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OCEANOGRAPHY

A Compilation of Observations from Moored Current Meters

Volume XIV
Part A

Current, Temperature and Pressure in the Drake Passage During Drake 79

January 1979-January 1980

by
R. D. Pillsbury
J. S. Bottero
R. E. Still

Data Report 91

Reference 81-17

December 1981

National Science Foundation
Grant No OCE-7823579

OREGON STATE UNIVERSITY

School of Oceanography
Oregon State University
Corvallis OR 97331

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TABLE OF CONTENTS

ABSTRACT

Internally recording instruments were installed in the Drake Passage in January 1979 and recovered in January 1980. Additional instruments were installed at this time for the first experiment in the Pilot Ocean Monitoring Experiment. These are to be recovered in March of 1981.

The array consisted of seventy current meters on twenty-four moorings. In addition there were twenty-eight temperture/pressure recorders and four thermistor chains installed on these same moorings. The data were taken at one hour intervals.

In this report, some of the current meter measurements are summarized through pertinent statistics, progressive vector diagrams, real time plots, stick figures, rotary spectra, and conventional power spectra.

Introduction

DRAKE 79 was the major experiment of the International Southern Ocean Studies (ISOS) program. It followed a series of preparatory experiments called FDRAKE, and like them was designed to study circulation and transport processes in the region of the Drake Passage. FDRAKE began in January of 1975 with extensive hydrographic and chemical data collection (Anon., 1976 and Nowlin et al., 1977) supplemented by an array of both short and long term current meter moorings (Pillsbury et al., 1976, 1977). This experiment was continued in January of 1976 (FDRAKE 76) with the collection of additional hydrographic data and the setting of a second long term current meter array by the R/V T. G. THOMPSON. The current meter array was recovered by the R/V MELVILLE in January of 1977 as a part of FDRAKE 77 (Sciremammano et al., 1978). The R/V MELVILLE deployed a cluster array in January 1977 which was recovered on the AGS YELCHO in December 1977. A single mooring, Yelcho, was set at that time and recovered by the R/V MELVILE in January 1979. The data from the cluster array and the Yelcho mooring are presented in Pillsbury et al., 1980.

DRAKE 79 was designed to study the time and space scales of flow variations near the Drake Passage, and to expand our knowledge of the distribution of water mass properties and their dynamics in this important region of the world's ocean.

In this report a compilation of the data from some of

the DRAKE 79 current meters is presented. The data from the thermistor chains, temperature/pressure recorders, conductivity cells on the Aanderaa meters and remaining current meters will be presented in a data report to be issued by Texas A&M University. The complementary hydrographic data are presented in a report (Worley and Nowlin, 1979). The hydrographic data from the recovery cruise aboard the R/V ATLANTIS II will be in a data report to be issued by Texas A&M University. The pressure measurements made to complement the hydrographic and current meter data will be presented in a report to be issued by the University of Washington.

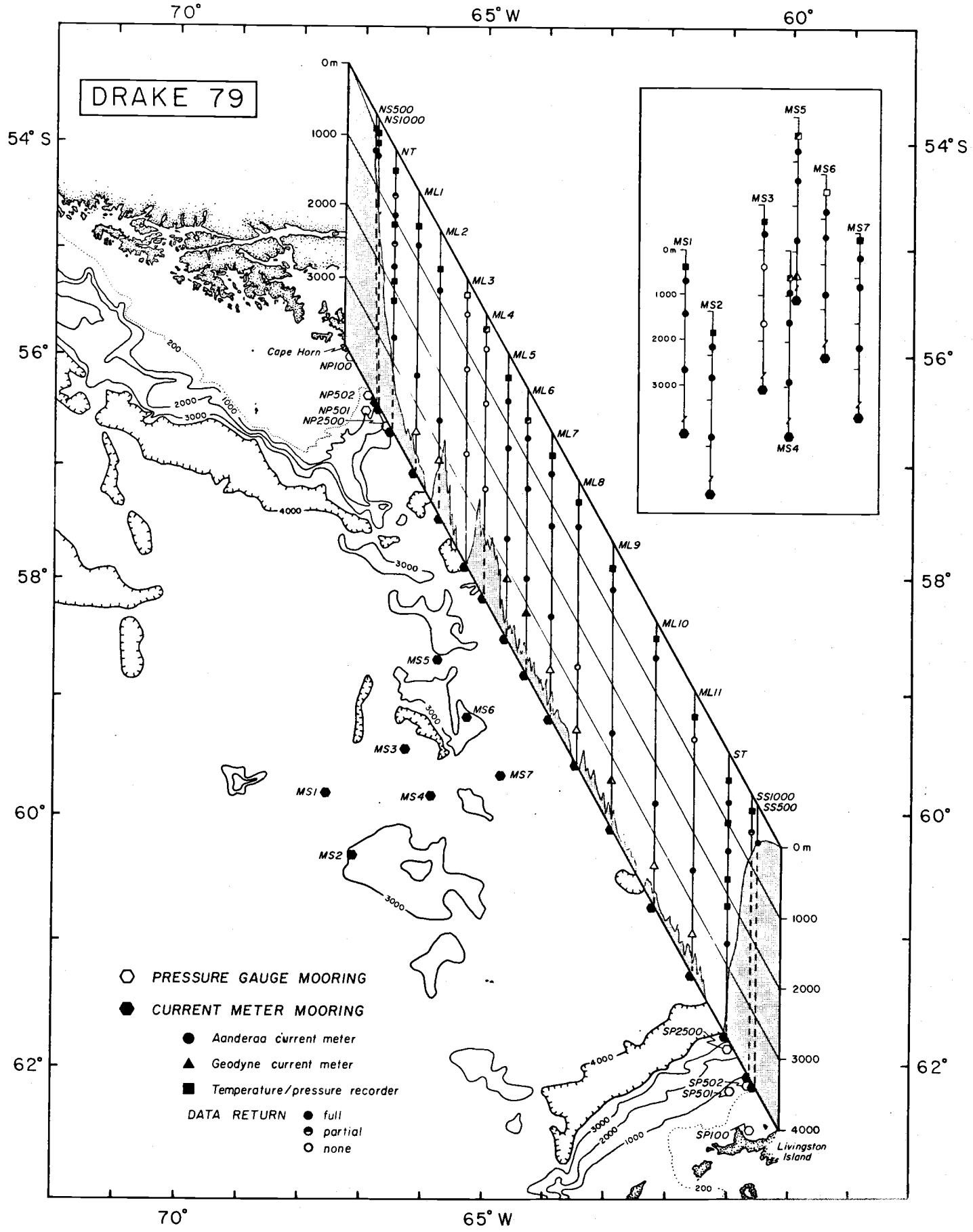
The Current Meter Program

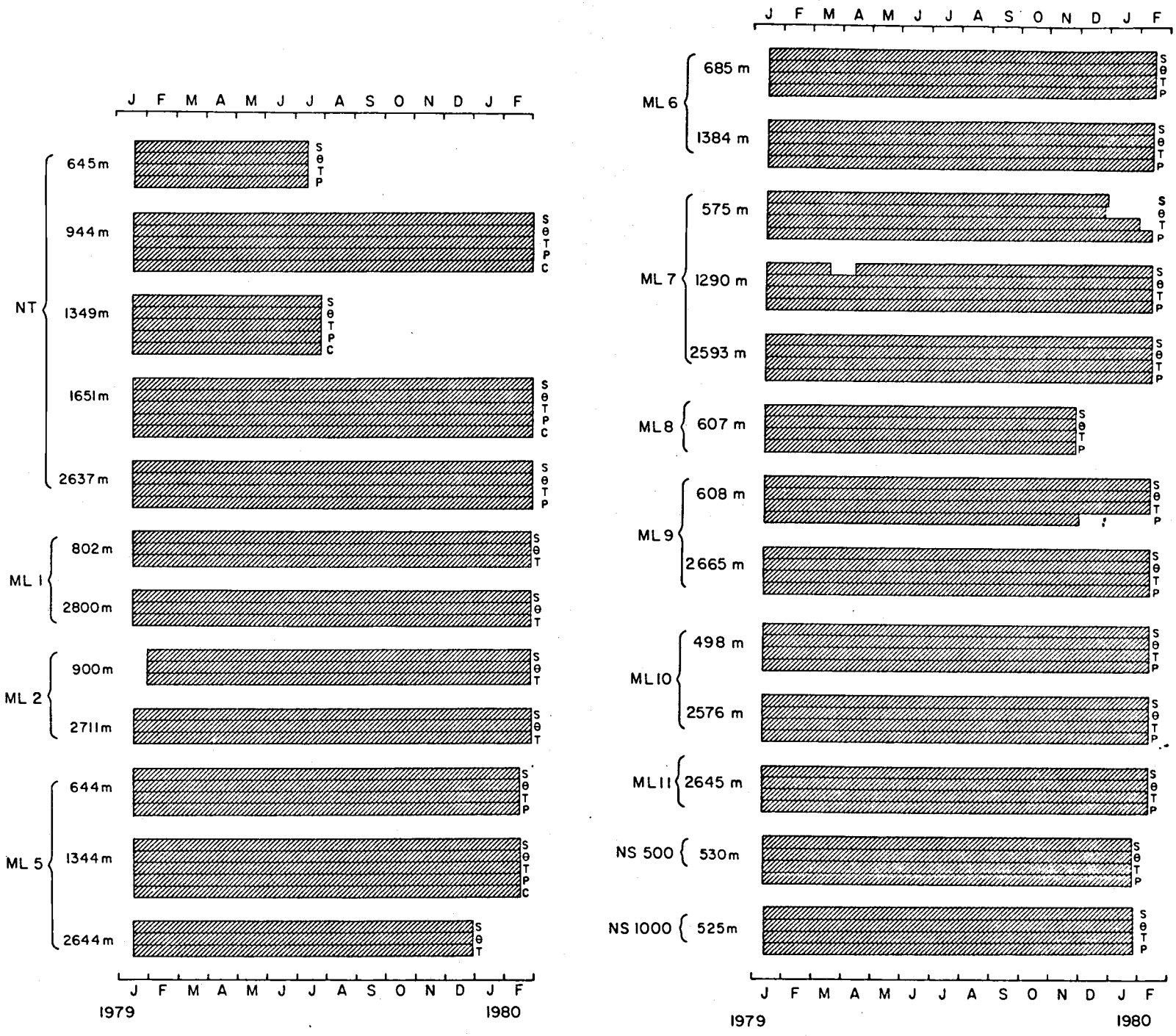
Figure 1 shows the Main Line (ML) array consisting of 48 current meters on 17 moorings; and the Mapping and Statistics (MS) array with 22 current meters on 7 moorings deployed upstream in the Antarctic Circumpolar Current. Figures 2 and 3 show the duration of data for each meter. The data from the ML array are presented in Part A of this report. The data from the MS array are presented in Part B.

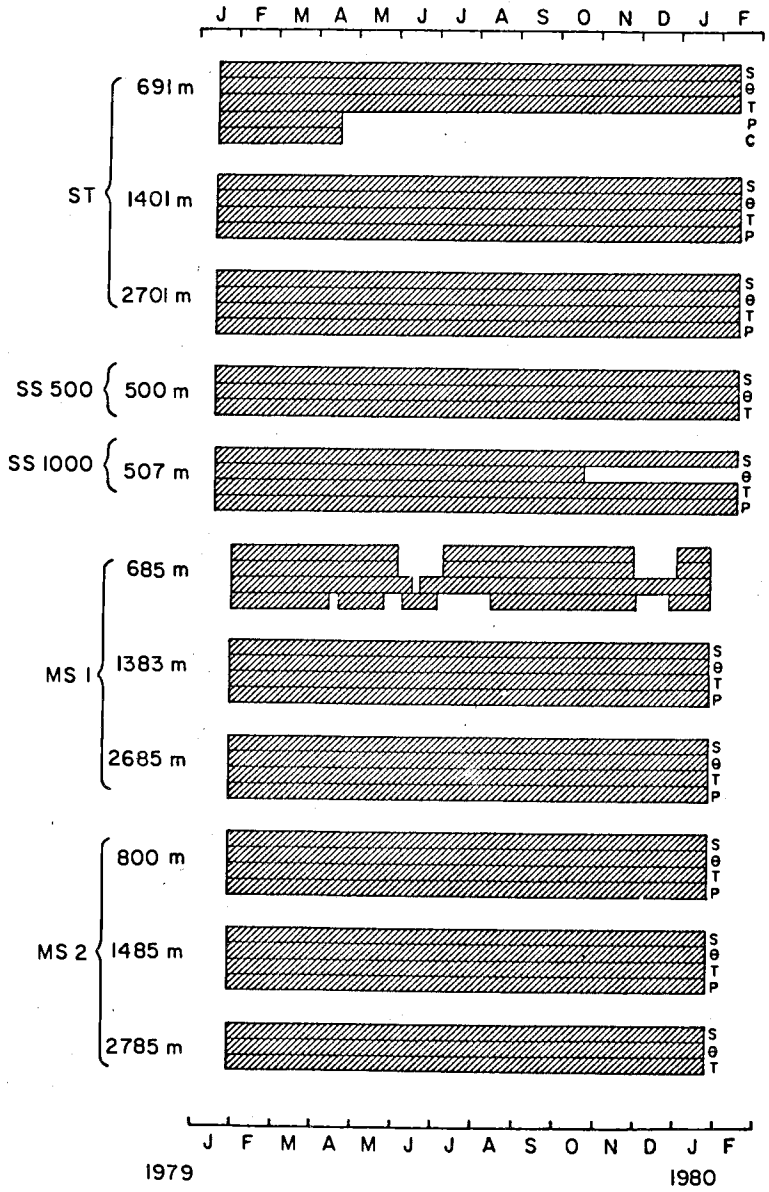
The general calibration techniques for the Aanderaa meters used have been previously discussed (Pillsbury et al., 1974, 1980).

All of the current meter moorings were subsurface, taut-wire moorings. Their design followed in large part the Woods Hole Oceanographic Institution intermediate mooring

Figure 1. The configuration of the current meter moorings installed in the Drake Passage in 1979.




J F M A M J J A S O N D J F
NT
645m
944m
1349m
1651m
2637m
ML 1
802m
2800m
ML 2
900m
2711m
ML 5
644m
1344m
2644m
S θ T P
S θ T P C
1979
1980
ML 6
685 m
1384 m
ML 7
575 m
1290 m
2593 m
ML 8
607 m
ML 9
608 m
2665 m
ML 10
498 m
2576 m
ML 11
2645 m
NS 500
530m
NS 1000
525m



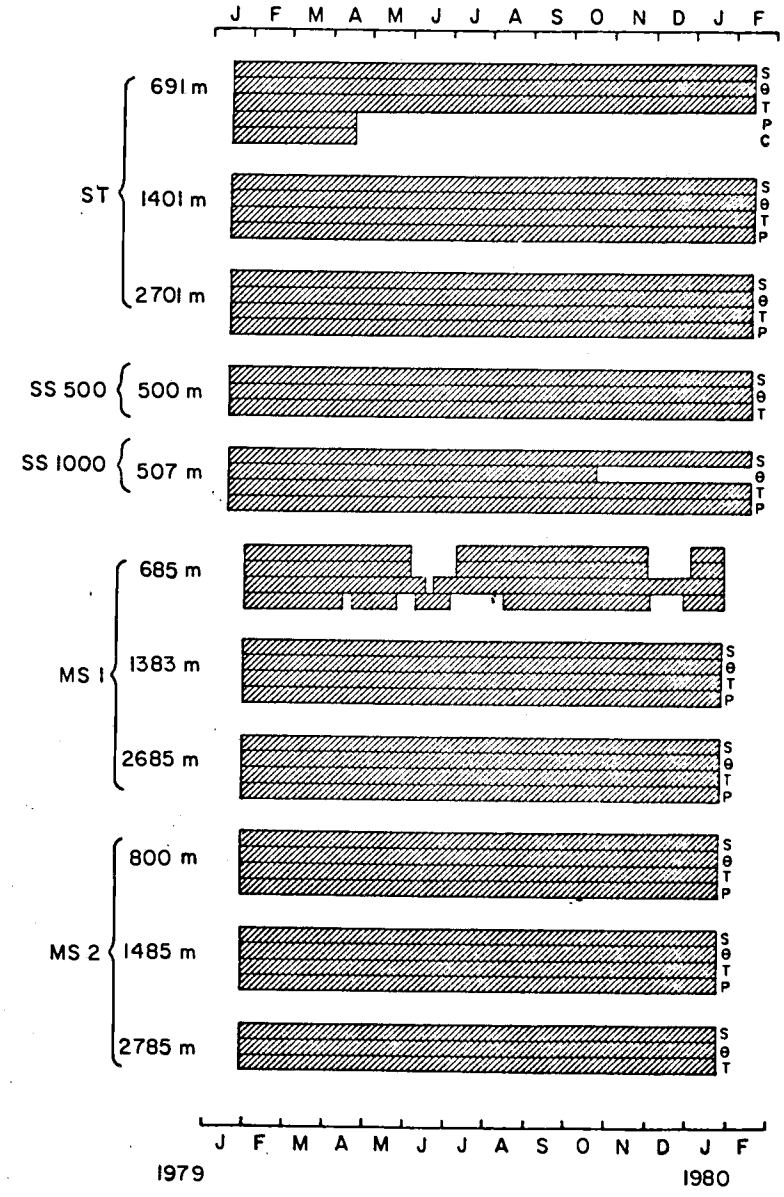


Figure 3. Data recovered from the array.

scheme (Heinmiller and Walden, 1973).

Description of the Processed Data

Data from each installation are presented separately. The header page gives information about the mooring location, instrumentation, data interval and a statement describing the kind of data collected at that point and the quality of the record. For a discussion of the depths assigned to the meters see the appendix.

Each meter has a serial number assigned to it by the manufacturer. Each successive tape recorded by that machine is numbered with the serial number and the tape number. Thus, 485/10 indicates the tenth tape recorded by machine 485.

The table of statistics following the header page gives the arithmetic mean, standard deviation, skewness, kurtosis, maximum value, minimum value and the number of hourly values of the record length for each variable measured. U is the true east-west velocity component and V is the true north-south velocity component.

Progressive vector diagrams, real time plots, stick figure plots, rotary spectra, and conventional power spectra follow the table of statistics. Data were taken every hour. Plots which show each point are too long to be easily included in this report. To reduce the plots and still present the important low frequency fluctuations, the data were filtered with a 60 + 1 + 60 point, Cosine Lanczos

filter with a half-amplitude at 34.3 hours and a half-power at 40 hours. The data were then resampled at 6 hour intervals. This filter was designed to remove both tidal and inertial oscillations. The conventional power spectra are calculated from unfiltered data.

ACKNOWLEDGMENTS

The funds for the program came from the National Science Foundation grant OCE - 7823579 which is gratefully acknowledged. Appreciation is also expressed to B. Moore, J. Simpkins, E. Seifert and D. Barstow for calibration and preparation of the instruments. Special appreciation to D. Root for his careful and extensive data processing and to G. Pittock who assembled this report.

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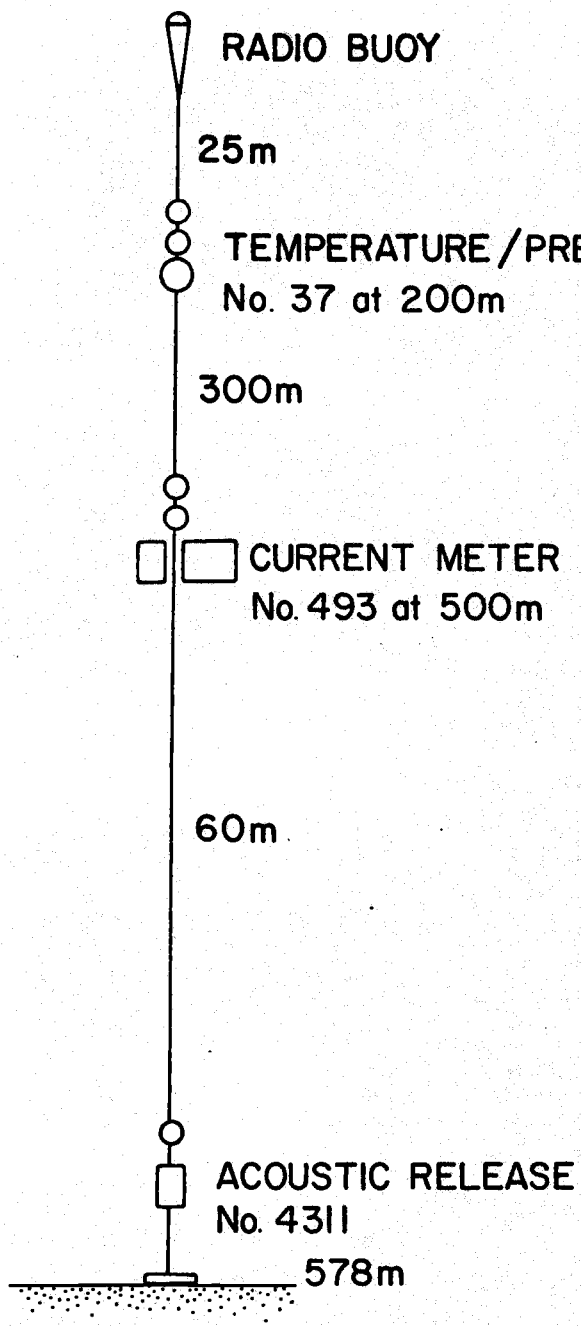
NS-500



NORTH SLOPE (NS) 500
56° 27.69' S
66° 53.18' W
INSTALLED: 13 JANUARY 1979

NS-500

Position: 56°27.69'S, 66°53.18'W
Depth of Water: 578 m
Set at 1011 UCT 13 January '79 by R/V MELVILLE
Retrieved at 1431 UCT 29 January '80 by R/V ATLANTIS II
Data Interval: 1309 UCT 13 January '79 to 1409 UCT 29 January '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	493/40

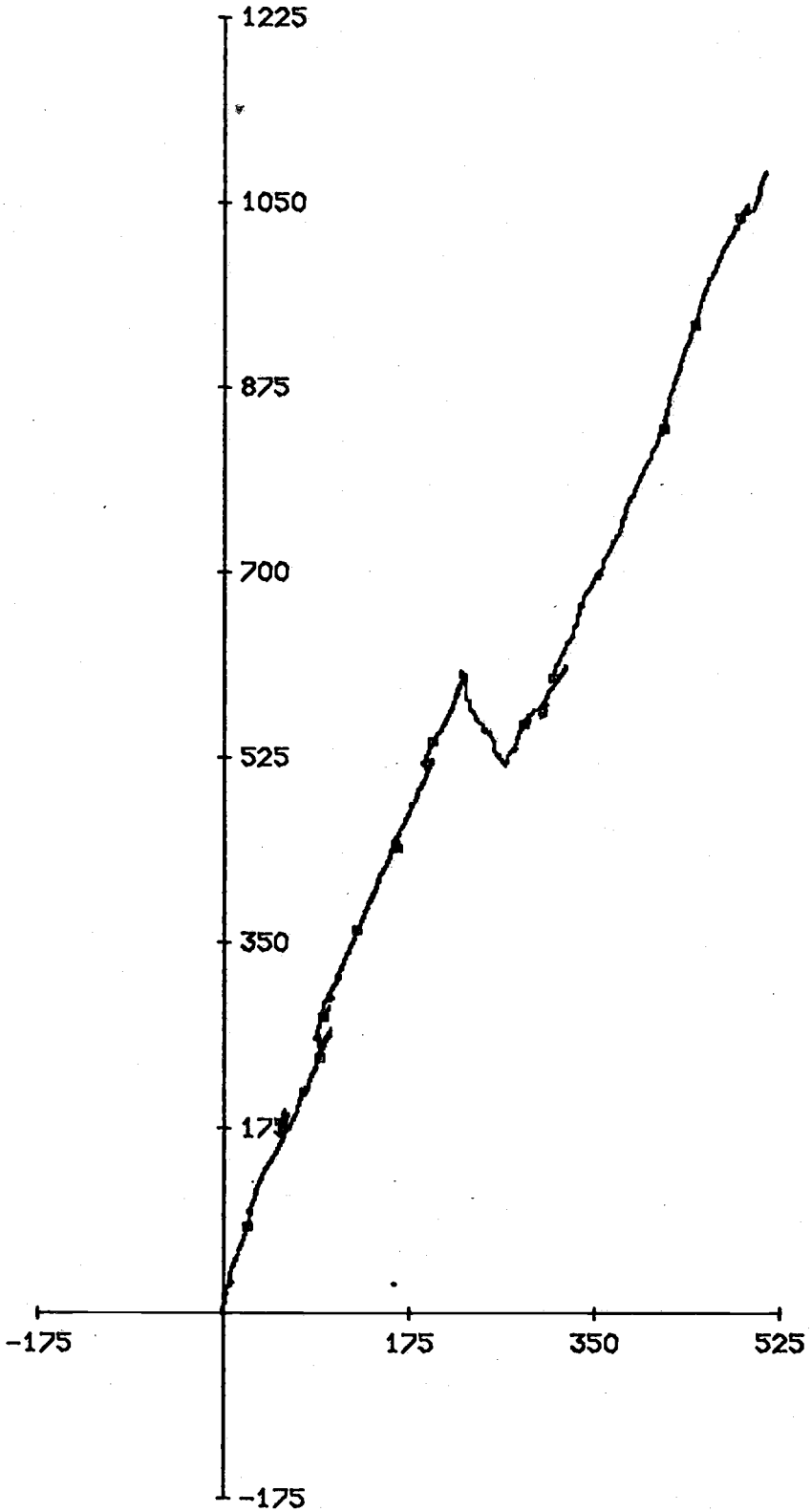
Instrument 493 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

NS-500

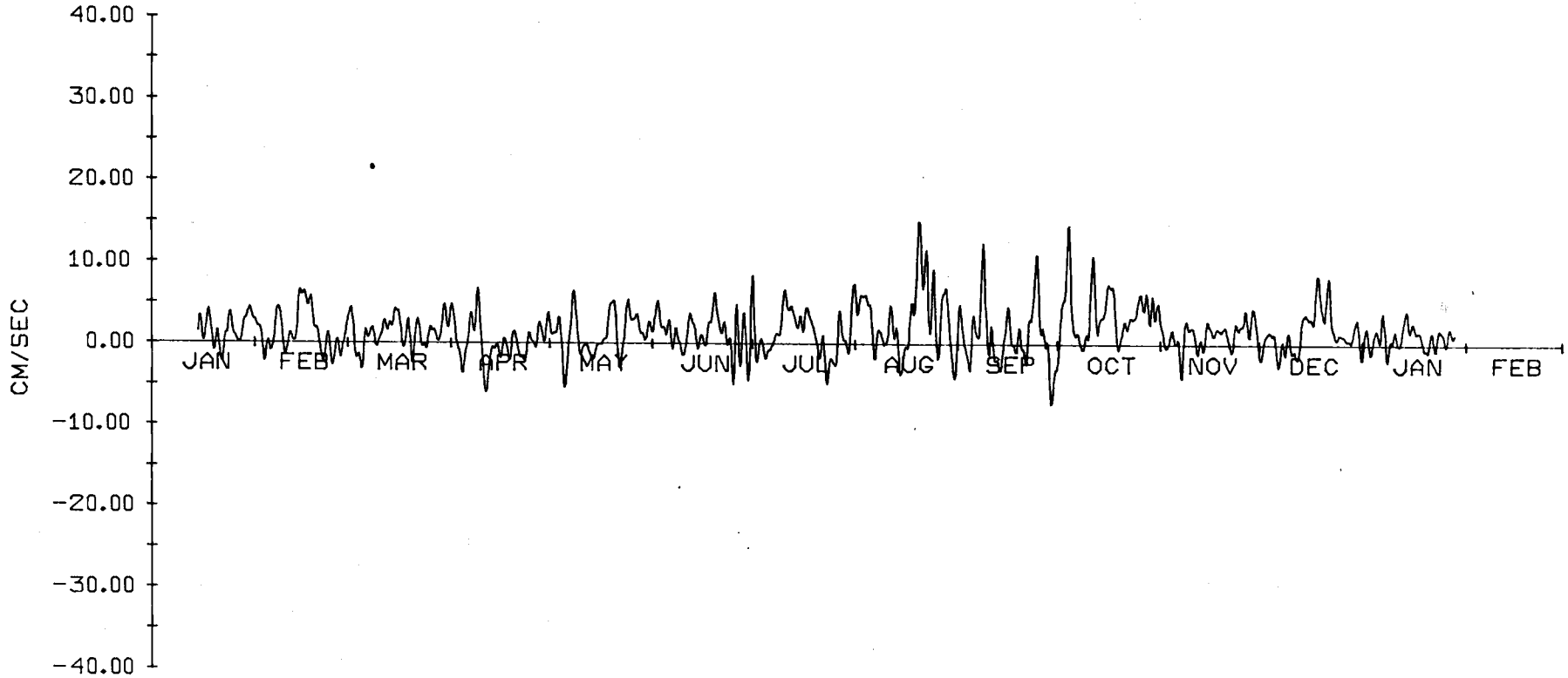
530 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	8.64	5.93	2.03	10.38	.70	56.00	9146
U	1.56	5.39	0.38	4.11	-17.60	34.30	9146
V	3.28	8.22	-0.56	7.23	-55.80	45.30	9146
T	4.70	0.15	0.07	3.58	4.01	5.27	9146
P	532.74	0.76	6.28	70.09	530.10	546.50	9146

Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



530 M AT NS-500. 381.0 DAYS STNG 1309 13 JAN 79.



530 METERS AT NS-500
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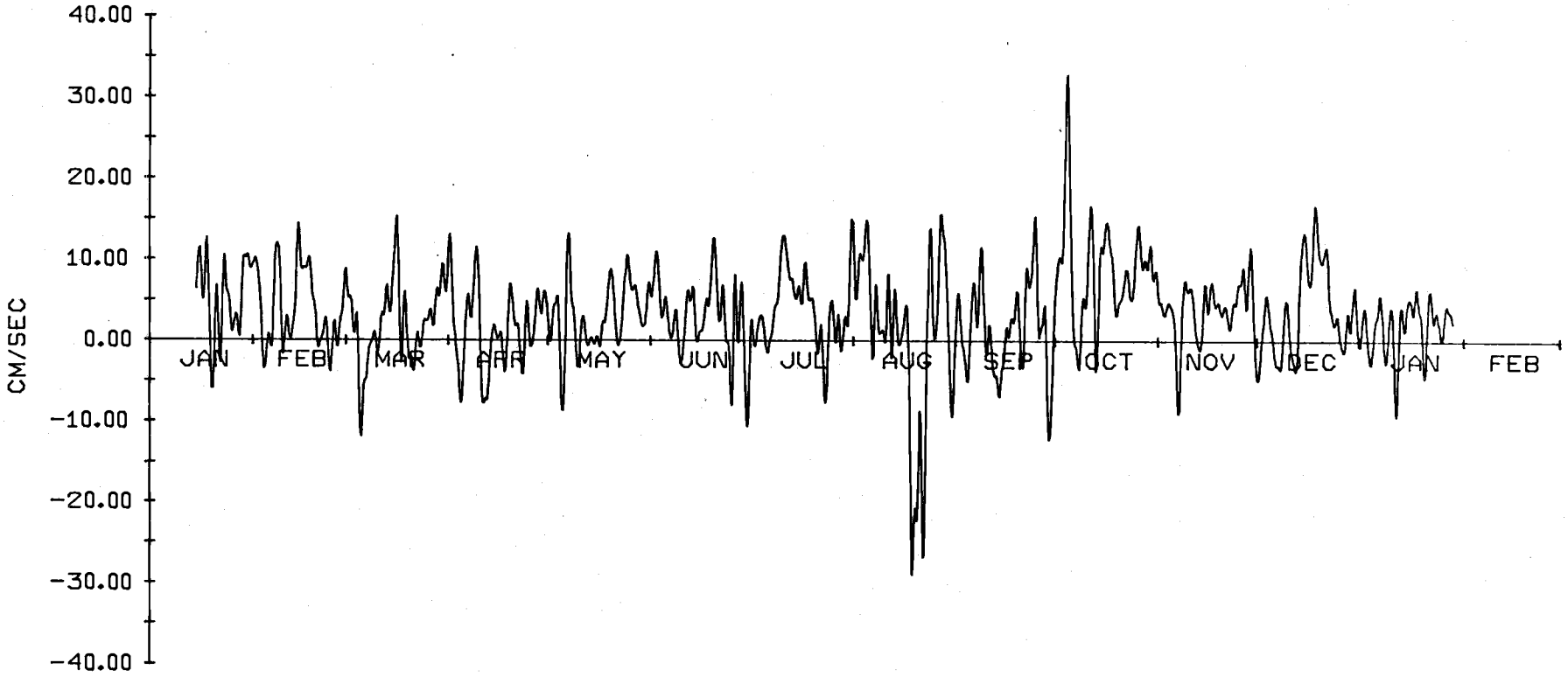

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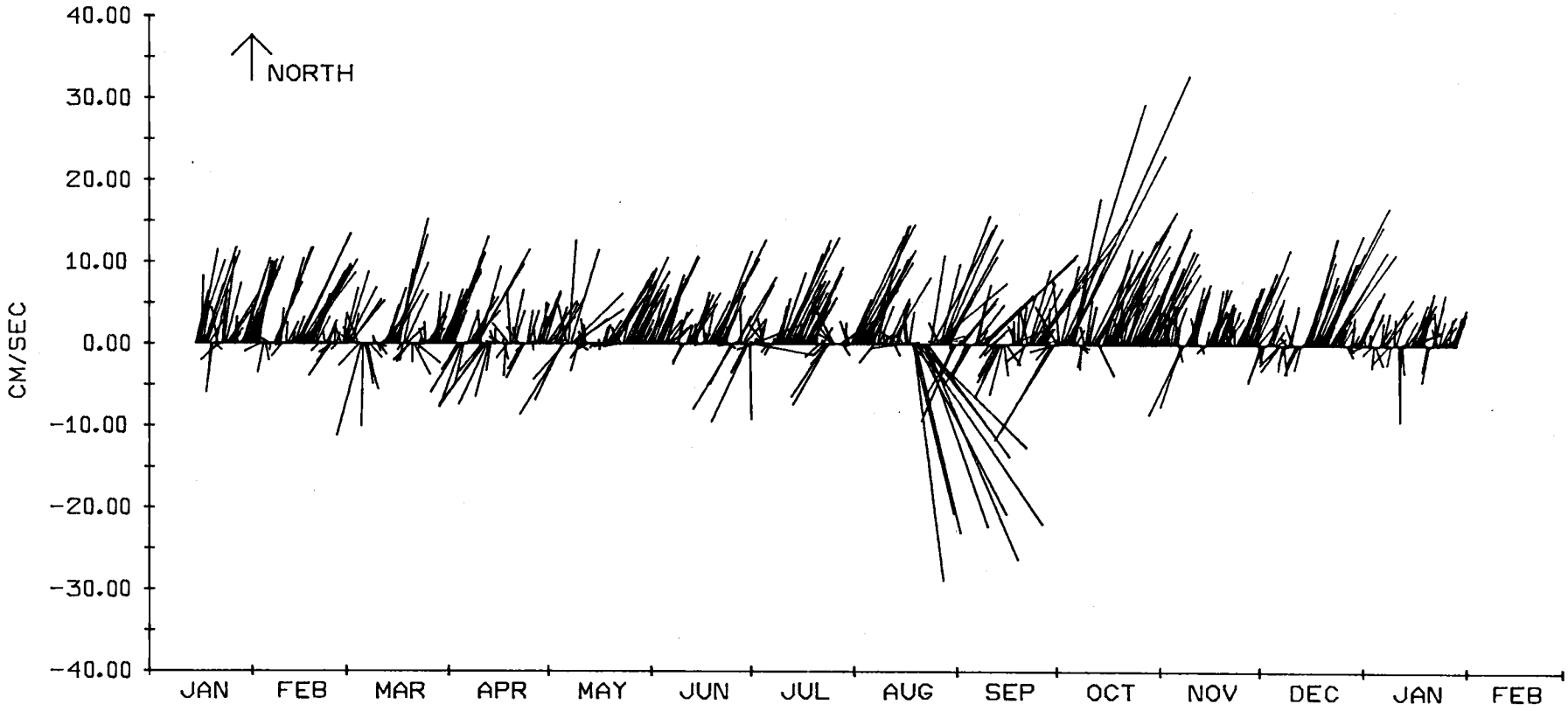
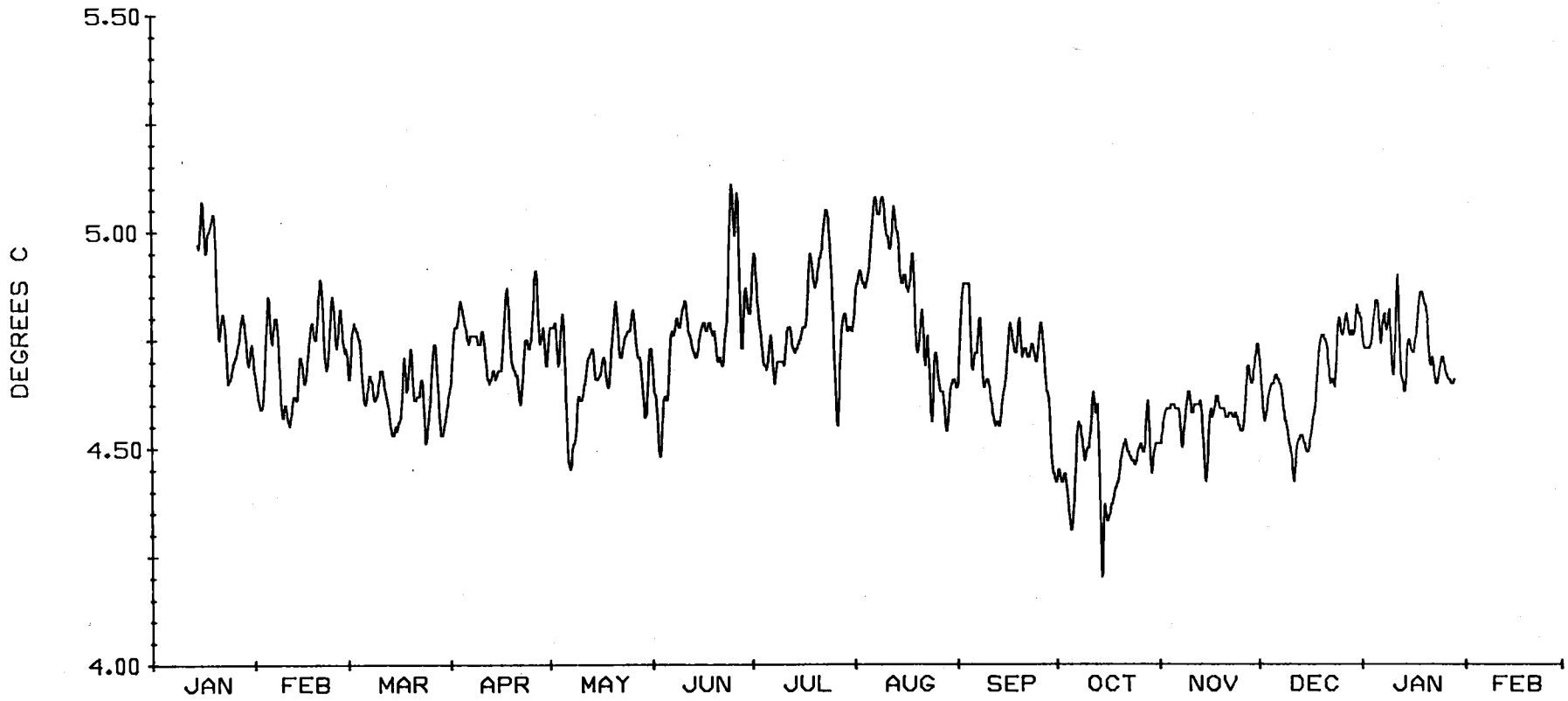
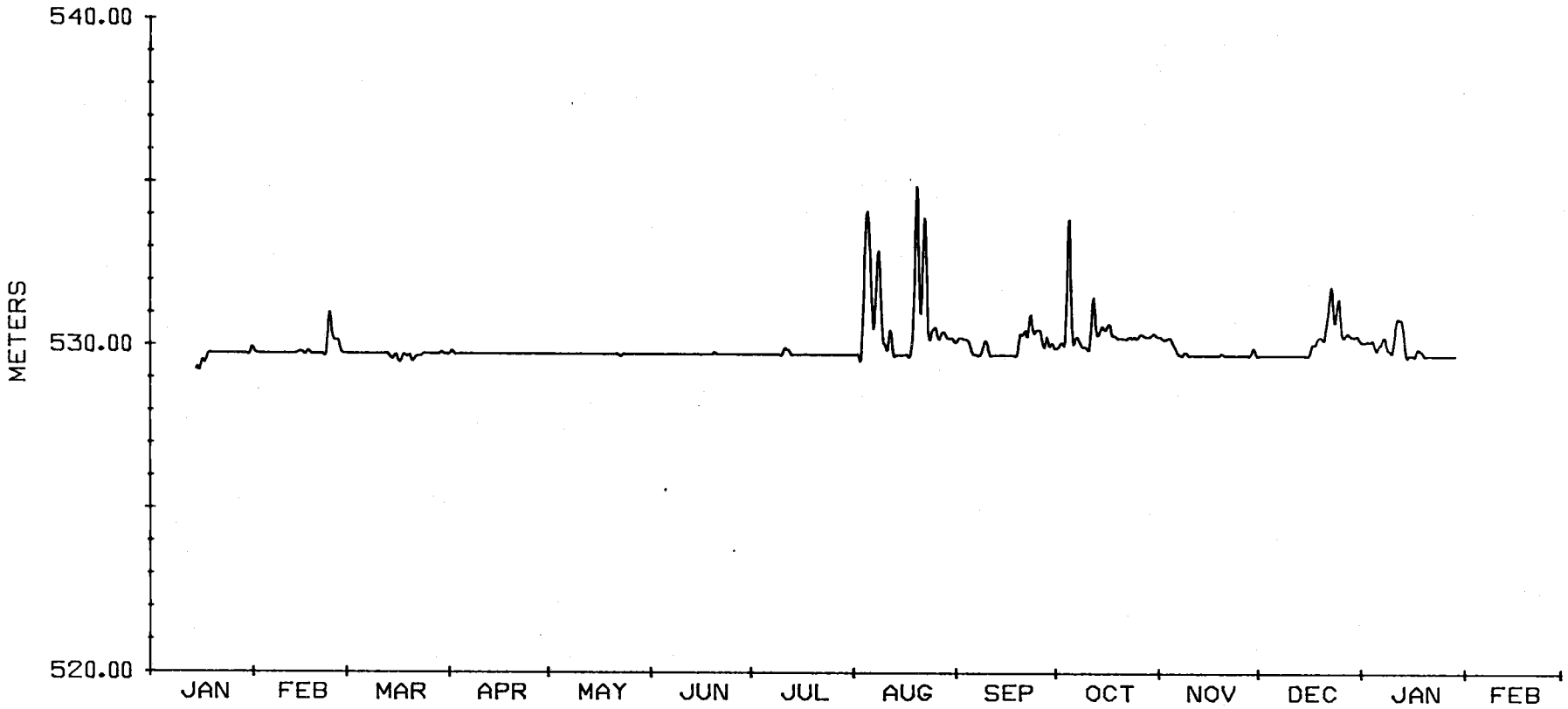
LLP FILTERED V COMPONENT



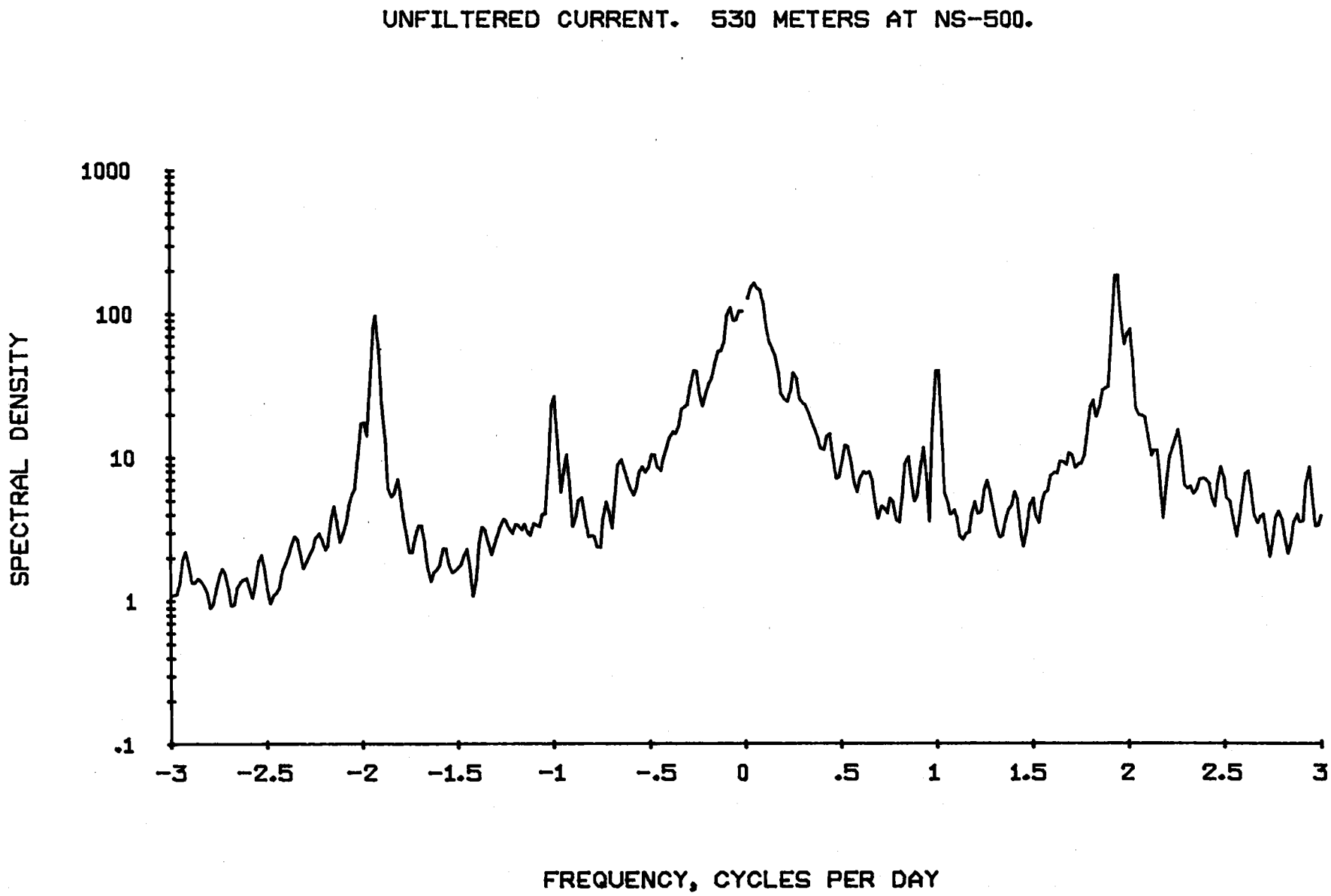
530 METERS AT NS-500
LLP CURRENT

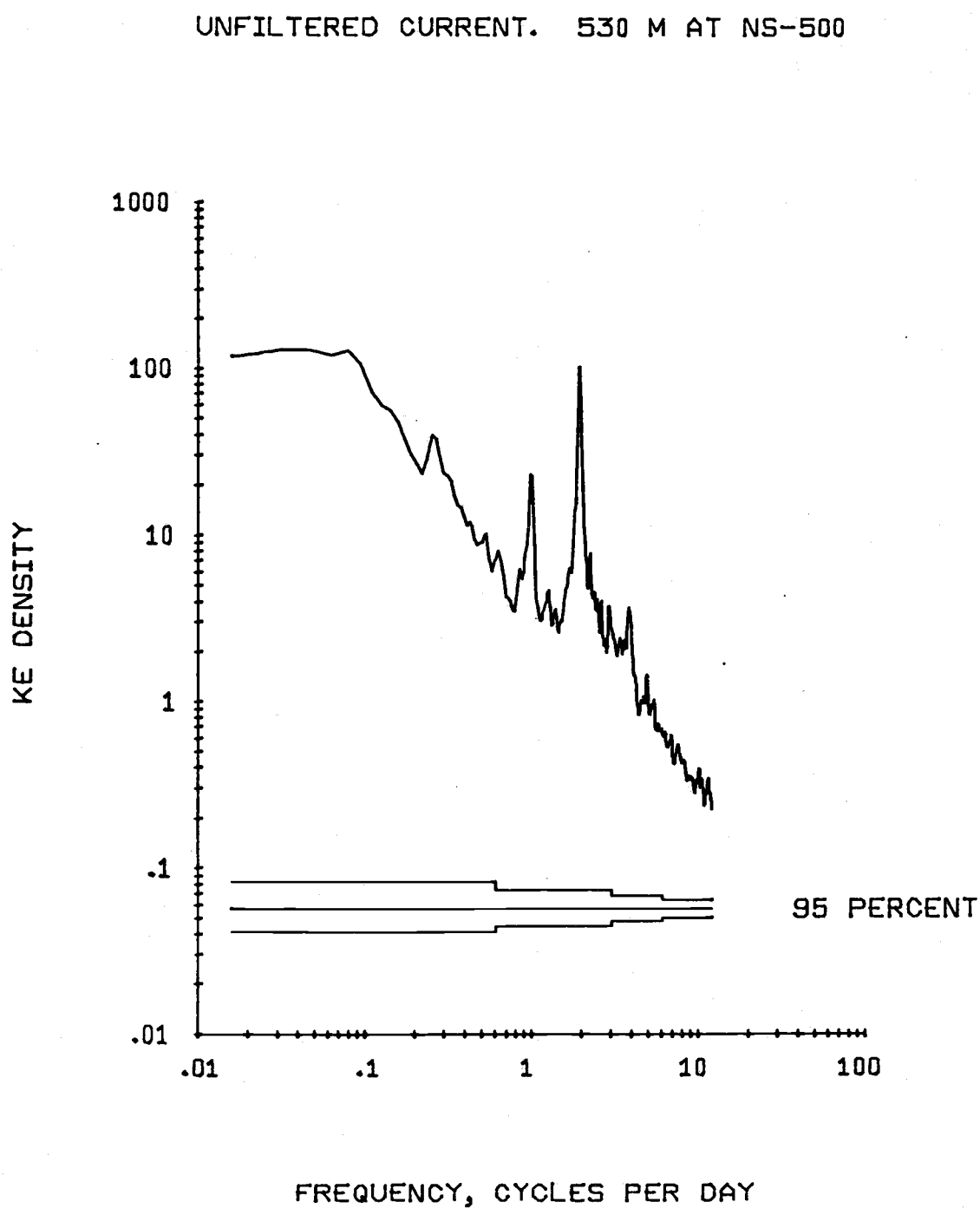


530 METERS AT NS-500
LLP FILTERED TEMPERATURE

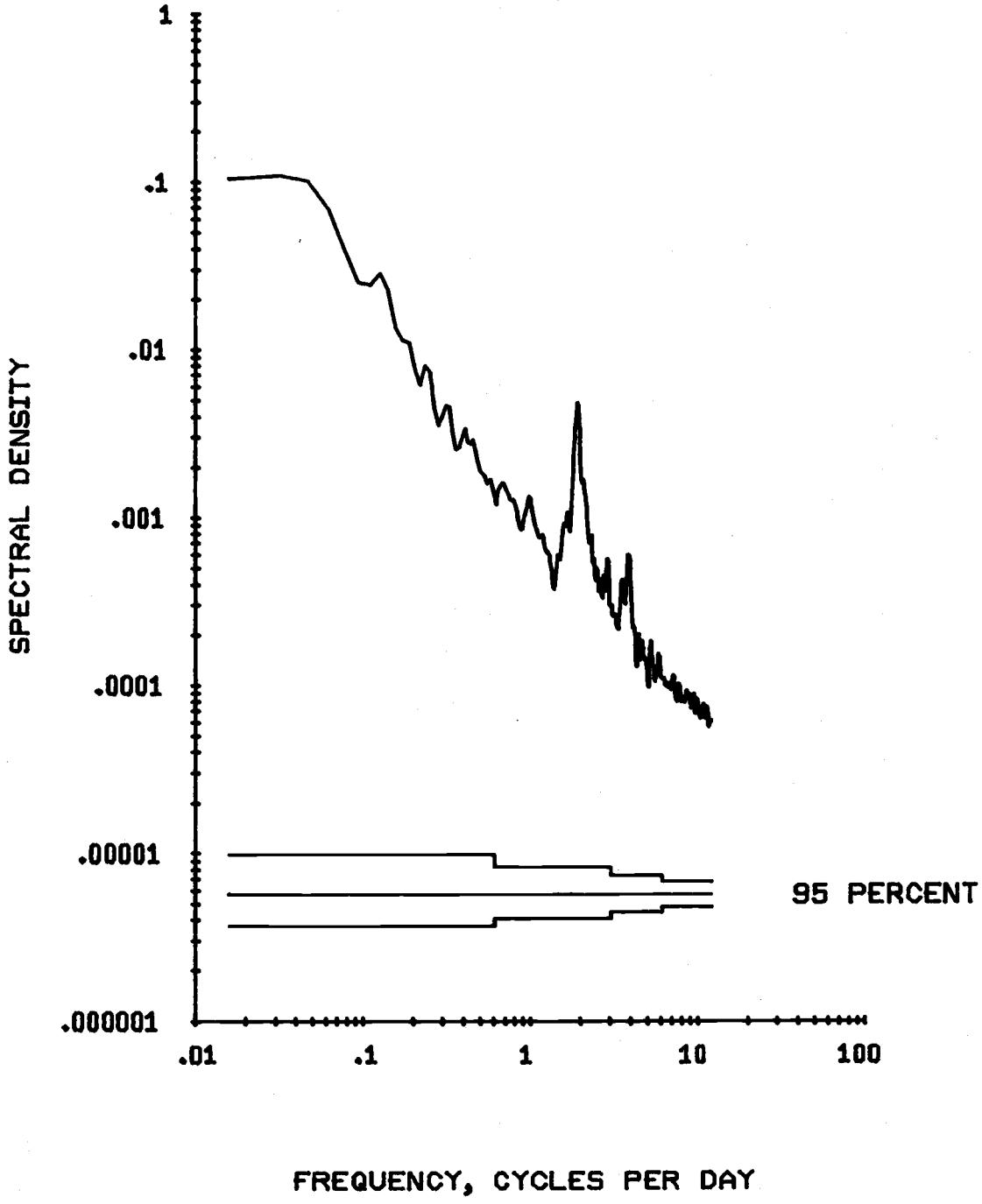


530 METERS AT NS-500
ULP FILTERED PRESSURE

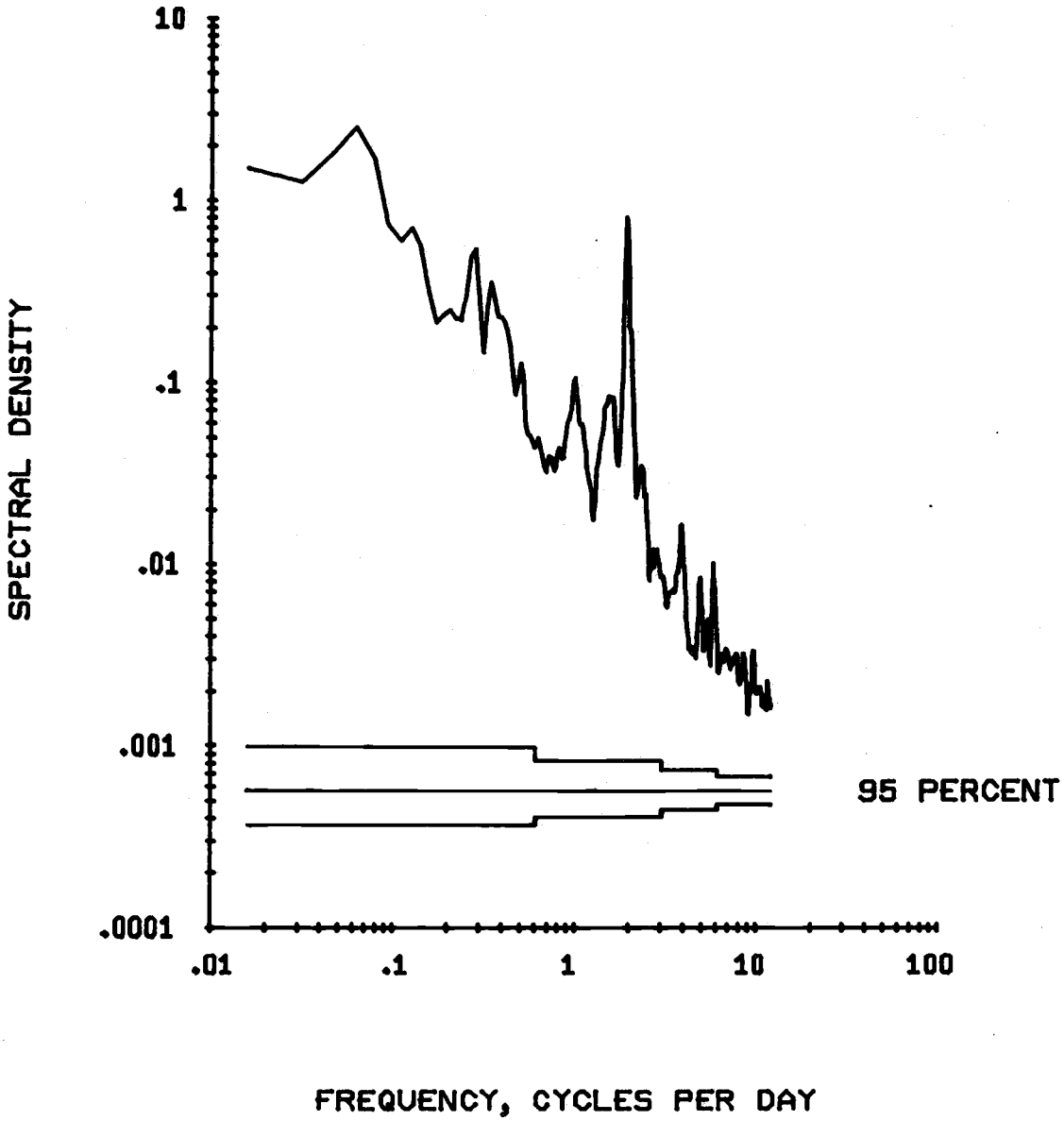

UNFILTERED CURRENT. 530 METERS AT NS-500.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY


UNFILTERED CURRENT. 530 M AT NS-500
1000
100
10
1
.1
.01
KE DENSITY
95 PERCENT
.01
.1
1
10
100
FREQUENCY, CYCLES PER DAY

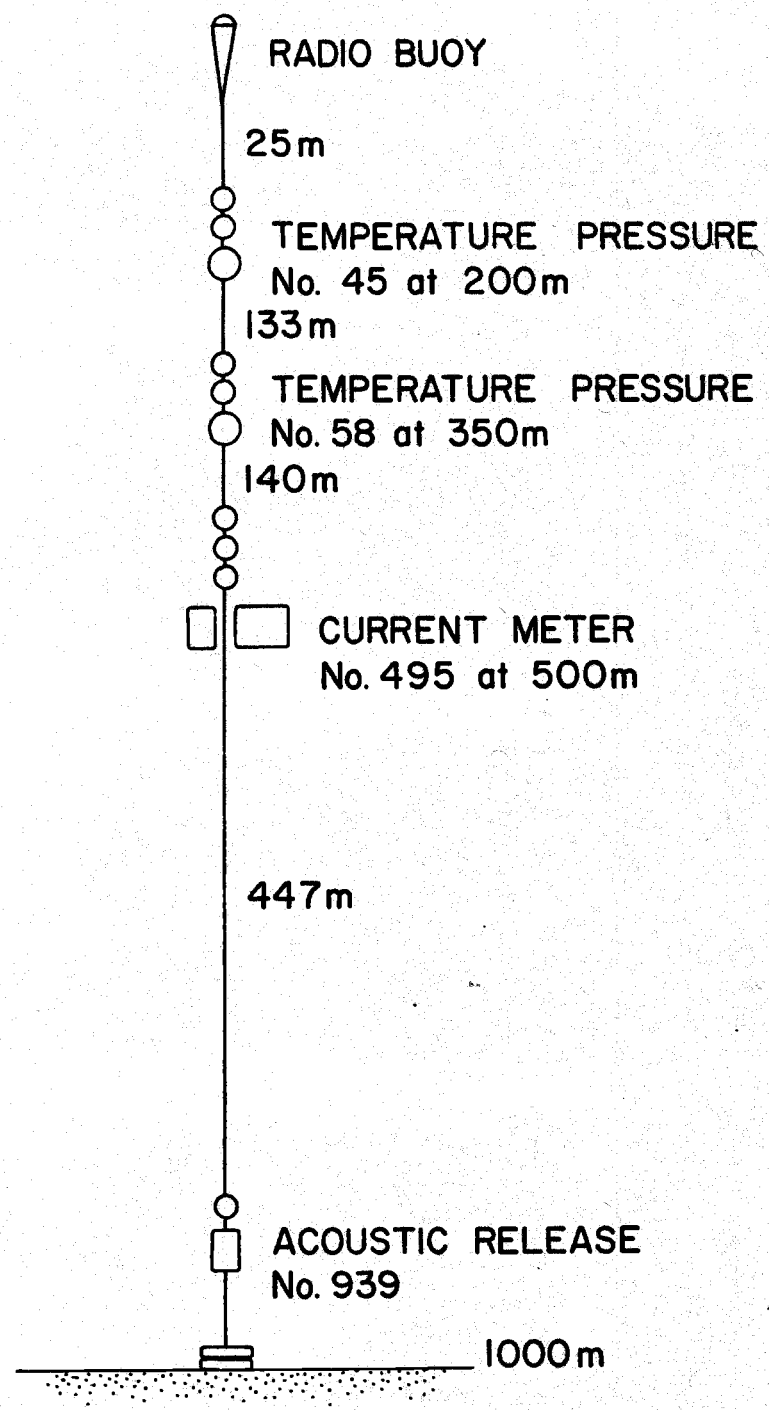
UNF TEMPERATURE. 530 M AT NS-500.



UNF PRESSURE. 530 M AT NS-500.



NS-1000



NORTH SLOPE (NS) 1000

56° 34.3' S

66° 55.5' W

INSTALLED: 14 JANUARY 1979

NS-1000

Position: 56°34.3'S, 66°55.5'W
Depth of Water: 1008 m
Set at 1139 UCT 14 January '79 by R/V MELVILLE
Retrieved at 1210 UCT 29 January '80 by R/V ATLANTIS II
Data Interval: 1358 UCT 14 January '79 to 1158 UCT 29 January '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	495/53

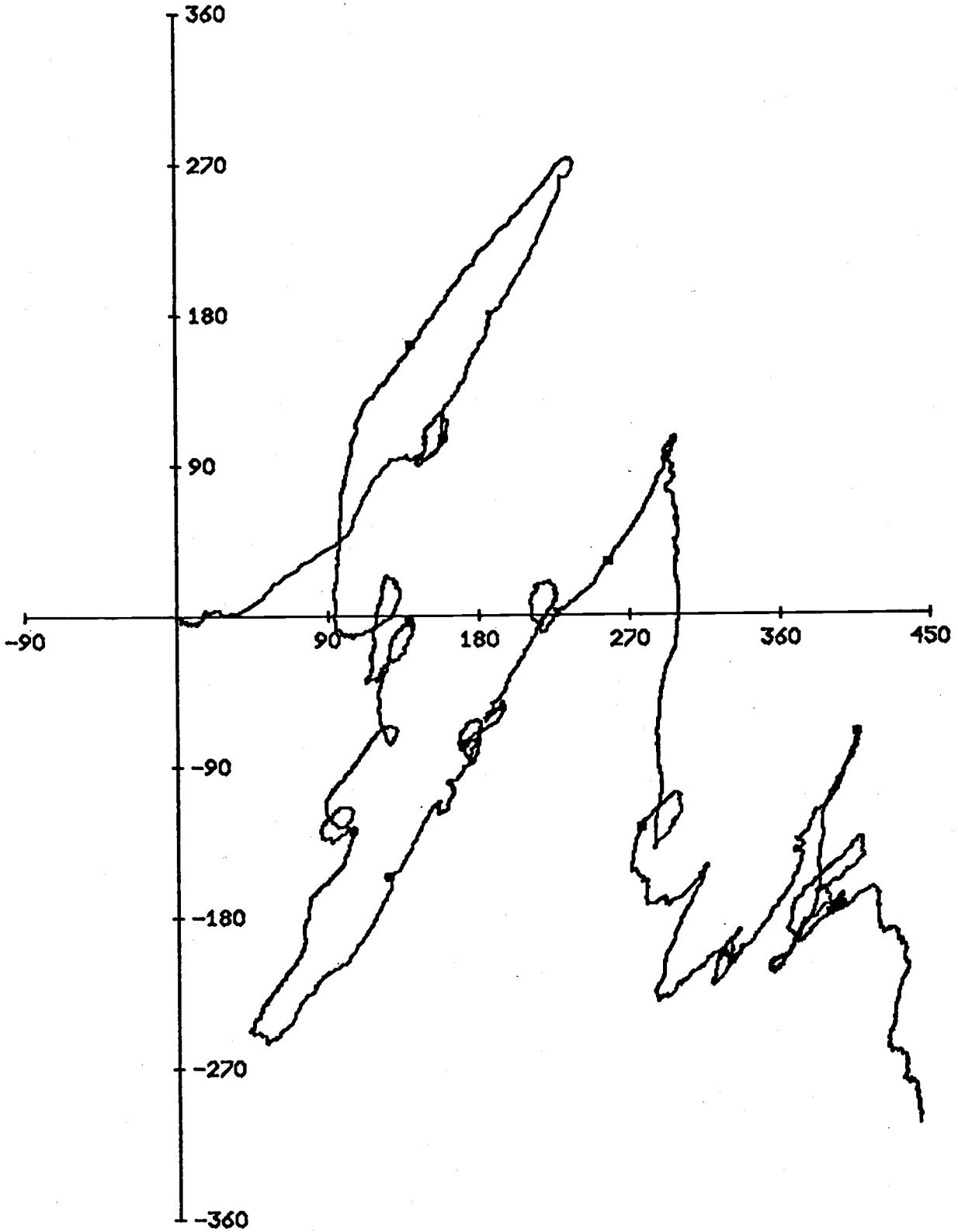
Instrument 495 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

NS-1000

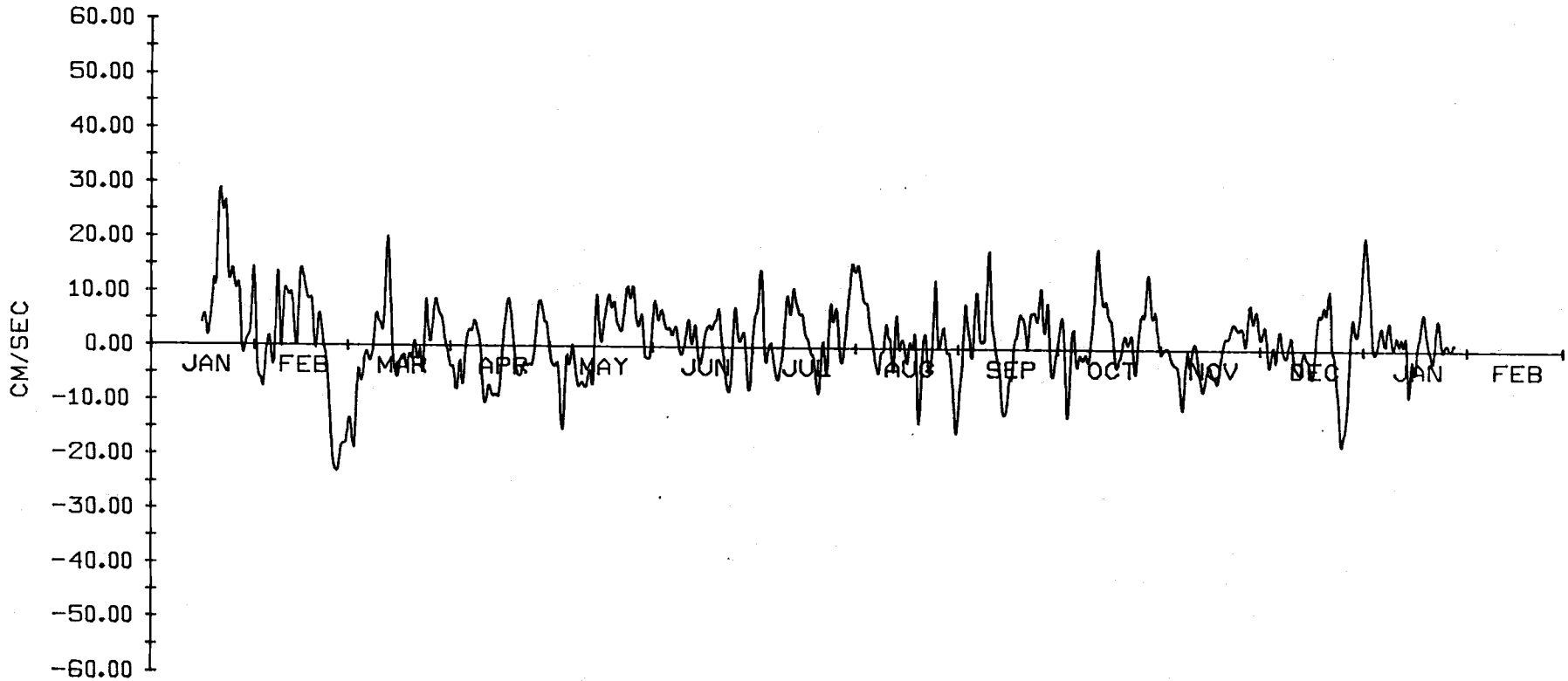
525 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	12.82	8.46	1.35	5.56	.70	61.90	9119
U	1.34	8.67	0.06	3.77	-32.40	37.10	9119
V	-.93	12.57	-0.49	3.90	-60.50	39.30	9119
T	4.65	0.16	-0.29	3.96	3.90	5.18	9119
P	527.79	4.12	11.83	187.97	525.90	615.20	9119

Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



525 M AT NS-1000. 379.9 DAYS STNG 1358 14 JAN 79.



525 METERS AT NS-1000
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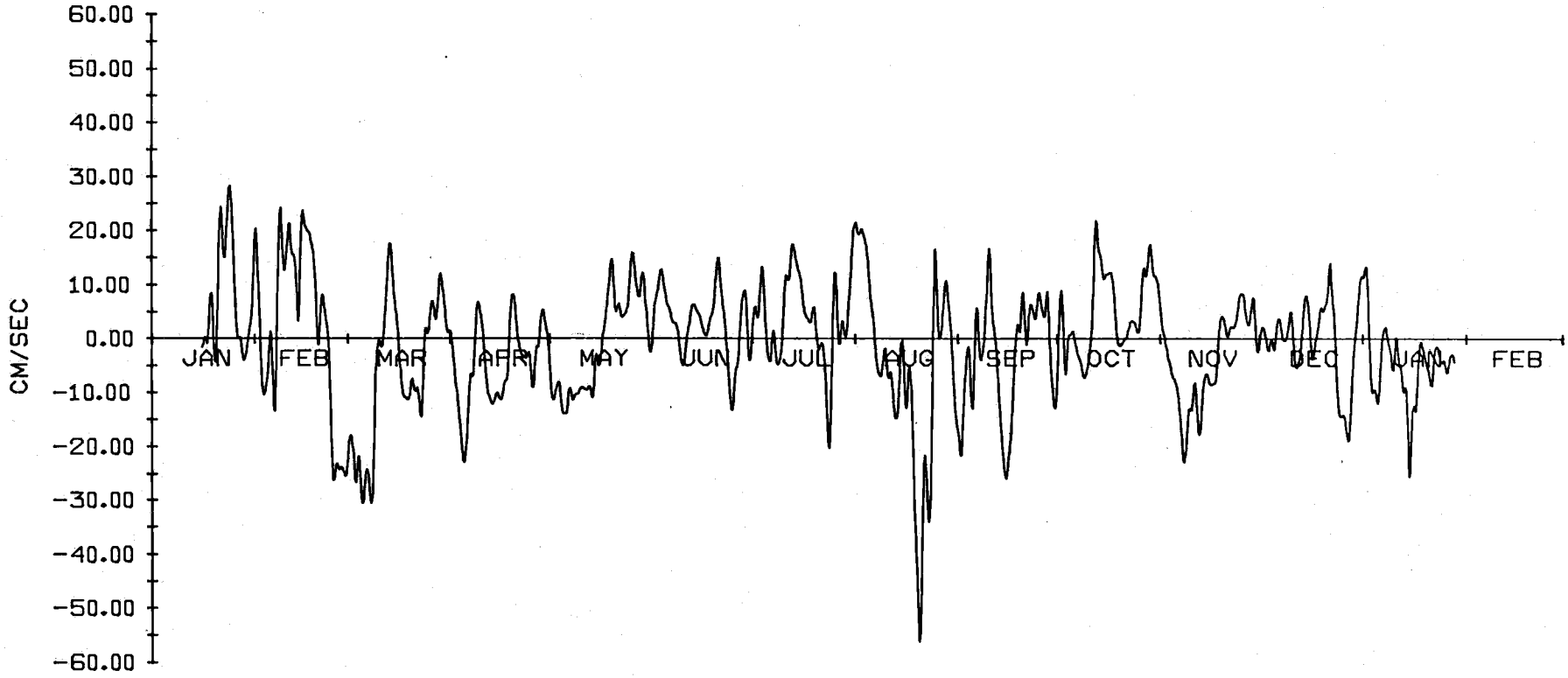
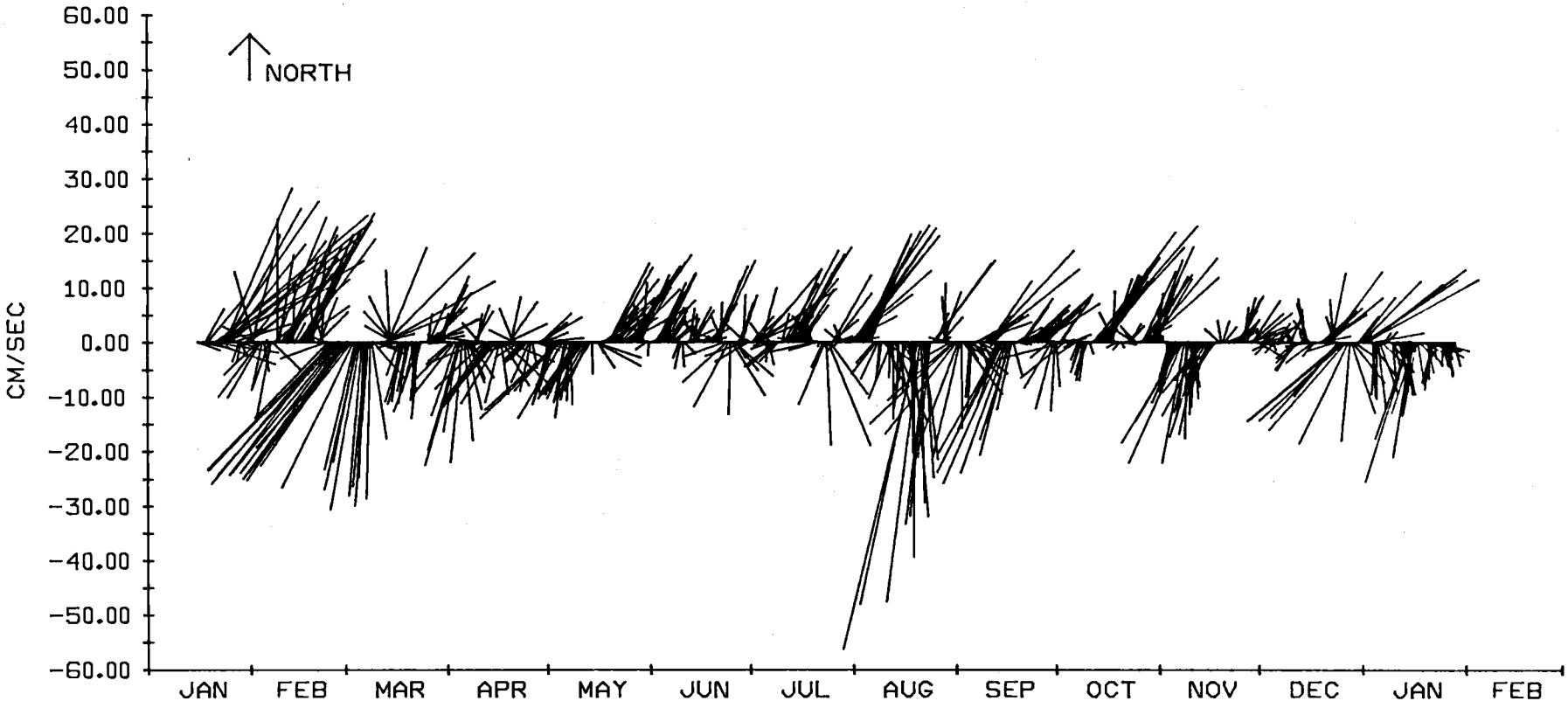


525 METERS AT NS-1000
LLP FILTERED V COMPONENT



525 METERS AT NS-1000
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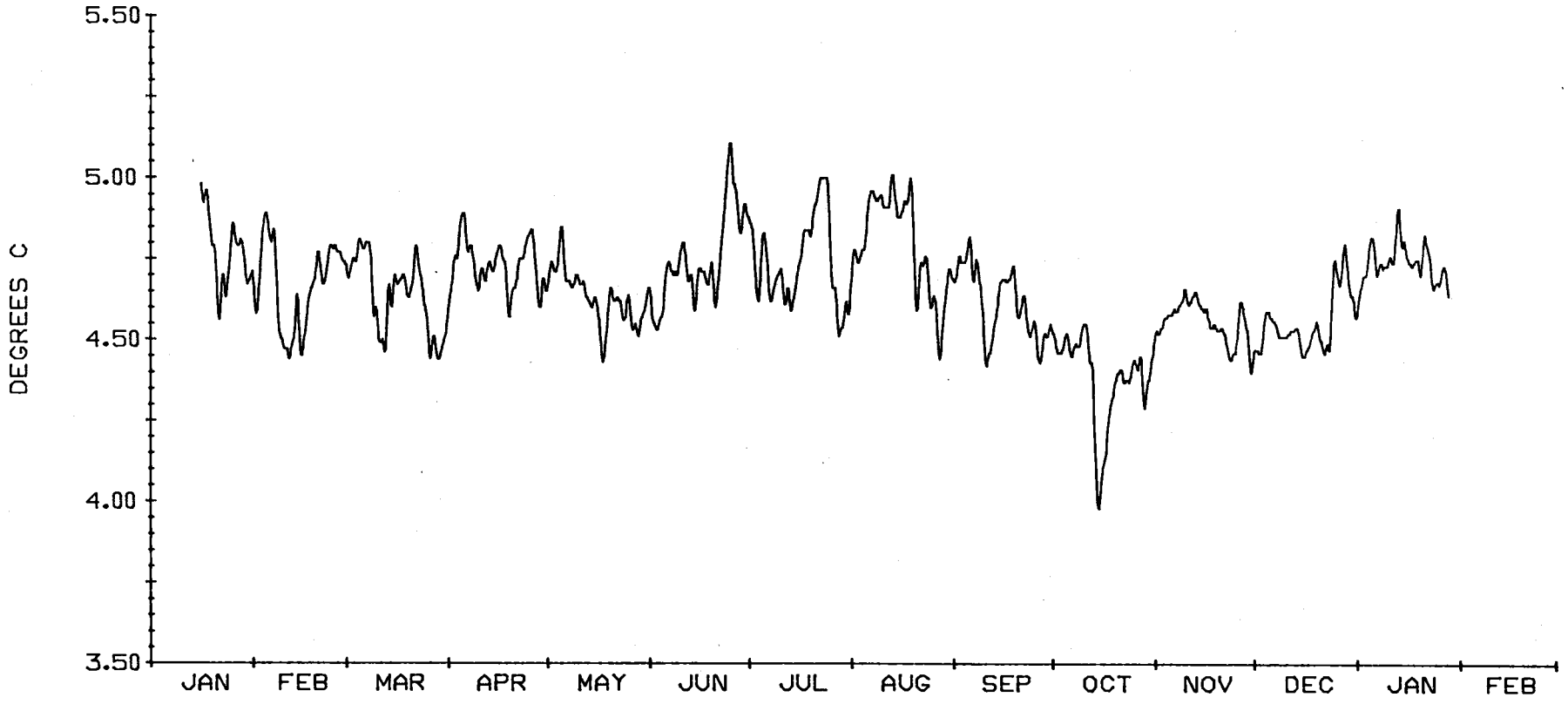

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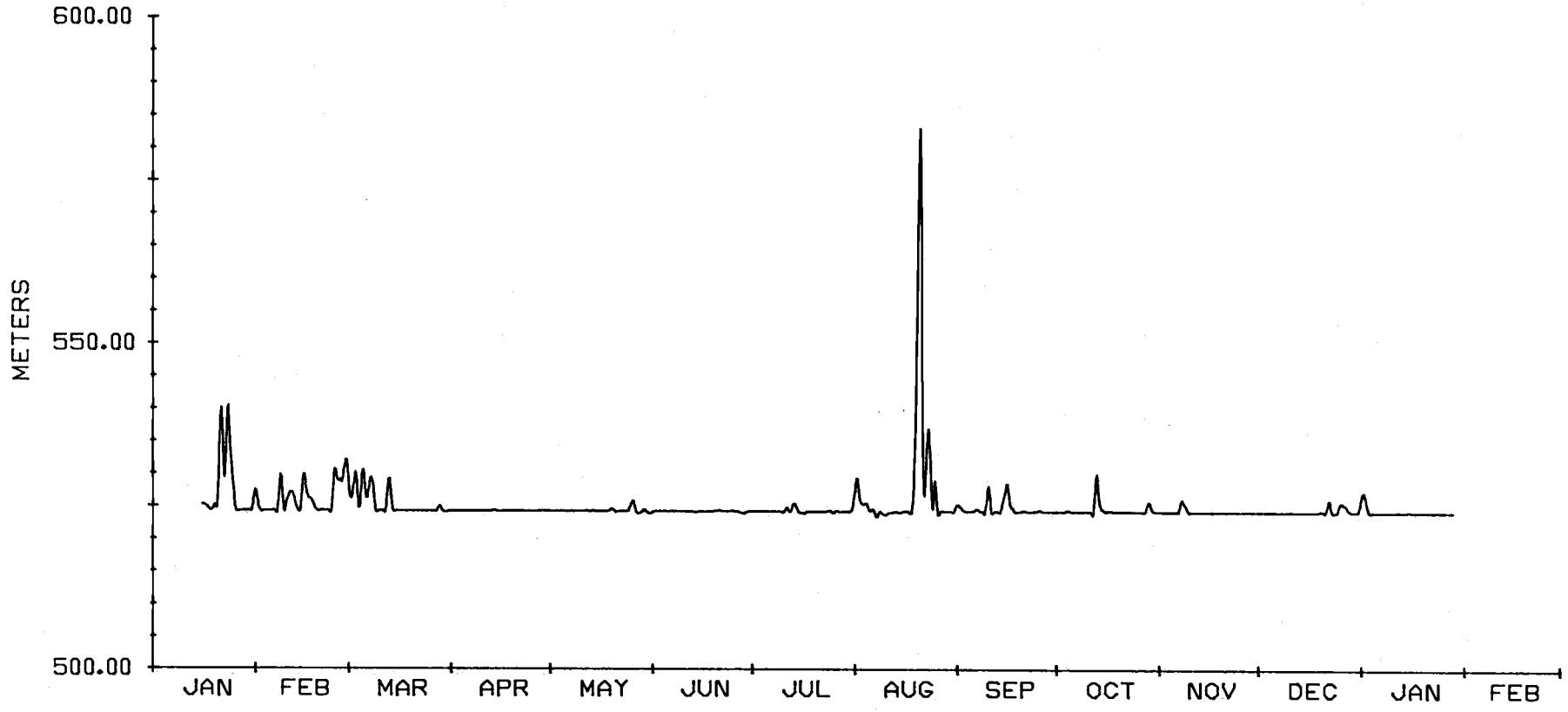
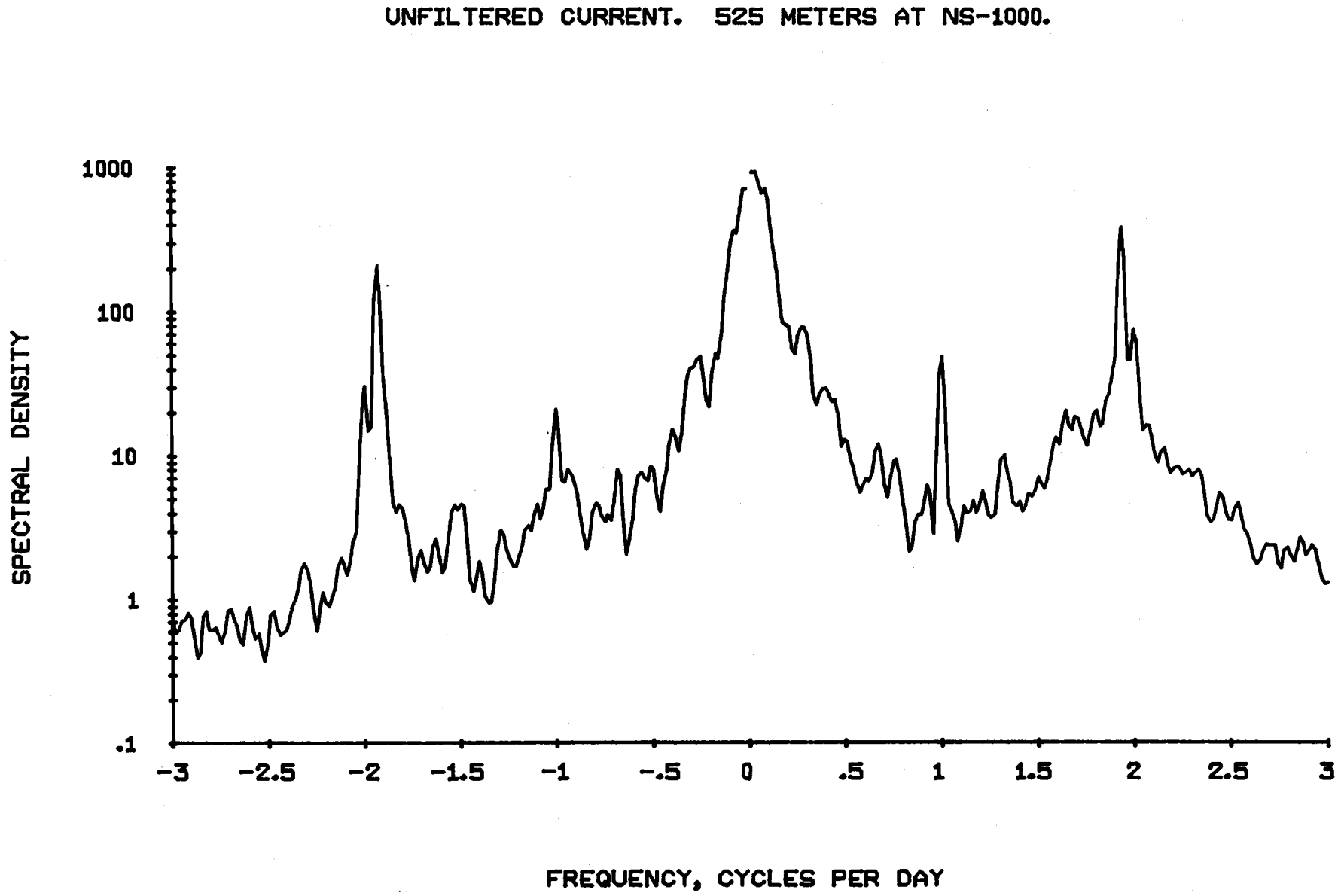
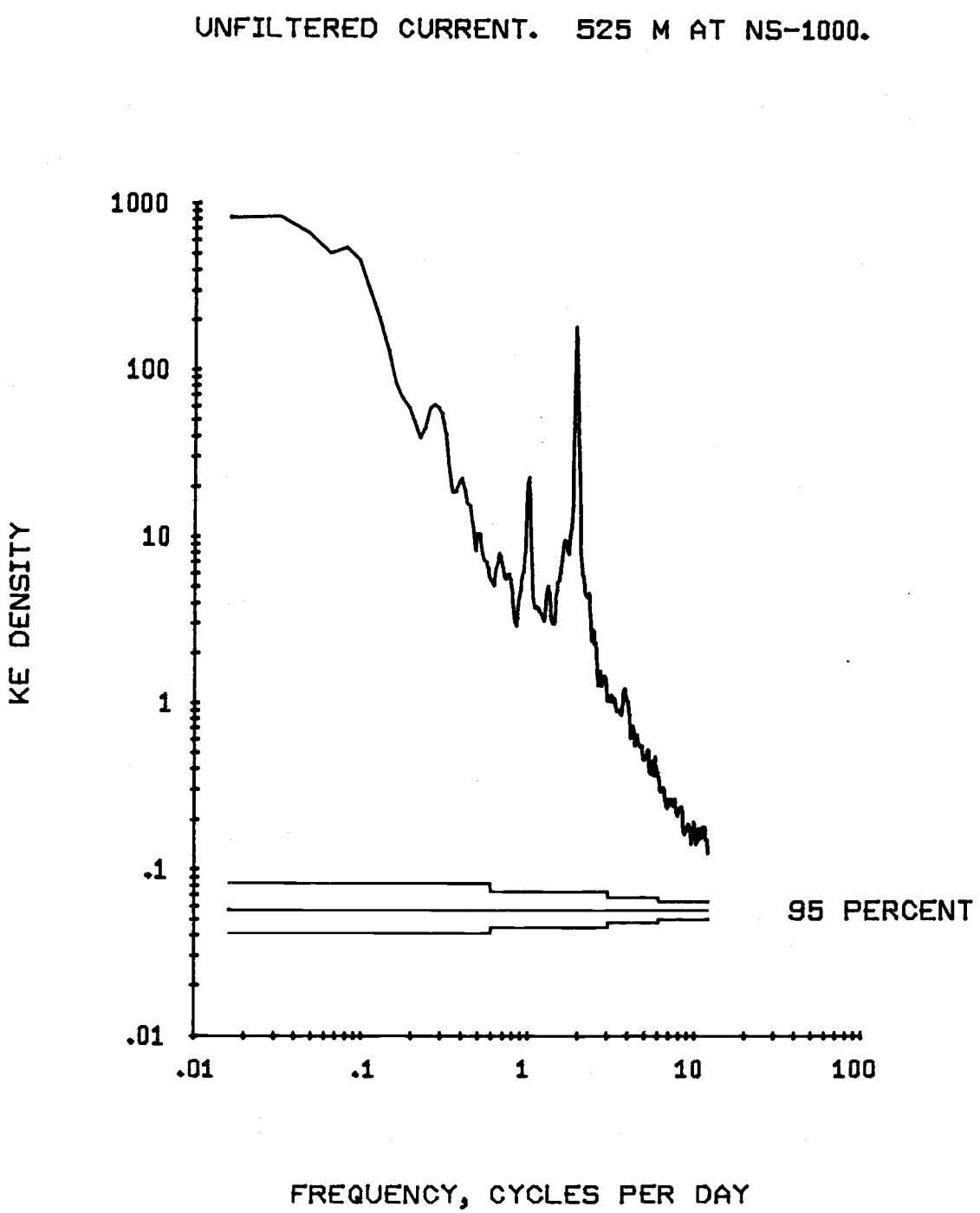
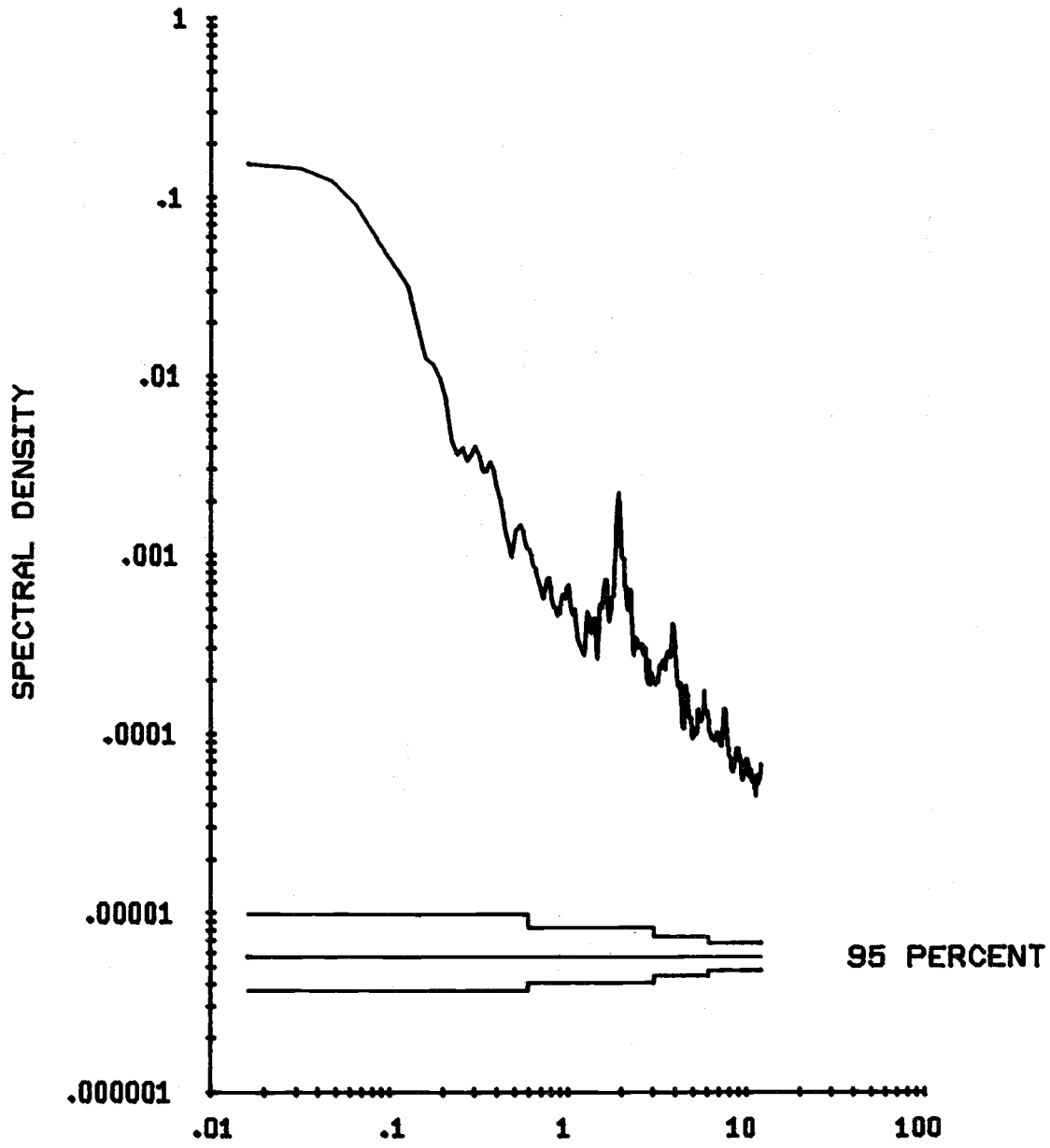


525 METERS AT NS-1000
LLP FILTERED PRESSURE

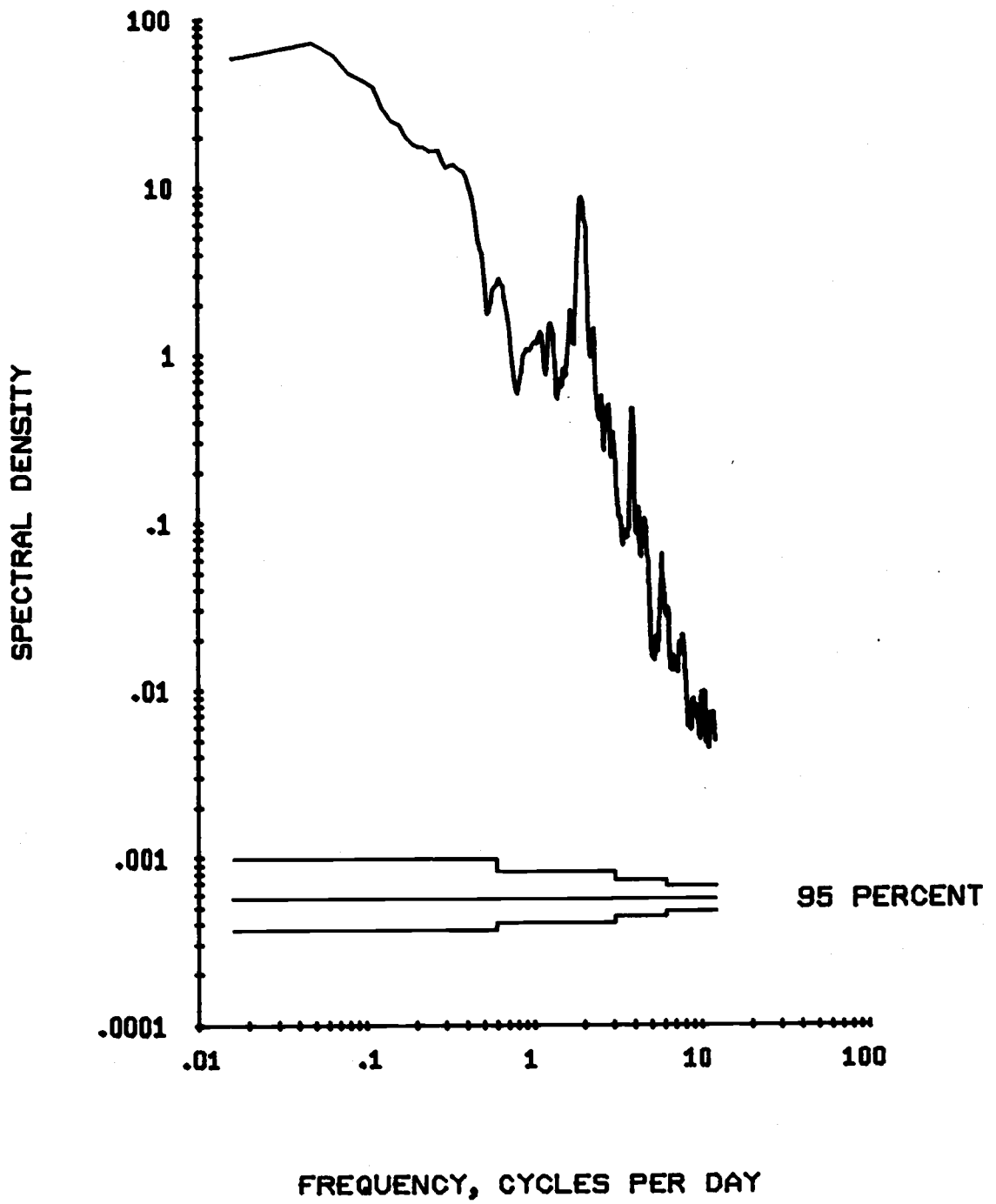

UNFILTERED CURRENT. 525 METERS AT NS-1000.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY


UNFILTERED CURRENT. 525 M AT NS-1000.
KE DENSITY
1000
100
10
1
.1
.01
.01
.1
1
10
100
95 PERCENT
FREQUENCY, CYCLES PER DAY

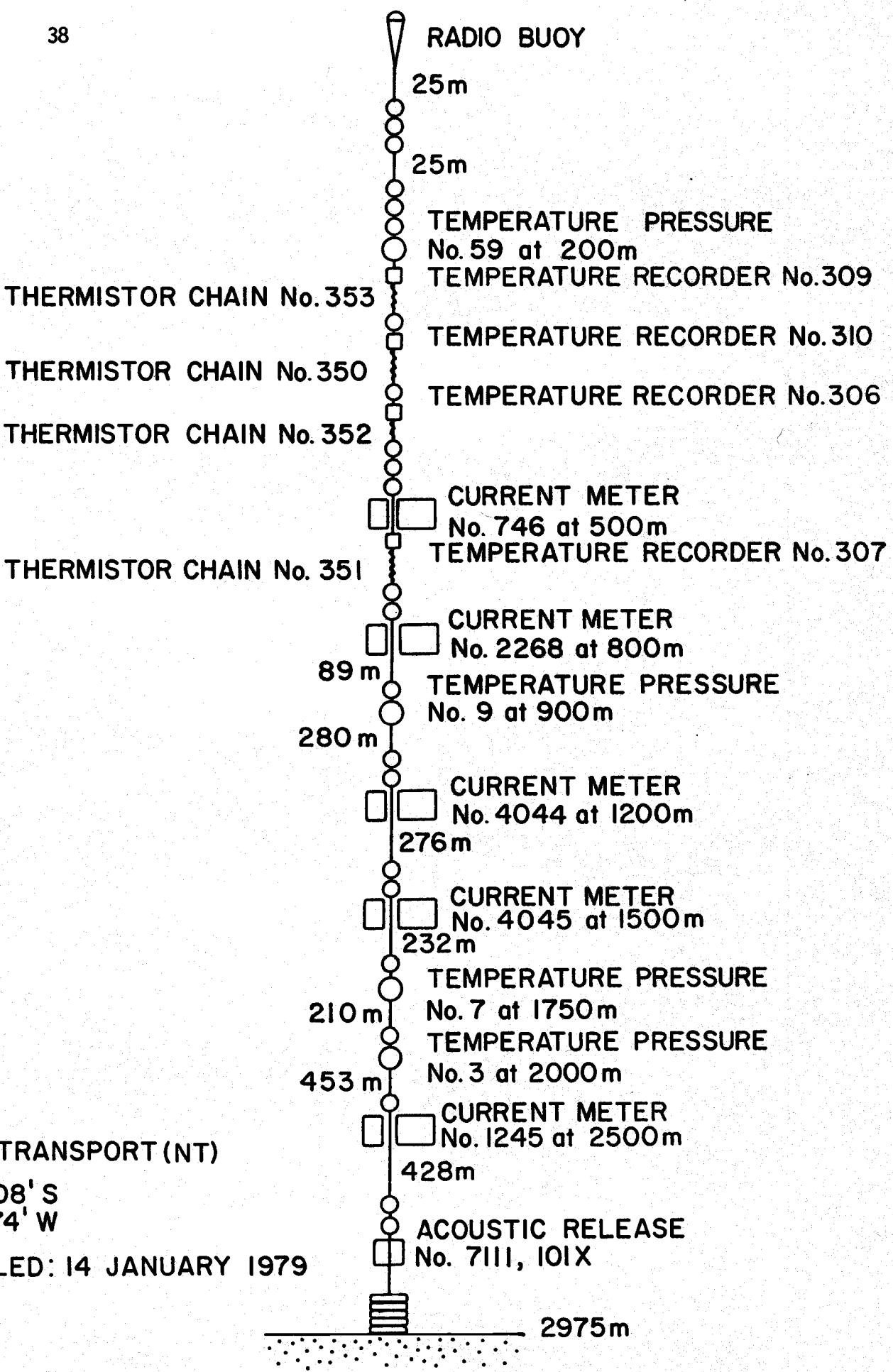
UNFILTERED TEMPERATURE. 525 METERS AT NS-1000.



UNFILTERED PRESSURE. 525 METERS AT NS-1000.



NT



NORTH TRANSPORT (NT)

56° 46.08' S
66° 33.74' W

INSTALLED: 14 JANUARY 1979

NT

Position: 56°46.08'S, 66°33.74'W
Depth of Water: 2975 m
Set at 2120 UCT 14 January '79 by R/V MELVILLE
Retrieved at 1426 UCT 23 February '80 by R/V ATLANTIS II
Data Interval: 2305 UCT 14 January '79 to 1405 UCT 23 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	746/34
800 m	2268/9
1200 m	4044/1
1500 m	4045/1
2500 m	1245/18

Instrument 746 recorded speed, direction, temperature, and pressure once per hour until 0426 UCT 10 July '79.

Instrument 2268 recorded speed, direction, temperature, pressure, and conductivity once per hour until the instrument was recovered. The speed record contains numerous sporadic errors. 1.9% of the processed speed record has been corrected with linear interpolation.

Instrument 4044 recorded speed, direction, temperature, pressure, and conductivity once per hour until 0838 UCT 23 July '79. The record is short due to a transport malfunction.

Instrument 4045 recorded speed, direction, temperature, pressure, and conductivity once per hour until the instrument was recovered.

Instrument 1245 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered. The speed record contains a suspicious section of below and near threshold values from 25 September to 6 October '79. No corrections have been made.

NT

645 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	24.21	11.91	0.43	2.75	0.70	66.00	4229
U	10.47	14.92	0.08	3.02	-40.90	55.80	4229
V	10.41	16.94	-0.36	2.87	-51.20	52.00	4229
T	4.26	0.31	-1.94	7.40	2.88	4.87	4229
P	647.93	69.24	2.33	9.35	596.90	1093.10	4229

944 m

S	19.47	9.80	0.44	2.73	0.80	56.30	9712
U	6.14	13.82	0.04	2.75	-37.90	48.80	9712
V	4.37	15.08	-0.27	2.81	-50.10	50.70	9712
T	3.53	0.26	-0.39	3.47	2.56	4.38	9712
P	948.89	56.04	2.34	9.21	908.70	1334.10	9712
C	32.03	0.20	-1.23	16.49	29.13	32.72	9712

1349 m

S	13.84	7.31	0.63	2.99	0.80	43.40	4546
U	4.75	9.87	0.17	2.69	-25.50	38.20	4546
V	5.81	9.55	-0.00	3.12	-30.40	39.20	4546
T	2.77	0.12	-0.14	3.61	2.34	3.24	4546
P	1356.24	41.42	2.44	10.12	1328.10	1643.50	4546
C	31.81	0.07	0.25	3.20	31.64	32.11	4546

Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.

NT

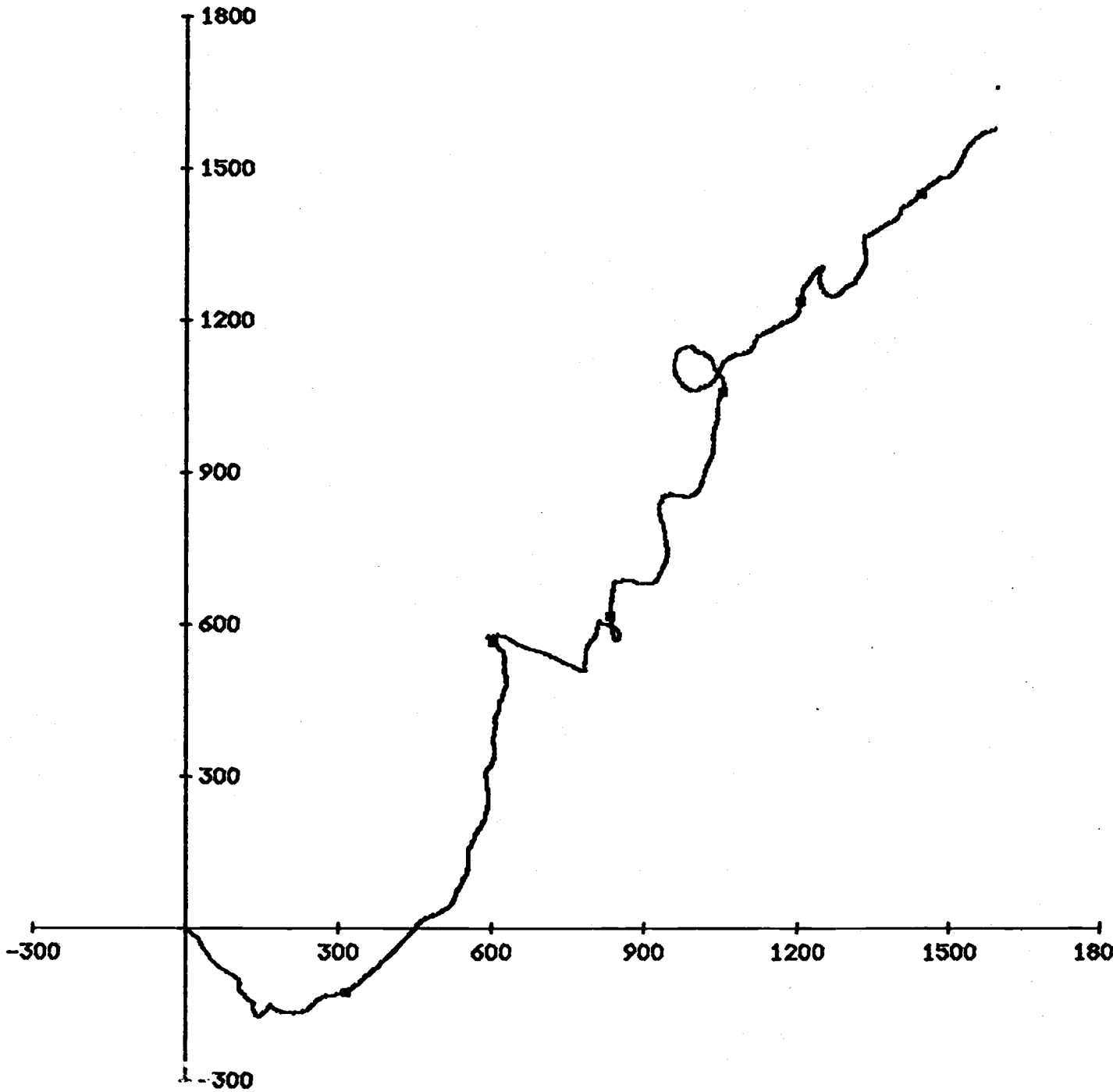
1651 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	11.34	6.86	1.18	4.57	0.80	45.00	9712
U	2.55	8.14	0.35	3.22	-25.10	35.30	9712
V	2.83	9.74	0.23	3.82	-34.10	42.90	9712
T	2.51	0.08	-0.24	3.35	2.20	2.78	9712
P	1659.11	34.25	2.31	9.08	1635.00	1894.90	9712
C	31.76	0.04	0.19	3.32	31.63	31.92	9712

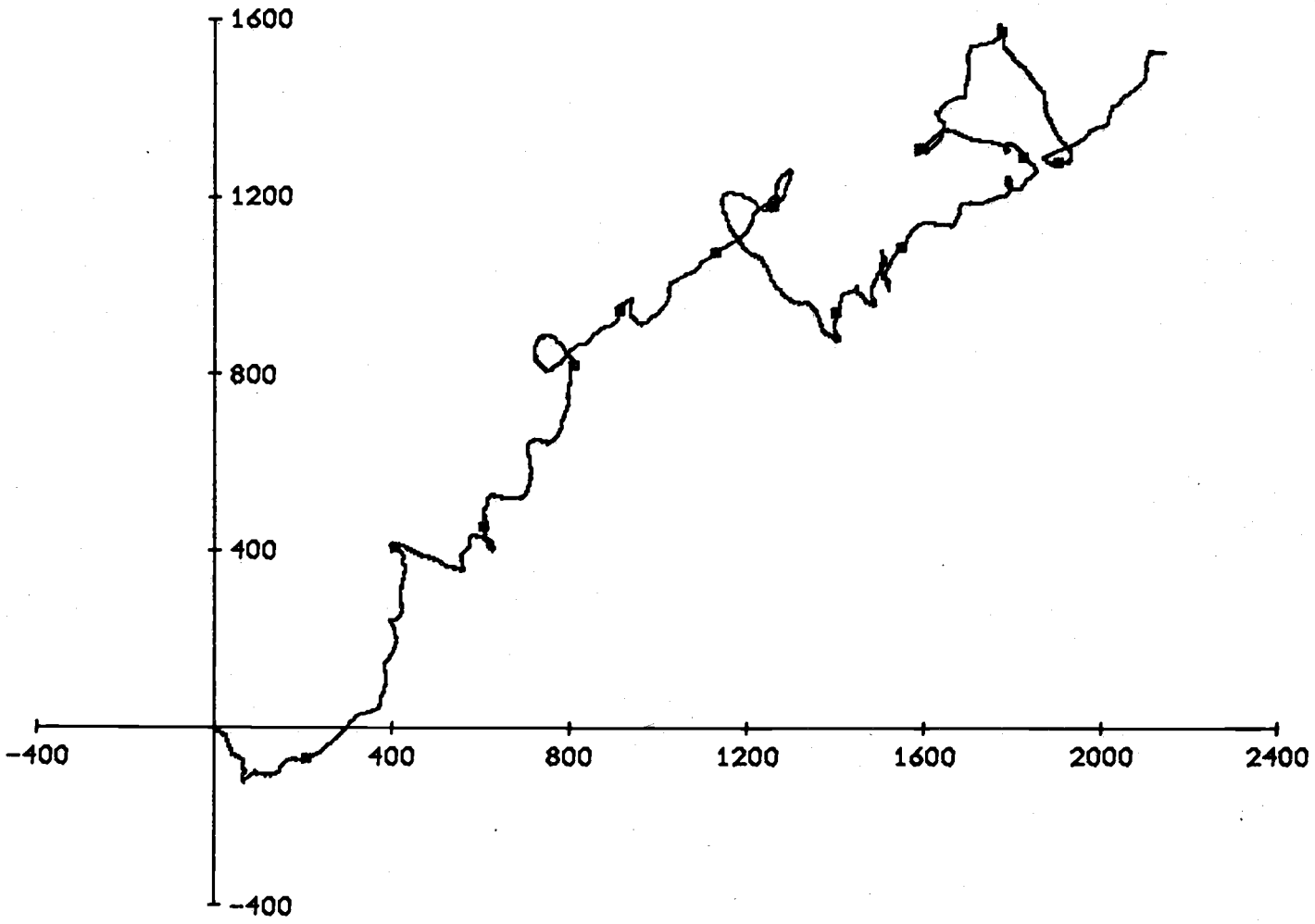
2637 m

S	8.40	5.25	1.14	4.78	0.70	40.80	9711
U	1.61	5.80	0.05	3.54	-27.10	25.80	9711
V	3.09	7.24	-0.16	3.94	-27.80	33.40	9711
T	1.96	0.06	-0.61	3.99	1.69	2.14	9711
P	2650.64	10.50	2.37	9.47	2641.40	2724.80	9711

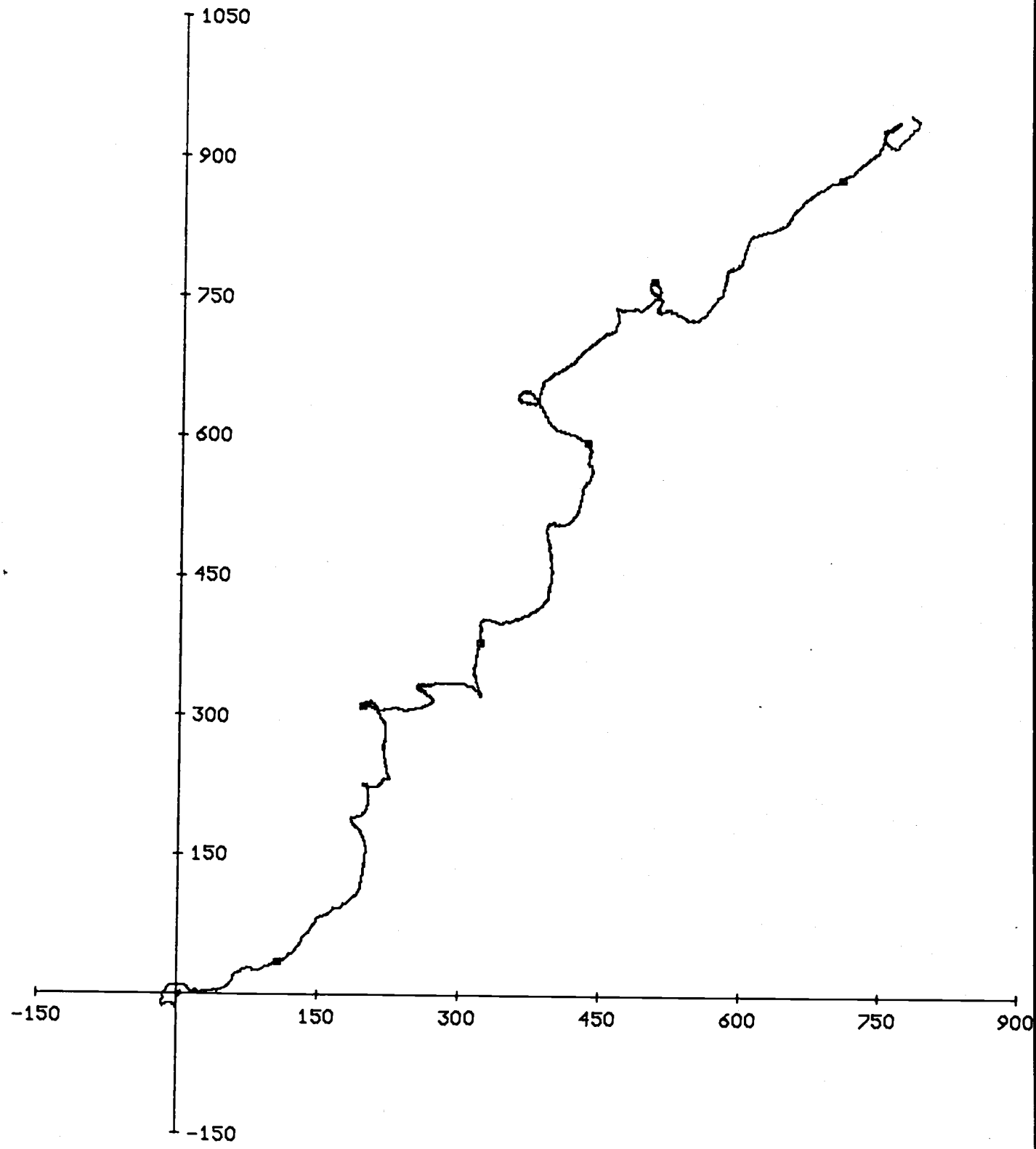
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



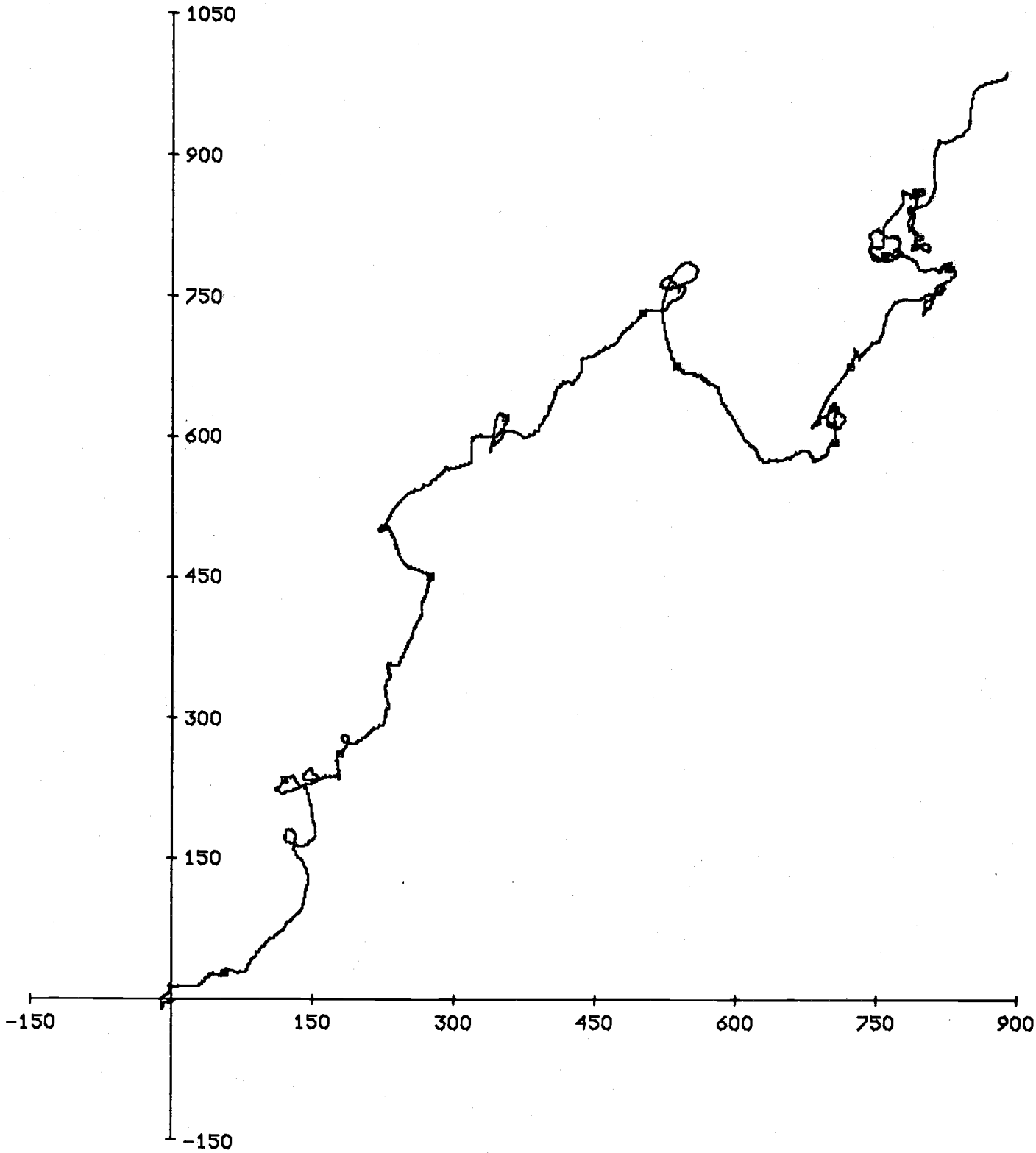
645 METERS AT NT. 15 JAN 79 - 10 JUL 79. TAPE 746/34.



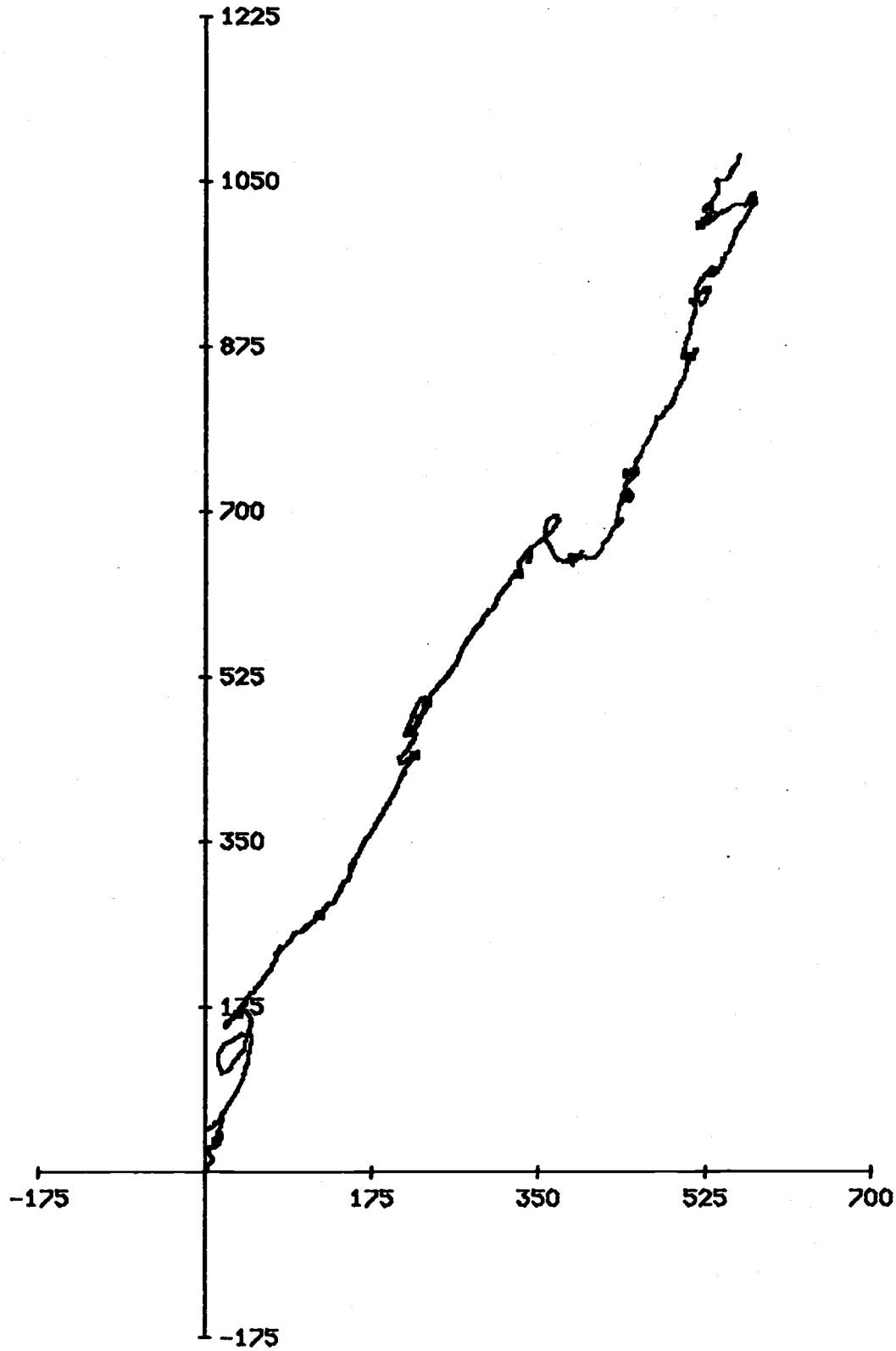
944 M AT STN NT. 404.6 DAYS STARTING 2304 14 JAN 79.



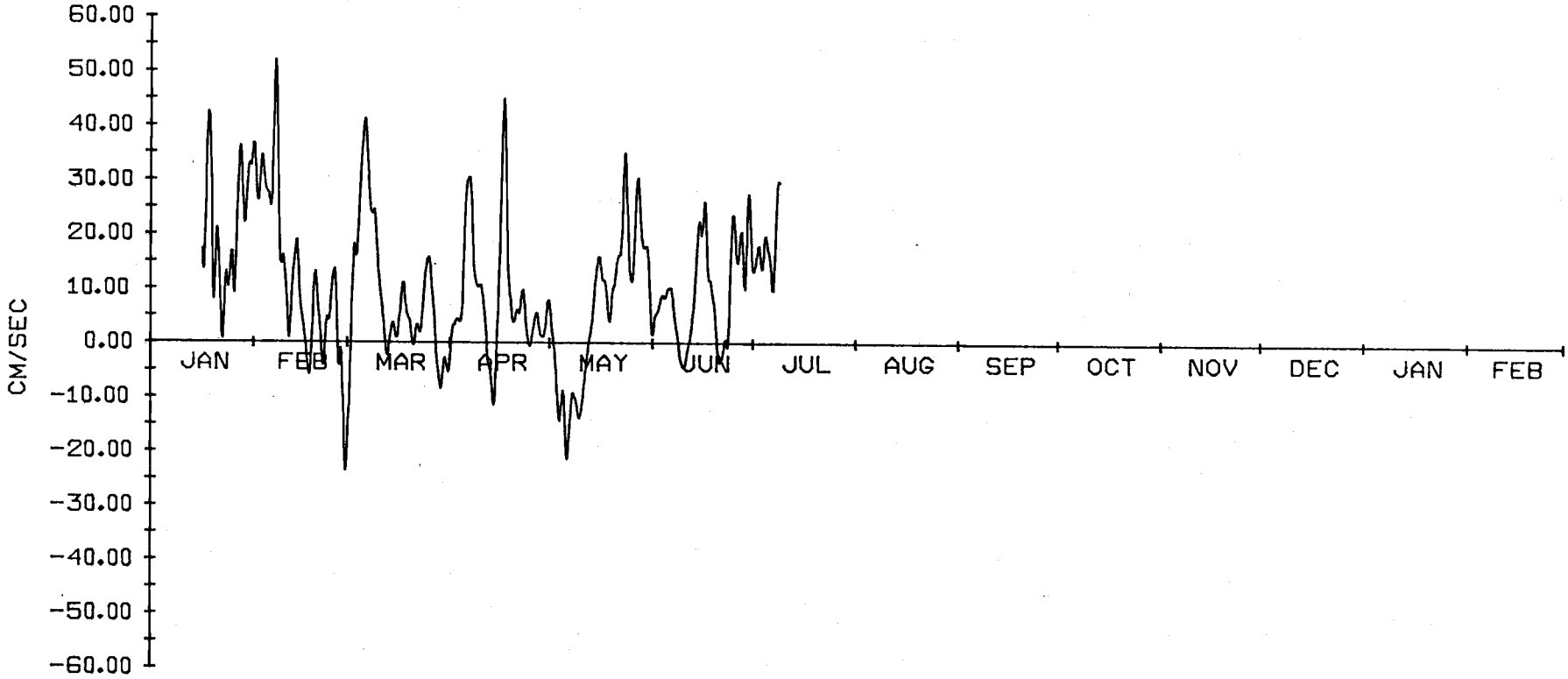
1349 M AT STN NT. 189.4 DAYS STARTING 2338 14 JAN 79.



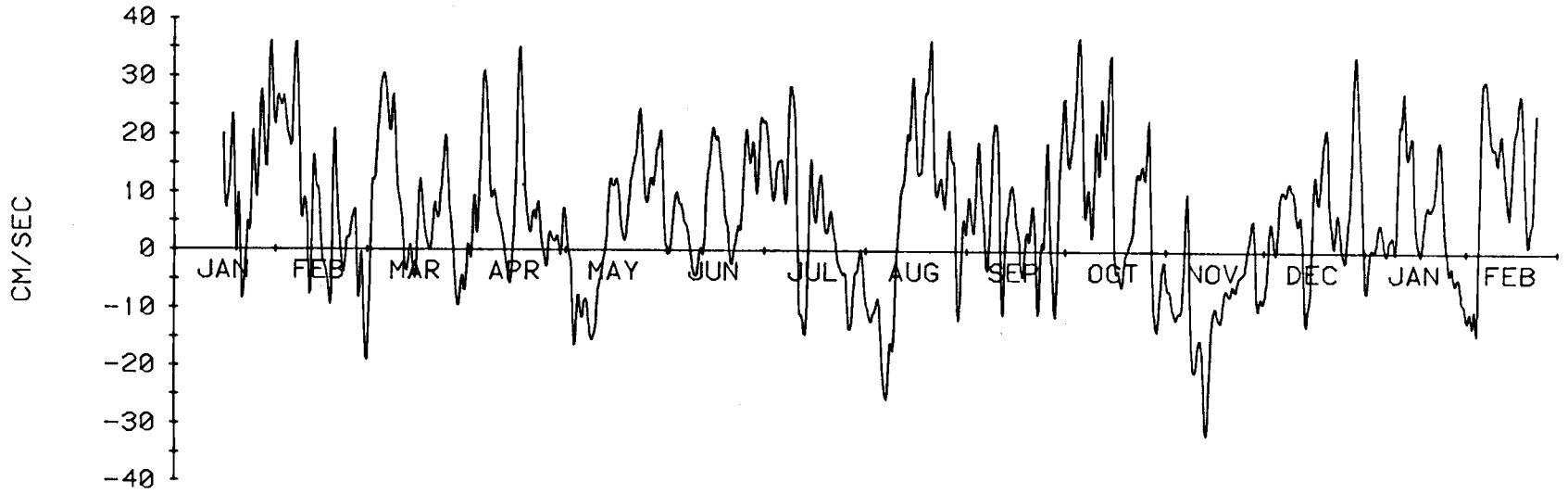
1651 M AT STN NT. 404.6 DAYS STARTING 2305 14 JAN 79.



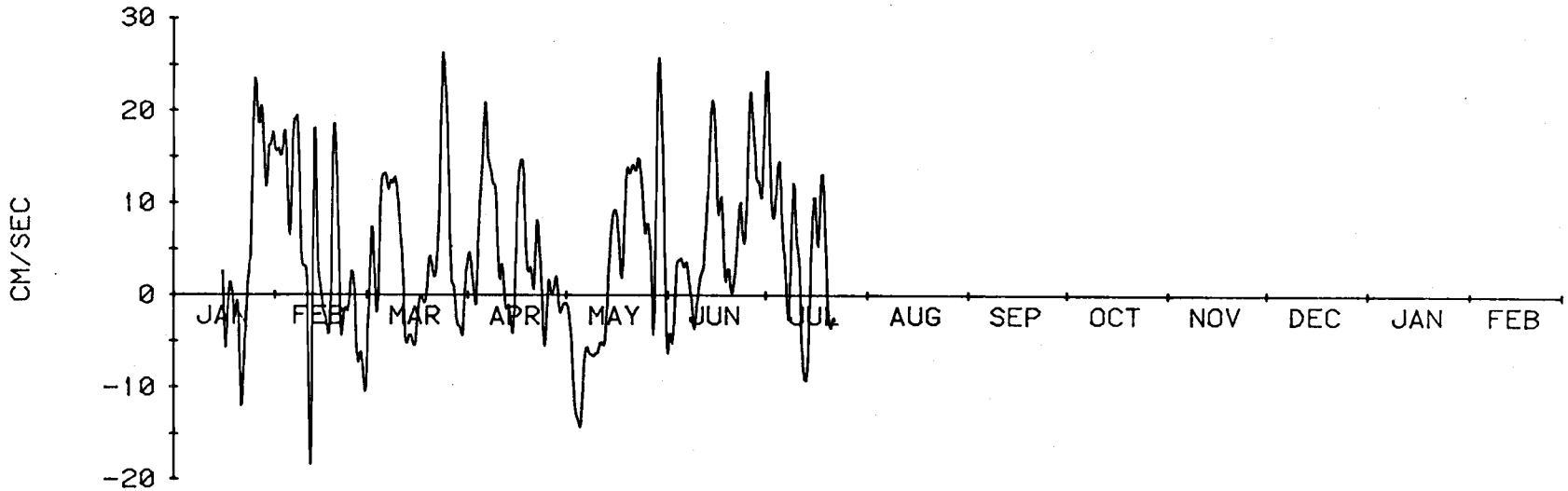
2637 M AT STN NT. 404.6 DAYS STARTING 2253 14 JAN 79.



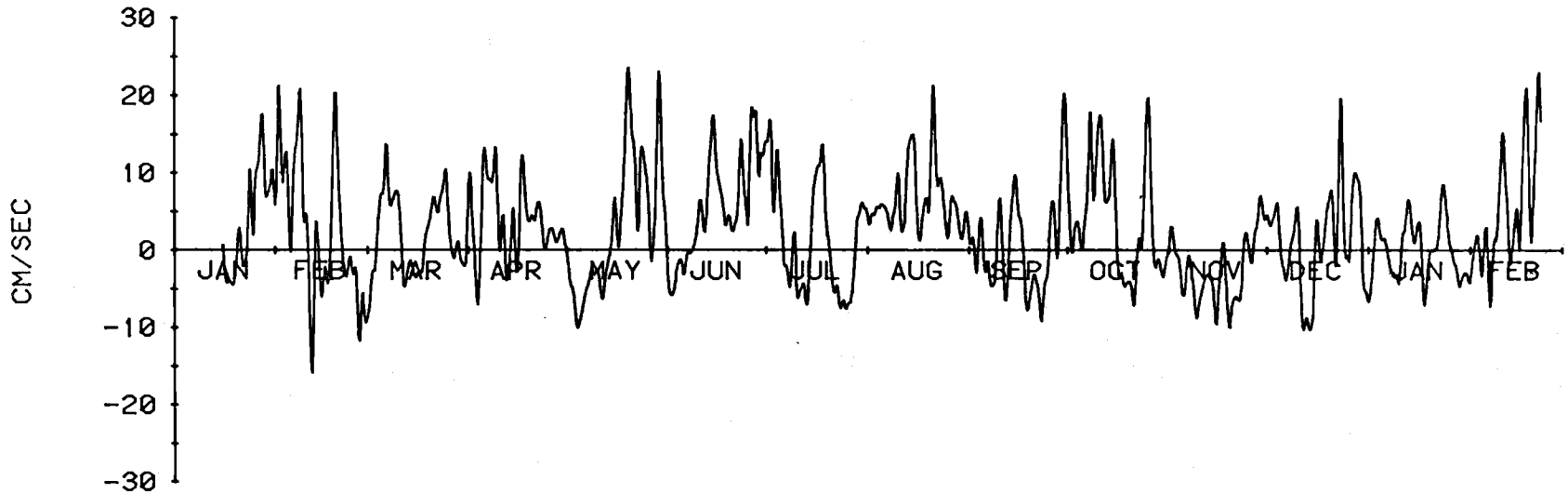
645 METERS AT NT
LLP FILTERED U COMPONENT



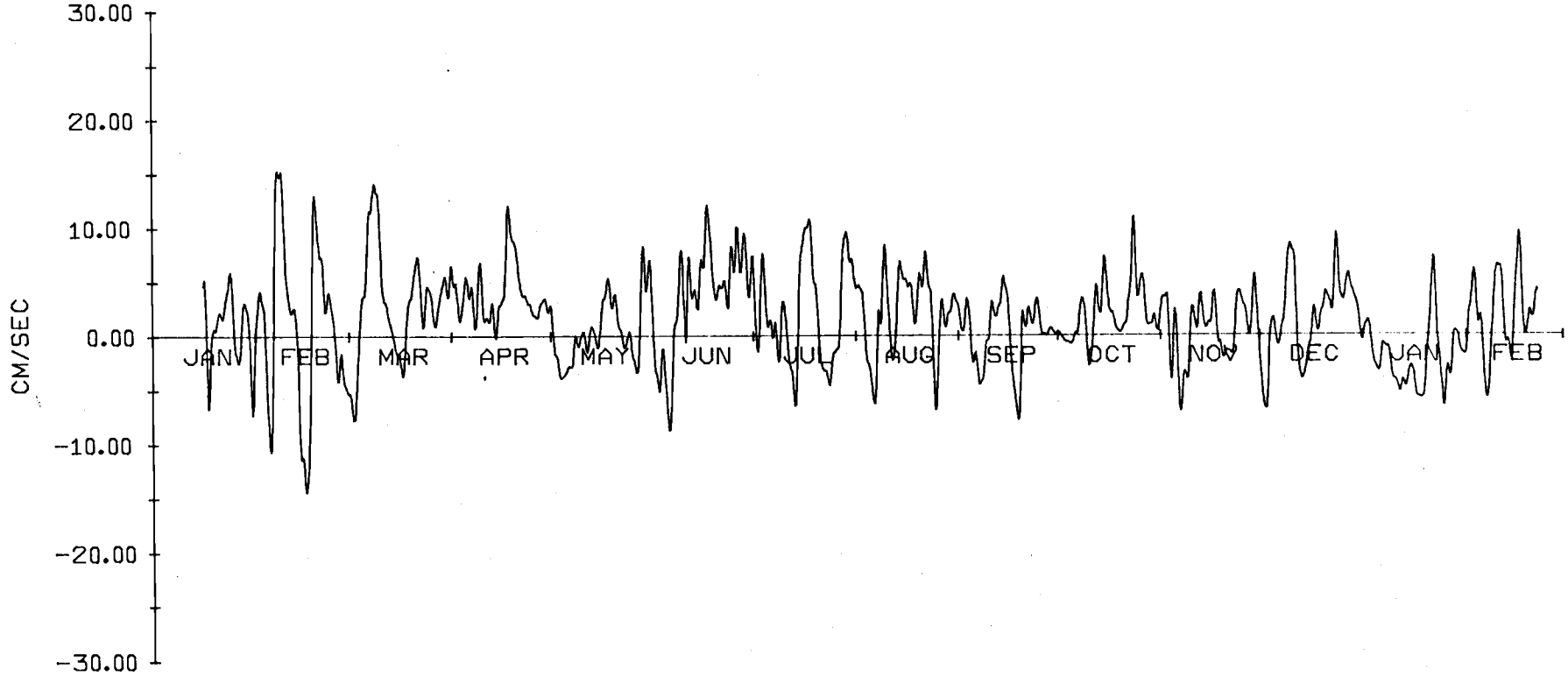
944 METERS AT NT
LLP FILTERED U COMPONENT



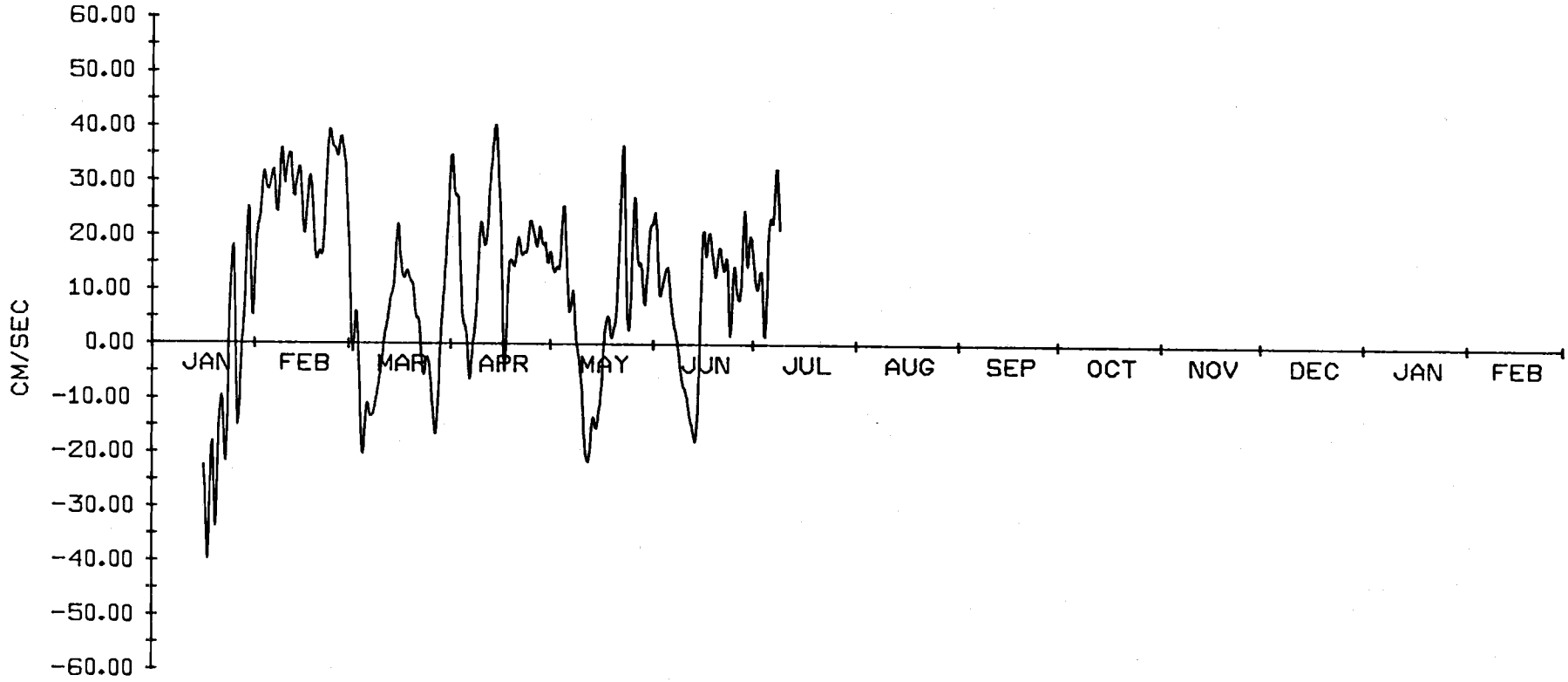
1349 METERS AT NT
LLP FILTERED U COMPONENT



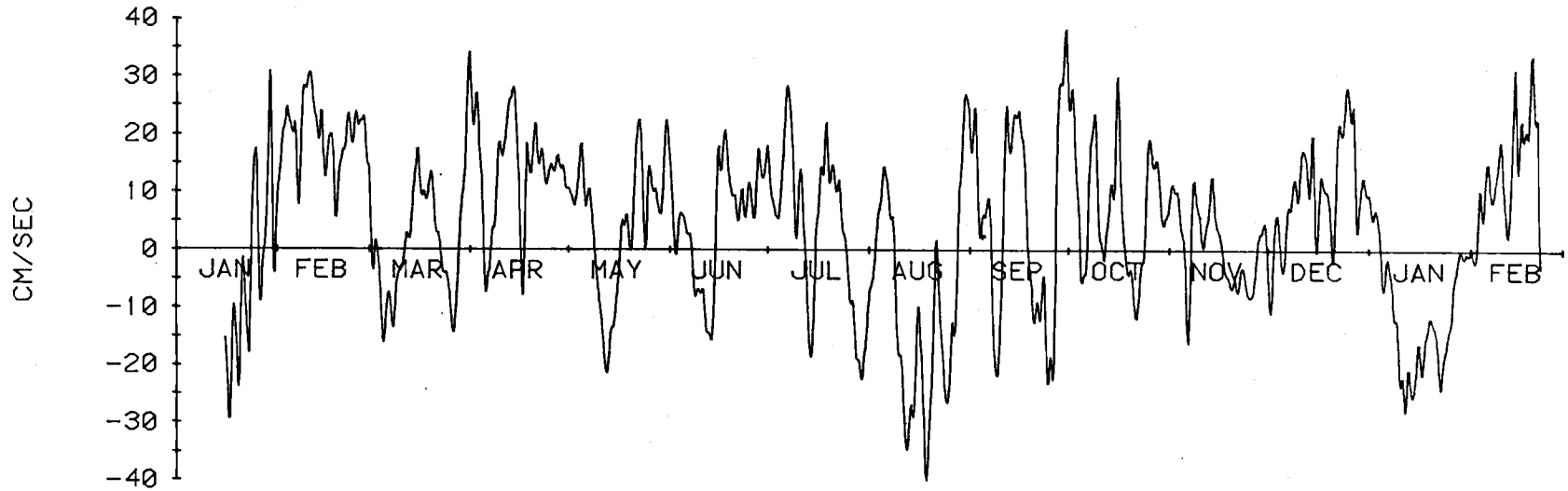
1651 METERS AT NT
LLP FILTERED U COMPONENT



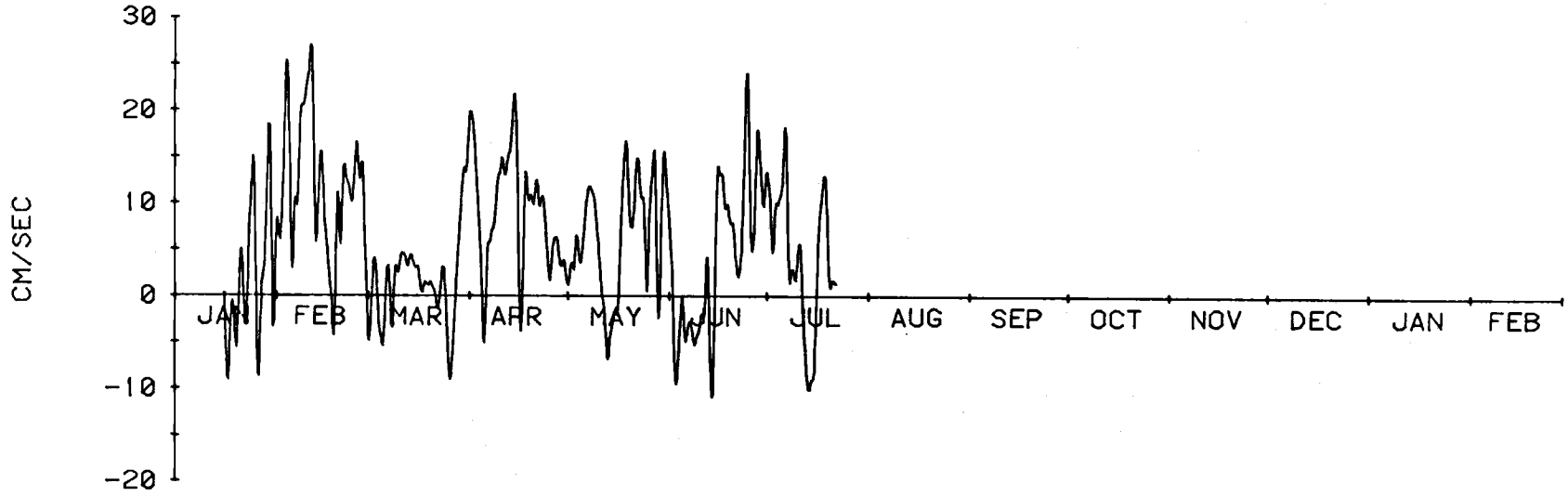
2637 METERS AT NT.
LLP FILTERED U COMPONENT



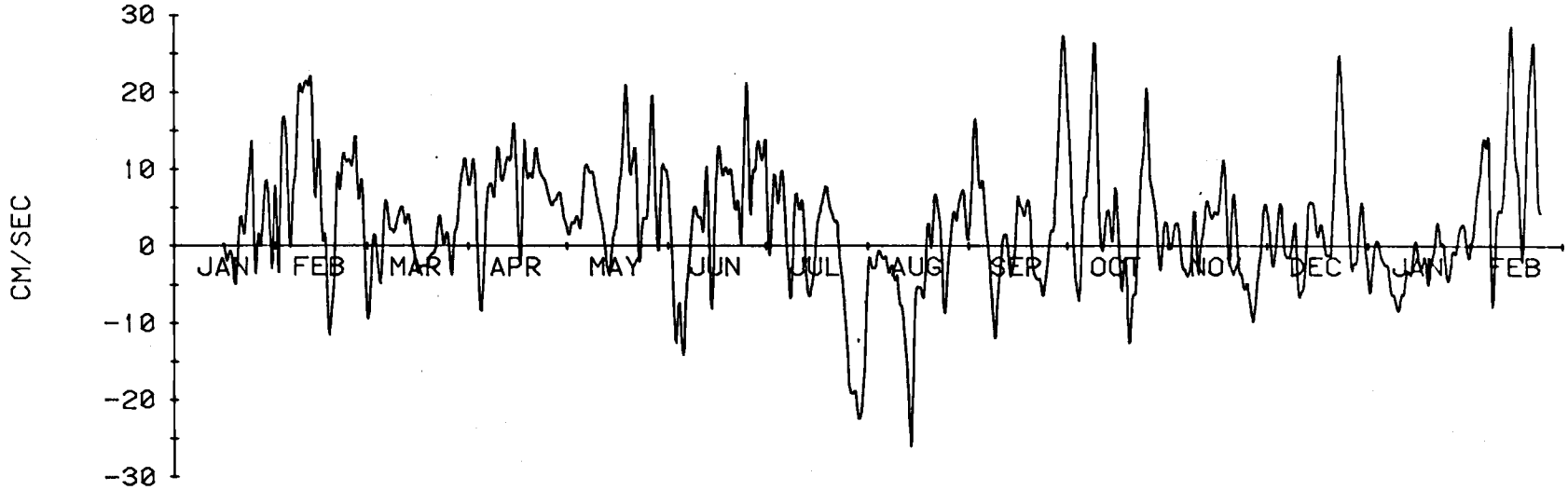
645 METERS AT NT
LLP FILTERED V COMPONENT



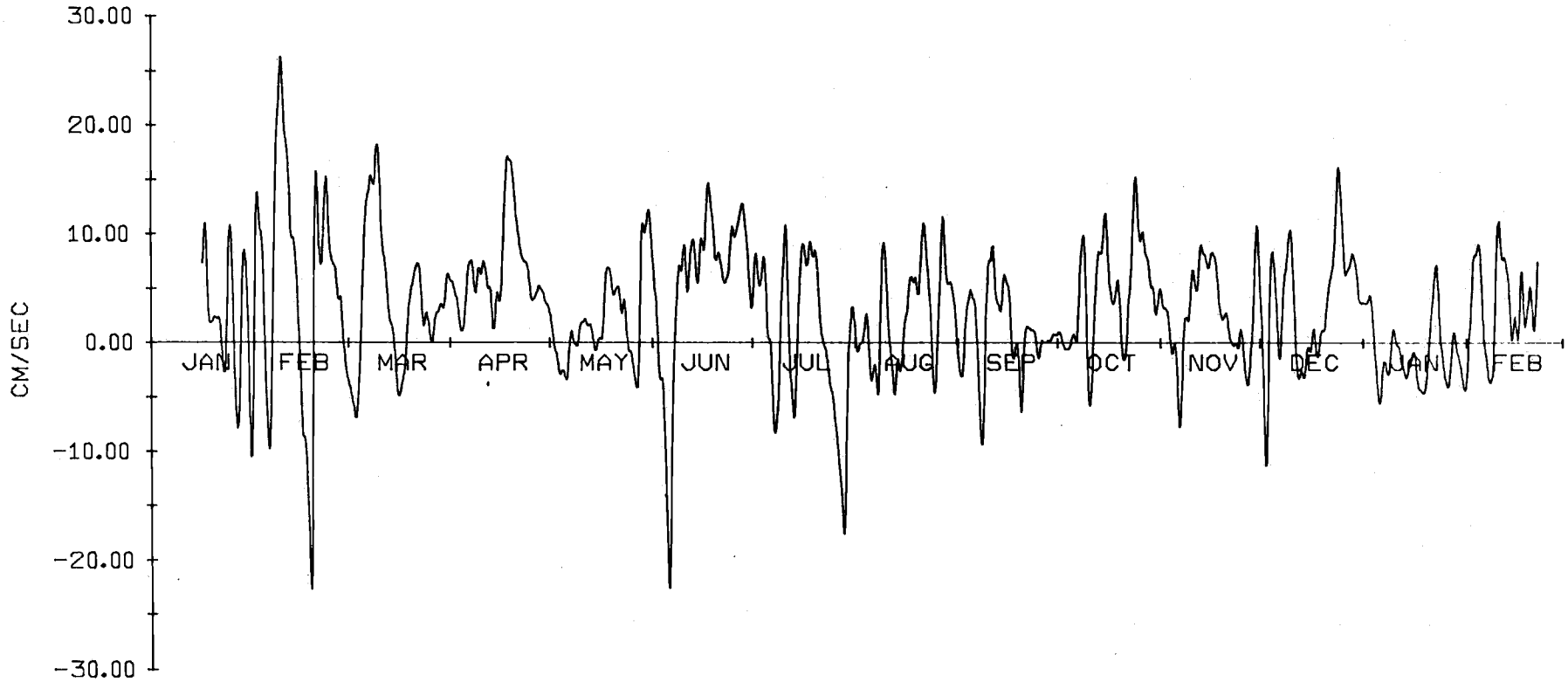
944 METERS AT NT
LLP FILTERED V COMPONENT



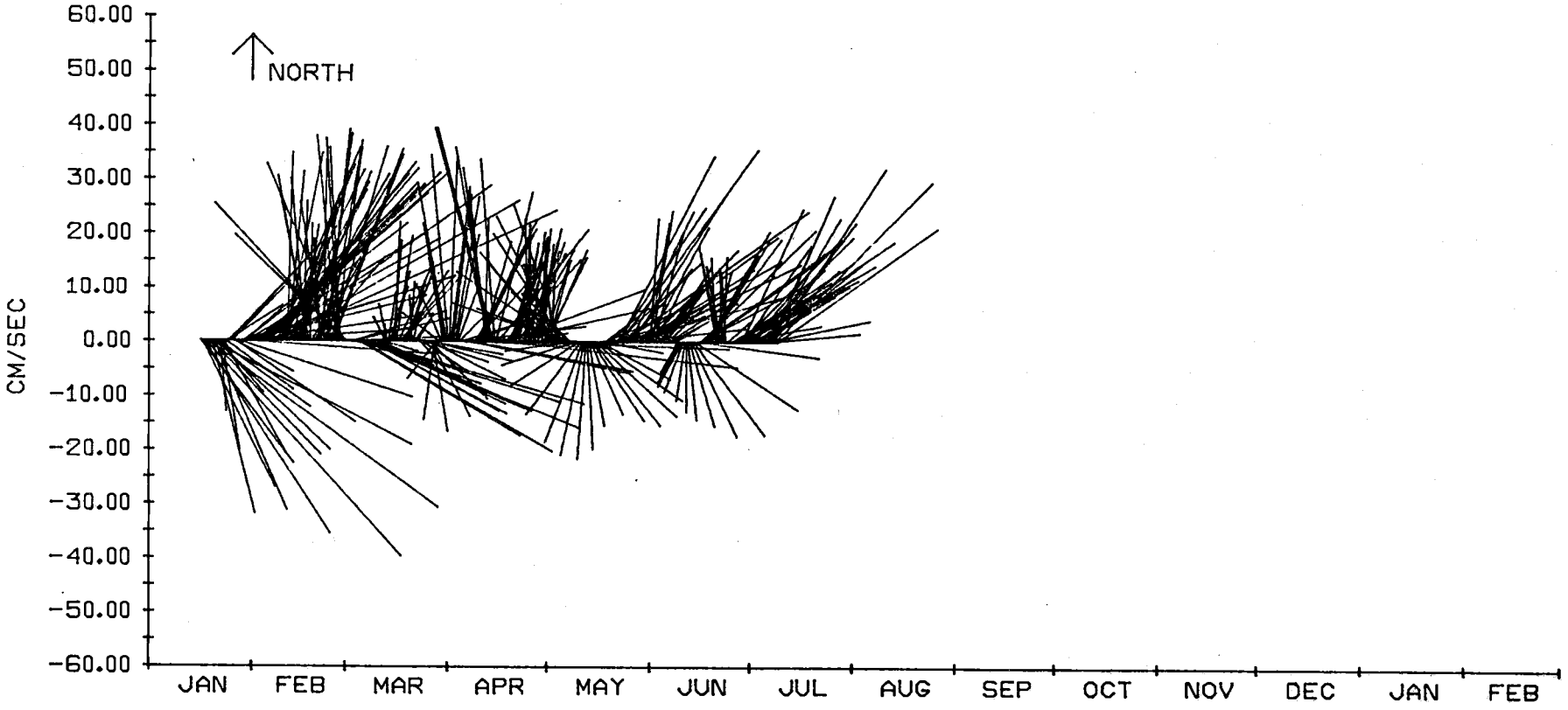
1349 METERS AT NT
LLP FILTERED V COMPONENT



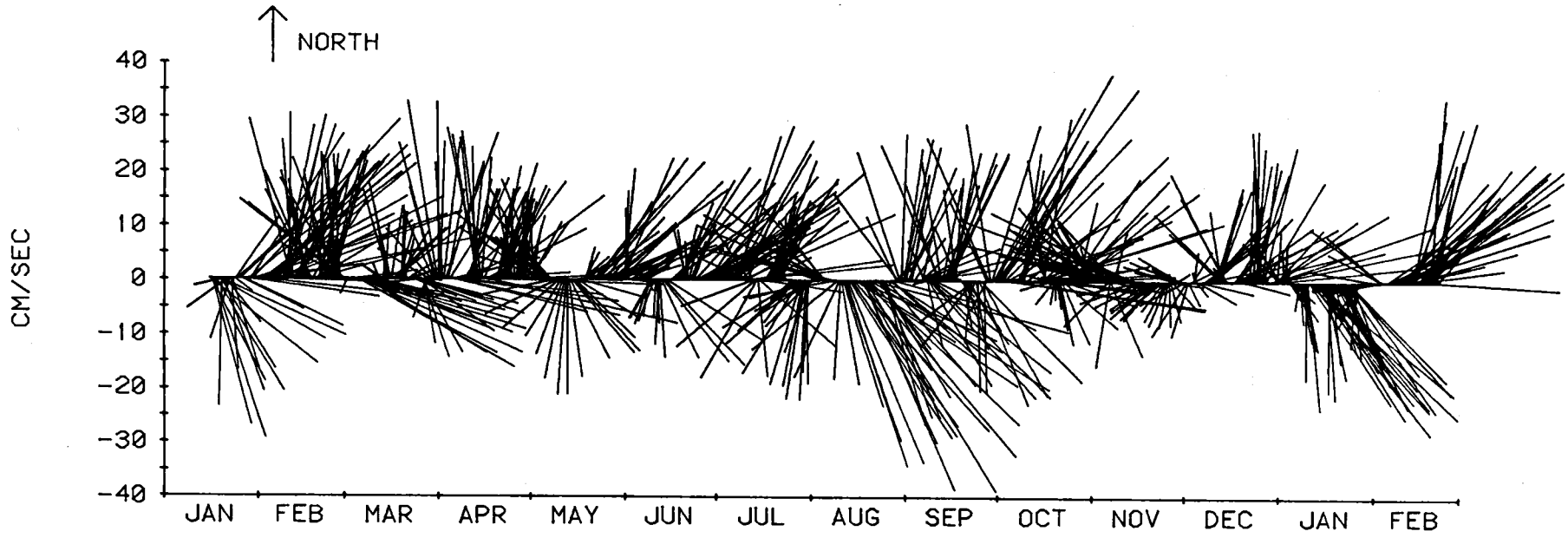
1651 METERS AT NT
LLP FILTERED V COMPONENT



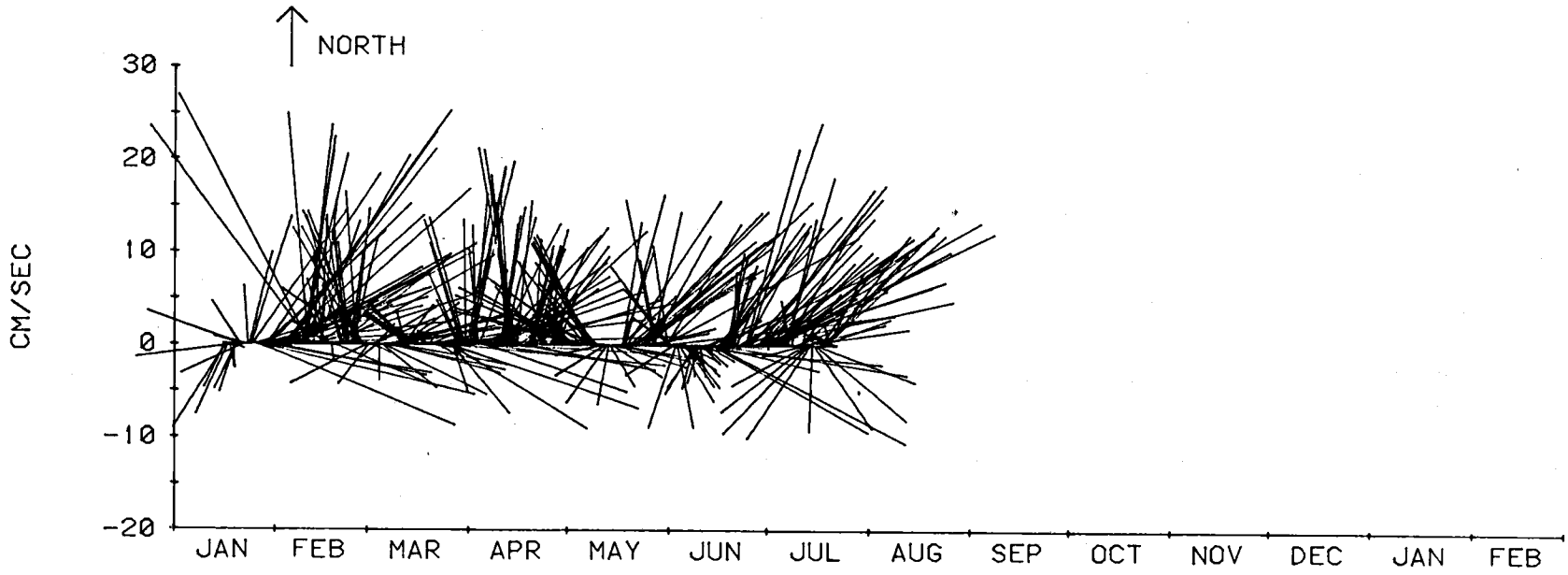
2637 METERS AT NT.
LLP FILTERED V COMPONENT



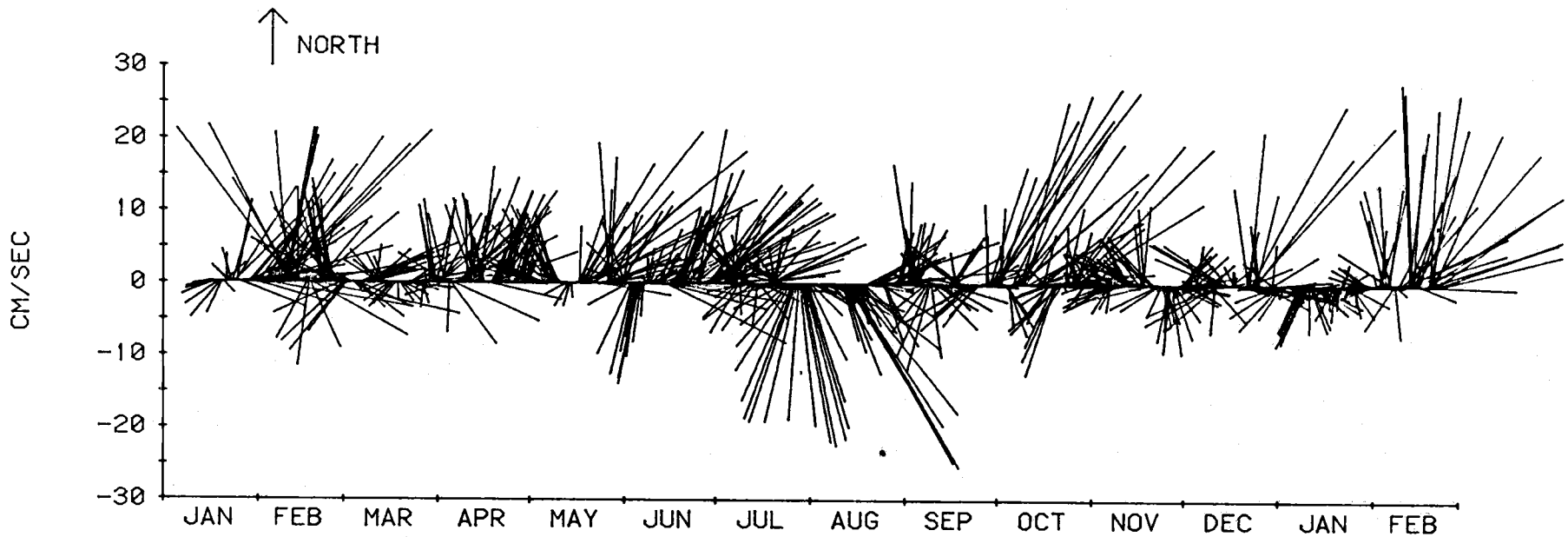
645 METERS AT NT
LLP FILTERED CURRENT



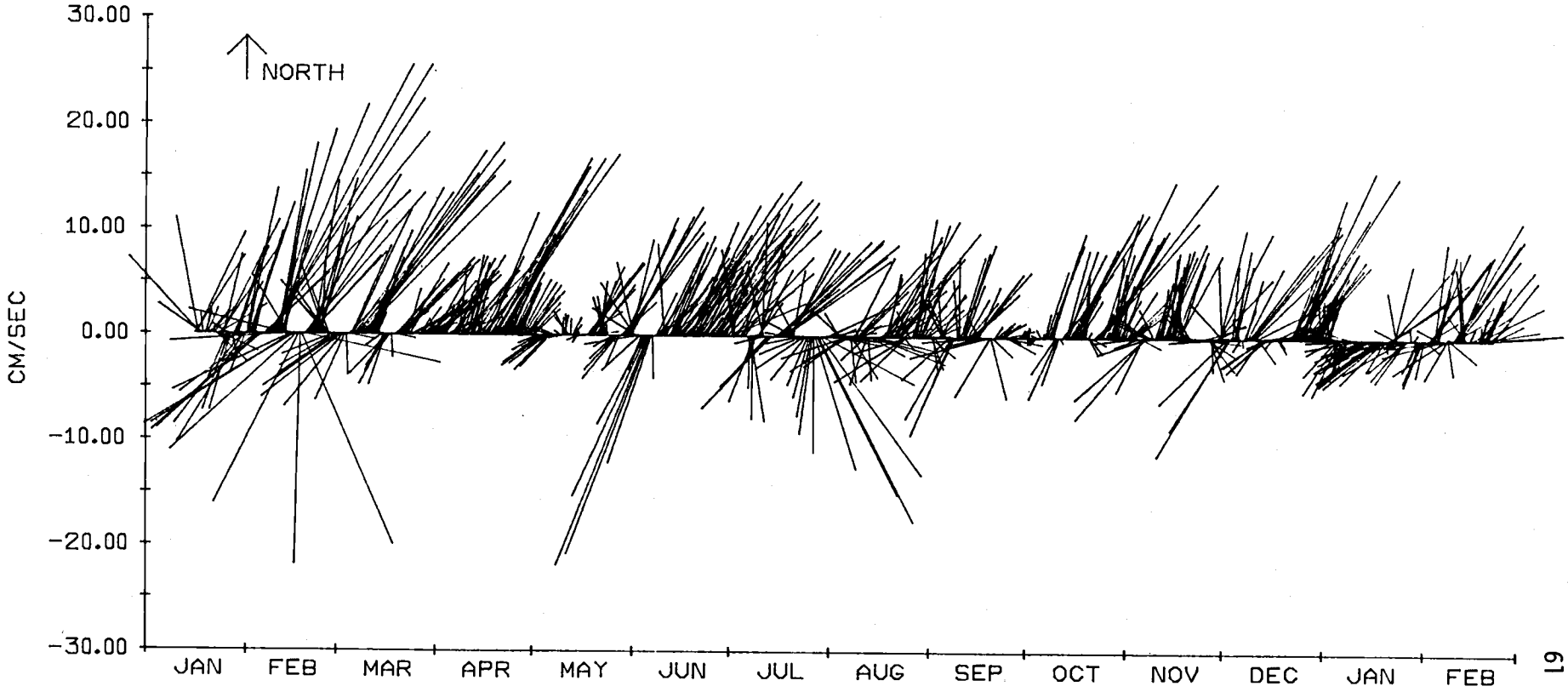
944 METERS AT NT
LLP FILTERED CURRENT



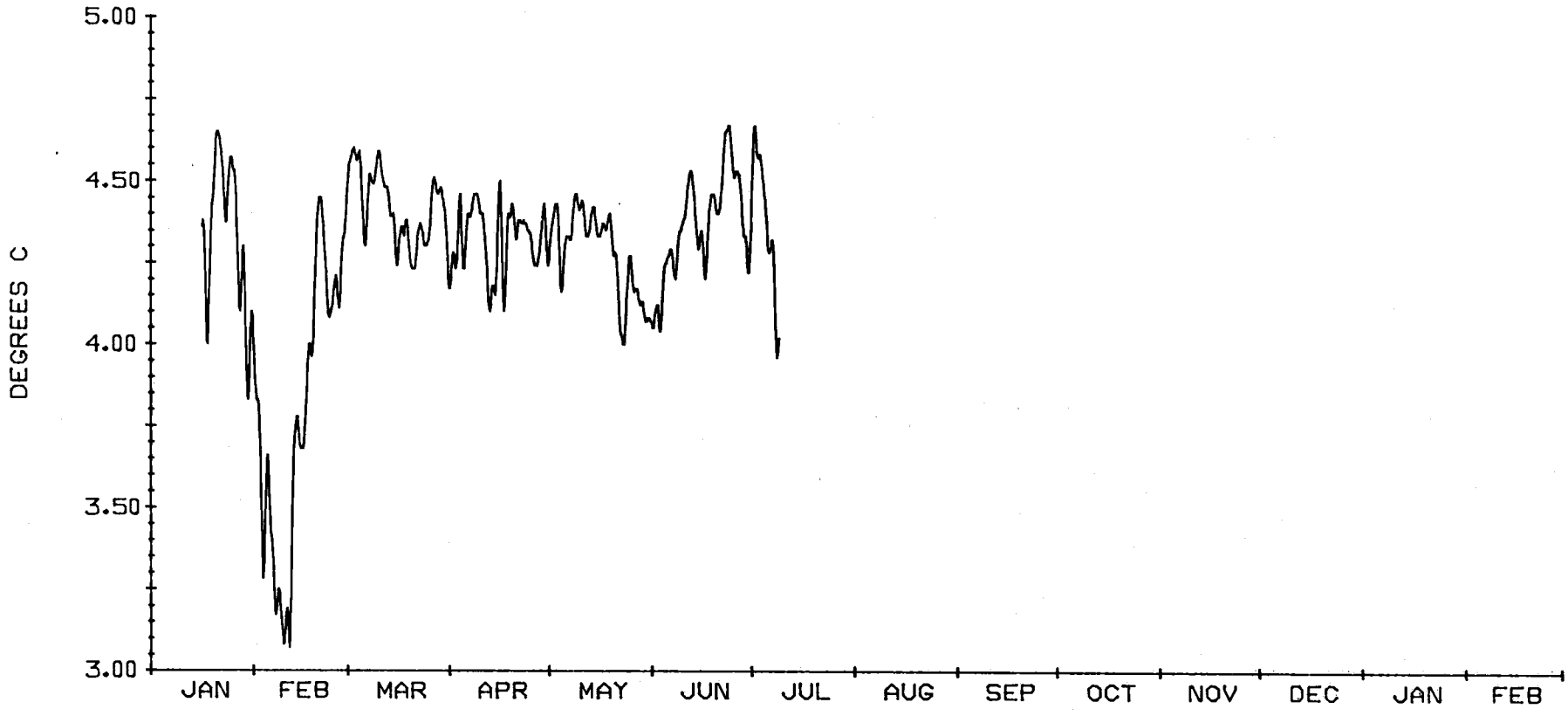
1349 METERS AT NT
LLP FILTERED CURRENT



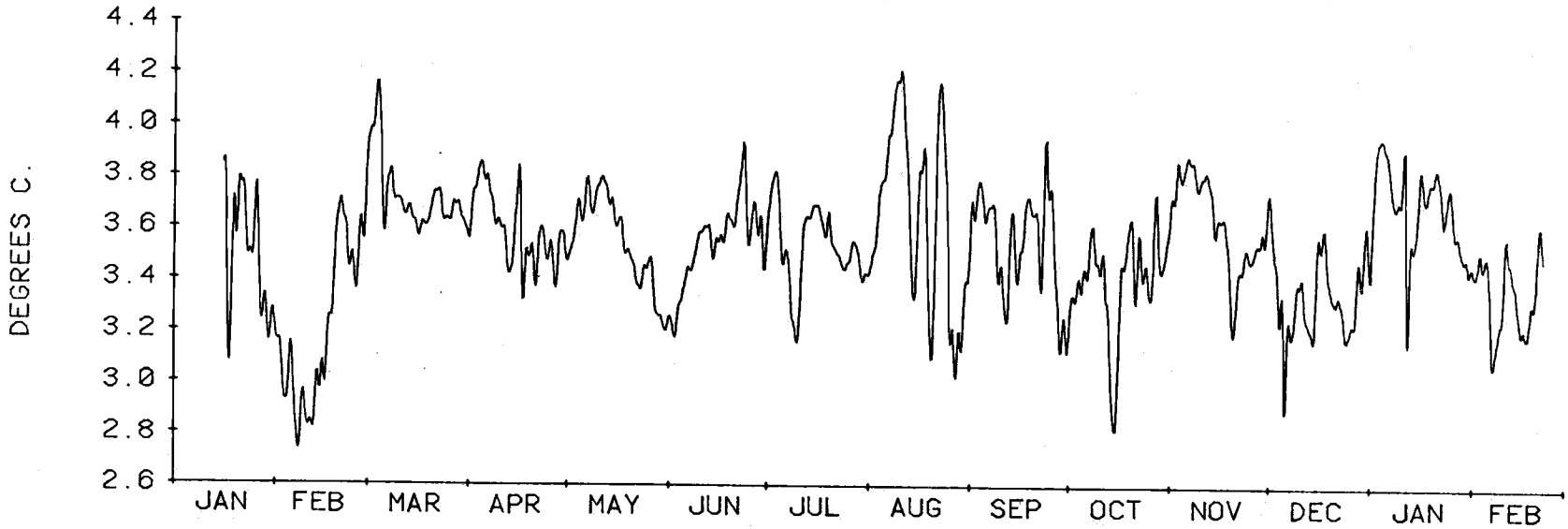
1651 METERS AT NT
LLP FILTERED CURRENT



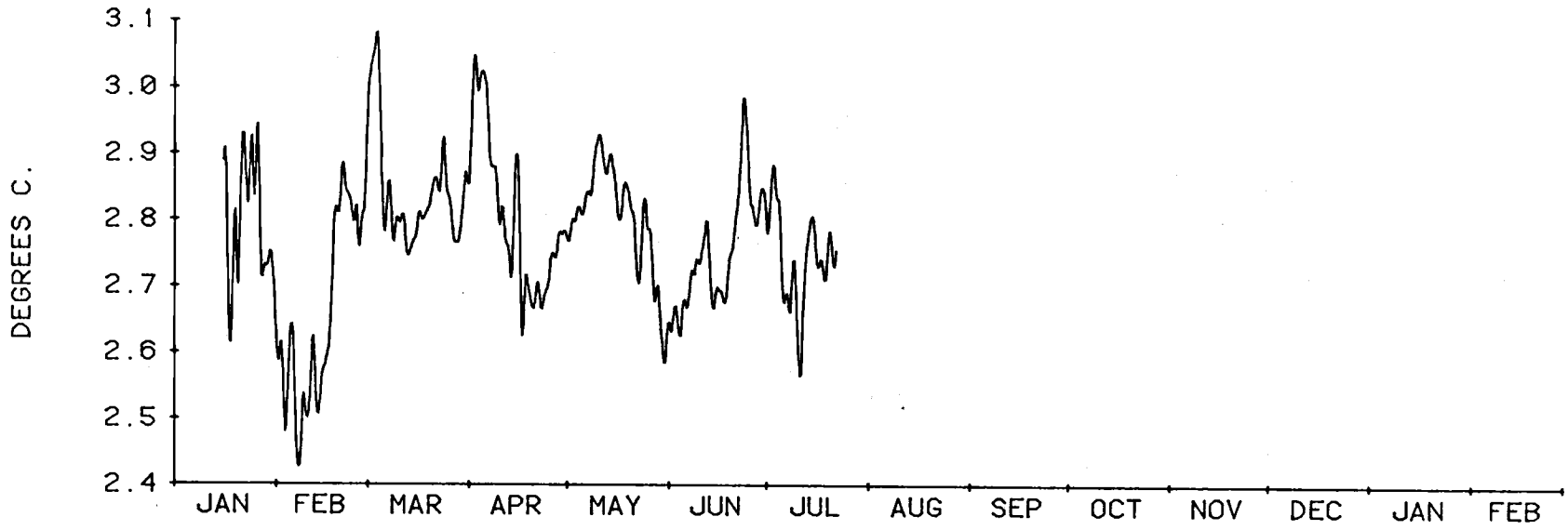
2637 METERS AT NT.
LLP FILTERED CURRENT



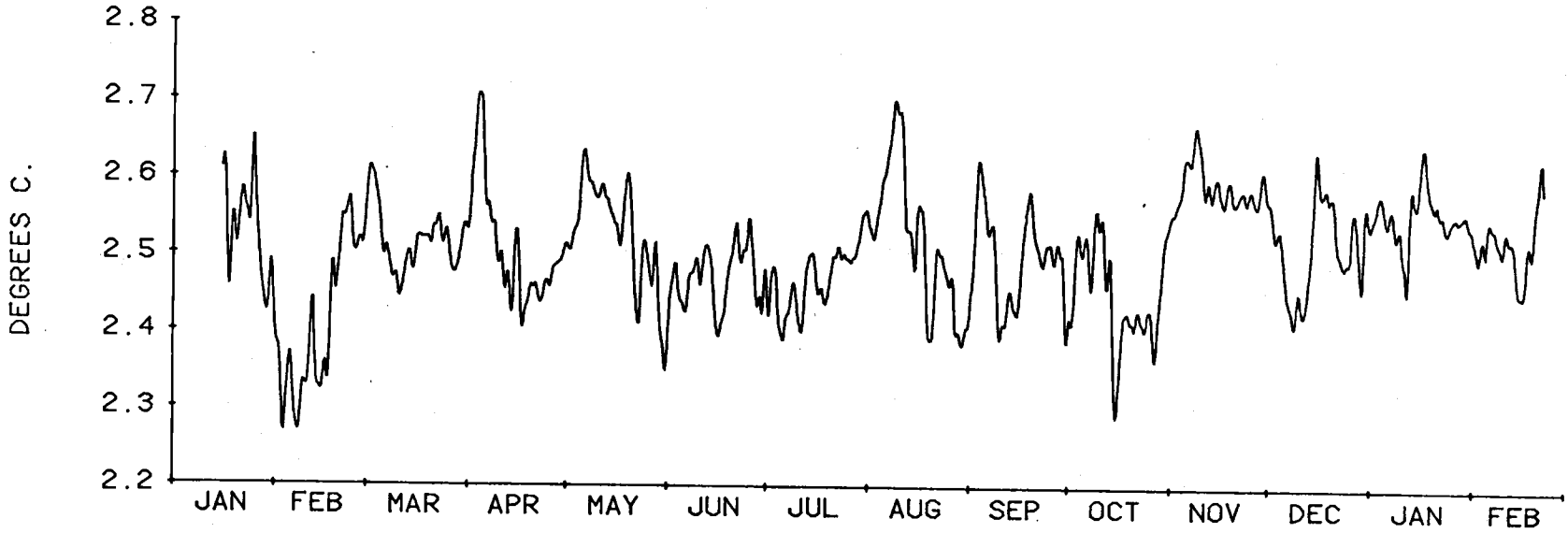
645 METERS AT NT
LLP FILTERED TEMPERATURE



944 METERS AT NT
LLP FILTERED TEMPERATURE

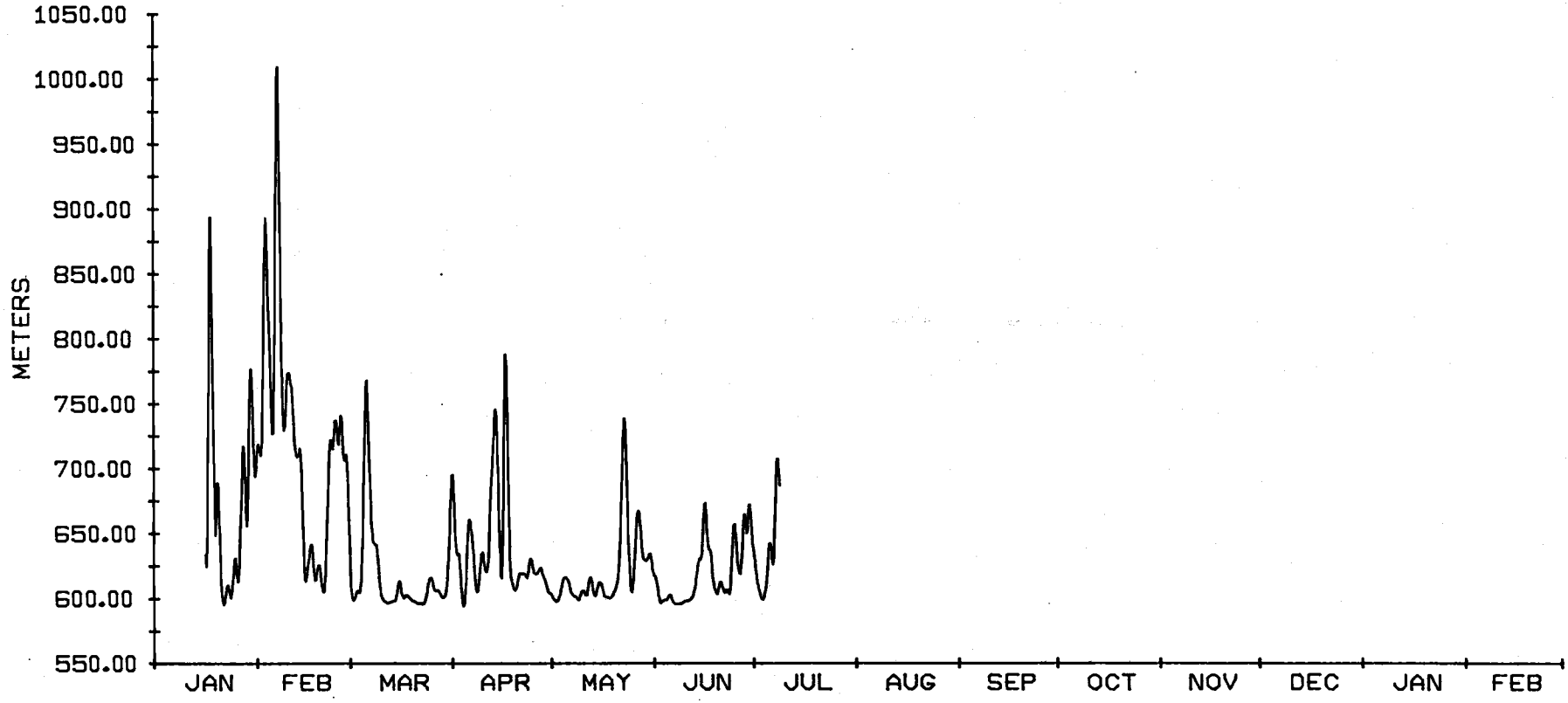


1349 METERS AT NT
LLP FILTERED TEMPERATURE

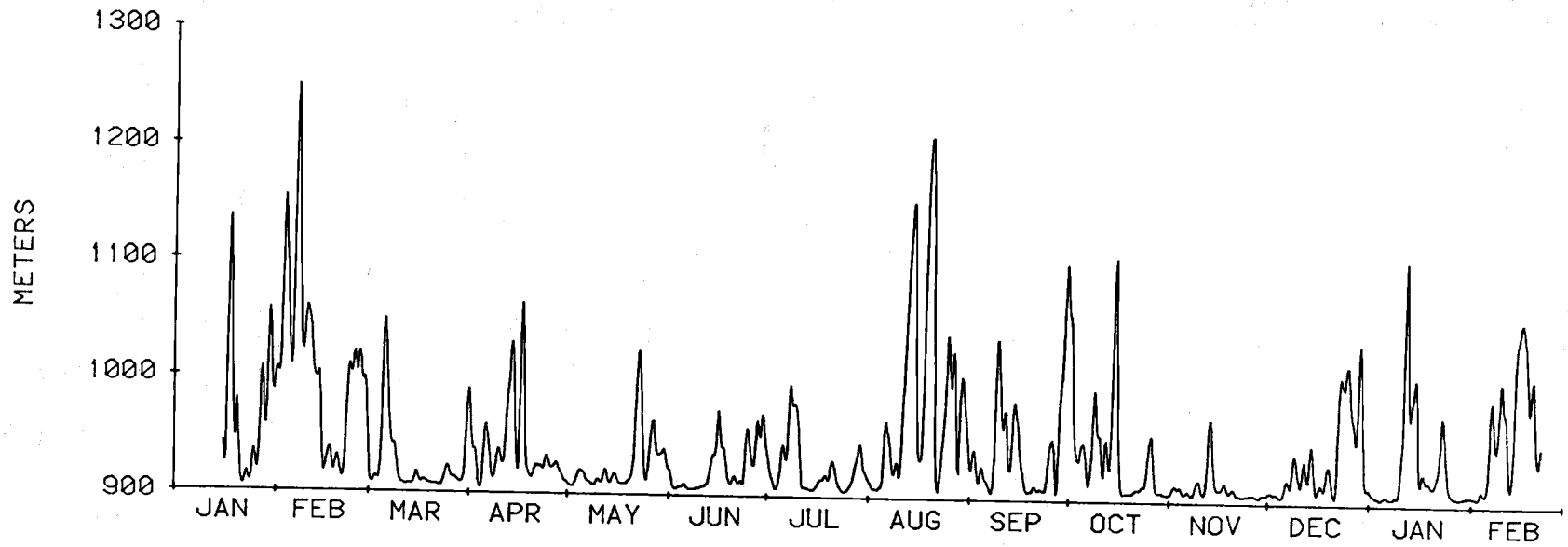


1651 METERS AT NT
LLP FILTERED TEMPERATURE

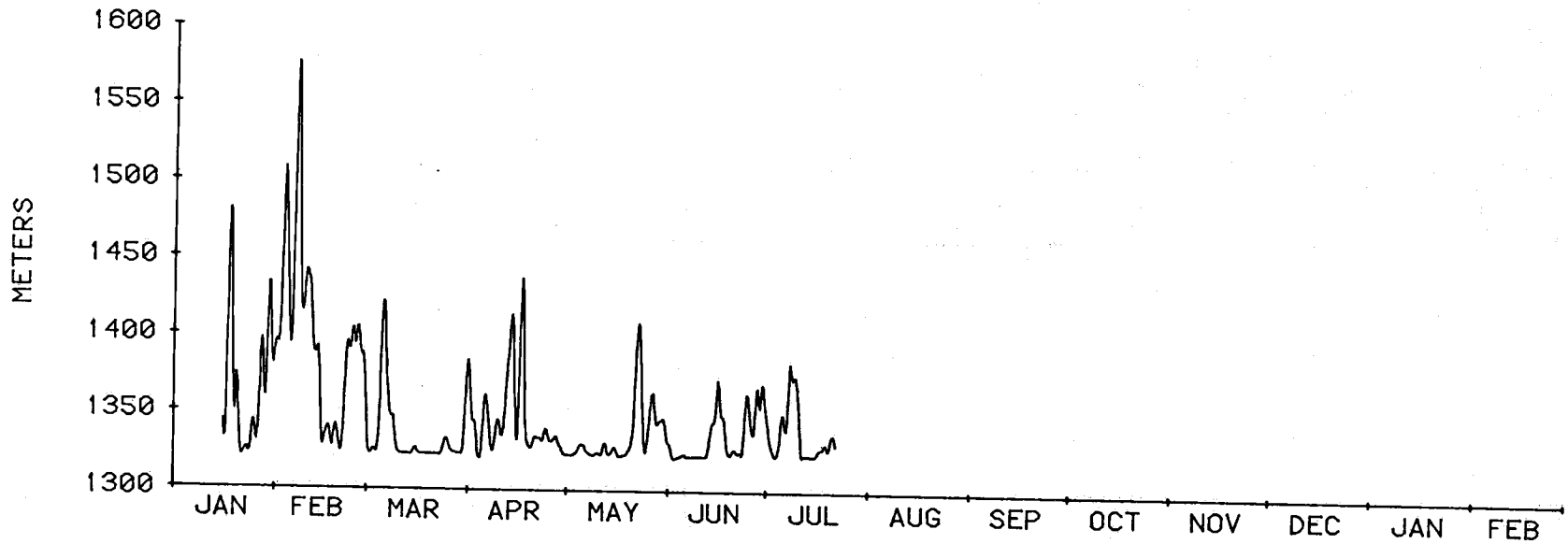
2637 METERS AT NT.
LLP FILTERED TEMPERATURE



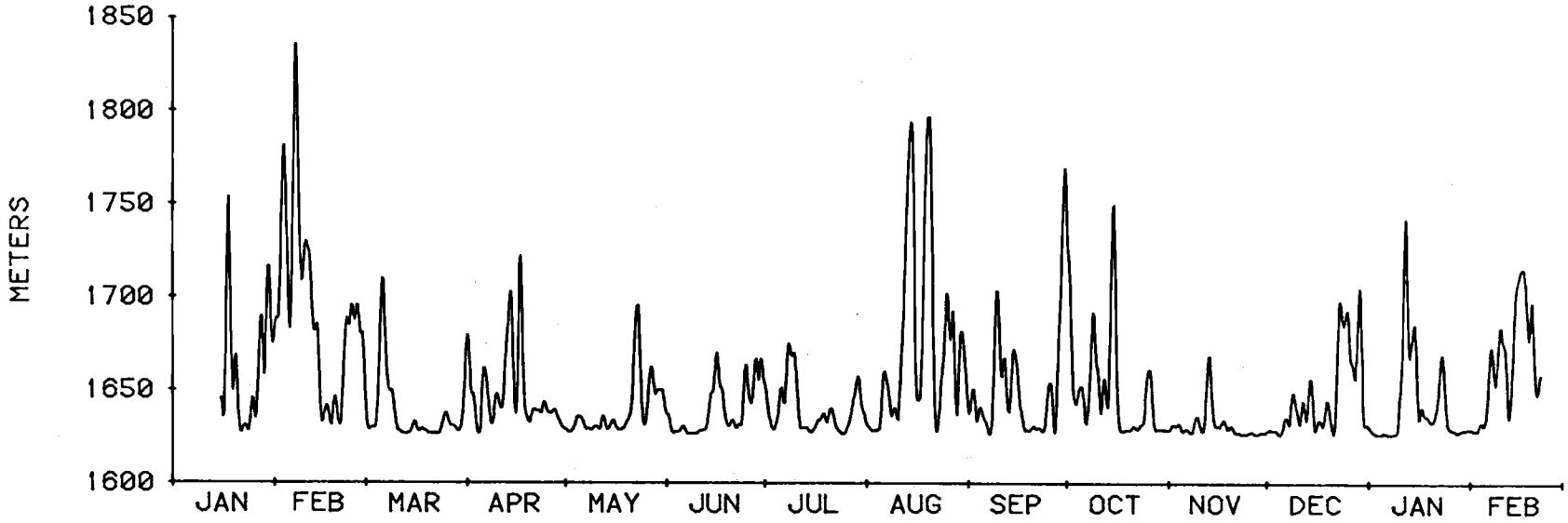
645 METERS AT NT
LLP FILTERED PRESSURE



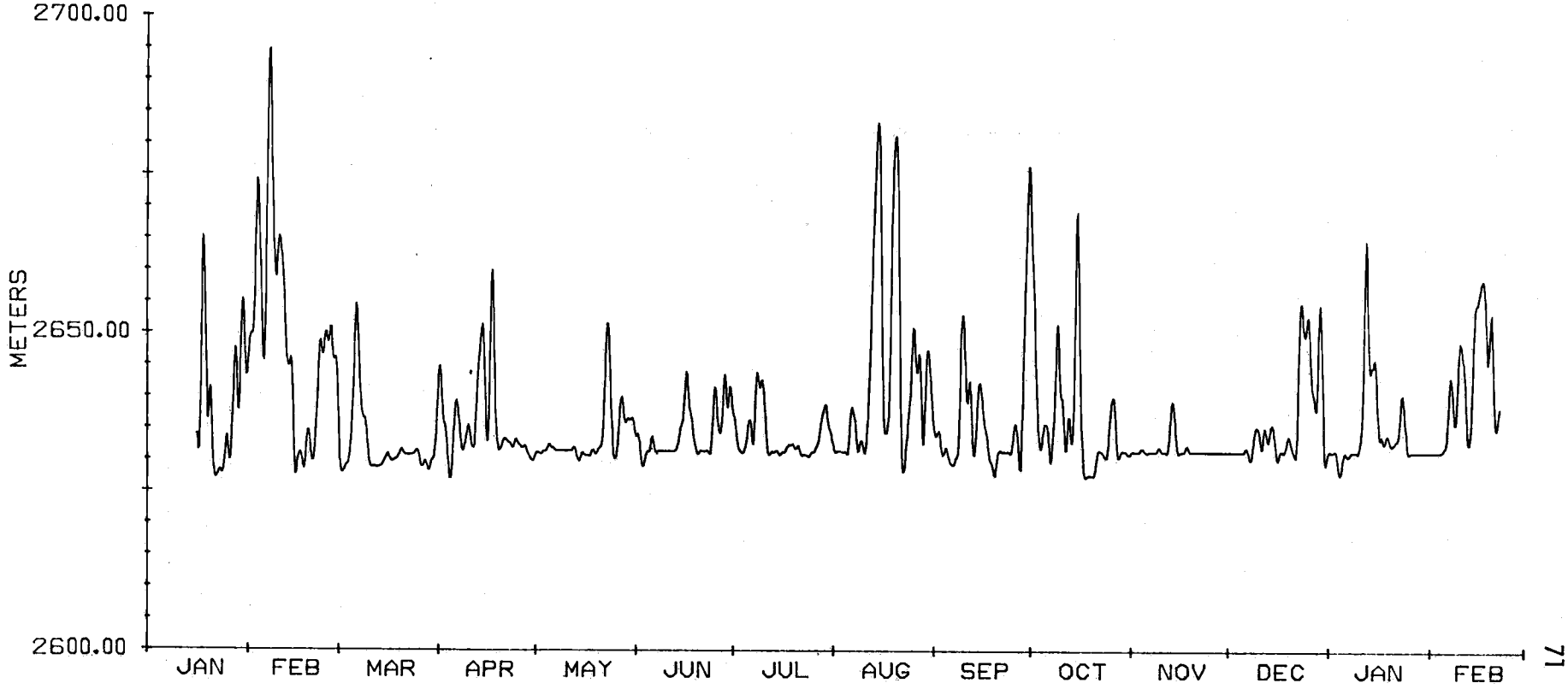
944 METERS AT NT
LLP FILTERED PRESSURE



1349 METERS AT NT
LLP FILTERED PRESSURE

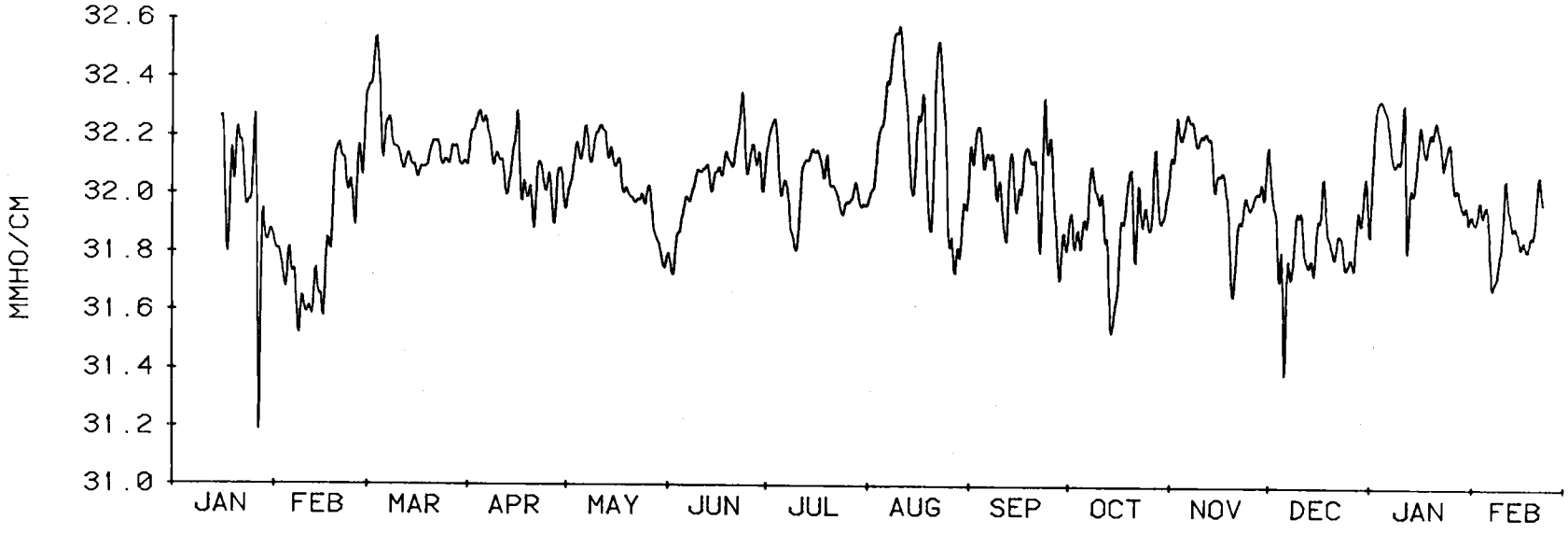


1651 METERS AT NT
LLP FILTERED PRESSURE

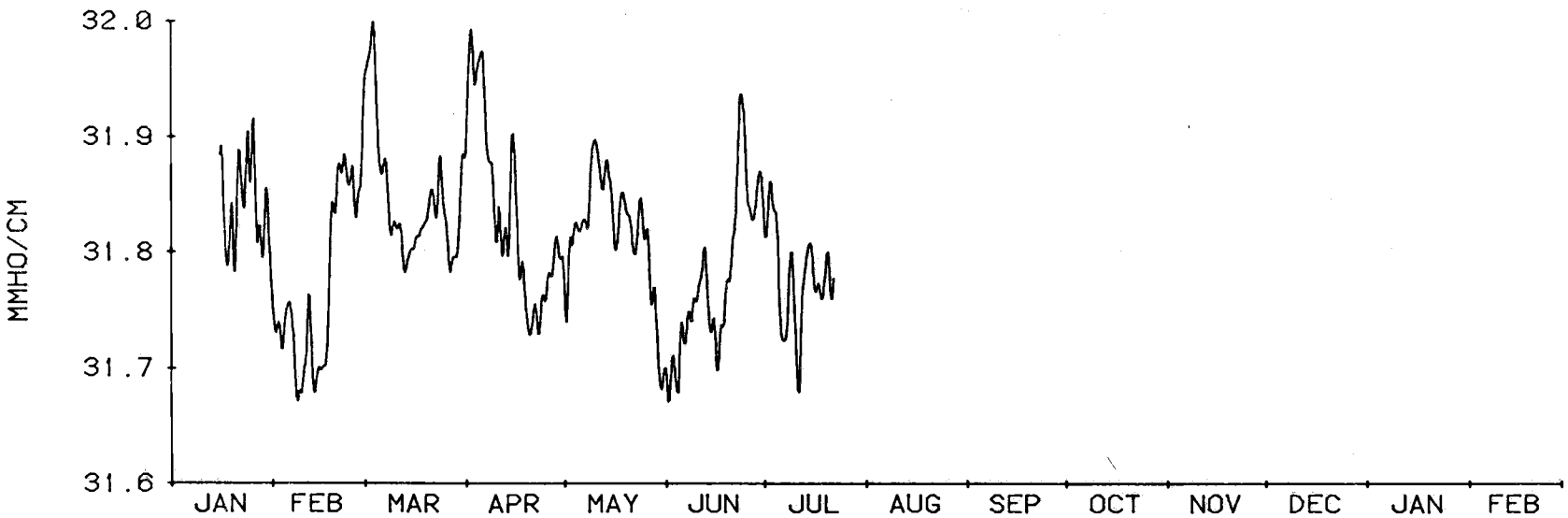


71

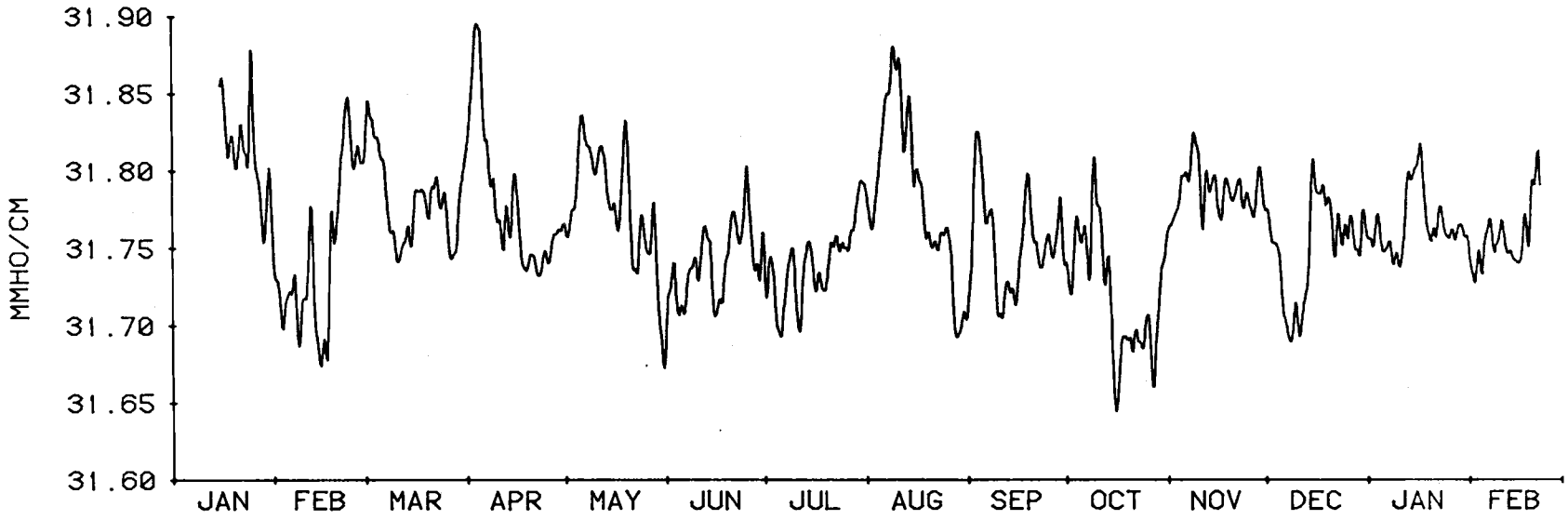
2637 METERS AT NT.
LLP FILTERED PRESSURE



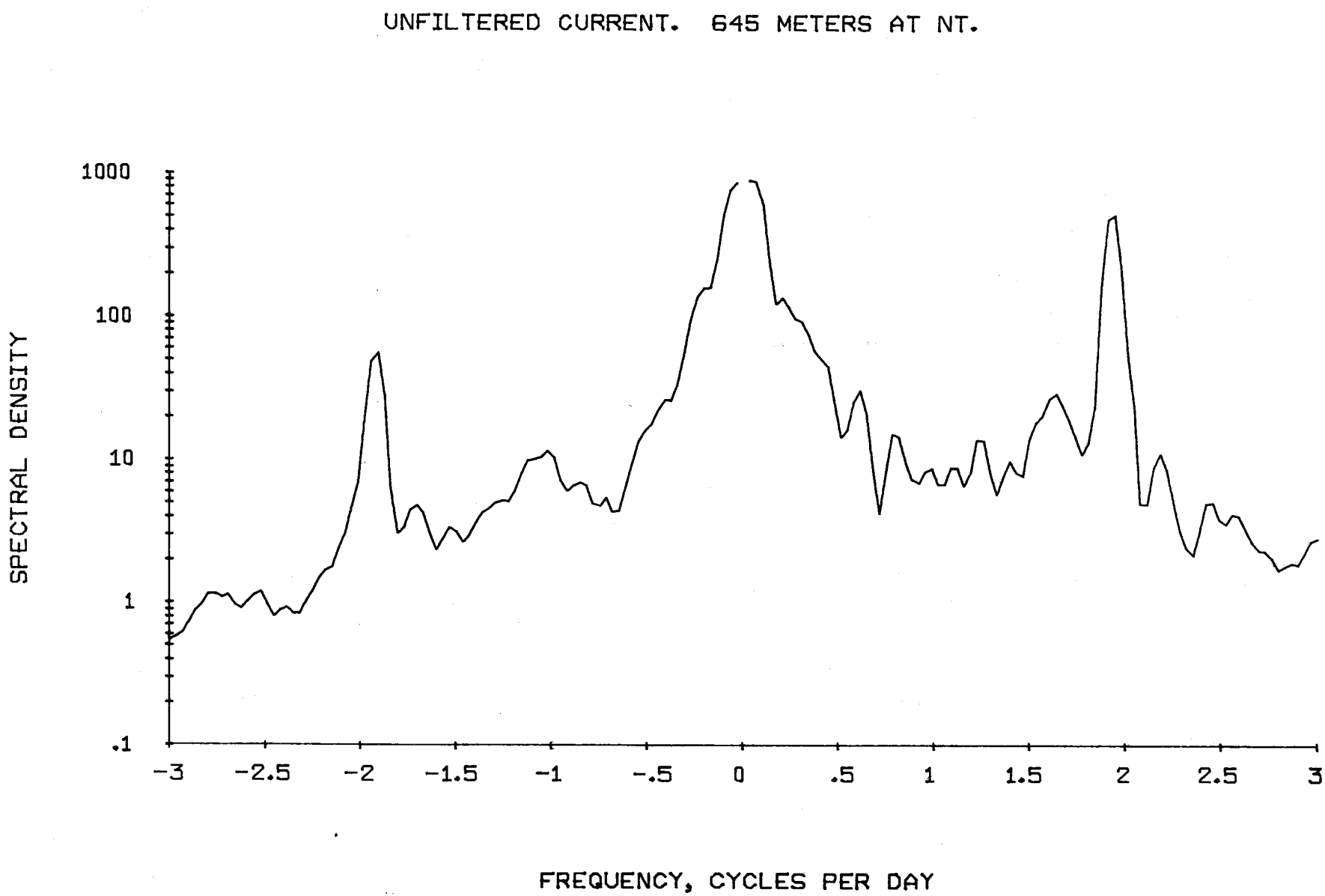
944 METERS AT NT
LLP FILTERED CONDUCTIVITY



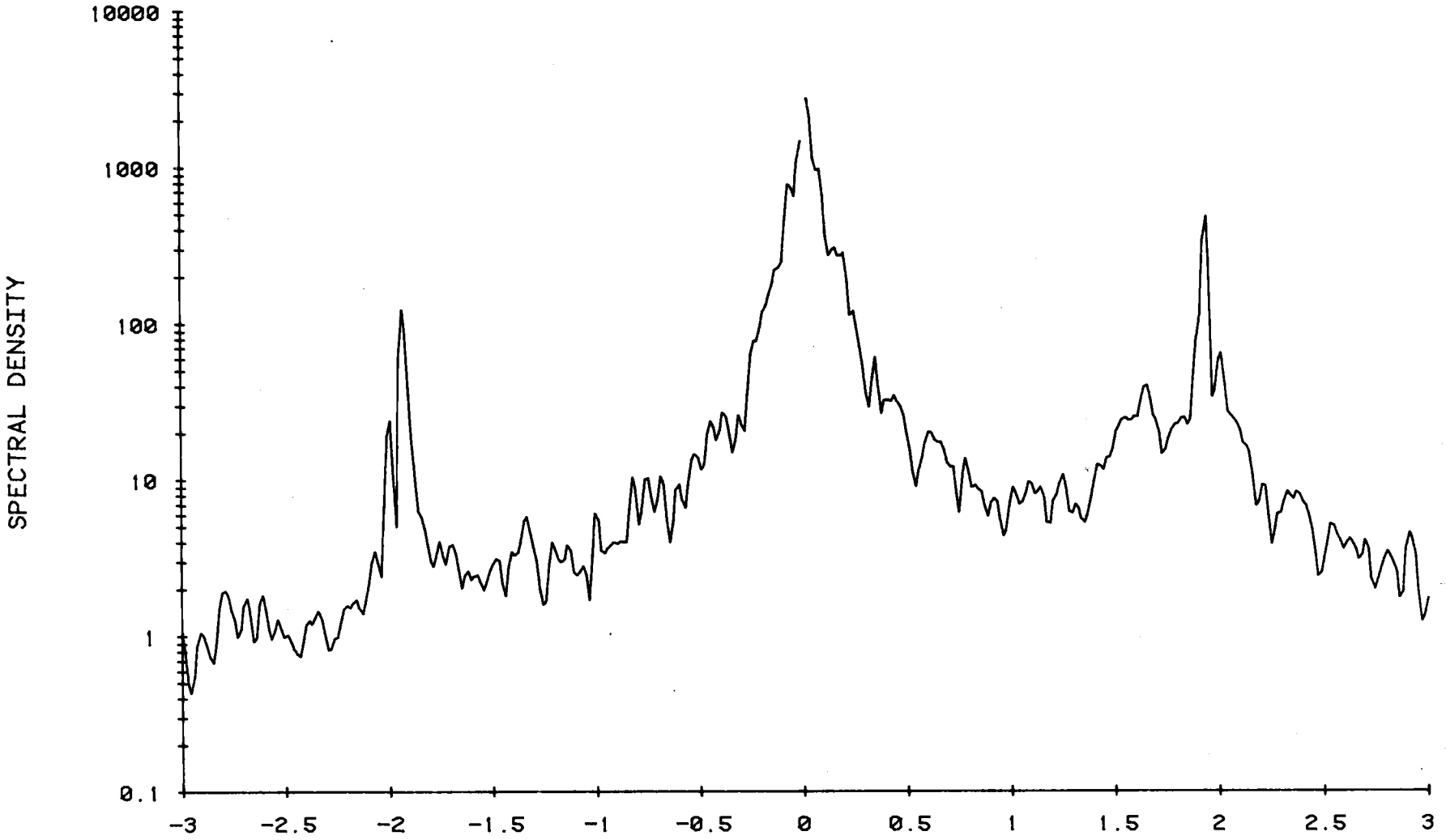
1349 METERS AT NT
LLP FILTERED CONDUCTIVITY

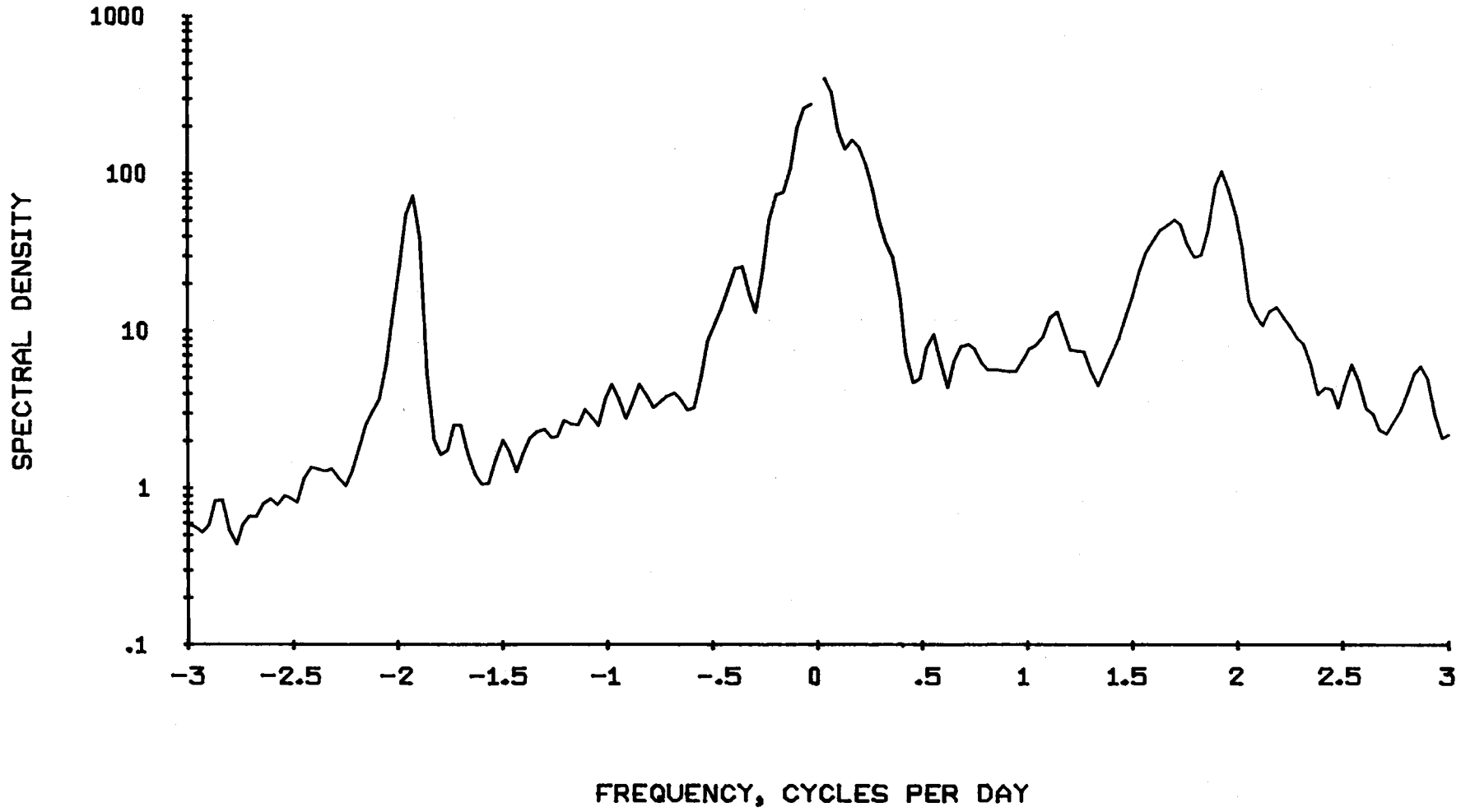


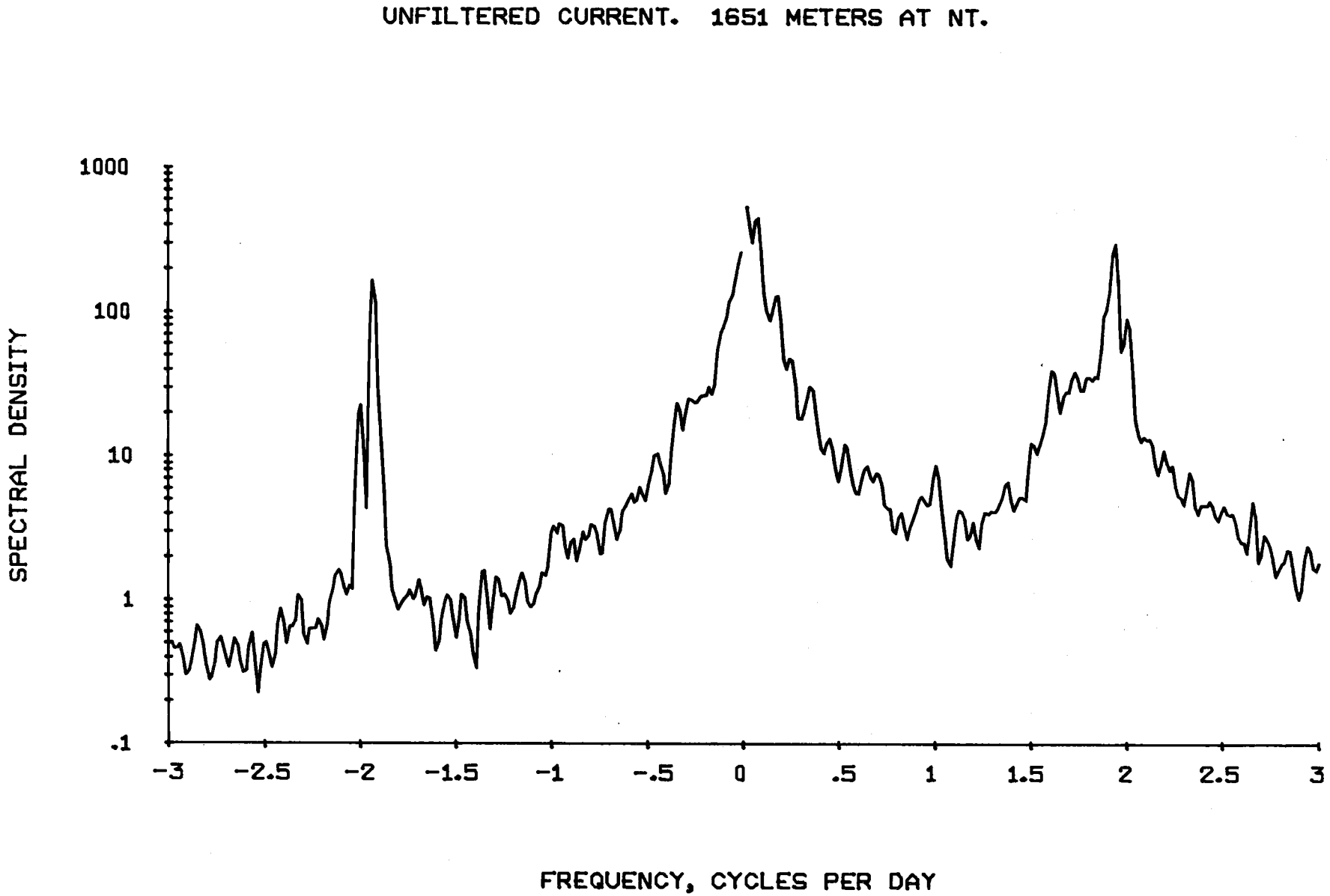
1651 METERS AT NT
LLP FILTERED CONDUCTIVITY

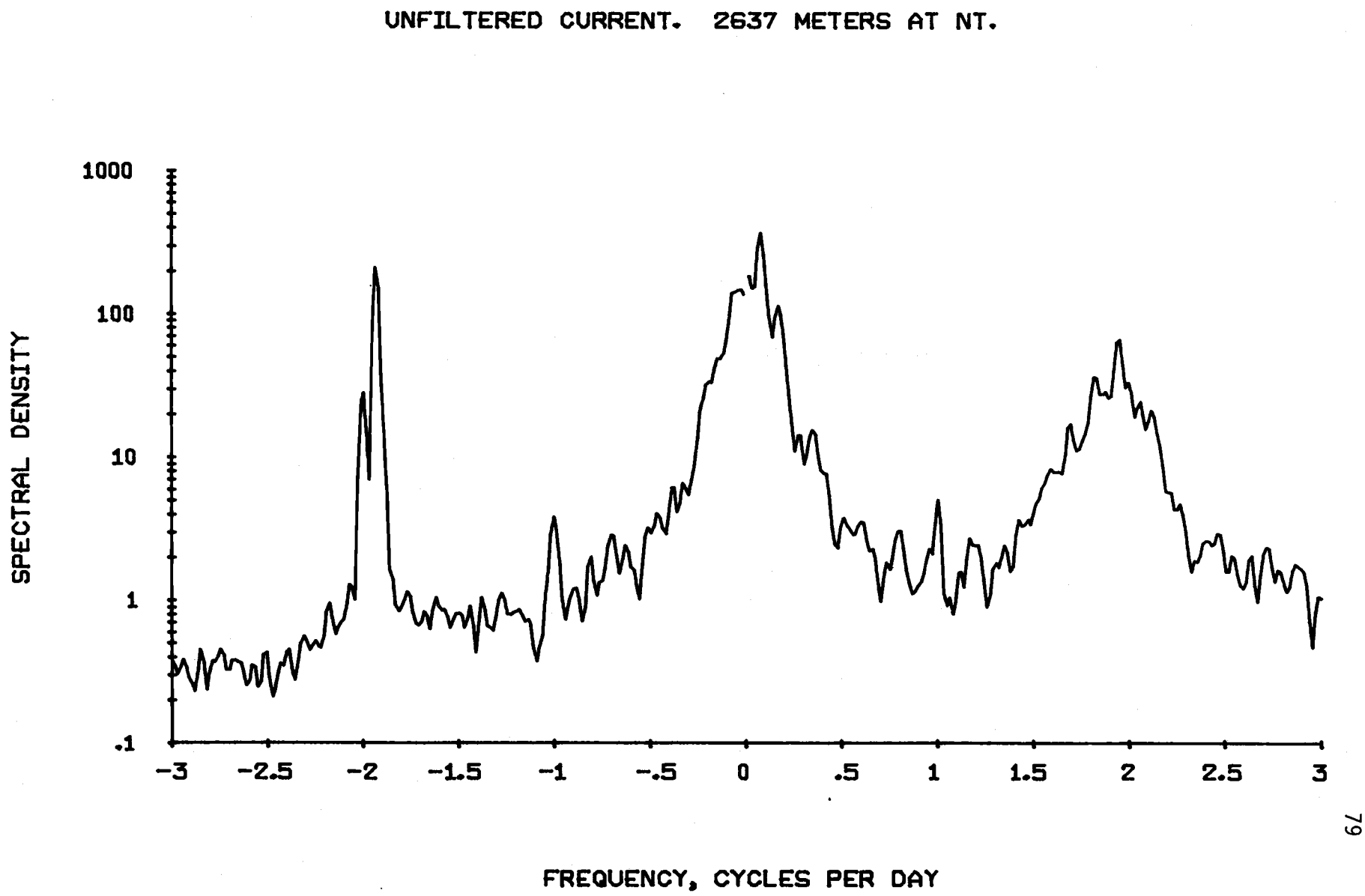

UNFILTERED CURRENT. 645 METERS AT NT.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

UNFILTERED CURRENT. 944 METERS AT NT

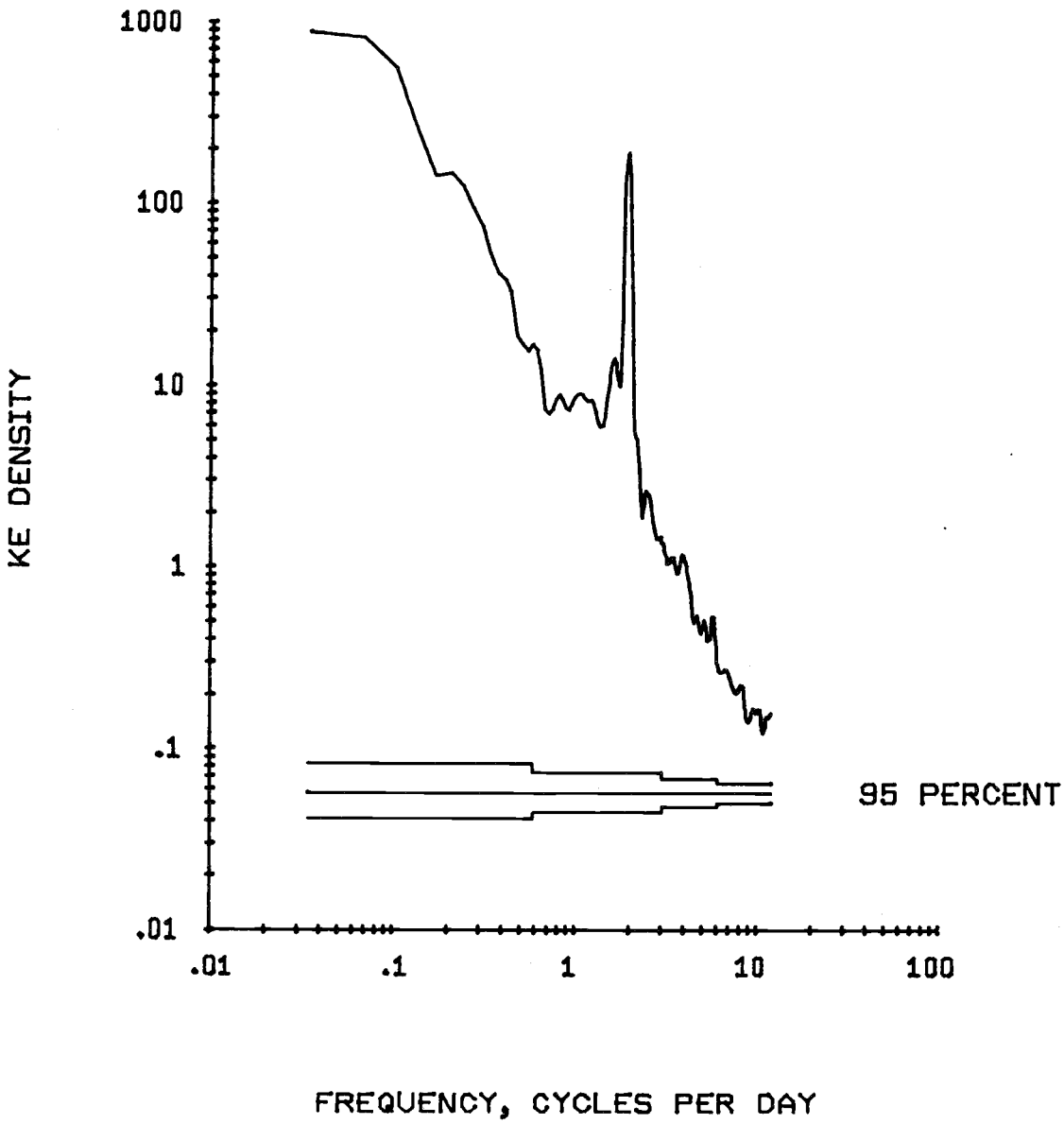



UNFILTERED CURRENT. 1349 METERS AT NT.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

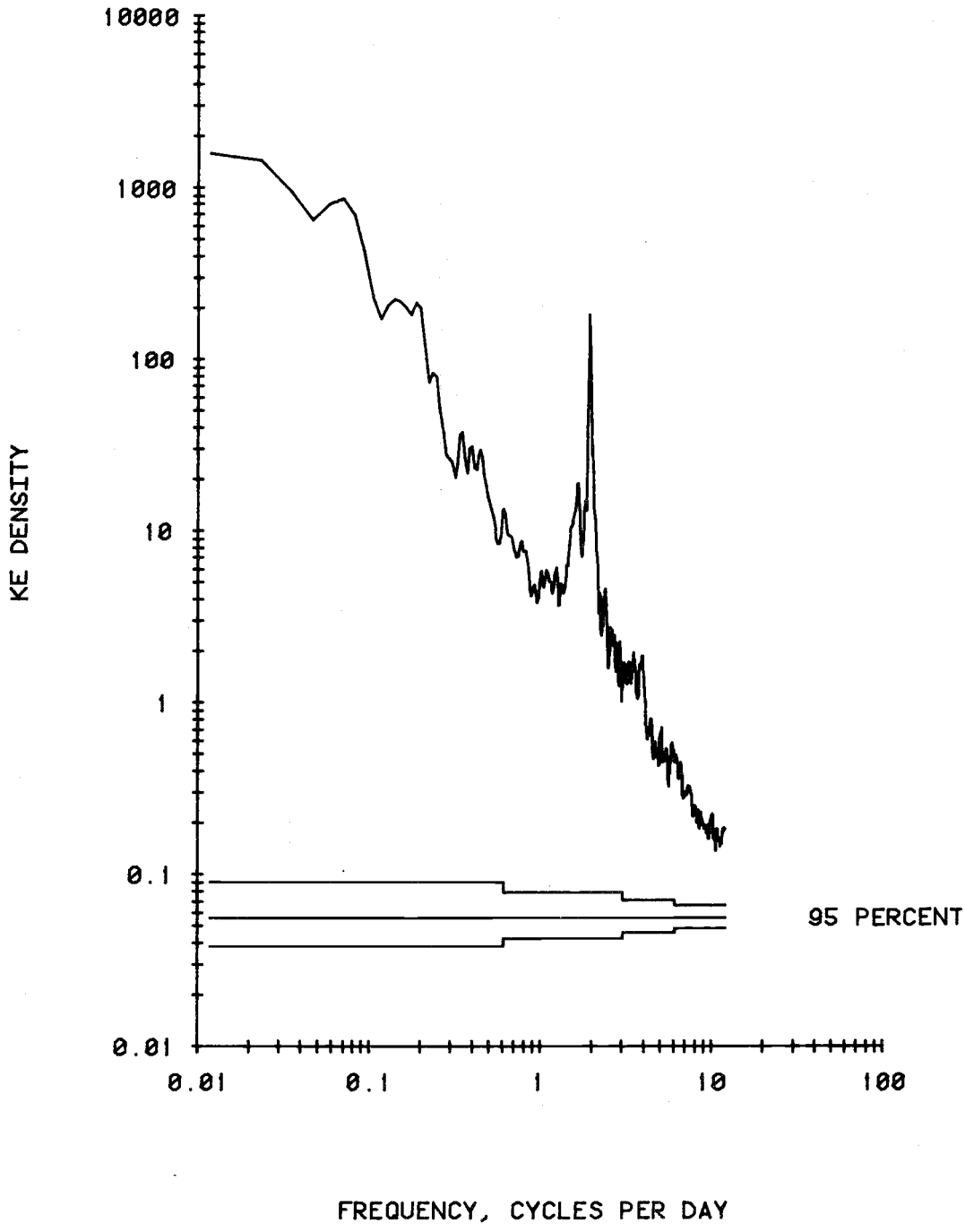

UNFILTERED CURRENT. 1651 METERS AT NT.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY


UNFILTERED CURRENT. 2637 METERS AT NT.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

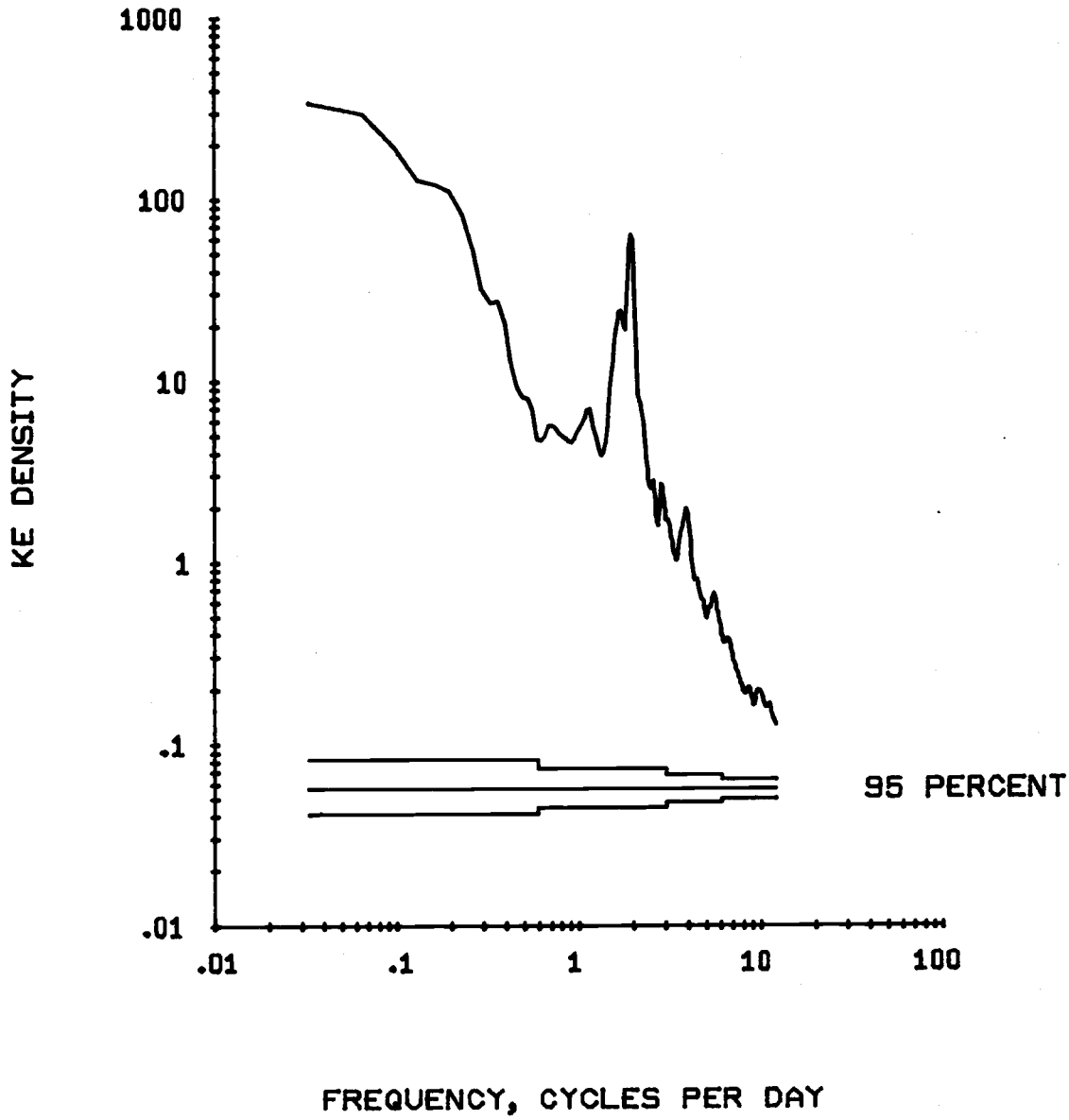
UNFILTERED CURRENT. 645 M AT NT.



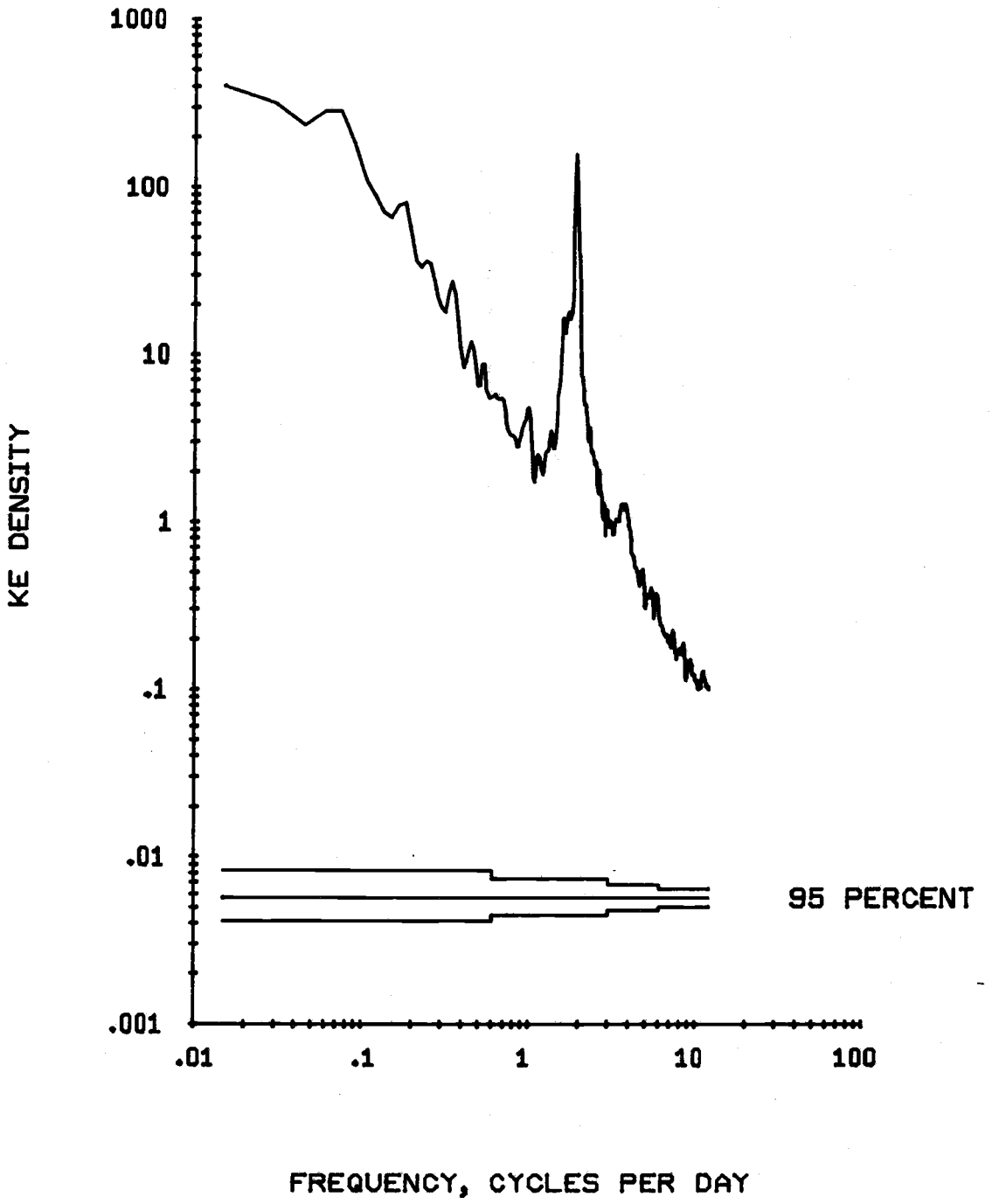
UNFILTERED CURRENT. 944 METERS AT NT



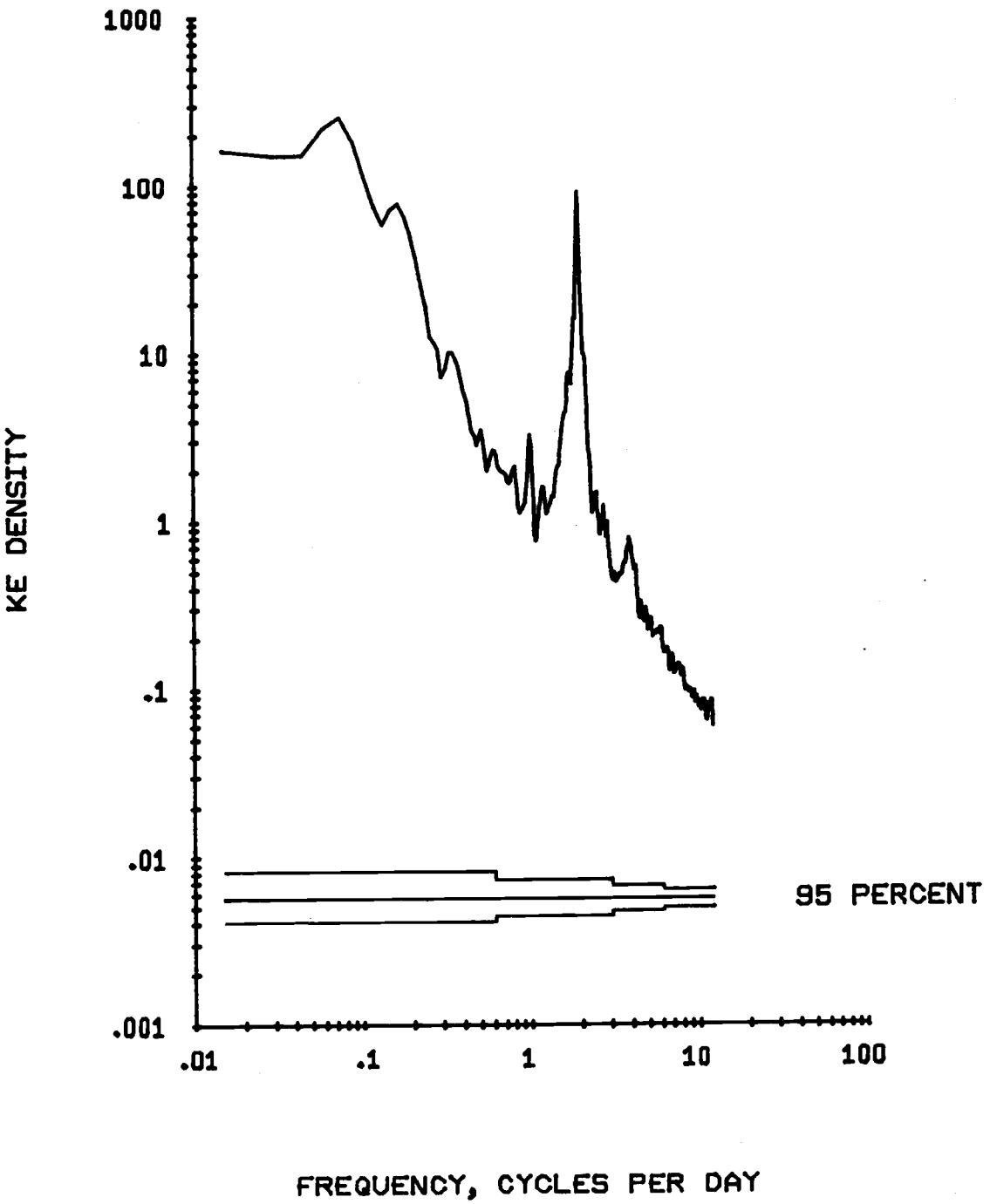
UNFILTERED CURRENT. 1349 METERS AT NT.



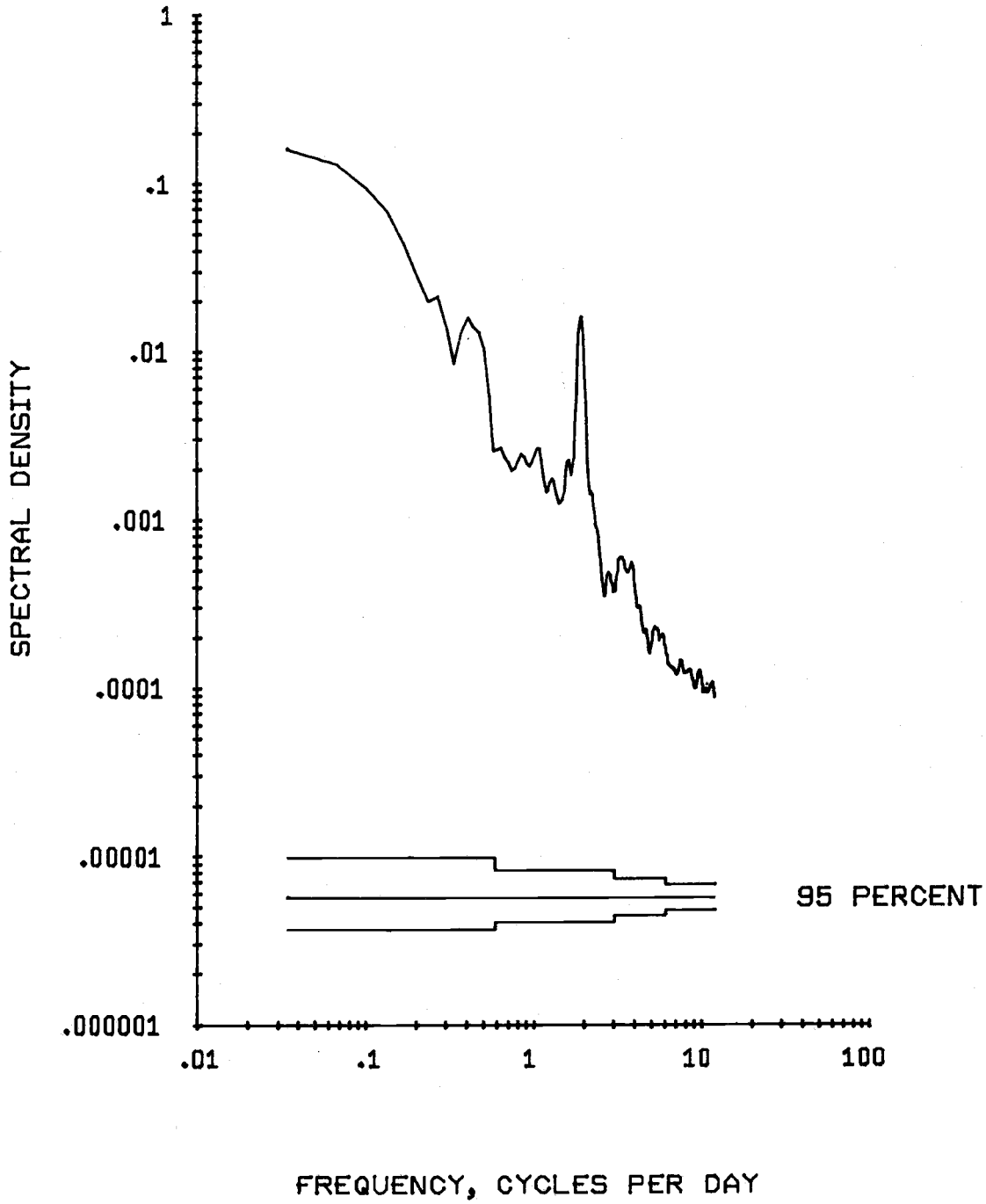
UNFILTERED CURRENT. 1651 METERS AT NT.



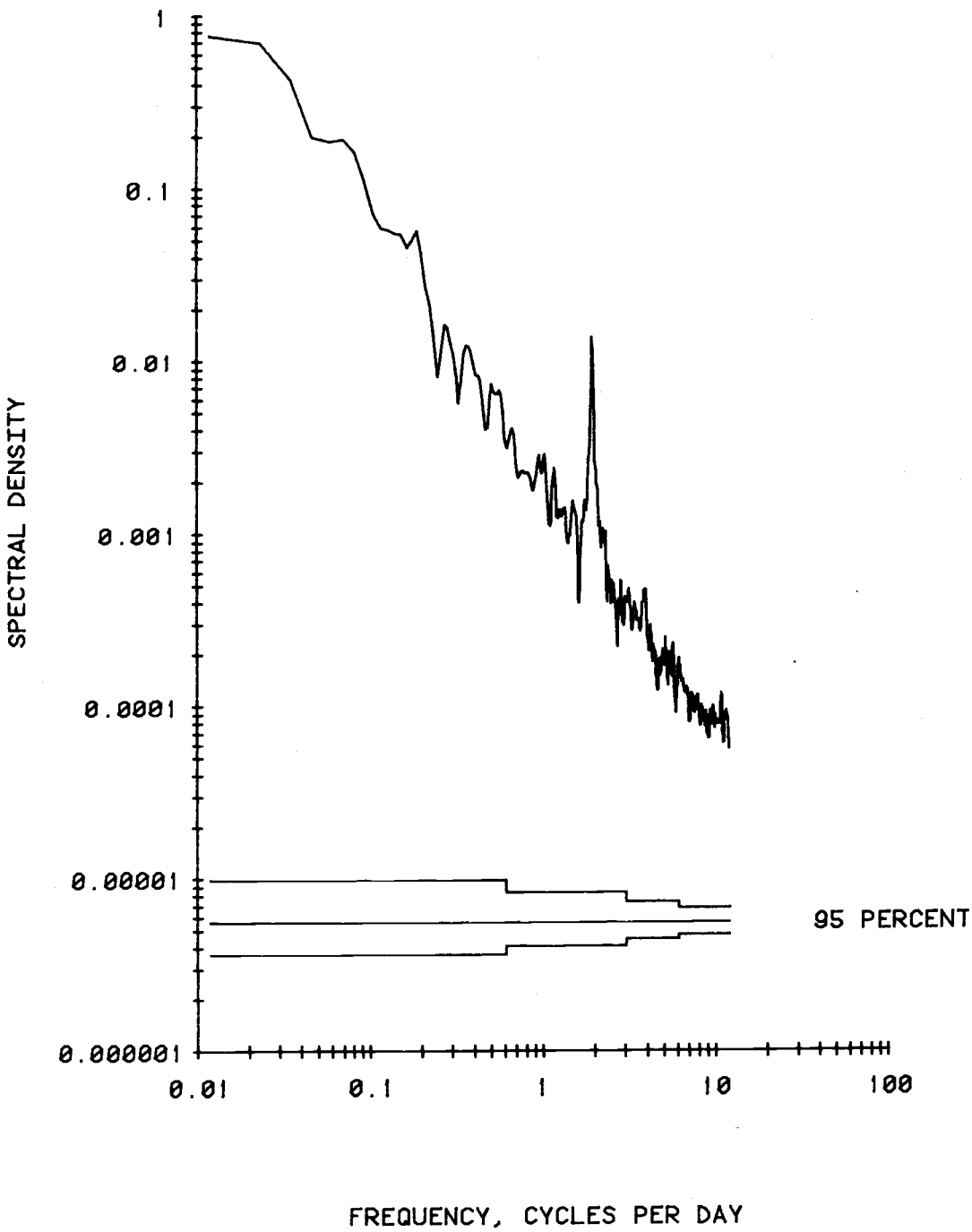
UNFILTERED CURRENT. 2637 M AT NT.



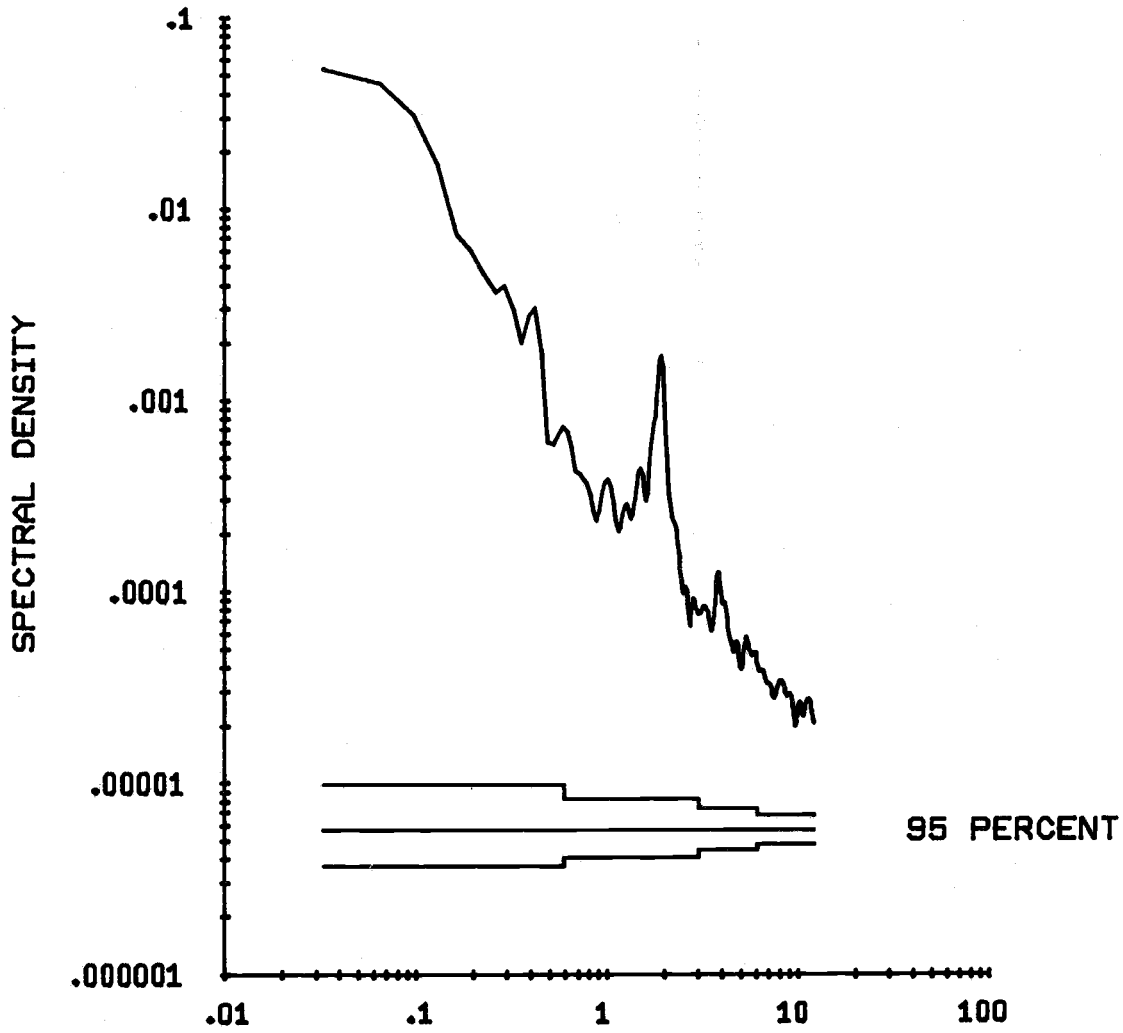
UNFILTERED TEMPERATURE. 645 METERS AT NT.



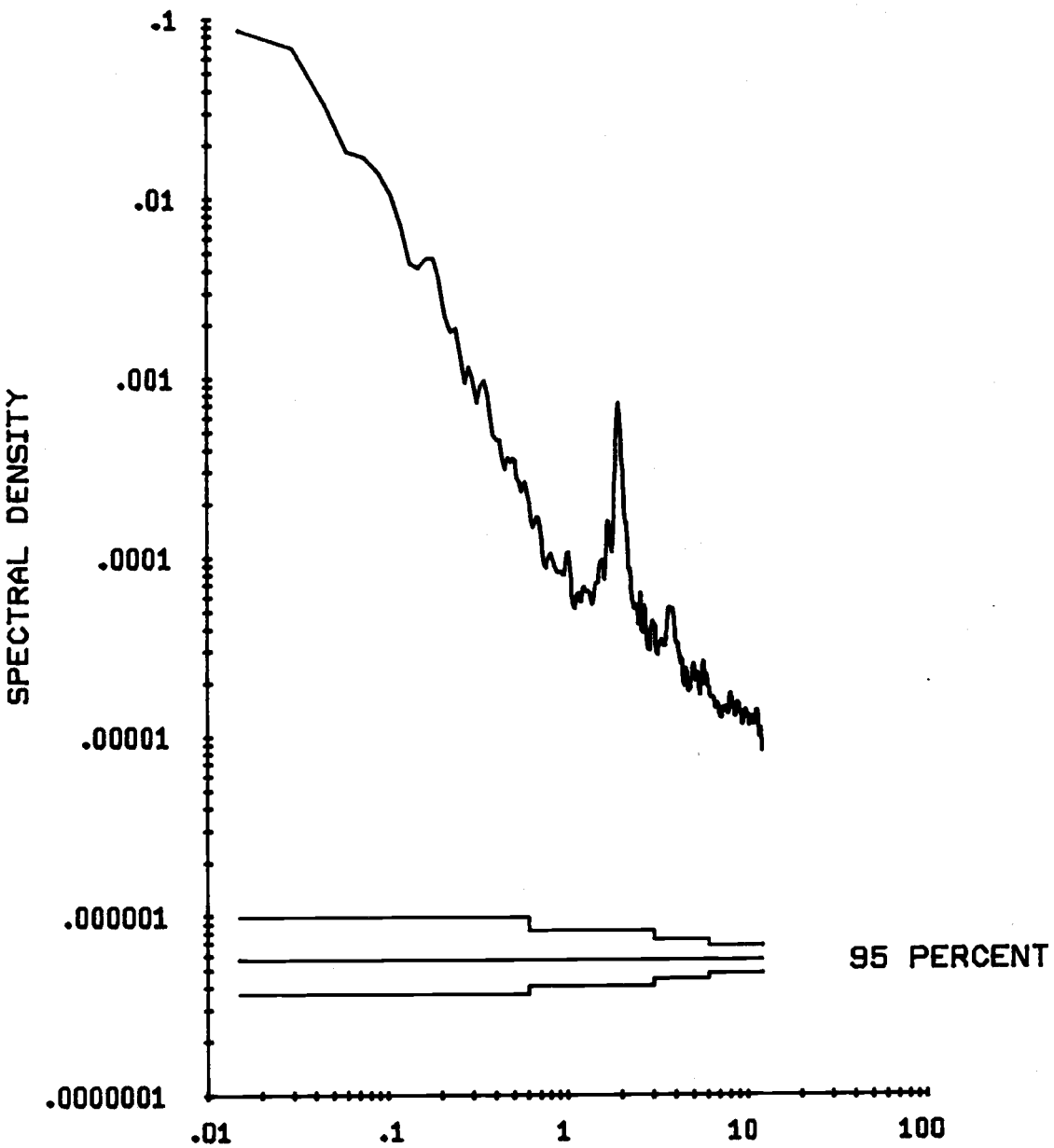
UNFILTERED TEMPERATURE. 944 METERS AT NT



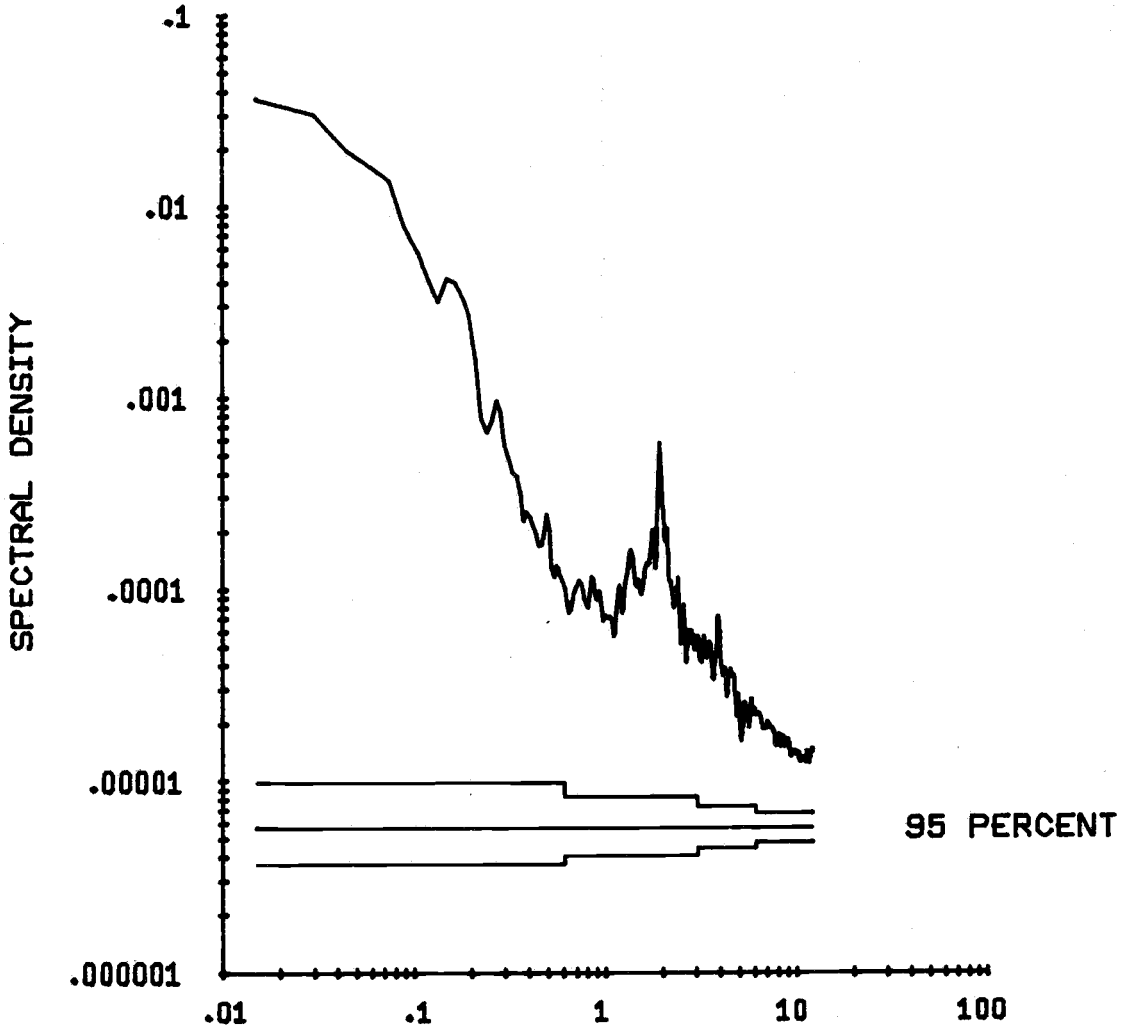
UNFILTERED TEMPERATURE. 1349 M AT NT.



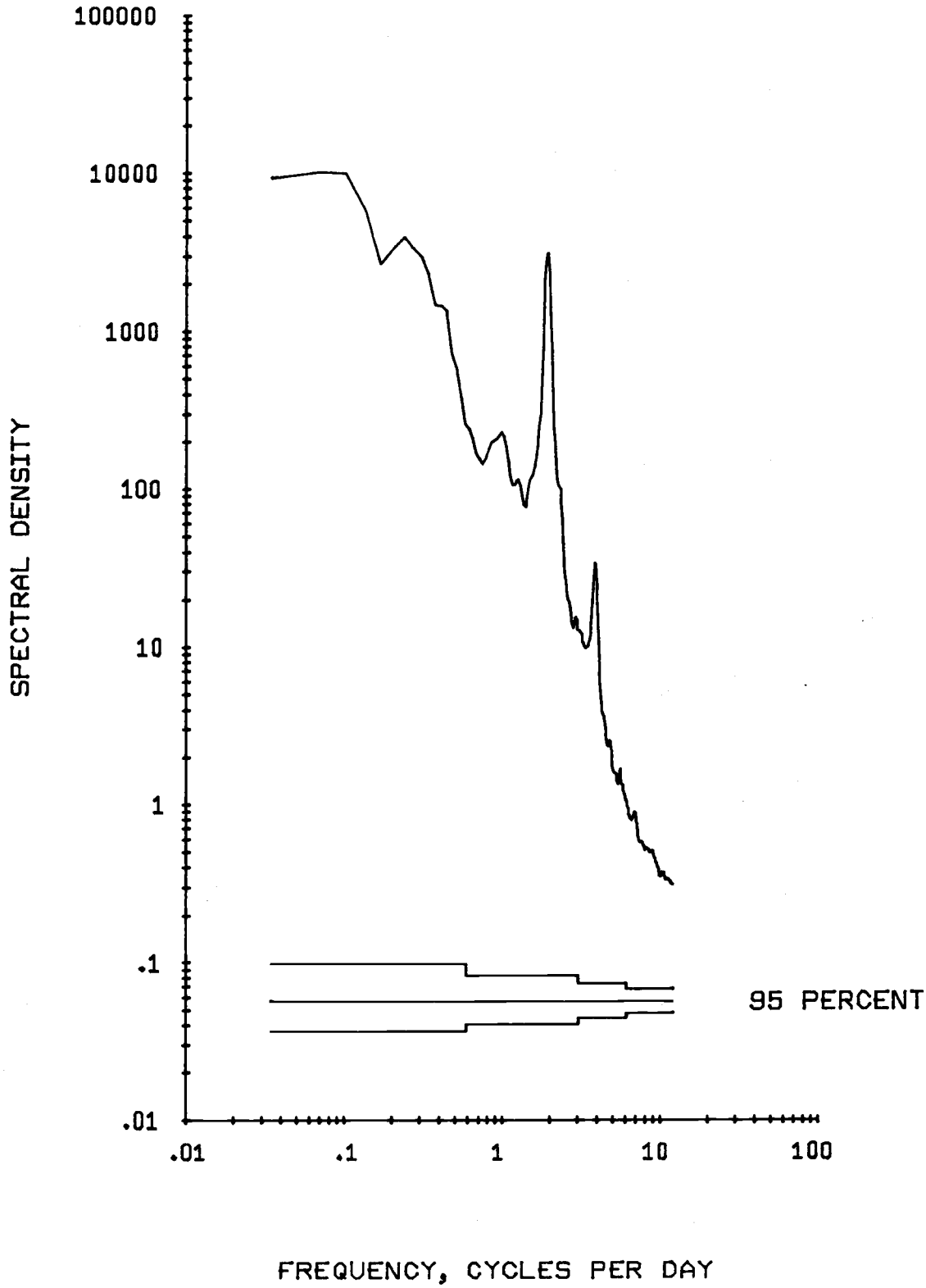
UNFILTERED TEMPERATURE. 1651 M AT NT.

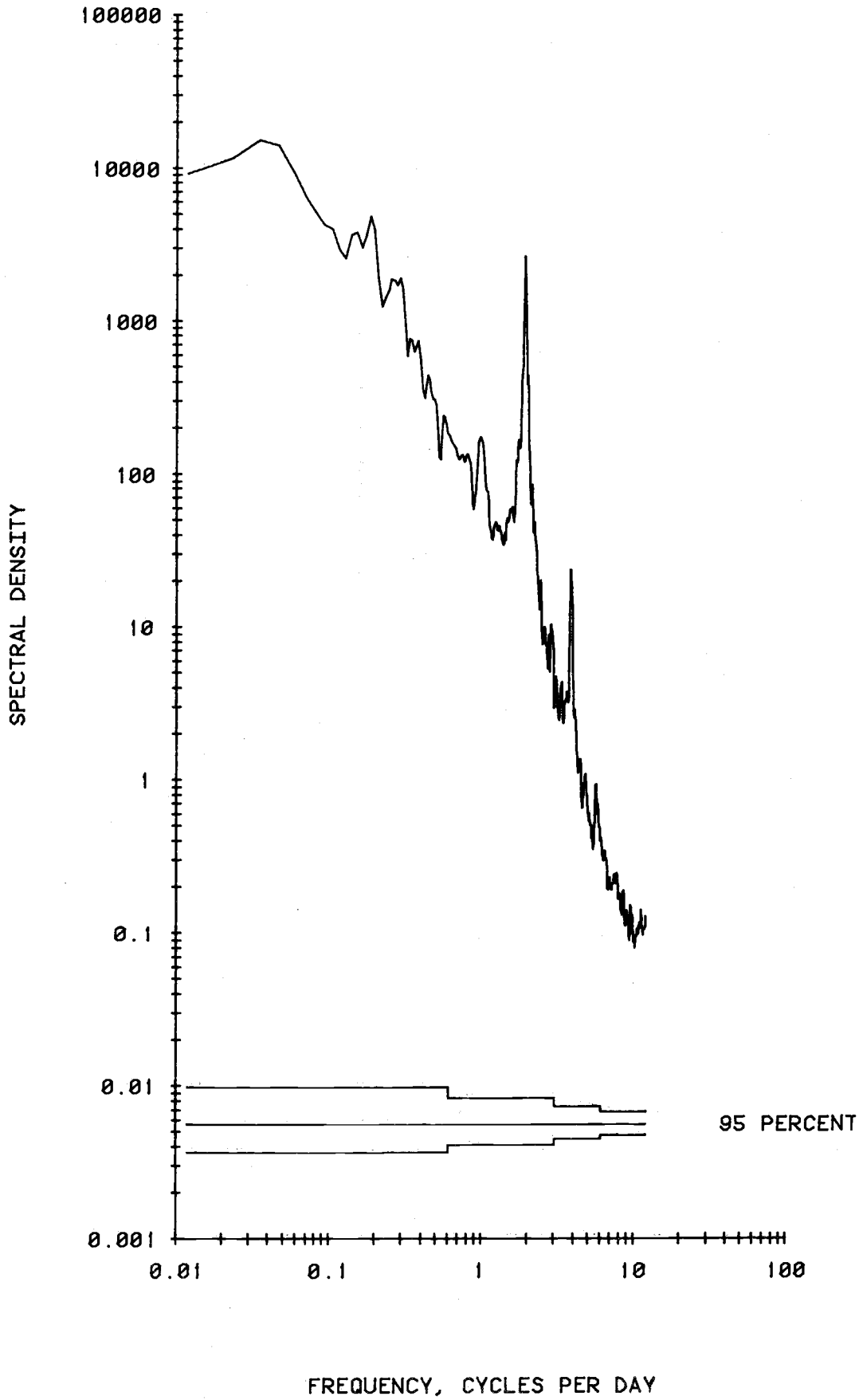


UNFILTERED TEMPERATURE. 2637 METERS AT NT.

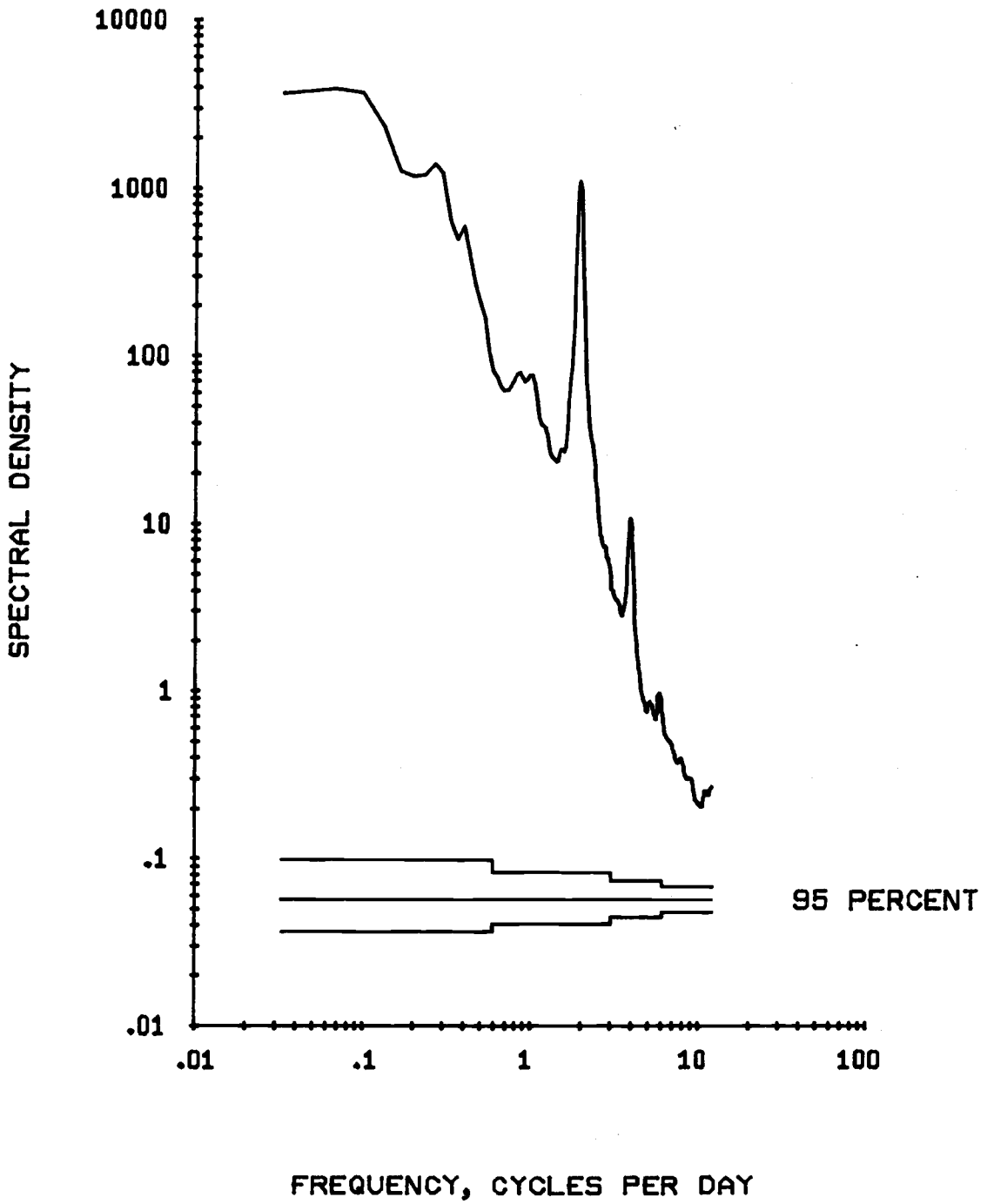


UNFILTERED PRESSURE. 645 METERS AT NT.

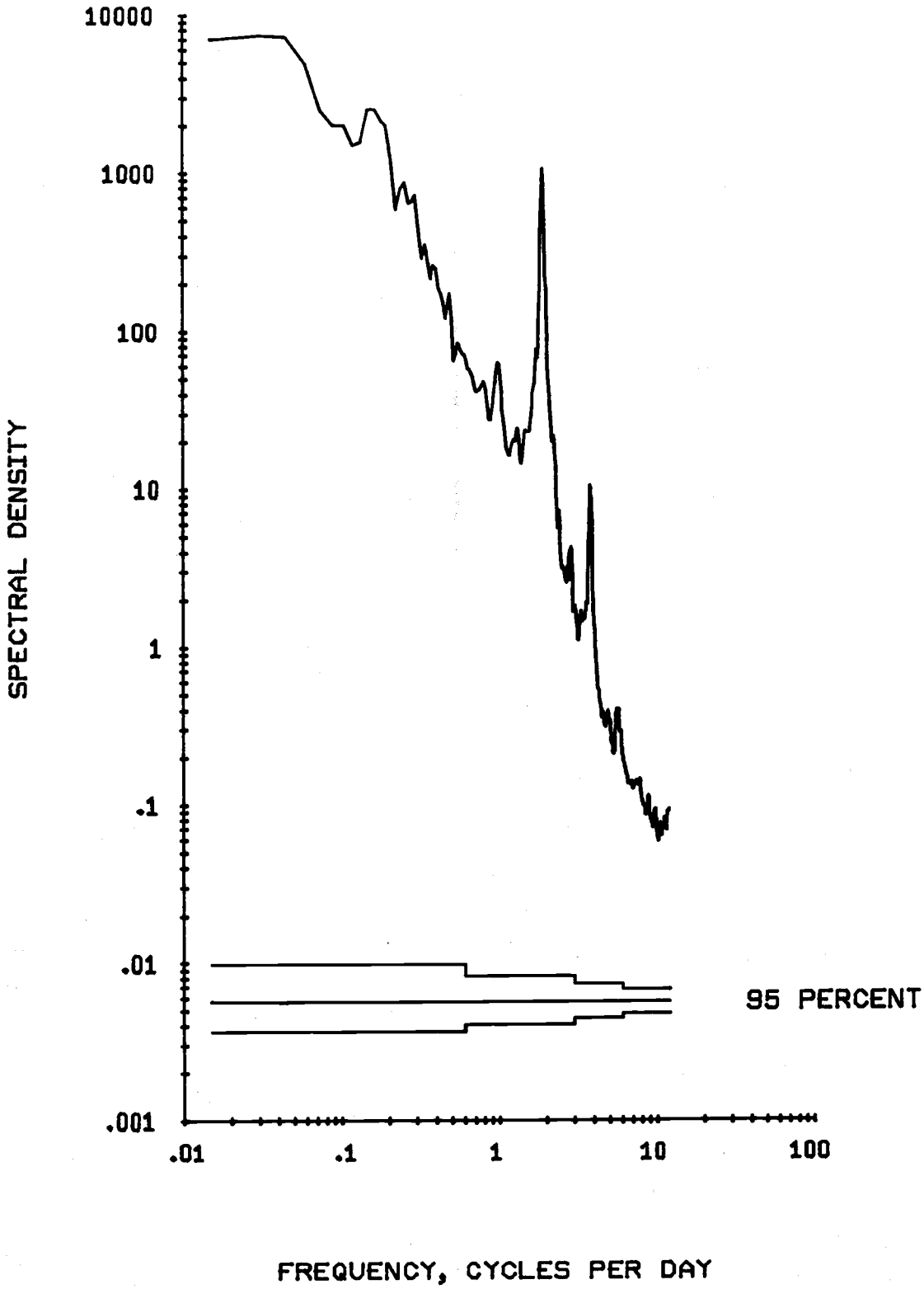



100000
10000
1000
100
10
1
0.1
0.01
0.001
SPECTRAL DENSITY
95 PERCENT
0.01
0.1
1
10
100
FREQUENCY, CYCLES PER DAY

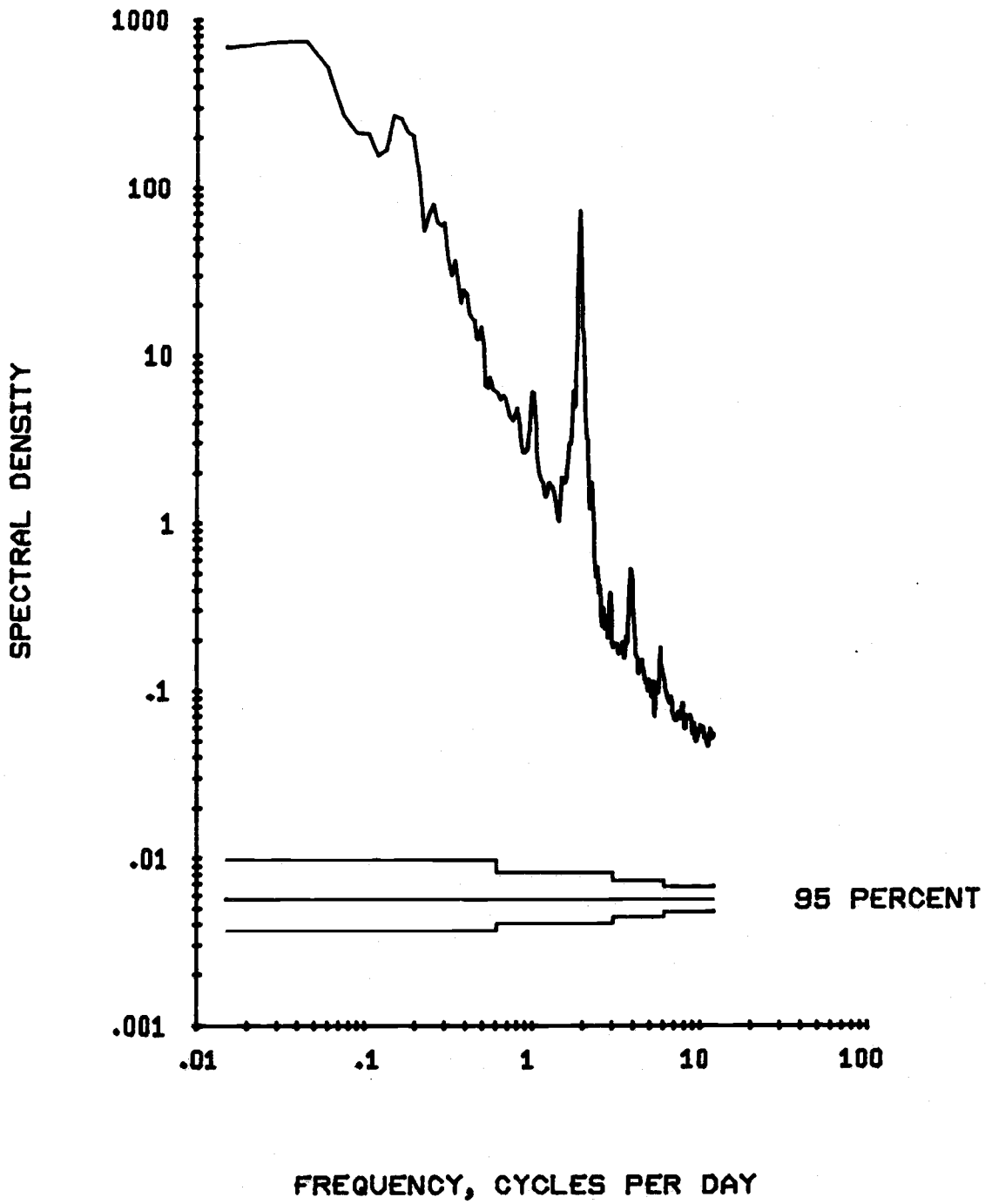
UNFILTERED PRESSURE. 1349 M AT NT.



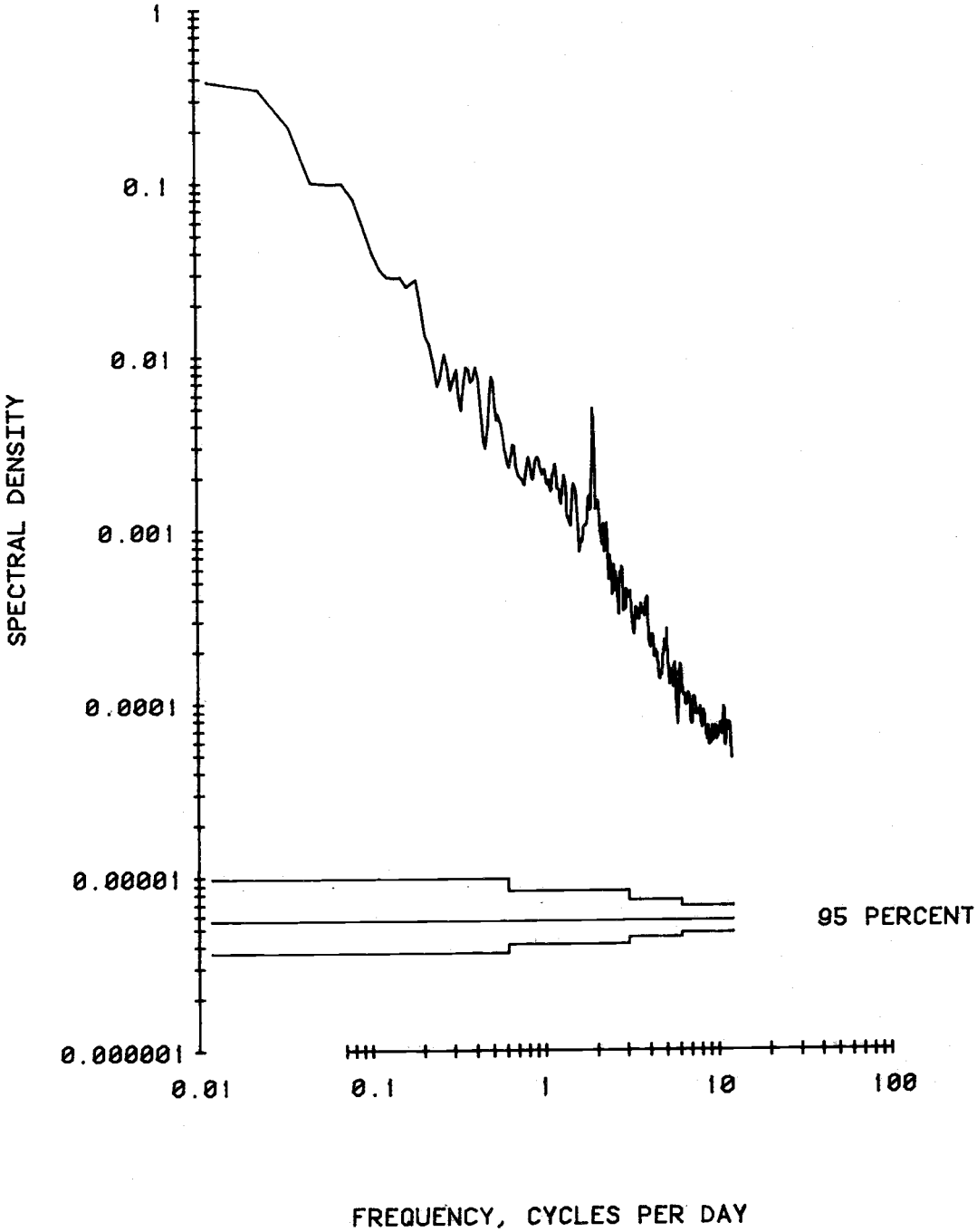
UNFILTERED PRESSURE. 1651 M AT NT.



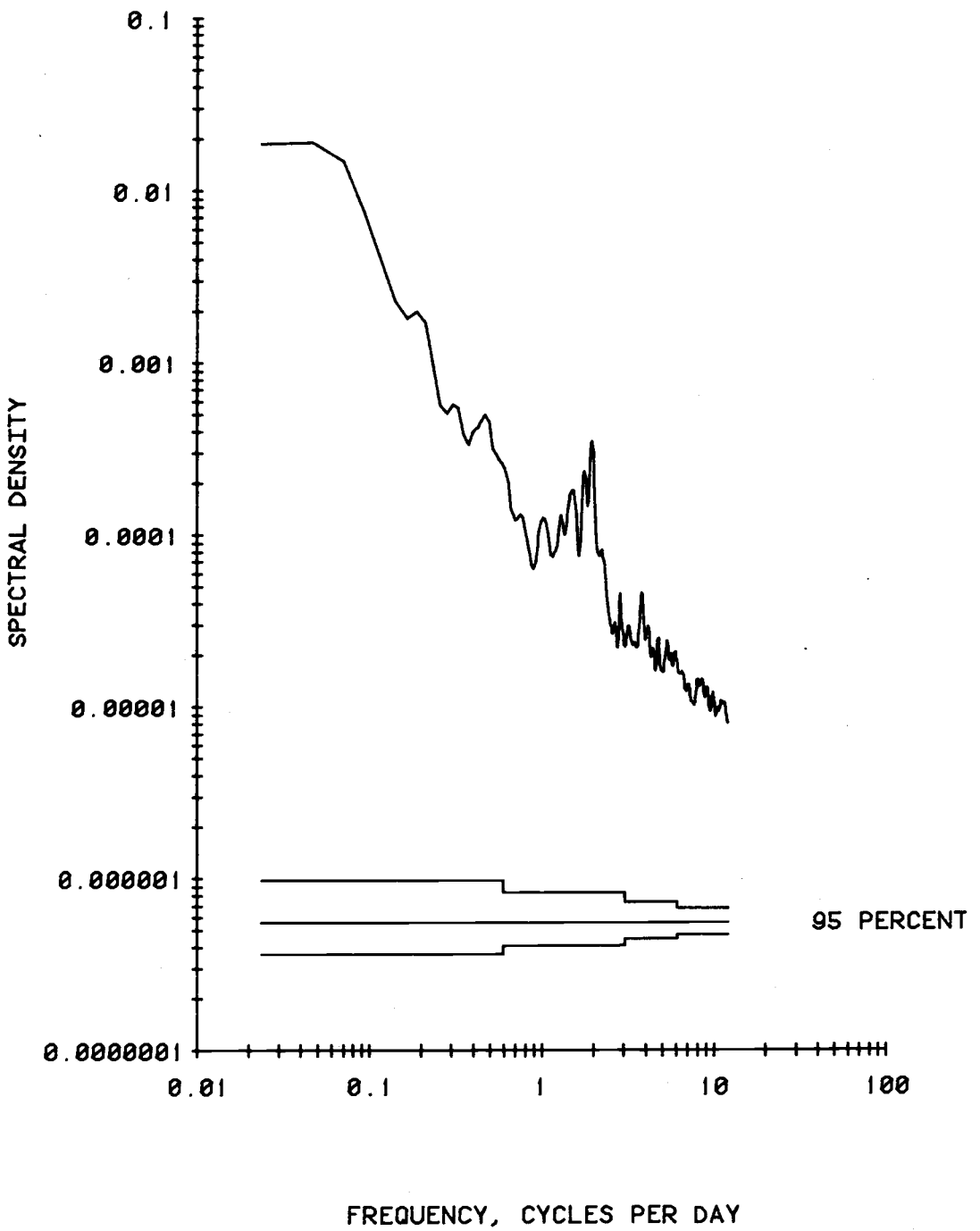
UNFILTERED PRESSURE. 2637 METERS AT NT.



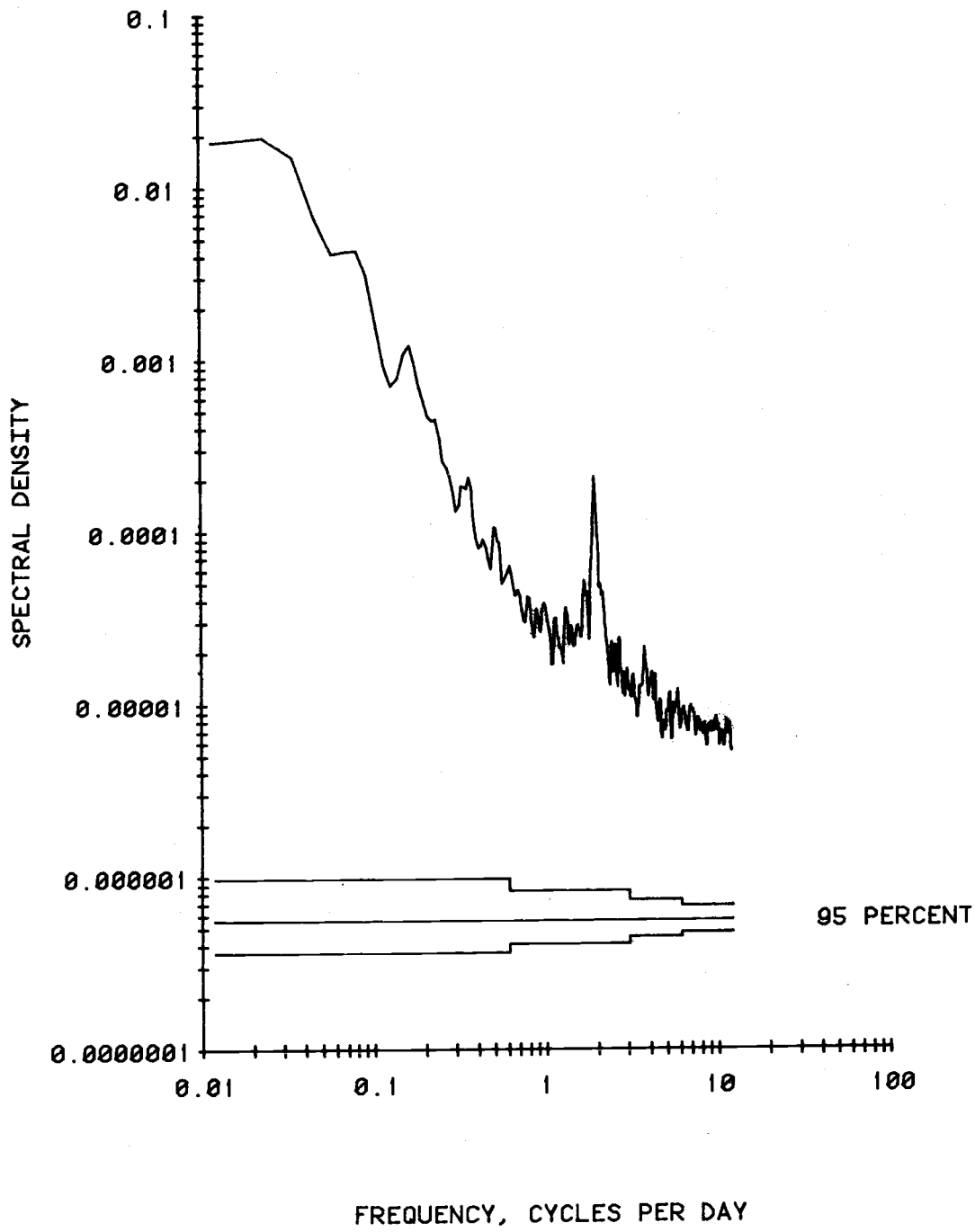
UNFILTERED CONDUCTIVITY. 944 METERS AT NT



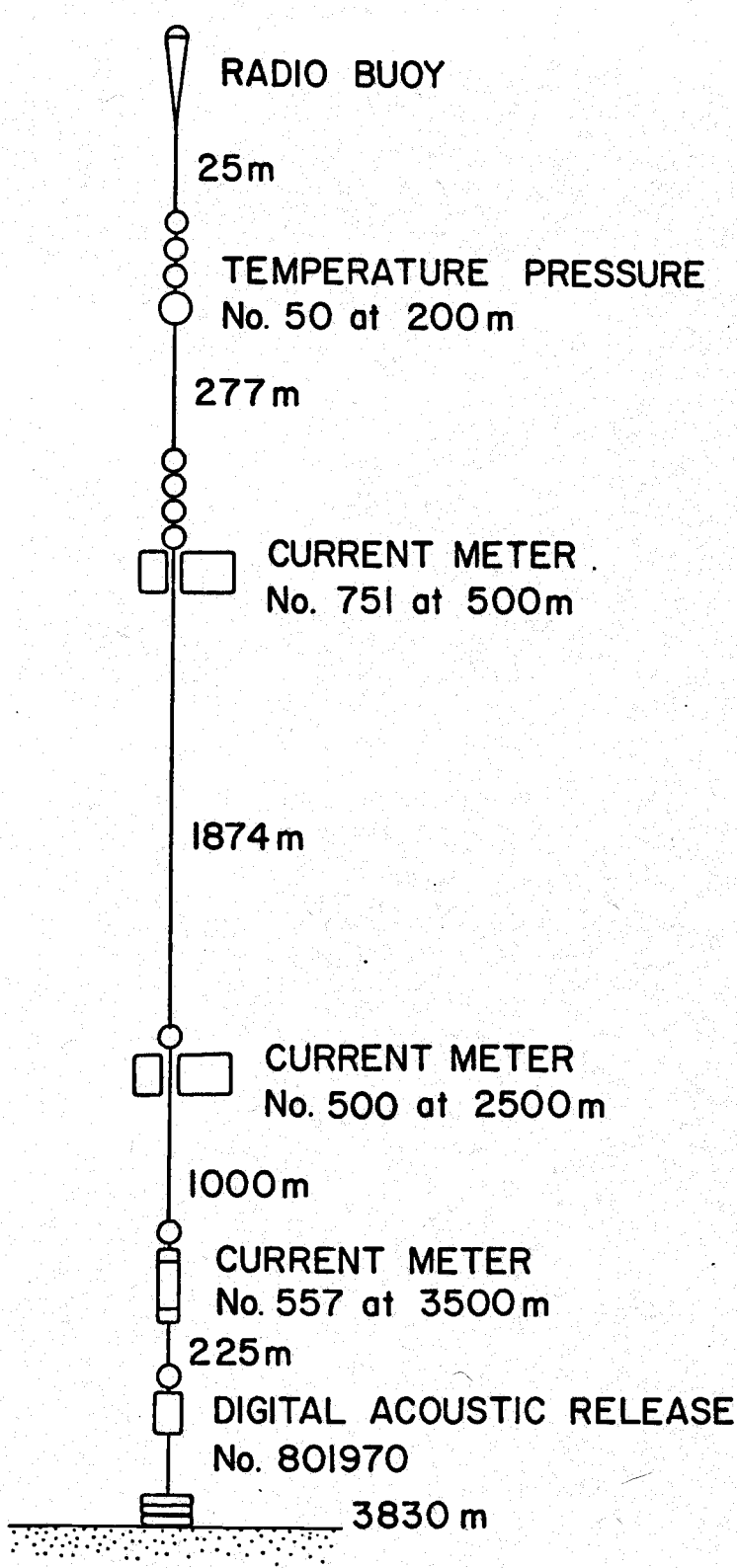
UNFILTERED CONDUCTIVITY. 1349 METERS AT NT



UNFILTERED CONDUCTIVITY. 1651 METERS AT NT



ML - 1



MAIN LINE (ML) I

57° 07.64' S

66° 11.46' W

INSTALLED: 15 JANUARY 1979

ML-1

Position: 57°07.64'S, 66°11.46'W
Depth of Water: 3830 m
Set at 0507 UCT 15 January '79 by R/V MELVILLE
Retrieved at 2032 UCT 23 February '80 by R/V ATLANTIS II
Data Interval: 0800 UCT 15 January '79 to 2300 UCT 23 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	751/33
2500 m	500/52

Instrument 751 recorded speed, direction, and temperature once per hour until the instrument was recovered.

Instrument 500 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered. The pressure record contained numerous cases where the sensor output was 1023. Most of these sections were caused by the depth of the instrument surpassing the sensor's top limit of 29268547 pascals. In some instances, however, it appears that when the sensor was close to its upper limit it jumped to 1023, bypassing any intervening values. Hence, a portion of the off scale points are probably due to instrument malfunction rather than too great a depth. All off scale values have been left in the processed file as is, although the true pressure is not known at these places. The correct average depth is unknown but was estimated as 2800 meters for labeling the listings and plots. The rest depth was about 2540 meters. No pressure plots were made.

ML-1

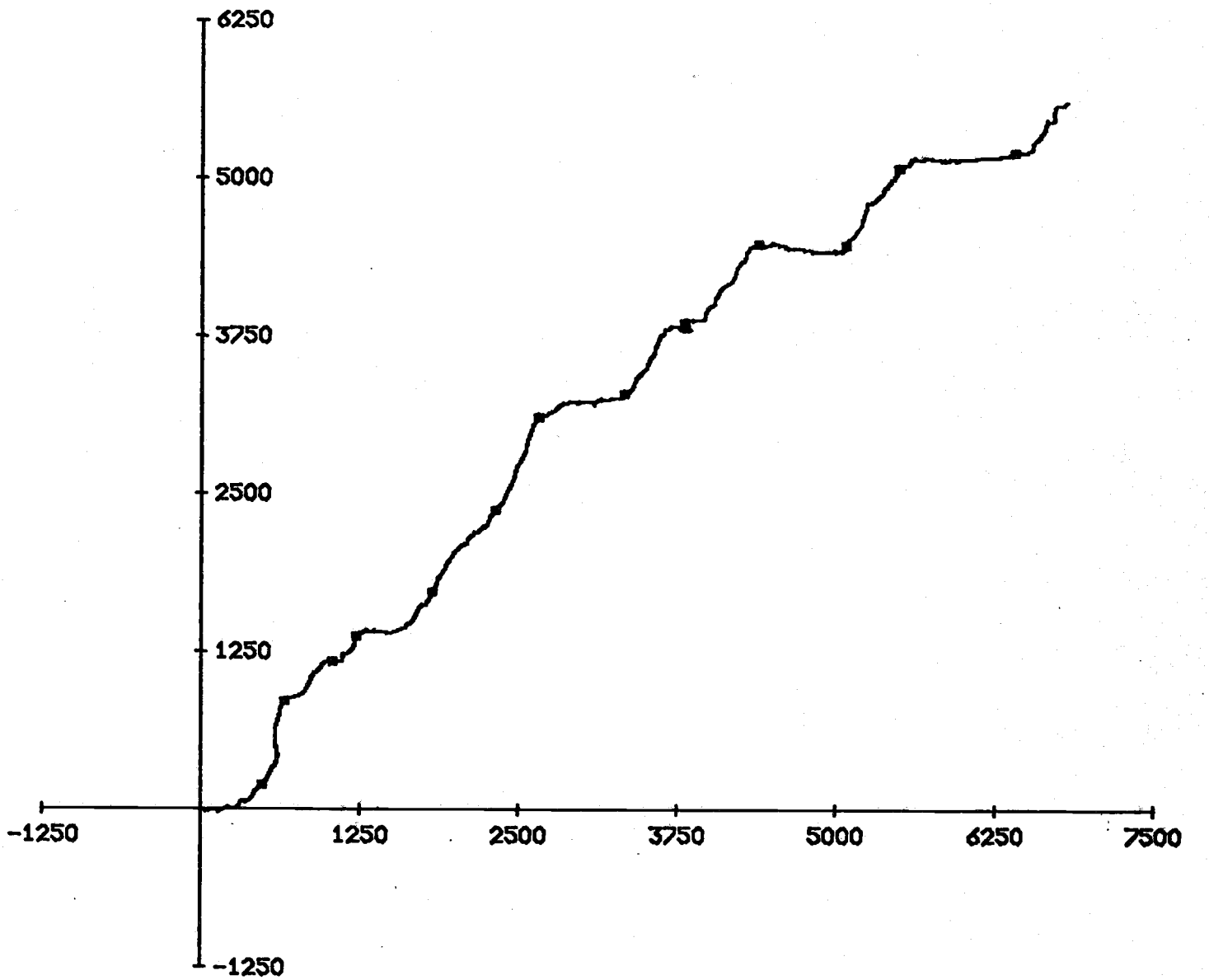
802 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	31.38	12.94	0.23	2.72	0.70	74.80	9708
U	19.65	14.62	-0.03	2.77	-41.20	60.30	9708
V	16.25	16.86	0.20	2.74	-37.90	74.20	9708
T	3.36	0.72	-0.00	1.91	1.79	5.03	9708

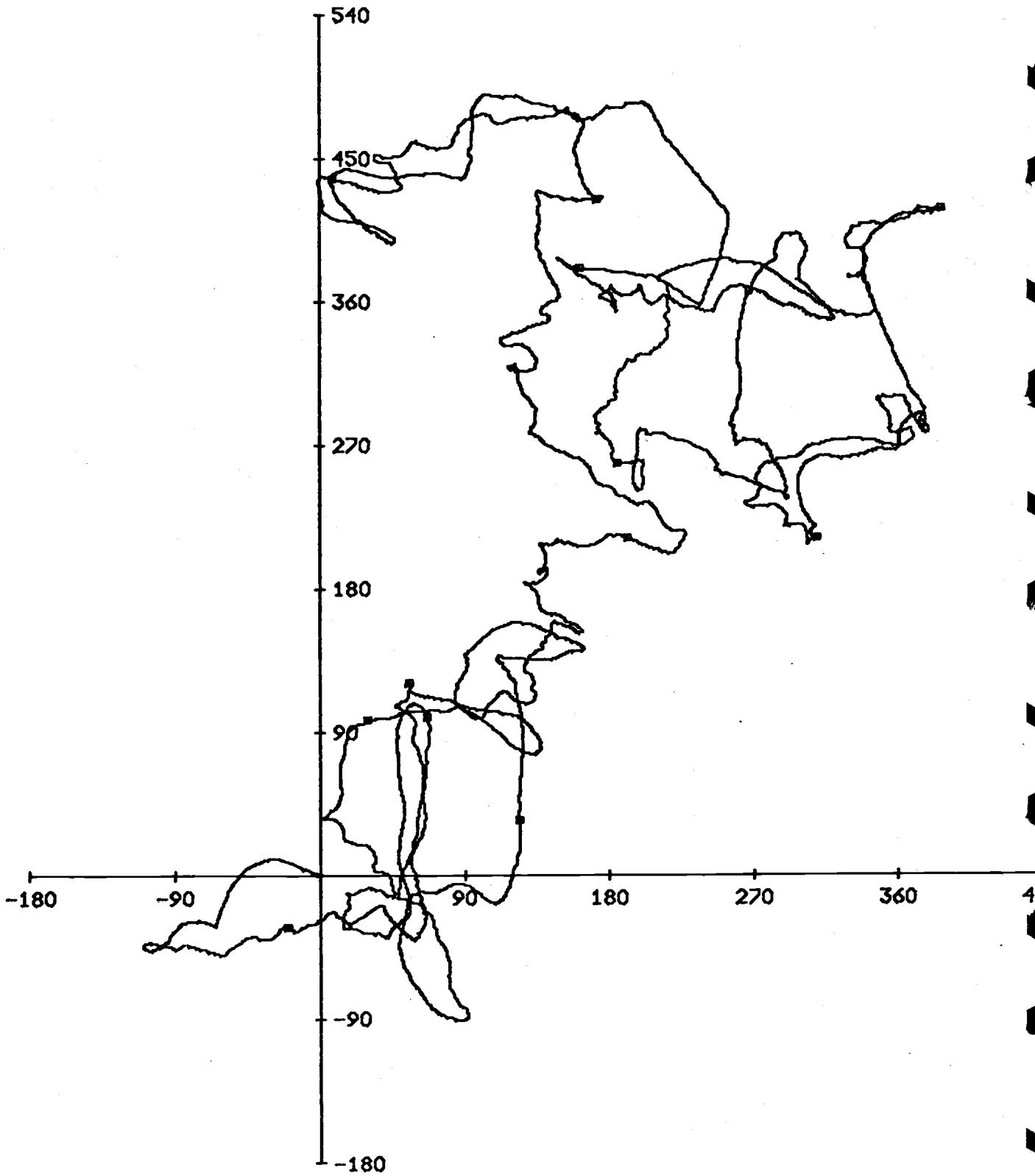
2800 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	15.78	7.95	0.34	2.58	0.70	43.10	9712
U	1.07	12.71	-0.17	2.94	-43.00	39.30	9712
V	0.82	12.19	-0.34	3.00	-39.40	37.50	9712
T	1.88	0.13	-1.41	5.87	1.15	2.12	9712

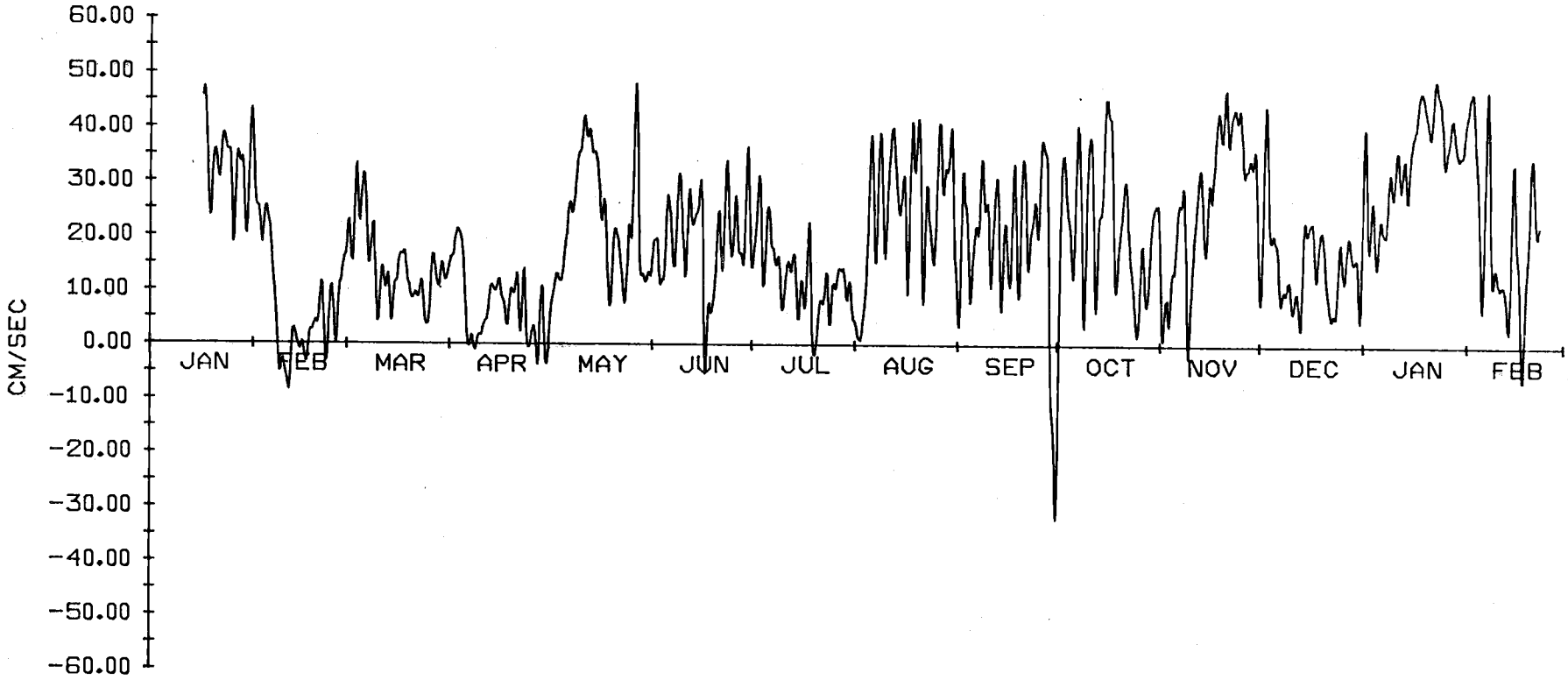
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



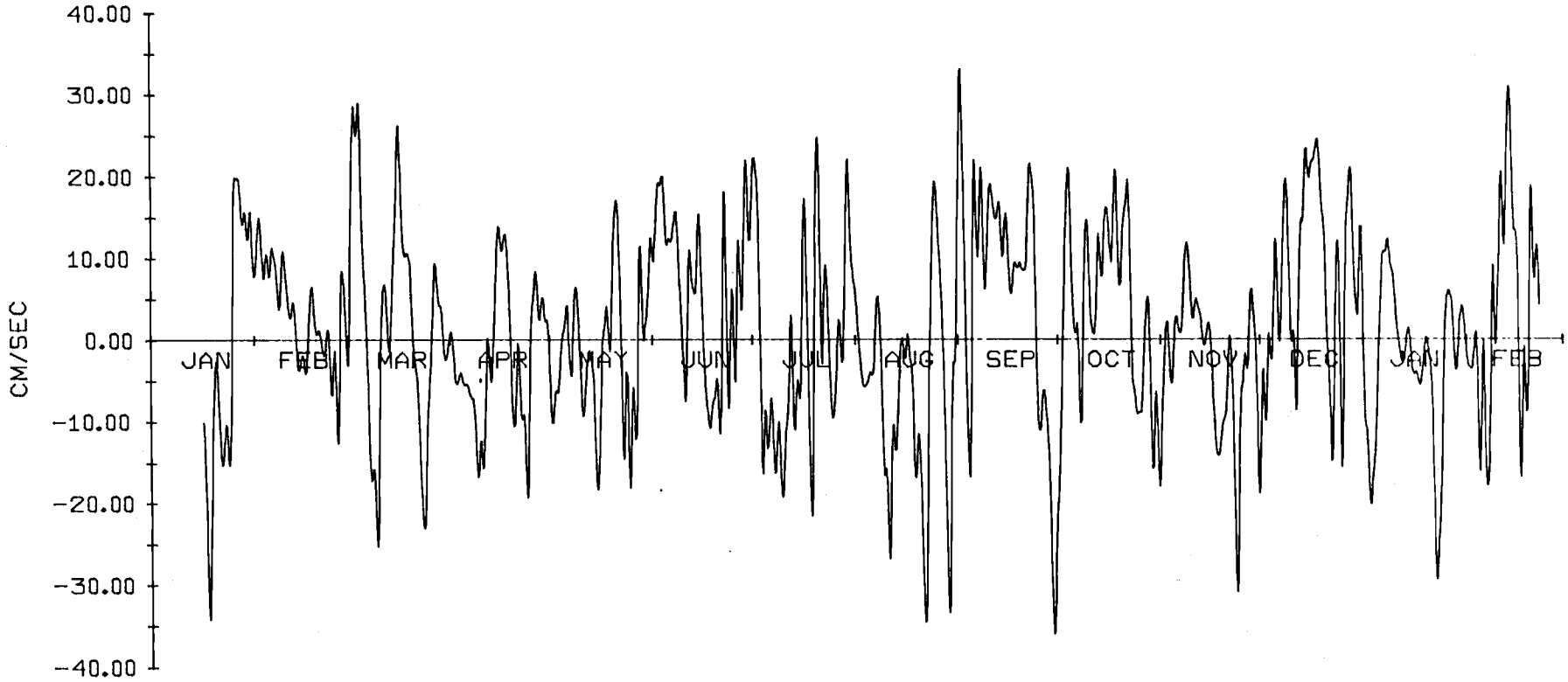
802 M AT ML-1. 404.5 DAYS STNG 934 15 JAN 79.



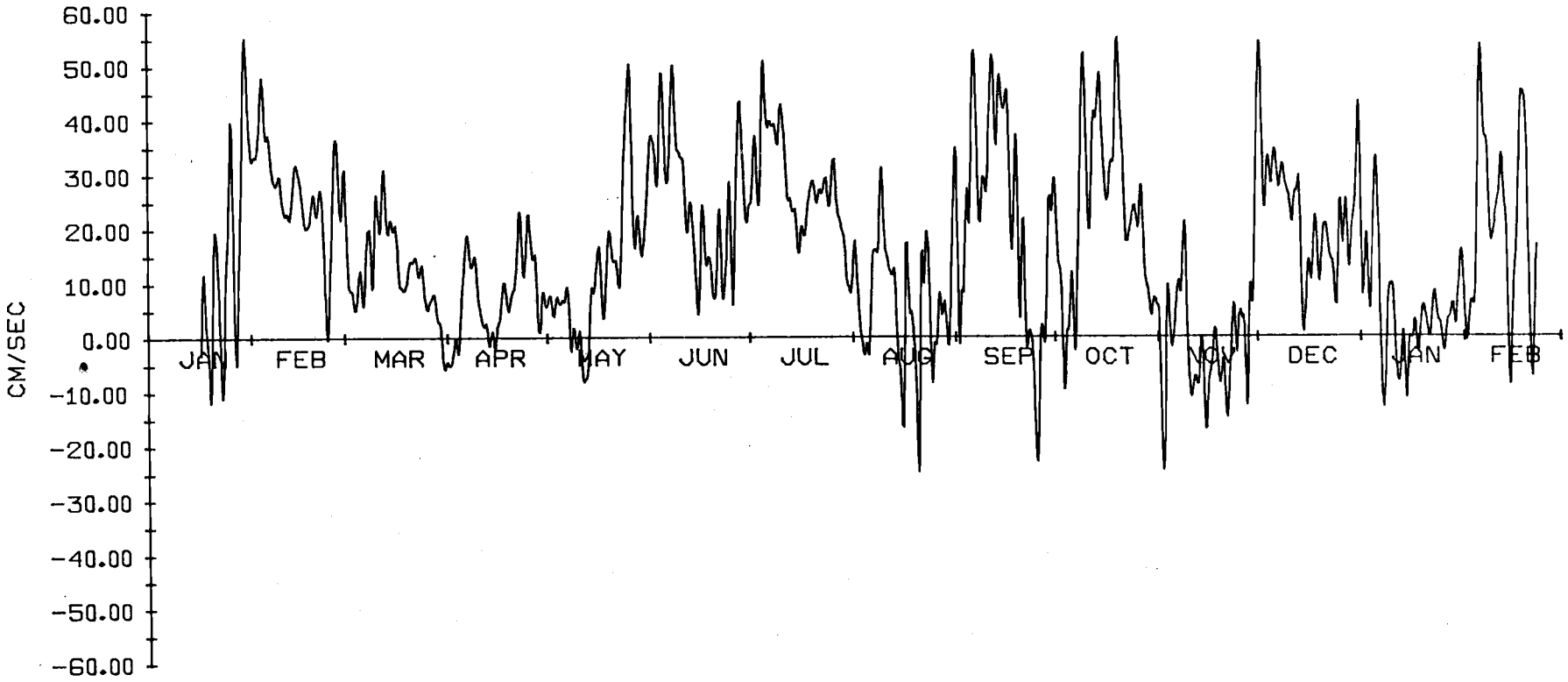
2800 M AT STN ML-1. 404.6 DAYS STARTING 800 15 JAN 79.



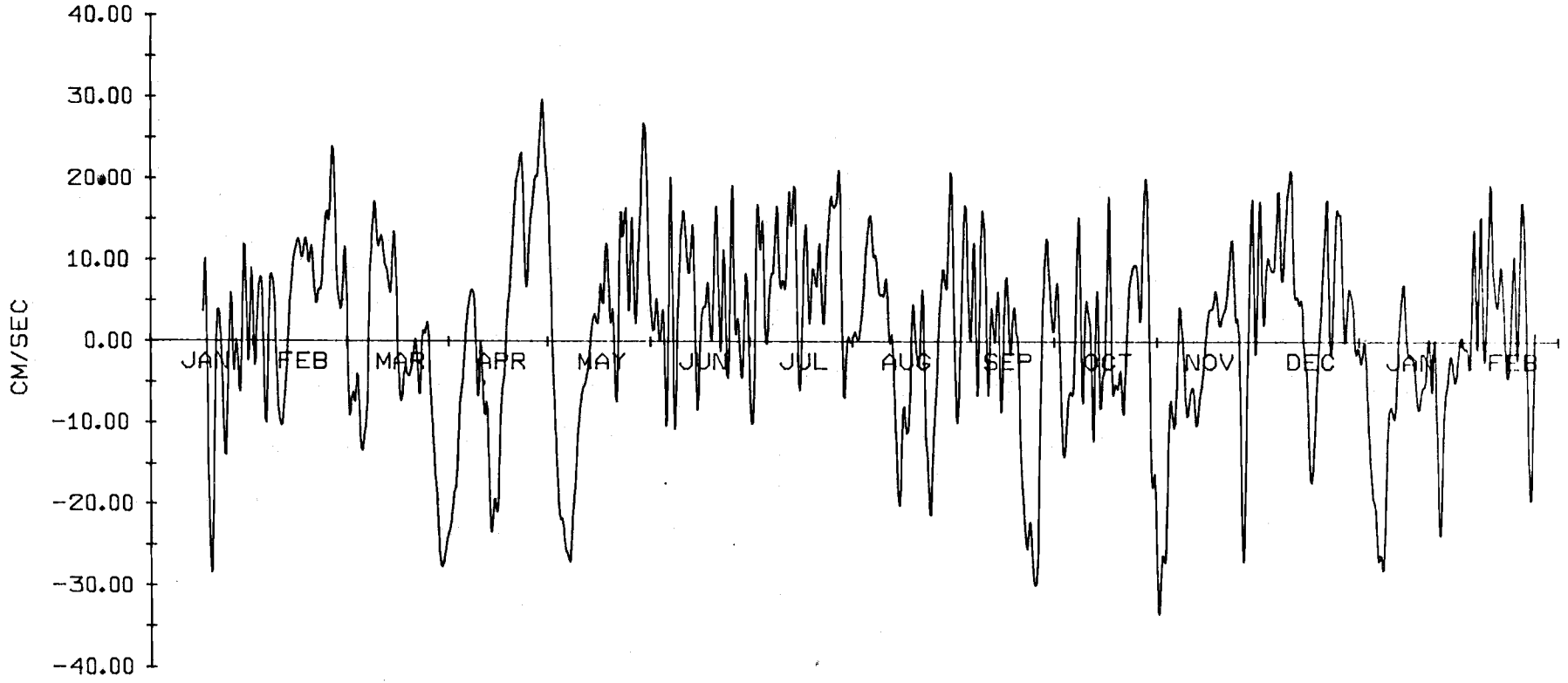
802 METERS AT ML-1
LLP FILTERED U COMPONENT



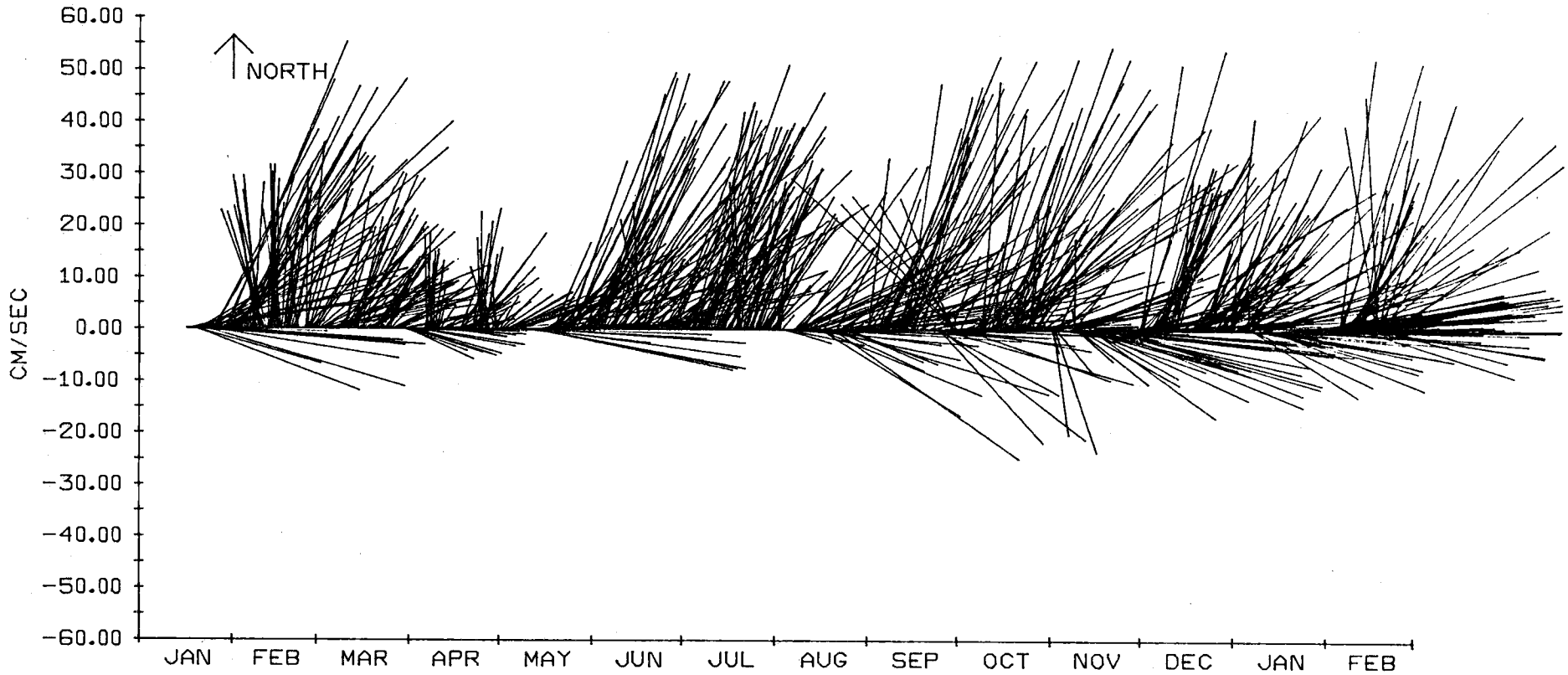
2800 METERS AT ML-1.
LLP FILTERED U COMPONENT



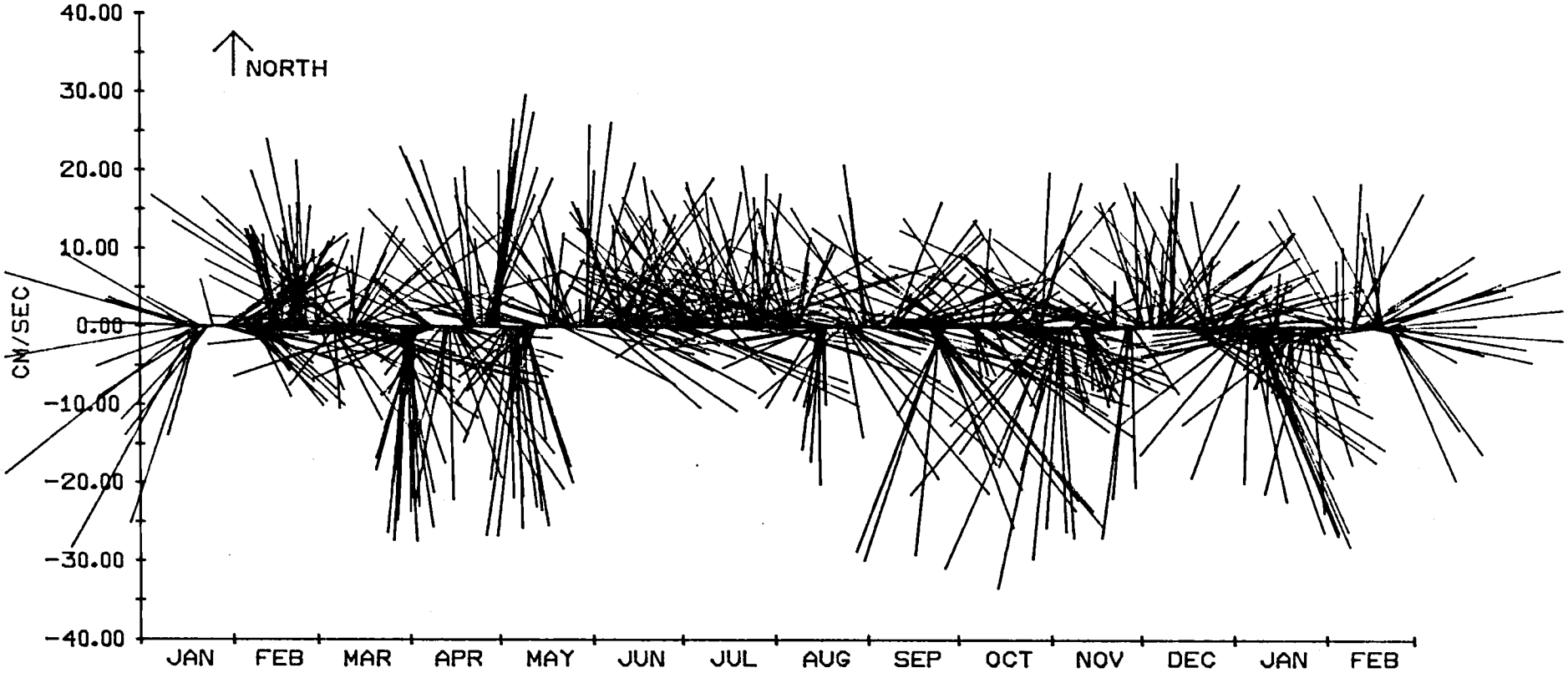
802 METERS AT ML-1
LLP FILTERED V COMPONENT



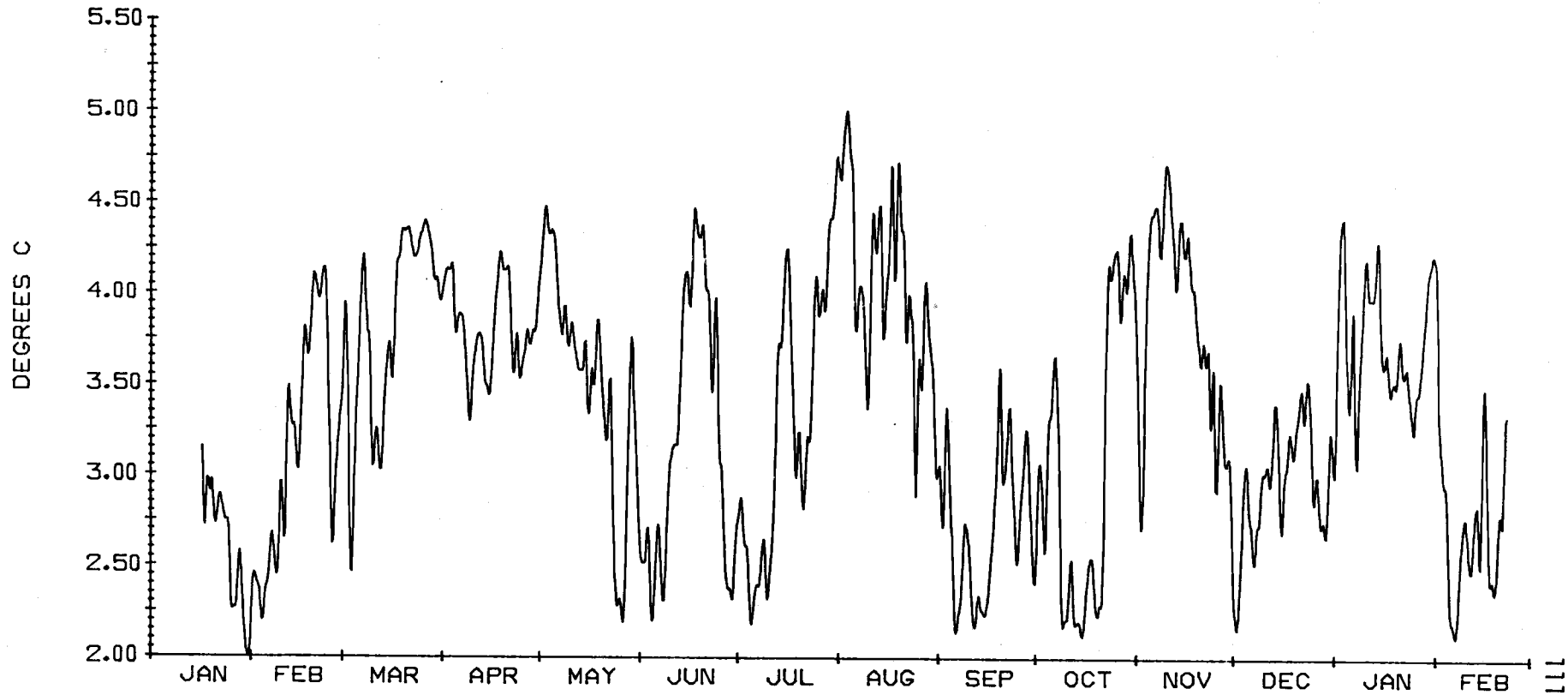
2800 METERS AT ML-1.
LLP FILTERED V COMPONENT



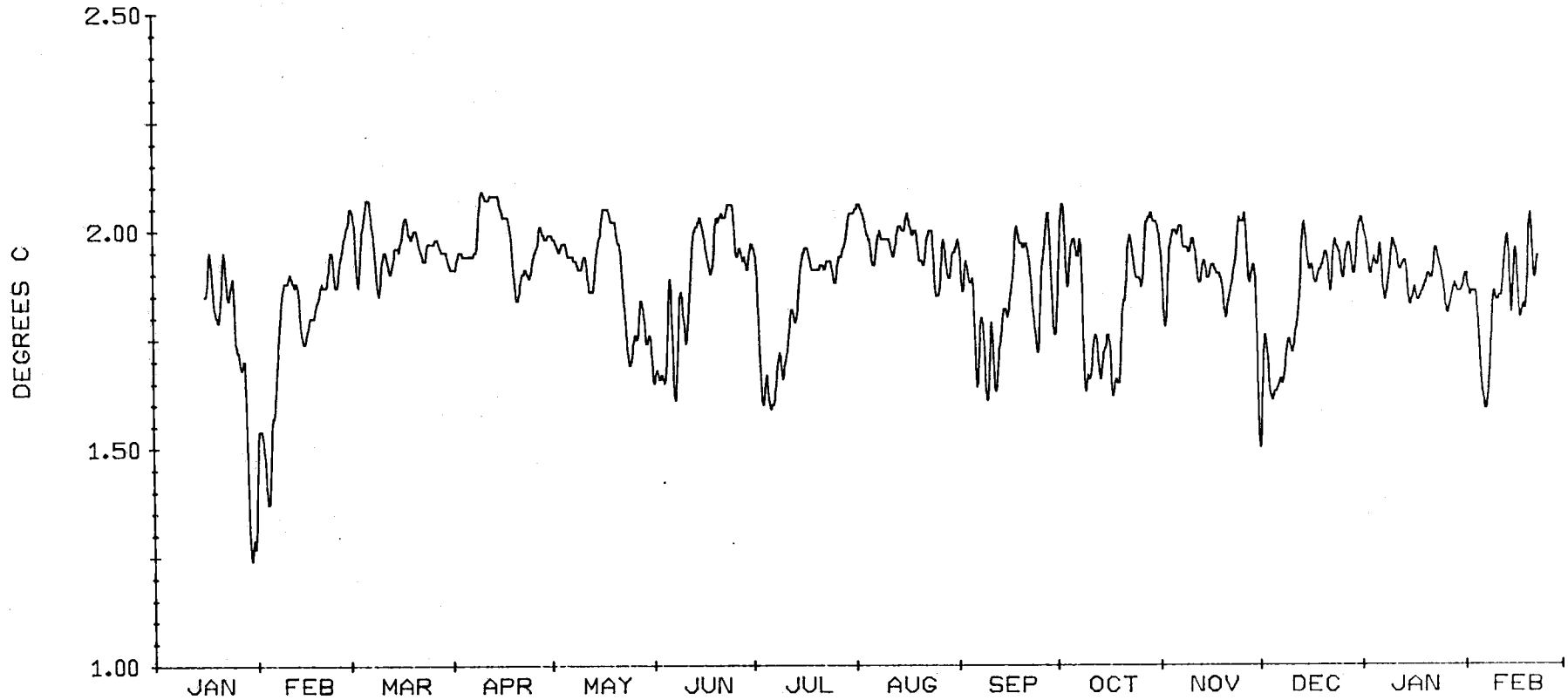
802 METERS AT ML-1
LLP FILTERED CURRENT



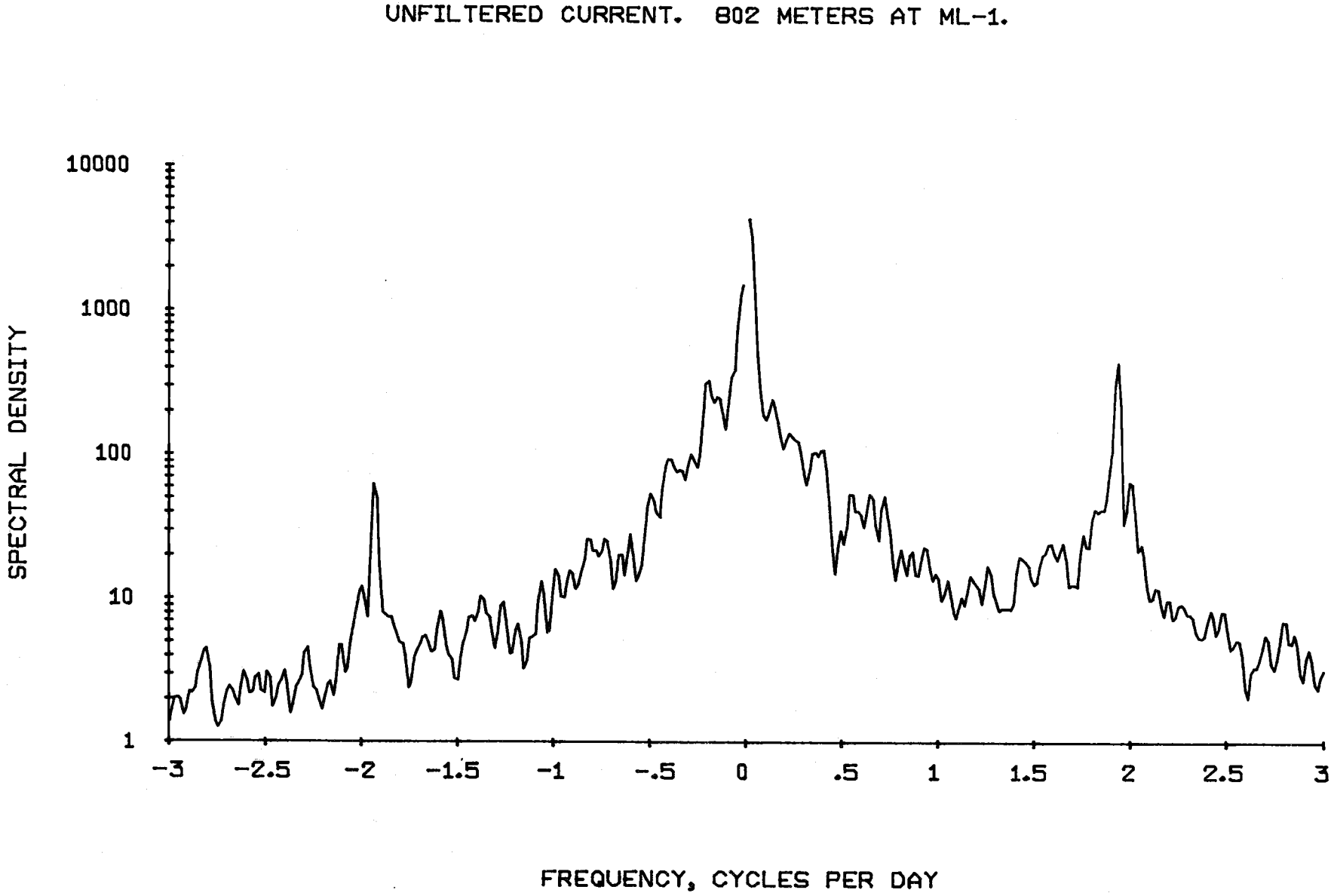
2800 METERS AT ML-1.
LLP FILTERED CURRENT



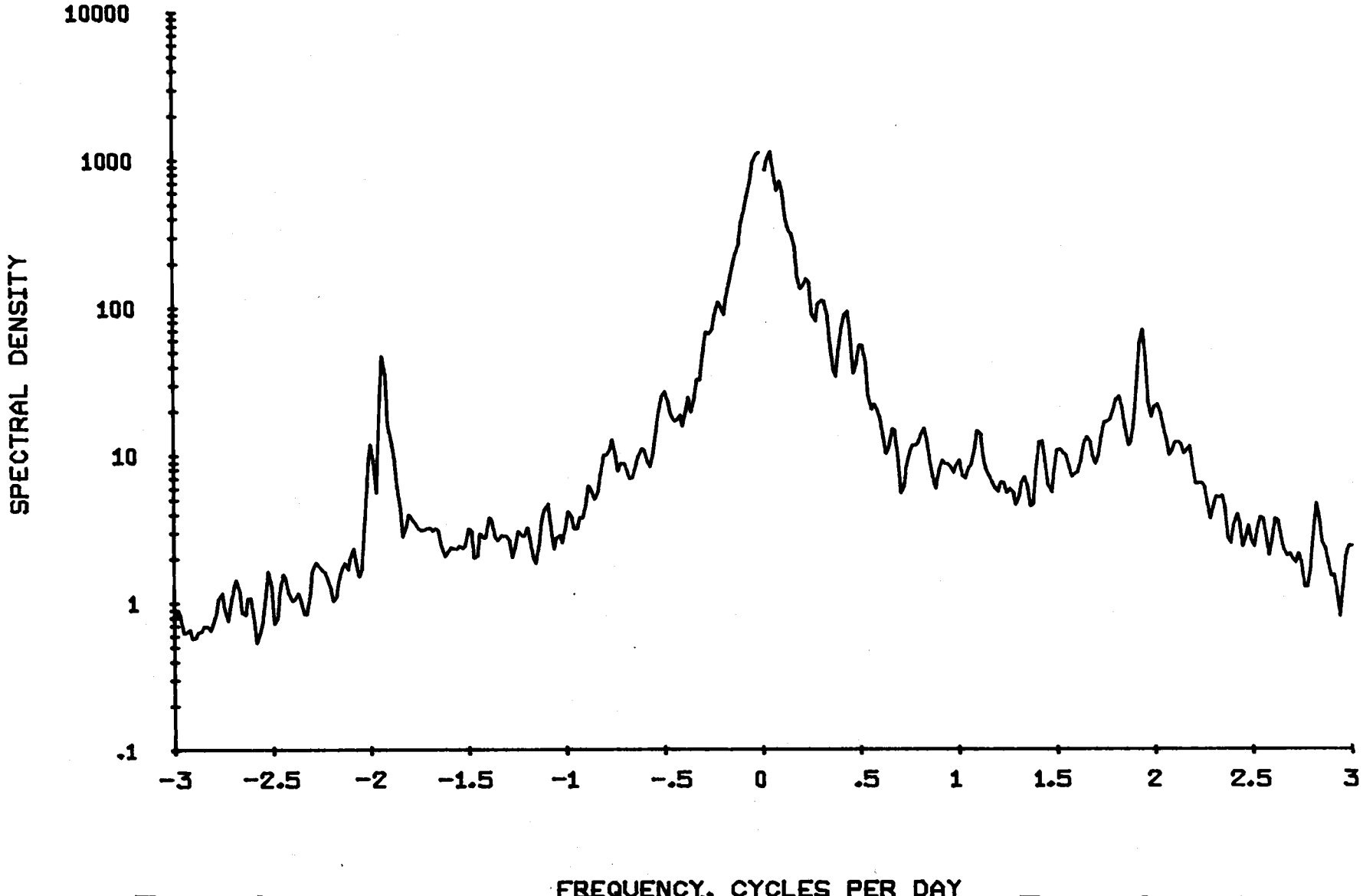
802 METERS AT ML-1
LLP FILTERED TEMPERATURE



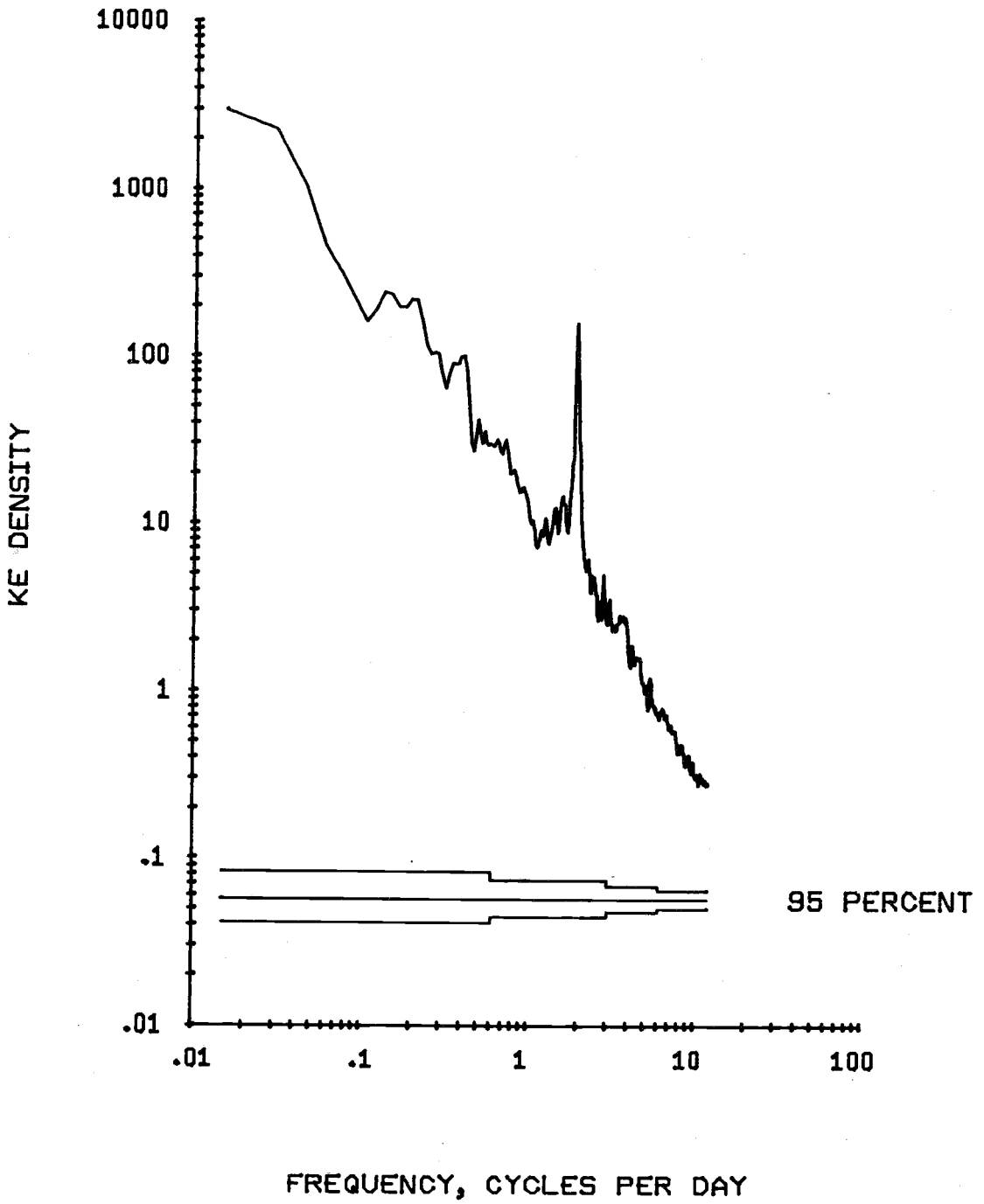
2800 METERS AT ML-1.
LLP FILTERED TEMPERATURE


UNFILTERED CURRENT. 802 METERS AT ML-1.
SPECTRAL DENSITY
10000
1000
100
10
1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

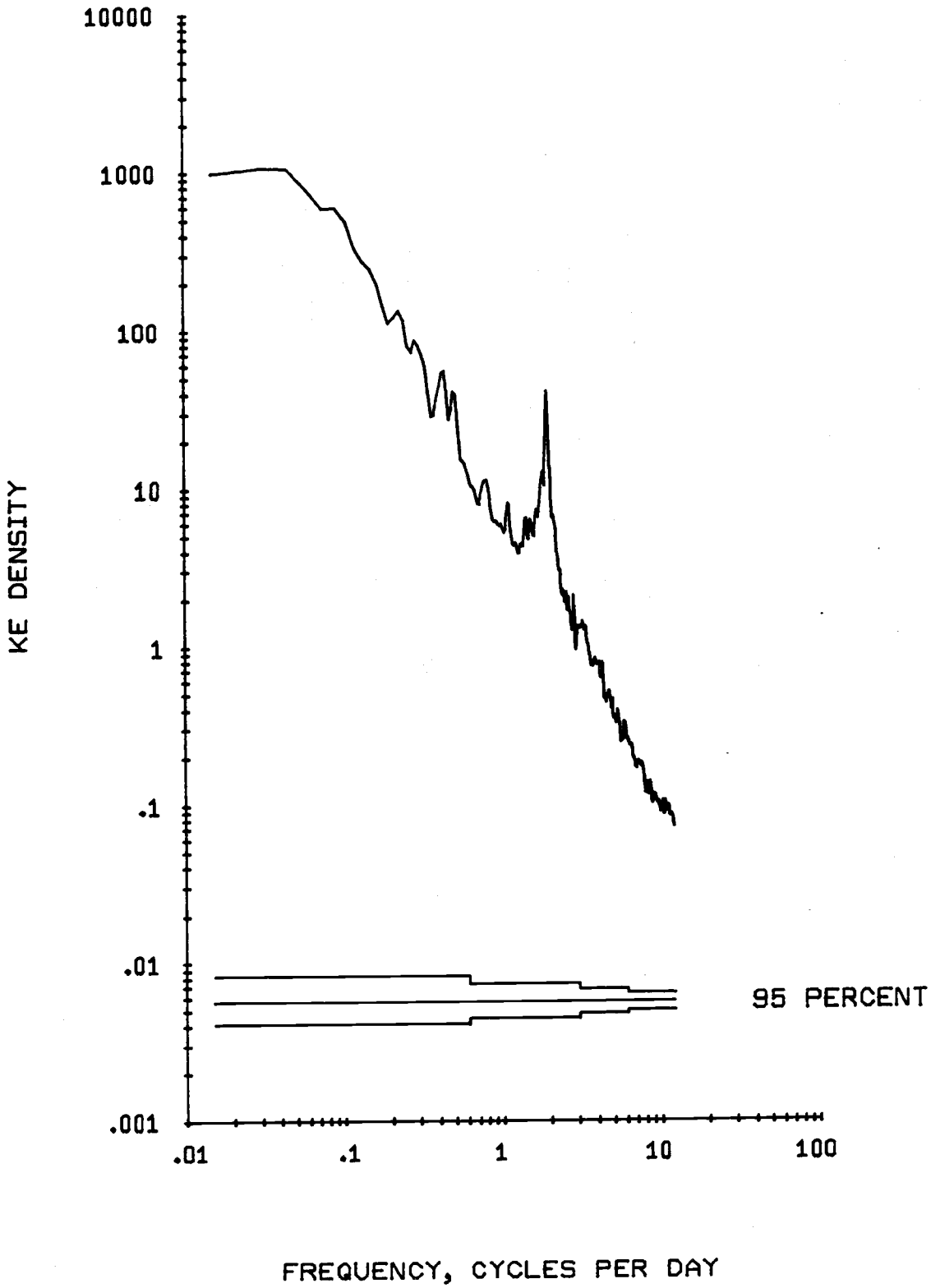
UNFILTERED CURRENT. 2800 METERS AT ML-1.



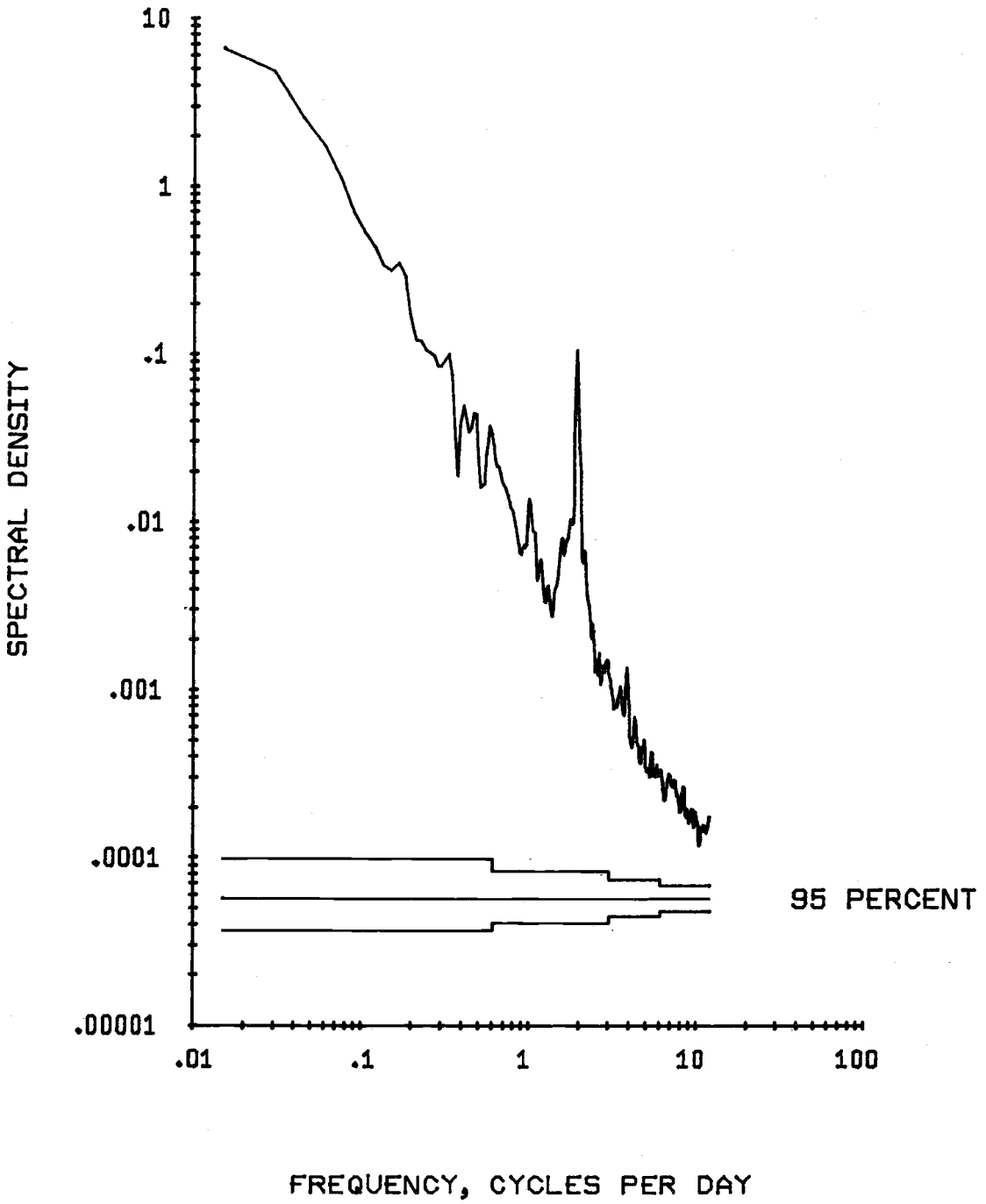
UNFILTERED CURRENT. 802 M AT ML-1.



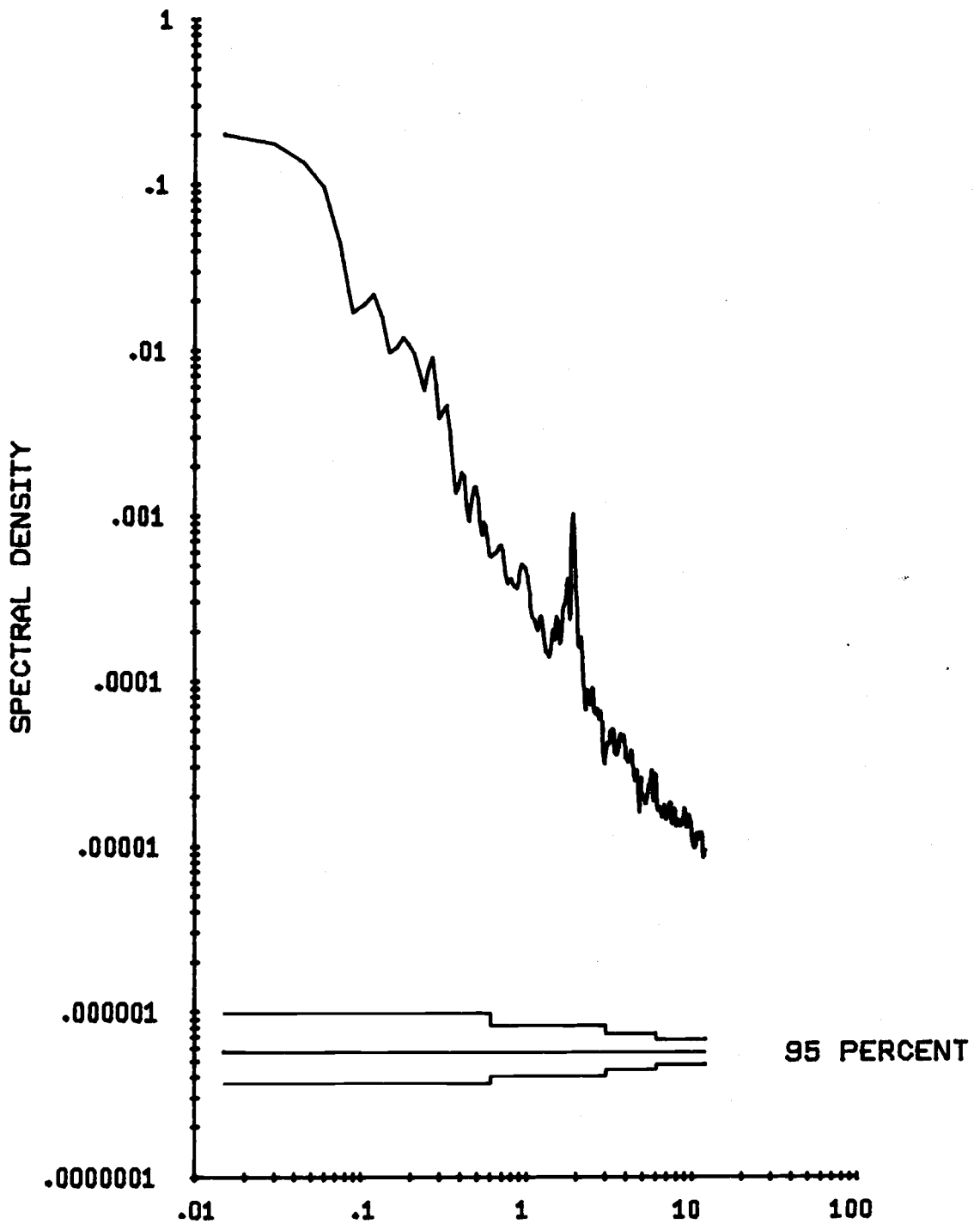
UNFILTERED CURRENT. 2800 M AT ML-1.



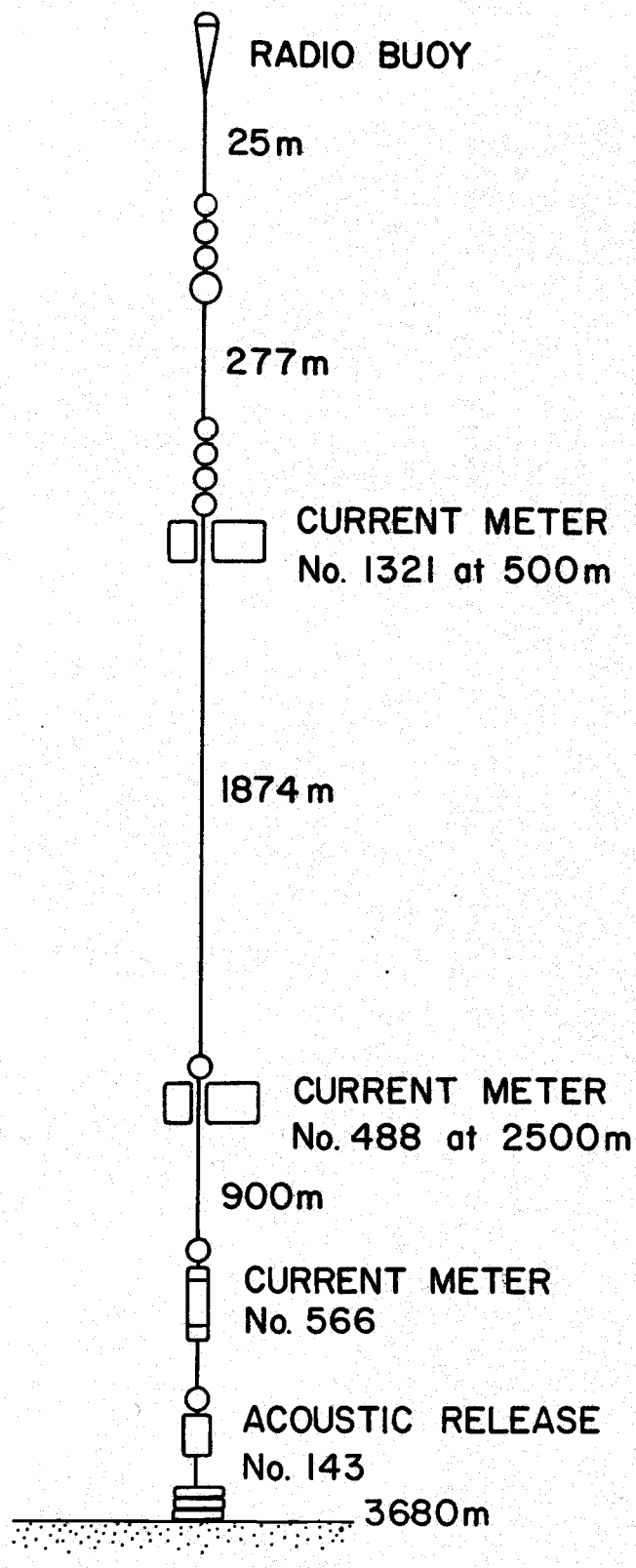
UNFILTERED TEMPERATURE. 802 METERS AT ML-1.



UNFILTERED TEMPERATURE. 2800 METERS AT ML-1.



ML - 2



MAIN LINE (ML) 2

57° 28.8' S

65° 44.8' W

INSTALLED: 16 JANUARY 1979

ML-2

Position: 57°28.8'S, 65°44.8'W
Depth of Water: 3680 m
Set at 0058 UCT 16 January '79 by R/V MELVILLE
Retrieved at 0600 UCT 24 February '80 by R/V ATLANTIS II
Data Interval: 0351 UCT 16 January '79 to 0551 UCT 24 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	1321/10
2500 m	488/37

Instrument 1321 recorded speed, direction, temperature, and pressure until the instrument was recovered. The pressure record was flawed. Neither pressure statistics nor plots could be made. The first 15 days of the record were lost because of instrument failure.

Instrument 488 recorded speed, direction, temperature, and pressure until the instrument was recovered. The pressure sensor was off scale (1023) in 4.1% of the processed file. The correct average depth is, therefore, somewhat greater than indicated in this summary. The calculated average was used to label the listings and plots without adjustment. Neither pressure statistics nor plots were made.

ML-2

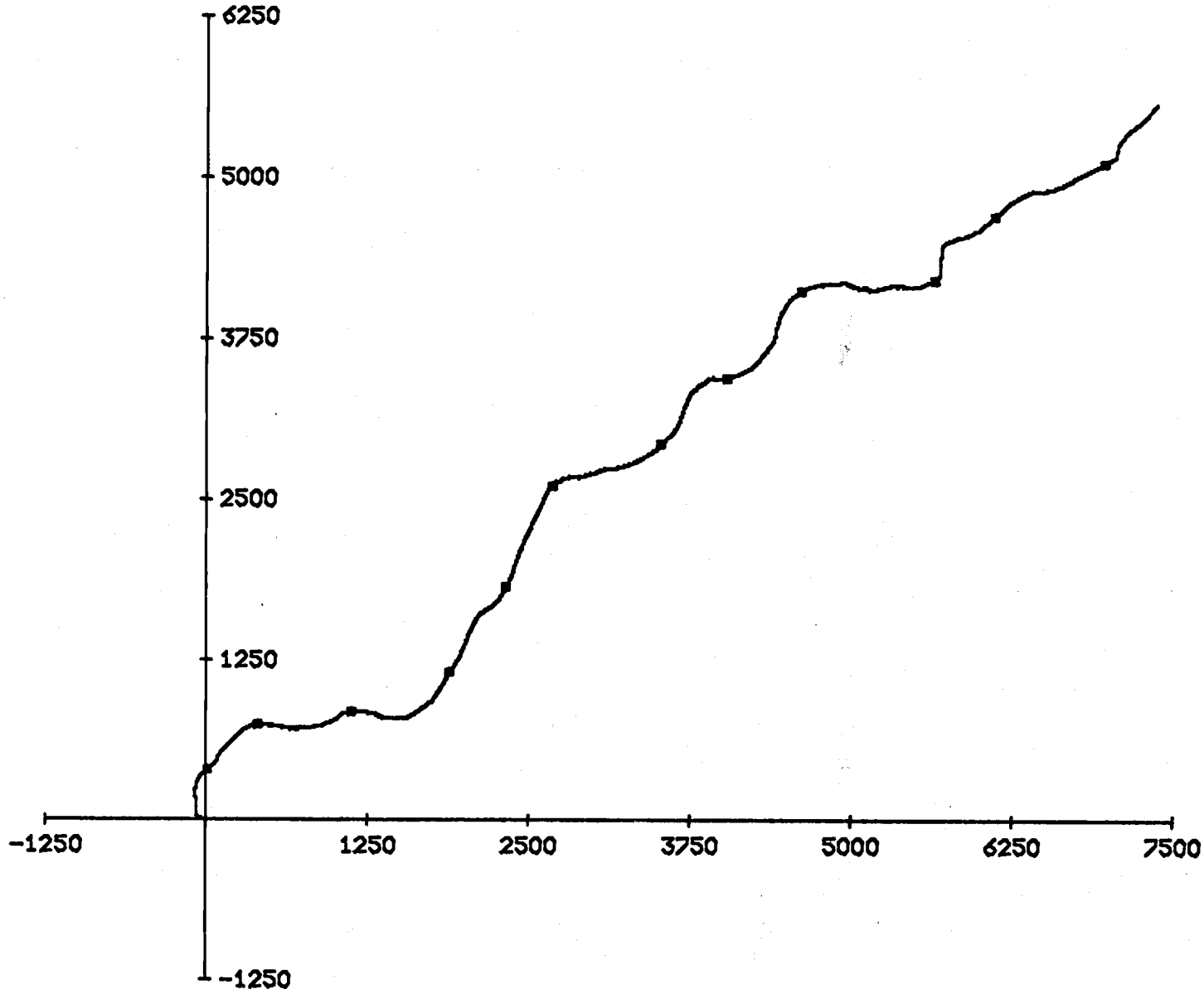
900 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	32.03	9.67	0.07	3.29	1.40	70.30	9301
U	21.98	13.45	-0.11	3.53	-36.50	70.20	9301
V	16.73	13.24	-0.41	3.03	-31.40	50.70	9301
T	2.81	0.39	0.92	3.47	1.83	4.25	9301

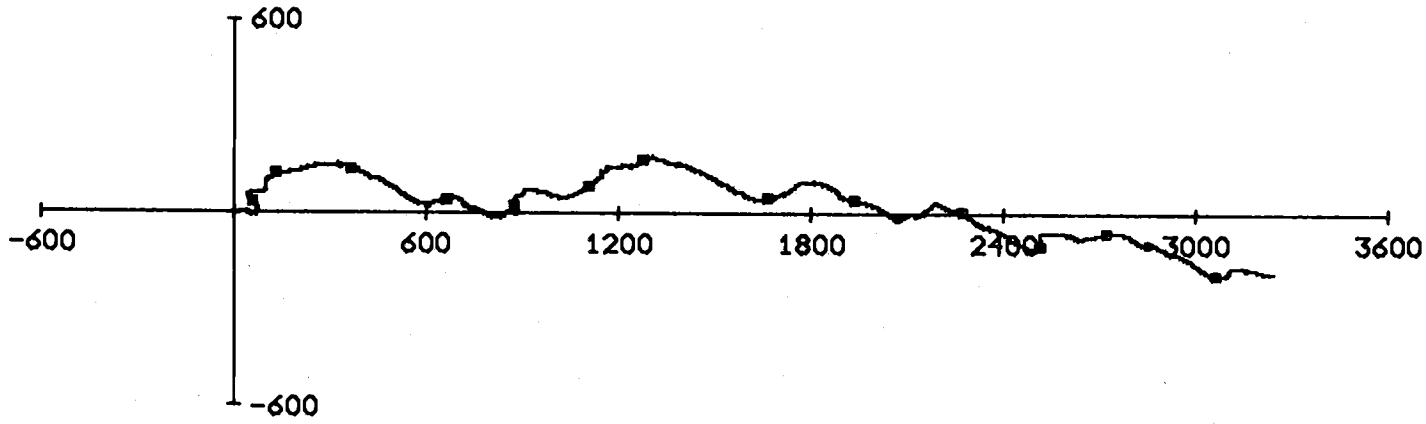
2711 m

S	13.04	6.91	0.58	3.02	0.70	42.70	9699
U	9.29	8.47	-0.20	3.46	-37.30	38.60	9699
V	-0.53	7.71	-0.22	3.26	-31.70	30.30	9699
T	1.53	0.20	-0.13	2.51	0.93	2.05	9699

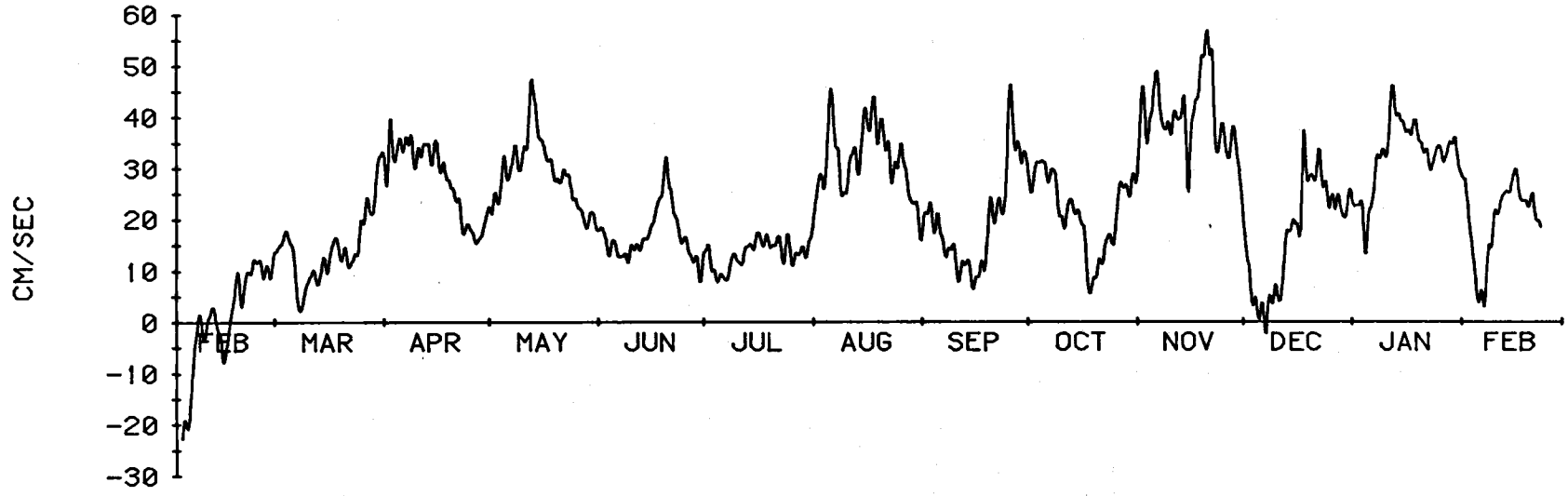
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



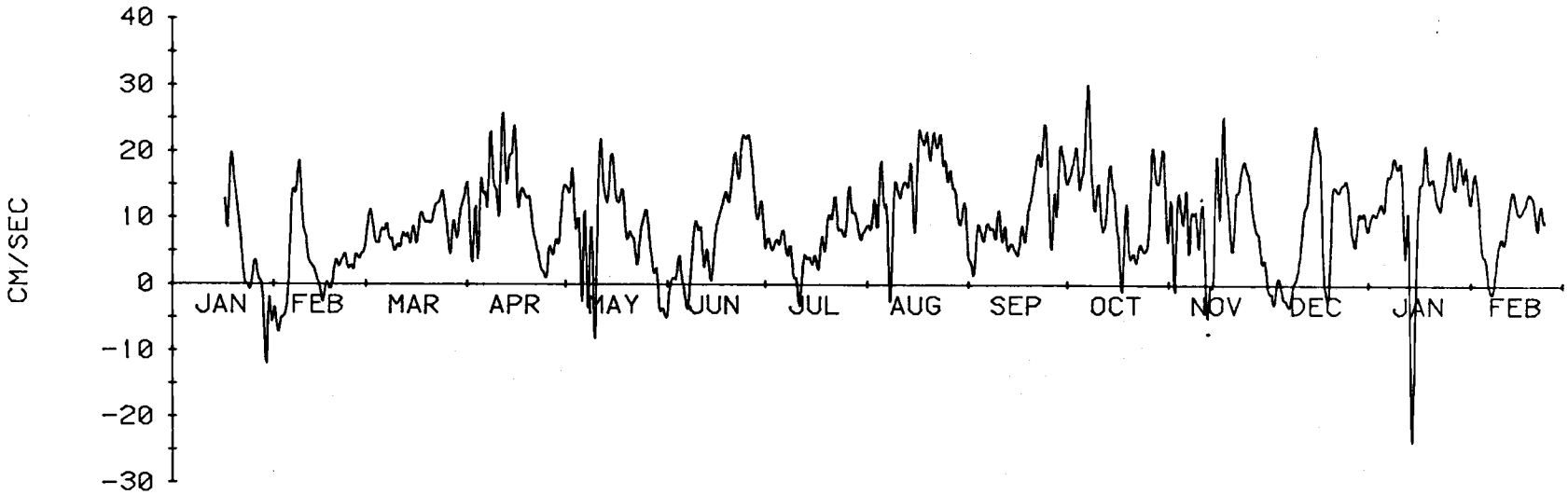
900 METERS AT ML-2. 1 FEB 79 - 24 FEB 80. TAPE 1321/10.



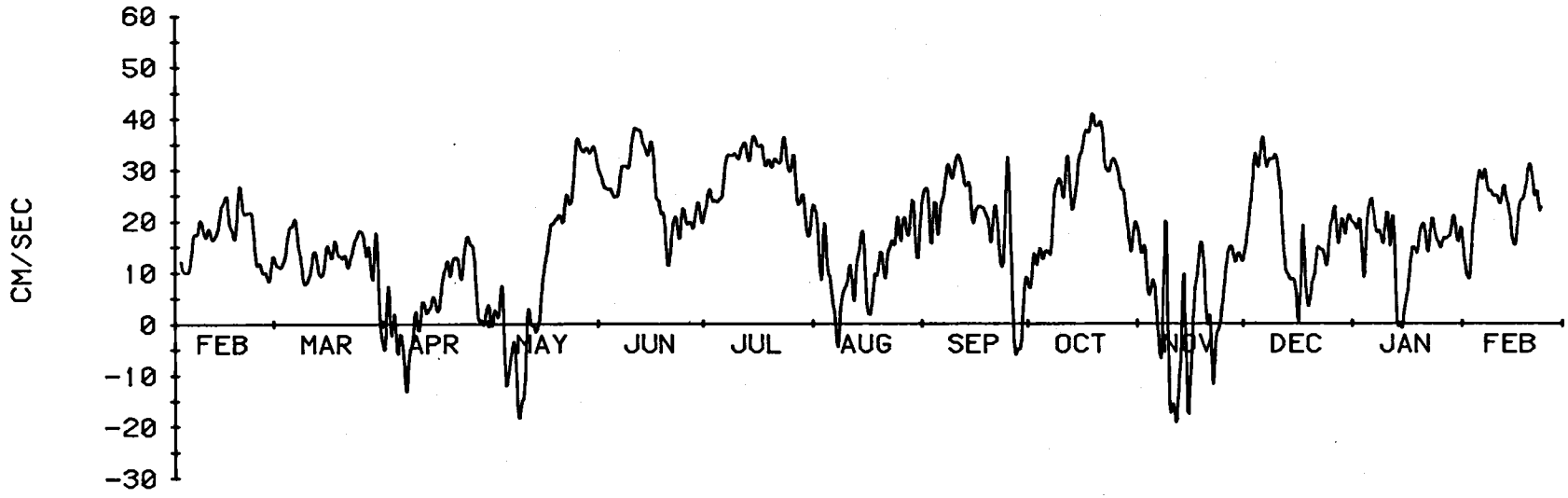
2711 M AT STN ML-2. 404.1 DAYS STARTING 0351 16 JAN 79.



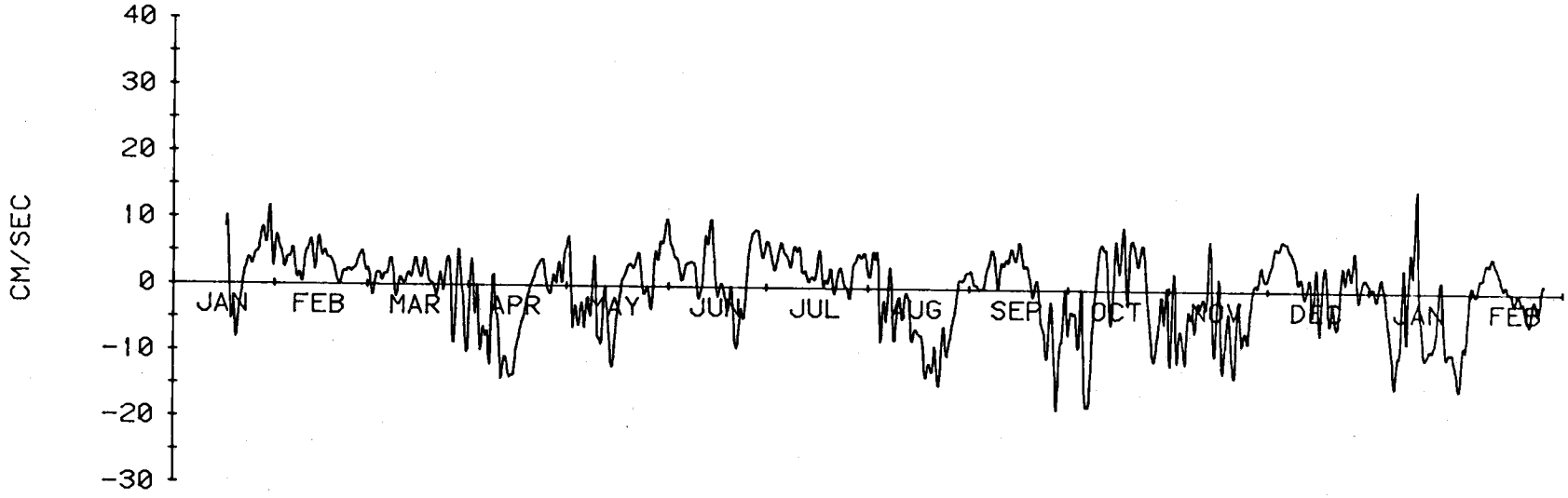
900 METERS AT ML-2
LLP FILTERED U COMPONENT



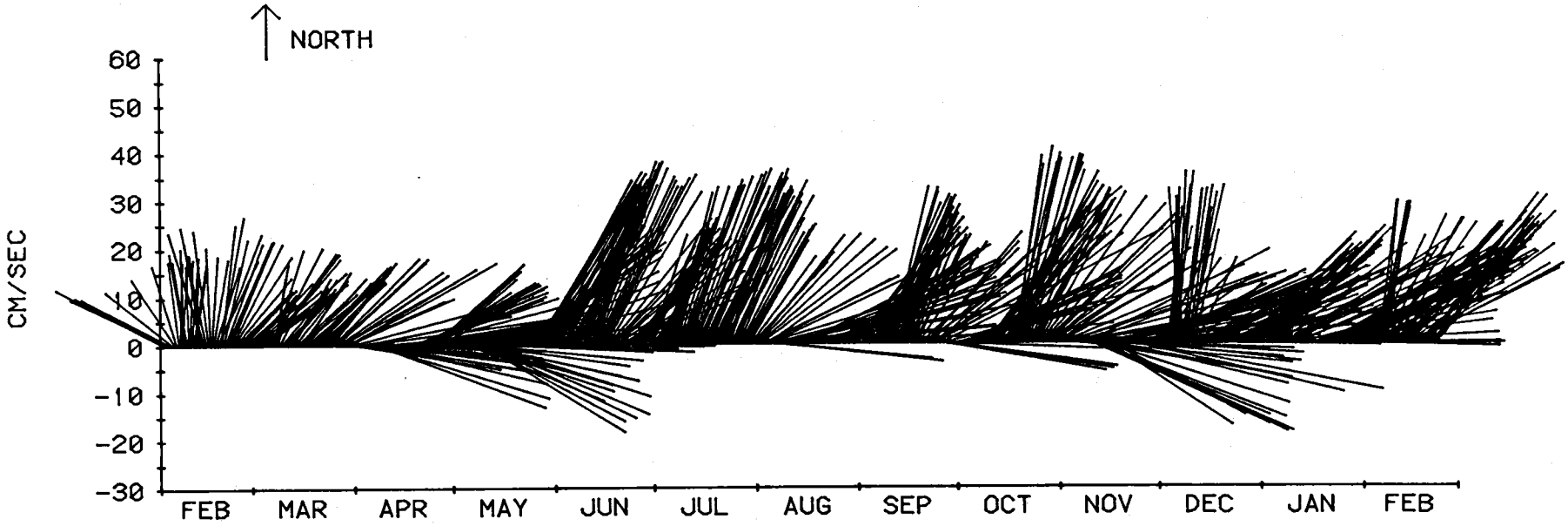
2711 METERS AT ML2
LLP FILTERED U COMPONENT



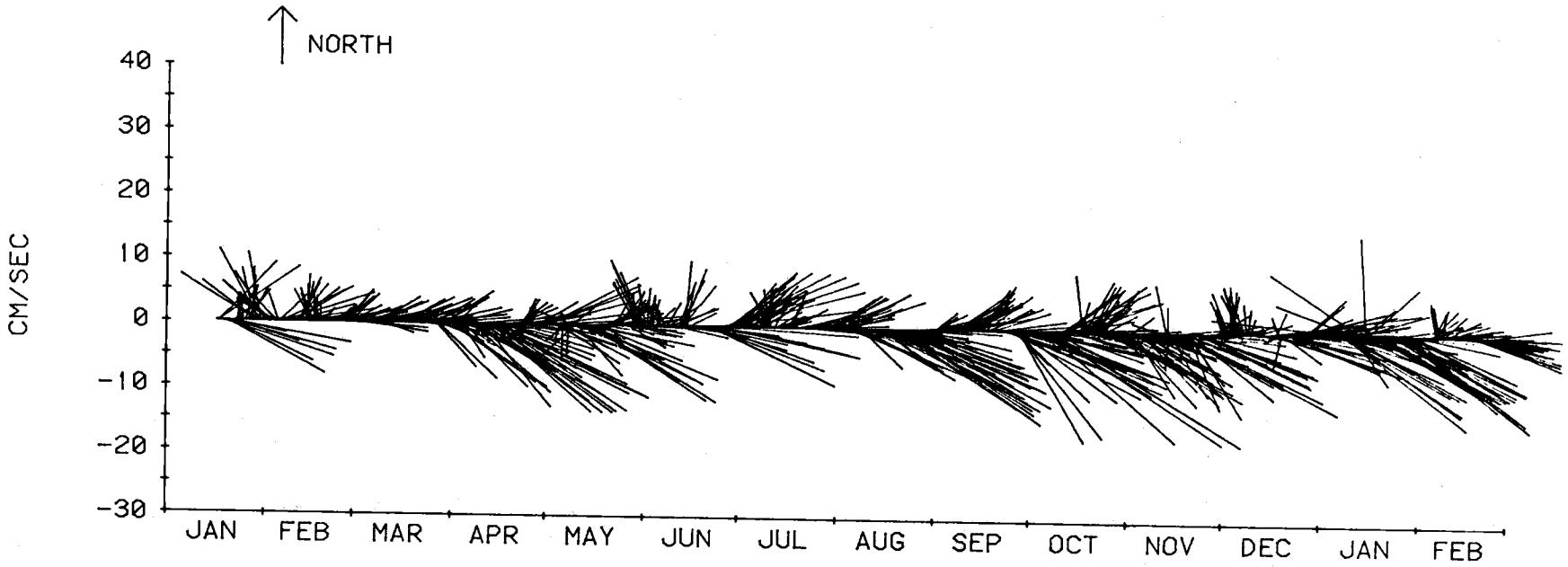
900 METERS AT ML-2
LLP FILTERED V COMPONENT



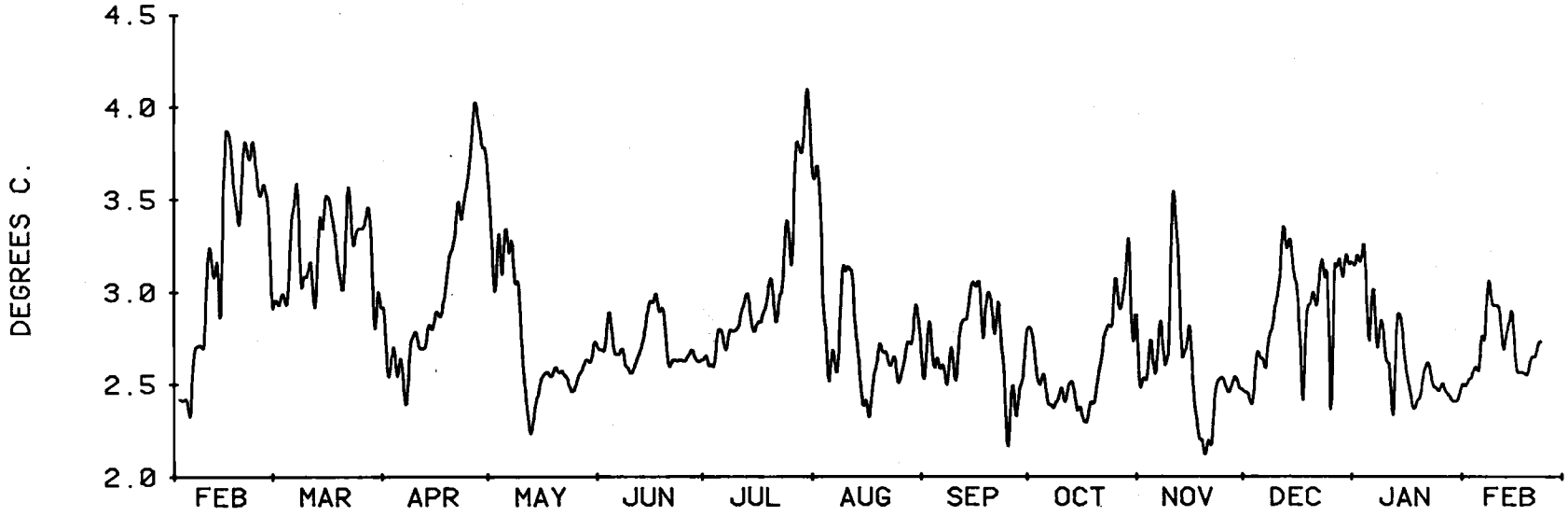
2711 METERS AT ML2
LLP FILTERED V COMPONENT



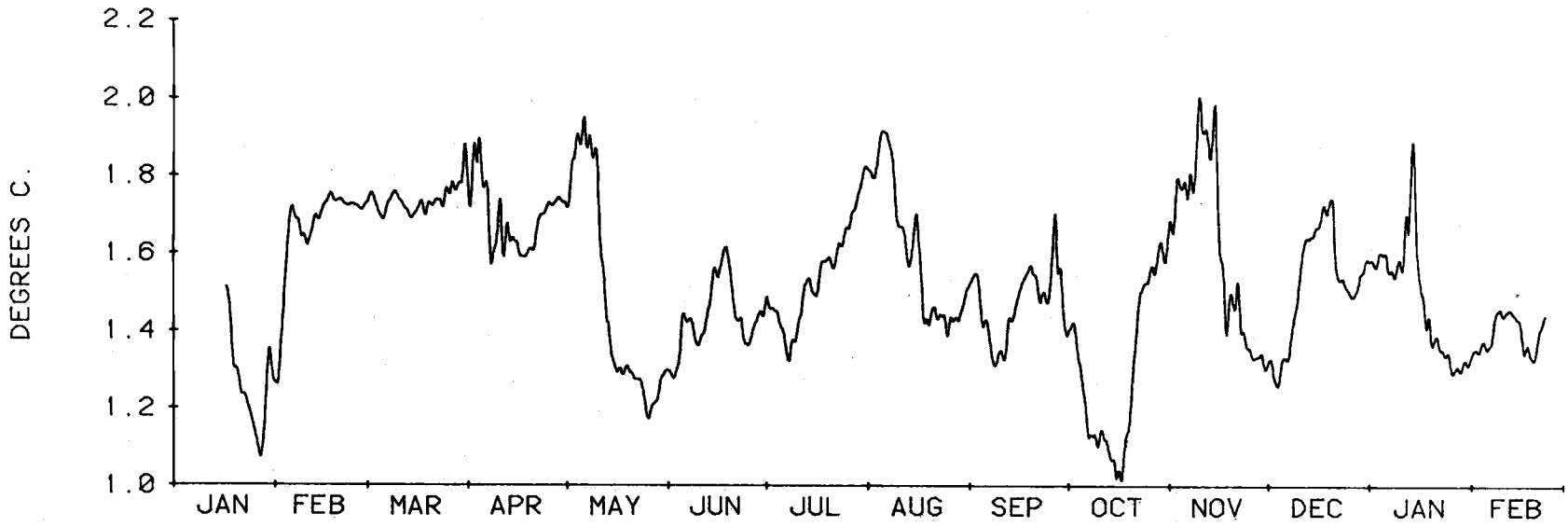
900 METERS AT ML-2
LLP FILTERED CURRENT



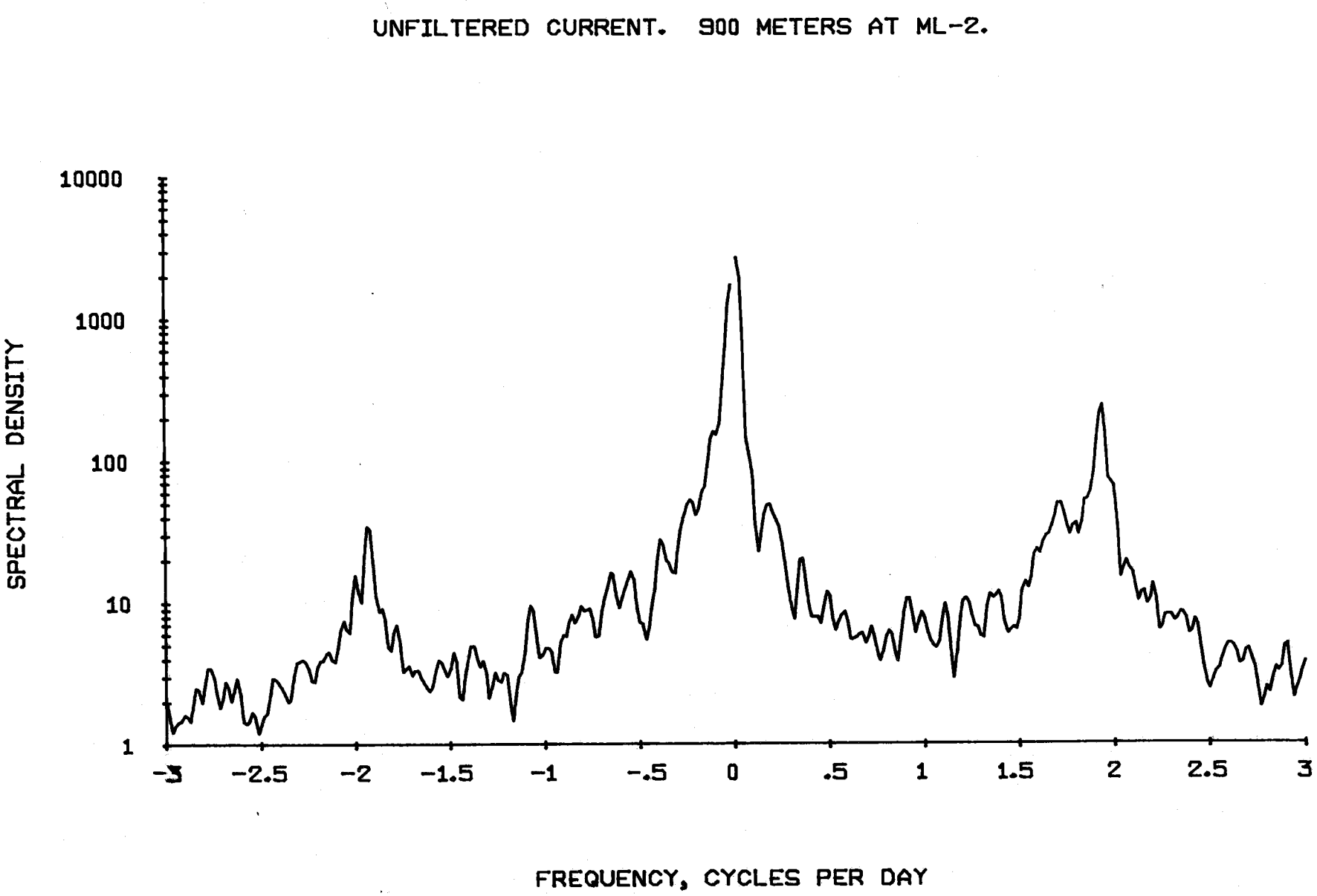
2711 METERS AT ML2
LLP FILTERED CURRENT



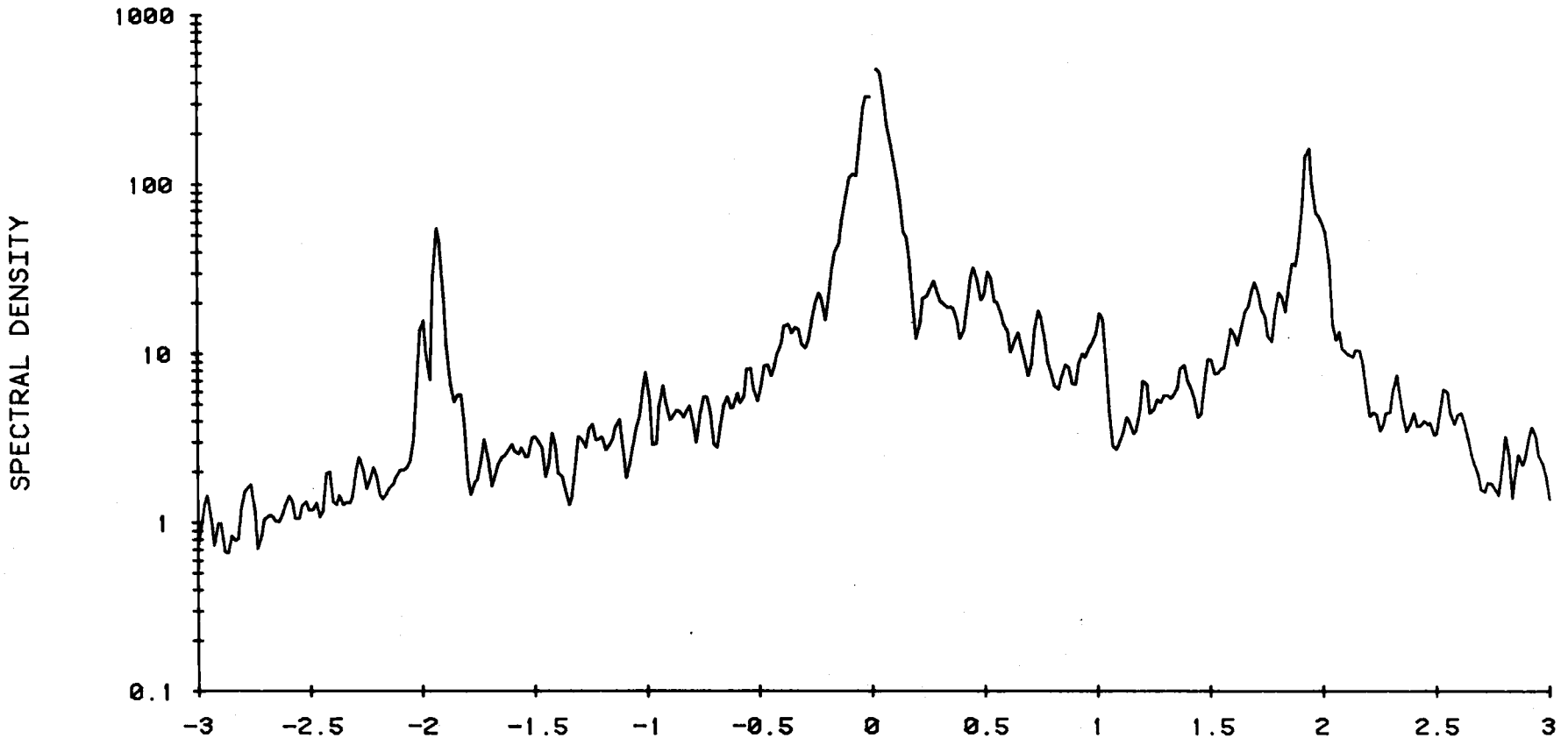
900 METERS AT ML-2
LLP FILTERED TEMPERATURE



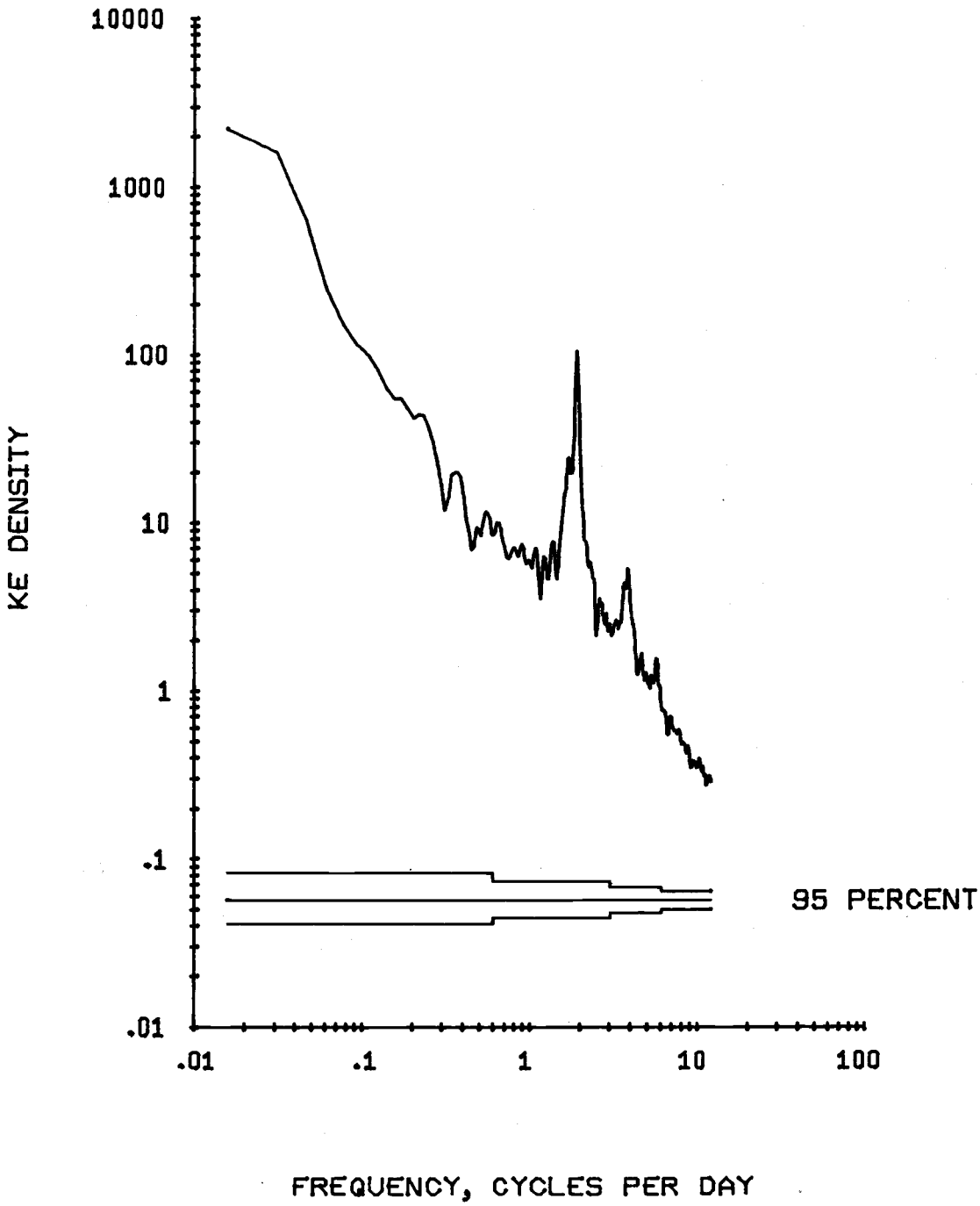
2711 METERS AT ML2
LLP FILTERED TEMPERATURE


UNFILTERED CURRENT. 900 METERS AT ML-2.
SPECTRAL DENSITY
10000
1000
100
10
1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

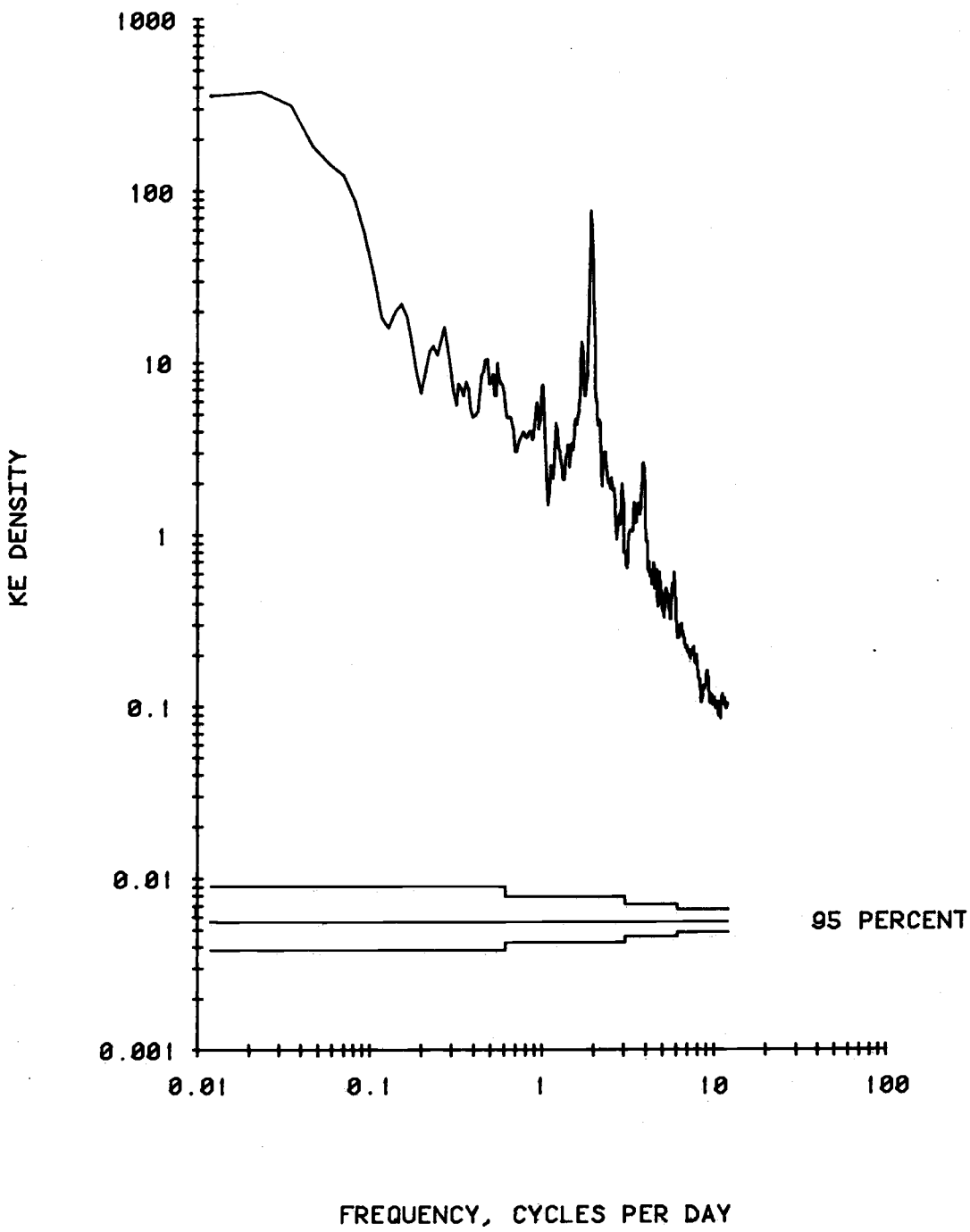
UNFILTERED CURRENT. 2711 METERS AT ML-2.



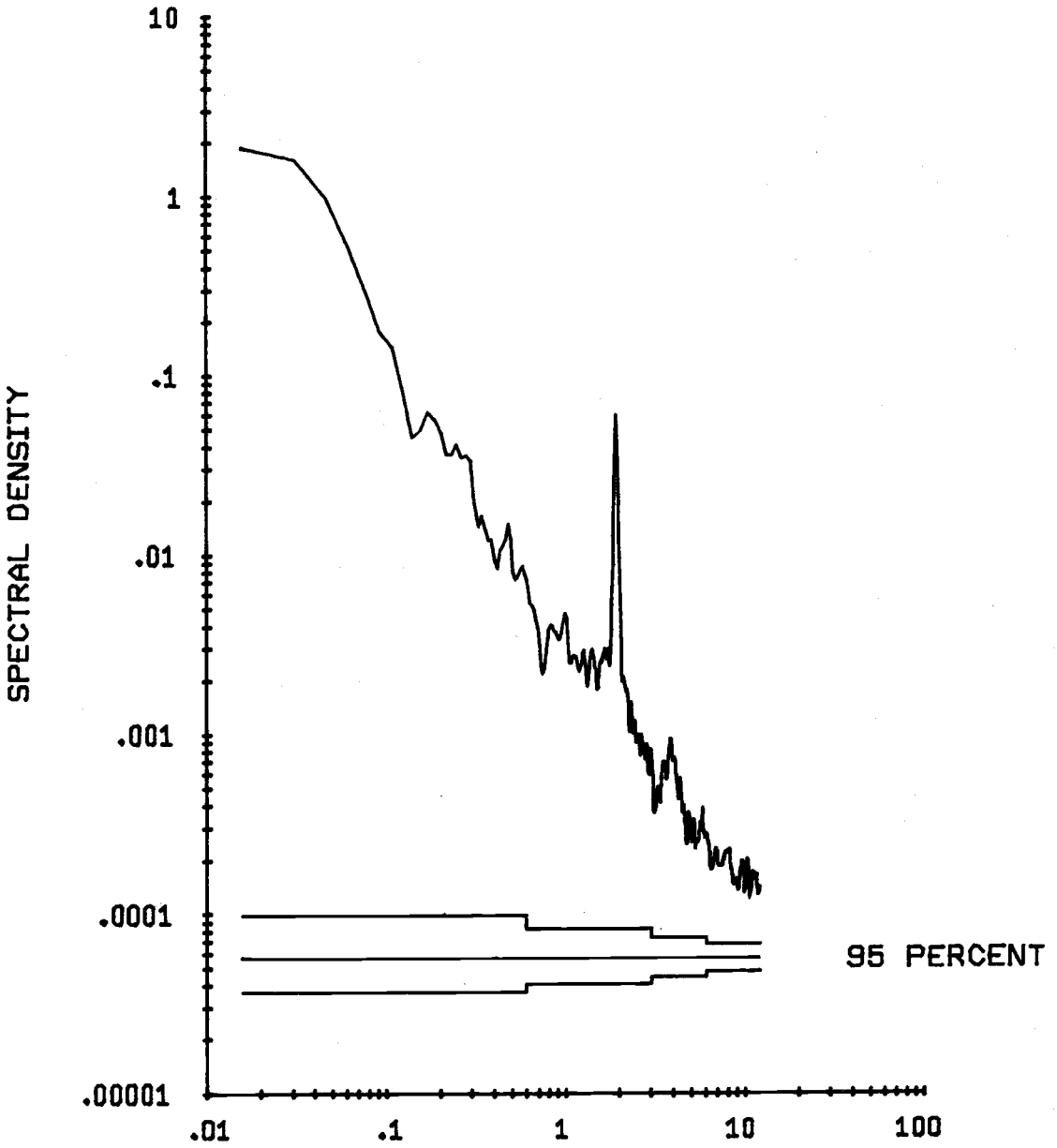
UNFILTERED CURRENT. 900 M AT ML-2.



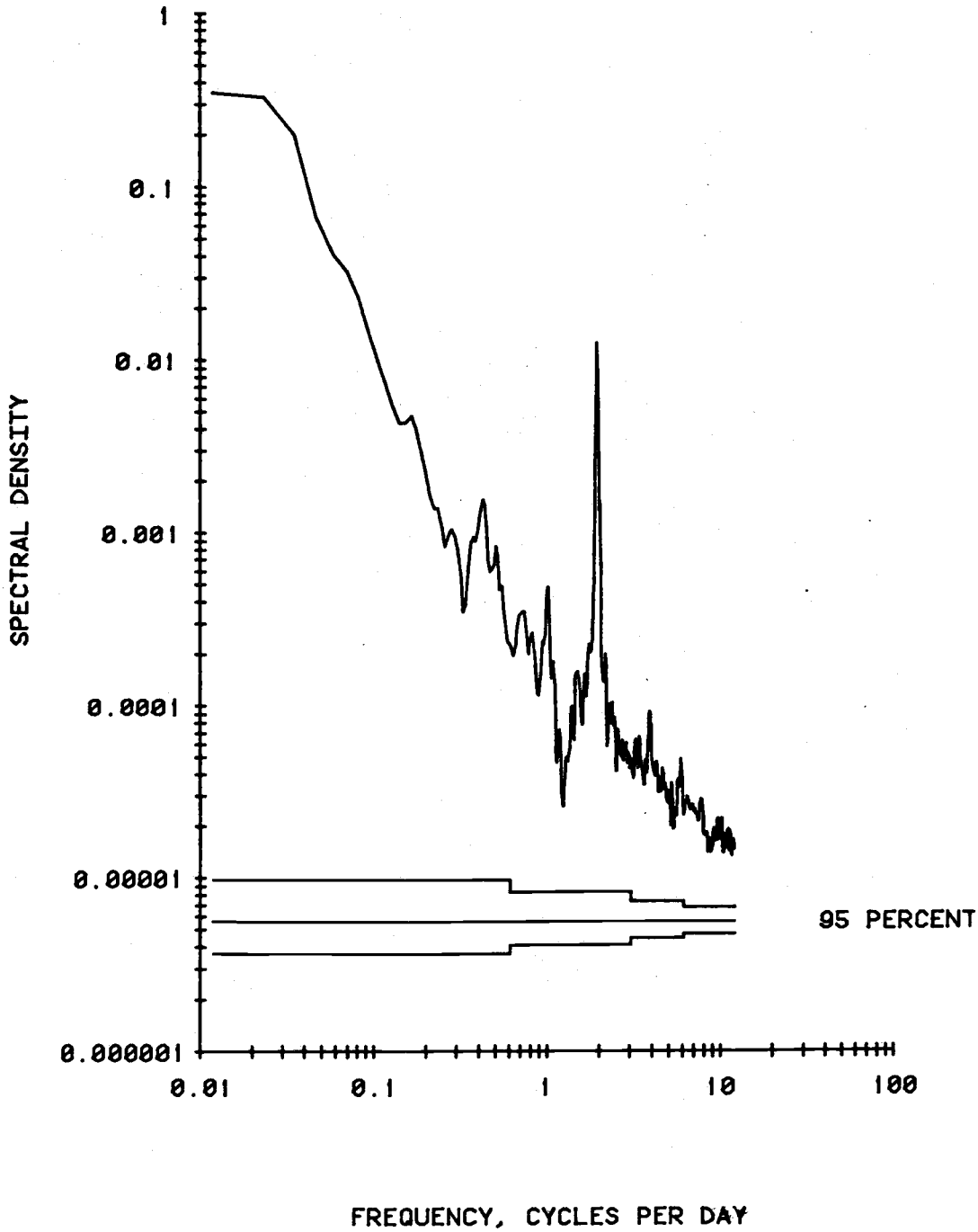
UNFILTERED CURRENT. 2711 METERS AT ML-2



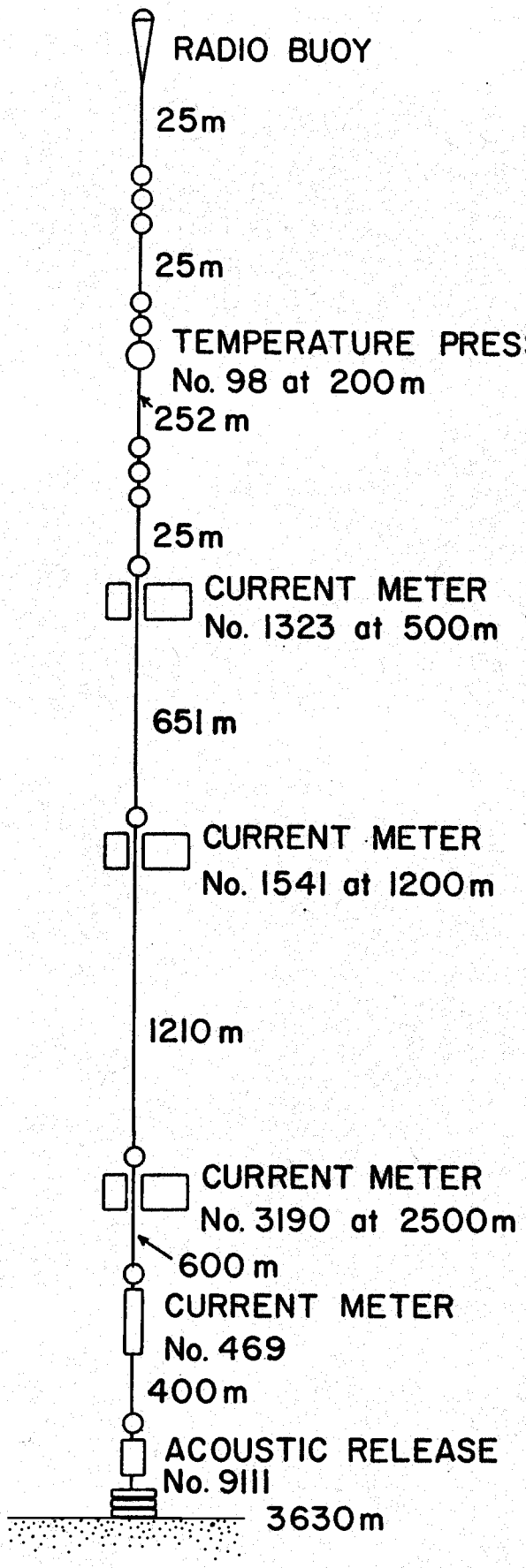
UNFILTERED TEMPERATURE. 900 METERS AT ML-2.



UNFILTERED TEMPERATURE. 2711 METERS AT ML-2



ML - 5



MAIN LINE (ML) 5
58° 31.1' S
64° 41.8' W
INSTALLED: 17 JANUARY 1979

ML-5

Position: 58°31.1'S, 64°41.8'W
Depth of Water: 3630 m
Set at 0333 UCT 17 January '79 by R/V MELVILLE
Retrieved at 1807 UCT 19 February '80 by R/V ATLANTIS II
Data Interval: 0534 UCT 17 January '79 to 1536 UCT 19 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	1323/8
1200 m	1541/14
2500 m	3190/12

Instrument 1323 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

Instrument 1541 recorded speed, direction, temperature, pressure, and conductivity once per hour until the instrument was recovered. The following intervals in the processed speed file were bridged due to instrument malfunction: (27 FEB - 2 MAR '79), and (12 JAN - 19 JAN '80).

Instrument 3190 recorded speed, direction, and temperature until 0834 UCT 25 December '79.

ML-5

644 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	17.15	8.20	0.03	2.26	0.70	42.10	9561
U	7.39	10.08	-0.08	2.77	-25.10	37.60	9561
V	7.41	12.26	-0.25	2.54	-37.10	39.10	9561
T	2.41	0.19	1.32	5.29	1.90	3.47	9561
P	647.08	36.24	1.35	4.34	611.50	808.00	9561

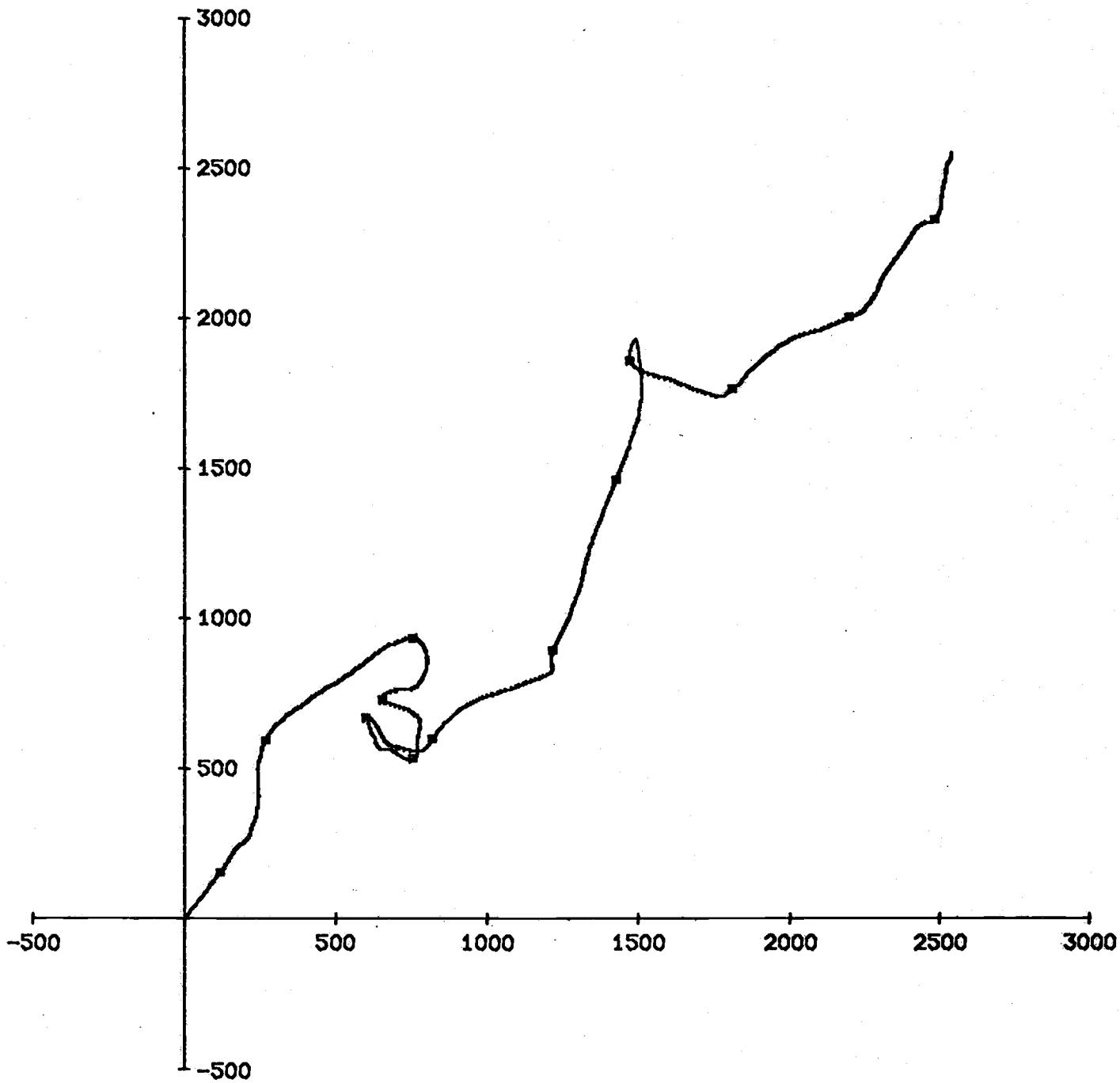
1344 m

S	10.82	4.97	0.34	2.66	0.70	31.10	9563
U	4.50	6.65	-0.15	2.96	-19.50	26.30	9563
V	4.80	7.37	-0.23	2.64	-19.90	28.90	9563
T	2.07	0.14	0.37	2.93	1.68	2.48	9563
P	1351.25	30.75	1.39	4.46	1321.70	1490.20	9563
C	31.25	0.11	0.10	2.69	30.93	31.50	9563

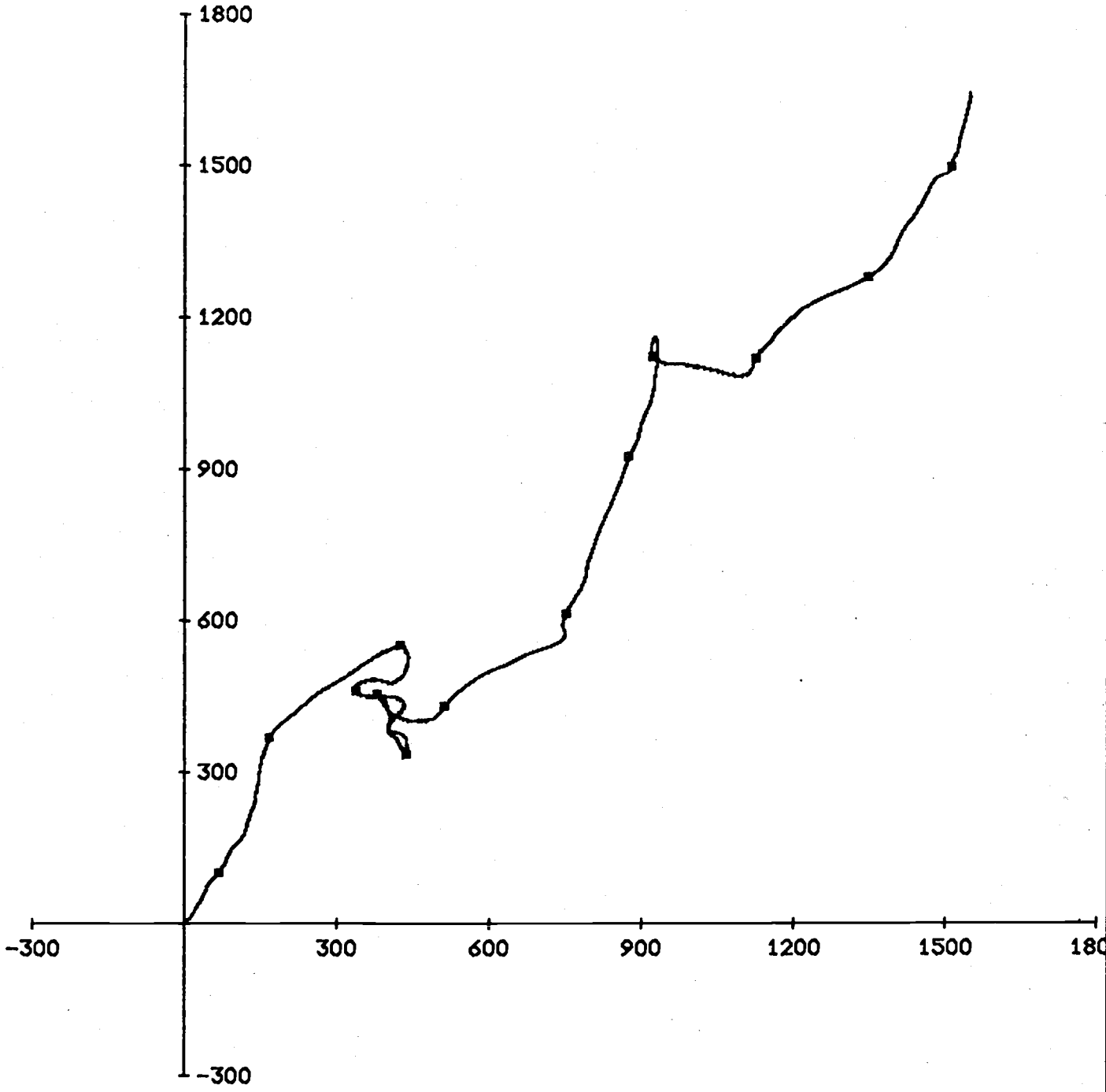
2644 m

S	7.06	3.57	0.77	3.73	0.80	24.50	8212
U	1.01	5.63	-0.29	3.00	-22.50	18.10	8212
V	1.59	5.23	0.06	3.33	-18.30	22.20	8212
T	1.16	0.16	0.34	2.89	0.76	1.58	8212

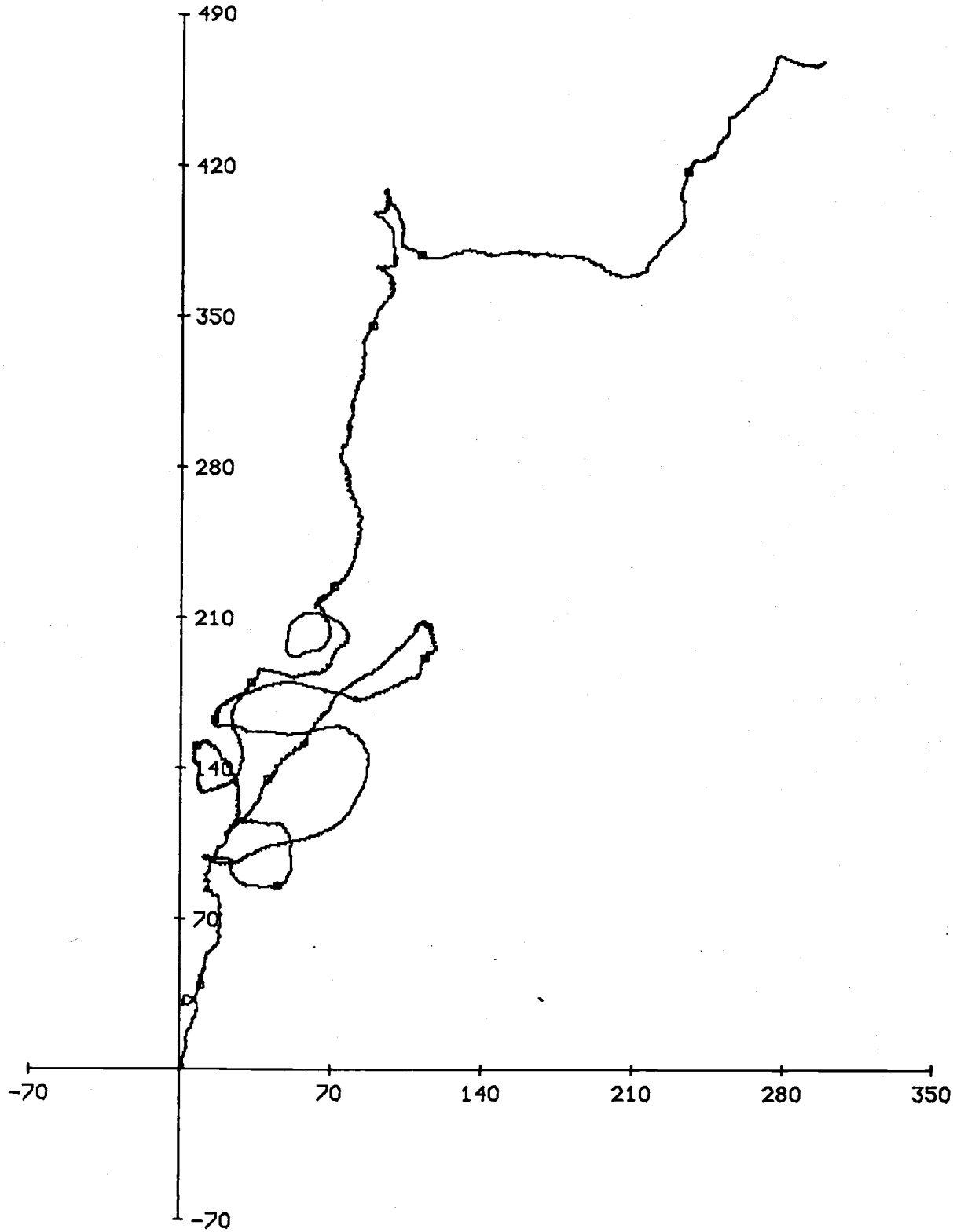
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



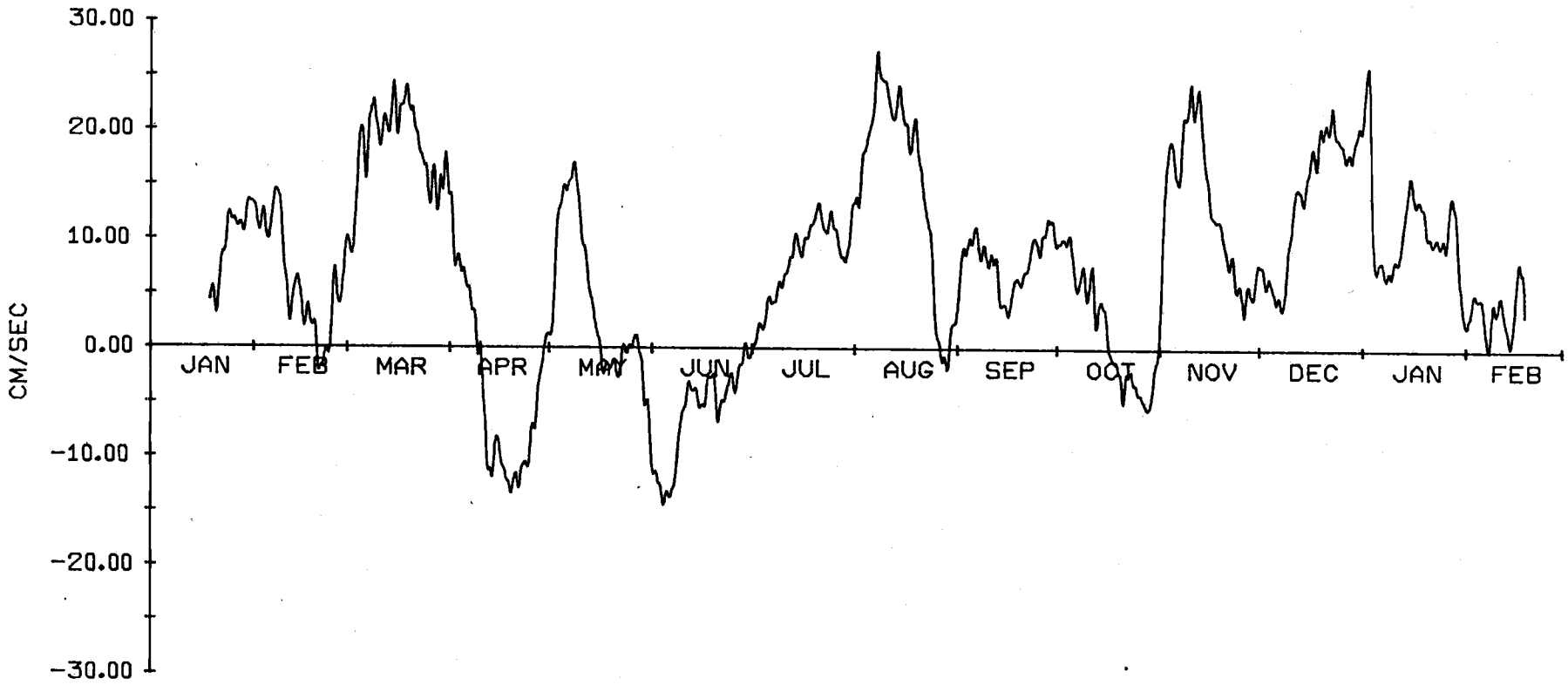
644 M AT STN ML-5. 398.3 DAYS STARTING 602 17 JAN 79.



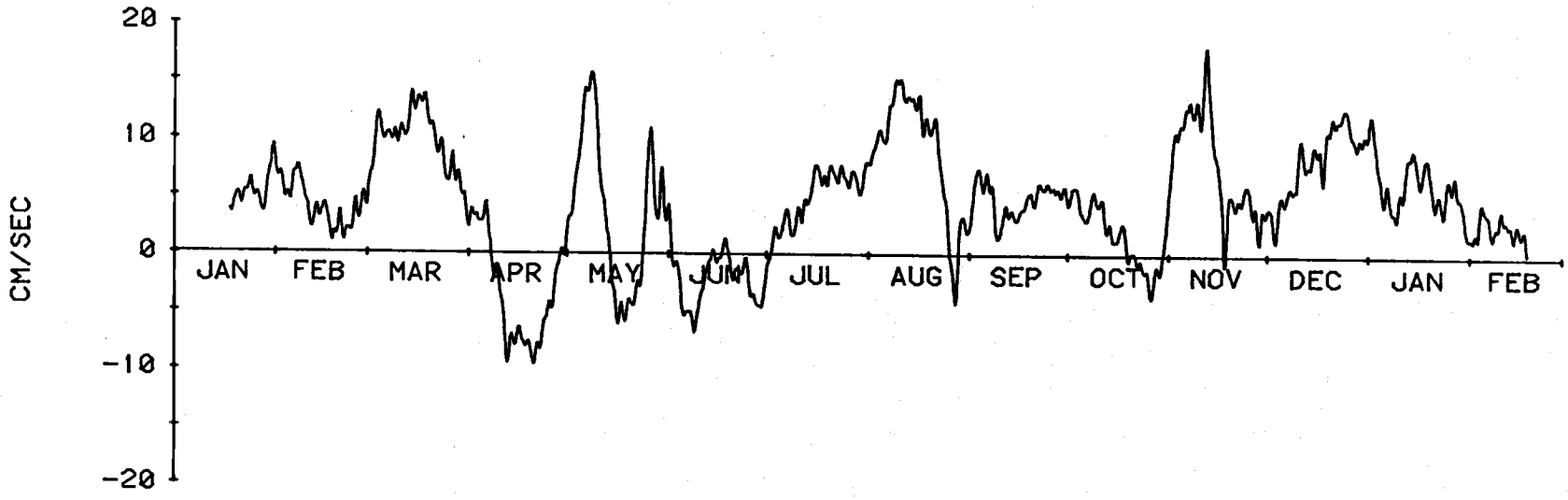
1344 M AT STN ML-5. 398.4 DAYS STARTING 0536 17 JAN 79.



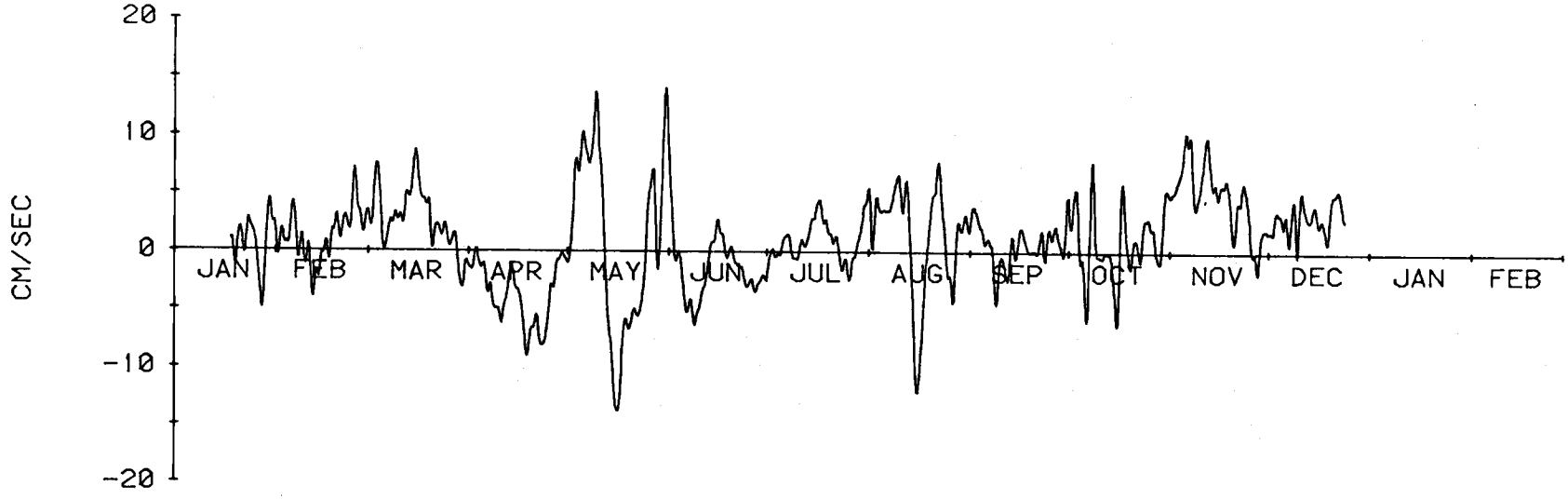
2644 M AT STN ML-5. 342.1 DAYS STARTING 0534 17 JAN 79.



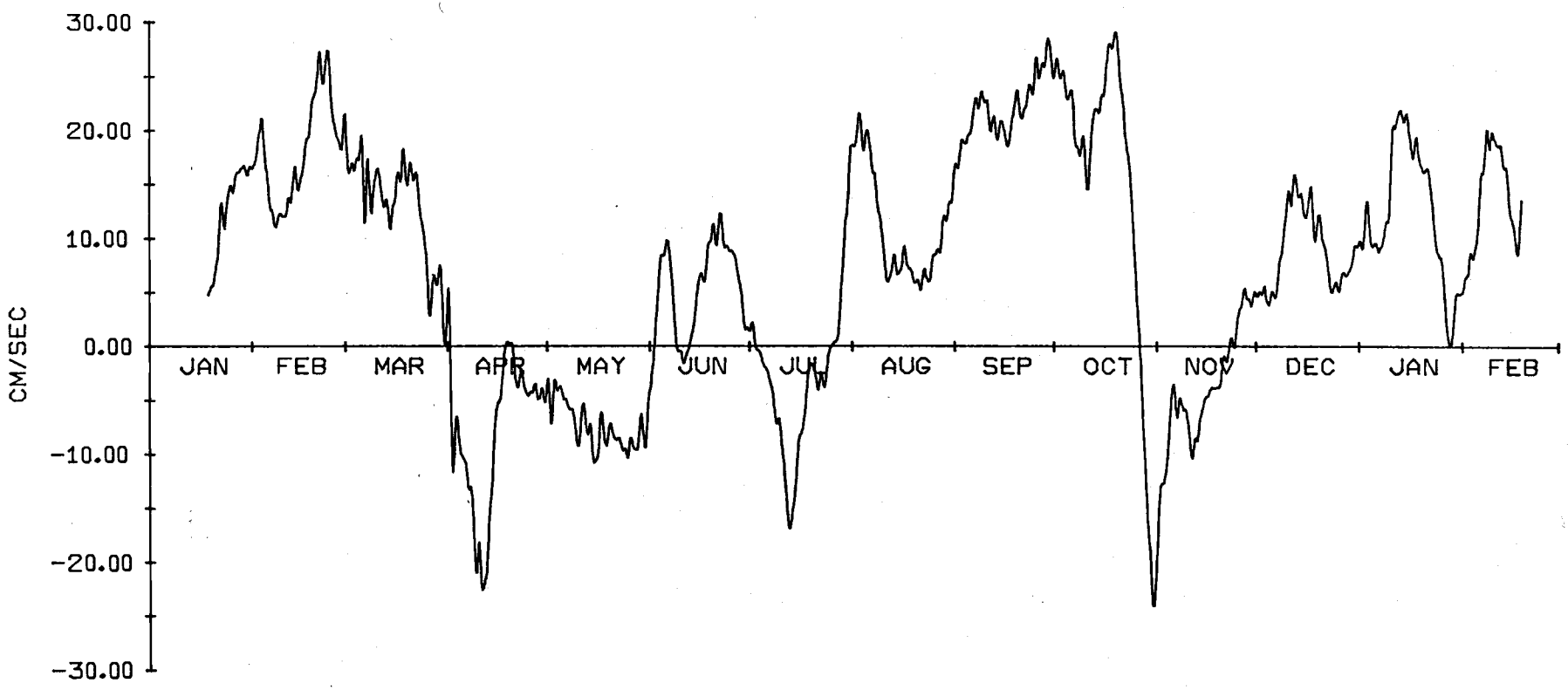
644 METERS AT ML-5
LLP FILTERED U COMPONENT



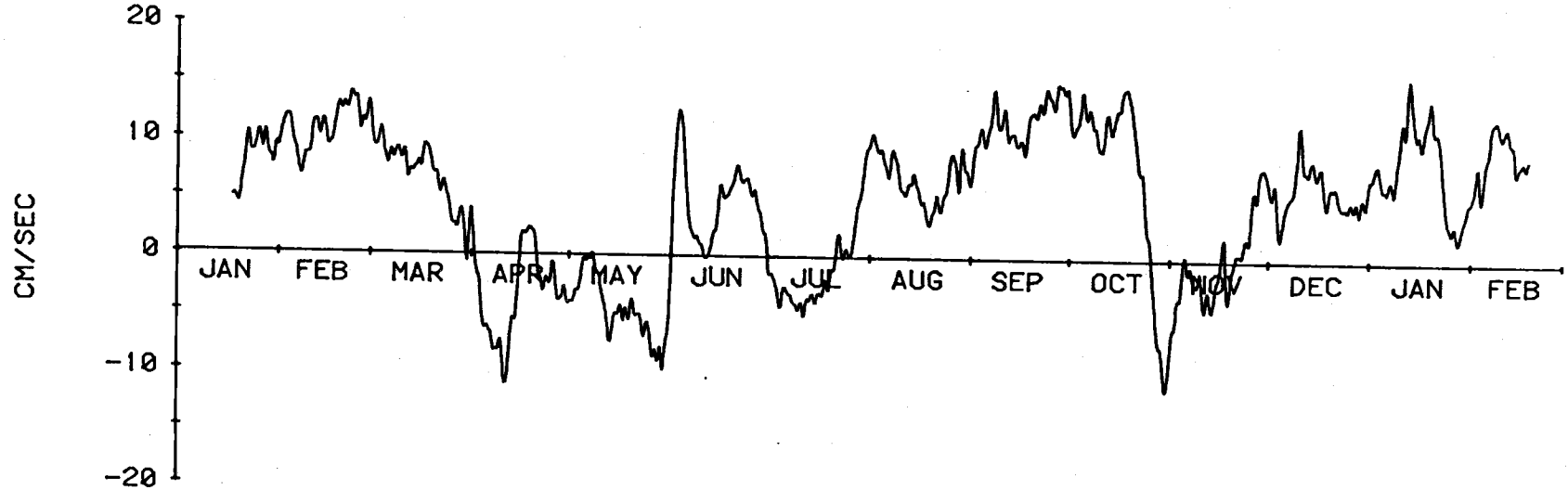
1344 METERS AT ML-5
LLP FILTERED U COMPONENT



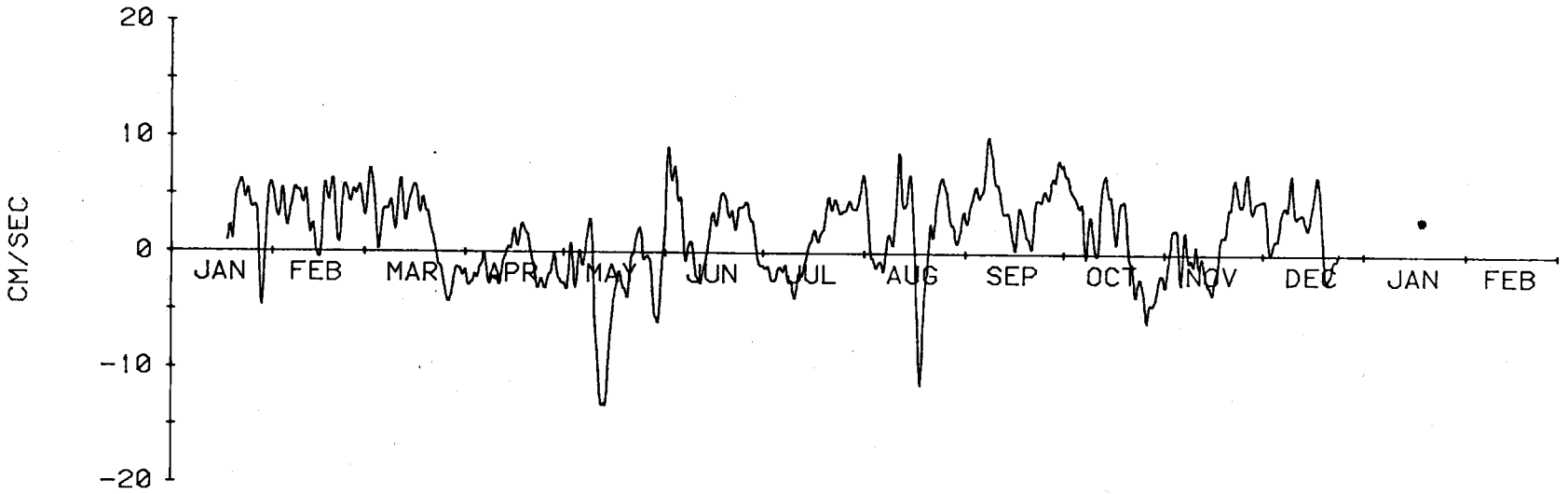
2644 METERS AT ML-5
LLP FILTERED U COMPONENT



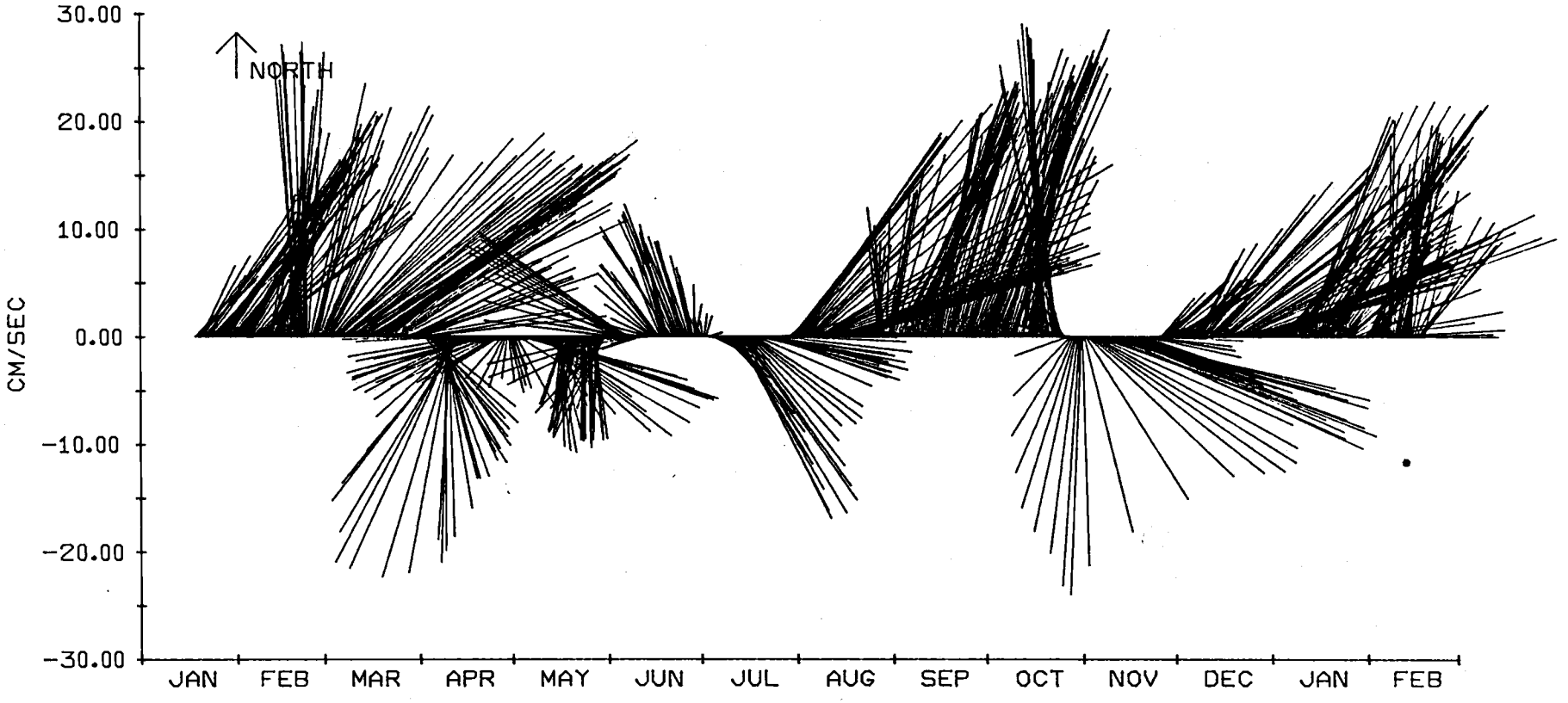
644 METERS AT ML-5
LLP FILTERED V COMPONENT



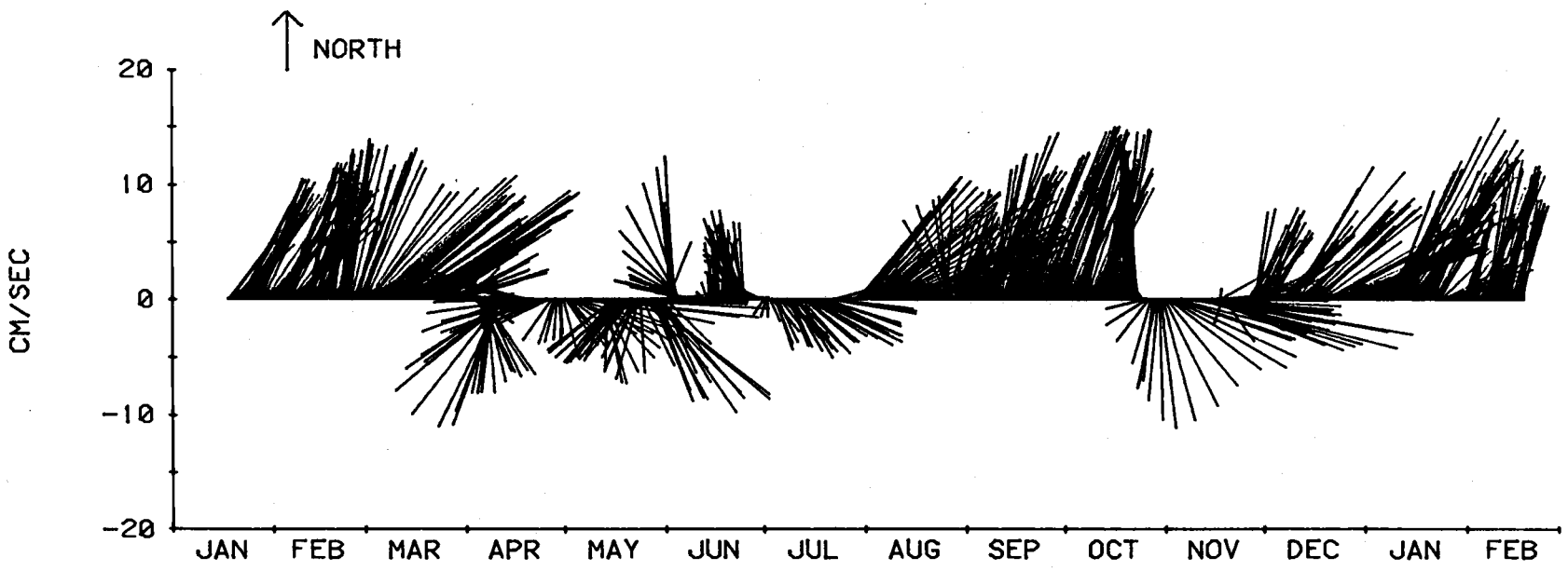
1344 METERS AT ML-5
LLP FILTERED V COMPONENT



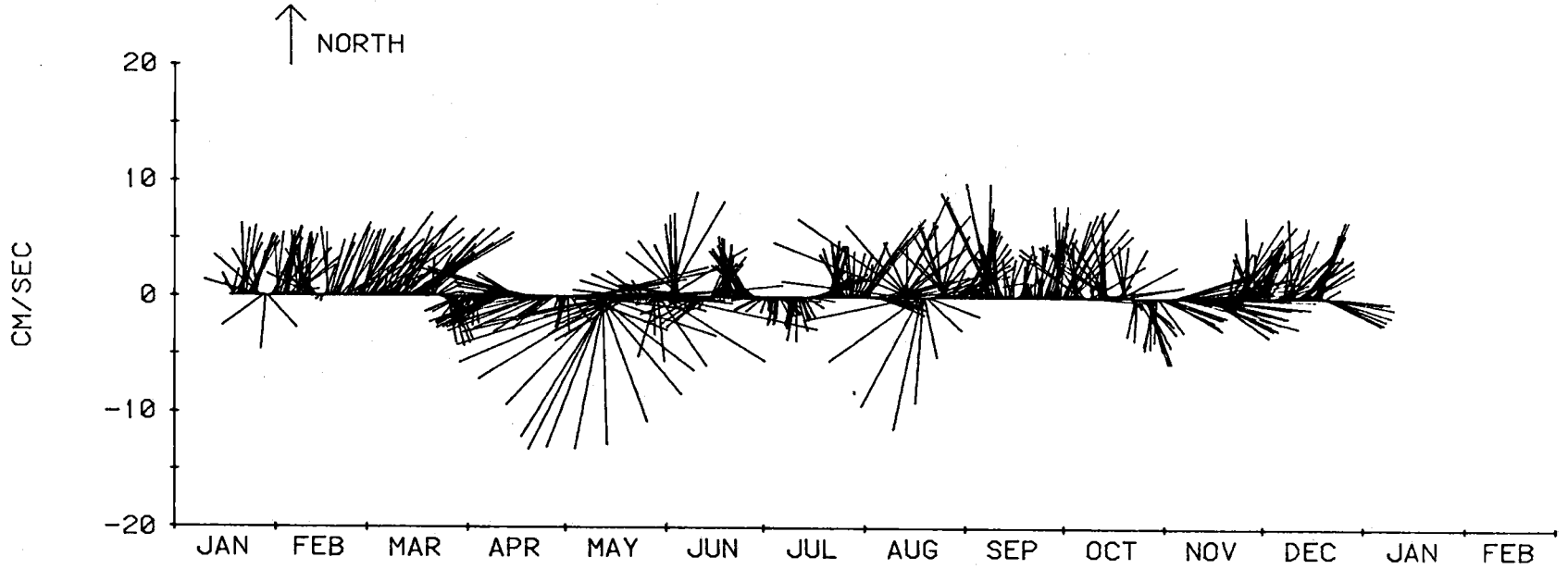
2644 METERS AT ML-5
LLP FILTERED V COMPONENT



644 METERS AT ML-5
LLP FILTERED CURRENT

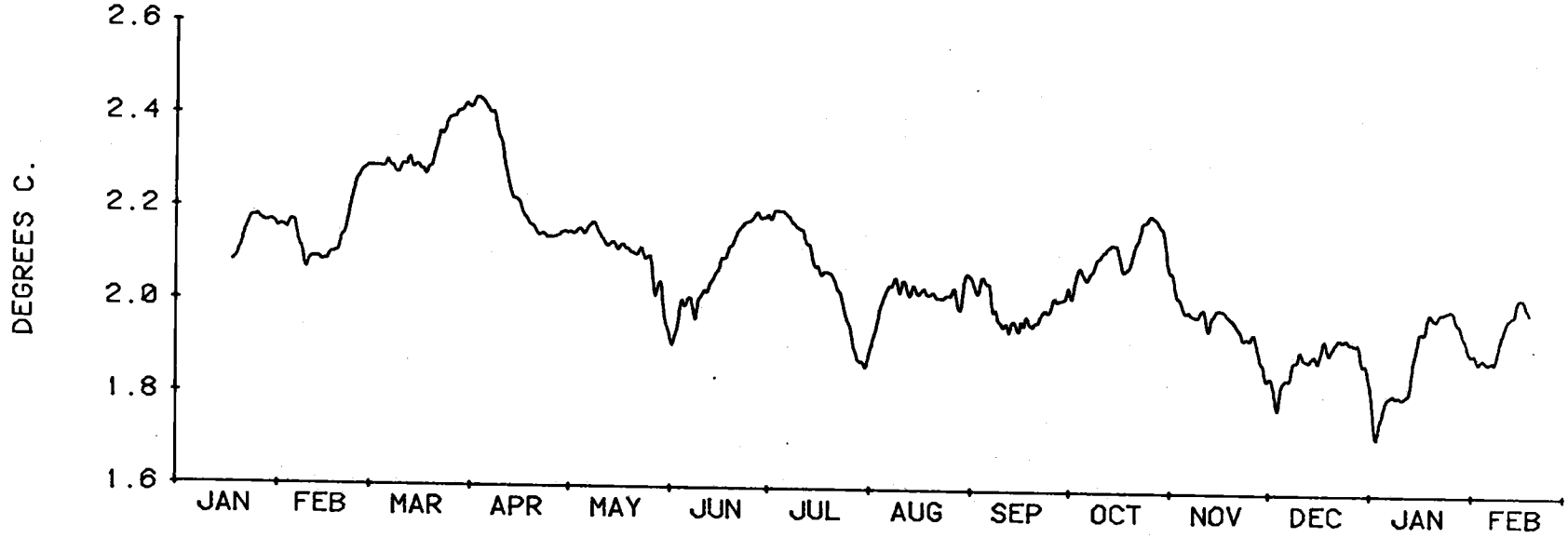


1344 METERS AT ML-5
LLP FILTERED CURRENT

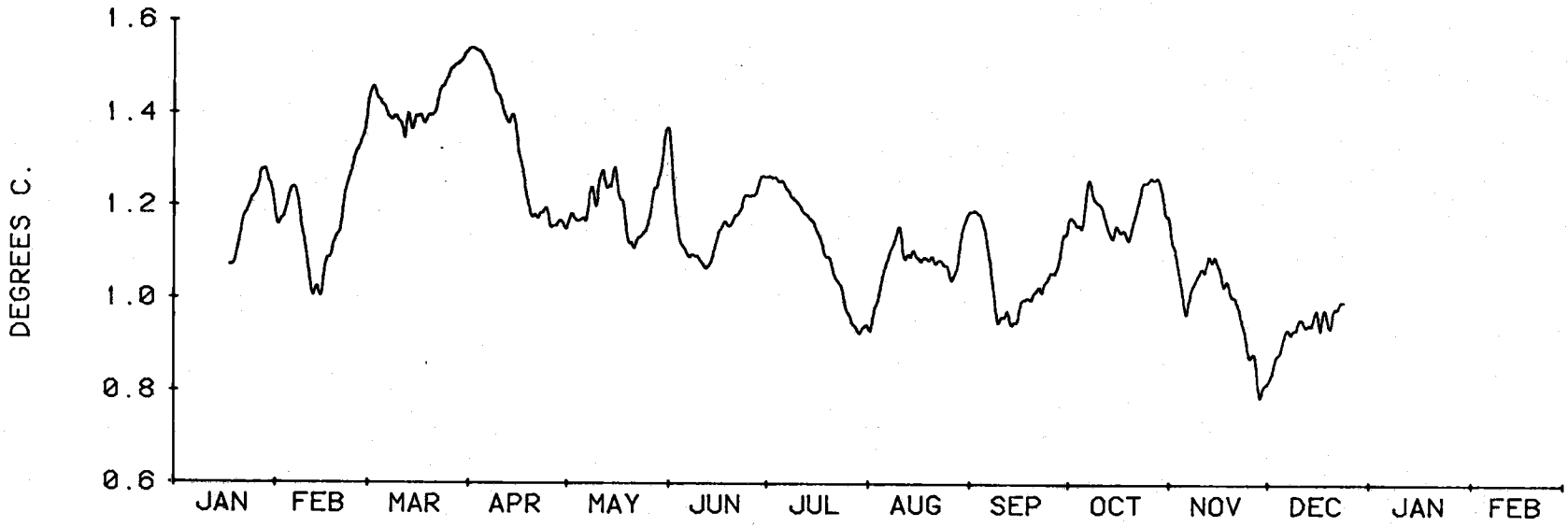


2644 METERS AT ML-5
LLP FILTERED CURRENT

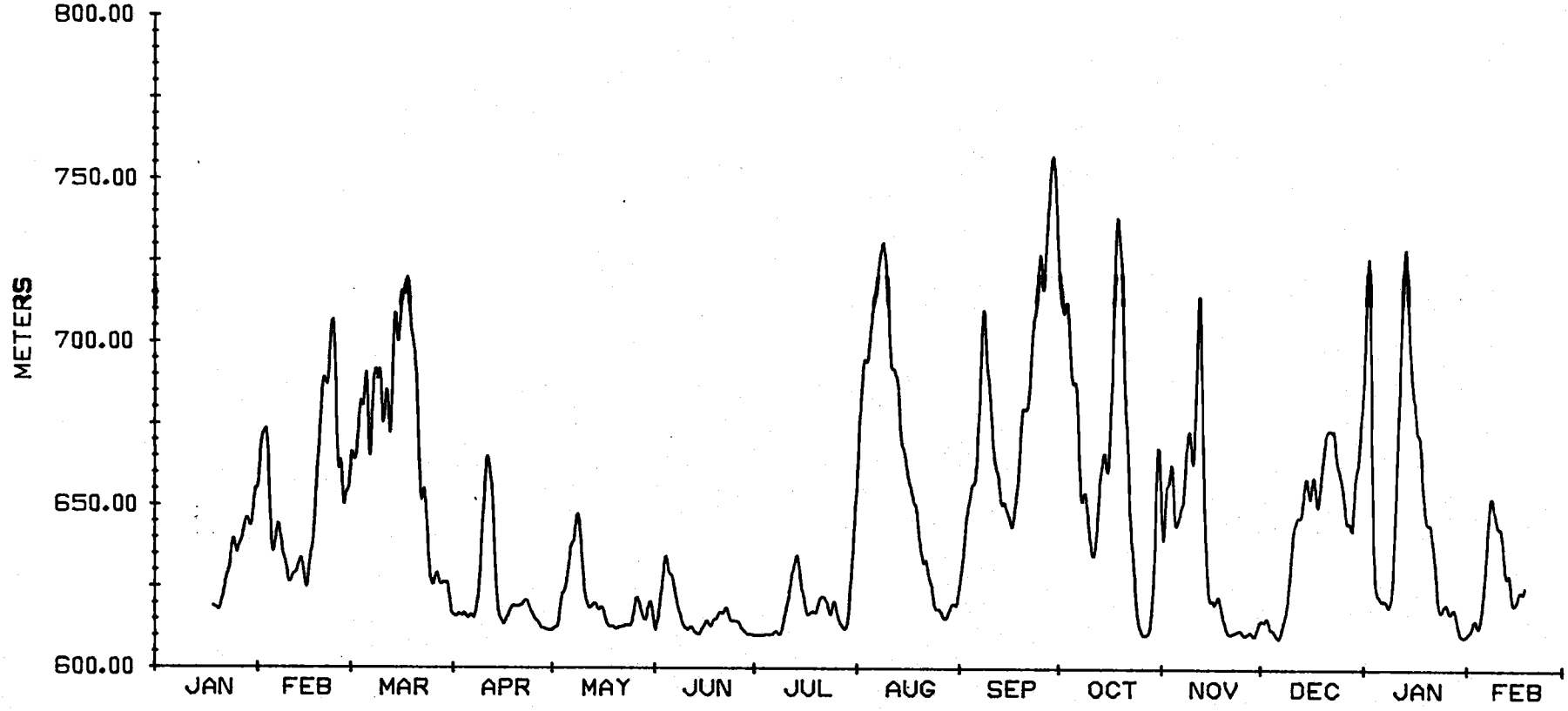
644 METERS AT ML-5
LLP FILTERED TEMPERATURE



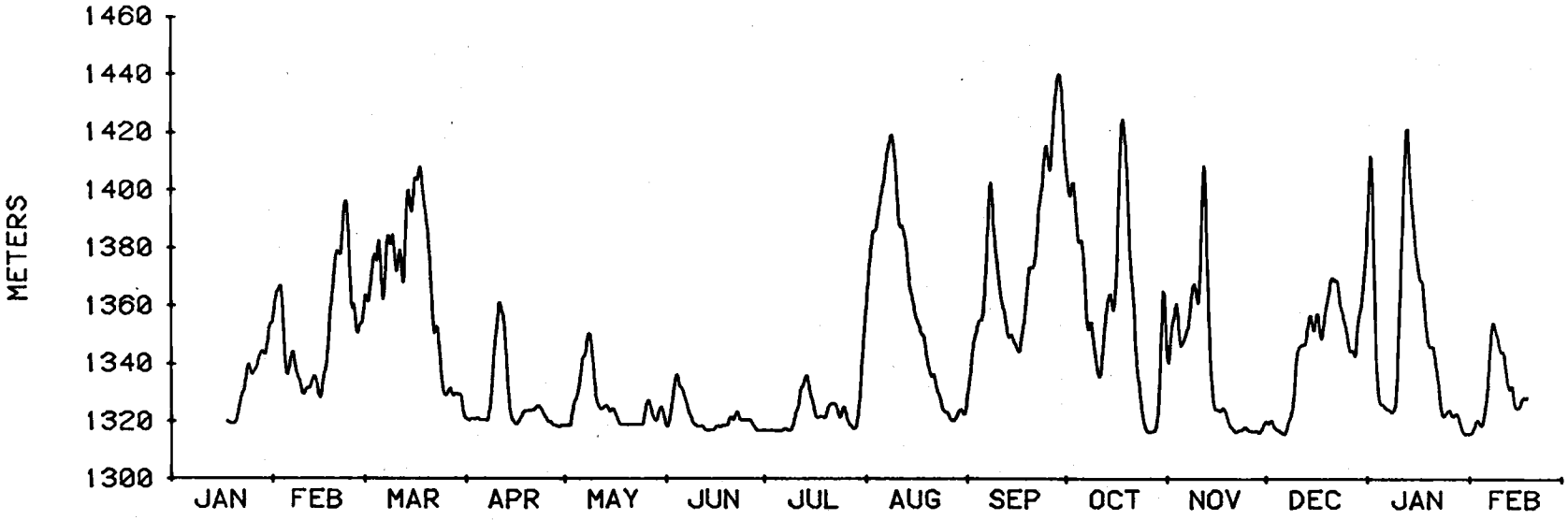
1344 METERS AT ML-5
LLP FILTERED TEMPERATURE



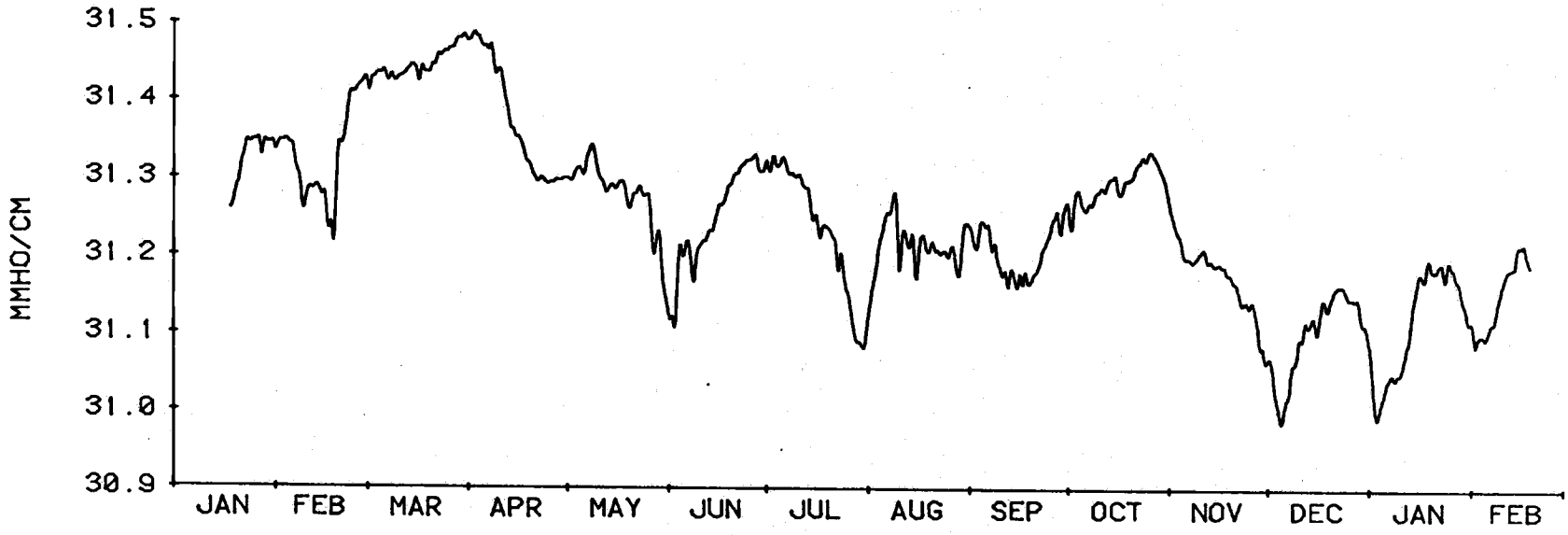
2644 METERS AT ML-5
LLP FILTERED TEMPERATURE



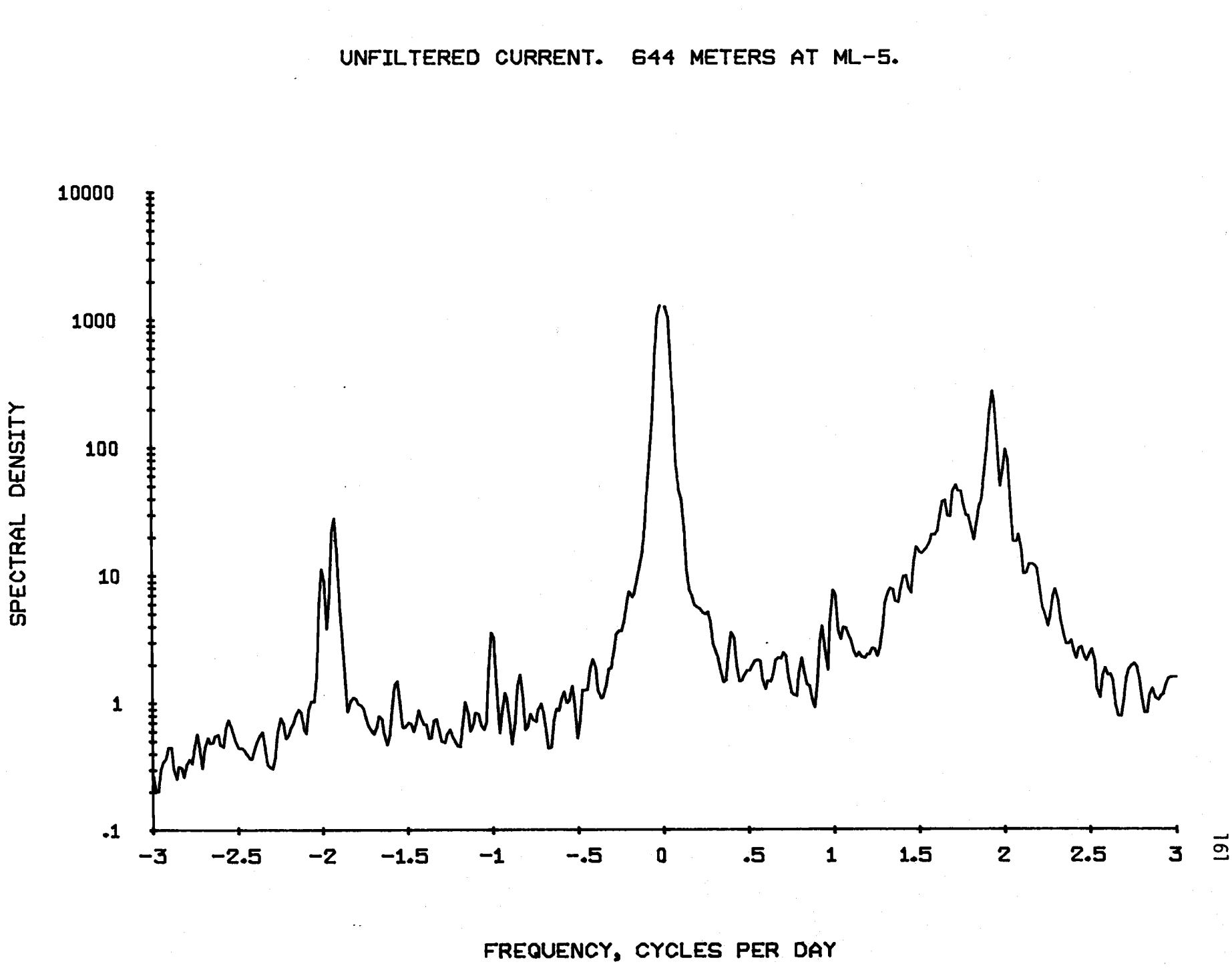
644 METERS AT ML-5
LLP FILTERED PRESSURE

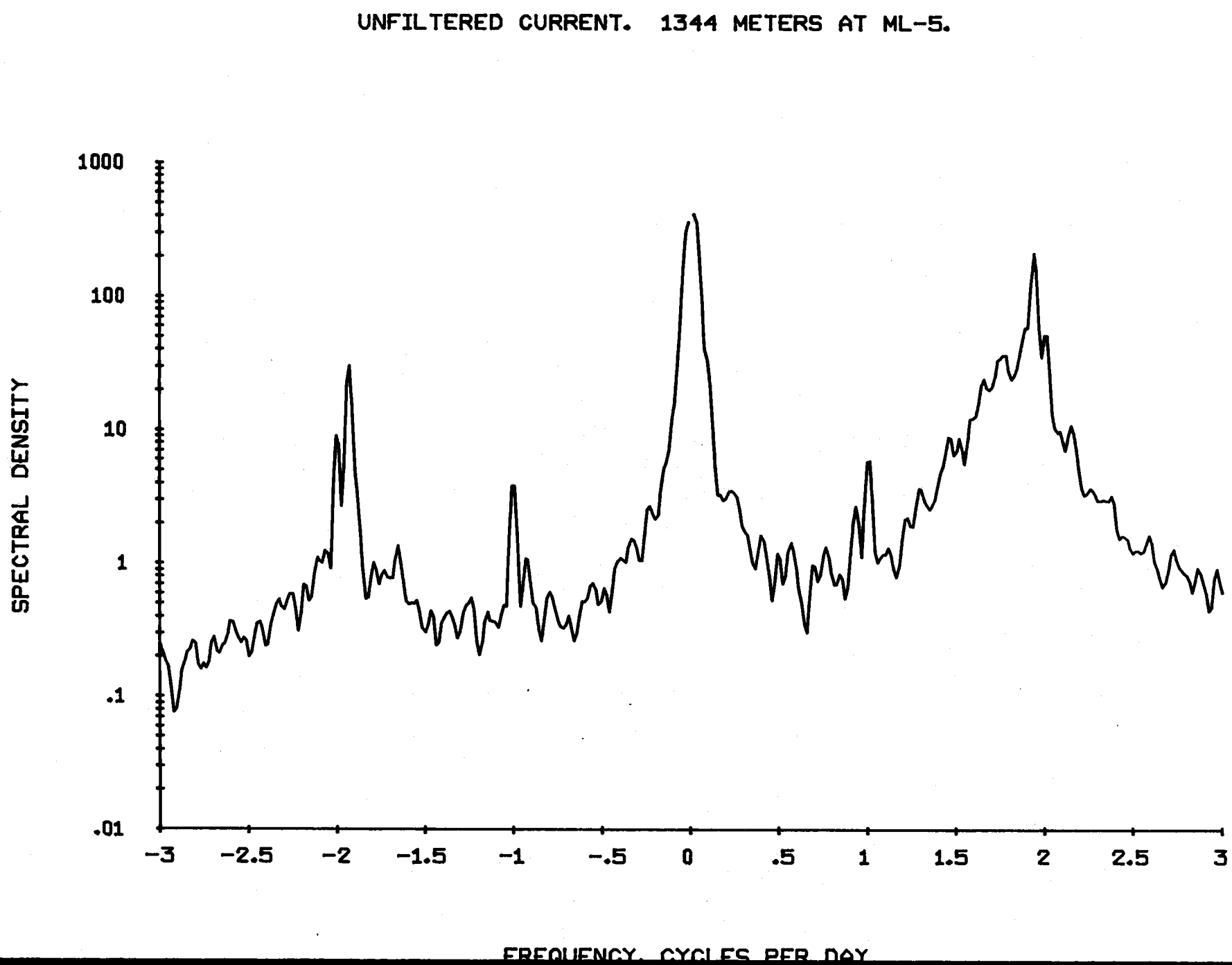


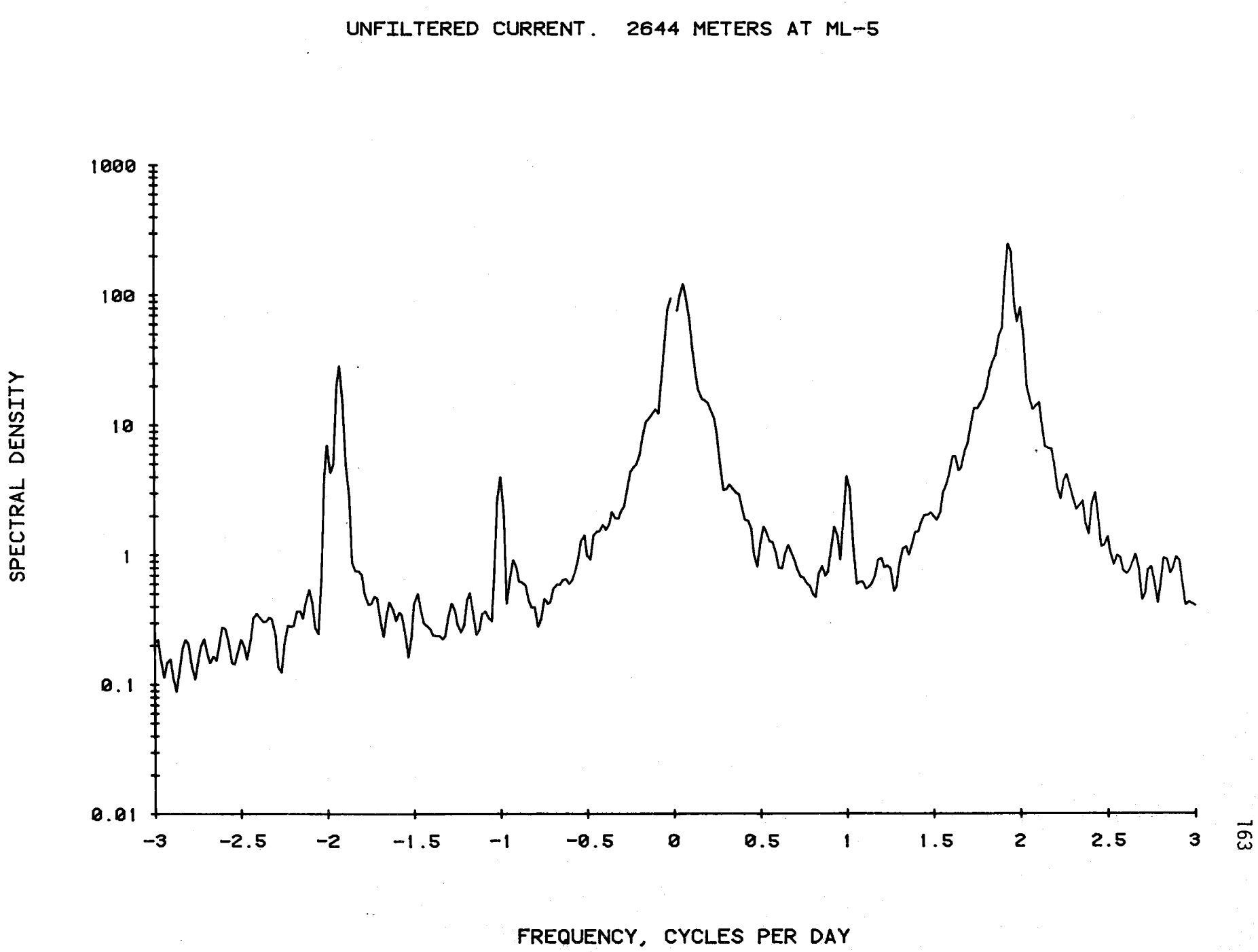
1344 METERS AT ML-5
LLP FILTERED PRESSURE



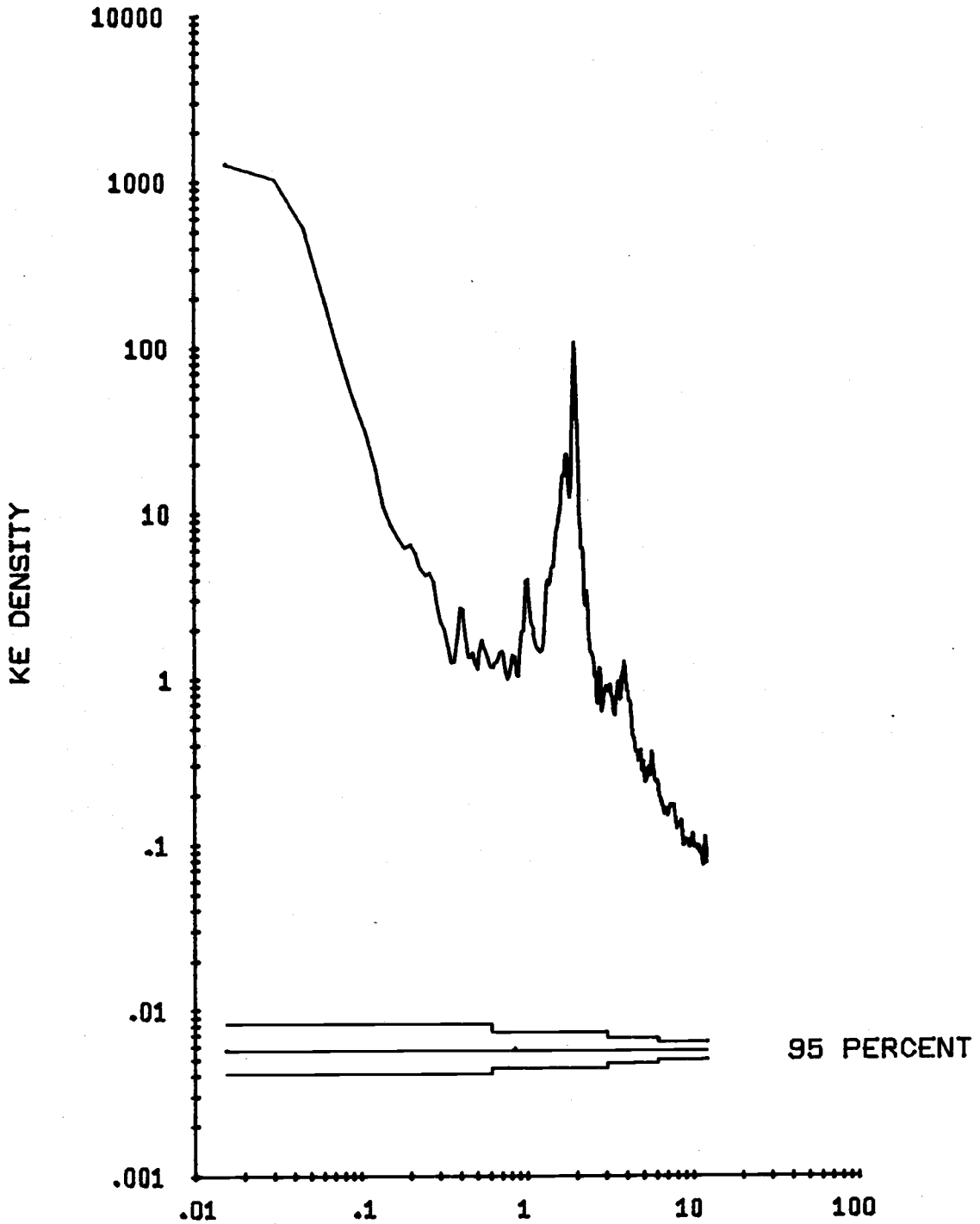
1344 METERS AT ML-5
LLP FILTERED CONDUCTIVITY


UNFILTERED CURRENT. 644 METERS AT ML-5.
SPECTRAL DENSITY
10000
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

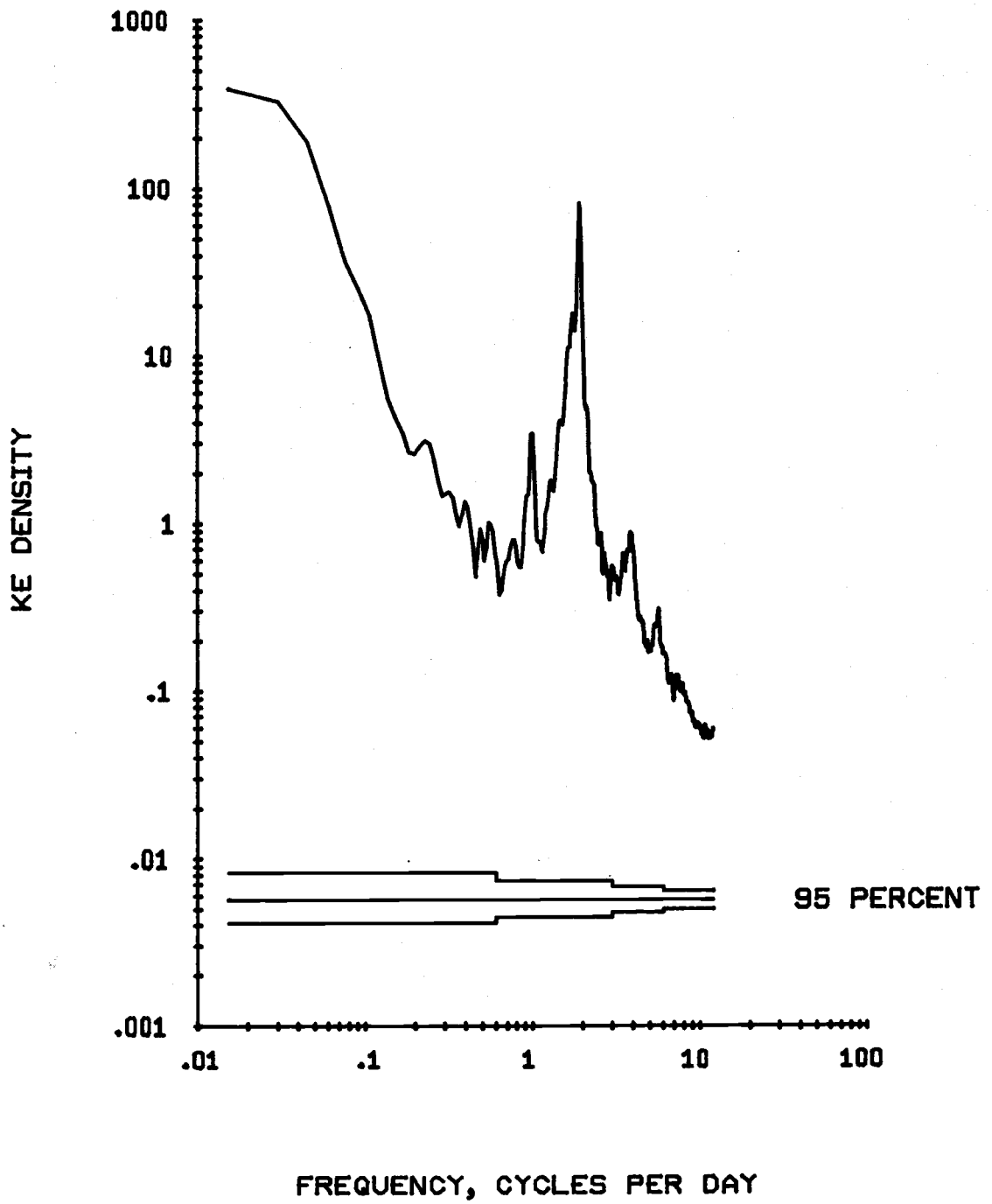

UNFILTERED CURRENT. 1344 METERS AT ML-5.
SPECTRAL DENSITY
1000
100
10
1
.1
.01
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY


UNFILTERED CURRENT. 2644 METERS AT ML-5
SPECTRAL DENSITY
1000
100
10
1
0.1
0.01
-3
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

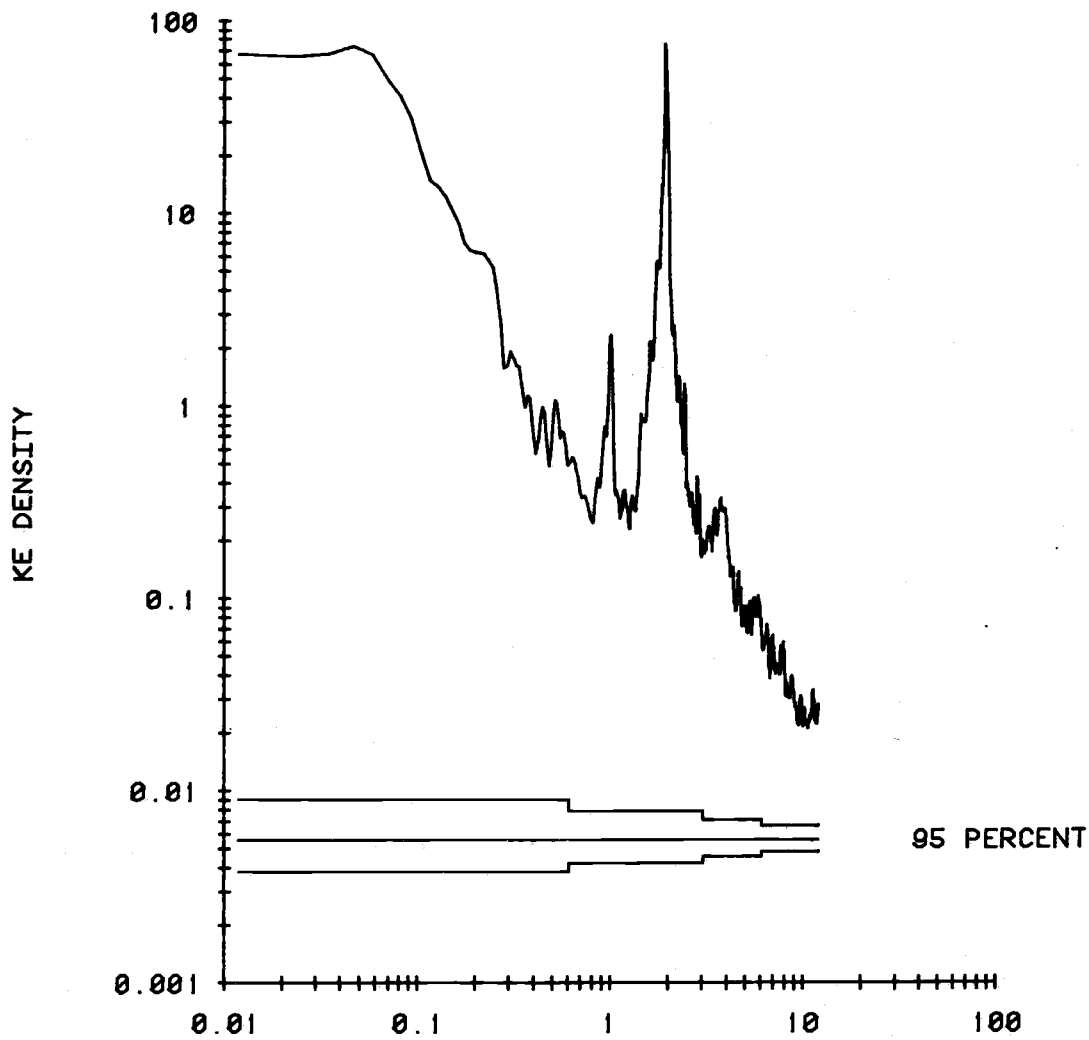
UNFILTERED CURRENT. 644 M AT ML-5.



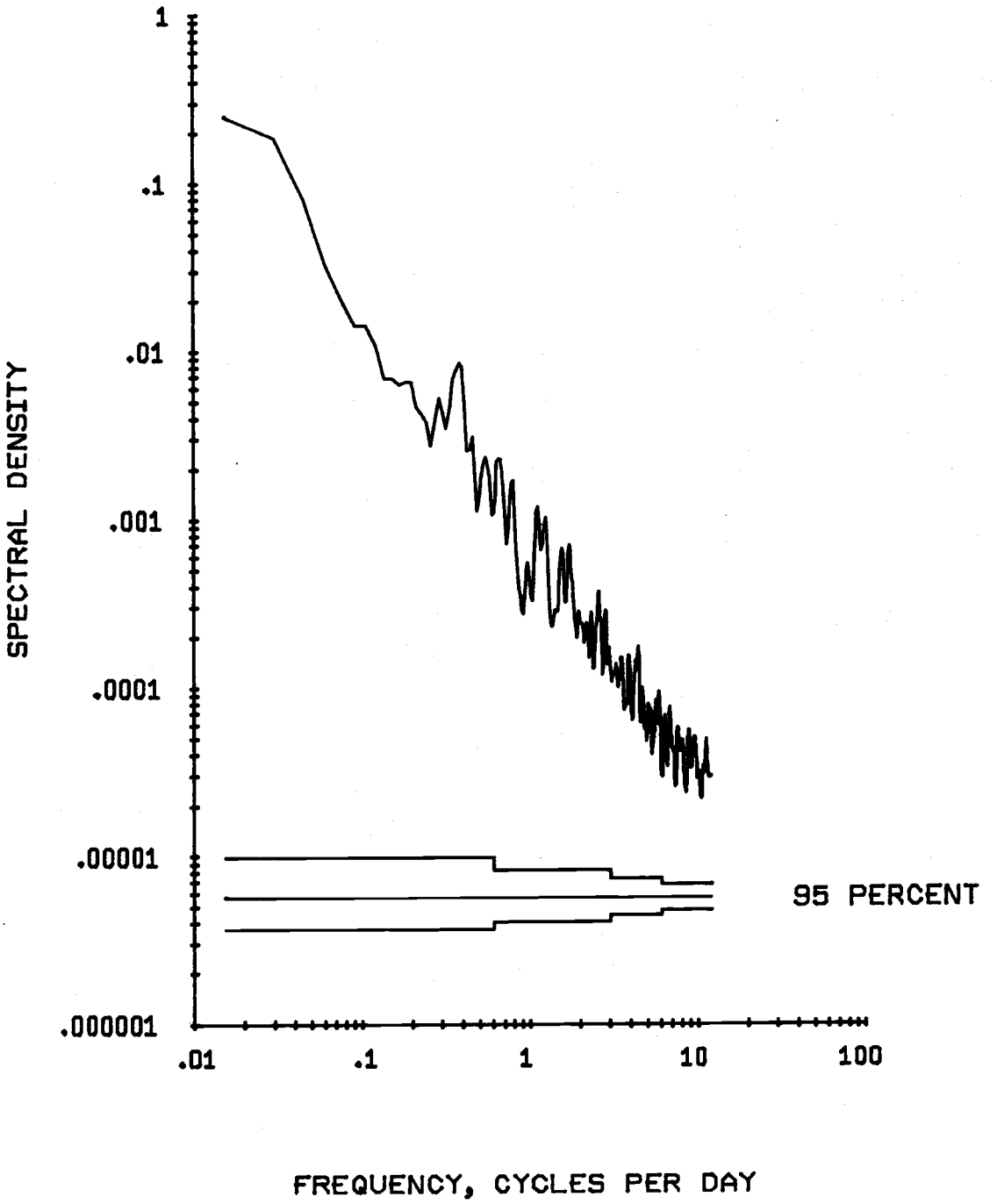
UNFILTERED CURRENT. 1344 METERS AT ML-5.



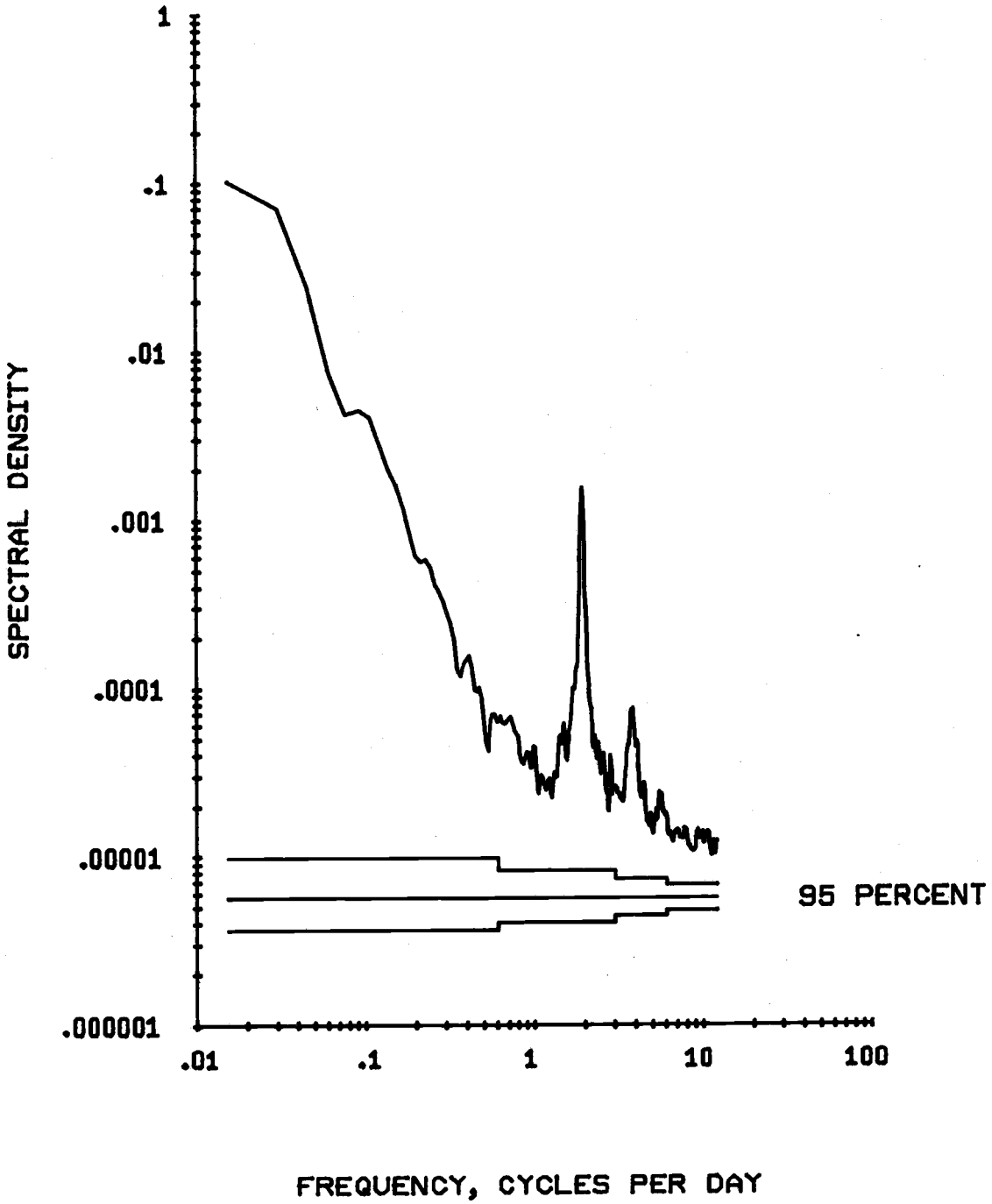
UNFILTERED CURRENT. 2644 METERS AT ML-5



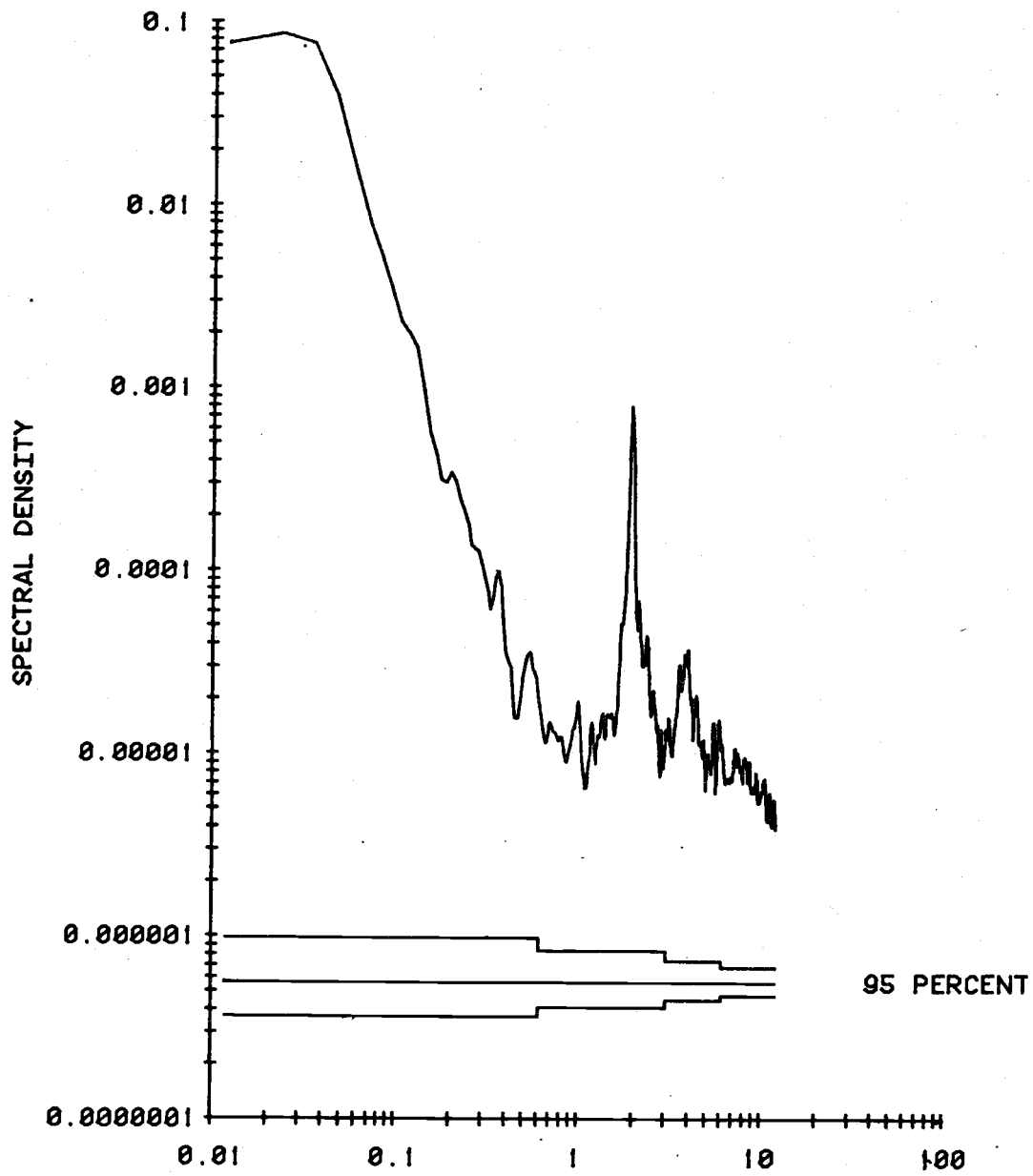
UNFILTERED TEMPERATURE. 644 METERS AT ML-5.



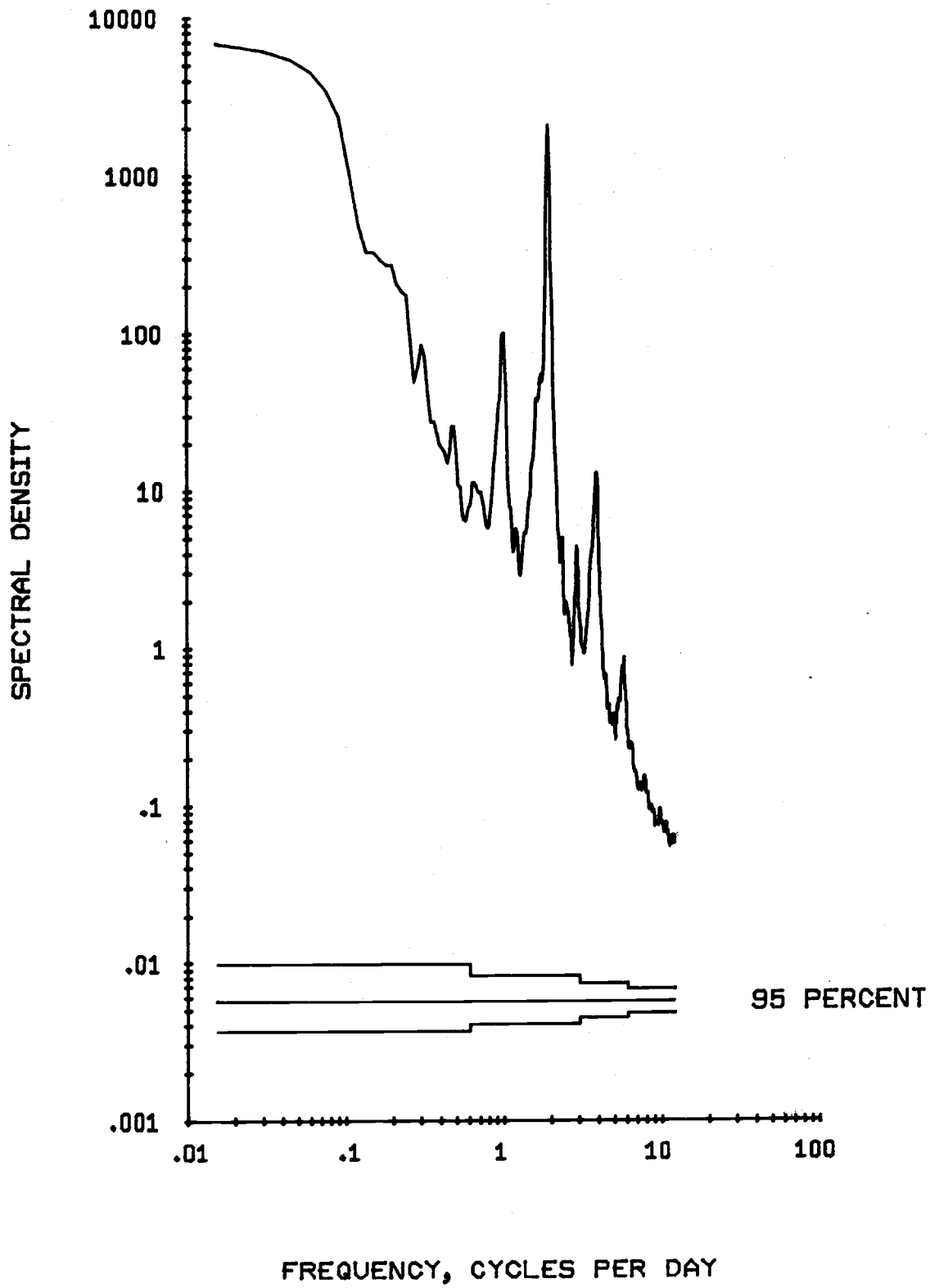
UNFILTERED TEMPERATURE. 1344 M AT ML-5.



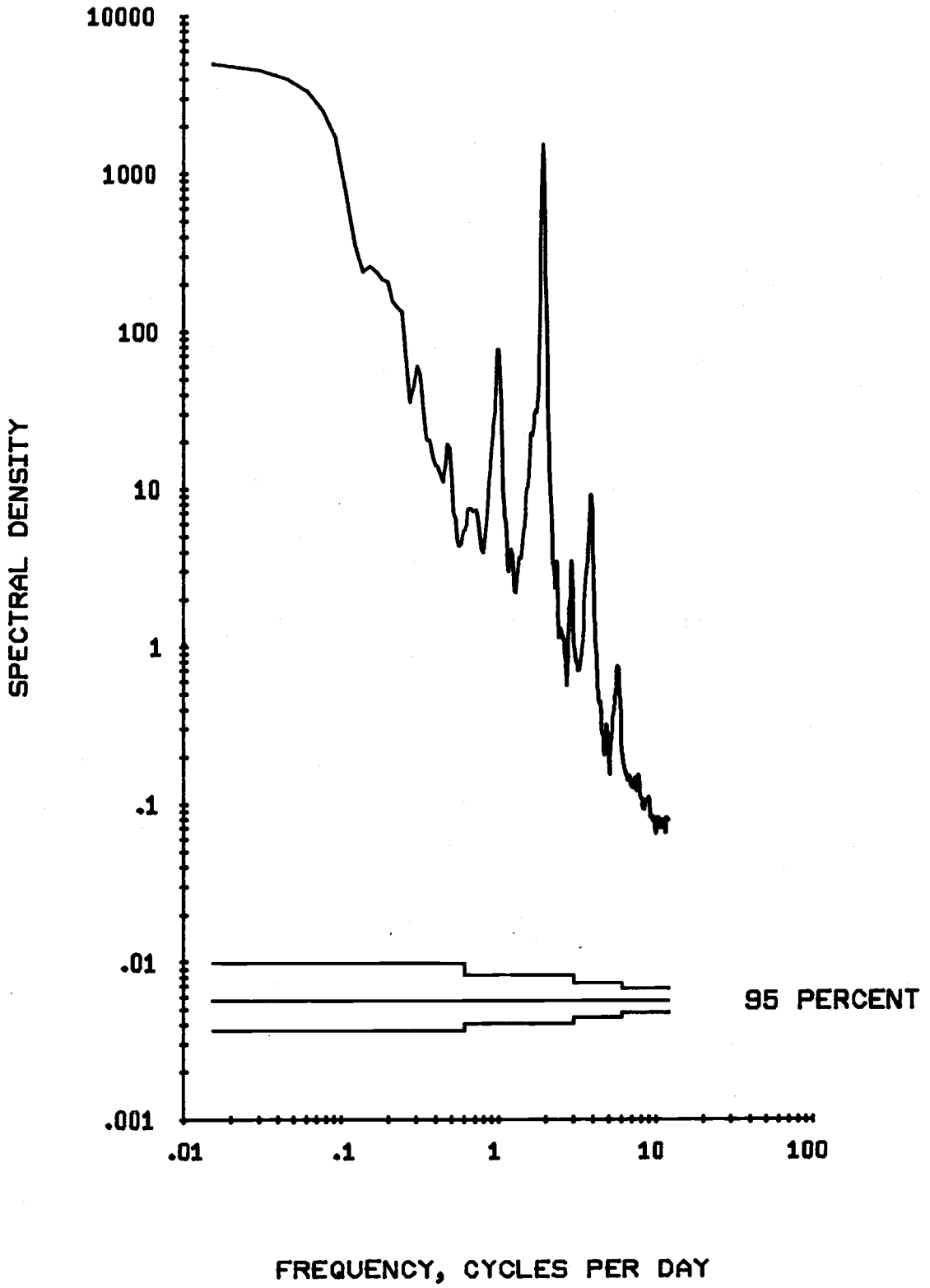
UNFILTERED TEMPERATURE. 2644 METERS AT ML-5



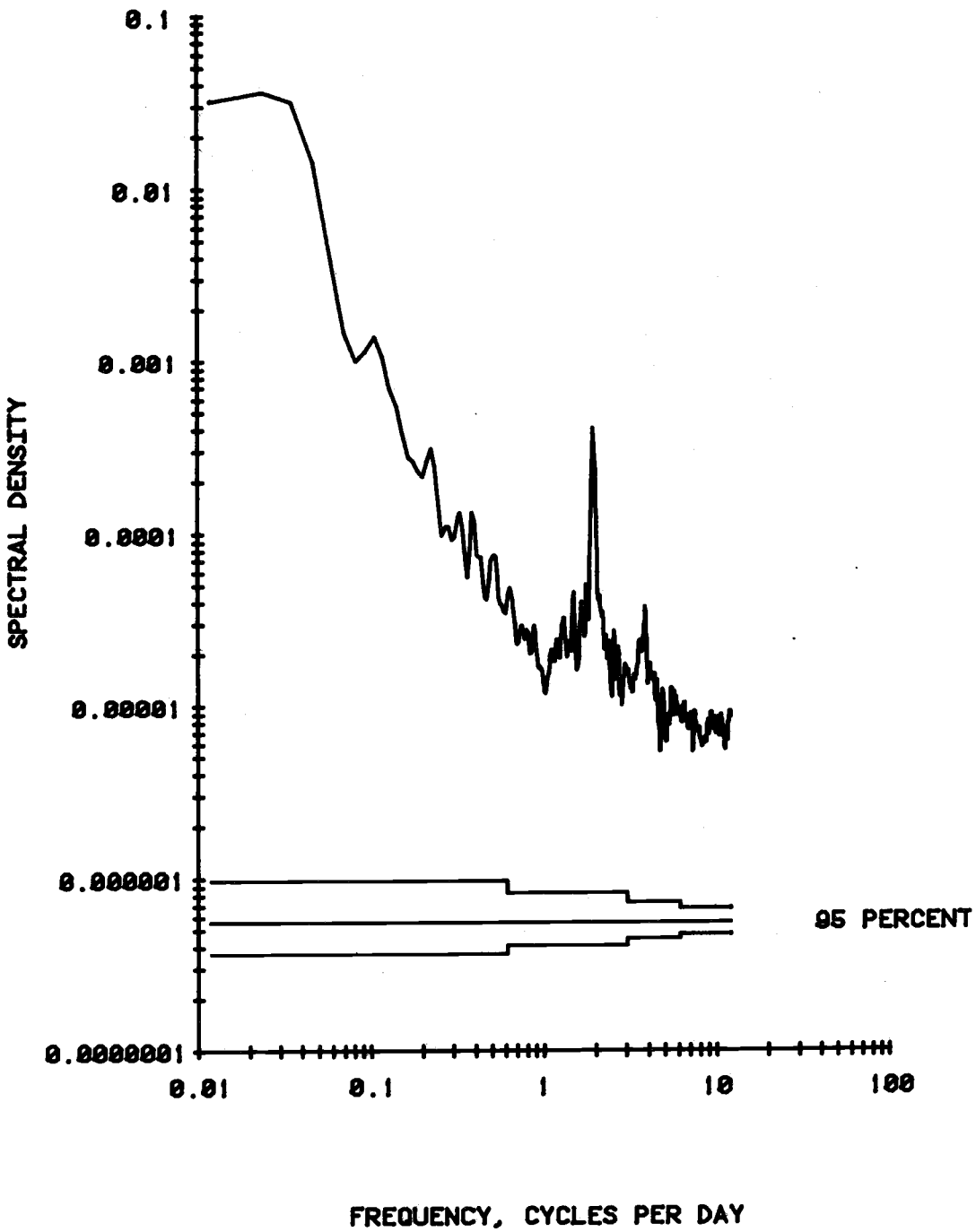
UNFILTERED PRESSURE. 644 METERS AT ML-5.



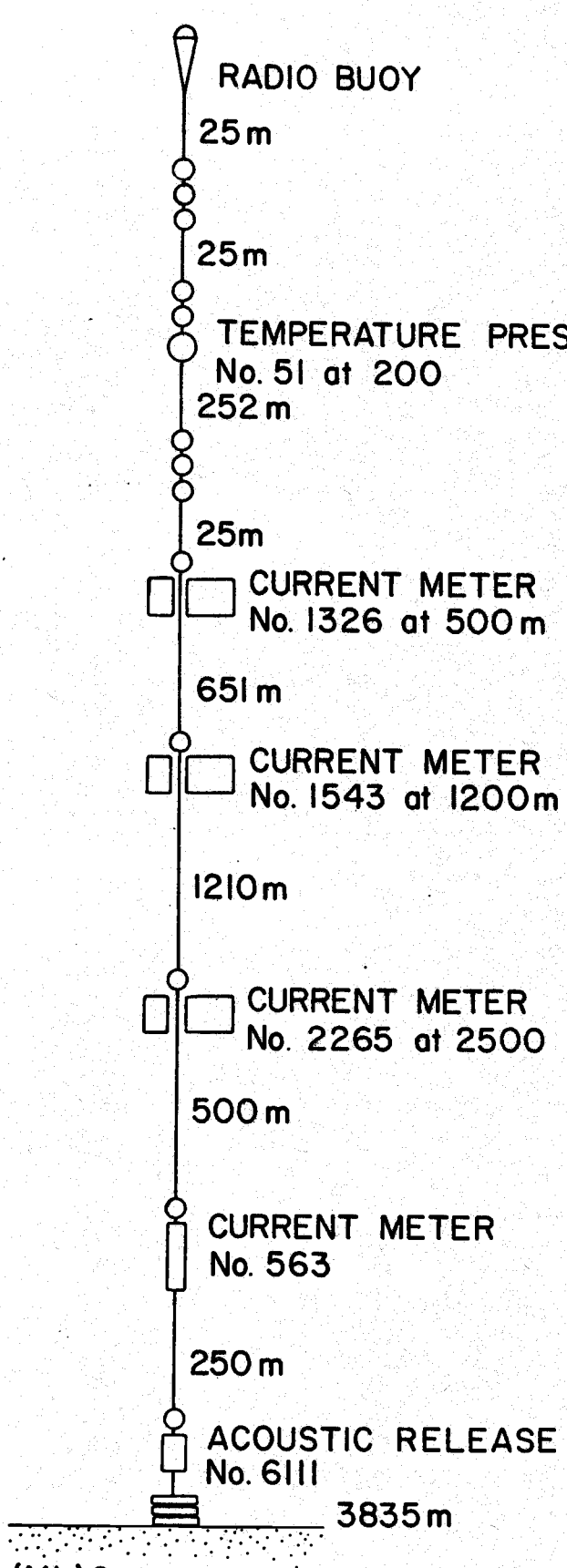
UNFILTERED PRESSURE. 1344 M AT ML-5.



UNFILTERED CONDUCTIVITY. 1344 METERS AT ML-5.



ML - 6



MAIN LINE (ML)6
58° 49.0' S
64° 23.6'W
INSTALLED: 17 JANUARY 1979

ML-6

Position: 58°49.0'S, 64°23.6'W
Depth of Water: 3835 m
Set at 1258 UCT 18 February '79 by R/V MELVILLE
Retrieved at 1956 UCT 18 February '80 by R/V ATLANTIS II
Data Interval: 1454 UCT 17 January '79 to 1548 UCT 18 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	1326/10
1200 M	1543/14
2500 M	2265/6

Instrument 1326 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

Instrument 1543 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered. One section (13 APR '79 to 15 APR '79) of the processed speed record was bridged due to an instrument malfunction.

Instrument 2265 failed.

ML-6

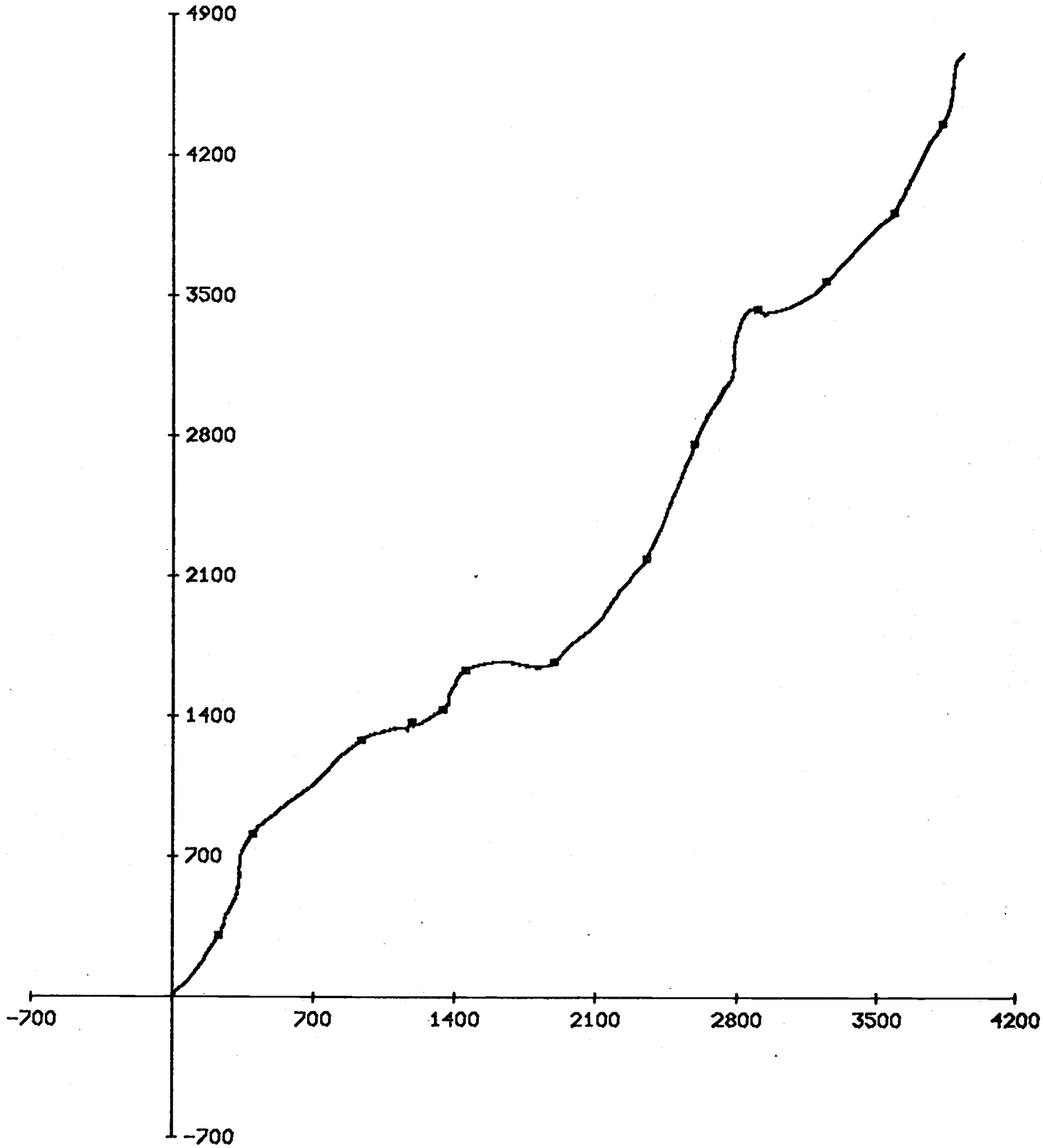
685 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	20.14	9.76	-0.14	2.51	0.70	48.70	9529
U	11.48	8.02	0.08	2.80	-17.60	43.80	9529
V	13.73	10.78	-0.01	2.48	-20.20	45.50	9529
T	2.30	0.21	0.84	2.98	1.97	2.97	9529
P	688.65	78.10	2.06	7.54	621.20	1072.80	9529

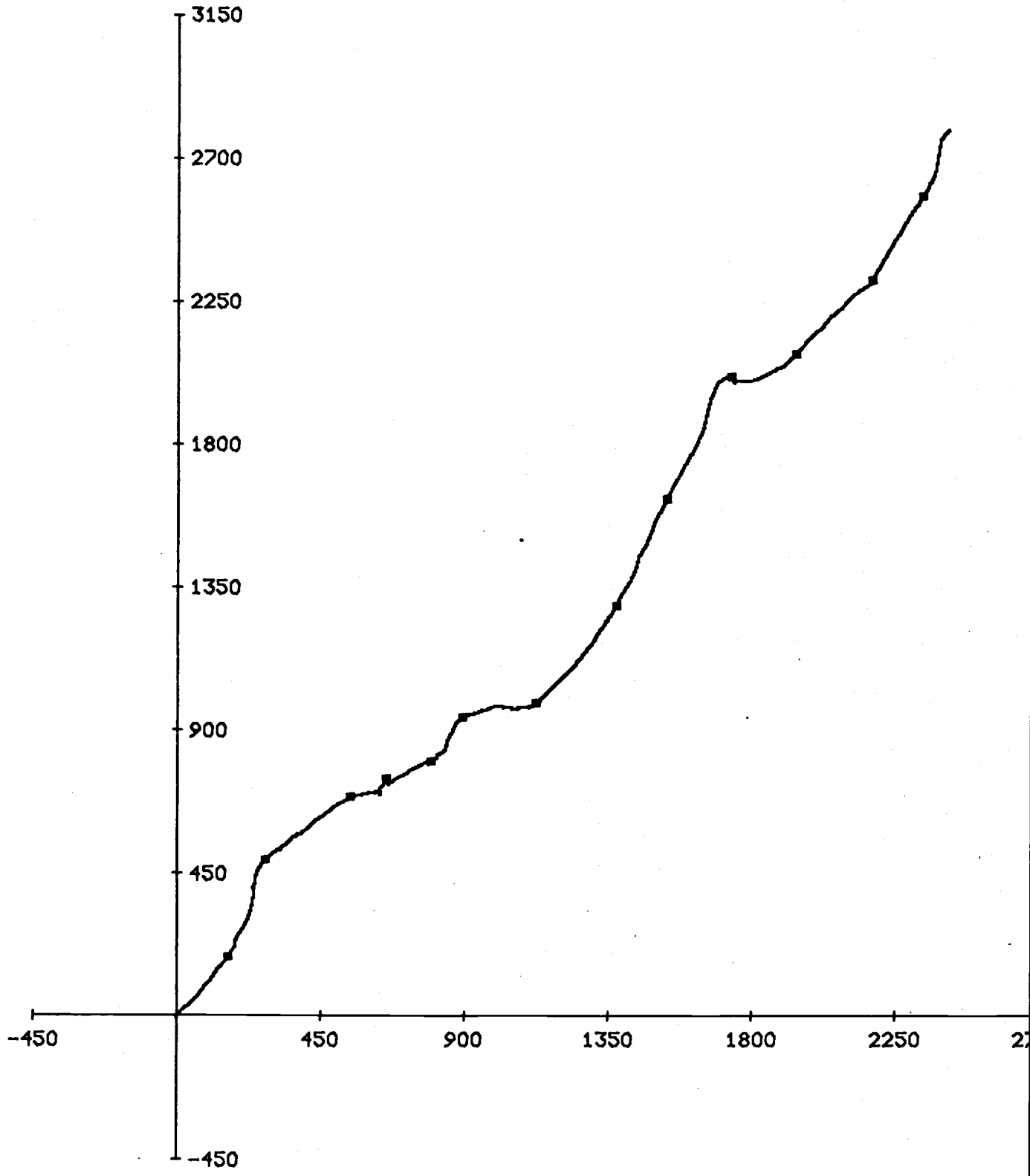
1384 m

S	12.45	5.91	0.35	2.59	0.80	33.40	9533
U	7.04	5.09	-0.18	3.18	-11.80	23.10	9533
V	8.17	6.91	0.15	2.66	-15.30	29.70	9533
T	1.89	0.21	0.08	1.71	1.43	2.32	9533
P	1391.33	66.31	2.03	7.26	1336.00	1708.50	9533

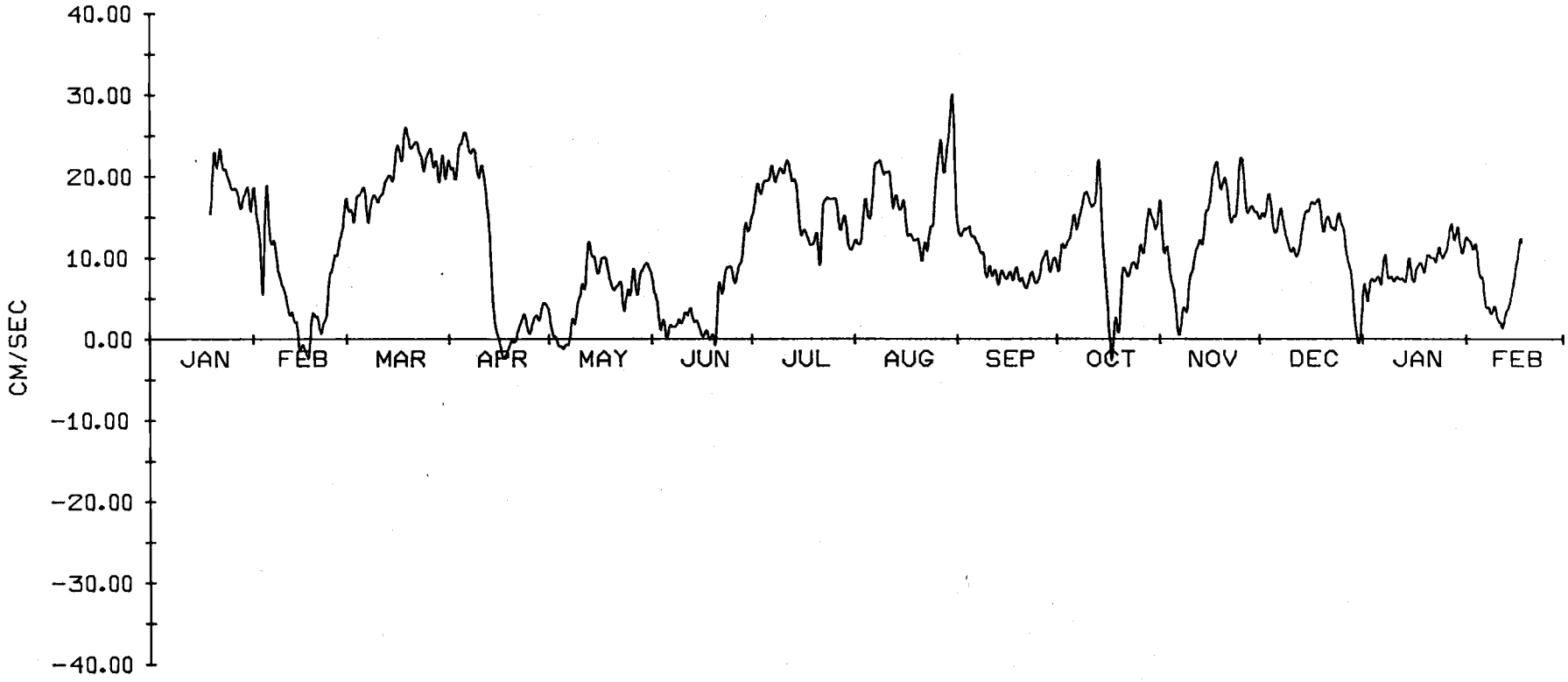
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



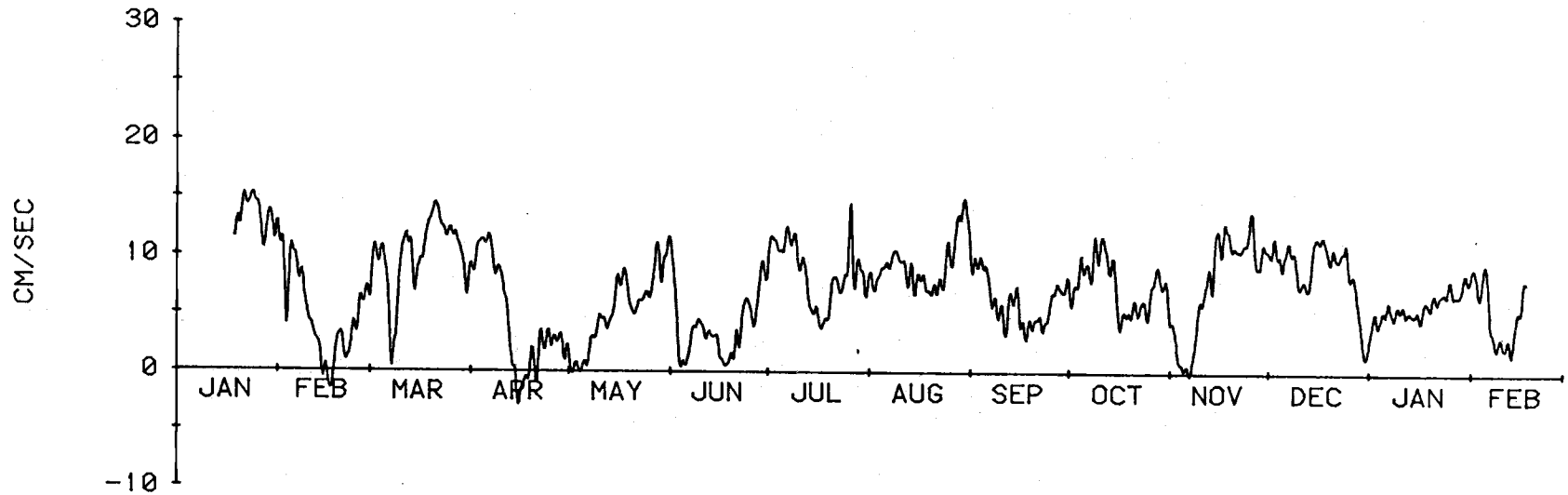
685 M AT ML-6. 397.0 DAYS STARTING 1548 17 JAN 79.



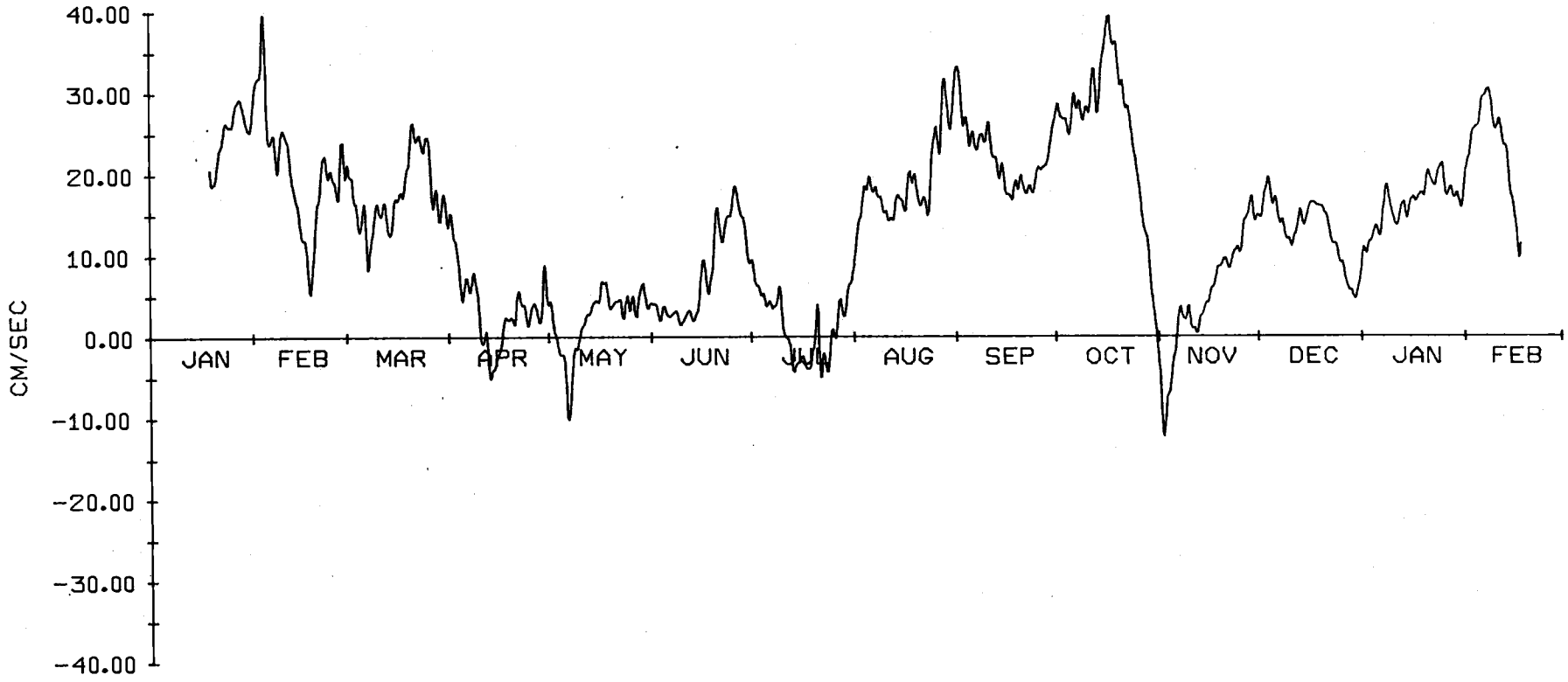
1384 M AT STN ML-6. 397.2 DAYS STARTING 1532 17 JAN 79.



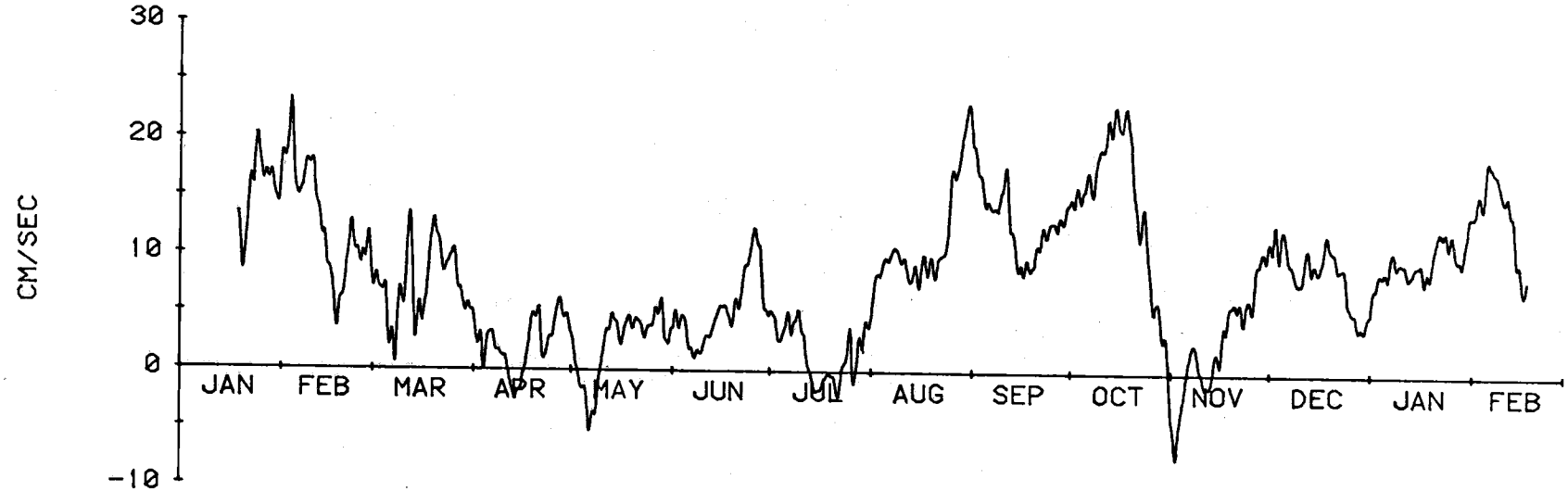
685 METERS AT ML-6
LLP FILTERED U COMPONENT



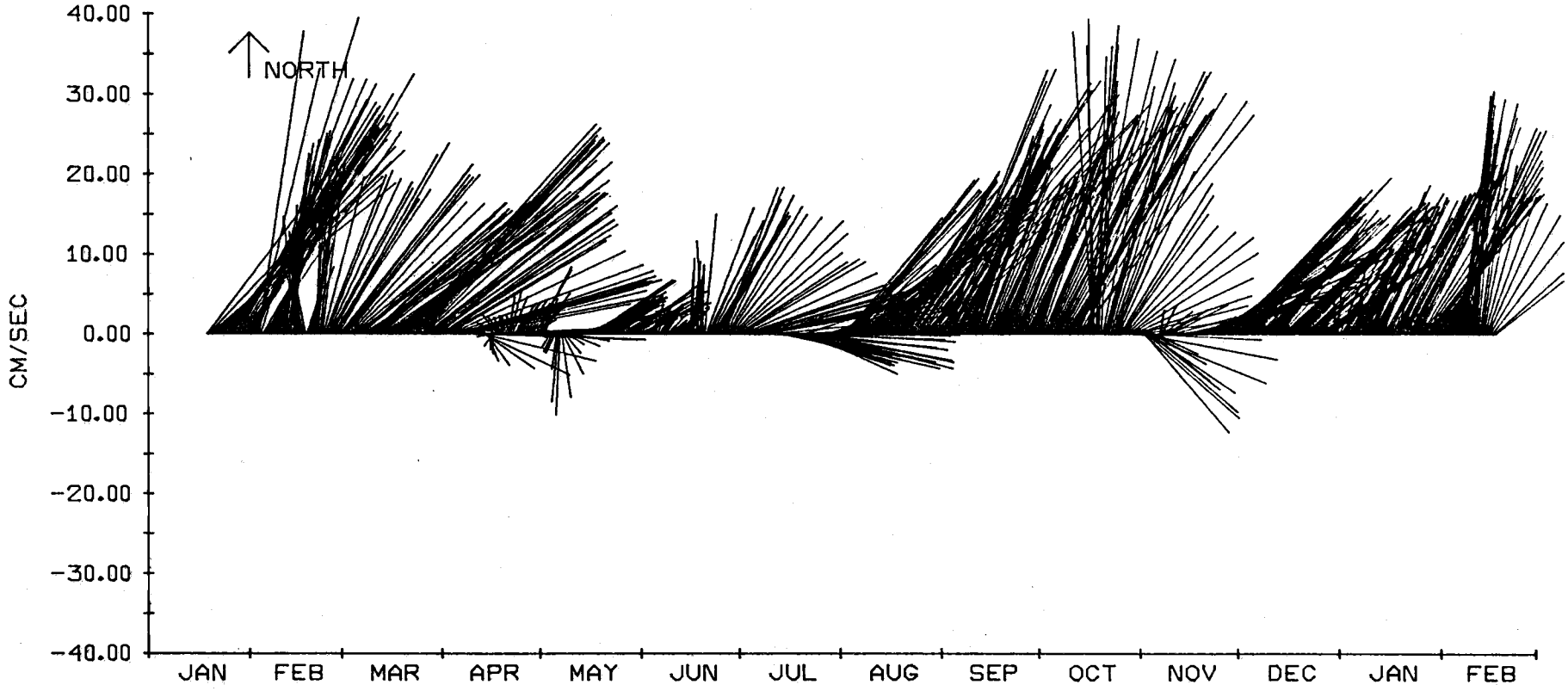
1384 METERS AT ML-6
LLP FILTERED U COMPONENT



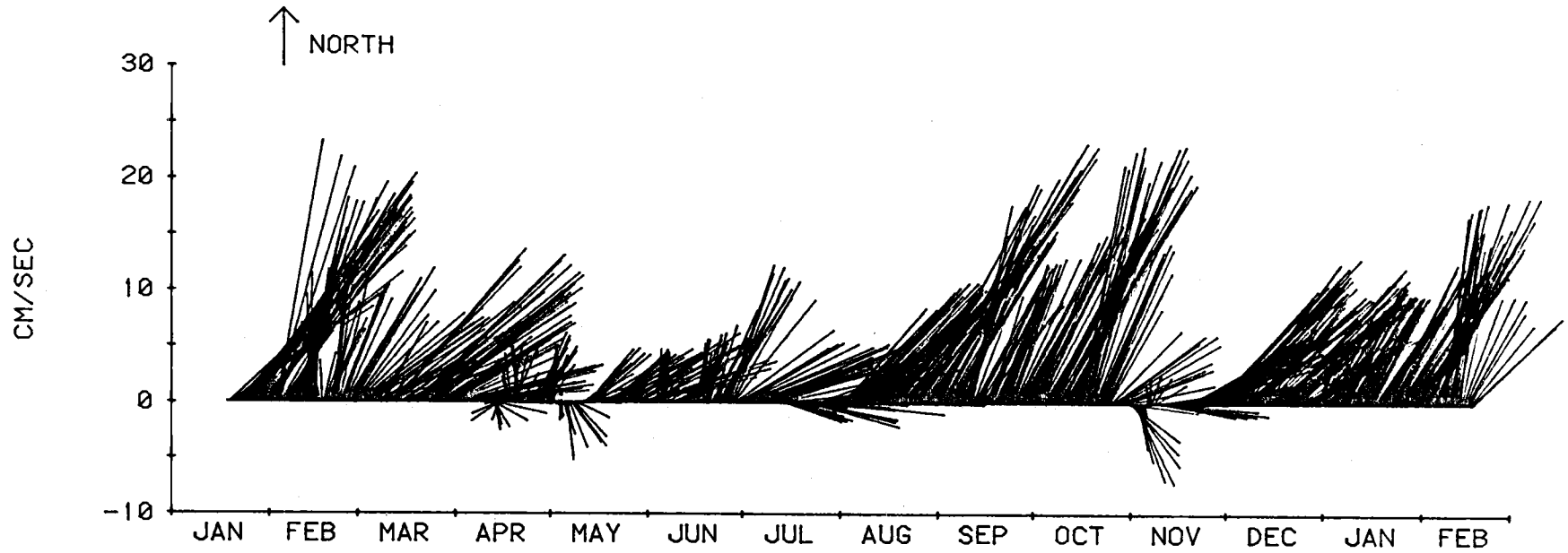
685 METERS AT ML-6
LLP FILTERED V COMPONENT



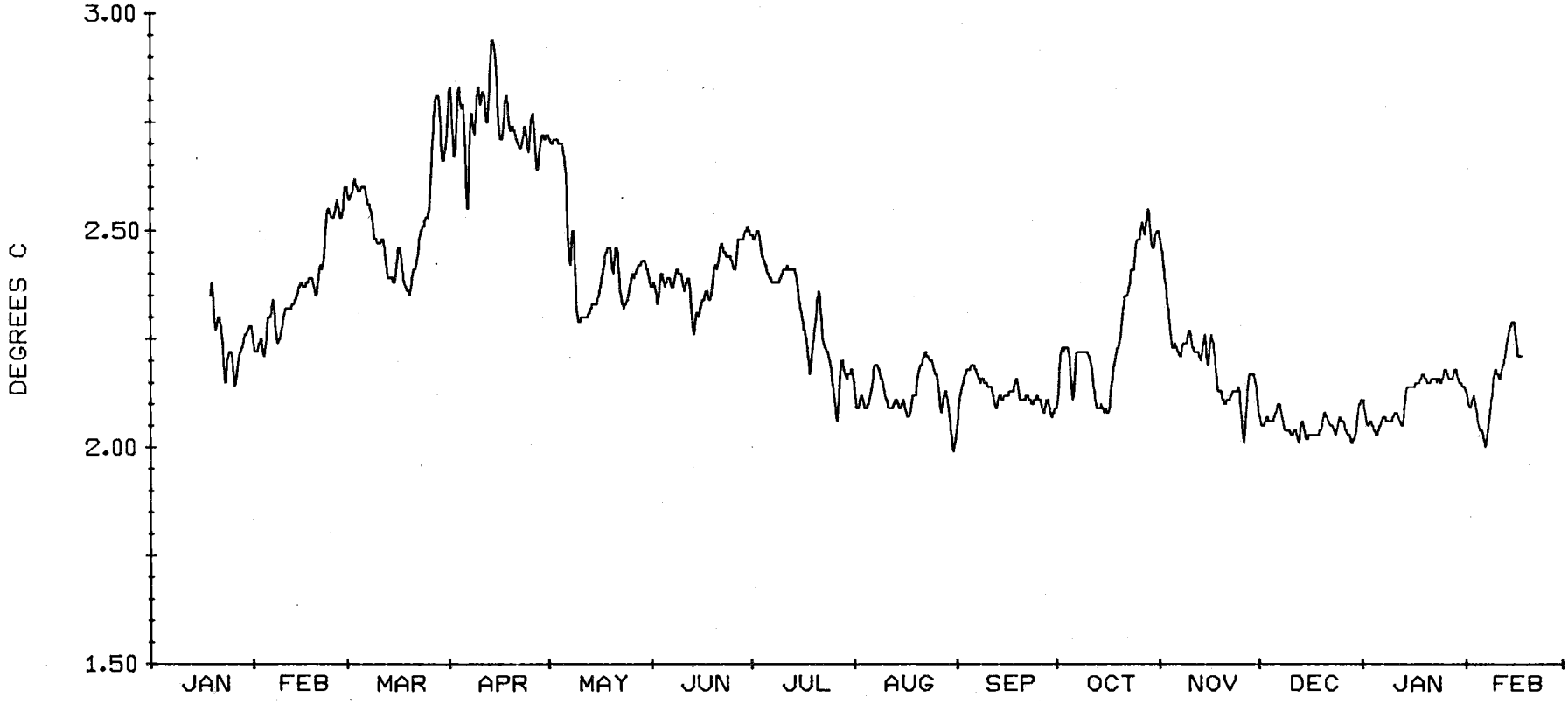
1384 METERS AT ML-6
LLP FILTERED V COMPONENT



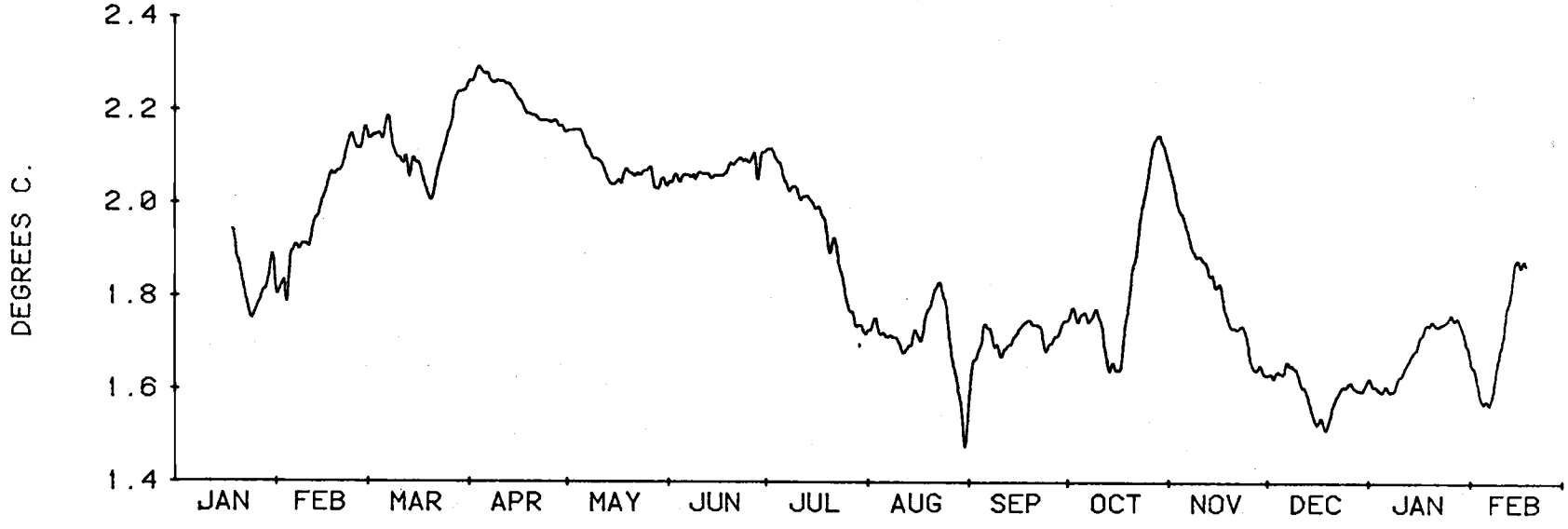
685 METERS AT ML-6
LLP FILTERED CURRENT



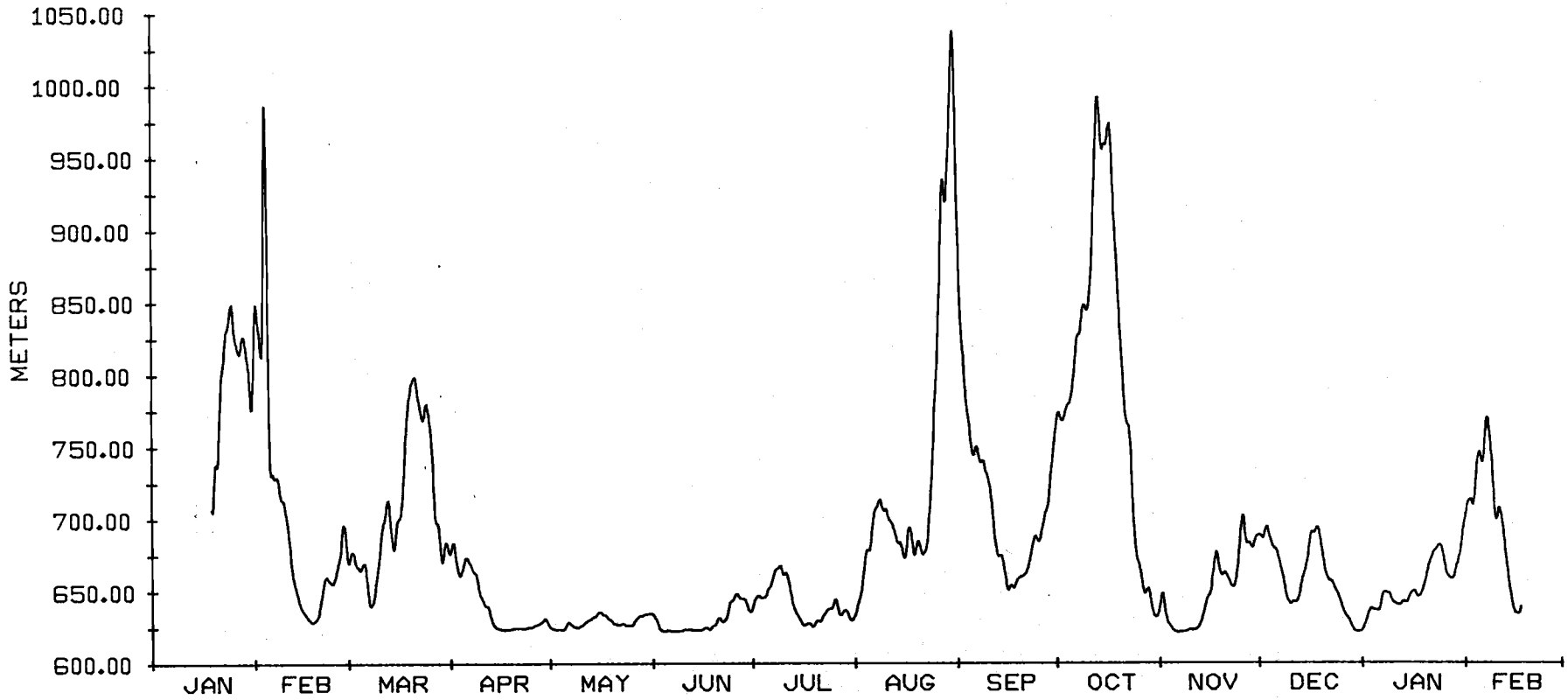
1384 METERS AT ML-6
LLP FILTERED CURRENT



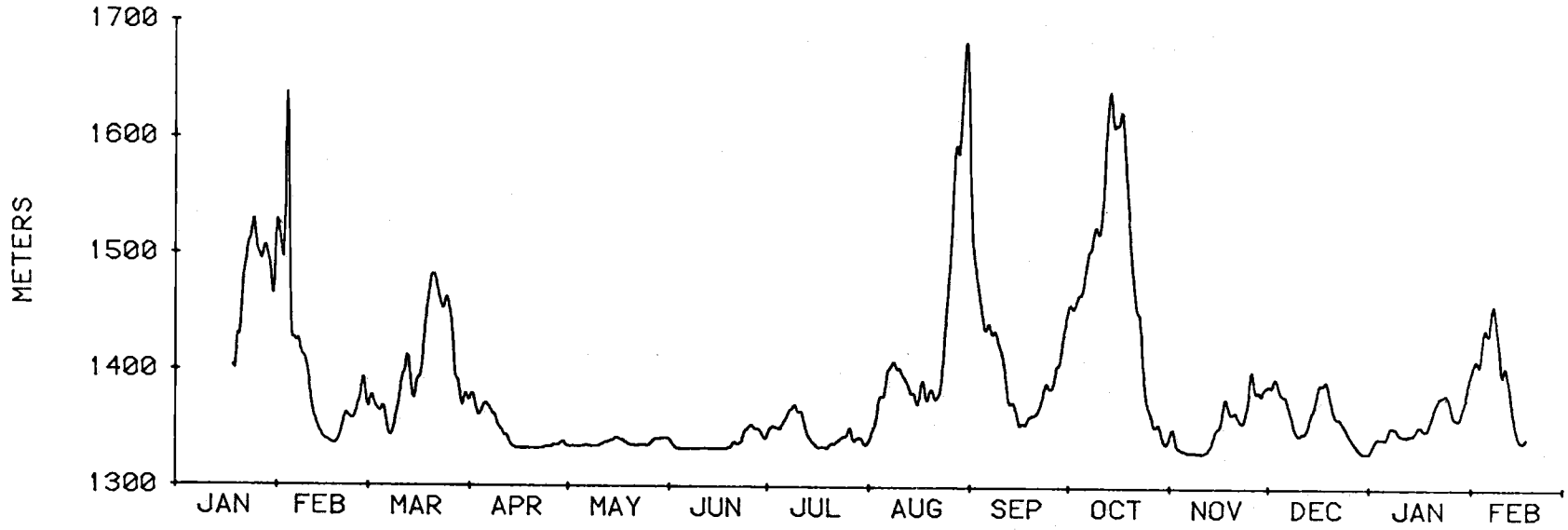
685 METERS AT ML-6
LLP FILTERED TEMPERATURE



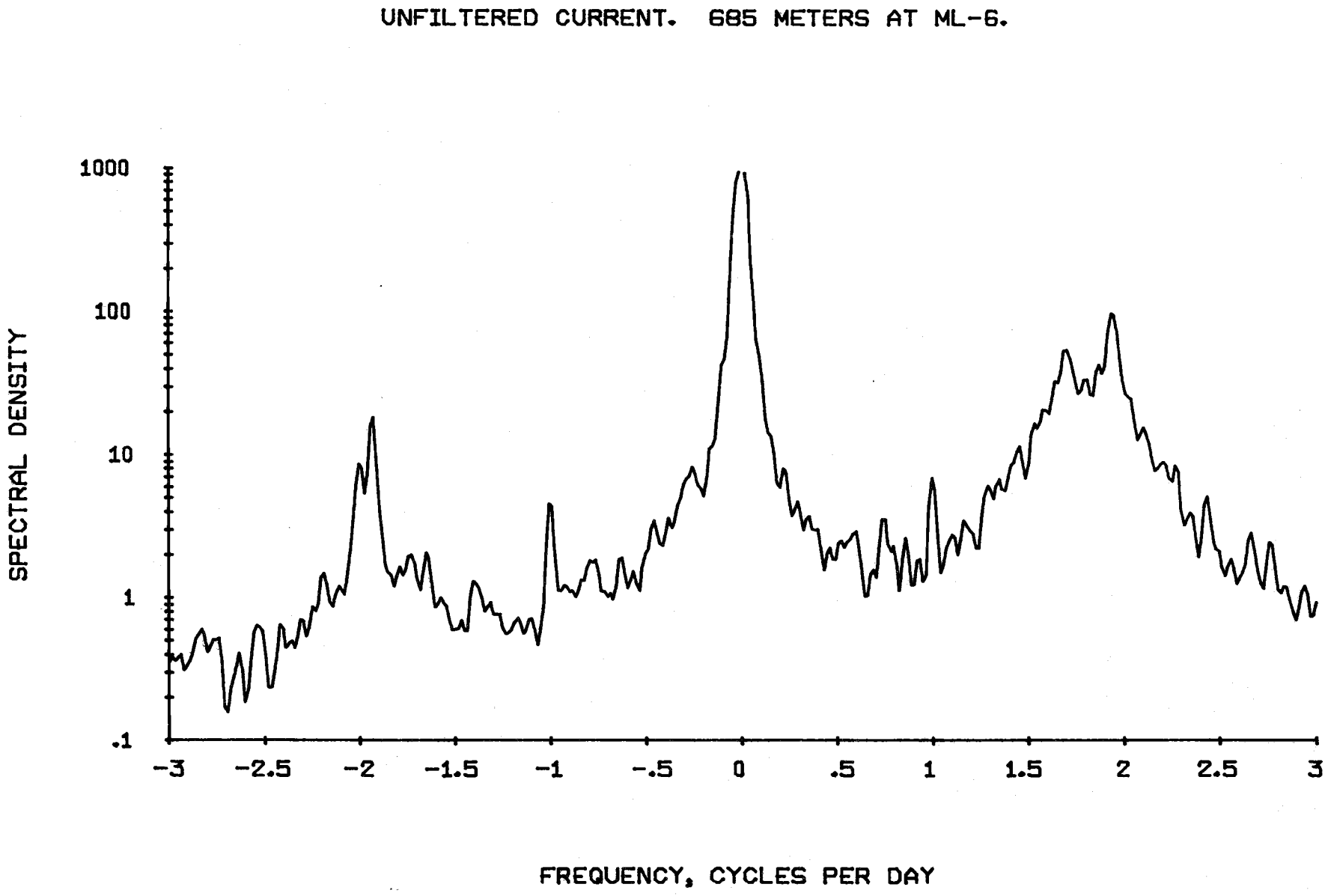
1384 METERS AT ML-6
LLP FILTERED TEMPERATURE



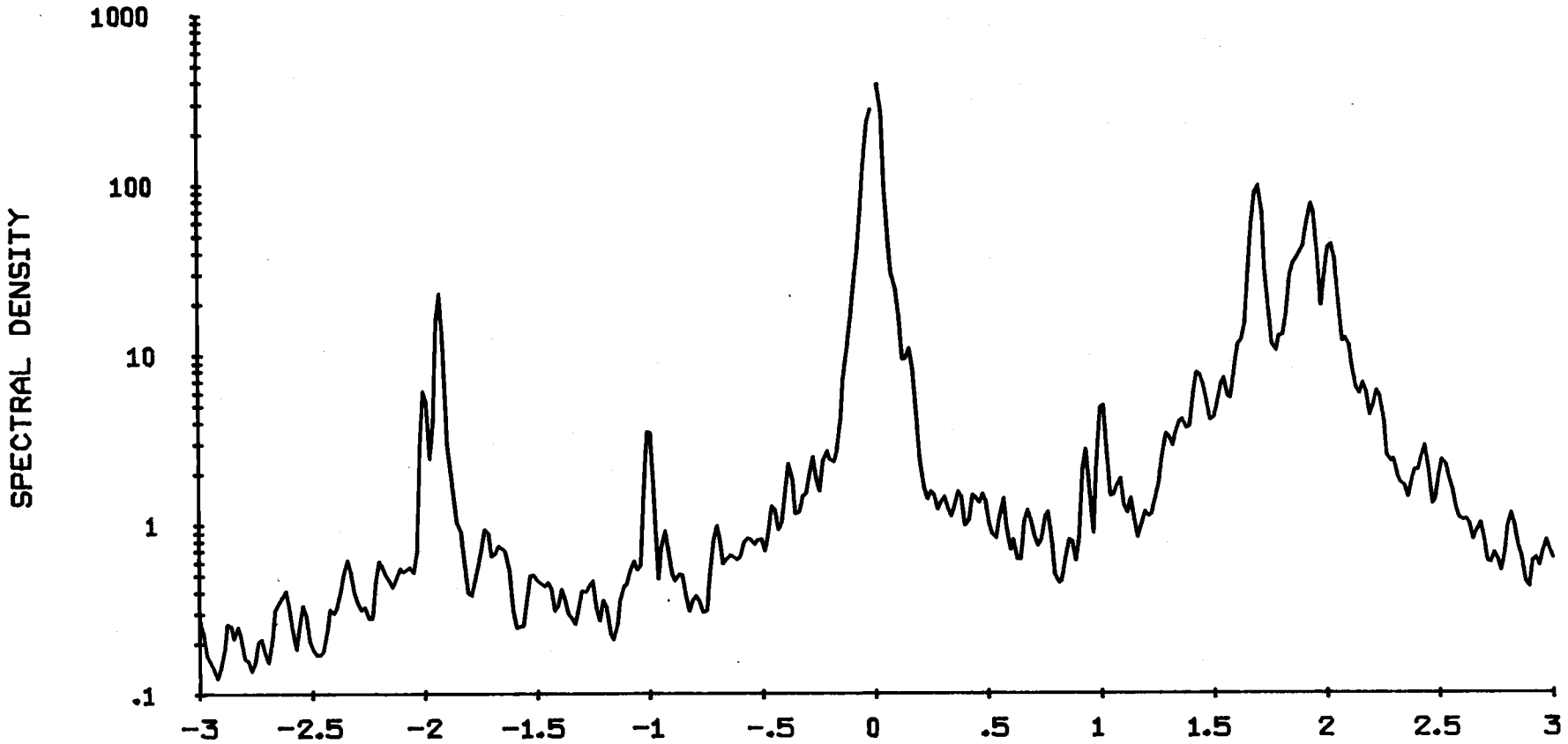
685 METERS AT ML-6
LLP FILTERED PRESSURE



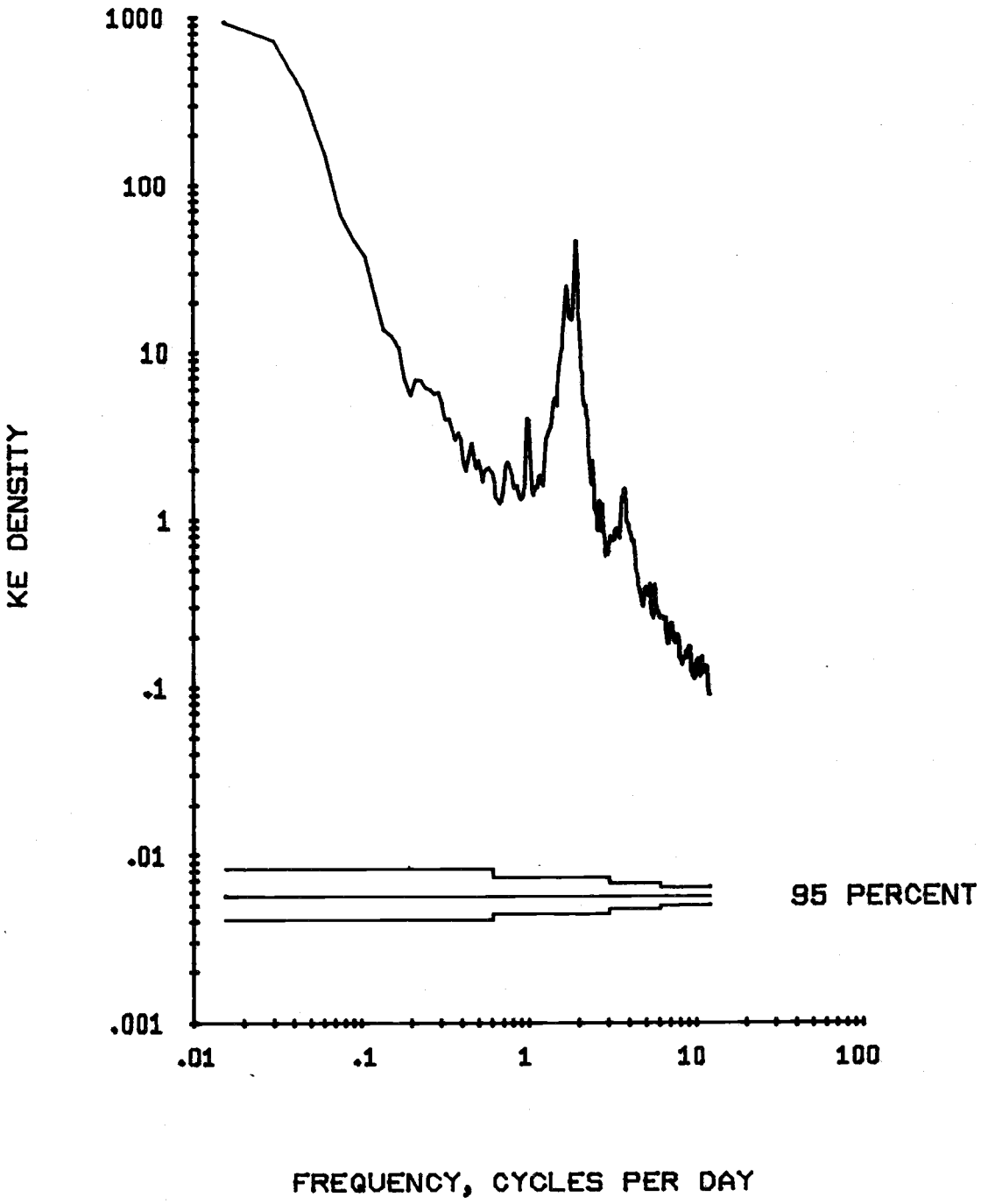
1384 METERS AT ML-6
LLP FILTERED PRESSURE


UNFILTERED CURRENT. 685 METERS AT ML-6.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

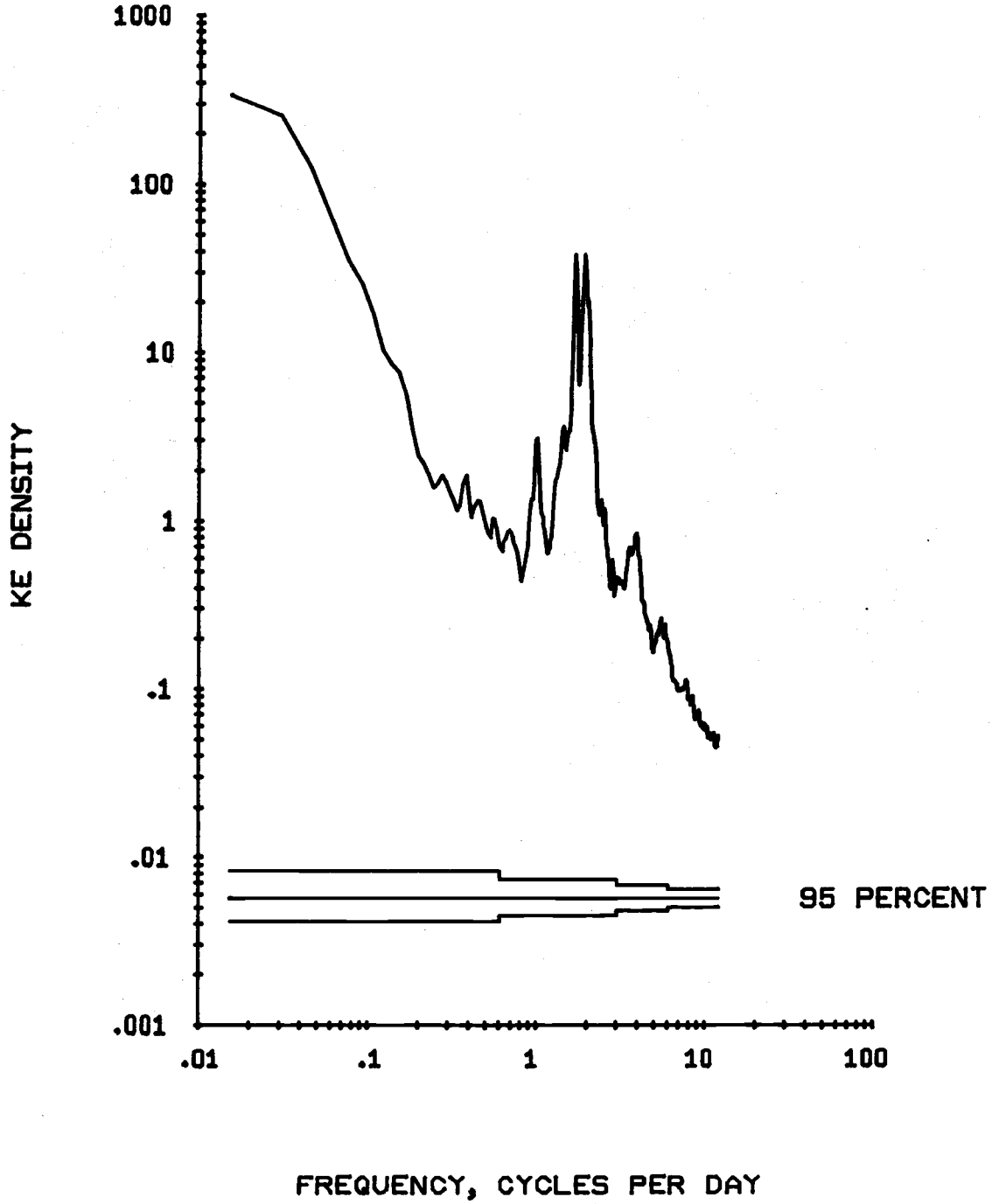
UNFILTERED CURRENT. 1384 METERS AT ML-6.



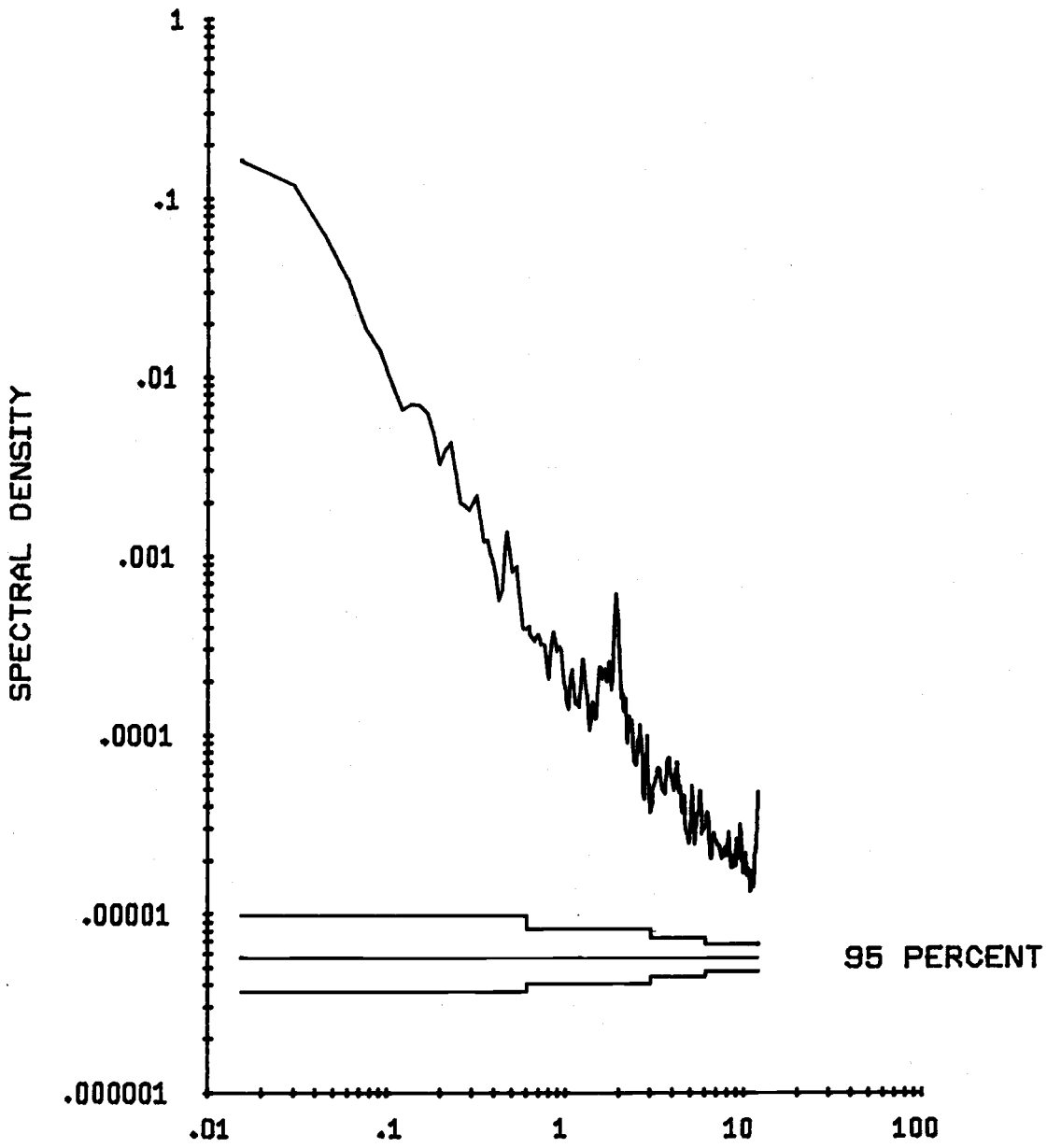
UNFILTERED CURRENT. 685 M AT ML-6.



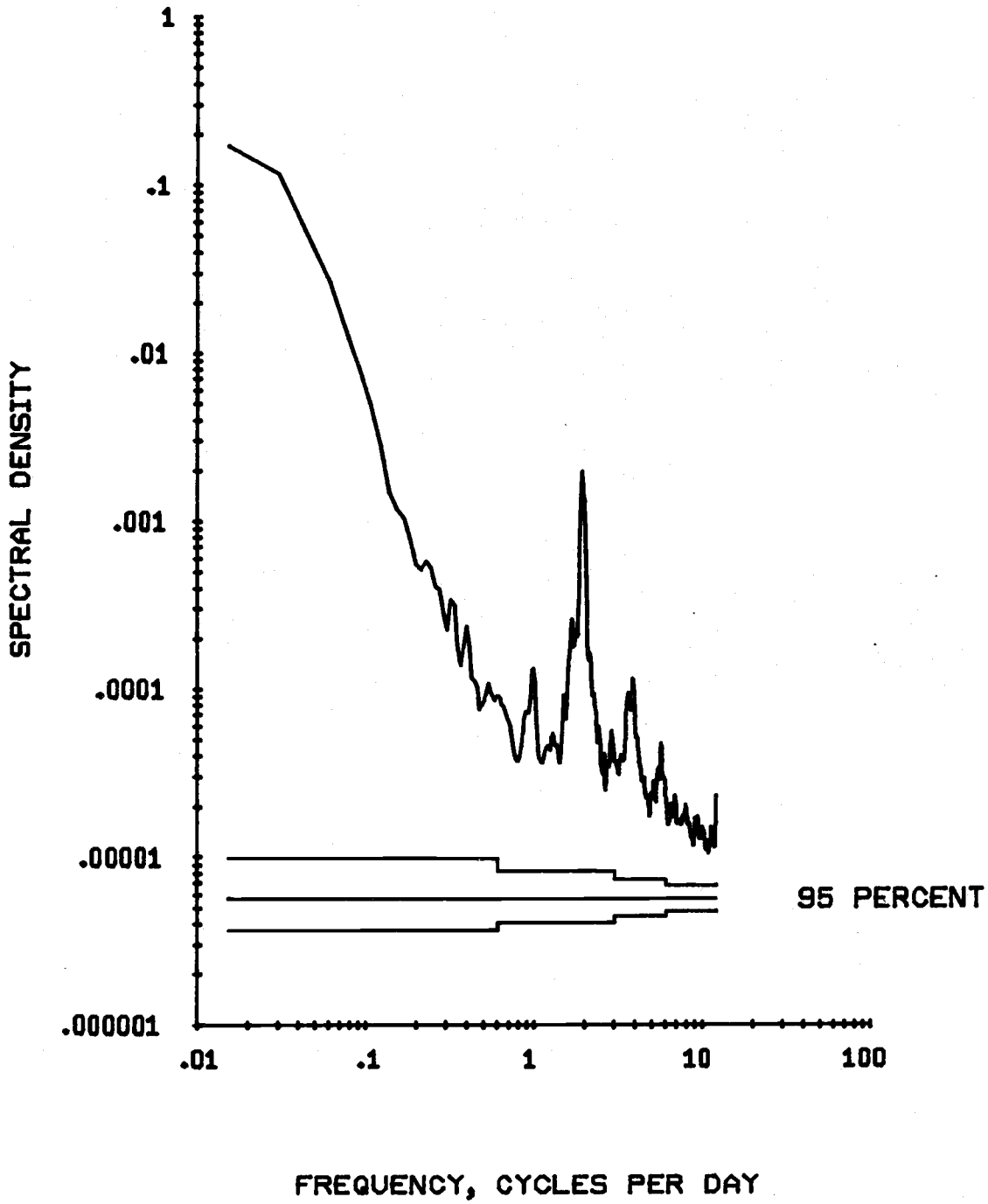
UNFILTERED CURRENT. 1384 METERS AT ML-6.



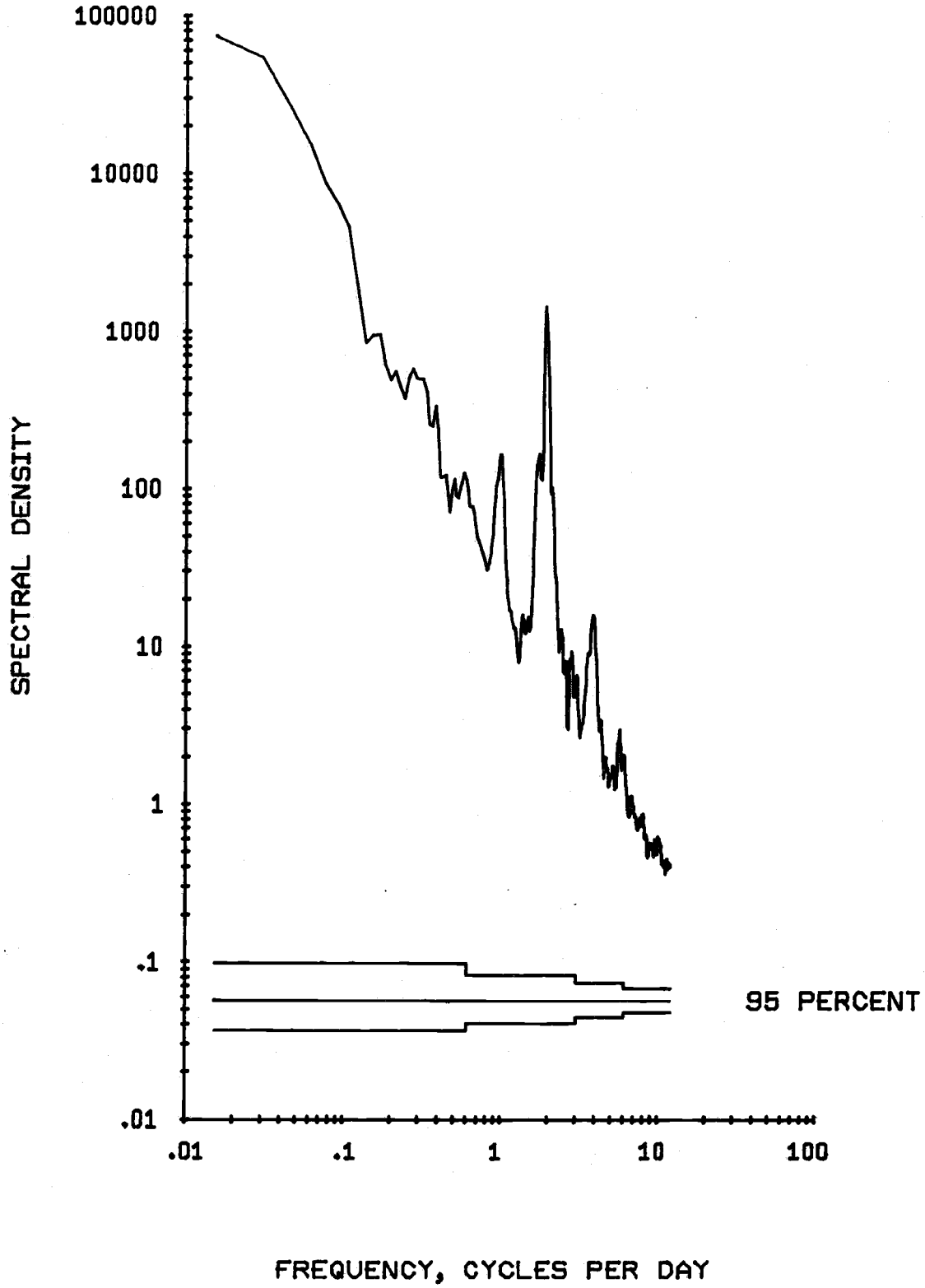
UNFILTERED TEMPERATURE. 685 METERS AT ML-6.



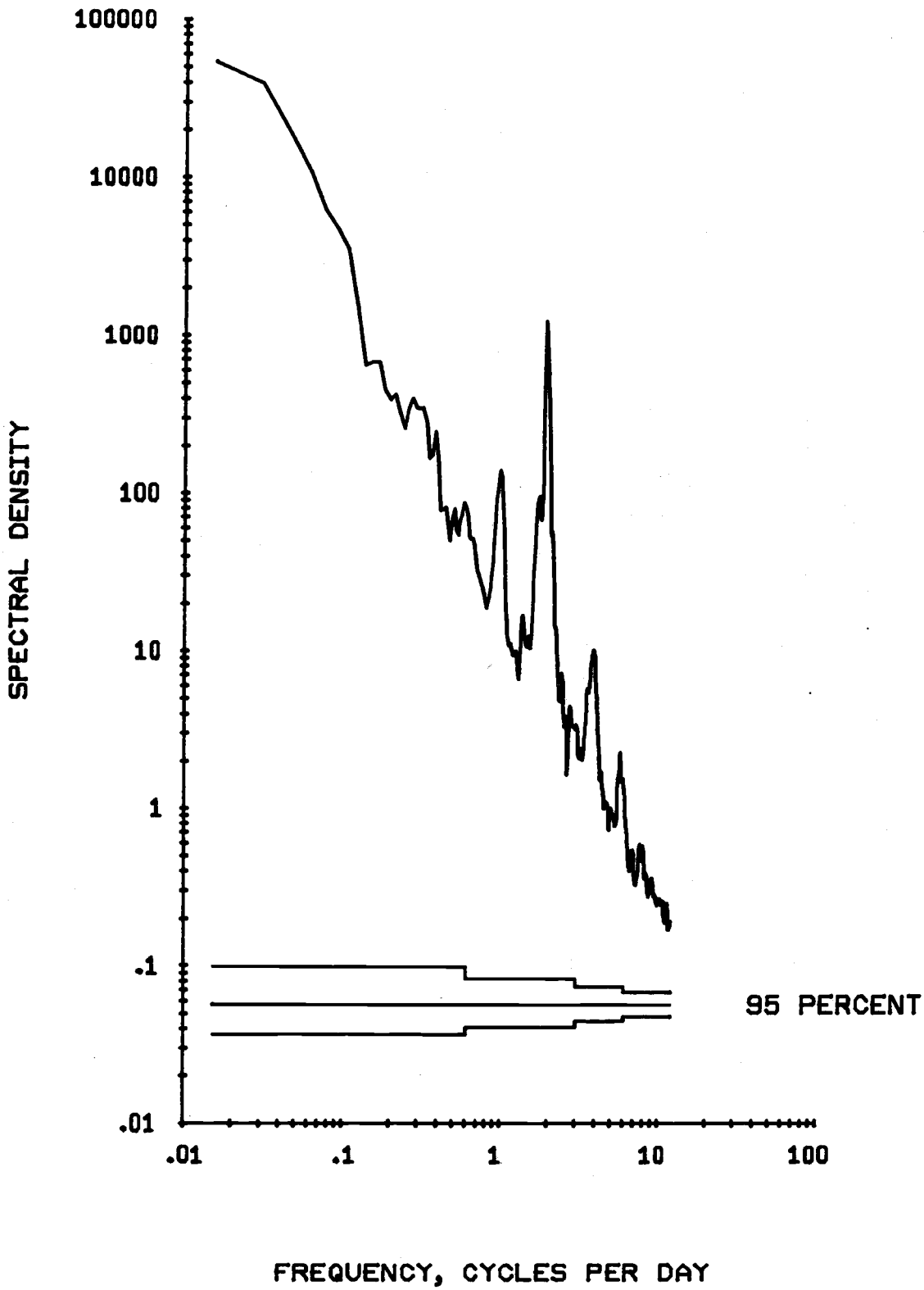
UNFILTERED TEMPERATURE. 1384 M AT ML-6.



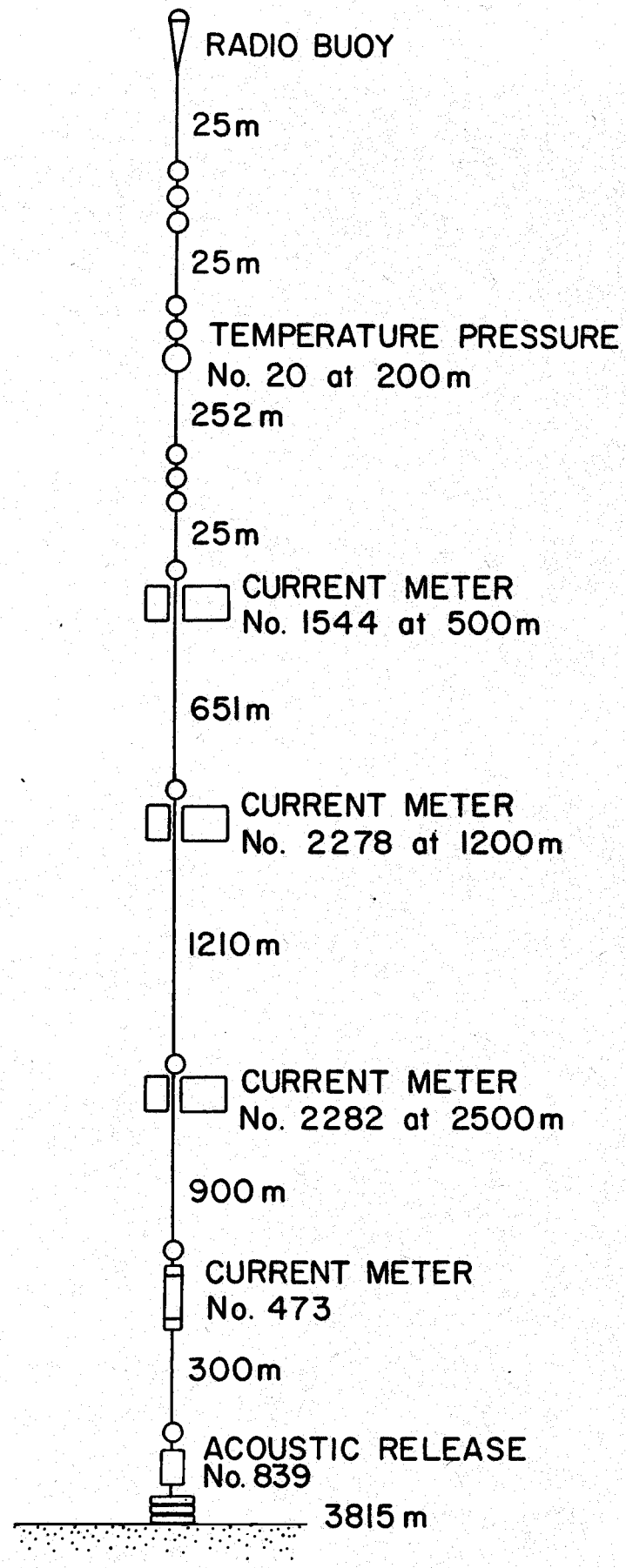
UNFILTERED PRESSURE. 685 METERS AT ML-6.



UNFILTERED PRESSURE. 1384 M AT ML-6.



ML - 7



MAIN LINE (ML)7
59° 11.3' S
63° 58.5' W

INSTALLED: 17 JANUARY 1979

ML-7

Position: 59°11.3'S, 63 °58.5'W
Depth of Water: 3815 m
Set at 1904 UCT 17 January '79 by R/V MELVILLE
Retrieved at 1403 UCT 18 February '80 by R/V ATLANTIS II
Data Interval: 2110 UCT 17 January '79 to 1510 UCT 18 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	1544/12
1200 m	2278/15
2500 m	2282/10

Instrument 1544 recorded speed, direction, temperature, and pressure once per hour. The last good direction is at 2310 UCT 27 DEC '79. The last good speed is at 2310 UCT 1 JAN '80. The last good temperature is at 2210 UCT 1 FEB '80.

Instrument 2278 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered. Three sections of the processed speed record were bridged due to instrument malfunction. They were: (24 MAR '79 to 16 APR '79), (2 SEP '79 - 3 SEP '79), and (15 NOV '79 - 18 NOV '79).

Instrument 2282 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

ML-7

575 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	19.33	9.68	0.07	2.00	0.80	44.90	8379
U	11.41	11.10	-0.15	2.38	-29.40	37.60	8259
V	12.44	8.02	-0.06	2.44	-13.70	35.70	8259
T	2.13	0.14	0.11	2.33	1.55	2.45	9122
P	578.38	90.41	1.63	5.21	502.20	936.80	9523

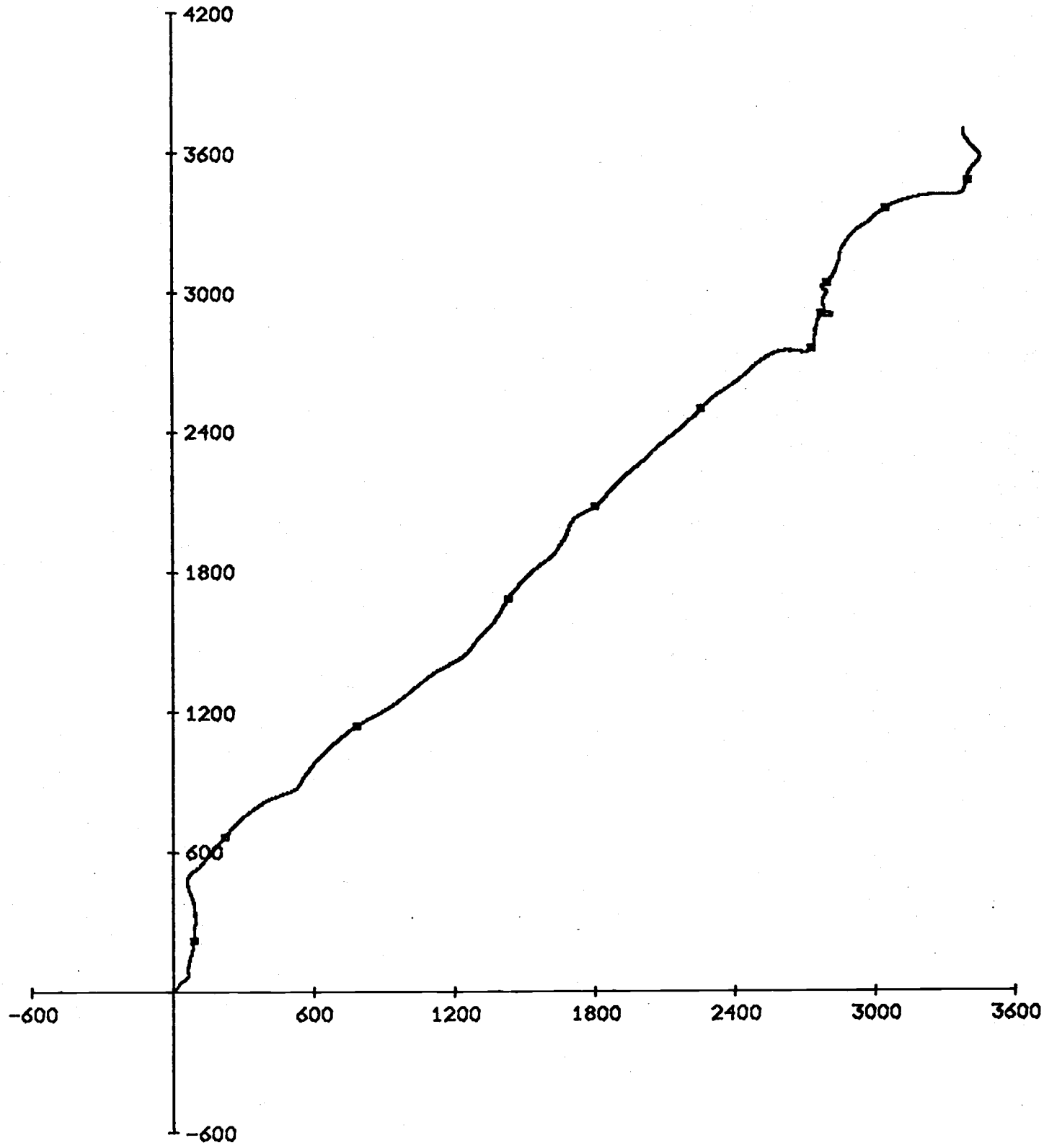
1290 m

S	10.91	5.78	0.55	2.83	0.70	32.30	9516
U	5.47	5.89	0.23	2.80	-21.00	23.80	9516
V	7.88	5.07	0.52	3.34	-8.80	27.80	9516
T	1.80	0.17	0.19	2.18	1.39	2.16	9516
P	1296.83	79.25	1.55	4.87	1234.20	1603.40	9516

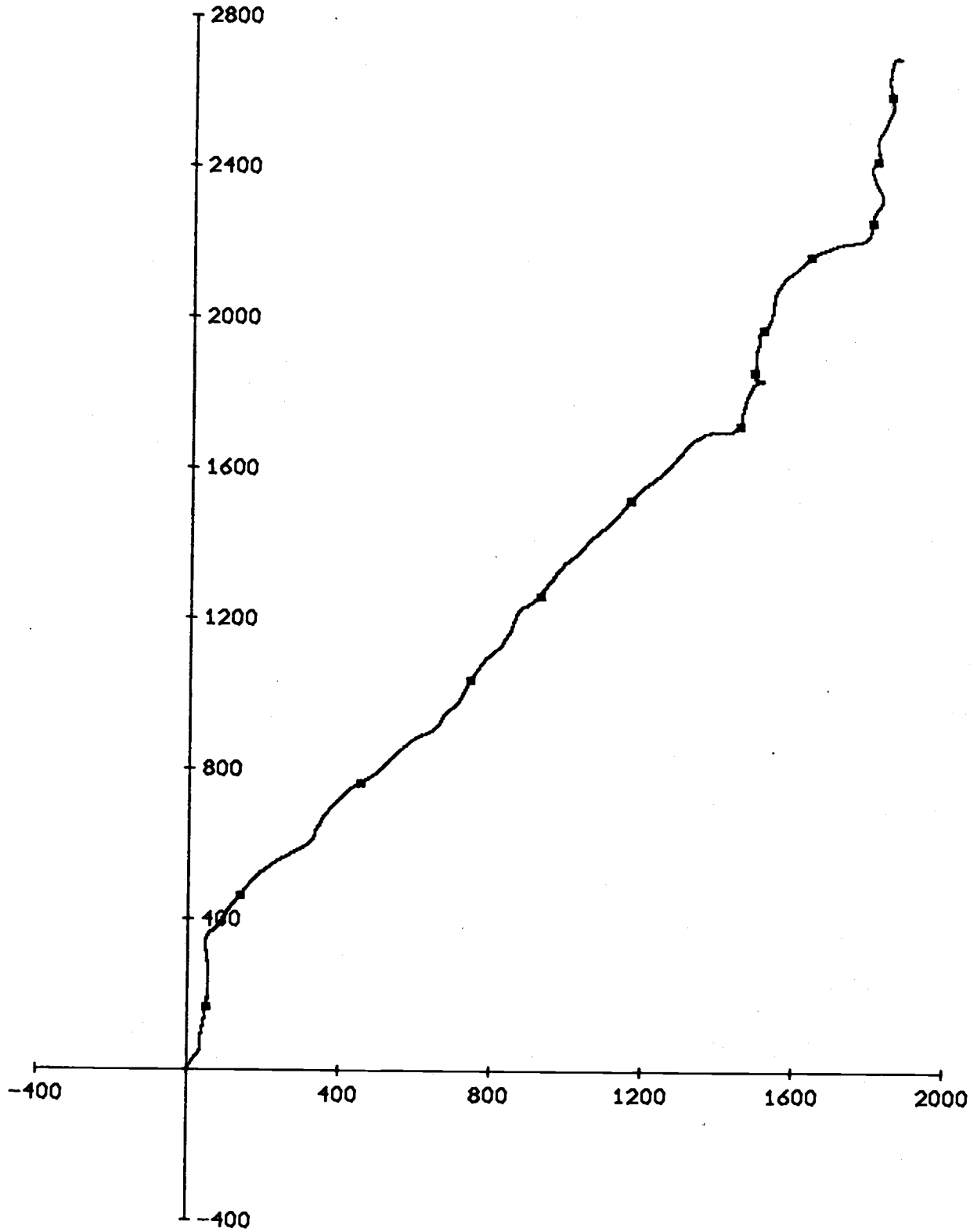
2593 m

S	6.88	3.80	0.74	3.77	0.70	30.60	9520
U	2.86	4.39	0.45	3.69	-12.70	22.00	9520
V	4.53	3.70	0.42	3.59	-9.40	22.40	9520
T	0.85	0.15	0.33	2.04	0.56	1.21	9520
P	2606.88	40.47	1.63	5.09	2574.80	2773.50	9520

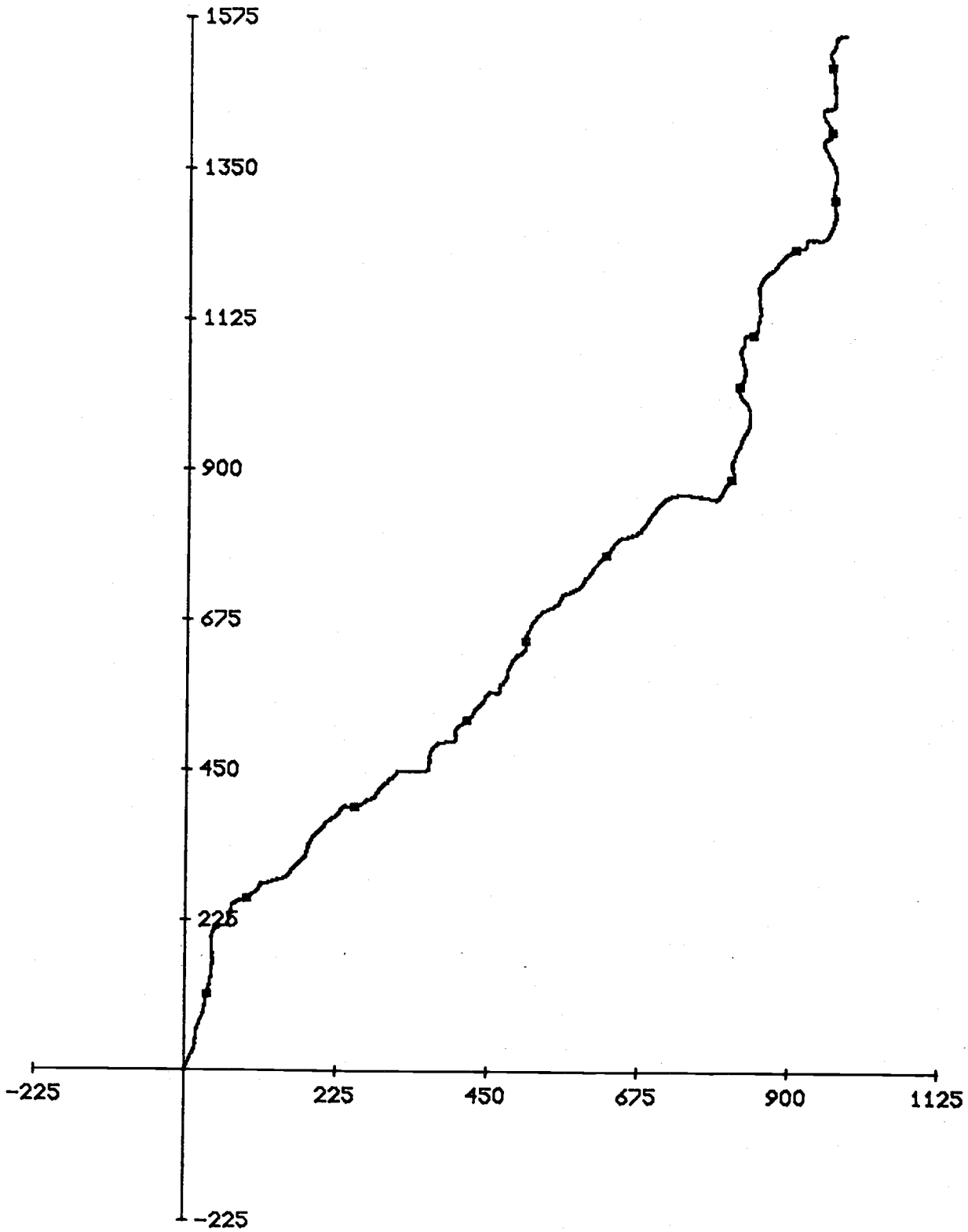
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



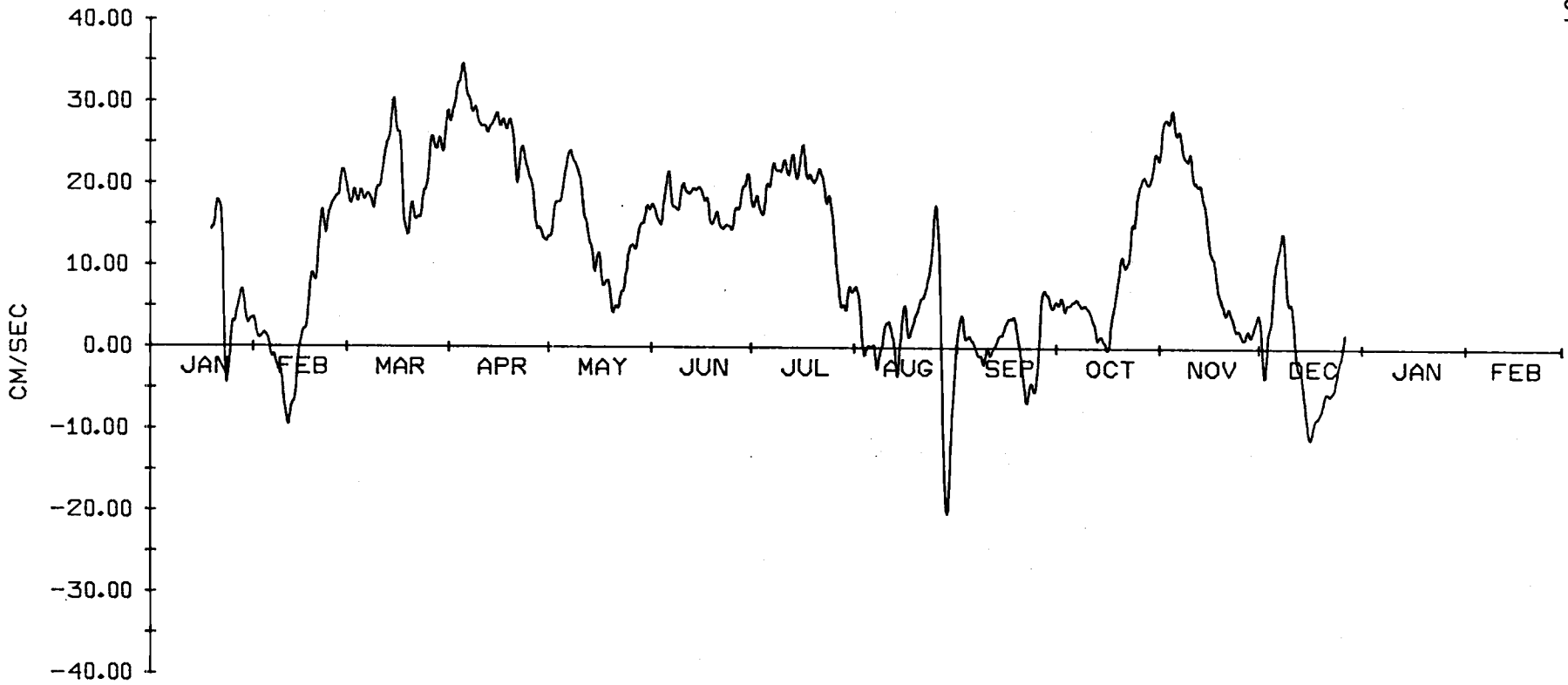
575 M AT ML-7. 344.1 DAYS STARTING 2110 17 JAN 79.



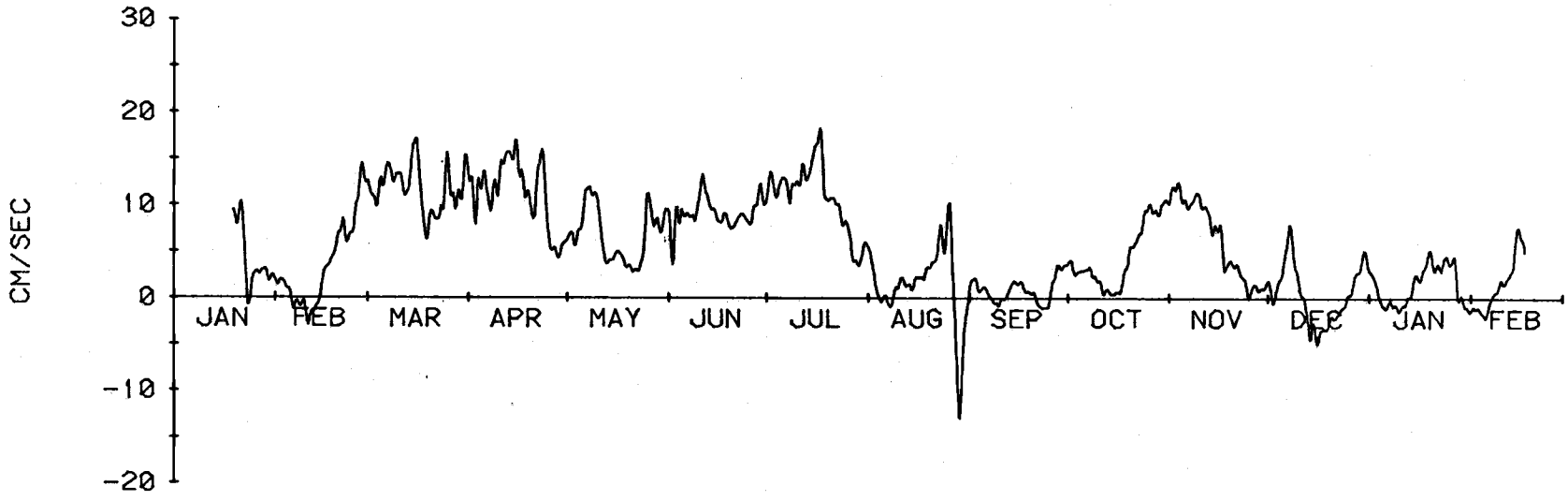
1290 M AT STN ML-7. 396.5 DAYS STARTING 0329 18 JAN 79.



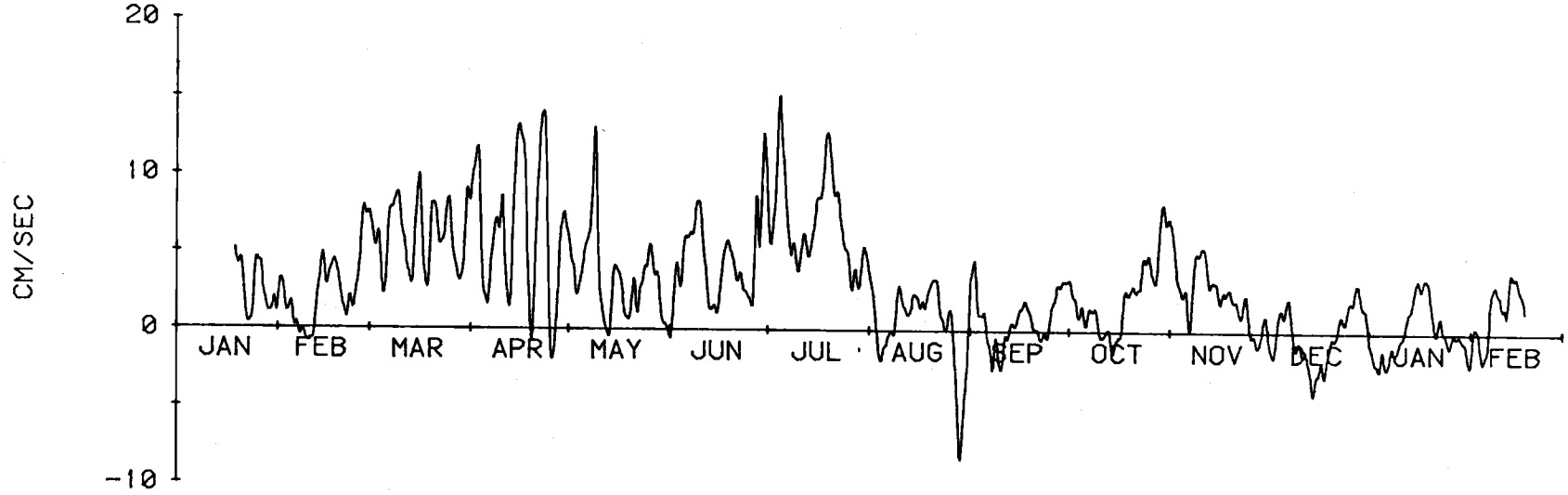
2593 M AT STN ML-7. 396.6 DAYS STARTING 2154 17 JAN 79.



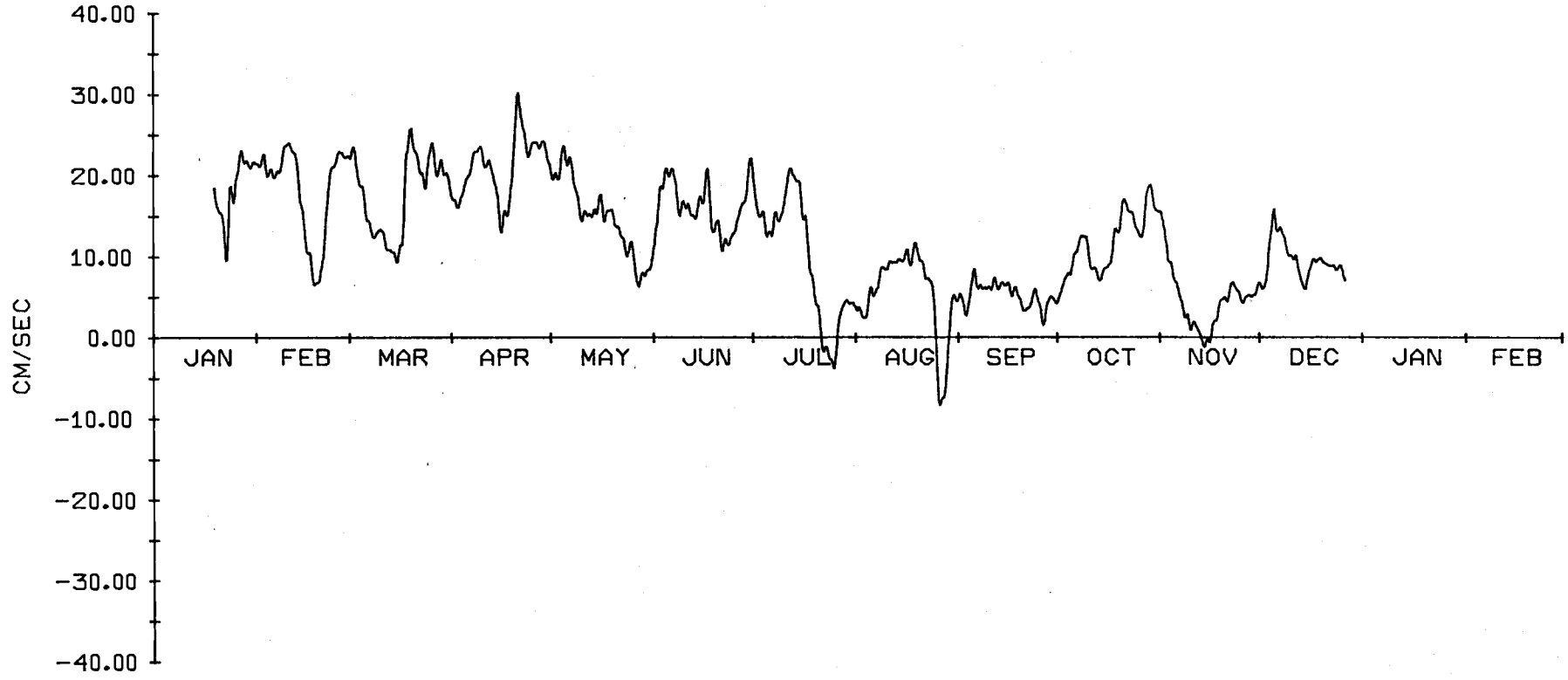
575 METERS AT ML-7
LLP FILTERED U COMPONENT



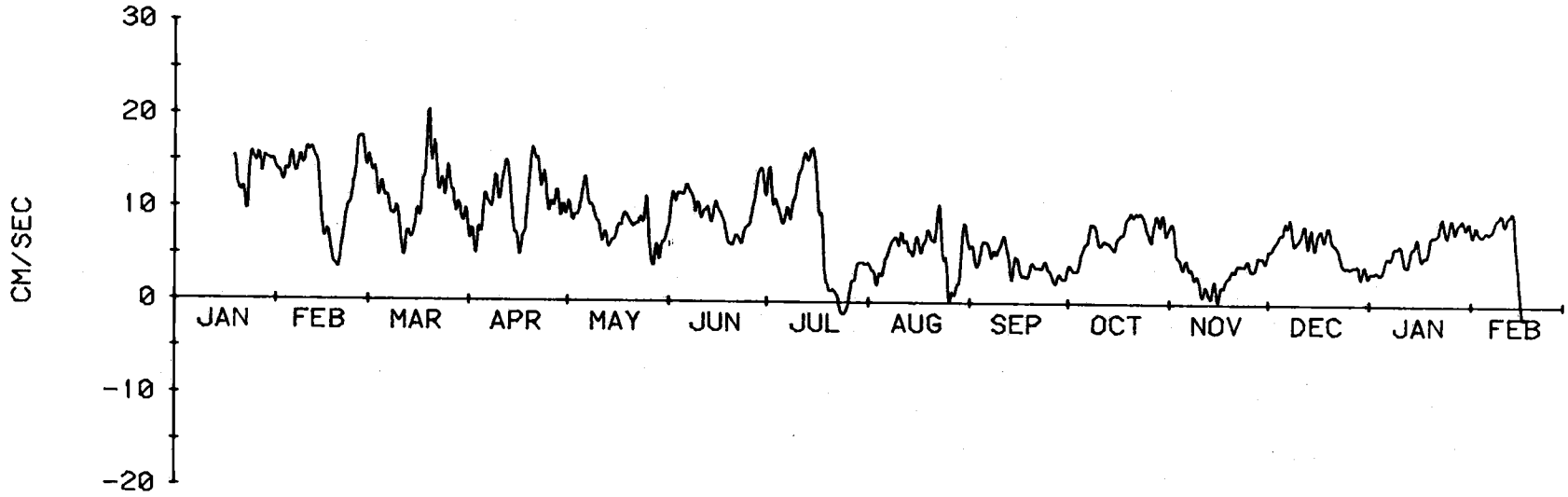
1290 METERS AT ML-7
LLP FILTERED U COMPONENT



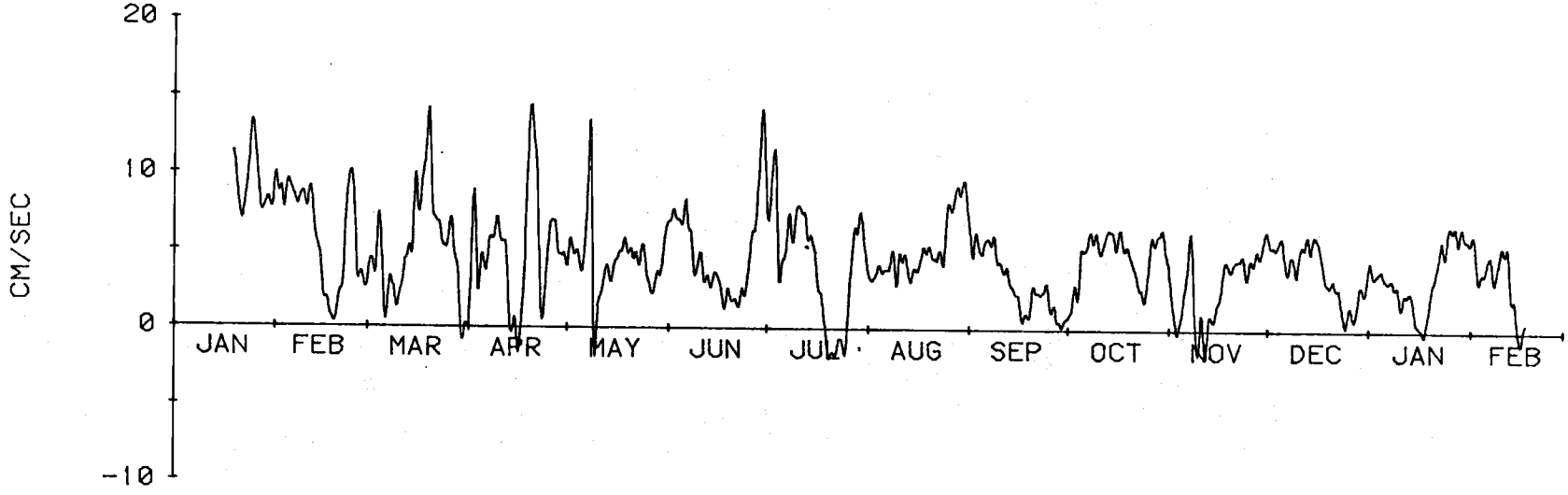
2593 METERS AT ML-7
LLP FILTERED U COMPONENT



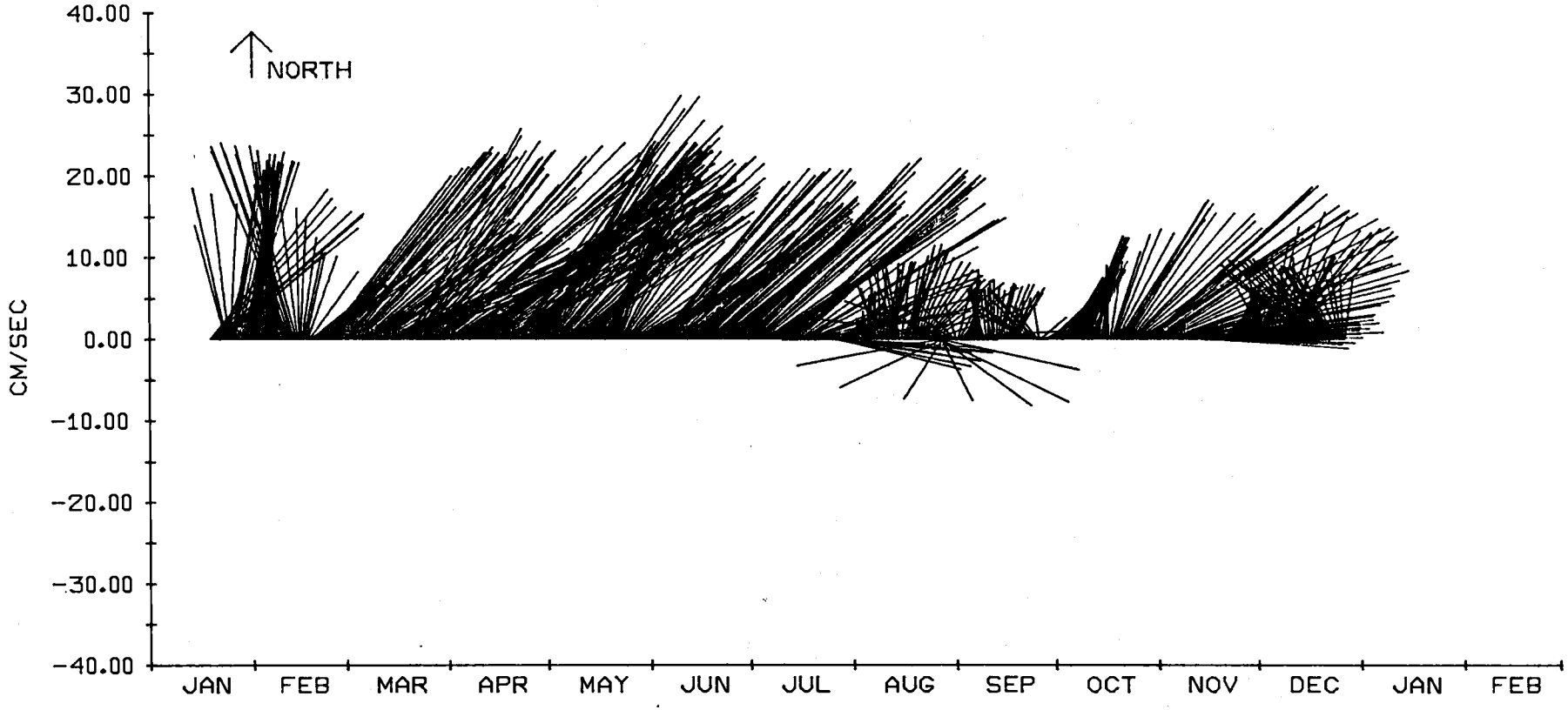
575 METERS AT ML-7
LLP FILTERED V COMPONENT



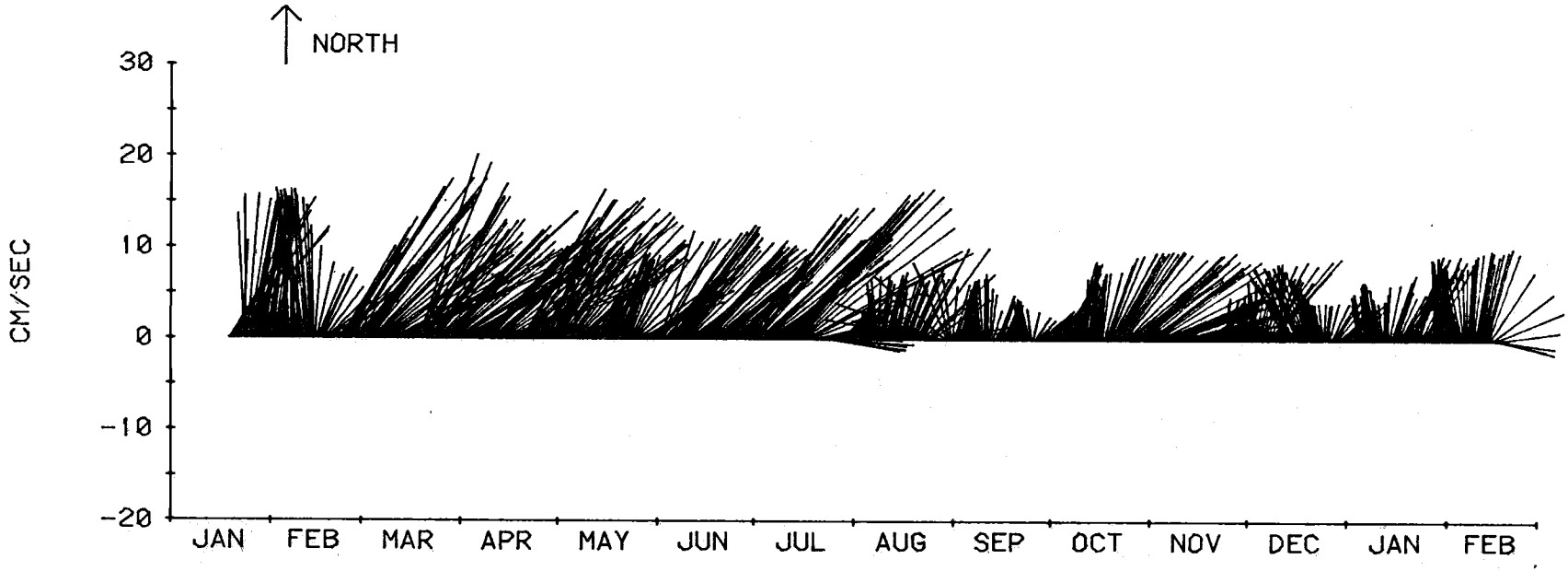
1290 METERS AT ML-7
LLP FILTERED V COMPONENT



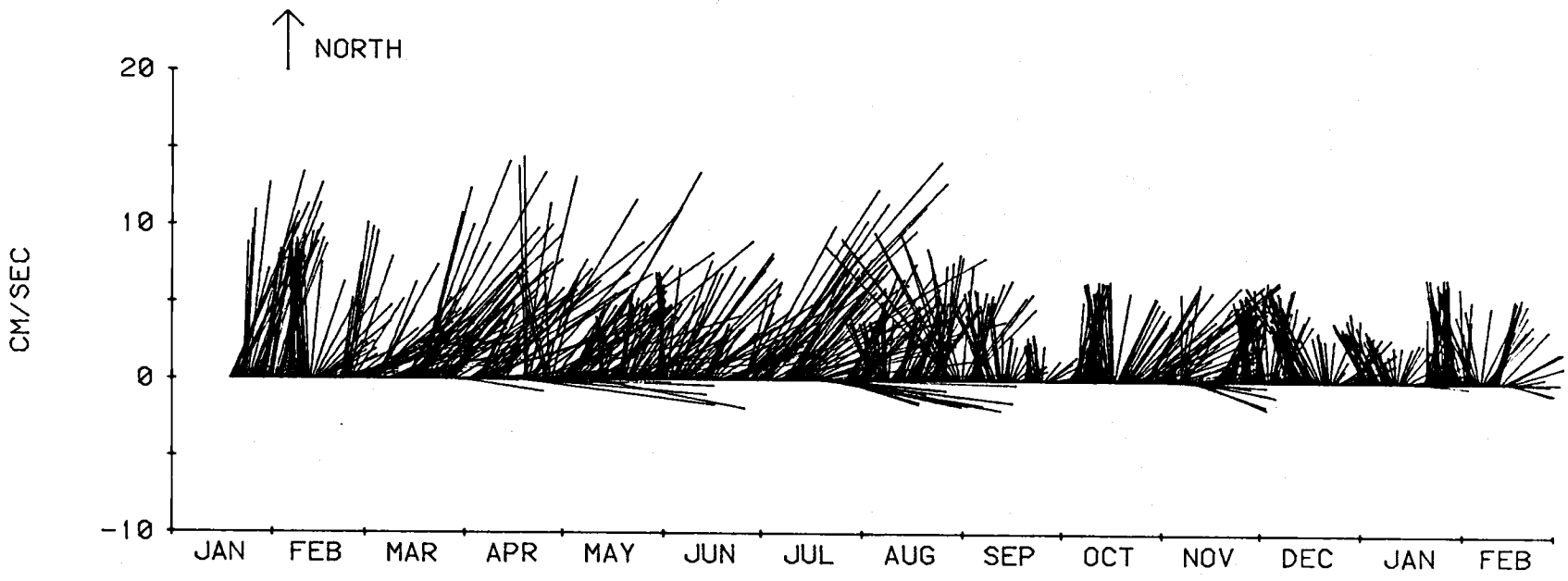
2593 METERS AT ML-7
LLP FILTERED V COMPONENT



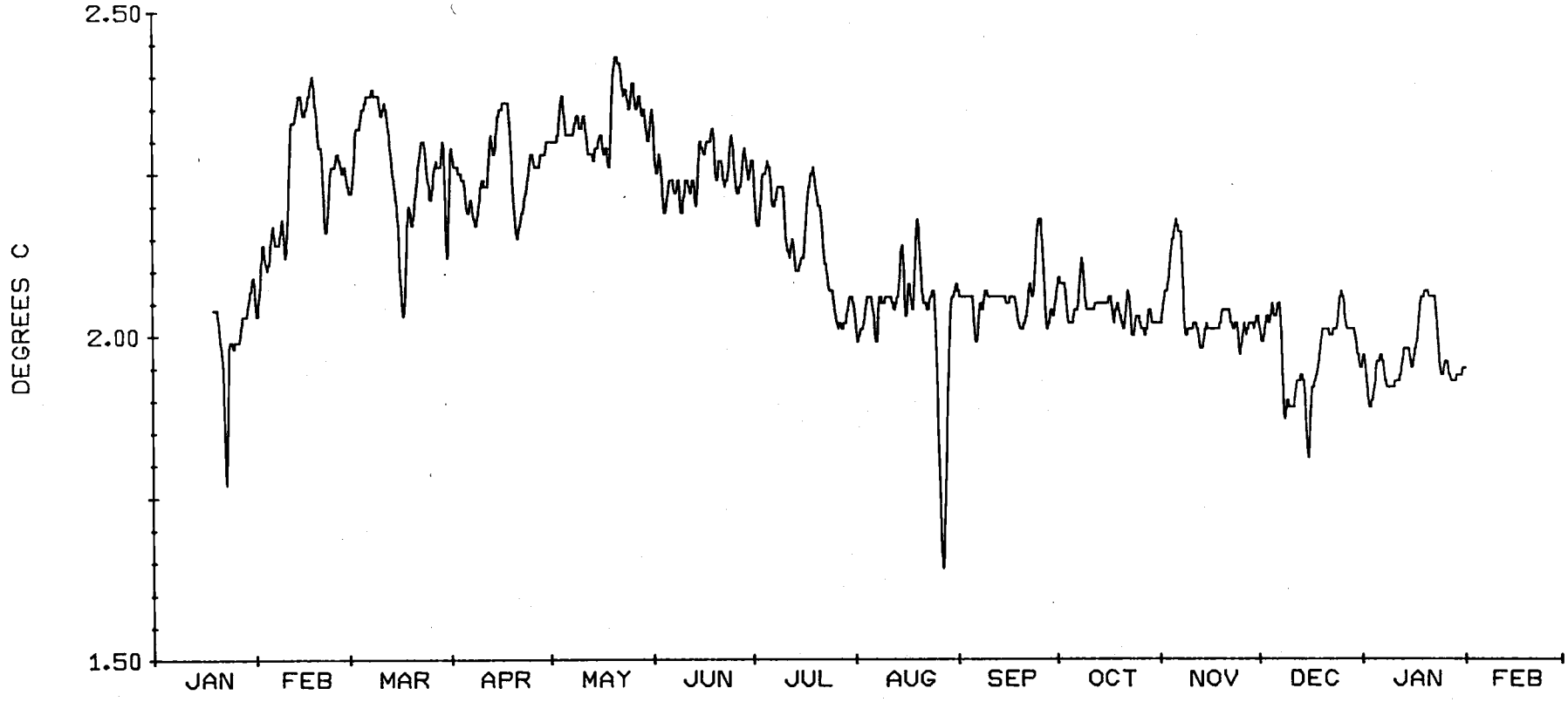
575 METERS AT ML-7
LLP FILTERED CURRENT



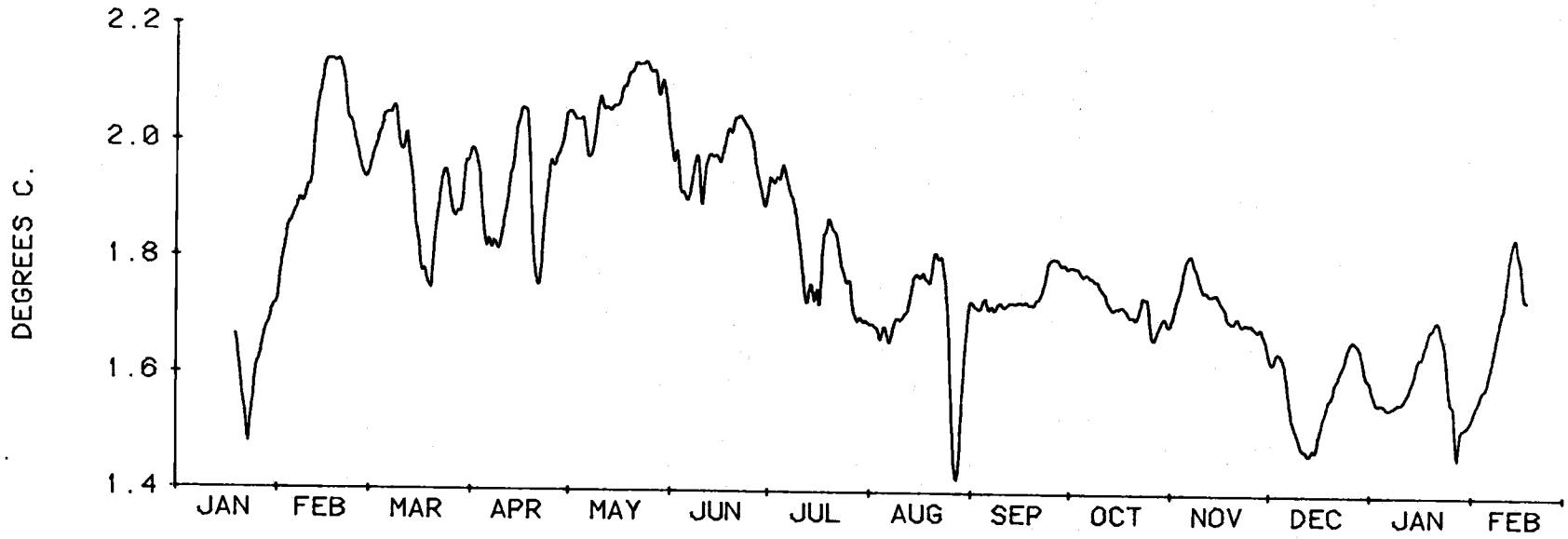
1290 METERS AT ML-7
LLP FILTERED CURRENT



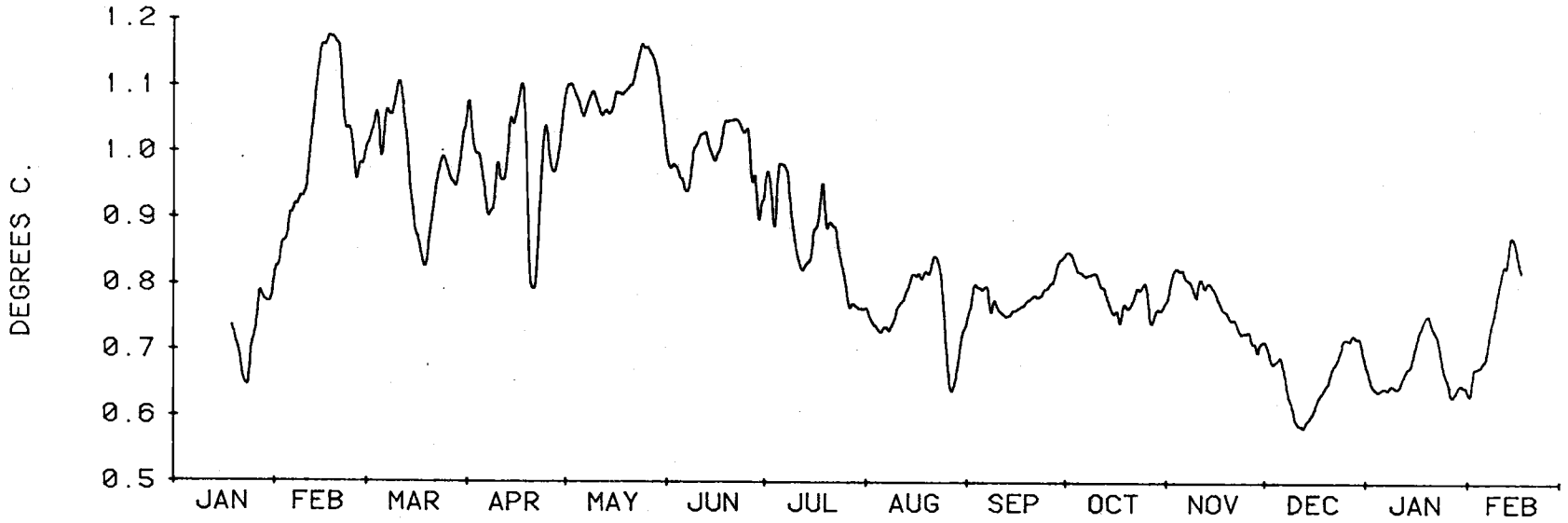
2593 METERS AT ML-7
LLP FILTERED CURRENT



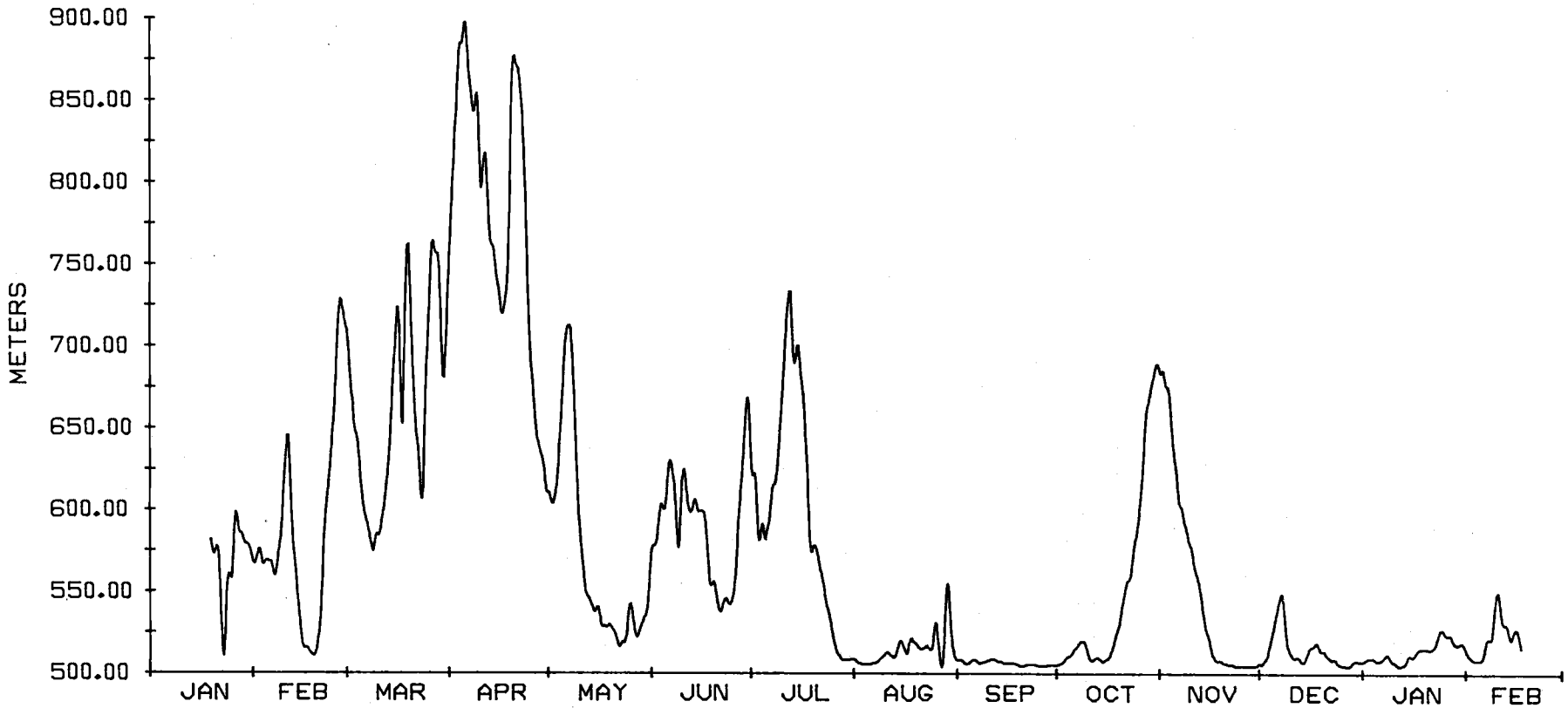
575 METERS AT ML-7
LLP FILTERED TEMPERATURE



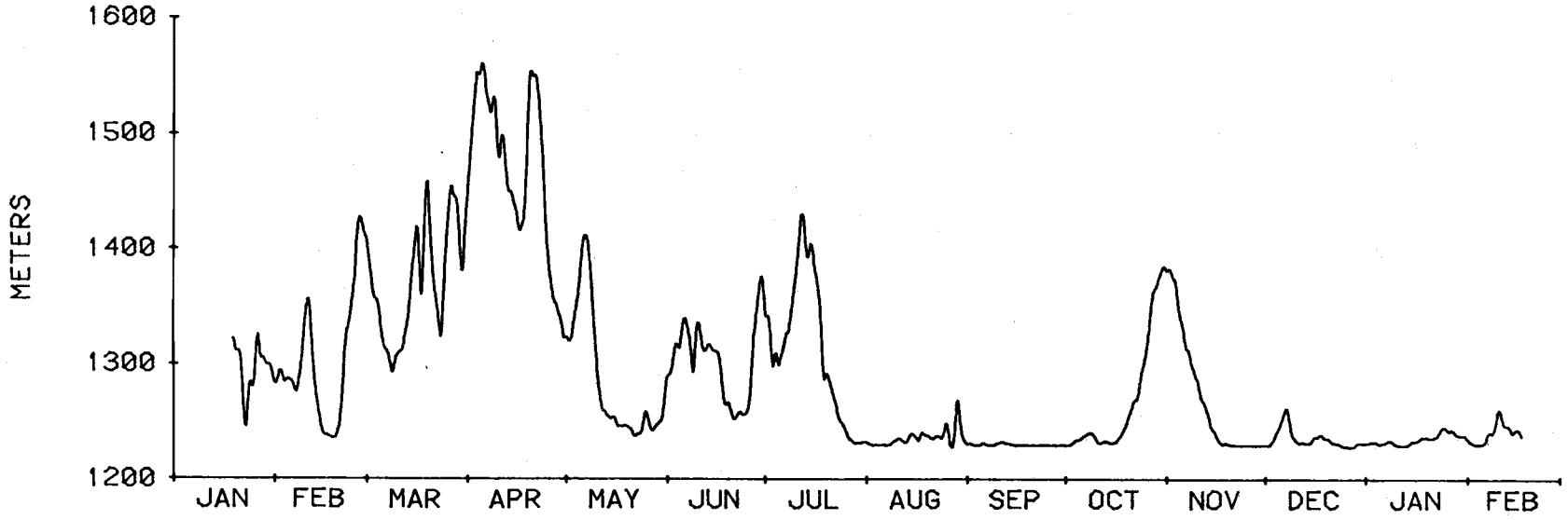
1290 METERS AT ML-7
LLP FILTERED TEMPERATURE



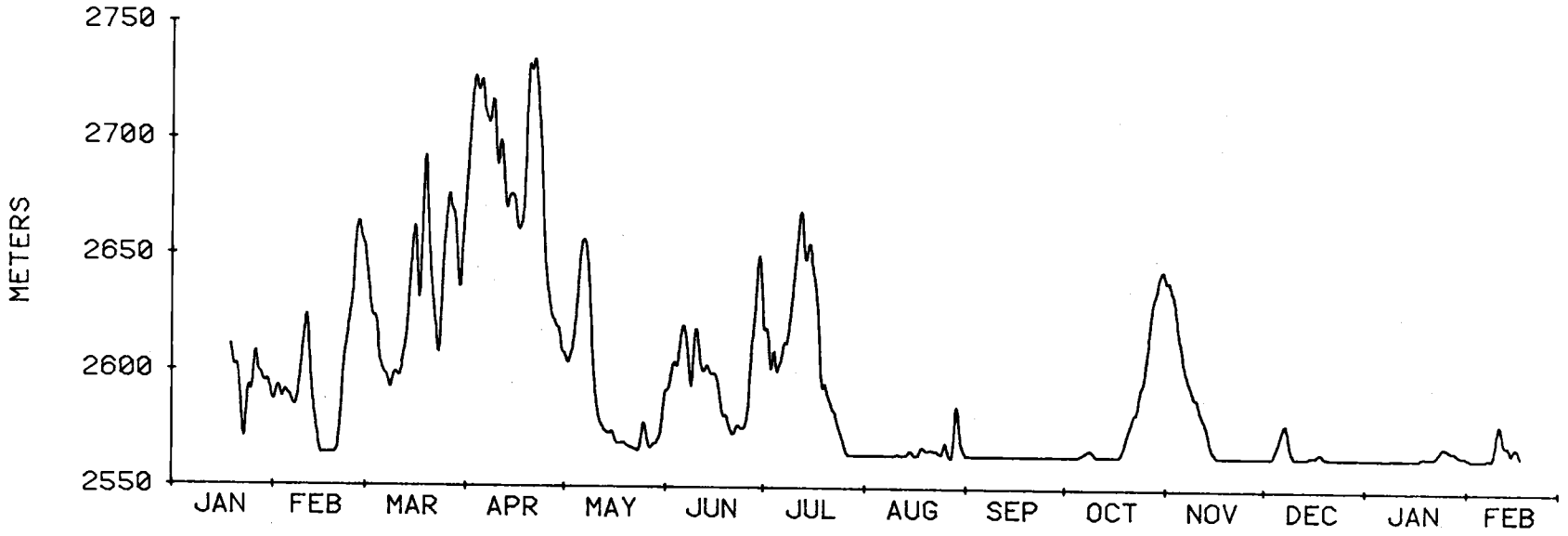
2593 METERS AT ML-7
LLP FILTERED TEMPERATURE



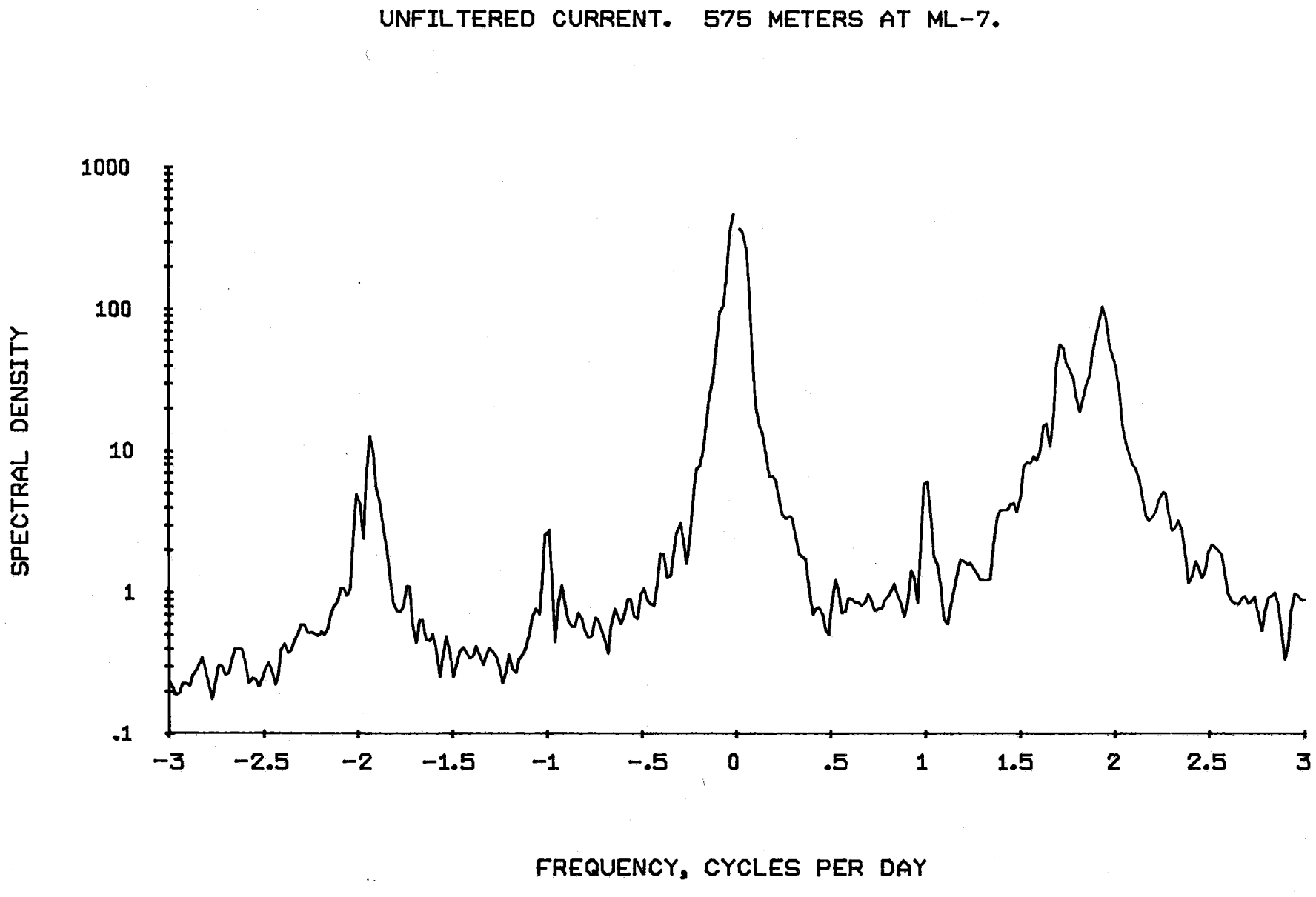
575 METERS AT ML-7
LLP FILTERED PRESSURE



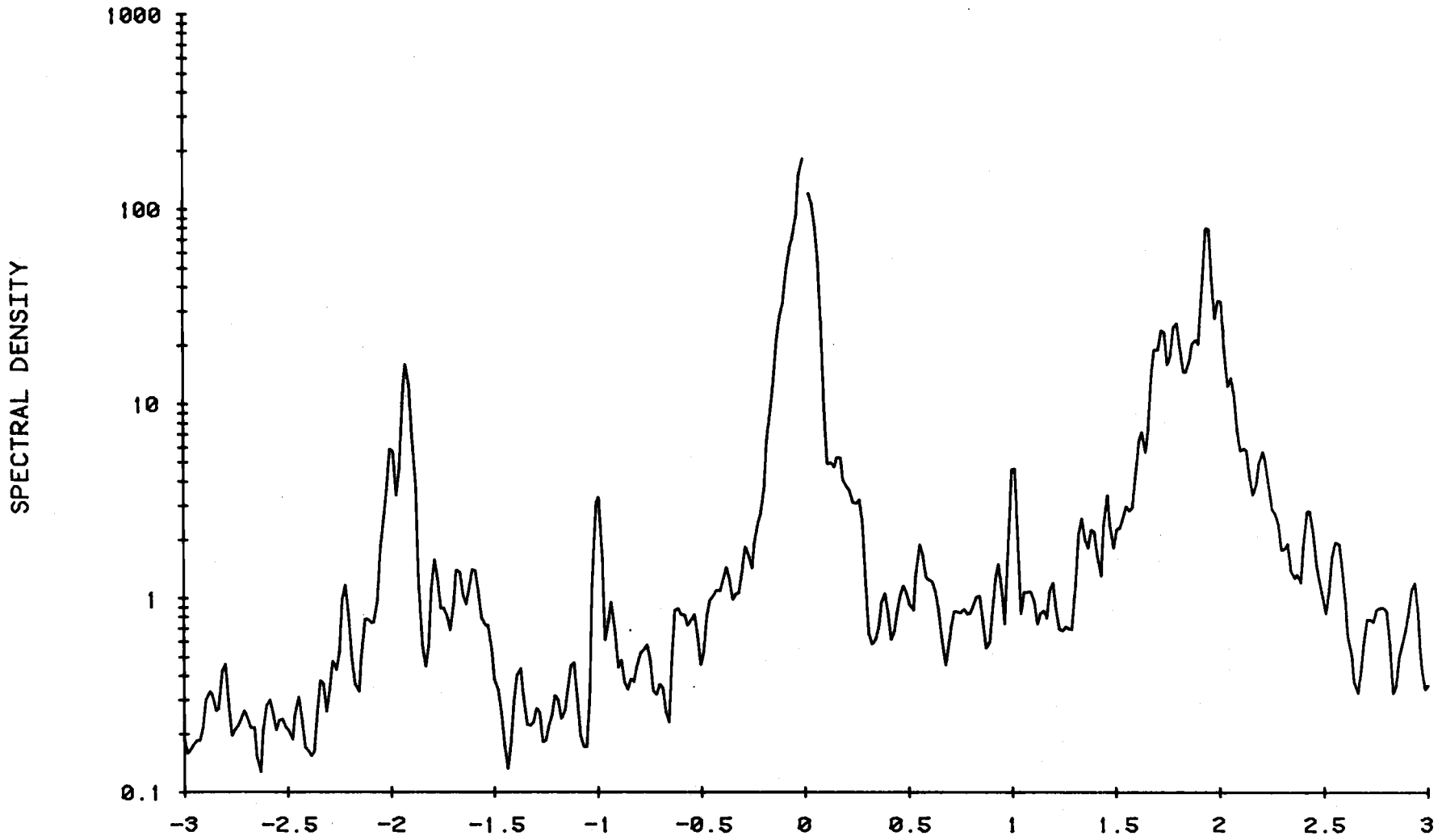
1290 METERS AT ML-7
LLP FILTERED PRESSURE

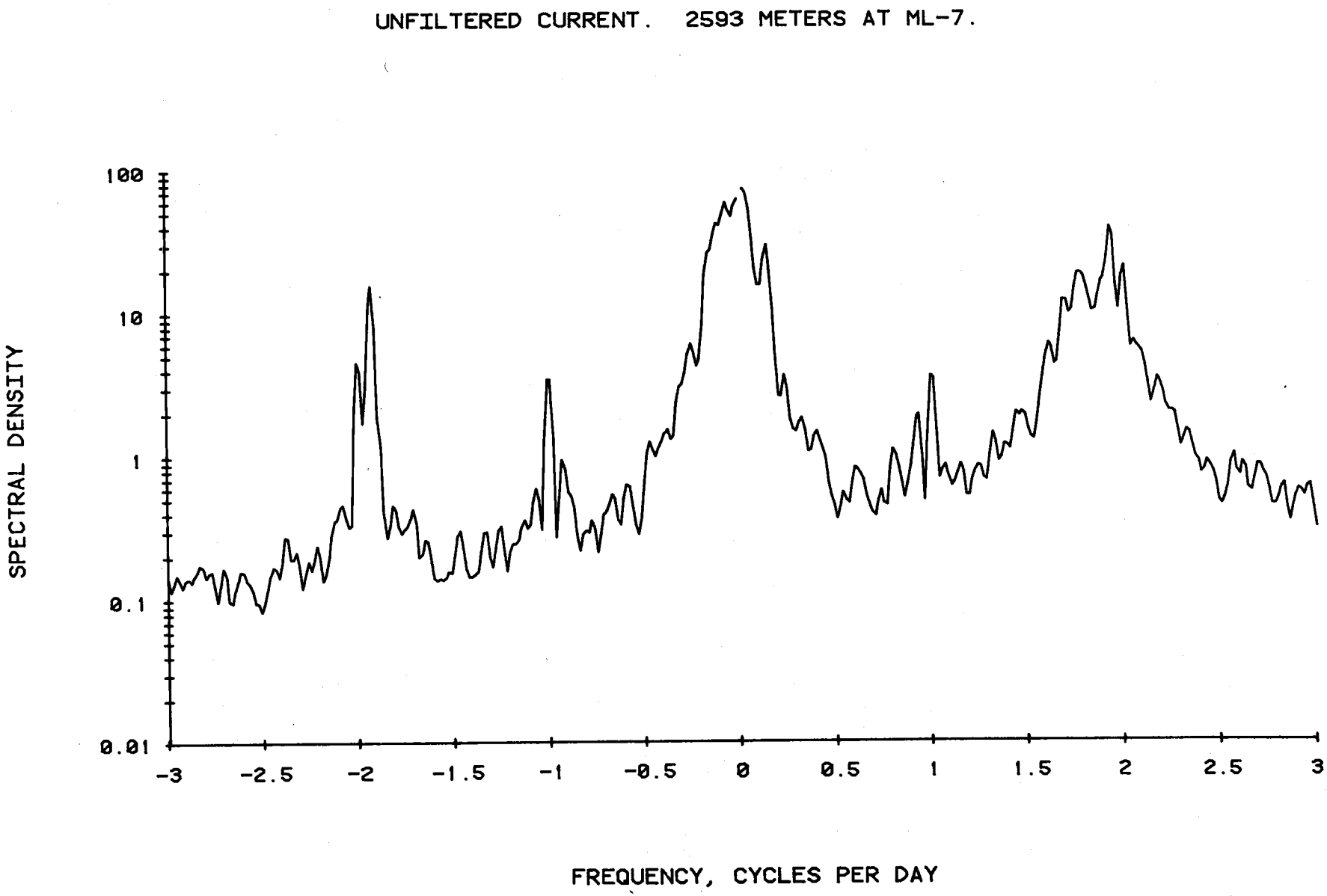


2593 METERS AT ML-7
LLP FILTERED PRESSURE

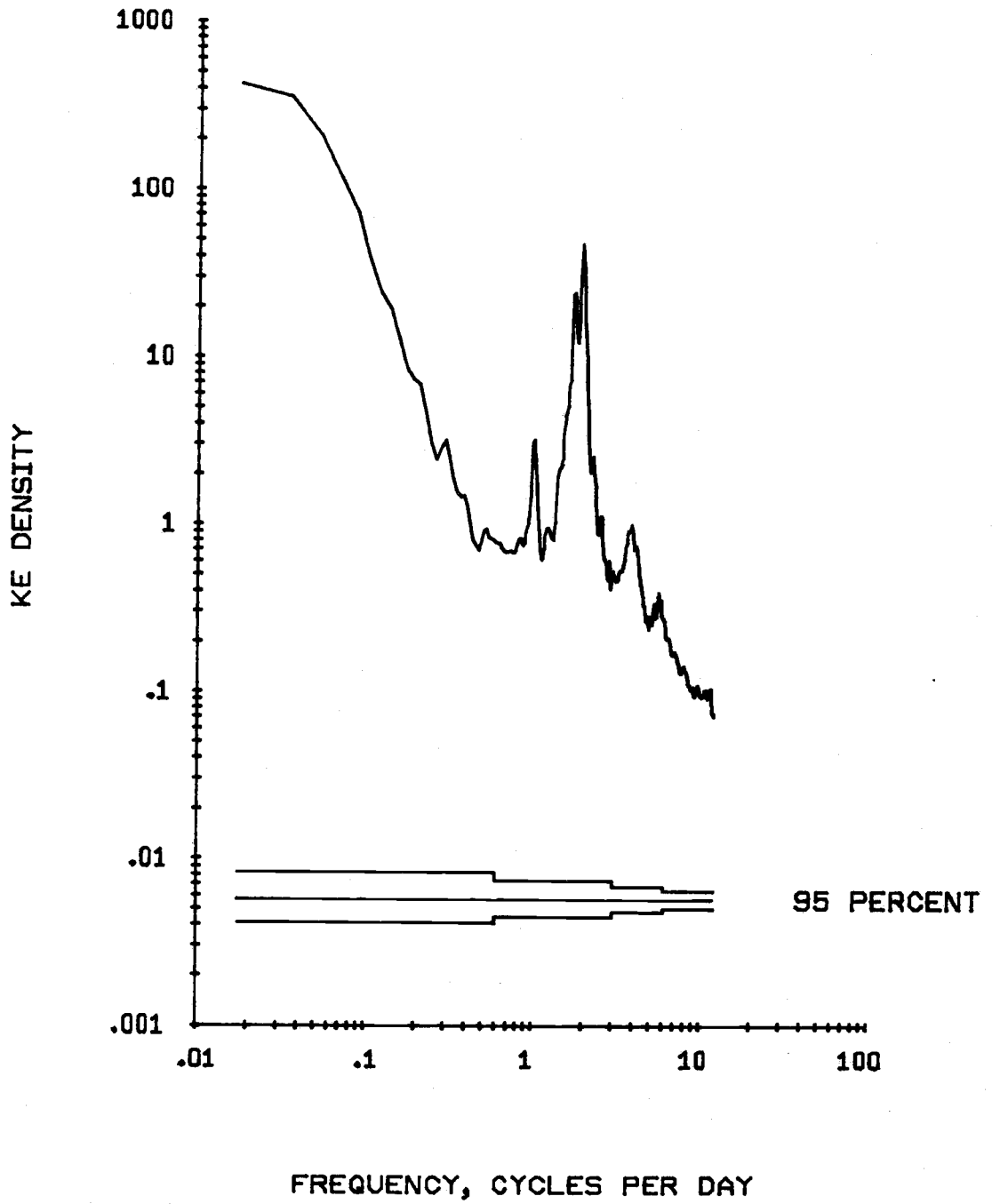

UNFILTERED CURRENT. 575 METERS AT ML-7.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

UNFILTERED CURRENT. 1290 METERS AT ML-7

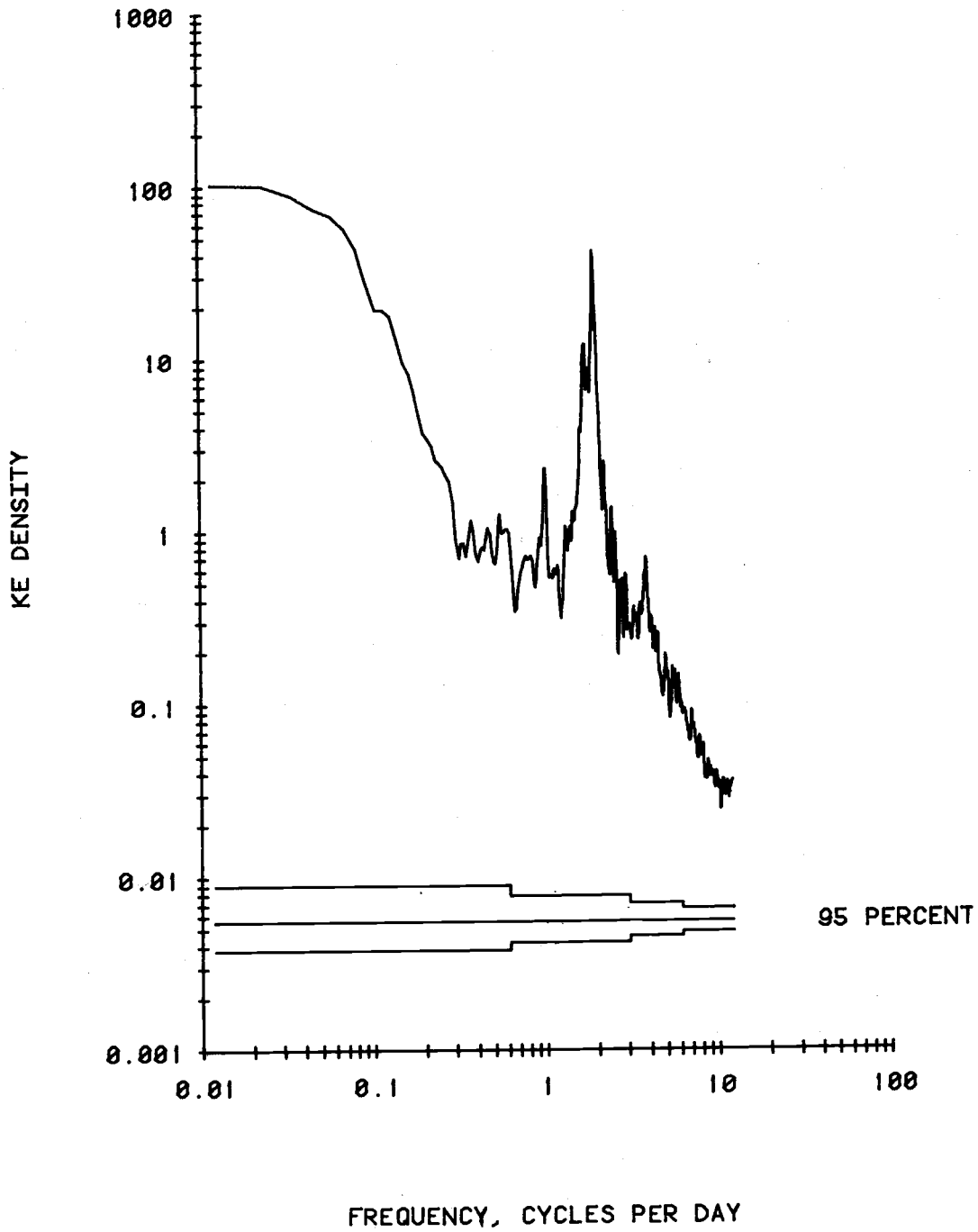



UNFILTERED CURRENT. 2593 METERS AT ML-7.
SPECTRAL DENSITY
100
10
1
0.1
0.01
-3
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

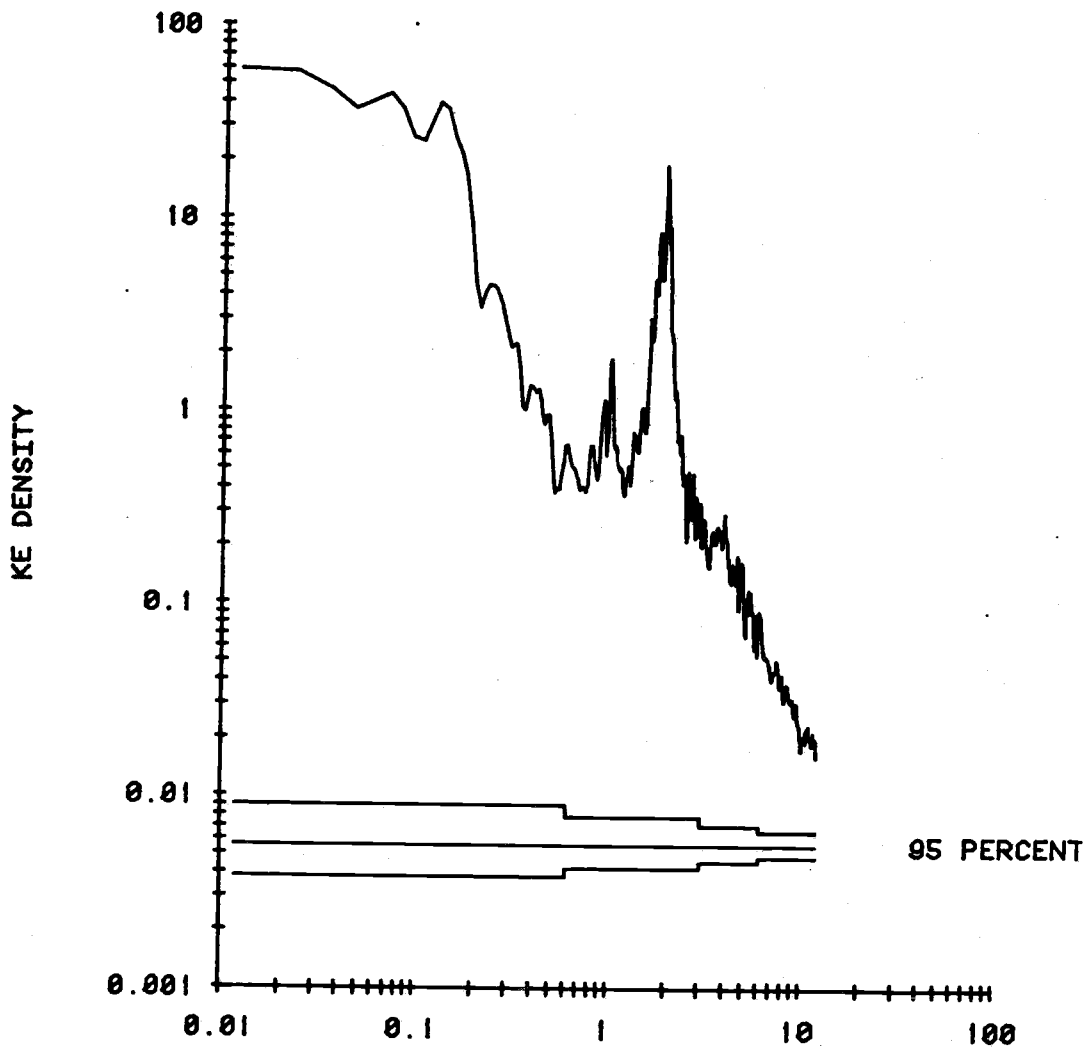
UNFILTERED CURRENT. 575 METERS AT ML-7.



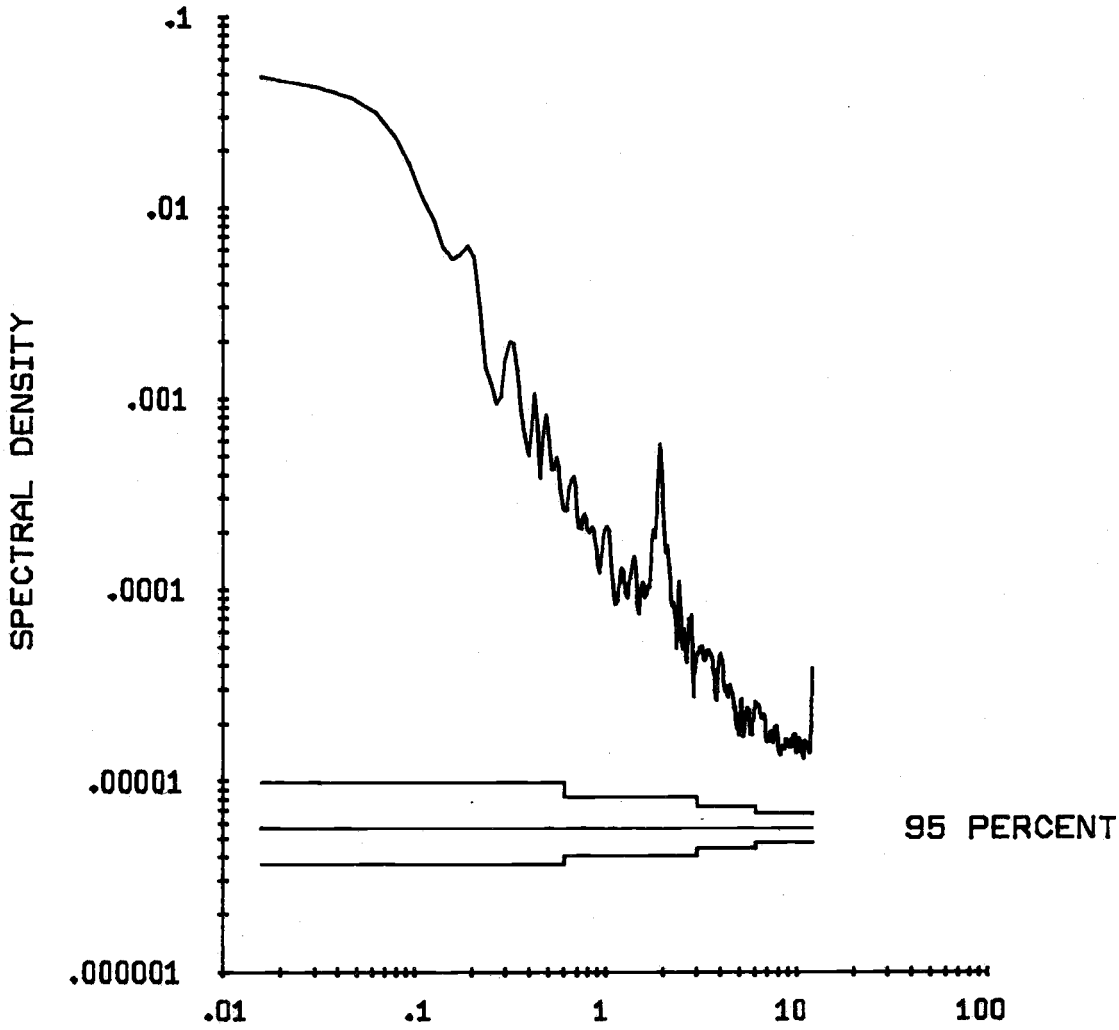
UNFILTERED CURRENT. 1290 METERS AT ML-7



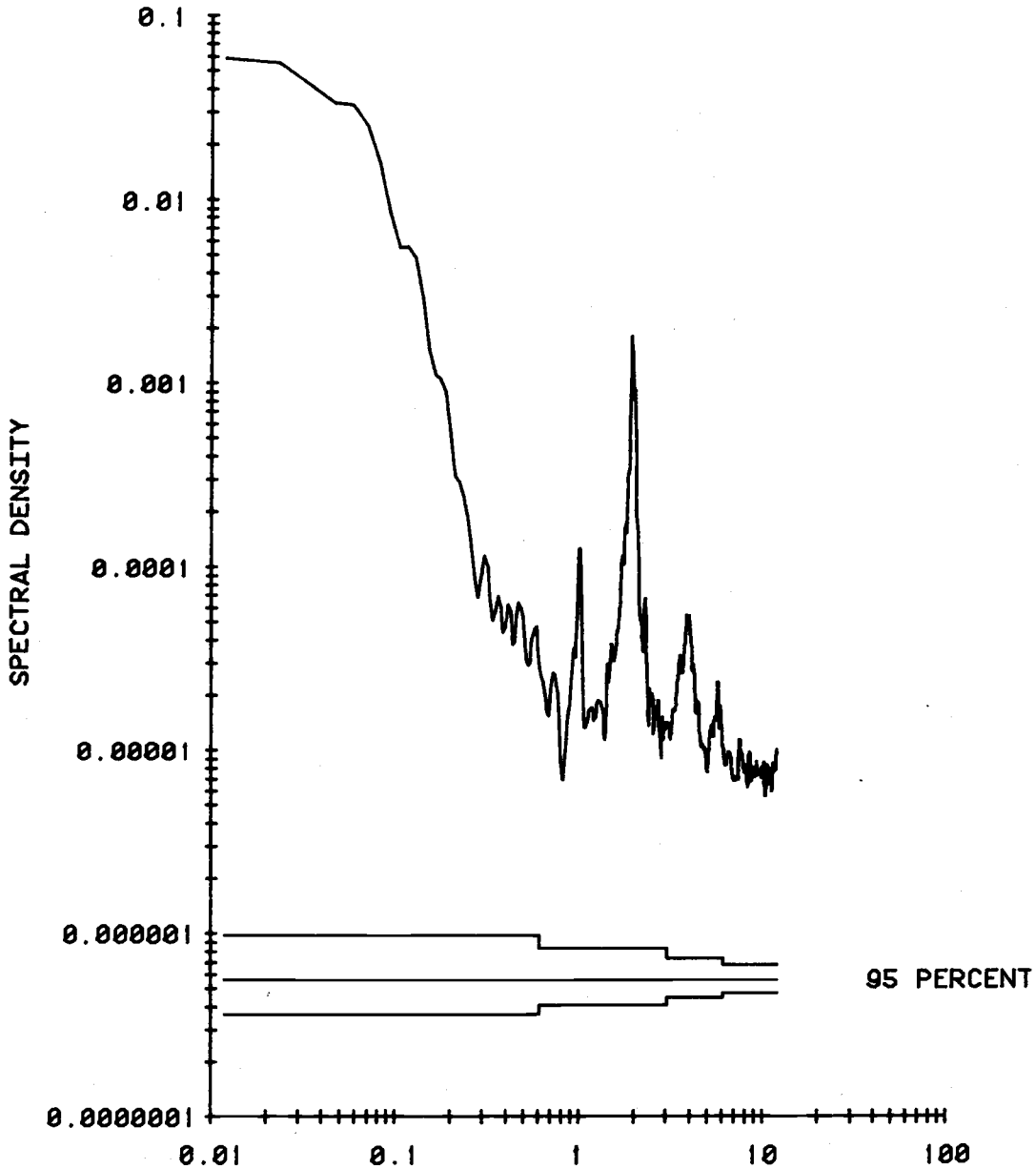
UNFILTERED CURRENT. 2593 METERS AT ML-7



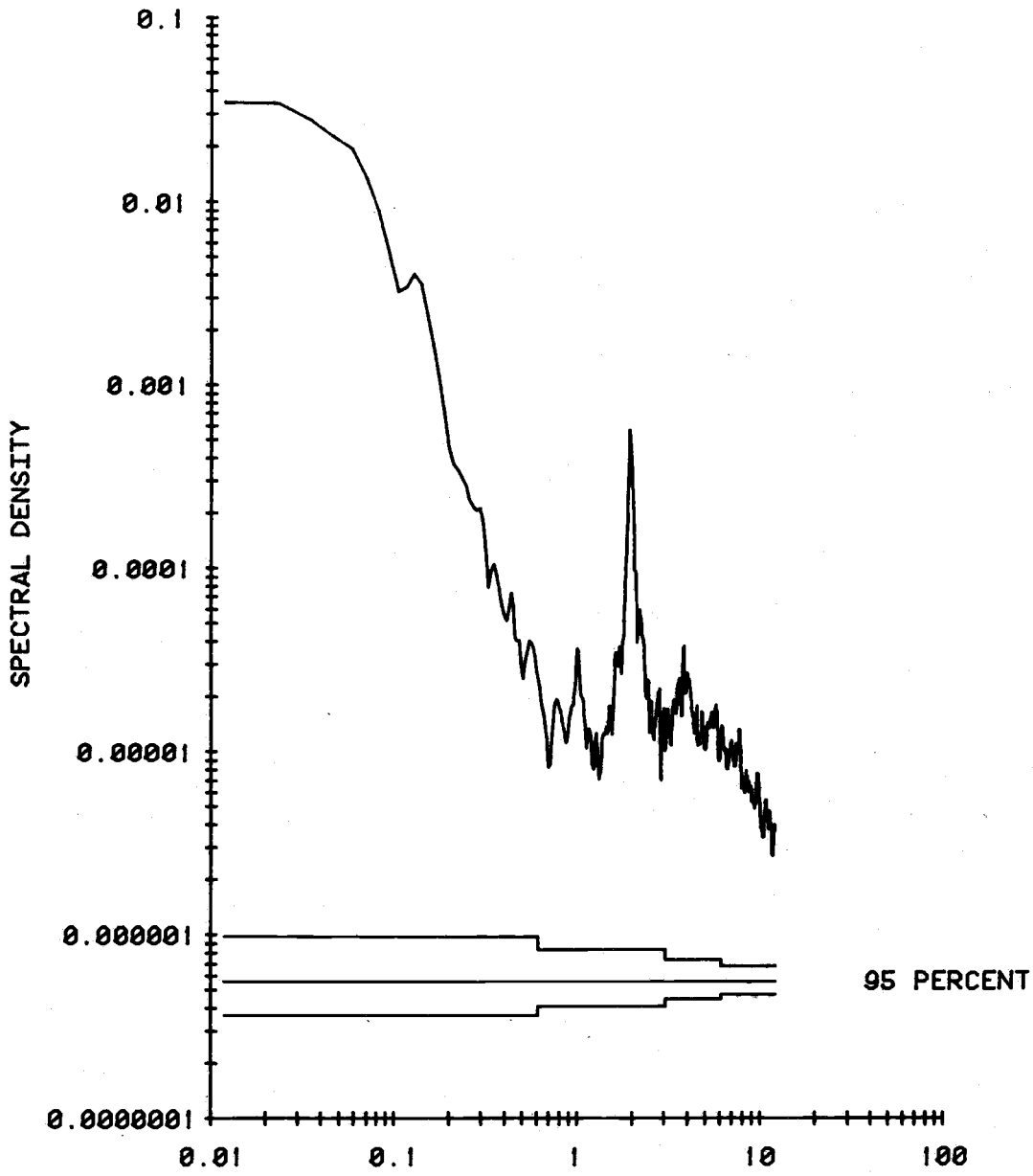
UNFILTERED TEMPERATURE. 575 METERS AT ML-7.



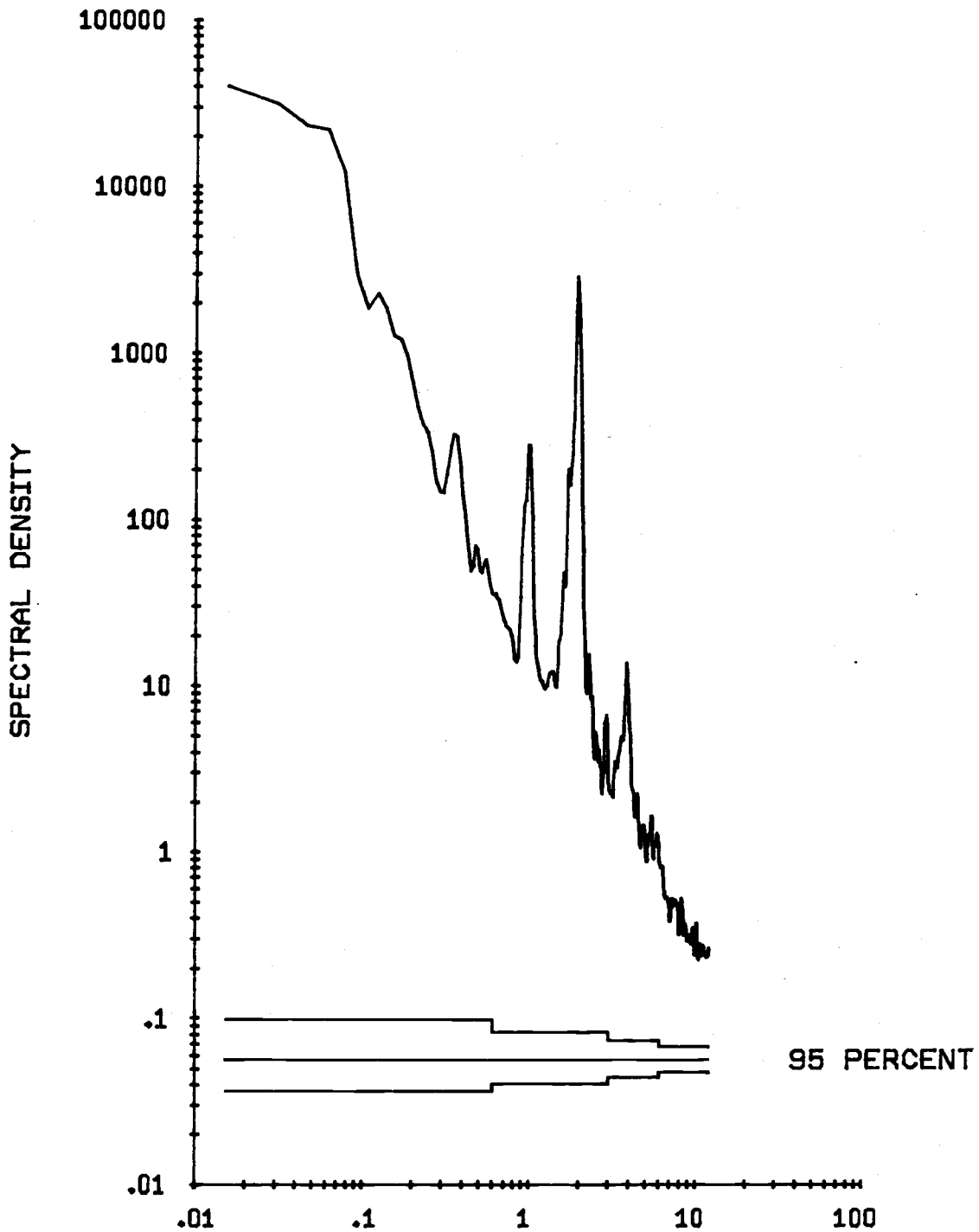
UNFILTERED TEMPERATURE. 1290 METERS AT ML-7



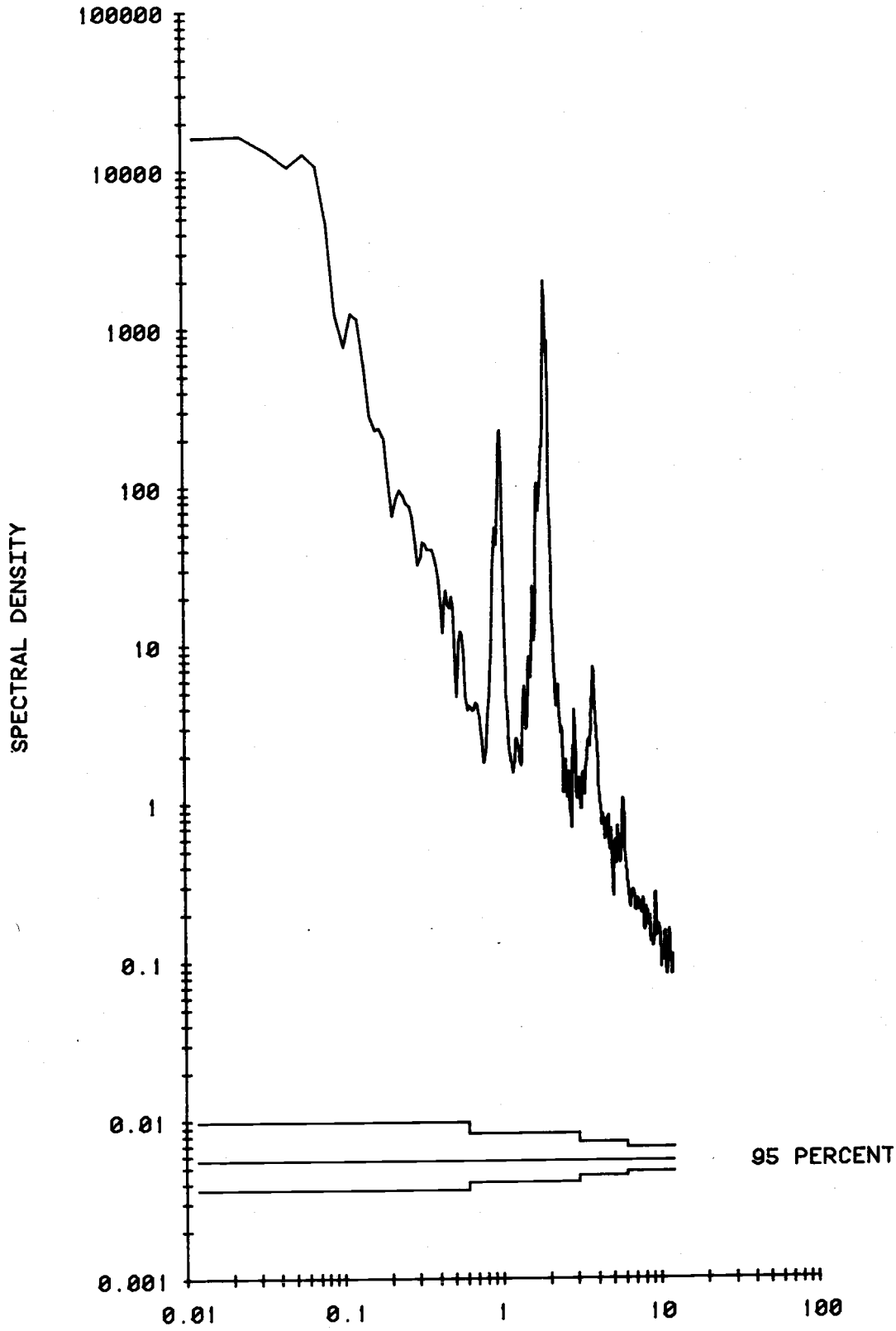
UNFILTERED TEMPERATURE. 2593 METERS AT ML-7



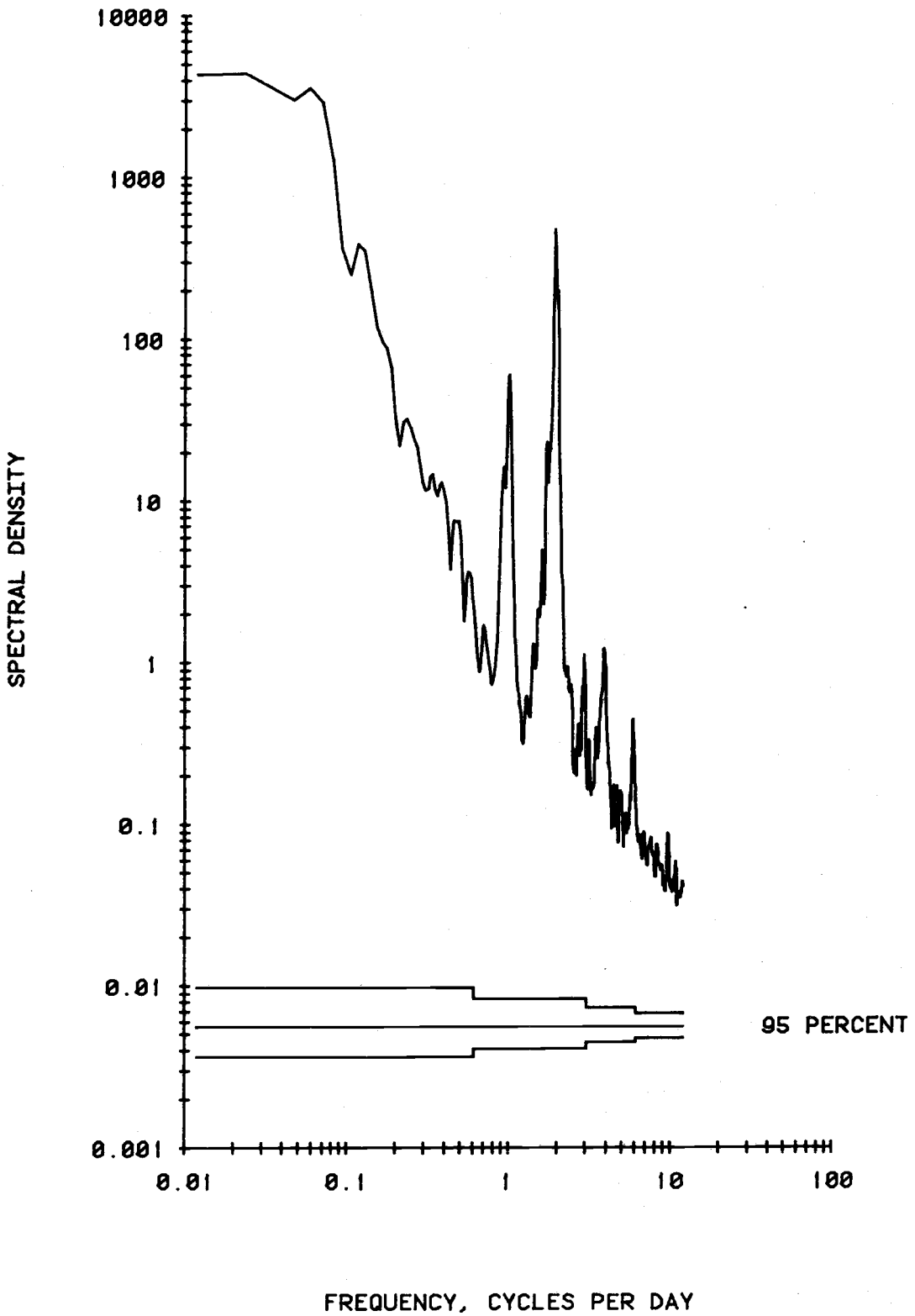
UNFILTERED PRESSURE. 575 METERS AT ML-7.



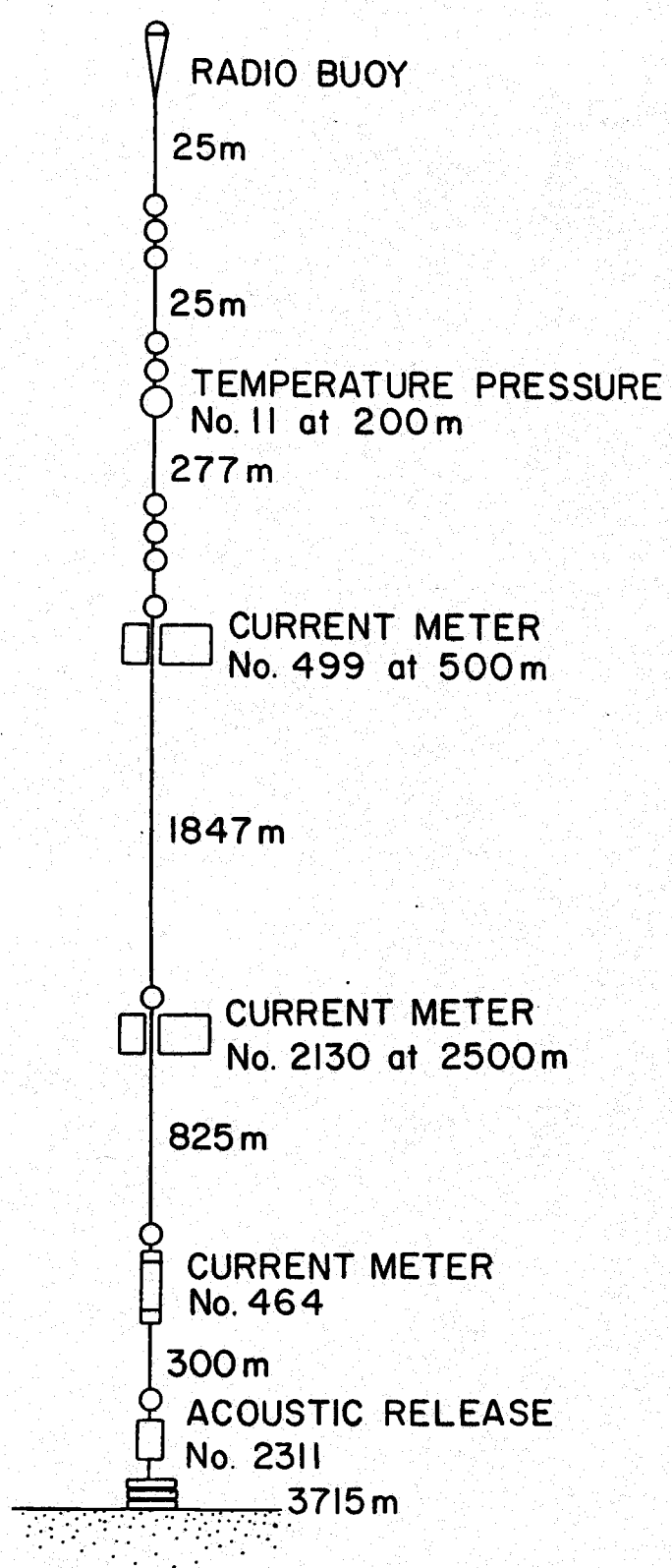
UNFILTERED PRESSURE. 1290 METERS AT ML-7



UNFILTERED PRESSURE. 2593 METERS AT ML-7



ML - 8



MAIN LINE (ML) 8

59° 36.5' S
63° 32.1' W

INSTALLED: 18 JANUARY 1979

ML-8

Position: 59°36.5'S, 63°32.1'W
Depth of Water: 3715 m
Set at 1059 UCT 18 January '79 by R/V MELVILLE
Retrieved at 0712 UCT 17 February '80 by R/V ATLANTIS II
Data Interval: 1434 UCT 18 January '79 to 1534 UCT 30 November '79

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	499/49
2500 m	2130/

Instrument 499 recorded speed, direction, temperature, and pressure once per hour until 1534 UCT 30 November '79.

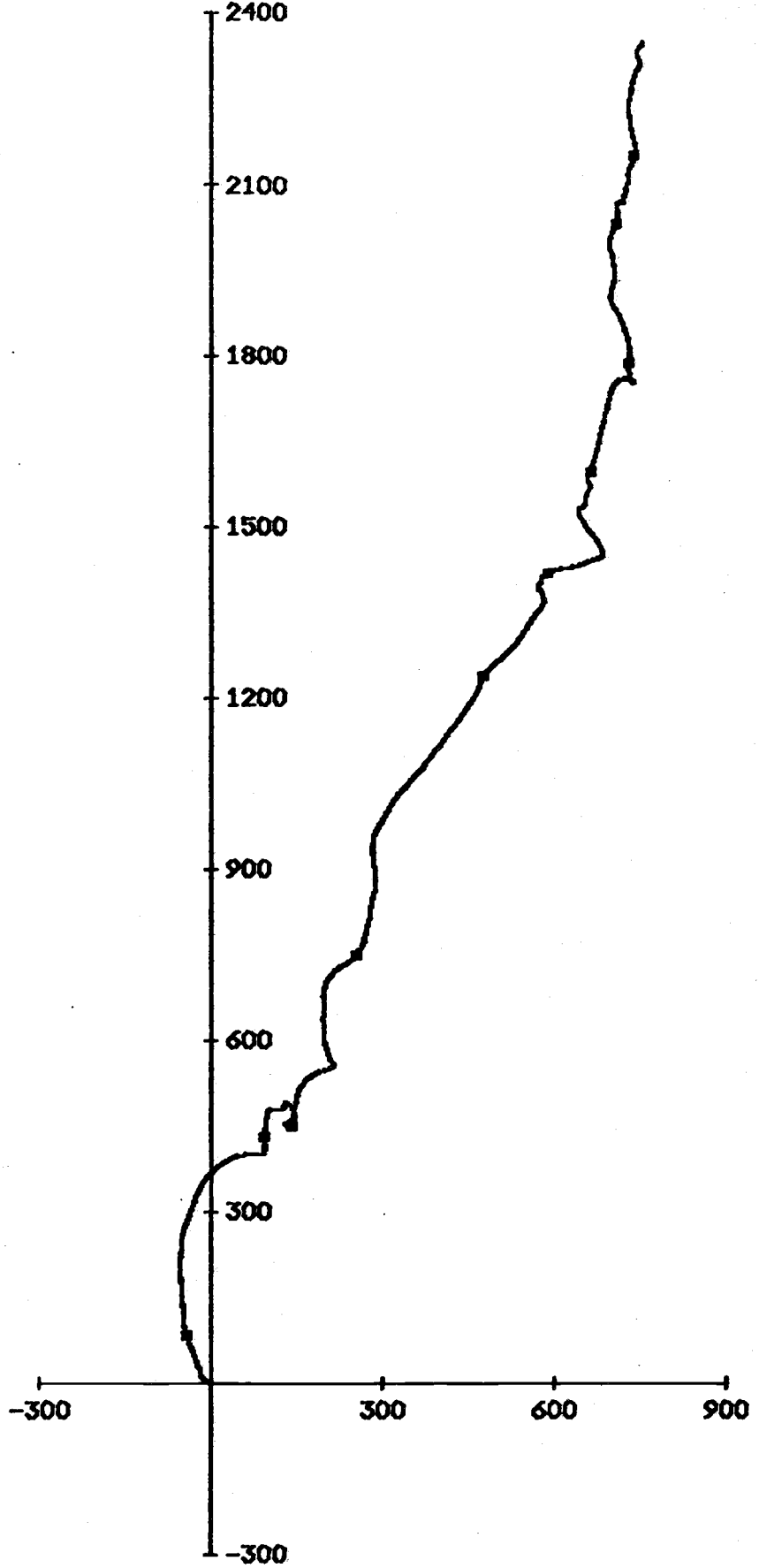
Instrument 2130 was not recovered.

ML-8

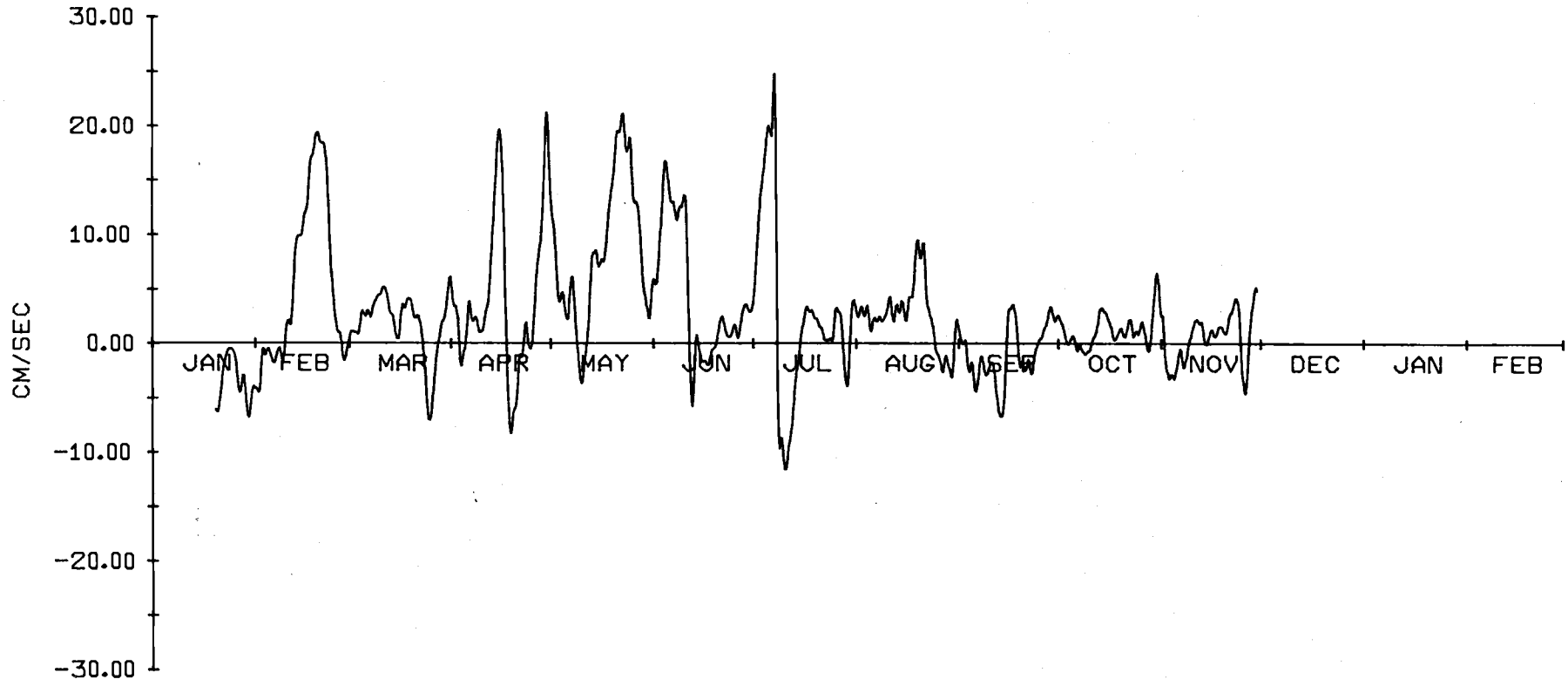
607 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	12.27	7.17	0.75	3.03	0.70	42.10	7586
U	2.77	7.55	0.37	3.22	-22.90	34.50	7586
V	8.60	7.96	0.31	2.85	-14.50	36.10	7586
T	2.04	0.08	-0.56	9.05	1.43	2.29	7586
P	609.91	51.85	2.06	9.25	548.40	954.90	7586

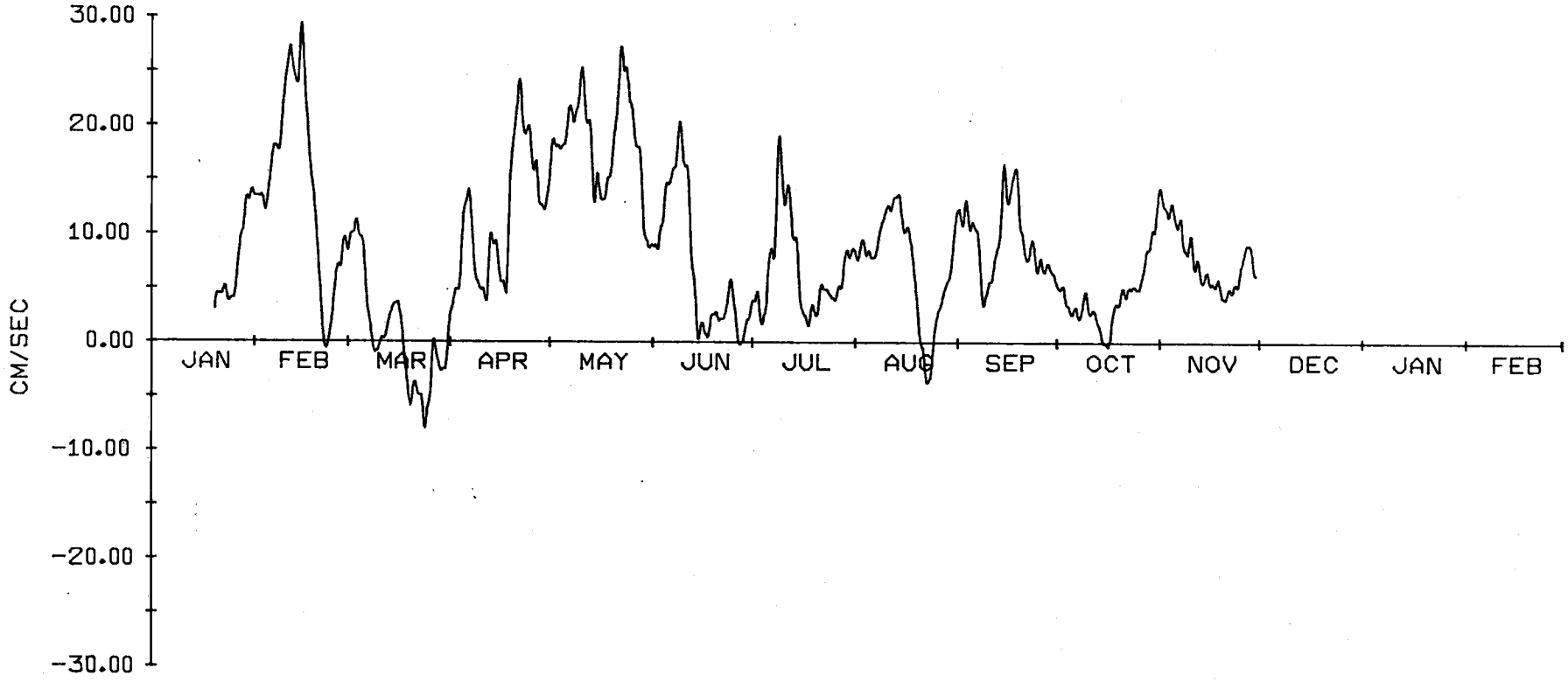
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



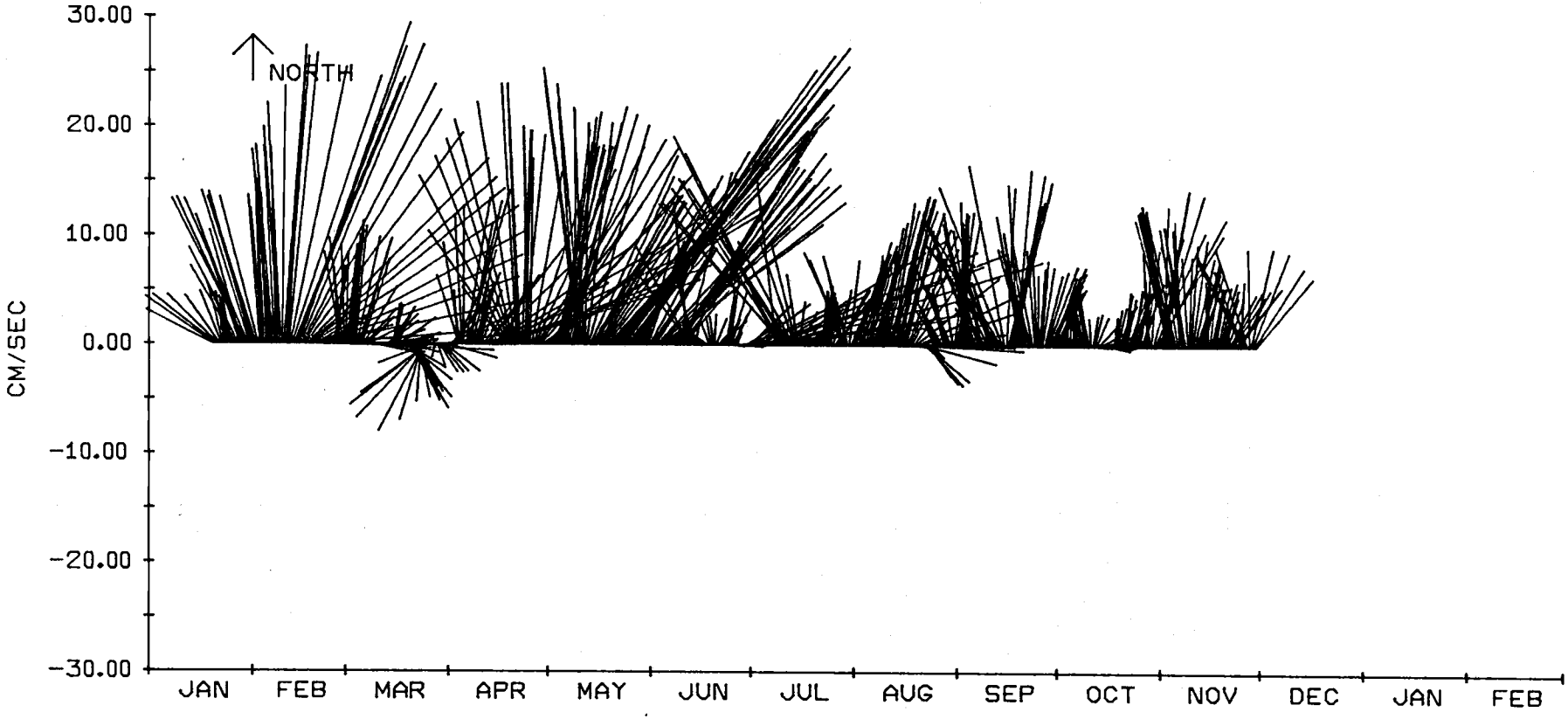
607 METERS AT ML-8. 18 JAN 79 - 30 NOV 79. TAPE 499/49.



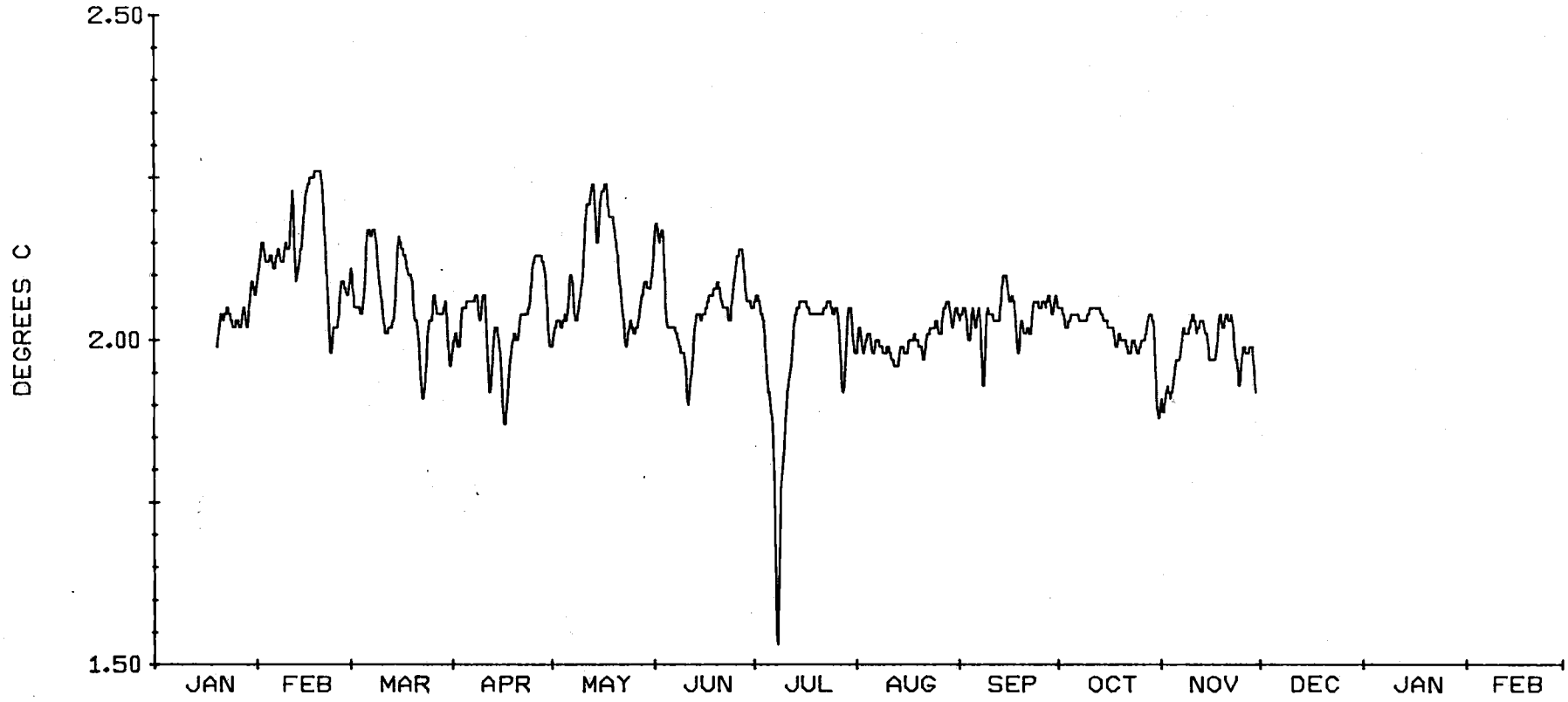
607 METERS AT ML-8
LLP FILTERED U COMPONENT



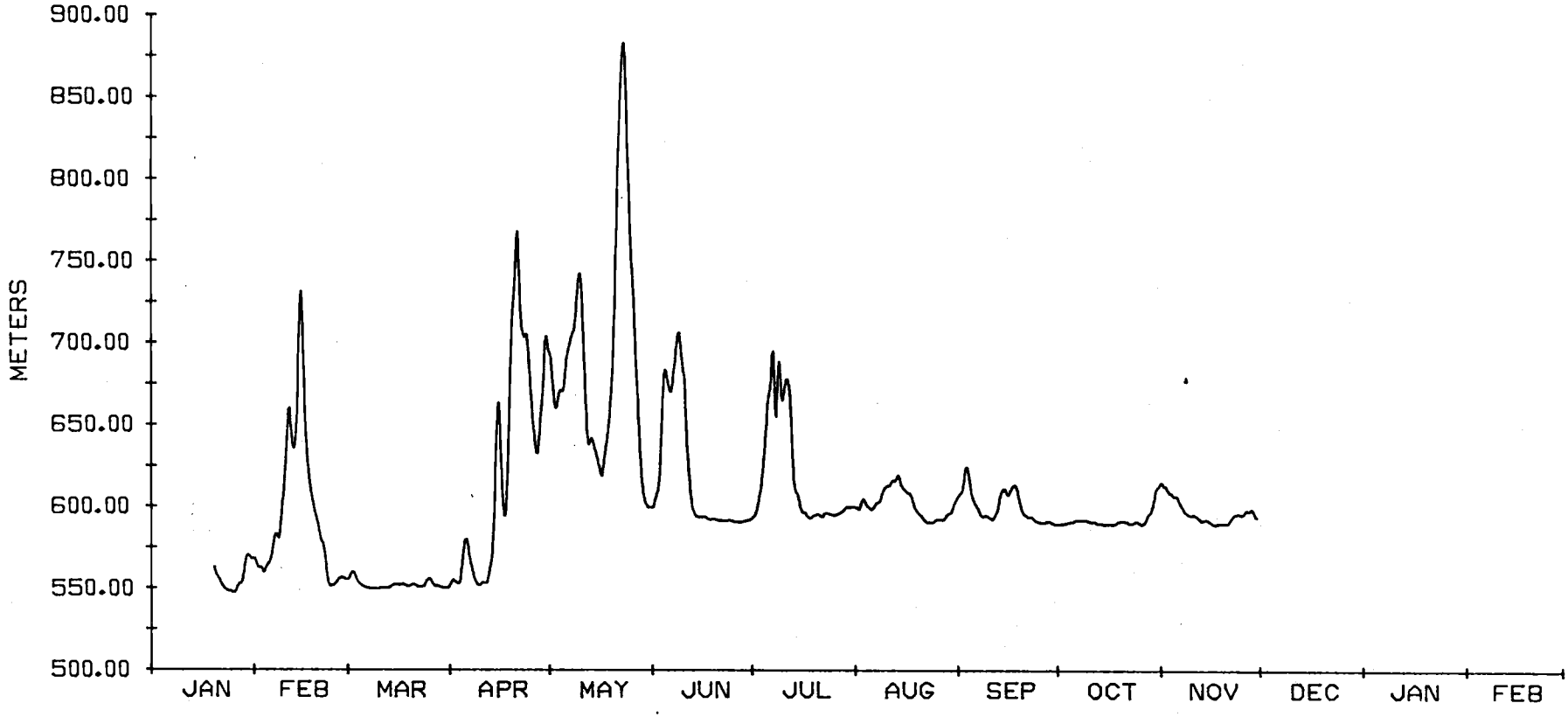
607 METERS AT ML-8
LLP FILTERED V COMPONENT



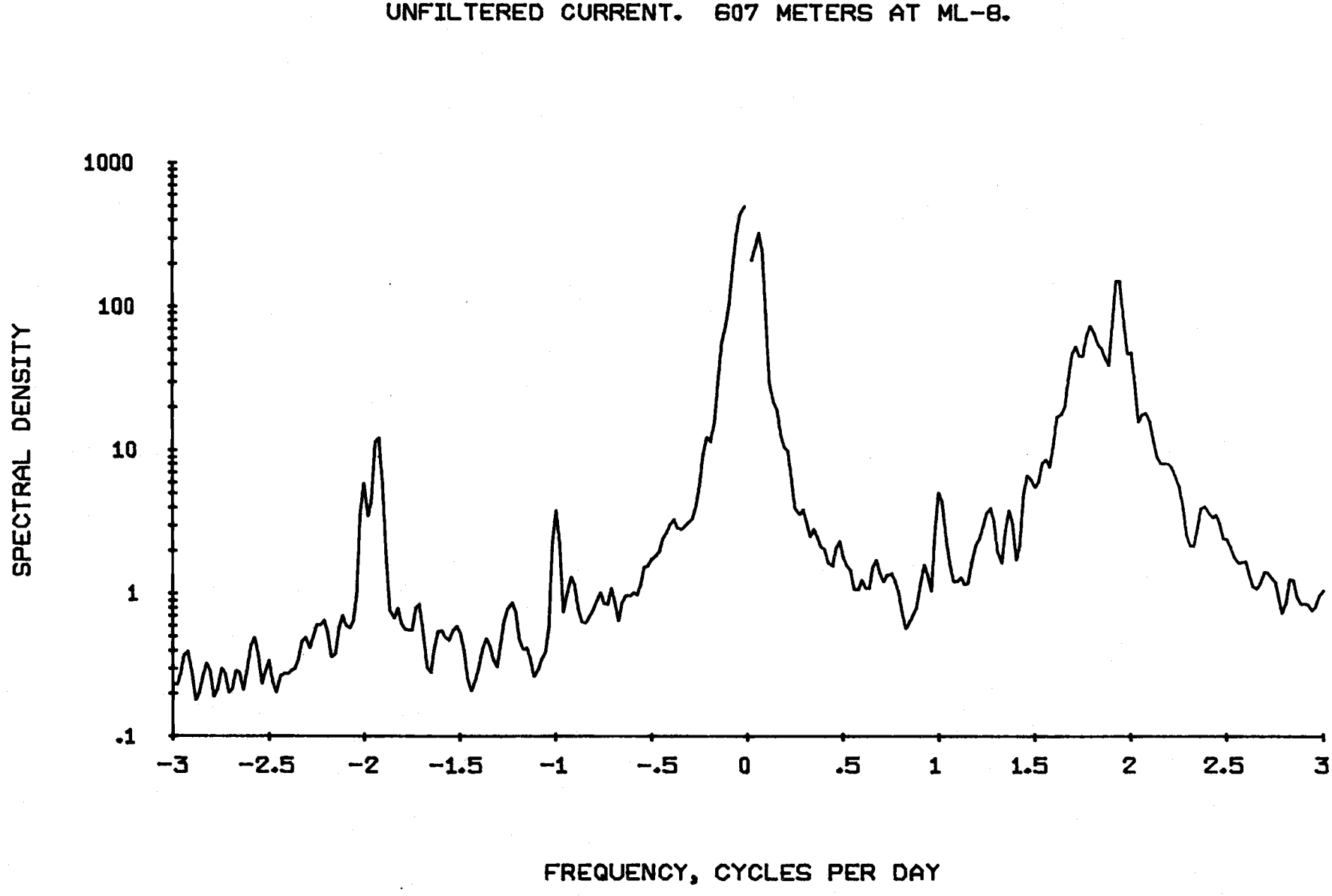
607 METERS AT ML-8
LLP FILTERED CURRENT



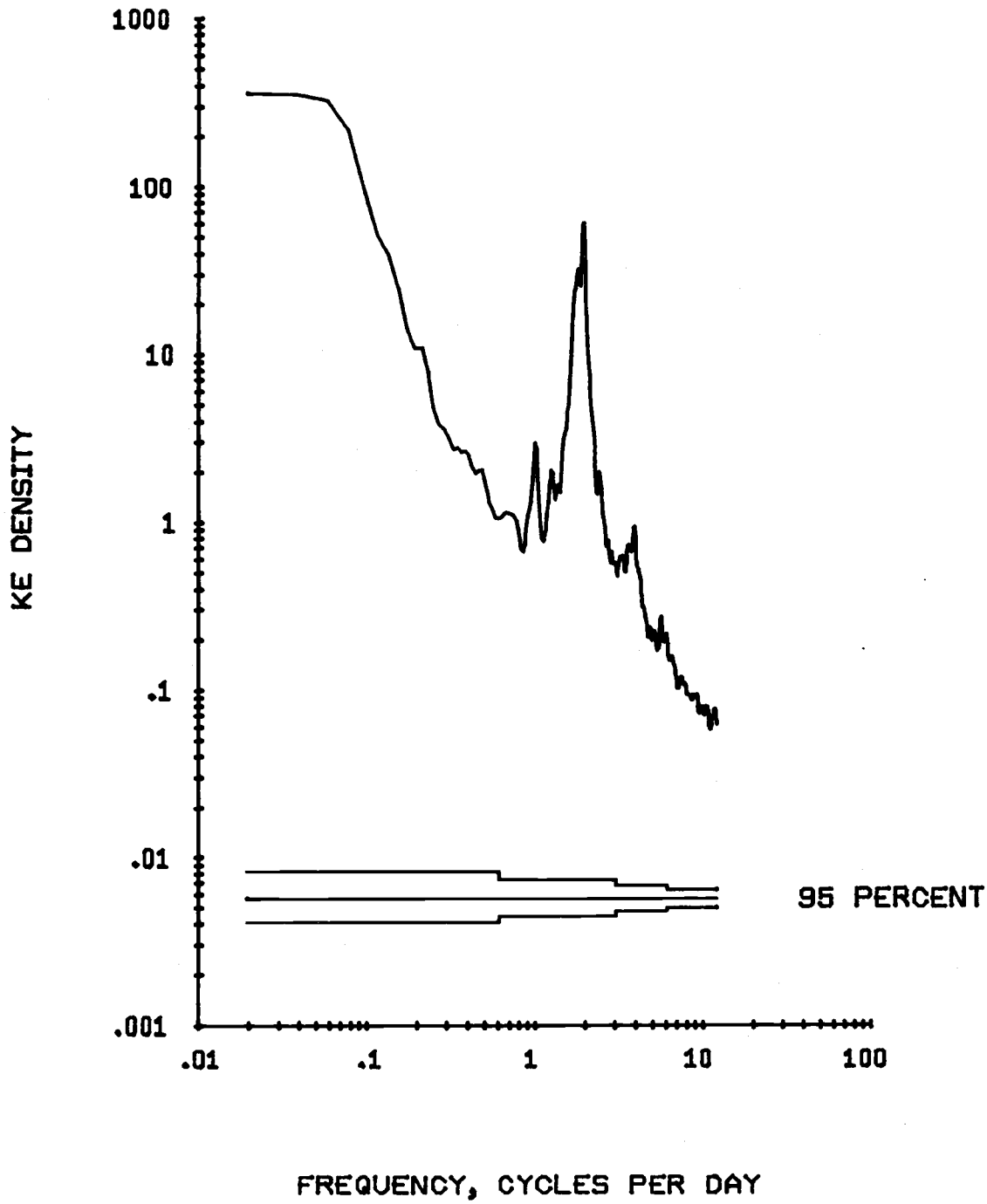
607 METERS AT ML-8
LLP FILTERED TEMPERATURE



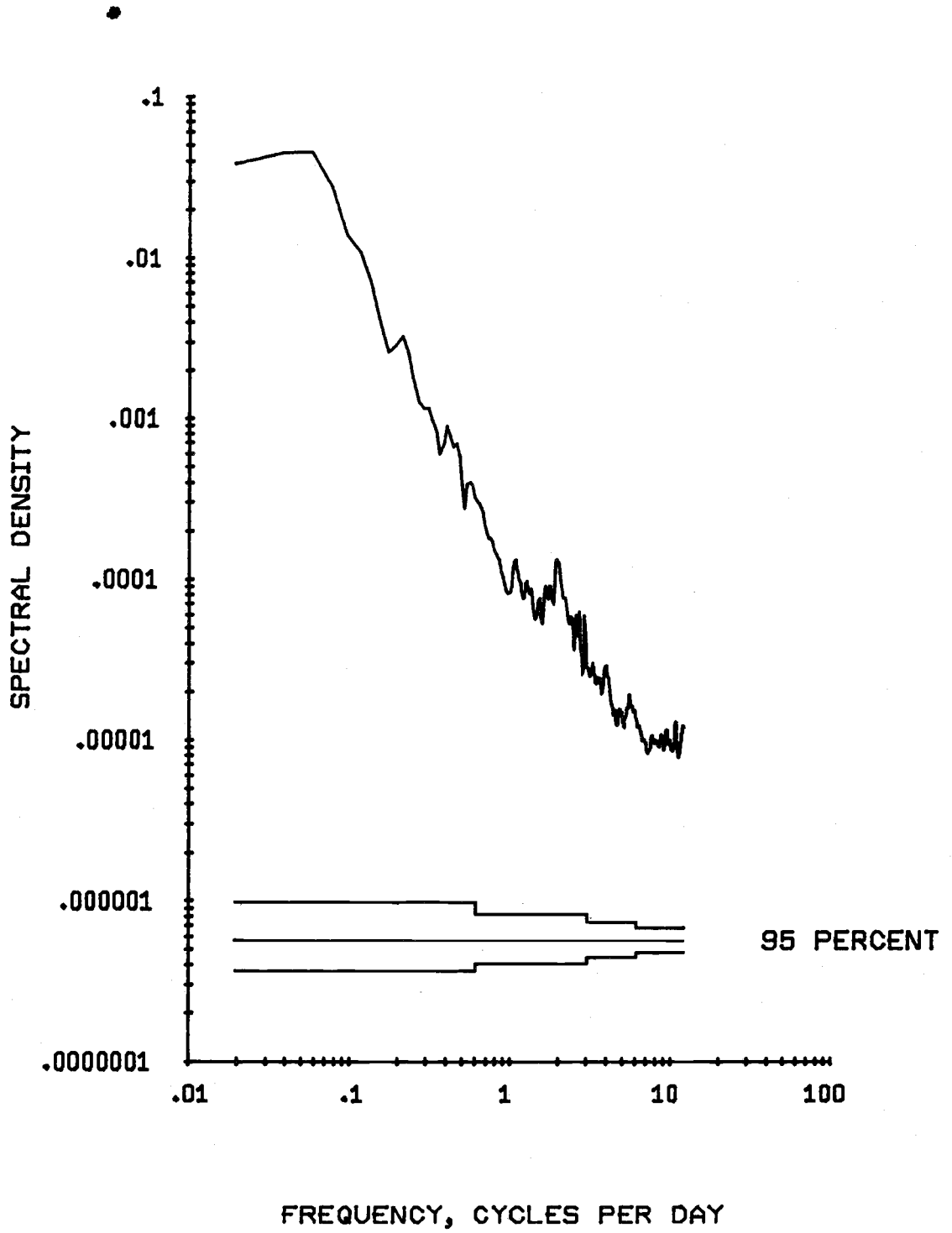
607 METERS AT ML-8
LLP FILTERED PRESSURE


UNFILTERED CURRENT. 607 METERS AT ML-8.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

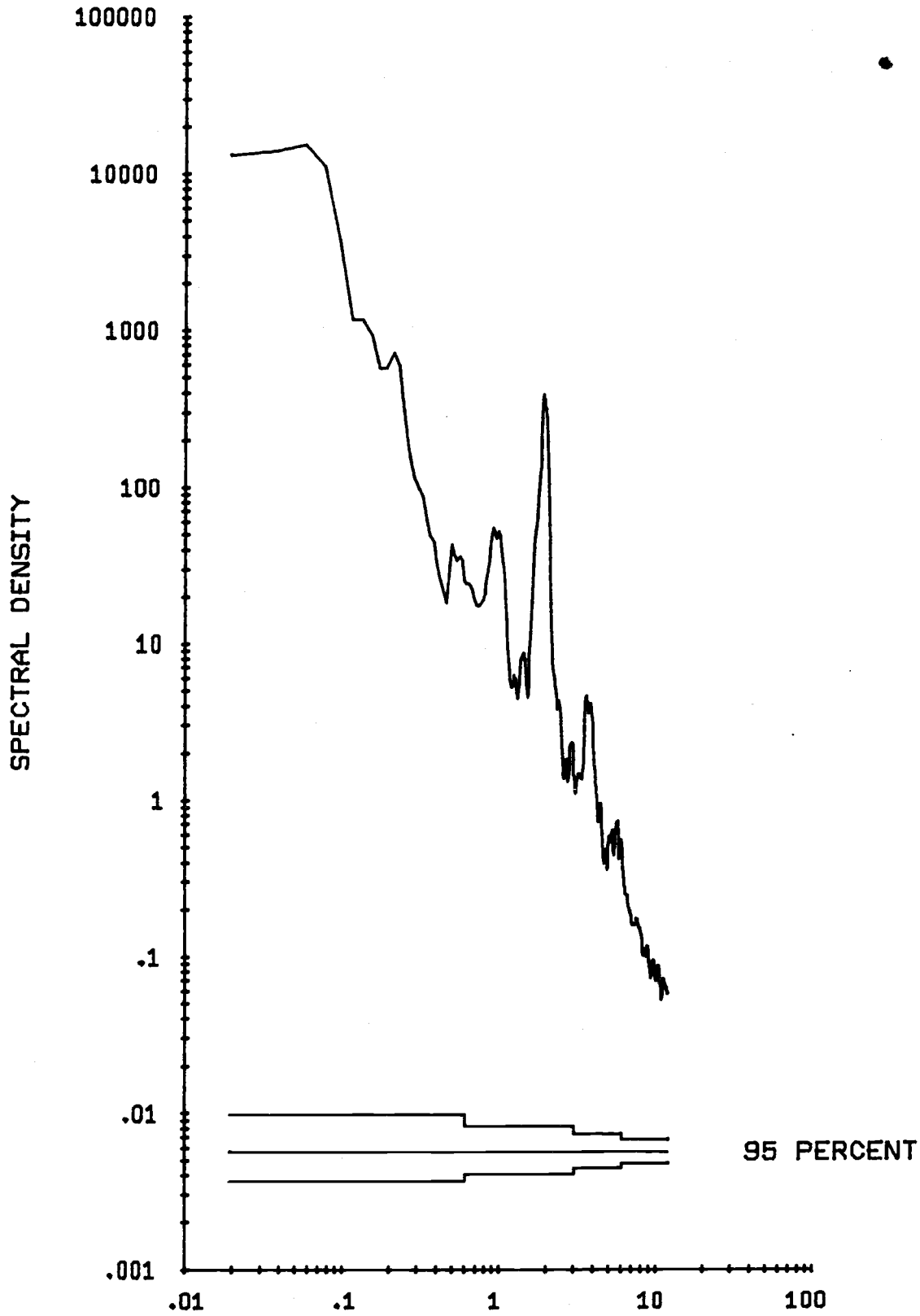
UNFILTERED CURRENT. 607 M AT ML-8.



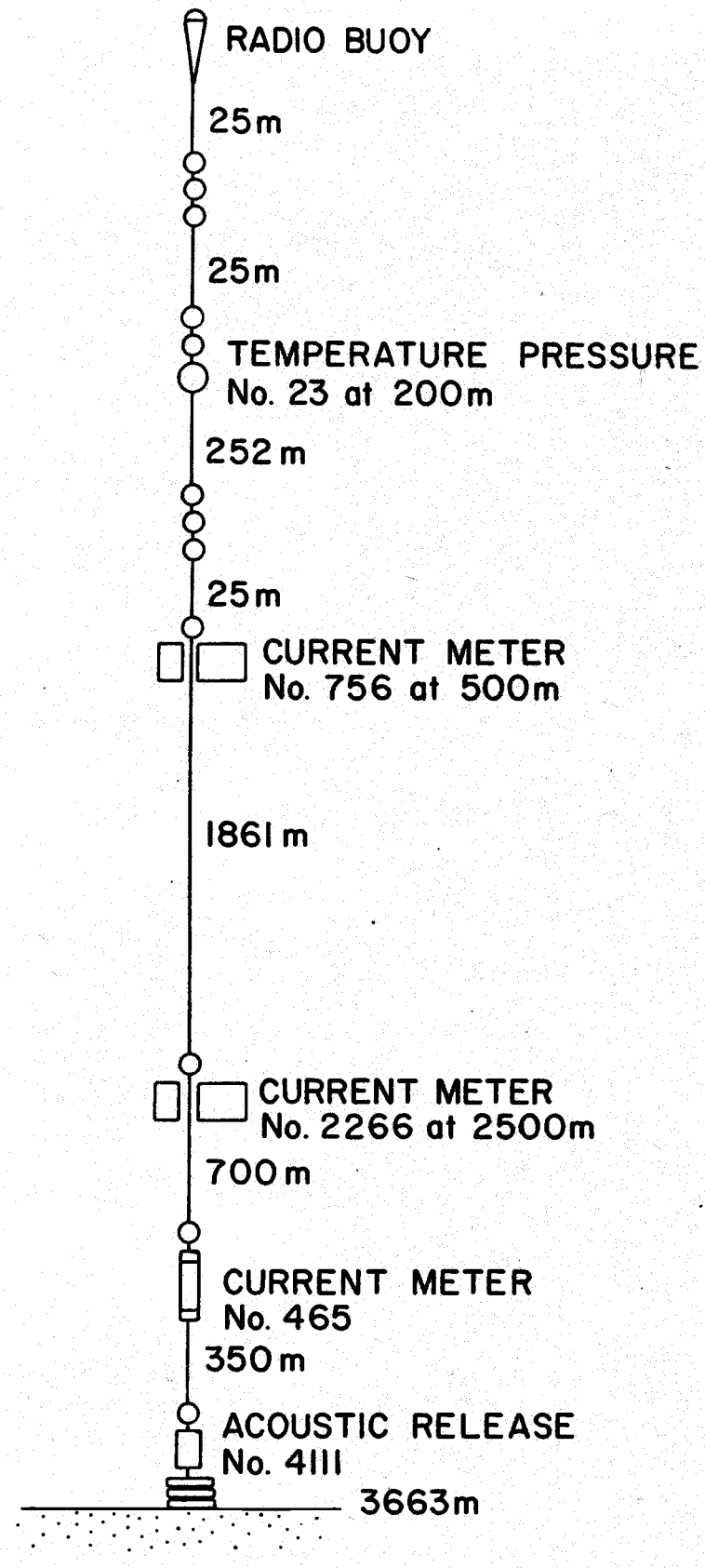
UNFILTERED TEMPERATURE. 607 METERS AT ML-8.



UNFILTERED PRESSURE. 607 METERS AT ML-8.



ML - 9



MAIN LINE (ML) 9
60° 08.5'S
62° 58.4'W
INSTALLED: 18 JANUARY 1979

ML-9

Position: 60°08.5'S, 62°58.4'W
Depth of Water: 3663 m
Set at 1738 UCT 18 January '79 by R/V MELVILLE
Retrieved at 0739 UCT 16 February '80 by R/V ATLANTIS II
Data Interval: 2032 UCT 18 January '79 to 0721 UCT 16 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	756/32
2500 m	2266/4

Instrument 756 recorded speed, direction, and temperature once per hour until the instrument was recovered. Pressure was recorded until 0000 UCT 4 December '79.

Instrument 2266 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

ML-9

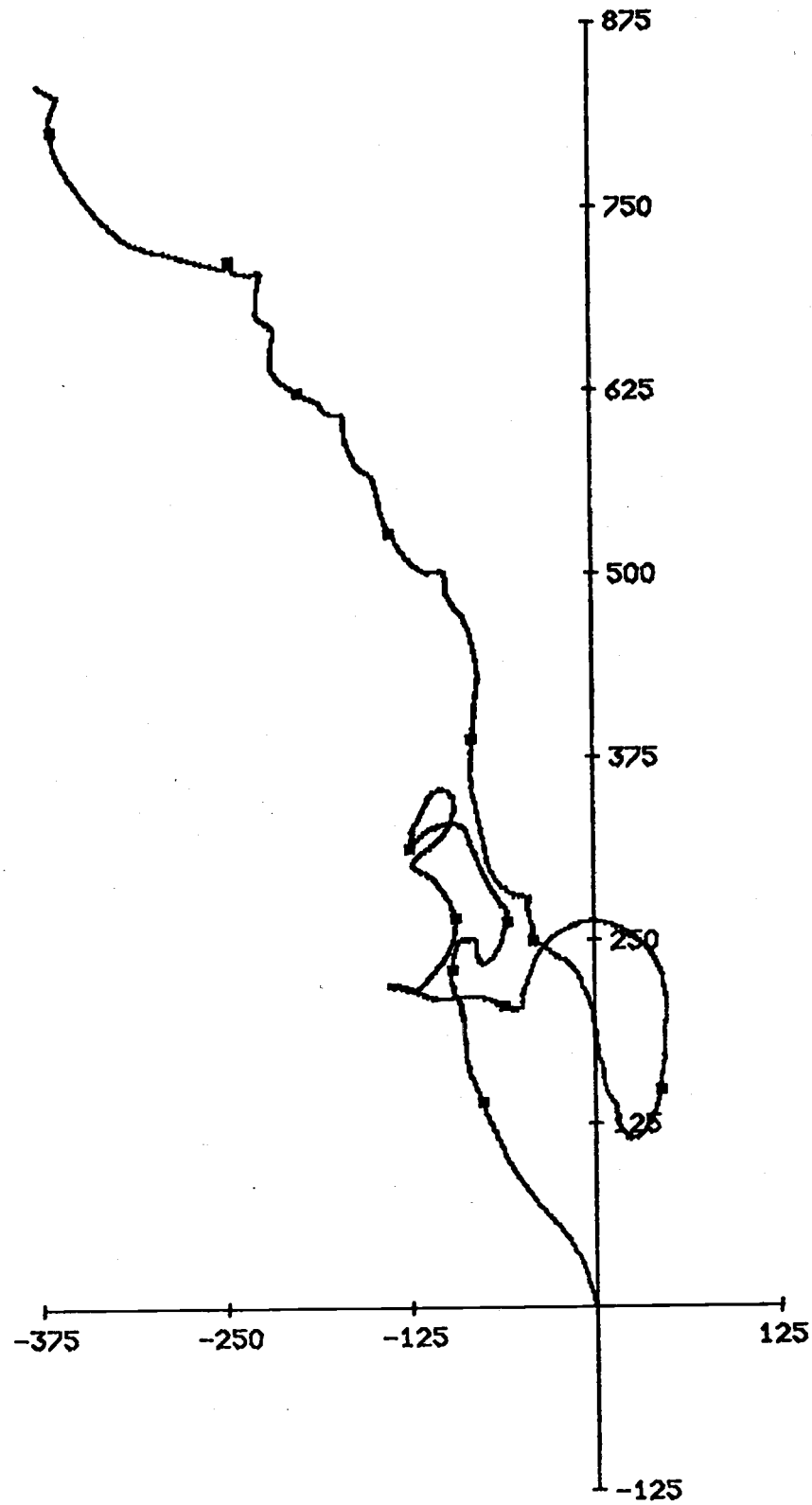
608 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	7.02	4.14	0.71	3.38	0.70	25.60	9442
U	-1.10	4.96	0.03	3.38	-19.90	19.30	9442
V	2.45	5.88	-0.49	4.01	-22.80	22.40	9442
T	2.00	0.05	-0.64	3.12	1.74	2.12	9442
P	611.38	9.55	2.71	11.68	595.20	671.80	7690

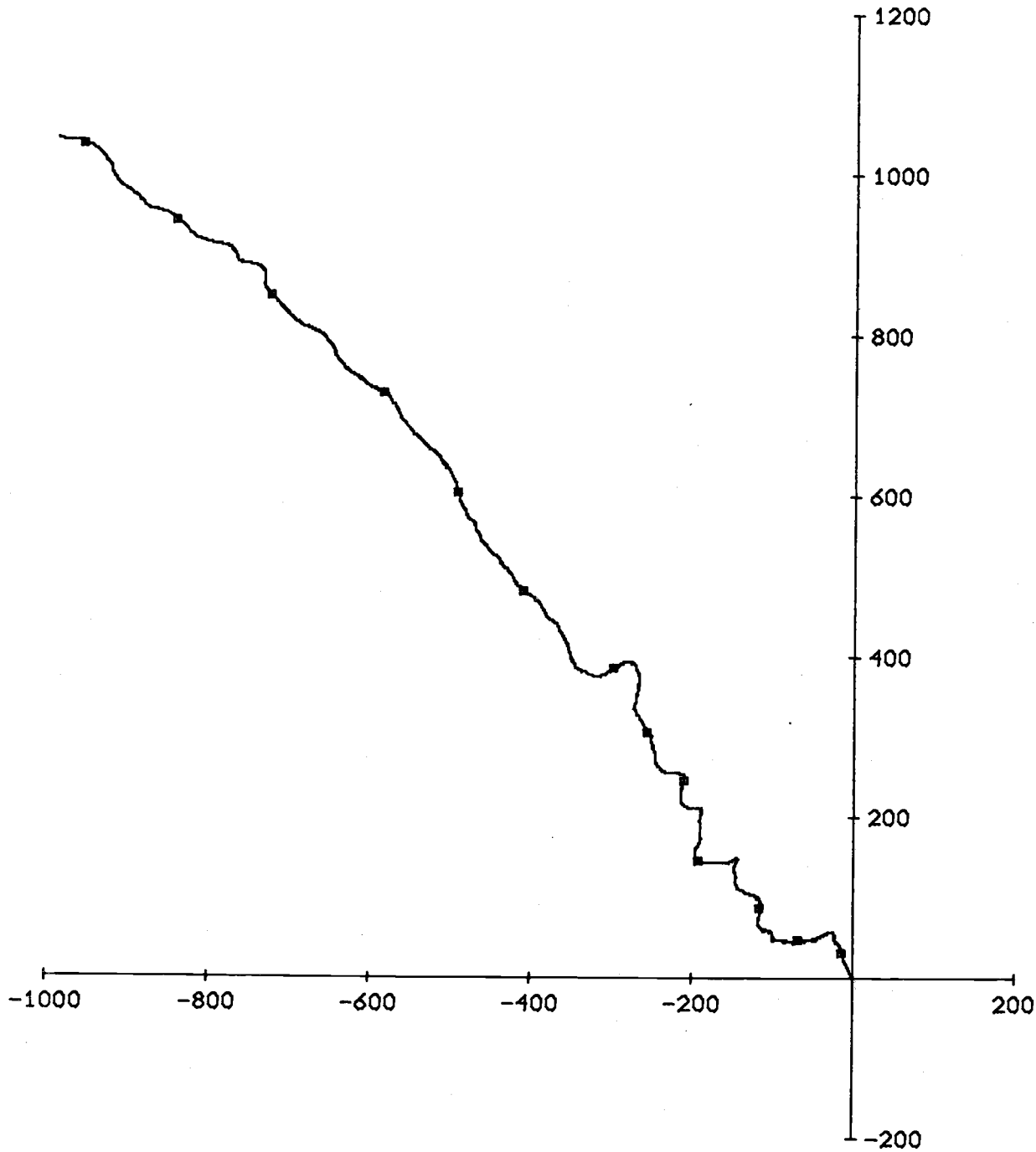
2665 m

S	6.37	3.21	0.69	3.51	0.80	21.50	9258
U	-2.97	4.32	-0.22	3.17	-20.80	12.10	9258
V	3.12	3.70	0.03	3.19	-11.70	16.60	9258
T	0.65	0.05	-0.00	2.58	0.52	0.79	9258
P	2678.28	1.22	5.53	36.01	2675.20	2690.10	9258

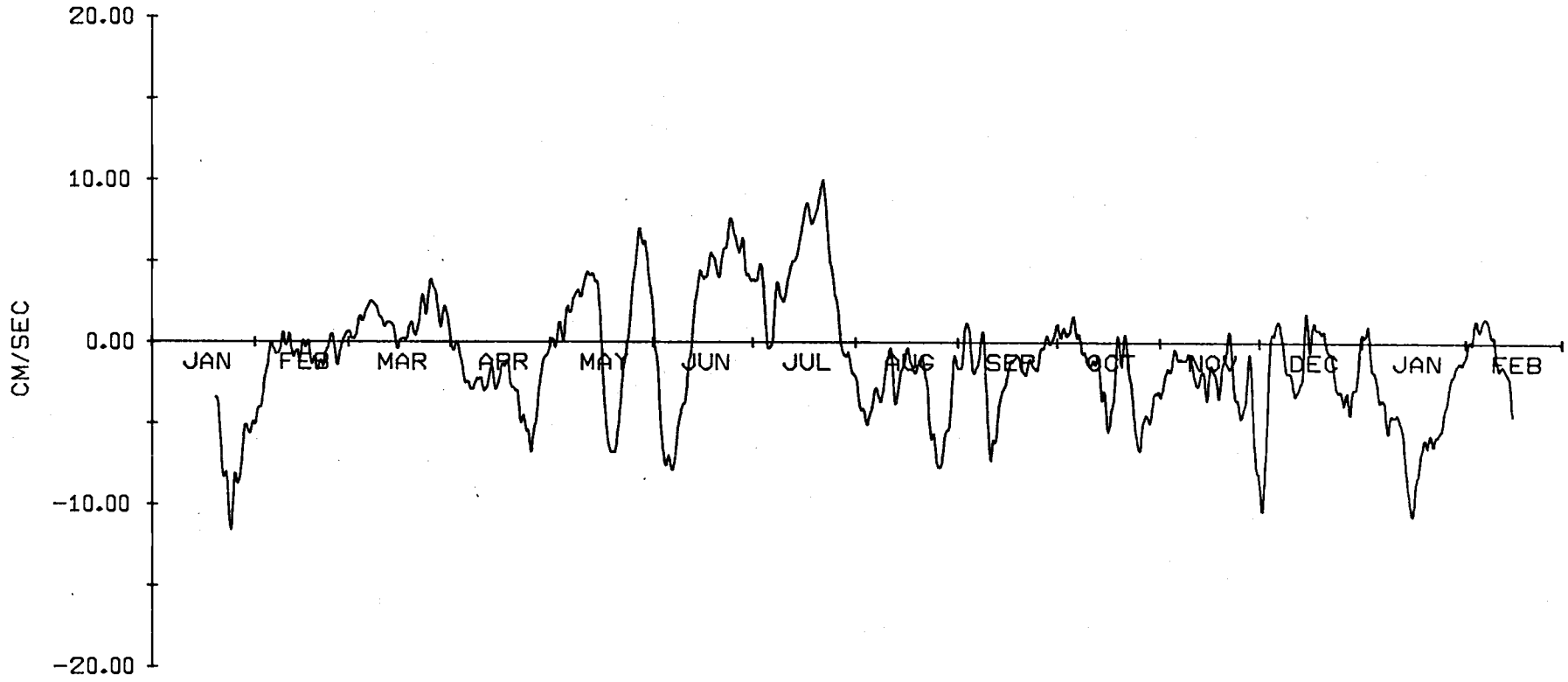
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



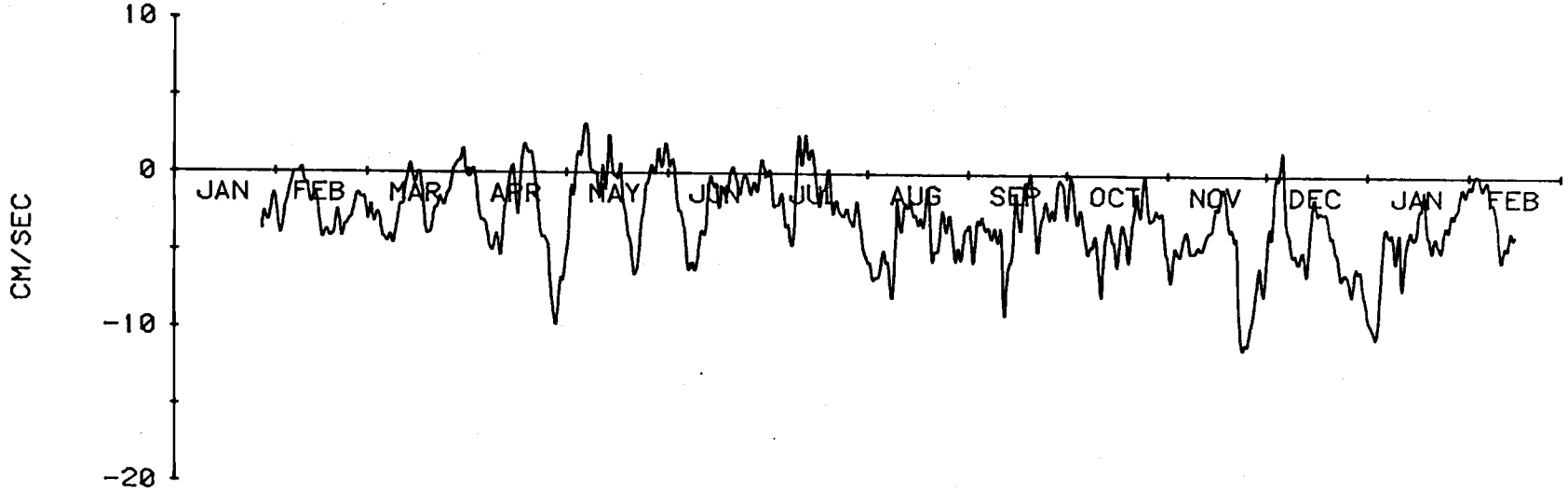
608 M AT ML-9. 393.4 DAYS STNG 2032 18 JAN 79.



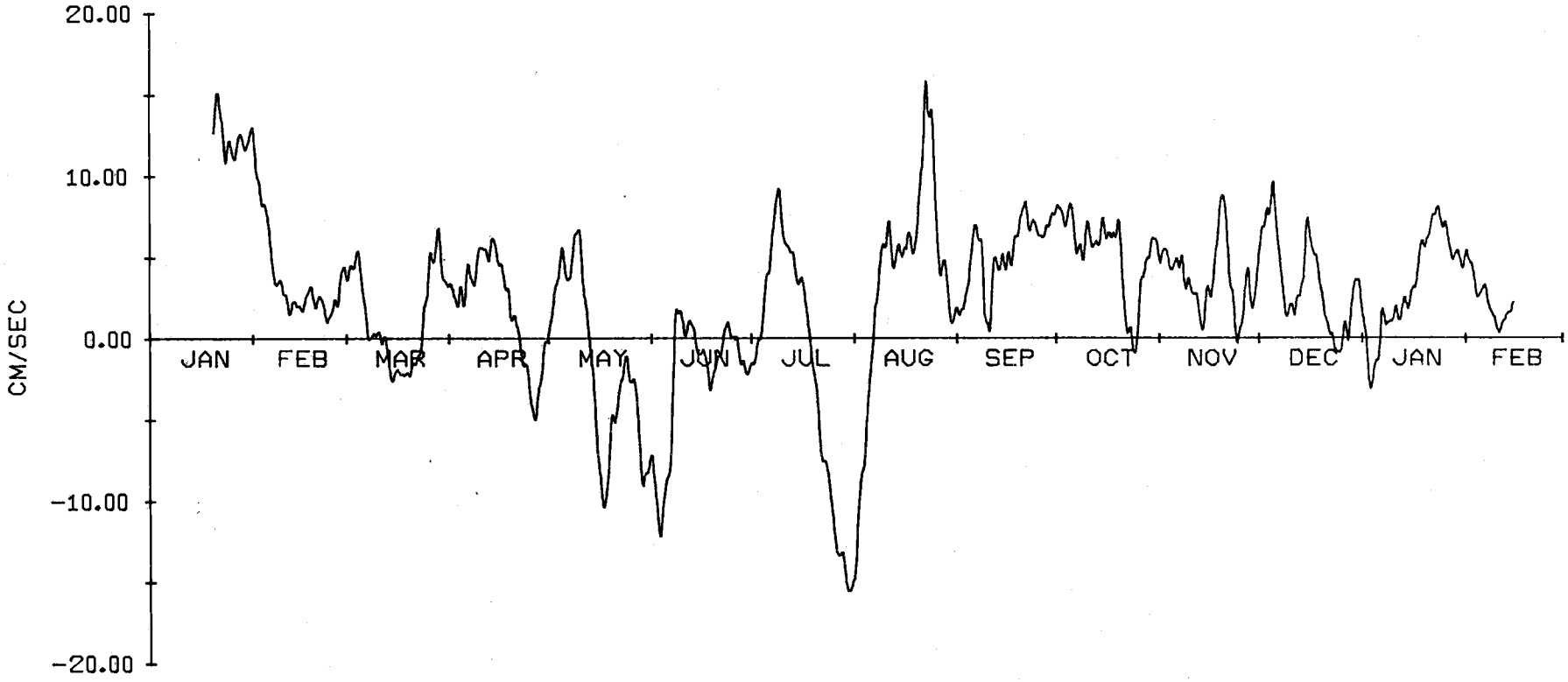
2665 M AT STN ML-9. 385.7 DAYS STARTING 1421 26 JAN 79.



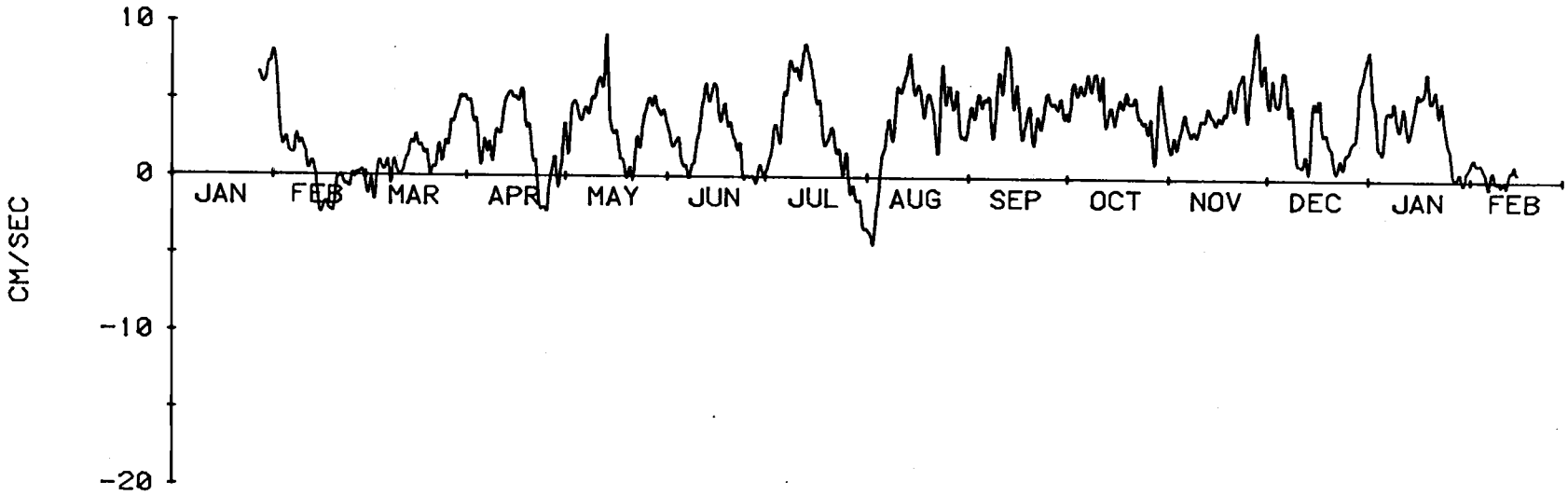
608 METERS AT ML-9
LLP FILTERED U COMPONENT



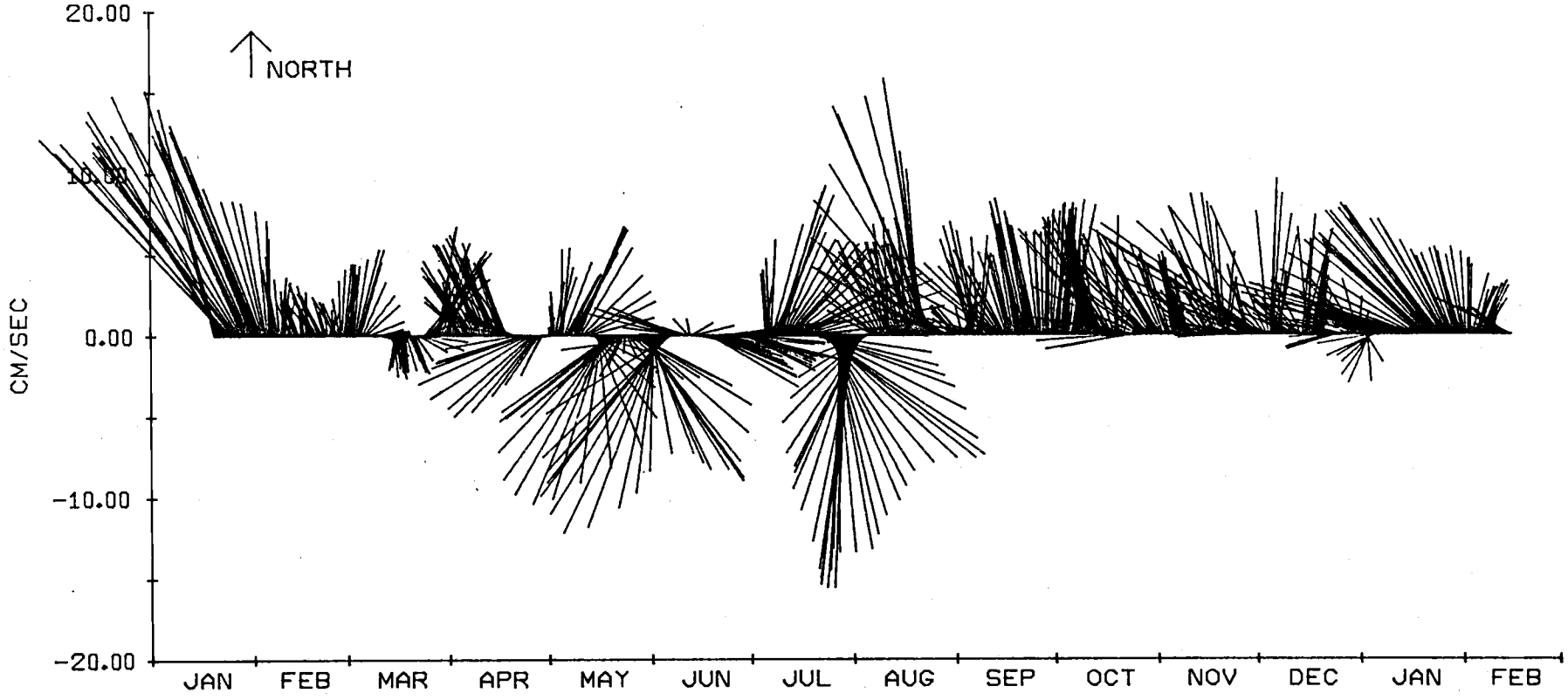
2665 METERS AT ML-9
LLP FILTERED U COMPONENT



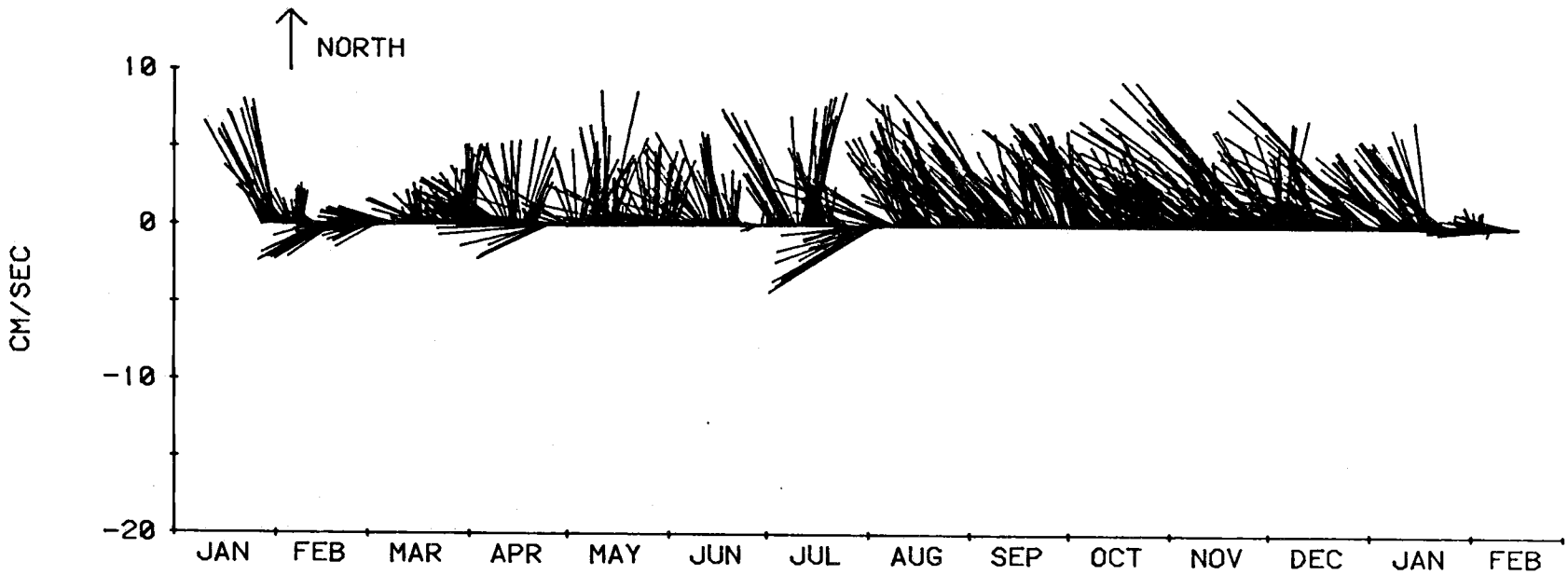
608 METERS AT ML-9
LLP FILTERED V COMPONENT



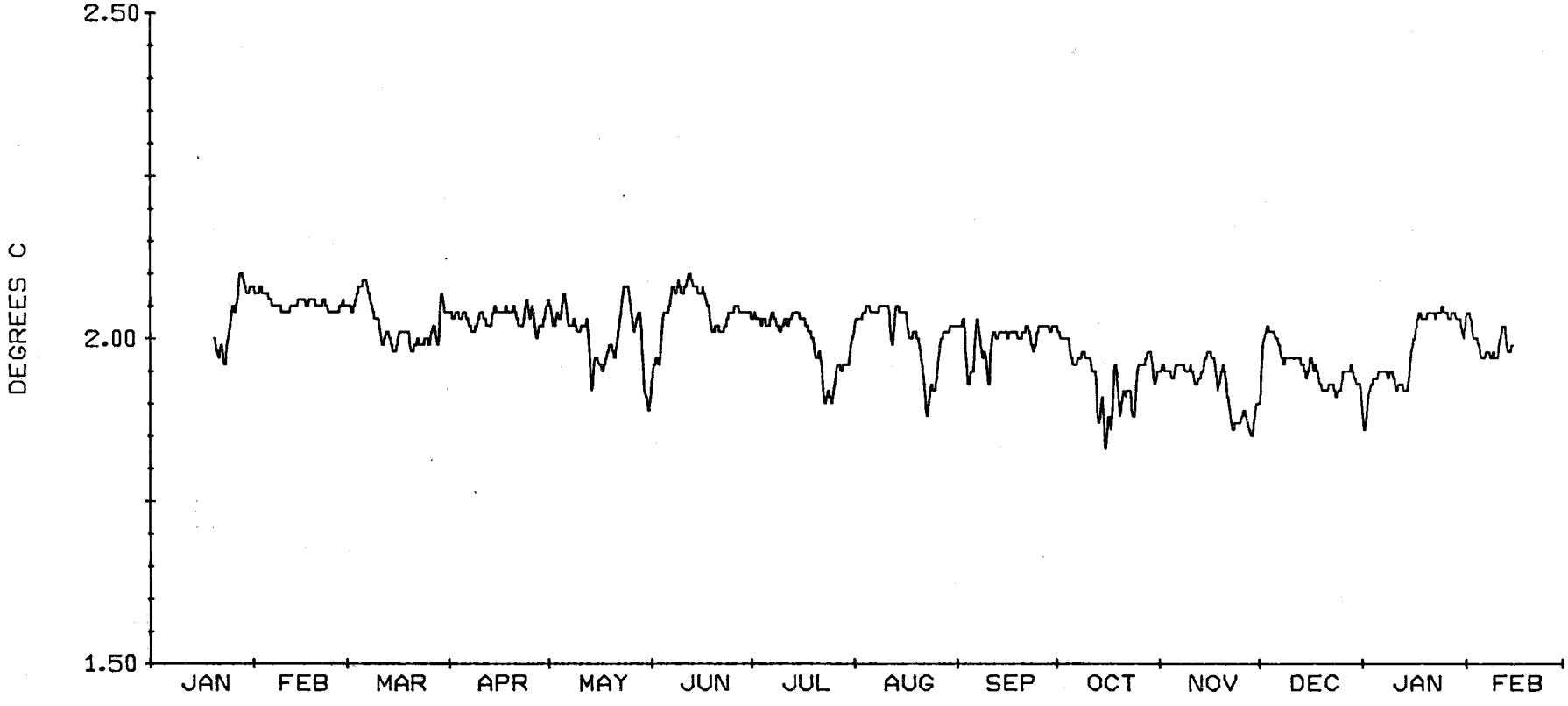
2665 METERS AT ML-9
LLP FILTERED V COMPONENT



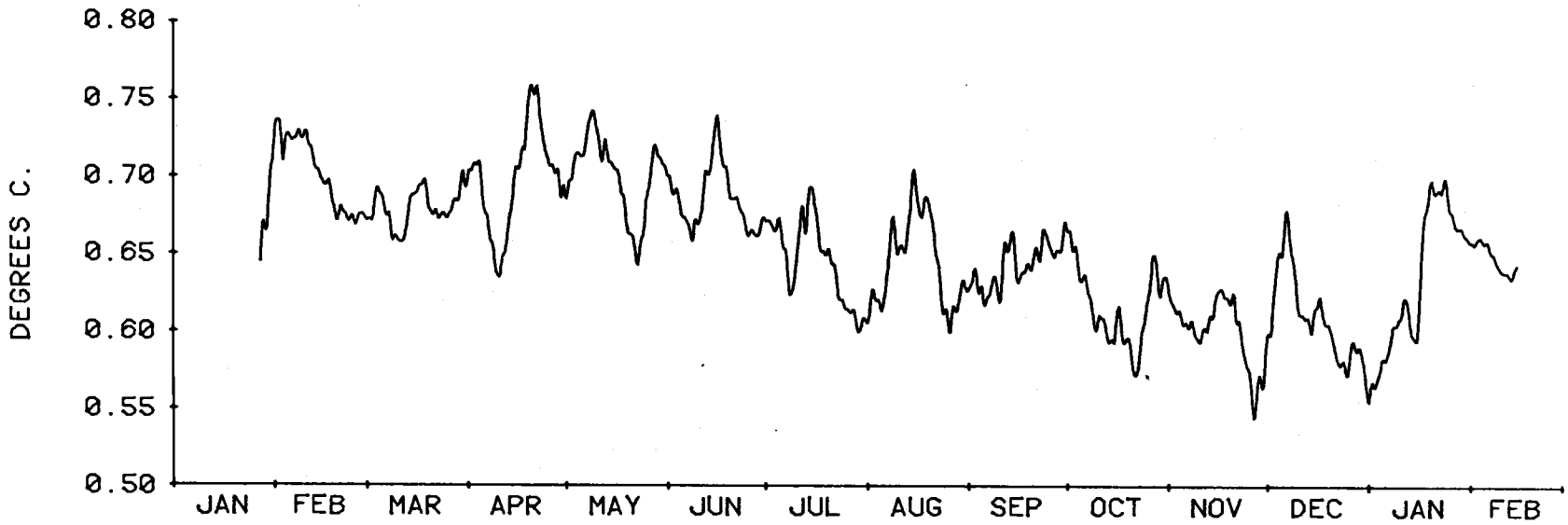
608 METERS AT ML-9
LLP FILTERED CURRENT



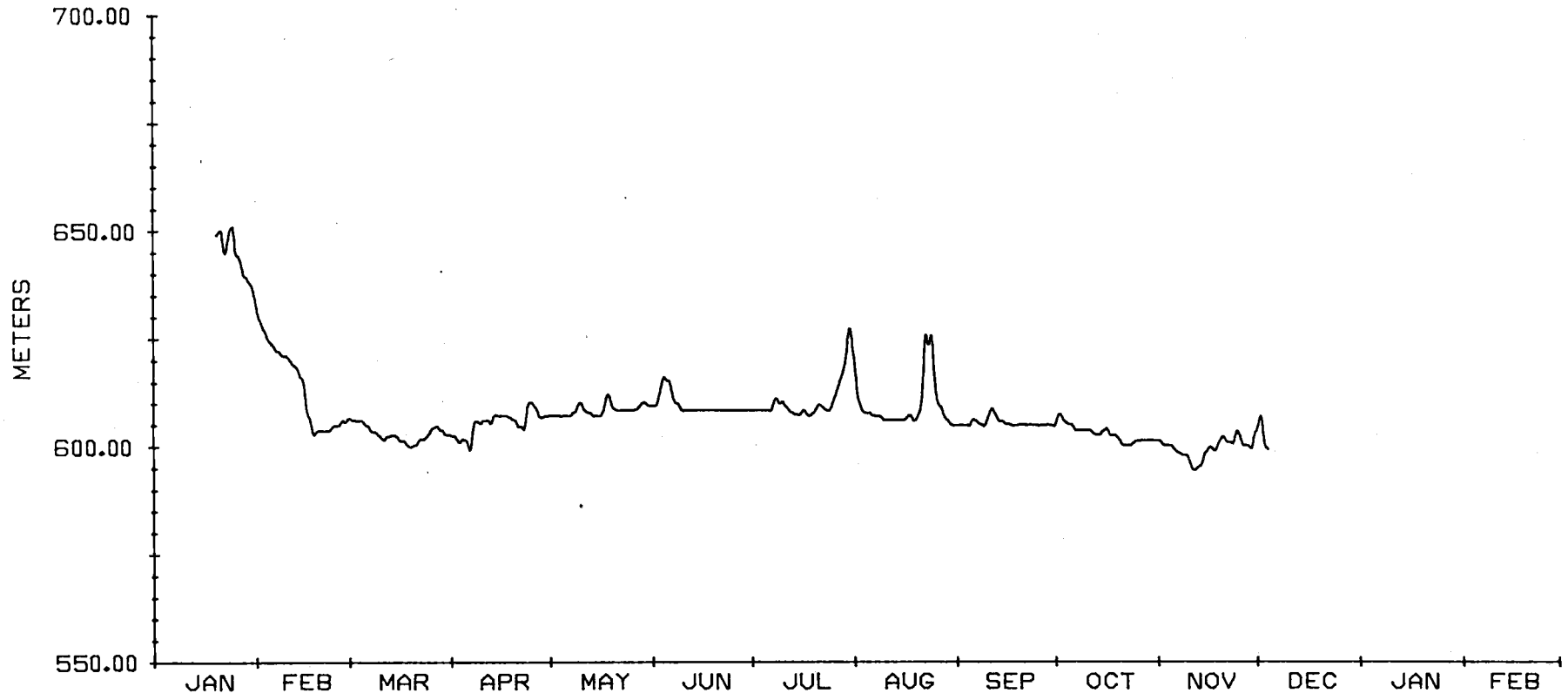
2665 METERS AT ML-9
LLP FILTERED CURRENT



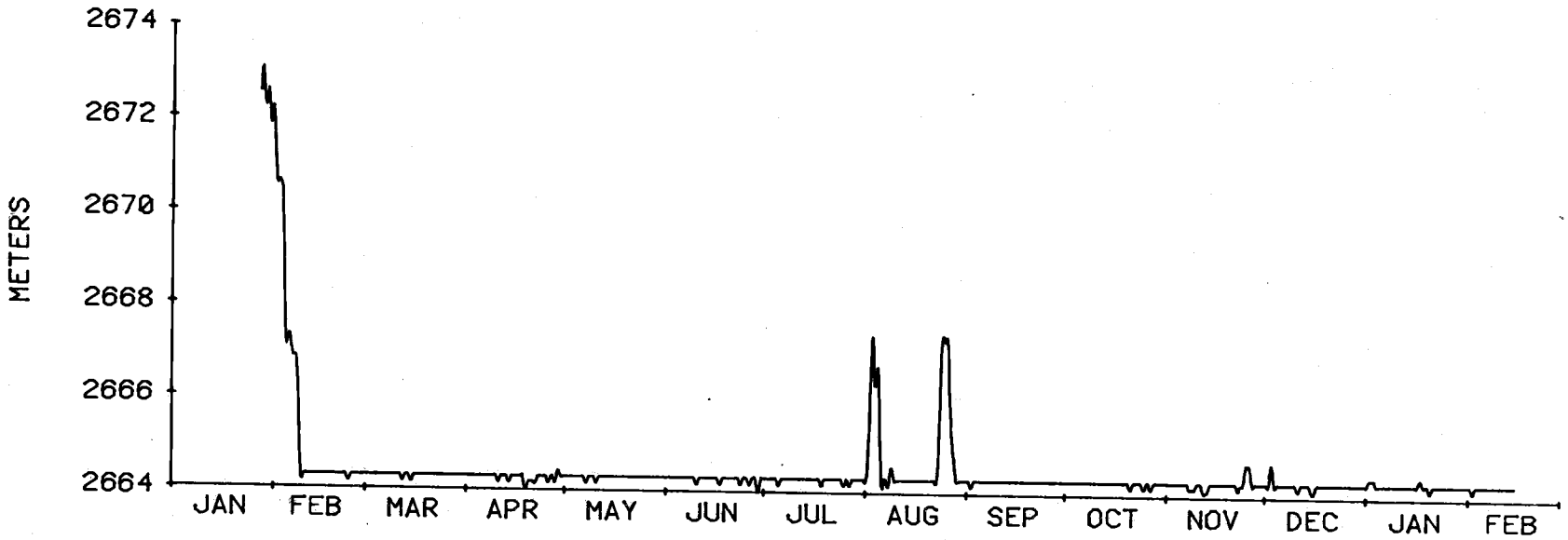
608 METERS AT ML-9
LLP FILTERED TEMPERATURE



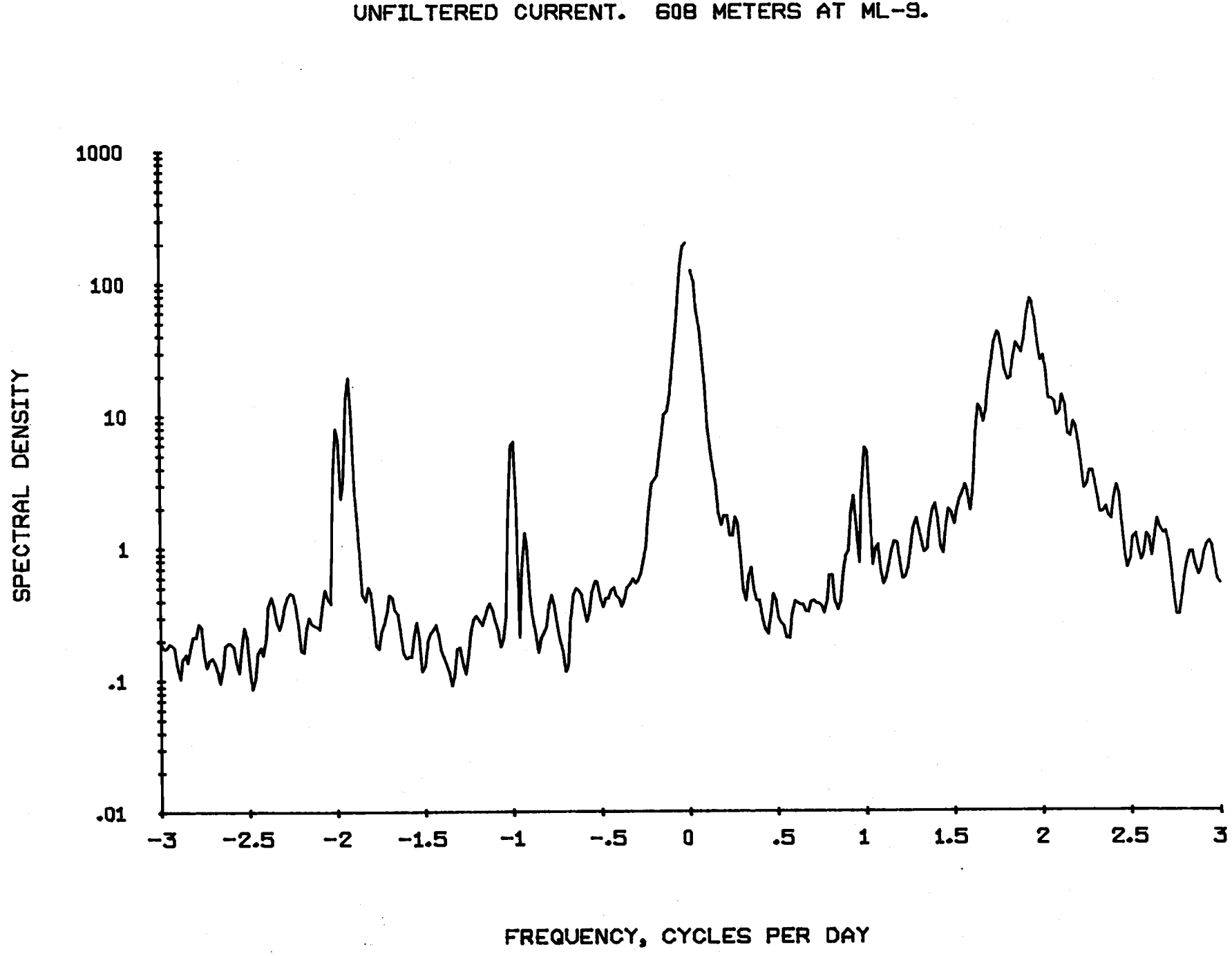
2665 METERS AT ML-9
LLP FILTERED TEMPERATURE

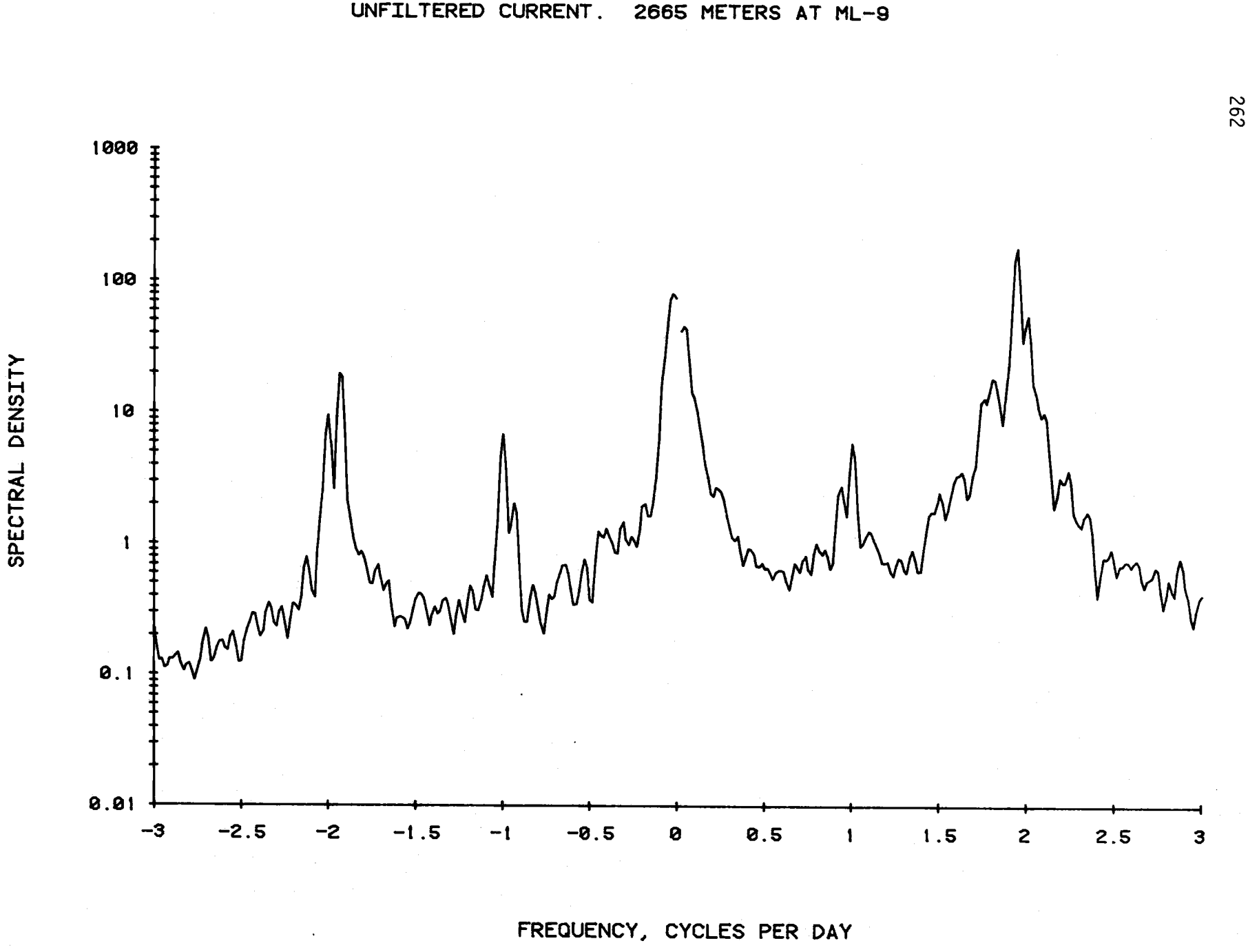


608 METERS AT ML-9
LLP FILTERED PRESSURE

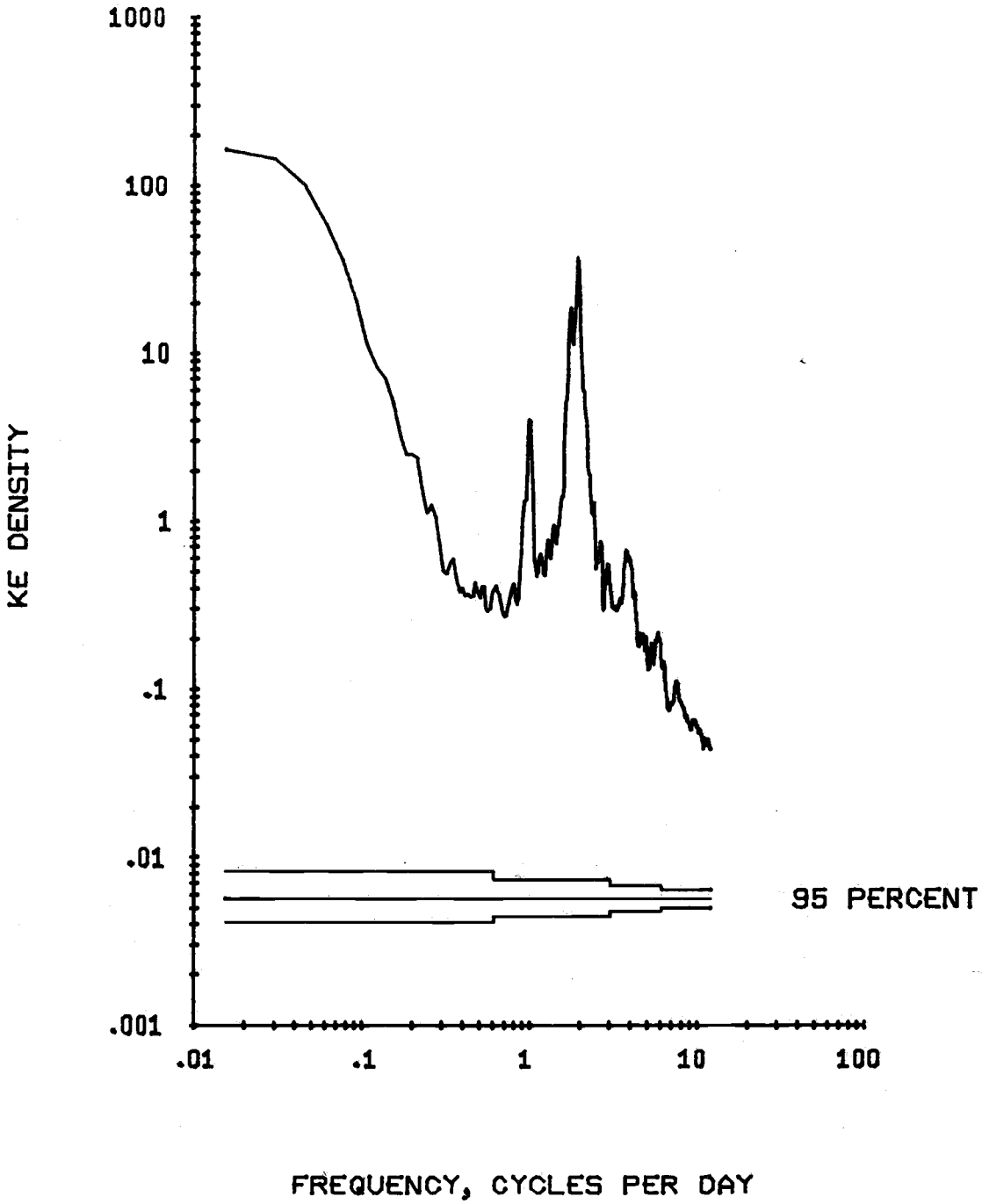


2665 METERS AT ML-9
LLP FILTERED PRESSURE

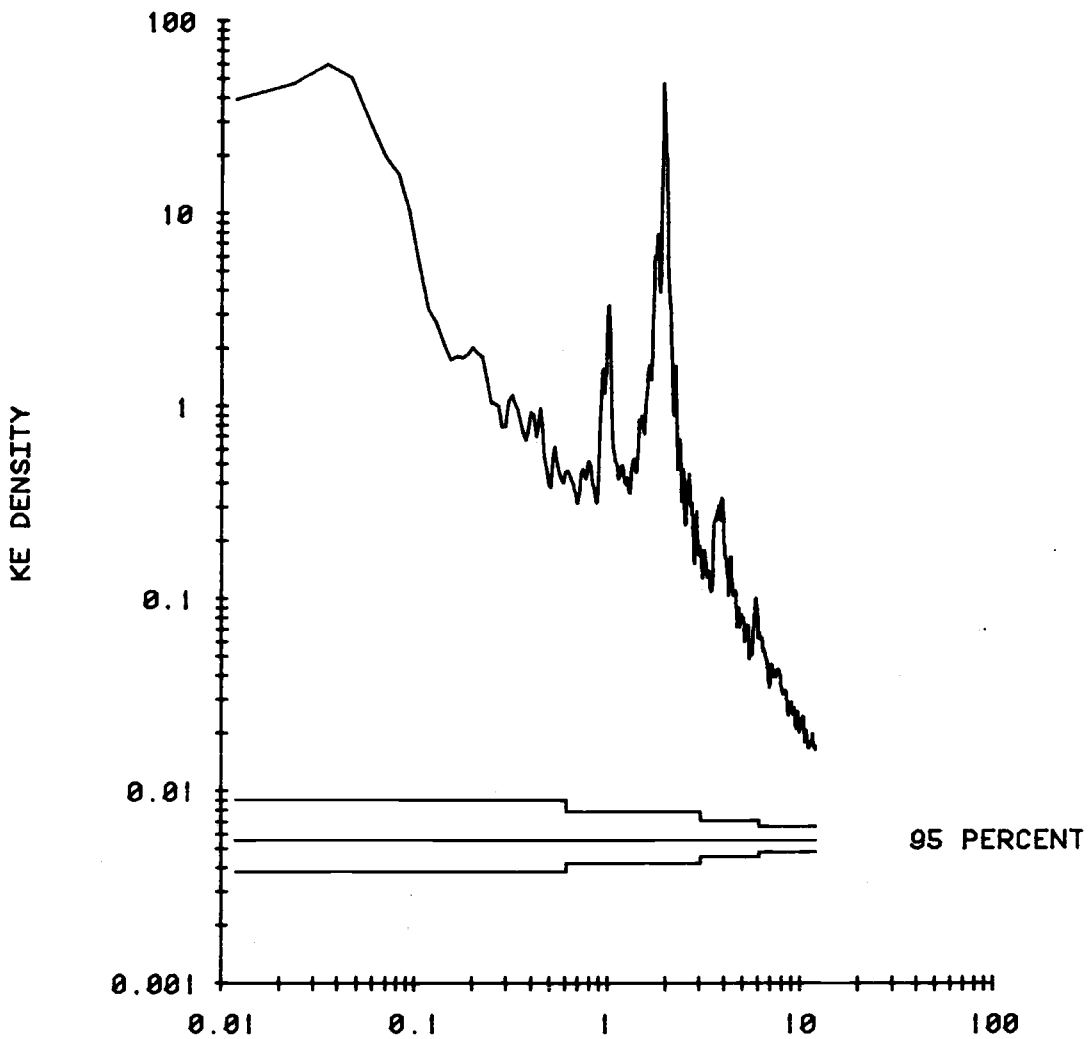

UNFILTERED CURRENT. 608 METERS AT ML-9.
SPECTRAL DENSITY
1000
100
10
1
.1
.01
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY


UNFILTERED CURRENT. 2665 METERS AT ML-9
SPECTRAL DENSITY
1000
100
10
1
0.1
0.01
-3
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

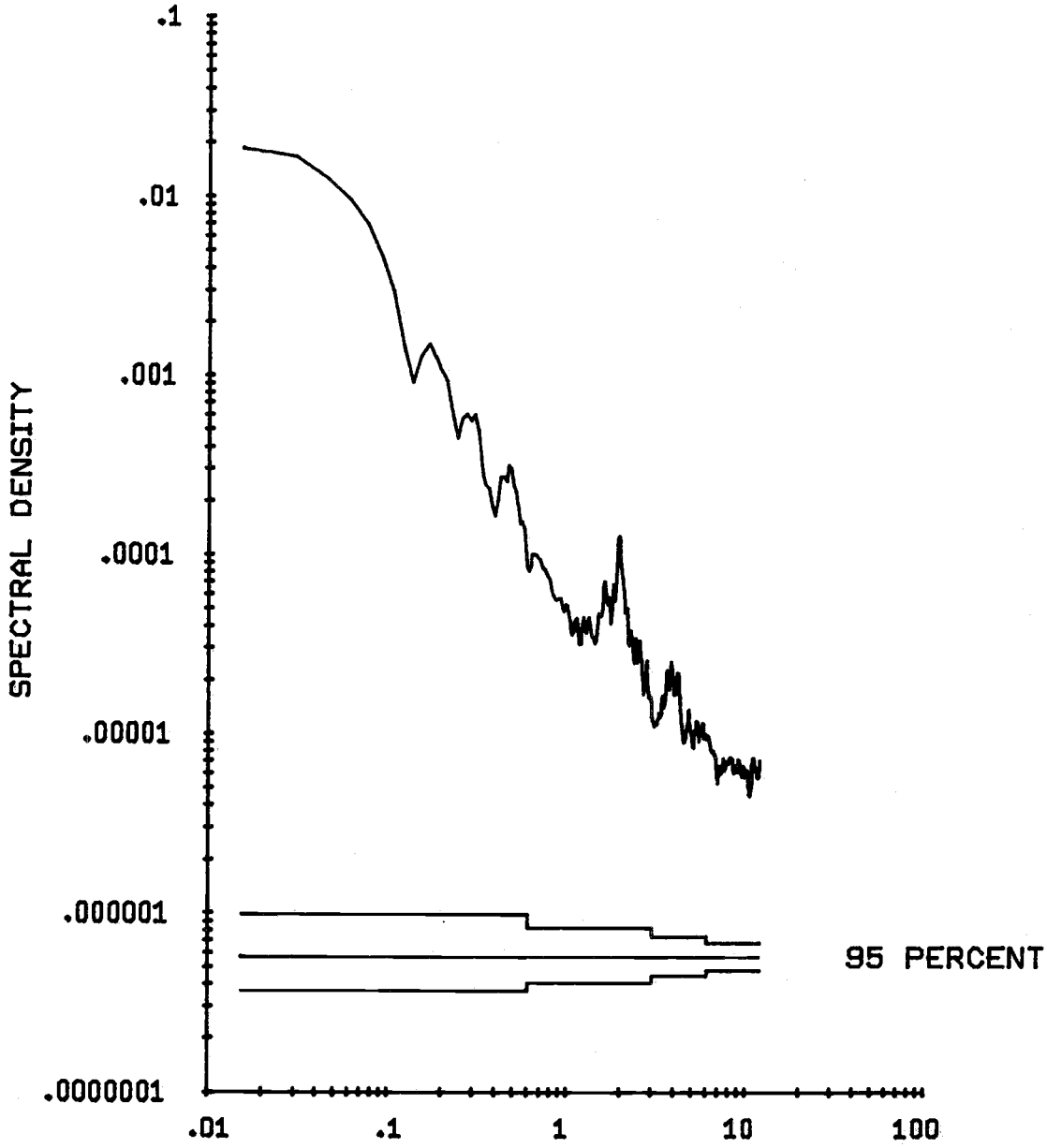
UNFILTERED CURRENT. 608 M AT ML-9.



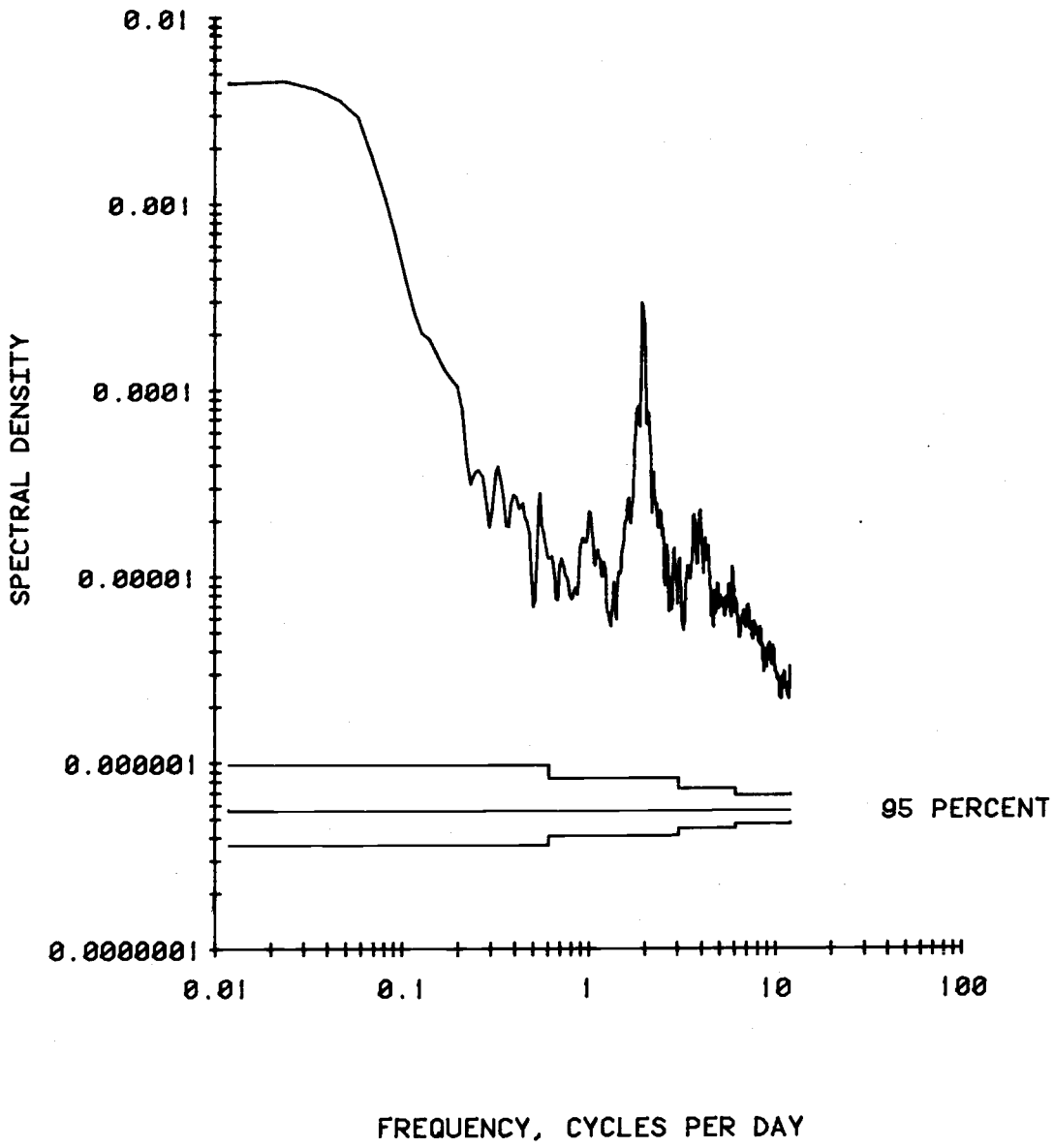
UNFILTERED CURRENT. 2665 METERS AT ML-9



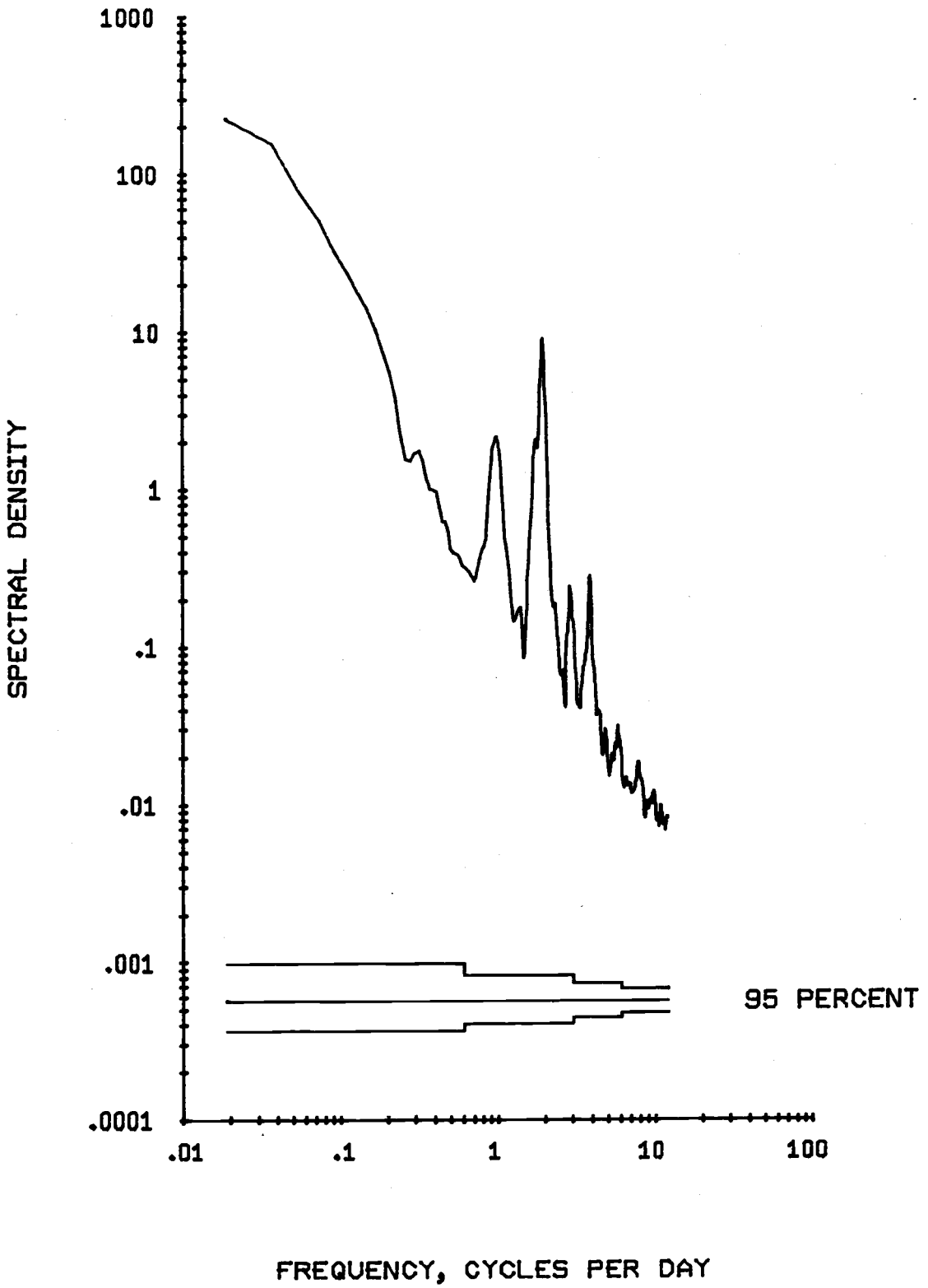
UNFILTERED TEMPERATURE. 608 METERS AT ML-9.



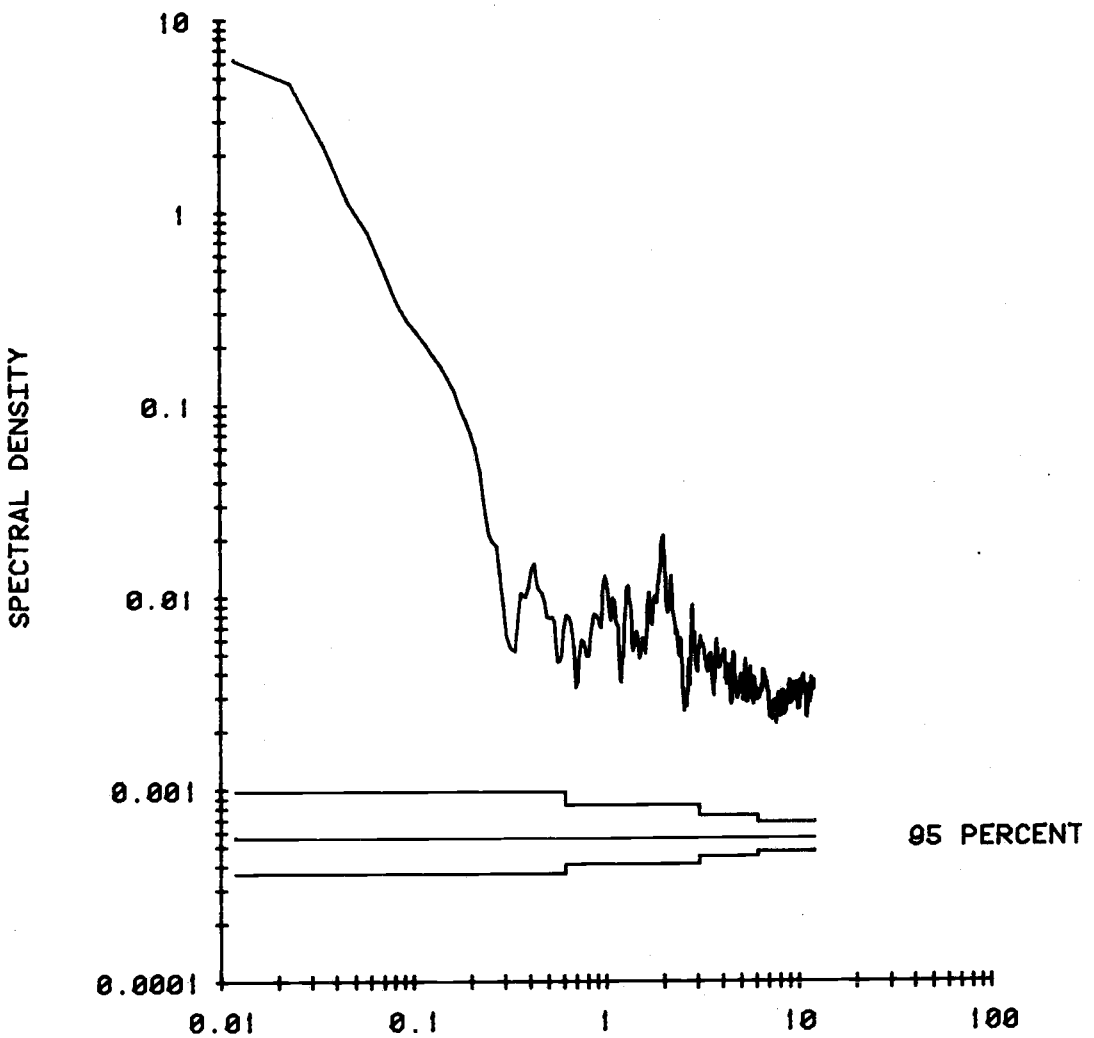
UNFILTERED TEMPERATURE. 2665 METERS AT ML-9



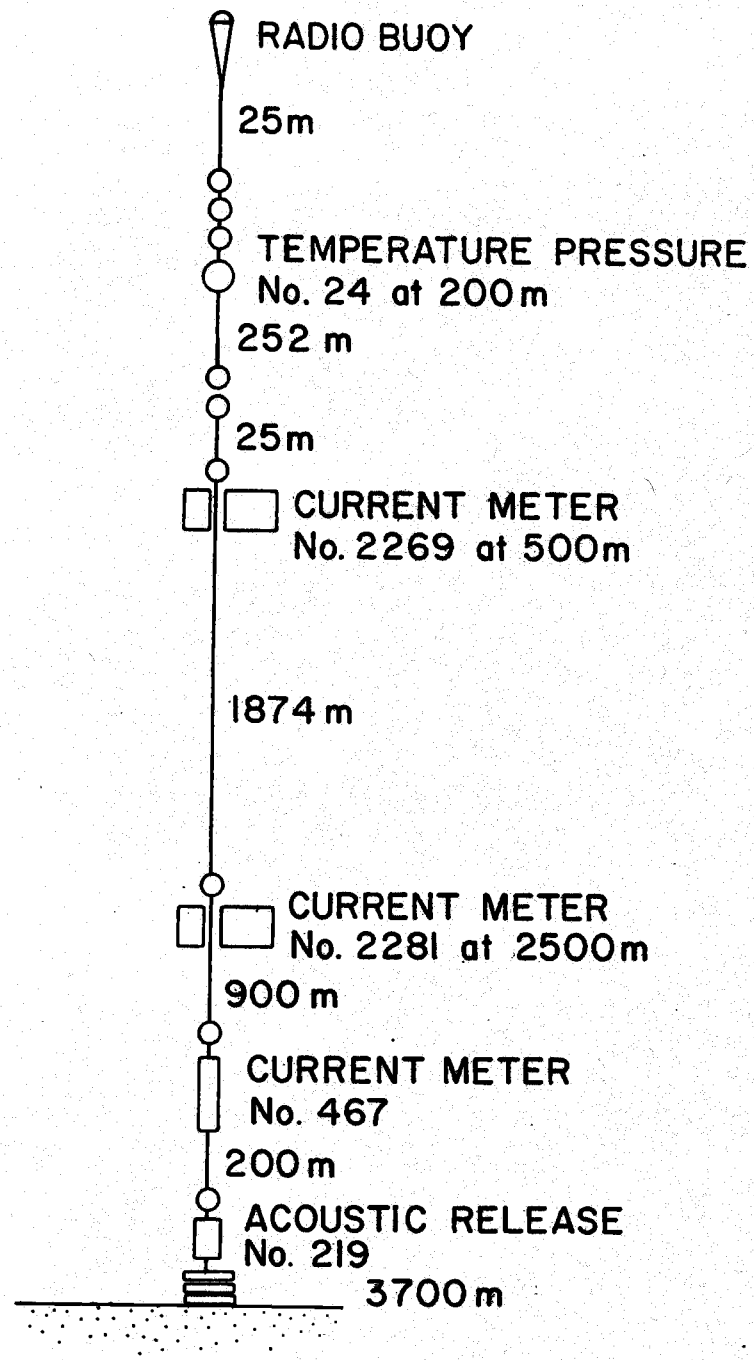
UNFILTERED PRESSURE. 608 METERS AT ML-9.



UNFILTERED PRESSURE. 2665 METERS AT ML-9



ML - 10



MAIN LINE (ML) 10
60° 45.9' S
62° 17.3' W
INSTALLED: 19 JANUARY 1979

ML-10

Position: 60°45.9'S, 62°17.3"W
Depth of Water: 3700 m
Set at 0043 UCT 19 January '79 by R/V MELVILLE
Retrieved at 2041 UCT 15 Feburary '80 by R/V ATLANTIS II
Data Interval: 0302 UCT 19 January '79 to 2036 UCT 15 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	2269/14
2500 m	2281/8

Instrument 2269 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

Instrument 2281 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

ML-10

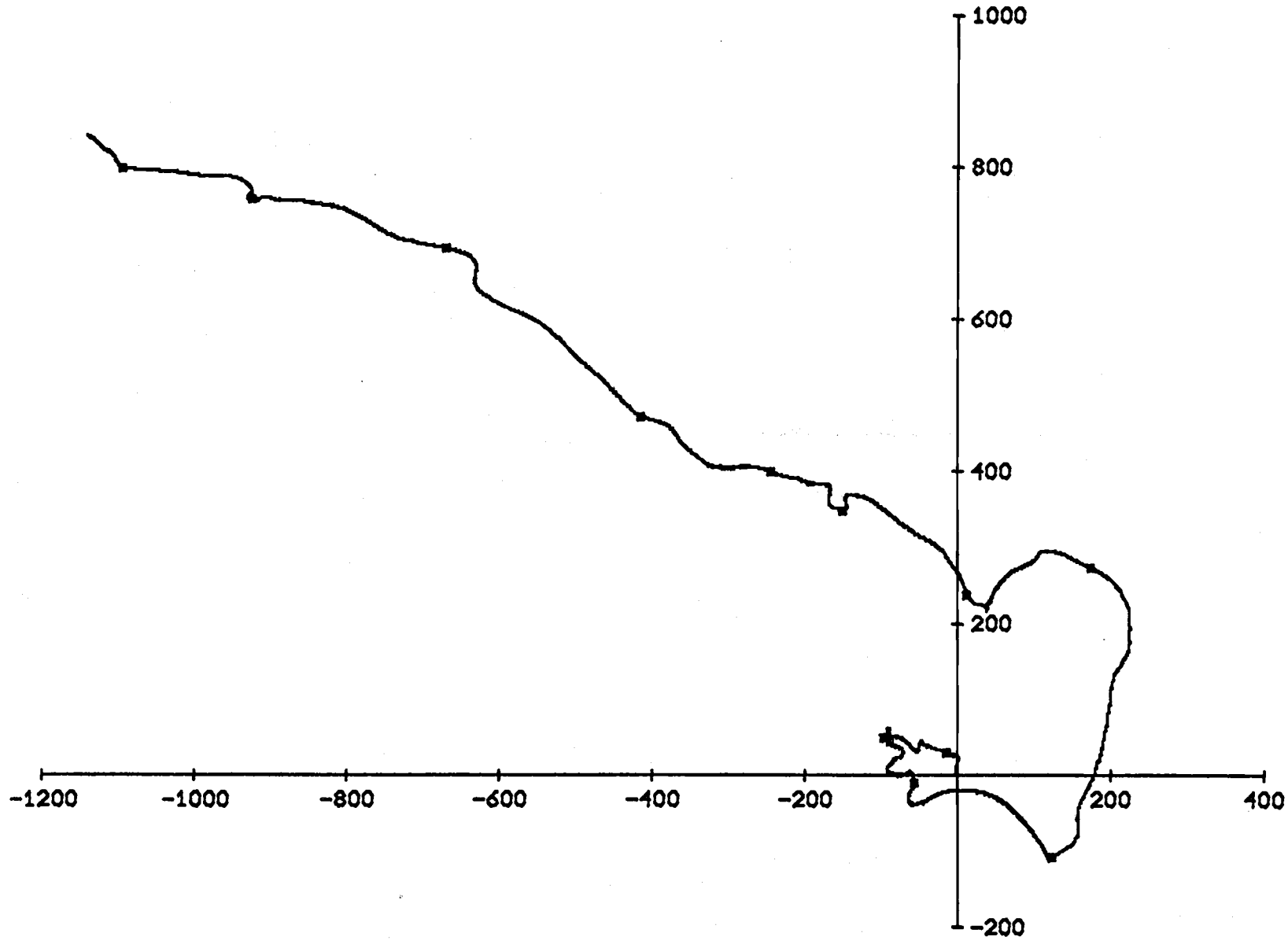
498 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	9.25	5.66	0.88	3.17	0.80	29.70	9425
U	-3.35	7.47	0.04	3.15	-28.50	20.10	9425
V	2.48	6.66	0.54	4.03	-16.80	29.60	9425
T	2.01	0.09	-2.20	9.48	1.55	2.17	9425
P	500.82	43.68	3.39	16.33	477.90	833.40	9425

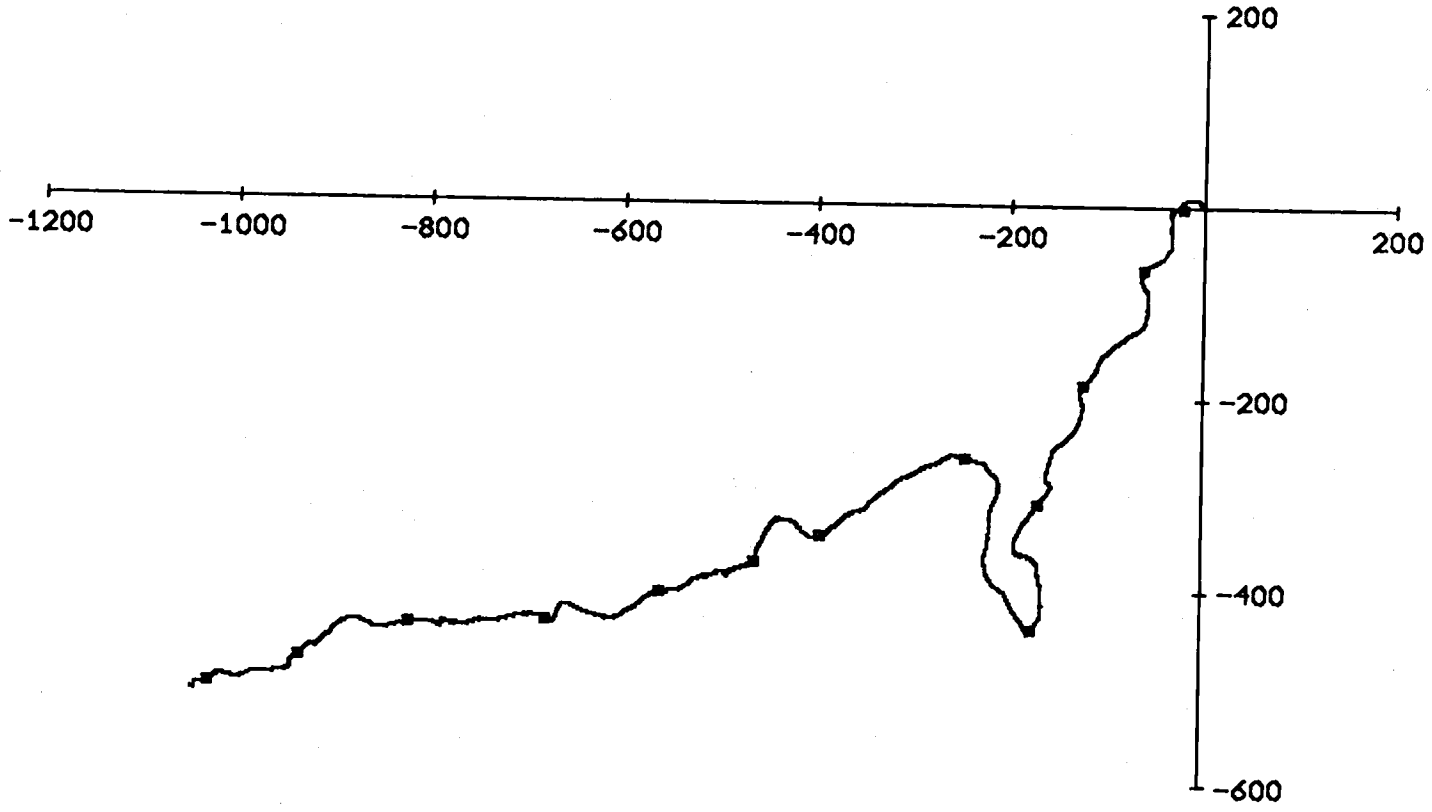
2576 m

S	5.88	3.52	0.84	3.82	0.70	23.10	9426
U	-3.09	4.08	-0.29	3.26	-18.60	10.50	9426
V	-1.50	4.30	0.87	5.65	-17.60	21.60	9426
T	0.70	0.06	-0.02	3.50	0.50	0.89	9426
P	2589.36	24.17	2.67	11.31	2565.80	2758.30	9426

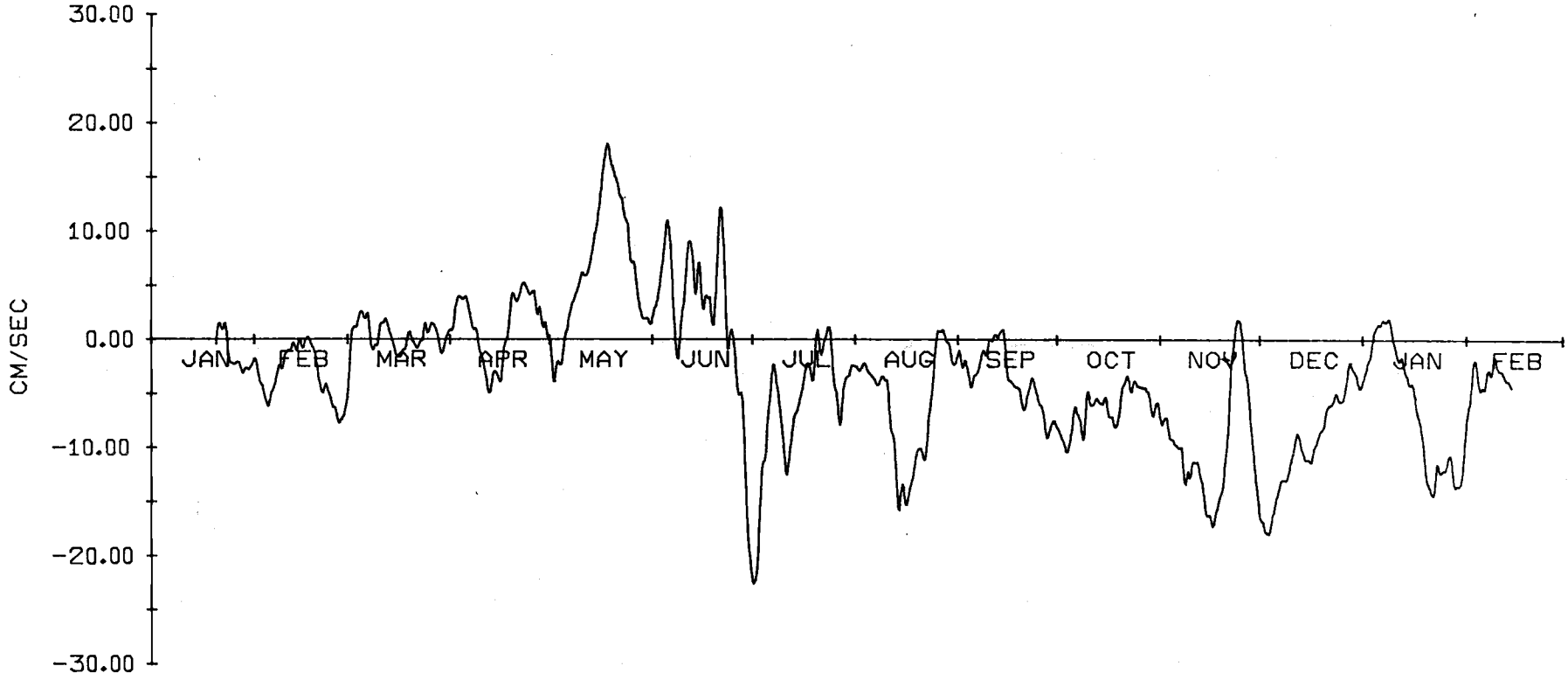
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



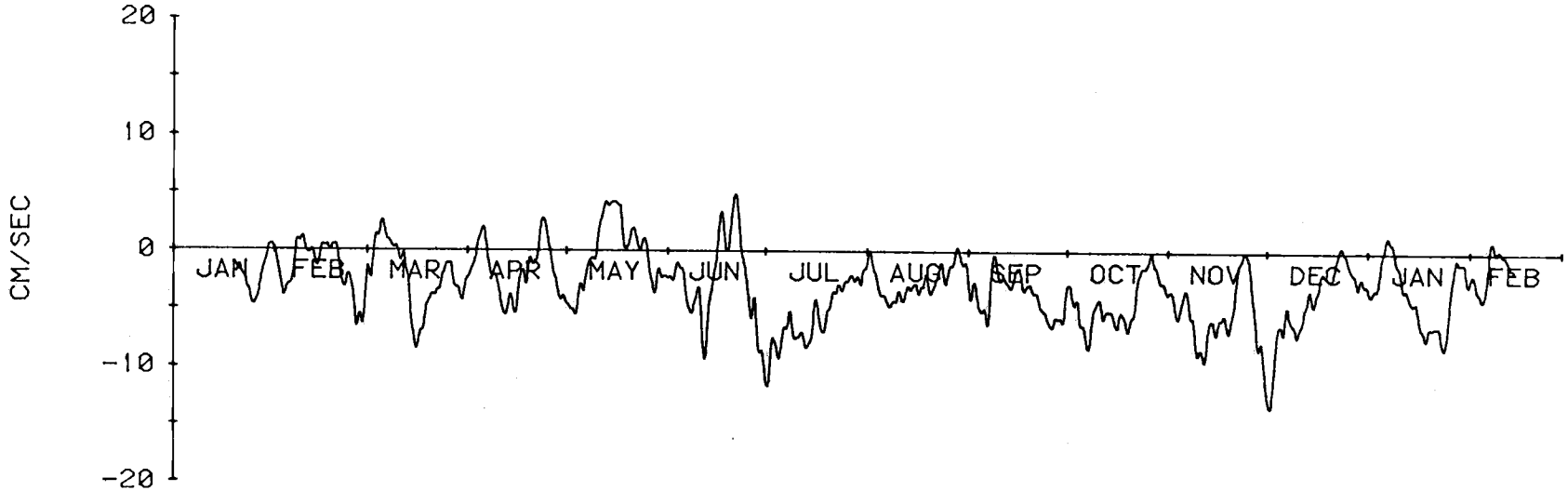
498 METERS AT ML-10. 19 JAN 79 - 15 FEB 80. TAPE 2269/14.



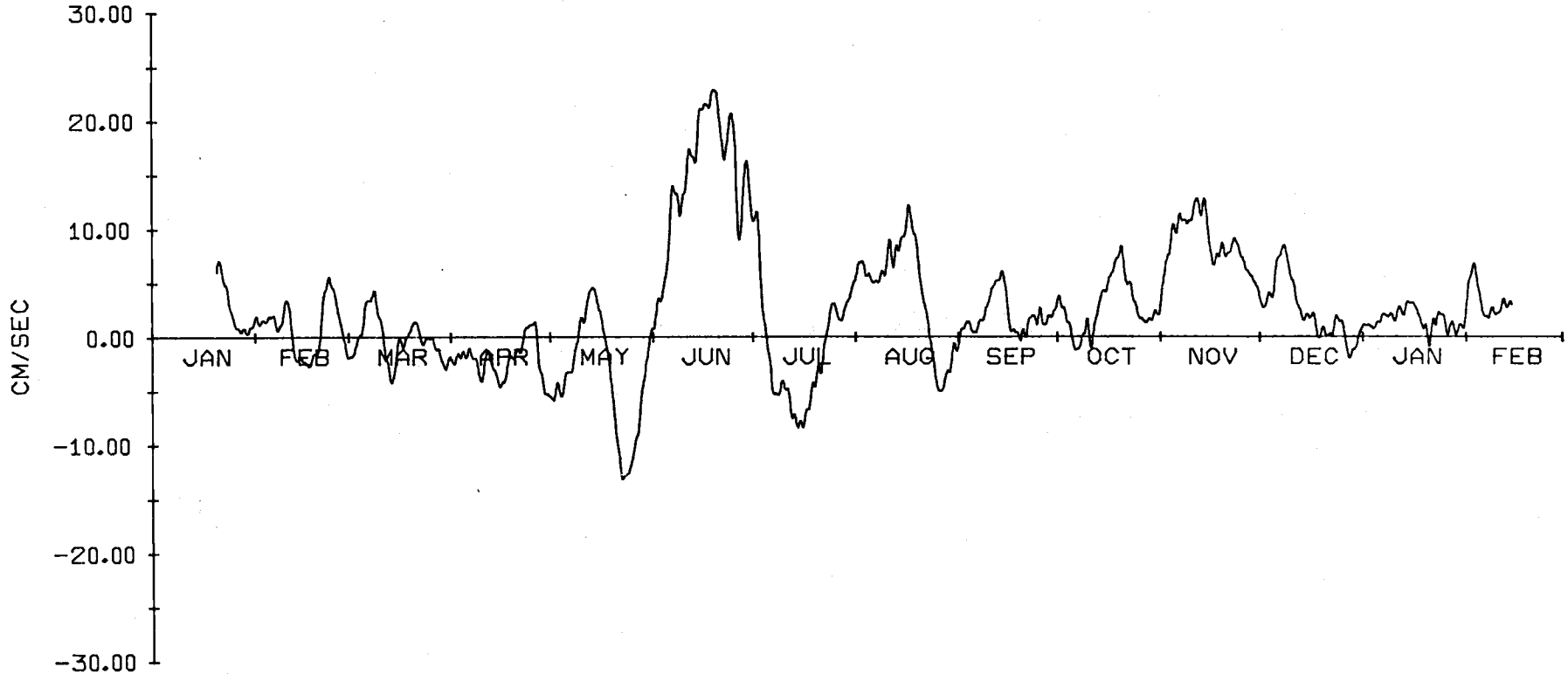
2576 M AT STN ML-10. 392.7 DAYS STARTING 0302 19 JAN 79.



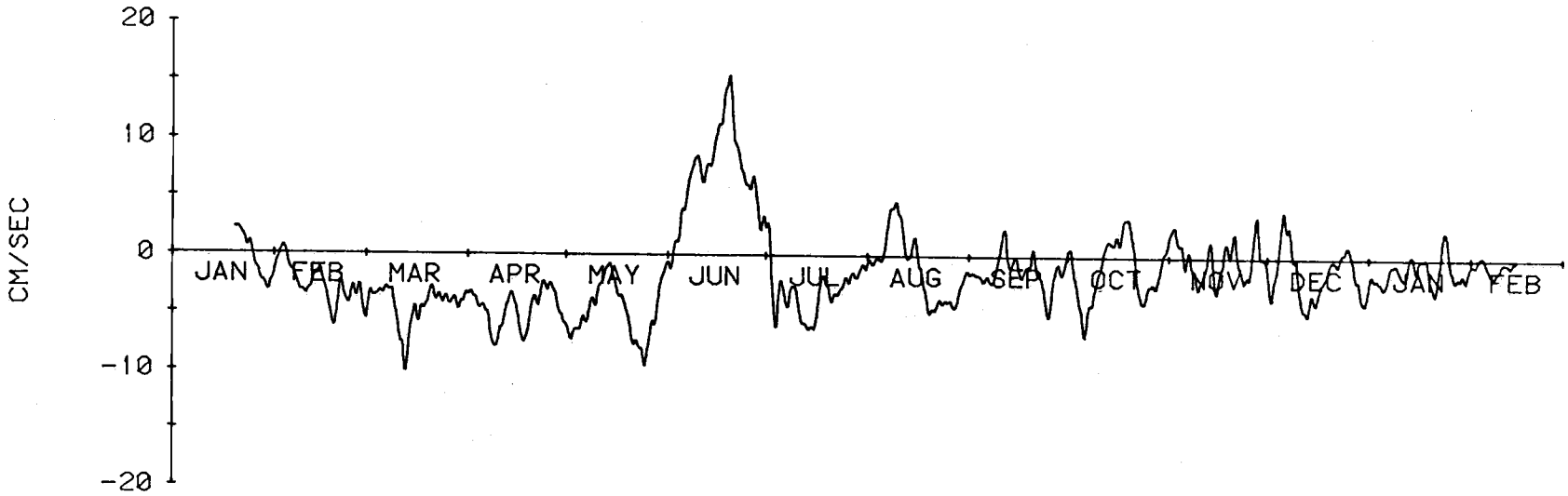
498 METERS AT ML-10
LLP FILTERED U COMPONENT



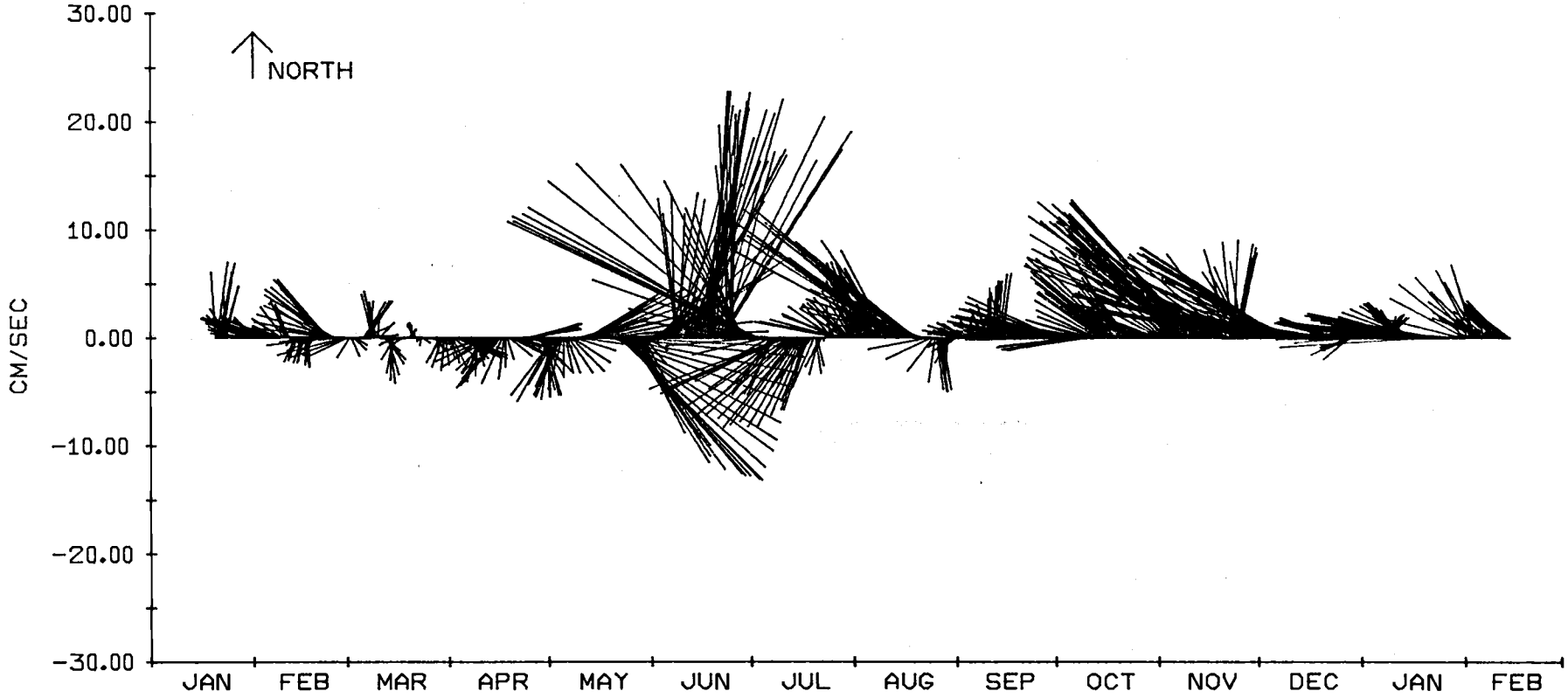
2576 METERS AT ML-10
LLP FILTERED U COMPONENT



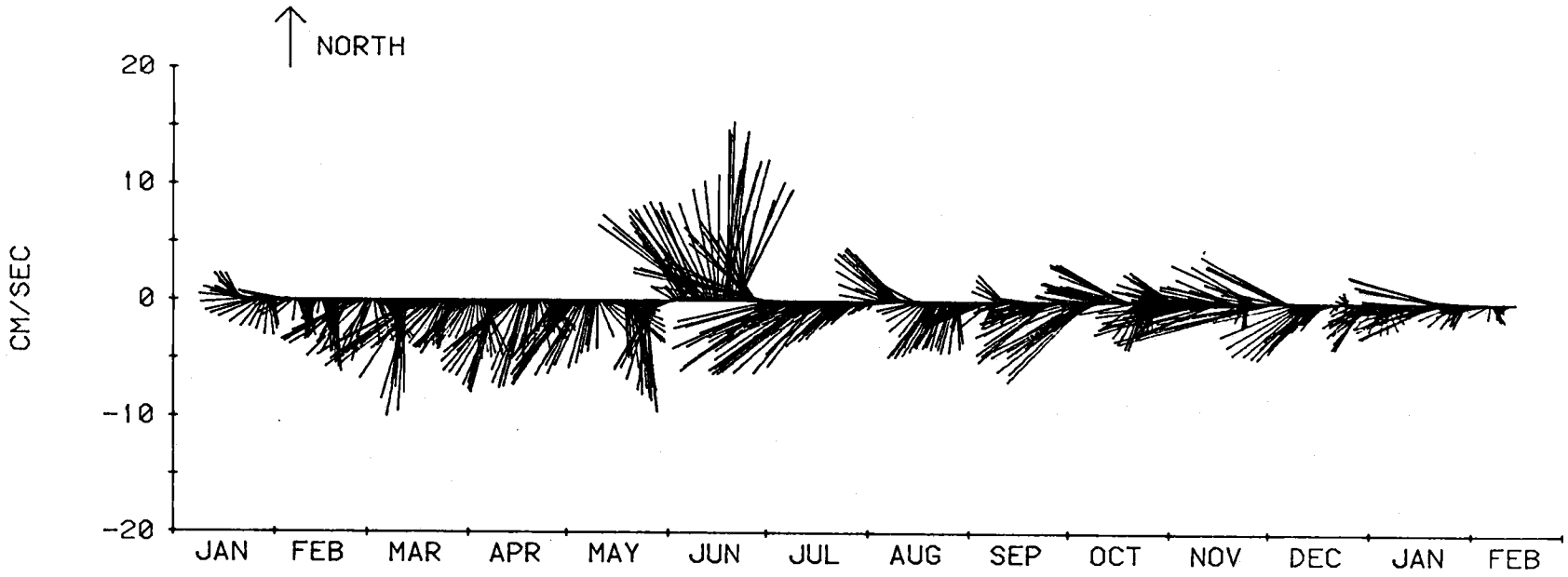
498 METERS AT ML-10
LLP FILTERED V COMPONENT



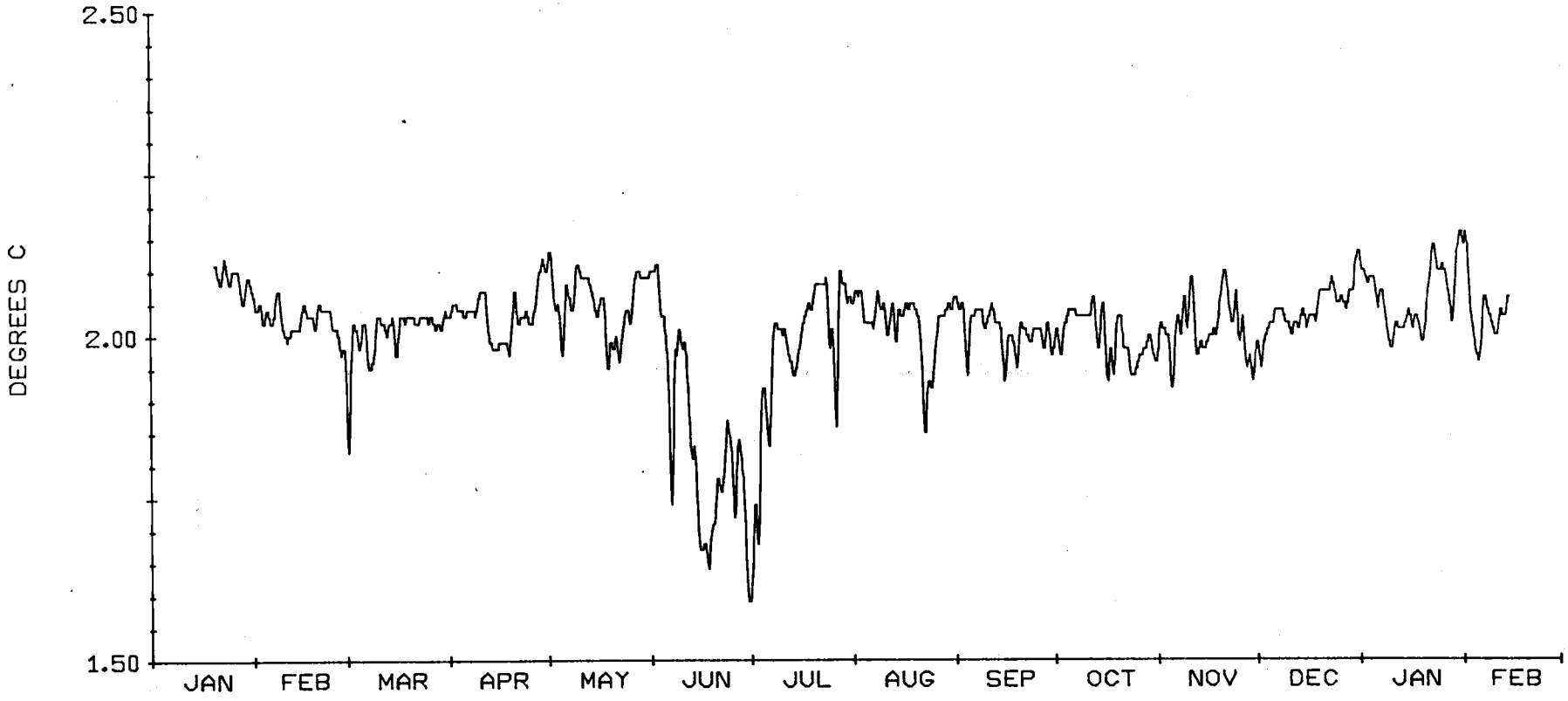
2576 METERS AT ML-10
LLP FILTERED V COMPONENT



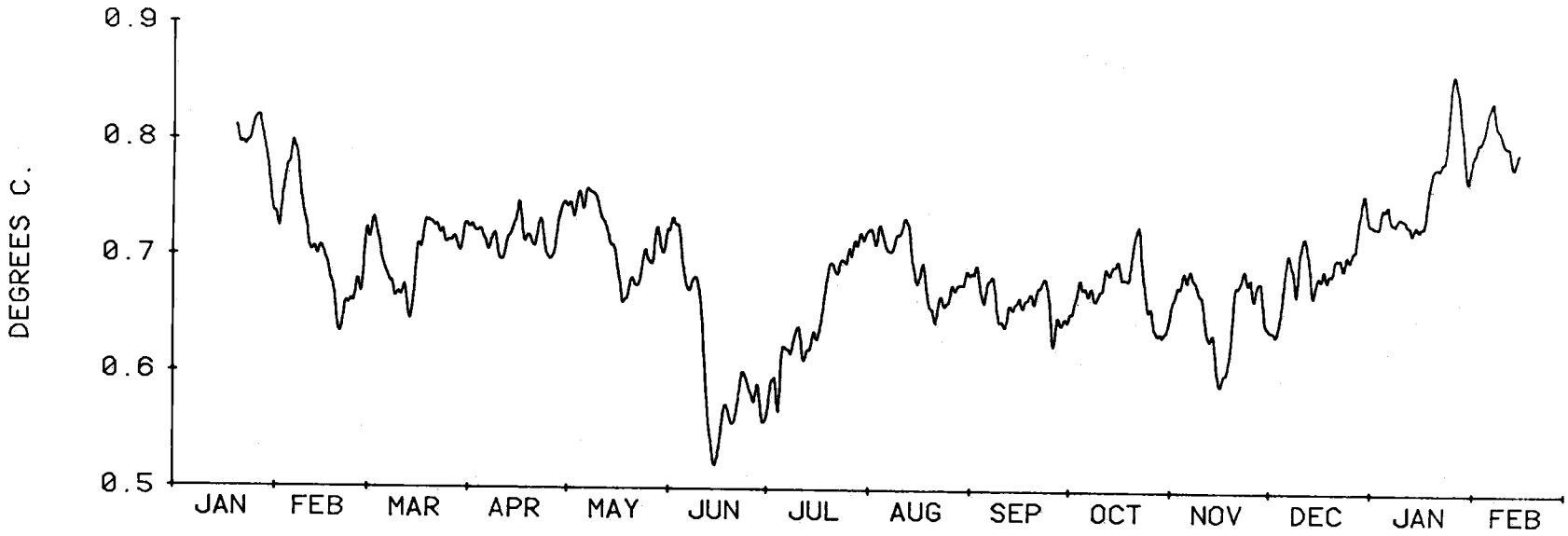
498 METERS AT ML-10
LLP FILTERED CURRENT



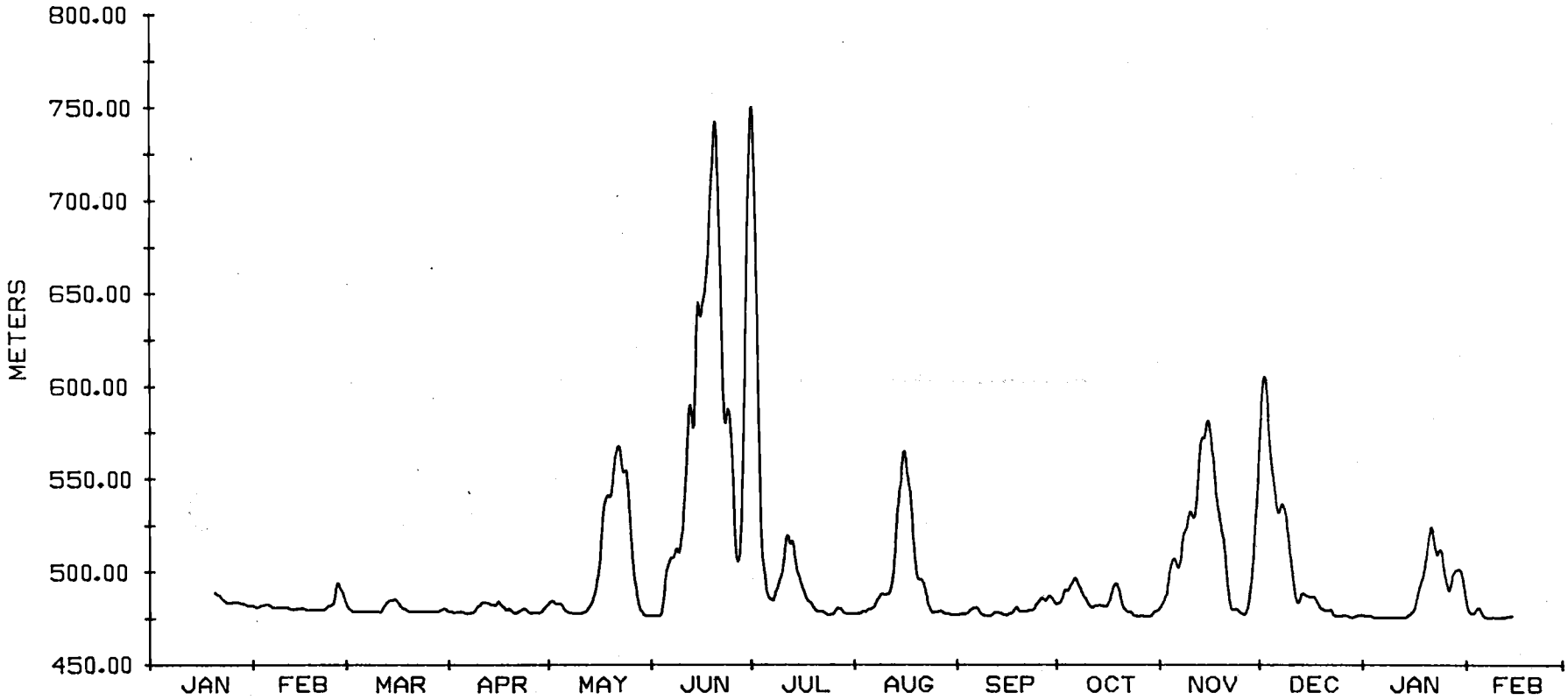
2576 METERS AT ML-10
LLP FILTERED CURRENT



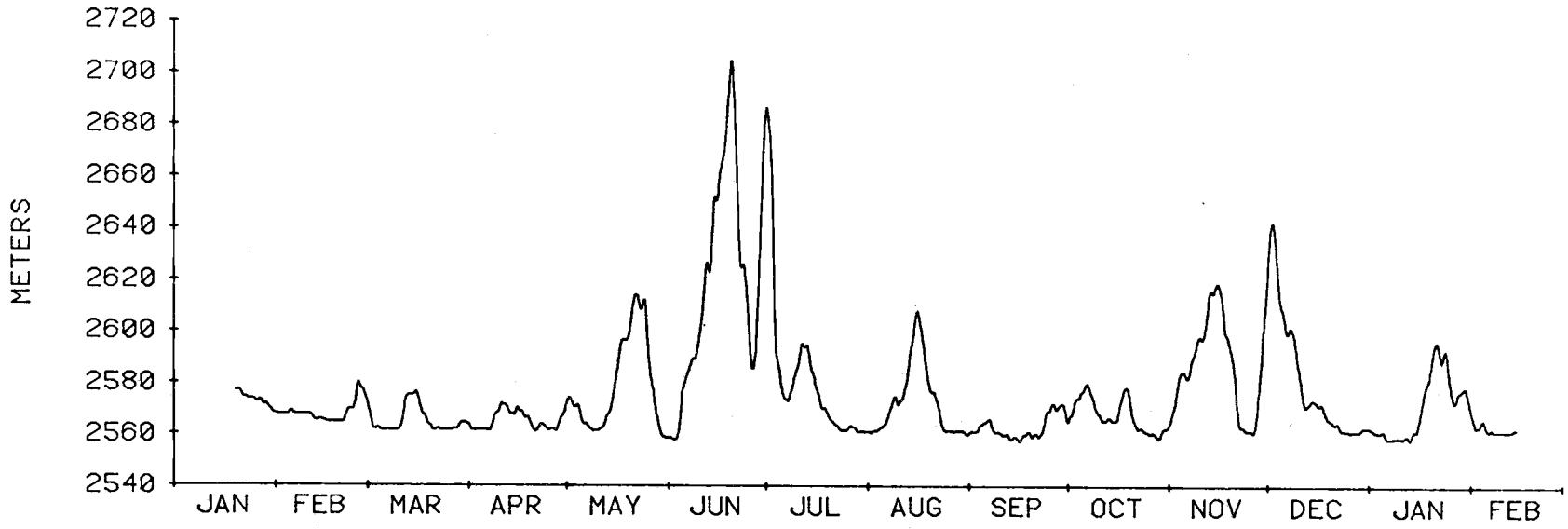
498 METERS AT ML-10
LLP FILTERED TEMPERATURE



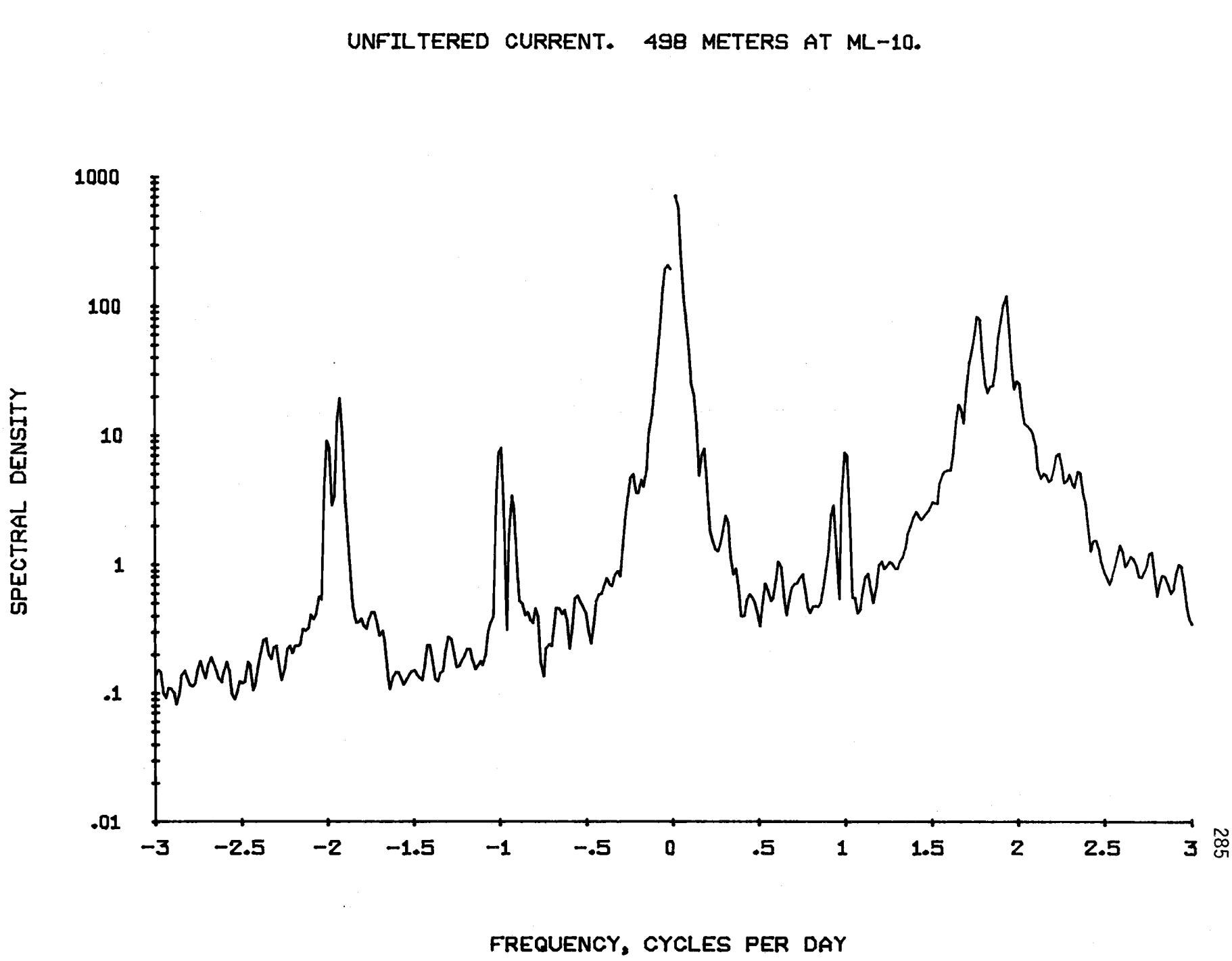
2576 METERS AT ML-10
LLP FILTERED TEMPERATURE



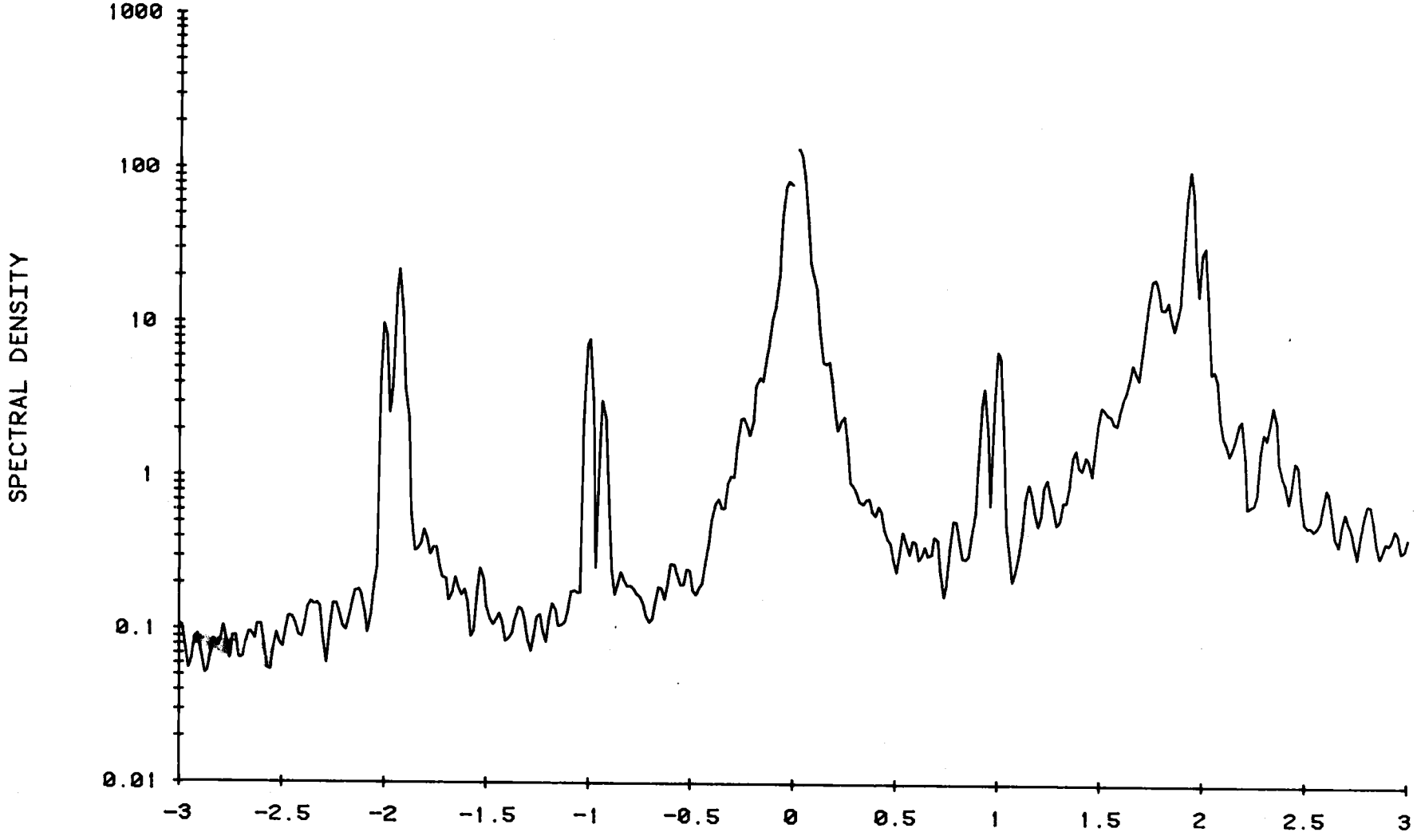
498 METERS AT ML-10
LLP FILTERED PRESSURE



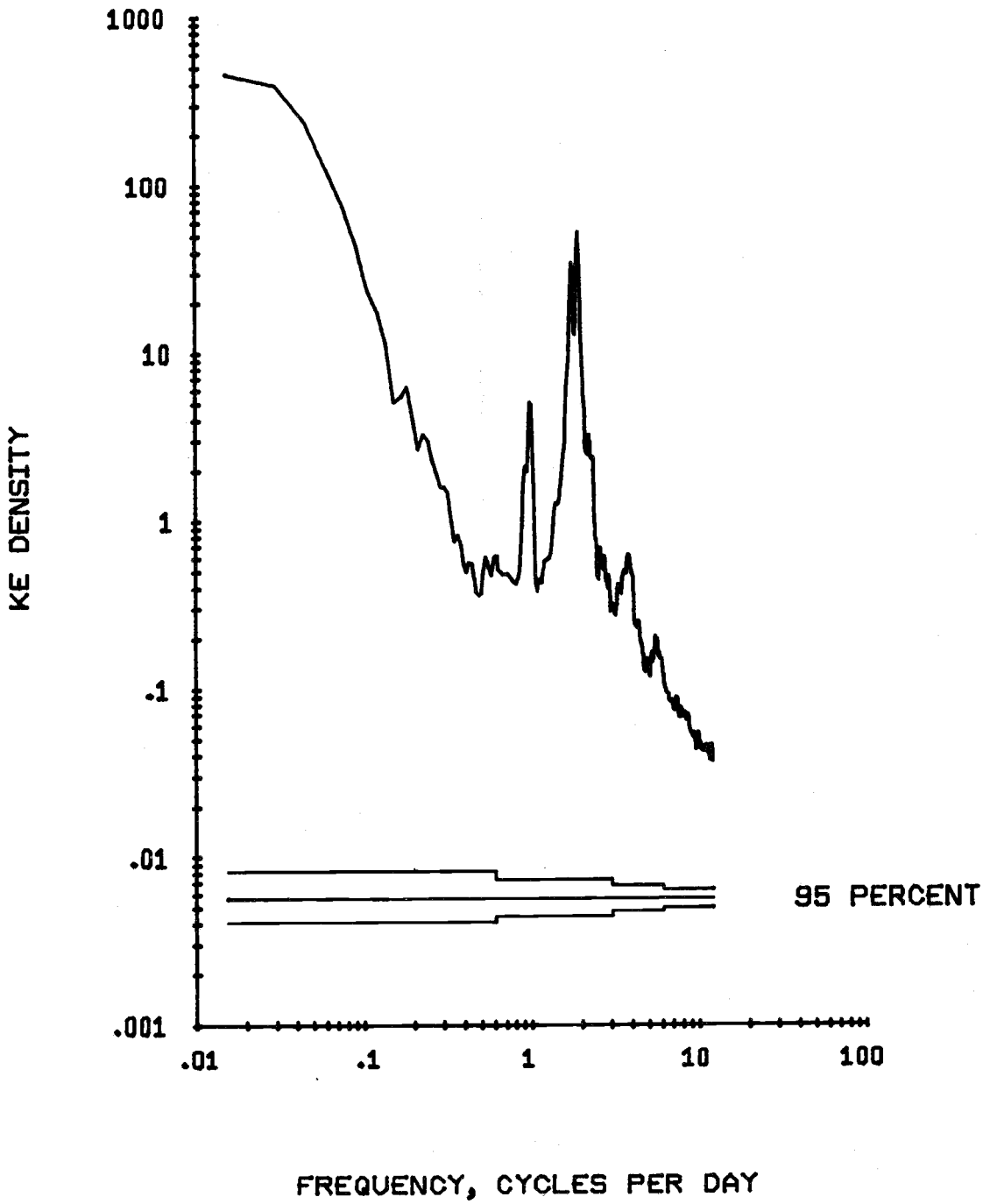
2576 METERS AT ML-10
LLP FILTERED PRESSURE


UNFILTERED CURRENT. 498 METERS AT ML-10.
SPECTRAL DENSITY
1000
100
10
1
.1
.01
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

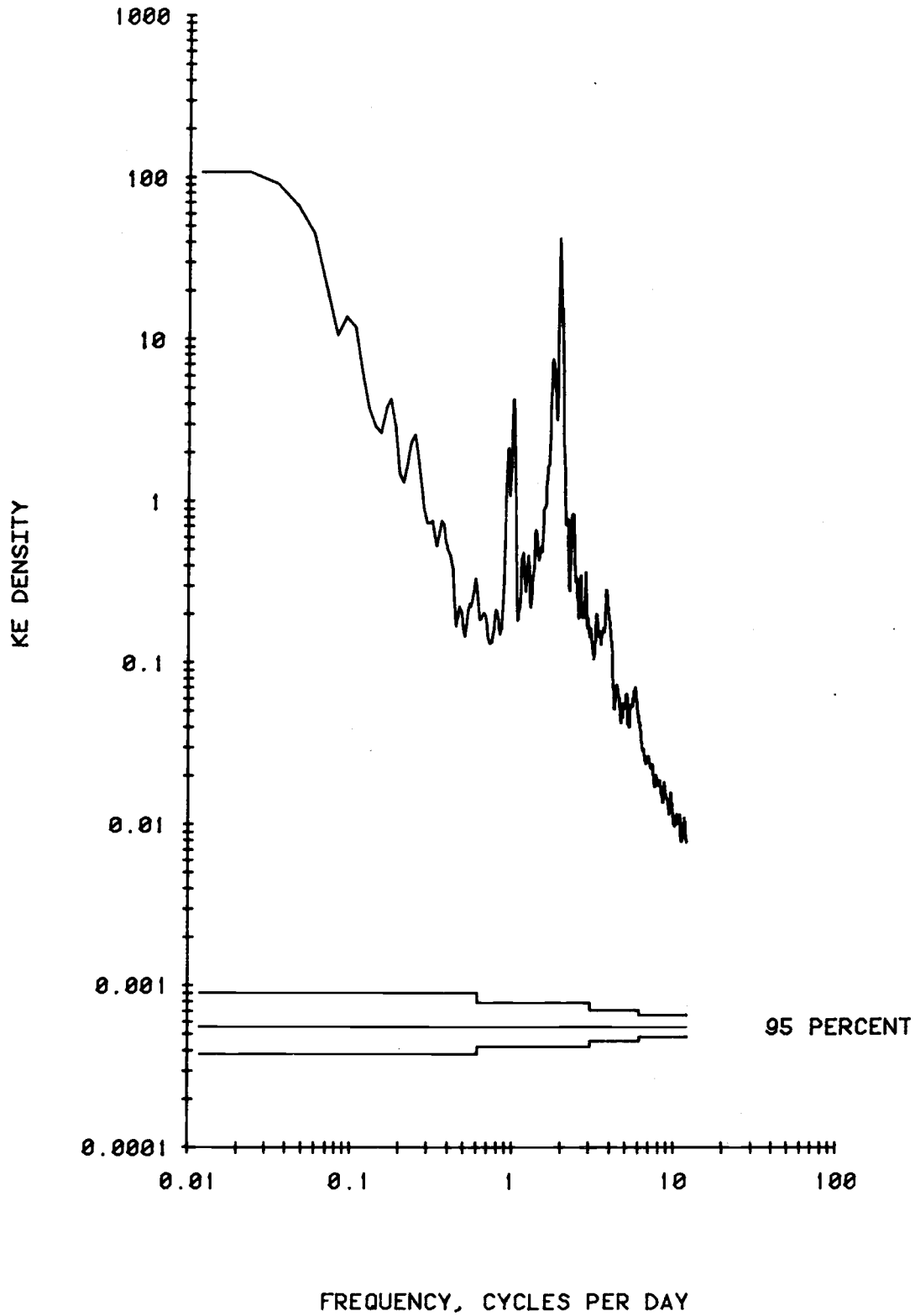
UNFILTERED CURRENT. 2576 METERS AT ML-10



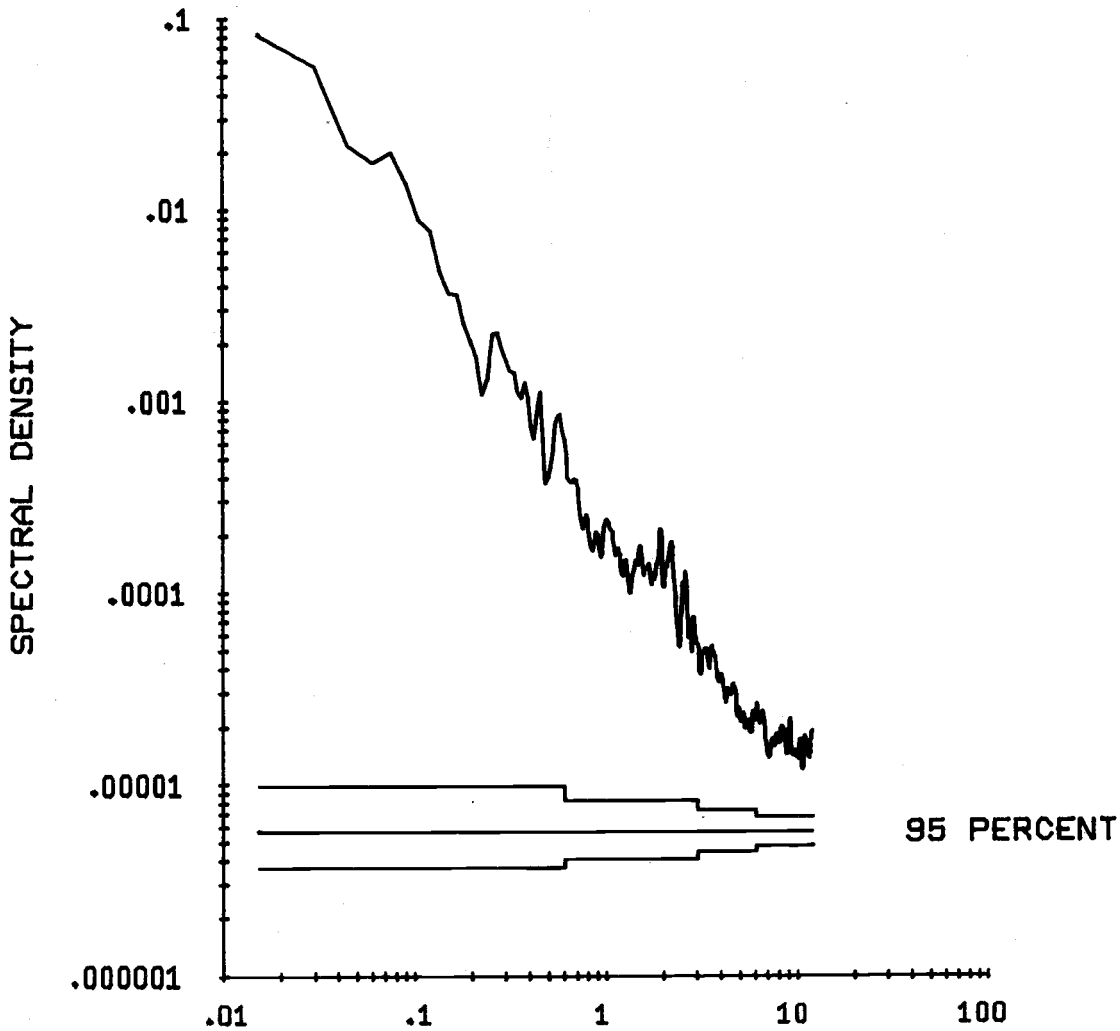
UNFILTERED CURRENT. 498 M AT ML-10.

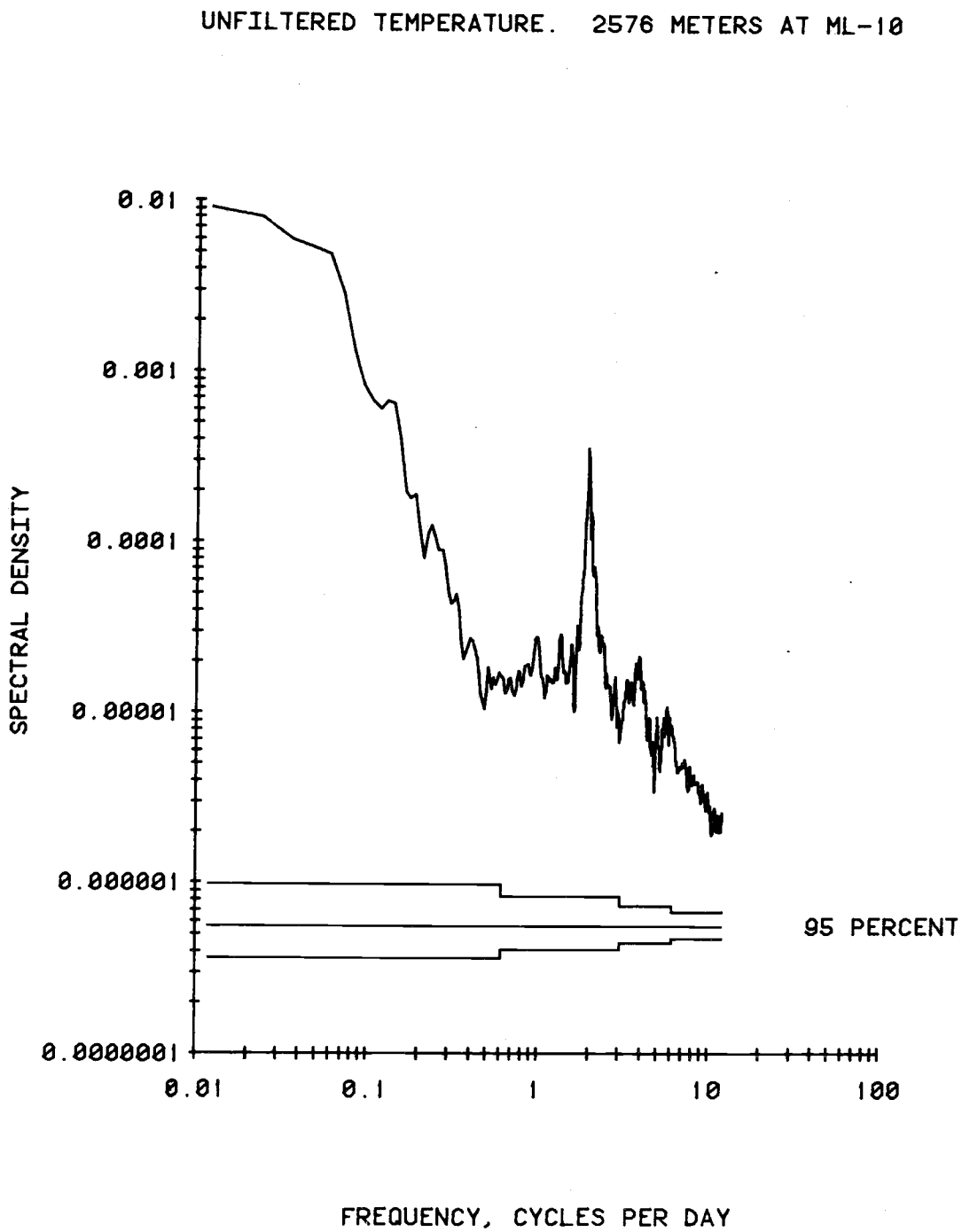


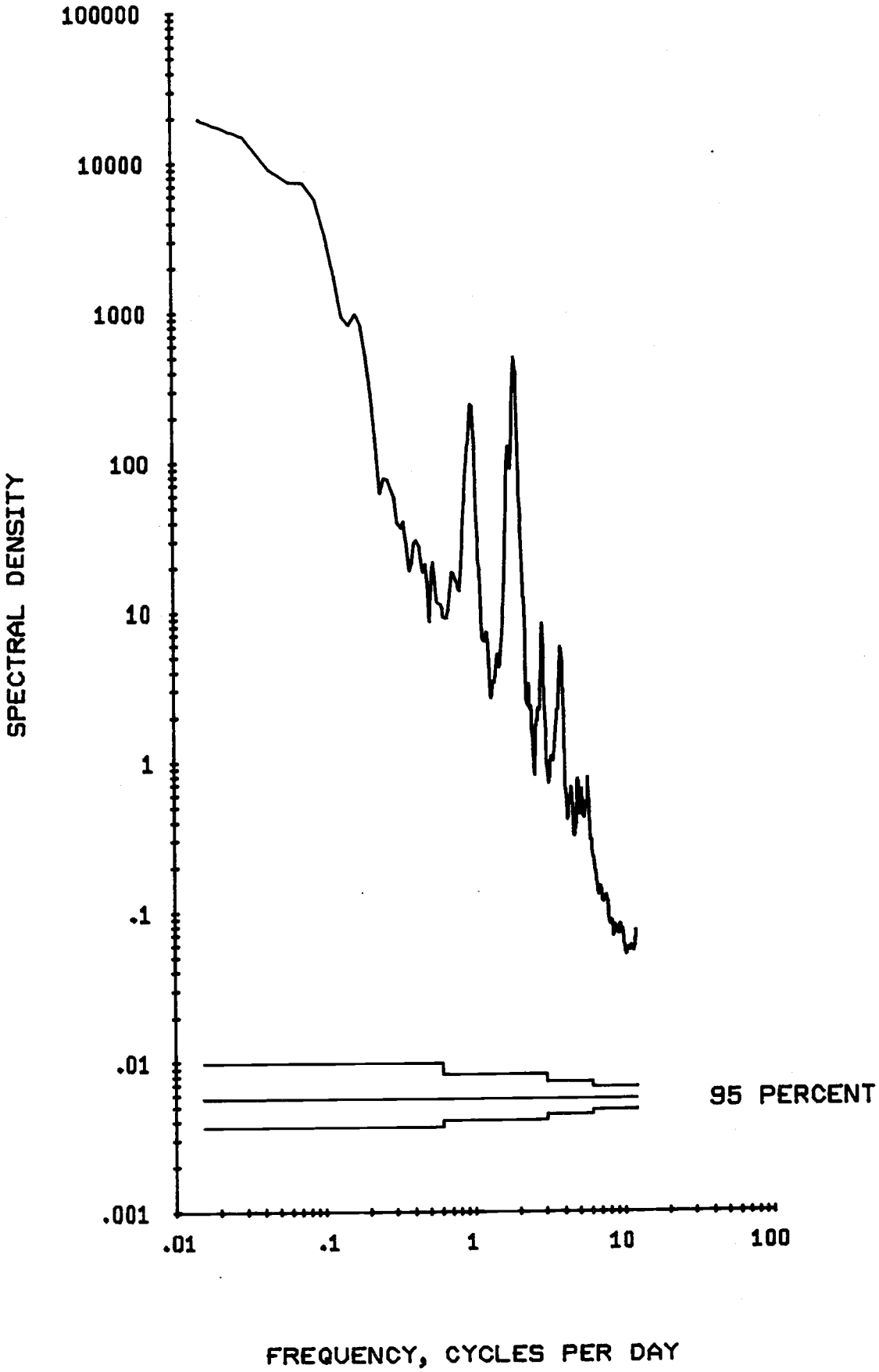
UNFILTERED CURRENT. 2576 METERS AT ML-10



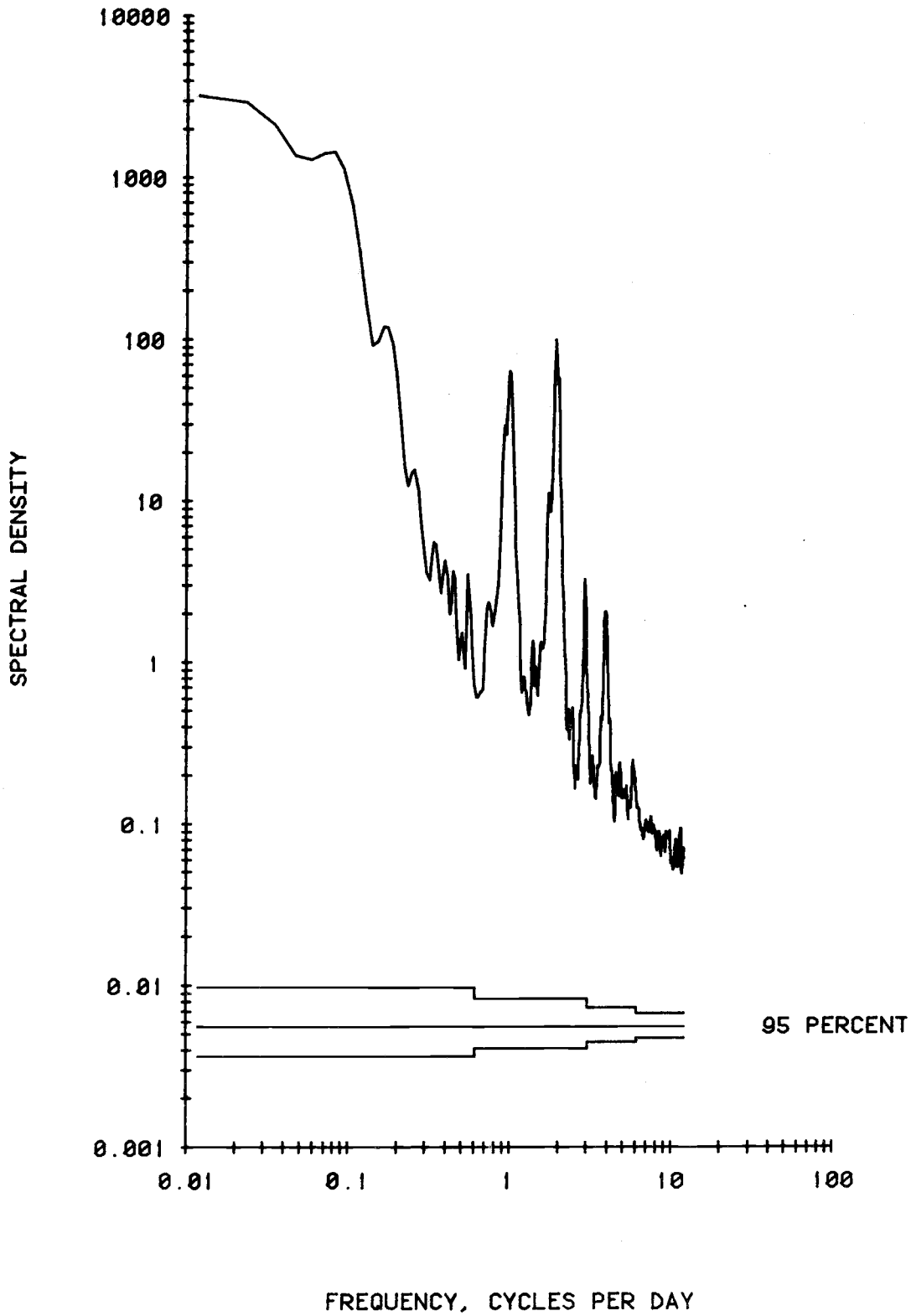
UNFILTERED TEMPERATURE. 498 METERS AT ML-10.



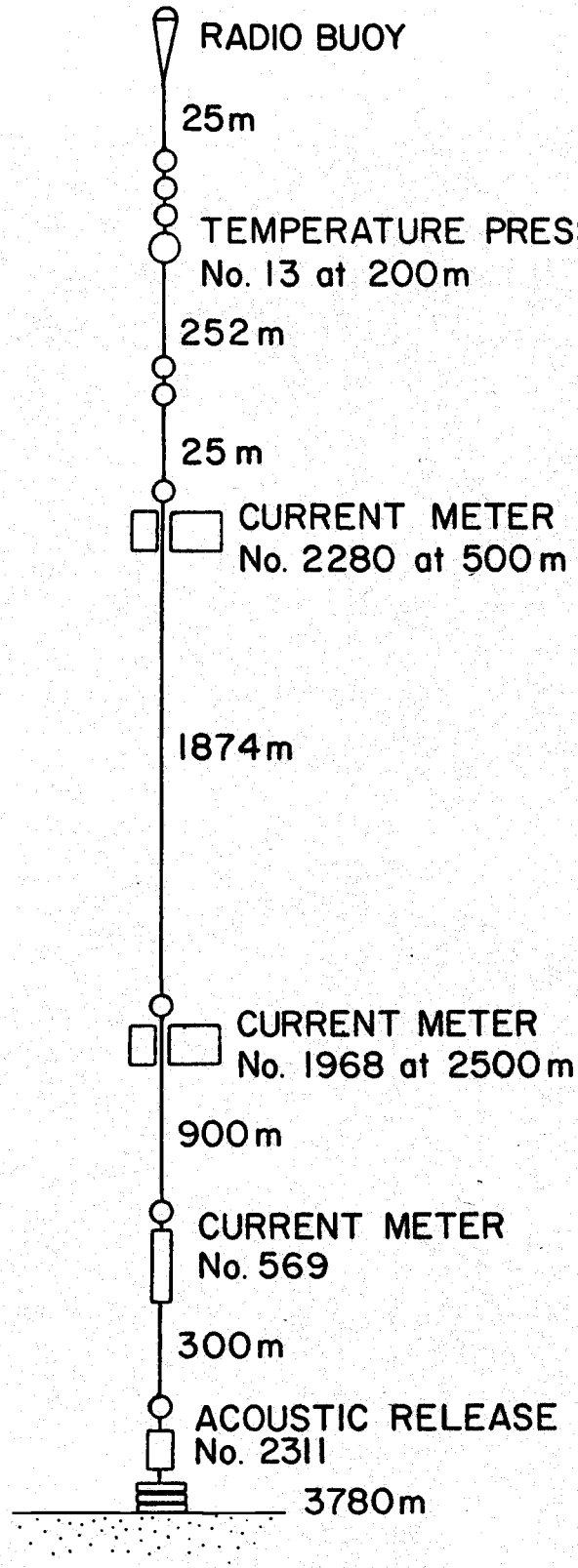

UNFILTERED TEMPERATURE. 2576 METERS AT ML-10
SPECTRAL DENSITY
0.01
0.001
0.0001
0.00001
0.000001
0.0000001
95 PERCENT
0.01
0.1
1
10
100
FREQUENCY, CYCLES PER DAY


100000
10000
1000
100
10
1
.1
.01
.001
SPECTRAL DENSITY
.01
.1
1
10
100
95 PERCENT
FREQUENCY, CYCLES PER DAY

UNFILTERED PRESSURE. 2576 METERS AT ML-10



ML - 11



MAIN LINE (ML) II
61° 17.4' S
61° 41.8' W
INSTALLED: 19 JANUARY 1979

ML-11

Position: 61°17.4S, 61°41.8'W
Depth of Water: 3780 m
Set at 0653 UCT 19 January '79 by R/V MELVILLE
Retrieved at 0043 UCT 15 February '80 by R/V ATLANTIS II
Data Interval: 0901 UCT 19 January '79 to 1401 UCT 15 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	2280/19
2500 m	1968/16

Instrument 2280 failed to yield data. The tape was wrapped around the capstan at recovery.

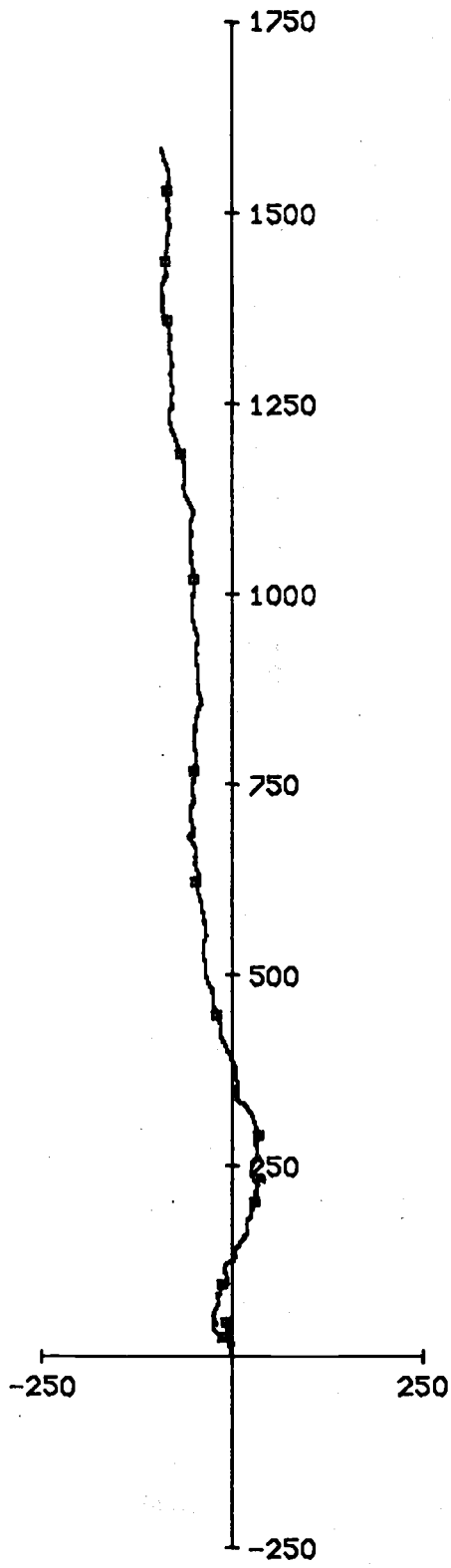
Instrument 1968 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered. The speed sensor (gear train) occasionally stalled for several cycles on 1023 or 0. There is also a suspicious two week period of below threshold speeds starting in late December. No corrections have been attempted.

ML-11

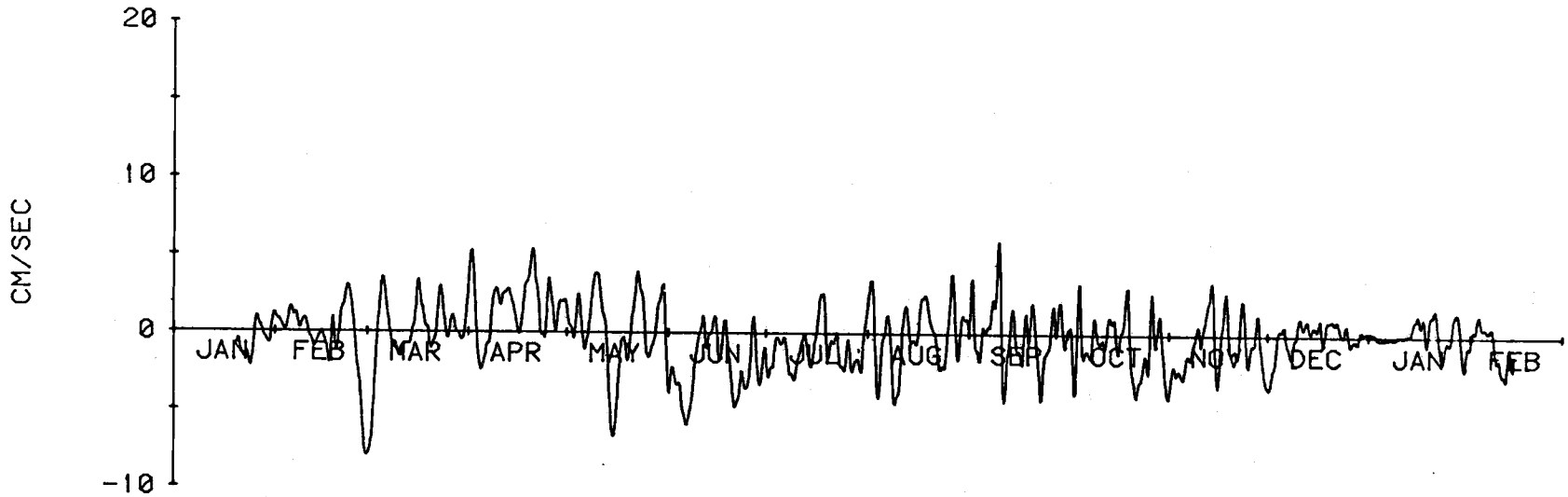
2645 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	6.04	3.60	0.30	2.64	0.70	20.30	9414
U	-0.27	3.22	-0.21	4.34	-17.80	16.20	9415
V	4.68	4.13	-0.02	2.97	-11.20	18.80	9414
T	0.61	0.08	0.45	2.53	0.43	0.83	9414
P	2658.22	23.52	1.40	4.55	2635.40	2781.80	9414

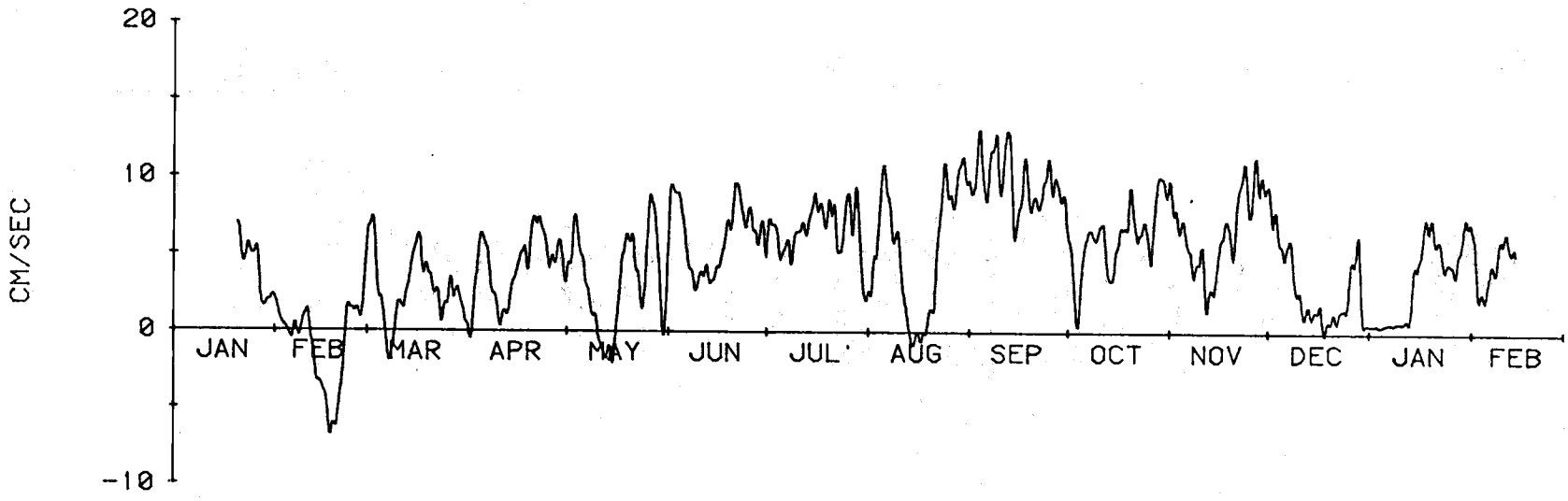
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



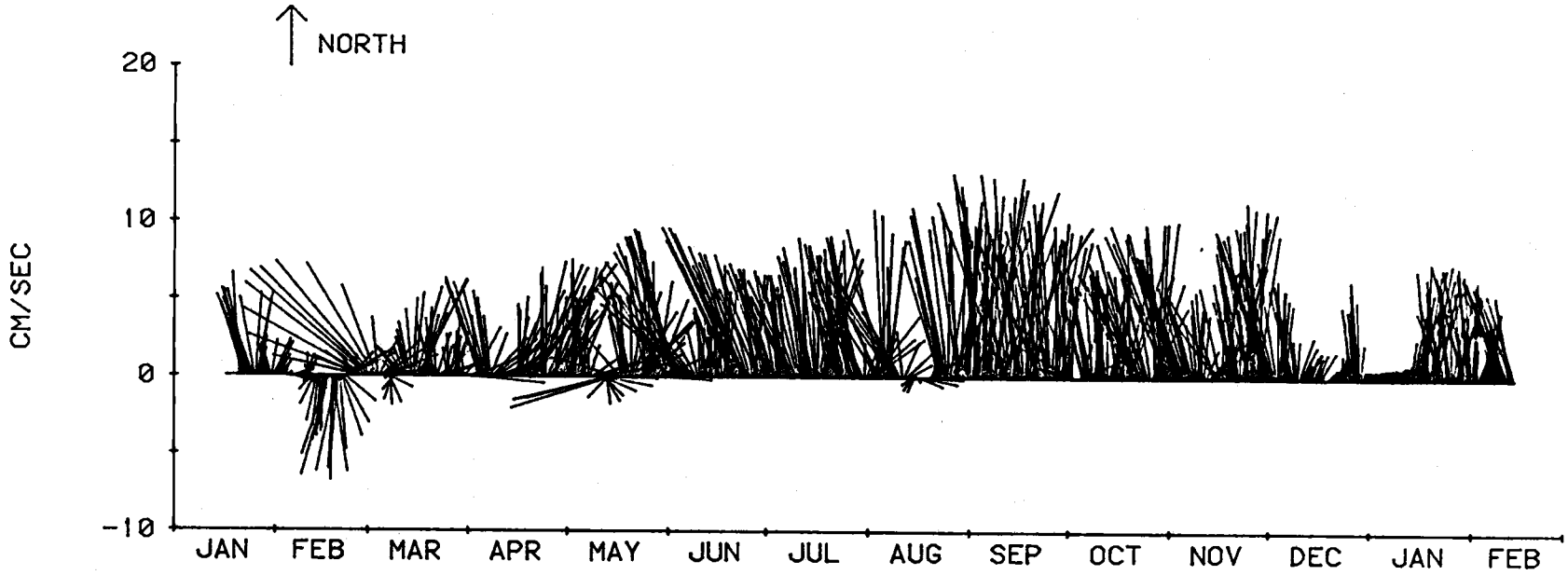
2645 M AT STN ML-11. 392.2 DAYS STARTING 901 19 JAN 79.



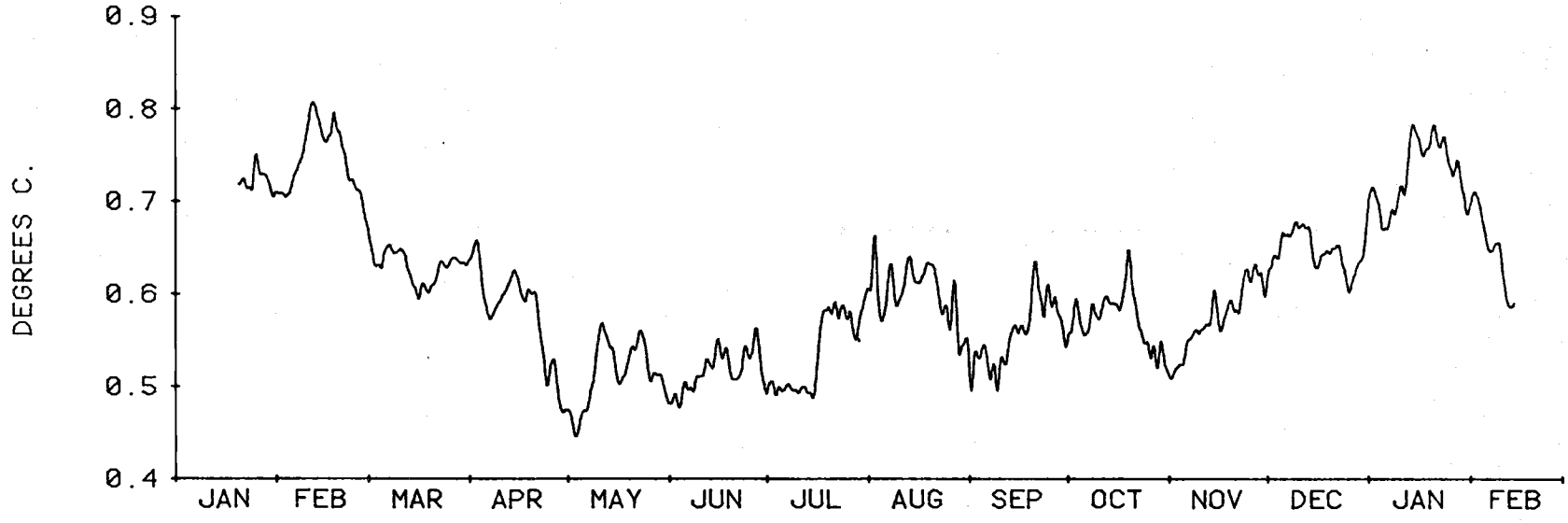
2645 METERS AT ML-11
LLP FILTERED U COMPONENT



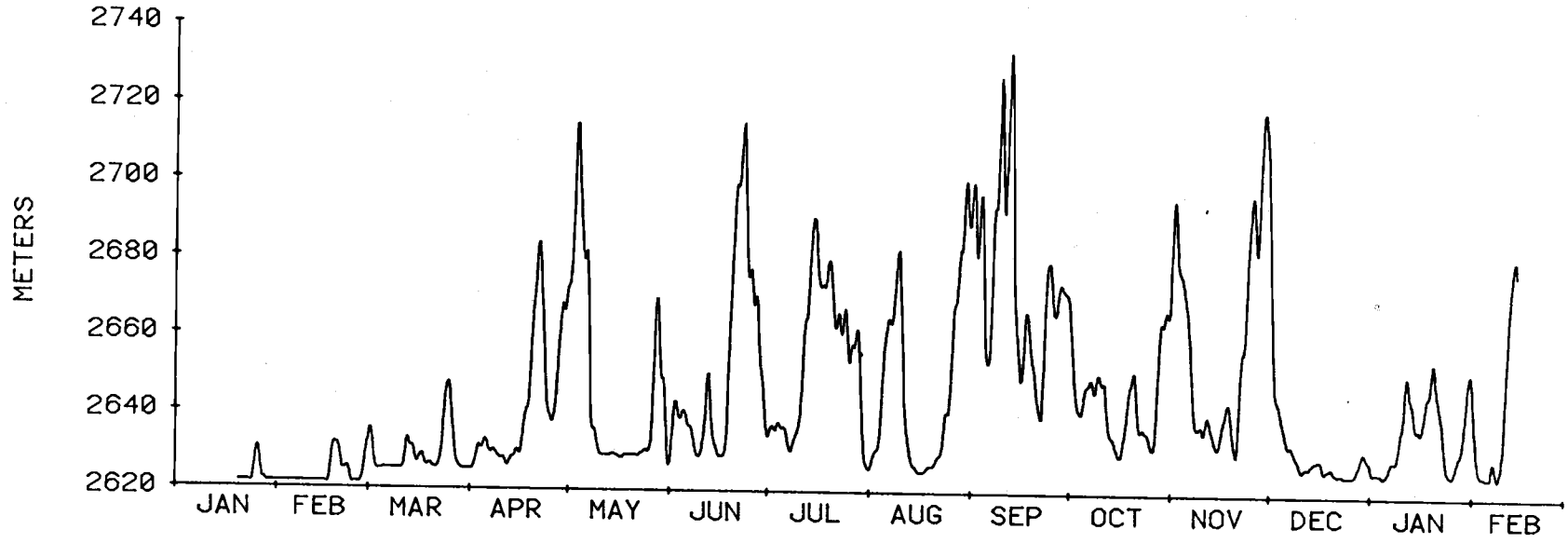
2645 METERS AT ML-11
LLP FILTERED V COMPONENT



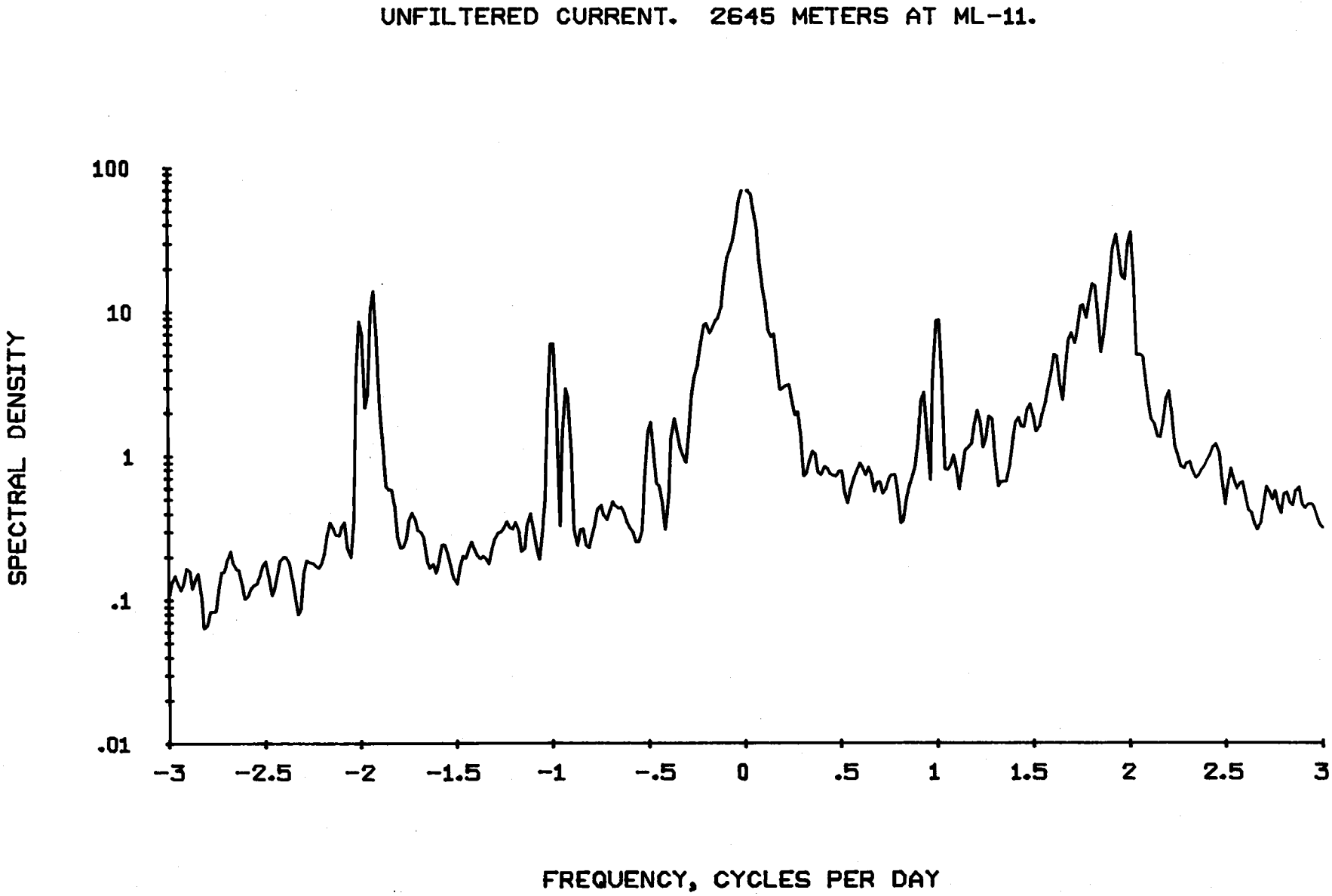
2645 METERS AT ML-11
LLP FILTERED CURRENT



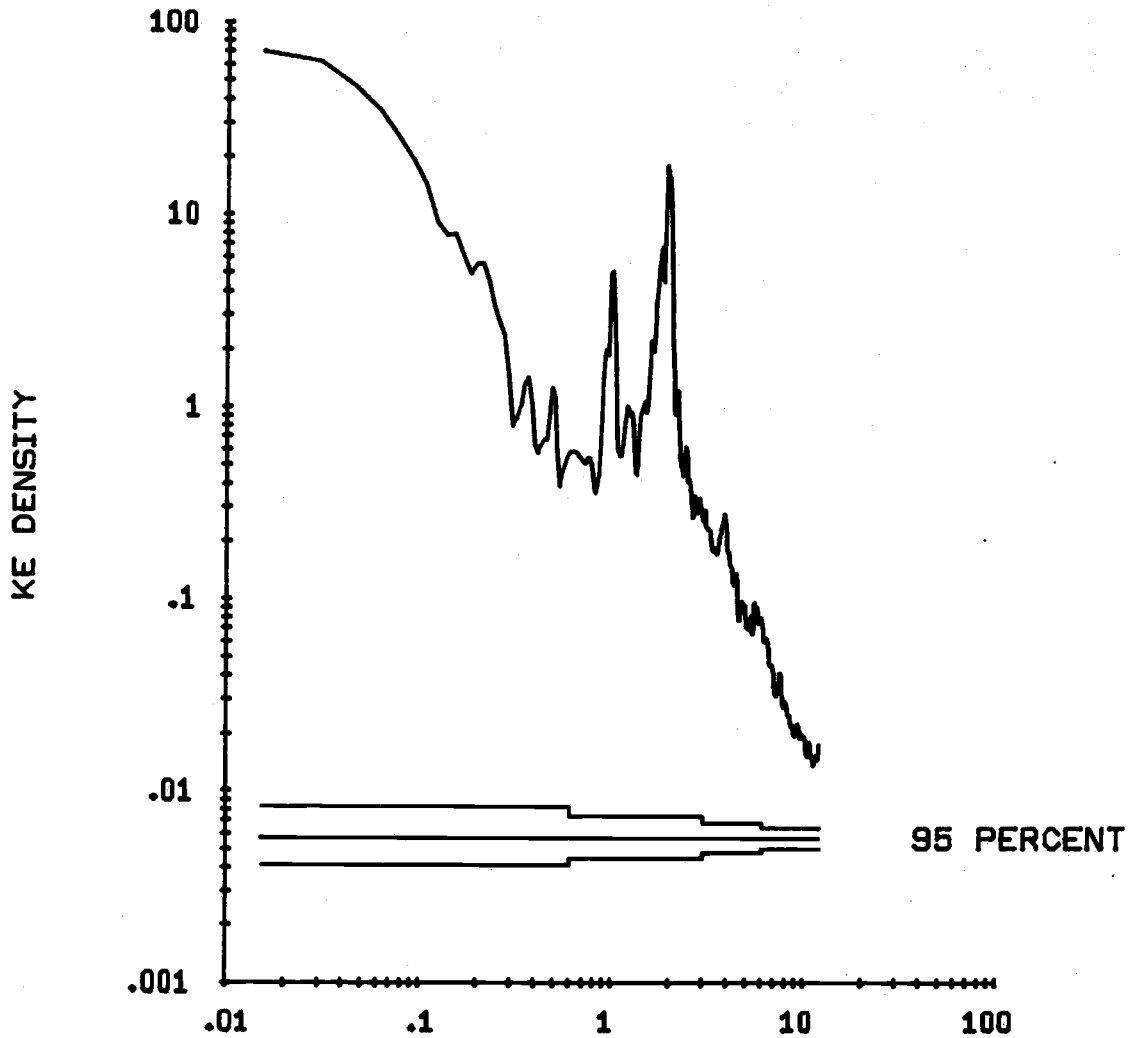
2645 METERS AT ML-11
LLP FILTERED TEMPERATURE



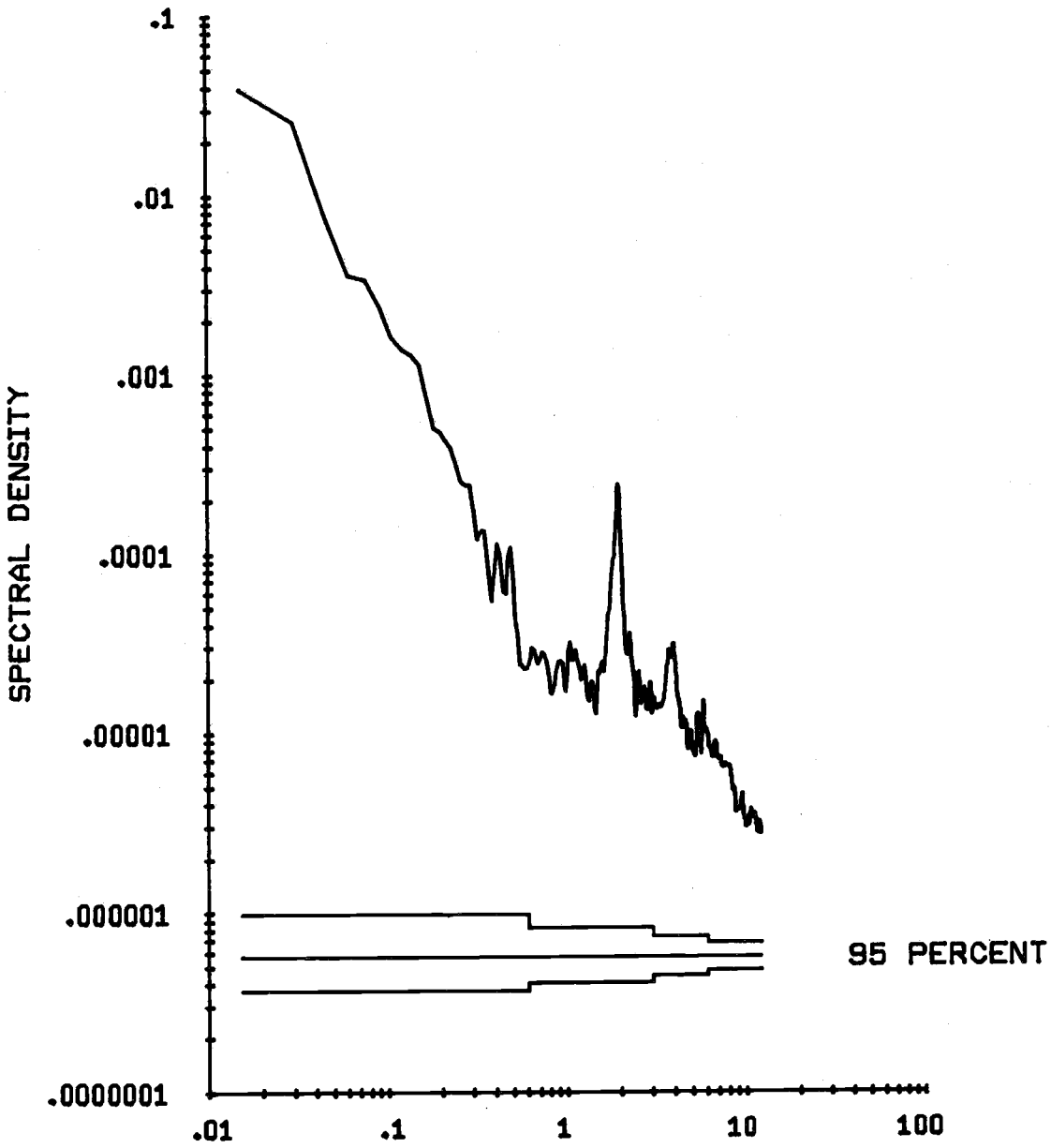
2645 METERS AT ML-11
LLP FILTERED PRESSURE


UNFILTERED CURRENT. 2645 METERS AT ML-11.
SPECTRAL DENSITY
100
10
1
.1
.01
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

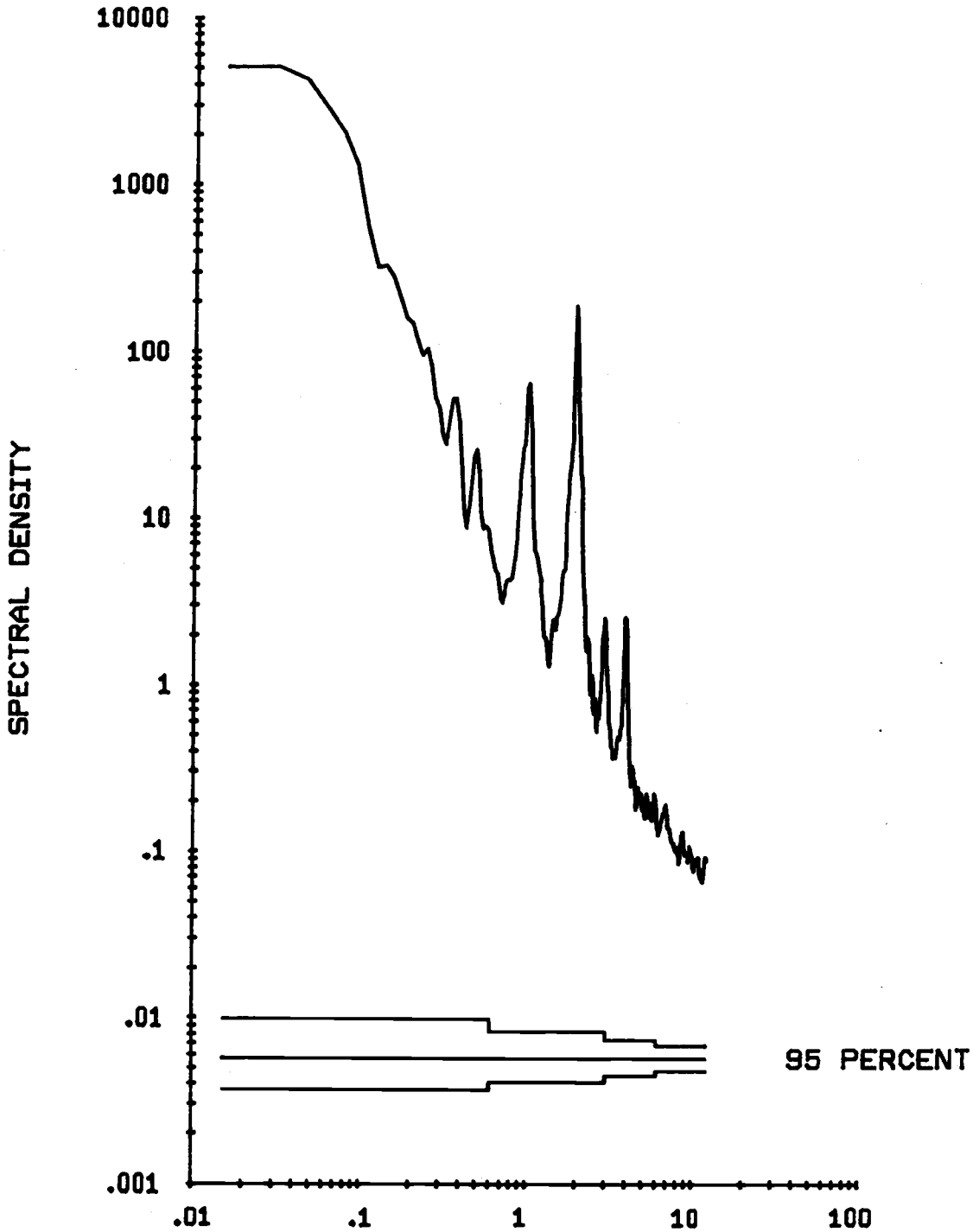
UNFILTERED CURRENT. 2645 METERS AT ML-11.



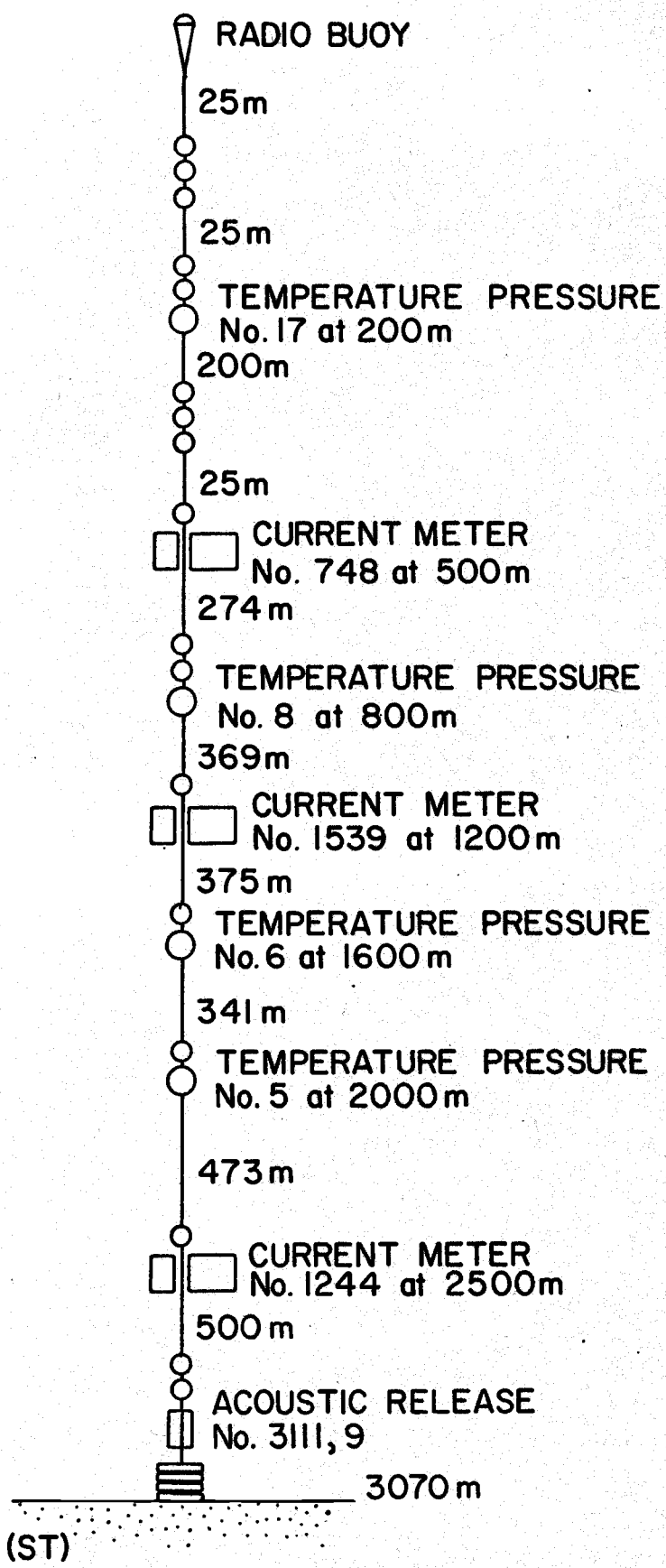
UNFILTERED TEMPERATURE. 2645 M AT ML-11.



UNFILTERED PRESSURE. 2645 M AT ML-11.



ST



SOUTH TRANSPORT (ST)

61° 48.0' S

61° 08.5' W

INSTALLED: 19 JANUARY 1979

ST

Position: 61°48.0'S, 61°08.5'W
Depth of Water: 3070 m
Set at 1537 UCT 19 January '79 by R/V MELVILLE
Retrieved at 1154 UCT 14 February '80 by R/V ATLANTIS II
Data Interval: 1736 UCT 19 January '79 to 1236 UCT 14 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	748/40
1200 m	1539/15
2500 m	1244/16

Instrument 748 measured speed, direction, temperature, pressure, and conductivity. Speed and direction were recorded once per hour until the instrument was recovered. Temperature, pressure, and conductivity were recorded until 2344 UCT 12 April '79. Speed and direction were of poor quality after mid-April. Direction errors were corrected by interpolating across certain values (63, 95, 127, 511, etc.). Speed errors were of two types: low-high errors and backward drift during below threshold currents. These were removed where recognized. It is believed that the corrected records are of good quality.

Instrument 1539 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered. The speed record contains a suspicious section of below threshold values beginning 16 July. No corrections have been made.

Instrument 1244 recorded speed, direction, temperature, and pressure once per hour until the instrument was recovered.

ST

691 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	9.27	8.17	0.86	2.90	0.70	41.90	9372
U	4.03	8.89	0.11	4.39	-28.80	36.10	9372
V	3.28	6.83	0.21	4.89	-29.80	33.30	9372
T	1.37	0.22	-0.27	1.37	0.82	1.67	1999
P	695.07	6.58	2.70	13.65	686.10	742.50	1999
C	30.46	0.20	-0.29	1.44	29.89	30.72	1999

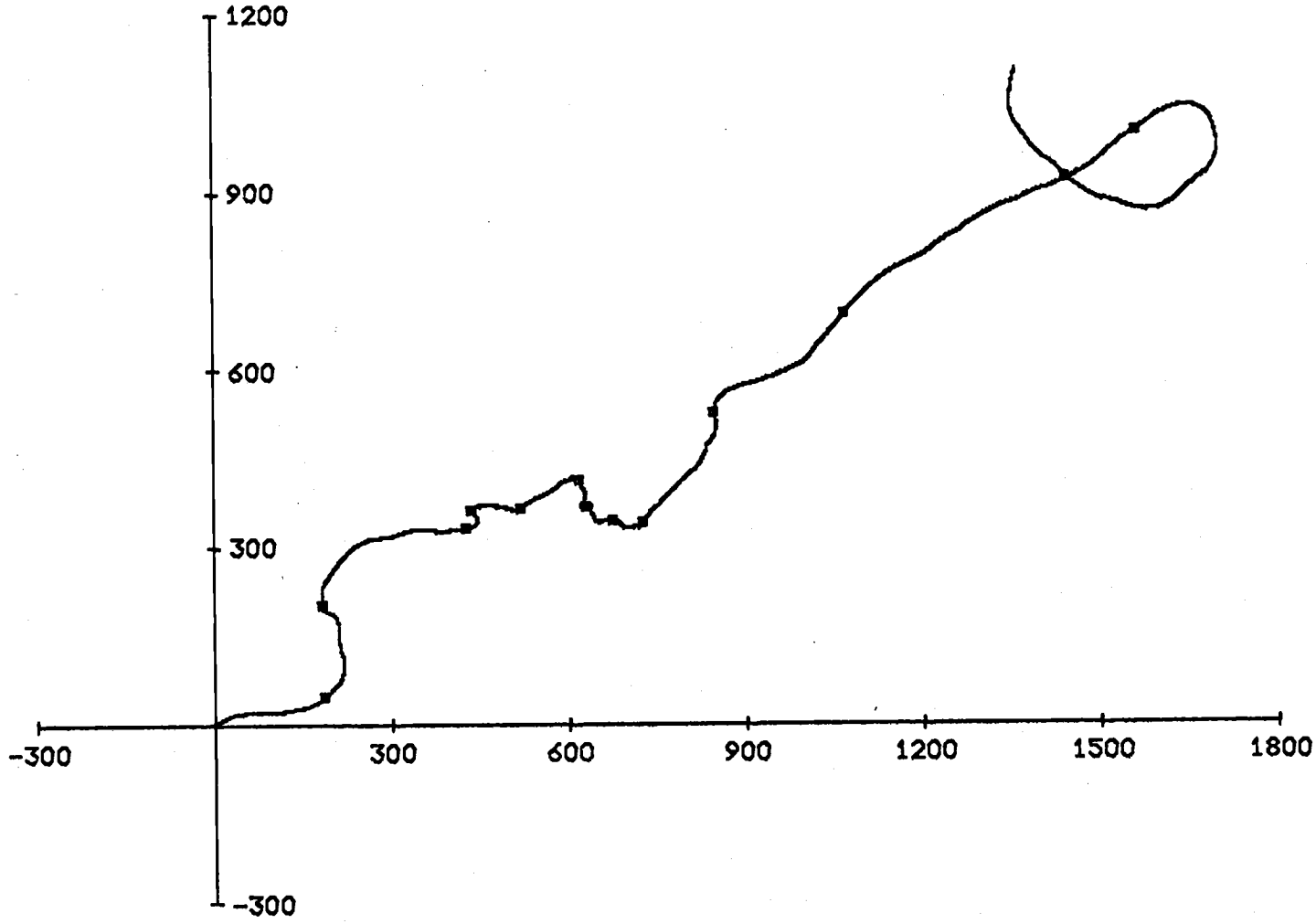
1401 m

S	6.16	4.32	0.81	3.30	0.80	24.60	9380
U	0.70	6.17	-0.27	3.59	-21.60	21.90	9380
V	0.98	4.13	-0.01	3.89	-16.50	17.40	9380
T	0.94	0.17	-1.00	2.79	0.24	1.19	9380
P	1408.15	6.56	3.03	13.41	1403.30	1453.90	9380

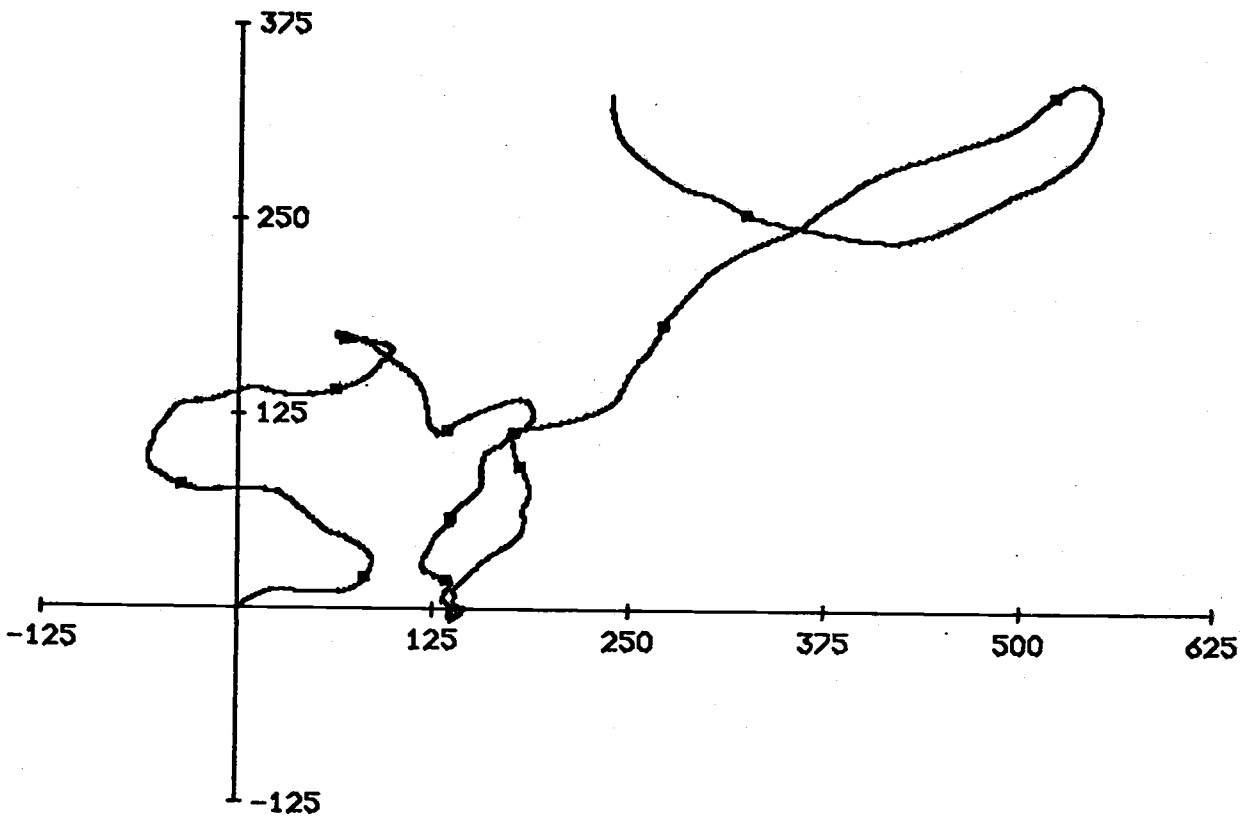
2701 m

S	9.10	5.14	0.52	2.67	0.70	27.20	9378
U	-8.44	5.42	-0.21	2.86	-26.60	7.90	9378
V	-1.61	2.46	-0.21	2.98	-11.60	6.70	9378
T	0.45	0.03	-0.23	2.75	0.34	0.54	9378
P	2714.68	2.27	1.08	10.61	2706.90	2733.20	9378

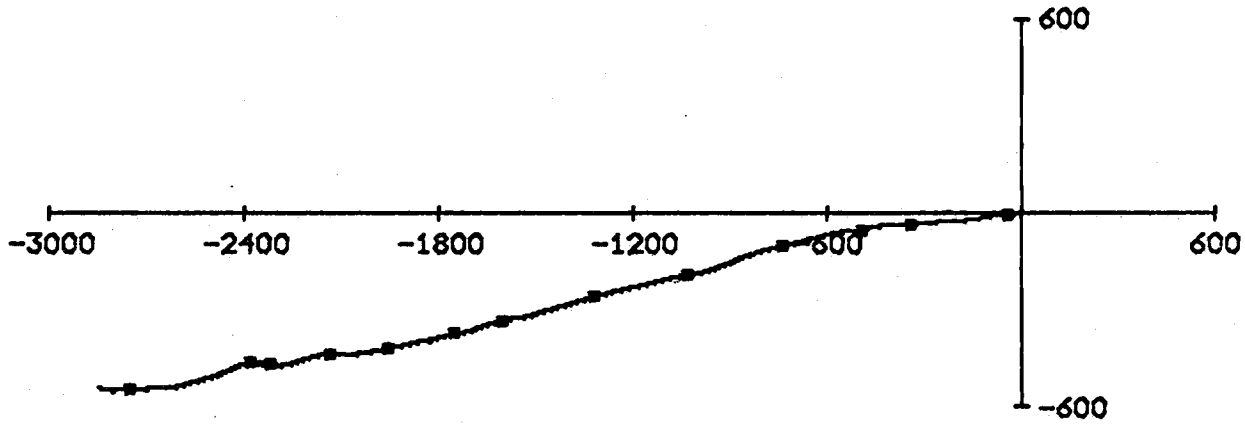
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



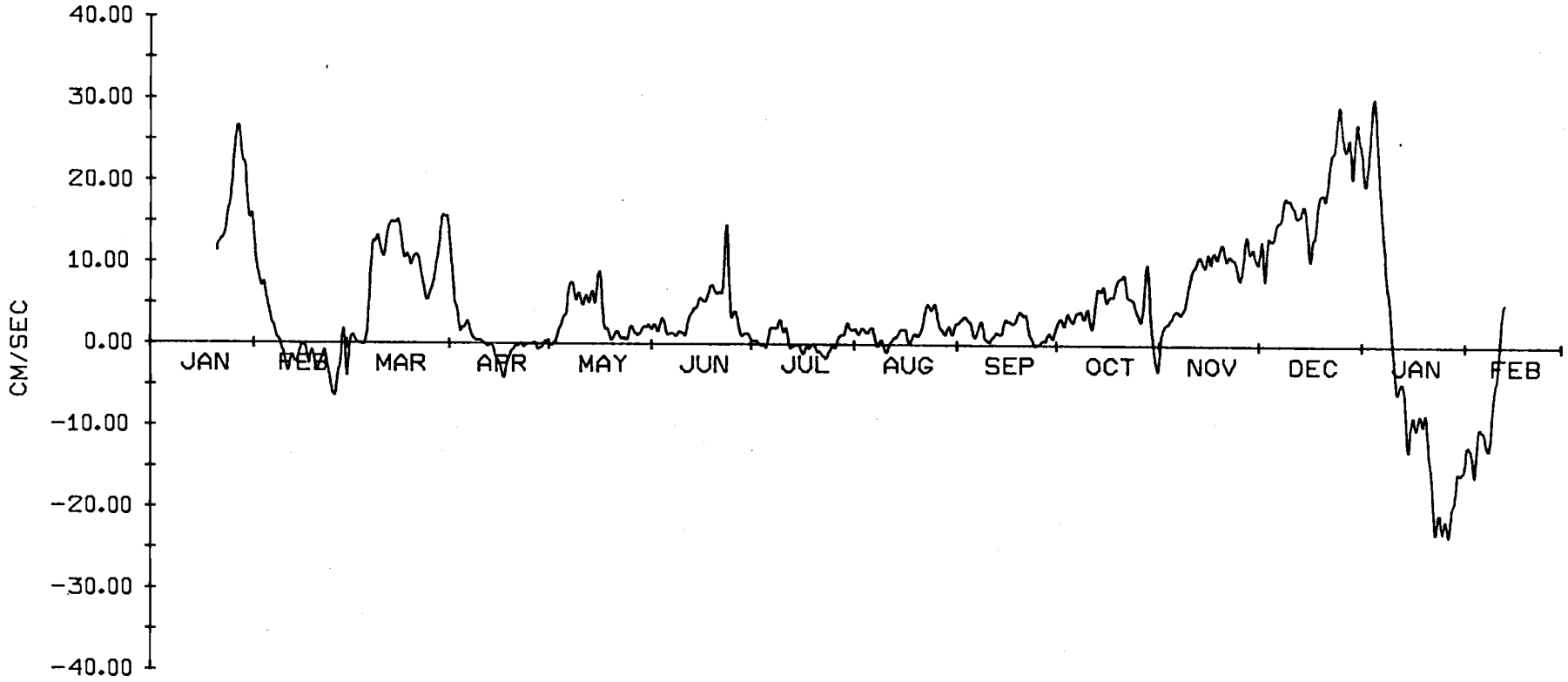
691 METERS AT ST. 19 JAN 79 - 14 FEB 80. TAPE 748/40.



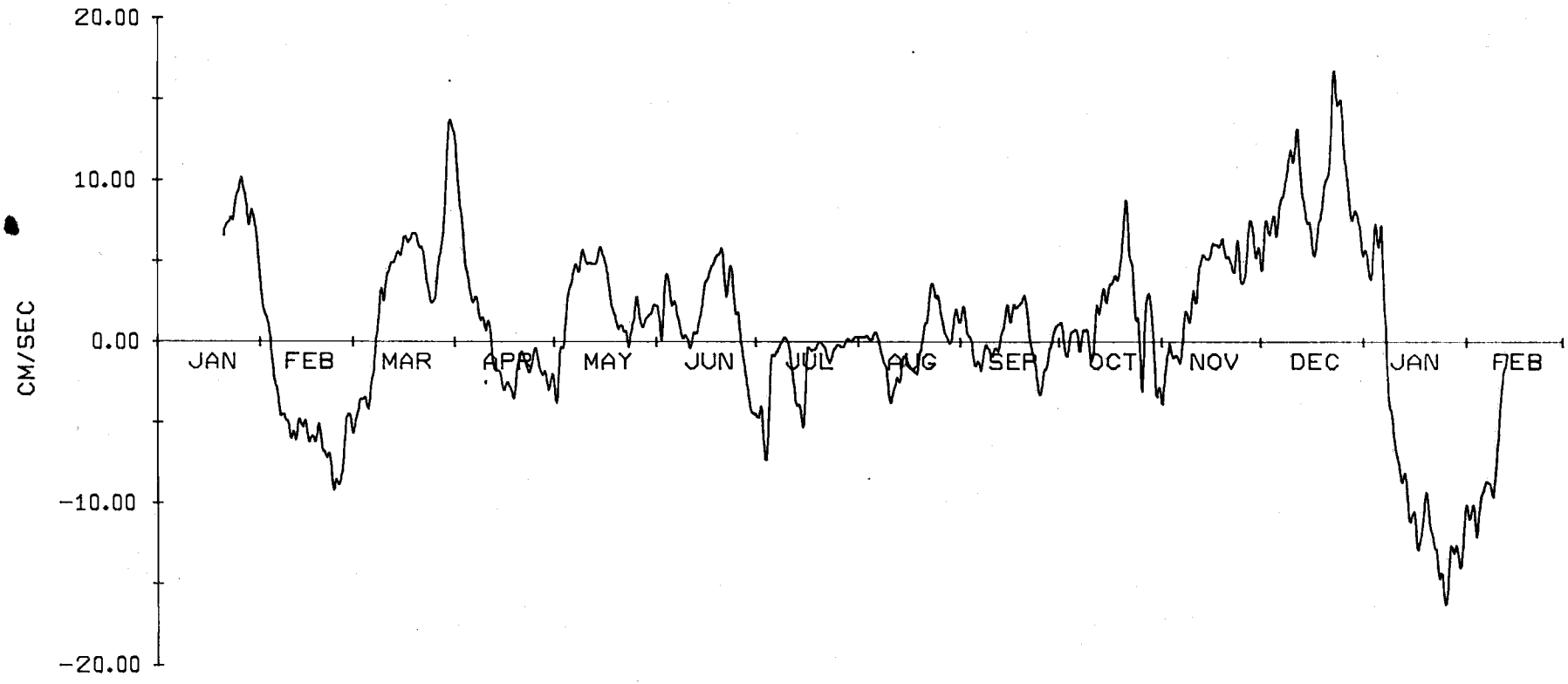
1401 M AT STN ST. 390.8 DAYS STARTING 1736 19 JAN 79.



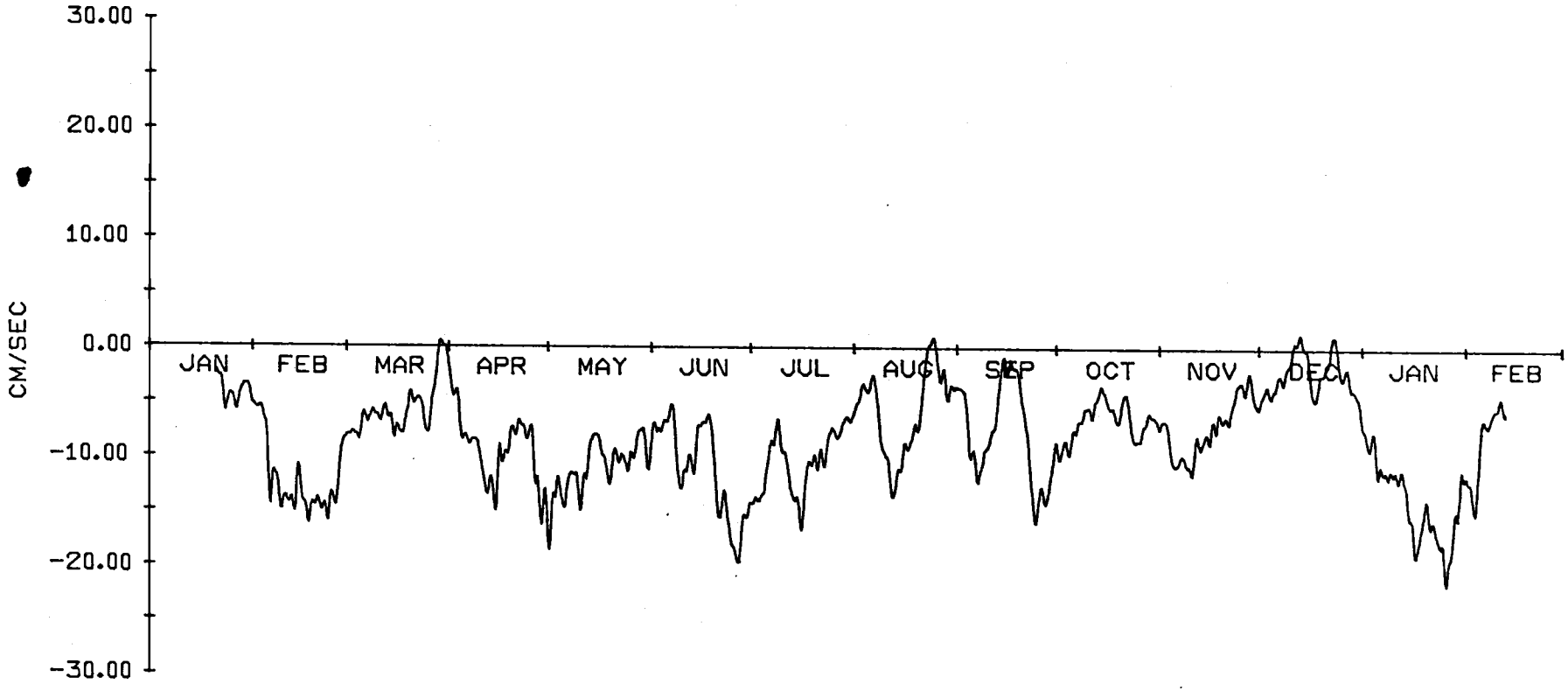
2701 M AT STN ST. 390.7 DAYS STARTING 1756 19 JAN 79.



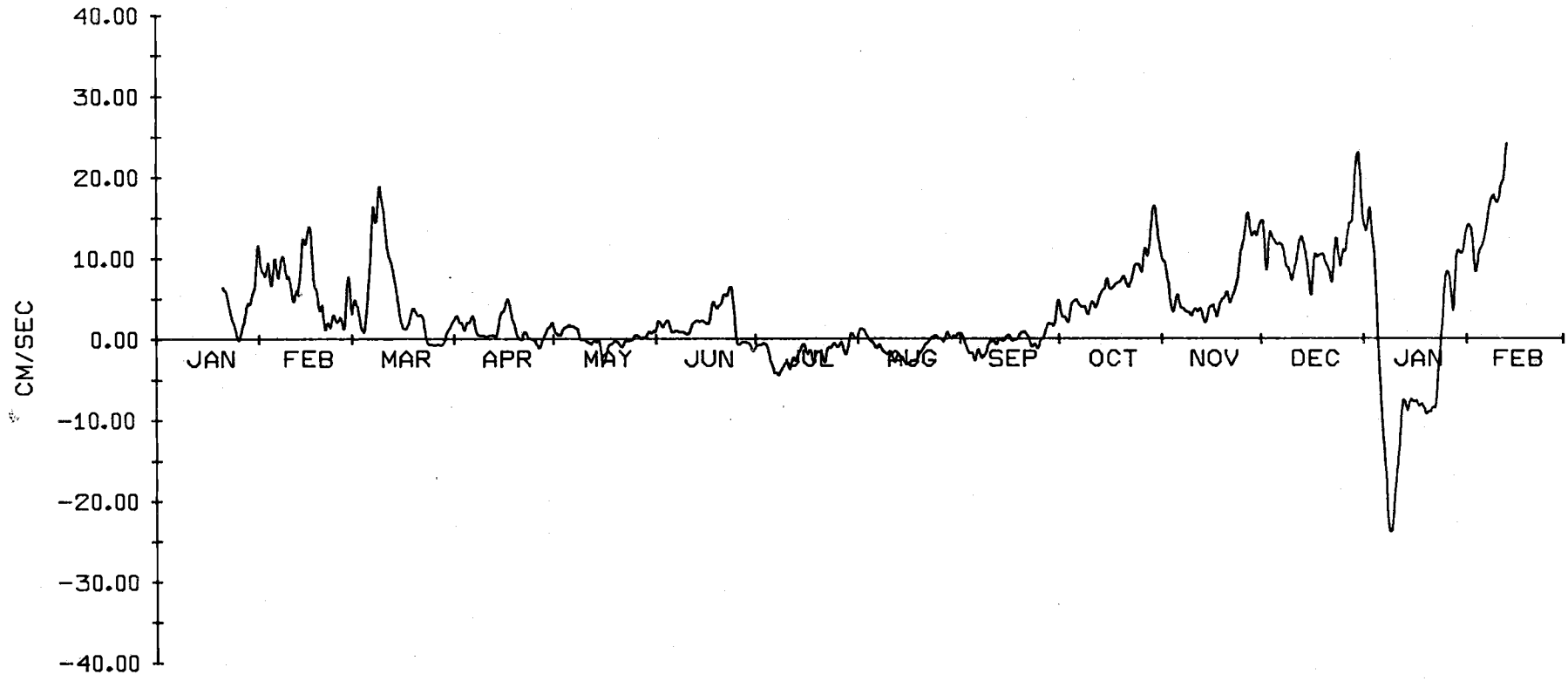
691 METERS AT ST
LLP FILTERED U COMPONENT



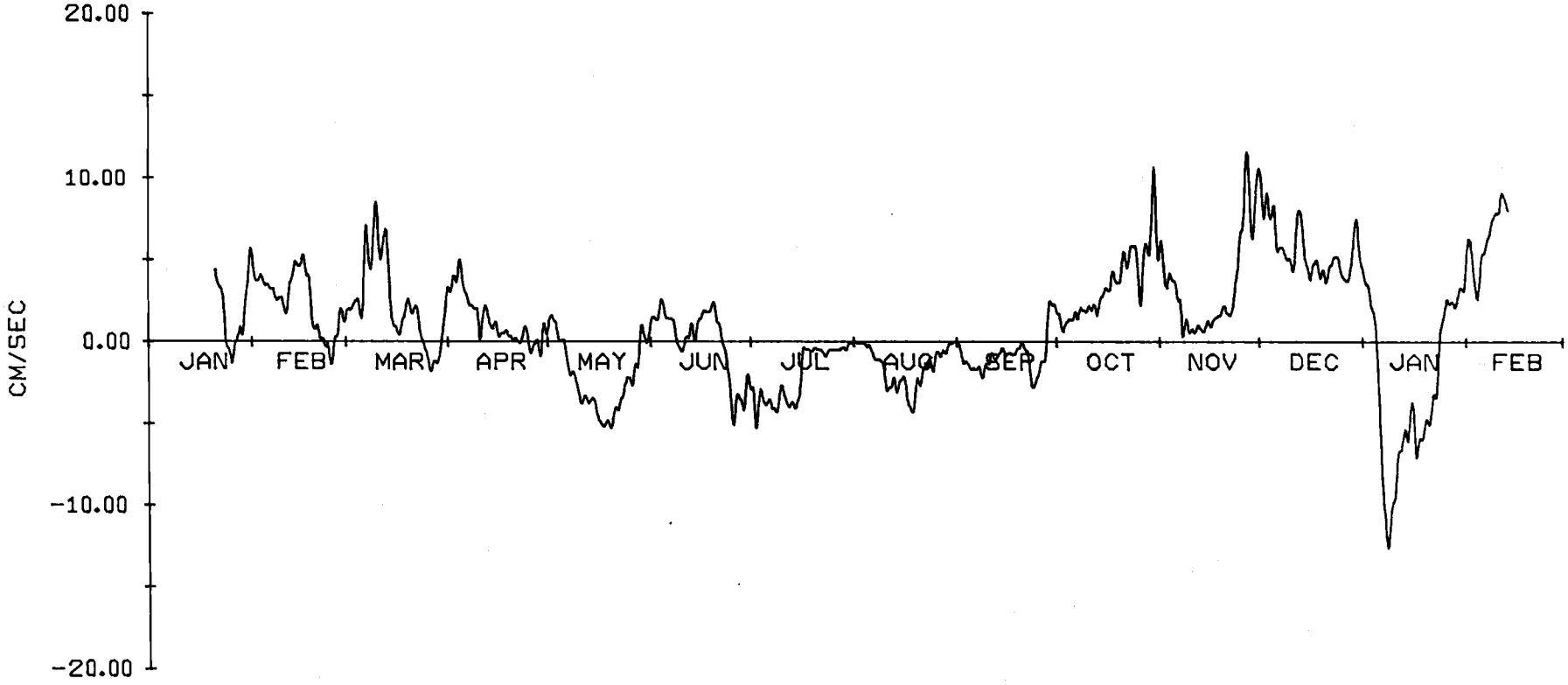
1401 METERS AT ST.
LLP FILTERED U COMPONENT



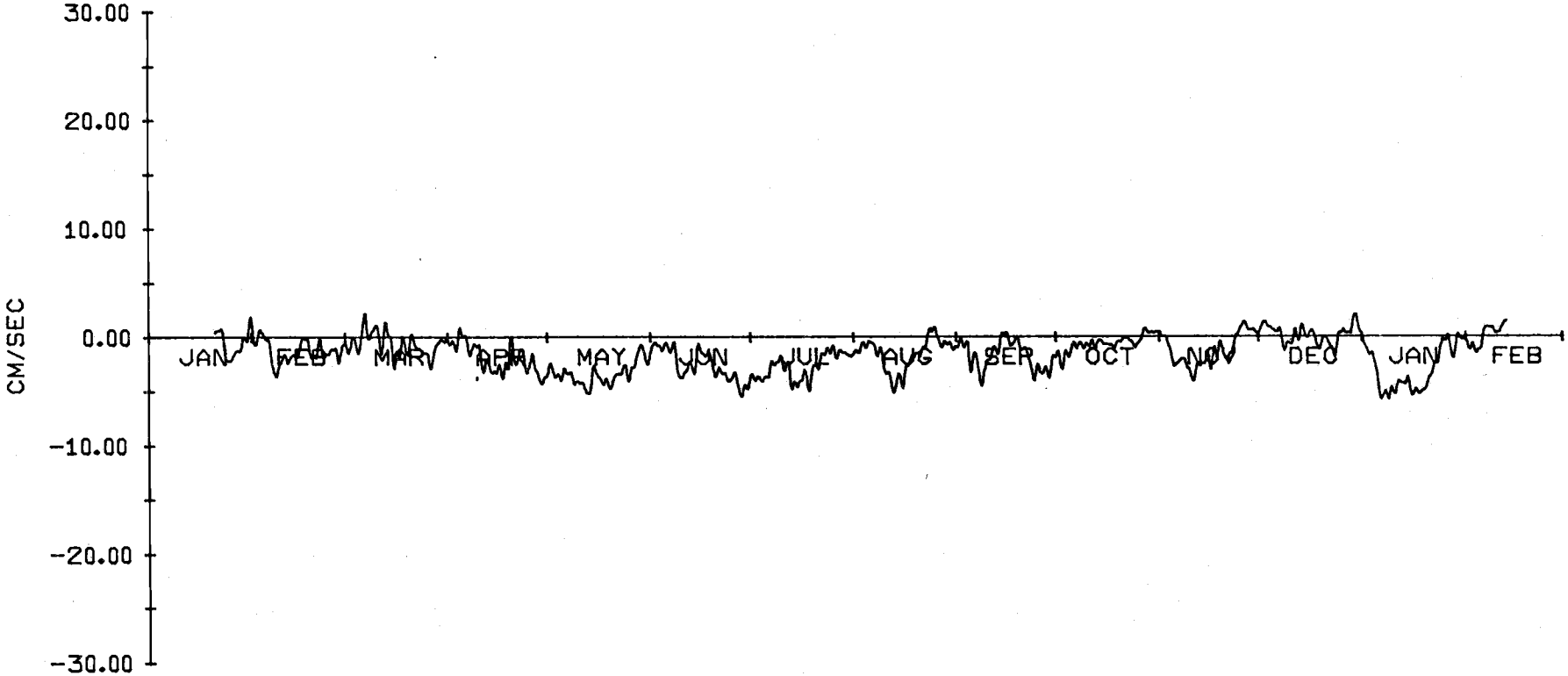
2701 METERS AT ST.
LLP FILTERED U COMPONENT



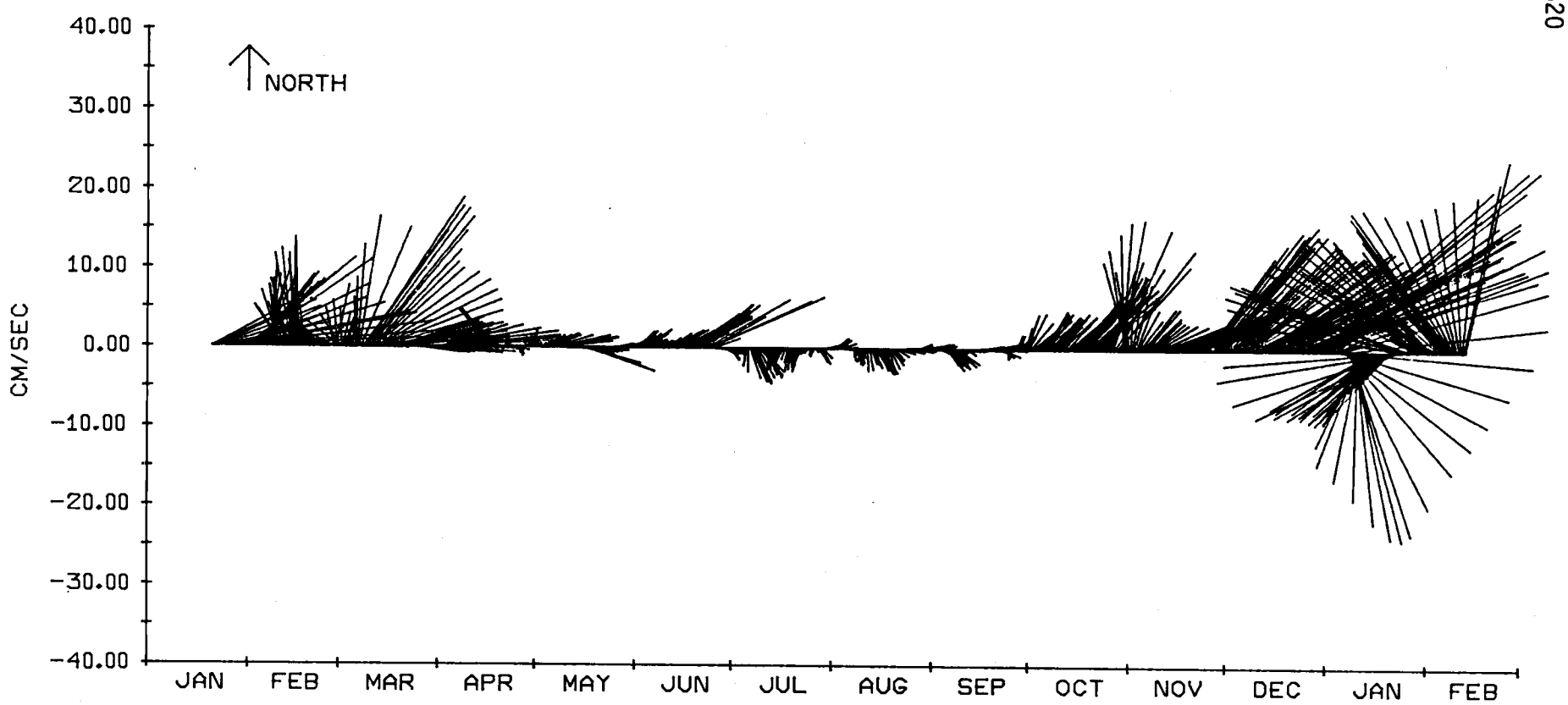
691 METERS AT ST
LLP FILTERED V COMPONENT



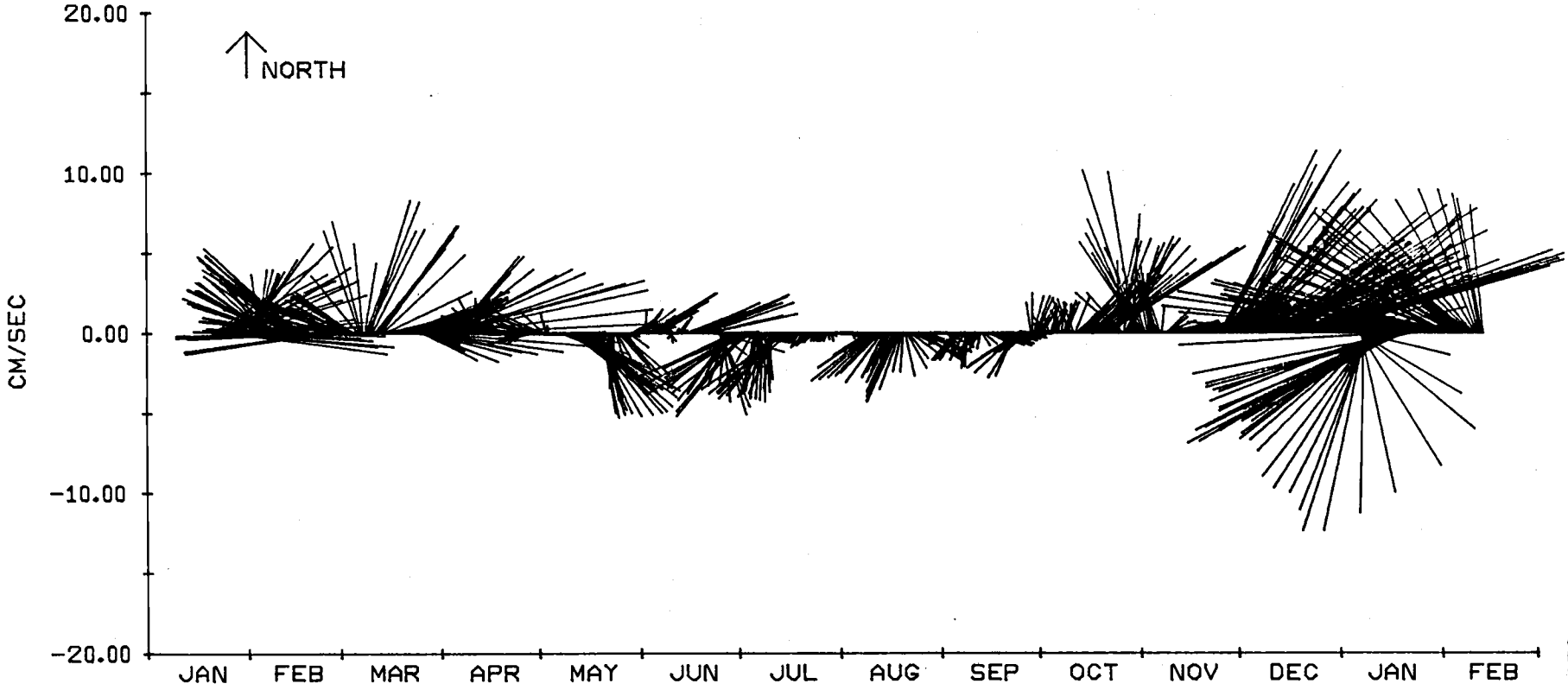
1401 METERS AT ST.
LLP FILTERED V COMPONENT



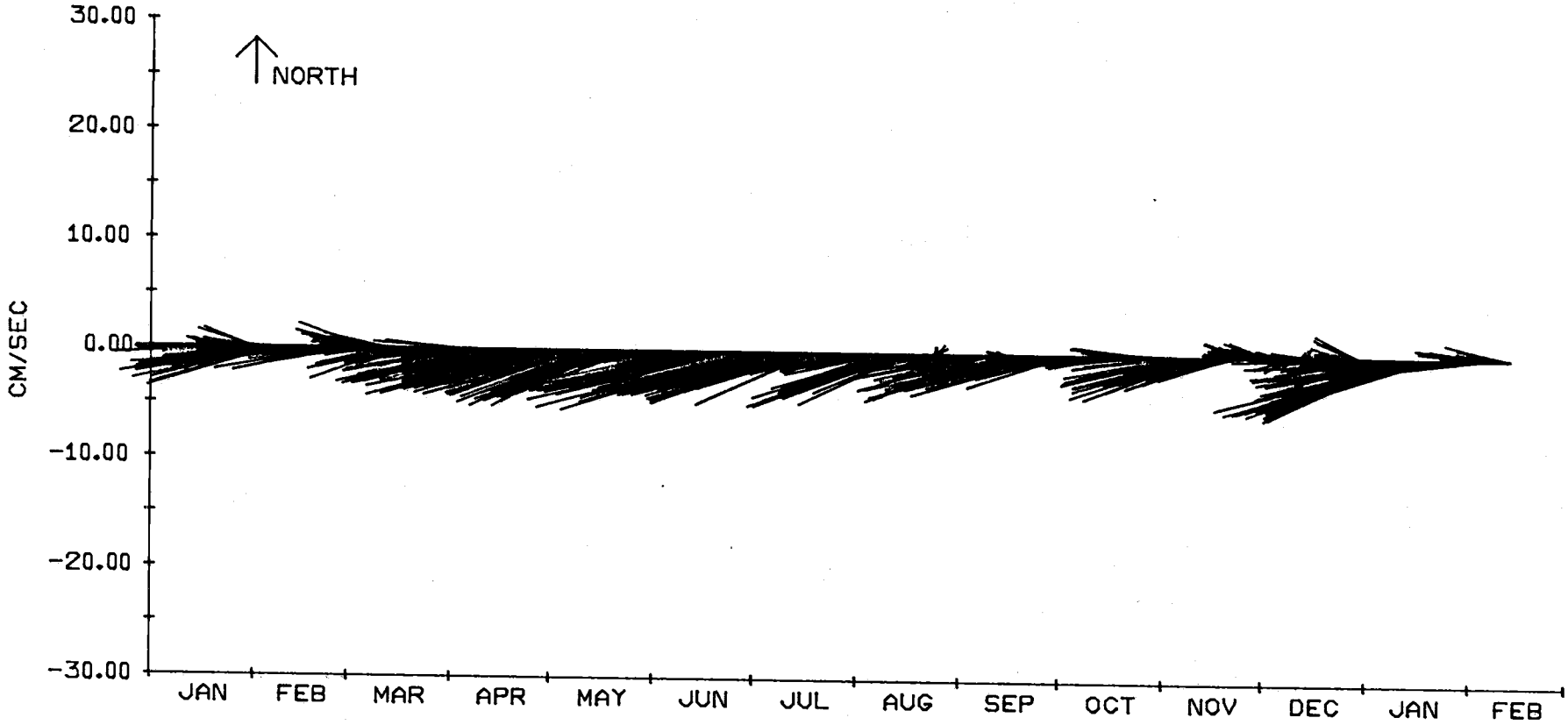
2701 METERS AT ST.
LLP FILTERED V COMPONENT



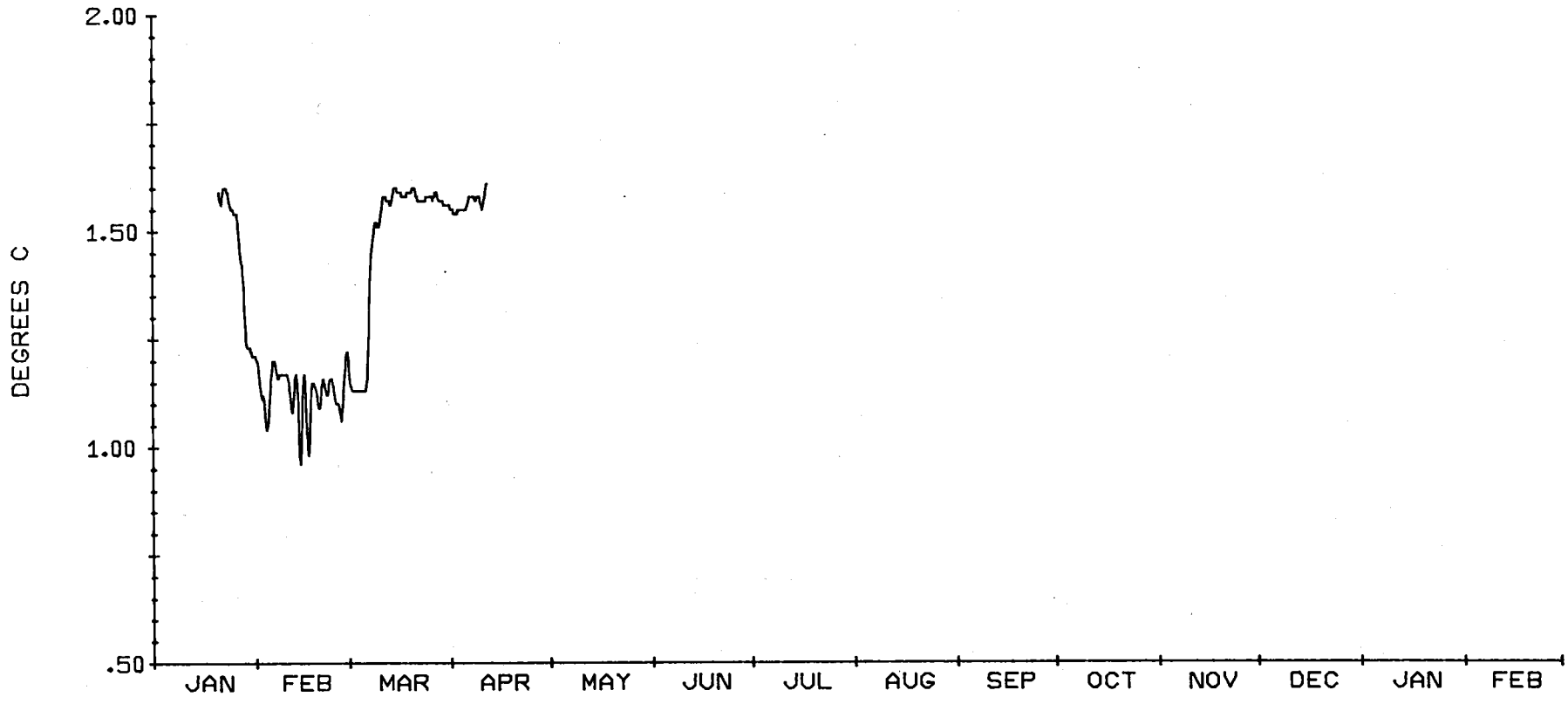
691 METERS AT ST
LLP FILTERED CURRENT



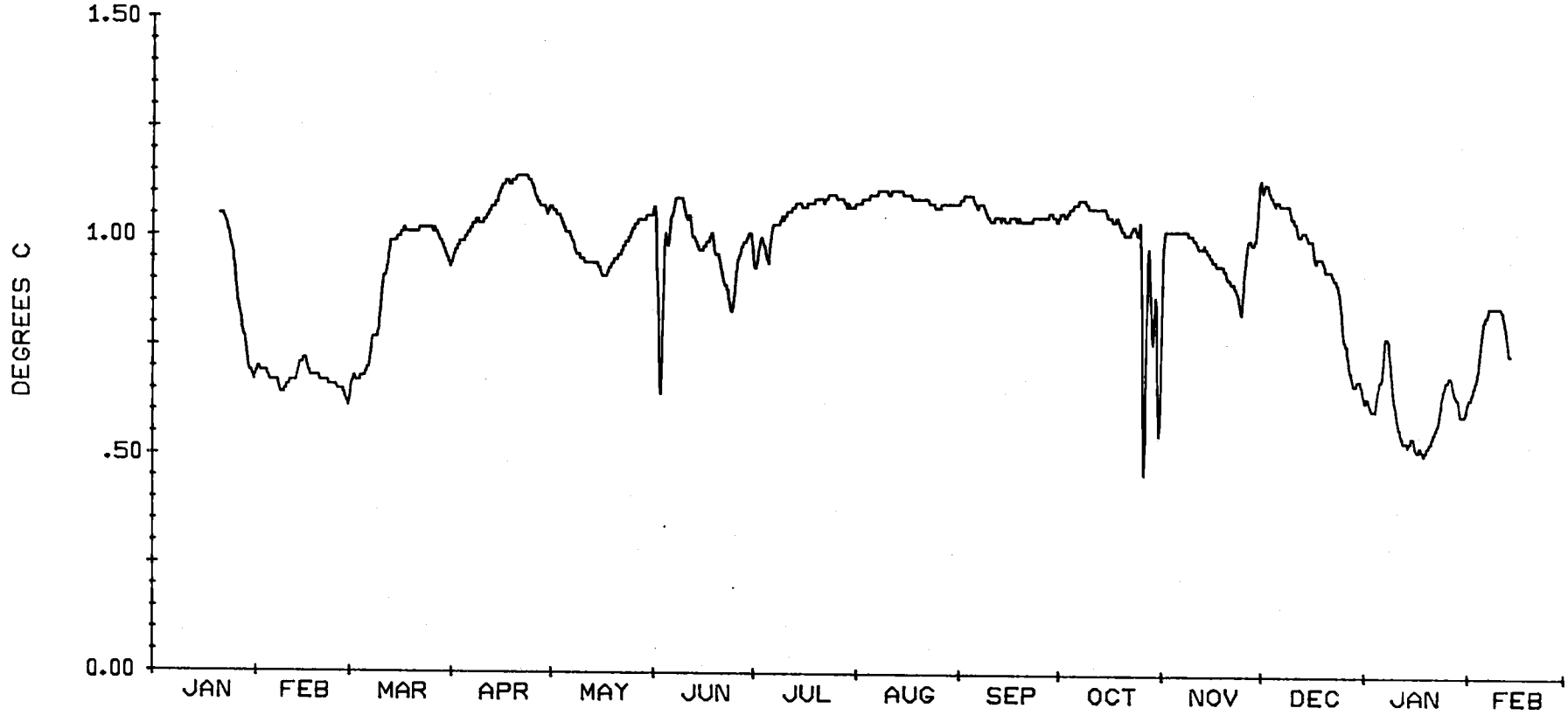
1401 METERS AT ST.
LLP FILTERED CURRENT



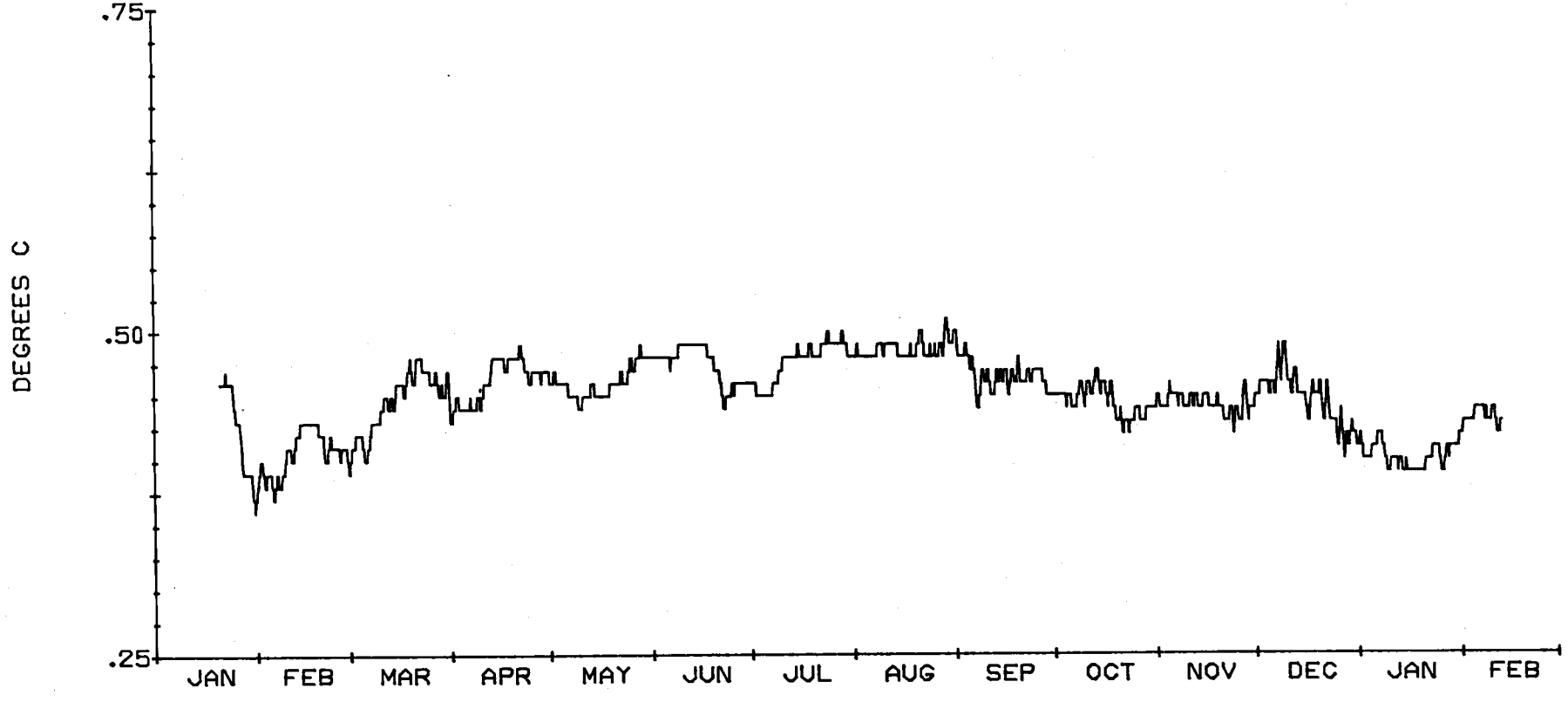
2701 METERS AT ST.
LLP FILTERED CURRENT



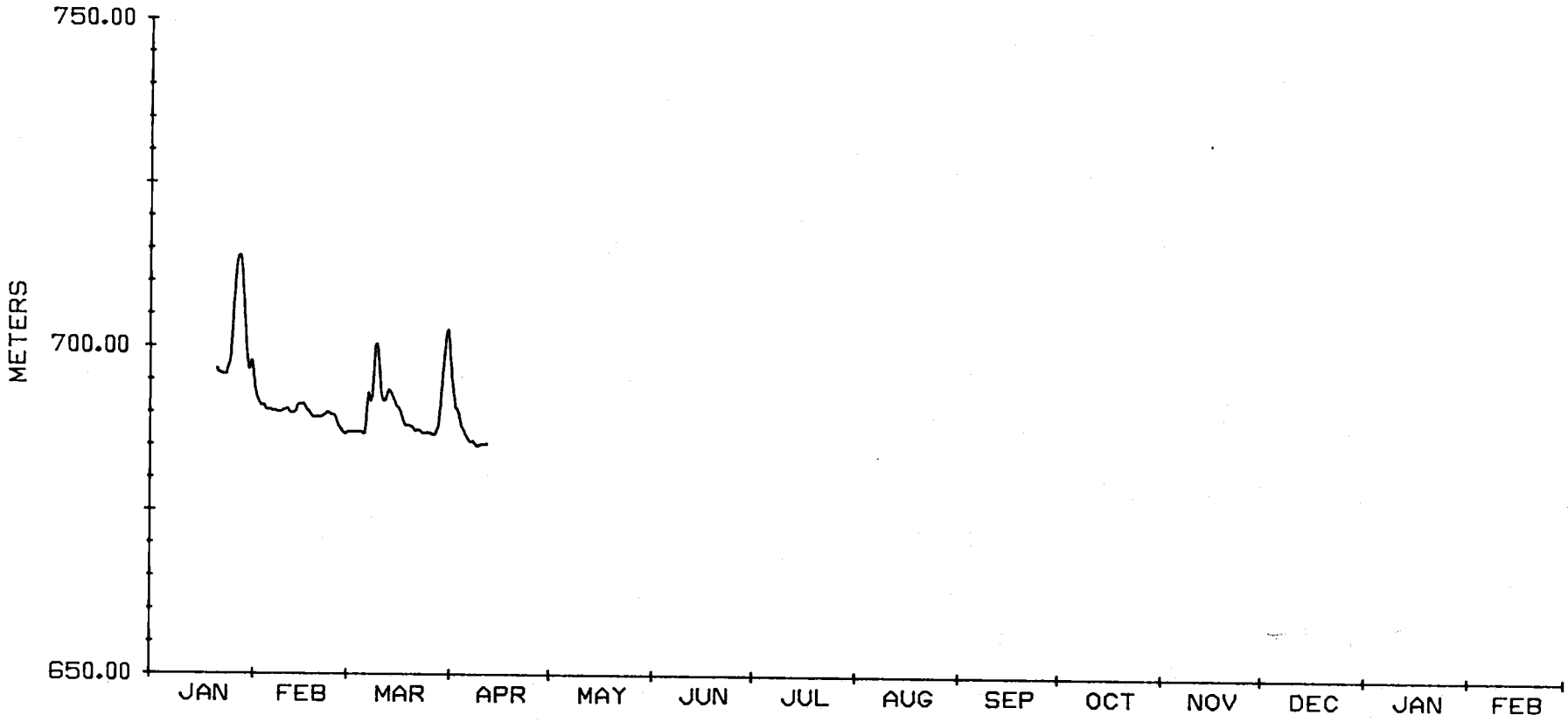
691 METERS AT ST
LLP FILTERED TEMPERATURE



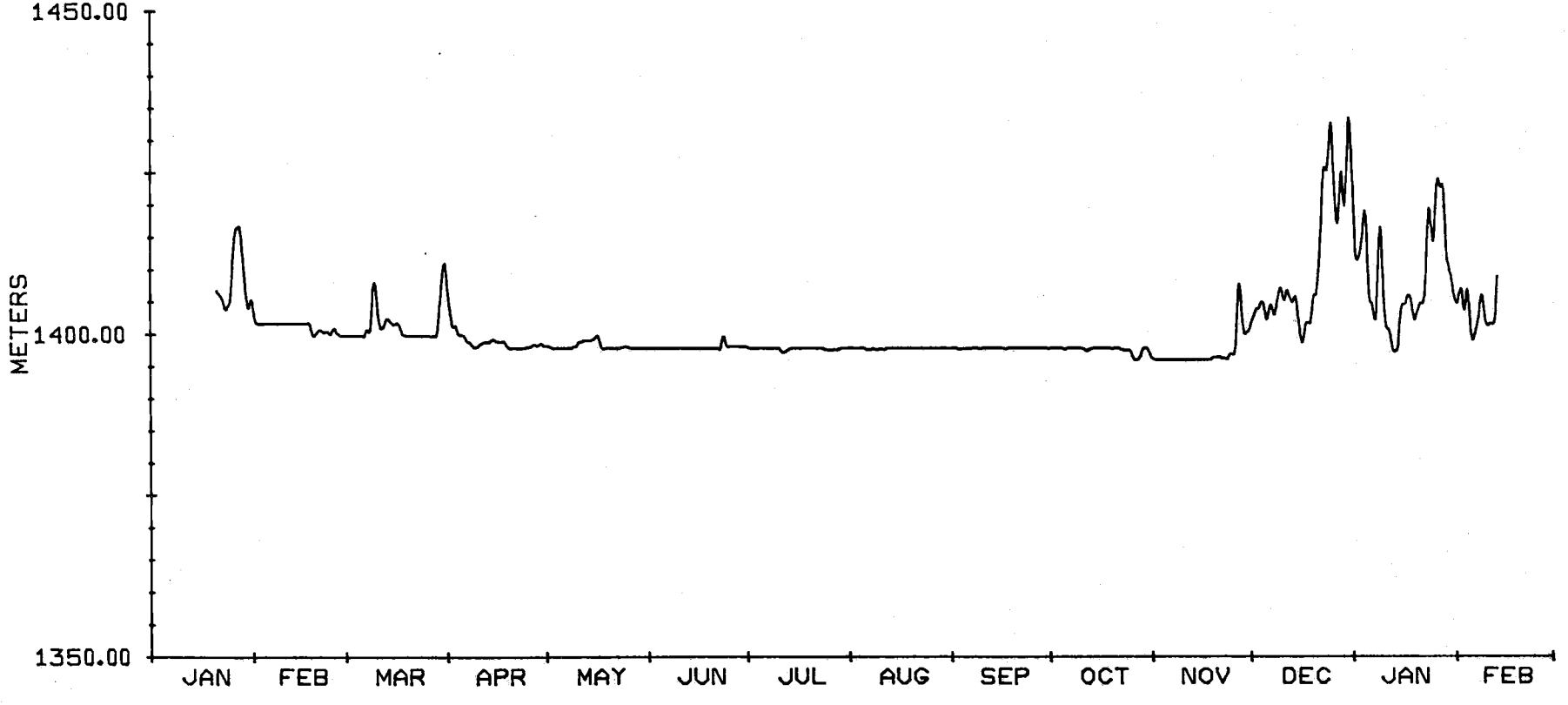
1401 METERS AT ST.
LLP FILTERED TEMPERATURE



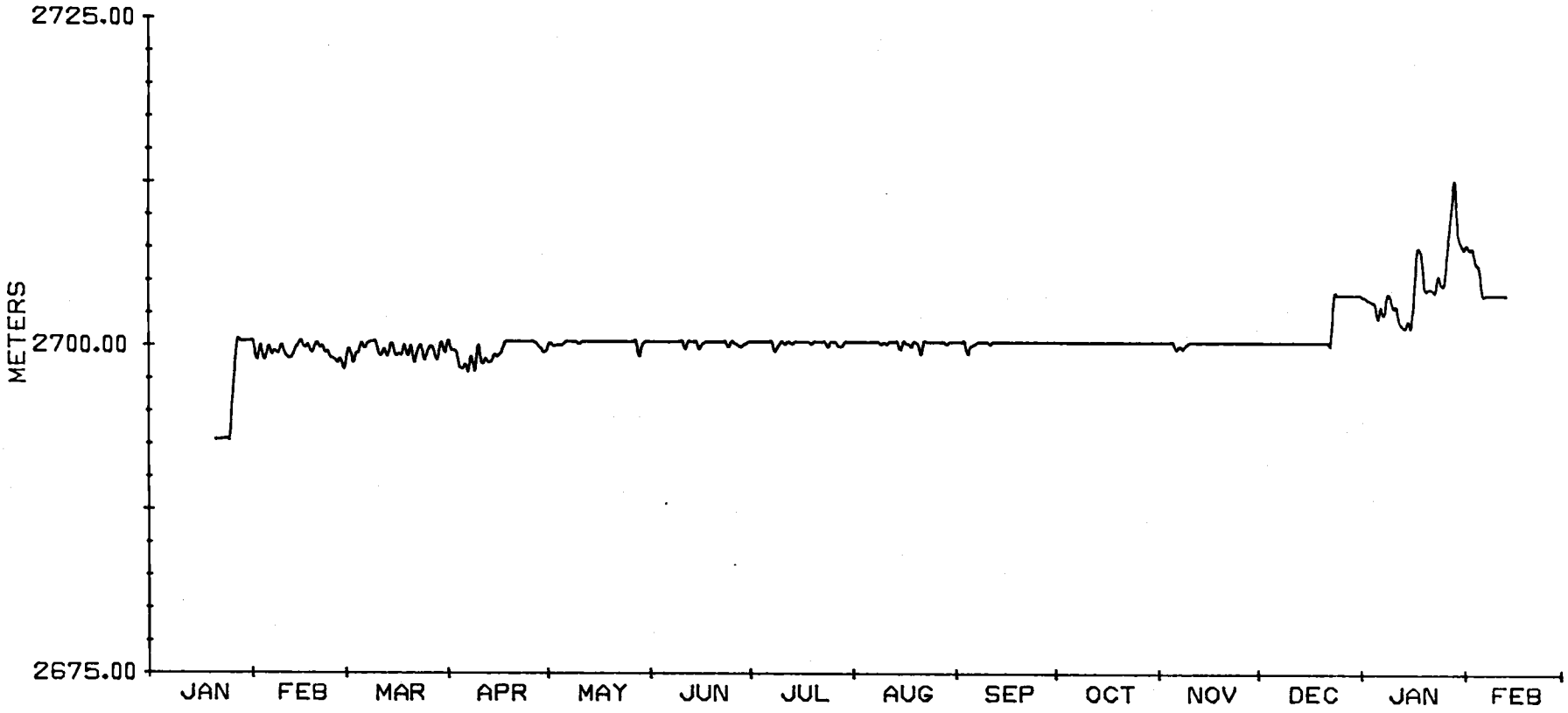
2701 METERS AT ST.
LLP FILTERED TEMPERATURE



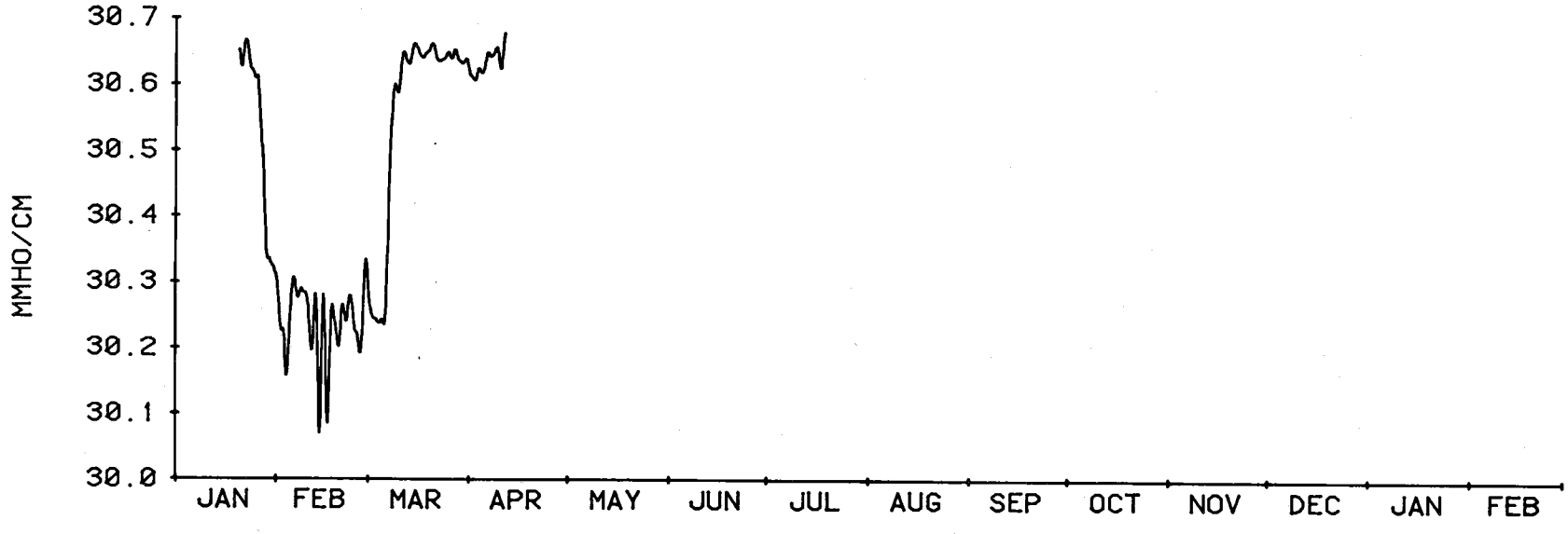
691 METERS AT ST
LLP FILTERED PRESSURE



1401 METERS AT ST.
LLP FILTERED PRESSURE

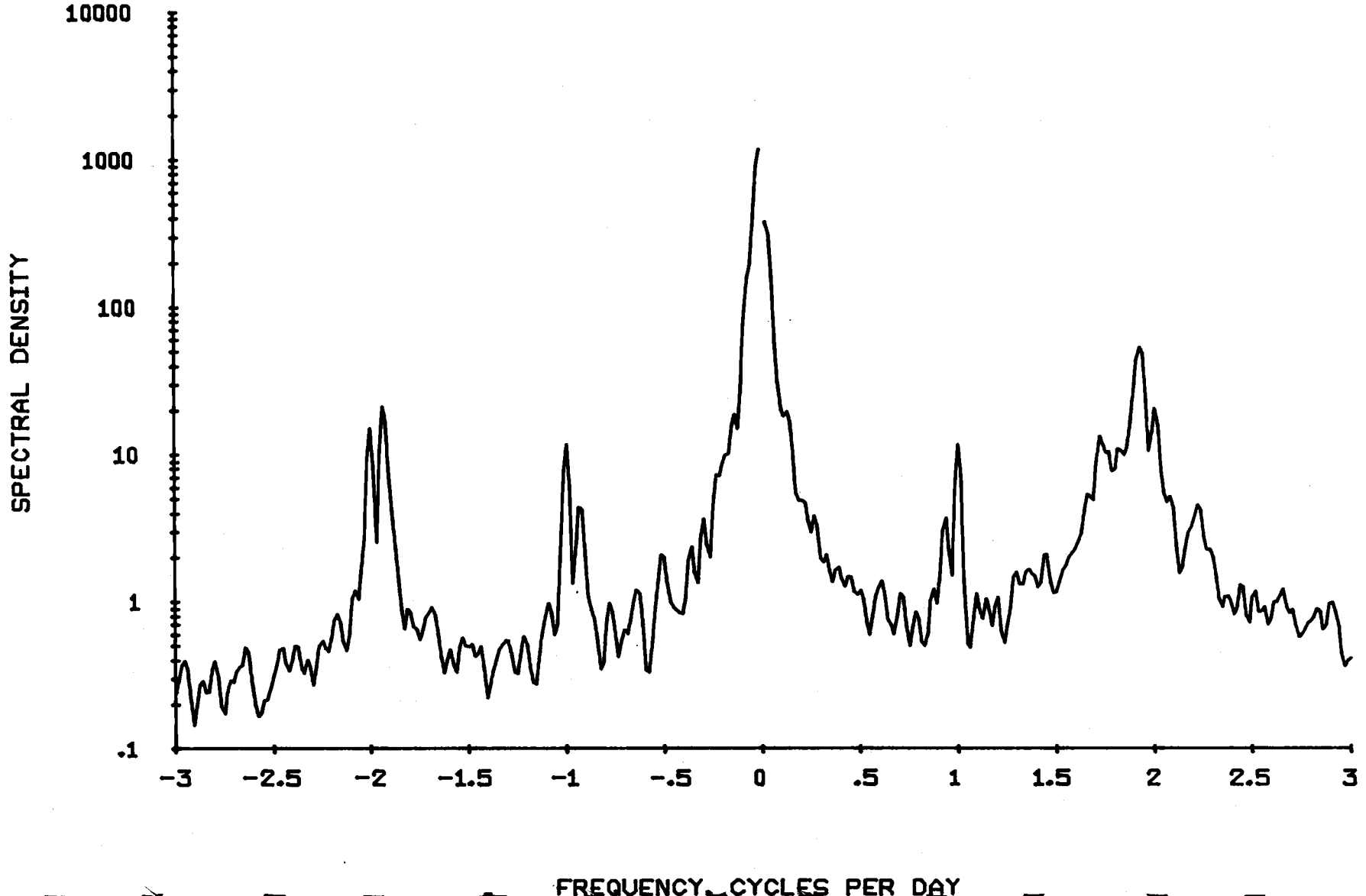


2701 METERS AT ST.
LLP FILTERED PRESSURE

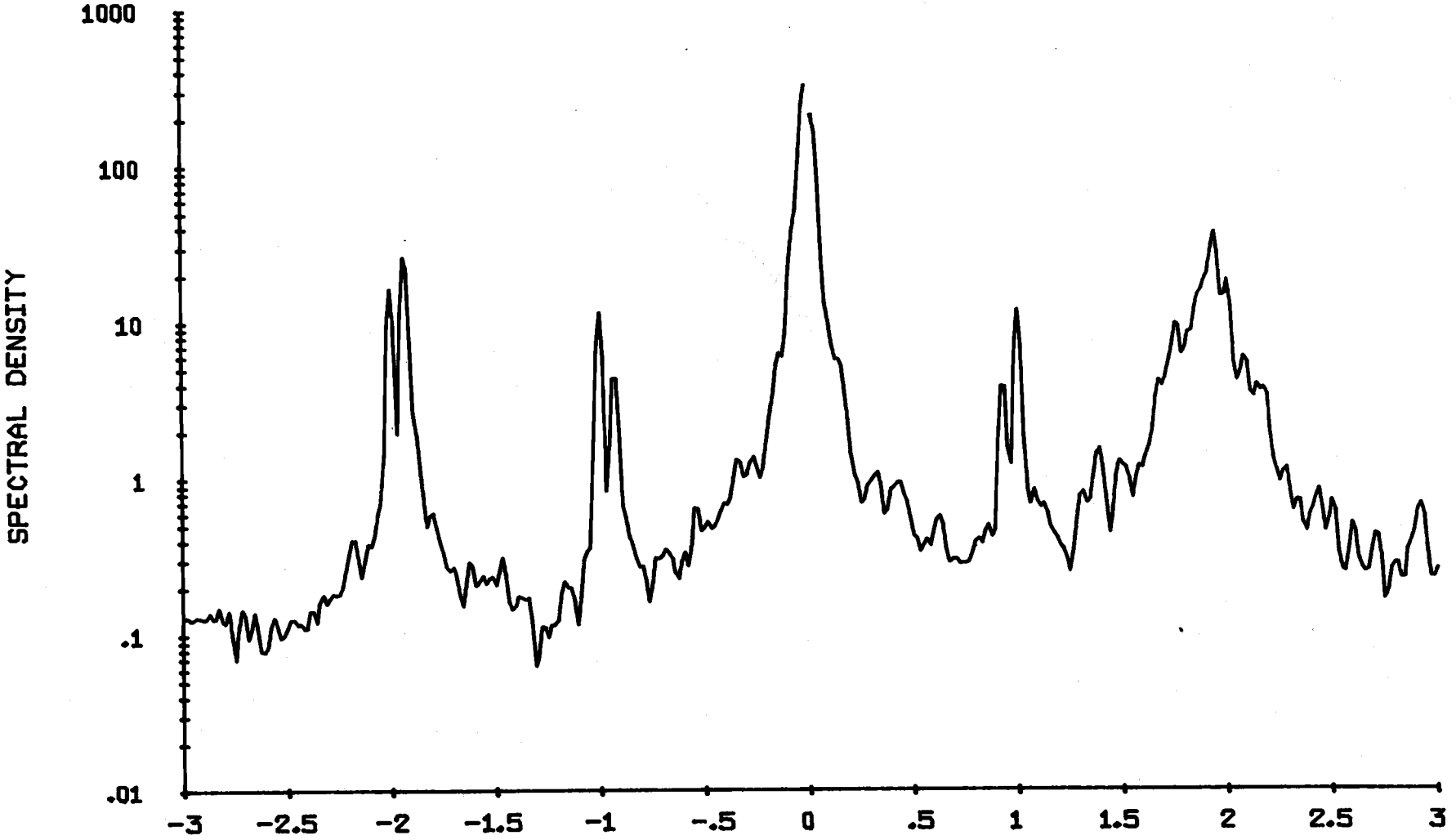


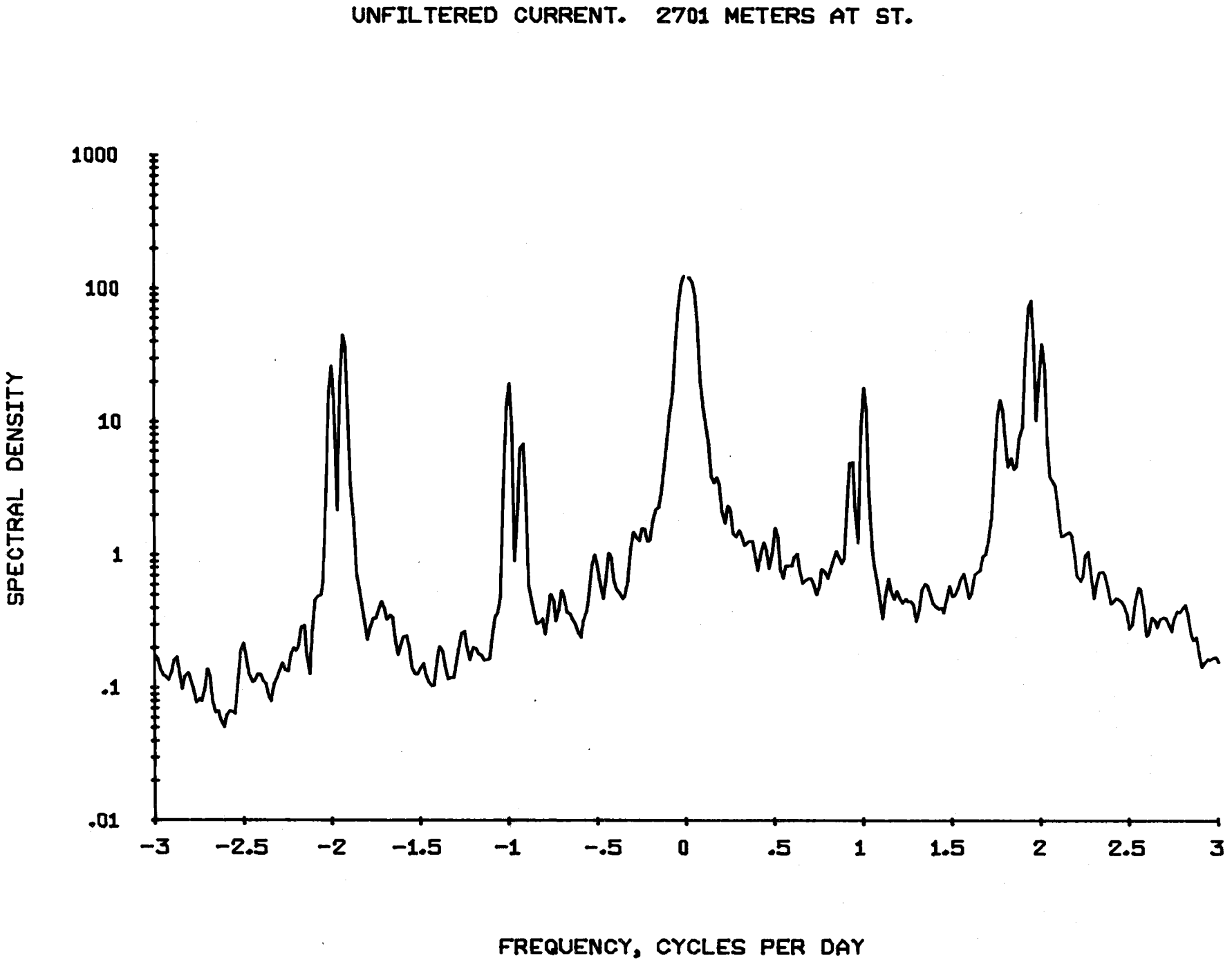
691 METERS AT ST
LLP FILTERED CONDUCTIVITY

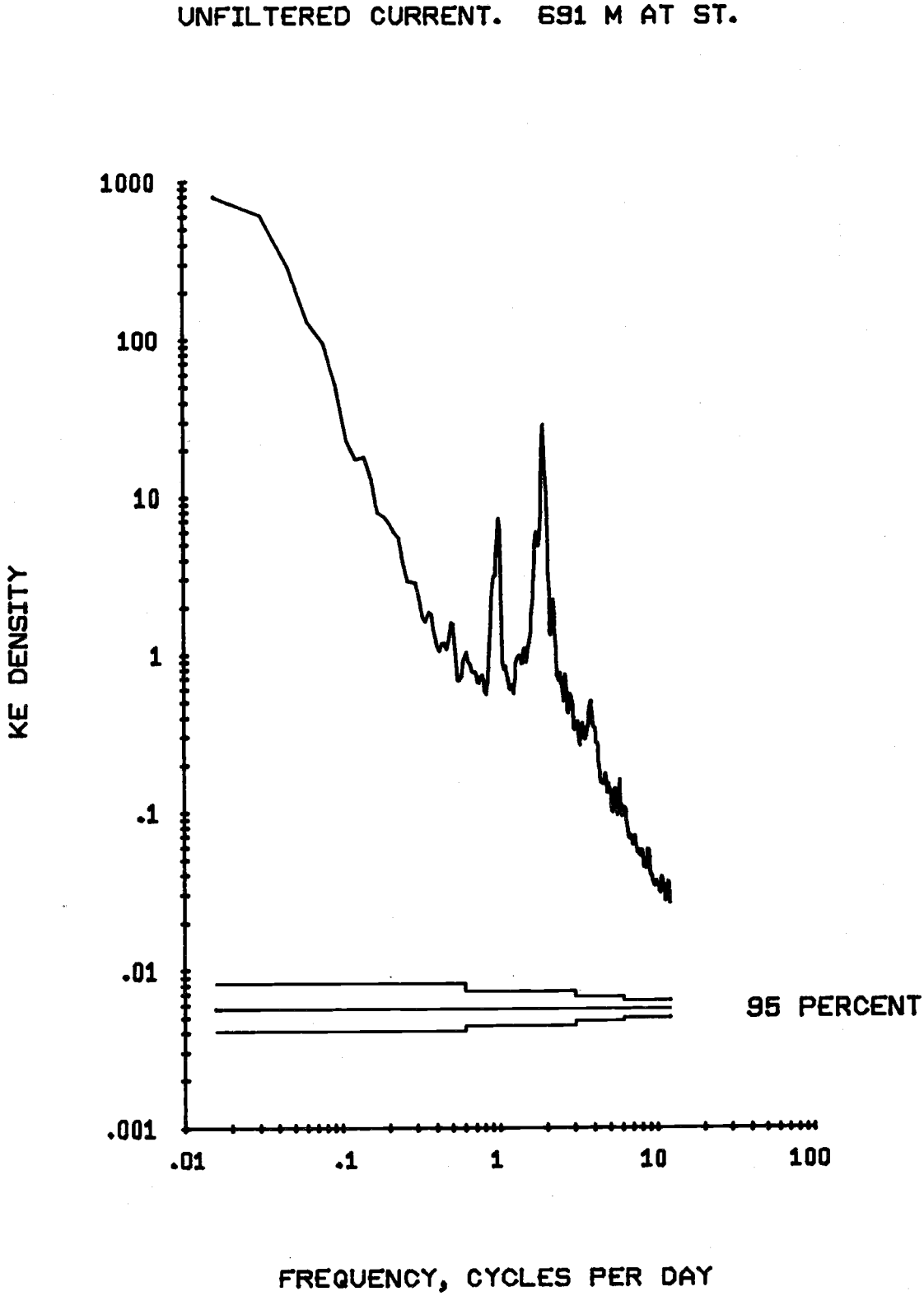
UNFILTERED CURRENT. 691 METERS AT ST.



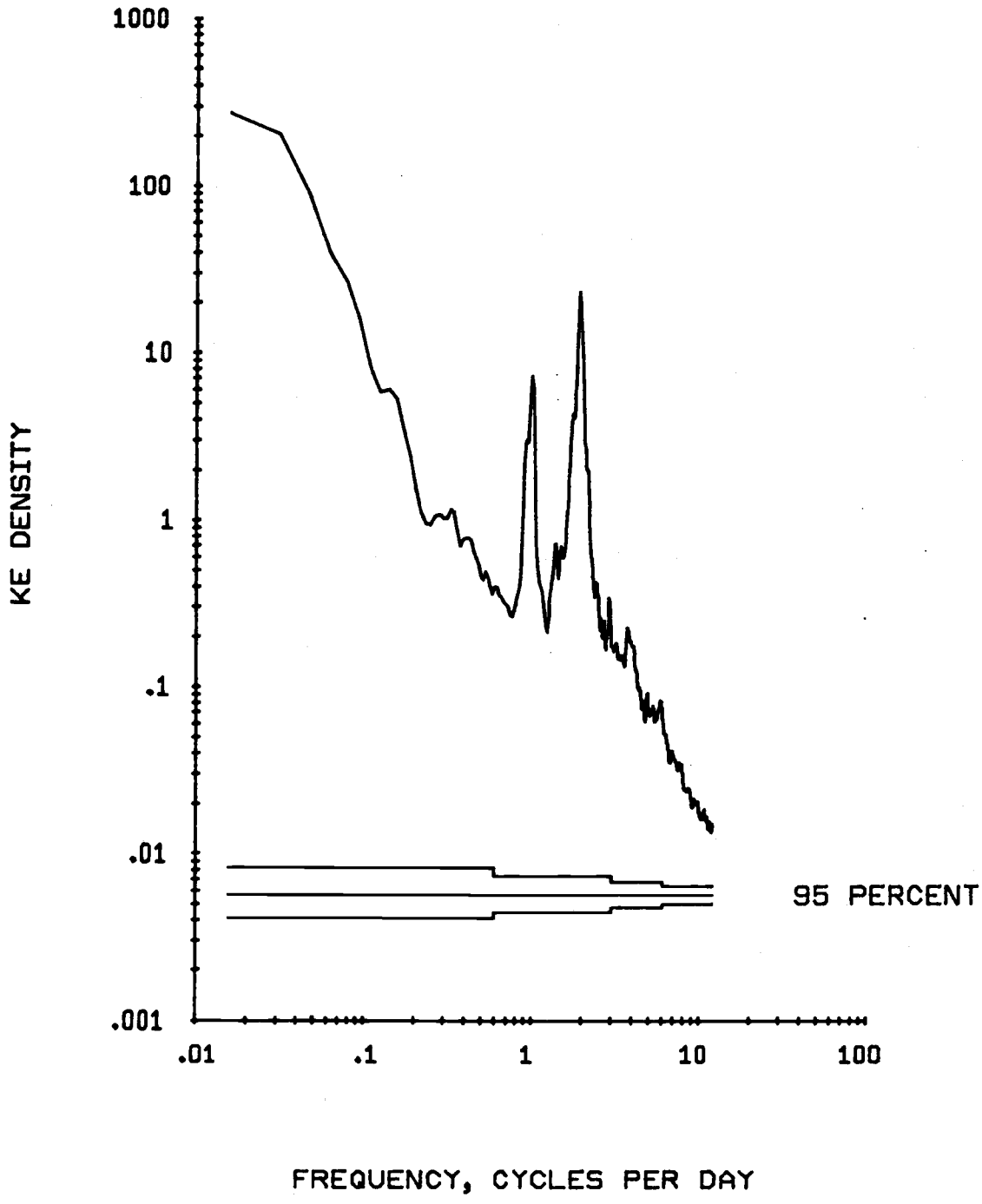
UNFILTERED CURRENT. 1401 METERS AT ST.



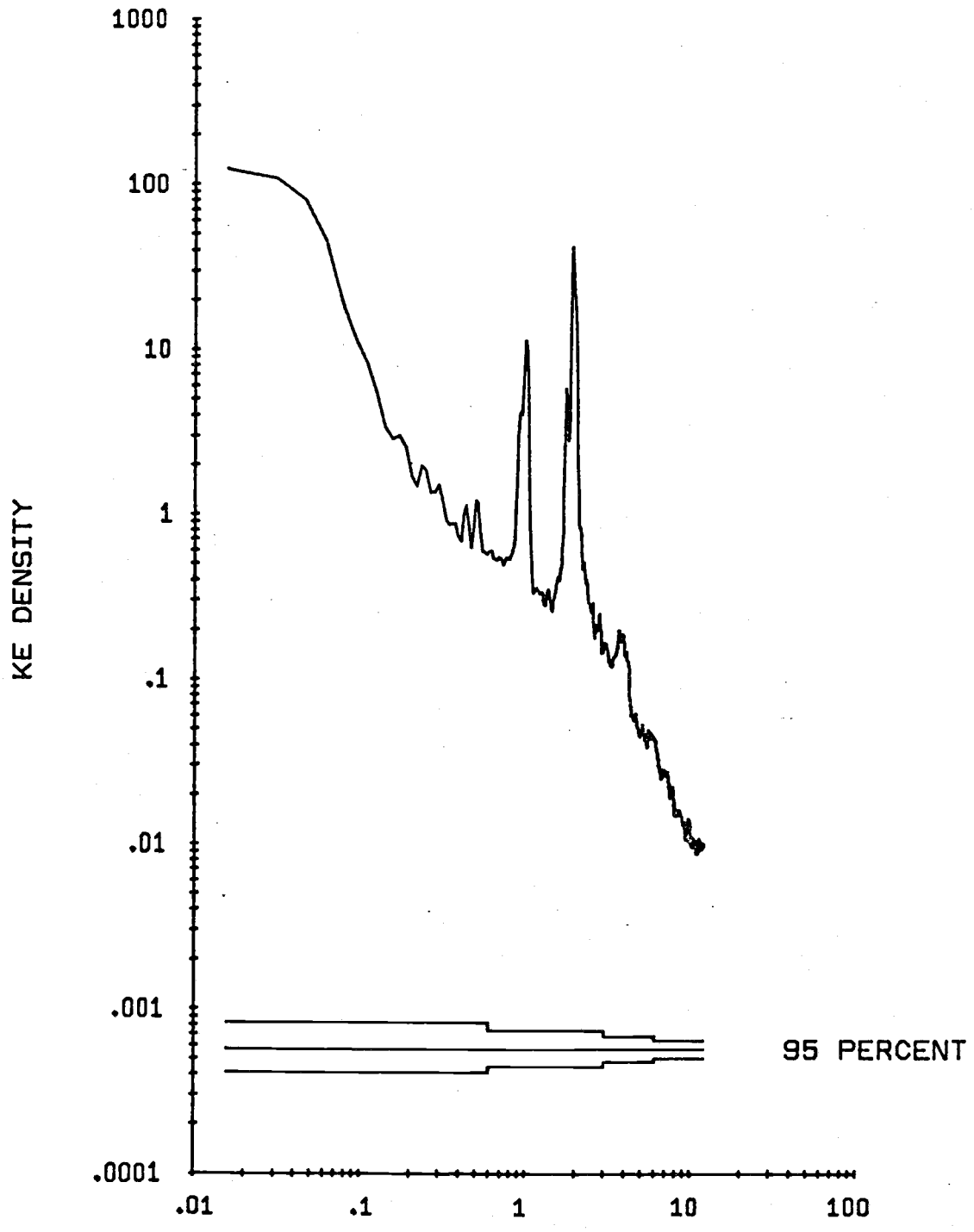

UNFILTERED CURRENT. 2701 METERS AT ST.
SPECTRAL DENSITY
1000
100
10
1
.1
.01
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY


UNFILTERED CURRENT. 691 M AT ST.
1000
100
10
1
.1
.01
.001
KE DENSITY
95 PERCENT
.01
.1
1
10
100
FREQUENCY, CYCLES PER DAY

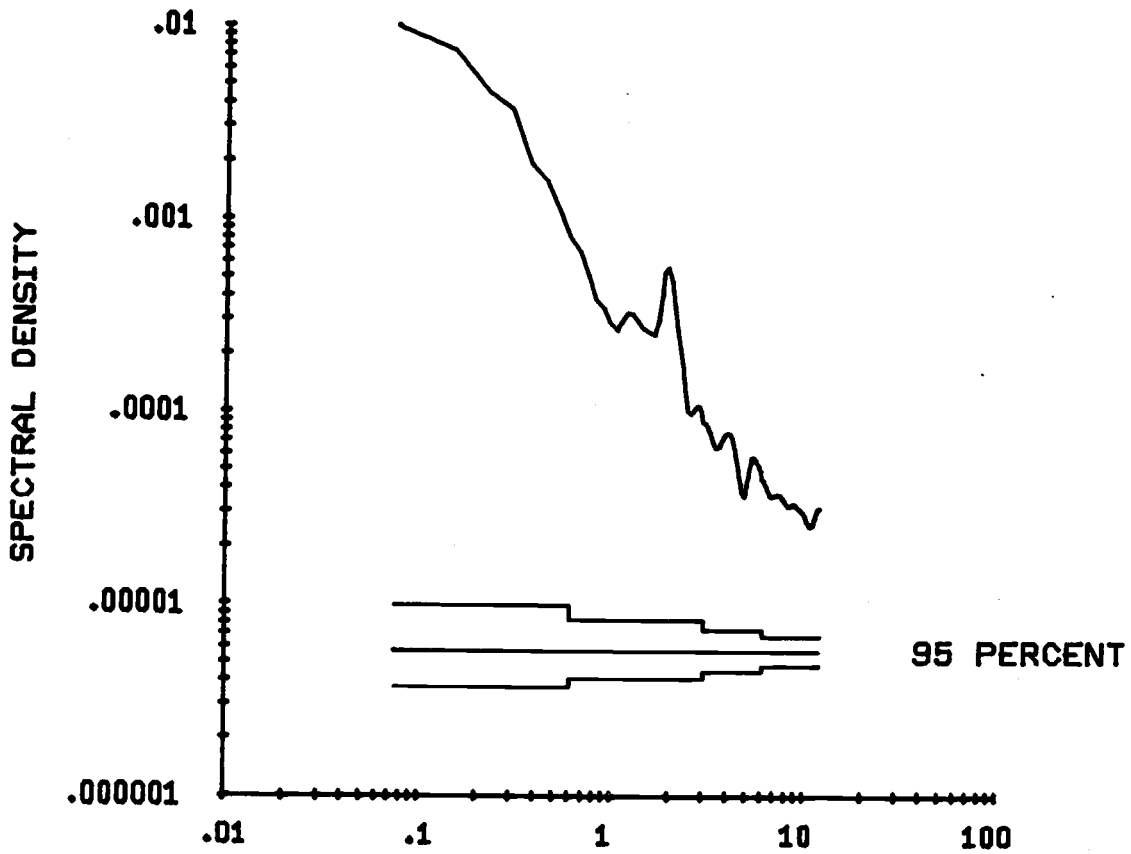
UNFILTERED CURRENT. 1401 METERS AT ST.



UNFILTERED CURRENT. 2701 METERS AT ST.

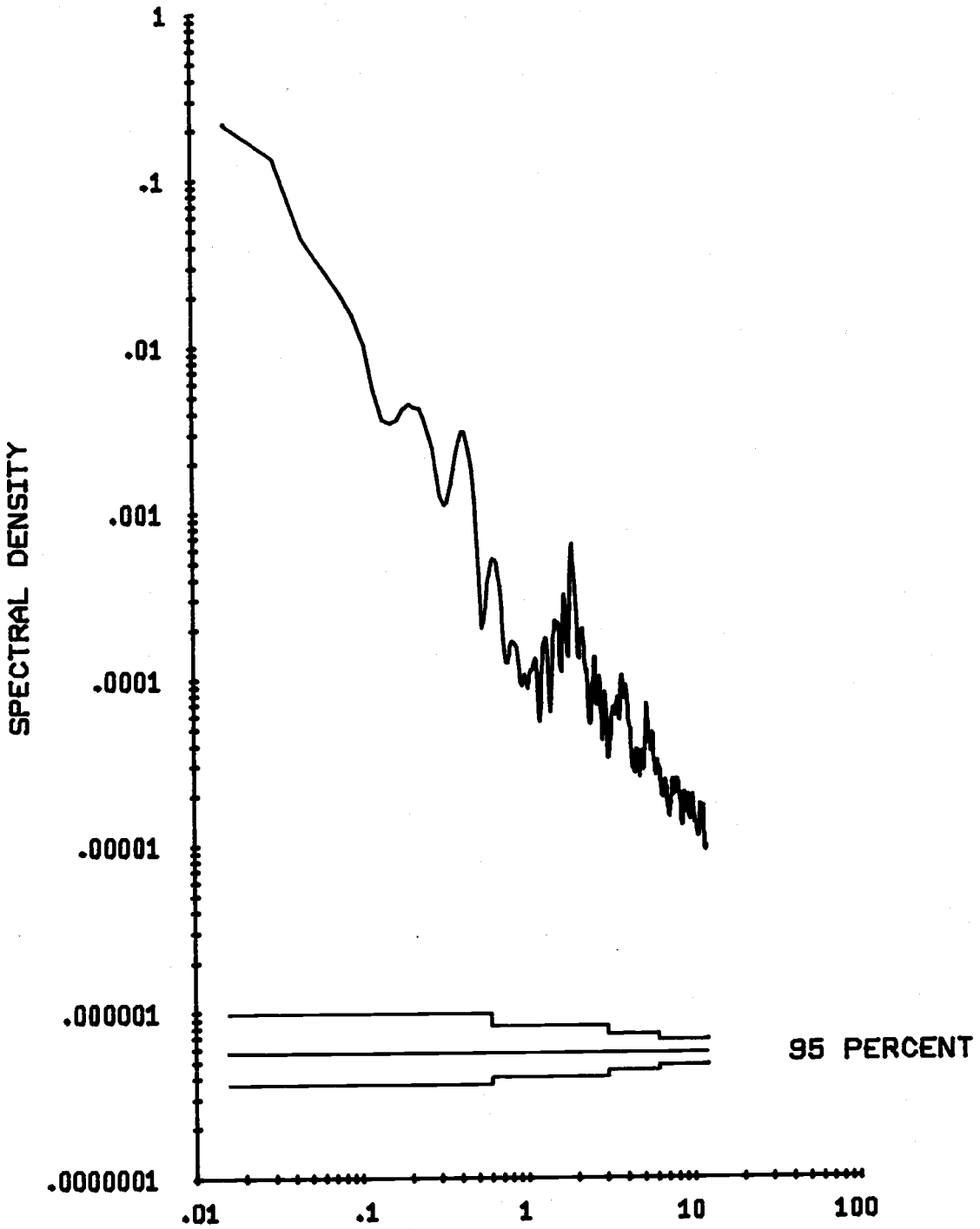


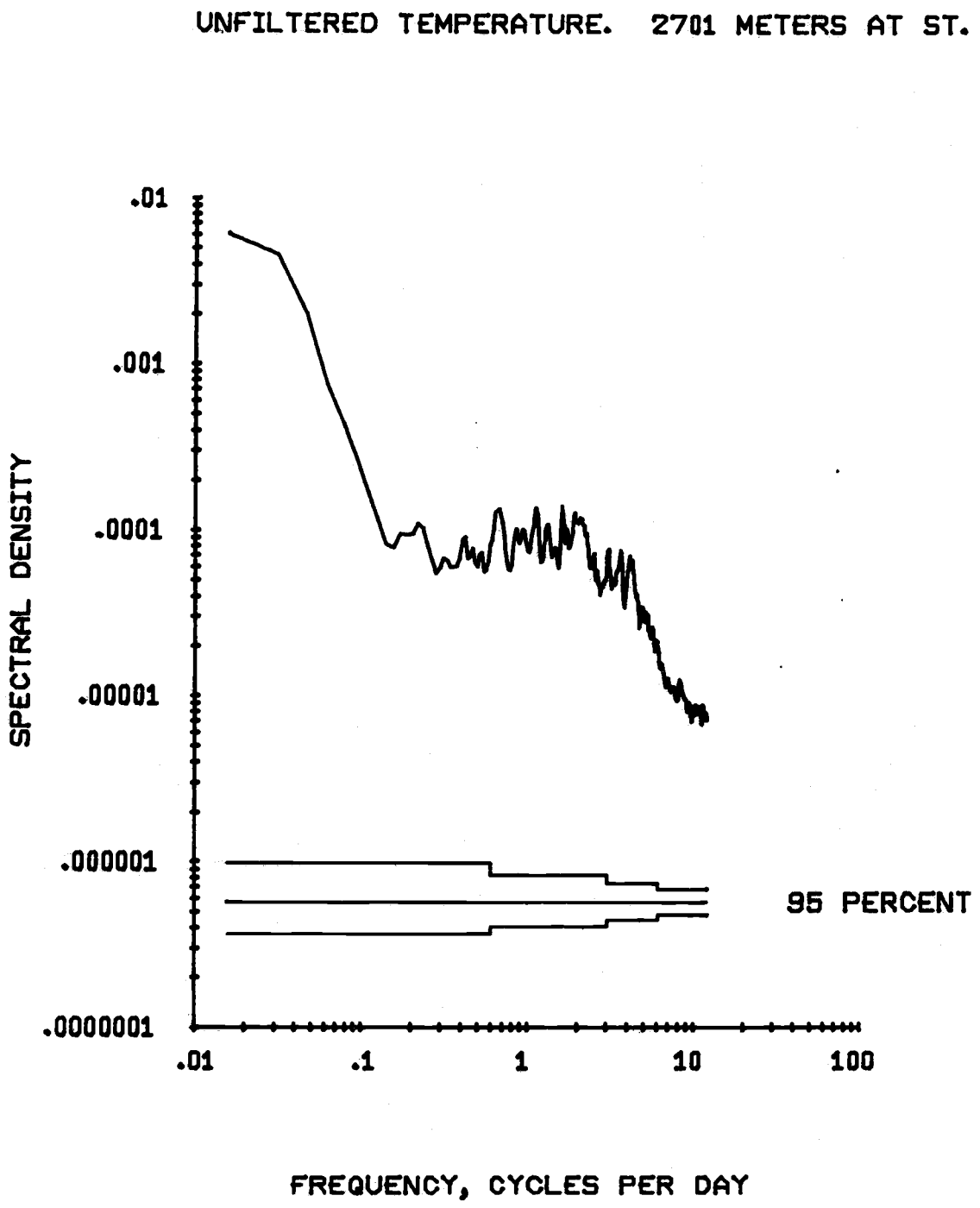
UNFILTERED TEMPERATURE. 691 METERS AT ST.



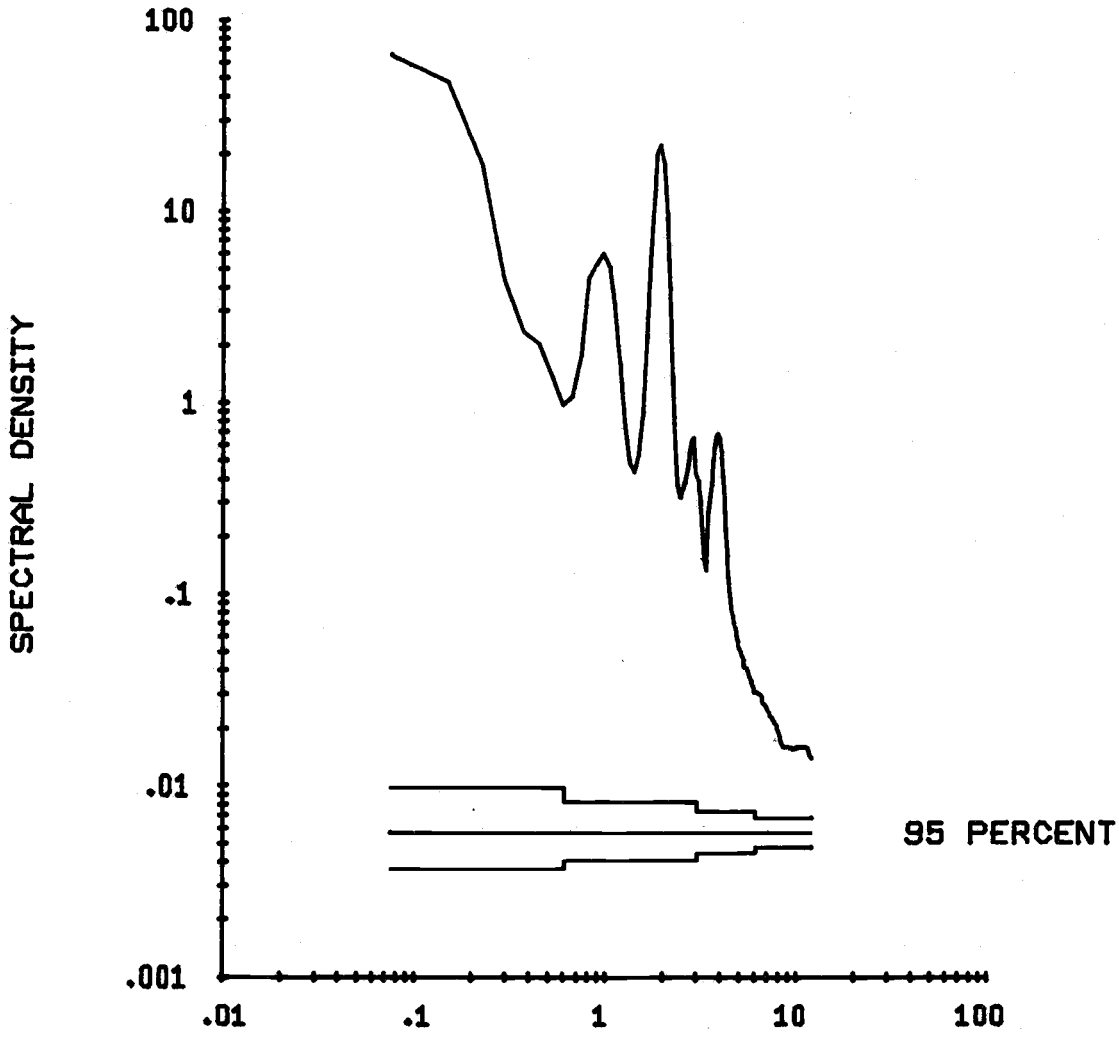
FREQUENCY, CYCLES PER DAY

UNFILTERED TEMPERATURE. 1401 METERS AT ST.

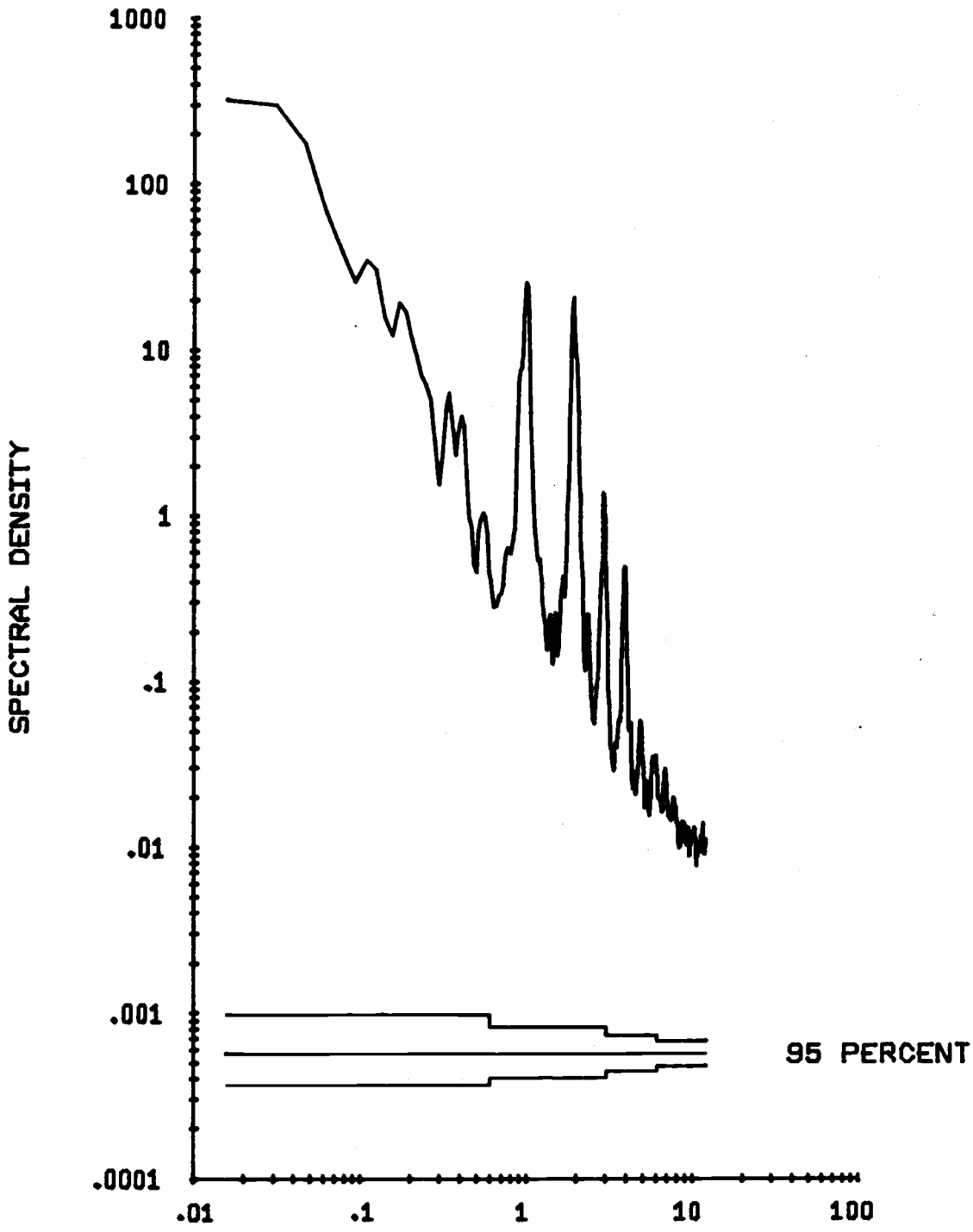



UNFILTERED TEMPERATURE. 2701 METERS AT ST.
SPECTRAL DENSITY
.01
.001
.0001
.00001
.000001
.0000001
.01
.1
1
10
100
95 PERCENT
FREQUENCY, CYCLES PER DAY

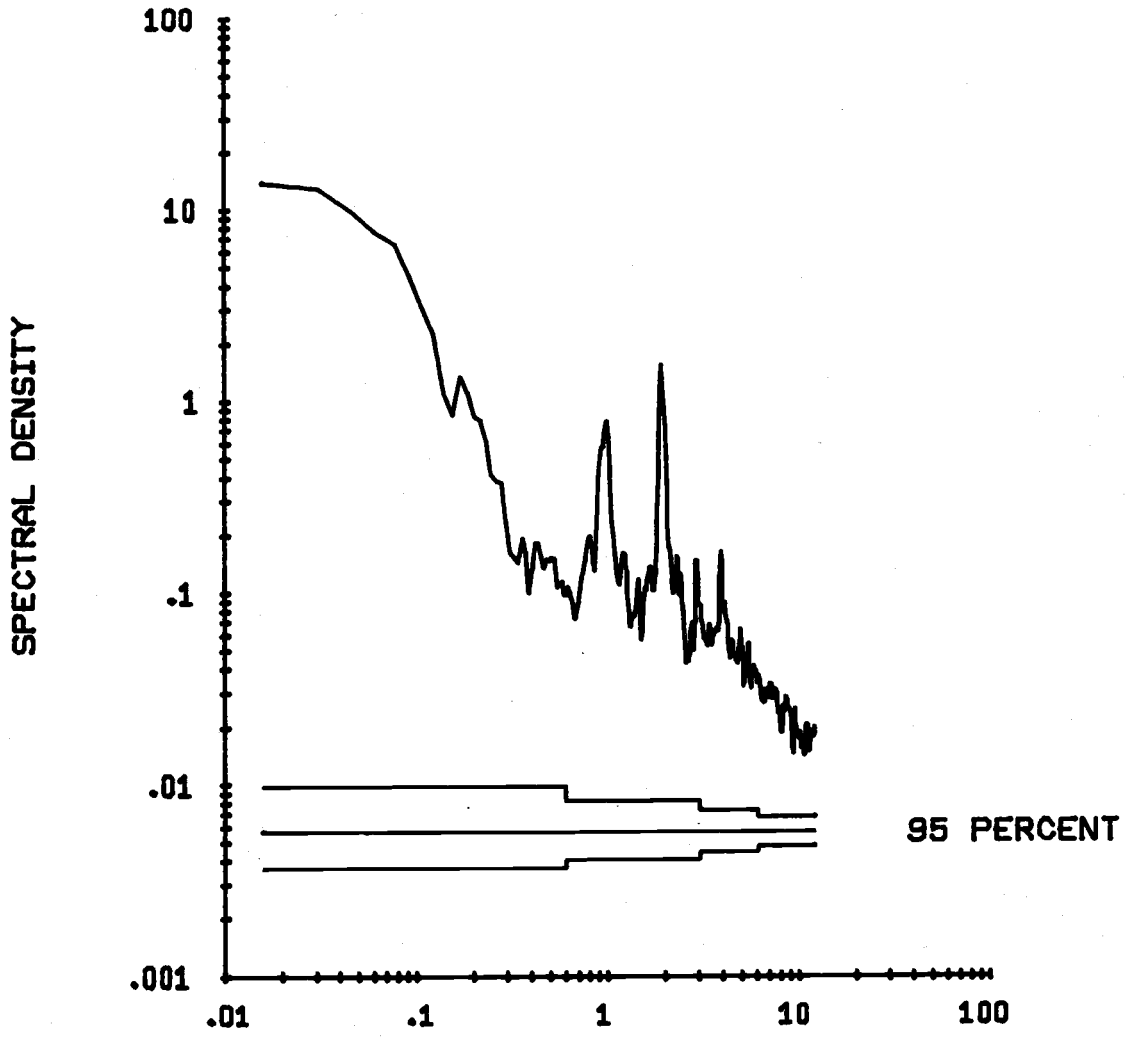
UNFILTERED PRESSURE. 691 METERS AT ST.

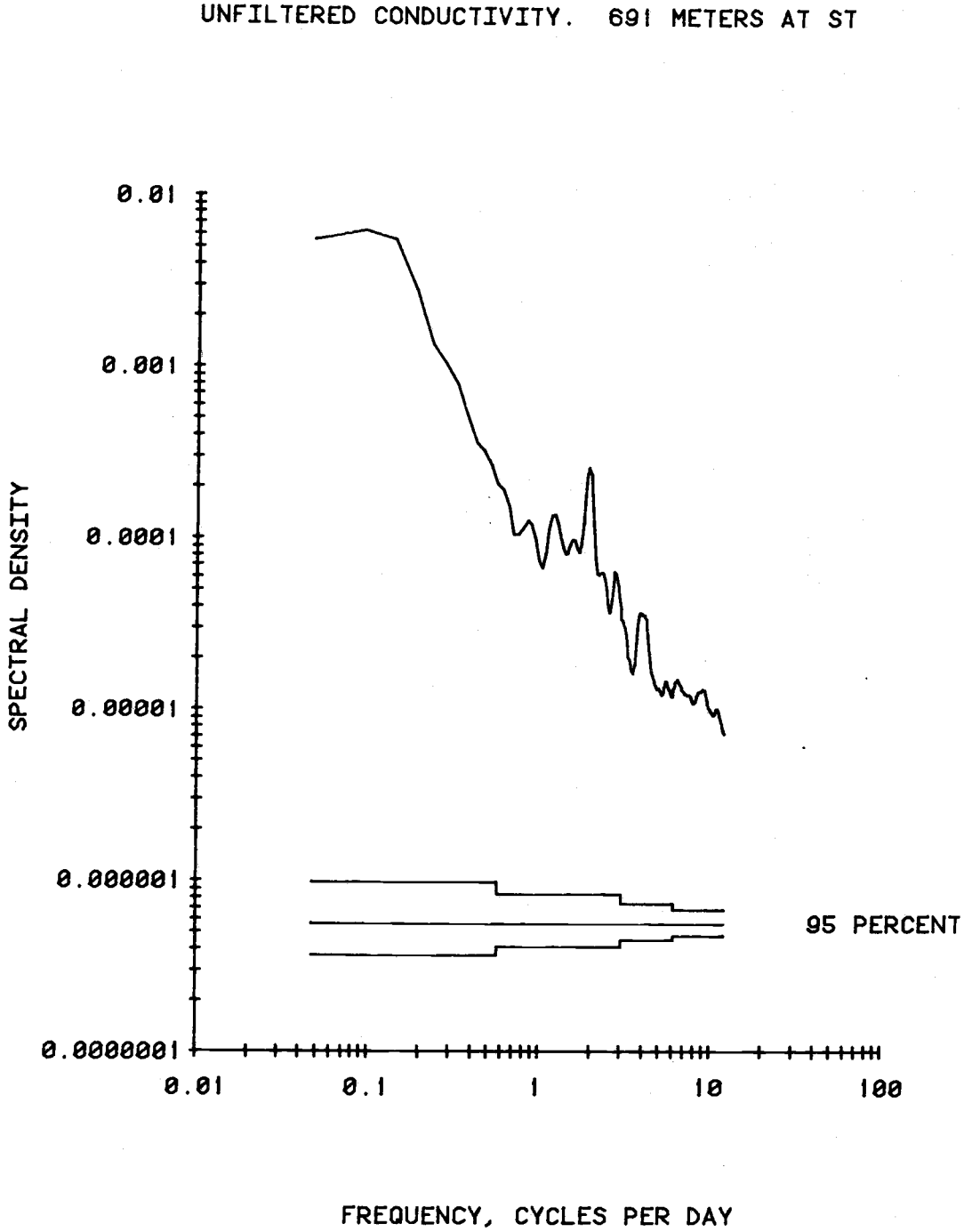


UNFILTERED PRESSURE. 1401 METERS AT ST.

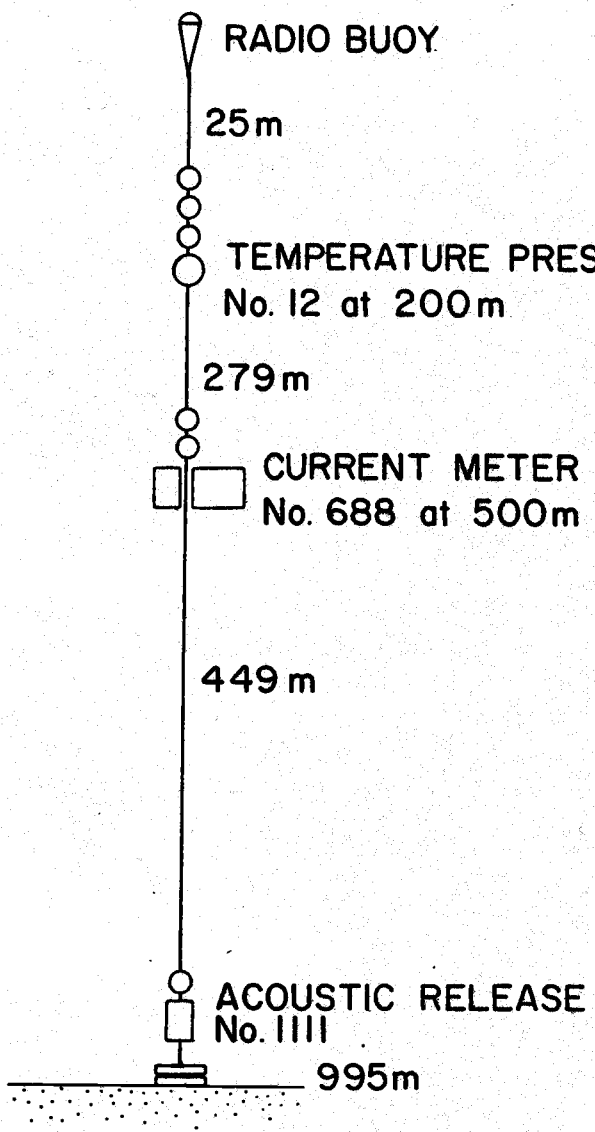


UNFILTERED PRESSURE. 2701 METERS AT ST.




UNFILTERED CONDUCTIVITY. 691 METERS AT ST
0.01
0.001
0.0001
0.00001
0.000001
0.0000001
SPECTRAL DENSITY
95 PERCENT
0.01
0.1
1
10
100
FREQUENCY, CYCLES PER DAY

SS - 1000



SOUTH SLOPE (SS) 1000

62° 03.6' S

60° 38.6' W

INSTALLED: 19 JANUARY 1979

SS-1000

Position: 62°03.6'S, 60°38.6'W
Depth of Water: 995 m
Set at 2136 UCT 19 January '79 by R/V MELVILLE
Retrieved at 1309 UCT 13 February '80 by R/V ATLANTIS II
Data Interval: 2346 UCT 19 January '79 to 1246 UCT 13 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	688/51

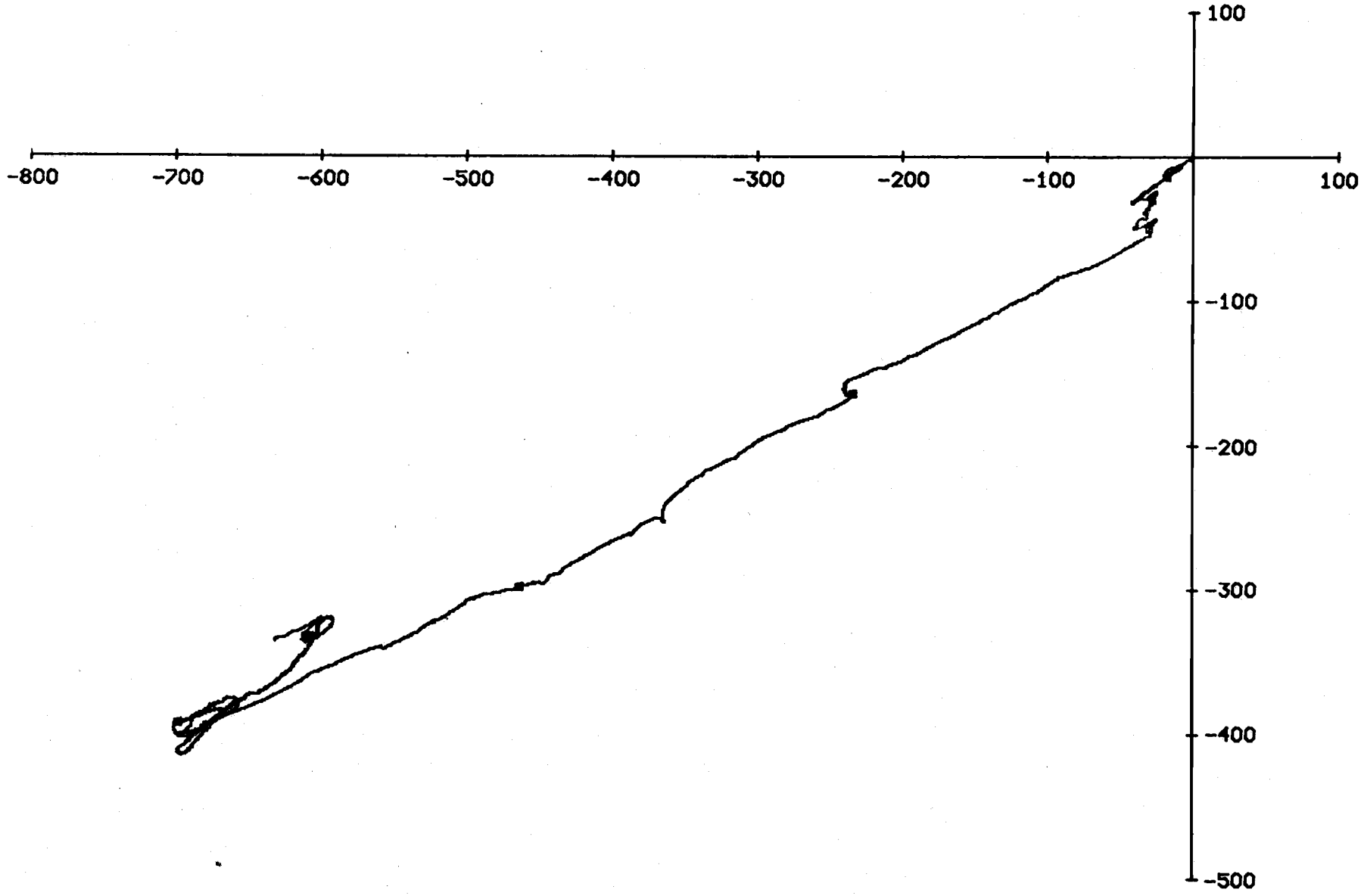
Instrument 688 recorded speed, direction, temperature, and pressure once per hour. Speed, temperature, and pressure were recorded until the instrument was recovered. The last good direction was recorded at 2346 UCT 20 October '79.

SS-1000

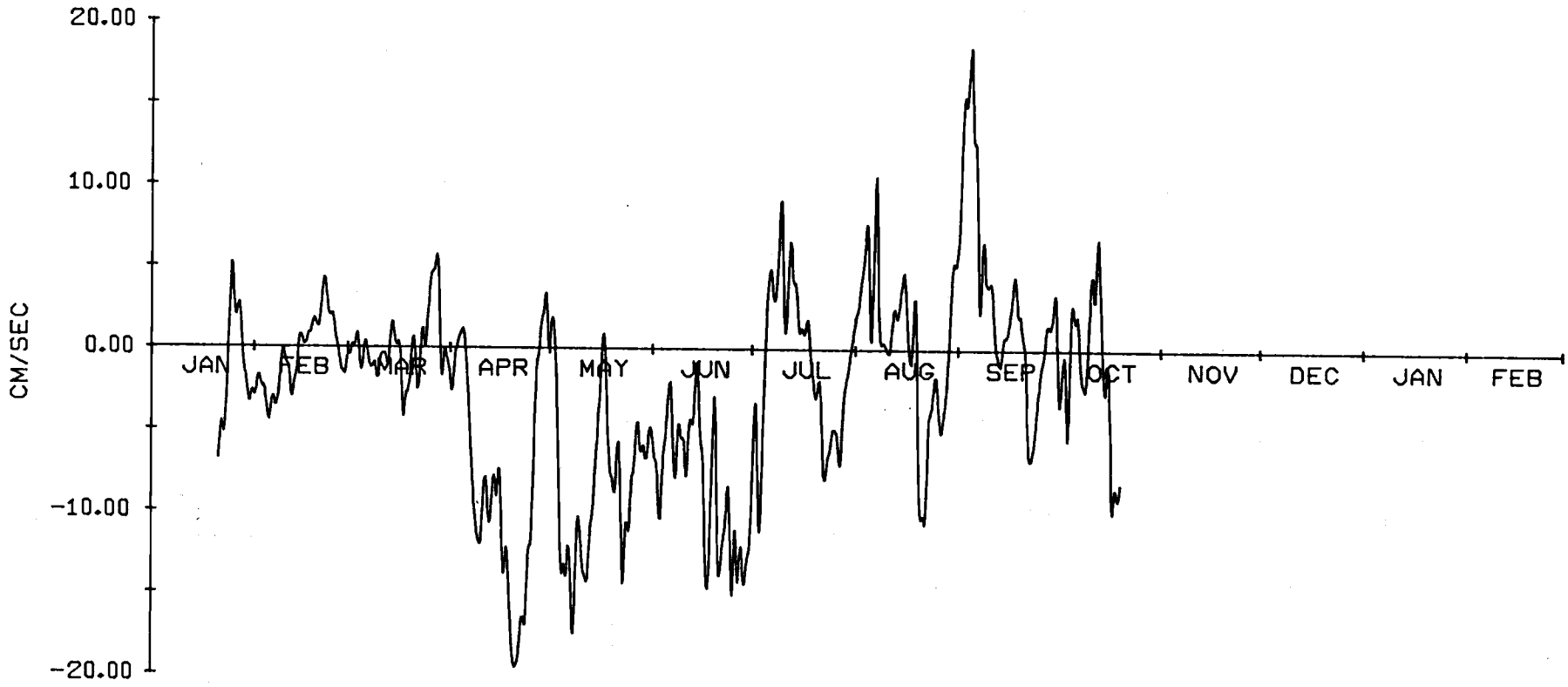
507 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	7.44	5.05	0.94	3.61	0.70	28.20	9350
U	-2.67	7.02	-0.14	3.43	-24.10	23.90	6577
V	-1.42	4.86	0.32	3.66	-17.30	17.60	6577
T	0.82	0.56	-0.79	2.65	-0.95	1.77	9350
P	509.16	1.03	1.36	7.10	507.90	518.00	9350

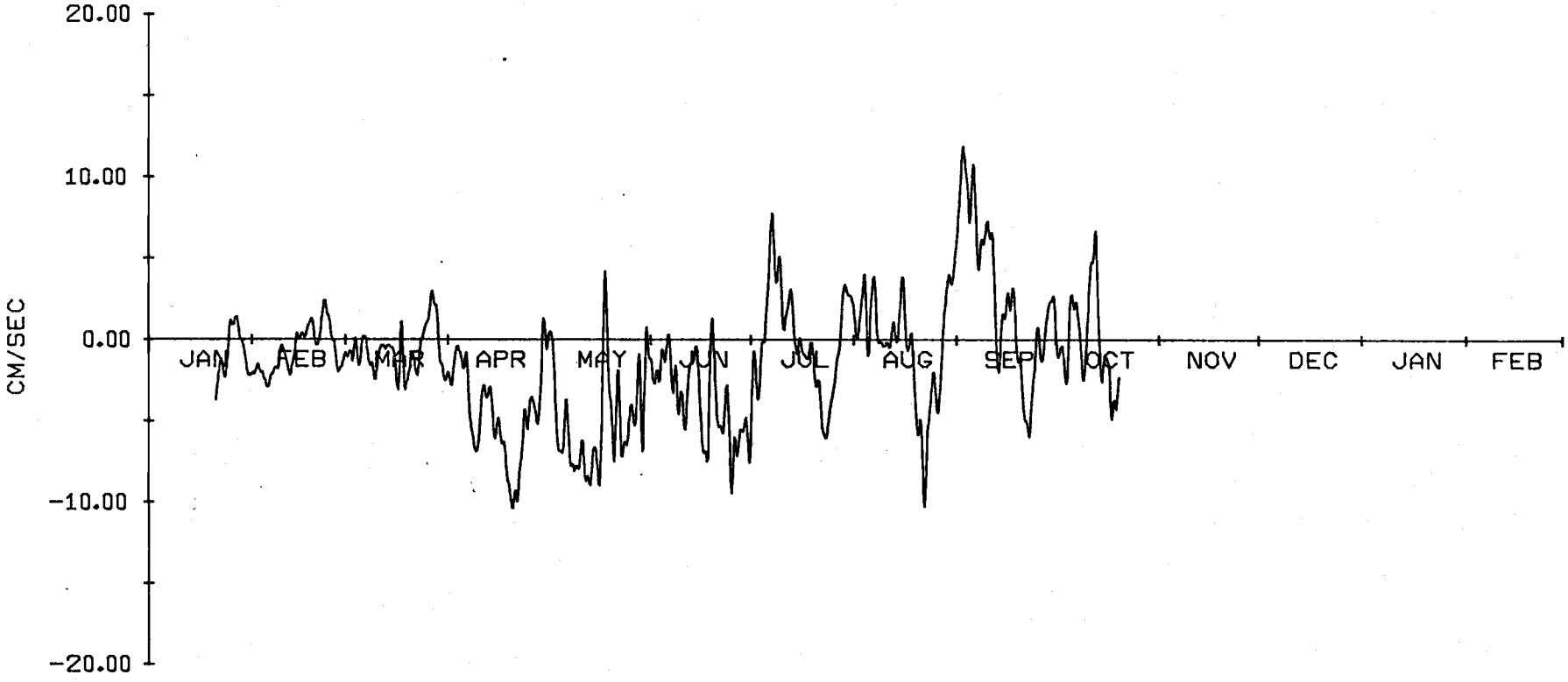
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



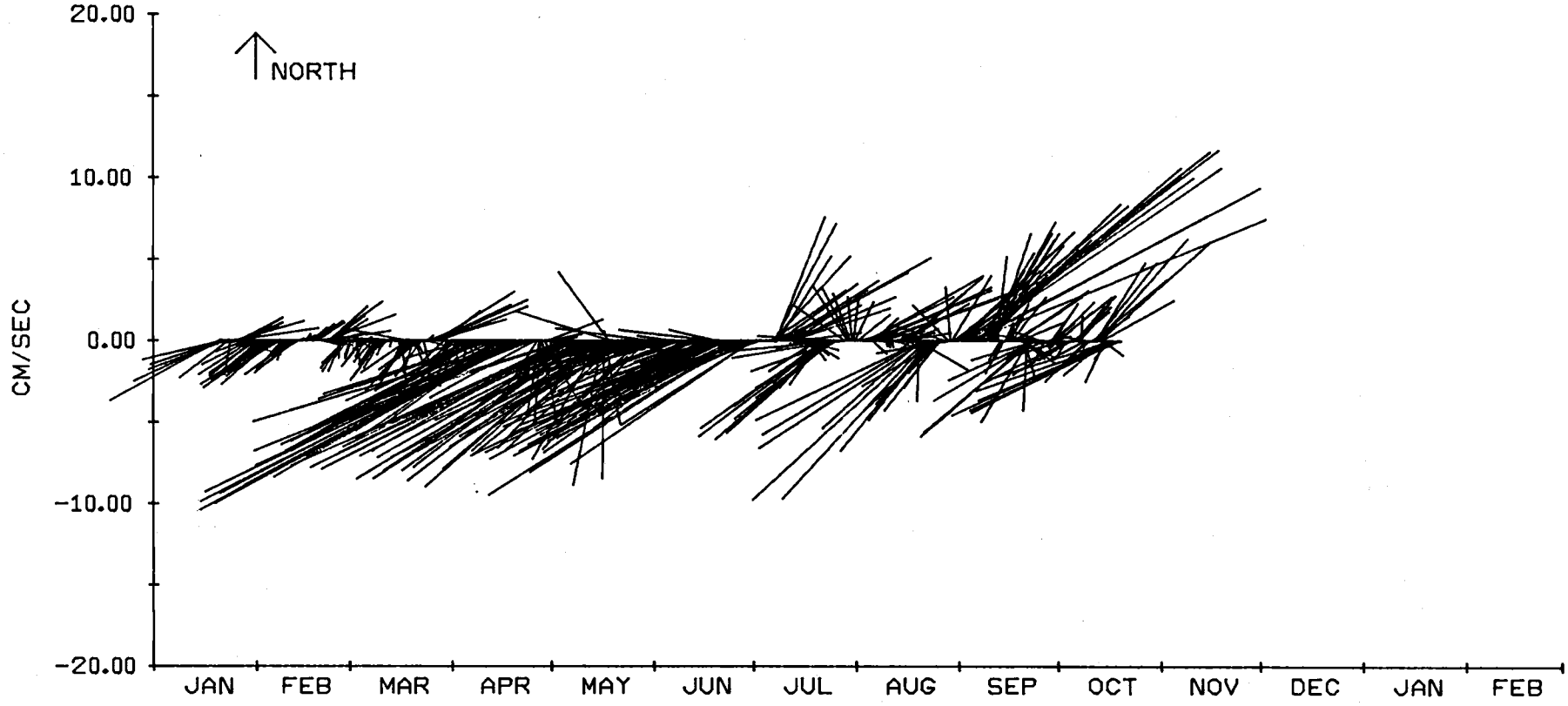
507 METERS AT SS-1000. 19 JAN 79 - 20 OCT 79. TAPE 688/51.



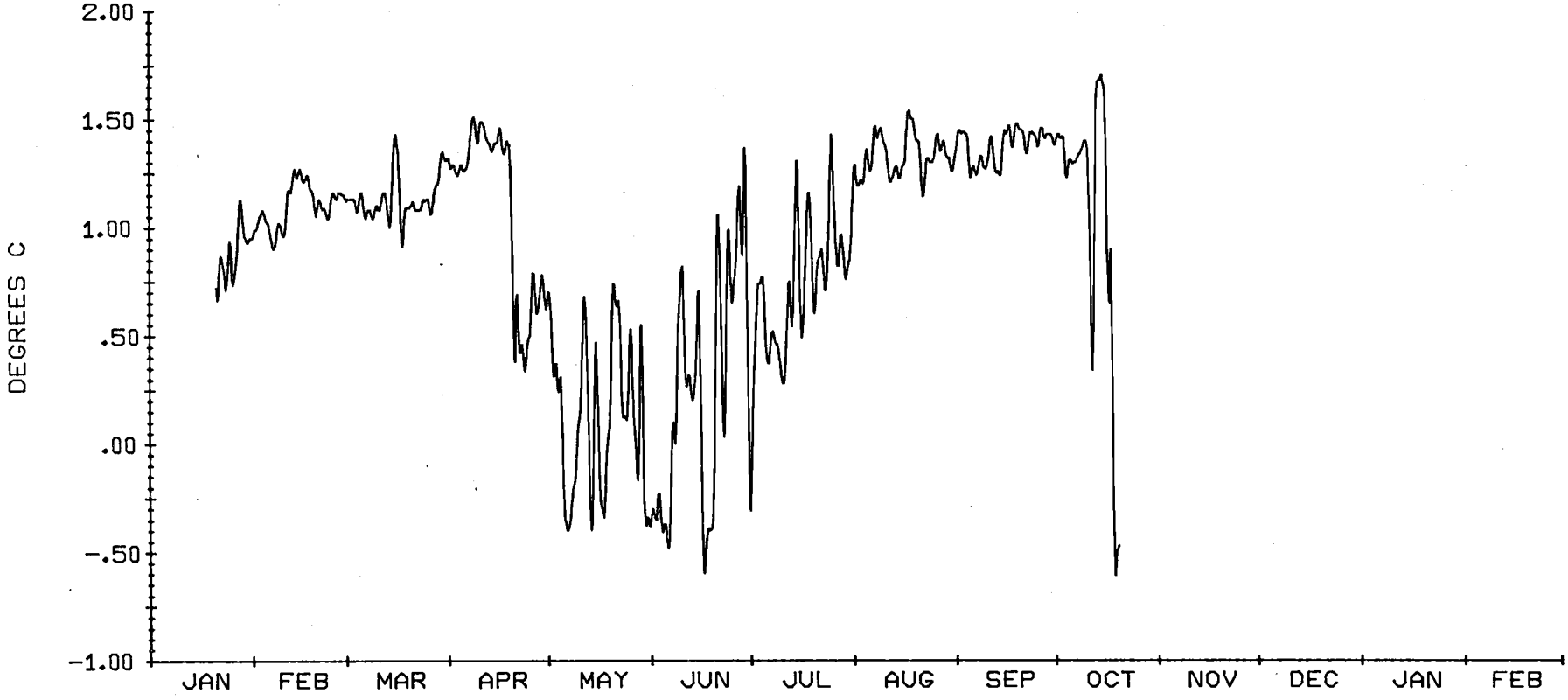
507 METERS AT SS-1000
LLP FILTERED U COMPONENT



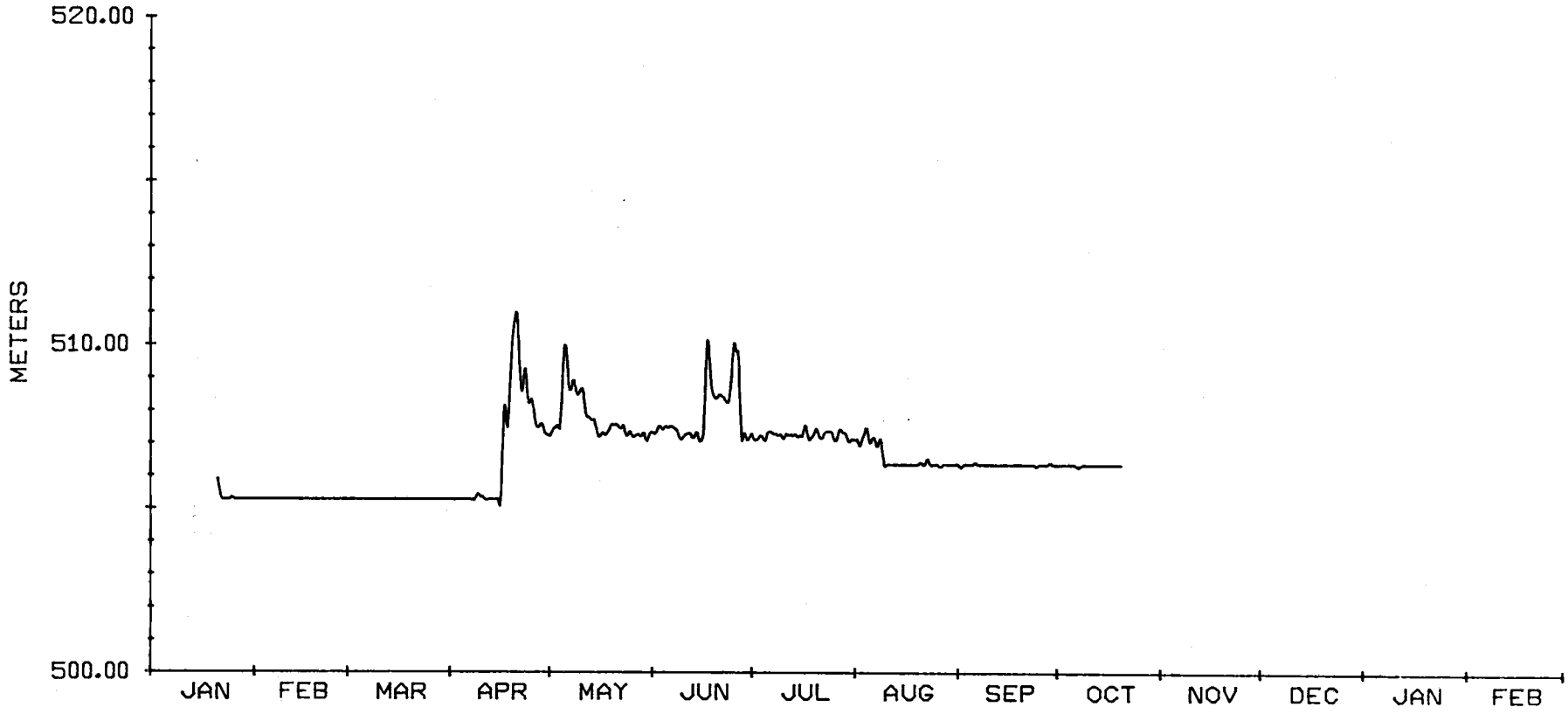
507 METERS AT SS-1000
LLP FILTERED V COMPONENT



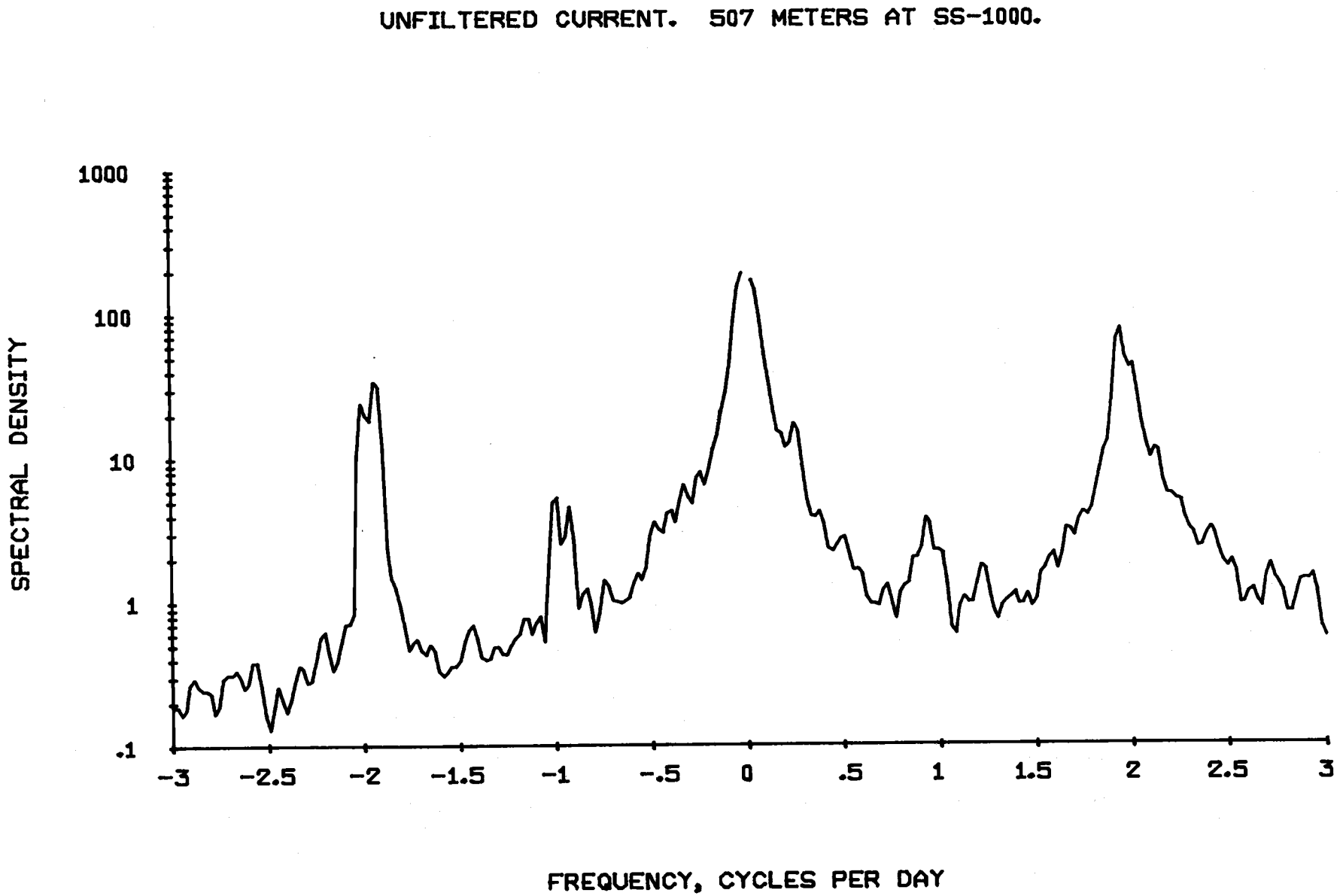
507 METERS AT SS-1000
LLP FILTERED CURRENT



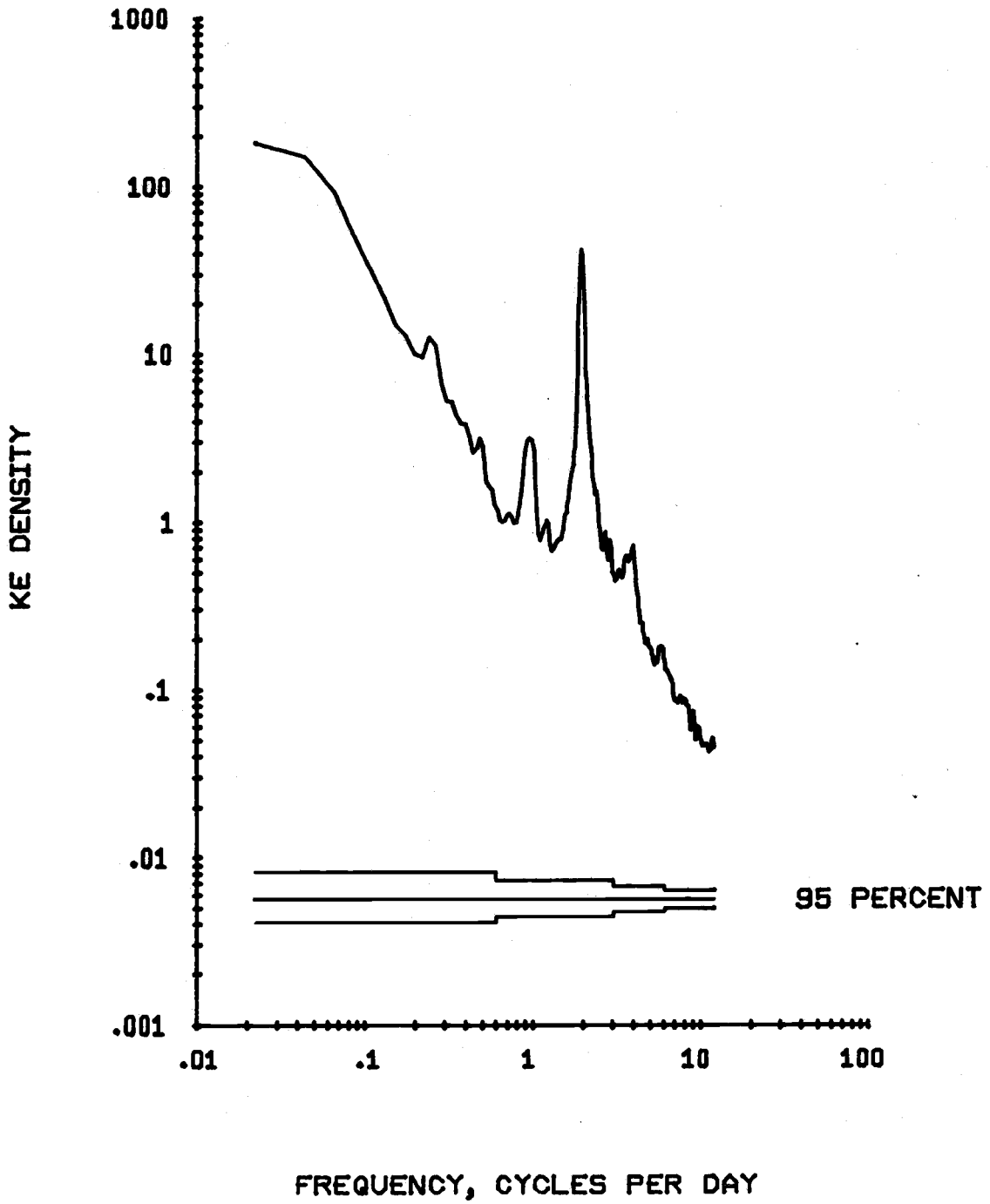
507 METERS AT SS-1000
LLP FILTERED TEMPERATURE



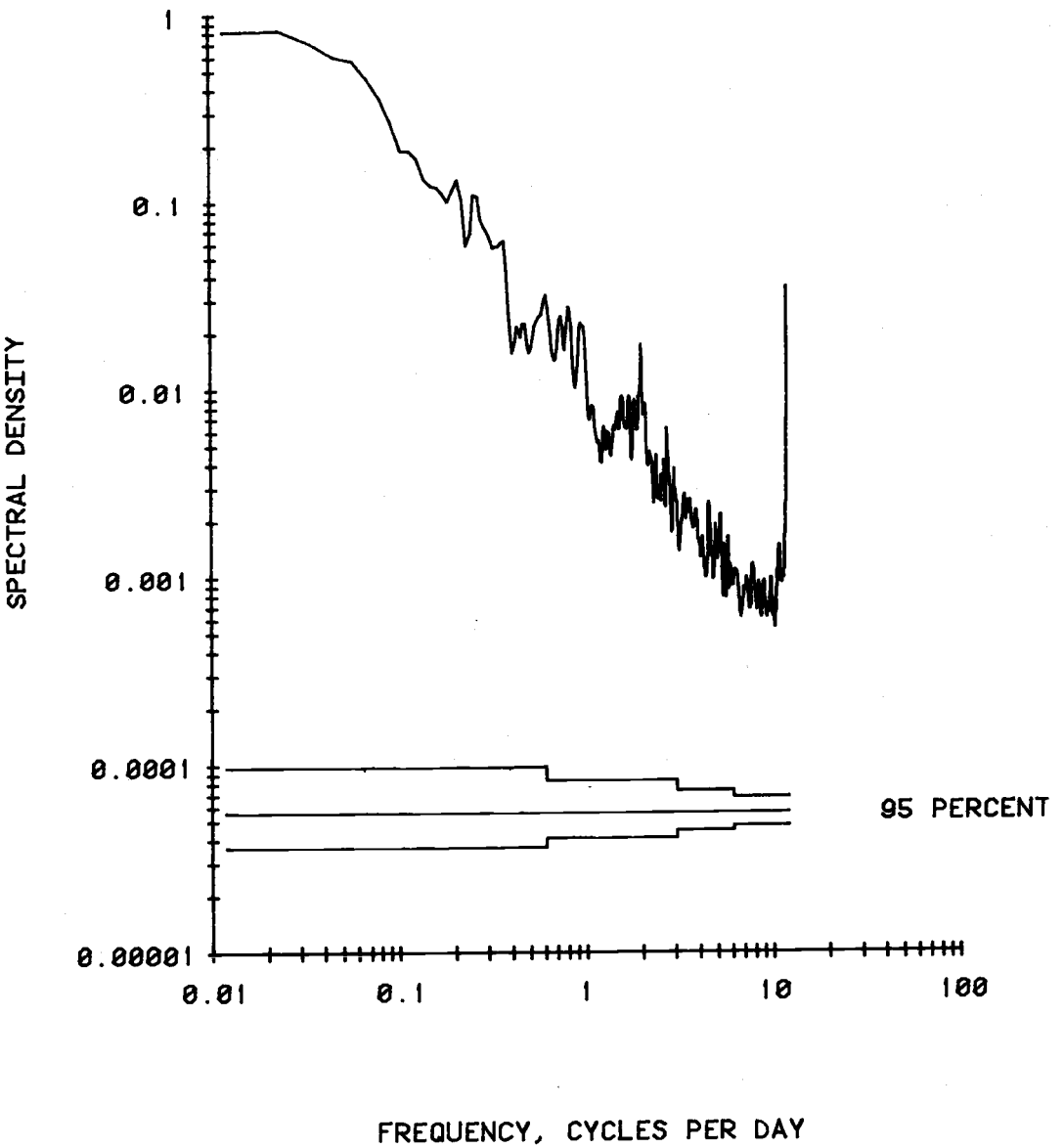
507 METERS AT SS-1000
LLP FILTERED PRESSURE


UNFILTERED CURRENT. 507 METERS AT SS-1000.
SPECTRAL DENSITY
1000
100
10
1
.1
-3
-2.5
-2
-1.5
-1
-.5
0
.5
1
1.5
2
2.5
3
FREQUENCY, CYCLES PER DAY

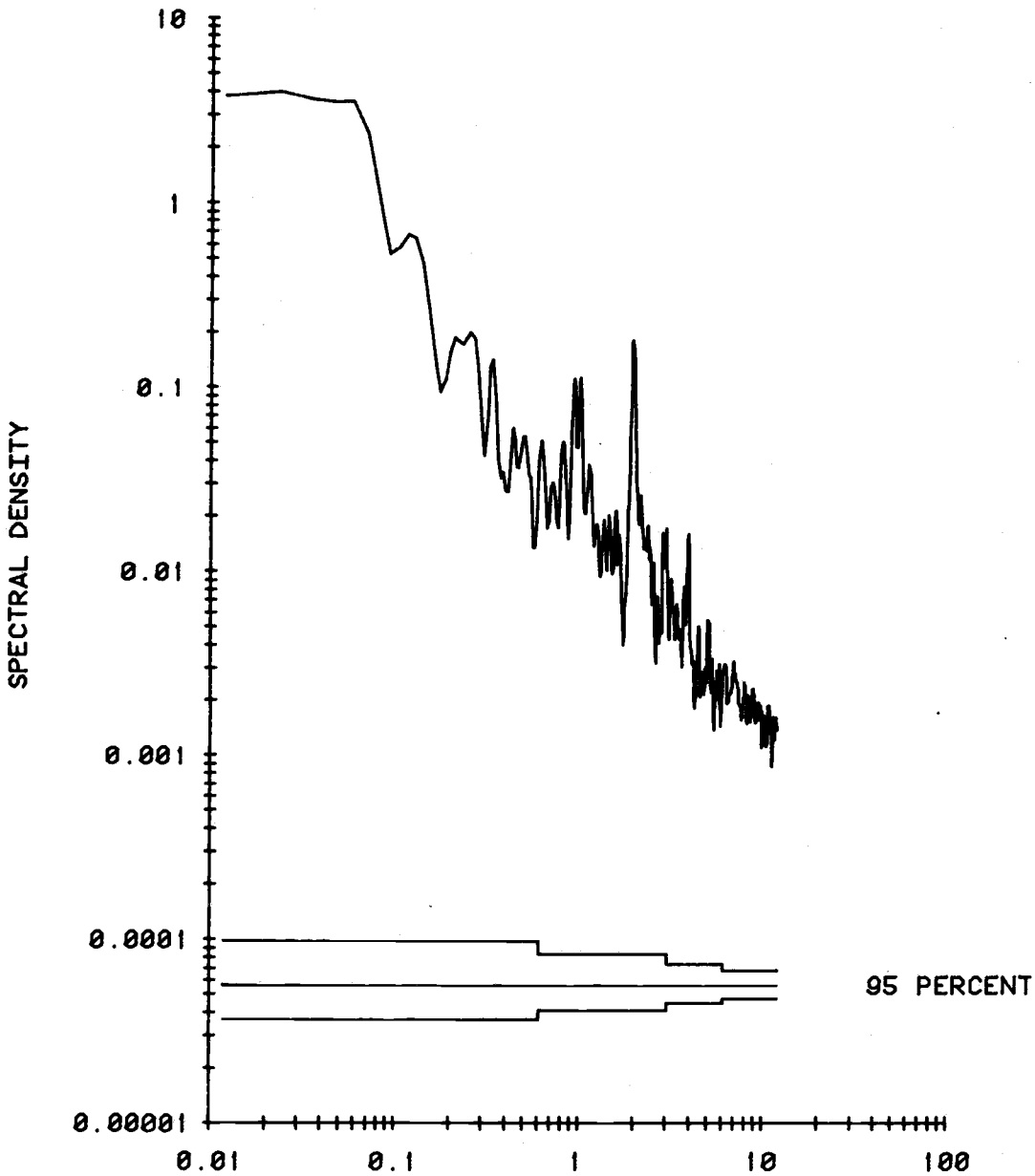
UNFILTERED CURRENT. 507 M AT SS-1000.



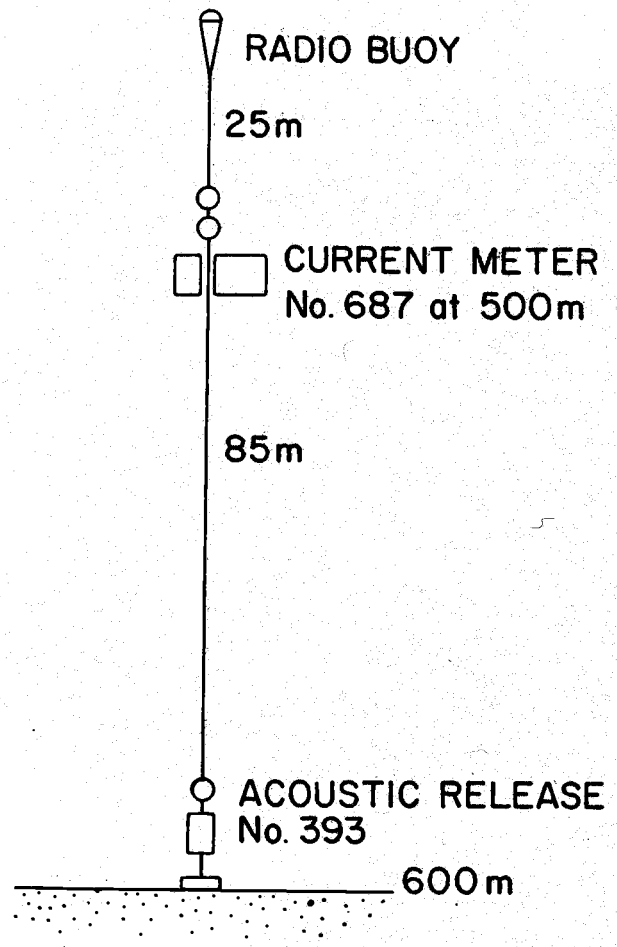
UNFILTERED TEMPERATURE. 507 METERS AT SS-1000



UNFILTERED PRESSURE. 507 METERS AT SS-1000



SS - 500



SOUTH SLOPE (SS) 500
62° 05.0' S
60° 34.9' W

INSTALLED: 20 JANUARY 1979

SS-500

Position: 62°05.0'S, 60°34.9'W
Depth of Water: 600 m
Set at 1016 UCT 20 January '79 by R/V MELVILLE
Retrieved at 1544 UCT 13 February '80 by R/V ATLANTIS II
Data Interval: 1229 UCT 20 January '79 to 1529 UCT 13 February '80

Instrumentation

Intended Depth	RCM5 Serial No./Tape No.
500 m	687/38

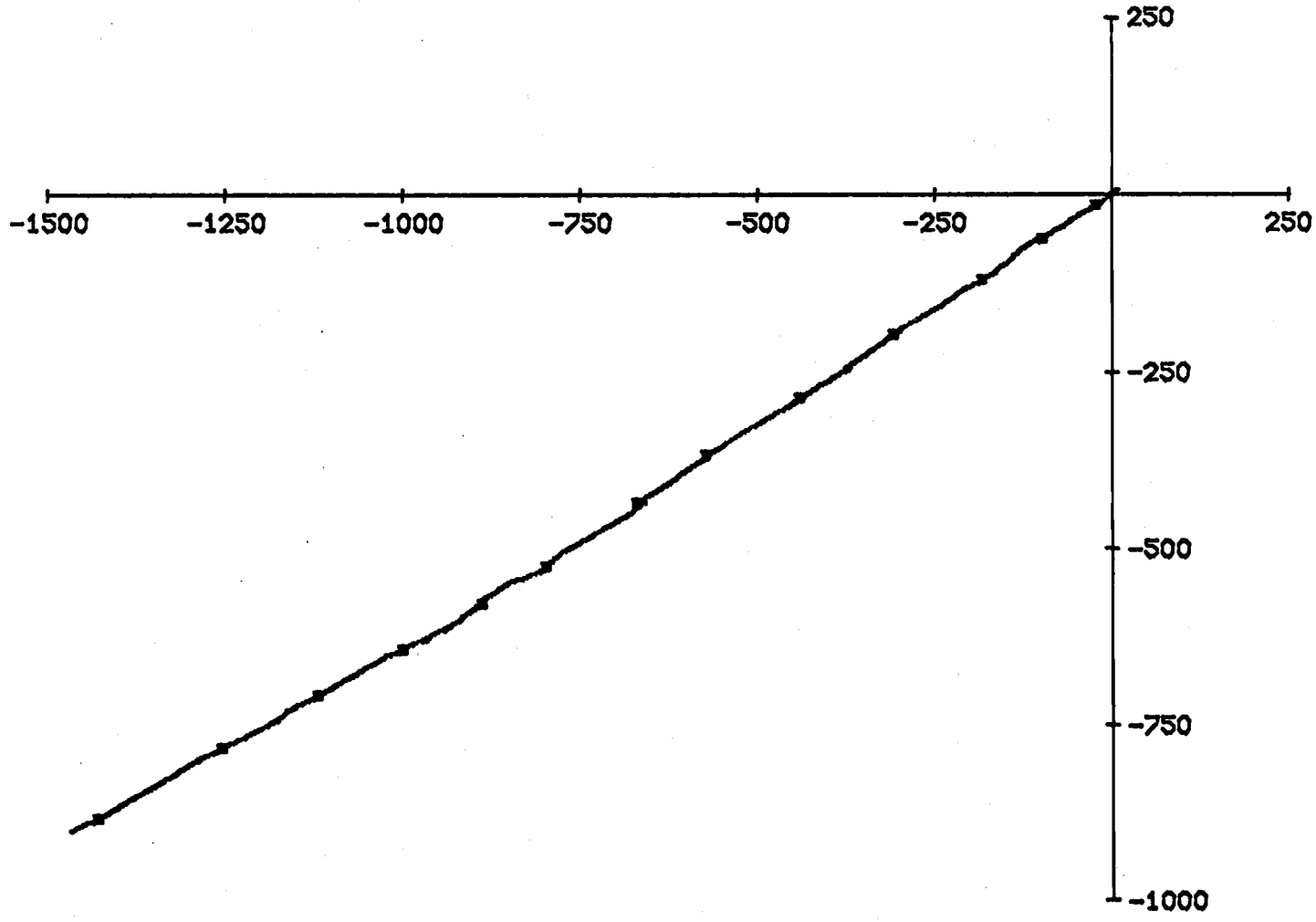
Instrument 687 recorded speed, direction, and temperature. Direction and temperature were recorded once per hour until the instrument was recovered. The speed sensor of RCM 687 was equipped with a 1200:1 reduction gearbox. As a result, speed of over 16 cm/sec caused more than one circuit (per hour) of the meter's speed potentiometer. Throughout this record there were uncertainties in speed that were resolved with human judgement and in some cases an appeal to purely esthetic criteria. The resulting processed speed record may be accurate, or it may not be.

SS-500

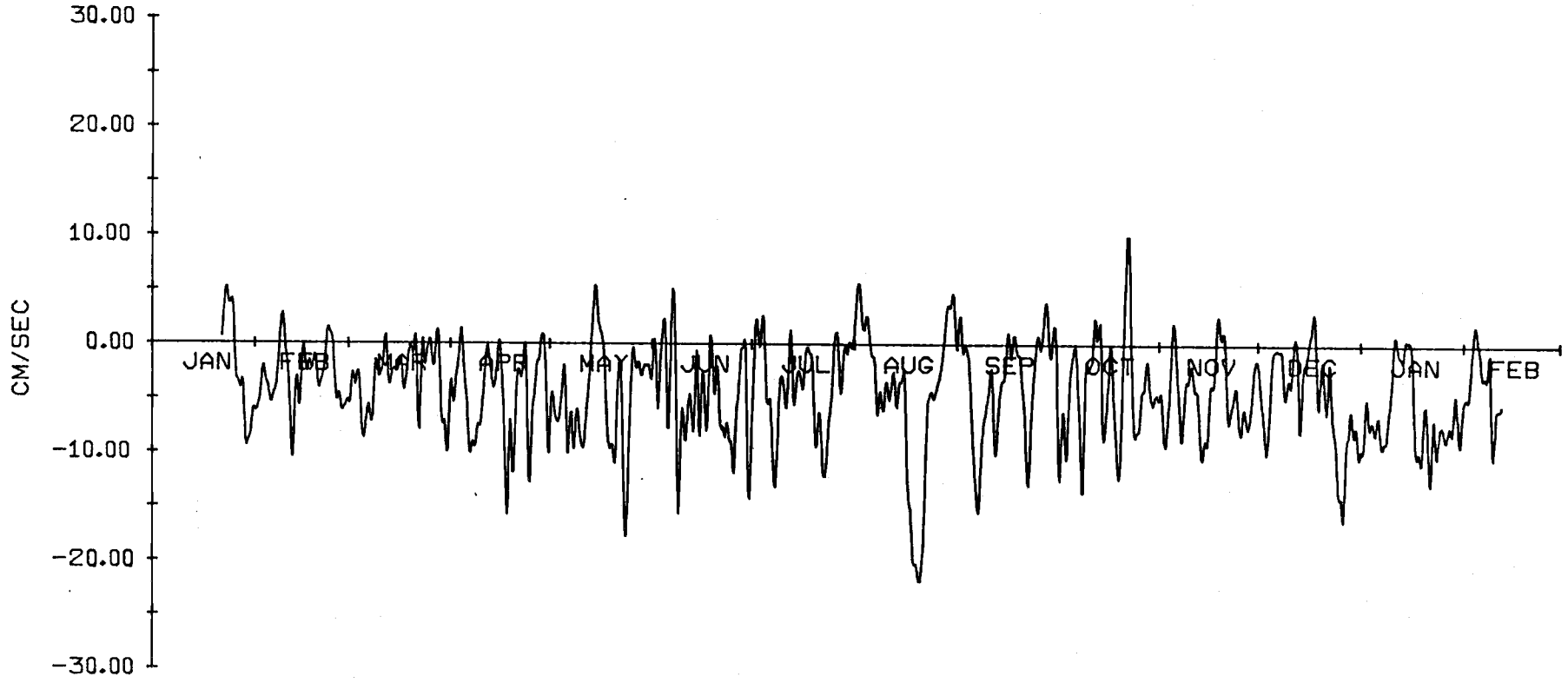
500 m

	MEAN	S.D.	SKEW	KURT	MIN	MAX	N
S	7.08	4.95	1.10	4.49	0.70	31.20	9340
U	-4.37	5.67	-0.37	3.57	-29.80	17.70	9340
V	-2.68	4.04	-0.34	4.07	-26.10	20.10	9340
T	0.22	0.62	-0.05	1.98	-1.26	1.51	9340

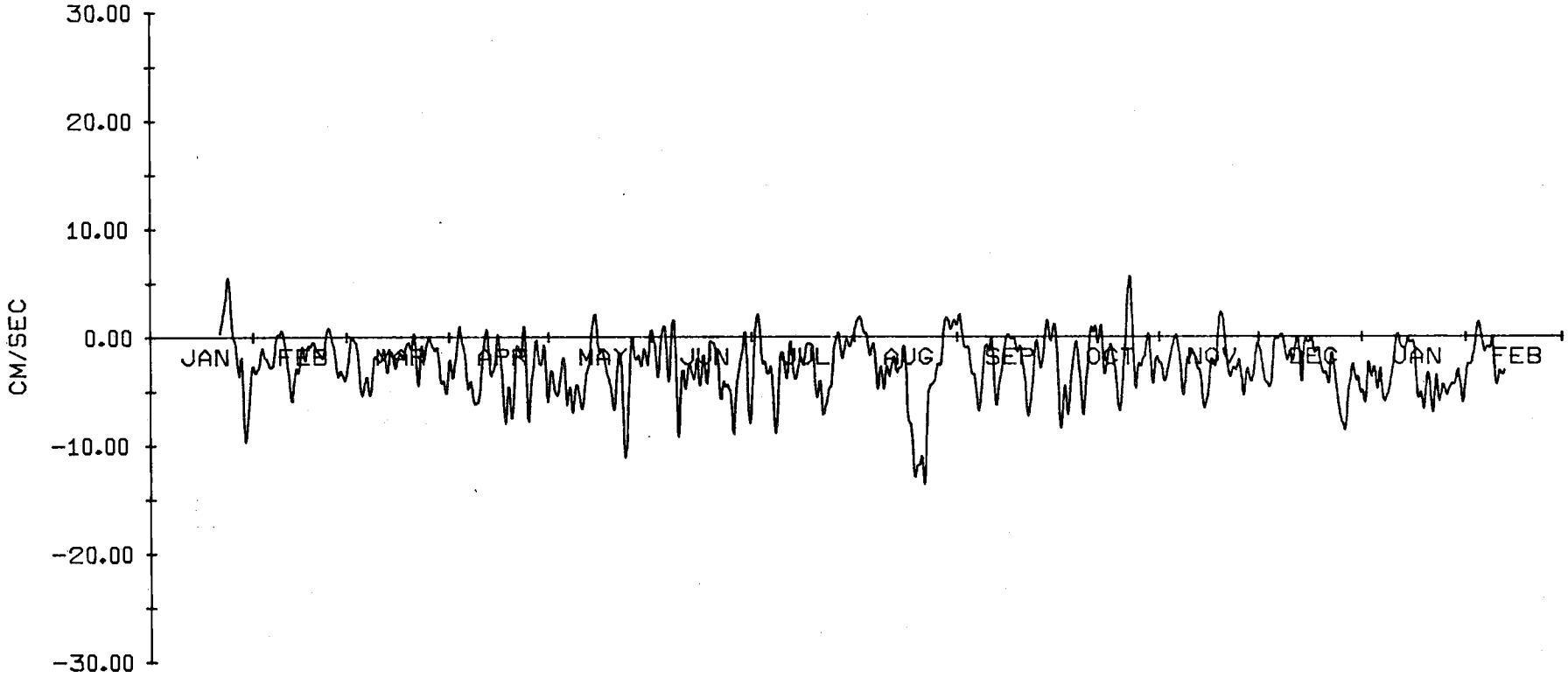
Speed, u, and v are given in cm/sec; temperature in degrees centigrade; pressure in decibars; and conductivity in mmhr/cm.



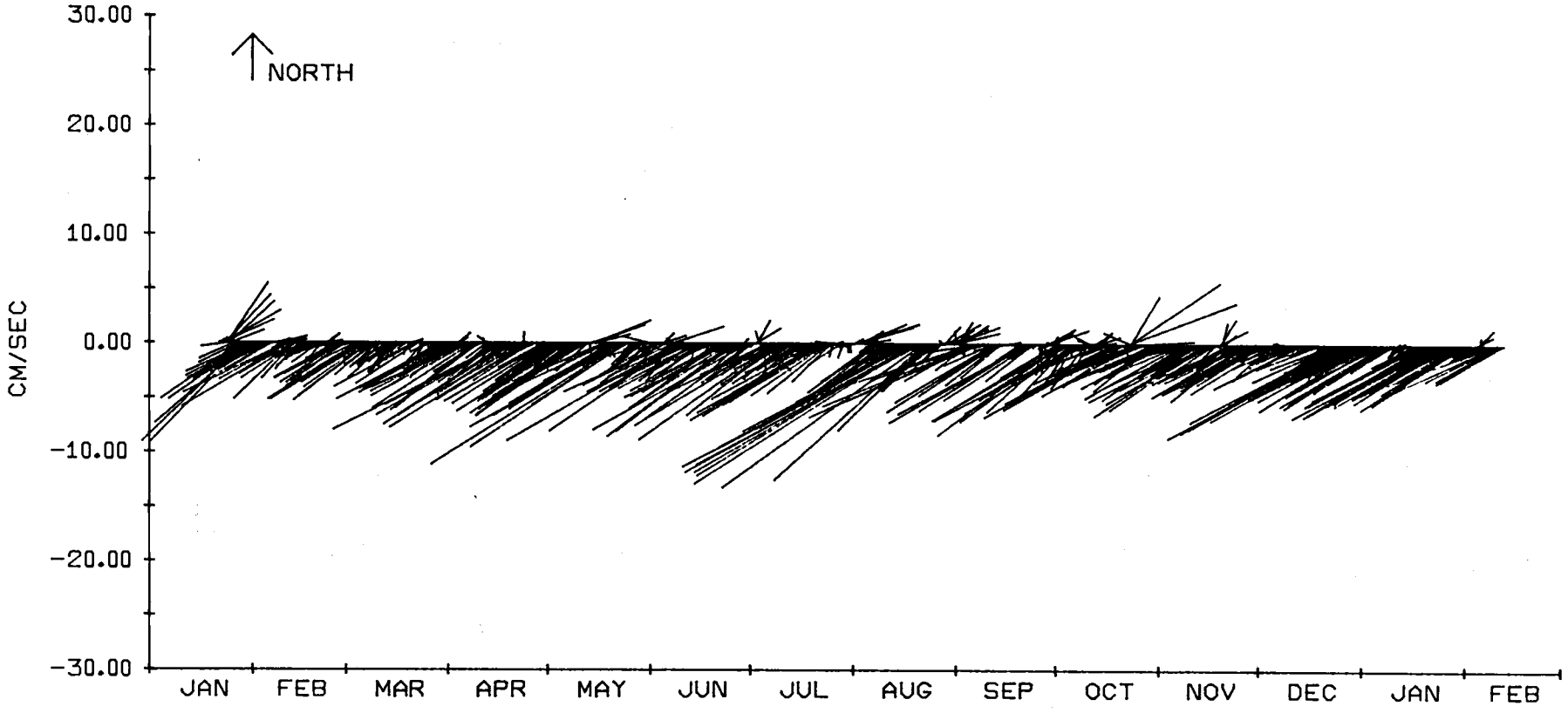
500 METERS AT 33-500. 20 JAN 79 - 13 FEB 80. TAPE 687/38.



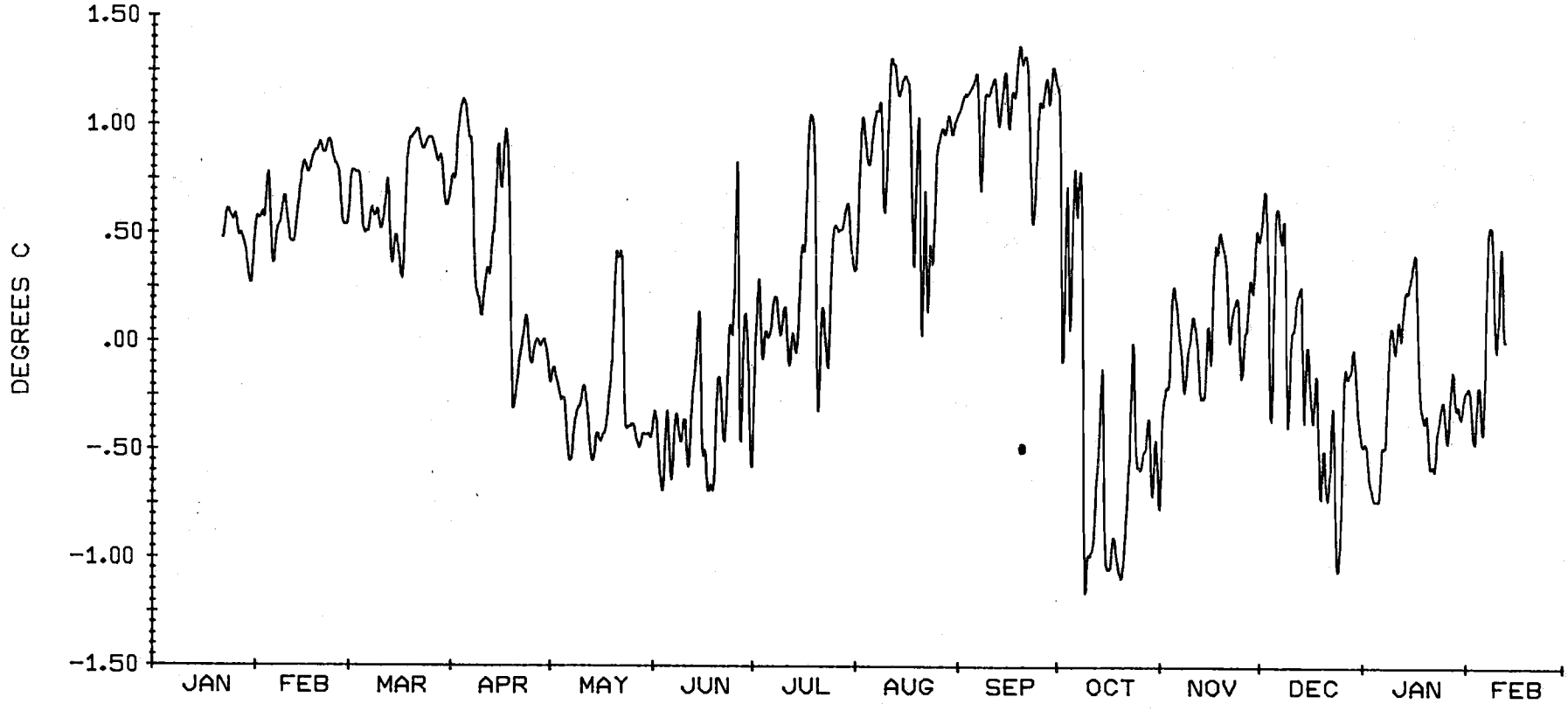
500 METERS AT SS-500
LLP FILTERED U COMPONENT



500 METERS AT SS-500
LLP FILTERED V COMPONENT

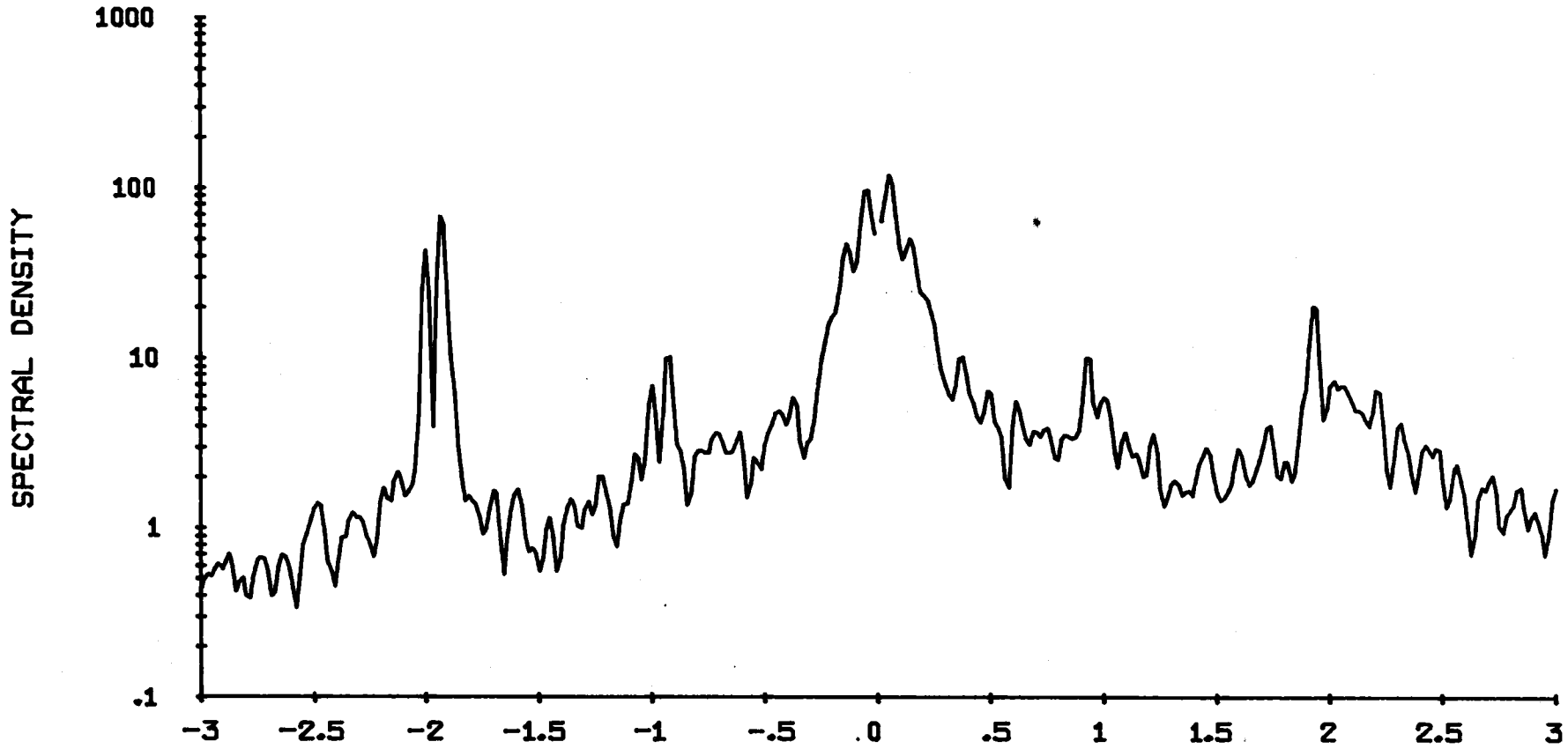


500 METERS AT SS-500
LLP FILTERED CURRENT

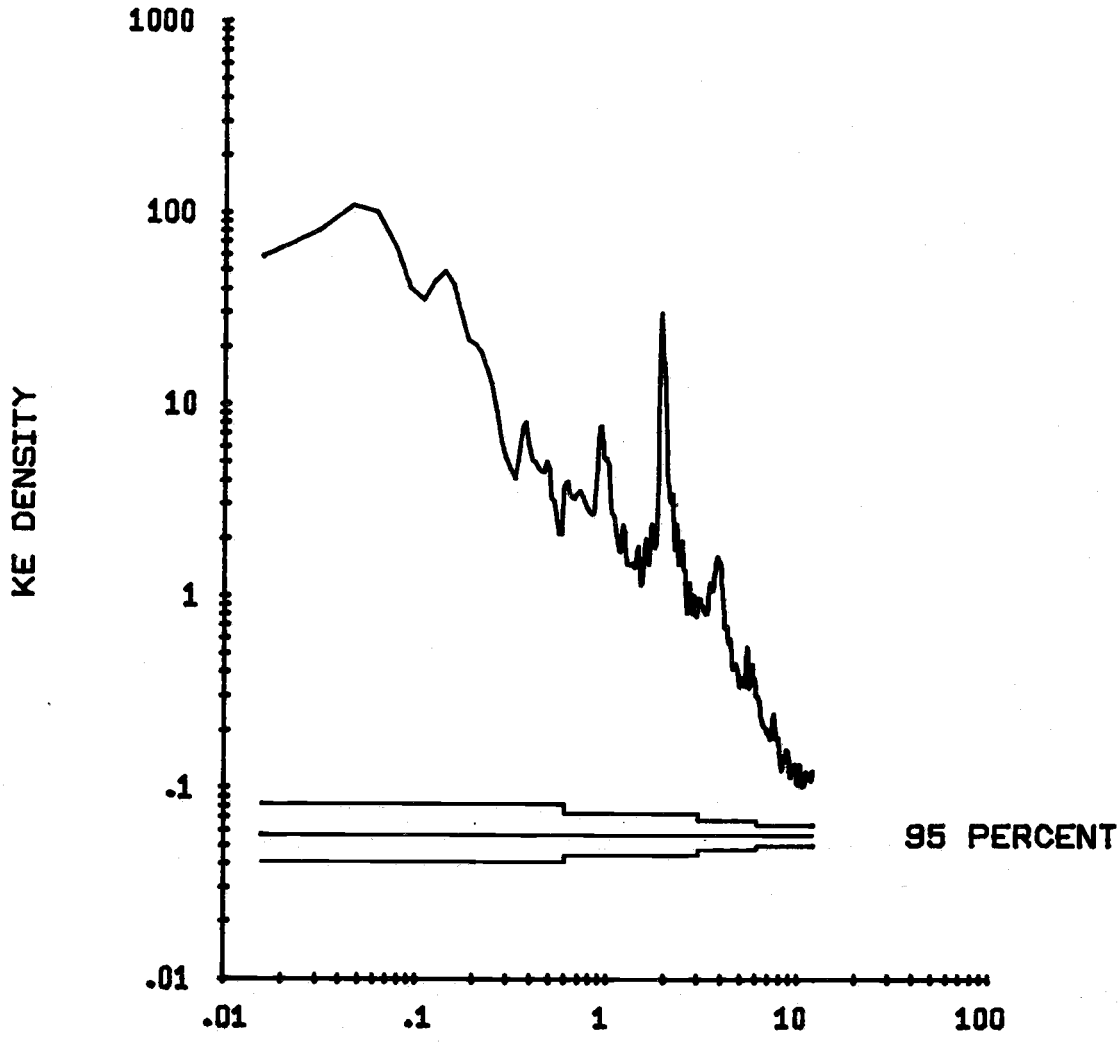


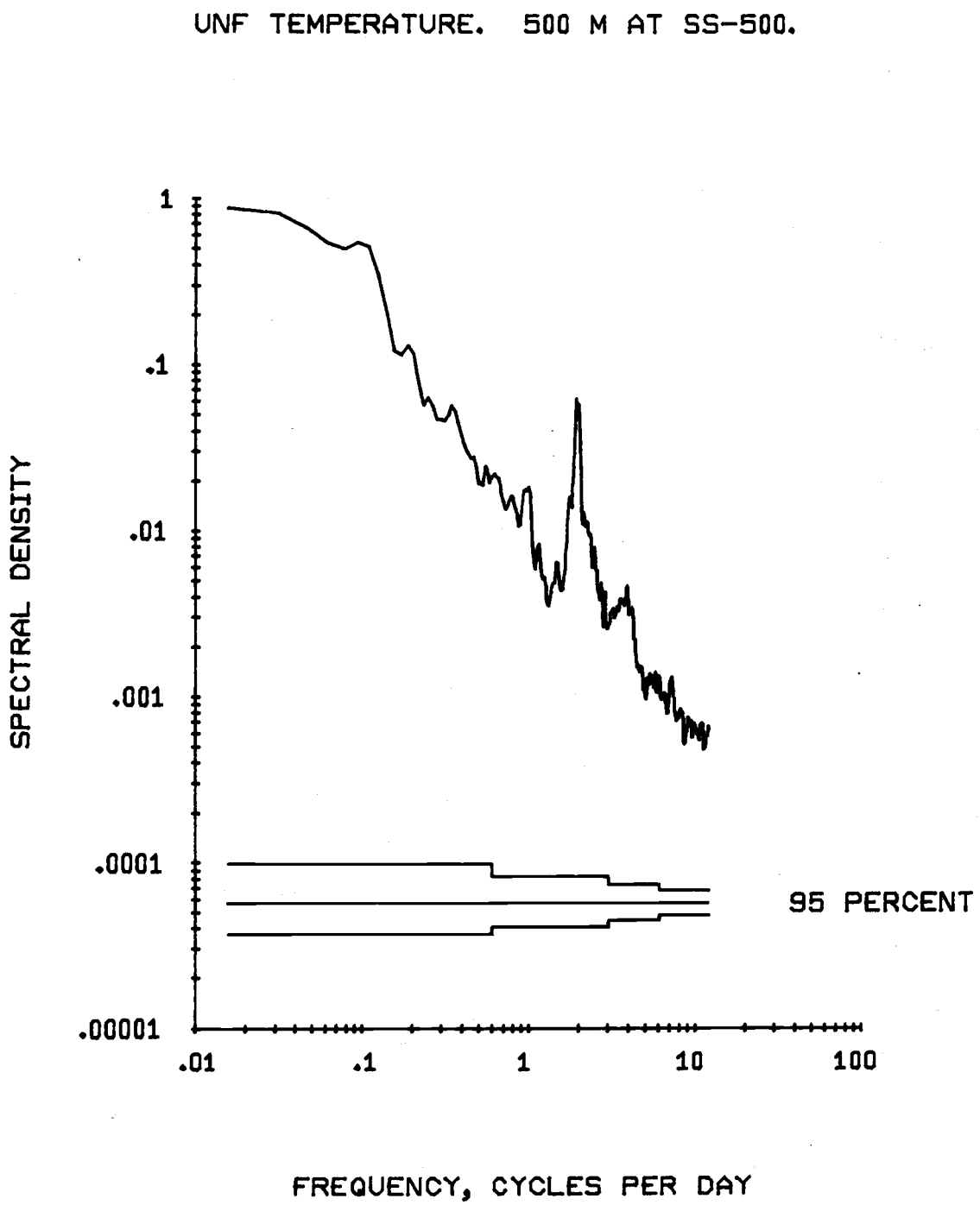
500 METERS AT SS-500
LLP FILTERED TEMPERATURE

UNFILTERED CURRENT. 500 METERS AT SS-500.



UNFILTERED CURRENT. 500 M AT SS-500.




UNF TEMPERATURE. 500 M AT SS-500.
SPECTRAL DENSITY
1
.1
.01
.001
.0001
.00001
.01
.1
1
10
100
95 PERCENT
FREQUENCY, CYCLES PER DAY

APPENDIX

The depths of the instruments that were used in previous FDRAKE experiments were assigned in two ways. In the earlier experiments none of the meters were equipped with pressure sensors, and the depth was assigned using the best estimate of the bottom depth and the mooring component lengths. In later experiments the addition of pressure sensors to some of the meters allowed the depths to be based on pressure data. At no time in the series of experiments, including DRAKE 79 were all of the meters equipped with pressure sensors.

In the present report almost all of the instrument depths are based either directly or indirectly on pressure data. Some of the current meters contained on-board pressure sensors which allowed direct estimation of instrument depth. The depths of other meters were estimated by extrapolating upward or downward from pressure sensors elsewhere on the mooring. The depths given here are average depths obtained by averaging over the record length, and reflect depth variations caused by mooring blow-over.

Depth was calculated from pressure using the formula:

$$z(m) = 0.99481\ p\ (\text{decibars})$$

which assumes an ocean of constant density equal to 1.025 g cm^{-3}. It has been pointed out that this shallow-water formula overestimates depth in the deep ocean. A better estimate is given by using a formula obtained from Professor

J. L. Reid at Scripps (T. Whitworth, personal communication):

$$z(m) = (0.992446)P - (2.28717 \times 10^{-6})P^2 + (2.08213 \times 10^{-11})P^3$$

It is based on a world ocean average density profile. Investigators at Texas A & M noted discrepancies between the depths calculated with our simple formula and those obtained from T/P recorders on the same moorings. The following table summarizes the findings of TAMU (W. D. Nowlin, Jr. and T. Whitworth, III, personal communication) and is our best estimate of the actual meter depths. These depths are calculated using Reid's formula. Employing actual density data obtained in the Drake Passage rather than Reid's formula makes a meter or two change from these depths.

Mooring	Instrument	Design depth meters	Pressure minimum decibars	Depth minimum meters	Difference meters
ML-8	T/P	200	245	243	43
	CM	500	550	545	45
ML-9	T/P	200	327	324	124
	CM	500	598	592	92
	CM	2500	2678	2641	141
	GEODYNE	3200			
	ANCHOR	3665			
ML-10	T/P	200	187	186	-14
	CM	500	478	474	-26
	CM	2500	2574	2540	40
	ANCHOR	3700			
ML-11	T/P	200	323	320	120
	CM	2500	2635	2600	100
	ANCHOR	3780			
ST	T/P	200	389	386	186
	CM	500	688	682	182
	T/P	800	987	977	177
	CM	1200	1403	1388	188
	T/P	1600	1807	1786	186
	T/P	2000			
	CM	2500	2714	2677	177
	ANCHOR	3070			
SS-1000	T/P	200	203	201	1
	CM	500	508	504	4
	ANCHOR	995			
MS-1	T/P	200	375	372	172
	CM	500	685	679	179
	CM	1200	1386	1371	171
	CM	2500	2697	2660	160
	ANCHOR	3610			
MS-2	T/P	200	498	494	294
	CM	500	798	791	291
	CM	1200	1489	1371	171
	CM	2500	2697	2660	160
	ANCHOR	3000			
MS-3	T/P	200	329	326	126
	CM	500	638	632	132
	ANCHOR	3450			

Mooring	Instrument	Design depth meters	Pressure minimum decibars	Depth minimum meters	Difference meters
MS-5	T/P	200	423	419	219
	CM	500	727	720	220
	CM	1200	1444	1428	228
	CM	2500	2750	2712	212
	GEODYNE	3300			
	ANCHOR	3780			
MS-6	T/P	200	408	405	205
	CM	500	801	793	293
	CM	1200	1401	1386	186
	CM	2500			
	ANCHOR	2580			
MS-7	T/P	200	205	203	3
	CM	500	513	509	9
	CM	1200	1206	1194	-6
	CM	2500			
	ANCHOR	3630			

Mooring	Instrument	Design depth meters	Pressure minimum decibars	Depth minimum meters	Difference meters
NS500	T/P	200	197	195	-5
	CM	500	532	527	27
	ANCHOR	578			
NS1000	T/P	200	223	221	21
	T/P	350	370	366	16
	CM	500	527	522	22
	ANCHOR	1000			
NT	T/P	200	261	259	59
	CM	500	597	591	91
	CM	800	910	901	100
	T/P	900	997	987	87
	CM	1200	1328	1313	113
	CM	1500	1635	1616	116
	T/P	1750	1885	1862	112
	T/P	2000			
	CM	2500	2641	2605	105
	ANCHOR	?			
ML-1	T/P	200	184	183	-17
	CM	500			
	CM	2500	2557	2523	23
	ANCHOR	3830			
ML-2	T/P	200	278	275	75
	CM	500	571	565	65
	CM	2500	2568	2534	34
	ANCHOR	3680			
ML-5	T/P	200	303	300	100
	CM	500	613	607	107
	CM	1200	1323	1309	109
	ANCHOR	3630			
ML-6	T/P	200	327	324	124
	CM	500	625	619	119
	CM	1200	1338	1324	124
	CM	2500	2664	2628	128
	ANCHOR	3835			
ML-7	T/P	200	194	192	-8
	CM	500	507	503	3
	CM	1200	1234	1221	21
	CM	2500	2577	2542	42
	ANCHOR	3815			