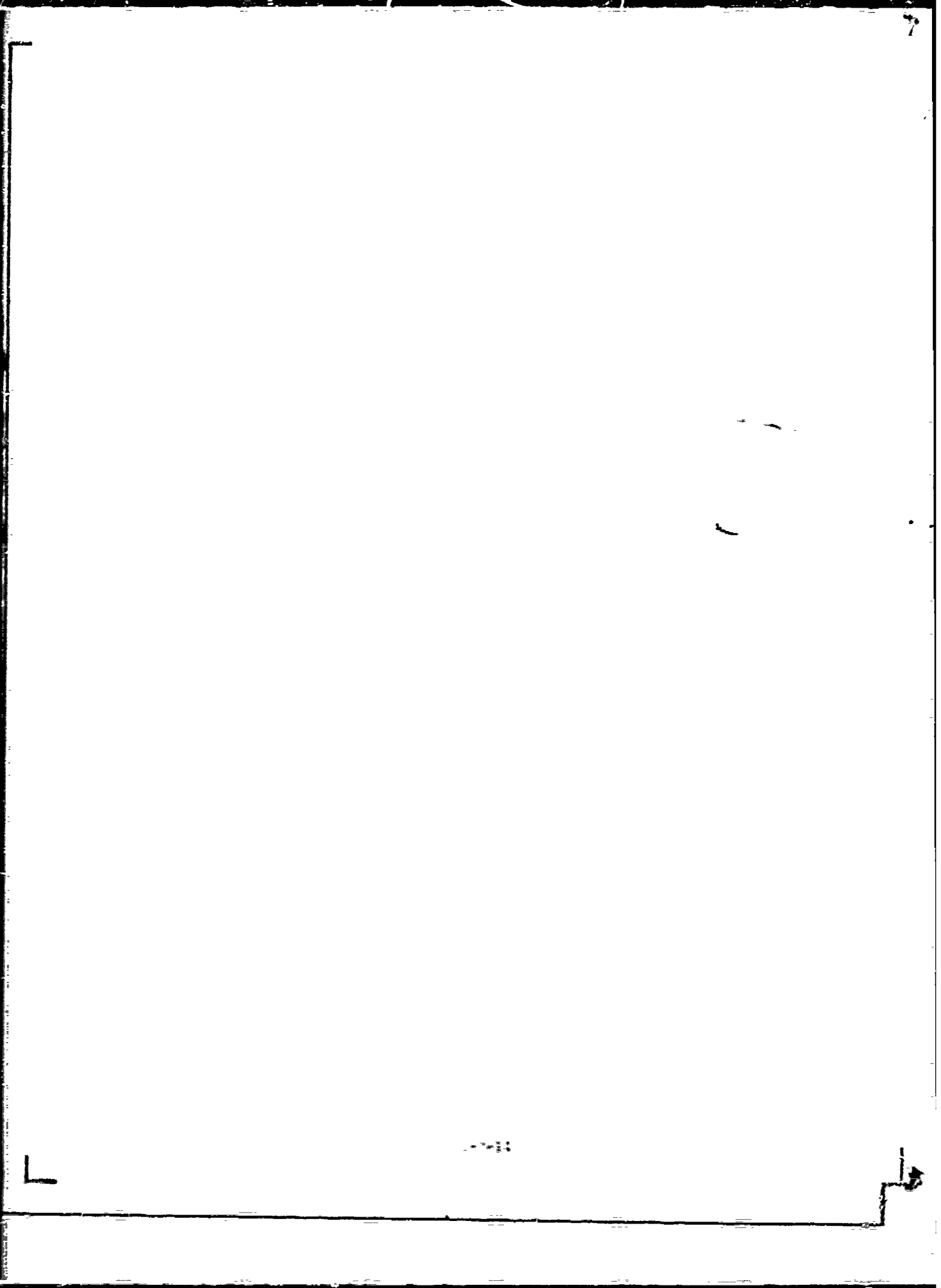


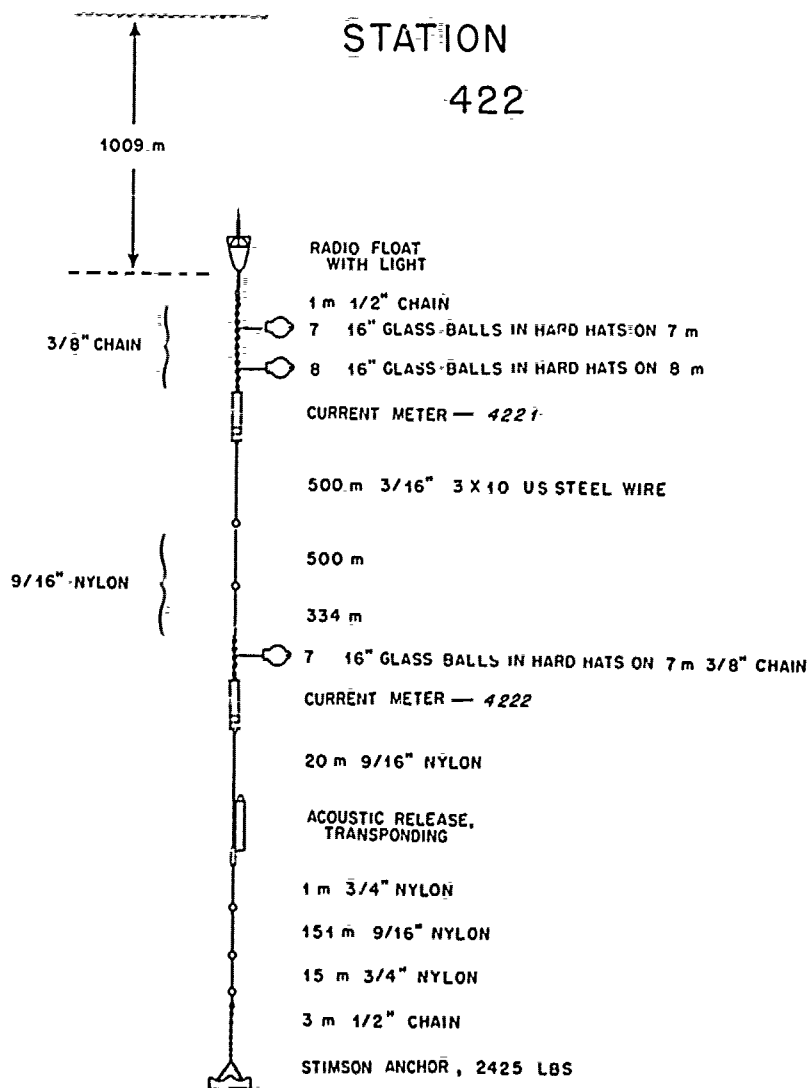
09 14 18 24 28 03 AUG 08 13 18 23 28



42948







Mooring No. 422

Set 72 February 01 39° 02.3'N 70° 02.1'W
Year Month Day Latitude Longitude

Set by Heinmiller Ship CHAIN Cruise #101

Retrieved 72 May 19
Year Month Day

Retrieved by Gifford Ship KNORR Cruise #26

Purpose of Mooring: Part of continuing long-term slope array at Site D

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4221	M-257	CM	1027	
4222	M-274	CM	2495	

COMMENTS ON MOORING:

DATA NUMBER 4221

Instrument No. M-257

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

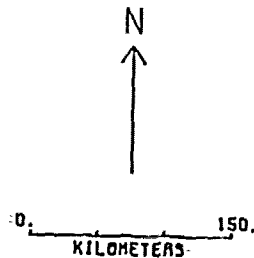
23 samples

at 5.27 sec/sample

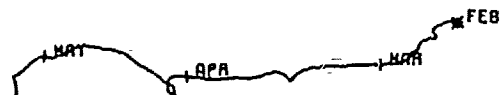
VACM accumulated averages
over --- sec

Instrument Depth 1027 m

Comments:



72- 11 -01 To 72- V -19



DATA/ 422101800

VARIABLE	LAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	35.685	5.279	58.696
STD. ERR.	.673	.488	.625
VARIANCE	2339.392	1229.366	1474.665
STD. DEV.	48.367	35.062	37.745
KURTOSIS	3.064	3.156	3.671
SKEWNESS	-.575	-.165	1.055
MINIMUM	-204.652	-150.954	11.820
MAXIMUM	94.844	116.737	211.666

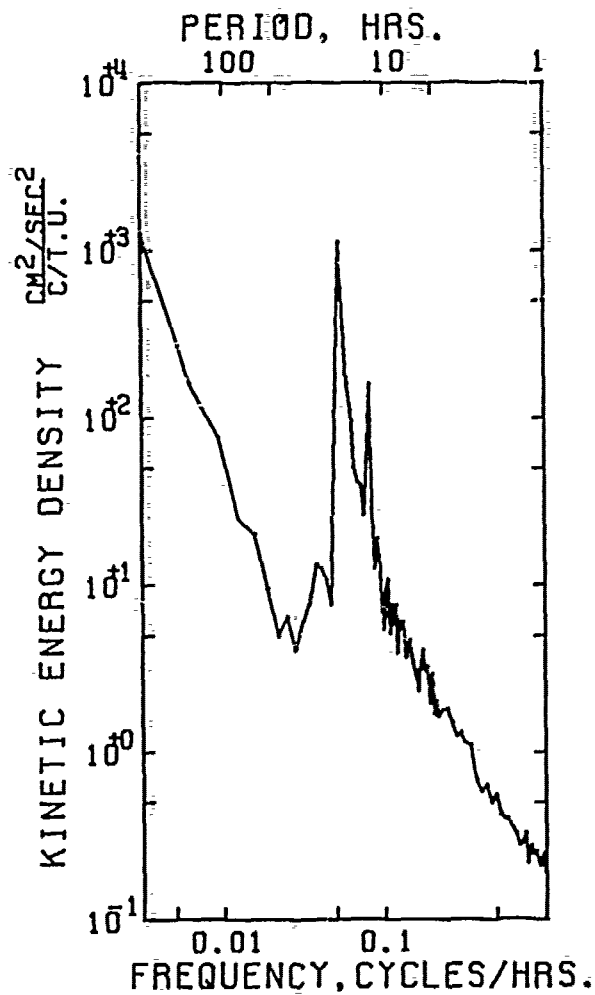
.....
EAST & NORTH
.....

COVARIANCE	-204.383
STD. ERR. OF COVARIANCE	33.233
STD. DEV. OF COVARIANCE	2383.637
CORRELATION COEFFICIENT	-.121
VECTOR MEAN	36.074
VECTOR VARIANCE	1784.379
VECTOR STD. DEV.	42.242

.....
* SAMPLE SIZE = 5166 POINTS
* SPANNING RANGE
* FROM 72- 11 -01 15:00.58
* TO 72- V -19 05:30.58
* DURATION 107.60 DAYS

7

AUTO SPECTRUM
422101800 EAST COMP
422101800 NORTH COMP



1027 METERS
72-11-01 TO 72-V-18
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



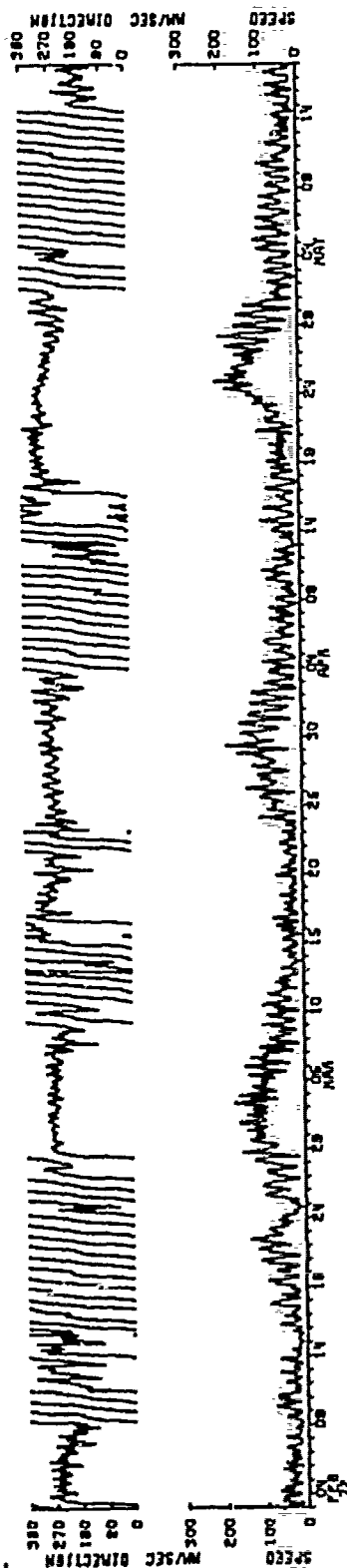
ERST

100 MW/SEC

42210

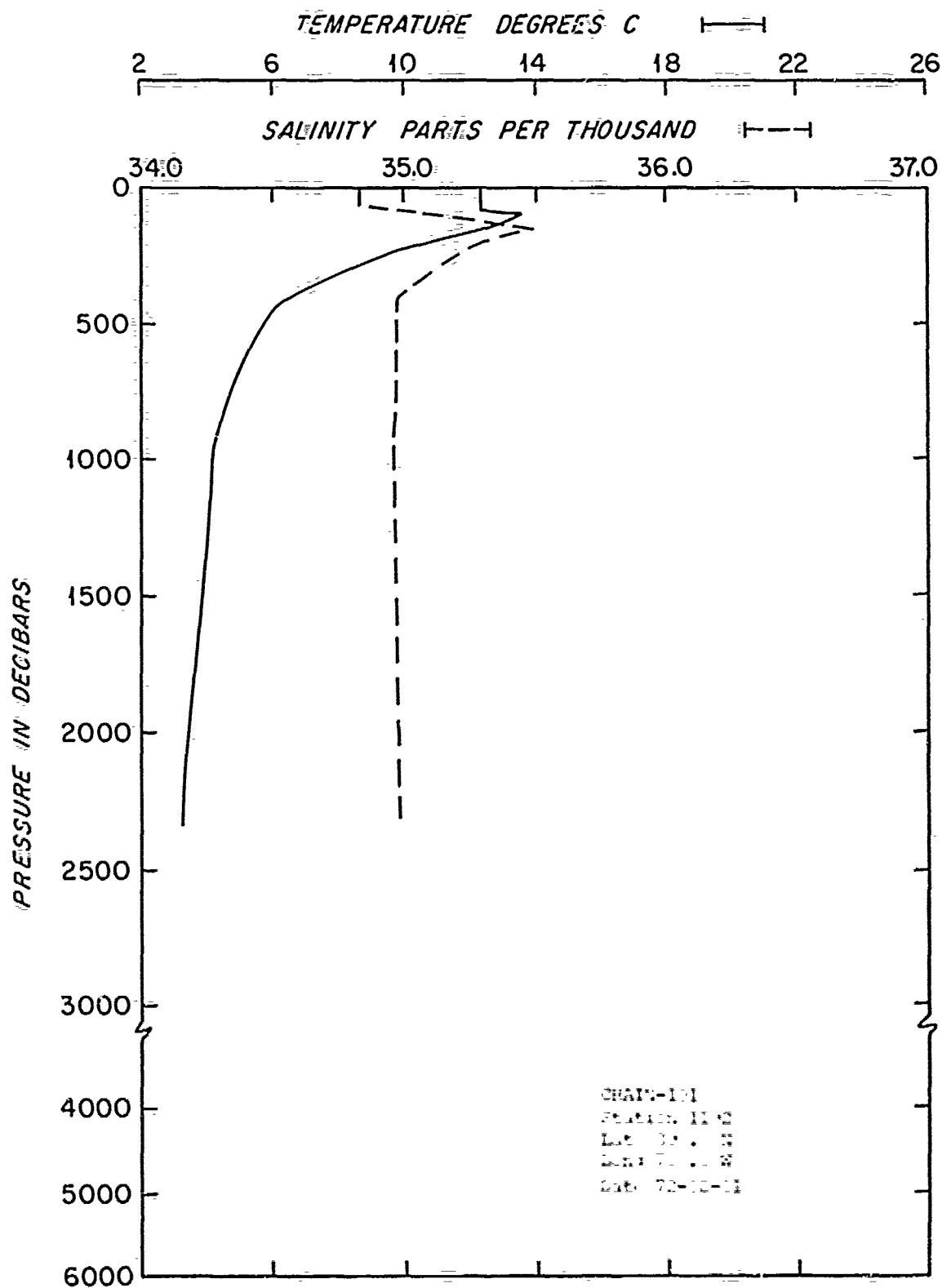
ACRTH

100 MW/SEC



I-D-6

1-D-6



h

h

1-2-11

1-2-11

L

DATA NUMBER 4295

Instrument No. M-276

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

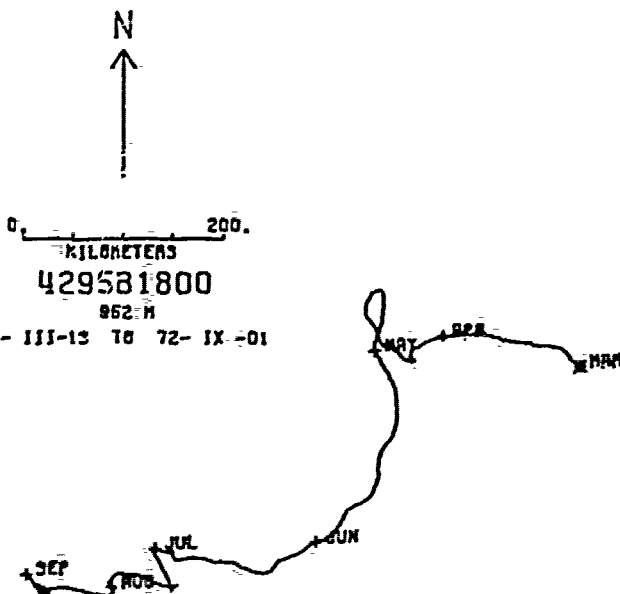
at 5.27 sec/sample 72- III-13 TO 72- IX -01

VACH accumulated averages

over --- sec

Instrument Depth 962 m

Comments:



DATA/ 429581800

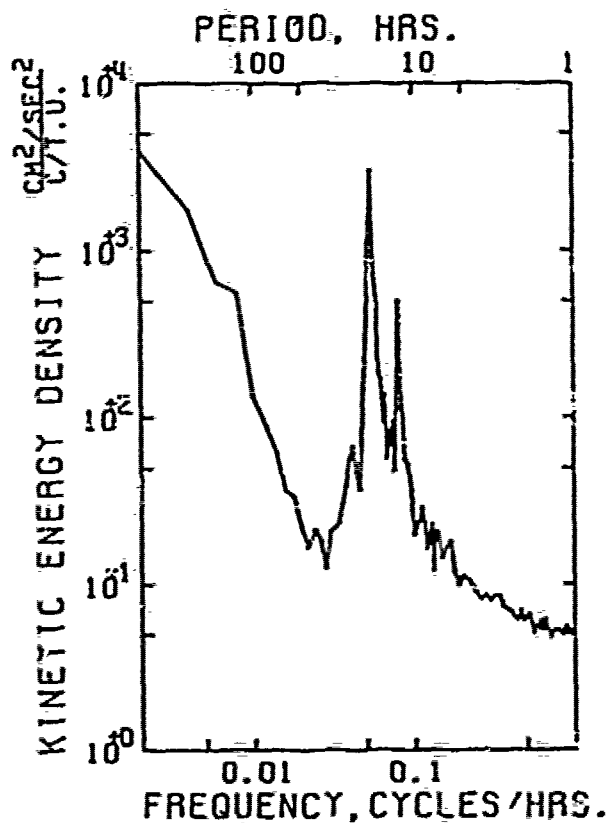
```
*****
VARIABLE *      EAST      NORTH      SPEED
UNITS    *      MM/SEC    MM/SEC    MM/SEC
*****
MEAN      *      37.481    12.960    95.212
STD. ERR. *       737      765      465
VARIANCE  *    4462.073    5813.846    1776.743
STD. DEV. *     66.805     69.382     42.151
KURTOSIS  *      2.767     2.872     3.375
SKEWNESS  *       156     -166/E-1     606
MINIMUM   *    256.388    233.417     338
MAXIMUM   *    170.823    271.944    277.063
```

EAST & NORTH

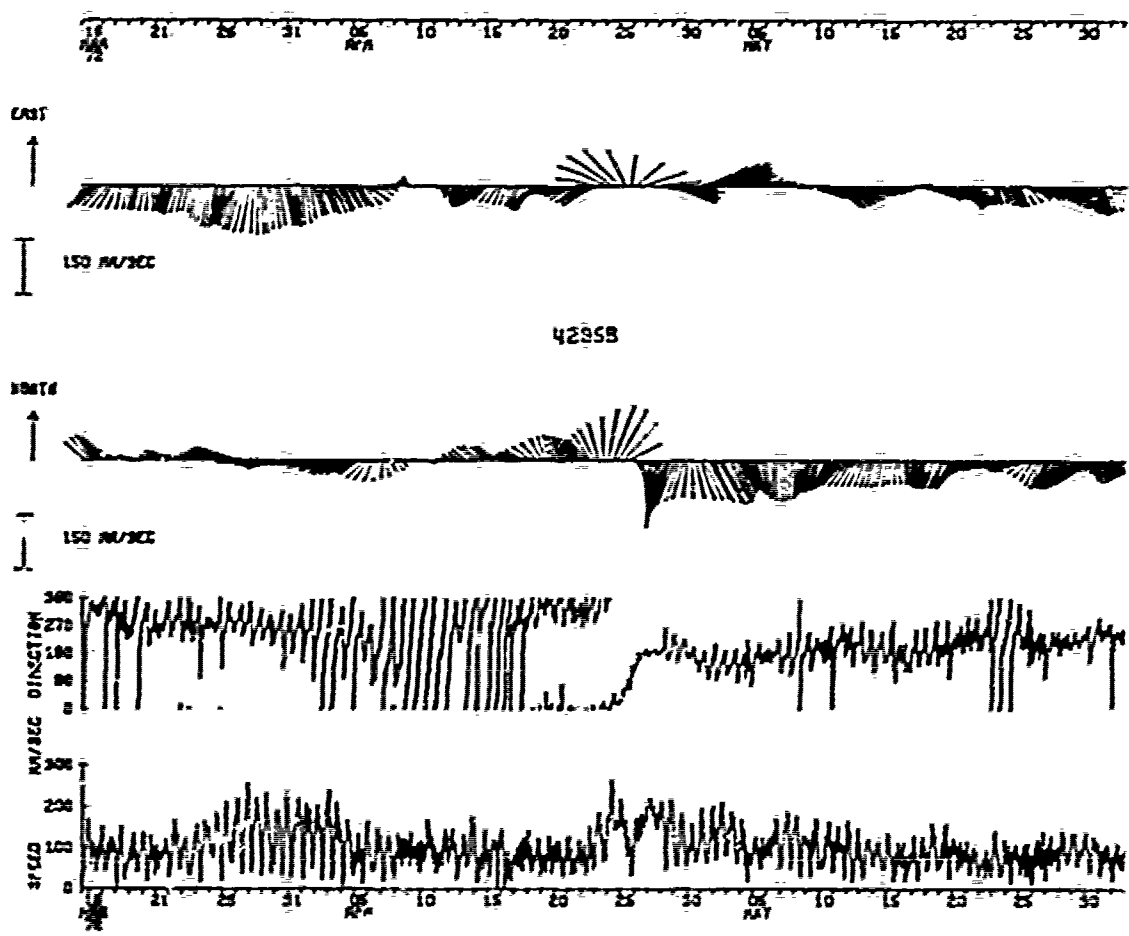
```
COVARIANCE *      22.996
STD. ERR. OF COVARIANCE *     53.254
STD. DEV. OF COVARIANCE *    4827.908
CORRELATION COEFFICIENT *      134
VECTOR MEAN *     39.564
VECTOR VARIANCE *    4638.359
VECTOR STD. DEV. *     68.106

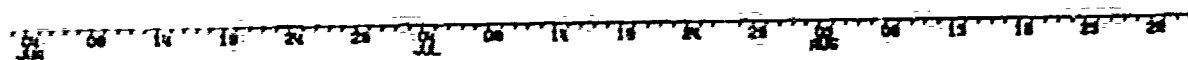
*****
* SAMPLE SIZE * 8219 POINTS
* SPANNING RANGE
* FROM 72- III-13 20:00.37
* TO 72- IX -01 01:00.37
* DURATION 171.21 DAYS
```

AUTO SPECTRUM
429581800 EAST COMP
429581800 NORTH COMP

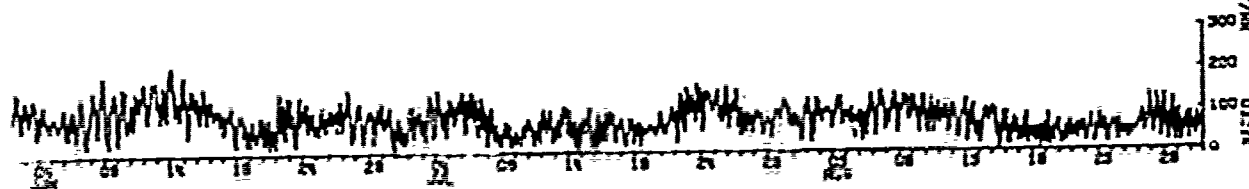
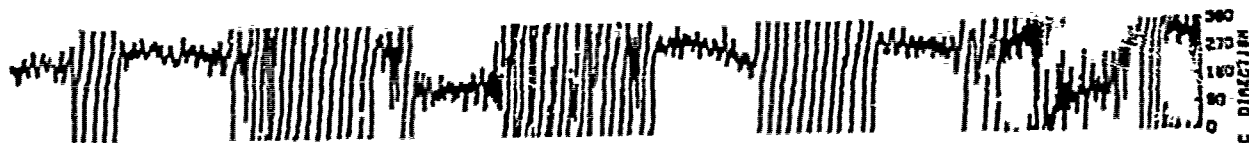


962 METERS
72-III-13 TO 72-VIII-27
1 PIECES WITH 4000 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





42958



1-3-14

1-C-1

DATA NUMBER 4222

Instrument No. M-274

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

23 samples

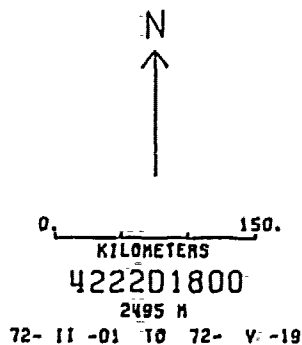
at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 2495 m

Comments:



72- 11 -01 TO 72- V -19



DATA/ 4222D1800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	31.058	3.309	66.837
STD. ERR.	.723	.657	.527
VARIANCE	2698.041	2226.605	1433.019
STD. DEV.	51.943	47.187	37.855
KURTOSIS	3.559	2.999	4.376
SKEWNESS	.471	.710E-1	1.054
MINIMUM	-240.856	-171.116	8.207
MAXIMUM	128.013	148.721	242.887

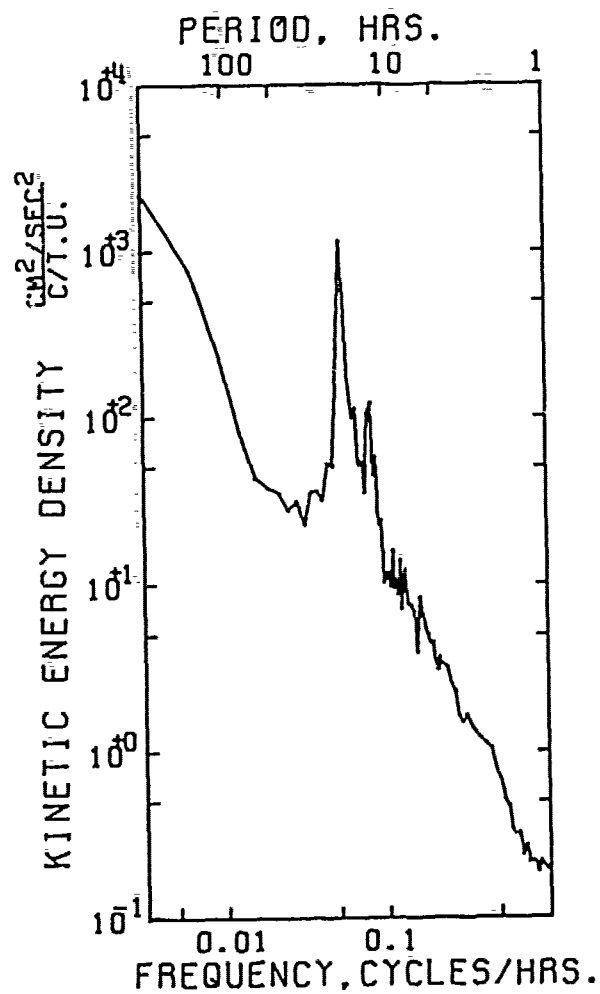
EAST & NORTH

COVARIANCE
STD. ERR. OF COVARIANCE
STD. DEV. OF COVARIANCE
CORRELATION COEFFICIENT
VECTOR MEAN
VECTOR VARIANCE
VECTOR STD. DEV.

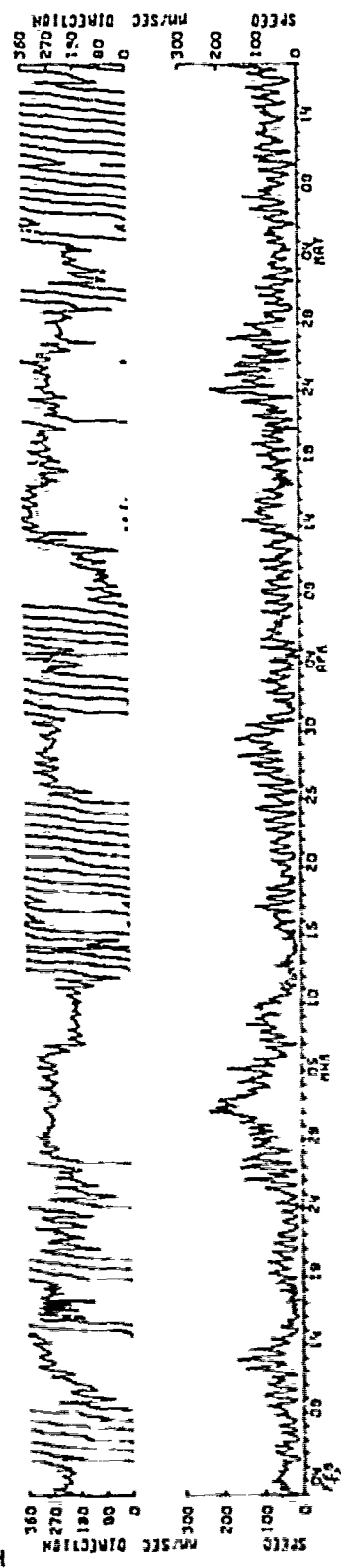
297.126
40.321
2897.791
.121
31.234
2462.323
49.622

SAMPLE SIZE 5165 POINTS
SPANNING RANGE
FROM 72- 11 -01 16:00:58
TO 72- V -19 06:00:58
DURATION 107.58 DAYS

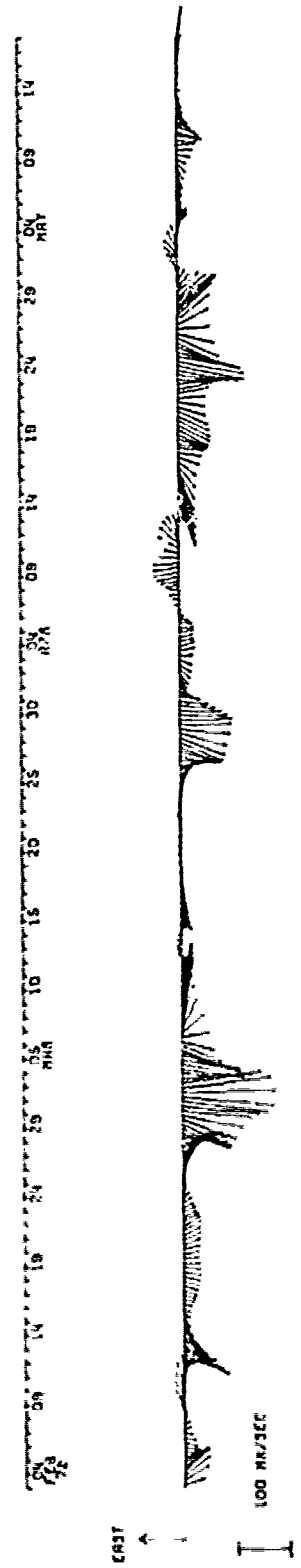
AUTO SPECTRUM
422201800 EAST COMP
422201800 NORTH COMP



2495 METERS
72-II-01 TO 72-V-18
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



42220



CRST

NORTH

1-1-0

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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

DATA NUMBER 4296

Instrument No. M-227

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages
over --- Sec

Instrument Depth 1998 m

Comments:



0 200.

KILOMETERS

4296B1800

1998 M

72- III-13 TO 72- VI-14



DATA/ 4296B1800

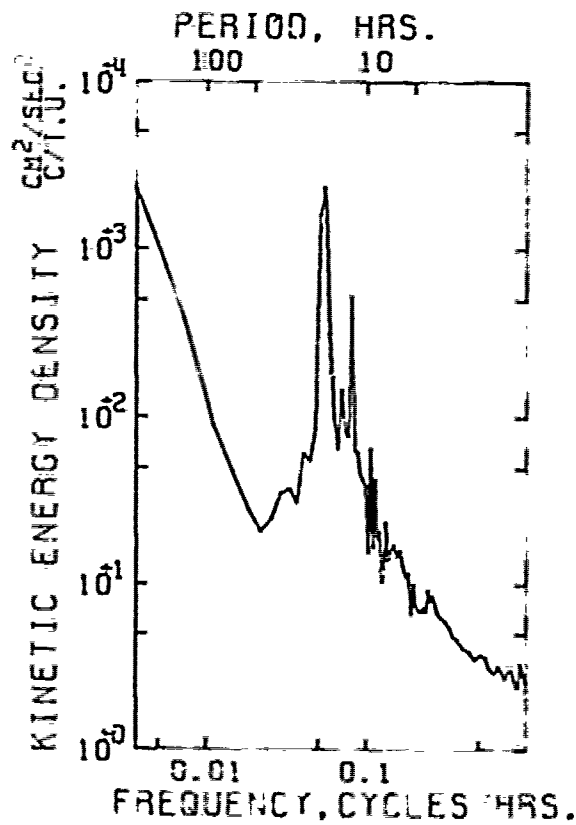
```
.....
VARIABLE *   EAST COMP   NORTH COMP   SPEED
UNITS    *   MM/SEC     MM/SEC       MM/SEC
.....
MEAN      *   -31.519     +186       91.072
STD. ERR. *   .978       .995       .558
VARIANCE  *   4269.846    4421.211   1349.701
STD. DEV. *   65.344     66.492    37.279
KURTOSIS  *   2.541      2.342     3.552
SKEWNESS  *   .769E-1    .282E-2    .572
MINIMUM   *   -255.057    -206.652   3.000
MAXIMUM   *   155.517     188.502   262.000
```

.....
EAST COMP & NORTH COMP
.....

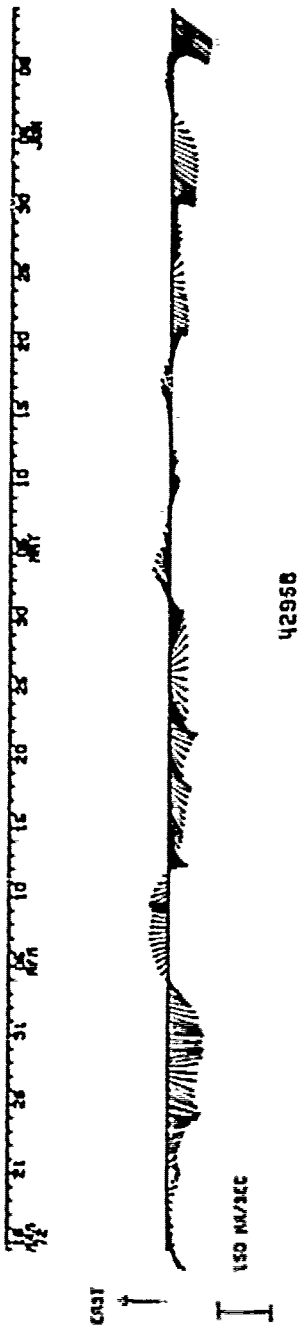
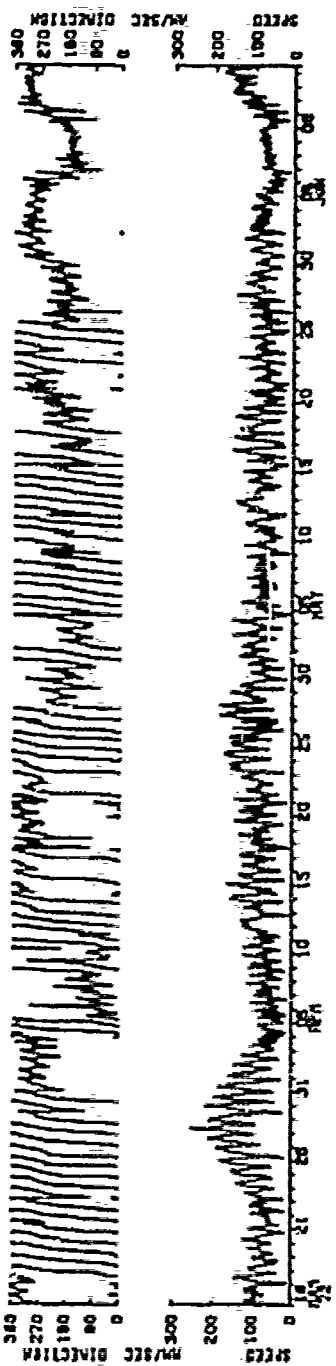
```
COVARIANCE *   -792.166
STD. ERR. OF COVARIANCE *   65.643
STD. DEV. OF COVARIANCE *   4385.810
CORRELATION COEFFICIENT *   -.182
VECTOR MEAN *   31.520
VECTOR VARIANCE *   4345.528
VECTOR STD. DEV. *   65.921
```

```
.....
* SAMPLE SIZE = 4464 POINTS
*
* SPANNING RANGE
* FROM 72- III-13 19:30:37
* TO 72- VI-14 19:00:37
*
* DURATION 92.98 DAYS
```

AUTO SPECTRUM
429681800 EAST COMP
429681800 NORTH COMP



1998 METERS
72-III-13 TO 72-VI-12
1 PIECES WITH 2187 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

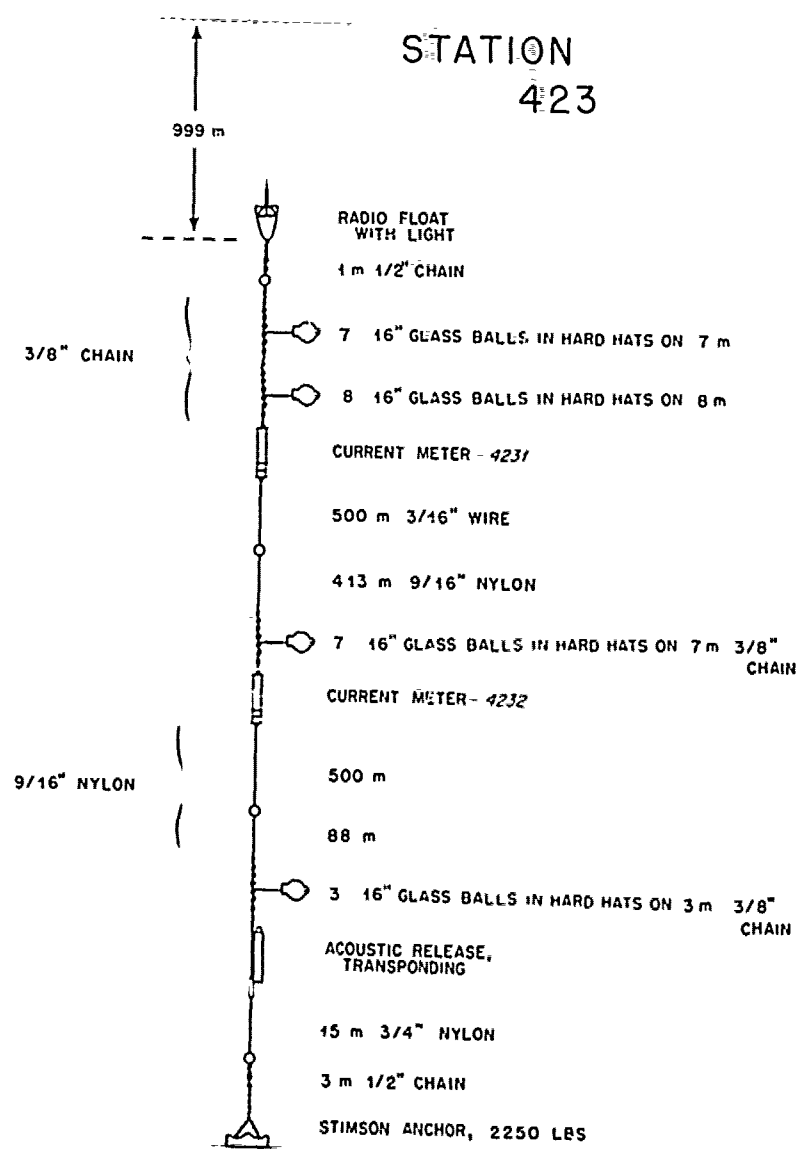


42958

U.S. GOVERNMENT PRINTING OFFICE: 1964 O - 340-000

100

7
U.S. GOVERNMENT PRINTING OFFICE: 1964 O - 350-000



Mooring No. 423

Set 72 February 01 39° 10.5'N 70° 33.3'W
Year Month Day Latitude Longitude

Set by Heinmiller Ship CHAIN Cruise #101

Retrieved 72 May 19
Year Month Day

Retrieved by Gifford Ship KNORR Cruise #26

Purpose of Mooring: Part of continuing long-term slope array

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4231	M-270	CM	1017	
4232	M-273	CM	2001	

COMMENTS ON MOORING:

DATA NUMBER 4231

Instrument No. M-270

Instrument Sampling Scheme
Model 850 data bursts

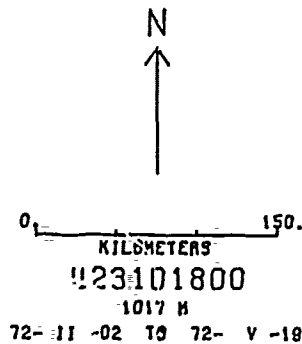
every 1800 sec
23 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 1017 m

Comments:



DATA/ 423101800

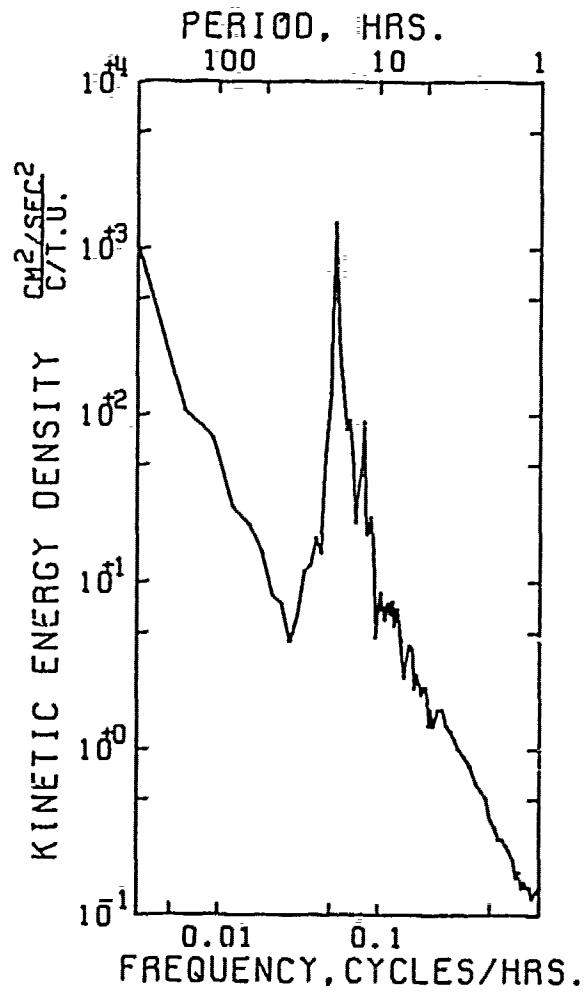
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	29.851	4.120	57.647
STD. ERR.	.594	.546	.429
VARIANCE	1823.107	1543.653	951.597
STD. DEV.	42.698	39.289	30.848
KURTOSIS	3.038	3.111	3.484
SKEWNESS	.127	.406	.821
MINIMUM	171.760	131.853	12.173
MAXIMUM	95.902	113.267	186.743

EAST & NORTH
COVARIANCE

STD. ERR. OF COVARIANCE	107.708
STD. DEV. OF COVARIANCE	30.540
CORRELATION COEFFICIENT	2195.661
VECTOR MEAN	-.642E-1
VECTOR VARIANCE	30.134
VECTOR STD. DEV.	1683.380
	41.029

SAMPLE SIZE = 5169 POINTS
SPANNING RANGE
FROM 72-11-02 04:00:58
TO 72- V-19 20:00:58
DURATION 107.67 DAYS

AUTO SPECTRUM
423101800 EAST COMP
423101800 NORTH COMP



1017 METERS
72-11-02 TO 72-V-18
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



EAST

↑

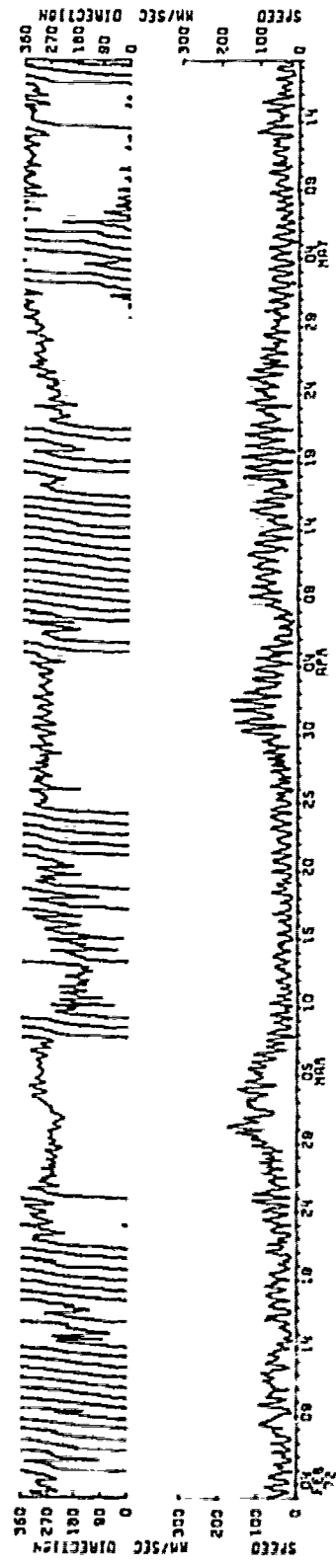
100 NM/SEC

42310

NORTH

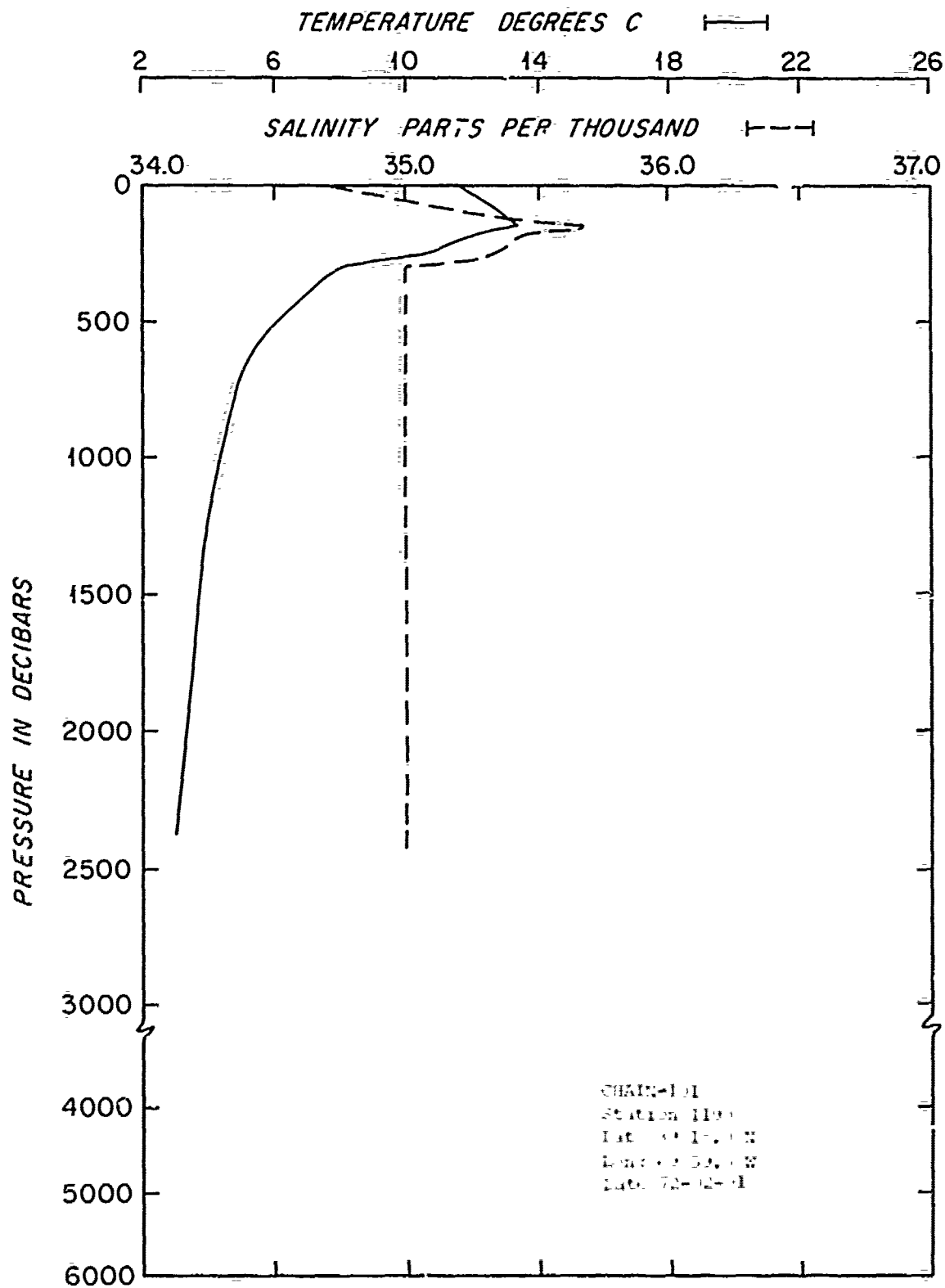
↑

100 NM/SEC

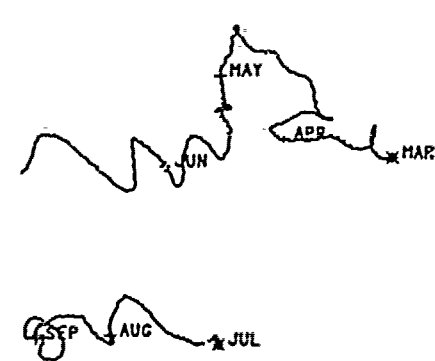
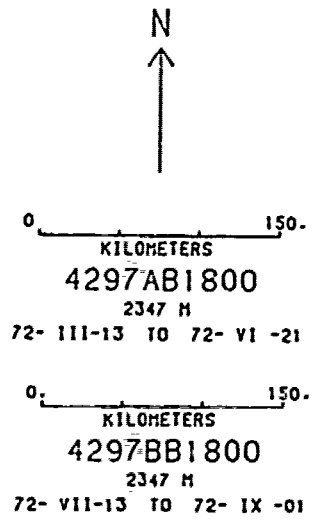


1-1-1

1-F-4



1-1--



DATE: 4/7/72-1933

DATE	EAST COMP	NORTH COMP	EAST COMP & NORTH COMP	STANDARD DEVIATION	SPANNING RANGE
4/7/72-1933	4297AB1800	4297BB1800	4297AB1800	4297BB1800	4297AB1800
MEAN	25.25	1.13	25.25	1.13	25.25
STD. DEV.	1.13	1.13	1.13	1.13	1.13
VAR.	1.28	1.28	1.28	1.28	1.28
COV.	0.00	0.00	0.00	0.00	0.00
MIN.	24.00	0.00	24.00	0.00	24.00
MAX.	26.50	2.26	26.50	2.26	26.50
DURATION	100.17 DAYS				

DATE: 4/7/72-1933

DATE	EAST COMP	NORTH COMP	EAST COMP & NORTH COMP	STANDARD DEVIATION	SPANNING RANGE
4/7/72-1933	4297AB1800	4297BB1800	4297AB1800	4297BB1800	4297AB1800
MEAN	25.25	1.13	25.25	1.13	25.25
STD. DEV.	1.13	1.13	1.13	1.13	1.13
VAR.	1.28	1.28	1.28	1.28	1.28
COV.	0.00	0.00	0.00	0.00	0.00
MIN.	24.00	0.00	24.00	0.00	24.00
MAX.	26.50	2.26	26.50	2.26	26.50
DURATION	50.15 DAYS				

DATE: 4/7/72-1933

DATE	EAST COMP	NORTH COMP	EAST COMP & NORTH COMP	STANDARD DEVIATION	SPANNING RANGE
4/7/72-1933	4297AB1800	4297BB1800	4297AB1800	4297BB1800	4297AB1800
MEAN	25.25	1.13	25.25	1.13	25.25
STD. DEV.	1.13	1.13	1.13	1.13	1.13
VAR.	1.28	1.28	1.28	1.28	1.28
COV.	0.00	0.00	0.00	0.00	0.00
MIN.	24.00	0.00	24.00	0.00	24.00
MAX.	26.50	2.26	26.50	2.26	26.50
DURATION	171.33 DAYS				

DATA NUMBER 4297

Instrument No. M-250

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

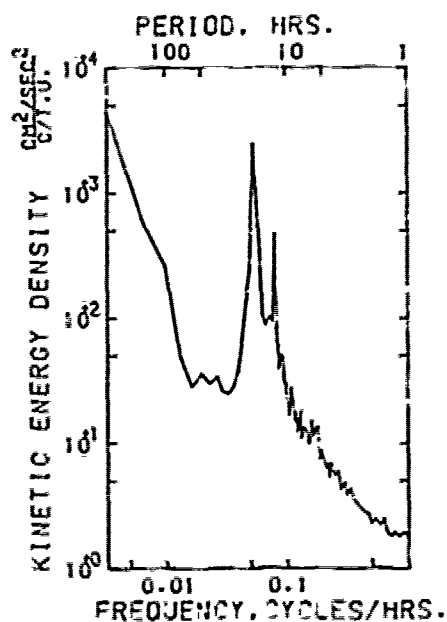
VACM accumulated averages

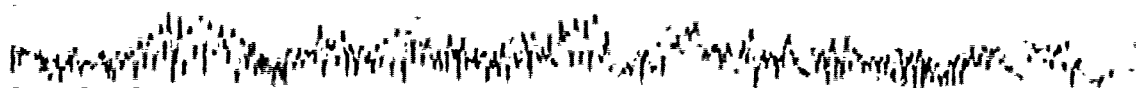
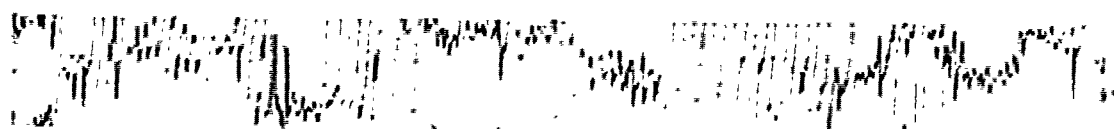
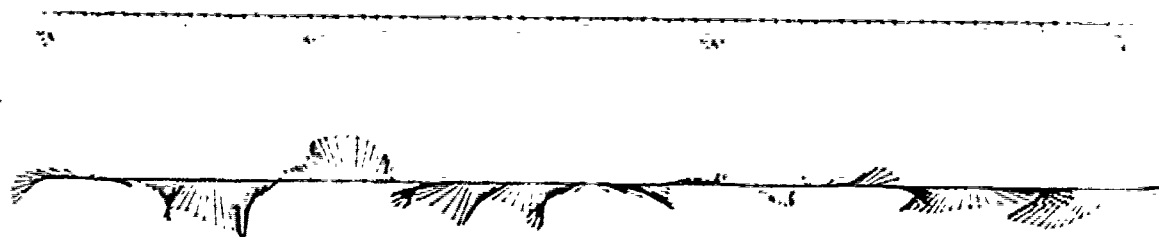
over -- sec

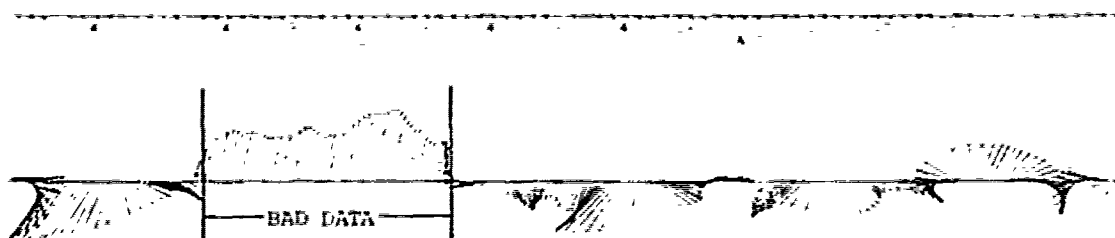
Instrument Depth 2347 m

Comments: Compass and vane didn't work for 16 days of record. Record was split into 2 good parts. Speed was good for whole record.

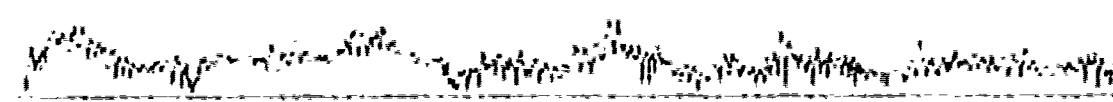
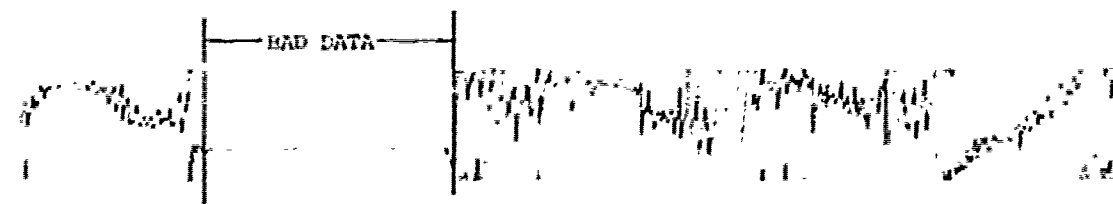
AUTO SPECTRUM
4297AB1800 EAST COMP
4297AB1800 NORTH COMP
2347 METERS
72-111-13 °C 72-VI-21
1 PIECES WITH 2400 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS







4-7



DATA NUMBER 4232

Instrument No. M-273

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

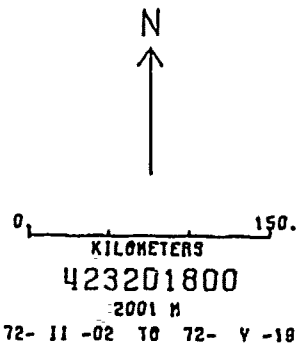
23 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 2001 m

Comments:



DATA/ 423201800

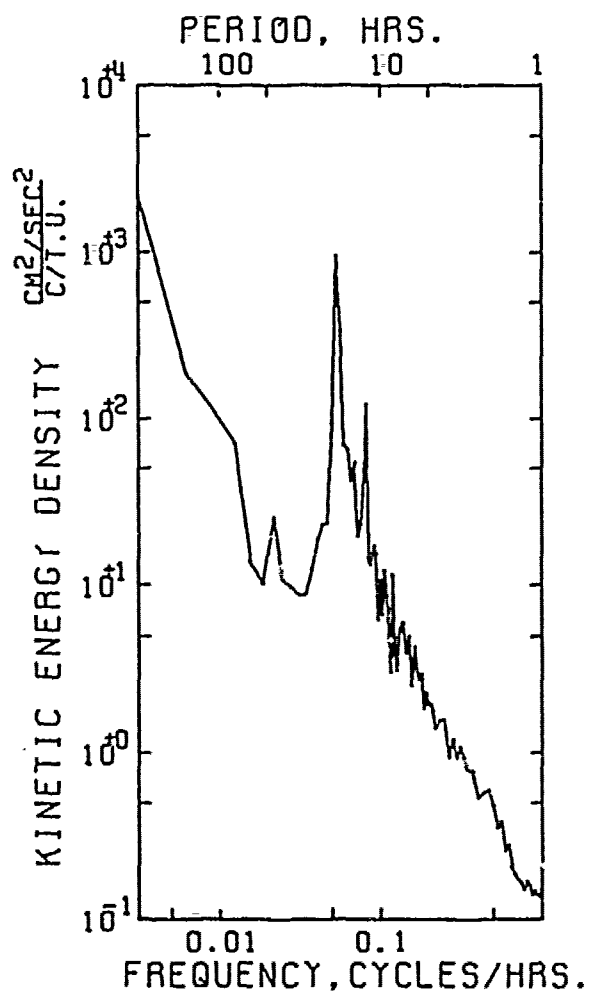
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	15.083	1.224	53.538
STD. ERR.	.658	.525	.444
VARIANCE	2237.584	1423.558	1018.428
STD. DEV.	47.303	37.730	31.913
KURTOSIS	3.406	3.438	3.587
SKEWNESS	.143	.265	.982
MINIMUM	158.736	116.484	1.239
MAXIMUM	159.416	173.545	173.545

EAST & NORTH

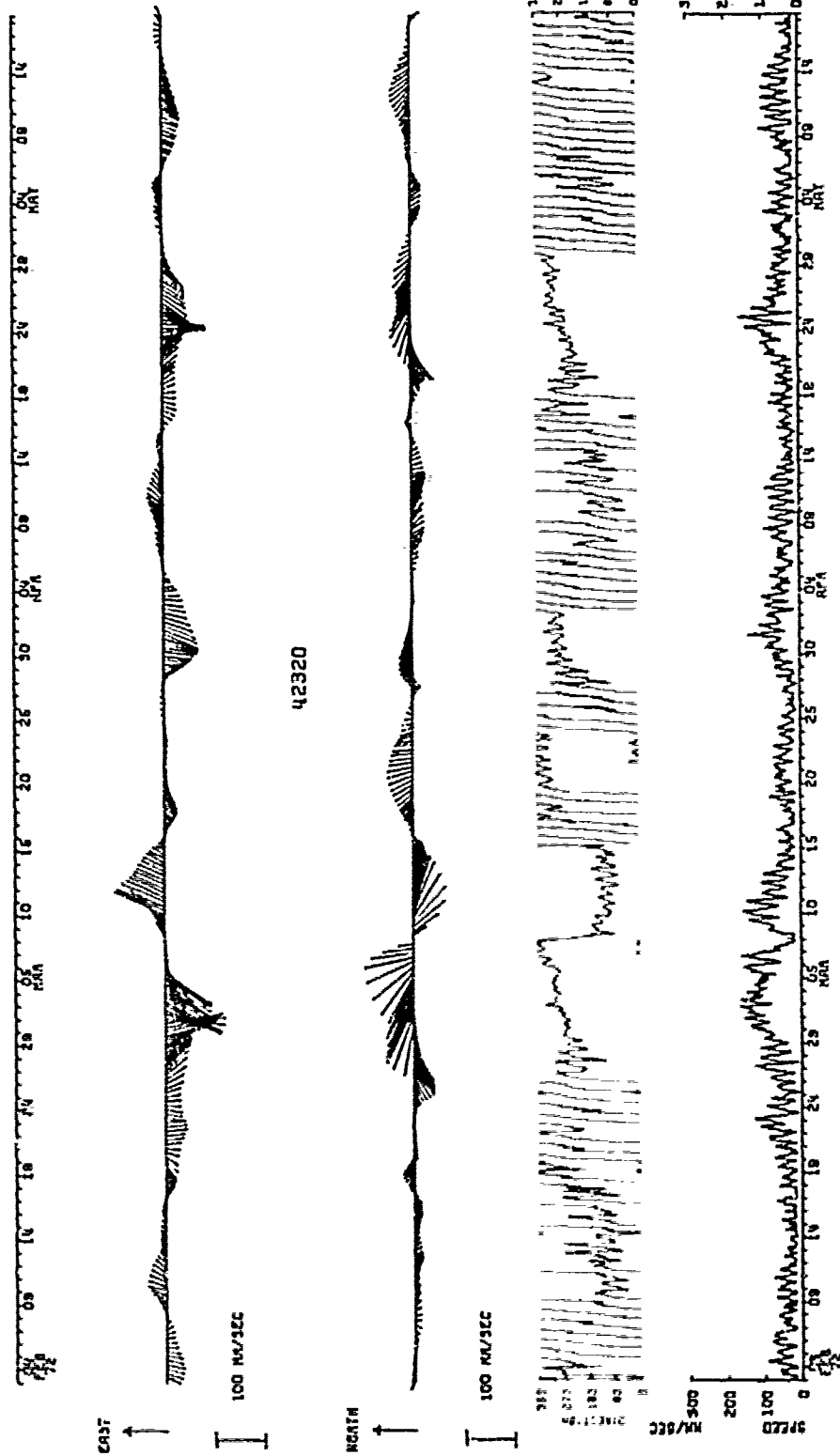
COVARIANCE	-465.826
STD. ERR. OF COVARIANCE	27.403
STD. DEV. OF COVARIANCE	1970.713
CORRELATION COEFFICIENT	.261
VECTOR MEAN	15.133
VECTOR VARIANCE	1830.571
VECTOR STD. DEV.	42.785

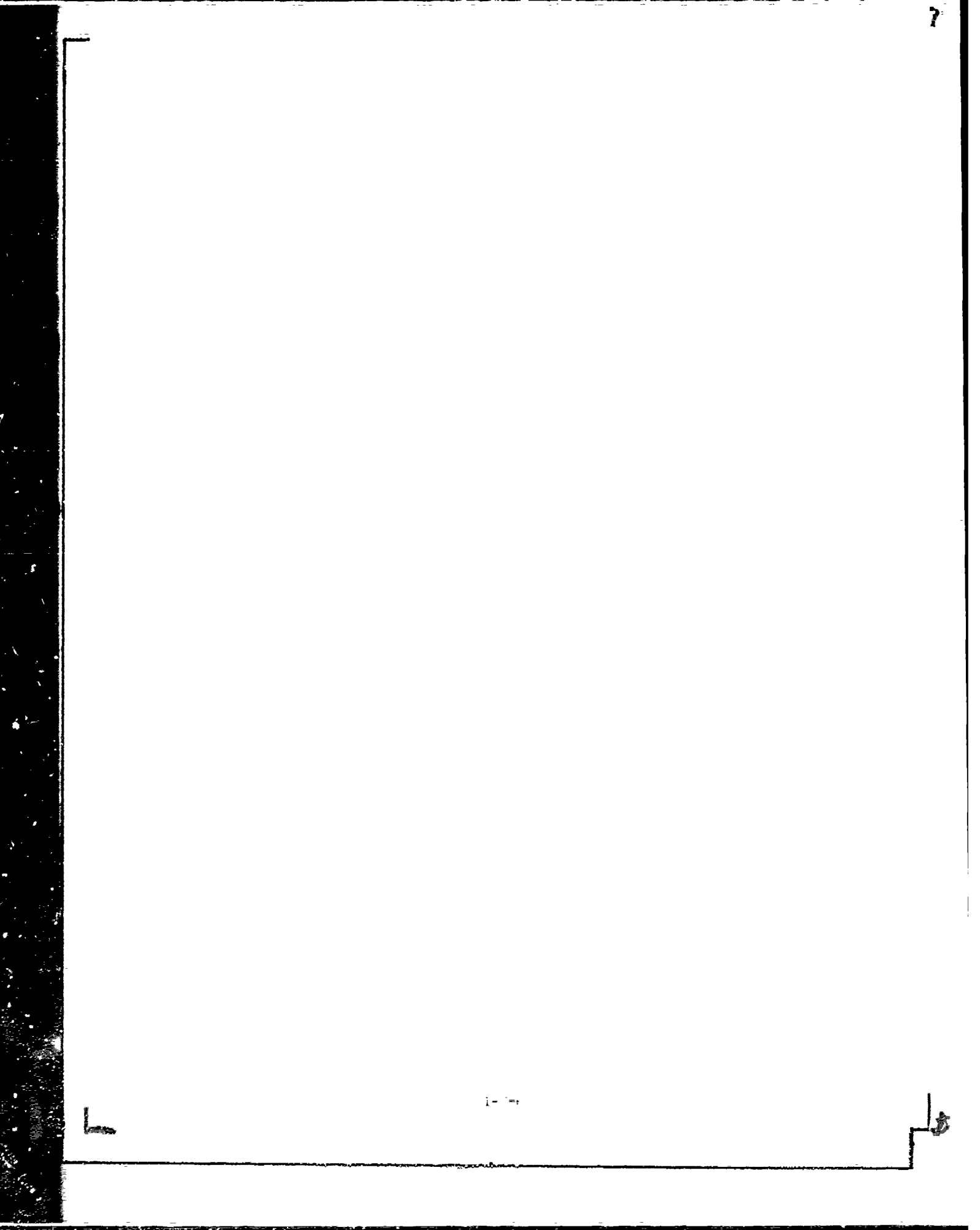
 • SAMPLE SIZE = 5172 POINTS
 •
 • SPANNING RANGE
 • FROM 72- 11 -02 02,30,57
 • TO 72- V -19 20,00,57
 •
 • DURATION : 07,73 DAYS

AUTO SPECTRUM
423201800 EAST COMP
423201800 NORTH COMP



2001 METERS
72-11-02 TO 72-V-18
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





1-5-7

1-7-77

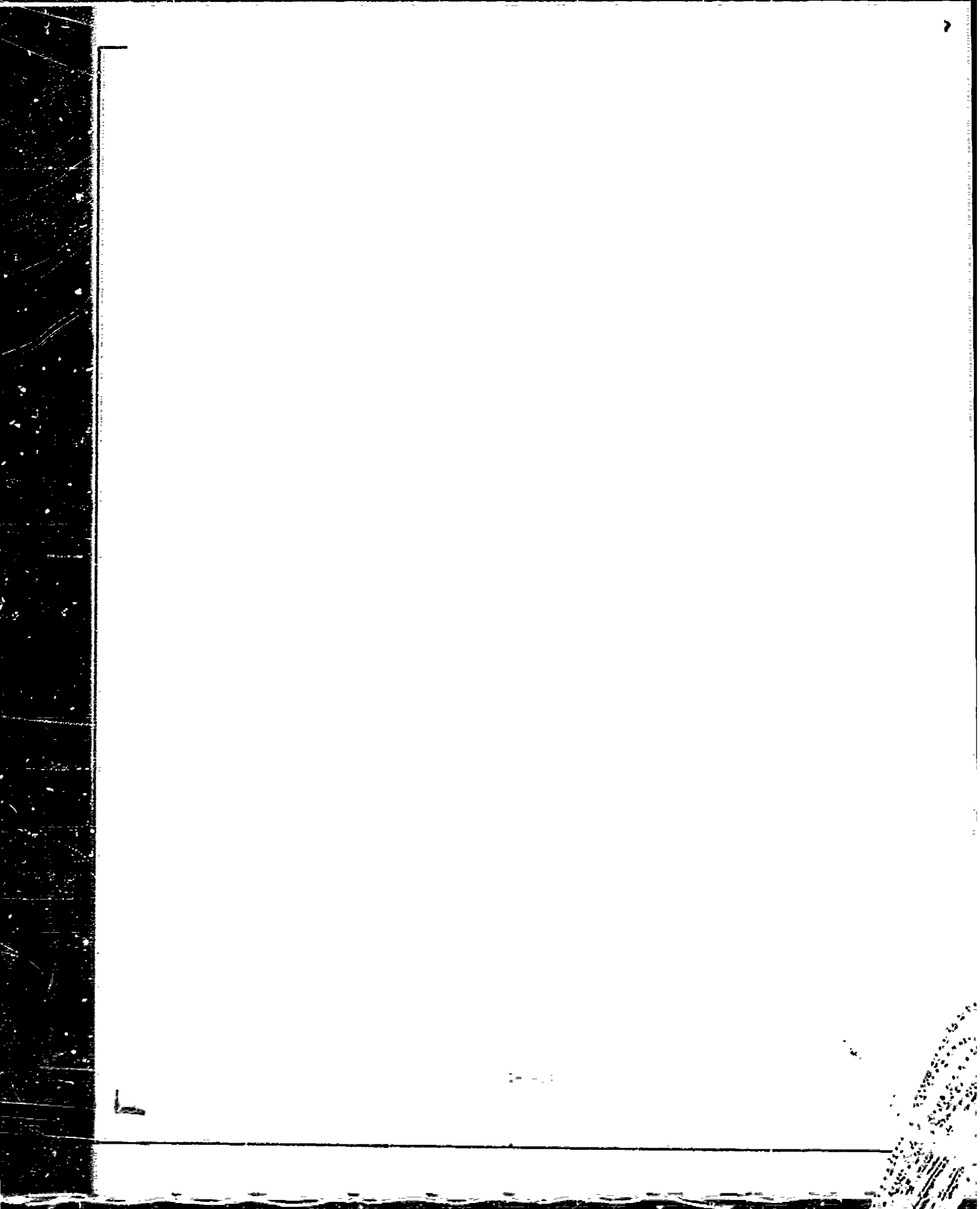
L

1

L.

2-2-11





STATION 437

5200 m

LIGHT
RADIO
GLASS BALL FLOAT
1 m 1/2" CHAIN

10 m 9/16" NYLON

CURRENT METER — 4371

217 m 1/2" NYLON

ACOUSTIC RELEASE, TRANSPONDING

30 m 9/16" NYLON

3 m 1/2" CHAIN

1000 LB CYLINDRICAL ANCHOR

Mooring No. 437

Set 72 April 08 37° 00.0'N 49° 44.2'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #104

Retrieved 72 June 06
Year Month Day

Retrieved by Tupper-Horn Ship CHAIN Cruise #104

Purpose of Mooring: Measurement of bottom current in Gulf Stream

Mooring Type: Bottom

<u>Data</u> <u>Number</u>	<u>Instrument</u> <u>Number</u>	<u>Type</u>	<u>Depth</u> <u>Meters</u>	<u>Comments</u>
4371	M-238	CM	5217	

COMMENTS ON MOORING:

DATA NUMBER 4371

Instrument No. 22-30

Instrument Sample Rate

Model - 1000 Data Rate

Year 1972

12 1972

at 12 1972

DATA 1000 Data Rate

Year 1972

Instrument No. 22-30

Year 1972

N

0 200.

KILOMETERS

43710900

5217 M

72- IV -08 TO 72- VI -06

JUN

*RPR

MAY

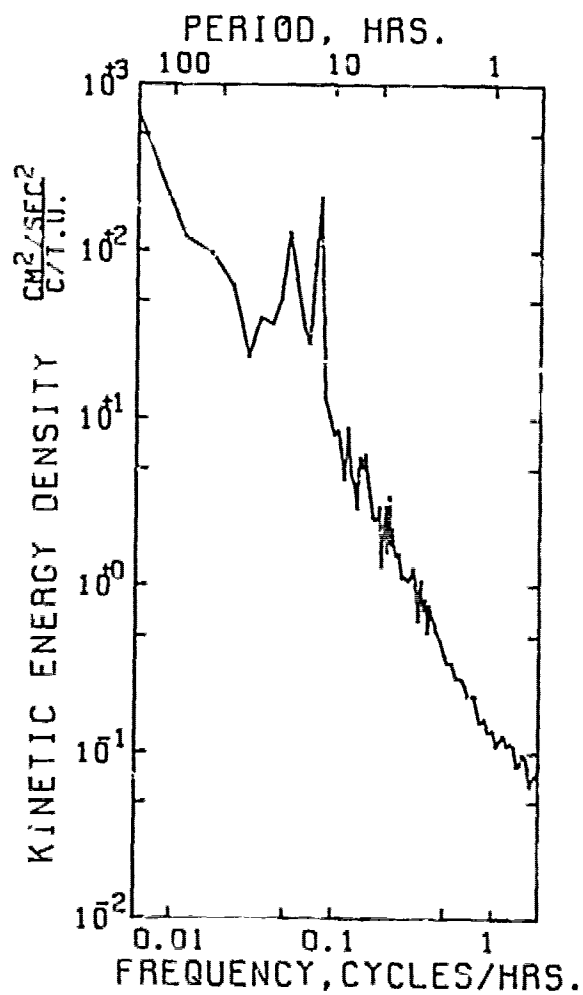
DATA/ 43710900

```
.....
VARIABLE * EAST NORTH SPEED
UNITS * MM/SEC MM/SEC MM/SEC
.....
MEAN * 115.172 42.048 134.920
STD. ERR. * .713 .632 .623
VARIANCE * 2872.721 2255.403 2193.075
STD. DEV. * 53.598 47.491 46.830
KURTOSIS * 2.540 4.941 2.945
SKEWNESS * .043E+2 .1083 .236
MINIMUM * -8.168 -159.990 -17.953
MAXIMUM * 292.442 172.577 295.793
```

.....
EAST & NORTH
.....

```
.....
COVARIANCE * -149.757 * SAMPLE SIZE = 5645 POINTS
STD. ERR. OF COVARIANCE * 86.432 *
STD. DEV. OF COVARIANCE * 6493.946 * SPANNING RANGE
CORRELATION COEFFICIENT * -.586E-1 * FROM 72- IV -08 22.30.37
VECTOR MEAN * 123.365 * TO 72- VI -06 17.30.37
VECTOR VARIANCE * 2564.062 *
VECTOR STD. DEV. * 50.637 * DURATION 58.79 DAYS
```

AUTO SPECTRUM
43710900 EAST COMP
43710900 NORTH COMP



5217 METERS
72-IV-08 TO 72-VI-04
1 PIECES WITH 270C ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

15 16 21 26 01 06 11 16 21 26 31 05
APR MAY JUN

EAST



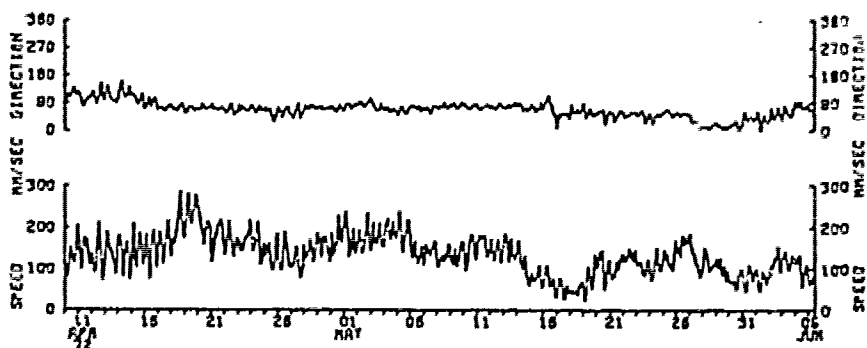
150 MM/SEC

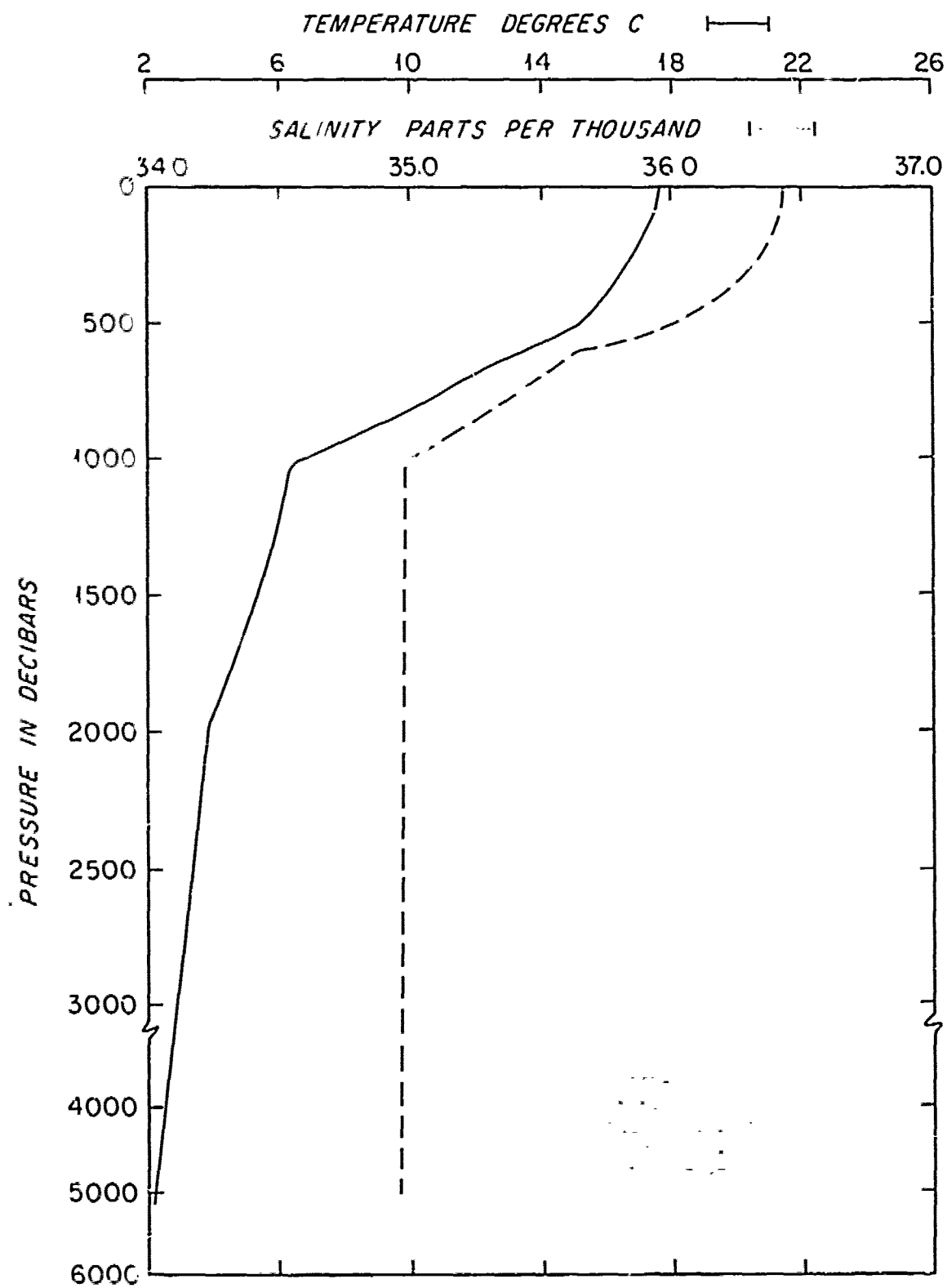
43710

NCATH



150 MM/SEC





4553 -

STATION 443

1

100 LB. CYCLOPSAL ANCHOR

1

3 - 1/2" CHAIN

1

30 - 3/16" NYLON

1

DEPTH METER - 4432

1

500 - 1/2" RAMSON NYLON

1

ACM - 4432

1

247 - 1/2" RAMSON NYLON

1

ACOUSTIC RELEASE, TRANSPONDING

1

30 - 3/16" NYLON

1

3 - 1/2" CHAIN

1

1000 LB. CYCLOPSAL ANCHOR

Mooring No. 413

Year 1961 Month 1 Day 1 Latitude 43° 46.1'N Longitude

Set by 155 11 Ship USNS Cruise 514

Retrieved 1961
Year Month Day

Retrieved by 155 11 Ship USNS Cruise 514

Purpose of Mooring: Mooring for 155 11

Mooring Type: Bottom

Data Number	Instrument Number	Type	Depth Meters	Comments
1411	155 11	155	155	
1412	155 11	155	155	

COMMENTS ON MOORING:

DATA NUMBER 4431

Instrument No. 15021

Instrument Sampling Scheme
Model 550 data burst

DATE 1972-11-11

15 samples

at 1500 per sample

ACM Accumulated Overrides

BY 1500 per

Instrument Location 1500

Comments:

N
↑
0. 150.
KILOMETERS
44310900
4597 M

72- IV -11 TO 72- VI -04

MAY
1500

JUN

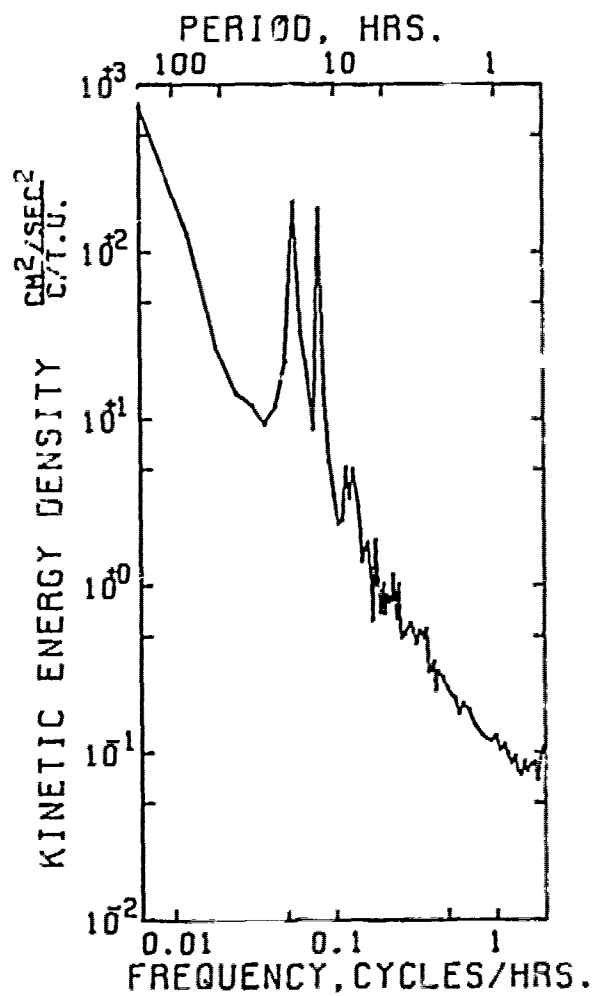
DATA/ 44310900

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	12.020	21.022	82.601
STD. ERR.	.745	1.124	.745
VARIANCE	2897.113	6592.173	3242.894
STD. DEV.	53.825	81.192	56.946
KURTOSIS	3.371	3.256	3.628
SKEWNESS	-.005	-.685	1.060
MINIMUM	-189.119	-282.374	1.197
MAXIMUM	146.027	151.751	289.577

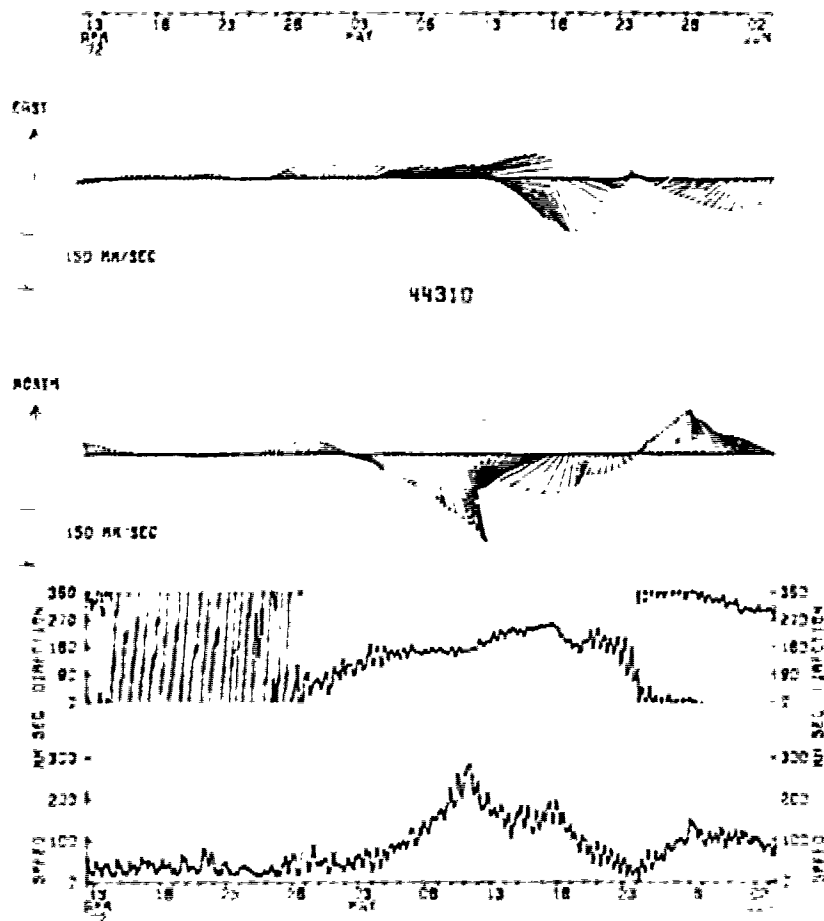
EAST & NORTH

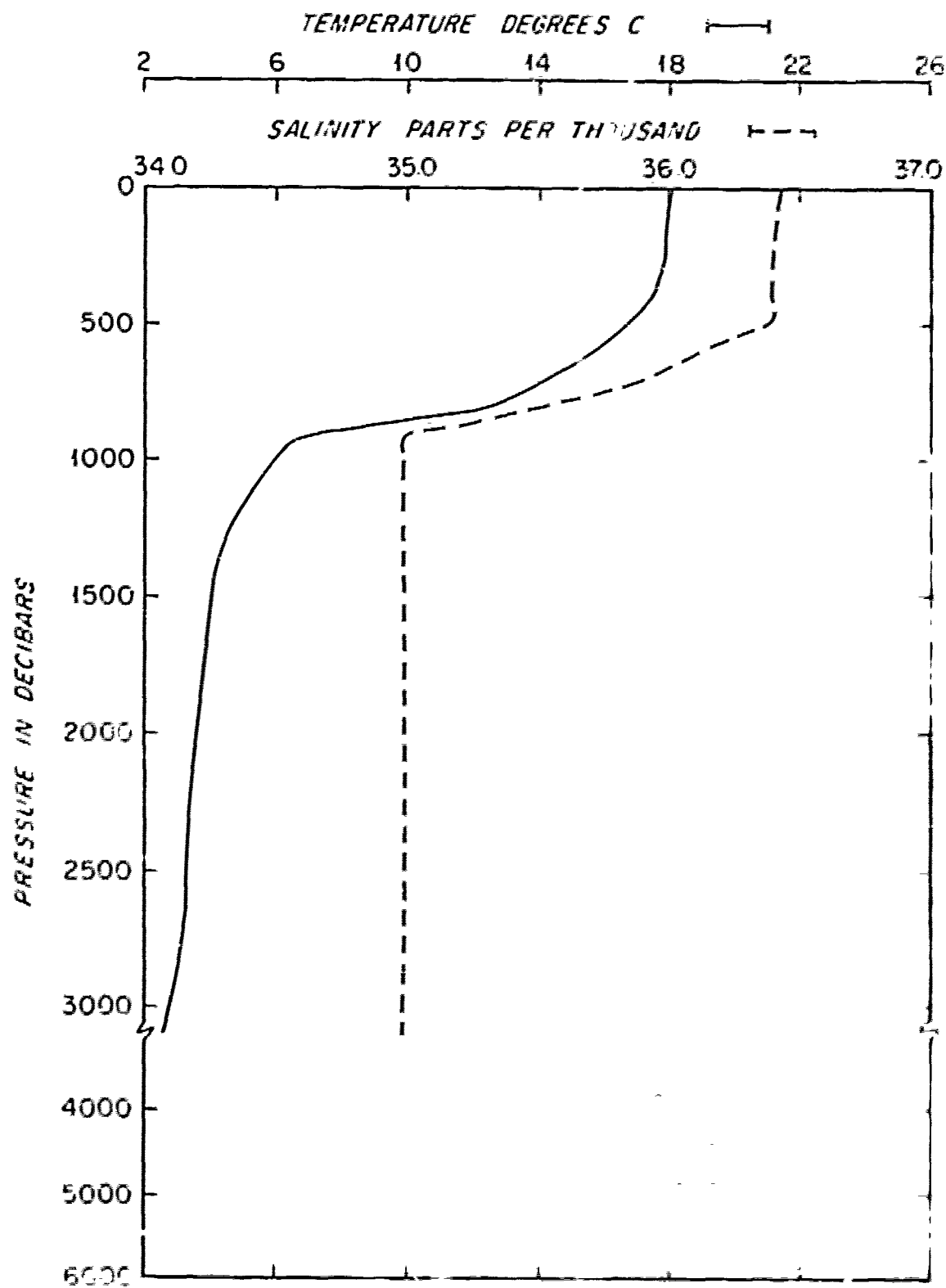
COVARIANCE	-268.589	SAMPLE SIZE	5222 POINTS
STD. ERR. OF COVARIANCE	73.015		
STD. DEV. OF COVARIANCE	5276.309	SPANNING RANGE	
CORRELATION COEFFICIENT	-.0152-1	FROM 72- IV -11	05.00.37
VECTOR MEAN	24.215	TO 72- VI -04	14.15.37
VECTOR VARIANCE	4744.643		
VECTOR STD. DEV.	68.881	DURATION	54.39 DAYS

AUTO SPECTRUM
44310900 EAST COMP
44310900 NORTH COMP



4597 METERS
72-IV-11 TO 72-VI-04
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





STATION 438

5144 m

LIGHT
RADIO
GLASS BALL FLOAT
1 m 1/2" CHAIN

10 m 9/16" NYLON

CURRENT METER — 4381

217 m 1/2" CHAIN

ACOUSTIC RELEASE, TRANSDUCING

30 m 9/16" NYLON

30 m 1/2" CHAIN

1000 LB CYLINDRICAL ANCHOR

Mooring No. 438

Set 72 April 09 37° 30.6'N 49° 44.4'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #104

Retrieved 72 June 06
Year Month Day

Retrieved by Tupper-Horn Ship CHAIN Cruise #104

Purpose of Mooring: Measurement of bottom current in Gulf Stream

Mooring Type: Bottom

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4301	M-225	CH	5161	

COMMENTS ON MOORING:

DATA NUMBER 4381

Instrument No. M-225

Instrument Sampling Scheme

Model 850 data bursts

every 900 sec

15 samples

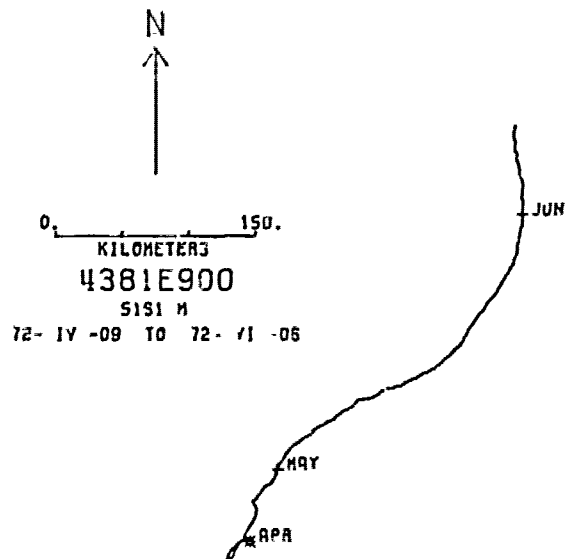
at 5.27 sec/sample

VACH accumulated averages

over --- sec

Instrument Depth 5151 m

Comments:



DATA/ 4381E900

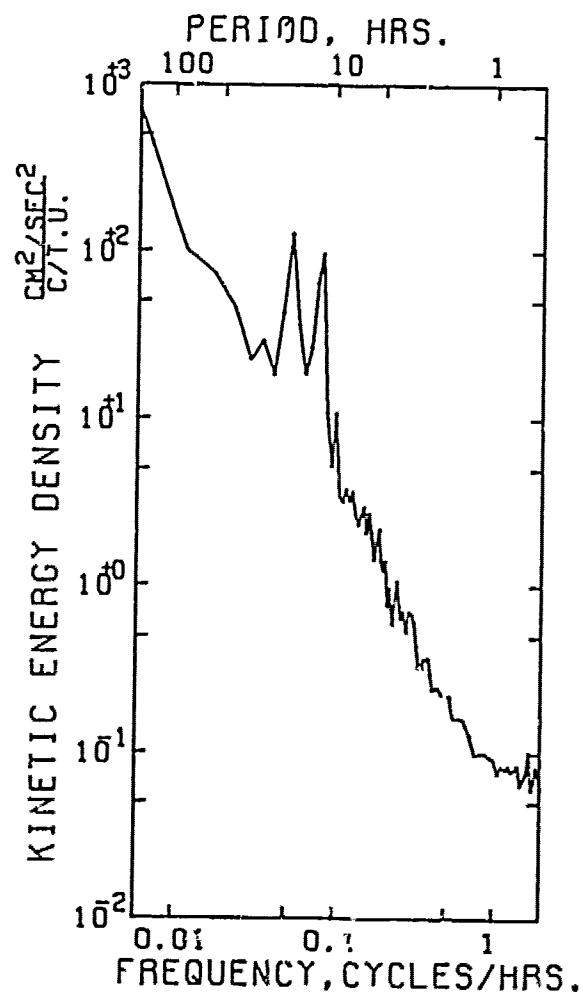
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	40.026	54.543	91.866
STD. ERR.	0.635	0.699	0.548
VARIANCE	2244.381	2715.601	1668.135
STD. DEV.	47.375	52.111	40.843
KURTOSIS	2.678	2.789	2.868
SKEWNESS	0.334	0.789E-1	0.356
MINIMUM	-105.924	-69.681	15.486
MAXIMUM	174.742	206.950	230.472

EAST & NORTH

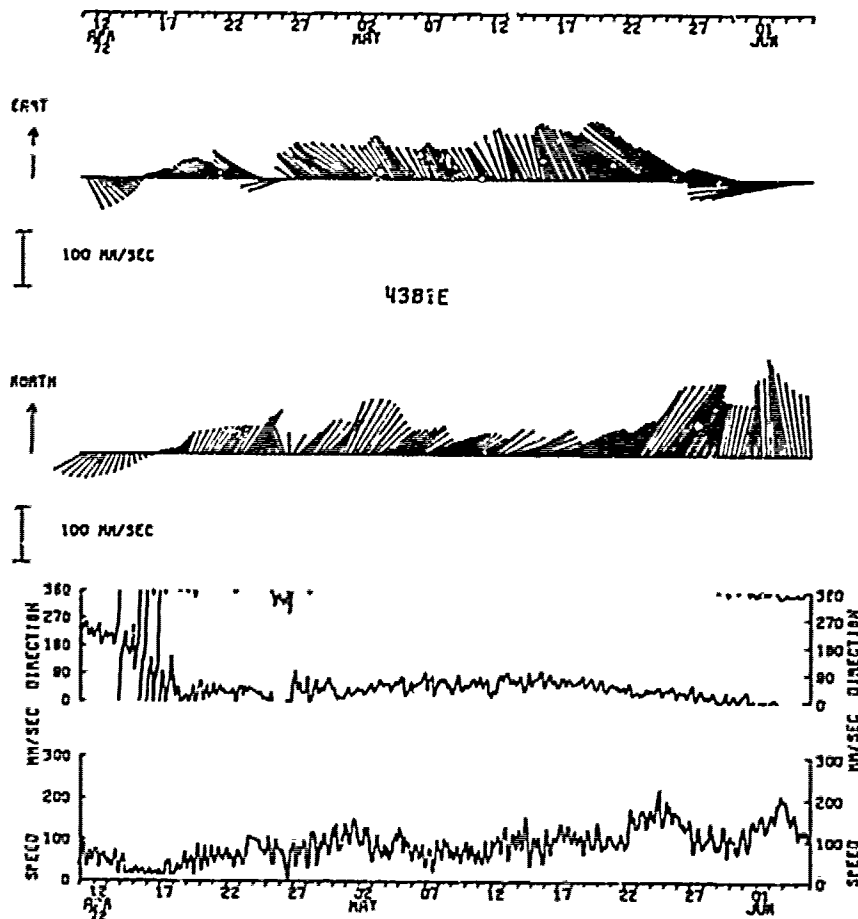
COVARIANCE	171.080
STD. ERR. OF COVARIANCE	53.572
STD. DEV. OF COVARIANCE	3993.872
CORRELATION COEFFICIENT	0.150
VECTOR MEAN	71.746
VECTOR VARIANCE	2479.991
VECTOR STD. DEV.	49.800

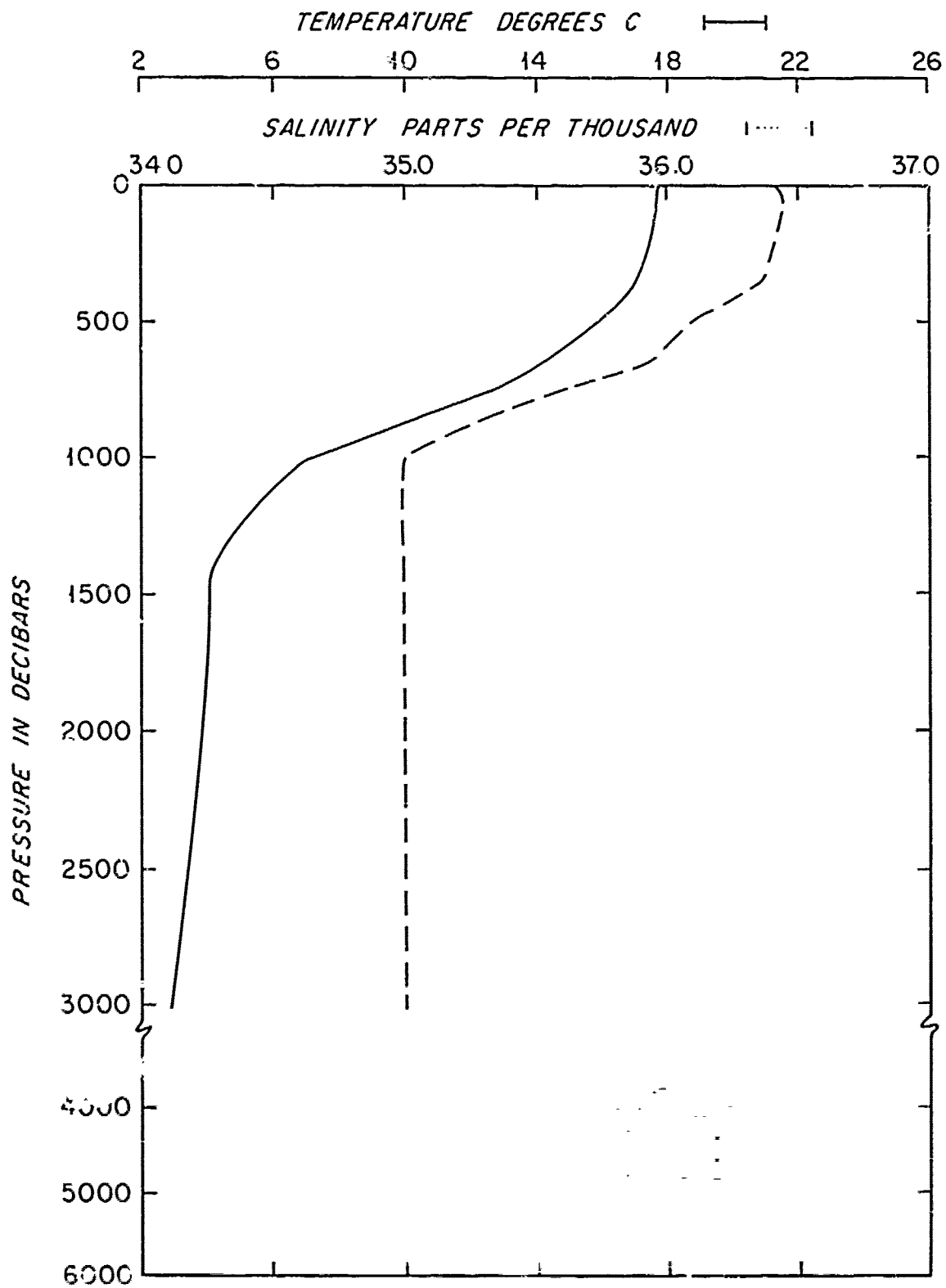
• SAMPLE SIZE = 5558 POINTS
• SPANNING RANGE
• FROM 72- IV -09 12:30.37
• TO 72- VI -06 09:45.37
• DURATION 57.89 DAYS

AUTO SPECTRUM
4381E900 EAST COMP
4381E900 NORTH COMP



5161 METERS
72-IV-09 TO 72-VI-04
1 PIECES WITH 2700 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





DATA NUMBER 4432

Instrument No. V-0116

Instrument Sampling Scheme
Model 850 data bursts

every --- sec

--- samples

at --- sec/sample

WASH accumulated averages
over 900 sec

Instrument Depth 3150 m

Comments:

N



0. 150.

KILOMETERS

4432A900

5156 H

72- IV -11 TO 72- VI -04

MAY

JUN

DATA/ 4432A900

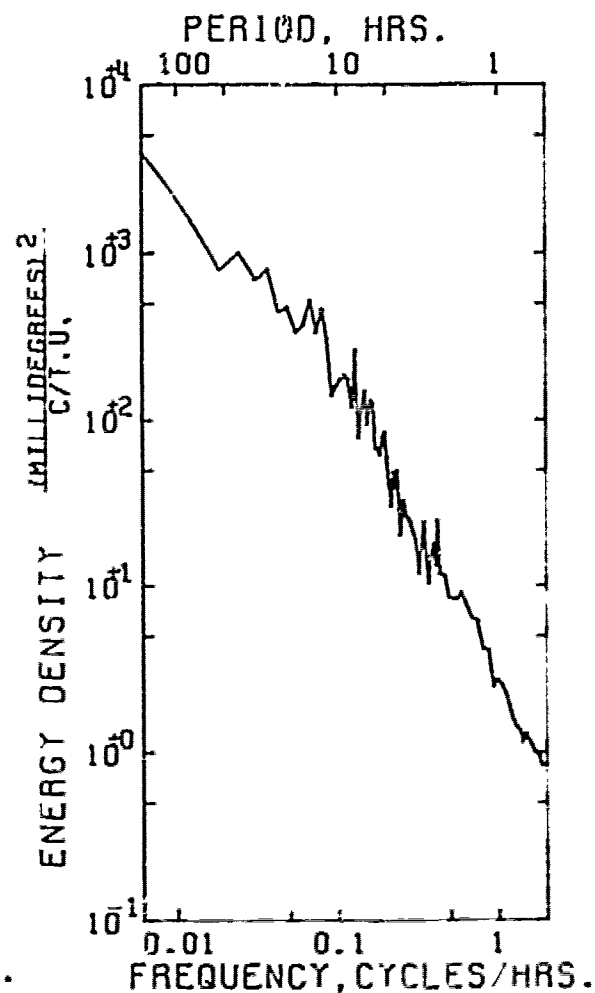
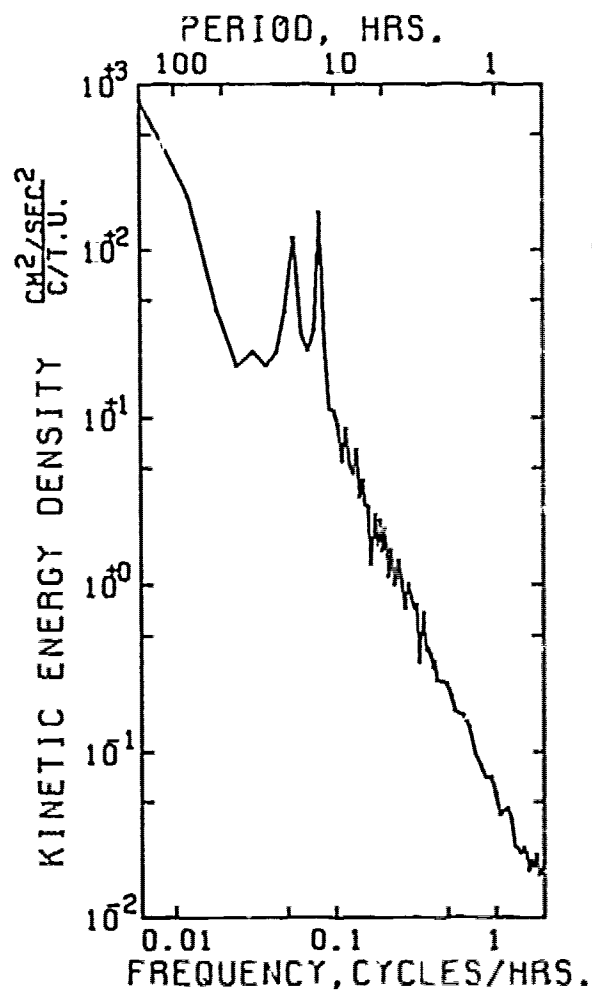
VARIABLE	EAST	NORTH	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	-6.576	-21.603	40.713	2.319
STD. DEV.	.847	1.144	.876	.157E+3
VARIANCE	37.5.075	7.77.113	334X.679	.129E+3
STD. DEV.	61.197	85.190	58.593	.113E+1
KURTOSIS	4.272	2.744	2.872	33.305
SKEWNESS	-1.207	-.432	.878	3.742
MINIMUM	-273.131	-266.545	2.000	0.283
MAXIMUM	123.086	167.432	276.000	2.465

.....
EAST & NORTH
.....

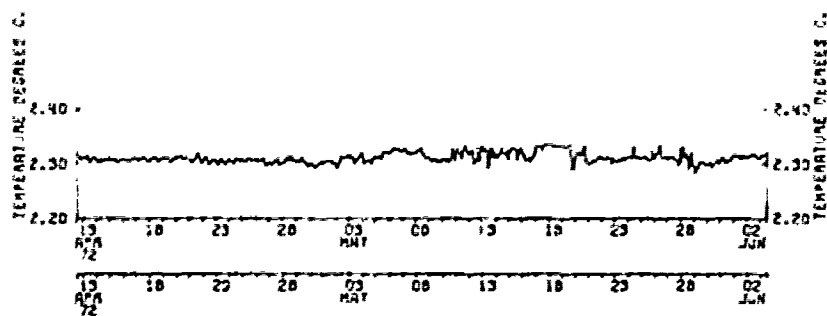
Covariance	182.063	SAMPLE SIZE	5225 PLANTS
STD. DEV. OF COVARIANCE	74.591	SPANNING RANGE	
STD. DEV. OF COVARIANCE	5659.174	FROM 72- IV -11	04.45.00
CORRELATION COEFFICIENT	.346E+1	TO 72- VI -04	14.45.00
VECTOR MEAN	22.486		
VECTOR VARIANCE	5561.034		
VECTOR STD. DEV.	74.573	DURATION	54.42 DAYS

AUTO SPECTRUM
4432A900 EAST
4432A900 NORTH

AUTO SPECTRUM
4432A900 TEMPERATURE

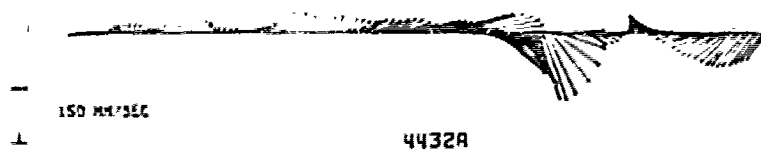


5156 METERS
72-IV-11 TO 72-VI-04
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



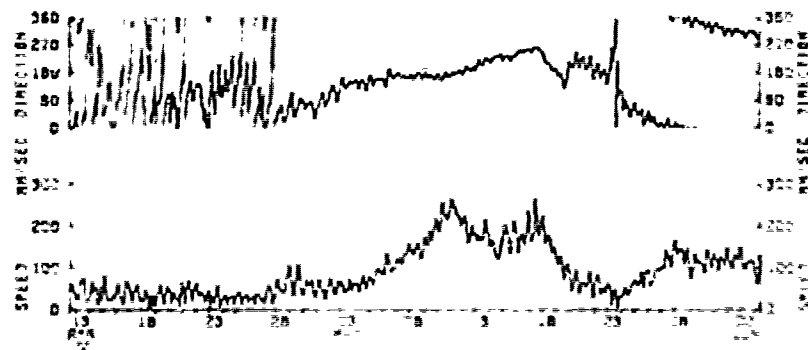
CRS

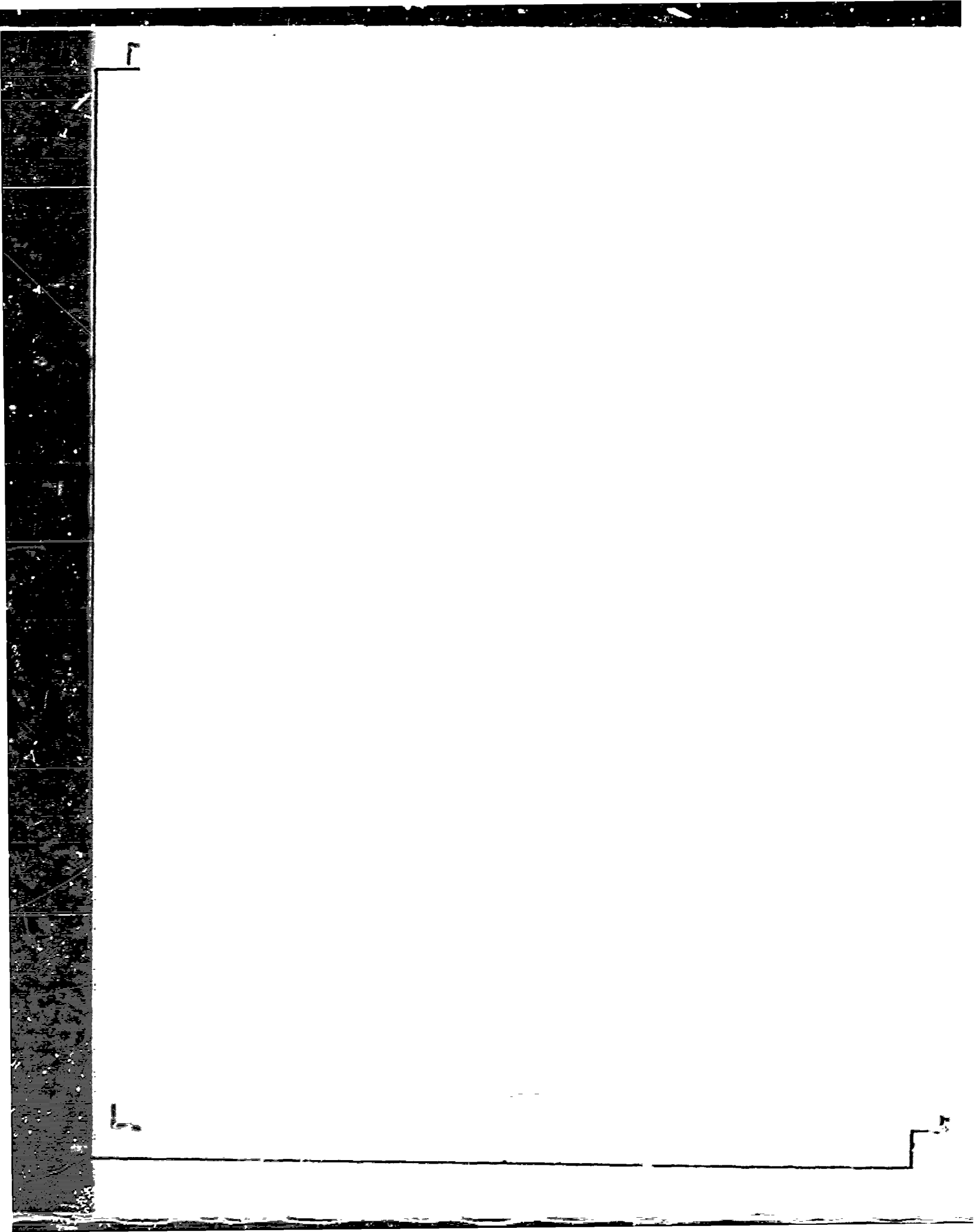
A



RCAT

A





STATION 440

3142 m

LIGHT
RADIO
GLASS BALL FLOAT
1 m 1/2" CHAIN
10 m 9/16" NYLON

CURRENT METER - 4401

217 m 1/2" SAMPSON NYLON

ACOUSTIC RELEASE, TRANSPONDING

30 m 9/16" NYLON

3 m 1/2" CHAIN

1000 LB CYLINDRICAL ANCHOR

Mooring No. 440

Set 72 April 10
Year Month Day

38° 17.6'N

49° 46.6'W

Latitude

Longitude

Set by Gifford

Ship

CHAIN

Cruise #104

Retrieved 72 June 05
Year Month Day

Retrieved by Tupper-Horn

Ship

CHAIN

Cruise #104

Purpose of Mooring: Measurements of Gulf Stream

Mooring Type: Bottom

<u>Data</u> <u>Number</u>	<u>Instrument</u> <u>Number</u>	<u>Type</u>	<u>Depth</u> <u>Meters</u>	<u>Comments</u>
4401	M-256	CH	5159	

COMMENTS ON MOORING:

DATA NUMBER 4401

Instrument No. M-256

Instrument Sampling Scheme

Model 850 data bursts

every 900 sec

15 samples

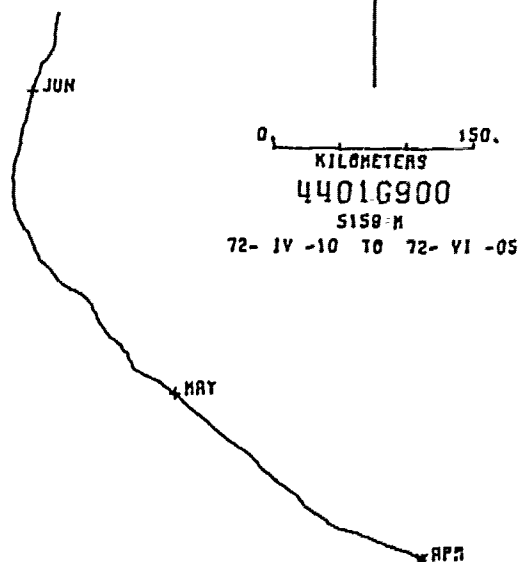
at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 5159 m

Comments:



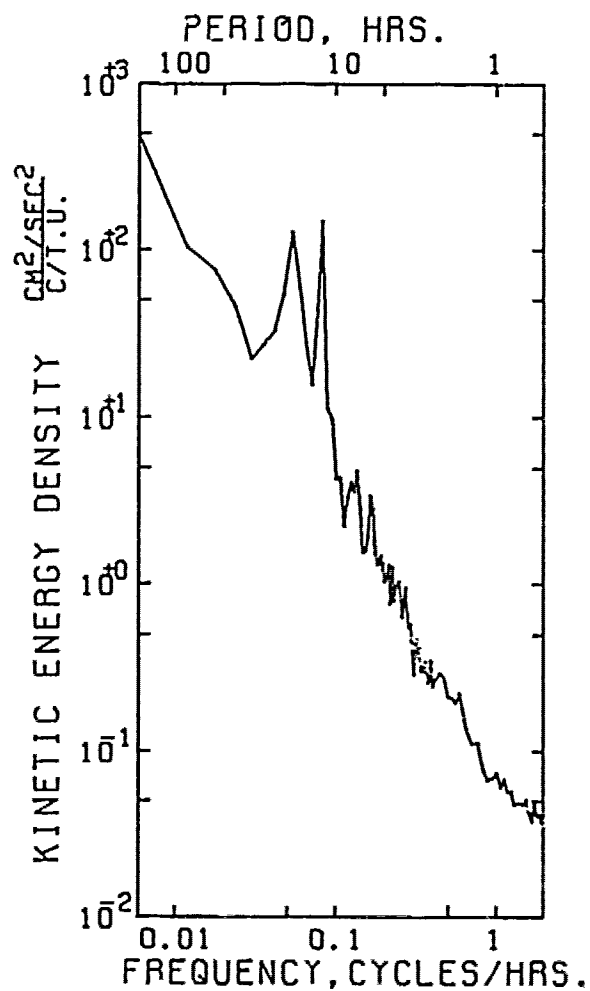
DATA/ 4401G900

VARIABLE *	EAST	NORTH	SPEED
UNITS *	MM/SEC	MM/SEC	MM/SEC
MEAN *	54.389	81.065	115.321
STD. ERR. *	.820	.562	.542
VARIANCE *	3649.726	1715.621	1596.110
STD. DEV. *	60.413	41.420	39.951
KURTOSIS *	3.399	2.438	2.636
SKEWNESS *	.555	.301	.230
MINIMUM *	-202.972	-9.272	17.895
MAXIMUM *	185.525	220.258	255.715

EAST & NORTH

COVARIANCE *	1169.755	• SAMPLE SIZE * 5432 POINTS
STD. ERR. OF COVARIANCE *	85.601	•
STD. DEV. OF COVARIANCE *	6308.950	• SPANNING RANGE
CORRELATION COEFFICIENT *	.467	• FROM 72- IV -10 06.00.37
VECTOR MEAN *	97.620	• TO 72- VI -05 19.45.37
VECTOR VARIANCE *	2682.673	•
VECTOR STD. DEV. *	51.795	• DURATION 56.57 DAYS

AUTO SPECTRUM
4401G900 EAST COMP
4401G900 NORTH COMP



5159 METERS
72-IV-10 TO 72-VI-C5
1 PIECES WITH 2700 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

12 17 22 27 02 07 12 17 22 27 01
MAY MAY JUN

EAST



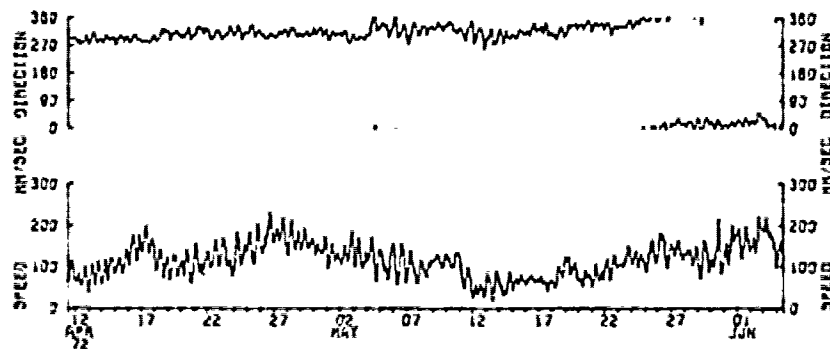
100 KM/SEC

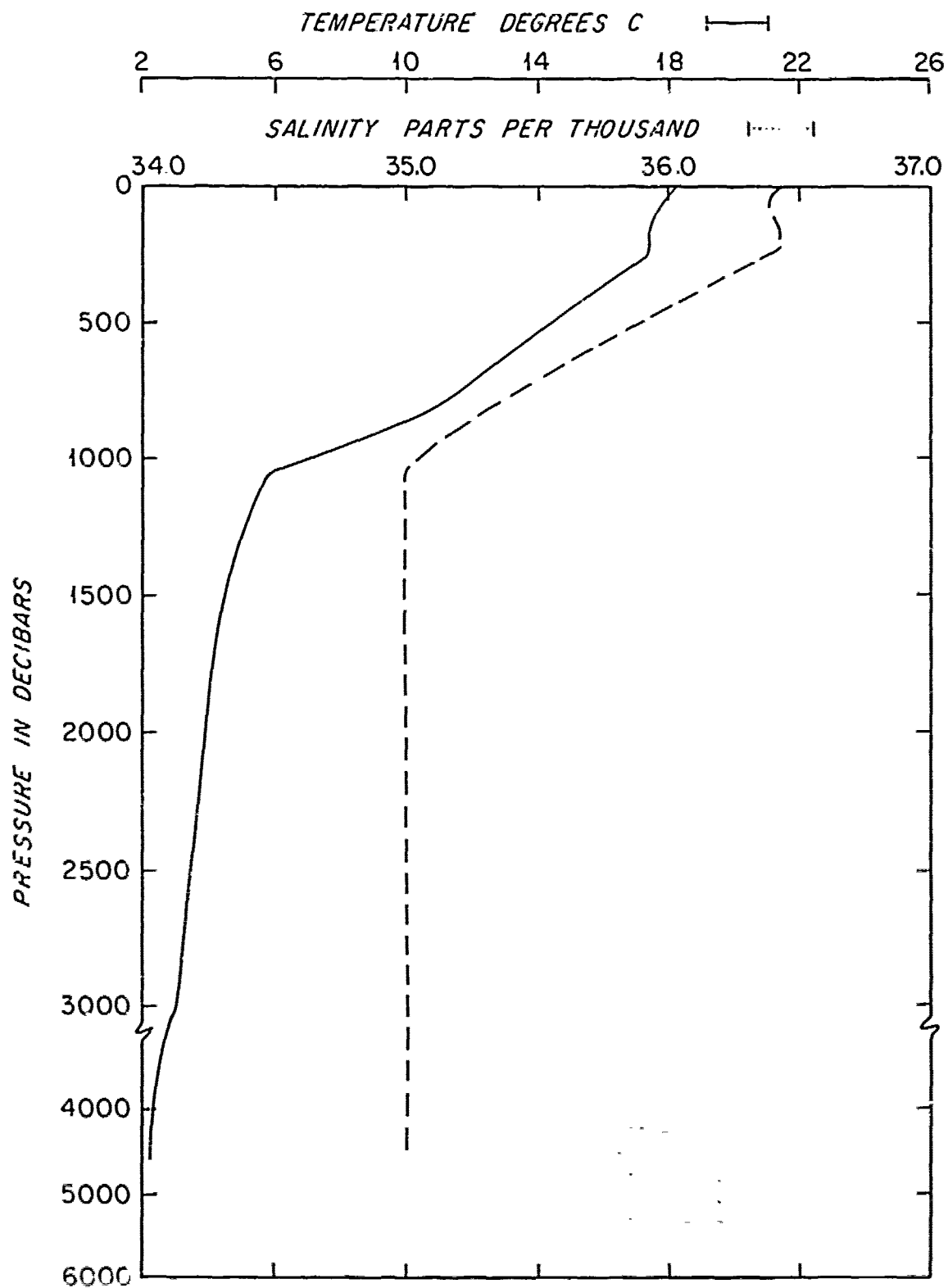
44010

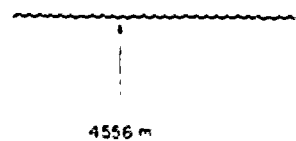
NORTH



100 KM/SEC







STATION 444



RADIO FLOAT
WITH LIGHT
2 m 1/2" CHAIN



12 16" GLASS BALLS IN NETS ON 30 m 9/16" NYLON



CURRENT METER - 4441

500 m 1/2" SAMSON NYLON



VACM - 4442

217 m 1/2" SAMSON NYLON



ACOUSTIC RELEASE, TRANSPONDING

30 m 9/16" NYLON



3 m 1/2" CHAIN



1000 LB CYLINDRICAL ANCHOR

Mooring No. 444

Set 72 April 11 49° 45.3'N 40° 41. 'W
Year Month Day Latitude Longitude

Set by Sifford Ship CHAIN Cruise #114

Retrieved 72 June 04
Year Month Day

Retrieved by Pepper-Horn Ship CHAIN Cruise #114

Purpose of Mooring: Measurement of Gulf Stream Currents

Mooring Type: Bottom

<u>Data</u> <u>Number</u>	<u>Instrument</u> <u>Number</u>	<u>Type</u>	<u>Depth</u> <u>Meters</u>	<u>Comments</u>
4441	M-200	CT	4394	
4442	M-110	WAT	1103	

COMMENTS ON MOORING:

DATA NUMBER 4441

Instrument No. M-266

Instrument Sampling Scheme:

Model 850 data bursts

every 0.00 sec

15 samples

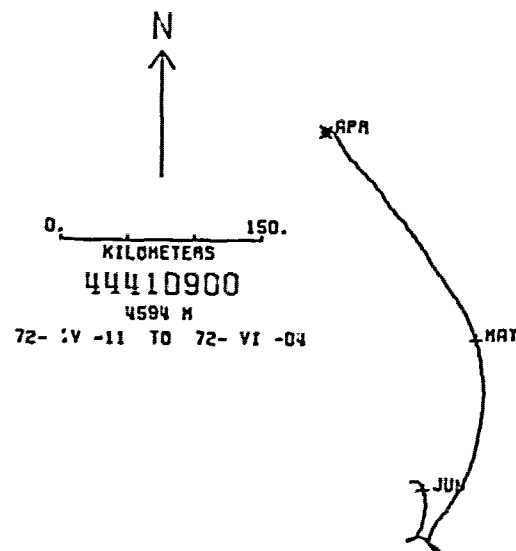
at 5.27 sec/sample

WASH: accumulated averages

over --- sec

Instrument Data 1894

Comments:



DATA/ 44410900

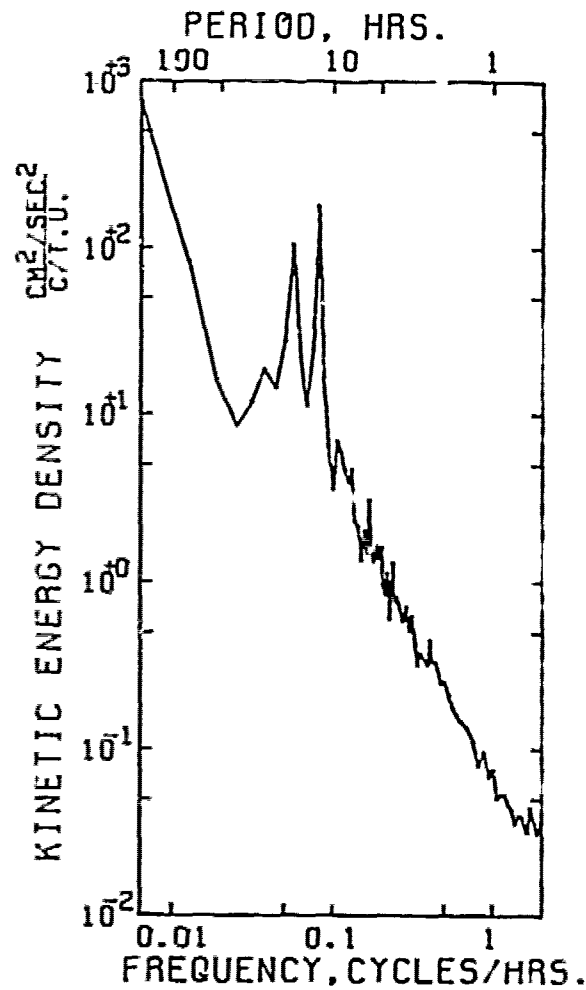
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	14.11	53.495	98.828
STD. ERR.	.793	1.026	.715
VARIANCE	3244.321	6083.618	2636.244
STD. DEV.	56.957	77.998	51.345
KURTOSIS	2.449	2.153	2.276
SKEWNESS	-.722E+1	.229	.263
MINIMUM	-146.064	-216.667	-17.628
MAXIMUM	169.615	133.009	232.722

EAST & NORTH

COVARIANCE	6698.697
STD. ERR. OF COVARIANCE	86.475
STD. DEV. OF COVARIANCE	6211.812
CORRELATION COEFFICIENT	.127
VECTOR MEAN	55.455
VECTOR VARIANCE	4663.570
VECTOR STD. DEV.	68.293

* SAMPLE SIZE = 5160 POINTS
*
* SPANNING RANGE
* FROM 72- IV -11 13.15.00
* TO 72- VI -04 07.00.00
*
* DURATION 53.74 DAYS

AUTO SPECTRUM
44410900 EAST COMP
44410900 NORTH COMP



4594 METERS
72-IV-11 TO 72-VI-03
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

14 19 24 29 04 09 14 19 24 29 03
KPA HRT JAN

4-51
A



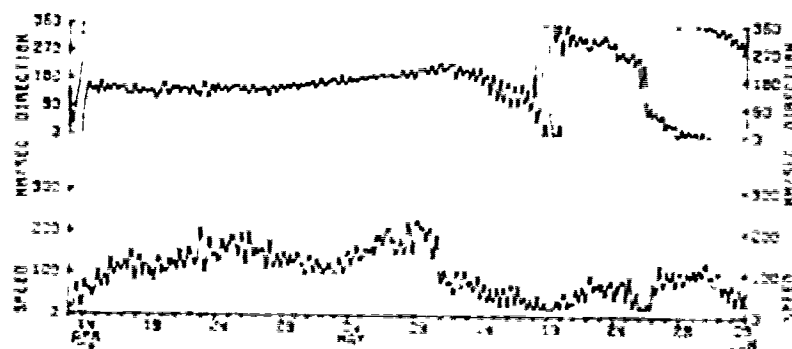
100 KM/SEC

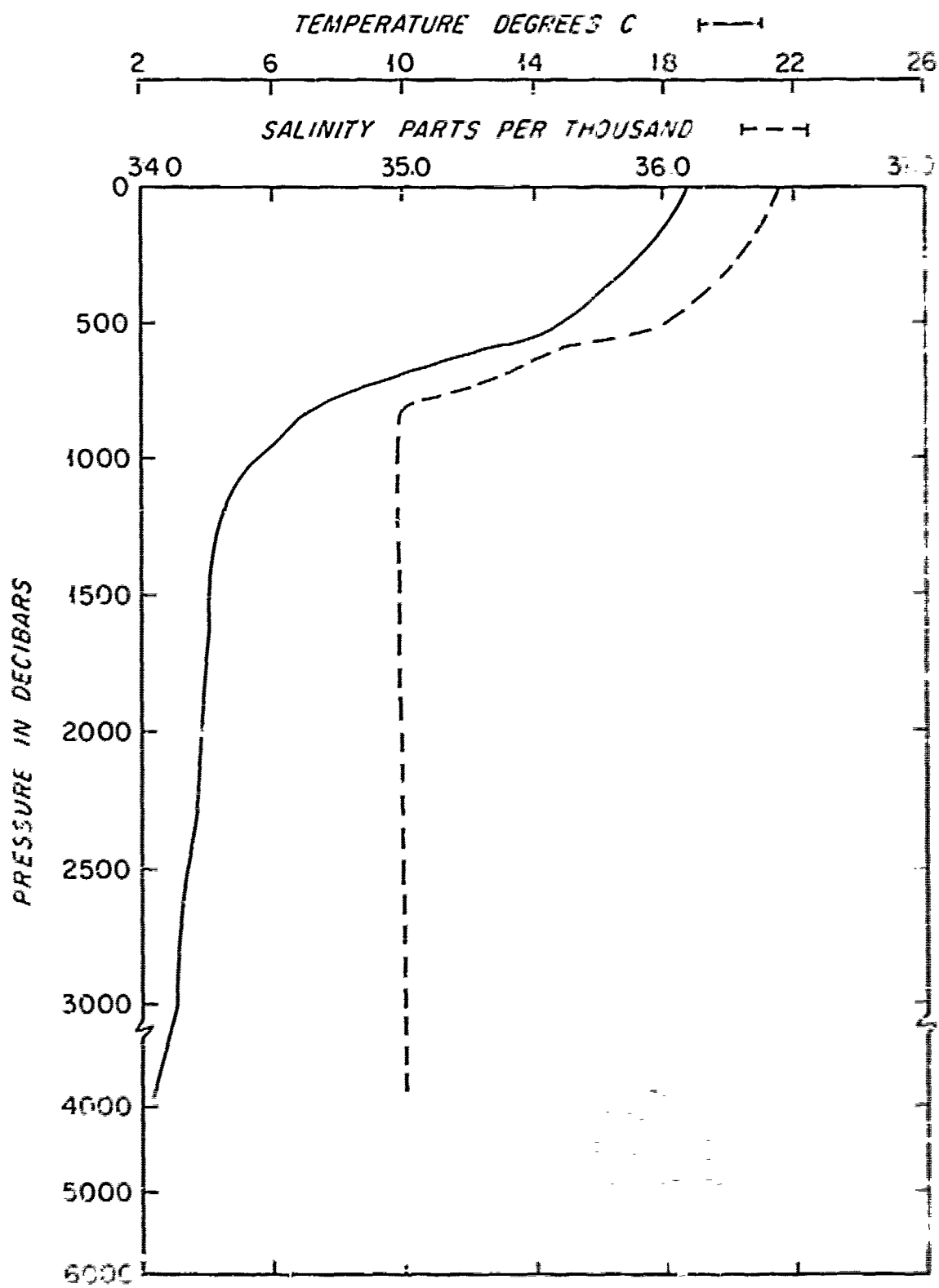
44410

4074
A

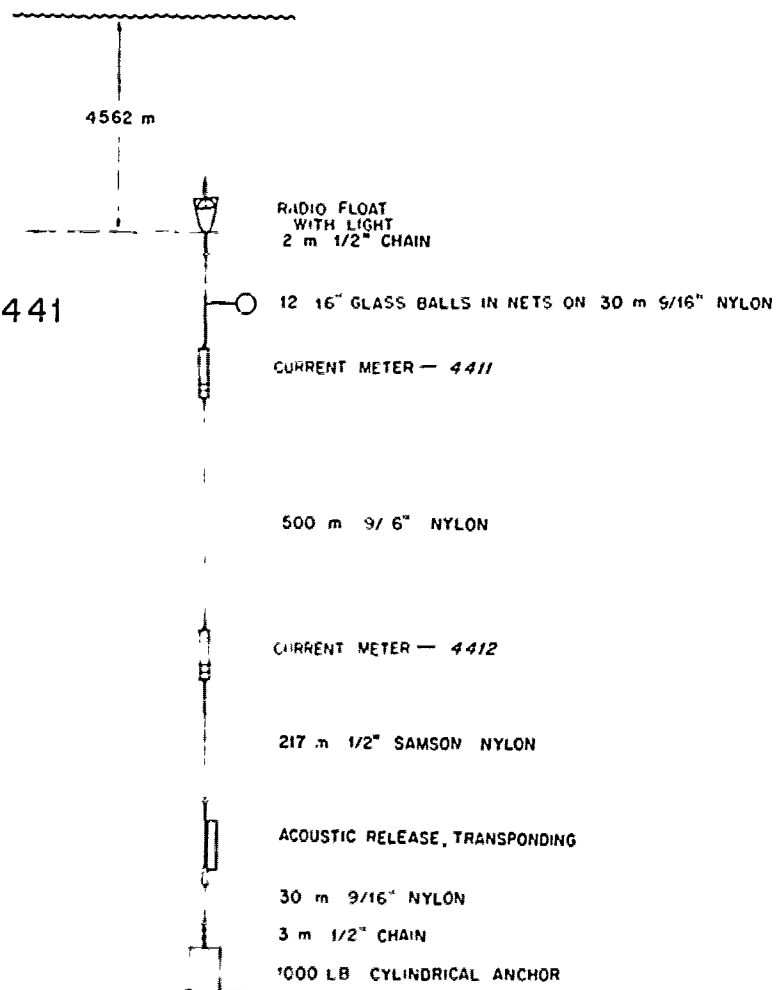


100 KM/SEC





STATION 441



Mooring No. 441

Set 72 April 10 38° 39.0'N 49° 47.3'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #104

Retrieved 72 June 05
Year Month Day

Retrieved by Tupper-Horn Ship CHAIN Cruise #104

Purpose of Mooring: Measurements of Gulf Stream Currents

Mooring Type: Bottom

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comm.</u>
4411	M-226	CM	1600	
4412	V-0117	VACM	5159	

COMMENTS ON MOORING:

DATA NUMBER 4411

Instrument No. M-226

Instrument Sampling Scheme

Model 850 data bursts

every 900 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages

over -- sec

Instrument Depth 4600 m

Comments:

JUN

0 150.

KILOMETERS

4411A900

4600 M

72- IV -10 TO 72- VI -05

MAY

APR

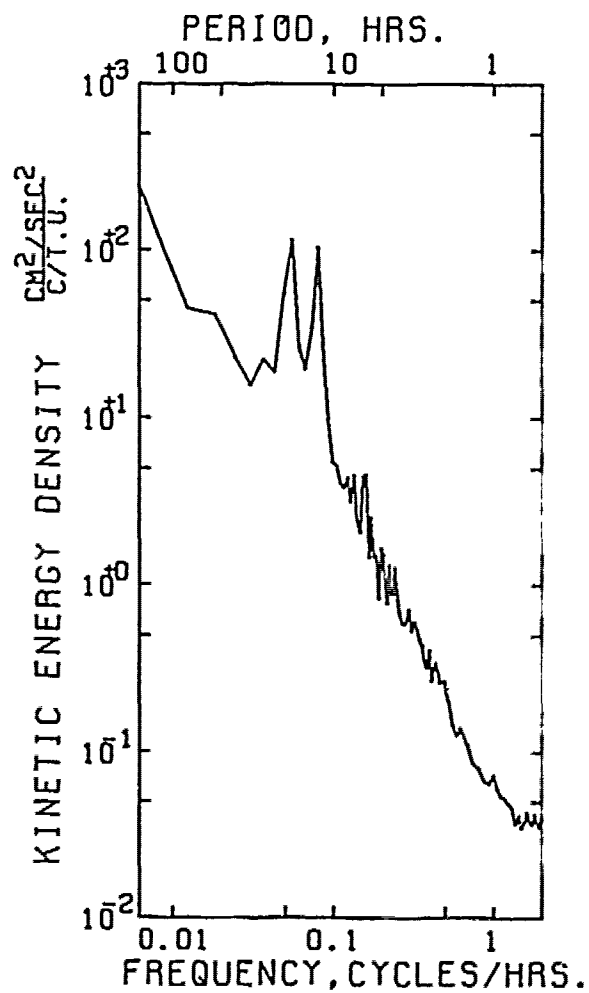
DATA/ 4411A900

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-57.119	66.888	100.020
STD. ERR.	.065	.086	.672
VARIANCE	2372.084	1841.309	1945.990
STD. DEV.	48.704	42.910	44.113
KURTOSIS	3.253	1.634	2.144
SKEWNESS	.436	-.461E-1	.184
MINIMUM	-178.511	-21.811	16.483
MAXIMUM	94.495	171.993	205.369

EAST & NORTH

COVARIANCE	-169.954	SAMPLE SIZE = 5367 POINTS
STD. ERR. OF COVARIANCE	75.325	
STD. DEV. OF COVARIANCE	5518.270	SPANNING RANGE
CORRELATION COEFFICIENT	-.813E-1	PRGM 72- IV -10 13.45.37
VECTOR MEAN	87.958	TO 72- VI -05 11.15.37
VECTOR VARIANCE	2106.697	
VECTOR STD. DEV.	45.899	DURATION 55.90 DAYS

AUTO SPECTRUM
4411A900 EAST COMP
4411A900 NORTH COMP



4600 METERS
72-IV-10 TO 72-VI-03
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

13 APR 72 18 21 28 01 MAY 04 13 18 23 28 02 JUN

EAST



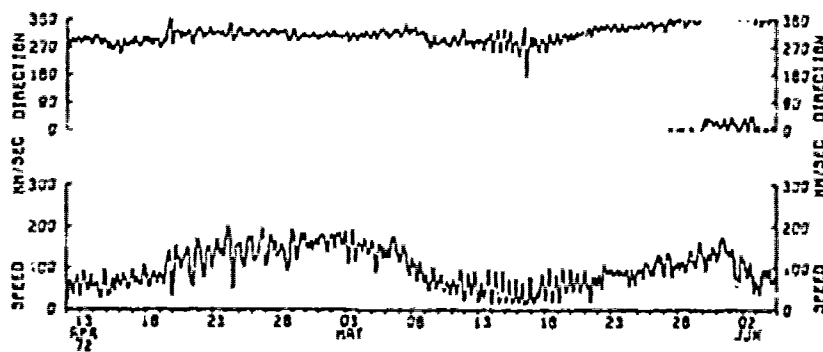
100 KM/SEC

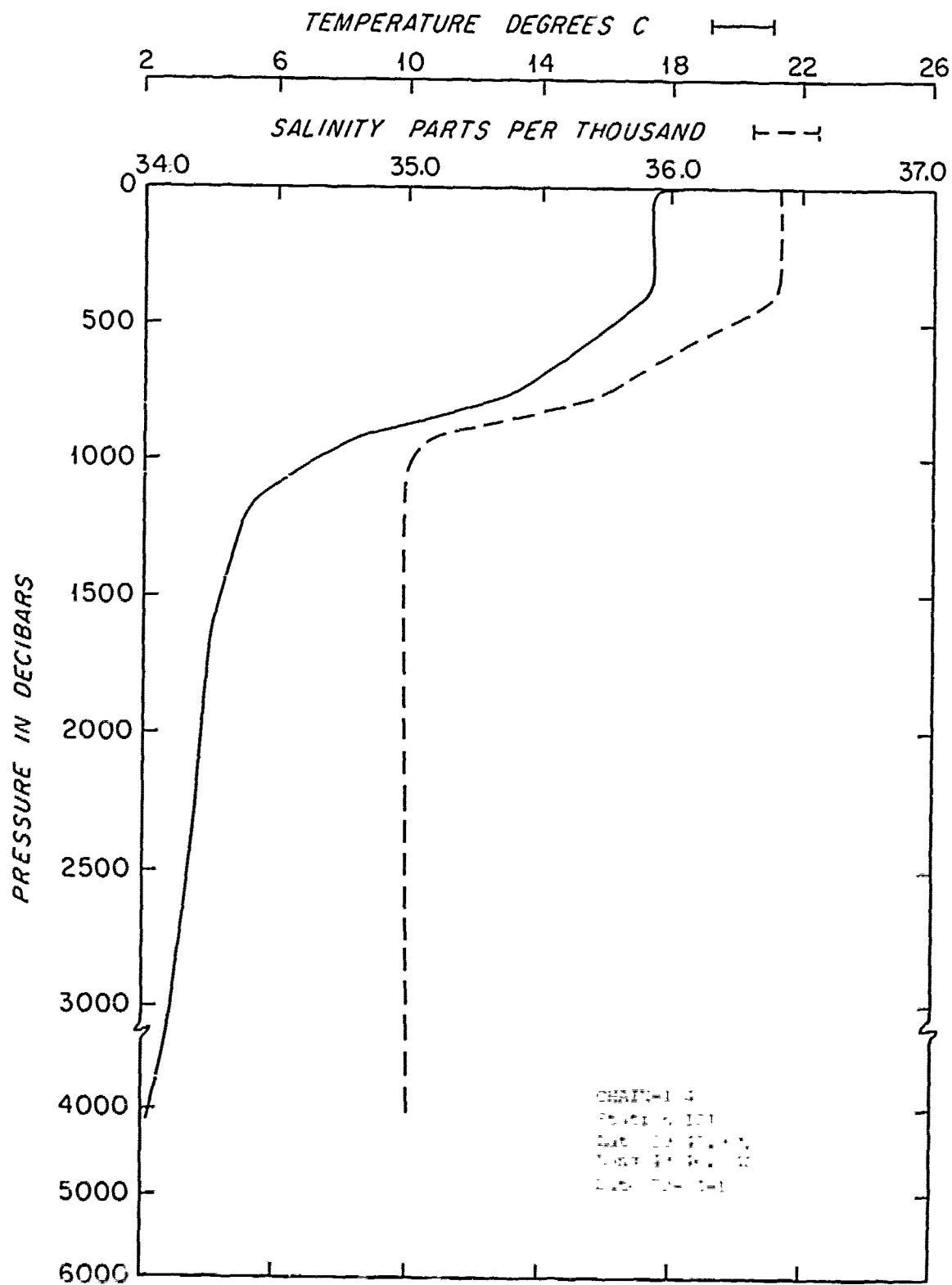
4411A

NORTH



100 KM/SEC





DATA NUMBER 4442

Instrument No. V-0120

Instrument Sampling Scheme
Model 850 data bursts

every --- sec

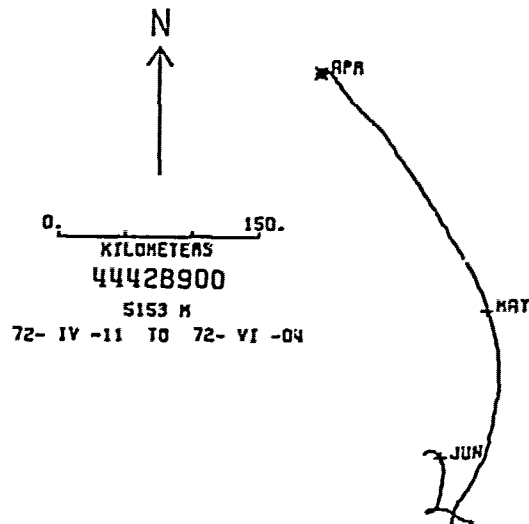
--- samples

at --- sec/sample

WASM accumulated averages
over 900 sec

Instrument Depth 5153 m

Comments:

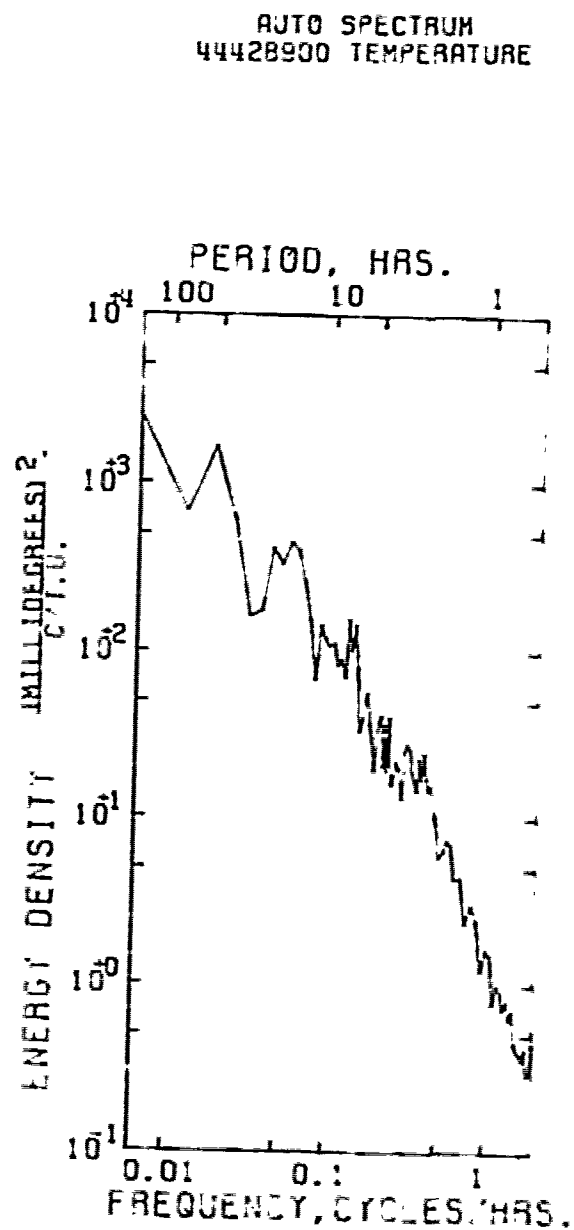
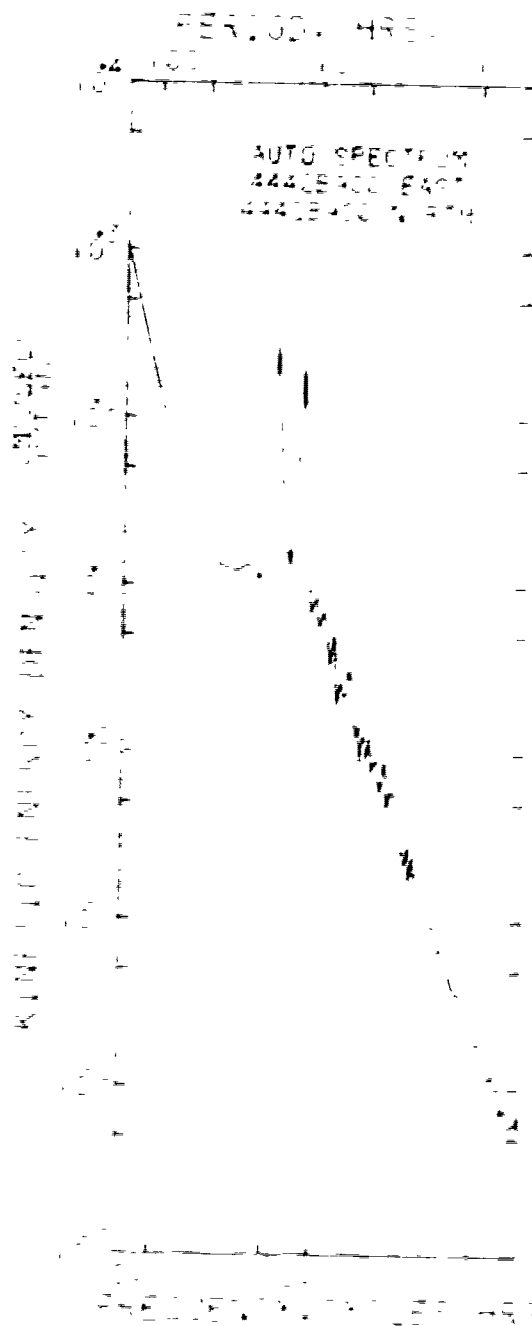


DATA/ 4442-8900

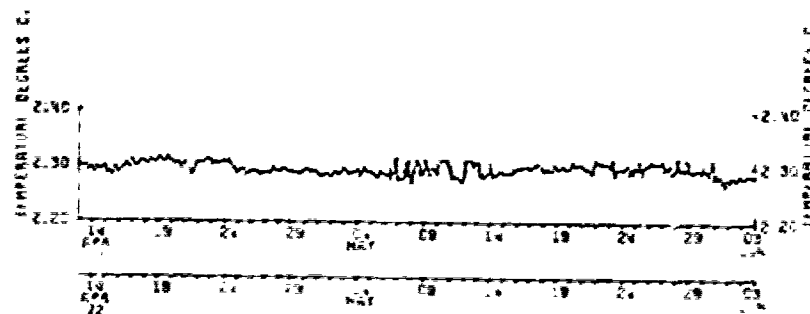
VARIABLE	UNIT	MEAN	STD. DEV.	MAXIMUM	MINIMUM
MEAN		17.171	0.871	110.850	0.290
STD. DEV.		0.871	0.737	273.013	0.105-3
VARIANCE		0.758	0.543	74.613	0.011-3
STD. COV.		0.000	0.000	0.000	0.000-1
KURTOSIS		0.100	0.100	0.100	0.100
SKENOSIS		0.100	0.100	0.100	0.100
MINIMUM		-147.172	-0.000	0.000	0.000
MAXIMUM		155.428	149.022	273.000	0.000

DATA/ 4442-8900

MEAN	17.171	MEAN	110.850
STD. DEV.	0.871	STD. DEV.	0.737
VARIANCE	0.758	VARIANCE	0.543
STD. COV.	0.000	STD. COV.	0.000
KURTOSIS	0.100	KURTOSIS	0.100
SKENOSIS	0.100	SKENOSIS	0.100
MINIMUM	-147.172	MINIMUM	0.000
MAXIMUM	155.428	MAXIMUM	273.000



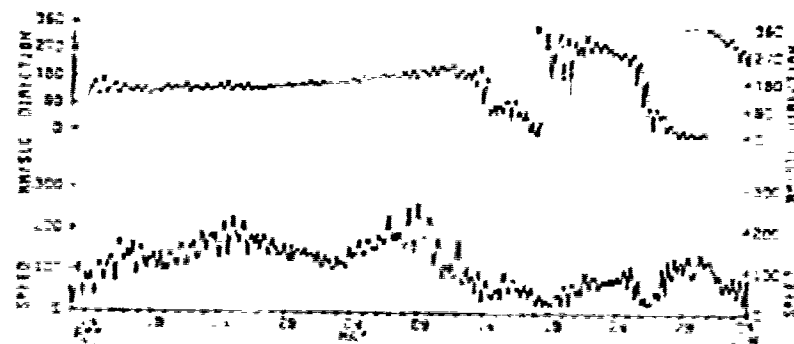
5153 METERS
72-IV-11 TO 72-VI-03
: PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

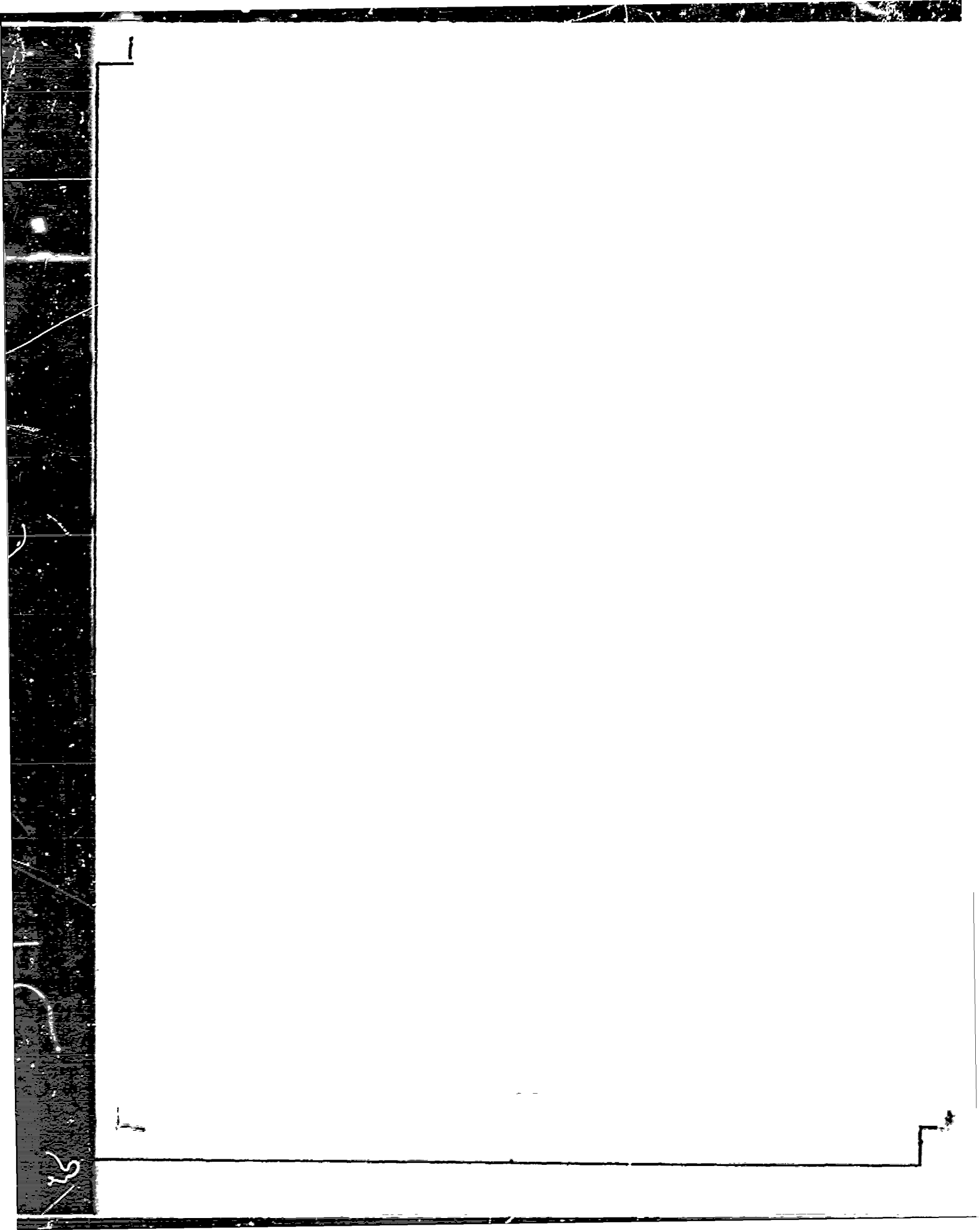


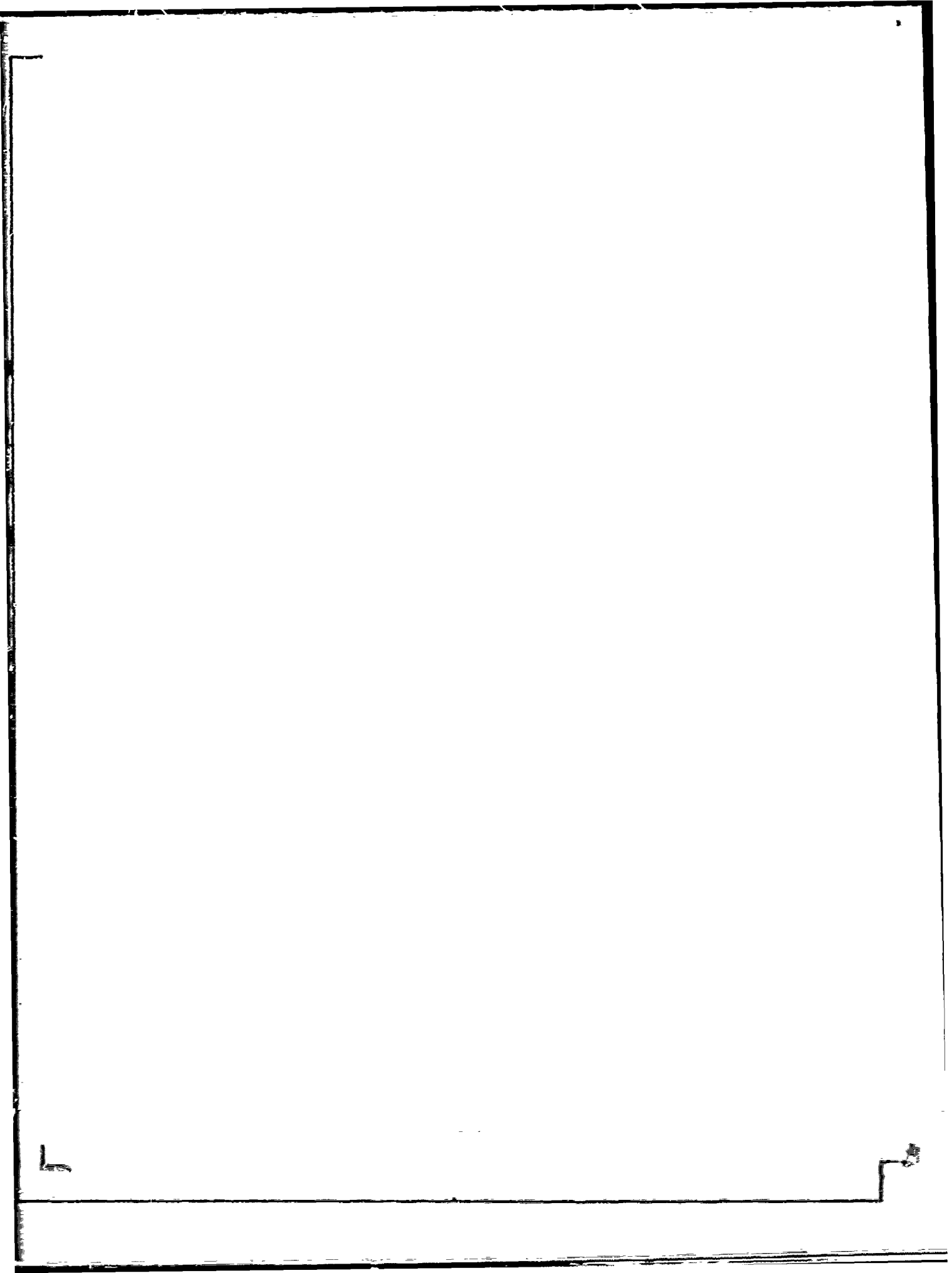
EAST



NORTH







DATA NUMBER 4412

Instrument No. V-0117

Instrument Sampling Scheme
Model 850 data bursts

every --- sec

--- samples

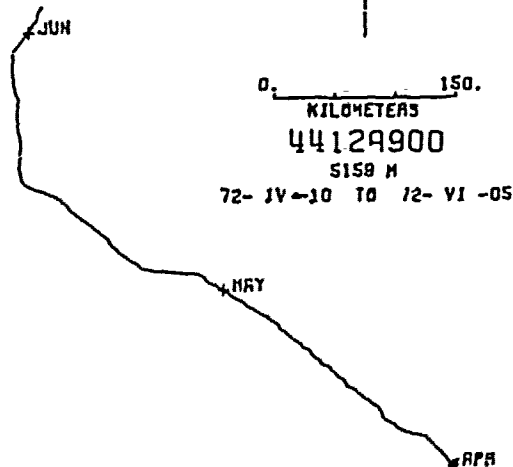
at --- sec/sample

VACM accumulated averages

over 900 sec

Instrument Depth 5159 m

Comments:



DATA/ 4412A900

VARIABLE *	EAST	NORTH	SPEED	TEMPERATURE
UNITS *	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	71.038	74.974	123.040	2.299
STD. ERR.	.953	.638	.694	.270E-3
VARIANCE	4870.738	2183.423	2583.418	.390E-3
STD. DEV.	69.791	46.727	50.827	.197E-1
KURTOSIS	2.364	2.712	1.955	23.470
SKEWNESS	.266	.227	-.106	1.972
MINIMUM	-217.850	-40.433	10.000	2.250
MAXIMUM	155.776	212.892	238.000	2.548

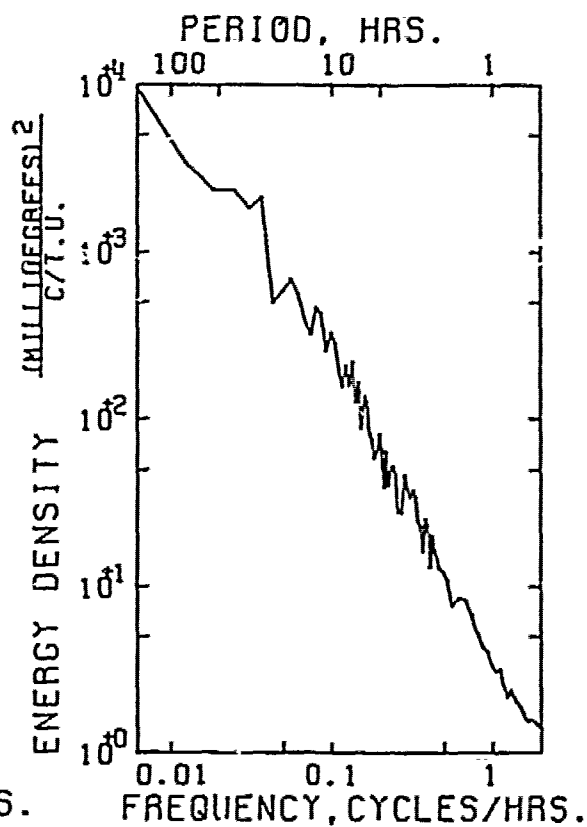
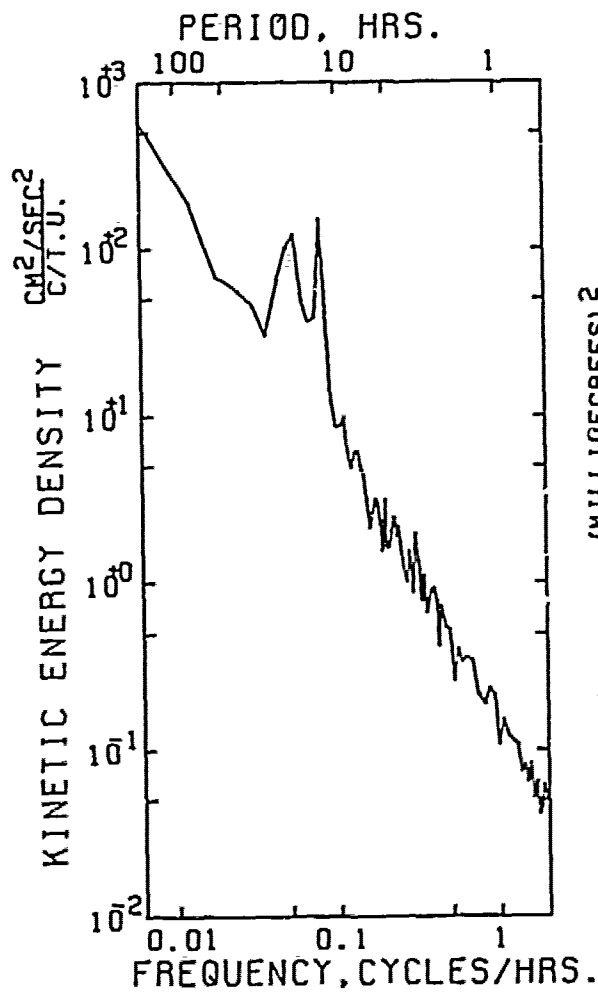
EAST & NORTH

COVARIANCE	184.944
STD. ERR. OF COVARIANCE	90.904
STD. DEV. OF COVARIANCE	6655.897
CORRELATION COEFFICIENT	.567E-1
VECTOR MEAN	103.284
VECTOR VARIANCE	3527.081
VECTOR STD. DEV.	59.389

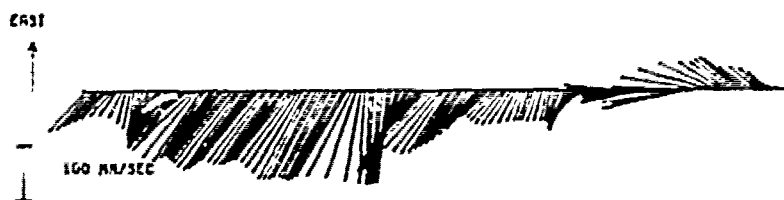
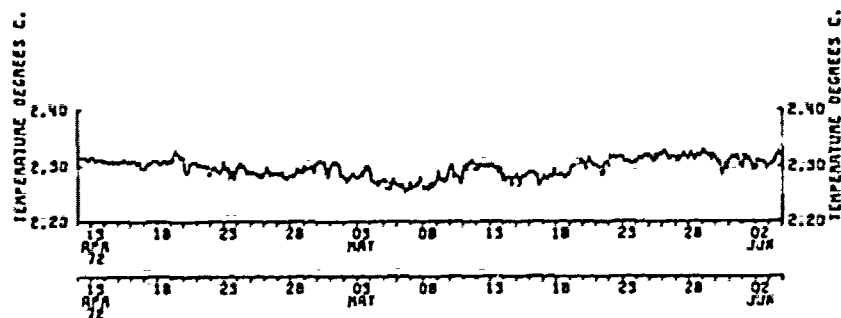
• SAMPLE SIZE • 5361 POINTS
•
• SPANNING RANGE
• FROM 72- IV -10 15.15.00
• TO 72- VI -05 11.15.00
•
• DURATION 55.83 DAYS

AUTO SPECTRUM
4412A900 EAST
4412A900 NORTH

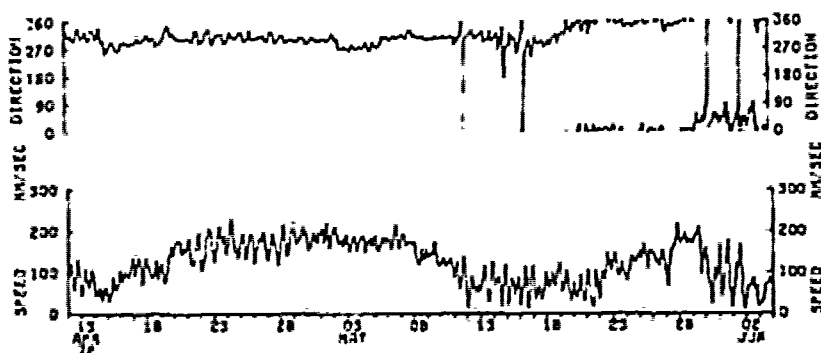
AUTO SPECTRUM
4412A900 TEMPERATURE

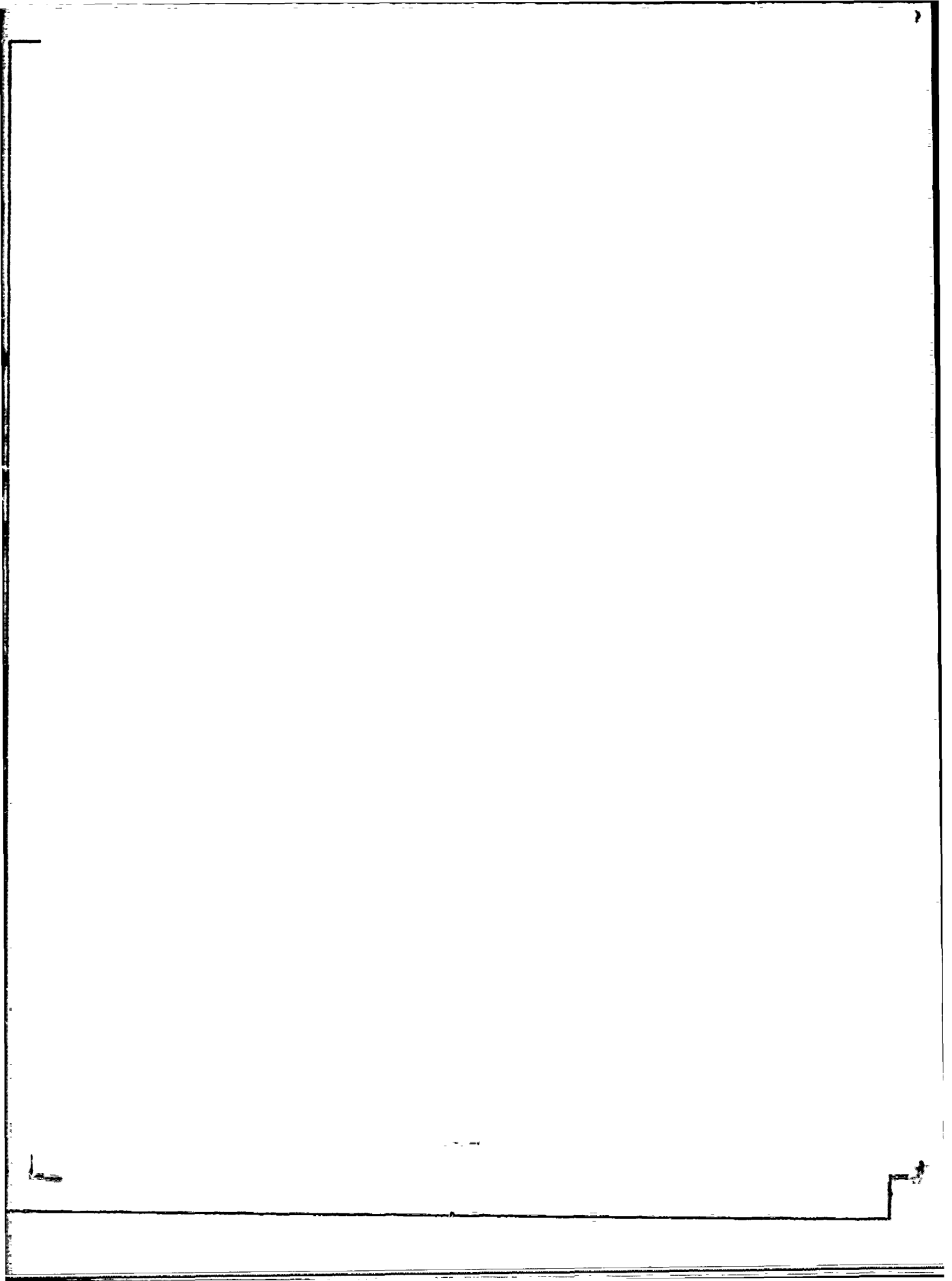


5159 METERS
72-IV-10 TO 72-VI-03
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



4412A





STATION 445

5107 m

LIGHT
RADIO
GLASS BALL FLOAT
1 m 1/2" CHAIN
16 m 9/16" NYLON

CURRENT METER — 4451

217 m 1/2" SAMSON NYLON

ACOUSTIC RELEASE, TRANSPONDING

30 m 9/16" NYLON

3 m 1/2" CHAIN

1000 LB CYLINDRICAL ANCHOR

Mooring No. 445

Set 72 April 11 40° 03.3'N 49° 46.8'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #104

Retrieved 72 June 03
Year Month Day

Retrieved by Tupper-Horn Ship CHAIN Cruise #104

Purpose of Mooring: Measurements of Bottom Currents in Gulf Stream

Mooring Type: Bottom

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4451	M-277	CU	5124	

COMMENTS ON MOORING:

DATA NUMBER 4451

Instrument No. 3-277

Instrument Sampling Scheme

Model 850 data bursts

every 900 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 5125 m

Comments:



0 150.
KILOMETERS

4451C900

5125 M

72- IV -11 TO 72- V -04

MAY
APR

DATA/ 4451C900

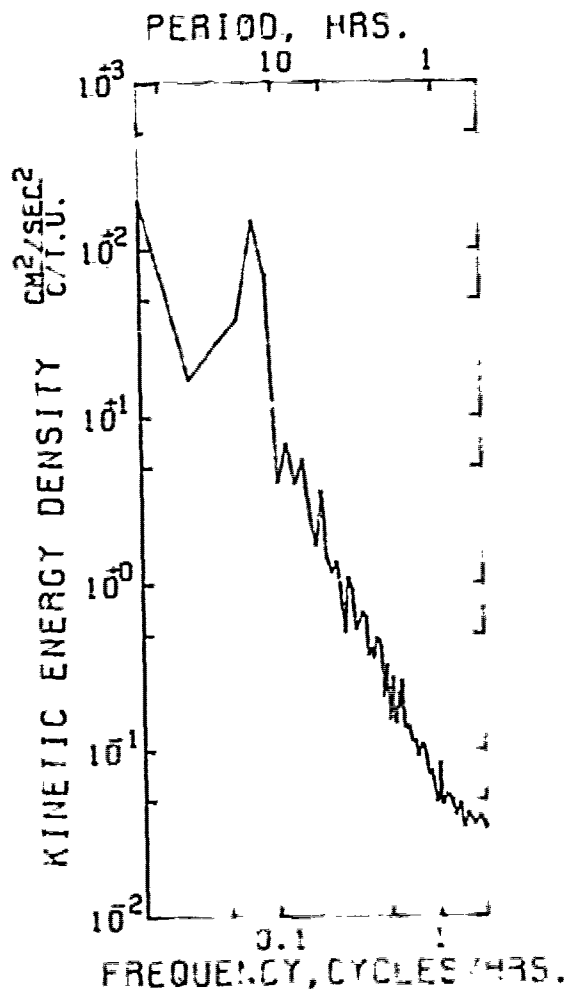
VARIABLE	•	EAST COMP	NORTH COMP	SPEED
UNITS	•	MM/SEC	MM/SEC	MM/SEC
MEAN	•	-23.534	6.853	74.178
STD. ERR.	•	1.159	1.149	.814
VARIANCE	•	2907.864	2858.000	1434.712
STD. DEV.	•	53.925	53.460	37.878
KURTOSIS	•	3.001	2.580	2.103
SKEWNESS	•	.456	-.520	.223
MINIMUM	•	-143.943	-142.973	18.000
MAXIMUM	•	114.930	108.525	172.000

.....
EAST COMP & NORTH COMP

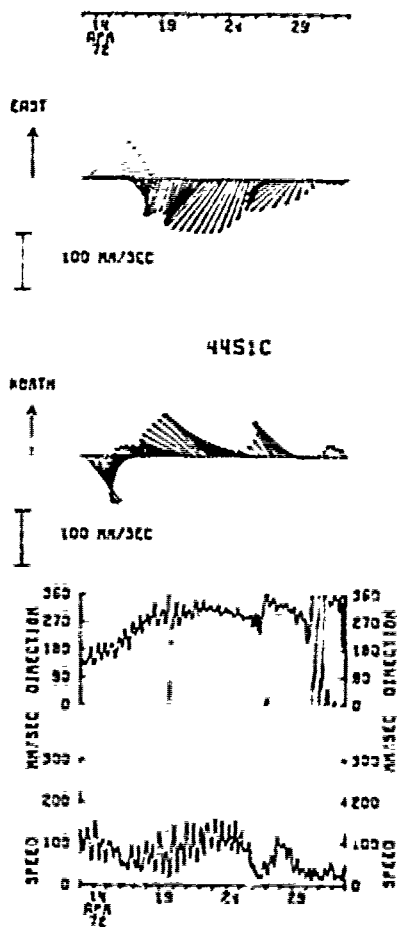
COVARIANCE	•	-1976.664
STD. ERR. OF COVARIANCE	•	68.716
STD. DEV. OF COVARIANCE	•	3196.565
CORRELATION COEFFICIENT	•	-.686
VECTOR MEAN	•	34.227
VECTOR VARIANCE	•	2882.932
VECTOR STD. DEV.	•	53.693

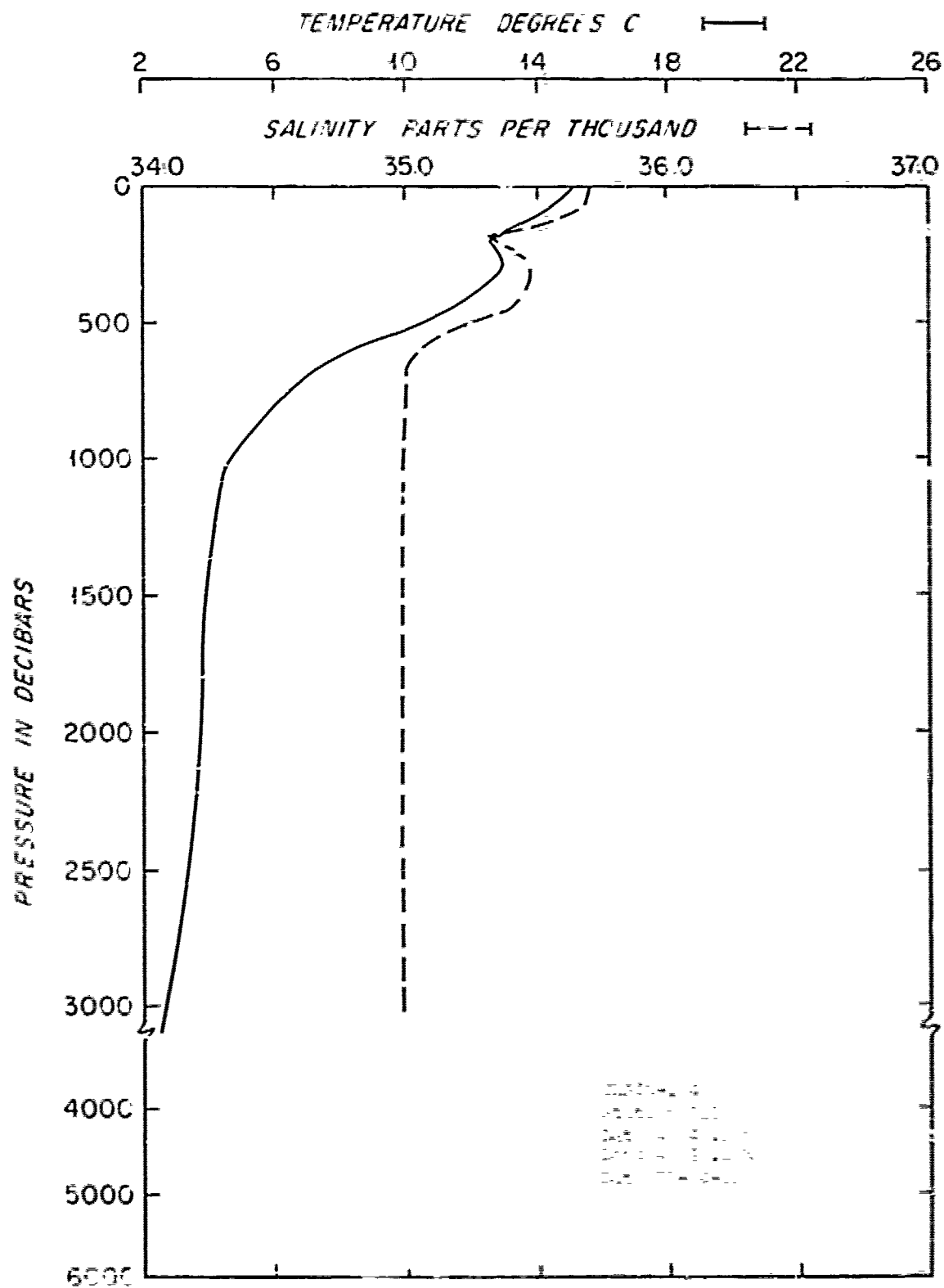
.....
• SAMPLE SIZE = 2164 POINTS
•
• SPANNING RANGE
• FROM 72- IV -11 17.30.37
• TO 72- V -04 06.15.37
•
• DURATION 22.53 DAYS

AUTO SPECTRUM
4451C900 EAST COMP
4451C900 NORTH COMP



5124 METERS
72-IV-11 TO 72-V-04
1 PIECES WITH 1080 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





7

STATION 442

4.59 m

RADIO FLOAT
WITH LIGHT
2 m 1/2" CHAIN

12 16" GLASS BALLS IN NETS ON 30 m 3/16" NYLON

CURRENT METER — 4421

500 m 1/2" SAMSON NYLON

VACM — 4422

217 m 1/2" SAMSON NYLON

ACOUSTIC RELEASE, TRANSPONDING

30 m 9/16" NYLON

3 m 1/2" CHAIN

1000 LB CYLINDRICAL ANCHOR

-1-1

Mooring No. 442

Set 72 April 10 39° 00.0'N 49° 46.0'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #104

Retrieved 72 June 05
Year Month Day

Retrieved by Tupper-Horn Ship CHAIN Cruise #104

Purpose of Mooring: Measurement of Gulf Stream Currents

Mooring Type: Bottom

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4421	M-205	CM	4597	
4422	V-0113	VACM	5156	

COMMENTS ON MOORING:

DATA NUMBER 4421

Instrument No. M-205

Instrument Sampling Scheme

Model 850 data bursts

every 900 sec

15 samples

at 5.27 sec/sample

JACO accumulated averages

over --- sec

Instrument Depth 4597 m

Comments:



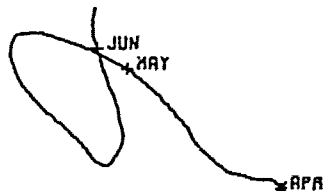
0. 150.

KILOMETERS

44211900

4597 M

72- IV -10 TO 72- VI -05



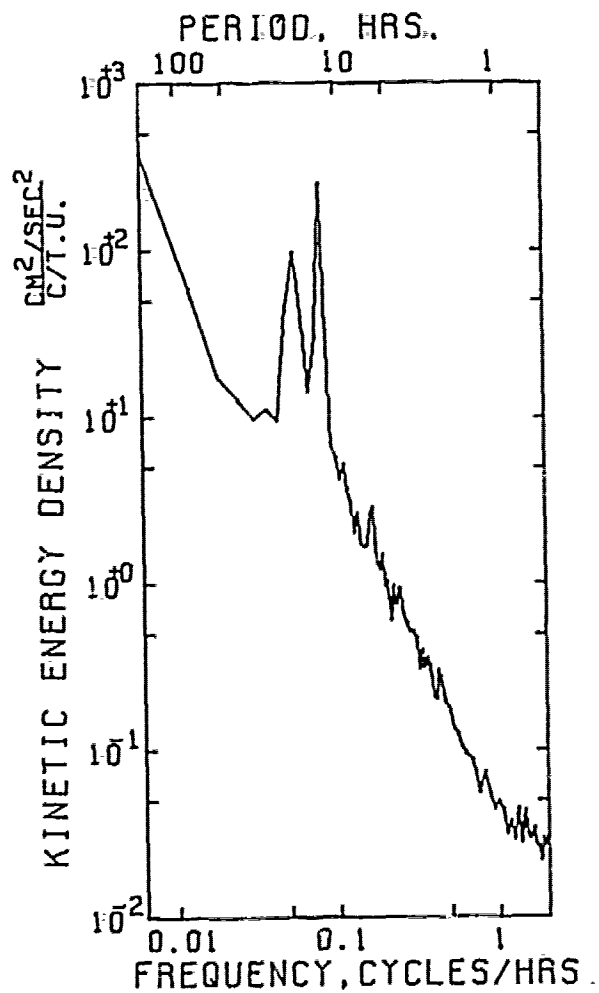
DATA/ 44211900

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-29.110	26.972	103.592
STD. ERR.	1.002	.989	.506
VARIANCE	5326.206	5187.657	1357.499
STD. DEV.	72.981	72.025	36.844
KURTOSIS	2.909	2.763	3.285
SKEWNESS	.095	.003	.303
MINIMUM	-175.037	-167.032	17.628
MAXIMUM	203.051	183.969	234.111

.....
EAST & NORTH
.....

COVARIANCE	•	•2721.519	• SAMPLE SIZE •	5302 POINTS
STD. ERR. OF COVARIANCE	•	65.671	•	
STD. DEV. OF COVARIANCE	•	4781.839	• SPANNING RANGE	
CORRELATION COEFFICIENT	•	.518	• FROM 72- IV -10	21.15.37
VECTOR MEAN	•	39.685	• TO 72- VI -05	02.30.37
VECTOR VARIANCE	•	5256.931	•	
VECTOR STD. DEV.	•	72.505	• DURATION	55.22 DAYS

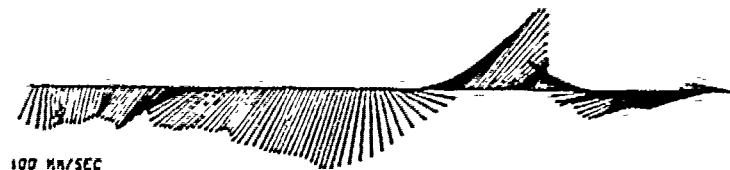
AUTO SPECTRUM
44211900 EAST COMP
44211900 NORTH COMP



4597 METERS
72-IV-10 TO 72-VI-03
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

13 18 23 28 03 08 13 18 23 28 03
APR 72 MAY JUN

EAST



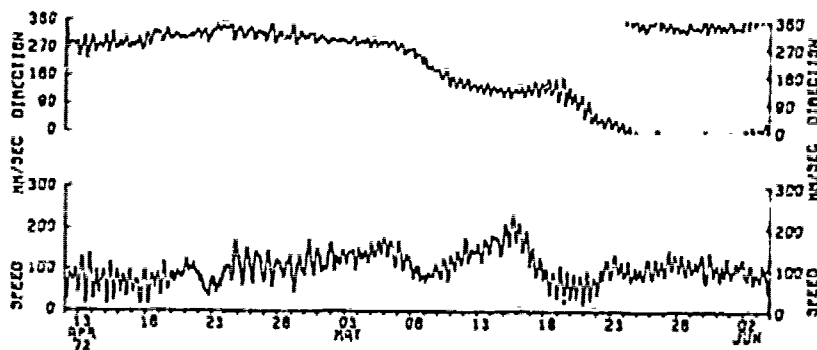
100 KM/SEC

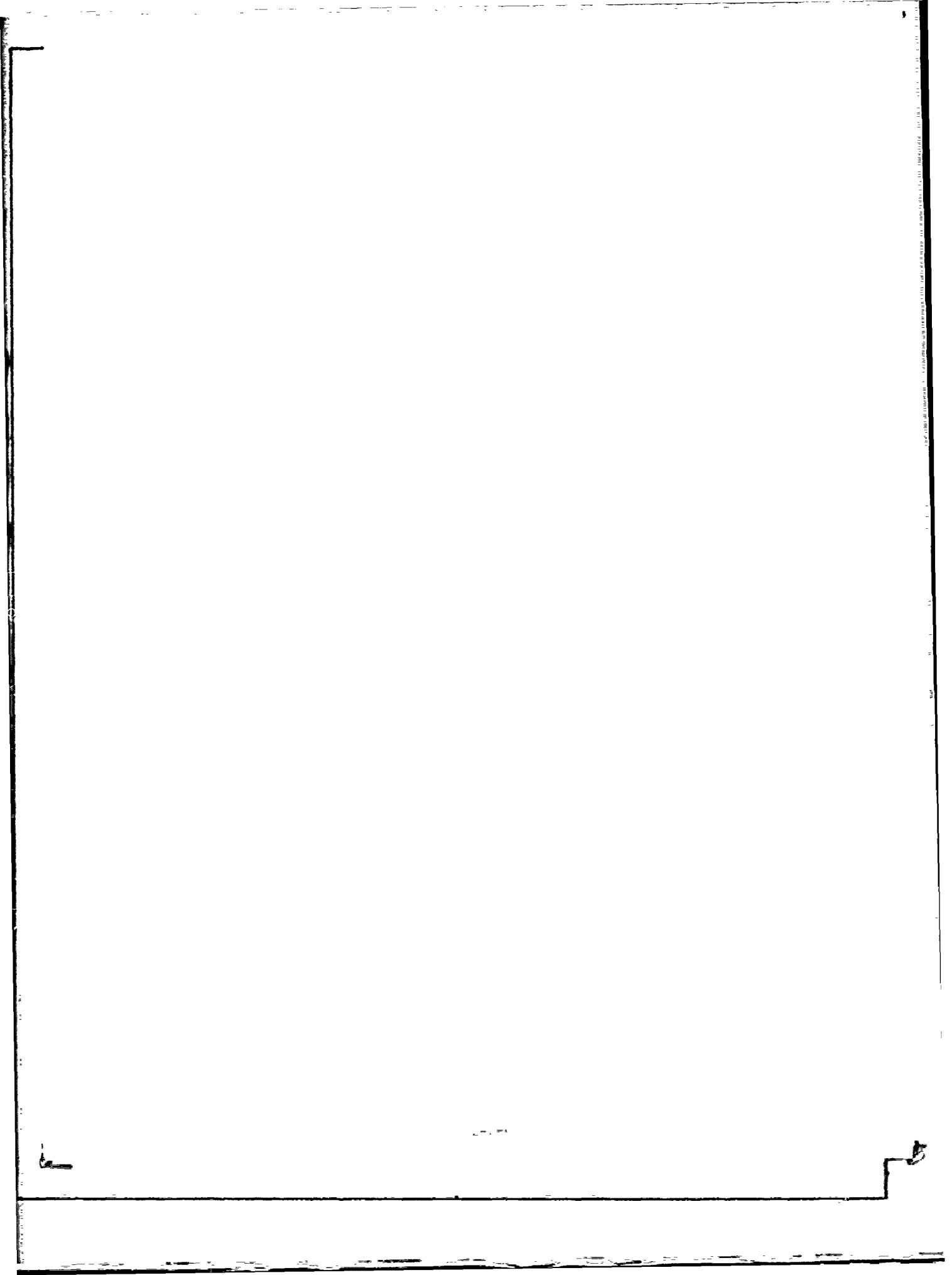
44211

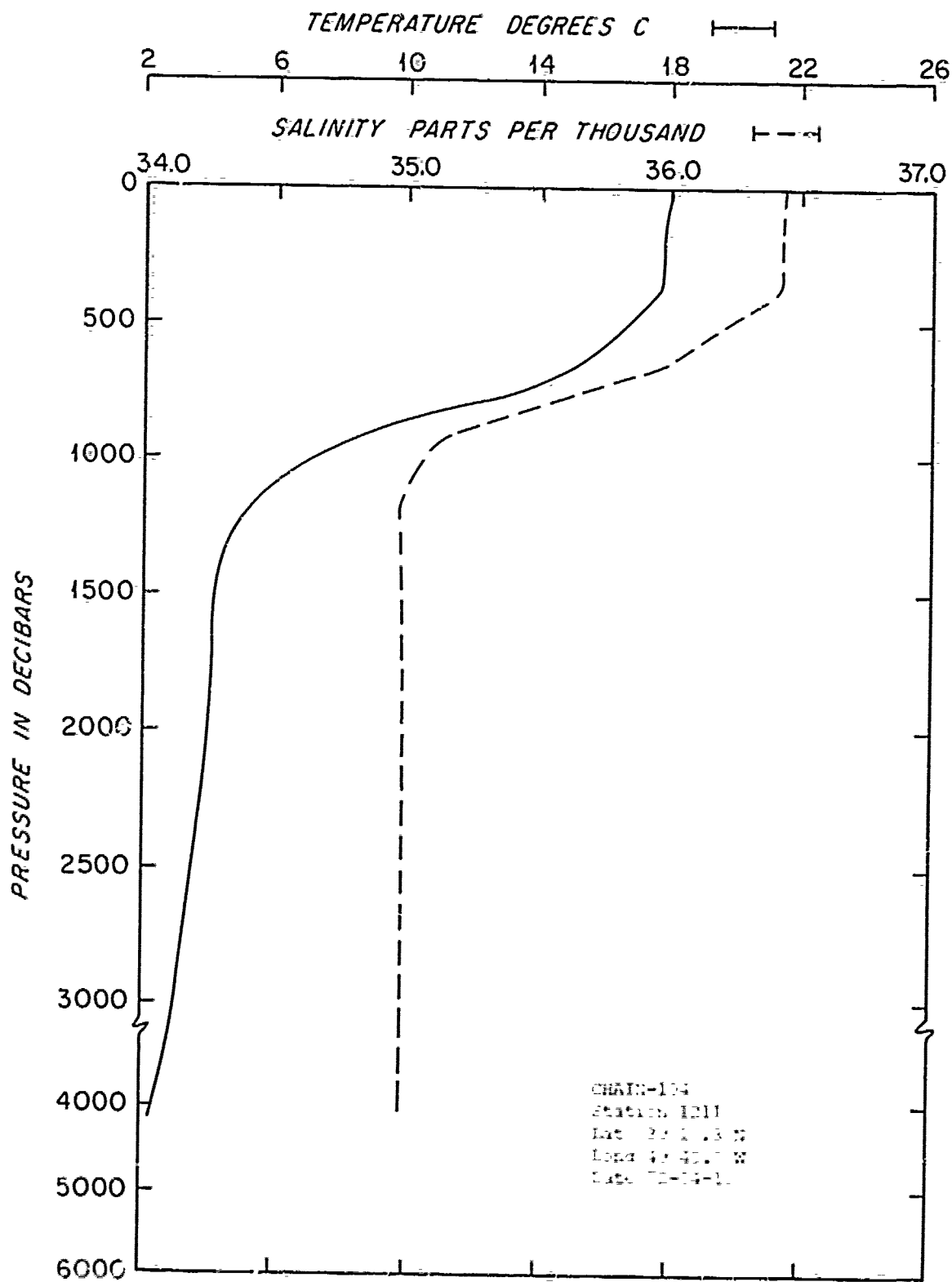
NORTH



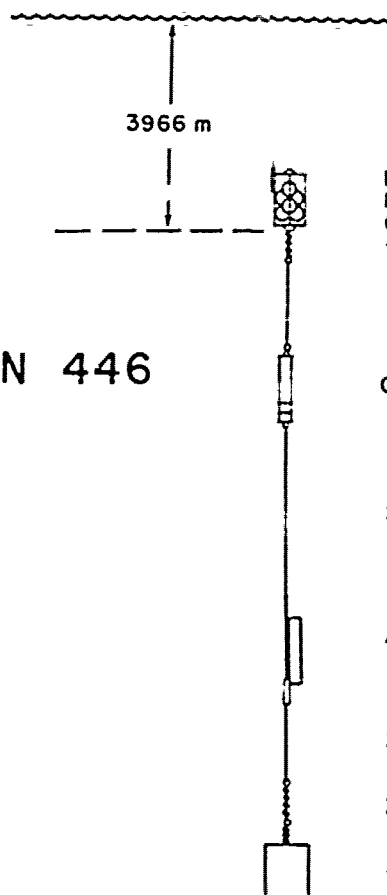
100 KM/SEC







STATION 446



LIGHT
RADIO
GLASS BALL FLOAT
1 m" CHAIN

10 m 9/16" NYLON

CURRENT METER - 4461

217 m 1/2" SAMPSON NYLON

ACOUSTIC RELEASE, TRANSPONDING

30 m 9/16" NYLON

3 m 1/2" CHAIN

1000 LB CYLINDRICAL ANCHOR

Mooring No. 446Set 72 April 11
Year Month Day40° 33.5'N
Latitude49° 45.0'W
LongitudeSet by GiffordShip CHAINCruise #104Retrieved 72 June 03
Year Month DayRetrieved by Tupper-HornShip CHAINCruise #104Purpose of Mooring: Measurements of Bottom Currents in Gulf StreamMooring Type: Bottom

<u>Data</u> <u>Number</u>	<u>Instrument</u> <u>Number</u>	<u>Type</u>	<u>Depth</u> <u>Meters</u>	<u>Comments</u>
4461	M-281	CM	3959	

REMOVED BY: W. H. HARRIS

DATA NUMBER 4461

Instrument No. M-281

Instrument Sampling Scheme

Model 850 data bursts

every 900 sec

15 samples

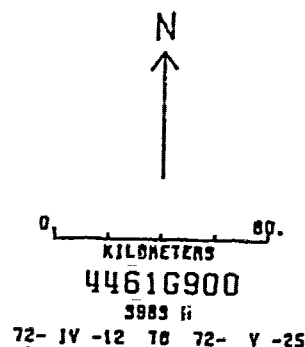
at 5.27 sec/sample

WACM accumulated averages

over --- sec

Instrument Depth 2989 m

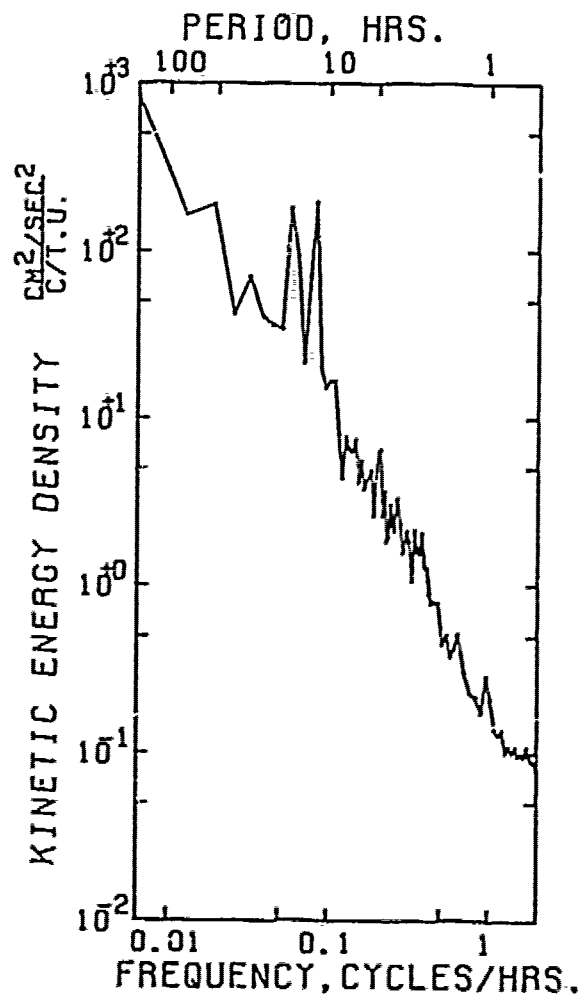
Comments:



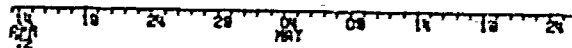
DATA 4461G900

WACM	=	-1.1167	7.1167
WACM	=	1.1167	7.1167
WACM	=	7.1167	11.1167
WACM	=	11.1167	15.1167
WACM	=	15.1167	19.1167
WACM	=	19.1167	23.1167
WACM	=	23.1167	27.1167
WACM	=	27.1167	31.1167
WACM	=	31.1167	35.1167
WACM	=	35.1167	39.1167
WACM	=	39.1167	43.1167
WACM	=	43.1167	47.1167
WACM	=	47.1167	51.1167
WACM	=	51.1167	55.1167
WACM	=	55.1167	59.1167
WACM	=	59.1167	63.1167
WACM	=	63.1167	67.1167
WACM	=	67.1167	71.1167
WACM	=	71.1167	75.1167
WACM	=	75.1167	79.1167
WACM	=	79.1167	83.1167
WACM	=	83.1167	87.1167
WACM	=	87.1167	91.1167
WACM	=	91.1167	95.1167
WACM	=	95.1167	99.1167
WACM	=	99.1167	103.1167
WACM	=	103.1167	107.1167
WACM	=	107.1167	111.1167
WACM	=	111.1167	115.1167
WACM	=	115.1167	119.1167
WACM	=	119.1167	123.1167
WACM	=	123.1167	127.1167
WACM	=	127.1167	131.1167
WACM	=	131.1167	135.1167
WACM	=	135.1167	139.1167
WACM	=	139.1167	143.1167
WACM	=	143.1167	147.1167
WACM	=	147.1167	151.1167
WACM	=	151.1167	155.1167
WACM	=	155.1167	159.1167
WACM	=	159.1167	163.1167
WACM	=	163.1167	167.1167
WACM	=	167.1167	171.1167
WACM	=	171.1167	175.1167
WACM	=	175.1167	179.1167
WACM	=	179.1167	183.1167
WACM	=	183.1167	187.1167
WACM	=	187.1167	191.1167
WACM	=	191.1167	195.1167
WACM	=	195.1167	199.1167
WACM	=	199.1167	203.1167
WACM	=	203.1167	207.1167
WACM	=	207.1167	211.1167
WACM	=	211.1167	215.1167
WACM	=	215.1167	219.1167
WACM	=	219.1167	223.1167
WACM	=	223.1167	227.1167
WACM	=	227.1167	231.1167
WACM	=	231.1167	235.1167
WACM	=	235.1167	239.1167
WACM	=	239.1167	243.1167
WACM	=	243.1167	247.1167
WACM	=	247.1167	251.1167
WACM	=	251.1167	255.1167
WACM	=	255.1167	259.1167
WACM	=	259.1167	263.1167
WACM	=	263.1167	267.1167
WACM	=	267.1167	271.1167
WACM	=	271.1167	275.1167
WACM	=	275.1167	279.1167
WACM	=	279.1167	283.1167
WACM	=	283.1167	287.1167
WACM	=	287.1167	291.1167
WACM	=	291.1167	295.1167
WACM	=	295.1167	299.1167
WACM	=	299.1167	303.1167
WACM	=	303.1167	307.1167
WACM	=	307.1167	311.1167
WACM	=	311.1167	315.1167
WACM	=	315.1167	319.1167
WACM	=	319.1167	323.1167
WACM	=	323.1167	327.1167
WACM	=	327.1167	331.1167
WACM	=	331.1167	335.1167
WACM	=	335.1167	339.1167
WACM	=	339.1167	343.1167
WACM	=	343.1167	347.1167
WACM	=	347.1167	351.1167
WACM	=	351.1167	355.1167
WACM	=	355.1167	359.1167
WACM	=	359.1167	363.1167
WACM	=	363.1167	367.1167
WACM	=	367.1167	371.1167
WACM	=	371.1167	375.1167
WACM	=	375.1167	379.1167
WACM	=	379.1167	383.1167
WACM	=	383.1167	387.1167
WACM	=	387.1167	391.1167
WACM	=	391.1167	395.1167
WACM	=	395.1167	399.1167
WACM	=	399.1167	403.1167
WACM	=	403.1167	407.1167
WACM	=	407.1167	411.1167
WACM	=	411.1167	415.1167
WACM	=	415.1167	419.1167
WACM	=	419.1167	423.1167
WACM	=	423.1167	427.1167
WACM	=	427.1167	431.1167
WACM	=	431.1167	435.1167
WACM	=	435.1167	439.1167
WACM	=	439.1167	443.1167
WACM	=	443.1167	447.1167
WACM	=	447.1167	451.1167
WACM	=	451.1167	455.1167
WACM	=	455.1167	459.1167
WACM	=	459.1167	463.1167
WACM	=	463.1167	467.1167
WACM	=	467.1167	471.1167
WACM	=	471.1167	475.1167
WACM	=	475.1167	479.1167
WACM	=	479.1167	483.1167
WACM	=	483.1167	487.1167
WACM	=	487.1167	491.1167
WACM	=	491.1167	495.1167
WACM	=	495.1167	499.1167
WACM	=	499.1167	503.1167
WACM	=	503.1167	507.1167
WACM	=	507.1167	511.1167
WACM	=	511.1167	515.1167
WACM	=	515.1167	519.1167
WACM	=	519.1167	523.1167
WACM	=	523.1167	527.1167
WACM	=	527.1167	531.1167
WACM	=	531.1167	535.1167
WACM	=	535.1167	539.1167
WACM	=	539.1167	543.1167
WACM	=	543.1167	547.1167
WACM	=	547.1167	551.1167
WACM	=	551.1167	555.1167
WACM	=	555.1167	559.1167
WACM	=	559.1167	563.1167
WACM	=	563.1167	567.1167
WACM	=	567.1167	571.1167
WACM	=	571.1167	575.1167
WACM	=	575.1167	579.1167
WACM	=	579.1167	583.1167
WACM	=	583.1167	587.1167
WACM	=	587.1167	591.1167
WACM	=	591.1167	595.1167
WACM	=	595.1167	599.1167
WACM	=	599.1167	603.1167
WACM	=	603.1167	607.1167
WACM	=	607.1167	611.1167
WACM	=	611.1167	615.1167
WACM	=	615.1167	619.1167
WACM	=	619.1167	623.1167
WACM	=	623.1167	627.1167
WACM	=	627.1167	631.1167
WACM	=	631.1167	635.1167
WACM	=	635.1167	639.1167
WACM	=	639.1167	643.1167
WACM	=	643.1167	647.1167
WACM	=	647.1167	651.1167
WACM	=	651.1167	655.1167
WACM	=	655.1167	659.1167
WACM	=	659.1167	663.1167
WACM	=	663.1167	667.1167
WACM	=	667.1167	671.1167
WACM	=	671.1167	675.1167
WACM	=	675.1167	679.1167
WACM	=	679.1167	683.1167
WACM	=	683.1167	687.1167
WACM	=	687.1167	691.1167
WACM	=	691.1167	695.1167
WACM	=	695.1167	699.1167
WACM	=	699.1167	703.1167
WACM	=	703.1167	707.1167
WACM	=	707.1167	711.1167
WACM	=	711.1167	715.1167
WACM	=	715.1167	719.1167
WACM	=	719.1167	723.1167
WACM	=	723.1167	727.1167
WACM	=	727.1167	731.1167
WACM	=	731.1167	735.1167
WACM	=	735.1167	739.1167
WACM	=	739.1167	743.1167
WACM	=	743.1167	747.1167
WACM	=	747.1167	751.1167
WACM	=	751.1167	755.1167
WACM	=	755.1167	759.1167
WACM	=	759.1167	763.1167
WACM	=	763.1167	767.1167
WACM	=	767.1167	771.1167
WACM	=	771.1167	775.1167
WACM	=	775.1167	779.1167
WACM	=	779.1167	783.1167
WACM	=	783.1167	787.1167
WACM	=	787.1167	791.1167
WACM	=	791.1167	795.1167
WACM	=	795.1167	799.1167
WACM	=	799.1167	803.1167
WACM	=	803.1167	807.1167
WACM	=	807.1167	811.1167
WACM	=	811.1167	815.1167
WACM	=	815.1167	819.1167
WACM	=	819.1167	823.1167
WACM	=	823.1167	827.1167
WACM	=	827.1167	831.1167
WACM	=	831.1167	835.1167
WACM	=	835.1167	839.1167
WACM	=	839.1167	843.1167
WACM	=	843.1167	847.1167
WACM	=	847.1167	851.1167
WACM	=	851.1167	855.1167
WACM	=	855.1167	859.1167
WACM	=	859.1167	863.1167
WACM	=	863.1167	867.1167
WACM	=	867.1167	871.1167
WACM	=	871.1167	875.1167
WACM	=	875.1167	879.1167
WACM	=	879.1167	883.1167
WACM	=	883.1167	887.1167
WACM	=	887.1167	891.1167
WACM	=	891.1167	895.1167
WACM	=	895.1167	899.1167
WACM	=	899.1167	903.1167
WACM	=	903.1167	907.1167
WACM	=	907.1167	911.1167
WACM	=	911.1167	915.1167
WACM	=	915.1167	919.1167
WACM	=	919.1167	923.1167
WACM	=	923.1167	927.1167
WACM	=	927.1167	931.1167
WACM	=	931.1167	935.1167
WACM	=	935.1167	939.1167
WACM	=	939.1167	943.1167
WACM	=	943.1167	947.1167
WACM	=	947.1167	951.1167
WACM	=	951.1167	955.1167
WACM	=	955.1167	959.1167
WACM	=	959.1167	963.1167
WACM	=	963.1167	967.1167
WACM	=	967.1167	971.1167
WACM	=	971.1167	975.1167
WACM	=	975.1167	979.1167
WACM	=	979.1167	983.1167
WACM	=	983.1167	987.1167
WACM	=	987.1167	991.1167
WACM	=	991.1167	995.1167
WACM	=	995.1167	999.1167
WACM	=	999.1167	1003.1167
WACM	=	1003.1167	1007.1167
WACM	=	1007.1167	1011.1167
WACM	=	1011.1167	1015.1167
WACM	=	1015.1167	1019.1167
WACM	=	1019.1167	1023.1167
WACM	=	1023.1167	1027.1167
WACM	=	1027.1167	1031.1167
WACM	=	1031.1167	1035.1167
WACM	=	1035.1167	1039.1167
WACM	=	1039.1167	1043.1167
WACM	=	1043.1167	1047.1167
WACM	=	1047.1167	1051.1167
WACM	=	1051.1167	1055.1167
WACM	=	1055.1167	1059.1167
WACM	=	1059.1167	1063.1167
WACM	=	1063.1167	1067.1167
WACM	=	1067.1167	1071.1167
WACM	=	1071.1167	1075.1167
WACM	=	1075.1167	

AUTO SPECTRUM
4461G900 EAST COMP
4461G900 NORTH COMP



3983 METERS
72-IV-12 TO 72-VI-03
1 PIECES WITH 2500 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



EAST



100 NM/SEC

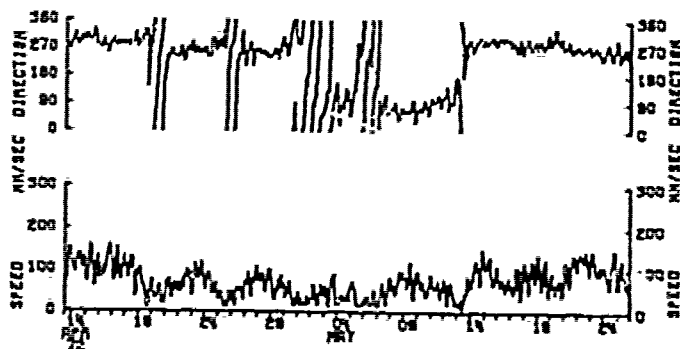
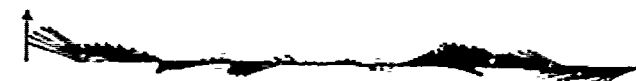


4461

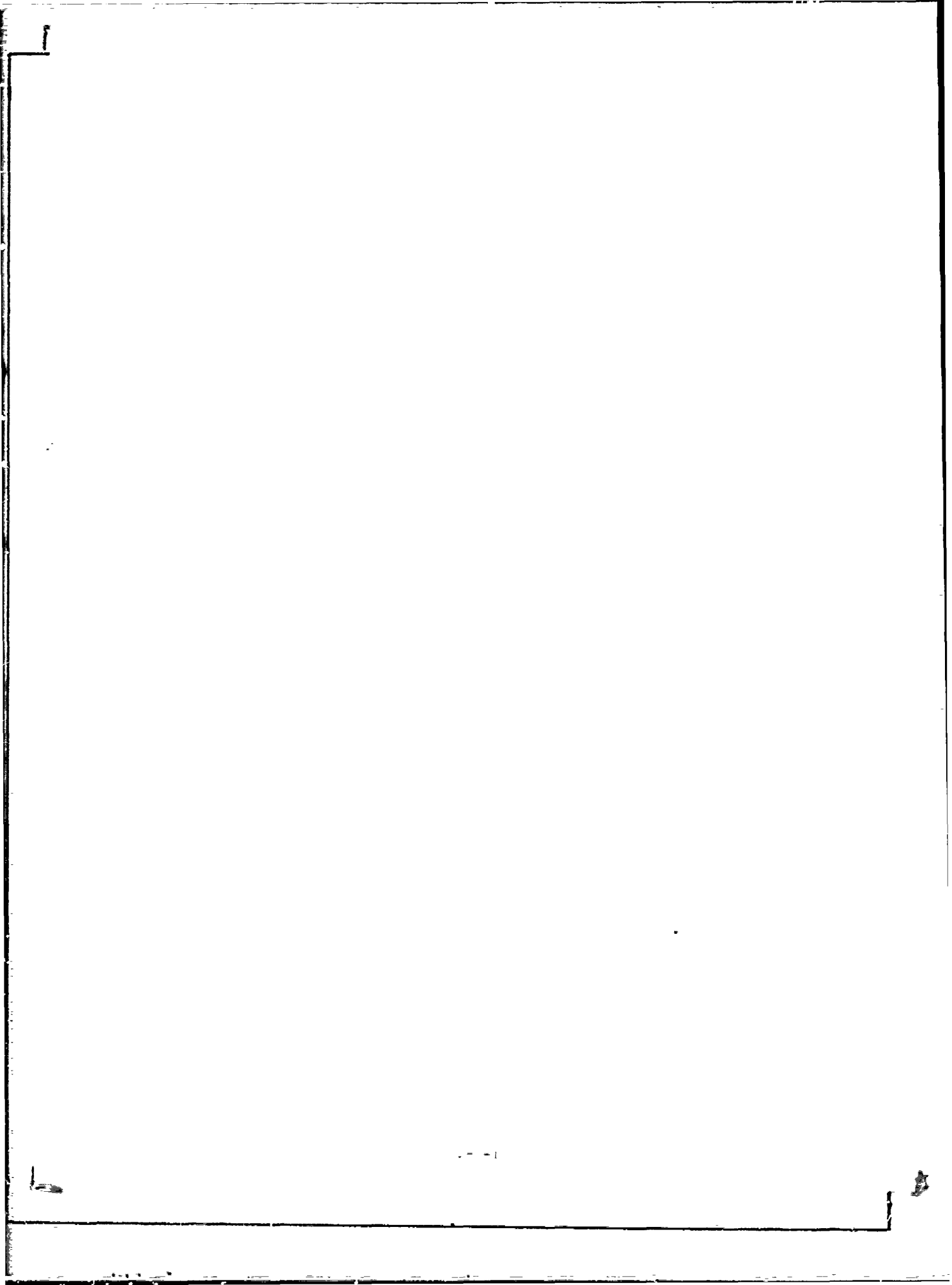
NOATH



100 NM/SEC









DATA NUMBER 4422

Instrument No. V-0113

Instrument Sampling Scheme

Model 850 data bursts

every --- sec

--- samples

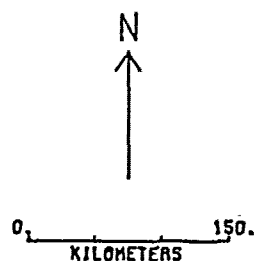
at --- sec/sample

VACM accumulated averages

over 900 sec

Instrument Depth 5156 m

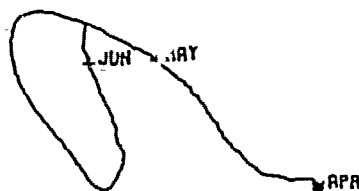
Comments:



4422A900

5156-M

72- IV -11 73- 72- VI -05



DATA/ SUMMARY

VARIABLE	EAST	NORTH	SPEED	TEMPERATURE
UNIT	M/SEC	M/SEC	M/SEC	DEGREES C.
MEAN	-38.345	45.345	114.230	2.313
STD. DEV.	1.102	1.354	1.436	1.3E-3
VARIANCE	44.3635	735.428	2070.713	1.6E-6
STD. DEV.	-0.180	29.148	45.515	1.5E-2
CORRELATION	2.415	2.488	2.745	1.764
SKEDNESS	1.184	-1.104	1.440	1.424
MINIMUM	-54.104	-148.685	25.070	5.264
MAXIMUM	177.767	165.924	241.000	2.391

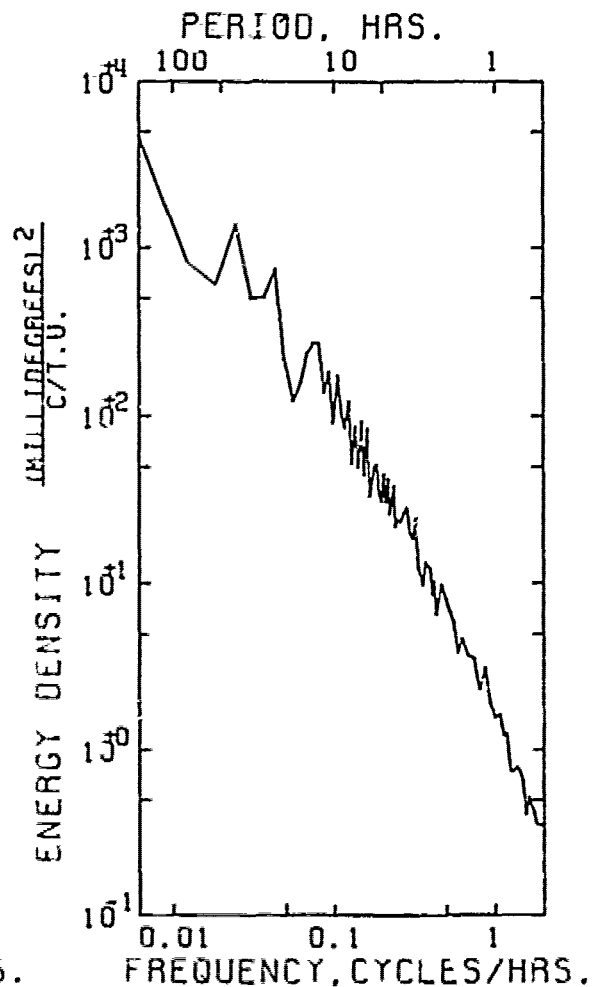
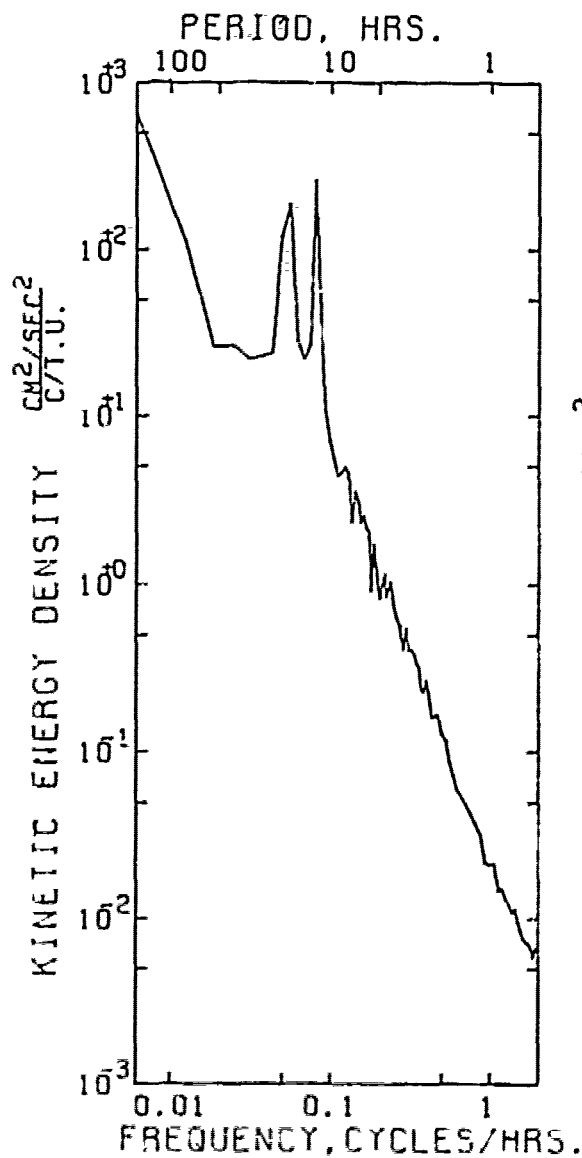
.....
EAST & NORTH
.....

.....
TEMPERATURE
STD. DEV. OF VARIANCE
STD. DEV. OF COVARIANCE
CORRELATION COEFFICIENT
VECT. MEAN
VECT. VARIANCE
VECT. STD. DEV.

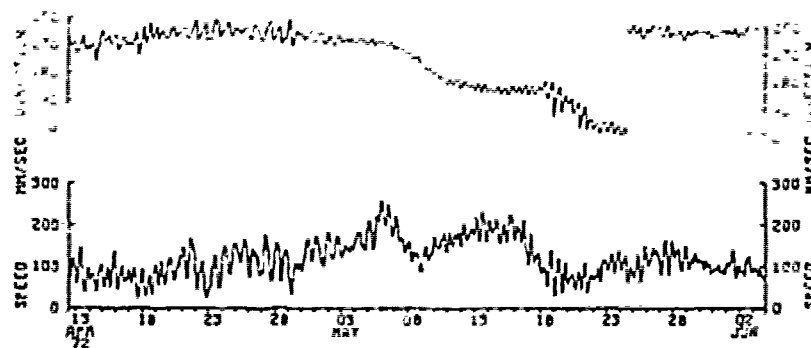
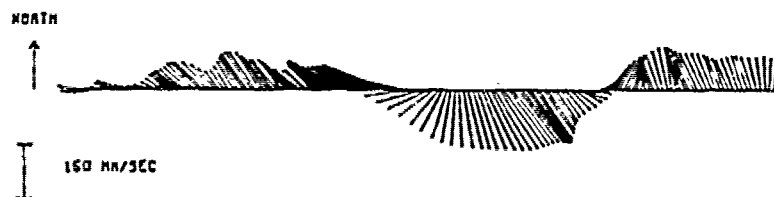
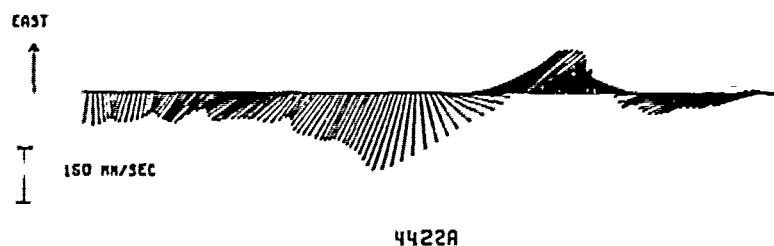
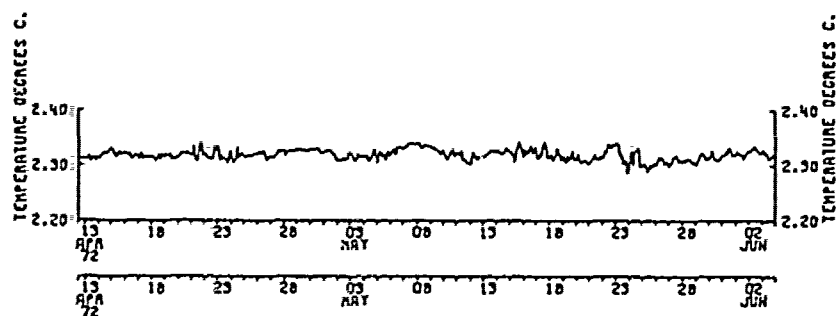
.....
* SAMPLE SIZE * 1877 POINTS
*
* SPANNING RANGE
* FROM 72- IV -11 00:00:00
* TO 72- VI -05 00:00:00
*
* DURATION 54.9 DAYS

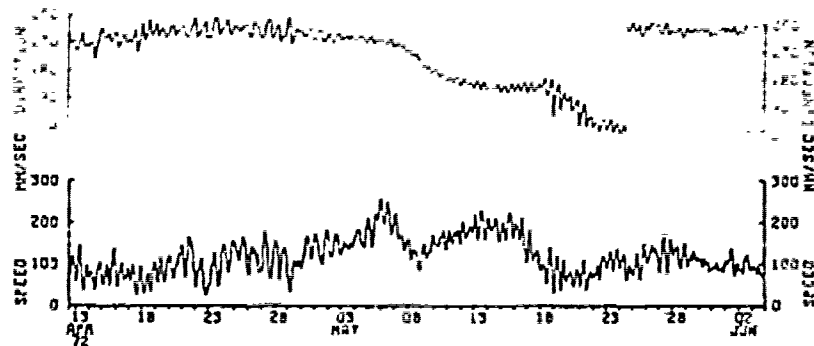
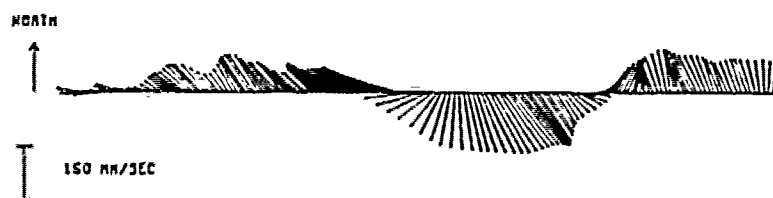
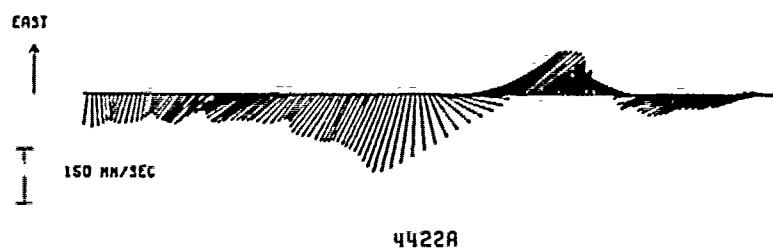
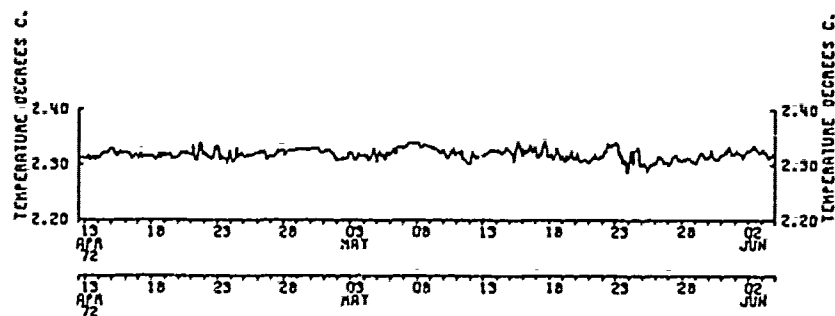
AUTO SPECTRUM
4422A900 EAST
4422A900 NORTH

AUTO SPECTRUM
4422A900 TEMPERATURE



5156 METERS
72-IV-11 TO 72-VI-34
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS





.....



2

•

1

Abstract

—

2

Mooring No. 447

Set 72 April 12 41° 00.0'N 40° 46.0'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #101

Retrieved 72 June 03
Year Month Day

Retrieved by Dwyer-Horn Ship CHAIN Cruise #101

Purpose of Mooring: Measurement of Bottom Currents in Gulf Stream

Mooring Type: Bottom

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4471	M-104	CH	3422	

COMMENTS BY MOORING:

DATA NUMBER 4471

Instrument No. M-264

Instrument Sampling Scheme

Model 850 data bursts

every 200 sec

15 samples

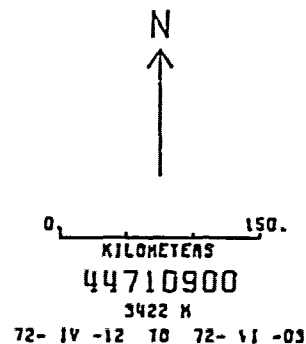
at 5.27 sec/sample

WACH accumulated averages

over --- sec

Instrument Depth 3422 m

Comments:



DATA/ 44710900

.....			
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
.....			
MEAN	4.189	-59.077	90.558
STD. ERR.	.735	.995	.773
VARIANCE	2727.297	4957.703	2993.781
STD. DEV.	52.224	70.425	54.715
KURTOSIS	2.095	3.665	4.714
SKEWNESS	.707E+2	-1.851	1.269
MINIMUM	-148.706	-288.602	15.825
MAXIMUM	163.193	109.828	296.571

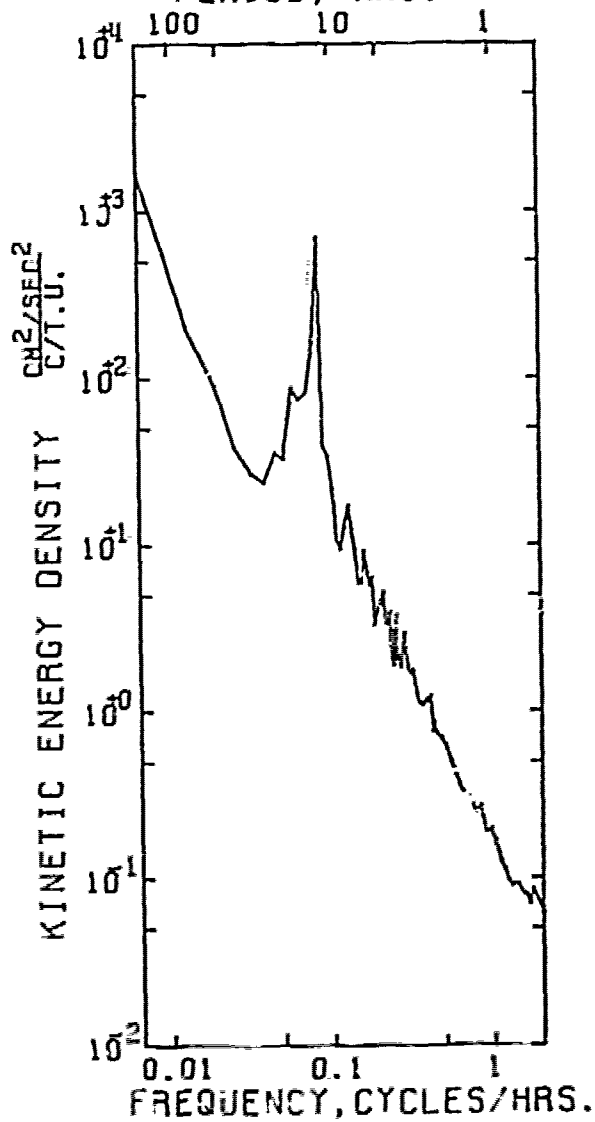
.....
EAST & NORTH
.....

COVARIANCE	.226488
STD. ERR. OF COVARIANCE	.55057
STD. DEV. OF COVARIANCE	4143.878
CORRELATION COEFFICIENT	-.216E-1
VECTOR MEAN	59.225
VECTOR VARIANCE	3843.500
VECTOR STD. DEV.	61.996

.....
SAMPLE SIZE = 5008 POINTS
SPANNING RANGE
FROM 72- IV -12 06:30:37
TO 72- VI -03 10:15:37
DURATION 52.16 DAYS

AUTO SPECTRUM
44710900 EAST COMP
44710900 NORTH COMP

PERIOD, HRS.



3422 METERS
72-IV-12 TO 72-VI-03
1 PIECES WITH 2500 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

14 19 24 29 00 MAY 14 19 24 29
R/T
72

EAST



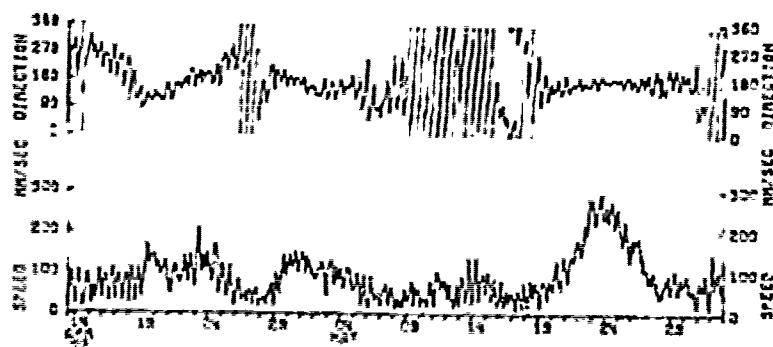
150 NM/SEC

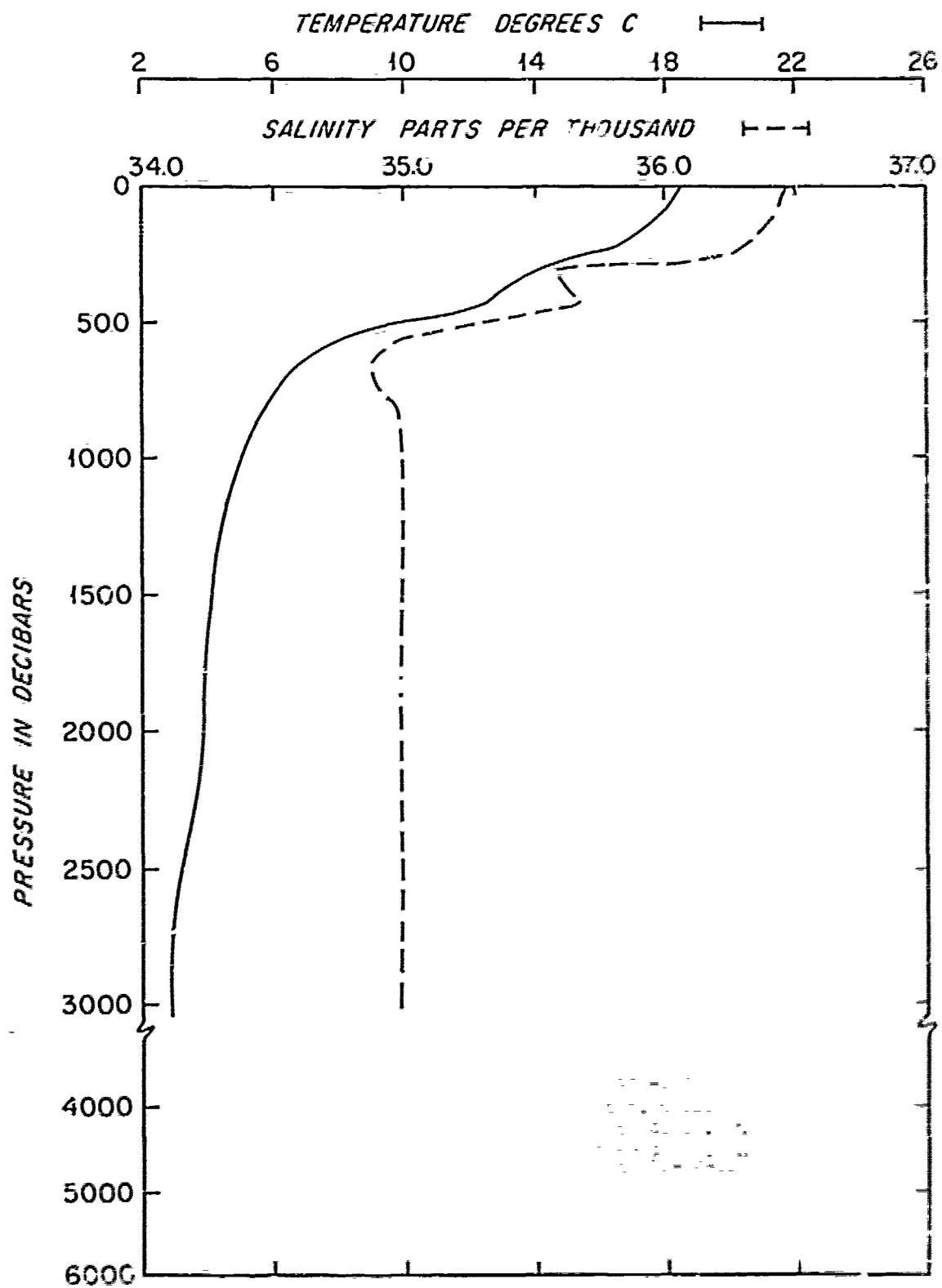
447.0

WEST

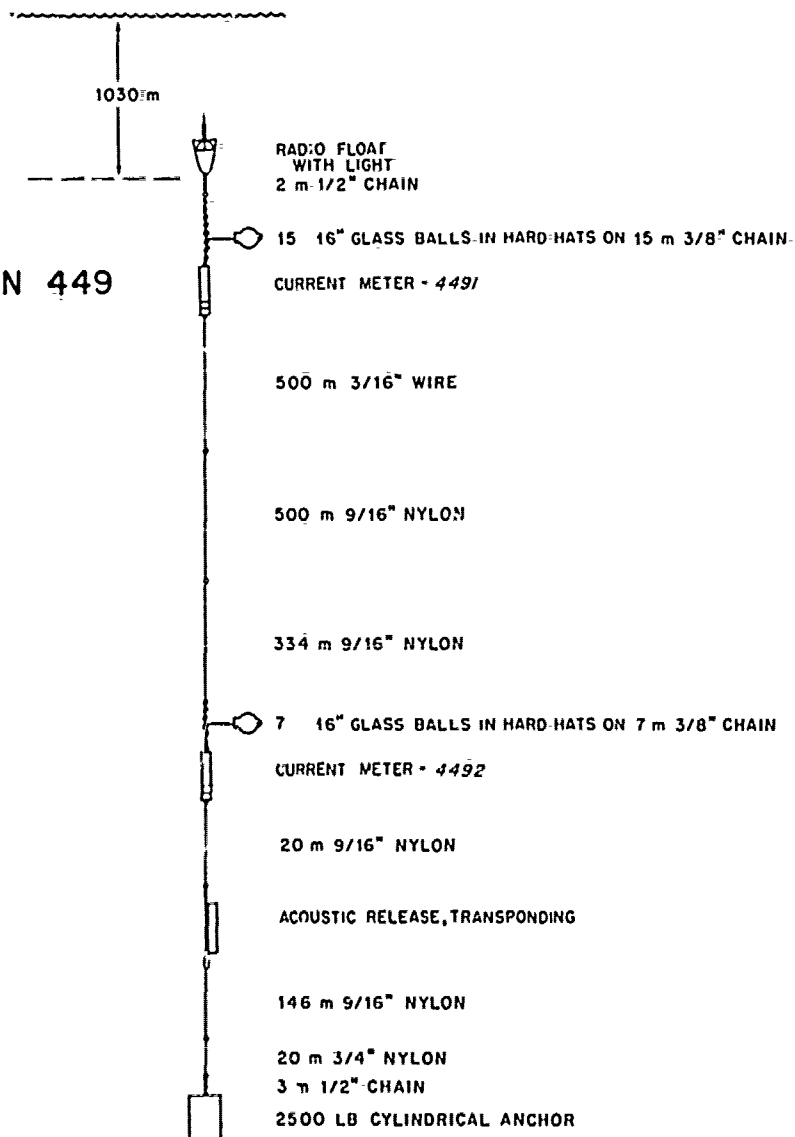


150 NM/SEC





STATION 449



Mooring No. 449

Set 72 May 19 38° 58.8'N 70° 00.3'W
Year Month Day Latitude Longitude

Set by Gifford Ship KNORR Cruise #26

Retrieved 72 August 29
Year Month Day

Retrieved by Moller Ship ATLANTIS-II Cruise #69

Purpose of Mooring: Long-term slope array

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4491	M-142	CM	1049	
4492	M-249	CM	2540	

COMMENTS ON MOORING:

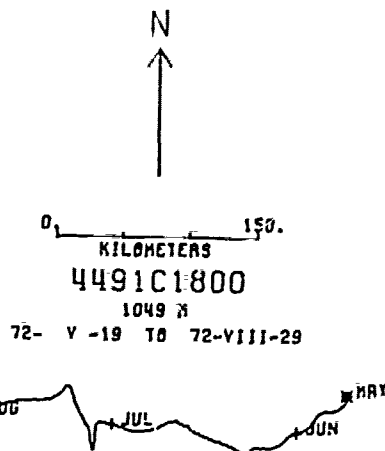
DATA NUMBER 4491

Instrument No. M-142

Instrument Sampling Scheme
Model 850 data bursts
every 1800 sec
15 samples
at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 1049 m



Comments:

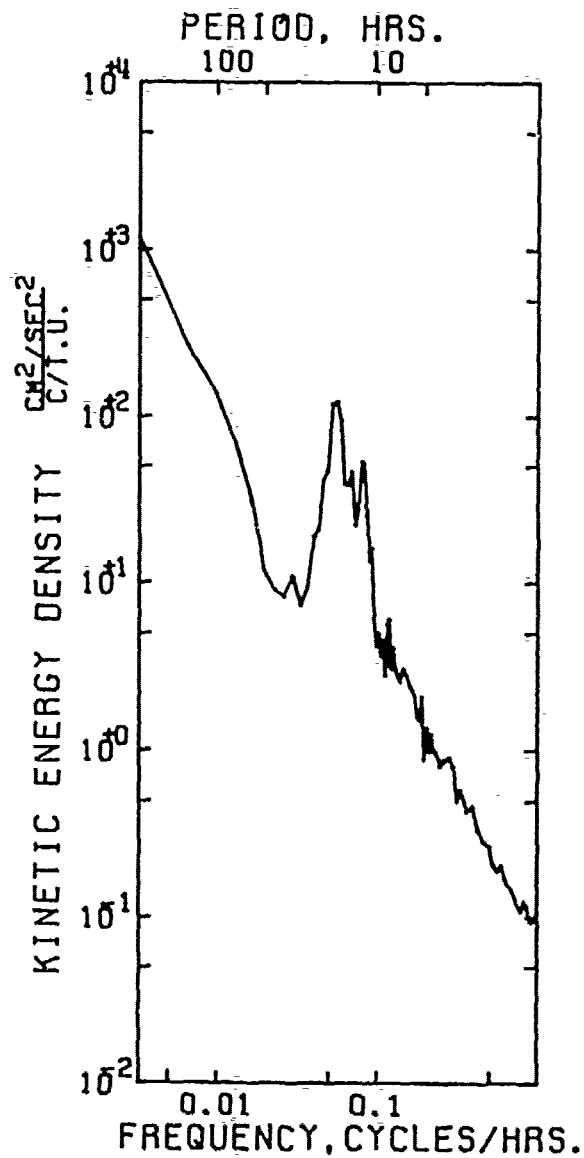
DATA/ 4491C1800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-38.836	-1.759	55.467
STD. ERR.	.531	.485	.445
VARIANCE	1383.316	1152.572	970.619
STD. DEV.	37.193	33.950	31.155
KURTOSIS	2.883	3.982	2.992
SKEWNESS	.4383	.133	.728
MINIMUM	-162.732	-143.731	15.647
MAXIMUM	51.438	136.076	167.571

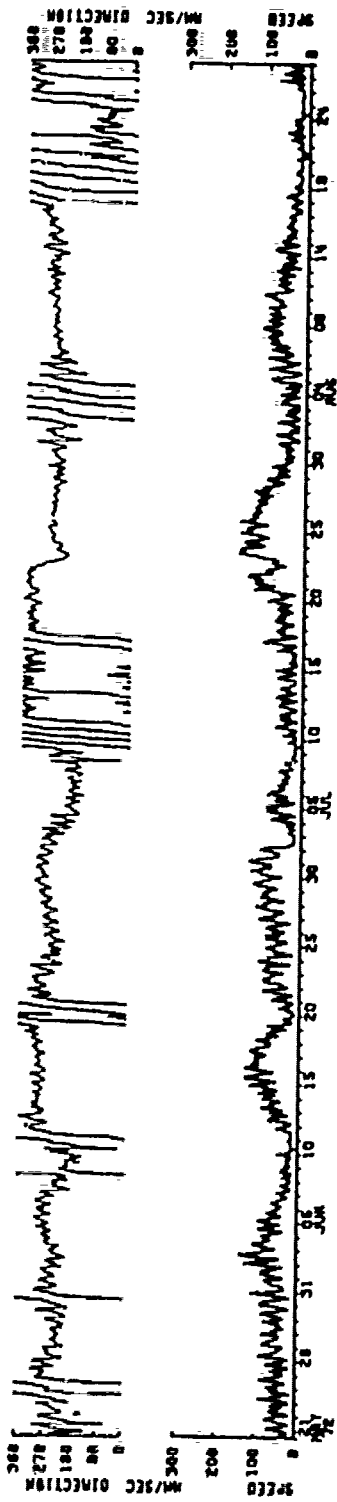
*****		*****	
EAST & NORTH			

COVARIANCE	50.295	SAMPLE SIZE	4907 POINTS
STD. ERR. OF COVARIANCE	26.321		
STD. DEV. OF COVARIANCE	1843.772	SPANNING RANGE	
CORRELATION COEFFICIENT	.398E-1	FROM 72- V -19	05.30.37
VECTOR MEAN	38.876	TO 72-VIII-29	10.30.37
VECTOR VARIANCE	1267.944		
VECTOR STD. DEV.	35.608	DURATION	102.21 DAYS

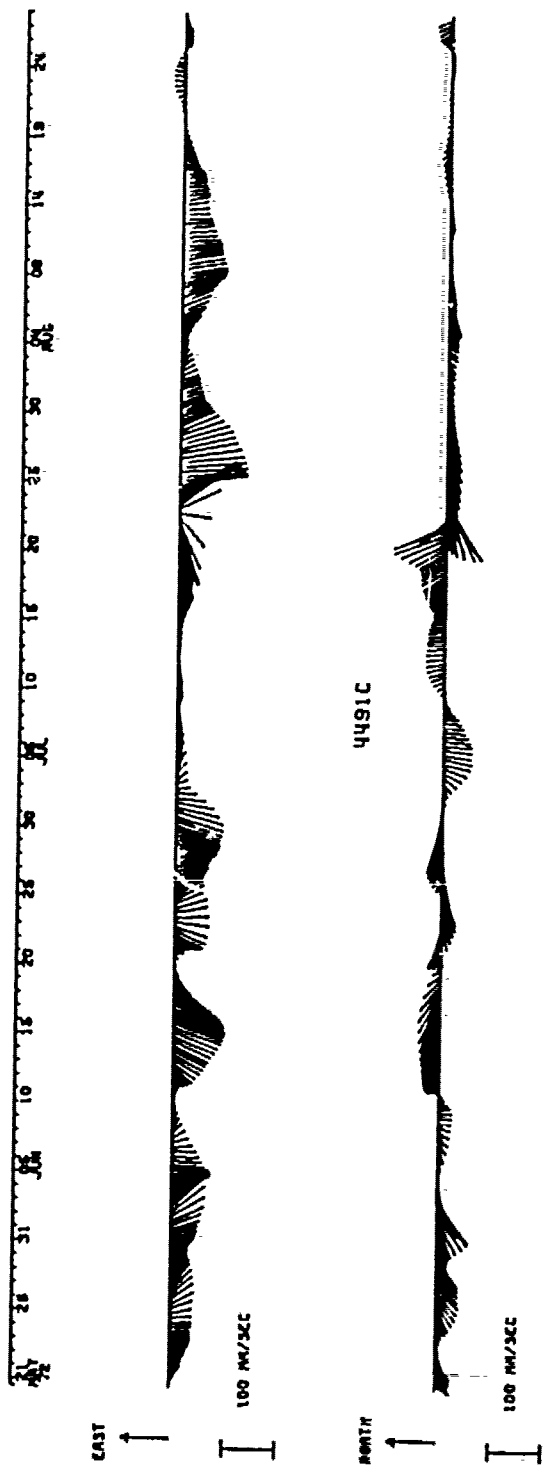
AUTO SPECTRUM
4491C1800 EAST COMP
4491C1800 NORTH COMP



1049 METERS
72-V-19 TO 72-VIII-28
1 PIECES WITH 2430 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

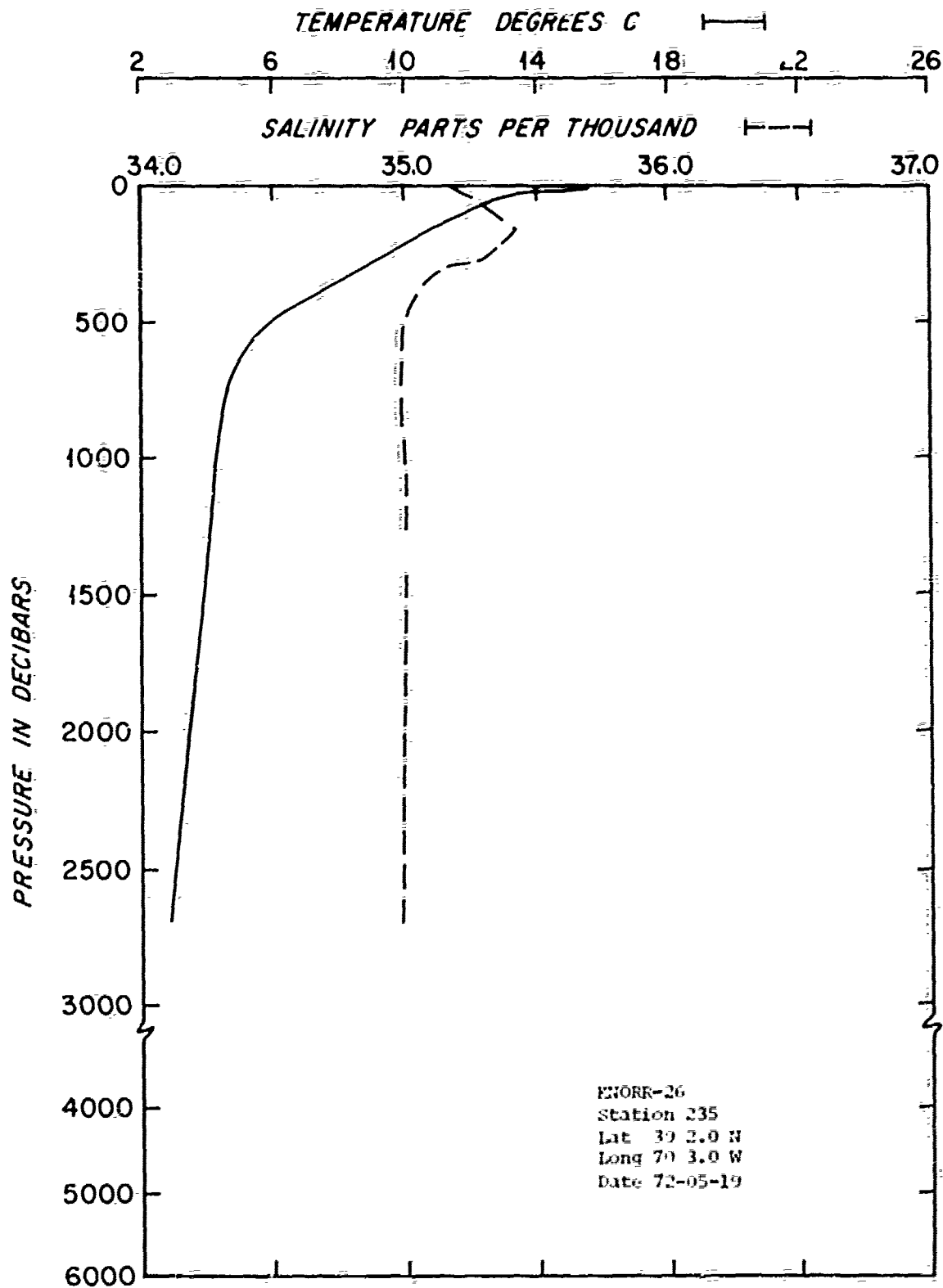


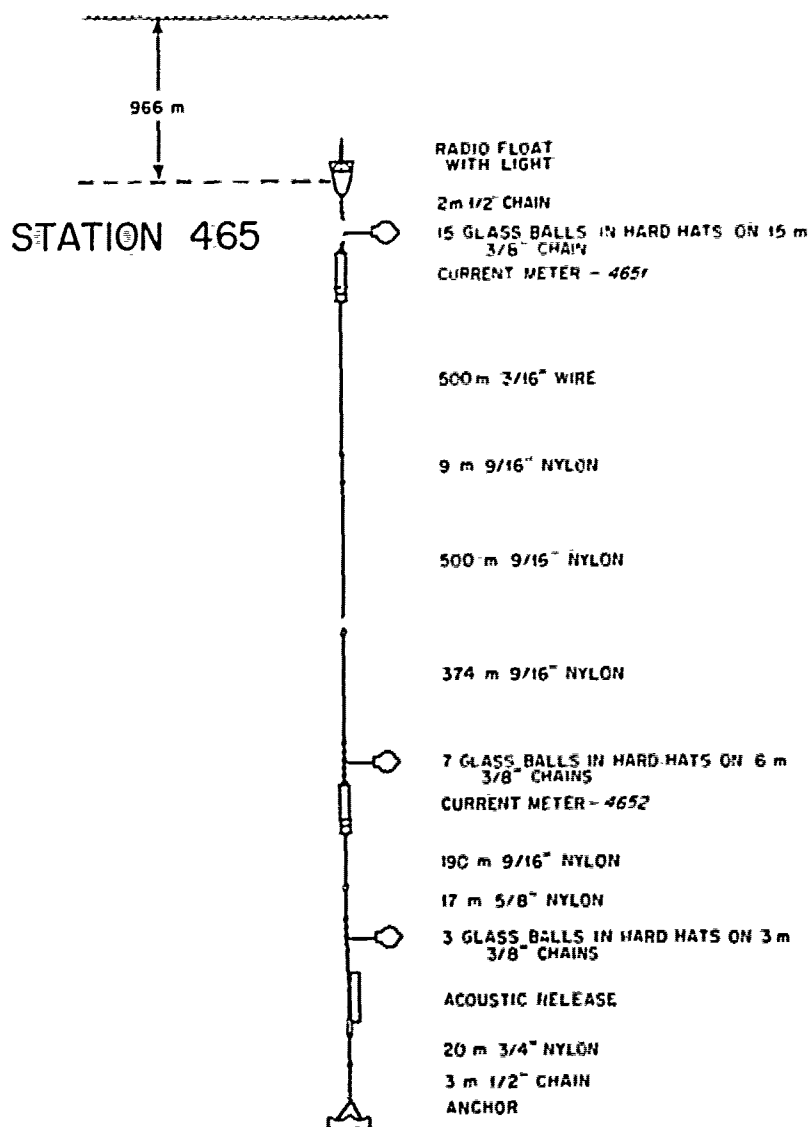
4491C



3-A-5

3-A-6





Mooring No. 465

Set 72 August 29 38° 59.0'N 70° 00.0'W
Year Month Day Latitude Longitude

Set by Tupper Ship ATLANTIS II Cruise #59

Retrieved 72 December 10
Year Month Day

Retrieved by Tupper Ship CHAIN Cruise #109

Purpose of Mooring: Long-term slope array

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4651	M-206T	CM	985	
4652	M-25b	CM	2487	

COMMENTS ON MOORING:

DATA NUMBER 4651

Instrument No. M-206T

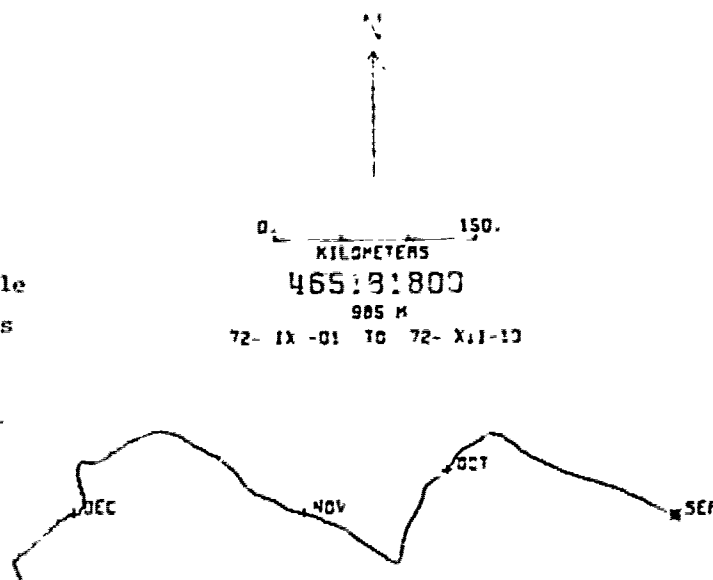
Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec
 23 samples
at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 985 m

Comments:



DATA/ 465181800

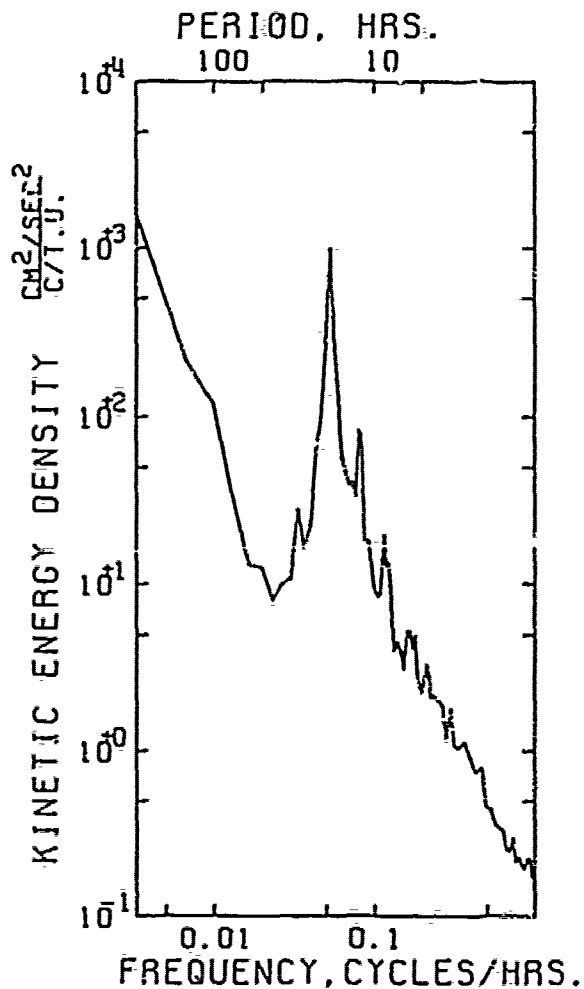
VARIABLE	EAST COMP	NORTH COMP	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	-55.775	-5.006	81.336	3.920
STD. ERR.	.689	.766	.594	.210E-2
VARIANCE	2335.336	2885.653	1732.136	.217E-1
STD. DEV.	48.325	53.718	41.619	.147
KURTOSIS	3.965	3.194	2.600	1.774
SKEWNESS	.335	-.519	.439	.274
MINIMUM	-230.004	-220.403	12.000	3.659
MAXIMUM	151.883	125.327	234.000	4.397

EAST COMP & NORTH COMP

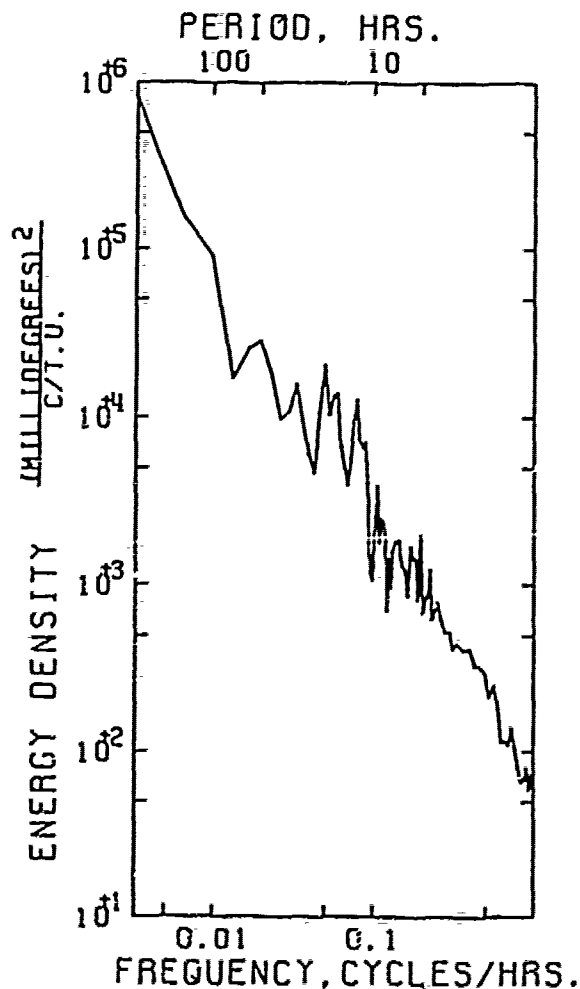
COVARIANCE	-961.103
STD. ERR. OF COVARIANCE	60.027
STD. DEV. OF COVARIANCE	4203.290
CORRELATION COEFFICIENT	-.370
VECTOR MEAN	55.999
VECTOR VARIANCE	2610.494
VECTOR STD. DEV.	51.093

• SAMPLE SIZE = 4915 POINTS
•
• SPANNING RANGE
• FROM 72-VIII-30 03.00.55
• TO 72- XII-10 12.00.55
•
• DURATION 102.38 DAYS

AUTO SPECTRUM
465181800 EAST COMP
465181800 NORTH COMP



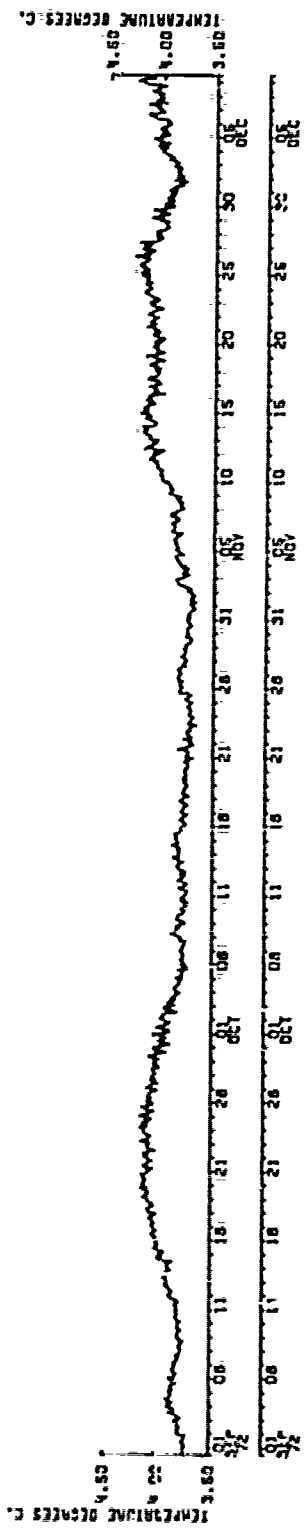
AUTO SPECTRUM
465181800 TEMPERATURE



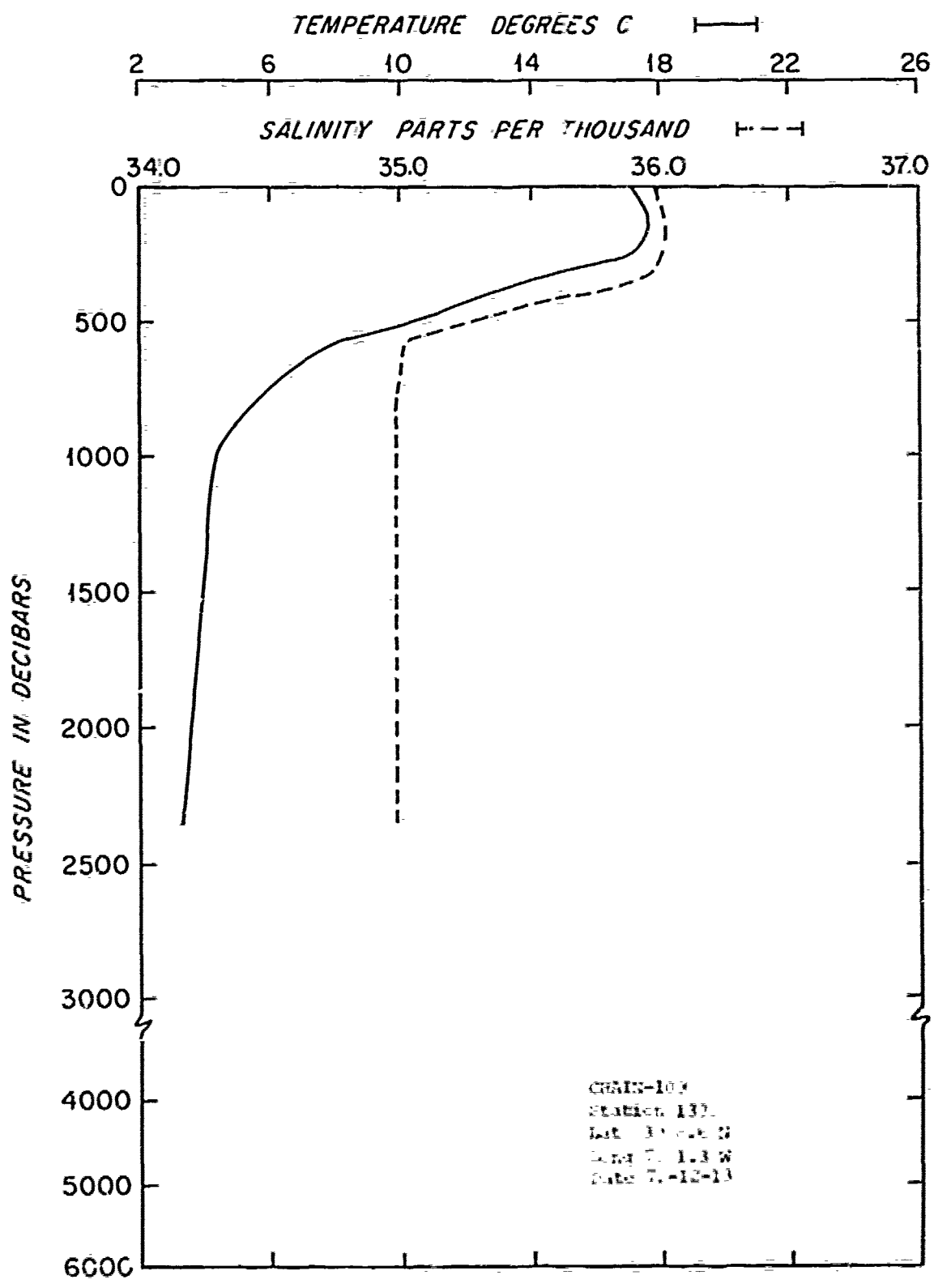
985 METERS
72-VIII-30 TO 72-XII-09
1 PIECES WITH 2430 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



8159h



2-71-7 4



3-B-1

3-B-2

DATA NUMBER 4492

Instrument No. M-249

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

15 samples

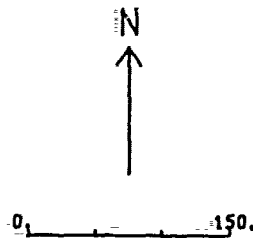
at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 2540 m

Comments:



4492A1800

2540 M

72- V -19 TO 72-VIII-29



DATA/ 4492A1800

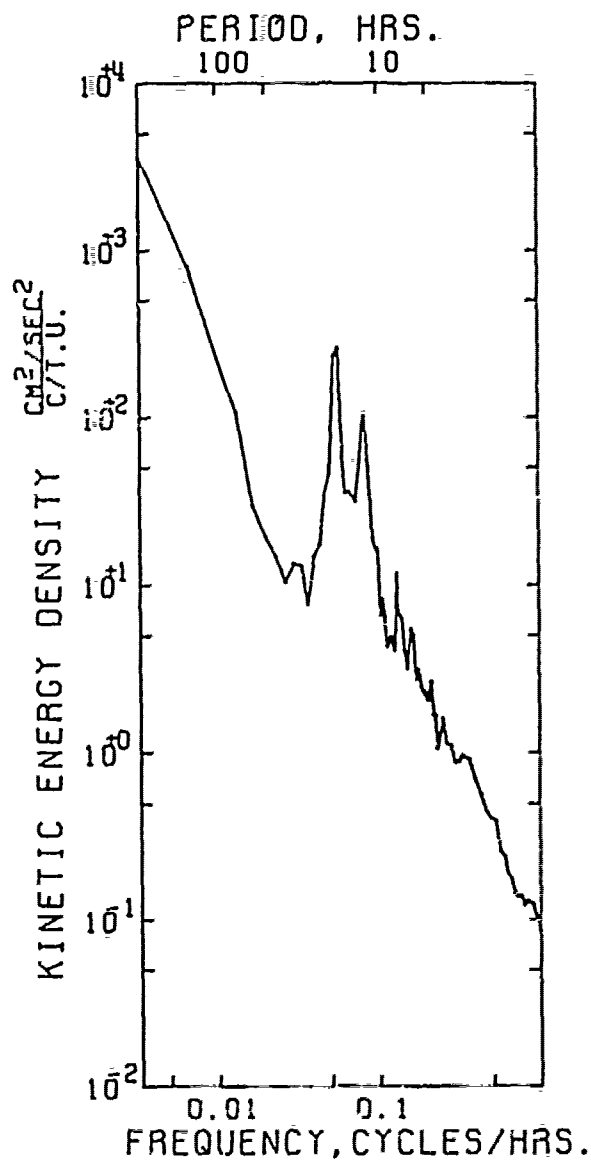
VARIABLE	EAST CAMP	NORTH CAMP	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-37.076	45.286	67.473
STD. ERR.	.701	.654	.530
VARIANCE	2415.203	2115.261	1380.056
STD. DEV.	49.145	45.982	37.149
KURTOSIS	3.149	3.264	3.606
SKEWNESS	-.674	-.317	.937
MINIMUM	-199.168	-166.625	15.000
MAXIMUM	66.207	124.900	206.020

EAST CAMP & NORTH CAMP

COVARIANCE	-396.335
STD. ERR. OF COVARIANCE	32.731
STD. DEV. OF COVARIANCE	2293.021
CORRELATION COEFFICIENT	-.175
VECTOR MEAN	47.452
VECTOR VARIANCE	2265.232
VECTOR STD. DEV.	47.596

SAMPLE SIZE = 4978 POINTS
SPANNING RANGE
FROM 72- V -19 05:00:37
TO 72-VIII-29 10:30:37
DURATION 102.23 DAYS

AUTO SPECTRUM
4492A1800 EAST COMP
4492A1800 NORTH COMP



2540 METERS
72-V-19 TO 72-V111-28
1 PIECES WITH 2430 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

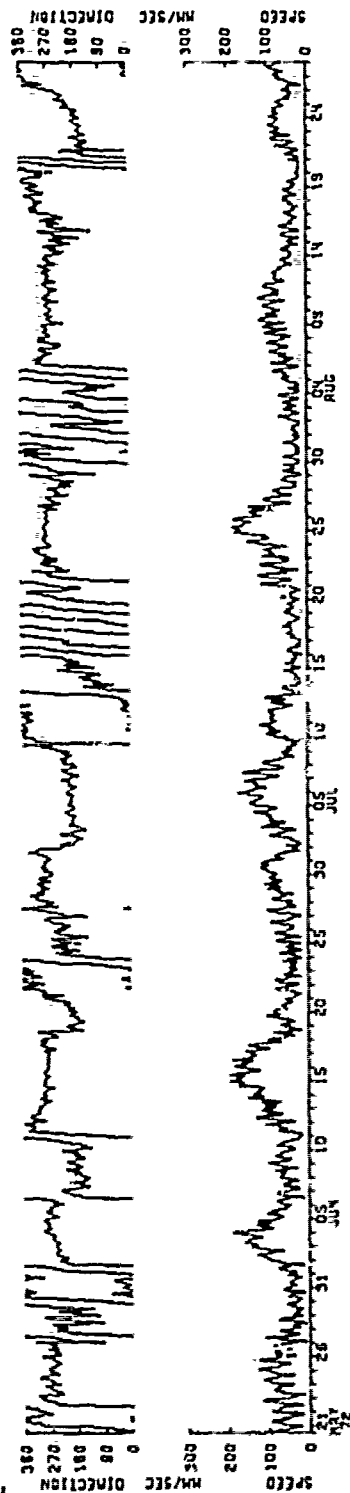
21 JUN 26 05 10 15 20 25 30 01 JUL 05 10 15 20 25 30 01 AUG 05 10 15 20 25 30

EAST



4492A

WEST



2-10-6

1-1-7

DATA NUMBER 4652

Instrument No. M-256

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

23 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 2487 m

Comments:



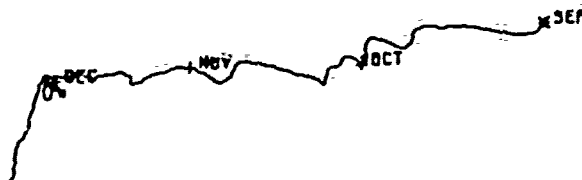
0. 150.

KILOMETERS

4652E1800

2487 m

72- IX -01 TO 72- XII-10



DATA/ 4652E1800

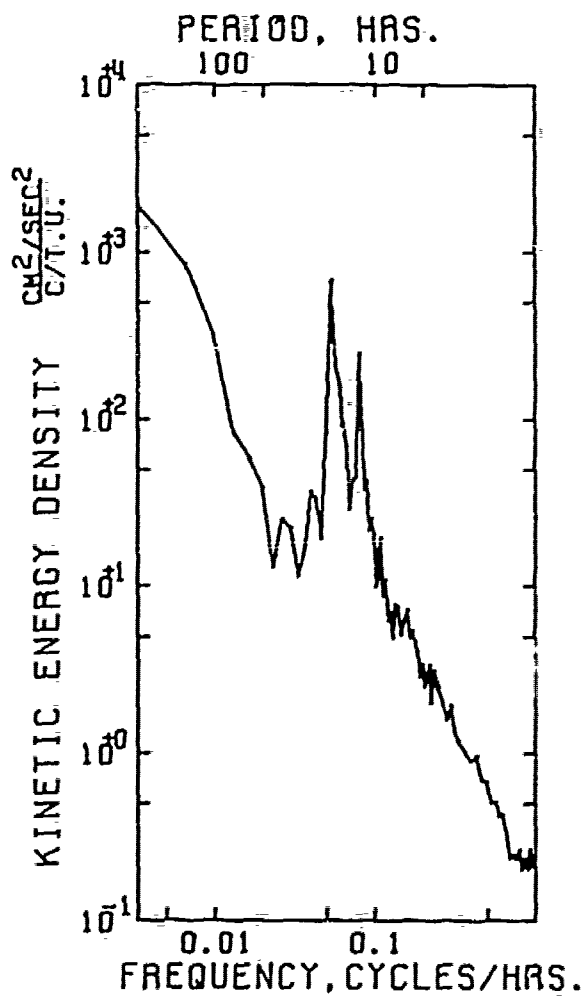
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	38.153	10.640	68.978
STD. ERR.	.702	.675	.548
VARIANCE	2422.999	2241.325	1475.158
STD. DEV.	49.224	47.343	38.408
KURTOSIS	2.676	4.168	3.351
SKEWNESS	.289	.379	.865
MINIMUM	-203.900	-203.264	9.578
MAXIMUM	98.753	162.186	206.455

.....
EAST & NORTH
.....

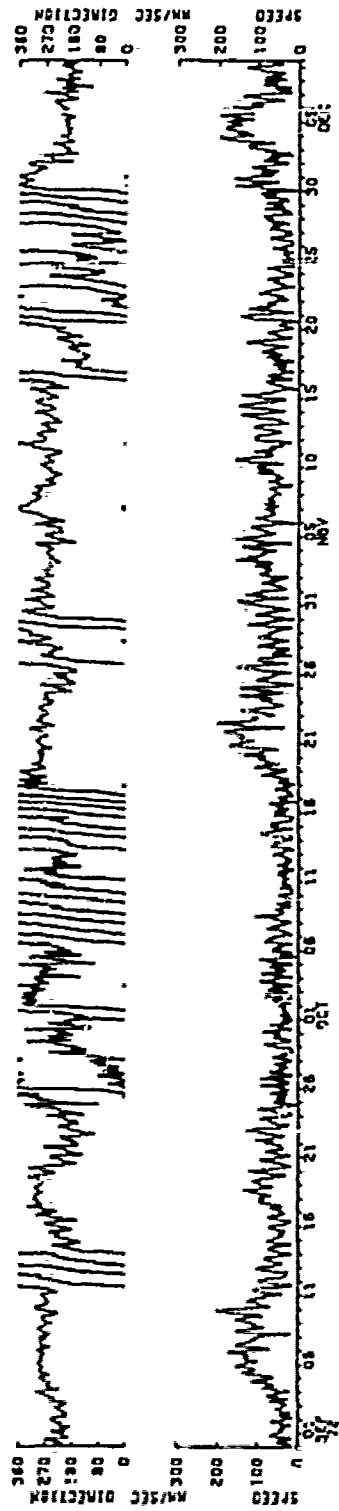
COVARIANCE	331.596
STD. ERR. OF COVARIANCE	40.274
STD. DEV. OF COVARIANCE	2823.477
CORRELATION COEFFICIENT	.142
VECTOR MEAN	39.609
VECTOR VARIANCE	2332.162
VECTOR STD. DEV.	48.292

.....
* SAMPLE SIZE = 4915 POINTS
* SPANNING RANGE
* FROM 72-VIII-30 03:00:58
* TO 72- XII-10 12:00:58
* DURATION 102.38 DAYS

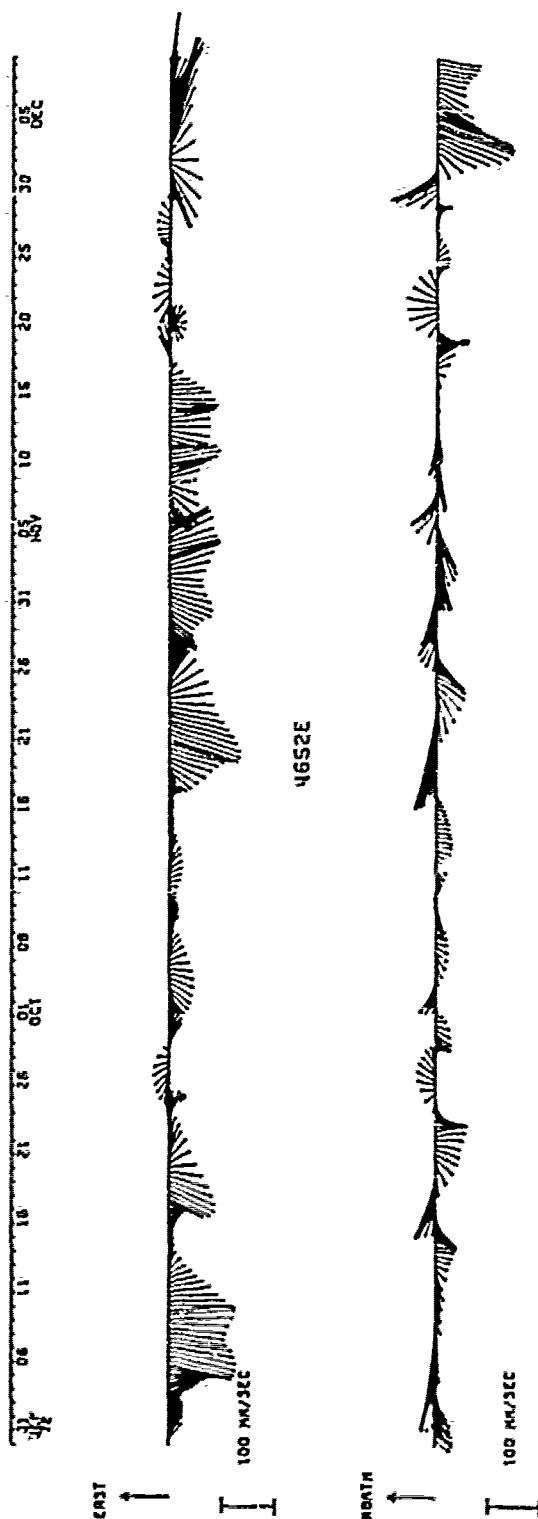
AUTO SPECTRUM
4652E1800 EAST COMP
4652E1800 NORTH COMP

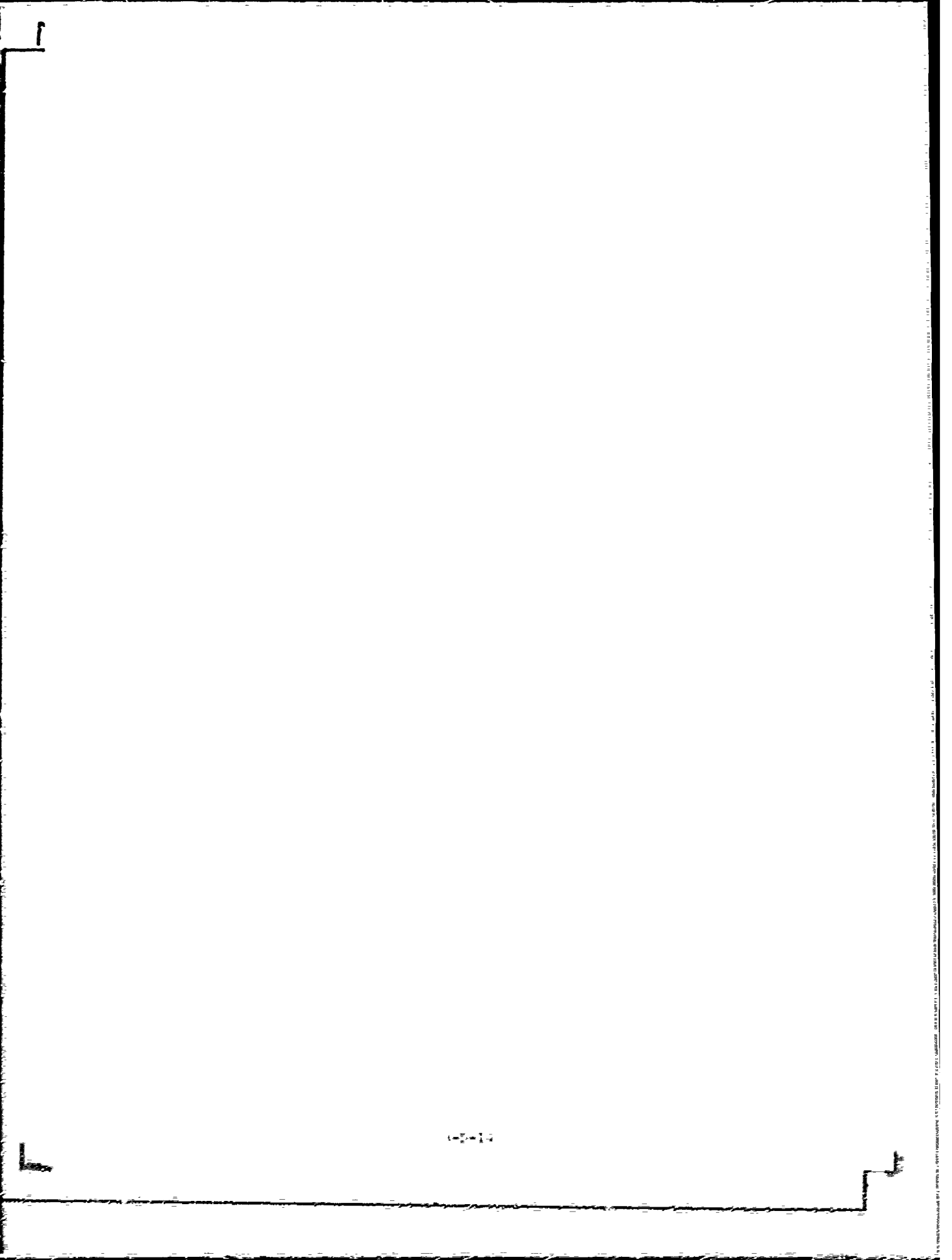


2487 METERS
72-VIII-30 TO 72-XII-09
1 PIECES WITH 2430 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

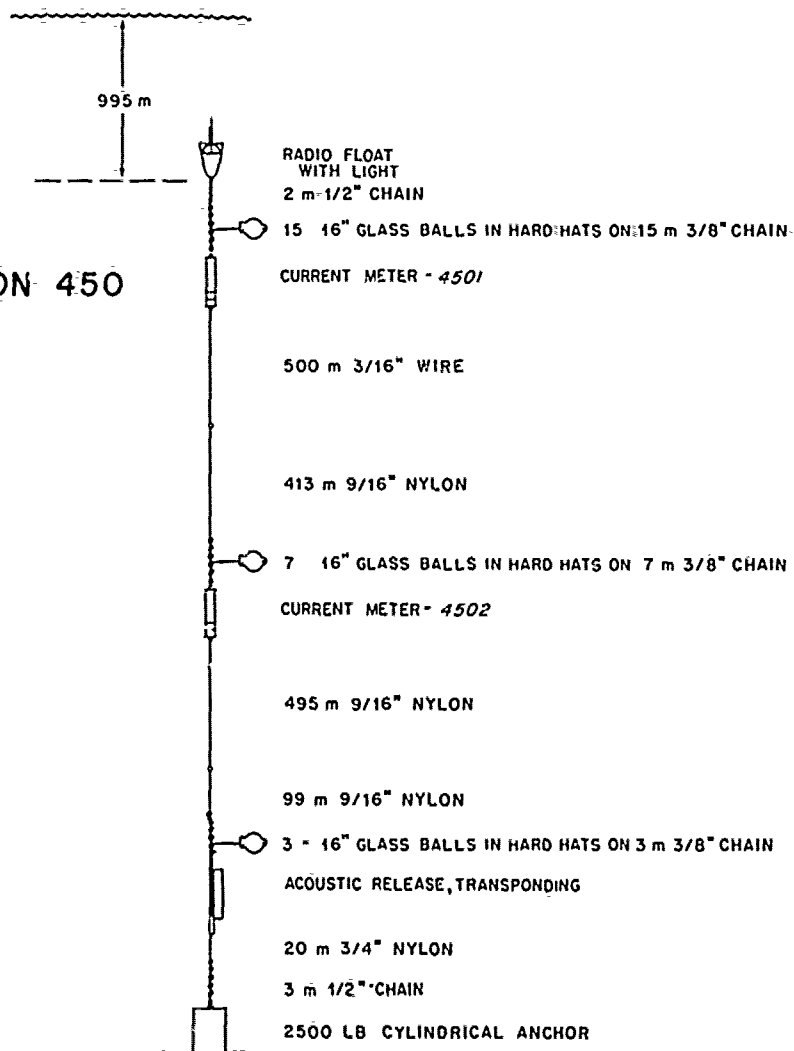


3259





STATION 450



Mooring No. 450

Set 72 May 19 39° 9.2'N 70° 30.8'W
Year Month Day Latitude Longitude

Set by Gifford Ship KNORR Cruise #26

Retrieved 72 August 29
Year Month Day

Retrieved by Moller Ship ATLANTIS-II Cruise #69

Purpose of Mooring: Long-term slope array

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4501	M-173	CM	1014	
4502	M-212T	CM	7738	

COMMENTS ON MOORING:

DATA NUMBER 4501

Instrument No. M-173

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

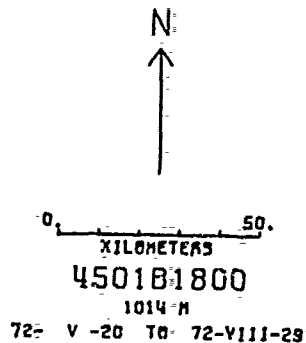
15 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 1014 m

Comments:



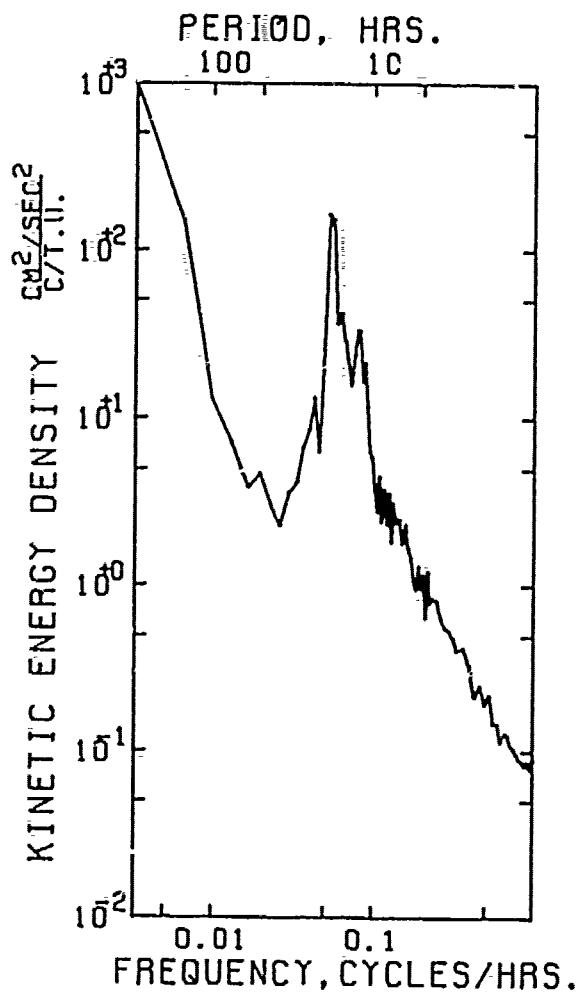
DATA/ 4501B1800

VARIABLE *	EAST	NORTH	SPEED
UNITS *	MM/SEC	MM/SEC	MM/SEC
MEAN *	-12.235	1.568	44.302
STD. ERR. *	.043	.462	.372
VARIANCE *	1443.110	1043.410	676.058
STD. DEV. *	37.988	32.302	26.001
KURTOSIS *	2.661	3.423	2.795
SKEWNESS *	.0341	.180	.851
MINIMUM *	-137.120	-107.438	15.363
MAXIMUM *	88.896	106.170	137.174

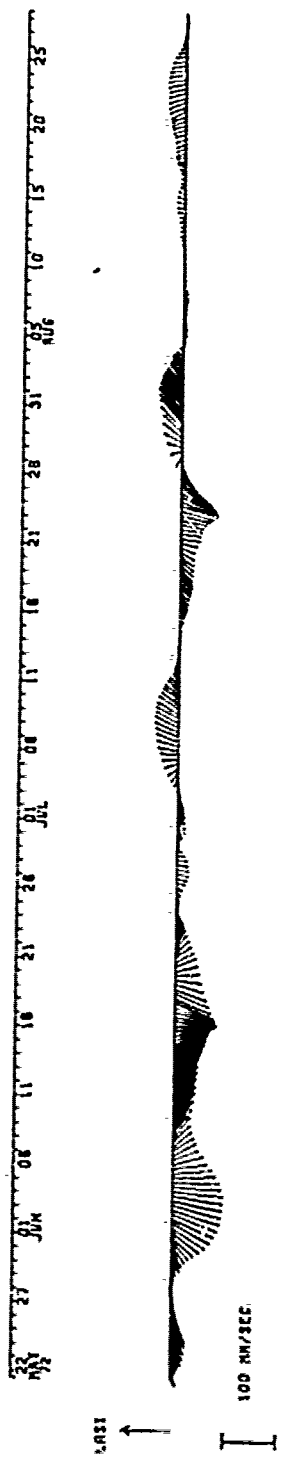
EAST & NORTH

COVARIANCE *	-81.244	* SAMPLE SIZE = 4889 POINTS
STD. ERR. OF COVARIANCE *	20.833	* SPANNING RANGE
STD. DEV. OF COVARIANCE *	1456.694	* FROM 72- V-20 00.00.37
CORRELATION COEFFICIENT *	-.662E-1	* TO 72-VIII-29 20.00.37
VECTOR MEAN *	12.335	* DURATION 101.83 DAYS
VECTOR VARIANCE *	1243.260	
VECTOR STD. DEV. *	35.260	

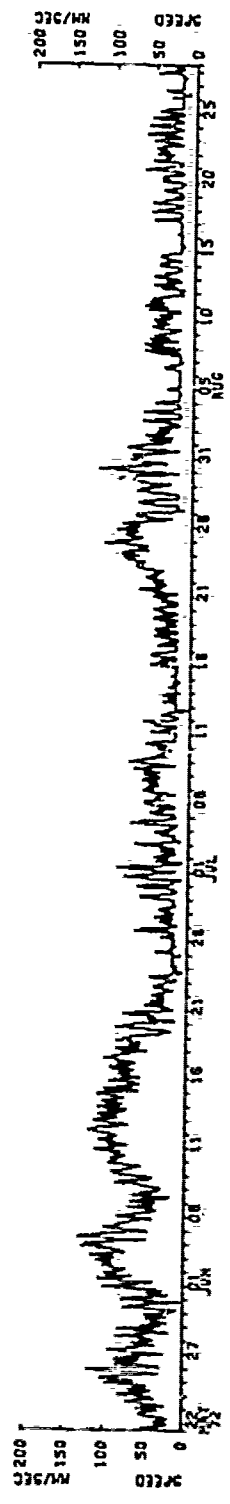
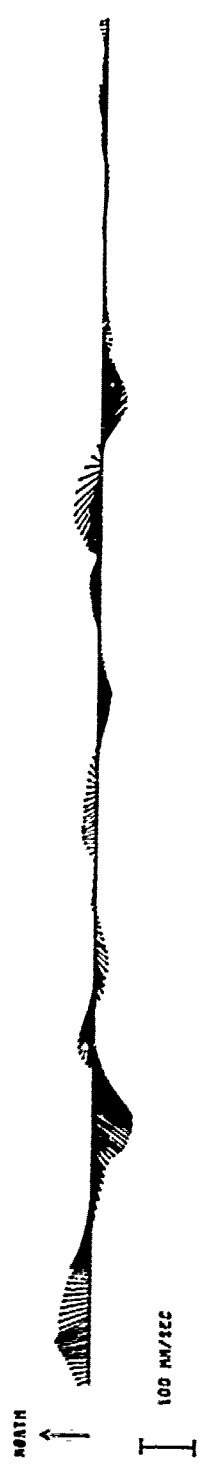
AUTO SPECTRUM
450181800 EAST COMP
450181800 NORTH COMP

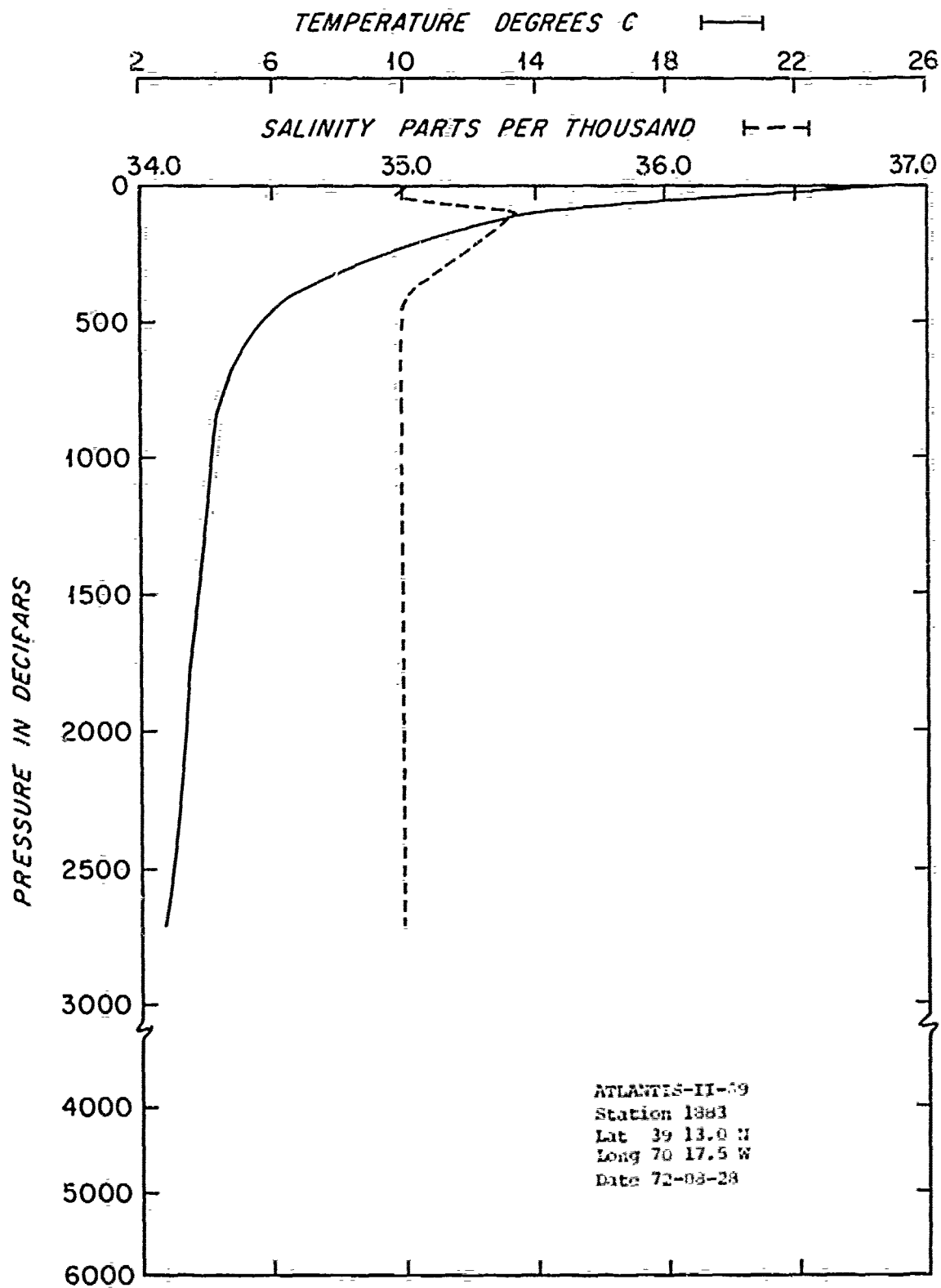


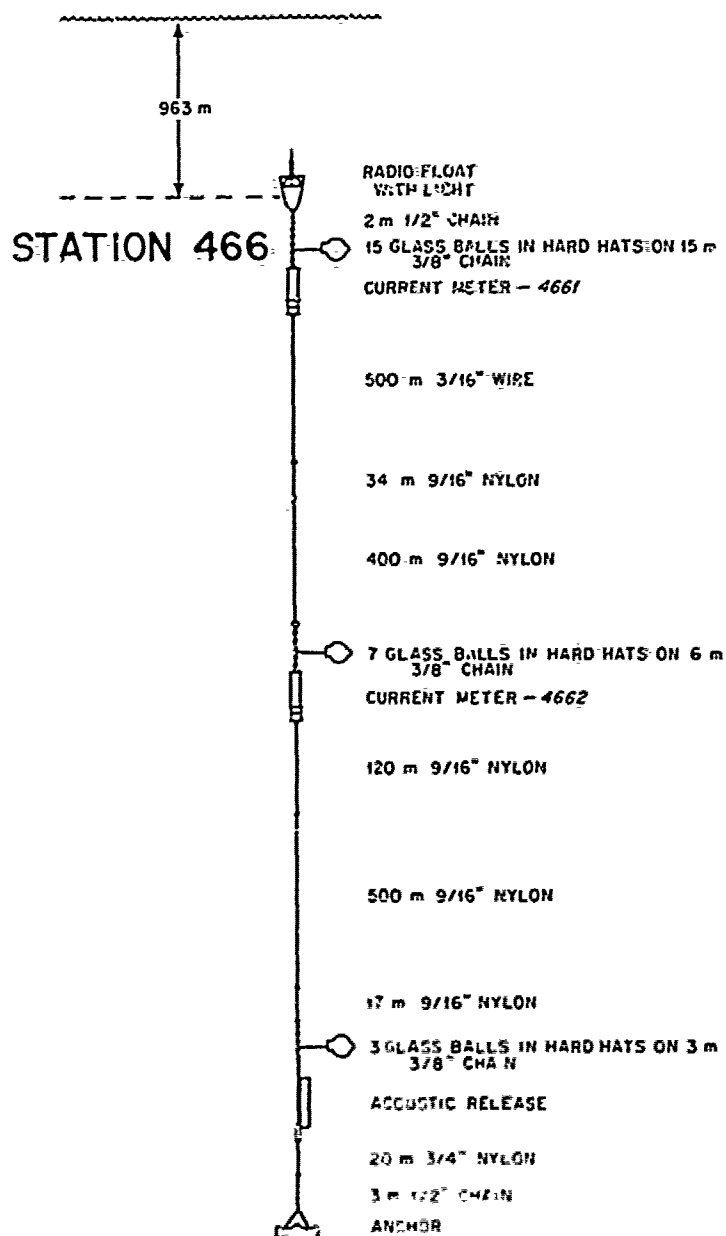
1014 METERS
72-V-20 TO 72-VIII-29
1 PIECES WITH 2430 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



4501B







Mooring No. 466

Set 72 August 29 39° 9.2'N 70° 30.8'W
Year Month Day Latitude Longitude

Set by Tupper Ship ATLANTIS-II Cruise #69

Retrieved 72 December 08
Year Month Day

Retrieved by Tupper Ship CHAIN Cruise #109

Purpose of Mooring: Long-term slope array

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
1661	M-272	CM	983	No data
1662	M-264	CM	1980	

COMMENTS ON MOORING:

DATA NUMBER 4662

Instrument No. M-264

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

23 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 1980 m

Comments:



0. 150.

KILOMETERS

466281800

1980 M

72- IX -01 TO 72- XII-08



DATA/ 466281800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-20.774	.434	55.843
STD. ERR.	.642	.539	.195
VARIANCE	239.877	1405.095	756.523
STD. DEV.	15.485	37.485	27.505
KURTOSIS	2.949	2.547	3.145
SKEWNESS	.83021	.115	.674
MINIMUM	-155.227	-107.536	14.701
MAXIMUM	114.417	119.360	161.091

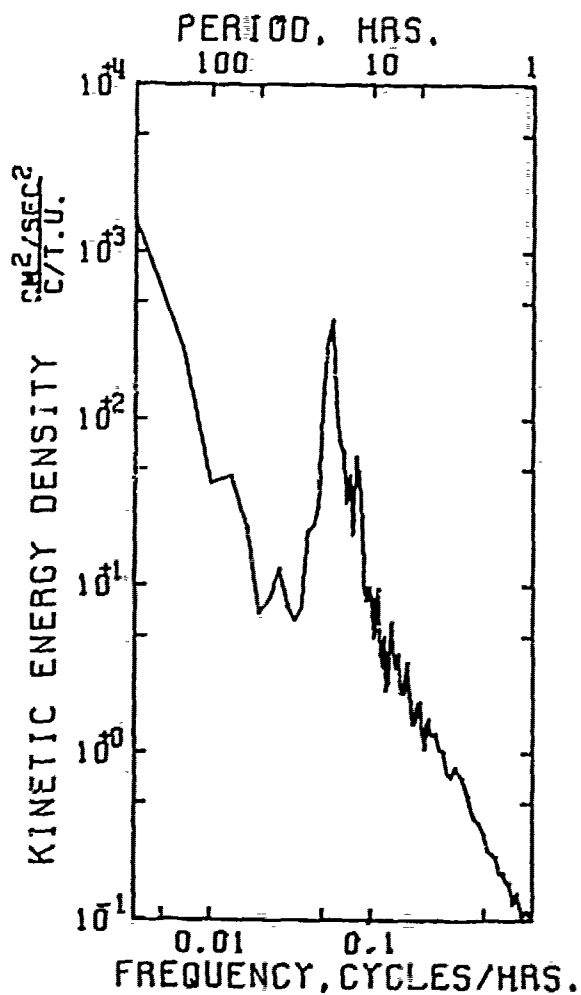
EAST & NORTH

COVARIANCE

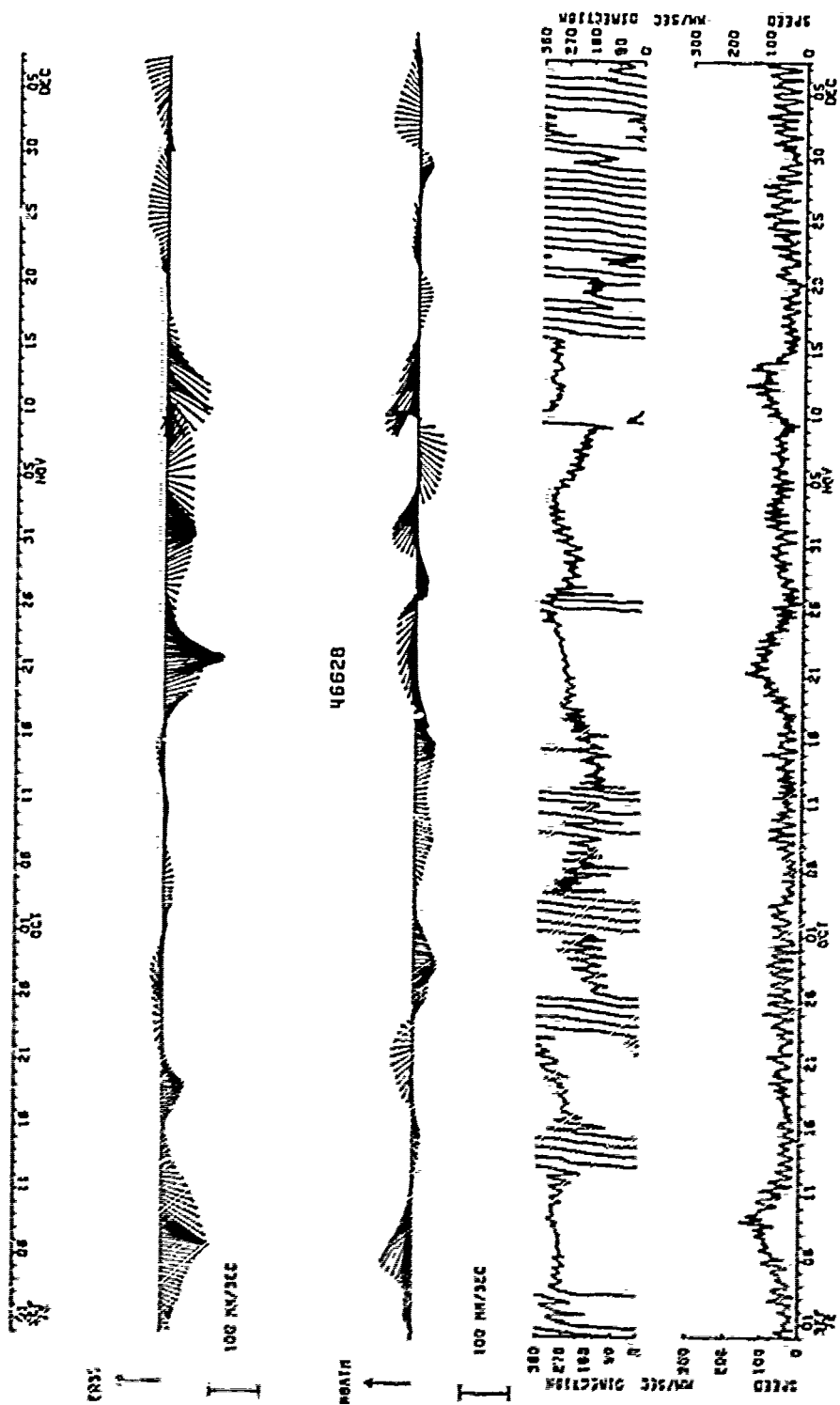
STD. ERR. OF COVARIANCE	-377.463
STD. DEVI. OF COVARIANCE	25.691
CORRELATION COEFFICIENT	1787.850
VECTOR MEAN	-.223
VECTOR VARIANCE	20.779
VECTOR STD. DEV.	1722.486

SAMPLE SIZE	843 POINTS
SPANNING RANGE	
FROM	72-VIII-30 01:30:58
TO	72- XII-08 22:30:58
DURATION	100.88 DAYS

AUTO SPECTRUM
466281800 EAST COMP
466281800 NORTH COMP



1980 METERS
72-VIII-30 TO 72-XII-08
1 PIECES WITH 2400 ESTIMATES
PER PIECE. AVERAGED OVER
& ADJACENT FREQUENCY BANDS



11

3-D-1

3-D-2

DATA NUMBER 4502

Instrument No. M-212T

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 2008 m

Comments:

Temperature data only

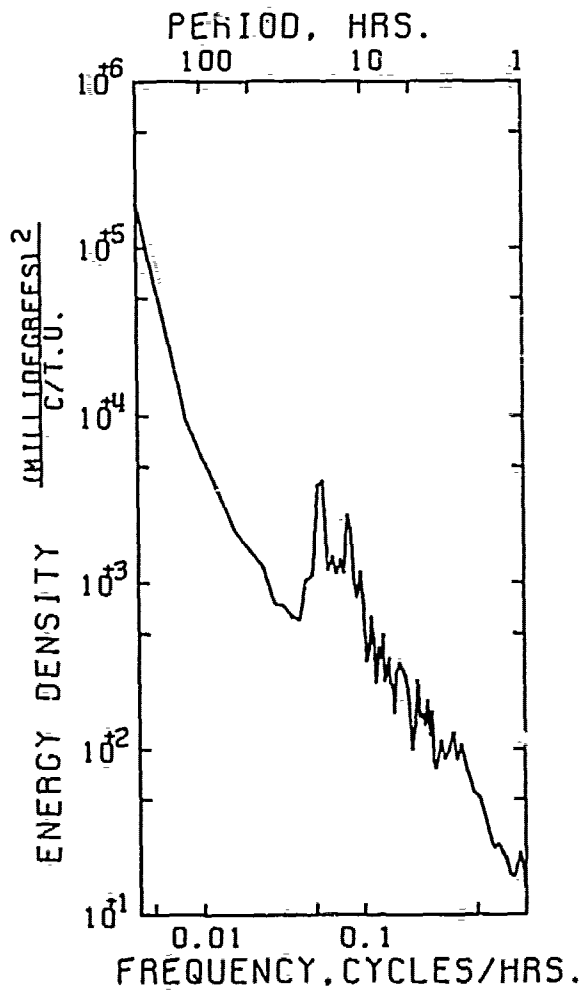
DATA/ 4502

VARIABLE * TEMPERATURE
UNITS * DEGREES C.

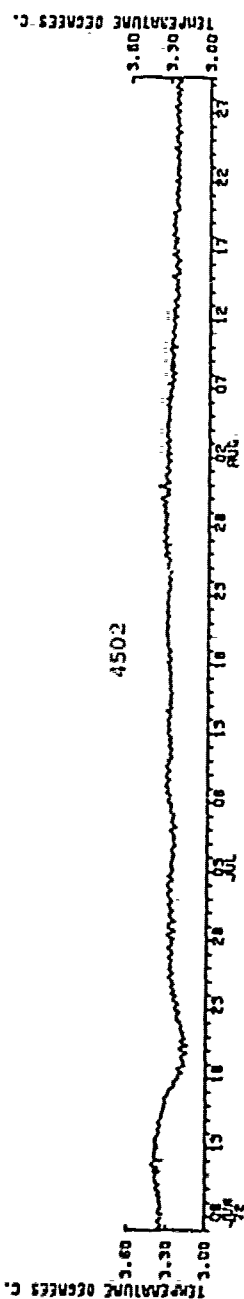
MEAN * 3.286
STD. ERR. * .701E-3
VARIANCE * .199E-2
STD. DEV. * .446E-1
KURTOSIS * 3.537
SKEWNESS * .306E-1
MINIMUM * 3.132
MAXIMUM * 3.426

* SAMPLE SIZE = 4043 POINTS
*
* SPANNING RANGE
* FROM 72-VI-06 15.00.37
* TO 72-VIII-29 20.00.37
*
* DURATION 84.21 DAYS

AUTO SPECTRUM
4502 TEMPERATURE



2008 METERS
72-VI-06 TO 72-VIII-28
1 PIECES WITH 2000 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS

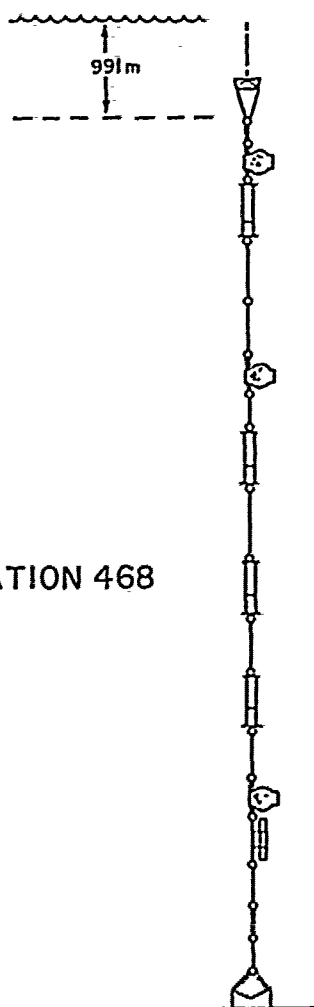


3-D-5

3-D-6

3-D-7

STATION 468



RADIO FLOAT WITH LIGHT

2m 1/2" CHAIN.

15 16" GLASS BALLS IN HARD HATS ON 15m 3/8" CHAIN

CURRENT METER - 4681

500m 3/16" WIRE

412m 9/16" NYLON

9 16" GLASS BALLS IN HARD HATS ON 10m 3/8" CHAIN

10m 9/16" NYLON

CURRENT METER - 4682

293 9/16" NYLON

CURRENT METER - 4683

168m 9/16" NYLON

CURRENT METER - 4684

56m 9/16" NYLON

5 16" GLASS BALLS IN HARD HATS ON 5m 3/8" CHAIN

ACOUSTIC RELEASE, TRANSPONDING

20 3/4" NYLON

3m 1/2" CHAIN

Mooring No. 468

Set 72 September 04 39° 10.0'N 70° 2.8'W
Year Month Day Latitude Longitude

Set by Moller Ship ATLANTIS-II Cruise #69

Retrieved 72 December 06
Year Month Day

Retrieved by Tupper Ship CHAIN Cruise #109

Purpose of Mooring: Site D long-term current measurement

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4681	M-127T	CM	1010	No data
4682	M-198T	CM	2012	No data
4683	M-257	CM	2364	
4684	M-191	CM	2364	

COMMENTS ON MOORING:

DATA NUMBER 4683

Instrument No. M-257

Instrument Sampling Scheme
Model 550 data bursts

every 15.0 sec
23 samples

at 5.00 sec/sample

WASH accumulated averages
over --- sec

Instrument Depth 2364 m

Comments:



0 150
KILOMETERS

468381800

2364 m

72- IX -05 TO 72- XII-06



DATA/ 468381800

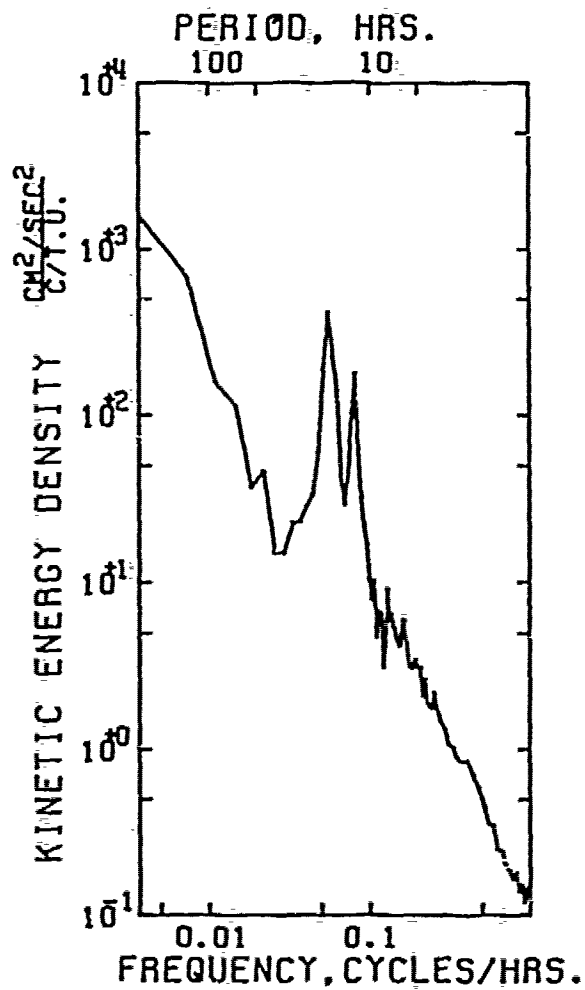
VARIABLE	EAST	NORTH	DEPTH
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	23.330	-1.175	61.112
STD. ERR.	.696	.692	.444
VARIANCE	2155.005	2133.243	1084.442
STD. DEV.	46.428	46.187	32.945
KURTOSIS	2.718	3.463	2.048
SKEWNESS	.129	-.525E-2	.544
MINIMUM	-169.931	-195.619	1.123
MAXIMUM	120.890	137.836	207.080

EAST & NORTH

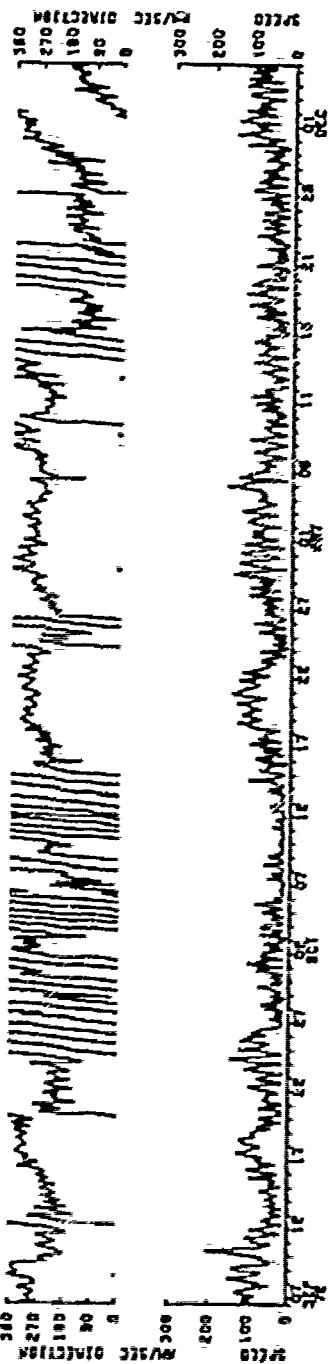
COVARIANCE	4636.826
STD. ERR. OF COVARIANCE	36.417
STD. DEV. OF COVARIANCE	2430.147
CORRELATION COEFFICIENT	-.297
VECTOR MEAN	23.331
VECTOR VARIANCE	2144.424
VECTOR STD. DEV.	46.308

SAMPLE SIZE = 4453 POINTS
SPANNING RANGE
FROM 72- IX -05 02:00:58
TO 72- XII-06 20:00:58
DURATION 92.75 DAYS

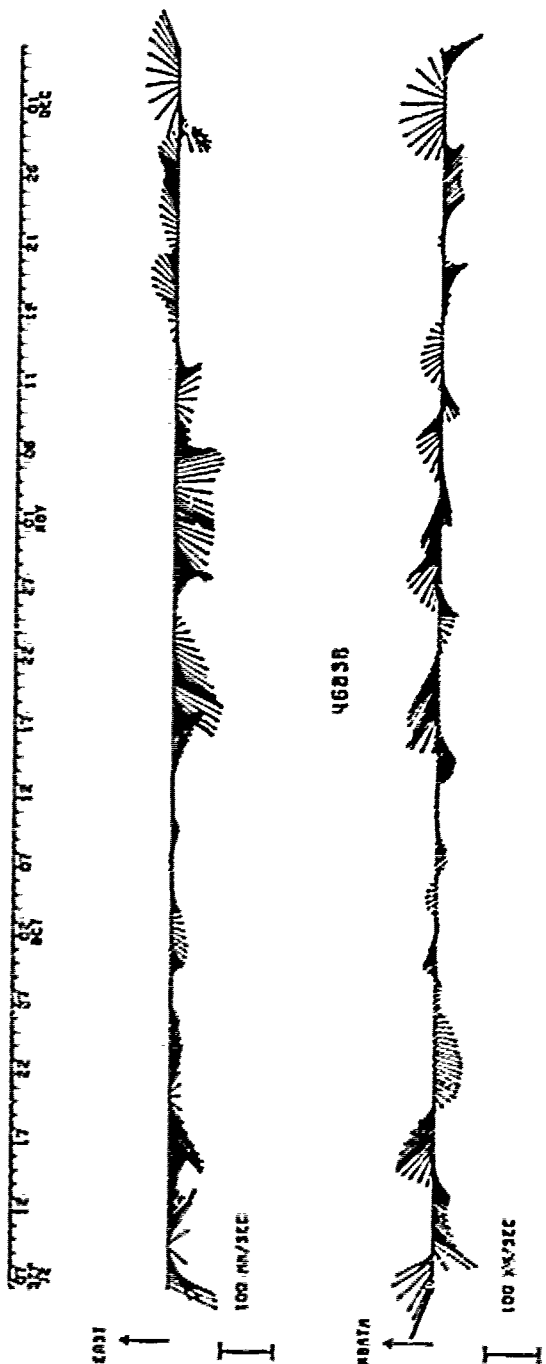
AUTO SPECTRUM
468381800 EAST COMP
468381800 NORTH COMP



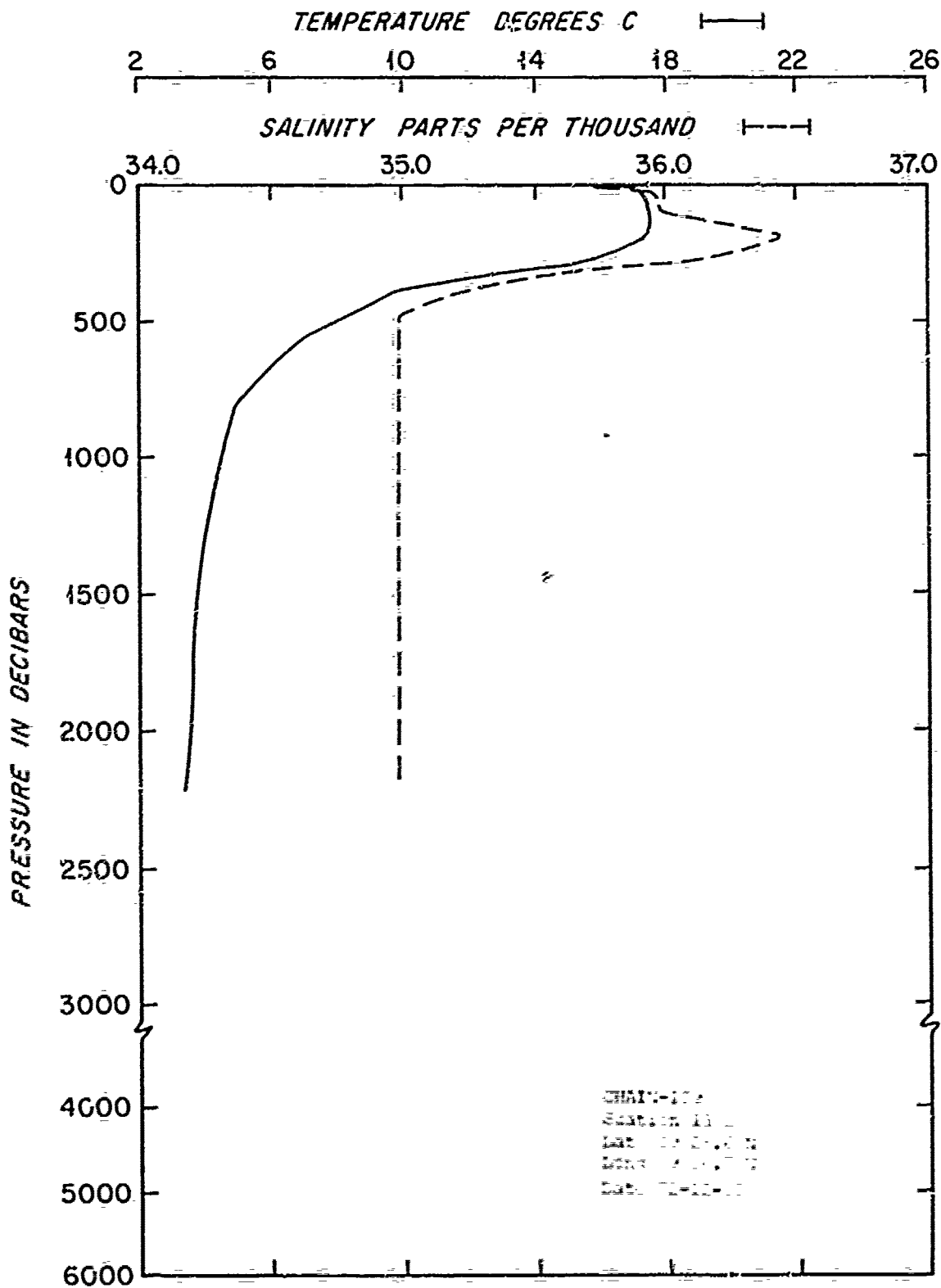
2364 METERS
72-IX-05 TO 72-XII-05
1 PIECES WITH 2187 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



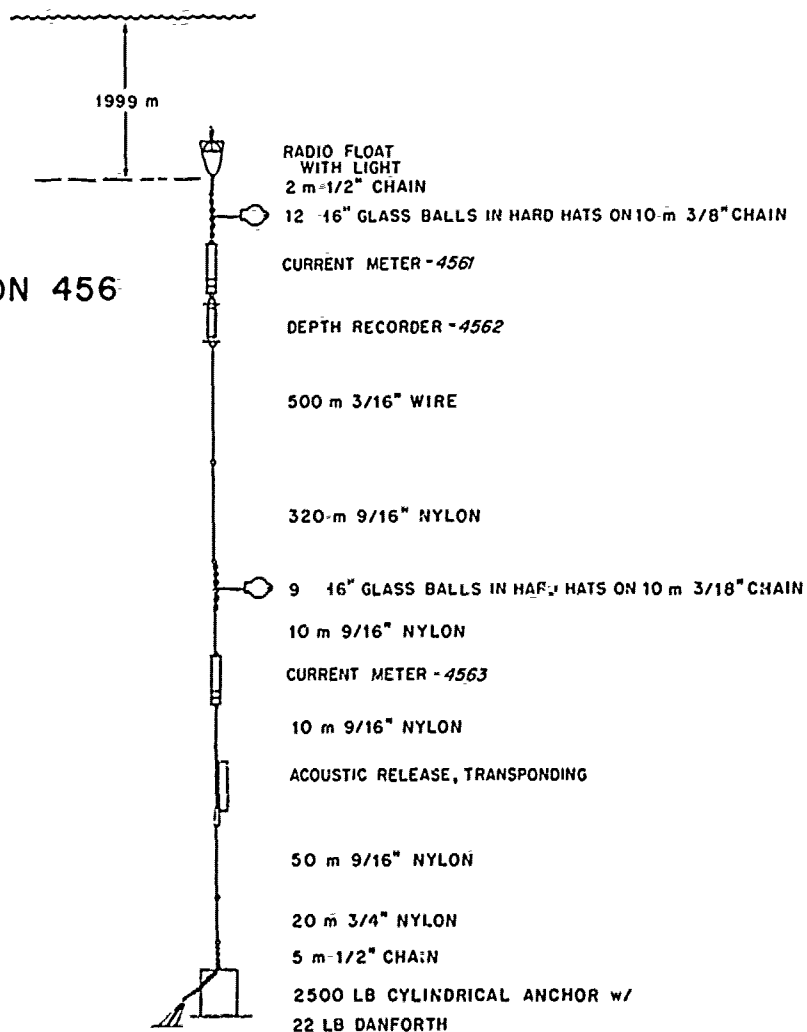
46838



3-5-1



STATION 456



Mooring No. 456

Set 72 May 31 33° 42.0'N 62° 35.5'W
Year Month Day Latitude Longitude

Set by Gifford Ship KNORR Cruise #26

Retrieved 72 October 25
Year Month Day

Retrieved by Gifford Ship CHAIN Cruise #107

Purpose of Mooring: Muir Seamount to study semi-diurnal tidal motions

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4561	M-122T	CM	2015	
4562	1025	Depth Rec.	2016	
4563	M-129T	CM	2898	No data

COMMENTS ON MOORING:

DATA NUMBER 4561

Instrument No. M-122T

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec
15 samples
at 5.27 sec/sample
VACM accumulated averages
over --- sec

Instrument Depth 2015 m

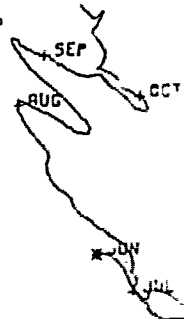
Comments:

0 100.
KILOMETERS

456101800

2015 m

72-11-01 TO 72- X-25



DATA/ 456101800

VARIABLE	EAST COMP	NORTH COMP	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	6.11	9.555	43.635	3.349
STD. ERR.	4.25	3.79	2.59	6.62E-3
VARIANCE	1276.370	1014.822	475.238	3.16E-2
STD. DEV.	35.726	31.856	21.800	5.62E-1
KURTOSIS	2.811	2.709	3.233	3.539
SKEWNESS	1.196	1.166	.811	4.54
MINIMUM	-105.009	-100.844	10.000	3.148
MAXIMUM	131.244	109.507	140.000	3.758

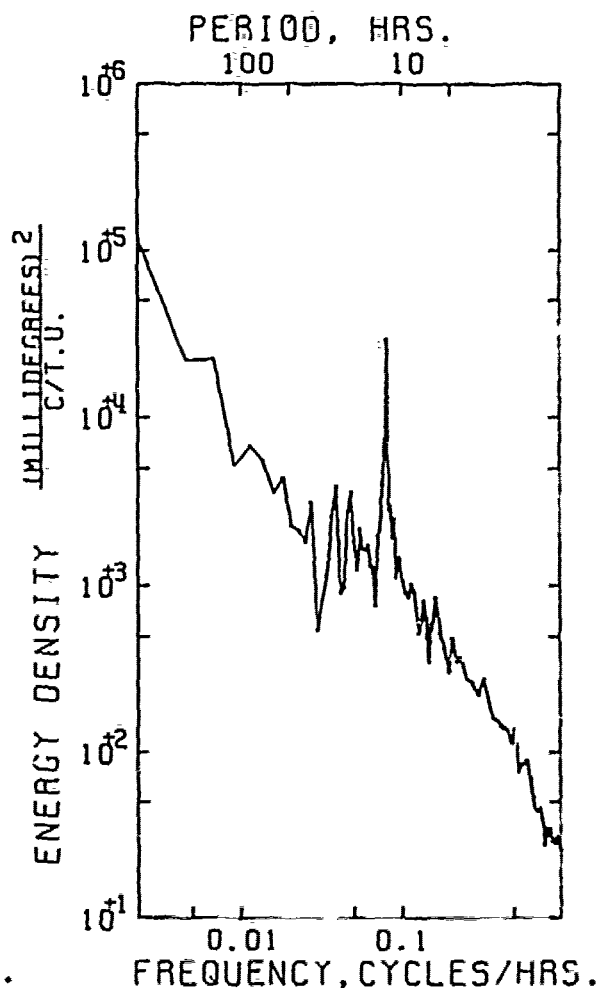
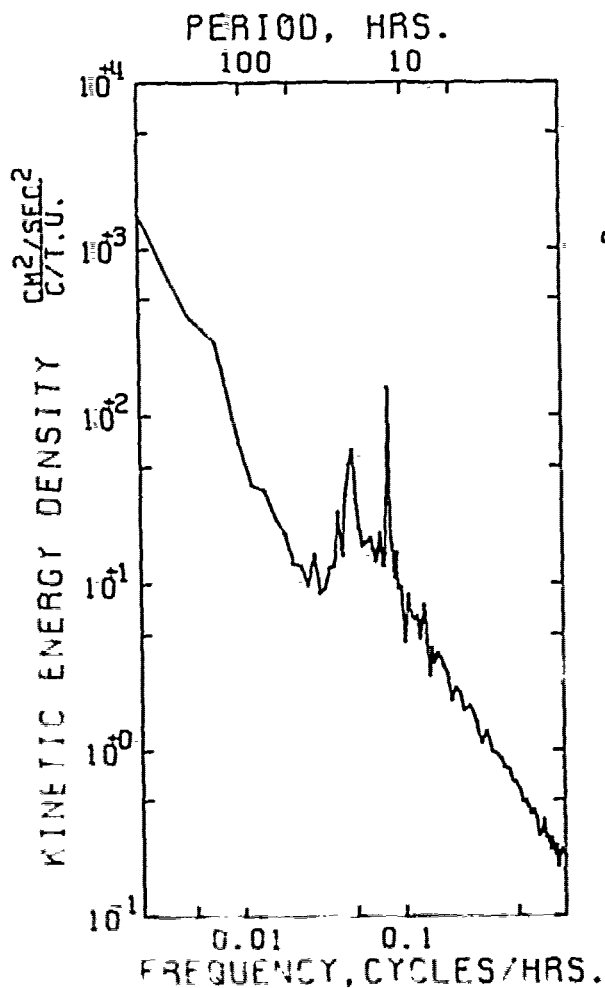
EAST COMP & NORTH COMP

COVARIANCE	606.896
STD. ERR. OF COVARIANCE	14.104
STD. DEV. OF COVARIANCE	1185.649
CORRELATION COEFFICIENT	5.533
VECTOR MEAN	9.575
VECTOR VARIANCE	1145.596
VECTOR STD. DEV.	33.847

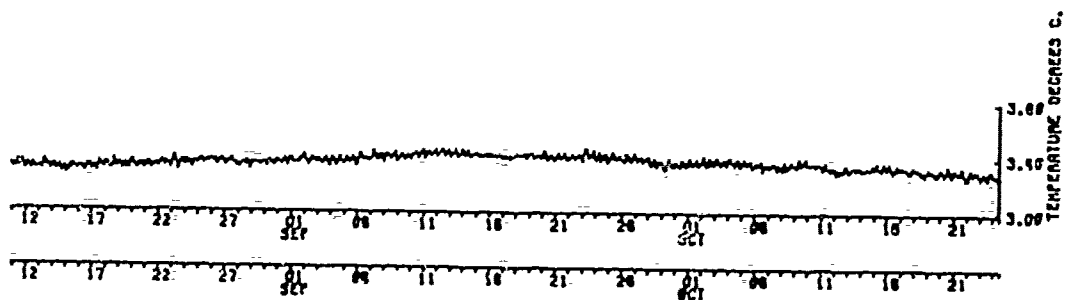
* SAMPLE SIZE * 7067 POINTS
* SPANNING RANGE
* FROM 72- V-31 16.00.34
* TO 72- X-25 21.00.34
* DURATION 147.21 DAYS

AUTO SPECTRUM
456101800 EAST COMP
456101800 NORTH COMP

AUTO SPECTRUM
456101800 TEMPERATURE



2015 METERS
72-V-31 TO 72-X-22
1 PIECES WITH 3456 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



45610



3-E-6

3-E-7

3-E--

DATA NUMBER 4684

Instrument No. M-191

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

23 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 2564 m

Comments:



0. 150.

KILOMETERS

468481800

2584 M

72- IX -05 TO 72- XI -02



DATA/ 468481800

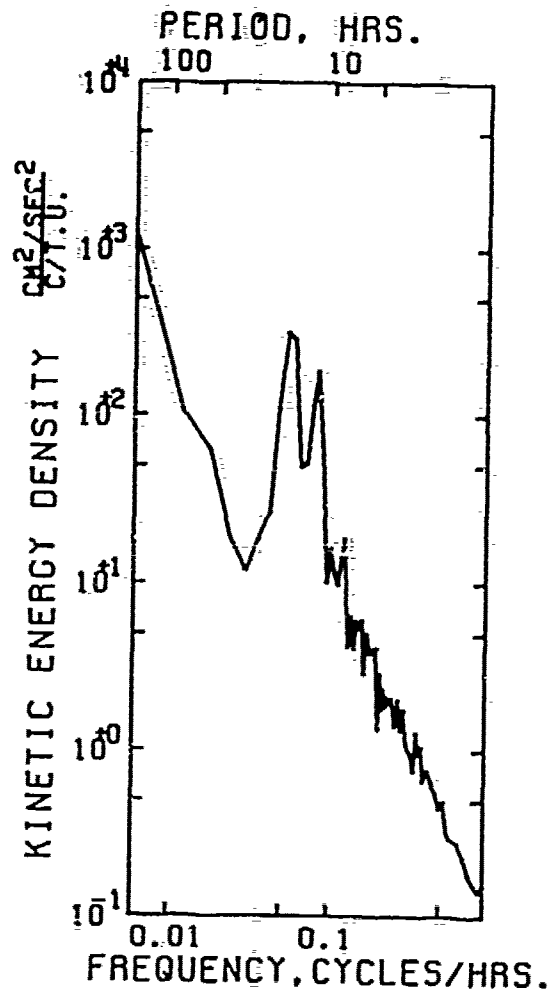
VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-31.080	3.696	63.491
STD. ERR.	.011	.939	.675
VARIANCE	1833.127	2459.278	1270.951
STD. DEV.	42.815	49.597	35.650
KURTOSIS	2.034	2.884	2.547
SKEWNESS	-.860E+1	.128	.479
MINIMUM	-154.388	-147.210	17.347
MAXIMUM	102.262	151.888	192.328

EAST & NORTH

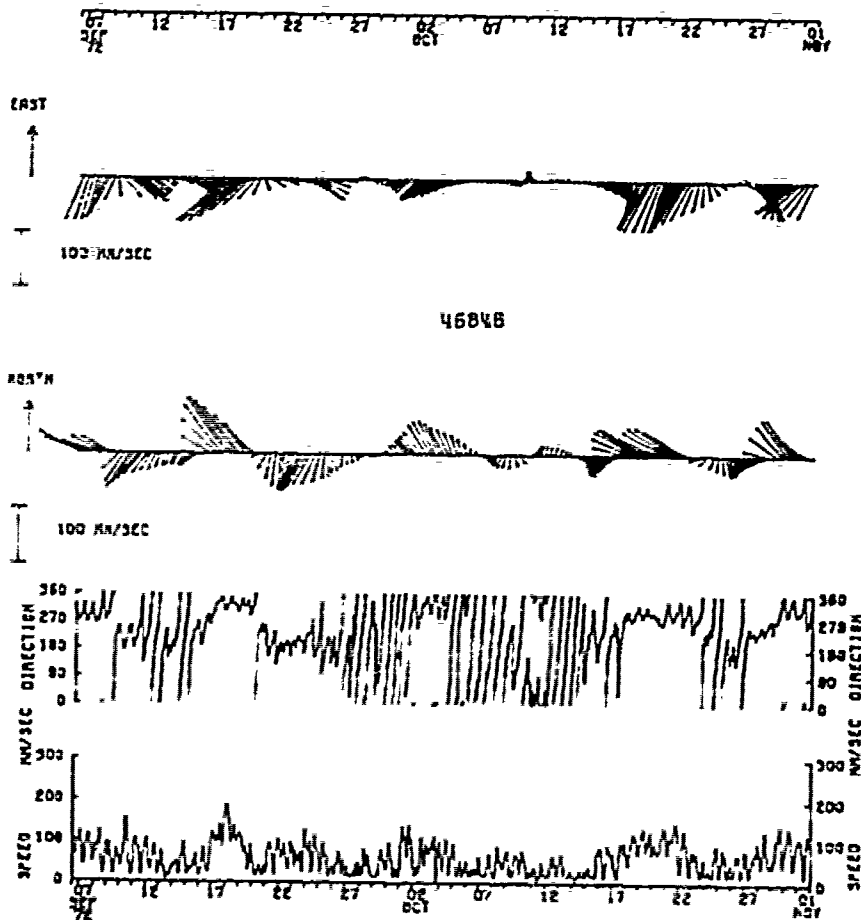
COVARIANCE	-536.305
STD. ERR. OF COVARIANCE	54.324
STD. DEV. OF COVARIANCE	2868.926
CORRELATION COEFFICIENT	-.253
VECTOR MEAN	31.765
VECTOR VARIANCE	2146.502
VECTOR STD. DEV.	46.330

SAMPLE SIZE = 2789 POINTS
SPANNING RANGE
FROM 72- IX -05 03.00.53
TO 72- XI -02 05.00.53
DURATION 58.08 DAYS

AUTO SPECTRUM
4684B1800 EAST COMP
4684B1800 NORTH COMP



2564 METERS
72-IX-05 TO 72-X-31
1 PIECES WITH 1350 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



3-E-12

E-2-14

h

2

STATION 462

3/8" DACRON

23 m

LIGHT
RADIO
GLASS BALL FLOAT
5 m 3/8" CHAIN

VACM — 4621

5 m 3/8" DACRON

DEPTH RECORDER — 4622

ACOUSTIC BEACON

10 m 3/8" DACRON

6 16" GLASS BALLS IN HARD HATS ON 5 m 3/8" CHAIN

VACM — 4623

22 m

VACM — 4624

10 m

ACOUSTIC BEACON

347 m

TEMP/ TEST PKG. — 4625

10 m

6 16" GLASS BALLS IN HARD HATS ON 5 m 3/8" CHAIN

ACOUSTIC RELEASE, TRANSPONDING

20 m 5/8" NYLON

3 m 1" CHAIN

1000 LB CYLINDRICAL ANCHOR

Mooring No. 462

Set 72 July 15 39° 54.7'N 70° 46.4'W
Year Month Day Latitude Longitude

Set by Moller Ship CAPT. BILL IV Cruise --

Retrieved 72 August 05
Year Month Day

Retrieved by Moller Ship CAPT. BILL IV Cruise --

Purpose of Mooring: Internal Wave Experiment

Mooring Type: Bottom

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4621	V-0111	VACM	32	No data
4622	1017	Depth Rec.	38	
4623	V-0112	VACM	59	
4624	V-0113	VACM	84	
4625	V-0134	VACM	460	Temperature Test Package

COMMENTS ON MOORING:

DATA NUMBER 4623

Instrument No. V-0112

Instrument Sampling Scheme
Model 850 data bursts

every --- sec
--- samples
at --- sec/sample

VACM accumulated averages
over 56.25 sec

Instrument Depth 59 m

Comments:



0. 100.
KILOMETERS

4623856.25

59 M

72-VII-15 TO 72-VIII-05



DATA/ 4623856.25

VARIABLE *	EAST	NORTH	SPEED	TEMPERATURE
UNITS *	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN *	2.206E-2	2.462	92.114	12.793
STD. ERR. *	.397	.401	.231	.414E-2
VARIANCE *	5037.403	5145.367	1703.899	.548
STD. DEV. *	70.975	71.731	41.278	.740
KURTOSIS *	2.515	2.631	3.178	4.241
SKEWNESS *	.102E-1	.284	.693	.900
MINIMUM *	-228.562	-234.149	4.000	10.138
MAXIMUM *	205.006	181.145	271.000	14.332

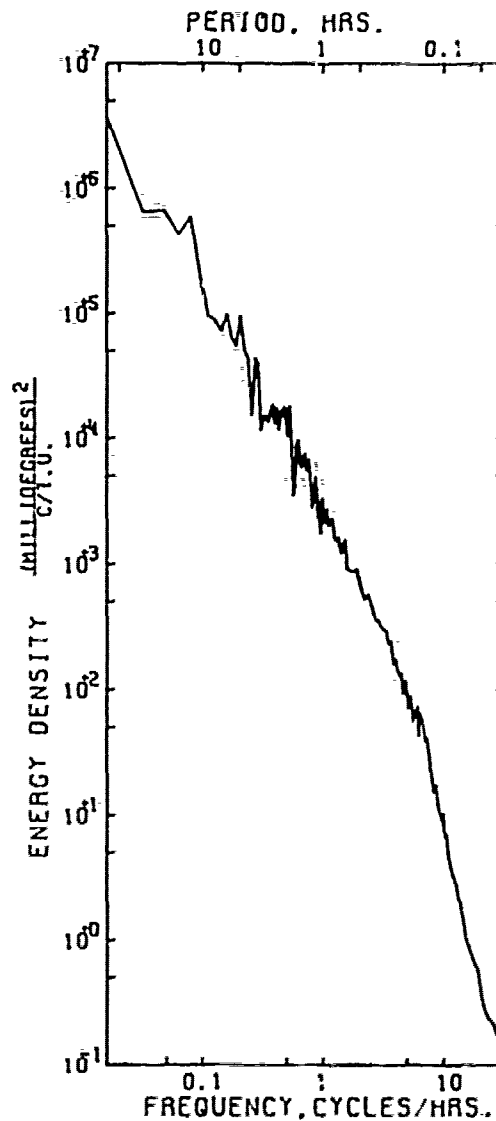
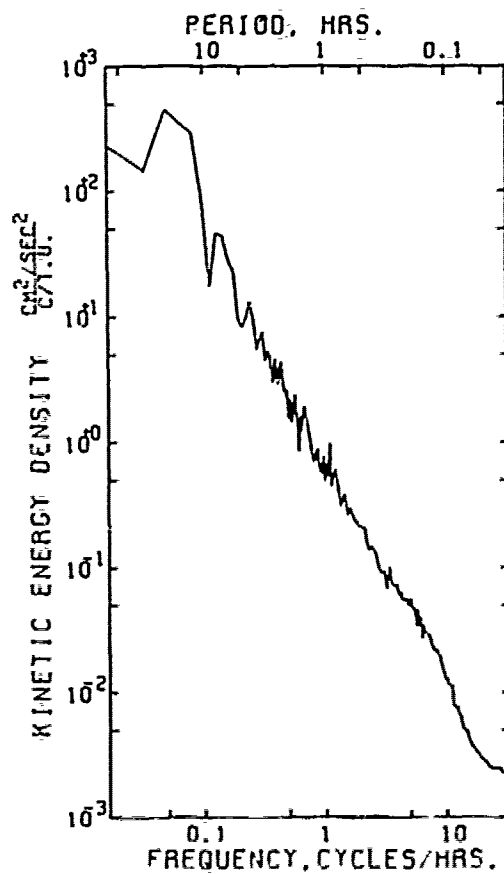
EAST & NORTH

COVARIANCE *	-852.422
STD. ERR. OF COVARIANCE *	28.489
STD. DEV. OF COVARIANCE *	5091.680
CORRELATION COEFFICIENT *	-.167
VECTOR MEAN *	2.462
VECTOR VARIANCE *	5091.385
VECTOR STD. DEV. *	71.354

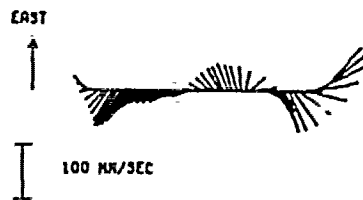
* SAMPLE SIZE = 31942 POINTS
* SPANNING RANGE
* FROM 72-VII-15 15.15.28
* TO 72-VIII-05 10.20.09
* DURATION 20.79 DAYS

AUTO SPECTRUM
4623856.25 EAST
4623856.25 NORTH

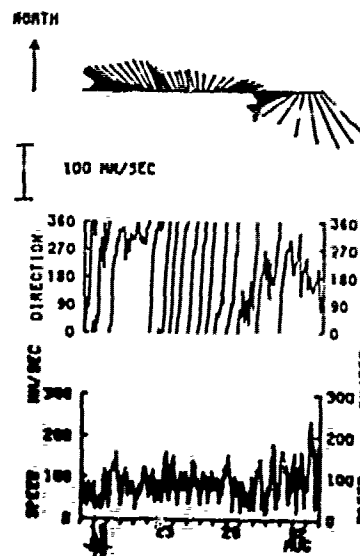
AUTO SPECTRUM
4673856.25 TEMPERATURE



59 METERS
72-VII-15 TO 72-VII-31
3 PIECES WITH 4000 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



4623



3-F-6.

3-7-7

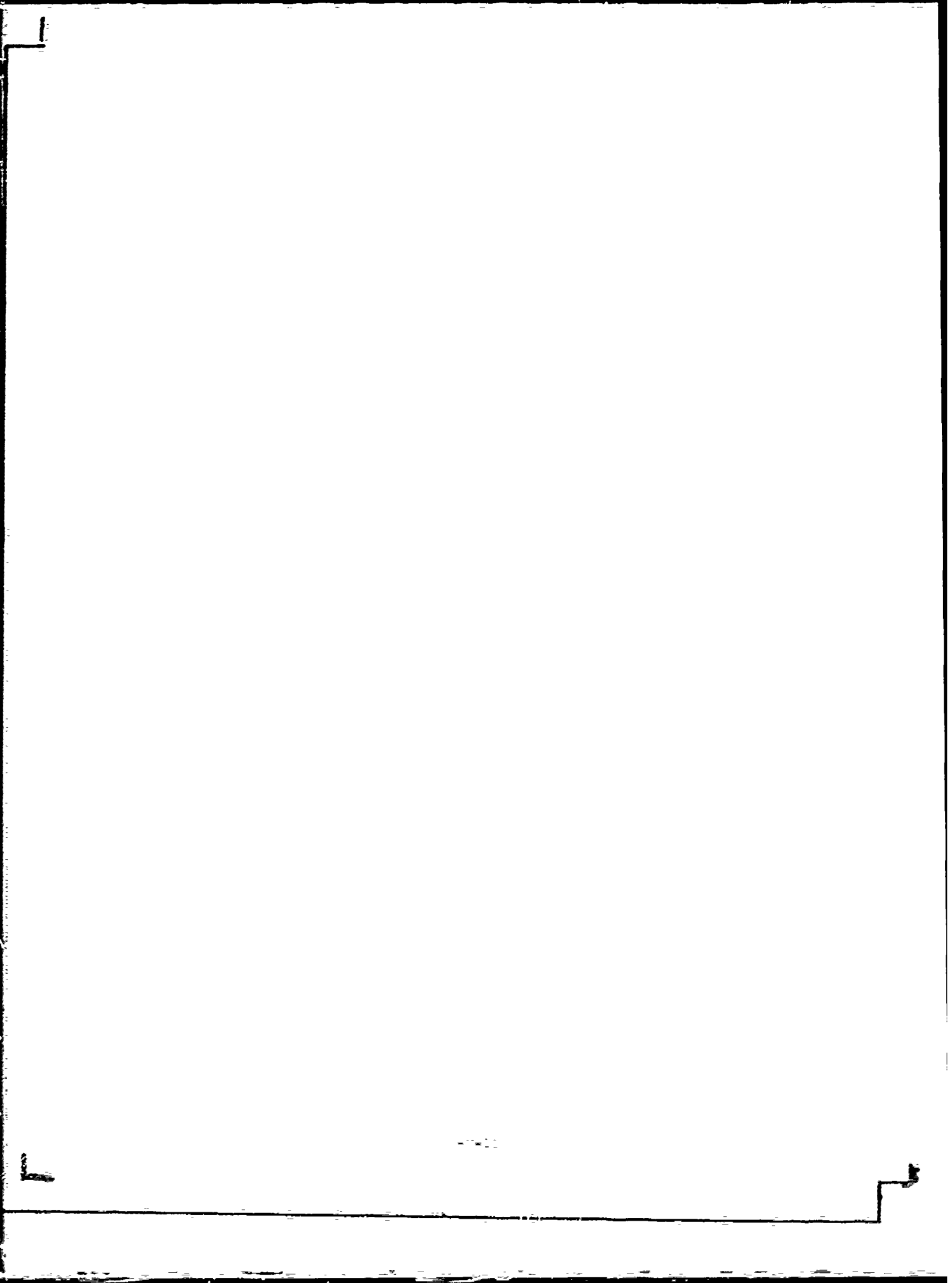
3-8-44

7

6

3-1-

3-F-10



3-7-12

L

5

3-G-2

DATA NUMBER 4624

Instrument No. V-0113

Instrument Sampling Scheme
Model 850 data bursts

every --- sec

--- samples

at --- sec/sample

VACM accumulated averages

over 56.25 sec

Instrument Depth 84 m

Comments:



0. 100.
KILOMETERS

4624A56.25

84 M

72-VII-15 10 72-VIII-05



DATA/ 4624A56.25

VA- IABLE	EAST	NORTH	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	17.353	6.085	85.274	12.954
STD. ERR.	.355	.362	.271	.163E-2
VARIANCE	5021.242	4195.037	1294.674	.345E-1
STD. DEV.	63.413	64.769	35.931	.291
KURTOSIS	2.312	2.549	3.391	2.172
SKEWNESS	.169	-.342	.751	-.402
MINIMUM	-143.286	-217.937	4.000	12.270
MAXIMUM	211.330	166.092	228.000	13.646

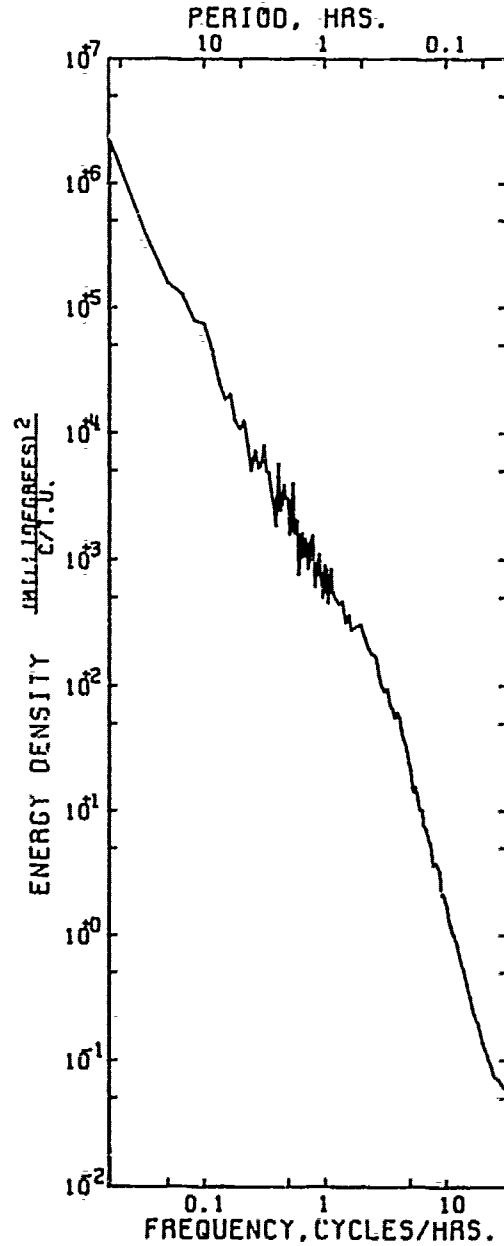
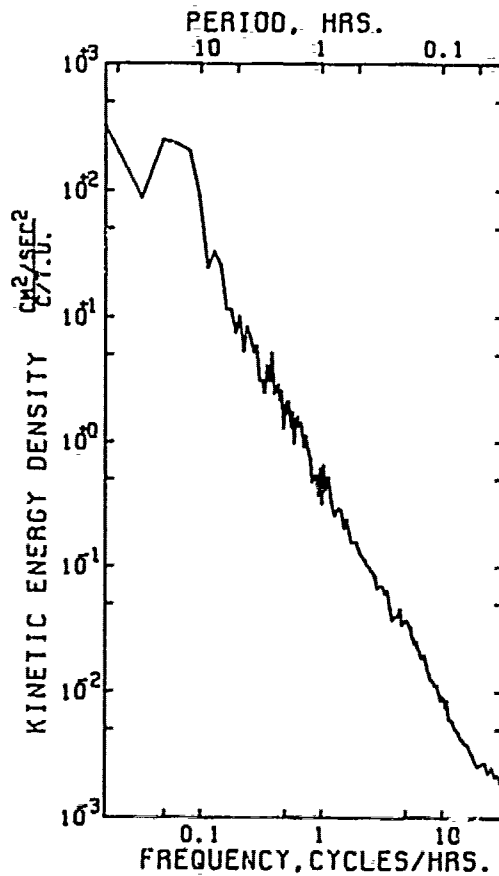
EAST & NORTH

COVARIANCE	-996.055
STD. ERR. OF COVARIANCE	23.022
STD. DEV. OF COVARIANCE	414.598
CORRELATION COEFFICIENT	-.243
VECTOR MEAN	18.369
VECTOR VARIANCE	4108.140
VECTOR STD. DEV.	64.095

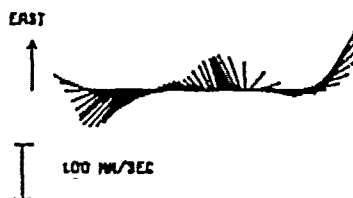
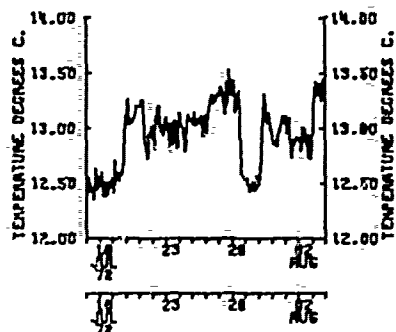
* SAMPLE SIZE * 31942 POINTS
*
* SPANNING RANGE
* FROM 72-VII-15 15.15.23
* TO 72-VIII-05 10.20.09
*
* DURATION 20.79 DAYS

AUTO SPECTRUM
4624A56.25 EAST
4624A56.25 NORTH

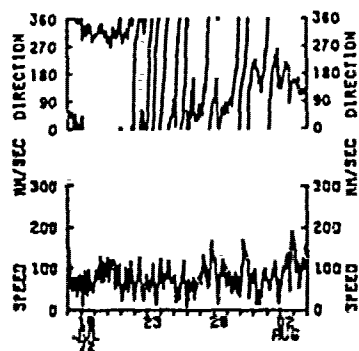
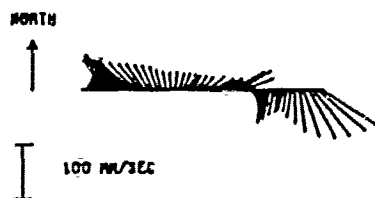
AUTO SPECTRUM
4624A56.25 TEMPERATURE



84 METERS
72-VII-15 TO 72-VII-31
3 PIECES WITH 4000 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



4624



3-2-6

3-G-7

1

L

100-1

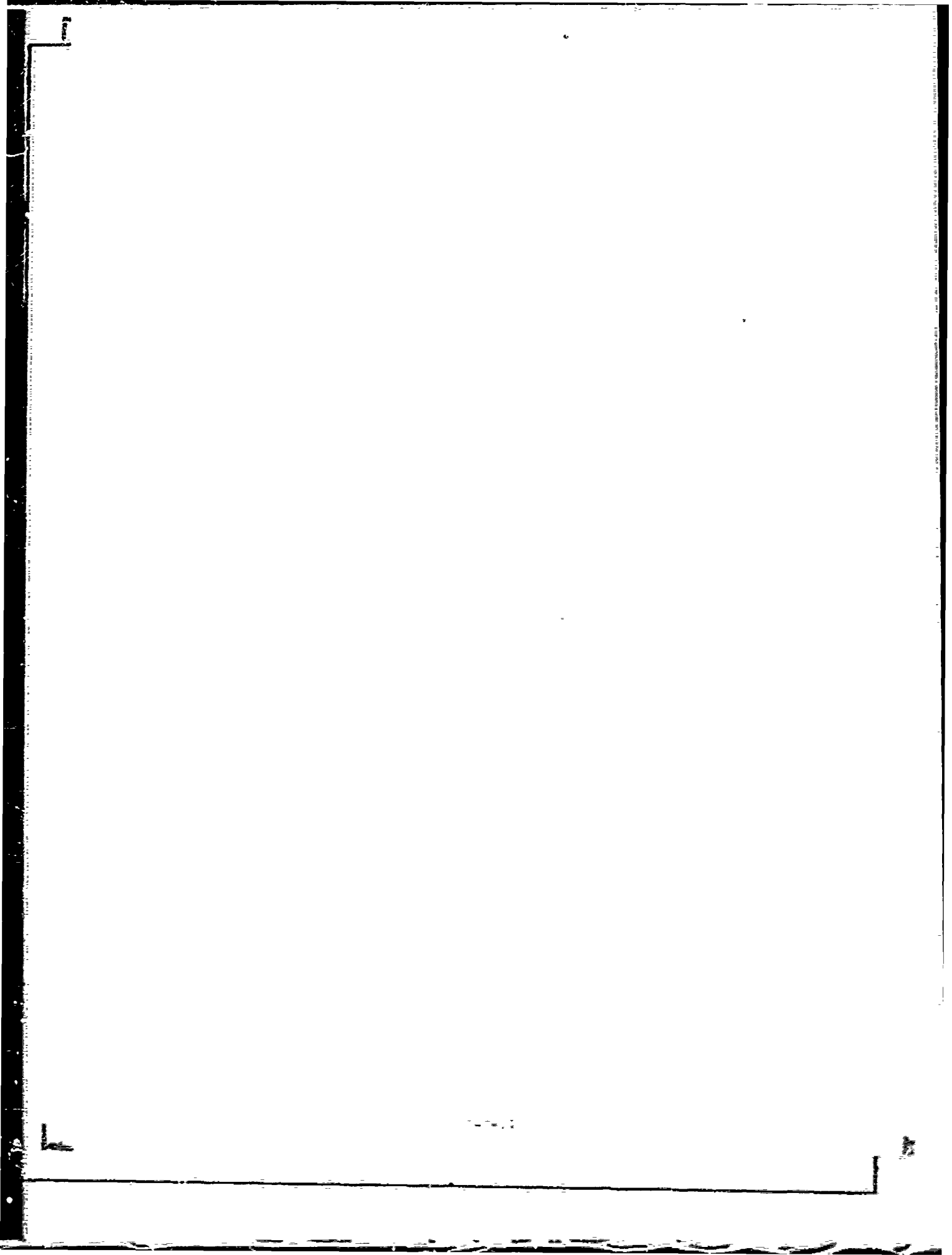
1

1

10-12

L

E



Mooring No. 469

Set 72 October 28 28° 2.9'N 69° 36.4'W
Year Month Day Latitude Longitude

Set by Gifford Ship CHAIN Cruise #107

Retrieved 72 November 03
Year Month Day

Retrieved by Gifford Ship CHAIN Cruise #107

Purpose of Mooring: Mooring Dynamics Experiment for M.I.T.

Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4691	V-0126	VACM	537	
4692	V-0134	Diff. Temp.	539	No data
4693	#1	T/D	542	
4694		White Horse	546	
4695	V-0136	VACM	1057	
4696	V-0133	VACM	1564	
4697		Dir. Incln.	2065	
4698	#2	T/D	2068	
4699	V-0137	VACM	2518	
469,10	#1	Inclinometer	3504	
469,11	#3	T/D	3507	
469,12	V-0139	VACM	3514	
469,13	#2	Inclinometer	4101	
469,14		Tensiometer	5368	
469,15	#4	T/D	5371	

COMMENTS ON MOORING:

DATA NUMBER 4691

Instrument No. V-0126

Instrument Sampling Scheme
Model 850 data bursts

every --- sec

--- samples

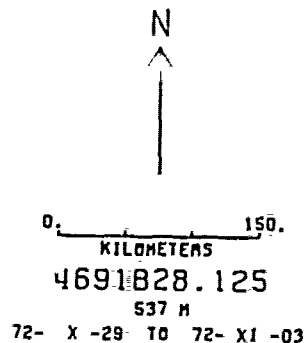
at --- sec/sample

VACM accumulated averages
over 28.125 sec

Instrument Depth 537 m

Comments:

Increase in spectra at high
frequencies is due to digiti-
zation errors from rapid recording
rate.



/NOV
*OCT

DATA/ 4691828.125

VARIABLE *	EAST	NORTH	SPEED	TEMPERATURE
UNITS *	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN *	22.900	48.558	67.529	16.539
STD. ERR. *	.248	.250	.185	.513E-3
VARIANCE *	1205.966	1044.897	571.804	.441E-2
STD. DEV. *	34.727	32.325	23.912	.664E-1
KURTOSIS *	2.455	2.630	2.317	2.683
SKEWNESS *	.378E-1	.489	.238	.332
MINIMUM *	-62.967	-39.848	22.000	16.378
MAXIMUM *	107.275	116.962	123.000	16.750

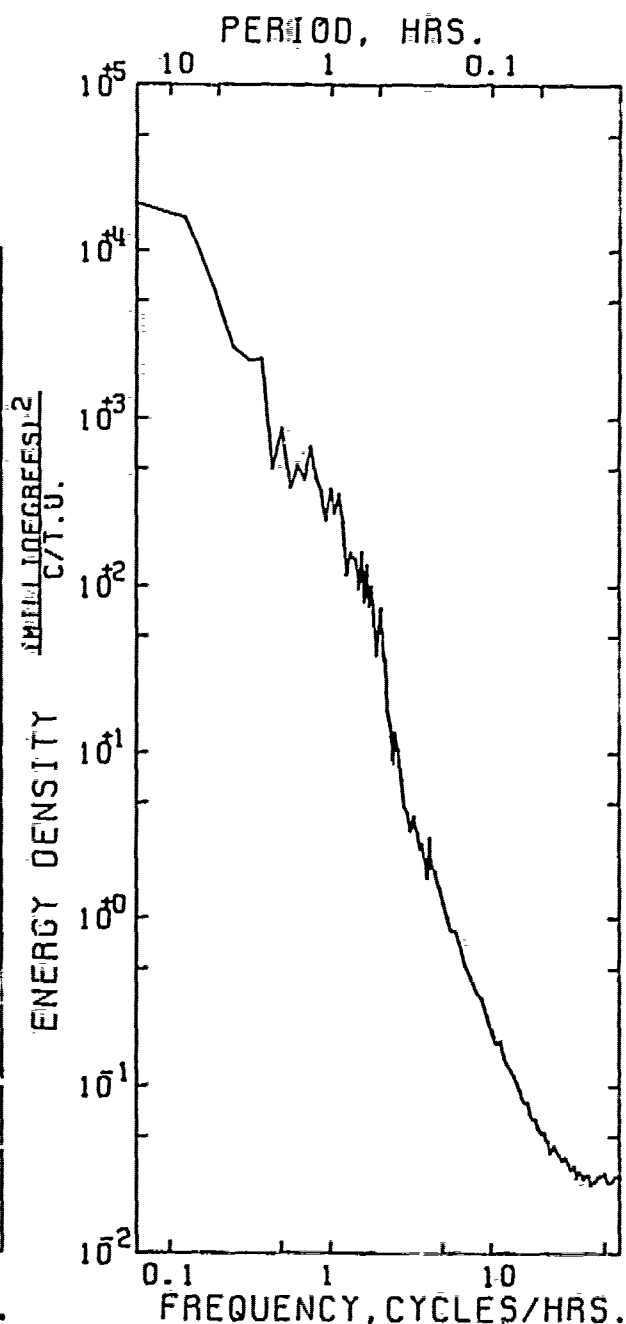
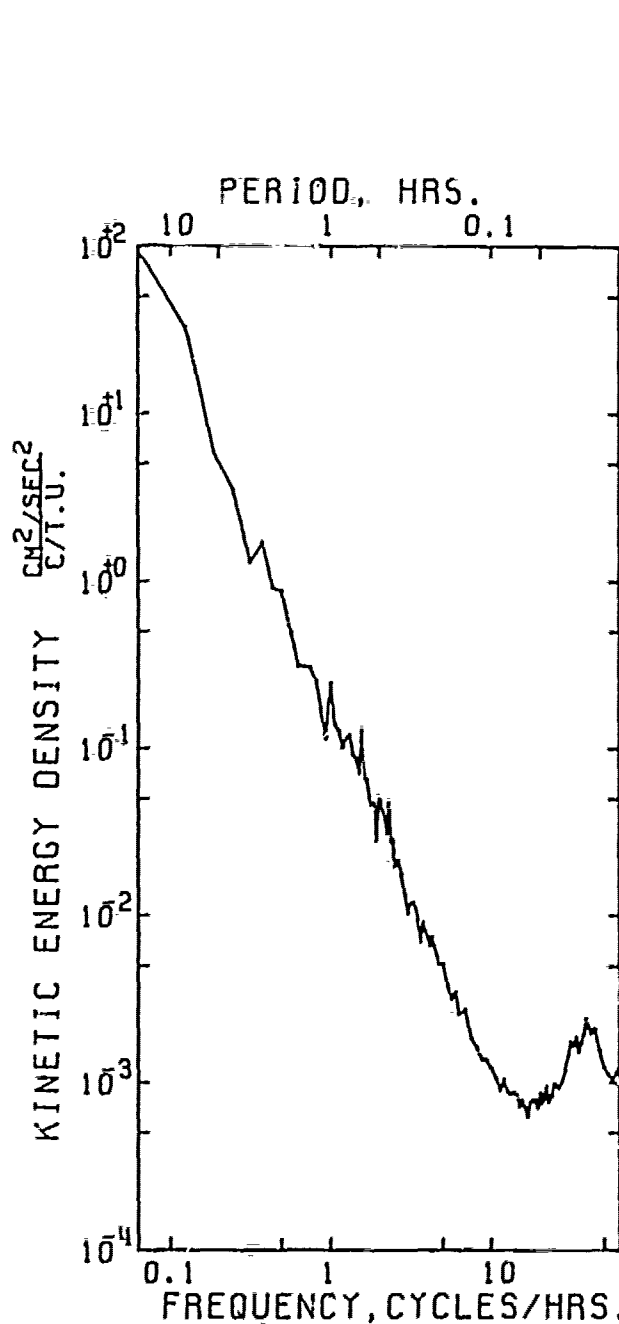
EAST & NORTH

COVARIANCE *	-266.124
STD. ERR. OF COVARIANCE *	14.565
STD. DEV. OF COVARIANCE *	1886.090
CORRELATION COEFFICIENT *	.237
VECTOR MEAN *	53.687
VECTOR VARIANCE *	1125.431
VECTOR STD. DEV. *	33.547

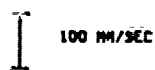
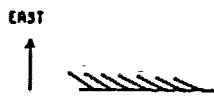
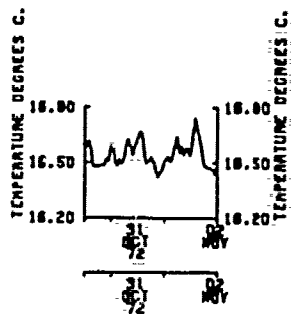
* SAMPLE SIZE * 16768 POINTS
* SPANNING RANGE
* FROM 72- X -29 00.14.17
* TO 72- XI -03 11.13.49
* DURATION 5.46 DAYS

AUTO SPECTRUM
4691828.125 EAST
4691828.125 NORTH

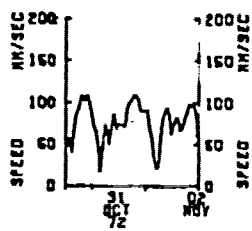
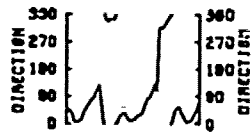
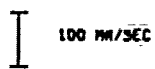
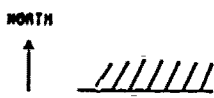
AUTO SPECTRUM
4691828.125 TEMPERATURE

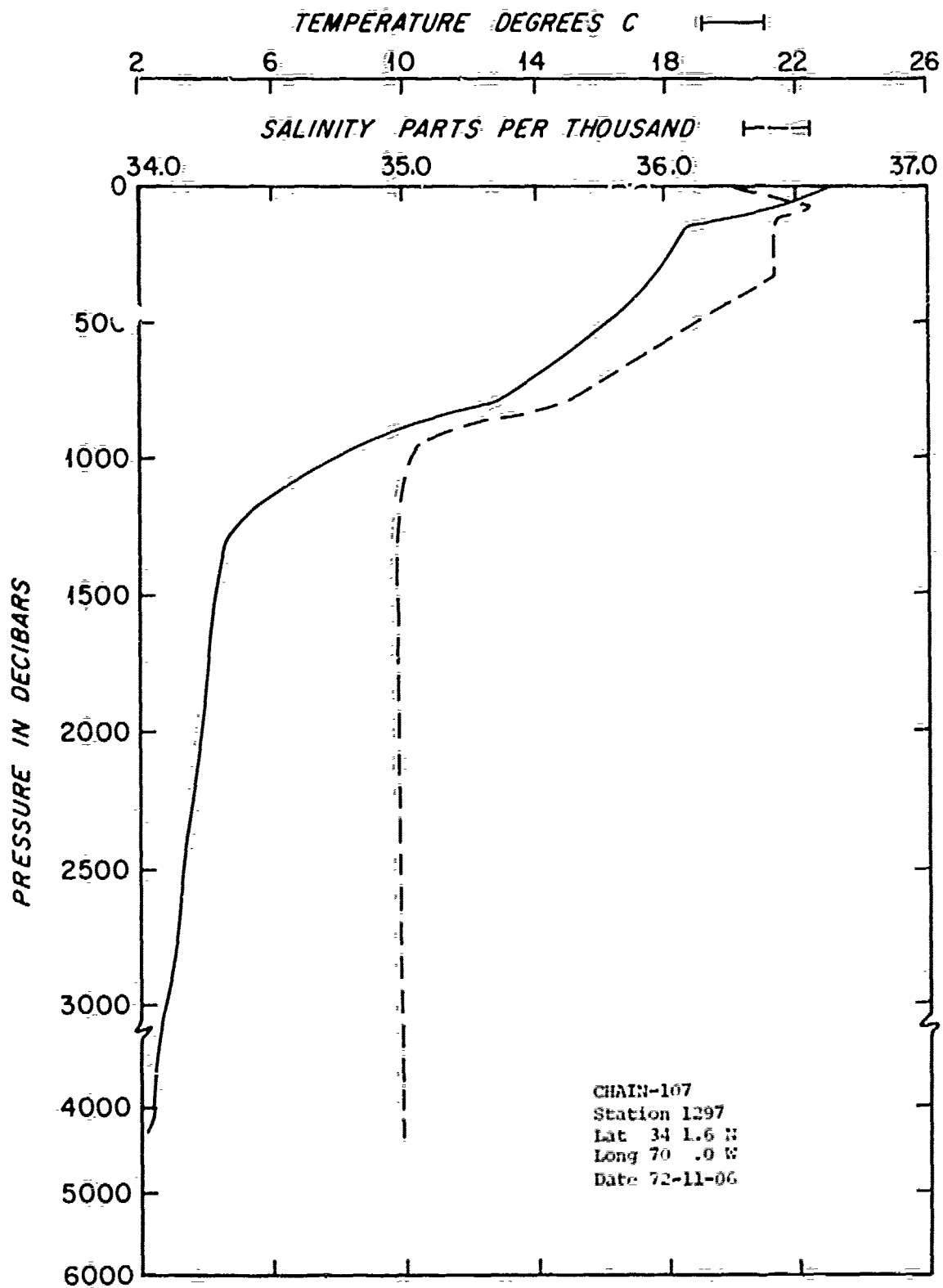


537 METERS
72-X-29 TO 72-XI-03
4 PIECES WITH 2048 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



46918

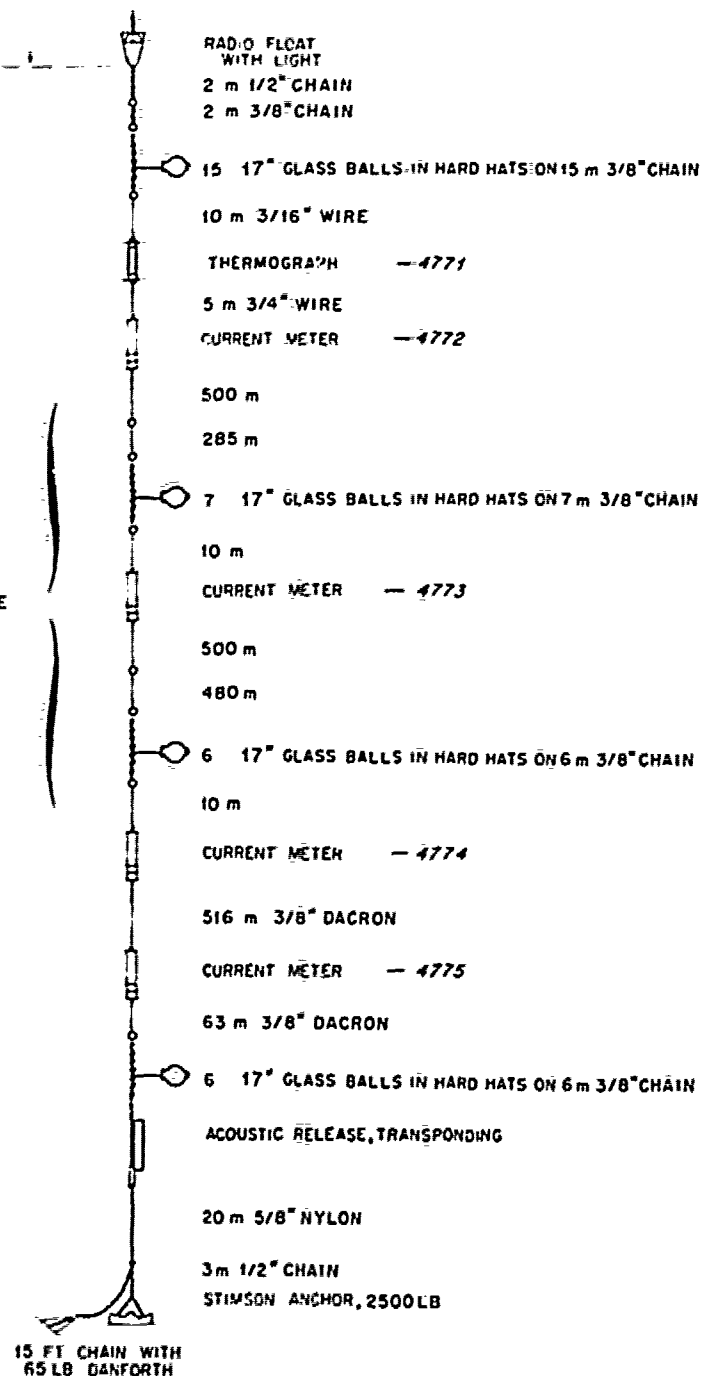




STATION 477

164 m

3/16" WIRE



Mooring No. 477

Set 72 December 08 39° 09.9'N 70° 00.6'W
Year Month Day Latitude Longitude

Set by Tupper Ship CHAIN Cruise #109

Retrieved 73 March 26
Year Month Day

Retrieved by Gifford-Heinmiller Ship CHAIN Cruise #112

Purpose of Mooring: Site D routine measurements

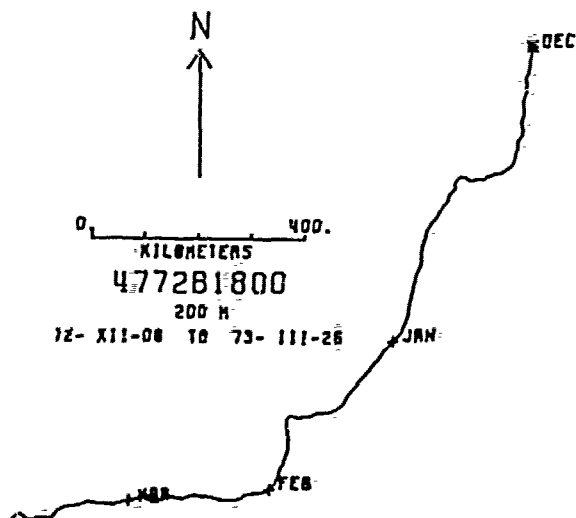
Mooring Type: Intermediate

<u>Data Number</u>	<u>Instrument Number</u>	<u>Type</u>	<u>Depth Meters</u>	<u>Comments</u>
4771	#4	Thermograph	194	
4772	M-274	CM	200	
4773	M-273	CM	1003	
4774	M-240	CM	2002	
4775	M-265	CM	2552	No data

COMMENTS ON MOORING: Mooring launched by faking box.

DATA NUMBER 4772
 Instrument No. M-274
 Instrument Sampling Scheme
 Model 850 data bursts
 every 1800 sec
15 samples
 at 5.27 sec/sample
 VACM accumulated averages
 over --- sec
 Instrument Depth 200 m

Comments:



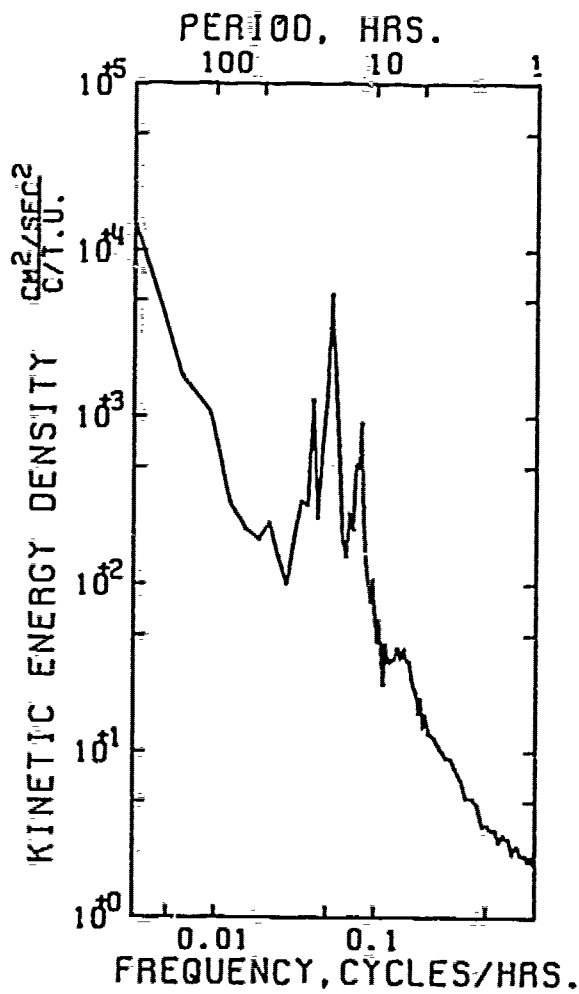
DATA/ 477281800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-105.566	-91.175	193.004
STD. ERR.	1.266	2.164	1.586
VARIANCE	8295.166	24221.184	14761.747
STD. DEV.	91.078	155.532	121.251
KURTOSIS	3.243	3.962	4.570
SKEWNESS	-.990E-1	-.1014	1.329
MINIMUM	-202.847	-642.500	7.082
MAXIMUM	257.976	256.112	647.616

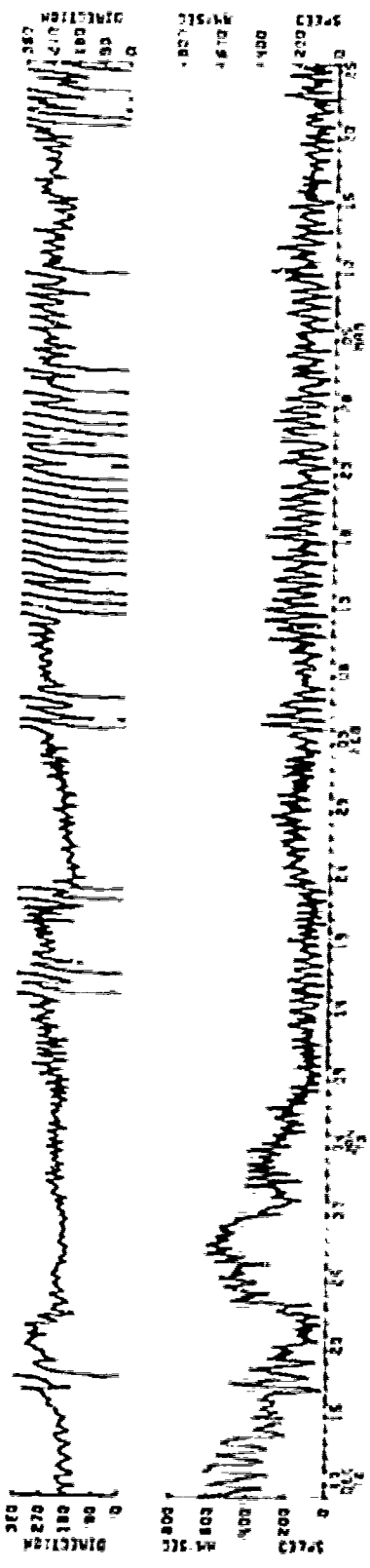
EAST & NORTH

COVARIANCE	784.721	SAMPLE SIZE	5173 POINTS
STD. ERR. OF COVARIANCE	359.091	SPANNING RANGE	
STD. DEV. OF COVARIANCE	2587.074	FROM	72- XII-08 23.30.37
CORRELATION COEFFICIENT	-.55E-1	TO	73- III-26 17.30.37
VECTOR MEAN	139.413	DURATION	107.75 DAYS
VECTOR VARIANCE	16258.175		
VECTOR STD. DEV.	127.508		

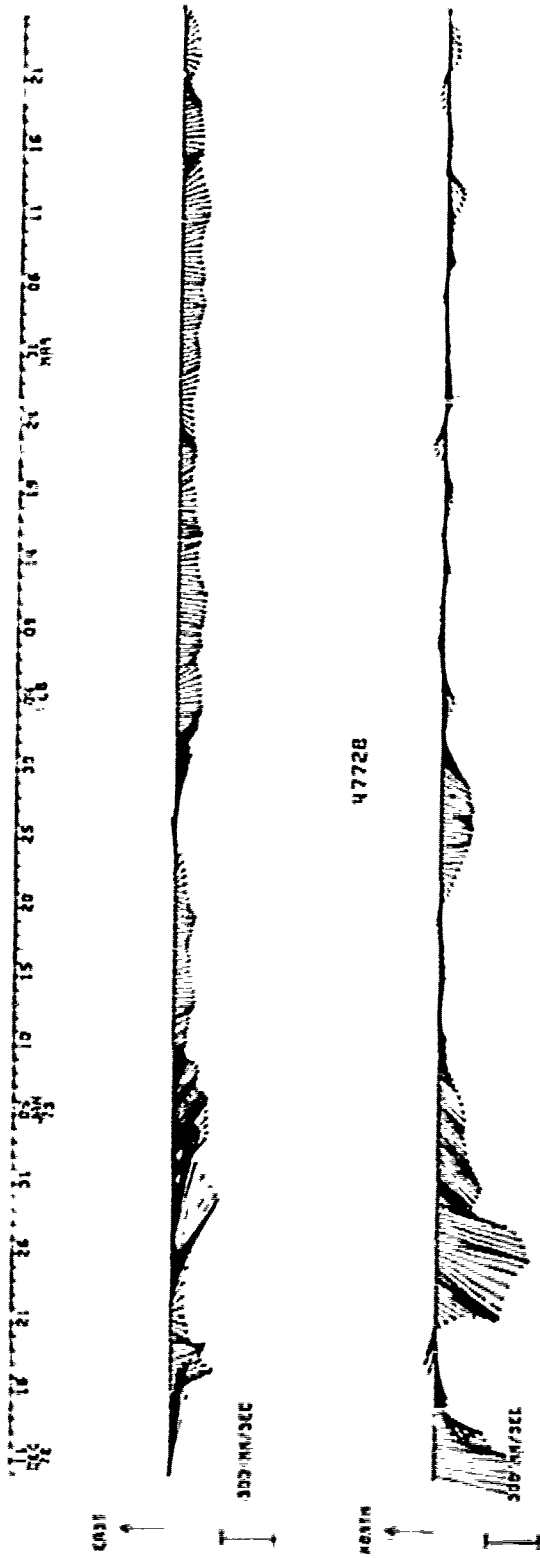
AUTO SPECTRUM
477281800 EAST COMP
477281800 NORTH COMP

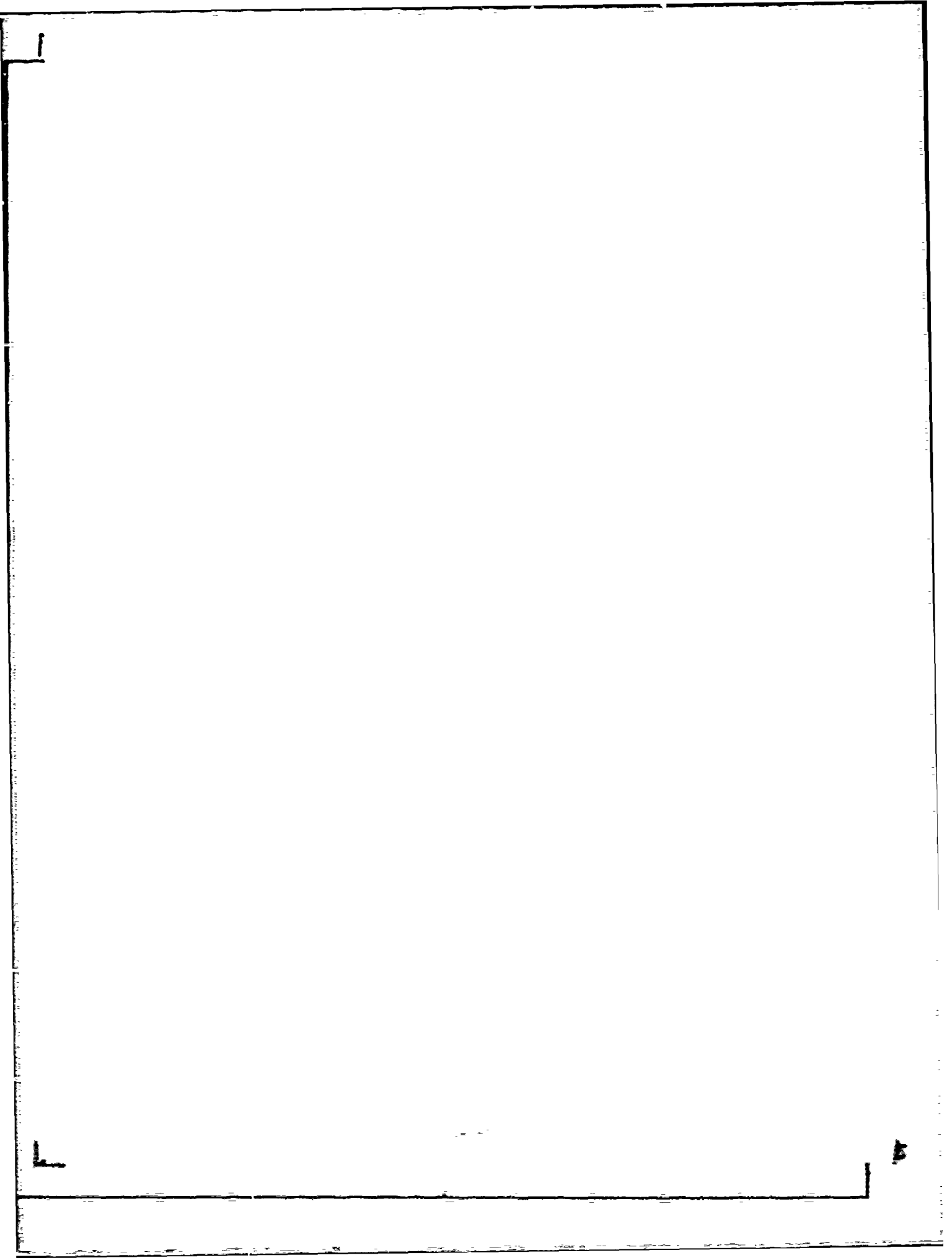


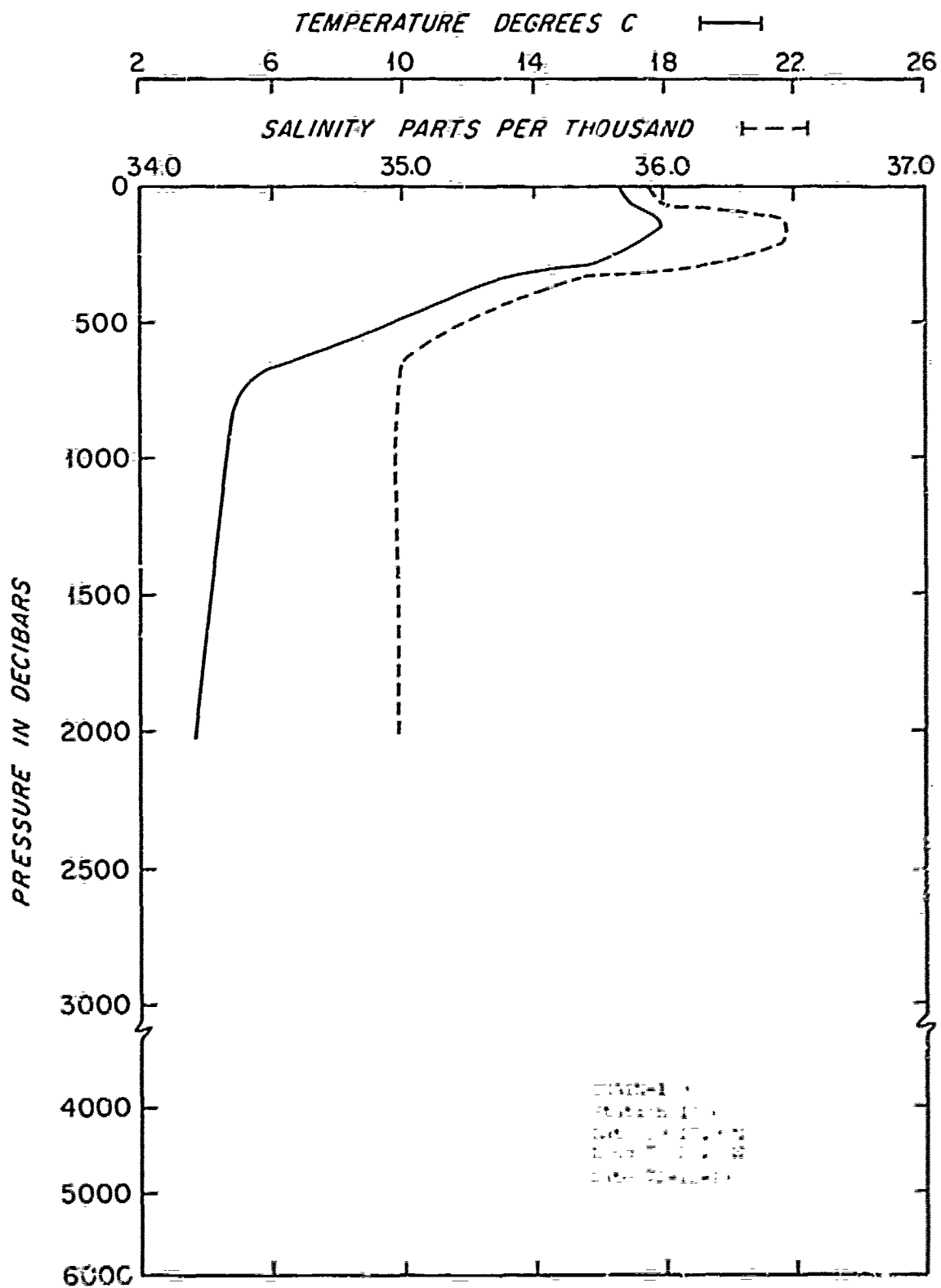
200 METERS
72-XII-08 TO 73-III-25
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



47728







4-R-1

4-14-1

DATA NUMBER 4695

Instrument No. V-0136

Instrument Sampling Scheme
Model 850 data bursts

every --- sec
--- samples
at --- sec/sample

VACM accumulated averages
over 14.0625 sec

Instrument Depth 1057 m

Comments:

0. 150.
KILOMETERS
4695014.0625
1057 M
72- X -29 10 72- X1 -03

1404
X007

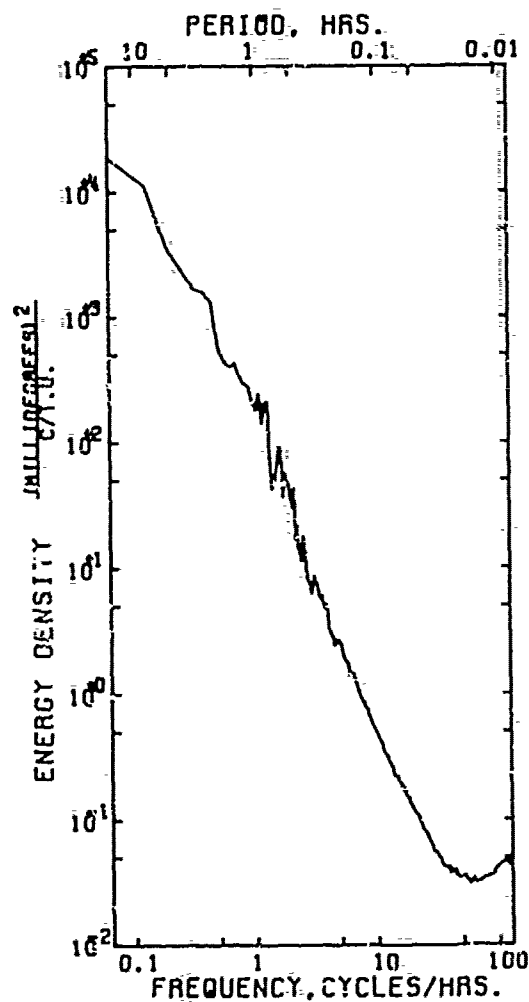
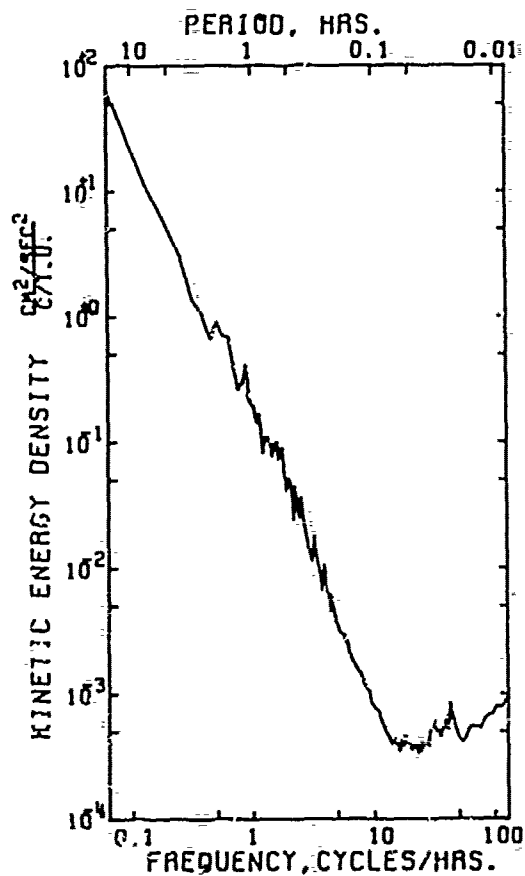
DATA/ 4695014.0625

VARIABLE	EAST	NORTH	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	20.981	45.724	59.496	6.225
STD. ERR.	.103	.155	.143	.449E-3
VARIANCE	890.419	802.805	685.108	.675E-2
STD. DEV.	29.838	28.334	26.175	.822E-1
KURTOSIS	2.490	2.327	1.824	983.450
SKEWNESS	.329	.142	.287	-12.800
MINIMUM	-42.003	-29.591	23.000	.000
MAXIMUM	105.258	115.225	124.000	6.445

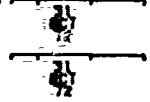
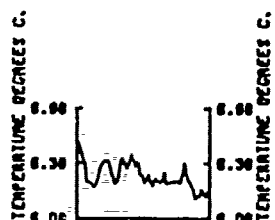
EAST & NORTH		*****	
COVARIANCE		SAMPLE SIZE = 33536 POINTS	
STD. ERR. OF COVARIANCE	38.532	SPANING RANGE	
STD. DEV. OF COVARIANCE	8.939	FROM 72- X -29 00:59:10	
CORRELATION COEFFICIENT	1637.024	TO 72- X1 -03 11:58:56	
VECTOR MEAN	.456E-1	DURATION 5:46 DAYS	
VECTOR VARIANCE	50.308		
VECTOR STD. DEV.	846.562		
	29.096		

AUTO SPECTRUM
4695014.0625 EAST
4695014.0625 NORTH

AUTO SPECTRUM
4695014.0625 TEMPERATURE



1057 METERS
72-X-29 TO 72-X1-03
4 PIECES WITH 4000 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



EAST



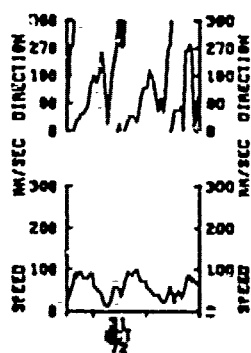
100 MW/SEC

46950

NORTH



100 MW/SEC



DATA NUMBER 4774

Instrument No. M-240

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 2002 m

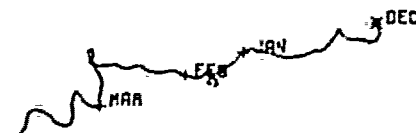
Comments:

N
↑
0. 150.
KILOMETERS

4774A1800

2002 M

72- XII-08 TO 73- III-26



DATA/ 4774A1800

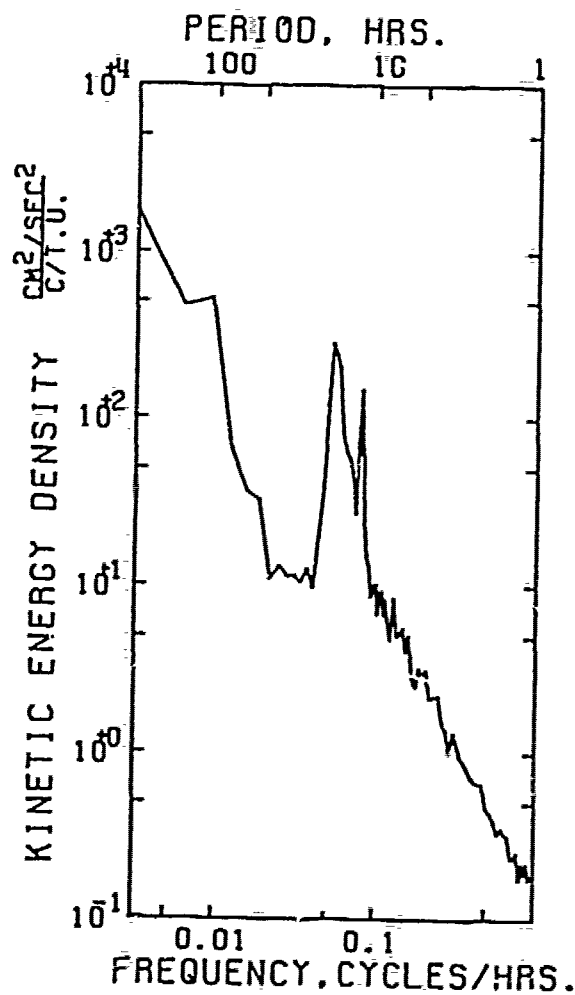
```
.....
VARIABLE *      EAST      NORTH      SPEED
UNITS    *      MM/SEC    MM/SEC    MM/SEC
.....
MEAN      *      -29.236    -50.662    55.667
STD. ERR. *           .805        .575        .670
VARIANCE  *      1890.791    1712.939    1454.692
STD. DEV. *       43.783     41.388     38.133
KURTOSIS  *       4.131      3.681      4.074
SKEWNESS  *       -0.676     -0.319     -1.050
MINIMUM   *      -211.896    -183.585    15.275
MAXIMUM   *       91.160     153.157    221.054
```

.....
EAST & NORTH

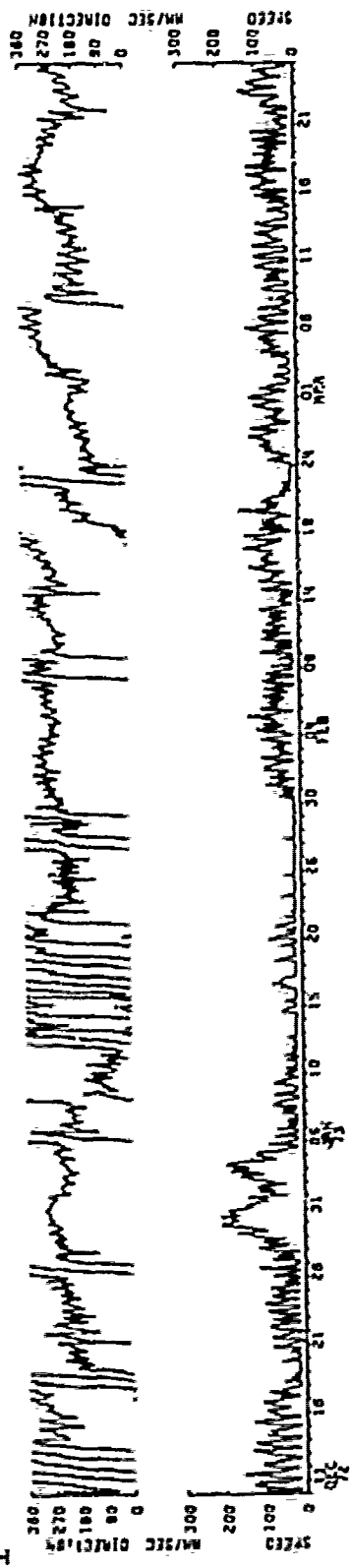
```
.....
COVARIANCE *      -303.030
STD. ERR. OF COVARIANCE *      36.563
STD. DEV. OF COVARIANCE *     2629.776
CORRELATION COEFFICIENT *       .109
VECTOR MEAN *      30.808
VECTOR VARIANCE *     1801.865
VECTOR STD. DEV. *      42.448
```

```
.....
SAMPLE SIZE * 5173 POINTS
SPANNING RANGE
FROM 72- XII-08 23.00.37
TO 73- III-26 17.00.37
DURATION 107.75 DAYS
```

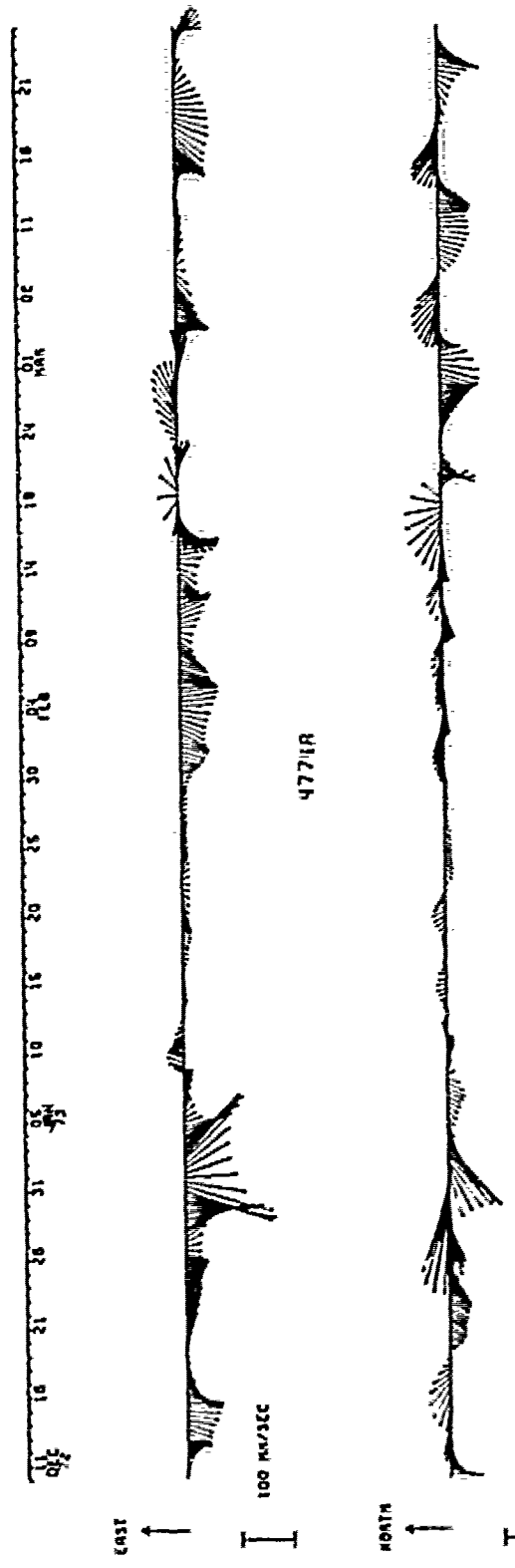
AUTO SPECTRUM
4774A1800 EAST COMP
4774A1800 NORTH COMP

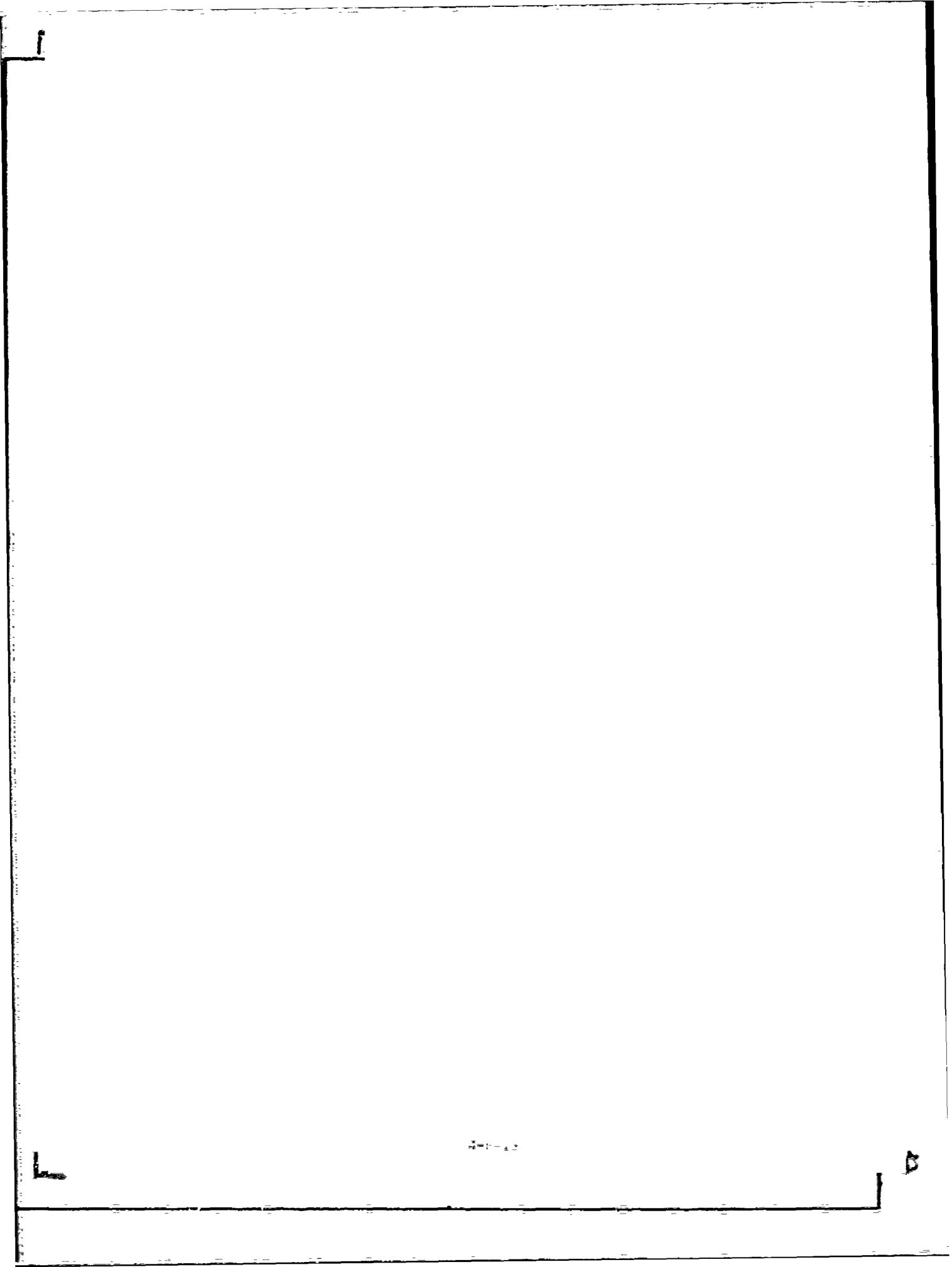


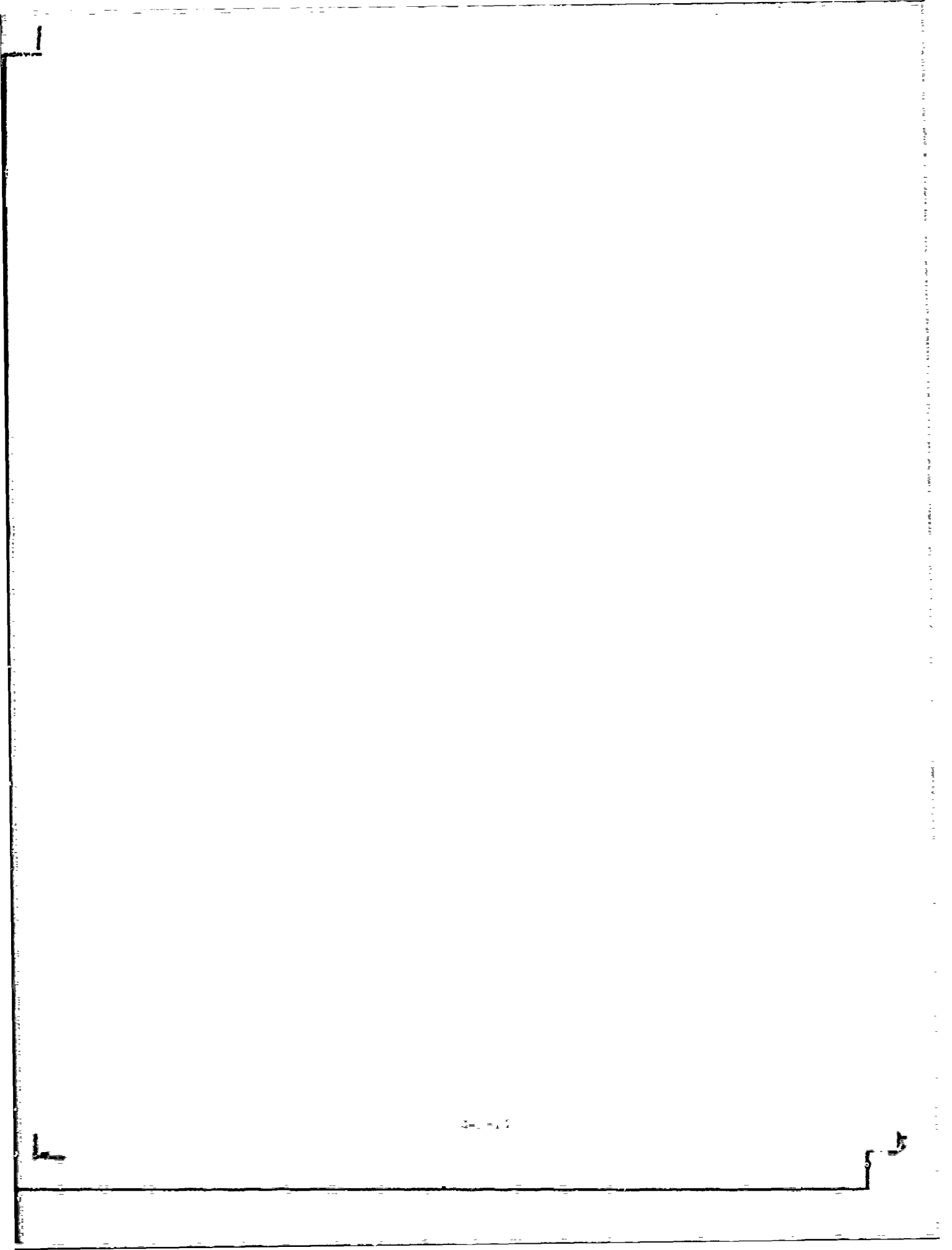
2002 METERS
72-X11-08 TO 73-111-25
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



4771R







4-C-1

4-C-2

DATA NUMBER 4696

Instrument No. V-0133

Instrument Sampling Scheme

Model 850 data bursts

every --- sec

--- samples

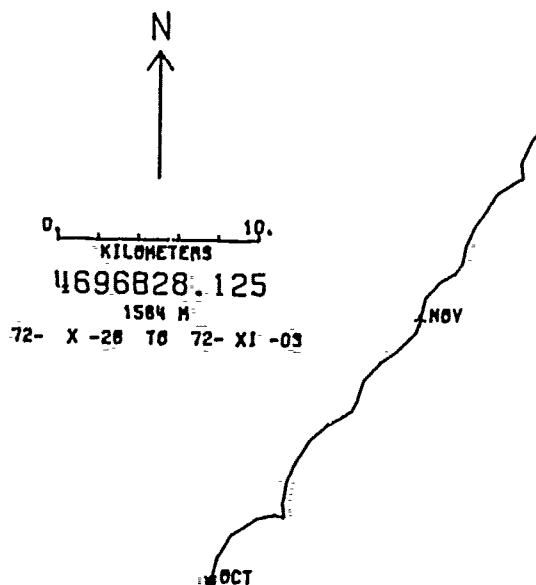
at --- sec/sample

VACM accumulated averages

over 28.125 sec

Instrument Depth 1564 m

Comments:



DATA/ 4696828.125

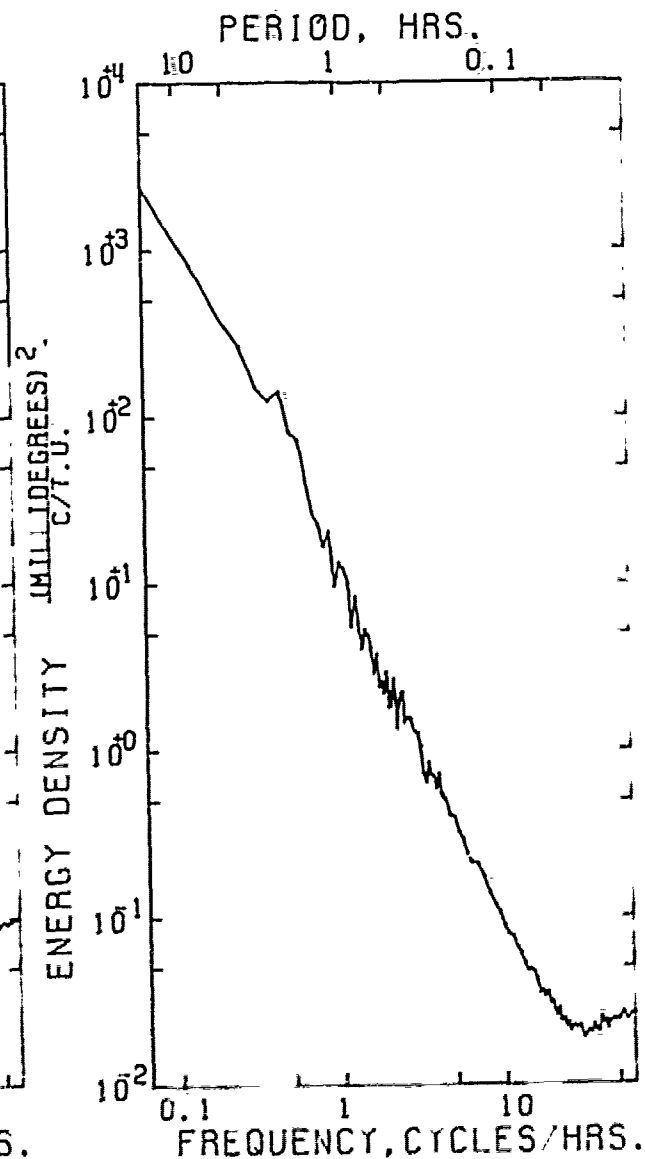
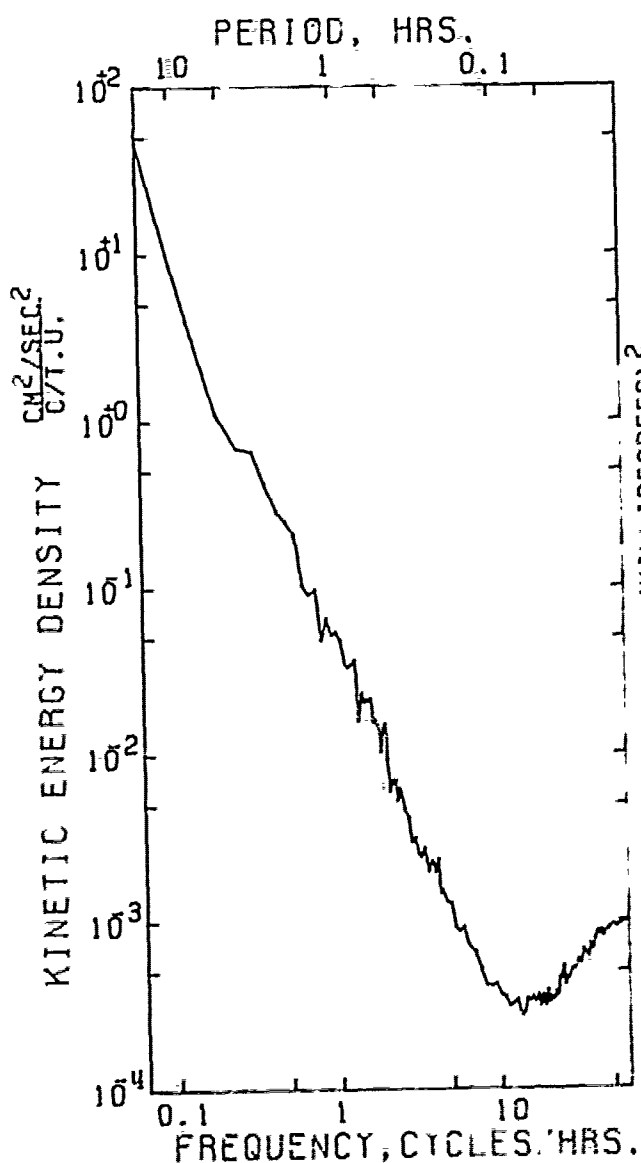
VARIABLE	EAST	NORTH	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	34.378	47.989	63.860	4.217
STD. ERR.	.170	.170	.150	.233E-3
VARIANCE	459.513	487.044	380.849	.919E-3
STD. DEV.	22.125	22.069	19.517	.303E-1
KURTOSIS	3.071	2.627	2.457	5.481
SKEWNESS	.234	-.405	-.325E+1	1.237
MINIMUM	-20.831	-19.053	22.000	4.154
MAXIMUM	106.166	94.775	118.000	4.968

EAST & NORTH

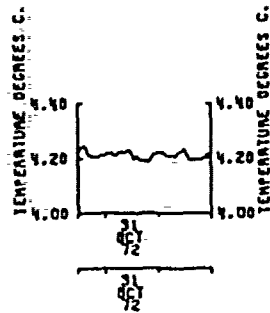
COVARIANCE	44.121	SAMPLE SIZE = 16896 POINTS
STD. ERR. OF COVARIANCE	9.912	
STD. DEV. OF COVARIANCE	1288.414	SPANNING RANGE
CORRELATION COEFFICIENT	-.904E+1	FROM 72- X -28 23.59.17
VECTOR MEAN	59.044	TO 72- XI -03 11.58.49
VECTOR VARIANCE	488.279	
VECTOR STD. DEV.	22.097	DURATION 5.50 DAYS

AUTO SPECTRUM
4696828.125 EAST
4696828.125 NORTH

AUTO SPECTRUM
4696828.125 TEMPERATURE



1564 METERS
72-X-28 TO 72-X1-03
3 PIECES WITH 2048 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



EAST



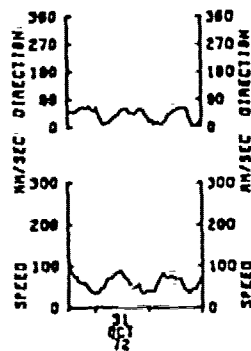
100 MM/SEC

46968

NORTH



100 MM/SEC

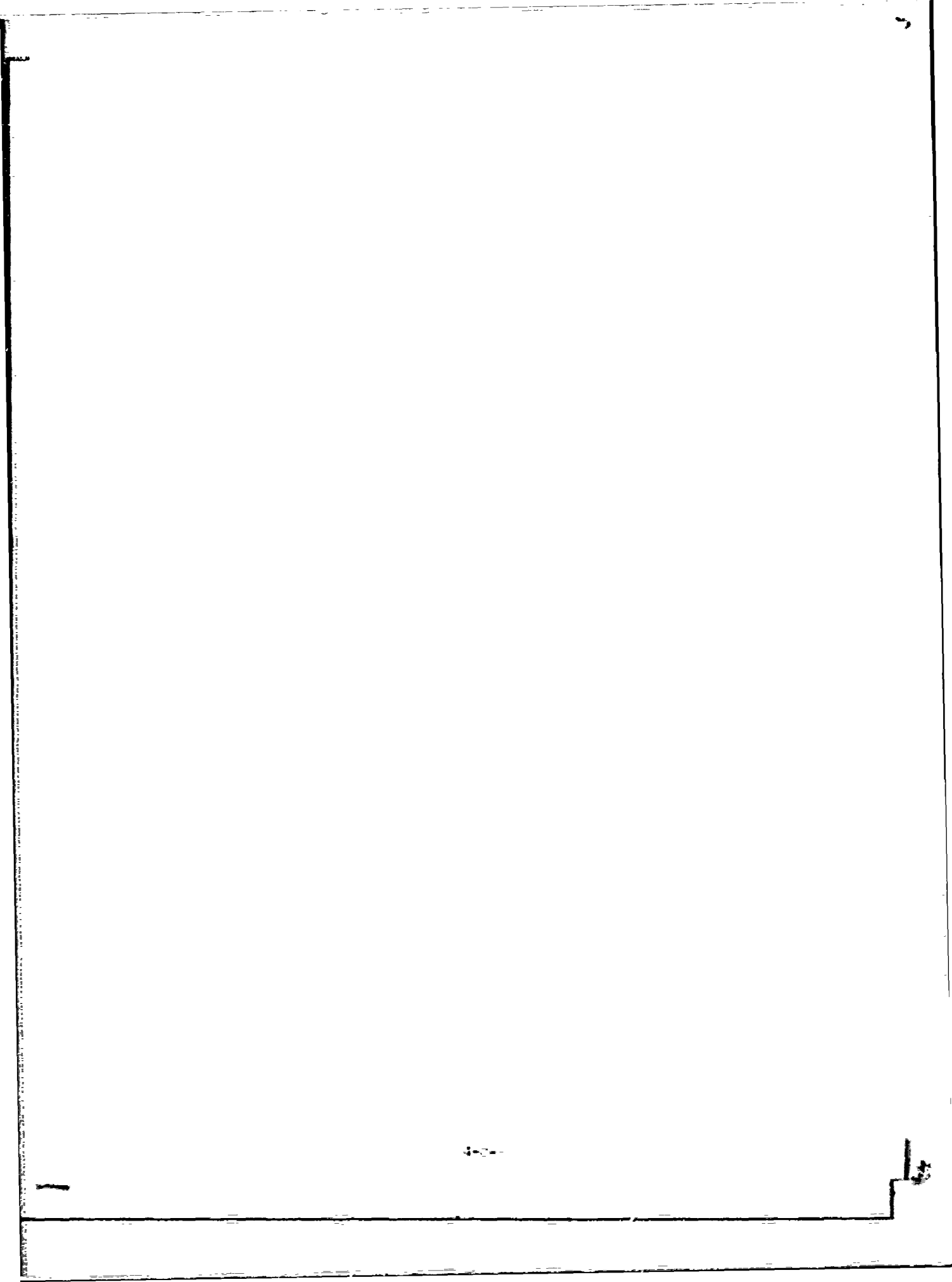


4-C-5

1-1-1

1-1-1

4-2-7



DATA NUMBER 4775

Instrument No. N-265

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

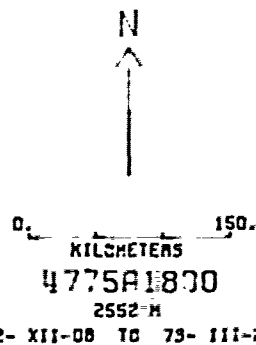
at 5.27 sec/sample

VACM accumulated averages

over --- sec

Instrument Depth 2552 m

Comments:



DATA/ 4775A1800

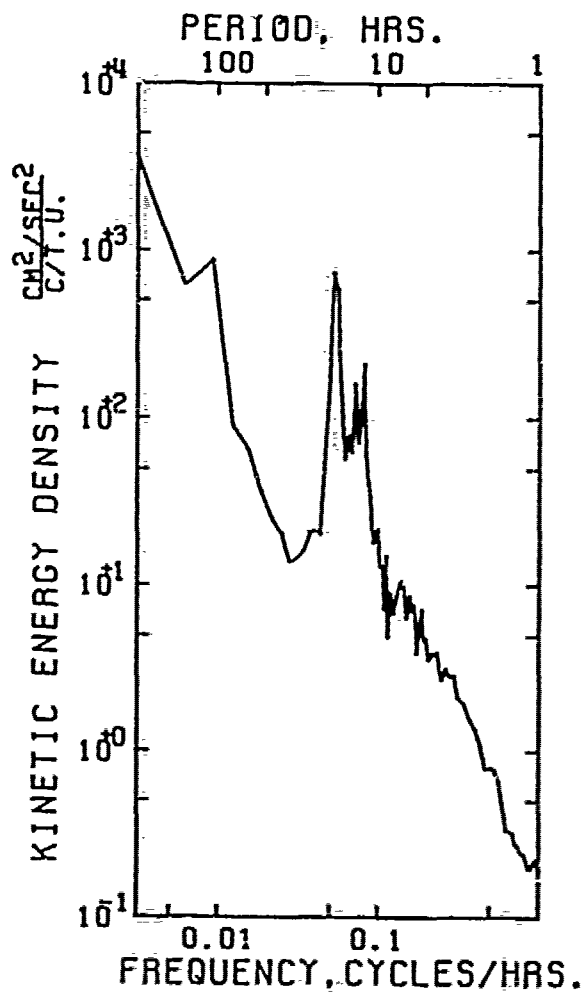
VARIABLE	EAST	NORTH	SPEED
UNITS	m/sec	m/sec	m/sec
MEAN	23.033	6.165	71.543
STD. ERR.	.036	.061	.517
VARIANCE	2093.069	3841.373	1385.246
STD. DEV.	45.756	61.978	37.219
KURTOSIS	3.182	2.658	2.877
SKEWNESS	.228	.119	.572
MINIMUM	-24.456	-173.956	11.983
MAXIMUM	132.934	178.196	273.786

EAST & NORTH

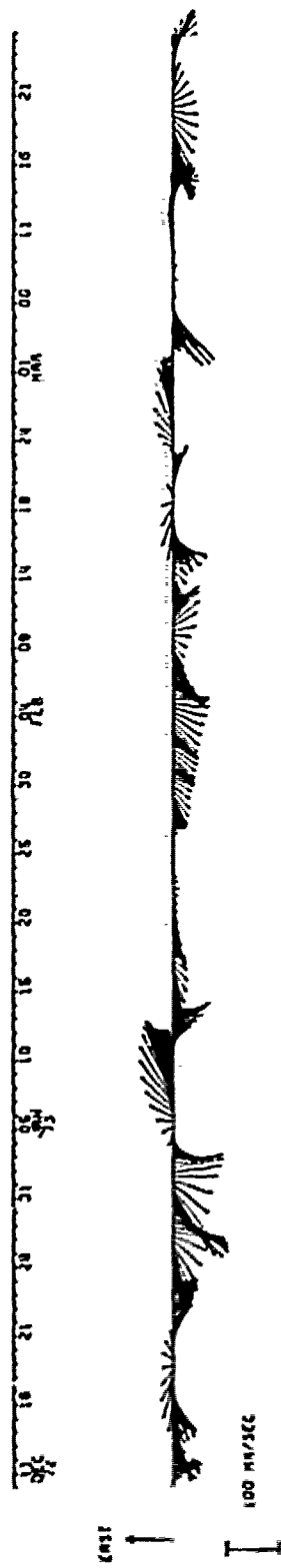
COVARIANCE	-684.415
STD. ERR. OF COVARIANCE	43.511
STD. DEV. OF COVARIANCE	3130.943
CORRELATION COEFFICIENT	-.171
VECTOR MEAN	23.048
VECTOR VARIANCE	2967.446
VECTOR STD. DEV.	54.474

• SAMPLE SIZE = 5178 PRINTS
•
• SPANNING RANGE
• FROM 72- XII-08 20.00.37
• TO 73- III-26 16.30.37
•
• DURATION 107.85 DAYS

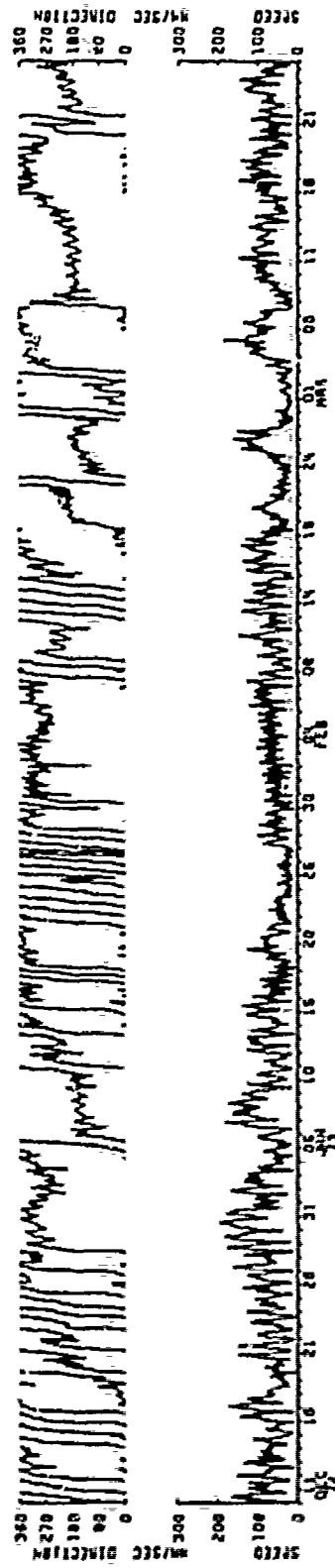
AUTO SPECTRUM
4775A1800 EAST COMP
4775A1800 NORTH COMP

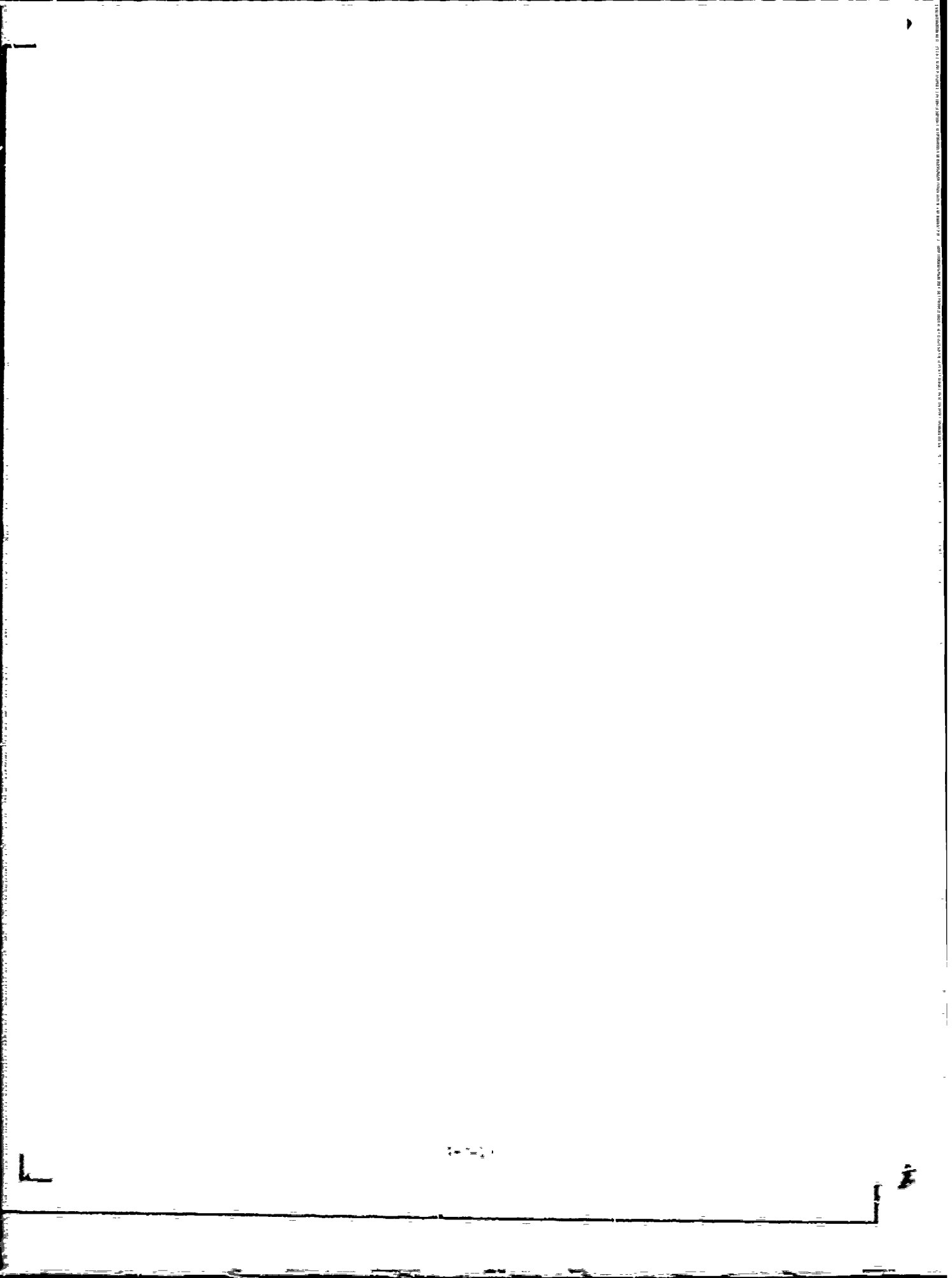


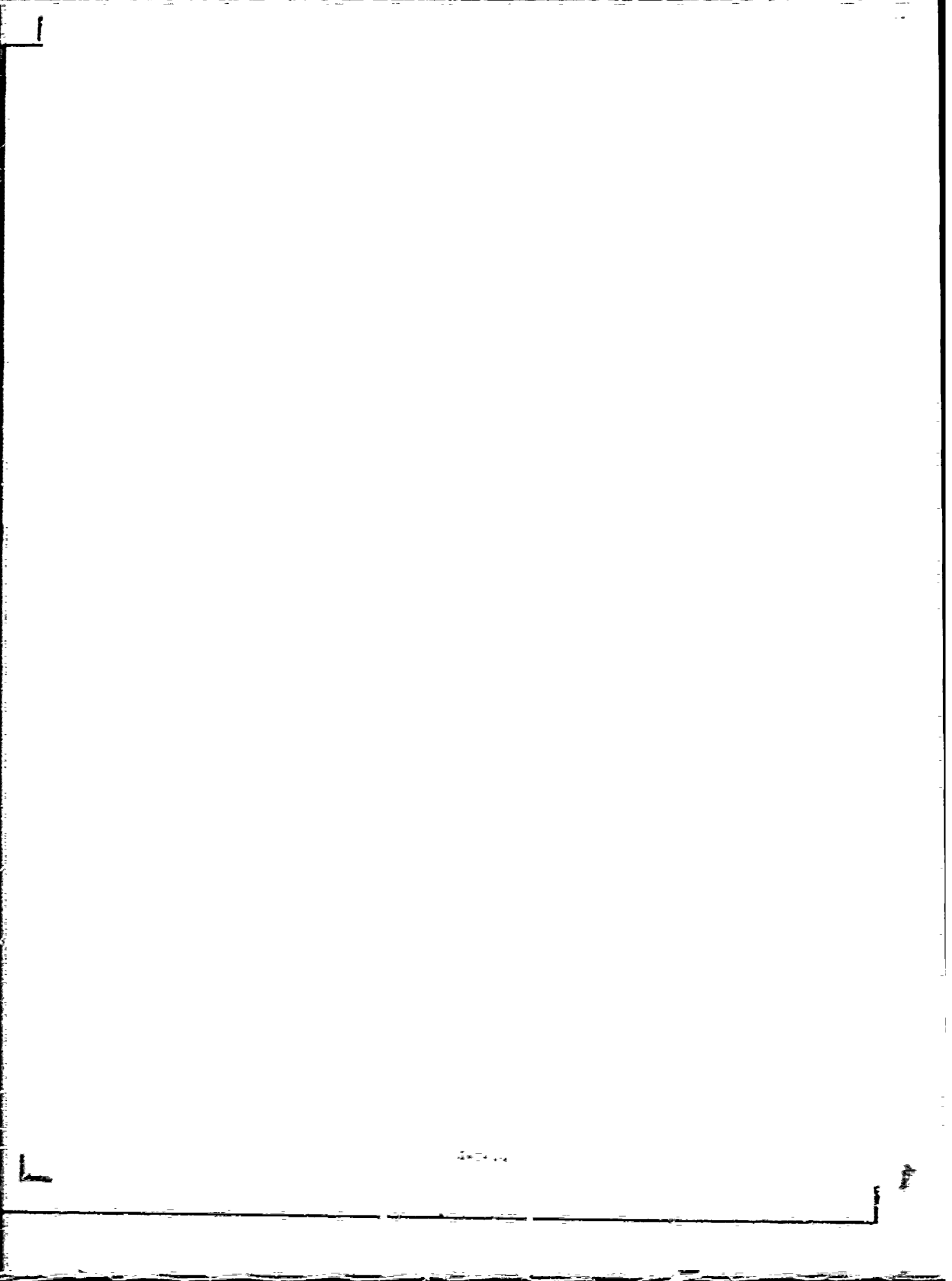
2552 METERS
72-XII-08 TO 73-III-25
1 PIECES WITH 2560 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



4775A







4-D-1

4-D-2

DATA NUMBER 4699

Instrument No. V-0137

Instrument Sampling Scheme

Model 850 data bursts

every --- sec

--- samples

at --- sec/sample

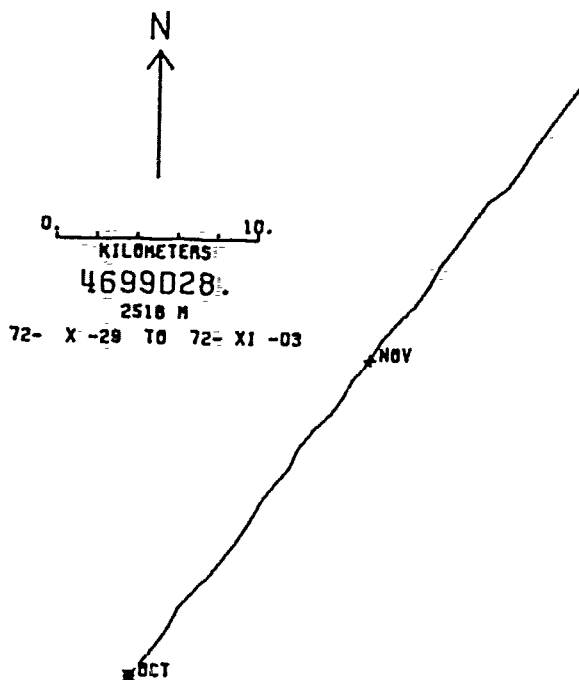
VACM accumulated averages

over 28.125 sec

Instrument Depth 2518 m

Comments:

Increase in spectra at high frequencies is due to digitization errors from rapid recording rate.



DATA/ 4699028.

.....				
VARIABLE	EAST	NORTH	SPEED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	49.680	61.399	79.745	3.143
STD. ERR.	.783E-1	.756E-1	.667E-1	.160E-3
VARIANCE	103.039	96.024	74.809	.432E-3
STD. DEV.	10.151	9.799	8.649	.208E-1
KURTOSIS	2.352	2.160	2.774	8.705
SKEWNESS	.186E-1	.137	.116	1.982
MINIMUM	19.987	35.485	53.000	3.108
MAXIMUM	76.332	87.645	104.000	3.240

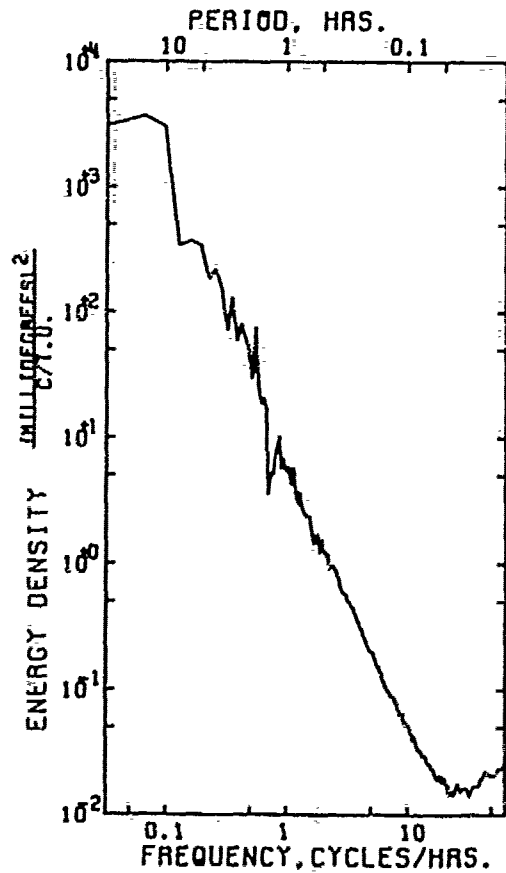
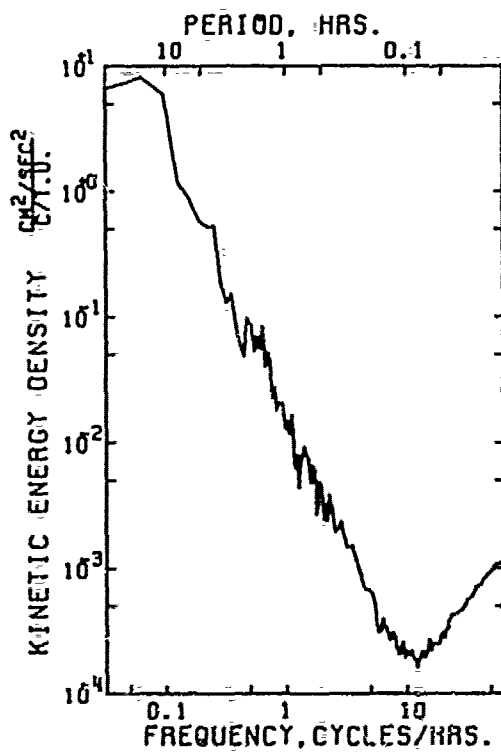
.....
EAST & NORTH

.....	
COVARIANCE	.23.499
STD. ERR. 9F COVARIANCE	5.420
STD. DEV. 9F COVARIANCE	702.850
CORRELATION COEFFICIENT	.236
VECTOR MEAN	78.980
VECTOR VARIANCE	99.531
VECTOR STD. DEV.	9.977

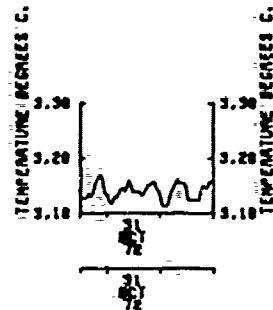
.....
SAMPLE SIZE = 16815 POINTS
.....
SPANNING RANGE
FROM 72- X -29 02:00:56
TO 72- X1 -03 13:22:30
.....
DURATION 5.47 DAYS

AUTO SPECTRUM
4699028. EAST
4699028. NORTH

AUTO SPECTRUM
4699028. TEMPERATURE



2518 METERS
72-X-29 TO 72-XI-03
2 PIECES WITH 4000 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



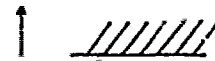
CRST



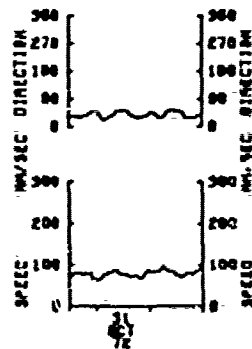
100 MM/SEC

46990

ROTH



100 MM/SEC



4-D-6

L

7

4-D-7

STATION 478

3/16" WIRE

3/8" DACRON

962 m

RADIO-FLOAT
WITH LIGHT

2 m 1/2" CHAIN

2 m 3/8" CHAIN

14 17" GLASS BALLS IN HARD HATS ON 14 m 3/8" CHAIN

10 m

CURRENT METER — 4781

500 m

480 m

7 17" GLASS BALLS IN HARD HATS ON 7 m 3/8" CHAIN

10 m

CURRENT METER — 4782

500 m

177 m

6 17" GLASS BALLS IN HARD HATS ON 6 m 3/8" CHAIN

ACOUSTIC RELEASE, TRANSPONDING

20 m 5/8" NYLON

3 m 1/2" CHAIN

STIMSON ANCHOR 2,500 LBS

Mooring No. 478

Set 72 December 09 39° 9.9'N 70° 30.3'W
Year Month Day Latitude Longitude

Set by Tupper Ship CHAIN Cruise #109

Retrieved 73 March 29
Year Month Day

Retrieved by Gifford-Heinmiller Ship CHAIN Cruise #112

Purpose of Mooring: Site B routine measurements

Mooring Type: Intermediate

<u>Data</u> <u>Number</u>	<u>Instrument</u> <u>Number</u>	<u>Type</u>	<u>Depth</u> <u>Meters</u>	<u>Comments</u>
4781	M-238	CM	991	
4782	M-271	CM	1091	

COMMENTS ON MOORING: Mooring launched by faking box.

DATA NUMBER 4781

Instrument No. M-238

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 991 m

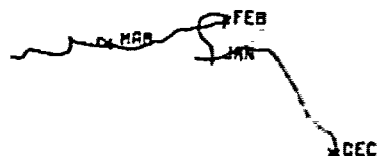
Comments:

N
↑
0. 150.
KILOMETERS

4781C1800

991 M

72- XII-08 TO 73- III-28



DATA/ 4781C1800

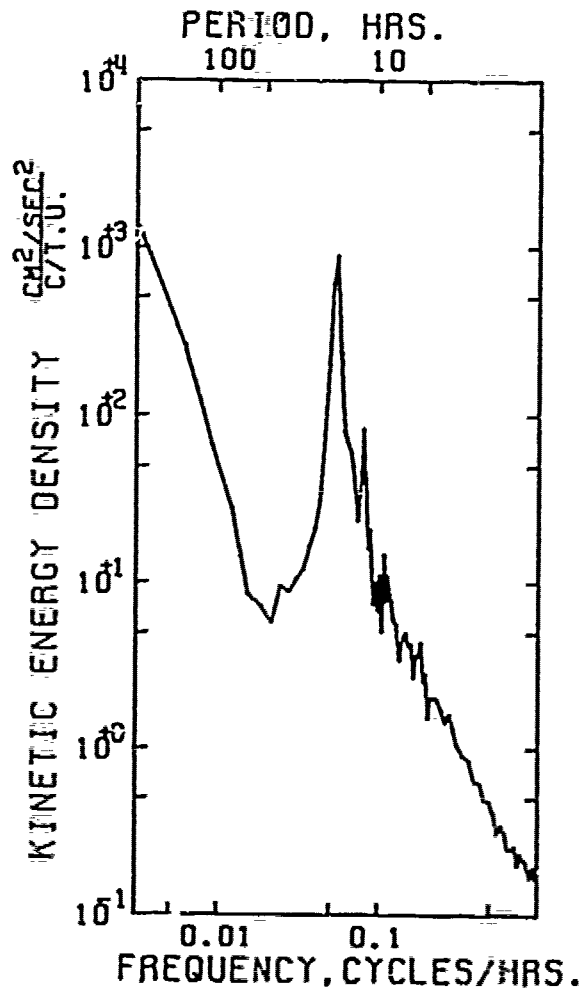
```
.....
VARIABLE *          EAST          NORTH          SPEED
UNITS *          MM/SEC          MM/SEC          MM/SEC
.....
MEAN *          -25.040          7.164          57.250
STD. ERR. *          .035          .580          .574
VARIANCE *          2112.026          1762.772          1324.393
STD. DEV. *          45.963          41.985          36.461
KURTOSIS *          3.051          6.836          4.471
SKEWNESS *          -.182          .757          1.152
MINIMUM *          -202.148          -156.290          11.676
MAXIMUM *          122.247          197.301          220.417
```

.....
EAST & NORTH

```
.....
STANDARD DEVIATION *          177.730          5235.05118
STD. ERR. OF COVARIANCE *          38.521
STD. DEV. OF COVARIANCE *          2788.191
CORRELATION COEFFICIENT *          -.9216-1
VECTOR MEAN *          26.622
VECTOR VARIANCE *          1937.699
VECTOR STD. DEV. *          44.019
```

```
.....
SPANNING RANGE
FROM 72- XII-08 20.30.37
TO 73- III-28 23.30.37
DURATION 109.18 DAYS
```

AUTO SPECTRUM
4781C1800 EAST COMP
4781C1800 NORTH COMP



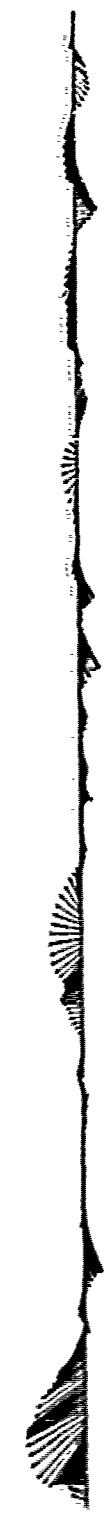
991 METERS
72-XII-09 TO 73-III-27
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



↑

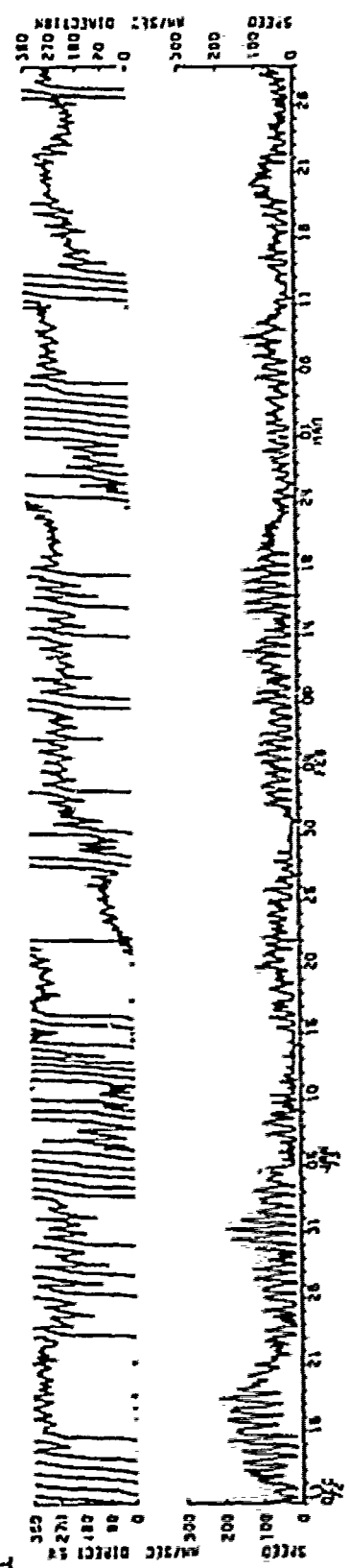
100 M/SEC

4781C



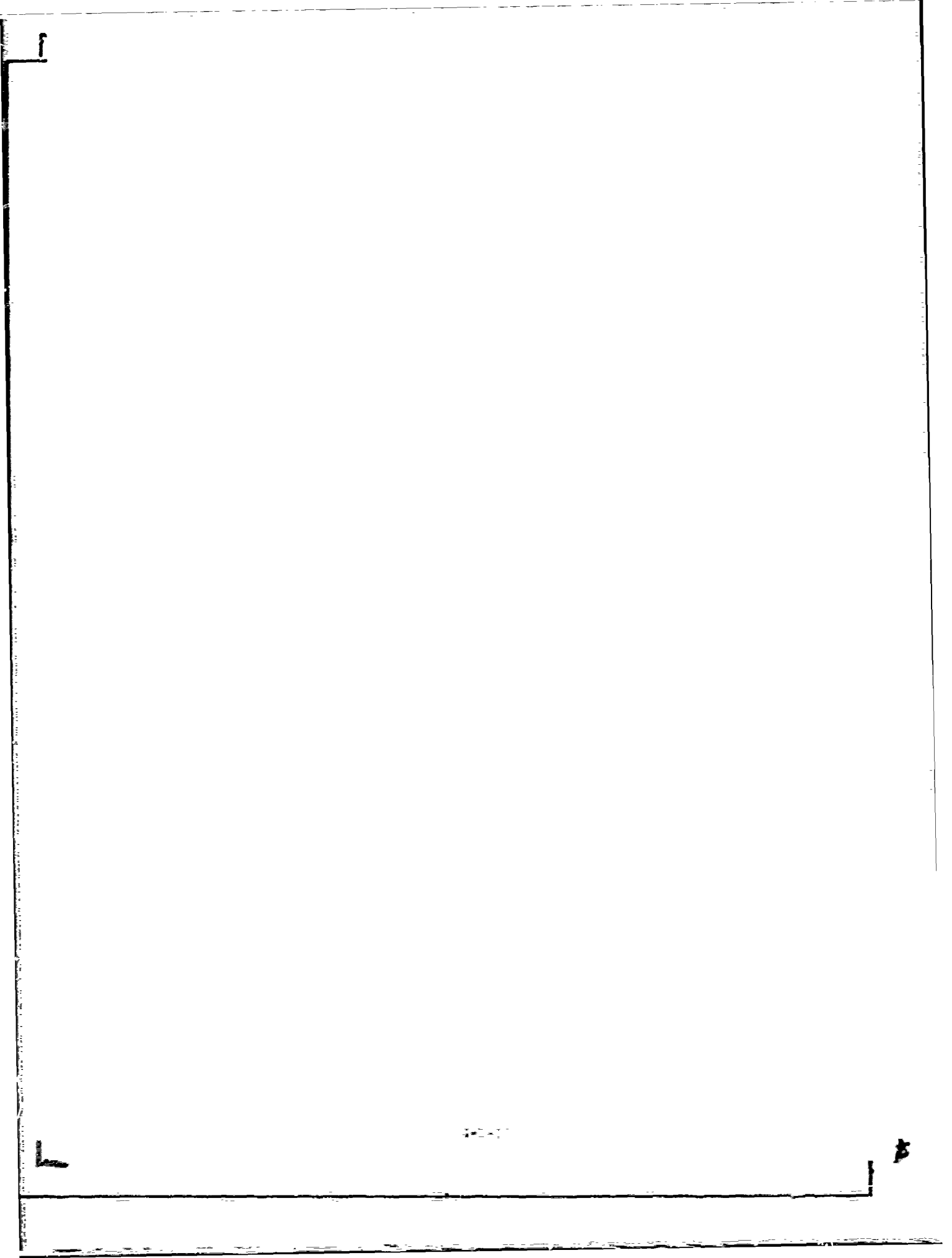
↑

100 M/SEC



↑

100 M/SEC



4-E-1

4-E-2

DATA NUMBER 469,12

Instrument No. V-0139

Instrument Sampling Scheme

Model 850 data bursts

every --- sec

--- samples

at --- sec/sample

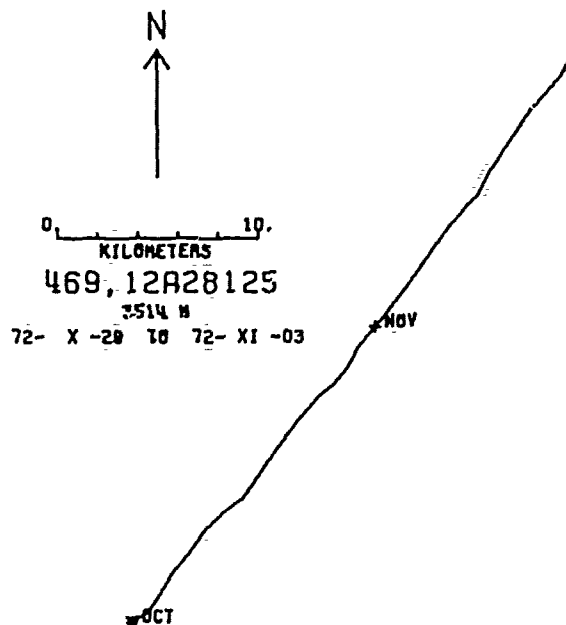
VACM accumulated averages

over 28.125 sec

Instrument Depth 2514 m

Comments:

Increase in spectra at high frequencies is due to digitization errors from rapid recording rate.



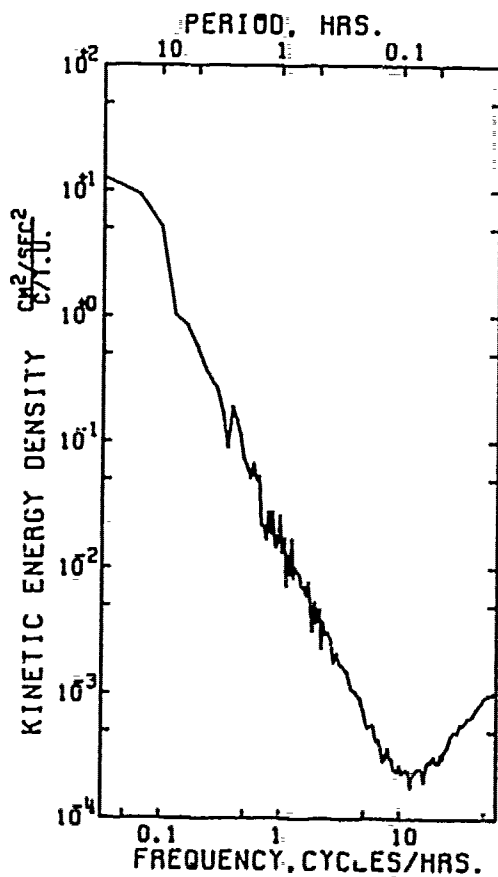
DATA/ 469,12A28125

VARIABLE	EAST	NORTH	SPED	TEMPERATURE
UNITS	MM/SEC	MM/SEC	MM/SEC	DEGREES C.
MEAN	51.469	62.357	81.478	2.469
STD. ERR.	.804E-1	.869E-1	.756E-1	.452E-4
VARIANCE	102.596	119.787	90.807	.324E-4
STD. DEV.	10.129	10.945	9.529	.569E-2
KURTOSIS	2.483	4.224	3.041	2.583
SKEWNESS	.252	.534	.442	.271E-1
MINIMUM	21.522	17.534	55.000	2.453
MAXIMUM	76.180	98.004	116.000	2.484

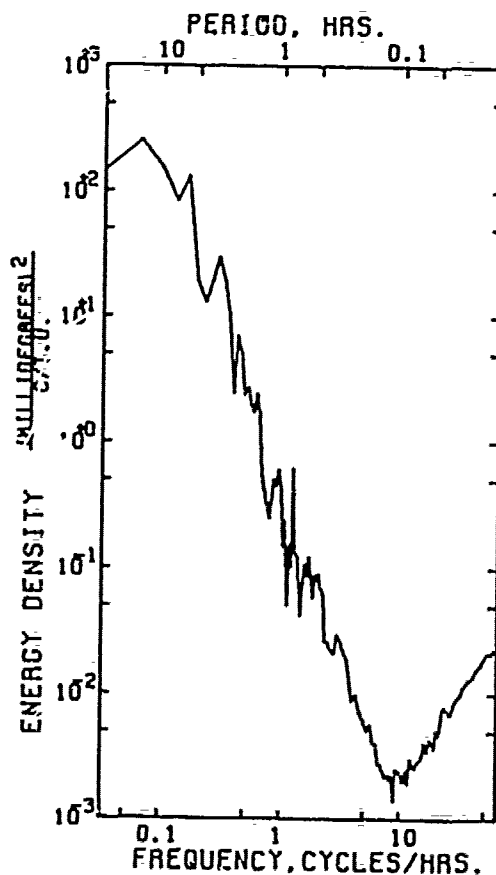
EAST & NORTH

COVARIANCE	-13.219	SAMPLE SIZE = 15872 PRINTS
STD. ERR. OF COVARIANCE	6.674	
STD. DEV. OF COVARIANCE	840.864	SPANNING RANGE
CORRELATION COEFFICIENT	.119	FROM 72- X -29 08.22.15
VECTOR MEAN	80.878	TO 72- XI -03 12.21.46
VECTOR VARIANCE	111.192	
VECTOR STD. DEV.	10.545	DURATION 5.17 DAYS

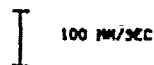
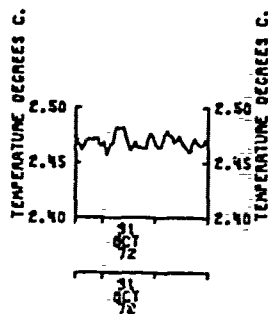
AUTO SPECTRUM
469.12A20125 EAST
469.12A20125 NORTH



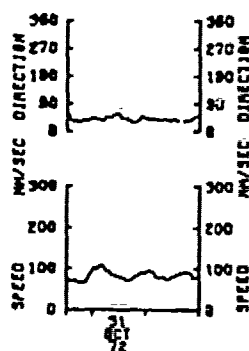
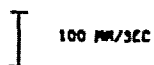
AUTO SPECTRUM
469.12A20125 TEMPERATURE



3514 METERS
72-X-29 TO 72-X1-03
2 PIECES WITH 3000 ESTIMATES
PER PIECE. AVERAGED OVER
2 ADJACENT FREQUENCY BANDS



469.12R



4-E-7

DATA NUMBER 4782

Instrument No. M-271

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

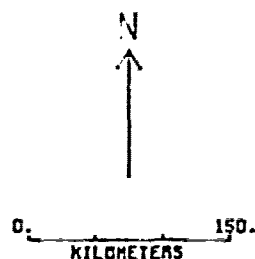
at 5.27 sec/sample

VACH accumulated averages

over --- sec

Instrument Depth 1991 m

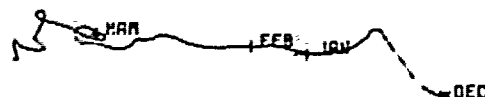
Comments:



4782A1800

1991 M

72- XII-10 TO 73- III-28



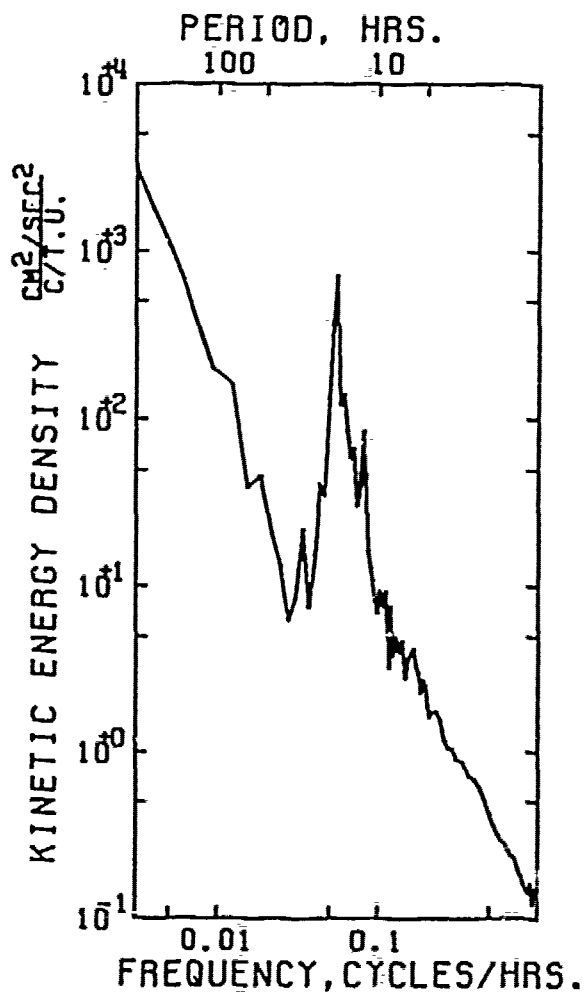
DATA/ 4782A1800

```
.....
VARIABLE *          EAST          NORTH          SPEED
UNITS *          MM/SEC          MM/SEC          MM/SEC
.....
MEAN *          -34.766          3.372          69.747
STD. ERR. *          .771          .605          .576
VARIANCE *          3101.905          1906.309          1337.279
STD. DEV. *          55.695          43.661          36.566
KURTOSIS *          2.819          3.853          4.811
SKEWNESS *          .024E-1          .251          1.132
MINIMUM *          -229.105          -132.120          15.648
MAXIMUM *          134.001          169.300          245.922
.....
```

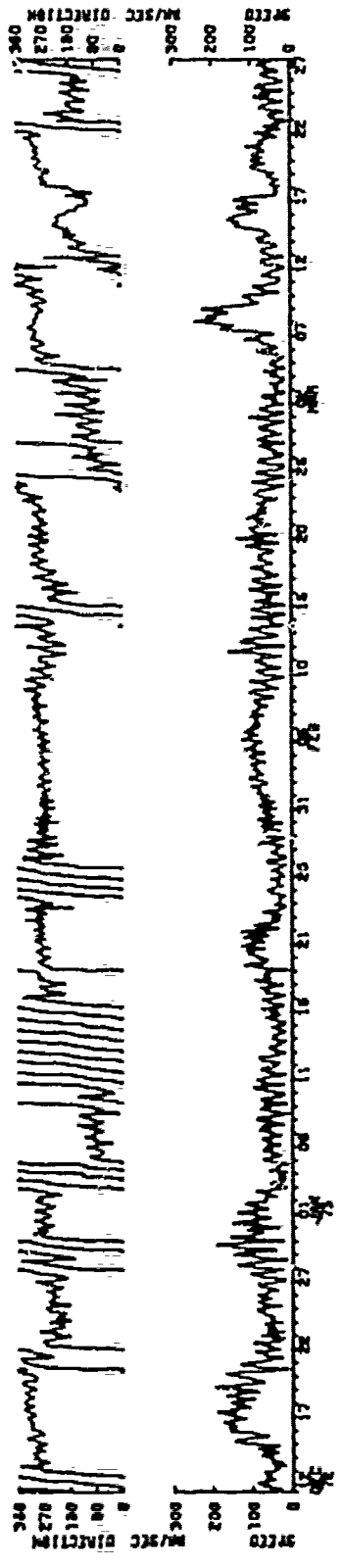
.....
EAST & NORTH
.....

```
.....
COVARIANCE *          -667.733          .....
STD. ERR. OF COVARIANCE *          45.735          .....
STD. DEV. OF COVARIANCE *          3302.756          .....
CORRELATION COEFFICIENT *          .275          .....
VECTOR MEAN *          34.629          .....
VECTOR VARIANCE *          2505.107          .....
VECTOR STD. DEV. *          50.041          .....
.....
* SAMPLE SIZE = 5215 POINTS
* SPANNING RANGE
* FROM 72- XII-10 08.00.37
* TO 73- III-28 23.00.37
* DURATION 108.63 DAYS
.....
```

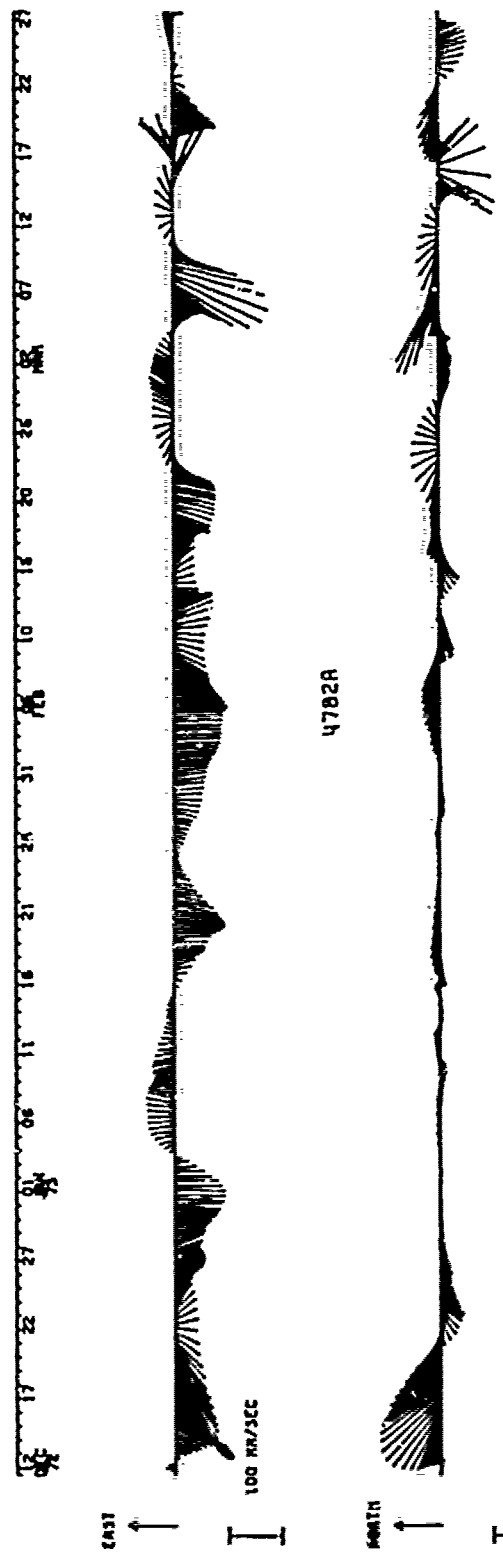
AUTO SPECTRUM
4782A1800 EAST COMP
4782A1800 NORTH COMP



1991 METERS
72-XII-10 TO 73-III-28
1 PIECES WITH 2592 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



4782A



1

20.5

4-2-14

Ln

4-F-1

4-F-2

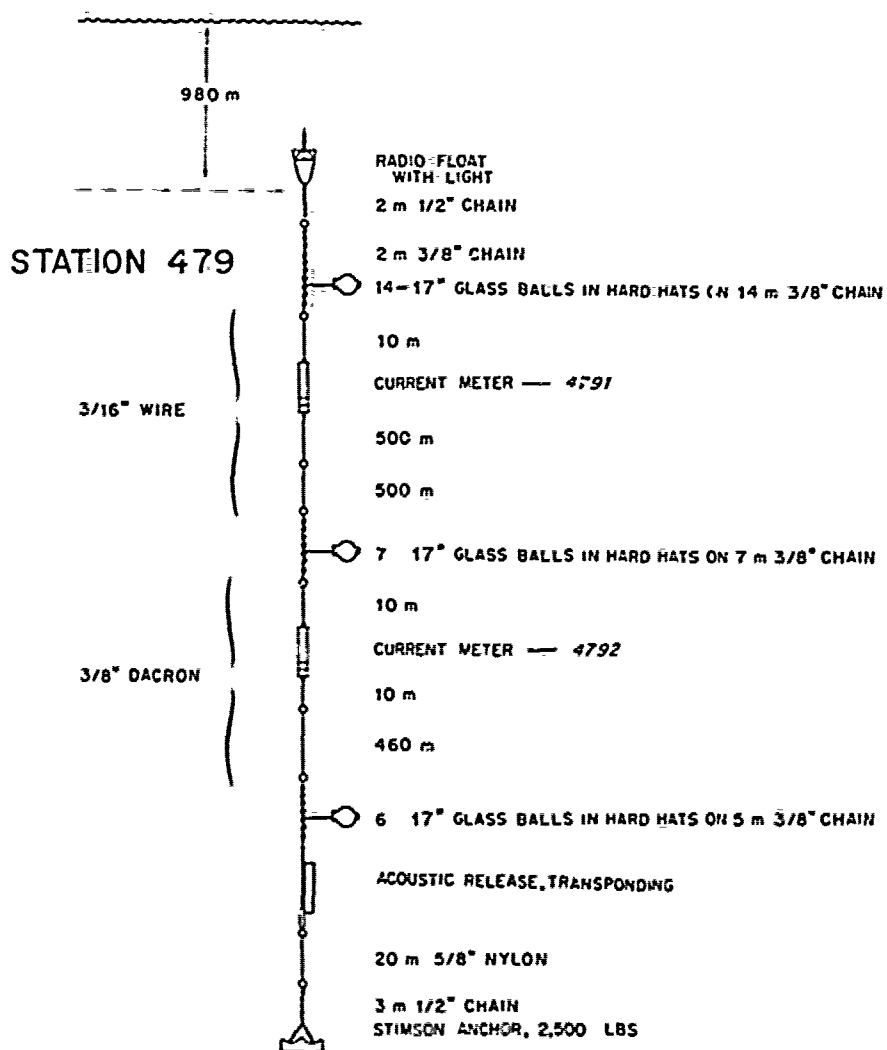
4-F-3

4-F-4

10-10-5

4-F-6

4-F-7



Mooring No. 479

Set 72 December 10 39° 23.0'N 69° 59.8'W
Year Month Day Latitude Longitude

Set by Tupper Ship CHAIN Cruise #109

Retrieved 73 March 26
Year Month Day

Retrieved by Gifford-Heinmiller Ship CHAIN Cruise #112

Purpose of Mooring: Site D routine measurements

Mooring Type: Intermediate

<u>Data</u> <u>Number</u>	<u>Instrument</u> <u>Number</u>	<u>Type</u>	<u>Depth</u> <u>Meters</u>	<u>Comments</u>
4791	M-277	CM	1009	
4792	M-266	CM	2028	

COMMENTS ON MOORING: Mooring launched by faking box.

DATA NUMBER 4791

Instrument No. M-277

Instrument Sampling Scheme

Model 850 data bursts

every 1800 sec

15 samples

at 5.27 sec/sample

VACM accumulated averages

ver --- sec

Instrument Depth 1009 m

Comments:



0. 150.
KILOMETERS

479181800

1009 M

72- XII-10 TO 73- III-26



DATA/ 479181800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-35.326	-2.407	63.330
STD. ERR.	.686	.124	.173
VARIANCE	2386.049	1496.846	1131.874
STD. DEV.	48.847	38.689	33.643
KURTOSIS	3.230	3.603	3.292
SKEWNESS	.292	-.239	.675
MINIMUM	-229.570	-153.515	15.114
MAXIMUM	138.833	129.720	239.615

EAST & NORTH

COVARIANCE	-504.205
STD. ERR. OF COVARIANCE	34.926
STD. DEV. OF COVARIANCE	2460.379
CORRELATION COEFFICIENT	-.1267
VECTORMEAN	35.138
VECTORM VARIANCE	1941.448
VECTORM STD. DEV.	44.062

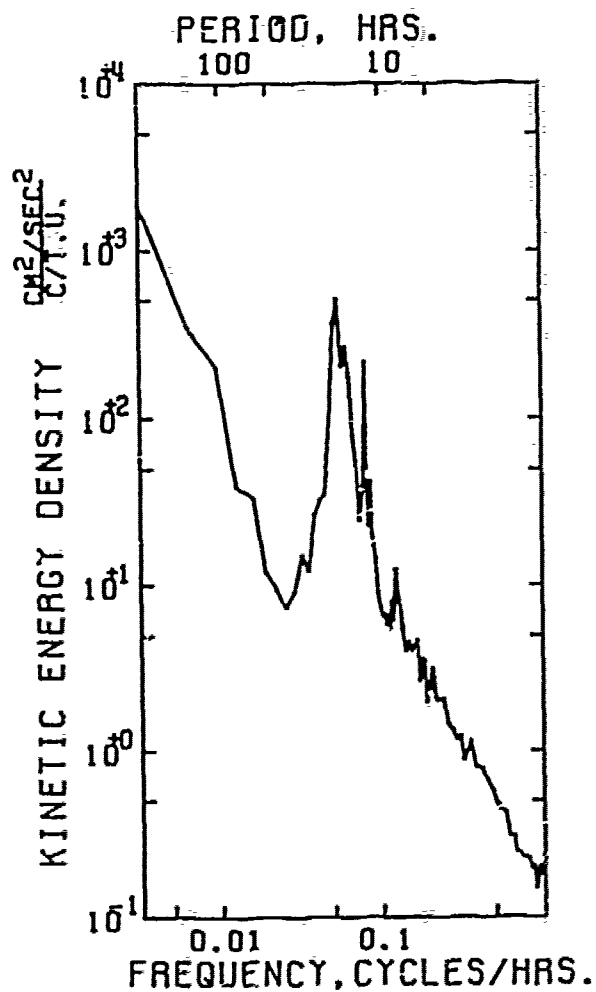
SAMPLE SIZE = 5064 POINTS

SPANNING RANGE
FROM 72- XII-10 23.30.37
TO 73- III-26 11.00.37

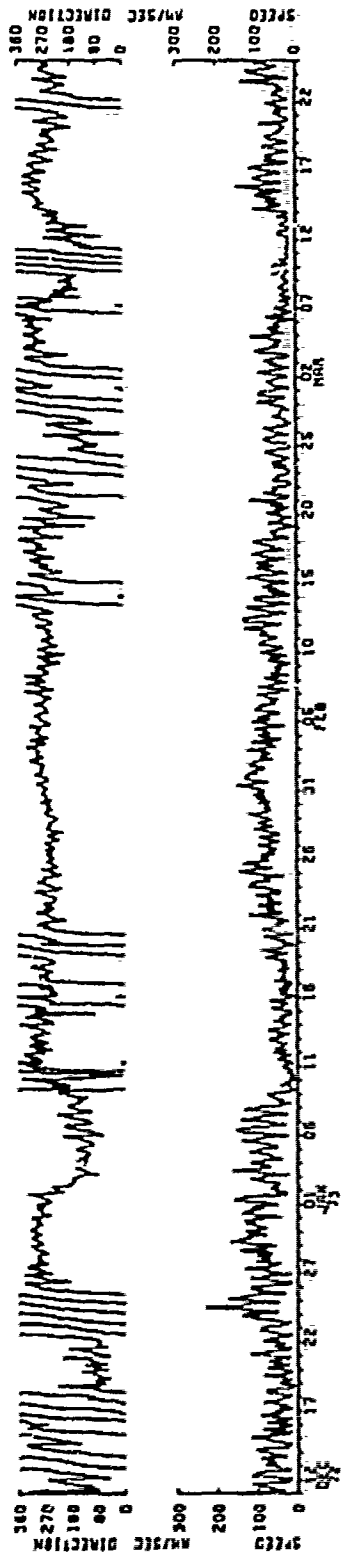
DURATION 105.48 DAYS

7

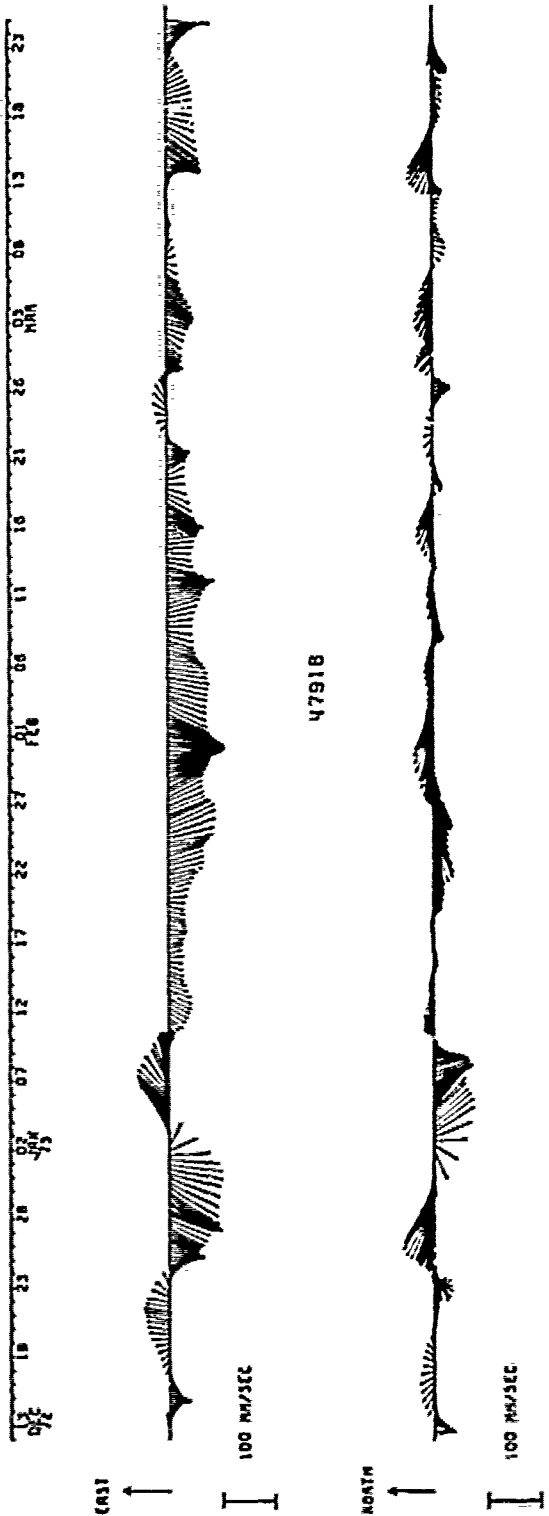
AUTO SPECTRUM
479181800 EAST COMP
479181800 NORTH COMP



1009 METERS
72-XII-10 TO 73-III-25
1 PIECES WITH 2500 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



47918



↑

100 M/SEC

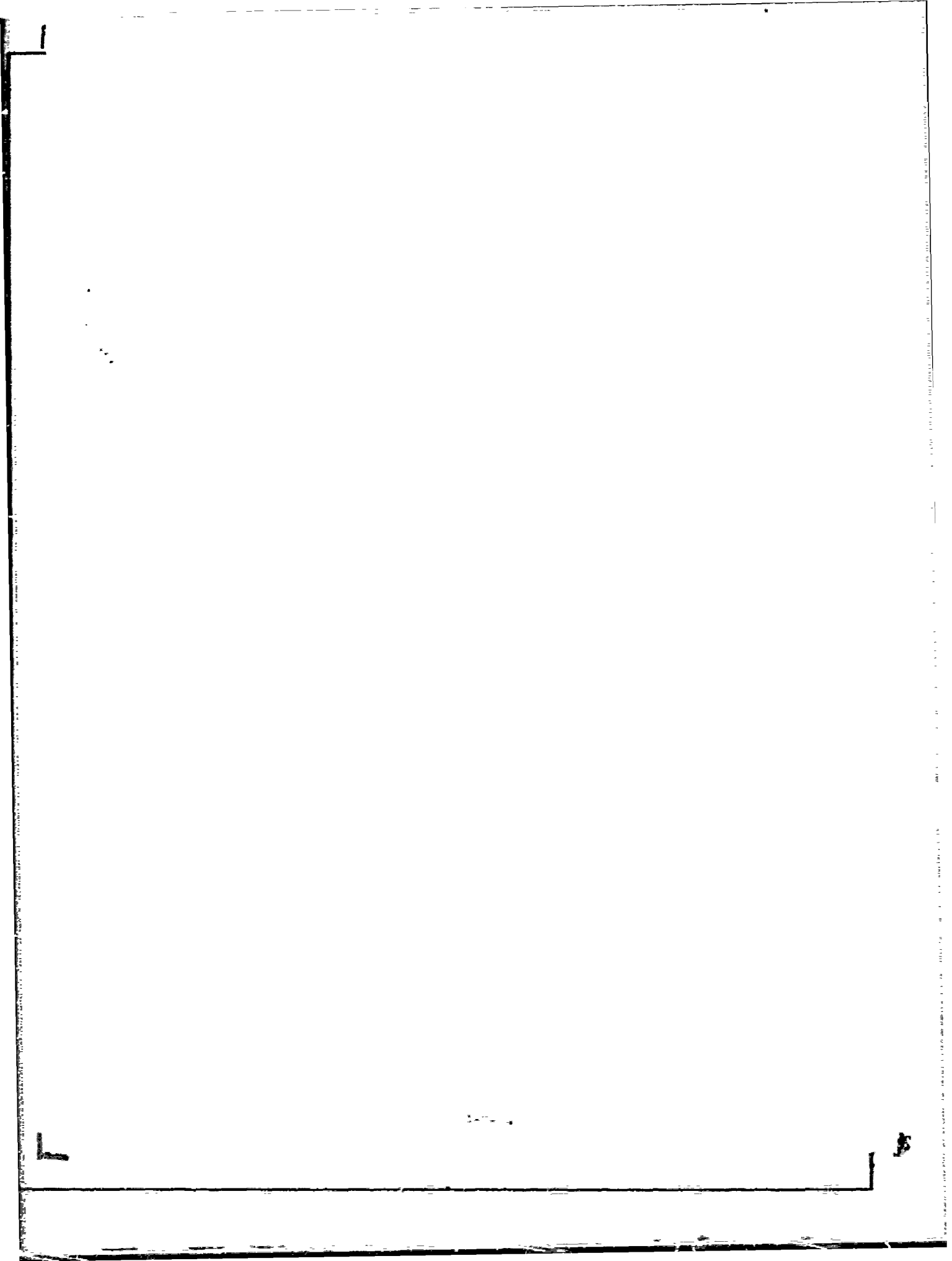
↑

100 M/SEC

1-10-10

L

5



4-G-2

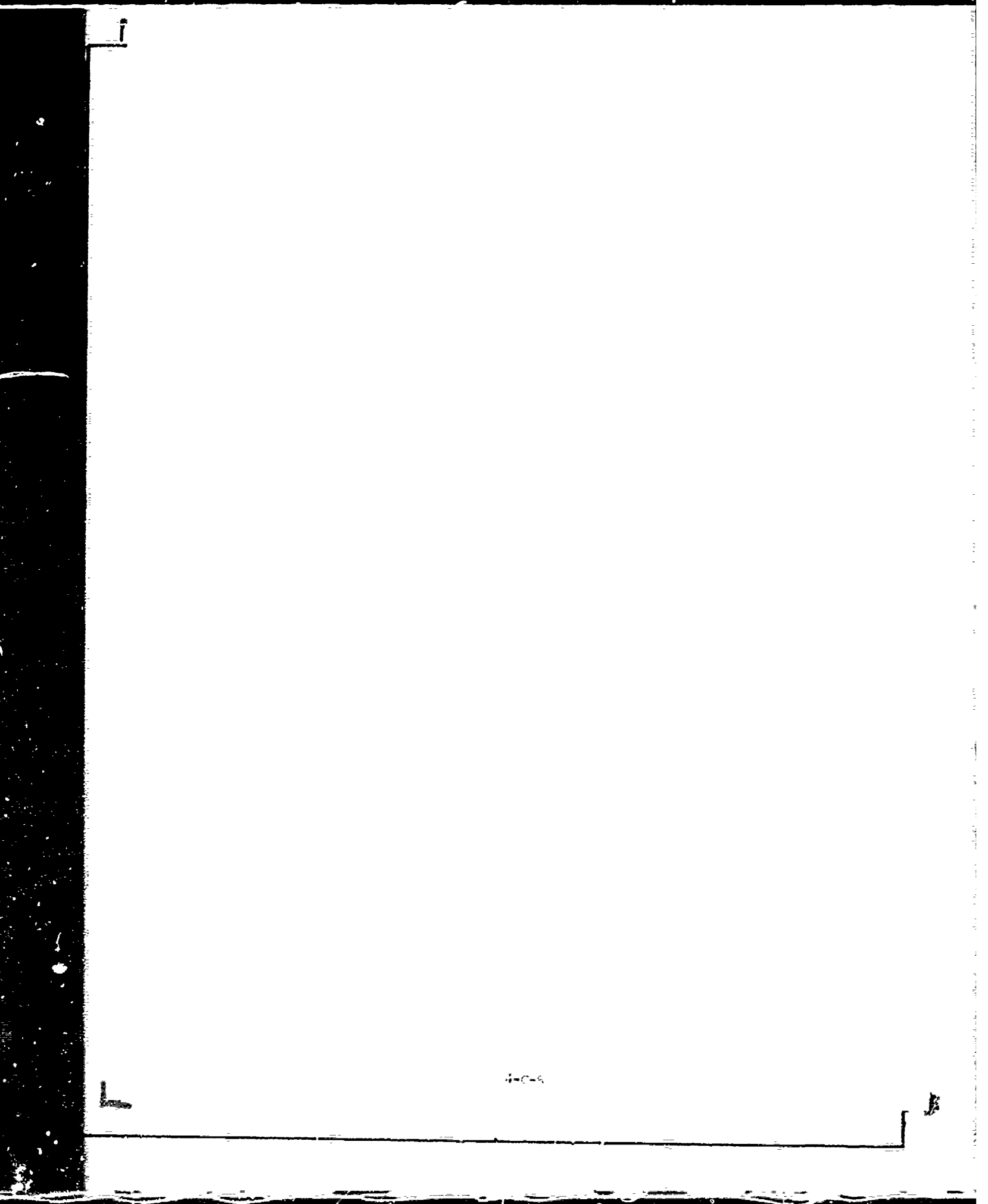
-G-3

4-C-4

4-6-7

4-5-6

4-6-7



DATA NUMBER 4792

Instrument No. M-266

Instrument Sampling Scheme
Model 850 data bursts

every 1800 sec
15 samples
at 5.27 sec/sample

VACM accumulated averages
over --- sec

Instrument Depth 2025 m



0 150.

KILOMETERS

4792A1800

2025 M

72- XII-10 TO 73- III-26



Comments:

DATA/ 4792A1800

VARIABLE	EAST	NORTH	SPEED
UNITS	MM/SEC	MM/SEC	MM/SEC
MEAN	-14.956	1.091	53.450
STD. ERR.	.598	.574	.410
VARIANCE	1512.329	1670.807	851.071
STD. DEV.	38.571	40.876	29.173
KURTOSIS	3.723	4.420	4.653
SKEWNESS	.678	-.699	1.121
MINIMUM	-159.971	-175.314	13.753
MAXIMUM	167.458	112.679	186.060

EAST & NORTH

COVARIANCE	-597.780
STD. ERR. OF COVARIANCE	27.382
STD. DEV. OF COVARIANCE	1948.750
CORRELATION COEFFICIENT	-.343
VECTOR MEAN	14.996
VECTOR VARIANCE	1741.568
VECTOR STD. DEV.	41.732

SAMPLE SIZE = 5065 POINTS

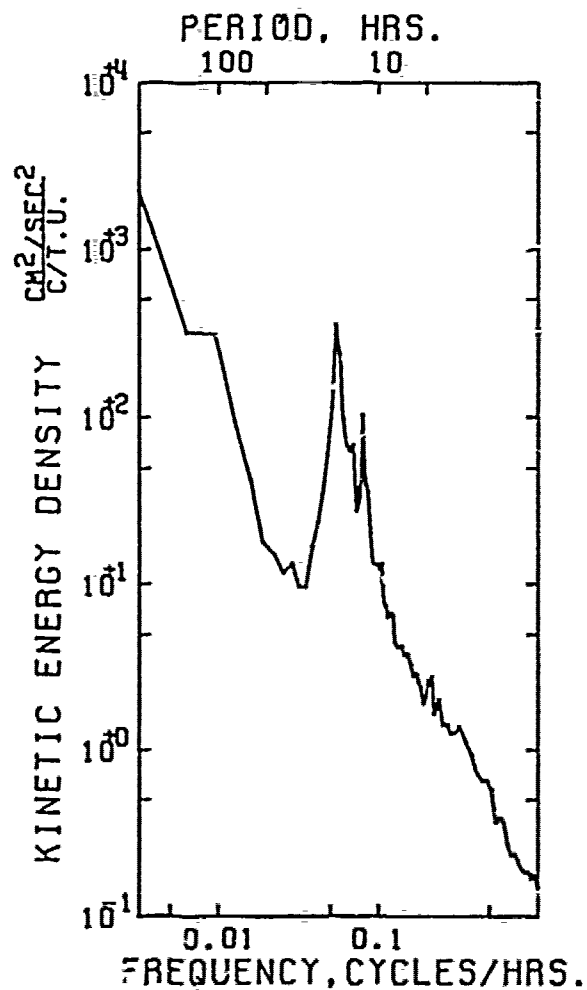
SPANNING RANGE

FROM 72- XII-10 23.00.37

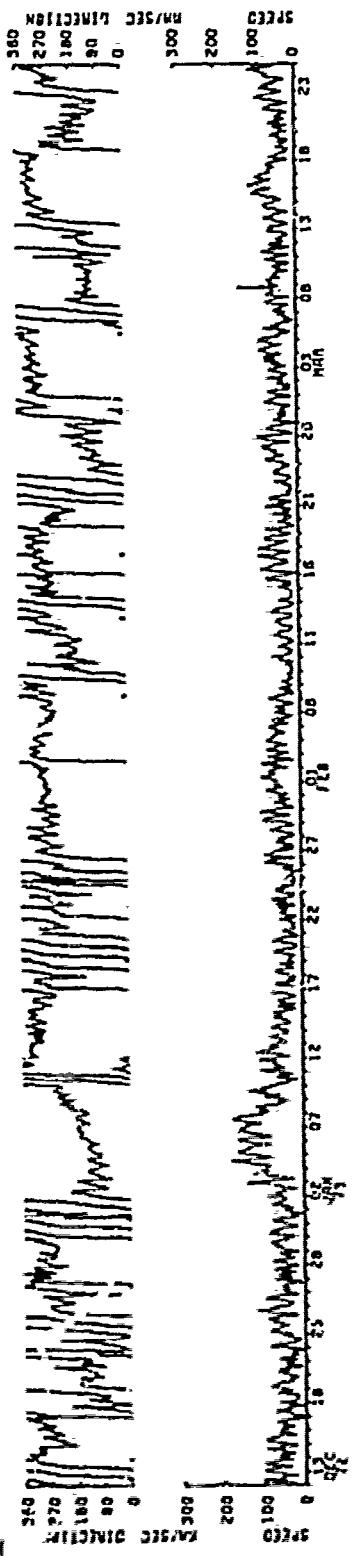
TO 73- III-26 11.00.37

DURATION 105.50 DAYS

AUTO SPECTRUM
4792A1800 EAST COMP
4792A1800 NORTH COMP



2028 METERS
72-X11-10 TO 73-111-25
1 PIECES WITH 2500 ESTIMATES
PER PIECE. AVERAGED OVER
8 ADJACENT FREQUENCY BANDS



47528

