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Lydonia Canyon Experiment: Data report for moored array deployment I, October 1980-April 1981

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INTRODUCTION

Lydonia Canyon is located along the southern flank of Georges Bank off the coast of the northeastern United States (fig. 1). The canyon, as defined by the 200-m isobath, cuts northward approximately 20 km onto the Continental Shelf. In 1980, the U.S. Geological Survey began a field study of the physical oceanography and geology of the canyon and the adjacent shelf and slope. The major objectives of the field program were to:

1. Describe the currents, hydrography, and suspended sediments in Lydonia Canyon and on the adjacent shelf and slope;

2. Map the surficial geology of the region, particularly regions of sediment deposition or scour;

3. Determine the role of canyons in transporting sediment and nutrients on or off the Continental Shelf;

4. Determine if Lydonia Canyon is a potential sink for drill muds or cuttings discharged onto the outer Continental Shelf by petroleum exploration.

The field program included:

1. Measurements by an array of moored current meters, bottom tripods, and sediment traps maintained between October 1980 and November 1982;

2. Synoptic observations of the hydrography and suspended sediments during 8 cruises between October 1980 and November 1982;

3. Surveys of the bottom utilizing a research submersible, sidescan sonographs, and high-resolution acoustic profiles;

4. Samples of the surficial sediment;

5. Detailed surveys of the canyon bathymetry.

Five arrays of moored instruments were deployed as part of the Lydonia Canyon experiment (table 1). The data in this report are presented in graphical and tabular form and were obtained by the first array of moored instruments deployed from October 1980 to April 1981.

INSTRUMENTATION

Several types of current meters and instrument packages were used in the canyon experiment to measure currents, temperature, pressure, and light transmission, and to document sediment movement. Each instrument is briefly described below.

Vector-averaging current meter (VACM)

Currents and temperature were measured by means of EG&G vector-averaging current meters (VACM) which have a Savonius rotor and small vane to detect

current speed and direction. The VACM samples direction every 1/16 rotor turn and vector averages the current for a specified interval. In this experiment, sampling intervals of 3.75 or 7.5 minutes were used. Temperature was also averaged for the same period. Some VACM's were modified to measure and record additional variables. Three versions of the VACM were used in the canyon experiment: VACM-pressure, VACM-transmission, and VACM-transmission-conductivity.

VACM-Pressure

VACM's modified to record pressure were used to determine instrument depth on selected moorings, primarily in areas of rough topography. The pressure instruments were provided by the Woods Hole Oceanographic Institution (WHOI). Pressure is averaged over one-half the VACM sampling interval. Accuracy is approximately 0.1% full scale (4.4 m) and resolution is .01 m.

VACM-Transmission

VACM's modified to measure light transmission were used to qualitatively document the level and variablity of suspended sediment in the water column or near the sea floor. The 1-m folded-path white-light transmission sensor was manufactured by Montedoro-Whitney. Power was supplied to the VACM to operate the transmissometer from an external battery. Light transmission was measured once for about 0.1 s in the center of the VACM sampling interval. Accuracy is approximately ±5%. Fouling of the sensor optics, especially on the shallow instruments, gradually degraded the transmission readings during the experiment.

VACM-Transmission-conductivity-fast-response temperature

VACM's were modified to measure light transmission and conductivity (fig. 2). The 0.25 m path red LED (light emitting diode) transmission sensor was manufactured by Sea Tech Inc. (Bartz and others, 1978). The transmission sensor voltage was measured for about 0.1 s in the center of the VACM sampling interval. Conductivity was measured by means of a Sea Bird, Inc. conductivity sensor (Peterson and Gregg, 1979). Output of the conductivity sensor was averaged for 1.875 s in the center of the VACM sampling interval. Because transmission and conductivity sensors were on for only a short sampling period and required little power, both were powered by the VACM battery. Temperature was measured simultaneously by means of a thermistor mounted adjacent to the conductivity cell and provided a temperature measurement with a time constant similar to the conductivity sensor.

Bottom tripod

An instrument system which measured near-bottom current, temperature, pressure, and light transmission and which photographed the sea floor was deployed at three locations on the shelf around the head of Lydonia Canyon to document near-bottom currents and sediment movement. This instrument system (fig. 3) was developed for long-term studies of sediment movement on the Continental Shelf (Butman and Folger, 1979). For the Lydonia Canyon experiment, the instrument sampled average rotor speed and pressure every 7.5 min. Measurements of temperature and light transmission were made in the center of the sampling interval. The instrument also burst-sampled current

speed, current direction, and pressure for 48 s every 7.5 min (12 samples at a rate of 4 s). The standard deviation of the high-frequency burst pressure measurements is a measure of the bottom-pressure fluctuations caused by surface waves and, with the current measurements, can be used to determine bottom stress using the model of Grant and Madsen (1979). The high-frequency burst current measurements were vector averaged to obtain current speed and direction.

Deep instrument package

An instrument package was constructed to measure currents and light transmission and to obtain time-lapse photographs of the sea floor (fig. 4). The instrument packages were used in the canyon axis, where the bottom-tripod system was unsuitable because of rough topography, and in water depths deeper than 125 m, where the tripod deployment and recovery system is unworkable. The instrument package was deployed as a component of a subsurface mooring. The instrument package consisted of a VACM modified to record light transmission or light transmission and conductivity, a Benthos, Inc. 35-mm model-371 camera and model-382 strobe, a sediment trap, and an acoustic release mounted on a triangular stainless steel frame (fig. 4). Swivels were placed above and below the package to allow it to rotate freely and to face upcurrent. The VACM was mounted upside down so that the current rotor and vane were clear of the release mechanism. The current meter in this configuration is approximately 5 m above the sea floor.

Pressure

Bottom pressure and temperature measurements were obtained by means of a special subsurface mooring (fig. 5). A data logger was bolted alongside an acoustic release. The release was attached directly to a steel rod embedded in a concrete anchor and could not swivel more than approximately 90°. The pressure sensor was connected to the data logger by an electrical cable, the sensor was wrapped in foam and placed snugly in a well in the concrete anchor; it was held securely in place during launch by corrodable links. Buoyancy was attached above the release-data logger package for recovery.

MOORED ARRAY

The mean flow in this region of the Outer Continental Shelf is generally westward (Butman and others, 1982), although Gulf Stream eddies may reverse the flow for long periods near the shelf break. The moored array was designed to document currents upstream and downstream of Lydonia Canyon on both the shelf and upper slope and on either side of the shelf-water/slope-water front which intersects the bottom near the 100-m isobath. The array was designed primarily to describe the near-bottom currents and sediment movement on the Outer Continental Shelf, the currents and sediment movement in the canyon, and transport from the shelf into the canyon.

Instruments were deployed at 15 locations in Lydonia Canyon and on the adjacent shelf and slope (figs. 6, 7, 8, and table 2). Throughout the array, instruments were deployed at common depths of approximately 10, 50, 100, 200, 400, and 800 m from the surface. Bottom tripods and VACM's 10 meters above bottom (mab) were placed at LCA, LCL, and LCM around the head of the canyon on the Continental Shelf. At LCA and LCL, the VACM's at 10 mab measured light

transmission and conductivity to monitor the variability in the position of the shelf-water/slope-water front and to determine the height of any near-bottom sediment resuspension. Instruments were also deployed at 10 and 50 m at LCL.

Currents were measured at 4 stations along the canyon axis (stations LCB, LCE, LCN, and LCH) from approximately 300 to 1,500 m. At LCB and LCE, in the shallower part of the axis where the canyon cuts northward into the Continental Shelf, instruments were placed at depths above and below the depth of the adjacent shelf to investigate the coupling between shelf and canyon currents, and particularly to investigate the transport of resuspended material from the shelf into the canyon. The uppermost instrument (100 m) at LCB measured transmission and conductivity, and the upper two instruments at station LCE measured transmission. At LCH, instruments were deployed above the adjacent slope depth at 200, 400, and 800 m, and below the adjacent slope at approximately 1,400 m.

At two locations along the canyon axis, instruments were placed on the canyon walls to document the horizontal variablity of the currents in the canyon. Moorings were placed on the canyon walls at LCC and LCD at approximately the depth of the adjacent shelf (150 m). At LCF and LCG instruments were placed at approximately 200 m (above the depth of the adjacent shelf) and at approximately 400 m (below the depth of the adjacent shelf). The instruments at LCB, LCC, and LCD form a small cross-canyon array near the canyon head and the instruments at LCF, LCG, and LCN form an array near the shelf break.

To the east of Lydonia Canyon, instruments were deployed across the shelf and slope at LCL, LCI, and LCJ at depths of 10 m (LCL and LCI), 50 m (LCL, LCI, LCJ), 100 m (LCL), and 200 m (LCI and LCJ) and near bottom (LCL and LCI). To the west of the canyon near-bottom instruments were deployed at LCL on the shelf and at LCK on the slope at approximately 200 and 450 m. The instruments at LCJ, LCH, and LCK form an along-slope array at water depths of approximately 500 m and instruments at common depths of approximately 200 and 400 m.

To monitor near-bottom current, sediment resuspension, and sediment movement, deep instrument packages were deployed at LCB, LCE, and LCH in the canyon axis and LCI on the slope. Similar near-bottom current measurements were made at LCA, LCL, and LCM by means of the bottom tripod systems.

Bottom pressure was measured at LCA, LCL, and LCM on the shelf and at LCO in the canyon axis. The pressure array can be used to estimate along-shelf and cross-shelf pressure gradients near the canyon head.

LOGISTICS

The moored array was deployed on two R.V. OCEANUS cruises in the fall of 1980: OCEANUS 88, October 23-31, and OCEANUS 90, November 24-December 3. The bottom tripods and surface buoys at LCA and LCM and the subsurface moorings at LCC, LCD, LCF, and LCG were deployed on OCEANUS 88. Surface buoys at LCL were also deployed on OCEANUS 88. The remaining subsurface moorings at all other stations and the tripod at LCL were deployed on OCEANUS 90. The deep instrument package at LCH was originally planned to be part of the subsurface

mooring at LCH. However, heavy weather prevented deployment on OCEANUS 90 and the deep instrument package was deployed on a separate mooring just to the north of LCH on OCEANUS 91 (January 26-February 4, 1981). The pressure mooring at LCO was also deployed on OCEANUS 91.

Instruments were recovered on OCEANUS 95, April 24-May 6, 1981. All instruments were recovered except for 2 VACM's. At LCL, the surface buoy was lost and the VACM suspended beneath the buoy was not recovered. At LCE, the release in the deep instrument package would not release although it would transpond. The upper two instruments at LCE were recovered by dragging; the wire was severed between instruments two and three. Repeated attempts to recover the lower instruments by dragging on OCEANUS 95 failed. The deep instrument package was recovered using the submersible ALVIN on July 1, 1981. An hydraulic chain cutter was used to cut the chain between anchor and the deep instrument package; the backup buoyancy in the glass balls was sufficient to bring the instrument to the surface. The VACM-pressure at LCE was not recovered.

All moorings were recovered at the same locations as deployed except at LCC and LCD. The mooring at LCC was recovered on the shelf to the west of the canyon, approximately 1.5 km from the deployment location on the west wall. It was tangled with longlines and was recovered by dragging. The mooring at station LCD was recovered in the axis of the canyon, approximately 1 km west of the deployment location on the east wall. Careful examination of the data records indicated the mooring at LCC was moved on March 25, 1981 and the mooring at LCD on March 10, 1981. The mooring at LCD could have slipped down the canyon slope, but we suspect that both moorings were accidentally entangled and moved by longlines or draggers. The mooring at LCJ was hit several times by fishing trawlers or longlines (see discussion of instrument depths for details).

The positioning of the moorings in the canyon axis and on the walls of the canyon was critical and required considerable care. A detailed bathymetric map of Lydonia Canyon was compiled as part of the canyon experiment (J. Moody and B. Butman, unpub. data) and used for the mooring deployments. A bathymetric transect was run across the canyon axis through the desired instrument location prior to deployment of a mooring. The moorings were deployed anchor last. All components were strung astern of the OCEANUS and the mooring was towed across the canyon axis toward the launch point. The depth was monitored continuously and the anchor was released in the center of the axis (determined by the maximum depth and/or the desired launch point, or a judicious decision). After the mooring was deployed, the bathymetric transect was continued in order to determine position in the axis. The mooring position after deployment and before recovery was also determined by ranging to the acoustic release. The horizontal accuracy of the positions determined from the acoustic ranges was approximately ±100 m. The placement of moorings in the canyon axis seemed satisfactory, although the instruments may have been deployed slightly to one side or the other, particularly at the deeper stations LCN and LCH where side echos from the canyon walls and the narrow axis made the bathymetry extremely difficult to interpret unambiguously. At LCH, the actual depth of the mooring was determined by obtaining numerous ranges to the mooring and solving for the depth of the acoustic release (the true water depth was 100 m deeper than determined from the echosounder).

A NORTHSTAR-6000 Loran C was used for all navigation. The 9960 chain and slaves Y and W were used. The internal Northstar 5101 algorithm was used to determine latitude and longitude. The relative accuracy of the latitude and longitude was excellent.

MOORING DESIGN

Appropriate anchor weights and buoyancy were selected for the subsurface moorings using a mooring-design program NOYFB (Moller, 1976). Schematics of the subsurface moorings deployed at LCA-LCN in the first deployment of the moored array are shown in figure 8. Moorings were designed to tilt less than 15°, the maximum angle for unbiased operation of the VACM in 50 cm/s currents, and to survive in 75 cm/s currents. All moorings were designed to minimize damage by fishing activity. For example, near-bottom backup flotation was used on most moorings so that the lower portion of the mooring could be recovered if the upper flotation was lost. Near-bottom components on moorings placed on the canyon walls were 3/8" wire or chain to prevent chafe from any steep slopes or rock outcrops. At all stations on the shelf and upper slope (LCA, LCI, LCL, LCM), two lighted surface buoys were deployed to mark the sites and to help fisherman avoid fouling their nets.

After recovery of the moored array, the measured currents were used to estimate actual instrument tilts during deployment. The mooring program to compute instrument tilts was run for three current strengths: observed mean current speed, mean speed plus one standard deviation, and the maximum observed speed (table 3). The currents at all depths on the mooring were assumed to be in the same direction and to occur simultaneously in order to determine the worst possible condition for instrument tilts. The vertical profile of current over the mooring was determined by linear interpolation between instruments and was assumed to be constant to the surface above the uppermost instrument and to the sea floor below the lowest instrument. In general all tilts were less than 5° for current speeds less than the mean speed plus one standard deviation (table 3). For the maximum currents, tilts exceeded 15° for some of the instruments at LCA, LCE, LCI, LCJ, LCL, and LCM. Tilts were most severe for the near-bottom mooring components, particularly the sediment traps mounted approximately 4 m above bottom on the acoustic release.

The predicted mooring tilt can be compared to the actual mooring tilt by comparing the predicted changes in instrument depth (dip) with observed changes on those moorings with VACM's modified to measure pressure. At stations LCB, LCF, LCH, and LCN, the predicted dips were of the same order or less than the observed dips (fig. 9). Thus, the predicted tilts from the mooring program using the measured currents are probably a reasonable or slight overestimate of the actual tilts which occurred during deployment. For example, at station LCH, the maximum dip for the upper instrument at maximum current was approximately 7 m. The pressure sensor at LCH showed maximum excursions of approximately 7 m. At station LCN, the predicted maximum dip was 9 m, and the observed maximum dip was about 4 m.

DATA RETURN

A total of 18 standard VACM's, 16 modified VACM's (6 VACM-pressure, 5 VACM-transmission, and 5 VACM-transmission-conductivity), 3 bottom tripods,

and 1 pressure instrument were deployed as part of the moored array. All but two of the VACM's were recovered; all other instruments returned usable data. Overall the data return was excellent, although individual sensors and/or recording electronics failed on some instruments at various times during the experiment (table 4). Transmission on 3 of the 5 VACM-transmission instruments either failed or was questionable. The fast-response temperature channel on 2 of the 5 VACM-transmission-conductivity-fast response temperature instruments failed, but this failure did not affect the current, transmission, or conductivity data. Pressure was questionable on the VACM at LCJ (see discussion of instrument depth). Part of the data from the tripod at LCA was not recorded due to a tape recorder failure in the first of two tape decks, and the current vane on the tripod at LCL failed so that no near-bottom currents are available at LCL. The transmissometers on all 3 tripods failed or were heavily fouled before the instruments were recovered.

INSTRUMENT DEPTH

Instrument depths were determined from the observed water depth at launch and the lengths of the mooring components. In addition, the VACM-pressure instruments were placed on selected moorings to measure instrument depth in areas of rough topography where the depth was difficult to determine from the widebeam echosounder (because of side echoes), and where the exact placement of the mooring was uncertain. The measured instrument depths at LCB, LCF, LCH, and LCN agreed with the predicted instrument depths by 11 m or less (table 5). This agreement is excellent in view of the rough topography. At these stations, the water depth was adjusted to agree with the depths as measured by the pressure instruments.

At LCJ, the instrument depth predicted from the observed water depth and measured by the pressure sensor did not agree. Nor were the predicted and observed changes in instrument depth consistent. The measured depth of the upper VACM given by the pressure sensor was approximately 83 m, while the predicted depth from the water depth at launch was 49 m. At recovery, the mooring was tangled with longlines; several major dips during the deployment (some as large as 70 m) are attributed to entanglement with longlines, although large currents associated with a Gulf Stream Eddy also caused major mooring dip. The maximum observed change in instrument depth attributed to current occurred on December 12, 1980 when the upper VACM dipped approximately 45 m. The mooring calculations indicated that the maximum expected change in depth of the upper VACM under these conditions was approximately 25 m (the calculations of instrument depth at the other moorings were all larger than was observed). The pressure sensor apparently failed on or about February 1, and the VACM data stopped on April 2 because of a dead battery. The inconsistencies in the absolute depth, the changes in depth, and the instrument failure make the pressure record at LCJ suspect. The initial depth of the upper instrument (83 m) was used to determine the depth of instruments in the mooring. If water depth was used, all instrument depths would be 34 m shallower than are listed in table 1. Subsequent detailed mapping of the mooring location indicates that the deeper water depth is consistent.

DATA PROCESSING

Data in all instruments were recorded on $1/4$" cassette tapes on Sea Data, Inc. recorders. These tapes were transcribed to 9T tape using a Sea Data

Reader. The data were decoded to engineering variables and stored in WHOI Buoy Format on tape (Maltais, 1969). All subsequent processing was conducted using the WHOI Buoy Group Processing System. The data were carefully checked for instrument malfunction and then edited. The beginning and end of the records were truncated to remove launch and recovery transients and wild points were deleted. Most data gaps were filled by linear interpolation. The data were carefully checked at each stage to assure that the edited data were correct.

After editing, the basic version of the data file included all variables recorded at the basic sampling interval (see table 2 for sampling rates). An hour-averaged data file and a low-passed file were created from the basic file. The low-passed version was created using a digital filter (PL33; Flagg and others, 1976) that essentially removed all fluctuations having periods shorter than 33 hours.

RECORD IDENTIFICATION

All USGS moorings are sequentially assigned a unique 3 digit mooring number. Moorings deployed as part of the Lydonia Canyon moored array were numbers 203-205, and 207-221 (table 2). Individual data records are labeled by a 4-digit identifier that indicates mooring number and the relative position of the instruments on the mooring (MMMP). The mooring number is the first 3 numbers in the data record label, and the fourth digit indicates the position of the instrument in the mooring from the surface. Thus, data record 2141 is the upper instrument from the surface on mooring 214, record 2142 is the second instrument from the surface on mooring 214, etc. At stations where tripods and subsurface moorings were deployed, the data records have separate mooring numbers.

In the data processing, several versions of data are created, and each is identified by additional codes which follow the 4-digit record identifier. The edited version of the basic file is identified by a letter (generally A or B). The hour-averaged version of the data file is identified by a 1H (record 2141-A1H, for example), and the low-passed version by LP (record 2141-A1HLP or 2141-ALP).

EXPLANATION OF DATA REPORT

This report contains data in graphical and tabular form.

Summary data plots

The mean current and the monthly mean current for all instruments in the moored array are shown in figure 10. The currents in the area around Lydonia Canyon during the deployment of the moored array were strongly influenced by a Gulf Stream eddy or ring located to the south of the canyon during December 1980 and January and part of February 1981. The monthly mean current was eastward at all stations along the southern edge of Georges Bank during this period. The eddy was strong enough to cause the mean current at depths less than 250 m, averaged over the entire deployment period at LCF, LCG, LCH, to be to the east. In contrast, the currents at LCA on the shelf were westward throughout the deployment and apparently less affected by the Gulf Stream eddy.

The direction and amplitude of the major axis of the low-frequency currents is shown in figure 11. The low-frequency currents were oriented primarily along isobaths. In the canyon axis, low-frequency currents below the depth of the adjacent shelf were along axis. In contrast, at depths above the adjacent shelf and slope, the low-frequency currents were parallel to the shelf and slope bathymetry. Low-frequency currents were generally larger on the outer shelf and slope (LCI, LCJ, LCK, LCN, and LCH) than at stations on the shelf (LCA, LCB, LCL, LCM).

The semidiurnal (M_2) tidal currents are shown in figure 12. The tidal current ellipses are oriented cross-shelf and parallel to the canyon axis. M_2 tidal velocities increase from the outer shelf onto the Continental Shelf.

Tabular data

Statistics of the current-meter data are tabulated in tables 6-8. The mean and the standard deviation of hour-averaged and low-passed east current, north current and temperature, and the average, standard deviation, and maximum hour-averaged current speed are tabulated in table 6 for the entire data record. The mean and variance of current and temperature, and the correlation between east current and north current, between east current and temperature, and between north current and temperature are tabulated for the whole record and by month in table 7a for the hour-averaged data and in table 7b for the low-passed data. Current ellipse parameters for the entire record and by month are tabulated for the hour-averaged data in table 8a and for the low-passed data in table 8b. The amplitude and plate at the M_2 tidal currents are tabulated in table 9.

Individual data records

The current and temperature data from each instrument is presented graphically in several ways.

Scatterplots

Scatterplots of the hour-averaged and low-passed current for each instrument are shown in figure 13.

Spectra

Variance conserving spectra of the currents and temperature for each data record are shown in figure 14. The data records were broken into pieces 720 hours long and spectra averaged over the pieces. In some cases, the currents were rotated to a long-shelf/cross-shelf or an upcanyon/cross-canyon coordinate system before computing the spectra.

Stackplots

Several stackplots (figs. 15-50) are shown for each data record. The plotted variables in each plot depend on instrument type.

a. Stackplots of hour-averaged temperature, speed, direction, north-south current, and east-west current (all instruments).

b. Stackplot of low-passed temperature, vector plot of low-passed current, low-passed east current, and low-passed north current (all instruments).

c. Stackplot of hour-averaged temperature, light transmission, PSDEV, and current speed (tripods only).

d. Stackplot of hour-averaged temperature, light transmission, current speed, and low-passed current components (near-bottom deep instrument packages).

e. Stackplot of hour-averaged temperature, transmission, and low-passed current components (mid-water VACM-transmission instruments).

f. Stackplot of hour-averaged and low-passed pressure (bottom pressure instruments only).

g. Stackplot of temperature, difference of fast-response sensor and VACM temperature, salinity, conductivity (VACM-TCT instruments only).

Data grouped by mooring

Stackplots of low-passed north-south and east-west current components and of hour-averaged temperature for all instruments on each mooring are shown in figures 51-58.

Data from selected areas and depths

Stackplots of low-passed current components for selected groups of moorings are shown in figures 59-66. Currents at depths of 80-100 m at LCA, LCB, LCL, and LCM around the head of Lydonia Canyon are shown in figure 59. Currents at LCB in the head of the canyon and at LCC and LCD on the walls at the canyon are shown in figure 60. Currents at the closely spaced stations LCF, LCN, and LCG across the canyon axis are shown in figures 61 and 62. Currents across the slope and rise at LCC, LCI, and LCJ are shown in figures 62 and 63.

Bottom pressure from LCA, LCL, LCM, and LCO and selected low-passed pressure difference records are shown in figs. 65 and 66.

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appreciated; the success of the moored array is due in large part to their careful work, often during extremely poor winter Georges Bank weather. The gracious assistance of the crew of the submersible ALVIN in recovering the deep instrument package at LCE is also appreciated. This work was supported by the USGS and by the U.S. Bureau of Land Management (now Minerals Management Service) under Memorandum of Understanding AA551-MU0-18 and by Interagency Agreements AA551-IA1-17 and AA851-IA2-66.

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TABLE CAPTIONS

1. Dates of five deployments of the Lydonia Canyon moored array, and the moorings occupied during each deployment. The data presented in this report were collected in deployment I. See figure 6 for location of moorings LCA-LCO.

2. Lydonia Canyon moorings, deployment I. For each mooring, the mooring number, water depth, latitude, longitude, mooring type (T = tripod, SS = subsurface), instrument type (V = VACM; VP = VACM-pressure; VT = VACM-transmission; VTC = VACM-transmission-conductivity; DIP = deep instrument package; ST = sediment trap), instrument depth, instrument serial number, and date deployed and recovered are tabulated.

3. Mooring performance. This table summarizes the calculated mooring tilt and dip (using the computer program NOYFB) for each instrument in the mooring for four observed current strengths (mean current minus 1 standard deviation, mean current, mean current plus 1 standard deviation, and maximum current). The table lists station, instrument type (see table 1 for abbreviations), record ID, instrument depth, static tension (in lbs) in the mooring line above the instrument, the observed mean, standard deviation, and maximum current speed (in cm/s), the mooring tilt for each current speed (in degrees), and the instrument dip (in m) from the static position.

4. Data return from instruments in deployment I. For each instrument (see table 1 for abbreviations), the table lists sampling rate (minutes), and an adjective rating of the data quality for current, temperature, pressure, conductivity, fast-response temperature, transmission, and camera. (P = partial, G = good, Q = questionable, F = failed). Where the instrument did not measure a particular variable, the column is left blank.

5. Comparison of measured and predicted instrument depths at the 5 moorings equipped with VACM pressure instruments.

6. Statistics of current and temperature for first deployment of moored array. For each data record, the mean and standard deviation of hour-averaged (standard deviation total) and low-passed (LF) east current, north current and temperature, and the mean, standard deviation, and maximum hour-averaged current speed are tabulated.

7. Monthly current statistics. Mean and variance of current and temperature, and correlation between east current and north current, east current and temperature, and north current and temperature for entire record and by month.

    a. Hour-averaged time series

    b. Low-passed time series

8. Monthly ellipse statistics. Orientation, amplitude of major and minor axis, theta, and S defined as follows:

orientation	=	$0.5\ (\tan^{-1}\ ((2\langle uv\rangle)/(\langle uu\rangle-\langle vv\rangle))$
major axis	=	$0.5\ (\langle uu\rangle + \langle vv\rangle) + R$
minor axis	=	$0.5\ (\langle uu\rangle + \langle vv\rangle) - R$
where R	=	$(0.5\ (\langle uu\rangle - \langle vv\rangle)^2 + \langle uv\rangle^2)^{1/2}$
theta	=	$\tan^{-1}\ (\langle vT\rangle/\langle uT\rangle)$
S	=	$(\langle uT\rangle^2 + \langle vT\rangle^2)^{1/2}$
where		$\langle\ \rangle$ means average over data record and u and v are the east and north components of current respectively, and T is temperature.

   a. Hour-averaged time series

   b. Low-passed time series

9. M_2 tidal currents. The amplitude and phase of the east and north current components and the ellipse parameters (major axis, minor axis, orientation, and phase) are tabulated. The phase is in degrees Greenwich. The tidal parameters were computed for data pieces 29 days long; the standard deviation of the individual piece estimates is tabulated as an error estimate for the mean.

Table 1. Dates of five deployments of the Lydonia Canyon moored array, and the moorings occupied during each deployment. The data presented in this report were collected in deployment I. See figure 6 for location of moorings LCA-LCO.

Array	Dates	Stations occupied
1	October 1980-April 1981	LCA-LCO
2	April 1981-September 1981	LCA, LCB, LCE, LCI, LCL
3	September 1981-January 1982	LCA, LCB, LCE, LCI, LCP, LCO
4	January 1982-July 1982	LCA, LCB, LCI, LCQ, LCR, LCS
5	July 1982-November 1982	LCA, LCB, LCU

Table 2. Lydonia Canyon moorings, deployment I

Station/ location	Moor. no.	Water depth (m)	Latitude N.	Longitude W.	Moor. type[1]	Inst. type[2]	Inst. depth (m)	Inst. sn	Deployed YrMoDy	Racovered YrMoDy	Comments
LCA/	204	100	40°34.20'	67°44.81'	T		99	SD5	801024	810424	Color film
shelf	207	100	40°34.21'	67°44.55'	SS	ST	74	ST102	801130	810424	
	2071					VTC	80	628TC			
						ST	95	ST100			
LCB/	2081	282	40°31.55'	67°42.82'	SS	VTC	92	V322TC	801128	810428	
canyon head	—					ST	221	ST116			
	2082					VP	227	V106P			
	—					ST	263	ST103			
	2083					DIP	277	V321TC			Color film
	—					ST	277	ST111			
LCC/	209	184	40°29.43'	67°43.50'	SS	V	134	V541	801024	810425	Dragged 3/25/81
west wall		135	40°29.08'	67°44.50'							Recovered
LCD/	210	193	40°29.25'	67°41.25'	SS	V	143	V487	801027	810425	Dragged 3/10/81
east wall		240	40°29.24'	67°41.79'							Recovered
LCE/	2111	600	40°25.38'	67°39.88'	SS	VT	116	V442T	801201	810501	
axis	2112					VT	216	V443T			
	—					ST	435	ST118			
	2113					VP	441	V111P			Lost
	—					ST	581	ST117			Lost
	2114					DIP	595	V518T		810701	B + W film
	—					ST	595	ST114			
LCF/	2121	505	40°21.18'	67°39.01'	SS	VP	205	V161P	801027	810427	
east wall	2122					V	405	V101			
LCG/	2131	495	40°21.44'	67°41.63'	SS	V	195	V493	801027	810427	
west wall	2132					V	395	V105			
LCH/	2141	1,554	40°17.59'	67°39.54'	SS	VP	290	V201P	801201	810427	
axis	2142					V	540	V193			
	--					ST	884	ST119			
	2143					V	890	V199			
	—					ST	1,448	ST113			
	2144					V	1,454	V373			
	221	1,380	40°17.93'	69°39.52'	SS	ST	1,361	ST114	810120	810428	
	2211					DIP	1,375	V335T			
	—					ST	1,375	ST107			Color film

[1]Mooring type: T=tripod; SS=subsurface

[2]Instrument type: V=VACM; VP=VACM-pressure; VT=VACM-transmission; VTC=VACM-transmission-conductivity; DIP=deep instrument package; ST=sediment trap

Table 2. Lydonia Canyon moorings, deployment I (cont.)

Station/ location	Moor. no.	Water depth (m)	Latitude N.	Longitude W.	Moor type[1]	Inst type[2]	Inst. depth (m)	Inst. sn	Deployed YrMoDy	Recovered YrMoDy	Comments
LCI/	2151	250	40°22.84'	67°33.14'	S	V	10	V485	801127	810430	
east slope	2152		40°22.95'	67°32.94'	SS	VT	55	V516T	801202	810429	
	—					ST	189	T115			
	2153					V	195	V491			
	—					ST	231	ST101			
	2154					DIP	245	V477T			B + W film
	—					ST	245	ST106			
LCJ/	2161	571	40°21.18'	67°31.98'	SS	VP	83	V127P	801127	810429	
east slope	2162					V	223	V562			
	—					ST	465	ST120			
	2163					V	471	V422			
LCK/	2171	554	40°16.27'	67°46.99'	SS	V	204	V558	801127	810427	
west slope	—					ST	448	ST109			
	2172					V	454	V423			
LCL/	205	125	40°32.30'	67°36.83'	T		124	SD7	801125	810502	Color film
shelf east	2181	125	40°32.31'	67°36.40'	S	V	10	V472	801024	------	Lost
	2182	130	40°31.68'	67°36.50'	SS	V	70	V421	801130	810425	
	—					ST	104	ST108			
	2183	130				VTC	110	V626TC			
	—					ST	125	ST105			
LCM/	203	120	40°29.57'	67°48.55'	T		119	SD11,SD9	801024	810426	
shelf west	219	123	40°29.47'	67°48.24'	SS	ST	97	ST11	801202	810425	
	2191					V	103	V624			
	—					ST	118	ST110			
LCN/	2201	1,041	40°21.32'	67°40.38'	SS	VP	243	V184P	801129	810427	Depth uncertain
axis	2202					V	841	V381			
LCO/ axis	222	555	40°26.73'	67°39.73'	SS	P	555	SD4	810120	810421	

[1]Mooring type: T-tripod; SS-subsurface

[2]Instrument type: V-VACM; VP-VACM-pressure; VT-VACM-transmission; VTC-VACM-transmission-conductivity; DIP-deep instrument package; ST-sediment trap

Table 3. Calculated mooring tilt and dip for each instrument (m is mean current, σ is standard deviation, and max is maximum current

Sta.	Inst.	Inst. ID	Depth (m)	Static tension (lbs)	Current statistics M (cm/s)	σ (cm/s)	Max (cm/s)	Mooring tilt M−σ (°)	M (°)	M+σ (°)	Max (°)	Mooring dip M (m)	M+σ (m)	Max (m)
LCA	ST		74	607				0.5	0.7	2.1	5.5	0	1	2
	VT	2071	80	562	32	11	70	1.4	3.3	6.0	15.5	0	0	1
	ST		95	371				3.7	8.6	15.3	35.9	0	0	0
LCB	VT	2081	92	901	26	10	65	0.4	1.0	2.0	6.5	0	1	2
	ST		221	1,031				0.4	1.1	2.2	8.5	0	0	0
	VP	2082	227	987	10	6	50	0.4	1.3	2.5	10.2	0	0	1
	ST		263	1,803				0.2	0.7	1.5	6.4	0	0	1
	DIP	2083	277	1,708	12	9	49	0.4	1.3	2.9	13.6	0	0	0
LCC	V	2091	134	900	17	9	62	0.1	0.3	0.6	3.4	0	0	1
LCD	V	2101	143	900	20	10	54	0.1	0.4	0.8	2.6	0	0	0
LCE	VT	2111	116	900	21	10	60	0.2	0.7	1.5	5.3	0	1	16
	VT	2112	216	954	13	7	49	0.3	1.2	2.6	11.3	0	1	15
	ST		435	963				0.4	1.6	3.6	16.2	0	1	9
	VP	2113	441	918(lost)				0.4	1.8	4.2	18.7	0	1	9
	ST		581	1,822				0.3	1.4	3.4	14.9	0	0	1
	DIP	2114	595	1,726	15	9	49	0.5	2.5	6.0	24.9	0	0	0
LCF	VP	2121	205	900	27	15	80	0.1	0.6	1.5	5.4	0	0	3
	V	2122	405	1,733	7	4	29	0.9	0.7	1.6	6.9	0	0	1
LCG	V	2131	195	900	15	10	64	0.0	0	0.1	0.5	0	0	0
	V	2132	395	1,733	6	3	25	0.0	0.1	0.3	2.0	0	0	0
LCH	VP	2141	290	1,457	24	14	69	0.1	0.3	0.8	2.5	0	0	7
	V	2142	540	1,340	10	5	33	0.1	0.7	1.6	5.6	0	1	7
	ST		884	1,649				0.1	0.6	1.6	5.7	0	0	5
	V	2143	890	1,559	5	3	18	0.1	0.7	1.7	6.1	0	1	5
	ST		1,448	2,580				0.1	0.5	1.3	5.5	0	0	1
	V	2144	1,454	2,490	6	4	27	0.1	0.5	1.3	5.8	0	0	0
LCI	VT	2151	55	900	25	15	80	0.2	1.0	2.5	9.7	0	1	6
	ST		189	1,031				0.3	1.6	4.0	14.2	0	0	2
	V	2153	195	986	27	16	76	0.3	2.0	5.0	17.6	0	0	2
	ST		231	1,803				0.2	1.2	3.1	10.6	0	0	1
	DIP	2154	245	1,707	18	9	45	0.5	2.5	6.0	19.1	0	0	0
LCJ	VP	2161	93	900	32	19	99	0.1	0.9	2.3	8.0	0	3	25
	V	2162	233	800	30	17	77	0.4	2.4	6.0	18.3	0	2	22
	ST		477	1,398				0.3	1.8	4.4	15.0	0	0	5
	V	2163	483	1,354	7	4	35	0.3	1.9	4.8	16.3	0	0	5
LCK	V	2171	204	900	23	13	72	0.1	0.5	1.1	4.5	0	0	4
	ST		448	1,392				0.2	1.0	2.3	9.3	0	1	3
	V	2172	454	1,348	13	7	41	0.2	1.1	2.6	10.3	0	0	2
LCL	V	2182	70	900	26	12	81	0.2	0.6	1.3	5.8	0	0	1
	ST		104	1,035				0.3	1.0	2.2	8.9	0	0	1
	VT	2183	110	991	25	10	62	0.6	1.8	3.6	13.6	0	0	0
	ST		125	799				1.0	3.0	6.0	21.0	0	0	0
LCM	ST		97	607				0.2	0.8	1.6	6.3	0	0	1
	V	2191	103	562	26	12	75	0.4	1.4	2.9	11.2	0	0	1
	ST		118	406				1.2	4.0	8.4	30.0	0	0	0
LCN	VP	2201	243	900	21	14	71	0	0.4	1.0	4.4	0	1	9
	V	2202	841	1,379	8	4	30	0.1	1.0	2.6	11.5	0	0	6

Table 4. Instrument performance, deployment I; rating of data quality is: P=Partial; G=Good, Q=Questionable; F=Failed; —=variable not measured.

Sta.	Record ID	Inst. type	Sample rate (min)	Current	Temp.	Press.	Cond.	FRT	Trans.	Cam.	Comments
LCA	204	T	7.5	P	P	P	—	—	P	G	Tape deck A failed
	207	VTC	7.5	G	G	—	G	G	G	—	
LCB	2081	VTC	7.5	G	G	—	G	G	G	—	
	2082	VP	3.75	G	G	G	—	—	—	—	
	2083	VTC	7.5	G	G	—	G	G	G	G	Possible vane error
LCC	2091	V	7.5	G	G	—	—	—	—	—	Dragged onto shelf
LCD	2101	V	7.5	G	G	—	—	—	—	—	Dragged into canyon
LCE	2111	VT	7.5	G	G	—	—	—	Q	—	
	2112	VT	7.5	G	G	—	—	—	G	—	
	2113	VP	3.75	—	—	—	—	—	—	—	Lost
	2114	VTC	7.5	G	G	—	—	F	G	G	No conductivity sensor installed.
LCF	2121	VP	3.75	G	G	G	—	—	—	—	
	2122	V	7.5	G	G	—	—	—	—	—	
LCG	2131	V	7.5	G	G	—	—	—	—	—	
	2132	V	7.5	G	G	—	—	—	—	—	
LCH	2141	VP	3.75	G	G	G	—	—	—	—	
	2142	V	7.5	G	G	—	—	—	—	—	
	2143	V	7.5	G	G	—	—	—	—	—	
	2144	V	7.5	P	P	—	—	—	—	—	Some data gaps
	2211	VT	7.5	G	G	—	—	—	Q	G	Trans. does not match lab calib.
LCI	2151	V	3.75	G	G	—	—	—	—	—	
	2152	VT	7.50	G	G	—	—	—	G	—	
	2153	V	7.50	G	G	—	—	—	—	—	
	2154	VT	7.50	G	G	—	—	—	F	G	
LCJ	2161	VP	3.75	G	Q	Q	—	—	—	—	Multiplexed variables
	2162	V	3.75	G	G	—	—	—	—	—	Mooring excessive dips
	2163	V	7.50	G	G	—	—	—	—	—	
LCK	2171	V	7.5	G	G	—	—	—	—	—	
	2172	V	7.5	G	G	—	—	—	—	—	
LCL	205	T	7.5	F	G	G	—	—	P	G	Current vane failed
	2181	V	3.75	—	—	—	—	—	—	—	Lost
	2182	V	3.75	G	G	—	—	—	—	—	
	2183	VTC	7.50	G	G	—	G	F	G	—	
LCM	203	T	7.50	G	G	G	—	—	P	G	
	2191	V	3.75	G	G	—	—	—	—	—	
LCN	2201	VP	3.75	G	G	G	—	—	—	—	
	2202	V	7.50	G	G	—	—	—	—	—	
LCO	2221	P	7.5	—	G	G	—	—	—	—	

Table 5. Comparison of measured and predicted instrument depths at 5 moorings with VACM-pressure instruments

Sta.	Record ID	Water launch depth (m)	Inst. depth predicted (m)	Depth measured (m)	Difference (m)	Comments
LCB	2082	290	235	227	8	Adjusted water depth to 282 m
LCF	2121	500	200	205	5	Adjusted water depth to 505 m
LCH	2141	1,554	290	289	1	Water depth determined from acoustic ranges to transporter.
LCJ	2161	537	49	83	34	Adjusted water depth to 571 m. Agrees with new bathymetric map.
LCN	2201	1,030	232	243	11	Adjusted water depth to 1,041 m.

Table 6. Current and temperature statistics, Lydonia Canyon deployment I.
(Stand. dev. Total=standard deviation of hour-averaged variables; Stand. dev. LF=standard deviation of low-passed variables)

Sta.	Record no.	Inst. type	Depth (m)	Start (YrMoDy)	Stop (YrMoDy)	Hours	EAST Mean (cm/s)	EAST Stand. dev. Total (cm/s)	EAST Stand. dev. LF (cm/s)	NORTH Mean (cm/s)	NORTH Stand. dev. Total (cm/s)	NORTH Stand. dev. LF (cm/s)	TEMPERATURE Mean (°C)	TEMPERATURE Stand. dev. Total (°C)	TEMPERATURE Stand. dev. LF (°C)	SPEED Mean (cm/s)	SPEED SD (cm/s)	SPEED Max. (cm/s)
LCA	204	T	100	801024	801212	1174	0.1	9.5	4.4	-2.4	14.6	4.4	12.3	0.7	0.7	15.7	7.9	62
	204	T	100	810216	810424	1605	-3.3	11.0	6.0	-3.5	14.3	5.0	7.4	1.7	1.7	16.7	8.3	53
	207	V	80	801130	810424	3472	-7.9	18.1	9.3	-2.3	25.9	4.3	7.3	2.0	1.8	31.7	10.7	70
LCB	2081	V	92	801128	810428	3616	-8.0	17.8	8.8	0.2	20.2	3.6	8.2	2.2	2.0	26.2	10.1	65
	2082	V	227	801128	810428	3616	-1.1	5.8	5.1	1.8	10.5	1.6	9.7	1.3	1.1	10.4	6.3	50
	2083	V	277	801128	810428	3520	0.6	7.7	2.4	-3.5	12.8	2.6	8.6	1.2	0.8	12.3	9.0	49
LCC	2091	V	134	801024	810325	3645	-3.2	11.7	5.9	-3.1	14.8	4.1	11.4	1.3	1.2	17.2	9.0	62
LCD	2101	V	143	801027	810310	3201	-3.2	11.4	5.0	2.3	19.0	3.5	11.8	1.0	0.8	20.0	9.9	54
LCE	2111	V	116	801201	810501	3613	3.2	15.1	10.2	0.9	17.0	5.2	11.3	2.3	2.3	20.5	10.3	60
	2112	V	216	801201	810501	3613	-2.4	6.9	3.1	3.0	12.1	5.8	10.3	1.3	1.2	12.7	6.8	49
	2114	V	595	801201	810501	3613	1.3	7.8	1.9	-0.5	15.5	3.2	5.1	0.4	0.3	15.1	8.7	49
LCF	2121	V	205	801027	810416	4088	13.9	24.3	23.2	5.4	11.3	6.7	11.7	1.5	1.4	26.8	15.1	80
	2122	V	405	801027	810427	4359	-1.6	6.5	2.1	-1.4	16.8	1.9	6.4	0.6	0.5	7.5	4.4	29
LCG	2131	V	195	801027	810427	4361	3.2	14.4	12.0	1.3	9.5	5.4	10.0	1.4	1.3	14.7	9.7	64
	2132	V	395	801027	810427	4360	-0.8	4.3	1.5	0.2	4.7	1.3	6.0	0.5	0.4	5.6	3.2	25
LCH	2141	V	290	801201	810427	3525	11.0	21.8	21.2	5.2	11.8	8.7	9.2	1.3	1.2	23.5	14.5	69
	2142	V	540	801201	810427	3525	-2.4	8.9	8.2	0.1	5.7	3.2	5.2	0.3	0.3	9.5	5.1	33
	2143	V	890	801201	810427	3523	-0.3	3.6	2.7	0.2	4.5	2.0	4.4	0.1	0.1	5.2	2.6	18
	2144	V	1,454	801201	810409	3103	0.8	2.6	1.1	0.0	6.5	3.1	4.0	0.1	0.1	6.0	3.9	26
	221	V	1,375	810120	810428	2352	-2.8	3.5	1.1	0.2	6.9	2.6	4.0	0.1	0.1	7.4	3.7	22
LCI	2151	V	10	801127	810430	3698	-6.8	23.7	18.8	-5.8	18.2	10.9	8.0	2.5	2.4	27.7	14.3	79
	2152	V	55	801202	810429	3567	7.4	24.7	22.7	2.5	13.8	8.7	10.3	3.4	3.3	25.1	15.2	80
	2153	V	195	801202	810429	3567	11.9	25.9	24.1	2.8	11.1	6.1	11.4	1.7	1.7	26.5	15.6	76
	2154	V	245	801202	810429	3567	7.9	15.0	13.8	-3.1	10.2	4.3	9.6	1.5	1.3	17.8	9.2	45
LCJ	2161	V	83	801127	810402	3023	17.5	30.5	29.8	5.0	11.9	7.2	12.7	2.9	2.9	32.2	19.1	99
	2162	V	223	801127	810429	3665	17.3	26.8	26.2	5.2	12.1	9.0	10.9	1.4	1.3	29.8	17.4	77
	2163	V	471	801127	810426	3665	-0.4	6.9	5.9	0.4	4.5	1.6	5.6	0.4	0.4	7.1	4.3	35
LCK	2171	V	204	801128	810427	3619	10.5	22.1	21.5	3.9	10.6	7.4	11.3	1.4	1.3	23.4	13.4	72
	2172	V	454	801128	810427	3619	-1.0	12.8	11.7	-1.5	6.6	3.5	5.8	0.5	0.4	12.8	7.0	41
LCL	2182	V	65	801130	810425	3501	-10.7	18.7	10.6	-1.2	18.8	4.0	7.6	2.0	1.9	26.1	11.8	81
	2183	V	105	801130	810425	3502	-3.6	19.3	9.9	-0.8	18.5	4.0	9.5	2.1	2.0	24.9	10.5	62
LCM	2191	V	103	801128	810427	3619	-3.9	18.7	10.1	-3.2	20.9	4.4	9.7	3.0	2.5	25.9	11.9	75
	2031	T	119	801024	810426	4400	1.9	12.7	7.6	-3.7	14.5	3.8	10.5	2.2	2.2	17.3	9.6	62
LCN	2201	V	243	801129	810427	3567	9.7	19.7	18.1	4.8	11.7	7.9	10.3	1.5	1.4	21.3	13.8	71
	2202	V	841	801129	810427	3567	-1.4	5.5	2.0	0.2	6.9	1.7	4.6	0.2	0.2	7.7	4.5	30

Table 7a. Monthly current statistics for hour-averaged time series.

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2031-A1H	801024	810426	4400	1.93	-3.70	161.93	211.18	-27.42	10.46	4.97	8.83	-0.48
2031-A1H	801024	801031	172	3.06	-1.35	82.39	200.00	15.85	12.90	0.02	0.41	-0.08
2031-A1H	801101	801130	720	5.66	-6.37	232.64	342.79	-42.26	12.97	0.26	2.85	0.15
2031-A1H	801201	801231	744	5.71	-4.28	160.33	173.38	-41.77	12.06	1.29	6.50	1.25
2031-A1H	810101	810131	744	3.42	-4.03	128.25	174.13	-36.82	10.37	2.09	7.15	1.25
2031-A1H	810201	810228	672	-1.36	-1.85	109.44	232.29	-1.74	10.26	0.66	3.98	1.93
2031-A1H	810301	810331	744	-4.78	-3.25	166.54	184.04	-13.00	8.91	2.81	5.46	1.63
2031-A1H	810401	810426	604	2.62	-2.68	91.10	143.92	-14.85	7.04	0.44	2.44	1.38
2041A-A1H	801024	801212	1174	0.13	-2.37	90.83	212.55	-36.94	12.31	0.51	1.37	0.41
2041A-A1H	801024	801031	176	0.04	-3.18	93.93	274.64	-48.39	12.47	0.05	0.64	0.70
2041A-A1H	801101	801130	720	-0.05	-2.48	102.42	208.22	-36.75	12.60	0.34	1.60	0.39
2041A-A1H	801201	801212	278	0.66	-1.56	58.45	183.33	-30.71	11.46	0.25	1.85	1.14
2041B-A1H	810216	810424	1605	-3.34	-3.53	120.92	203.26	-19.94	7.40	2.97	2.49	3.27
2041B-A1H	810216	810301	300	-3.87	-4.61	120.67	156.16	-29.84	8.11	1.54	2.88	1.18
2041B-A1H	810301	810401	745	-5.30	-3.42	153.33	232.09	-11.91	8.06	3.71	6.12	5.51
2041B-A1H	810401	810424	562	-0.48	-3.13	64.59	188.81	-26.25	6.16	0.38	2.88	2.21
2071-A1H	801130	810424	3472	-7.93	-2.33	382.94	669.36	-60.99	7.29	3.81	10.18	6.15
2071-A1H	801201	810101	745	-6.01	-0.75	373.96	638.87	-91.30	9.52	1.85	9.95	4.84
2071-A1H	810101	810201	745	-5.96	-0.69	337.66	567.96	-80.28	6.50	1.85	9.89	6.76
2071-A1H	810201	810301	673	-9.83	-4.75	406.83	732.15	-65.46	7.34	2.18	11.80	8.11
2071-A1H	810301	810401	745	-10.24	-3.50	437.72	669.09	-22.43	7.31	3.32	12.46	5.64
2071-A1H	810401	810424	563	-7.83	-2.15	334.00	756.12	-57.58	5.30	0.14	2.61	3.64
2081-A1H	801128	810428	3616	-8.05	0.22	317.66	406.05	-52.03	8.20	4.83	12.67	3.52
2081-A1H	801201	810101	745	-5.79	0.58	369.90	391.46	-37.12	10.34	2.66	15.03	4.86
2081-A1H	810101	810201	745	-6.03	0.25	254.36	388.76	-36.77	7.73	3.08	14.21	6.00
2081-A1H	810201	810301	673	-10.85	0.01	336.95	440.47	-60.45	8.91	1.99	14.68	3.39
2081-A1H	810301	810401	745	-10.24	1.02	299.97	381.38	-52.59	7.78	3.82	12.51	2.11
2081-A1H	810401	810428	656	-7.81	-0.63	302.87	434.00	-76.30	5.74	0.38	3.06	0.06
2082-A1H	801128	810428	3616	-1.08	1.77	33.26	110.08	-43.32	9.66	1.77	0.78	-0.76
2082-A1H	801201	801231	744	-0.98	2.02	31.43	94.40	-39.78	10.80	1.08	1.01	-1.16
2082-A1H	810101	810131	744	-0.95	1.61	29.24	95.61	-38.79	10.18	0.72	1.04	-1.03
2082-A1H	810201	810228	672	-1.57	1.46	36.67	113.33	-44.68	9.96	0.85	1.75	-2.18
2082-A1H	810301	810331	744	-1.35	2.45	36.80	126.98	-45.88	9.21	1.11	0.41	0.49
2082-A1H	810401	810428	655	-0.59	1.32	32.13	119.35	-48.20	7.89	0.22	0.39	-0.47
2083-A1H	801128	810424	3520	0.60	-3.46	58.71	162.78	-74.82	8.58	1.37	1.25	-2.69
2083-A1H	801201	810101	745	0.96	-4.39	43.61	146.60	-58.47	9.18	1.55	1.18	-3.90
2083-A1H	810101	810201	745	0.63	-2.79	52.53	149.86	-67.85	8.83	1.08	1.17	-1.81
2083-A1H	810201	810301	673	1.67	-4.70	81.11	206.99	-101.86	8.80	1.16	1.37	-3.85
2083-A1H	810301	810401	745	-0.20	-2.86	54.06	163.11	-73.83	8.38	0.94	0.76	-1.45
2083-A1H	810401	810424	560	-0.11	-2.61	66.09	149.95	-74.28	7.37	0.27	0.43	-0.77

Table 7a. Monthly current statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2091-A1H	801024	810325	3645	-3.22	-3.12	135.92	219.73	-22.02	11.43	1.62	4.37	0.80
2091-A1H	801024	801101	170	-4.92	-4.99	115.31	287.90	-30.98	12.48	0.13	-1.58	-0.09
2091-A1H	801101	801201	721	-1.64	-4.64	201.50	314.92	-51.40	12.58	0.20	0.22	-1.41
2091-A1H	801201	810101	745	-0.68	-2.18	101.02	134.90	-11.91	12.13	0.64	2.77	1.81
2091-A1H	810101	810201	745	-2.54	-2.06	89.64	148.45	-17.73	11.11	1.47	3.88	1.54
2091-A1H	810201	810301	673	-4.40	-2.28	95.66	241.18	-27.42	10.89	0.25	1.07	0.98
2091-A1H	810301	810325	596	-7.44	-4.26	177.51	246.72	-0.29	9.90	1.40	6.57	2.40
2101-A1H	801027	810310	3201	-3.16	2.29	130.02	362.21	-36.91	11.83	1.00	2.76	0.30
2101-A1H	801101	801201	721	-2.73	0.41	149.61	447.85	-57.15	12.39	0.23	-1.31	-0.69
2101-A1H	801201	810101	745	-0.84	2.44	94.18	289.44	-9.36	12.50	0.54	1.11	2.29
2101-A1H	810101	810201	745	-1.72	3.32	88.87	293.55	-25.00	11.55	1.14	3.18	0.88
2101-A1H	810201	810301	673	-5.23	3.36	144.85	402.95	-55.54	11.19	0.26	2.42	0.77
2101-A1H	810301	810310	223	-10.20	1.87	185.71	379.57	-57.54	10.59	1.63	7.07	-0.17
2111-A1H	801201	810501	3614	3.22	0.93	227.70	288.65	3.94	11.29	5.23	13.52	8.01
2111-A1H	801201	810101	725	16.15	4.75	248.35	352.35	-35.50	14.19	0.74	4.18	0.25
2111-A1H	810101	810201	745	5.10	2.81	183.86	297.56	-0.20	12.29	1.19	4.67	5.42
2111-A1H	810201	810301	673	-2.11	0.88	96.64	244.74	-12.82	11.65	0.31	0.36	1.64
2111-A1H	810301	810401	745	-5.27	-1.77	176.25	249.11	14.52	10.02	2.92	3.66	3.37
2111-A1H	810401	810501	721	2.15	-2.09	151.79	260.69	-28.64	8.33	0.88	2.09	3.80
2112-A1H	801201	810501	3613	-2.37	3.02	47.48	146.48	32.32	10.33	1.78	-0.62	-0.48
2112-A1H	801201	810101	725	-2.69	3.97	40.61	144.39	25.37	11.61	0.83	0.67	-2.47
2112-A1H	810101	810201	745	-3.46	6.33	38.50	139.09	17.48	10.64	0.50	-0.26	0.81
2112-A1H	810201	810301	673	-3.28	0.70	60.63	146.56	46.55	10.80	0.61	-0.47	-2.25
2112-A1H	810301	810401	745	-1.48	1.42	51.65	153.90	36.61	10.21	1.20	0.43	-1.77
2112-A1H	810401	810501	721	-1.04	2.41	42.49	128.40	41.10	8.44	0.17	0.31	0.56
2114-A1H	801201	810501	3613	1.34	-0.47	61.11	239.87	85.98	5.08	0.12	-0.27	-0.94
2114-A1H	801201	810101	724	0.94	-0.06	65.11	264.00	98.36	5.03	0.11	-0.35	-0.78
2114-A1H	810101	810201	745	1.00	-0.38	63.65	236.86	93.47	5.07	0.09	-0.26	-0.57
2114-A1H	810201	810301	673	1.51	-1.49	54.80	232.49	76.32	5.23	0.07	-0.27	-0.86
2114-A1H	810301	810401	745	2.05	-0.10	59.83	239.54	85.33	5.22	0.16	-0.30	-1.66
2114-A1H	810401	810501	721	1.21	-0.51	61.18	224.08	75.67	4.85	0.70	-0.32	-0.66
2121-A1H	801027	810416	4088	13.92	5.45	591.69	128.00	119.32	11.70	2.21	22.10	4.65
2121-A1H	801101	801130	720	6.74	3.80	393.35	105.41	48.82	11.36	1.31	8.99	1.80
2121-A1H	801201	801231	744	40.67	12.46	195.06	96.23	30.67	13.63	0.80	3.78	-0.91
2121-A1H	810101	810131	744	33.18	11.29	111.16	84.77	11.62	12.46	0.50	1.07	-0.34
2121-A1H	810201	810228	672	-4.56	0.55	177.17	96.08	7.46	11.16	0.54	1.36	-1.39
2121-A1H	810301	810331	744	-6.08	-0.31	377.14	131.57	32.12	10.88	0.87	0.64	-1.83
2121-A1H	810401	810416	362	6.54	3.86	259.37	103.96	35.20	9.70	1.70	11.80	1.57
2122-A1H	801027	810427	4359	-1.59	-1.39	42.05	28.13	23.65	6.37	0.36	-0.44	-0.32
2122-A1H	801101	801201	721	-1.42	-1.61	44.06	35.28	26.89	6.54	0.32	-0.42	-0.51
2122-A1H	801201	810101	745	-0.98	-0.80	36.56	28.60	23.30	6.30	0.34	-0.37	-0.35
2122-A1H	810101	810201	745	-1.69	-1.04	39.32	25.45	23.01	6.35	0.25	0.10	0.09
2122-A1H	810201	810301	673	-1.87	-1.74	52.84	30.19	28.20	6.49	0.19	-0.38	-0.13
2122-A1H	810301	810401	745	-2.14	-2.12	33.80	22.18	17.46	6.64	0.58	-0.66	-0.34
2122-A1H	810401	810427	634	-1.48	-1.17	43.59	24.86	20.43	5.94	0.19	-0.75	-0.29

Table 7a. Monthly current statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2131-A1H	801027	810427	4361	3.20	1.29	207.22	90.16	70.60	10.02	1.94	8.81	1.92
2131-A1H	801101	801201	721	0.14	0.66	159.77	96.02	65.45	9.80	0.94	2.64	1.42
2131-A1H	801201	810101	745	15.29	5.94	182.68	59.43	67.15	11.50	1.16	6.52	1.51
2131-A1H	810101	810201	745	13.41	4.12	179.19	73.01	35.82	10.69	1.29	8.20	-0.10
2131-A1H	810201	810301	673	-4.23	-1.54	76.36	73.71	25.67	10.00	0.61	-1.82	-2.33
2131-A1H	810301	810401	745	-4.80	-1.40	132.19	107.03	56.43	9.83	1.36	-0.78	-1.34
2131-A1H	810401	810427	631	-1.74	-0.45	112.15	86.00	33.41	8.22	0.46	2.02	-0.27
2132-A1H	801027	810427	4360	-0.80	0.20	18.39	21.74	9.91	6.03	0.23	-0.06	-0.06
2132-A1H	801101	801201	721	-0.43	0.07	20.59	21.47	8.66	6.16	0.17	0.04	0.03
2132-A1H	801201	810101	745	-0.83	0.29	19.35	22.59	13.57	5.90	0.16	0.07	0.08
2132-A1H	810101	810201	745	-1.11	0.01	17.24	19.61	9.48	6.01	0.16	-0.17	-0.14
2132-A1H	810201	810301	673	-1.23	-0.02	19.93	24.33	11.06	6.15	0.10	-0.23	-0.23
2132-A1H	810301	810401	745	-0.50	0.45	16.25	19.25	8.04	6.27	0.43	-0.07	0.06
2132-A1H	810401	810427	631	-0.68	0.33	17.15	24.40	8.92	5.69	0.13	-0.06	-0.15
2141-A1H	801201	810427	3525	11.01	5.19	476.32	139.48	150.35	9.18	1.58	18.45	6.40
2141-A1H	801201	810101	732	36.58	15.22	222.49	79.60	33.56	10.64	0.45	3.32	0.27
2141-A1H	810101	810201	745	27.28	11.77	79.85	46.47	9.44	9.96	0.44	2.54	0.83
2141-A1H	810201	810301	673	-6.57	-1.12	147.21	105.74	22.56	8.55	0.55	2.73	0.17
2141-A1H	810301	810401	745	-5.96	-1.86	185.50	136.27	38.32	8.62	0.73	-2.19	-2.22
2141-A1H	810401	810427	634	0.94	0.82	91.71	70.51	-6.17	7.91	0.74	1.80	-0.62
2142-B1H	801201	810427	3525	-2.43	0.12	78.53	32.76	16.37	5.21	0.08	-0.27	-0.03
2142-B1H	801201	810101	732	2.38	1.87	80.89	26.41	15.51	5.24	0.06	-1.01	-0.23
2142-B1H	810101	810201	745	0.09	1.05	85.77	37.46	22.64	5.26	0.06	0.16	0.14
2142-B1H	810201	810301	673	-7.18	-1.13	62.27	32.80	3.17	5.26	0.04	-0.12	-0.01
2142-B1H	810301	810401	745	-6.44	-1.66	45.03	29.88	5.83	5.28	0.12	0.11	0.06
2142-B1H	810401	810427	634	-1.17	0.44	44.97	27.85	8.66	4.97	0.03	0.03	0.05
2143-B1H	801201	810427	3523	-0.31	0.16	13.04	20.23	-3.43	4.42	0.02	-0.11	-0.03
2143-B1H	801201	810101	732	-0.59	-0.08	14.02	18.91	-2.41	4.42	0.02	-0.13	-0.06
2143-B1H	810101	810201	745	-0.24	0.33	14.48	17.54	-2.26	4.41	0.02	-0.23	-0.03
2143-B1H	810201	810301	673	-1.03	-0.21	14.77	24.24	-5.34	4.48	0.01	-0.03	0.03
2143-B1H	810301	810401	745	-0.18	0.17	10.96	19.73	-4.09	4.44	0.01	-0.02	0.03
2143-B1H	810401	810427	632	0.58	0.63	9.29	20.66	-3.92	4.31	0.00	-0.01	-0.02
2144-A1H	801201	810409	3103	0.76	0.03	6.87	42.79	3.67	4.00	0.02	-0.02	-0.11
2144-A1H	801201	810101	732	0.69	0.22	7.29	39.43	4.51	3.97	0.02	-0.03	-0.05
2144-A1H	810101	810201	745	1.07	0.82	6.36	31.37	3.79	4.02	0.01	0.01	-0.08
2144-A1H	810201	810301	673	0.94	-0.15	5.25	58.87	0.90	3.99	0.02	-0.03	-0.23
2144-A1H	810301	810401	745	0.37	-0.85	8.58	46.10	5.12	4.02	0.01	-0.03	-0.09
2144-A1H	810401	810409	212	0.73	0.22	5.30	26.05	2.15	3.97	0.01	-0.04	0.00
2151-A1H	801127	810430	3698	-6.83	-5.84	562.57	329.98	74.64	8.02	6.14	20.19	7.53
2151-A1H	801201	801231	744	9.44	-2.04	611.56	320.01	103.13	10.83	3.03	22.79	9.85
2151-A1H	810101	810131	744	-5.08	-3.67	539.42	290.45	62.07	7.56	1.36	14.38	3.54
2151-A1H	810201	810228	672	-13.18	-5.07	347.58	367.74	19.64	8.94	3.24	11.31	8.33
2151-A1H	810301	810331	744	-20.27	-6.41	442.94	296.38	81.18	6.39	4.13	-14.62	-9.02
2151-A1H	810401	810430	714	-7.05	-11.65	355.26	300.17	26.59	5.88	0.36	-1.81	2.06

Table 7a. Monthly current statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2172-A1H	801128	810427	3619	-1.04	-1.53	164.10	44.19	23.09	5.82	0.22	1.39	-0.08
2172-A1H	801201	810101	745	9.98	1.24	161.37	51.43	16.44	6.06	0.18	0.38	-0.35
2172-A1H	810101	810201	745	4.01	-1.71	154.64	54.68	9.98	6.01	0.22	1.87	0.23
2172-A1H	810201	810301	673	-9.76	-3.86	110.20	33.36	13.83	5.72	0.08	0.55	-0.33
2172-A1H	810301	810401	745	-7.58	-2.82	72.98	33.31	19.82	5.84	0.25	-0.47	-0.22
2172-A1H	810401	810427	644	-2.58	-0.74	52.19	33.47	-0.77	5.38	0.07	-0.31	-0.31
2182-A1H	801130	810425	3501	-10.73	-1.18	347.91	353.25	-34.63	7.59	4.06	8.74	-0.48
2182-A1H	801201	810101	745	-8.78	0.02	328.84	360.52	-49.52	9.72	1.65	12.15	0.83
2182-A1H	810101	810201	745	-7.66	-0.91	270.45	312.95	-43.49	6.93	1.73	7.03	-2.24
2182-A1H	810201	810301	673	-13.23	-2.67	378.40	373.02	-30.39	8.37	1.85	12.63	0.03
2182-A1H	810301	810401	745	-13.53	-1.31	430.27	347.50	-10.74	7.14	3.91	7.41	-0.54
2182-A1H	810401	810425	585	-10.60	-1.11	297.85	374.46	-48.52	5.34	0.28	2.21	-1.25
2183-A1H	801130	810425	3502	-3.62	-0.81	371.59	343.44	-48.05	9.51	4.48	14.35	-1.07
2183-A1H	801201	810101	745	-0.18	-1.23	468.90	364.05	-56.39	11.46	1.90	13.99	-1.49
2183-A1H	810101	810201	745	0.40	0.00	366.23	328.12	-82.13	9.77	2.98	16.35	-3.20
2183-A1H	810201	810301	673	-5.23	-0.87	309.03	391.49	-39.82	10.42	0.68	7.11	1.32
2183-A1H	810301	810401	745	-8.22	-1.56	340.12	308.79	3.48	8.53	3.93	10.16	0.32
2183-A1H	810401	810425	586	-5.35	-0.30	299.96	325.29	-74.47	6.87	0.58	7.96	-0.88
2191-A1H	801128	810427	3619	-3.91	-3.23	348.80	438.49	0.90	9.67	9.11	13.43	5.23
2191-A1H	801201	810101	745	-0.19	-3.31	377.13	429.57	24.95	11.99	5.45	16.41	4.83
2191-A1H	810101	810201	745	-2.85	-1.37	319.19	422.56	-42.12	9.37	2.70	12.38	3.29
2191-A1H	810201	810301	673	-5.61	-3.66	340.63	551.75	-1.26	9.85	0.96	9.19	6.09
2191-A1H	810301	810401	745	-9.41	-5.59	397.80	432.89	13.72	8.59	3.08	9.24	3.20
2191-A1H	810401	810427	644	-1.83	-2.51	278.62	387.90	-10.25	7.32	12.14	6.01	5.94
2201-A1H	801129	810427	3567	9.69	4.84	388.84	136.37	134.69	10.26	2.38	16.82	5.09
2201-A1H	801201	801231	744	30.47	13.79	210.23	95.58	90.94	11.88	1.03	5.15	0.81
2201-A1H	810101	810131	744	22.51	8.76	189.06	100.48	61.60	10.98	1.14	6.24	1.70
2201-A1H	810201	810228	672	-3.44	-0.83	111.88	105.30	22.28	9.96	0.76	-1.08	-2.38
2201-A1H	810301	810331	744	-4.72	-0.74	189.45	108.78	34.18	9.80	1.26	-2.95	-2.76
2201-A1H	810401	810427	632	-0.05	1.81	129.29	98.06	22.23	8.31	0.63	3.05	-0.30
2202-A1H	801129	810427	3567	-1.37	0.23	30.29	47.18	28.03	4.59	0.03	-0.22	-0.13
2202-A1H	801201	810101	745	-0.88	0.60	21.76	30.04	16.43	4.58	0.03	-0.16	-0.07
2202-A1H	810101	810201	745	-1.36	0.17	26.39	45.93	25.24	4.58	0.04	-0.12	-0.12
2202-A1H	810201	810301	673	-1.89	0.06	38.52	56.19	35.63	4.70	0.03	-0.28	-0.17
2202-A1H	810301	810401	745	-1.65	-0.15	34.70	54.79	33.50	4.64	0.03	-0.31	-0.17
2202-A1H	810401	810427	633	-1.11	0.48	30.49	50.78	30.40	4.45	0.01	-0.12	-0.05
2211-A1H	810120	810428	2352	-2.84	0.23	12.04	48.06	-2.07	3.99	0.01	0.03	-0.10
2211-A1H	810120	810201	270	-2.63	1.02	10.66	41.76	-0.85	4.00	0.01	-0.02	-0.19
2211-A1H	810201	810301	673	-3.14	-0.25	12.61	57.07	-4.54	3.99	0.02	0.05	-0.10
2211-A1H	810301	810401	745	-2.73	-0.13	13.20	52.22	-1.56	4.02	0.01	0.03	-0.07
2211-A1H	810401	810428	667	-2.73	0.79	10.61	35.75	-0.91	3.96	0.00	0.02	-0.05

Table 7b. Monthly current statistics for low-passed time series.

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2031-A1HLPT	801026	810424	4334	1.86	-3.71	57.34	14.51	-0.70	10.46	4.76	6.58	-0.96
2031-A1HLPT	801026	801031	139	3.90	0.05	6.95	7.49	5.68	12.92	0.01	0.21	0.16
2031-A1HLPT	801101	801130	720	5.63	-6.41	56.65	20.88	10.35	12.97	0.22	2.17	0.49
2031-A1HLPT	801201	801231	744	5.74	-4.27	34.48	8.98	0.49	12.06	1.04	2.83	0.72
2031-A1HLPT	810101	800131	744	3.41	-4.04	34.14	11.31	-5.56	10.37	1.76	3.02	-0.04
2031-A1HLPT	810201	800228	672	-1.40	-1.88	23.88	8.98	6.35	10.25	0.41	0.43	0.49
2031-A1HLPT	810301	800331	744	-4.80	-3.24	92.51	13.38	1.50	8.91	2.70	3.53	1.76
2031-A1HLPT	810401	800424	571	2.03	-2.84	11.99	9.39	2.83	7.00	0.26	-0.29	0.15
2041A-A1HLPT	801026	801211	1108	0.19	-2.24	19.39	19.65	12.60	12.34	0.45	0.82	0.21
2041A-A1HLPT	801026	801031	143	0.66	-2.13	9.80	5.56	1.77	12.52	0.03	-0.03	-0.09
2041A-A1HLPT	801101	801130	720	-0.06	-2.50	22.30	22.20	14.77	12.61	0.30	1.27	0.42
2041A-A1HLPT	801201	801211	245	0.65	-1.55	15.91	19.71	11.99	11.46	0.16	0.53	0.54
2041B-A1HLPT	810217	810423	1539	-3.52	-3.60	36.57	24.95	19.09	7.41	2.73	-0.14	1.72
2041B-A1HLPT	810217	810301	267	-4.13	-4.67	27.53	9.43	8.93	8.11	0.98	-2.54	-1.40
2041B-A1HLPT	810301	810401	745	-5.29	-3.40	52.37	41.23	35.32	8.06	3.50	4.11	4.21
2041B-A1HLPT	810401	810423	529	-0.73	-3.33	6.64	9.07	0.79	6.16	0.12	0.36	0.29
2071-A1HLPT	801202	810423	3406	-8.04	-2.29	86.38	18.25	19.10	7.28	3.30	3.57	1.07
2071-A1HLPT	801202	810101	717	-6.22	-0.58	79.55	8.48	5.87	9.47	1.66	5.76	1.20
2071-A1HLPT	810101	810201	745	-5.92	-0.70	68.04	10.18	6.80	6.50	1.27	2.80	1.04
2071-A1HLPT	810201	810301	673	-9.82	-4.68	53.65	12.24	7.15	7.34	1.33	-1.29	-0.43
2071-A1HLPT	810301	810401	745	-10.24	-3.49	165.44	31.05	49.59	7.31	2.96	6.82	1.04
2071-A1HLPT	810401	810423	530	-8.13	-2.15	30.24	15.75	8.30	5.29	0.06	0.18	0.12
2081-A1HLPT	801130	810426	3550	-8.02	0.28	77.00	12.85	3.04	8.18	4.14	4.26	1.37
2081-A1HLPT	801201	810101	745	-5.79	0.59	103.55	18.93	3.16	10.34	2.08	6.77	1.09
2081-A1HLPT	810101	810201	745	-6.04	0.24	50.79	11.29	1.12	7.72	2.16	4.57	2.24
2081-A1HLPT	810201	810301	673	-10.78	0.02	32.37	6.71	-1.64	8.91	0.97	0.90	0.34
2081-A1HLPT	810301	810401	745	-10.28	1.05	129.25	10.69	9.64	7.79	3.51	7.74	0.83
2081-A1HLPT	810401	810426	623	-7.18	-0.68	38.16	14.96	3.27	5.69	0.17	-0.43	-0.01
2082-A1HLPT	801130	810426	3550	-1.10	1.78	2.48	5.07	-2.03	9.67	1.30	-0.08	0.27
2082-A1HLPT	801201	801231	744	-0.99	2.05	1.50	4.25	-1.28	10.80	0.39	-0.01	0.06
2082-A1HLPT	810101	810131	744	-0.93	1.55	1.99	3.87	-1.87	10.18	0.18	0.22	-0.10
2082-A1HLPT	810201	810228	672	-1.61	1.56	3.10	4.73	-1.63	9.96	0.23	0.12	0.11
2082-A1HLPT	810301	810331	744	-1.34	2.41	3.77	7.47	-3.41	9.21	0.80	-0.07	0.65
2082-A1HLPT	810401	810426	622	-0.63	1.34	1.39	3.89	-1.50	7.89	0.14	-0.18	0.28
2083-A1HLPT	801130	810422	3454	0.56	-3.44	5.92	6.92	-4.40	8.58	0.68	0.41	-0.32
2083-A1HLPT	801201	810101	745	0.96	-4.36	5.36	8.79	-4.69	9.19	0.41	-0.40	0.55
2083-A1HLPT	810101	810201	745	0.65	-2.82	3.98	4.05	-2.18	8.83	0.39	0.60	-0.19
2083-A1HLPT	810201	810301	673	1.62	-4.59	8.32	8.00	-5.56	8.80	0.09	-0.16	0.06
2083-A1HLPT	810301	810401	745	-0.19	-2.92	5.44	6.55	-5.00	8.38	0.58	0.13	-0.06
2083-A1HLPT	810401	810422	527	-0.46	-2.26	3.81	2.44	-1.19	7.35	0.15	0.25	-0.05

Table 7a. Monthly current statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2152-A1H	801202	810429	3567	7.40	2.45	610.95	189.96	143.43	10.29	11.59	46.36	17.92
2152-A1H	801202	810101	720	34.35	9.88	308.71	182.23	71.04	14.42	2.40	11.42	5.18
2152-A1H	810101	810201	745	22.13	7.49	370.69	124.25	72.14	11.46	3.48	16.18	6.28
2152-A1H	810201	810301	673	-5.66	0.63	233.38	139.81	32.69	11.15	1.92	9.36	5.38
2152-A1H	810301	810401	745	-13.26	-1.81	296.04	188.87	60.08	7.69	5.50	-13.20	-4.56
2152-A1H	810401	810429	688	-1.68	-4.51	189.37	166.96	25.60	6.65	5.47	1.00	6.47
2153-A1H	801202	810429	3567	11.93	2.78	673.33	123.21	141.13	11.37	3.04	26.86	4.77
2153-A1H	801202	810101	720	40.03	9.10	240.00	122.62	68.72	13.51	0.65	-1.39	-1.53
2153-A1H	810101	810201	745	31.24	6.99	167.57	71.48	10.21	12.43	0.46	0.98	-1.37
2153-A1H	810201	810301	673	-5.05	-0.70	215.12	80.43	34.68	11.21	0.55	2.97	-0.09
2153-A1H	810301	810401	745	-10.54	-3.13	463.70	132.83	88.32	10.49	1.08	1.36	-0.38
2153-A1H	810401	810429	688	2.47	1.39	202.32	98.17	31.26	9.07	0.72	4.76	-0.01
2154-A1H	801202	810429	3567	7.91	-3.14	225.58	103.50	30.85	9.59	2.15	7.16	-1.08
2154-A1H	801202	810101	720	23.71	1.40	69.24	65.55	-14.97	10.87	1.07	0.43	-1.47
2154-A1H	810101	810201	745	17.75	-2.10	100.51	95.91	-8.52	10.25	1.49	1.66	-3.78
2154-A1H	810201	810301	673	-0.87	-5.38	98.07	111.61	6.59	9.63	1.07	-1.57	-3.75
2154-A1H	810301	810401	745	-4.22	-5.38	160.75	116.81	27.76	9.27	1.55	-4.28	-4.08
2154-A1H	810401	810429	688	2.40	-4.40	88.94	94.28	6.50	7.88	0.45	-0.44	-1.60
2161-A1H	801127	810402	3023	17.49	5.02	930.71	140.77	143.51	12.69	8.58	60.69	12.13
2161-A1H	801201	810101	745	45.94	10.05	342.83	144.29	20.41	15.90	1.10	5.69	0.51
2161-A1H	810101	810201	745	38.86	8.42	275.68	85.68	15.82	13.60	0.67	-1.22	0.21
2161-A1H	810201	810301	673	-5.67	1.57	245.82	96.83	30.19	11.77	0.76	6.63	2.69
2161-A1H	810301	810401	745	-10.94	-0.41	329.09	151.40	63.04	9.03	4.69	-3.51	1.20
2162-A1H	801127	810429	3665	17.25	5.17	718.75	146.74	205.95	10.89	1.94	21.41	5.90
2162-A1H	801201	810101	745	47.86	15.28	154.00	68.70	19.81	12.17	0.88	2.05	0.14
2162-A1H	810101	810201	745	37.54	10.72	89.25	50.55	4.70	11.67	0.52	-0.46	-1.54
2162-A1H	810201	810301	673	-3.28	-0.87	188.36	103.15	39.83	10.61	0.72	3.84	0.23
2162-A1H	810301	810401	745	-5.39	-3.08	528.12	170.13	150.51	10.34	1.00	-1.25	-1.34
2162-A1H	810401	810429	685	4.27	1.85	166.35	84.33	24.35	9.33	1.33	6.72	1.55
2163-A1H	801127	810429	3665	-0.40	0.35	48.28	20.48	-0.96	5.57	0.17	-1.22	-0.13
2163-A1H	801201	810101	745	-0.37	1.00	40.47	15.86	-0.58	5.46	0.13	-1.44	-0.15
2163-A1H	810101	810201	745	1.53	0.78	45.41	18.71	-0.66	5.55	0.10	-0.85	0.05
2163-A1H	810201	810301	673	-3.45	-0.69	39.17	23.40	-4.41	5.77	0.09	-0.76	-0.13
2163-A1H	810301	810401	745	-1.50	-0.08	64.32	20.66	-2.84	5.76	0.29	-1.29	-0.09
2163-A1H	810401	810429	685	1.33	0.53	36.66	22.39	-1.54	5.28	0.07	-0.49	0.08
2171-B1H	801128	810427	3619	10.52	3.94	490.36	111.39	99.00	11.31	1.83	18.43	4.68
2171-B1H	801201	810101	745	33.59	10.32	288.44	62.31	32.15	12.85	0.62	6.93	0.18
2171-B1H	810101	810201	745	25.18	8.16	91.91	69.96	17.28	12.13	0.45	1.80	-0.28
2171-B1H	810201	810301	673	-5.89	-0.72	210.70	81.52	13.54	10.68	0.54	4.13	-0.26
2171-B1H	810301	810401	745	-5.87	-0.83	346.69	140.98	59.18	10.69	0.73	-1.65	-0.68
2171-B1H	810401	810427	644	3.59	1.40	184.40	93.23	-7.75	9.84	0.95	4.13	1.20

Table 7b. Monthly current statistics for low-passed time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2091-A1HLPT	801026	810324	3579	-3.13	-3.07	34.25	16.98	10.40	11.45	1.34	2.91	0.42
2091-A1HLPT	801026	801101	137	-4.95	-4.25	10.54	8.24	2.23	12.39	0.02	-0.07	0.01
2091-A1HLPT	801101	801201	721	-1.63	-4.65	35.97	19.46	7.51	12.58	0.10	-0.05	-0.22
2091-A1HLPT	801201	810101	745	-0.68	-2.16	17.64	13.02	4.38	12.13	0.35	0.39	0.37
2091-A1HLPT	810101	810201	745	-2.53	-2.08	16.71	9.74	3.78	11.11	1.14	1.94	0.49
2091-A1HLPT	810201	810301	673	-4.40	-2.23	16.70	12.72	5.04	10.89	0.15	0.10	0.43
2091-A1HLPT	810301	810324	563	-7.15	-4.33	73.91	27.45	34.27	10.01	1.16	5.12	2.21
2101-A1HLPT	801029	810308	3135	-3.02	2.30	25.29	12.28	-2.69	11.86	0.71	1.31	-0.07
2101-A1HLPT	801101	801201	721	-2.72	0.39	23.85	18.66	-1.60	12.39	0.06	0.13	0.33
2101-A1HLPT	801201	810101	745	-0.80	2.45	11.10	6.64	-2.44	12.50	0.29	-0.19	0.04
2101-A1HLPT	810101	810201	745	-1.75	3.31	13.86	7.18	-3.32	11.55	0.83	0.47	0.58
2101-A1HLPT	810201	810301	673	-5.19	3.34	22.30	11.87	-0.39	11.19	0.13	0.20	0.39
2101-A1HLPT	810301	810308	190	-9.58	1.79	61.88	11.77	-15.50	10.86	1.09	3.20	0.46
2111-A1HLPT	801203	810430	3548	3.15	0.88	103.10	27.55	26.76	11.29	5.05	11.35	6.52
2111-A1HLPT	801203	810101	692	16.19	4.80	70.79	16.91	4.48	14.21	0.53	2.08	0.64
2111-A1HLPT	810101	810201	745	5.06	2.79	40.52	21.26	11.27	12.29	1.06	2.83	2.96
2111-A1HLPT	810201	810301	673	-2.07	0.84	21.84	24.48	3.30	11.65	0.26	-0.30	1.18
2111-A1HLPT	810301	810401	745	-5.32	-1.71	82.15	24.25	31.49	10.02	2.73	1.36	1.45
2111-A1HLPT	810401	810430	697	2.20	-2.24	25.88	15.27	1.76	8.30	0.61	-0.83	0.52
2112-A1HLPT	801203	810429	3547	-2.34	2.96	9.59	33.65	-0.23	10.34	1.53	-0.53	0.05
2112-A1HLPT	801203	810101	692	-2.55	3.77	5.84	17.17	-6.38	11.62	0.46	0.20	-0.27
2112-A1HLPT	810101	810201	745	-3.48	6.32	9.49	43.26	-8.55	10.64	0.21	-0.20	0.59
2112-A1HLPT	810201	810301	673	-3.29	0.71	9.59	41.42	5.55	10.80	0.28	0.28	-1.79
2112-A1HLPT	810301	810401	745	-1.48	1.38	11.38	33.01	8.22	10.21	1.05	0.50	-1.12
2112-A1HLPT	810401	810429	696	-0.94	2.40	6.55	12.31	4.76	8.42	0.09	0.33	0.37
2114-A1HLPT	801203	810430	3547	1.34	-0.45	3.66	10.24	3.41	5.08	0.08	0.03	-0.13
2114-A1HLPT	801203	810101	691	0.94	0.10	2.39	6.58	1.53	5.02	0.07	-0.08	-0.12
2114-A1HLPT	810101	810201	745	0.96	-0.45	3.14	10.49	3.96	5.07	0.05	-0.02	0.02
2114-A1HLPT	810201	810301	673	1.51	-1.43	3.40	10.04	3.43	5.23	0.04	-0.02	0.05
2114-A1HLPT	810301	810401	745	2.04	-0.11	4.51	16.86	6.33	5.22	0.09	0.08	-0.44
2114-A1HLPT	810401	810430	697	1.23	-0.43	3.91	5.37	1.65	4.86	0.05	-0.02	-0.05
2121-A1HLPT	801029	810414	4022	13.97	5.47	540.25	44.43	122.91	11.70	2.06	23.77	5.68
2121-A1HLPT	801101	801130	720	6.75	3.80	349.53	21.42	52.60	11.36	1.07	10.73	2.20
2121-A1HLPT	801201	801231	744	40.65	12.45	115.64	13.51	20.02	13.63	0.63	5.40	0.65
2121-A1HLPT	810101	810131	744	33.18	11.30	55.50	17.61	10.38	12.46	0.37	1.66	0.23
2121-A1HLPT	810201	810228	672	-4.55	0.55	115.12	12.51	11.38	11.16	0.33	3.24	-0.06
2121-A1HLPT	810301	810331	744	-6.08	-0.35	318.41	27.16	44.51	10.88	0.71	1.56	-0.66
2121-A1HLPT	810401	810414	329	6.27	3.77	220.85	13.99	34.82	9.51	1.28	13.47	2.31
2122-A1HLPT	801029	810426	4293	-1.59	-1.40	4.41	3.79	2.93	6.38	0.28	-0.22	-0.29
2122-A1HLPT	801101	801201	721	-1.43	-1.62	3.66	3.60	2.68	6.54	0.23	-0.38	-0.64
2122-A1HLPT	801201	810101	745	-0.99	-0.79	3.99	4.23	3.47	6.30	0.27	-0.34	-0.39
2122-A1HLPT	810101	810201	745	-1.68	-1.05	4.92	3.32	2.98	6.34	0.19	0.15	0.04
2122-A1HLPT	810201	810301	673	-1.86	-1.72	5.92	4.08	3.39	6.49	0.08	-0.05	-0.12
2122-A1HLPT	810301	810401	745	-2.17	-2.14	3.23	3.56	2.30	6.64	0.49	-0.16	-0.08
2122-A1HLPT	810401	810426	601	-1.51	-1.22	4.20	2.19	1.67	5.97	0.09	-0.29	-0.06

Table 7b. Monthly current statistics for low-passed time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2131-A1HLPT	801028	810425	4295	3.19	1.32	144.95	29.13	55.84	10.04	1.61	8.50	3.05
2131-A1HLPT	801101	801201	721	0.08	0.66	101.65	24.53	44.14	9.80	0.75	2.56	1.87
2131-A1HLPT	801201	810101	745	15.36	5.98	74.12	18.37	26.13	11.50	0.61	3.49	1.00
2131-A1HLPT	810101	810201	745	13.38	4.10	111.33	27.67	45.94	10.69	0.58	5.53	2.17
2131-A1HLPT	810201	810301	673	-4.23	-1.54	33.62	11.05	11.40	10.00	0.35	0.00	-0.41
2131-A1HLPT	810301	810401	745	-4.82	-1.40	87.91	33.39	44.91	9.83	1.25	0.28	-0.15
2131-A1HLPT	810401	810425	598	-2.36	-0.77	41.88	15.19	18.38	8.22	0.35	2.28	1.11
2132-A1HLPT	801029	810425	4294	-0.80	0.19	2.37	1.67	1.31	6.03	0.19	0.12	0.09
2132-A1HLPT	801101	801201	721	-0.43	0.08	1.84	1.06	0.76	6.16	0.13	0.09	0.16
2132-A1HLPT	801201	810101	745	-0.84	0.28	1.81	1.48	1.15	5.90	0.13	0.23	0.12
2132-A1HLPT	810101	810201	745	-1.10	0.01	2.18	1.02	0.86	6.01	0.13	0.04	0.02
2132-A1HLPT	810201	810301	673	-1.22	-0.01	2.99	2.02	1.92	6.15	0.06	0.02	-0.01
2132-A1HLPT	810301	810401	745	-0.53	0.43	2.20	2.40	1.77	6.27	0.38	0.19	0.27
2132-A1HLPT	810401	810425	598	-0.68	0.31	2.98	2.12	1.41	5.72	0.08	0.06	-0.03
2141-A1HLPT	801202	810426	3459	11.08	5.15	448.04	75.27	163.67	9.18	1.43	19.21	7.25
2141-A1HLPT	801202	810101	699	37.78	15.33	168.04	16.87	44.29	10.64	0.35	3.73	0.98
2141-A1HLPT	810101	810201	745	27.30	11.78	60.52	11.16	19.31	9.96	0.30	2.61	1.08
2141-A1HLPT	810201	810301	673	-6.57	-1.10	96.34	15.31	31.57	8.55	0.41	3.59	1.21
2141-A1HLPT	810301	810401	745	-5.96	-1.85	142.66	61.26	51.32	8.62	0.57	-1.37	-0.90
2141-A1HLPT	810401	810426	601	0.76	0.75	53.92	8.09	1.82	7.91	0.59	2.17	0.43
2142-B1HLPT	801202	810426	3459	-2.45	0.11	67.59	10.29	17.92	5.21	0.07	-0.23	0.02
2142-B1HLPT	801202	810101	699	2.57	1.89	64.92	5.50	15.59	5.23	0.05	-1.13	-0.25
2142-B1HLPT	810101	810201	745	0.10	1.07	74.10	13.34	24.82	5.26	0.05	0.22	0.18
2142-B1HLPT	810201	810301	673	-7.19	-1.18	51.60	7.15	5.66	5.26	0.03	-0.01	0.04
2142-B1HLPT	810301	810401	745	-6.46	-1.65	36.04	8.52	7.85	5.28	0.11	0.16	0.16
2142-B1HLPT	810401	810426	601	-1.20	0.44	35.74	7.17	8.90	4.98	0.02	0.15	0.14
2143-B1HLPT	801202	810425	3457	-0.33	0.15	7.27	4.17	0.73	4.42	0.02	-0.10	-0.02
2143-B1HLPT	801202	810101	699	-0.60	-0.11	8.48	3.80	1.66	4.42	0.02	-0.13	-0.05
2143-B1HLPT	810101	810201	745	-0.24	0.32	9.14	4.27	1.31	4.41	0.02	-0.22	-0.02
2143-B1HLPT	810201	810301	673	-1.04	-0.23	8.48	4.15	-0.85	4.48	0.01	-0.02	0.04
2143-B1HLPT	810301	810401	745	-0.16	0.18	4.91	5.02	0.03	4.44	0.01	-0.02	0.04
2143-B1HLPT	810401	810425	599	0.48	0.60	3.71	2.94	0.78	4.31	0.00	0.01	-0.02
2144-A1HLPT	801202	810408	3037	0.76	0.04	1.28	9.70	0.88	4.00	0.01	-0.01	-0.08
2144-A1HLPT	801202	810101	699	0.69	0.23	0.39	5.83	0.21	3.97	0.02	-0.01	-0.03
2144-A1HLPT	810101	810201	745	1.07	0.82	1.06	6.76	1.36	4.02	0.01	0.02	-0.08
2144-A1HLPT	810201	810301	673	0.95	-0.19	0.67	18.83	-1.14	3.99	0.02	-0.02	-0.18
2144-A1HLPT	810301	810401	745	0.36	-0.83	2.73	7.80	2.40	4.02	0.01	-0.02	-0.03
2144-A1HLPT	810401	810408	179	0.68	0.54	0.82	4.23	0.59	3.99	0.01	-0.05	-0.03
2151-A1HLPT	801129	810429	3632	-7.06	-5.89	353.47	117.95	72.07	7.97	5.50	15.20	5.56
2151-A1HLPT	801201	801231	744	9.45	-2.18	372.38	105.06	90.42	10.83	2.28	13.37	6.55
2151-A1HLPT	810101	810131	744	-5.10	-3.64	247.62	90.35	58.92	7.56	0.97	7.00	1.54
2151-A1HLPT	810201	810228	672	-13.16	-5.05	132.63	80.61	21.79	8.94	2.99	8.19	6.24
2151-A1HLPT	810301	810331	744	-20.25	-6.46	330.57	139.37	84.02	6.39	4.05	-16.20	-9.35
2151-A1HLPT	810401	810429	681	-7.54	-11.94	178.74	116.71	36.21	5.84	0.32	-2.77	1.45

Table 7b. Monthly current statistics for low-passed time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2152-A1HLPT	801203	810428	3501	7.23	2.35	516.12	76.30	141.54	10.24	10.91	42.55	16.18
2152-A1HLPT	801203	810101	687	34.75	9.69	189.84	39.34	64.80	14.29	1.67	8.31	3.87
2152-A1HLPT	810101	810201	745	22.13	7.51	217.82	22.89	51.00	11.46	2.64	8.17	3.47
2152-A1HLPT	810201	810301	673	-5.67	0.67	178.12	46.43	34.77	11.15	1.69	8.08	5.22
2152-A1HLPT	810301	810401	745	-13.28	-1.80	218.28	61.62	67.51	7.69	5.25	-13.97	-5.68
2152-A1HLPT	810401	810428	655	-2.05	-4.83	100.56	63.50	34.84	6.55	5.15	-1.84	4.52
2153-A1HLPT	801203	810428	3501	11.73	2.71	581.81	37.65	133.19	11.36	2.86	27.75	6.25
2153-A1HLPT	801203	810101	687	40.38	9.16	49.90	9.11	11.24	13.52	0.48	0.87	0.70
2153-A1HLPT	810101	810201	745	31.21	6.98	75.61	5.59	5.72	12.43	0.30	1.71	-0.21
2153-A1HLPT	810201	810301	673	-5.02	-0.69	154.36	14.80	37.72	11.21	0.38	4.31	1.39
2153-A1HLPT	810301	810401	745	-10.54	-3.16	379.48	33.18	96.11	10.49	0.87	1.41	0.85
2153-A1HLPT	810401	810428	655	2.03	1.28	145.35	15.07	36.68	9.00	0.44	3.67	1.08
2154-A1HLPT	801203	810428	3501	7.69	-3.18	190.73	18.18	42.81	9.59	1.57	7.93	1.30
2154-A1HLPT	801203	810101	687	23.53	1.50	31.55	5.05	4.56	10.85	0.37	0.96	0.01
2154-A1HLPT	810101	810201	745	17.74	-2.08	60.41	12.34	13.60	10.25	0.51	1.38	-0.02
2154-A1HLPT	810201	810301	673	-0.78	-5.41	58.04	9.51	8.08	9.63	0.42	0.74	-0.42
2154-A1HLPT	810301	810401	745	-4.29	-5.37	135.30	18.79	35.85	9.27	1.26	-3.33	-2.14
2154-A1HLPT	810401	810428	655	1.95	-4.55	57.80	10.00	12.31	7.85	0.26	0.45	-0.29
2161-A1HLPT	801129	810401	2957	17.56	5.01	886.96	52.29	145.29	12.66	8.40	60.87	11.64
2161-A1HLPT	801201	810101	745	45.97	10.07	268.23	20.21	17.78	15.89	0.93	5.30	0.51
2161-A1HLPT	810101	810201	745	38.86	8.39	214.32	11.54	20.04	13.60	0.60	-1.67	0.00
2161-A1HLPT	810201	810301	673	-5.65	1.60	213.56	38.89	32.13	11.77	0.67	6.59	2.43
2161-A1HLPT	810301	810401	745	-10.98	-0.37	265.18	60.26	60.98	9.03	4.32	-4.71	0.08
2162-A1HLPT	801129	810428	3599	17.14	5.08	688.09	81.18	215.21	10.89	1.64	22.27	6.90
2162-A1HLPT	801201	810101	745	47.87	15.27	120.63	14.38	25.34	12.17	0.47	2.34	0.32
2162-A1HLPT	810101	810201	745	37.53	10.76	71.07	10.02	10.00	11.67	0.21	0.54	-0.69
2162-A1HLPT	810201	810301	673	-3.26	-0.85	136.29	21.32	43.94	10.61	0.52	5.26	2.30
2162-A1HLPT	810301	810401	745	-5.37	-3.12	472.22	80.18	161.03	10.34	0.74	-0.21	0.41
2162-A1HLPT	810401	810428	652	3.90	1.78	128.54	20.95	34.41	9.31	1.14	7.38	2.34
2163-A1HLPT	801129	810428	3599	-0.49	0.33	34.41	2.45	4.96	5.57	0.14	-1.03	-0.20
2163-A1HLPT	801201	810101	745	-0.40	0.99	29.13	1.19	3.57	5.46	0.10	-1.37	-0.16
2163-A1HLPT	810101	810201	745	1.54	0.79	29.05	2.79	5.47	5.55	0.07	-0.68	-0.14
2163-A1HLPT	810201	810301	673	-3.45	-0.70	24.73	2.09	1.56	5.77	0.05	-0.49	-0.11
2163-A1HLPT	810301	810401	745	-1.49	-0.10	48.56	1.97	4.13	5.76	0.25	-1.09	-0.14
2163-A1HLPT	810401	810428	652	1.02	0.49	24.11	2.43	5.39	5.29	0.03	-0.25	-0.03
2171-B1HLPT	801129	810426	3553	10.66	3.92	462.58	55.06	106.00	11.32	1.65	19.13	5.87
2171-B1HLPT	801201	810101	745	33.62	10.35	260.10	10.97	36.53	12.85	0.50	7.28	1.19
2171-B1HLPT	810101	810201	745	25.17	8.12	62.05	14.82	19.51	12.13	0.28	2.04	0.84
2171-B1HLPT	810201	810301	673	-5.90	-0.67	172.02	20.79	17.50	10.68	0.33	4.60	1.11
2171-B1HLPT	810301	810401	745	-5.83	-0.81	301.37	74.04	66.15	10.69	0.61	-0.83	0.73
2171-B1HLPT	810401	810426	611	3.60	1.37	156.82	44.27	-0.80	9.87	0.78	4.36	2.39

Table 7b. Monthly current statistics for low-passed time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	East (cm/s)	North (cm/s)	σ_u^2 (cm^2/s^2)	σ_v^2 (cm^2/s^2)	$u'v'$ (cm^2/s^2)	Temp (°C)	σ_T^2 ($°C^2$)	$u'T'$ (°C-cm/s)	$v'T'$ (°C-cm/s)
2172-A1HLPT	801129	810426	3553	-0.99	-1.56	137.51	12.06	32.92	5.82	0.17	1.63	0.17
2172-A1HLPT	801201	810101	745	9.98	1.24	115.61	10.31	23.79	6.06	0.10	0.47	-0.20
2172-A1HLPT	810101	810201	745	4.03	-1.69	127.89	10.18	28.44	6.01	0.16	2.16	0.43
2172-A1HLPT	810201	810301	673	-9.73	-3.84	89.79	6.50	20.48	5.72	0.05	0.71	0.05
2172-A1HLPT	810301	810401	745	-7.61	-2.86	53.20	12.92	23.71	5.84	0.23	-0.38	-0.06
2172-A1HLPT	810401	810426	611	-2.73	-0.77	21.87	4.24	8.77	5.40	0.03	0.14	0.03
2182-A1HLPT	801201	810423	3435	-10.73	-1.14	111.83	15.82	8.12	7.57	3.51	3.08	0.98
2182-A1HLPT	801201	810101	724	-8.54	-0.14	97.89	11.57	2.74	9.67	1.21	6.54	1.37
2182-A1HLPT	810101	810201	745	-7.66	-0.91	84.90	17.80	-4.33	6.93	1.13	1.40	0.27
2182-A1HLPT	810201	810301	673	-13.23	-2.65	76.90	14.05	6.18	8.36	0.99	1.06	1.46
2182-A1HLPT	810301	810401	745	-13.55	-1.27	202.63	14.88	33.51	7.14	3.65	4.05	1.16
2182-A1HLPT	810401	810423	552	-10.87	-0.73	48.86	17.79	-9.17	5.30	0.16	-1.07	0.40
2183-A1HLPT	801201	810424	3436	-3.58	-0.78	98.88	16.13	2.90	9.50	4.05	7.84	-0.08
2183-A1HLPT	801201	810101	724	0.33	-1.27	73.56	12.81	0.13	11.42	1.52	6.44	-0.17
2183-A1HLPT	810101	810201	745	0.46	-0.03	79.80	17.91	-8.09	9.77	2.27	5.94	-0.31
2183-A1HLPT	810201	810301	673	-5.26	-0.86	72.82	13.70	4.39	10.42	0.33	0.16	0.53
2183-A1HLPT	810301	810401	745	-8.20	-1.53	149.17	18.24	22.54	8.53	3.83	7.26	0.92
2183-A1HLPT	810401	810424	553	-5.82	-0.73	42.58	15.91	-12.19	6.82	0.21	0.70	0.24
2191-A1HLPT	801129	810426	3553	-3.99	-3.30	102.58	19.74	14.23	9.46	6.42	6.58	0.68
2191-A1HLPT	801201	810101	745	-0.18	-3.23	89.65	11.17	8.19	11.99	4.95	7.84	1.24
2191-A1HLPT	810101	810201	745	-2.85	-1.37	84.04	13.85	-5.72	9.37	2.20	6.22	-1.31
2191-A1HLPT	810201	810301	673	-5.58	-3.73	51.67	14.97	13.27	9.85	0.56	1.28	0.22
2191-A1HLPT	810301	810401	745	-9.43	-5.53	180.68	28.99	39.18	8.59	2.92	5.95	1.31
2191-A1HLPT	810401	810426	611	-1.85	-2.72	45.20	20.73	-2.90	6.62	2.92	0.13	-0.02
2201-A1HLPT	801201	810425	3501	9.45	4.72	327.22	62.99	124.52	10.27	2.02	17.23	6.45
2201-A1HLPT	801201	801231	742	30.52	13.82	106.79	26.18	44.45	11.88	0.54	3.50	0.86
2201-A1HLPT	810101	810131	744	22.48	8.73	125.12	50.06	64.52	10.97	0.58	5.48	3.32
2201-A1HLPT	810201	810228	672	-3.44	-0.86	64.77	20.85	15.40	9.97	0.40	1.40	-0.26
2201-A1HLPT	810301	810331	744	-4.73	-0.75	144.71	26.44	36.76	9.80	1.10	-1.52	-1.36
2201-A1HLPT	810401	810425	599	-0.73	1.50	71.95	12.19	17.34	8.31	0.52	3.78	1.42
2202-A1HLPT	801201	810425	3501	-1.40	0.22	3.90	2.98	2.56	4.60	0.03	-0.09	-0.06
2202-A1HLPT	801201	810101	742	-0.87	0.60	3.46	2.20	2.05	4.59	0.03	-0.11	-0.07
2202-A1HLPT	810101	810201	745	-1.36	0.16	4.29	4.46	3.73	4.58	0.04	-0.05	-0.07
2202-A1HLPT	810201	810301	673	-1.90	0.04	3.84	2.30	2.09	4.70	0.02	-0.08	-0.03
2202-A1HLPT	810301	810401	745	-1.66	-0.16	4.67	3.51	3.07	4.64	0.02	-0.10	-0.04
2202-A1HLPT	810401	810425	600	-1.24	0.48	2.35	1.74	1.12	4.46	0.01	-0.02	-0.03
2211-A1HLPT	810122	810427	2286	-2.86	0.20	1.11	6.60	-0.05	3.99	0.01	0.03	-0.05
2211-A1HLPT	810122	810201	237	-2.80	1.14	0.97	4.02	-0.33	3.98	0.01	-0.03	-0.18
2211-A1HLPT	810201	810301	673	-3.12	-0.29	1.32	9.32	-0.48	3.99	0.02	0.04	-0.03
2211-A1HLPT	810301	810401	745	-2.74	-0.10	1.20	6.70	0.33	4.02	0.01	0.03	-0.02
2211-A1HLPT	810401	810427	634	-2.75	0.73	0.73	3.57	-0.11	3.96	0.00	0.03	-0.02

Table 8a. Monthly ellipse statistics for hour-averaged time series.

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2031-A1H	801024	810426	4400	155.97	223.41	14.95	149.70	12.24	0.33	93.09	8.84
2031-A1H	801024	801031	172	7.54	202.10	14.22	80.29	8.96	0.60	101.72	0.41
2031-A1H	801101	801130	720	161.25	357.13	18.90	218.29	14.77	0.39	87.05	2.85
2031-A1H	801201	801231	744	139.44	209.13	14.46	124.58	11.16	0.40	79.12	6.62
2031-A1H	810101	810131	744	150.96	194.57	13.95	107.81	10.38	0.45	80.11	7.26
2031-A1H	810201	810228	672	179.19	232.32	15.24	109.41	10.46	0.53	64.13	4.43
2031-A1H	810301	810331	744	151.97	190.96	13.82	159.62	12.63	0.16	73.33	5.70
2031-A1H	810401	810426	604	165.33	147.81	12.16	87.21	9.34	0.41	60.55	2.80
2041A-A1H	801024	801212	1174	164.37	222.88	14.93	80.49	8.97	0.64	73.33	1.43
2041A-A1H	801024	801031	176	165.91	286.79	16.93	81.79	9.04	0.72	42.45	0.95
2041A-A1H	801101	801130	720	162.60	219.74	14.82	90.91	9.53	0.59	76.26	1.65
2041A-A1H	801201	801212	278	166.91	190.47	13.80	51.31	7.16	0.73	58.28	2.17
2041B-A1H	810216	810424	1605	167.08	207.84	14.42	116.34	10.79	0.44	37.31	4.11
2041B-A1H	810216	810301	300	150.37	173.13	13.16	103.70	10.18	0.40	67.65	3.11
2041B-A1H	810301	810401	745	171.59	233.85	15.29	151.57	12.31	0.35	48.04	8.24
2041B-A1H	810401	810424	562	168.55	194.13	13.93	59.27	7.70	0.70	52.54	3.63
2071-A1H	801130	810424	3472	168.47	681.81	26.11	370.49	19.25	0.46	58.84	118.90
2071-A1H	801201	810101	745	162.71	667.28	25.83	345.54	18.59	0.48	64.07	110.60
2071-A1H	810101	810201	745	162.56	593.18	24.36	312.44	17.68	0.47	55.65	119.81
2071-A1H	810201	810301	673	169.04	744.83	27.29	394.15	19.85	0.47	55.51	143.13
2071-A1H	810301	810401	745	174.51	671.24	25.91	435.57	20.87	0.35	65.65	136.75
2071-A1H	810401	810424	563	172.37	763.83	27.64	326.29	18.06	0.57	35.57	44.78
2081-A1H	801128	810428	3616	155.17	430.12	20.74	293.59	17.13	0.32	74.47	131.53
2081-A1H	801201	810101	745	143.10	419.34	20.48	342.03	18.49	0.18	72.08	157.93
2081-A1H	810101	810201	745	165.66	398.16	19.95	244.96	15.65	0.39	67.13	154.23
2081-A1H	810201	810301	673	155.28	468.30	21.64	309.13	17.58	0.34	77.01	150.64
2081-A1H	810301	810401	745	153.87	407.18	20.18	274.17	16.56	0.33	80.44	126.83
2081-A1H	810401	810428	656	155.34	469.03	21.66	267.84	16.37	0.43	88.85	30.64
2082-A1H	801128	810428	3616	155.78	129.57	11.38	13.78	3.71	0.89	133.99	10.89
2082-A1H	801201	801231	744	154.18	113.64	10.66	12.19	3.49	0.89	138.93	15.36
2082-A1H	810101	810131	744	155.27	113.47	10.65	11.37	3.37	0.90	134.85	14.60
2082-A1H	810201	810228	672	155.31	133.87	11.57	16.13	4.02	0.88	141.29	27.91
2082-A1H	810301	810331	744	157.25	146.23	12.09	17.56	4.19	0.88	39.97	6.43
2082-A1H	810401	810428	655	156.07	140.74	11.86	10.74	3.28	0.92	140.24	6.06
2083-A1H	801128	810424	3520	152.41	201.88	14.21	19.61	4.43	0.90	155.09	29.68
2083-A1H	801201	810101	745	155.68	173.02	13.15	17.19	4.15	0.90	163.17	40.70
2083-A1H	810101	810201	745	152.82	184.70	13.59	17.69	4.21	0.90	147.17	21.50
2083-A1H	810201	810301	673	150.86	263.79	16.24	24.31	4.93	0.91	160.47	40.84
2083-A1H	810301	810401	745	153.22	200.37	14.16	16.80	4.10	0.92	152.25	16.35
2083-A1H	810401	810424	560	149.72	193.32	13.90	22.72	4.77	0.88	150.90	8.86

Table 8a. Monthly ellipse statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2091-A1H	801024	810325	3645	166.14	225.16	15.01	130.49	11.42	0.42	79.65	44.38
2091-A1H	801024	801101	170	170.13	293.30	17.13	109.92	10.48	0/63	266.87	15.77
2091-A1H	801101	801201	721	158.91	334.74	18.30	181.67	13.48	0.46	171.18	14.25
2091-A1H	801201	810101	745	162.45	138.67	11.78	97.26	9.86	0.30	56.86	33.08
2091-A1H	810101	810201	745	164.45	153.38	12.38	84.70	9.20	0.45	68.30	41.72
2091-A1H	810201	810301	673	169.67	246.17	15.69	90.66	9.52	0.63	47.50	14.45
2091-A1H	810301	810325	596	179.76	246.72	15.71	177.51	13.32	0.28	69.92	69.94
2101-A1H	801027	810310	3201	171.18	367.93	19.18	124.29	11.15	0.66	83.74	27.80
2101-A1H	801101	801201	721	169.52	458.43	21.41	139.03	11.79	0.70	242.25	14.83
2101-A1H	801201	810101	745	177.26	289.89	17.03	93.73	9.68	0.68	25.84	25.39
2101-A1H	810101	810201	745	173.14	296.56	17.22	85.86	9.27	0.71	74.52	33.02
2101-A1H	810201	810301	673	168.36	414.39	20.36	133.41	11.55	0.68	72.28	25.40
2101-A1H	810301	810310	223	164.65	395.36	19.88	169.92	13.04	0.57	91.39	70.70
2111-A1H	801201	810501	3614	3.68	288.90	17.00	227.45	15.08	0.21	59.36	157.14
2111-A1H	801201	810101	725	162.84	363.31	19.06	237.39	15.41	0.35	86.58	41.85
2111-A1H	810101	810201	745	179.90	297.56	17.25	183.86	13.56	0.38	40.71	71.52
2111-A1H	810201	810301	673	175.09	245.84	15.68	95.54	9.77	0.61	12.37	16.83
2111-A1H	810301	810401	745	10.87	251.89	15.87	173.47	13.17	0.31	47.32	49.77
2111-A1H	810401	810501	721	166.13	267.76	16.36	144.72	12.03	0.46	28.80	43.36
2112-A1H	801201	810501	3613	16.57	156.10	12.49	37.86	6.15	0.76	232.21	7.86
2112-A1H	801201	810101	725	13.03	150.26	12.26	34.74	5.89	0.77	164.76	25.55
2112-A1H	810101	810201	745	9.58	142.04	11.92	35.55	5.96	0.75	342.02	8.48
2112-A1H	810201	810301	673	23.65	166.95	12.92	40.25	6.34	0.76	191.82	23.02
2112-A1H	810301	810401	745	17.80	165.65	12.87	39.89	6.32	0.76	166.49	18.25
2112-A1H	810401	810501	721	21.87	144.89	12.04	26.00	5.10	0.82	28.44	6.41
2114-A1H	801201	810501	3613	21.94	274.51	16.57	26.47	5.14	0.90	195.98	9.73
2114-A1H	801201	810101	724	22.34	304.43	17.45	24.69	4.97	0.92	204.29	8.51
2114-A1H	810101	810201	745	23.59	277.68	16.66	22.83	4.78	0.92	204.67	6.29
2114-A1H	810201	810301	673	20.33	260.77	16.15	26.52	5.15	0.90	197.59	8.98
2114-A1H	810301	810401	745	21.76	273.60	16.54	25.77	5.08	0.91	190.29	16.85
2114-A1H	810401	810501	721	21.45	253.81	15.93	31.45	5.61	0.88	205.73	7.34
2121-A1H	801027	810416	4088	76.38	620.59	24.91	99.09	9.95	0.84	78.13	225.80
2121-A1H	801101	801130	720	80.63	401.41	20.04	97.35	9.87	0.76	78.68	91.72
2121-A1H	801201	801231	744	74.09	203.80	14.28	87.48	9.35	0.57	103.56	38.86
2121-A1H	810101	810131	744	69.31	115.54	10.75	80.38	8.97	0.30	107.60	11.21
2121-A1H	810201	810228	672	84.79	177.85	13.34	95.40	9.77	0.46	135.74	19.43
2121-A1H	810301	810331	744	82.67	381.28	19.53	127.44	11.29	0.67	160.62	19.39
2121-A1H	810401	810416	362	77.81	266.97	16.34	96.36	9.82	0.64	82.40	119.05
2122-A1H	801027	810427	4359	53.20	59.74	7.73	10.44	3.23	0.83	234.02	5.42
2122-A1H	801101	801201	721	49.64	66.91	8.18	12.42	3.52	0.81	219.65	6.56
2122-A1H	801201	810101	745	49.85	56.22	7.50	8.95	2.99	0.84	226.82	5.13
2122-A1H	810101	810201	745	53.38	56.41	7.51	8.36	2.89	0.85	46.36	1.33
2122-A1H	810201	810301	673	55.94	71.90	8.48	11.13	3.34	0.85	250.31	3.98
2122-A1H	810301	810401	745	54.20	46.39	6.81	9.58	3.10	0.79	242.71	7.45
2122-A1H	810401	810427	634	57.32	56.70	7.53	11.75	3.43	0.79	249.03	8.01

Table 8a. Monthly ellipse statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2131-A1H	801027	810427	4361	64.83	240.39	15.50	56.98	7.55	0.76	77.70	90.16
2131-A1H	801101	801201	721	57.98	200.70	14.17	55.09	7.42	0.73	61.71	29.96
2131-A1H	801201	810101	745	66.27	212.20	14.57	29.91	5.47	0.86	76.96	66.87
2131-A1H	810101	810201	745	73.00	190.15	13.79	62.05	7.88	0.67	90.69	81.97
2131-A1H	810201	810301	673	46.48	100.74	10.04	49.33	7.02	0.51	218.01	29.59
2131-A1H	810301	810401	745	51.28	177.42	13.32	61.80	7.86	0.65	210.27	15.50
2131-A1H	810401	810427	631	55.69	134.96	11.62	63.19	7.95	0.53	97.73	20.36
2132-A1H	801027	810427	4360	40.21	30.12	5.49	10.00	3.16	0.67	223.91	0.84
2132-A1H	801101	801201	721	43.55	29.70	5.45	12.36	3.52	0.58	51.12	0.51
2132-A1H	801201	810101	745	41.60	34.64	5.89	7.30	2.70	0.79	43.02	1.03
2132-A1H	810101	810201	745	41.44	27.98	5.29	8.87	2.98	0.68	230.82	2.16
2132-A1H	810201	810301	673	39.38	33.40	5.78	10.85	3.29	0.68	225.30	3.29
2132-A1H	810301	810401	745	39.72	25.93	5.09	9.57	3.09	0.63	312.27	0.94
2132-A1H	810401	810427	631	33.95	30.40	5.51	11.15	3.34	0.63	200.09	1.62
2141-A1H	801201	810427	3525	69.12	533.66	23.10	82.13	9.06	0.85	70.87	195.32
2141-A1H	801201	810101	732	77.42	299.98	17.32	72.11	8.49	0.69	85.28	33.34
2141-A1H	810101	810201	745	75.25	82.33	9.07	43.99	6.63	0.47	72.00	26.73
2141-A1H	810201	810301	673	66.29	157.11	12.53	95.83	9.79	0.39	86.38	27.35
2141-A1H	810301	810401	745	61.36	206.43	14.37	115.34	10.74	0.44	224.61	31.18
2141-A1H	810401	810427	634	105.10	93.37	9.66	68.85	8.30	0.26	109.13	19.06
2142-B1H	801201	810427	3525	72.21	83.78	9.15	27.51	5.24	0.67	263.63	2.76
2142-B1H	801201	810101	732	75.17	84.99	9.22	22.30	4.72	0.74	257.18	10.32
2142-B1H	810101	810201	745	68.42	94.73	9.73	28.51	5.34	0.70	47.82	2.14
2142-B1H	810201	810301	673	83.92	62.61	7.91	32.46	5.70	0.48	264.71	1.19
2142-B1H	810301	810401	745	71.21	47.02	6.86	27.90	5.28	0.41	60.74	1.20
2142-B1H	810401	810427	634	67.33	48.59	6.97	24.23	4.91	0.50	31.29	0.55
2143-B1H	801201	810427	3523	158.19	21.60	4.65	11.67	3.42	0.46	257.60	1.17
2143-B1H	801201	810101	732	157.68	19.90	4.46	13.03	3.61	0.35	246.09	1.44
2143-B1H	810101	810201	745	152.00	18.74	4.33	13.28	3.64	0.29	262.01	2.32
2143-B1H	810201	810301	673	155.79	26.64	5.16	12.36	3.52	0.54	306.14	0.42
2143-B1H	810301	810401	745	158.48	21.34	4.62	9.35	3.06	0.56	323.82	0.34
2143-B1H	810401	810427	632	162.71	21.88	4.68	8.07	2.84	0.63	212.78	0.18
2144-A1H	801201	810409	3103	5.78	43.17	6.57	6.50	2.55	0.85	192.07	1.07
2144-A1H	801201	810101	732	7.83	40.05	6.33	6.67	2.58	0.83	212.20	0.63
2144-A1H	810101	810201	745	8.44	31.94	5.65	5.80	2.41	0.82	176.55	0.82
2144-A1H	810201	810301	673	0.97	58.89	7.67	5.23	2.29	0.91	186.35	2.26
2144-A1H	810301	810401	745	7.63	46.78	6.84	7.90	2.81	0.83	196.98	0.91
2144-A1H	810401	810409	212	5.86	26.27	5.13	5.08	2.25	0.81	267.08	0.44
2151-A1H	801127	810430	3698	73.65	584.46	24.18	308.09	17.55	0.47	69.54	215.48
2151-A1H	801201	801231	744	72.36	644.35	25.38	287.22	16.95	0.55	66.62	248.27
2151-A1H	810101	810131	744	76.75	554.04	23.54	275.83	16.61	0.50	76.16	148.09
2151-A1H	810201	810228	672	31.42	379.74	19.49	335.59	18.32	0.12	53.61	140.47
2151-A1H	810301	810331	744	66.04	479.02	21.89	260.30	16.13	0.46	238.34	171.77
2151-A1H	810401	810430	714	68.00	366.00	19.13	289.42	17.01	0.21	318.74	27.40

Table 8a. Monthly ellipse statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2152-A1H	801202	810429	3567	72.86	655.17	25.60	145.73	12.07	0.78	68.86	497.07
2152-A1H	801202	810101	720	65.84	340.58	18.45	150.36	12.26	0.56	65.60	125.39
2152-A1H	810101	810201	745	74.83	390.26	19.76	104.69	10.23	0.73	68.80	173.52
2152-A1H	810201	810301	673	72.53	243.67	15.61	129.51	11.38	0.47	60.13	107.91
2152-A1H	810301	810401	745	65.86	322.96	17.97	161.95	12.73	0.50	250.93	139.62
2152-A1H	810401	810429	688	56.82	206.11	14.36	150.22	12.26	0.27	8.50	65.46
2153-A1H	801202	810429	3567	76.42	707.42	26.60	89.11	9.44	0.87	79.93	272.82
2153-A1H	801202	810101	720	65.25	271.67	16.48	90.94	9.54	0.67	222.22	20.64
2153-A1H	810101	810201	745	84.00	168.64	12.99	70.41	8.39	0.58	144.50	16.80
2153-A1H	810201	810301	673	76.38	223.52	14.95	72.03	8.49	0.68	91.78	29.70
2153-A1H	810301	810401	745	75.95	485.80	22.04	110.73	10.52	0.77	105.59	14.15
2153-A1H	810401	810429	688	74.51	210.98	14.53	89.51	9.46	0.58	90.06	47.58
2154-A1H	801202	810429	3567	76.59	232.94	15.26	96.15	9.81	0.59	98.55	72.42
2154-A1H	801202	810101	720	131.49	82.48	9.08	52.31	7.23	0.37	163.70	15.26
2154-A1H	810101	810201	745	127.46	107.03	10.35	89.38	9.45	0.17	156.29	41.33
2154-A1H	810201	810301	673	22.11	114.29	10.69	95.39	9.77	0.17	202.74	40.62
2154-A1H	810301	810401	745	64.18	174.18	13.20	103.38	10.17	0.41	226.36	59.12
2154-A1H	810401	810429	688	33.84	98.63	9.93	84.59	9.20	0.14	195.43	16.59
2161-A1H	801127	810402	3023	80.02	955.97	30.92	115.51	10.75	0.88	78.69	618.87
2161-A1H	801201	810101	745	84.19	344.91	18.57	142.21	11.93	0.59	84.92	57.11
2161-A1H	810101	810201	745	85.27	276.98	16.64	84.37	9.19	0.70	279.86	12.40
2161-A1H	810201	810301	673	78.97	251.70	15.87	90.95	9.54	0.64	67.91	71.58
2161-A1H	810301	810401	745	72.32	349.19	18.69	131.30	11.46	0.62	288.89	37.08
2162-A1H	801127	810429	3665	72.12	785.19	28.02	80.30	8.96	0.90	74.59	222.05
2162-A1H	801201	810101	745	77.54	158.37	12.58	64.32	8.02	0.59	85.98	20.59
2162-A1H	810101	810201	745	83.18	89.81	9.48	49.99	7.07	0.44	196.80	16.06
2162-A1H	810201	810301	673	68.47	204.08	14.29	87.43	9.35	0.57	86.54	38.47
2162-A1H	810301	810401	745	69.97	582.99	24.15	115.26	10.74	0.80	223.04	18.27
2162-A1H	810401	810429	685	74.65	173.03	13.15	77.65	8.81	0.55	77.01	68.96
2163-A1H	801127	810429	3665	91.97	48.31	6.95	20.45	4.52	0.56	264.02	12.27
2163-A1H	801201	810101	745	91.35	40.48	6.36	15.85	3.98	0.61	263.94	14.47
2163-A1H	810101	810201	745	91.42	45.43	6.74	18.70	4.32	0.59	273.46	8.56
2163-A1H	810201	810301	673	104.61	40.32	6.35	22.25	4.72	0.45	260.44	7.73
2163-A1H	810301	810401	745	93.70	64.50	8.03	20.47	4.52	0.68	266.09	12.90
2163-A1H	810401	810429	685	96.08	36.82	6.07	22.22	4.71	0.40	279.08	4.93
2171-B1H	801128	810427	3619	76.21	514.66	22.69	87.08	9.33	0.83	75.75	190.13
2171-B1H	801201	810101	745	82.06	292.92	17.11	57.82	7.60	0.80	88.51	69.29
2171-B1H	810101	810201	745	61.21	101.41	10.07	60.47	7.78	0.40	98.68	18.23
2171-B1H	810201	810301	673	84.08	212.10	14.56	80.12	8.95	0.62	93.62	41.33
2171-B1H	810301	810401	745	75.04	362.50	19.04	125.17	11.19	0.66	247.50	17.89
2171-B1H	810401	810427	644	94.83	185.06	13.60	92.57	9.62	0.50	73.78	43.02

Table 8a. Monthly ellipse statistics for hour-averaged time series (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2172-A1H	801128	810427	3619	79.47	168.40	12.98	39.90	6.32	0.76	93.34	13.88
2172-A1H	801201	810101	745	81.67	163.78	12.80	49.02	7.00	0.70	132.50	5.15
2172-A1H	810101	810201	745	84.36	155.62	12.47	53.70	7.33	0.66	82.89	18.87
2172-A1H	810201	810301	673	80.10	112.62	10.61	30.95	5.56	0.73	120.67	6.42
2172-A1H	810301	810401	745	67.51	81.18	9.01	25.11	5.01	0.69	245.10	5.18
2172-A1H	810401	810427	644	92.35	52.23	7.23	33.44	5.78	0.36	255.22	4.35
2182-A1H	801130	810425	3501	137.20	385.31	19.63	315.85	17.77	0.18	93.14	87.48
2182-A1H	801201	810101	745	143.87	396.67	19.92	292.69	17.11	0.26	86.10	121.78
2182-A1H	810101	810201	745	148.02	340.10	18.44	243.30	15.60	0.29	107.63	73.77
2182-A1H	810201	810301	673	132.47	406.22	20.15	345.21	18.58	0.15	89.87	126.29
2182-A1H	810301	810401	745	97.27	431.64	20.78	346.13	18.60	0.20	94.16	74.32
2182-A1H	810401	810425	585	154.15	397.97	19.95	274.34	16.56	0.31	119.51	25.41
2183-A1H	801130	810425	3502	126.84	407.59	20.19	307.45	17.53	0.25	94.27	143.91
2183-A1H	801201	810101	745	113.54	493.47	22.21	339.48	18.42	0.31	96.08	140.73
2183-A1H	810101	810201	745	128.47	431.49	20.77	262.86	16.21	0.39	101.07	166.57
2183-A1H	810201	810301	673	158.00	407.59	20.19	292.94	17.12	0.28	79.51	72.28
2183-A1H	810301	810401	745	83.73	340.50	18.45	308.41	17.56	0.09	88.19	101.65
2183-A1H	810401	810425	586	139.83	388.17	19.70	237.09	15.40	0.39	96.31	80.04
2191-A1H	801128	810427	3619	0.58	438.50	20.94	348.79	18.68	0.21	68.73	144.08
2191-A1H	801201	810101	745	21.79	439.54	20.97	367.16	19.16	0.17	73.61	171.04
2191-A1H	810101	810201	745	160.41	437.55	20.92	304.20	17.44	0.31	75.10	128.08
2191-A1H	810201	810301	673	179.66	551.76	23.49	340.62	18.46	0.38	56.49	110.21
2191-A1H	810301	810401	745	19.02	437.62	20.92	393.07	19.83	0.10	70.90	97.82
2191-A1H	810401	810427	644	174.69	388.85	19.72	277.67	16.66	0.29	45.36	84.46
2201-A1H	801129	810427	3567	66.57	447.20	21.15	78.01	8.83	0.83	73.15	175.74
2201-A1H	801201	801231	744	61.11	260.40	16.14	45.41	6.74	0.83	81.10	52.09
2201-A1H	810101	810131	744	62.86	220.65	14.85	68.90	8.30	0.69	74.75	64.68
2201-A1H	810201	810228	672	49.20	131.10	11.45	86.07	9.28	0.34	204.30	26.15
2201-A1H	810301	810331	744	69.86	201.98	14.21	96.24	9.81	0.52	226.88	40.35
2201-A1H	810401	810427	632	62.54	140.84	11.87	86.51	9.30	0.39	95.53	30.60
2202-A1H	801129	810427	3567	36.62	68.01	8.25	9.46	3.07	0.86	239.36	2.55
2202-A1H	801201	810101	745	37.93	42.85	6.55	8.96	2.99	0.79	245.50	1.79
2202-A1H	810101	810201	745	34.42	63.23	7.95	9.09	3.01	0.86	226.34	1.69
2202-A1H	810201	810301	673	38.04	84.06	9.17	10.64	3.26	0.87	239.35	3.26
2202-A1H	810301	810401	745	36.66	79.72	8.93	9.77	3.13	0.88	240.85	3.52
2202-A1H	810401	810427	633	35.77	72.68	8.53	8.59	2.93	0.88	247.65	1.30
2211-A1H	810120	810428	2352	176.72	48.18	6.94	11.92	3.45	0.75	164.44	0.98
2211-A1H	810120	810201	270	178.44	41.78	6.46	10.63	3.26	0.75	186.44	1.94
2211-A1H	810201	810301	673	174.23	57.53	7.58	12.16	3.49	0.79	153.06	1.08
2211-A1H	810301	810401	745	177.72	52.28	7.23	13.13	3.62	0.75	157.37	0.78
2211-A1H	810401	810428	667	177.94	35.78	5.98	10.58	3.25	0.70	157.44	0.53

Table 8b. Monthly ellipse statistic for low-passed data.

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2031-A1HLPT	801026	810424	4334	90.94	57.35	7.57	14.50	3.81	0.75	98.29	6.65
2031-A1HLPT	801026	801031	139	43.63	12.91	3.59	1.53	1.24	0.88	52.88	0.26
2031-A1HLPT	801101	801130	720	74.97	59.43	7.71	18.10	4.25	0.70	77.33	2.22
2031-A1HLPT	801201	801231	744	88.90	34.49	5.87	8.97	2.99	0.74	75.68	2.92
2031-A1HLPT	810101	800131	744	102.99	35.42	5.95	10.03	3.17	0.72	90.76	3.02
2031-A1HLPT	810201	800228	672	69.77	26.22	5.12	6.64	2.58	0.75	41.39	0.65
2031-A1HLPT	810301	800331	744	88.91	92.54	9.62	13.36	3.66	0.86	63.58	3.95
2031-A1HLPT	810401	800424	571	57.34	13.81	3.72	7.58	2.75	0.45	297.09	0.32
2041A-A1HLPT	801026	801211	1108	44.70	32.12	5.67	6.92	2.63	0.79	75.85	0.85
2041A-A1HLPT	801026	801031	143	70.04	10.44	3.23	4.91	2.22	0.53	196.31	0.10
2041A-A1HLPT	801101	801130	720	45.10	37.02	6.08	7.48	2.73	0.80	71.61	1.34
2041A-A1HLPT	801201	801211	245	40.50	29.95	5.47	5.67	2.38	0.81	44.67	0.76
2041B-A1HLPT	810217	810423	1539	53.47	50.71	7.12	10.80	3.29	0.79	355.31	1.72
2041B-A1HLPT	810217	810301	267	67.69	31.20	5.59	5.77	2.40	0.82	241.08	2.90
2041B-A1HLPT	810301	810401	745	49.48	82.56	9.09	11.04	3.32	0.87	44.28	5.88
2041B-A1HLPT	810401	810423	529	16.48	9.30	3.05	6.40	2.53	0.31	51.90	0.46
2071-A1HLPT	801202	810423	3406	75.36	91.37	9.56	13.26	3.64	0.86	73.34	37.27
2071-A1HLPT	801202	810101	717	85.31	80.03	8.95	7.99	2.83	0.90	78.26	58.81
2071-A1HLPT	810101	810201	745	83.39	68.82	8.30	9.39	3.06	0.86	69.65	29.90
2071-A1HLPT	810201	810301	673	80.47	54.85	7.41	11.04	3.32	0.80	251.70	13.59
2071-A1HLPT	810301	810401	745	71.79	181.76	13.48	14.73	3.84	0.92	81.34	68.97
2071-A1HLPT	810401	810423	530	65.56	34.01	5.83	11.98	3.46	0.65	56.44	2.11
2081-A1HLPT	801130	810426	3550	87.29	77.14	8.78	12.71	3.57	0.84	72.15	44.72
2081-A1HLPT	801201	810101	745	87.86	103.67	10.18	18.82	4.34	0.82	80.84	68.53
2081-A1HLPT	810101	810201	745	88.37	50.82	7.13	11.26	3.36	0.78	63.90	50.87
2081-A1HLPT	810201	810301	673	93.64	32.47	5.70	6.61	2.57	0.80	69.52	9.65
2081-A1HLPT	810301	810401	745	85.38	130.02	11.40	9.91	3.15	0.92	83.89	77.79
2081-A1HLPT	810401	810426	623	82.12	38.61	6.21	14.51	3.81	0.62	268.29	4.28
2082-A1HLPT	801130	810426	3550	151.27	6.18	2.49	1.36	1.17	0.78	344.64	2.83
2082-A1HLPT	801201	801231	744	158.51	4.75	2.18	0.99	0.99	0.79	349.00	0.59
2082-A1HLPT	810101	810131	744	148.31	5.02	2.24	0.84	0.92	0.83	115.33	2.41
2082-A1HLPT	810201	810228	672	148.24	5.74	2.40	2.09	1.45	0.64	46.51	1.62
2082-A1HLPT	810301	810331	744	149.23	9.50	3.08	1.74	1.32	0.82	354 30	6.54
2082-A1HLPT	810401	810426	622	154.87	4.59	2.14	0.69	0.83	0.85	326.35	3.32
2083-A1HLPT	801130	810422	3454	138.22	10.85	3.29	1.99	1.41	0.82	127.77	5.15
2083-A1HLPT	801201	810101	745	145.02	12.07	3.47	2.08	1.44	0.83	324.05	6.80
2083-A1HLPT	810101	810201	745	135.47	6.20	2.49	1.83	1.35	0.71	107.49	6.29
2083-A1HLPT	810201	810301	673	134.18	13.72	3.70	2.60	1.61	0.81	291.13	1.69
2083-A1HLPT	810301	810401	745	138.16	11.03	3.32	0.96	0.98	0.91	116.21	1.43
2083-A1HLPT	810401	810422	527	119.99	4.49	2.12	1.75	1.32	0.61	102.20	2.57

Table 8b. Monthly ellipse statistic for low-passed data (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2091-A1HLPT	801026	810324	3579	64.86	39.13	6.26	12.10	3.48	0.69	81.78	29.44
2091-A1HLPT	801026	801101	137	58.63	11.91	3.45	6.88	2.62	0.42	277.32	0.74
2091-A1HLPT	801101	801201	721	68.85	38.88	6.24	16.55	4.07	0.57	193.25	2.27
2091-A1HLPT	801201	810101	745	58.90	20.28	4.50	10.38	3.22	0.49	46.27	5.33
2091-A1HLPT	810101	810201	745	66.33	18.37	4.29	8.08	2.84	0.56	75.71	19.99
2091-A1HLPT	810201	810301	673	55.76	20.13	4.49	9.30	3.05	0.54	12.93	4.44
2091-A1HLPT	810301	810324	563	62.06	92.08	9.60	9.28	3.05	0.90	66.62	55.78
2101-A1HLPT	801029	810308	3135	101.24	25.82	5.08	11.75	3.43	0.55	93.25	13.08
2101-A1HLPT	801101	801201	721	105.82	24.30	4.93	18.21	4.27	0.25	22.08	3.56
2101-A1HLPT	801201	810101	745	113.82	12.18	3.49	5.56	2.36	0.54	282.09	1.94
2101-A1HLPT	810101	810201	745	112.40	15.23	3.90	5.82	2.41	0.62	38.88	7.42
2101-A1HLPT	810201	810301	673	92.14	22.31	4.72	11.86	3.44	0.47	27.44	4.35
2101-A1HLPT	810301	810308	190	105.87	66.29	8.14	7.36	2.71	0.89	81.90	32.31
2111-A1HLPT	801203	810430	3548	72.34	111.62	10.57	19.03	4.36	0.83	60.13	130.91
2111-A1HLPT	801203	810101	692	85.28	71.16	8.44	16.54	4.07	0.77	72.87	21.72
2111-A1HLPT	810101	810201	745	65.25	45.71	6.76	16.06	4.01	0.65	43.69	40.91
2111-A1HLPT	810201	810301	673	34.10	26.71	5.17	19.61	4.43	0.27	345.81	12.18
2111-A1HLPT	810301	810401	745	66.30	95.97	9.80	10.43	3.23	0.89	43.22	19.90
2111-A1HLPT	810401	810430	697	80.80	26.16	5.11	14.99	3.87	0.43	302.19	9.81
2112-A1HLPT	801203	810429	3547	179.46	33.65	5.80	9.58	3.10	0.72	275.09	5.33
2112-A1HLPT	801203	810101	692	155.78	20.04	4.48	2.97	1.74	0.85	143.83	3.37
2112-A1HLPT	810101	810201	745	166.57	45.31	6.73	7.45	2.73	0.84	341.00	6.26
2112-A1HLPT	810201	810301	673	9.61	42.36	6.51	8.65	2.94	0.80	171.23	18.15
2112-A1HLPT	810301	810401	745	18.62	35.78	5.98	8.61	2.93	0.76	155.79	12.29
2112-A1HLPT	810401	810429	696	29.42	15.00	3.87	3.86	1.96	0.74	41.70	4.91
2114-A1HLPT	801203y	810430	3547	22.98	11.69	3.42	2.21	1.49	0.81	168.09	1.37
2114-A1HLPT	801203	810101	691	18.12	7.08	2.66	1.89	1.37	0.73	212.94	1.40
2114-A1HLPT	810101	810201	745	23.56	12.21	3.49	1.41	1.19	0.88	321.77	0.27
2114-A1HLPT	810201	810301	673	22.93	11.49	3.39	1.95	1.40	0.83	340.28	0.52
2114-A1HLPT	810301	810401	745	22.85	19.53	4.42	1.85	1.36	0.91	169.30	4.43
2114-A1HLPT	810401	810430	697	33.02	6.44	2.54	2.84	1.69	0.56	200.57	0.49
2121-A1HLPT	801029	810414	4022	76.81	569.05	23.85	15.64	3.95	0.97	76.56	244.35
2121-A1HLPT	801101	801130	720	81.11	357.75	18.91	13.19	3.63	0.96	78.44	109.52
2121-A1HLPT	801201	801231	744	79.30	119.43	10.93	9.72	3.12	0.92	83.11	54.36
2121-A1HLPT	810101	810131	744	75.64	58.15	7.63	14.95	3.87	0.74	82.10	16.75
2121-A1HLPT	810201	810228	672	83.74	116.37	10.79	11.26	3.36	0.90	91.13	32.35
2121-A1HLPT	810301	810331	744	81.50	325.06	18.03	20.50	4.53	0.94	112.79	16.97
2121-A1HLPT	810401	810414	329	80.70	226.55	15.05	8.29	2.88	0.96	80.26	136.64
2122-A1HLPT	801029	810426	4293	48.01	7.05	2.66	1.15	1.07	0.84	217.18	3.67
2122-A1HLPT	801101	801201	721	45.28	6.31	2.51	0.95	0.97	0.85	210.88	7.41
2122-A1HLPT	801201	810101	745	44.04	7.58	2.75	0.64	0.80	0.92	220.62	5.18
2122-A1HLPT	810101	810201	745	52.51	7.21	2.69	1.03	1.02	0.86	74.13	1.55
2122-A1HLPT	810201	810301	673	52.58	8.52	2.92	1.49	1.22	0.83	201.48	1.31
2122-A1HLPT	810301	810401	745	42.94	5.70	2.39	1.09	1.05	0.81	242.56	1.76
2122-A1HLPT	810401	810426	601	60.47	5.15	2.27	1.25	1.12	0.76	259.20	2.99

Table 8b. Monthly ellipse statistic for low-passed data (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2131-A1HLPT	801028	810425	4295	68.02	167.48	12.94	6.60	2.57	0.96	70.26	90.32
2131-A1HLPT	801101	801201	721	65.57	121.70	11.03	4.48	2.12	0.96	53.85	31.66
2131-A1HLPT	801201	810101	745	69.88	83.69	9.15	2.80	1.67	0.97	74.04	36.28
2131-A1HLPT	810101	810201	745	66.16	131.63	11.47	7.37	2.71	0.94	68.53	59.39
2131-A1HLPT	810201	810301	673	67.36	38.38	6.20	6.29	2.51	0.84	180.28	4.14
2131-A1HLPT	810301	810401	745	60.63	113.19	10.64	8.12	2.85	0.93	119.02	3.17
2131-A1HLPT	810401	810425	598	62.99	51.25	7.16	5.82	2.41	0.89	64.06	25.33
2132-A1HLPT	801029	810425	4294	52.49	3.38	1.84	0.66	0.81	0.80	53.12	1.45
2132-A1HLPT	801101	801201	721	58.65	2.31	1.52	0.59	0.77	0.74	29.93	1.89
2132-A1HLPT	801201	810101	745	49.04	2.81	1.68	0.48	0.69	0.83	62.75	2.57
2132-A1HLPT	810101	810201	745	62.01	2.64	1.62	0.57	0.75	0.79	66.16	0.38
2132-A1HLPT	810201	810301	673	52.07	4.49	2.12	0.52	0.72	0.88	119.43	0.26
2132-A1HLPT	810301	810401	745	43.41	4.08	2.02	0.53	0.73	0.87	35.37	3.31
2132-A1HLPT	810401	810425	598	53.47	4.02	2.00	1.08	1.04	0.73	114.77	0.61
2141-A1HLPT	801202	810426	3459	69.36	509.70	22.58	13.61	3.69	0.97	69.32	205.37
2141-A1HLPT	801202	810101	699	74.81	180.06	13.42	4.84	2.20	0.97	75.30	38.59
2141-A1HLPT	810101	810201	745	70.98	67.18	8.20	4.50	2.12	0.93	67.42	28.21
2141-A1HLPT	810201	810301	673	71.03	107.19	10.35	4.46	2.11	0.96	71.45	37.89
2141-A1HLPT	810301	810401	745	64.21	167.46	12.94	36.46	6.04	0.78	236.74	16.38
2141-A1HLPT	810401	810426	601	87.73	54.00	7.35	8.02	2.83	0.85	78.95	22.16
2142-B1HLPT	801202	810426	3459	73.99	72.73	8.53	5.15	2.27	0.93	275.42	2.27
2142-B1HLPT	801202	810101	699	76.16	68.76	8.29	1.66	1.29	0.98	257.49	11.57
2142-B1HLPT	810101	810201	745	70.38	82.95	9.11	4.49	2.12	0.95	50.95	2.85
2142-B1HLPT	810201	810301	673	82.86	52.31	7.23	6.44	2.54	0.88	343.32	0.41
2142-B1HLPT	810301	810401	745	75.16	38.12	6.17	6.44	2.54	0.83	45.12	2.29
2142-B1HLPT	810401	810426	601	74.03	38.29	6.19	4.62	2.15	0.88	47.72	2.06
2143-B1HLPT	801202	810425	3457	77.43	7.43	2.73	4.01	2.00	0.46	260.65	1.03
2143-B1HLPT	801202	810101	699	72.28	9.01	3.00	3.27	1.81	0.64	247.55	1.39
2143-B1HLPT	810101	810201	745	75.88	9.47	3.08	3.94	1.98	0.58	264.18	2.19
2143-B1HLPT	810201	810301	673	100.73	8.65	2.94	3.99	2.00	0.54	334.23	0.44
2143-B1HLPT	810301	810401	745	12.72	5.02	2.24	4.90	2.21	0.02	334.14	0.40
2143-B1HLPT	810401	810425	599	58.13	4.20	2.05	2.46	1.57	0.41	152.23	0.23
2144-A1HLPT	801202	810408	3037	5.92	9.79	3.13	1.19	1.09	0.88	185.66	0.79
2144-A1HLPT	801202	810101	699	2.24	5.84	2.42	0.38	0.62	0.93	197.03	0.34
2144-A1HLPT	810101	810201	745	12.78	7.07	2.66	0.75	0.87	0.89	166.01	0.82
2144-A1HLPT	810201	810301	673	176.43	18.90	4.35	0.60	0.77	0.97	185.57	1.79
2144-A1HLPT	810301	810401	745	21.72	8.75	2.96	1.77	1.33	0.80	203.43	0.38
2144-A1HLPT	810401	810408	179	9.54	4.33	2.08	0.72	0.85	0.84	239.54	0.52
2151-A1HLPT	801129	810429	3632	74.27	373.78	19.33	97.65	9.88	0.74	69.92	161.88
2151-A1HLPT	801201	801231	744	72.96	400.09	20.00	77.35	8.79	0.81	63.91	148.91
2151-A1HLPT	810101	810131	744	71.58	267.24	16.35	70.73	8.41	0.74	77.58	71.67
2151-A1HLPT	810201	810228	672	70.02	140.55	11.86	72.69	8.53	0.48	52.71	102.97
2151-A1HLPT	810301	810331	744	69.34	362.24	19.03	107.70	10.38	0.70	240.01	187.04
2151-A1HLPT	810401	810429	681	65.29	195.40	13.98	100.05	10.00	0.49	297.67	31.26

Table 8b. Monthly ellipse statistic for low-passed data (cont.)

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2152-A1HLPT	801203	810428	3501	73.62	557.73	23.62	34.69	5.89	0.94	69.18	455.24
2152-A1HLPT	801203	810101	687	69.63	213.89	14.62	15.28	3.91	0.93	64.99	91.64
2152-A1HLPT	810101	810201	745	76.19	230.35	15.18	10.35	3.22	0.96	67.00	88.80
2152-A1HLPT	810201	810301	673	76.08	186.74	13.67	37.82	6.15	0.80	57.14	96.19
2152-A1HLPT	810301	810401	745	69.62	243.36	15.60	36.55	6.05	0.85	247.88	150.77
2152-A1HLPT	810401	810428	655	59.00	121.49	11.02	42.57	6.52	0.65	337.89	48.76
2153-A1HLPT	801203	810428	3501	76.96	612.65	24.75	6.80	2.61	0.99	77.30	284.49
2153-A1HLPT	801203	810101	687	75.57	52.80	7.27	6.22	2.49	0.88	51.24	11.20
2153-A1HLPT	810101	810201	745	85.36	76.07	8.72	5.13	2.26	0.93	97.03	17.26
2153-A1HLPT	810201	810301	673	75.80	163.90	12.80	5.26	2.29	0.97	72.03	45.33
2153-A1HLPT	810301	810401	745	75.48	404.37	20.11	8.29	2.88	0.98	58.90	16.50
2153-A1HLPT	810401	810428	655	75.31	154.97	12.45	5.45	2.33	0.97	73.59	38.28
2154-A1HLPT	801203	810428	3501	76.80	200.77	14.17	8.14	2.85	0.96	80.72	80.40
2154-A1HLPT	801203	810101	687	80.50	32.31	5.68	4.29	2.07	0.87	89.37	9.64
2154-A1HLPT	810101	810201	745	75.24	63.99	8.00	8.75	2.96	0.86	90.87	13.83
2154-A1HLPT	810201	810301	673	80.80	59.35	7.70	8.20	2.86	0.86	119.74	8.49
2154-A1HLPT	810301	810401	745	74.19	145.45	12.06	8.64	2.94	0.94	237.28	39.55
2154-A1HLPT	810401	810428	655	76.37	60.79	7.80	7.02	2.65	0.89	123.21	5.32
2161-A1HLPT	801129	810401	2957	80.40	911.53	30.19	27.73	5.27	0.97	79.18	619.74
2161-A1HLPT	801201	810101	745	85.92	269.50	16.42	18.94	4.35	0.93	84.50	53.22
2161-A1HLPT	810101	810201	745	84.41	216.28	14.71	9.58	3.10	0.96	269.92	16.70
2161-A1HLPT	810201	810301	673	79.90	219.28	14.81	33.17	5.76	0.85	69.74	70.22
2161-A1HLPT	810301	810401	745	74.62	281.96	16.79	43.49	6.59	0.85	270.95	47.13
2162-A1HLPT	801129	810428	3599	72.33	756.66	27.51	12.62	3.55	0.98	72.79	233.18
2162-A1HLPT	801201	810101	745	77.25	126.36	11.24	8.65	2.94	0.93	82.35	23.65
2162-A1HLPT	810101	810201	745	80.93	72.66	8.52	8.42	2.90	0.88	141.61	8.75
2162-A1HLPT	810201	810301	673	71.30	151.16	12.29	6.45	2.54	0.96	66.43	57.43
2162-A1HLPT	810301	810401	745	70.30	529.88	23.02	22.52	4.75	0.96	333.09	4.54
2162-A1HLPT	810401	810428	652	73.70	138.60	11.77	10.89	3.30	0.92	72.45	77.43
2163-A1HLPT	801129	810428	3599	81.38	35.17	5.93	1.70	1.30	0.95	259.14	10.51
2163-A1HLPT	801201	810101	745	82.83	29.58	5.44	74.13	8.61	0.98	263.19	13.75
2163-A1HLPT	810101	810201	745	78.69	30.14	5.49	1.69	1.30	0.94	258.63	6.93
2163-A1HLPT	810201	810301	673	86.08	24.84	4.98	1.98	1.41	0.92	257.79	5.03
2163-A1HLPT	810301	810401	745	84.98	48.92	6.99	1.61	1.27	0.97	262.75	11.03
2163-A1HLPT	810401	810428	652	76.79	25.38	5.04	1.16	1.08	0.95	262.97	2.47
2171-B1HLPT	801129	810426	3553	76.26	488.50	22.10	29.14	5.40	0.94	72.93	200.11
2171-B1HLPT	801201	810101	745	81.83	265.35	16.29	5.72	2.39	0.98	80.69	73.81
2171-B1HLPT	810101	810201	745	70.22	69.07	8.31	7.81	2.79	0.89	67.66	22.10
2171-B1HLPT	810201	810301	673	83.48	174.02	13.19	18.79	4.33	0.89	76.40	47.37
2171-B1HLPT	810301	810401	745	74.90	319.22	17.87	56.19	7.50	0.82	311.58	11.05
2171-B1HLPT	810401	810426	611	90.41	156.83	12.52	44.27	6.65	0.72	61.31	49.75

Table 8b. Monthly ellipse statistic for low-passed data (cont.).

Record ID	Start YrMoDy	Stop YrMoDy	Hours	Orient (°)	MAJ (cm^2/s^2)	$(MAJ)^{1/2}$ (cm/s)	MIN (cm^2/s^2)	$(MIN)^{1/2}$ (cm/s)	Ellip	Theta (°)	s
2172-A1HLPT	801129	810426	3553	76.15	145.62	12.07	3.95	1.99	0.97	84.19	16.39
2172-A1HLPT	801201	810101	745	77.84	120.74	10.99	5.18	2.28	0.96	112.75	5.10
2172-A1HLPT	810101	810201	745	77.11	134.40	11.59	3.67	1.92	0.97	78.75	21.97
2172-A1HLPT	810201	810301	673	76.91	94.55	9.72	1.73	1.32	0.98	85.62	7.10
2172-A1HLPT	810301	810401	745	65.17	64.17	8.01	1.95	1.40	0.97	261.74	3.87
2172-A1HLPT	810401	810426	611	67.59	25.49	5.05	0.62	0.79	0.98	77.59	1.48
2182-A1HLPT	801201	810423	3435	85.20	112.51	10.61	15.14	3.89	0.87	72.32	32.30
2182-A1HLPT	801201	810101	724	88.18	97.98	9.90	11.48	3.39	0.88	78.14	66.85
2182-A1HLPT	810101	810201	745	93.68	85.18	9.23	17.52	4.19	0.79	79.24	14.26
2182-A1HLPT	810201	810301	673	84.43	77.50	8.80	13.44	3.67	0.83	35.88	18.03
2182-A1HLPT	810301	810401	745	80.18	208.43	14.44	9.08	3.01	0.96	74.07	42.14
2182-A1HLPT	810401	810423	552	105.27	51.37	7.17	15.29	3.91	0.70	290.20	11.43
2183-A1HLPT	801201	810424	3436	87.99	98.98	9.95	16.03	4.00	0.84	90.61	78.36
2183-A1HLPT	801201	810101	724	89.88	73.56	8.58	12.81	3.58	0.83	91.48	64.44
2183-A1HLPT	810101	810201	745	97.33	80.84	8.99	16.87	4.11	0.79	92.97	59.49
2183-A1HLPT	810201	810301	673	85.78	73.14	8.55	13.38	3.66	0.82	16.54	5.56
2183-A1HLPT	810301	810401	745	80.50	152.94	12.37	14.47	3.80	0.91	82.79	73.18
2183-A1HLPT	810401	810424	553	111.22	47.31	6.88	11.18	3.34	0.76	71.40	7.38
2191-A1HLPT	801129	810426	3553	80.52	104.96	10.24	17.37	4.17	0.84	84.07	66.18
2191-A1HLPT	801201	810101	745	84.10	90.50	9.51	10.32	3.21	0.89	80.99	79.33
2191-A1HLPT	810101	810201	745	94.63	84.51	9.19	13.39	3.66	0.84	101.87	63.54
2191-A1HLPT	810201	810301	673	72.07	55.97	7.48	10.67	3.27	0.81	80.11	12.96
2191-A1HLPT	810301	810401	745	76.34	190.20	13.79	19.47	4.41	0.90	77.60	60.90
2191-A1HLPT	810401	810426	611	96.67	45.54	6.75	20.39	4.52	0.55	99.72	1.29
2201-A1HLPT	801201	810425	3501	68.35	376.65	19.41	13.56	3.68	0.96	69.47	183.99
2201-A1HLPT	801201	801231	742	66.10	126.49	11.25	6.48	2.55	0.95	76.24	36.08
2201-A1HLPT	810101	810131	744	60.09	162.23	12.74	12.95	3.60	0.92	58.80	64.03
2201-A1HLPT	810201	810228	672	72.48	69.63	8.34	15.99	4.00	0.77	100.49	14.23
2201-A1HLPT	810301	810331	744	74.07	155.20	12.46	15.94	3.99	0.90	228.26	20.40
2201-A1HLPT	810401	810425	599	74.93	76.62	8.75	7.53	2.74	0.90	69.38	40.34
2202-A1HLPT	801201	810425	3501	50.10	6.04	2.46	0.84	0.92	0.86	235.62	1.12
2202-A1HLPT	801201	810101	742	53.57	4.98	2.23	0.68	0.82	0.86	238.22	1.26
2202-A1HLPT	810101	810201	745	44.34	8.11	2.85	0.65	0.81	0.92	216.55	0.89
2202-A1HLPT	810201	810301	673	55.11	5.29	2.30	0.84	0.92	0.84	248.28	0.81
2202-A1HLPT	810301	810401	745	50.34	7.21	2.69	0.96	0.98	0.87	249.49	1.12
2202-A1HLPT	810401	810425	600	52.66	3.20	1.79	0.88	0.94	0.72	214.31	0.41
2211-A1HLPT	810122	810427	2286	179.46	6.60	2.57	1.11	1.05	0.83	150.26	0.55
2211-A1HLPT	810122	810201	237	173.87	4.05	2.01	0.94	0.97	0.77	187.88	1.84
2211-A1HLPT	810201	810301	673	176.58	9.35	3.06	1.29	1.14	0.86	124.14	0.49
2211-A1HLPT	810301	810401	745	3.37	6.72	2.59	1.18	1.09	0.83	128.86	0.39
2211-A1HLPT	810401	810427	634	177.76	3.57	1.89	0.72	0.85	0.80	121.09	0.33

Table 9. M_2 tidal current parameters

STATION LAT. LONG.	RECORD LENGTH (DAYS)	INSTR DEPTH (M)	ABOVE BOTTOM (M)	FOURIER COEFFICIENTS EAST (CM/SEC)	PHASE (DEG-G)	NORTH (CM/SEC)	PHASE (DEG-G)	CURRENT ELLIPSE PARAMETERS UMAJOR (CM/SEC)	UMINOR (CM/SEC)	PHASE (DEG-G)	ORIEN (DEG-TRUE)
LCA	116	80	20	22.2+-1.1	113+- 5	33.2+-1.4	11+- 3	33.7+-1.3	-21.3+-1.1	3+- 2	347+- 3
40°34'N. 67°45'W.	58	99	1	10.4+-2.3	119+- 10	16.6+-1.7	357+- 3	17.6+-1.5	- 8.3+-3.1	346+- 0	337+- 2
LCB	145	92	190	19.0+-2.1	114+- 2	25.2+-0.7	13+- 3	25.8+-0.9	-18.2+-2.1	360+- 5	343+- 4
40°32'N.	145	227	55	2.0+-0.9	75+- 58	3.8+-2.3	248+- 72	4.3+-2.3	+ 0.4+-1.0	244+- 70	327+- 18
67°43'W.	116	277	5	2.3+-2.0	7+- 28	6.1+-3.8	151+- 29	6.5+-4.2	+ 0.6+-0.5	153+- 30	344+- 11
LCC	116	134	50	9.1+-2.4	113+- 4	15.6+-3.5	2+- 2	16.2+-3.6	- 8.1+-2.1	353+- 3	343+- 4
40°29'N. 67°44'W.											
LCD	116	143	50	9.9+-1.8	96+- 13	22.5+-2.1	358+- 8	22.6+-2.2	- 9.7+-1.7	356+- 7	356+- 4
40°29'N. 67°41'W.											
LCE	145	116	484	11.6+-2.7	125+- 6	18.9+-1.9	23+- 4	19.1+-2.0	-11.2+-2.7	17+- 4	350+- 3
40°25'N.	145	216	384	5.3+-0.8	10+- 22	11.8+-0.8	7+- 5	12.9+-0.7	- 0.3+-1.7	8+- 7	24+- 4
67°40'W.	145	595	5	6.0+-0.6	21+- 12	14.7+-1.2	24+- 13	15.8+-1.3	+ 0.3+-0.6	23+- 13	22+- 1
LCF	145	205	300	6.4+-1.6	104+- 25	8.8+-1.4	12+- 15	8.9+-1.5	- 6.2+-1.5	12+- 17	360+- 17
40°21'N.	174	405	100	5.4+-0.8	355+- 7	4.4+-0.4	358+- 9	7.0+-0.8	+ 0.2+-0.4	356+- 7	51+- 3
67°39'W.											
LCG	174	195	300	6.7+-1.0	85+- 23	6.9+-2.2	14+- 26	8.6+-0.8	- 4.6+-1.7	24+- 45	24+- 42
40°21'N.	174	395	100	3.1+-0.5	21+- 9	4.2+-0.6	357+- 6	5.1+-0.7	- 1.0+-0.2	5+- 8	36+- 5
67°42'W.											
LCH*	145	290	1264	4.3+-1.5	131+- 9	6.9+-2.2	21+- 11	7.1+-2.1	- 4.0+-1.6	13+- 13	344+- 8
40°18'N.	145	540	1014	1.6+-0.4	31+- 23	3.3+-1.0	312+- 20	3.4+-0.9	- 1.5+-0.4	307+- 43	355+- 30
67°40'W.	145	890	664	1.4+-0.3	188+- 7	3.5+-0.5	2+- 17	3.8+-0.5	+ 0.1+-0.3	3+- 16	339+- 4
	29	1454	100	1.2	25	5.5	342	5.5	- 0.8	343	10
	87	1375	5	1.1+-0.1	101+- 28	5.8+-0.9	332+- 19	5.8+-0.9	- 0.8+-0.3	331+- 19	354+- 3
LCI	145	10	240	10.0+-3.9	141+- 19	11.6+-2.5	45+- 20	11.8+-2.6	- 9.6+-3.8	34+- 30	349+- 30
40°23'N.	145	55	195	9.1+-2.7	125+- 16	10.8+-1.8	35+- 17	11.2+-1.9	- 8.7+-2.3	46+- 44	12+- 33
67°33'W.	145	195	55	9.9+-3.6	106+- 12	9.3+-1.9	18+- 6	11.0+-3.8	- 8.0+-1.3	358+- 49	342+- 53
	145	245	5	3.8+-0.7	57+- 23	6.0+-1.6	316+- 19	6.3+-1.1	- 3.3+-0.5	302+- 33	340+- 25
LCJ	116	83	488	6.4+-2.0	129+- 20	9.1+-2.7	45+- 13	9.1+-2.7	- 6.2+-2.1	50+- 8	8+- 10
40°21'N.	145	223	348	4.9+-2.6	127+- 11	7.2+-2.6	30+- 11	7.3+-2.6	- 4.8+-2.6	24+- 11	351+- 9
67°32'W.	145	471	100	1.2+-0.4	5+- 92	1.6+-0.6	227+- 18	1.8+-0.6	- 0.5+-0.7	212+- 21	340+- 32
LCK	145	204	350	4.0+-1.7	146+- 10	6.5+-1.6	47+- 6	6.6+-1.6	- 3.9+-1.7	42+- 6	352+- 8
40°16'N.	145	454	100	4.3+-1.3	61+- 22	4.3+-1.6	296+- 18	5.5+-1.7	- 2.6+-1.0	263+- 21	311+- 16
67°47'W.											
LCL	116	65	60	18.7+-1.3	121+- 2	22.9+-0.7	21+- 2	23.5+-0.7	-18.0+-1.3	6+- 2	340+- 2
40°32'N.	116	105	20	19.4+-3.7	106+- 4	22.6+-1.2	4+- 2	23.9+-1.9	-17.9+-2.9	341+-17	332+- 17
67°36'W.											
LCM	145	103	20	18.8+-1.8	100+- 6	25.5+-2.5	6+- 5	25.6+-2.5	-18.6+-1.9	2+- 7	354+- 7
40°30'N.	174	119	1	10.4+-2.5	85+- 11	15.1+-3.7	344+- 8	15.5+-3.6	-9.9+-2.4	333+- 11	344+- 11
67°49'W.											
LCN	145	243	798	6.2+-0.6	105+- 10	7.4+-2.9	17+- 31	8.6+-1.3	-4.8+-1.8	15+- 55	4+- 42
40°21'N.	145	841	200	4.9+-1.1	5+- 4	7.0+-1.4	347+- 7	8.4+-1.7	-1.2+-0.3	353+- 6	34+- 2
67°40'W.											

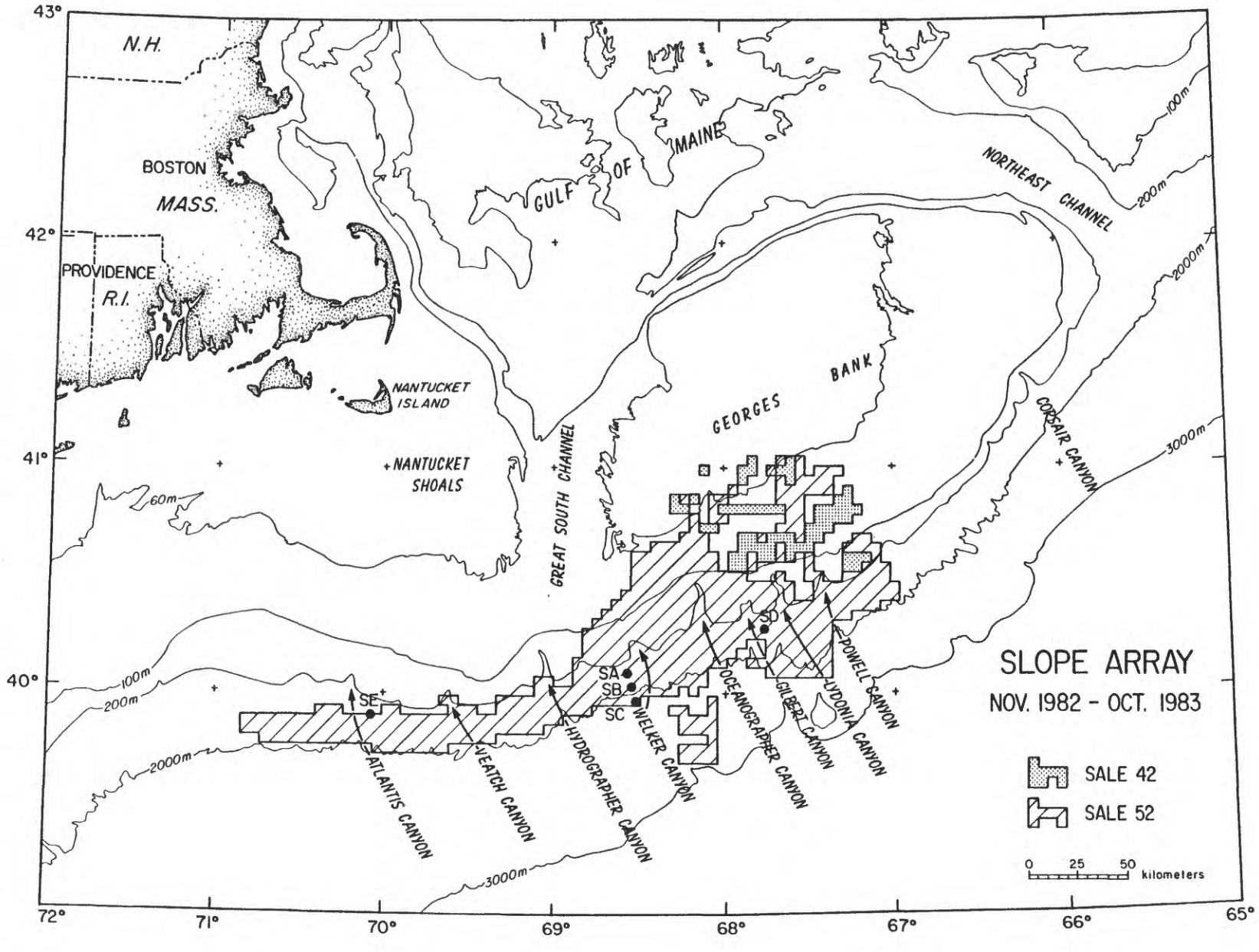


Figure 1. Location of Lydonia Canyon on the southern flank of Georges Bank.

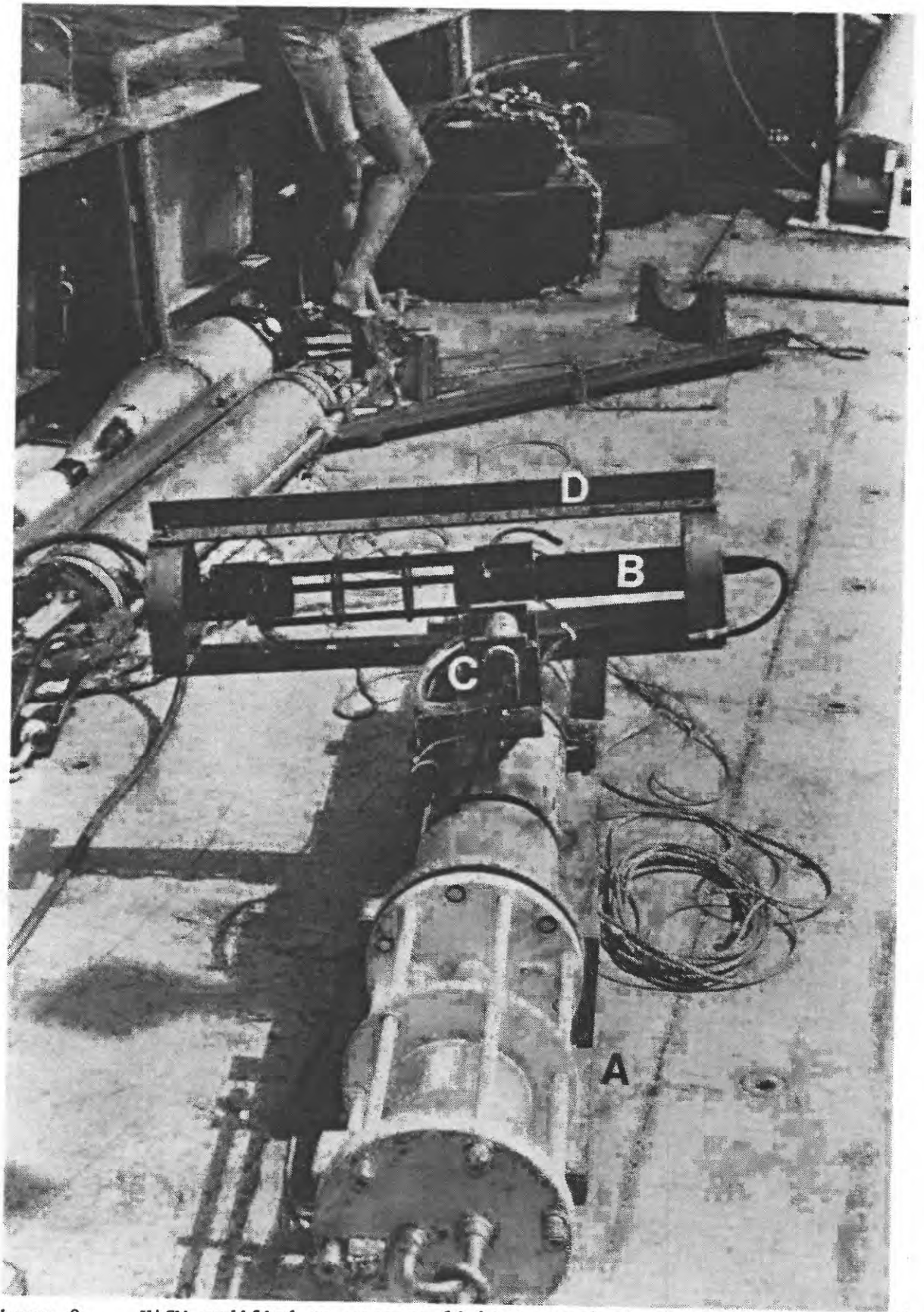


Figure 2. VACM modified to measure light transmission and conductivity. A is the VACM rotor, B the transmission sensor, C the conductivity sensor, and D the protective cage.

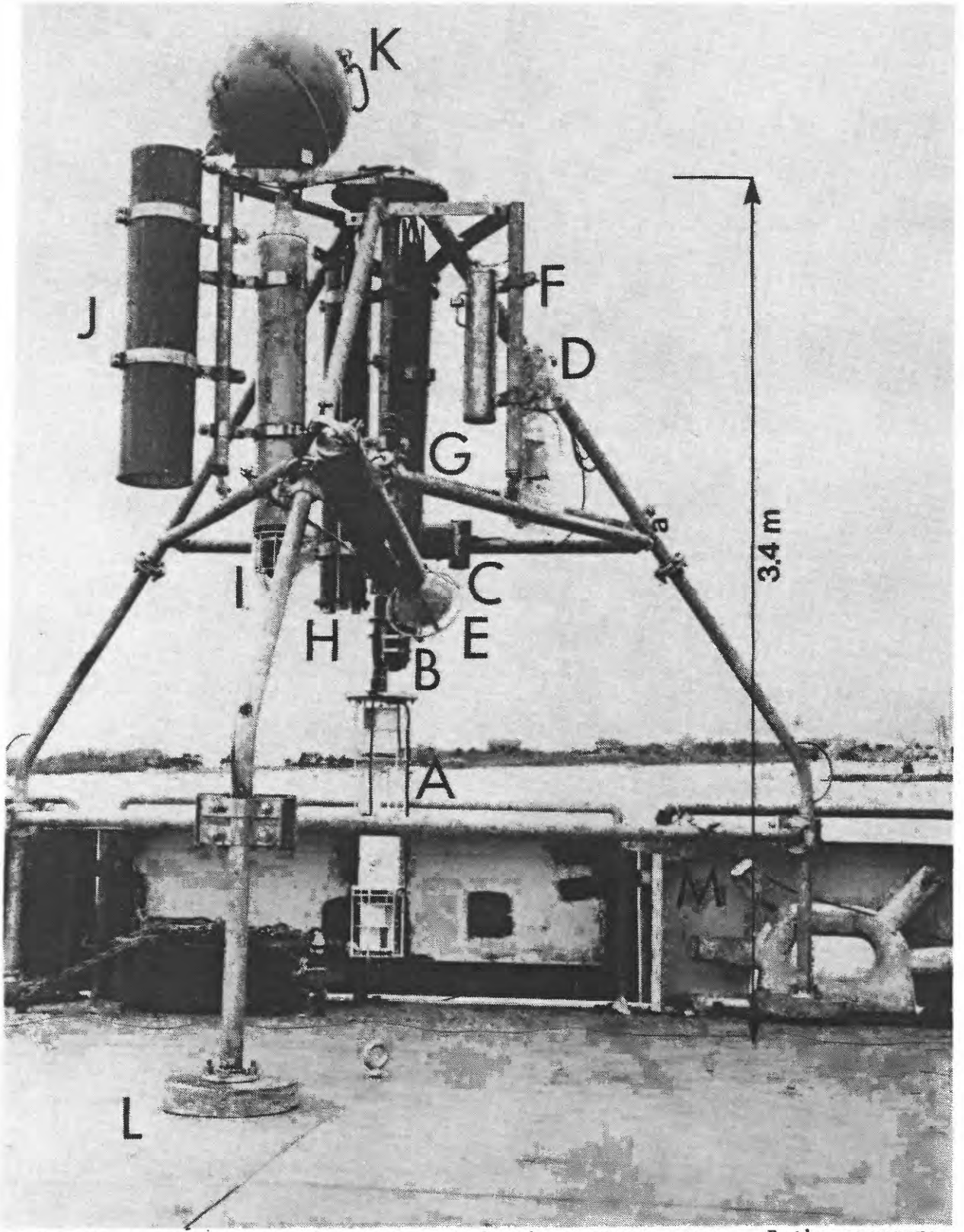


Figure 3. Bottom tripod system. A is the current sensor, B the pressure sensor, C the transmissometer, D the camera (wrapped in a protective plastic bag), E the camera strobe light, F the camera battery pack, G the Sea Data electronics, H the battery pressure housing, I the acoustic release transponder, J the rope canister, K the recovery float, and L the lead anchor feet.

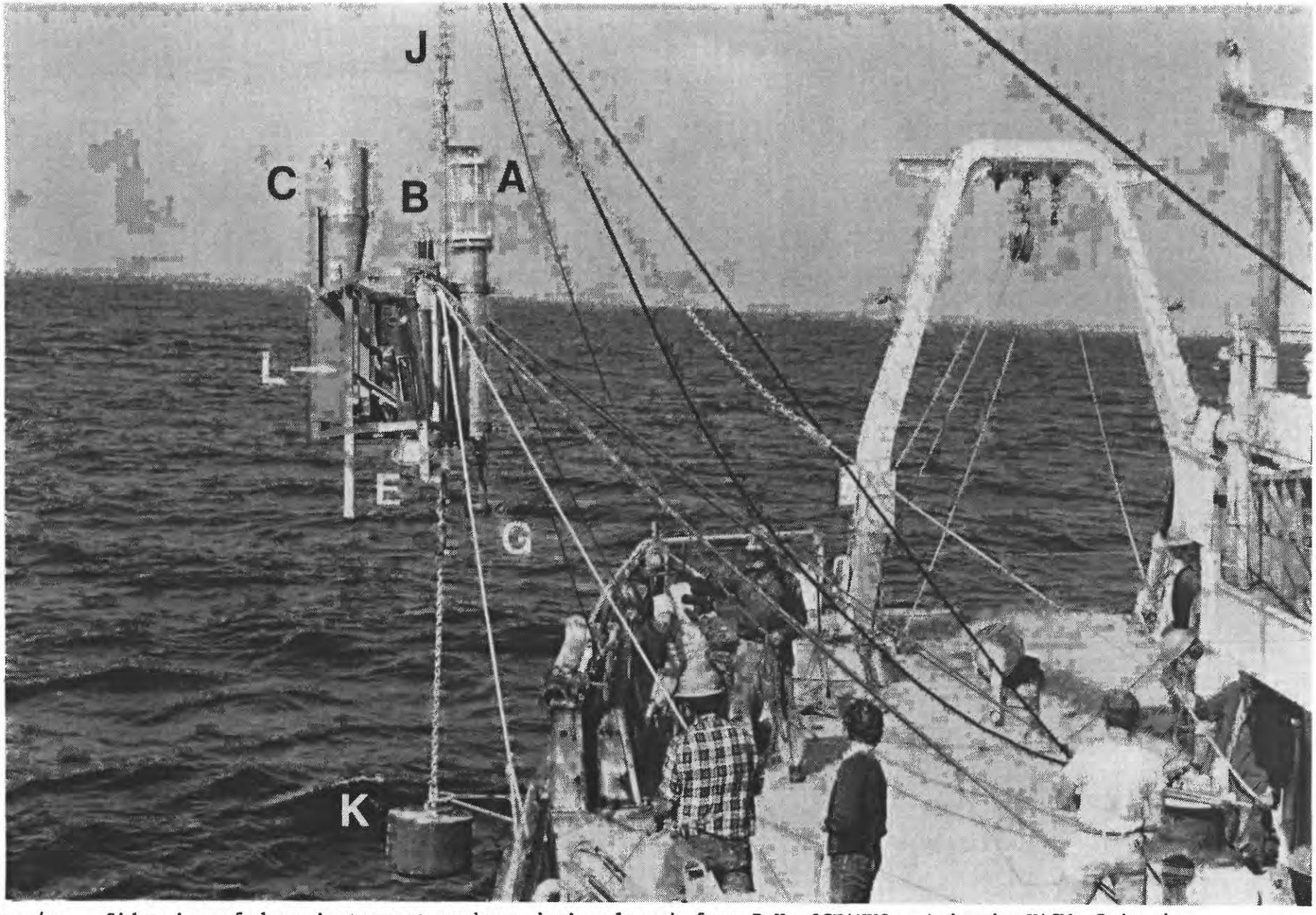


Figure 4a. Side view of deep instrument package during launch from R.V. OCEANUS. A is the VACM, B is the acoustic release, C is the sediment trap, E is the camera strobe, G is the magnetic compass for picture orientation, J is the float attachment, L is the vane to orient the package into the current, and K is the anchor.

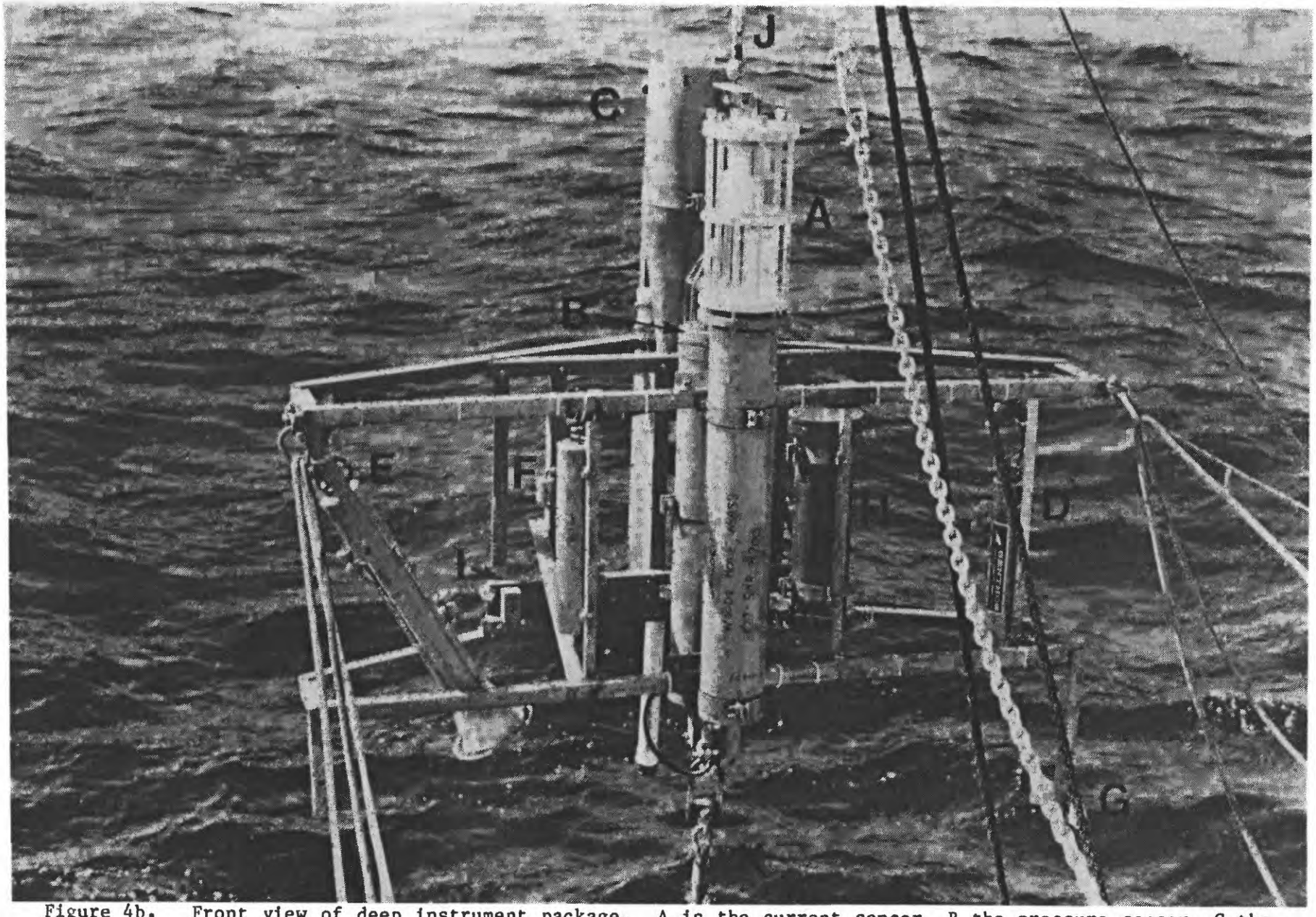


Figure 4b. Front view of deep instrument package. A is the current sensor, B the pressure sensor, C the transmissometer, D the camera, E the camera strobe light, F the camera battery housing, G the Sea Data electronics, H the transmissometer battery housing, I the transmissometer, and J the rope canister.

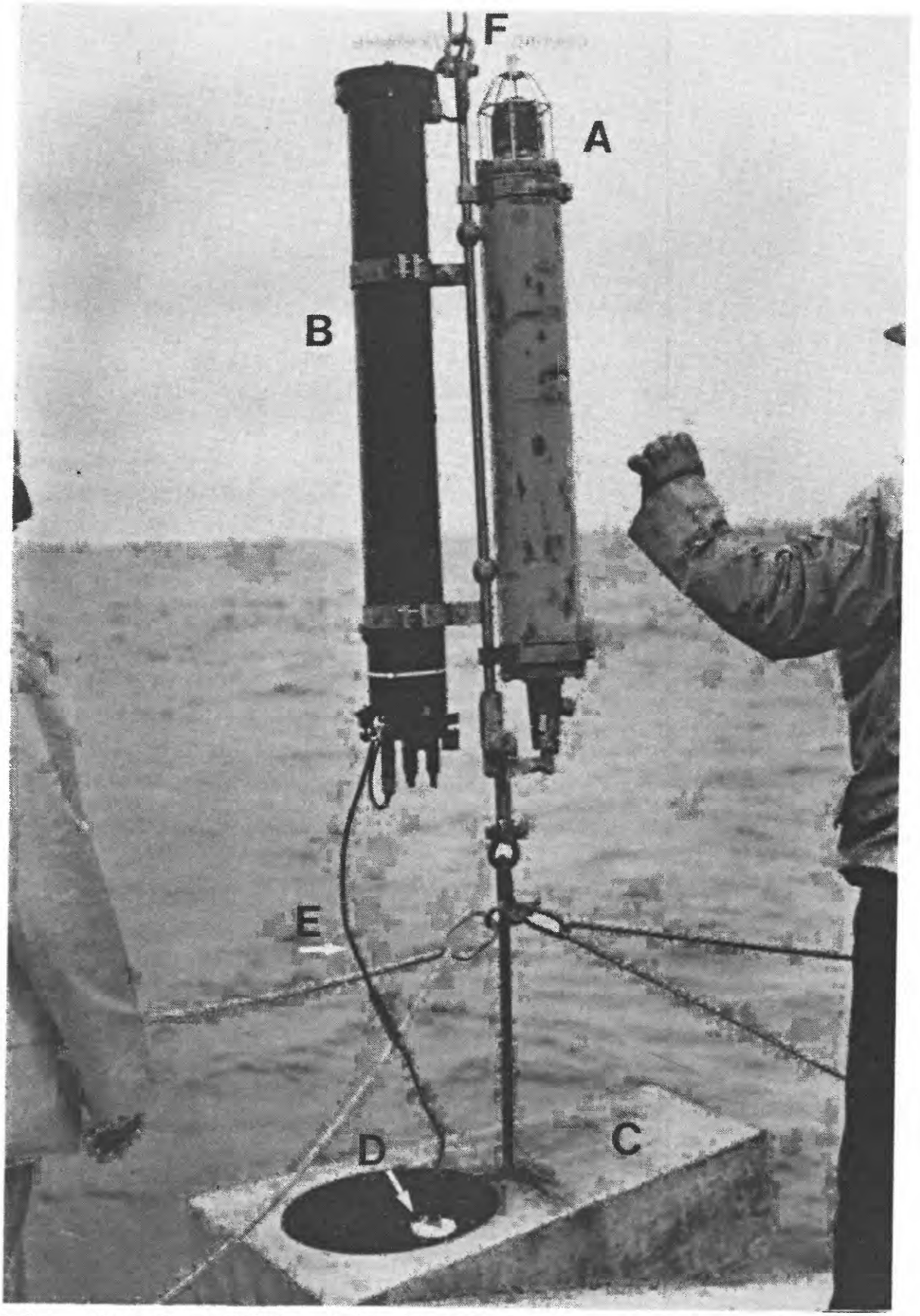


Figure 5. Pressure mooring. A is the acoustic release, B is the data logger, C is the concrete anchor, D is the pressure sensor, E is the wire connecting the pressure sensor to the data logger, and F is the chain which leads to the flotation.

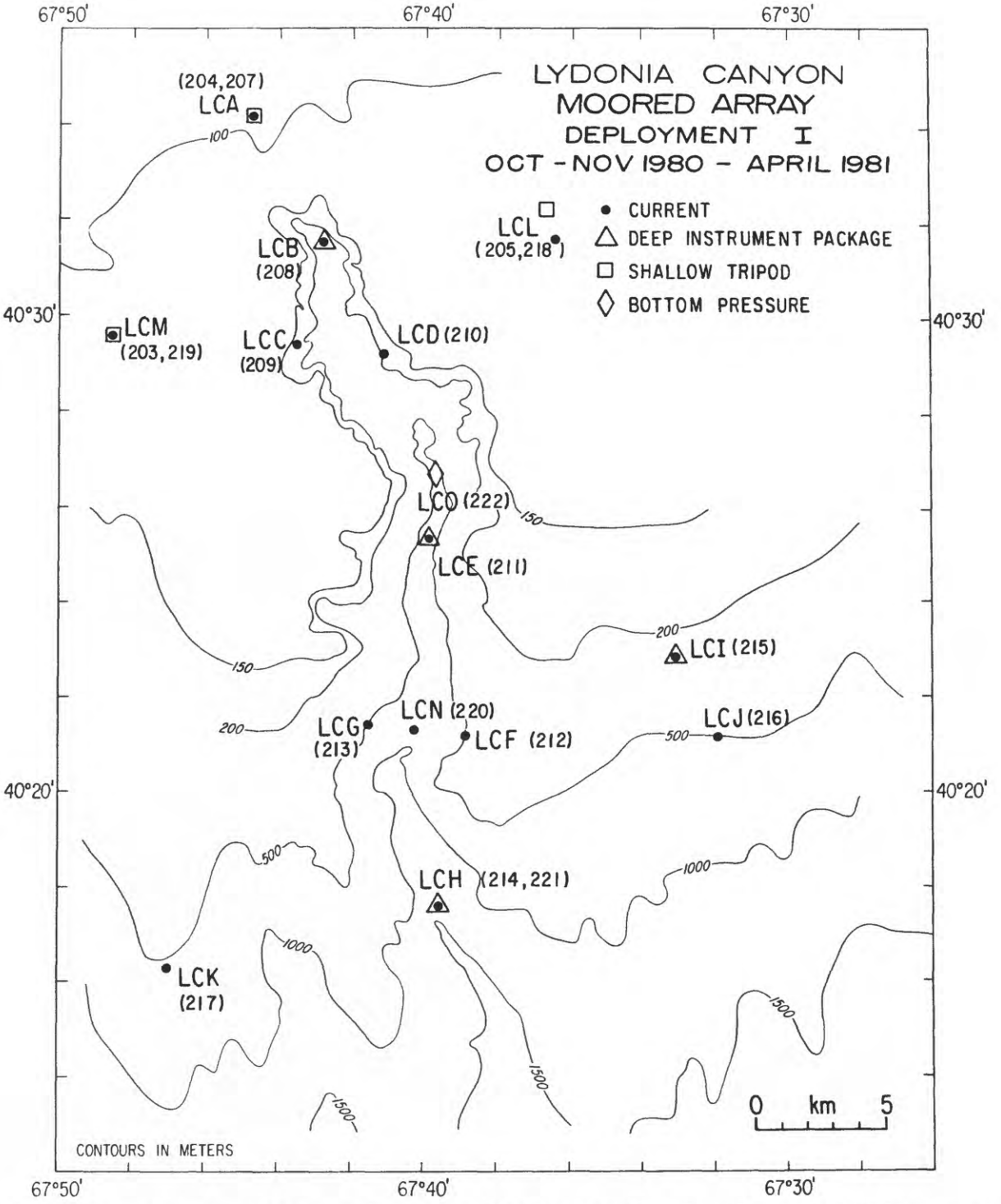


Figure 6. Lydonia Canyon moored array, deployment I. Stations are indicated by letters. The three-digit number in parenthesis following the station letters is the mooring number. All data are referenced by this mooring number.

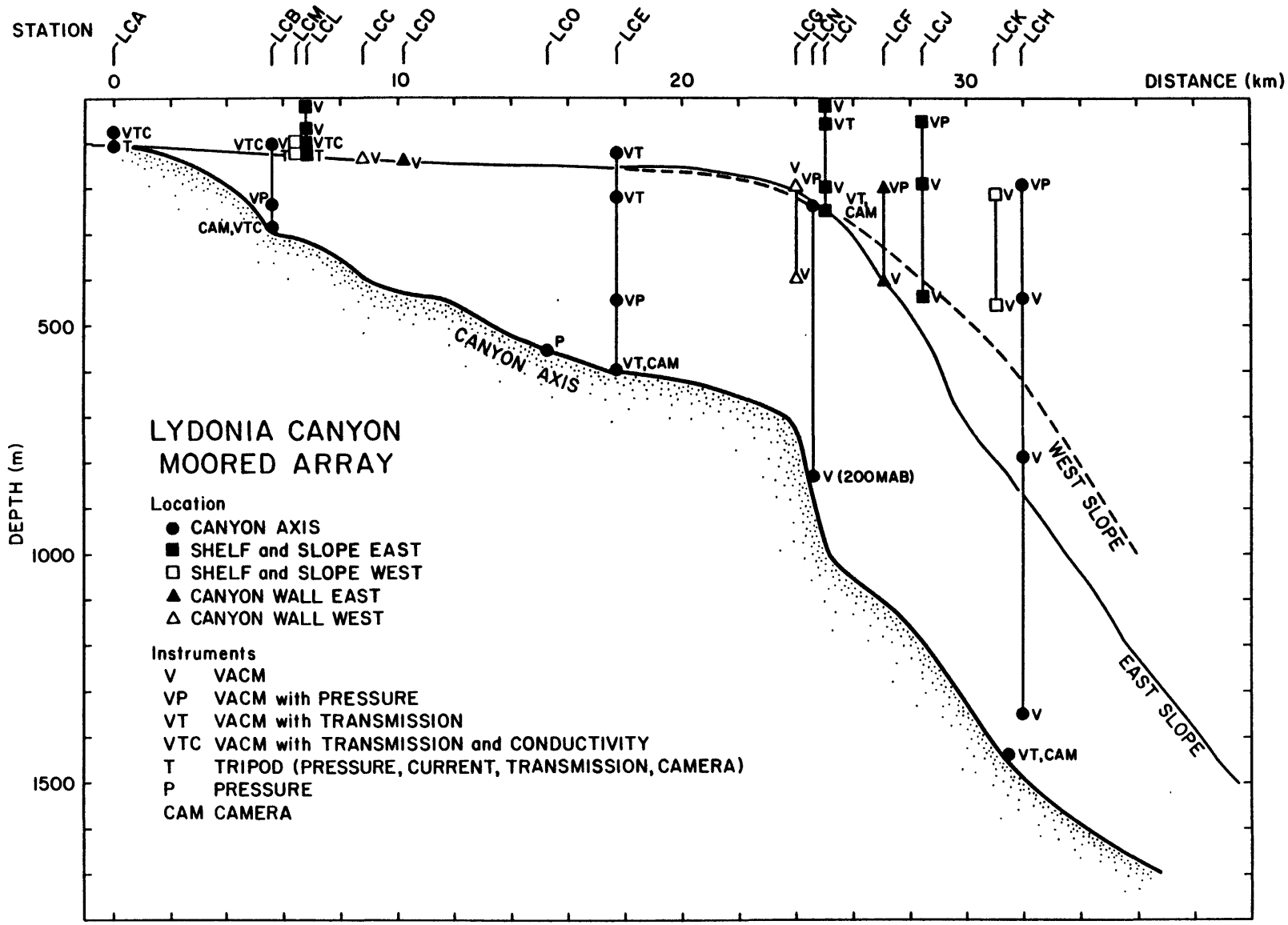


Figure 7a. Cross section of Lydonia Canyon and adjacent shelf and slope showing approximate positions of instruments in the moored array.

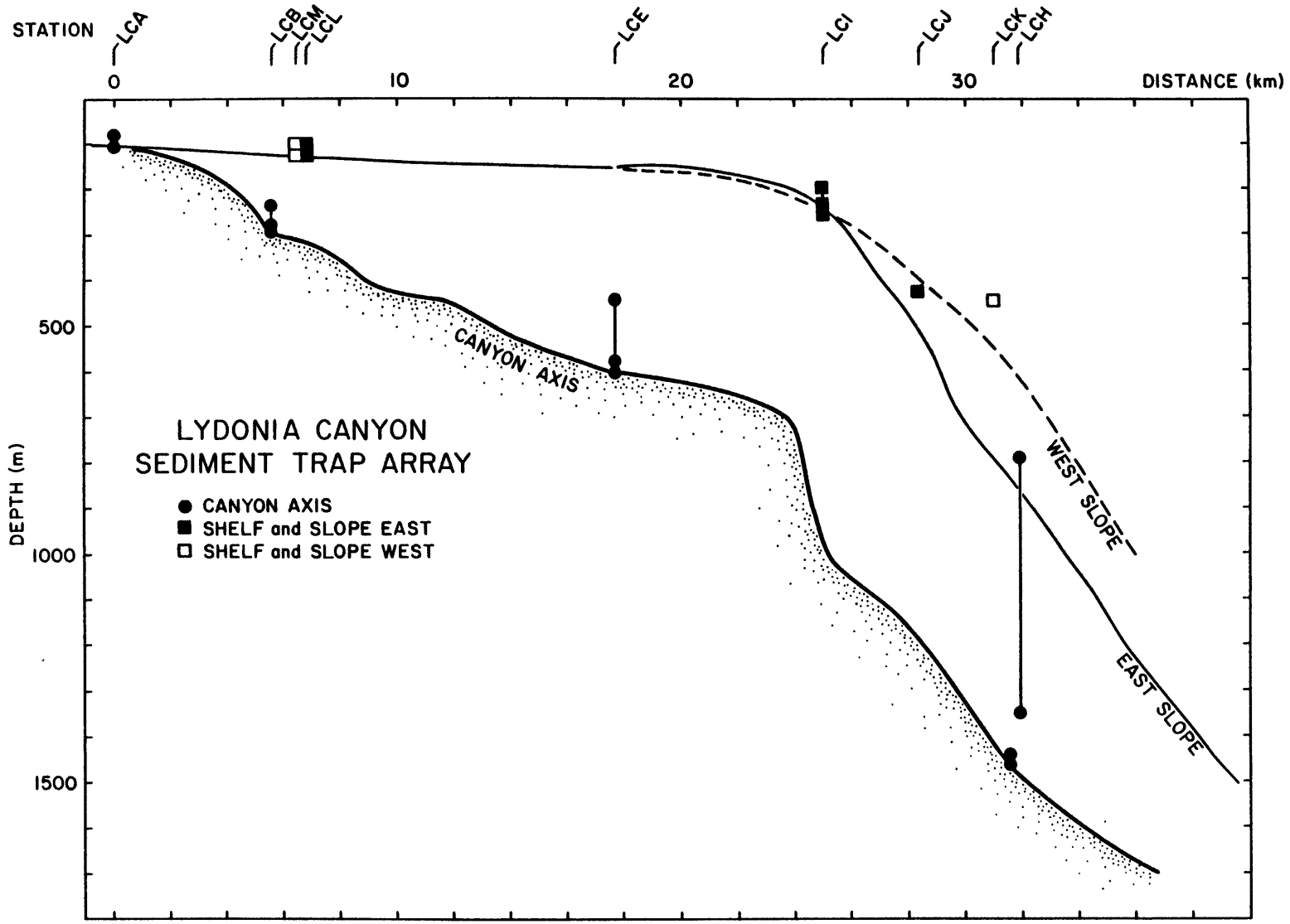


Figure 7b. Cross section of Lydonia Canyon and adjacent shelf and slope showing approximate positions of sediment traps in the moored array.

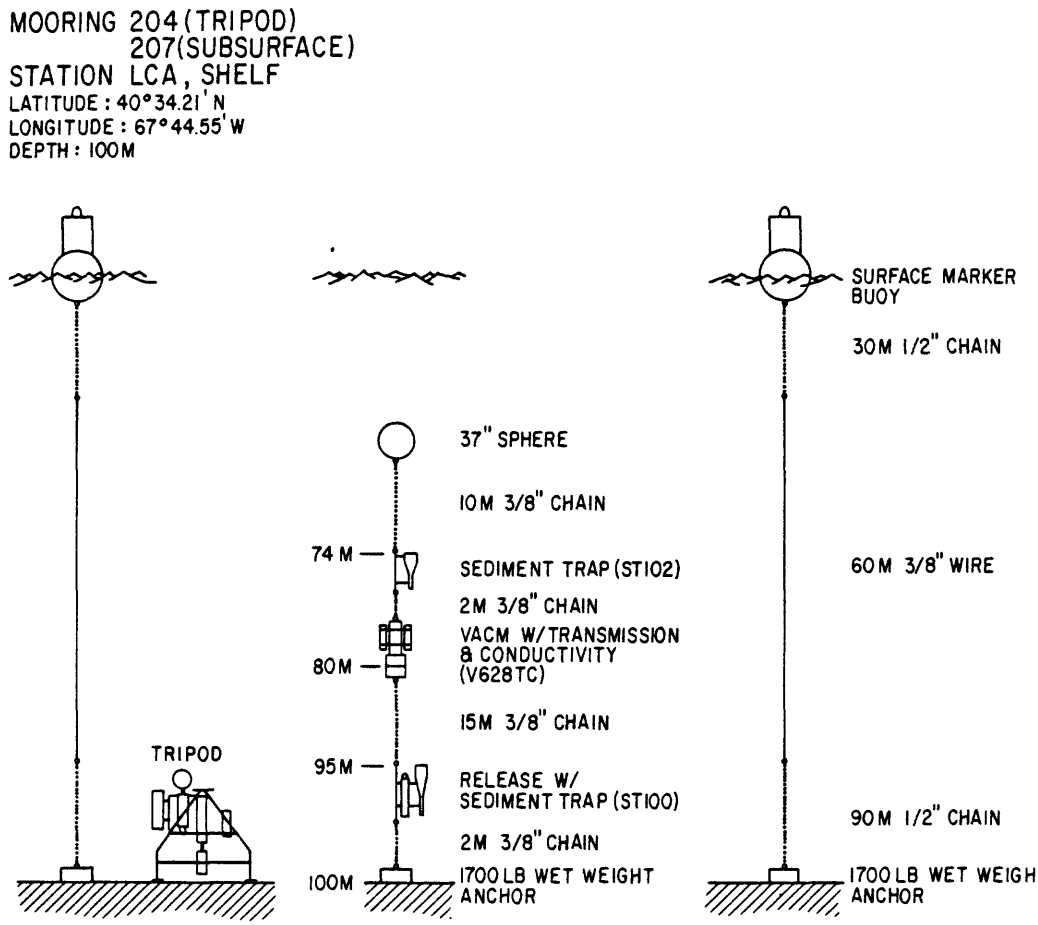


Figure 8a. Schematic of Lydonia Canyon moorings 204 and 207 at station LCA.

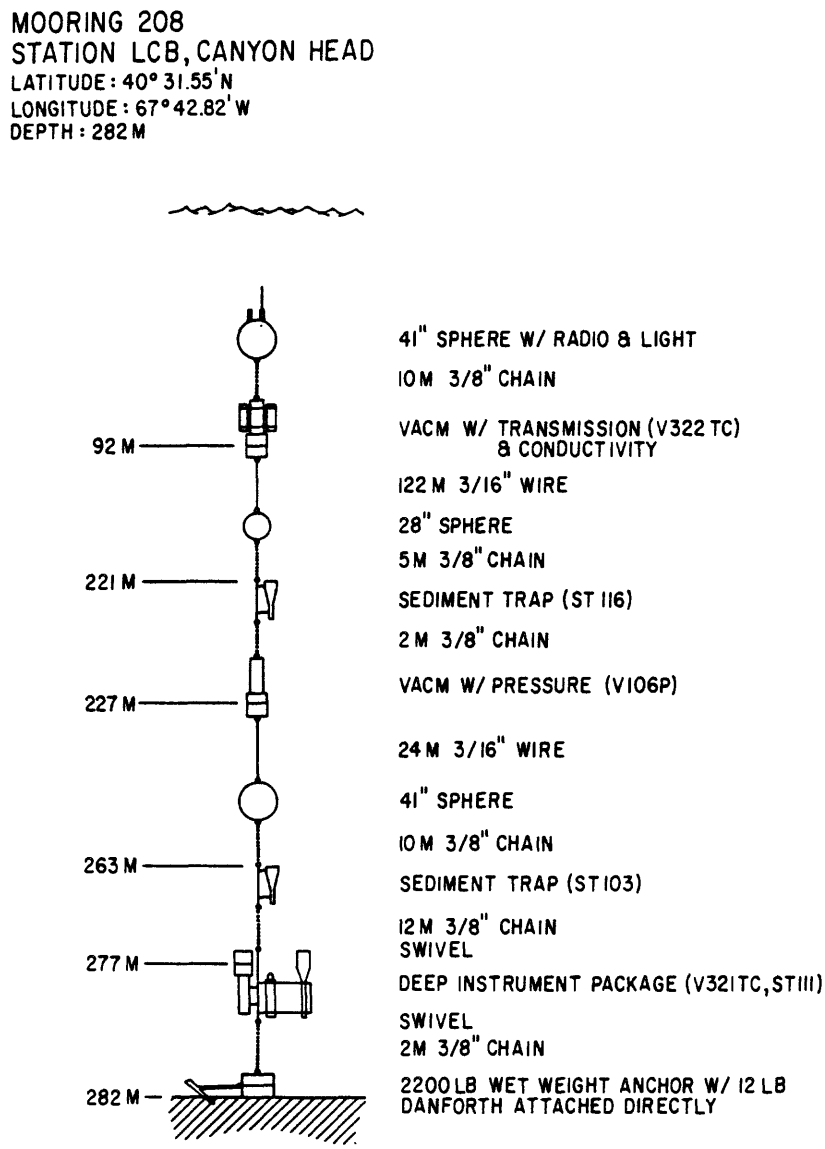


Figure 8b. Schematic of Lydonia Canyon mooring 208 at station LCB.

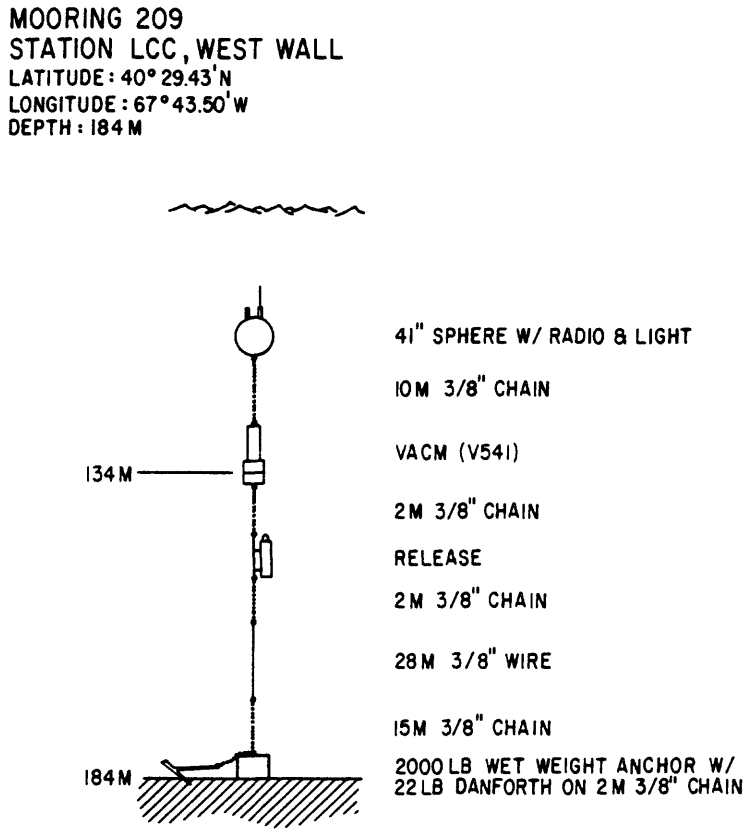


Figure 8c. Schematic of Lydonia Canyon mooring 209 at station LCC.

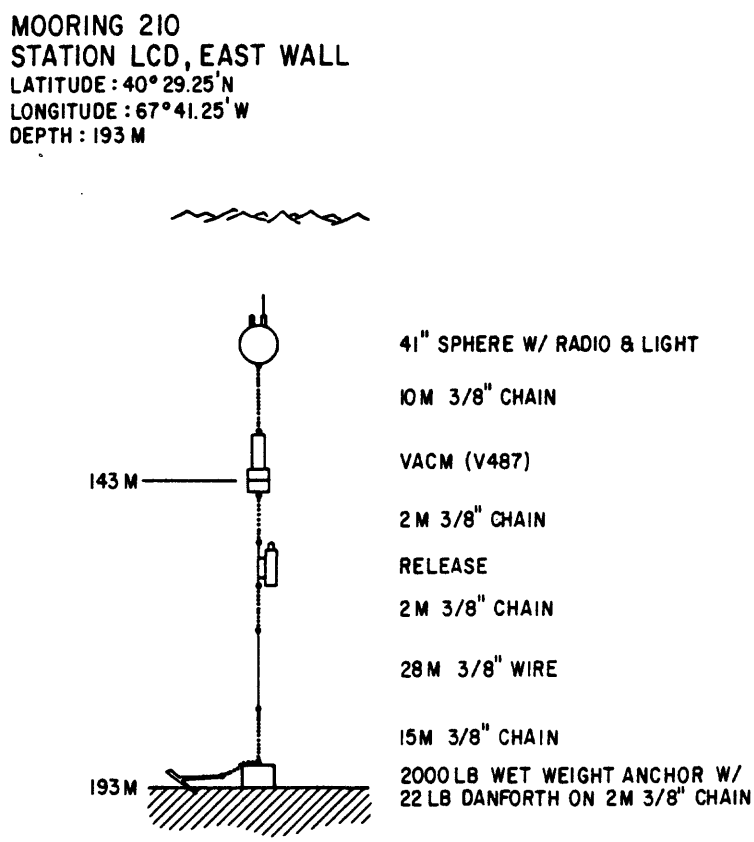


Figure 8d. Schematic of Lydonia Canyon mooring 210 at station LCD.

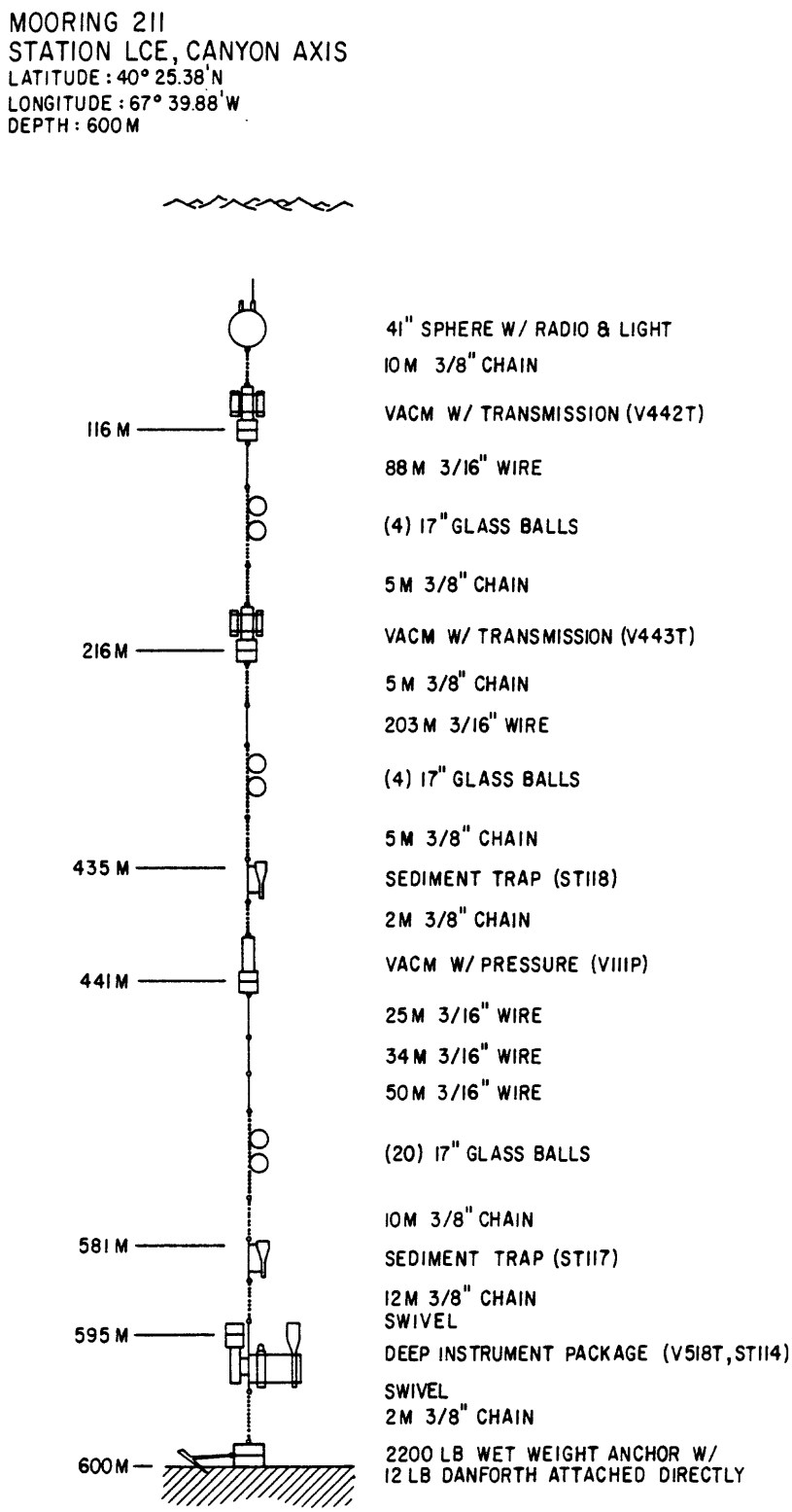


Figure 8e. Schematic of Lydonia Canyon mooring 211 at station LCE.

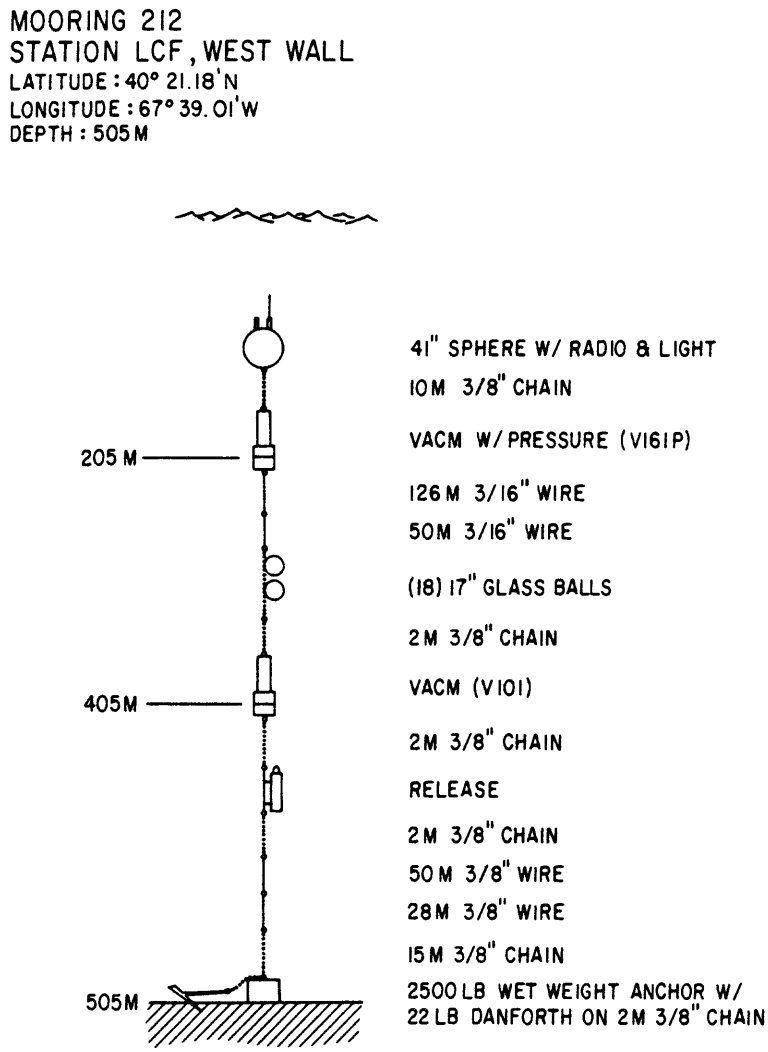


Figure 8f. Schematic of Lydonia Canyon mooring 212 at station LCF.

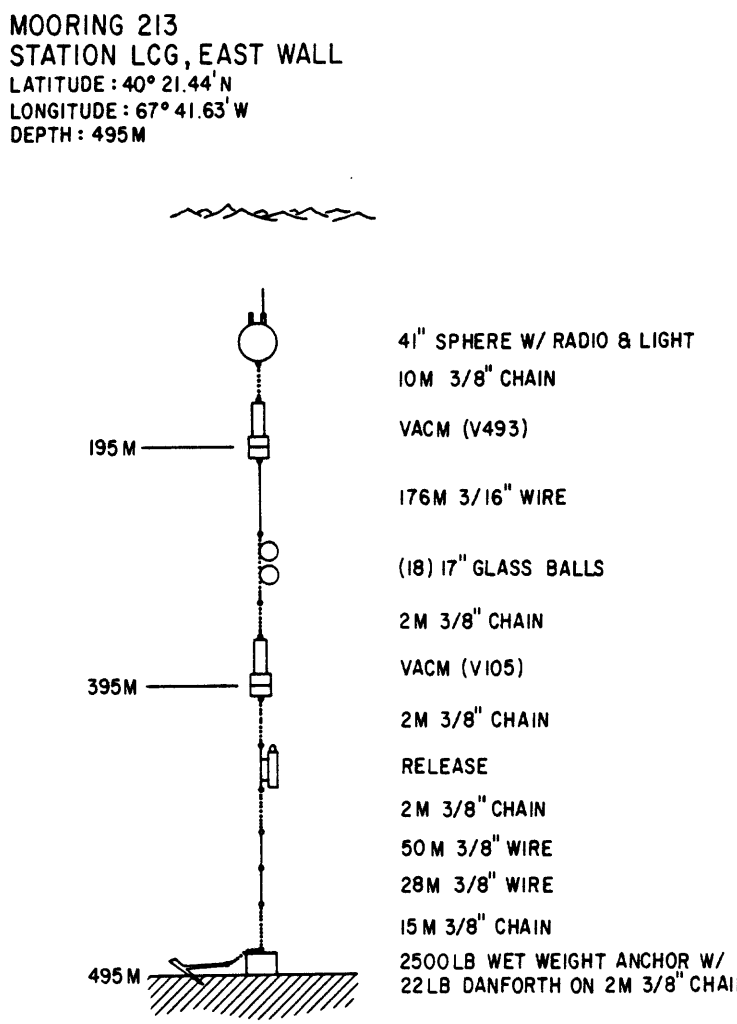


Figure 8g. Schematic of Lydonia Canyon mooring 213 at station LCG.

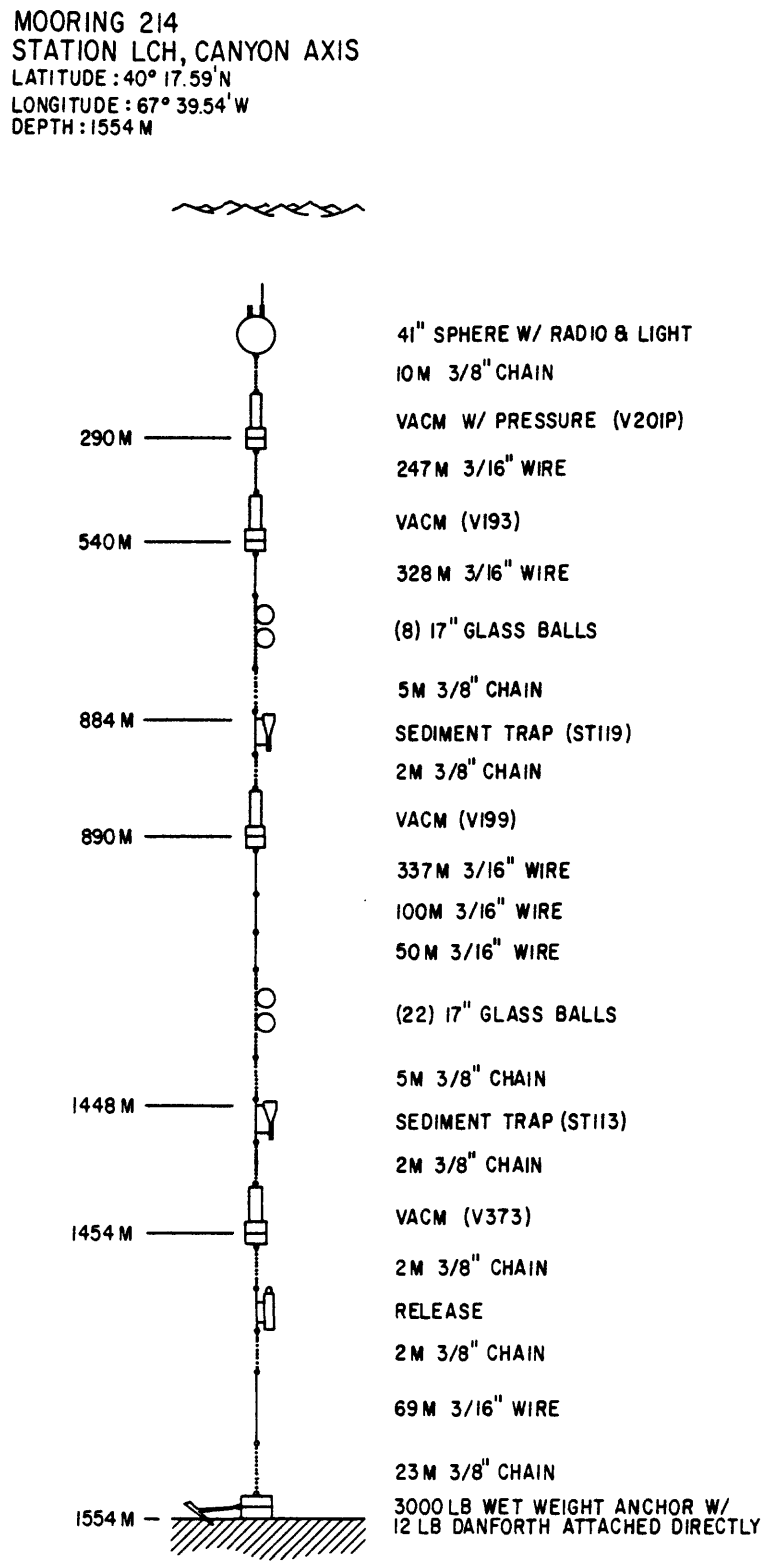


Figure 8h. Schematic of Lydonia Canyon mooring 214 at station LCH.

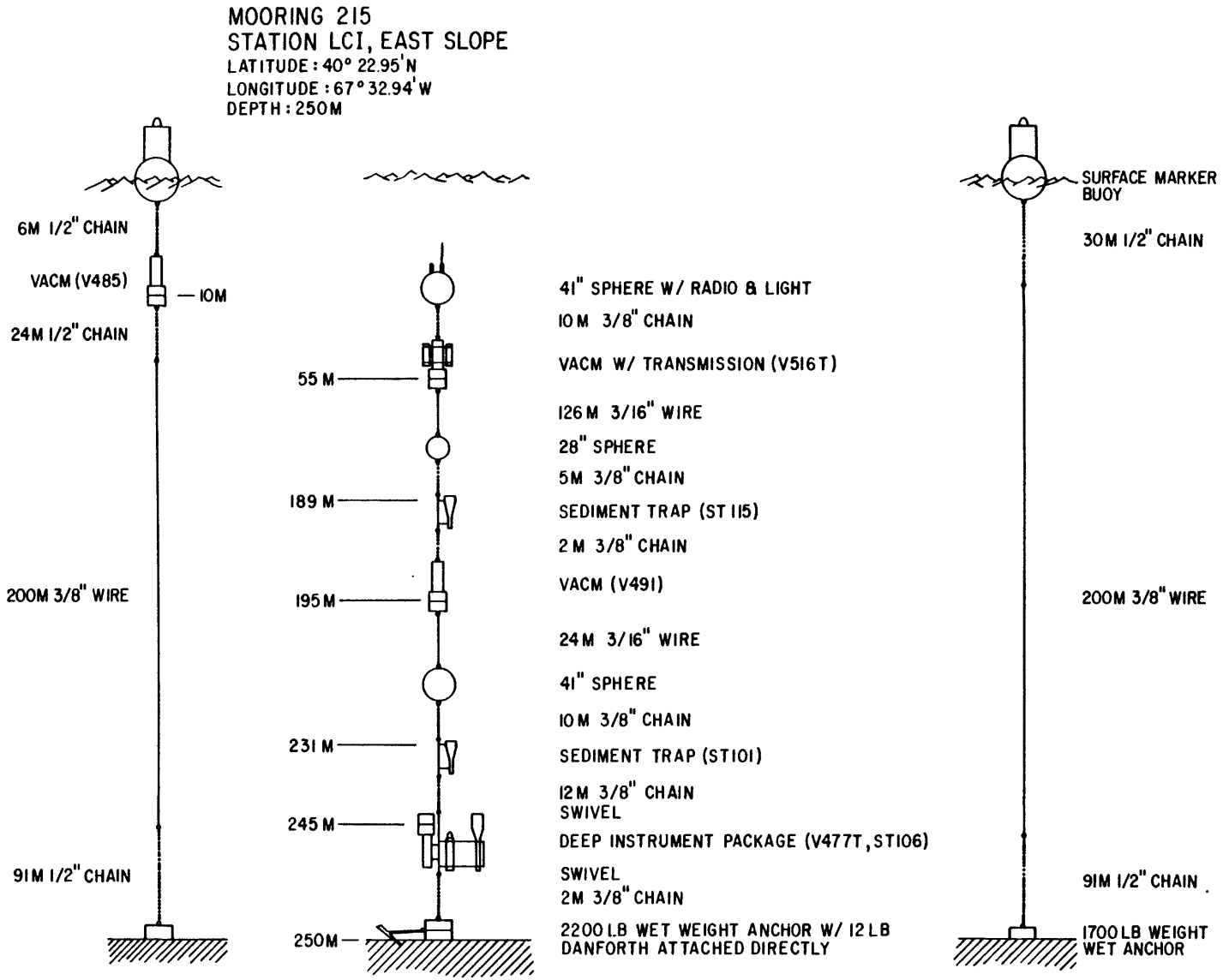


Figure 81. Schematic of Lydonia Canyon mooring 215 at station LCI.

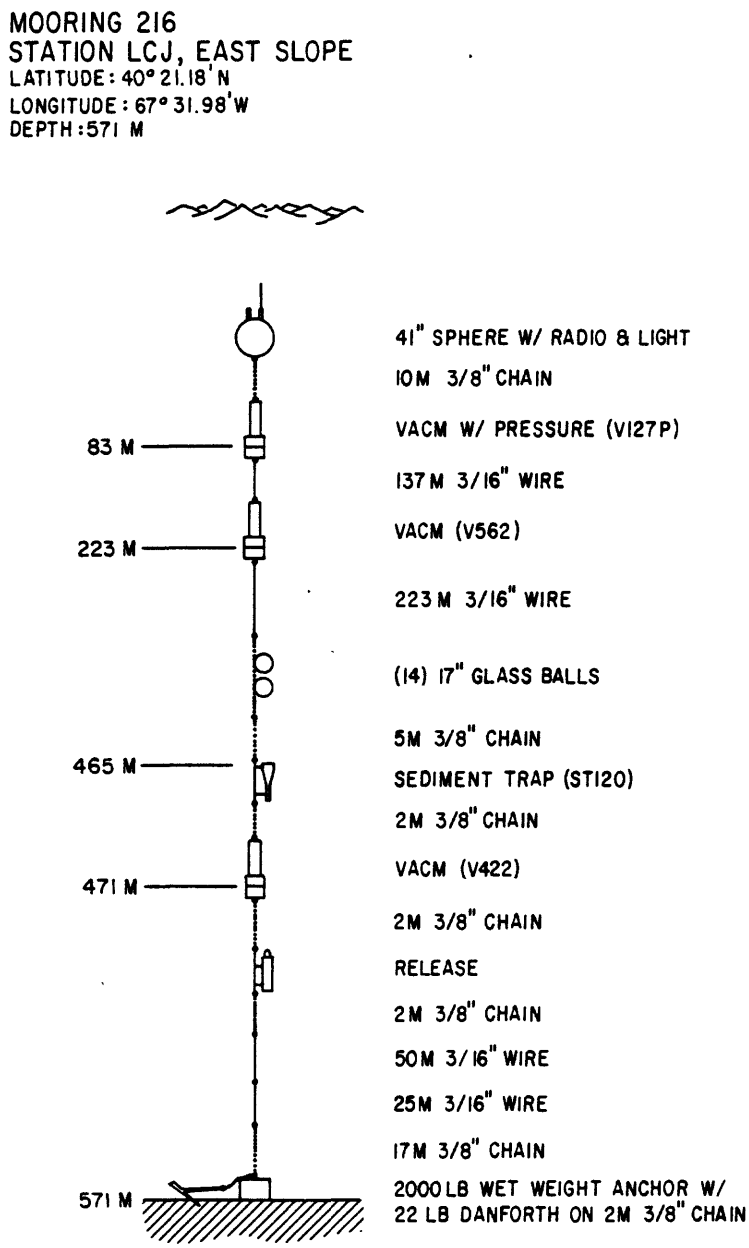


Figure 8j. Schematic of Lydonia Canyon mooring 216 at station LCJ.

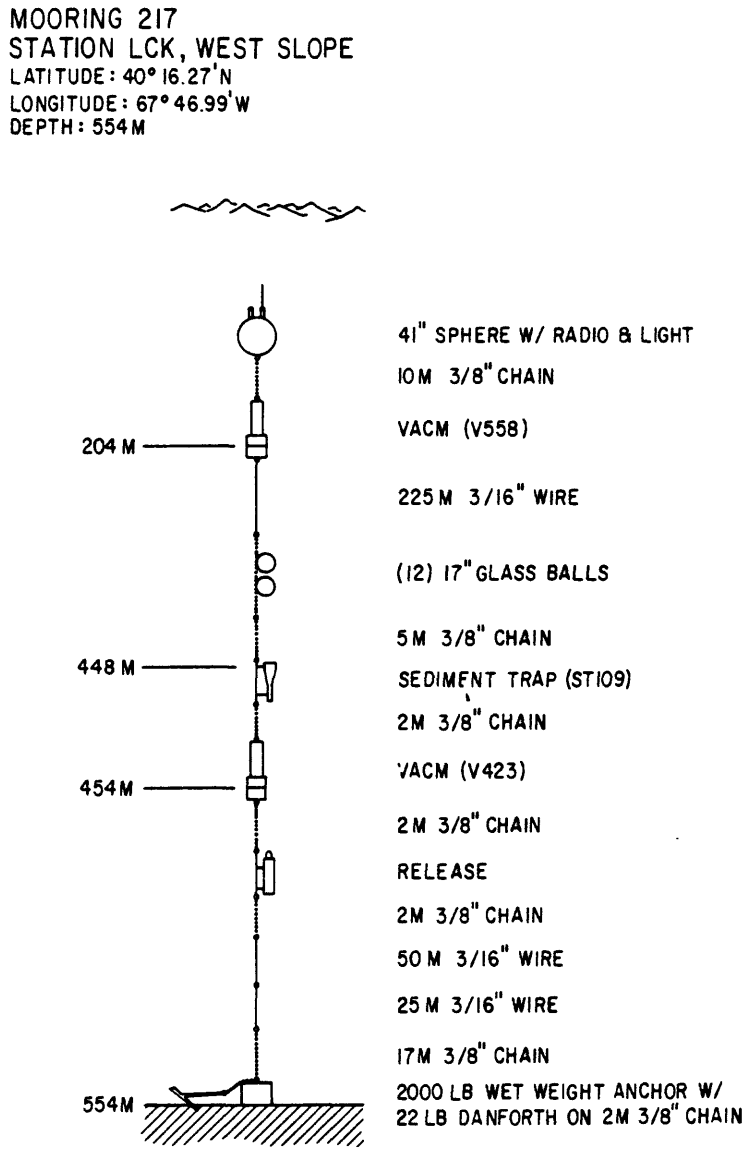


Figure 8k. Schematic of Lydonia Canyon mooring 217 at station LCK.

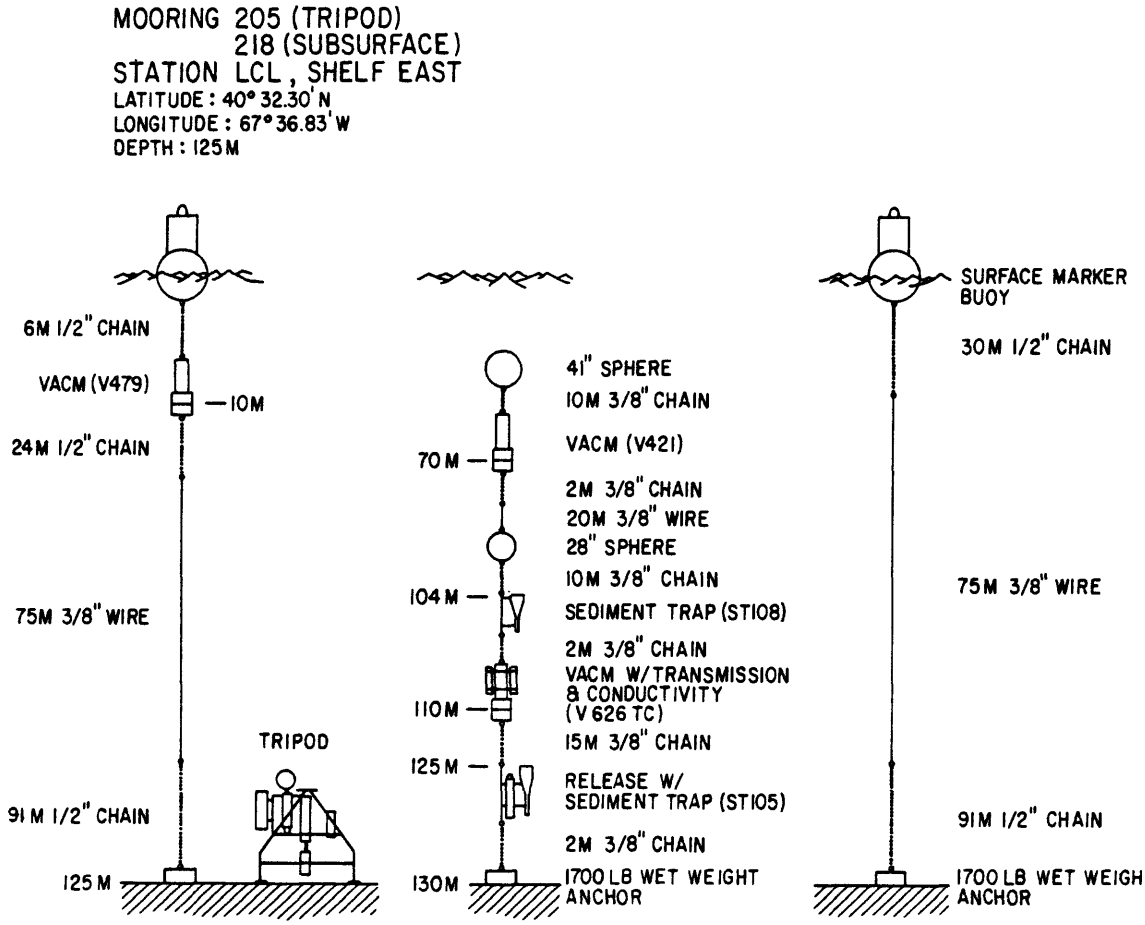


Figure 81. Schematic of Lydonia Canyon moorings 205 and 218 at station LCL.

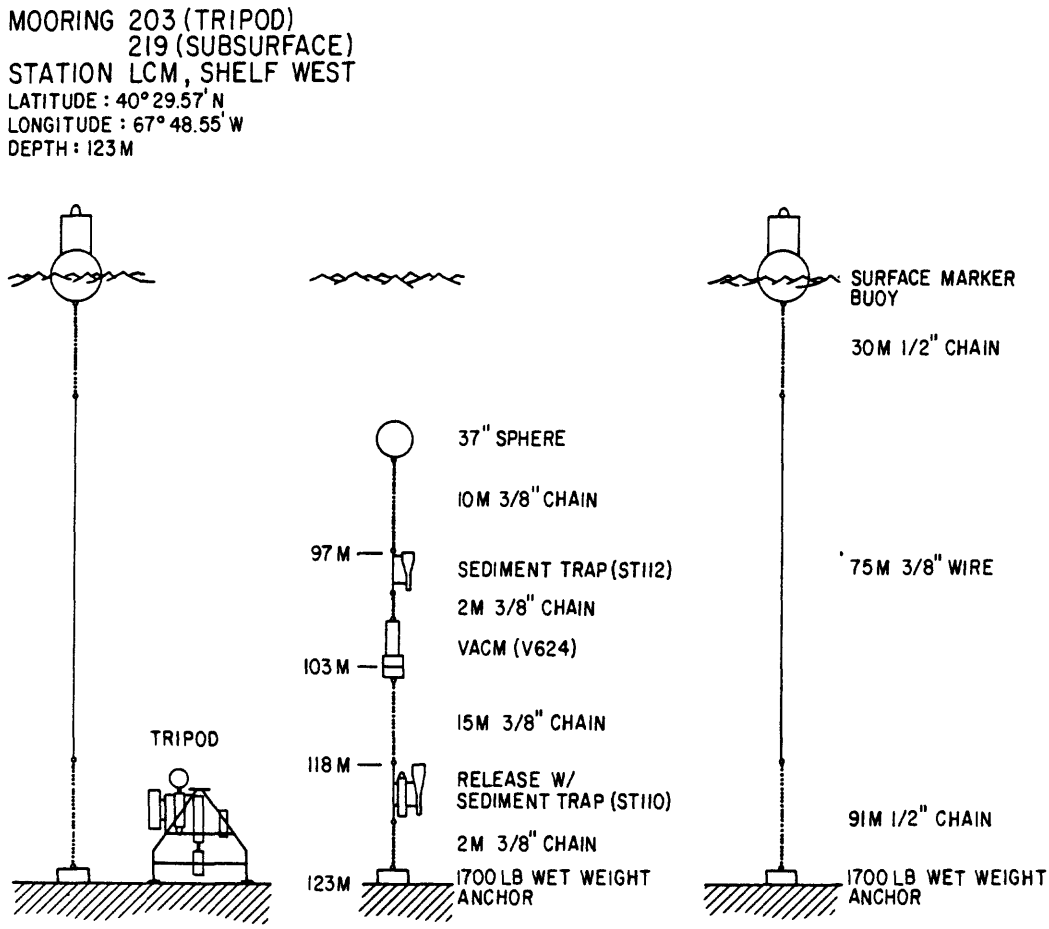


Figure 8m. Schematic of Lydonia Canyon moorings 203 and 219 at station LCM.

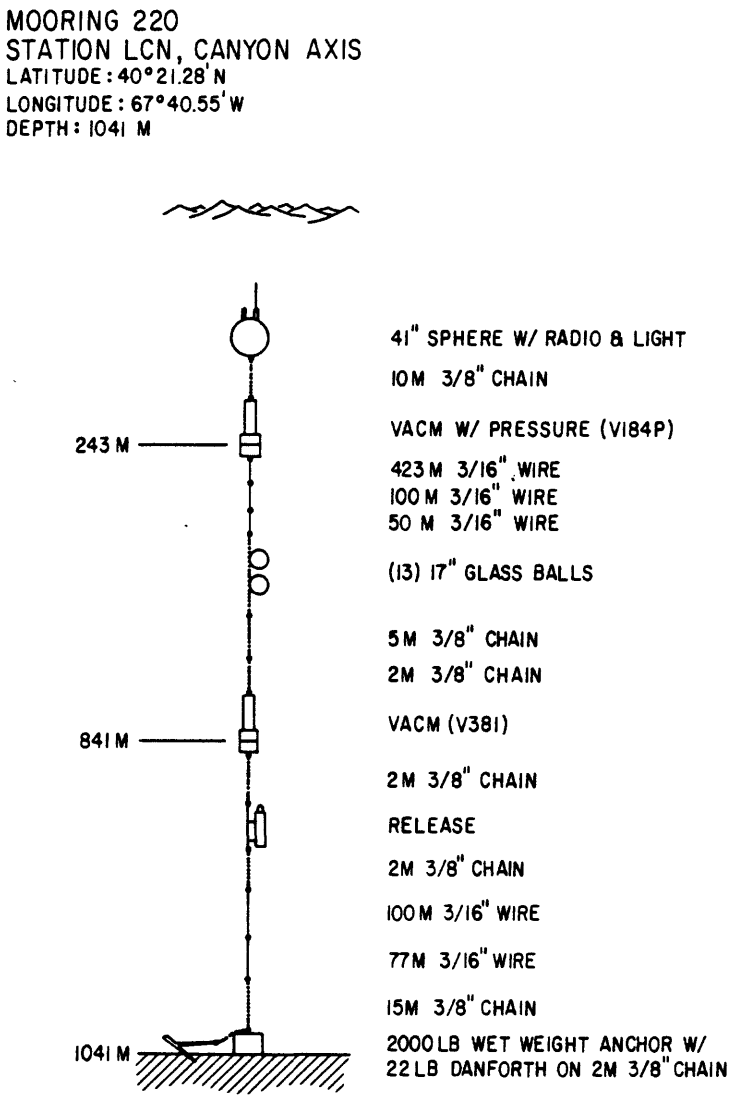


Figure 8n. Schematic of Lydonia Canyon mooring 220 at station LCN.

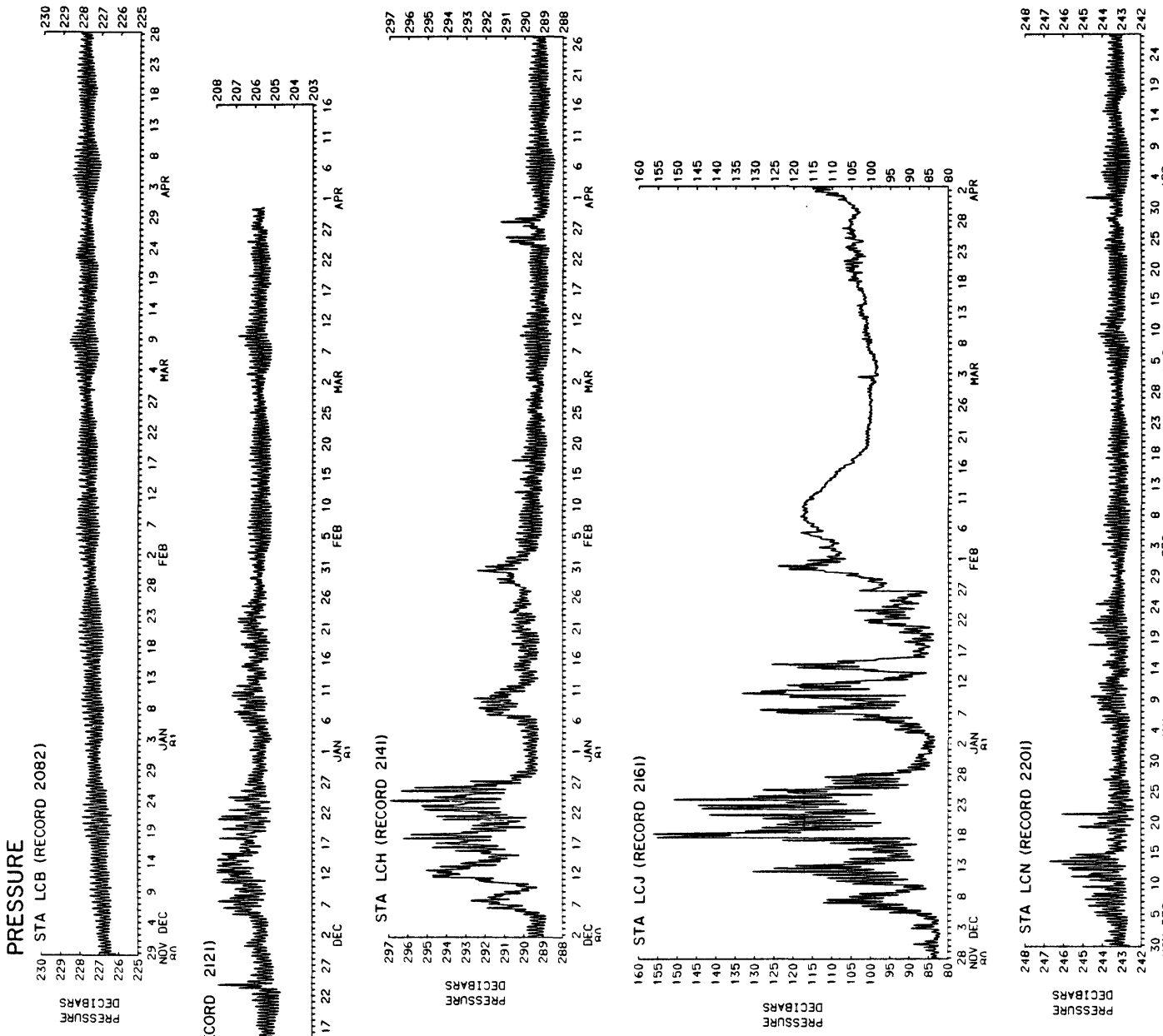


Figure 9. Mid-depth pressures as measured by VACM-P instruments at LCB, LCF, LCH, LCJ, and LCN. Note the scale change for the mooring at LCJ (see text for discussion).

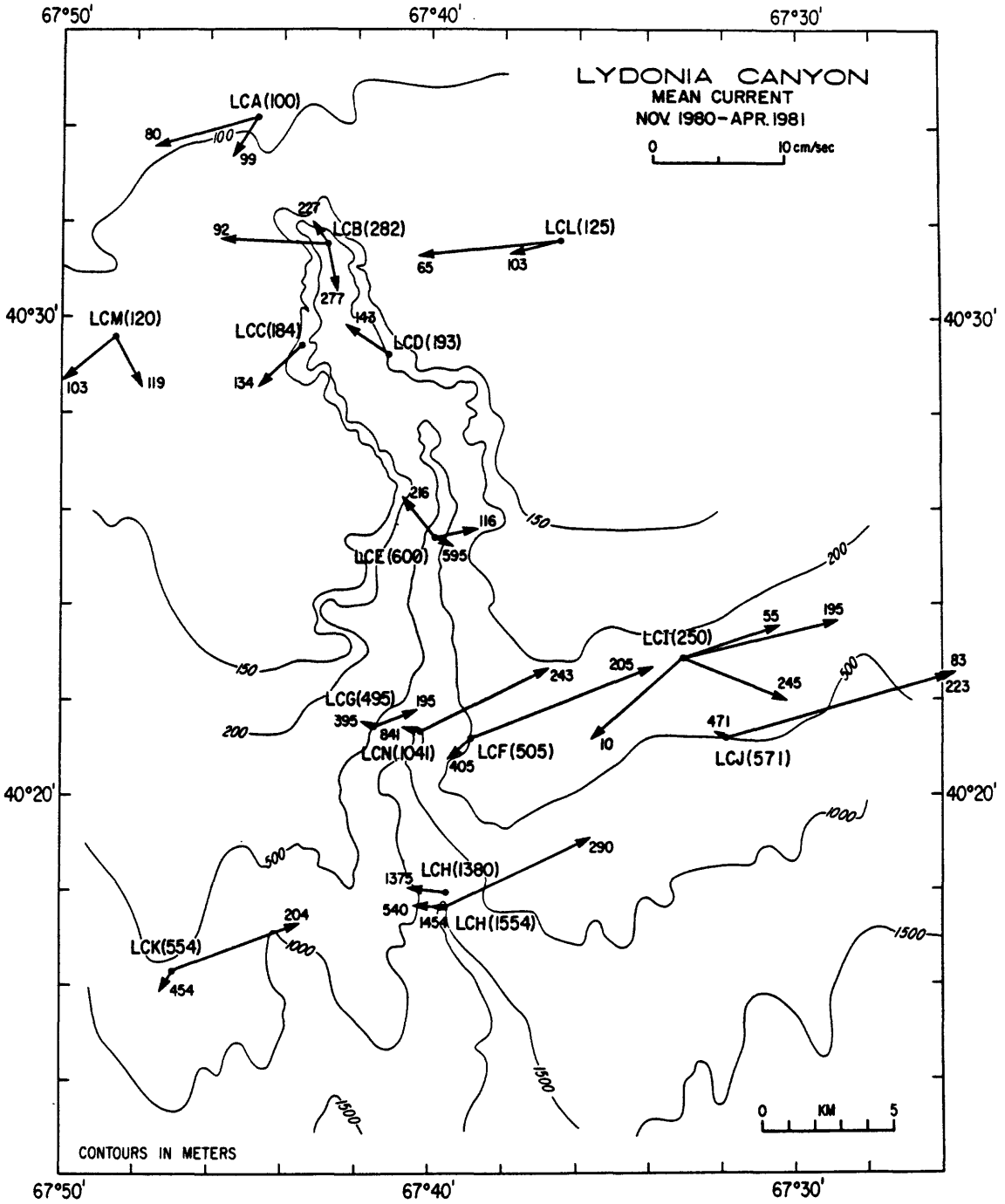


Figure 10a. Mean currents observed during entire deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

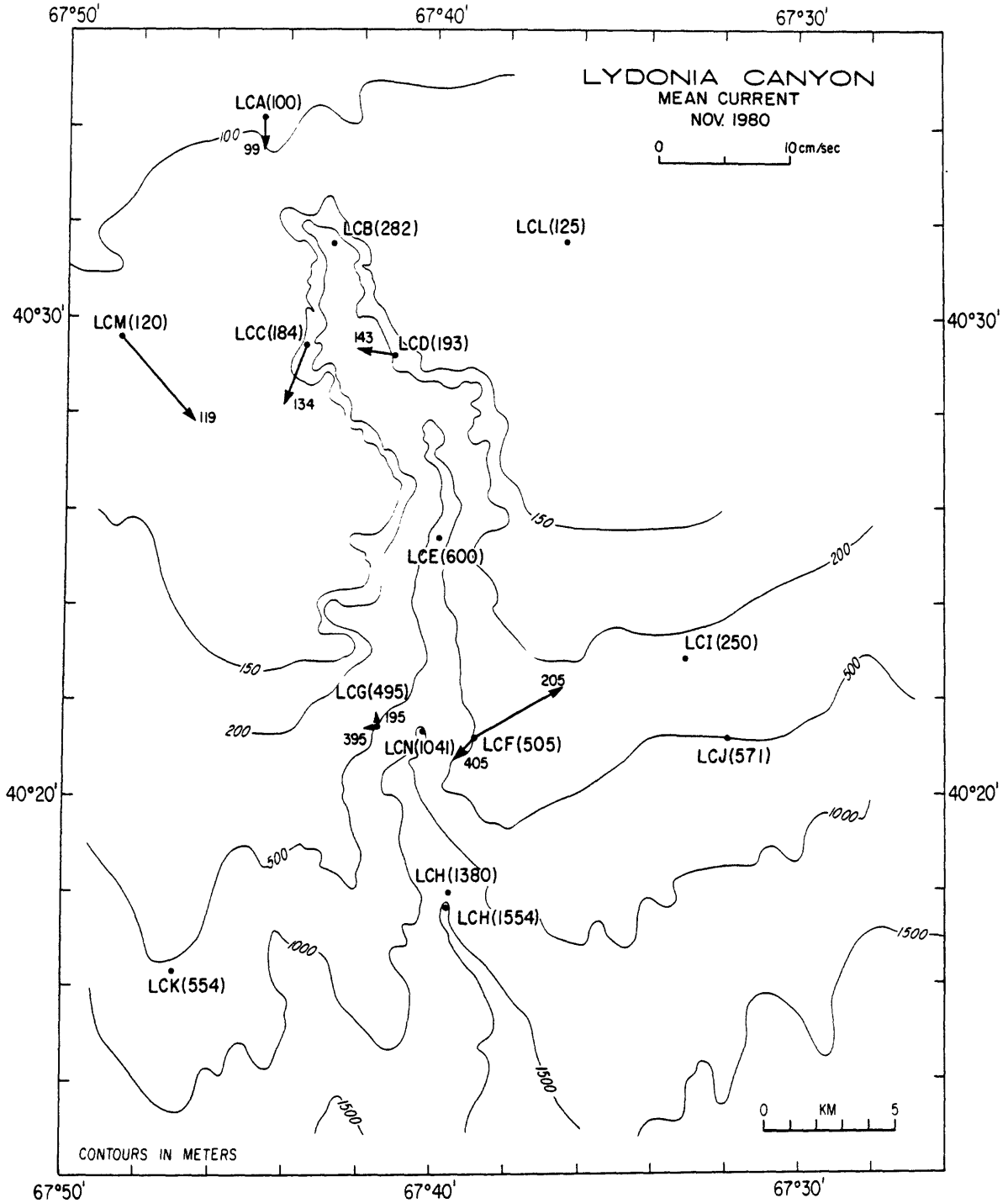


Figure 10b. Mean currents observed during November 1980 deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

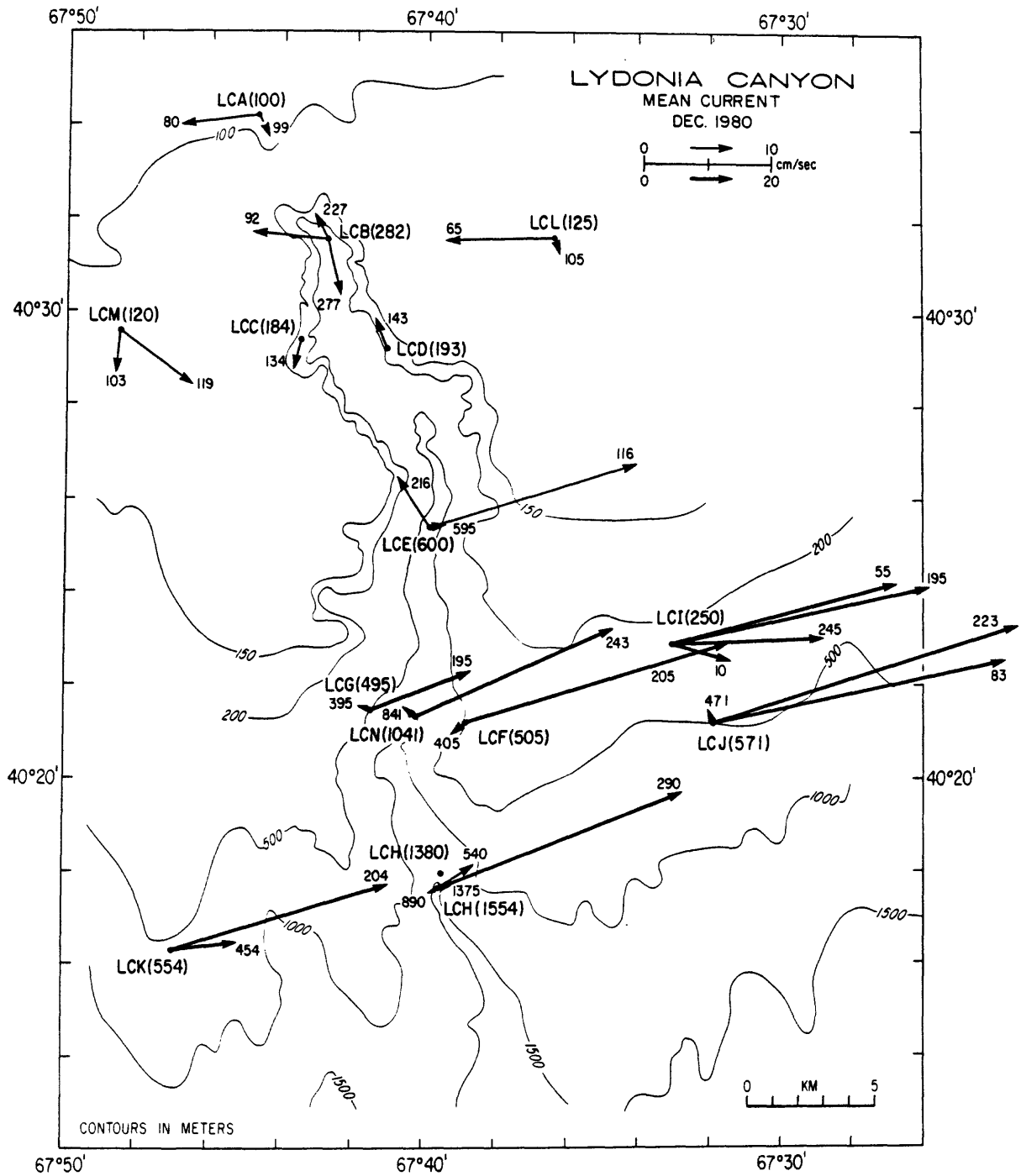


Figure 10c. Mean currents observed during December 1980 deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). Two speed scales are used on the December and January plots (heavy arrows indicate currents twice as strong as the light arrows). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

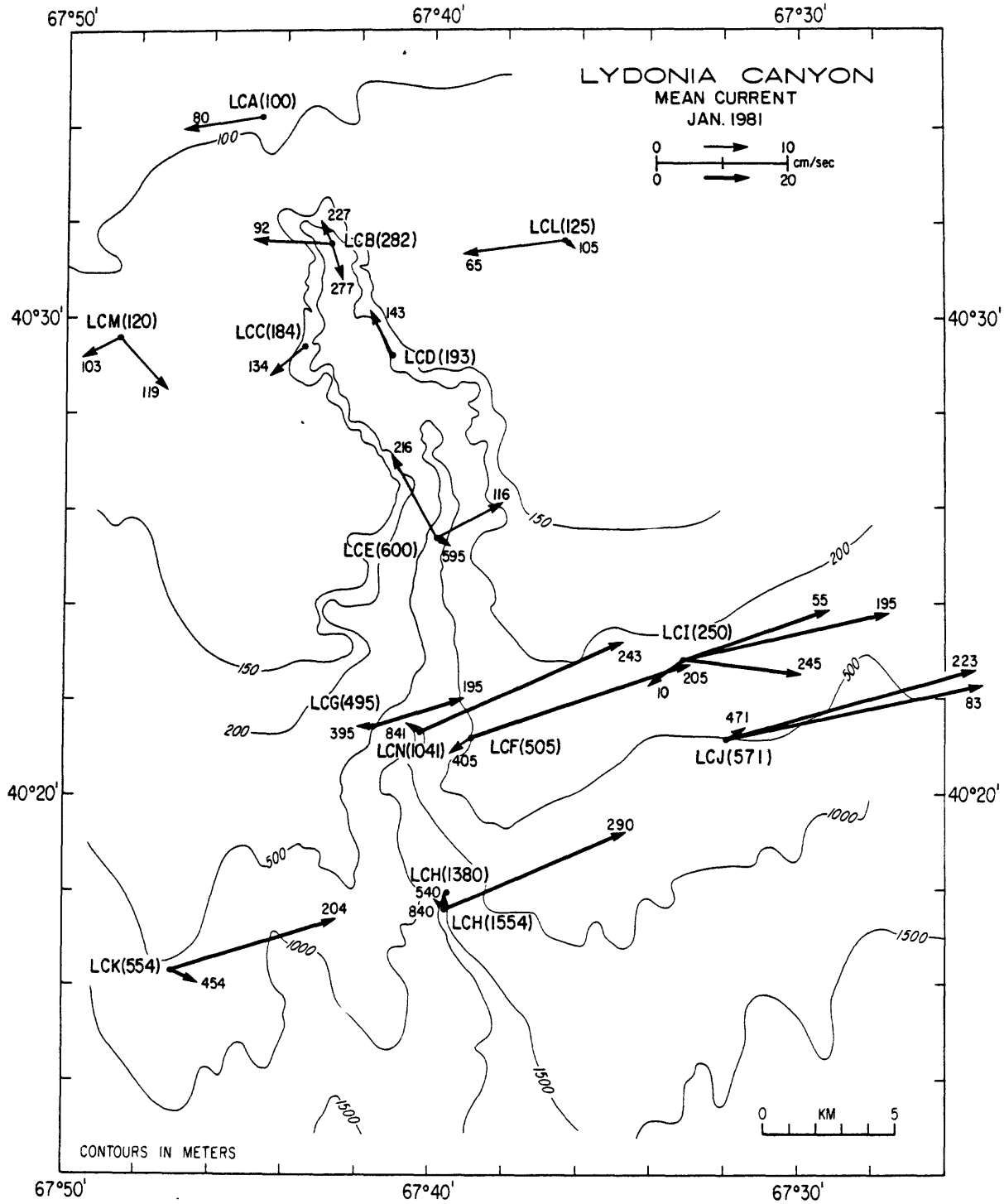


Figure 10d. Mean currents observed during January 1981 deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). Two speed scales are used on the December and January plots (heavy arrows indicate currents twice as strong as the light arrows). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

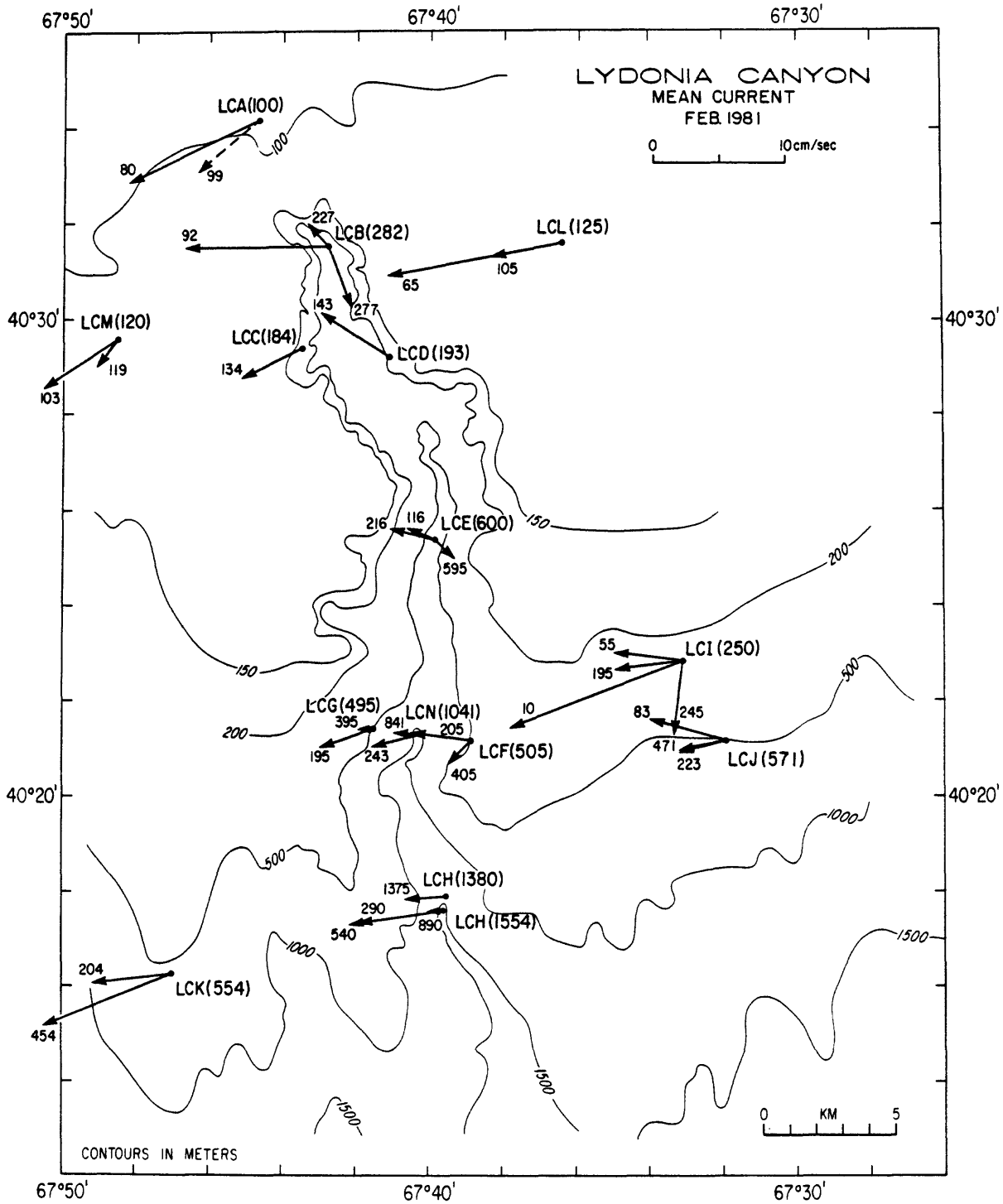


Figure 10e. Mean currents observed during February 1981 deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

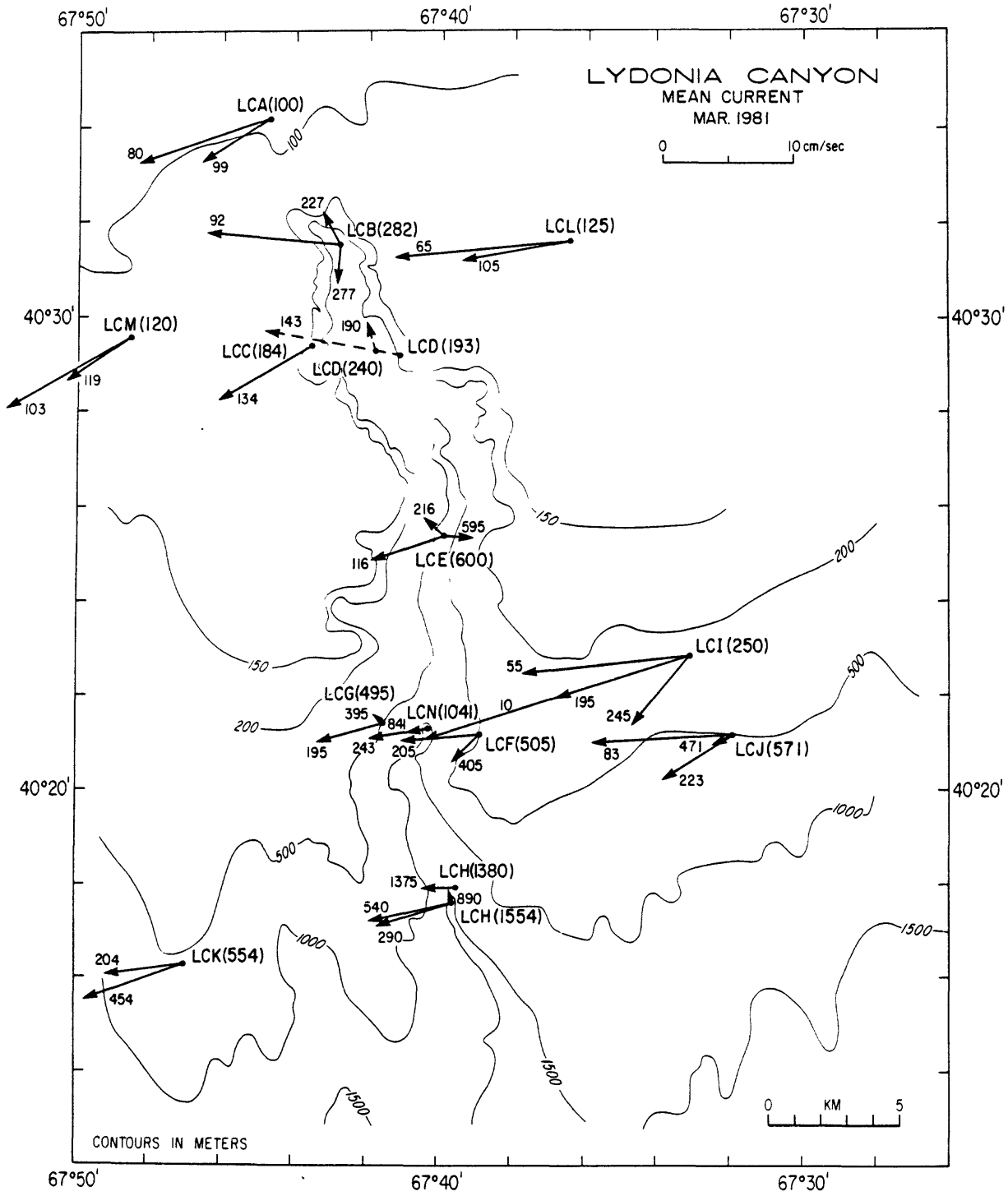


Figure 10f. Mean currents observed during March 1981 deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

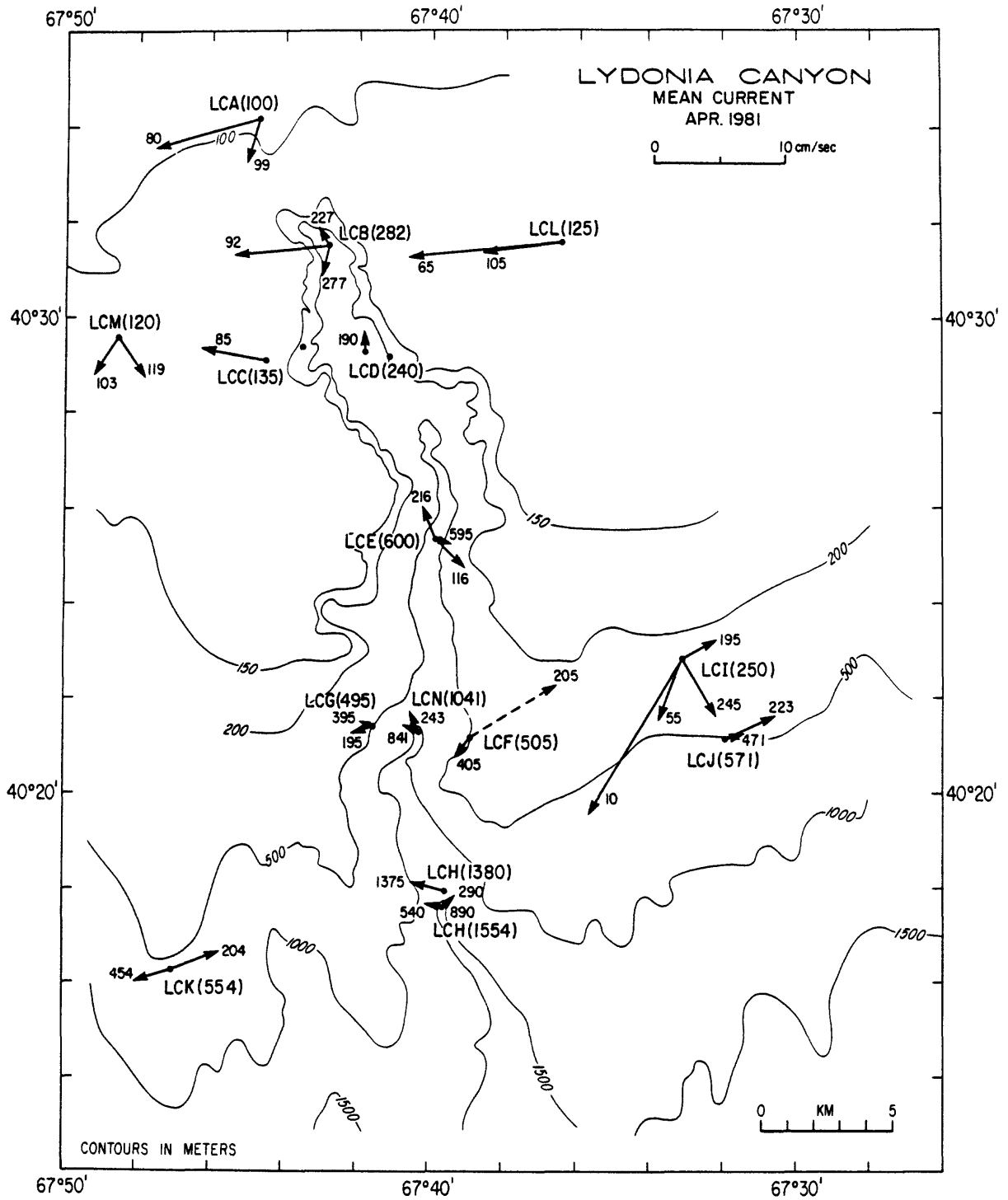


Figure 10g. Mean currents observed during April 1981 deployment I of Lydonia Canyon moored array. Arrows point in the direction of mean flow and the length of the arrow is proportional to the current speed in cm/s (see scale). The number in parenthesis following the station letter is the water depth of the station and the number at the tip of the arrow indicates the depth of the measurement in meters.

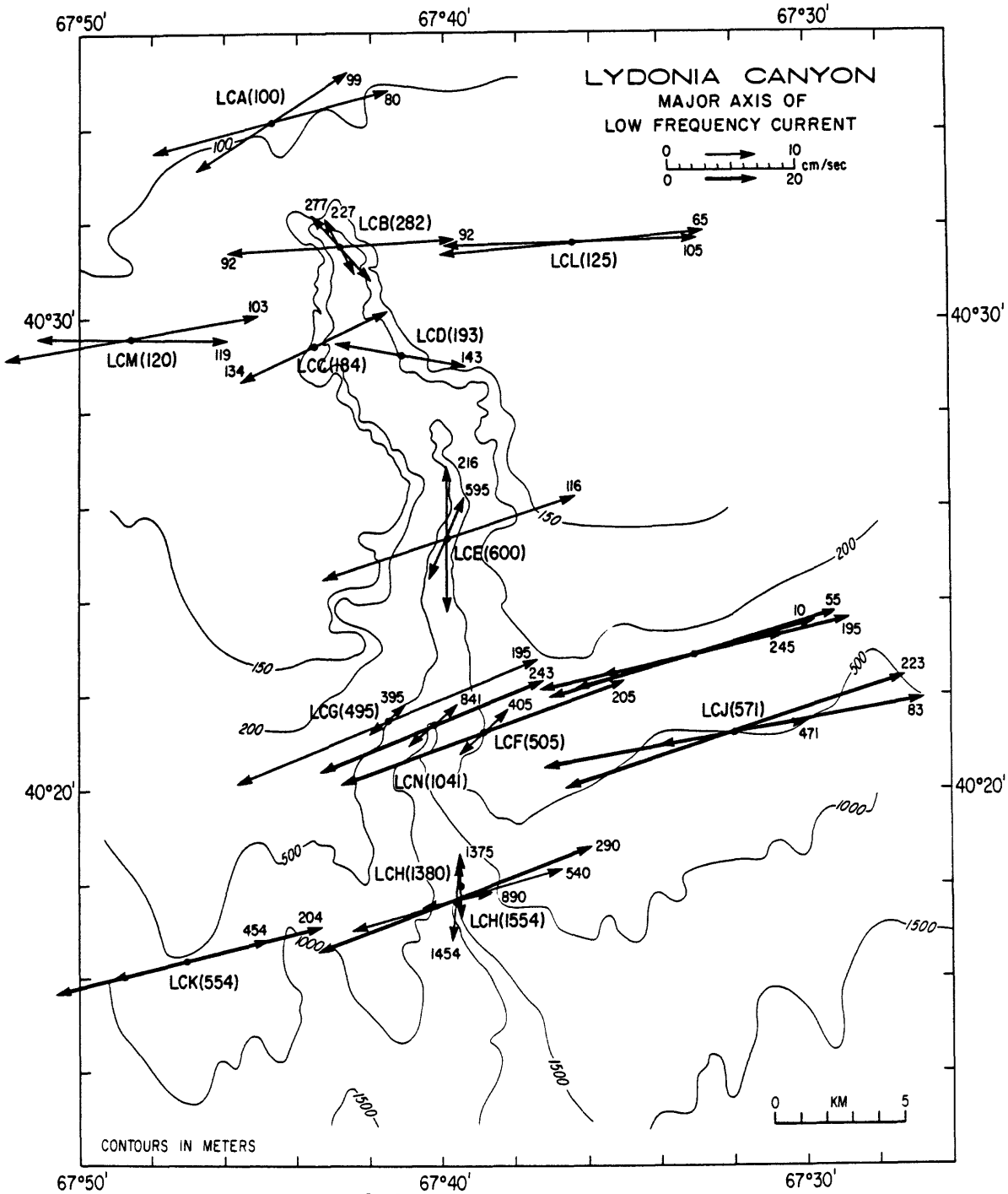


Figure 11. Principal axis of low-frequency currents during deployment I of the Lydonia Canyon moored array. The two-headed arrows indicate the orientation of the major axis and the half length of the arrow is the magnitude of the major axis in cm/s. Two speed scales are used (heavy arrows indicate currents twice as strong as the light arrows). The number in parenthesis following the station letter is the water depth at the station in m, and the number at the tip of the arrows is the depth of the measurement in meters.

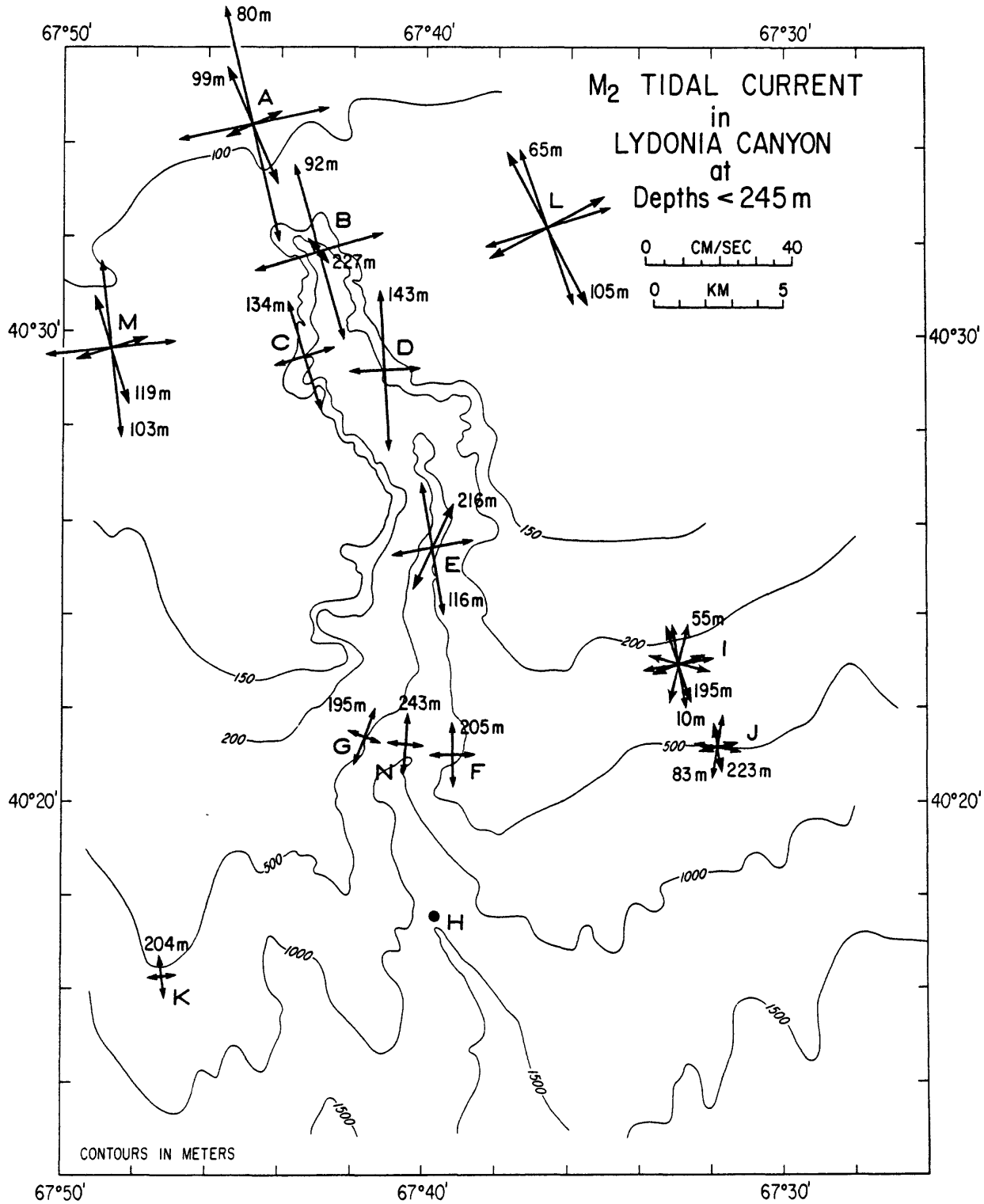


Figure 12a. Semidiurnal tidal currents at depths less than 245 m from the sea surface. The amplitude and orientation of the major and minor axis of the rotary tidal currents are shown by two-headed arrows. The number at the tip of the arrows indicates the depth of the observation in meters.

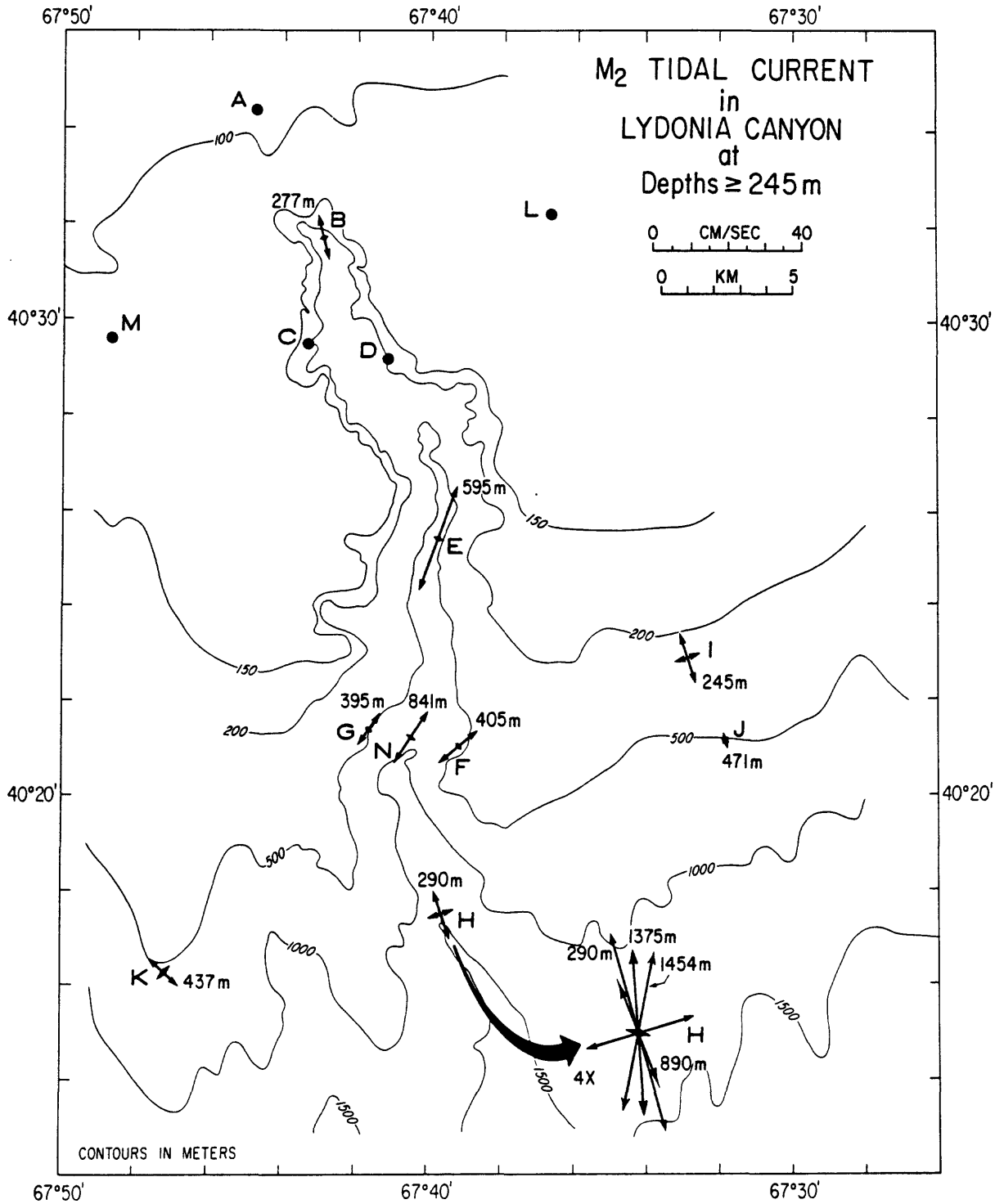


Figure 12b. Semidiurnal tidal currents at depths greater than 245 m from the sea surface. The amplitude and orientation of the major and minor axis of the rotary tidal currents are shown by two-headed arrows. The number at the tip of the arrows indicates the depth of the observation in meters

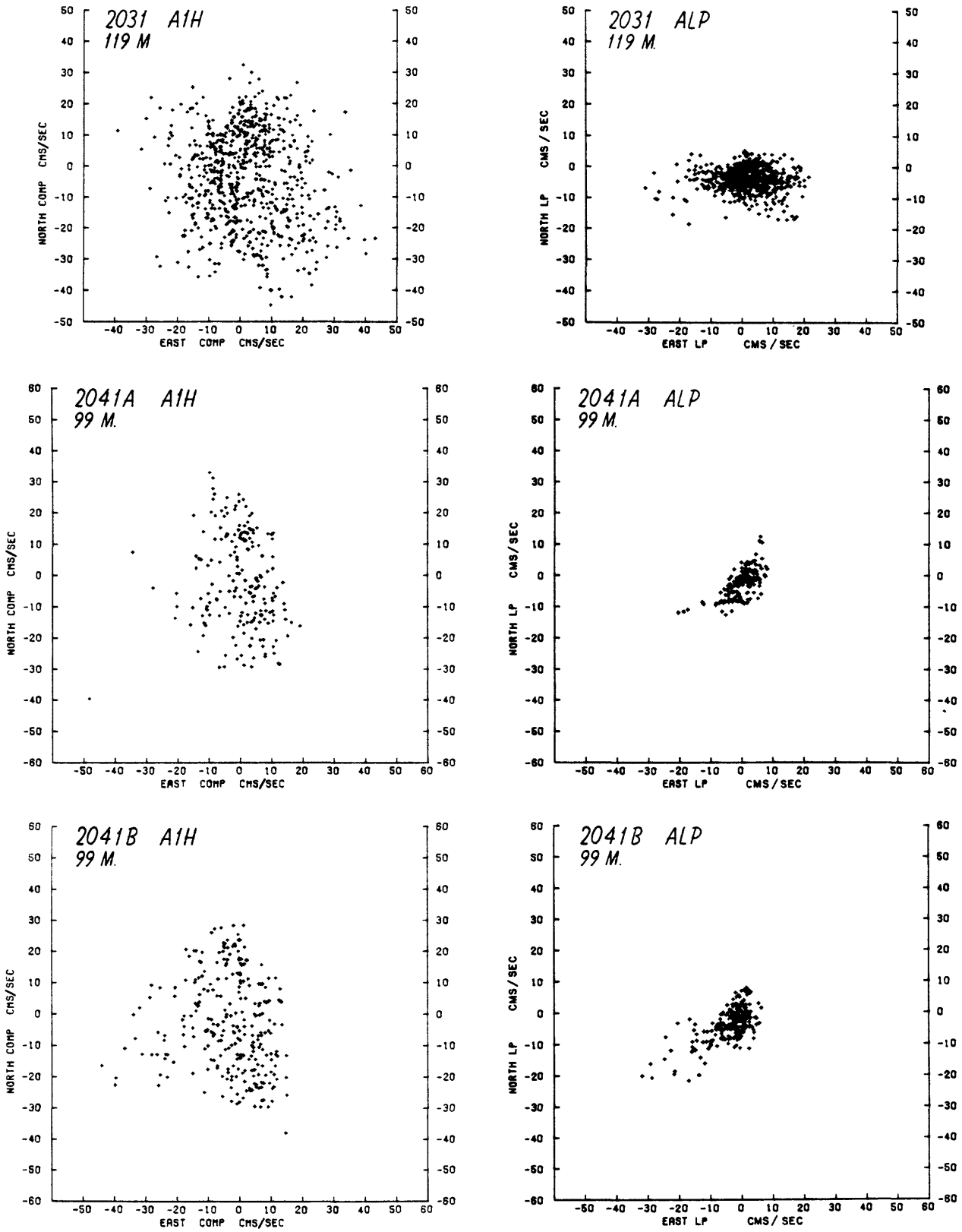


Figure 13a. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 203, 204.

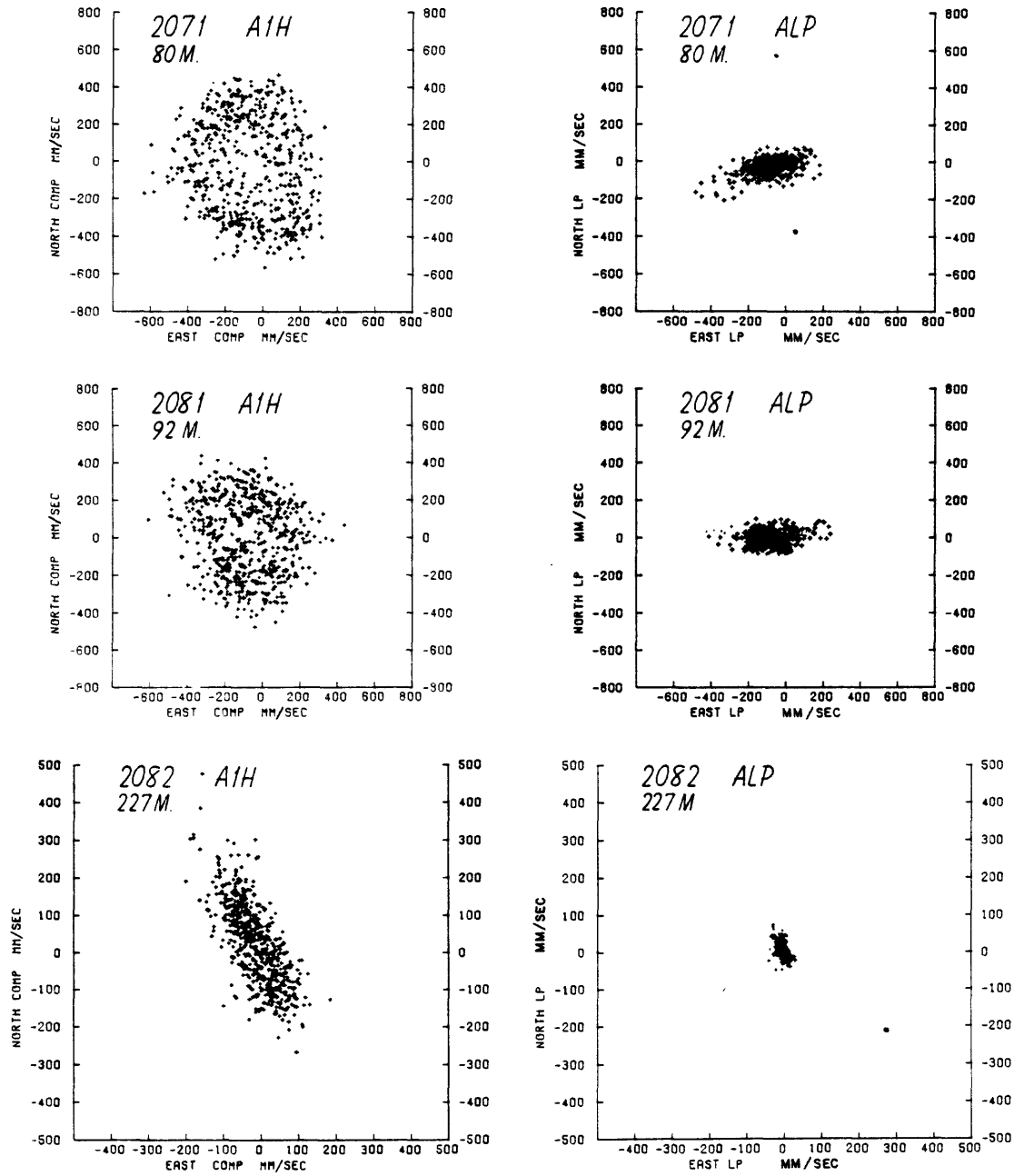


Figure 13b. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 207, 2081, 2082.

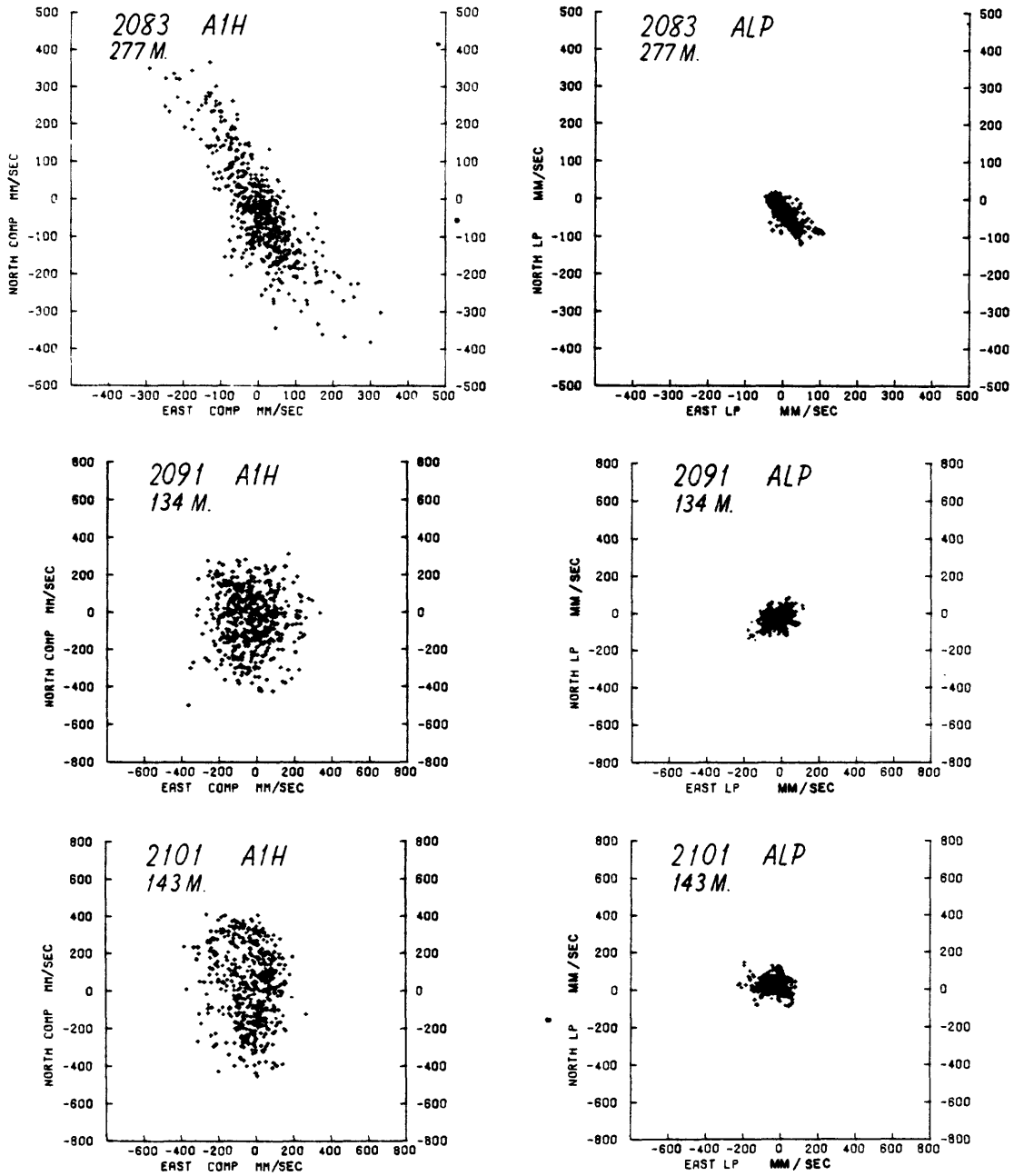


Figure 13c. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2083, 2091, 2101.

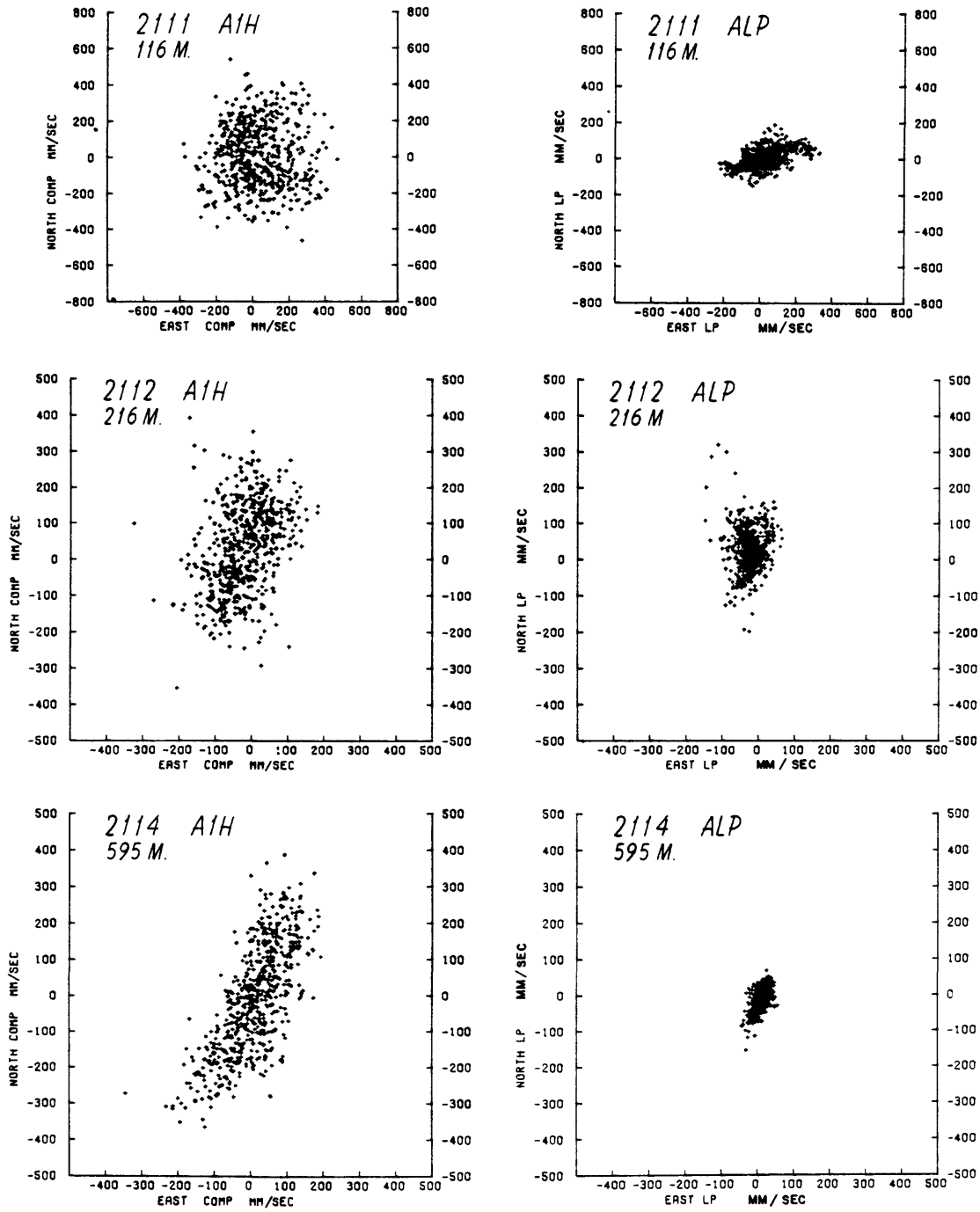


Figure 13d. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2111, 2112, 2114.

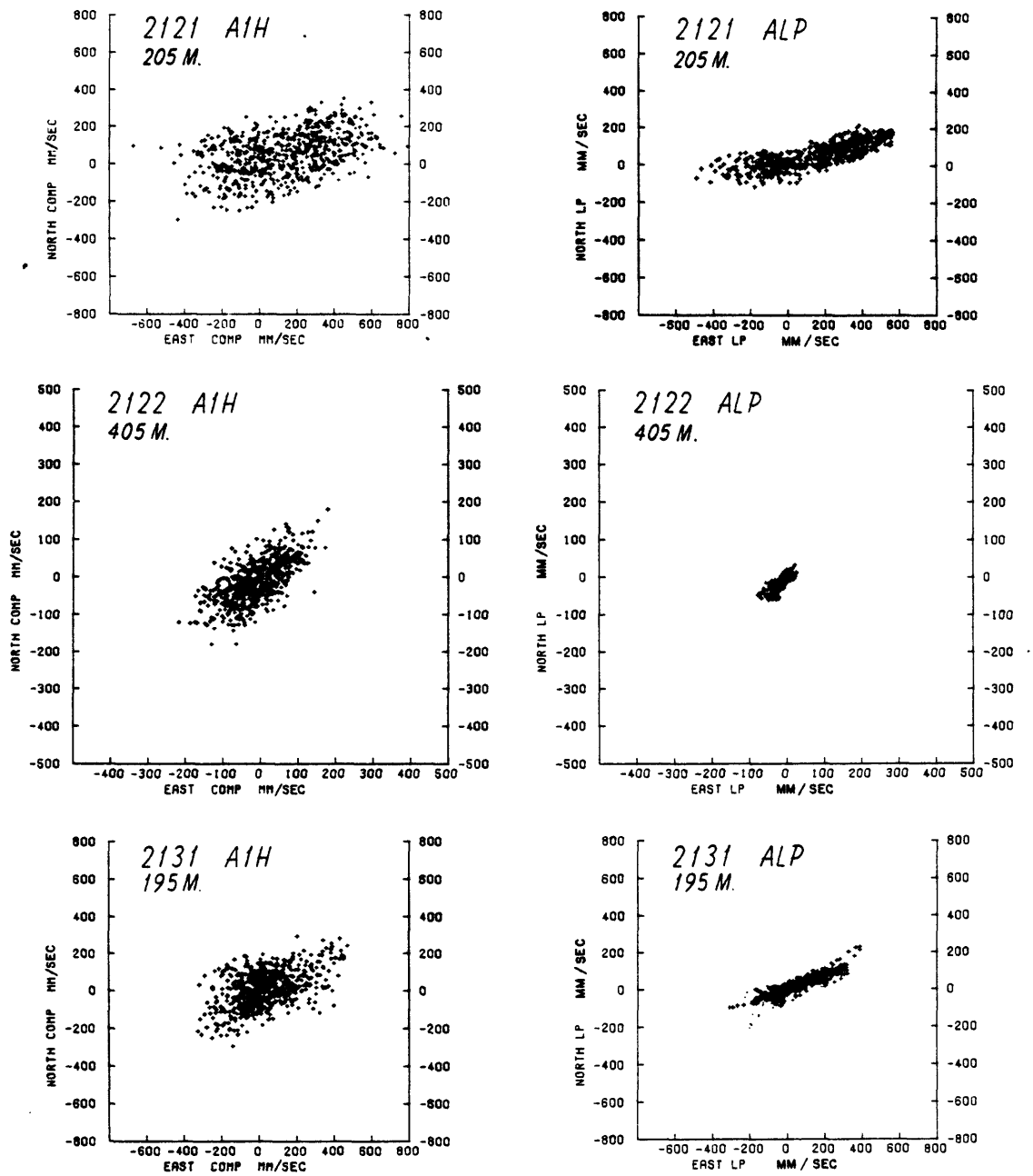


Figure 13e. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2121, 2122, 2131.

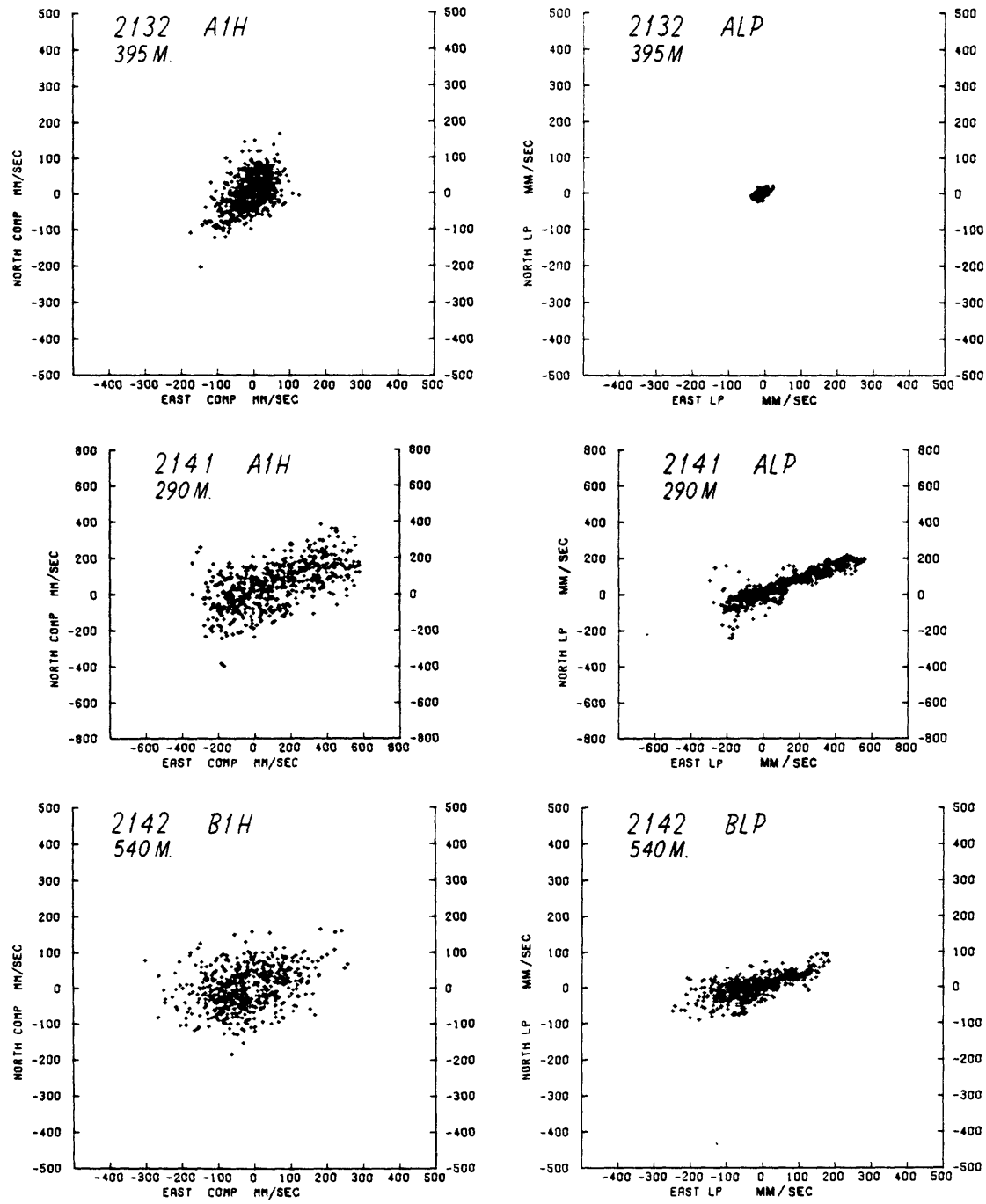


Figure 13f. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2132, 2141, 2142.

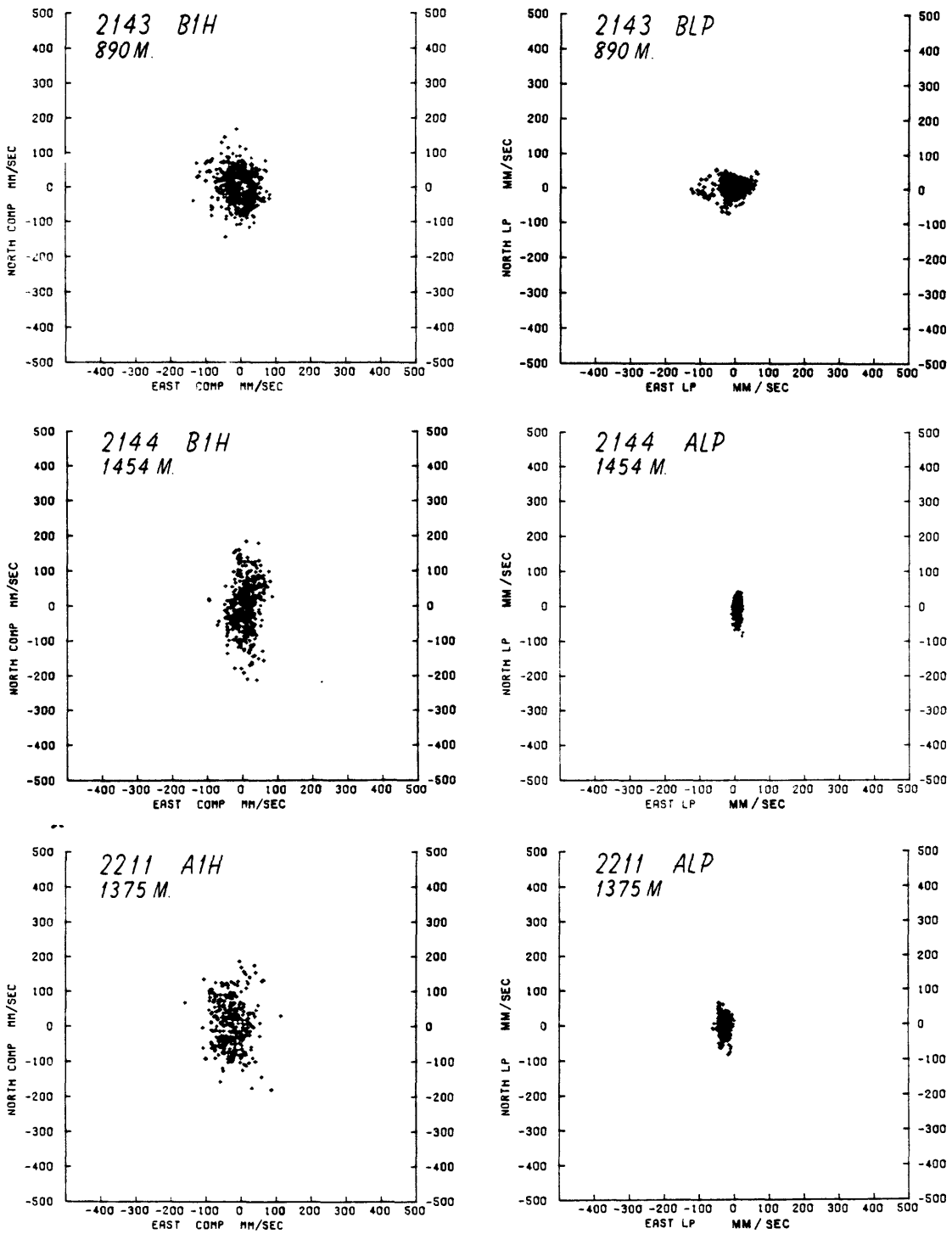


Figure 13g. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2143, 2144, 2211.

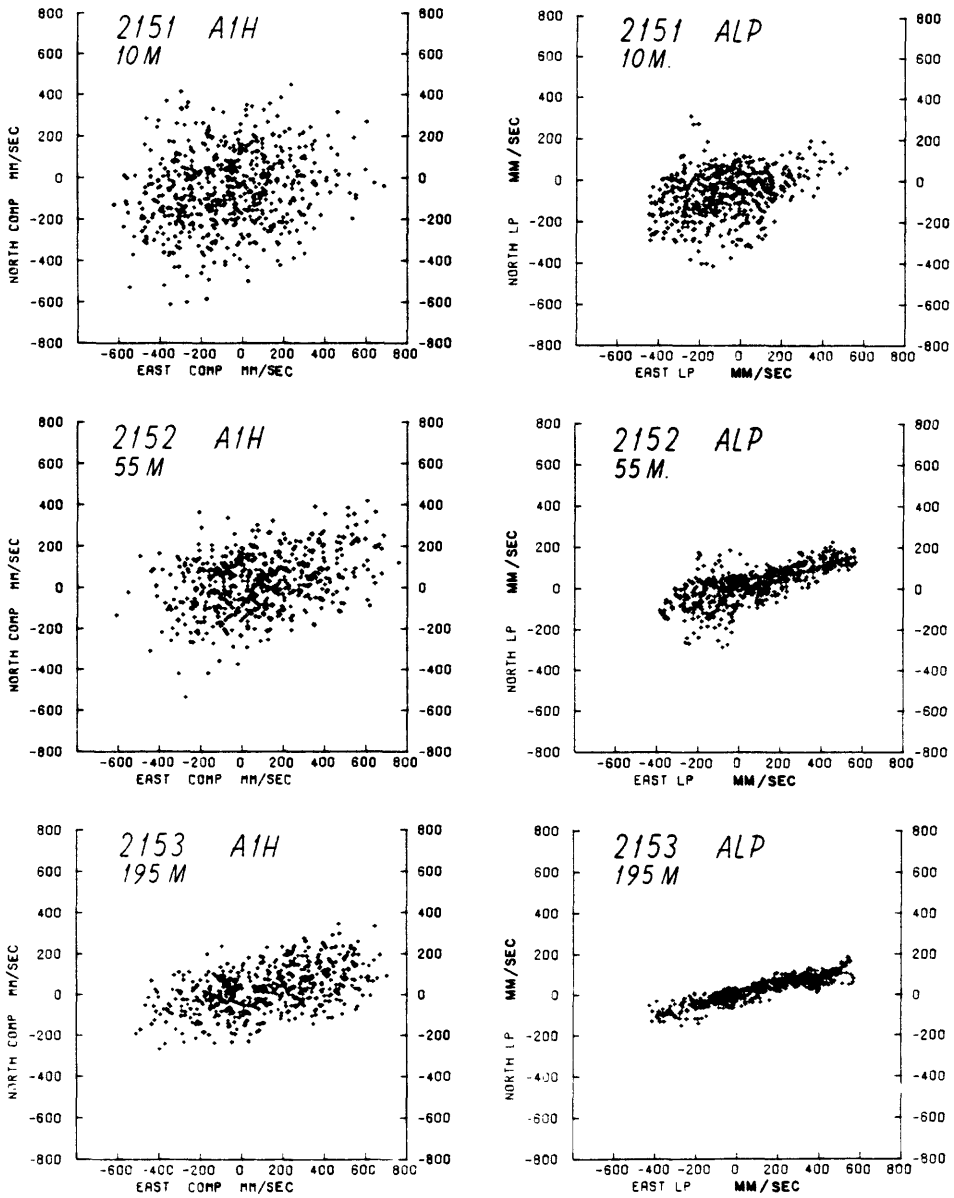


Figure 13h. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2151, 2152, 2153.

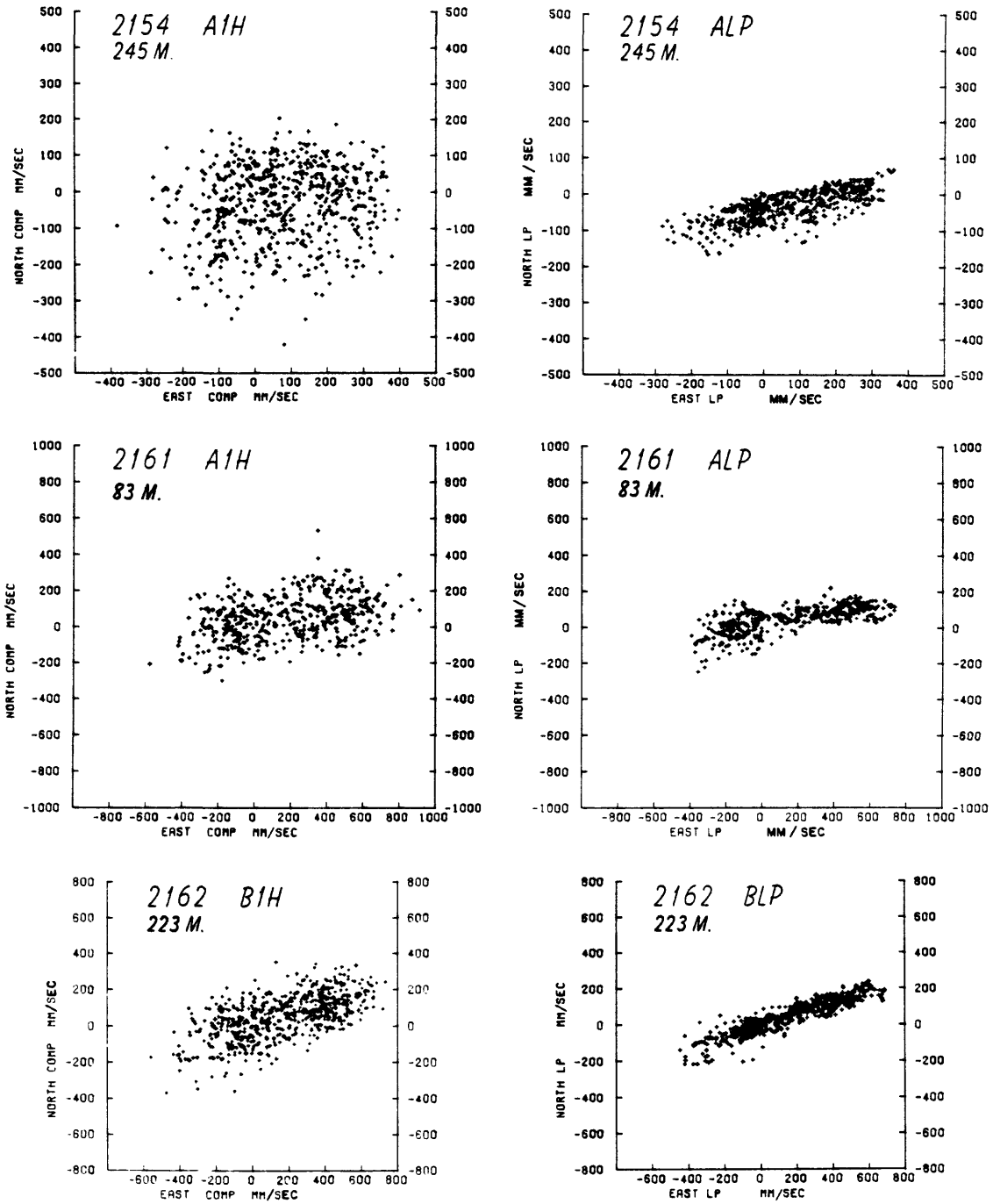


Figure 13i. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2154, 2161, 2162.

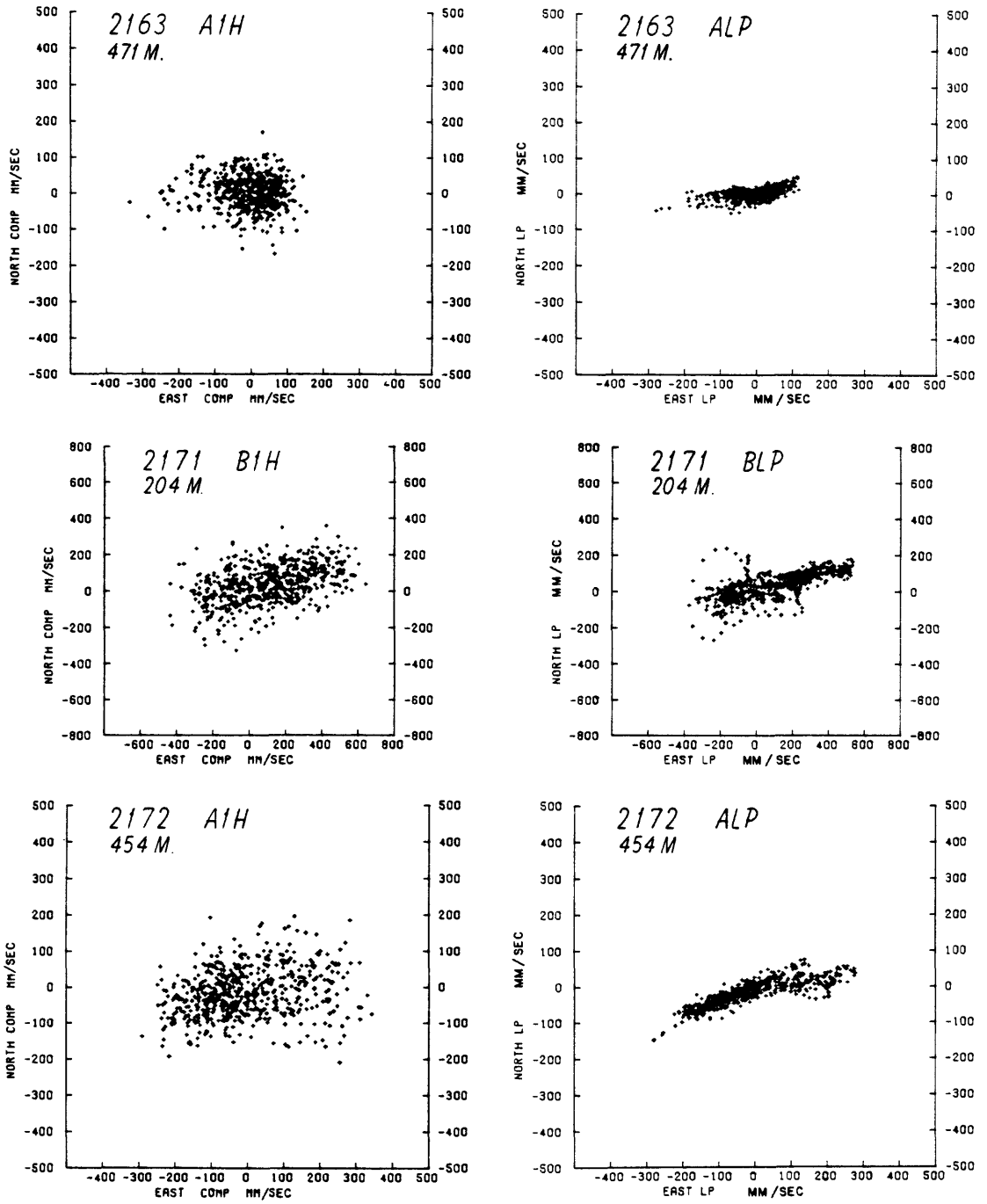


Figure 13j. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2163, 2171, 2172.

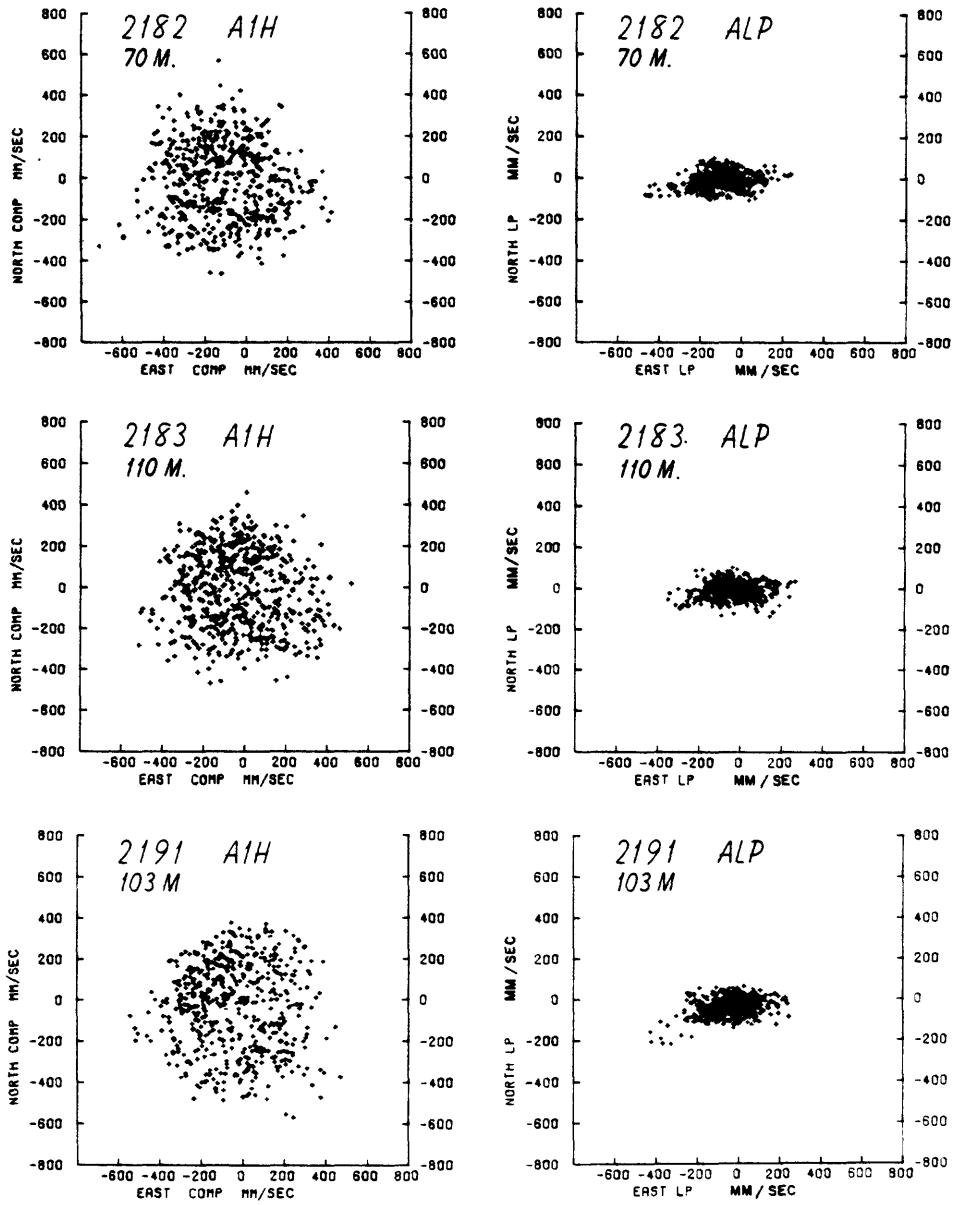


Figure 13k. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2182, 2183, 2191.

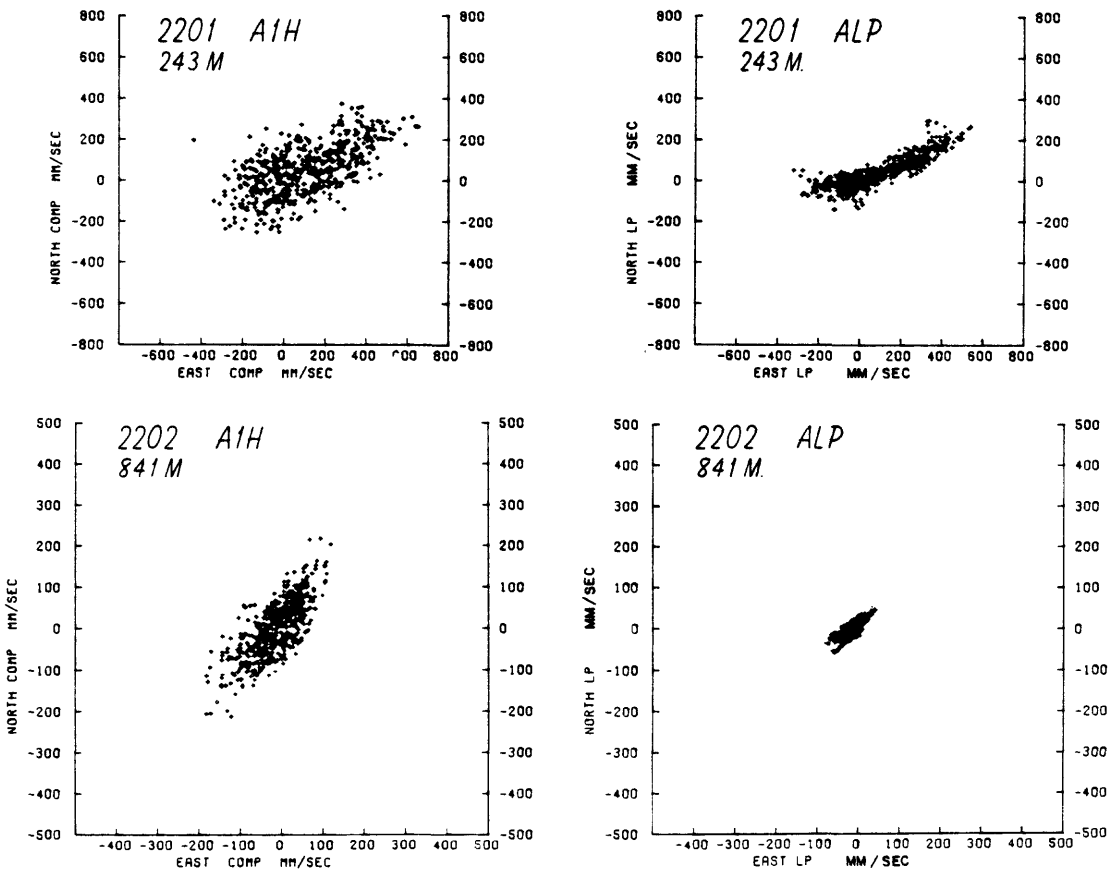
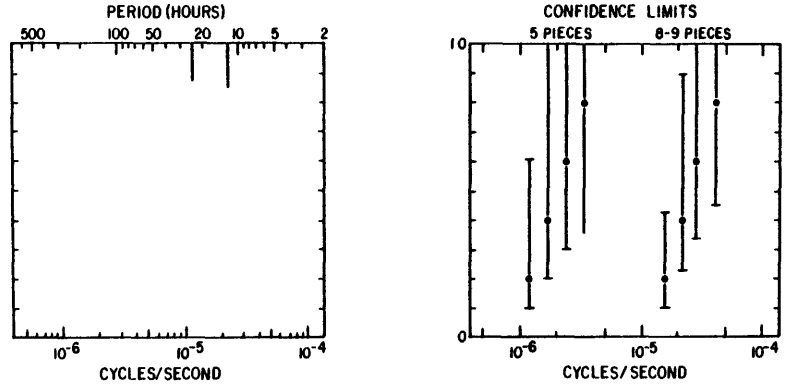


Figure 131. Scatterplots of hour-averaged (A1H) and low-passed (ALP) current data, records 2201, 2202.

Figure 14a. Variance conserving kinetic energy spectra. For each data record in 14a, the spectra were computed for each current component, for the total current, and for temperature. In some cases, the currents were rotated to either a longshelf/cross-shelf coordinate system (LS,CS) or to an upcanyon/cross-canyon (uc,cc) coordinate system; the orientation of the coordinate system is listed in each caption. The spectral estimates were computed from the hour-averaged time series. The estimates were computed from hanned and overlapped data pieces 720 hours long. The confidence limits (which are a function of amplitude in a variance-conserving spectral plot and depend on the number of data pieces) are shown in figure 14a. In the variance-conserving spectra, the energy in each frequency band times the frequency of the band is plotted on a linear scale vs. the log of the frequency. Thus, the area under the spectral curve

$$(\int f \cdot A(f)\ d\ (\log\ f) = \frac{1}{2.3} \int f \cdot A(f)\ d\ (\ln f) = \frac{1}{2.3} \int A\ (f)\ df$$

is the total variance of the data record (divided by 2.3). In figures 14b-m, the data records are organized from shallow to deep at each station. The number in parenthesis following the record number is the number of data pieces used to compute the spectra.



Detailed spectral axes showing periods (left) and confidence limits for 20, 40, 60, and 80% of full scale for 5, 8-9, and 10-11 data pieces.

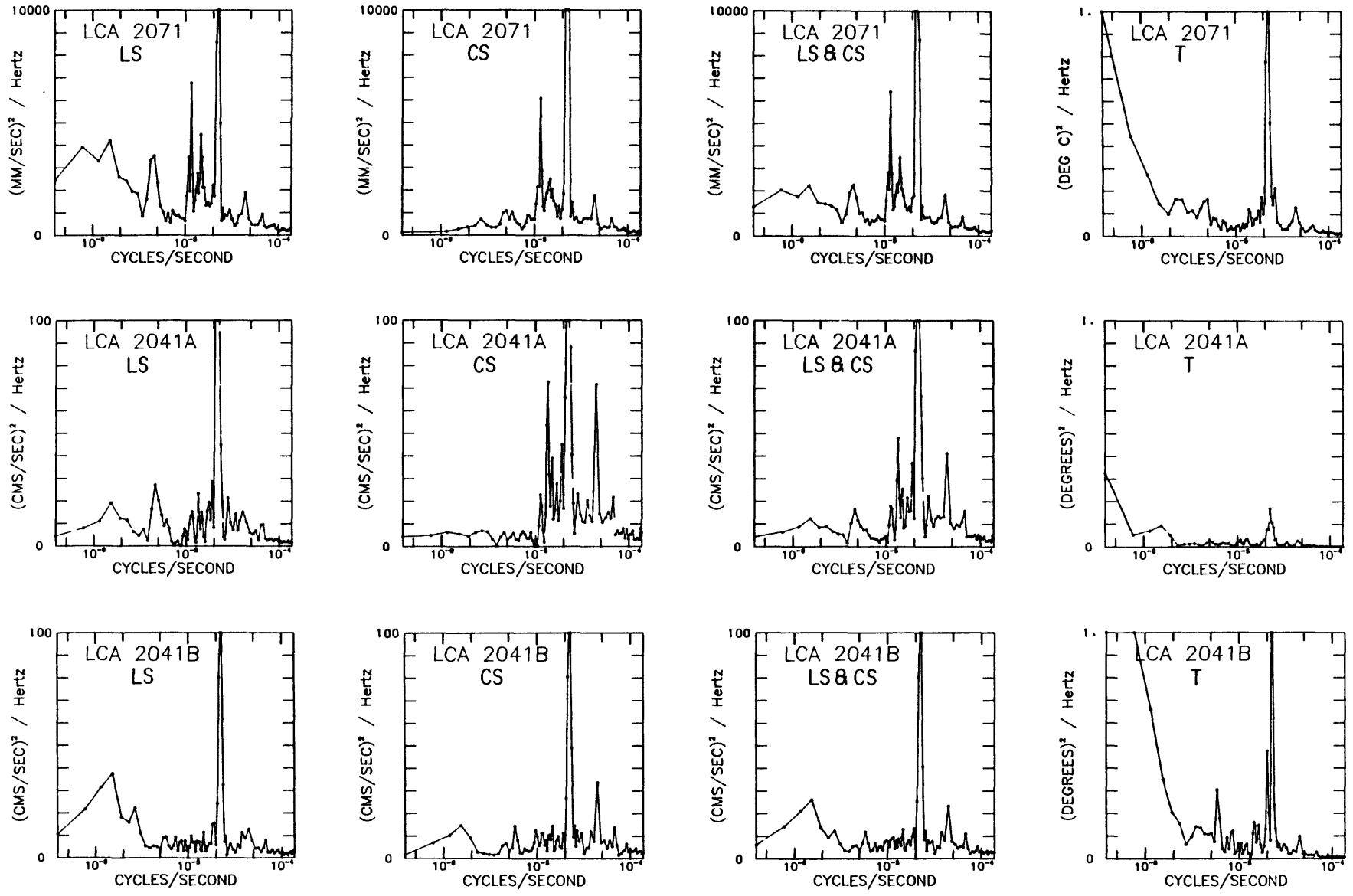


Figure 14b. Station LCA, Records 2071, 2041A, 2041B; see figure 14a for full explanation. Record 2071 (8), longshelf 75°, cross-shelf 345°; Record 2041A (2), longshelf 75°, cross-shelf 345°; Record 2041B (3) longshelf 75°, cross-shelf 345°.

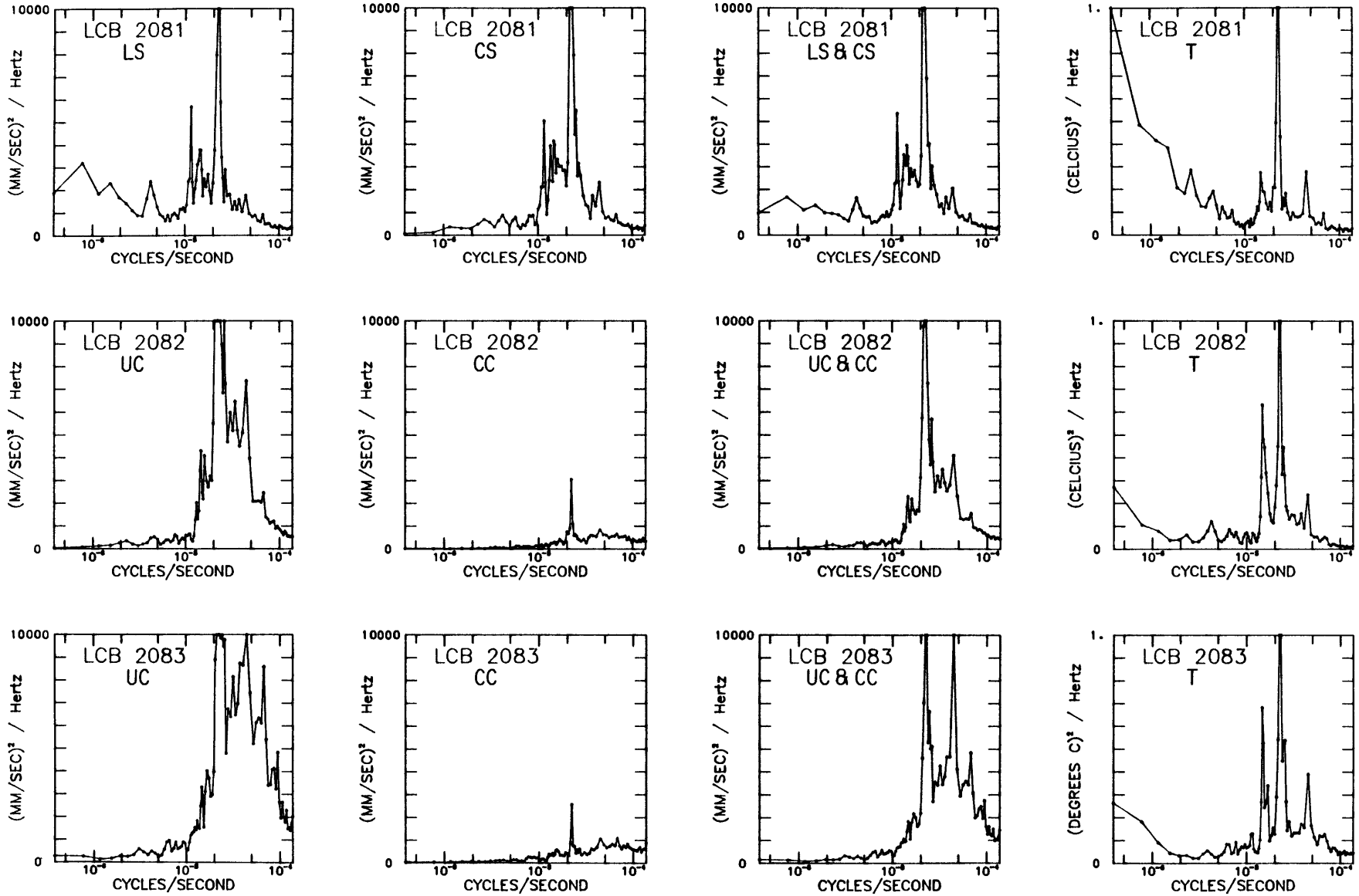


Figure 14c. Station LCB; see figure 14a for full explanation.
Record 2081 (9), longshelf 85°, cross-shelf 345°; Record 2082 (9), upcanyon 333°, cross-canyon 63°; Record 2083 (8), upcanyon 333°, cross-canyon 63°.

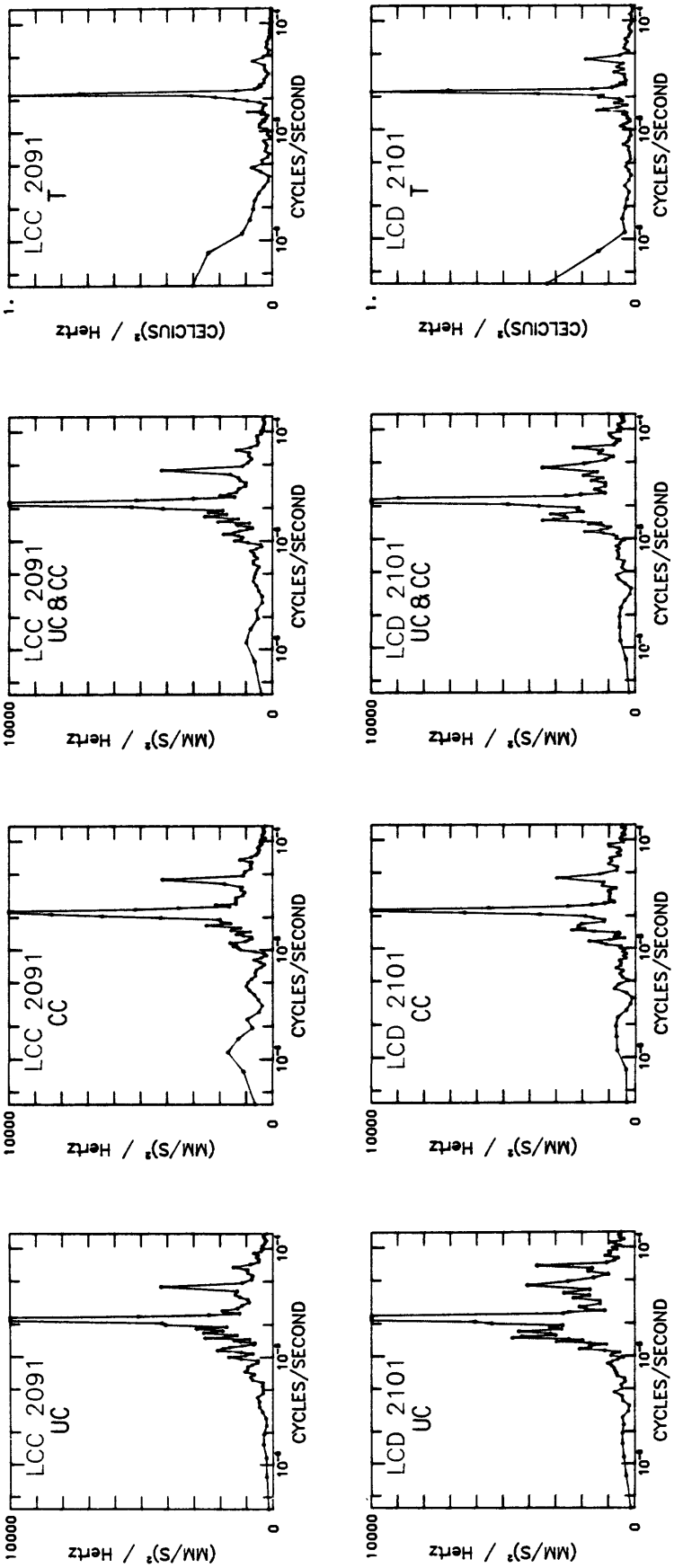


Figure 14d. Stations LCC and LCD; see figure 14a for full explanation. Record 2091 (9), upcanyon 340°, cross-canyon 70°; Record 2101 (7), upcanyon 340°, cross-canyon 70°.

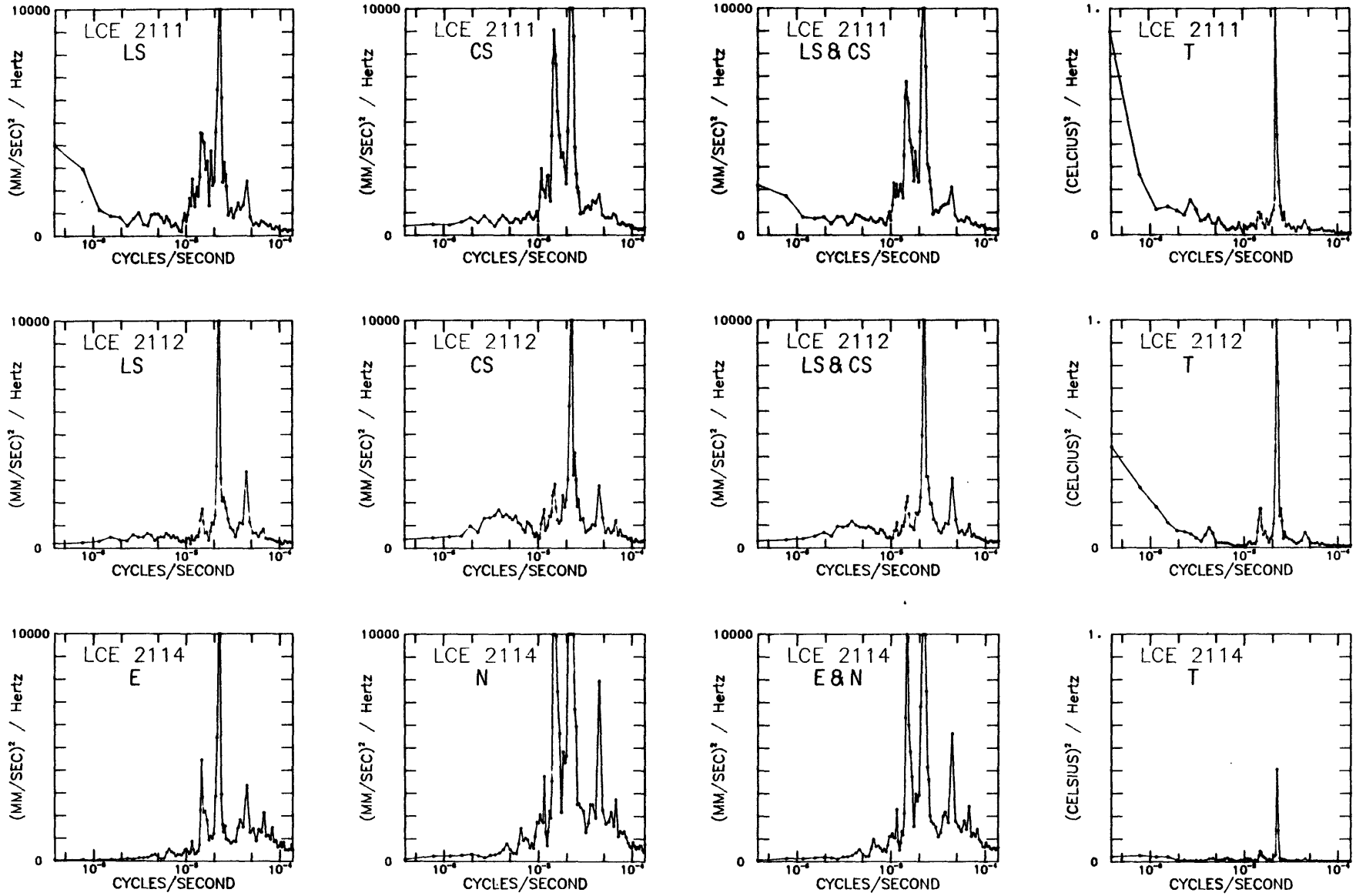


Figure 14e. Station LCE; see figure 14a for full explanation. Record 2111 (9), longshelf 70°, cross-shelf 340°; Record 2112 (9), longshelf 70°, cross-shelf 340°; Record 2114 (9), east, north.

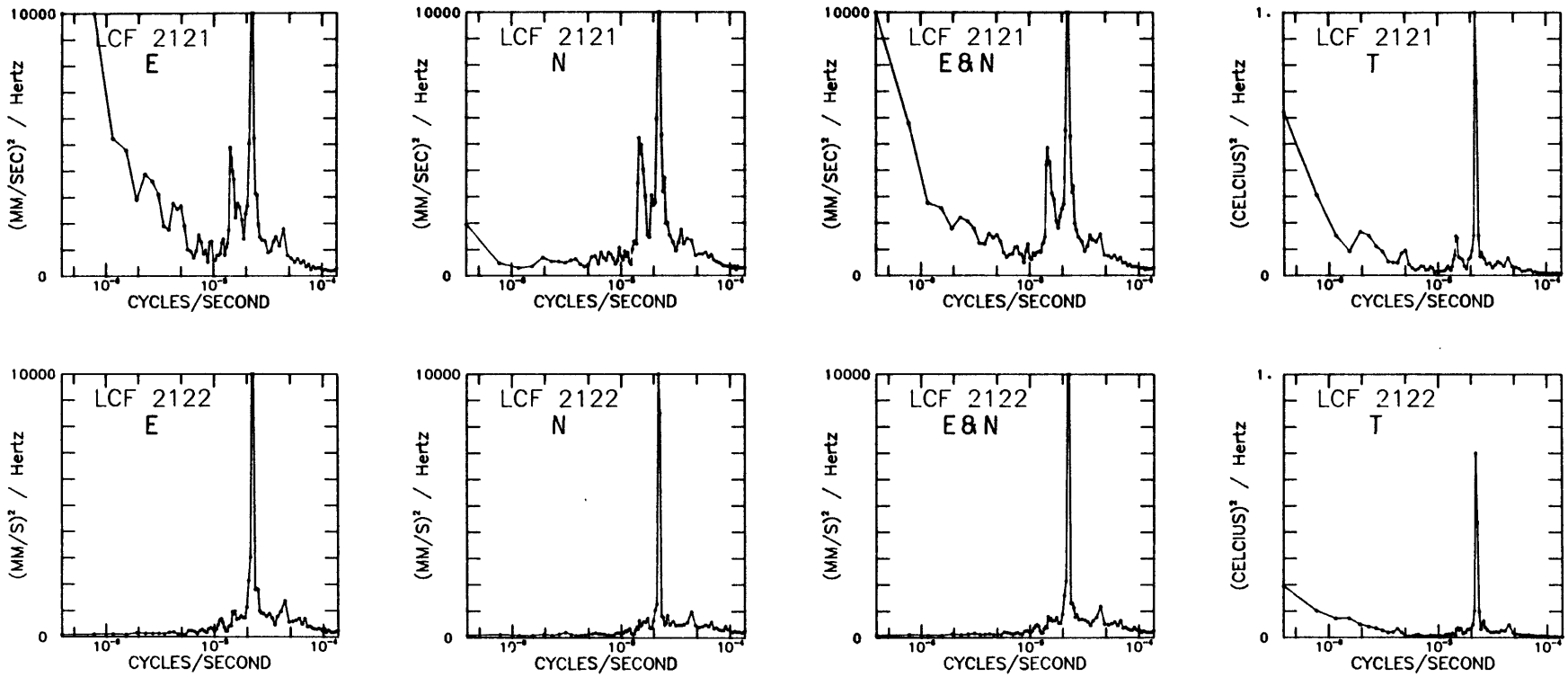


Figure 14f. Station LCF; see figure 14a for full explanation.
Record 2121 (10), east and north; Record 2122 (11), east and north.

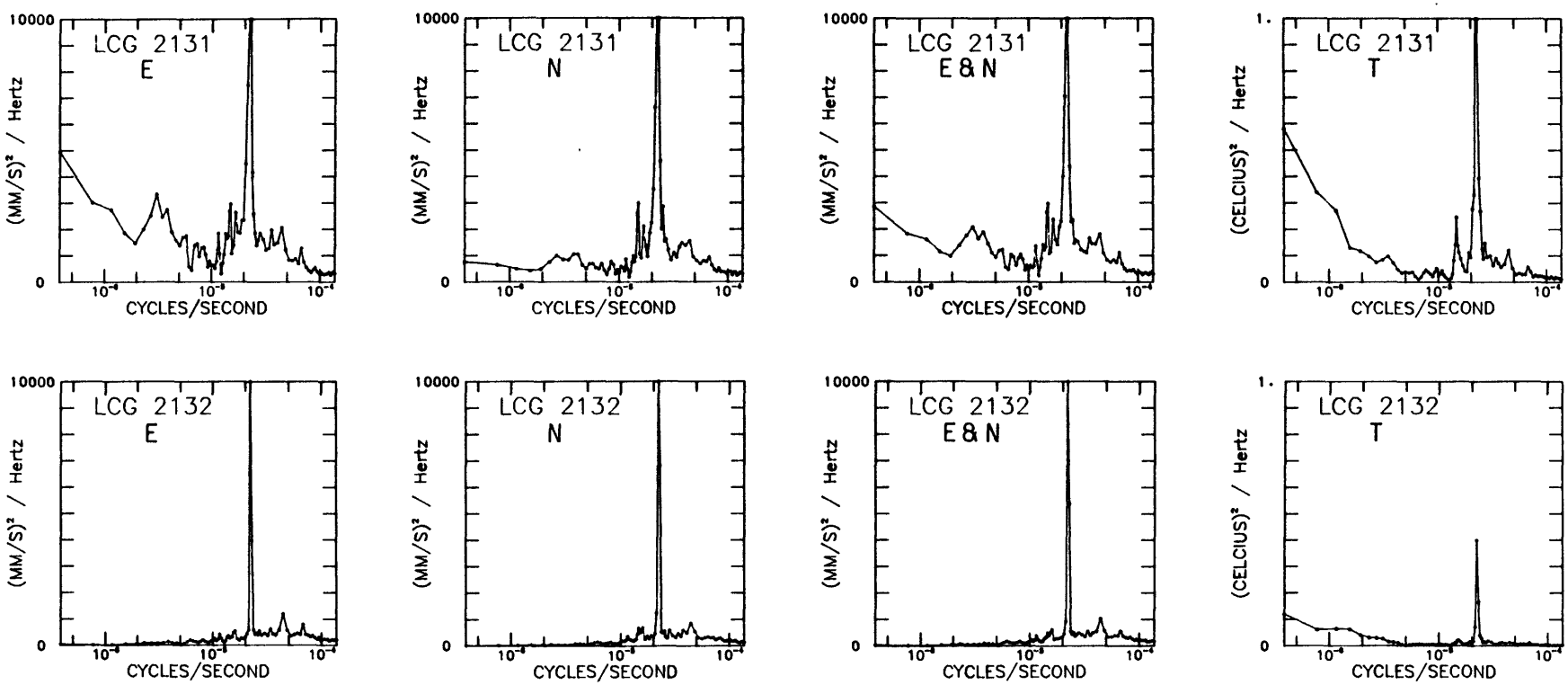


Figure 14g. Station LCG; see figure 14a for full explanation.
Record 2131 (11), east and north; Record 2132 (11), east and north.

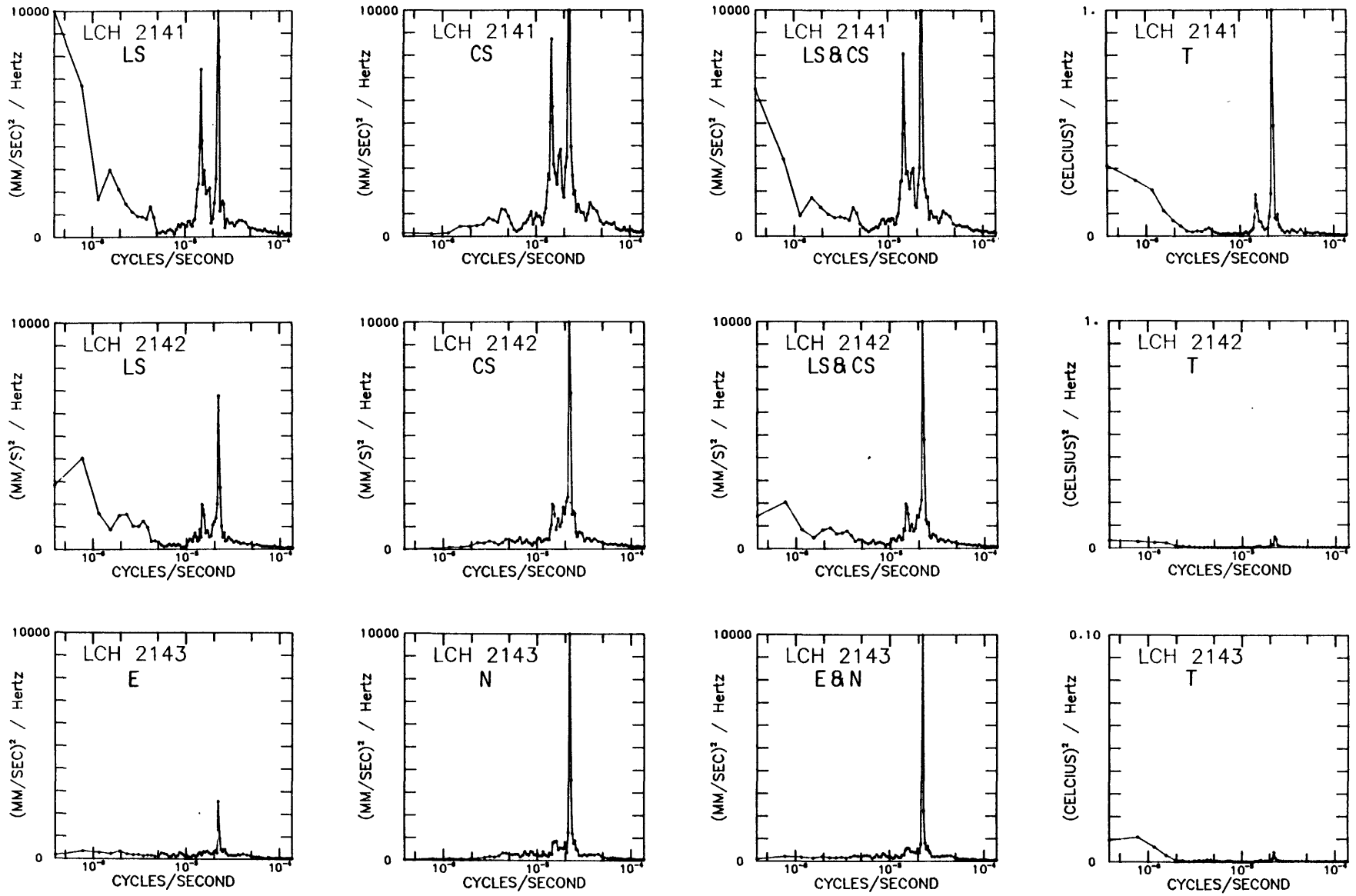


Figure 14h. Station LCH; see figure 14a for full explanation. Record 2141 (8), longshelf 70°, cross-shelf 340°; Record 2142 (8), longshelf 70°, cross-shelf 340°; Record 2143 (8), east and north.

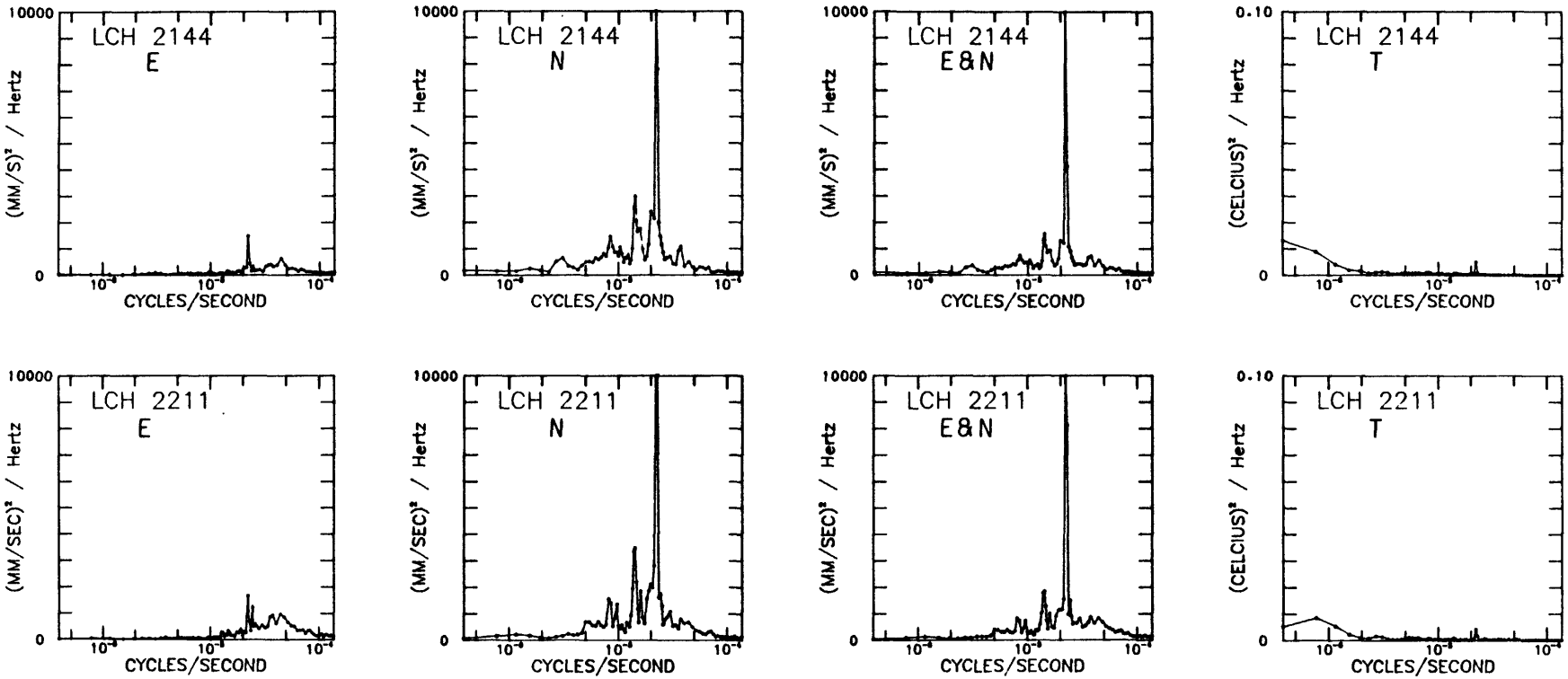


Figure 141. Station LCH; see figure 14a for full explanation.
Record 2144 (7), east and north; Record 2211 (5), east and north.

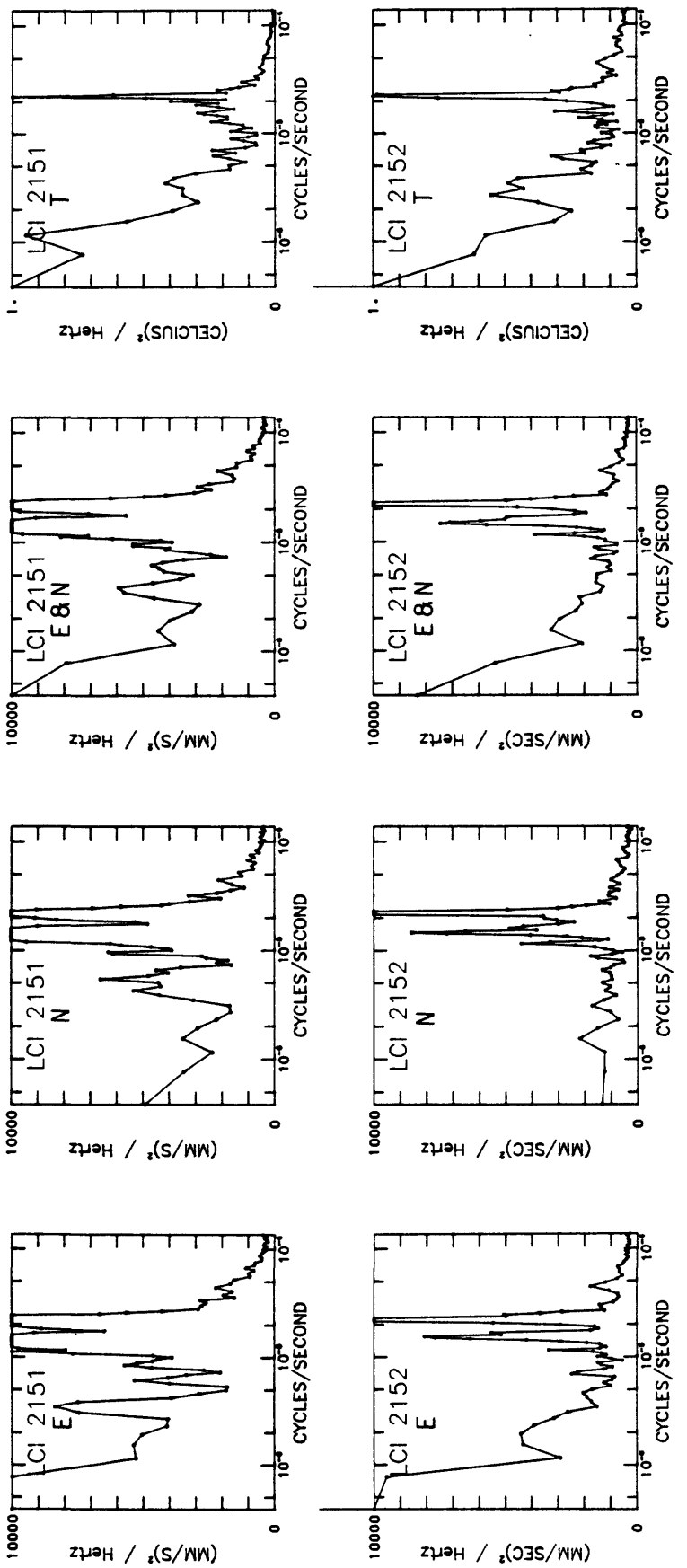


Figure 14j. Station LCI; see figure 14a for full explanation. Record 2151 (9), east and north; Record 2152 (8), east and north.

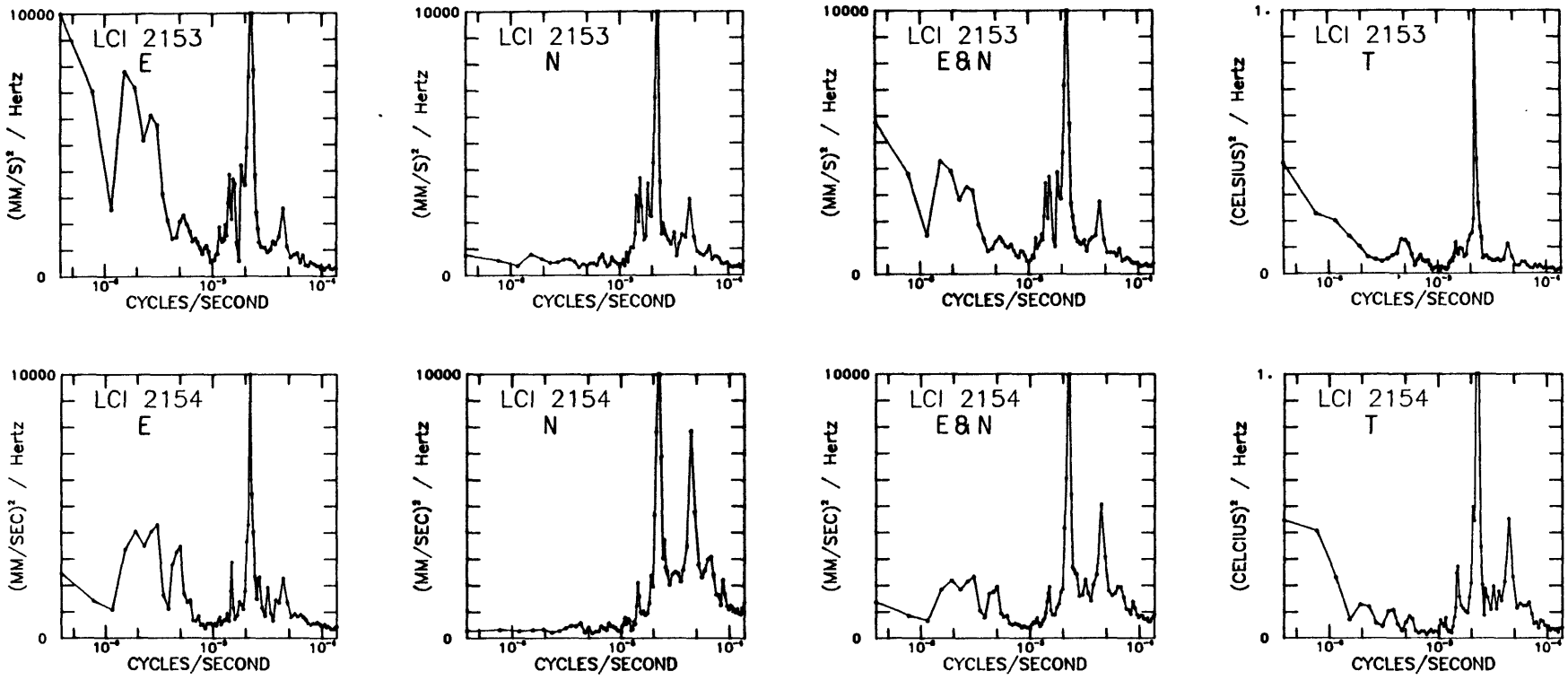


Figure 14k. Station LCI; see figure 14a for full explanation.
Record 2153 (8), east and north current; Record 2154 (8), east and north current.

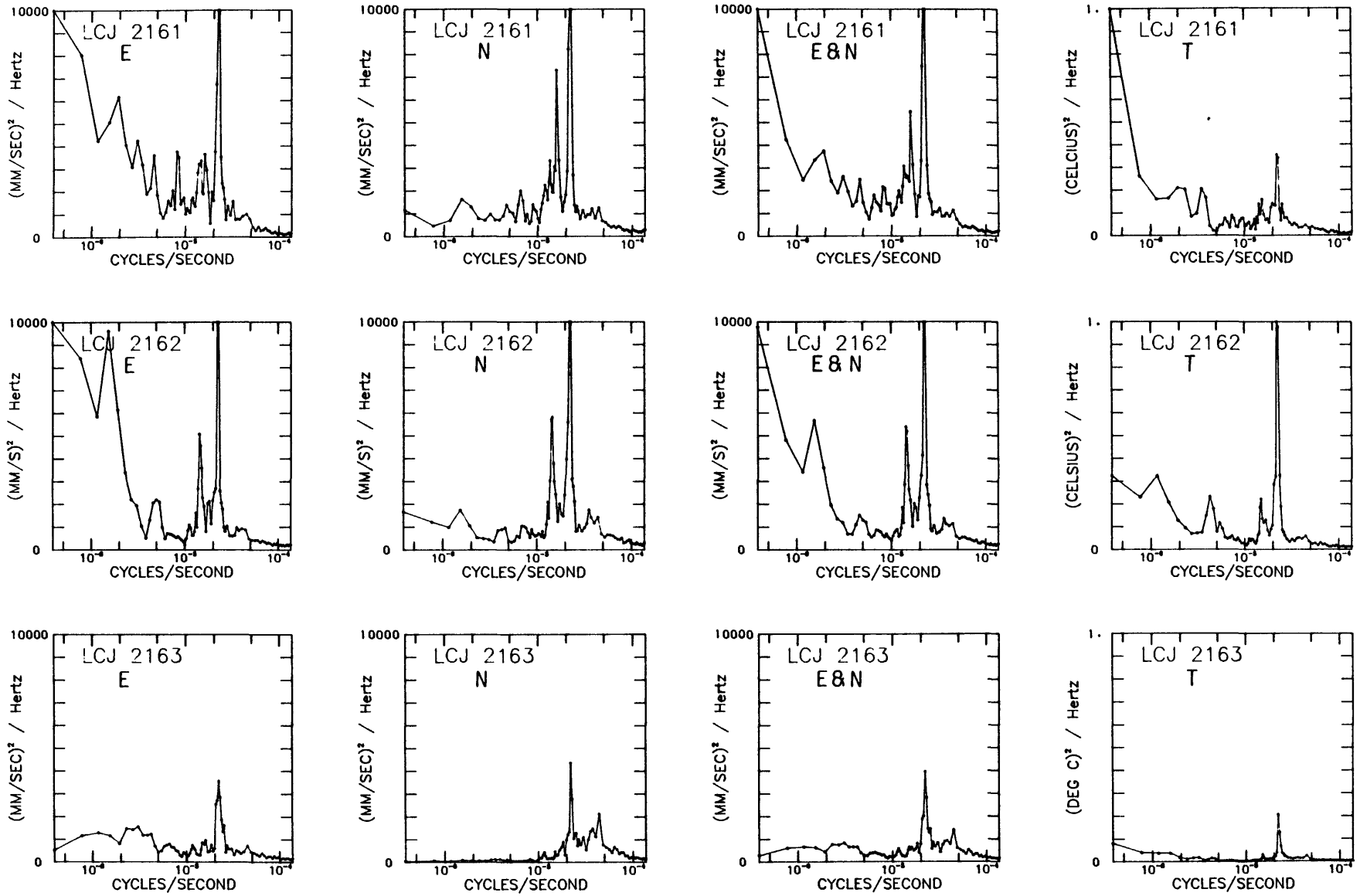


Figure 141. Station LCJ; see figure 14a for full explanation.
Record 2161 (7), east and north current; Record 2162 (9), east and north current; Record 2163 (9), east and north current.

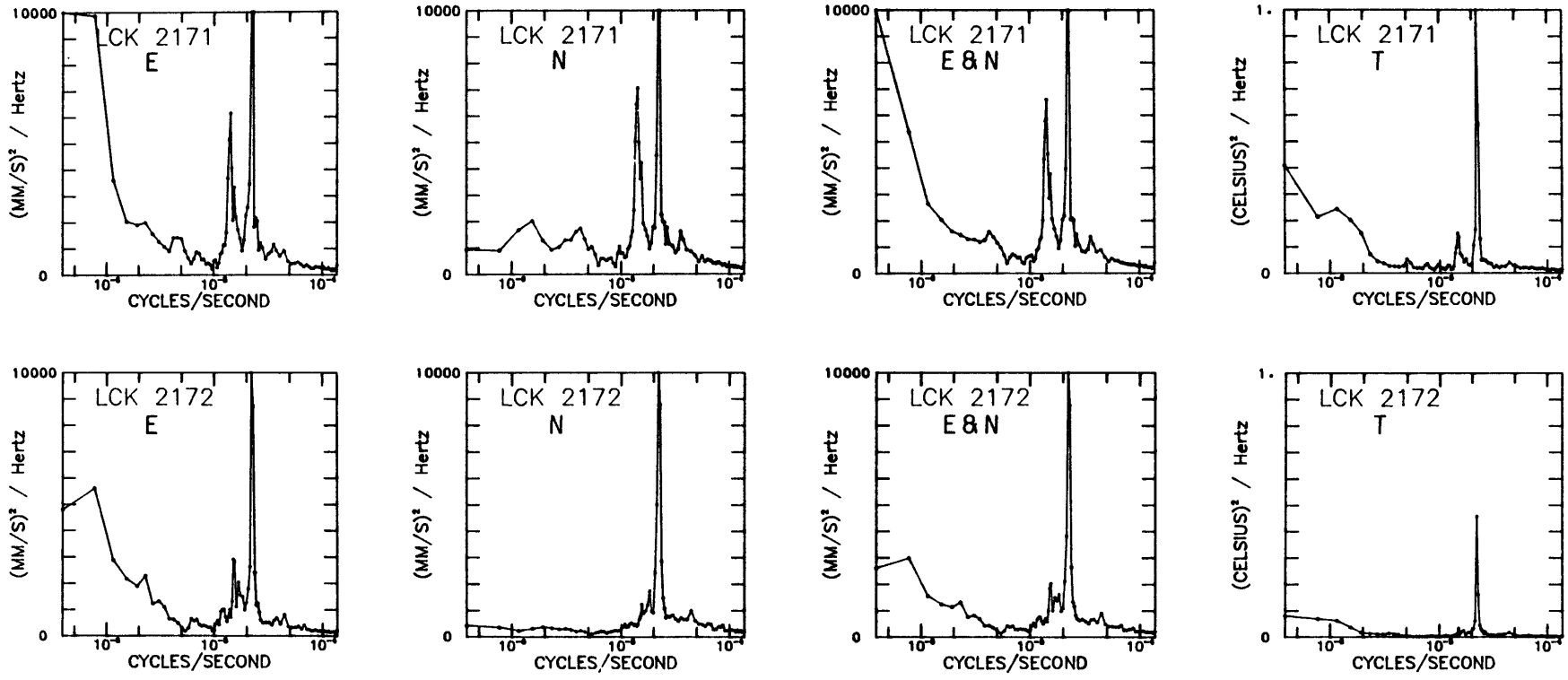


Figure 14m. Station LCK; see figure 14a for full explanation.
Record 2171 (9), east and north current; Record 2172 (9), east and north current.

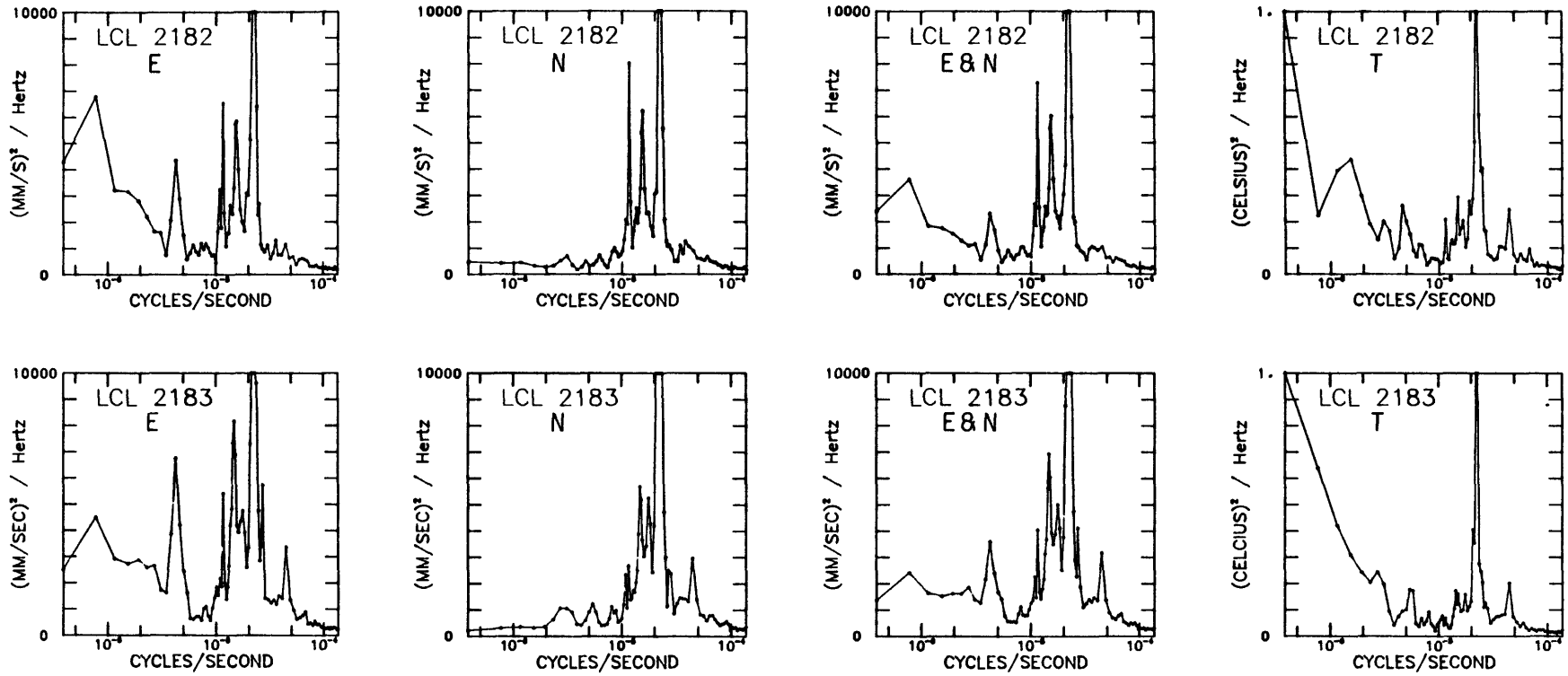


Figure 14n. Station LCL; see figure 14a for full explanation.
Record 2182 (8), east and north current; Record 2183 (8), east and north current.

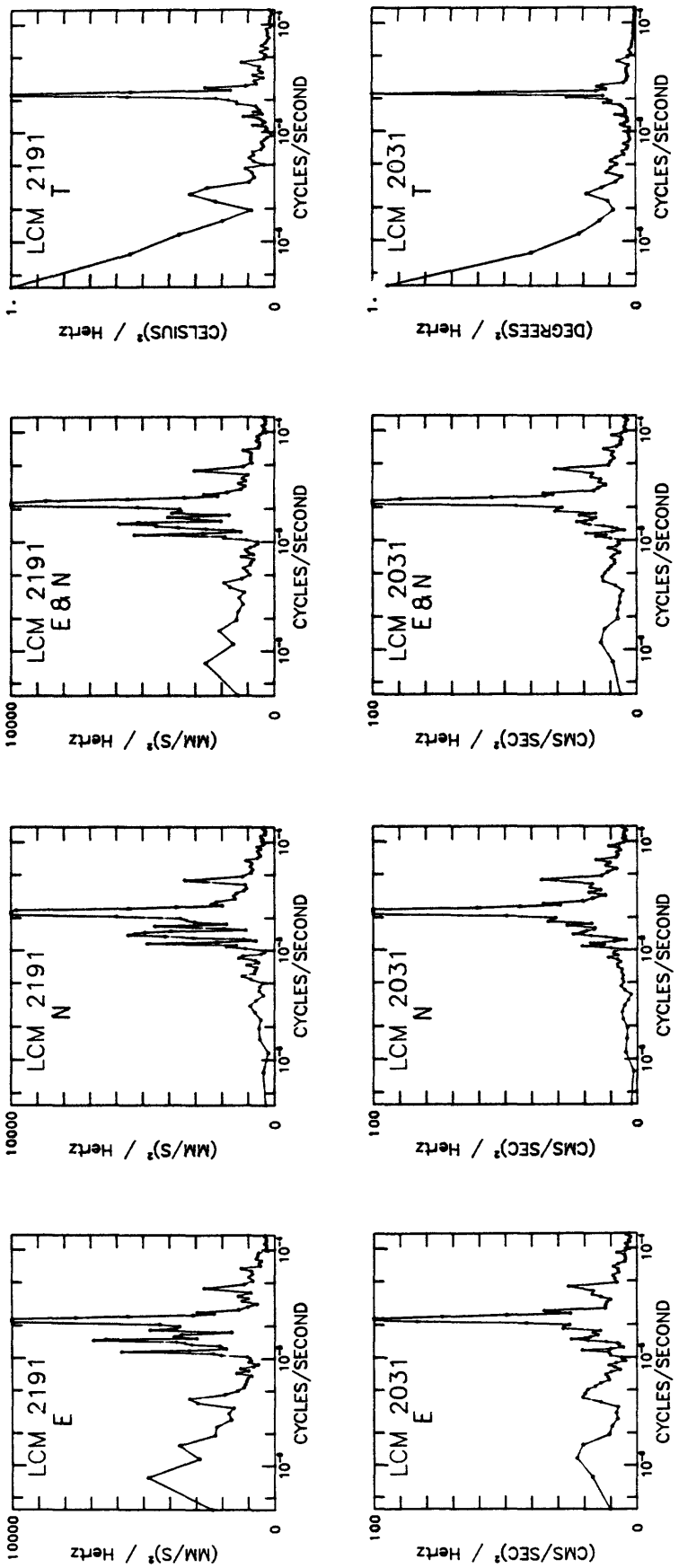


Figure 14o. Station LCM; see figure 14a for full explanation. Record 2191 (9), east and north current; Record 2031 (11), east and north current.

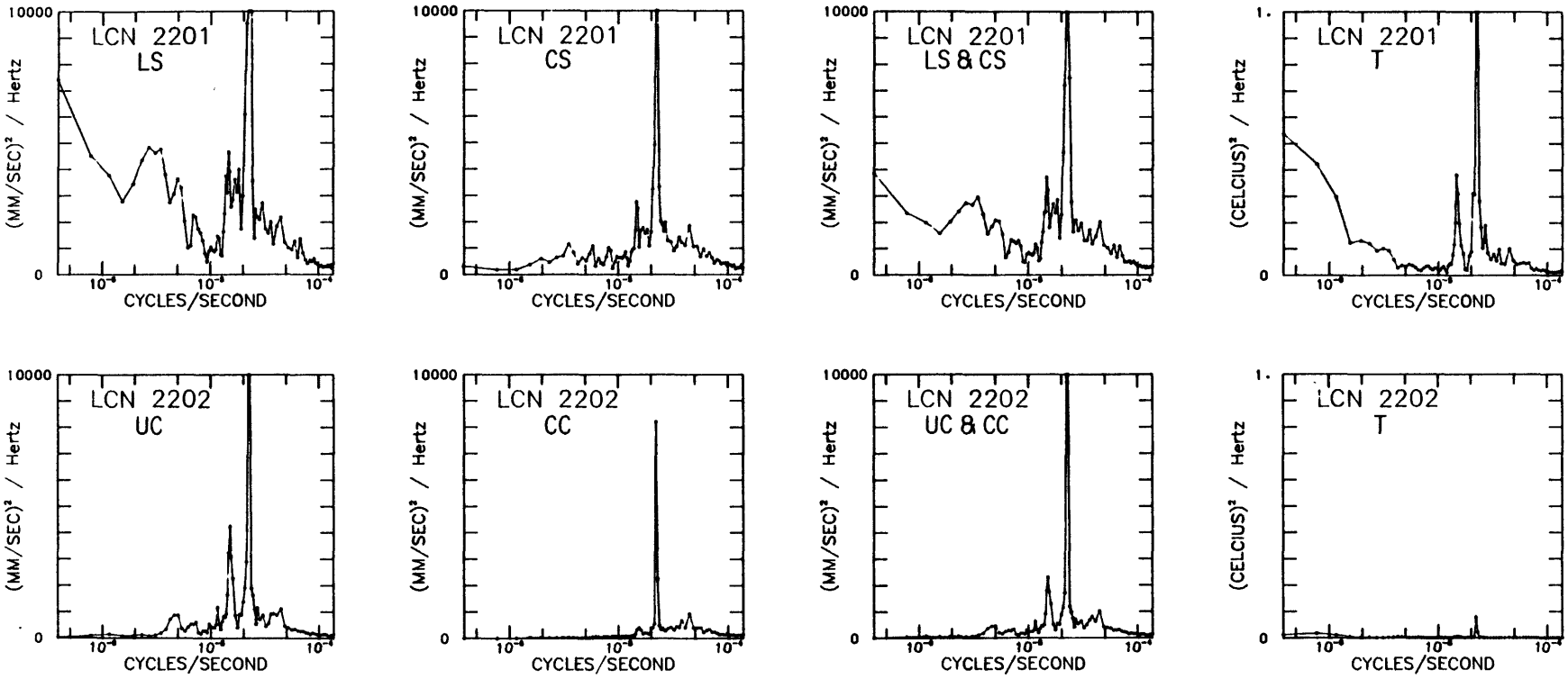


Figure 14p. Station LCN; see figure 14a for full explanation.
Record 2201 (8), long-shelf 70°, cross-shelf 340°; Record 2202 (8), upcanyon 49°, cross-canyon 139°.

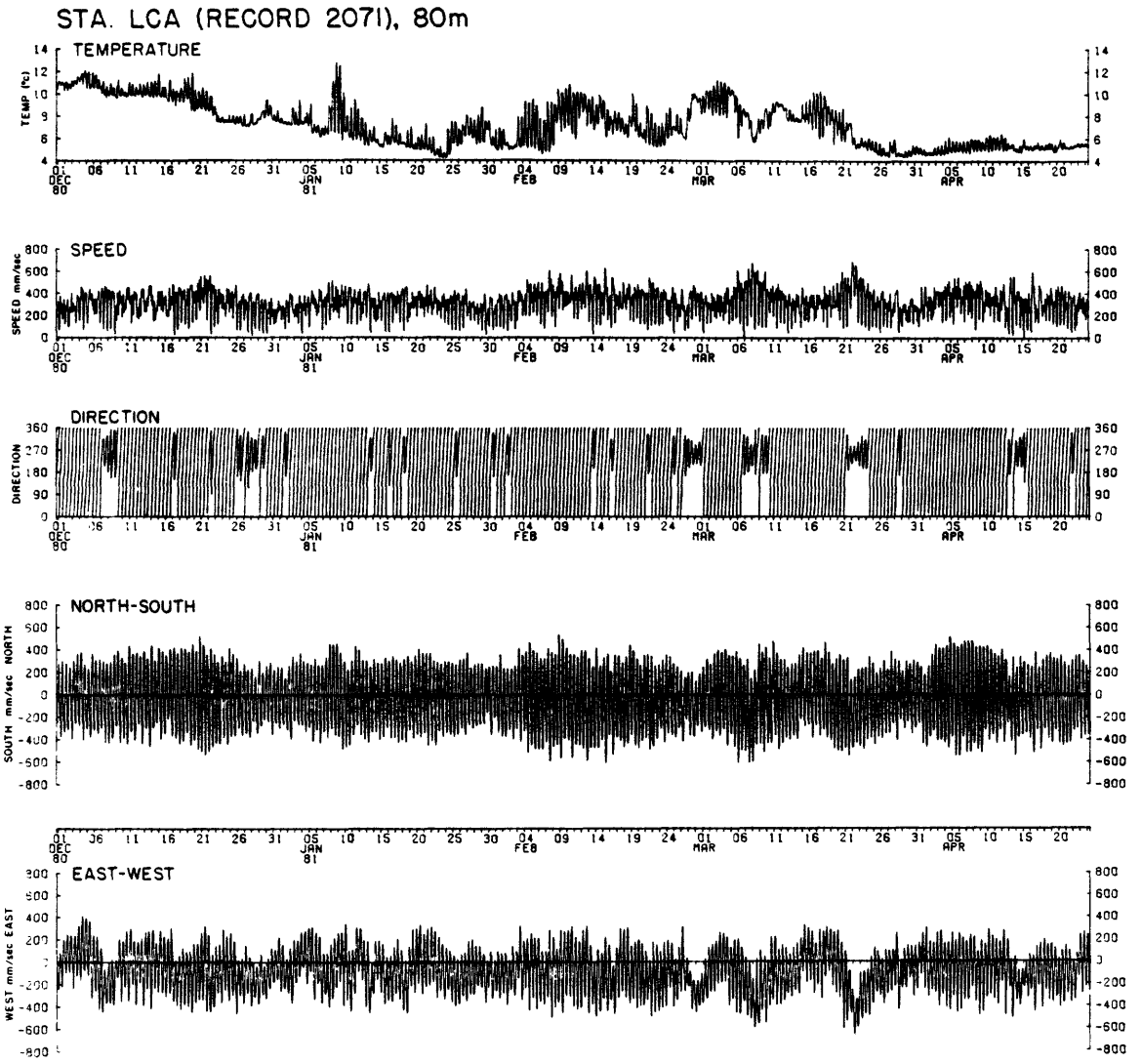


Figure 15a. Station LCA, record 2071, 80 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

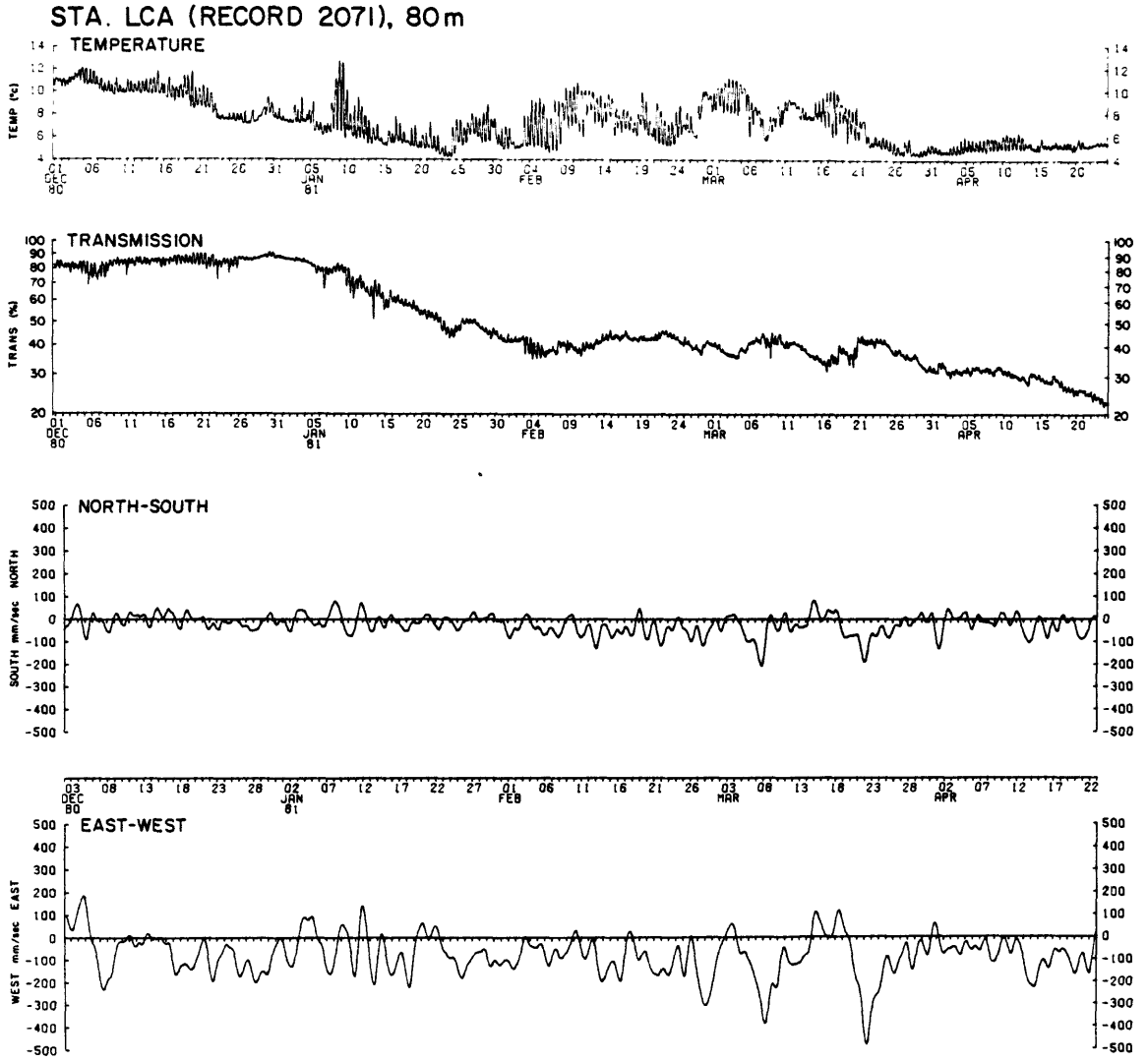


Figure 15b. Station LCA, record 2071, 80 m, hour-averaged temperature, percent light transmission (TR) over 1-m path length, and low-passed north-south, east-west current.

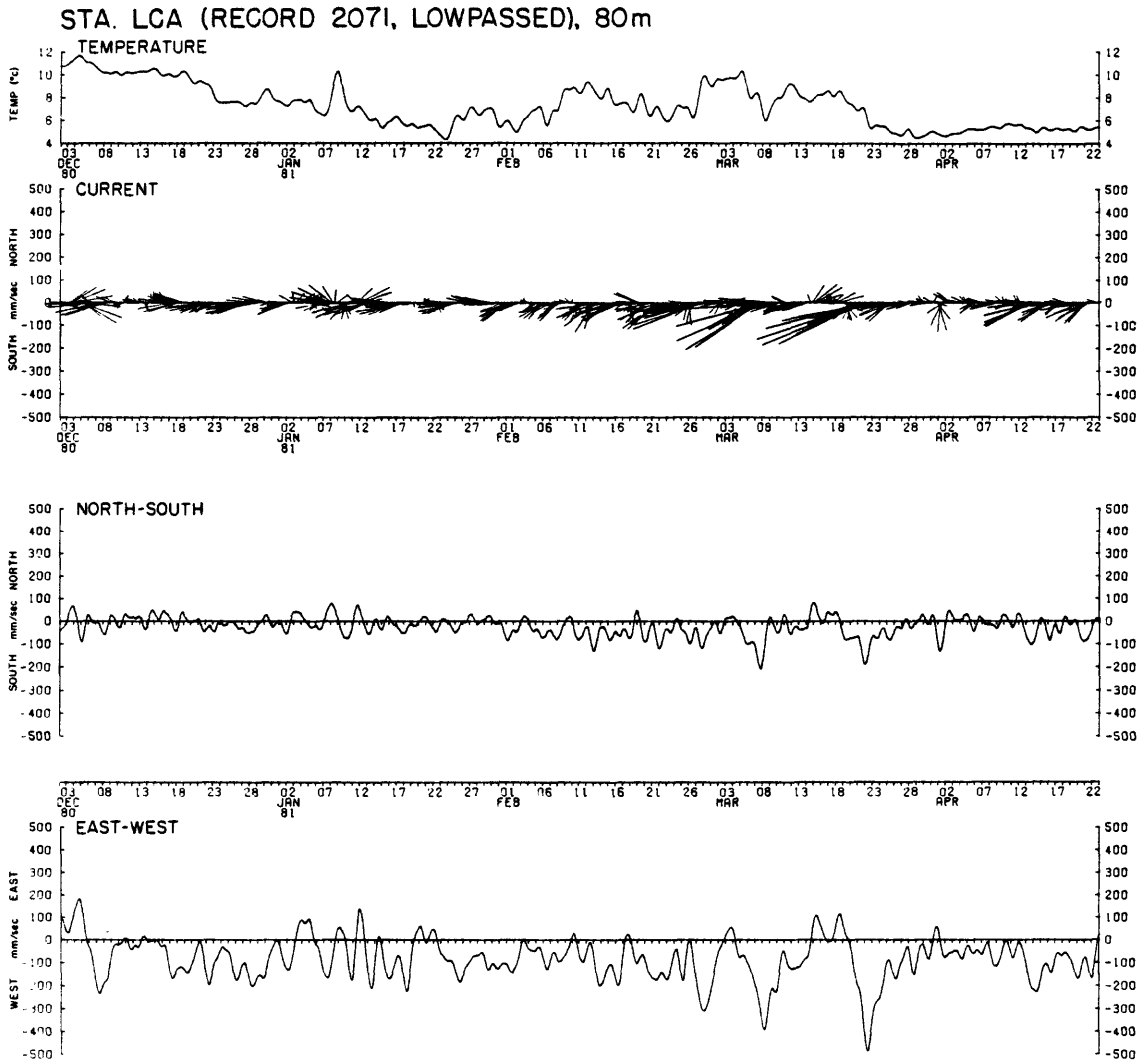


Figure 15c. Station LCA, record 2071, 80 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

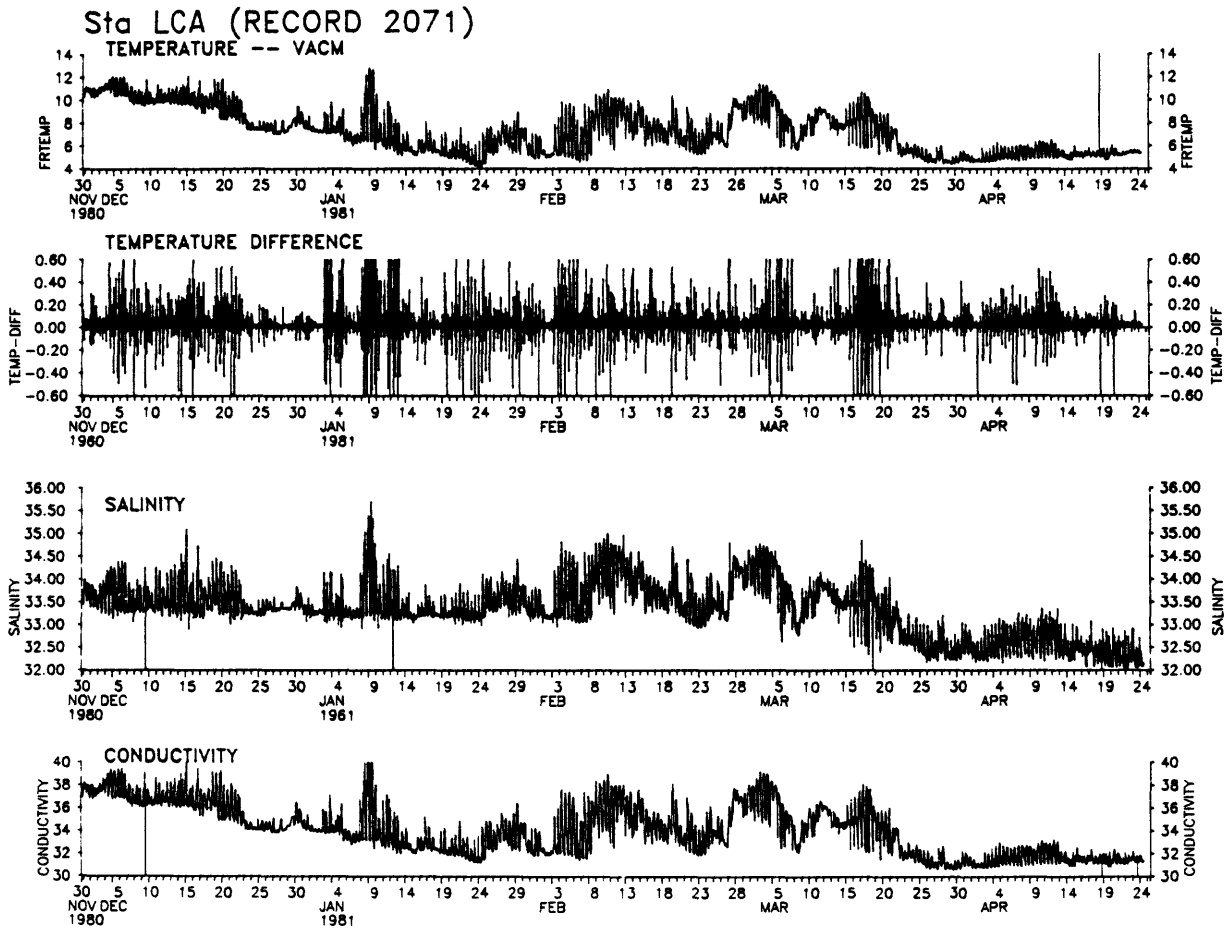


Figure 15d. Station LCA, record 2071, 80 m, 7.5-minute fast-response sensor temperature, VACM temperature minus fast-response sensor temperature, salinity, and conductivity (unedited).

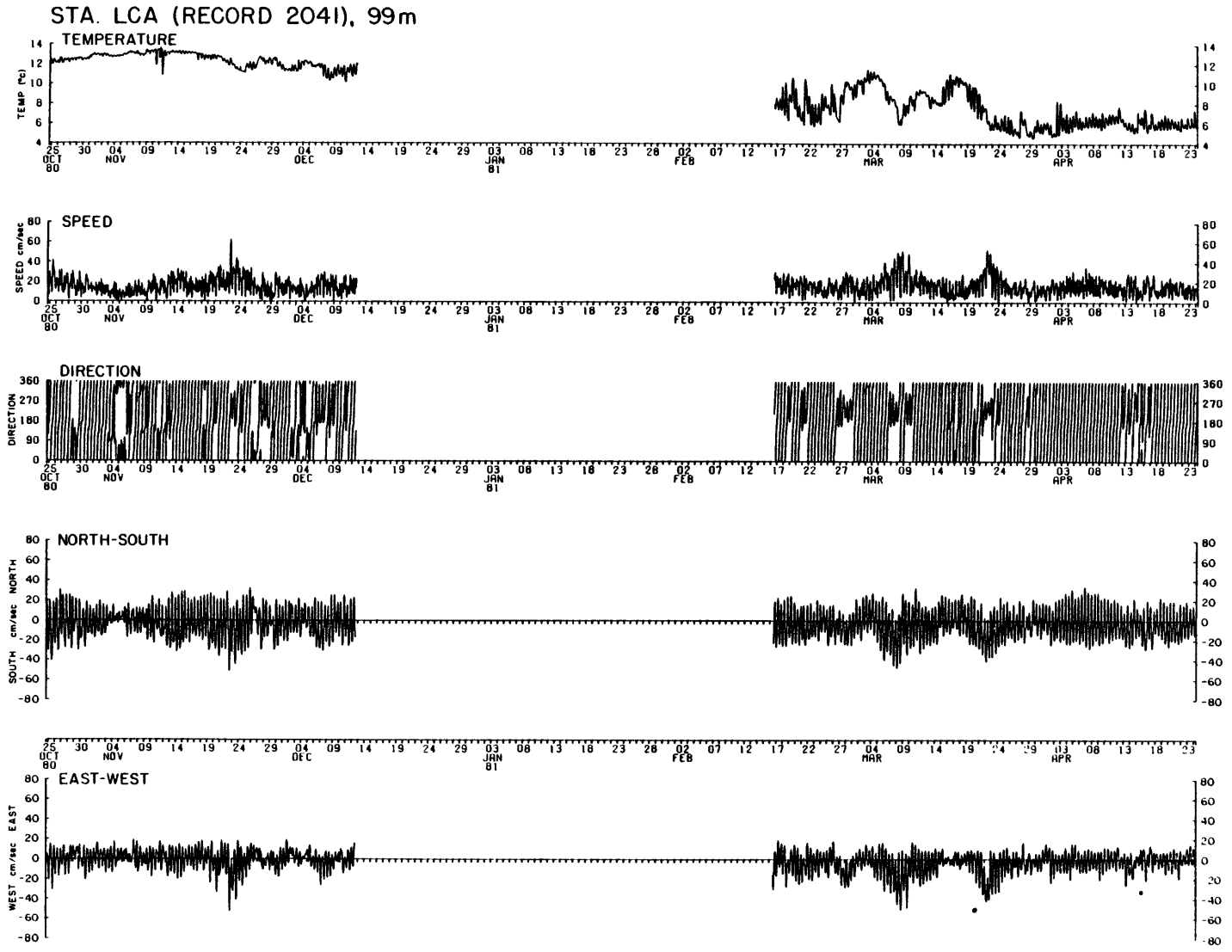


Figure 16a. Station LCA, record 2041, 99 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

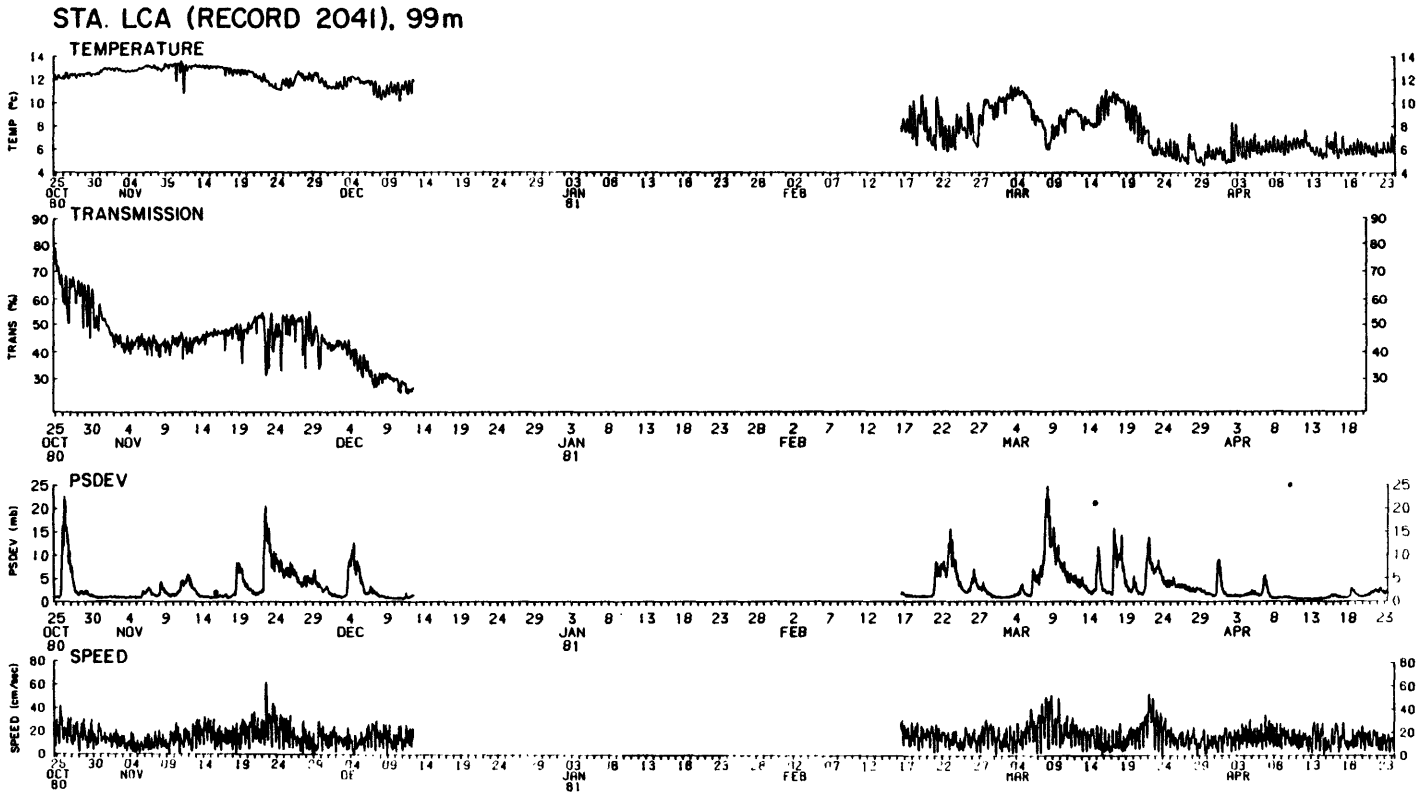


Figure 16b. Station LCA, record 2041, 99 m, hour-averaged temperature, percent light transmission over 1-m path length, standard deviation of burst pressure measurements, and speed.

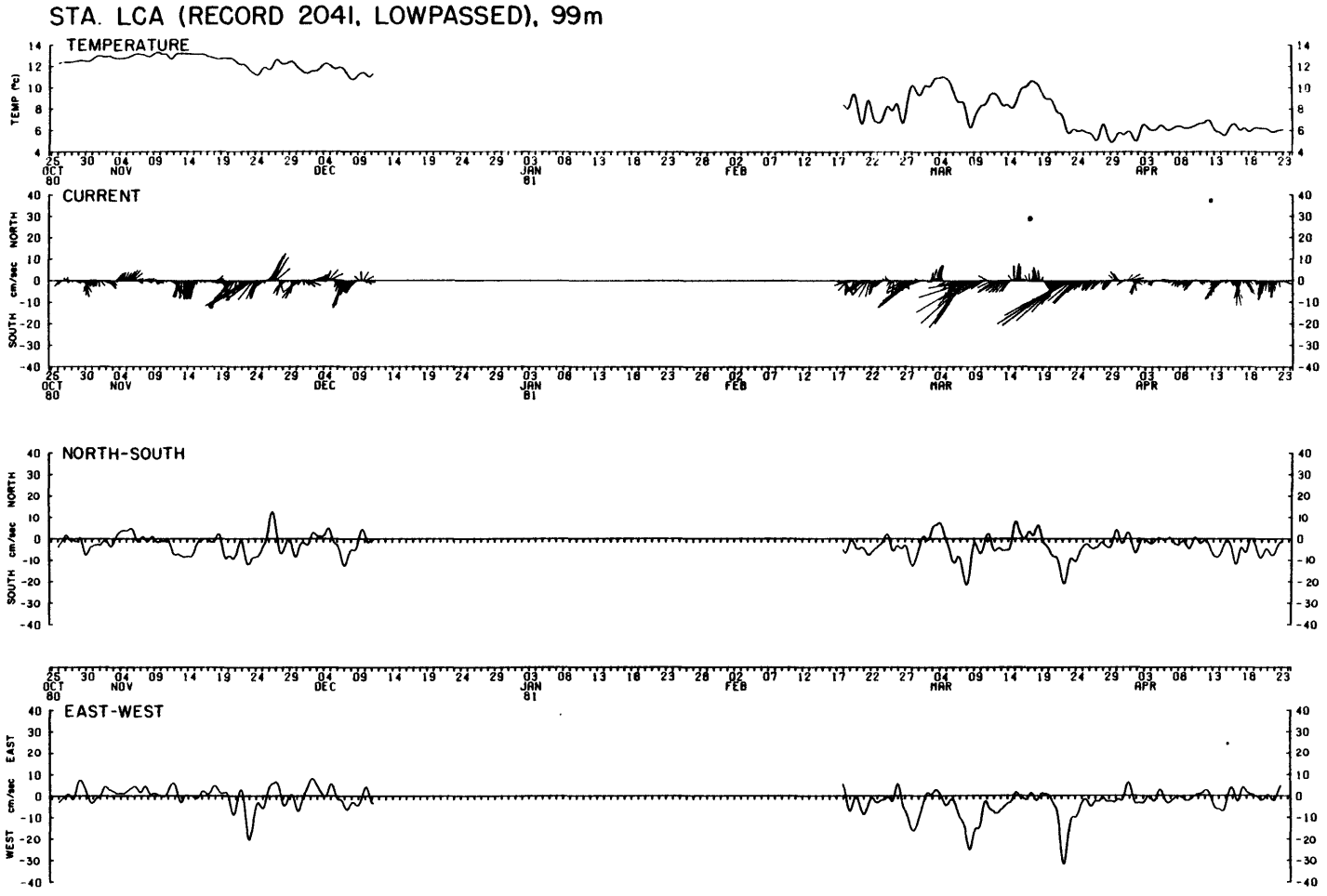


Figure 16c. Station LCA, record 2041, 99 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

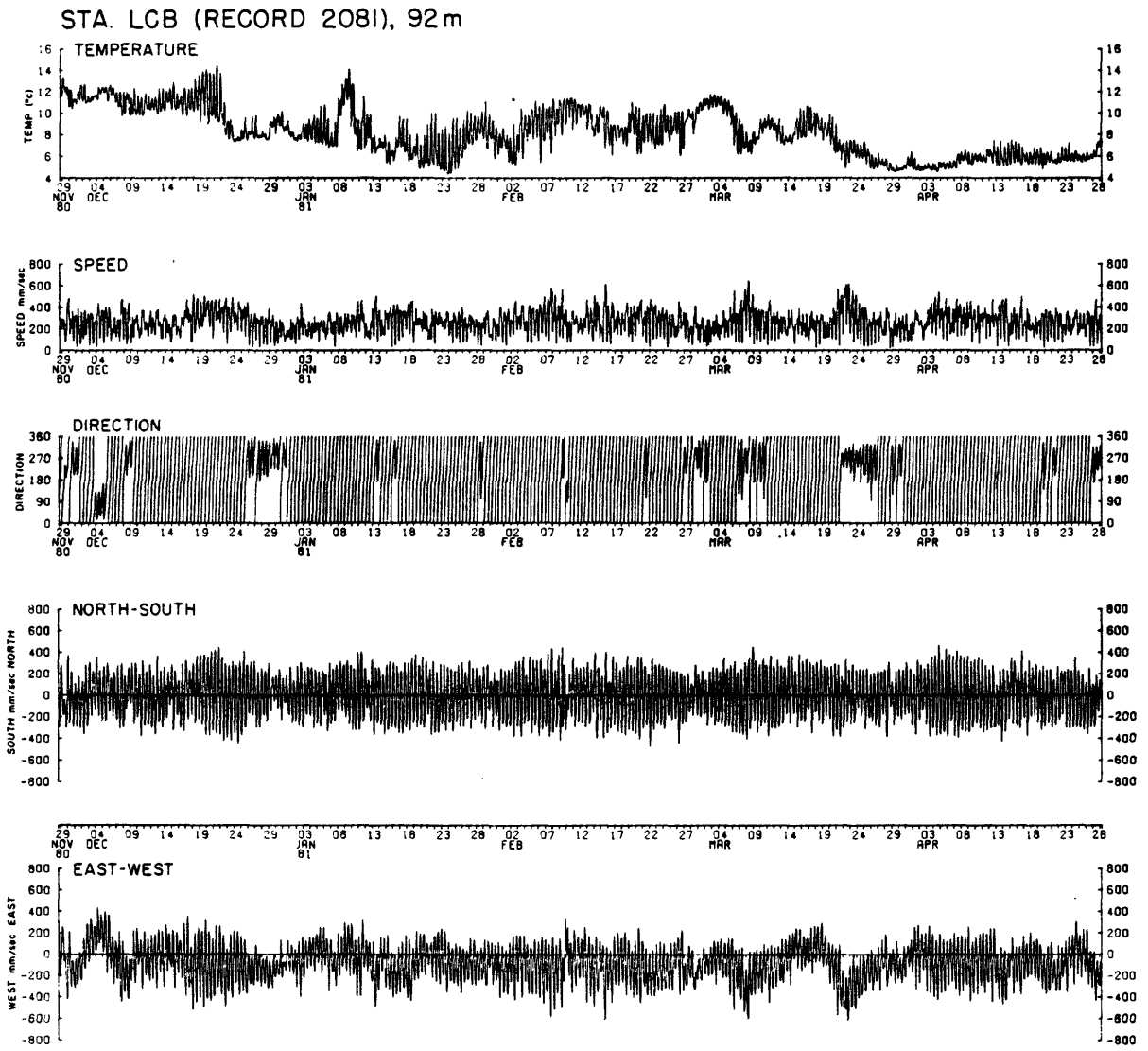


Figure 17a. Station LCB, record 2081, 92 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

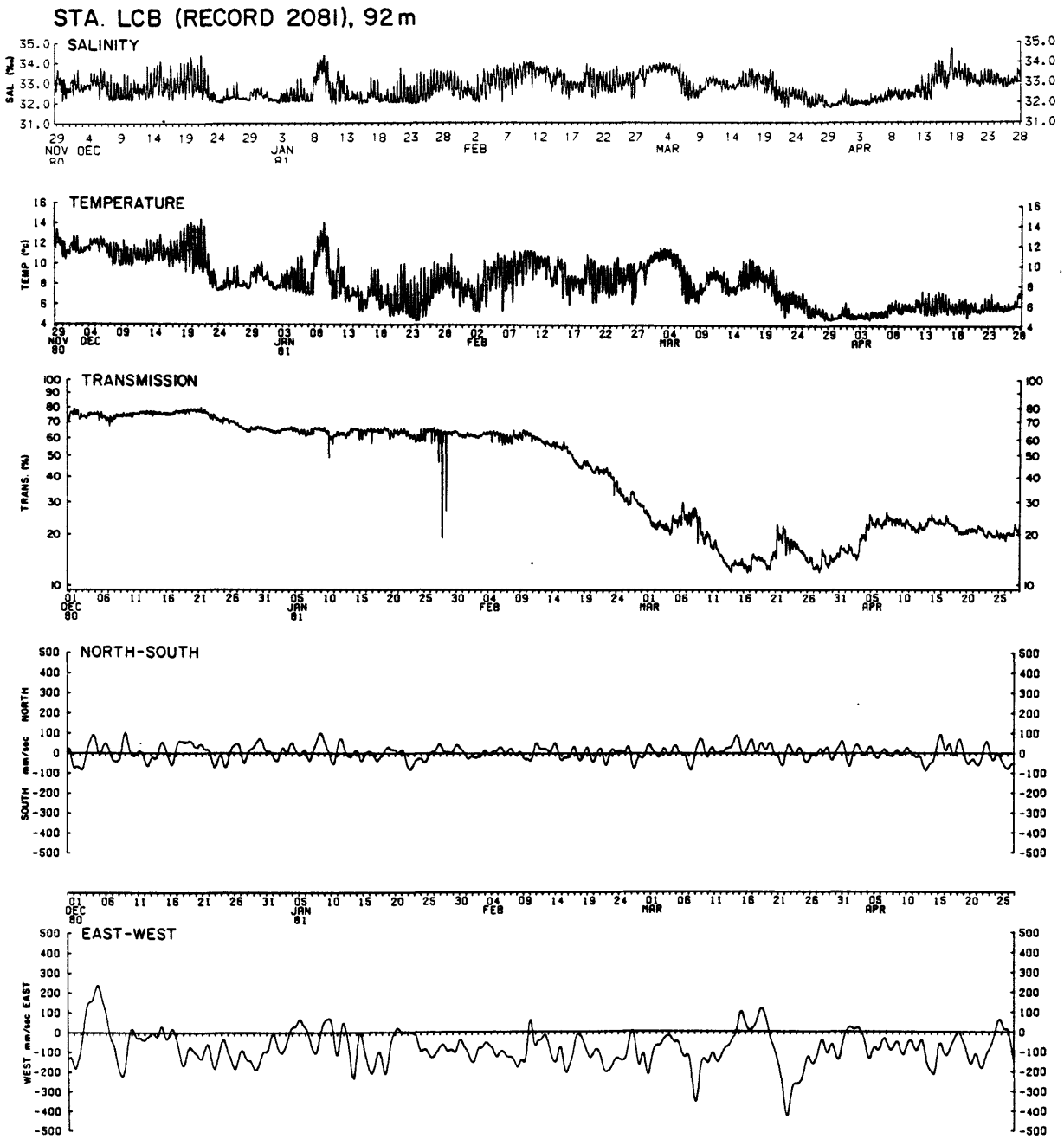


Figure 17b. Station LCB, record 2081, 92 m, hour-averaged salinity, temperature, percent light transmission over 1-m path length, and low-passed north-south, east-west current.

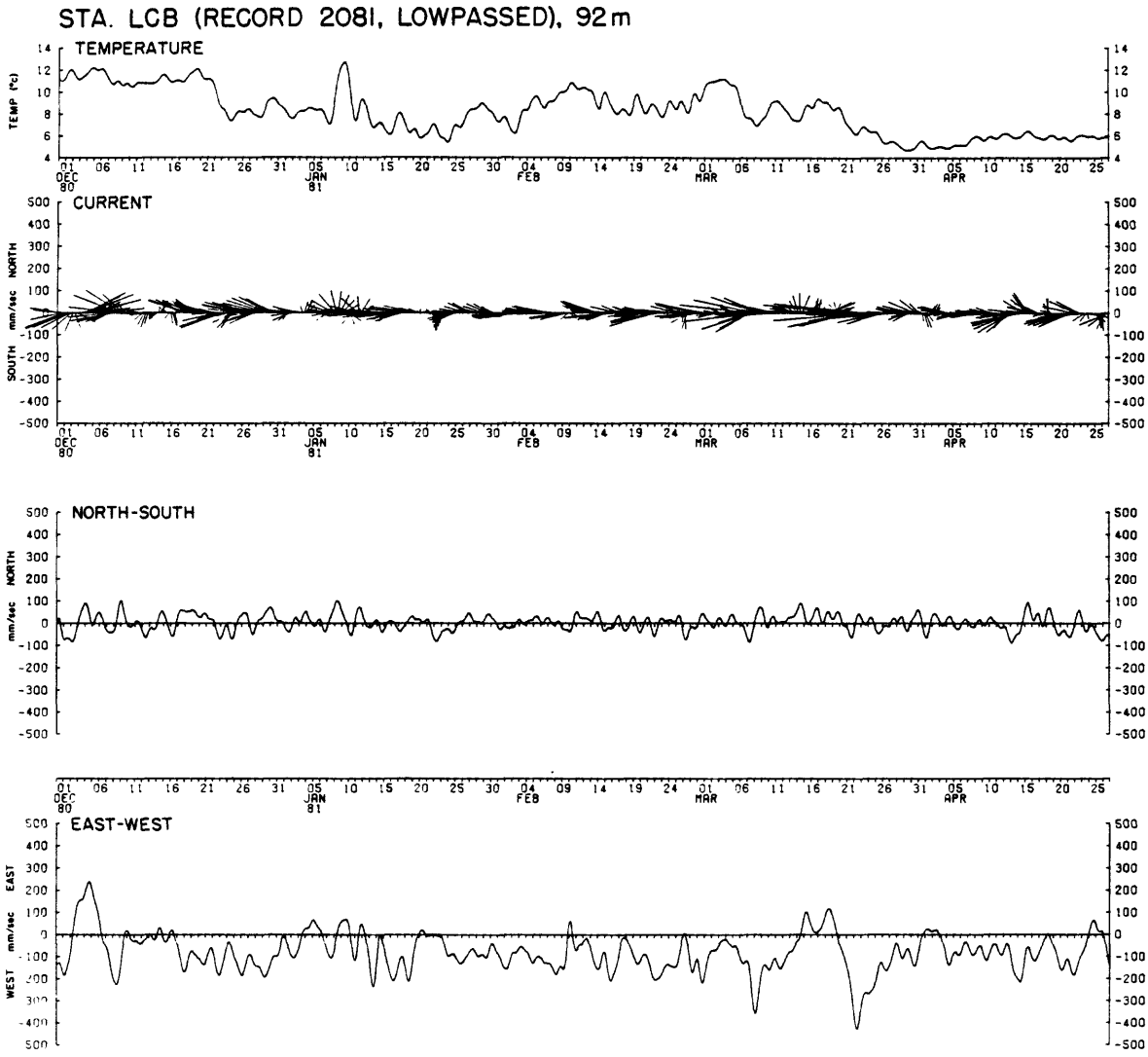


Figure 17c. Station LCB, record 2081, 92 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

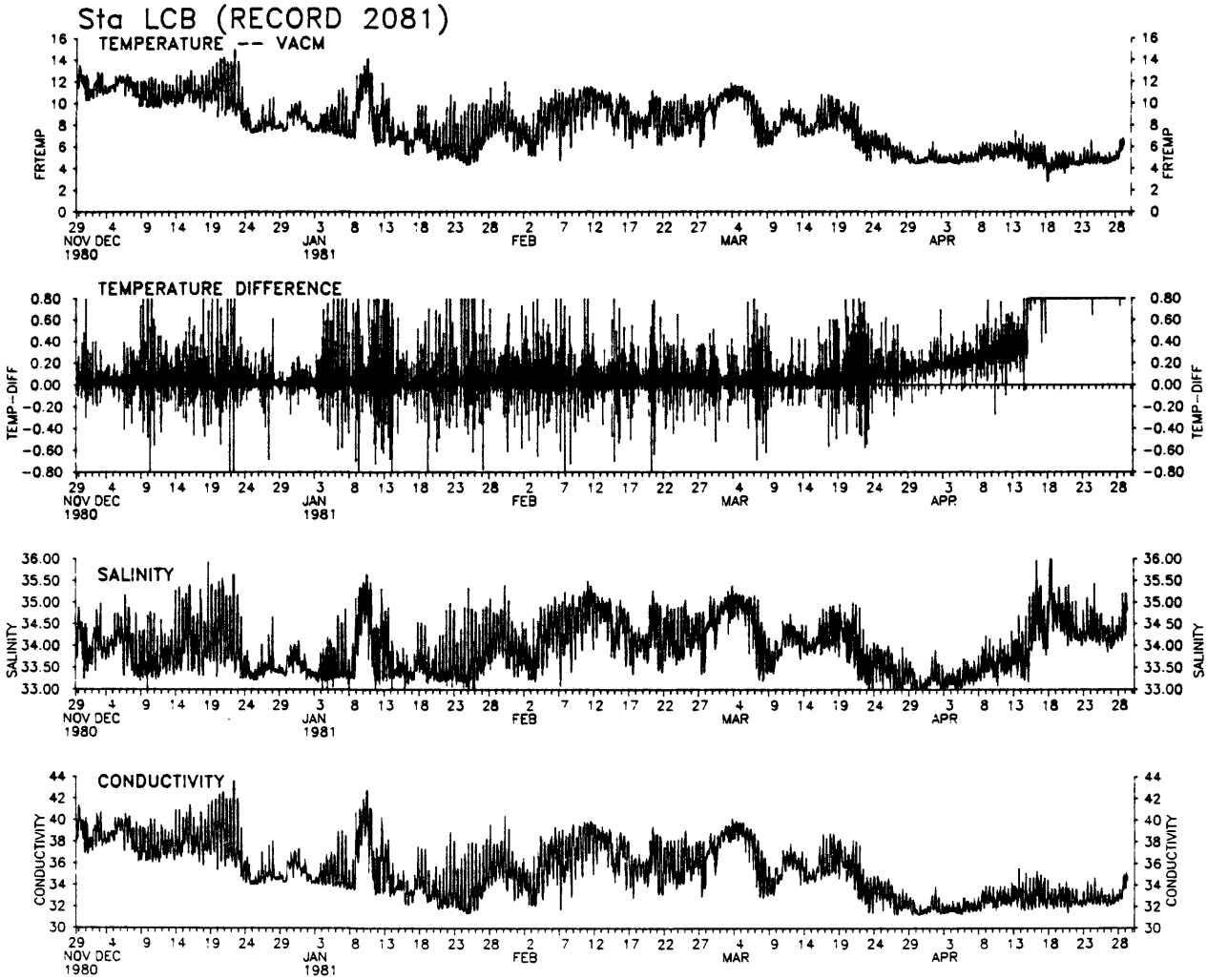


Figure 17d. Station LCB, record 2081, 92 m, 7.5-minute fast-response sensor temperature, VACM temperature minus fast-response sensor temperature, salinity, and conductivity (unedited).

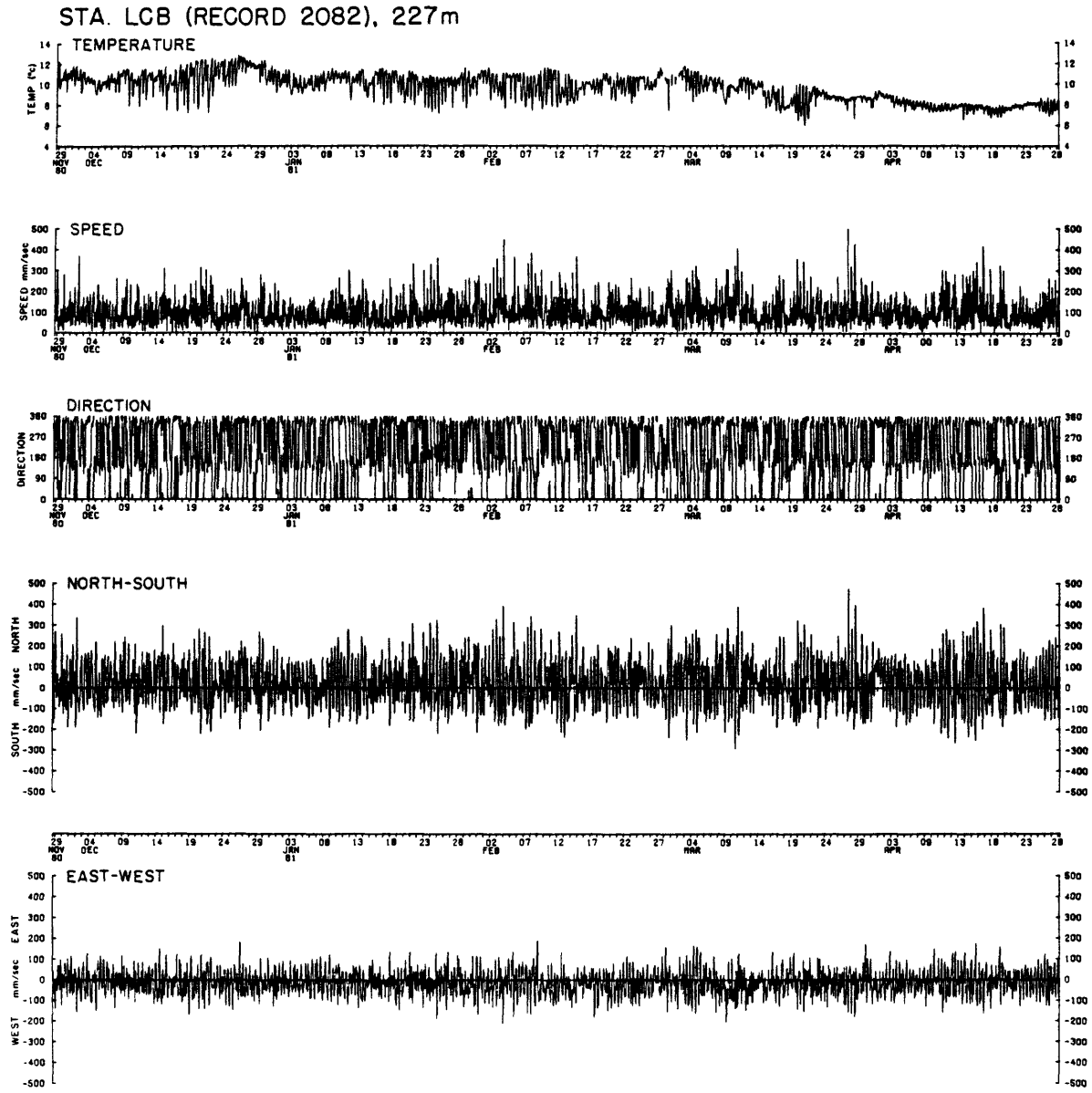


Figure 18a. Station LCB, record 2082, 227 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

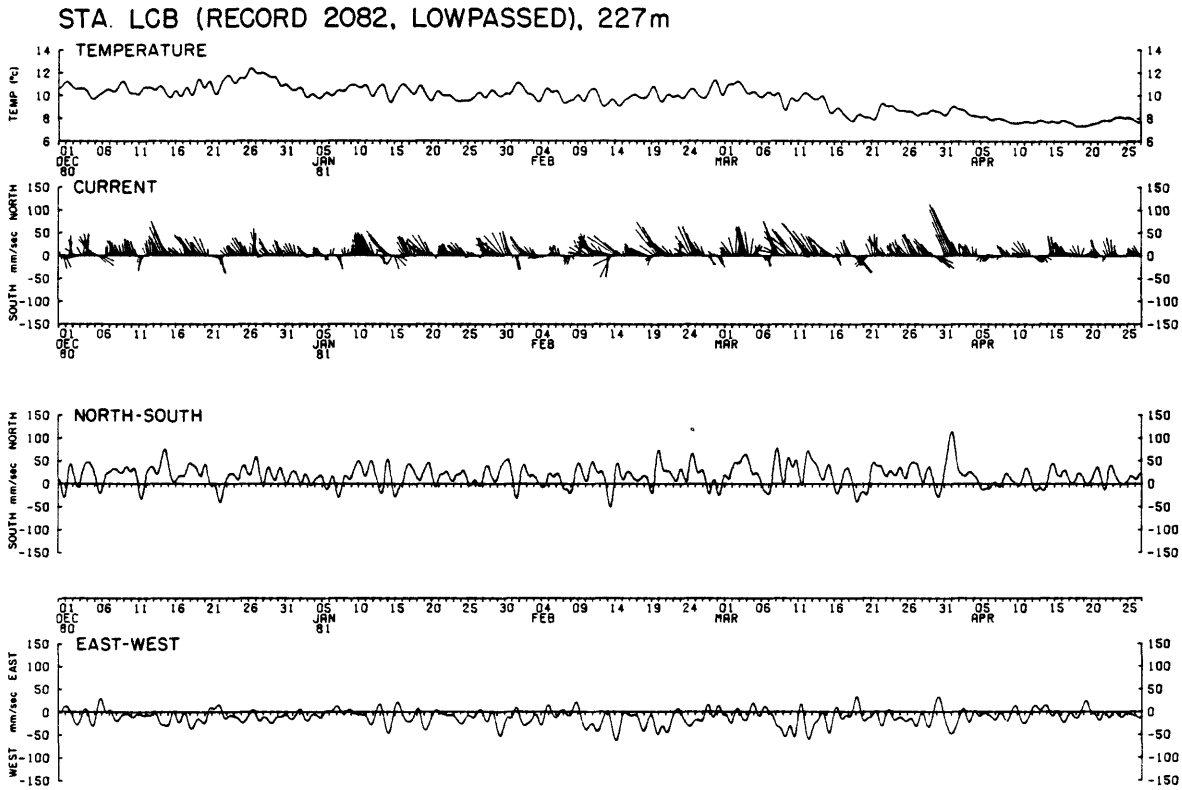


Figure 18b. Station LCB, record 2082, 227 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

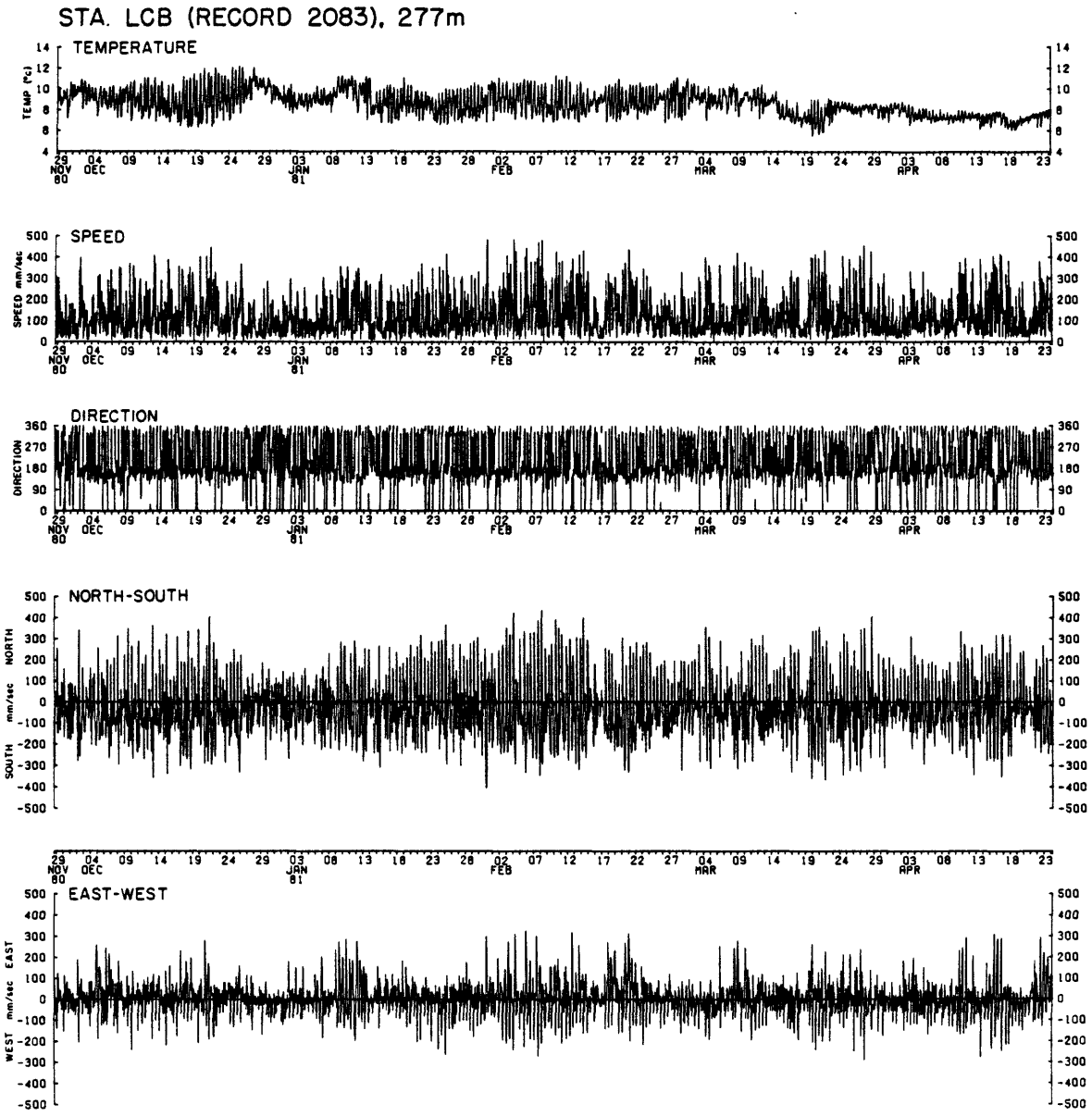


Figure 19a. Station LCB, record 2083, 277 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

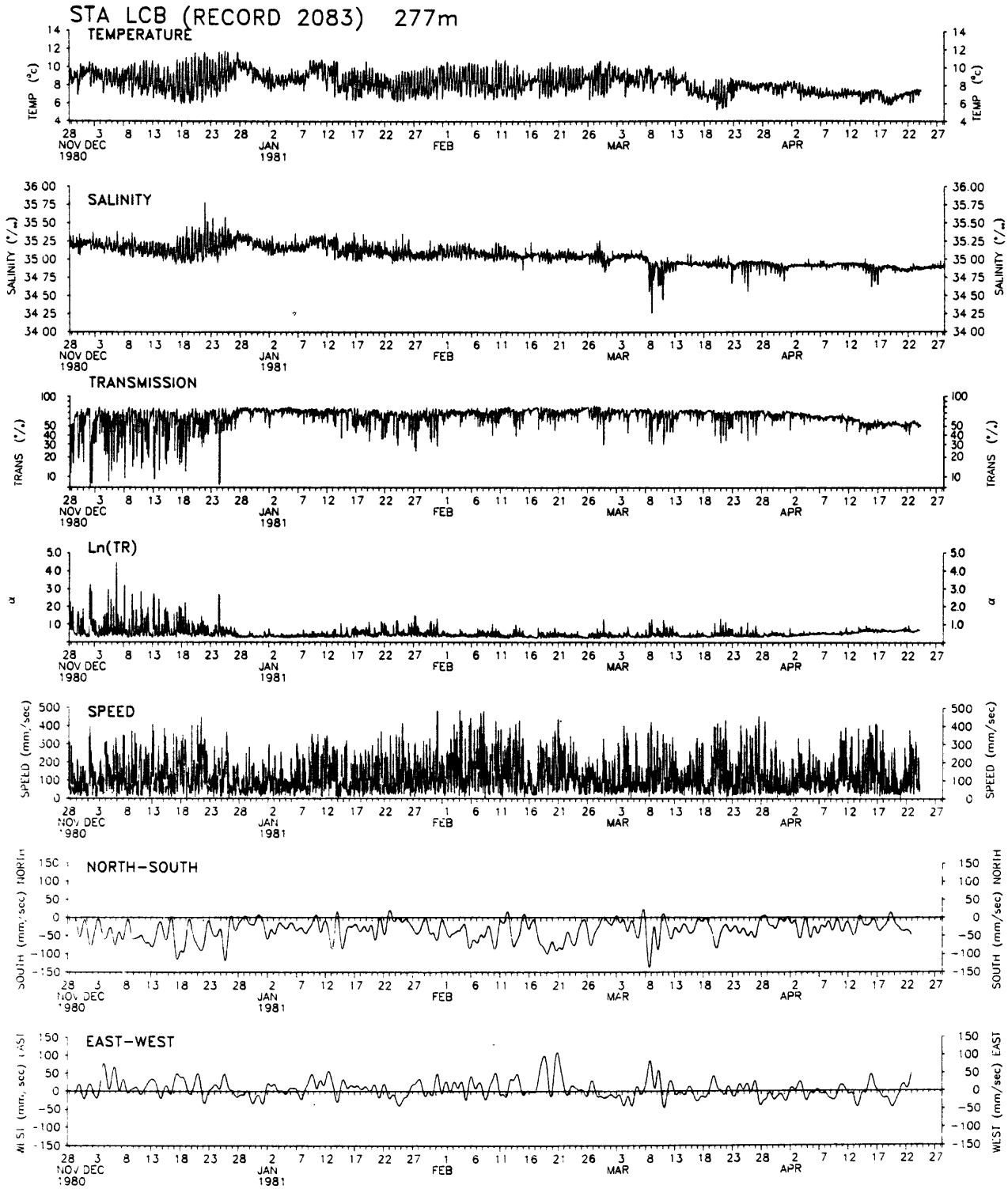


Figure 19b. Station LCB, record 2083, 277 m, hour-averaged temperature, salinity, percent light transmission over 1-m path length, -ln percent light transmission over 1-m path length, speed, and low-passed north-south, east-west current.

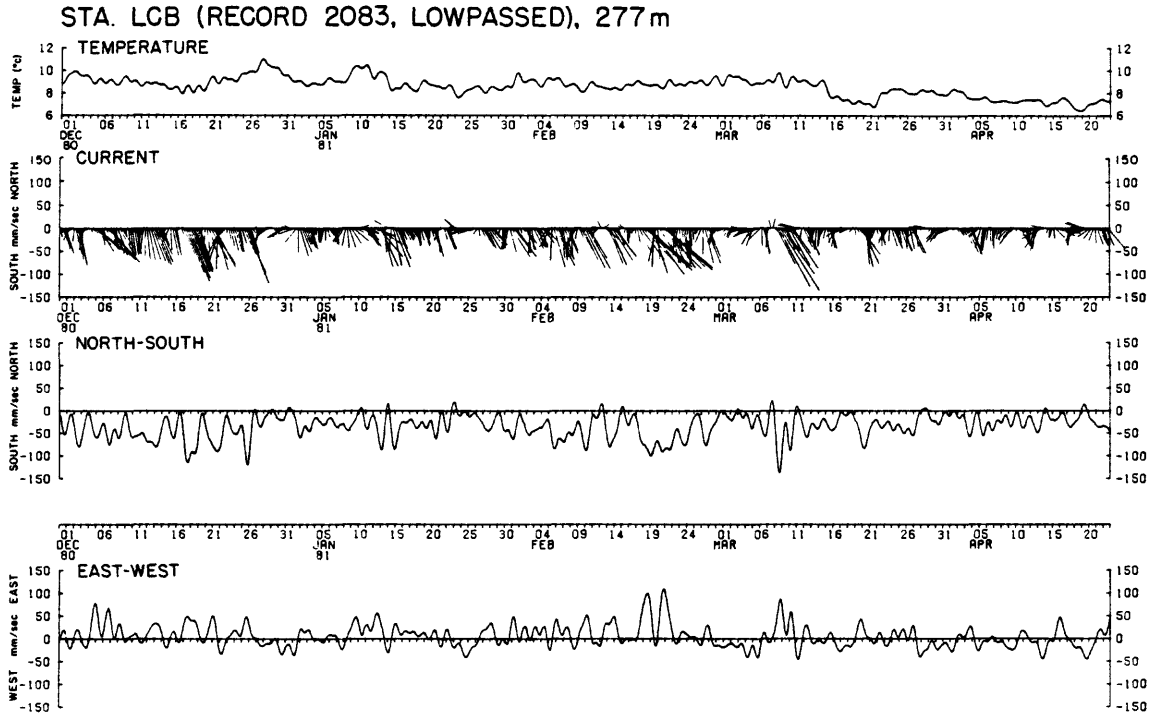


Figure 19c. Station LCB, record 2083, 277 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

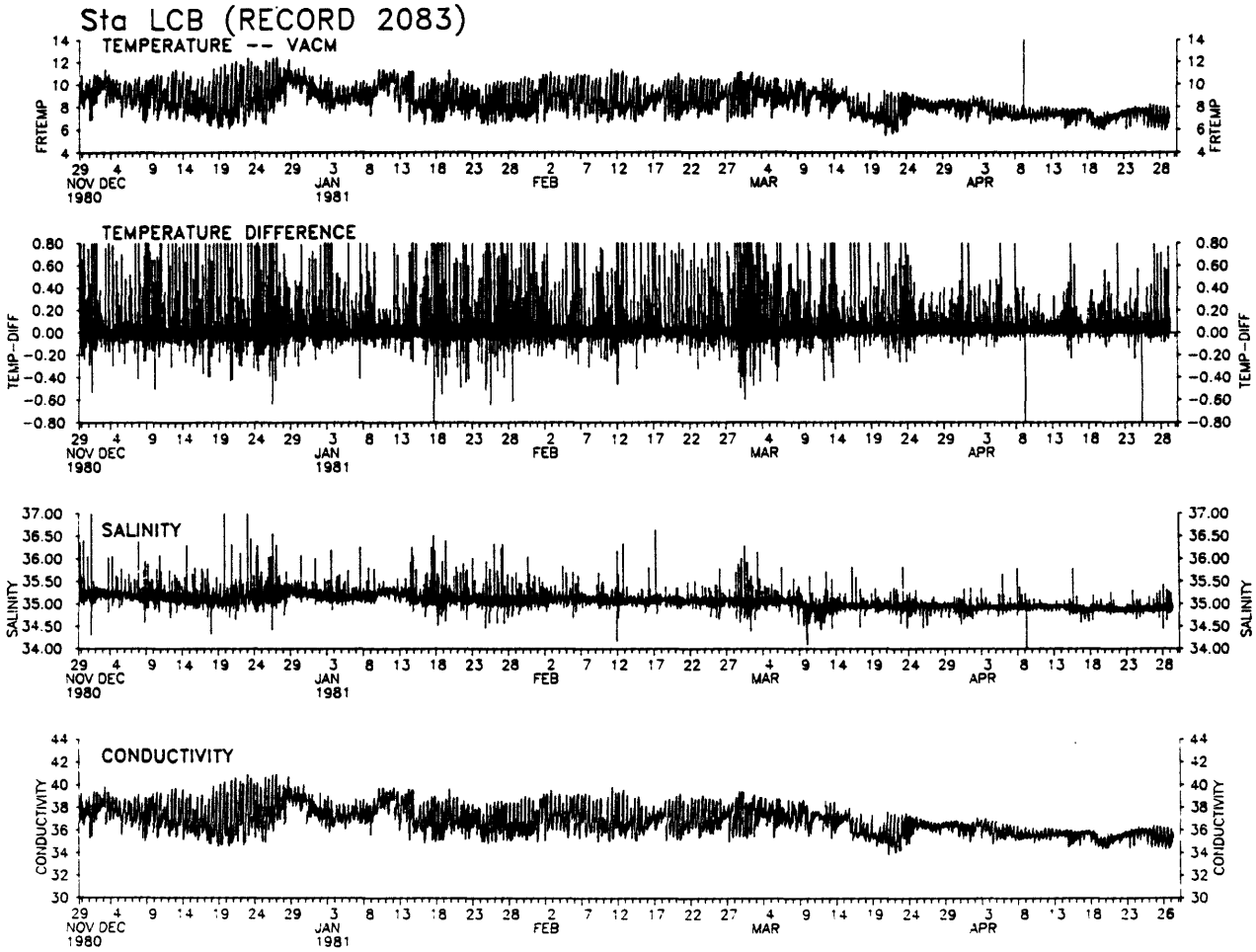


Figure 19d. Station LCB, record 2083, 277 m, 7.5-minute fast-response sensor temperature, VACM temperature minus fast-response sensor temperature, salinity, and conductivity (unedited).

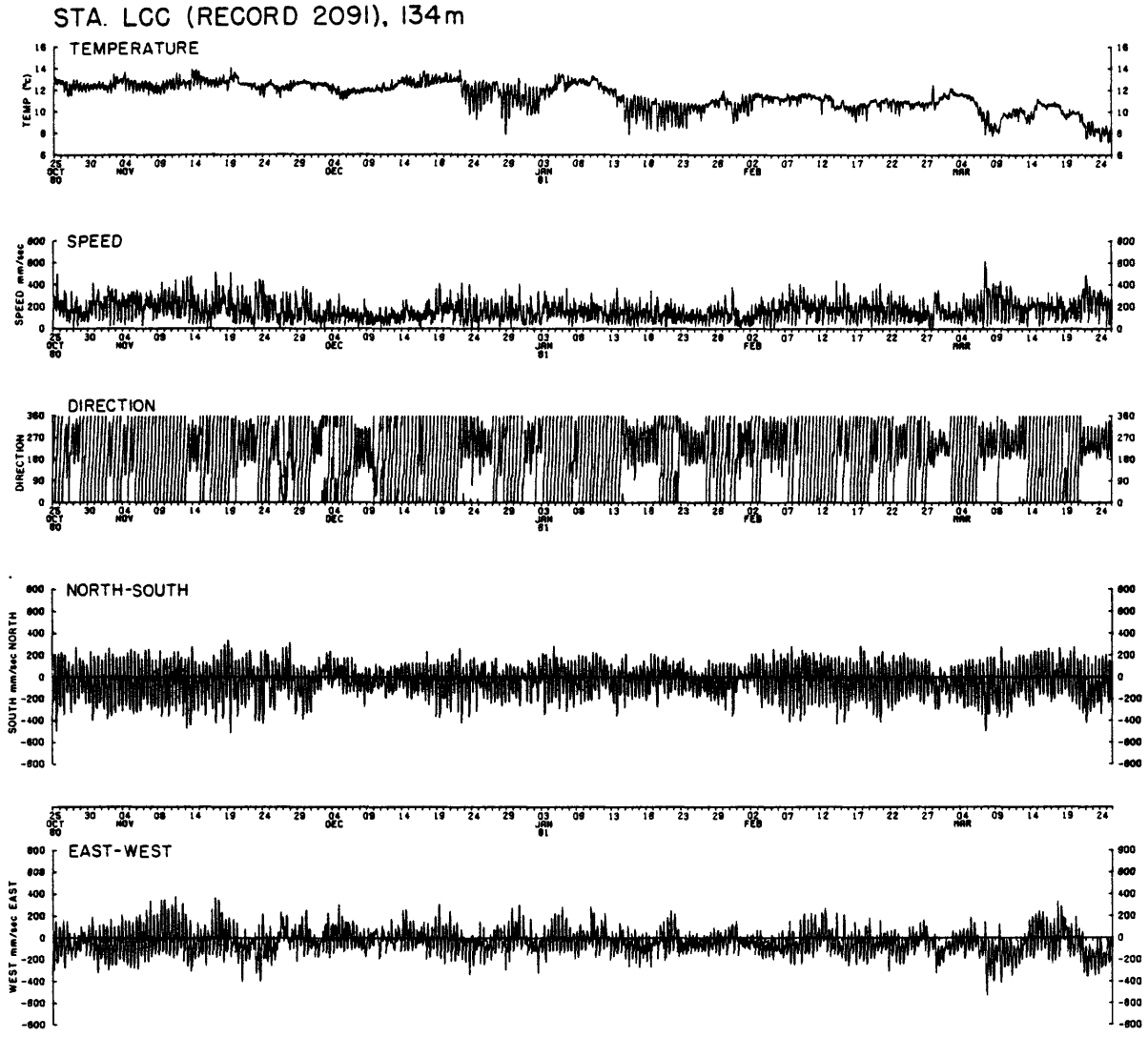


Figure 20a. Station LCC, record 2091, 134 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

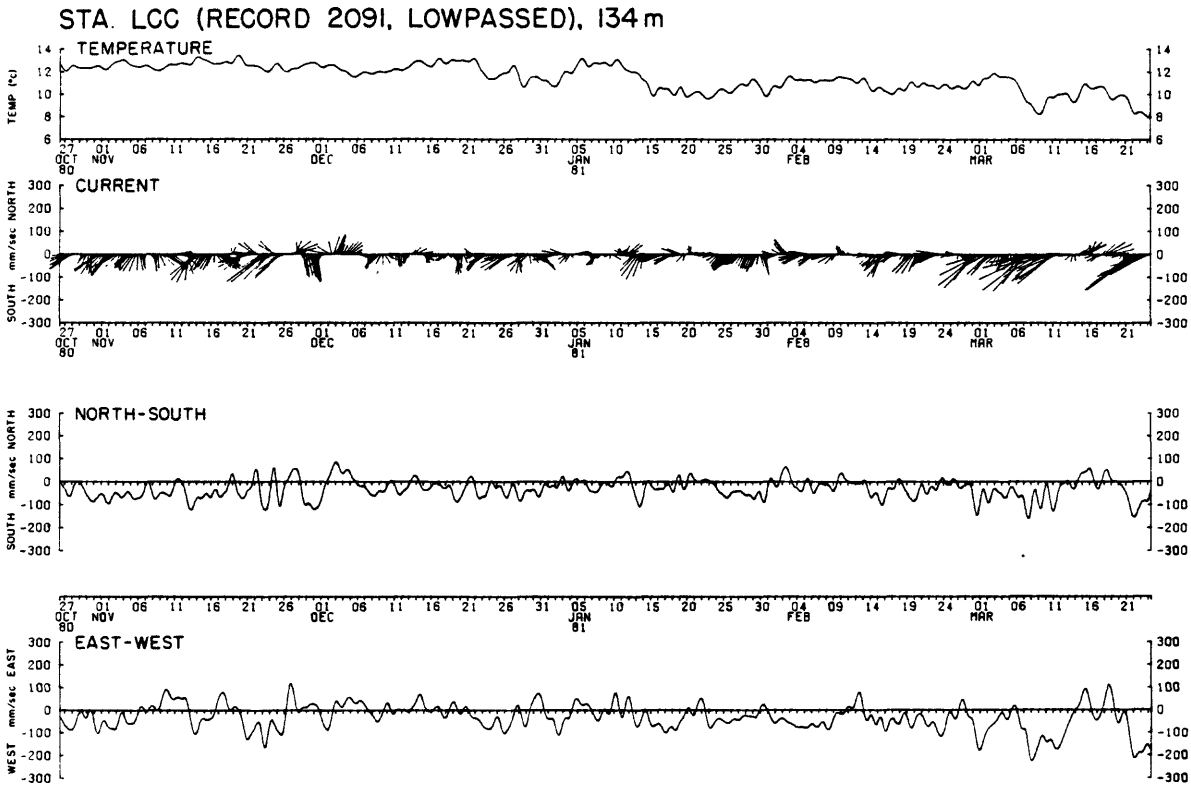


Figure 20b. Station LCC, record 2091, 134 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

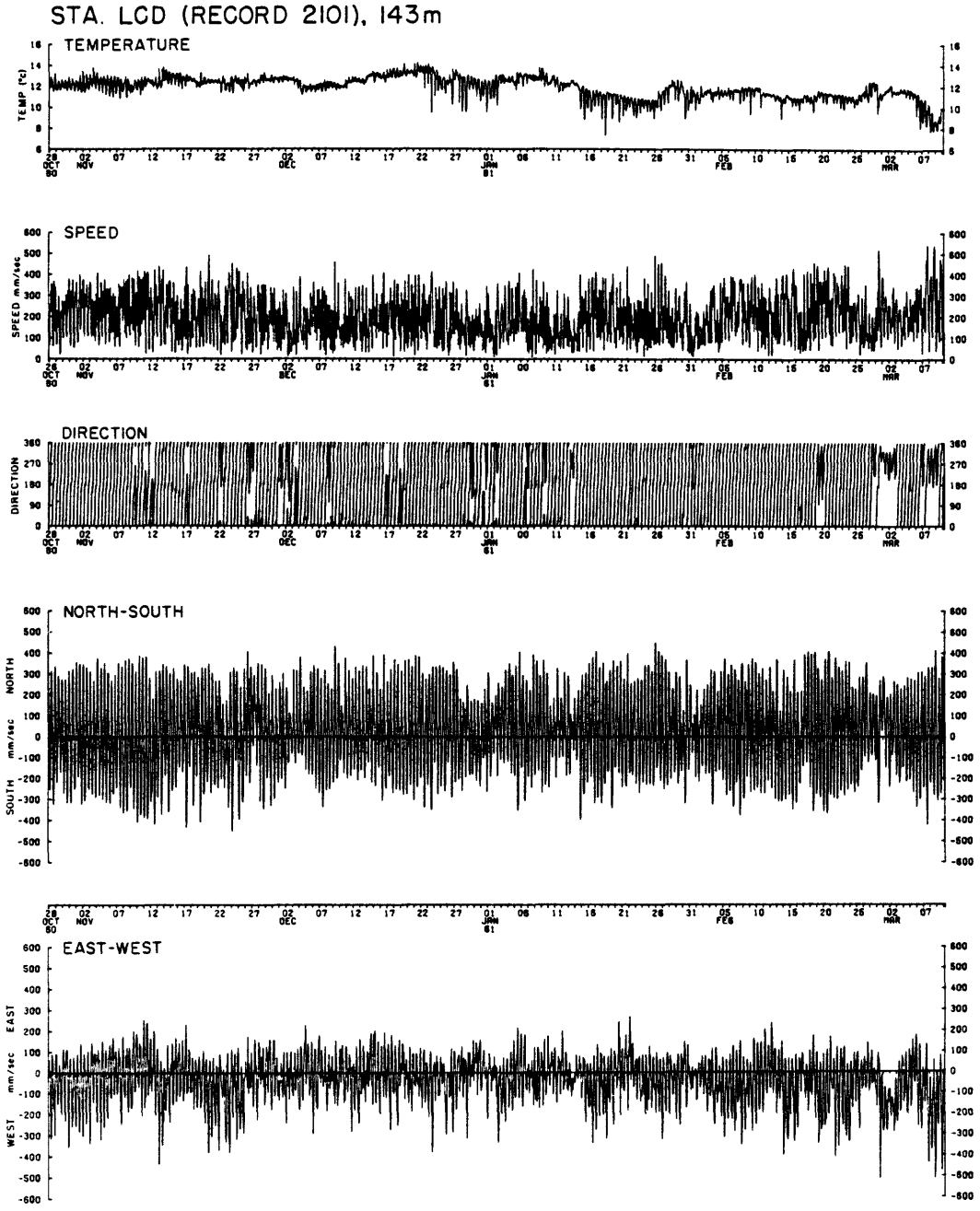


Figure 21a. Station LCD, record 2101, 143 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

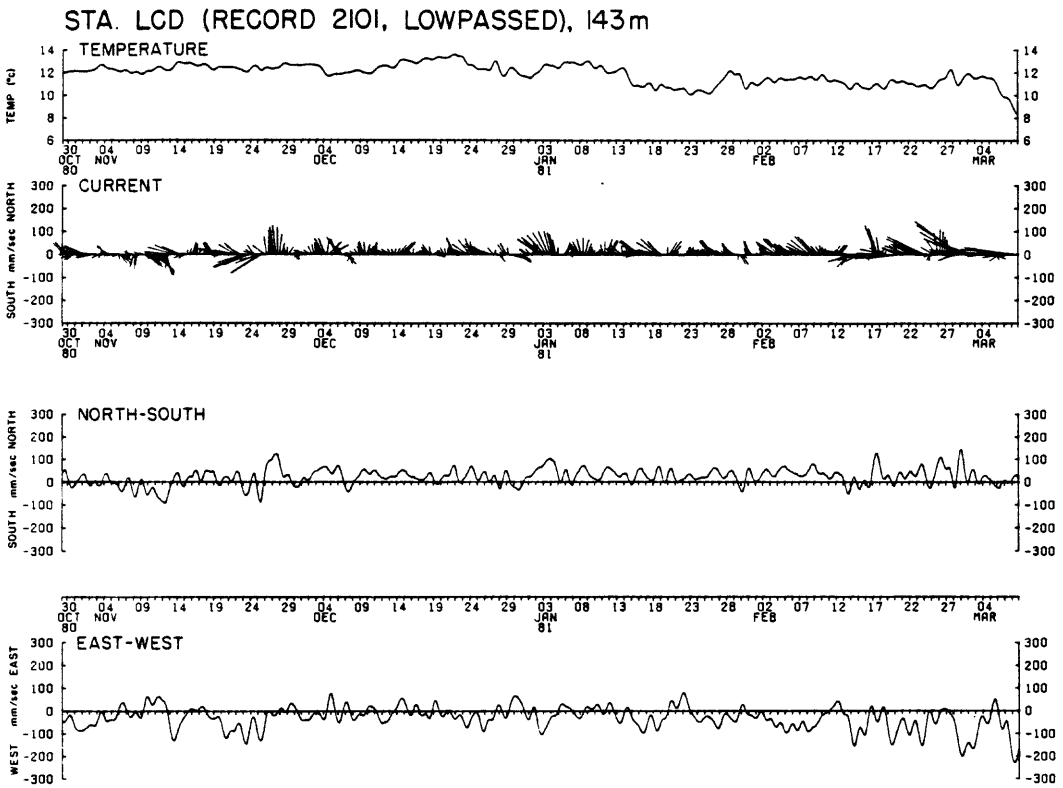


Figure 21b. Station LCD, record 2101, 143 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

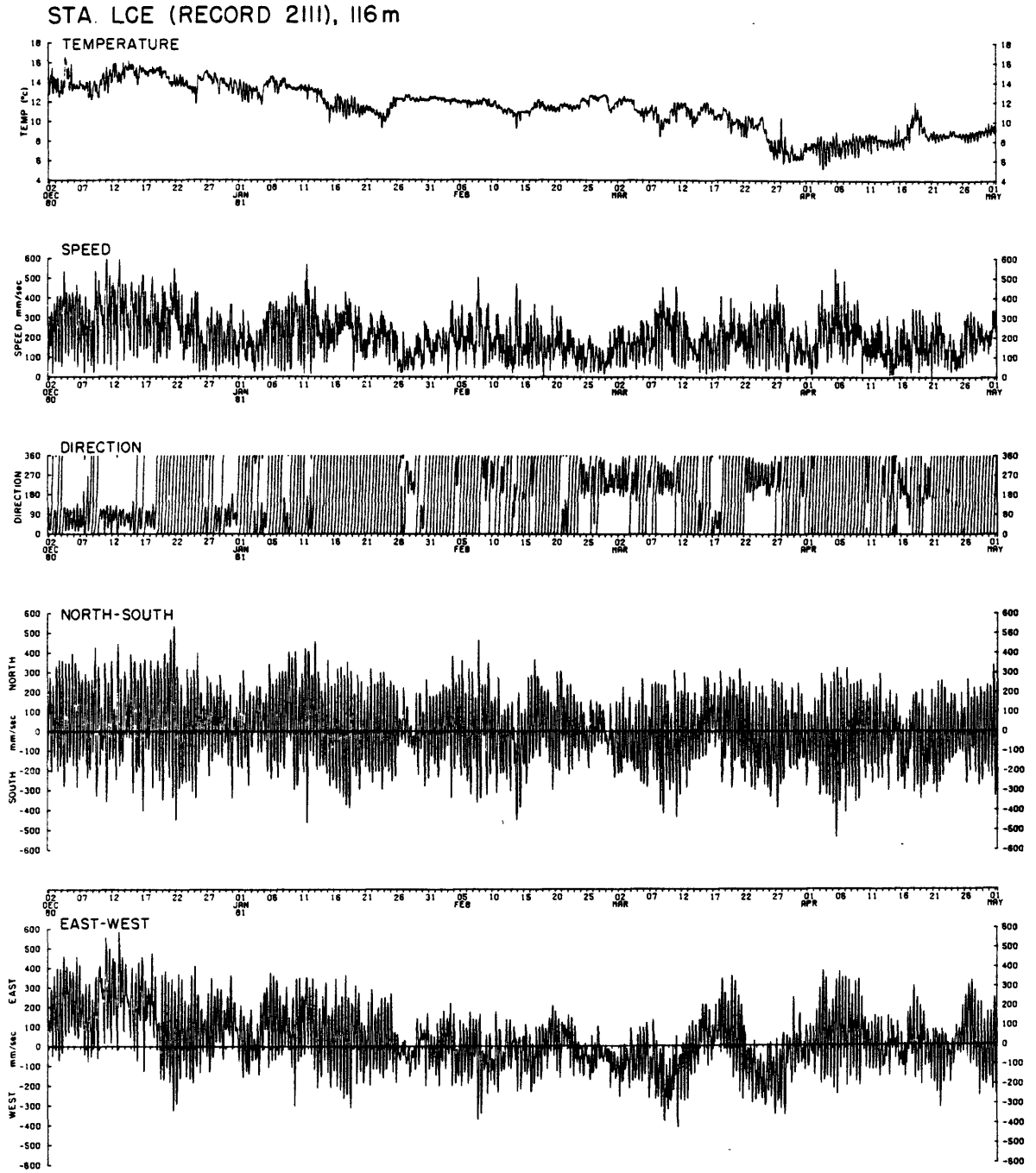


Figure 22a. Station LCE, record 2111, 116 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

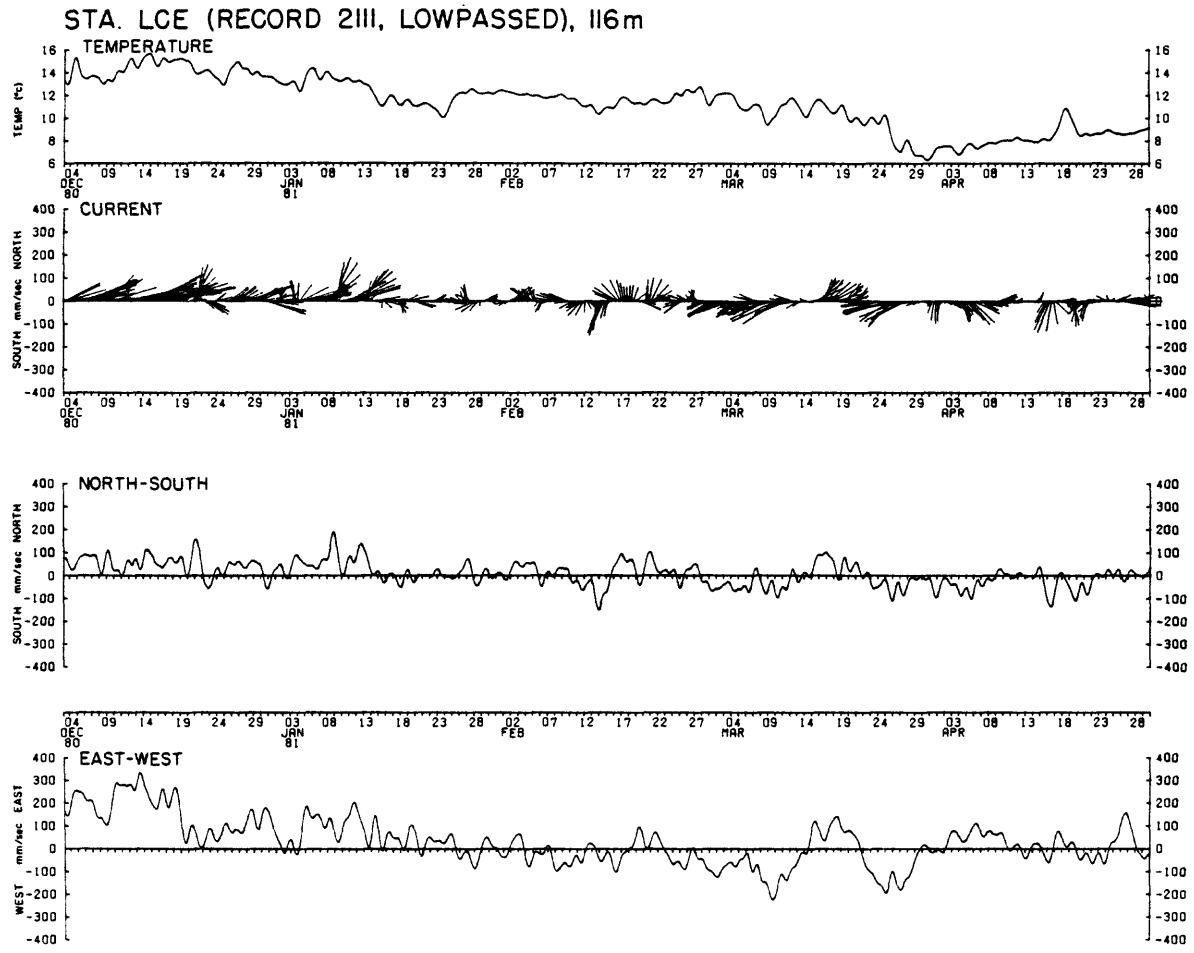


Figure 22b. Station LCE, record 2111, 116 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

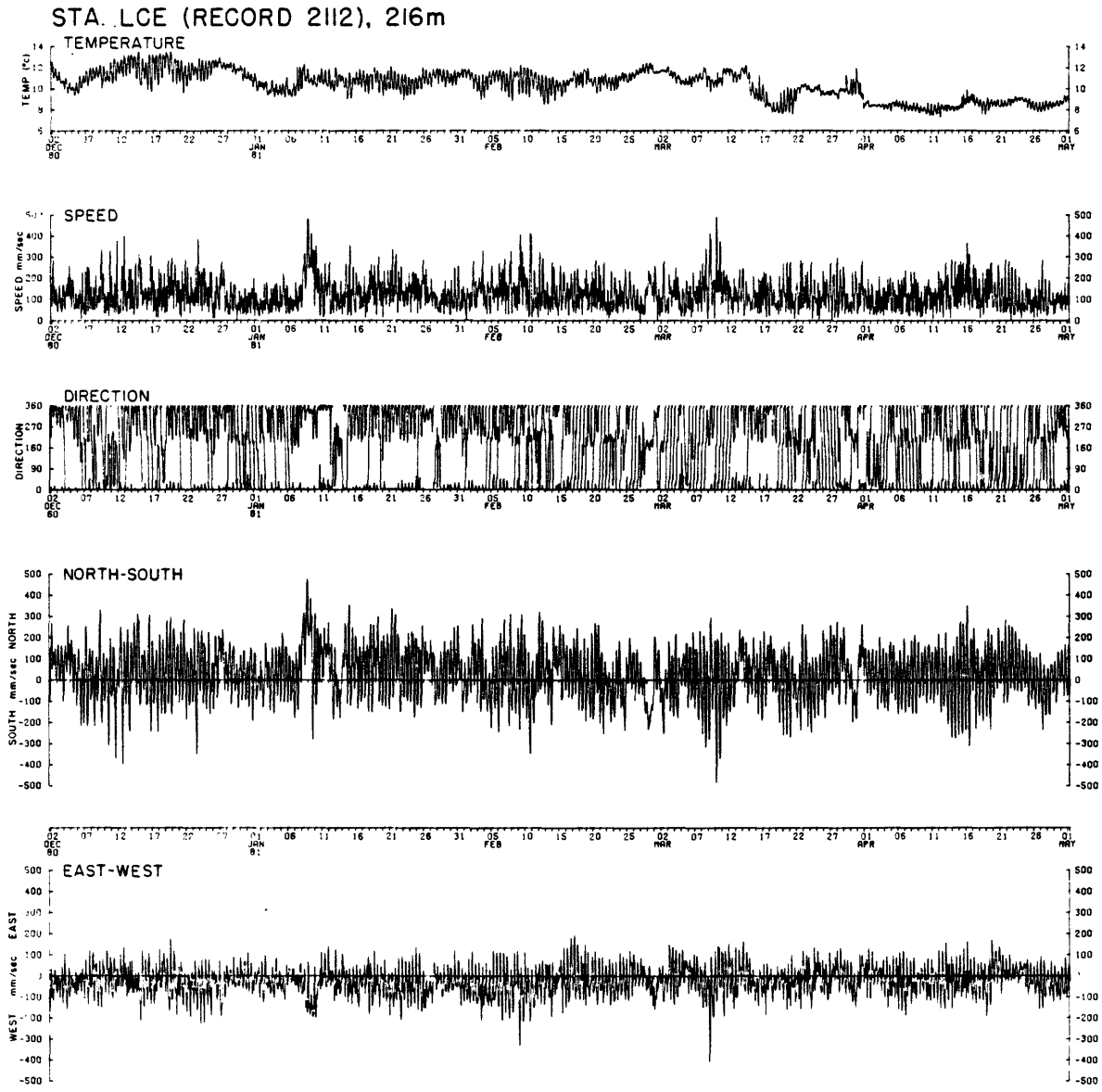


Figure 23a. Station LCE, record 2112, 216 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

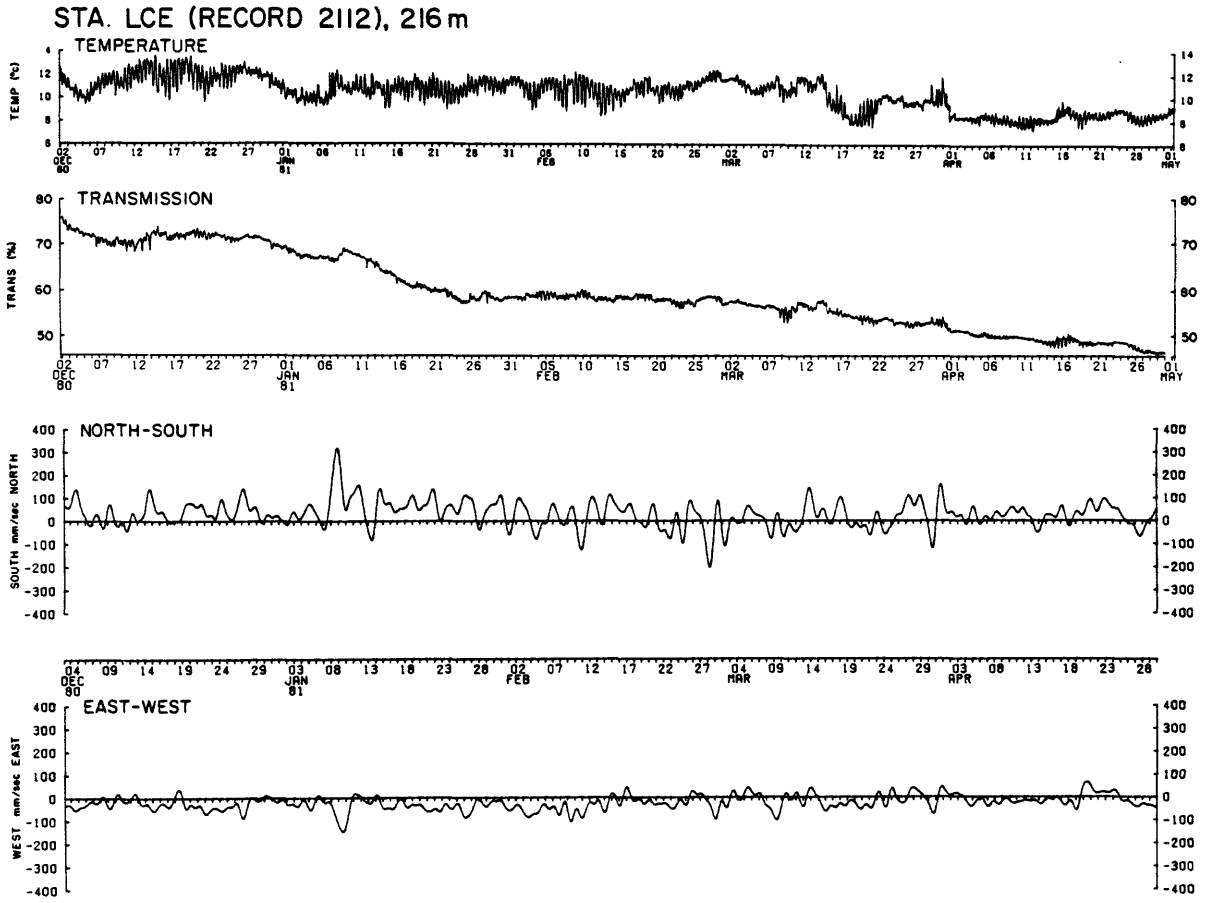


Figure 23b. Station LCE, record 2112, 216 m, hour-averaged temperature, percent light transmission over 1-m path length, and low-passed north-south, east-west current.

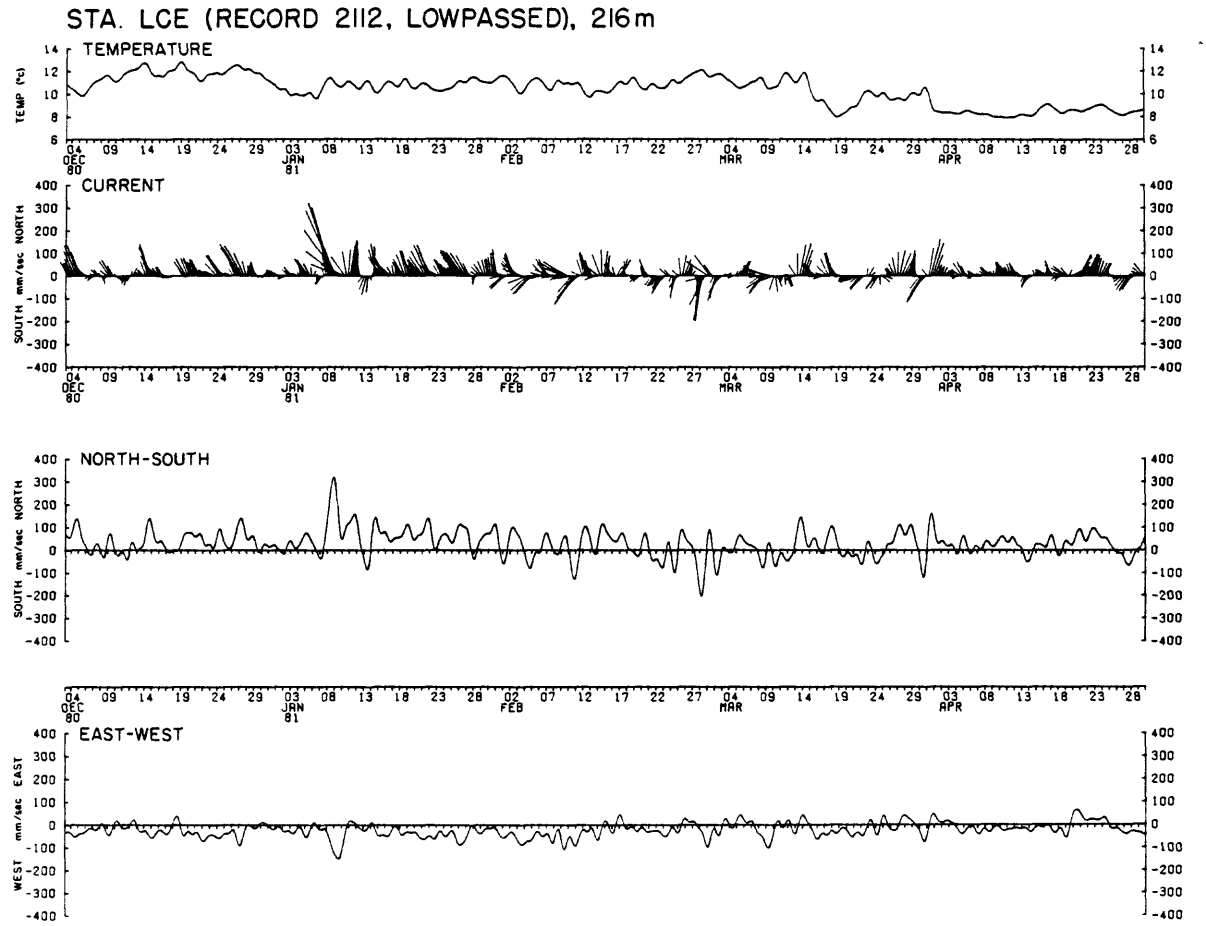


Figure 23c. Station LCE, record 2112, 216 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

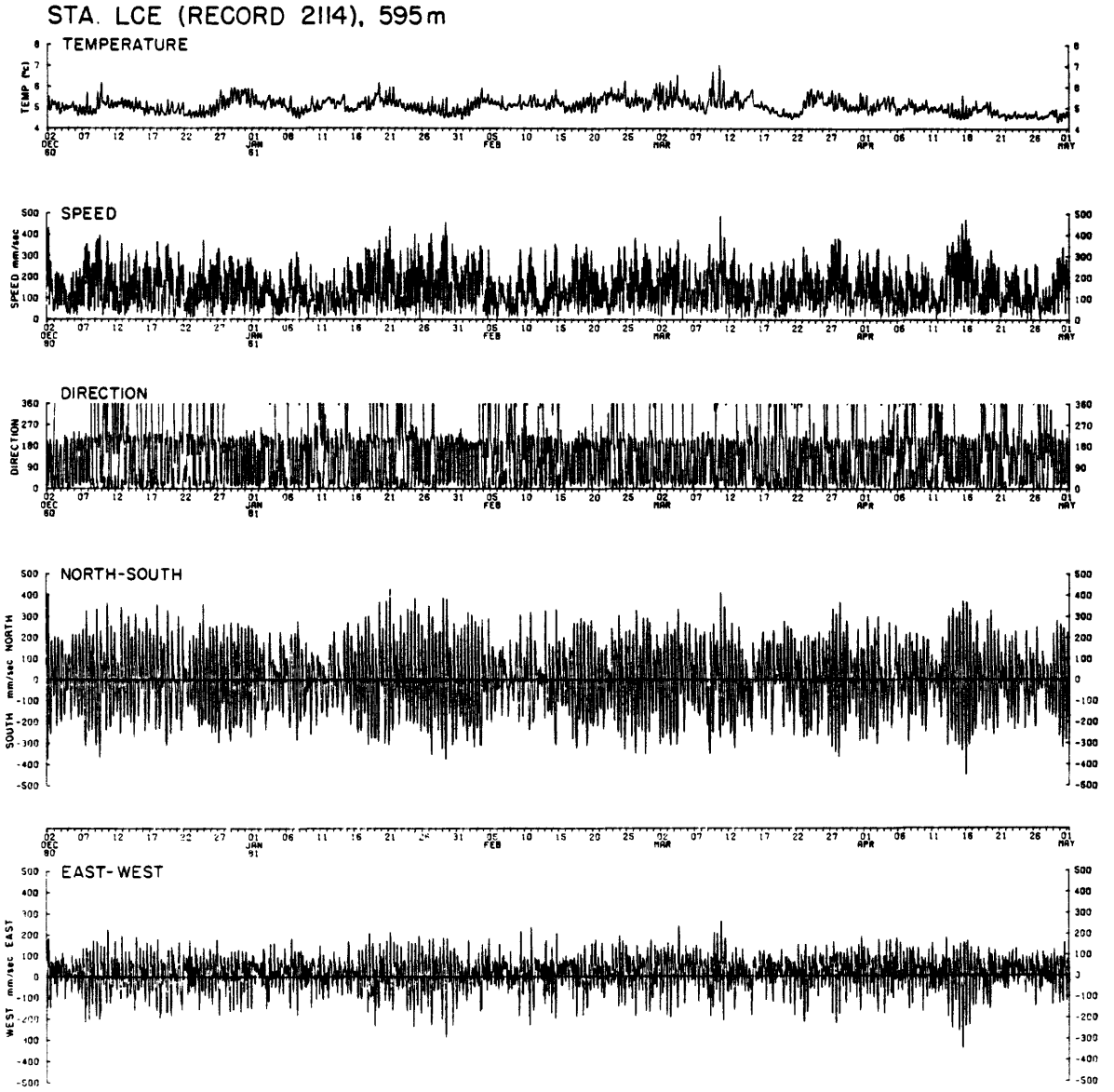


Figure 24a. Station LCE, record 2114, 595 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

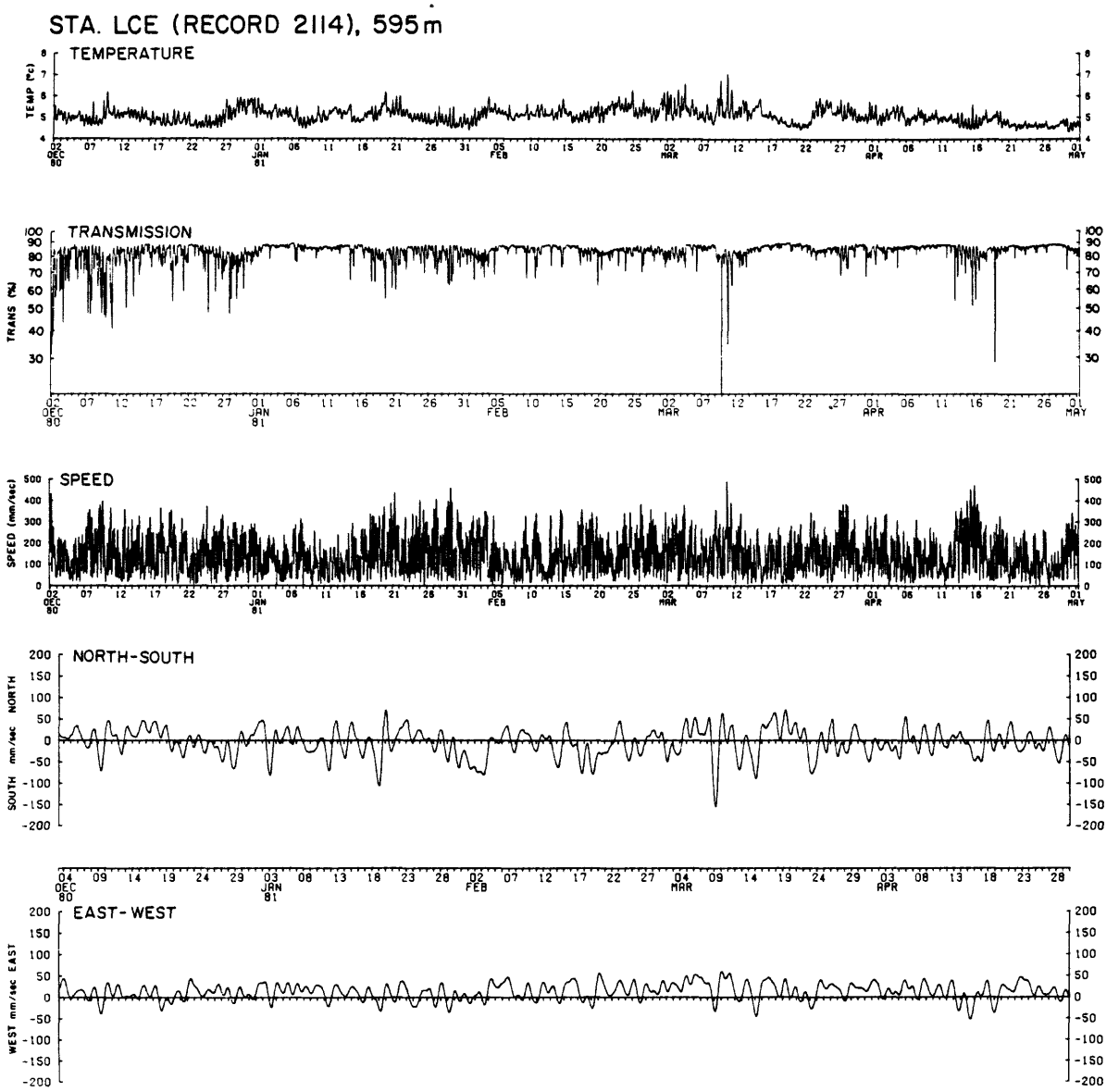


Figure 24b. Station LCE, record 2114, 595 m, hour-averaged temperature, percent light transmission over 1-m path length, speed, and low-passed north-south, east-west current.

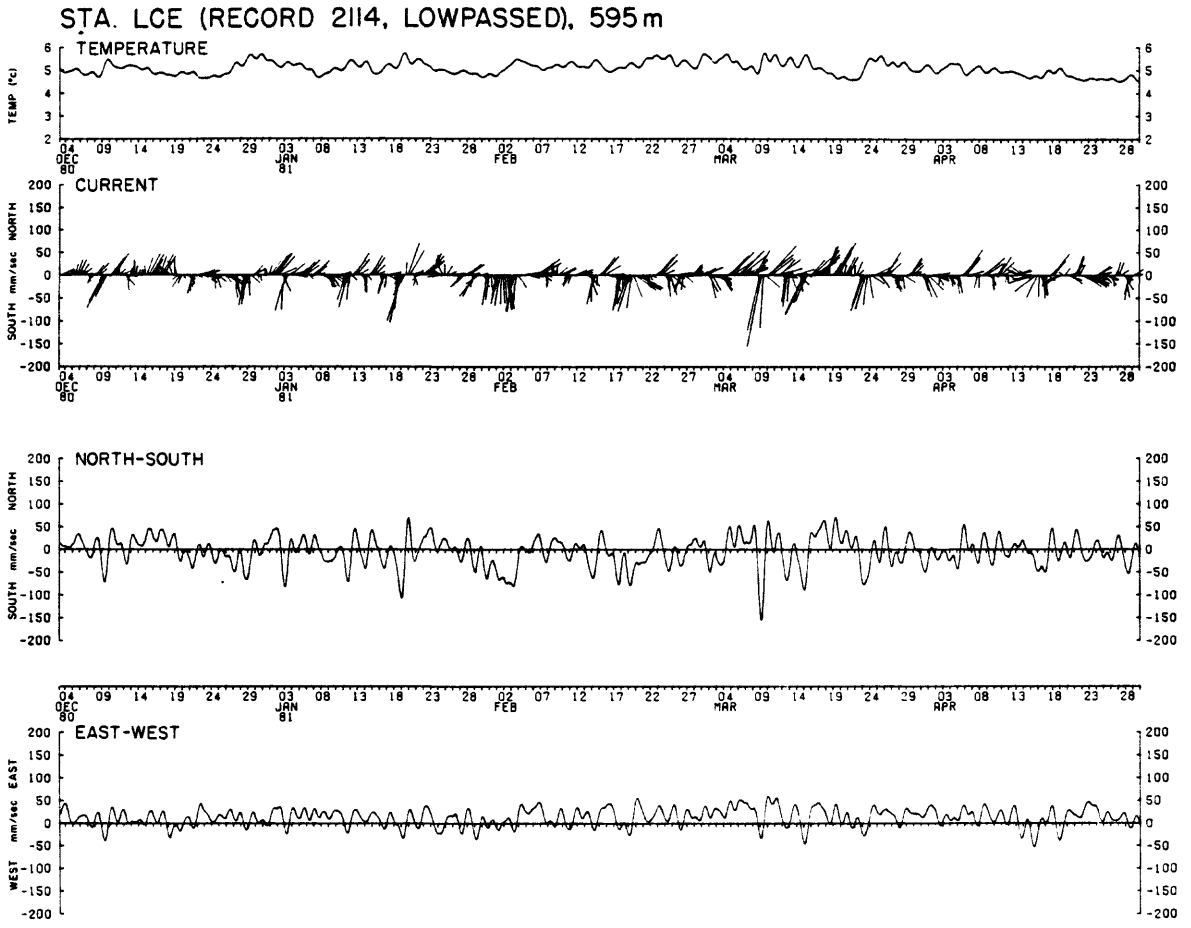


Figure 24c. Station LCE, record 2114, 595 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

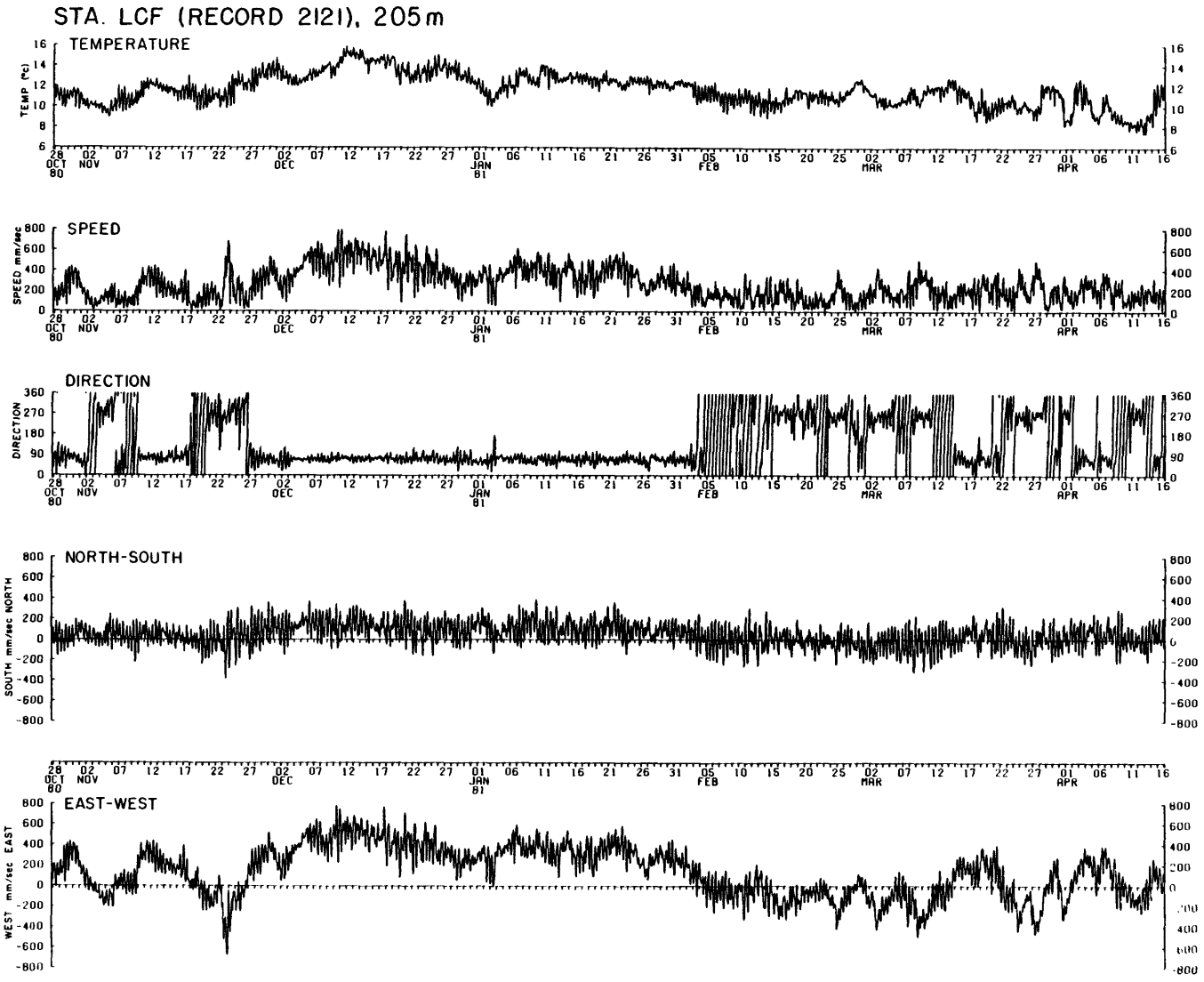


Figure 25a. Station LCF, record 2121, 205 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

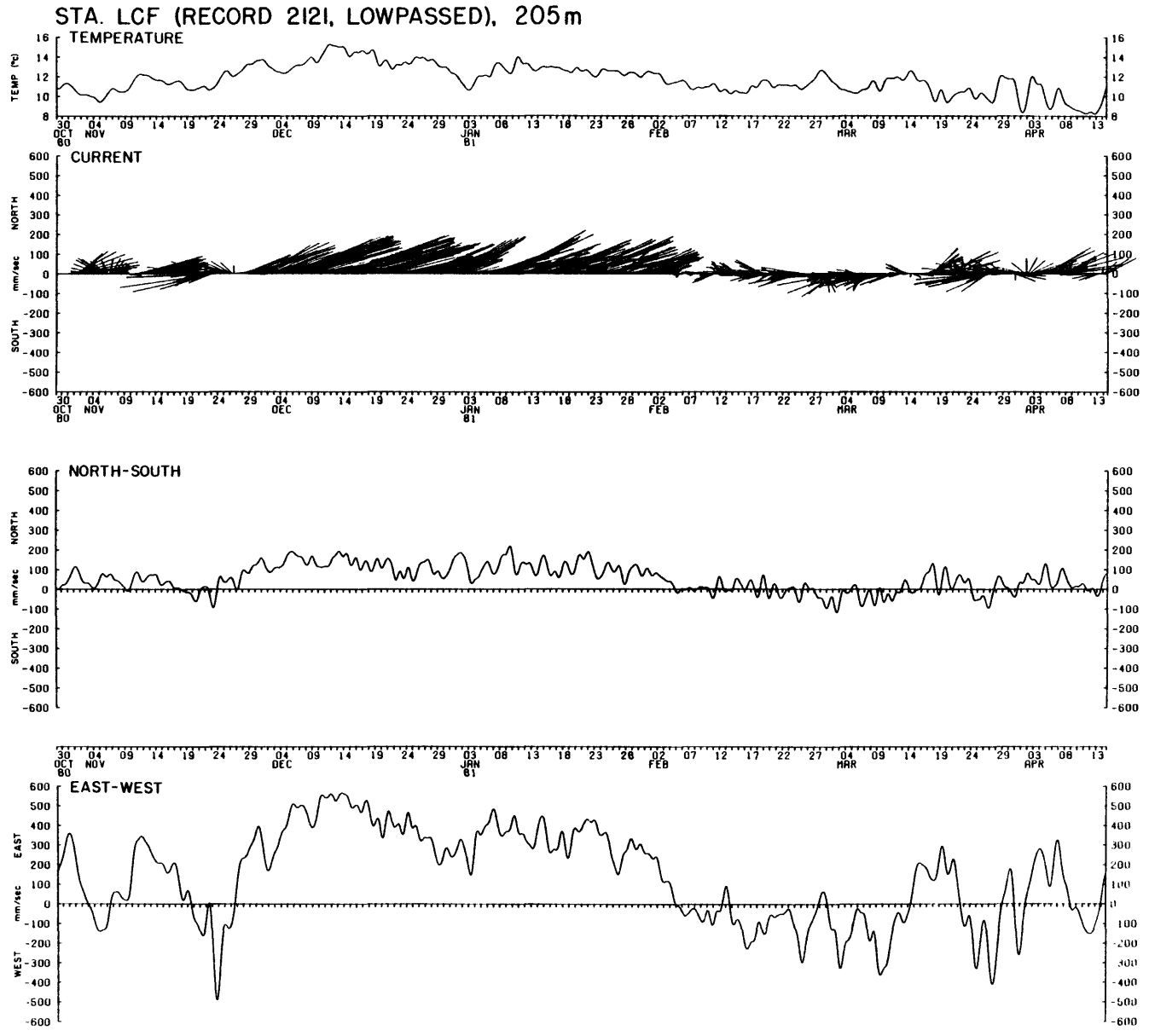


Figure 25b. Station LCF, record 2121, 205 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

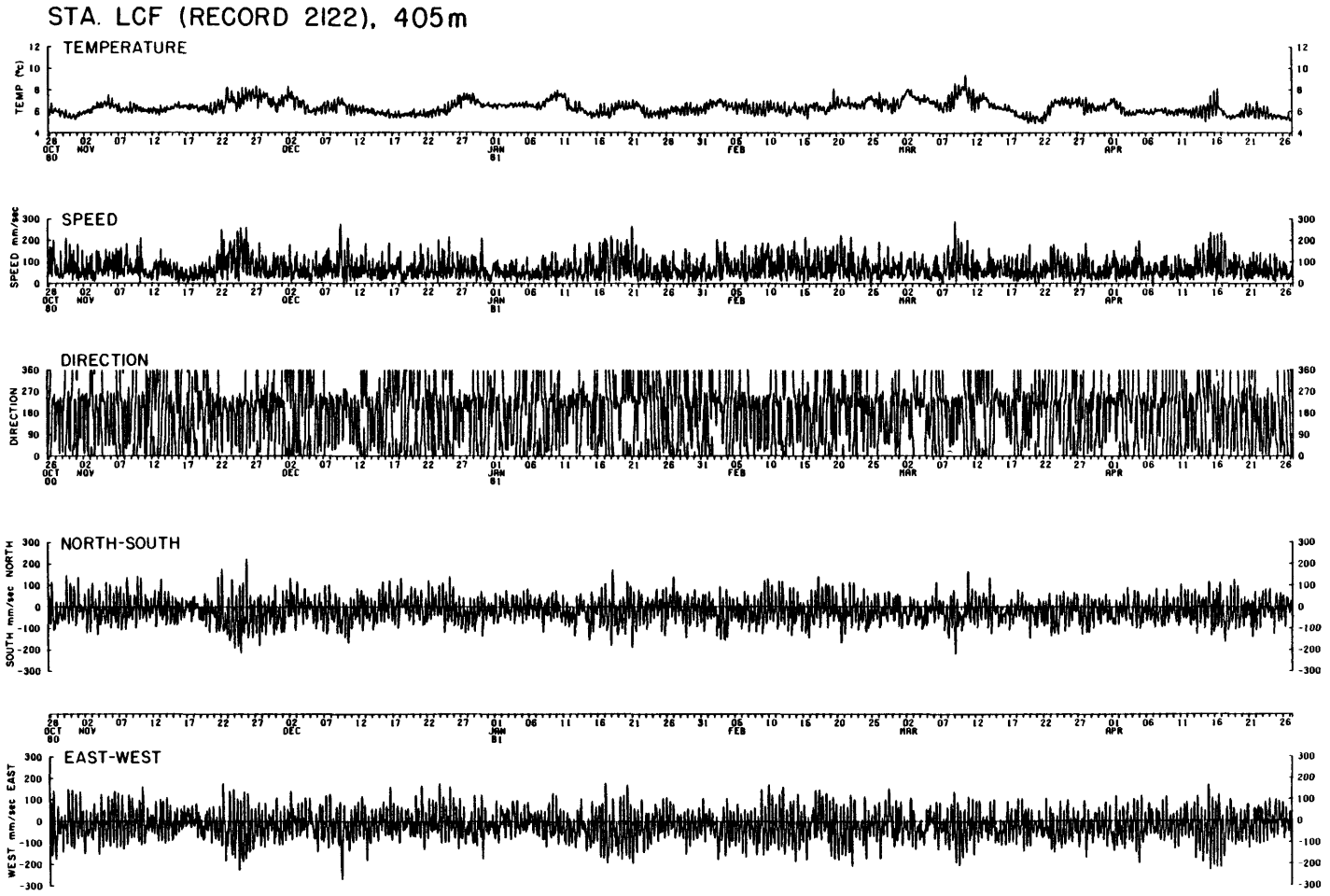


Figure 26a. Station LCF, record 2122, 405 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

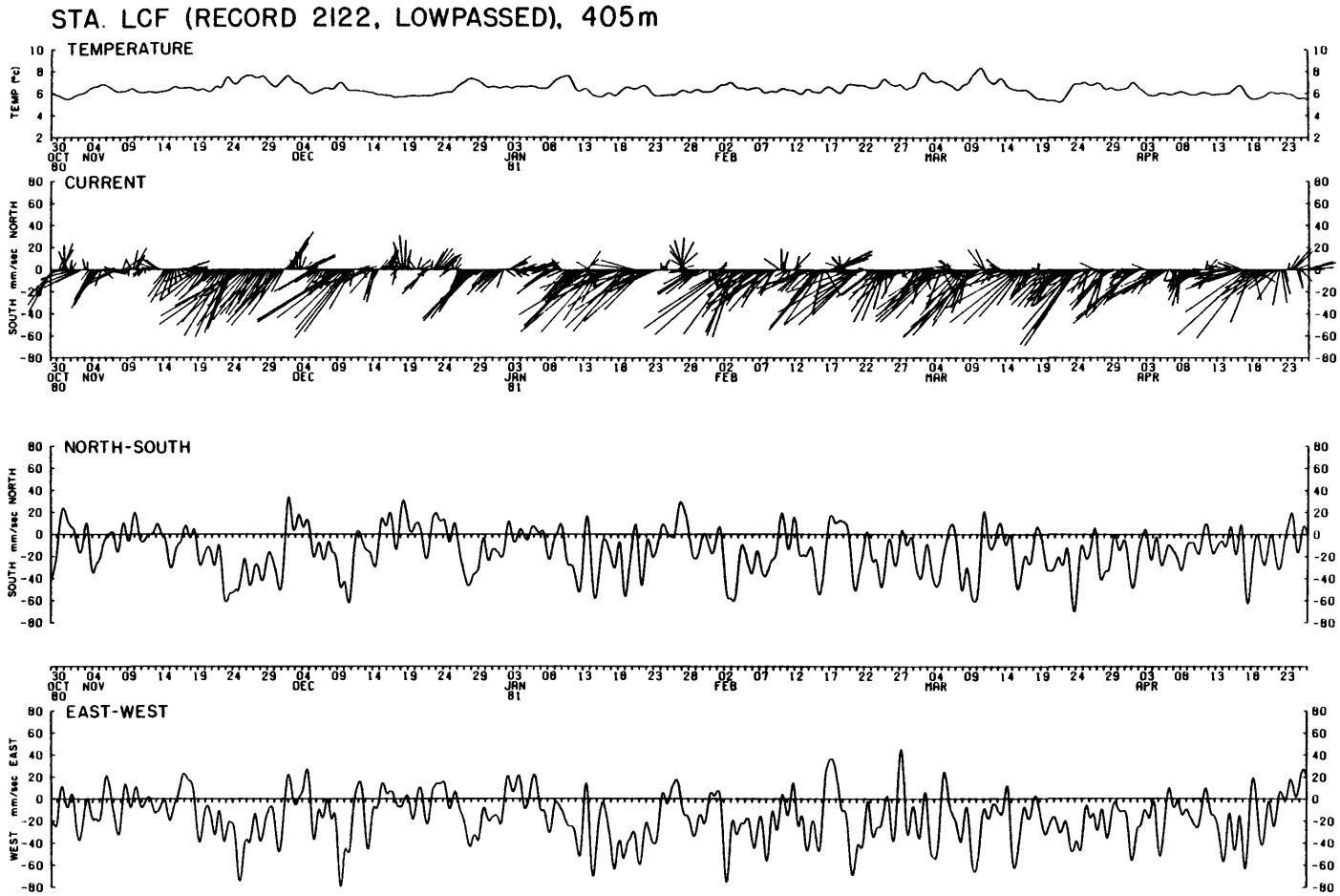


Figure 26b. Station LCF, record 2122, 405 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

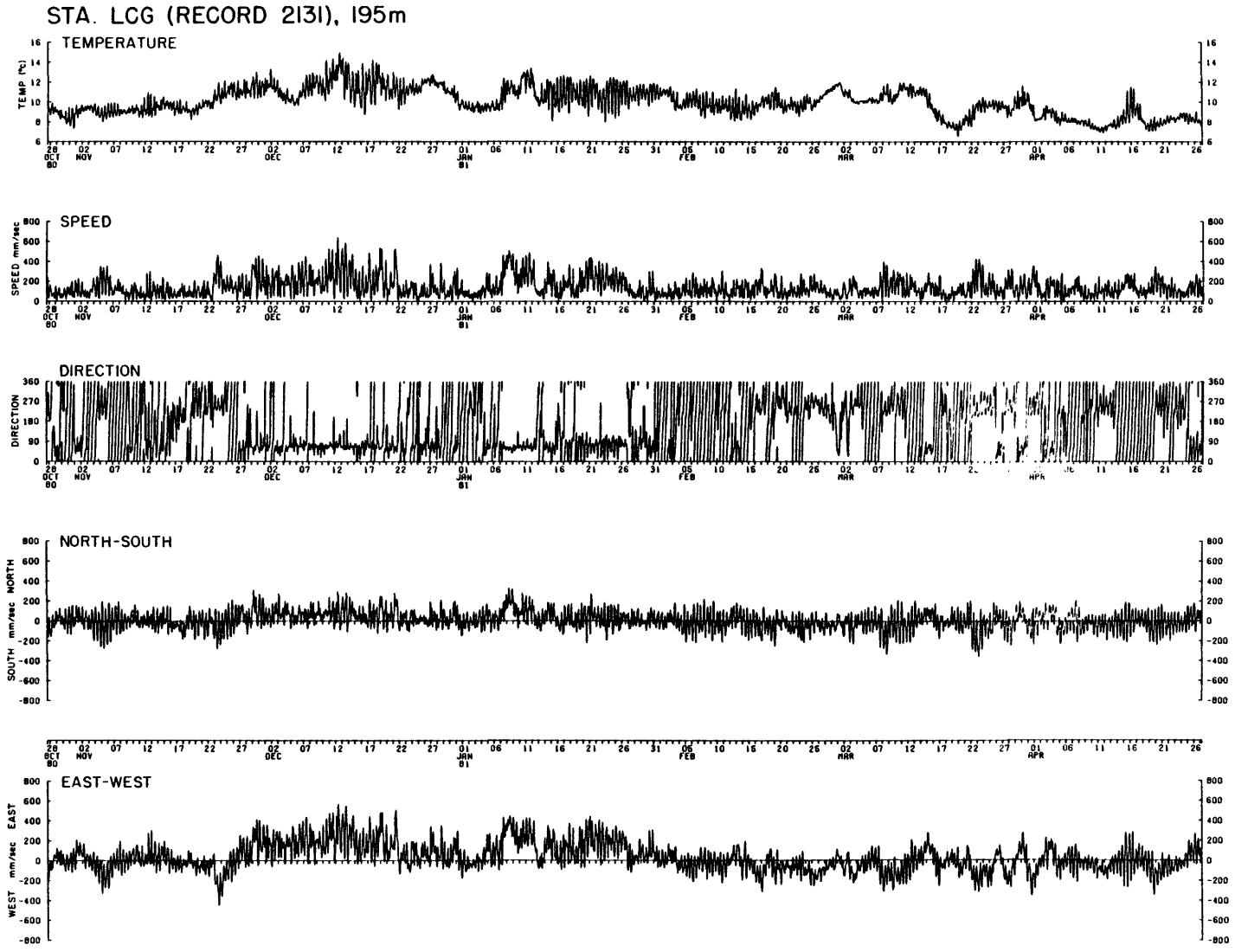


Figure 27a. Station LCG, record 2131, 195 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

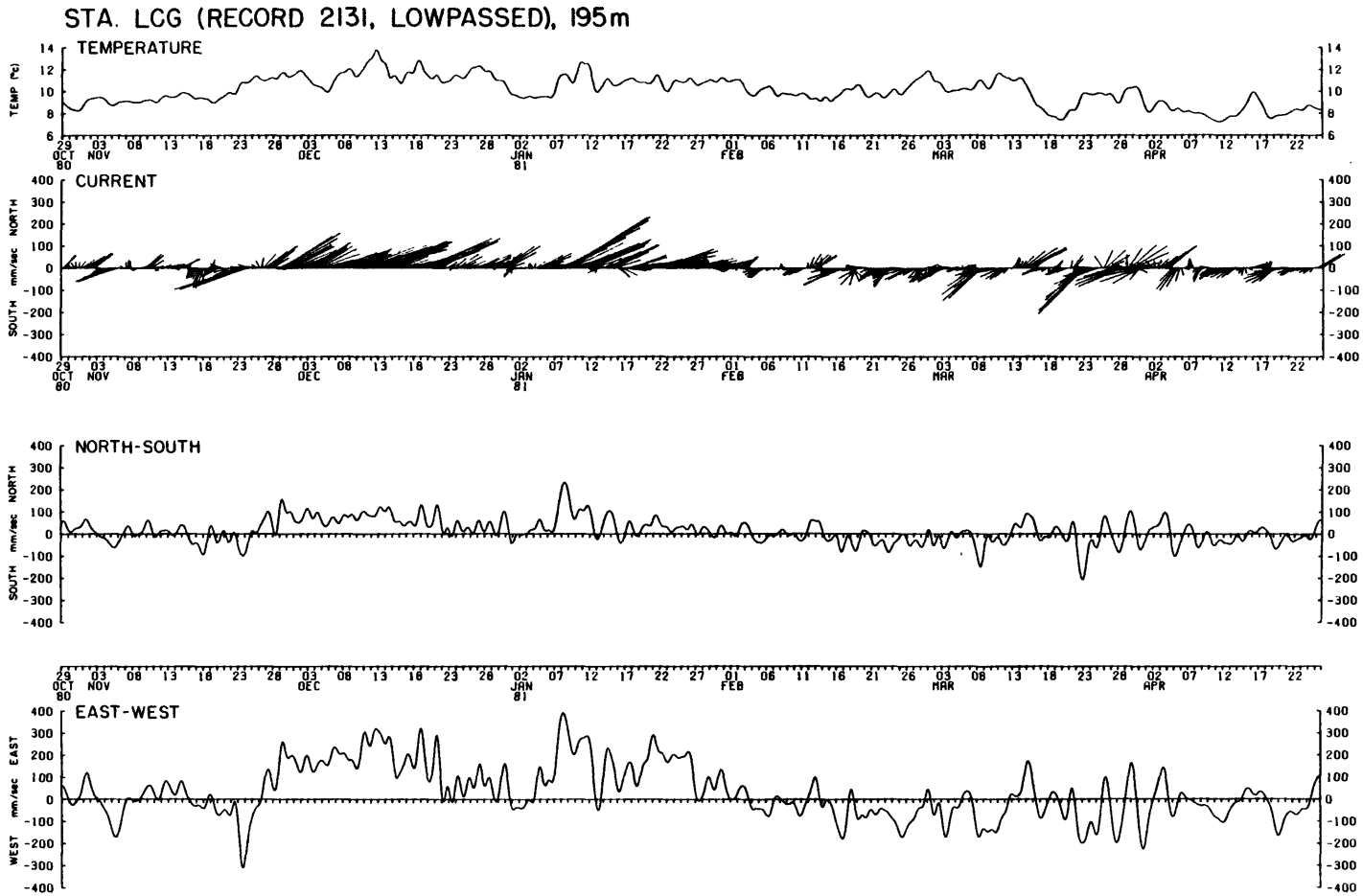


Figure 27b. Station LCG, record 2131, 195 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

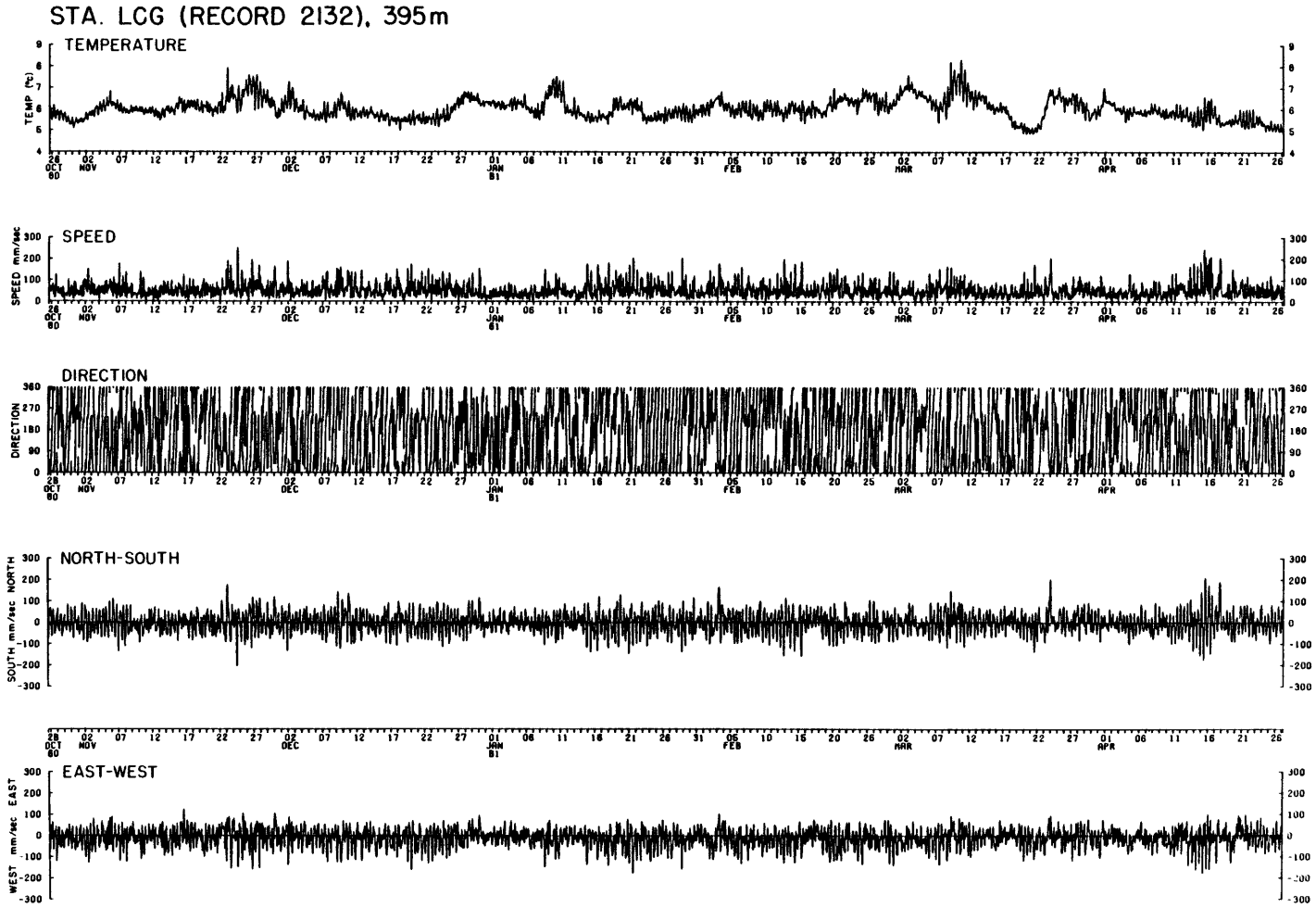


Figure 28a. Station LCG, record 2132, 395 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

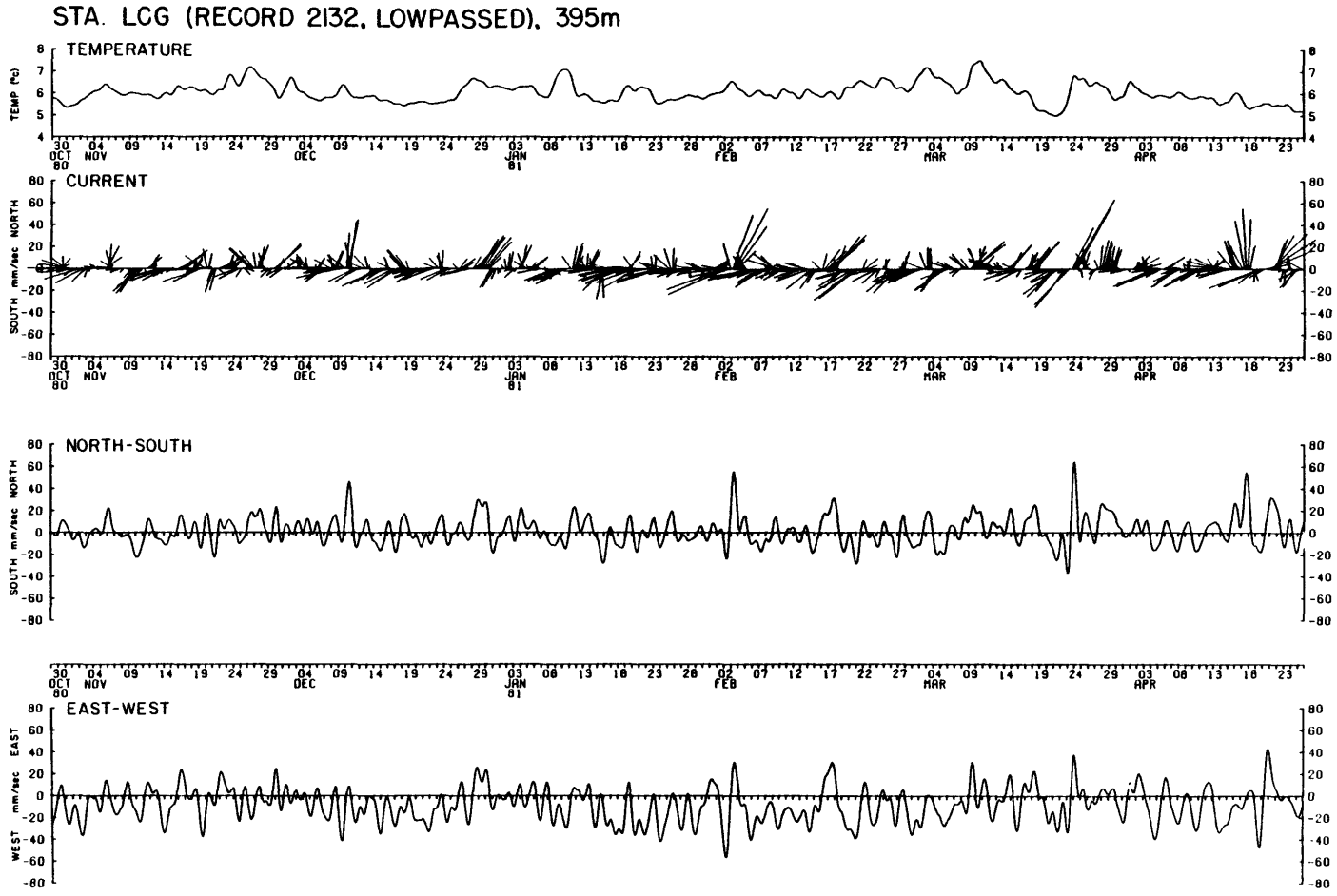


Figure 28b. Station LCG, record 2132, 395 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

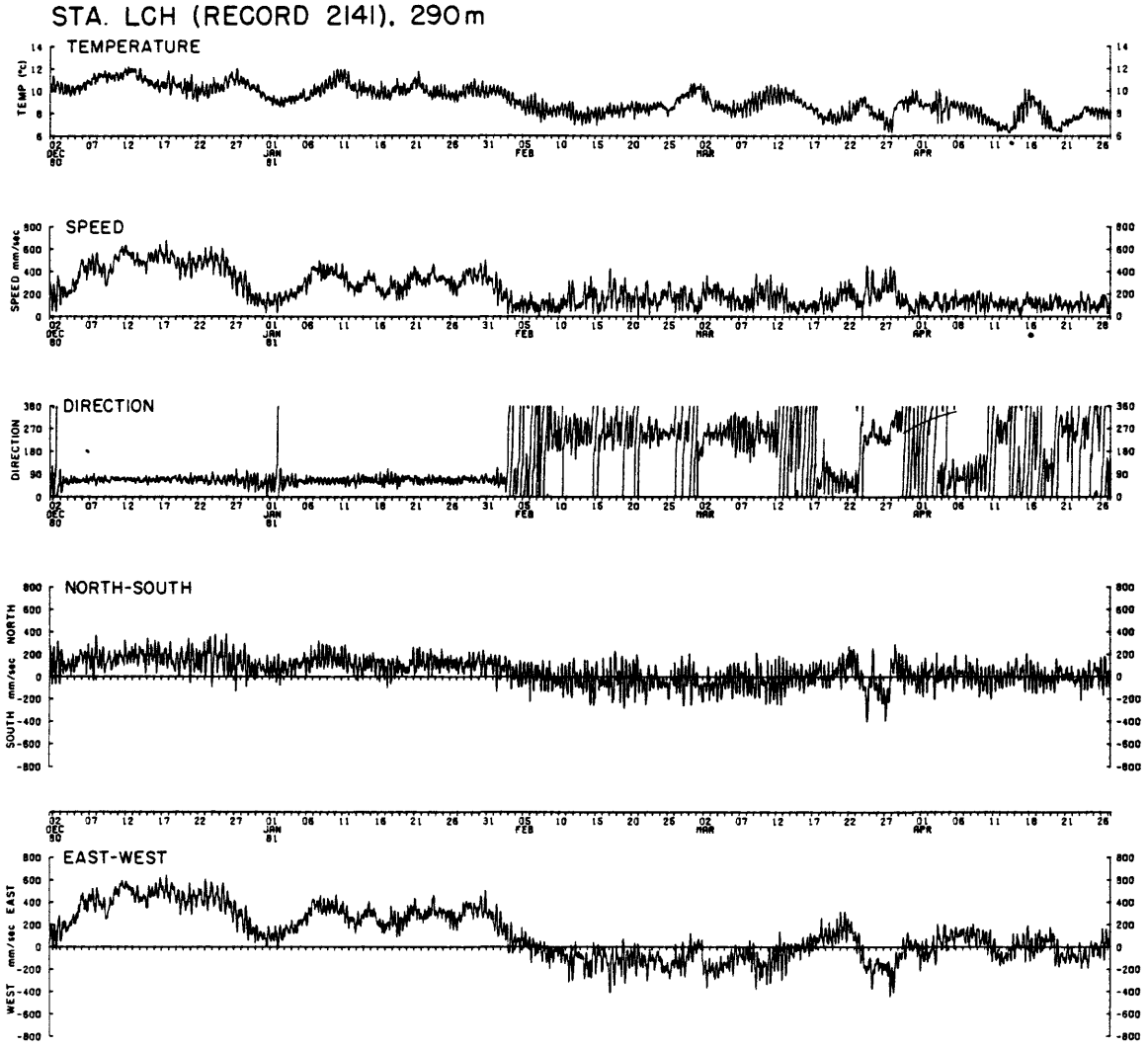


Figure 29a. Station LCH, record 2141, 290 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

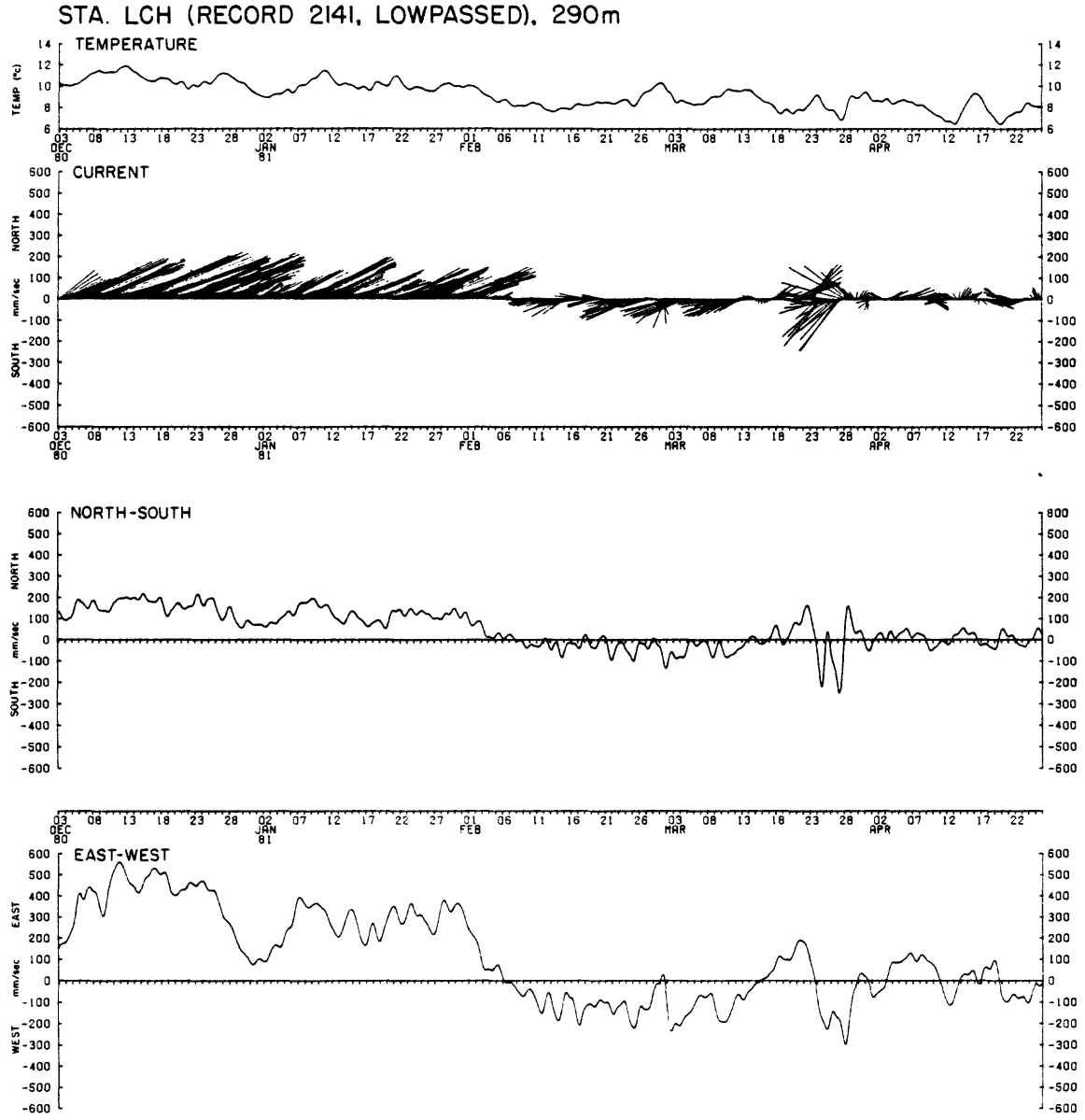


Figure 29b. Station LCH, record 2141, 290 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

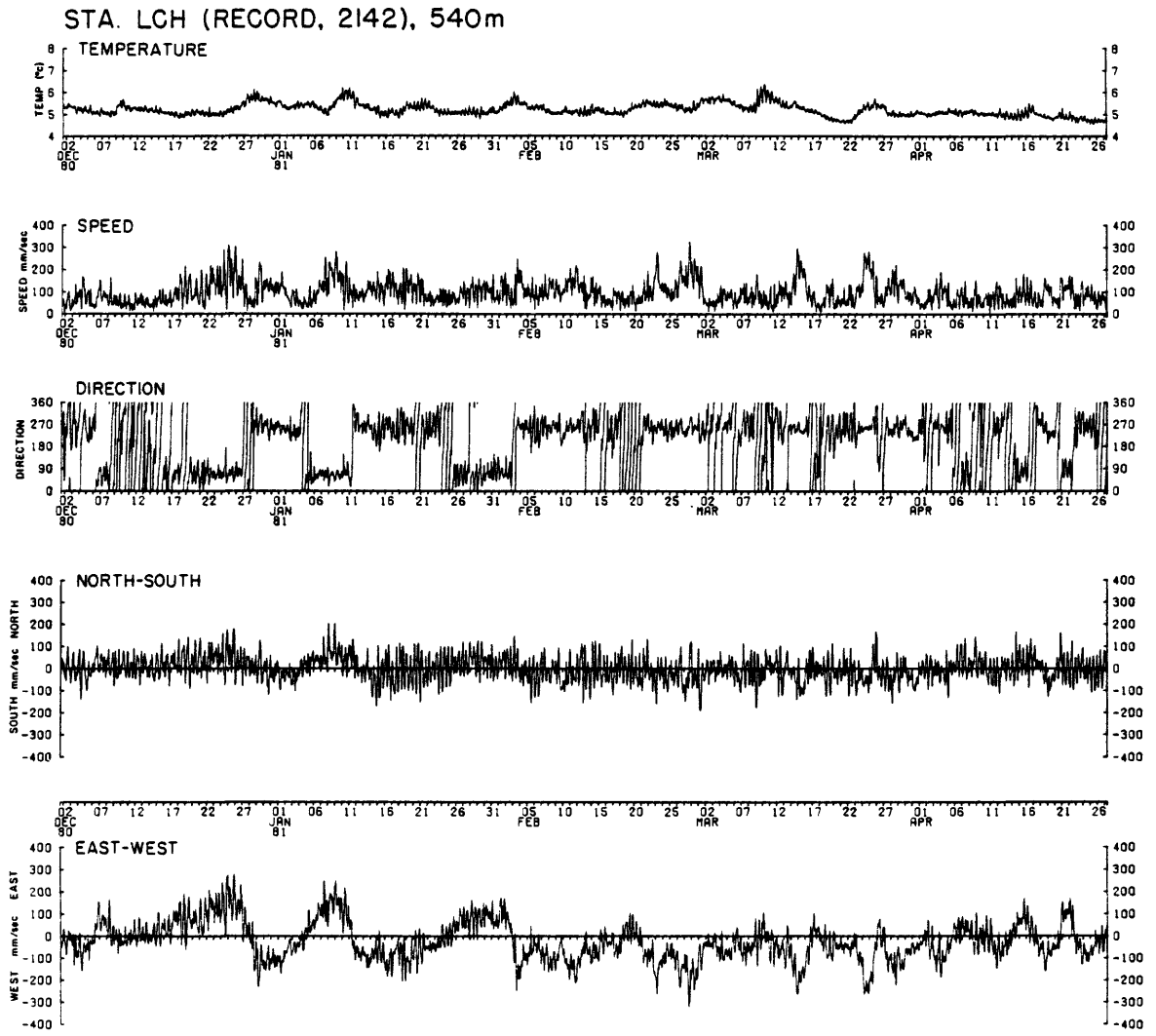


Figure 30a. Station LCH, record 2142, 540 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

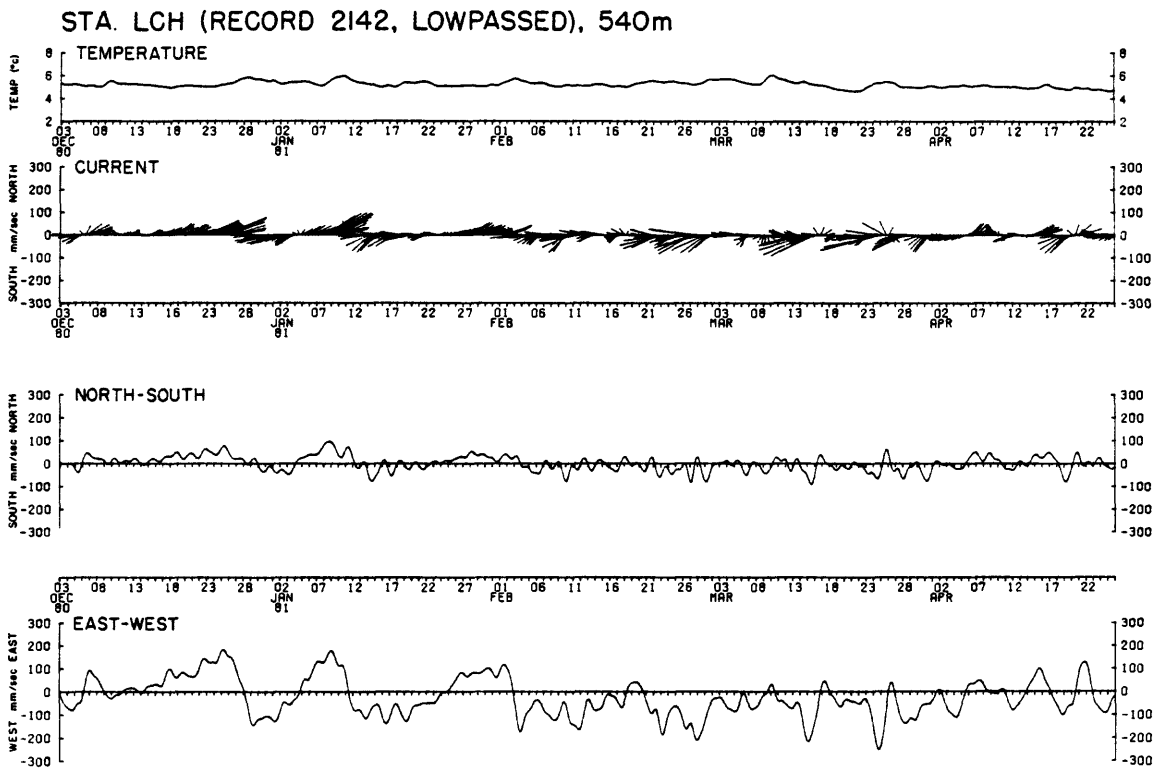


Figure 30b. Station LCH, record 2142, 540 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

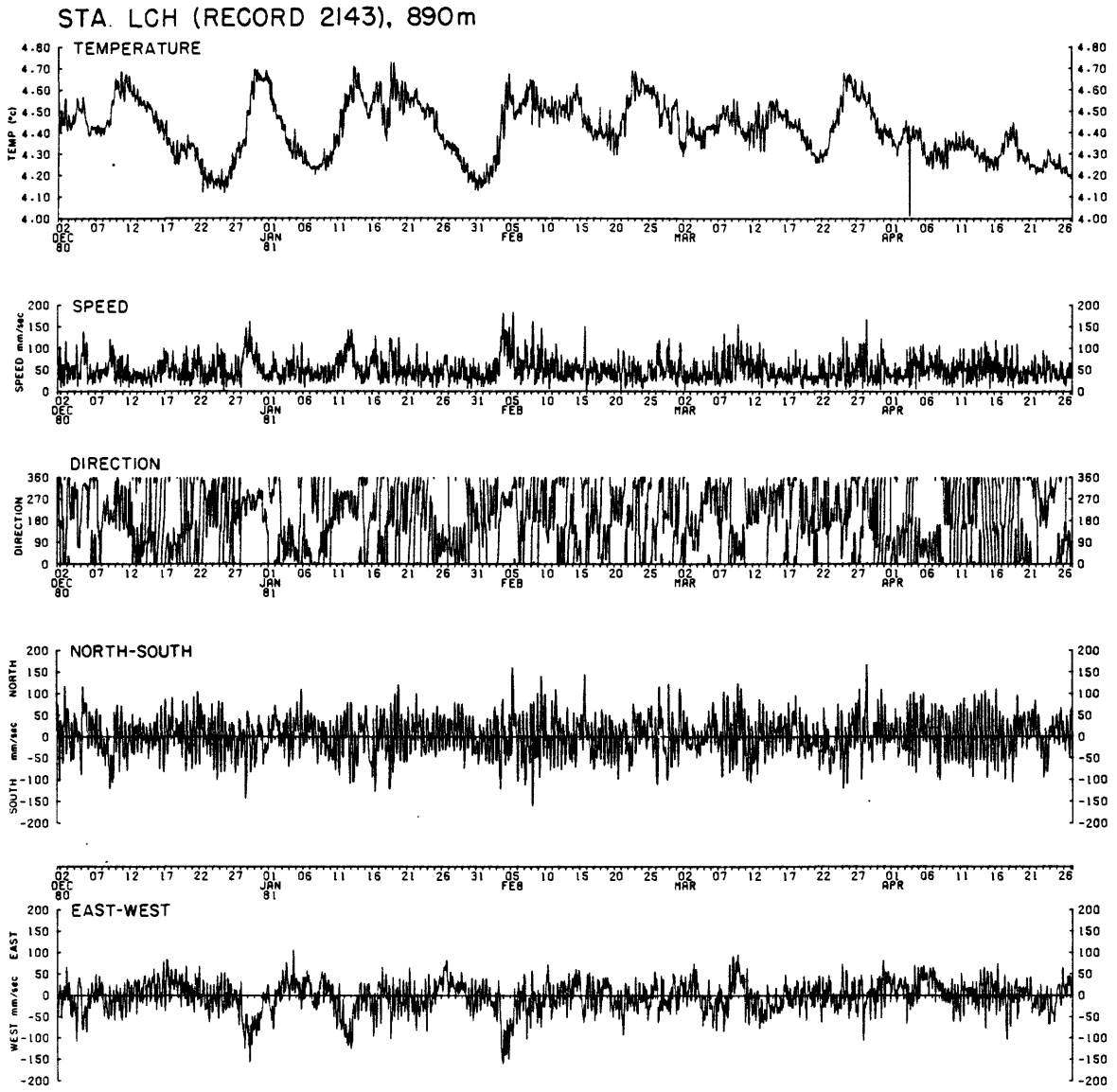


Figure 31a. Station LCH, record 2143, 890 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

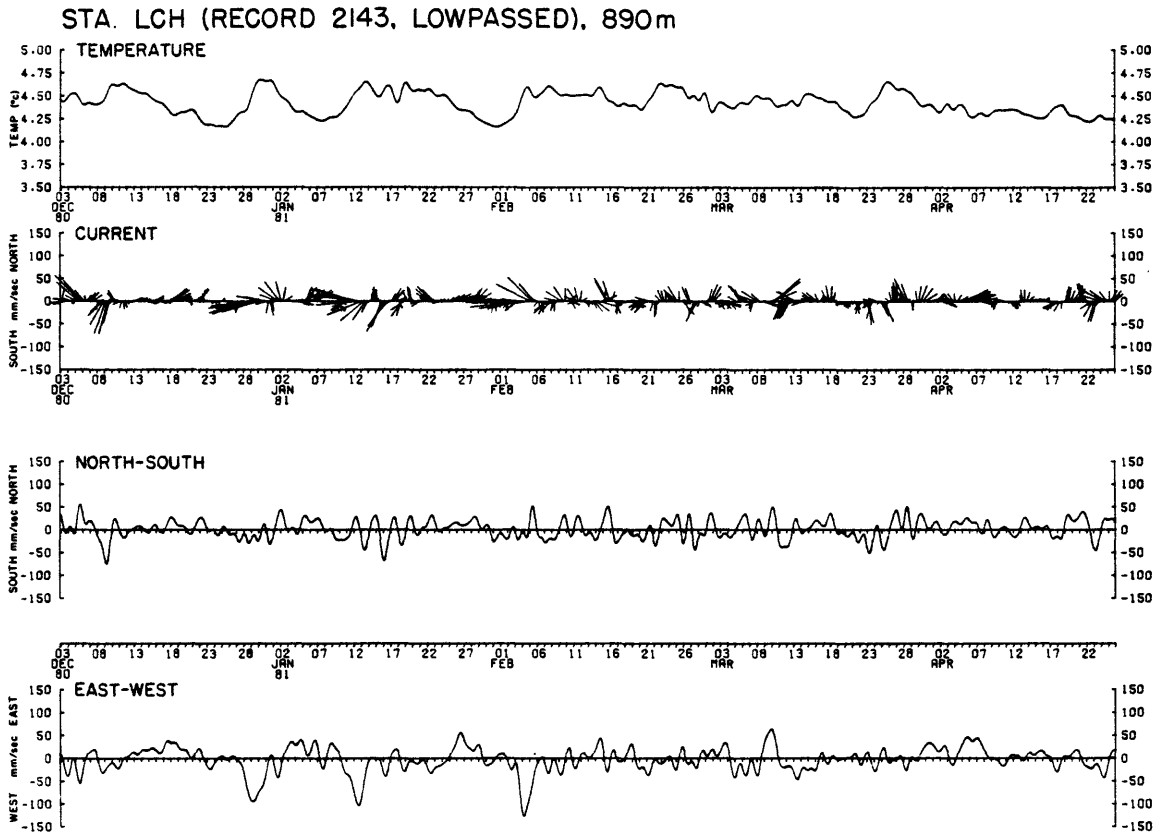


Figure 31b. Station LCH, record 2143, 890 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

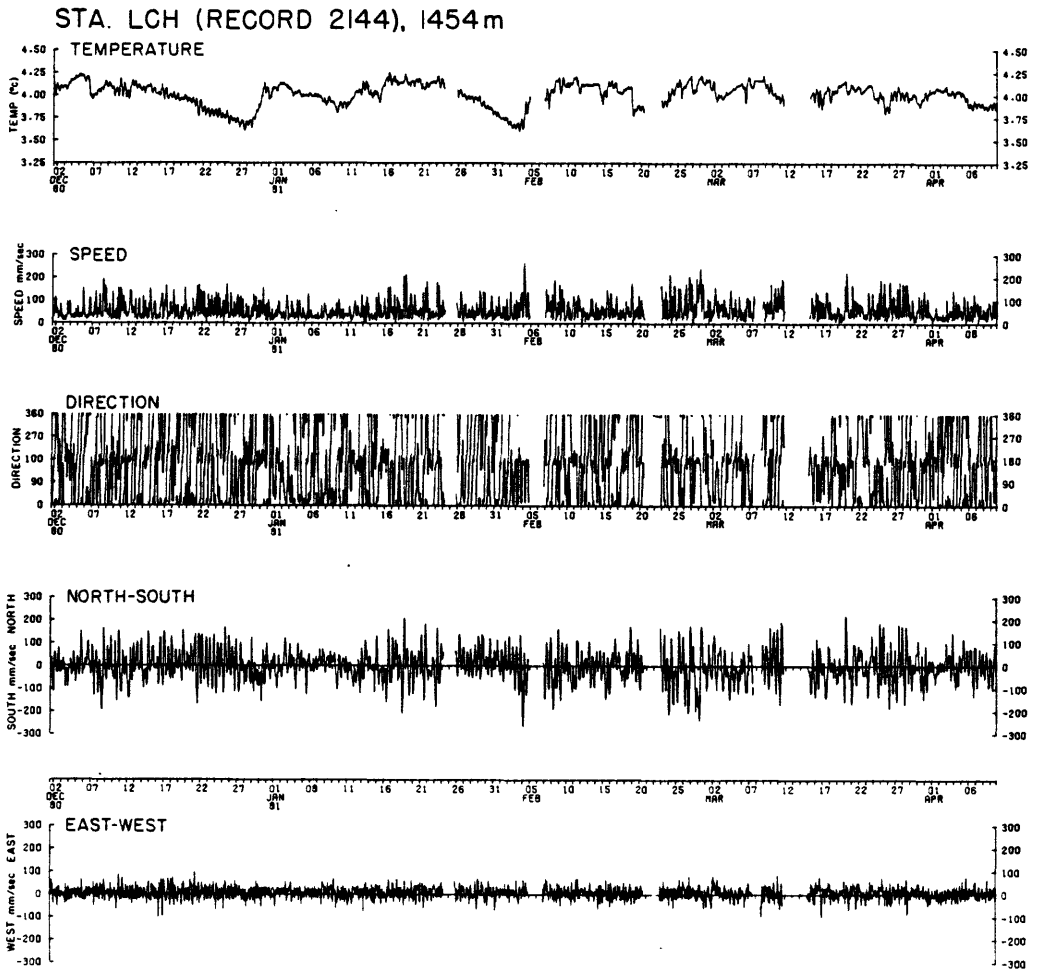


Figure 32a. Station LCH, record 2144, 1,454 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

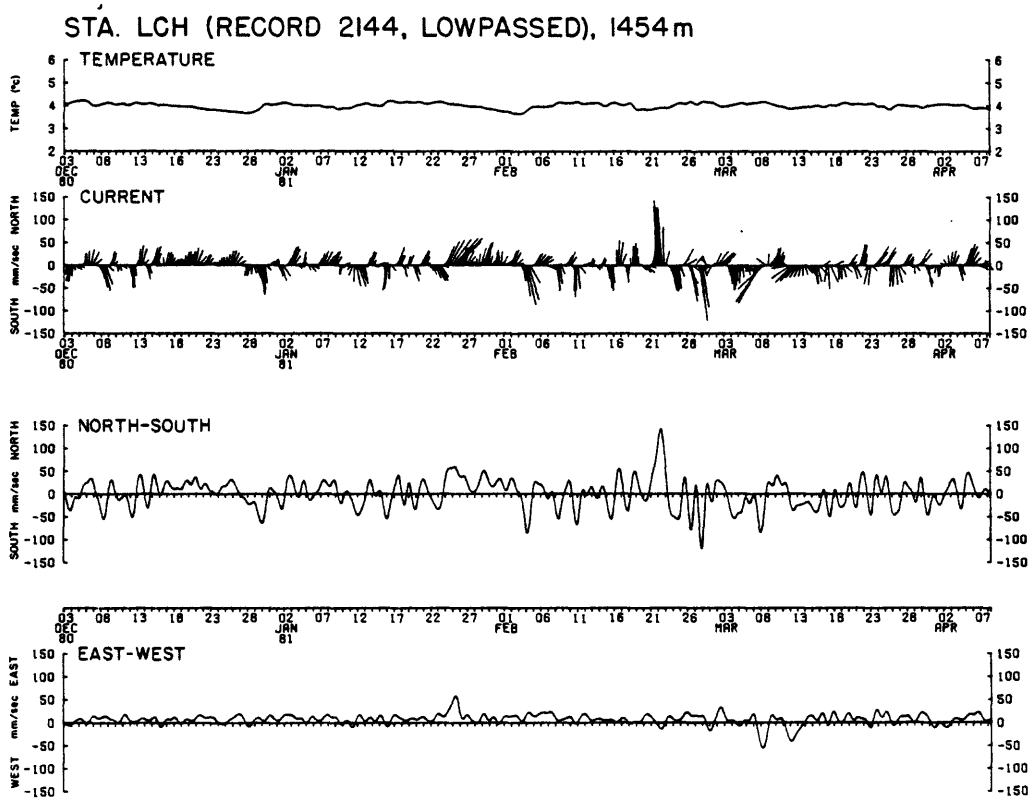


Figure 32b. Station LCH, record 2144, 1,454 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

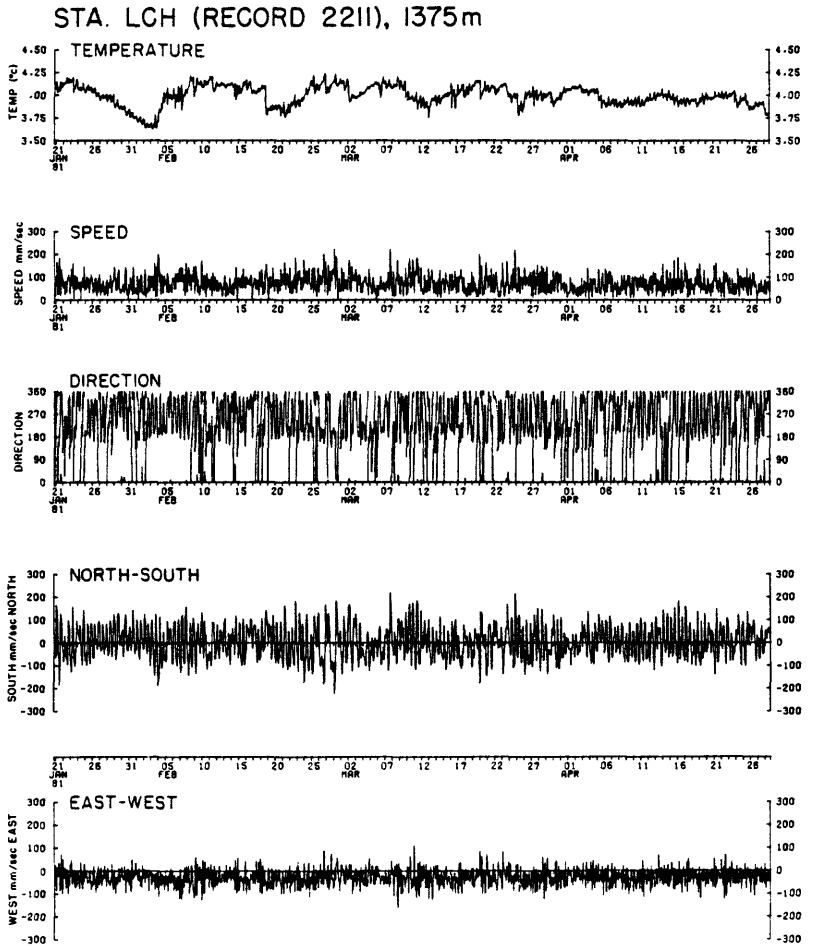


Figure 33a. Station LCH, record 2211, 1,375 m, hour-averaged temperature, speed, direction, and north-south, east-west current. Record 2211 obtained at a location slightly to the north of station LCH.

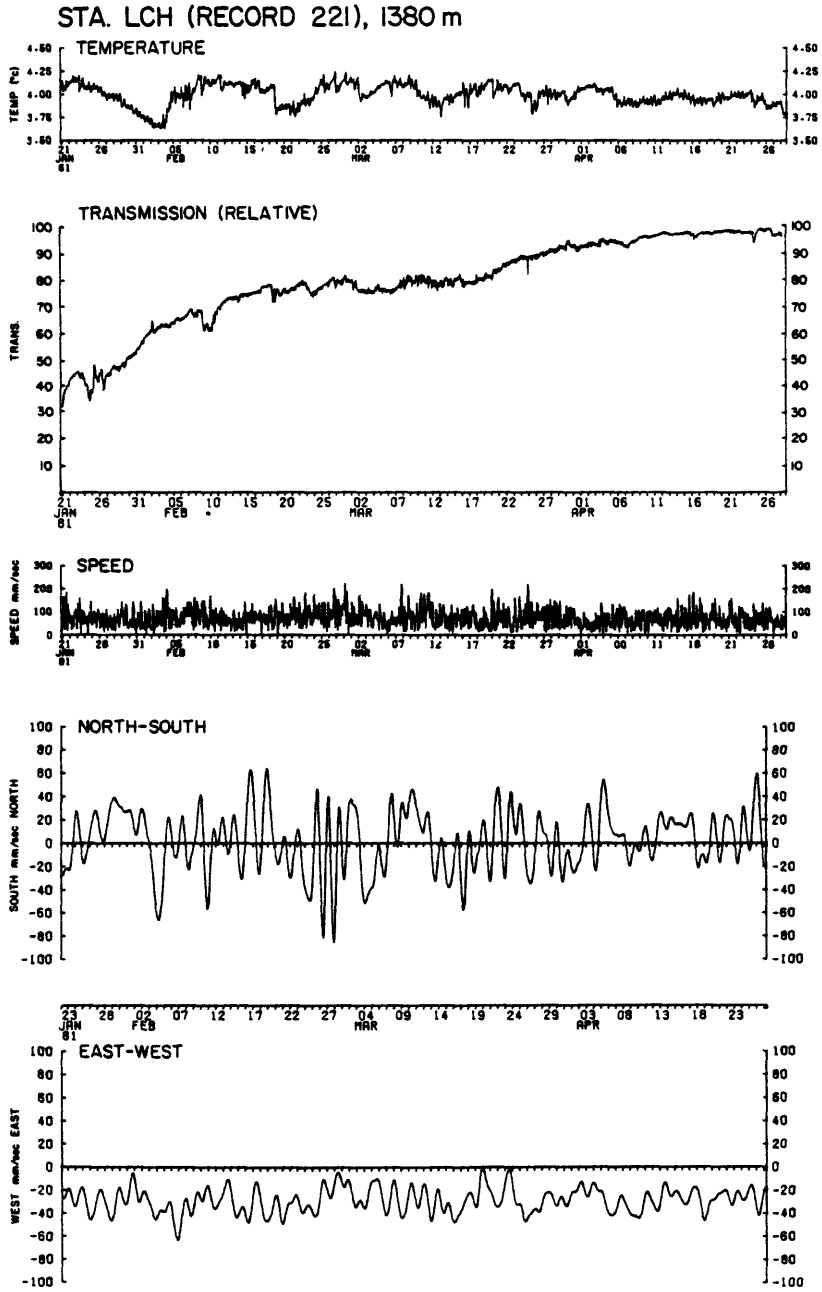


Figure 33b. Station LCH, record 221, 1,375 m, hour-averaged temperature, percent light transmission over 1-m path length, speed, and low-passed north-south, east-west current.

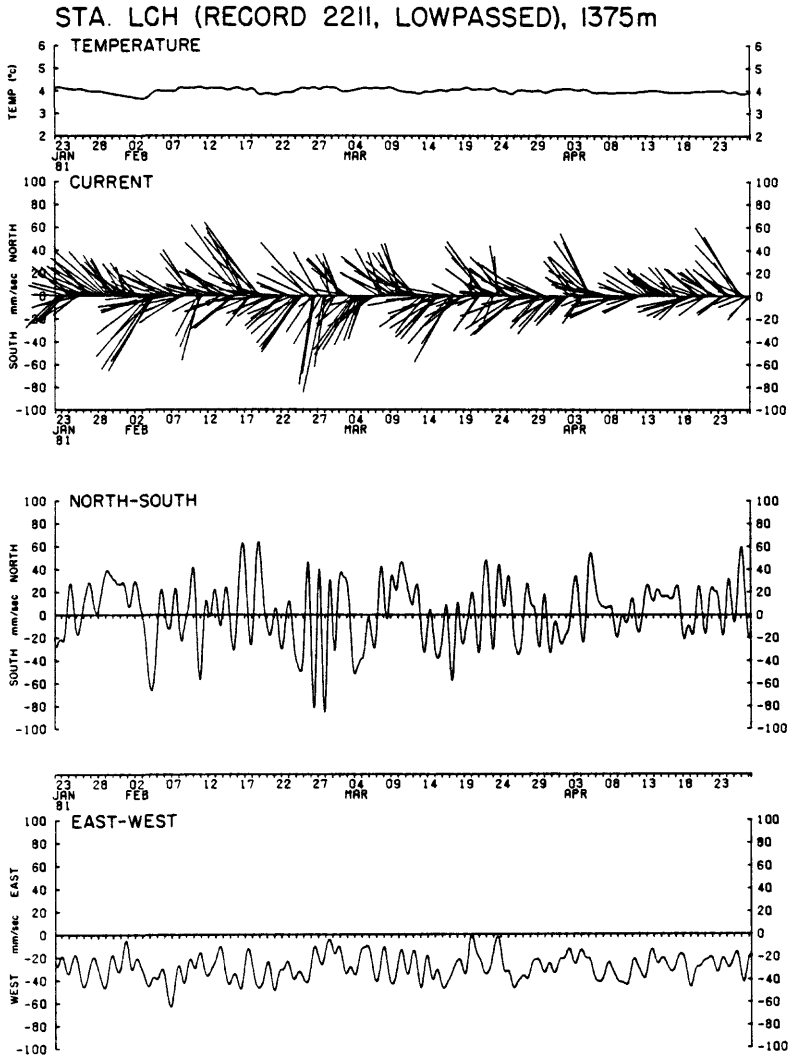


Figure 33c. Station LCH, record 2211, 1,375 m, low-passed temperature, vector current stickplot, and north-south, east-west current. Record 2211 obtained at a location slightly to the north of station LCH.

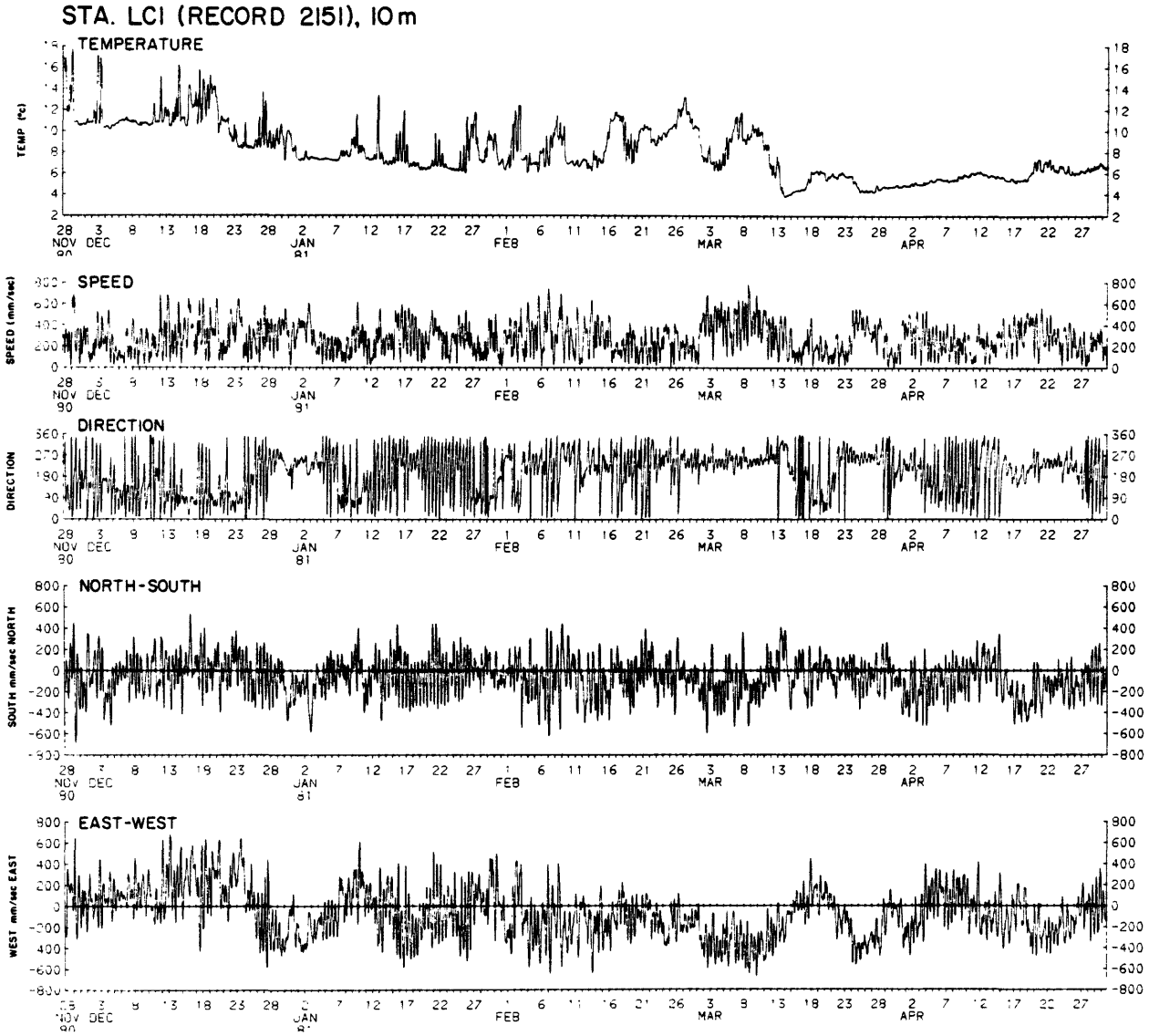


Figure 34a. Station LCI, record 2151, 10 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

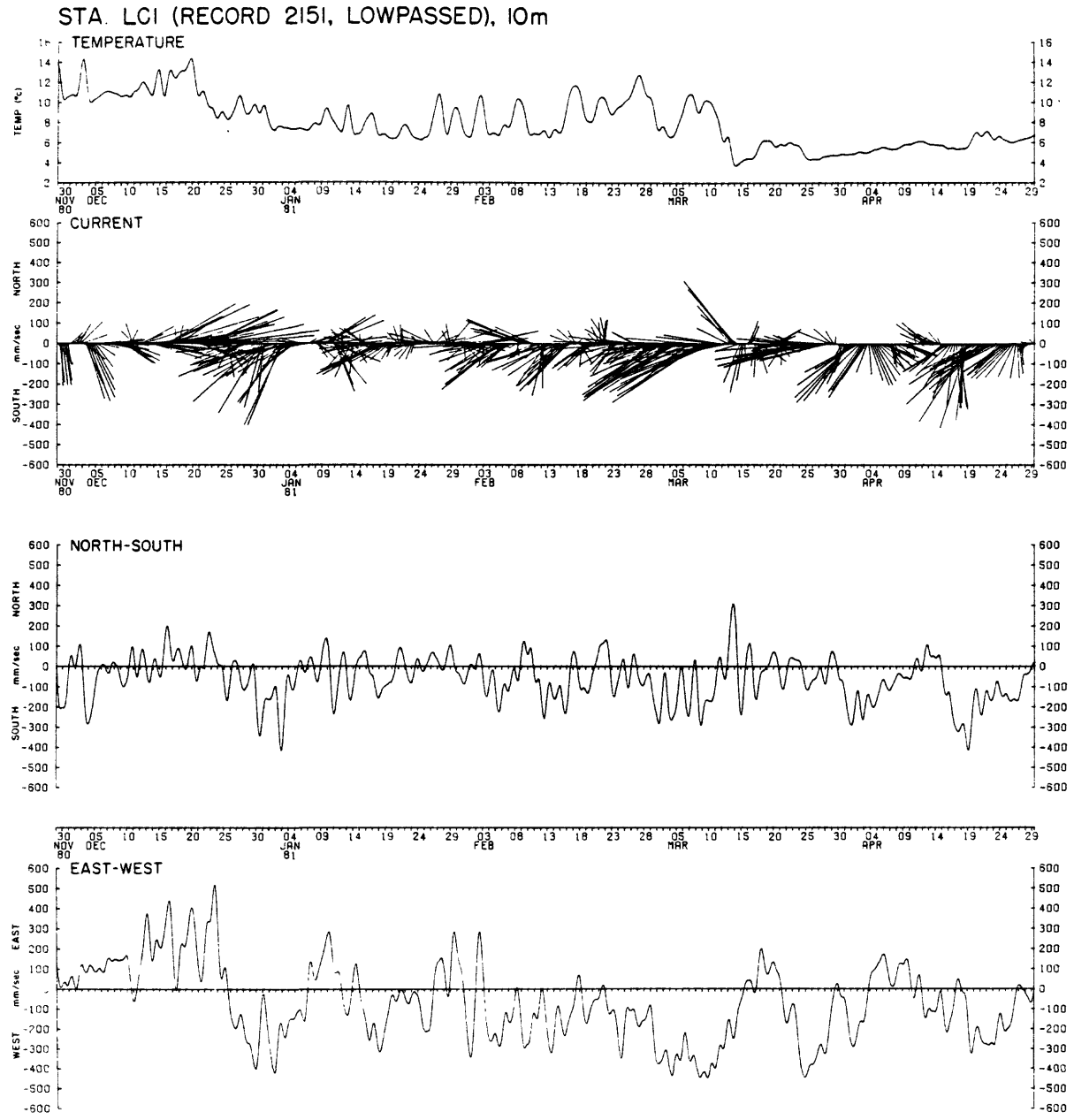


Figure 34b. Station LCI, record 2151, 10 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

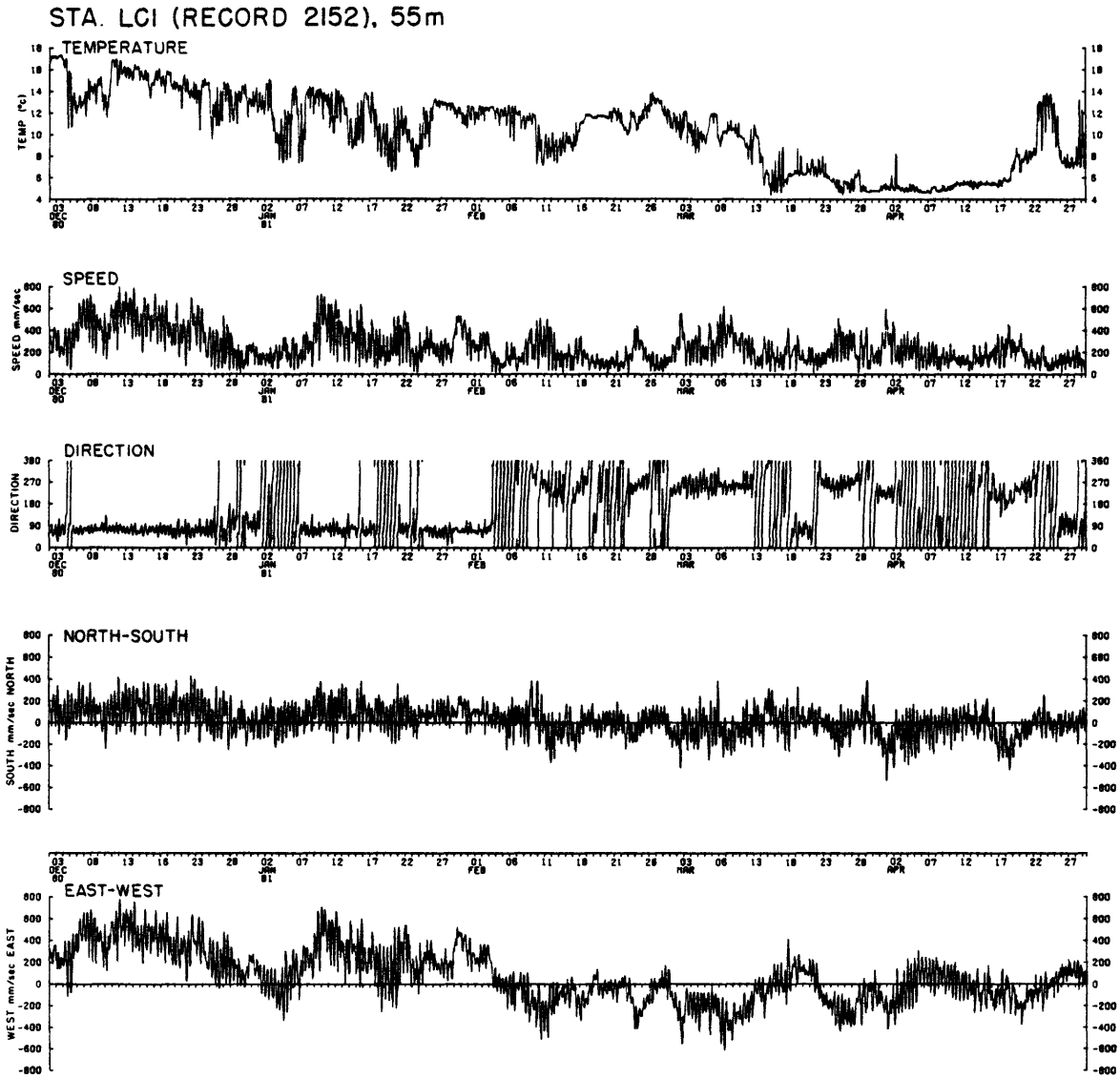


Figure 35a. Station LCI, record 2152, 55 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

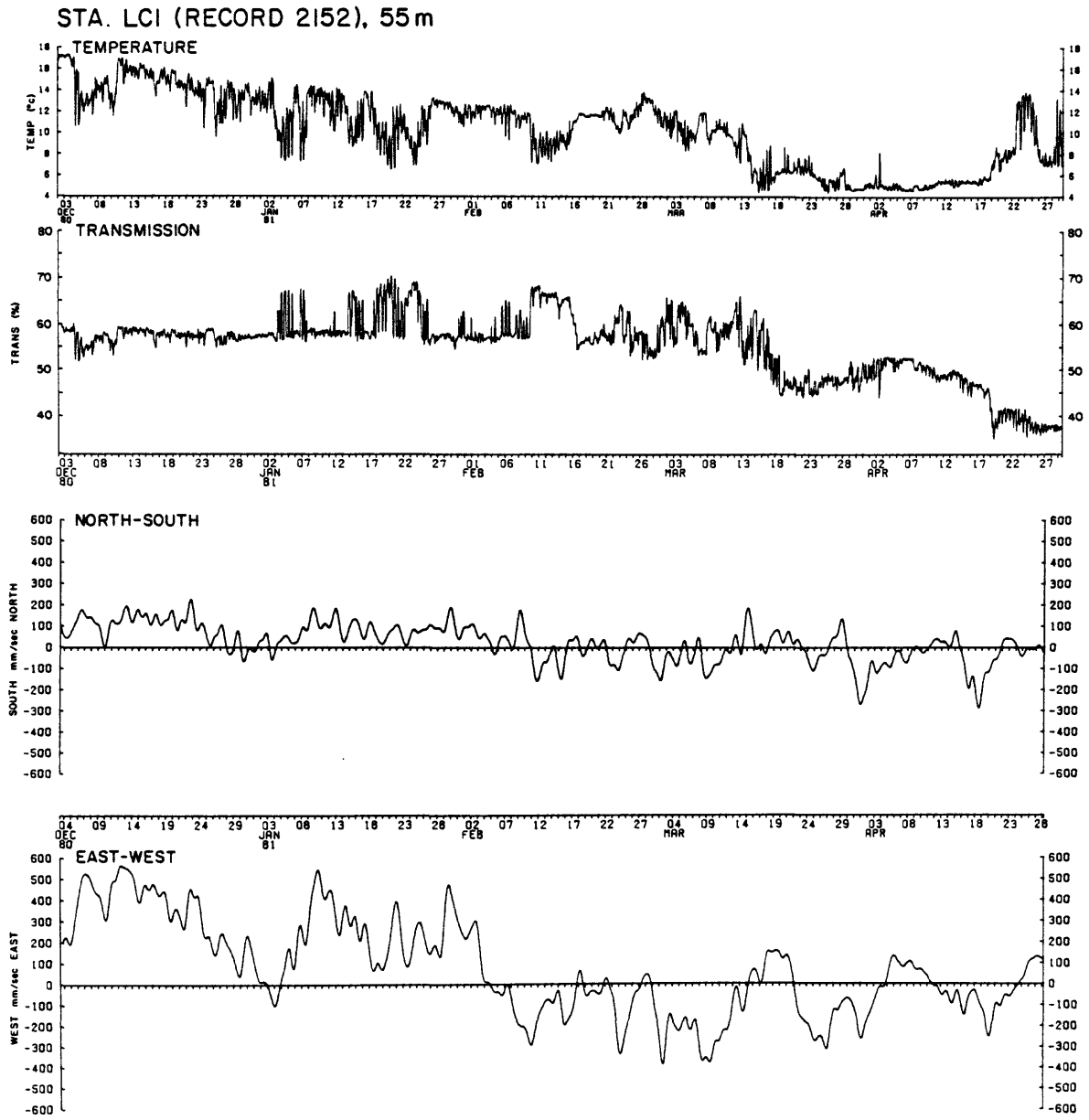


Figure 35b. Station LCI, record 2152, 55 m, hour-averaged temperature, percent light transmission over 1-m path length, and north-south, east-west current.

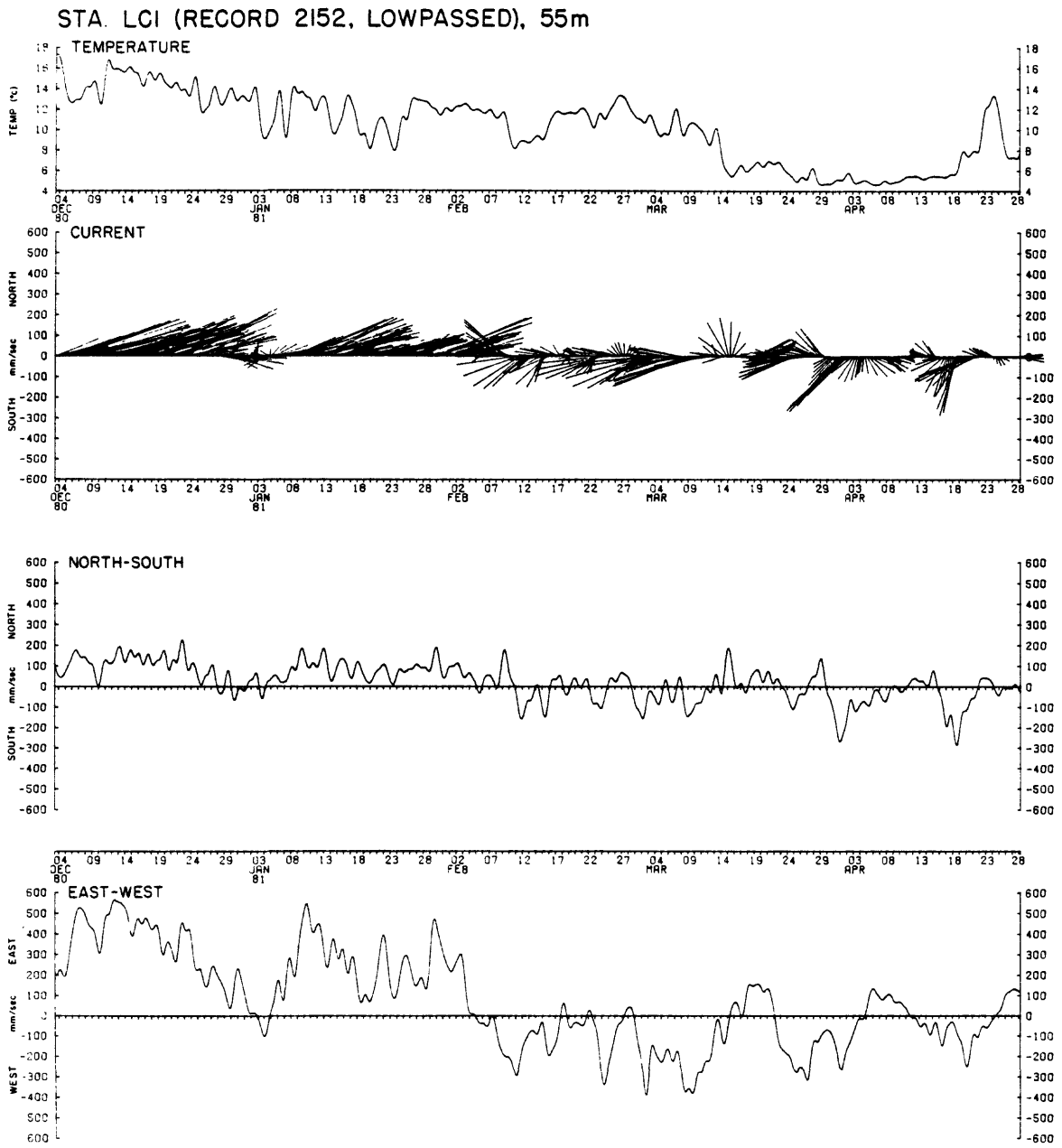


Figure 35c. Station LCI, record 2152, 55 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

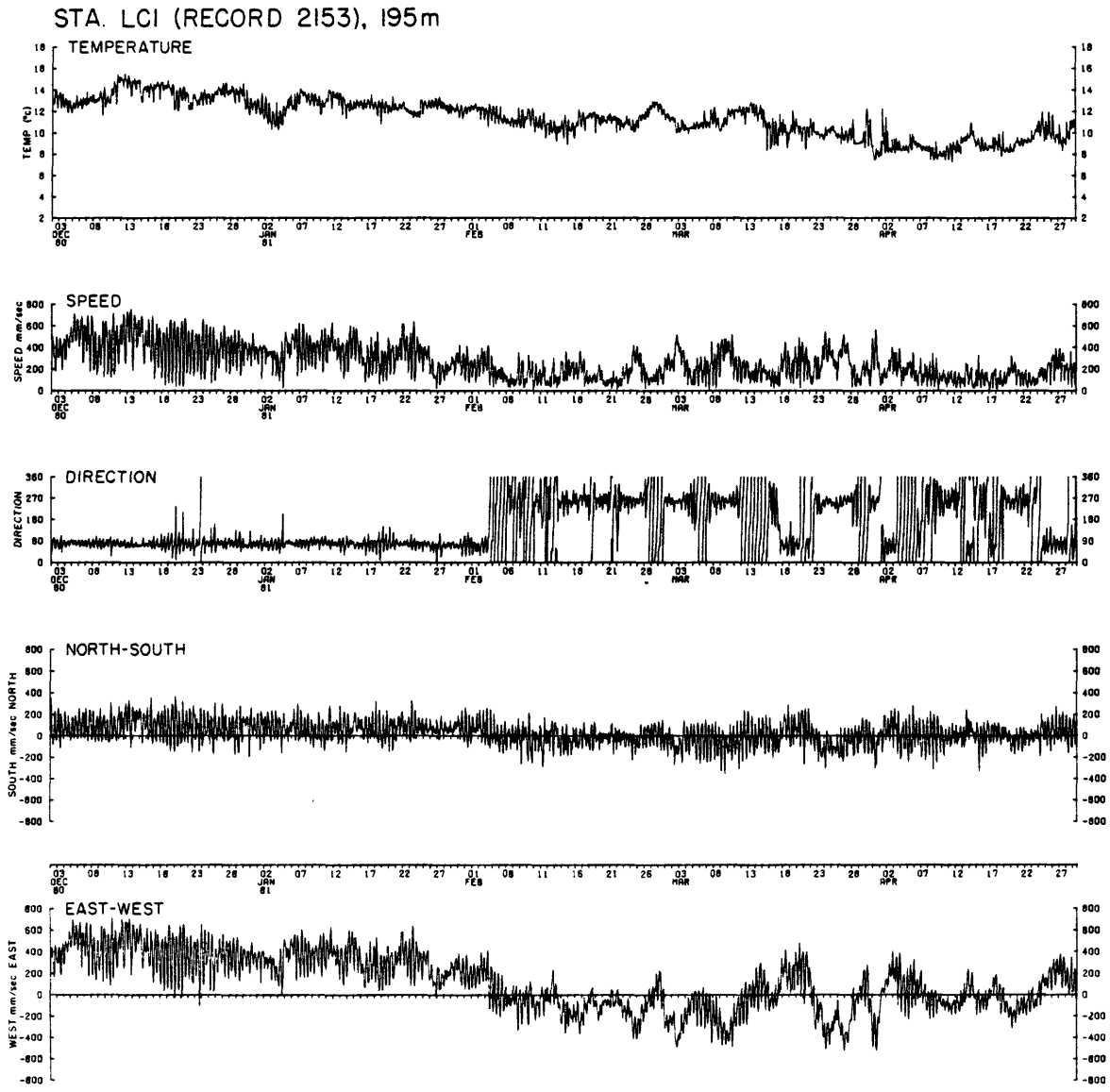


Figure 36a. Station LCI, record 2153, 195 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

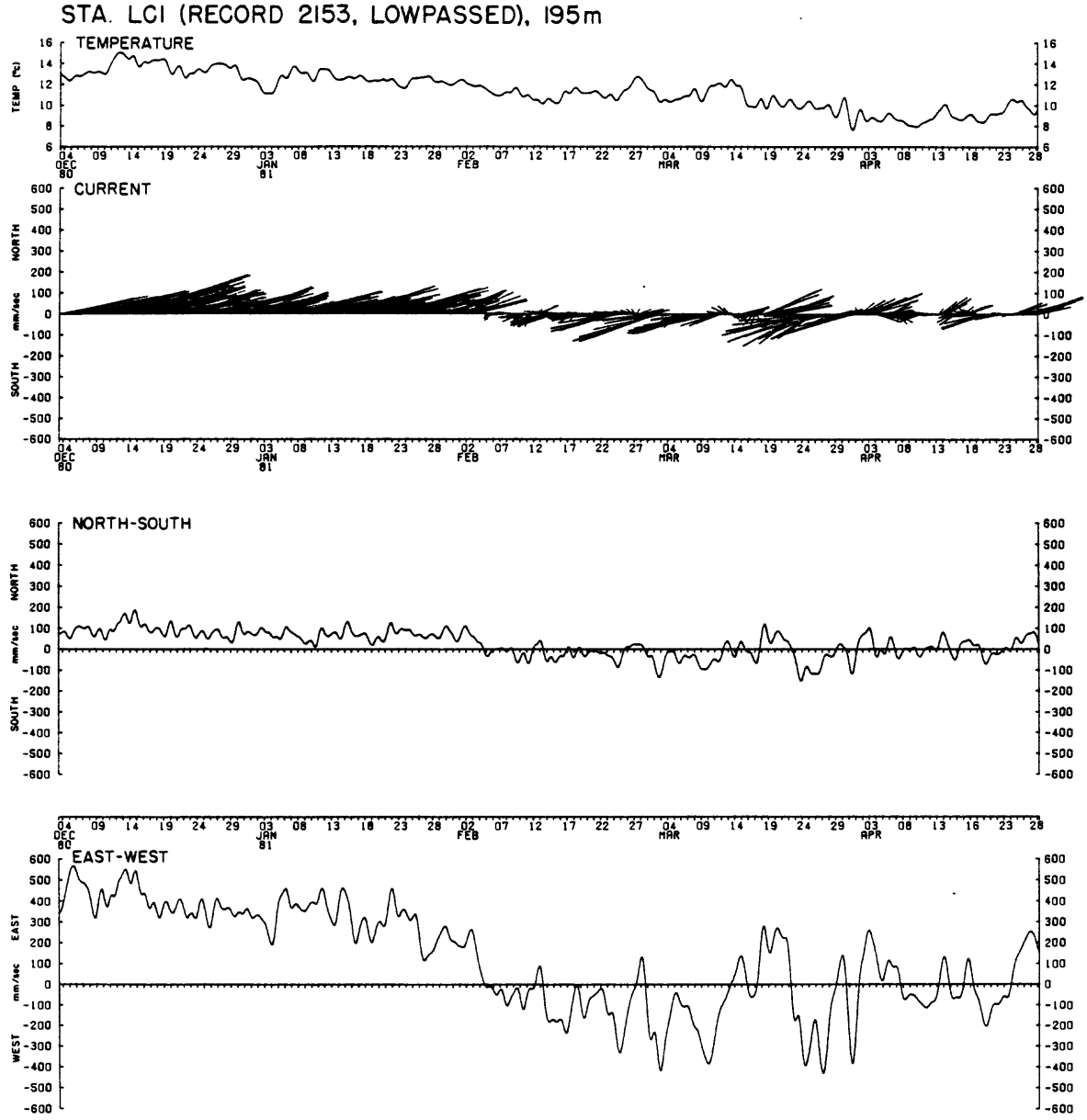


Figure 36b. Station LCI, record 2153, 195 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

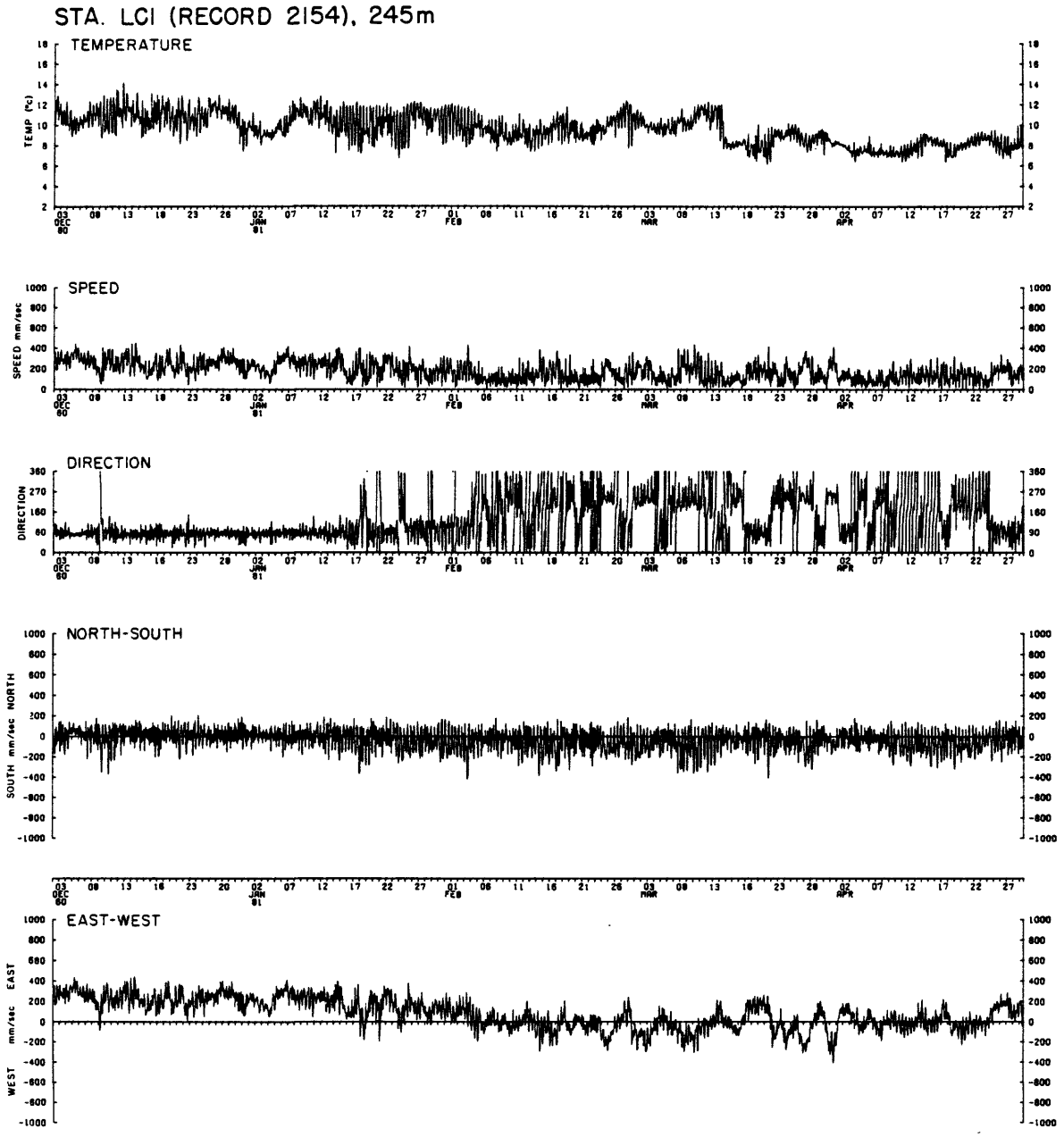


Figure 37a. Station LCI, record 2154, 245 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

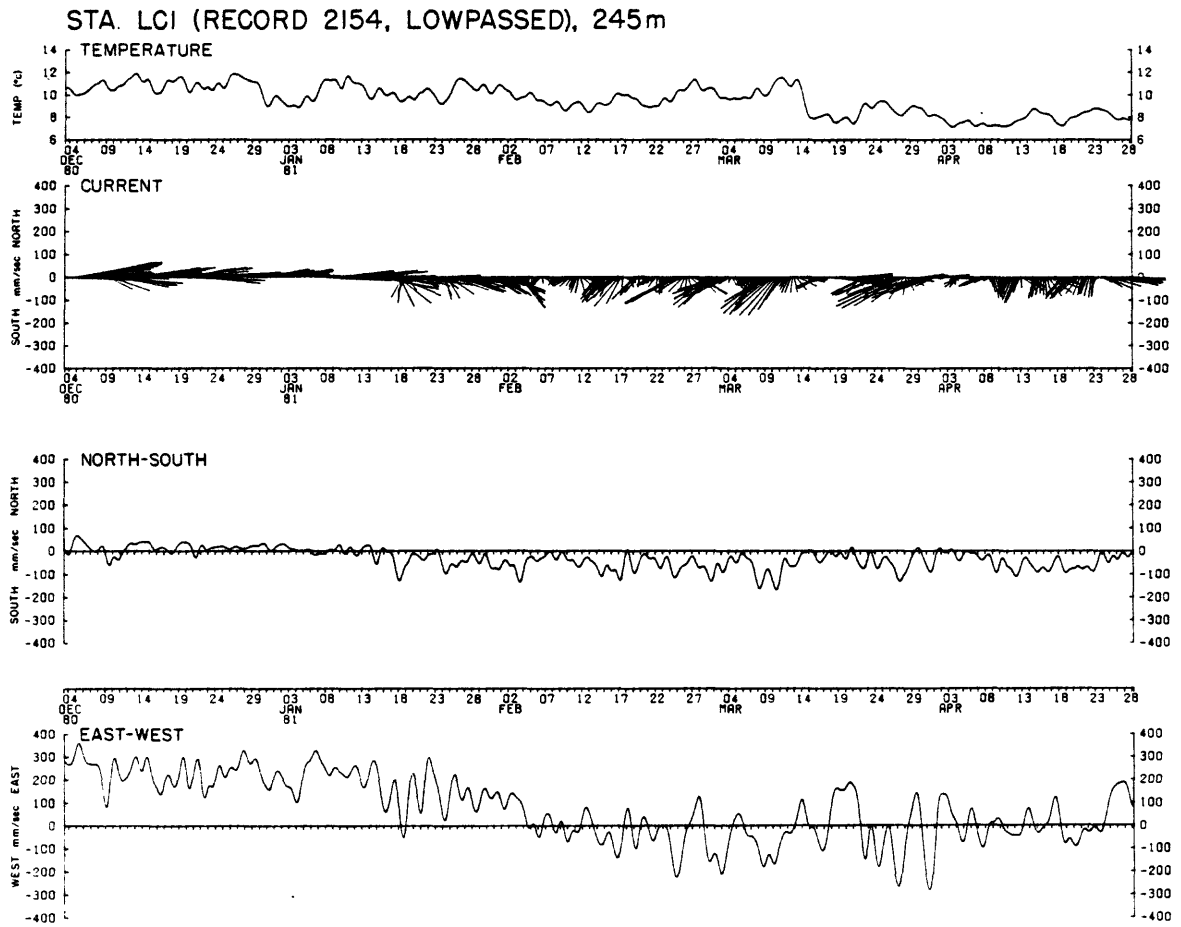


Figure 37b. Station LCI, record 2154, 245 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

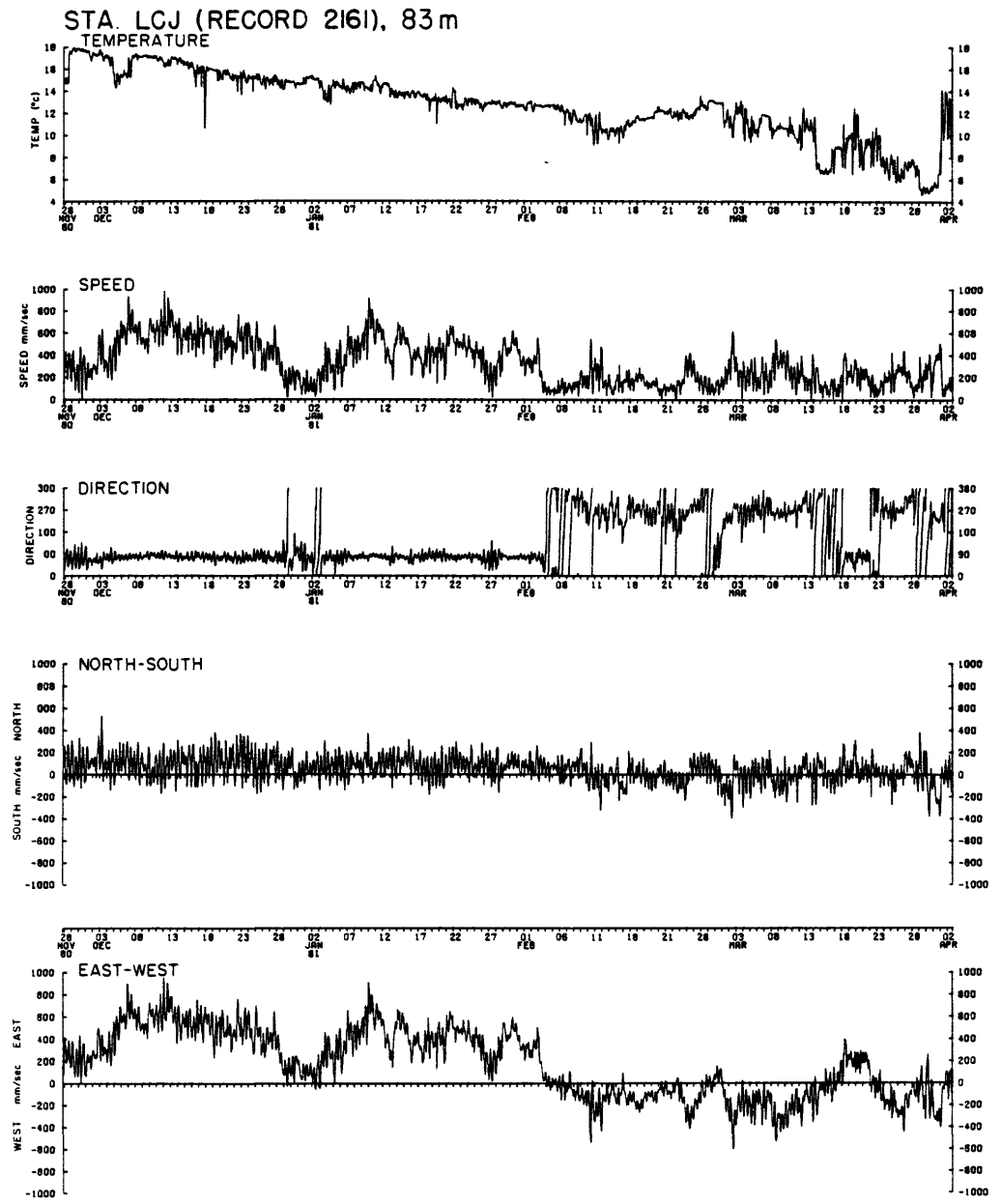


Figure 38a. Station LCJ, record 2161, 83 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

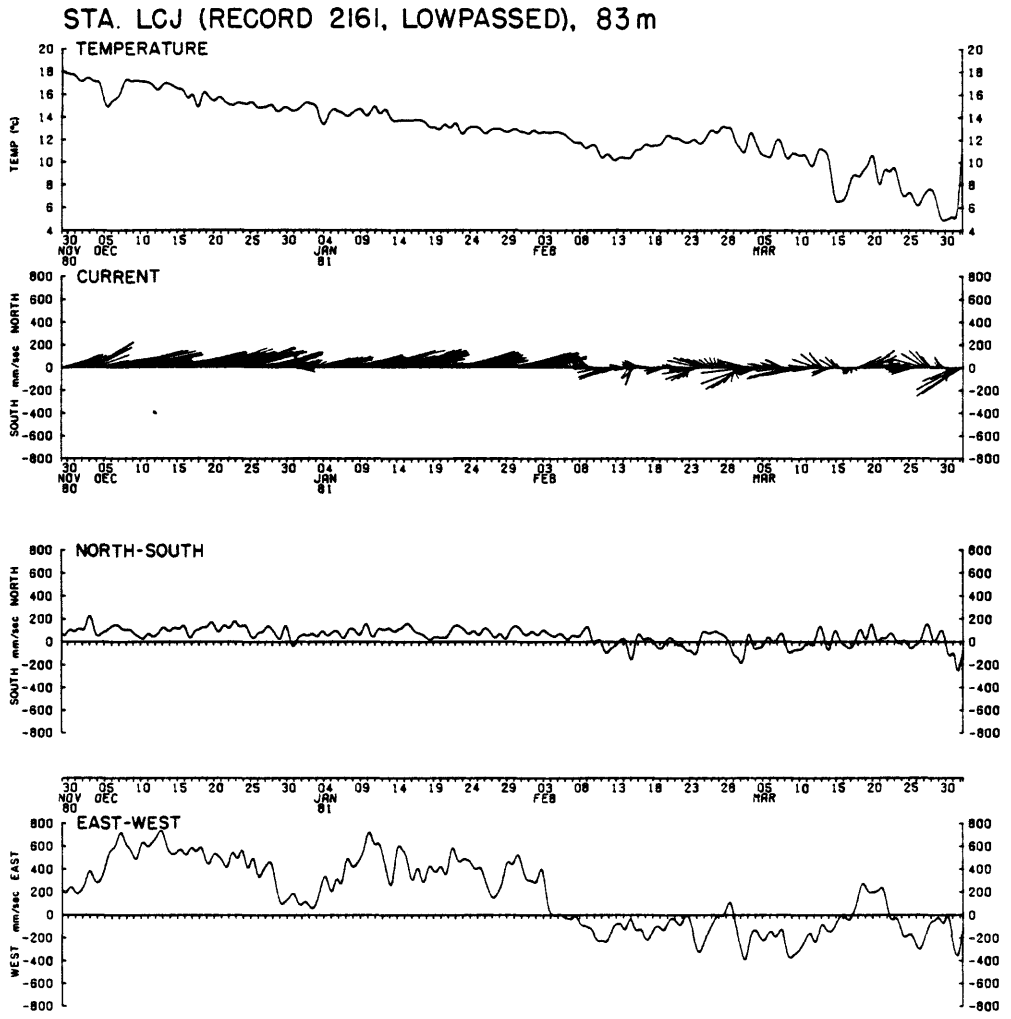


Figure 38b. Station LCJ, record 2161, 83 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

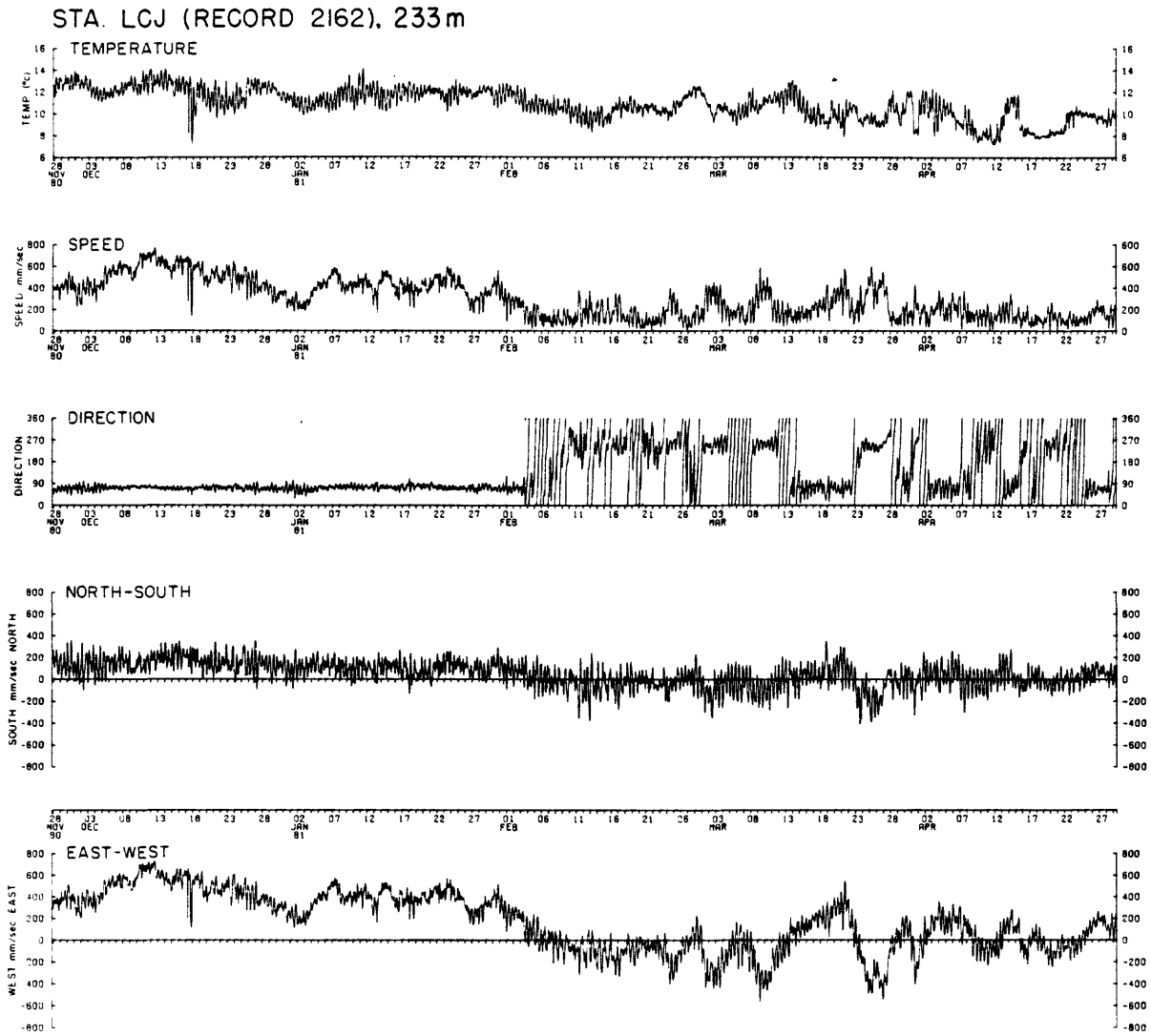


Figure 39a. Station LCJ, record 2162, 233 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

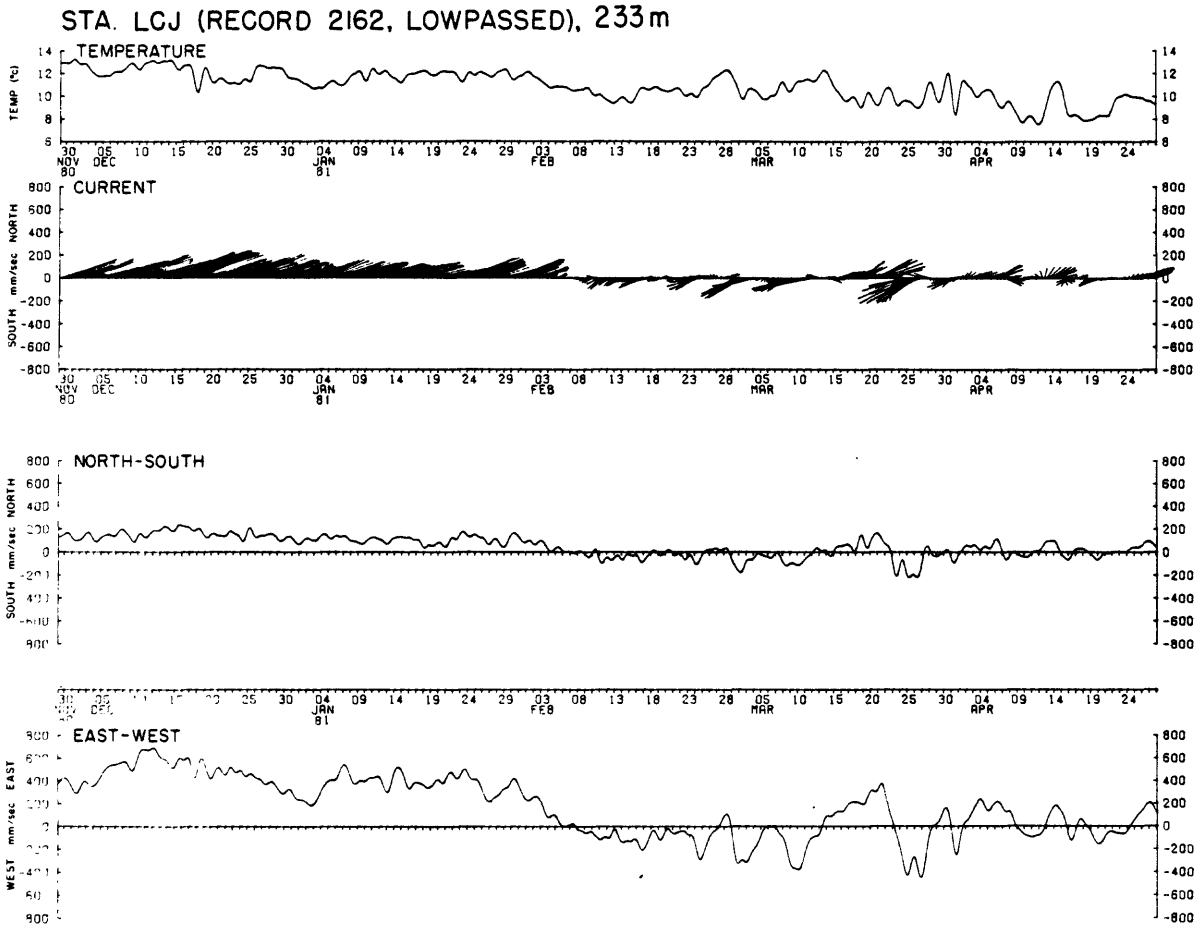


Figure 39b. Station LCJ, record 2162, 233 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

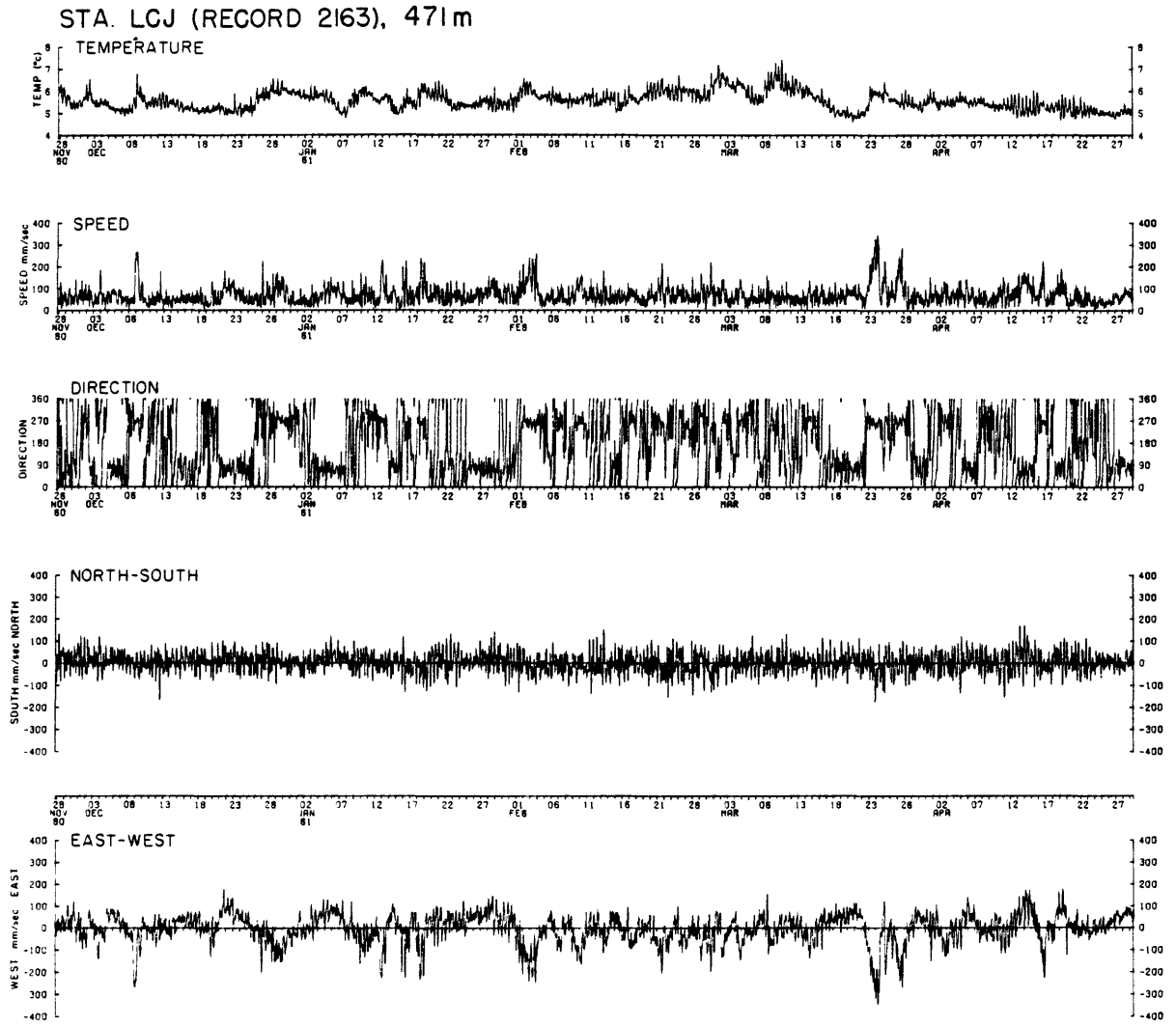


Figure 40a. Station LCJ, record 2163, 471 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

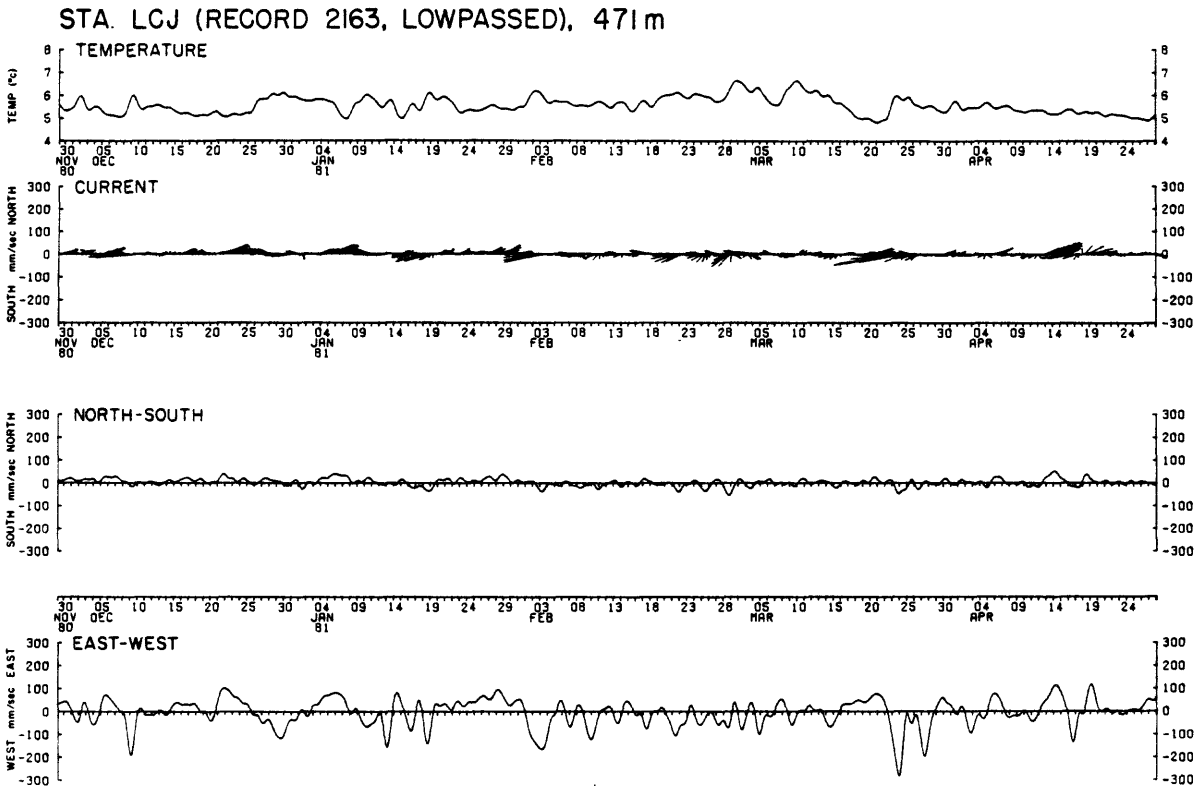


Figure 40b. Station LCJ, record 2163, 471 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

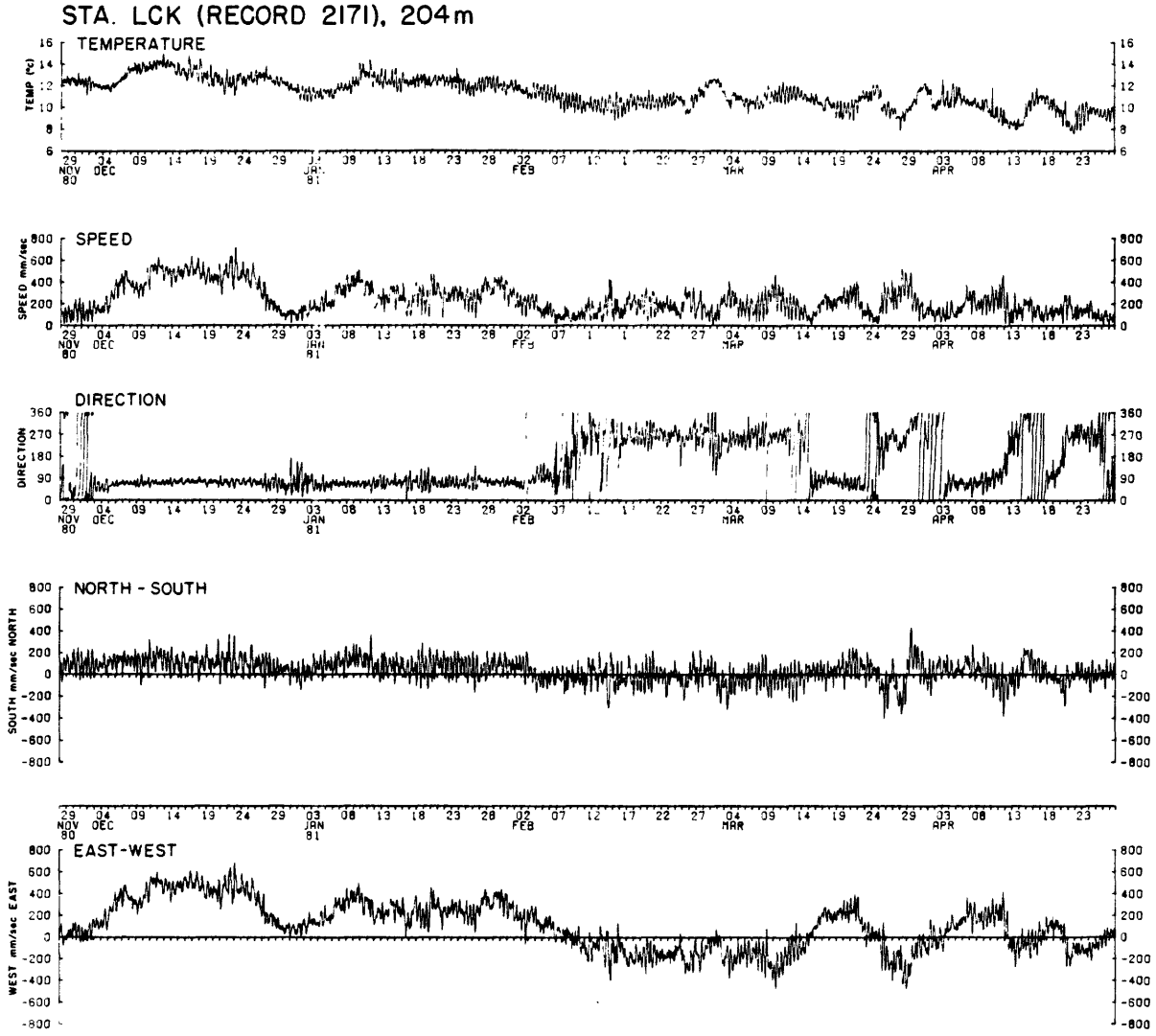


Figure 41a. Station LCK, record 2171, 204 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

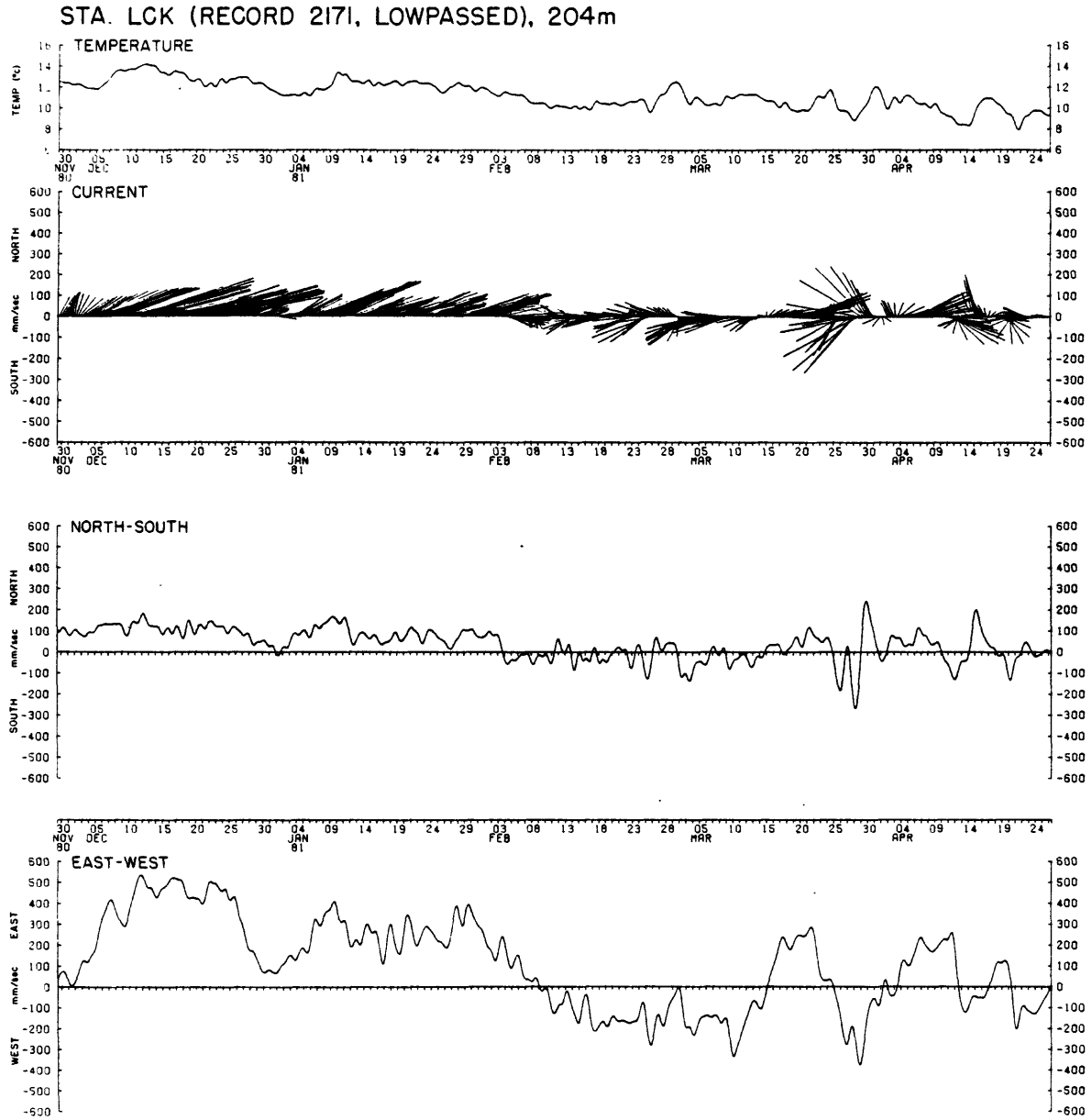


Figure 41b. Station LCK, record 2171, 204 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

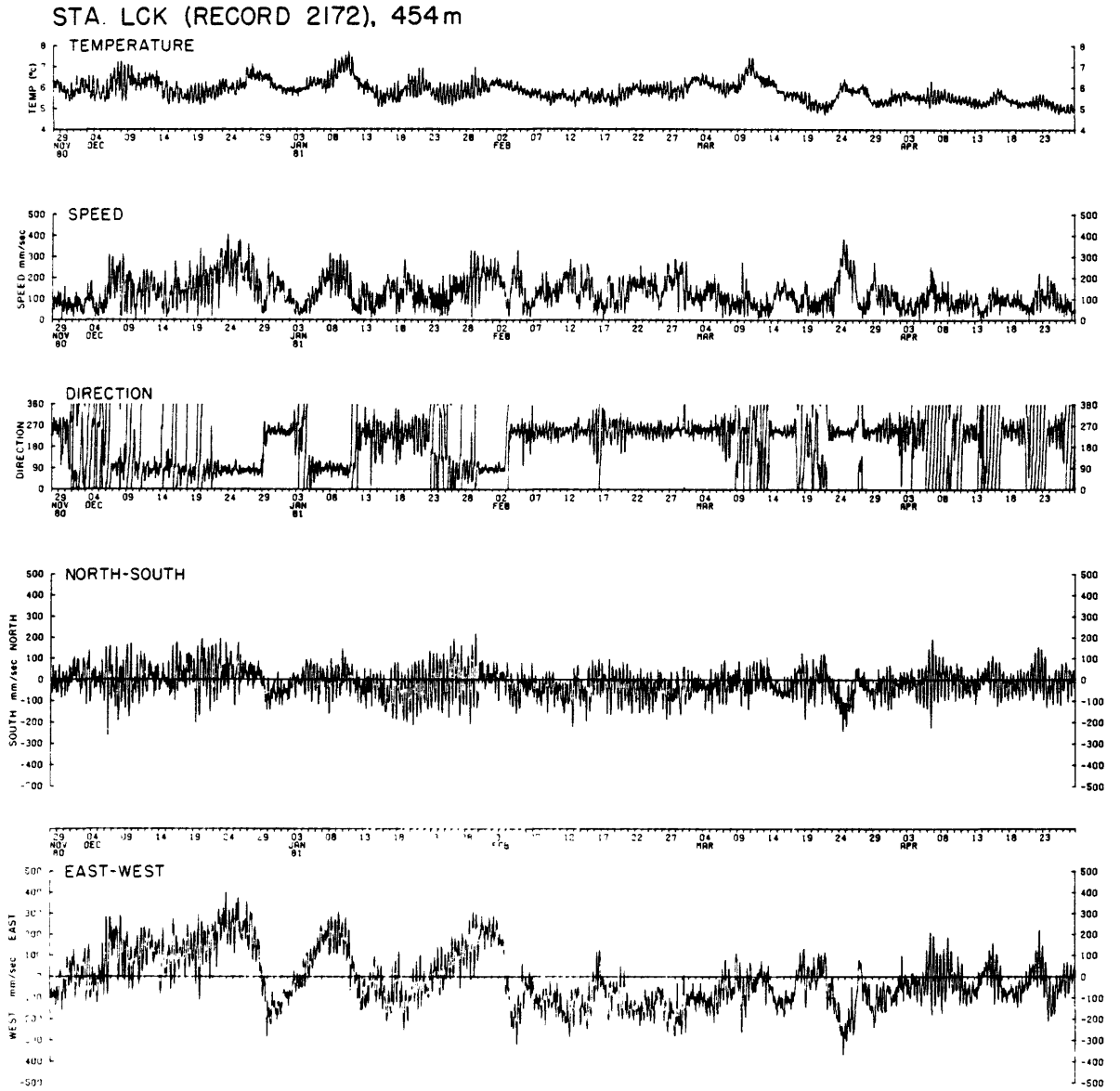


Figure 42a. Station LCK, record 2172, 454 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

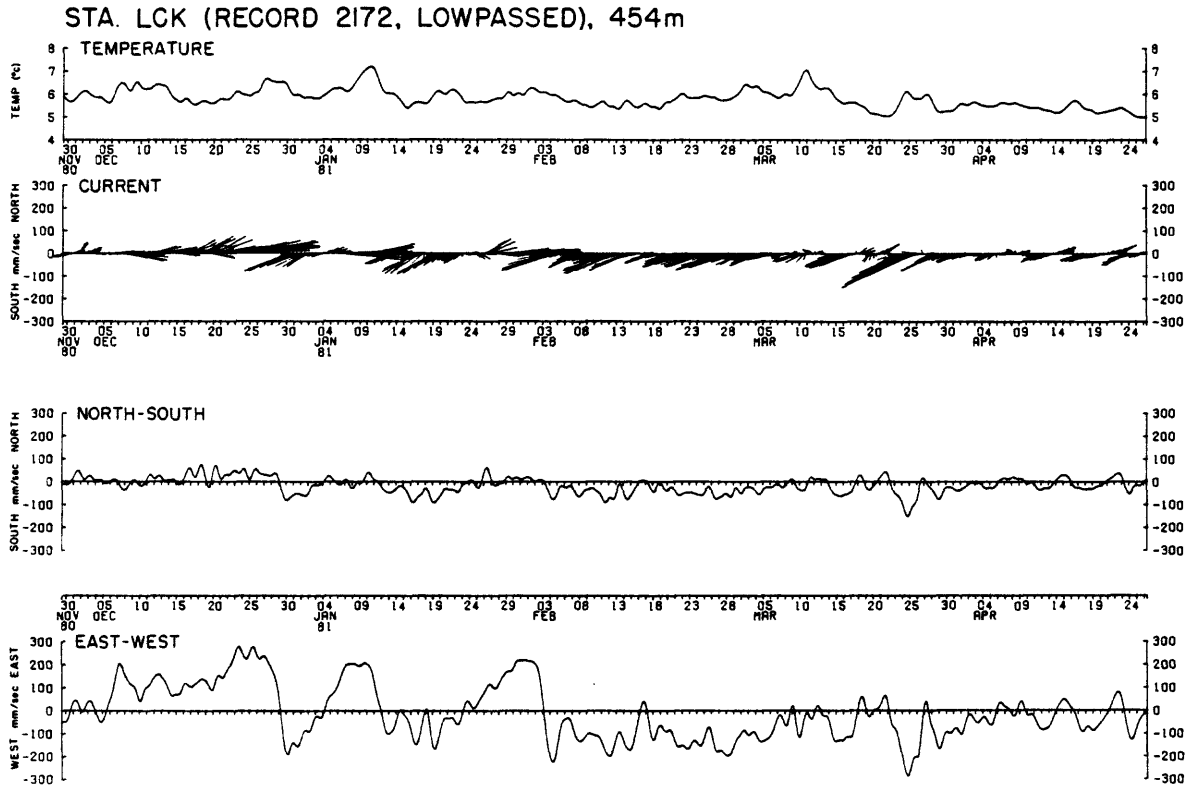


Figure 42b. Station LCK, record 2172, 454 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

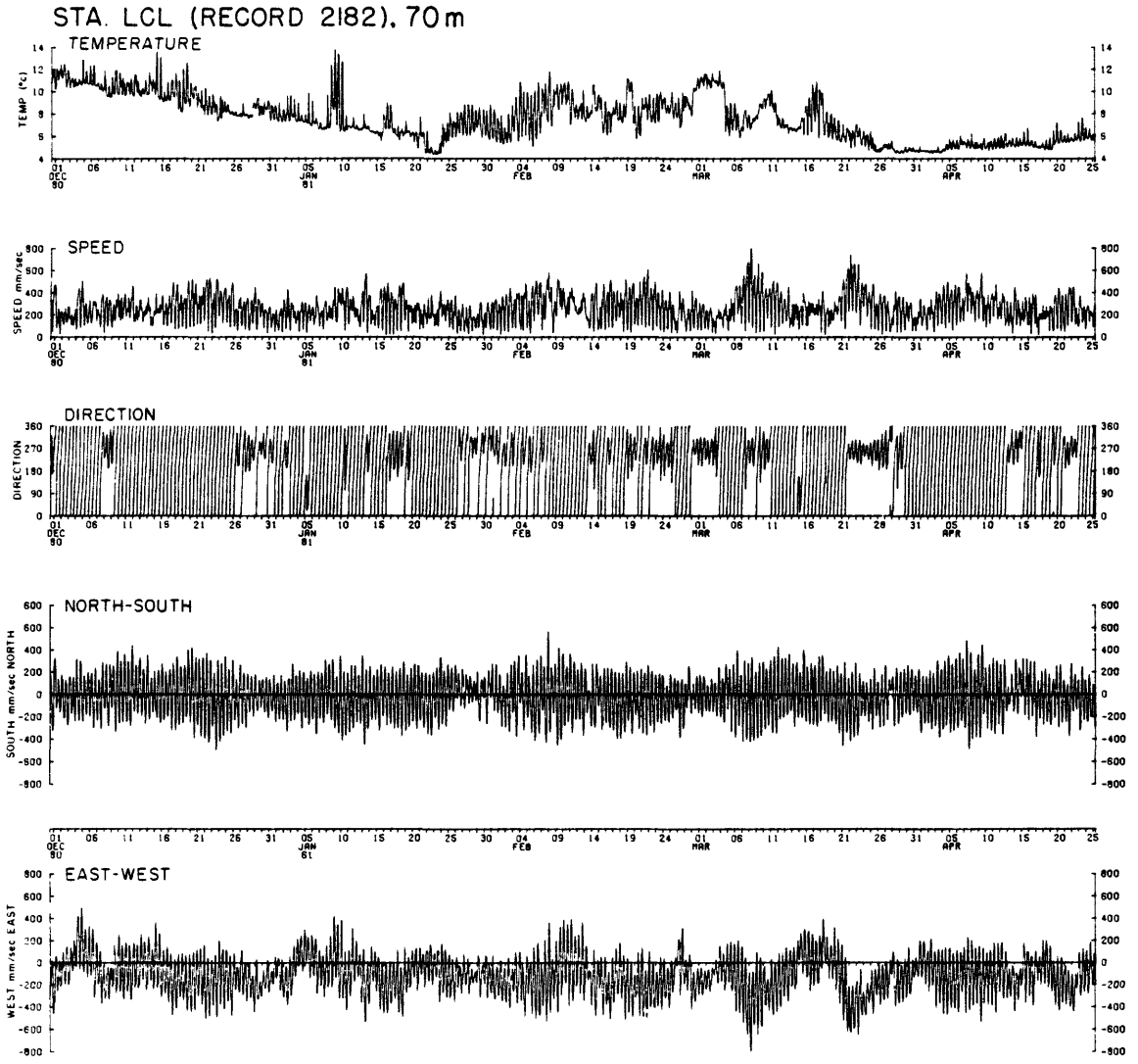


Figure 43a. Station LCL, record 2182, 70 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

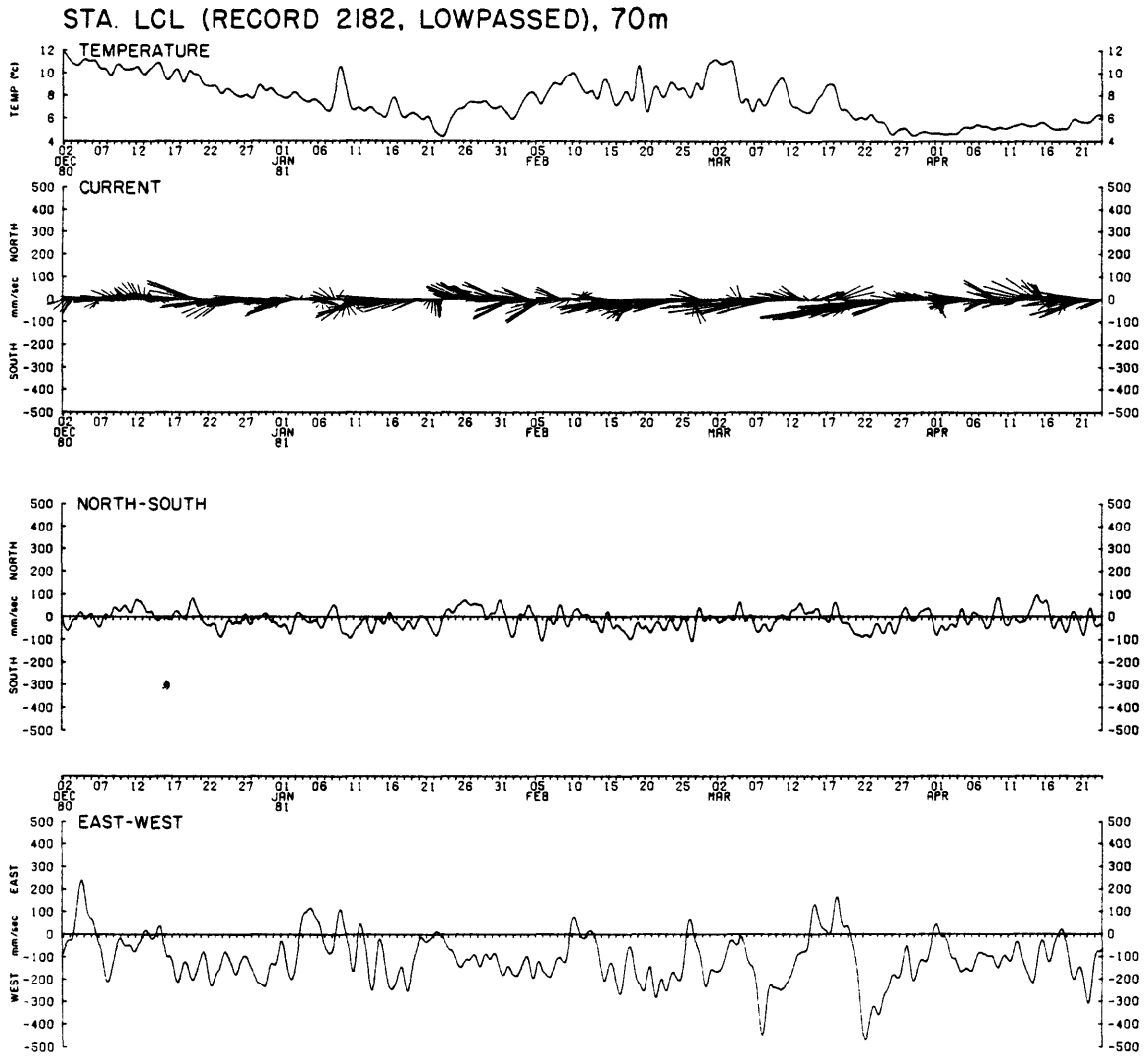


Figure 43b. Station LCL, record 2182, 70 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

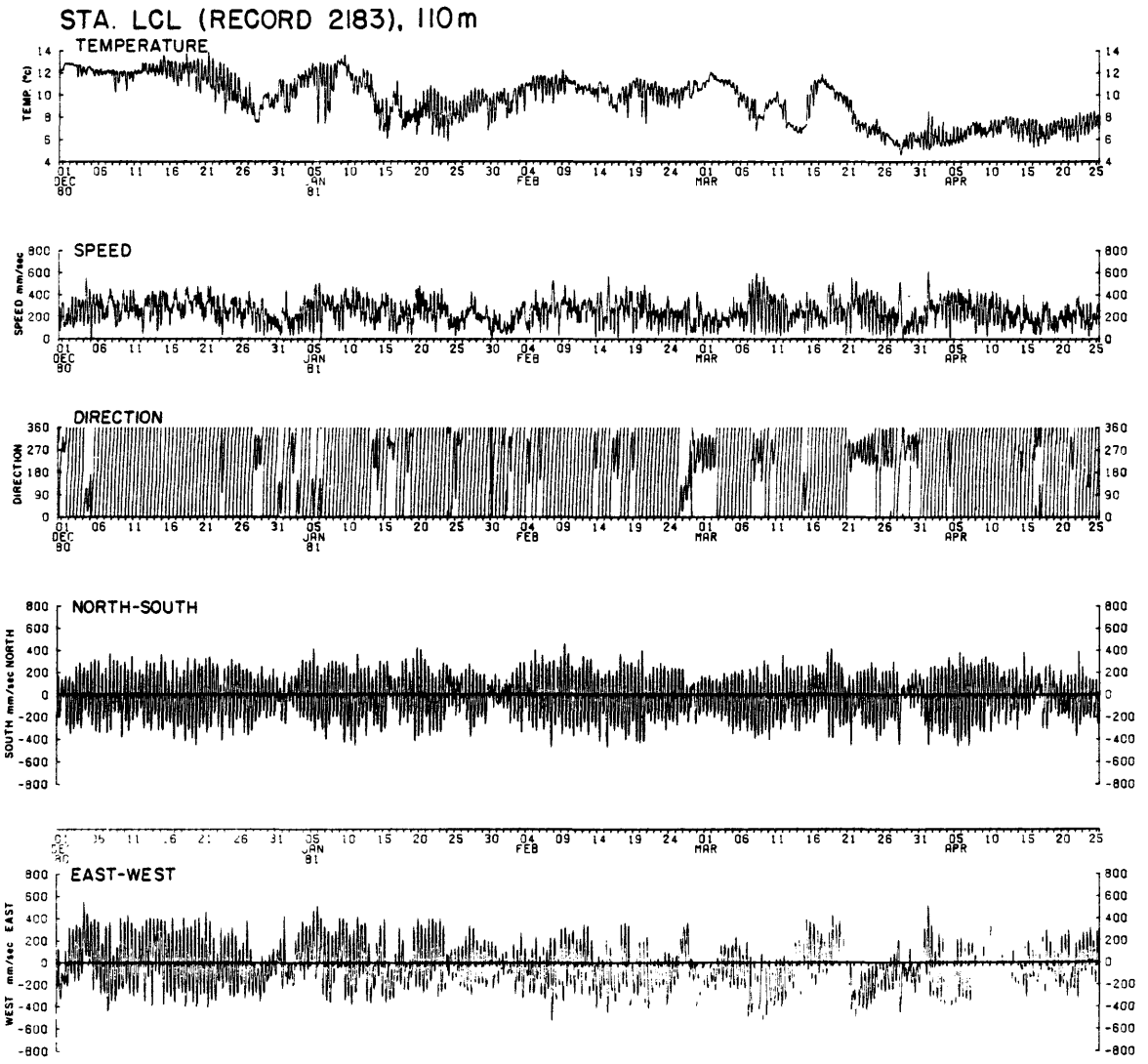


Figure 44a. Station LCL, record 2183, 110 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

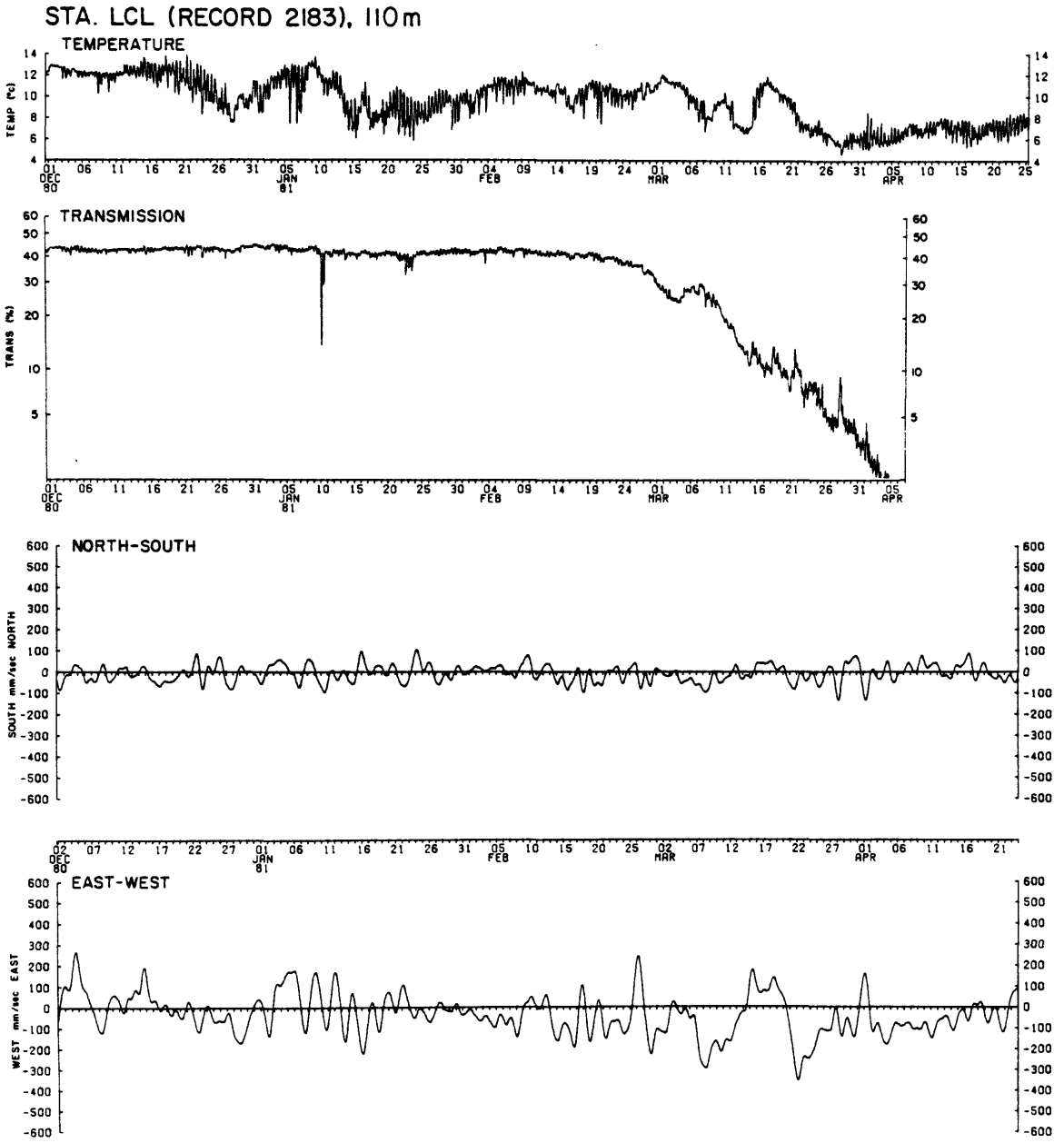


Figure 44b. Station LCL, record 2183, 110 m, hour-averaged temperature, percent light transmission over 1-m path length, and low-passed north-south, east-west current.

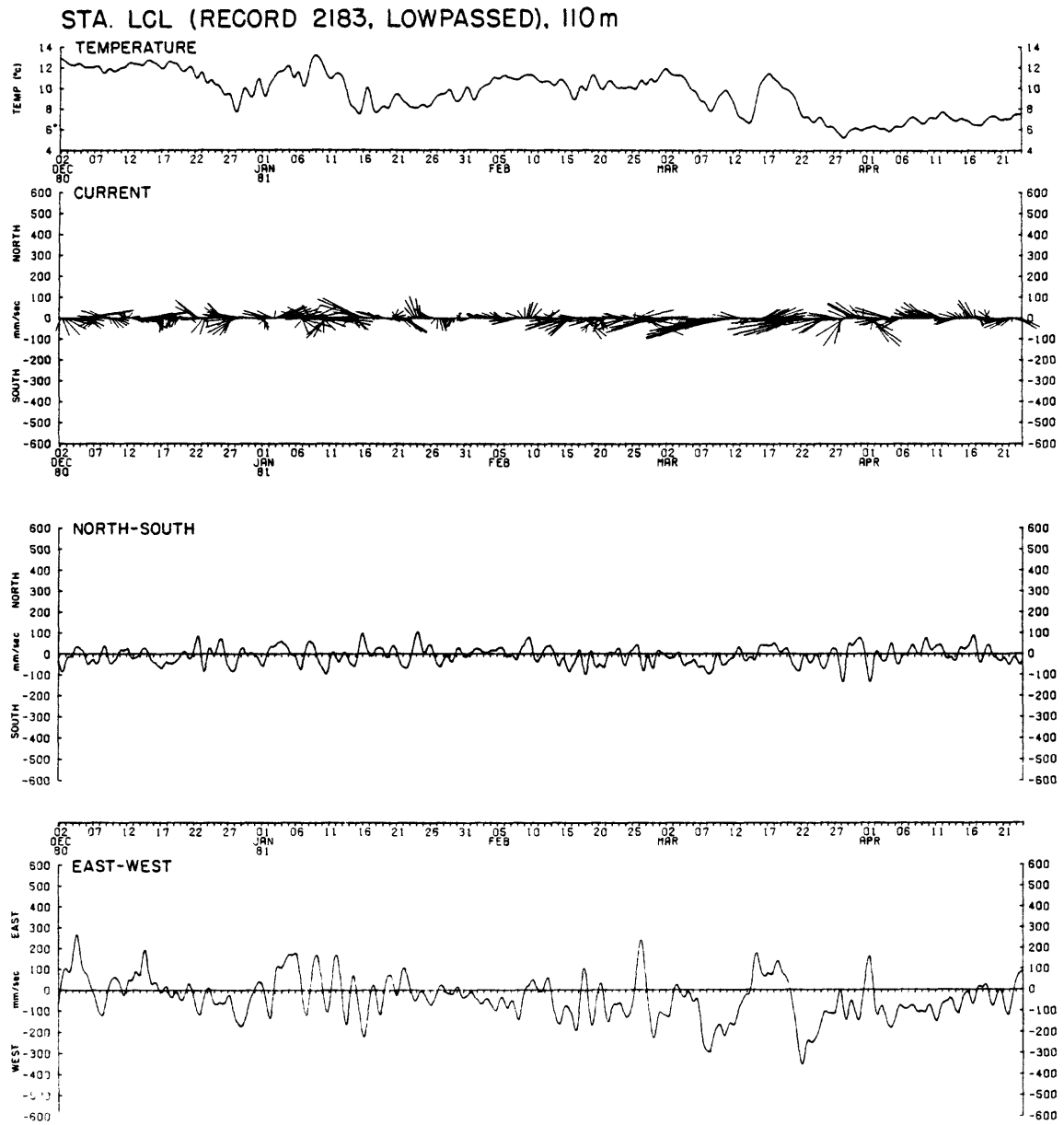


Figure 44c. Station LCL, record 2183, 110 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

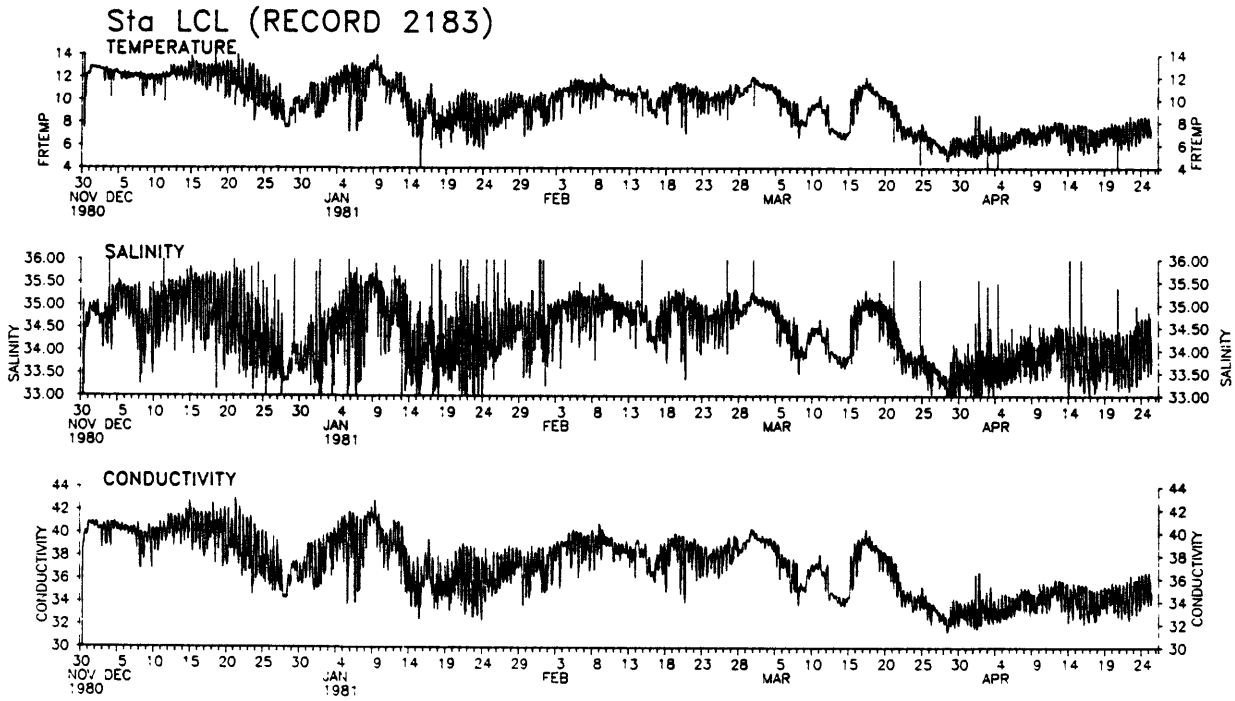


Figure 44d. Station LCL, record 2183, 110 m, 7.5-minute fast-response sensor temperature, salinity (unedited), and conductivity.

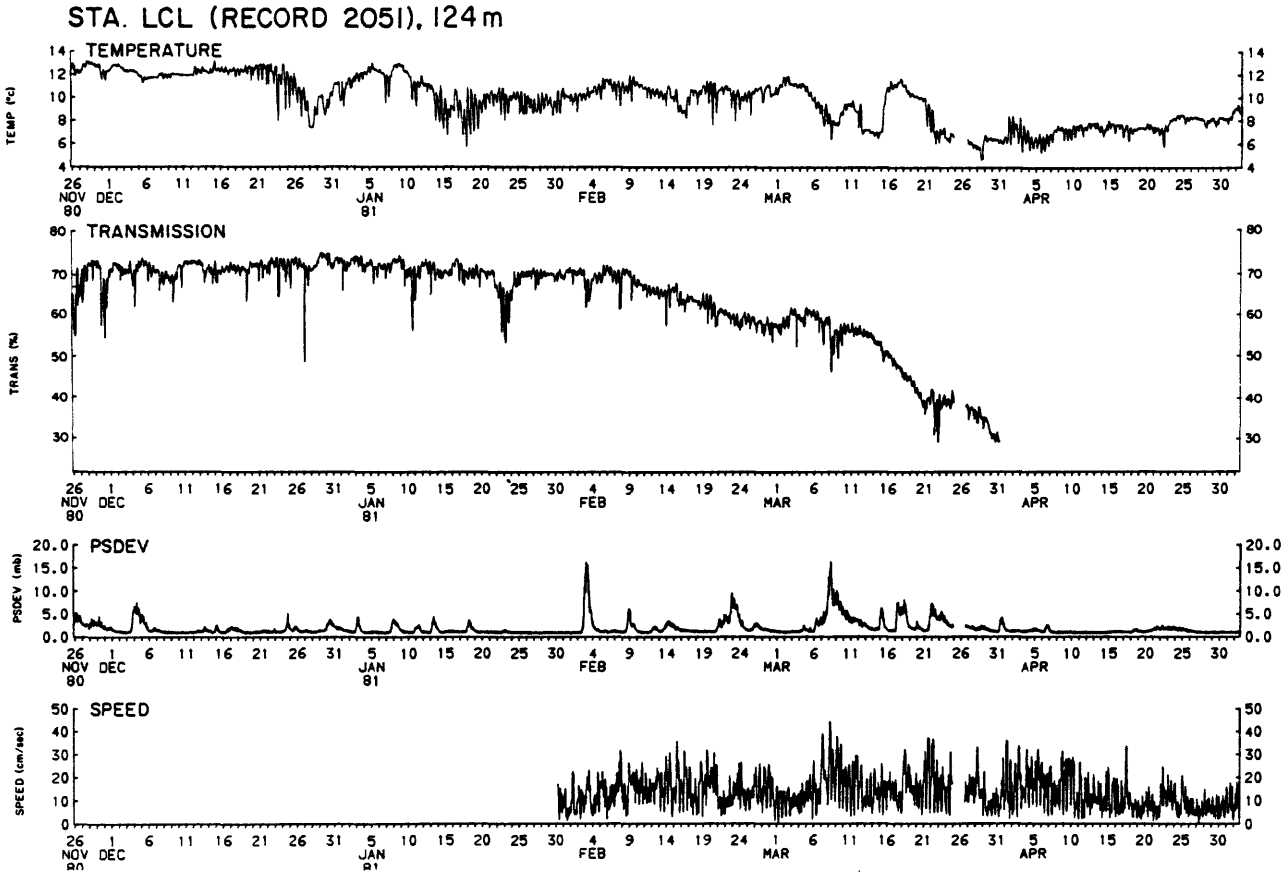


Figure 45a. Station LCL, record 2051, 124 m, hour-averaged temperature, percent light transmission over 1-m path length, standard deviation of burst pressure measurements, and speed.

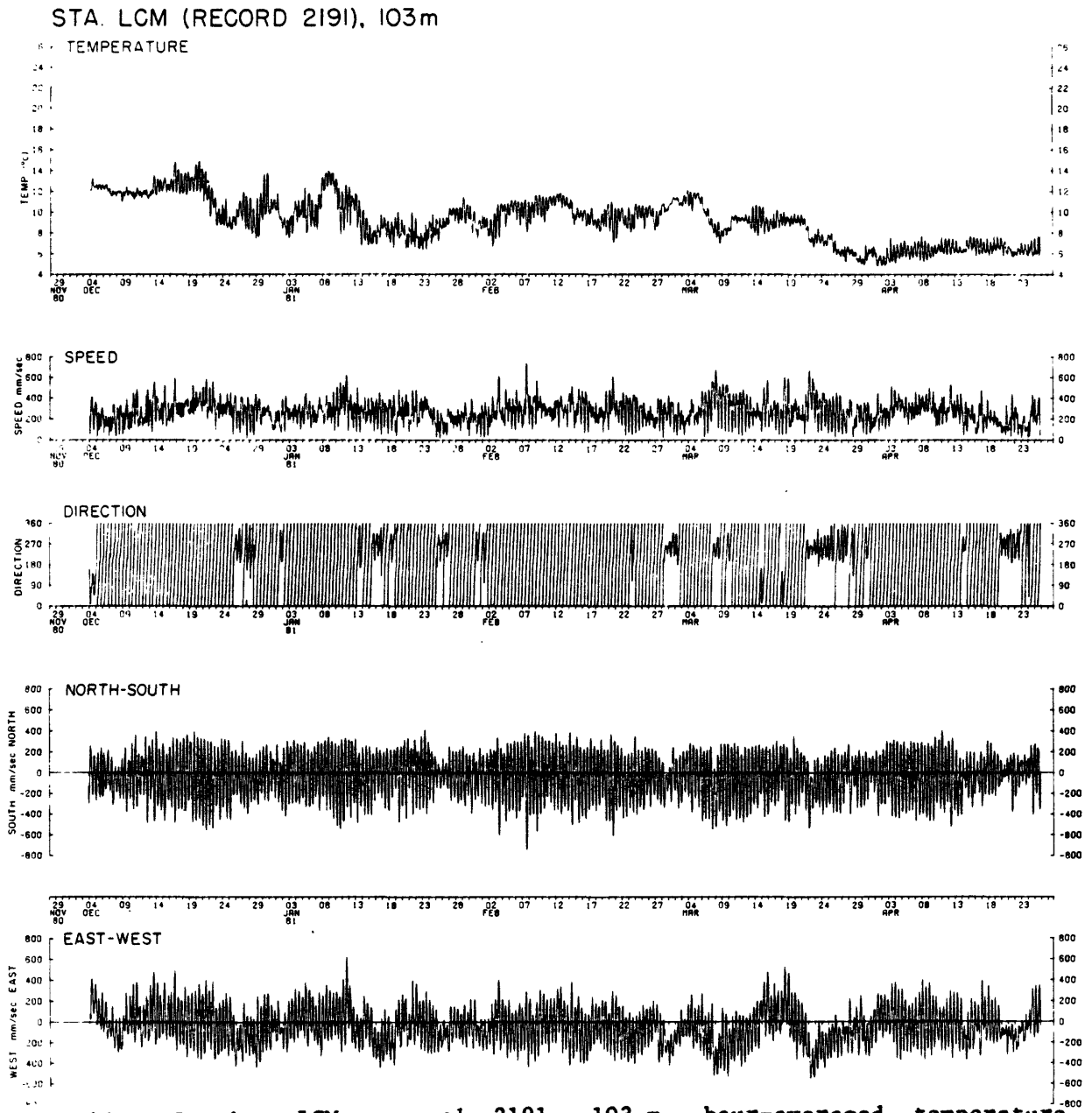


Figure 46a. Station LCM, record 2191, 103 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

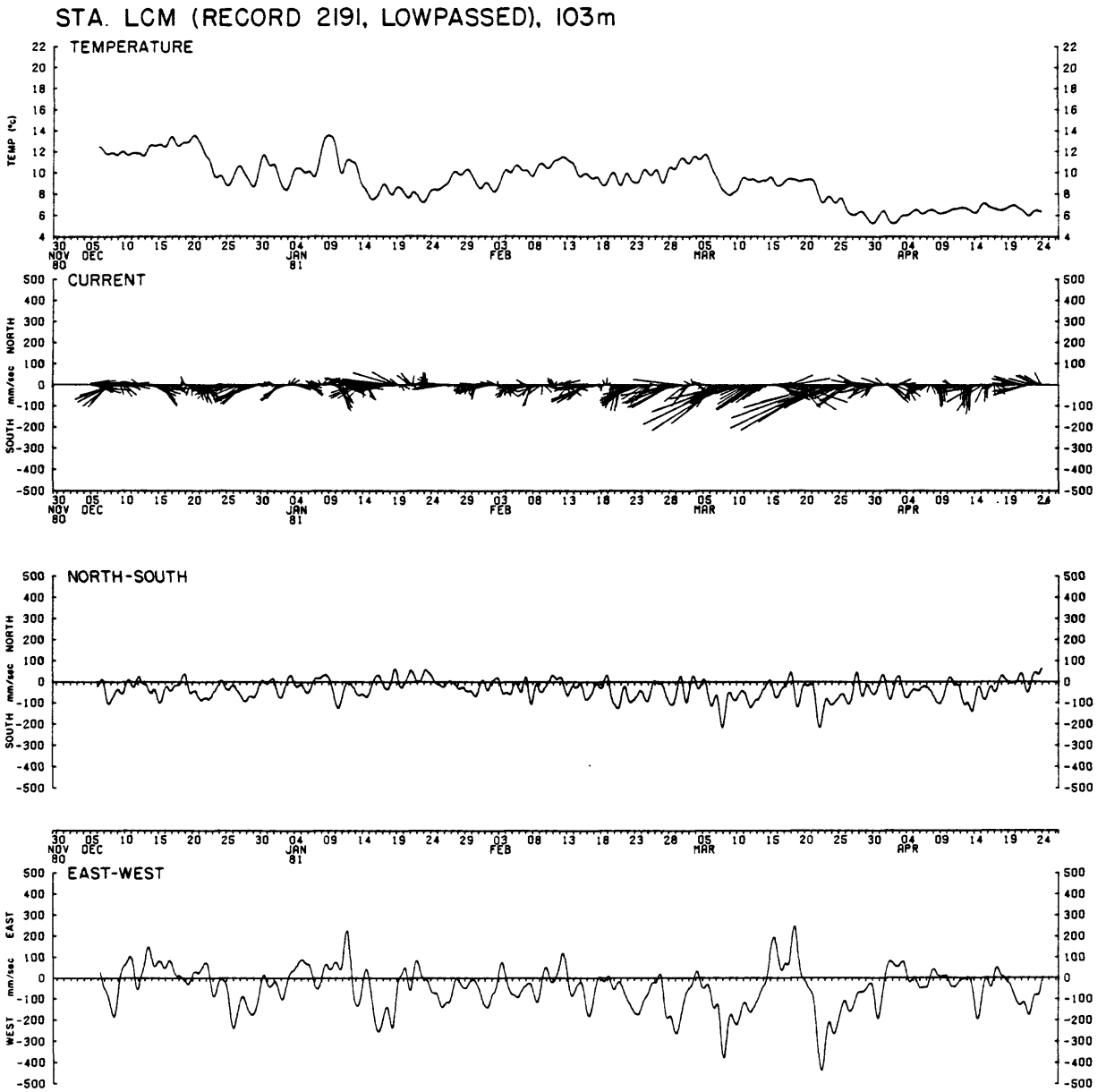


Figure 46b. Station LCM, record 2191, 103 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

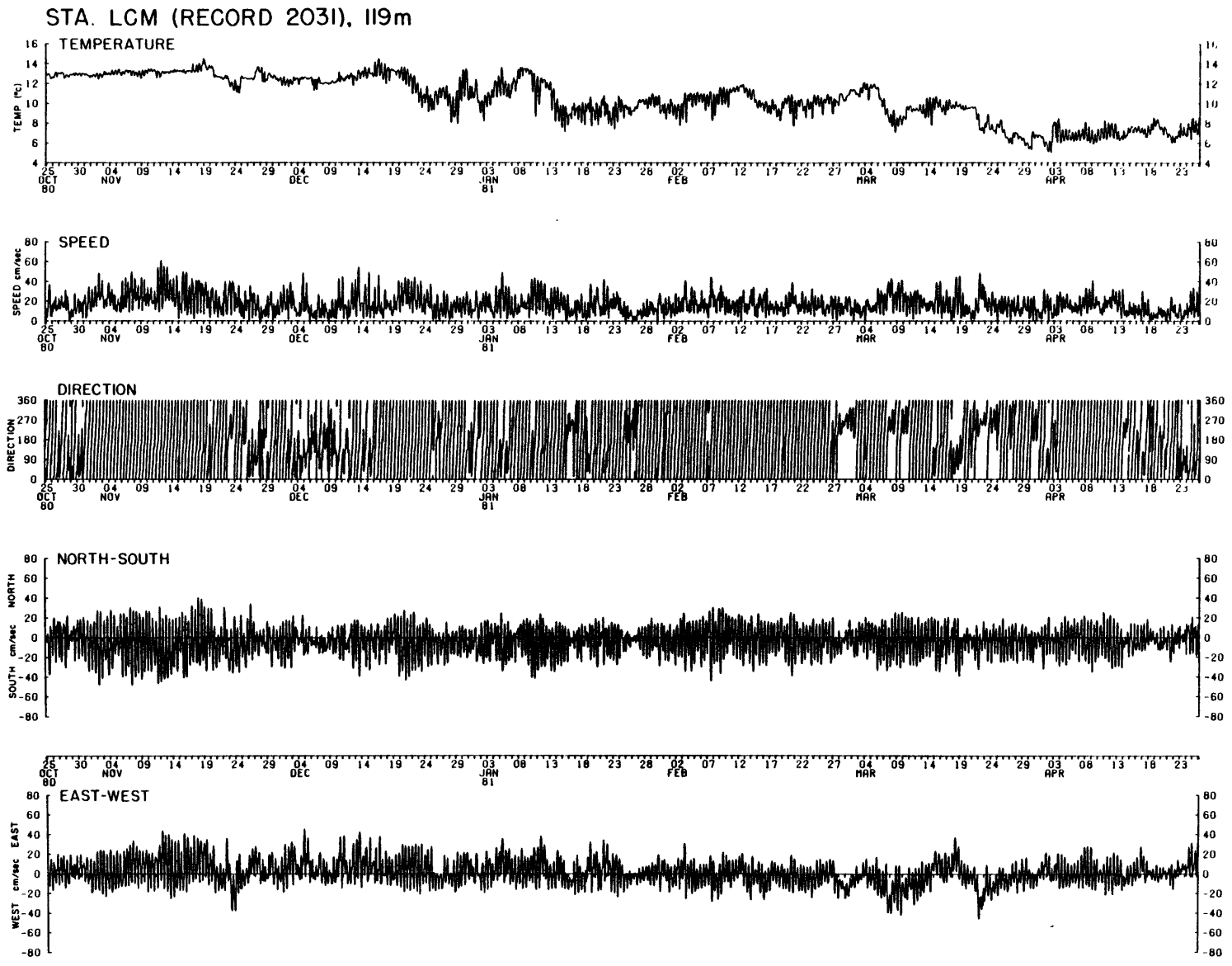


Figure 47a. Station LCM, record 2031, 119 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

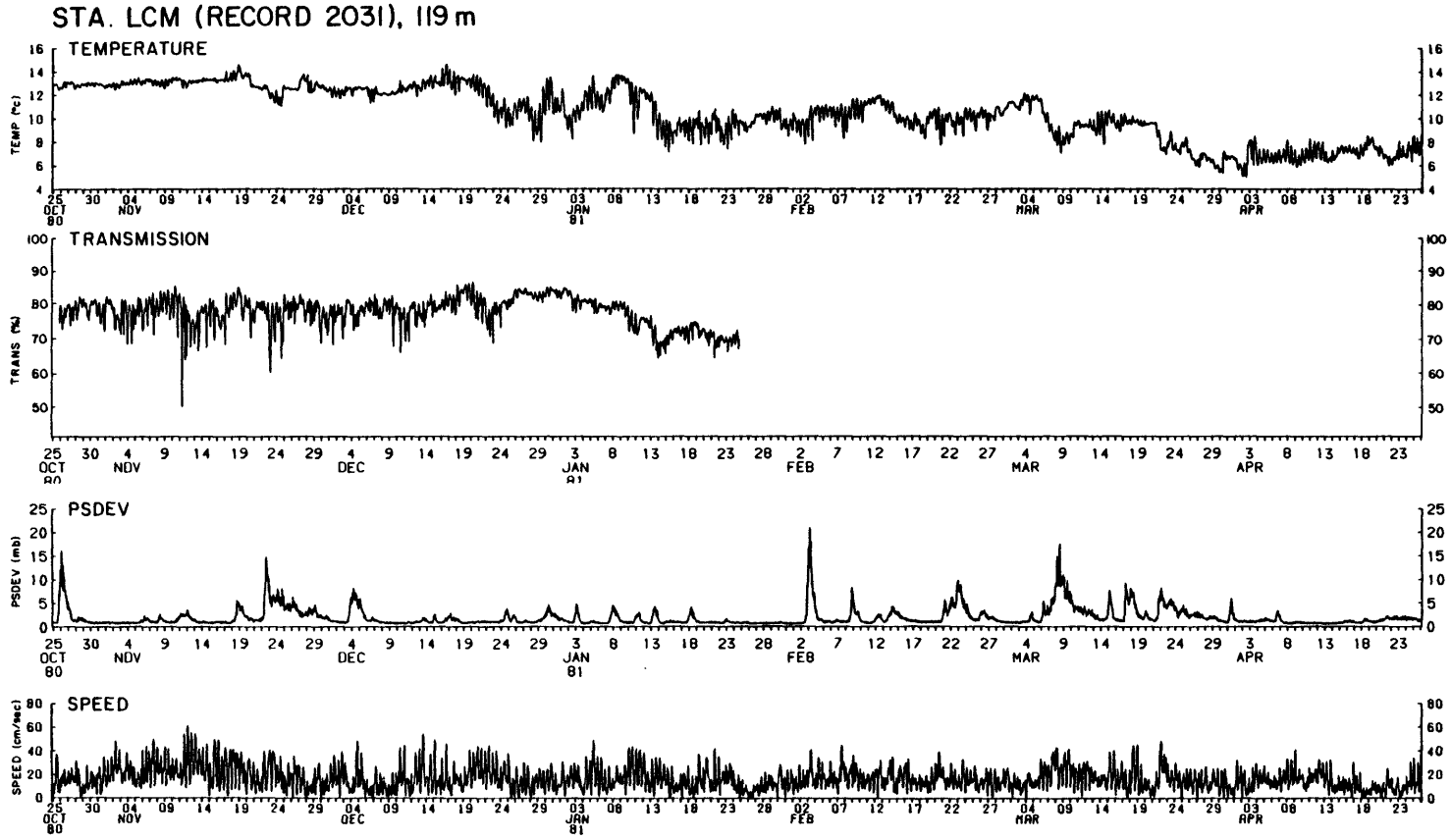


Figure 47b. Station LCM, record 2031, 119 m, hour-averaged temperature, percent light transmission over 1-m path length, standard deviation of burst pressure measurements, and speed.

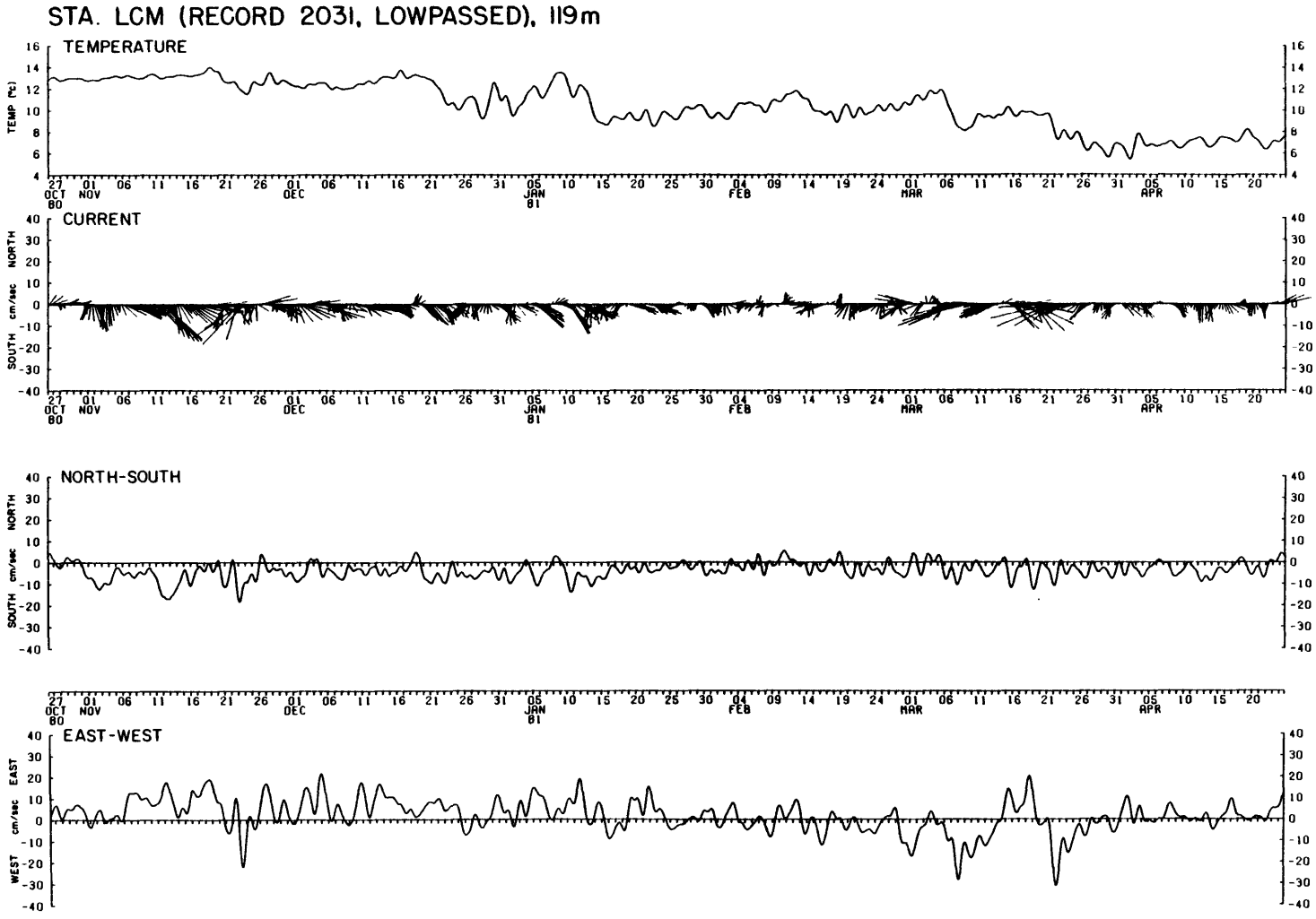


Figure 47c. Station LCM, record 2031, 119 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

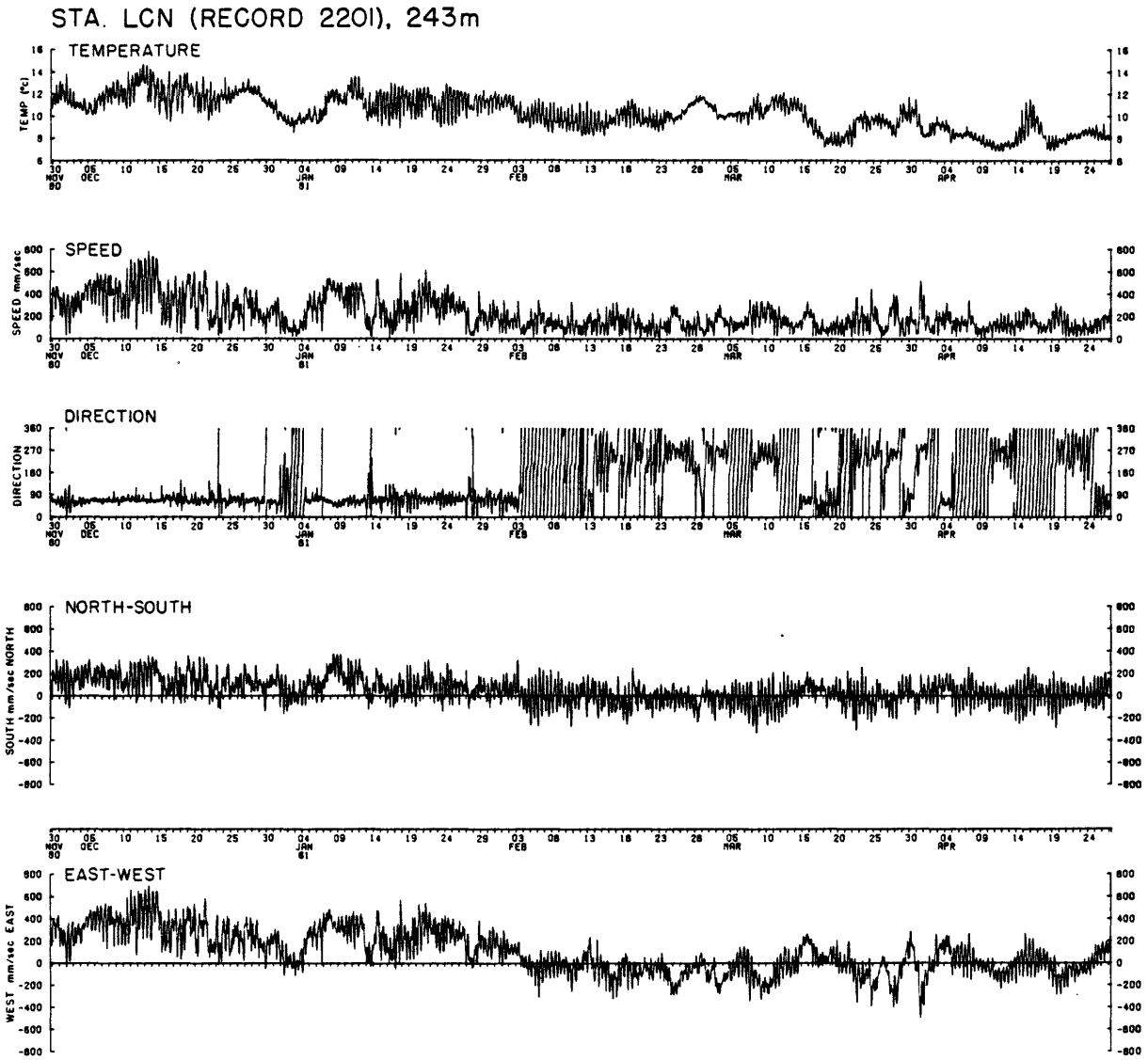


Figure 48a. Station LCN, record 2201, 243 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

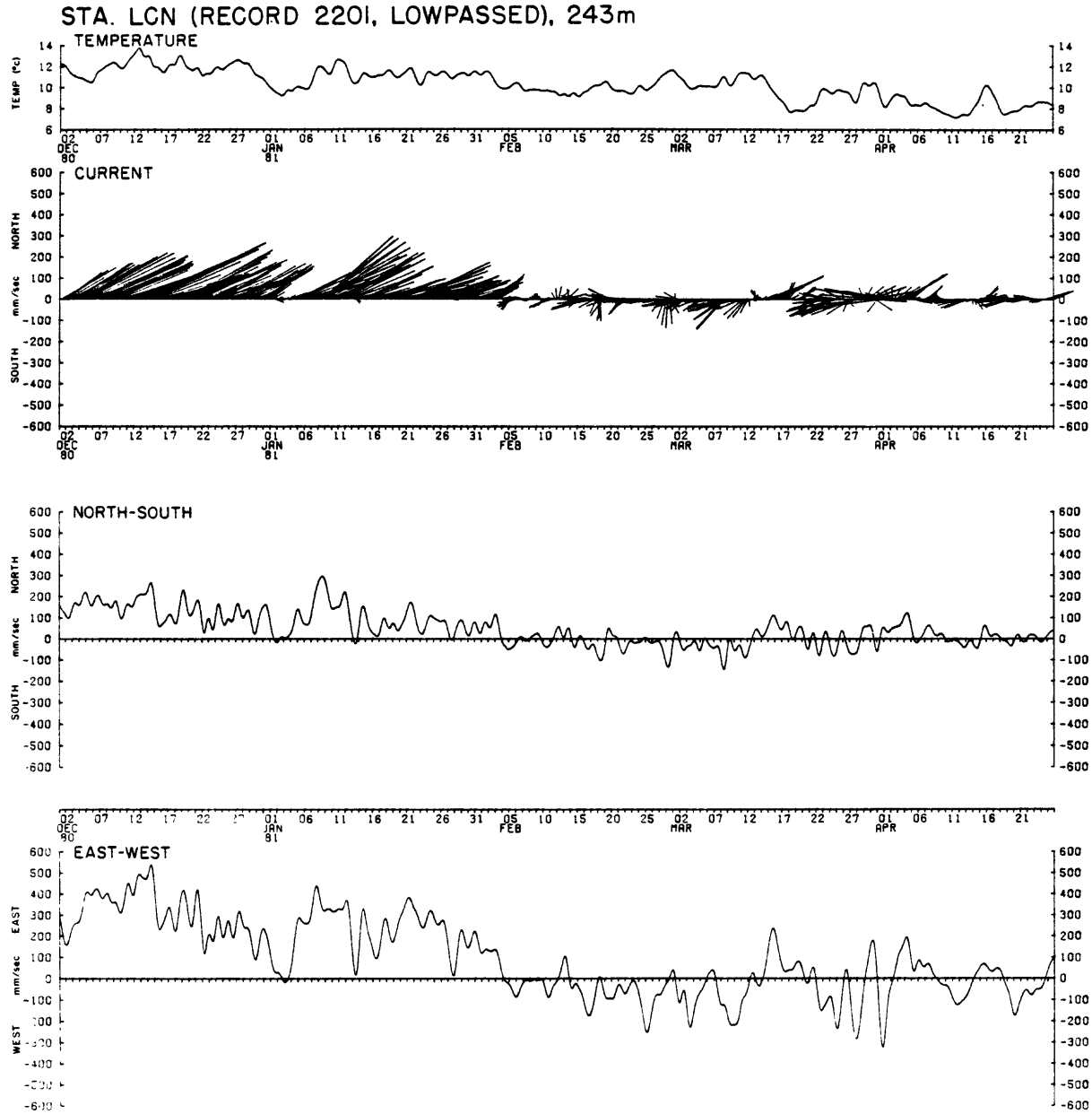


Figure 48b. Station LCN, record 2201, 243 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

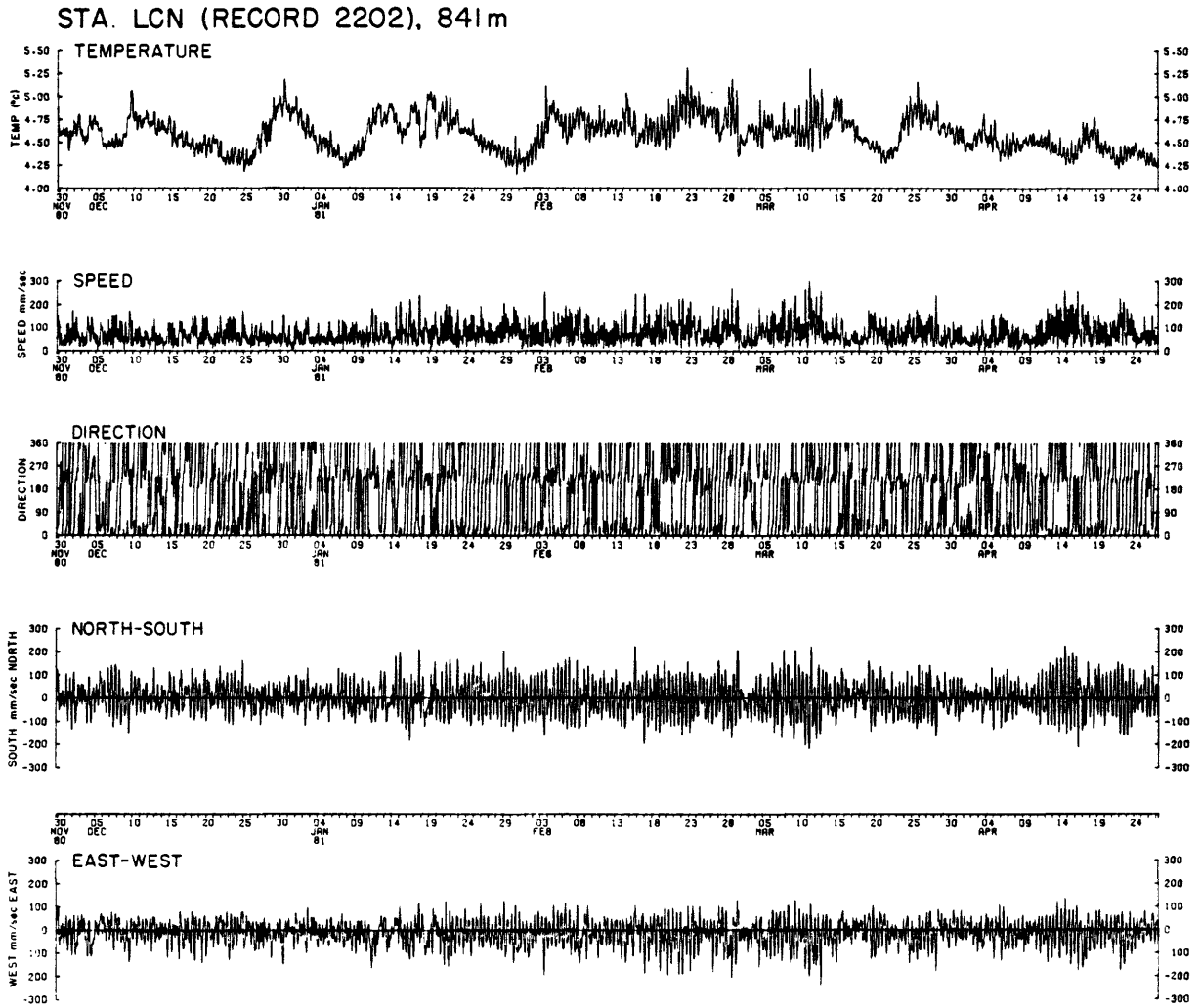


Figure 49a. Station LCN, record 2202, 841 m, hour-averaged temperature, speed, direction, and north-south, east-west current.

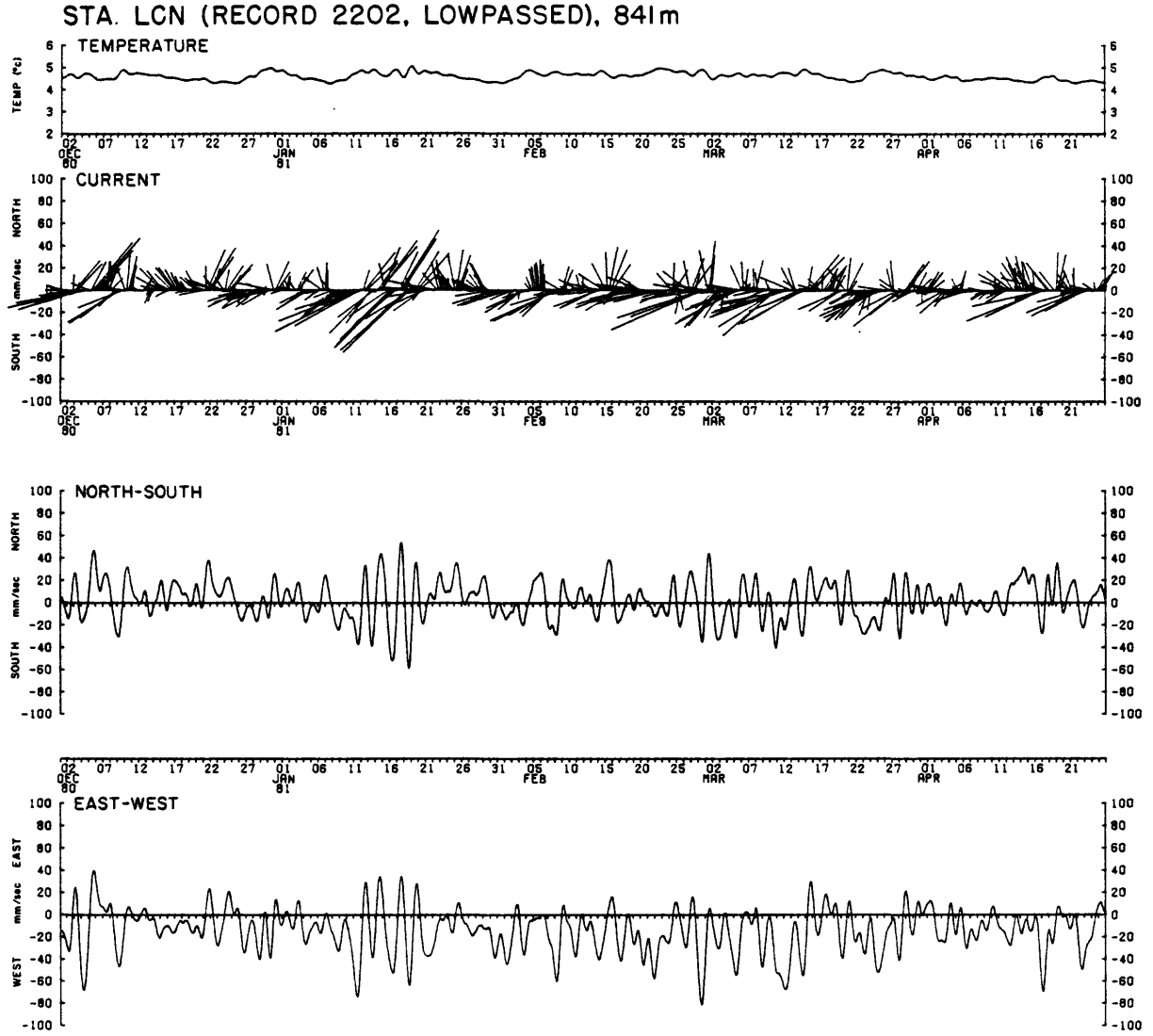


Figure 49b. Station LCN, record 2202, 841 m, low-passed temperature, vector current stickplot, and north-south, east-west current.

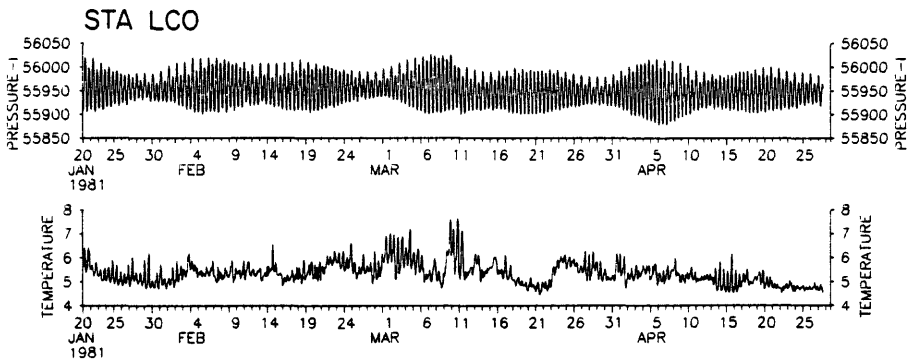


Figure 50a. Station LCO, record 221, 559 m, hour-averaged pressure, and temperature.

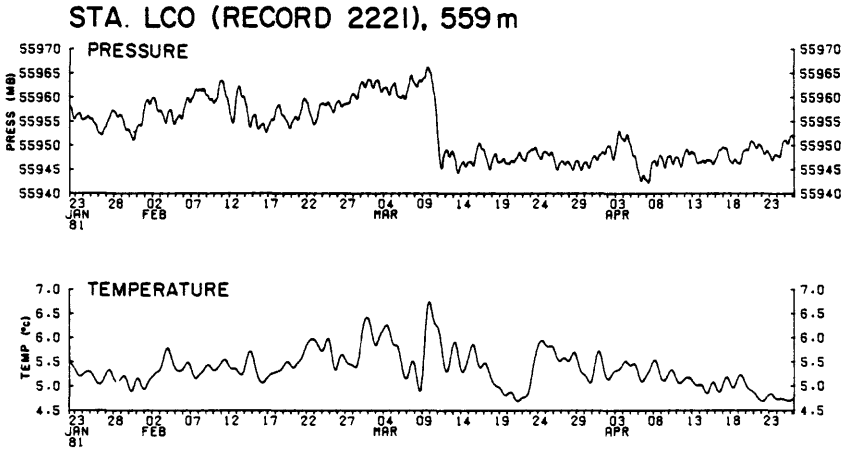


Figure 50b. Station LCO, record 221, 559 m, low-passed pressure and temperature.

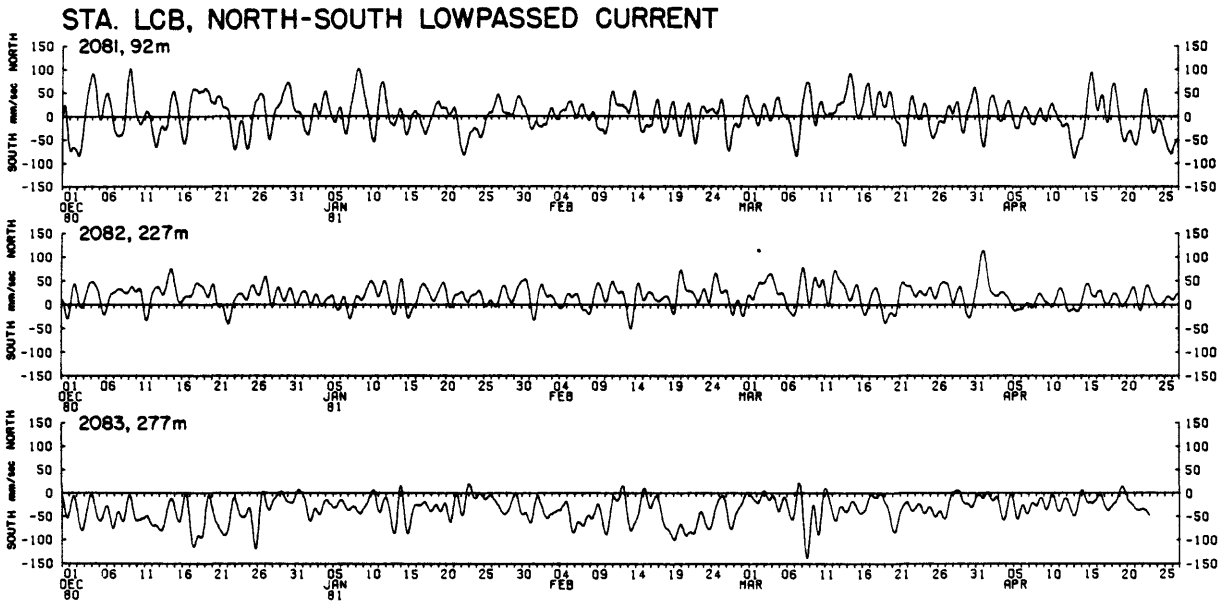


Figure 51a. Station LCB, records 2081, 2082, 2083, low-passed north-south current.

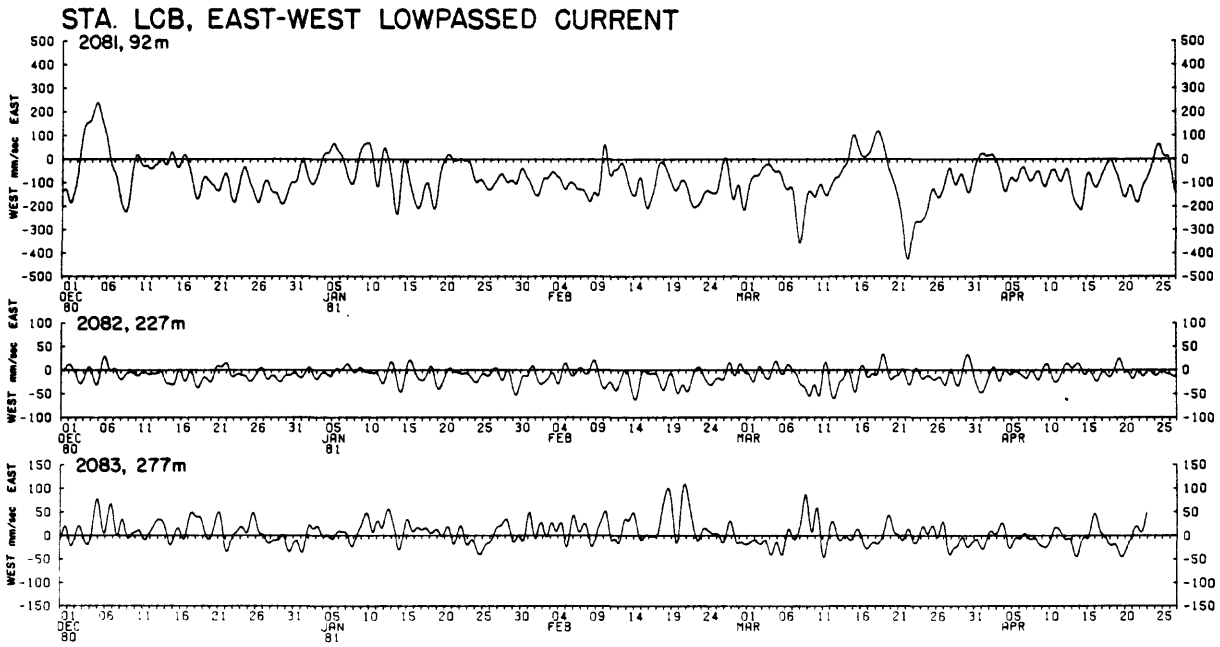


Figure 51b. Station LCB, records 2081, 2082, 2083, low-passed east-west current.

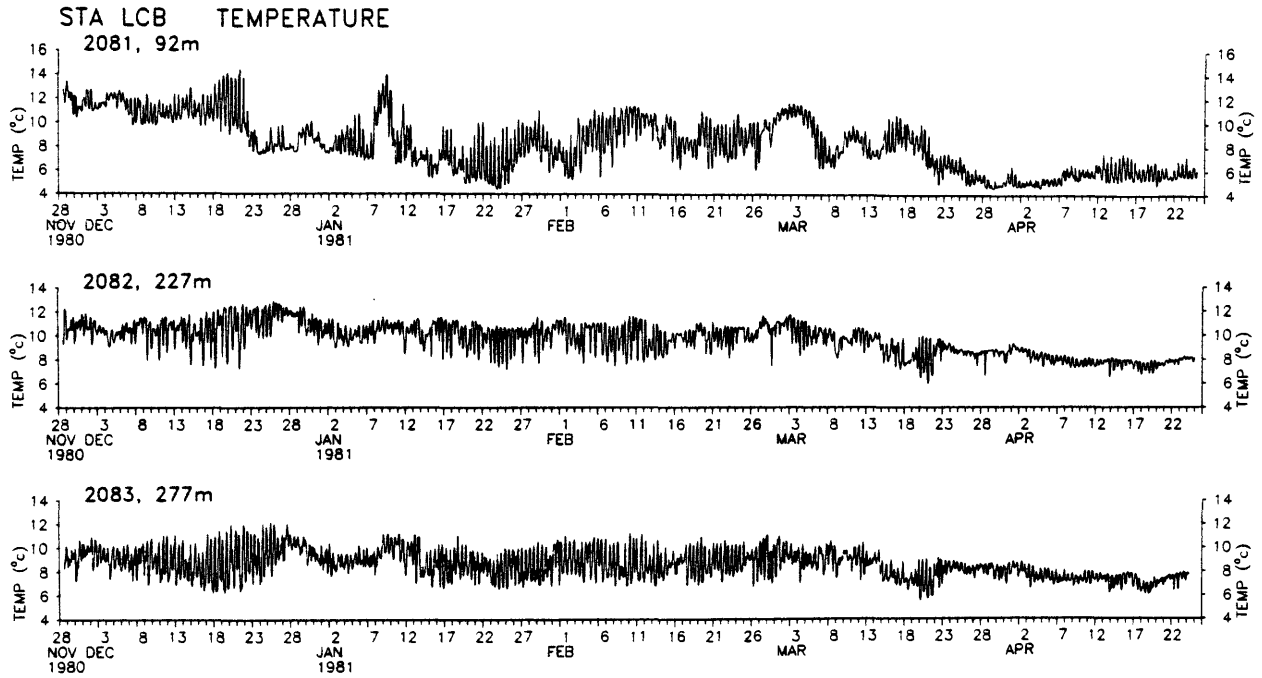


Figure 51c. Station LCB, records 2081, 2082, 2083, hour-averaged temperature.

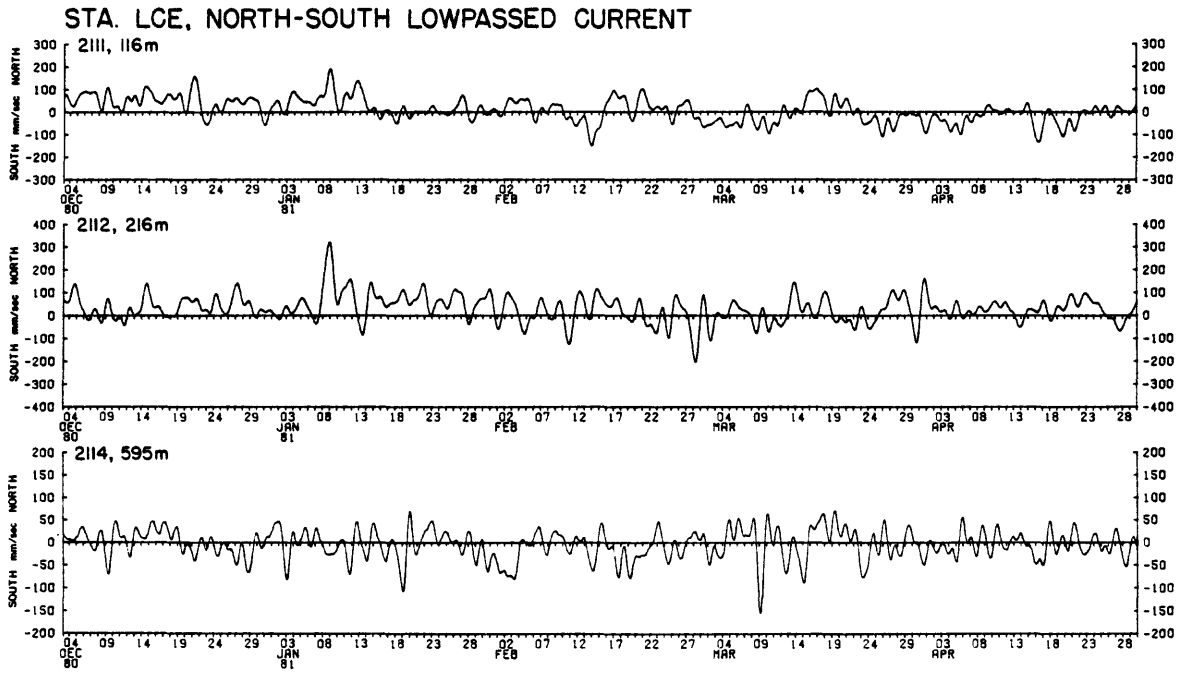


Figure 52a. Station LCE, records 2111, 2112, 2114, low-passed north-south current.

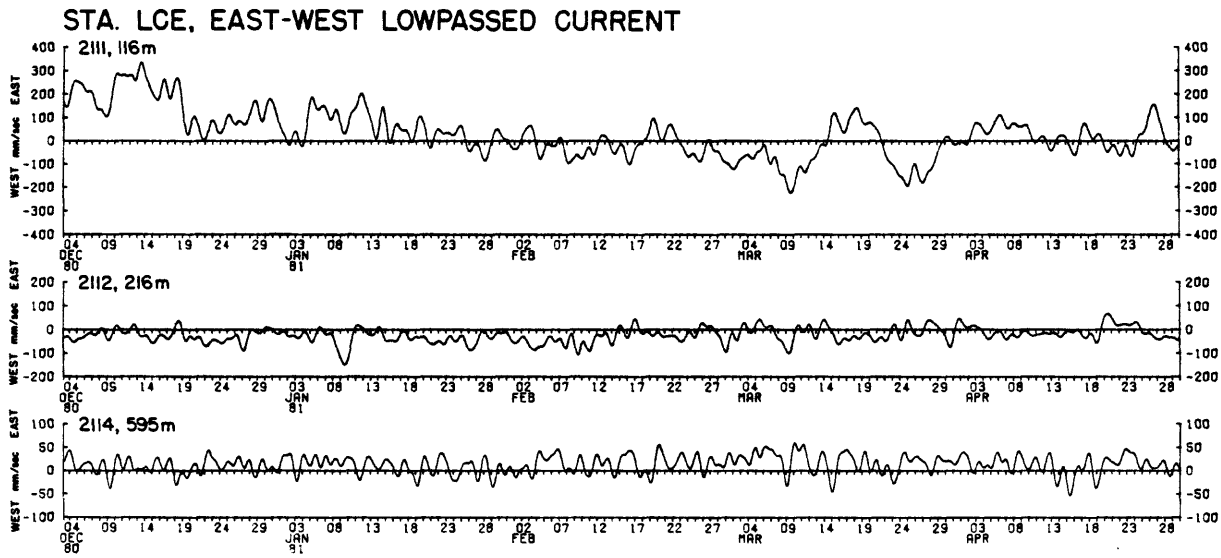


Figure 52b. Station LCE, records 2111, 2112, 2114, low-passed east-west current.

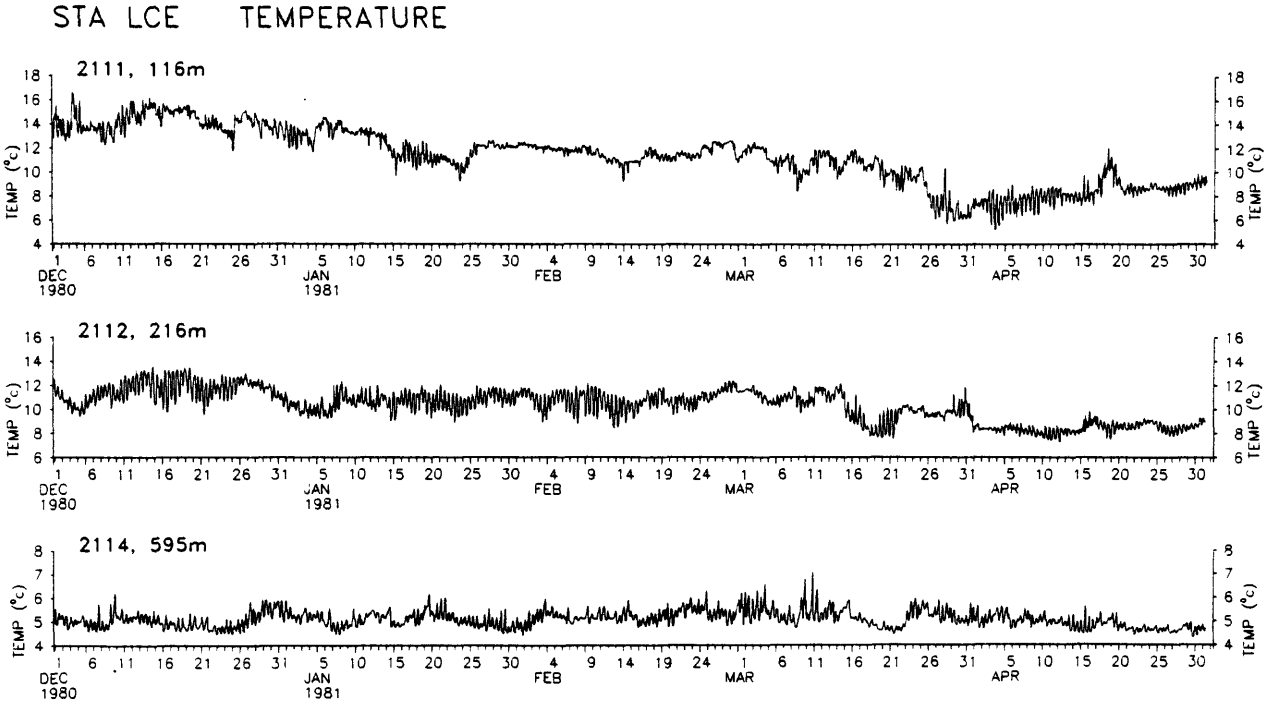


Figure 52c. Station LCE, records 2111, 2112, 2114, hour-averaged temperature.

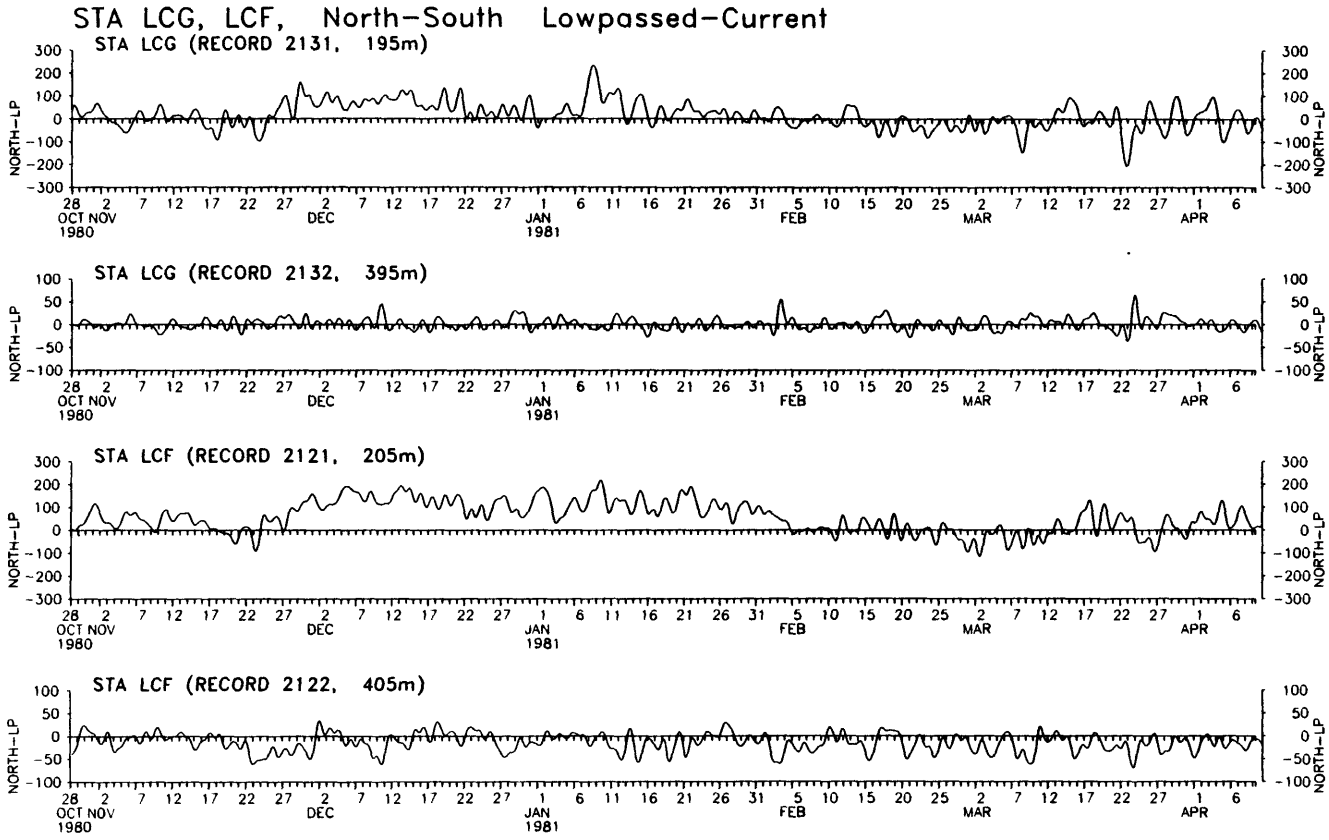


Figure 53a. Stations LCG and LCF, records 2131, 2132, 2121, 2122, low-passed north-south current.

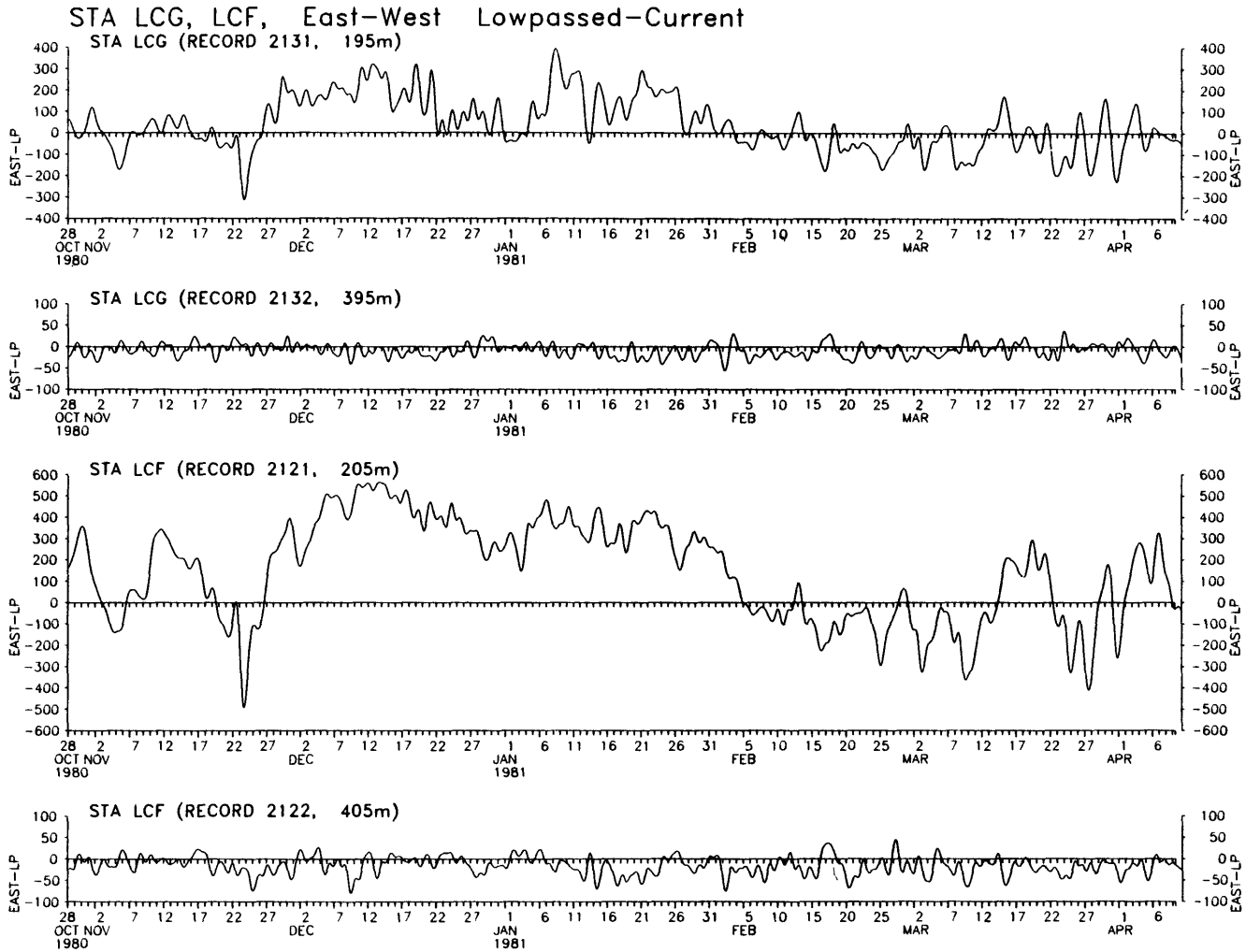


Figure 53b. Stations LCG and LCF, records 2131, 2132, 2121, 2122, low-passed east-west current.

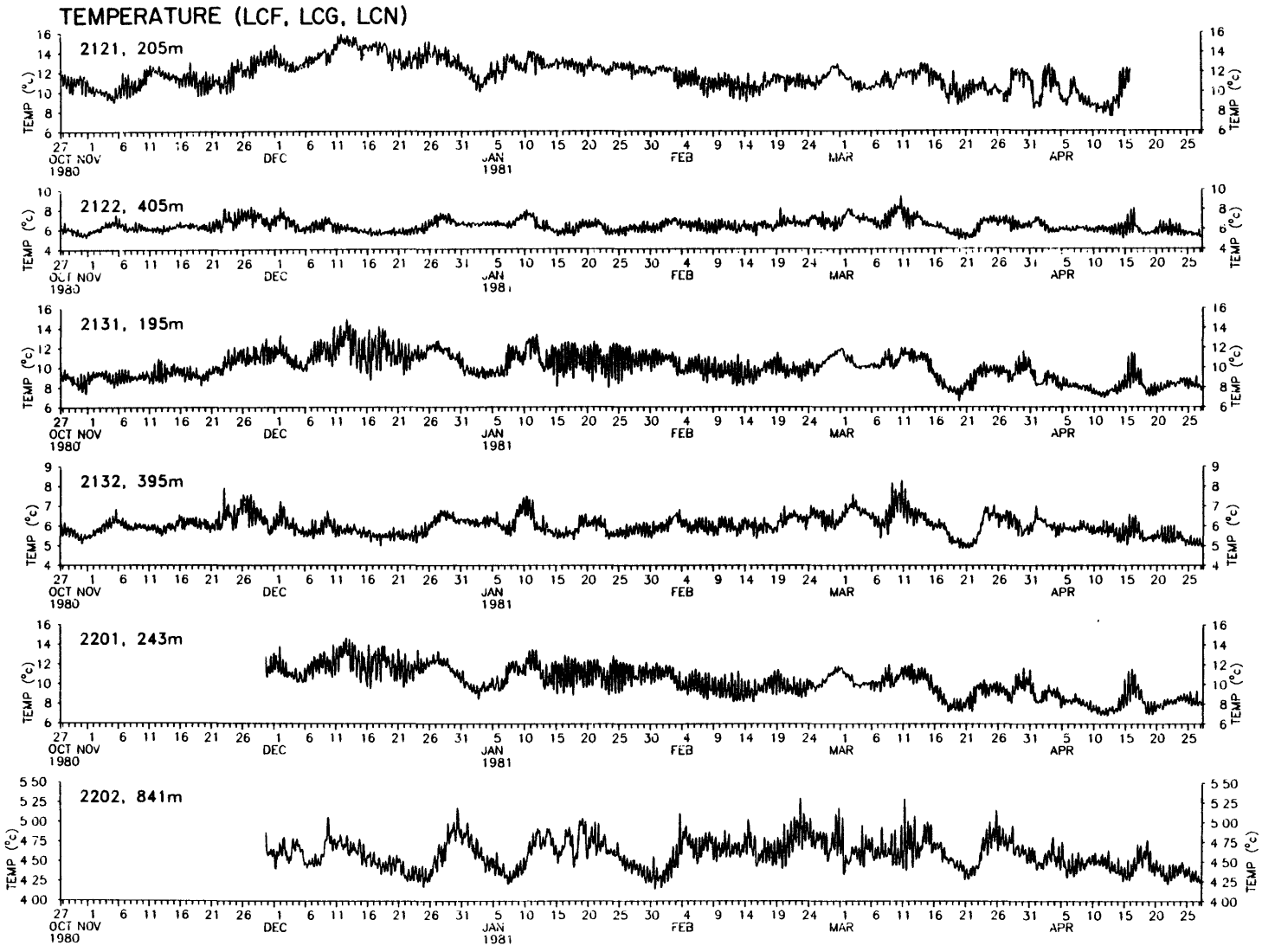


Figure 53c. Stations LCF, LCG, and LCN, records 2121, 2122, 2131, 2132, 2201, 2202 hour-averaged temperature.

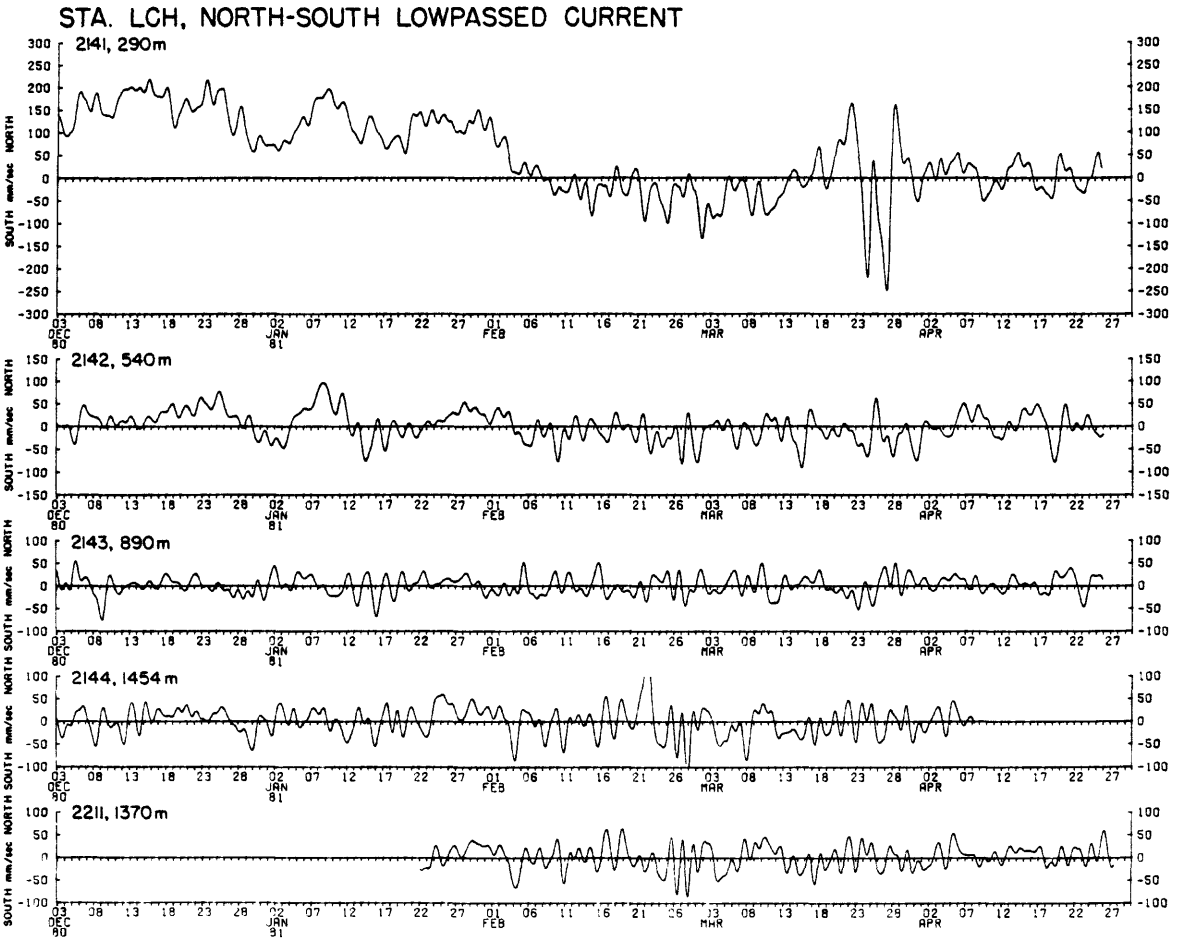


Figure 54a. Station LCH, records 2141, 2142, 2143, 2144, 2211, low-passed north-south current. Record 2211 obtained at a location slightly to the north of station LCH.

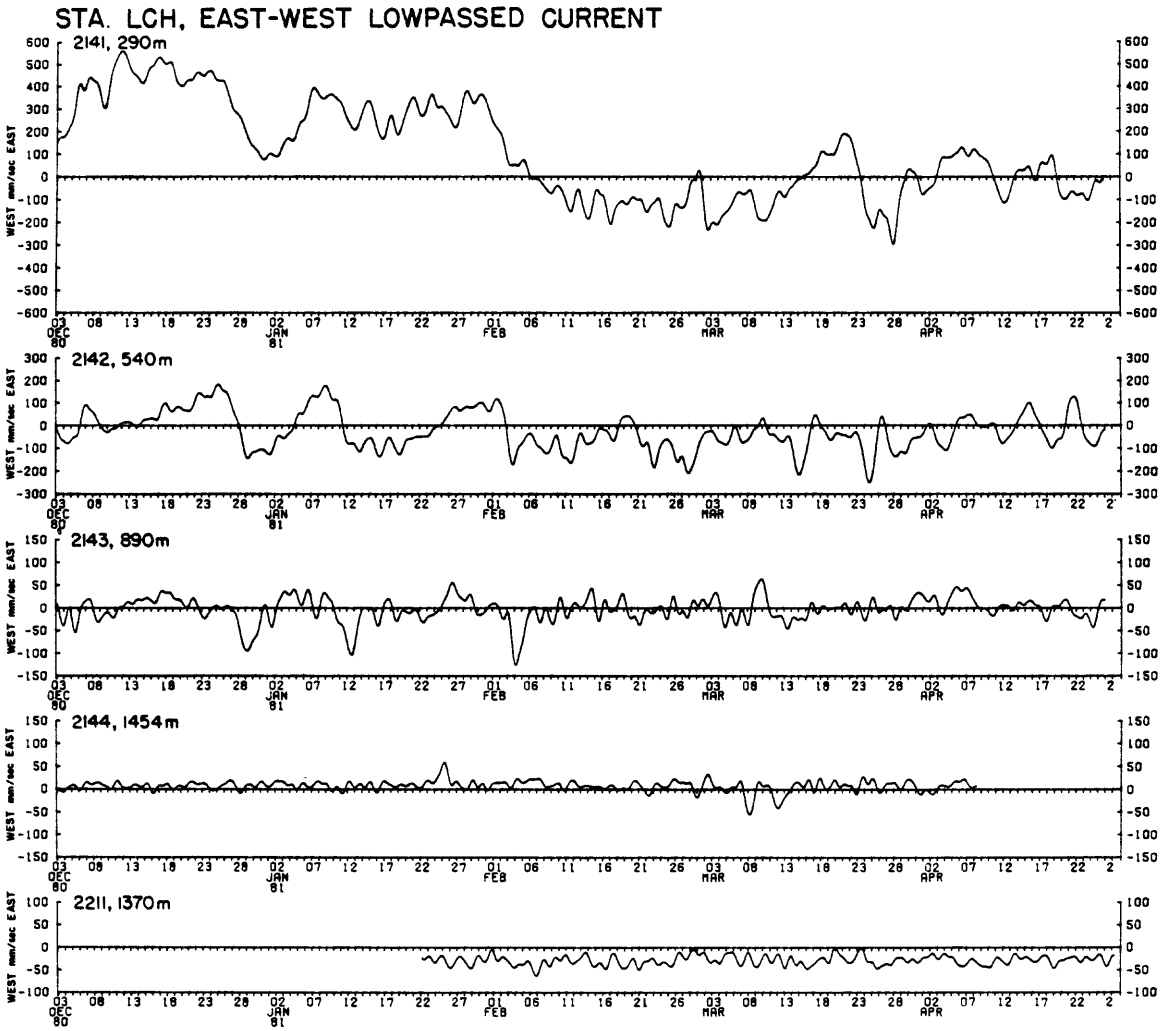


Figure 54b. Station LCH, records 2141, 2142, 2143, 2144, 2211, low-passed east-west current. Record 2211 obtained at a location slightly to the north of station LCH.

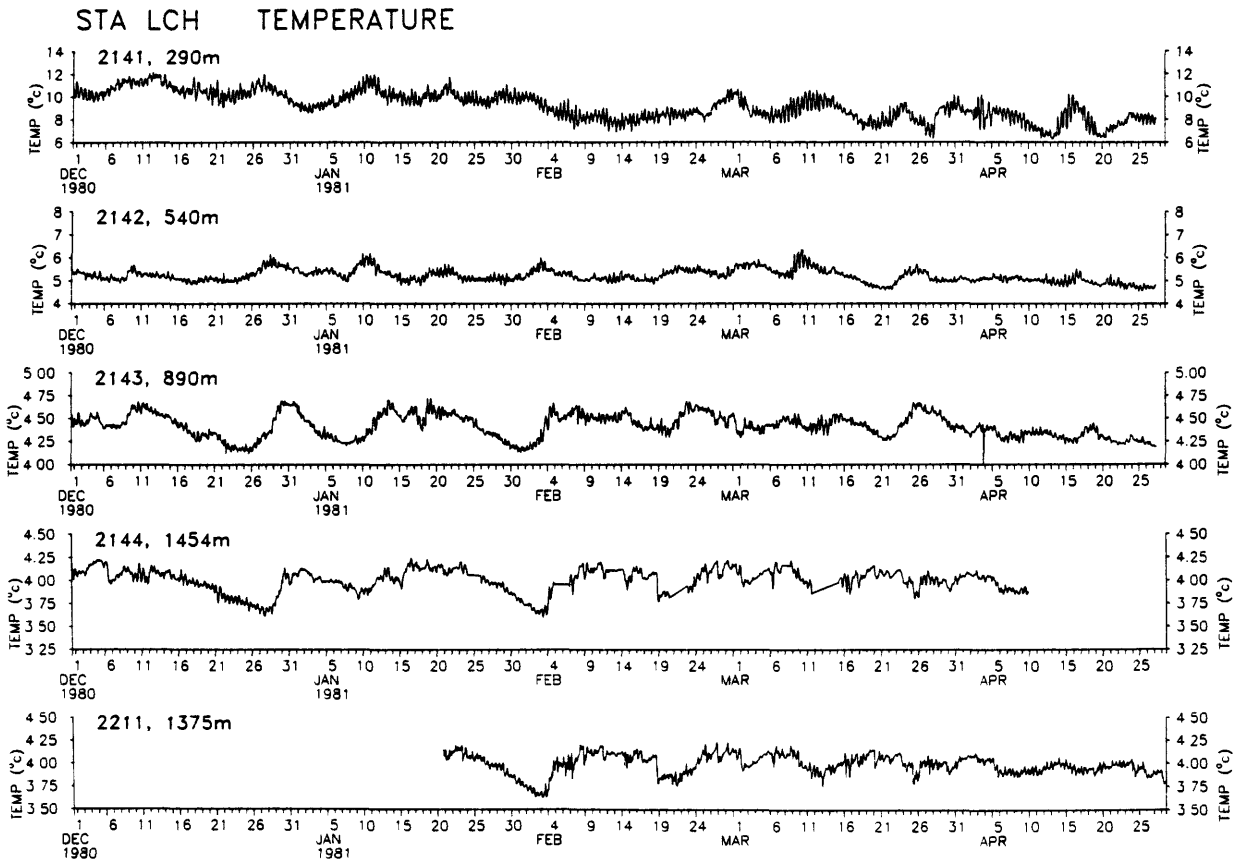


Figure 54c. Station LCH, records 2141, 2142, 2143, 2144, 2211, hour-averaged temperature. Record 2211 obtained at a location slightly to the north of station LCH.

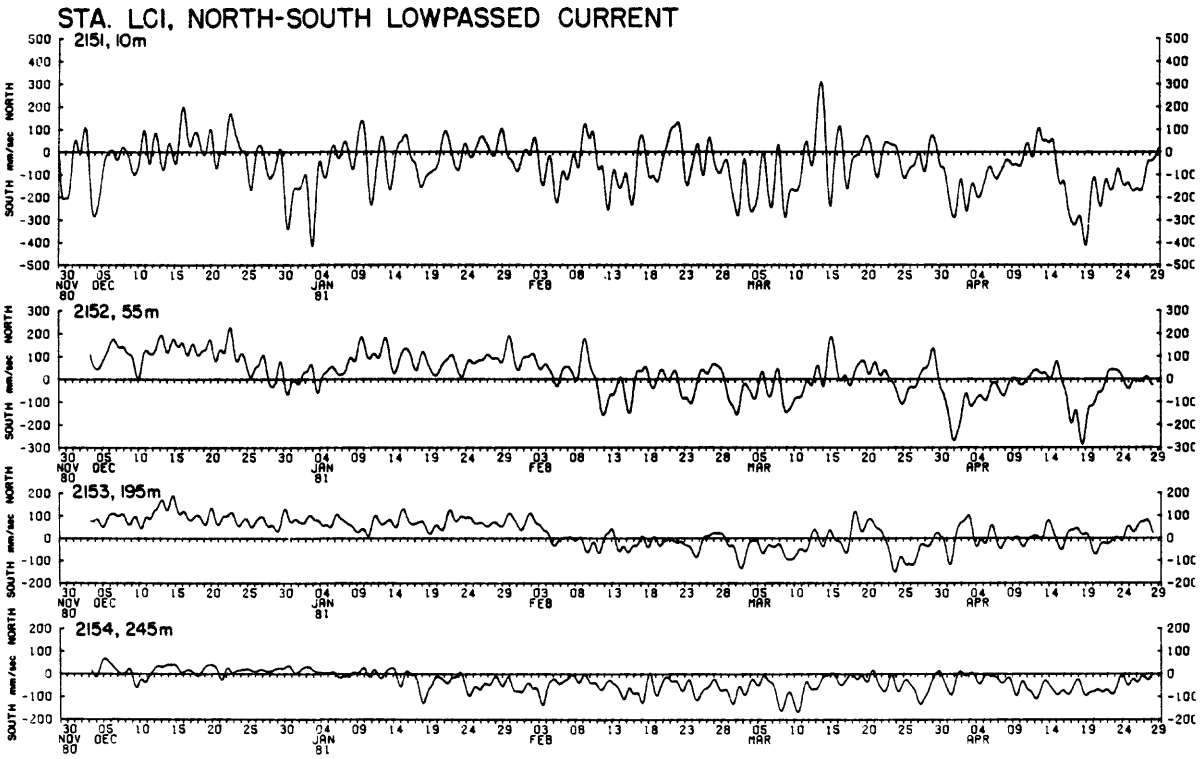


Figure 55a. Station LCI, records 2151, 2152, 2153, 2154, low-passed north-south current.

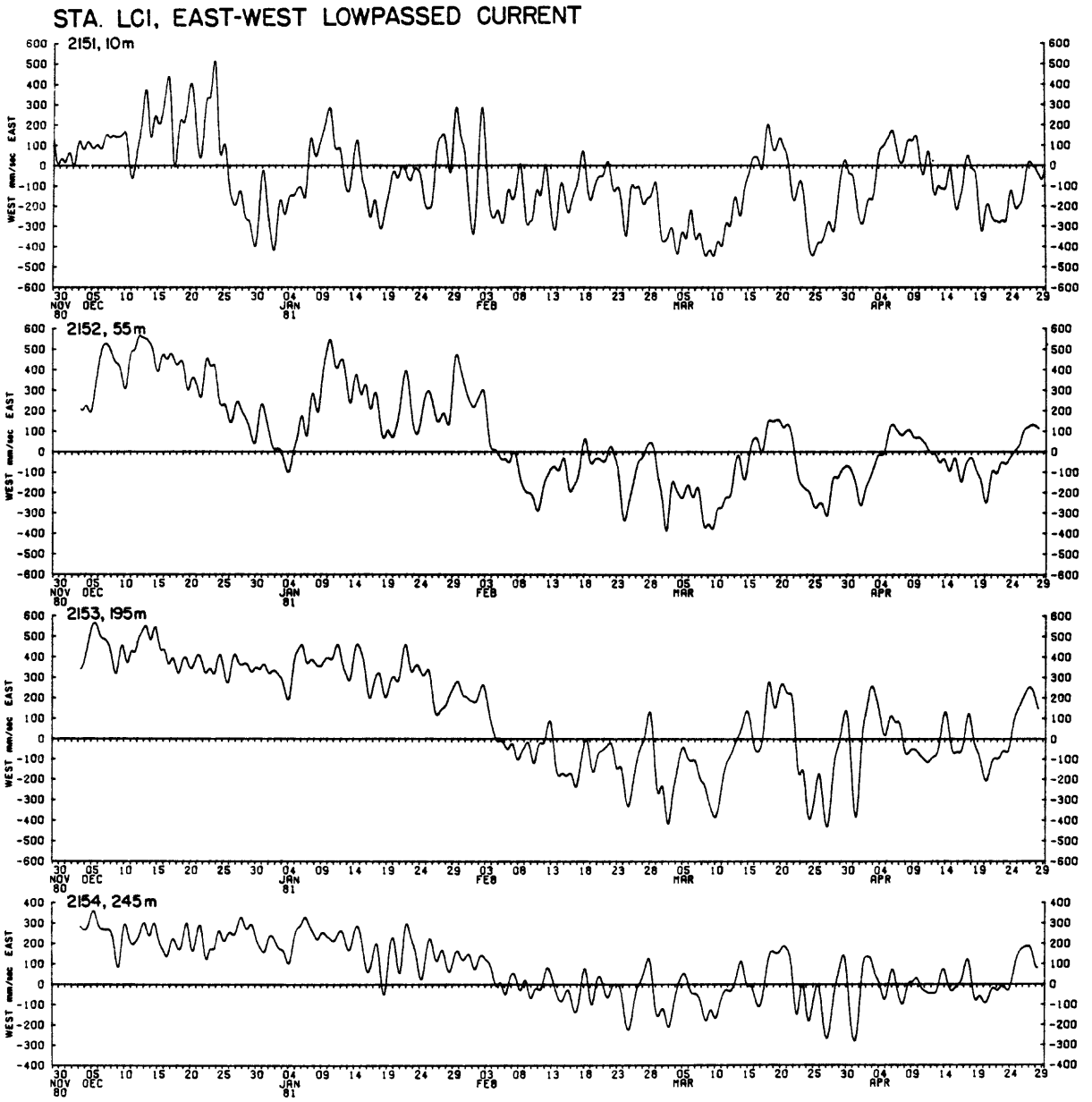


Figure 55b. Station LCI, records 2151, 2152, 2153, 2154, low-passed east-west current.

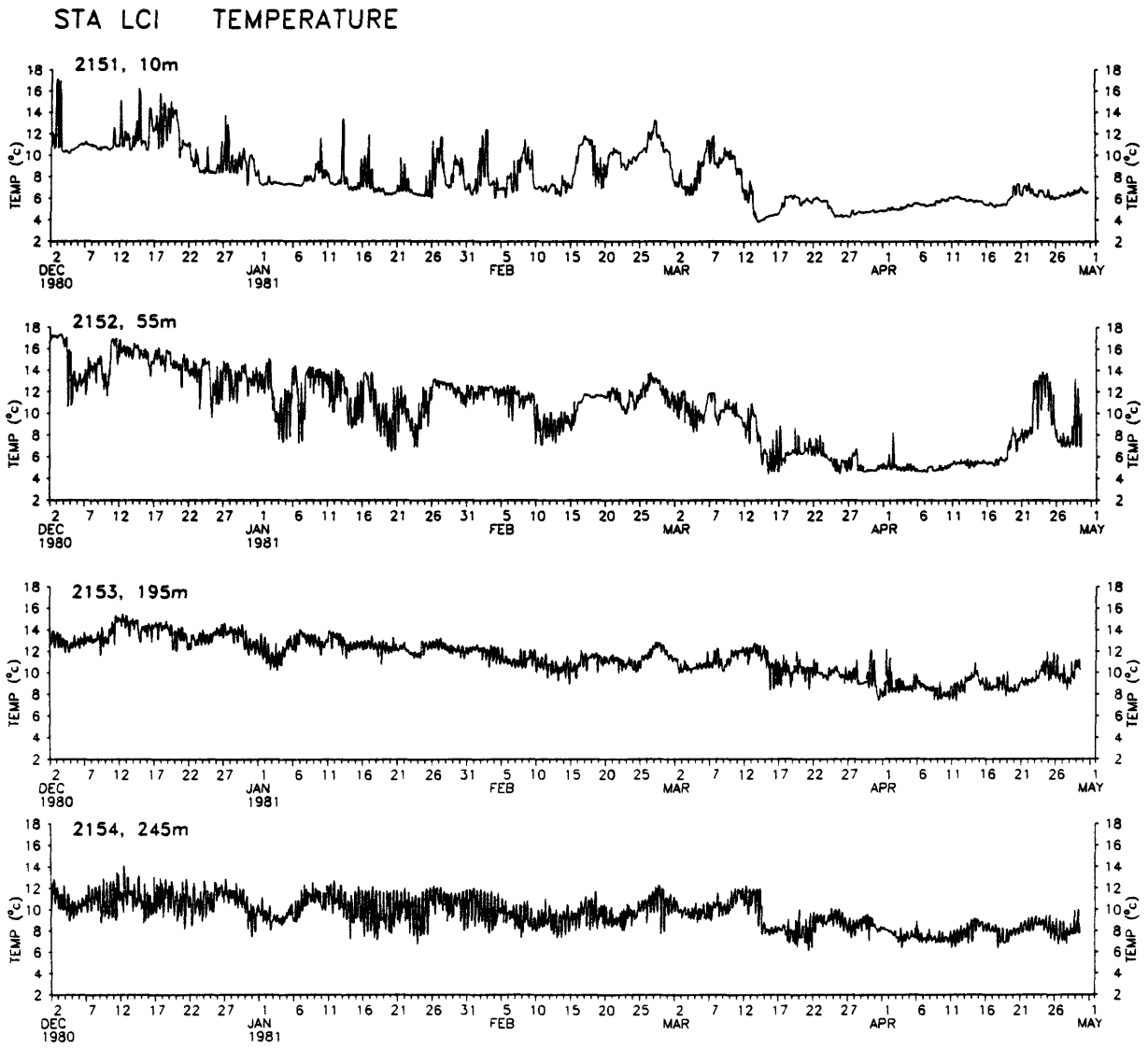


Figure 55c. Station LCI, records 2151, 2152, 2153, 2154, hour-averaged temperature.

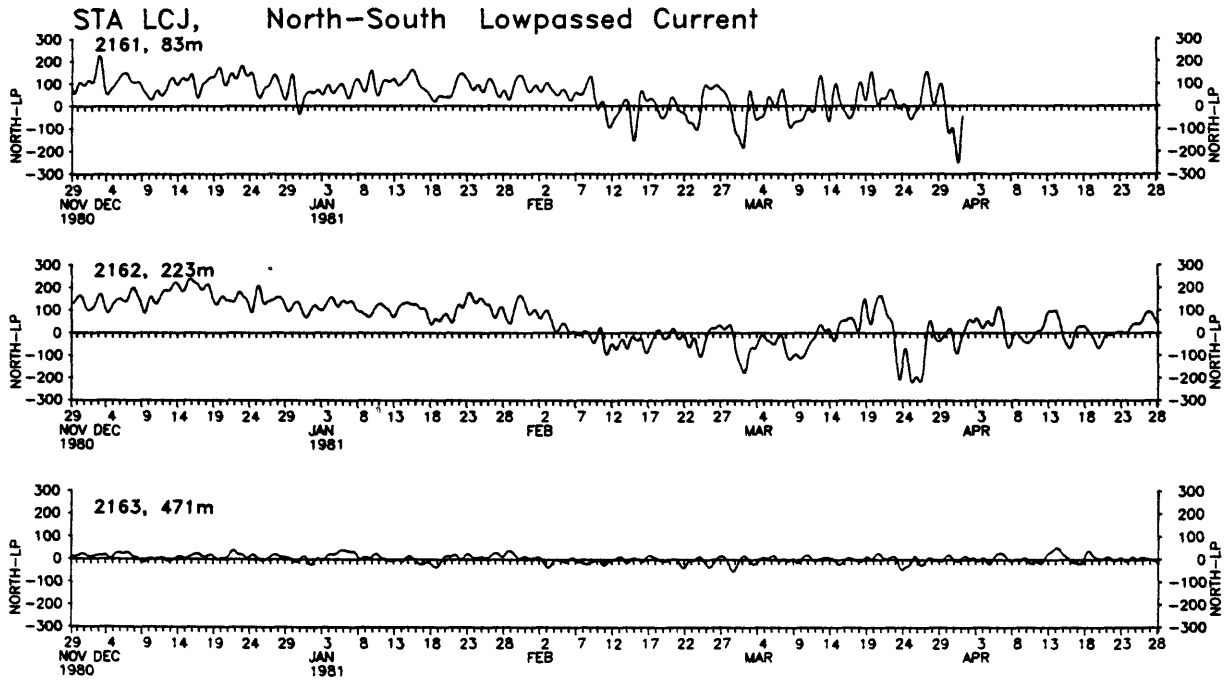


Figure 56a. Station LCJ, records 2161, 2162, 2163, low-passed north-south current.

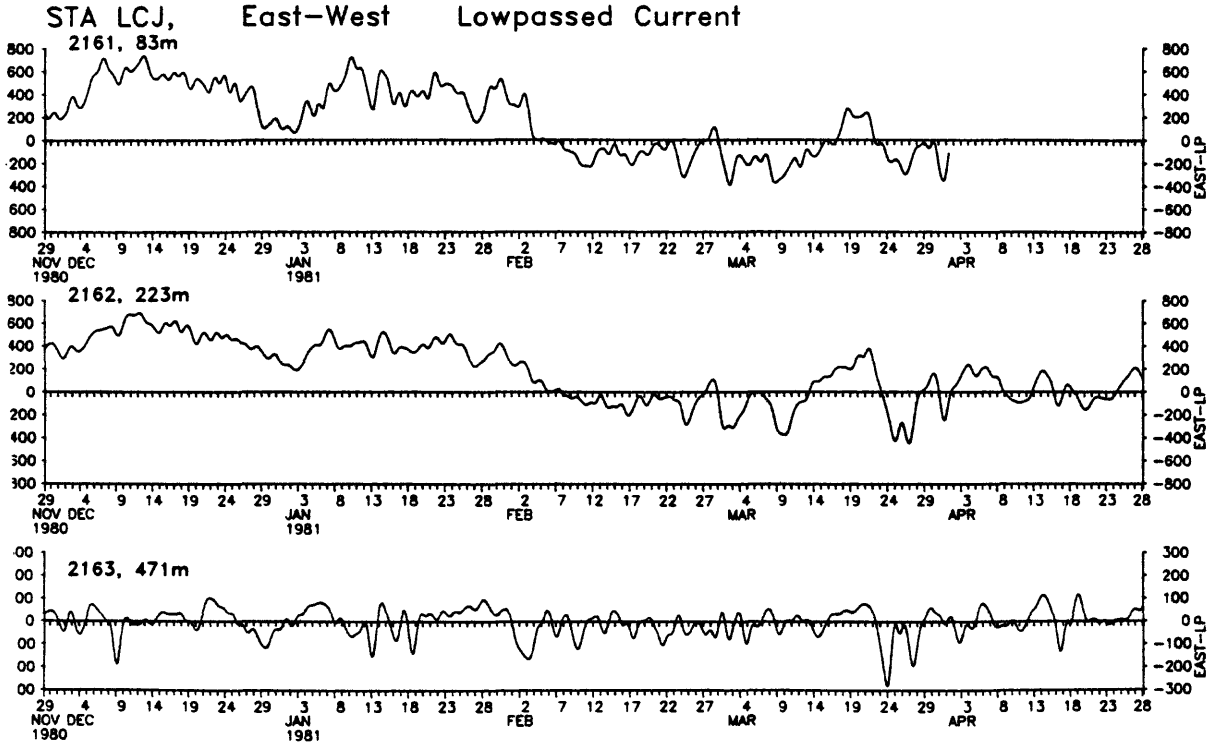


Figure 56b. Station LCJ, records 2161, 2162, 2163, low-passed east-west current.

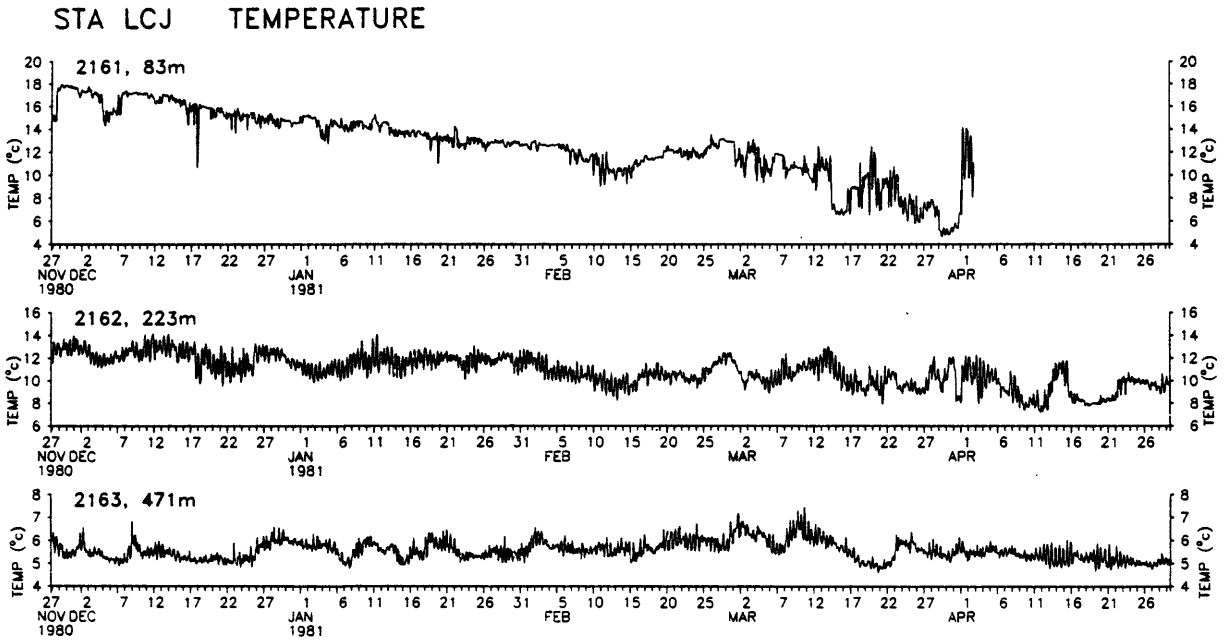


Figure 56c. Station LCJ, records 2161, 2162, 2163, hour-averaged temperature.

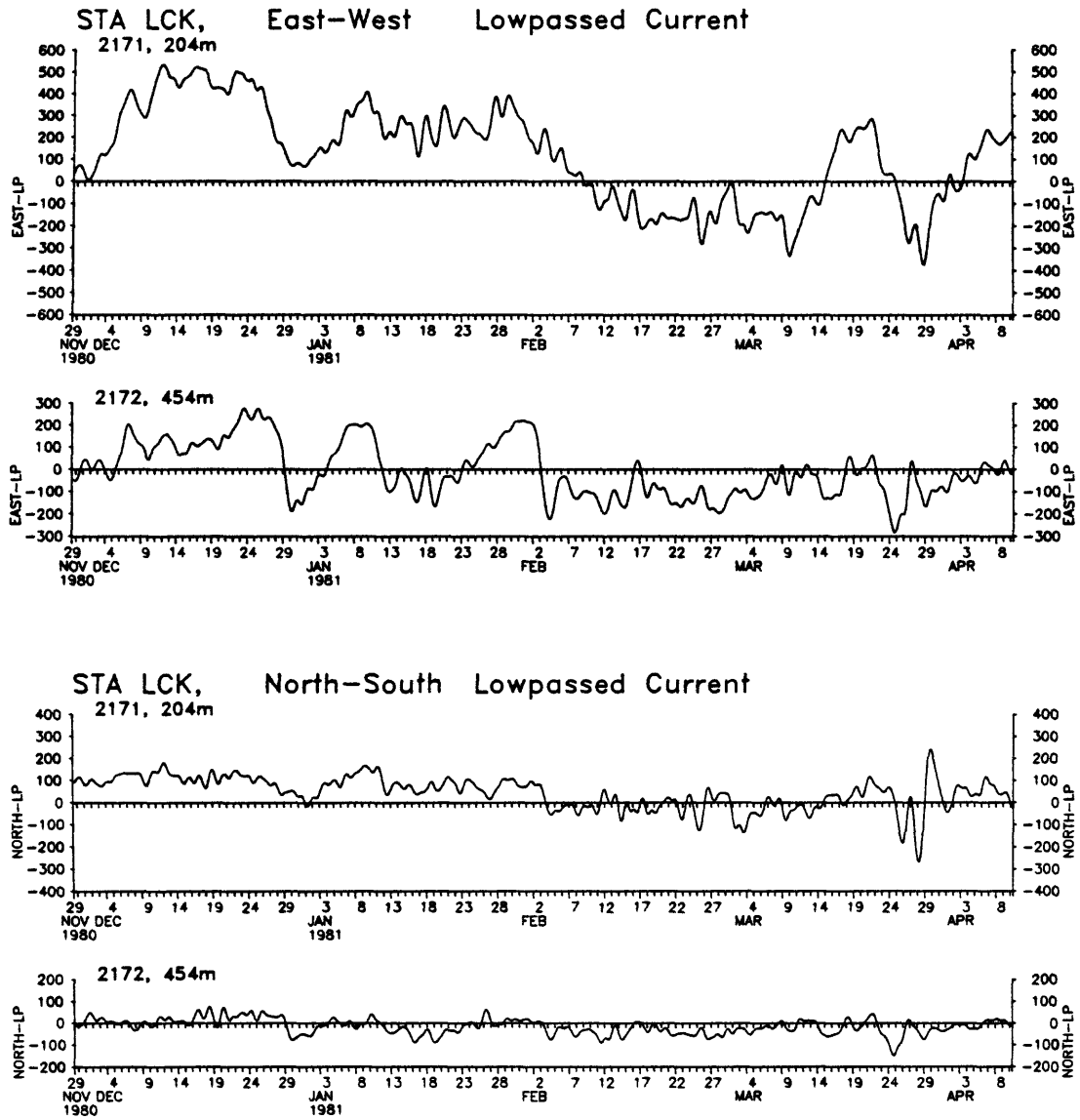


Figure 57a. Station LCK, records 2171, 2172, low-passed north-south, east-west current.

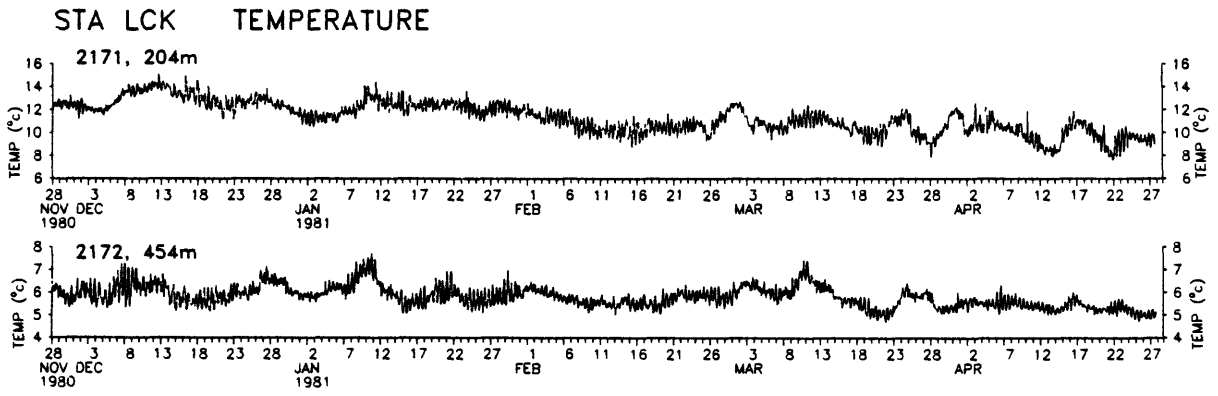


Figure 57b. Station LCK, records 2171, 2172, hour-averaged temperature.

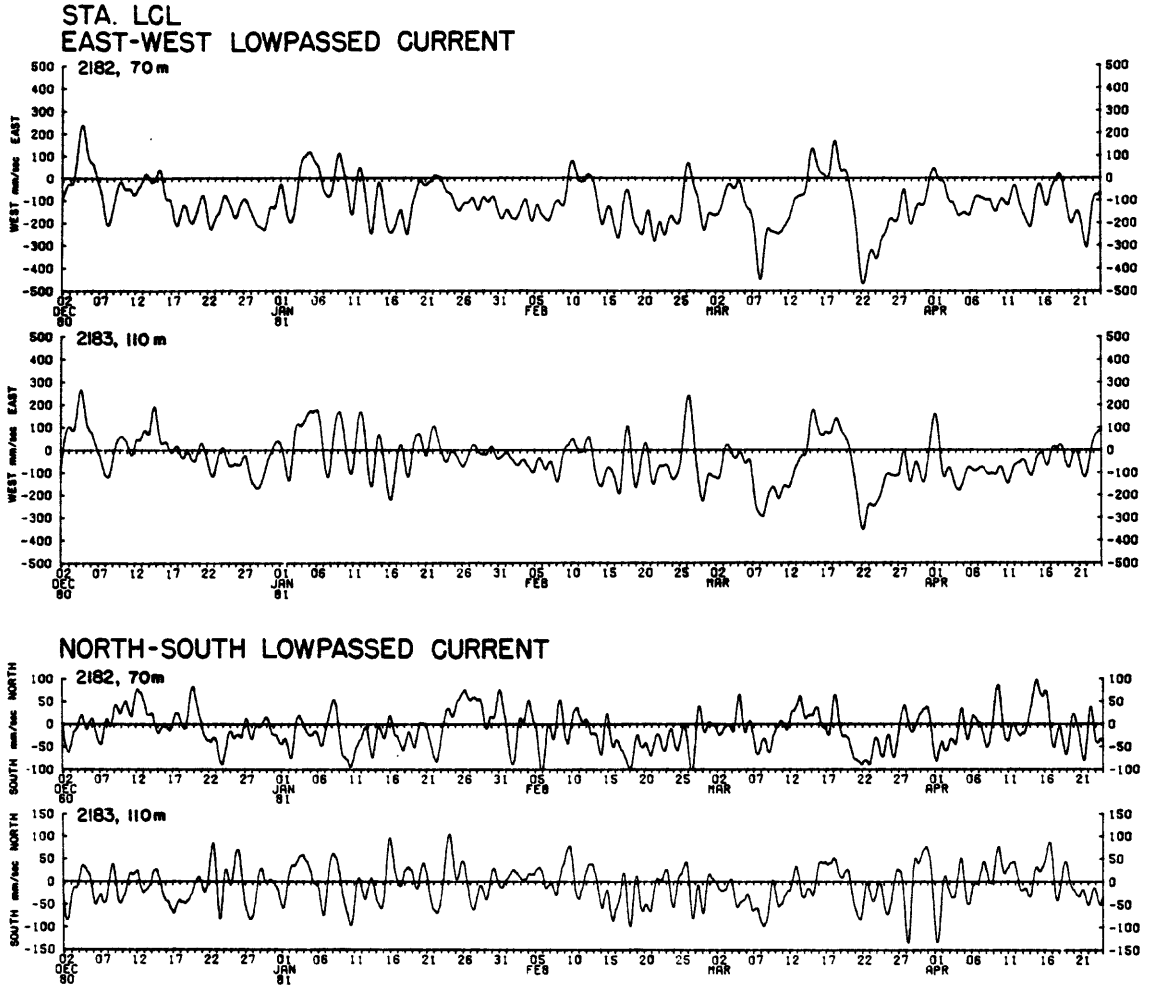


Figure 58a. Station LCL, records 2182, 2183, low-passed north-south, east-west current.

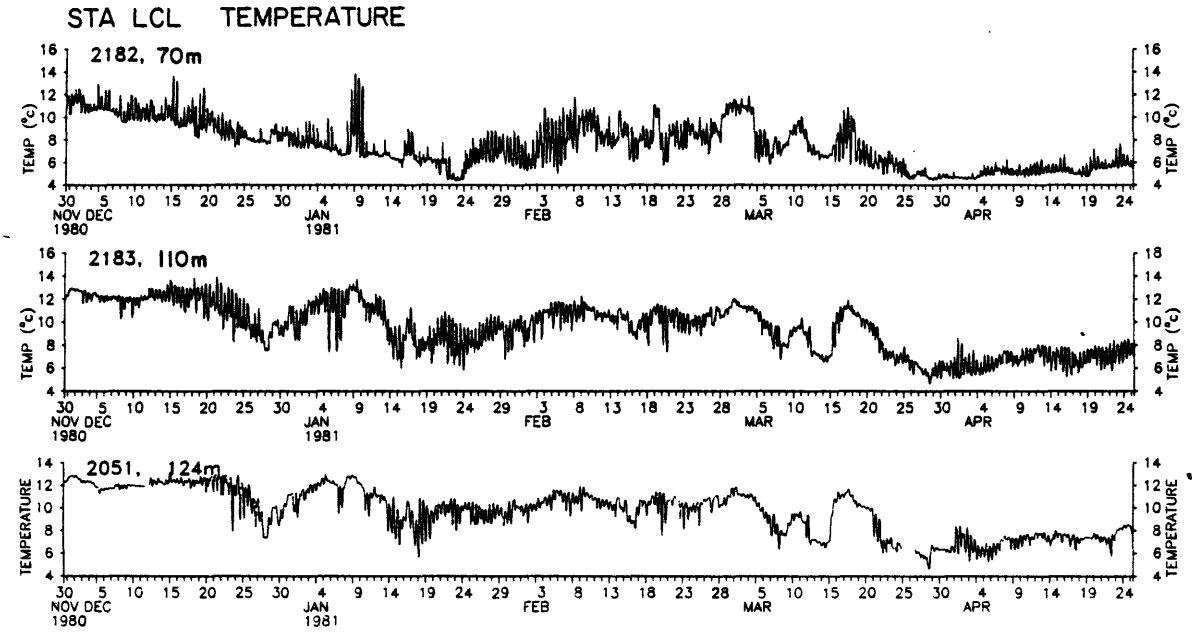


Figure 58b. Station LCL, records 2182, 2183, hour-averaged temperature.

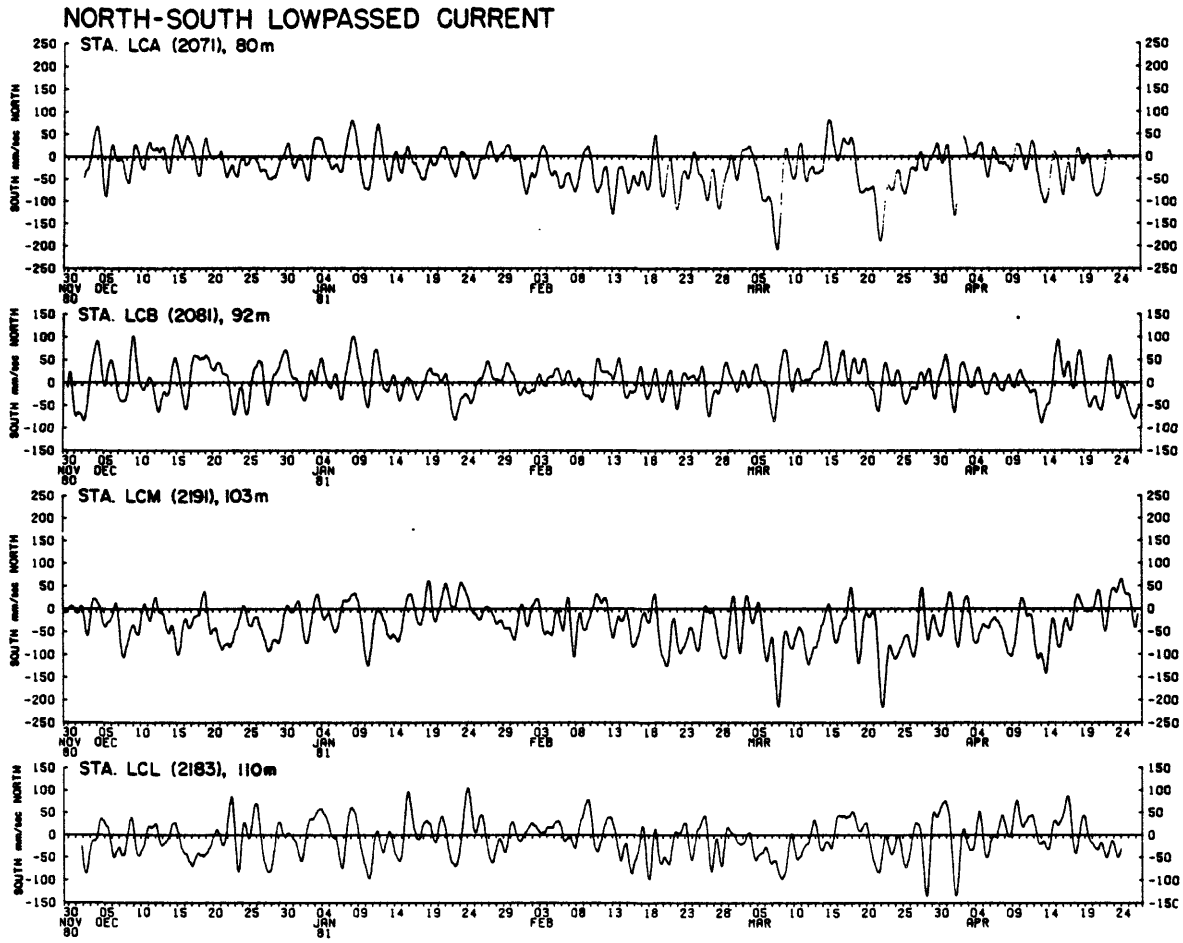


Figure 59a. Canyon head, Stations LCA (80 m), LCB (92 m), LCM (103 m), LCL (110 m), north-south low-passed current.

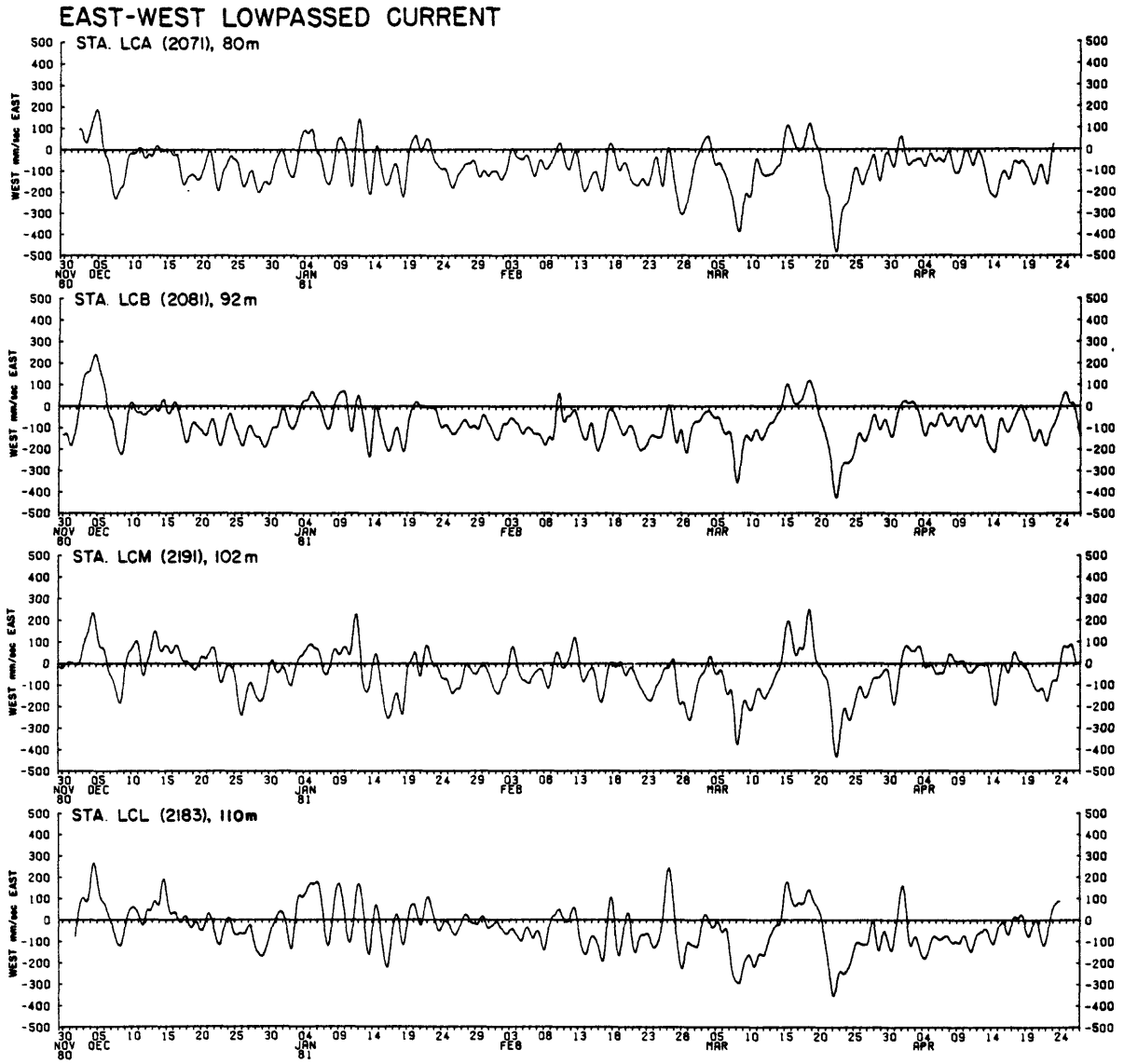


Figure 59b. Canyon head, Stations LCA (80 m), LCB (92 m), LCM (103 m), LCL (110 m), east-west low-passed current.

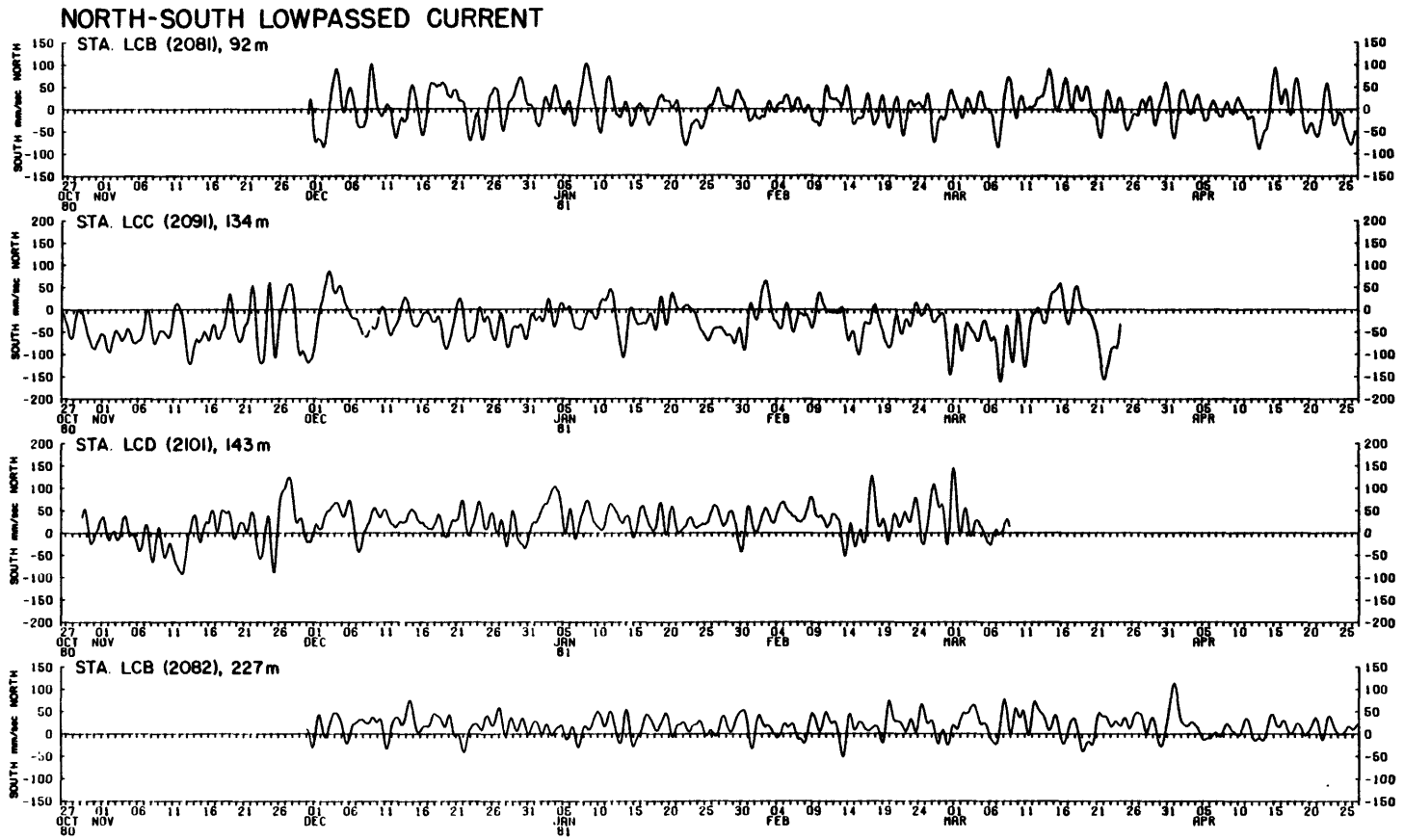


Figure 60a. Canyon head, Stations LCB (92 m), LCC (134 m), LCD (143 m), LCB (227 m), north-south low-passed current.

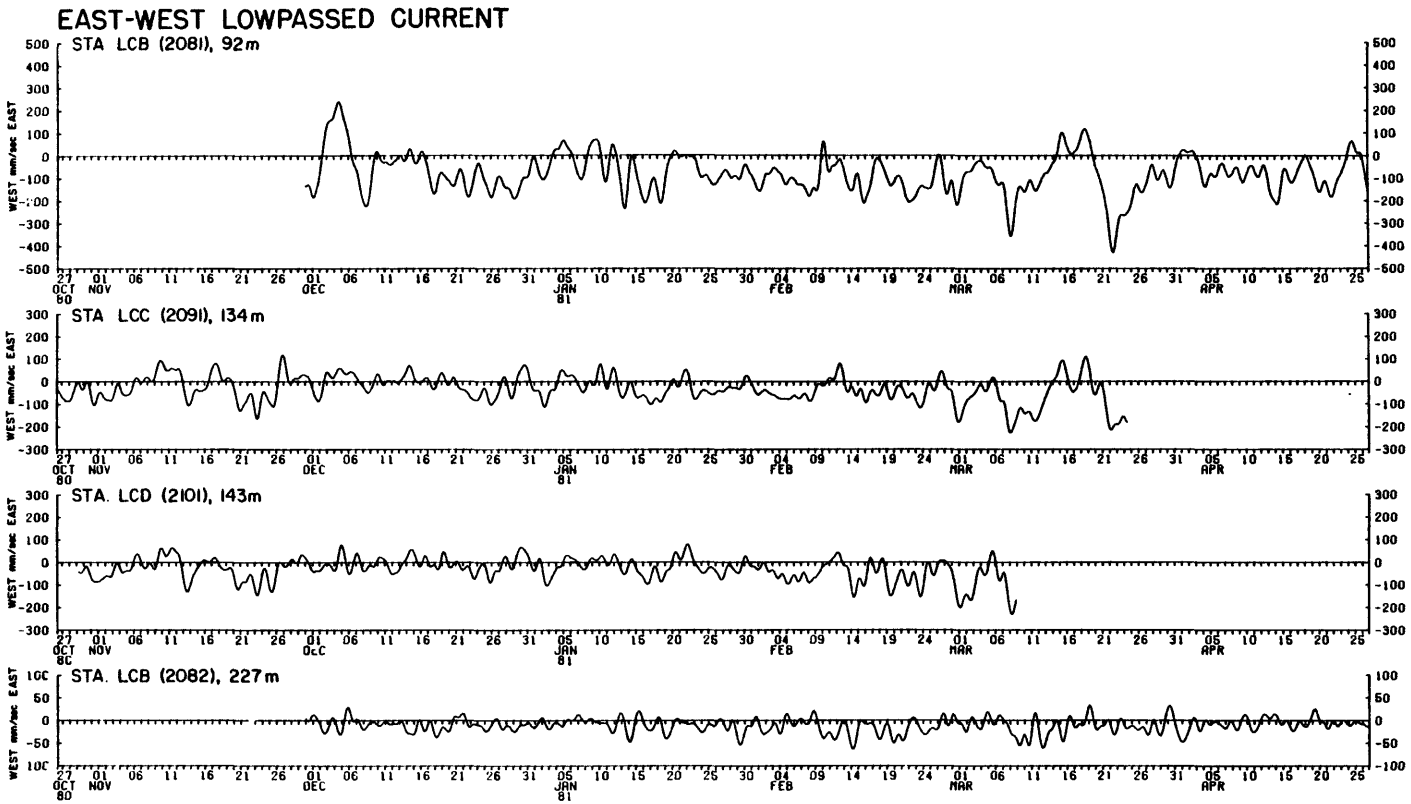


Figure 60b. Canyon head, Stations LCB (92 m), LCC (134 m), LCD (143 m), LCB (227 m), east-west low-passed current.

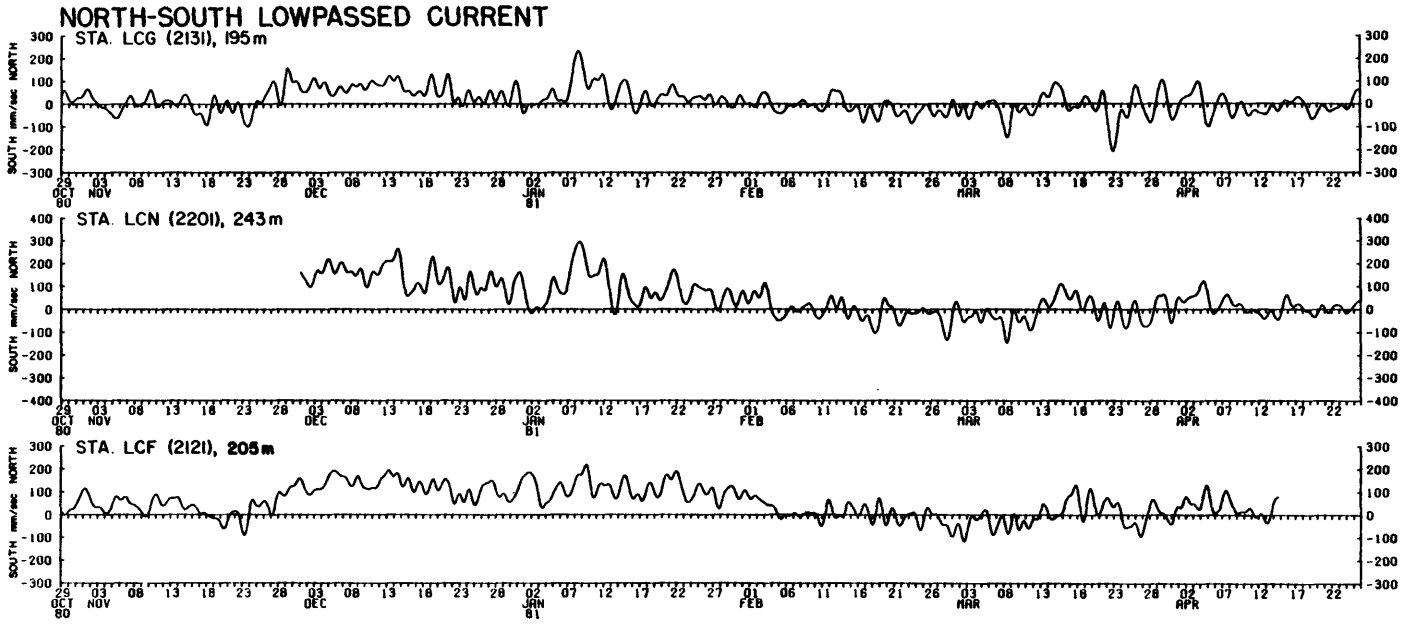


Figure 61a. Cross-canyon transect, Stations LCG (195 m), LCN (243 m), LCF (205 m), north-south low-passed current.

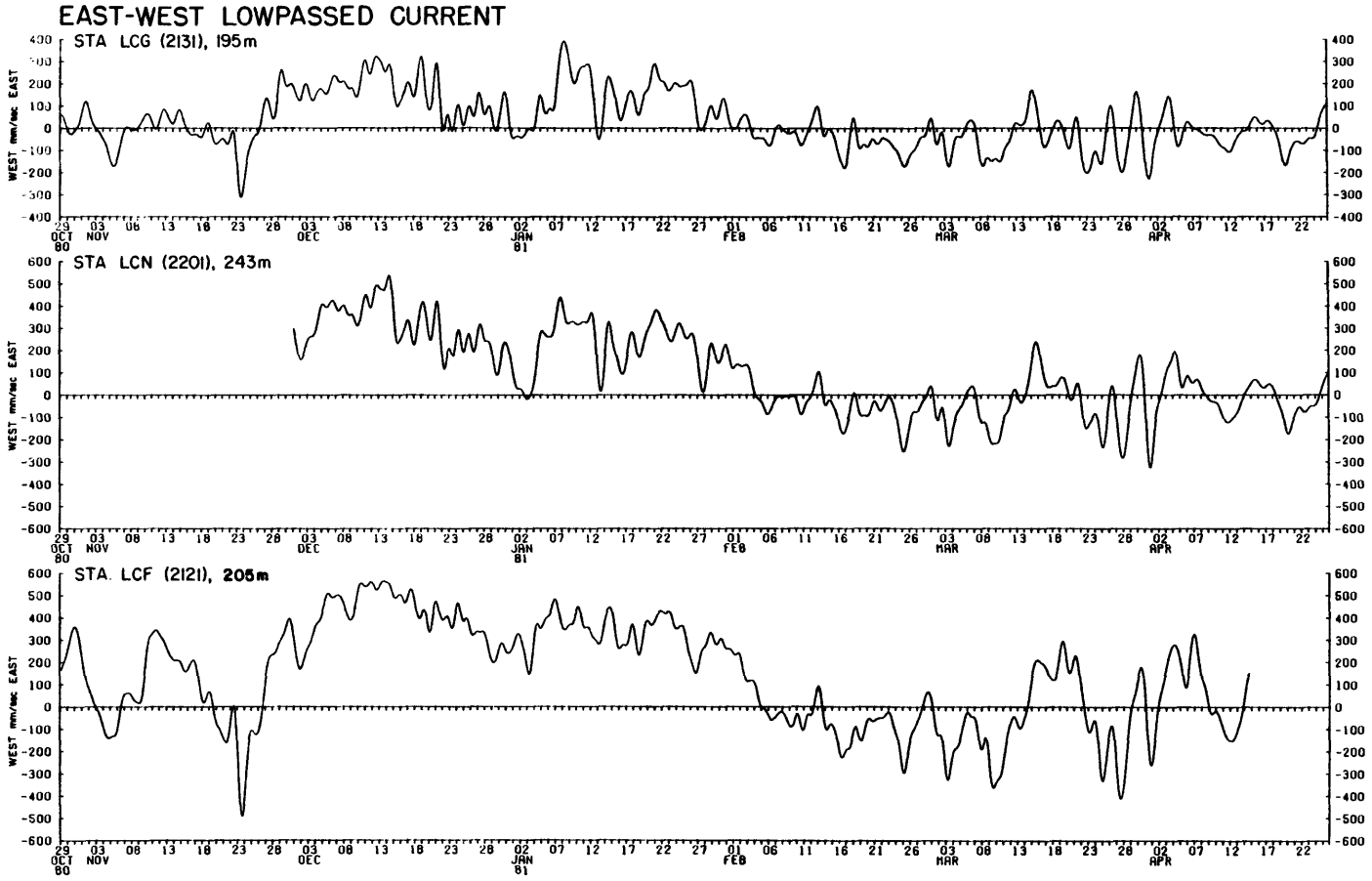


Figure 61b. Cross-canyon transect, Stations LCG (195 m), LCN (243 m), LCF (205 m), north-south low-passed current.

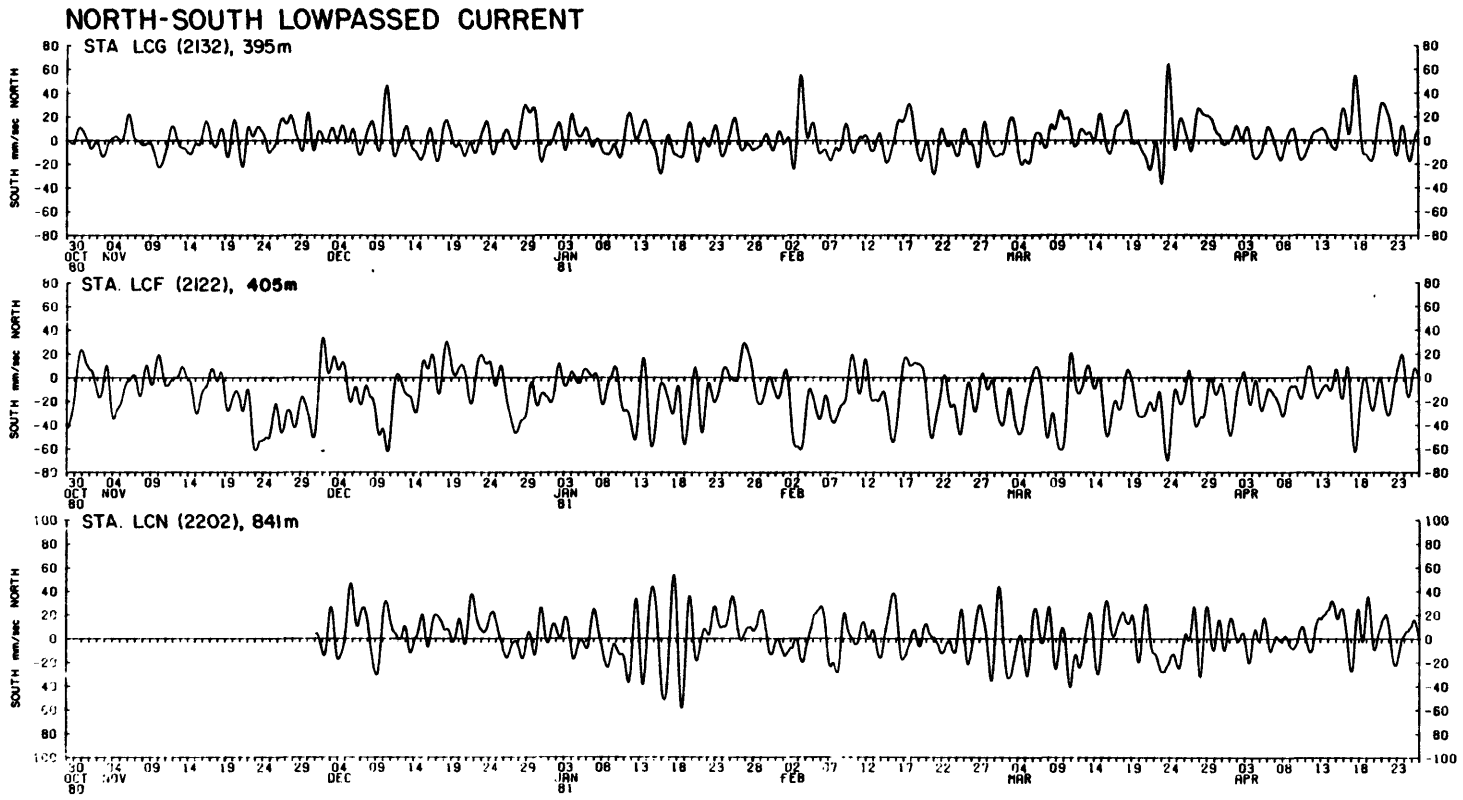


Figure 62a. Cross-canyon transect, Stations LCG (395 m), LCF (405 m), LCN (841 m), north-south low-passed current.

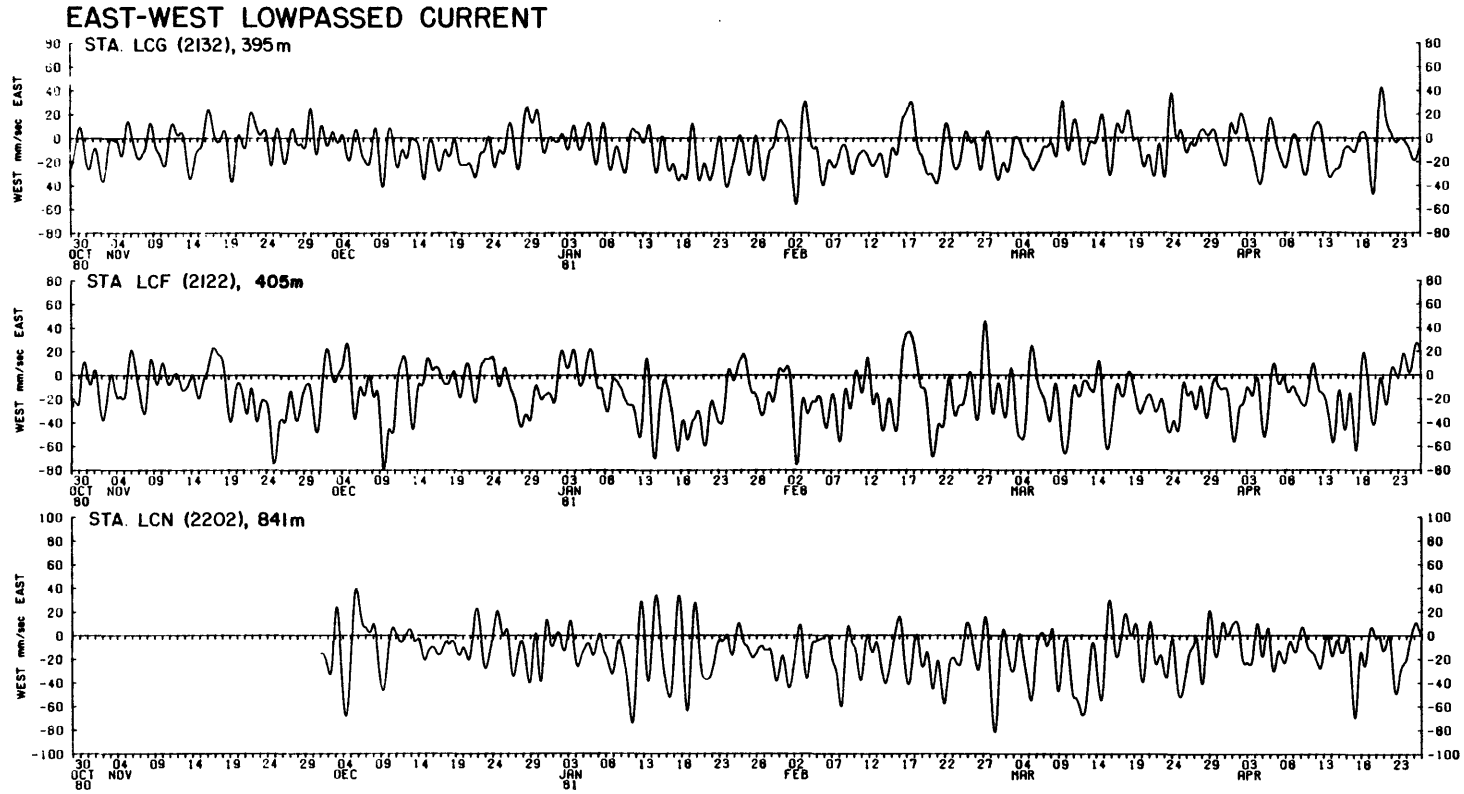


Figure 62b. Cross-canyon transect, Stations LCG (395 m), LCF (405 m), LCN (841 m), east-west low-passed current.

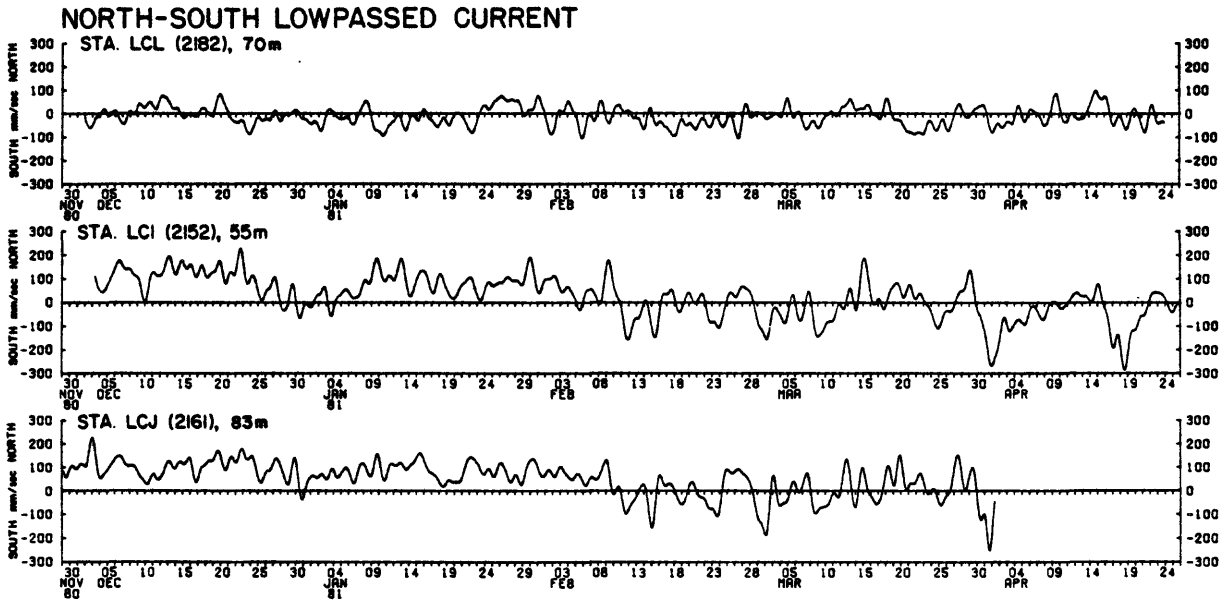


Figure 63a. Cross-shelf transect, Stations LCL (70 m), LCI (55 m), LCJ (83 m), north-south low-passed current.

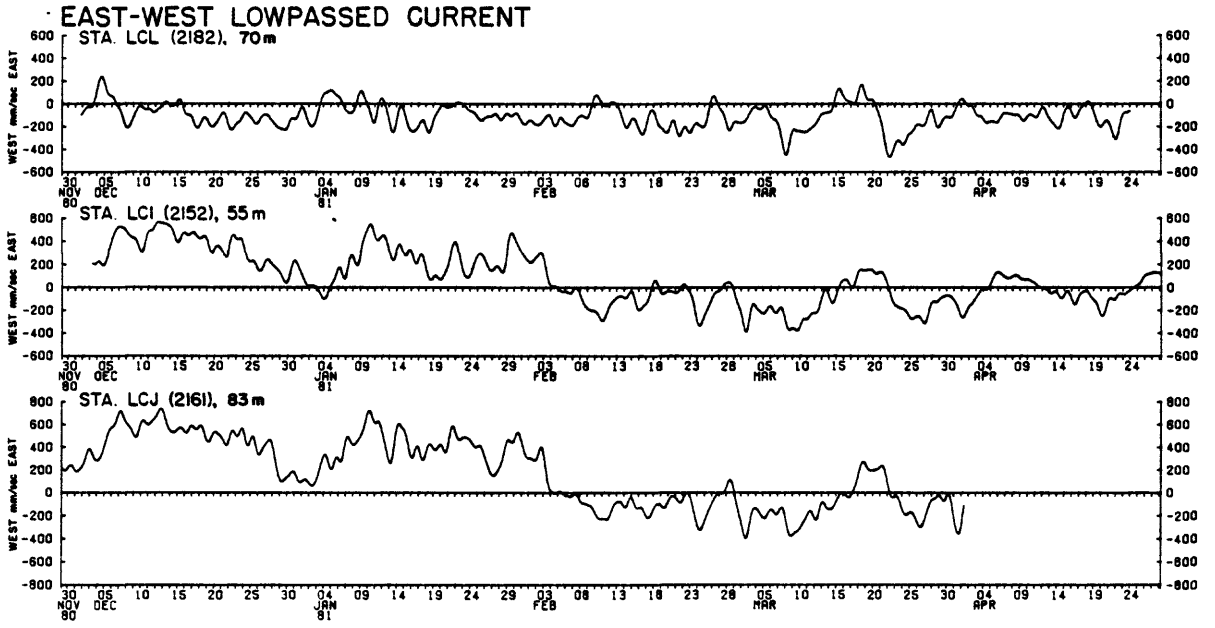


Figure 63b. Cross-shelf transect, Stations LCL (70 m), LCI (55 m), LCJ (83 m), east-west low-passed current.

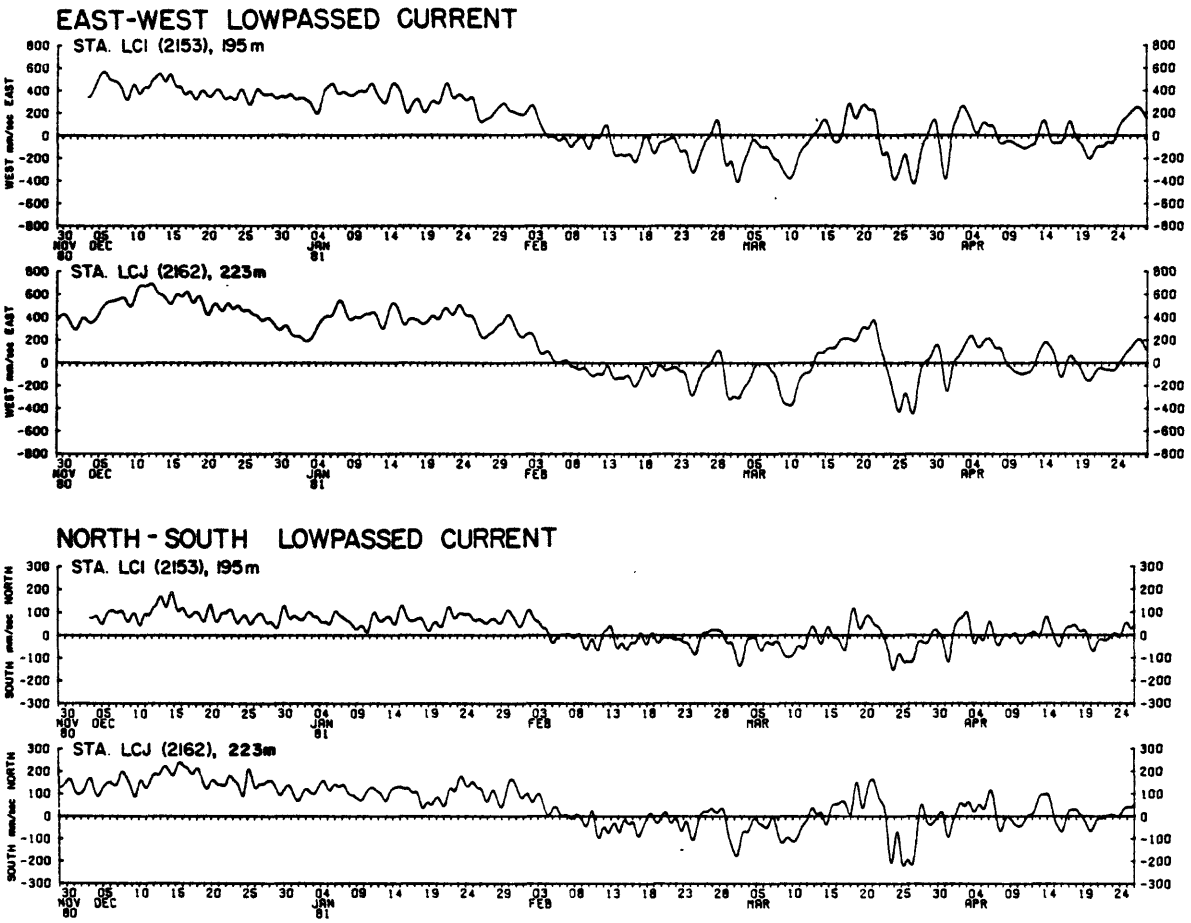


Figure 64. Cross-shelf transect, Stations LCI (195 m), LCJ (223 m), and east-west, north-south low-passed current.

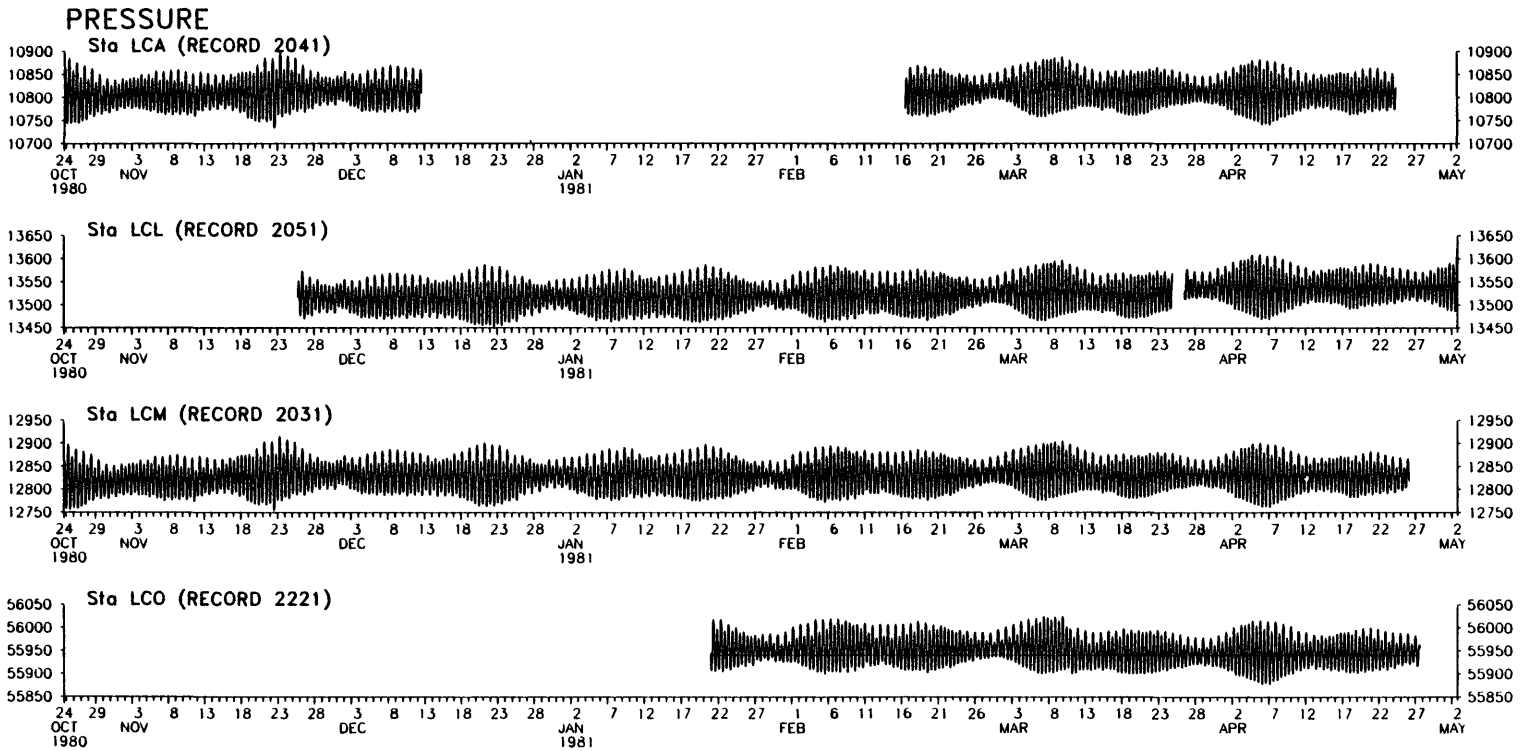


Figure 65a. Bottom pressure, Stations LCA, LCL, LCM, LCO, hour-averaged.

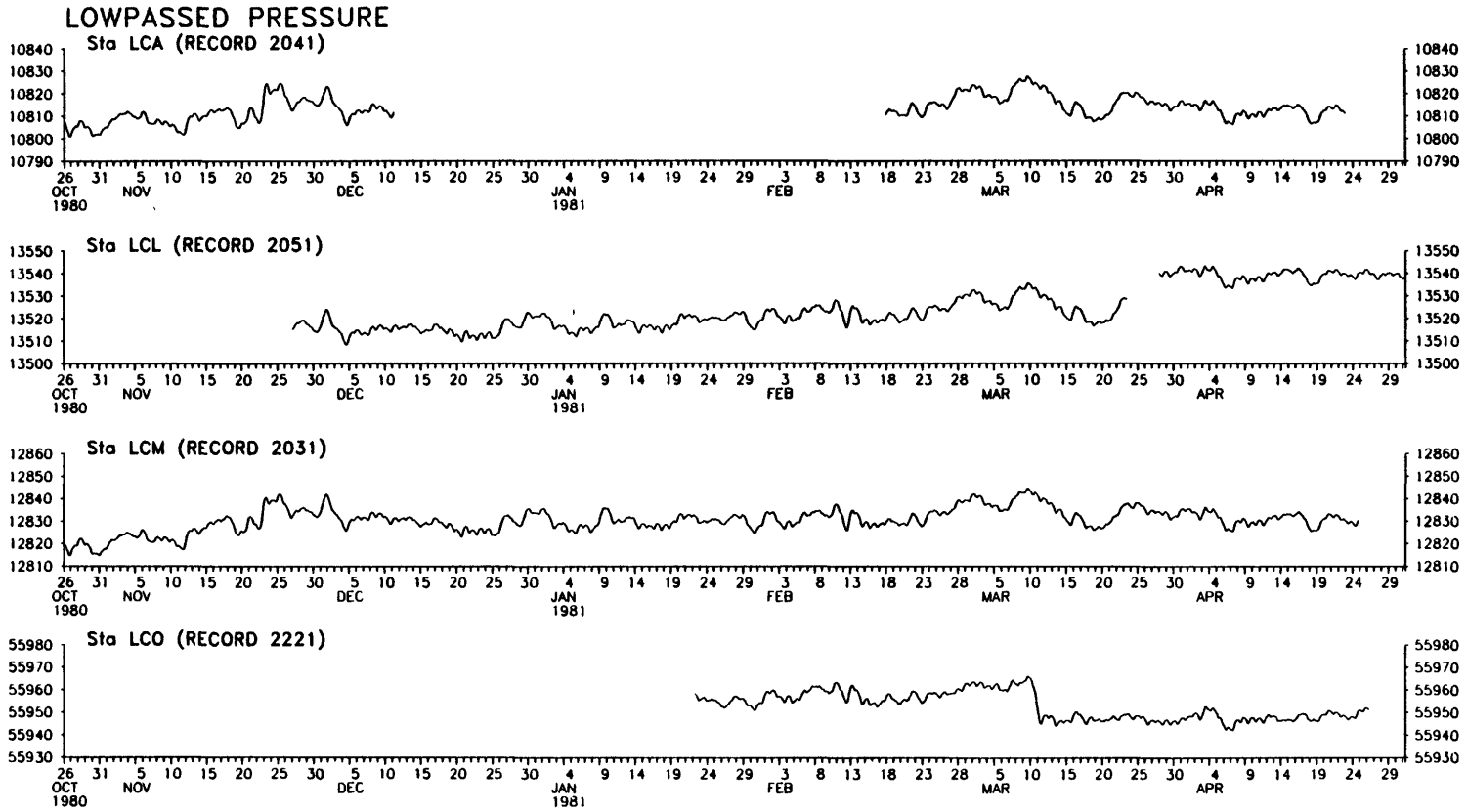


Figure 65b. Bottom pressure, Stations LCA, LCL, LCM, LCO, low-passed.

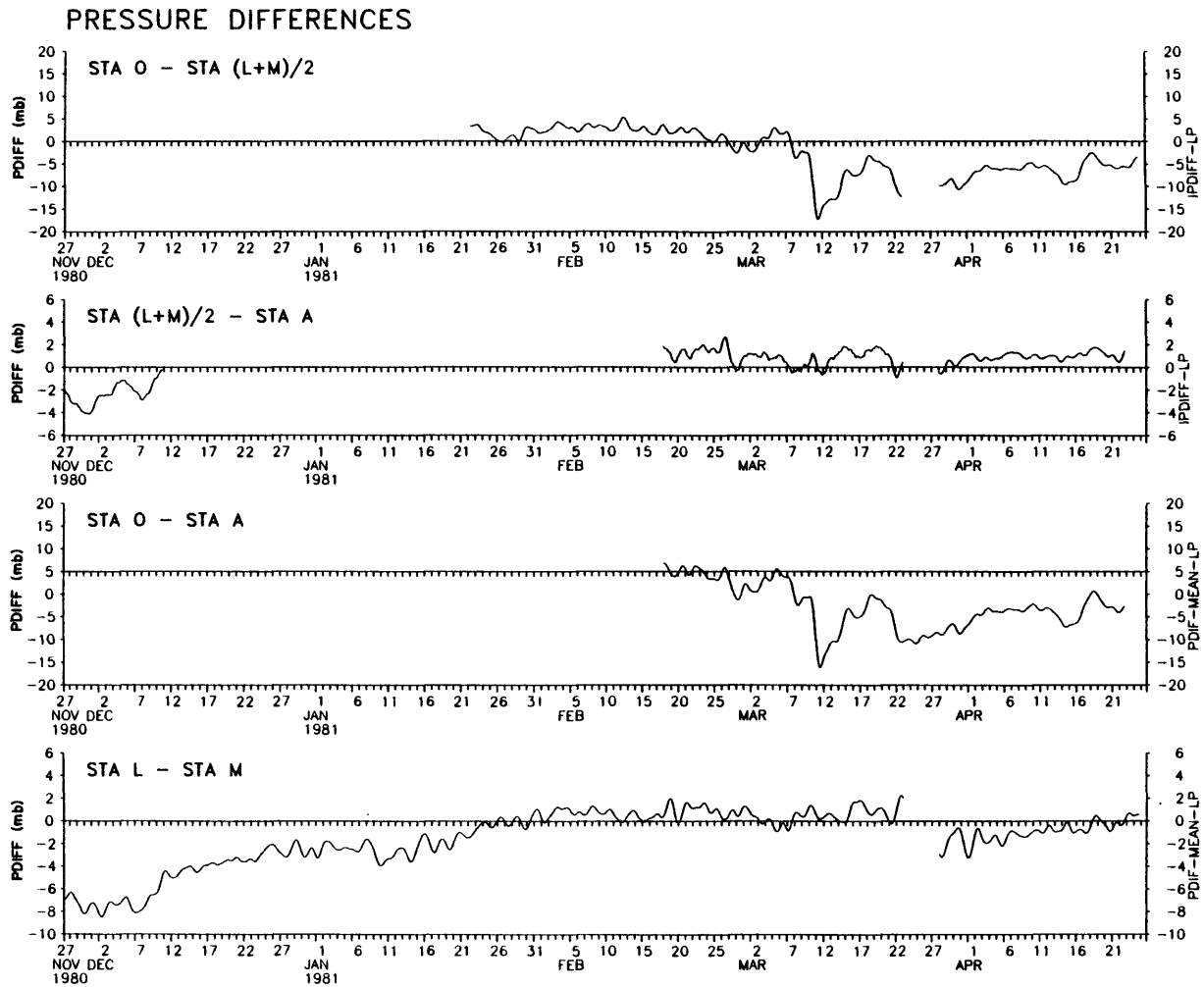


Figure 66. Low-passed bottom pressure differences, LCO-(LCL+LCM)/2, (LCL+LCM)/2-LCA, LCO-LCA, LCL-LCM.