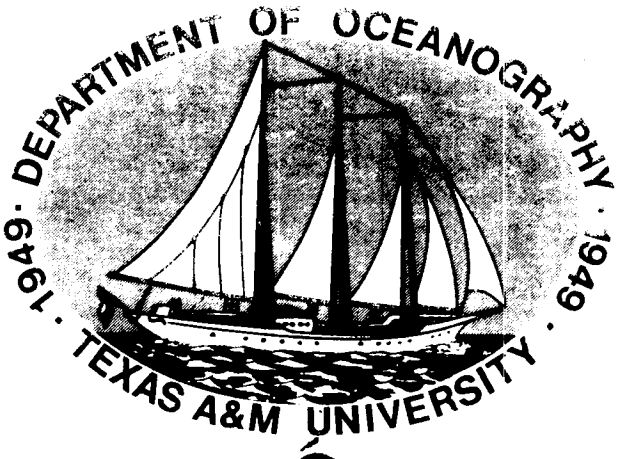

NORTHERN GULF OF MEXICO TOPOGRAPHIC FEATURES STUDY

TIME SERIES DATA REPORT

Principal Investigator
David W. McGrail

Submitted to the
U.S. Department of the Interior
Bureau of Land Management
Outer Continental Shelf Office
New Orleans, Louisiana

Contract No. AA851-CTO-25

TAMU Technical Report 82-5-T

Department of Oceanography
Texas A&M University
College Station, Texas

Research Conducted Through
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*Data from deployments 1 (Jan-Apr 79) and 2 (Jul-Sep 79) were reported under BLM-TAMRF Contract AA551-CT8-35. See Final Report, Vol. 3, pp. 39-43.

INTRODUCTION

Long term measurements of current speed, direction, temperature, conductivity, and transmissivity were made in the vicinity of the Flower Garden Banks during the spring/summer of 1980 and 1981 and the fall/winter of 1979 and 1980-1981. Data on temperature and velocity are reported in this volume. All long-term measurements are discussed in full in Chapter IV of the final report for this project. The study area, which includes the East and West Flower Garden Banks, is located approximately 184 km southeast of Galveston, Texas. The East Flower Garden Bank is located at a latitude of 27°55'N and a longitude of 93°36'W. The West Flower Garden Bank is located at a latitude of 27°52'N and a longitude of 93°51'W. Both are salt intruded coralline reefs.

Mooring Locations and Data Inventory

Time series measurements were obtained from three moorings during the spring/summer of 1980 and the fall/winter of 1979/1980-1981 (Tables 1-4 and Maps 1-4; maps preface each section). Mooring I was located northeast of the East Flower Garden Bank. Mooring II was located on the west side of the East Flower Garden Bank. Mooring III was located on the west side of the West Flower Garden Bank during the fall/winter of 1979, but was moved to the east side of the West Flower Garden Bank during subsequent deployments. Time series measurements were obtained from four moorings during the spring/summer of 1981, with the fourth mooring located northwest of the West Flower Garden Bank.

Moorings I, III (Dec 79), and IV were located far enough from the banks so that the currents recorded were probably not influenced significantly by the banks. The measurements obtained from stations II and III (September, February, July) were topographically influenced.

The mooring configuration, location, and associated time series data inventory for the four deployments are summarized in Tables 1-4. A bar chart summarizing the length and type of data recorded is also given (Figures 1-3). In order to consolidate the full set of time series current measurements, we include in these tables and charts information for the two prior deployments reported under BLM-TAMRF Contract #AA551-CT8-35 (McGrail, 1981). A more detailed description of the mooring design, checkout, deployment, and recovery procedures is provided in the final report, Chapter IV.

Changes in Configuration of Moorings

Sep-Dec 79

The information found in Tables 1-4 indicates that the configuration of the current meter moorings has changed since the onset of the study. During the period from September 1979 to December 1979, each of the three moorings consisted of two HydroProducts Seatrack model 550 current meters, one close to the surface, and one close to the bottom of the water column. HydroProducts model 550 is a Savonius rotor current meter with a counterbalanced vane and internal compass to determine direction. Current speeds are accurate to $\pm$ 2% over the full scale of speeds recorded (2.6 to 260 cm/sec possible range). Current directions are good to $\pm$ 7° over a speed range of 2.6 to 5 cm/sec and are good to $\pm$ 4° over a speed range of 5 to 260 cm/sec. Current measurements were recorded every six minutes and stored on a digital magnetic cassette. In addition, a Marsh-McBirney model 585 electromagnetic current meter was moored on top of the East Flower Garden Bank. Current measurements are made using two sets of

orthogonal electrodes which sense X and Y components of velocity and reject vertical components. Measurements were taken and recorded every ten minutes.

Apr-Sep 80

During the period from April 1980 to September 1980, each of the three moorings consisted of two Savonius rotor current meters. The electromagnetic current meter was moved from its position on top of the East Flower Garden Bank to mooring II. Data were recorded every 20 minutes and stored on a digital magnetic cassette. A transmissometer was added to the bottom current meter on each mooring in order to measure light attenuation due to suspended sediment. Transmissivity measurements were obtained using a Sea Tech 25 cm path length transmissometer. This instrument contains a light-emitting diode (LED) with a wavelength of 660 nanometers (red). The advantage of this wavelength is that attenuation due to yellow matter (gelbstoff) is negligible at 660 nm. Therefore, the measured attenuation is due only to particulate matter and seawater. Transmissivity measurements were taken and stored every twenty minutes.

Oct 80-Jul 81

During the period from October 1980 to December 1980 and March 1981 to July 1981, additional current meters and transmissometers were added to the moorings. Another mooring, located on the northwest side of the West Flower Garden Bank, was added during the last deployment. Time series data for these moorings was recorded every twenty minutes and stored on a digital magnetic cassette.

Data Presentation

The time series data presented in this report were obtained from the last four deployments of the full set of six deployments. Data for the first two deployments were presented in a previous final report (McGrail, 1981). To preserve the integrity of the full data set, we have retained consecutive numbering of deployments, so this data report begins with deployment 3, which happens to be the first deployment of the unreported data.

The data are arranged sectionally by deployment. Each section is prefaced by an index and a map indicating the location of the moorings for that deployment. The location map is followed by page-size plots of raw temperature and velocity records for each meter at each mooring. Direction-speed histograms conclude each section.

Temperature readings were recorded concurrently with current speed and direction on all six deployments. Temperatures given here have not been corrected for instrument offsets and are, therefore, to be viewed as relative rather than absolute.

In velocity records where the speed sensor failed before the end of the record (usually due to biofouling), synthetic speeds were attached to the recorded directions to produce hybrid velocities. The synthetic speeds were developed statistically by averaging the speeds associated with each 10° increment of direction recorded during the portion of the record when both sensors were functioning. In the

velocity plots, a heavy vertical line separates synthesized speeds from recorded velocities; arrows point from the beginning of synthesized speeds toward the end of the record.

REFERENCES

McGrail, D.W., 1981. Water and sediment dynamics. In Rezak, R., and T.J. Bright, Northern Gulf of Mexico Topographic Features Study, Final Report to U.S. Dept. of Interior, Bureau of Land Management, Contract #AA551-CT8-35, Vol. 3, pp. 32-45.

TABLE 1
HYDROPRODUCTS CURRENT METER AND ASSOCIATED TIME SERIES DATA INVENTORY,
EAST AND WEST FLOWER GARDEN BANKS
(All Deployments from Jan 79 - Jul 81)

MOORING & METER	MONTH OF RECOVERY	INSTRUMENT SERIAL NUMBER	LOCATION	DEPTH (m) METER/BOTTOM	TIME OF FIRST GOOD RECORDING		FINAL TIME		RECORDING INTERVAL (minutes)	TOTAL RECORDS (Including 6 header records)
Mor1Met1	Apr 79	677754	27°58.63'N, 93°32.42'W	56/96	1/16/79	10:34	3/26/79	23:52	6	16700
Mor2Met1	Apr 79	677764	27°54.65'N, 93°38.02'W	60/100	1/17/79	21:16	4/10/79	19:22	6	19908
Mor2Met3	Apr 79	677755	27°54.65'N, 93°38.02'W	96/100	1/17/79	21:52	3/25/79	22:46	6	16096
Mor1Met1	Sep 79	677764	27°58.38'N, 93°32.19'W	60/100	7/12/79	18:05	9/4/79	19:11	6	12978
Mor1Met2	Sep 79	677755	27°58.38'N, 93°32.19'W	94/100	7/12/79	18:21	9/5/79	11:15	6	13136
Mor1Met3	Sep 79	611219	27°58.38'N, 93°32.19'W	96/100	7/12/79	18:38	9/1/79	21:26	6	12276
Mor2Met1	Sep 79	677754	27°54.57'N, 93°38.23'W	60/100	7/11/79	22:05	9/3/79	14:41	6	12892
Mor2Met2	Sep 79	611201	27°54.57'N, 93°38.23'W	94/100	7/12/79	02:09	9/4/79	12:21	6	13068
Mor2Met3	Sep 79	677763	27°54.57'N, 93°38.23'W	96/100	7/11/79	21:41	9/4/79	07:47	6	13068
Mor1Met1	Dec 79	677764	27°58.55'N, 93°32.32'W	53/99	9/9/79	15:01	12/10/79	04:19	6	21979
Mor1Met2	Dec 79	611219	27°58.55'N, 93°32.32'W	95/99	9/9/79	15:10	11/25/79	07:10	6	18411
Mor2Met1	Dec 79	677754	27°54.60'N, 93°38.23'W	53/99	9/11/79	16:19	11/28/79	14:19	6	18707
Mor2Met2	Dec 79	677763	27°54.60'N, 93°38.32'W	95/99	9/11/79	16:20	12/13/79	05:44	6	22220
Mor3Met1	Dec 79	677755	27°54.93'N, 93°52.79'W	61/107	9/11/79	18:15	12/9/79	22:39	6	21410
Mor1Met1	Sep 80	611219	27°58.56'N, 93°32.61'W	53/99	4/22/80	23:20	8/12/80	20:20	20	8061
Mor1Met2	Sep 80	611227	27°58.56'N, 93°32.61'W	95/99	4/23/80	18:00	9/7/80	04:20	20	9745
Mor2Met1	Sep 80	677764	27°54.43'N, 93°38.00'W	49/95	4/23/80	20:00	10/5/80	17:20	20	11734
Mor2Met2	Sep 80	611225	27°54.43'N, 93°38.00'W	90/95	4/23/80	20:00	8/20/80	07:40	20	8529
Mor3Met1	Sep 80	677763	27°54.35'N, 93°45.90'W	58/104	4/23/80	16:00	9/7/80	04:20	20	9760
Mor3Met2	Sep 80	677754	27°54.35'N, 93°45.90'W	100/104	4/23/80	16:00	8/20/80	06:00	20	8545

TABLE 1 (Continued)

MOORING & METER	MONTH OF RECOVERY	INSTRUMENT SERIAL NUMBER	LOCATION	DEPTH (m) METER/BOTTOM	TIME OF FIRST GOOD RECORDING		FINAL TIME		RECORDING INTERVAL (minutes)	TOTAL RECORDS (including 6 header records)
Mor1Met1	Jan 81	677764	27°58.63'N, 93°32.52'W	54/96	10/13/80	19:40	1/19/81	21:20	20	7063
Mor1Met2	Jan 81	611239	27°58.63'N, 93°32.52'W	80/96	10/13/80	17:40	1/23/81	18:00	20	7360
Mor2Met1	Feb 81	677748	27°54.39'N, 93°37.95'W	32/99	10/25/80	09:35	2/11/81	15:15	20	7872
Mor2Met2	Feb 81	677755	27°54.39'N, 93°37.95'W	57/99	10/25/80	08:15	2/9/81	16:35	20	7736
Mor2Met3	Feb 81	611236	27°54.39'N, 93°37.95'W	83/99	10/25/80	09:15	2/10/81	03:55	20	7767
Mor2Met4	Feb 81	611225	27°54.39'N, 93°37.95'W	95/99	10/25/80	09:55	2/10/81	11:35	20	7788
Mor3Met1	Feb 81	611219	27°54.34'N, 93°45.89'W	52/101	10/20/80	17:50	2/9/81	17:11	20	8086
Mor3Met2	Feb 81	667763	27°54.34'N, 93°45.89'W	63/101	10/20/80	21:10	2/11/81	20:10	20	8212
Mor3Met3	Feb 81	611240	27°54.34'N, 93°45.89'W	90/101	10/20/80	21:10	2/10/81	06:50	20	8100
Mor3Met4	Feb 81	667754	27°54.34'N, 93°45.89'W	97/101	10/20/80	21:30	12/5/80	05:50	20	3270
Mor1Met1	Jul 81	677763	27°58.58'N, 93°32.53'W	47/97	3/6/81	00:40	7/16/81	00:00	20	9491
Mor1Met2	Jul 81	611226	27°58.58'N, 93°32.53'W	58/97	3/6/81	00:00	7/11/81	10:00	20	9182
Mor1Met3	Jul 81	677713	27°58.58'N, 93°32.53'W	85/97	3/6/81	00:20	7/16/81	00:00	20	9497
Mor1Met4	Jul 81	611225	27°58.58'N, 93°32.53'W	91/97	3/6/81	00:20	7/16/81	00:00	20	9492
Mor2Met1	Jul 81	668218	27°53.79'N, 93°37.47'W	50/103	3/5/81	22:20	6/3/81	21:40	20	6485
Mor2Met2	Jul 81	677748	27°53.79'N, 93°37.47'W	71.5/103	3/5/81	22:20	7/15/81	16:00	20	9495
Mor2Met3	Jul 81	611236	27°53.79'N, 93°37.47'W	85/103	3/5/81	22:20	7/15/81	16:40	20	9492
Mor2Met4	Jul 81	677754	27°53.79'N, 93°37.47'W	97/103	3/5/81	22:20	4/14/81	03:20	20	2830
Mor3Met1	Jul 81	668224	27°54.38'N, 93°45.90'W	53/103	3/5/81	17:40	7/16/81	05:40	20	9545
Mor3Met2	Jul 81	611219	27°54.38'N, 93°45.90'W	64/103	3/5/81	17:20	7/15/81	16:20	20	9508
Mor3Met3	Jul 81	611244	27°54.38'N, 93°45.90'W	91/103	3/5/81	17:20	7/15/81	15:00	20	9504
Mor3Met4	Jul 81	611229	27°54.38'N, 93°45.90'W	97/103	3/5/81	17:20	7/15/81	15:00	20	9505
Mor4Met1	Jul 81	677725	27°55.01'N, 93°55.01'W	47/97	3/5/81	22:20	7/15/81	15:00	20	9488
Mor4Met2	Jul 81	677755	27°55.01'N, 93°55.01'W	58/97	3/5/81	16:20	7/15/81	22:40	20	9526
Mor4Met3	Jul 81	611239	27°55.01'N, 93°55.01'W	85/97	3/5/81	16:20	7/15/81	13:40	20	9498
Mor4Met4	Jul 81	611240	27°55.01'N, 93°55.01'W	91/97	3/5/81	16:00	7/15/81	13:20	20	9503

TABLE 2
QUALITY ASSESSMENT OF HYDROPRODUCTS CURRENT METER AND ASSOCIATED TIME SERIES DATA,
EAST AND WEST FLOWER GARDEN BANKS
(All Deployments from Jan 79 - Jul 81)

MOORING & METER	DATE OF RECOV-ERY	INVENTORY AND QUALITY (x Indicates good throughout record) SPEED	DIRECTION	TEMPERATURE	TRANSMISSIVITY (serial #)	CONDUCTIVITY	DEPTH SENSOR
Mor1Met1	Apr 79	1/16/79 10:34 - 3/13/79 15:04 (Recs 7-13492) good speed; bad thereafter.	Bad (Constant)	x			
Mor2Met1	Apr 79	1/17/79 21:16 - 3/6/79 19:16 (Recs 7-11507) good speed; fabricated speed thereafter.	x	x			
Mor2Met3	Apr 79	1/17/79 21:52 - 2/8/79 18:22 (Recs 7-5252) good speed; bad thereafter.	Bad (Constant)	x			
Mor1Met1	Sep 79	x	x	x			
Mor1Met2	Sep 79	x	x	x			
Mor1Met3	Sep 79	7/12/79 18:38 - 7/25/79 11:38 (Recs 7-3057) good speed; speed set = 20.0 thereafter.	x	x			
Mor2Met1	Sep 79	no recording (speed set = 20.0 throughout record).	x	x			
Mor2Met2	Sep 79	x	x	x			
Mor2Met3	Sep 79	x	x	x			
Mor1Met1	Dec 79	9/9/79 15:01 - 11/8/79 22:07 (Recs 7-14477) good speed; fabricated constant speed thereafter.	Bad (Constant)	x			
Mor1Met2	Dec 79	9/9/79 15:10 - 11/4/79 13:10 (Recs 7-13432) good speed; fabricated speed thereafter.	x	x			
Mor2Met1	Dec 79	9/11/79 16:19 - 10/23/79 08:19 (Recs 7-10007) good speed; fabricated speed thereafter.	Poor	x			
Mor2Met2	Dec 79	9/11/79 16:20 - 10/23/79 04:20 (Recs 7-9967) intermittent speed; fabricated speed thereafter.	x	x			
Mor3Met1	Dec 79	9/11/79 18:15 - 11/3/79 00:15 (Recs 7-12547) good speed; fabricated speed thereafter.	x	x			
Mor1Met1	Sep 80	4/22/80 23:20 - 5/31/80 07:20 (Recs 7-2767) good speed; fabricated speed thereafter.	x	x			
Mor1Met2	Sep 80	4/23/80 18:00 - 5/29/80 14:20 (Recs 7-2577) good speed; fabricated speed thereafter.	x	x	4/23 - 5/29, erratic decrease to 0; no recording thereafter. (#14)		
Mor2Met1	Sep 80	4/23/80 20:00 - 6/8/80 21:40 (Recs 7-3324) good speed; 6/8/80 22:00 - 8/8/80 19:40 (Recs 3325-7710) speed set = 20.0; 8/8/80 20:00 - 9/29/80 17:40 (Recs 7711-11447) good speed; low values thereafter.	x	x			

TABLE 2 (Continued)

MOORING & METER	DATE OF RECOV-ERY	INVENTORY AND QUALITY (x indicates good throughout record) SPEED	DIRECTION	TEMPERATURE	TRANSMISSIVITY (serial #)	CONDUCTIVITY	DEPTH SENSOR
Mor2Met2	Sep 80	x	x	x	4/23 - 5/28, erratic decrease to 0; no recording thereafter.		
Mor3Met1	Sep 80	4/23/80 16:00 - 6/11/80 08:00 (Recs 7-3507) good speed; fabricated speed thereafter.	x	x			
Mor3Met2	Sep 80	4/23/80 16:00 - 6/13/80 08:40 (Recs 7-3657) good speed; fabricated speed thereafter.	x	x	4/24 - 5/30, good data. 5/30 - 6/10, rapid decrease; values < 50% thereafter.(#15)		
Mor1Met1	Jan 81	x	x	x			
Mor1Met2	Jan 81	x	x	x			
Mor2Met1	Feb 81	x	x	x		x	
Mor2Met2	Feb 81	10/25/80 08:15 - 12/8/80 16:35 (Recs 7-3207) good speed; fabricated speed thereafter.	x	x			
Mor2Met3	Feb 81	10/25/80 09:15 - 2/7/81 03:15 (Recs 7507) good speed; fabricated speed thereafter.	x	x	10/25 - 12/11, good data. 12/11 - 12/16, rapid decrease to below 56%. 12/16 - 12/27, rise to 60-64%. 12/27 - 2/10, decrease to below 56%. (#15)		
Mor2Met4	Feb 81	All speeds bad and set = 20.0 throughout record	x	x	10/25 - 1/4, good data; rapid decrease below 55% thereafter.(#30)		
Mor3Met1	Feb 81	10/20/80 17:50 - 2/7/81 16:51 (Recs 7-7927) good speed; fabricated speed thereafter.	x	x			
Mor3Met2	Feb 81	10/20/80 21:10 - 12/27/80 02:30 (Recs 7-4847) good speed; fabricated speed thereafter.	Bad (Constant)	No Good			
Mor3Met3	Feb 81	x	x	x	10/20 - 1/12, good data; rapid decrease below 55% thereafter.(#14)		
Mor3Met4	Feb 81	x	x	x		x (#31)	
Mor1Met1	Jul 81	3/6/81 00:40 - 6/18/81 01:20 (Recs 7-7496) good speed; fabricated speed thereafter.	Bad (Constant)	x			
Mor1Met2	Jul 81	3/6/81 00:00 - 5/14/81 10:40 (Recs 7-5007) good speed; fabricated speed thereafter.	x	x			

TABLE IV-2 (Continued)

MOORING & METER	DATE OF RECOV-ERY	INVENTORY AND QUALITY (x indicates good throughout record) SPEED	DIRECTION	TEMPERATURE	TRANSMISSIVITY (serial #)	CONDUCTIVITY	DEPTH SENSOR
Mor1Met3	Jul 81	3/6/81 00:20 - 3/27/81 14:40 (Recs 7-1103) fabricated speed. 3/27/81 15:00 - 4/4/81 16:40 (Recs 1104-1685) interpolations for speeds >40.0; 4/4/81 17:00 - 5/14/81 12:00 (Recs 1686-4551) and 5/23/81 19:40 - 6/3/81 03:00 (Recs 5223-5966) good speed; 5/14/81 12:20 - 5/23/81 19:20 (Recs 4552-5222) and 6/3/81 03:20-Record end (Recs 5967-9497) fabricated data.	x	x		x	
Mor1Met4	Jul 81	3/6/81 00:20 - 5/25/81 13:40 (Recs 7-5807) good speed; fabricated speed thereafter.	x	x	3/6 - 3/31, good data. 3/31 - 6/14, rapid decrease to <40%; values<40% thereafter. (#31)		
Mor2Met1	Jul 81	x	x	x		x	x
Mor2Met2	Jul 81	3/5/81 22:20 - 6/30/81 14:20 (Recs 7-8407) good speed; fabricated speed thereafter.	x	x		x	
Mor2Met3	Jul 81	x	x	x	3/5 - 5/8, good data. 5/8 - 6/30 rapid decrease to 25%; no recording thereafter. (#15)		
Mor2Met4	Jul 81	x	Bad (Constant)	x	Bad throughout record (#61)		
Mor3Met1	Jul 81	x	x	x		x	x
Mor3Met2	Jul 81	x	x	x			
Mor3Met3	Jul 81	3/5/81 17:20 - 6/24/81 20:00 (Recs 7-8007) good speed; fabricated speed thereafter.	x	x	3/5 - 5/6, good data. 5/6 - 5/20, rapid decrease; No recording thereafter.(#62)		
Mor3Met4	Jul 81	3/5/81 17:20 - 6/27/81 14:40 (Recs 7-8207) good speed; fabricated speed thereafter.	x	x	3/5 - 5/4, good data. 5/4 - 6/14, slow decrease; low values (25-30%) thereafter.(#14)		
Mor4Met1	Jul 81	x	x	x		x	
Mor4Met2	Jul 81	3/5/81 16:20 - 3/26/81 12:20 (Recs 7-1507) good speed; speed set = 20.0 thereafter.	x	x			
Mor4Met3	Jul 81	3/5/81 16:20 - 3/26/81 12:20 (Recs 7-1507) good speed; speed set = 20.0 thereafter.	x	x	3/5 - 4/8, good data. 5/6 - 6/12, drops below 40%. 6/13 climbs to 65%; steady decrease thereafter. (#30)		
Mor4Met4	Jul 81	3/5/81 16:00 - 3/26/81 12:00 (Recs 7-1507) good speed; speed set = 20.0 thereafter.	x	x	3/5 - 3/9, good data; no recording thereafter.(#7)		

TABLE 3
MARSH-McBIRNEY ELECTROMAGNETIC CURRENT METER DATA INVENTORY

The first four deployments were made on top of the East Flower Garden Bank. The last three deployments were on mooring II, near the southwest edge of the East Flower Garden Bank.
x: Means good data.

ELECTROMAGNETIC CURRENT METER DISC FILE	LOCATION	DEPTH (m) METER/BOTTOM	TIME OF FIRST GOOD READING		FINAL TIME		RECORDING INTERVAL (minutes)	TOTAL RECORDS	SPEED U,V COMP.
EMCM.EMA.Apr79	27°54.65'N, 93°35.92'W	28/30	2/10/79	18:00	4/16/79	05:30	15	6197	Low values
EMCM.EMA.Jul79	27°54.65'N, 93°35.92'W	28/30	4/29/79	18:00	7/07/79	05:20	20	4937	x
EMCM.EMA.Sep79	27°54.65'N, 93°35.92'W	28/30	7/14/79	23:30	8/29/79	14:20	20	3358	x
EMCM.EMA.Dec79	27°54.65'N, 93°35.92'W	28/30	9/25/79	00:00	10/16/79	13:50	10	3114	x
MOR2.EMCM.Sep80	27°54.43'N, 93°38.00'W	15/95	4/17/80	15:40	5/08/80	00:40	20	1469	x
MOR2.EMCM.Feb81	27°54.39'N, 93°37.95'W	20/99	10/24/80	22:25	1/11/81	19:54	20	5038	*
MOR2.EMCM.Jul81	27°53.79'N, 93°37.47'W	38/103	3/05/81	16:53	4/06/81	13:13	20	2315	x

*10/24/80 22:25 - 12/28/80 16:45 (Recs 7-4668) Good Speed
12/28/80 17:05 - 1/11/81 19:54 (Recs 4669-5038) Steady Increase in speed from 50.0 - 110.0 cm/sec.

TABLE 4
DATA INVENTORY FOR CONDUCTIVITY-TEMPERATURE PROBE DEPLOYED ON MOORING LINE
ADJACENT TO THE MARSH-McBIRNEY ELECTROMAGNETIC CURRENT METER

The first three deployments were on top of the East Flower Garden Bank. The last deployment was on mooring 11, near the southwest edge of the East Flower Garden Bank.
x: Means good data.

DISC FILE	LOCATION	FIRST GOOD TIME	FINAL TIME	RECORDING INTERVAL (minutes)	DEPTH (m) METER/BOTTOM	TOTAL RECORDS	TEMPERATURE	COND.
CONTMP.EMA.APR2379	27°54.65'N 93°35.92'W	2/10/79 16:44	4/24/79 09:10	6	27/30	18448	x	x
CONTP.EMA.JUL1279	27°54.65'N 93°35.92'W	4/29/79 13:40	7/10/79 18:46	6	27/30	17330	x	x
CONTMP.EMA.SEP79	27°54.65'N 93°35.92'W	7/16/79 14:10	8/30/79 23:22	6	27/30	10893	x	x
CONTMP.EMA.SEP80	27°54.43'N 93°38.00'W	4/23/80 20:00	6/8/80 04:00	20	14/95	2904	x	x

Figure 1

DATA INVENTORY FOR CURRENT METER ARRAYS: JANUARY 1979 THROUGH DECEMBER 1979

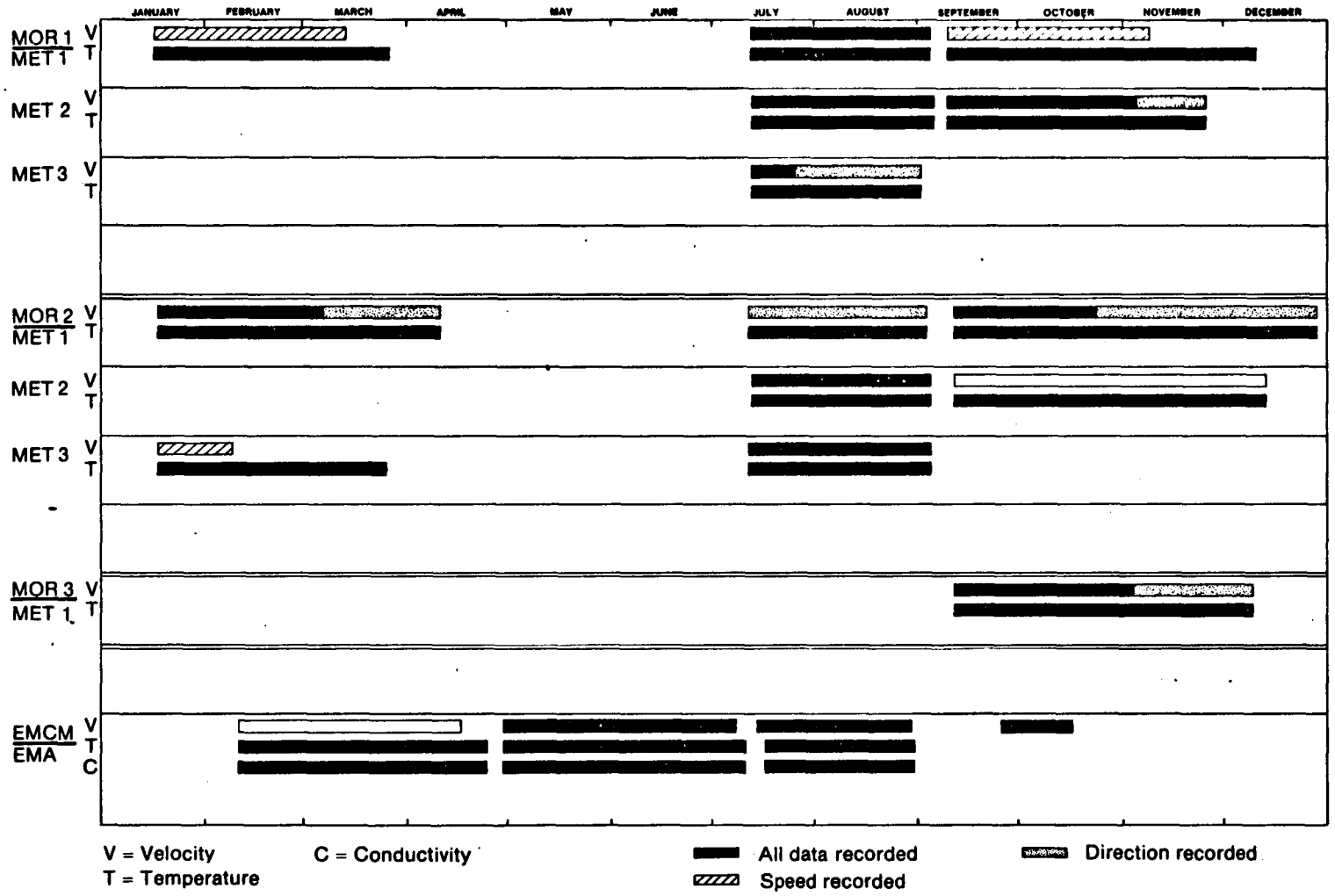


Figure 2

DATA INVENTORY FOR CURRENT METER ARRAYS: APRIL 1980 THROUGH OCTOBER 1980

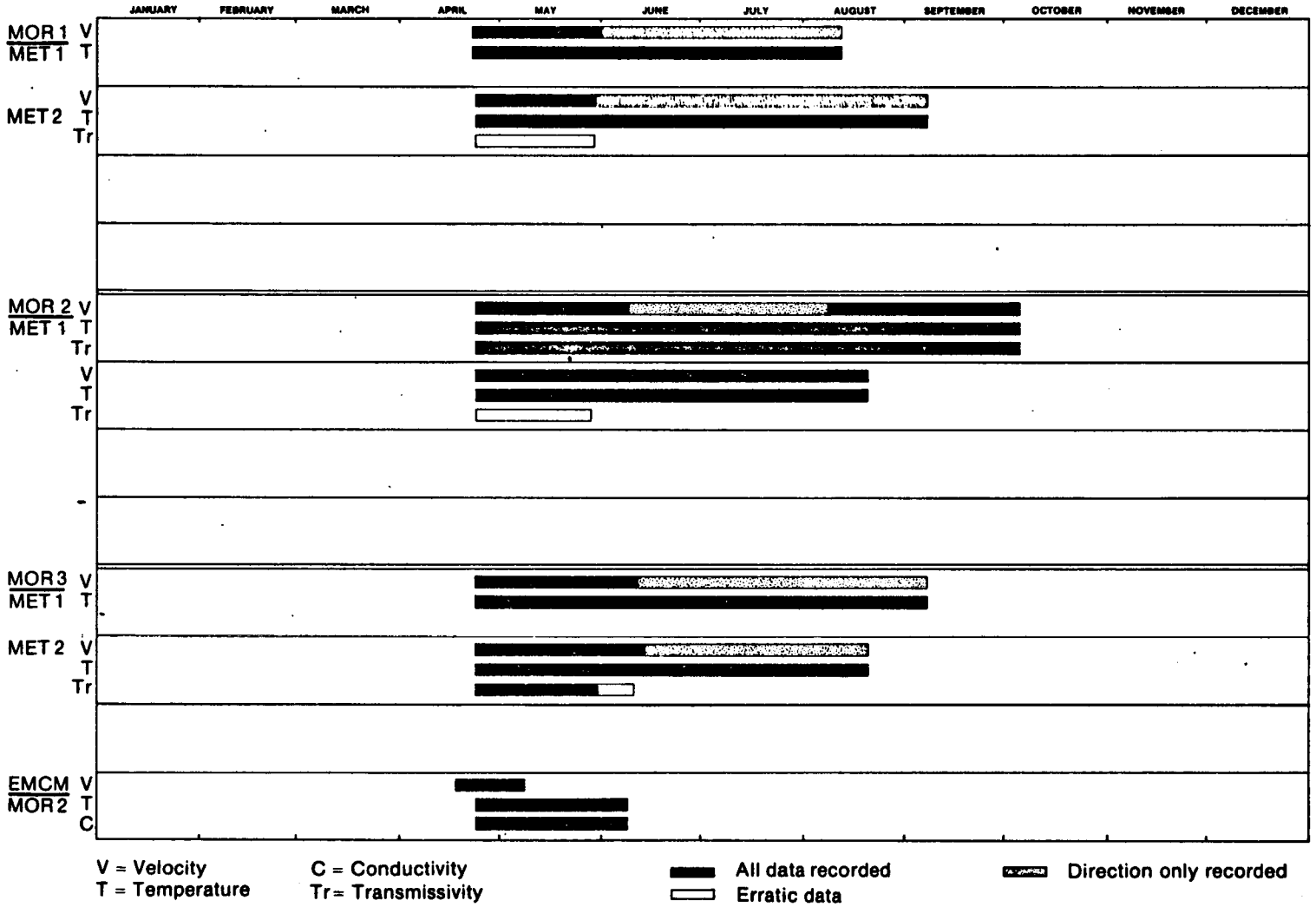
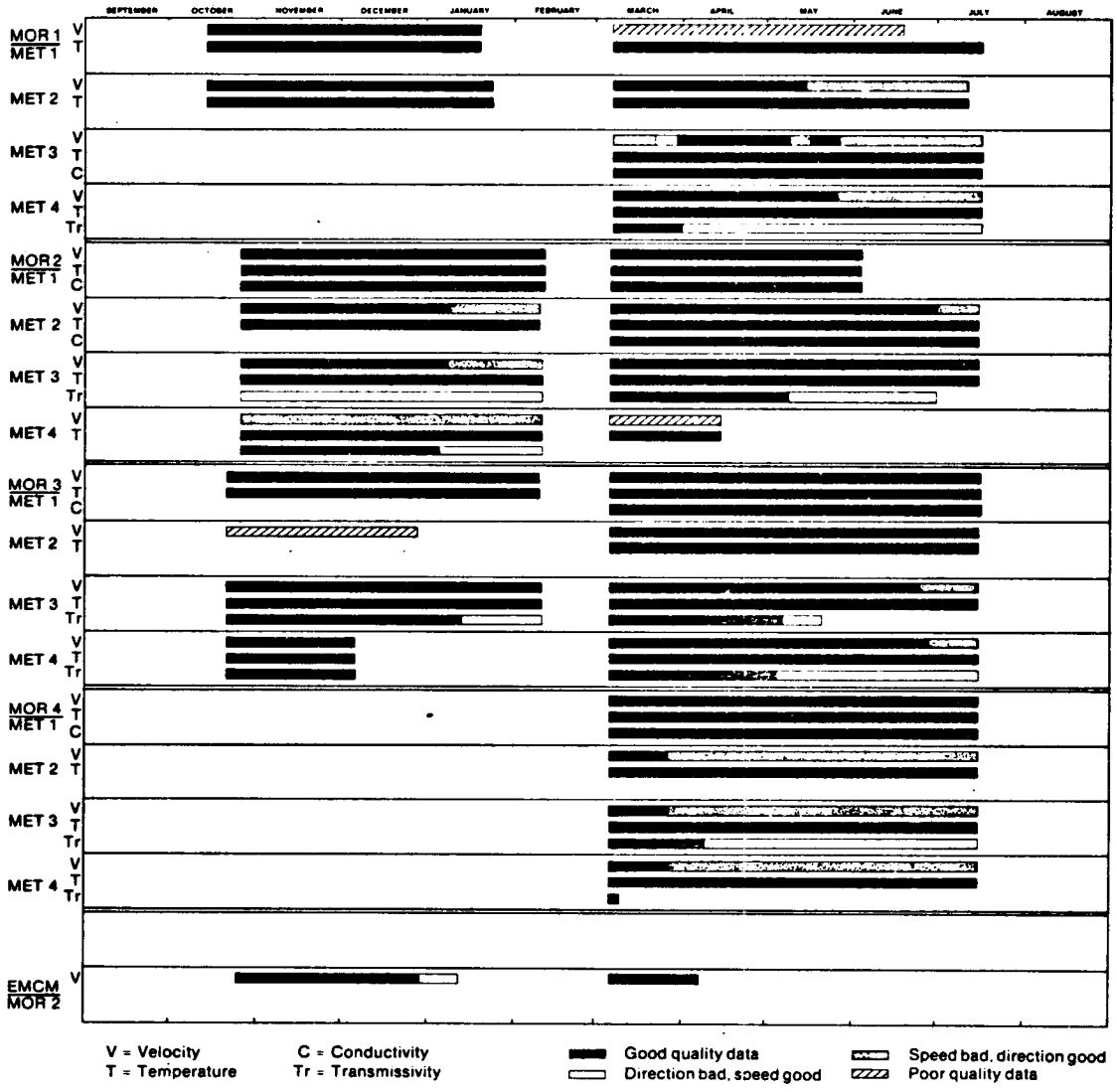


Figure 3

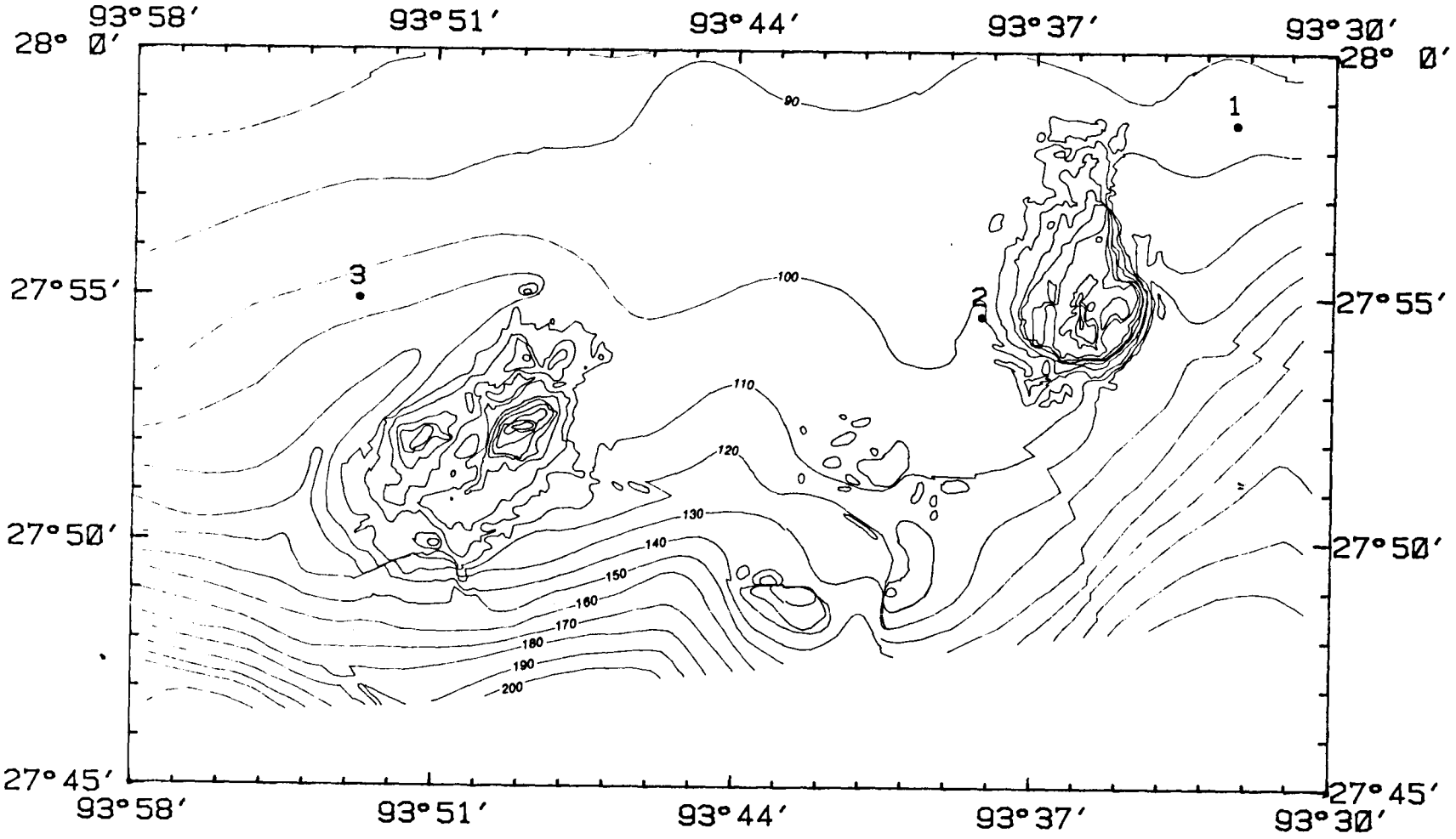
DATA INVENTORY FOR CURRENT METER ARRAYS: OCTOBER 1980 THROUGH JULY 1981

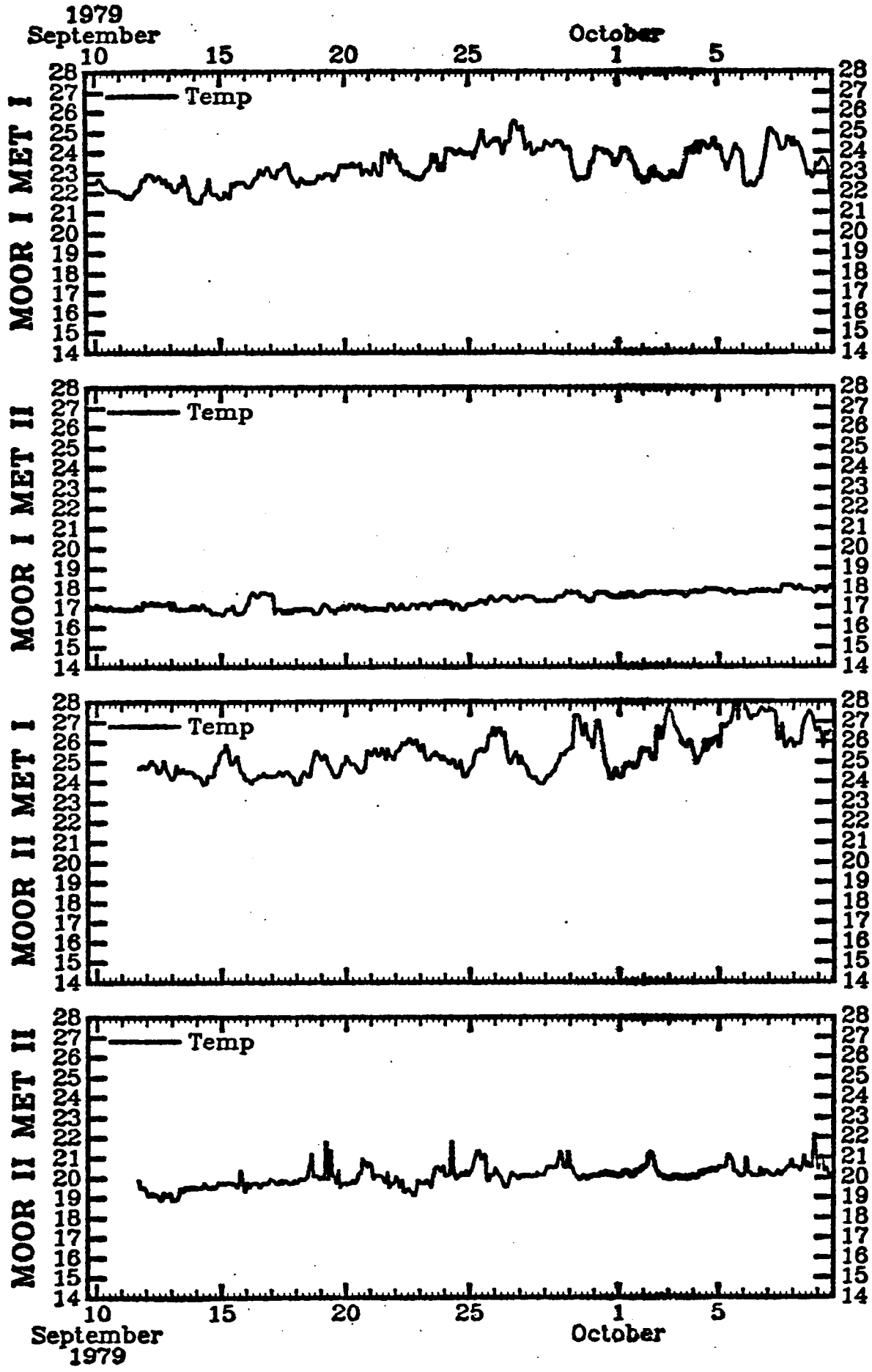


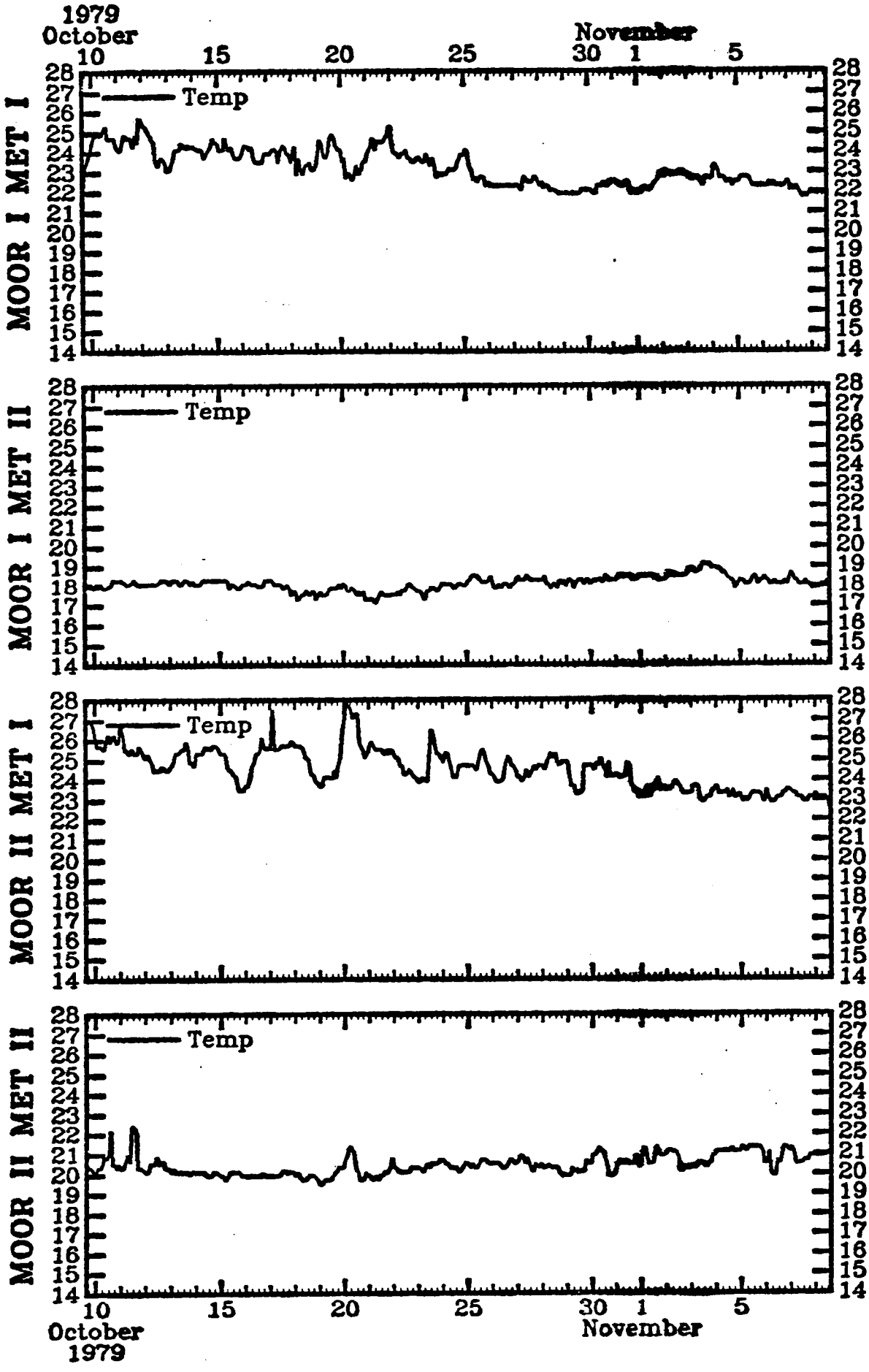
DEPLOYMENT 3: SEPTEMBER-DECEMBER 1979

MAP 1

MOORING POSITIONS FOR DEPLOYMENT 3 (SEPT-DEC 79)




1979
September
October
10
15
20
25
1
5
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
September
1979
October


1979
October
November
10
15
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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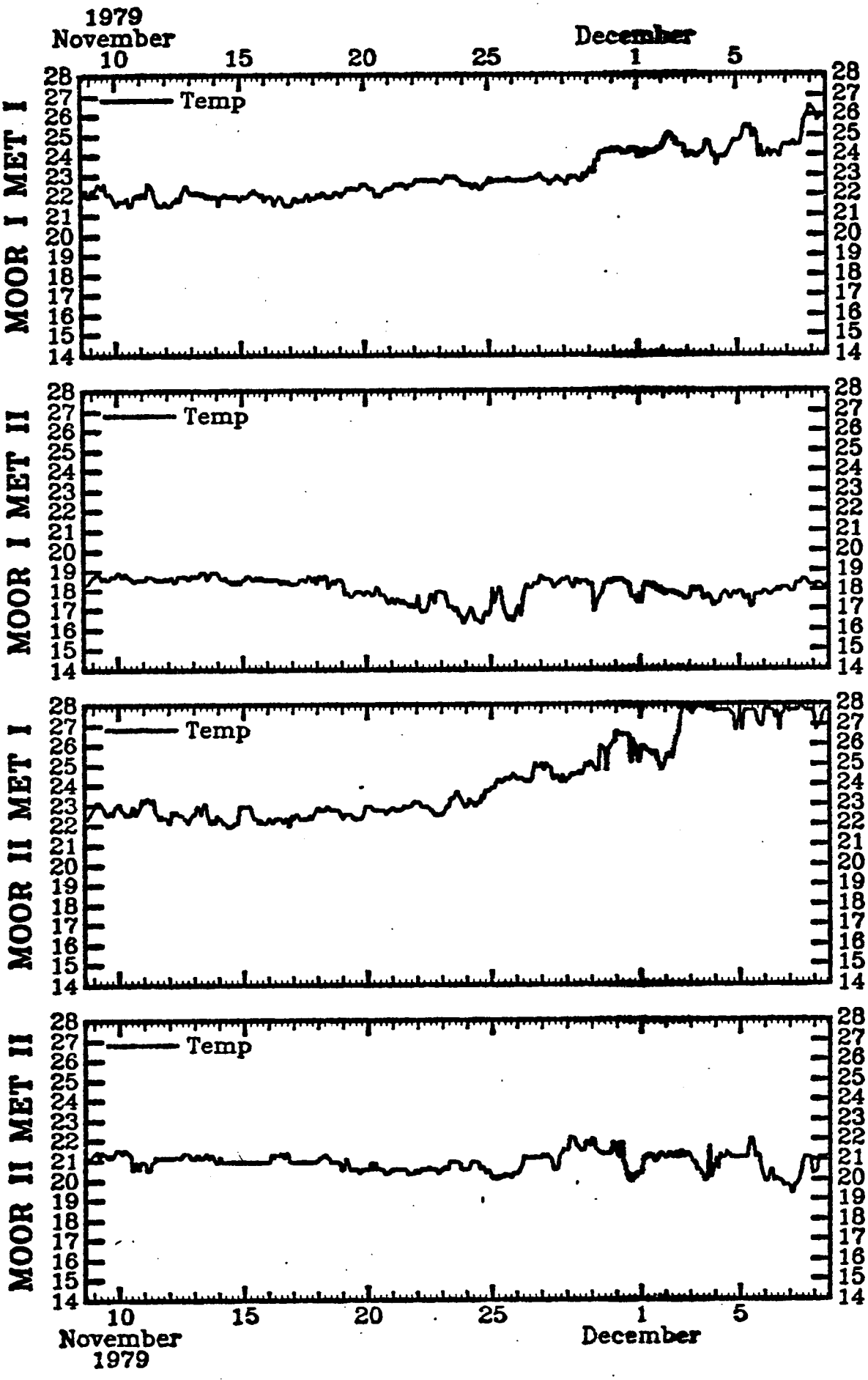
October
1979
November


1979
November
December
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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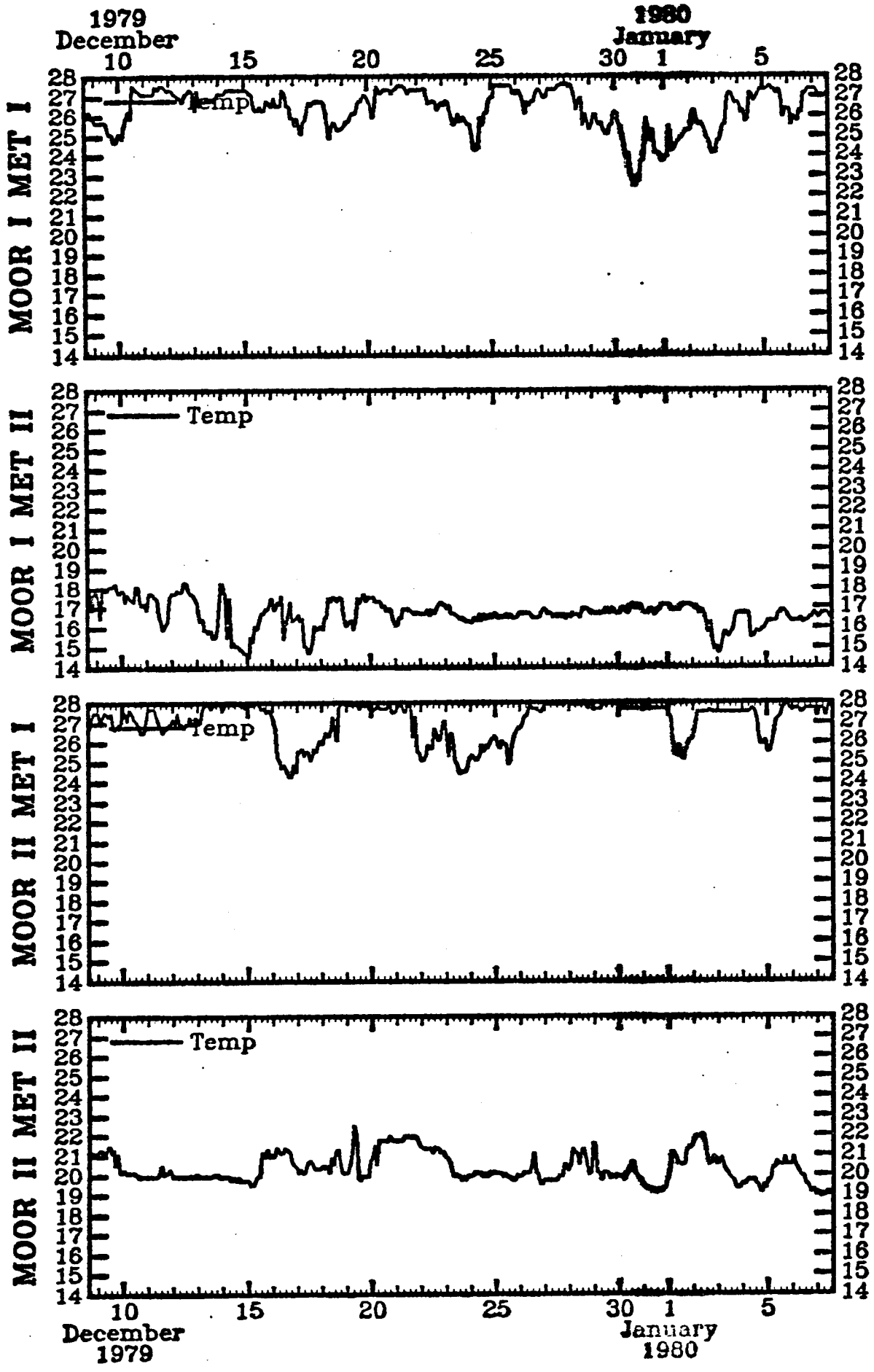
November
1979
December


1979
December
1980
January
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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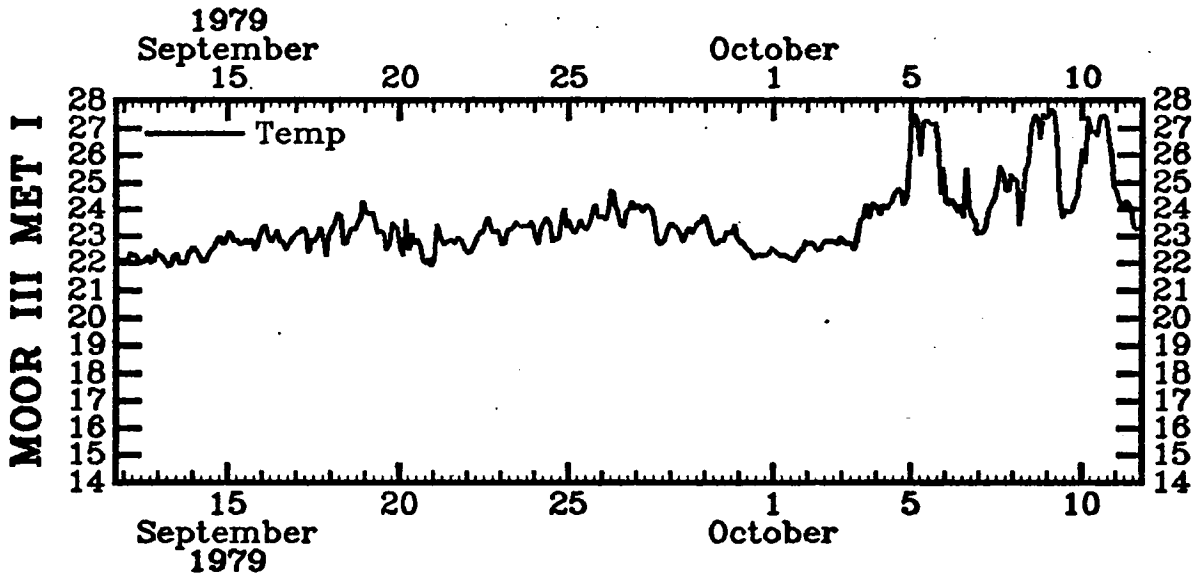
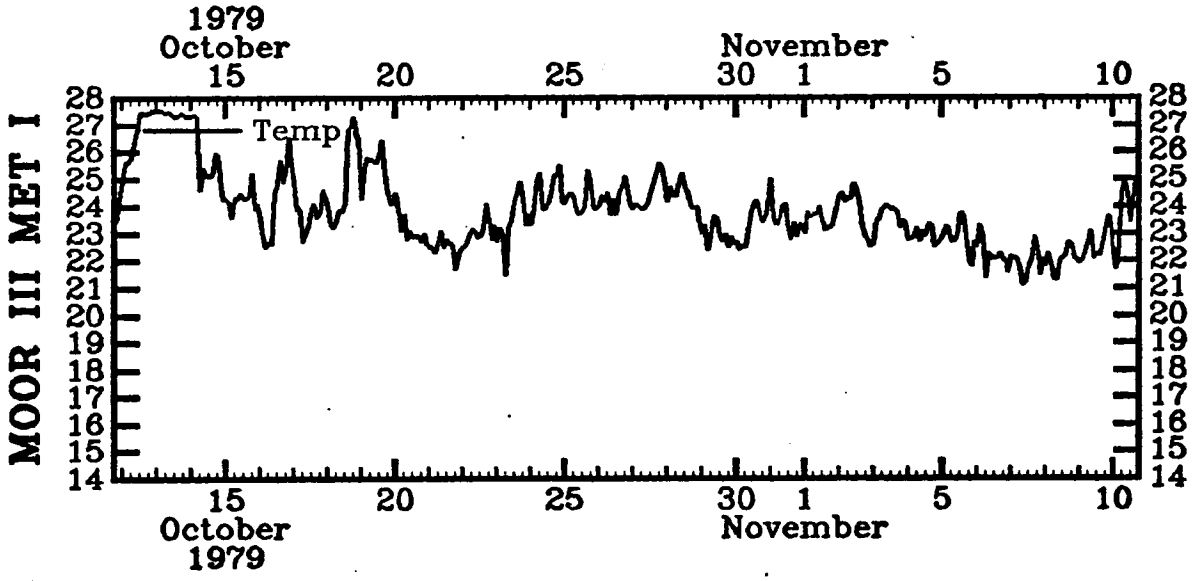
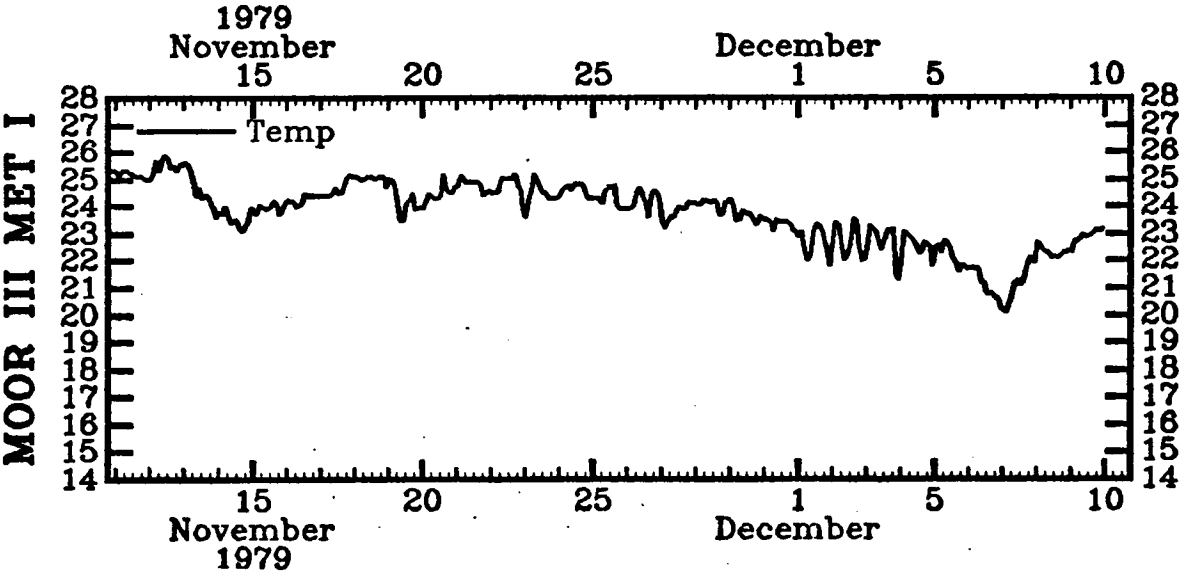
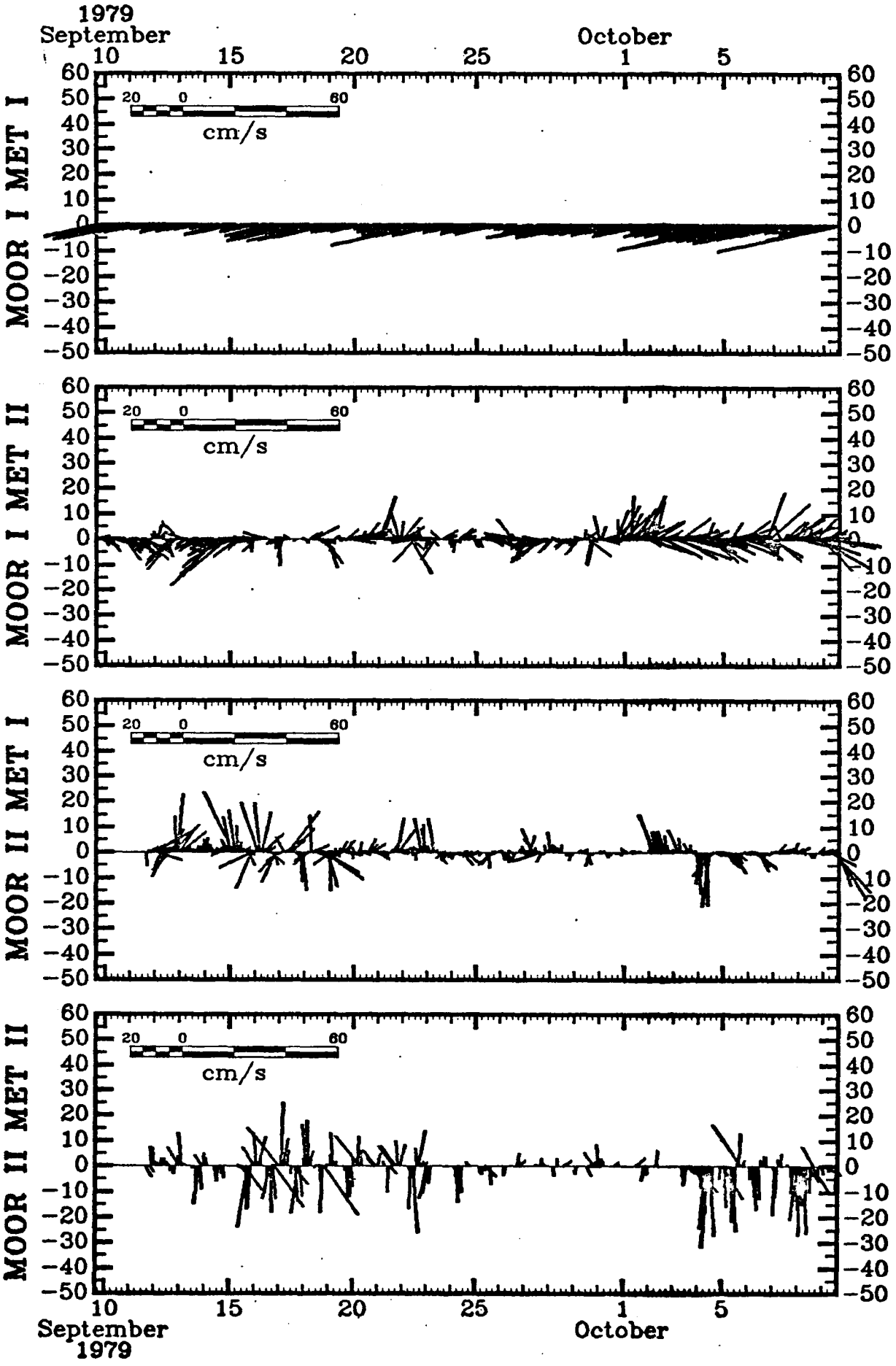
16
15
14
December
1979
January
1980


MOOR III MET I
1979
September
October
15 20 25 1 5 10
Temp
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14
15 20 25 1 5 10
September
1979
October


MOOR III MET I
1979
October
November
15 20 25 30 1 5 10
Temp
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14
15 20 25 30 1 5 10
October
1979
November


MOOR III MET I
1979
November
December
15 20 25 1 5 10
Temp
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14
15 20 25 1 5 10
November
1979
December


1979
September
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
20
0
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cm/s
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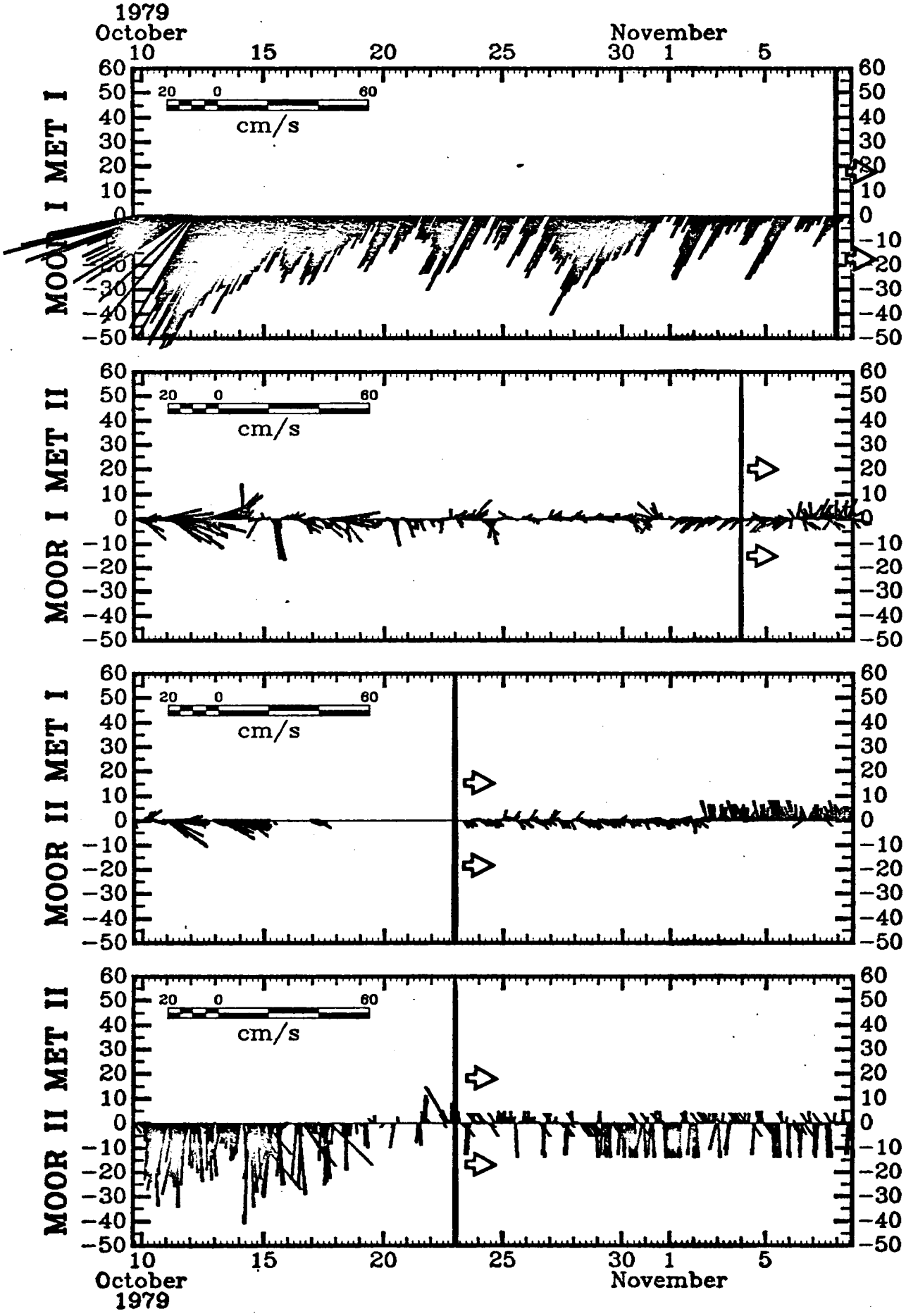
50
40
30
20
10
0
−10
−20
−30
−40
−50
September
1979
October


1979
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
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cm/s
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40
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−10
−20
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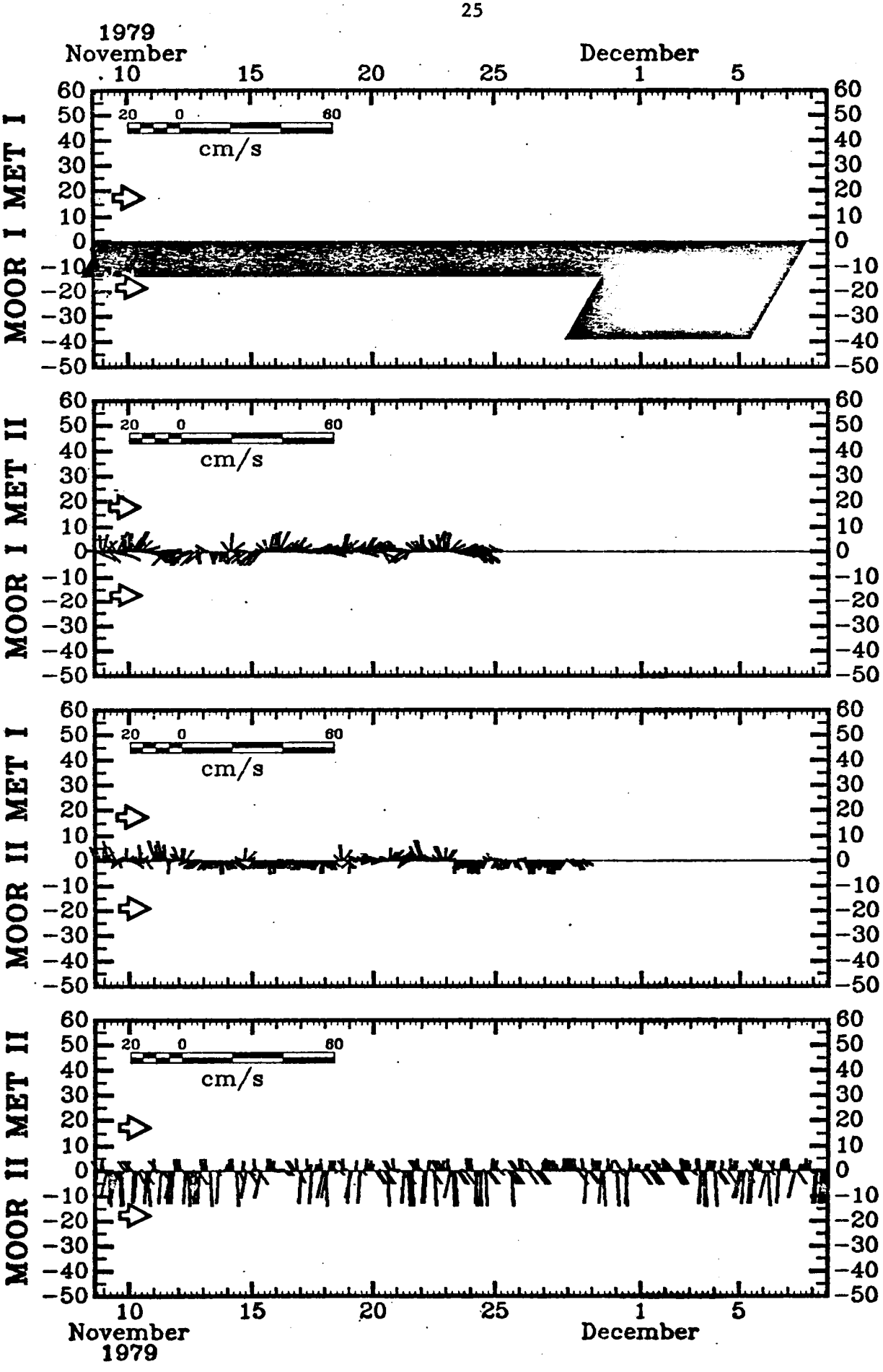
−50
October
1979
November


1979
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December
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
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cm/s
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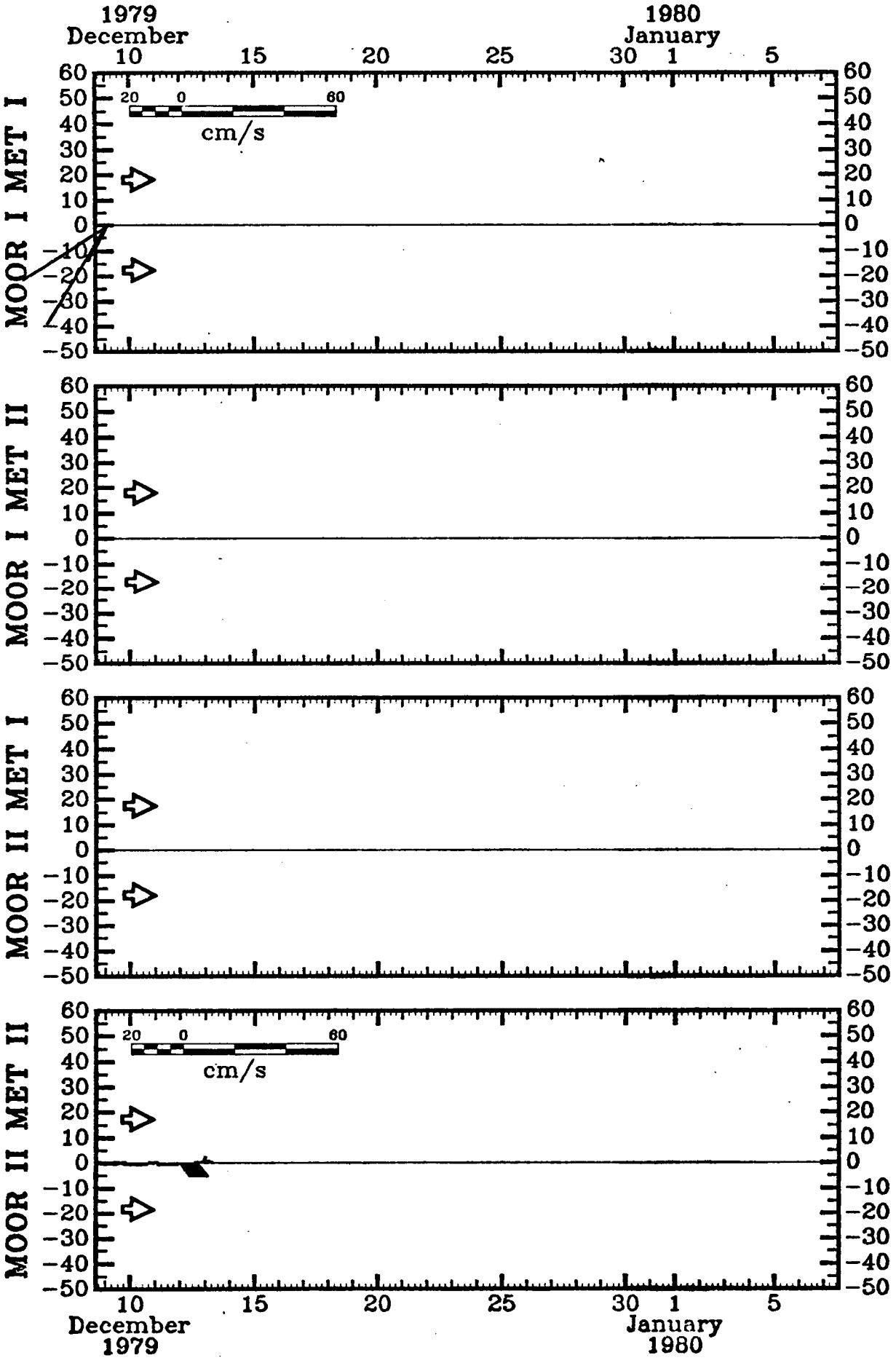
November
1979
December


1979
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January
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
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cm/s
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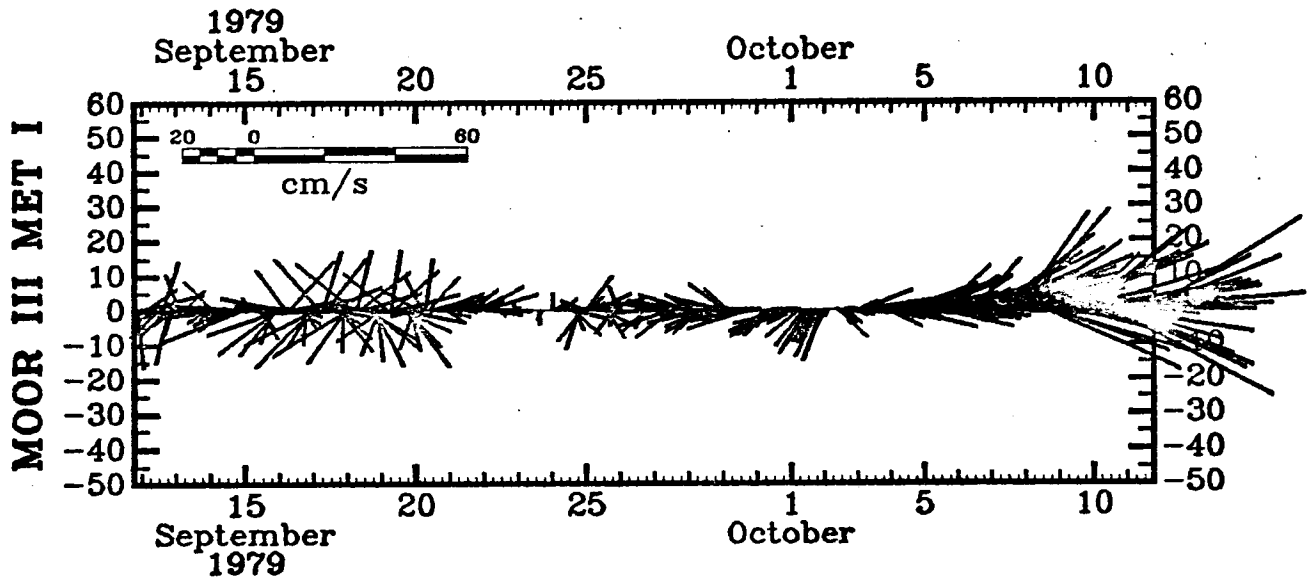
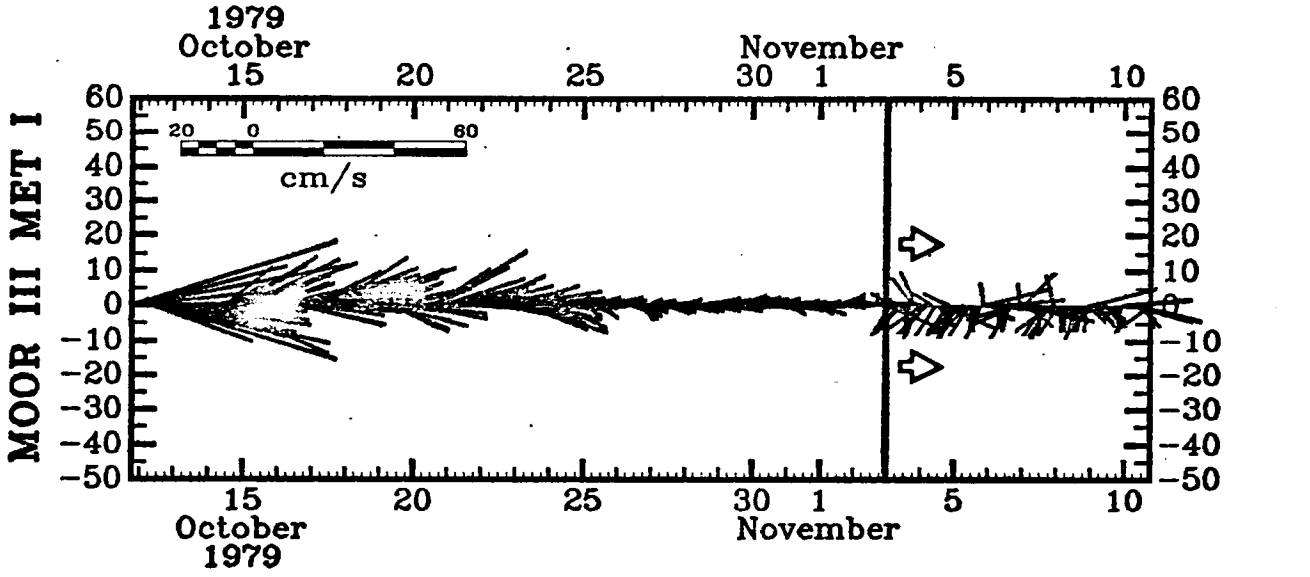
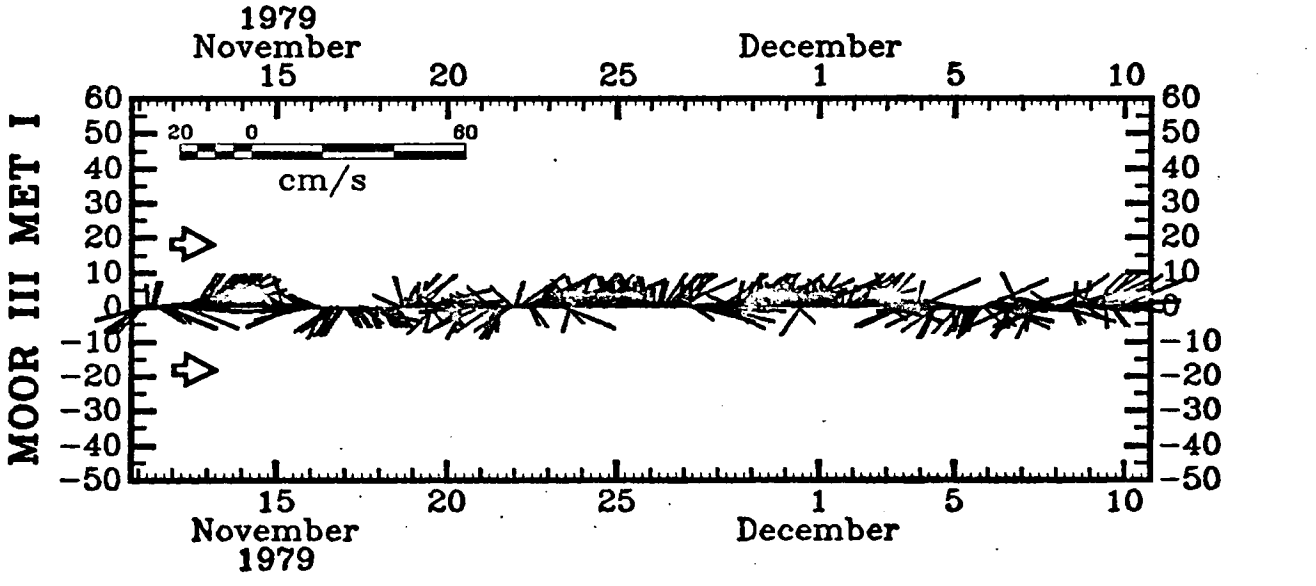
−40
−50
10
December
1979
January
1980


1979
September
October
15 20 25 1 5 10
MOOR III MET I
20 0 60
cm/s
60 50 40 30 20 10 0 −10 −20 −30 −40 −50
15 20 25 1 5 10
September
1979
October


1979
October
November
15 20 25 30 1 5 10
MOOR III MET I
20 0 60
cm/s
60 50 40 30 20 10 0 −10 −20 −30 −40 −50
15 20 25 30 1 5 10
October
1979
November


1979
November
December
15 20 25 1 5 10
MOOR III MET I
20 0 60
cm/s
60 50 40 30 20 10 0 −10 −20 −30 −40 −50
15 20 25 1 5 10
November
1979
December

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 1 (53 m), DEC 79 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10- 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20- 29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30- 39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40- 49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50- 59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60- 69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70- 79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80- 89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90- 99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100-109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110-119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120-129	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130-139	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140-149	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150-159	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160-169	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170-179	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180-189	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190-199	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200-209	6.66	7.28	6.26	5.42	4.68	3.90	3.00	1.09	0.64	0.41	0.46	0.73	40.54
210-219	0.0	0.0	0.0	0.0	0.0	0.12	0.24	0.15	0.22	0.47	0.30	0.26	1.78
220-229	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.10	0.03	0.16
230-239	0.0	0.0	0.0	0.0	0.0	0.08	0.26	0.08	0.09	0.13	0.13	0.03	0.79
240-249	0.0	0.0	0.02	0.35	0.38	0.23	0.21	0.26	0.28	0.27	0.09	0.0	2.10
250-259	9.27	10.97	11.62	7.63	4.28	2.37	1.26	0.66	0.17	0.10	0.10	0.20	47.63
260-269	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270-279	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280-289	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290-299	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300-309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310-319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320-329	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330-339	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340-349	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350-359	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL %	14.93	18.25	17.90	13.41	9.34	6.70	4.97	2.25	1.40	1.40	1.20	1.26	

PERCENT AT 0 CM/SEC= 7.007

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 2 (95 m), DEC 79 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.27	0.28	0.13	0.10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.81
10- 19	0.57	0.25	0.13	0.16	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15
20- 29	0.74	0.51	0.49	0.34	0.12	0.03	0.0	0.0	0.0	0.0	0.0	0.0	2.23
30- 39	1.01	0.95	0.49	0.11	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.63
40- 49	1.39	0.91	0.65	0.13	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.09
50- 59	2.43	1.55	0.77	0.28	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.04
60- 69	1.77	1.54	0.69	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.33
70- 79	1.91	1.05	0.95	0.42	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.40
80- 89	2.15	1.48	0.91	0.66	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.26
90- 99	2.38	1.64	1.25	0.77	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.13
100-109	1.51	1.36	1.37	0.63	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.06
110-119	1.56	1.52	1.12	0.48	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.93
120-129	2.07	1.74	0.96	0.32	0.29	0.02	0.0	0.0	0.0	0.0	0.0	0.0	5.40
130-139	1.33	1.14	0.51	0.10	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.13
140-149	1.88	0.96	0.30	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.17
150-159	1.77	0.65	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.64
160-169	1.42	0.61	0.19	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
170-179	1.48	0.60	0.28	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.46
180-189	1.43	0.51	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.06
190-199	1.06	0.57	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
200-209	0.99	0.23	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
210-219	0.85	0.60	0.14	0.09	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.71
220-229	1.39	1.35	0.32	0.34	0.25	0.01	0.0	0.0	0.0	0.0	0.0	0.0	3.66
230-239	1.36	0.76	0.72	0.37	0.13	0.01	0.0	0.0	0.0	0.0	0.0	0.0	3.36
240-249	1.29	0.87	0.56	0.19	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.93
250-259	1.09	0.77	0.39	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.35
260-269	1.03	0.70	0.28	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.08
270-279	0.62	0.48	0.10	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22
280-289	0.60	0.25	0.04	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.89
290-299	0.53	0.23	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.77
300-309	0.51	0.25	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83
310-319	0.38	0.22	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70
320-329	0.48	0.31	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.81
330-339	0.36	0.20	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62
340-349	0.32	0.13	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54
350-359	0.25	0.12	0.12	0.07	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57
TOTAL %	42.16	27.36	14.73	6.23	1.74	0.07	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC = 7.694

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 1 (53 m), DEC 79 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.51	0.44	0.35	0.07	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.44
10- 19	1.19	0.32	0.21	0.17	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.93
20- 29	0.99	0.38	0.23	0.09	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.71
30- 39	0.98	0.56	0.23	0.14	0.07	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.99
40- 49	1.19	0.53	0.41	0.12	0.10	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.36
50- 59	1.28	0.59	0.17	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.10
60- 69	1.18	0.42	0.11	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.78
70- 79	1.84	0.50	0.14	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.51
80- 89	1.86	0.36	0.20	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.49
90- 99	1.58	0.78	0.15	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.56
100-109	2.34	1.84	0.39	0.04	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.63
110-119	2.75	1.10	1.26	0.08	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.23
120-129	1.79	1.18	0.37	0.36	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.84
130-139	1.42	0.62	0.37	0.09	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.45
140-149	1.77	0.63	0.16	0.07	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.78
150-159	1.35	0.84	0.14	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.51
160-169	1.08	0.33	0.13	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.55
170-179	1.17	0.58	0.47	0.19	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.51
180-189	1.25	0.47	0.44	0.15	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.45
190-199	1.20	0.27	0.09	0.08	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.65
200-209	1.34	0.18	0.16	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.76
210-219	0.90	0.23	0.28	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.42
220-229	0.88	0.32	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
230-239	0.70	0.53	0.09	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.34
240-249	0.54	0.23	0.10	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.88
250-259	0.64	0.32	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.06
260-269	0.50	0.19	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.76
270-279	0.41	0.17	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62
280-289	0.35	0.12	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51
290-299	0.51	0.07	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.61
300-309	0.56	0.08	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67
310-319	0.52	0.21	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.77
320-329	0.60	0.26	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.92
330-339	0.86	0.69	0.22	0.14	0.07	0.02	0.0	0.0	0.0	0.0	0.0	0.0	2.00
340-349	1.14	0.83	0.40	0.43	0.18	0.03	0.0	0.0	0.0	0.0	0.0	0.0	3.01
350-359	1.60	0.91	0.49	0.41	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.36
TOTAL %	41.77	17.88	8.37	3.18	1.28	0.08	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC=27.447

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 1 (61 m), DEC 79 RECOVERY

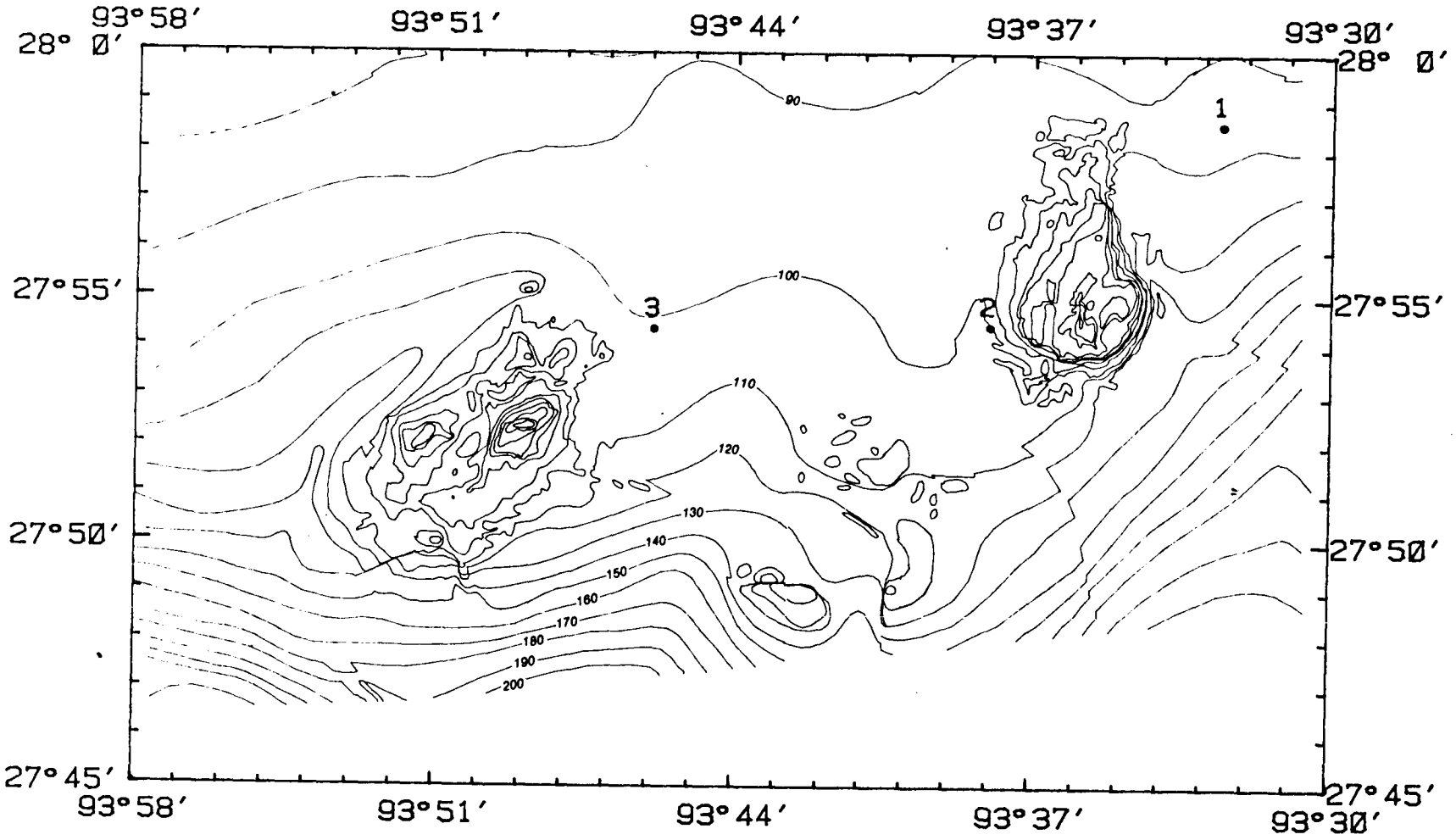
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

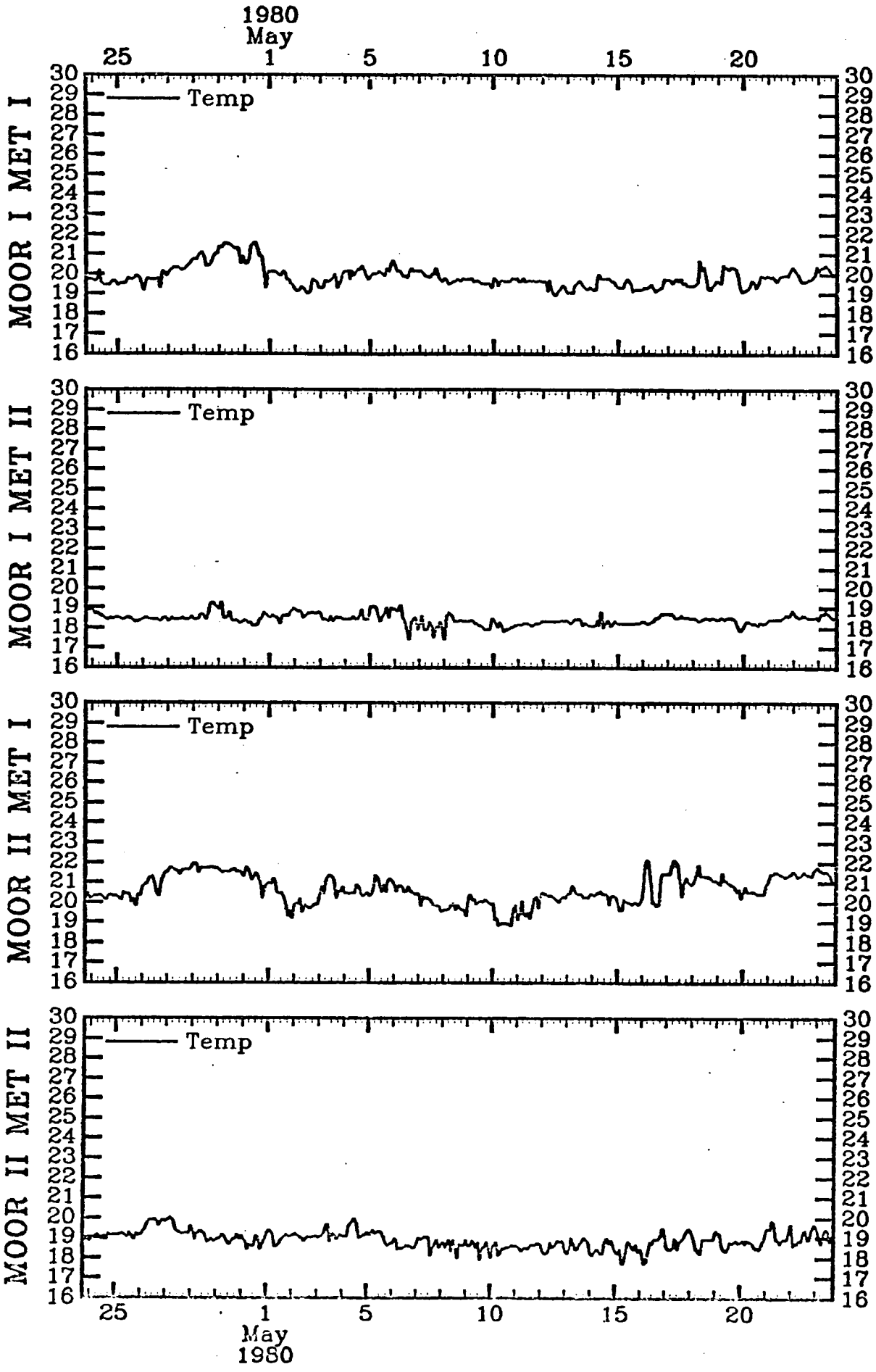
SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.16	0.06	0.09	0.10	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41
10- 19	0.11	0.12	0.14	0.13	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50
20- 29	0.28	0.07	0.17	0.10	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.65
30- 39	0.26	0.15	0.23	0.23	0.12	0.01	0.06	0.08	0.01	0.0	0.0	0.0	1.15
40- 49	0.37	0.35	0.27	0.30	0.07	0.08	0.09	0.16	0.01	0.0	0.0	0.0	1.70
50- 59	0.54	0.77	0.82	0.56	0.45	0.46	0.29	0.20	0.06	0.04	0.02	0.02	4.22
60- 69	0.61	1.49	1.16	1.16	1.40	1.24	0.73	0.44	0.19	0.07	0.05	0.04	8.59
70- 79	0.64	2.44	1.50	1.33	2.00	1.31	1.24	0.47	0.22	0.10	0.09	0.10	11.52
80- 89	0.72	3.33	2.24	1.32	2.34	1.66	0.85	0.45	0.25	0.08	0.03	0.06	13.33
90- 99	0.80	2.95	2.18	1.67	1.16	1.35	0.89	0.55	0.22	0.07	0.04	0.01	11.88
100-109	0.77	2.49	1.48	1.08	1.20	0.97	0.44	0.37	0.29	0.14	0.23	0.0	9.46
110-119	0.45	1.14	0.73	0.62	0.25	0.20	0.22	0.11	0.31	0.14	0.07	0.0	4.23
120-129	0.57	0.90	0.39	0.22	0.04	0.0	0.0	0.0	0.0	0.01	0.0	0.0	2.13
130-139	0.45	0.38	0.26	0.15	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.25
140-149	0.32	0.61	0.25	0.12	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.30
150-159	0.18	0.33	0.14	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70
160-169	0.09	0.16	0.10	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42
170-179	0.33	0.14	0.02	0.09	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80
180-189	0.13	0.14	0.25	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60
190-199	0.24	0.18	0.21	0.14	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.78
200-209	0.23	0.26	0.58	0.36	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.44
210-219	0.32	0.47	0.78	0.36	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.94
220-229	0.18	0.26	0.46	0.10	0.12	0.05	0.0	0.0	0.0	0.0	0.0	0.0	1.16
230-239	0.08	0.17	0.61	0.21	0.18	0.07	0.0	0.0	0.0	0.0	0.0	0.0	1.52
240-249	0.08	0.32	0.85	0.70	0.29	0.04	0.0	0.0	0.0	0.0	0.0	0.0	2.27
250-259	0.08	0.13	0.53	0.93	0.26	0.02	0.0	0.0	0.0	0.0	0.0	0.0	1.04
260-269	0.15	0.18	0.41	0.54	0.24	0.03	0.0	0.0	0.0	0.0	0.0	0.0	1.55
270-279	0.30	0.30	0.45	0.38	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.67
280-289	0.33	0.12	0.36	0.13	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.99
290-299	0.33	0.12	0.21	0.13	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.82
300-309	0.30	0.23	0.16	0.14	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.86
310-319	0.14	0.17	0.10	0.08	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54
320-329	0.13	0.06	0.06	0.11	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.40
330-339	0.06	0.06	0.10	0.09	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.33
340-349	0.10	0.06	0.06	0.12	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38
350-359	0.18	0.06	0.07	0.11	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43
TOTAL %	10.99	21.37	18.59	13.97	10.77	7.52	4.79	2.82	1.56	0.65	0.53	0.32	

PERCENT AT 0 CM/SEC= 6.116

DEPLOYMENT 4: APRIL-SEPTEMBER 1980

MAP 2
MOORING POSITIONS FOR DEPLOYMENT 4 (APR-SEP 80)




1980
May
25
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10
15
20
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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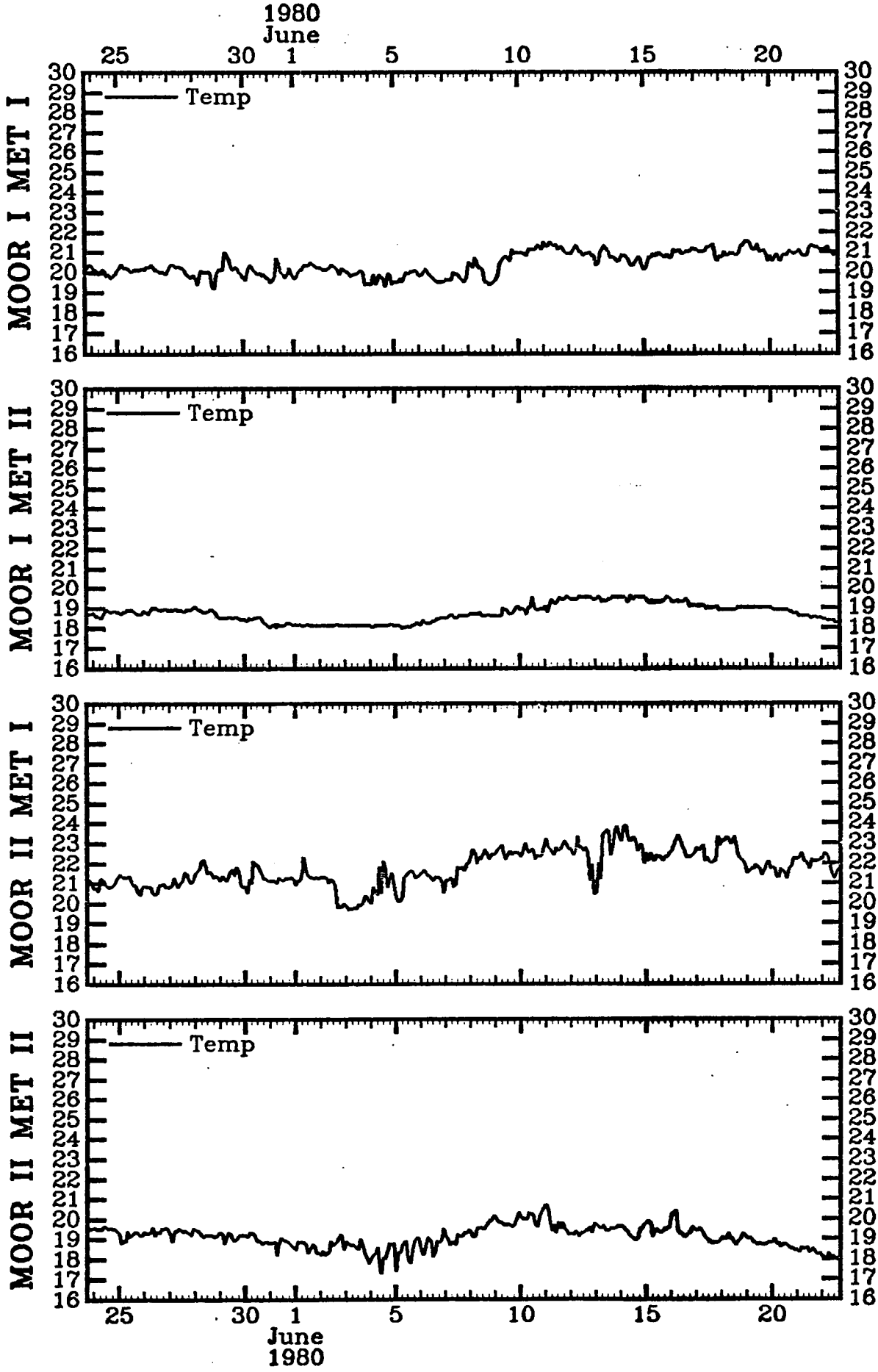
16
May
1980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June
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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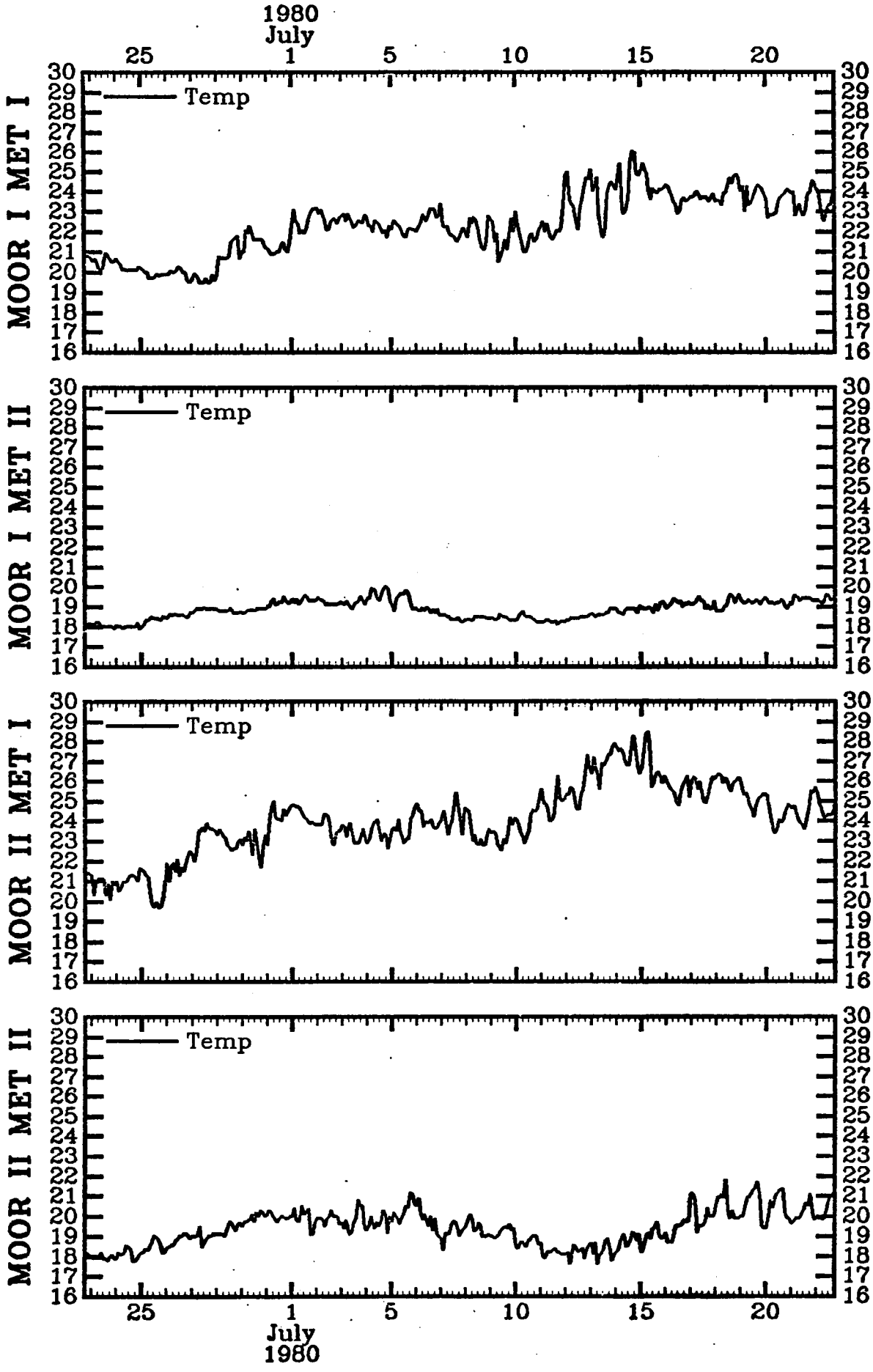
16
June
1980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July
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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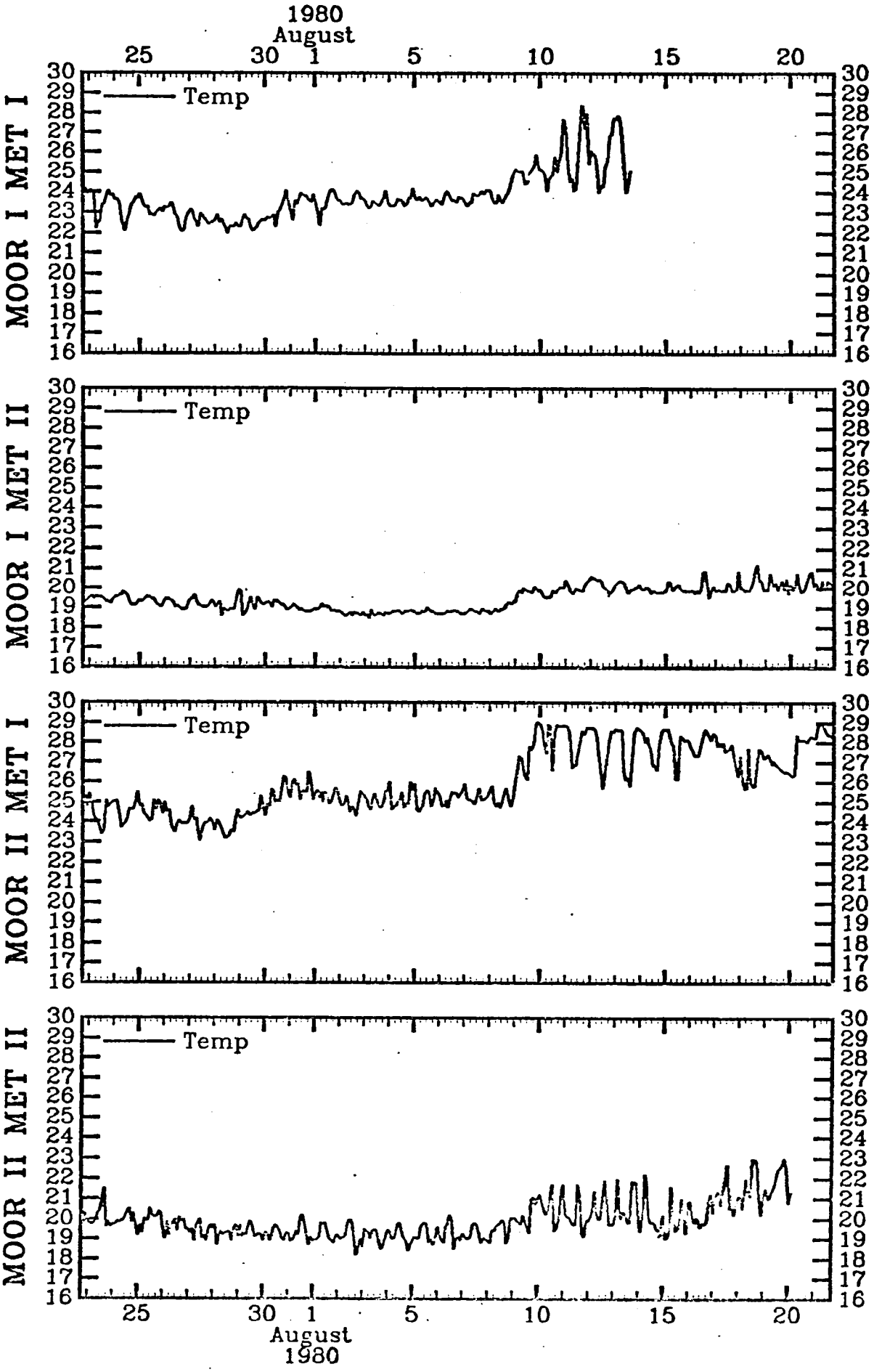
16
July
1980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August
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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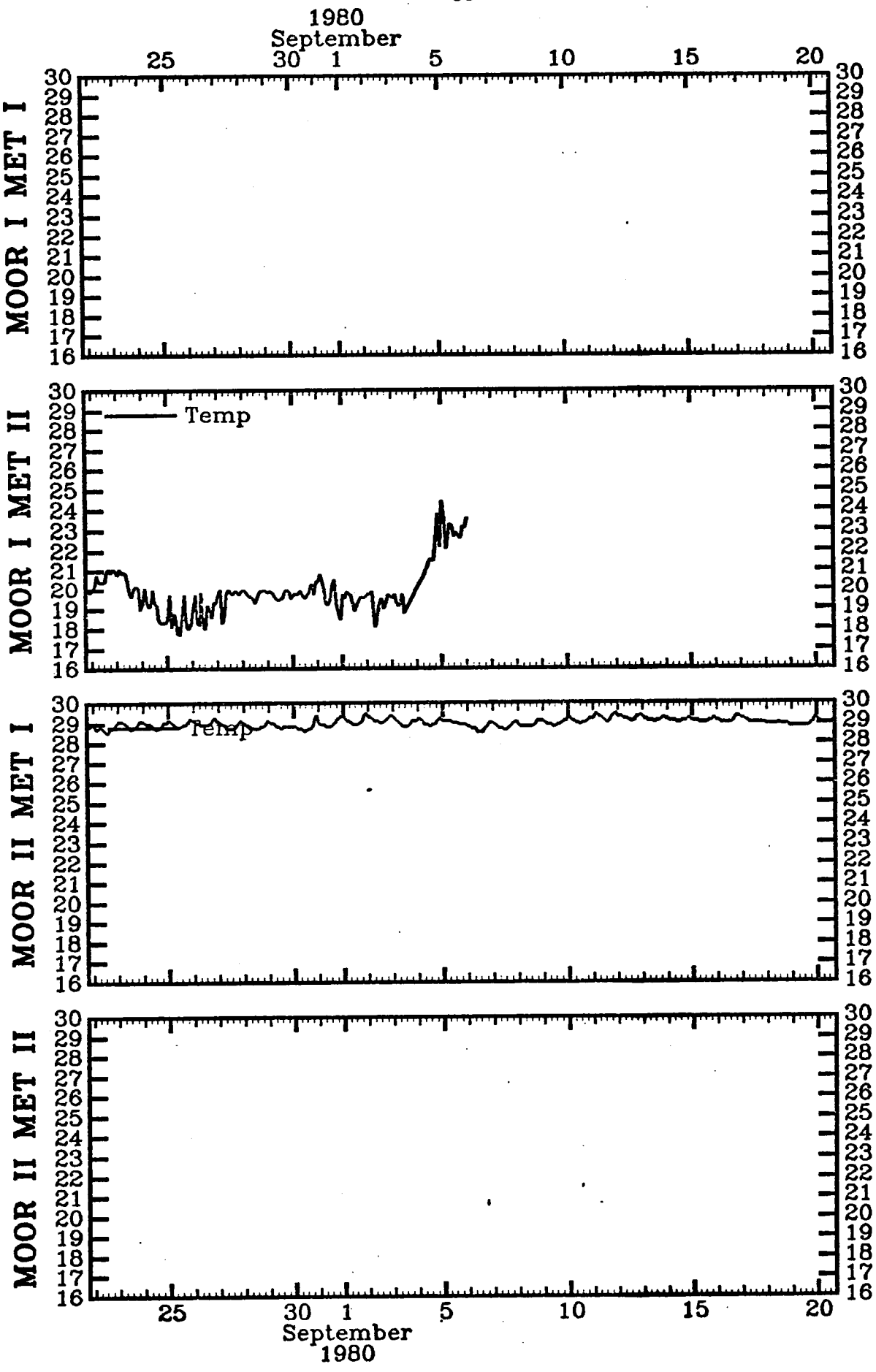
17
16
August
1980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September
25
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MOOR I MET II
Temp
MOOR II MET I
Temp
MOOR II MET II
16
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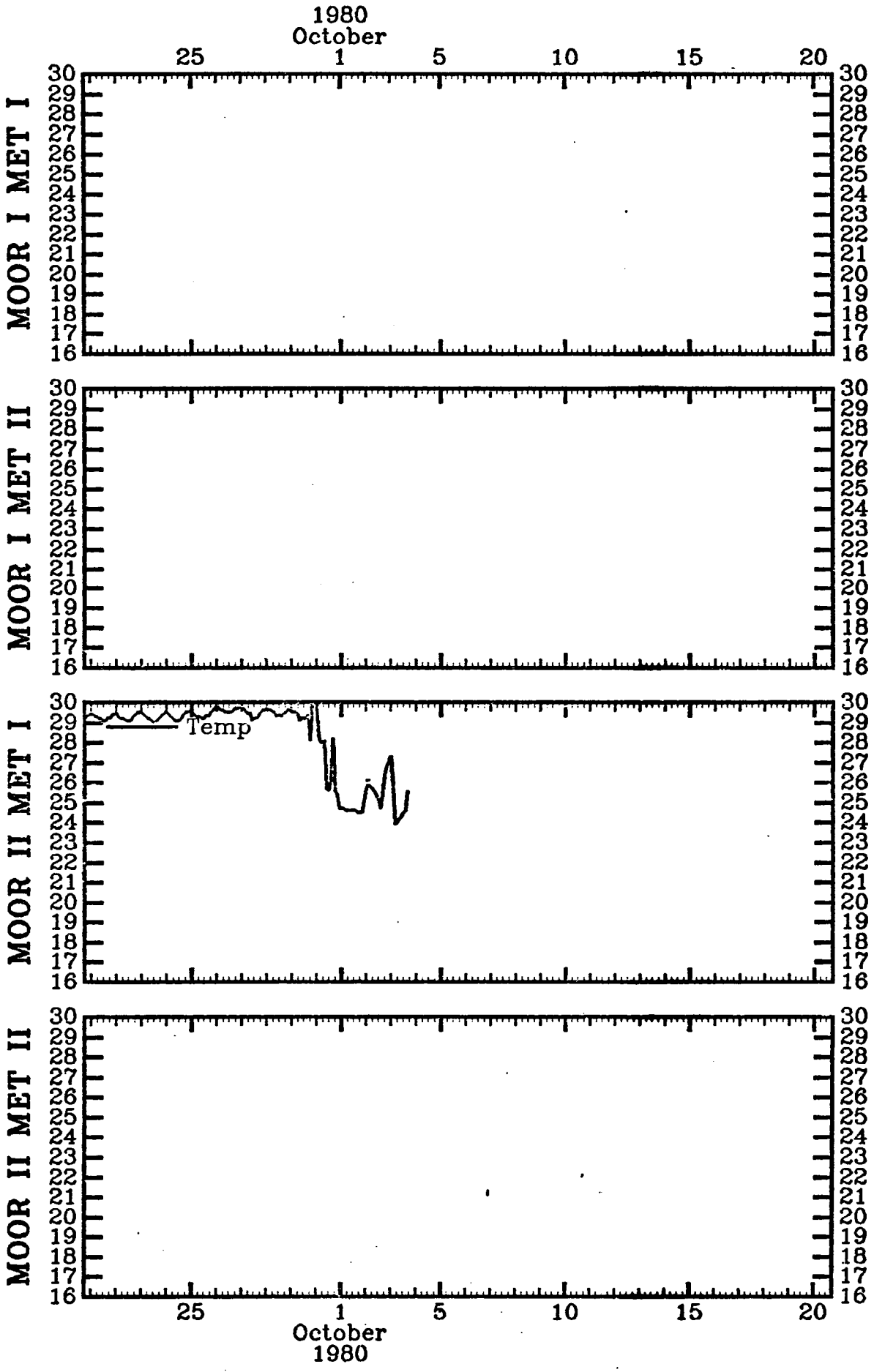
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October
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1
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MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
Temp
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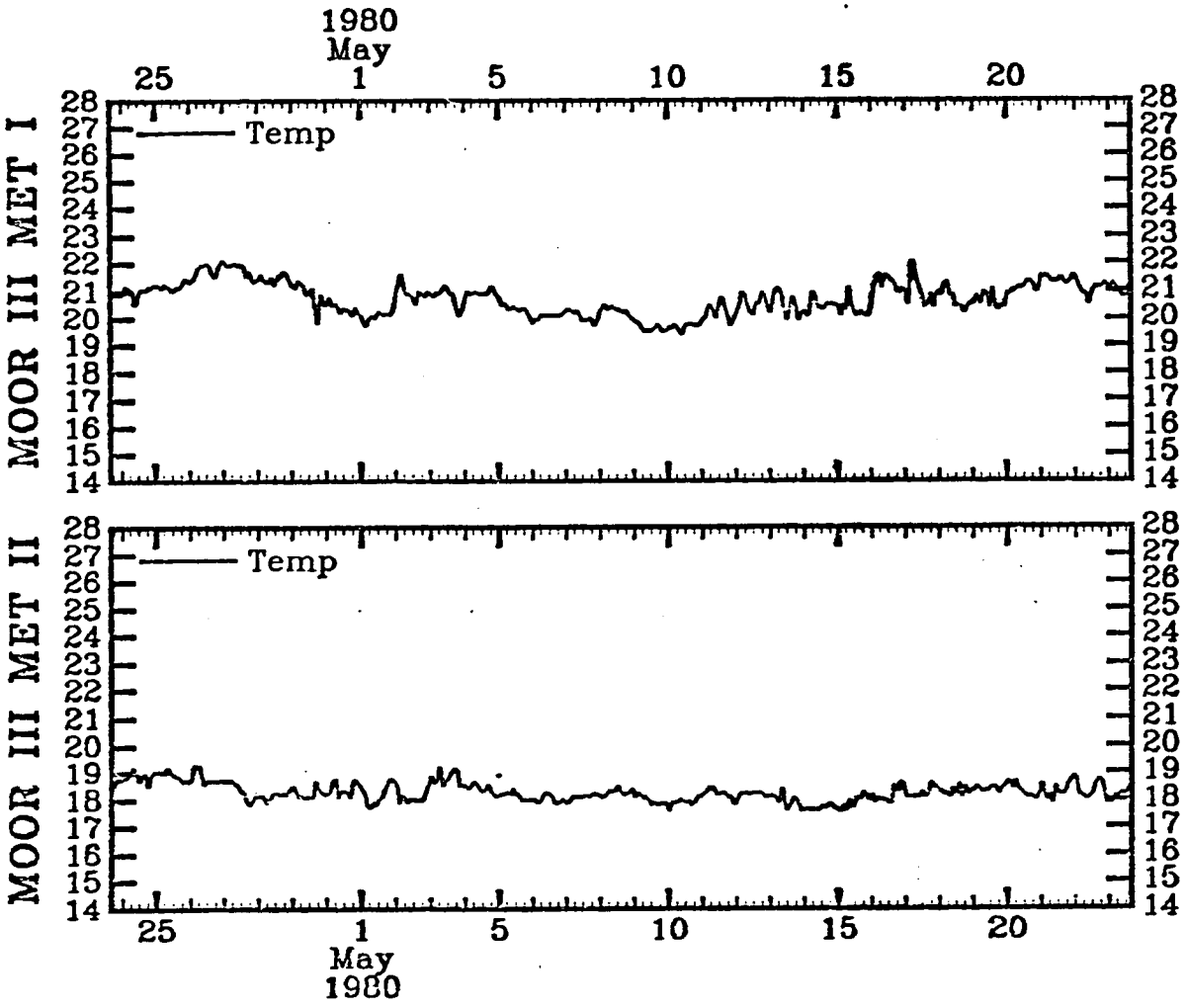
October
1980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May
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MOOR III MET I
Temp
MOOR III MET II
Temp
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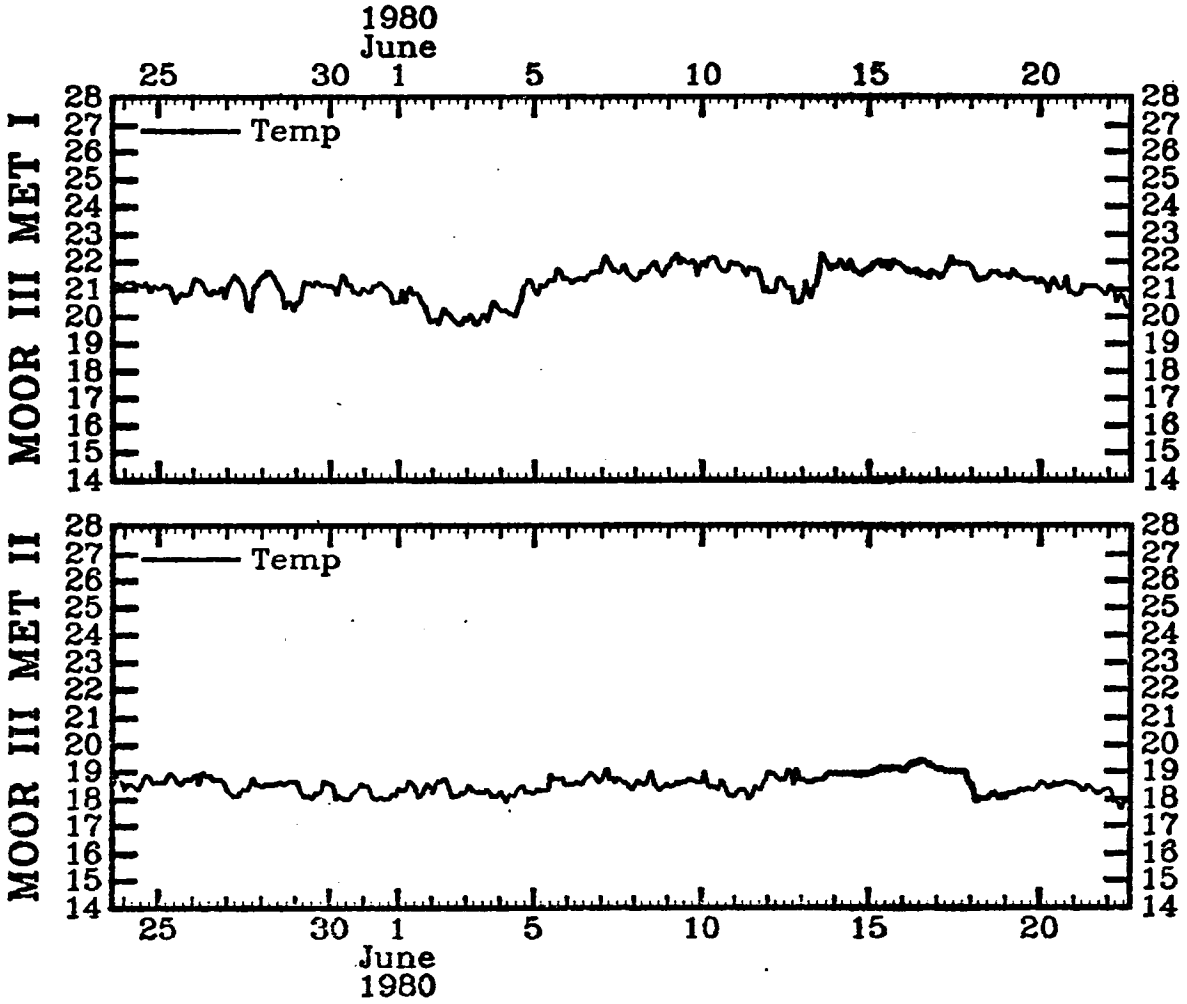
May
1980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June
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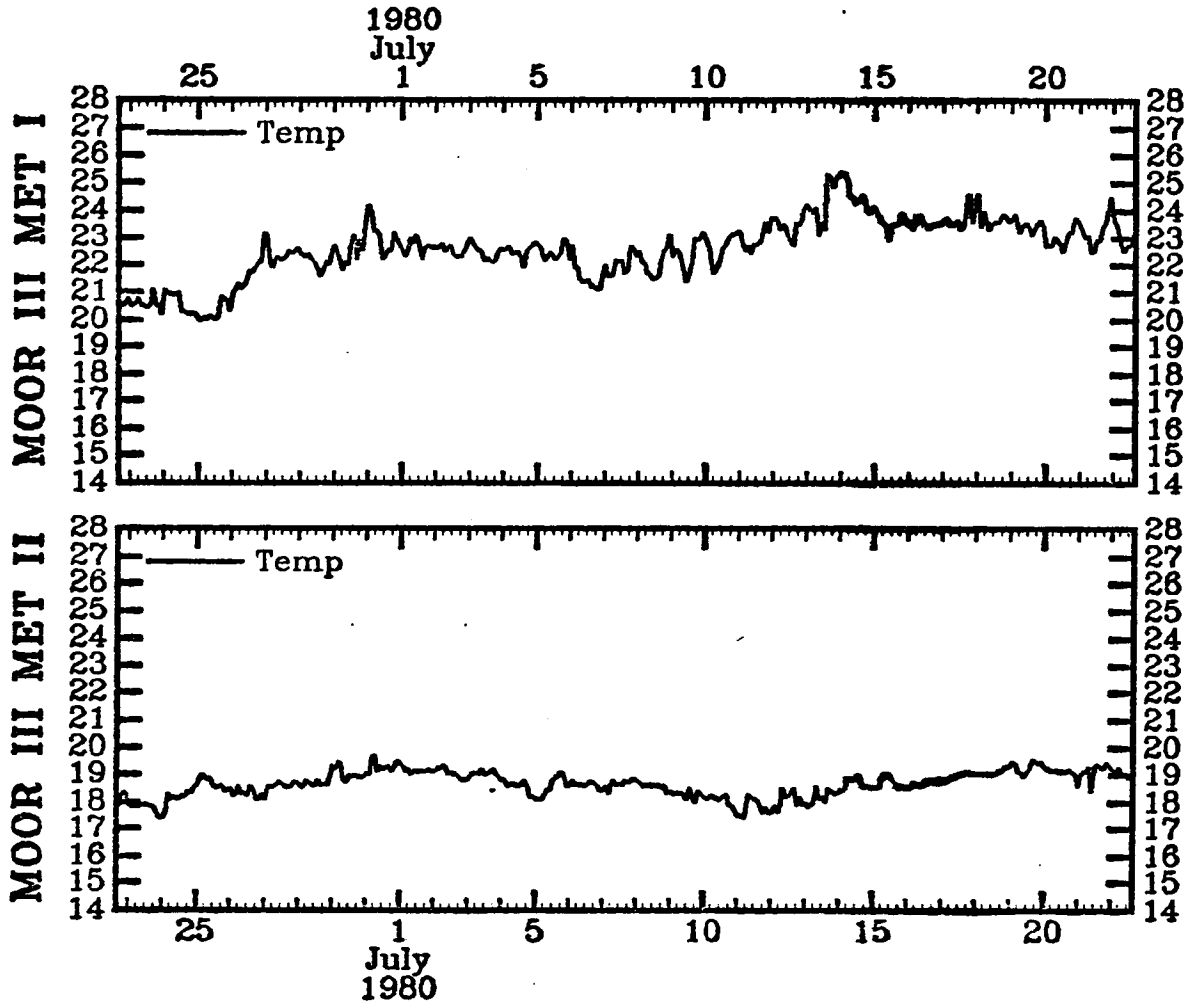
MOOR III MET I
Temp
MOOR III MET II
Temp
June
1980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July
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20
MOOR III MET I
Temp
MOOR III MET II
Temp
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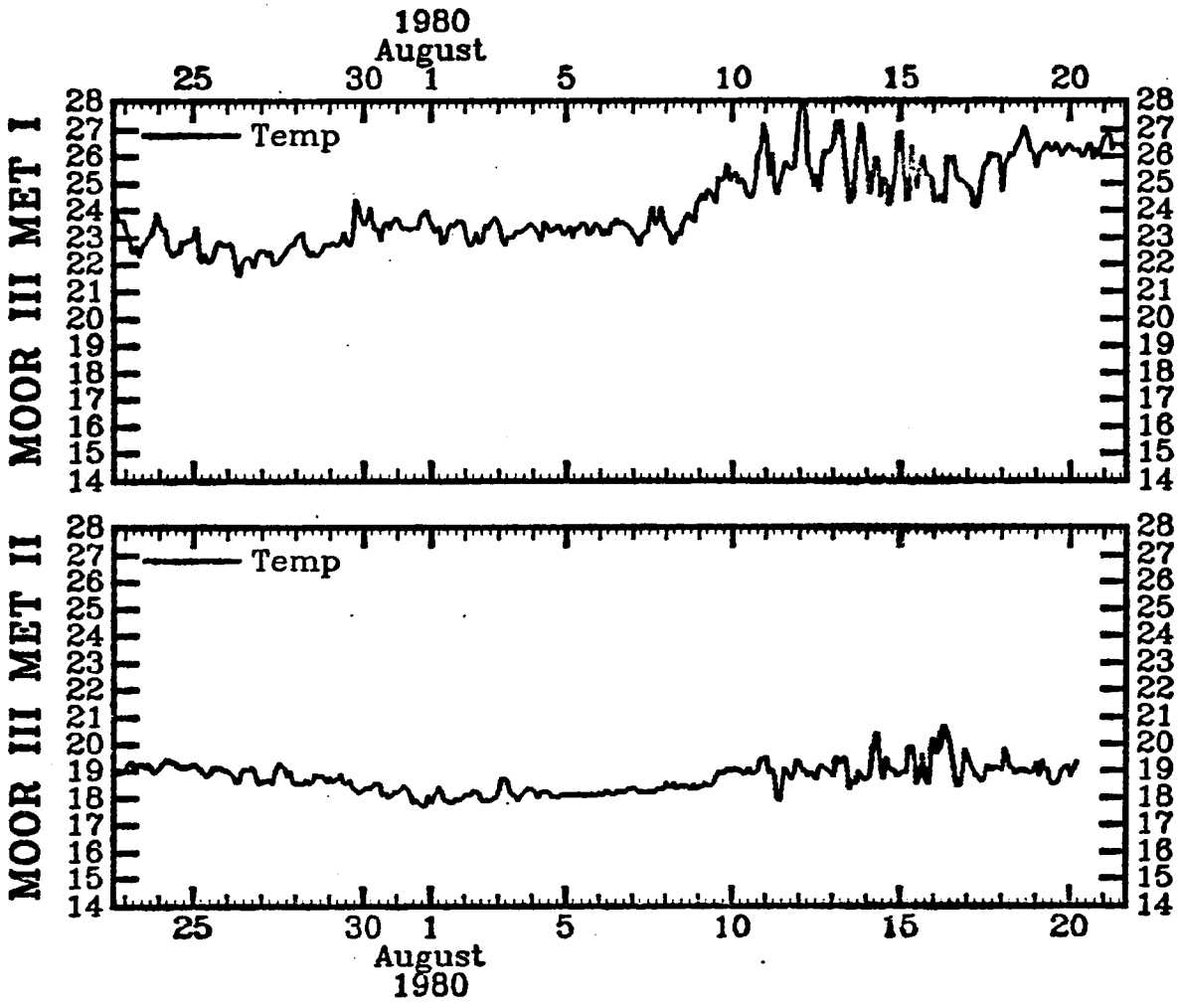
July
1980


1980
August
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30
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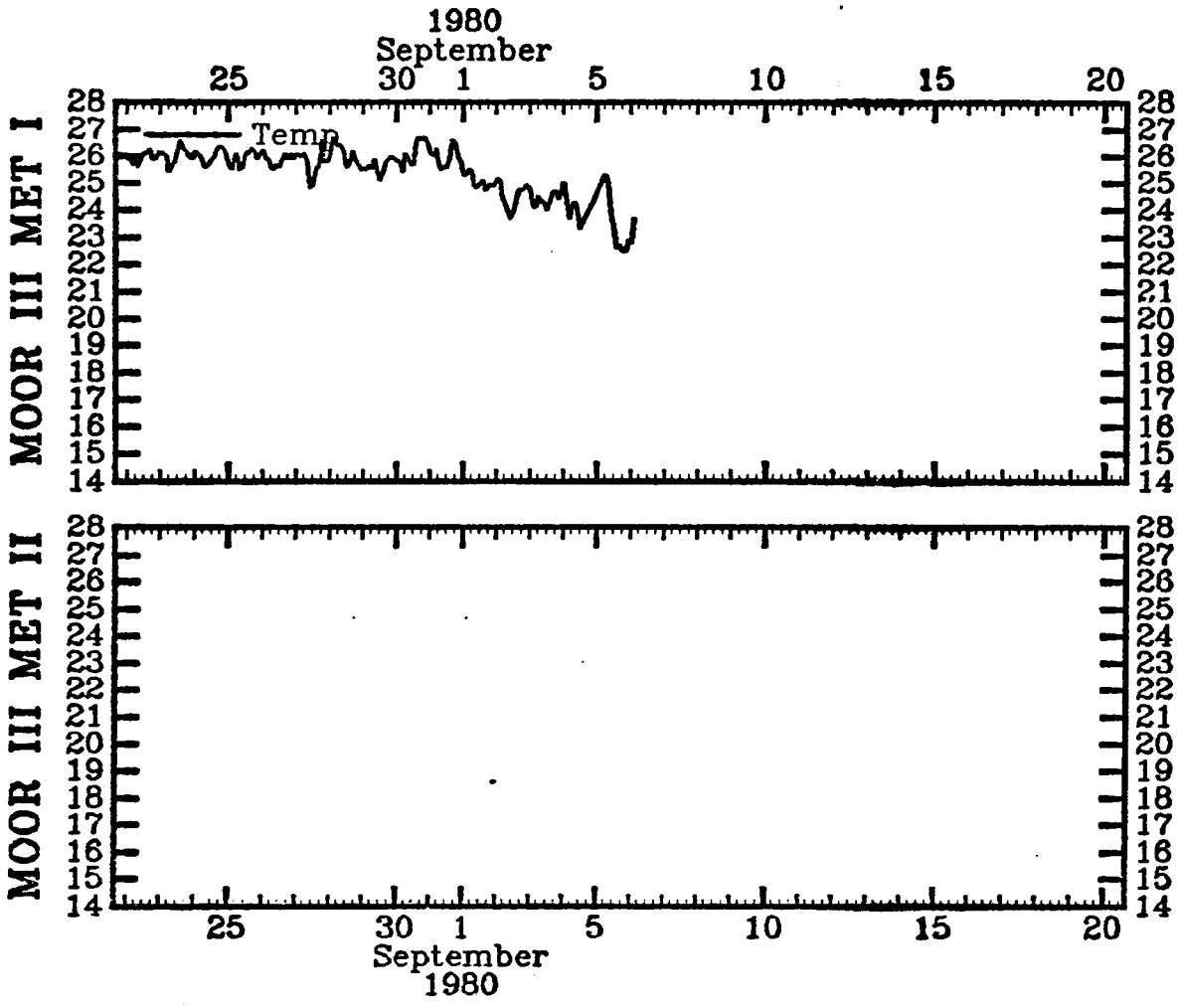
20
MOOR III MET I
Temp
MOOR III MET II
Temp
August
1980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September
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30
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MOOR III MET I
Temp
MOOR III MET II
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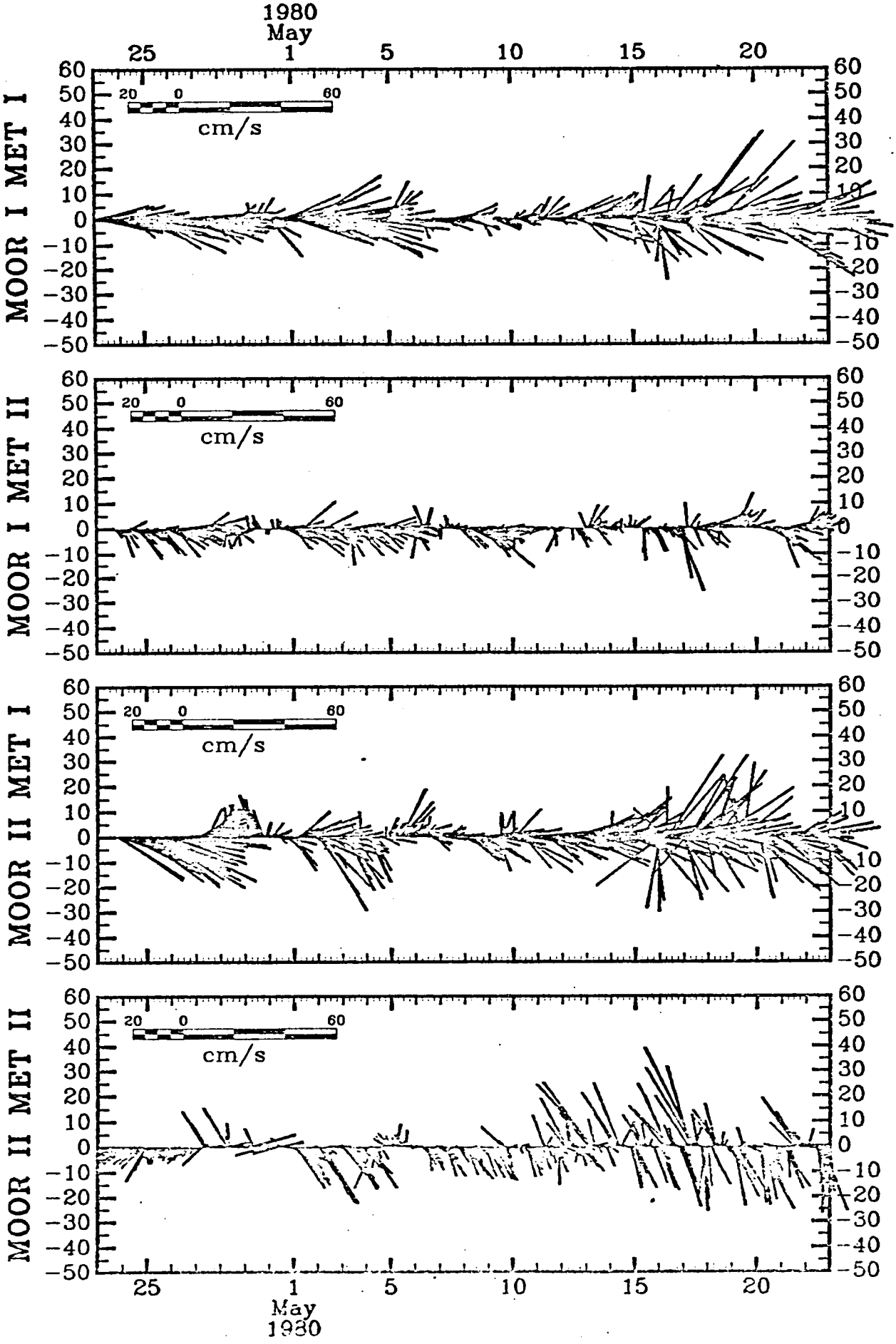
14
September
1980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May
25
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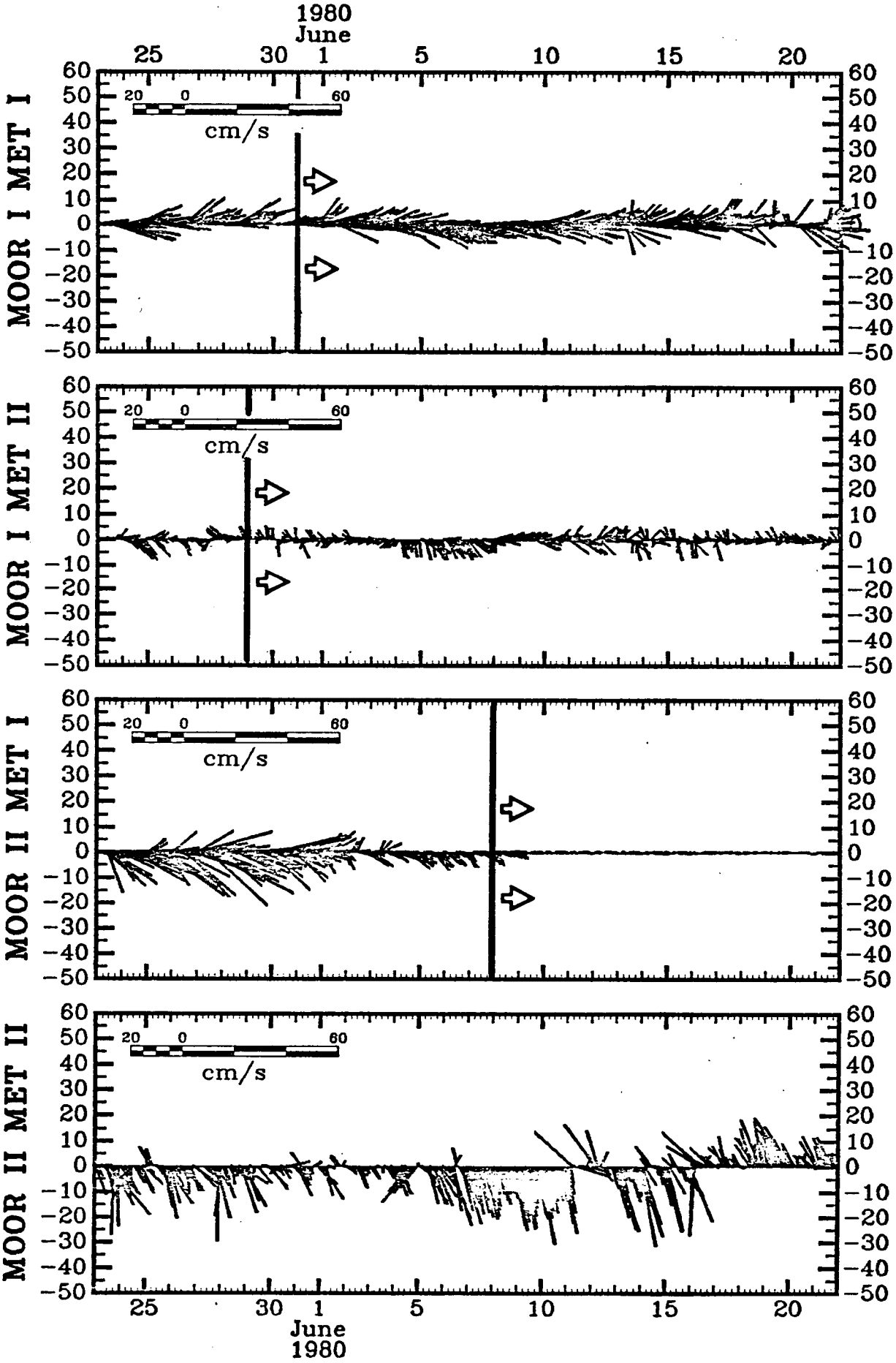
20
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
20 0 60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
May
1980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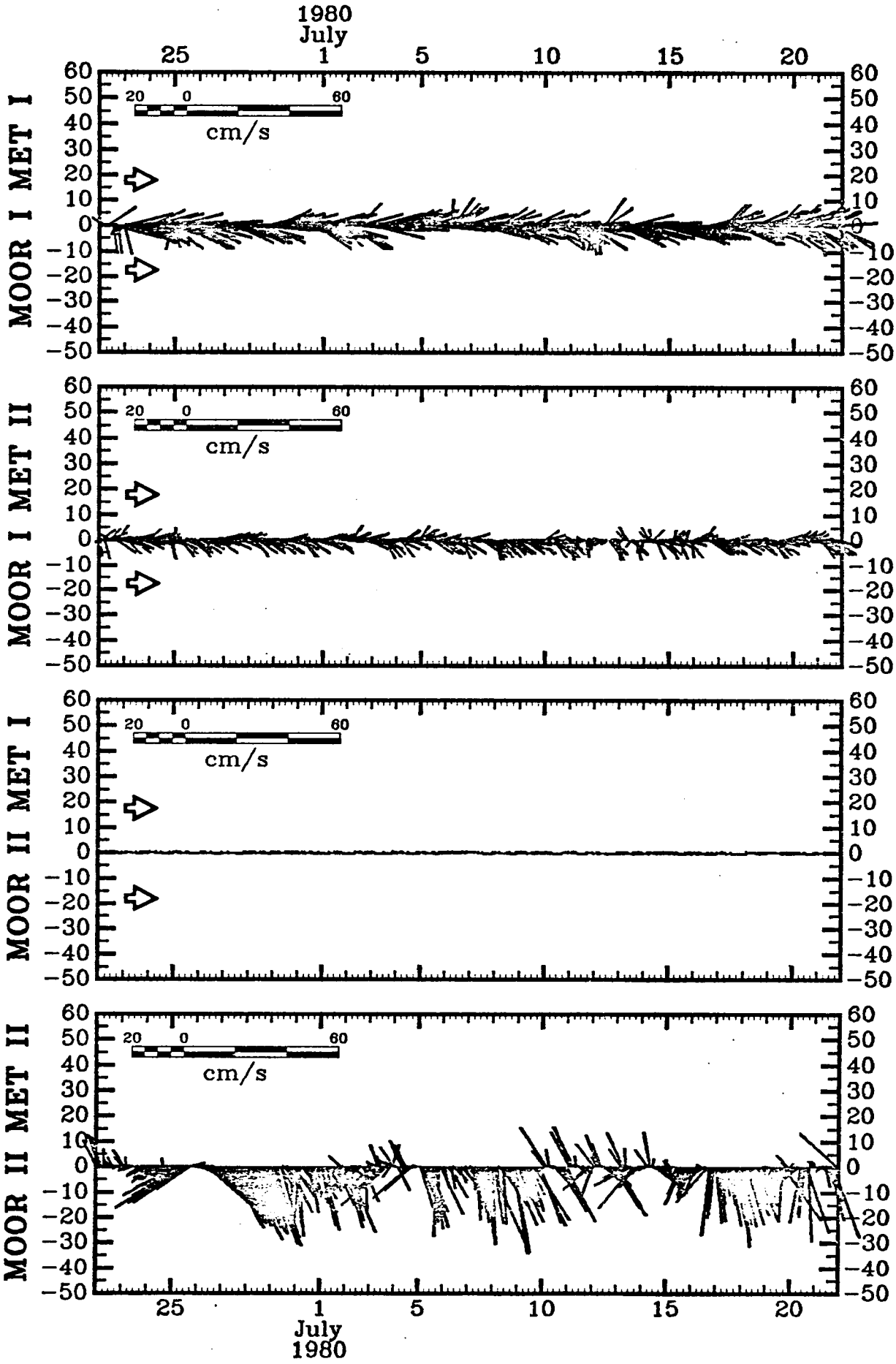
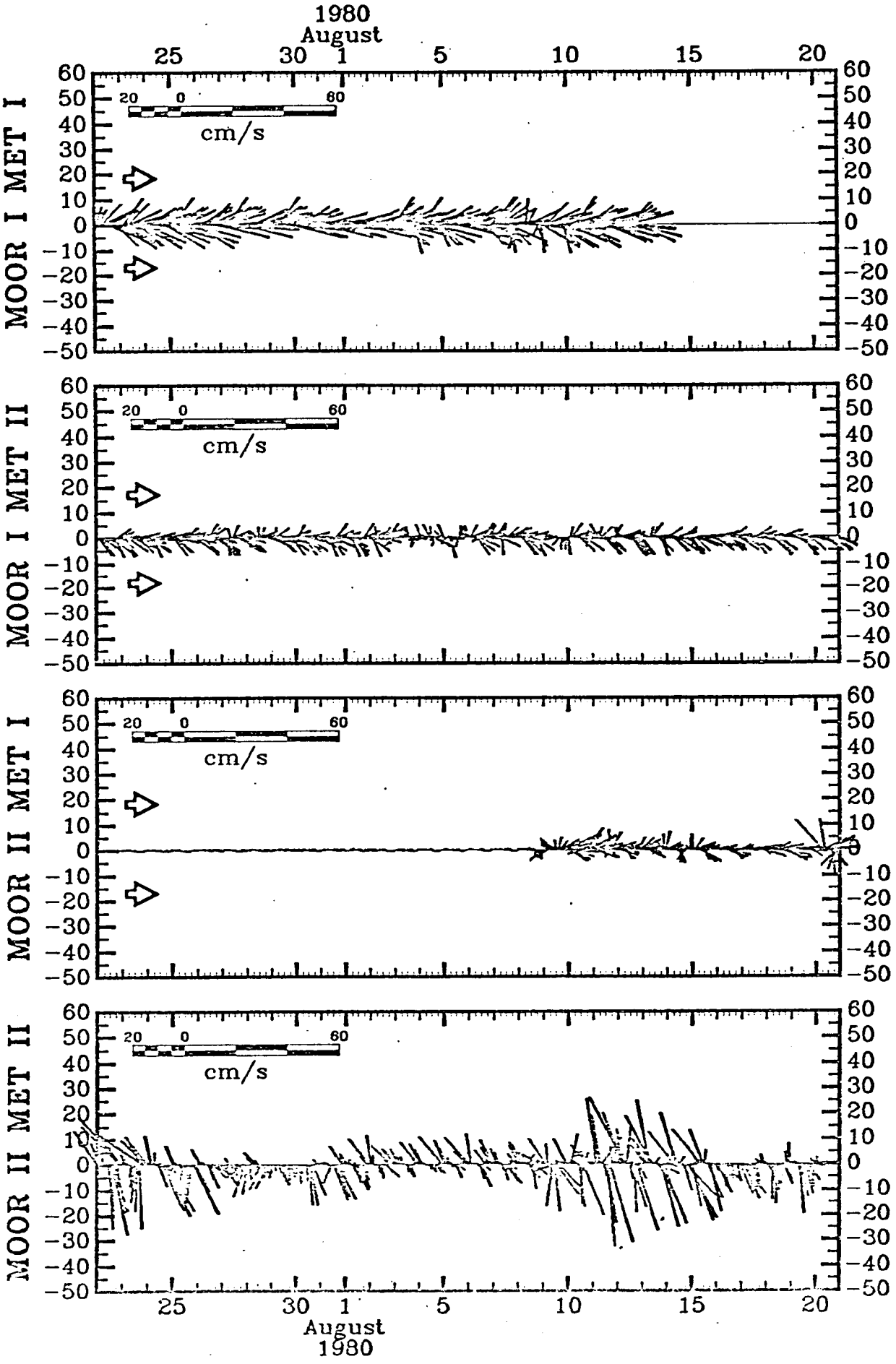
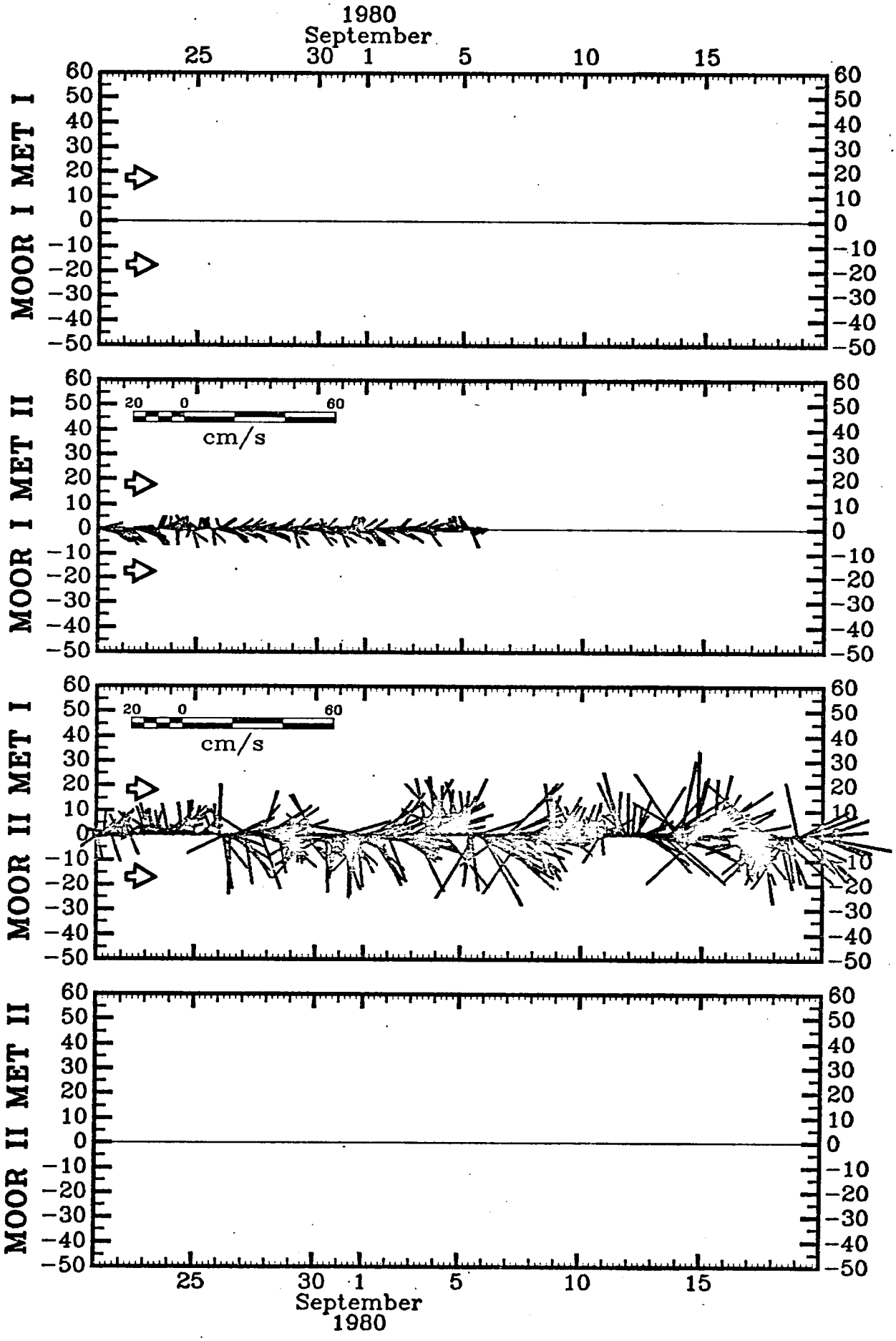
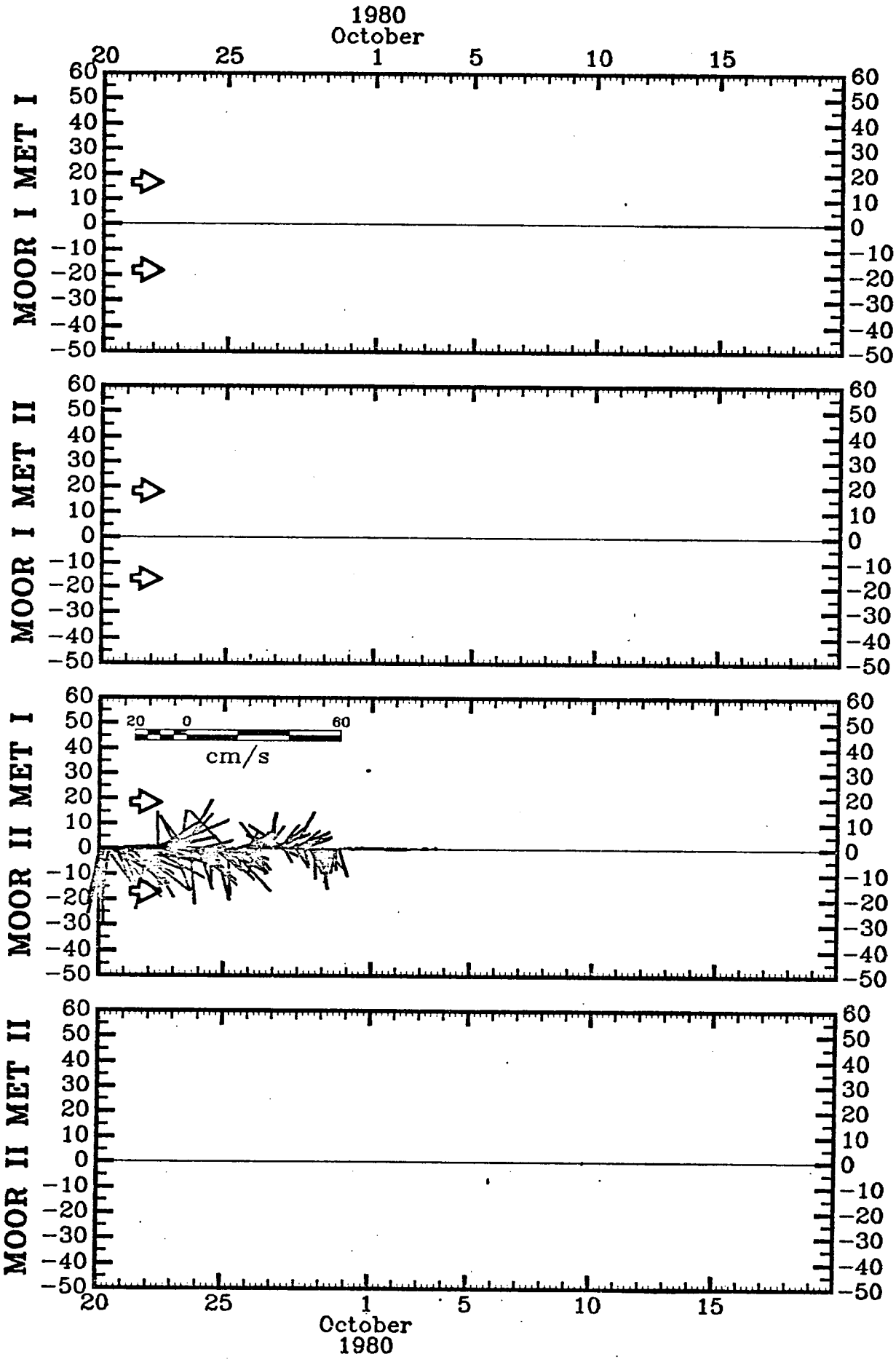
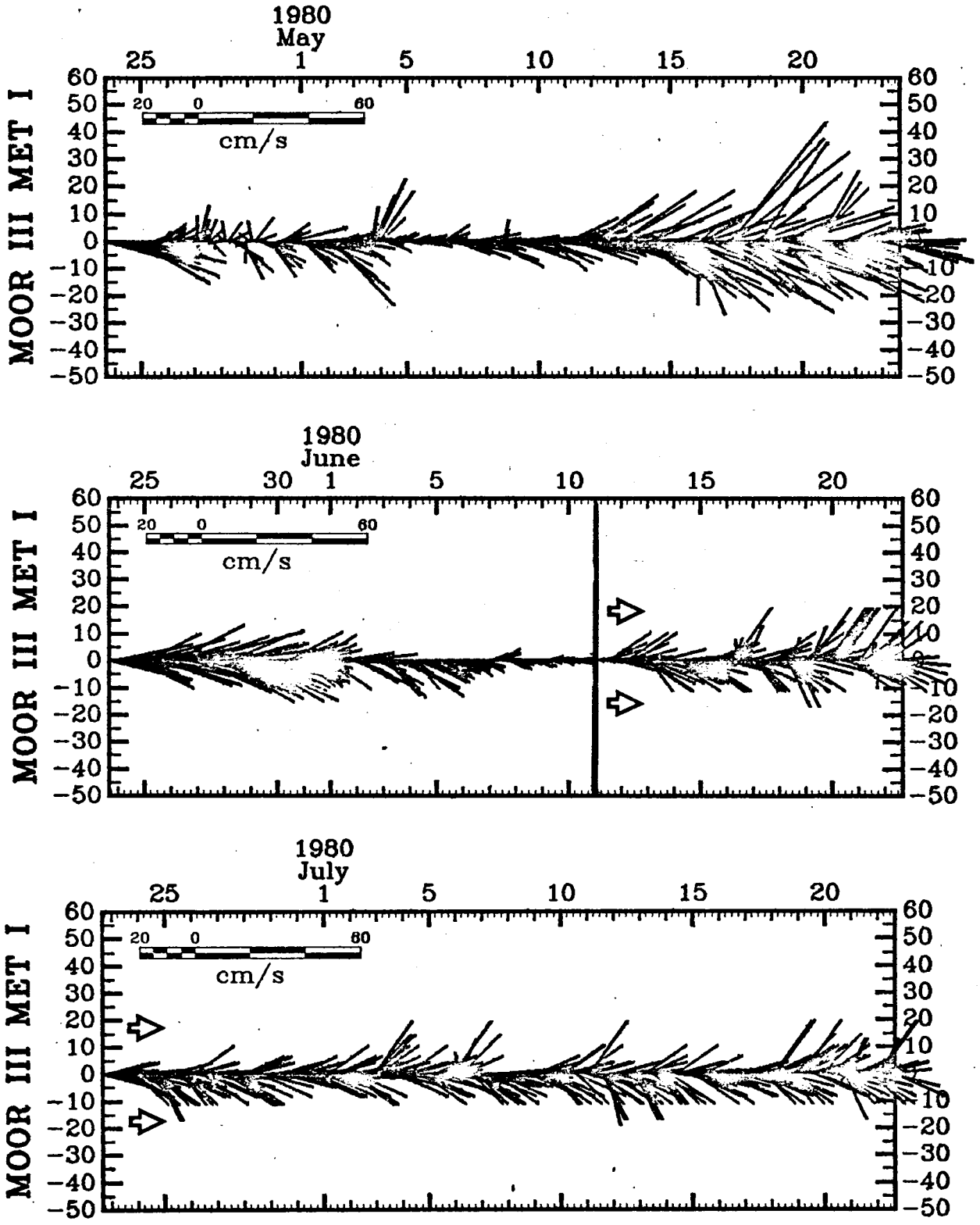
June
25
30
1
5
10
15
20
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
20
0
60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
June
1980

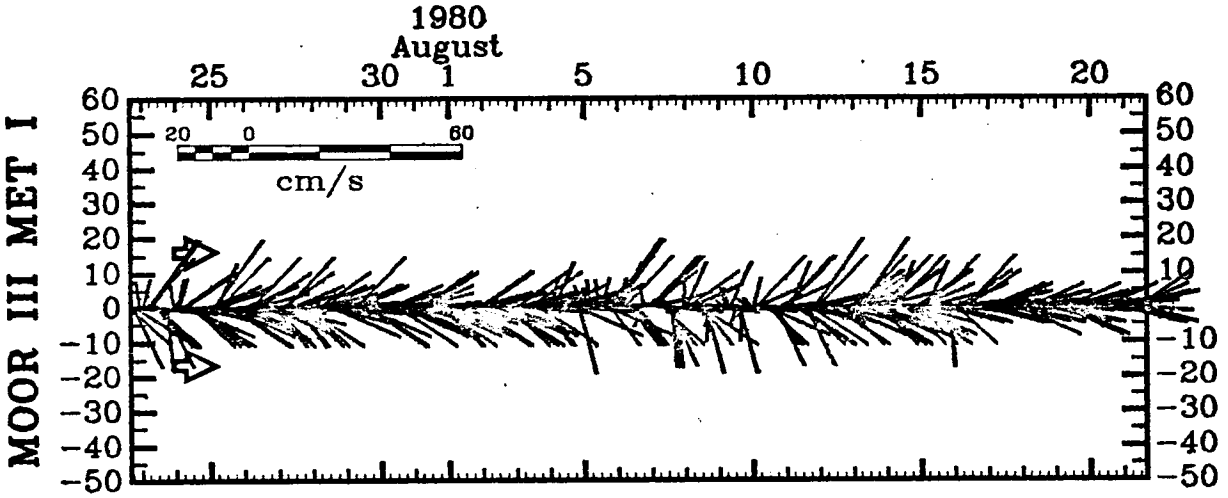

1980
July
25
1
5
10
15
20
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
20 0 60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
July
1980

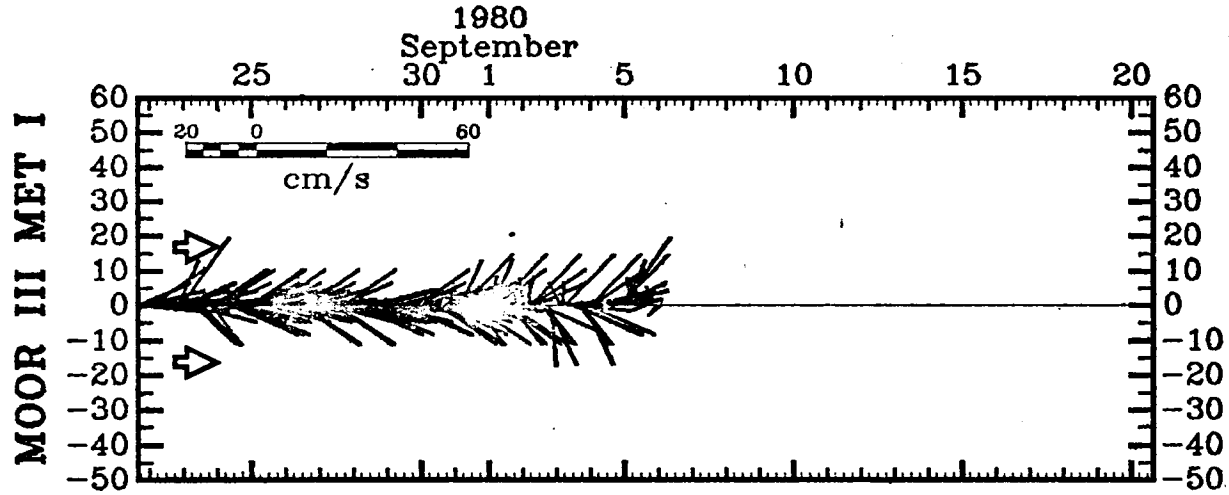

1980
August
25
30
1
5
10
15
20
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
20
0
60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
August
1980

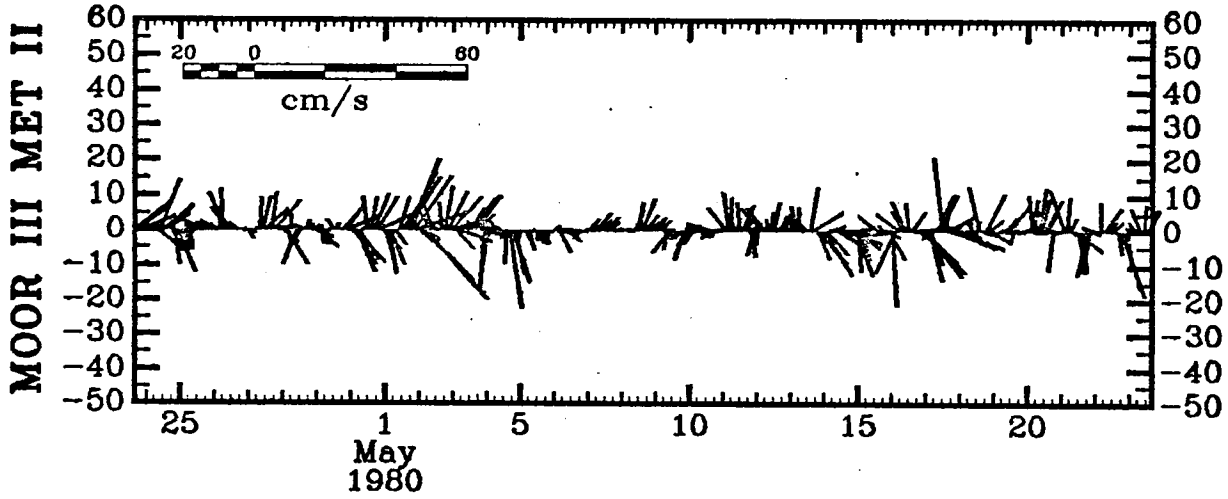

1980
September
25
30
1
5
10
15
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
20
0
60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
September
1980

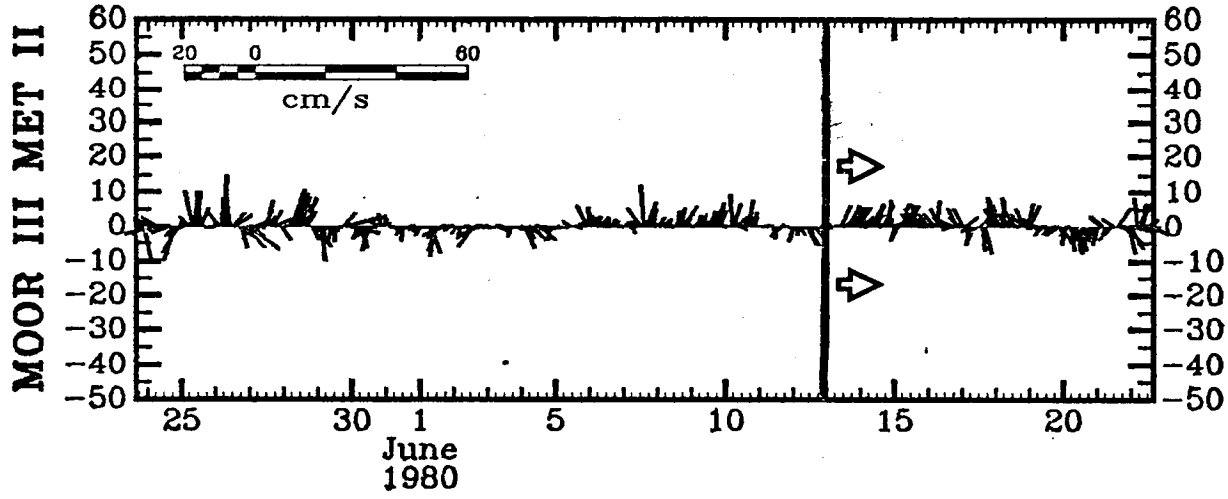

1980
October
20
25
1
5
10
15
MOOR I MET I
MOOR I MET II
MOOR II MET I
MOOR II MET II
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
20
0
60
cm/s
October
1980


1980
May
25
1
5
10
15
20
MOOR III MET I
20 0 60
cm/s
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
1980
June
25
30
1
5
10
15
20
MOOR III MET I
20 0 60
cm/s
1980
July
25
1
5
10
15
20
MOOR III MET I
20 0 60
cm/s

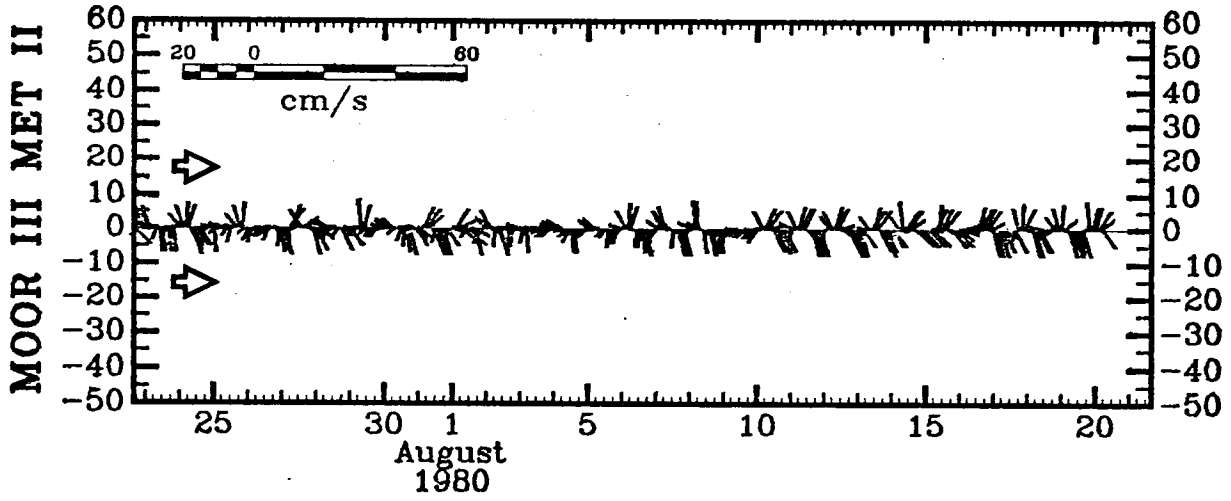

1980
August
25
30
1
5
10
15
20
MOOR III MET I
20
0
60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50

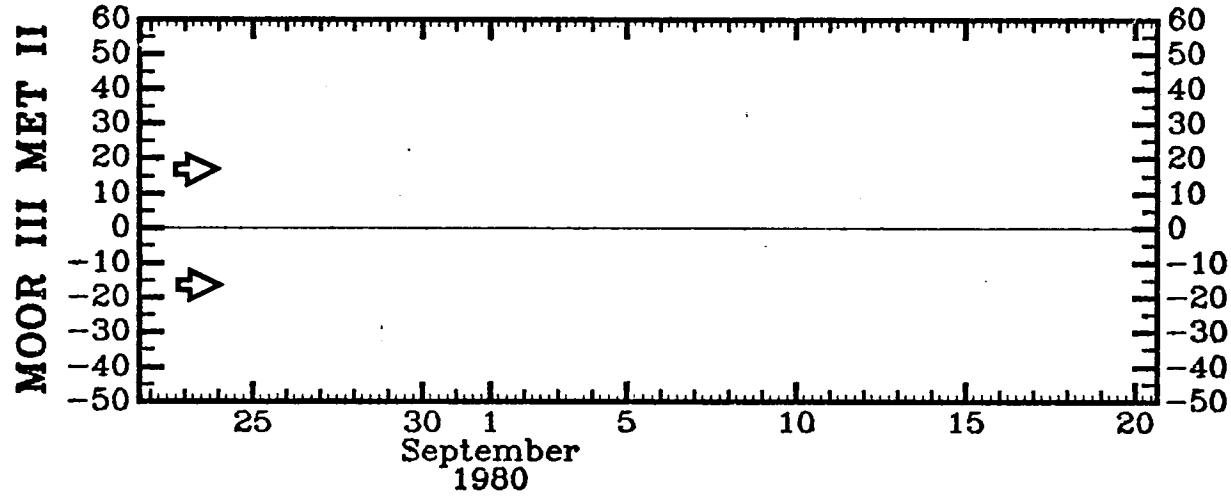

1980
September
25
30
1
5
10
15
20
MOOR III MET I
20
0
60
cm/s
60
50
40
30
20
10
0
−10
−20
−30
−40
−50


MOOR III MET II
20 0 60
cm/s
60 50 40 30 20 10 0 -10 -20 -30 -40 -50
25 1 5 10 15 20
May
1980


MOOR III MET II
20 0 60
cm/s
60 50 40 30 20 10 0 -10 -20 -30 -40 -50
25 30 1 5 10 15 20
June
1980


MOOR III MET II
20 0 60
cm/s
60 50 40 30 20 10 0 -10 -20 -30 -40 -50
25 1 5 10 15 20
July
1980


MOOR III MET II
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
20 0 60
cm/s
25
30
1
5
10
15
20
August
1980


MOOR III MET II
60
50
40
30
20
10
0
−10
−20
−30
−40
−50
25
30
1
5
10
15
20
September
1980

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 1 (53 m), SEP 80 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.14	0.04	0.11	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40
10- 19	0.11	0.33	0.18	0.07	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.72
20- 29	0.33	0.40	0.07	0.07	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91
30- 39	0.62	1.12	0.69	0.22	0.25	0.0	0.11	0.11	0.25	0.0	0.0	0.0	3.37
40- 49	0.54	0.91	0.80	0.29	0.04	0.07	0.07	0.07	0.11	0.0	0.0	0.0	2.90
50- 59	0.83	1.63	2.39	0.51	0.29	0.18	0.25	0.11	0.04	0.04	0.0	0.0	6.27
60- 69	0.80	2.32	1.81	0.87	0.65	0.51	0.51	0.11	0.0	0.0	0.0	0.0	7.58
70- 79	0.58	2.07	1.38	1.67	1.38	1.09	1.12	0.18	0.0	0.0	0.0	0.0	9.46
80- 89	0.87	1.63	3.59	2.21	2.61	1.41	1.38	0.40	0.07	0.0	0.0	0.0	14.17
90- 99	0.91	1.45	2.57	2.72	3.44	2.61	2.03	1.38	0.11	0.04	0.04	0.11	17.40
100-109	0.87	1.88	1.16	2.50	3.26	1.63	1.49	0.36	0.33	0.07	0.0	0.0	13.56
110-119	1.12	1.30	1.27	1.38	1.74	0.76	0.65	0.33	0.04	0.07	0.0	0.0	8.66
120-129	0.69	0.91	0.29	0.43	0.58	0.62	0.36	0.11	0.14	0.07	0.0	0.0	4.20
130-139	0.47	0.47	0.25	0.25	0.22	0.14	0.0	0.0	0.0	0.0	0.0	0.0	1.81
140-149	0.47	0.47	0.25	0.36	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.67
150-159	0.04	0.25	0.0	0.14	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47
160-169	0.11	0.14	0.07	0.0	0.07	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.47
170-179	0.18	0.07	0.04	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43
180-189	0.11	0.11	0.07	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36
190-199	0.04	0.0	0.07	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14
200-209	0.18	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22
210-219	0.07	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18
220-229	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07
230-239	0.07	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11
240-249	0.14	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22
250-259	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11
260-269	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11
270-279	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
280-289	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290-299	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
300-309	0.07	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14
310-319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320-329	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
330-339	0.14	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22
340-349	0.07	0.14	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25
350-359	0.07	0.04	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18
TOTAL %	10.98	18.09	17.25	13.92	14.90	9.10	7.97	3.15	1.09	0.29	0.04	0.11	

PERCENT AT 0 CM/SEC= 3.117
SPMEAN= 16.331 SPVAR=375.248 DIMEAN= 93.524

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 2 (95 m), SEP 80 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.15	0.35	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.68
10- 19	0.87	0.49	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
20- 29	0.49	0.31	0.14	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.01
30- 39	0.56	0.63	0.38	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.68
40- 49	0.87	1.75	0.21	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.90
50- 59	0.84	1.29	0.42	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.66
60- 69	0.80	0.84	0.45	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.17
70- 79	0.59	1.22	0.56	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.52
80- 89	1.05	2.13	1.05	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.26
90- 99	1.68	2.66	0.87	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.31
100-109	1.15	2.90	1.64	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.91
110-119	1.08	3.18	2.80	0.42	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.51
120-129	1.08	2.34	2.17	0.91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.50
130-139	1.89	3.43	2.38	0.21	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.07
140-149	1.29	2.41	1.82	0.28	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.94
150-159	0.70	1.64	0.77	0.14	0.03	0.07	0.0	0.0	0.0	0.0	0.0	0.0	3.36
160-169	0.70	0.77	0.31	0.14	0.10	0.03	0.0	0.0	0.0	0.0	0.0	0.0	2.06
170-179	0.73	0.87	0.35	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.03
180-189	0.87	0.66	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.68
190-199	0.87	0.21	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19
200-209	0.49	0.21	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80
210-219	0.66	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87
220-229	0.52	0.28	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.84
230-239	0.70	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.98
240-249	0.80	0.59	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43
250-259	1.12	0.59	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.75
260-269	1.05	0.73	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.82
270-279	0.73	0.38	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15
280-289	1.05	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15
290-299	1.01	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19
300-309	0.84	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
310-319	0.98	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.33
320-329	1.12	0.45	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.61
330-339	0.70	0.42	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22
340-349	1.01	0.38	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43
350-359	0.98	0.45	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
TOTAL %	33.07	35.93	17.30	3.04	0.52	0.10	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC=10.031
SPMEAN= 6.181 SPVAR= 57.651 DIMEAN=152.578 DIRVAR=********

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 1 (49 m), SEP 80 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.12	0.48	0.30	0.06	0.18	0.12	0.0	0.0	0.0	0.0	0.0	0.0	1.25
10- 19	0.12	0.45	0.33	0.03	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	1.01
20- 29	0.39	1.31	0.09	0.06	0.09	0.12	0.06	0.03	0.03	0.0	0.0	0.0	2.18
30- 39	0.27	0.87	0.39	0.27	0.12	0.15	0.12	0.12	0.0	0.0	0.0	0.0	2.30
40- 49	0.33	0.75	1.01	0.72	0.03	0.06	0.18	0.12	0.0	0.0	0.0	0.0	3.19
50- 59	0.57	1.07	0.66	1.07	0.66	0.18	0.21	0.03	0.0	0.0	0.0	0.0	4.45
60- 69	0.24	1.19	1.13	0.95	0.60	0.15	0.03	0.0	0.0	0.0	0.0	0.0	4.30
70- 79	0.27	0.98	0.93	1.04	1.10	0.66	0.09	0.03	0.0	0.0	0.0	0.0	5.10
80- 89	0.48	1.10	2.54	1.52	0.98	0.36	0.03	0.0	0.0	0.0	0.0	0.0	7.01
90- 99	0.72	1.34	2.21	1.85	1.37	0.48	0.33	0.24	0.0	0.0	0.0	0.0	8.53
100-109	1.10	2.12	2.18	1.85	1.58	0.66	1.07	0.21	0.12	0.0	0.0	0.0	10.89
110-119	1.01	3.10	1.46	2.24	2.09	1.46	1.43	0.66	0.09	0.0	0.0	0.0	13.55
120-129	0.95	2.81	1.88	2.48	1.73	0.98	0.81	0.18	0.09	0.0	0.0	0.0	11.91
130-139	0.66	2.69	1.01	1.82	1.16	0.60	0.24	0.06	0.0	0.0	0.0	0.0	8.24
140-149	0.54	1.70	1.13	1.01	0.81	0.45	0.42	0.06	0.0	0.0	0.0	0.0	6.12
150-159	0.39	0.57	0.63	0.57	0.54	0.09	0.0	0.03	0.0	0.0	0.0	0.0	2.81
160-169	0.21	0.45	0.12	0.15	0.18	0.27	0.0	0.0	0.0	0.0	0.0	0.0	1.37
170-179	0.09	0.06	0.0	0.03	0.06	0.21	0.09	0.0	0.0	0.0	0.0	0.0	0.54
180-189	0.03	0.09	0.03	0.06	0.0	0.03	0.03	0.06	0.0	0.0	0.0	0.0	0.33
190-199	0.06	0.03	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.15
200-209	0.03	0.03	0.0	0.03	0.0	0.0	0.03	0.03	0.0	0.0	0.0	0.0	0.15
210-219	0.03	0.09	0.0	0.0	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.18
220-229	0.03	0.03	0.0	0.0	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.15
230-239	0.03	0.03	0.0	0.0	0.06	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.15
240-249	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250-259	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260-269	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270-279	0.0	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
280-289	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
290-299	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
300-309	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
310-319	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
320-329	0.0	0.18	0.09	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
330-339	0.12	0.39	0.30	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.01
340-349	0.0	1.07	0.18	0.24	0.06	0.06	0.0	0.0	0.0	0.0	0.0	0.0	1.61
350-359	0.06	0.39	0.18	0.24	0.03	0.09	0.06	0.0	0.0	0.0	0.0	0.0	1.04
TOTAL %	8.83	25.45	18.80	18.56	13.55	7.37	5.25	1.85	0.33	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 0.0
SPMEAN= 15.030 SPVAR=302.414 DIMEAN=111.469

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 2 (90 m), SEP 80 RECOVERY

CM/S
DIRECTION IN DEGREES TRUE

DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.65	0.41	0.20	0.04	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.31
10- 19	0.54	0.31	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.89
20- 29	0.52	0.14	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67
30- 39	0.32	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42
40- 49	0.35	0.07	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43
50- 59	0.57	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.65
60- 69	0.35	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41
70- 79	0.22	0.82	0.01	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.28
80- 89	0.88	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04
90- 99	0.82	0.12	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95
100-109	0.69	0.33	0.14	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19
110-119	0.90	0.37	0.11	0.12	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.62
120-129	1.27	0.95	0.20	0.12	0.04	0.02	0.0	0.0	0.0	0.0	0.0	0.0	2.59
130-139	1.88	1.71	0.83	0.46	0.23	0.08	0.13	0.01	0.0	0.0	0.0	0.0	5.29
140-149	2.64	2.97	2.17	1.56	0.66	0.22	0.0	0.0	0.0	0.0	0.0	0.0	10.22
150-159	1.81	2.98	2.68	2.25	1.87	0.87	0.23	0.02	0.0	0.0	0.0	0.0	12.80
160-169	1.44	2.07	2.68	2.68	1.94	1.23	0.25	0.04	0.0	0.0	0.0	0.0	12.31
170-179	1.22	1.63	1.22	1.24	1.27	0.61	0.16	0.05	0.0	0.0	0.0	0.0	7.40
180-189	0.49	0.35	0.57	0.54	0.45	0.29	0.05	0.01	0.0	0.0	0.0	0.0	2.76
190-199	0.61	0.45	0.52	0.06	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.69
200-209	1.00	0.62	0.31	0.25	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	2.19
210-219	0.27	0.39	0.32	0.19	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.17
220-229	0.83	0.46	0.32	0.23	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0	1.91
230-239	1.38	1.11	0.56	0.25	0.12	0.20	0.02	0.0	0.0	0.0	0.0	0.0	3.65
240-249	0.75	0.50	0.23	0.14	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.69
250-259	0.53	0.25	0.12	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.31
260-269	0.29	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31
270-279	0.20	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22
280-289	0.38	0.04	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42
290-299	0.34	0.06	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43
300-309	0.46	0.23	0.06	0.09	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87
310-319	0.76	0.66	0.33	0.29	0.18	0.05	0.02	0.01	0.0	0.0	0.0	0.0	2.30
320-329	1.76	1.98	1.09	0.75	0.39	0.06	0.07	0.05	0.01	0.0	0.0	0.0	6.16
330-339	1.15	2.08	1.17	0.52	0.20	0.16	0.04	0.02	0.02	0.01	0.0	0.0	5.37
340-349	0.94	1.24	0.69	0.29	0.16	0.11	0.06	0.01	0.0	0.0	0.0	0.0	3.51
350-359	0.99	0.87	0.38	0.21	0.07	0.01	0.01	0.01	0.0	0.0	0.0	0.0	2.55
TOTAL %	31.14	26.27	17.02	12.38	7.78	3.98	1.15	0.23	0.04	0.01	0.0	0.0	

CALM AT 0 CM/SEC= 0.0
VECTOR MEAN= 9.986 SPVAR=160.315 DIMEAN=193.964

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 1 (58 m), SEP 80 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.09	0.15	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
10- 19	0.06	0.65	0.30	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.07
20- 29	0.12	0.71	0.12	0.15	0.09	0.15	0.09	0.03	0.0	0.0	0.0	0.03	1.48
30- 39	0.06	0.24	0.12	0.0	0.15	0.21	0.0	0.0	0.03	0.0	0.03	0.15	0.98
40- 49	0.15	0.59	0.15	0.15	0.0	0.21	0.03	0.18	0.12	0.03	0.03	0.09	1.72
50- 59	0.21	0.77	0.53	0.41	0.36	0.47	0.27	0.27	0.0	0.06	0.03	0.0	3.38
60- 69	0.18	1.61	0.50	0.59	0.71	0.68	0.39	0.09	0.06	0.0	0.0	0.0	5.01
70- 79	0.33	1.93	0.92	0.86	1.13	1.16	0.33	0.24	0.09	0.0	0.0	0.0	6.96
80- 89	0.59	2.40	1.84	2.19	1.69	1.16	0.24	0.21	0.09	0.0	0.0	0.0	10.40
90- 99	0.65	2.49	2.79	3.61	2.49	2.52	1.57	0.65	0.03	0.03	0.03	0.03	16.89
100-109	0.44	3.26	2.64	2.46	2.73	3.53	1.78	0.50	0.09	0.12	0.12	0.03	17.69
110-119	0.33	3.38	2.81	2.40	2.61	2.07	1.27	0.33	0.71	0.77	0.33	0.03	17.04
120-129	0.12	1.27	1.84	1.69	1.42	0.68	0.65	0.41	0.30	0.24	0.06	0.0	8.68
130-139	0.12	0.89	1.16	1.13	0.56	0.36	0.24	0.06	0.0	0.0	0.0	0.0	4.50
140-149	0.12	0.39	0.53	0.18	0.12	0.12	0.06	0.03	0.0	0.0	0.0	0.0	1.54
150-159	0.03	0.0	0.18	0.03	0.03	0.03	0.09	0.0	0.0	0.0	0.0	0.0	0.39
160-169	0.0	0.0	0.06	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.12
170-179	0.0	0.0	0.09	0.0	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.18
180-189	0.06	0.06	0.03	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21
190-199	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
200-209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210-219	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
220-229	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
230-239	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09
240-249	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
250-259	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
260-269	0.18	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21
270-279	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09
280-289	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15
290-299	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
300-309	0.03	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12
310-319	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
320-329	0.09	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12
330-339	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15
340-349	0.03	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15
350-359	0.0	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09
TOTAL %	4.44	21.63	16.68	15.97	14.13	13.42	6.99	2.99	1.51	1.24	0.62	0.36	

PERCENT AT 0 CM/SEC= 0.0
SPMEAN= 18.407 SPVAR=450.095 DIMEAN= 99.530

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 2 (100 m), SEP 80 RECOVERY

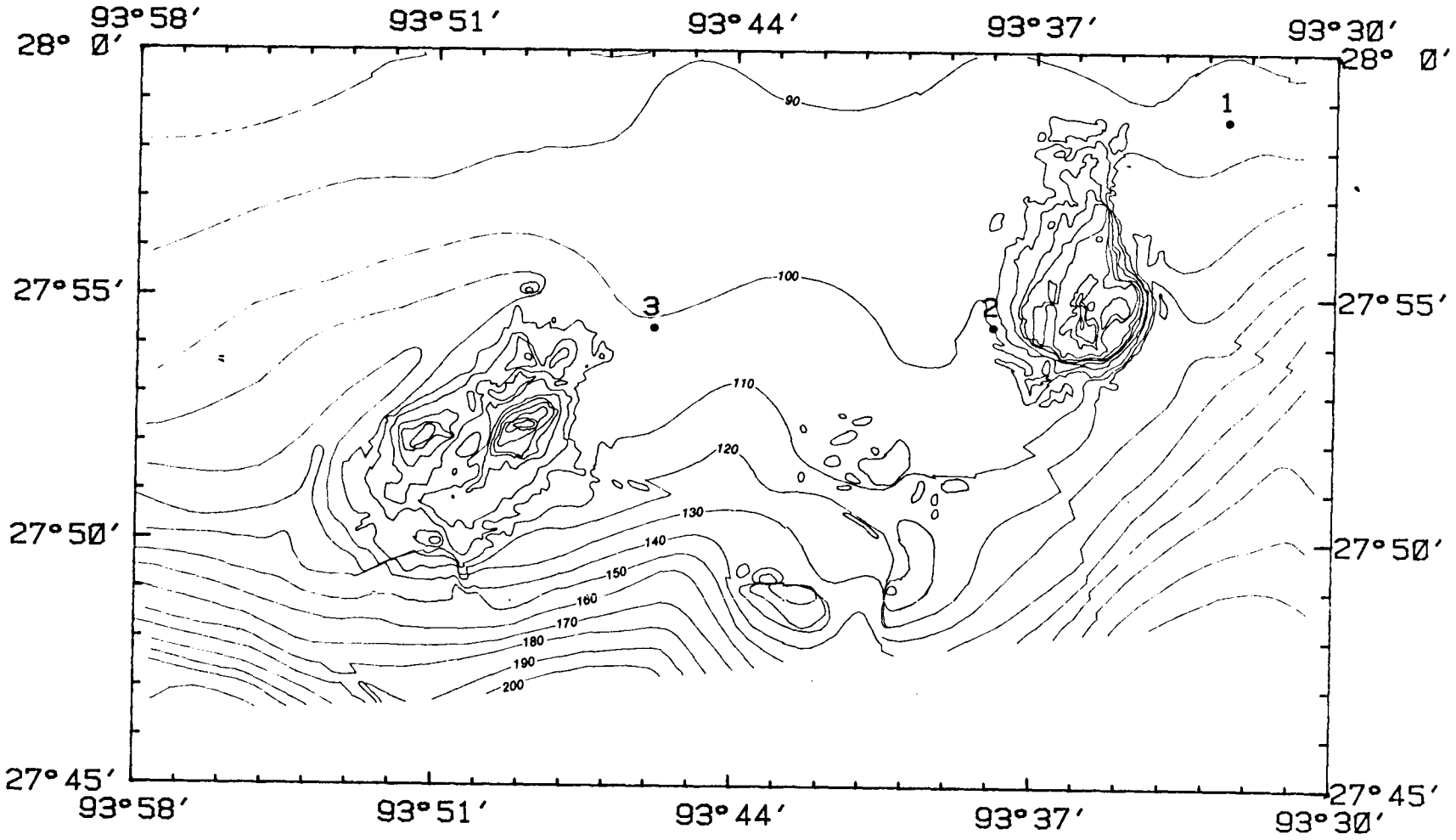
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

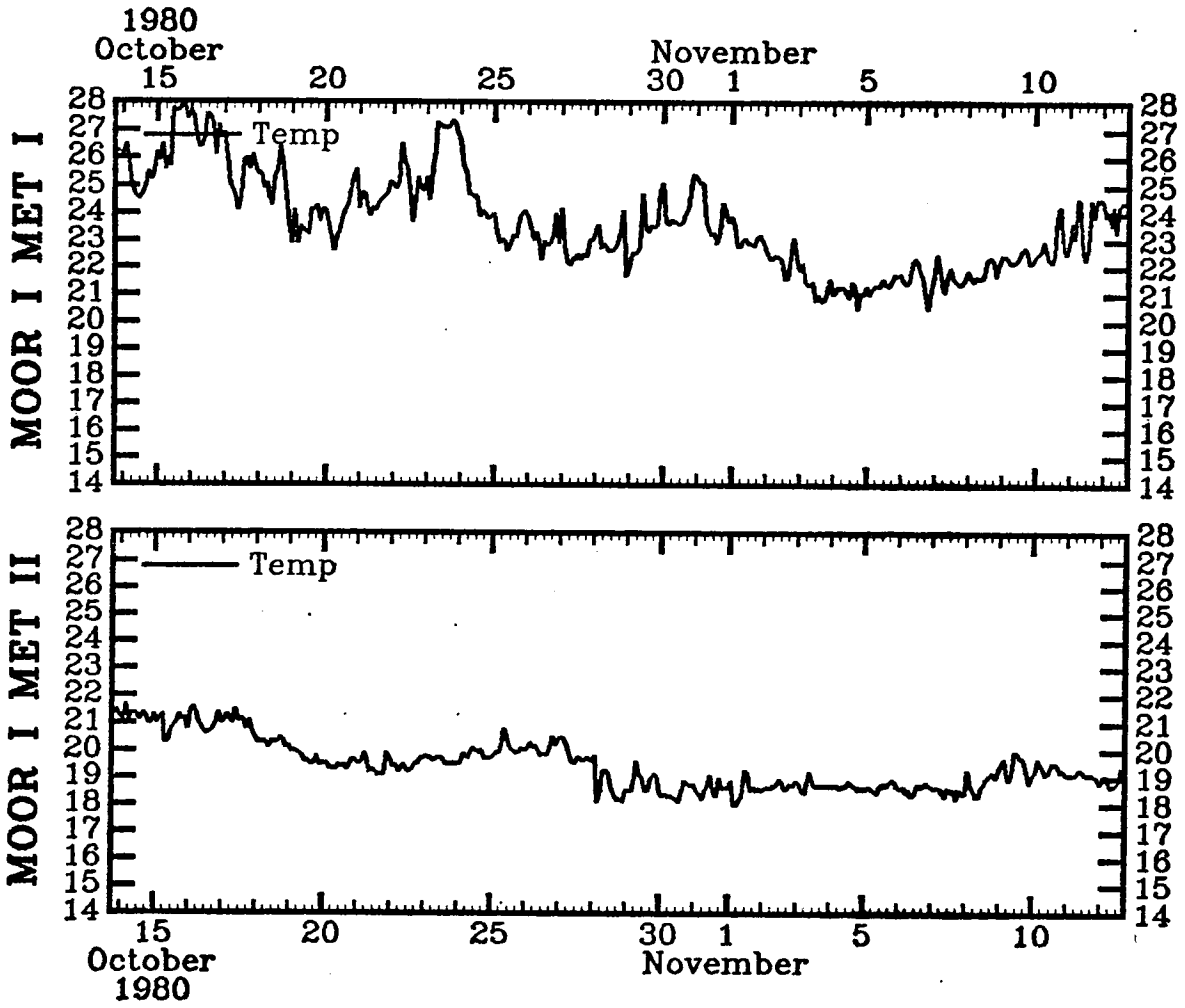
SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.83	1.61	0.89	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.38
10- 19	1.58	1.72	1.30	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.63
20- 29	2.44	2.36	0.78	0.31	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.02
30- 39	2.11	1.94	0.86	0.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.24
40- 49	2.11	1.22	0.44	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.88
50- 59	2.63	0.97	0.53	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.19
60- 69	1.83	0.36	0.42	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.63
70- 79	1.36	0.44	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.05
80- 89	1.41	0.58	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.25
90- 99	1.58	0.55	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.27
100-109	1.03	0.75	0.11	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.94
110-119	1.28	0.61	0.28	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.27
120-129	1.61	0.72	0.33	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.77
130-139	1.61	0.92	0.39	0.14	0.19	0.03	0.0	0.0	0.0	0.0	0.0	0.0	3.27
140-149	2.14	1.53	0.61	0.19	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.49
150-159	1.61	1.36	1.03	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.27
160-169	1.28	1.11	0.80	0.42	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.69
170-179	1.75	1.11	0.89	0.11	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.99
180-189	1.97	0.86	0.50	0.08	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.49
190-199	2.11	1.03	0.28	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.47
200-209	2.11	1.03	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.30
210-219	1.86	0.64	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.55
220-229	1.77	0.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.30
230-239	1.80	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.19
240-249	1.30	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.55
250-259	1.28	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.55
260-269	1.16	0.28	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
270-279	0.53	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67
280-289	0.78	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.14
290-299	0.75	0.67	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.44
300-309	1.28	0.28	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.64
310-319	1.14	0.53	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.69
320-329	1.19	1.00	0.17	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.38
330-339	0.61	0.69	0.17	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.53
340-349	0.69	0.69	0.36	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.77
350-359	0.55	1.08	0.78	0.14	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.58
TOTAL %	53.05	30.59	12.92	2.72	0.69	0.03	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 0.0
SPMEAN= 5.435 SPVAR= 47.989 DIMEAN=149.082

DEPLOYMENT 5: OCTOBER 1980-FEBRUARY 1981

MAP 3
MOORING POSITIONS FOR DEPLOYMENT 5 (OCT 80-FEB 81)




1980
October
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MOOR I MET I
Temp
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October
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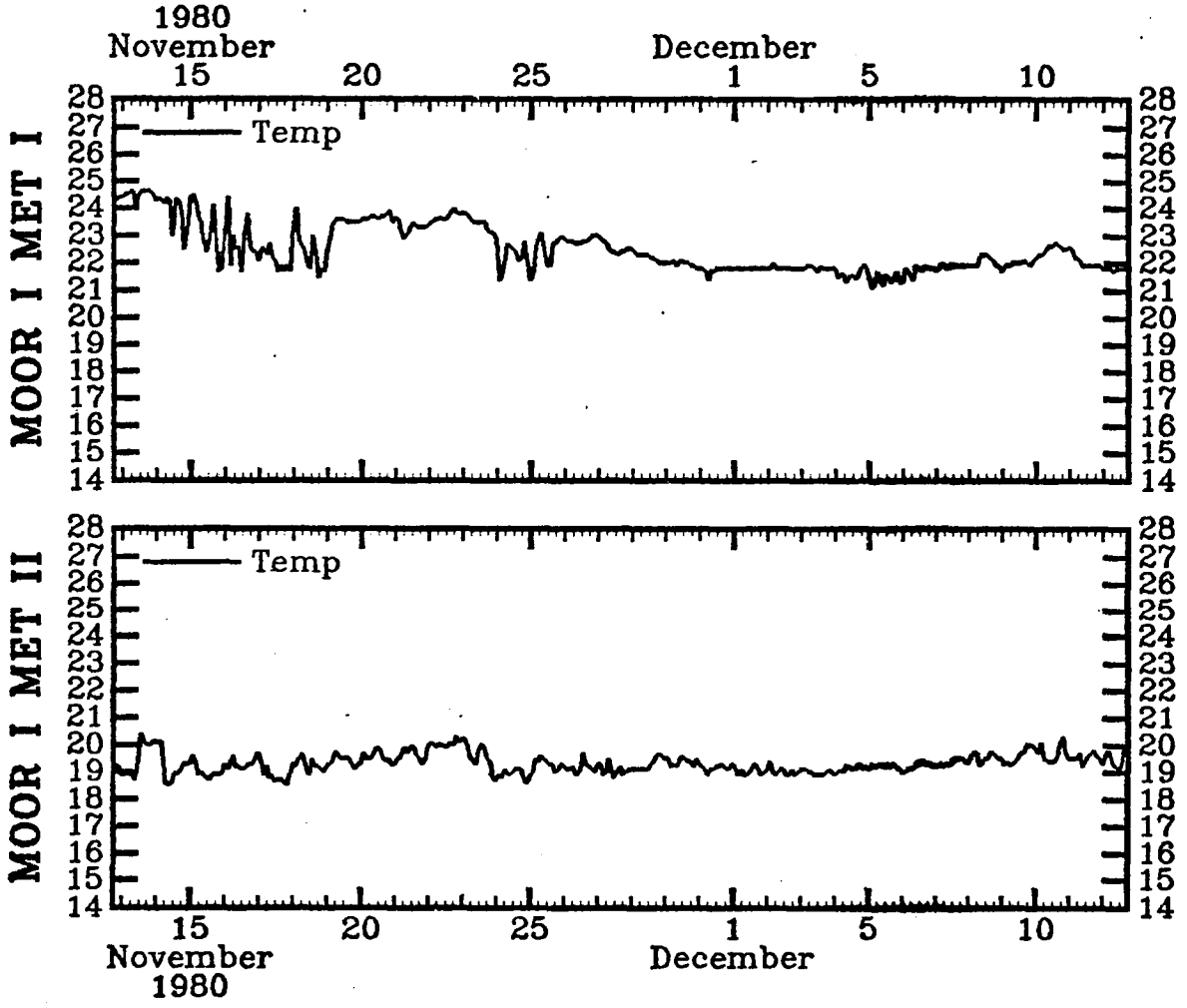
1980
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MOOR I MET I
Temp
MOOR I MET II
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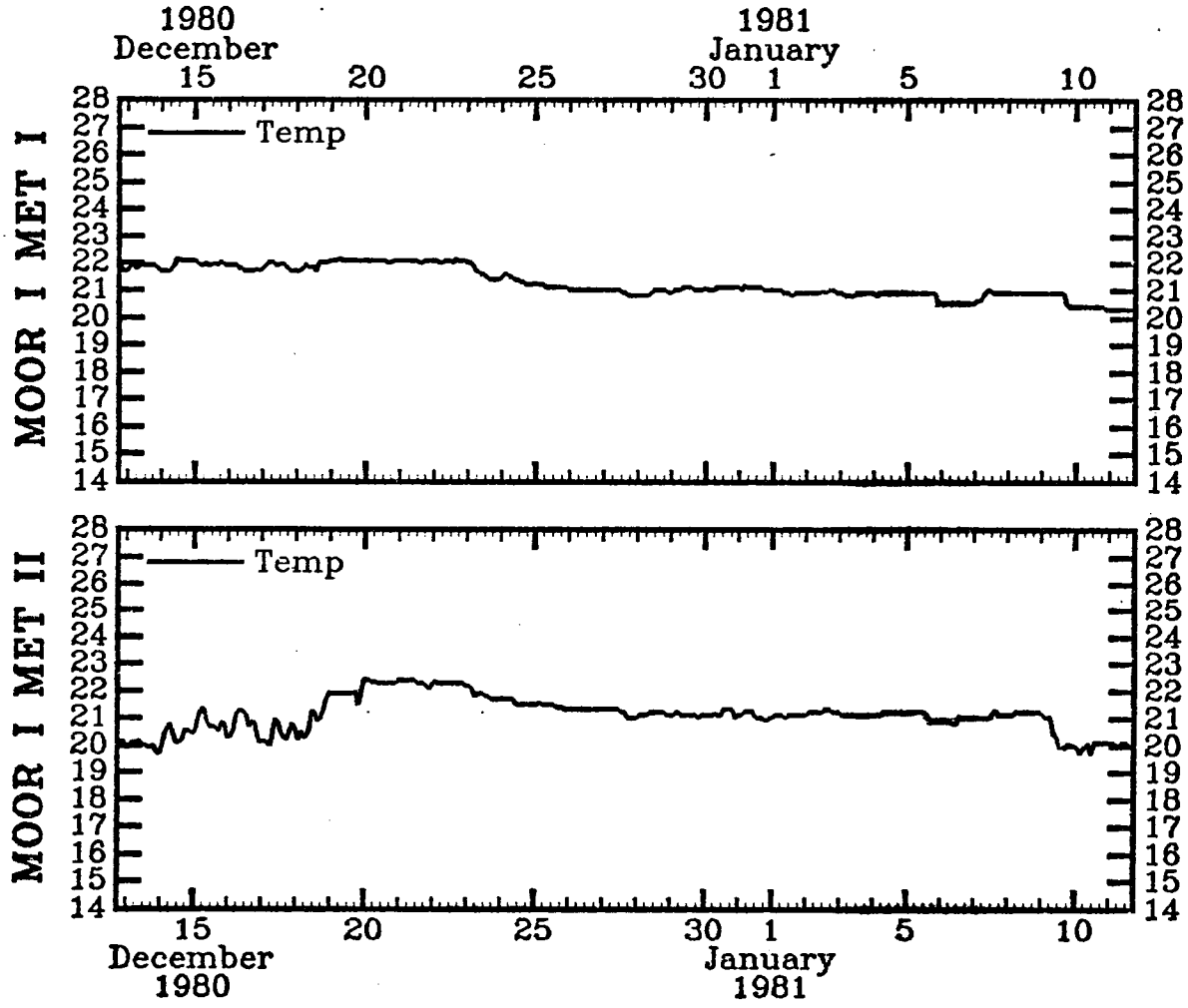
1980
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1981
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MOOR I MET I
Temp
MOOR I MET II
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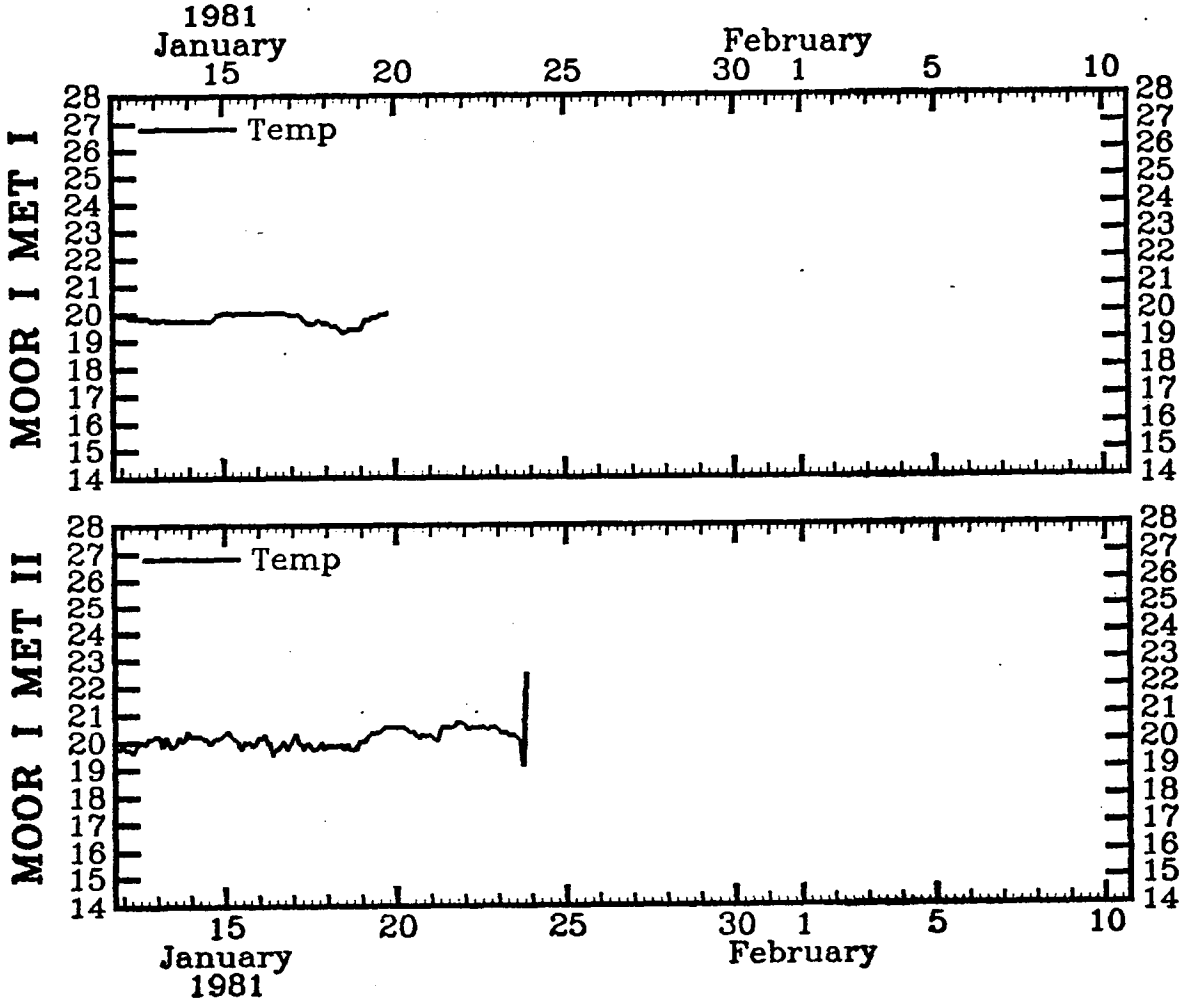
1981
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MOOR I MET I
Temp
MOOR I MET II
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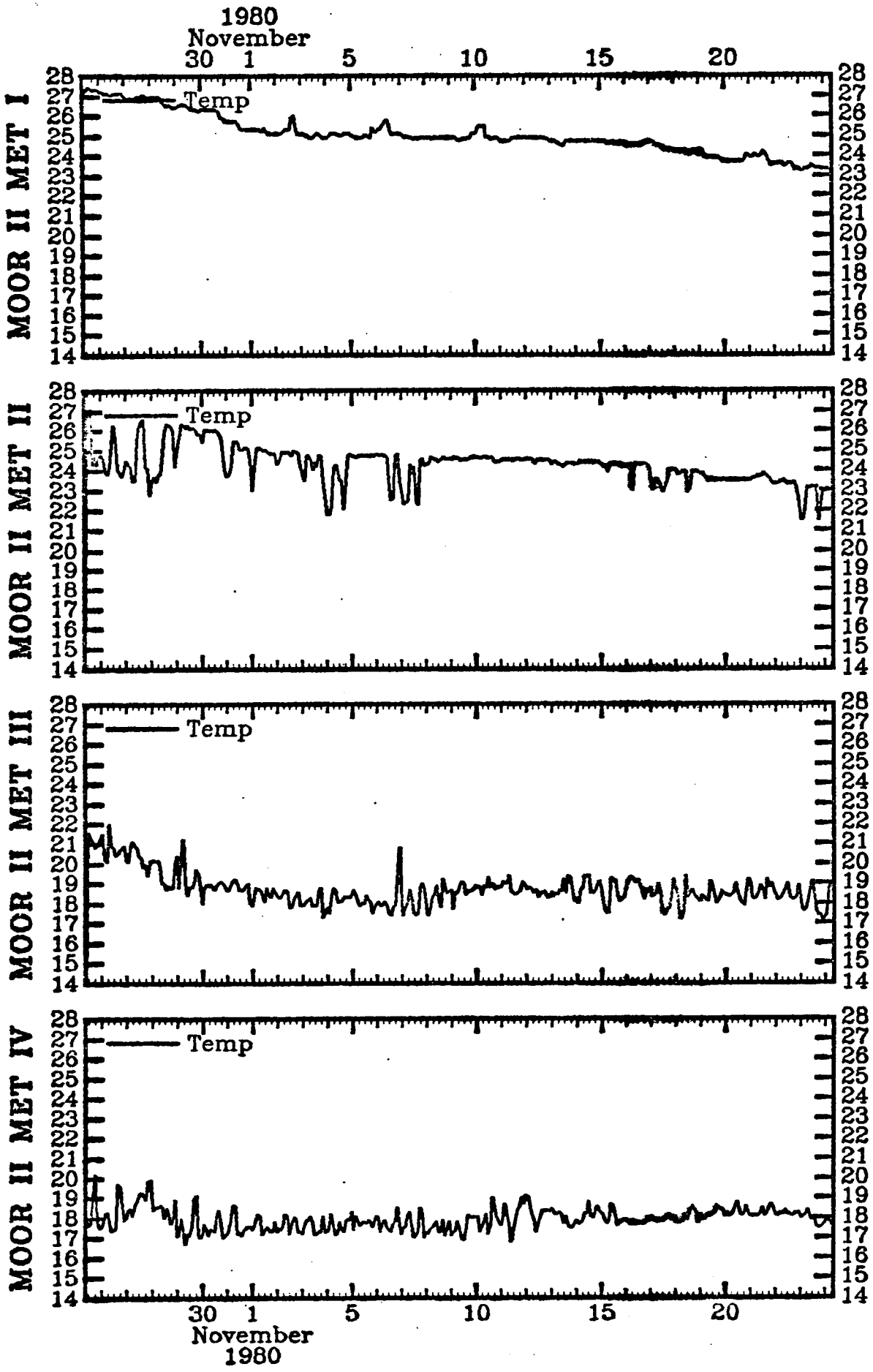
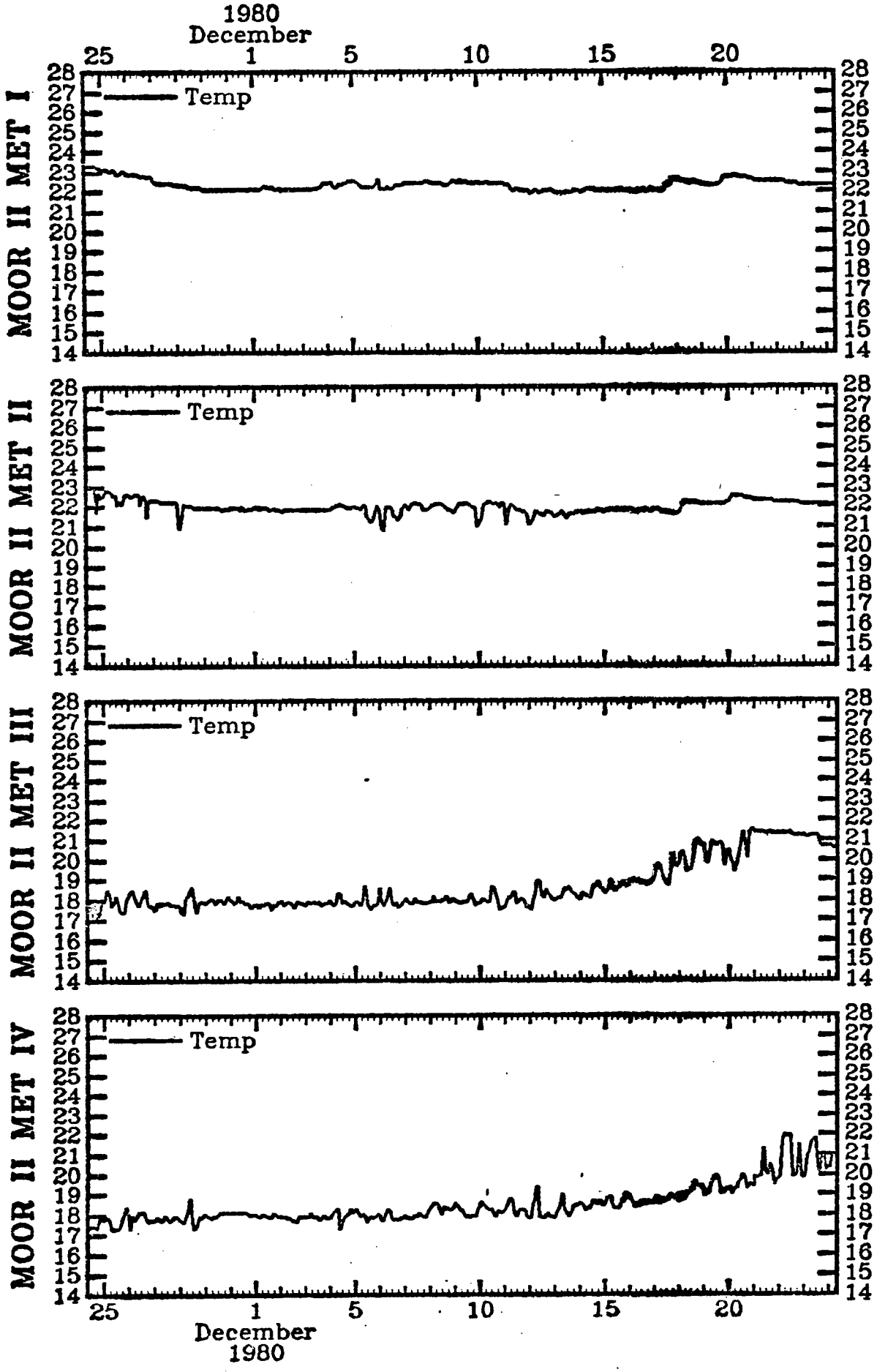

1980
November
30 1 5 10 15 20
MOOR II MET I
Temp
MOOR II MET II
Temp
MOOR II MET III
Temp
MOOR II MET IV
Temp
30 1 5 10 15 20
November
1980


1980
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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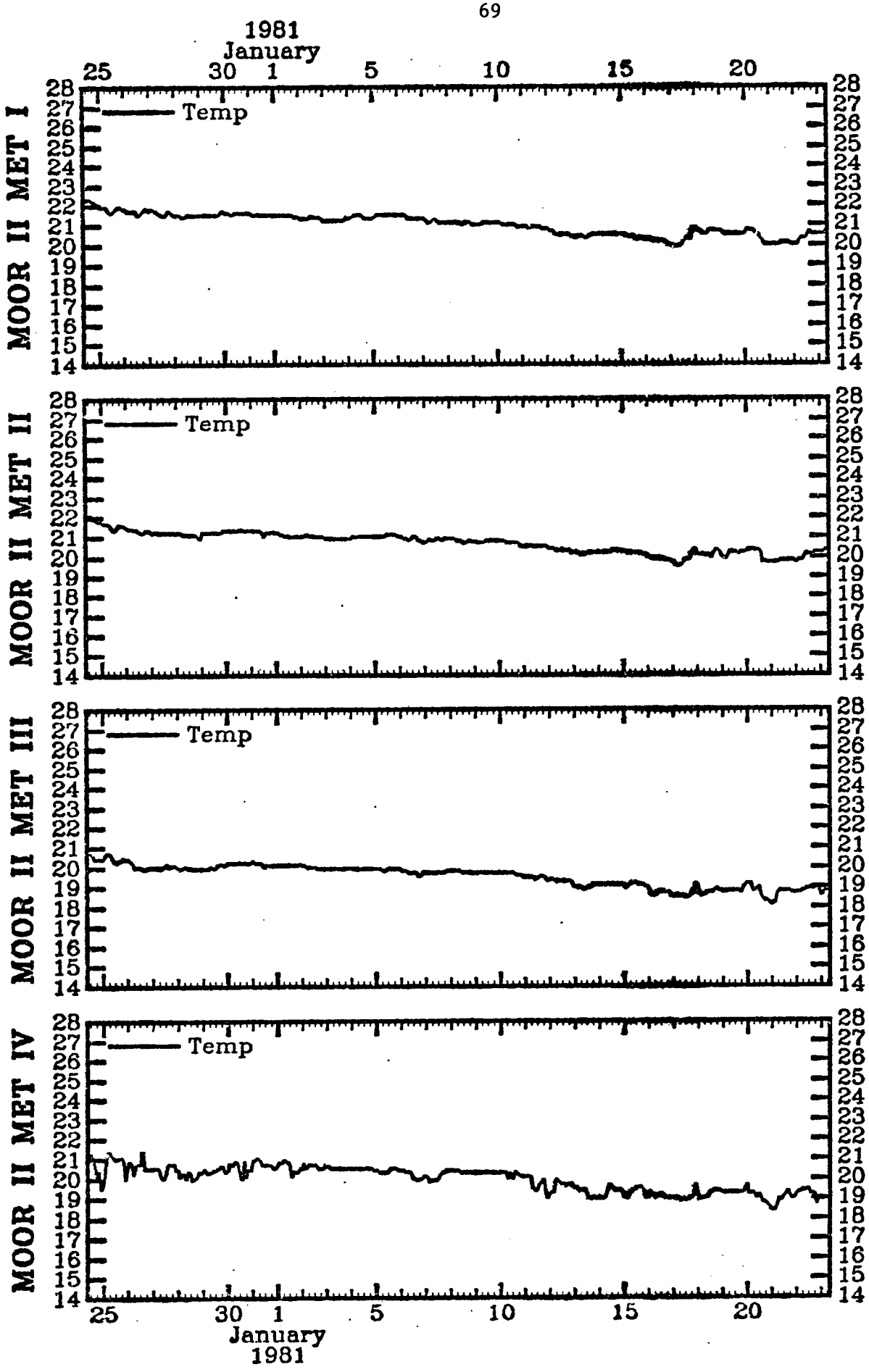
1981
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MOOR II MET I
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MOOR II MET III
MOOR II MET IV
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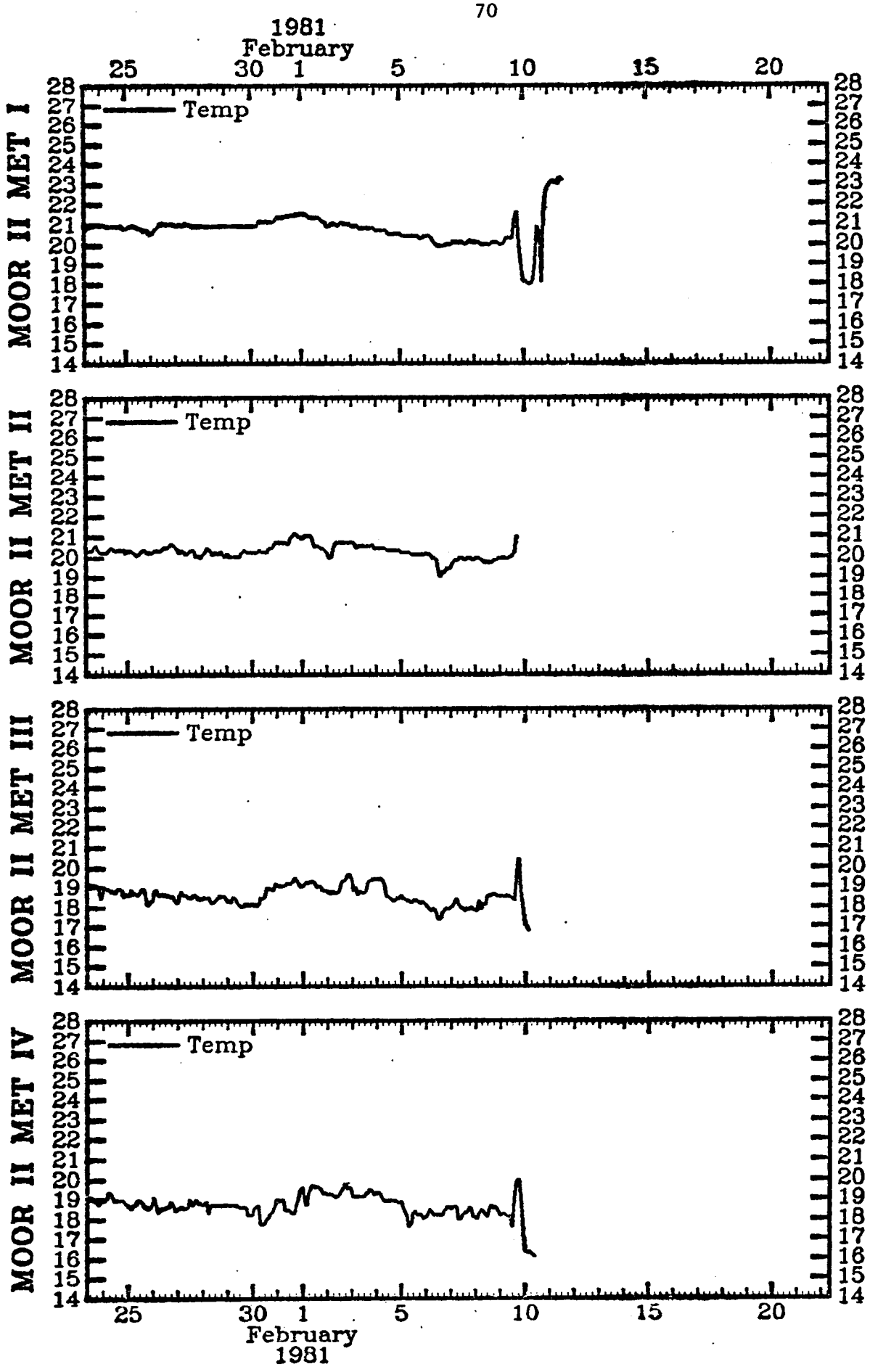
1981
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MOOR II MET I
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MOOR II MET III
MOOR II MET IV
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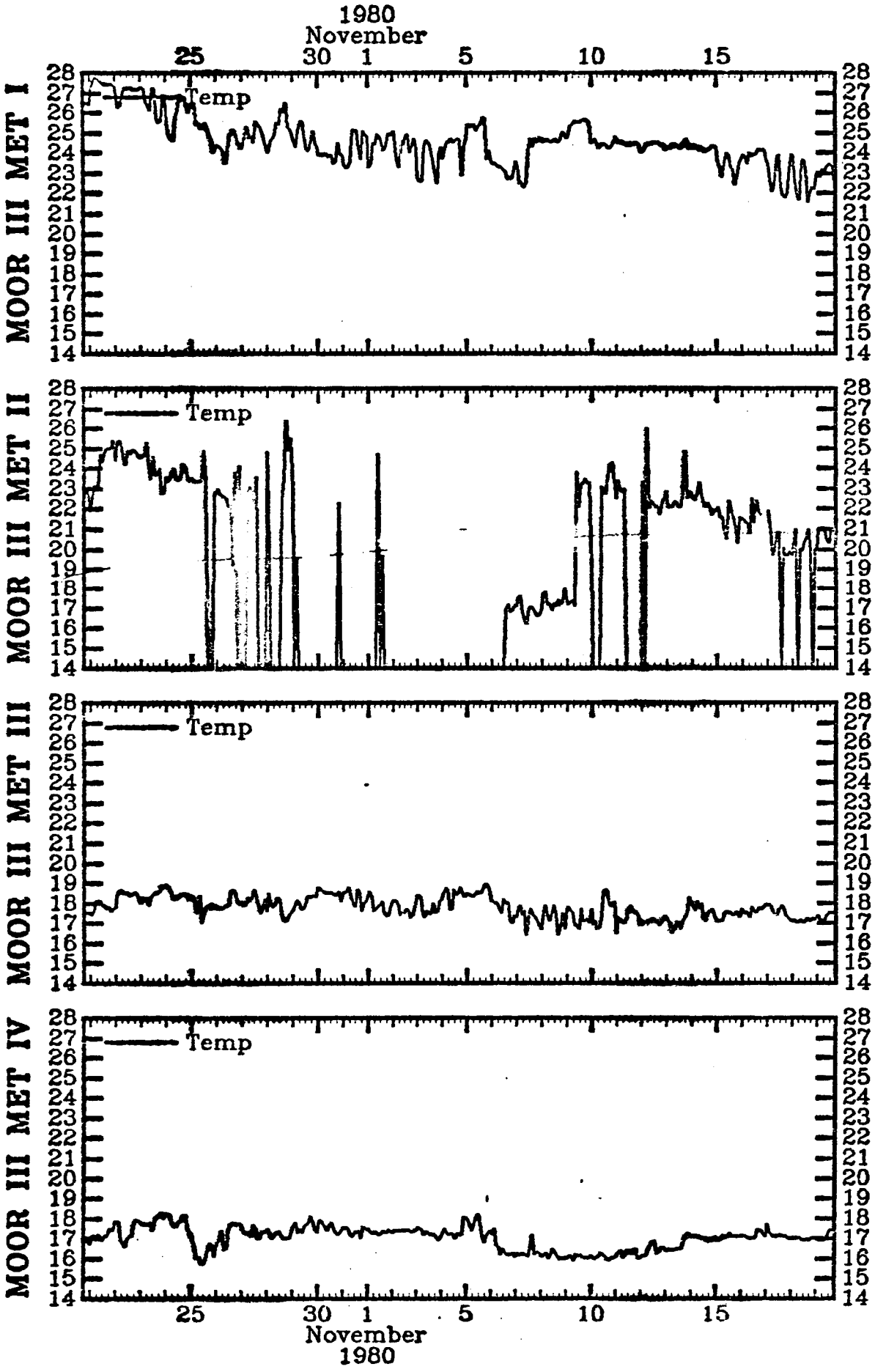
1980
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
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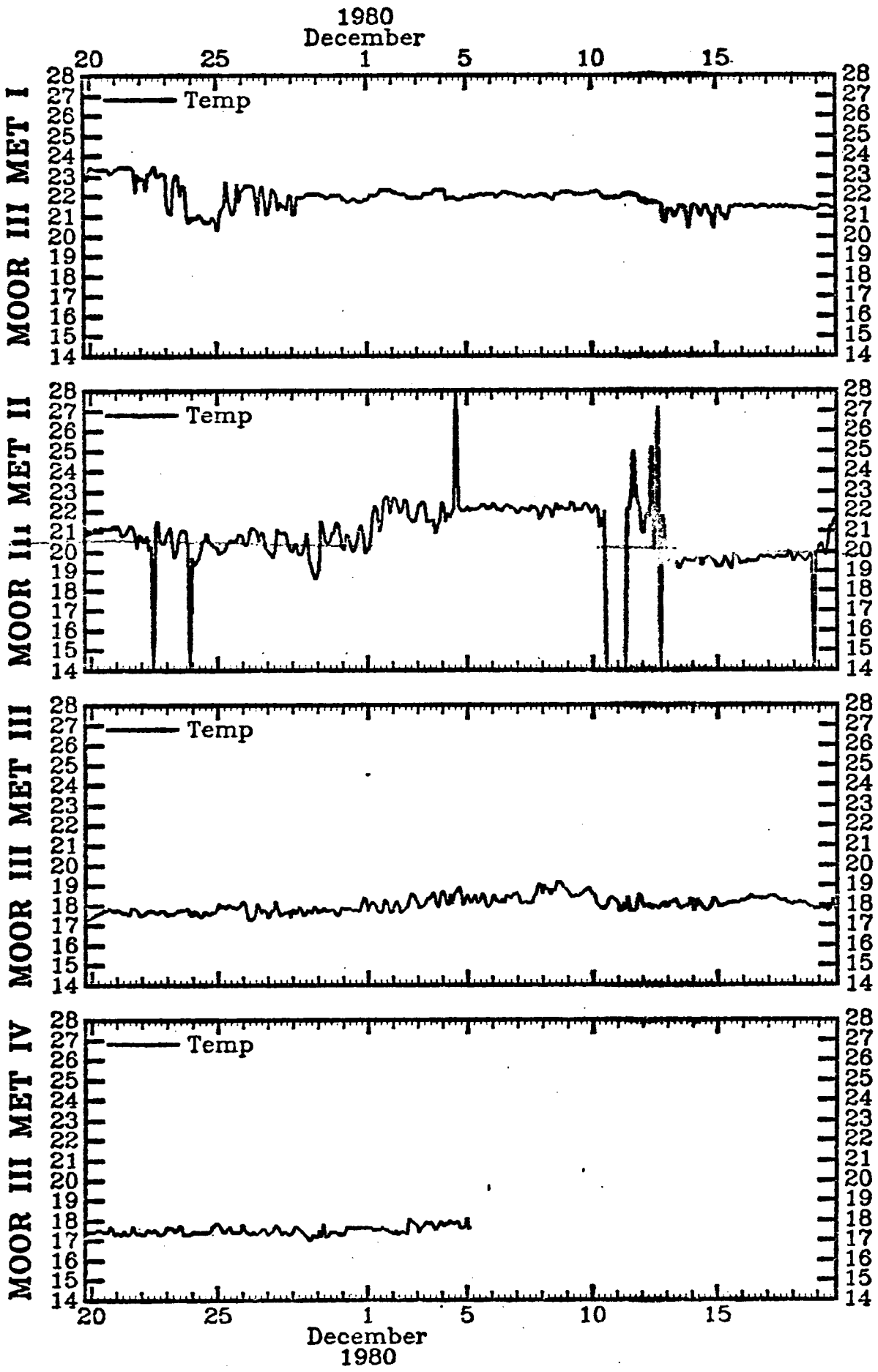
November


1980
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
Temp
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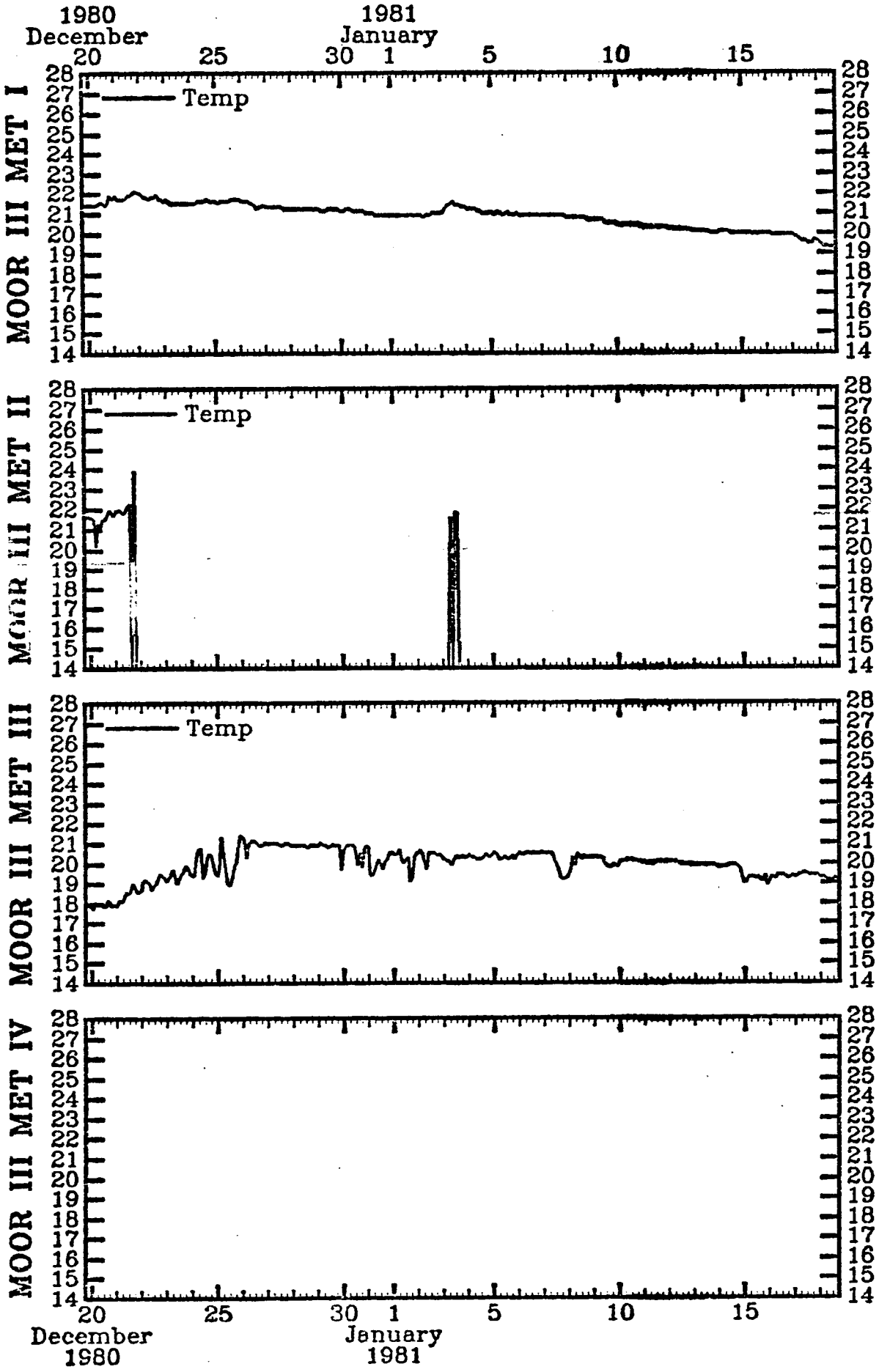
December
1980


1980
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MOOR III MET III
MOOR III MET IV
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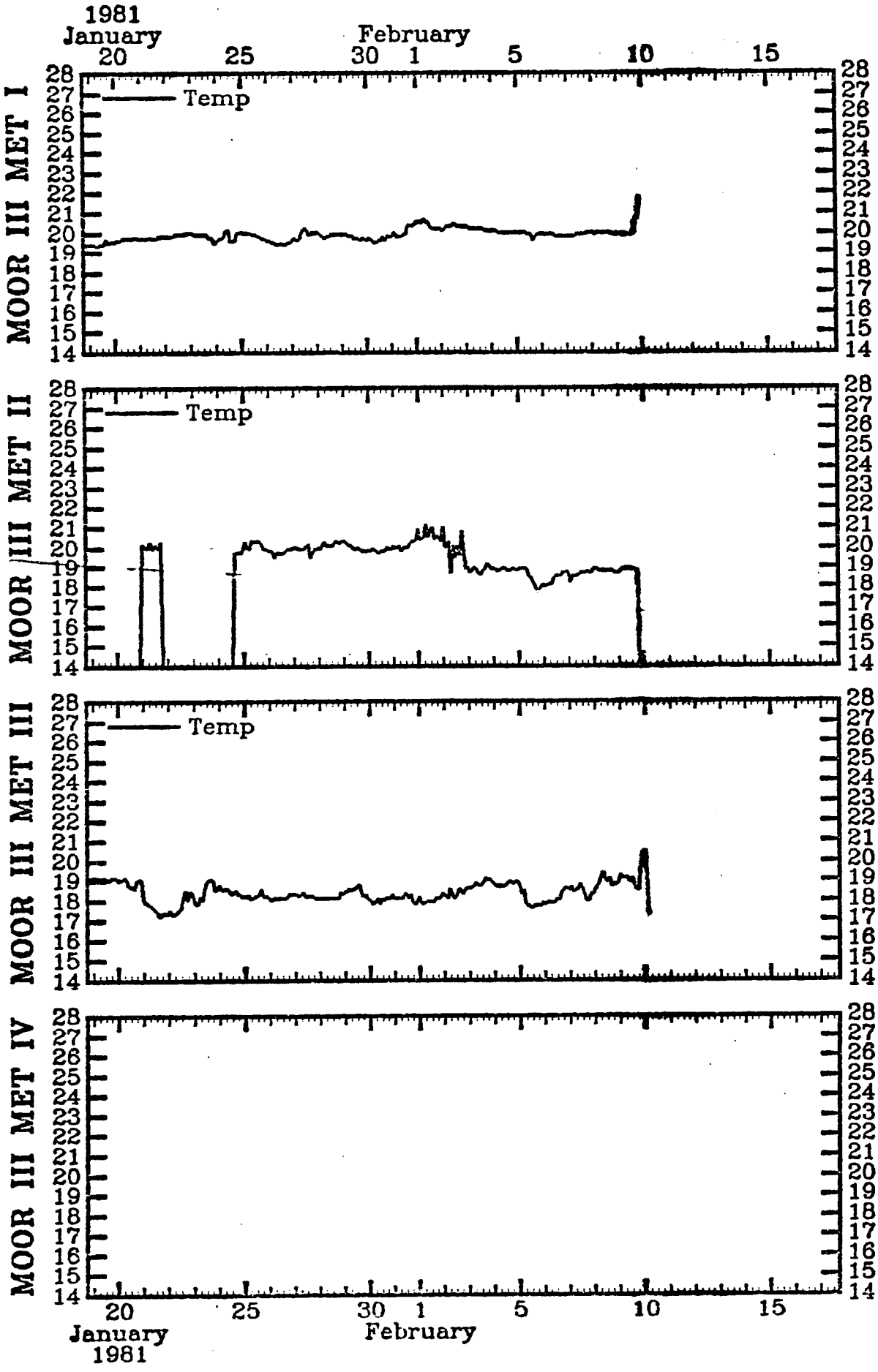
January
1981


1981
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
Temp
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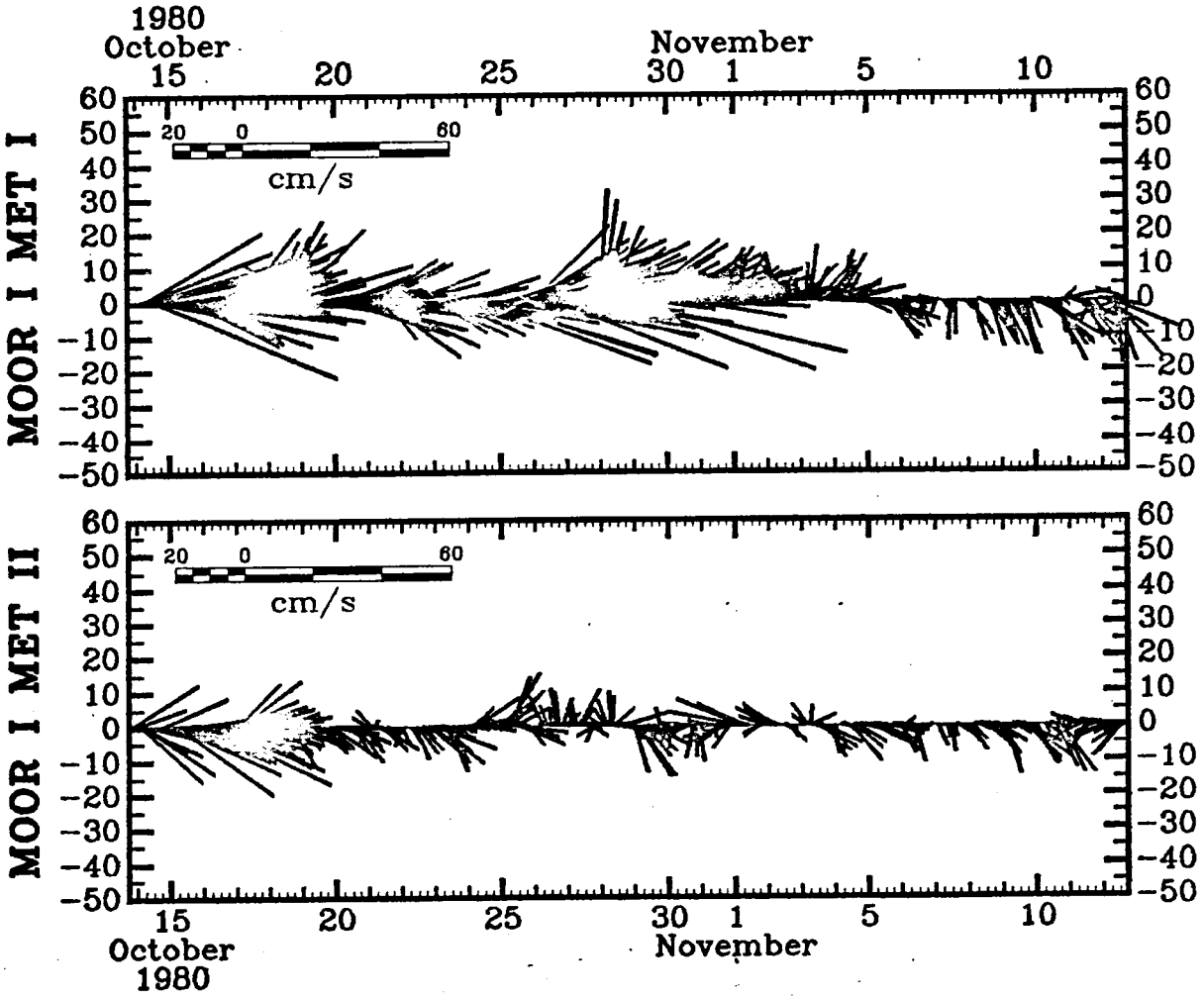
January
1981
February


1980
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MOOR I MET I
MOOR I MET II
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cm/s
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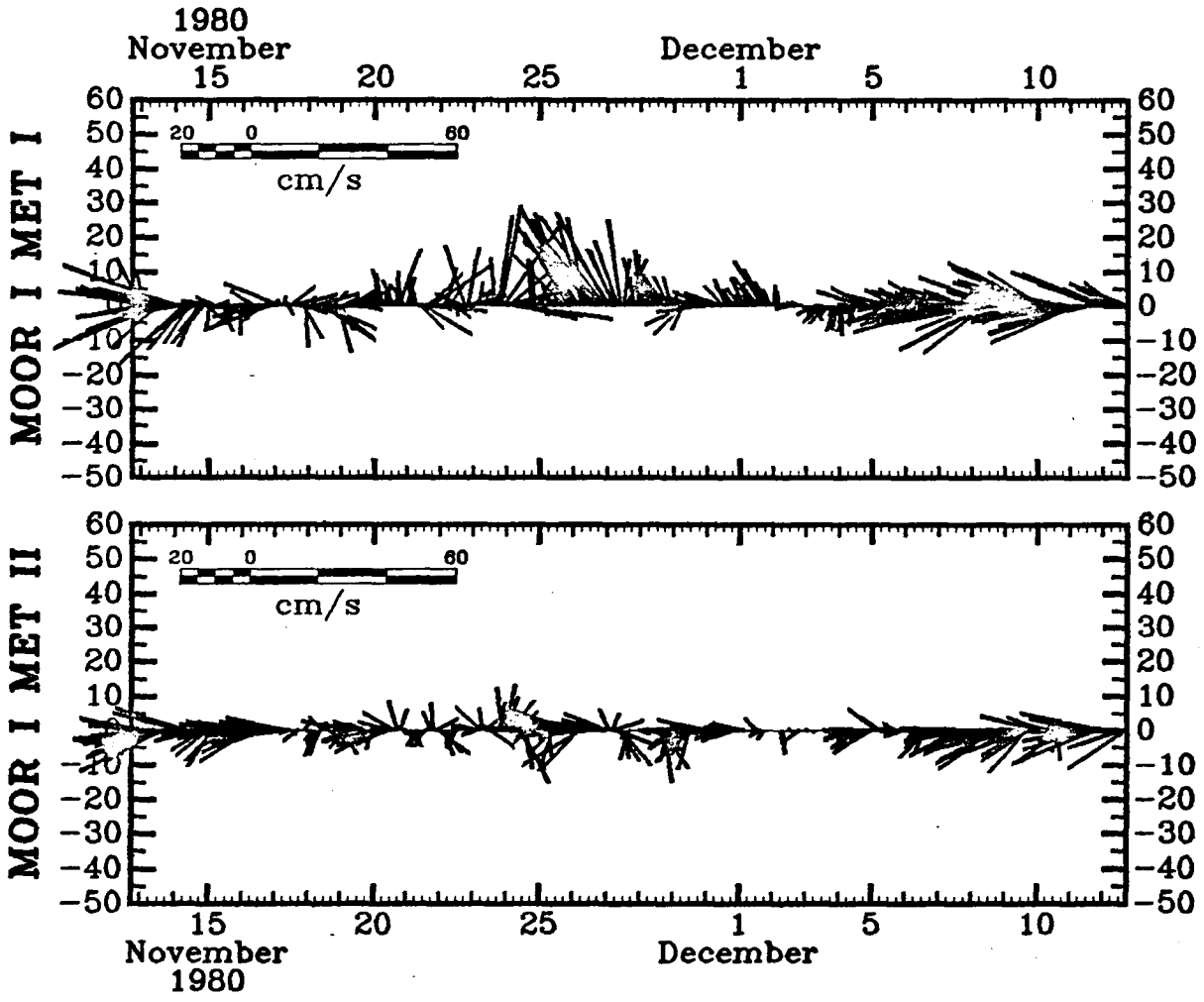
October
1980
November


1980
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MOOR I MET I
MOOR I MET II
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cm/s
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November
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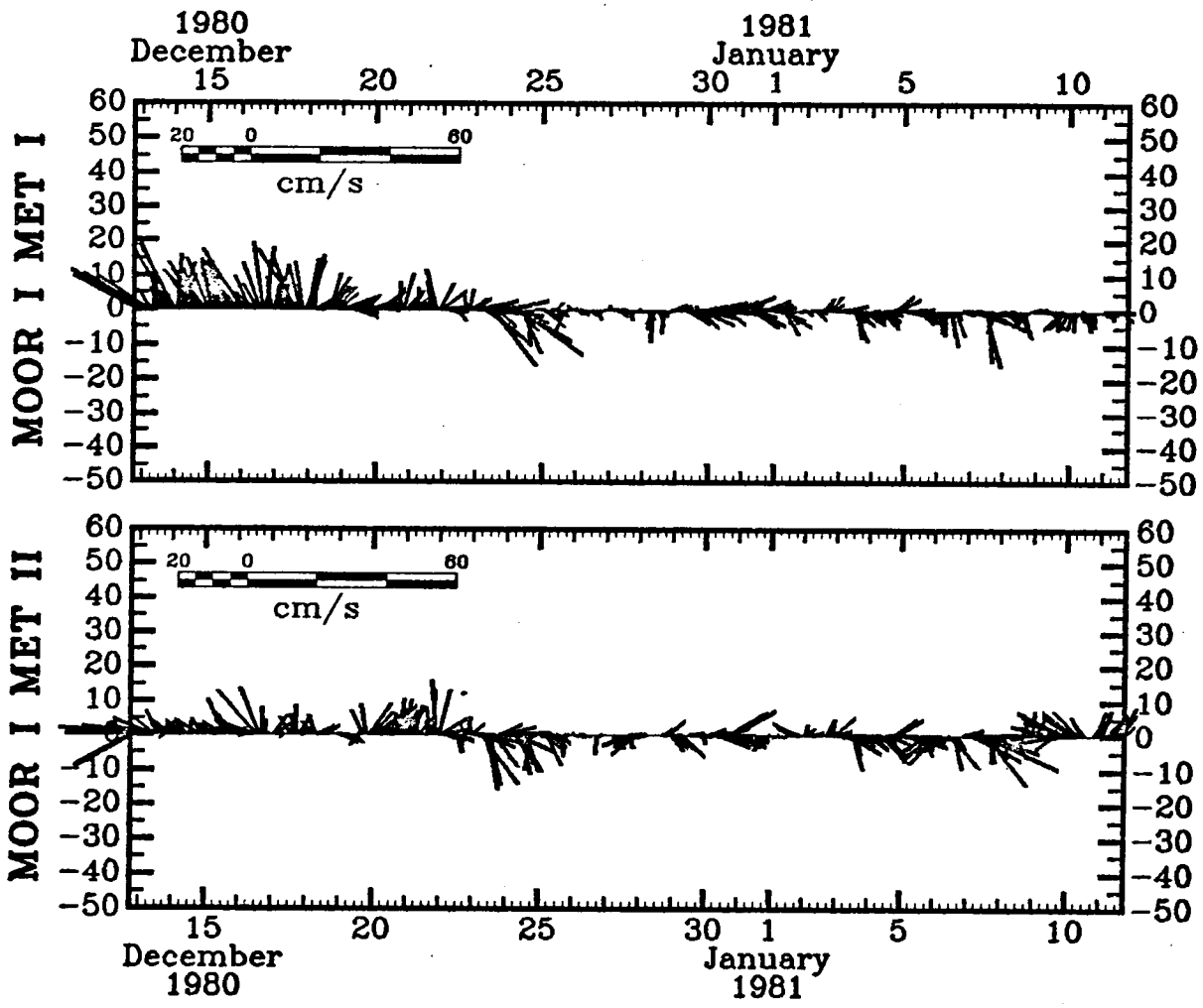
December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MOOR I MET I
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December
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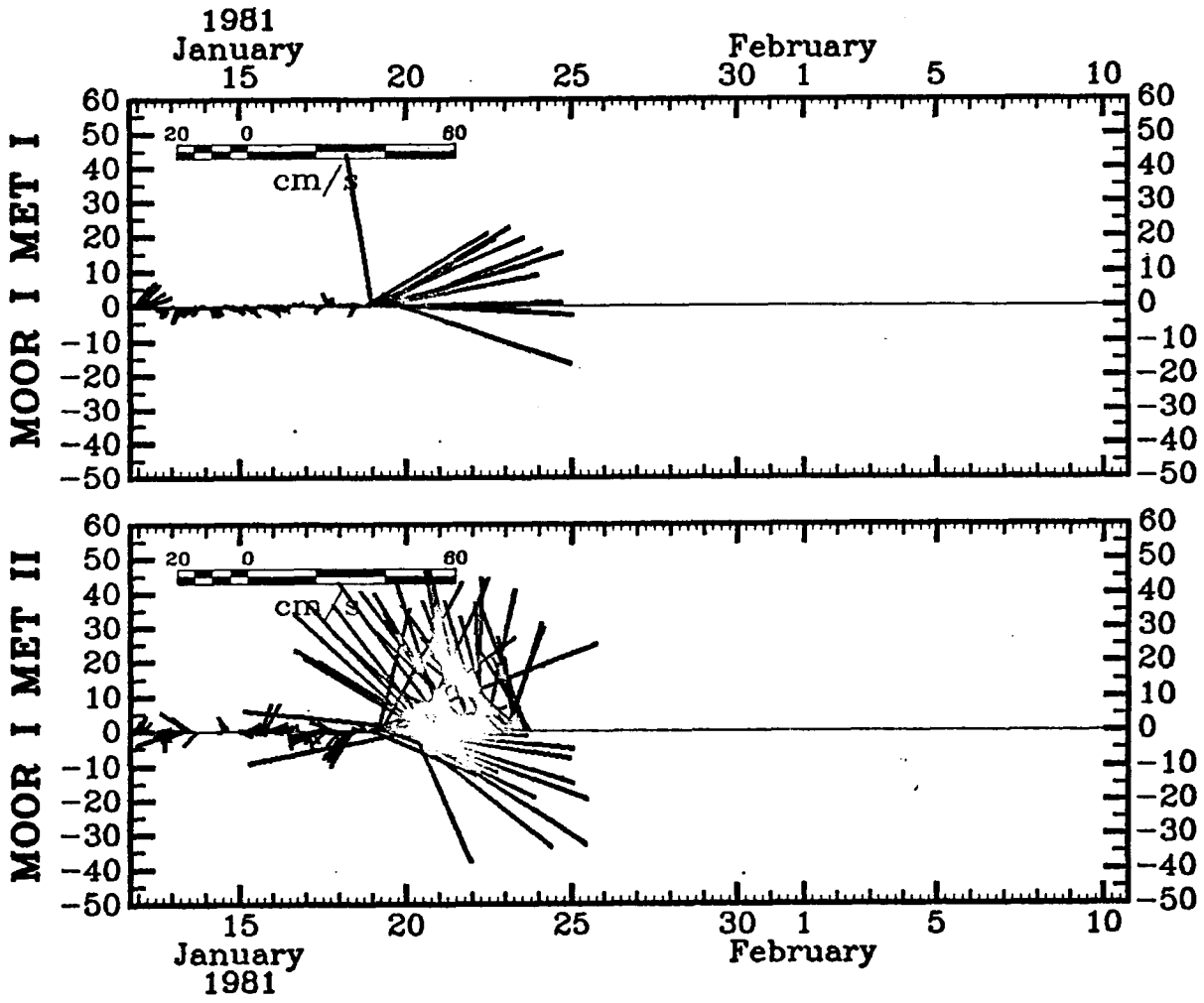
January
1981


1981
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MOOR I MET I
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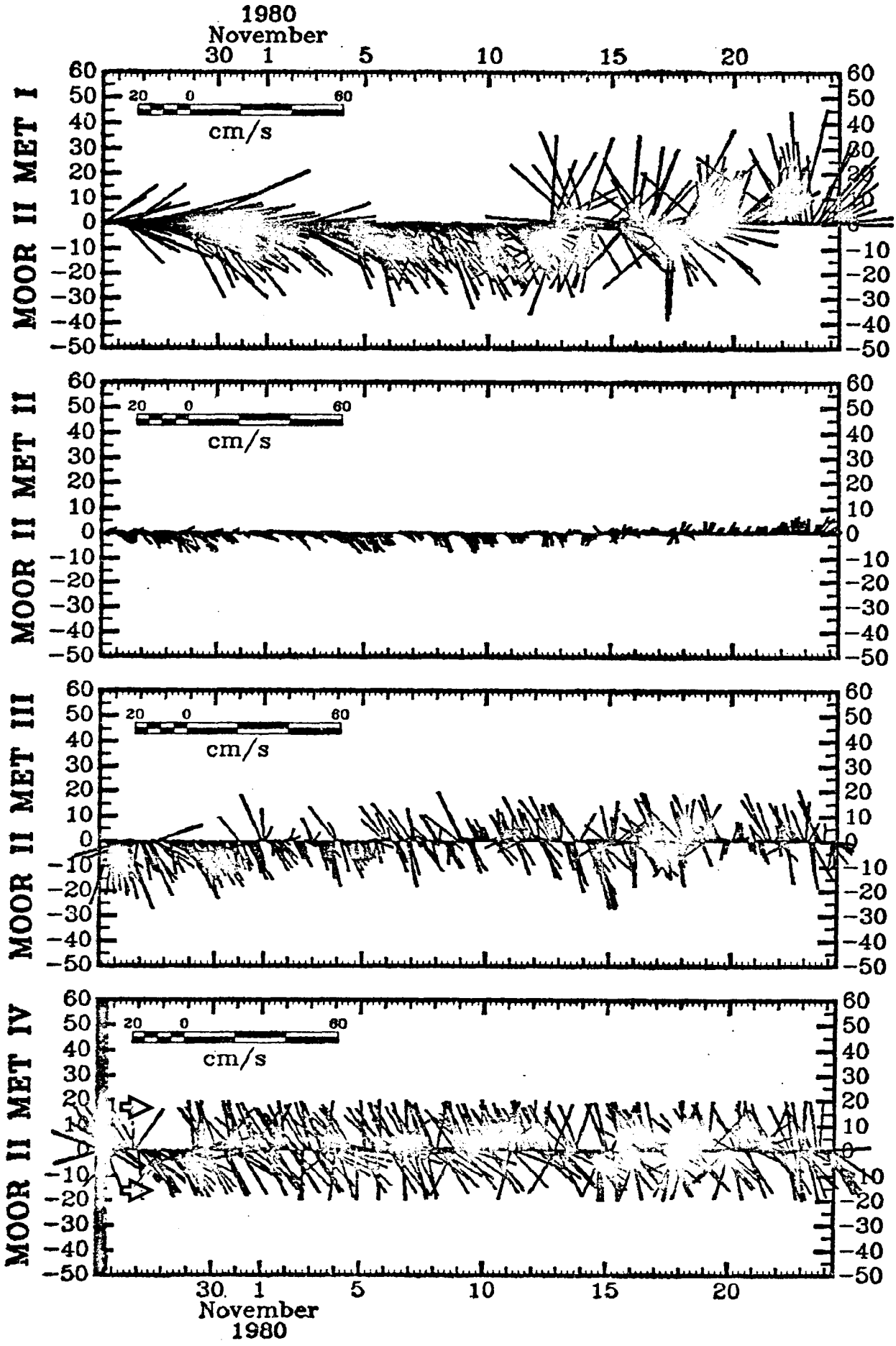
January
1981
February


1980
November
30 1 5 10 15 20
MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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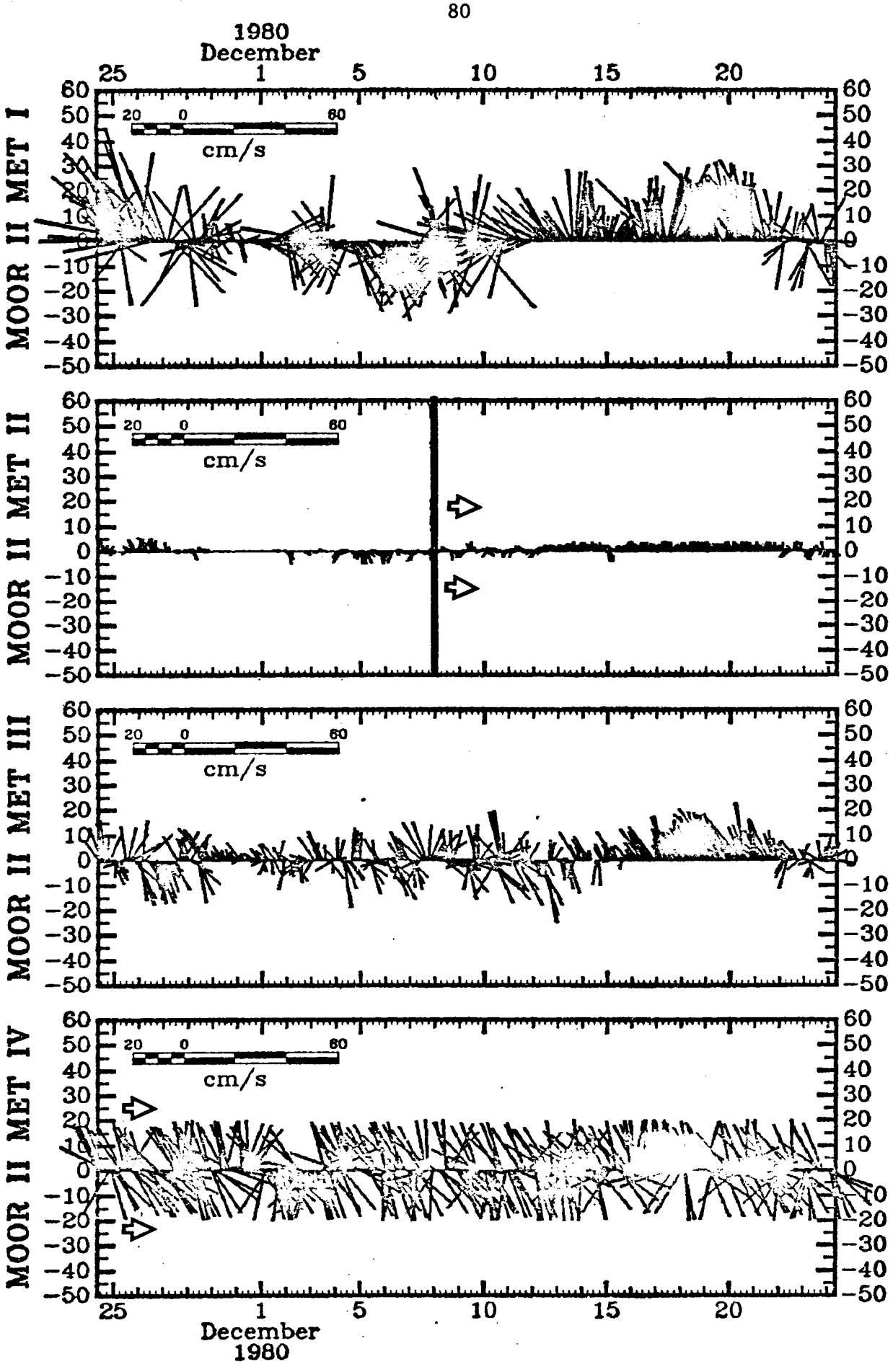
30 1 5 10 15 20
November
1980


1980
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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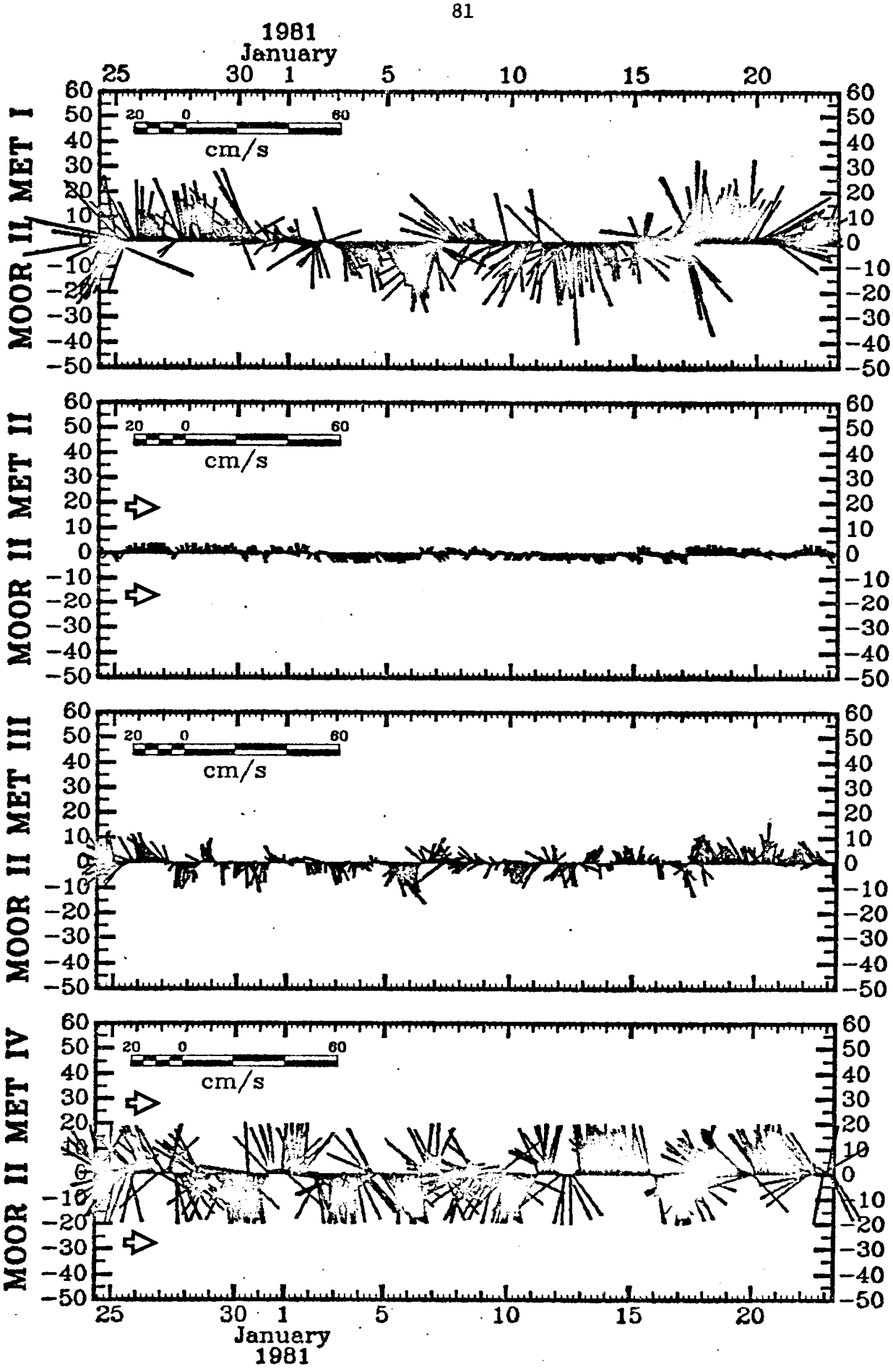
December
1980


1981
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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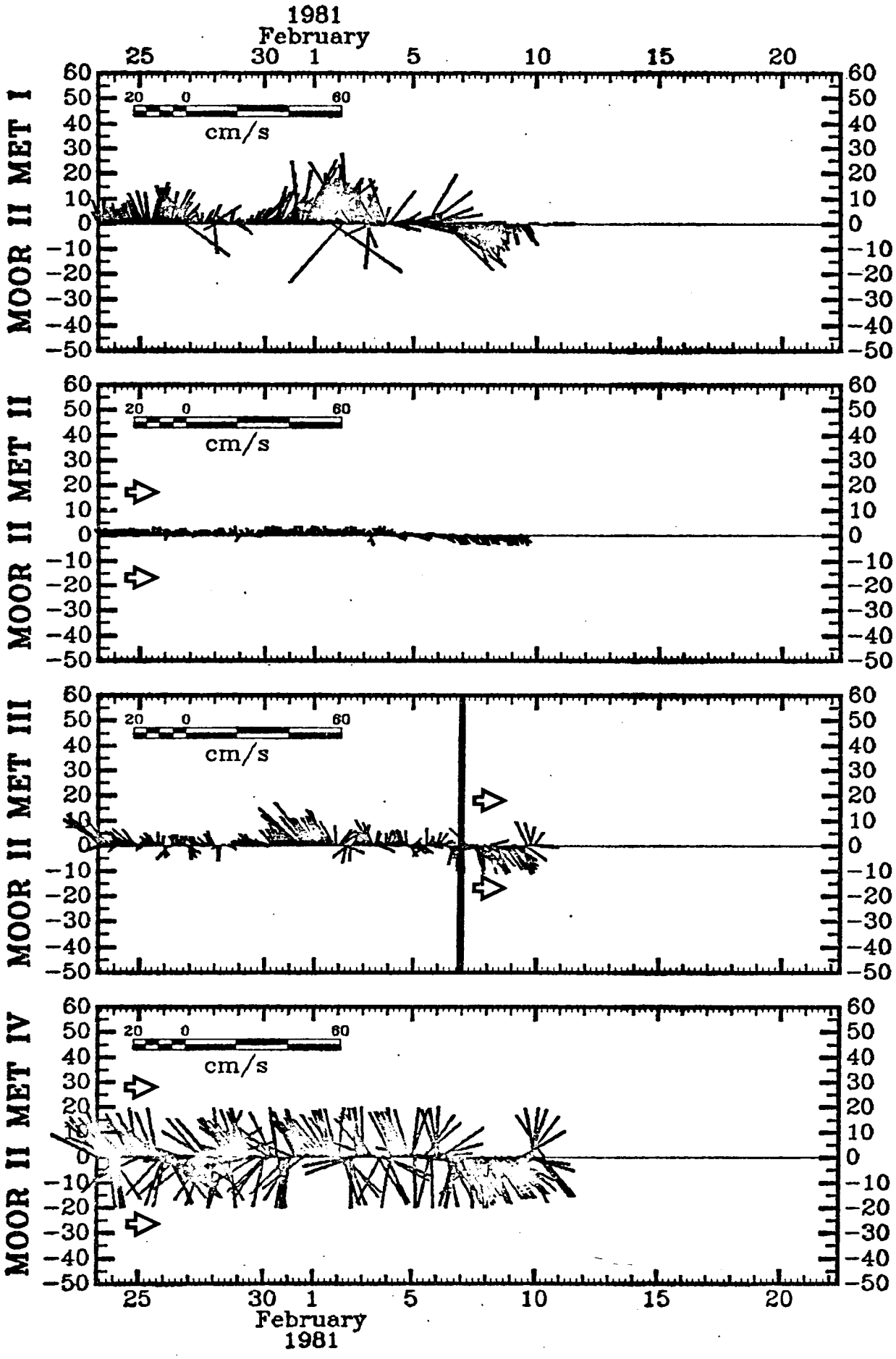
1981
January


1981
February
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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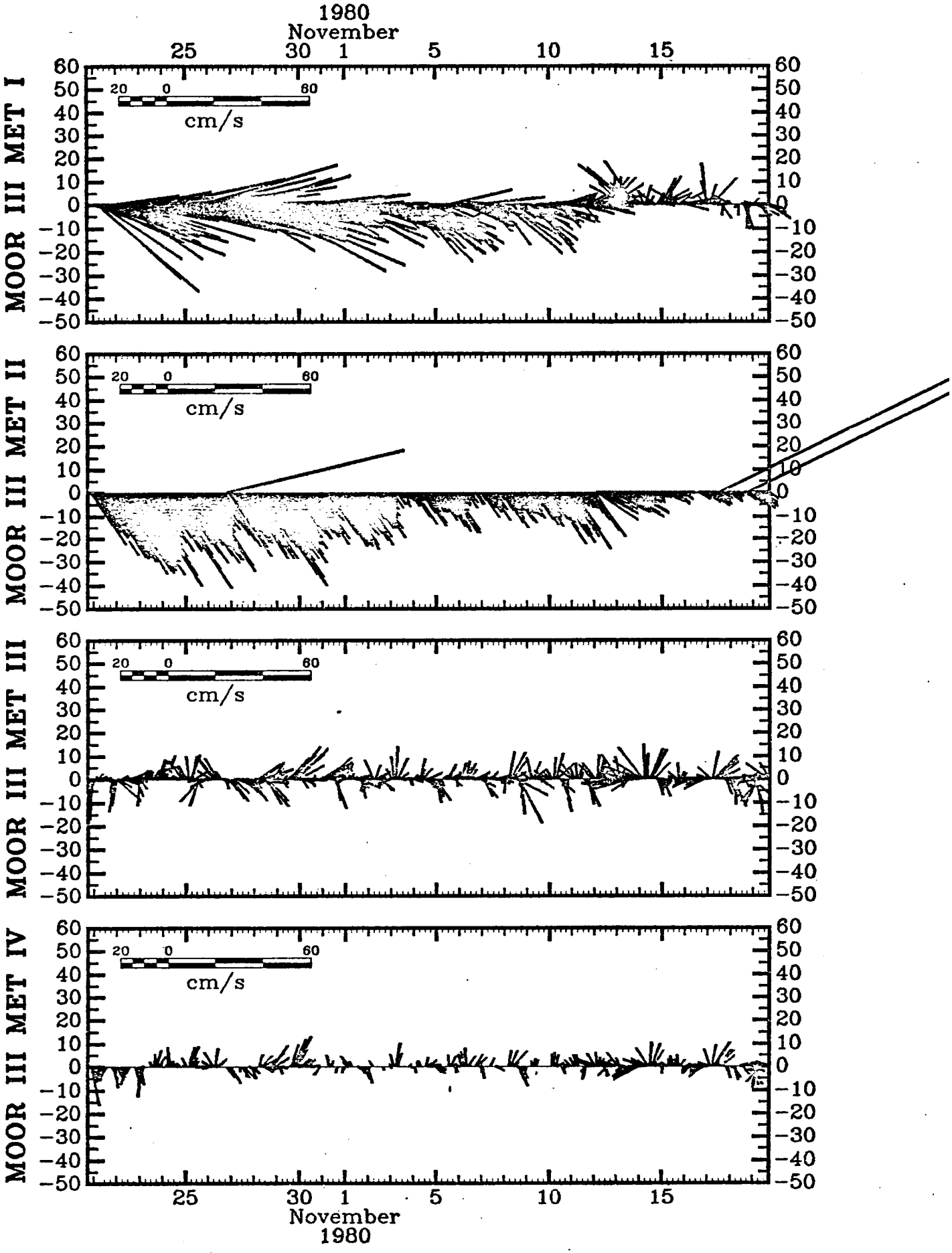
1981
February


1980
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
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cm/s
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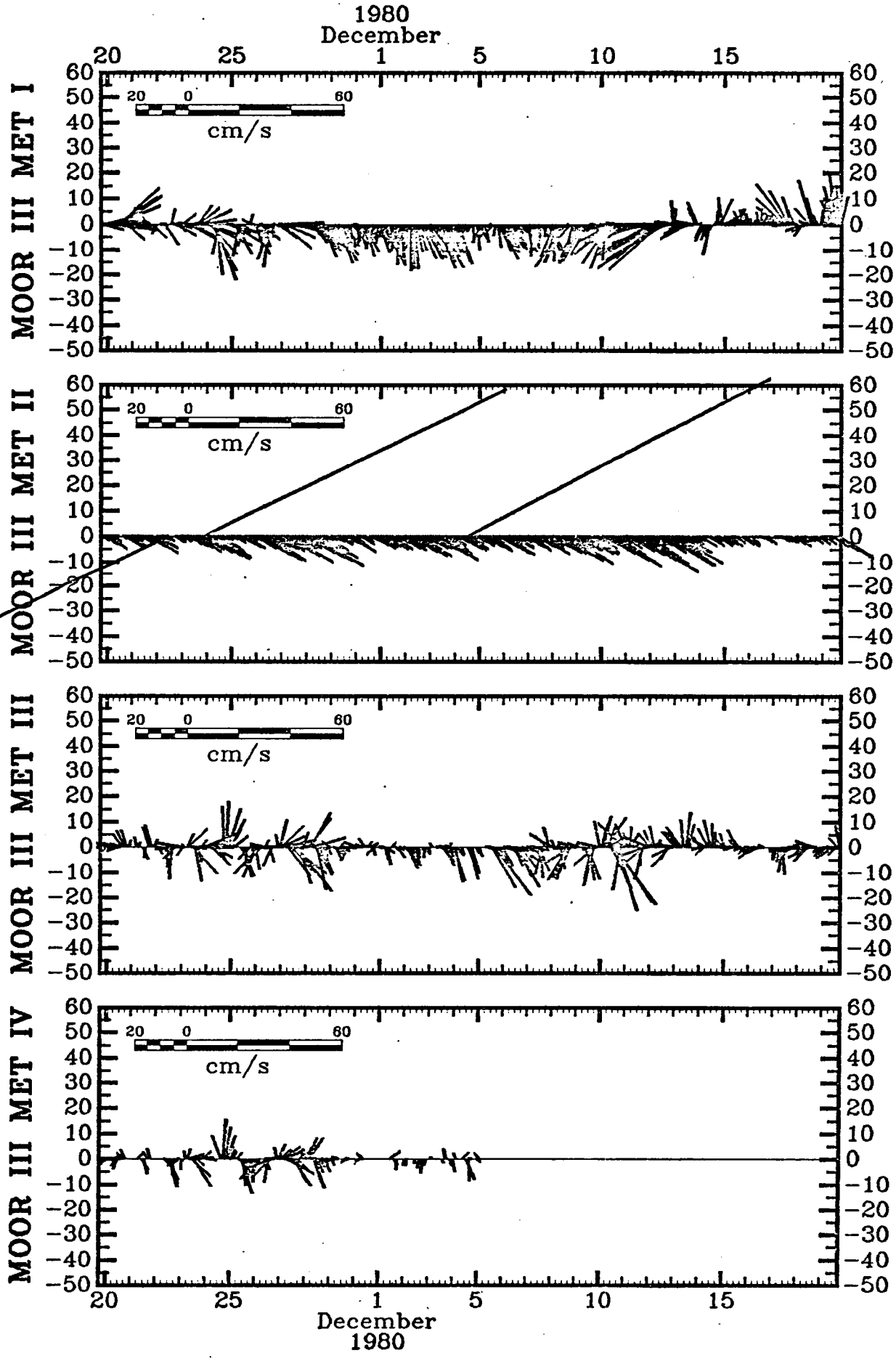
1980
November


1980
December
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
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cm/s
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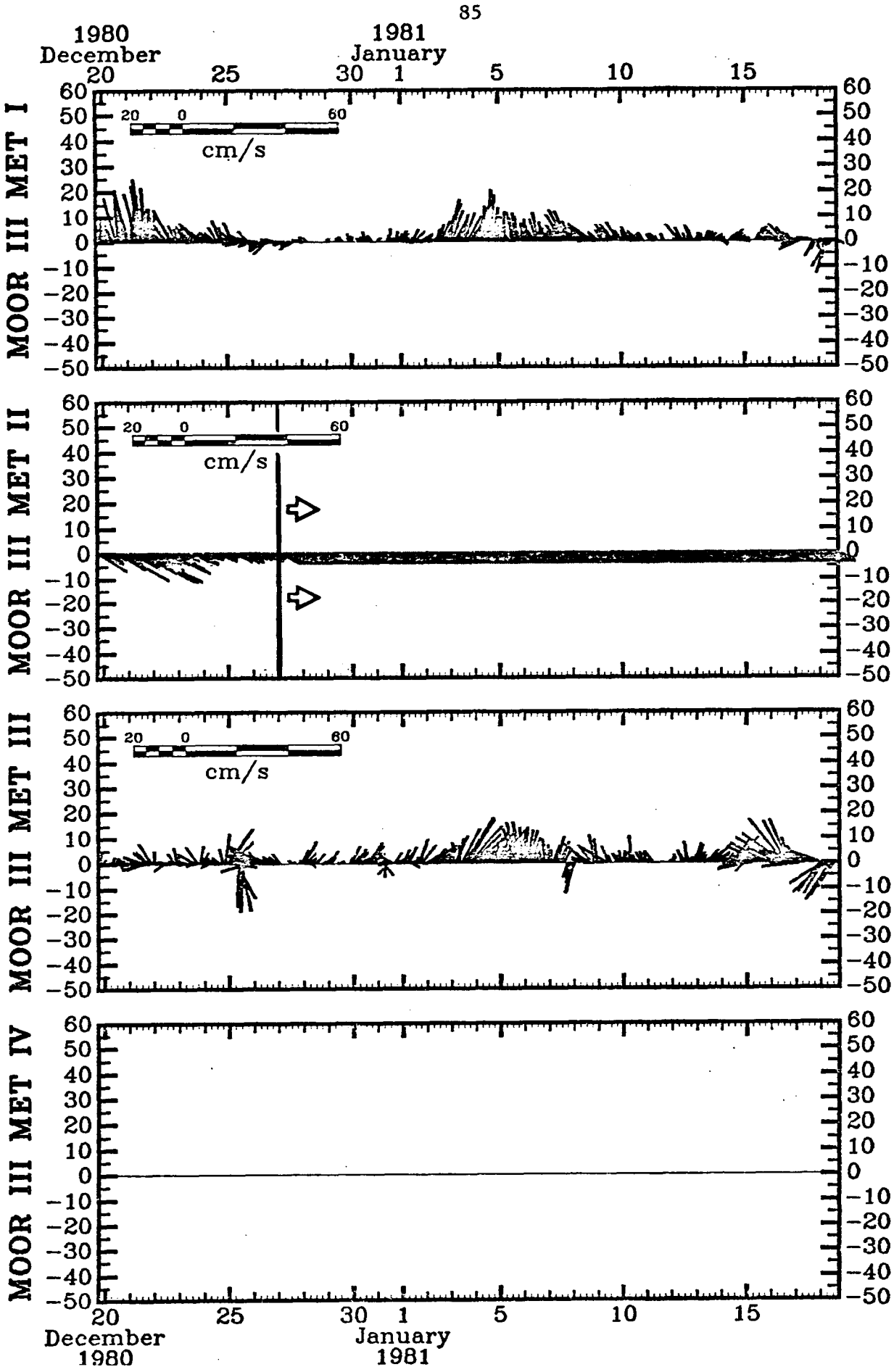
December
1980


1980
December
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
20 0 60
cm/s
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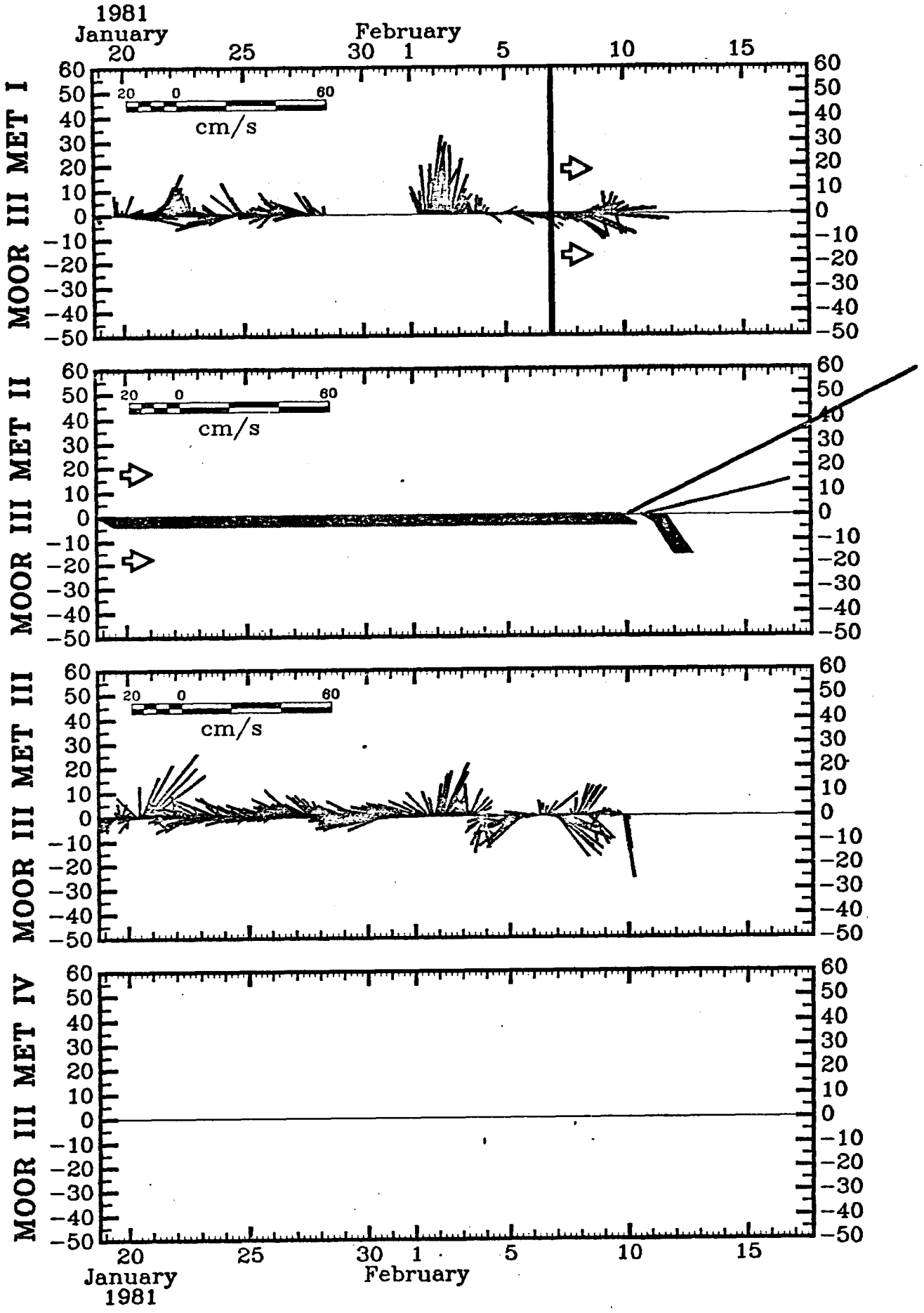
December
1980
January
1981


1981
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
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cm/s
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−50
January
1981
February

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 4 (95 m), FEB 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	2.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.36
10- 19	1.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.93
20- 29	1.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.12
30- 39	0.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94
40- 49	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75
50- 59	0.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94
60- 69	0.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46
70- 79	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60
80- 89	0.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.99
90- 99	1.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.08
100-109	1.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.52
110-119	2.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.24
120-129	3.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.80
130-139	5.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.26
140-149	7.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.79
150-159	5.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.69
160-169	4.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.09
170-179	3.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.55
180-189	2.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.42
190-199	1.89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.89
200-209	1.95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.95
210-219	1.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.52
220-229	1.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.31
230-239	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
240-249	1.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.20
250-259	0.85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85
260-269	0.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.96
270-279	0.95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95
280-289	1.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.41
290-299	1.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.58
300-309	2.85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.85
310-319	6.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.17
320-329	10.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.06
330-339	9.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.25
340-349	5.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.26
350-359	4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.00
TOTAL %	99.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 0.013

SPMEAN= 0.499 SPVAR= 0.249 DIMEAN=217.628

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 1 (52 m), FEB 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.95	0.92	0.47	0.25	0.16	0.10	0.05	0.01	0.0	0.0	0.0	0.0	2.82
10- 19	0.54	0.97	0.61	0.27	0.11	0.0	0.03	0.03	0.0	0.0	0.0	0.0	2.55
20- 29	0.68	0.85	0.56	0.21	0.03	0.04	0.0	0.0	0.0	0.0	0.0	0.0	2.36
30- 39	0.83	0.68	0.53	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.10
40- 49	0.69	0.32	0.30	0.15	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.49
50- 59	0.52	0.40	0.32	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.46
60- 69	0.48	0.49	0.33	0.13	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.46
70- 79	0.52	0.30	0.42	0.21	0.08	0.13	0.01	0.10	0.11	0.14	0.16	0.03	2.21
80- 89	0.43	0.43	0.44	0.39	0.29	0.45	0.45	0.57	0.24	0.16	0.13	0.09	4.08
90- 99	0.30	0.47	0.92	0.45	0.44	0.77	0.61	0.44	0.37	0.64	0.49	0.29	6.20
100-109	0.32	1.00	0.87	0.73	0.57	0.64	0.64	0.37	0.37	0.43	0.40	0.21	6.55
110-119	0.35	0.87	0.76	0.68	0.80	0.48	0.61	0.37	0.16	0.05	0.11	0.16	5.40
120-129	0.34	0.71	0.66	0.44	0.29	0.40	0.39	0.15	0.11	0.01	0.01	0.06	3.59
130-139	0.35	0.37	0.47	0.21	0.21	0.28	0.20	0.03	0.01	0.04	0.03	0.01	2.21
140-149	0.34	0.57	0.88	0.47	0.18	0.08	0.0	0.0	0.0	0.0	0.0	0.0	2.51
150-159	0.24	0.38	1.26	0.48	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.44
160-169	0.18	0.64	0.58	0.09	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.51
170-179	0.27	0.67	0.24	0.30	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.55
180-189	0.21	0.45	0.37	0.21	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.26
190-199	0.32	0.49	0.56	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.49
200-209	0.23	0.43	0.61	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.58
210-219	0.20	0.43	0.48	0.15	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.31
220-229	0.29	0.42	0.23	0.05	0.06	0.03	0.03	0.0	0.0	0.0	0.0	0.0	1.10
230-239	0.39	0.56	0.23	0.13	0.18	0.13	0.05	0.0	0.0	0.0	0.0	0.0	1.65
240-249	0.48	0.45	0.20	0.09	0.11	0.06	0.0	0.0	0.0	0.0	0.0	0.0	1.40
250-259	0.28	0.56	0.14	0.05	0.28	0.03	0.0	0.0	0.0	0.0	0.0	0.0	1.33
260-269	0.42	0.72	0.25	0.09	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.62
270-279	0.43	0.37	0.28	0.13	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.28
280-289	0.69	0.49	0.30	0.13	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.69
290-299	0.71	0.56	0.15	0.05	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.51
300-309	0.76	1.04	0.29	0.03	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.17
310-319	0.78	0.90	0.20	0.06	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.98
320-329	1.28	1.51	0.39	0.25	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.53
330-339	1.26	1.16	0.56	0.14	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.13
340-349	1.29	1.05	0.50	0.28	0.19	0.04	0.01	0.0	0.0	0.0	0.0	0.0	3.36
350-359	1.24	1.74	0.85	0.35	0.29	0.20	0.01	0.0	0.0	0.0	0.0	0.0	4.68
TOTAL %	19.58	24.35	17.18	8.38	5.10	3.88	3.09	2.06	1.38	1.48	1.34	0.86	

PERCENT AT 0 CM/SEC=11.324

SPMEAN= 12.219 SPVAR=300.940 DIMEAN=177.606

-PERCE

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 2 (63 m), FEB 81 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
10- 19	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
20- 29	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
30- 39	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19
40- 49	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
50- 59	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13
60- 69	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.28
70- 79	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.01	0.09
80- 89	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
90- 99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100-109	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
110-119	35.38	6.07	2.67	0.89	0.23	0.01	0.0	0.0	0.0	0.0	0.0	0.0	45.25
120-129	13.12	11.37	5.41	2.33	0.67	0.02	0.0	0.0	0.0	0.0	0.0	0.0	32.93
130-139	0.01	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
140-149	1.86	3.08	3.35	2.38	3.29	2.61	1.84	0.88	0.57	0.24	0.0	0.0	20.11
150-159	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
160-169	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
170-179	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27
180-189	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.01
190-199	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200-209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210-219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220-229	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230-239	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01
240-249	0.07	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.26
250-259	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01
260-269	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
270-279	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
280-289	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
290-299	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300-309	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
310-319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320-329	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
330-339	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
340-349	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350-359	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
TOTAL %	51.60	20.52	11.44	5.59	4.23	2.64	1.84	0.89	0.58	0.24	0.0	0.37	

PERCENT AT 0 CM/SEC= 0.049
SPMEAN= 7.868 SPVAR=191.850 DIMEAN=124.325

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 3 (90 m), FEB 81 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.90	1.01	0.75	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.80
10- 19	1.36	1.55	0.99	0.26	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.20
20- 29	1.10	1.39	0.73	0.26	0.11	0.01	0.0	0.0	0.0	0.0	0.0	0.0	3.60
30- 39	0.91	1.33	0.75	0.36	0.23	0.01	0.05	0.0	0.0	0.0	0.0	0.0	3.64
40- 49	0.94	1.20	1.11	0.36	0.04	0.06	0.04	0.0	0.0	0.0	0.0	0.0	3.75
50- 59	0.84	1.55	0.51	0.08	0.01	0.06	0.03	0.0	0.0	0.0	0.0	0.0	3.08
60- 69	0.89	1.03	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.30
70- 79	0.59	0.48	0.11	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.20
80- 89	0.85	0.54	0.11	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.54
90- 99	0.76	0.46	0.16	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
100-109	0.85	0.70	0.09	0.04	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.69
110-119	0.76	0.66	0.13	0.09	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.70
120-129	0.69	0.63	0.18	0.19	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.78
130-139	0.81	0.71	0.58	0.13	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.36
140-149	0.75	0.81	0.59	0.26	0.29	0.08	0.04	0.0	0.0	0.0	0.0	0.0	2.81
150-159	0.74	0.91	0.61	0.25	0.10	0.05	0.0	0.0	0.0	0.0	0.0	0.0	2.66
160-169	0.93	0.83	0.73	0.24	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.79
170-179	0.73	0.76	0.64	0.19	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.34
180-189	0.56	0.46	0.50	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.66
190-199	0.59	0.64	0.45	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.84
200-209	0.55	0.25	0.51	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
210-219	0.54	0.29	0.41	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.44
220-229	0.51	0.30	0.33	0.11	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.28
230-239	0.76	0.70	0.31	0.15	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.98
240-249	0.76	0.91	0.29	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.11
250-259	0.96	0.86	0.38	0.39	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.73
260-269	1.10	1.19	0.75	0.83	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.25
270-279	0.94	1.39	0.76	0.84	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.18
280-289	0.95	1.38	0.93	0.40	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.89
290-299	0.98	1.26	1.21	0.49	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.95
300-309	0.75	1.20	0.66	0.19	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.86
310-319	0.74	1.13	0.58	0.13	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.61
320-329	0.78	1.33	0.53	0.08	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.76
330-339	0.74	1.31	0.30	0.08	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.48
340-349	0.85	0.96	0.33	0.10	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.26
350-359	0.81	1.23	0.53	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.73
TOTAL %	29.26	33.32	18.88	7.55	2.58	0.30	0.15	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 7.953
SPMEAN= 7.340 SPVAR= 83.184 DIMEAN=180.655

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 4 (97 m), FEB 81 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.29	1.36	0.14	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.97
10- 19	1.22	1.61	0.63	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.53
20- 29	1.22	1.99	0.77	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.02
30- 39	1.57	1.33	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.39
40- 49	1.36	1.08	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.52
50- 59	1.47	0.84	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.34
60- 69	1.15	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.54
70- 79	0.87	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.12
80- 89	0.63	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87
90- 99	0.45	0.31	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80
100-109	0.84	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94
110-119	0.59	0.28	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91
120-129	0.94	0.38	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.54
130-139	1.43	0.59	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.17
140-149	1.22	1.29	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.90
150-159	1.57	1.64	0.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.64
160-169	1.96	1.57	0.66	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.30
170-179	1.57	1.50	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.39
180-189	1.15	1.08	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.34
190-199	0.94	0.91	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.10
200-209	0.77	0.45	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.33
210-219	1.19	0.77	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.03
220-229	0.59	0.45	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.08
230-239	1.01	1.01	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.27
240-249	0.91	0.70	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.71
250-259	0.84	0.45	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.33
260-269	0.98	0.38	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
270-279	0.77	0.52	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.33
280-289	0.49	0.52	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
290-299	0.35	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.08
300-309	1.08	0.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
310-319	0.66	0.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22
320-329	0.98	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43
330-339	1.40	0.49	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.92
340-349	1.08	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.75
350-359	1.19	1.50	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.94
TOTAL %	37.80	28.88	5.66	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC=27.273
SPMEAN= 3.785 SPVAR= 25.888 DIMEAN=163.204

PERCENTAGE

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 3 (83 m), FEB 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.80	1.46	0.91	0.23	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.42
10- 19	0.62	1.31	0.63	0.17	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
20- 29	0.49	0.82	0.47	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.81
30- 39	0.49	0.91	0.22	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.67
40- 49	0.41	0.53	0.26	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.23
50- 59	0.36	0.62	0.16	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19
60- 69	0.28	0.34	0.21	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.84
70- 79	0.36	0.41	0.10	0.08	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.97
80- 89	0.31	0.34	0.19	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87
90- 99	0.31	0.38	0.21	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.97
100-109	0.40	0.49	0.40	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.44
110-119	0.39	0.65	0.39	0.12	0.04	0.01	0.0	0.0	0.0	0.01	0.0	0.0	1.60
120-129	0.62	1.11	0.54	0.45	0.19	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.94
130-139	0.80	0.94	0.67	0.49	0.30	0.06	0.0	0.0	0.0	0.0	0.0	0.01	3.08
140-149	0.88	1.67	1.90	1.26	0.25	0.03	0.01	0.0	0.0	0.0	0.0	0.0	5.99
150-159	0.89	1.29	1.68	1.10	0.36	0.09	0.01	0.0	0.0	0.0	0.0	0.0	5.43
160-169	0.84	2.01	1.77	1.00	0.39	0.26	0.03	0.0	0.0	0.0	0.0	0.0	6.29
170-179	0.70	2.19	1.02	0.47	0.28	0.04	0.01	0.0	0.0	0.0	0.0	0.0	4.71
180-189	0.53	1.62	0.50	0.16	0.05	0.03	0.0	0.0	0.0	0.0	0.0	0.0	2.89
190-199	0.65	1.40	0.45	0.09	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.67
200-209	0.38	0.94	0.30	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.64
210-219	0.44	0.91	0.40	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.79
220-229	0.32	0.53	0.21	0.04	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.11
230-239	0.50	0.57	0.27	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.45
240-249	0.45	0.44	0.16	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15
250-259	0.39	0.48	0.18	0.08	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19
260-269	0.36	0.36	0.14	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91
270-279	0.38	0.26	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70
280-289	0.39	0.40	0.10	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93
290-299	0.72	0.58	0.22	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.58
300-309	1.04	1.04	0.53	0.41	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.13
310-319	0.82	1.37	1.04	0.60	0.16	0.05	0.0	0.0	0.0	0.0	0.0	0.0	4.02
320-329	1.09	2.80	2.50	1.37	0.38	0.04	0.0	0.0	0.0	0.0	0.0	0.0	8.17
330-339	1.18	2.73	2.33	1.27	0.48	0.05	0.01	0.0	0.0	0.0	0.0	0.0	8.05
340-349	1.14	2.23	1.48	0.78	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.98
350-359	0.76	1.99	1.36	0.56	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.77
TOTAL %	21.30	38.10	23.95	11.54	3.64	0.69	0.08	0.0	0.0	0.01	0.0	0.01	

PERCENT AT 0 CM/SEC= 0.686

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 1 (54 m), JAN 81 RECOVERY

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.33	0.99	0.76	0.45	0.04	0.07	0.09	0.0	0.0	0.0	0.0	0.0	2.73
10- 19	0.31	0.93	0.69	0.40	0.13	0.13	0.03	0.0	0.0	0.0	0.0	0.0	2.63
20- 29	0.52	0.60	0.36	0.18	0.15	0.06	0.0	0.0	0.0	0.0	0.0	0.0	1.87
30- 39	0.46	0.76	0.22	0.30	0.16	0.18	0.01	0.0	0.0	0.0	0.0	0.0	2.12
40- 49	0.46	0.90	0.21	0.31	0.27	0.10	0.07	0.01	0.0	0.0	0.0	0.0	2.34
50- 59	0.64	1.03	0.39	0.34	0.40	0.42	0.19	0.07	0.04	0.0	0.0	0.0	3.54
60- 69	0.57	1.15	0.39	0.27	0.52	0.61	0.40	0.27	0.16	0.01	0.0	0.0	4.36
70- 79	0.67	1.39	0.72	0.24	0.61	0.38	0.43	0.54	0.16	0.25	0.07	0.0	5.42
80- 89	0.72	1.03	0.42	0.21	0.43	0.61	0.64	0.40	0.46	0.72	0.22	0.10	5.97
90- 99	1.10	0.99	0.67	0.42	0.51	0.91	0.39	0.46	0.40	0.34	0.36	0.13	6.69
100-109	1.10	1.05	0.72	0.46	0.28	0.31	0.48	0.25	0.06	0.07	0.40	0.25	5.45
110-119	0.97	0.73	0.54	0.46	0.39	0.16	0.09	0.03	0.0	0.0	0.06	0.12	3.55
120-129	1.42	0.87	0.34	0.39	0.19	0.03	0.06	0.03	0.0	0.0	0.0	0.03	3.36
130-139	1.60	1.46	0.43	0.27	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.94
140-149	1.43	1.08	0.67	0.39	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.57
150-159	1.09	0.90	0.57	0.28	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.88
160-169	1.36	0.58	0.57	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.75
170-179	1.02	0.79	0.34	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.24
180-189	0.48	0.81	0.09	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
190-199	0.87	0.64	0.04	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.58
200-209	0.91	0.19	0.09	0.03	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.24
210-219	0.64	0.27	0.12	0.06	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.13
220-229	0.58	0.46	0.15	0.13	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.36
230-239	0.57	0.25	0.12	0.07	0.12	0.03	0.01	0.0	0.0	0.0	0.0	0.0	1.18
240-249	0.39	0.39	0.27	0.18	0.22	0.12	0.09	0.0	0.0	0.0	0.0	0.0	1.66
250-259	0.58	0.19	0.16	0.27	0.07	0.39	0.19	0.01	0.0	0.0	0.0	0.0	1.88
260-269	0.30	0.30	0.51	0.34	0.22	0.49	0.25	0.0	0.0	0.0	0.0	0.0	2.42
270-279	0.22	0.37	0.24	0.27	0.13	0.56	0.06	0.03	0.0	0.0	0.0	0.0	1.88
280-289	0.24	0.46	0.73	0.45	0.22	0.24	0.06	0.0	0.0	0.0	0.0	0.0	2.40
290-299	0.16	0.64	0.42	0.36	0.37	0.42	0.01	0.0	0.0	0.0	0.0	0.0	2.39
300-309	0.34	0.33	0.18	0.27	0.21	0.01	0.01	0.0	0.0	0.0	0.0	0.0	1.36
310-319	0.31	0.61	0.27	0.19	0.21	0.03	0.06	0.0	0.0	0.0	0.0	0.0	1.69
320-329	0.50	0.79	0.72	0.52	0.27	0.22	0.21	0.01	0.0	0.0	0.0	0.0	3.33
330-339	0.42	0.69	0.78	0.39	0.24	0.15	0.04	0.0	0.0	0.0	0.0	0.0	2.70
340-349	0.52	0.58	0.76	0.21	0.16	0.07	0.0	0.0	0.0	0.0	0.0	0.0	2.31
350-359	0.51	0.94	0.73	0.31	0.12	0.04	0.0	0.0	0.0	0.0	0.0	0.0	2.66
TOTAL %	24.41	26.09	15.38	9.81	7.05	6.75	3.91	2.14	1.30	1.40	1.12	0.64	

PERCENT AT 0 CM/SEC= 0.0

SPMEAN= 13.610 SPVAR=328.041 DIMEAN=157.654

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 2 (80 m), JAN 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.46	0.42	0.20	0.01	0.03	0.0	0.01	0.03	0.07	0.0	0.04	0.0	1.28
10- 19	0.41	0.73	0.20	0.04	0.01	0.0	0.04	0.04	0.01	0.01	0.0	0.01	1.52
20- 29	0.49	0.68	0.14	0.11	0.0	0.03	0.04	0.03	0.0	0.03	0.01	0.01	1.56
30- 39	0.48	0.67	0.26	0.07	0.01	0.0	0.0	0.01	0.0	0.0	0.01	0.0	1.51
40- 49	0.34	0.76	0.22	0.15	0.03	0.01	0.0	0.03	0.01	0.0	0.0	0.0	1.55
50- 59	0.67	0.60	0.48	0.05	0.07	0.01	0.03	0.07	0.01	0.04	0.03	0.0	2.05
60- 69	0.45	0.60	0.37	0.03	0.10	0.0	0.01	0.05	0.01	0.0	0.0	0.01	1.63
70- 79	0.54	0.69	0.31	0.16	0.23	0.01	0.01	0.05	0.05	0.03	0.01	0.0	2.12
80- 89	0.57	0.71	0.41	0.33	0.22	0.26	0.04	0.05	0.04	0.03	0.0	0.0	2.65
90- 99	0.80	1.39	0.76	0.39	0.29	0.20	0.05	0.04	0.05	0.03	0.03	0.0	4.04
100-109	0.52	1.20	1.12	0.42	0.18	0.16	0.14	0.03	0.03	0.01	0.04	0.0	3.83
110-119	0.48	1.44	0.94	0.26	0.24	0.11	0.10	0.13	0.03	0.0	0.01	0.04	3.82
120-129	0.73	1.47	0.82	0.26	0.12	0.08	0.03	0.05	0.0	0.04	0.03	0.03	3.66
130-139	1.01	1.40	1.24	0.22	0.03	0.0	0.0	0.0	0.0	0.03	0.04	0.0	3.96
140-149	0.94	1.13	1.06	0.46	0.0	0.0	0.0	0.01	0.01	0.0	0.0	0.0	3.62
150-159	0.75	1.10	0.56	0.33	0.0	0.0	0.0	0.0	0.01	0.01	0.0	0.0	2.76
160-169	0.83	0.99	0.46	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.50
170-179	0.64	0.72	0.27	0.04	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.0	1.70
180-189	0.71	0.57	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.37
190-199	0.52	0.61	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.25
200-209	0.76	0.69	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	1.62
210-219	1.02	1.10	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.0	2.65
220-229	0.76	0.99	0.44	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.31
230-239	0.88	1.16	0.75	0.41	0.10	0.01	0.0	0.0	0.0	0.0	0.03	0.0	3.33
240-249	0.75	1.36	0.92	0.61	0.37	0.05	0.0	0.0	0.0	0.03	0.0	0.03	4.12
250-259	0.50	1.45	0.97	0.58	0.30	0.05	0.03	0.01	0.01	0.03	0.03	0.0	3.97
260-269	0.61	1.54	0.87	0.97	0.58	0.26	0.03	0.0	0.0	0.0	0.0	0.0	4.85
270-279	0.58	1.18	0.97	0.83	0.46	0.07	0.07	0.0	0.01	0.04	0.01	0.03	4.26
280-289	0.48	1.12	0.88	0.53	0.19	0.03	0.05	0.03	0.0	0.03	0.05	0.01	3.40
290-299	0.63	0.88	0.64	0.22	0.04	0.01	0.0	0.03	0.07	0.12	0.01	0.0	2.60
300-309	0.56	0.75	0.38	0.08	0.01	0.0	0.04	0.03	0.04	0.11	0.03	0.01	2.04
310-319	0.45	0.48	0.10	0.01	0.03	0.04	0.08	0.08	0.07	0.04	0.04	0.01	1.43
320-329	0.38	0.67	0.07	0.0	0.01	0.03	0.10	0.10	0.07	0.10	0.07	0.0	1.58
330-339	0.29	0.63	0.07	0.01	0.04	0.10	0.05	0.12	0.08	0.04	0.03	0.01	1.47
340-349	0.45	0.53	0.16	0.0	0.03	0.03	0.07	0.07	0.05	0.07	0.03	0.01	1.50
350-359	0.31	0.63	0.29	0.07	0.0	0.04	0.03	0.07	0.05	0.07	0.01	0.01	1.58
TOTAL %	21.73	32.98	18.15	8.00	3.71	1.60	1.05	1.22	0.82	0.95	0.61	0.27	

PERCENT AT 0 CM/SEC= 8.907
SPMEAN= 9.722 SPVAR=187.537 DIMEAN=183.135

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 1 (32 m), FEB 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.14	0.43	0.88	0.73	1.08	0.83	0.25	0.13	0.05	0.04	0.01	0.0	4.57
10- 19	0.14	0.61	1.01	0.85	0.80	0.62	0.14	0.05	0.01	0.01	0.01	0.0	4.27
20- 29	0.22	0.52	0.66	0.84	0.71	0.50	0.14	0.11	0.03	0.04	0.0	0.01	3.78
30- 39	0.06	0.53	0.84	0.60	0.61	0.31	0.13	0.09	0.01	0.01	0.0	0.0	3.20
40- 49	0.04	0.48	0.60	0.55	0.42	0.39	0.19	0.08	0.04	0.0	0.0	0.0	2.79
50- 59	0.11	0.31	0.51	0.45	0.41	0.37	0.25	0.08	0.0	0.0	0.0	0.0	2.48
60- 69	0.05	0.31	0.43	0.33	0.32	0.37	0.14	0.05	0.04	0.03	0.0	0.0	2.06
70- 79	0.08	0.10	0.38	0.39	0.27	0.20	0.14	0.08	0.10	0.04	0.0	0.0	1.78
80- 89	0.08	0.17	0.42	0.59	0.59	0.39	0.18	0.18	0.10	0.09	0.03	0.0	2.80
90- 99	0.08	0.20	0.52	0.73	0.75	0.52	0.27	0.25	0.17	0.18	0.06	0.0	3.73
100-109	0.06	0.14	0.52	0.71	0.76	0.67	0.43	0.32	0.25	0.17	0.05	0.01	4.11
110-119	0.10	0.10	0.46	1.04	0.74	0.64	0.57	0.25	0.06	0.01	0.0	0.0	3.99
120-129	0.10	0.15	0.36	0.59	0.80	0.59	0.60	0.10	0.08	0.03	0.01	0.0	3.40
130-139	0.14	0.24	0.23	0.73	0.99	0.93	0.59	0.11	0.04	0.04	0.0	0.0	4.04
140-149	0.22	0.46	1.11	0.78	0.76	0.66	0.52	0.14	0.03	0.0	0.0	0.0	4.67
150-159	0.20	0.48	1.06	0.84	0.84	0.94	0.53	0.14	0.01	0.0	0.0	0.0	5.05
160-169	0.01	0.24	0.81	0.73	0.67	0.45	0.24	0.15	0.01	0.0	0.0	0.0	3.32
170-179	0.04	0.27	0.59	0.53	0.62	0.38	0.15	0.05	0.03	0.01	0.0	0.0	2.67
180-189	0.06	0.17	0.38	0.48	0.41	0.27	0.09	0.03	0.03	0.0	0.0	0.0	1.91
190-199	0.01	0.08	0.23	0.38	0.38	0.37	0.13	0.05	0.01	0.0	0.0	0.0	1.64
200-209	0.03	0.05	0.17	0.32	0.32	0.14	0.13	0.04	0.01	0.0	0.0	0.0	1.20
210-219	0.03	0.05	0.11	0.34	0.28	0.22	0.23	0.06	0.0	0.01	0.0	0.0	1.34
220-229	0.04	0.19	0.19	0.27	0.39	0.36	0.09	0.11	0.04	0.0	0.0	0.0	1.68
230-239	0.10	0.14	0.18	0.22	0.28	0.32	0.13	0.04	0.04	0.0	0.01	0.0	1.45
240-249	0.05	0.17	0.32	0.28	0.20	0.20	0.14	0.08	0.03	0.03	0.0	0.0	1.49
250-259	0.01	0.13	0.14	0.20	0.08	0.15	0.19	0.08	0.01	0.03	0.0	0.0	1.02
260-269	0.03	0.09	0.24	0.17	0.13	0.13	0.19	0.15	0.03	0.04	0.0	0.0	1.18
270-279	0.70	0.22	0.31	0.13	0.19	0.13	0.17	0.09	0.05	0.01	0.0	0.0	1.99
280-289	0.03	0.15	0.24	0.18	0.11	0.22	0.14	0.04	0.03	0.0	0.0	0.0	1.13
290-299	0.01	0.24	0.20	0.34	0.27	0.09	0.06	0.03	0.0	0.0	0.0	0.0	1.30
300-309	0.10	0.33	0.34	0.31	0.31	0.10	0.17	0.13	0.04	0.03	0.0	0.0	1.85
310-319	0.13	0.36	0.59	0.42	0.27	0.27	0.23	0.14	0.05	0.0	0.0	0.0	2.44
320-329	0.20	0.75	0.78	0.48	0.39	0.33	0.22	0.11	0.14	0.01	0.0	0.0	3.43
330-339	0.17	0.84	0.67	0.55	0.46	0.38	0.22	0.22	0.10	0.04	0.0	0.01	3.65
340-349	0.14	0.98	0.67	0.79	0.61	0.39	0.22	0.15	0.10	0.05	0.0	0.0	4.11
350-359	0.10	0.38	0.83	0.95	0.94	0.61	0.34	0.14	0.13	0.03	0.0	0.0	4.46
TOTAL %	3.81	11.06	17.98	18.81	18.18	14.44	8.54	4.10	1.88	0.95	0.19	0.04	

PERCENT AT 0 CM/SEC= 0.0

SPMEAN= 19.978 SPVAR=494.663 DIMEAN=164.952

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 2 (90 m), FEB 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.93	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.20
10- 19	1.67	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.77
20- 29	1.33	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.53
30- 39	1.54	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.84
40- 49	1.02	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.23
50- 59	0.83	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.89
60- 69	1.01	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04
70- 79	1.07	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15
80- 89	1.07	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.24
90- 99	1.19	0.60	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.80
100-109	1.41	0.84	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.36
110-119	1.55	0.96	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.69
120-129	1.16	1.13	0.12	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.42
130-139	1.27	1.00	0.16	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.43
140-149	2.02	1.46	0.08	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.57
150-159	1.85	1.09	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.95
160-169	1.19	0.85	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.06
170-179	1.26	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.42
180-189	1.15	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22
190-199	1.06	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15
200-209	0.58	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.66
210-219	0.76	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87
220-229	0.41	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47
230-239	0.92	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
240-249	0.60	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.61
250-259	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45
260-269	0.50	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54
270-279	0.28	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32
280-289	0.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.52
290-299	0.61	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62
300-309	0.91	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.98
310-319	1.07	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.16
320-329	1.22	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.35
330-339	0.84	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
340-349	1.24	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.42
350-359	1.80	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.03
TOTAL %	39.31	10.92	0.69	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC=49.042

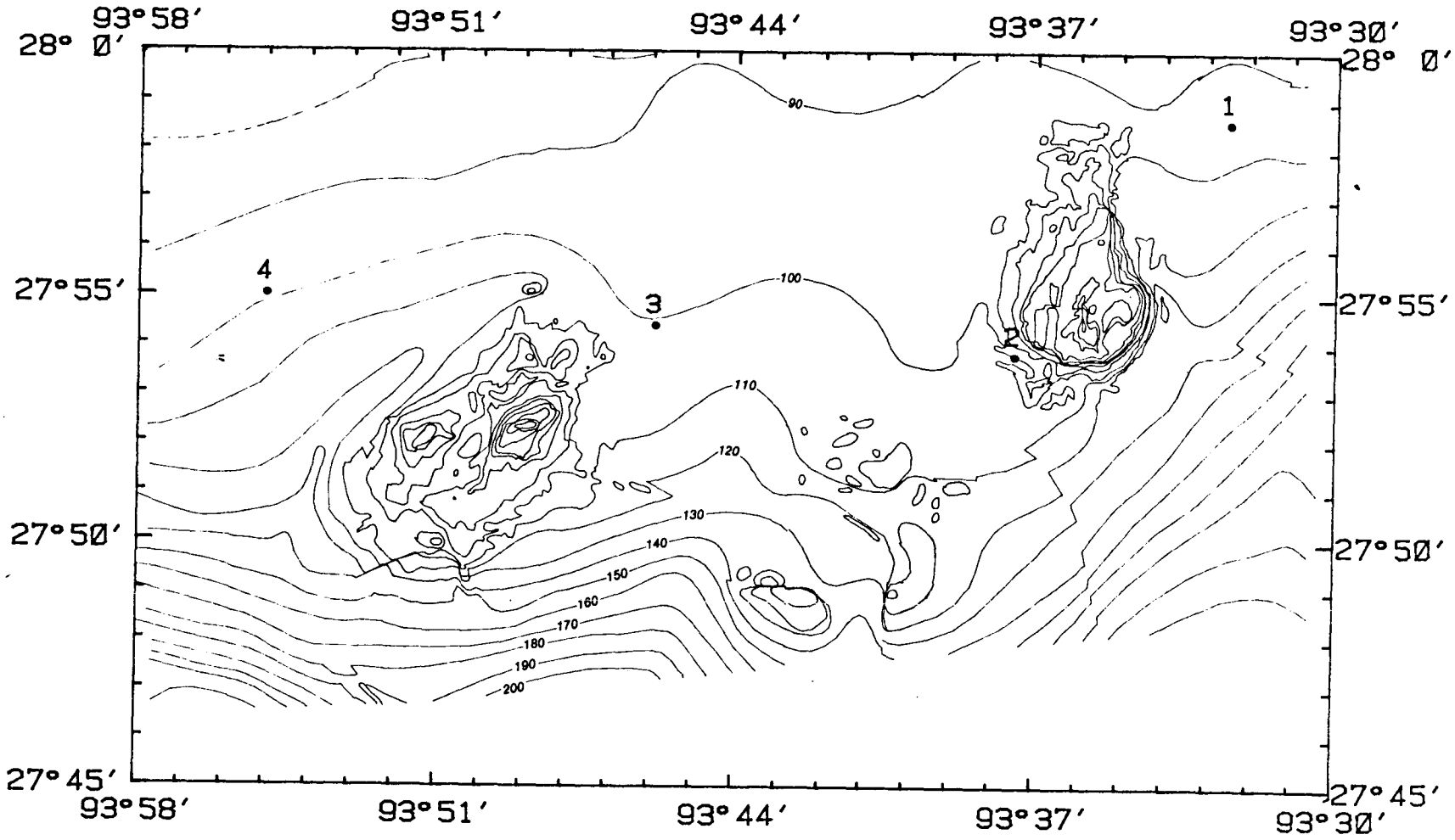
SPMEAN= 1.593 SPVAR= 7.727 DIMEAN=165.506

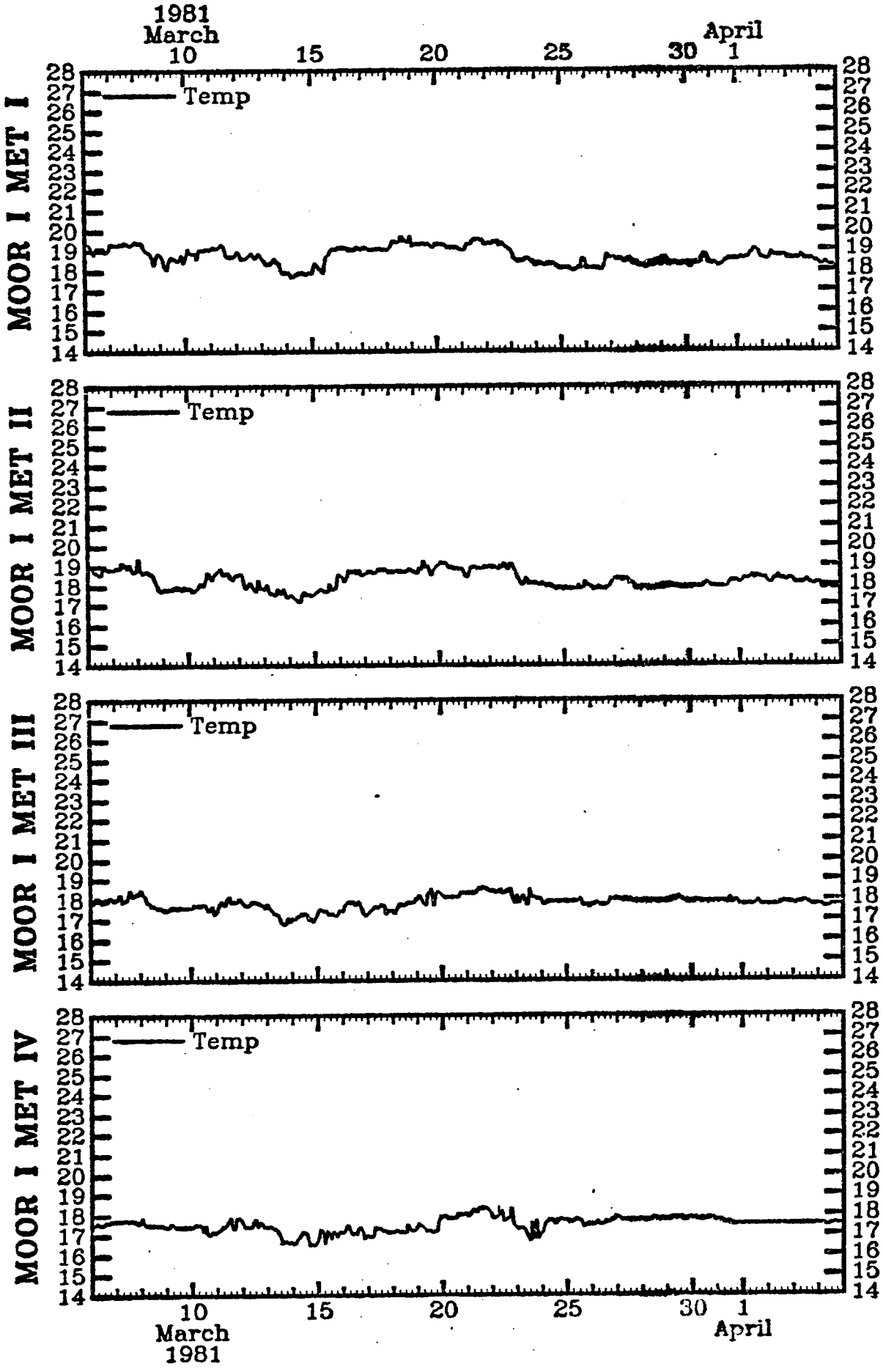
DEPLOYMENT 6: MARCH-JULY 1981

Page

MAP 4

MOORING POSITIONS FOR DEPLOYMENT 6 (MAR-JUL 81)

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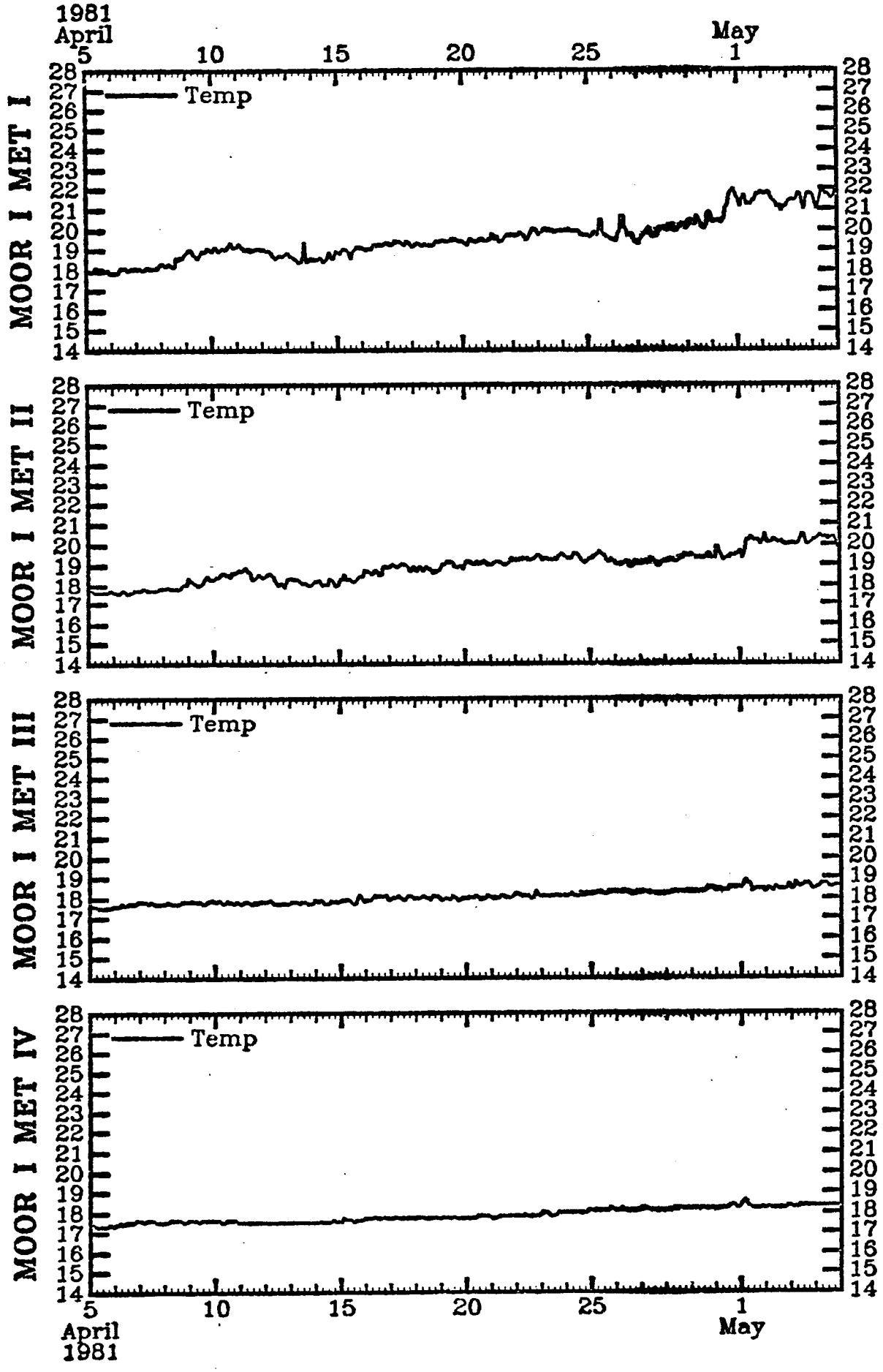
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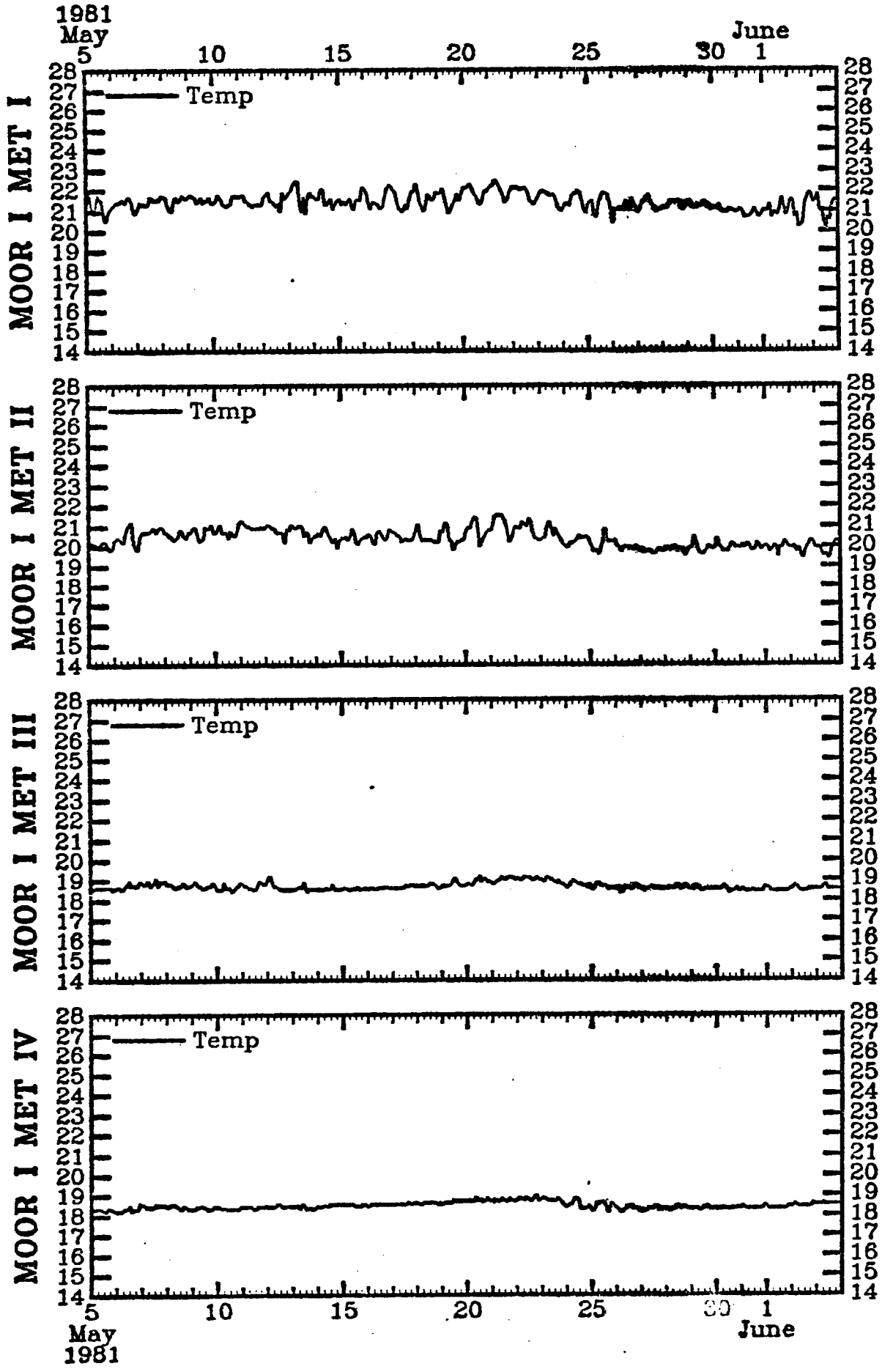
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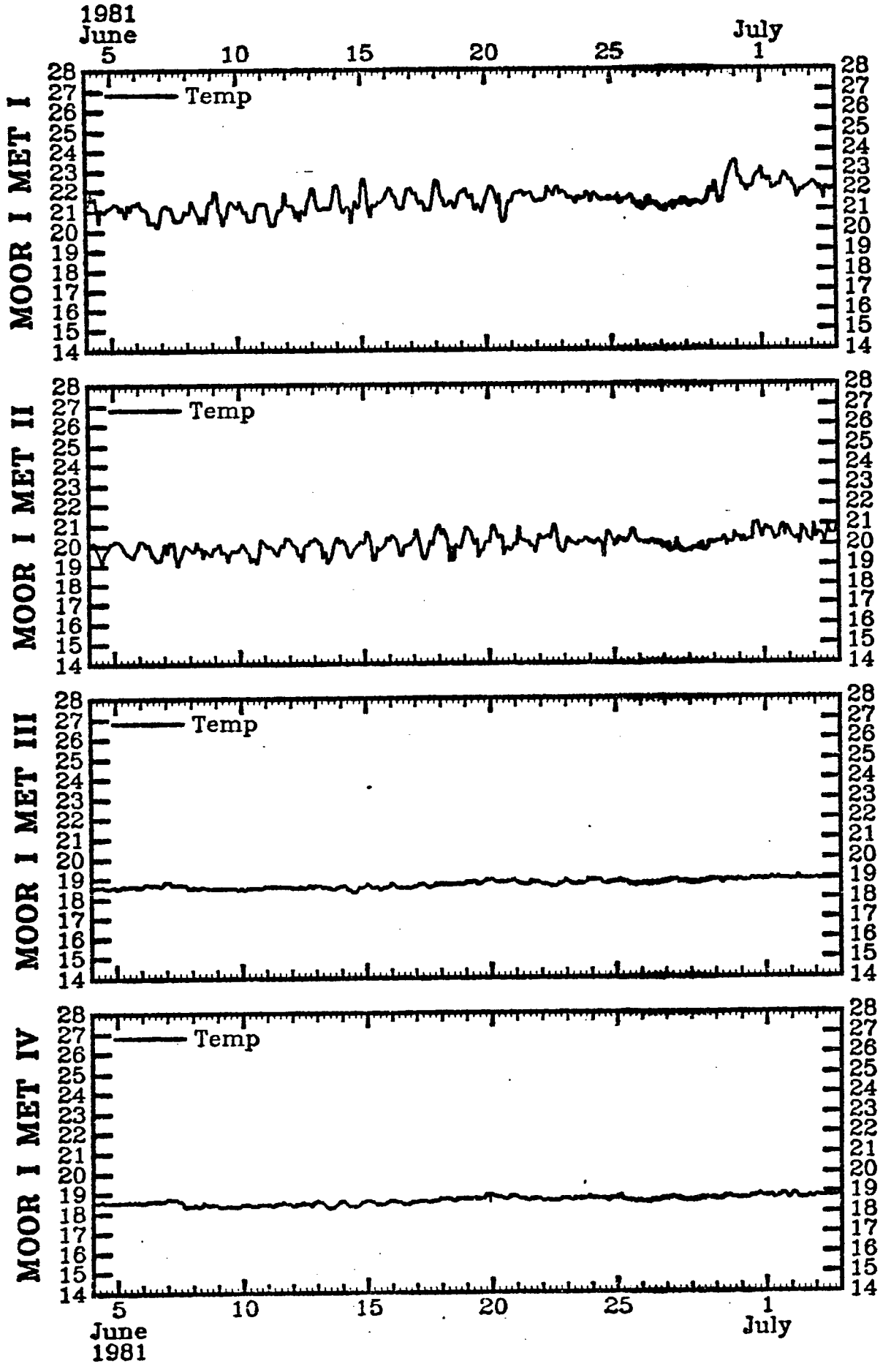
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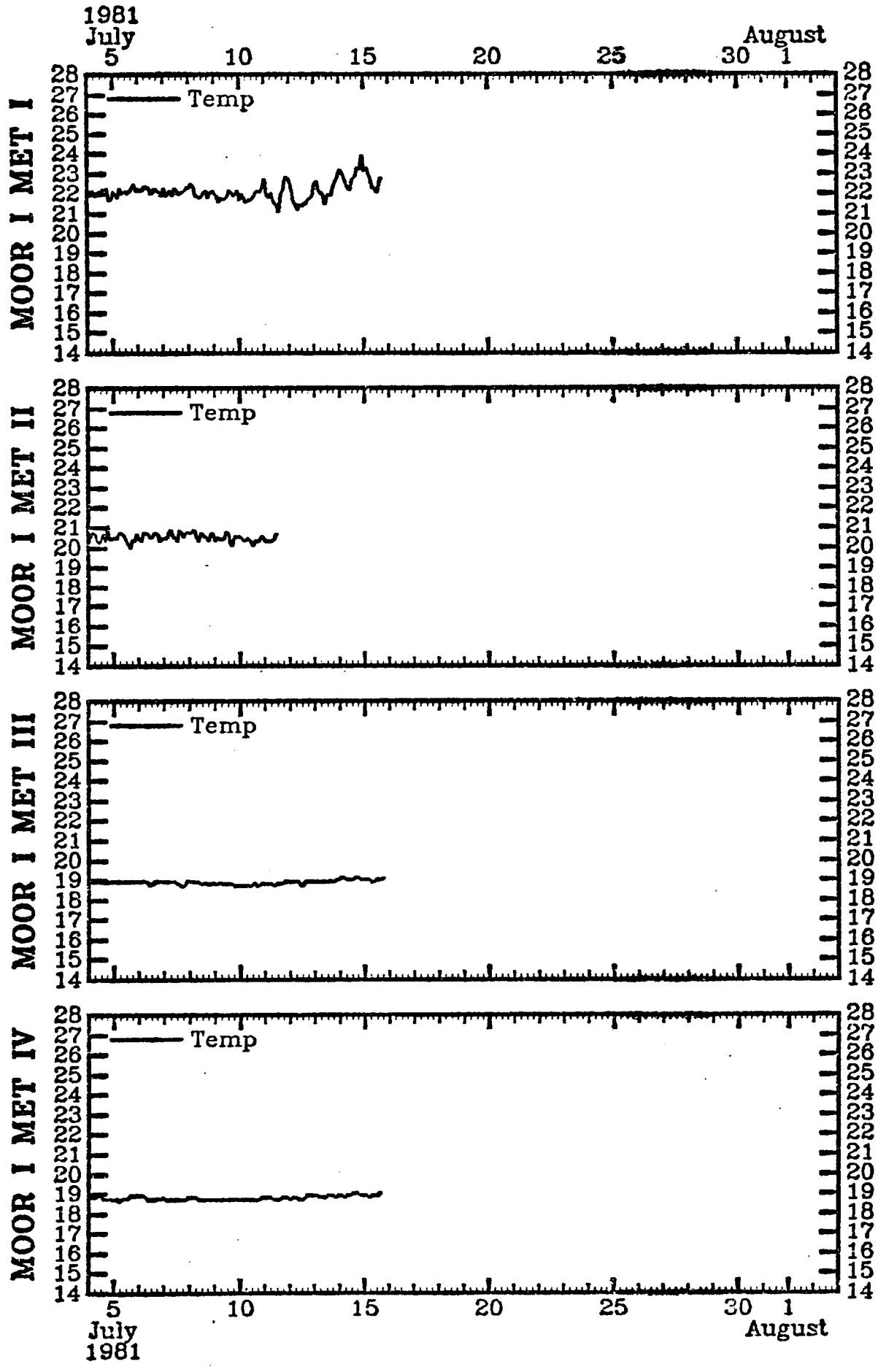
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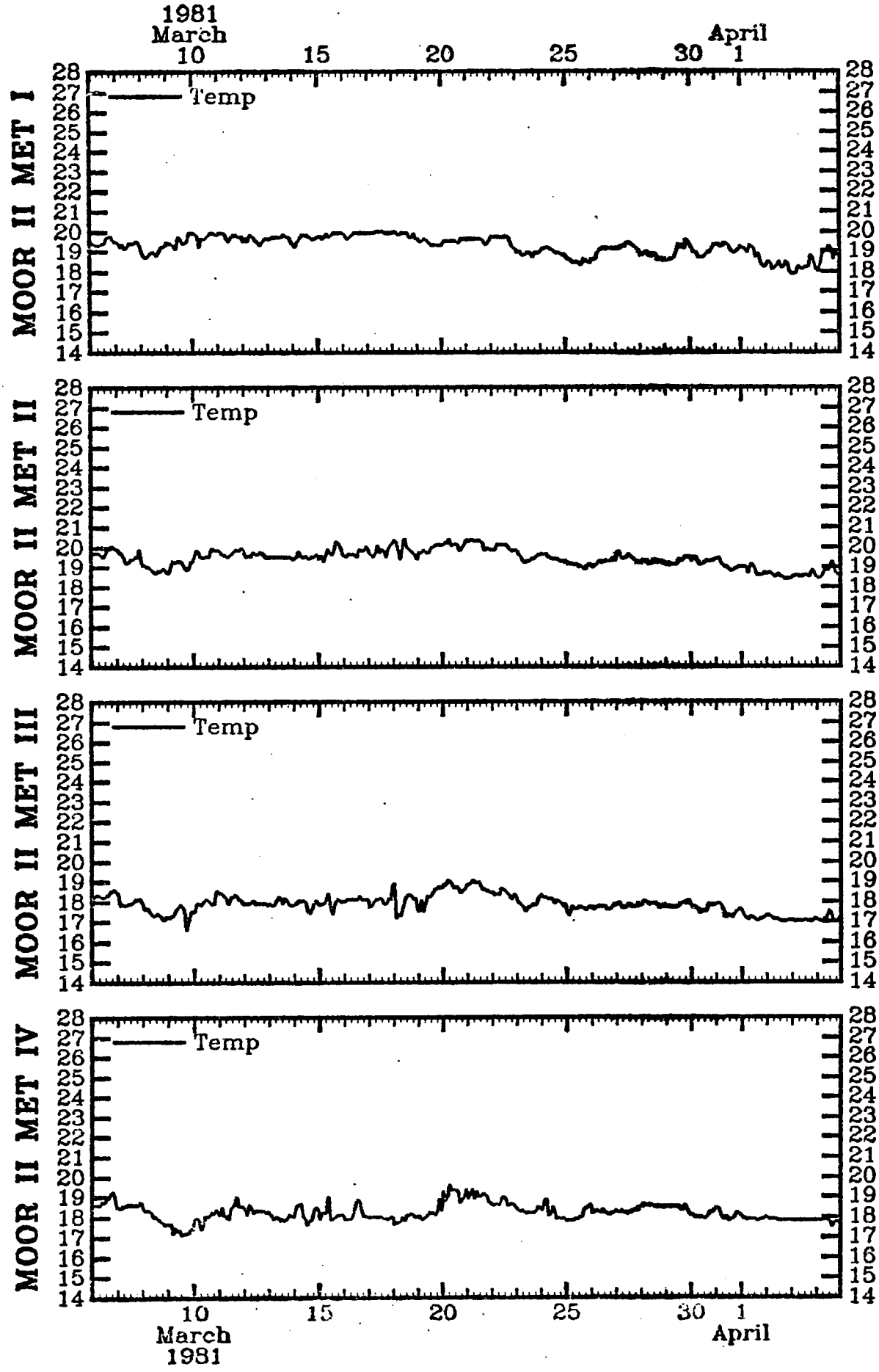
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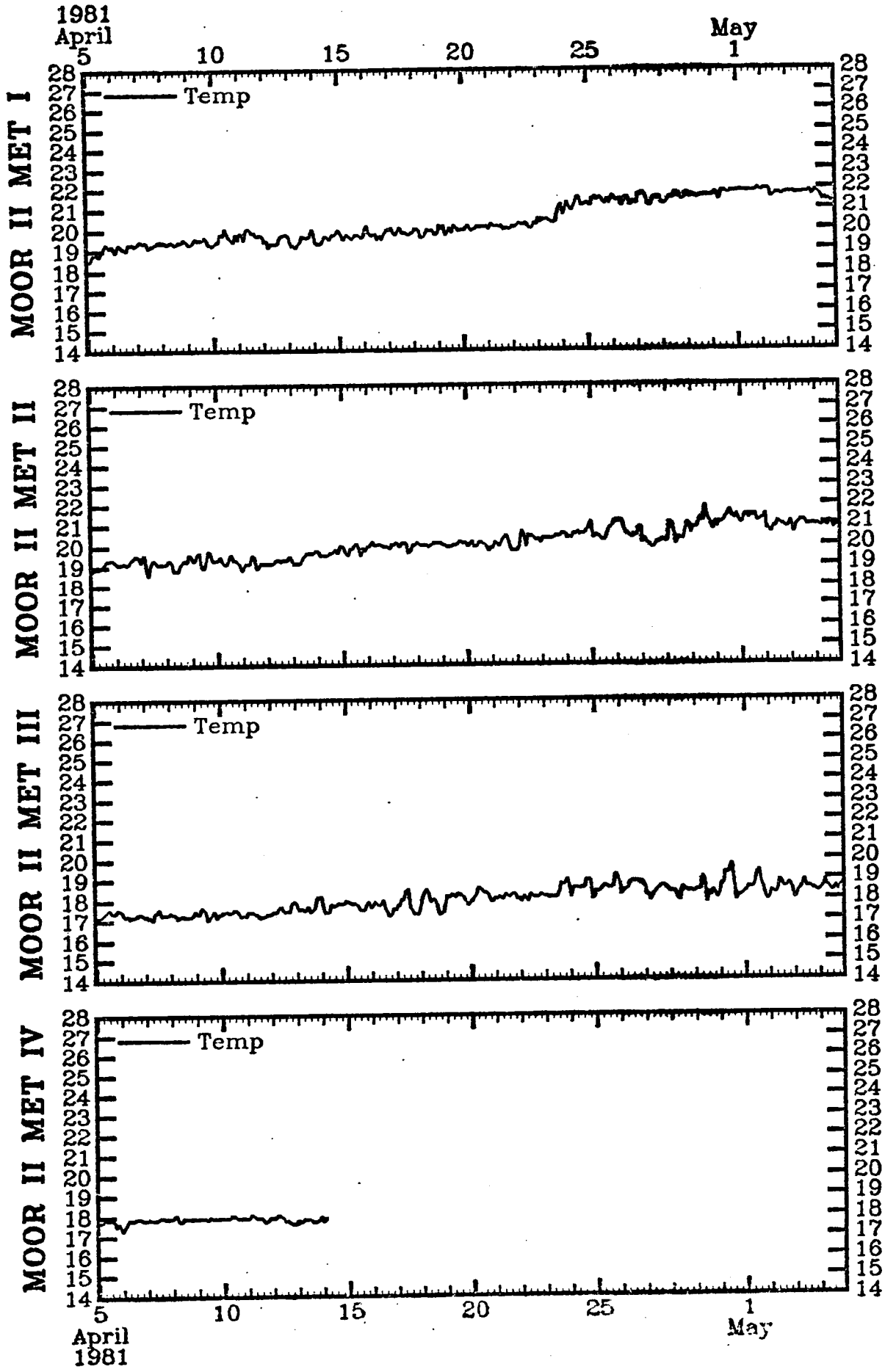
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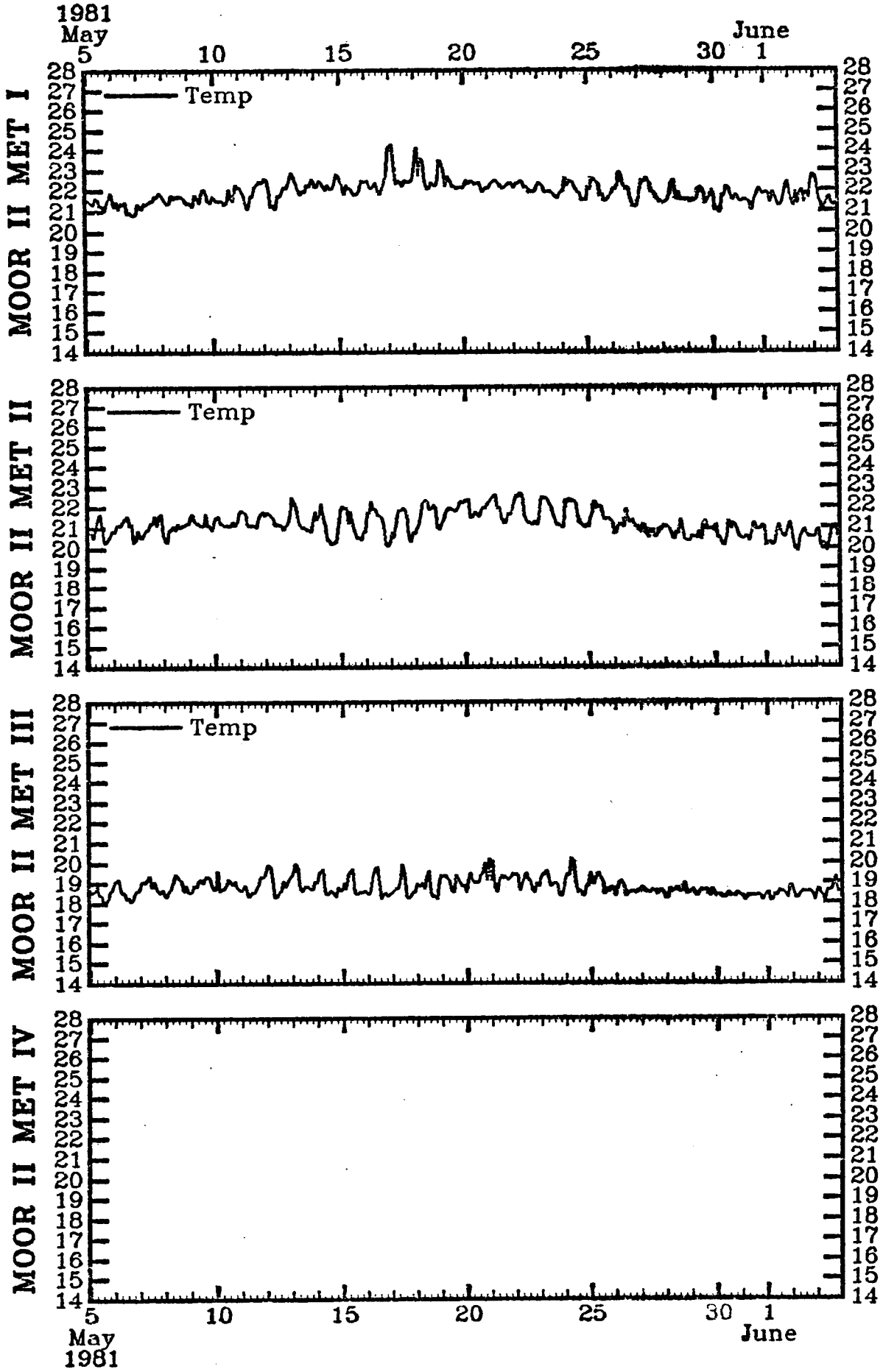
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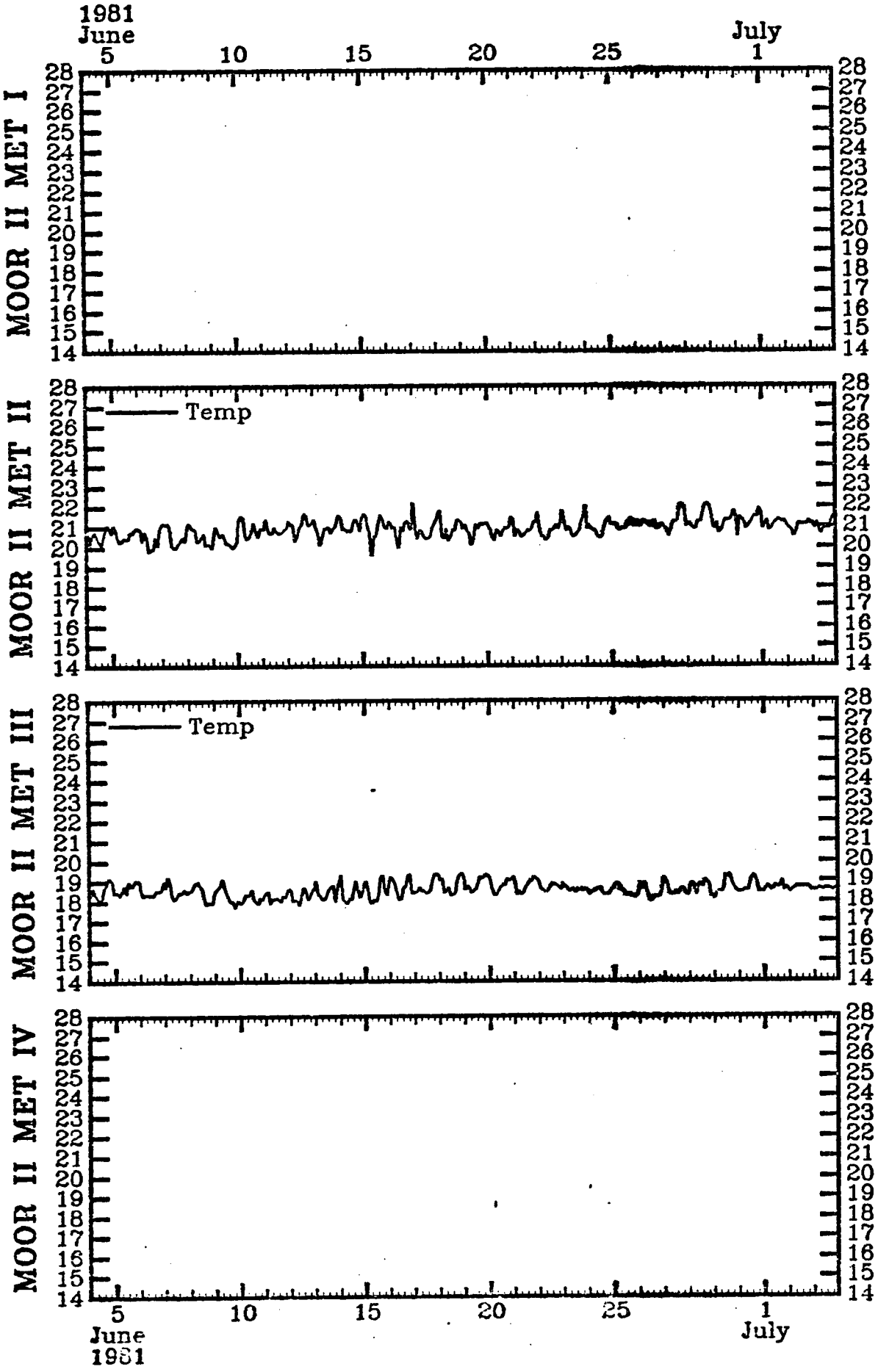
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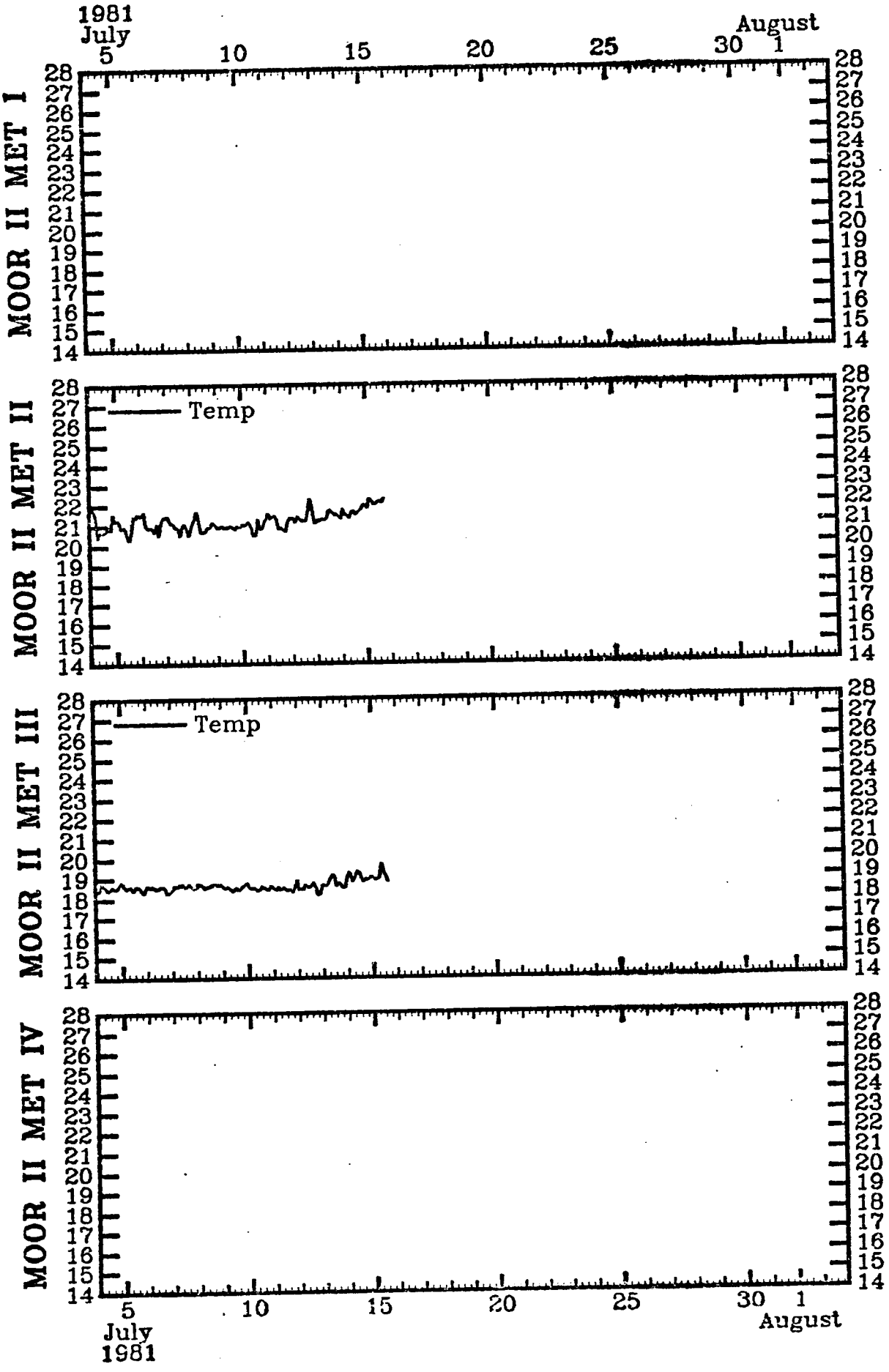
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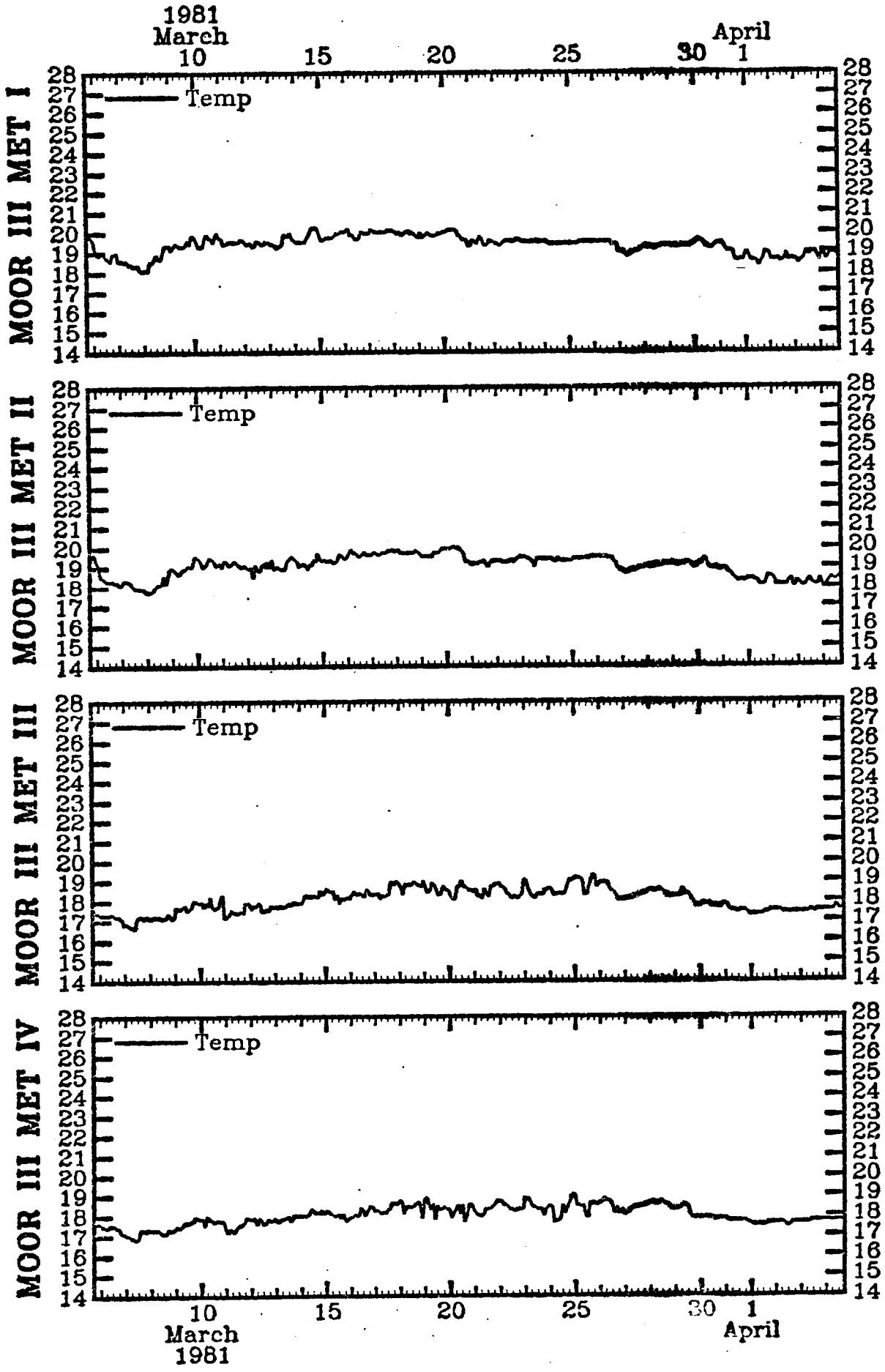
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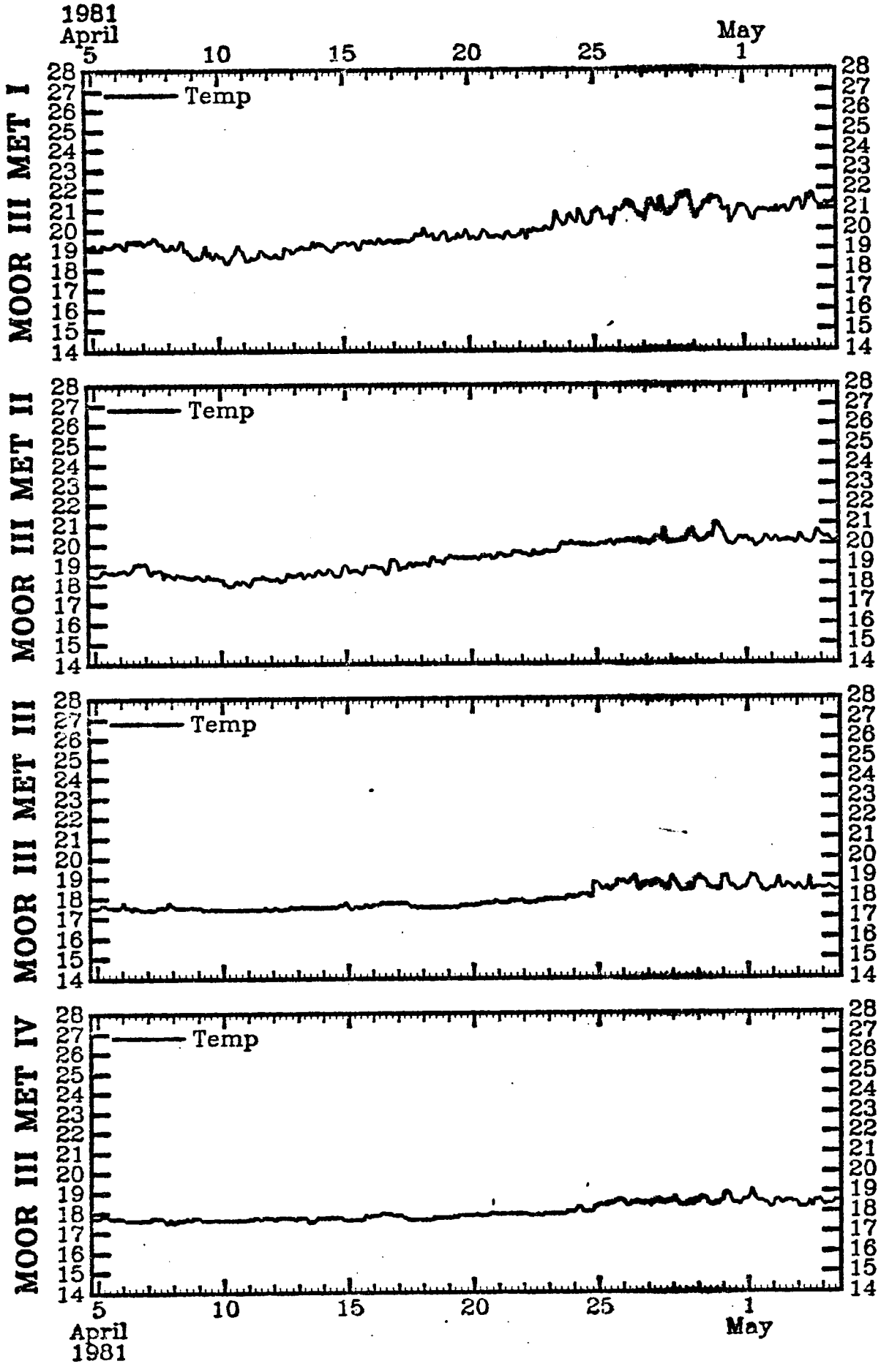
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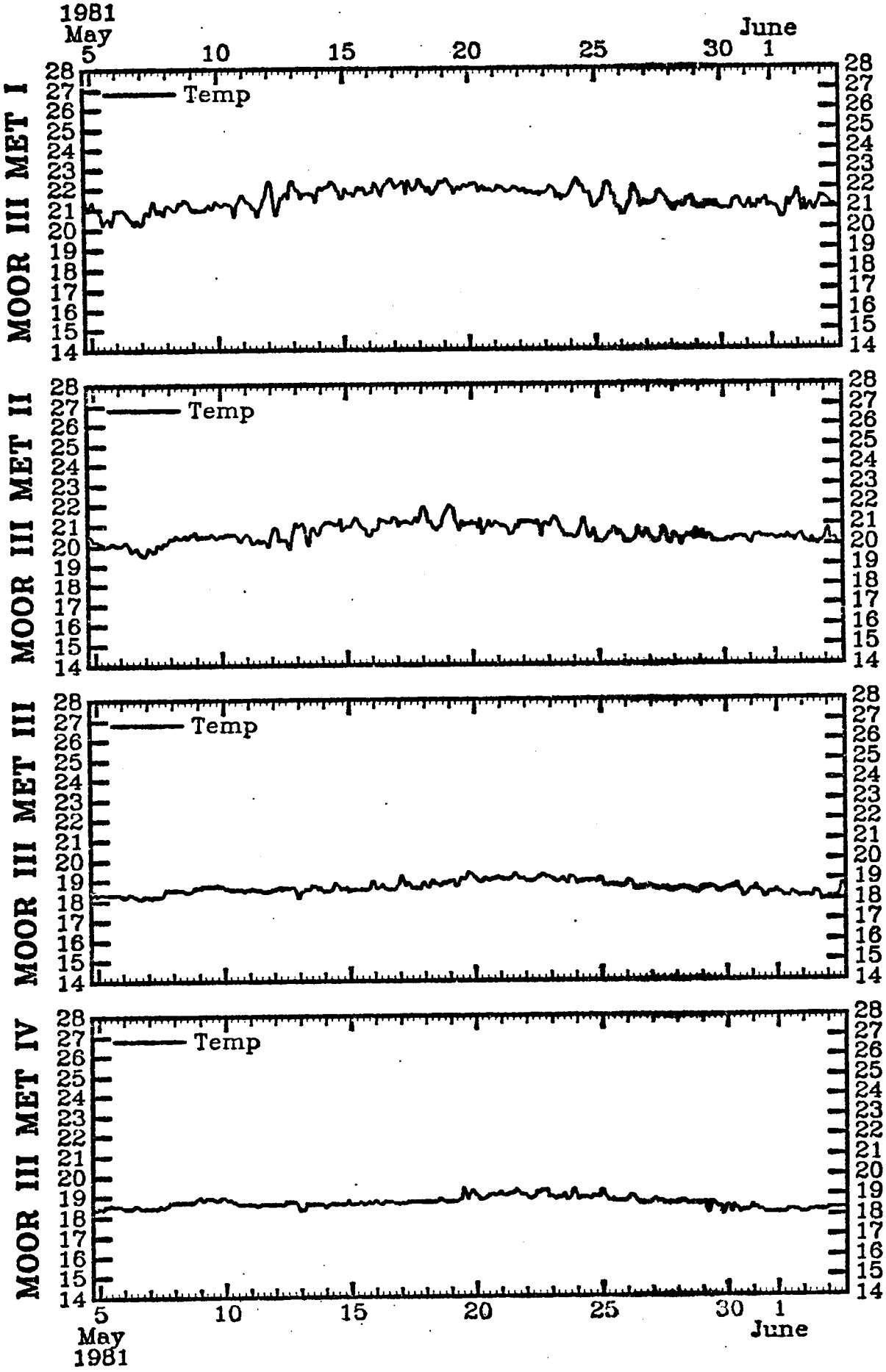
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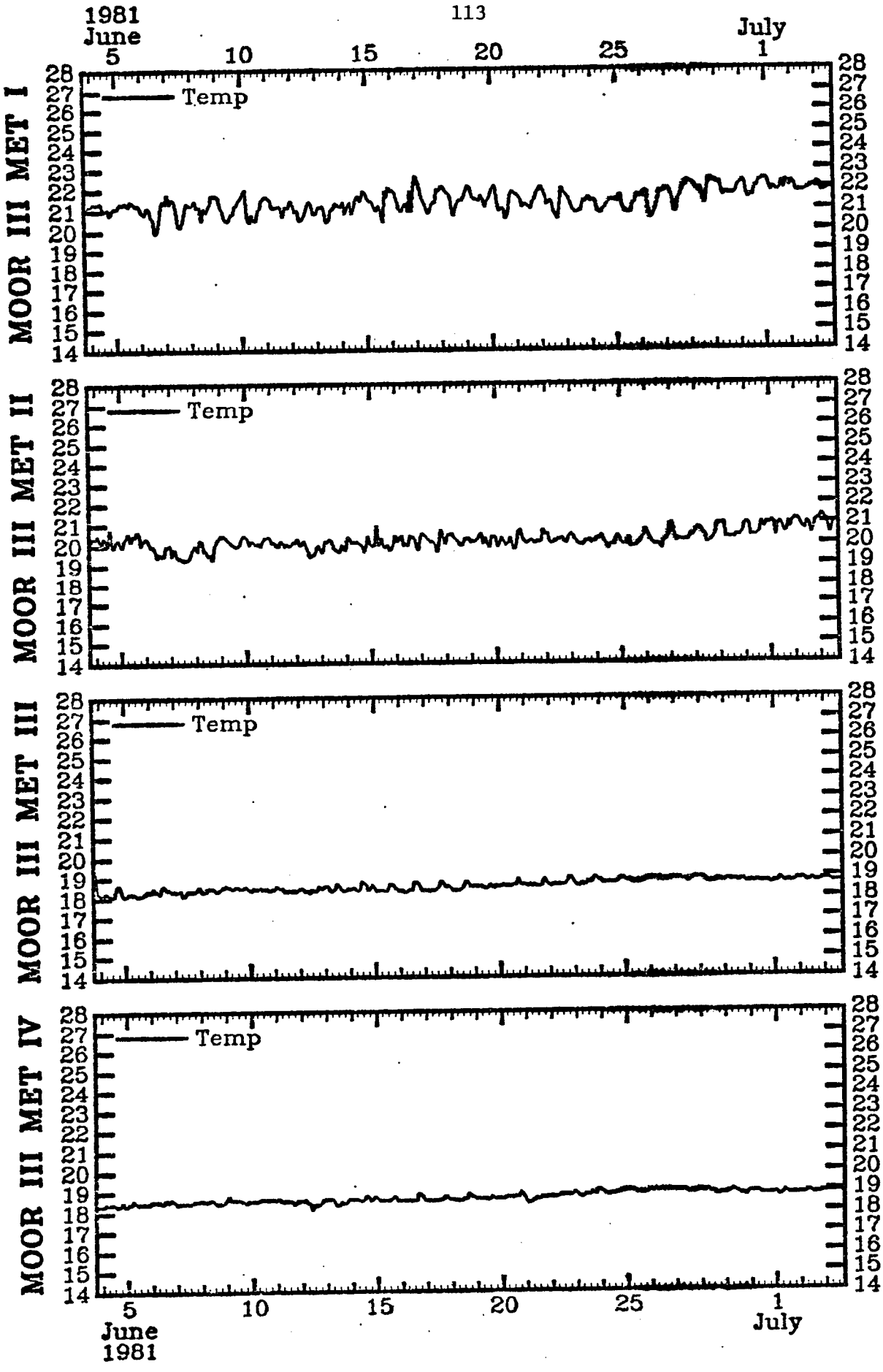
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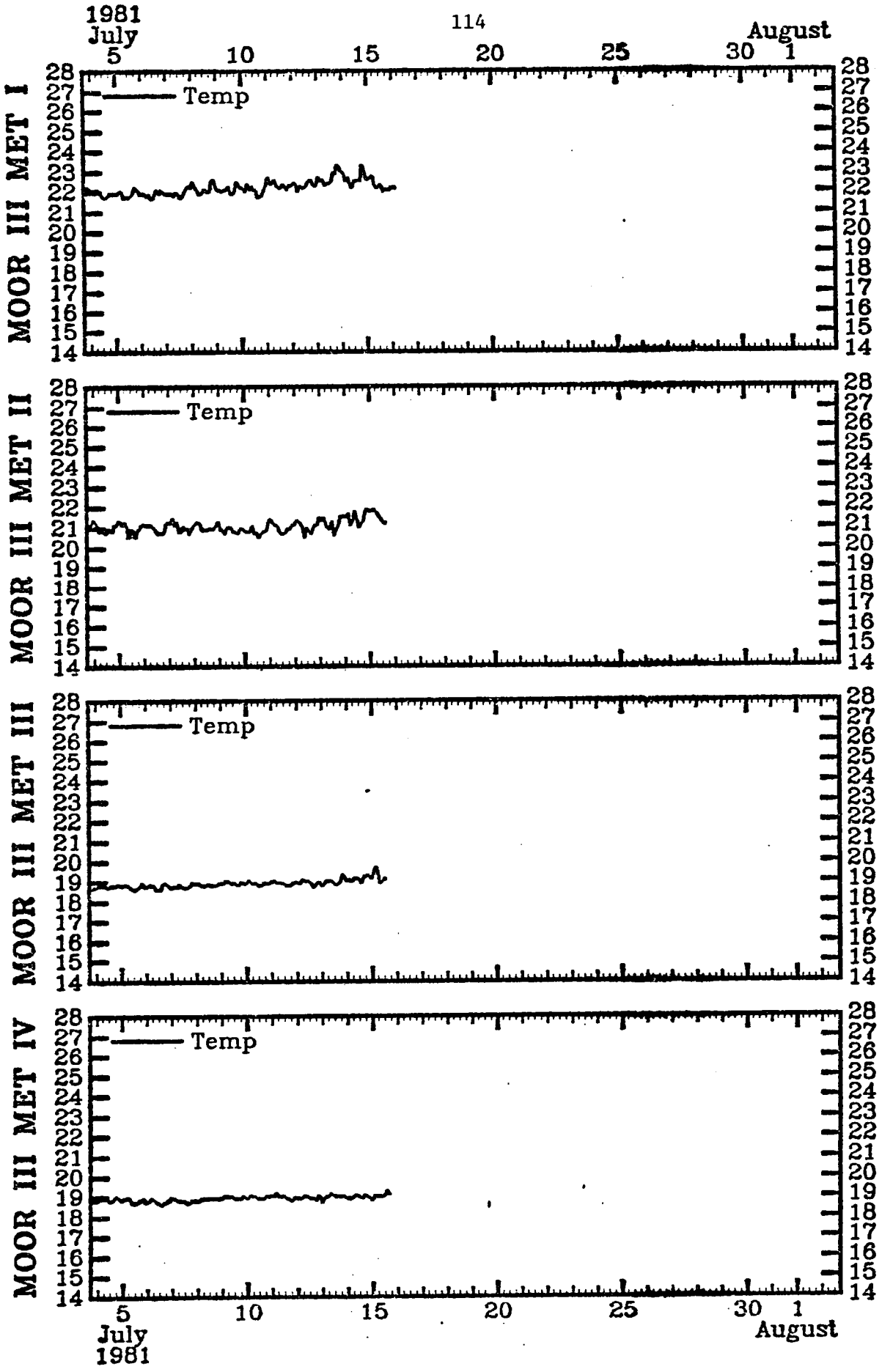
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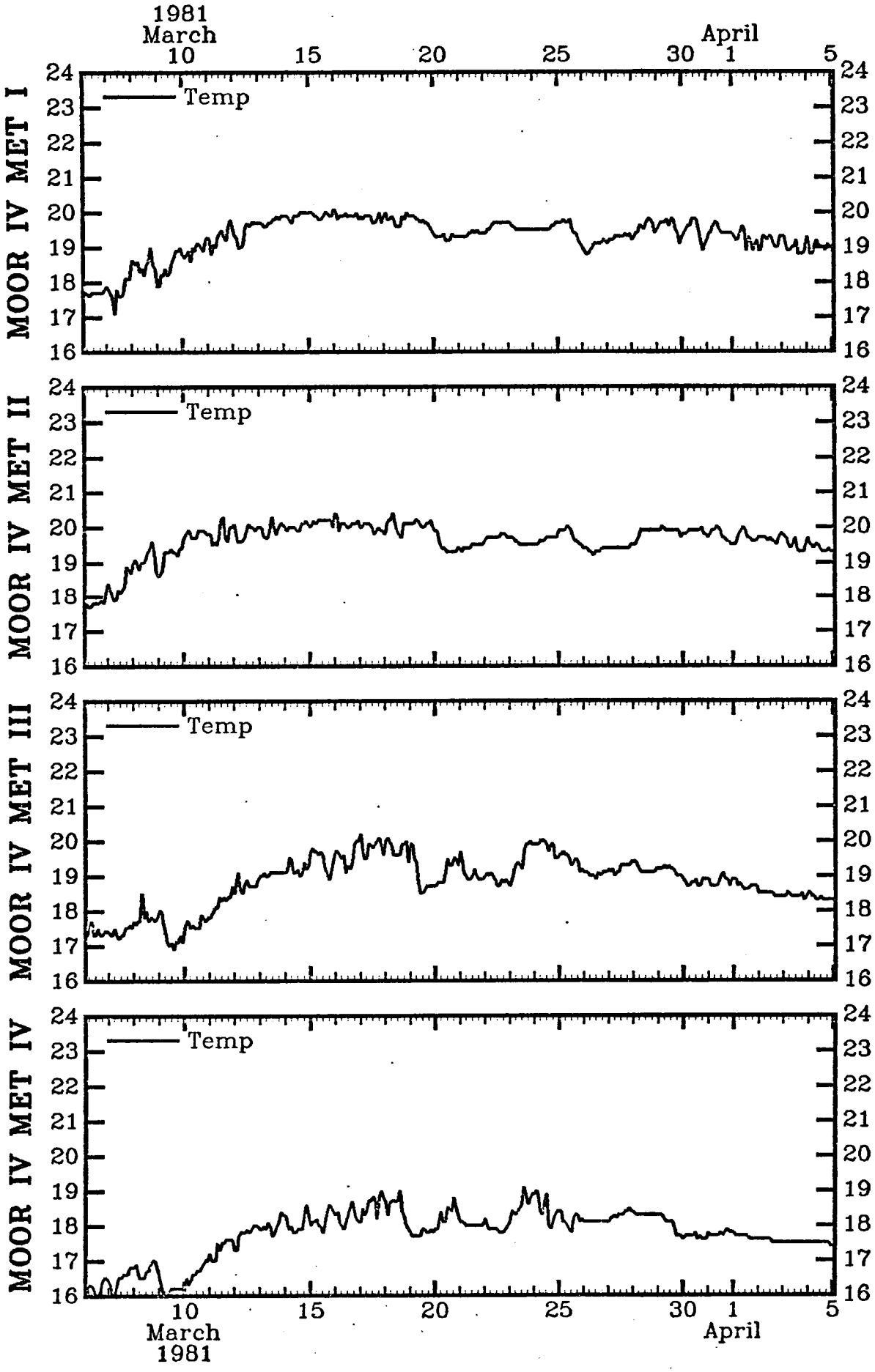
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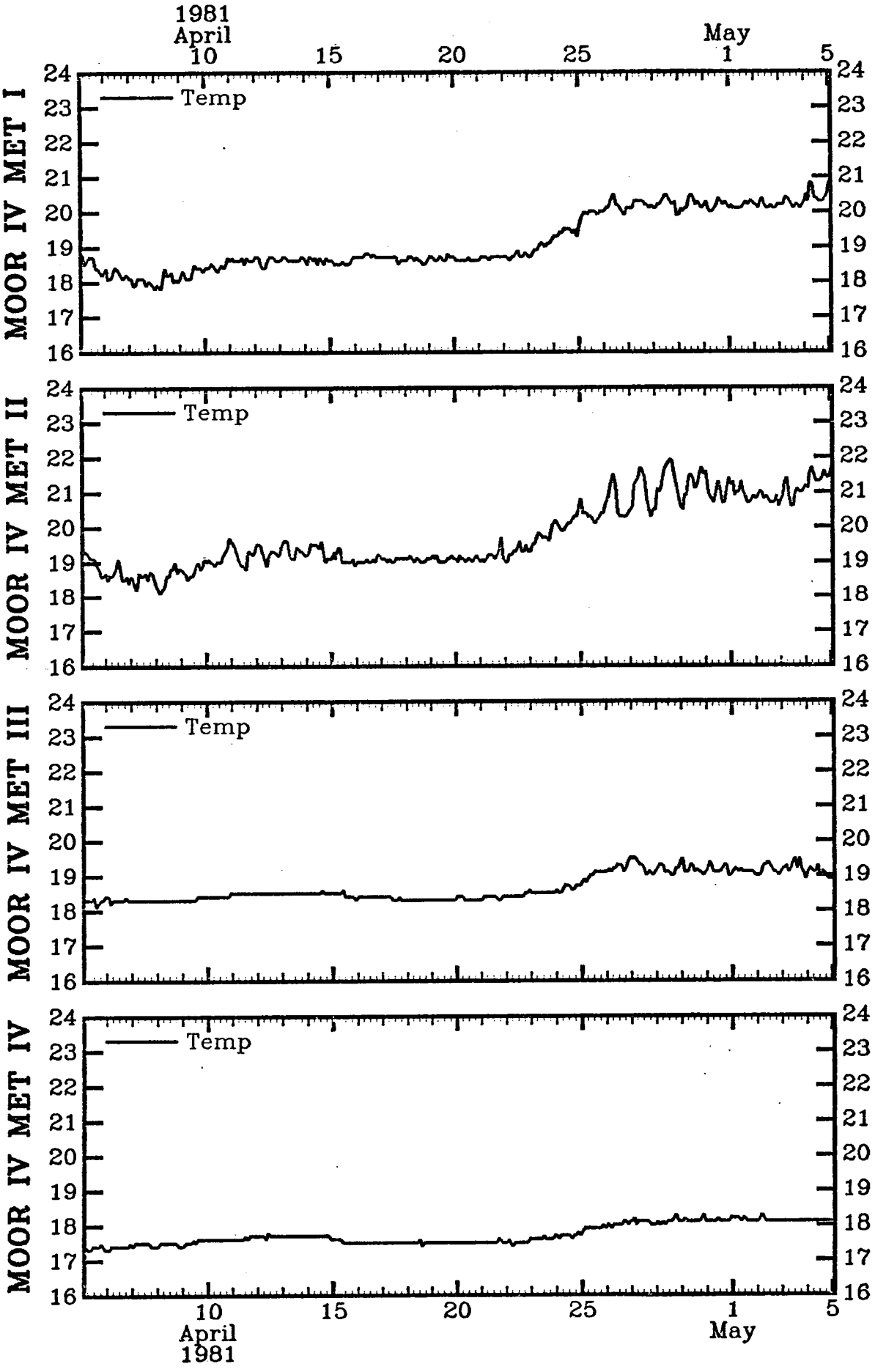
1981
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MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
Temp
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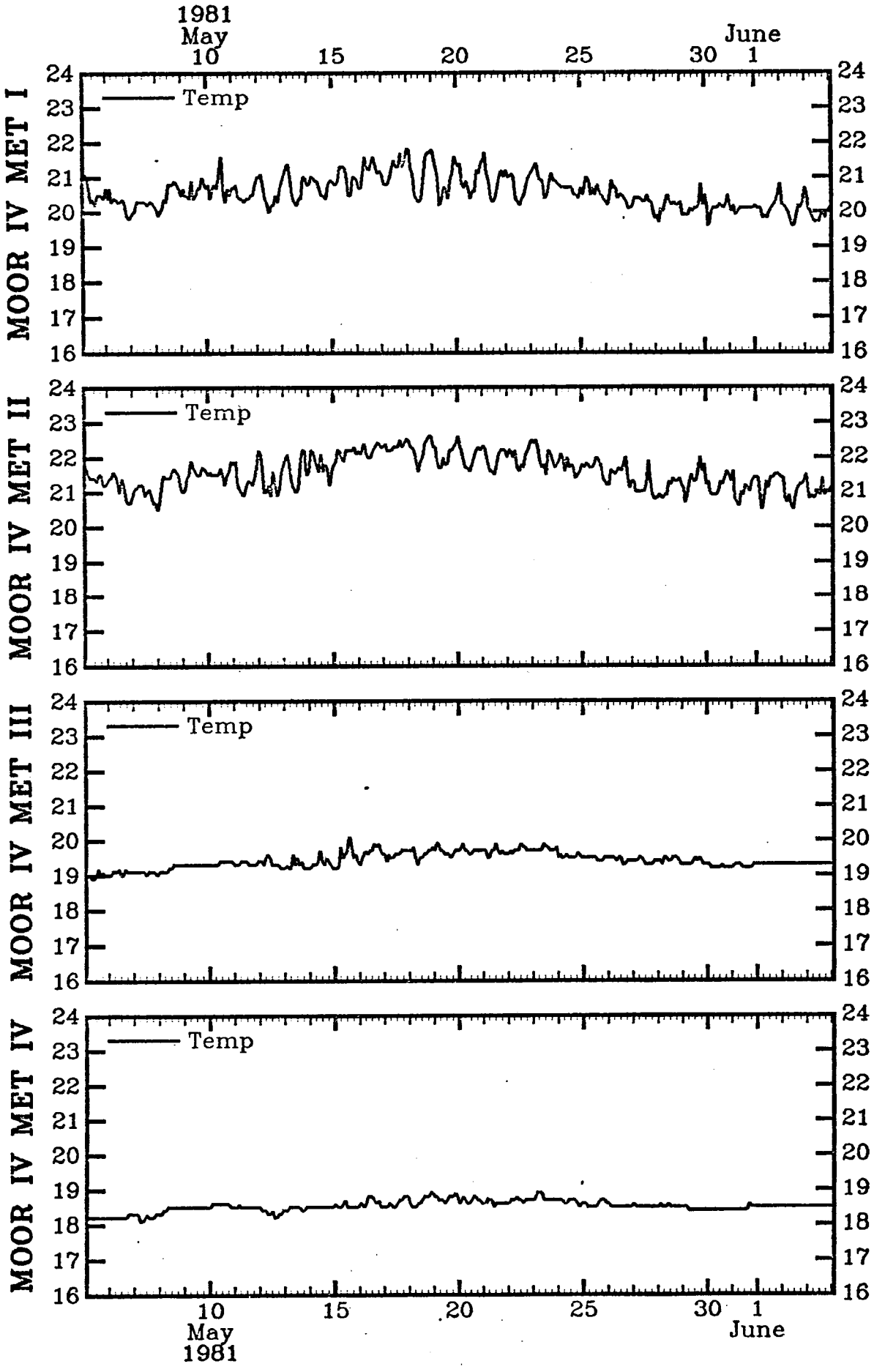
1981
May


1981
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June
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MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
Temp
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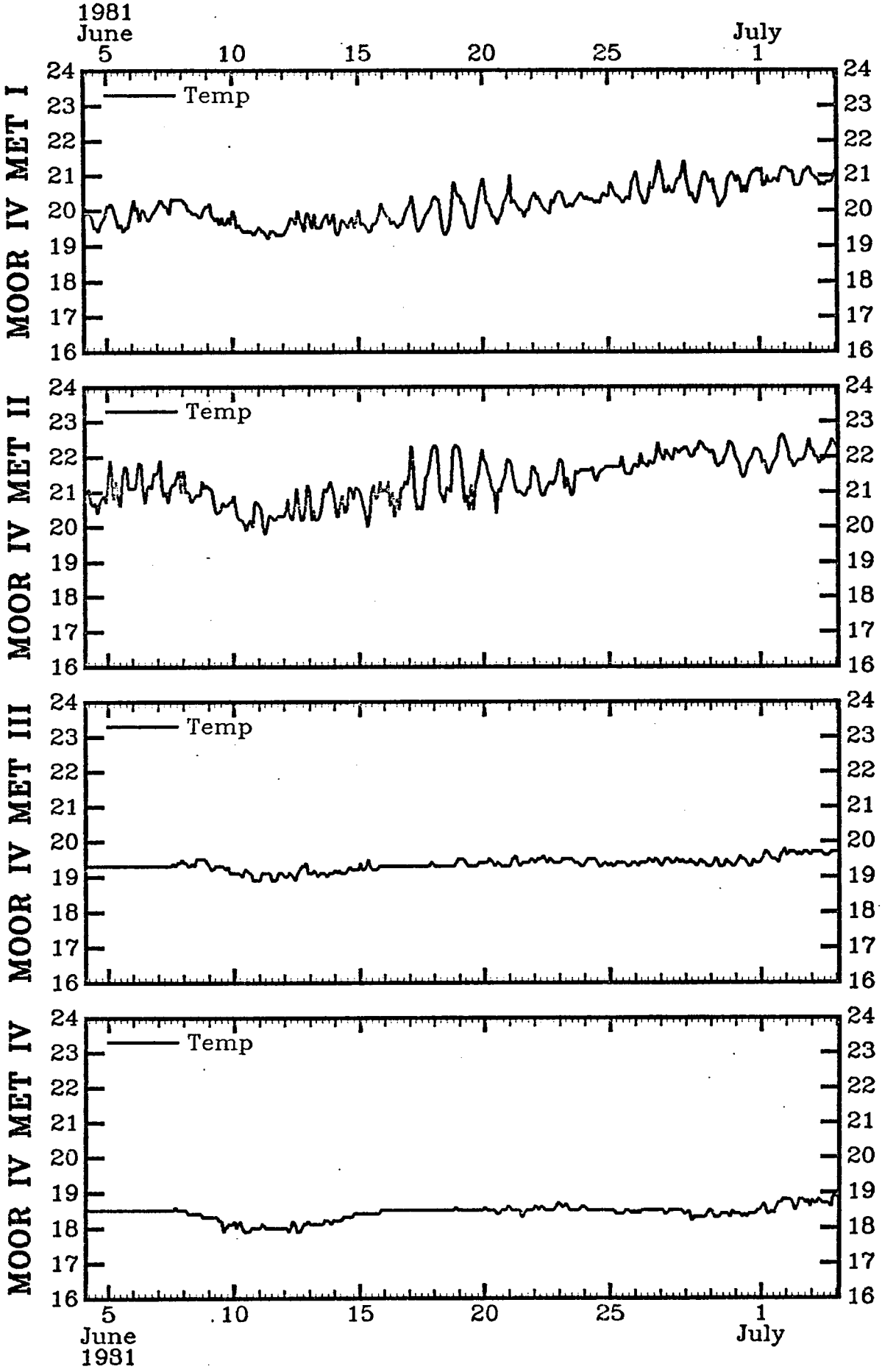
May
1981
June


1981
June
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July
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MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
Temp
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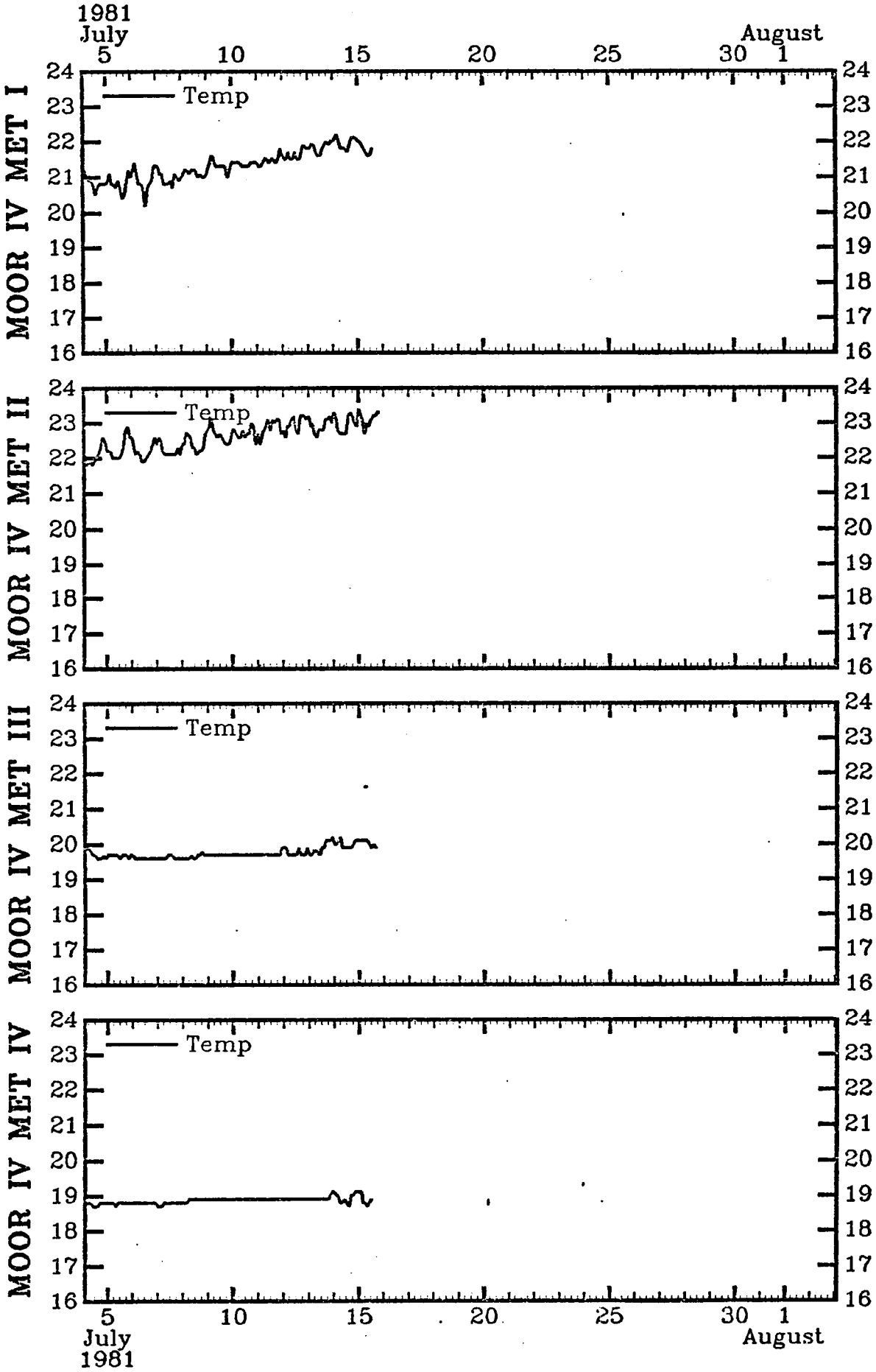
June
1981
July


1981
July
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August
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MOOR IV MET I
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MOOR IV MET IV
Temp
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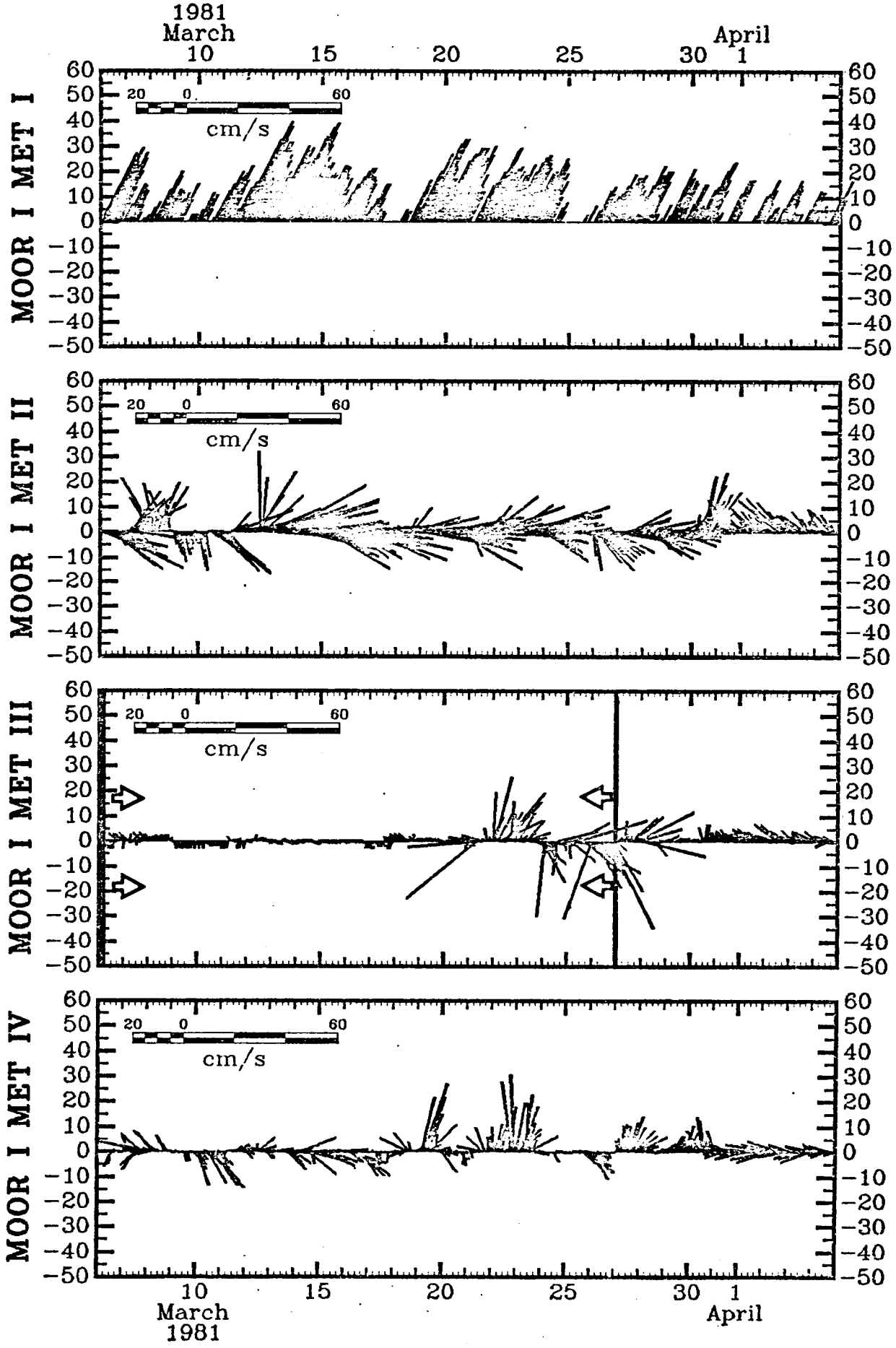
August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March
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April
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MOOR I MET I
MOOR I MET II
MOOR I MET III
MOOR I MET IV
20 0 60
cm/s
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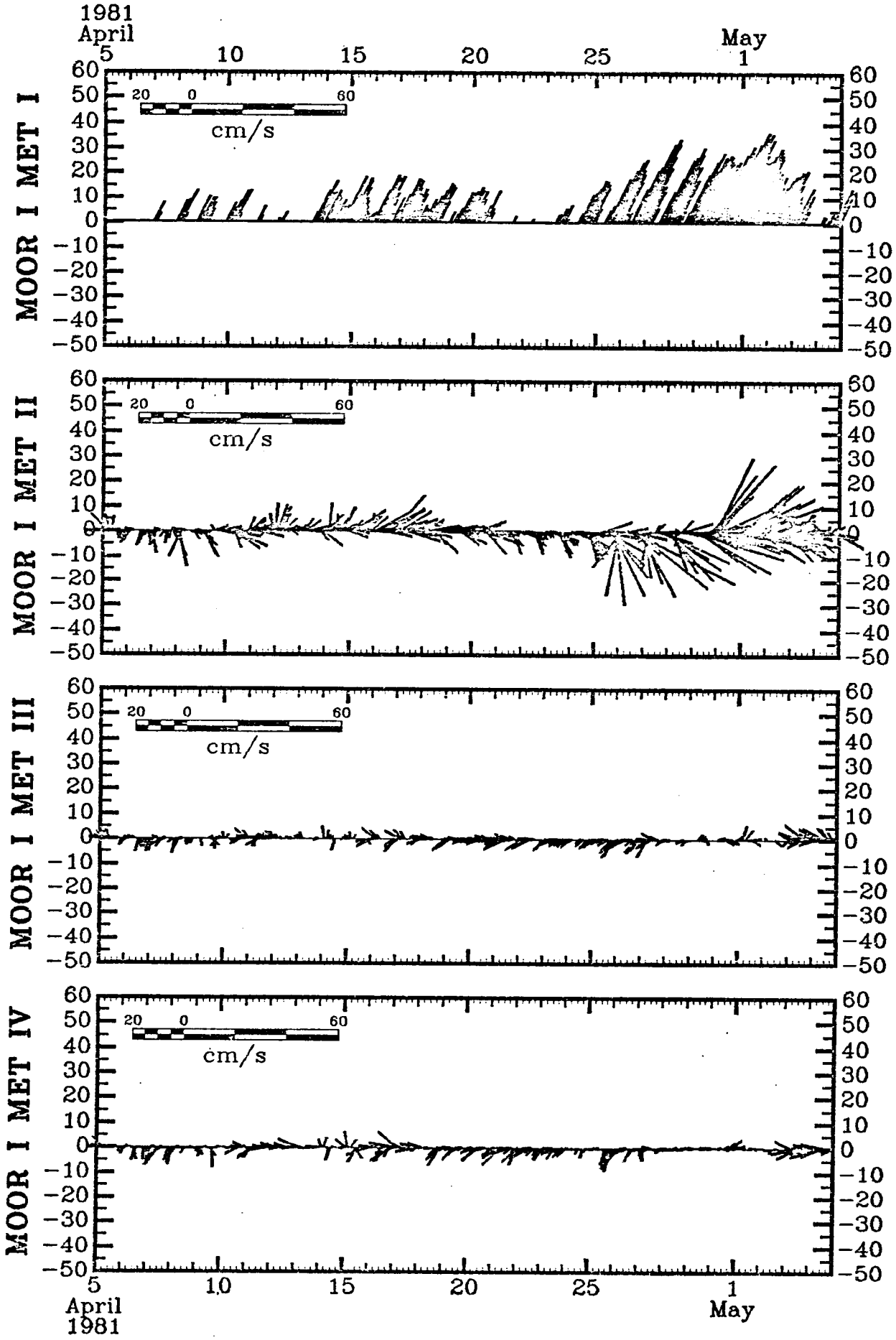
March
1981
April


1981
April
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May
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MOOR I MET I
MOOR I MET II
MOOR I MET III
MOOR I MET IV
20 0 60
cm/s
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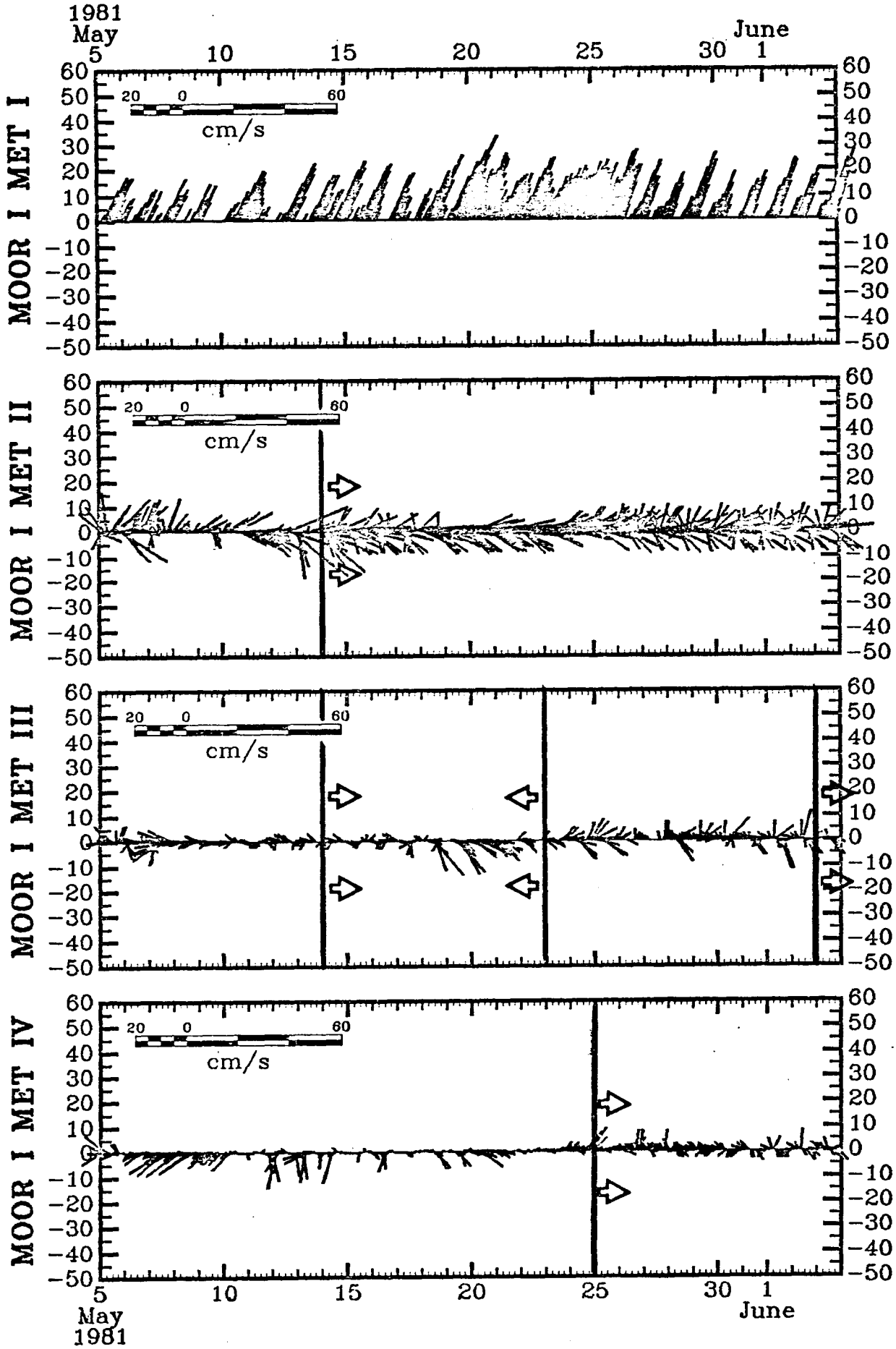
April
1981
May


1981
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MOOR I MET I
MOOR I MET II
MOOR I MET III
MOOR I MET IV
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cm/s
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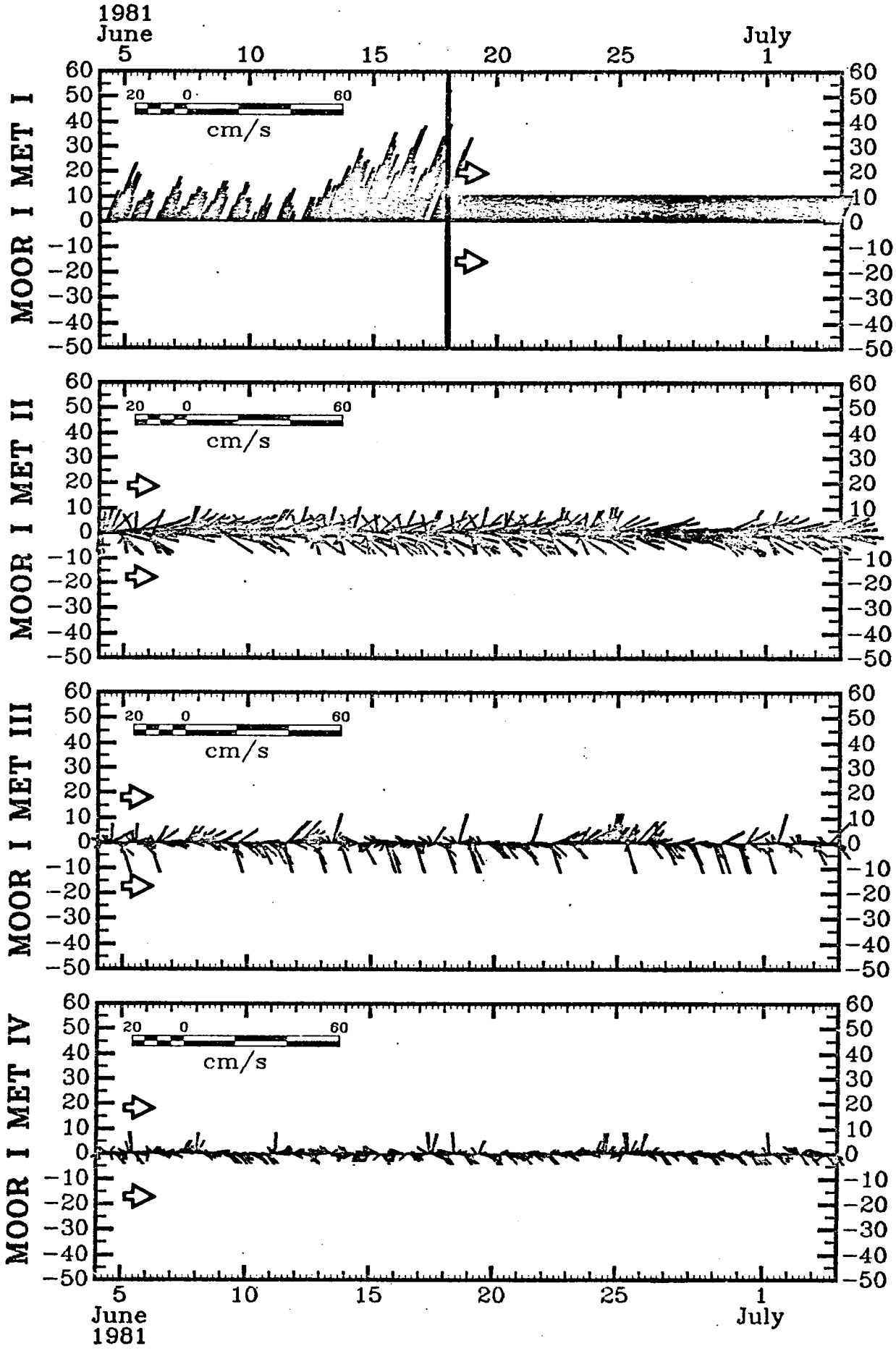
1981
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MOOR I MET I
MOOR I MET II
MOOR I MET III
MOOR I MET IV
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cm/s
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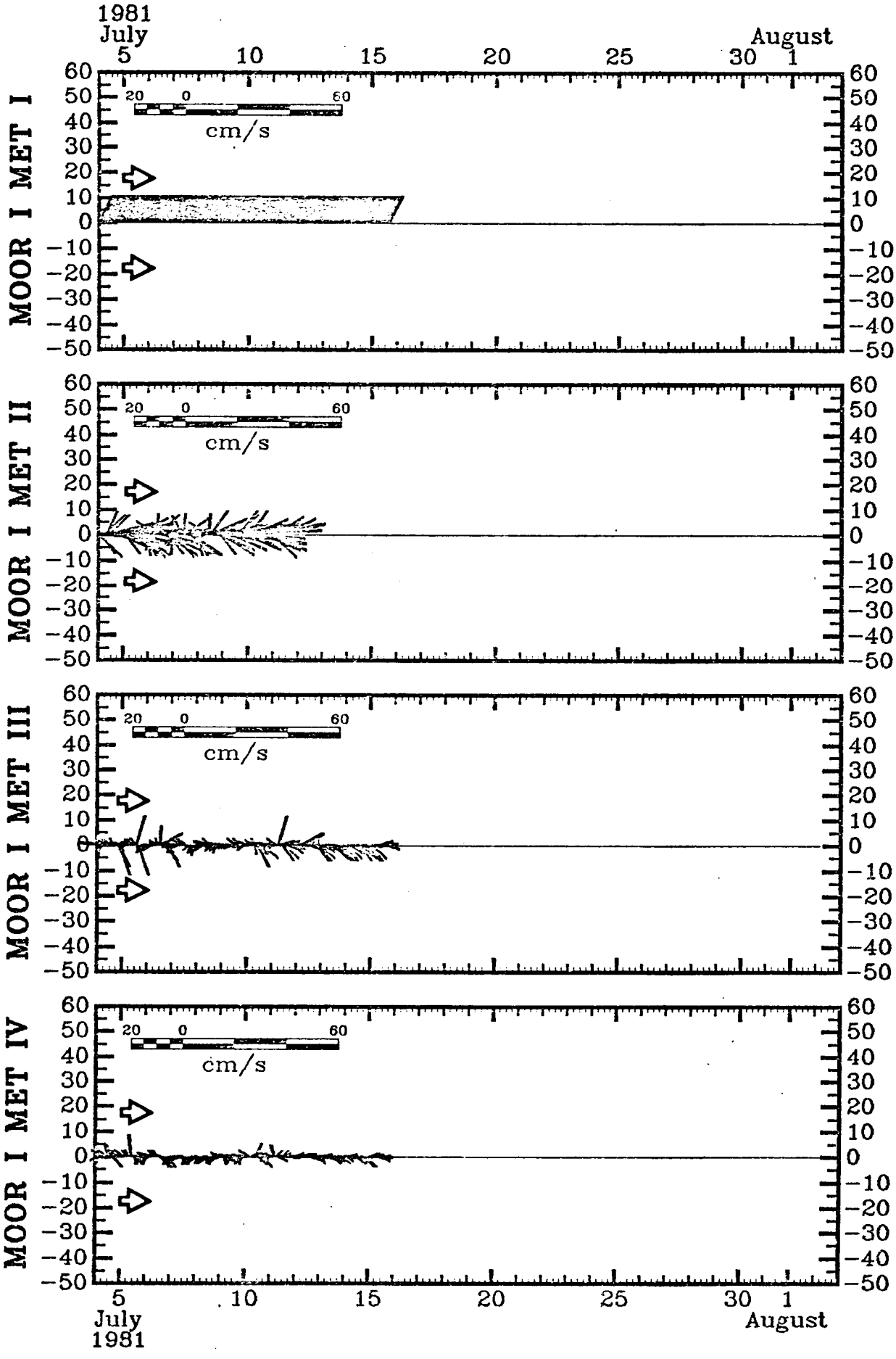
June
1981
July


1981
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MOOR I MET I
MOOR I MET II
MOOR I MET III
MOOR I MET IV
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cm/s
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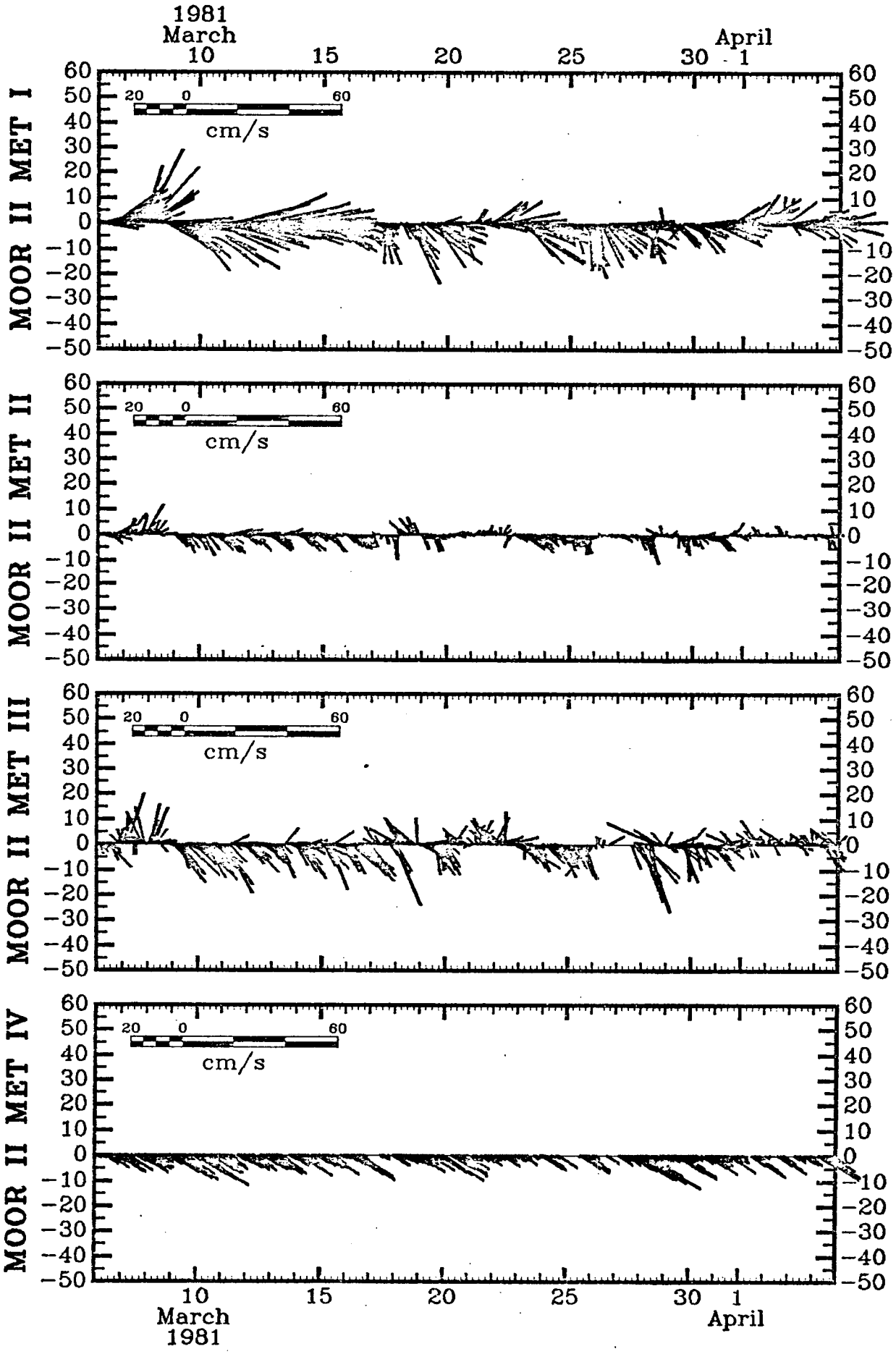
July
1981
August


1981
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April
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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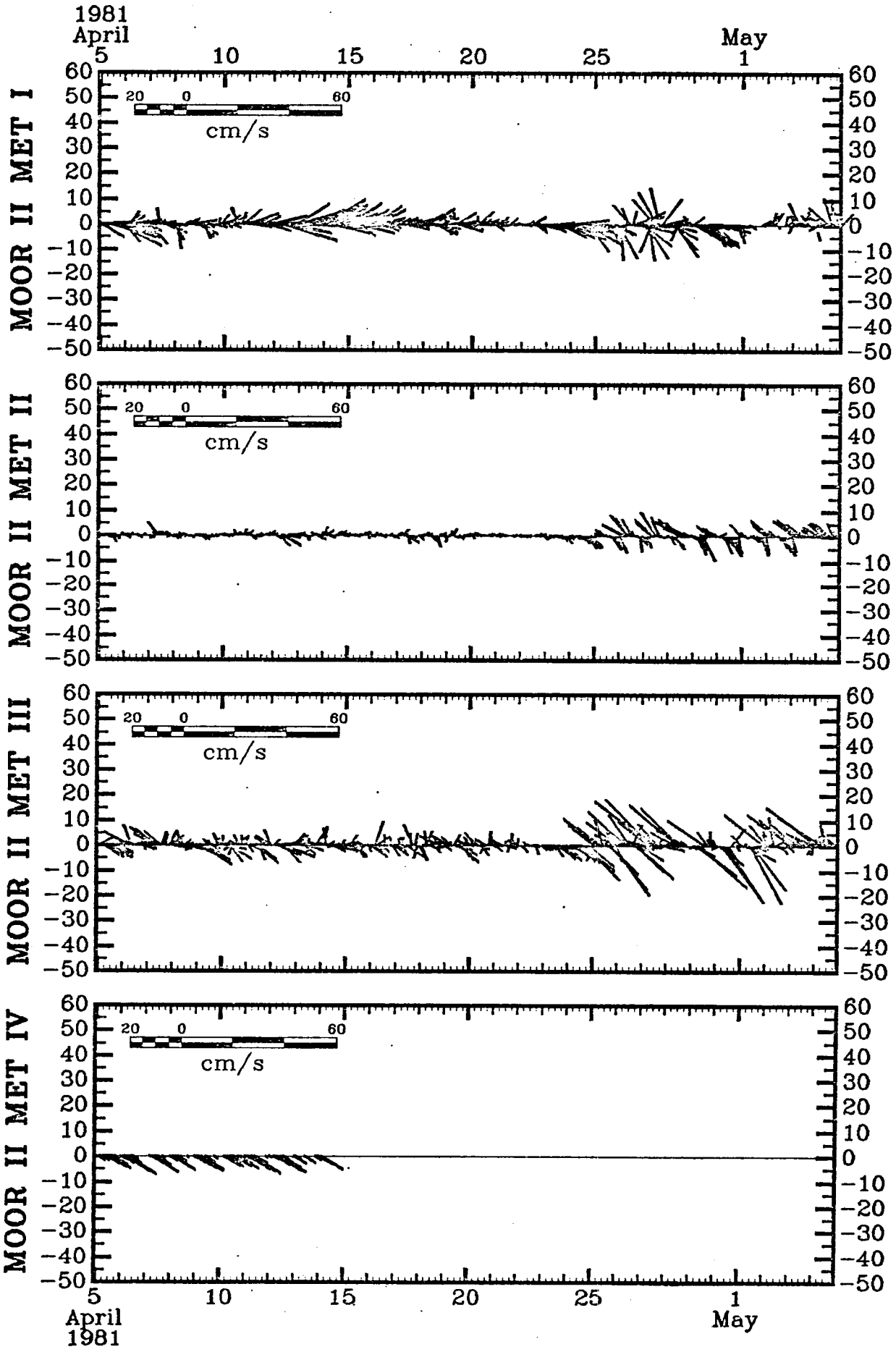
1981
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MOOR II MET II
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MOOR II MET IV
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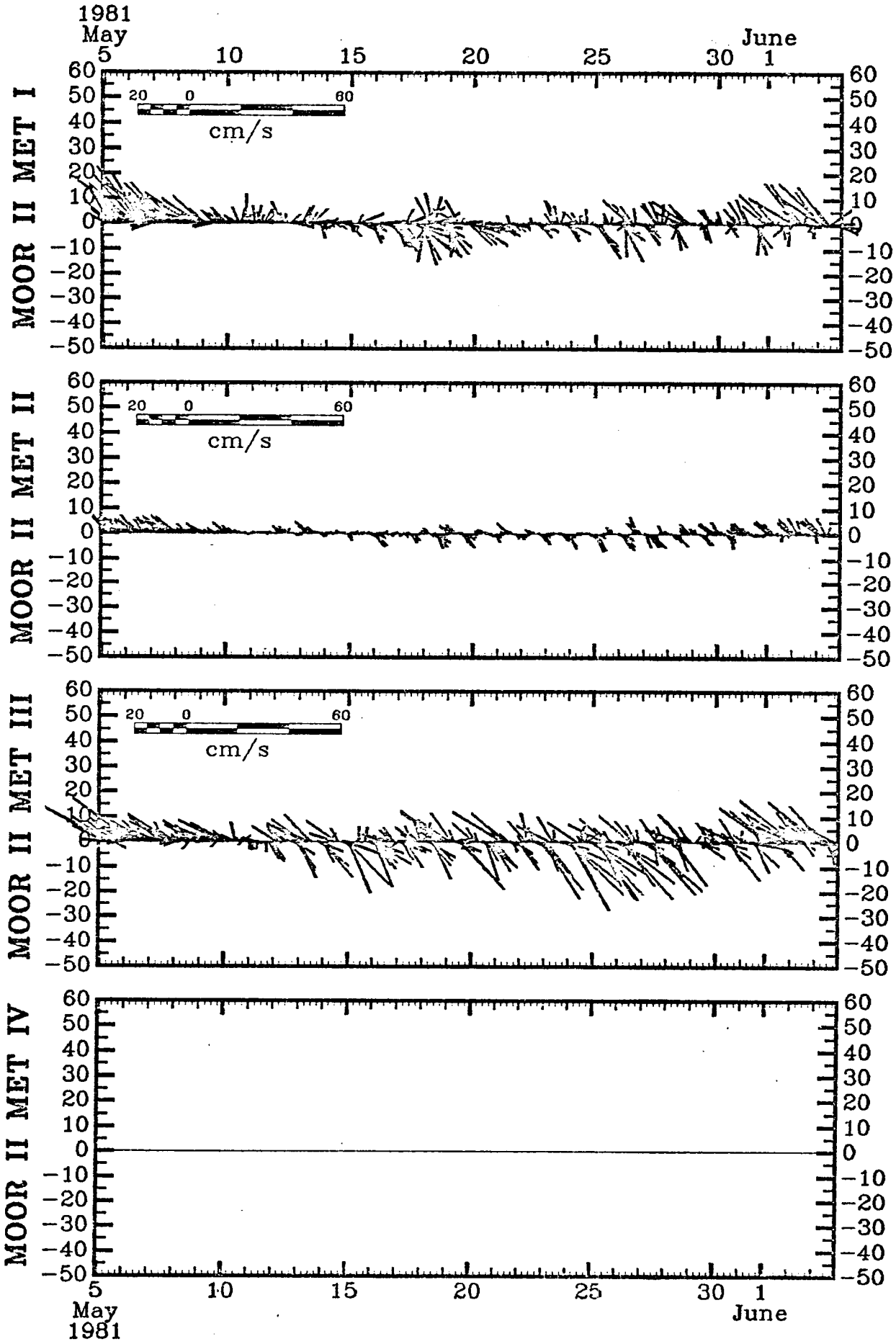
April
1981
May


1981
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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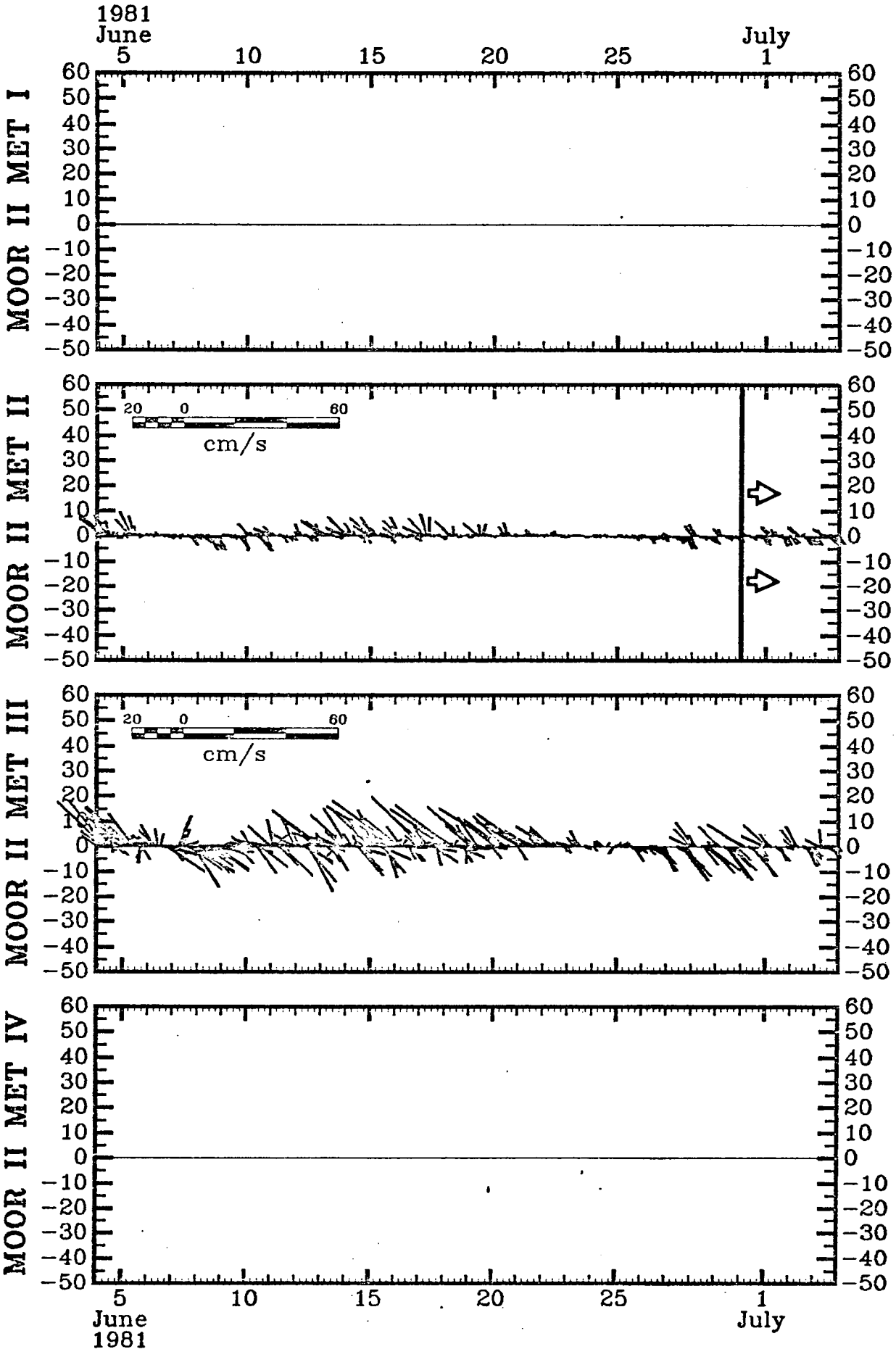
1981
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July
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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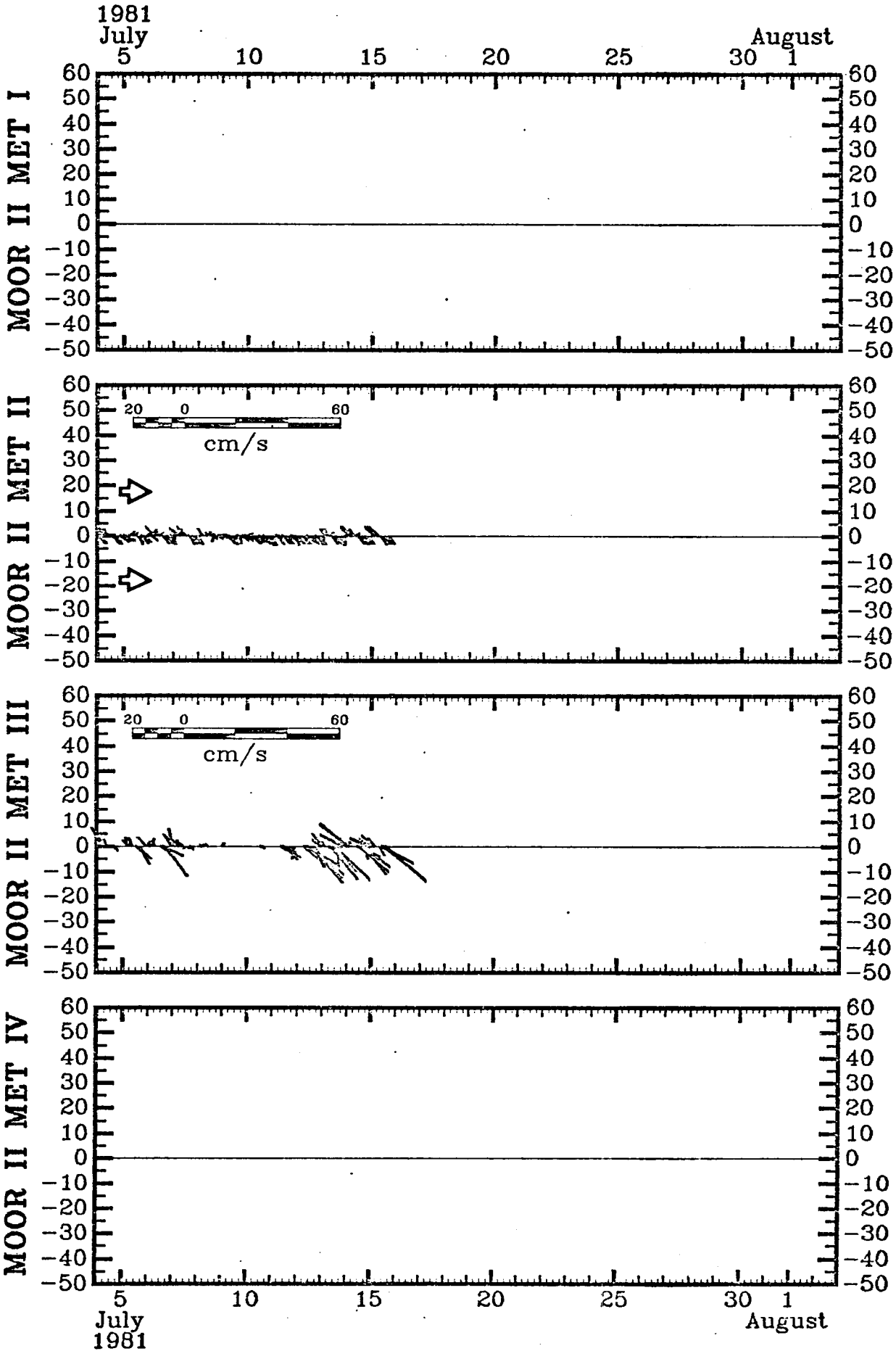
June
1981
July


1981
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August
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MOOR II MET I
MOOR II MET II
MOOR II MET III
MOOR II MET IV
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cm/s
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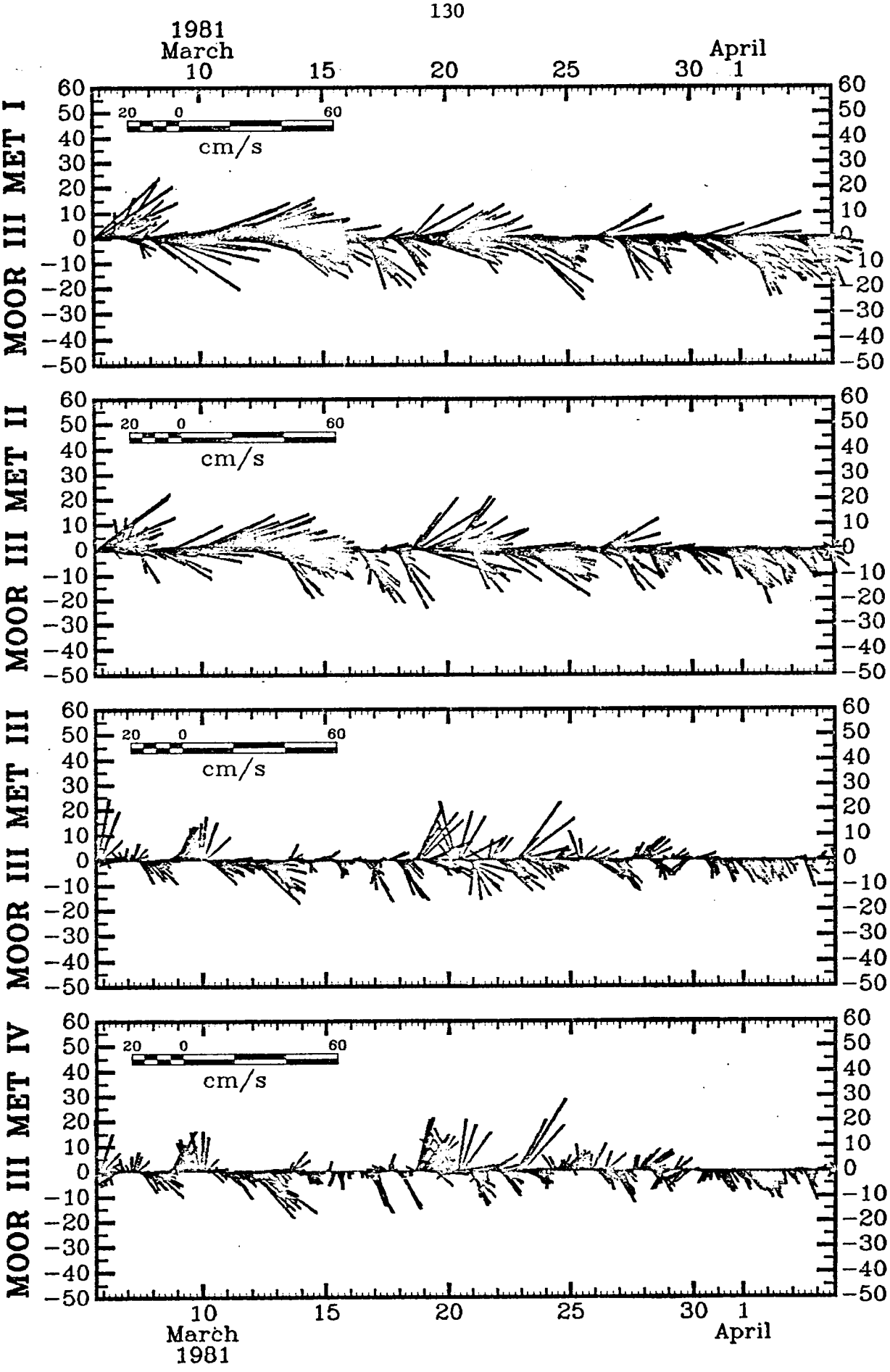
July
1981
August


1981
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April
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
20 0 60
cm/s
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March
1981
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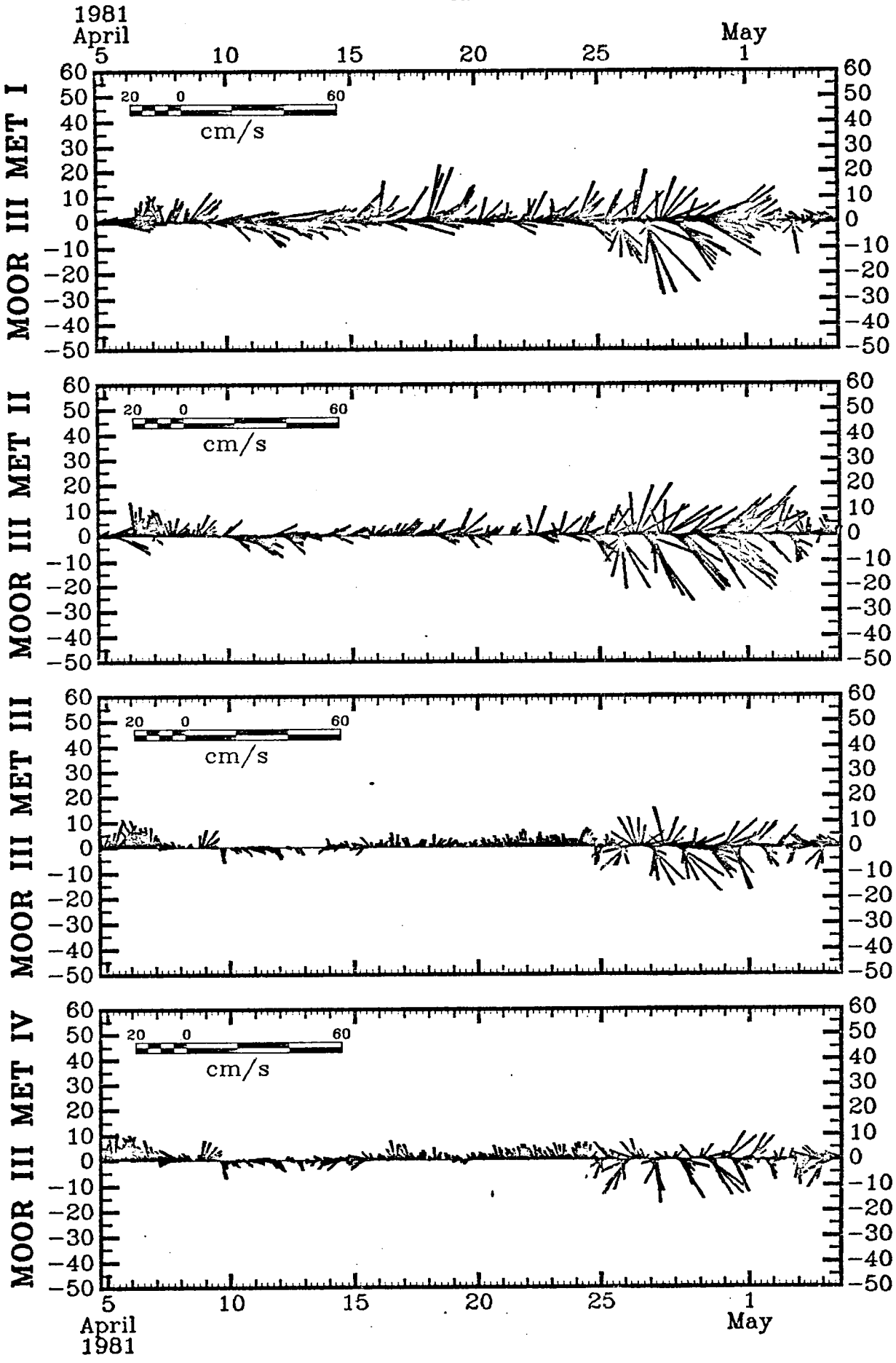
April


1981
April
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
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cm/s
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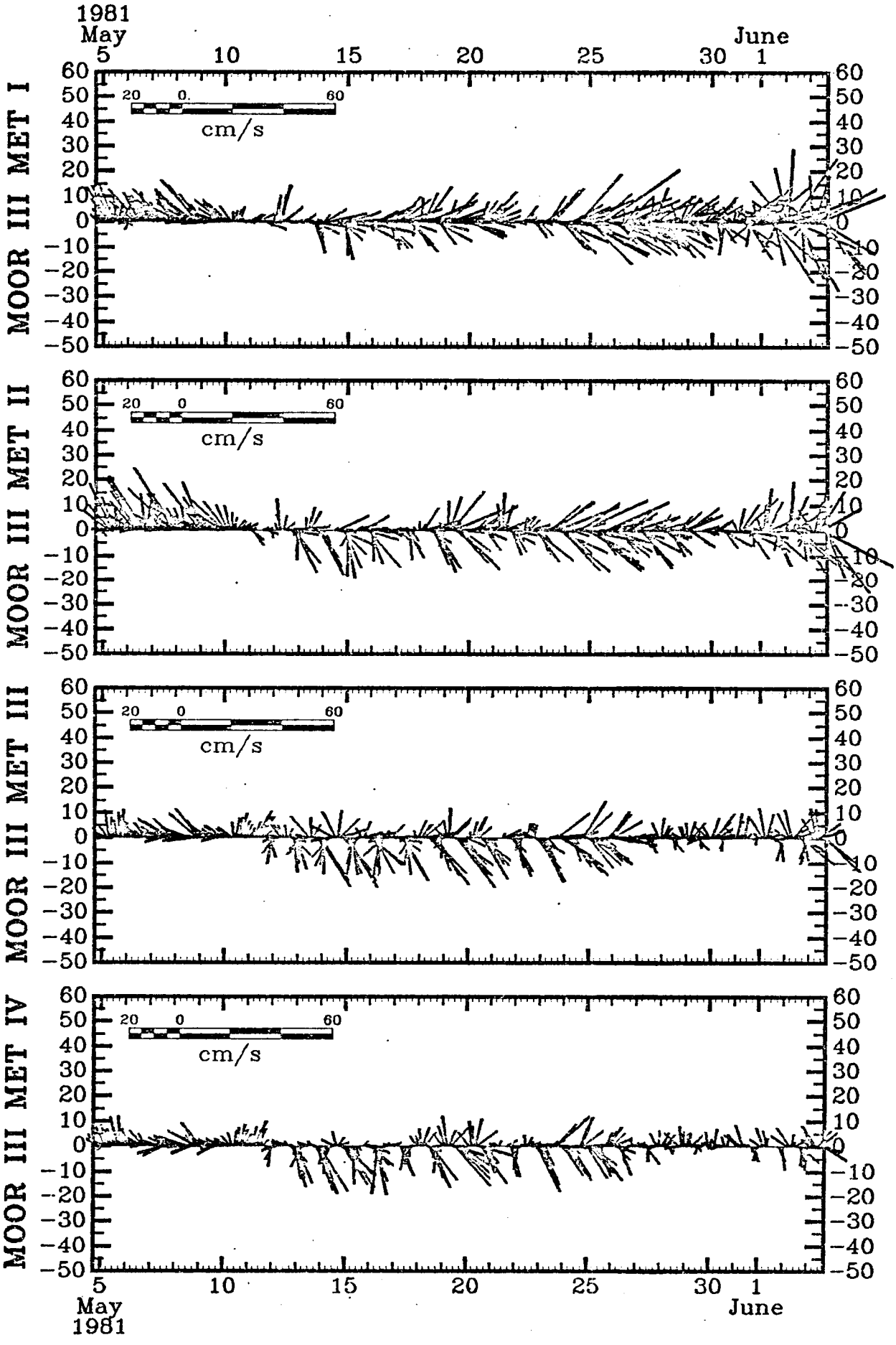
April
1981


1981
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MOOR III MET I
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MOOR III MET III
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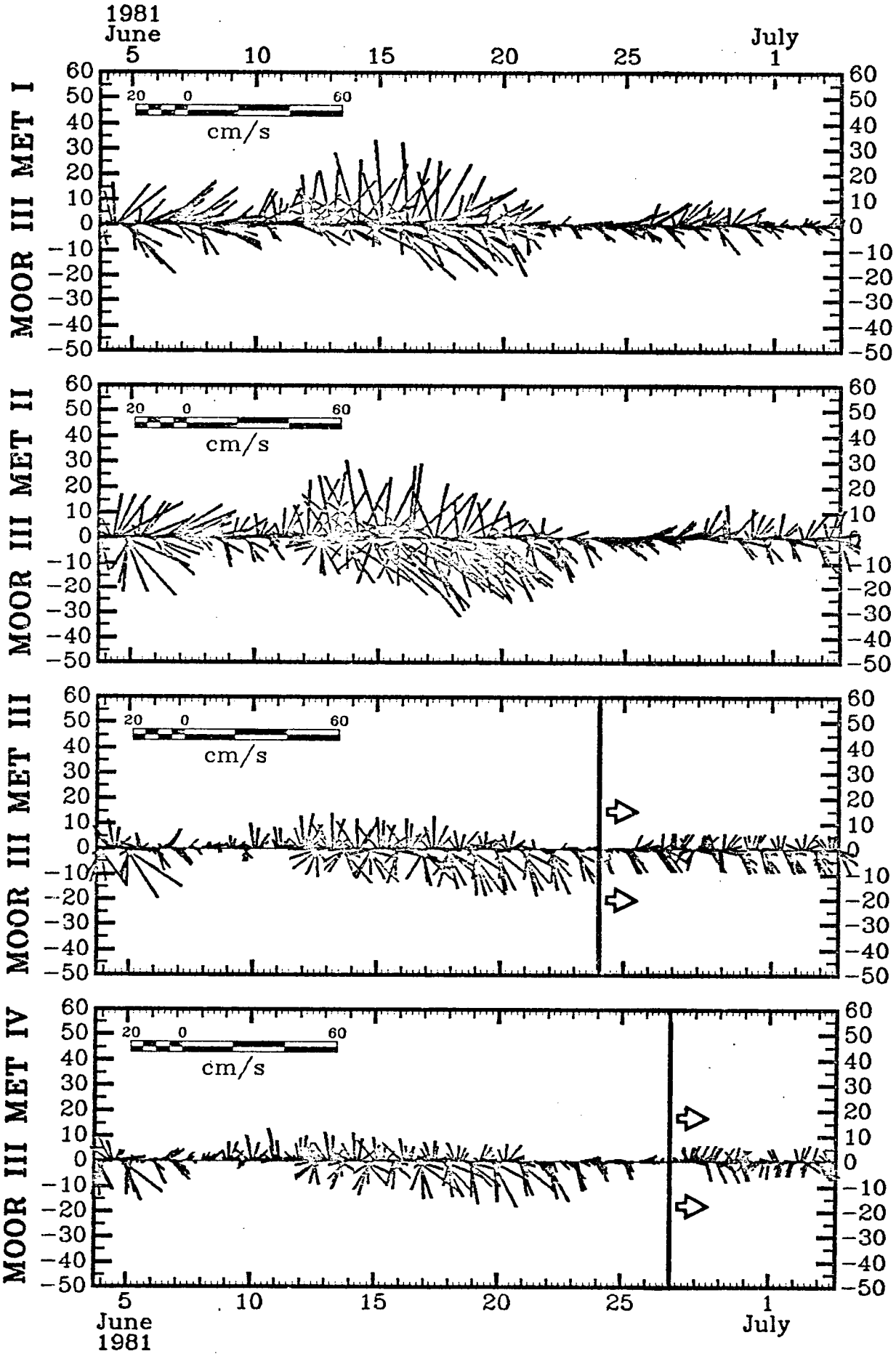
1981
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MOOR III MET II
MOOR III MET III
MOOR III MET IV
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cm/s
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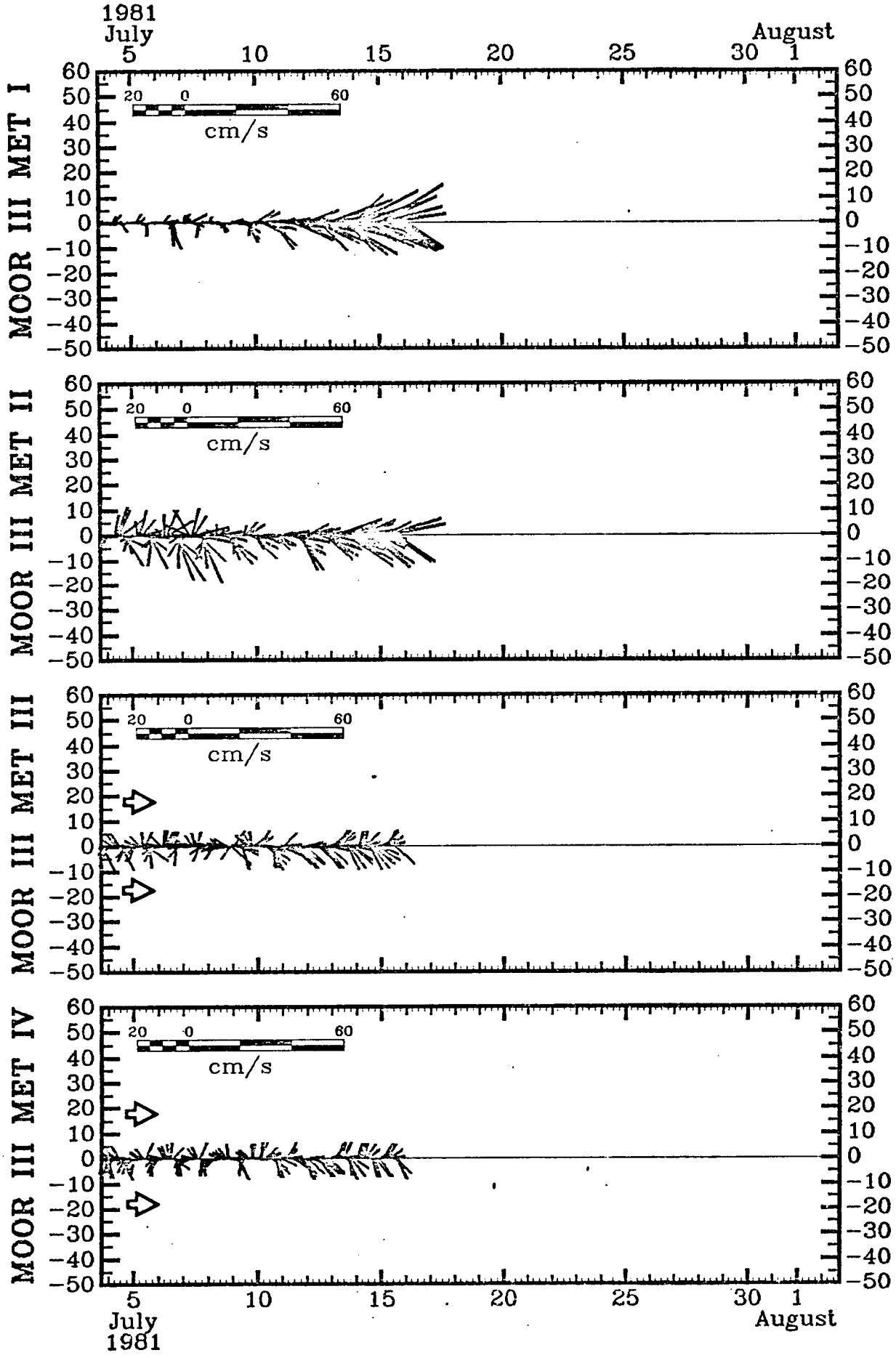
June
1981
July


1981
July
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MOOR III MET I
MOOR III MET II
MOOR III MET III
MOOR III MET IV
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cm/s
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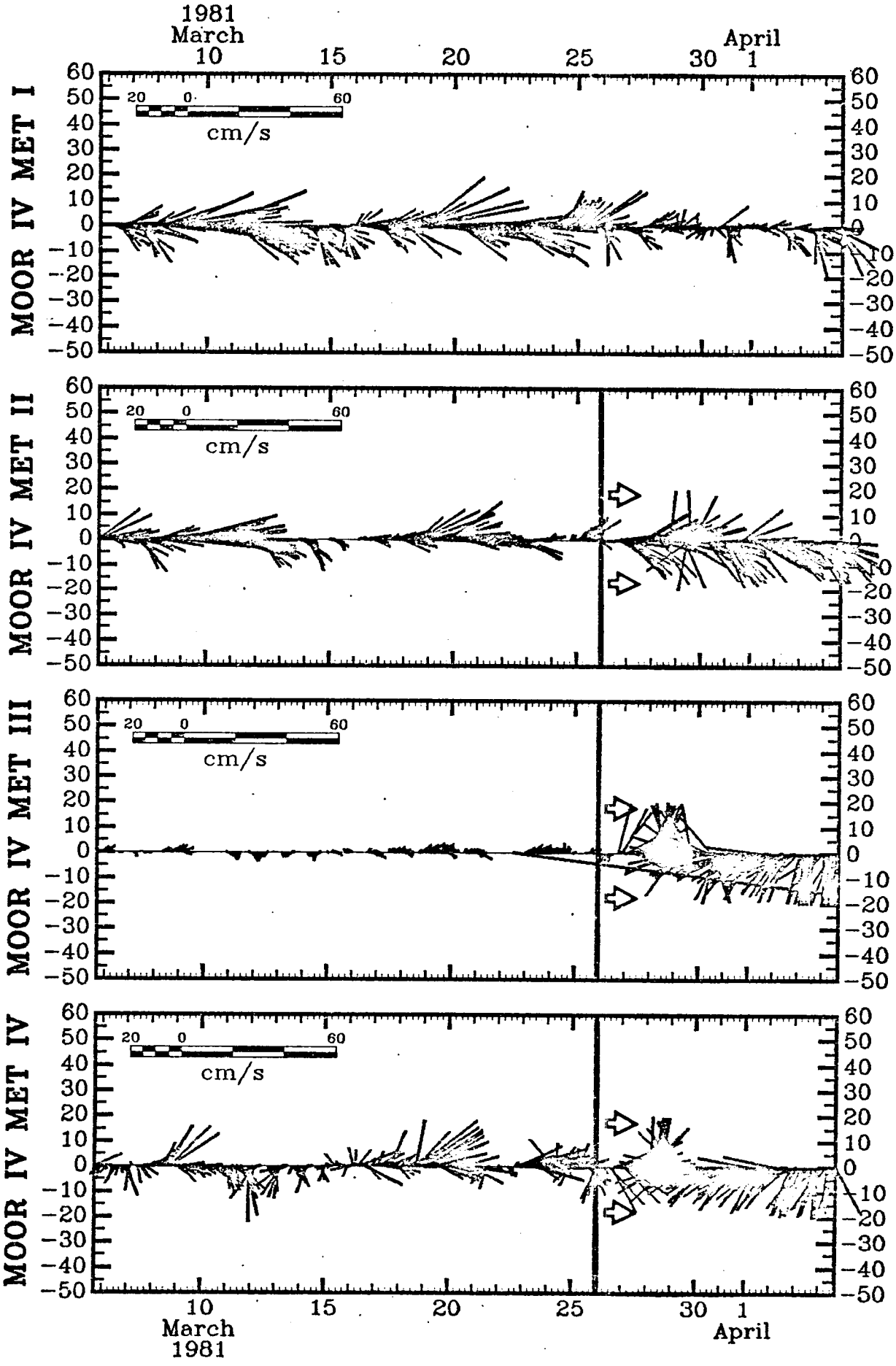
July
1981
August


1981
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April
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MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
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cm/s
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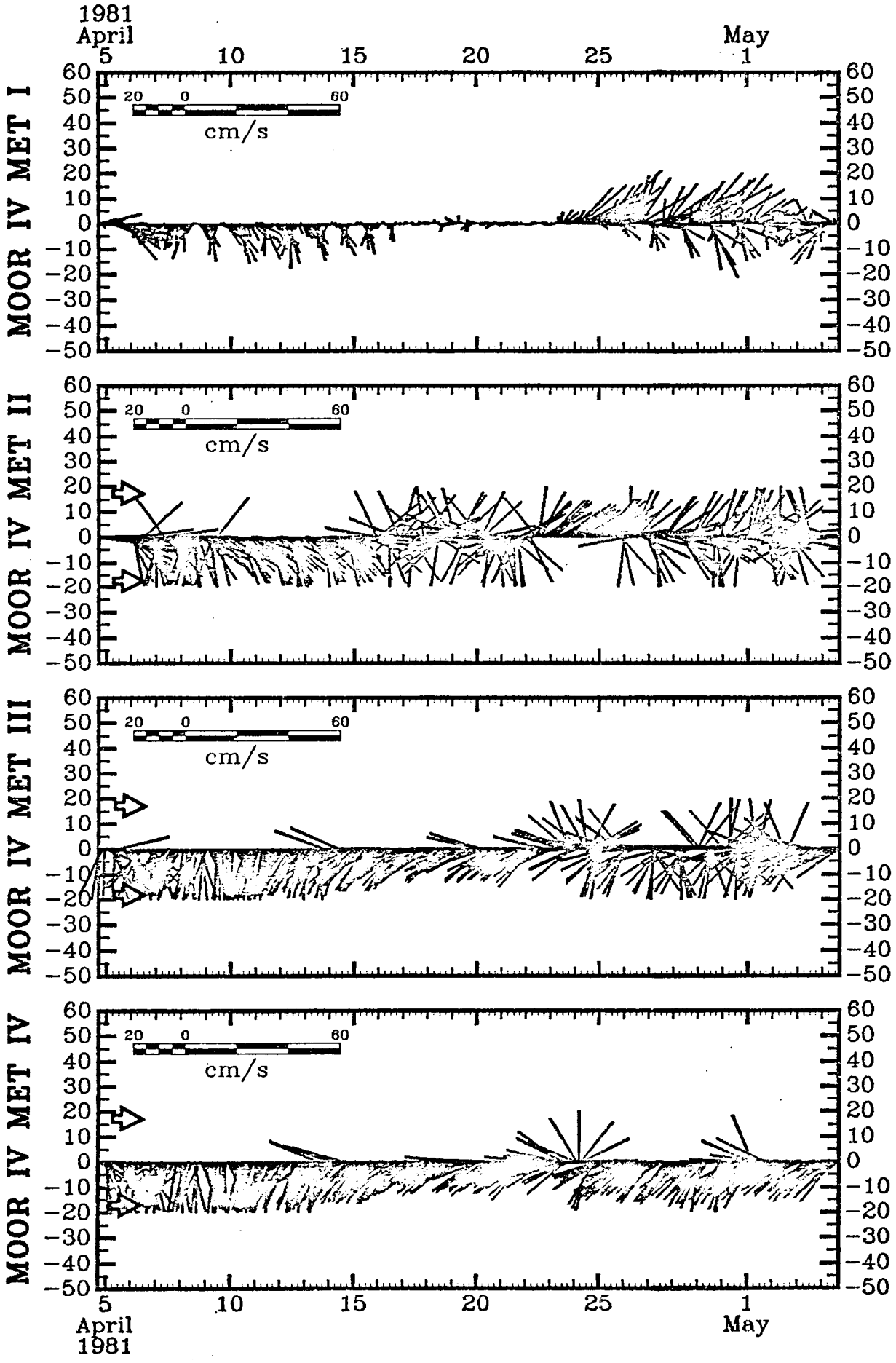
April


1981
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MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
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cm/s
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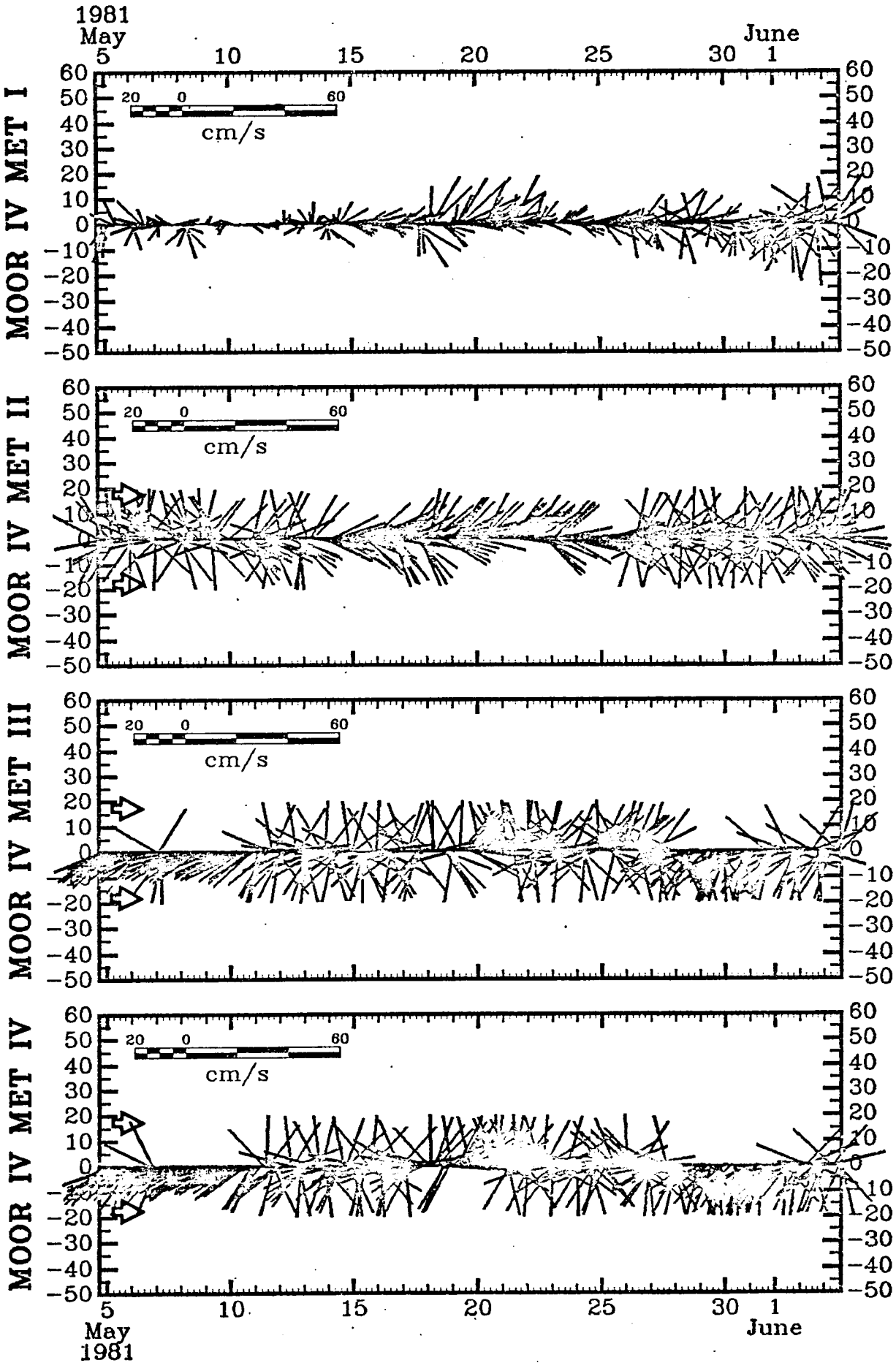
April
1981
May


1981
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0
60
cm/s
MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
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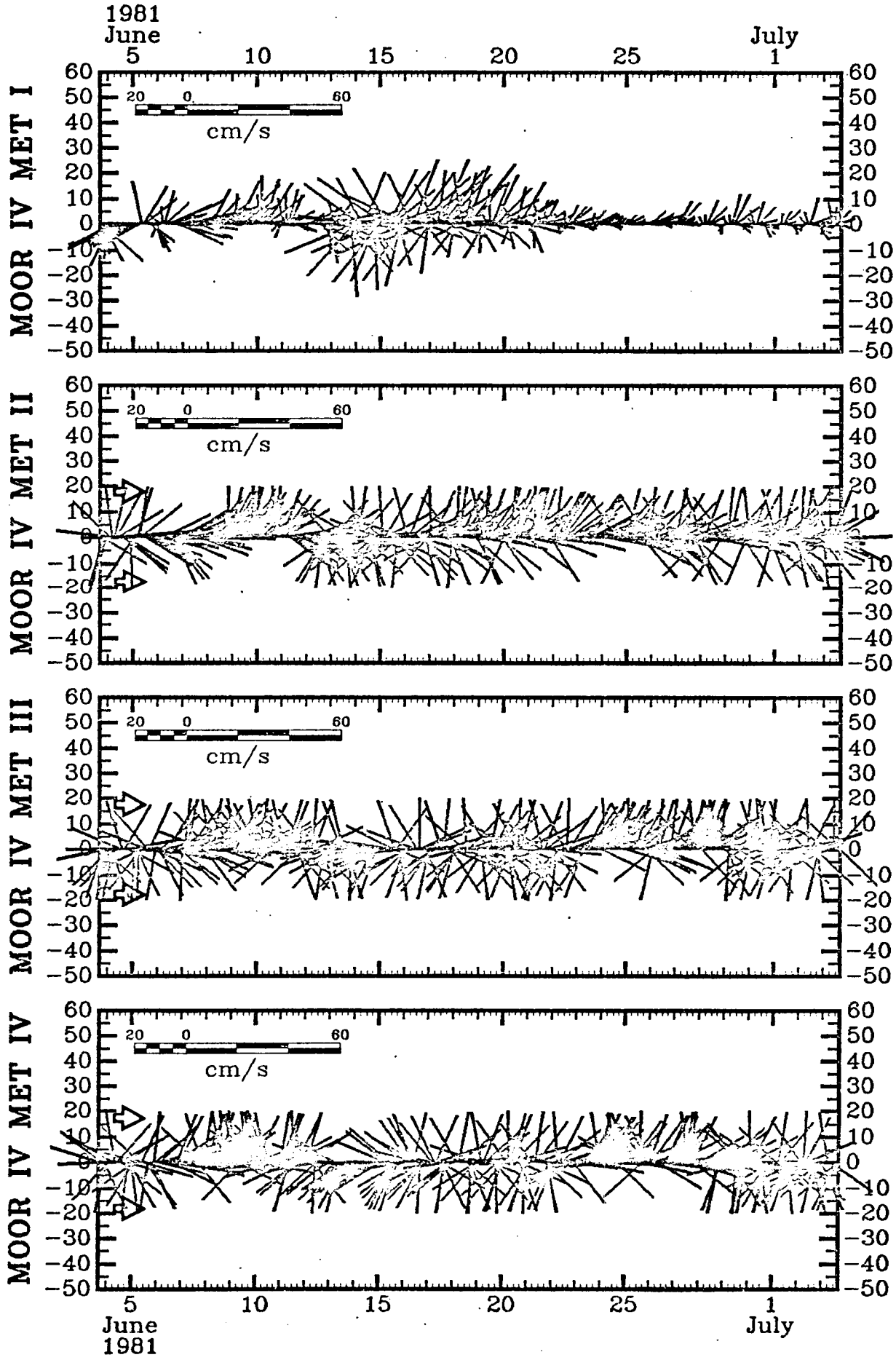
May
1981
June


1981
June
July
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MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
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cm/s
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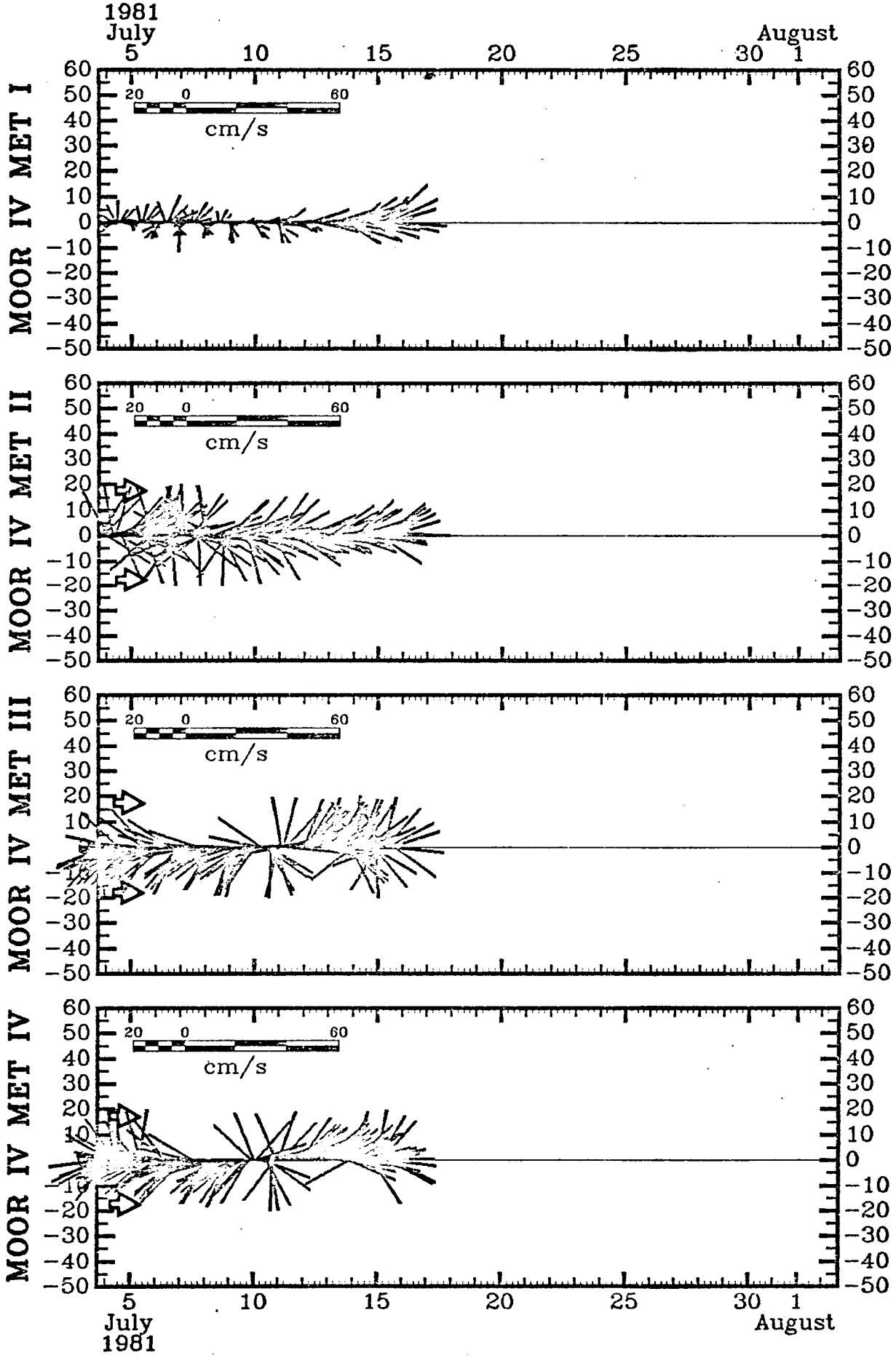
June
1981


1981
July
August
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1
MOOR IV MET I
MOOR IV MET II
MOOR IV MET III
MOOR IV MET IV
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0
60
cm/s
60
50
40
30
20
10
0
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−20
−30
−40
−50
July
1981
August

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 1 (47 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.64	0.00	0.16	0.04	0.10	0.04	0.06	0.00	0.00	0.00	0.00	0.00	1.04
10- 19	0.28	0.08	0.46	0.20	0.10	0.10	0.04	0.00	0.00	0.00	0.00	0.00	1.04
20- 29	0.32	1.06	0.54	0.14	0.24	0.04	0.04	0.00	0.00	0.00	0.00	0.00	2.68
30- 39	0.64	0.26	0.78	0.50	0.16	0.16	0.58	0.02	0.00	0.00	0.00	0.00	3.30
40- 49	0.66	1.04	0.60	0.30	0.24	0.14	0.04	0.10	0.00	0.00	0.00	0.00	3.12
50- 59	0.56	1.42	0.64	0.42	0.36	0.36	0.12	0.08	0.00	0.00	0.00	0.00	3.96
60- 69	0.56	1.10	1.02	0.76	0.38	0.60	0.34	0.04	0.00	0.00	0.00	0.00	4.81
70- 79	0.46	1.40	1.36	1.06	0.34	0.64	0.66	0.32	0.14	0.00	0.00	0.00	6.40
80- 89	0.66	1.32	1.80	1.16	0.56	1.26	0.94	0.42	0.10	0.04	0.00	0.00	8.30
90- 99	0.60	1.30	1.40	1.12	1.04	1.18	0.88	0.38	0.04	0.04	0.00	0.00	8.17
100-109	0.66	1.64	2.06	1.00	0.56	1.08	0.40	0.06	0.00	0.00	0.00	0.00	7.47
110-119	0.58	1.06	1.02	1.36	0.00	0.46	0.18	0.06	0.06	0.02	0.00	0.00	6.01
120-129	0.72	1.16	1.40	0.44	0.34	0.56	0.12	0.02	0.08	0.02	0.00	0.00	5.07
130-139	0.76	1.28	1.08	0.72	0.76	0.32	0.10	0.04	0.00	0.00	0.00	0.00	4.05
140-149	1.14	1.20	0.76	0.24	0.30	0.04	0.04	0.00	0.00	0.00	0.00	0.00	3.66
150-159	0.84	1.06	0.56	0.08	0.16	0.12	0.02	0.00	0.00	0.00	0.00	0.00	2.86
160-169	0.72	1.24	0.82	0.28	0.04	0.04	0.02	0.00	0.00	0.00	0.00	0.00	3.15
170-179	0.68	0.78	0.42	0.24	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	2.19
180-189	0.36	0.32	0.16	0.06	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.98
190-199	0.52	0.34	0.06	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.00
200-209	0.56	0.26	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
210-219	0.24	0.08	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
220-229	0.20	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
230-239	0.06	0.12	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
240-249	0.18	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
250-259	0.08	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
260-269	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
270-279	0.54	0.32	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
280-289	0.46	0.14	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
290-299	0.40	0.34	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
300-309	0.30	0.22	0.46	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
310-319	0.36	0.20	0.06	0.12	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
320-329	0.40	0.00	0.06	0.02	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.54
330-339	0.44	0.70	0.40	0.12	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.72
340-349	0.30	0.38	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
350-359	0.44	0.00	0.06	0.06	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	1.22
TOTAL %	17.22	25.81	21.29	11.53	7.65	7.55	4.14	1.46	0.42	0.12	0.0	0.0	

PERCENT AT 0 CM/SEC= 2.03

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 2 (58 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.54	0.40	0.16	0.04	0.10	0.04	0.06	0.0	0.0	0.0	0.0	0.0	1.34
10- 19	0.28	0.68	0.46	0.20	0.18	0.10	0.04	0.0	0.0	0.0	0.0	0.0	1.94
20- 29	0.32	1.06	0.84	0.14	0.24	0.04	0.04	0.0	0.0	0.0	0.0	0.0	2.68
30- 39	0.64	0.96	0.78	0.50	0.16	0.16	0.18	0.02	0.0	0.0	0.0	0.0	3.30
40- 49	0.66	1.04	0.60	0.30	0.24	0.18	0.04	0.10	0.0	0.0	0.0	0.0	3.16
50- 59	0.56	1.42	0.64	0.42	0.36	0.36	0.12	0.02	0.0	0.0	0.0	0.0	3.90
60- 69	0.56	1.10	1.02	0.76	0.38	0.20	0.34	0.04	0.0	0.0	0.0	0.0	4.41
70- 79	0.46	1.46	1.36	1.06	0.34	0.68	0.66	0.32	0.14	0.0	0.0	0.0	6.48
80- 89	0.64	1.32	1.80	1.16	0.56	1.34	0.94	0.42	0.10	0.04	0.0	0.0	8.52
90- 99	0.60	1.36	1.40	1.18	1.04	1.18	0.48	0.30	0.04	0.04	0.0	0.0	8.03
100-109	0.66	1.64	2.06	1.00	0.56	1.08	0.40	0.06	0.0	0.0	0.0	0.0	7.57
110-119	0.58	1.16	1.62	1.36	0.60	0.46	0.18	0.06	0.06	0.02	0.0	0.0	6.61
120-129	0.72	1.16	1.40	0.94	0.84	0.56	0.12	0.02	0.02	0.02	0.0	0.0	5.87
130-139	0.78	1.28	1.36	0.72	0.76	0.32	0.0	0.04	0.0	0.0	0.0	0.0	4.96
140-149	1.04	1.20	0.76	0.24	0.30	0.08	0.04	0.0	0.0	0.0	0.0	0.0	3.66
150-159	0.64	1.08	0.56	0.08	0.16	0.12	0.02	0.0	0.0	0.0	0.0	0.0	2.66
160-169	0.72	1.24	0.42	0.28	0.04	0.04	0.02	0.0	0.0	0.0	0.0	0.0	2.76
170-179	0.62	0.78	0.32	0.24	0.02	0.02	0.02	0.0	0.0	0.0	0.0	0.0	2.02
180-189	0.76	0.32	0.18	0.06	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	1.40
190-199	0.52	0.34	0.06	0.0	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	1.00
200-209	0.56	0.26	0.04	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.88
210-219	0.24	0.08	0.06	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42
220-229	0.20	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28
230-239	0.06	0.12	0.02	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24
240-249	0.18	0.10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
250-259	0.08	0.10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20
260-269	0.32	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56
270-279	0.56	0.28	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94
280-289	0.40	0.14	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.64
290-299	0.42	0.34	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.84
300-309	0.30	0.22	0.46	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.06
310-319	0.36	0.26	0.16	0.12	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
320-329	0.40	0.90	0.96	0.22	0.04	0.02	0.0	0.0	0.0	0.0	0.0	0.0	2.54
330-339	0.44	0.70	0.40	0.12	0.02	0.04	0.0	0.0	0.0	0.0	0.0	0.0	1.72
340-349	0.30	0.38	0.14	0.06	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.96
350-359	0.44	0.60	0.06	0.06	0.0	0.02	0.04	0.0	0.0	0.0	0.0	0.0	1.22
TOTAL %	17.22	25.81	21.29	11.53	7.65	7.55	4.14	1.46	0.42	0.12	0.0	0.0	

PERCENT AT 0 CM/SEC= 2.803

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 3 (85 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.81	0.37	0.03	0.12	0.05	0.0	0.0	0.02	0.0	0.0	0.0	0.0	1.39
10- 19	1.16	0.57	0.13	0.07	0.02	0.03	0.02	0.0	0.0	0.0	0.0	0.0	2.00
20- 29	1.24	0.20	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.51
30- 39	1.18	0.10	0.17	0.02	0.02	0.02	0.02	0.0	0.0	0.0	0.0	0.0	1.51
40- 49	0.92	0.20	0.18	0.05	0.05	0.07	0.0	0.02	0.0	0.0	0.0	0.0	1.46
50- 59	1.21	0.24	0.02	0.07	0.07	0.02	0.05	0.0	0.0	0.0	0.0	0.0	1.66
60- 69	1.04	0.25	0.07	0.10	0.05	0.05	0.03	0.02	0.0	0.0	0.0	0.0	1.61
70- 79	1.29	0.18	0.07	0.08	0.03	0.02	0.02	0.02	0.0	0.0	0.0	0.0	1.71
80- 89	1.26	0.32	0.10	0.05	0.03	0.07	0.02	0.0	0.0	0.0	0.0	0.0	1.85
90- 99	1.05	0.29	0.12	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.56
100-109	2.82	0.85	0.45	0.0	0.02	0.03	0.02	0.0	0.0	0.0	0.0	0.0	4.19
110-119	1.91	0.90	0.37	0.03	0.0	0.0	0.02	0.03	0.0	0.0	0.0	0.0	3.26
120-129	2.05	0.50	0.40	0.07	0.02	0.05	0.02	0.0	0.0	0.0	0.0	0.0	3.11
130-139	1.78	0.31	0.22	0.10	0.02	0.02	0.02	0.0	0.0	0.0	0.0	0.0	2.47
140-149	2.15	0.44	0.20	0.20	0.05	0.03	0.0	0.05	0.0	0.0	0.0	0.0	3.14
150-159	1.58	0.27	0.10	0.18	0.10	0.03	0.0	0.02	0.0	0.0	0.0	0.0	2.28
160-169	1.70	0.13	0.10	0.12	0.03	0.02	0.02	0.0	0.0	0.0	0.0	0.0	2.12
170-179	2.45	0.22	0.03	0.0	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0	2.74
180-189	2.27	0.35	0.07	0.0	0.02	0.0	0.02	0.0	0.0	0.0	0.0	0.0	2.72
190-199	2.05	0.52	0.07	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	2.65
200-209	1.21	0.40	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.63
210-219	1.18	0.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.73
220-229	1.43	0.50	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.95
230-239	2.22	0.87	0.12	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	3.23
240-249	2.40	0.95	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.53
250-259	2.20	0.92	0.19	0.02	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	3.34
260-269	2.30	0.95	0.15	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	3.42
270-279	2.45	1.46	0.12	0.02	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.0	4.11
280-289	1.44	2.25	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.21
290-299	1.16	1.05	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.70
300-309	1.05	0.22	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.91
310-319	1.23	0.62	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.92
320-329	1.53	0.45	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.03
330-339	1.34	0.02	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.38
340-349	1.36	0.15	0.02	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	1.55
350-359	1.34	0.30	0.02	0.03	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	1.71
TOTAL %	59.17	20.39	4.48	1.44	0.66	0.52	0.34	0.18	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC=12.815

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 1 METER 4 (91 m), JUL 81 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.64	0.38	0.19	0.10	0.21	0.0	0.03	0.0	0.0	0.0	0.0	0.0	1.55
10- 19	0.99	0.54	0.54	0.19	0.17	0.07	0.0	0.0	0.0	0.0	0.0	0.0	2.40
20- 29	0.72	0.45	0.17	0.10	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
30- 39	1.42	0.54	0.16	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.12
40- 49	1.45	0.29	0.22	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.04
50- 59	2.69	0.50	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.40
60- 69	1.38	0.28	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.85
70- 79	1.16	0.35	0.05	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.63
80- 89	1.40	0.22	0.10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
90- 99	1.50	0.26	0.07	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.70
100-109	1.97	0.40	0.16	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.64
110-119	1.93	0.36	0.36	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.62
120-129	2.07	0.54	0.24	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.97
130-139	1.38	0.67	0.25	0.19	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.51
140-149	1.97	0.72	0.31	0.22	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.26
150-159	1.79	0.36	0.09	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.28
160-169	2.42	0.33	0.10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.87
170-179	2.66	0.40	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.11
180-189	2.02	0.71	0.10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.85
190-199	2.14	0.81	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.05
200-209	2.35	0.88	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.24
210-219	3.12	0.76	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.90
220-229	3.18	1.59	0.19	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.97
230-239	5.06	2.50	0.47	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.13
240-249	3.07	1.44	0.26	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.77
250-259	1.78	1.57	0.63	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.10
260-269	2.21	1.43	0.60	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.27
270-279	1.73	1.05	0.74	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.62
280-289	1.01	1.00	0.45	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.11
290-299	1.04	0.24	0.17	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.47
300-309	0.93	0.50	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.67
310-319	0.74	0.31	0.21	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.28
320-329	1.29	0.16	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.62
330-339	0.86	0.08	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.03
340-349	0.60	0.28	0.12	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04
350-359	0.52	0.24	0.12	0.02	0.0	0.05	0.10	0.0	0.0	0.0	0.0	0.0	1.05
TOTAL %	64.27	24.87	8.16	1.83	0.57	0.12	0.14	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 0.035

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 1 (50 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.48	0.40	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.97
10- 19	0.42	0.57	0.11	0.02	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.17
20- 29	0.63	0.45	0.03	0.05	0.01	0.08	0.03	0.0	0.0	0.0	0.0	0.0	1.31
30- 39	0.68	0.24	0.23	0.07	0.02	0.02	0.05	0.0	0.0	0.0	0.0	0.0	1.36
40- 49	0.46	0.93	0.35	0.28	0.06	0.06	0.0	0.0	0.0	0.0	0.0	0.0	2.04
50- 59	0.82	1.03	0.65	0.52	0.22	0.02	0.0	0.0	0.0	0.0	0.0	0.0	3.26
60- 69	1.08	1.27	1.13	0.77	0.12	0.08	0.0	0.0	0.0	0.0	0.0	0.0	4.45
70- 79	1.08	1.42	0.99	0.77	0.17	0.25	0.02	0.0	0.0	0.0	0.0	0.0	4.69
80- 89	1.22	2.50	1.72	1.31	0.40	0.37	0.25	0.02	0.0	0.0	0.0	0.0	7.69
90- 99	0.99	2.38	1.39	1.61	0.65	1.06	0.62	0.02	0.0	0.0	0.0	0.0	9.31
100-109	1.11	2.57	1.84	1.61	0.49	0.49	0.51	0.08	0.0	0.0	0.0	0.0	8.71
110-119	0.88	1.97	1.45	1.06	0.62	0.26	0.05	0.02	0.0	0.0	0.0	0.0	7.09
120-129	1.03	1.53	1.77	0.90	0.37	0.46	0.11	0.02	0.0	0.0	0.0	0.0	5.50
130-139	0.83	1.77	1.13	0.85	0.11	0.05	0.03	0.0	0.0	0.0	0.0	0.0	4.78
140-149	0.97	1.62	1.10	0.59	0.11	0.02	0.0	0.0	0.0	0.0	0.0	0.0	4.40
150-159	0.39	1.22	0.59	0.76	0.17	0.02	0.0	0.0	0.0	0.0	0.0	0.0	3.17
160-169	0.32	0.73	0.34	0.26	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.70
170-179	0.29	0.62	0.46	0.32	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.71
180-189	0.22	0.34	0.20	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95
190-199	0.14	0.29	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55
200-209	0.20	0.29	0.14	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.65
210-219	0.29	0.23	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57
220-229	0.32	0.32	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.68
230-239	0.12	0.12	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26
240-249	0.15	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
250-259	0.36	0.14	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.52
260-269	0.11	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40
270-279	0.32	0.32	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.71
280-289	0.36	0.31	0.19	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93
290-299	0.36	0.37	0.19	0.15	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.11
300-309	0.26	0.62	0.46	0.26	0.29	0.20	0.02	0.0	0.0	0.0	0.0	0.0	2.05
310-319	0.43	0.94	0.77	0.43	0.39	0.08	0.0	0.0	0.0	0.0	0.0	0.0	3.05
320-329	0.39	1.19	0.85	0.26	0.19	0.05	0.0	0.0	0.0	0.0	0.0	0.0	2.92
330-339	0.51	0.39	0.52	0.14	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	2.25
340-349	0.48	0.63	0.19	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.31
350-359	0.49	0.56	0.09	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.16
TOTAL %	18.64	32.12	19.56	14.28	4.63	3.58	1.67	0.12	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 5.402

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 2 (71.5 m), JUL 81 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.54	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.62
10- 19	1.16	0.11	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
20- 29	1.14	0.20	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.41
30- 39	1.35	0.19	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.60
40- 49	1.74	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.85
50- 59	2.06	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.25
60- 69	2.17	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.38
70- 79	2.04	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.24
80- 89	2.81	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.10
90- 99	3.79	0.51	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.32
100-109	5.69	0.74	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.54
110-119	3.74	0.87	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.77
120-129	5.00	1.50	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.77
130-139	5.67	2.51	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.49
140-149	5.40	2.92	0.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.86
150-159	3.94	2.14	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.12
160-169	2.57	1.32	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.96
170-179	1.37	0.36	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.80
180-189	0.91	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.17
190-199	0.61	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.72
200-209	0.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51
210-219	0.49	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50
220-229	0.31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32
230-239	0.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44
240-249	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38
250-259	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35
260-269	0.37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37
270-279	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67
280-289	0.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.99
290-299	1.49	0.35	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.94
300-309	2.41	1.87	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.01
310-319	3.16	2.63	0.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.31
320-329	3.76	1.46	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.35
330-339	2.92	0.71	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.75
340-349	1.93	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.20
350-359	1.94	0.17	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.12
TOTAL %	73.79	22.42	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 1.275

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 3 (85 m), JUL 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.78	0.62	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.59
10- 19	0.61	0.41	0.12	0.14	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.32
20- 29	0.64	0.66	0.16	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.49
30- 39	0.67	0.41	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.10
40- 49	0.55	0.36	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93
50- 59	0.52	0.36	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
60- 69	0.44	0.45	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95
70- 79	0.91	0.71	0.12	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
80- 89	0.87	0.79	0.16	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.83
90- 99	1.01	1.08	0.39	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.50
100-109	1.11	1.61	0.73	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.53
110-119	1.00	2.07	1.06	0.27	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	4.48
120-129	1.55	2.20	1.71	0.56	0.31	0.17	0.0	0.0	0.0	0.0	0.0	0.0	6.50
130-139	0.94	2.26	1.94	1.48	0.37	0.22	0.05	0.0	0.0	0.0	0.0	0.0	7.26
140-149	1.30	2.30	2.32	1.48	0.69	0.32	0.07	0.0	0.0	0.0	0.0	0.0	8.47
150-159	1.06	1.36	1.22	0.51	0.14	0.13	0.02	0.0	0.0	0.0	0.0	0.0	4.45
160-169	0.93	0.77	0.42	0.14	0.05	0.04	0.0	0.0	0.0	0.0	0.0	0.0	2.34
170-179	0.55	0.35	0.19	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.13
180-189	0.65	0.25	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
190-199	0.42	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47
200-209	0.28	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33
210-219	0.28	0.16	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47
220-229	0.35	0.06	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43
230-239	0.31	0.03	0.01	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37
240-249	0.28	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39
250-259	0.34	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50
260-269	0.39	0.25	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.65
270-279	0.61	0.42	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.08
280-289	0.64	0.65	0.21	0.08	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.78
290-299	0.91	1.55	1.01	0.15	0.14	0.05	0.0	0.0	0.0	0.0	0.0	0.0	4.06
300-309	1.22	2.11	2.13	1.25	0.81	0.47	0.13	0.0	0.0	0.0	0.0	0.0	8.13
310-319	1.20	2.10	1.41	0.82	0.41	0.20	0.03	0.0	0.0	0.0	0.0	0.0	5.18
320-329	1.39	2.12	1.25	0.32	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.18
330-339	1.24	1.21	0.27	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.82
340-349	0.94	0.69	0.18	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.84
350-359	0.91	0.75	0.09	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.75
TOTAL %	27.75	31.56	17.89	9.42	3.13	1.61	0.31	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 9.330

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 2 METER 4 (97 m), JUL 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10- 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20- 29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30- 39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40- 49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50- 59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60- 69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70- 79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80- 89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90- 99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100-109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110-119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120-129	34.60	23.34	12.43	4.60	0.64	0.07	0.0	0.0	0.0	0.0	0.0	0.0	75.7
130-139	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140-149	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150-159	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160-169	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170-179	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180-189	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190-199	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200-209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210-219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220-229	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230-239	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240-249	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250-259	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260-269	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270-279	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280-289	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290-299	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300-309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310-319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320-329	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330-339	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340-349	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350-359	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL %	34.60	23.34	12.43	4.60	0.64	0.07	0.0	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC=24.327

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 1 (53 m), JUL 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL *
0- 9	0.51	0.60	0.27	0.13	0.08	0.13	0.02	0.0	0.0	0.0	0.0	0.0	1.74
10- 19	0.82	0.77	0.37	0.06	0.10	0.09	0.01	0.0	0.0	0.0	0.0	0.0	2.24
20- 29	0.95	0.66	0.35	0.47	0.15	0.06	0.02	0.0	0.0	0.0	0.0	0.0	2.66
30- 39	0.84	0.90	0.88	0.45	0.10	0.16	0.04	0.01	0.0	0.0	0.0	0.0	3.38
40- 49	0.91	0.79	0.90	0.46	0.20	0.08	0.02	0.0	0.0	0.0	0.0	0.0	3.37
50- 59	1.11	0.77	1.16	0.99	0.73	0.23	0.05	0.05	0.0	0.0	0.0	0.0	5.10
60- 69	1.01	1.12	1.30	1.06	0.70	0.46	0.30	0.10	0.02	0.0	0.0	0.0	6.07
70- 79	1.42	1.43	1.11	0.93	0.60	0.45	0.19	0.19	0.07	0.03	0.01	0.0	6.43
80- 89	1.35	1.38	1.64	0.99	0.70	0.52	0.50	0.45	0.46	0.05	0.02	0.0	8.76
90- 99	1.61	1.82	1.87	1.06	0.70	0.56	0.28	0.25	0.17	0.01	0.0	0.0	8.33
100-109	1.21	2.31	1.39	1.13	0.60	0.78	0.12	0.30	0.02	0.0	0.0	0.0	8.15
110-119	1.14	1.42	1.28	1.36	0.86	0.65	0.27	0.01	0.0	0.0	0.0	0.0	7.00
120-129	1.02	0.47	1.02	1.66	0.99	0.72	0.36	0.05	0.0	0.0	0.0	0.0	6.77
130-139	0.90	1.01	1.24	0.77	0.73	0.39	0.16	0.02	0.0	0.0	0.0	0.0	5.22
140-149	0.82	1.50	0.48	1.03	0.55	0.19	0.05	0.01	0.0	0.0	0.0	0.0	4.03
150-159	0.83	0.67	0.69	0.44	0.22	0.19	0.02	0.0	0.0	0.0	0.0	0.0	2.86
160-169	0.60	0.51	0.42	0.29	0.09	0.15	0.0	0.0	0.0	0.0	0.0	0.0	2.07
170-179	0.45	0.25	0.28	0.29	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.31
180-189	0.38	0.21	0.10	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74
190-199	0.34	0.15	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59
200-209	0.24	0.07	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38
210-219	0.30	0.08	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41
220-229	0.26	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36
230-239	0.25	0.05	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33
240-249	0.20	0.07	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
250-259	0.24	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35
260-269	0.22	0.10	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43
270-279	0.30	0.12	0.10	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57
280-289	0.25	0.13	0.21	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.64
290-299	0.39	0.27	0.17	0.05	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91
300-309	0.45	0.21	0.31	0.20	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.21
310-319	0.38	0.22	0.28	0.21	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.21
320-329	0.43	0.27	0.47	0.18	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
330-339	0.36	0.30	0.19	0.07	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.97
340-349	0.34	0.27	0.24	0.02	0.09	0.03	0.01	0.0	0.0	0.0	0.0	0.0	1.01
350-359	0.47	0.22	0.21	0.10	0.06	0.08	0.07	0.01	0.0	0.0	0.0	0.0	1.26
TOTAL %	23.28	22.51	19.93	14.25	9.05	5.86	3.59	1.47	0.74	0.09	0.21	0.0	

PERCENT AT 0 CM/SEC= 0.021

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 2 (64 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.46	0.60	0.57	0.15	0.11	0.14	0.02	0.0	0.0	0.0	0.0	0.0	2.04
10- 19	0.51	0.69	0.78	0.20	0.12	0.11	0.01	0.0	0.0	0.0	0.0	0.0	2.43
20- 29	0.51	0.79	0.74	0.17	0.15	0.09	0.0	0.0	0.0	0.0	0.0	0.0	2.44
30- 39	0.42	0.68	0.48	0.23	0.25	0.15	0.02	0.0	0.0	0.0	0.0	0.0	2.05
40- 49	0.48	0.86	0.61	0.27	0.37	0.12	0.04	0.01	0.0	0.0	0.0	0.0	2.95
50- 59	0.75	1.72	0.75	0.41	0.46	0.14	0.03	0.005	0.0	0.0	0.0	0.0	4.90
60- 69	0.72	1.36	1.18	0.59	0.35	0.31	0.19	0.01	0.02	0.0	0.0	0.0	4.75
70- 79	0.53	1.42	1.24	0.44	0.49	0.39	0.31	0.09	0.03	0.0	0.0	0.0	5.35
80- 89	1.03	1.58	1.14	0.35	0.48	0.55	0.45	0.28	0.03	0.0	0.0	0.0	5.90
90- 99	1.14	1.36	1.05	0.46	0.36	0.51	0.26	0.20	0.01	0.01	0.0	0.0	5.36
100-109	0.78	1.64	1.41	0.57	0.45	0.43	0.21	0.05	0.02	0.01	0.0	0.0	5.58
110-119	0.82	2.01	1.43	0.67	0.69	0.51	0.12	0.01	0.0	0.0	0.0	0.0	6.18
120-129	0.60	1.50	1.43	0.79	0.33	0.72	0.26	0.24	0.07	0.0	0.0	0.0	6.36
130-139	0.53	1.19	1.72	1.12	0.38	0.56	0.24	0.17	0.04	0.0	0.0	0.0	6.55
140-149	0.69	1.28	1.80	1.01	0.58	0.57	0.15	0.01	0.01	0.0	0.0	0.0	6.10
150-159	0.45	0.76	1.27	0.75	0.43	0.25	0.02	0.0	0.0	0.0	0.0	0.0	4.90
160-169	0.59	0.58	0.82	0.56	0.21	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.77
170-179	0.38	0.39	0.55	0.32	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	1.70
180-189	0.40	0.26	0.33	0.20	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.20
190-199	0.22	0.24	0.15	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.76
200-209	0.27	0.28	0.13	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.79
210-219	0.20	0.20	0.11	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57
220-229	0.18	0.14	0.11	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46
230-239	0.23	0.07	0.07	0.0	0.01	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.41
240-249	0.13	0.22	0.06	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45
250-259	0.23	0.11	0.03	0.02	0.01	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.44
260-269	0.13	0.11	0.07	0.01	0.04	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.37
270-279	0.14	0.12	0.04	0.03	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.30
280-289	0.08	0.16	0.17	0.09	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.54
290-299	0.11	0.18	0.06	0.07	0.09	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.54
300-309	0.12	0.21	0.14	0.08	0.04	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.61
310-319	0.16	0.20	0.42	0.08	0.12	0.09	0.0	0.0	0.0	0.0	0.0	0.0	1.07
320-329	0.19	0.19	0.27	0.36	0.11	0.20	0.0	0.0	0.0	0.0	0.0	0.0	1.33
330-339	0.17	0.49	0.35	0.12	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	1.22
340-349	0.21	0.46	0.23	0.03	0.05	0.05	0.02	0.0	0.0	0.0	0.0	0.0	1.05
350-359	0.16	0.52	0.52	0.11	0.04	0.06	0.03	0.0	0.0	0.0	0.0	0.0	1.44
TOTAL %	15.46	24.59	22.22	10.62	7.02	6.14	2.39	1.14	0.24	0.02	0.0	0.0	

PERCENT AT 0 CM/SEC= 9.261

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 3 (91 m), JUL 81 RECOVERY

SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.06	1.08	0.64	0.13	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.98
10- 19	1.20	1.06	0.36	0.06	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	2.78
20- 29	1.09	1.04	0.50	0.10	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.82
30- 39	1.10	1.41	0.73	0.24	0.13	0.05	0.0	0.0	0.0	0.0	0.0	0.0	3.70
40- 49	0.99	1.29	0.94	0.04	0.06	0.03	0.05	0.0	0.0	0.0	0.0	0.0	3.10
50- 59	1.34	1.35	0.36	0.11	0.03	0.04	0.0	0.0	0.0	0.0	0.0	0.0	3.23
60- 69	1.25	0.94	0.35	0.13	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.70
70- 79	1.19	0.85	0.25	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.18
80- 89	1.01	0.35	0.20	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.81
90- 99	1.04	0.55	0.33	0.08	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.08
100-109	1.10	0.52	0.50	0.39	0.13	0.01	0.0	0.0	0.0	0.0	0.0	0.0	3.14
110-119	1.12	0.53	0.79	0.73	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.21
120-129	1.19	1.06	0.85	1.03	0.44	0.05	0.0	0.0	0.0	0.0	0.0	0.0	4.57
130-139	1.25	1.46	1.05	1.10	0.49	0.04	0.0	0.0	0.0	0.0	0.0	0.0	5.39
140-149	1.26	1.58	1.56	1.20	0.68	0.06	0.0	0.0	0.0	0.0	0.0	0.0	6.34
150-159	0.81	1.26	0.96	1.23	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.42
160-169	0.48	1.21	0.61	0.65	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.98
170-179	0.51	0.94	0.85	0.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.54
180-189	0.55	0.85	0.60	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.20
190-199	0.40	0.44	0.35	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.60
200-209	0.35	0.55	0.38	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.71
210-219	0.48	0.50	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.73
220-229	0.40	0.34	0.31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.06
230-239	0.35	0.25	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.81
240-249	0.40	0.25	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.76
250-259	0.45	0.38	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04
260-269	0.48	0.59	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.16
270-279	0.40	0.59	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.16
280-289	0.51	0.63	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.25
290-299	0.59	0.60	0.20	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
300-309	0.59	0.93	0.19	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.71
310-319	0.40	1.13	0.28	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.85
320-329	0.66	0.96	0.51	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.14
330-339	1.34	0.63	0.61	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.66
340-349	1.60	1.08	0.41	0.04	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.19
350-359	1.30	1.11	0.69	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.18
TOTAL %	30.70	30.70	17.61	7.92	2.64	0.33	0.05	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 8.056

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 3 METER 4 (97 m), JUL 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.84	1.70	0.43	0.06	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.11
10- 19	1.01	1.57	0.11	0.10	0.05	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.84
20- 29	1.00	1.15	0.41	0.29	0.09	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.94
30- 39	1.03	1.10	0.32	0.11	0.06	0.06	0.02	0.0	0.0	0.0	0.0	0.0	2.70
40- 49	1.01	1.07	0.38	0.11	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.63
50- 59	0.70	0.84	0.34	0.05	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.94
60- 69	0.70	0.62	0.20	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.65
70- 79	0.52	0.43	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.11
80- 89	1.17	0.54	0.29	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.01
90- 99	0.42	0.61	0.12	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19
100-109	0.58	0.56	0.17	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.35
110-119	0.83	0.55	0.29	0.21	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.07
120-129	1.20	0.95	0.50	0.41	0.16	0.01	0.0	0.0	0.0	0.0	0.0	0.0	3.30
130-139	1.38	1.75	0.24	0.50	0.29	0.09	0.0	0.0	0.0	0.0	0.0	0.0	4.85
140-149	1.27	2.33	1.61	0.82	0.20	0.01	0.0	0.0	0.0	0.0	0.0	0.0	6.24
150-159	1.12	1.72	1.37	0.90	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.24
160-169	1.00	1.40	0.95	0.38	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.74
170-179	1.16	1.06	0.74	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.10
180-189	0.79	0.92	0.66	0.04	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.42
190-199	0.60	0.92	0.37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.88
200-209	0.50	0.60	0.35	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.46
210-219	0.73	0.75	0.13	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.34
220-229	0.74	0.46	0.16	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.39
230-239	0.62	0.56	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.35
240-249	0.79	0.57	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.51
250-259	0.77	0.52	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
260-269	1.13	0.45	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.73
270-279	0.93	0.54	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.67
280-289	0.59	0.78	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
290-299	0.94	0.96	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.02
300-309	1.17	0.36	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.16
310-319	1.21	0.95	0.16	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.37
320-329	2.00	1.02	0.34	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.05
330-339	1.68	1.55	0.33	0.04	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.66
340-349	1.44	1.49	0.35	0.07	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.39
350-359	1.43	1.09	0.34	0.06	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.02
TOTAL %	35.97	36.21	13.74	4.69	1.33	0.20	0.02	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 7.847

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 4 METER 1 (47 m), JUL 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.51	0.60	0.20	0.15	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43
10- 19	0.78	0.42	0.28	0.24	0.09	0.06	0.0	0.0	0.0	0.0	0.0	0.0	1.86
20- 29	0.73	0.60	0.58	0.35	0.21	0.12	0.01	0.0	0.0	0.0	0.0	0.0	2.59
30- 39	0.83	0.67	0.54	0.50	0.44	0.24	0.01	0.0	0.0	0.0	0.0	0.0	3.74
40- 49	0.80	0.72	0.64	0.42	0.35	0.30	0.01	0.0	0.0	0.0	0.0	0.0	3.17
50- 59	1.03	1.46	0.97	0.78	0.49	0.37	0.07	0.0	0.0	0.0	0.0	0.0	5.17
60- 69	1.09	1.16	1.06	0.54	0.38	0.19	0.12	0.08	0.0	0.0	0.0	0.0	4.64
70- 79	1.22	0.92	1.30	1.00	0.33	0.20	0.06	0.11	0.01	0.0	0.0	0.0	5.05
80- 89	0.95	0.79	1.37	1.09	0.50	0.31	0.25	0.19	0.05	0.0	0.0	0.0	5.49
90- 99	1.04	1.26	1.30	1.12	0.56	0.36	0.33	0.26	0.20	0.03	0.0	0.0	6.26
100-109	1.11	1.18	1.16	1.01	0.53	0.16	0.07	0.05	0.0	0.0	0.0	0.0	5.32
110-119	1.19	1.22	1.79	1.58	0.34	0.21	0.03	0.0	0.0	0.0	0.0	0.0	5.97
120-129	1.59	0.96	1.24	0.99	0.33	0.17	0.0	0.0	0.0	0.0	0.0	0.0	5.28
130-139	0.97	0.75	0.99	0.50	0.20	0.02	0.0	0.0	0.0	0.0	0.0	0.0	3.42
140-149	1.31	1.26	1.39	0.41	0.14	0.02	0.0	0.0	0.0	0.0	0.0	0.0	4.42
150-159	0.97	0.79	1.07	0.52	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.61
160-169	0.89	0.74	0.86	0.46	0.08	0.01	0.01	0.0	0.0	0.0	0.0	0.0	3.09
170-179	0.59	0.90	0.72	0.23	0.08	0.05	0.0	0.0	0.0	0.0	0.0	0.0	2.57
180-189	0.88	1.18	0.80	0.15	0.08	0.06	0.01	0.0	0.0	0.0	0.0	0.0	3.21
190-199	0.73	0.90	0.23	0.09	0.02	0.05	0.01	0.0	0.0	0.0	0.0	0.0	2.04
200-209	0.65	0.64	0.41	0.12	0.02	0.05	0.01	0.0	0.0	0.0	0.0	0.0	1.91
210-219	1.07	0.45	0.35	0.12	0.11	0.07	0.01	0.0	0.0	0.0	0.0	0.0	2.17
220-229	0.65	0.37	0.19	0.01	0.08	0.05	0.01	0.0	0.0	0.0	0.0	0.0	1.28
230-239	0.89	0.71	0.30	0.15	0.08	0.08	0.02	0.0	0.0	0.0	0.0	0.0	1.82
240-249	0.84	0.19	0.17	0.37	0.26	0.04	0.03	0.0	0.0	0.0	0.0	0.0	1.91
250-259	1.04	0.21	0.07	0.06	0.03	0.05	0.03	0.0	0.0	0.0	0.0	0.0	1.51
260-269	0.86	0.05	0.11	0.04	0.02	0.02	0.05	0.0	0.0	0.0	0.0	0.0	1.19
270-279	0.58	0.16	0.13	0.04	0.05	0.02	0.03	0.0	0.0	0.0	0.0	0.0	1.01
280-289	0.62	0.14	0.11	0.04	0.02	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.98
290-299	0.45	0.21	0.16	0.02	0.03	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.91
300-309	0.43	0.21	0.08	0.01	0.04	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.84
310-319	0.37	0.17	0.12	0.0	0.05	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.74
320-329	0.64	0.26	0.08	0.02	0.05	0.05	0.0	0.0	0.0	0.0	0.0	0.0	1.12
330-339	0.57	0.22	0.07	0.02	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93
340-349	0.56	0.31	0.14	0.08	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.13
350-359	0.61	0.46	0.23	0.12	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.48
TOTAL %	30.06	22.77	21.64	13.46	6.22	3.43	1.27	0.70	0.26	0.03	0.0	0.0	

PERCENT AT 0 CM/SEC= 0.116

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 4 METER 2 (58 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10- 19	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40
20- 29	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67
30- 39	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27
40- 49	0.40	1.27	0.60	0.27	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.61
50- 59	1.54	0.60	0.33	0.74	1.07	0.33	0.0	0.0	0.0	0.0	0.0	0.0	4.62
60- 69	0.73	0.33	0.27	0.67	0.27	0.60	0.13	0.0	0.0	0.0	0.0	0.0	2.61
70- 79	0.47	0.33	1.14	1.20	0.54	1.81	0.40	0.20	0.0	0.0	0.0	0.0	6.09
80- 89	0.67	2.28	1.34	1.67	1.94	3.75	1.61	0.40	0.0	0.0	0.0	0.0	13.65
90- 99	1.41	2.21	2.01	1.74	1.00	2.21	1.20	0.33	0.0	0.0	0.0	0.0	12.12
100-109	1.47	2.21	2.14	1.94	1.07	0.60	0.27	0.0	0.0	0.0	0.0	0.07	9.77
110-119	1.67	3.02	2.41	1.81	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.04
120-129	0.74	2.14	2.48	0.74	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.36
130-139	0.40	0.74	0.80	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.61
140-149	0.54	1.07	0.67	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.41
150-159	0.94	0.47	1.20	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.68
160-169	0.67	0.13	0.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.14
170-179	0.0	0.13	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20
180-189	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190-199	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200-209	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210-219	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220-229	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230-239	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240-249	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250-259	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260-269	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270-279	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280-289	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290-299	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300-309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310-319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320-329	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330-339	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340-349	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350-359	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL %	12.58	17.20	15.80	11.65	6.09	9.30	3.61	0.94	0.0	0.0	0.0	0.07	

PERCENT AT 0 CM/SEC=22.758

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 4 METER 3 (85 m), JUL 81 RECOVERY

SPEED IN CM/S

DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
10- 19	1.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.14
20- 29	1.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.41
30- 39	1.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	1.67
40- 49	2.48	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
50- 59	5.09	1.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.76
60- 69	3.76	1.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.20
70- 79	2.41	2.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.42
80- 89	1.74	1.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.48
90- 99	1.41	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	1.87
100-109	2.48	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.54
110-119	1.61	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
120-129	2.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.68
130-139	2.82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.82
140-149	2.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.61
150-159	2.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.01
160-169	2.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
170-179	2.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.28
180-189	1.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
190-199	2.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.14
200-209	2.48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.48
210-219	2.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.60
220-229	2.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.88
230-239	2.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.60
240-249	2.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.60
250-259	2.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.01
260-269	1.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
270-279	2.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.20
280-289	2.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.33
290-299	1.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
300-309	1.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40
310-319	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
320-329	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
330-339	1.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27
340-349	1.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.20
350- 0	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27
TOTAL %	52.95	7.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	

PERCENT AT 0 CM/SEC=32.019

PERCENTAGE BREAKDOWN OF SPEED AND DIRECTION FOR MOORING 4 METER 4 (91 m), JUL 81 RECOVERY
SPEED IN CM/S
DIRECTION IN DEGREES TRUE

SPEED / DIRECTION	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	OVER 55	TOTAL %
0- 9	0.20	0.67	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
10- 19	0.27	0.54	0.27	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.14
20- 29	0.20	0.54	0.40	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.20
30- 39	0.40	1.14	0.13	0.80	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.95
40- 49	0.33	1.54	0.07	0.07	0.33	0.13	0.0	0.0	0.0	0.0	0.0	0.0	2.48
50- 59	0.54	1.34	0.87	0.40	0.80	1.14	0.0	0.0	0.0	0.0	0.0	0.0	5.09
60- 69	0.67	1.20	0.74	0.47	0.47	0.74	0.07	0.0	0.0	0.0	0.0	0.0	4.35
70- 79	0.47	1.07	1.47	0.27	0.80	0.60	0.0	0.0	0.0	0.0	0.0	0.0	4.69
80- 89	0.60	1.74	0.87	0.20	0.60	0.20	0.07	0.0	0.0	0.0	0.0	0.0	4.48
90- 99	0.67	0.74	1.27	0.54	0.94	0.07	0.0	0.0	0.0	0.0	0.0	0.0	4.22
100-109	0.80	1.14	0.67	0.47	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.68
110-119	1.00	1.47	0.54	0.60	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.68
120-129	1.34	2.15	0.67	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.29
130-139	0.80	2.34	1.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.75
140-149	0.67	1.67	1.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.95
150-159	0.87	1.54	0.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.15
160-169	2.07	1.07	0.74	0.27	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.28
170-179	0.54	1.87	1.00	0.0	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.68
180-189	0.67	1.47	0.40	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
190-199	1.00	1.27	1.20	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.75
200-209	0.87	1.14	0.80	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.08
210-219	0.60	0.80	0.40	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.01
220-229	0.87	0.80	0.27	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.07
230-239	0.94	1.34	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
240-249	0.67	1.00	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74
250-259	1.54	0.60	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.21
260-269	0.87	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.14
270-279	0.60	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74
280-289	1.00	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.07
290-299	0.54	0.07	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67
300-309	0.13	0.13	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33
310-319	0.07	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33
320-329	0.0	0.20	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33
330-339	0.0	0.13	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20
340-349	0.27	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54
350-359	0.40	0.34	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.07
TOTAL %	23.56	36.21	17.94	5.22	5.89	2.89	0.13	0.0	0.0	0.0	0.0	0.0	

PERCENT AT 0 CM/SEC= 9.170

The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

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

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

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