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THIRD SEASON RESULTS FROM SHIP RESPONSE INSTRUMENTATION ABOARD THE SL-7 CLASS CONTAINERSHIP S.S. SEA-LAND McLEAN IN NORTH ATLANTIC SERVICE

SHIP STRUCTURE COMMITTEE
1976

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13. ABSTRACT

One of the class of eight SL-7 high speed containerships has been extensively instrumented with stress, strain and motion sensors. These have been modified for the Third Season of data acquisition to emphasize measurement of hatch corner and bow sideshell strains. Much of the previous instrumentation inventory, including a wave height radar and Tucker wave meter, has also been employed in the Third Season. This report contains a summary of the recorded data, examples of the analog records, a catalog of the data formats and a listing of the available data intervals. Some analysis of the data is also reported including midship bending stresses encompassing all three data seasons.

Data collection for the third season began with the westbound North Atlantic voyage 59 on January 17, 1975 and terminated with westbound voyage 61 on March 17, 1975.

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SR-211

20 DEC 1976

This report is one of a group of Ship Structure Committee Reports which describes the SL-7 Instrumentation Program. This program, a jointly funded undertaking of Sea-Land Service, Inc., the American Bureau of Shipping and the Ship Structure Committee, represents an excellent example of cooperation between private industry, regulatory authority and government. The goal of the program is to advance understanding of the performance of ships' hull structures and the effectiveness of the analytical and experimental methods used in their design. While the experiments and analyses of the program are keyed to the SL-7 Containership and a considerable body of the data will be developed relating specifically to that ship, the conclusions of the program will be completely general, and thus applicable to any surface ship structure.

The program includes measurement of hull stresses, accelerations and environmental and operating data on the S. S. Sea-Land McLean, development and installation of a microwave radar wavemeter for measuring the seaway encountered by the vessel, a wave tank model study and a theoretical hydrodynamic analysis which relate to the wave induced loads, a structural model study and a finite element structural analysis which relate to the structural response, and installation of long term stress recorders on each of the eight vessels of the class. In addition, work is underway to develop the initial correlations of the results of the several program elements.

Results of each of the program elements will be published as Ship Structure Committee Reports and each of the reports relating to this program will be identified by an SL- designation along with the usual SSC- number. A list of all of the SL reports published to date is included on the back cover of this report.

This report contains a portion of the data with a preliminary discussion and evaluation of the third season of data collection from 17 January 1975 to 17 March 1975. The instrumentation was modified this season to emphasize hatch corner and bow side shell strains. The basic instrumentation of prior seasons was retained. Please refer to the outside rear cover for ordering information on the reports from the first two seasons numbered SL-7-8 and SL-7-9.

W. M. Benkert
Rear Admiral, U.S. Coast Guard
Chairman, Ship Structure Committee

Cover (2)

(SL-7-10)

THIRD SEASON RESULTS FROM SHIP RESPONSE INSTRUMENTATION ABOARD THE SL-7 CLASS CONTAINERSHIP S.S. SEA-LAND McLEAN IN NORTH ATLANTIC SERVICE

SHIP STRUCTURE COMMITTEE
1976

(SL-7-10)

Technical Report

on

Project SR-211, "SL-7 Data Collection"

THIRD SEASON RESULTS FROM SHIP RESPONSE INSTRUMENTATION ABOARD THE SL-7 CLASS CONTAINERSHIP S.S. SEA-LAND McLEAN IN NORTH ATLANTIC SERVICE

by

R. R. Boentgen

Teledyne Materials Research

under

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U. S. Coast Guard Headquarters
Washington, D.C.
1976

ABSTRACT

One of the class of eight SL-7 high speed containerships has been extensively instrumented with stress, strain and motion sensors. These have been modified for the Third Season of data acquisition to emphasize measurement of hatch corner and bow sideshell strains. Much of the previous instrumentation inventory, including a wave height radar and Tucker wave meter, has also been employed in the Third Season. This report contains a summary of the recorded data, examples of the analog records, a catalog of the data formats and a listing of the available data intervals. Some analysis of the data is also reported including midship bending stresses encompassing all three data seasons.

Data collection for the third season began with the westbound North Atlantic voyage 59 on January 17, 1975 and terminated with westbound voyage 61 on March 17, 1975.

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I. INTRODUCTION

The S.S. SEA-LAND McLEAN is the first of the new SL-7 class of high-speed containerships. Characteristics of the vessel are given in Table I, and the vessel is shown in the photograph of Figure 1. A multifaceted program of analysis and experiments, coordinated by the SL-7 Program Advisory Committee of the National Academy of Sciences--National Research Council, has been instituted to study this ship's structure and its responses to imposed loading. One important facet of this program is the collection of data on structural and dynamic responses of the actual (i.e., full-scale) ship's structure. This is being accomplished by an on-board instrumentation system with sensors located throughout the vessel measuring strains, stresses, accelerations, various sea characteristics and ship operating parameters. Presented in this report is a summary of the data gathered during the third season of operation on North Atlantic Voyages 59-61 during the period 17 January 1975 to 17 March 1975.

Data acquired during the first season were presented in Reference 1, which covered Voyages 1 to 12 on the North Atlantic during the period 8 October 1972 to 5 April 1973. A total of 80 data tapes were recorded containing over 50,000 sensor data intervals from more than 100 transducers. The report included a description of the digitized data, correlations of stresses with sea state, simultaneous response data from all transducers during selected portions of a rough voyage, and a consideration of torsional responses. Data were reported in a number of forms, including expanded time-histories, logbook tabulations, tabulations of maximum values scaled from compressed time-histories, and plots derived from parametric studies of digitized response and logbook data.

Data acquired during the second season were presented in Reference 2, which covered Voyages 25-38 on the North Atlantic during the period 22 September 1973 to 31 March 1974. A total of 94 data tapes were recorded containing over 60,000 sensor data intervals from more than 100 transducers. Except for some minor changes, the arrangement of the transducers was identical to that employed during the first season. A major slam event was experienced during the second season while the ship was at very slow speed. These data were reported in the form of analog plots, tables of maximum recorded values, and expanded time-histories in addition to presentations similar to those made for the first season.

A significant amount of new strain gage instrumentation was installed for the third season data acquisition program. The location of this gaging was based on observations of damage incurred in the first two years of vessel operation. Specifically, radial cracks from the forward and some aft hatch corners and green water set-down of the forecastle and bow flare plating had been experienced. In an attempt to characterize the loading in these areas, additional strain gages were added. All new instrumentation was assigned to Recorder No. 2 while keeping the Recorder No. 1 assignments similar to those used in the second data acquisition season. All primary data (i.e., horizontal and vertical bending, pitch, roll, etc.) including those signals required to extract the wave height data from the slant range radar signal, are collected on Recorder No. 1, the same signal being recorded on the same channel in each interval. In contrast, four signals are recorded on each channel of Recorder No. 2, one in each of the four sequential modes. These assignments are further discussed in this report.

A detailed description of the instrumentation system has been published previously in Reference 3, and the calibration of the McLEAN is reported in Reference 4.

The purpose of this document is to present some of the more significant trends derived from Third Season data and to serve an an index for the retrieval of data, in the various formats available, for further analysis and correlation. As such, it is not intended that all possible data correlations or even that all raw data be reported herein, since much of the data is available only in FM magnetic tape format. This analysis task is part of the overall SL-7 program and is identified as SR-211.

II. CONCLUSIONS

The following conclusions are based on the review of Third Season data and data reduction and statistics as completed to date and presented in this report:

1. The highest peak-to-trough stress measured was 79 Ksi on the forward hatch corner circumferential gage (F_yB).

2. The hatch corners exhibit high stresses (especially in quartering seas) even under moderate wave conditions.

3. A correlation exists between the midship torsional stress and the circumferential hatch corner stress.

4. For the environmental conditions encountered (Beaufort No. 9, or less), sideshell stresses were relatively low and almost unidirectional in tension, indicating relatively low impact loading.

5. The environmental conditions encountered during the Third Season, as indicated by the Beaufort Number distribution, were less severe than the yearly average for the mid-North Atlantic.

III. INSTRUMENTATION SYSTEM

The basic instrumentation system has been described fully in previous reports (see References 1, 2 and 3). Described herein are the changes incorporated for the Third Season and the channel assignments and formats used in the data acquisition.

A. Added Instrumentation

A significant amount of new instrumentation was installed for Third Season data acquisition. Only minor revisions were made on the Recorder No. 1 inputs, but all modes of Recorder No. 2 inputs represent reassigned or newly-installed strain gages. In order to allow for correlations between various regions of the bow, the modes were structured to have overlapping recording periods. Table II lists the various groups of gages recorded in each mode.

1. Bow Sideshell

Single-element weldable strain gages were installed along the longitudinal axes of selected vertical stiffeners at the free top surface. They were

located on central stiffeners between major frames at the vertical midpoint. Gage locations and identification are shown in Figure 2.

2. Hatch Corner

Figure 3 shows the location and identification of strain gages at the three selected hatch corner cutouts. The gages at Frame 144 were mounted during the original installation. Although the rosette (AR_2) was recorded during the first two seasons, the S_y gages were used only during the calibration experiment. (See Reference 4.) At Frame 258, the rosette was also previously used but the hatch corner gages were newly installed. At Frame 290, all new gages were installed since the rosette at this location had been damaged during the course of structural modifications in this area. Rosette identification is the same as that previously used.

Recording of the hatch corner rim gages and their associated rosette was in the "D" mode of each index, as indicated in Table II. The forward corner gages at Frame 290 were recorded in all "D" modes and Frame 144 or Frame 258 gaging were recorded alternately on a daily basis.

3. Forward Dyadic Array

The only change made to Recorder No. 1 channel assignments was the substitution of a forward quarter point vertical bending transducer for the forward shearing stress array on channel 13. It was expected that useful comparisons could be made between the output of this sensor and the newly-installed bow gages. Since the gage array was installed only during the Third Season, a vertical bending calibration is not available for it.

B. Recording Format

All of the information obtained from the various transducers located throughout the vessel was recorded on two 14-track analog FM tape recorders located in the instrumentation room. Recorder No. 1, designated the primary recorder, recorded the same 13 signals whenever it was placed in operation. The fourteenth channel was used as a noise compensation channel during reproduction.

The second recorder had its first thirteen channels switched through four modes, designated A, B, C, and D. Each mode was recorded for thirty minutes sequentially. Channel 14 was again used as a compensation channel in all modes. Each 30-minute period is a data "interval," and is assigned an interval number. Any particular segment of data can thus be identified by referring to the following nomenclature.

1. Tape number--(All odd numbers are from No. 1 Recorder and all even numbers are from Recorder No. 2. Third Season analog tapes are numbered from 201/202 to 233/234 inclusive.)

2. Voyage number and direction (E = East, W = West).

3. Index number (sequential numbering of each four-hour logbook entry accompanying each data tape).

4. Channel number and mode letter (Recorder No. 2 only).

5. Interval number.

By specifying "Tape No. 202, Voyage 59E, Index 1, Channel 1-A, Interval 1" a specific 30-minute data interval is identified, in this case on Recorder No. 2.

Each interval of 30 minutes, whether on Recorder No. 1 or No. 2, is automatically preceded by a one-minute electrical zero and a one-minute period of calibration signals. A typical data interval trace is presented in Figure 4.

C. Configuration of Transducers

1. Strain Gage Signals

The majority of the transducers used in this system are obtained from various configurations of single-element strain gages with associated bridge completion and calibration resistors. These gages are attached by spot-welding to the surface of various hull structural elements. Each strain gage is constructed with inherent temperature compensation. That is, if the gage is attached to a plate which is subsequently warmed (or cooled) but is otherwise unrestrained, no change in strain will be indicated. If that plate is now restrained from expansion due to the temperature change, a signal associated with the degree of restraining stress generated will be indicated even though no change in length occurred. Such a restraint is generated, for example, when the sun warms the deck or upper hull girder while the lower hull is in cooler water. This diurnal variation tends to induce compressive deck stresses and tensile stresses under the waterline even though the displacement tends to hog the ship.

Sketches summarizing the locations of the strain gage sets are presented in Figures 5 and 6. It should be noted that the single-element strain gages used are installed in various configurations which have different properties. These are described in detail in Reference 3, but can be summarized as follows:

a. Single element (quarter bridge) - a single strain gage element. Its output is proportional to the strain along the element.

b. Dyadic gage - two single elements at an angle of 56° to each other for materials such as steel with $\mu = 0.28$. In this configuration the output is proportional to the stress along the axis of symmetry.

c. A dyadic pair of gages oriented longitudinally on each side of the ship, each pair connected to one arm of the bridge circuit. Depending on whether the arms are opposite or adjacent, the output of this arrangement is proportional to the average or horizontal bending stress.

d. Shear gage (half-bridge) - two single elements at right angles to each other. The output is proportional to the shearing stress along the axis of symmetry.

e. A shear gage half-bridge on each side of the ship connected to form a full bridge. Depending on the polarity of the connection, the output is proportional to the vertical or torsional shearing stress.

f. Rosette - three single gage elements, each at a different direction, near a point. This is a special case of the single element gage. Each signal output is recorded separately and simultaneously. If static strains are added these readings completely define the state of strain (both the normal and shearing strains, in any direction) at this point. In the McLEAN installation, the rosette gage elements were oriented in a longitudinal, athwartship and diagonal (from forward port to aft starboard) direction.

2. Transducer Signals

In addition to the strain gage signals discussed above, 10 additional transducer signals are provided as inputs to the recording system. These signals, consisting of eight linear accelerometers and two angular displacement pendulums, are fully described in Table III. The primary function of these signals is to provide a record of ship motions occurring at the same time as the recorded strain gage information.

3. Rudder Angle

Although in previous data seasons a multiplexed signal consisting of various ship operating parameters was recording on Channel No. 10 of Recorder No. 1, in the Third Season this was restricted to rudder angle.

4. Wave Height Radar

The Ocean Wave Height Radar System (OWHRS) developed by the Naval Research Laboratory was operational for part of the third season, and slant-range data were recorded. The transmitting electronics package is located at the parabolic antenna, which is mounted at the starboard wing of the bridge and adjusted to look down at the water surface at a fixed angle to the ship. The slant-range signal, therefore, contains components of ship motions, particularly rolling. The reduction of these data to absolute wave height is the objective of a separate project under the Ship Structure Committee.

5. Tucker Wave Meter System

A second attempt to achieve wave data has been made in this program by the continued inclusion of a Tucker Wave Meter aboard the vessel. This British device, which consists of pressure cells and accelerometers mounted both port and starboard, was installed at the end of the first season's operation. Data from this instrument is to be compared to that obtained from the OWHRS.

6. Scratch Gages

Under a separate Ship Structure Committee project (SR-215, "Extreme Stress Data"), mechanical scratch gages have been installed at a midship location on all eight vessels of the class. The device consists of a simple extensometer with mechanical amplification which causes a stylus to mark on sensitive paper. The paper is advanced once every four hours and the record thus obtained shows the maximum positive to maximum negative excursion of the stylus in a four-hour period. One scratch gage is located in each ship's starboard tunnel near the midship frame except for the McLEAN, which has one scratch gage in each tunnel. Data tapes are being retained by Teledyne as part of the SL-7 Data Library.

7. Logbook

An important adjunct to the data recorded on the two magnetic tape recorders is the data logbook kept by the instrumentation observer. Appendix A contains a summary of logbook entries. Environmental conditions are noted here along with information to index the tape recordings. All sea, wind and wave conditions reported here are derived from this source.

8. Quick-looks

The data reduction process actually begins with "quick-look" playbacks made aboard the ship. Each tape is played back on an oscillograph at a relatively high speed, with a low paper speed. This produces a compact hard-copy record for review. Signal peaks, relative levels and overall variations may be judged from these records, but details of the waveform cannot be seen.

To summarize, shipboard data gathering produces analog magnetic tapes of the recorded data from two tape recorders running simultaneously. In addition, a manual logbook record is maintained which correlates the magnetic tape data with the conditions existing at the time of the data recording. Quick-look records are also produced for on-site quality control purposes, but these have little application to most data analysis procedures except for scaling an overall maximum value for each interval.

D. Data Analysis Operations at TMR

1. Analog Oscillographic Records

As shown in Figure 7, the preponderance of data reduction takes place after the recordings are removed from the ship. After review of the logbook records and taking into account the notes of the on-board observer, certain sections of data are played back onto oscillographic records. Details of this operation depend on the type of analysis being done; it may be desired to compare one channel relative to another for a long period, or only the response for a short period around some event such as a slam. Examples of records are presented in later sections.

2. Filtering and Digitizing

Most large-magnitude stress records, especially those associated with slamming and similar dynamic events, can be separated into two components: wave-induced, and first-mode two-noded vibrations ("whipping," or "springing"). Each component is characterized by its frequency. The first-mode frequency of the McLEAN at normal operating load is 0.80 Hz, while wave-induced components are lower in frequency (i.e., longer in period). Separation of these components is accomplished by passing the electrical signal representing the stress level or sensor output through electronic filters adjusted for the appropriate bandpass frequencies (see Figure 8). The resulting filtered signal (or the original combined signal) may then be reproduced on an oscillograph to produce a time history, or it may be digitized in order to change its format for further processing.

Certain channels are selected for digitizing and further processing into library tapes. The details of this process are presented in Reference 4. In this step the logbook record is collated with the corresponding stress or motion data. In addition to a digitized data record, this operation also computes numbers

characterizing each data interval, such as the maximum peak-to-trough, root-mean-square (RMS), and number of cycles. Some of these data have been used further in various analyses described below.

The library tapes (see Figure 7) can be summarized further by deletion of the complete digitized record. This summary tape can provide a computer-generated tabulation of environmental and characteristic data. Examples of these data are provided as a separate Appendix to this report. The summary tape also provides the data base for the parametric studies discussed below. Header block and data summary block formats for summary tapes are given in Tables IV and V, respectively. It should be noted that summary tapes do not contain data on which to base spectra, nor, as presently structured, do they contain computed values for the original waveform. Values reported are only for the wave-induced (maximum, RMS) and first-mode (maximum only) components.

A general summary of the SL-7 data formats currently available is presented in Table VI.

IV. RESULTS

A. Environmental Conditions

Environmental conditions experienced during the third season data acquisition were generally milder than those encountered in previous seasons and were, on average, lower than an average year at mid-Atlantic. Figure 9 presents a comparison of average Beaufort Numbers for the mid-North Atlantic and those observed for the Third Season. Note that the average and observed frequency of occurrence for Beaufort Numbers 5, 6, and 7 are almost the same. The observed frequency is lower than the average for higher Beaufort Numbers and higher than the average for the lower Beaufort Numbers.

B. Hatch Corner Stresses

The highest stresses observed during the Third Season, and, in fact, the highest stress ever recorded aboard an SL-7, were at the forward hatch corner. Figure 10A, B, C presents data from these gages, FyA, FyB, and FyC respectively, as a function of Beaufort Number and relative wave direction (RWD). Note that the highest stresses were at the FyB location and that the highest stresses occurred in following and beam sea direction for the higher Beaufort Numbers and in head seas for the lowest Beaufort Number.

It was also characteristic of these stresses that their magnitude was high even for relatively low wave heights. Figure 11 presents a composite of simultaneous signals from Recorder No. 1 and No. 2 showing some of these relationships. The frequency, location of maxima, and general envelope of amplitudes show a high degree of correlations between the TSM, Roll and FyB signals. A probable explanation lies in the link between ship's roll which produces torsional loading thus imposing high hatch corner stresses. Such high stresses were previously noted during the calibration event (see Reference 4) when the vessel was loaded statically with a torsional load. The highest stress measured at that time was 10.2 Ksi at the hatch corner just forward of the aft house. No gages were located at the forward hatch during calibration or during the first two data acquisition seasons.

In order to explore the relationship observed between TSM and FyB, Figures 12A and 12B were prepared. These clearly indicate the linear relationship between TSM and FyB, and also indicate the presence of another factor inherently different in eastbound and westbound voyages. This factor is probably the relative wave direction, since with prevailing winds generally from the west, an east-bound crossing would have a preponderance of following seas and, conversely, a west-bound crossing would have a preponderance of head seas.

Table VII is a listing of four maximum recorded stress conditions that occurred during the past season. It should be noted that the highest rim stress occurs while the ship is rolling. Rim gages at FR 290 (F_y gage) exhibit the largest stress during a rolling condition while the gages at FR 144 (S_y gage) are about half that stress. At FR 258 (H_y gage) the stress is about half of that at the S_y gages.

In head seas the stress is about equal at each of the three hatch locations. All stress values given are maximum peak-to-trough for each thirty-minute period recorded.

Figure 13 presents expanded time-history data for a rolling condition, and Figure 14 is the same for a head sea condition. Logbook data for both conditions are listed in Table VIII. Also included are time histories from Recorder No. 1 for each condition. Note that the highest hatch corner stress occurs at the same time that longitudinal horizontal bending stress and torsional shearing stress are high under both conditions. It appears that horizontal bending and torsion contribute more to the increased stress in the hatch corner than do vertical bending or ship slamming. (Due to the nature of the horizontal bending transducer, some torsion-induced stress is sensed by it.)

Table IX lists the apparent maximum peak-to-trough stress recorded from each element of the rosettes and each rim gage at the same time. Expanded records are also included in Figures 13 and 14.

Included in Table V is a calculated principal stress based on the peak-to-trough data. This table gives the stress in the original orthagonal directions, the principal stress magnitude and its angle with the "A" element. These calculated values are not strictly valid in this case as they are peak-to-trough and do not include the still-water stress component. In each case, the time-history of the highest strain level element of the rosette was scanned visually, and the one highest stress instant determined. Then, the strains in all three elements occurring at that instant were scaled and recorded.

C. Bow Sideshell Stresses

As can be seen in the sets of analog traces given in Figure 15, the bow sideshell stress traces are characterized by unidirectional spikes without any prior buildup or other significant warning.

The highest stresses recorded during the Third Season occurred on Voyage 61 westbound. Maximum values have been scaled and tabulated from oscillograph records from 18 intervals. Logbook data for these are listed in Appendix A, pages 52 and 53. Stress data are presented in Table X. All stresses are measured peak-to-trough. The highest recorded stress, 6,000 psi, was noted twice on Gage B-5 and once on Gage C-2. Expanded time-histories of the analog signals of Interval

31A, B, C are included in Figure 15. The longitudinal vertical bending signal is on each sheet for cross-referencing purposes. Horizontal bending, roll, and pitch signals are included from Recorder No. 1. The measured value of highest stress on the bow plate occurred during the highest vertical bending stress and a simultaneous high pitch excursion. The bow plates exhibit a very low stress profile from ship motion. All increased stress is an impact type occurring when the ship pitches down and the bow is subjected to head seas. Beam, quartering, or following seas have no effect on increased bow stress regardless of ship speed. It should be noted again that during the past recording season, the ship did not encounter the extremes of weather and sea conditions due to the change to a more southerly crossing and reduced speed.

D. Wave Height Measurements

The outputs of two independent wave measuring systems were recorded along with the stress and motion data. (See Figure 16.)

The Tucker wave meter output already has been corrected for ship vertical movement at the pressure ports by accelerometers intrinsic to the Tucker system. Further correction is, nevertheless, necessary since the system is designed for quasi-static use (i.e., ship's speed effects are not accounted for). See Reference 2.

The Ocean Wave Height Radar output is proportional to the slant range from the fixed (relative to the ship) transmit/receive antenna to the wave surface. All ship's motions influence this measurement and it, therefore, must be corrected before the true wave height can be obtained. This manipulation is part of another SL-7 effort (SR-221). Note the flat area in the OWHR trace. This is a result of loss of "lock" in the radar system and results in difficulties when an automated data reduction process involving integration is attempted.

Note also that the two wave measuring systems are located at different points on the vessel and "see" different wave systems.

E. Longitudinal Vertical Bending Stress

As the single most important structural parameter for ship design, the LVB was given special attention in the process of data reduction.

The process outlined in Figure 7 and 8 was used to digitize all Third Season LVB data. The listing resulting from the TAB program is contained in Appendix A. In addition to listing the various values of the first-mode and wave-induced stresses, the listing also presents all environmental conditions for each Third Season interval.

Appendix B contains the results of the parametric studies program, SPLOT. Contained in the plots are graphs of the wave-induced bending stresses for each Beaufort Number. Within each Beaufort Number, the given parameter is sorted into one of five groups of relative wave direction or ship speed. The plotted point is then the mean, RMS, or mean of the 1/3 highest values of the sorted parameter data set. The parameter can be either the maximum or RMS peak-to-trough wave-induced stress within each interval. The summary tables in this Appendix contain, in addition, the number of points in each parameter data set and the standard deviation of the set.

Since these values are based on the data contained on the summary tape in accordance with the format described in Reference 5, no value relating to the maximum value of the original unfiltered signal is available. A program has been developed titled MAX which processes the compacted library tape and computes the difference between the largest positive and most negative value. The results of this program are listed in Appendix C. The designation of the interval is identical to that for the Appendix A listing.

A further processing of LVB stresses by the SPLOT program has been made using the digitized results from all three seasons. For LVB this encompasses over 5000 data interval points for each RMS or maximum peak-to-trough wave-induced stress. Note that in the case of a sort by relative wave direction, all curves lie very close together except for the higher Beaufort Numbers where there is a scarcity of data points. This is to be expected since only the wave-induced stress component is plotted and, if Beaufort Number is considered a reasonable measure of wave height (assuming a fully-developed sea) then the relative wave direction should have little or no influence on the wave-induced stress component.

REFERENCES

1. Boentgen, R.R.; Fain, R.A.; Wheaton, J.W.; First Season Results From Ship Response Instrumentation Aboard the SL-7 Class Containership S.S. SEA-LAND McLEAN in North Atlantic Service; SSC-264, (SL-7-8).

2. Wheaton, J.W.; Boentgen, R. R.; Second Season Results From Ship Response Instrumentation Aboard the SL-7 Class Containership S. S. SEA-LAND McLEAN in North Atlantic Service; Teledyne Materials Research, Waltham, MA., 1975 Technical Report No. 1559 (j).

3. Fain, R.A.; Design and Installation of a Ship Response Instrumentation System Aboard the SL-7 Class Containership S.S. SEA-LAND McLEAN, Report SSC-238 (SL-7-1) 1963.

4. Boentgen, R.R.; Wheaton, J.W.; Static Structural Calibration of Ship Response Insturmentation Aboard the S.S. SEA-LAND McLEAN; Report SSC-263 (SL-7-7).

5. Johnson, A.E., Jr.; Flaherty, J.A., and Walters, I.J.; A Method for Digitizing, Preparing, and Using Library Tapes of Ship Stress and Environmental Data; Report SSC-236, 1973; and Computer Programs for Digitizing and Using Library Tapes of Ship Stress and Environment Data; Report SSC-237, 1973.

6. Statistics on Wave Heights and Periods for the North Atlantic Ocean David Taylor Model Basin R&D Report 1091, September 1957.

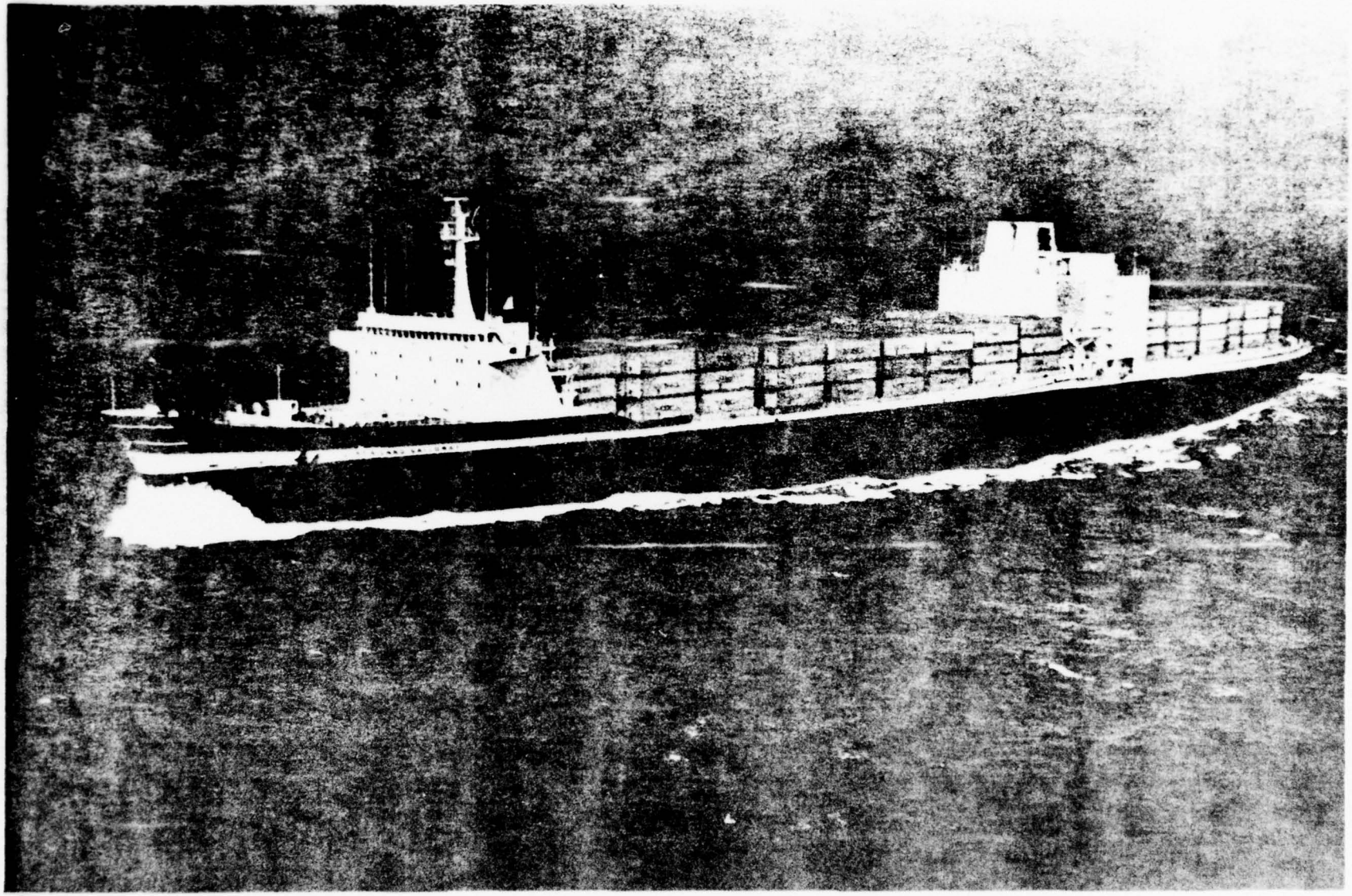


Figure 1. SL-7 Class Containership

Recording	Gage
A Mode	A1,2,3,4,5,6 - B1,2,3,4,5,6
B Mode	B1,2,3,4,5,6 - C1,2,3,4,5,6
C Mode	A1,2,5,6 - B1,2,5,6 - C1,2,3,4
D Mode	Hatch Corners Frames 258 & 290
D Mode Alternate	Hatch Corners Frames 144 & 290

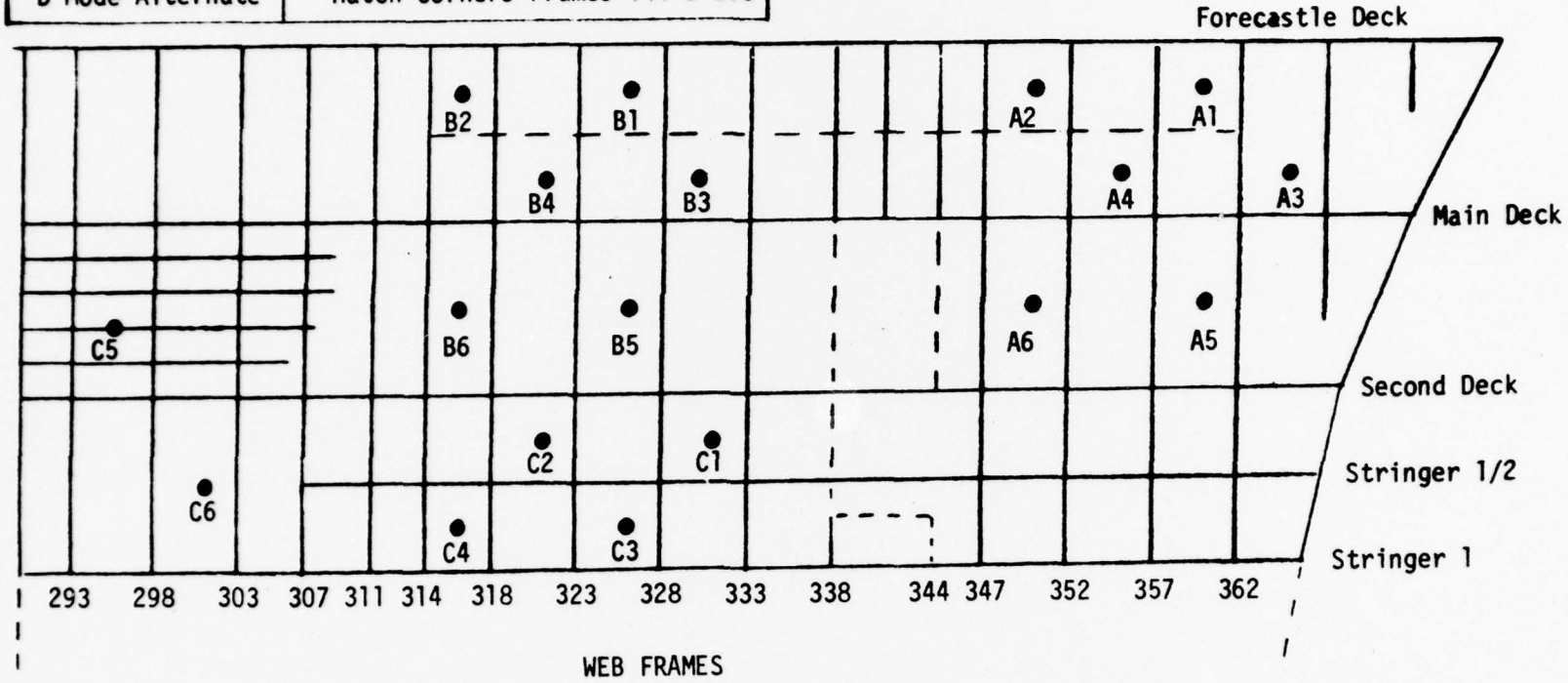


Figure 2

Strain Gage Arrays

Forebody Structure, SS SEA-LAND McLEAN
(Starboard Side Only)

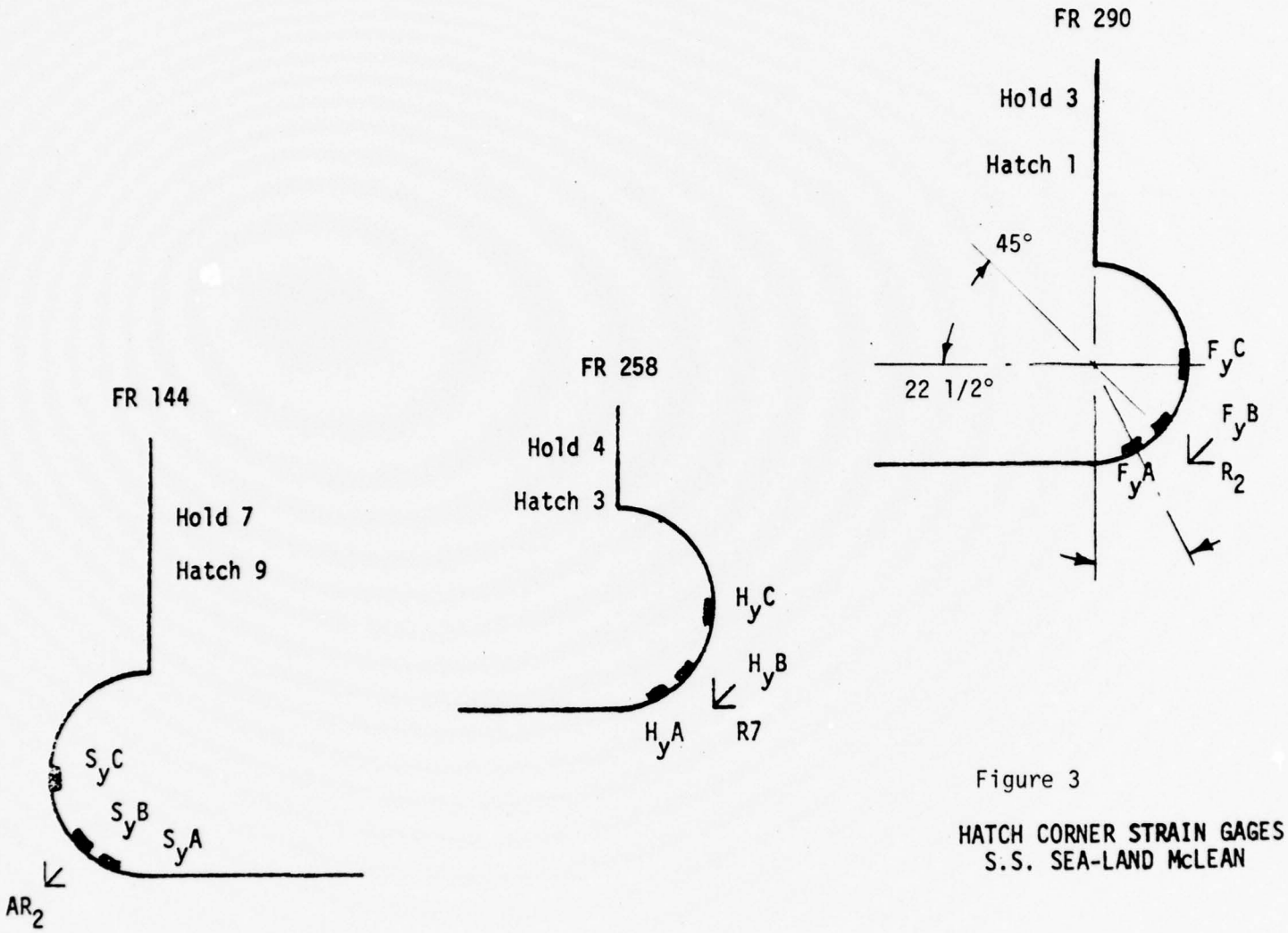


Figure 3

HATCH CORNER STRAIN GAGES
S.S. SEA-LAND McLEAN

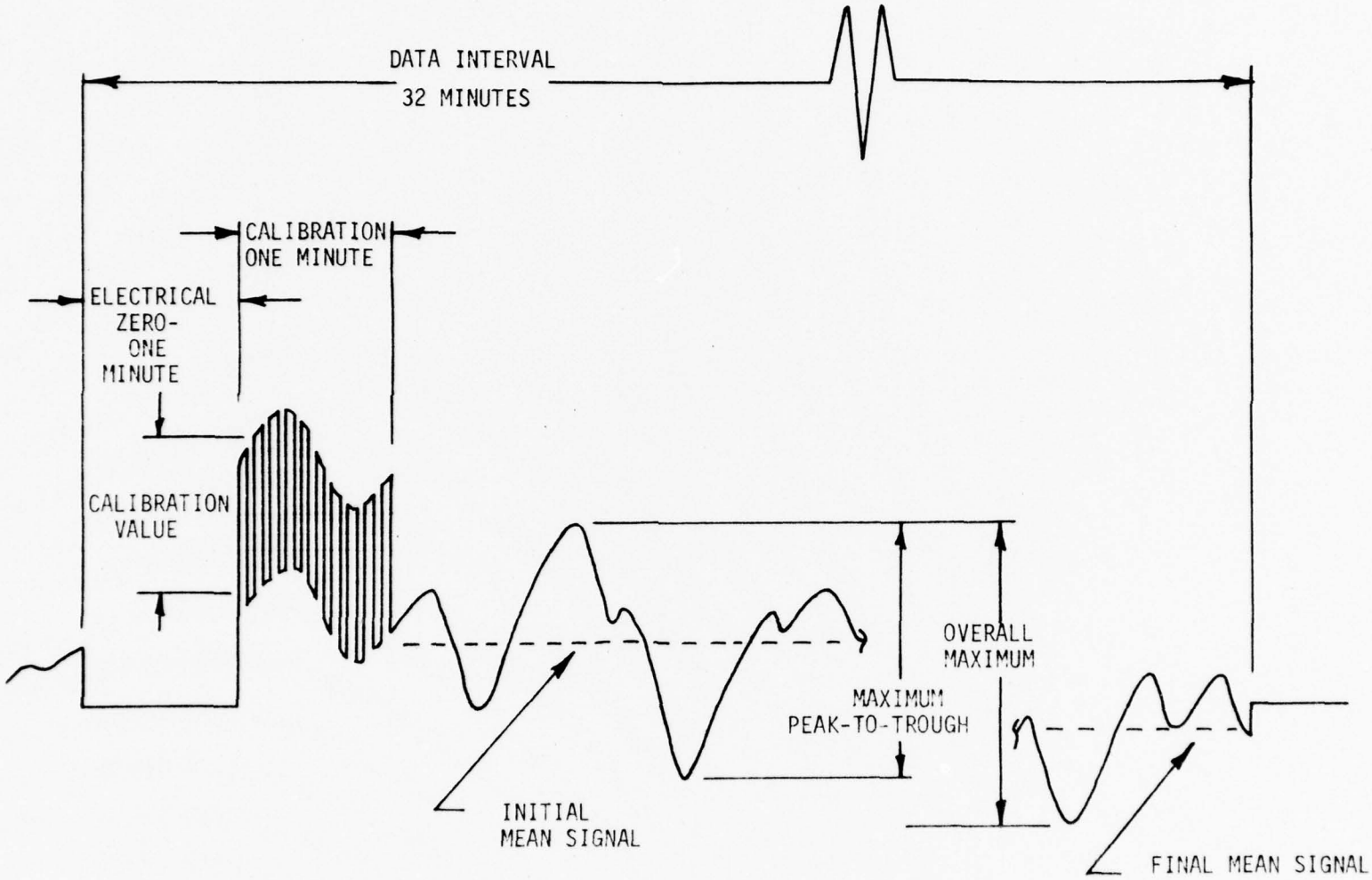
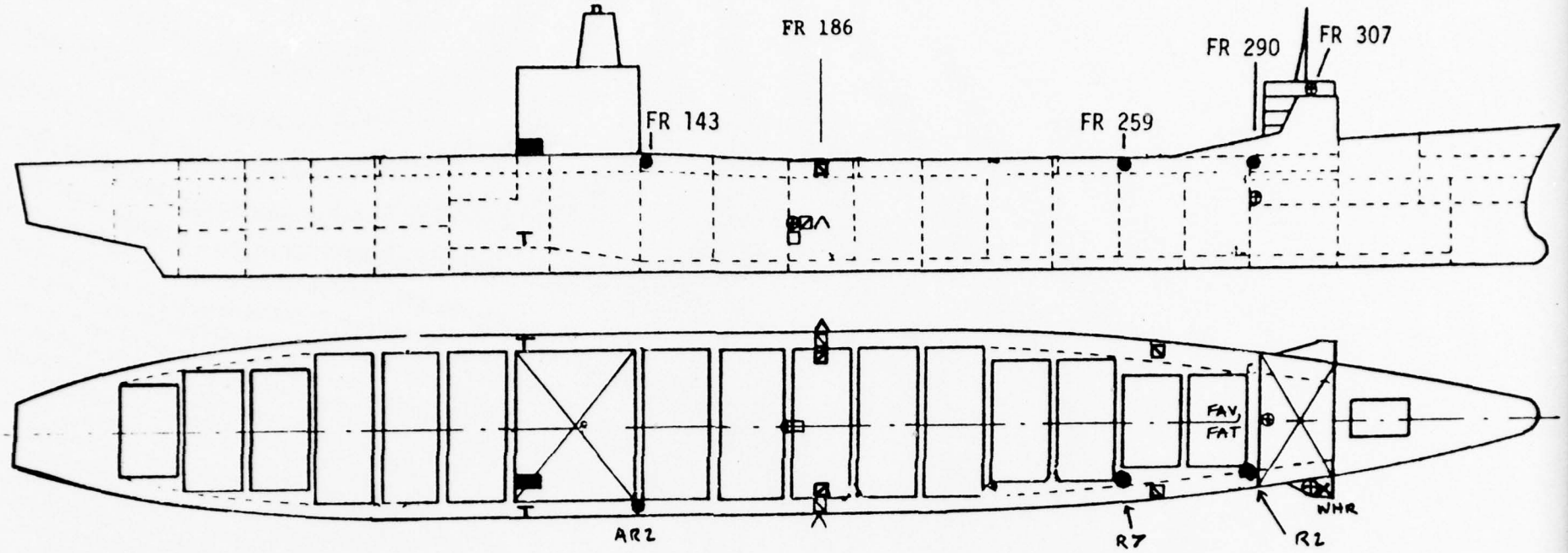


Figure 4. TYPICAL ANALOG DATA INTERVAL RECORD



LEGEND

⊕ Bidirectional Accelerometer

⧅ Longitudinal Vertical Bending Element (LVBS, LVBP)

□ Pitch and Roll Pendulum

● Three-Arm Rosette (R, AR)

✕ Wave Height Radar (WHR)

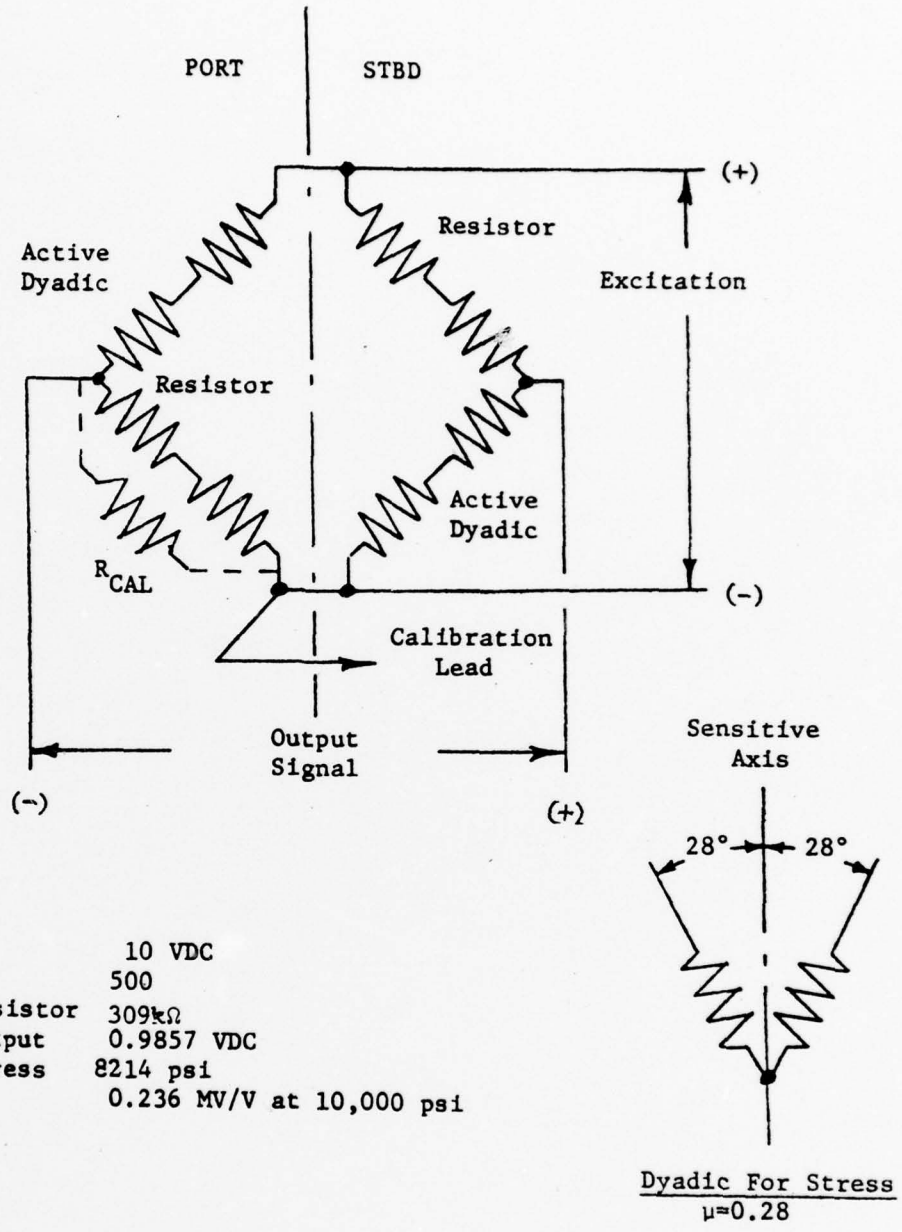
T Tucker Wave Meter (TWM)

△ Midship Torsional Shear Element (TSMP, TSMS)

⧄ Longitudinal Horizontal Bending Element (LHBS, LHBP)

FIGURE 5

GENERAL SENSOR LAYOUT



Excitation	10 VDC
Amplifier Gain	500
Calibration Resistor	309kΩ
Calibration Output	0.9857 VDC
Calibration Stress	8214 psi
Sensitivity	0.236 MV/V at 10,000 psi

Figure 6. STRAIN GAGE CIRCUIT AS USED FOR LONGITUDINAL VERTICAL BENDING (LVB) STRESS, MIDSHIP AND FORWARD

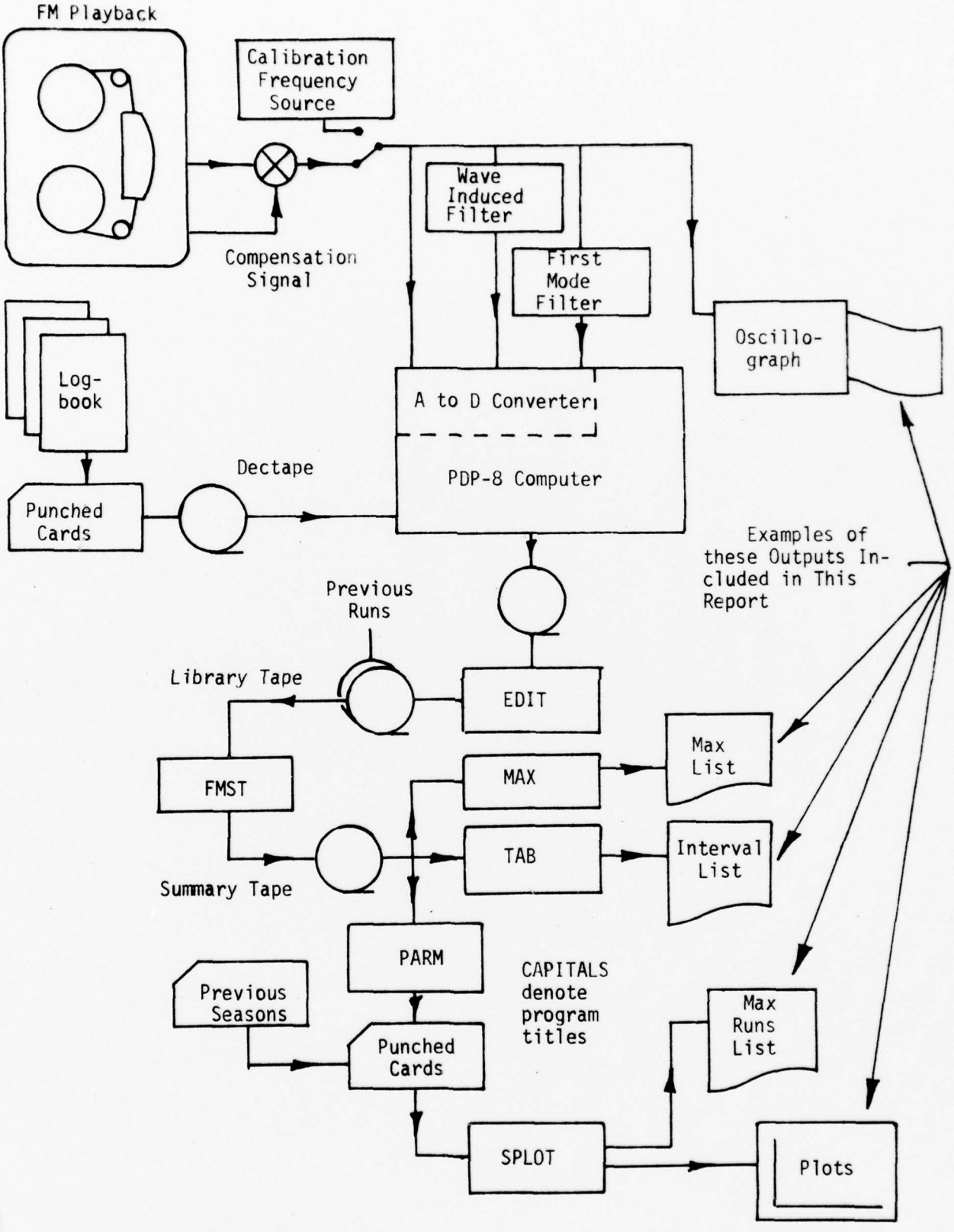


Figure 7. SCHEMATIC OF DATA REDUCTION

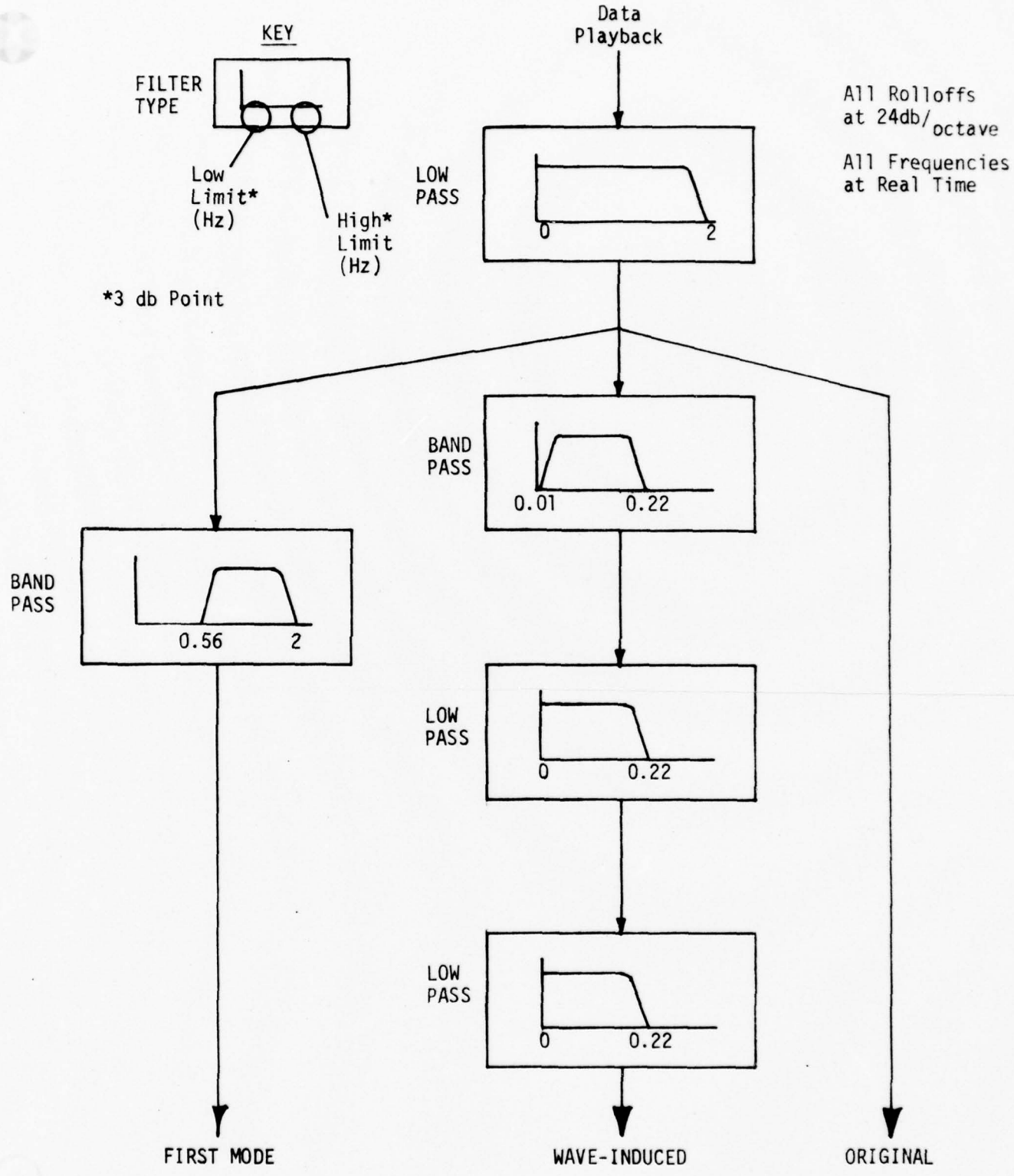


Figure 8. THIRD SEASON SIGNAL FILTERING FOR LVB DIGITIZING

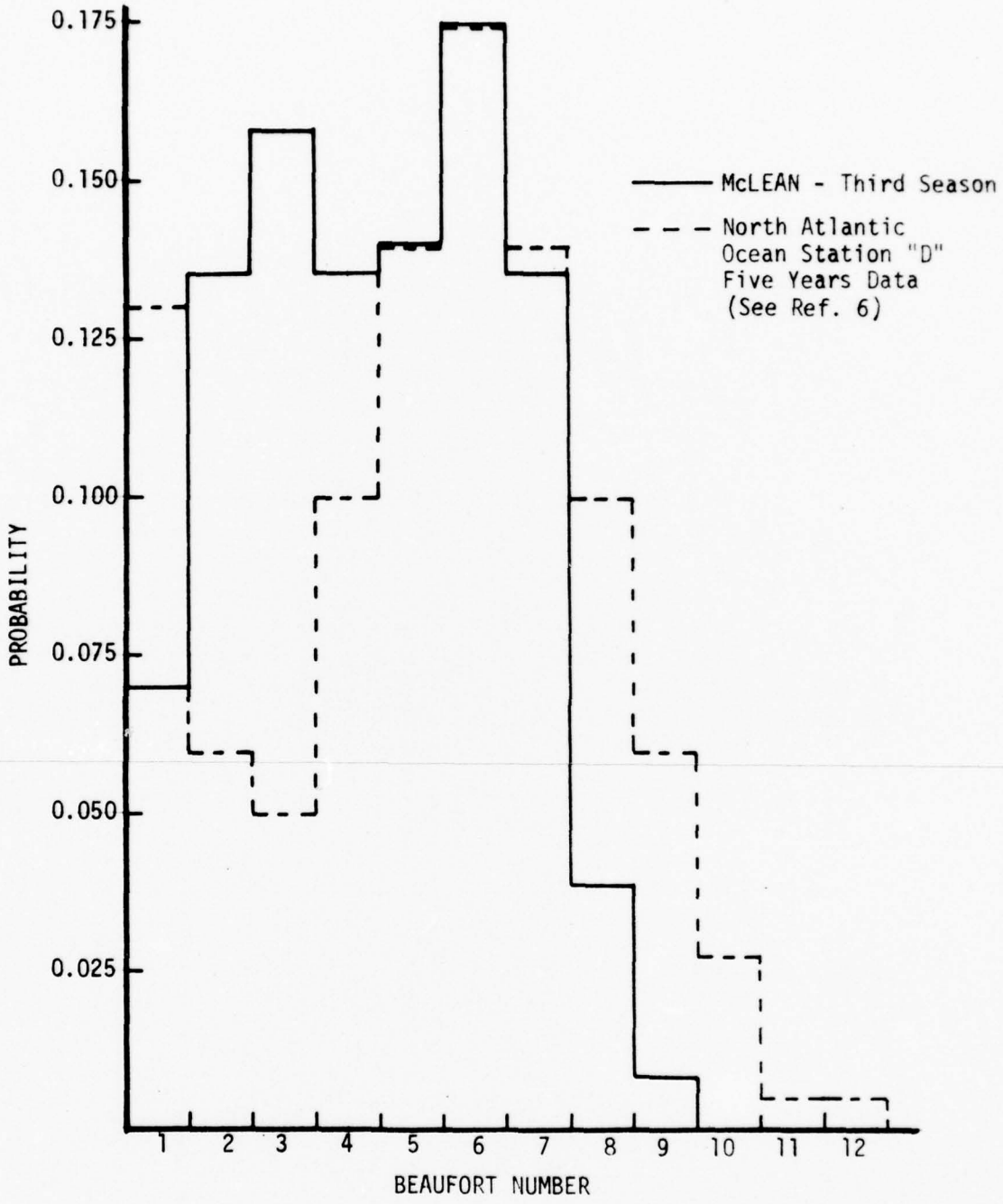


Figure 9 NORMALIZED HISTOGRAM OF BEAUFORT NUMBERS ENCOUNTERED

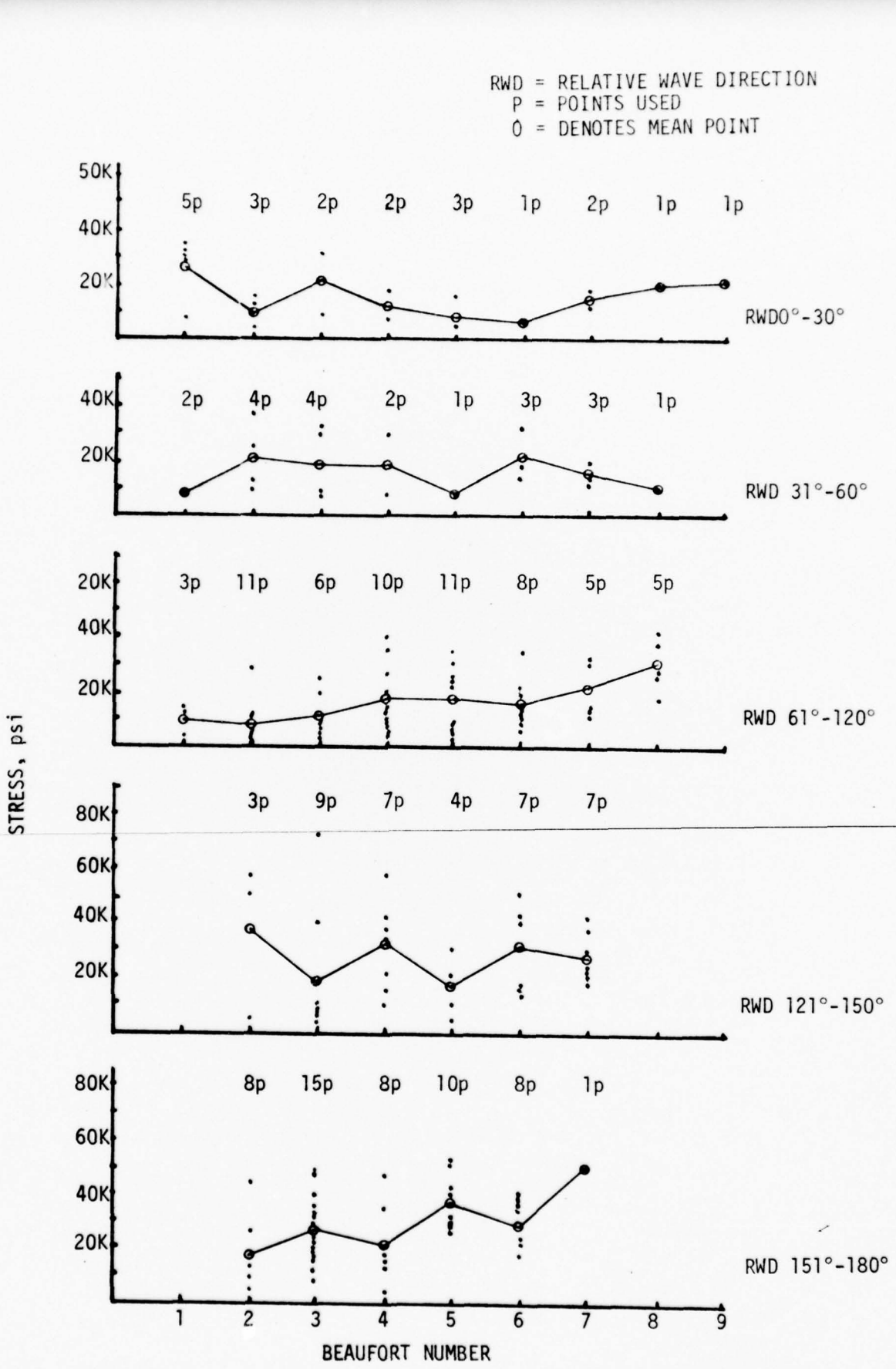


Figure 10A. AVERAGE OF MAXIMUM F_yA STRESS WITHIN EACH INTERVAL

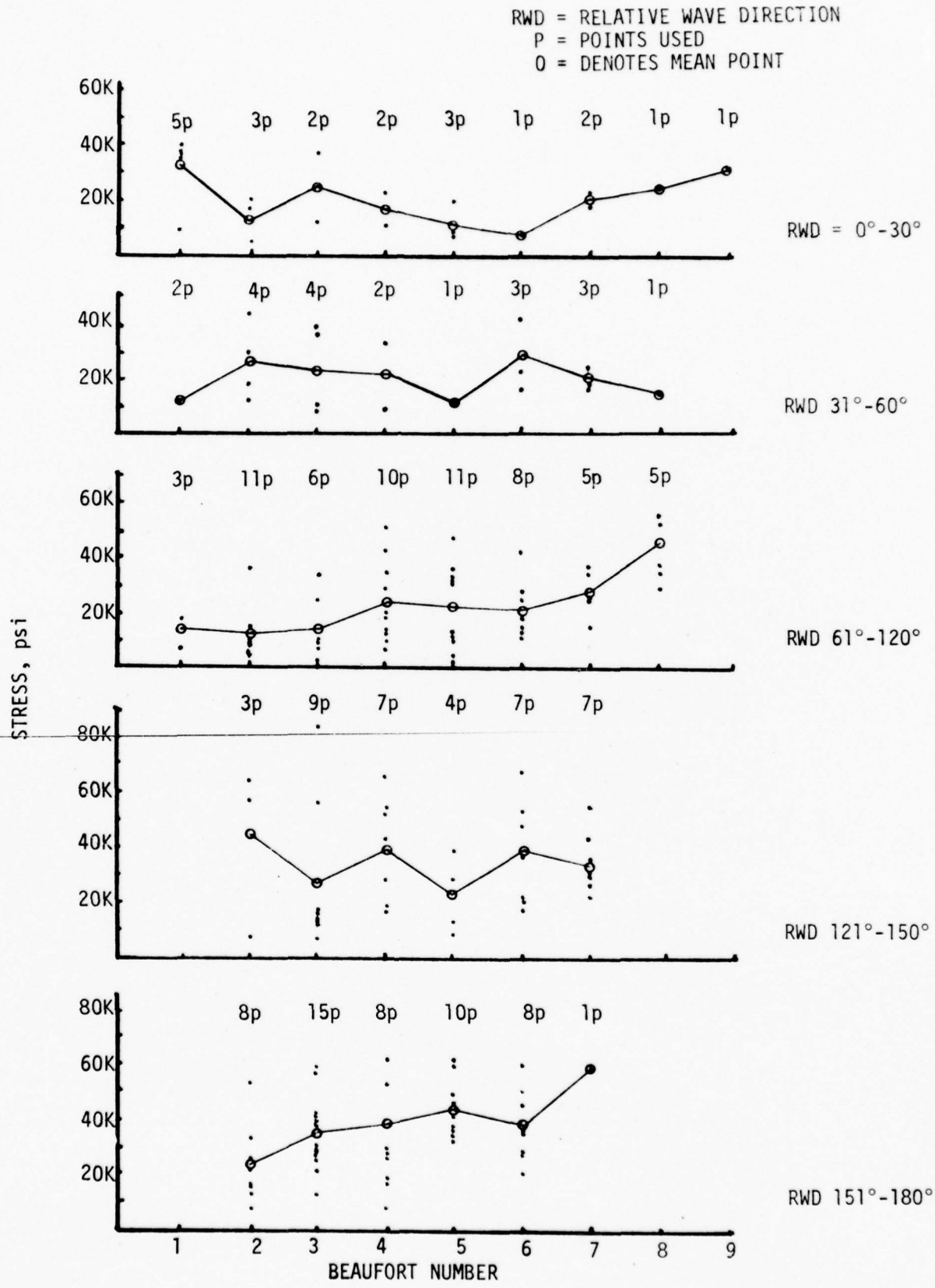


Figure 10B. AVERAGE OF MAXIMUM F_yB STRESS WITHIN EACH INTERVAL

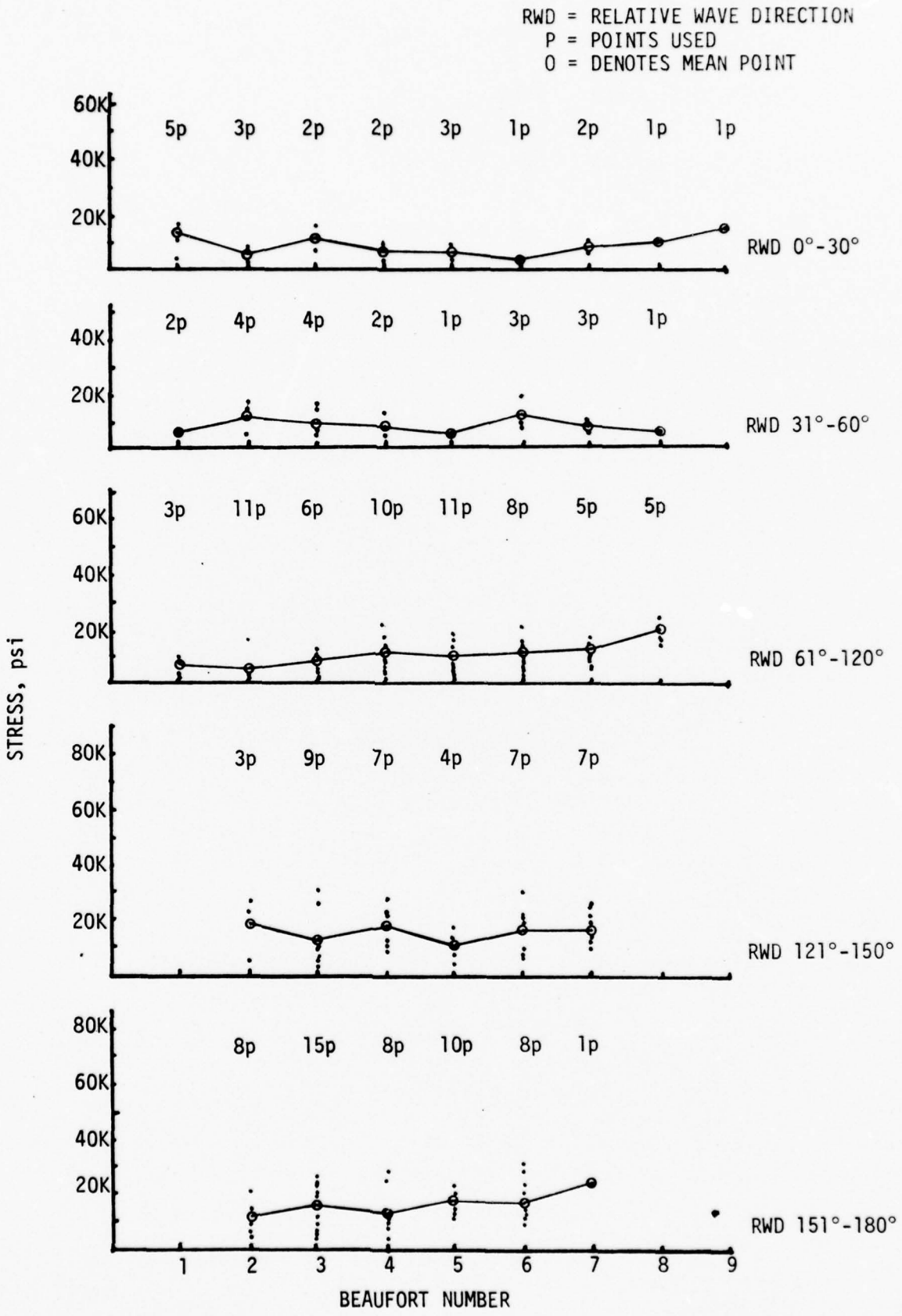
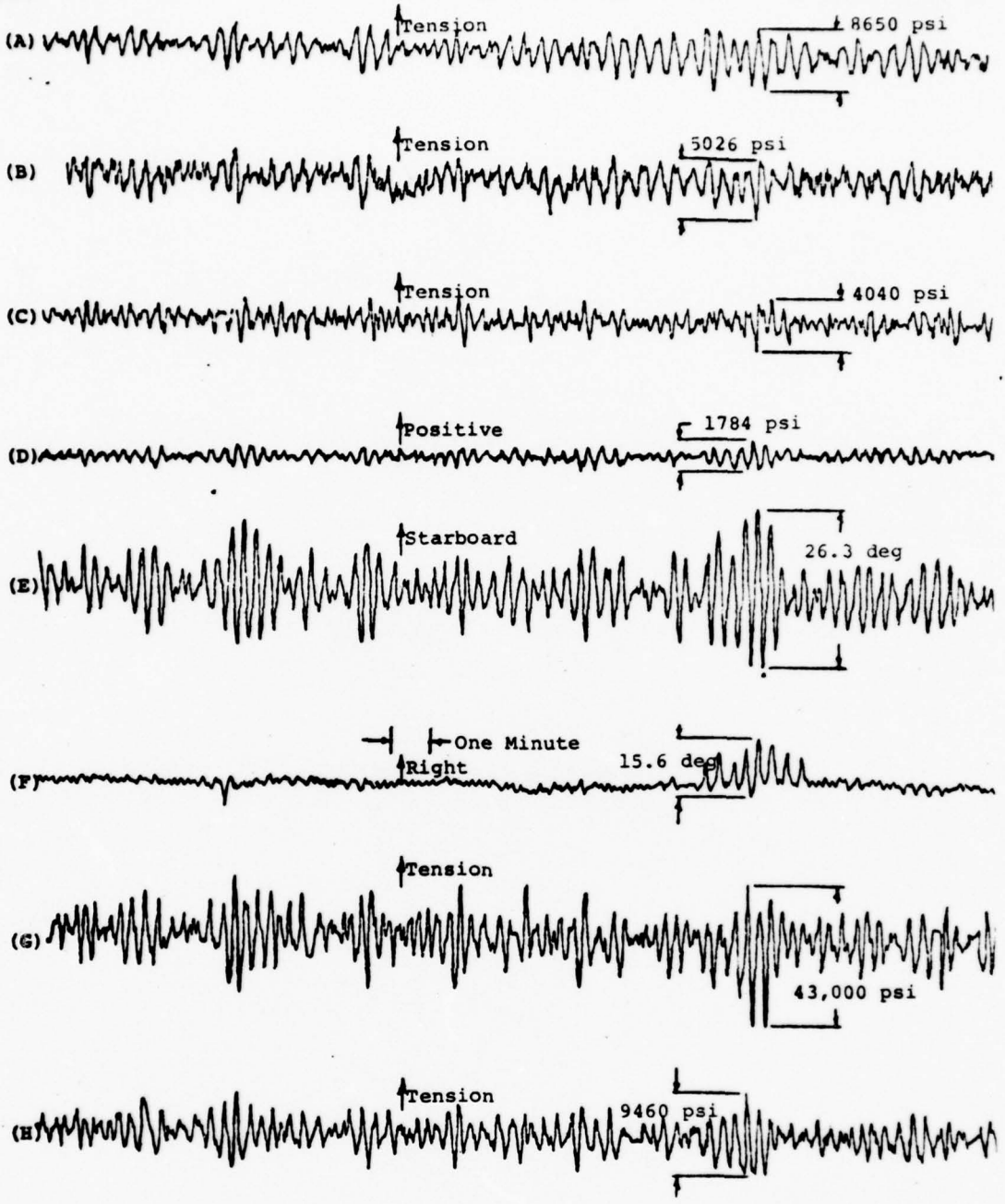


Figure 10C. AVERAGE OF MAXIMUM F_yC STRESS WITHIN EACH INTERVAL



Key:

(A) Midship Longitudinal Vertical Bending Stress	(E) Roll Angle
(B) Forward Longitudinal Vertical Bending Stress	(F) Rudder Angle
(C) Midship Longitudinal Lateral Bending Stress	(G) Hatch Corner Gage FYB
(D) Torsional Midship Shearing Stress (+ CW Fwd)	(H) Hatch Corner Gage FYC

Figure 11. SAMPLE ANALOG TRACES FOR ONE INSTANT OF SHIP RESPONSE TO QUARTERING SEA WITH 3-5 FOOT WAVES AND SWELLS.

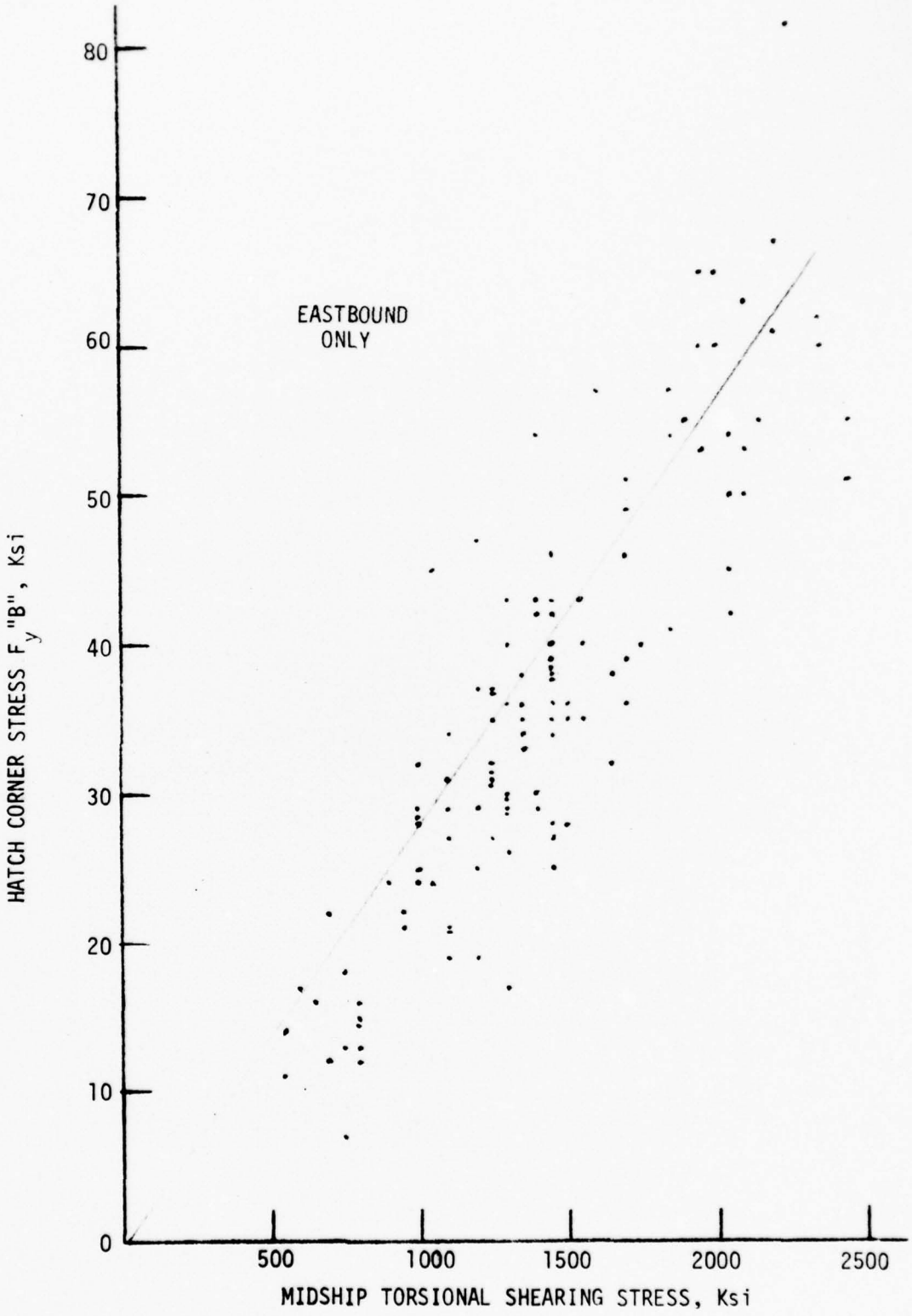


Figure 12A. MAXIMUM F_yB STRESS WITHIN EACH INTERVAL VERSUS THE MAXIMUM TSM STRESS WITHIN THE SAME INTERVAL FOR EASTBOUND PASSAGES

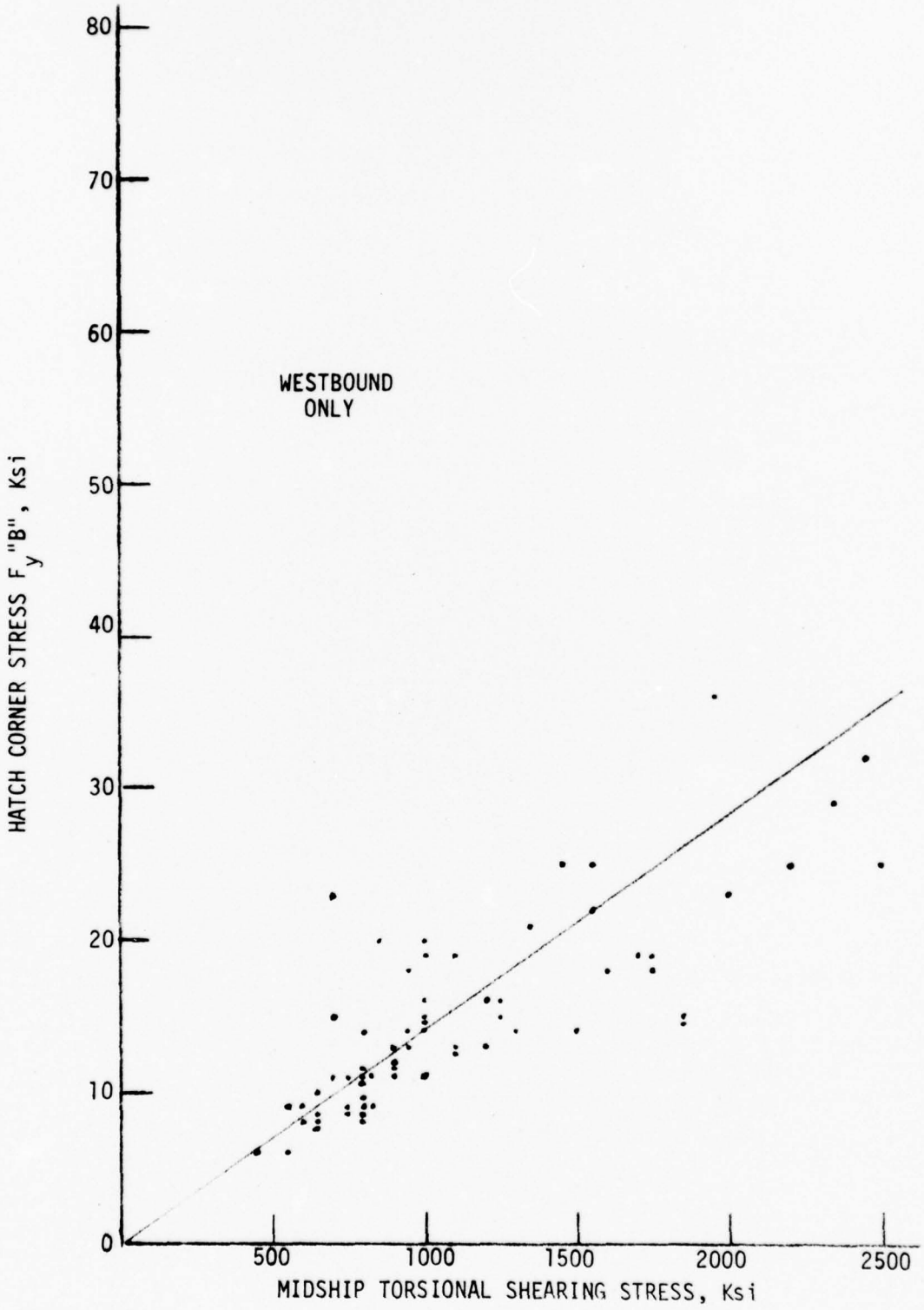


Figure 12B. MAXIMUM F_yB STRESS WITHIN EACH INTERVAL VERSUS THE MAXIMUM TSM STRESS WITHIN THE SAME INTERVAL FOR WESTBOUND PASSAGES

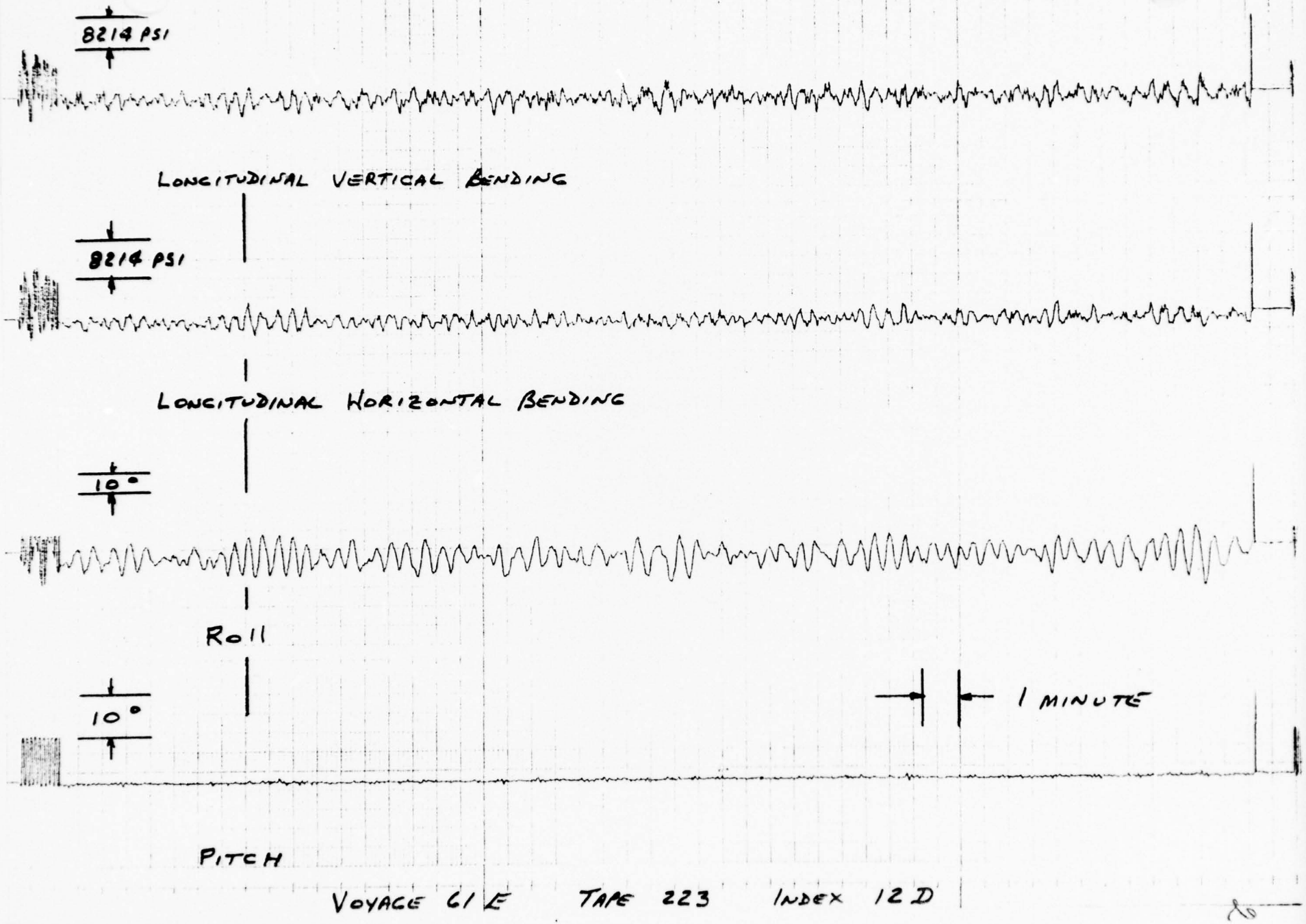
Voyage 61 East
Index 12 "D" Mode

Recorder #1	VERTICAL BENDING	
Tape #223	HORIZONTAL BENDING	
	ROLL	
	PITCH	
Recorder #2	VERTICAL BENDING	
Tape #224	R_2 A,B,C	Hatch Corner - FR. 290
	F_y A,B,C	
	AR_2 A,B,C	Hatch Corner - FR 144
	S_y A,B,C	

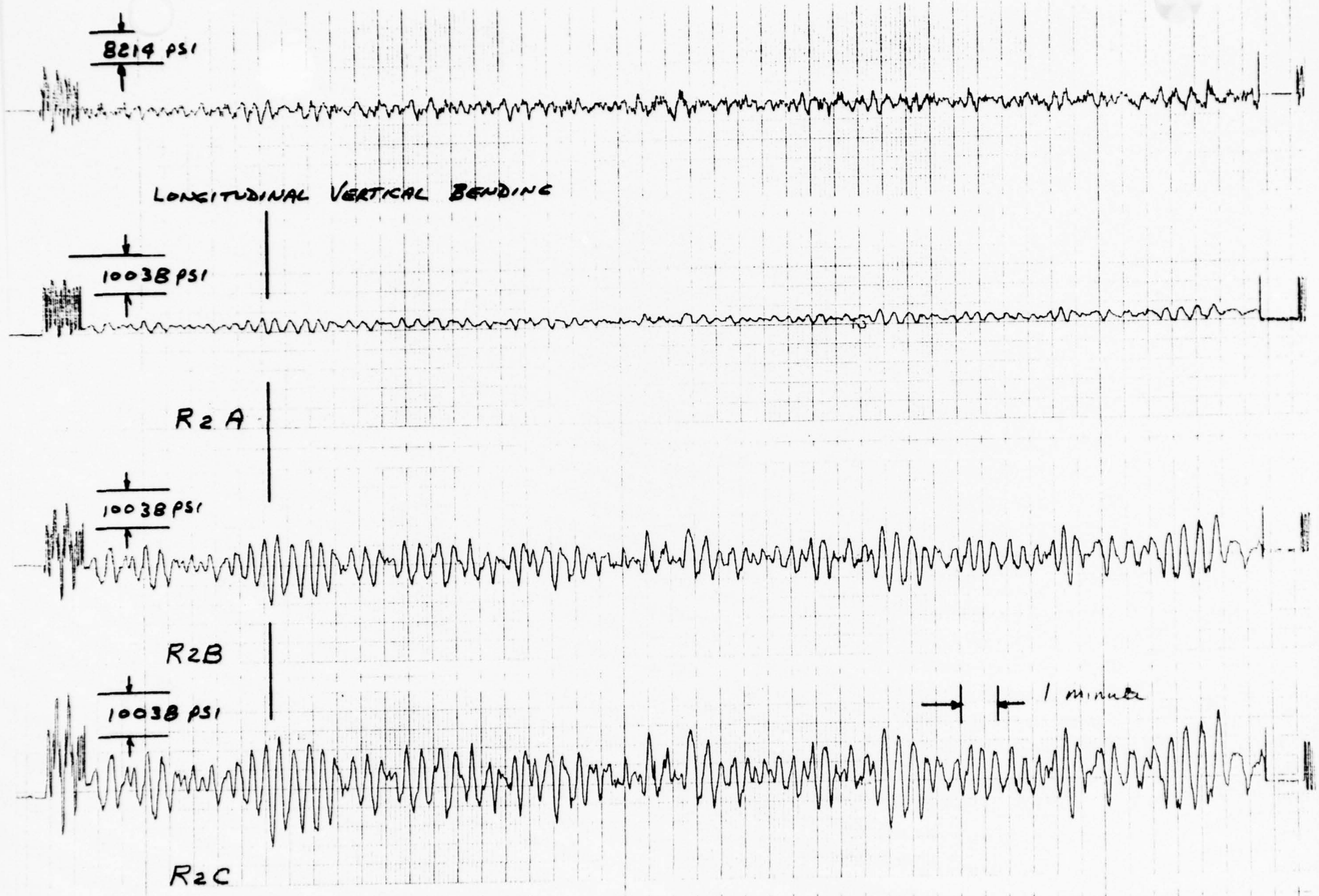
Note: Reference lines denote instant of largest hatch corner stress recorded in interval.

Figure 13

SAMPLE ANALOG TRACES FOR HIGH
HATCH CORNER STRESS-QUARTERING SEAS

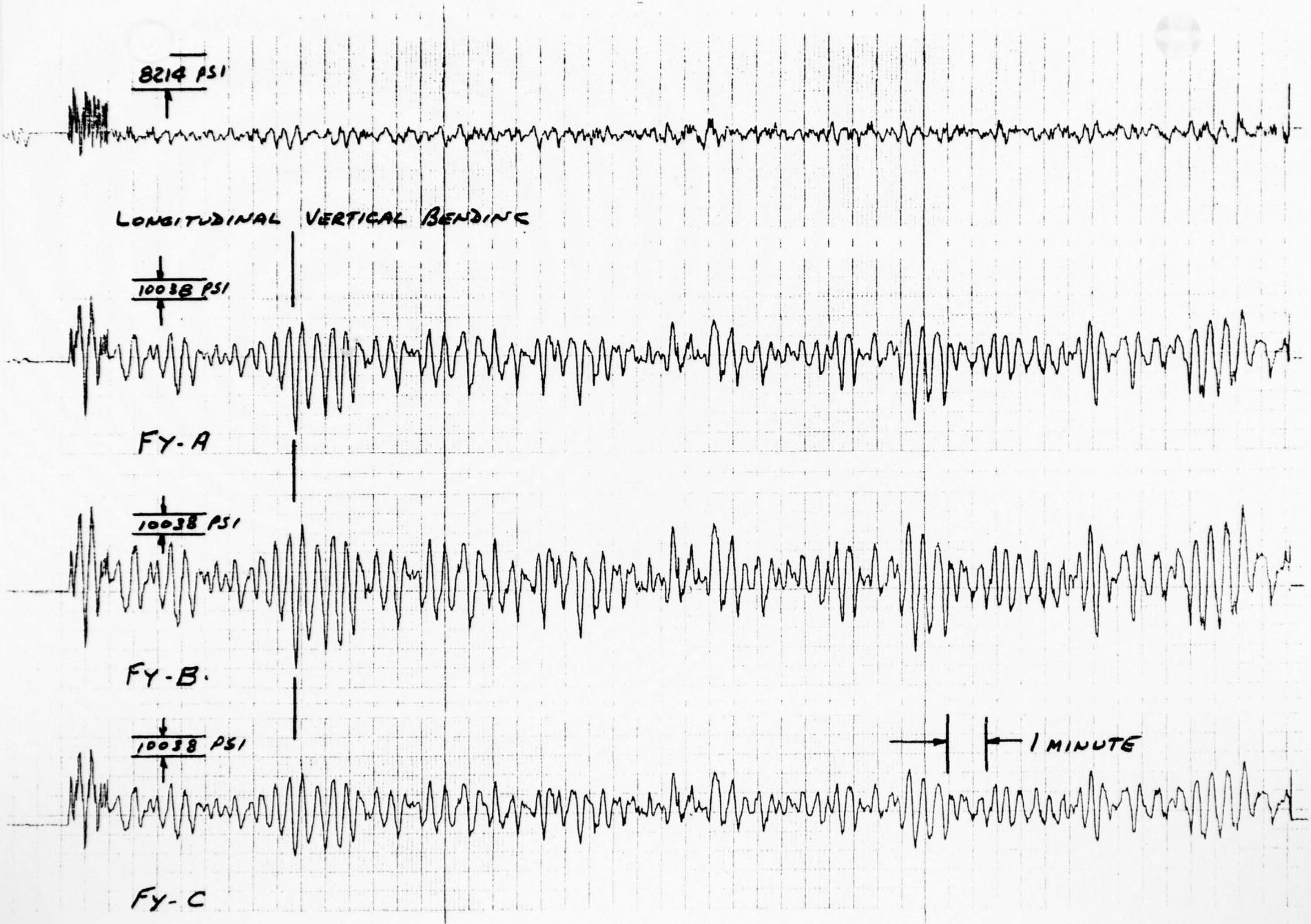


VOYAGE 61E TAPE 223 INDEX 12D



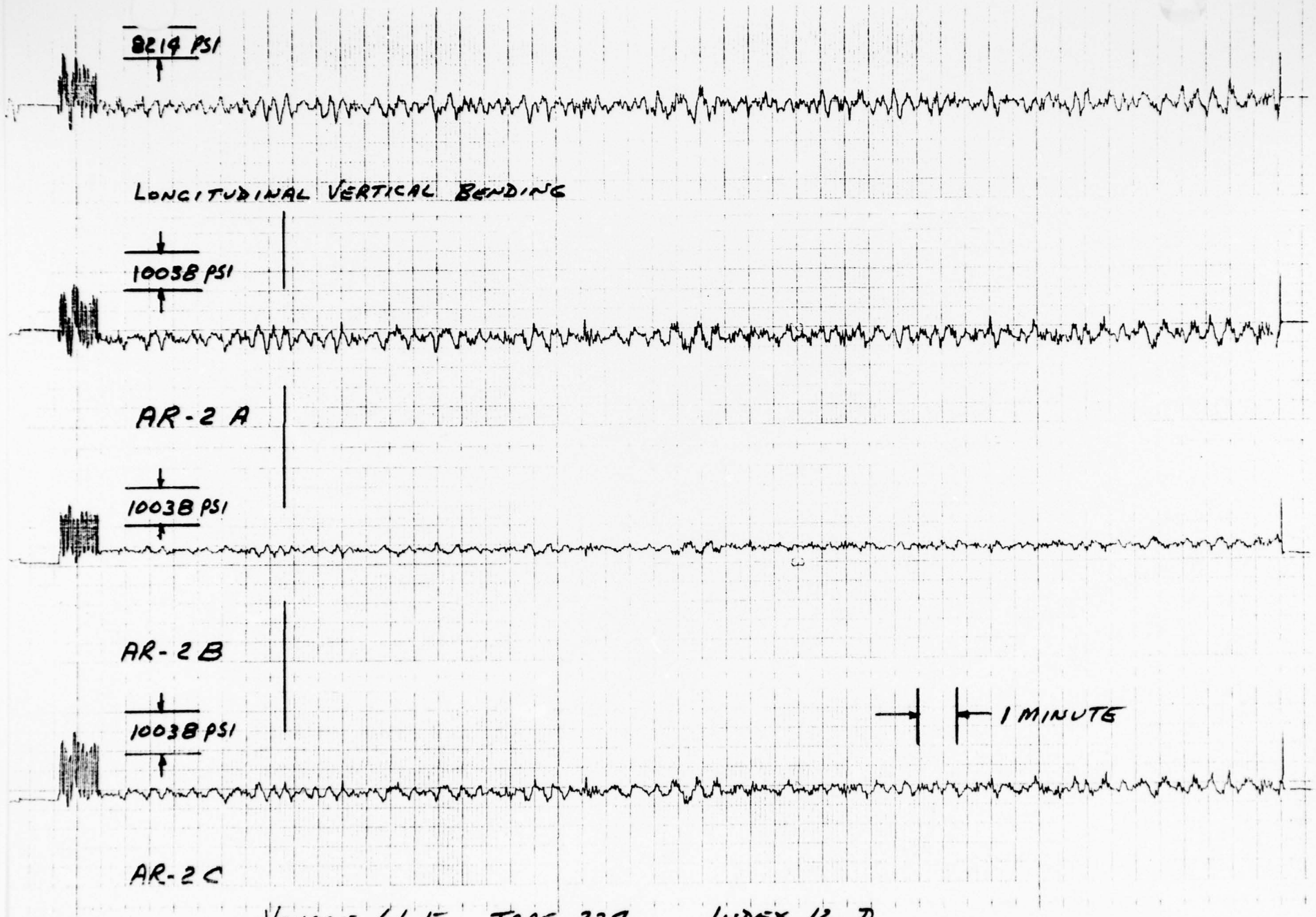
VOYAGE 61E TAPE 224 INDEX 12D

a

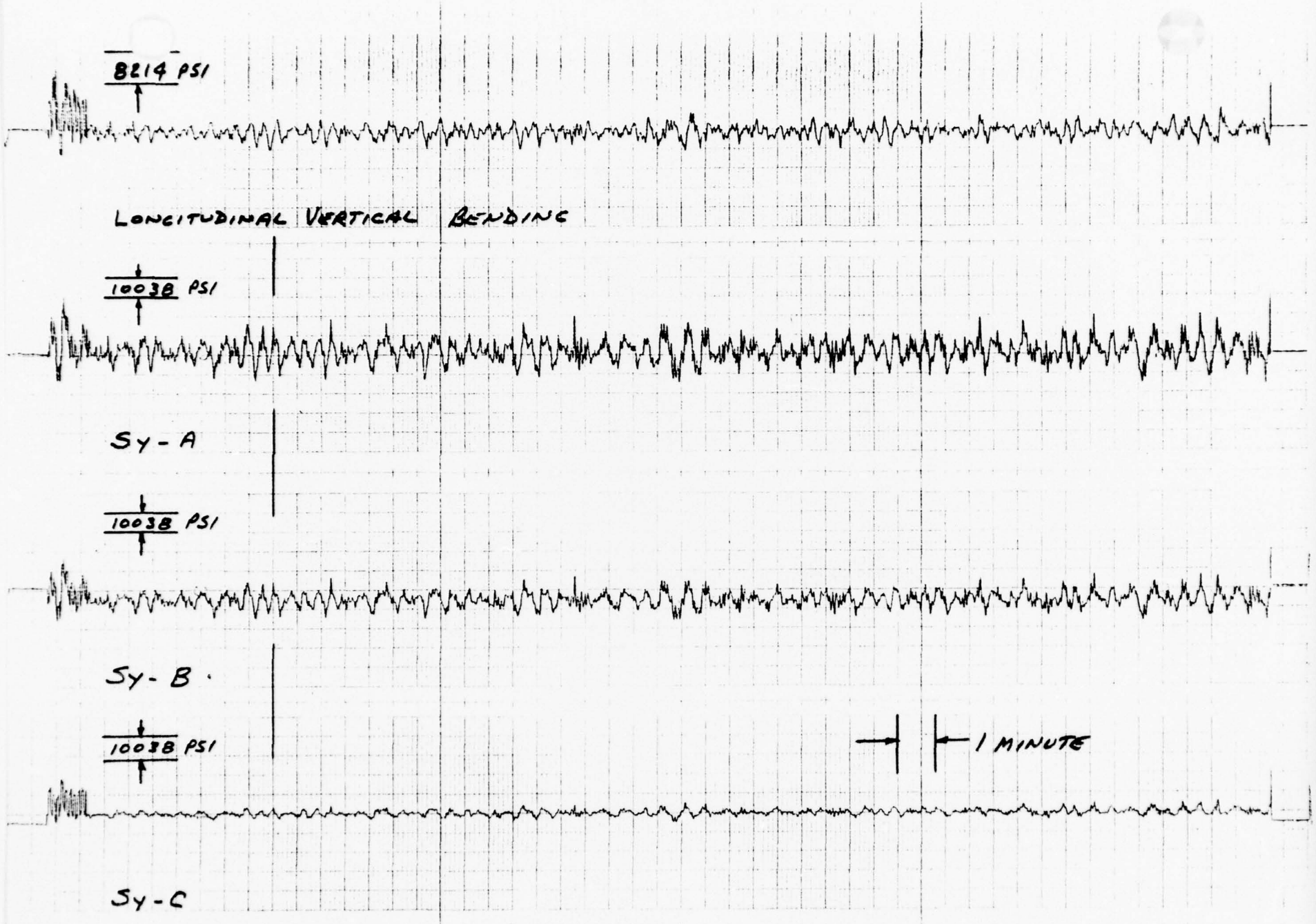


VOYAGE 61 E TAPE 224 INDEX 12 D

4



VOYAGE 61 E TAPE 229 INDEX 12 D



VOYAGE 61 E TAPE 224 INDEX 12D

Voyage 61 West

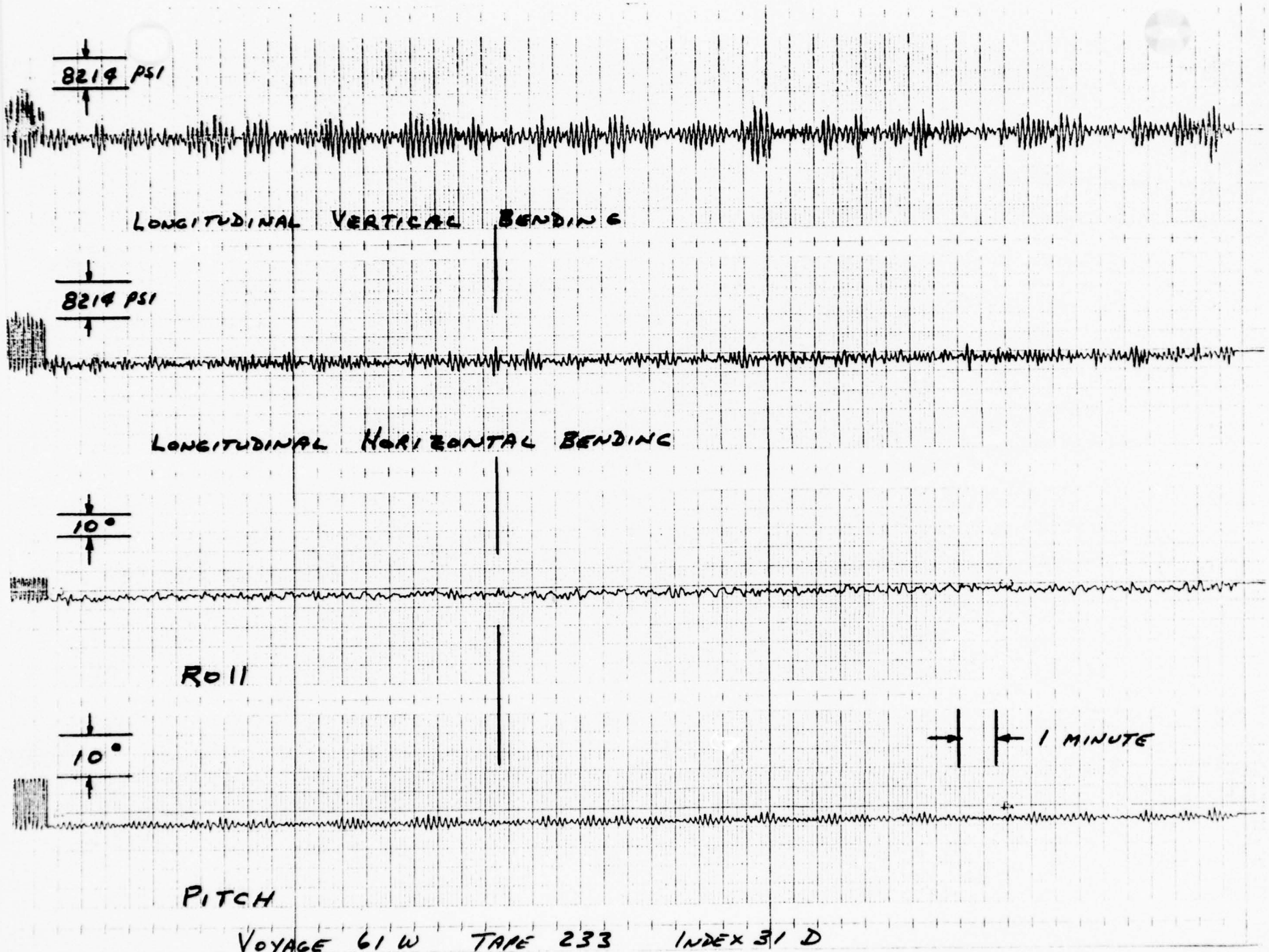
Index 31 "D" Mode

Recorder #1		VERTICAL BENDING
Tape #233		HORIZONTAL BENDING
		ROLL
		PITCH
Recorder #2		VERTICAL BENDING
Tape #234	R_2 A,B,C	Hatch Corner FR 290
	F_y A,B,C	
	R_7 A,B,C	Hatch Corner FR 258
	H_y A,B,C	

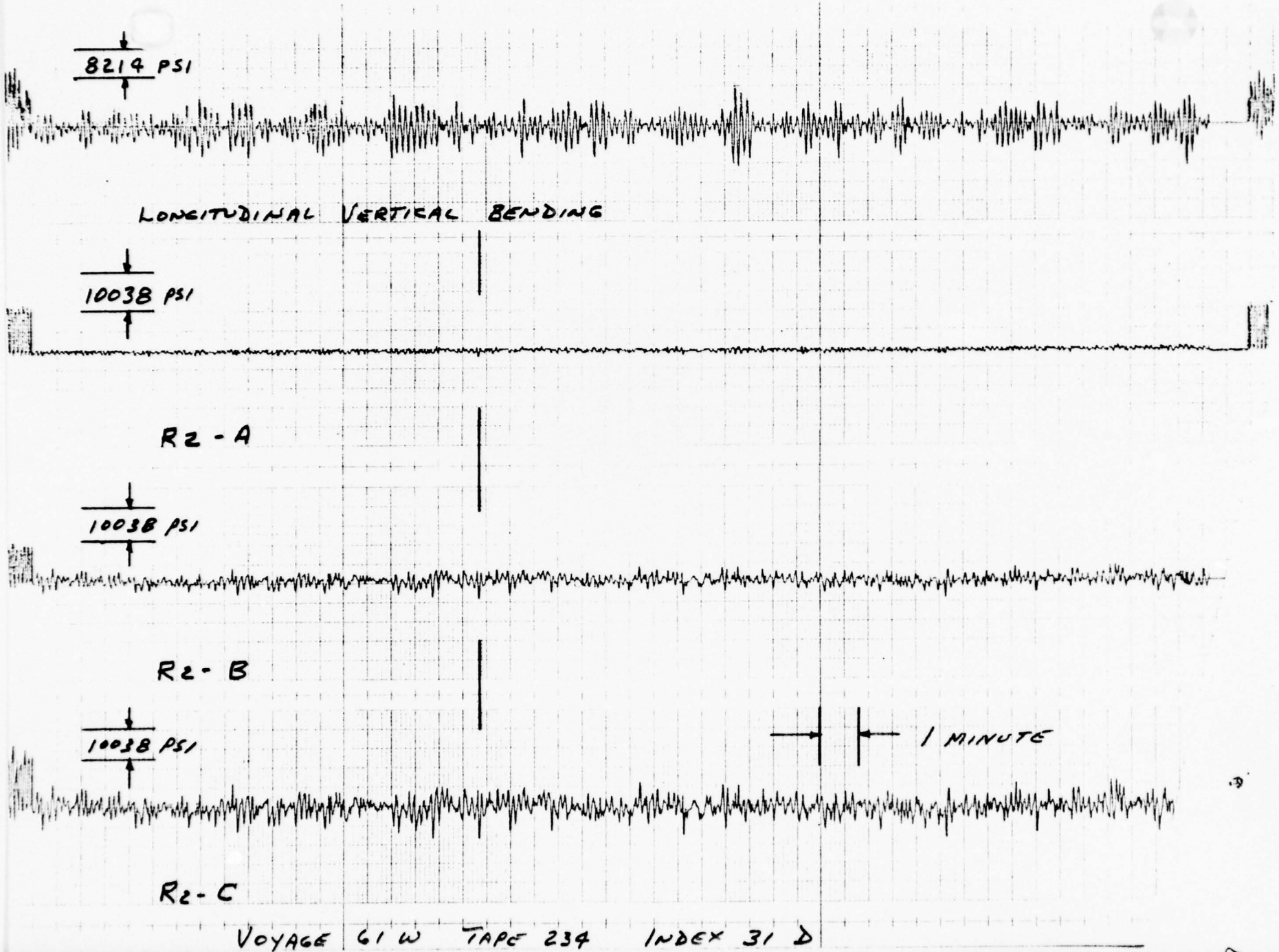
Note: Reference lines denote instant of largest hatch corner stress recorded in interval.

Figure 14

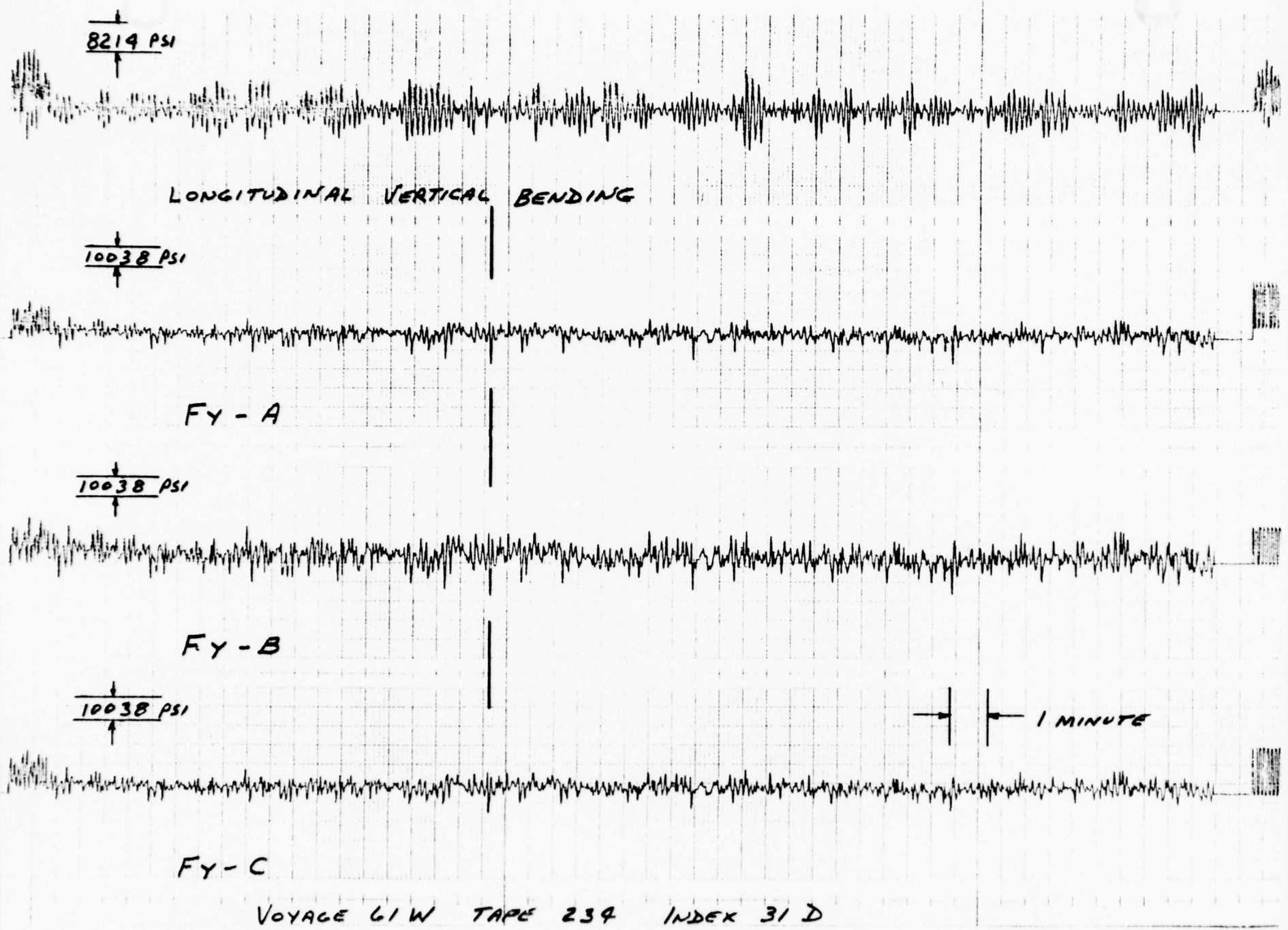
SAMPLE ANALOG TRACES FOR HIGH HATCH CORNER STRESSES-BROAD-ON-THE BOW SEAS



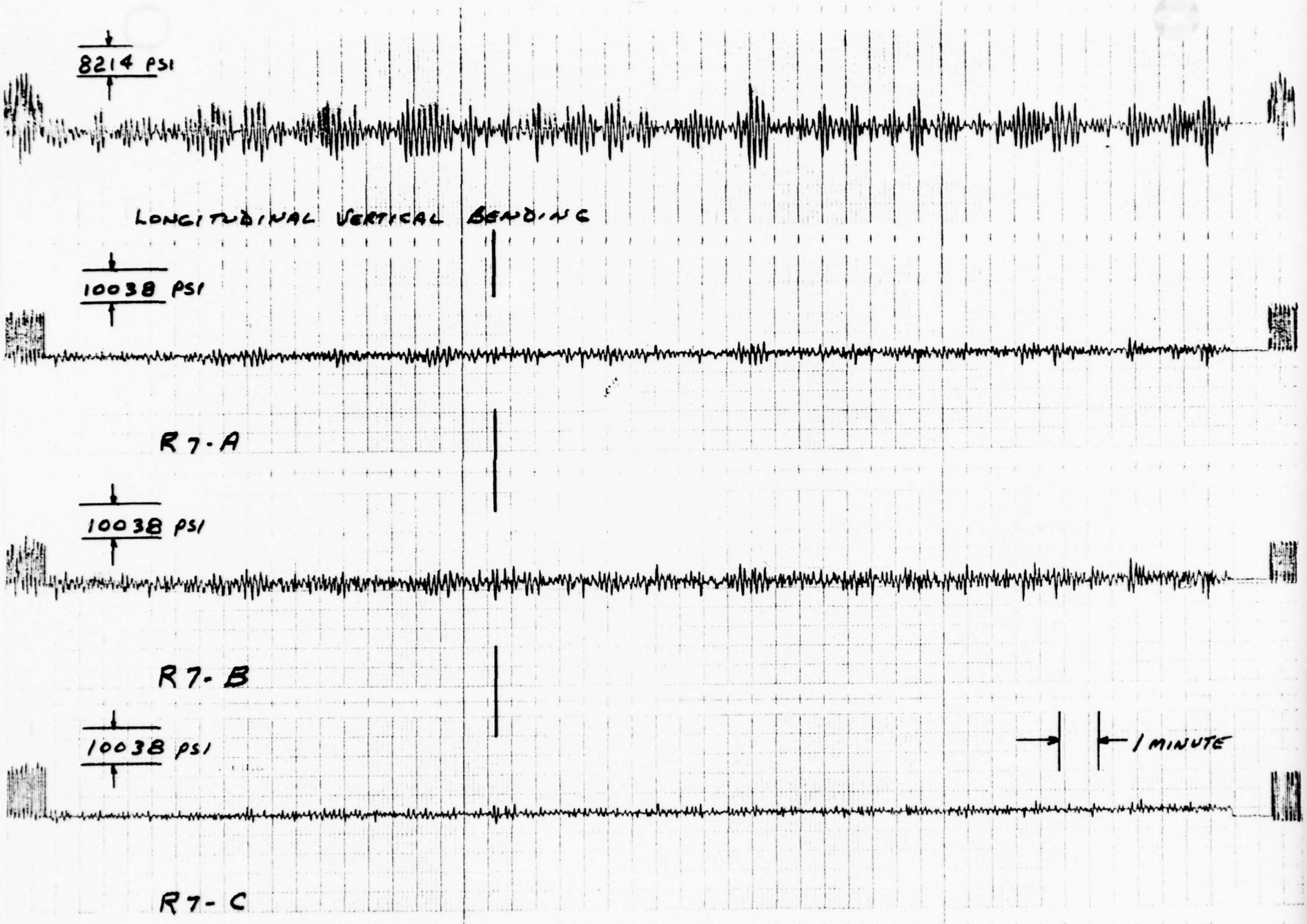
VOYAGE 61 W TAPE 233 INDEX 31 D



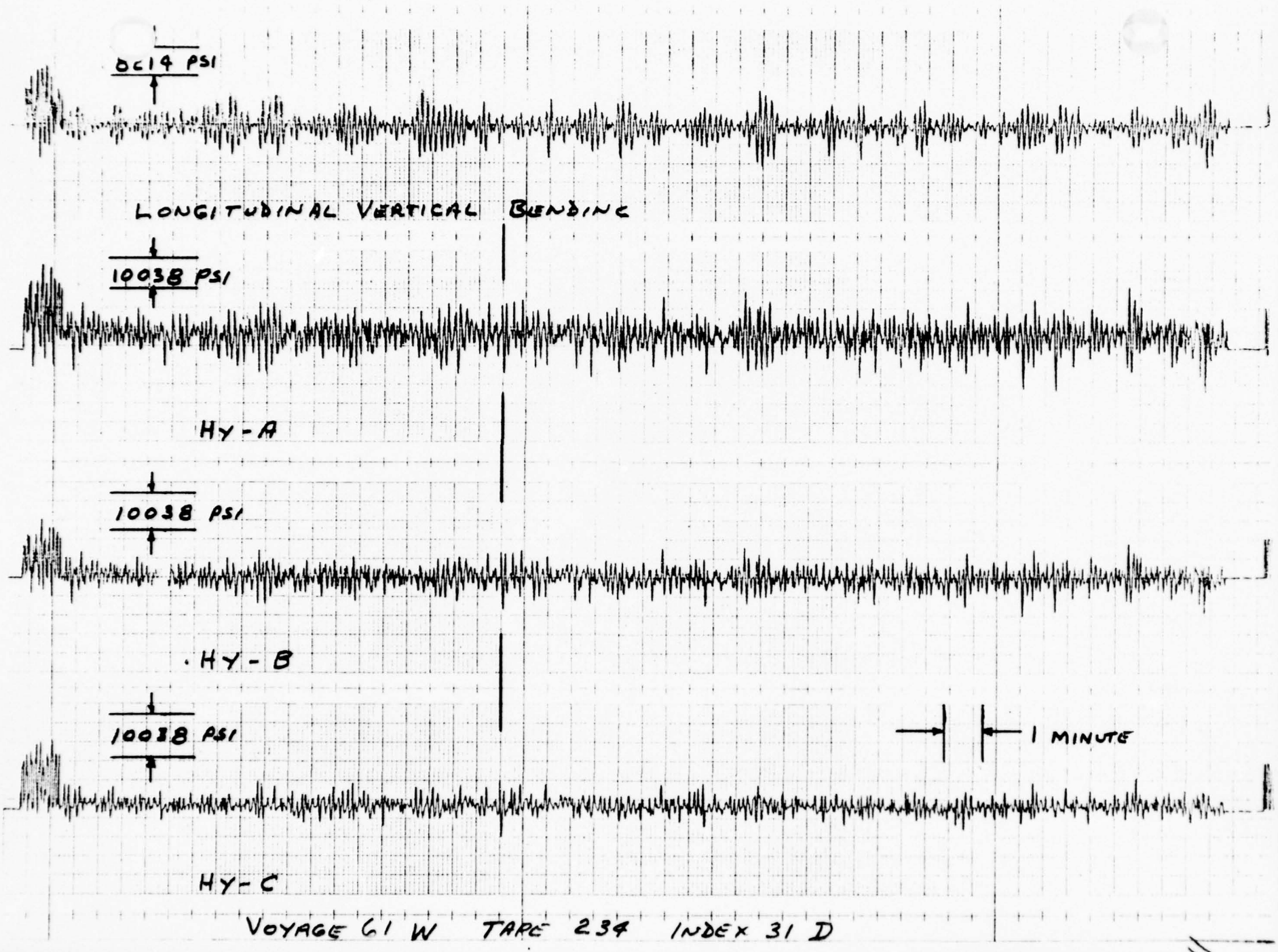
VOYAGE 61 W TAPE 234 INDEX 31 D



VOYAGE 61 W TAPE 234 INDEX 31 D



VOYAGE 61 W TAPE 234 INDEX 31 D



VOYAGE 61 W TAPE 234 INDEX 31 D

Voyage 61 West
Index 31 "A" Mode

Recorder #1
Tape #233

VERTICAL BENDING STRESS
HORIZONTAL BENDING STRESS
ROLL ANGLE
PITCH

Recorder #2

VERTICAL BENDING STRESS

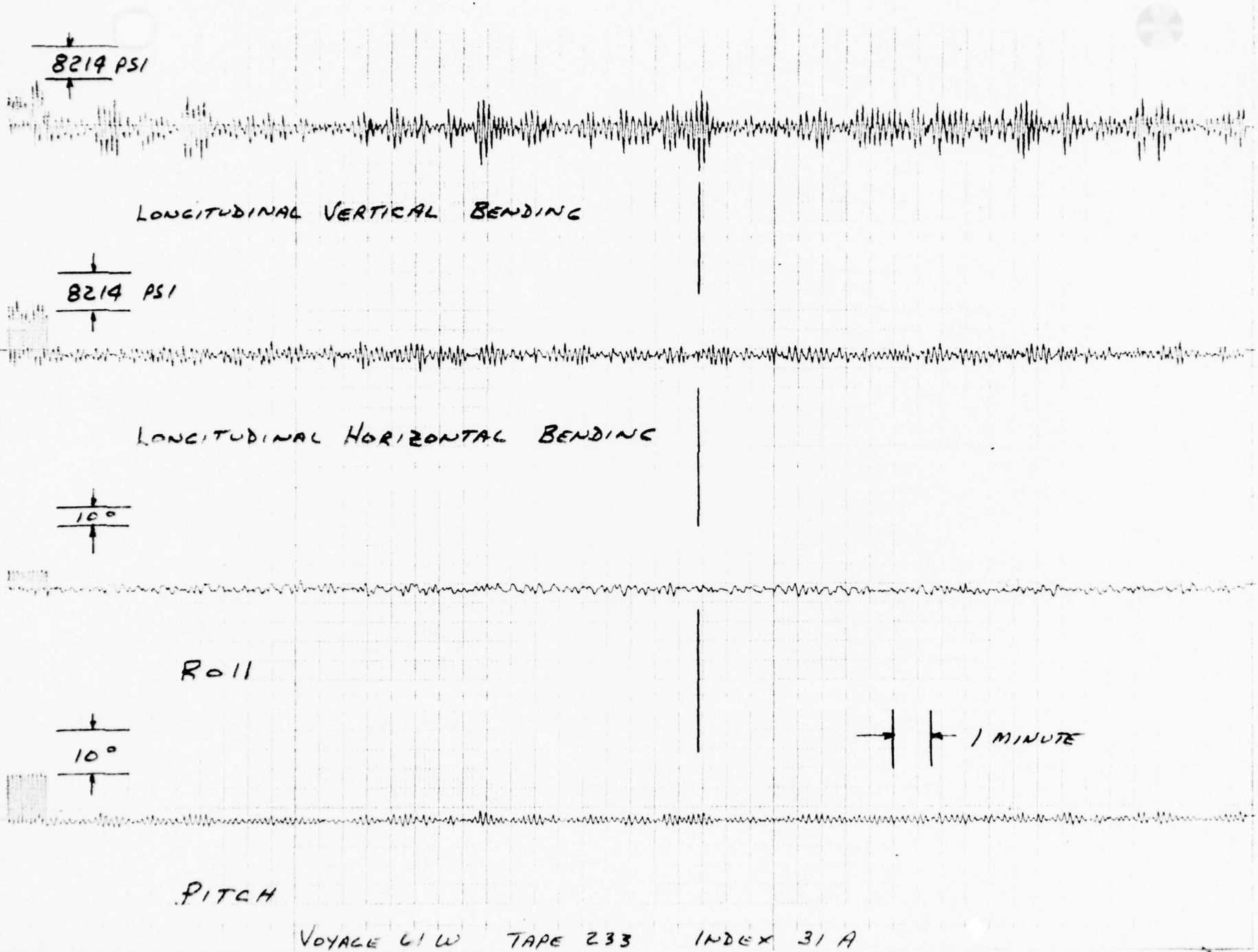
A - 1-6
B - 1-6

Bow Sideshell

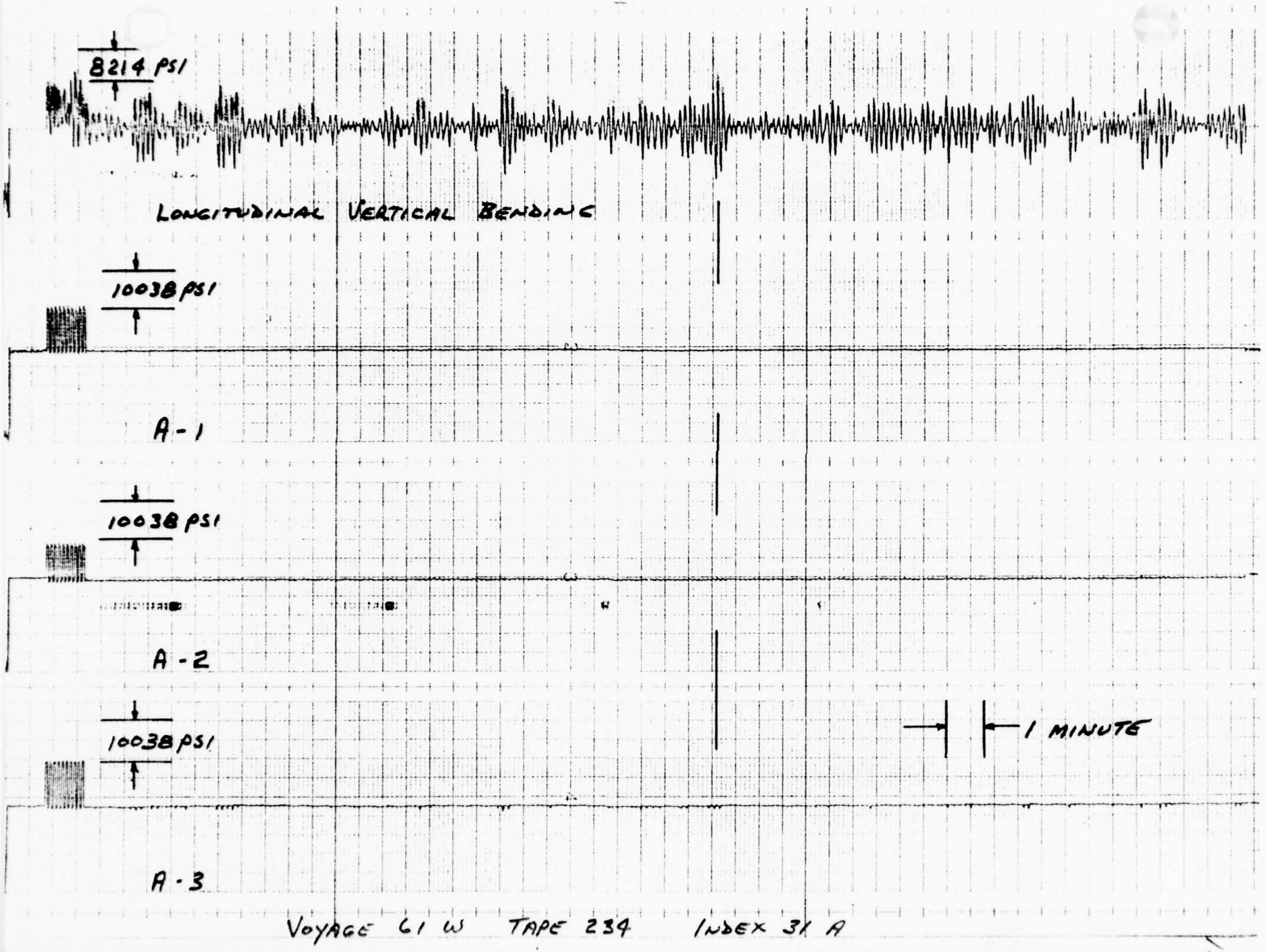
Note: Reference lines denote instant of largest bow gage stress recorded in interval.

Figure 15A

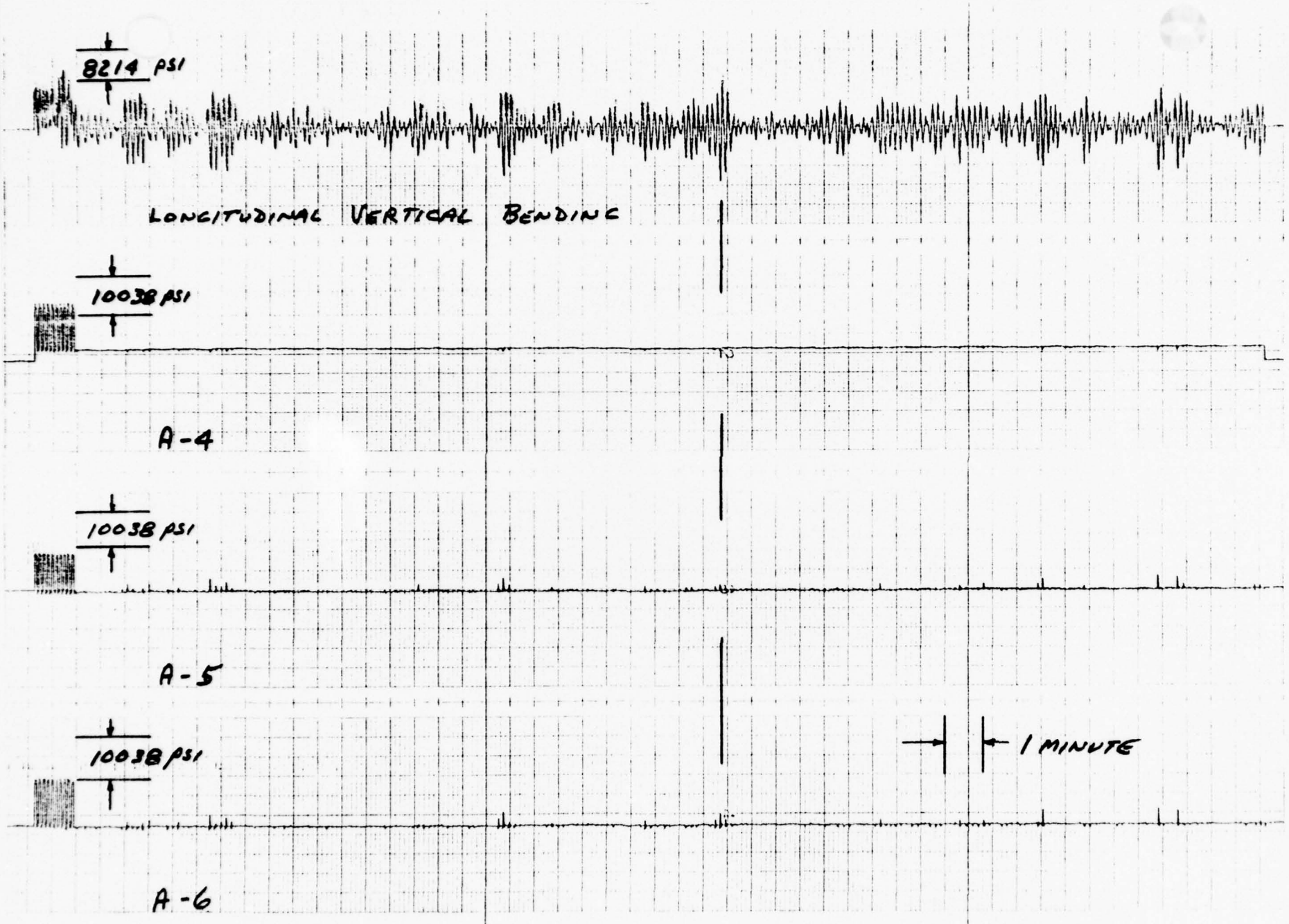
SAMPLE ANALOG TRACES FOR HIGH SIDESHELL STRESSES-A MODE



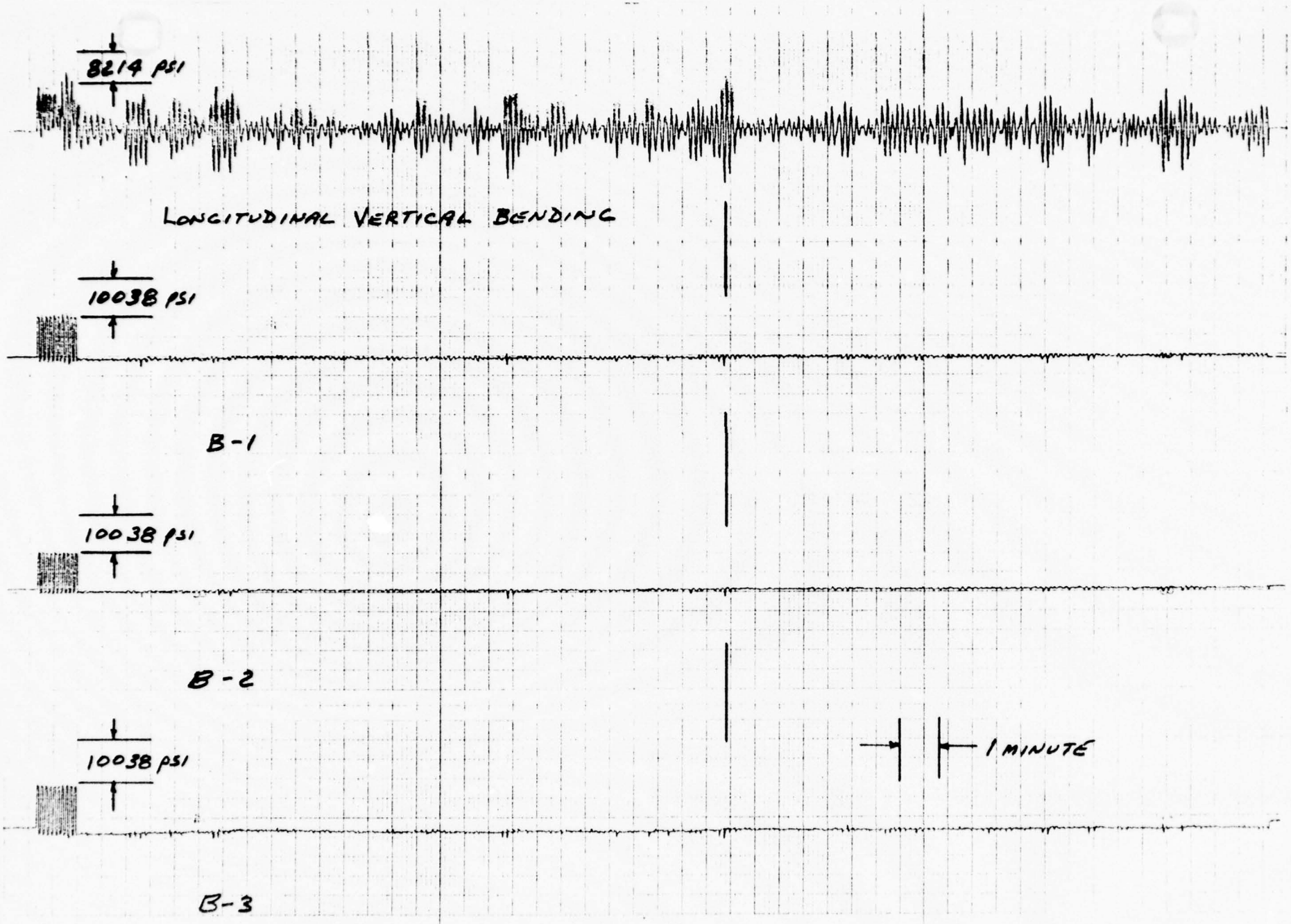
VOYAGE 61 W TAPE 233 INDEX 31 A



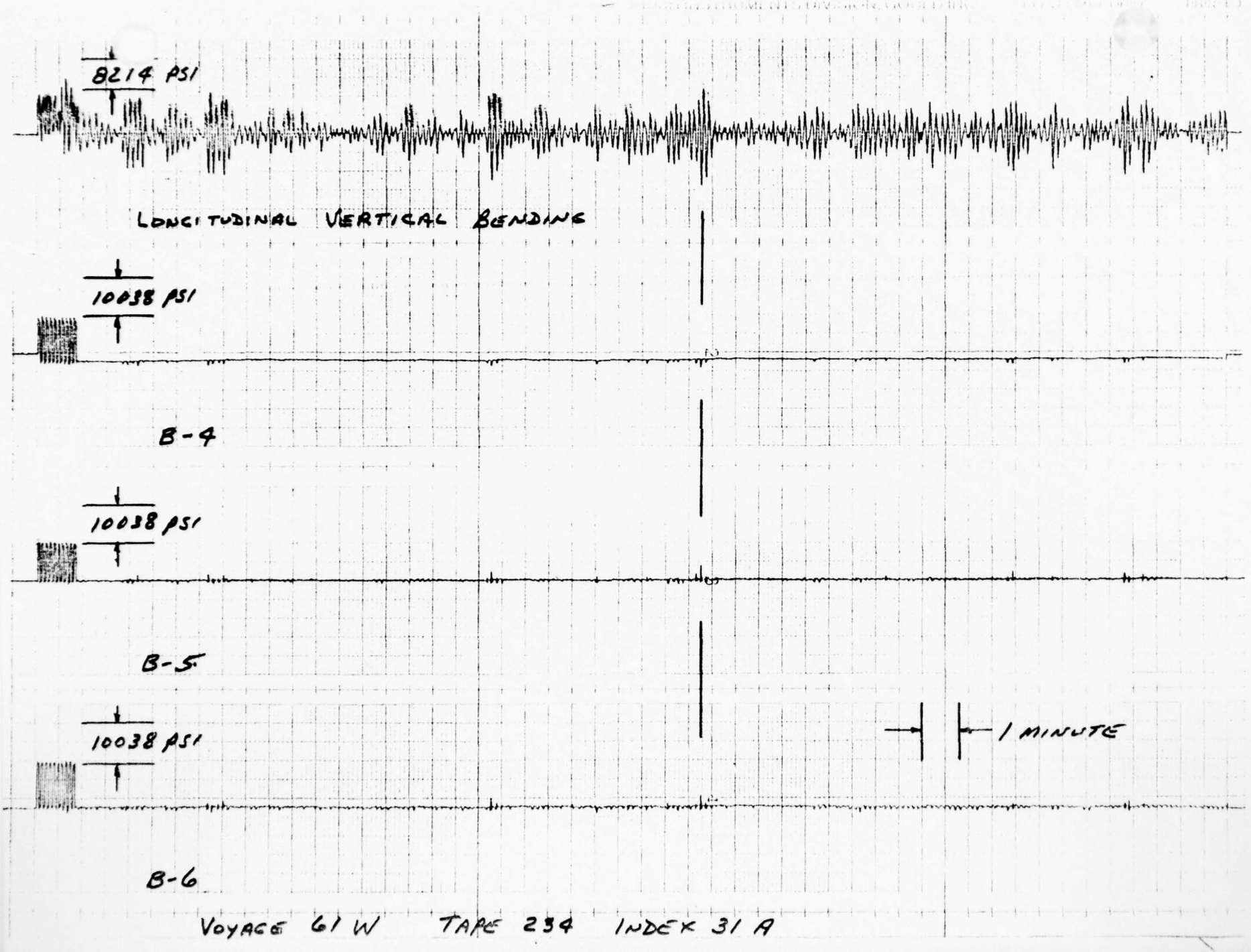
VOYAGE 61 W TAPE 234 INDEX 31 A



VOYAGE 61 W TAPE 234 INDEX 31 A



VOYAGE 61 W TAPE 234 INDEX 31 A



VOYAGE 61 W TAPE 234 INDEX 31 A

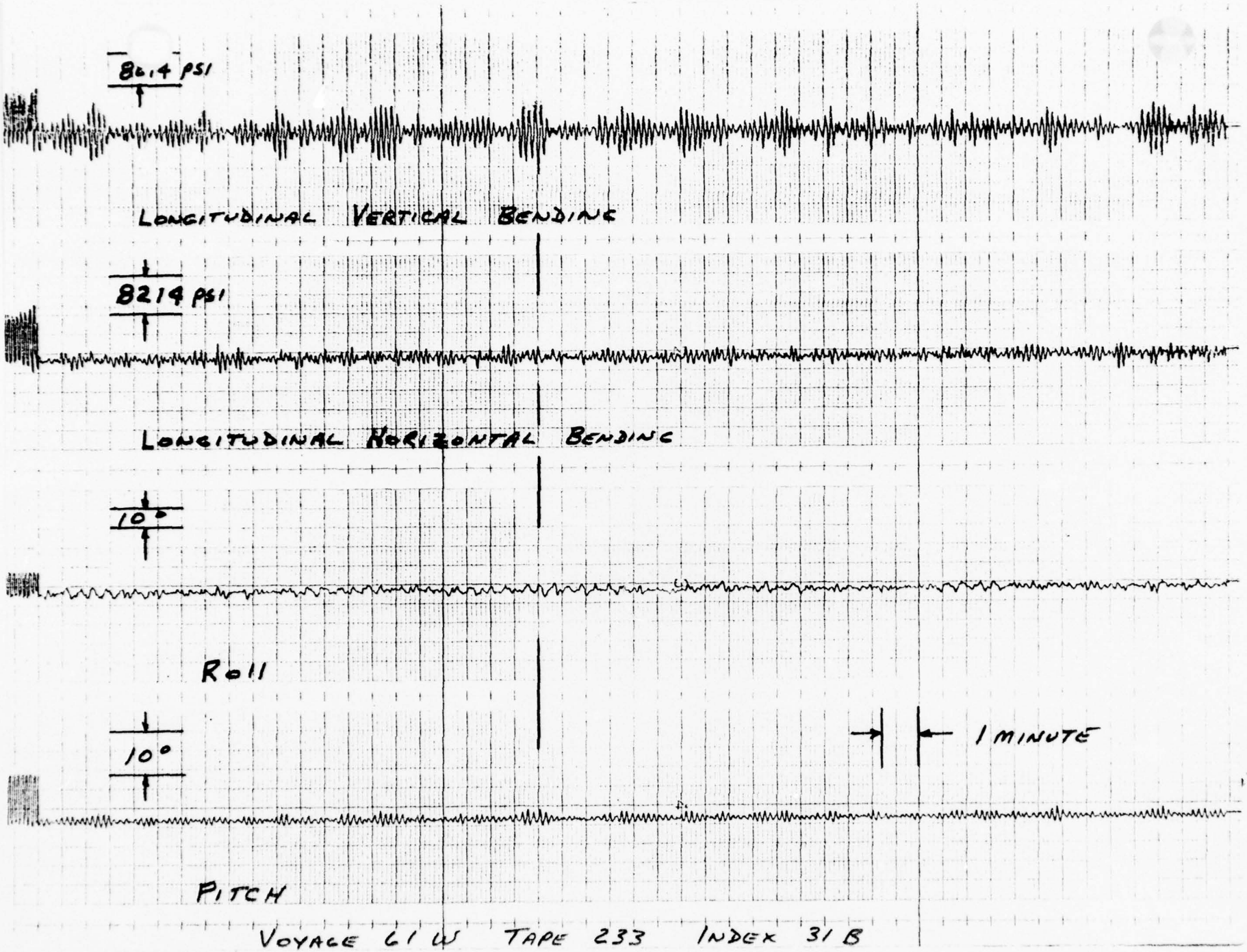
Voyage 61 West
Index 31 "B" Mode

Recorder #1	VERTICAL BENDING
Tape #233	HORIZONTAL BENDING
	ROLL
	PITCH
Recorder #2	VERTICAL BENDING
Tape #234	C 1-6 Bow Sideshell
	B 1-6

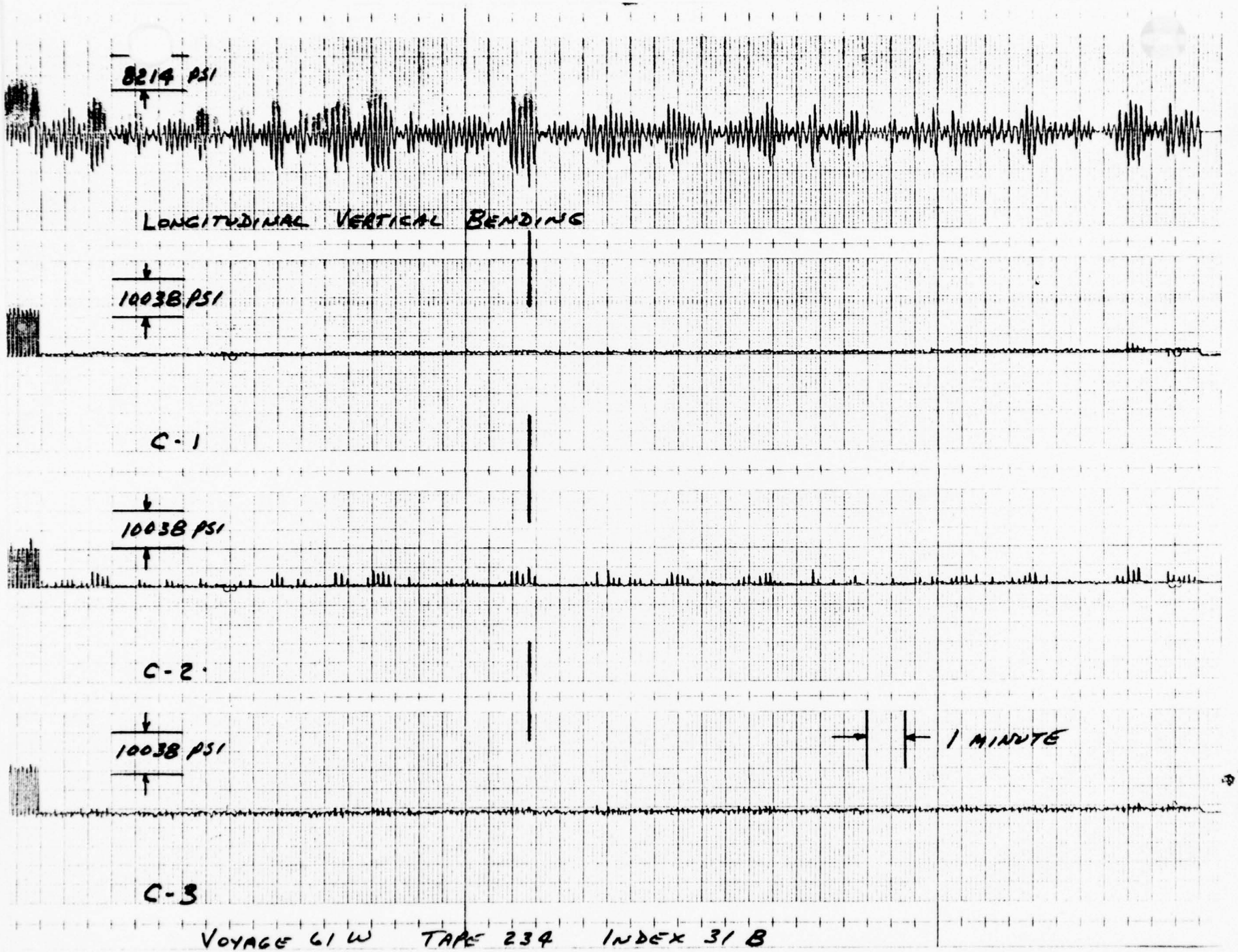
Note: Reference lines denote instant of largest bow gage stress recorded in interval.

Figure 15B

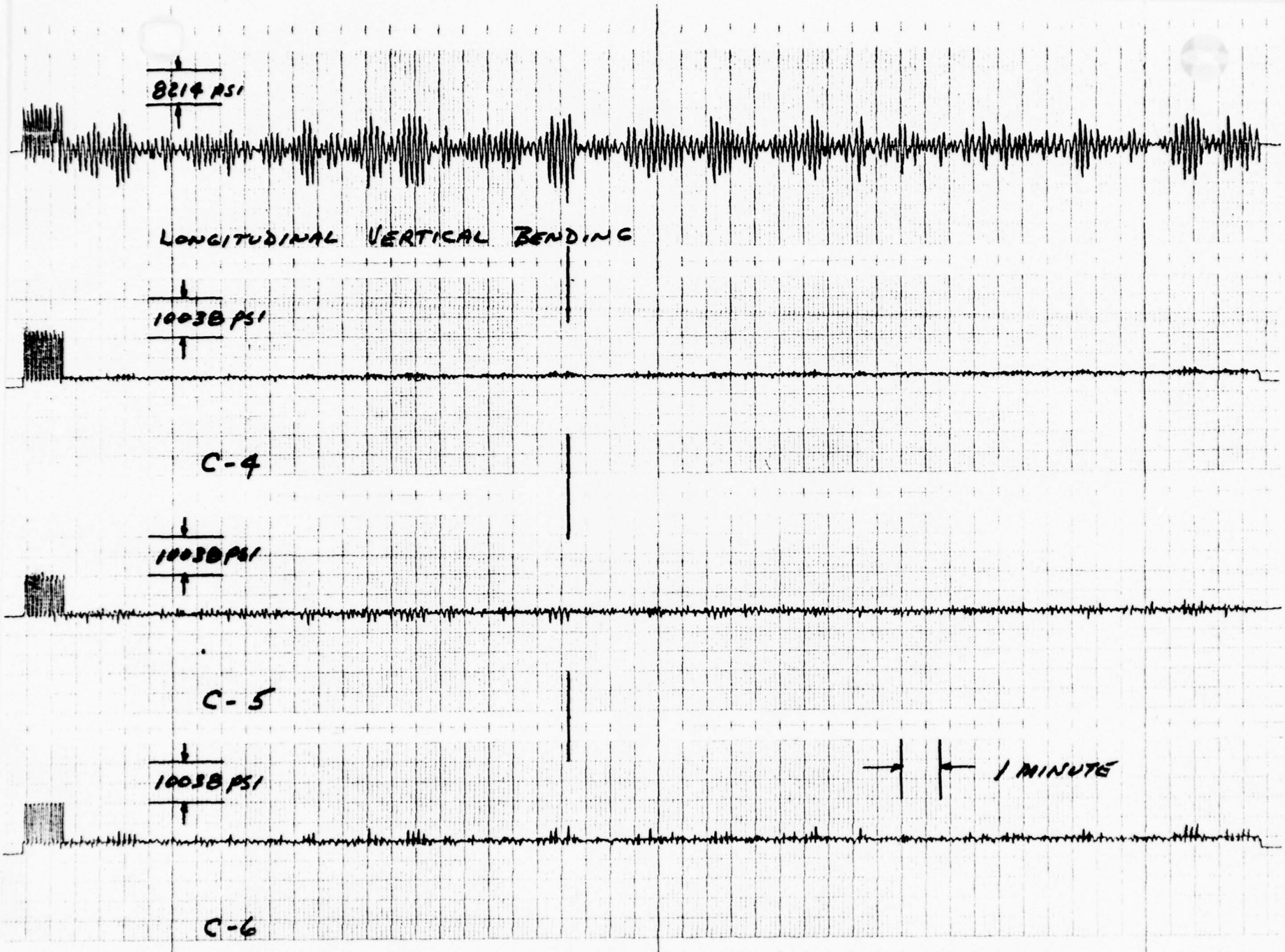
SAMPLE ANALOG TRACES FOR HIGH
SIDESHELL STRESSES-B MODE



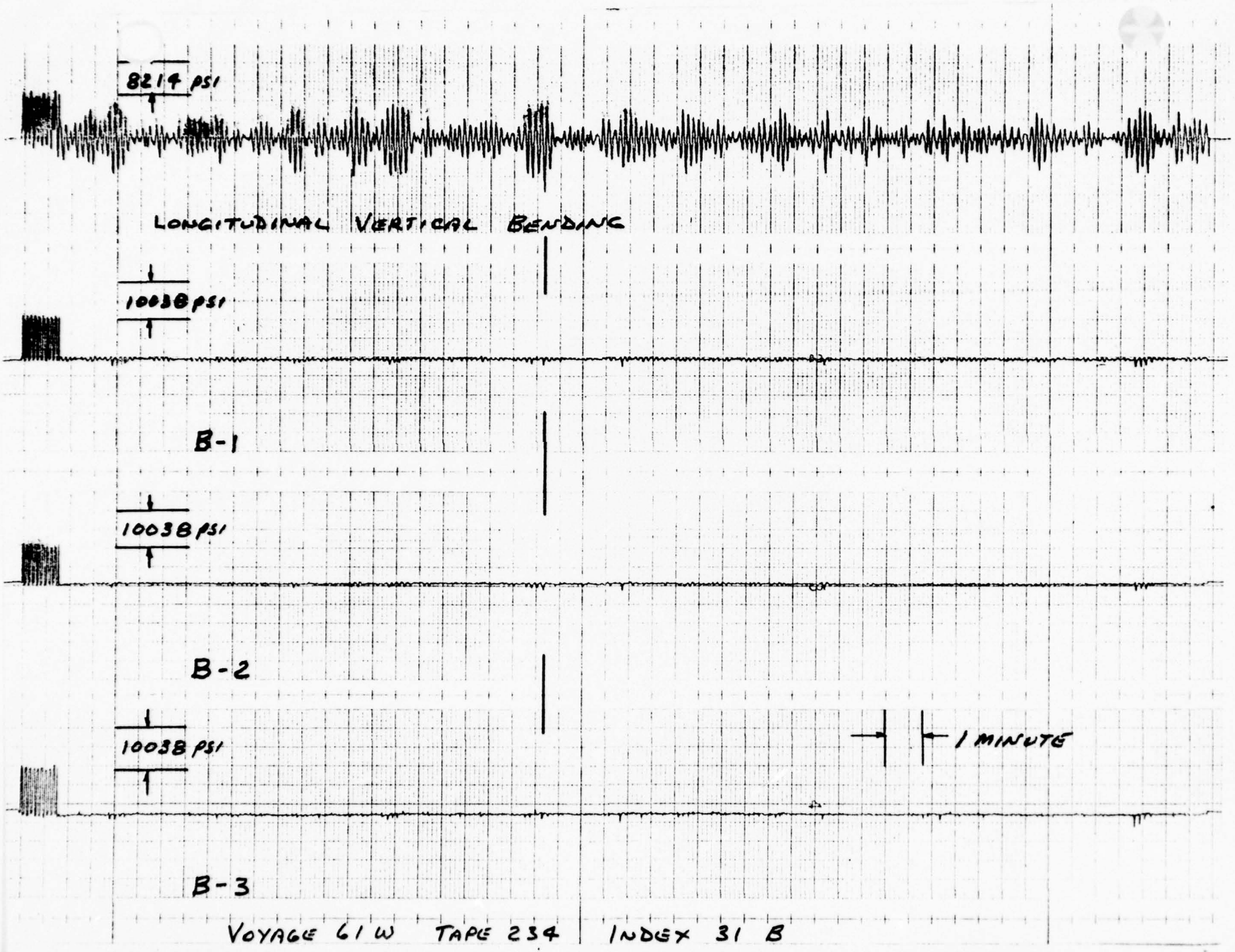
VOYAGE 61 W TAPE 233 INDEX 31 B

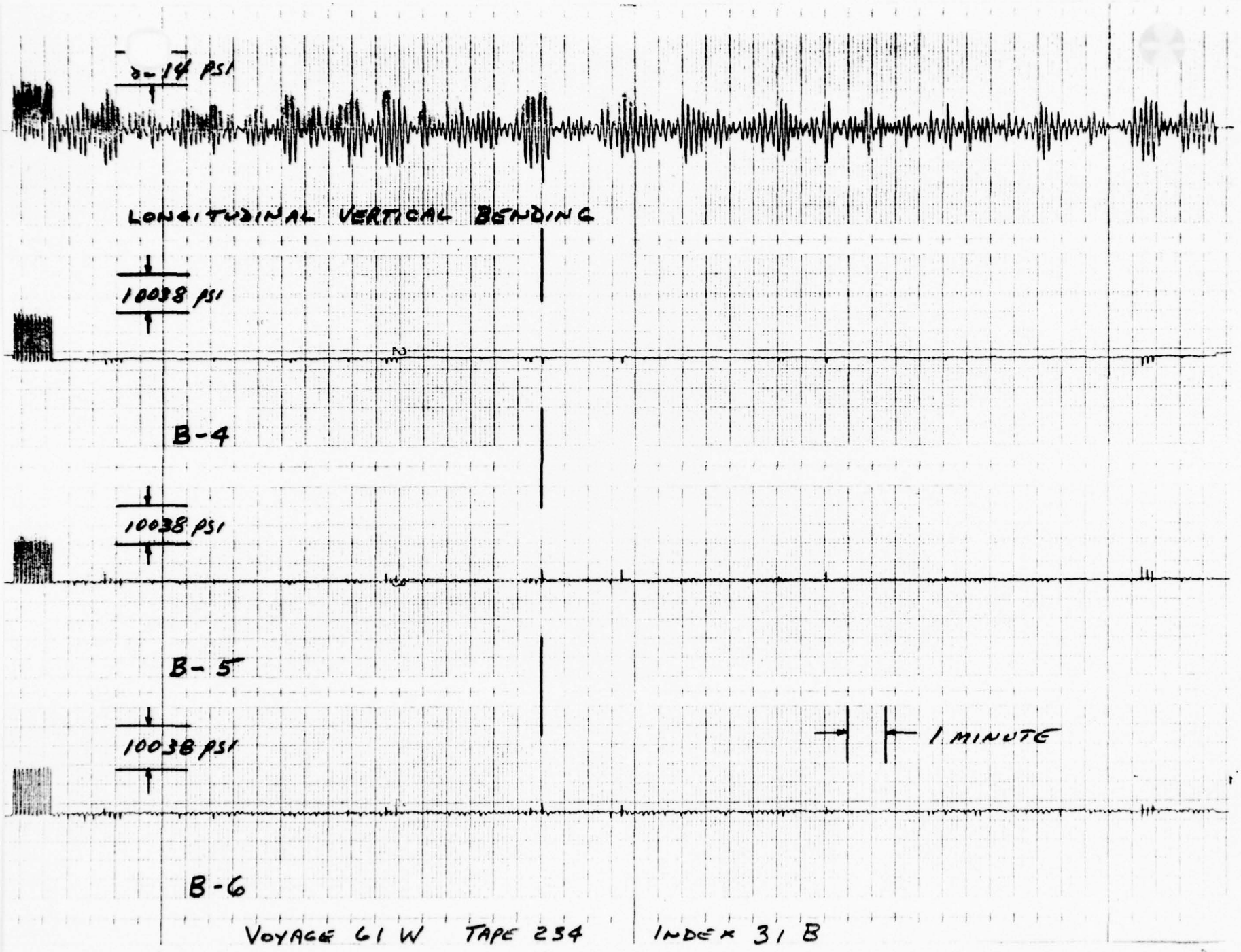


VOYAGE 61 W TAPE 234 INDEX 31 B



VOYAGE 61 W TAPE 234 INDEX 31 B


8214 PSI
LONGITUDINAL VERTICAL BENDING
10038 PSI
B-1
10038 PSI
B-2
10038 PSI
1 MINUTE
B-3
VOYAGE 61 W TAPE 234 INDEX 31 B



VOYAGE 61 W TAPE 254 INDEX 31 B

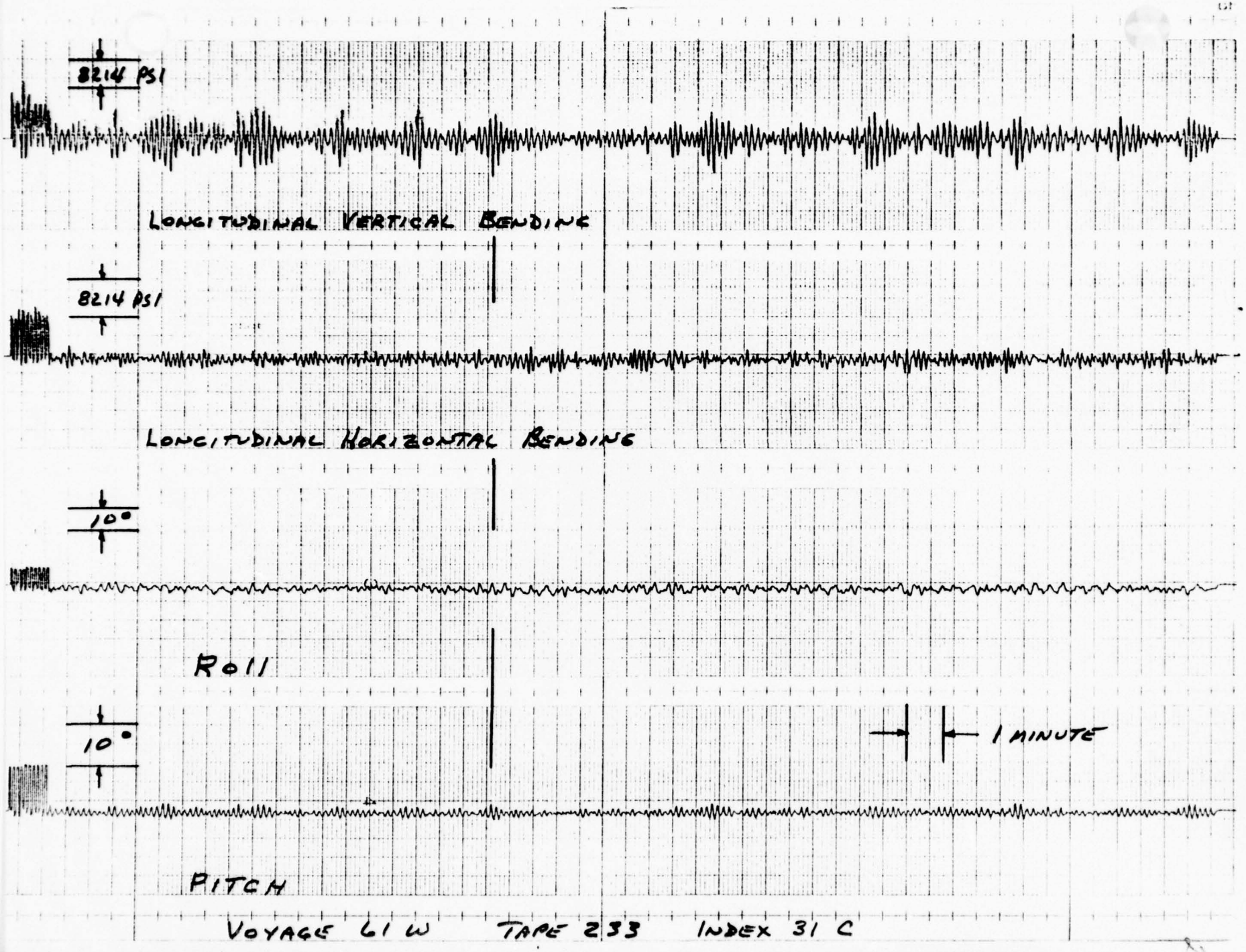
Voyage 61 West
Index 31 "C" Mode

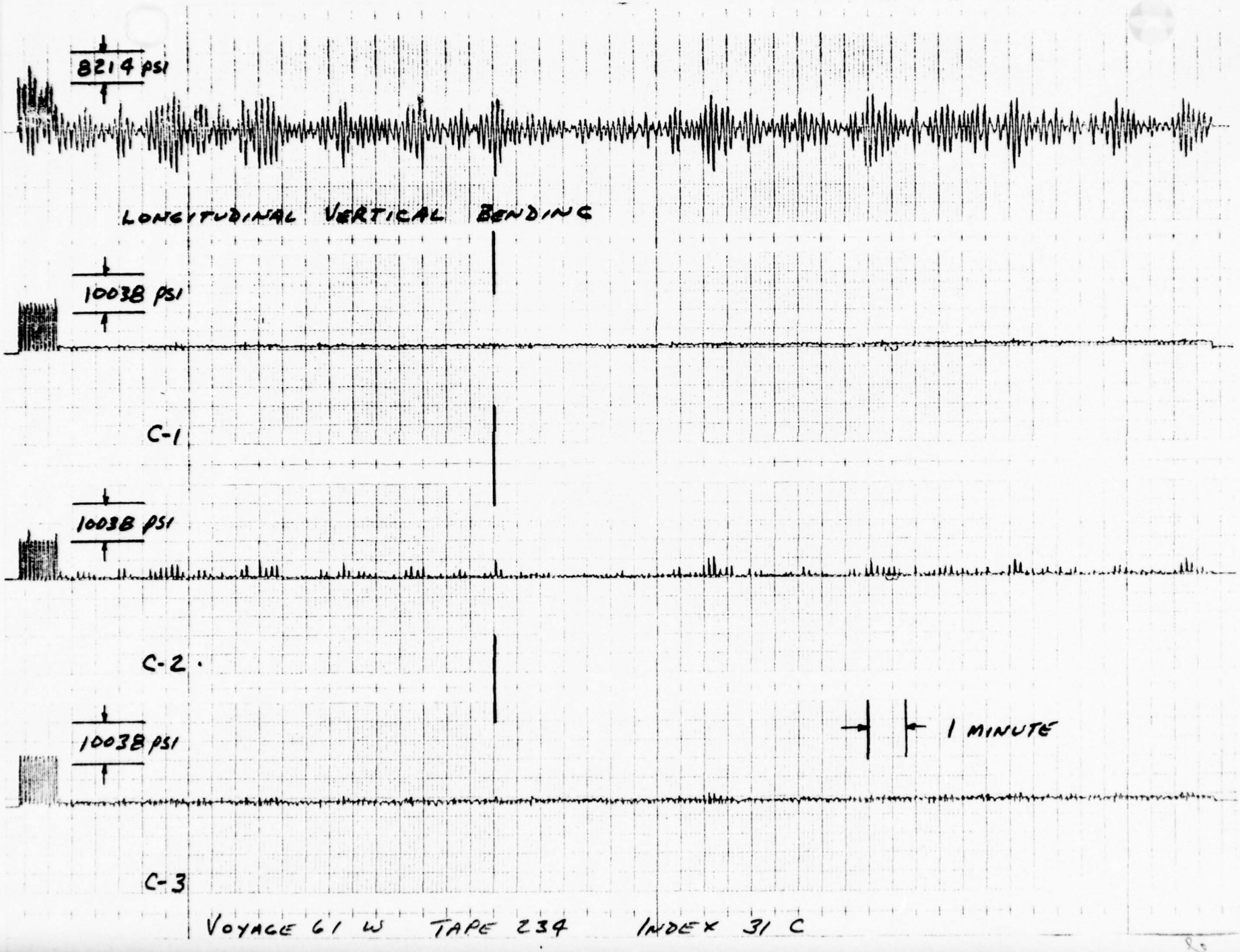
Recorder #1	VERTICAL BENDING
Tape #233	HORIZONTAL BENDING
	ROLL
	PITCH
Recorder #2	VERTICAL BENDING
Tape #234	C 1-4
	A 1,2,5,6 Bow Sideshell
	B 1,2,5,6

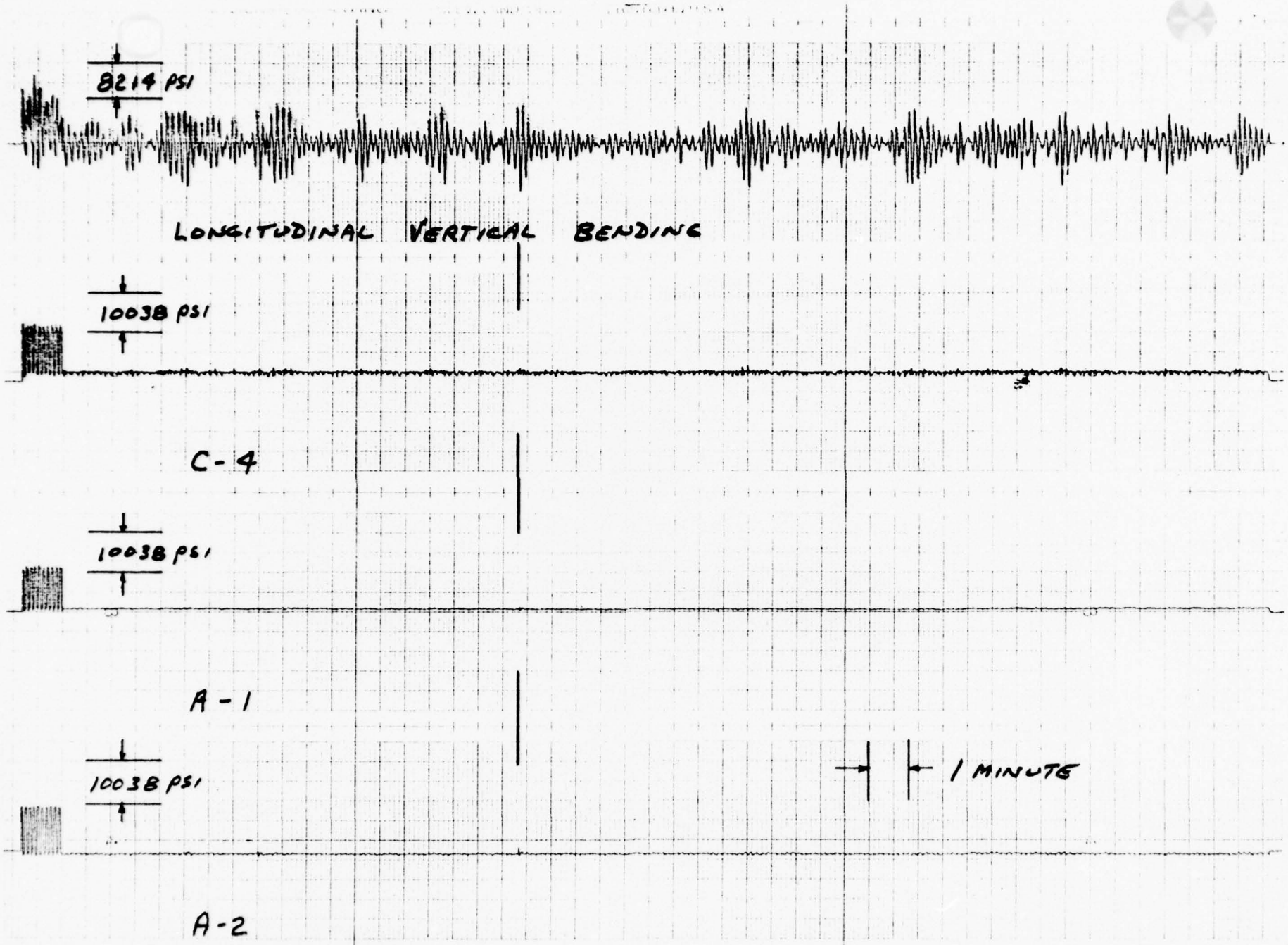
Note: Reference lines denote instant of largest bow gage stress recorded in interval.

Figure 15C

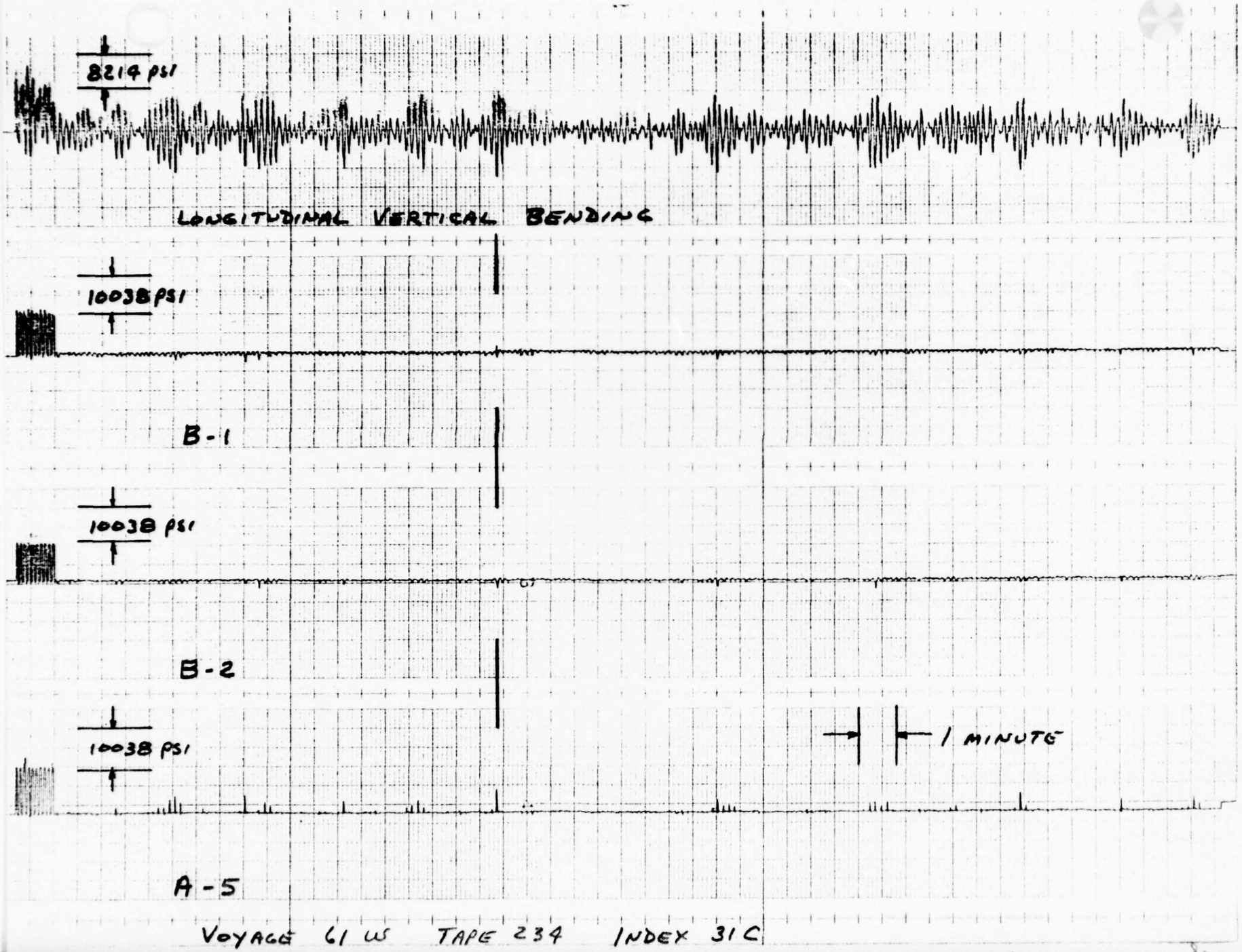
SAMPLE ANALOG TRACES FOR HIGH SIDESHELL STRESSES-C MODE


8214 PSI
LONGITUDINAL VERTICAL BENDING
8214 PSI
LONGITUDINAL HORIZONTAL BENDING
10°
ROLL
10°
1 MINUTE
PITCH
VOYAGE 61 W TAPE 233 INDEX 31 C

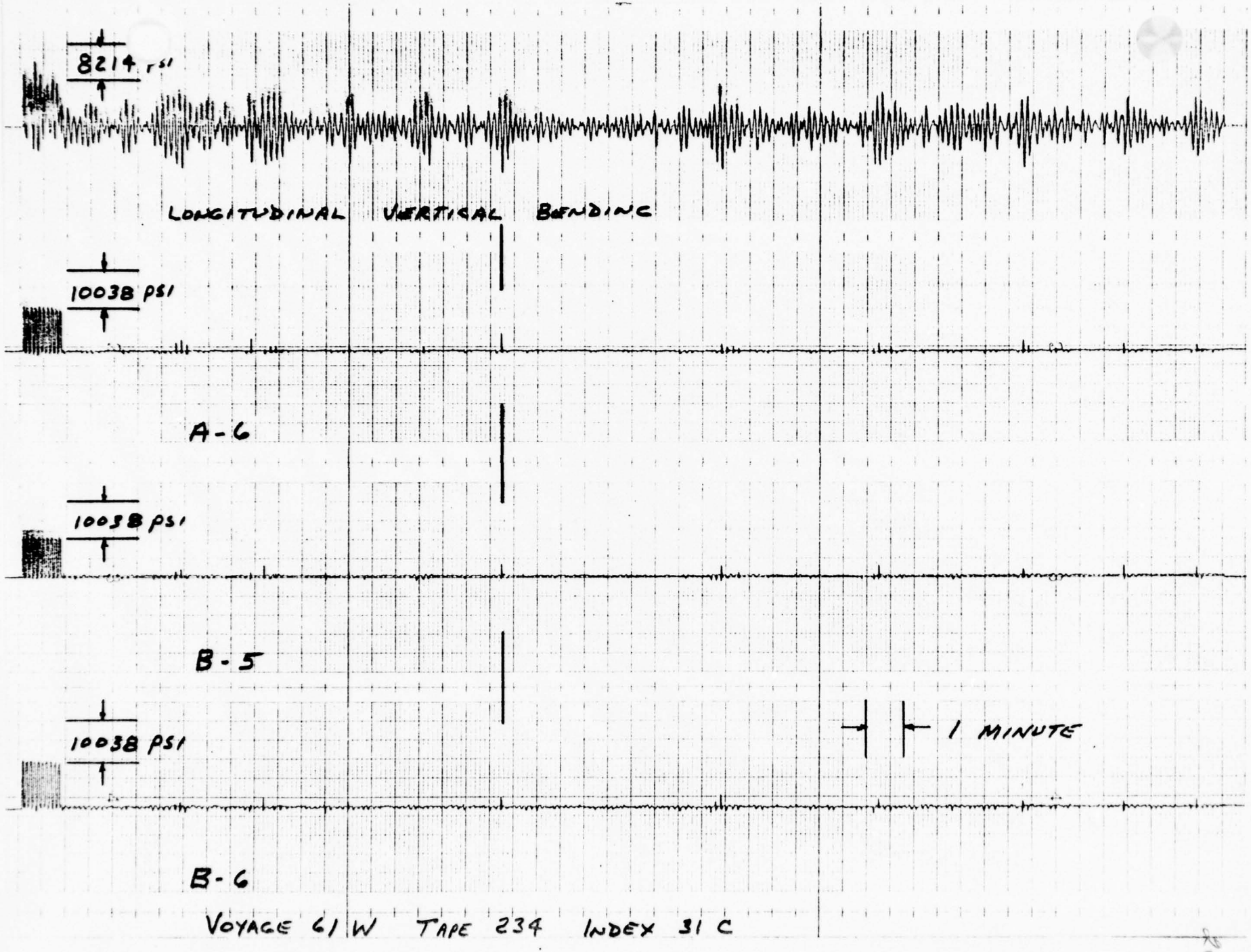

8214 PSI
LONGITUDINAL VERTICAL BENDING
10038 PSI
C-1
10038 PSI
C-2
10038 PSI
1 MINUTE
C-3
VOYAGE 61 W TAPE 234 INDEX 31 C



VOYAGE 61 W TAPE 234 INDEX 31 C



VOYAGE 61 WS TAPE 234 INDEX 31C



VOYAGE 61W TAPE 234 INDEX 31 C

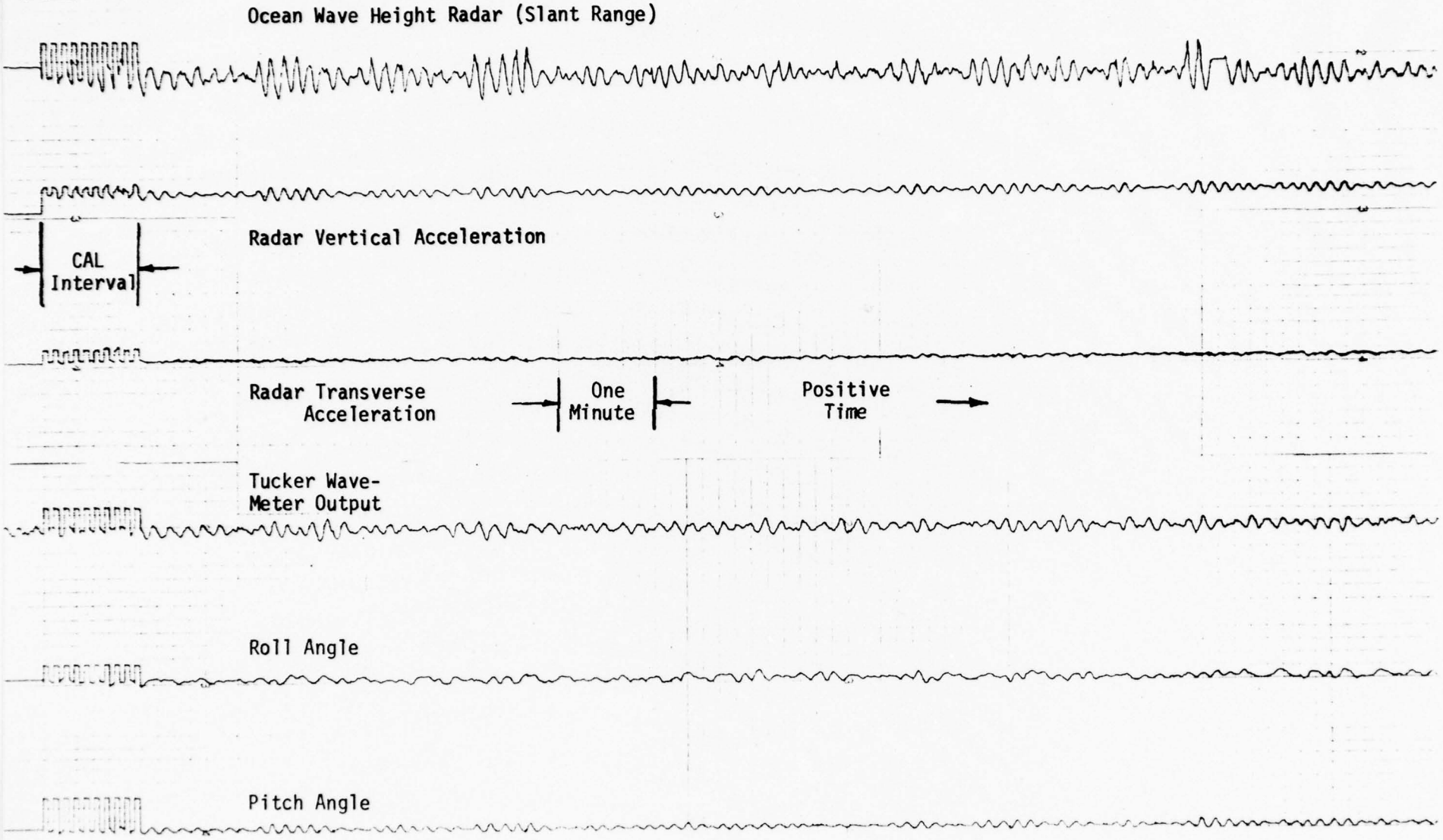


Figure 16. TYPICAL ANALOG TRACES OF DATA REQUIRED FOR WAVE HEIGHT DETERMINATION (RECORDER NO. 1, TAPE 233, INDEX 1A)

APPENDIX A

LISTING OF ENVIRONMENTAL CONDITIONS AND LONGITUDINAL VERTICAL BENDING STRESS FOR EACH DIGITIZED THIRD SEASON INTERVAL

This appendix is a result of the TAB program, a part of the process of preparing digital library tapes. The column headings and listing are generally self-explanatory. Note, however, that all the azimuths are measured in degrees and relative directions are measured with zero as the vessel heading. The column labeled "Sea State" lists the Beaufort Number observation. Note also that the stresses listed refer only to the wave-induced or first mode components.

The listing, as used here, serves two purposes; first to list the various combinations of environmental conditions encountered and second to list the various LVB stress levels generated by these conditions. It is expected that the listing will be used to locate specific intervals of interest for further data reduction by investigators.

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	TIME GMT	LATITUDE / LONGITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP INTERVAL NUM					SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN201 002	01-17-75			078	130.0	055P	055P		123P	0800	43	PT CLDY
59E 05		0630		31.7	04	15	01		001	10280	040	
MCLEAN201 002	01-17-75			078	130.0	055P	055P		123P	0800	43	PT CLDY
59E 06		0600		31.7	04	15	01		001	10280	040	
MCLEAN201 002	01-17-75			078	130.0	055P	055P		123P	0800	43	PT CLDY
59E 07		0630		31.7	04	15	01		001	10280	040	
MCLEAN201 002	01-17-75			078	130.0	055P	055P		123P	0800	43	PT CLDY
59E 08		0400		31.7	04	15	01		001	10280	040	
MCLEAN201 003	01-17-75			090	130.5	090P	090P		135P	0800	46	PT CLDY
59E 09		1200		31.9	05	20	03		004	10295	040	
MCLEAN201 003	01-17-75			090	130.5	090P	090P		135P	0800	46	PT CLDY
59E 12		1230		31.9	05	20	03		004	10295	040	
MCLEAN201 004	01-17-75	37-06 N		090	127.0	135P	135P		135P	0800	65	PT CLDY
59E 13		1630	069-54 W	30.9	06	25	03		003	10289	046	
MCLEAN201 004	01-17-75	37-06 N		090	127.0	135P	135P		135P	0800	65	PT CLDY
59E 14		1630	069-54 W	30.9	06	25	03		003	10289	046	
MCLEAN201 004	01-17-75	37-06 N		090	127.0	135P	135P		135P	0800	65	PT CLDY
59E 15		1630	069-54 W	30.9	06	25	03		003	10289	046	
MCLEAN201 004	01-17-75	37-06 N		090	127.0	135P	135P		135P	0800	65	PT CLDY
59E 16		1630	069-54 W	30.9	06	25	03		003	10289	046	
MCLEAN201 005	01-17-75	37-06 N		088	127.4	133P	133P		133P	0800	66	PT CLDY
59E 17		2030	069-54 W	31.0	07	30	03		004	10281	051	
MCLEAN201 005	01-17-75	37-06 N		088	127.4	133P	133P		133P	0800	66	PT CLDY
59E 18		2030	069-54 W	31.0	07	30	03		004	10281	051	
MCLEAN201 005	01-17-75	37-06 N		088	127.4	133P	133P		133P	0800	66	PT CLDY
59E 19		2030	069-54 W	31.0	07	30	03		004	10281	051	
MCLEAN201 005	01-17-75	37-06 N		088	127.4	133P	133P		133P	0800	66	PT CLDY
59E 20		2030	069-54 W	31.0	07	30	03		004	10281	051	
MCLEAN201 006	01-17-75	37-06 N		090	126.0	112P	112P		135P	0800	70	PT CLDY
59E 21		2400	069-54 W	30.0	07	30	03		004	10282	049	
MCLEAN201 006	01-17-75	37-06 N		090	126.0	112P	112P		135P	0800	70	PT CLDY
59E 22		2400	069-54 W	30.0	07	30	03		004	10282	049	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV3S MIDSHIP TRANSDUCER
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NUMBER CYCLES	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND--	1ST MODE		
	1347	1	
159	505	703	0
	1523	1	
159	578	673	-879
	2065	0	
140	900	0	-638
	3544	0	
99	1230	0	-616
	3021	3	ROLLING TO STBD -4
74	1360	739	-682
	4313	5	ROLLING TO STBD -4
72	2219	856	-550
	3449	2	
82	1325	739	668
	3244	0	
73	1530	0	761
	3918	0	
74	1772	0	754
	5485	0	
62	2014	0	1142
	5643	7	
53	3266	827	563
	6225	2	
45	3032	695	1032
	7039	0	
46	2951	0	593
	5061	0	
48	2548	0	842
	6884	10	
58	3219	878	1032
	7368	12	
58	3200	1105	673

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV6S MIDSHIP TRANSDUCER
PAGE 2A

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVEWAVE HT LENG FEET FT		SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN201	006	01-17-75	37-06 N	090	126.0	112P	112P		135P	0800	70	PT CLDY
59E	23	2400	069-54 W	30.0	07	30	03		004	10202	049	
MCLEAN201	006	01-17-75	37-06 N	090	126.0	112P	112P		135P	0800	70	PT CLDY
59E	24	2400	069-54 W	30.0	07	30	03		004	10202	049	
MCLEAN201	007	01-18-75	37-06 N	090	125.7	112P	112P		135P	0800	63	OCAST
59E	25	0400	069-54 W	29.8	07	30	03		004	10301	050	
MCLEAN201	007	01-18-75	37-06 N	090	125.7	112P	112P		135P	0800	63	OCAST
59E	26	0400	069-54 W	29.8	07	30	03		004	10301	050	
MCLEAN201	007	01-18-75	37-06 N	090	125.7	112P	112P		135P	0800	63	OCAST
59E	27	0400	069-54 W	29.8	07	30	03		004	10301	050	
MCLEAN201	007	01-18-75	37-06 N	090	125.7	112P	112P		135P	0800	63	OCAST
59E	28	0400	069-54 W	29.8	07	30	03		004	10301	050	
MCLEAN201	008	01-18-75	37-06 N	090	127.0	135P	135P		135P	0800	67	OCAST
59E	29	0800	069-54 W	30.9	07	30	03		005	10288	052	
MCLEAN201	008	01-18-75	37-06 N	090	127.0	135P	135P		135P	0800	67	OCAST
59E	30	0800	069-54 W	30.9	07	30	03		005	10288	052	
MCLEAN201	008	01-18-75	37-06 N	090	127.0	135P	135P		135P	0800	67	OCAST
59E	31	0800	069-54 W	30.9	07	30	03		005	10288	052	
MCLEAN201	008	01-18-75	37-06 N	090	127.0	135P	135P		135P	0800	67	OCAST
59E	32	0800	069-54 W	30.9	07	30	03		005	10288	052	
MCLEAN201	009	01-18-75	37-06 N	090	126.6	135P	135P		135P	0800	65	PT CLDY
59E	33	1200	069-54 W	30.6	07	30	03		006	10302	054	
MCLEAN201	009	01-18-75	37-06 N	090	126.6	135P	135P		135P	0800	65	PT CLDY
59E	34	1200	069-54 W	30.6	07	30	03		006	10302	054	
MCLEAN201	009	01-18-75	37-06 N	090	126.6	135P	135P		135P	0800	65	PT CLDY
59E	35	1200	069-54 W	30.6	07	30	03		006	10302	054	
MCLEAN201	009	01-18-75	37-06 N	090	126.6	135P	135P		135P	0800	65	PT CLDY
59E	36	1200	069-54 W	30.6	07	30	03		006	10302	054	
MCLEAN201	010	01-18-75	36-54 N	090	127.3	090P	090P		135P	0800	64	PT CLDY
59E	37	1600	068-13 W	31.0	07	30	04		006	10311	057	
MCLEAN201	010	01-18-75	36-54 N	090	127.3	090P	090P		135P	0800	64	PT CLDY
59E	38	1600	068-13 W	31.0	07	30	04		006	10311	057	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV6S MIDSHIP TRANSDUCER
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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND--	1ST MODE	
7397	7	
56	2966	864	849
5031	3	
61	2592	776	1032
4702	1	
67	2380	703	739
7126	2	
60	3054	1120	234
4643	0	
60	2292	0	820
5771	0	
47	2863	0	769
9360	1	
44	3947	703	864
7719	0	
44	4108	0	783
6196	4	
52	3303	827	739
7163	2	
51	3420	1016	693
8789	0	ROLLING EASILY
42	4116	0	1089
7492	0	ROLLING EASILY
50	3574	0	795
8403	0	ROLLING EASILY
31	4416	0	739
7346	2	ROLLING EASILY
43	3786	732	1435
7653	2	
55	3332	732	1794
11828	5	
47	4313	827	1282

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
PAGE 3A

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN201	010	01-18-75	36-54 N	090	127.3	090P	090P		135P	0600	64	PT CLDY
59E	39	1600	055-16 W	31.0	07	30	04		006	10311	057	
MCLEAN201	010	01-18-75	36-54 N	090	127.3	090P	090P		135P	0600	64	PT CLDY
59E	40	1600	055-16 W	31.0	07	30	04		006	10311	057	
MCLEAN201	011	01-18-75	36-54 N	080	127.0	125P	125P		125I	0600	50	PT CLDY
59E	41	2000	055-16 W	30.9	07	30	04		006	03016	557	
MCLEAN201	011	01-18-75	36-54 N	080	127.0	125P	125P		125I	0600	50	PT CLDY
59E	42	2000	055-18 W	30.9	07	30	04		006	03016	557	
MCLEAN201	011	01-18-75	36-54 N	080	127.0	125P	125P		125I	0600	50	PT CLDY
59E	43	2000	055-16 W	30.9	07	30	04		006	03016	557	
MCLEAN201	011	01-18-75	36-54 N	080	127.0	125P	125P		125I	0600	50	PT CLDY
59E	44	2000	055-18 W	30.9	07	30	04		006	03016	557	
MCLEAN201	012	01-18-75	36-54 N	080	126.7	125P	125P		125P	0600	64	COAST
59E	45	2400	055-18 W	30.6	07	30	05		008	10322	049	
MCLEAN201	012	01-18-75	36-54 N	080	126.7	125P	125P		125P	0600	64	COAST
59E	46	2400	055-18 W	30.6	07	30	05		008	10322	049	
MCLEAN201	012	01-18-75	36-54 N	080	126.7	125P	125P		125P	0600	64	COAST
59E	47	2400	055-18 W	30.6	07	30	05		008	10322	049	
MCLEAN201	012	01-18-75	36-54 N	080	126.7	125P	125P		125P	0600	64	COAST
59E	48	2400	055-18 W	30.6	07	30	05		008	10322	049	
MCLEAN201	013	01-19-75	36-54 N	080	126.7	035P	125P		125P	0600	64	COAST
59E	49	0400	055-18 W	30.6	06	25	04		006	10331	053	
MCLEAN201	013	01-19-75	36-54 N	080	126.7	035P	125P		125P	0600	64	COAST
59E	50	0400	055-18 W	30.6	06	25	04		006	10331	053	
MCLEAN201	013	01-19-75	36-54 N	080	126.7	035P	125P		125P	0600	64	COAST
59E	51	0400	055-18 W	30.6	06	25	04		006	10331	053	
MCLEAN201	013	01-19-75	36-54 N	080	126.7	035P	125P		125P	0600	64	COAST
59E	52	0400	055-18 W	30.6	06	25	04		006	10331	053	
MCLEAN201	014	01-19-75	36-54 N	080	126.8	125P	125P		125P	0600	64	COAST
59E	53	0800	055-16 W	30.7	06	25	03		005	10342	051	
MCLEAN201	014	01-19-75	36-54 N	080	126.8	125P	125P		125P	0600	64	COAST
59E	54	0800	055-18 W	30.7	06	25	03		005	10342	051	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
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MAX P-TO-P STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			---WAVE IND-- 1ST MODE			
9411	13		50	4013	1018	1303
10290	13		56	3889	961	856
7735	11		49	4035	908	834
3291	13		55	3933	1120	820
9521	21		44	4775	1237	769
9711	5		52	3991	1164	769
9111	14		56	3754	1098	651
9858	14		53	4606	1831	866
8254	10		57	3801	791	754
9301	16		54	4160	1127	871
8569	11		47	4006	981	783
7800	8		51	3896	966	725
11821	13		43	5230	988	1113
8232	5		46	3634	717	673
7426	19		60	3024	1062	1003
6336	8		46	3479	988	585

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SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVB3 MIDSHIP TRANSDUCER
PAGE 4A

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN201	014	01-19-75	36-54 N	080	126.8	125P	125P	
59E	55	0800	055-18 W	30.7	06	25	03	
MCLEAN201	014	01-19-75	36-54 N	080	126.8	125P	125P	
59E	56	0800	055-18 W	30.7	06	25	03	
MCLEAN201	015	01-19-75	38-26 N	080	083.0	125P	125P	
59E	57	1200	041-33 W	20.3	06	25	03	
MCLEAN201	015	01-19-75	38-26 N	080	083.0	125P	125P	
59E	58	1200	041-33 W	20.3	06	25	03	
MCLEAN201	015	01-19-75	38-26 N	080	083.0	125P	125P	
59E	59	1200	041-33 W	20.3	06	25	03	
MCLEAN201	015	01-19-75	38-26 N	080	083.0	125P	125P	
59E	60	1200	041-33 W	20.3	06	25	03	
MCLEAN203	016	01-19-75	38-26 N	080	083.0	057P	057P	
59E	01	1600	041-33 W	20.3	03	10	02	
MCLEAN203	016	01-19-75	38-26 N	080	083.0	057P	057P	
59E	02	1600	041-33 W	20.3	03	10	02	
MCLEAN203	016	01-19-75	38-26 N	080	083.0	057P	057P	
59E	03	1600	041-33 W	20.3	03	10	02	
MCLEAN203	016	01-19-75	38-26 N	080	083.0	057P	057P	
59E	04	1600	041-33 W	20.3	03	10	02	
MCLEAN203	017	01-19-75	38-26 N	080	082.7	057P	057P	
59E	05	2000	041-33 W	20.2	02	05	02	
MCLEAN203	017	01-19-75	38-26 N	080	082.7	057P	057P	
59E	06	2000	041-33 W	20.2	02	05	02	
MCLEAN203	017	01-19-75	38-26 N	080	082.7	057P	057P	
59E	07	2000	041-33 W	20.2	02	05	02	
MCLEAN203	017	01-19-75	38-26 N	080	082.7	057P	057P	
59E	08	2000	041-33 W	20.2	02	05	02	
MCLEAN203	018	01-19-75	38-26 N	080	083.3	057P	057P	
59E	09	2400	041-33 W	20.4	03	10	02	
MCLEAN203	018	01-19-75	38-26 N	080	083.3	057P	057P	
59E	10	2400	041-33 W	20.4	03	10	02	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVB3 MIDSHIP TRANSDUCER
PAGE 4B

REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND-- 1ST MODE		
125P	0600	64	OCAST	6833	4	
005	10342	051		57	2841	864	915
125P	0600	64	OCAST	8137	8	
005	10342	051		49	4445	791	703
125P	0600	63	OCAST	8906	0	
005	10363	055		67	4350	0	1875
125P	0600	63	OCAST	7463	0	
005	10363	055		64	3706	0	1853
125P	0600	63	OCAST	8056	0	
005	10363	055		67	3178	0	1882
125P	0600	63	OCAST	9673	2	
005	10363	055		63	4592	798	1926
125P	0600	62	PT CLDY	6259	0	
005	10362	055		67	3515	0	0
125P	0600	62	PT CLDY	7988	0	
005	10362	055		61	4148	0	7
125P	0600	62	PT CLDY	7429	1	
005	10362	055		64	3707	1110	66
125P	0600	62	PT CLDY	6171	0	
005	10362	055		69	3317	0	23
125P	0600	62	PT CLDY	7164	0	
005	10373	054		73	2714	0	-85
125P	0600	62	PT CLDY	8193	0	
005	10373	054		66	3854	0	-155
125P	0600	62	PT CLDY	7480	0	
005	10373	054		68	3449	0	-133
125P	0600	62	PT CLDY	6805	0	
005	10373	054		62	3582	0	-96
125P	0600	57	OCAST	7517	1	
005	10392	055		60	4192	676	-173
125P	0600	57	OCAST	7532	0	
005	10392	055		59	3729	0	-206

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV85 MIDSHIP TRANSDUCER

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN203	016	01-19-75	38-26 N	080	083.3	057P	057P	
59E	11	2400	041-33 W	20.4	03	10	02	
MCLEAN203	018	01-19-75	38-26 N	080	083.3	057P	057P	
59E	12	2400	041-33 W	20.4	03	10	02	
MCLEAN203	019	01-20-75	38-26 N	080	083.6	035P	035P	
59E	13	0400	041-33 W	20.5	02	05	01	
MCLEAN203	019	01-20-75	38-26 N	080	083.6	035P	035P	
59E	14	0400	041-33 W	20.5	02	05	01	
MCLEAN203	019	01-20-75	38-26 N	080	083.6	035P	035P	
59E	15	0400	041-33 W	20.5	02	05	01	
MCLEAN203	019	01-20-75	38-26 N	080	083.6	035P	035P	
59E	16	0400	041-33 W	20.5	02	05	01	
MCLEAN203	020	01-20-75	38-26 N	078	084.3	033P	033P	
59E	17	0800	041-33 W	20.6	04	15	01	
MCLEAN203	020	01-20-75	38-26 N	078	084.3	033P	033P	
59E	18	0800	041-33 W	20.6	04	15	01	
MCLEAN203	020	01-20-75	38-26 N	078	084.3	033P	033P	
59E	19	0800	041-33 W	20.6	04	15	01	
MCLEAN203	020	01-20-75	38-26 N	078	084.3	033P	033P	
59E	20	0800	041-33 W	20.6	04	15	01	
MCLEAN203	021	01-20-75	39-50 N	072	070.4	018S	018S	
59E	21	1200	031-26 W	17.2	03	10	01	
MCLEAN203	021	01-20-75	39-50 N	072	070.4	018S	018S	
59E	22	1200	031-26 W	17.2	03	10	01	
MCLEAN203	021	01-20-75	39-50 N	072	070.4	018S	018S	
59E	23	1200	031-26 W	17.2	03	10	01	
MCLEAN203	021	01-20-75	39-50 N	072	070.4	018S	018S	
59E	24	1200	031-26 W	17.2	03	10	01	
MCLEAN203	022	01-20-75	39-50 N	072	070.6	018S	018S	
59E	25	1600	031-26 W	17.2	01	02	01	
MCLEAN203	022	01-20-75	39-50 N	072	070.6	018S	018S	
59E	26	1600	031-26 W	17.2	01	02	01	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV85 MIDSHIP TRANSDUCER

REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	SWELL HT FEET	BAROM INCH HG	AIR TEMP
125P	0600	57	OCAST			
005	10392	055				
125P	0600	57	OCAST			
005	10392	055				
125P	0600	59	PT CLDY			
005	10389	055				
125P	0600	59	PT CLDY			
005	10389	055				
125P	0600	59	PT CLDY			
005	10389	055				
125P	0600	59	PT CLDY			
005	10389	055				
123P	0600	60	PT CLDY			
005	10411	055				
123P	0600	60	PT CLDY			
005	10411	055				
123P	0600	60	PT CLDY			
005	10411	055				
123P	0600	60	PT CLDY			
005	10411	055				
117P	0600	59	PT CLDY			
005	10419	059				
117P	0600	59	PT CLDY			
005	10419	059				
117P	0600	59	PT CLDY			
005	10419	059				
117P	0600	59	PT CLDY			
005	10419	059				
117P	0600	57	CLEAR			
006	10423	057				
117P	0600	57	CLEAR			
006	10423	057				

MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND-- 1ST MODE			
7215	0	
65	3743	0	-184
7592	0	
67	3354	0	-155
8627	0	
62	3935	0	-214
8340	1	
65	3537	669	-206
8561	0	
66	3758	0	-170
7105	0	
64	2986	0	-126
6825	0	
63	3523	0	-103
4964	0	
61	2978	0	-74
5943	0	
70	2787	0	-103
6185	0	
66	2780	0	-23
5810	0	
74	3148	0	-1273
5965	0	
62	2736	0	-1251
6266	0	
80	2502	0	-1133
5582	0	
73	3074	0	-993
5796	0	ROLLING IN 6 IN BEAM
74	2502	0	-729
5494	0	ROLLING IN 6 IN BEAM
70	2978	0	-677

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
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ANALOG TAPE NUMBER	LEGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN203	022	01-20-75	39-50 N	072	070.6	018S	018S	
59E	27	1600	031-26 W	17.2	01	02	01	
MCLEAN203	022	01-20-75	39-50 N	072	070.6	018S	018S	
59E	28	1600	031-26 W	17.2	01	02	01	
MCLEAN203	023	01-20-75	39-50 N	072	070.7		018S	
59E	29	2000	031-26 W	17.3	01	02	01	
MCLEAN203	023	01-20-75	39-50 N	072	070.7		018S	
59E	30	2000	031-26 W	17.3	01	02	01	
MCLEAN203	023	01-20-75	39-50 N	072	070.7		018S	
59E	31	2000	031-26 W	17.3	01	02	01	
MCLEAN203	023	01-20-75	39-50 N	072	070.7		018S	
59E	32	2000	031-26 W	17.3	01	02	01	
MCLEAN203	024	01-20-75	39-50 N	072	070.2		018S	
59E	33	2400	031-26 W	17.1	01	02	01	
MCLEAN203	024	01-20-75	39-50 N	072	070.2		018S	
59E	34	2400	031-26 W	17.1	01	02	01	
MCLEAN203	024	01-20-75	39-50 N	072	070.2		018S	
59E	35	2400	031-26 W	17.1	01	02	01	
MCLEAN203	024	01-20-75	39-50 N	072	070.2		018S	
59E	36	2400	031-26 W	17.1	01	02	01	
MCLEAN203	025	01-21-75	39-50 N	072	070.4		018S	
59E	37	0400	031-26 W	17.2	01	02	01	
MCLEAN203	025	01-21-75	39-50 N	072	070.4		018S	
59E	38	0400	031-26 W	17.2	01	02	01	
MCLEAN203	025	01-21-75	39-50 N	072	070.4		018S	
59E	39	0400	031-26 W	17.2	01	02	01	
MCLEAN203	025	01-21-75	39-50 N	072	070.4		018S	
59E	40	0400	031-26 W	17.2	01	02	01	
MCLEAN203	026	01-21-75	39-50 N	072	071.2	162P	162P	
59E	41	0800	031-26 W	17.4	02	05	01	
MCLEAN203	026	01-21-75	39-50 N	072	071.2	162P	162P	
59E	42	0800	031-26 W	17.4	02	05	01	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND--	1ST MODE	
117P	0600	57	CLEAR	4597	0	ROLLING IN 6 IN BEAM
006	10423	057		75	2574	0	-743
117P	0600	57	CLEAR	5729	0	ROLLING IN 6 IN BEAM
006	10423	057		82	3045	0	-846
117P	0600	58	CLEAR	6185	0	
006	10449	054		89	2883	0	-1207
117P	0600	58	CLEAR	5413	0	
006	10449	054		90	2464	0	-1222
117P	0600	58	CLEAR	6090	0	
006	10449	054		78	2721	0	-1222
117P	0600	58	CLEAR	5200	0	
006	10449	054		80	2618	0	-1260
117P	0600	56	CLEAR	4508	0	
006	10451	053		82	2500	0	-1273
117P	0600	56	CLEAR	4006	0	
006	10451	053		80	2228	0	-1295
117P	0600	56	CLEAR	6619	0	
006	10451	053		76	2647	0	-1324
117P	0600	56	CLEAR	5641	0	
006	10451	053		69	3039	0	-1295
117P	0600	57	PT CLDY	5832	0	
006	10444	054		80	2228	0	-1324
117P	0600	57	PT CLDY	6009	0	
006	10444	054		79	2728	0	-1295
117P	0600	57	PT CLDY	5325	0	
006	10444	054		81	2913	0	-1295
117P	0600	57	PT CLDY	6332	0	
006	10444	054		82	2684	0	-1273
117P	0600	57	PT CLDY	4104	0	
006	10443	054		82	2339	0	-1324
117P	0600	57	PT CLDY	5546	0	
006	10443	054		68	2656	0	-1288

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV85 MIDSHIP TRANSDUCER

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN203	026	01-21-75	39-50 N	072	071.2	162P	162P	
59E	43	0800	031-26 W	17.4	02	05	01	
MCLEAN203	026	01-21-75	39-50 N	072	071.2	162P	162P	
59E	44	0860	031-26 W	17.4	02	05	01	
MCLEAN203	027	01-21-75	39-50 N	072	070.3	173P	173P	
59E	45	1200	031-26 W	17.2	03	10	01	
MCLEAN203	027	01-21-75	39-50 N	072	070.3	173P	173P	
59E	46	1200	031-26 W	17.2	03	10	01	
MCLEAN203	027	01-21-75	39-50 N	072	070.3	173P	173P	
59E	47	1200	031-26 W	17.2	03	10	01	
MCLEAN203	027	01-21-75	39-50 N	072	070.3	173P	173P	
59E	48	1200	031-26 W	17.2	03	10	01	
MCLEAN203	028	01-21-75	42-00 N	072	066.0	151P	151P	
59E	49	1600	022-51 W	16.1	05	20	02	
MCLEAN203	028	01-21-75	42-00 N	072	066.0	151P	151P	
59E	50	1600	022-51 W	16.1	05	20	02	
MCLEAN203	028	01-21-75	42-00 N	072	066.0	151P	151P	
59E	51	1600	022-51 W	16.1	05	20	02	
MCLEAN203	028	01-21-75	42-00 N	072	066.0	151P	151P	
59E	52	1600	022-51 W	16.1	05	20	02	
MCLEAN203	029	01-21-75	42-00 N	072	066.1	173P	173P	
59E	53	2000	022-51 W	16.1	05	20	02	
MCLEAN203	029	01-21-75	42-00 N	072	066.1	173P	173P	
59E	54	2000	022-51 W	16.1	05	20	02	
MCLEAN203	029	01-21-75	42-00 N	072	066.1	173P	173P	
59E	55	2000	022-51 W	16.1	05	20	02	
MCLEAN203	030	01-21-75	42-00 N	072	065.9	175S	175S	
59E	57	2400	022-51 W	16.1	05	20	02	
MCLEAN203	030	01-21-75	42-00 N	072	065.9	175S	175S	
59E	58	2400	022-51 W	16.1	05	20	02	
MCLEAN203	030	01-21-75	42-00 N	072	065.9	175S	175S	
59E	59	2400	022-51 W	16.1	05	20	02	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV85 MIDSHIP TRANSDUCER

REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND--	1ST MODE	
117P	0600	57	PT CLDY	6744	0	
006	10443	054		76	2750	0	-1361
117P	0600	57	PT CLDY	4553	0	
006	10443	054		79	2419	0	-1376
117P	0600	55	PT CLDY	7053	0	
006	10432	059		83	2883	0	-1398
117P	0600	55	PT CLDY	5200	0	
006	10432	059		76	2773	0	-1295
117P	0600	55	PT CLDY	5715	0	
006	10432	059		81	2692	0	-1280
117P	0600	55	PT CLDY	5619	0	
006	10432	059		81	2287	0	-1339
117P	0600	55	OCAST	4038	0	
005	10400	057		80	2383	0	-2119
117P	0600	55	OCAST	4854	0	
005	10400	057		80	2500	0	-2163
117P	0600	55	OCAST	7178	0	
005	10400	057		88	2706	0	-2134
117P	0600	55	OCAST	4633	0	
005	10400	057		97	1949	0	-2163
117P	0600	56	OCAST	6185	0	
005	10391	056		90	2500	0	-2244
117P	0600	56	OCAST	5457	0	
005	10391	056		91	2324	0	-2207
117P	0600	56	OCAST	4972	0	
005	10391	056		76	2604	0	-2273
117P	0600	54	OCAST	4994	0	
005	10353	056		83	2471	0	-2317
117P	0600	54	OCAST	5541	0	
005	10353	056		86	2546	0	-2332
117P	0600	54	OCAST	5737	0	
005	10353	056		81	2883	0	-2340

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV8S MIDSHIP TRANSDUCER
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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES ---WAVE IND--	RMS STRESS PSI	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN203 030	01-21-75	42-00 N	072	065.9	175S	175S		117P	0600	54	OCAST	6965	0		
59E 60	2400	022-51 W	16.1	05	20	02		005	10353	056		90	2677	0	-2376
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	7143	0		
59E 01	0400	022-51 W	15.8	05	20	02		005	10312	057		86	3093	0	0
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	6850	0		
59E 02	0400	022-51 W	15.8	05	20	02		005	10312	057		87	2750	0	131
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	7034	0		
59E 03	0400	022-51 W	15.8	05	20	02		005	10312	057		83	3166	0	211
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	5852	0		
59E 04	0400	022-51 W	15.8	05	20	02		005	10312	057		82	2838	0	226
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	6092	0		
59E 05	0800	022-51 W	15.8	05	20	02		005	10283	056		83	3174	0	175
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	7581	0		
59E 06	0800	022-51 W	15.8	05	20	02		005	10283	056		73	3933	0	175
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	6129	0		
59E 07	0800	022-51 W	15.8	05	20	02		005	10283	056		78	3312	0	138
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	7603	0		
59E 08	0800	022-51 W	15.8	05	20	02		005	10283	056		75	3911	0	160
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	8090	0		
59E 09	1200	014-42 W	15.8	07	30	04		006	10251	056		76	3772	0	853
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	8215	0		
59E 10	1200	014-42 W	15.8	07	30	04		006	10251	056		78	3422	0	897
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	8748	0		
59E 11	1200	014-42 W	15.8	07	30	04		006	10251	056		73	3808	0	839
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	7274	0		
59E 12	1200	014-42 W	15.8	07	30	04		006	10251	056		79	3562	0	675
MCLEAN205 034	01-22-75	43-55 N	054	064.2	133P	133P		144P	0600	54	OCAST	7202	0		
59E 13	1600	014-42 W	15.7	06	25	05		006	10267	056		87	3305	0	817
MCLEAN205 034	01-22-75	43-55 N	054	064.2	133P	133P		144P	0600	54	OCAST	9026	0		
59E 14	1600	014-42 W	15.7	06	25	05		006	10267	056		92	2911	0	861
MCLEAN205 034	01-22-75	43-55 N	054	064.2	133P	133P		144P	0600	54	OCAST	5844	0		
59E 15	1600	014-42 W	15.7	06	25	05		006	10267	056		88	3093	0	861

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV8S MIDSHIP TRANSDUCER
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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES ---WAVE IND--	RMS STRESS PSI	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN203 030	01-21-75	42-00 N	072	065.9	175S	175S		117P	0600	54	OCAST	6965	0		
59E 60	2400	022-51 W	16.1	05	20	02		005	10353	056		90	2677	0	-2376
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	7143	0		
59E 01	0400	022-51 W	15.8	05	20	02		005	10312	057		86	3093	0	0
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	6850	0		
59E 02	0400	022-51 W	15.8	05	20	02		005	10312	057		87	2750	0	131
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	7034	0		
59E 03	0400	022-51 W	15.8	05	20	02		005	10312	057		83	3166	0	211
MCLEAN205 031	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	56	OCAST	5852	0		
59E 04	0400	022-51 W	15.8	05	20	02		005	10312	057		82	2838	0	226
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	6092	0		
59E 05	0800	022-51 W	15.8	05	20	02		005	10283	056		83	3174	0	175
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	7581	0		
59E 06	0800	022-51 W	15.8	05	20	02		005	10283	056		73	3933	0	175
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	6129	0		
59E 07	0800	022-51 W	15.8	05	20	02		005	10283	056		78	3312	0	138
MCLEAN205 032	01-22-75	42-00 N	072	064.7	162P	162P		162P	0600	54	OCAST	7603	0		
59E 08	0800	022-51 W	15.8	05	20	02		005	10283	056		75	3911	0	160
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	8090	0		
59E 09	1200	014-42 W	15.8	07	30	04		006	10251	056		76	3772	0	853
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	8215	0		
59E 10	1200	014-42 W	15.8	07	30	04		006	10251	056		78	3422	0	897
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	8748	0		
59E 11	1200	014-42 W	15.8	07	30	04		006	10251	056		73	3808	0	839
MCLEAN205 033	01-22-75	43-55 N	072	064.7	173P	173P		162P	0600	55	OCAST	7274	0		
59E 12	1200	014-42 W	15.8	07	30	04		006	10251	056		79	3562	0	675
MCLEAN205 034	01-22-75	43-55 N	054	064.2	133P	133P		144P	0600	54	OCAST	7202	0		
59E 13	1600	014-42 W	15.7	06	25	05		006	10267	056		87	3305	0	817
MCLEAN205 034	01-22-75	43-55 N	054	064.2	133P	133P		144P	0600	54	OCAST	9026	0		
59E 14	1600	014-42 W	15.7	06	25	05		006	10267	056		92	2911	0	861
MCLEAN205 034	01-22-75	43-55 N	054	064.2	133P	133P		144P	0600	54	OCAST	5844	0		
59E 15	1600	014-42 W	15.7	06	25	05		006	10267	056		88	3093	0	861

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LV6S MIDSHIP TRANSDUCER

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	TIME GMT	LATITUDE	LONGITUDE	SHIPS COURSE	SHIPS SPEED KTS	PROP RPM	SEA STATE	REL WIND DIR	REL WIND SPEED KNOTS	REL WAVE DIR	WAVE PD SECS	WAVE HT FEET	WAVE LENG FT
TRIP	INTERVAL NUM														
MCLEAN205	034	01-22-75	43-55	N		054	064.2	133P		133P					
59E	16		1600	014-42	W	15.7		06		25		05			
MCLEAN205	035	01-22-75	43-55	N		054	063.8	144P		144P					
59E	17		2000	014-42	W	15.6		02		05		04			
MCLEAN205	035	01-22-75	43-55	N		054	063.8	144P		144P					
59E	18		2000	014-42	W	15.6		02		05		04			
MCLEAN205	035	01-22-75	43-55	N		054	063.8	144P		144P					
59E	19		2000	014-42	W	15.6		02		05		04			
MCLEAN205	036	01-22-75	43-55	N		054	064.1	133P		133P					
59E	21		2400	014-42	W	15.7		04		15		04			
MCLEAN205	036	01-22-75	43-55	N		054	064.1	133P		133P					
59E	22		2400	014-42	W	15.7		04		15		04			
MCLEAN205	036	01-22-75	43-55	N		054	064.1	133P		133P					
59E	23		2400	014-42	W	15.7		04		15		04			
MCLEAN205	036	01-22-75	43-55	N		054	064.1	133P		133P					
59E	24		2400	014-42	W	15.7		04		15		04			
MCLEAN205	037	01-23-75	43-55	N		054	063.8	133P		133P					
59E	25		0400	014-42	W	15.6		03		10		02			
MCLEAN205	037	01-23-75	43-55	N		054	063.8	133P		133P					
59E	26		0400	014-42	W	15.6		03		10		02			
MCLEAN205	037	01-23-75	43-55	N		054	063.8	133P		133P					
59E	27		0400	014-42	W	15.6		03		10		02			
MCLEAN205	037	01-23-75	43-55	N		054	063.8	133P		133P					
59E	28		0400	014-42	W	15.6		03		10		02			
MCLEAN205	038	01-23-75	43-55	N		054	064.2	144P		144P					
59E	29		0800	014-42	W	15.7		02		05		02			
MCLEAN205	038	01-23-75	43-55	N		054	064.2	144P		144P					
59E	30		0800	014-42	W	15.7		02		05		02			
MCLEAN205	038	01-23-75	43-55	N		054	064.2	144P		144P					
59E	31		0800	014-42	W	15.7		02		05		02			
MCLEAN205	038	01-23-75	43-55	N		054	064.2	144P		144P					
59E	32		0800	014-42	W	15.7		02		05		02			

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	SWELL HT FEET	BAROM INCH HG	AIR TEMP	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
							NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
							---WAVE IND--	1ST MODE	
144P	0600	54	OCAST				5706	0	
006	10257	056					81	3166	0	904
144P	0600	53	CLEAR				6289	0	
005	10209	053					87	2940	0	809
144P	0600	53	CLEAR				6151	0	
005	10209	053					87	2602	0	882
144P	0600	53	CLEAR				6355	0	
005	10209	053					85	3203	0	824
144P	0600	54	PT CLDY				6946	1	
005	10199	054					90	3159	934	707
144P	0600	54	PT CLDY				6143	0	
005	10199	054					88	2991	0	824
144P	0600	54	PT CLDY				9011	0	
005	10199	054					83	3833	0	809
144P	0600	54	PT CLDY				6195	0	
005	10199	054					79	3356	0	831
144P	0800	52	PT CLDY				6581	0	
006	10166	053					83	3203	0	706
144P	0800	52	PT CLDY				6691	1	
006	10166	053					89	2999	612	795
144P	0800	52	PT CLDY				6392	0	
006	10166	053					89	2969	0	802
144P	0800	52	PT CLDY				7634	0	
006	10166	053					86	3159	0	751
144P	0800	52	OCAST				6545	2	
006	10135	053					88	2802	634	773
144P	0800	52	OCAST				5698	0	
006	10135	053					77	3130	0	861
144P	0800	52	OCAST				5881	0	
006	10135	053					85	3013	0	853
144P	0800	52	OCAST				7610	0	
006	10135	053					85	3115	0	824

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI ---WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	7778	0	
59E	33	1200	007-37 W	15.8	04	15	03		006	10109	051		85	3137	0	758
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	5917	0	
59E	34	1200	007-37 W	15.8	04	15	03		006	10109	051		81	3093	0	760
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	6856	0	
59E	35	1200	007-37 W	15.8	04	15	03		006	10109	051		78	3006	0	795
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	5771	0	
59E	36	1200	007-37 W	15.8	04	15	03		006	10109	051		80	2867	0	751
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	6705	0	
59E	37	1600	007-37 W	15.7	03	10	02		006	10071	055		79	2736	0	715
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	5428	0	
59E	38	1600	007-37 W	15.7	03	10	02		006	10071	055		80	2904	0	736
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	6076	0	
59E	39	1600	007-37 W	15.7	03	10	02		006	10071	055		83	2597	0	758
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	6143	0	
59E	40	1600	007-37 W	15.7	03	10	02		006	10071	055		79	3130	0	839
MCLEAN205	041	01-23-75	47-20 N	066	066.6	156P	156P		156P	0800	50	PT CLDY	6807	0	
59E	41	2000	007-37 W	16.3	05	20	02		006	10075	050		70	3546	0	671
MCLEAN205	041	01-23-75	47-20 N	066	066.6	156P	156P		156P	0800	50	PT CLDY	8646	20		
59E	42	2000	007-37 W	16.3	05	20	02		006	10075	050		72	3590	1714	715
MCLEAN207	004	01-28-75			110.0						41	RAIN	2011	11		
59W	04	1623			01					10021	041		215	813	783	0
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1138	13		
59W	05	2000		26.8	05	20	01			09915	041		186	547	887	133
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1131	7		
59W	06	2000		26.8	05	20	01			09915	041		168	561	791	14
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1123	0		
59W	07	2000		26.8	05	20	01			09915	041		153	606	0	-392
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1427	0		
59W	08	2000		26.8	05	20	01			09915	041		192	626	0	-503
MCLEAN207	006	01-28-75		218	119.0	052S	052S				43	OCAST	1865	41		
59W	09	2400		29.0	07	30	01			09883	044		187	968	1345	-555

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI ---WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	7778	0	
59E	33	1200	007-37 W	15.8	04	15	03		006	10109	051		85	3137	0	758
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	5917	0	
59E	34	1200	007-37 W	15.8	04	15	03		006	10109	051		81	3093	0	760
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	6856	0	
59E	35	1200	007-37 W	15.8	04	15	03		006	10109	051		78	3006	0	795
MCLEAN205	039	01-23-75	47-20 N	049	064.9	150P	150P		139P	0800	52	OCAST	5771	0	
59E	36	1200	007-37 W	15.8	04	15	03		006	10109	051		80	2867	0	751
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	6705	0	
59E	37	1600	007-37 W	15.7	03	10	02		006	10071	055		79	2736	0	715
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	5428	0	
59E	38	1600	007-37 W	15.7	03	10	02		006	10071	055		80	2904	0	736
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	6076	0	
59E	39	1600	007-37 W	15.7	03	10	02		006	10071	055		83	2597	0	758
MCLEAN205	040	01-23-75	47-20 N	049	064.3	161P	161P		139P	0800	51	PT CLDY	6143	0	
59E	40	1600	007-37 W	15.7	03	10	02		006	10071	055		79	3130	0	839
MCLEAN205	041	01-23-75	47-20 N	066	066.6	156P	156P		156P	0800	50	PT CLDY	6807	0	
59E	41	2000	007-37 W	16.3	05	20	02		006	10075	050		70	3546	0	671
MCLEAN205	041	01-23-75	47-20 N	066	066.6	156P	156P		156P	0800	50	PT CLDY	8646	20		
59E	42	2000	007-37 W	16.3	05	20	02		006	10075	050		72	3590	1714	715
MCLEAN207	004	01-28-75			110.0						41	RAIN	2011	11		
59W	04	1623			01					10021	041		215	813	783	0
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1138	13		
59W	05	2000		26.8	05	20	01			09915	041		186	547	887	133
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1131	7		
59W	06	2000		26.8	05	20	01			09915	041		168	561	791	14
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1123	0		
59W	07	2000		26.8	05	20	01			09915	041		153	606	0	-392
MCLEAN207	005	01-28-75		260	110.0	035P	035P				41	RAIN	1427	0		
59W	08	2000		26.8	05	20	01			09915	041		192	626	0	-503
MCLEAN207	006	01-28-75		218	119.0	052S	052S				43	OCAST	1865	41		
59W	09	2400		29.0	07	30	01			09883	044		187	968	1345	-555

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN207 006	01-28-75		218	119.0	052S	052S		
59W 10		2400		29.0	07	30	01	
MCLEAN207 006	01-28-75		218	119.0	052S	052S		
59W 11		2400		29.0	07	30	01	
MCLEAN207 006	01-28-75		218	119.0	052S	052S		
59W 12		2400		29.0	07	30	01	
MCLEAN207 007	01-29-75		220	126.9	050S	050S		
59W 13		0400		30.9	07	30	01	
MCLEAN207 007	01-29-75		220	126.9	050S	050S		
59W 14		0400		30.9	07	30	01	
MCLEAN207 007	01-29-75		220	126.9	050S	050S		
59W 15		0400		30.9	07	30	01	
MCLEAN207 007	01-29-75		220	126.9	050S	050S		
59W 16		0400		30.9	07	30	01	
MCLEAN207 008	01-29-75		237	129.9	022S	012P		
59W 17		0800		31.6	06	25	02	
MCLEAN207 008	01-29-75		237	129.9	022S	012P		
59W 18		0800		31.6	06	25	02	
MCLEAN207 008	01-29-75		237	129.9	022S	012P		
59W 19		0800		31.6	06	25	02	
MCLEAN207 008	01-29-75		237	129.9	022S	012P		
59W 20		0800		31.6	06	25	02	
MCLEAN207 009	01-29-75	49-54 N	260	111.2	069P	035S		
59W 21		1200	002-30 W	27.1	06	25	02	
MCLEAN207 009	01-29-75	49-54 N	260	111.2	069P	035S		
59W 22		1200	002-30 W	27.1	06	25	02	
MCLEAN207 009	01-29-75	49-54 N	260	111.2	069P	035S		
59W 23		1200	002-30 W	27.1	06	25	02	
MCLEAN207 009	01-29-75	49-54 N	260	111.2	069P	035S		
59W 24		1200	002-30 W	27.1	06	25	02	
MCLEAN207 010	01-29-75	49-54 N	229	131.4	016S	004P		
59W 25		1600	002-30 W	31.7	07	30	03	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI ---WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
		43	COAST	1796	38	
	09883	044		155	916	1336	-141
		43	COAST	1382	32	
	09883	044		152	643	1064	138
		43	COAST	1013	20	
	09883	044		128	532	1279	1035
		46	PT CLDY	1064	0	
	10030	045		202	414	0	1353
		46	PT CLDY	1168	2	
	10030	045		172	554	769	1745
		46	PT CLDY	702	2	
	10030	045		144	303	724	406
		46	PT CLDY	1035	1	
	10030	045		193	362	732	635
		48	COAST	4059	0	DROP PILOT CHERBOURG
	10085	048		219	1523	0	214
		48	COAST	3127	0	DROP PILOT CHERBOURG
	10085	048		187	1249	0	1545
		48	COAST	3238	0	DROP PILOT CHERBOURG
	10085	048		165	1419	0	1959
		48	COAST	1005	0	DROP PILOT CHERBOURG
	10085	048		143	456	0	2602
035S	0800	43	COAST	7949	19	
005	10070	052		177	3394	1404	517
035S	0800	43	COAST	6433	19	
005	10070	052		179	3083	2181	709
035S	0800	43	COAST	6255	31	
005	10070	052		181	2573	1922	820
035S	0800	43	COAST	7143	36	
005	10070	052		179	3120	2218	872
004P	0800	50	COAST	8777	54	
005	10078	058		176	3649	4325	1097

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN207	010	01-29-75	49-54 N	229	131.4	018S	004P	
59W	26	1600	002-30 W	31.9	07	30	03	
MCLEAN207	010	01-29-75	49-54 N	229	131.4	018S	004P	
59W	27	1600	002-30 W	31.9	07	30	03	
MCLEAN207	010	01-29-75	49-54 N	229	131.4	018S	004P	
59W	28	1600	002-30 W	31.9	07	30	03	
MCLEAN207	011	01-29-75	49-54 N	229	131.4	004P	004P	
59W	29	2000	002-30 W	31.9	07	30	03	
MCLEAN207	011	01-29-75	49-54 N	229	131.4	004P	004P	
59W	30	2000	002-30 W	31.9	07	30	03	
MCLEAN207	011	01-29-75	49-54 N	229	131.4	004P	004P	
59W	31	2000	002-30 W	31.9	07	30	03	
MCLEAN207	011	01-29-75	49-54 N	229	131.4	004P	004P	
59W	32	2000	002-30 W	31.9	07	30	03	
MCLEAN207	012	01-29-75	49-54 N	229	131.0	004P	004P	
59W	33	2400	002-30 W	31.9	07	30	03	
MCLEAN207	012	01-29-75	49-54 N	229	131.0	004P	004P	
59W	34	2400	002-30 W	31.9	07	30	03	
MCLEAN207	012	01-29-75	49-54 N	229	131.0	004P	004P	
59W	35	2400	002-30 W	31.9	07	30	03	
MCLEAN207	012	01-29-75	49-54 N	229	131.0	004P	004P	
59W	36	2400	002-30 W	31.9	07	30	03	
MCLEAN207	013	01-30-75	49-54 N	229	130.8	026P	026P	
59W	37	0400	002-30 W	31.7	07	30	03	
MCLEAN207	014	01-30-75	49-54 N	229	130.8	026P	026P	
59W	43	0800	002-30 W	31.7	07	30	03	
MCLEAN207	014	01-30-75	49-54 N	229	130.8	026P	026P	
59W	44	0800	002-30 W	31.7	07	30	03	
MCLEAN207	015	01-30-75	49-46 N	229	116.2	026P	026P	
59W	45	1200	010-25 W	28.2	07	30	03	
MCLEAN207	015	01-30-75	49-46 N	229	116.2	026P	026P	
59W	46	1200	010-25 W	28.2	07	30	03	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND--	1ST MODE	
004P	0600	50	COAST	8718	82	
005	10078	053		179	3726	2795	1160
004P	0600	50	COAST	7852	56	
005	10078	053		180	3357	4288	1183
004P	0600	50	COAST	6011	50	
005	10078	053		184	2699	1796	1242
004P	0600	51	COAST	6825	61	
006	10119	050		176	3297	3172	1338
004P	0600	51	COAST	6130	60	
006	10119	050		182	2795	3675	1412
004P	0600	51	COAST	7024	69	
006	10119	050		191	2832	3763	1412
004P	0600	51	COAST	6048	55	
006	10119	050		173	2928	2965	1508
004P	0600	52	COAST	7668	78	
006	10125	051		178	3394	5279	1545
004P	0600	52	COAST	8496	71	
006	10125	051		190	3024	3689	1530
004P	0600	52	COAST	9368	70	
006	10125	051		187	2920	3734	1560
004P	0600	52	COAST	7039	78	
006	10125	051		177	3053	3911	1597
004P	0600	56	COAST	11653	83	
006	10125	050		180	3941	7830	1536
004P	0600	56	COAST	12735	56	
006	10125	050		185	3667	4547	1856
004P	0600	56	COAST	8348	64	
006	10125	050		159	3897	3238	2314
018S	0600	56	COAST,RAIN,FOG	9139	82	
006	10119	057		197	3615	4384	-400
018S	0600	56	COAST,RAIN,FOG	7416	55	
006	10119	057		153	3386	2395	-348

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI ---WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN207	015	01-30-75	41-46 N	229	116.2	026P	026P		018S	0600	56	OCAST,RAIN,FOG	6937	53		
59W	47	1200	016-25 W	28.2	07	30	03		006	10119	057		162	2920	3349	-289
MCLEAN207	015	01-30-75	41-46 N	229	116.2	026P	026P		018S	0600	56	OCAST,RAIN,FOG	8289	50		
59W	48	1200	016-25 W	28.2	07	30	03		006	10119	057		159	3386	2595	-257
MCLEAN207	016	01-30-75	41-46 N	229	120.9	041S	041S		018S	0600	56	THIN OCAST	7357	59		
59W	49	1600	016-25 W	29.5	05	20	02		006	10125	055		168	3105	2706	-999
MCLEAN207	016	01-30-75	41-46 N	229	120.9	041S	041S		018S	0600	56	THIN OCAST	9790	51		
59W	50	1600	016-25 W	29.5	05	20	02		006	10125	055		172	3334	5420	-845
MCLEAN207	016	01-30-75	41-46 N	229	120.9	041S	041S		018S	0600	56	THIN OCAST	11358	65		
59W	51	1600	016-25 W	29.5	05	20	02		006	10125	055		172	4081	3703	-725
MCLEAN207	016	01-30-75	41-46 N	229	120.9	041S	041S		018S	0600	56	THIN OCAST	9006	52		
59W	52	1600	016-25 W	29.5	05	20	02		006	10125	055		172	3578	2950	-703
MCLEAN207	017	01-30-75	41-46 N	249	131.5	021S	021S		010S	0600	57	PT CLDY	9184	62		
59W	53	2000	016-25 W	32.0	06	25	02		005	10175	056		175	3142	3039	-673
MCLEAN207	017	01-30-75	41-46 N	249	131.5	021S	021S		010S	0600	57	PT CLDY	8962	65		
59W	54	2000	016-25 W	32.0	06	25	02		005	10175	056		179	3342	3268	-629
MCLEAN207	017	01-30-75	41-46 N	249	131.5	021S	021S		010S	0600	57	PT CLDY	6705	60		
59W	55	2000	016-25 W	32.0	06	25	02		005	10175	056		178	3104	2528	-636
MCLEAN207	017	01-30-75	41-46 N	249	131.5	021S	021S		010S	0600	57	PT CLDY	7180	58		
59W	56	2000	016-25 W	32.0	06	25	02		005	10175	056		175	3135	2950	-636
MCLEAN207	018	01-30-75	41-46 N	249	132.2	032S	032S		010S	0600	58	PT CLDY	9283	64		
59W	57	2400	016-25 W	32.7	06	25	02		005	10231	056		177	4074	3453	-659
MCLEAN207	018	01-30-75	41-46 N	249	132.2	032S	032S		010S	0600	58	PT CLDY	9265	63		
59W	58	2400	016-25 W	32.7	06	25	02		005	10231	056		166	4140	3046	-673
MCLEAN207	018	01-30-75	41-46 N	249	132.2	032S	032S		010S	0600	58	PT CLDY	7350	55		
59W	59	2400	016-25 W	32.7	06	25	02		005	10231	056		167	3527	2292	-725
MCLEAN207	018	01-30-75	41-46 N	249	132.2	032S	032S		010S	0600	58	PT CLDY	8866	39		
59W	60	2400	016-25 W	32.7	06	25	02		005	10231	056		169	3423	4074	-592
MCLEAN209	019	01-31-75	41-45 N	249	129.2	024P	024P		010S	0600	58	PT CLDY	11819	39		
59W	01	0400	016-25 W	31.4	04	15	02		005	10213	056		171	4043	4088	0
MCLEAN209	019	01-31-75	41-46 N	249	129.2	024P	024P		010S	0600	58	PT CLDY	10079	34		
59W	02	0400	016-25 W	31.4	04	15	02		005	10213	056		164	3756	2066	178

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN209	019	01-31-75	41-46 N	249	129.2	024P	024P		010S	0600	58	PT CLDY
59W	03	0400	016-25 W	31.4	04	15	02		005	10213	058	
MCLEAN209	019	01-31-75	41-46 N	249	129.2	024P	024P		010S	0600	58	PT CLDY
59W	04	0400	016-25 W	31.4	04	15	02		005	10213	058	
MCLEAN209	020	01-31-75	41-46 N	249	130.5	047P	047P		010S	0600	59	PT CLDY
59W	05	0800	016-25 W	31.7	06	25	02		005	10190	058	
MCLEAN209	020	01-31-75	41-46 N	249	130.5	047P	047P		010S	0600	59	PT CLDY
59W	06	0800	016-25 W	31.7	06	25	02		005	10190	058	
MCLEAN209	020	01-31-75	41-46 N	249	130.5	047P	047P		010S	0600	59	PT CLDY
59W	07	0800	016-25 W	31.7	06	25	02		005	10190	058	
MCLEAN209	020	01-31-75	41-46 N	249	130.5	047P	047P		010S	0600	59	PT CLDY
59W	08	0800	016-25 W	31.7	06	25	02		005	10190	058	
MCLEAN209	021	01-31-75	36-30 N	249	130.0	058P	058P		024P	0600	59	PT CLDY
59W	09	1200	031-50 W	31.7	08	35	03		005	10138	059	
MCLEAN209	021	01-31-75	36-30 N	249	130.0	058P	058P		024P	0600	59	PT CLDY
59W	10	1200	031-50 W	31.7	08	35	03		005	10138	059	
MCLEAN209	021	01-31-75	36-30 N	249	130.0	058P	058P		024P	0600	59	PT CLDY
59W	11	1200	031-50 W	31.7	08	35	03		005	10138	059	
MCLEAN209	021	01-31-75	36-30 N	249	130.0	058P	058P		024P	0600	59	PT CLDY
59W	12	1200	031-50 W	31.7	08	35	03		005	10138	059	
MCLEAN209	022	01-31-75	36-30 N	249	129.5	024P	024P		024P	0600	63	COAST
59W	13	1600	031-50 W	31.5	06	40	04		006	10075	065	
MCLEAN209	022	01-31-75	36-30 N	249	129.5	024P	024P		024P	0600	63	COAST
59W	14	1600	031-50 W	31.5	08	40	04		006	10075	065	
MCLEAN209	022	01-31-75	36-30 N	249	129.5	024P	024P		024P	0600	63	COAST
59W	15	1600	031-50 W	31.5	06	40	04		006	10075	065	
MCLEAN209	022	01-31-75	36-30 N	249	129.5	024P	024P		024P	0600	63	COAST
59W	16	1600	031-50 W	31.5	08	40	04		006	10075	065	
MCLEAN209	023	01-31-75	36-30 N	249	122.0	024P	024P		024P	0600	66	COAST
59W	17	2000	031-50 W	29.7	09	45	06		006	10069	068	
MCLEAN209	023	01-31-75	36-30 N	249	122.0	024P	024P		024P	0600	66	COAST
59W	18	2000	031-50 W	29.7	09	45	06		006	10069	068	

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND--	1ST MODE	

7678	39			
164	3664	2326	200	
10667	33			
162	3828	2408	208	
8414	55			
169	3672	2742	215	
8028	52			
176	3300	2966	237	
6296	53			
175	2869	2817	267	
8585	65			
170	2876	5039	304	
5612	56			
164	2334	2839	416	
6296	63			
176	2393	4165	431	
5367	57			
178	2326	2445	661	
5478	69			
189	2304	2163	631	
5445	71			
197	2438	3456	126	
6050	69			
192	2296	2795	185	
5114	63			
193	2542	3174	304	
9492	62			
205	3040	6017	319	
12592	89			
187	4519	6437	1992	
14792	83			
184	5080	13729	2046	

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	TIME GMT	LATITUDE	LONGITUDE	SHIPS COURSE	SHIPS SPEED KTS	PROP RPM	SEA STATE	REL WIND DIR	REL WIND SPEED KNOTS	REL WAVE DIR	WAVE PD SECS	WAVE HT FEET	WAVE LENG FT	REL SWELL DIR	SWELL HT FEET	SWELL LENGTH FEET	BAROM INCH HG	SEA TEMP	AIR TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM																								
																							NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
																							---WAVE IND--	1ST MODE		
MCLEAN209	023	01-31-75	36-30 N		249	122.0	024P	024P						024P	0800	66	OCAST				11336	67		
59W	19	2000	031-50 W		29.7	09	45	06						008	10089	060					179	5523	5538	2096
MCLEAN209	023	01-31-75	36-30 N		249	122.0	024P	024P						024P	0800	66	OCAST				16220	92		
59W	20	2000	031-50 W		29.7	09	45	06						008	10089	060					161	6288	12644	2505
MCLEAN209	024	01-31-75	36-30 N		249	092.5	010S	010S						010S	0800	63	OCAST				9679	47		
59W	21	2400	031-50 W		22.5	07	30	06						008	10099	061					156	3947	2200	3114
MCLEAN209	024	01-31-75	36-30 N		249	092.5	010S	010S						010S	0800	63	OCAST				11863	50		
59W	22	2400	031-50 W		22.5	07	30	06						008	10099	061					160	4341	2616	3092
MCLEAN209	024	01-31-75	36-30 N		249	092.5	010S	010S						010S	0800	63	OCAST				9673	69		
59W	23	2400	031-50 W		22.5	07	30	06						008	10099	061					155	4794	3315	3114
MCLEAN209	024	01-31-75	36-30 N		249	092.5	010S	010S						010S	0800	63	OCAST				10897	59		
59W	24	2400	031-50 W		22.5	07	30	06						008	10099	061					161	4467	2780	3159
MCLEAN209	025	02-01-75	36-30 N		249	111.8	002P	002P						032S	0800	65	PT CLDY				13662	63		
59W	25	0400	031-50 W		27.2	05	20	04						008	10105	060					167	4304	2720	2633
MCLEAN209	025	02-01-75	36-30 N		249	111.8	002P	002P						032S	0800	65	PT CLDY				11648	70		
59W	26	0400	031-50 W		27.2	05	20	04						008	10105	060					161	4593	4083	2713
MCLEAN209	025	02-01-75	36-30 N		249	111.8	002P	002P						032S	0800	65	PT CLDY				11797	68		
59W	27	0400	031-50 W		27.2	05	20	04						008	10105	060					164	4742	4333	2690
MCLEAN209	025	02-01-75	36-30 N		249	111.8	002P	002P						032S	0800	65	PT CLDY				10919	66		
59W	28	0400	031-50 W		27.2	05	20	04						008	10105	060					165	4177	4571	2690
MCLEAN209	026	02-01-75	36-30 N		249	117.4	002P	002P						043S	0800	65	PT CLDY				14792	67		
59W	29	0800	031-50 W		28.6	07	30	04						008	10118	062					164	5545	4385	2401
MCLEAN209	026	02-01-75	36-30 N		249	117.4	002P	002P						043S	0800	65	PT CLDY				9433	74		
59W	30	0800	031-50 W		28.6	07	30	04						008	10118	062					161	4556	3679	2549
MCLEAN209	026	02-01-75	36-30 N		249	117.4	002P	002P						043S	0800	65	PT CLDY				11313	60		
59W	31	0800	031-50 W		28.6	07	30	04						008	10118	062					160	4385	2757	2460
MCLEAN209	026	02-01-75	36-30 N		249	117.4	002P	002P						043S	0800	65	PT CLDY				10912	64		
59W	32	0800	031-50 W		28.6	07	30	04						008	10118	062					152	4742	3798	2527
MCLEAN209	027	02-01-75	32-35 N		249	117.0	002P	002P						043S	0800	65	PT CLDY				8822	63		
59W	33	1200	044-25 W		28.5	07	30	04						008	10121	063					157	3880	2957	2698
MCLEAN209	027	02-01-75	32-35 N		249	117.0	002P	002P						043S	0800	65	PT CLDY				12776	51		
59W	34	1200	044-25 W		28.5	07	30	04						008	10121	063					154	4304	3590	2742

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-T-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND-- 1ST MODE			
MCLEAN209	027	02-01-75	32-35 N	249	117.0	002P	002P		043S	0800	65	PT CLDY	9537	60		
59W	35	1200	044-25 W	26.5	07	30	04		008	10121	063		143	4296	2869	2527
MCLEAN209	027	02-01-75	32-35 N	249	117.0	002P	002P		043S	0800	65	PT CLDY	8132	51		
59W	36	1200	044-25 W	28.5	07	30	04		008	10121	063		164	3501	3077	2601
MCLEAN209	028	02-01-75	32-35 N	270	118.7	011S	011S		022S	0800	66	PT CLDY	12740	70		
59W	37	1600	044-25 W	29.0	07	30	03		006	10146	070		169	4601	5448	2415
MCLEAN209	028	02-01-75	32-35 N	270	118.7	011S	011S		022S	0800	66	PT CLDY	14235	71		
59W	38	1600	044-25 W	29.0	07	30	03		006	10146	070		173	4396	3382	2527
MCLEAN209	028	02-01-75	32-35 N	270	118.7	011S	011S		022S	0800	66	PT CLDY	7589	59		
59W	39	1630	044-25 W	29.0	07	30	03		006	10146	070		170	3724	3315	2594
MCLEAN209	028	02-01-75	32-35 N	270	118.7	011S	011S		022S	0800	66	PT CLDY	12644	71		
59W	40	1630	044-25 W	29.0	07	30	03		006	10146	070		170	4876	4068	2653
MCLEAN209	029	02-01-75	32-35 N	270	121.0	022S	022S		045S	0800	64	PT CLDY	9481	60		
59W	41	2000	044-25 W	29.4	06	25	03		006	10168	066		162	4014	2661	2311
MCLEAN209	029	02-01-75	32-35 N	270	121.0	022S	022S		045S	0800	64	PT CLDY	10206	49		
59W	42	2000	044-25 W	29.4	06	25	03		006	10168	066		172	3716	3746	2371
MCLEAN209	029	02-01-75	32-35 N	270	121.0	022S	022S		045S	0800	64	PT CLDY	7953	66		
59W	43	2000	044-25 W	29.4	06	25	03		006	10168	066		171	3798	2475	2371
MCLEAN209	029	02-01-75	32-35 N	270	121.0	022S	022S		045S	0800	64	PT CLDY	10525	61		
59W	44	2000	044-25 W	29.4	06	25	03		006	10168	066		169	3775	3136	2363
MCLEAN209	030	02-01-75	32-35 N	290	127.5	002S	002S		025S	0800	66	PT CLDY	7405	52		
59W	45	2400	044-25 W	31.0	06	25	02		006	10161	064		161	3523	3307	2014
MCLEAN209	030	02-01-75	32-35 N	290	127.5	002S	002S		025S	0800	66	PT CLDY	8286	50		
59W	46	2400	044-25 W	31.0	06	25	02		006	10161	064		167	3233	1903	2021
MCLEAN209	030	02-01-75	32-35 N	290	127.5	002S	002S		025S	0800	66	PT CLDY	5236	39		
59W	47	2400	044-25 W	31.0	06	25	02		006	10161	064		160	3241	3315	2230
MCLEAN209	030	02-01-75	32-35 N	290	127.5	002S	002S		025S	0800	66	PT CLDY	7113	44		
59W	48	2400	044-25 W	31.0	06	25	02		006	10161	064		161	3156	2436	2068
MCLEAN209	031	02-02-75	32-35 N	290	132.4	002S	002S		025S	0600	66	PT CLDY	6788	39		
59W	49	0400	044-25 W	32.7	06	25	02		004	10161	064		162	2899	1917	2086
MCLEAN209	031	02-02-75	32-35 N	290	132.4	002S	002S		025S	0600	66	PT CLDY	6772	26		
59W	50	0400	044-25 W	32.7	06	25	02		004	10161	064		165	2809	2594	1994

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI ---WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN209	031	02-02-75	32-35 N	290	132.4	002S	002S		025S	0600	66	PT CLDY	5255	39	
59W	51	0400	044-25 W	32.7	06	25	02		004	10161	064		184	2527	1969	2014
MCLEAN209	031	02-02-75	32-35 N	290	132.4	002S	002S		025S	0600	66	PT CLDY	5790	36	
59W	52	0400	044-25 W	32.7	06	25	02		004	10161	064		190	2512	2230	1984
MCLEAN209	032	02-02-75	32-35 N	290	132.0	002S	002S		025S	0600	65	OCAST	4794	27	
59W	53	0800	044-25 W	32.6	06	25	01		003	10152	061		152	1955	1442	2036
MCLEAN209	032	02-02-75	32-35 N	290	132.0	002S	002S		025S	0600	65	OCAST	4742	26	
59W	54	0800	044-25 W	32.6	06	25	01		003	10152	061		190	1903	1412	2051
MCLEAN209	032	02-02-75	32-35 N	290	132.0	002S	002S		025S	0600	65	OCAST	3924	36	
59W	55	0800	044-25 W	32.6	06	25	01		003	10152	061		195	1917	1404	2007
MCLEAN209	032	02-02-75	32-35 N	290	132.0	002S	002S		025S	0600	65	OCAST	3829	30	
59W	56	0800	044-25 W	32.6	06	25	01		003	10152	061		178	1895	1256	1999
MCLEAN209	033	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	65	OCAST	2683	41	
59W	57	1200	044-25 W	32.8	06	25	01		003	10184	058		179	1390	1367	1940
MCLEAN209	033	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	65	OCAST	3860	23	
59W	58	1200	044-25 W	32.8	06	25	01		003	10184	058		162	1501	1360	1910
MCLEAN209	033	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	65	OCAST	3278	15	
59W	59	1200	044-25 W	32.8	06	25	01		003	10184	058		145	1620	1144	1925
MCLEAN209	033	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	65	OCAST	4118	19	
59W	60	1200	044-25 W	32.8	06	25	01		003	10184	058		138	1613	1040	1984
MCLEAN209	034	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	58	OCAST	2566	10	
59W	61	1600	044-25 W	32.8	06	25	01		003	10186	056		157	1308	951	2059
MCLEAN209	034	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	58	OCAST	4244	19	
59W	62	1600	044-25 W	32.8	06	25	01		003	10186	056		152	1687	914	2163
MCLEAN209	034	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	58	OCAST	3820	17	
59W	63	1600	044-25 W	32.8	06	25	01		003	10186	056		163	1866	1293	2244
MCLEAN209	034	02-02-75	32-35 N	290	132.5	025S	025S		025S	0600	58	OCAST	3320	12	
59W	64	1600	044-25 W	32.8	06	25	01		003	10186	056		146	1806	929	2319
MCLEAN211	003	02-07-75		090	087.2	090P	090P		157P	0600	43	OCAST	531	0	DEPART PORTSMOUTH,VA
60E	09	1200		21.2	03	10	02		006	10112	041		149	235	0	0
MCLEAN211	003	02-07-75		090	087.2	090P	090P		157P	0600	43	OCAST	856	0	DEPART PORTSMOUTH,VA
60E	10	1200		21.2	03	10	02		006	10112	041		165	361	0	0 -3884

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--	1ST MODE		
MCLEAN211	003	02-07-75		090	087.2	090P	090P		157P	0500	43	OCAST		1122	2	DEPART PORTSMOUTH,VA
60E	11	1200		21.2	03	10	02		006	10112	041		170	457	736	-2924
MCLEAN211	003	02-07-75		090	087.2	090P	090P		157P	0500	43	OCAST		1410	2	DEPART PORTSMOUTH,VA
60E	12	1200		21.2	03	10	02		006	10112	041		192	568	767	-1514
MCLEAN211	004	02-07-75	36-46 N	094	094.3	139P	139P		161P	0500	45	OCAST		2052	1	
60E	13	1600	073-44 W	23.0	05	20	03		006	10116	045		148	1018	634	2192
MCLEAN211	004	02-07-75	36-46 N	094	094.3	139P	139P		161P	0500	45	OCAST		2236	1	
60E	14	1600	073-44 W	23.0	05	20	03		006	10116	045		152	1004	767	2126
MCLEAN211	004	02-07-75	36-46 N	094	094.3	139P	139P		161P	0500	45	OCAST		2414	0	
60E	15	1600	073-44 W	23.0	05	20	03		006	10116	045		143	974	0	2133
MCLEAN211	004	02-07-75	36-46 N	094	094.3	139P	139P		161P	0500	45	OCAST		1956	0	
60E	16	1600	073-44 W	23.0	05	20	03		006	10116	045		138	1011	0	2008
MCLEAN211	005	02-07-75	36-46 N	094	092.8	139P	139P		161P	0500	71	OCAST		3073	0	
60E	17	2000	073-44 W	22.6	06	25	03		006	10105	050		121	1328	0	1337
MCLEAN211	005	02-07-75	36-46 N	094	092.8	139P	139P		161P	0500	71	OCAST		2392	0	
60E	18	2000	073-44 W	22.6	06	25	03		006	10105	050		120	1262	0	1454
MCLEAN211	005	02-07-75	36-46 N	094	092.8	139P	139P		161P	0500	71	OCAST		2879	1	
60E	19	2000	073-44 W	22.6	06	25	03		006	10105	050		103	1587	789	1291
MCLEAN211	005	02-07-75	36-46 N	094	092.8	139P	139P		161P	0500	71	OCAST		2312	0	
60E	20	2000	073-44 W	22.6	06	25	03		006	10105	050		104	1496	0	1196
MCLEAN211	006	02-07-75	36-46 N	094	118.7	139P	139P		161P	0500	69	OCAST		2739	0	
60E	21	2400	073-44 W	28.9	06	25	03		006	10111	054		101	1380	0	1144
MCLEAN211	006	02-07-75	36-46 N	094	118.7	139P	139P		161P	0500	69	OCAST		3031	0	
60E	22	2400	073-44 W	28.9	06	25	03		006	10111	054		99	1543	0	1299
MCLEAN211	006	02-07-75	36-46 N	094	118.7	139P	139P		161P	0500	69	OCAST		3226	0	
60E	23	2400	073-44 W	28.9	06	25	03		006	10111	054		96	1483	0	1251
MCLEAN211	006	02-07-75	36-46 N	094	118.7	139P	139P		161P	0500	69	OCAST		3942	0	
60E	24	2400	073-44 W	28.9	06	25	03		006	10111	054		95	1653	0	1513
MCLEAN211	007	02-08-75	36-46 N	094	120.7	161P	161P		139P	0600	66	OCAST		4387	0	
60E	25	0400	073-44 W	29.5	06	25	03		010	10119	056		77	2111	0	1321
MCLEAN211	007	02-08-75	36-46 N	094	120.7	161P	161P		139P	0600	66	OCAST		5455	0	
60E	26	0400	073-44 W	29.5	06	25	03		010	10119	056		65	2408	0	1225

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--	1ST MODE		
MCLEAN211	007	02-08-75	36-46 N	094	120.7	161P	161P		139P	0600	66	OCAST	4961	0		
60E	27	0400	073-44 W	29.5	06	25	03		010	10119	056		69	2510	0	1594
MCLEAN211	007	02-08-75	36-46 N	094	120.7	161P	161P		139P	0600	66	OCAST	5780	0		
60E	28	0400	073-44 W	29.5	06	25	03		010	10119	056		70	2554	0	1166
MCLEAN211	008	02-08-75	36-46 N	094	120.5	139P	139P		139P	0600	70	OCAST	5684	0		
60E	29	0800	073-44 W	29.4	07	30	03		010	10120	058		61	2746	0	1380
MCLEAN211	008	02-08-75	36-46 N	094	120.5	139P	139P		139P	0600	70	OCAST	8017	0		
60E	30	0800	073-44 W	29.4	07	30	03		010	10120	058		63	2945	0	1498
MCLEAN211	008	02-08-75	36-46 N	094	120.5	139P	139P		139P	0600	70	OCAST	6445	0		
60E	31	0800	073-44 W	29.4	07	30	03		010	10120	058		65	2731	0	1483
MCLEAN211	008	02-08-75	36-46 N	094	120.5	139P	139P		139P	0600	70	OCAST	6873	0		
60E	32	0800	073-44 W	29.4	07	30	03		010	10120	058		64	2731	0	1454
MCLEAN211	009	02-08-75	36-46 N	094	120.7	139P	139P		139P	0600	64	OCAST	5721	0		
60E	33	1200	073-44 W	29.5	06	25	03		010	10139	059		72	2347	0	1469
MCLEAN211	009	02-08-75	36-46 N	094	120.7	139P	139P		139P	0600	64	OCAST	5035	0		
60E	34	1200	073-44 W	29.5	06	25	03		010	10139	059		72	2259	0	1742
MCLEAN211	009	02-08-75	36-46 N	094	120.7	139P	139P		139P	0600	64	OCAST	3765	1		
60E	35	1200	073-44 W	29.5	06	25	03		010	10139	059		85	2087	612	1609
MCLEAN211	009	02-08-75	36-46 N	094	120.7	139P	139P		139P	0600	64	OCAST	5101	0		
60E	36	1200	073-44 W	29.5	06	25	03		010	10139	059		76	2318	0	1011
MCLEAN211	010	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	63	OCAST	5027	0		
60E	37	1600	060-14 W	29.5	07	30	03		010	10161	068		73	2118	0	1806
MCLEAN211	010	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	63	OCAST	4289	0		
60E	38	1600	060-14 W	29.5	07	30	03		010	10161	068		70	2059	0	1956
MCLEAN211	010	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	63	OCAST	5027	0		
60E	39	1600	060-14 W	29.5	07	30	03		010	10161	068		75	2000	0	2052
MCLEAN211	010	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	63	OCAST	5374	0		
60E	40	1600	060-14 W	29.5	07	30	03		010	10161	068		76	2185	0	2177
MCLEAN211	011	02-08-75	36-02 N	094	121.1	161P	161P		161P	0600	65	PT CLDY	5751	1		
60E	41	2000	060-14 W	29.6	06	25	03		010	10159	072		52	2761	701	1461
MCLEAN211	011	02-08-75	36-02 N	094	121.1	161P	161P		161P	0600	65	PT CLDY	4916	0		
60E	42	2000	060-14 W	29.6	06	25	03		010	10159	072		68	2576	0	1161

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN211	011	02-03-75	36-02 N	094	121.1	161P	161P		161P	0600	65	PT CLDY
60E	43	2000	060-14 W	29.6	06	25	03		010	10159	072	
MCLEAN211	011	02-08-75	36-02 N	094	121.1	161P	161P		161P	0600	65	PT CLDY
60E	44	2000	060-14 W	29.6	06	25	03		010	10159	072	
MCLEAN211	012	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	64	COAST
60E	45	2400	060-14 W	29.5	06	25	03		010	10179	065	
MCLEAN211	012	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	64	COAST
60E	46	2400	060-14 W	29.5	06	25	03		010	10179	065	
MCLEAN211	012	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	64	COAST
60E	47	2400	060-14 W	29.5	06	25	03		010	10179	065	
MCLEAN211	012	02-08-75	36-02 N	094	121.0	161P	161P		161P	0600	64	COAST
60E	48	2400	060-14 W	29.5	06	25	03		010	10179	065	
MCLEAN211	013	02-09-75	36-02 N	094	121.1	161P	161P		161P	0600	62	PT CLDY
60E	49	0400	060-14 W	29.6	06	25	03		008	10191	063	
MCLEAN211	013	02-09-75	36-02 N	094	121.1	161P	161P		161P	0600	62	PT CLDY
60E	50	0400	060-14 W	29.6	06	25	03		008	10191	063	
MCLEAN211	013	02-09-75	36-02 N	094	121.1	161P	161P		161P	0600	62	PT CLDY
60E	51	0400	060-14 W	29.6	06	25	03		008	10191	063	
MCLEAN211	013	02-09-75	36-02 N	094	121.1	161P	161P		161P	0600	62	PT CLDY
60E	52	0400	060-14 W	29.6	06	25	03		008	10191	063	
MCLEAN211	014	02-09-75	36-02 N	094	120.7	161P	161P		161P	0600	64	PT CLDY
60E	53	0800	060-14 W	29.5	04	15	03		008	10193	072	
MCLEAN211	014	02-09-75	36-02 N	094	120.7	161P	161P		161P	0600	64	PT CLDY
60E	54	0800	060-14 W	29.5	04	15	03		008	10193	072	
MCLEAN211	014	02-09-75	36-02 N	094	120.7	161P	161P		161P	0600	64	PT CLDY
60E	55	0800	060-14 W	29.5	04	15	03		008	10193	072	
MCLEAN211	014	02-09-75	36-02 N	094	120.7	161P	161P		161P	0600	64	PT CLDY
60E	56	0800	060-14 W	29.5	04	15	03		008	10193	072	
MCLEAN211	015	02-09-75	35-12 N	090	085.1	157P	157P		157P	0600	61	PT CLDY
60E	57	1200	060-42 W	20.8	05	20	03		008	10228	068	
MCLEAN211	015	02-09-75	35-12 N	090	085.1	157P	157P		157P	0600	61	PT CLDY
60E	58	1200	060-42 W	20.8	05	20	03		008	10228	068	

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MAX P-T-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			—WAVE IND—		1ST MODE	
5359	0					
75	2362		0	1358		
4651	0					
57	2746		0	1255		
6806	0					
66	2170		0	753		
4414	0					
58	2362		0	1040		
5574	0					
58	2318		0	959		
4134	0					
75	1993		0	1092		
5352	0					
59	2443		0	834		
5448	0					
61	2332		0	952		
5640	0					
57	2296		0	967		
6245	1					
63	2214	2975		664		
5751	0					
63	2288		0	1011		
4422	0					
66	2104		0	922		
4651	0					
60	2392		0	989		
4673	0					
56	2236		0	1284		
4392	0					
51	2539		0	1033		
4916	0					
82	2347		0	2074		

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN211	015	02-09-75	35-12 N	090	085.1	157P	157P	
60E	59	1200	046-42 W	20.8		05	20	03
MCLEAN211	015	02-09-75	35-12 N	090	085.1	157P	157P	
60E	60	1200	046-42 W	20.8		05	20	03
MCLEAN213	016	02-09-75	35-12 N	090	080.7	157P	157P	
60E	01	1600	046-42 W	19.6		03	10	02
MCLEAN213	016	02-09-75	35-12 N	090	080.7	157P	157P	
60E	02	1600	046-42 W	19.6		03	10	02
MCLEAN213	016	02-09-75	35-12 N	090	080.7	157P	157P	
60E	03	1600	046-42 W	19.6		03	10	02
MCLEAN213	016	02-09-75	35-12 N	090	080.7	157P	157P	
60E	04	1600	046-42 W	19.6		03	10	02
CLEAN213	017	02-09-75	35-12 N	072	079.8	139P	139P	
60E	05	2000	046-42 W	19.5		04	15	02
MCLEAN213	017	02-09-75	35-12 N	072	079.8	139P	139P	
60E	06	2000	046-42 W	19.5		04	15	02
MCLEAN213	017	02-09-75	35-12 N	072	079.8	139P	139P	
60E	07	2000	046-42 W	19.5		04	15	02
MCLEAN213	017	02-09-75	35-12 N	072	079.8	139P	139P	
60E	08	2000	046-42 W	19.5		04	15	02
MCLEAN213	018	02-09-75	35-12 N	072	080.7	117P	117P	
60E	09	2400	046-42 W	19.6		03	10	03
MCLEAN213	018	02-09-75	35-12 N	072	080.7	117P	117P	
60E	10	2400	046-42 W	19.6		03	10	03
MCLEAN213	018	02-09-75	35-12 N	072	080.7	117P	117P	
60E	11	2400	046-42 W	19.6		03	10	03
MCLEAN213	018	02-09-75	35-12 N	072	080.7	117P	117P	
60E	12	2400	046-42 W	19.6		03	10	03
MCLEAN213	019	02-10-75	35-12 N	072	080.9	117P	117P	
60E	13	0400	046-42 W	19.7		02	05	03
MCLEAN213	019	02-10-75	35-12 N	072	080.9	117P	117P	
60E	14	0400	046-42 W	19.7		02	05	03

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND-- 1ST MODE			
157P	0600	61	PT CLDY	6002	0		
008	10228	068		68	2783	0	2369
157P	0600	61	PT CLDY	6998	0		
008	10228	068		63	3565	0	2576
157P	0600	64	OCAST	5396	0		
008	10224	068		74	2524	0	0
157P	0600	64	OCAST	4619	0		
008	10224	068		78	2302	0	207
157P	0600	64	OCAST	4744	0		
008	10224	068		73	2524	0	296
157P	0600	64	OCAST	6032	0		
008	10224	068		63	3220	0	399
139P	0600	62	OCAST	5255	0		
008	10232	062		71	2783	0	-38
139P	0600	62	OCAST	6395	0		
008	10232	062		73	2894	0	-75
139P	0600	62	OCAST	6003	0		
008	10232	062		77	2724	0	-134
139P	0600	62	OCAST	4448	0		
008	10232	062		76	2790	0	-134
139P	0600	60	PT CLDY	5455	0		
008	10245	059		73	2909	0	-200
139P	0600	60	PT CLDY	5855	0		
008	10245	059		72	2909	0	-223
139P	0600	60	PT CLDY	5536	0		
008	10245	059		82	2539	0	-237
139P	0600	60	PT CLDY	7306	0		
008	10245	059		68	3138	0	-267
139P	0400	61	PT CLDY	6538	0		
012	10240	059		79	2805	0	-371
139P	0800	61	PT CLDY	6743	0		
012	10240	059		77	2953	0	-326

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN213	019	02-10-75	35-12 N	072	080.9	117P	117P		139P	0800	61	PT CLDY
60E	15	0400	046-42 W	19.7	02	05	03		012	10240	059	
MCLEAN213	019	02-10-75	35-12 N	072	080.9	117P	117P		139P	0800	61	PT CLDY
60E	16	0400	046-42 W	19.7	02	05	03		012	10240	059	
MCLEAN213	020	02-10-75	35-12 N	072	080.6	117P	117P		139P	0800	61	PT CLDY
60E	17	0800	046-42 W	19.6	04	15	03		012	10242	059	
MCLEAN213	020	02-10-75	35-12 N	072	080.6	117P	117P		139P	0800	61	PT CLDY
60E	18	0800	046-42 W	19.6	04	15	03		012	10242	059	
MCLEAN213	020	02-10-75	35-12 N	072	080.6	117P	117P		139P	0800	61	PT CLDY
60E	19	0800	046-42 W	19.6	04	15	03		012	10242	059	
MCLEAN213	020	02-10-75	35-12 N	072	080.6	117P	117P		139P	0800	61	PT CLDY
60E	20	0800	046-42 W	19.6	04	15	03		012	10242	059	
MCLEAN213	021	02-10-75	37-20 N	073	081.3	118P	118P		140P	0800	60	PT CLDY
60E	21	1200	037-40 W	19.8	04	15	03		016	10246	060	
MCLEAN213	021	02-10-75	37-20 N	073	081.3	118P	118P		140P	0800	60	PT CLDY
60E	22	1200	037-40 W	19.8	04	15	03		016	10246	060	
MCLEAN213	021	02-10-75	37-20 N	073	081.3	118P	118P		140P	0800	60	PT CLDY
60E	23	1200	037-40 W	19.8	04	15	03		016	10246	060	
MCLEAN213	021	02-10-75	37-20 N	073	081.3	118P	118P		140P	0800	60	PT CLDY
60E	24	1200	037-40 W	19.8	04	15	03		016	10246	060	
MCLEAN213	022	02-10-75	37-20 N	073	084.9	163P	163P		140P	0800	59	PT CLDY
60E	25	1600	037-40 W	20.7	02	05	02		016	10230	065	
MCLEAN213	022	02-10-75	37-20 N	073	084.9	163P	163P		140P	0800	59	PT CLDY
60E	26	1600	037-40 W	20.7	02	05	02		016	10230	065	
MCLEAN213	022	02-10-75	37-20 N	073	084.9	163P	163P		140P	0800	59	PT CLDY
60E	27	1600	037-40 W	20.7	02	05	02		016	10230	065	
MCLEAN213	022	02-10-75	37-20 N	073	084.9	163P	163P		140P	0800	59	PT CLDY
60E	28	1600	037-40 W	20.7	02	05	02		016	10230	065	
MCLEAN213	023	02-10-75	37-20 N	073	084.8	163P	163P		140P	0800	54	PT CLDY
60E	29	2000	037-40 W	20.7	03	10	03		016	10229	058	
MCLEAN213	023	02-10-75	37-20 N	073	084.8	163P	163P		140P	0800	54	PT CLDY
60E	30	2000	037-40 W	20.7	03	10	03		016	10229	058	

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			---WAVE IND--		1ST MODE	
6151	0		83	2842	0	-326
5855	0		79	2901	0	-37
6795	0		78	3086	0	-452
7313	0		81	2946	0	-459
6943	2		73	3516	977	-467
9260	1		78	3368	681	-467
5773	0		77	3175	0	-304
5847	0		69	2672	0	-393
6647	0		83	2997	0	-156
7276	0		69	3123	0	0
5571	0		55	3027	0	0
6743	0		66	3553	0	51
9541	0		55	3516	0	-60
6180	0		74	3360	0	-149
9097	0		65	4271	0	-607
7964	0		67	3294	0	-585

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN213	023	02-10-75	37-20 N	073	084.8	163P	163P	
60E	31	2000	037-40 W	20.7	03	10	03	
MCLEAN213	023	02-10-75	37-20 N	073	084.8	163P	163P	
60E	32	2000	037-40 W	20.7	03	10	03	
MCLEAN213	024	02-10-75	37-20 N	073	085.3	152S	152S	
60E	33	2400	037-40 W	20.8	03	10	03	
MCLEAN213	024	02-10-75	37-20 N	073	085.3	152S	152S	
60E	34	2400	037-40 W	20.8	03	10	03	
MCLEAN213	024	02-10-75	37-20 N	073	085.3	152S	152S	
60E	35	2400	037-40 W	20.8	03	10	03	
MCLEAN213	024	02-10-75	37-20 N	073	085.3	152S	152S	
60E	36	2400	037-40 W	20.8	03	10	03	
MCLEAN213	025	02-11-75	37-20 N	073	085.2	174S	174S	
60E	37	0400	037-40 W	20.8	03	10	03	
MCLEAN213	025	02-11-75	37-20 N	073	085.2	174S	174S	
60E	38	0400	037-40 W	20.8	03	10	03	
MCLEAN213	025	02-11-75	37-20 N	073	085.2	174S	174S	
60E	39	0400	037-40 W	20.8	03	10	03	
MCLEAN213	025	02-11-75	37-20 N	073	085.2	174S	174S	
60E	40	0400	037-40 W	20.8	03	10	03	
MCLEAN213	026	02-11-75	37-20 N	073	085.4	174S	174S	
60E	41	0800	037-40 W	20.8	05	20	04	
MCLEAN213	026	02-11-75	37-20 N	073	085.4	174S	174S	
60E	42	0800	037-40 W	20.8	05	20	04	
MCLEAN213	026	02-11-75	37-20 N	073	085.4	174S	174S	
60E	43	0800	037-40 W	20.8	05	20	04	
MCLEAN213	026	02-11-75	37-20 N	073	085.4	174S	174S	
60E	44	0800	037-40 W	20.8	05	20	04	
MCLEAN213	027	02-11-75	37-40 N	073	085.3	174S	174S	
60E	45	1200	037-50 W	20.8	06	25	04	
MCLEAN213	027	02-11-75	37-40 N	073	085.3	174S	174S	
60E	46	1200	037-50 W	20.8	06	25	04	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
					---WAVE IND-- 1ST MODE	
140P	0600	54.	PT CLDY	7454	0	
016	10229	058		64	3767	0	-622
140P	0800	54	PT CLDY	7863	0	
016	10229	058		70	3360	0	-63
118P	0800	57	PT CLDY	6973	0	
018	10213	057		65	3493	0	-726
118P	0800	57	PT CLDY	6062	0	
018	10213	057		70	3205	0	-763
118P	0800	57	PT CLDY	7942	0	
018	10213	057		71	3738	0	-763
118P	0800	57	PT CLDY	6730	0	
018	10213	057		74	3234	0	-719
118P	0800	59	PT CLDY	6624	0	ROLLING IN 18 FT SWE
018	10193	058		76	3131	0	-644
118P	0800	59	PT CLDY	6965	0	ROLLING IN 18 FT SWE
018	10193	058		62	3834	0	-889
118P	0800	59	PT CLDY	8142	0	ROLLING IN 18 FT SWE
018	10193	058		63	3456	0	-904
118P	0800	59	PT CLDY	10111	0	ROLLING .. 18 FT SWE
018	10193	058		65	4078	0	-904
118P	0800	58	PT CLDY	6950	0	
016	10190	058		61	3227	0	-992
118P	0800	58	PT CLDY	7772	0	
016	10190	058		65	3812	0	-978
118P	0800	58	PT CLDY	6780	0	
016	10190	058		67	3804	0	-985
118P	0800	58	PT CLDY	6662	0	
016	10190	058		70	3234	0	-867
118P	0800	58	PT CLDY	7169	0	
016	10170	060		70	3530	0	-171
118P	0800	58	PT CLDY	8712	0	
016	10170	060		65	3531	0	44

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	TRIP INTERVAL NUM	TIME GMT	LATITUDE	LONGITUDE	SHIPS COURSE	SHIPS SPEED KTS	PROP RPM	SEA STATE	REL WIND DIR	REL WIND SPEED KNOTS	REL WAVE DIR	WAVE PD SECS	WAVE HT FEET	WAVE LENG FT
MCLEAN213	027	02-11-75	39-40		N	073		085.3		174S		174S				
	60E	47		1200		027-50	W	20.8		06		25		04		
MCLEAN213	027	02-11-75	39-40		N	073		085.3		174S		174S				
	60E	48		1200		027-50	W	20.8		06		25		04		
MCLEAN213	028	02-11-75	39-40		N	073		085.8		152S		152S				
	60E	49		1600		027-50	W	20.9		05		20		04		
MCLEAN213	028	02-11-75	39-40		N	073		085.8		152S		152S				
	60E	50		1600		027-50	W	20.9		05		20		04		
MCLEAN213	028	02-11-75	39-40		N	073		085.8		152S		152S				
	60E	51		1600		027-50	W	20.9		05		20		04		
MCLEAN213	028	02-11-75	39-40		N	073		085.8		152S		152S				
	60E	52		1600		027-50	W	20.9		05		20		04		
MCLEAN213	029	02-11-75	39-40		N	072		086.5		153S		153S				
	60E	53		2000		027-50	W	21.1		06		25		04		
MCLEAN213	029	02-11-75	39-40		N	072		086.5		153S		153S				
	60E	54		2000		027-50	W	21.1		06		25		04		
MCLEAN213	029	02-11-75	39-40		N	072		086.5		153S		153S				
	60E	55		2000		027-50	W	21.1		06		25		04		
MCLEAN213	029	02-11-75	39-40		N	072		086.5		153S		153S				
	60E	56		2000		027-50	W	21.1		06		25		04		
MCLEAN213	030	02-11-75	39-40		N	072		086.8		164S		164S				
	60E	57		2400		027-50	W	21.2		06		25		04		
MCLEAN213	030	02-11-75	39-40		N	072		086.8		164S		164S				
	60E	58		2400		027-50	W	21.2		06		25		04		
MCLEAN213	030	02-11-75	39-40		N	072		086.8		164S		164S				
	60E	59		2400		027-50	W	21.2		06		25		04		
MCLEAN213	030	02-11-75	39-40		N	072		086.8		164S		164S				
	60E	60		2400		027-50	W	21.2		06		25		04		
MCLEAN215	031	02-12-75	39-40		N	072		086.7		175S		175S				
	60E	01		0400		027-50	W	21.1		05		20		04		
MCLEAN215	031	02-12-75	39-40		N	072		086.7		175S		175S				
	60E	02		0400		027-50	W	21.1		05		20		04		

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	SWELL HT FEET	BAROM INCH HG	AIR TEMP	MAX P-TO-P STRESS PSI	NUMBER OF BURSTS	COMMENTS
							NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
							---WAVE IND--	1ST MODE	
118P	0600	56	PT CLDY				6532	0	
				016	10170	060	64	3567	0	222
118P	0800	56	PT CLDY				6787	0	
				016	10170	060	65	3442	0	162
118P	0700	57	PT CLDY				5736	0	
				014	10146	060	67	3212	0	-23
118P	0700	57	PT CLDY				5995	0	
				014	10146	060	65	2953	0	-149
118P	0700	57	PT CLDY				6173	0	
				014	10146	060	65	3693	0	-326
118P	0700	57	PT CLDY				7394	0	
				014	10146	060	67	3419	0	-260
117P	0700	58	PT CLDY				8831	0	
				014	10148	058	63	3945	0	-430
117P	0700	58	PT CLDY				5995	0	
				014	10148	058	68	2857	0	-334
117P	0700	58	PT CLDY				7742	0	
				014	10146	058	61	3479	0	-163
117P	0700	58	PT CLDY				6114	0	
				014	10146	058	66	2983	0	-163
117P	0700	54	PT CLDY				5322	0	
				014	10145	058	61	3101	0	-208
117P	0700	54	PT CLDY				6377	0	
				014	10145	058	61	3242	0	-245
117P	0700	54	PT CLDY				8438	0	
				014	10145	058	62	4063	0	-245
117P	0700	54	PT CLDY				6876	0	
				014	10145	058	65	3220	0	-186
117P	0700	56	COAST				8471	0	
				014	10135	057	59	3660	0	0
117P	0700	56	COAST				8232	0	
				014	10135	057	62	3906	0	59

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN215	031	02-12-75	39-40 N	072	086.7	175S	175S		117P	0700	56	OCAST
60E	03	0400	027-50 W	21.1	05	20	04		014	10135	057	
MCLEAN215	031	02-12-75	39-40 N	072	086.7	175S	175S		117P	0700	56	OCAST
60E	04	0430	027-50 W	21.1	05	20	04		014	10135	057	
MCLEAN215	032	02-12-75	39-40 N	072	086.7	139P	139P		139P	0800	57	OCAST
60E	05	0800	027-50 W	21.1	05	20	04		012	10145	058	
MCLEAN215	032	02-12-75	39-40 N	072	086.7	139P	139P		139P	0800	57	OCAST
60E	06	0830	027-50 W	21.1	05	20	04		012	10145	058	
MCLEAN215	032	02-12-75	39-40 N	072	086.7	139P	139P		139P	0800	57	OCAST
60E	07	0900	027-50 W	21.1	05	20	04		012	10145	058	
MCLEAN215	032	02-12-75	39-40 N	072	086.7	139P	139P		139P	0800	57	OCAST
60E	08	0800	027-50 W	21.1	05	20	04		012	10145	056	
MCLEAN215	033	02-12-75	42-12 N	052	082.2	119P	119P		097P	0700	56	OCAST
60E	09	1200	017-18 W	20.0	06	25	04		010	10160	056	
MCLEAN215	033	02-12-75	42-12 N	052	082.2	119P	119P		097P	0700	56	OCAST
60E	10	1200	017-18 W	20.0	06	25	04		010	10160	058	
MCLEAN215	033	02-12-75	42-12 N	052	082.2	119P	119P		097P	0700	55	OCAST
60E	11	1200	017-18 W	20.0	06	25	04		010	10160	058	
MCLEAN215	033	02-12-75	42-12 N	052	082.2	119P	119P		097P	0700	56	OCAST
60E	12	1200	017-18 W	20.0	06	25	04		010	10160	058	
MCLEAN215	034	02-12-75	42-12 N	052	076.5	097P	097P		097P	0700	56	OCAST
60E	13	1600	017-18 W	18.7	03	10	04		010	10152	057	
MCLEAN215	034	02-12-75	42-12 N	052	076.5	097P	097P		097P	0700	56	OCAST
60E	14	1600	017-18 W	18.7	03	10	04		010	10152	057	
MCLEAN215	034	02-12-75	42-12 N	052	076.5	097P	097P		097P	0700	56	OCAST
60E	15	1600	017-18 W	18.7	03	10	04		010	10152	057	
MCLEAN215	034	02-12-75	42-12 N	052	076.5	097P	097P		097P	0700	56	OCAST
60E	16	1600	017-18 W	18.7	03	10	04		010	10152	057	
MCLEAN215	035	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	55	OCAST
60E	17	2000	017-18 W	20.0	05	20	04		010	10159	053	
MCLEAN215	035	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	55	OCAST
60E	19	2000	017-18 W	20.0	05	20	04		010	10159	053	

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND-- 1ST MODE			
3650	0	
60	3402	0	44
5743	0	
63	2986	0	64
7518	0	
60	3781	0	81
7397	0	
64	3202	0	81
5772	0	
64	3217	0	44
7949	0	
72	3105	0	148
7318	0	
65	3699	0	557
5661	0	
61	2600	0	403
6560	0	
76	3165	0	401
4509	0	
60	2585	0	297
6411	0	
79	2756	0	148
5912	0	
73	2429	0	252
4242	0	
72	2377	0	141
5252	1	
74	2585	742	176
7199	0	STILL ROLLING 20 DEC
78	2662	0	208
4517	0	STILL ROLLING 20 DEC
74	2431	0	304

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	

NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
---WAVE IND--	1ST MODE					

MCLEAN215	035	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	55	OCAST
60E	20	2000	017-18 W	20.0	05	20	04		010	10159	053	
70		2763			0	274				5624	0	STILL ROLLING 20 DEC
MCLEAN215	036	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	54	OCAST
60E	21	2400	017-18 W	20.0	05	20	04		010	10160	054	
73		2488			0	245				5312	0	
MCLEAN215	036	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	54	OCAST
60E	22	2400	017-18 W	20.0	05	20	04		010	10160	054	
73		2607			0	297				5906	0	
MCLEAN215	036	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	54	OCAST
60E	23	2400	017-18 W	20.0	05	20	04		010	10160	054	
78		2362			0	408				3997	0	
MCLEAN215	036	02-12-75	42-12 N	052	082.0	097P	097P		097P	0700	54	OCAST
60E	24	2400	017-18 W	20.0	05	20	04		010	10160	054	
73		2682			0	371				5891	0	
MCLEAN215	037	02-13-75	42-12 N	052	080.8	097P	097P		097P	0600	52	OCAST
60E	25	0400	017-18 W	19.7	04	15	04		080	10146	052	
76		2741			0	274				5400	0	
MCLEAN215	037	02-13-75	42-12 N	052	080.8	097P	097P		097P	0600	52	OCAST
60E	26	0400	017-18 W	19.7	04	15	04		080	10146	052	
76		2674			0	267				5868	0	
MCLEAN215	037	02-13-75	42-12 N	052	080.8	097P	097P		097P	0600	52	OCAST
60E	27	0400	017-18 W	19.7	04	15	04		080	10146	052	
81		2332			0	245				6263	0	
MCLEAN215	037	02-13-75	42-12 N	052	080.8	097P	097P		097P	0600	52	OCAST
60E	28	0400	017-18 W	19.7	04	15	04		080	10146	052	
76		2793			0	267				6441	0	
MCLEAN215	038	02-13-75	42-12 N	052	079.1	097P	097P		097P	0600	53	PT CLDY
60E	29	0800	017-18 W	19.3	05	20	04		080	10143	050	
78		2483			0	222				5802	0	
MCLEAN215	038	02-13-75	42-12 N	052	079.1	097P	097P		097P	0600	53	PT CLDY
60E	30	0800	017-18 W	19.3	05	20	04		080	10143	050	
75		2800			0	312				5327	0	
MCLEAN215	038	02-13-75	42-12 N	052	079.1	097P	097P		097P	0600	53	PT CLDY
60E	32	0800	017-18 W	19.3	05	20	04		080	10143	050	
75		2853			0	512				5133	0	
MCLEAN215	039	02-13-75	46-42 N	052	079.6	097P	097P		097P	0600	52	PT CLDY
60E	33	1200	008-54 W	19.4	05	20	04		006	10149	046	
73		2875			0	572				5504	0	
MCLEAN215	039	02-13-75	46-42 N	052	079.6	097P	097P		097P	0600	52	PT CLDY
60E	34	1200	008-54 W	19.4	05	20	04		006	10149	046	
71		2315			0	594				5119	0	
MCLEAN215	040	02-13-75	46-42 N	052	079.0	142P	142P		097P	0600	50	PT CLDY
60E	37	1600	008-54 W	19.3	05	20	03		006	10112	055	
77		2800			0	267				5136	0	
MCLEAN215	040	02-13-75	46-42 N	052	079.0	142P	142P		097P	0600	50	PT CLDY
60E	38	1600	008-54 W	19.3	05	20	03		006	10112	055	
82		2897			0	288				6508	0	

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN215 040	02-13-75	46-42 N	052	079.0	142P	142P		097P	0600	50	PT CLDY	
60E 39		1600	008-54 W	19.3	05	20	03	006	10112	055		
MCLEAN215 040	02-13-75	46-42 N	052	079.0	142P	142P		097P	0600	50	PT CLDY	
60E 40		1610	008-54 W	19.3	05	20	03	006	10112	055		
MCLEAN215 041	02-13-75	46-42 N	048	078.7	138P	138P		093P	0600	50	PT CLDY	
60E 41		2000	008-54 W	19.2	04	15	03	006	10093	048		
MCLEAN215 041	02-13-75	46-42 N	048	078.7	138P	138P		093P	0600	50	PT CLDY	
60E 42		2000	008-54 W	19.2	04	15	03	006	10093	048		
MCLEAN215 041	02-13-75	46-42 N	048	078.7	138P	138P		093P	0600	50	PT CLDY	
60E 43		2000	008-54 W	19.2	04	15	03	006	10093	048		
MCLEAN215 041	02-13-75	46-42 N	048	078.7	138P	138P		093P	0600	50	PT CLDY	
60E 44		2000	008-54 W	19.2	04	15	03	006	10093	048		
MCLEAN215 042	02-13-75	46-42 N	056	081.7	169P	169P		101P	0600	49	PT CLDY	
60E 45		2400	008-54 W	19.9	03	10	03	006	10080	049		
MCLEAN215 042	02-13-75	46-42 N	056	081.7	169P	169P		101P	0600	49	PT CLDY	
60E 46		2400	008-54 W	19.9	03	10	03	006	10080	049		
MCLEAN215 042	02-13-75	46-42 N	056	081.7	169P	169P		101P	0600	49	PT CLDY	
60E 47		2400	008-54 W	19.9	03	10	03	006	10080	049		
MCLEAN215 042	02-13-75	46-42 N	056	081.7	169P	169P		101P	0600	49	PT CLDY	
60E 48		2400	008-54 W	19.9	03	10	03	006	10080	049		
MCLEAN215 043	02-14-75	46-42 N	056	079.8	169S	169S		146P	0400	49	COAST	
60E 49		0400	008-54 W	19.5	04	15	02	003	10058	048		
MCLEAN215 043	02-14-75	46-42 N	056	079.8	169S	169S		146P	0400	49	COAST	
60E 50		0400	008-54 W	19.5	04	15	02	003	10058	048		
MCLEAN215 043	02-14-75	46-42 N	056	079.8	169S	169S		146P	0400	49	COAST	
60E 51		0400	008-54 W	19.5	04	15	02	003	10058	048		
MCLEAN215 043	02-14-75	46-42 N	056	079.8	169S	169S		146P	0400	49	COAST	
60E 52		0400	008-54 W	19.5	04	15	02	003	10058	048		
MCLEAN215 044	02-14-75	46-42 N	056	063.1	169S	169S		146P	0400	50	COAST	
60E 53		0800	008-54 W	15.4	02	05	01	003	10045	048		
MCLEAN215 044	02-14-75	46-42 N	056	063.1	169S	169S		146P	0400	50	COAST	
60E 54		0800	008-54 W	15.4	02	05	01	003	10045	048		

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			---WAVE IND-- 1ST MODE			
6233	0					
78			2793		0	364
5144	0					
81			2669		0	274
6805	0					
74			3291		0	170
6073	0					
77			2726		0	222
7630	0					
66			4078		0	267
8729	0					
61			3937		0	200
6032	0					
61			3425		0	59
7645	0					
70			3618		0	252
5240	0					
60			3662		0	141
5936	0					
58			2934		0	237
5304	0					
55			2741		0	260
5639	0					
63			2793		0	341
2511	0					
53			1567		0	282
3722	0					
66			1827		0	393
2221	0	CHERBOURG				
50			1082		0	133
2800	0	CHERBOURG				
57			1151		0	165

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN215	044	02-14-75	46-42 N	056	063.1	169S	169S		146P	0400	50	OCAST
60E	55	0800	008-54 W	15.4	02	05	01		003	10045	046	
MCLEAN215	044	02-14-75	46-42 N	056	063.1	169S	169S		146P	0400	50	OCAST
60E	56	0810	008-54 W	15.4	02	05	01		003	10045	046	
MCLEAN217	001	02-18-75		295	113.6	070P	070P		070P	0300	46	OCAST FOG
60W	01	1600		27.8	02	05	01		004	10213	053	
MCLEAN217	001	02-18-75		295	113.6	070P	070P		070P	0300	48	OCAST FOG
60W	02	1600		27.8	02	05	01		004	10213	053	
MCLEAN217	001	02-18-75		295	113.6	070P	070P		070P	0300	48	OCAST FOG
60W	03	1600		27.8	02	05	01		004	10213	053	
MCLEAN217	001	02-18-75		295	113.6	070P	070P		070P	0300	46	OCAST FOG
60W	04	1600		27.8	02	05	01		004	10213	053	
MCLEAN217	002	02-18-75		238	132.7	013P	013P		013P	0300	49	OCAST FOG
60W	05	2000		32.4	05	20	01		004	10196	053	
MCLEAN217	002	02-18-75		238	132.7	013P	013P		013P	0300	49	OCAST FOG
60W	06	2000		32.4	05	20	01		004	10196	053	
MCLEAN217	002	02-18-75		238	132.7	013P	013P		013P	0300	49	OCAST FOG
60W	07	2000		32.4	05	20	01		004	10196	053	
MCLEAN217	002	02-18-75		238	132.7	013P	013P		013P	0300	49	OCAST FOG
60W	08	2000		32.4	05	20	01		004	10196	053	
MCLEAN217	003	02-18-75		229	132.5	004P	004P		004P	0400	47	OCAST RAIN
60W	09	2400		32.3	04	15	01		004	10202	054	
MCLEAN217	003	02-18-75		229	132.5	004P	004P		004P	0400	47	OCAST RAIN
60W	10	2400		32.3	04	15	01		004	10202	054	
MCLEAN217	003	02-18-75		229	132.5	004P	004P		004P	0400	47	OCAST RAIN
60W	11	2400		32.3	04	15	01		004	10202	054	
MCLEAN217	003	02-18-75		229	132.5	004P	004P		004P	0400	47	OCAST RAIN
60W	12	2400		32.3	04	15	01		004	10202	054	
MCLEAN217	004	02-19-75		229	133.0	004P	004P		004P	0300	52	OCAST RAIN
60W	13	0400		32.5	02	05	02		003	10200	054	
MCLEAN217	004	02-19-75		229	133.0	004P	004P		004P	0300	52	OCAST RAIN
60W	14	0400		32.5	02	05	02		003	10200	054	

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MAX P-TO-P STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			---WAVE IND-- 1ST MODE			
2200	0	CHERBOURG				
50			1121	0	445	
3068	0	CHERBOURG				
52			1508	0	384	
6543	4					
172			2620	975	0	
5233	0					
173			2300	0	527	
6451	0					
175			2559	0	220	
6162	7					
175			2627	761	327	
5202	15					
165			2399	1069	510	
5585	5					
171			2109	891	502	
5385	6					
164			2262	1035	548	
5842	16					
166			2201	1569	449	
5537	16					
169			2445	1317	418	
5271	9					
166			2155	1074	464	
5615	23					
157			2231	1523	510	
5720	11					
149			2269	1272	510	
4044	0					
153			1972	0	403	
5507	2					
161			2125	1462	441	

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THIRD SEASON RESULTS FROM SHIP RESPONSE INSTRUMENTATION ABOARD --ETC(U)
DEC 75 R R BOENTGEN N00024-75-C-4354
UNCLASSIFIED TR-2058(D) SSC-SL-7-10 NL

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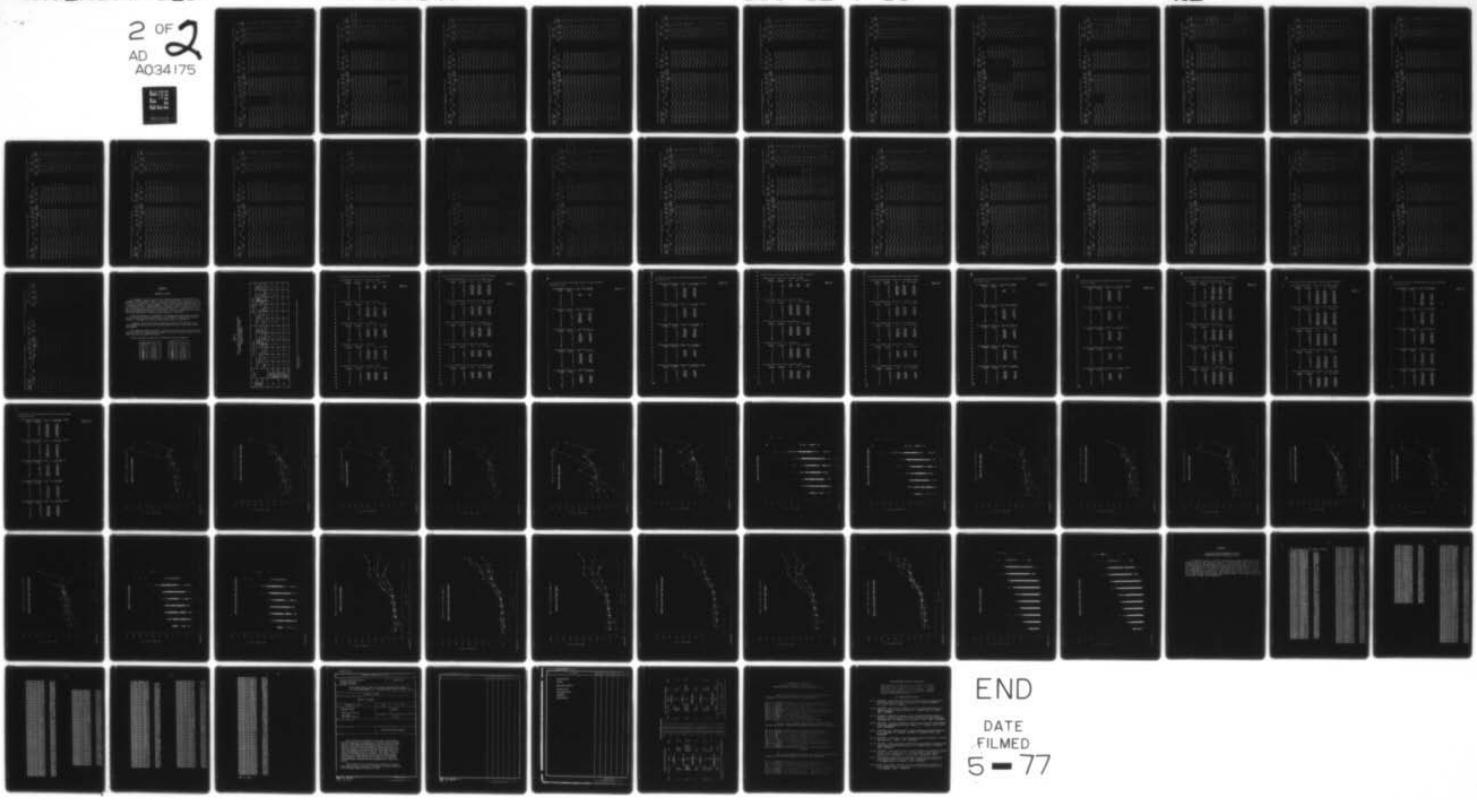

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVEHT FEET	WAVELENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN217	004	02-19-75		229	133.0	004P	004P		004P	0300	52	OCAST RAIN
60W	15	0400		32.5	02	05	02		003	10200	054	
MCLEAN217	004	02-19-75		229	133.0	004P	004P		004P	0300	52	OCAST RAIN
60W	16	0400		32.5	02	05	02		003	10200	054	
MCLEAN217	005	02-19-75		229	133.8	004P	004P		004P	0300	53	OCAST
60W	17	0800		32.6	02	05	02		003	10196	055	
MCLEAN217	005	02-19-75		229	133.8	004P	004P		004P	0300	53	OCAST
60W	18	0800		32.6	02	05	02		003	10196	055	
MCLEAN217	005	02-19-75		229	133.8	004P	004P		004P	0300	53	OCAST
60W	19	0800		32.6	02	05	02		003	10196	055	
MCLEAN217	005	02-19-75		229	133.8	004P	004P		004P	0300	53	OCAST
60W	20	0800		32.6	02	05	02		003	10196	055	
MCLEAN217	006	02-19-75	43-08 N	229	130.4	049P	049P		004P	0400	54	OCAST
60W	21	1200	014-40 W	31.8	05	20	04		004	10189	058	
MCLEAN217	006	02-19-75	43-08 N	229	130.4	049P	049P		004P	0400	54	OCAST
60W	22	1200	014-40 W	31.8	05	20	04		004	10189	058	
MCLEAN217	006	02-19-75	43-08 N	229	130.4	049P	049P		004P	0400	54	OCAST
60W	23	1200	014-40 W	31.8	05	20	04		004	10189	058	
MCLEAN217	006	02-19-75	43-08 N	229	130.4	049P	049P		004P	0400	54	OCAST
60W	24	1200	014-40 W	31.8	05	20	04		004	10189	058	
MCLEAN217	007	02-19-75	43-08 N	239	129.6	053S	053S		014P	0400	54	PT CLDY
60W	25	1600	014-40 W	31.6	02	05	04		004	10188	056	
MCLEAN217	007	02-19-75	43-08 N	239	129.6	053S	053S		014P	0400	54	PT CLDY
60W	26	1600	014-40 W	31.6	02	05	04		004	10188	056	
MCLEAN217	007	02-19-75	43-08 N	239	129.6	053S	053S		014P	0400	54	PT CLDY
60W	27	1600	014-40 W	31.6	02	05	04		004	10188	056	
MCLEAN217	007	02-19-75	43-08 N	239	129.6	053S	053S		014P	0400	54	PT CLDY
60W	28	1600	014-40 W	31.6	02	05	04		004	10188	056	
MCLEAN217	008	02-19-75	43-08 N	255	129.6	060S	060S		030P	0400	56	PT CLDY
60W	29	2000	014-40 W	31.6	06	25	05		004	10189	055	
MCLEAN217	008	02-19-75	43-08 N	255	129.6	060S	060S		030P	0400	56	PT CLDY
60W	30	2000	014-40 W	31.6	06	25	05		004	10189	055	

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NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
		---WAVE IND-- 1ST MODE				
151	1889	738	418	5080	2	
151	1896	708	457	4242	1	
157	1683	0	373	4197	0	
154	1607	0	616	3663	0	
146	1546	0	616	3275	0	
160	1614	0	647	3229	0	
169	1385	868	815	3031	4	
163	1531	868	731	3755	2	
152	1515	746	738	3534	3	
177	1591	799	769	4197	2	
167	1157	0	677	2993	0	
174	1505	0	799	3197	0	
152	1721	847	959	4379	1	
163	1911	639	1013	5554	1	
177	3163	2422	952	8401	38	SEAS OFF STARBOARD B
173	3793	3244	1061	7751	53	SEAS OFF STARBOARD B

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN217	008	02-19-75	43-08 N	255	129.6	060S	060S	
60W	31	2000	014-40 W	31.6	06	25	05	
MCLEAN217	008	02-19-75	43-08 N	255	129.6	060S	060S	
60W	32	2010	014-40 W	31.6	06	25	05	
MCLEAN217	009	02-19-75	43-08 N	255	129.0	071S	071S	
60W	33	2400	014-40 W	31.5	06	25	06	
MCLEAN217	009	02-19-75	43-08 N	255	129.0	071S	071S	
60W	34	2400	014-40 W	31.5	06	25	06	
MCLEAN217	009	02-19-75	43-08 N	255	129.0	071S	071S	
60W	35	2400	014-40 W	31.5	06	25	06	
MCLEAN217	009	02-19-75	43-08 N	255	129.0	071S	071S	
60W	36	2400	014-40 W	31.5	06	25	06	
MCLEAN217	010	02-20-75	43-08 N	255	128.9	037S	037S	
60W	37	0400	014-40 W	31.4	02	05	04	
MCLEAN217	010	02-20-75	43-08 N	255	128.9	037S	037S	
60W	38	0400	014-40 W	31.4	02	05	04	
MCLEAN217	010	02-20-75	43-08 N	255	128.9	037S	037S	
60W	39	0400	014-40 W	31.4	02	05	04	
MCLEAN217	010	02-20-75	43-08 N	255	128.9	037S	037S	
60W	40	0400	014-40 W	31.4	02	05	04	
MCLEAN217	011	02-20-75	43-08 N	270	129.3		022S	
60W	41	0800	014-40 W	31.5			01	
MCLEAN217	011	02-20-75	43-08 N	270	129.3		022S	
60W	42	0800	014-40 W	31.5			01	
MCLEAN217	011	02-20-75	43-08 N	270	129.3		022S	
60W	43	0800	014-40 W	31.5			01	
MCLEAN217	011	02-20-75	43-08 N	270	129.3		022S	
60W	44	0800	014-40 W	31.5			01	
MCLEAN217	012	02-20-75	43-08 N	266	129.5	063P	063P	
60W	45	1200	014-40 W	31.6	04	15	03	
MCLEAN217	012	02-20-75	43-08 N	266	129.5	063P	063P	
60W	46	1200	014-40 W	31.6	04	15	03	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-P STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND--	1ST MODE	
030P	0400	56	PT CLDY	6366	30	SEAS OFF STARBOARD E
004	10195	055		171	2985	1635	962
030P	0400	56	PT CLDY	8706	51	SEAS OFF STARBOARD E
004	10195	055		174	3618	5690	875
060S	0600	57	PT CLDY	7990	26	
007	10242	053		179	3389	2239	853
060S	0600	57	PT CLDY	7731	36	
007	10242	053		176	3564	2947	883
060S	0600	57	PT CLDY	9285	36	
007	10242	053		175	3359	3709	845
060S	0600	57	PT CLDY	7289	19	
007	10242	053		174	2902	2760	807
060S	0600	56	PT CLDY	7957	12	
008	10268	053		171	2854	2475	776
060S	0600	56	PT CLDY	6158	16	
008	10268	053		173	2666	2003	784
060S	0600	56	PT CLDY	8939	25	
008	10268	053		176	3001	2452	792
060S	0600	56	PT CLDY	7426	10	
008	10268	053		173	2643	1051	769
022S	0600	57	PT CLDY	7225	35	
008	10272	053		180	3183	2292	700
022S	0600	57	PT CLDY	6279	16	
008	10272	053		182	2765	2269	698
022S	0600	57	PT CLDY	5720	13	
008	10272	053		180	2467	1599	675
022S	0600	57	PT CLDY	5903	13	
008	10272	053		183	2526	1362	830
004S	0600	55	PT CLDY	6248	14	
006	10252	056		187	2487	2487	921
004S	0600	55	PT CLDY	4891	6	
006	10252	056		182	2155	888	1066

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--		1ST MODE	
MCLEAN217 012	02-20-75	39-52 N		268	129.5	063P	063P		004S	0600	55	PT CLDY	4509	8		
60W 47	1200	031-00 W		31.6	04	15	03		006	10252	056		186	1607	967	1089
MCLEAN217 012	02-20-75	39-52 N		288	129.5	063P	063P		004S	0600	55	PT CLDY	3907	15		
60W 48	1200	031-00 W		31.6	04	15	03		006	10252	056		199	1607	914	967
MCLEAN217 013	02-20-75	39-52 N		270	128.5	068P	068P		022S	0500	57	PT CLDY	2437	19		
60W 49	1600	031-00 W		31.4	05	20	03		003	10200	061		174	1112	1134	799
MCLEAN217 013	02-20-75	39-52 N		270	128.5	068P	068P		022S	0500	57	PT CLDY	2985	7		
60W 50	1600	031-00 W		31.4	05	20	03		003	10200	061		176	1119	808	1160
MCLEAN217 013	02-20-75	39-52 N		270	128.5	068P	068P		022S	0500	57	PT CLDY	2400	2		
60W 51	1600	031-00 W		31.4	05	20	03		003	10200	061		175	997	769	1645
MCLEAN217 013	02-20-75	39-52 N		270	128.5	068P	068P		022S	0500	57	PT CLDY	2251	1		
60W 52	1600	031-00 W		31.4	05	20	03		003	10200	061		170	967	670	1835
MCLEAN217 014	02-20-75	39-52 N		270	114.0	068P	068P		022S	0500	57	COAST	2105	18		
60W 53	2000	031-00 W		26.8	07	30	05		003	10153	061		172	891	1104	1713
MCLEAN217 014	02-20-75	39-52 N		270	114.0	068P	068P		022S	0500	57	COAST	1762	14		
60W 54	2000	031-00 W		26.8	07	30	05		003	10153	061		159	921	1112	1805
MCLEAN217 014	02-20-75	39-52 N		270	114.0	068P	068P		022S	0500	57	COAST	2076	13		
60W 55	2000	031-00 W		26.8	07	30	05		003	10153	061		163	982	1058	1729
MCLEAN217 014	02-20-75	39-52 N		270	114.0	068P	068P		022S	0500	57	COAST	2010	15		
60W 56	2000	031-00 W		26.8	07	30	05		003	10153	061		169	944	952	1691
MCLEAN217 015	02-20-75	39-52 N		270	114.5	068P	068P		022S	0500	56	COAST	2574	10		
60W 57	2400	031-00 W		27.9	06	25	05		003	10095	064		187	1188	853	1828
MCLEAN217 015	02-20-75	39-52 N		270	114.5	068P	068P		022S	0500	56	COAST	2690	29		
60W 58	2400	031-00 W		27.9	06	25	05		003	10095	064		200	1294	1207	1850
MCLEAN217 015	02-20-75	39-52 N		270	114.5	068P	068P		022S	0500	56	COAST	2816	21		
60W 59	2400	031-00 W		27.9	06	25	05		003	10095	064		203	1447	1089	1650
MCLEAN217 015	02-20-75	39-52 N		270	114.5	068P	068P		022S	0500	56	COAST	3793	23		
60W 60	2400	031-00 W		27.9	06	25	05		003	10095	064		196	1685	1081	1643
MCLEAN219 016	02-21-75	39-52 N		270	113.4	068P	068P		022S	0600	56	RAIN	4285	44		
60W 01	0400	031-00 W		27.7	06	25	05		012	10051	055		199	1751	1060	0
MCLEAN219 016	02-21-75	39-52 N		270	113.4	068P	068P		022S	0600	56	RAIN	3968	22		
60W 02	0400	031-00 W		27.7	06	25	05		012	10051	055		197	2041	1165	86

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--		1ST MODE	
MCLEAN219	016	02-21-75	39-52 N	270	113.4	068P	068P		022S	0600	58	RAIN	6291	48	
60W	03	0400	031-00 W	27.7	06	25	05		012	10051	055		213	2513	2277	175
MCLEAN219	016	02-21-75	39-52 N	270	113.4	068P	068P		022S	0600	58	RAIN	6421	43	
60W	04	0400	031-00 W	27.7	06	25	05		012	10051	055		212	2909	1774	220
MCLEAN219	017	02-21-75	39-52 N	270	111.9	022S	022S		022S	0600	59	RAIN	8310	65	
60W	05	0800	031-00 W	27.3	08	35	06		014	10123	054		205	3930	4158	418
MCLEAN219	017	02-21-75	39-52 N	270	111.9	022S	022S		022S	0600	59	RAIN	9653	56	
60W	06	0800	031-00 W	27.3	08	35	06		014	10123	054		200	3960	4082	434
MCLEAN219	017	02-21-75	39-52 N	270	111.9	022S	022S		022S	0600	59	RAIN	9559	67	
60W	07	0800	031-00 W	27.3	08	35	06		014	10123	054		199	3709	3732	388
MCLEAN219	017	02-21-75	39-52 N	270	111.9	022S	022S		022S	0600	59	RAIN	9285	65	
60W	08	0800	031-00 W	27.3	08	35	06		014	10123	054		202	4181	4798	418
MCLEAN219	018	02-21-75	39-53 N	270	087.4	022S	022S		022S	0800	62	RAIN	8493	37	
60W	09	1200	045-20 W	21.3	07	30	05		014	10167	049		184	3465	2620	677
MCLEAN219	018	02-21-75	39-53 N	270	087.4	022S	022S		022S	0800	62	RAIN	10351	49	
60W	10	1200	045-20 W	21.3	07	30	05		014	10167	049		183	3534	3328	716
MCLEAN219	018	02-21-75	39-53 N	270	087.4	022S	022S		022S	0800	62	RAIN	10991	37	
60W	11	1200	045-20 W	21.3	07	30	05		014	10167	049		184	3694	3465	716
MCLEAN219	018	02-21-75	39-53 N	270	087.4	022S	022S		022S	0800	62	RAIN	8889	50	
60W	12	1200	045-20 W	21.3	07	30	05		014	10167	049		179	3724	4113	693
MCLEAN219	019	02-21-75	39-53 N	270	089.5	067S	067S		067P	0800	62	COAST	4766	0	
60W	13	1600	045-20 W	21.8	01	02	02		008	10159	050		180	2155	0	479
MCLEAN219	019	02-21-75	39-53 N	270	089.5	067S	067S		067P	0800	62	COAST	6573	3	
60W	14	1600	045-20 W	21.8	01	02	02		008	10159	050		174	2437	850	411
MCLEAN219	019	02-21-75	39-53 N	270	089.5	067S	067S		067P	0800	62	COAST	6832	17	
60W	15	1600	045-20 W	21.8	01	02	02		008	10159	050		177	2925	1328	457
MCLEAN219	019	02-21-75	39-53 N	270	089.5	067S	067S		067P	0800	62	COAST	6459	4	
60W	16	1600	045-20 W	21.8	01	02	02		008	10159	050		180	2506	738	449
MCLEAN219	020	02-21-75	39-53 N	270	092.8	090P	090P		022S	0800	58	COAST	7396	25	
60W	17	2000	045-20 W	22.6	01	02	01		008	10120	054		175	3115	2132	434
MCLEAN219	020	02-21-75	39-53 N	270	092.8	090P	090P		022S	0800	58	COAST	8378	8	
60W	18	2000	045-20 W	22.6	01	02	01		008	10120	054		180	2579	1934	479

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
MCLEAN219	020	02-21-75	39-53 N	270	092.8	090P	090P		022S	0800	66	OCAST
60W	19	2000	045-20 W	22.6		01	02	01	008	10120	054	
MCLEAN219	020	02-21-75	39-53 N	270	092.8	090P	090P		022S	0800	66	OCAST
60W	20	2000	045-20 W	22.6		01	02	01	008	10120	054	
MCLEAN219	021	02-21-75	39-53 N	270	089.3	000	000		067S	0500	67	OCAST
60W	21	2400	045-20 W	21.8		03	10	02	005	10070	057	
MCLEAN219	021	02-21-75	39-53 N	270	089.3	000	000		067S	0500	67	OCAST
60W	22	2400	045-20 W	21.8		03	10	02	005	10070	057	
MCLEAN219	021	02-21-75	39-53 N	270	089.3	000	000		067S	0500	67	OCAST
60W	23	2400	045-20 W	21.8		03	10	02	005	10070	057	
MCLEAN219	021	02-21-75	39-53 N	270	089.3	000	000		067S	0500	67	OCAST
60W	24	2400	045-20 W	21.8		03	10	02	005	10070	057	
MCLEAN219	022	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	25	0400	045-20 W	22.3		02	05	02	008	10051	055	
MCLEAN219	022	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	26	0400	045-20 W	22.3		02	05	02	008	10051	055	
MCLEAN219	022	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	27	0400	045-20 W	22.3		02	05	02	008	10051	055	
MCLEAN219	022	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	28	0400	045-20 W	22.3		02	05	02	008	10051	055	
MCLEAN219	023	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	29	0800	045-20 W	22.3		02	05	02	010	10051	055	
MCLEAN219	023	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	30	0800	045-20 W	22.3		02	05	02	010	10051	055	
MCLEAN219	023	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	31	0800	045-20 W	22.3		02	05	02	010	10051	055	
MCLEAN219	023	02-22-75	39-53 N	270	091.6	067S	067S		045S	0600	66	OCAST
60W	32	0800	045-20 W	22.3		02	05	02	010	10051	055	
MCLEAN219	024	02-22-75	39-53 N	270	091.7	045S	045S		045S	0600	60	OCAST
60W	33	1200	045-20 W	22.4		07	30	05	010	10088	048	
MCLEAN219	024	02-22-75	39-53 N	270	091.7	045S	045S		045S	0600	60	OCAST
60W	34	1200	045-20 W	22.4		07	30	05	010	10088	048	

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
		---WAVE IND-- 1ST MODE		

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
MCLEAN219	020	5842	7	
60W	19	185	2704	1066	479
MCLEAN219	020	4852	3	
60W	20	186	2483	1127	464
MCLEAN219	021	4349	1	
60W	21	192	2056	853	-762
MCLEAN219	021	4296	1	
60W	22	193	1853	655	-653
MCLEAN219	021	4890	6	
60W	23	190	1828	1089	-549
MCLEAN219	021	4052	2	
60W	24	194	1598	822	-541
MCLEAN219	022	2589	0	
60W	25	183	1165	0	-724
MCLEAN219	022	2787	0	
60W	26	182	1317	0	-732
MCLEAN219	022	2544	0	
60W	27	183	1249	0	-732
MCLEAN219	022	2704	2	
60W	28	179	1249	700	-709
MCLEAN219	023	2094	6	
60W	29	192	1035	723	-648
MCLEAN219	023	2155	7	
60W	30	185	975	906	-534
MCLEAN219	023	2364	3	
60W	31	176	1112	929	-503
MCLEAN219	023	2490	4	
60W	32	184	1157	914	-516
MCLEAN219	024	2460	6	
60W	33	183	1241	929	-564
MCLEAN219	024	2544	18	
60W	34	185	1264	1536	-602

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN219 024	02-22-75	39-53 N	270	091.7	045S	045S		045S	0600	60	OCAST	
60W 35	1200	045-20 W	22.4	07	30	05		010	10068	048		
MCLEAN219 024	02-22-75	39-53 N	270	091.7	045S	045S		045S	0600	60	OCAST	
60W 36	1200	045-20 W	22.4	07	30	05		010	10068	048		
MCLEAN219 025	02-22-75	39-44 N	270	089.6	067S	067S		045S	0600	59	OCAST	
60W 37	1600	057-05 W	21.8	08	35	07		010	10153	049		
MCLEAN219 025	02-22-75	39-44 N	270	089.6	067S	067S		045S	0600	59	OCAST	
60W 38	1600	057-05 W	21.8	08	35	07		010	10153	049		
MCLEAN219 025	02-22-75	39-44 N	270	089.6	067S	067S		045S	0600	59	OCAST	
60W 39	1600	057-05 W	21.8	08	35	07		010	10153	049		
MCLEAN219 025	02-22-75	39-44 N	270	089.6	067S	067S		045S	0600	59	OCAST	
60W 40	1600	057-05 W	21.8	08	35	07		010	10153	049		
MCLEAN219 026	02-22-75	39-44 N	272	088.6	043S	043S		043S	0600	70	OCAST	
60W 41	2000	057-05 W	21.6	08	35	07		006	10186	050		
MCLEAN219 026	02-22-75	39-44 N	272	088.6	043S	043S		043S	0600	70	OCAST	
60W 42	2000	057-05 W	21.6	08	35	07		006	10186	050		
MCLEAN219 026	02-22-75	39-44 N	272	088.6	043S	043S		043S	0600	70	OCAST	
60W 43	2000	057-05 W	21.6	08	35	07		006	10186	050		
MCLEAN219 026	02-22-75	39-44 N	272	088.6	043S	043S		043S	0600	70	OCAST	
60W 44	2000	057-05 W	21.6	08	35	07		006	10186	050		
MCLEAN219 027	02-22-75	39-44 N	272	090.9	043S	043S		043S	0600	60	OCAST	
60W 45	2400	057-05 W	22.2	04	15	04		006	10233	050		
MCLEAN219 027	02-22-75	39-44 N	272	090.9	043S	043S		043S	0600	60	OCAST	
60W 46	2400	057-05 W	22.2	04	15	04		006	10233	050		
MCLEAN219 027	02-22-75	39-44 N	272	090.9	043S	043S		043S	0600	60	OCAST	
60W 47	2400	057-05 W	22.2	04	15	04		006	10233	050		
MCLEAN219 027	02-22-75	39-44 N	272	090.9	043S	043S		043S	0600	60	OCAST	
60W 48	2400	057-05 W	22.2	04	15	04		006	10233	050		
MCLEAN219 028	02-23-75	39-44 N	272	091.9	002P	002P		043S	0600	49	PT CLDY	
60W 49	0400	057-05 W	22.4	06	25	05		003	10247	051		
MCLEAN219 028	02-23-75	39-44 N	272	091.9	002P	002P		043S	0600	49	PT CLDY	
60W 50	0400	057-05 W	22.4	06	25	05		003	10247	051		

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MAX P-TO-P STRESS PSI	NUMBER OF BURSTS	COMMENTS			
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI		
---WAVE IND-- 1ST MODE					
4334	16				
199	1873	967	-857		
5309	15				
192	2125	1492	-841		
7502	50				
194	3366	2940	-572		
8279	32				
187	3298	3054	-572		
8416	35				
181	3618	2033	-732		
8218	37				
174	3785	2338	-686		
4242	13				
209	1965	924	-602		
3717	8				
206	1637	975	-496		
4131	5				
201	1904	807	-549		
3930	8				
207	1896	875	-595		
1957	0				
160	792	0	-823		
1591	4				
155	716	708	-800		
1424	0				
145	731	0	-803		
1249	0				
139	609	0	-816		
883	0				
136	339	0	-759		
922	0				
167	327	0	-629		

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	TIME GMT	LATITUDE	LONGITUDE	SHIPS COURSE	SHIPS SPEED KTS	PROP RPM	SEA STATE	REL WIND DIR	REL WIND SPEED KNOTS	REL WAVE DIR	WAVE PD SECS	WAVE HT FEET	WAVE LENG FT	REL SWELL DIR	SWELL HT FEET	SWELL LENGTH FEET	BAROM INCH HG	SEA TEMP	AIR TEMP	WEATHER
TRIP INTERVAL NUM																						
MCLEAN219 028	60M 51	02-23-75	0400	39-44 N	057-05 W	272	22.4	091.9	06	002P	25	002P	05			043S	003	0600	10247	43	051	PT CLDY
MCLEAN219 028	60M 52	02-23-75	0400	39-44 N	057-05 W	272	22.4	091.9	06	002P	25	002P	05			043S	003	0600	10247	43	051	PT CLDY
MCLEAN219 029	60M 53	02-23-75	0800	39-44 N	057-05 W	272	21.9	089.7	02	002P	05	002P	01			043S	003	0600	10224	62	050	PT CLDY
MCLEAN219 029	60M 54	02-23-75	0800	39-44 N	057-05 W	272	21.9	089.7	02	002P	05	002P	01			043S	003	0600	10224	62	050	PT CLDY
MCLEAN219 029	60M 55	02-23-75	0800	39-44 N	057-05 W	272	21.9	089.7	02	002P	05	002P	01			043S	003	0600	10224	62	050	PT CLDY
MCLEAN219 029	60M 56	02-23-75	0800	39-44 N	057-05 W	272	21.9	089.7	02	002P	05	002P	01			043S	003	0600	10224	62	050	PT CLDY
MCLEAN219 030	60M 57	02-23-75	1200	39-44 N	057-05 W	272	19.8	081.0	05	069P	20	069P	02			043S	003	0600	10195	55	055	PT CLDY
MCLEAN219 030	60M 58	02-23-75	1200	39-44 N	057-05 W	272	19.8	081.0	05	069P	20	069P	02			043S	003	0600	10195	55	055	PT CLDY
MCLEAN219 030	60M 59	02-23-75	1200	39-44 N	057-05 W	272	19.8	081.0	05	069P	20	069P	02			043S	003	0600	10195	55	055	PT CLDY
MCLEAN219 030	60M 60	02-23-75	1200	39-44 N	057-05 W	272	19.8	081.0	05	069P	20	069P	02			043S	003	0600	10195	55	055	PT CLDY
MCLEAN221 031	60M 01	02-23-75	1600	39-54 N	069-03 W	273	20.0	081.9	05	070P	20	070P	03			070P	003	0600	10161	58	056	COAST
MCLEAN221 031	60M 02	02-23-75	1600	39-54 N	069-03 W	273	20.0	081.9	05	070P	20	070P	03			070P	003	0600	10161	58	056	COAST
MCLEAN221 032	60M 05	02-23-75	2000	39-54 N	069-03 W	273	17.1	078.1	03	070P	10	070P	02			070P	003	0600	10112	58	055	COAST
MCLEAN221 032	60M 06	02-23-75	2000	39-54 N	069-03 W	273	17.1	078.1	03	070P	10	070P	02			070P	003	0600	10112	58	055	COAST
MCLEAN221 032	60M 07	02-23-75	2000	39-54 N	069-03 W	273	17.1	078.1	03	070P	10	070P	02			070P	003	0600	10112	58	055	COAST
MCLEAN221 032	60M 08	02-23-75	2000	39-54 N	069-03 W	273	17.1	078.1	03	070P	10	070P	02			070P	003	0600	10112	58	055	COAST

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
					---WAVE IND-- 1ST MODE			
MCLEAN219	028 60M 51	652	0		179	350	0	-709
MCLEAN219	028 60M 52	769	0		184	358	0	-747
MCLEAN219	029 60M 53	525	0		146	256	0	-516
MCLEAN219	029 60M 54	601	0		136	261	0	-534
MCLEAN219	029 60M 55	464	0		131	243	0	-567
MCLEAN219	029 60M 56	441	0		115	236	0	-572
MCLEAN219	030 60M 57	449	0		125	198	0	-572
MCLEAN219	030 60M 58	472	0		88	243	0	-511
MCLEAN219	030 60M 59	594	0		97	220	0	-442
MCLEAN219	030 60M 60	426	0		106	205	0	-328
MCLEAN221	031 60M 01	433	0		102	235	0	0
MCLEAN221	031 60M 02	638	0		136	243	0	30
MCLEAN221	032 60M 05	684	0		135	372	0	243
MCLEAN221	032 60M 06	823	0		146	357	0	243
MCLEAN221	032 60M 07	783	0		143	319	0	228
MCLEAN221	032 60M 08	696	0		142	278	0	228

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN221	033	02-23-75	39-54 N	273	066.3						43	DENSE FOG
60W	09	2400	069-03 W	16.2					10120	050		
MCLEAN221	033	02-23-75	39-54 N	273	066.3						43	DENSE FOG
60W	10	2400	069-03 W	16.2					10120	050		
MCLEAN221	033	02-23-75	39-54 N	273	066.3						43	DENSE FOG
60W	11	2400	069-03 W	16.2					10120	050		
MCLEAN221	034	02-24-75	39-54 N	280	055.9						43	DENSE FOG
60W	13	0400	069-03 W	13.6					10122	051		
MCLEAN221	034	02-24-75	39-54 N	280	055.9						43	DENSE FOG
60W	14	0400	069-03 W	13.6					10111	051		
MCLEAN221	034	02-24-75	39-54 N	280	055.9						43	DENSE FOG
60W	15	0400	069-03 W	13.6					10111	051		
MCLEAN221	034	02-24-75	39-54 N	280	055.9						43	DENSE FOG
60W	16	0400	069-03 W	13.6					10111	051		
MCLEAN223	002	02-28-75		081	110.2	099S	099S		144S	0800	44	CLEAR
61E	05	2400		26.8	02	05	01		001	10090	051	
MCLEAN223	002	02-28-75		081	110.2	099S	099S		144S	0800	44	CLEAR
61E	06	2400		26.8	02	05	01		001	10090	051	
MCLEAN223	002	02-28-75		081	110.2	099S	099S		144S	0800	44	CLEAR
61E	07	2400		26.8	02	05	01		001	10090	051	
MCLEAN223	002	02-28-75		081	110.2	099S	099S		144S	0800	44	CLEAR
61E	08	2400		26.8	02	05	01		001	10090	051	
MCLEAN223	003	03-01-75		081	122.3	099S	099S		144S	0800	70	PT CLDY
61E	09	0400		29.8	02	05	02		002	10063	056	
MCLEAN223	003	03-01-75		081	122.3	099S	099S		144S	0800	70	PT CLDY
61E	10	0400		29.8	02	05	02		002	10063	056	
MCLEAN223	003	03-01-75		081	122.3	099S	099S		144S	0800	70	PT CLDY
61E	11	0400		29.8	02	05	02		002	10063	056	
MCLEAN223	003	03-01-75		081	122.3	099S	099S		144S	0800	70	PT CLDY
61E	12	0400		29.8	02	05	02		002	10063	056	
MCLEAN223	004	03-01-75		081	121.4	144S	144S		144S	0800	73	COAST
61E	13	0800		29.6	02	05	03		003	10054	059	

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND-- 1ST MODE			
897	0	
151	441	0	235
935	0	
141	486	0	243
851	0	
130	372	0	220
722	0	
135	410	0	228
608	0	
119	296	0	235
714	0	
129	304	0	311
603	0	
121	296	0	327
815	0	
163	363	0	0
993	1	
167	370	1171	365
808	0	
170	346	0	342
953	0	
165	400	0	303
1438	0	
134	652	0	74
1402	0	
155	726	0	96
1625	0	
156	834	0	215
1352	0	
160	674	0	237
1920	0	
152	867	0	252

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--		1ST MODE	
MCLEAN223 004	03-01-75			081	121.4	144S	144S		144S	0800	73	OCAST	1705	0		
61E 14	0800			29.5	02	05	03		003	10054	059		154	822	0	311
MCLEAN223 004	03-01-75			081	121.4	144S	144S		144S	0800	73	OCAST	2046	0		
61E 15	0800			29.5	02	05	03		003	10054	059		160	867	0	356
MCLEAN223 004	03-01-75			081	121.4	144S	144S		144S	0800	73	OCAST	2001	0		
61E 16	0800			29.5	02	05	03		003	10054	059		169	867	0	341
MCLEAN223 005	03-01-75	38-26 N		081	121.0	144S	144S		144S	0800	73	OCAST	4722	8		
61E 17	1200	064-10 W		29.5	04	15	03		003	10042	060		116	2016	1008	467
MCLEAN223 005	03-01-75	38-26 N		081	121.0	144S	144S		144S	0800	73	OCAST	4819	11		
61E 18	1200	064-10 W		29.5	04	15	03		003	10042	060		106	1994	1297	-3055
MCLEAN223 005	03-01-75	38-26 N		081	121.0	144S	144S		144S	0800	73	OCAST	4656	8		
61E 19	1200	064-10 W		29.5	04	15	03		003	10042	060		110	2075	1119	-2961
MCLEAN223 005	03-01-75	38-26 N		081	121.0	144S	144S		144S	0800	73	OCAST	3647	4		
61E 20	1200	064-10 W		29.5	04	15	03		003	10042	060		96	1779	793	-3063
MCLEAN223 006	03-01-75	38-26 N		081	119.1	121S	121S		144S	0600	70	RAIN FOG	6524	23	ROLLING 10 DEG PORT	
61E 21	1600	064-10 W		29.0	07	30	04		006	10022	061		99	2535	1112	-3129
MCLEAN223 006	03-01-75	38-26 N		081	119.1	121S	121S		144S	0600	70	RAIN FOG	6687	22	ROLLING 10 DEG PORT	
61E 22	1600	064-10 W		29.0	07	30	04		006	10022	061		105	2565	1505	-3107
MCLEAN223 006	03-01-75	38-26 N		081	119.1	121S	121S		144S	0600	70	RAIN FOG	6457	21	ROLLING 10 DEG PORT	
61E 23	1600	064-10 W		29.0	07	30	04		006	10022	061		99	2654	1312	-3077
MCLEAN223 006	03-01-75	38-26 N		081	119.1	121S	121S		144S	0600	70	RAIN FOG	6872	32	ROLLING 10 DEG PORT	
61E 24	1600	064-10 W		29.0	07	30	04		006	10022	061		100	3010	1564	-2922
MCLEAN223 007	03-01-75	38-26 N		081	119.2	088S	088S		099S	0600	66	RAIN	6516	34		
61E 25	2000	064-10 W		29.0	08	35	06		008	09997	060		110	3002	1801	-2714
MCLEAN223 007	03-01-75	38-26 N		081	119.2	088S	088S		099S	0600	66	RAIN	6832	34		
61E 26	2000	064-10 W		29.0	08	35	06		008	09997	060		107	3403	1215	-2744
MCLEAN223 007	03-01-75	38-26 N		081	119.2	088S	088S		099S	0600	66	RAIN	6457	26		
61E 27	2000	064-10 W		29.0	08	35	06		008	09997	060		102	3158	2795	-2781
MCLEAN223 007	03-01-75	38-26 N		081	119.2	088S	088S		099S	0600	66	RAIN	6687	35		
61E 28	2000	064-10 W		29.0	08	35	06		008	09997	060		92	3373	1345	-2736
MCLEAN223 008	03-01-75	38-26 N		081	116.4	088S	088S		099S	0600	65	RAIN LIGHTNING	8388	32		
61E 29	2400	064-10 W		28.8	08	40	06		008	09990	065		98	2928	1809	-2936

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN223 008	03-01-75	38-26 N	081	118.4	088S	088S		099S	0600	65	RAIN LIGHTNING	
61E 30		2400	064-10 W	28.8	08	40	06	008	09990	065		
MCLEAN223 008	03-01-75	38-26 N	081	118.4	088S	088S		099S	0600	65	RAIN LIGHTNING	
61E 31		2400	064-10 W	28.8	08	40	06	008	09990	065		
MCLEAN223 008	03-01-75	38-26 N	081	118.4	086S	088S		099S	0600	65	RAIN LIGHTNING	
61E 32		2400	064-10 W	28.8	08	40	06	008	09990	065		
MCLEAN223 009	03-02-75	38-26 N	081	119.0	099S	099S		099S	0600	66	RAIN LIGHTNING	
61E 33		0400	064-10 W	29.0	08	40	06	008	09992	065		
MCLEAN223 009	03-02-75	38-26 N	081	119.0	099S	099S		099S	0600	66	RAIN LIGHTNING	
61E 34		0400	064-10 W	29.0	08	40	06	008	09992	065		
MCLEAN223 009	03-02-75	38-26 N	081	119.0	099S	099S		099S	0600	66	RAIN LIGHTNING	
61E 35		0400	064-10 W	29.0	08	40	06	008	09992	065		
MCLEAN223 009	03-02-75	38-26 N	081	119.0	099S	099S		099S	0600	66	RAIN LIGHTNING	
61E 36		0400	064-10 W	29.0	08	40	06	008	09992	065		
MCLEAN223 010	03-02-75	38-26 N	081	119.0	054S	054S		099S	0600	57	COAST	
61E 37		0800	064-10 W	29.0	06	25	04	006	10000	064		
MCLEAN223 010	03-02-75	38-26 N	081	119.0	054S	054S		099S	0600	57	COAST	
61E 38		0800	064-10 W	29.0	06	25	04	006	10000	064		
MCLEAN223 010	03-02-75	38-26 N	081	119.0	054S	054S		099S	0600	57	COAST	
61E 39		0800	064-10 W	29.0	06	25	04	006	10000	064		
MCLEAN223 010	03-02-75	38-26 N	081	119.0	054S	054S		099S	0600	57	COAST	
61E 40		0800	064-10 W	29.0	06	25	04	006	10000	064		
MCLEAN223 011	03-02-75	40-26 N	081	119.0	099S	099S		099S	0600	59	COAST	
61E 41		1200	049-37 W	29.0	06	25	04	006	10035	064		
MCLEAN223 011	03-02-75	40-26 N	081	119.0	099S	099S		099S	0600	59	COAST	
61E 42		1200	049-37 W	29.0	06	25	04	006	10035	064		
MCLEAN223 011	03-02-75	40-26 N	081	119.0	099S	099S		099S	0600	59	COAST	
61E 43		1200	049-37 W	29.0	06	25	04	006	10035	064		
MCLEAN223 011	03-02-75	40-26 N	081	119.0	099S	099S		099S	0600	59	COAST	
61E 44		1200	049-37 W	29.0	06	25	04	006	10035	064		
MCLEAN223 012	03-02-75	40-26 N	078	119.4	126S	126S		149S	0800	56	COAST	
61E 45		1600	049-37 W	29.1	06	25	04	006	10064	062		

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND-- 1ST MODE			
5745	34	
91	2809	1275	-2929
6079	29	
111	2765	1416	-2885
6294	39	
119	2617	2780	-3100
5871	37	HEAVY ROLL
106	2809	1482	-3166
6309	50	HEAVY ROLL
127	3010	1890	-3226
5212	31	HEAVY ROLL
125	2276	1349	-3137
4233	41	HEAVY ROLL
165	2113	1705	-3063
7273	39	
137	3492	3180	-3603
7095	29	
122	2876	1201	-2944
6626	29	
122	2772	1267	-3055
4819	22	
115	2505	1312	-2929
5493	17	SLOW HEAVY ROLL
112	2631	1371	-3248
5894	23	SLOW HEAVY ROLL
110	2654	1208	-3411
7199	15	SLOW HEAVY ROLL
115	2898	956	-3404
5871	22	SLOW HEAVY ROLL
110	2876	1067	-3396
5990	16	
91	3202	1252	-3322

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN223	012	03-02-75	40-26 N	076	119.4	126S	126S	
61E	46	1600	049-37 W	29.1	06	25	04	
MCLEAN223	012	03-02-75	40-26 N	076	119.4	126S	126S	
61E	47	1600	049-37 W	29.1	06	25	04	
MCLEAN223	012	03-02-75	40-26 N	076	119.4	126S	126S	
61E	48	1600	049-37 W	29.1	06	25	04	
MCLEAN223	013	03-02-75	40-26 N	076	118.0	149S	149S	
61E	49	2000	049-37 W	28.7	03	10	04	
MCLEAN223	013	03-02-75	40-26 N	076	118.0	149S	149S	
61E	50	2000	049-37 W	28.7	03	10	04	
MCLEAN223	013	03-02-75	40-26 N	076	118.0	149S	149S	
61E	51	2000	049-37 W	28.7	03	10	04	
MCLEAN223	013	03-02-75	40-26 N	076	118.0	149S	149S	
61E	52	2000	049-37 W	28.7	03	10	04	
MCLEAN223	014	03-02-75	40-26 N	076	119.5	177P	177P	
61E	53	2400	049-37 W	29.1	04	15	04	
MCLEAN223	014	03-02-75	40-26 N	076	119.5	177P	177P	
61E	54	2400	049-37 W	29.1	04	15	04	
MCLEAN223	014	03-02-75	40-26 N	076	119.5	177P	177P	
61E	55	2400	049-37 W	29.1	04	15	04	
MCLEAN223	014	03-02-75	40-26 N	076	119.5	177P	177P	
61E	56	2400	049-37 W	29.1	04	15	04	
MCLEAN223	015	03-03-75	40-26 N	090	119.4	169S	169S	
61E	57	0400	049-37 W	29.1	04	15	03	
MCLEAN223	015	03-03-75	40-26 N	090	119.4	169S	169S	
61E	58	0400	049-37 W	29.1	04	15	03	
MCLEAN223	015	03-03-75	40-26 N	090	119.4	169S	169S	
61E	59	0400	049-37 W	29.1	04	15	03	
MCLEAN223	015	03-03-75	40-26 N	090	119.4	169S	169S	
61E	60	0400	049-37 W	29.1	04	15	03	
MCLEAN223	016	03-03-75	40-26 N	090	082.0	157S	157S	
61E	01	0800	049-37 W	28.0	06	25	02	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
SWELL HT FEET	BAROM INCH HG	AIR TEMP	
149S	0800	58	OCAST
006	10064	062	
149S	0800	58	OCAST
006	10064	062	
149S	0800	58	OCAST
006	10064	062	
149S	0800	57	OCAST
006	10092	060	
149S	0800	57	OCAST
006	10092	060	
149S	0800	57	OCAST
006	10092	060	
149S	0800	57	OCAST
006	10092	060	
149S	0800	58	OCAST
006	10102	060	
149S	0800	58	OCAST
006	10102	060	
149S	0800	58	OCAST
006	10102	060	
149S	0800	58	OCAST
006	10102	060	
149S	0800	56	PT CLDY
006	10119	061	
149S	0800	56	PT CLDY
006	10119	061	
149S	0800	56	PT CLDY
006	10119	061	
149S	0800	56	PT CLDY
006	10119	061	
157S	0800	57	PT CLDY
005	10153	061	

MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND--	1ST MODE	
8696	11	
94	3388	1052	-3337
6946	9	
96	3158	1215	-3337
8407	20	
93	3536	1364	-3389
8348	9	
66	4166	1067	-3122
7525	7	
73	3662	1067	-3107
11410	14	
70	3986	1112	-3196
8652	19	
69	3640	1349	-3344
8125	5	
67	4174	949	-3745
8896	11	
64	4011	1149	-3885
7769	11	
64	3840	1215	-3982
9126	16	
67	4283	1371	-3693
7362	7	
75	3647	1052	-3856
5936	3	
66	3477	1527	-3762
7443	4	
60	3884	771	-3923
6229	2	
64	3632	830	-3865
8276	0	
74	3930	0	0

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--		1ST MODE	
MCLEAN225	015	03-03-75	40-26 N	090	082.0	157S	157S		157S	0600	57	PT CLDY		8477	0	
61E	02	0300	049-37 W	20.0		06	25	02	005	10153	061		75	4093	0	178
MCLEAN225	016	03-03-75	40-26 N	090	082.0	157S	157S		157S	0600	57	PT CLDY		9859	0	
61E	03	0800	049-37 W	20.0		06	25	02	005	10153	061		76	4066	0	176
MCLEAN225	016	03-03-75	40-26 N	090	082.0	157S	157S		157S	0600	57	PT CLDY		9027	0	
61E	04	0800	049-37 W	20.0		06	25	02	005	10153	061		78	4212	0	203
MCLEAN225	017	03-03-75	41-48 N	090	081.0	180	180		157S	0600	54	CLEAR		6783	0	
61E	05	1200	036-08 W	19.7		06	25	02	005	10168	061		73	3425	0	698
MCLEAN225	017	03-03-75	41-48 N	090	081.0	180	180		157S	0600	54	CLEAR		6790	0	
61E	06	1200	036-08 W	19.7		06	25	02	005	10168	061		74	3016	0	876
MCLEAN225	017	03-03-75	41-48 N	090	081.0	180	180		157S	0600	54	CLEAR		6560	0	
61E	07	1200	036-08 W	19.7		06	25	02	005	10168	061		76	3157	0	713
MCLEAN225	017	03-03-75	41-48 N	090	081.0	180	180		157S	0600	54	CLEAR		5560	0	
61E	08	1200	036-08 W	19.7		06	25	02	005	10168	061		73	4346	0	802
MCLEAN225	018	03-03-75	41-48 N	090	080.9	180	180		146S	0600	55	CLEAR		7541	0	
61E	09	1600	036-08 W	19.7		03	10	01	004	10169	069		75	3462	0	696
MCLEAN225	018	03-03-75	41-48 N	090	080.9	180	180		146S	0600	55	CLEAR		6181	0	
61E	10	1600	036-08 W	19.7		03	10	01	004	10169	069		74	3231	0	772
MCLEAN225	018	03-03-75	41-48 N	090	080.9	180	180		146S	0600	55	CLEAR		7803	0	
61E	11	1600	036-08 W	19.7		03	10	01	004	10169	069		76	3061	0	846
MCLEAN225	018	03-03-75	41-48 N	090	080.9	180	180		146S	0600	55	CLEAR		5552	0	
61E	12	1600	036-08 W	19.7		03	10	01	004	10169	069		69	3075	0	936
MCLEAN225	019	03-03-75	41-48 N	071	081.0	159P	159P		159P	0600	56	CLEAR		5935	0	
61E	13	2000	036-08 W	19.7		03	10	01	004	10169	058		33	2823	0	1003
MCLEAN225	019	03-03-75	41-48 N	071	081.0	159P	159P		159P	0600	56	CLEAR		6405	0	
61E	14	2000	036-08 W	19.7		03	10	01	004	10169	058		76	3090	0	1300
MCLEAN225	019	03-03-75	41-48 N	071	081.0	159P	159P		159P	0600	56	CLEAR		6040	0	
61E	15	2000	036-08 W	19.7		03	10	01	004	10169	058		75	2836	0	1515
MCLEAN225	019	03-03-75	41-48 N	071	081.0	159P	159P		159P	0600	56	CLEAR		6567	0	
61E	16	2000	036-08 W	19.7		03	10	01	004	10169	058		33	2602	0	1952
MCLEAN225	020	03-03-75	41-48 N	071	081.5	159P	159P		159P	0600	56	CLEAR		8209	0	
61E	17	2400	036-08 W	19.5		04	15	01	004	10160	057		68	3254	0	1456

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT
MCLEAN225	020	03-03-75	41-48 N	071	081.5	159P	159P	
61E	18	2400	036-08 W	19.8	04	15	01	
MCLEAN225	020	03-03-75	41-48 N	071	081.5	159P	159P	
61E	19	2400	036-08 W	19.8	04	15	01	
MCLEAN225	020	03-03-75	41-48 N	071	081.5	159P	159P	
61E	20	2400	036-08 W	19.8	04	15	01	
MCLEAN225	021	03-04-75	41-48 N	071	081.5	159P	159P	
61E	21	0400	036-08 W	19.8	03	10	01	
MCLEAN225	021	03-04-75	41-48 N	071	081.5	159P	159P	
61E	22	0400	036-08 W	19.8	03	10	01	
MCLEAN225	021	03-04-75	41-48 N	071	081.5	159P	159P	
61E	23	0400	036-08 W	19.8	03	10	01	
MCLEAN225	021	03-04-75	41-48 N	071	081.5	159P	159P	
61E	24	0400	036-08 W	19.8	03	10	01	
MCLEAN225	022	03-04-75	41-48 N	071	080.5	159P	159P	
61E	25	0800	036-08 W	19.6	04	15	01	
MCLEAN225	022	03-04-75	41-48 N	071	080.5	159P	159P	
61E	26	0800	036-08 W	19.6	04	15	01	
MCLEAN225	022	03-04-75	41-48 N	071	080.5	159P	159P	
61E	27	0800	036-08 W	19.6	04	15	01	
MCLEAN225	022	03-04-75	41-48 N	071	080.5	159P	159P	
61E	28	0800	036-08 W	19.6	04	15	01	
MCLEAN225	023	03-04-75	43-45 N	071	081.0	159P	159P	
61E	29	1200	026-00 W	19.7	04	15	01	
MCLEAN225	023	03-04-75	43-45 N	071	081.0	159P	159P	
61E	30	1200	026-00 W	19.7	04	15	01	
MCLEAN225	023	03-04-75	43-45 N	071	081.0	159P	159P	
61E	31	1200	026-00 W	19.7	04	15	01	
MCLEAN225	023	03-04-75	43-45 N	071	081.0	159P	159P	
61E	32	1200	026-00 W	19.7	04	15	01	
MCLEAN225	024	03-04-75	43-45 N	071	080.5	159P	159P	
61E	33	1600	026-00 W	19.5	03	10	01	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---AVE IND--	1ST MODE	
159P	0600	56	CLEAR	6352	0	
004	10190	057		76	2600	0	1515
159P	0600	56	CLEAR	5262	0	
004	10190	057		84	2422	0	1493
159P	0600	56	CLEAR	6025	0	
004	10190	057		76	2734	0	1446
159P	0600	54	PT CLDY	4524	0	
003	10180	056		84	2414	0	1329
159P	0600	54	PT CLDY	5393	0	
003	10180	056		84	2316	0	1337
159P	0600	54	PT CLDY	5327	0	
003	10180	056		67	2890	0	1374
159P	0600	54	PT CLDY	5601	0	
003	10180	056		77	2251	0	1315
159P	0600	53	OCAST	5096	0	
003	10182	058		86	2037	0	1186
159P	0600	53	OCAST	4561	0	
003	10182	058		82	2162	0	1240
159P	0600	53	OCAST	5445	0	
003	10182	058		73	2318	0	1255
159P	0600	53	OCAST	4017	0	
003	10182	058		87	1998	0	1203
159P	0600	53	OCAST	4175	0	
003	10183	060		76	2310	0	1017
159P	0600	53	OCAST	5416	0	
003	10183	060		72	2526	0	983
159P	0600	53	OCAST	4651	0	
003	10183	060		70	2518	0	1010
159P	0600	53	OCAST	4442	0	
003	10183	060		75	2191	0	1047
159P	0600	54	FOG OCAST	4116	0	
003	10186	059		75	2486	0	1099

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI --WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN225	024	03-04-75	43-45 N	071	080.1	159P	159P		159P	0600	54	FOG OCAST		4420	0	
61E	34	1600	026-00 W	19.5	03	10	01		003	10166	059		75	2303	0	1292
MCLEAN225	024	03-04-75	43-45 N	071	080.1	159P	159P		159P	0600	54	FOG OCAST		5022	0	
61E	35	1600	026-00 W	19.5	03	10	01		003	10166	059		72	2741	0	1471
MCLEAN225	024	03-04-75	43-45 N	071	080.1	159P	159P		159P	0600	54	FOG OCAST		4249	0	
61E	36	1600	026-00 W	19.5	03	10	01		003	10166	059		71	2615	0	1604
MCLEAN225	025	03-04-75	43-45 N	071	080.0	159P	159P		159P	0600	53	FOG OCAST		4769	0	
61E	37	2000	026-00 W	19.5	03	10	01		003	10169	058		69	2585	0	1664
MCLEAN225	025	03-04-75	43-45 N	071	080.0	159P	159P		159P	0600	53	FOG OCAST		4996	0	
61E	38	2000	026-00 W	19.5	03	10	01		003	10169	058		79	2362	0	1641
MCLEAN225	025	03-04-75	43-45 N	071	080.0	159P	159P		159P	0600	53	FOG OCAST		4630	0	
61E	40	2000	026-00 W	19.5	03	10	01		003	10169	058		75	2518	0	1701
MCLEAN225	026	03-04-75	43-45 N	071	079.4	159P	159P		159P	0800	53	FOG RAIN		5001	0	
61E	41	2400	026-00 W	19.5	03	10	01		003	10160	058		73	2451	0	1686
MCLEAN225	026	03-04-75	43-45 N	071	079.4	159P	159P		159P	0800	53	FOG RAIN		5490	0	
61E	42	2400	026-00 W	19.5	03	10	01		003	10160	058		67	2778	0	1701
MCLEAN225	026	03-04-75	43-45 N	071	079.4	159P	159P		159P	0800	53	FOG RAIN		5542	0	
61E	43	2400	026-00 W	19.5	03	10	01		003	10160	058		80	2214	0	1701
MCLEAN225	026	03-04-75	43-45 N	071	079.4	159P	159P		159P	0800	53	FOG RAIN		4764	0	
61E	44	2400	026-00 W	19.5	03	10	01		003	10160	058		70	2518	0	1751
MCLEAN225	027	03-05-75	43-45 N	071	080.0	159P	159P		159P	0800	53	FOG RAIN		4605	0	
61E	45	0400	026-00 W	19.5	02	05	01		002	10146	057		69	2325	0	1587
MCLEAN225	027	03-05-75	43-45 N	071	080.0	159P	159P		159P	0800	53	FOG RAIN		4836	0	
61E	46	0400	026-00 W	19.5	02	05	01		002	10146	057		66	2615	0	1612
MCLEAN225	027	03-05-75	43-45 N	071	080.0	159P	159P		159P	0800	53	FOG RAIN		5475	0	
61E	47	0400	026-00 W	19.5	02	05	01		002	10146	057		70	2303	0	1582
MCLEAN225	027	03-05-75	43-45 N	071	080.0	159P	159P		159P	0800	53	FOG RAIN		5379	0	
61E	48	0400	026-00 W	19.5	02	05	01		002	10146	057		62	2682	0	1587
MCLEAN225	028	03-05-75	43-45 N	071	080.1	159P	159P		159P	0800	53	FOG RAIN		4607	0	
61E	49	0800	026-00 W	19.5	02	05	01		002	10135	056		70	2191	0	1530
MCLEAN225	028	03-05-75	43-45 N	071	080.1	159P	159P		159P	0800	53	FOG RAIN		4665	0	
61E	50	0800	026-00 W	19.5	02	05	01		002	10135	056		66	2408	0	1582

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVEHT FEET	WAVE LENG FT
MCLEAN225	028	03-05-75	43-45 N	071	080.1	159P	159P	
61E	51	0600	026-00 W	19.5	02	05	01	
MCLEAN225	028	03-05-75	43-45 N	071	080.1	159P	159P	
61E	52	0800	026-00 W	19.5	02	05	01	
MCLEAN225	029	03-05-75	46-12 N	071	080.1	109S	109S	
61E	53	1200	015-42 W	19.5	04	15	02	
MCLEAN225	029	03-05-75	46-12 N	071	080.1	109S	109S	
61E	54	1200	015-42 W	19.5	04	15	02	
MCLEAN225	029	03-05-75	46-12 N	071	080.1	109S	109S	
61E	55	1200	015-42 W	19.5	04	15	02	
MCLEAN225	029	03-05-75	46-12 N	071	080.1	109S	109S	
61E	56	1200	015-42 W	19.5	04	15	02	
MCLEAN225	030	03-05-75	46-12 N	071	079.5	131S	131S	
61E	57	1600	015-42 W	19.4	04	15	02	
MCLEAN225	030	03-05-75	46-12 N	071	079.5	131S	131S	
61E	58	1600	015-42 W	19.4	04	15	02	
MCLEAN225	030	03-05-75	46-12 N	071	079.5	131S	131S	
61E	59	1600	015-42 W	19.4	04	15	02	
MCLEAN225	030	03-05-75	46-12 N	071	079.5	131S	131S	
61E	60	1600	015-42 W	19.4	04	15	02	
MCLEAN227	031	03-05-75	46-12 N	071	061.5	131S	131S	
61E	01	2000	015-42 W	14.9	03	10	02	
MCLEAN227	031	03-05-75	46-12 N	071	061.5	131S	131S	
61E	02	2000	015-42 W	14.9	03	10	02	
MCLEAN227	031	03-05-75	46-12 N	071	061.5	131S	131S	
61E	03	2000	015-42 W	14.9	03	10	02	
MCLEAN227	031	03-05-75	46-12 N	071	061.5	131S	131S	
61E	04	2000	015-42 W	14.9	03	10	02	
MCLEAN227	032	03-05-75	46-12 N	071	060.0	131S	131S	
61E	05	2400	015-42 W	14.8	03	10	01	
MCLEAN227	032	03-05-75	46-12 N	071	060.0	131S	131S	
61E	06	2400	015-42 W	14.8	03	10	01	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND--	1ST MODE	
159P	0800	53	FOG RAIN	4145	0	
002	10135	056		66	2243	0	1575
159P	0800	53	FOG RAIN	4138	0	
002	10135	056		70	2214	0	1545
154S	0800	53	FOG RAIN	4643	0	
002	10139	054		76	1961	0	1506
154S	0800	53	FOG RAIN	3350	0	
002	10139	054		76	1849	0	1308
154S	0800	53	FOG RAIN	5193	0	
002	10139	054		77	1939	0	1500
154S	0800	53	FOG RAIN	4575	0	
002	10139	054		74	2095	0	1500
131S	0800	52	FOG RAIN	4585	0	
002	10112	053		75	2102	0	1441
131S	0800	52	FOG RAIN	4190	0	
002	10112	053		67	2139	0	1476
131S	0800	52	FOG RAIN	4554	0	
002	10112	053		81	2043	0	1766
131S	0800	52	FOG RAIN	4725	0	
002	10112	053		80	2176	0	1775
131S	0800	52	RAIN	4049	0	
002	10116	053		84	1746	0	0
131S	0800	52	RAIN	3160	0	
002	10116	053		87	1510	0	56
131S	0800	52	RAIN	3393	0	
002	10116	053		75	1885	0	103
131S	0800	52	RAIN	3419	0	
002	10116	053		65	1591	0	103
131S	0800	52	COAST	2857	0	
002	10128	053		61	1428	0	59
131S	0800	52	COAST	2573	0	
002	10128	053		63	1406	0	28

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-T-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--	1ST NODE		
MCLEAN227 034	03-05-75	46-12 N	071	060.0	131S	131S		131S	0800	52	COAST		4137	0		
61E 07	2400	015-42 W	14.6	03	10	01		002	10108	055			77	1828	0	103
MCLEAN227 032	03-05-75	46-12 N	071	060.0	131S	131S		131S	0800	52	COAST		3084	0		
61E 08	2400	015-42 W	14.6	03	10	01		002	10108	055			84	1635	0	81
MCLEAN227 033	03-06-75	46-12 N	071	060.0	131S	131S		131S	0800	51	COAST		3345	0		
61E 09	0400	015-42 W	14.6	03	10	01		002	10105	055			83	1365	0	59
MCLEAN227 033	03-06-75	46-12 N	071	060.0	131S	131S		131S	0800	51	COAST		3454	0		
61E 10	0400	015-42 W	14.6	03	10	01		002	10105	055			78	1857	0	103
MCLEAN227 033	03-06-75	46-12 N	071	060.0	131S	131S		131S	0800	51	COAST		2930	0		
61E 11	0400	015-42 W	14.6	03	10	01		002	10105	055			89	1406	0	103
MCLEAN227 033	03-06-75	46-12 N	071	060.0	131S	131S		131S	0800	51	COAST		3590	0		
61E 12	0400	015-42 W	14.6	03	10	01		002	10105	055			95	1695	0	111
MCLEAN227 034	03-06-75	46-12 N	071	059.8	131S	131S		131S	0800	51	COAST		4123	0		
61E 13	0800	015-42 W	14.6	03	10	01		002	10105	055			80	1702	0	74
MCLEAN227 034	03-06-75	46-12 N	071	059.8	131S	131S		131S	0800	51	COAST		3284	0		
61E 14	0800	015-42 W	14.6	03	10	01		002	10105	055			77	1791	0	74
MCLEAN227 034	03-06-75	46-12 N	071	059.8	131S	131S		131S	0800	51	COAST		3503	0		
61E 15	0800	015-42 W	14.6	03	10	01		002	10105	055			79	1843	0	91
MCLEAN227 034	03-06-75	46-12 N	071	059.8	131S	131S		131S	0800	51	COAST		3049	0		
61E 16	0800	015-42 W	14.6	03	10	01		002	10105	055			80	1539	0	101
MCLEAN227 035	03-06-75	46-13 N	071	060.0	131S	131S		131S	0800	50	FOG RAIN		3640	0		
61E 17	1200	007-03 W	14.6	03	10	01		002	10109	055			80	1665	0	59
MCLEAN227 035	03-06-75	46-13 N	071	060.0	131S	131S		131S	0800	50	FOG RAIN		3140	0		
61E 18	1200	007-03 W	14.6	03	10	01		002	10109	055			73	1606	0	140
MCLEAN227 035	03-06-75	46-13 N	071	060.0	131S	131S		131S	0800	50	FOG RAIN		3715	0		
61E 19	1200	007-03 W	14.6	03	10	01		002	10109	055			91	1817	0	118
MCLEAN227 035	03-06-75	46-13 N	071	060.0	131S	131S		131S	0800	50	FOG RAIN		3725	0		
61E 20	1200	007-03 W	14.6	03	10	01		002	10109	055			88	1861	0	106
MCLEAN227 036	03-06-75	46-13 N	071	060.2	161P	161P		161P	0800	50	COAST		3353	0		
61E 21	1600	007-03 W	14.6	03	10	01		002	10096	055			77	1702	0	125
MCLEAN227 036	03-06-75	46-13 N	071	060.2	161P	161P		161P	0800	50	COAST		3185	0		
61E 22	1600	007-03 W	14.6	03	10	01		002	10096	055			70	1946	0	170

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ANALOG TAPE NUMBER / TRIP	LOGBOOK INDEX NUM / INTERVAL NUM	DATE / TIME GMT	LATITUDE / LONGITUDE	SHIPS COURSE / SHIPS SPEED KTS	PROP RPM / SEA STATE	REL WIND DIR / REL WIND SPEED KNOTS	REL WAVE DIR / WAVE HT FEET	WAVE PD SECS / WAVE LENG FT	REL SWELL DIR / SWELL HT FEET	SWELL LENGTH FEET / BAROM INCH HG	SEA TEMP / AIR TEMP	WEATHER	MAX P-TO-T STRESS PSI / NUMBER CYCLES	NUMBER OF BURSTS / RMS STRESS PSI	MAX STRESS PSI	COMMENTS / MEAN STRESS PSI
													---WAVE IND--	1ST MODE		
MCLEAN227	036	03-06-75	48-13 N	071	060.2	161P	161P		1515	0800	50	COAST	3775	0		
61E	23	1500	007-03 W	14.6	03	10	01		002	10096	055		75	1358	0	207
MCLEAN227	036	03-06-75	48-13 N	071	060.2	161P	161P		1515	0800	50	COAST	3435	0		
61E	24	1500	007-03 W	14.6	03	10	01		002	10095	055		76	1739	0	170
MCLEAN227	037	03-06-75	48-13 N	056	060.0	146P	146P		1465	0800	50	COAST	3471	0		
61E	28	2000	007-03 W	14.6	03	10	01		001	10105	054		77	1532	0	165
MCLEAN227	038	03-06-75	48-13 N	055	058.0	146P	146P		1465	0800	48	COAST	3020	0		
61E	29	2400	007-03 W	14.1	03	10	01		001	10103	051		71	1510	0	133
MCLEAN227	038	03-06-75	48-13 N	056	058.0	146P	146P		1465	0800	48	COAST	2642	0		
61E	30	2400	007-03 W	14.1	03	10	01		001	10103	051		76	1236	0	177
MCLEAN227	038	03-06-75	48-13 N	056	058.0	146P	146P		1465	0800	43	COAST	2294	0		
61E	31	2400	007-03 W	14.1	03	10	01		001	10103	051		75	1043	0	347
MCLEAN227	035	03-06-75	48-13 N	056	058.0	146P	145P		1465	0800	45	COAST	1365	0		
61E	32	2400	007-03 W	14.1	03	10	01		001	10103	051		72	651	0	370
MCLEAN227	039	03-07-75	48-13 N	090	053.0	180	180		1125	0800	48	COAST	1295	0		
61E	33	0400	007-03 W	12.9	02	05	01		001	10078	050		53	629	0	445
MCLEAN227	039	03-07-75	48-13 N	090	053.0	180	180		1125	0800	48	COAST	621	0		
61E	34	0400	007-03 W	12.9	02	05	01		001	10078	050		55	266	0	510
MCLEAN227	039	03-07-75	48-13 N	090	053.0	180	180		1125	0800	48	COAST	1643	0		
61E	35	0400	007-03 W	12.9	02	05	01		001	10078	050		53	660	0	-131
MCLEAN227	039	03-07-75	48-13 N	090	053.0	180	180		1125	0800	48	COAST	1524	0		
61E	36	0400	007-03 W	12.9	02	05	01		001	10078	050		52	658	0	-163
MCLEAN229	001	03-11-75	50-02 N		.	177P					48	PT CLDY	433	0		DROP PILOT CHERBOUR
61W	01	1200	000-47 W		02	05				10152	047		162	200	0	0
MCLEAN229	001	03-11-75	50-02 N		.	177P					48	PT CLDY	591	0		DROP PILOT CHERBOUR
61W	02	1200	000-47 W		02	05				10152	047		134	284	0	1226
MCLEAN229	001	03-11-75	50-02 N		.	177P					48	PT CLDY	787	0		DROP PILOT CHERBOUR
61W	03	1200	000-47 W		02	05				10152	047		203	327	0	-754
MCLEAN229	001	03-11-75	50-02 N		.	177P					48	PT CLDY	1479	0		DROP PILOT CHERBOUR
61W	04	1200	000-47 W		02	05				10152	047		203	639	0	-751
MCLEAN229	002	03-11-75	50-02 N	244	132.4	1615	1615		1615	0400	53	RAIN SHOWERS	2572	0		OVER GROUND SPEED 3
61W	05	1600	000-47 W	32.3	04	15	01		001	10139	042		197	1010	0	-1095

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	TRIP	INTERVAL NUM	DATE	TIME GMT	LATITUDE	LONGITUDE	SHIPS COURSE	SHIPS SPEED KTS	PROP RPM	SEA STATE	REL WIND DIR	REL WIND SPEED KNOTS	REL WAVE DIR	WAVE HT FEET	WAVE PD SECS	WAVE LENG FT	REL SWELL DIR	SWELL HT FEET	SWELL LENGTH FEET	BARUM INCH HG	SEA TEMP	AIR TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER CYCLES	NUMBER OF BURSTS	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI	COMMENTS
MCLEAN229	002	61W	06	03-11-75	1600	50-02 N	000-47 W	244	32.3	132.4	04	161S	15	161S	01			161S	001	0400	10139	50	046	RAIN SHOWERS	2433	196	0	1070	0	-959	OVER GROUND SPEED [illegible]
MCLEAN229	002	61W	07	03-11-75	1600	50-02 N	000-47 W	244	32.3	132.4	04	161S	15	161S	01			161S	001	0400	10139	50	046	RAIN SHOWERS	2035	195	0	1010	0	-758	OVER GROUND SPEED 3
MCLEAN229	002	61W	08	03-11-75	1600	50-02 N	000-47 W	244	32.3	132.4	04	161S	15	161S	01			161S	001	0400	10139	50	046	RAIN SHOWERS	2579	159	0	1174	0	-588	OVER GROUND SPEED 3
MCLEAN229	003	61W	09	03-11-75	2000	50-02 N	000-47 W	244	33.0	133.4	02	161S	05	161S	01			161S	001	0400	10126	49	048	OCAST	2973	99	0	1260	0	-491	
MCLEAN229	003	61W	10	03-11-75	2000	50-02 N	000-47 W	244	33.0	133.4	02	161S	05	161S	01			161S	001	0400	10126	49	048	OCAST	3349	135	0	1456	0	-632	
MCLEAN229	003	61W	11	03-11-75	2000	50-02 N	000-47 W	244	33.0	133.4	02	161S	05	161S	01			161S	001	0400	10126	49	048	OCAST	3724	130	0	1635	0	-662	
MCLEAN229	003	61W	12	03-11-75	2000	50-02 N	000-47 W	244	33.0	133.4	02	161S	05	161S	01			161S	001	0400	10126	49	048	OCAST	4430	101	1	1984	625	-744	
MCLEAN229	004	61W	13	03-11-75	2400	50-02 N	000-47 W	244	33.1	133.5	03	177P	10	177P	02			116S	002	0500	10119	51	048	PT CLDY	3910	95	0	1702	0	-318	
MCLEAN229	004	61W	14	03-11-75	2400	50-02 N	000-47 W	244	33.1	133.5	03	177P	10	177P	02			116S	002	0500	10119	51	048	PT CLDY	3404	92	1	1798	576	-692	
MCLEAN229	004	61W	15	03-11-75	2400	50-02 N	000-47 W	244	33.1	133.5	03	177P	10	177P	02			116S	002	0500	10119	51	048	PT CLDY	3471	96	0	1665	0	-610	
MCLEAN229	004	61W	16	03-11-75	2400	50-02 N	000-47 W	244	33.1	133.5	03	177P	10	177P	02			116S	002	0500	10119	51	048	PT CLDY	4727	93	0	1724	0	-662	
MCLEAN229	005	61W	17	03-12-75	0400	50-02 N	000-47 W	244	33.0	133.0	04	116S	15	116S	02			116S	002	0600	10152	53	050	PT CLDY	4316	77	0	2192	0	-870	
MCLEAN229	005	61W	18	03-12-75	0400	50-02 N	000-47 W	244	33.0	133.0	04	116S	15	116S	02			116S	002	0600	10152	53	050	PT CLDY	5411	80	0	2081	0	-840	
MCLEAN229	005	61W	19	03-12-75	0400	50-02 N	000-47 W	244	33.0	133.0	04	116S	15	116S	02			116S	002	0600	10152	53	050	PT CLDY	4935	70	1	2178	683	-774	
MCLEAN229	005	61W	20	03-12-75	0400	50-02 N	000-47 W	244	33.0	133.0	04	116S	15	116S	02			116S	002	0600	10152	53	050	PT CLDY	4573	72	2	2133	598	-722	
MCLEAN229	006	61W	21	03-12-75	0800	50-02 N	000-47 W	244	33.0	133.2	04	116S	15	116S	02			116S	002	0600	10155	54	051	PT CLDY	5763	67	0	2088	0	-768	

---WAVE IND--- 1ST MODE

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	
MCLEAN229 006	03-12-75	50-02 N	244	133.2	116S	116S		
61W 22	0800	000-47 W	33.0	04	15	02		
MCLEAN229 006	03-12-75	50-02 N	244	133.2	116S	116S		
61W 23	0800	000-47 W	33.0	04	15	02		
MCLEAN229 006	03-12-75	50-02 N	244	133.2	116S	116S		
61W 24	0800	000-47 W	33.0	04	15	02		
MCLEAN229 007	03-12-75	44-15 N	244	132.0	071S	071S		
61W 25	1200	017-36 W	32.2	04	15	01		
MCLEAN229 007	03-12-75	44-15 N	244	132.0	071S	071S		
61W 26	1200	017-36 W	32.2	04	15	01		
MCLEAN229 007	03-12-75	44-15 N	244	132.0	071S	071S		
61W 27	1200	017-36 W	32.2	04	15	01		
MCLEAN229 007	03-12-75	44-15 N	244	132.0	071S	071S		
61W 28	1200	017-36 W	32.2	04	15	01		
MCLEAN229 008	03-12-75	44-15 N	244	120.4	026S			
61W 29	1600	017-36 W	29.4	01	03	00		
MCLEAN229 008	03-12-75	44-15 N	244	120.4	026S			
61W 30	1600	017-36 W	29.4	01	03	00		
MCLEAN229 008	03-12-75	44-15 N	244	120.4	026S			
61W 31	1600	017-36 W	29.4	01	03	00		
MCLEAN229 008	03-12-75	44-15 N	244	120.4	026S			
61W 32	1600	017-36 W	29.4	01	03	00		
MCLEAN229 009	03-12-75	44-15 N	244	120.4	064P	064P		
61W 33	2000	017-36 W	29.4	04	15	01		
MCLEAN229 009	03-12-75	44-15 N	244	120.4	064P	064P		
61W 34	2000	017-36 W	29.4	04	15	01		
MCLEAN229 009	03-12-75	44-15 N	244	120.4	064P	064P		
61W 35	2000	017-36 W	29.4	04	15	01		
MCLEAN229 009	03-12-75	44-15 N	244	120.4	064P	064P		
61W 36	2000	017-36 W	29.4	04	15	01		
MCLEAN229 010	03-12-75	44-15 N	244	120.0	003S	003S		
61W 37	2400	017-36 W	29.3	04	15	01		

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND-- 1ST MODE		
116S	0600	54	PT CLDY	4341	0	
002	10155	051		66	2021	0	-803
116S	0600	54	PT CLDY	5062	0	
002	10155	051		64	1947	0	-855
116S	0600	54	PT CLDY	3538	0	
002	10155	051		71	1873	0	-714
116S	0600	52	CLEAR	4014	0	
002	10173	052		81	1702	0	371
116S	0600	52	CLEAR	3471	0	
002	10173	052		84	1739	0	416
116S	0600	52	CLEAR	3426	0	
002	10173	052		113	1449	0	512
116S	0600	52	CLEAR	4281	0	
002	10173	052		120	1404	0	512
116S	0600	54	PT CLDY	3055	0	SEA FLAT LOW SWELL
002	10186	052		114	1427	0	-1502
116S	0600	54	PT CLDY	3062	0	SEA FLAT LOW SWELL
002	10186	052		92	1404	0	-1393
116S	0600	54	PT CLDY	3464	0	SEA FLAT LOW SWELL
002	10186	052		98	1397	0	-1365
116S	0600	54	PT CLDY	2737	0	SEA FLAT LOW SWELL
002	10186	052		97	1306	0	-1398
026S	0600	54	PT CLDY	3486	2	
002	10149	049		124	1330	693	-1234
026S	0600	54	PT CLDY	2542	1	
002	10149	049		133	1300	728	-1316
026S	0600	54	PT CLDY	3362	0	
002	10149	049		137	1516	0	-1383
026S	0600	54	PT CLDY	2980	0	
002	10149	049		145	1434	0	-1443
019P	0600	53	OCAST	3835	2	
002	10162	055		153	1687	713	-1437

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TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN229	010	03-12-75	44-15 N	244	120.0	003S	003S		019P	0600	53	OCAST
61W	38	2400	017-36 W	29.3	04	15	01		002	10162	055	
MCLEAN229	010	03-12-75	44-15 N	244	120.0	003S	003S		019P	0600	53	OCAST
61W	39	2400	017-36 W	29.3	04	15	01		002	10162	055	
MCLEAN229	010	03-12-75	44-15 N	244	120.0	003S	003S		019P	0600	53	OCAST
61W	40	2400	017-36 W	29.3	04	15	01		002	10162	055	
MCLEAN229	011	03-13-75	44-15 N	244	120.4	042P	042P		019P	0400	55	OCAST
61W	41	0400	017-36 W	29.4	01	03	01		002	10173	055	
MCLEAN229	011	03-13-75	44-15 N	244	120.4	042P	042P		019P	0400	55	OCAST
61W	42	0400	017-36 W	29.4	01	03	01		002	10173	055	
MCLEAN229	011	03-13-75	44-15 N	244	120.4	042P	042P		019P	0400	55	OCAST
61W	43	0400	017-36 W	29.4	01	03	01		002	10173	055	
MCLEAN229	011	03-13-75	44-15 N	244	120.4	042P	042P		019P	0400	55	OCAST
61W	44	0400	017-36 W	29.4	01	03	01		002	10173	055	
MCLEAN229	012	03-13-75	44-15 N	238	120.6	036P	036P		013P	0400	56	OCAST RAIN SHOWERS
61W	45	0800	017-36 W	29.4	03	10	01		002	10149	059	
MCLEAN229	012	03-13-75	44-15 N	238	120.6	036P	036P		013P	0400	56	OCAST RAIN SHOWERS
61W	46	0800	017-36 W	29.4	03	10	01		002	10149	059	
MCLEAN229	012	03-13-75	44-15 N	238	120.6	036P	036P		013P	0400	56	OCAST RAIN SHOWERS
61W	47	0800	017-36 W	29.4	03	10	01		002	10149	059	
MCLEAN229	012	03-13-75	44-15 N	238	120.6	036P	036P		013P	0400	56	OCAST RAIN SHOWERS
61W	48	0800	017-36 W	29.4	03	10	01		002	10149	059	
MCLEAN229	013	03-13-75	38-53 N	246	120.5	055P	055P		021P	0400	55	PT CLDY
61W	49	1200	032-04 W	29.4	03	10	01		002	10150	061	
MCLEAN229	013	03-13-75	38-53 N	246	120.5	055P	055P		021P	0400	55	PT CLDY
61W	50	1200	032-04 W	29.4	03	10	01		002	10150	061	
MCLEAN229	013	03-13-75	38-53 N	246	120.5	055P	055P		021P	0400	55	PT CLDY
61W	51	1200	032-04 W	29.4	03	10	01		002	10150	061	
MCLEAN229	013	03-13-75	38-53 N	246	120.5	055P	055P		021P	0400	55	PT CLDY
61W	52	1200	032-04 W	29.4	03	10	01		002	10150	061	
MCLEAN229	014	03-13-75	38-53 N	273	121.0	082P	082P		048P	0400	59	PT CLDY
61W	53	1600	032-04 W	29.5	02	05	01		002	10119	060	

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			---WAVE IND--		1ST MODE	
3508	0		147	1784	0	-1428
3658	1		161	1821	669	-1415
4653	2		156	1873	646	-1405
3099	0		169	1657	0	-1480
3426	0		142	1709	0	-1487
3924	0		131	1717	0	-1480
3129	0		131	1536	0	-1547
2861	1		116	1278	659	-1569
3412	0		120	1382	0	-1532
2958	0		129	1248	0	-1487
2787	0		125	1360	0	-1495
2527	0		101	1390	0	-729
2099	0		454	1456	0	-595
4304	1		174	1739	869	-326
4110	0		163	1687	0	-387
3642	1		158	1464	1531	-603

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI ---WAVE IND--	MAX STRESS PSI 1ST MODE	MEAN STRESS PSI
MCLEAN229	014	03-13-75	38-53 N	273	121.0	082P	082P		048P	0400	59	PT CLDY	2742	0	
61W	54	1600	032-04 W	29.5	02	05	01		002	10115	060		166	1256	0	-595
MCLEAN229	014	03-13-75	38-53 N	273	121.0	082P	082P		048P	0400	59	PT CLDY	2691	0	
61W	55	1600	032-04 W	29.5	02	05	01		002	10119	060		156	1375	0	-565
MCLEAN229	014	03-13-75	38-53 N	273	121.0	082P	082P		048P	0400	59	PT CLDY	2973	0	
61W	56	1600	032-04 W	29.5	02	05	01		002	10119	060		148	1352	0	-595
MCLEAN229	015	03-13-75	38-53 N	273	120.6	087S	087S		087S	0400	60	PT CLDY	2505	0	
61W	57	2000	032-04 W	29.4	02	05	01		002	10122	060		147	1211	0	-736
MCLEAN229	015	03-13-75	38-53 N	273	120.6	087S	087S		087S	0400	60	PT CLDY	3040	0	
61W	58	2000	032-04 W	29.4	02	05	01		002	10122	060		131	1315	0	-647
MCLEAN229	015	03-13-75	38-53 N	273	120.6	087S	087S		087S	0400	60	PT CLDY	2757	0	
61W	59	2000	032-04 W	29.4	02	05	01		002	10122	060		136	1367	0	-536
MCLEAN229	015	03-13-75	38-53 N	273	120.6	087S	087S		087S	0400	60	PT CLDY	3336	0	
61W	60	2000	032-04 W	29.4	02	05	01		002	10122	060		143	1516	0	-558
MCLEAN229	016	03-13-75	38-53 N	273	069.1	087S	087S		087S	0400	55	PT CLDY	5753	0	
61W	61	2400	032-04 W	16.8	02	05	01		002	10146	058		129	2438	0	750
MCLEAN229	016	03-13-75	38-53 N	273	069.1	087S	087S		087S	0400	55	PT CLDY	6474	0	
61W	62	2400	032-04 W	16.8	02	05	01		002	10146	058		140	2475	0	839
MCLEAN229	016	03-13-75	38-53 N	273	069.1	087S	087S		087S	0400	55	PT CLDY	5731	0	
61W	63	2400	032-04 W	16.8	02	05	01		002	10146	058		144	2601	0	646
MCLEAN229	016	03-13-75	38-53 N	273	069.1	087S	087S		087S	0400	55	PT CLDY	5252	0	
61W	64	2400	032-04 W	16.8	02	05	01		002	10146	058		137	2371	0	654
MCLEAN231	017	03-14-75	38-53 N	273	069.0	154S	154S		087S	0600	59	CLEAR	4829	0	
61W	01	0400	032-04 W	16.8	02	05	01		002	10152	056		144	1909	0	0
MCLEAN231	017	03-14-75	38-53 N	273	069.0	154S	154S		087S	0600	59	CLEAR	4078	0	
61W	02	0400	032-04 W	16.8	02	05	01		002	10152	056		135	1887	0	29
MCLEAN231	017	03-14-75	38-53 N	273	069.0	154S	154S		087S	0600	59	CLEAR	4450	0	
61W	03	0400	032-04 W	16.8	02	05	01		002	10152	056		140	1849	0	-45
MCLEAN231	017	03-14-75	38-53 N	273	069.0	154S	154S		087S	0600	59	CLEAR	4593	0	
61W	04	0400	032-04 W	16.8	02	05	01		002	10152	056		139	1827	0	-82
MCLEAN231	018	03-14-75	38-53 N	273	069.0	098S	098S		087S	0600	59	CLEAR	4324	0	
61W	05	0800	032-04 W	16.8	02	05	01		002	10169	059		155	1775	0	-142

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN231 018	03-14-75	36-53 N	273	069.0	098S	098S		087S	0600	59	CLEAR	
01W 06	0800	032-04 W	16.6	02	05	01		002	10169	059		
MCLEAN231 018	03-14-75	36-53 N	273	069.0	098S	098S		087S	0600	59	CLEAR	
01W 07	0800	032-04 W	16.8	02	05	01		002	10169	059		
MCLEAN231 018	03-14-75	36-53 N	273	069.0	098S	098S		087S	0600	59	CLEAR	
01W 08	0800	032-04 W	16.8	02	05	01		002	10169	059		
MCLEAN231 019	03-14-75	39-16 N	273	069.1	042S	042S		087S	0600	58	CLEAR	
01W 09	1200	044-00 W	16.8	01	02	01		002	10183	061		
MCLEAN231 019	03-14-75	39-16 N	273	069.1	042S	042S		087S	0600	58	CLEAR	
01W 10	1200	044-00 W	16.8	01	02	01		002	10183	061		
MCLEAN231 019	03-14-75	39-16 N	273	069.1	042S	042S		087S	0600	58	CLEAR	
01W 11	1200	044-00 W	16.8	01	02	01		002	10183	061		
MCLEAN231 019	03-14-75	39-16 N	273	069.1	042S	042S		087S	0600	58	CLEAR	
01W 12	1200	044-00 W	16.8	01	02	01		002	10183	061		
MCLEAN231 020	03-14-75	39-16 N	273	068.5	003P	003P		042S	0400	60	OCAST	
01W 13	1600	044-00 W	16.7	05	20	01		002	10152	062		
MCLEAN231 020	03-14-75	39-16 N	273	068.5	003P	003P		042S	0400	60	OCAST	
01W 14	1600	044-00 W	16.7	05	20	01		002	10152	062		
MCLEAN231 020	03-14-75	39-16 N	273	068.5	003P	003P		042S	0400	60	OCAST	
01W 15	1600	044-00 W	16.7	05	20	01		002	10152	062		
MCLEAN231 020	03-14-75	39-16 N	273	068.5	003P	003P		042S	0400	60	OCAST	
01W 16	1600	044-00 W	16.7	05	20	01		002	10152	062		
MCLEAN231 021	03-14-75	39-16 N	273	067.0	008S	008S		003P	0400	62	OCAST	
01W 17	2000	044-00 W	16.3	05	20	02		002	10141	060		
MCLEAN231 021	03-14-75	39-16 N	273	067.0	008S	008S		003P	0400	62	OCAST	
01W 20	2000	044-00 W	16.3	05	20	02		002	10141	060		
MCLEAN231 022	03-14-75	39-16 N	273	072.6	076S	076S		003P	0400	63	RAIN SHOWERS OCAST	
01W 24	2400	044-00 W	17.6	05	20	02		002	10206	064		
MCLEAN231 023	03-15-75	39-16 N	273	069.0	087S	087S		003P	0400	64	OCAST	
01W 25	0400	044-00 W	16.3	03	10	02		002	10234	049		
MCLEAN231 023	03-15-75	39-16 N	273	069.0	087S	087S		003P	0400	64	OCAST	
01W 26	0400	044-00 W	16.8	03	10	02		002	10234	049		

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MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
			---WAVE IND--	1ST MODE		
3974	0		149	1716	0	-82
4004	0		149	1597	0	-82
3061	0		145	1456	0	-82
2719	0		152	1300	0	37
2577	0		144	1240	0	141
2719	0		149	1218	0	237
2682	0		139	1107	0	208
2370	0		148	1077	0	-8
2459	0		147	1025	0	-15
1998	0		151	1003	0	44
2303	0		150	926	0	-30
1456	0		132	824	0	74
1872	0		137	713	0	178
1679	0		132	965	0	327
2979	0		178	1463	0	349
3573	0		175	1641	0	356

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP INTERVAL NUM		TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVEWAVE HT FEET	LENG FT
MCLEAN231	023	03-15-75	39-16 N	273	069.0	087S	087S	
61W	27	0400	044-00 W	15.8	03	10	02	
MCLEAN231	023	03-15-75	39-16 N	273	069.0	087S	087S	
61W	28	0400	044-00 W	15.8	03	10	02	
MCLEAN231	024	03-15-75	39-16 N	273	071.0	109S	109S	
61W	29	0800	044-00 W	17.1	02	05	01	
MCLEAN231	024	03-15-75	39-16 N	273	071.0	109S	109S	
61W	30	0800	044-00 W	17.1	02	05	01	
MCLEAN231	024	03-15-75	39-16 N	273	071.0	109S	109S	
61W	31	0800	044-00 W	17.1	02	05	01	
MCLEAN231	024	03-15-75	39-16 N	273	071.0	109S	109S	
61W	32	0800	044-00 W	17.1	02	05	01	
MCLEAN231	025	03-15-75	39-29 N	273	071.7	138P	138P	
61W	33	1200	052-40 W	17.4	05	20	02	
MCLEAN231	025	03-15-75	39-29 N	273	071.7	138P	138P	
61W	34	1200	052-40 W	17.4	05	20	02	
MCLEAN231	025	03-15-75	39-29 N	273	071.7	138P	138P	
61W	35	1200	052-40 W	17.4	05	20	02	
MCLEAN231	025	03-15-75	39-29 N	273	071.7	138P	138P	
61W	36	1200	052-40 W	17.4	05	20	02	
MCLEAN231	026	03-15-75	39-29 N	273	072.3	117P	117P	
61W	37	1600	052-40 W	17.5	06	25	04	
MCLEAN231	026	03-15-75	39-29 N	273	072.3	117P	117P	
61W	38	1600	052-40 W	17.5	06	25	04	
MCLEAN231	026	03-15-75	39-29 N	273	072.3	117P	117P	
61W	39	1600	052-40 W	17.5	06	25	04	
MCLEAN231	026	03-15-75	39-29 N	273	072.3	117P	117P	
61W	40	1600	052-40 W	17.5	06	25	04	
MCLEAN231	027	03-15-75	39-29 N	273	070.0	048P	048P	
61W	41	2000	052-40 W	17.0	07	30	06	
MCLEAN231	027	03-15-75	39-29 N	273	070.0	048P	048P	
61W	42	2000	052-40 W	17.0	07	30	06	

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BARON INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
				---WAVE IND--	1ST MODE	
003P	0400	64	OCAST	4309	0	
002	10234	049		172	1731	0	319
003P	0400	64	OCAST	4747	0	
002	10234	049		174	1649	0	304
003P	0400	66	OCAST	2637	0	
002	10291	048		170	1203	0	148
003P	0400	66	OCAST	2689	0	
002	10291	048		156	1203	0	200
003P	0400	66	OCAST	2147	0	
002	10291	048		170	1055	0	185
003P	0400	66	OCAST	2429	0	
002	10291	048		171	1069	0	178
048P	0400	58	OCAST	2592	0	
002	10233	054		179	1062	0	0
048P	0400	58	OCAST	2303	0	
002	10233	054		172	1092	0	7
048P	0400	58	OCAST	2013	0	
002	10233	054		167	980	0	14
048P	0400	58	OCAST	2540	0	
002	10233	054		169	943	0	-6
048P	0400	58	OCAST	2050	0	
004	10146	063		163	995	0	-204
048P	0400	58	OCAST	2117	0	
004	10146	063		164	913	0	-194
048P	0400	58	OCAST	1679	0	
004	10146	063		163	824	0	-157
048P	0400	58	OCAST	1646	4	
004	10146	063		165	876	1173	-90
048P	0400	58	OCAST	6362	14	
006	10365	060		180	2429	1196	-90
048P	0400	58	OCAST	7050	13	
006	10365	060		185	2675	1537	-23

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM.	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP		NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
													---WAVE IND--		1ST MODE	
MCLEAN231	027	03-15-75	39-29 N	273	070.0	048P	048P		048P	0400	56	COAST	6590		15	
61W	43	2000	052-40 W	17.0	07	30	06		006	10085	060		161	2979	2555	14
MCLEAN231	027	03-15-75	39-29 N	273	070.0	048P	048P		048P	0400	58	COAST	9212		31	
61W	44	2000	052-40 W	17.0	07	30	06		006	10085	060		180	3670	2228	59
MCLEAN231	028	03-15-75	39-29 N	273	068.0	048P	048P		048P	0600	63	COAST	10074		35	
61W	45	2400	052-40 W	16.6	07	30	10		010	10058	062		169	4398	2845	44
MCLEAN231	028	03-15-75	39-29 N	273	068.0	048P	048P		048P	0600	63	COAST	9413		37	
61W	46	2400	052-40 W	16.6	07	30	10		010	10058	062		166	4101	2184	74
MCLEAN231	028	03-15-75	39-29 N	273	068.0	048P	048P		048P	0600	63	COAST	9036		45	
61W	47	2400	052-40 W	16.6	07	30	10		010	10058	062		172	3982	2139	118
MCLEAN231	028	03-15-75	39-29 N	273	068.0	048P	048P		048P	0600	63	COAST	10334		49	
61W	48	2400	052-40 W	16.6	07	30	10		010	10058	062		159	4576	2429	193
MCLEAN231	029	03-16-75	39-29 N	273	067.0	003P	003P		003P	0600	65	COAST	11842		43	
61W	49	0400	052-40 W	16.3	07	35	20		020	10085	062		164	4918	3335	312
MCLEAN231	029	03-16-75	39-29 N	273	067.0	003P	003P		003P	0600	65	COAST	13581		54	
61W	50	0400	052-40 W	16.3	07	35	20		020	10085	062		158	5512	3922	376
MCLEAN231	029	03-16-75	39-29 N	273	067.0	003P	003P		003P	0600	65	COAST	12496		50	
61W	51	0400	052-40 W	16.3	07	35	20		020	10085	062		159	5267	2570	453
MCLEAN231	029	03-16-75	39-29 N	273	067.0	003P	003P		003P	0600	65	COAST	12623		60	
61W	52	0400	052-40 W	16.3	07	35	20		020	10085	062		161	5215	3908	437
MCLEAN231	030	03-16-75	39-29 N	270	070.5	022S	022S		000	0600	61	COAST	15527		69	
61W	53	0800	052-40 W	17.1	09	45	20		020	10139	055		144	5943	2778	356
MCLEAN231	030	03-16-75	39-29 N	270	070.5	022S	022S		000	0600	61	COAST	13403		60	
61W	54	0800	052-40 W	17.1	09	45	20		020	10139	055		142	6240	4273	341
MCLEAN231	030	03-16-75	39-29 N	270	070.5	022S	022S		000	0600	61	COAST	17704		69	
61W	55	0800	052-40 W	17.1	09	45	20		020	10139	055		156	7325	2994	401
MCLEAN231	030	03-16-75	39-29 N	270	070.5	022S	022S		000	0600	61	COAST	18299		89	
61W	56	0800	052-40 W	17.1	09	45	20		020	10139	055		139	8380	7392	312
MCLEAN233	031	03-16-75	39-54 N	270	070.0	067S	067S		000	0600	58	COAST	19655		93	MANUAL RUN
61W	01	1200	060-37 W	17.0	08	40	20		020	10209	055		146	8566	7065	0
MCLEAN233	031	03-16-75	39-54 N	270	070.0	067S	067S		000	0600	58	COAST	15466		83	MANUAL RUN
61W	02	1200	060-37 W	17.0	08	40	20		020	10209	055		101	7949	5237	-90

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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	TRIP	INTERVAL NUM	DATE	TIME GMT	LATITUDE	LONGITUDE	SHIPS COURSE	SHIPS SPEED KTS	PROP RPM	SEA STATE	REL WIND DIR	REL WIND SPEED KNOTS	REL WAVE DIR	WAVE PD SECS	WAVE HT FEET	WAVE LENG FT
MCLEAN233	031	61W	03	03-16-75	1200	39-54 N	060-37 W	270	17.0	070.0	08	067S	40	067S	20		
MCLEAN233	031	61W	04	03-16-75	1200	39-54 N	060-37 W	270	17.0	070.0	08	067S	40	067S	20		
MCLEAN233	032	61W	05	03-16-75	1400	39-54 N	060-37 W	270	17.1	070.4	07	067S	35	067S	15		
MCLEAN233	032	61W	06	03-16-75	1400	39-54 N	060-37 W	270	17.1	070.4	07	067S	35	067S	15		
MCLEAN233	032	61W	07	03-16-75	1400	39-54 N	060-37 W	270	17.1	070.4	07	067S	35	067S	15		
MCLEAN233	032	61W	08	03-16-75	1400	39-54 N	060-37 W	270	17.1	070.4	07	067S	35	067S	15		
MCLEAN233	033	61W	09	03-16-75	1600	39-54 N	060-37 W	270	17.1	070.8	06	067S	25	067S	10		
MCLEAN233	033	61W	10	03-16-75	1600	39-54 N	060-37 W	270	17.1	070.8	06	067S	25	067S	10		
MCLEAN233	033	61W	11	03-16-75	1600	39-54 N	060-37 W	270	17.1	070.8	06	067S	25	067S	10		
MCLEAN233	033	61W	12	03-16-75	1600	39-54 N	060-37 W	270	17.1	070.8	06	067S	25	067S	10		
MCLEAN233	034	61W	13	03-16-75	1800	39-54 N	060-37 W	270	17.1	070.6	06	067S	25	067S	10		
MCLEAN233	034	61W	14	03-16-75	1800	39-54 N	060-37 W	270	17.1	070.6	06	067S	25	067S	10		
MCLEAN233	034	61W	15	03-16-75	1800	39-54 N	060-37 W	270	17.1	070.6	06	067S	25	067S	10		
MCLEAN233	034	61W	16	03-16-75	1800	39-54 N	060-37 W	270	17.1	070.6	06	067S	25	067S	10		
MCLEAN233	035	61W	17	03-16-75	2000	39-54 N	060-37 W	270	17.0	072.5	05	067S	20	067S	10		
MCLEAN233	035	61W	18	03-16-75	2000	39-54 N	060-37 W	270	17.0	072.5	05	067S	20	067S	10		

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REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	SWELL HT FEET	BAROM INCH HG	AIR TEMP	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS	NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
										---WAVE IND-- 1ST MODE			
000	0600	56	COAST	000			17283	66	MANUAL RUN				
	020	10209	055							144	8090	5579	-223
000	0600	56	COAST	000			19696	68	MANUAL RUN				
	020	10209	055							153	7236	4361	-305
067S	0600	60	COAST	000			17376	72					
	015	10226	053							148	7578	4740	-275
067S	0600	60	COAST	000			13960	82					
	015	10226	053							152	6396	3348	-327
067S	0600	60	COAST	000			16620	58					
	015	10226	053							150	6783	4174	-296
067S	0600	60	COAST	000			16434	53					
	015	10226	053							155	5460	3581	-342
067S	0600	64	PT CLDY	000			14094	59					
	010	10240	052							149	5765	4398	-320
067S	0600	64	PT CLDY	000			10839	34					
	010	10240	052							156	4460	2318	-372
067S	0600	64	PT CLDY	000			10193	37					
	010	10240	052							150	4420	2719	-327
067S	0600	64	PT CLDY	000			11464	24					
	010	10240	052							156	3856	2927	-350
067S	0600	64	PT CLDY	000			7883	36					
	010	10251	052							158	3862	6300	-379
067S	0600	64	PT CLDY	000			8707	22					
	010	10251	052							156	3588	1560	-424
067S	0600	64	PT CLDY	000			8996	21					
	010	10251	052							157	3581	2228	-379
067S	0600	64	PT CLDY	000			8937	19					
	010	10251	052							154	3373	1367	-402
067S	0600	66	PT CLDY	000			8731	5	END MANUAL RECORD				
	010	10260	049							157	3009	861	-309
067S	0600	66	PT CLDY	000			8463	17	END MANUAL RECORD				
	010	10260	049							157	3165	1426	-283

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
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ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS	REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER
TRIP	INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	SWELL HT FEET	BAROM INCH HG	AIR TEMP	
MCLEAN233	035	03-16-75	39-54 N	270	072.5	067S	067S		067S	0600	66	PT CLDY
61W	19	2000	060-37 W	17.6	05	20	10		010	10260	045	
MCLEAN233	035	03-16-75	39-54 N	270	072.5	067S	067S		067S	0600	66	PT CLDY
61W	20	2000	060-37 W	17.6	05	20	10		010	10260	045	
MCLEAN233	036	03-16-75	39-54 N	270	074.1	067S	067S		067S	0600	48	PT CLDY
61W	21	2400	060-37 W	18.0	04	15	06		006	10246	049	
MCLEAN233	036	03-16-75	39-54 N	270	074.1	067S	067S		067S	0600	48	PT CLDY
61W	22	2400	060-37 W	18.0	04	15	06		006	10246	049	
MCLEAN233	036	03-16-75	39-54 N	270	074.1	067S	067S		067S	0600	48	PT CLDY
61W	23	2400	060-37 W	18.0	04	15	06		006	10246	049	
MCLEAN233	036	03-16-75	39-54 N	270	074.1	067S	067S		067S	0600	48	PT CLDY
61W	24	2400	060-37 W	18.0	04	15	06		006	10246	049	
MCLEAN233	037	03-17-75	39-54 N	270	071.0	067S	067S		067S	0300	60	PT CLDY
61W	25	0400	060-37 W	17.2	03	10	02		002	10220	053	
MCLEAN233	037	03-17-75	39-54 N	270	071.0	067S	067S		067S	0800	60	PT CLDY
61W	26	0400	060-37 W	17.2	03	10	02		002	10220	053	
MCLEAN233	037	03-17-75	39-54 N	270	071.0	067S	067S		067S	0800	60	PT CLDY
61W	27	0400	060-37 W	17.2	03	10	02		002	10220	053	
MCLEAN233	037	03-17-75	39-54 N	270	071.0	067S	067S		067S	0800	60	PT CLDY
61W	28	0400	060-37 W	17.2	03	10	02		002	10220	053	
MCLEAN233	038	03-17-75	39-54 N	270	072.0	090S	090S		090S	0800	48	PT CLDY
61W	29	0800	060-37 W	17.5	01	05	01		001	10219	044	
MCLEAN233	038	03-17-75	39-54 N	270	072.0	090S	090S		090S	0800	48	PT CLDY
61W	30	0800	060-37 W	17.5	01	05	01		001	10219	044	
MCLEAN233	038	03-17-75	39-54 N	270	072.0	090S	090S		090S	0800	48	PT CLDY
61W	31	0800	060-37 W	17.5	01	05	01		001	10219	044	
MCLEAN233	038	03-17-75	39-54 N	270	072.0	090S	090S		090S	0800	48	PT CLDY
61W	32	0800	060-37 W	17.5	01	05	01		001	10219	044	
MCLEAN233	039	03-17-75	39-54 N	270	068.0	084S	084S		090S	0800	46	CLAST
61W	33	1200	060-37 W	14.8	01	05	01		001	10210	045	
MCLEAN233	039	03-17-75	39-54 N	270	068.0	084S	084S		090S	0800	46	CLAST
61W	34	1200	060-37 W	14.8	01	05	01		001	10210	045	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
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MAX P-TO-P STRESS PSI	NUMBER OF BURSTS	COMMENTS
NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
	—WAVE IND— 1ST MODE	
5715	16	END MANUAL RECORD
173	2630	965	-261
5059	10	END MANUAL RECORD
185	2028	1062	-194
4041	3	
149	1864	668	-261
3841	0	
138	1708	0	-164
2974	0	
145	1426	0	-186
2644	0	
138	1411	0	-216
2927	0	
123	1107	0	-253
1963	0	
132	906	0	-253
2689	0	
116	936	0	-186
2280	0	
107	1040	0	-194
2347	0	
105	1082	0	-246
1539	0	
94	760	0	-201
1240	0	
104	609	0	-186
1243	0	
103	624	0	-225
861	0	
111	430	0	-23
1040	0	
91	527	0	-192

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
PAGE 55A

ANALOG TAPE NUMBER	LOGBOOK INDEX NUM	DATE	LATITUDE	SHIPS COURSE	PROP RPM	REL WIND DIR	REL WAVE DIR	WAVE PD SECS
TRIP INTERVAL NUM	TIME GMT	LONGITUDE	SHIPS SPEED KTS	SEA STATE	REL WIND SPEED KNOTS	WAVE HT FEET	WAVE LENG FT	

SEA LAND MCLEAN 1975 SEASON SUMMARY TAPE LVBS MIDSHIP TRANSDUCER
PAGE 55B

REL SWELL DIR	SWELL LENGTH FEET	SEA TEMP	WEATHER	MAX P-TO-T STRESS PSI	NUMBER OF BURSTS	COMMENTS
SWELL HT FEET	BAROM INCH HG	AIR TEMP				

NUMBER CYCLES	RMS STRESS PSI	MAX STRESS PSI	MEAN STRESS PSI
---WAVE IND-- 1ST MODE			

APPENDIX B

PARAMETRIC STUDIES

This appendix contains the plots and tabulated summaries resulting from the parametric studies program "SPLOT." Each plot presents either a five-curve family of various ship speeds or a five-curve family of relative wave direction groups for a transducer output vs. Beaufort Number. Within each Beaufort Number the magnitude of a particular point is determined by calculating the mean of the data set or the mean of the one-third highest values within the data set. A superscribed note on each plot designates which value is applicable. The key on each plot also indicates which type (Ship Speed or Relative Wave Direction) is presented.

The measured data set is composed of the maximum wave-induced peak-to-trough value within each 30-minute data interval, or the RMS value determined for that interval. The graph title notes which characterization is applicable.

In addition to the Third Season Longitudinal Vertical Bending (LBV) signal, some parametric studies were run using data compiled from all three data acquisition seasons.

Each tabulated summary presents a listing of all plotted points along with the number of data points along with the number of data points comprising each plotted mean point and its standard deviation.

Table B provides an index for all parametric plots and summaries.

SYMBOL	SHIP SPD, Kts
○	0-15
△	16-20
+	21-25
×	26-30
◇	31-35

SYMBOL	REL SEA DIR.
○	0-30
△	31-60
+	61-120
×	121-150
◇	151-180

TABLE B

Index of Results of Digitized wave-Induced
Longitudinal Vertical Bending Stress
Parametric Studies

Value Derived from Each Interval	Sorted by	Third Season Data						Three Season Data					
		Plots by Calculating:			Tabular * Summary of		Dot Plots	Plots by Calculating:			Tabular * Summary of		Dot Plots
		Mean	RMS	1/3 Highest	Mean or RMS	1/3 Highest	All Points	Mean	RMS	1/3 Highest	Mean or RMS	1/3 Highest	All Points
Max.	Ship's Speed	1	3	5	I	III	7	17	19	21	IX	XI	23
	Relative Wave Direction	2	4	6	II	IV	8	18	20	22	X	XII	24
RMS	Ship's Speed	9	11	13	V	VII	15	-	-	-	-	-	-
	Relative Wave Direction	10	12	14	VI	VIII	16	-	-	-	-	-	-

*Includes number of points constituting each average and standard deviation of each mean.

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

TABLE B-I

SHIP SPEED BETWEEN 0.0 AND 15.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	2	951.	955.	90.
2	4	1271.	1331.	395.
3	29	3319.	3362.	538.
4	0			
5	0			
6	0			
7	0			
8	0			
9	0			
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 15.0 AND 20.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	24	4394.	4724.	1736.
2	43	4778.	4969.	1435.
3	67	5181.	5437.	1644.
4	56	5660.	5851.	1481.
5	58	4657.	5154.	2209.
6	28	7320.	7866.	2935.
7	20	10792.	11291.	3320.
8	4	19020.	19046.	1052.
9	4	17433.	17478.	1245.
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 20.0 AND 25.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	6348.	6485.	1144.
2	24	4787.	5716.	3124.
3	29	6111.	6598.	2486.
4	8	3767.	4398.	2270.
5	24	5870.	6169.	1896.
6	24	5545.	6266.	2918.
7	12	7957.	8586.	3225.
8	8	6057.	6480.	2068.
9	0			
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 25.0 AND 30.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	3243.	3265.	327.
2	24	2730.	3227.	1720.
3	12	5140.	5901.	2883.
4	24	5395.	5740.	1988.
5	12	7530.	8882.	4711.
6	52	5704.	5972.	1767.
7	44	6841.	7083.	3451.
8	16	7074.	7254.	1607.
9	4	13735.	13865.	1894.
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 30.0 AND 35.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	20	4681.	4949.	1666.
3	4	3493.	3927.	916.
4	32	4803.	5379.	2422.
5	14	3913.	4087.	1181.
6	96	6352.	6756.	2300.
7	43	7565.	8012.	2638.
8	8	6107.	6250.	1328.
9	0			
10	0			
11	0			
12	0			

MAX WAVE-INDUCED MID VERT. BENDING STRESS (A BEAUFORT NO.=MCLEAN THIRD SEASON

TABLE B-II

RELATIVE WAVE DIRECTION BETWEEN 0.0 AND 31.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	16	5533.	5579.	665.
2	12	2939.	3401.	1827.
3	8	5151.	5214.	804.
4	12	6520.	7072.	2741.
5	14	5893.	7214.	4162.
6	36	5131.	5831.	2770.
7	43	9736.	10012.	2335.
8	8	7865.	8081.	1859.
9	8	15584.	15775.	2487.
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 31.0 AND 61.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	3009.	3045.	462.
2	16	6750.	6998.	1847.
3	16	5210.	5605.	2068.
4	12	3218.	3826.	2070.
5	12	4737.	5911.	3536.
6	20	7556.	7642.	1145.
7	20	4653.	5799.	3461.
8	8	4849.	4936.	890.
9	0			
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 61.0 AND 121.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	16	4243.	4996.	2638.
2	44	3441.	3889.	1811.
3	24	3247.	3876.	2106.
4	40	4914.	5129.	1471.
5	20	3863.	4430.	2168.
6	32	6308.	7006.	3045.
7	24	7792.	8985.	4474.
8	20	9243.	10527.	5037.
9	0			
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 121.0 AND 151.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	11	4746.	5225.	2187.
3	33	4015.	4926.	2171.
4	24	5928.	6087.	1386.
5	20	4601.	5077.	2146.
6	36	6055.	6506.	2386.
7	24	7741.	7871.	1313.
8	0			
9	0			
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 151.0 AND 180.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	32	4304.	4718.	1939.
3	50	5825.	6006.	1484.
4	32	5897.	5791.	1939.
5	33	6446.	6518.	986.
6	36	6522.	6688.	1802.
7	8	6581.	6903.	1726.
8	0			
9	0			
10	0			
11	0			
12	0			

TABLE B-III

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

FOR HIGHEST 1/3 VALUES

SHIP SPEED BETWEEN 0.0 AND 15.0		PLOT SYMBOL OCTAGONAL	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	1	1643.	0.
3	9	3673.	183.
4	0		
5	0		
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 15.0 AND 20.0		PLOT SYMBOL TRIANGLE	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	8	6043.	265.
2	14	6348.	485.
3	22	6655.	569.
4	18	7314.	909.
5	19	6808.	663.
6	9	10267.	1603.
7	6	15099.	1781.
8	1	19696.	0.
9	1	18403.	0.
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 20.0 AND 25.0		PLOT SYMBOL PLUS	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	7887.	491.
2	8	8311.	686.
3	9	8240.	791.
4	2	6505.	320.
5	8	7593.	423.
6	8	8478.	703.
7	4	10978.	866.
8	2	8348.	69.
9	0		
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 25.0 AND 30.0		PLOT SYMBOL X	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	3694.	230.
2	8	4698.	1462.
3	4	8084.	1460.
4	8	7986.	710.
5	4	12116.	906.
6	17	7674.	1221.
7	14	10737.	2256.
8	5	9139.	494.
9	1	10220.	0.
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 30.0 AND 35.0		PLOT SYMBOL DIAMOND	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	6	6892.	1109.
3	1	4727.	0.
4	10	7454.	2342.
5	4	5503.	238.
6	18	8792.	850.
7	14	9884.	1107.
8	2	7898.	1598.
9	0		
10	0		
11	0		
12	0		

TABLE B-IV

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

FOR HIGHEST 1/3 VALUES

RELATIVE WAVE DIRECTION BETWEEN 0.0 AND 31.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	9	6197.	218.
2	8	8757.	558.
3	2	6116.	151.
4	8	10061.	1511.
5	4	12007.	1012.
6	12	8360.	1143.
7	10	12578.	1039.
8	2	9609.	50.
9	2	10351.	52.
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 31.0 AND 61.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	3675.	249.
2	5	8377.	189.
3	5	7572.	215.
4	4	5979.	669.
5	4	9378.	1442.
6	6	8853.	326.
7	6	9200.	1049.
8	2	5954.	342.
9	0		
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 61.0 AND 121.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	4	7287.	698.
2	14	5805.	811.
3	8	5763.	752.
4	13	6638.	931.
5	9	6073.	565.
6	10	9797.	1819.
7	8	12947.	3849.
8	4	15563.	4959.
9	0		
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 121.0 AND 151.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	5	6837.	552.
3	11	6868.	2139.
4	8	7520.	887.
5	6	7214.	653.
6	12	8749.	1104.
7	8	9257.	999.
8	0		
9	0		
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 151.0 AND 180.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	10	6388.	1497.
3	10	7496.	908.
4	10	7845.	810.
5	11	7480.	531.
6	12	8240.	889.
7	2	8719.	29.
8	0		
9	0		
10	0		
11	0		
12	0		

R.M.S. WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

TABLE B-V

SHIP SPEED BETWEEN 0.0 AND 15.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	2	479.	481.	49.
2	4	610.	644.	207.
3	29	1580.	1598.	243.
4	0			
5	0			
6	0			
7	0			
8	0			
9	0			
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 15.0 AND 20.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	24	2109.	2267.	831.
2	43	2217.	2312.	655.
3	67	2466.	2591.	796.
4	54	2619.	2687.	602.
5	58	2191.	2425.	1039.
6	28	3254.	3453.	1155.
7	20	4544.	4732.	1314.
8	4	7945.	7958.	458.
9	4	6972.	7038.	962.
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 20.0 AND 25.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	2651.	2667.	293.
2	24	2181.	2582.	1381.
3	28	2915.	3164.	1228.
4	8	1865.	2203.	1173.
5	24	2899.	3044.	928.
6	24	2651.	2978.	1348.
7	12	3206.	3422.	1198.
8	8	2684.	2815.	849.
9	0			
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 25.0 AND 30.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	1520.	1527.	148.
2	24	1192.	1381.	697.
3	12	2248.	2527.	1154.
4	24	2524.	2715.	999.
5	12	2855.	3306.	1667.
6	52	2535.	2624.	670.
7	44	2857.	3119.	1251.
8	16	3128.	3181.	578.
9	4	5504.	5541.	436.
10	0			
11	0			
12	0			

SHIP SPEED BETWEEN 30.0 AND 35.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	20	1909.	1975.	505.
3	4	1722.	1723.	49.
4	32	1952.	2180.	878.
5	16	1682.	1733.	492.
6	56	2785.	2917.	987.
7	43	3314.	3479.	1061.
8	8	2459.	2470.	233.
9	0			
10	0			
11	0			
12	0			

RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

TABLE B-VI

RELATIVE WAVE DIRECTION BETWEEN 0.0 AND 31.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	14	2669.	2680.	247.
2	12	1279.	1479.	742.
3	8	2396.	2461.	559.
4	12	2629.	2771.	873.
5	10	2311.	2738.	1469.
6	36	2181.	2438.	1091.
7	43	3910.	3984.	762.
8	8	3262.	3341.	721.
9	8	6238.	6334.	1097.
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 31.0 AND 61.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	1434.	1454.	231.
2	16	2832.	2954.	841.
3	16	2578.	2827.	1162.
4	12	1511.	1865.	1093.
5	12	1872.	2249.	1246.
6	20	3263.	3294.	450.
7	20	2020.	2503.	1478.
8	8	2095.	2111.	261.
9	0			
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 61.0 AND 121.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	18	1800.	2066.	1018.
2	44	1523.	1703.	761.
3	24	1461.	1765.	991.
4	40	2146.	2232.	612.
5	29	1845.	2120.	1044.
6	32	2740.	2980.	1173.
7	24	3285.	3721.	1748.
8	20	4006.	4486.	2020.
9	0			
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 121.0 AND 151.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	11	2221.	2452.	1039.
3	33	2016.	2198.	875.
4	24	2783.	2852.	623.
5	20	2105.	2313.	959.
6	36	2766.	2969.	1078.
7	24	3637.	3688.	611.
8	0			
9	0			
10	0			
11	0			
12	0			

RELATIVE WAVE DIRECTION BETWEEN 151.0 AND 180.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	32	2029.	2206.	876.
3	50	2788.	2858.	630.
4	32	2571.	2729.	918.
5	33	3163.	3179.	478.
6	36	3039.	3110.	680.
7	8	2868.	2978.	787.
8	0			
9	0			
10	0			
11	0			
12	0			

RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

FOR HIGHEST 1/3 VALUES

TABLE B-VII

SHIP SPEED BETWEEN 0.0 AND 15.0		PLOT SYMBOL OCTAGONAL	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	1	866.	0.
3	9	1812.	71.
4	0		
5	0		
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 15.0 AND 20.0		PLOT SYMBOL TRIANGLE	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	8	2866.	147.
2	14	2915.	148.
3	22	3146.	217.
4	18	3286.	312.
5	19	3134.	356.
6	9	4354.	537.
7	6	6166.	833.
8	1	8508.	0.
9	1	8380.	0.
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 20.0 AND 25.0		PLOT SYMBOL PLUS	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	3020.	95.
2	8	3695.	156.
3	9	3944.	211.
4	2	3251.	273.
5	8	3673.	178.
6	8	3904.	383.
7	4	4387.	303.
8	2	3702.	84.
9	0		
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 25.0 AND 30.0		PLOT SYMBOL X	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	1713.	4.
2	8	1979.	558.
3	4	3859.	219.
4	8	3869.	261.
5	4	4050.	228.
6	17	3299.	364.
7	10	4269.	578.
8	5	3837.	203.
9	1	6288.	0.
10	0		
11	0		
12	0		

SHIP SPEED BETWEEN 30.0 AND 35.0		PLOT SYMBOL DIAMOND	
BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	6	2551.	172.
3	1	1798.	0.
4	10	2904.	760.
5	4	2270.	78.
6	18	3787.	460.
7	14	4160.	261.
8	2	2791.	249.
9	0		
10	0		
11	0		
12	0		

TABLE B-VIII

RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

FOR HIGHEST 1/3 VALUES

RELATIVE WAVE DIRECTION BETWEEN 0.0 AND 31.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	5	2959.	105.
2	4	1971.	95.
3	2	3111.	37.
4	4	3822.	140.
5	4	4454.	224.
6	12	5440.	298.
7	10	6827.	401.
8	2	6071.	111.
9	2	7853.	528.
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 31.0 AND 61.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	1713.	4.
2	5	3733.	155.
3	5	3904.	218.
4	4	3017.	303.
5	4	3525.	362.
6	8	3804.	229.
7	6	3984.	510.
8	2	2364.	30.
9	0		
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 61.0 AND 121.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	4	2906.	146.
2	14	2503.	562.
3	8	2705.	250.
4	13	2912.	333.
5	9	2872.	134.
6	10	4000.	682.
7	8	5221.	1460.
8	6	6531.	2036.
9	0		
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 121.0 AND 151.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	3	3149.	18.
3	11	3029.	806.
4	8	3461.	355.
5	8	3167.	314.
6	12	3989.	557.
7	8	4276.	270.
8	0		
9	0		
10	0		
11	0		
12	0		

RELATIVE WAVE DIRECTION BETWEEN 151.0 AND 180.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	10	3008.	481.
3	10	3506.	313.
4	10	3700.	428.
5	11	3689.	187.
6	12	3803.	319.
7	2	3790.	18.
8	0		
9	0		
10	0		
11	0		
12	0		

TABLE B-IX

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

SHIP SPEED BETWEEN 0.0 AND 15.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	2	951.	955.	90.
2	4	1271.	1331.	395.
3	41	3783.	4143.	1689.
4	39	4610.	5096.	2171.
5	28	6658.	7090.	2489.
6	20	5516.	5675.	1336.
7	44	11042.	11552.	3397.
8	0			
9	20	19873.	20116.	3122.
10	28	19561.	19843.	3334.
11	20	19857.	20191.	3656.
12	12	22606.	23109.	4793.

SHIP SPEED BETWEEN 15.0 AND 20.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	24	4394.	4724.	1736.
2	47	4408.	4774.	1833.
3	91	4367.	4817.	2032.
4	60	5459.	5695.	1622.
5	62	4524.	5030.	2198.
6	32	6642.	7407.	3279.
7	24	11715.	12313.	3788.
8	12	13640.	14231.	4060.
9	20	14773.	15048.	2863.
10	24	14938.	15268.	3154.
11	4	14665.	14841.	2276.
12	0			

SHIP SPEED BETWEEN 20.0 AND 25.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	6384.	6485.	1144.
2	32	4349.	5184.	2821.
3	84	5763.	6246.	2408.
4	167	4212.	4834.	2372.
5	179	5603.	6230.	2725.
6	129	5582.	6060.	2359.
7	104	7735.	8574.	3699.
8	98	11543.	12276.	4178.
9	20	14254.	14502.	2675.
10	12	17374.	17507.	2150.
11	0			
12	0			

SHIP SPEED BETWEEN 25.0 AND 30.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	12	4037.	4200.	1160.
2	48	2310.	2900.	1753.
3	96	4110.	4636.	2147.
4	198	4503.	5402.	2983.
5	204	4611.	5537.	3066.
6	113	5366.	5866.	2368.
7	134	6136.	6914.	3186.
8	92	8294.	9172.	4103.
9	50	11892.	12487.	3808.
10	28	9872.	10377.	[illegible]
11	0			
12	4	14131.	14525.	3361.

SHIP SPEED BETWEEN 30.0 AND 35.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	28	3032.	4415.	2008.
2	252	3500.	4312.	2519.
3	317	3647.	4599.	2802.
4	383	3813.	4421.	2237.
5	423	4326.	4871.	2239.
6	420	5141.	5874.	2842.
7	290	6170.	6890.	3067.
8	136	8036.	8783.	3545.
9	92	10815.	11446.	3745.
10	44	9851.	10733.	4262.
11	8	7128.	7168.	760.
12	0			

TABLE B-X

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

RELATIVE WAVE DIRECTION BETWEEN 0.0 AND 31.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	40	4993.	5259.	1652.
2	64	3327.	3926.	2084.
3	96	5241.	6378.	3635.
4	155	4631.	5592.	3134.
5	138	4106.	4920.	2711.
6	143	5090.	5847.	2878.
7	127	8878.	9749.	4027.
8	36	9028.	9480.	2894.
9	72	16064.	16646.	4361.
10	36	16514.	17401.	5086.
11	4	19492.	19562.	1654.
12	12	27172.	27458.	3954.

RELATIVE WAVE DIRECTION BETWEEN 31.0 AND 61.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	8	3009.	3045.	462.
2	59	5159.	6039.	3171.
3	136	3328.	4102.	2398.
4	192	2959.	3440.	1755.
5	151	4258.	4980.	2583.
6	108	5673.	6403.	2969.
7	86	5566.	6606.	3558.
8	68	9128.	10204.	4561.
9	48	10582.	11080.	3285.
10	32	12973.	14099.	5522.
11	16	11962.	12944.	4947.
12	8	16877.	17938.	6078.

RELATIVE WAVE DIRECTION BETWEEN 61.0 AND 121.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	18	4066.	4703.	2362.
2	116	3443.	4197.	2401.
3	174	3846.	4433.	2206.
4	302	3787.	4435.	2309.
5	319	4427.	5021.	2369.
6	210	4810.	5484.	2635.
7	167	7127.	7925.	3465.
8	95	7590.	8743.	4341.
9	52	11224.	11594.	2908.
10	32	9804.	10427.	3551.
11	4	14665.	14841.	2276.
12	0			

RELATIVE WAVE DIRECTION BETWEEN 121.0 AND 151.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	35	2917.	3471.	1881.
3	110	3826.	3920.	1003.
4	156	4623.	5274.	2540.
5	163	5141.	5826.	2741.
6	168	5759.	6392.	2773.
7	93	7308.	8032.	3334.
8	115	10783.	11498.	3993.
9	28	10900.	11759.	4412.
10	24	11821.	12319.	3470.
11	8	23102.	23327.	3236.
12	8	24098.	24182.	2009.

RELATIVE WAVE DIRECTION BETWEEN 151.0 AND 180.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO. OF DATA POINTS	MEAN	RMS	ST. DEVIATION
1	0			
2	100	2987.	3590.	2051.
3	118	5180.	5588.	2101.
4	106	4898.	5389.	2266.
5	145	5730.	6311.	2626.
6	112	8020.	8406.	2221.
7	96	5781.	6409.	2759.
8	28	9824.	10508.	3716.
9	15	11882.	12158.	2959.
10	16	18111.	18226.	2046.
11	0			
12	0			

TABLE B-XI

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

FOR HIGHEST 1/3 VALUES

SHIP SPEED BETWEEN 0.0 AND 15.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	1	1643.	0.
3	13	5704.	1456.
4	13	7281.	1430.
5	9	9495.	1649.
6	6	7083.	1344.
7	10	10976.	3389.
8	0		
9	4	23597.	1830.
10	9	22992.	3497.
11	4	24573.	2424.
12	4	26886.	1306.

SHIP SPEED BETWEEN 15.0 AND 20.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	8	6043.	265.
2	15	6305.	496.
3	30	6831.	617.
4	20	7200.	928.
5	20	6782.	677.
6	10	10111.	1591.
7	8	16259.	1810.
8	4	19020.	1002.
9	6	18109.	451.
10	8	18350.	2242.
11	1	17871.	0.
12	0		

SHIP SPEED BETWEEN 20.0 AND 25.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	7887.	491.
2	10	8033.	831.
3	28	8349.	1155.
4	55	6872.	2196.
5	59	9589.	2303.
6	43	8172.	1180.
7	30	12197.	2181.
8	32	16102.	1589.
9	8	17470.	1499.
10	4	19869.	306.
11	0		
12	0		

SHIP SPEED BETWEEN 25.0 AND 30.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	4	5623.	212.
2	16	8424.	1151.
3	32	6399.	1530.
4	66	8053.	2173.
5	68	8307.	1737.
6	37	8031.	1678.
7	44	9601.	2772.
8	30	13196.	2766.
9	19	16550.	1776.
10	9	13707.	1909.
11	0		
12	1	19886.	0.

SHIP SPEED BETWEEN 30.0 AND 35.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	9	6583.	1219.
2	84	6302.	2185.
3	105	6372.	3338.
4	127	6382.	1908.
5	101	6929.	1603.
6	140	8377.	2219.
7	86	9729.	1963.
8	45	12173.	2007.
9	30	14900.	1282.
10	18	15182.	1988.
11	2	8324.	109.
12	0		

MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

FOR HIGHEST 1/3 VALUES

TABLE B-XII

RELATIVE WAVE DIRECTION BETWEEN 0.0 AND 31.0 PLOT SYMBOL OCTAGONAL

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	13	6630.	790.
2	21	5728.	1315.
3	32	8723.	4253.
4	51	8451.	2156.
5	46	7258.	2035.
6	47	8278.	1951.
7	42	13444.	2847.
8	12	12234.	1383.
9	24	20324.	2213.
10	12	21724.	3549.
11	1	21680.	0.
12	4	31988.	2852.

RELATIVE WAVE DIRECTION BETWEEN 31.0 AND 61.0 PLOT SYMBOL TRIANGLE

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	2	3675.	249.
2	19	8592.	1991.
3	45	6131.	2106.
4	64	5036.	1346.
5	50	7174.	2315.
6	36	8893.	2657.
7	28	9859.	2591.
8	22	14644.	2293.
9	16	14146.	1630.
10	10	18973.	1924.
11	5	17599.	919.
12	2	26173.	2547.

RELATIVE WAVE DIRECTION BETWEEN 61.0 AND 121.0 PLOT SYMBOL PLUS

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	6	6908.	802.
2	38	6201.	2019.
3	58	6357.	1714.
4	100	6412.	1935.
5	106	7173.	1396.
6	70	7996.	1593.
7	55	11184.	2177.
8	31	12451.	4083.
9	17	14318.	1165.
10	10	14008.	2792.
11	1	17871.	0.
12	0		

RELATIVE WAVE DIRECTION BETWEEN 121.0 AND 151.0 PLOT SYMBOL X

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	11	5348.	1432.
3	36	5371.	2022.
4	52	7725.	1549.
5	54	8296.	1873.
6	54	8935.	2048.
7	31	10958.	2627.
8	18	14977.	1612.
9	9	15180.	1057.
10	8	15271.	1250.
11	2	27148.	206.
12	2	26850.	425.

RELATIVE WAVE DIRECTION BETWEEN 151.0 AND 180.0 PLOT SYMBOL DIAMOND

BEAUFORT NUMBER	NO OF DATA POINTS	MEAN	ST. DEVIATION
1	0		
2	33	5297.	1085.
3	38	7892.	1175.
4	35	7501.	1768.
5	48	8544.	1982.
6	37	7399.	1084.
7	12	8727.	2470.
8	8	14193.	2910.
9	5	14629.	1046.
10	5	20466.	1104.
11	0		
12	0		

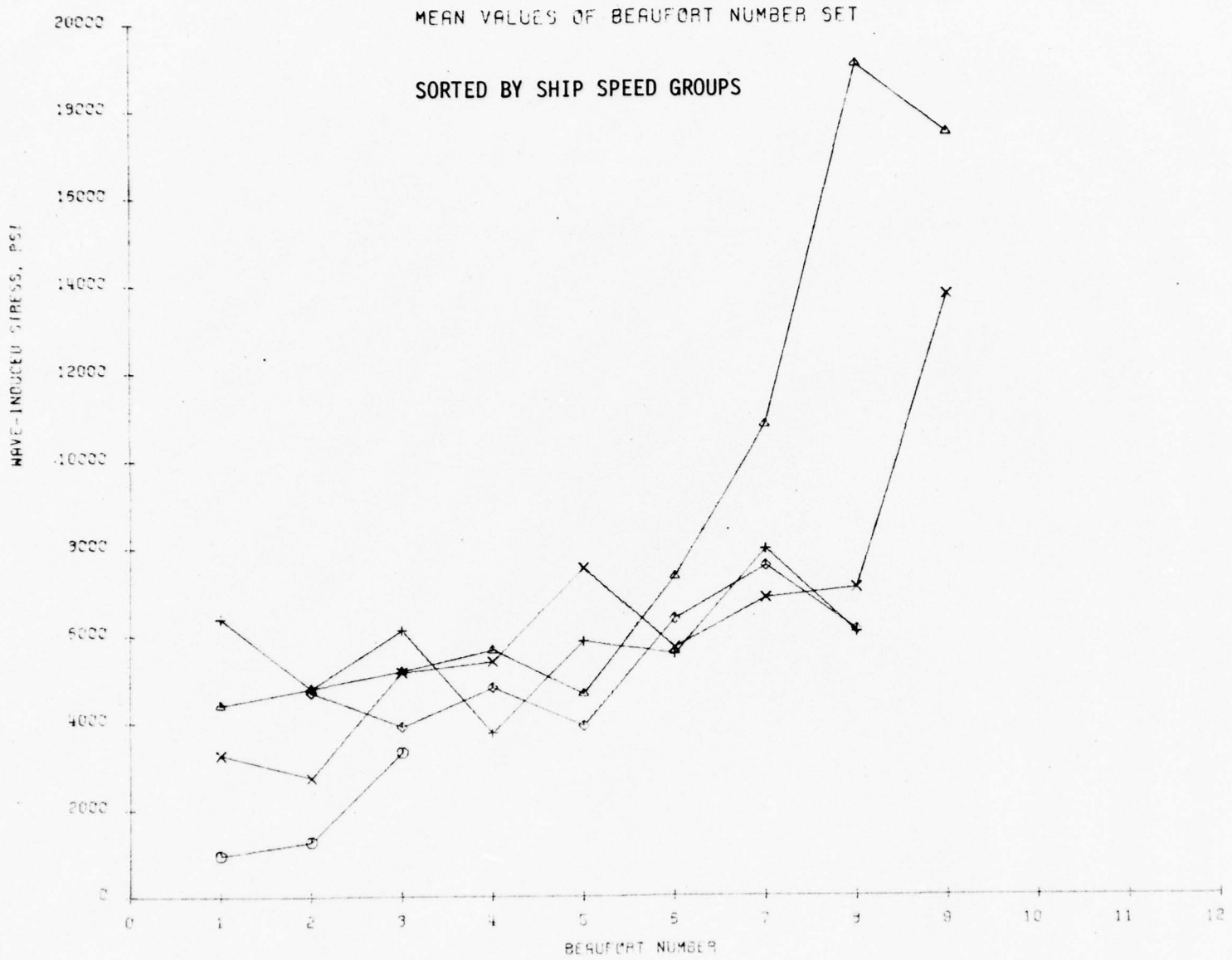

Figure B-1. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

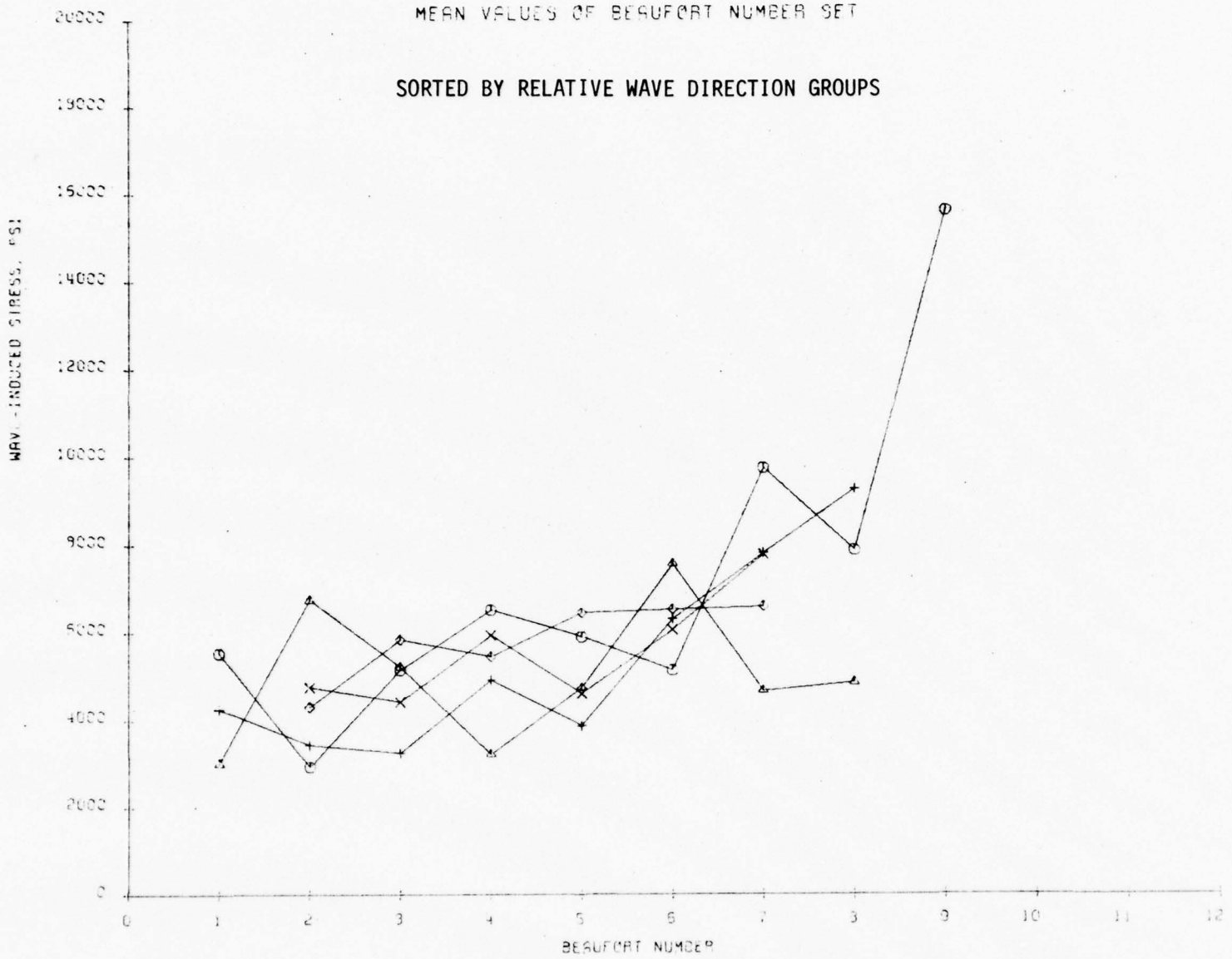

Figure B-2. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

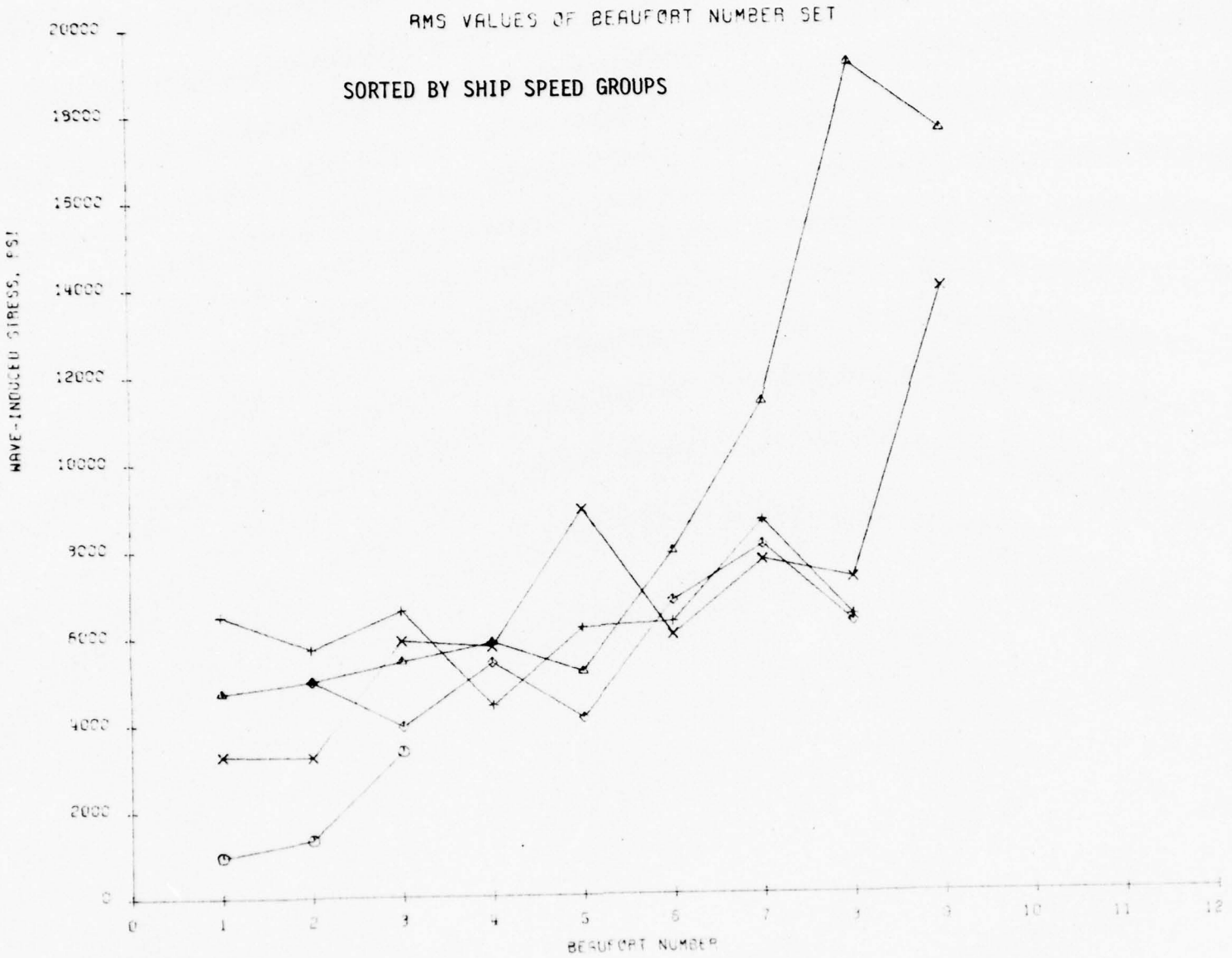

Figure B-3. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

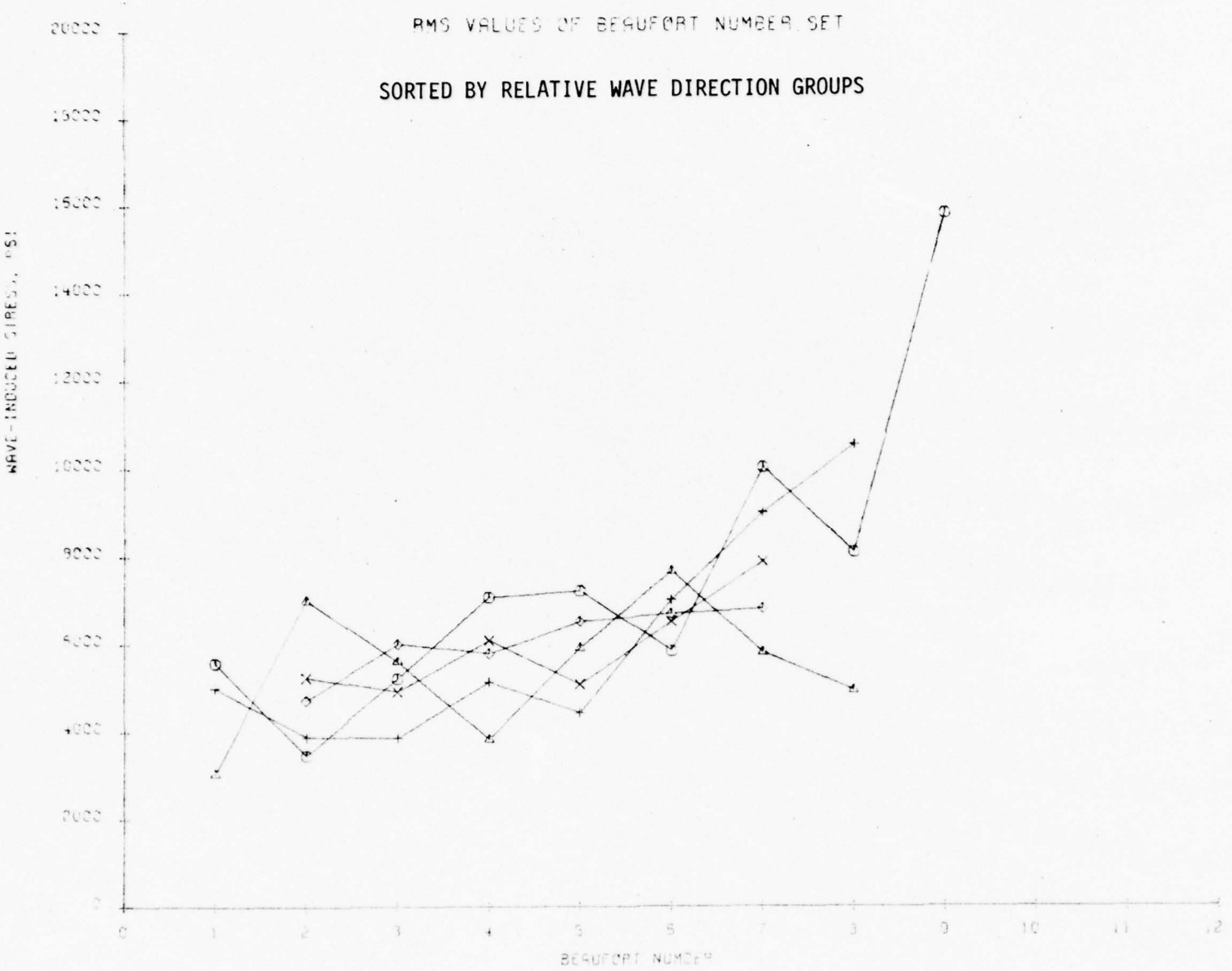

Figure B-4. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

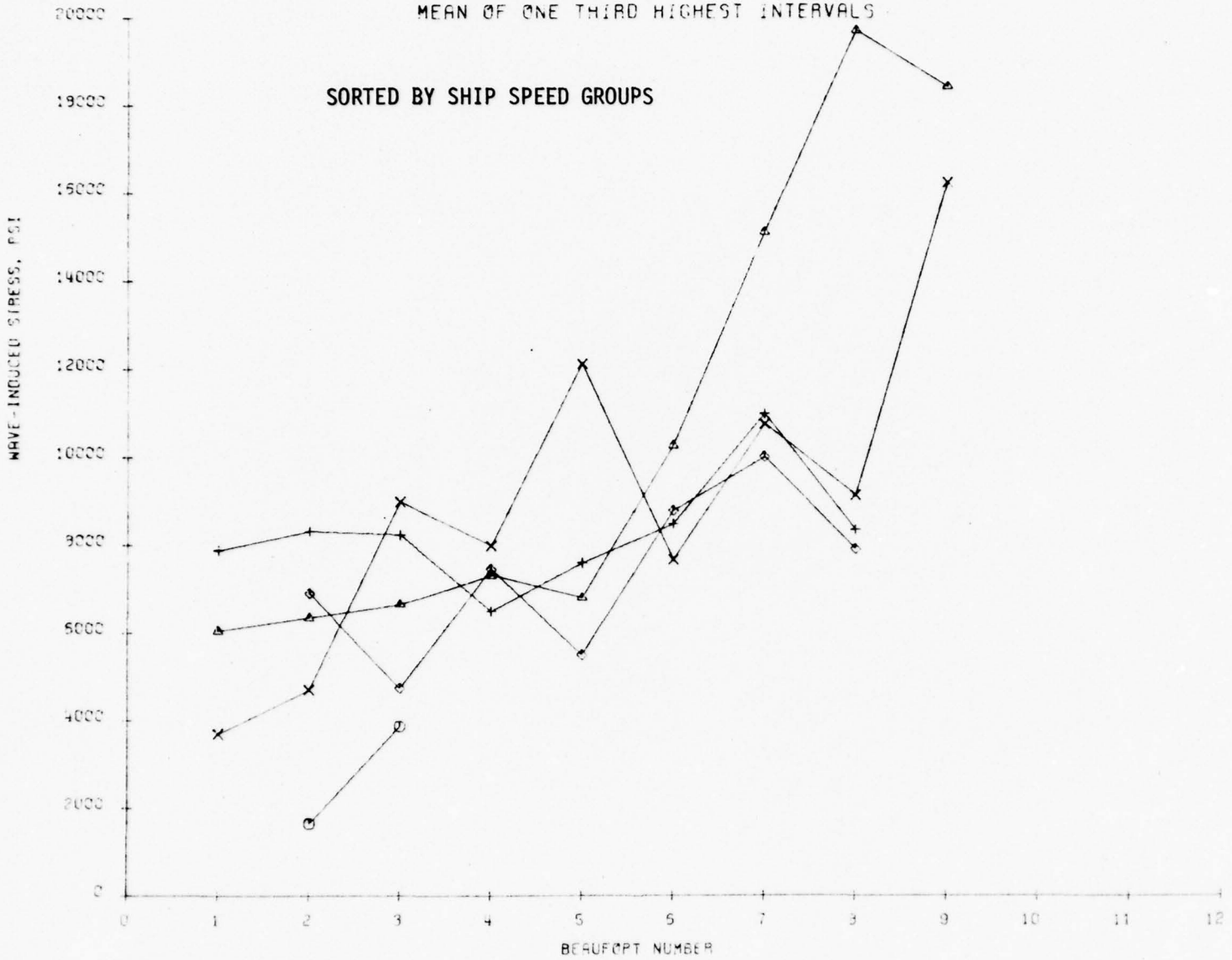

Figure B-5 MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

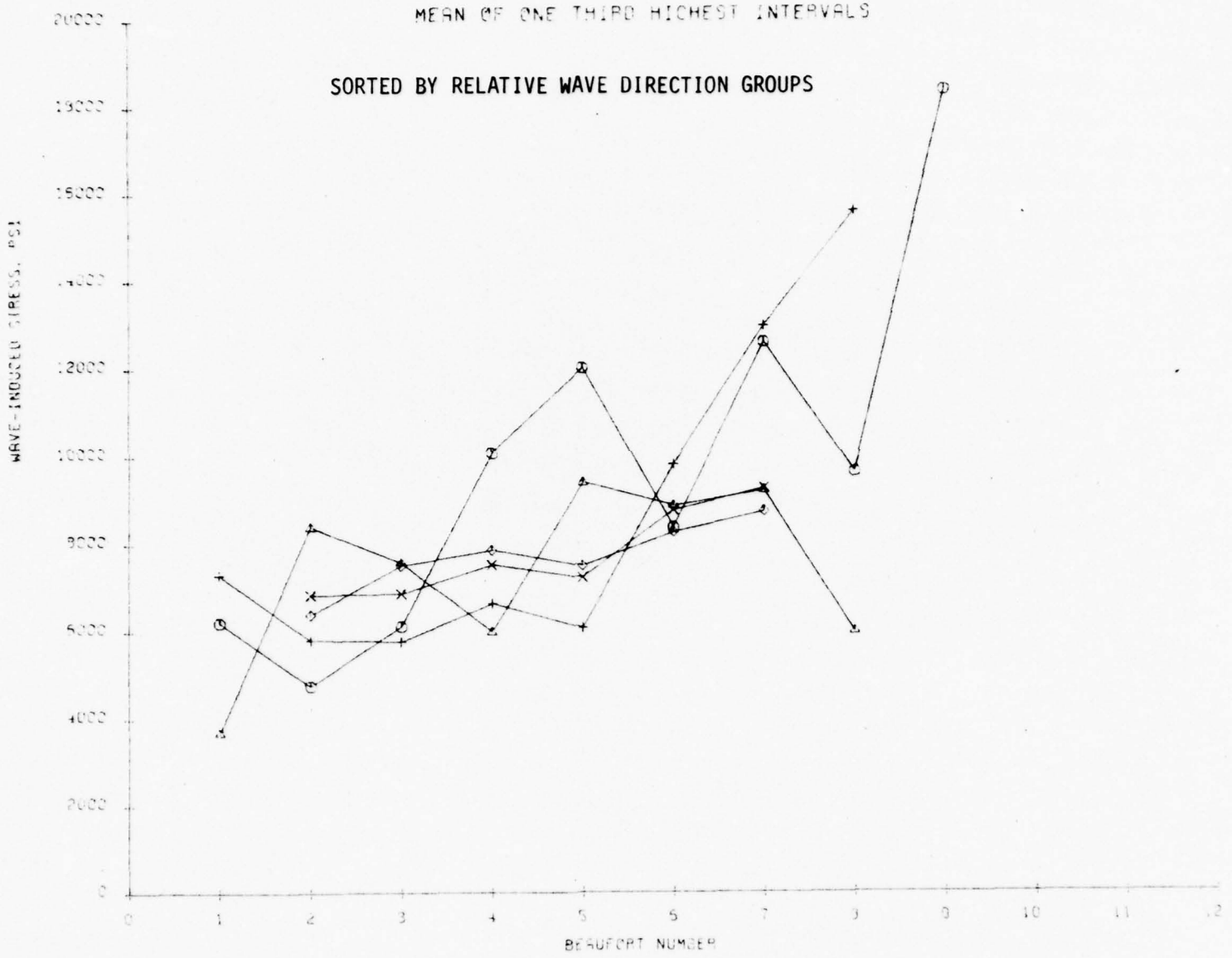

Figure B-6. MEAN WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

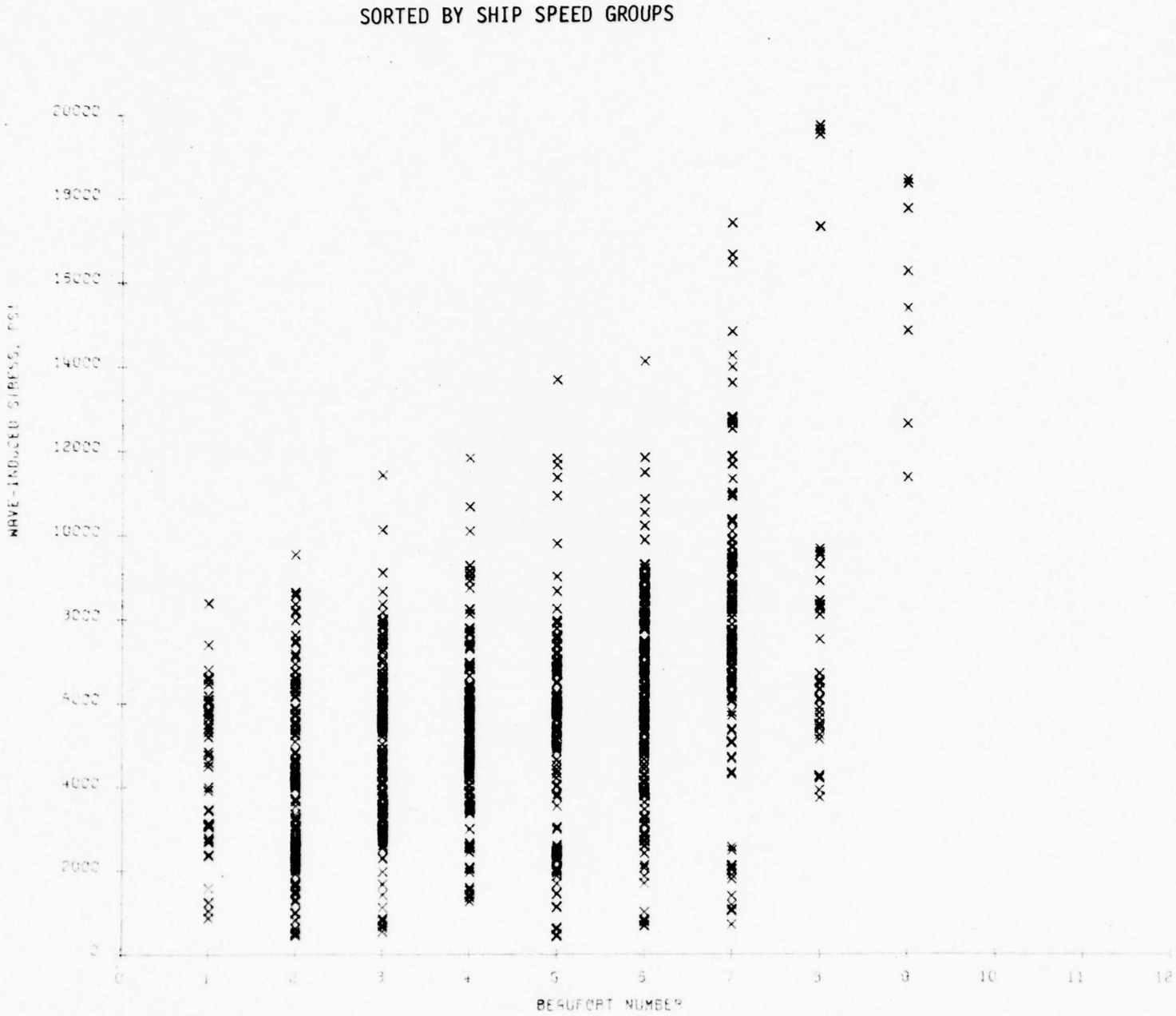

Figure B-7. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

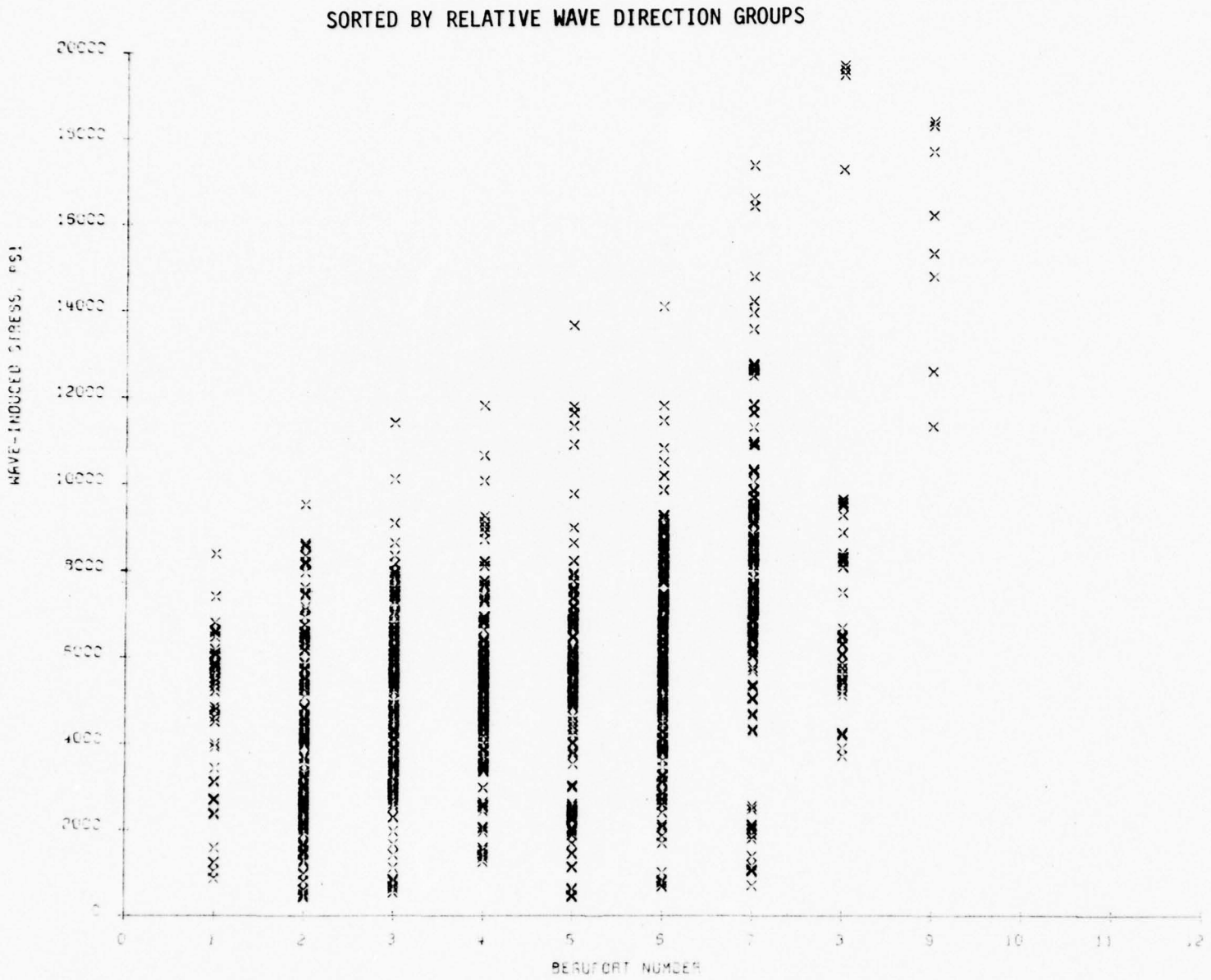

Figure B-8. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

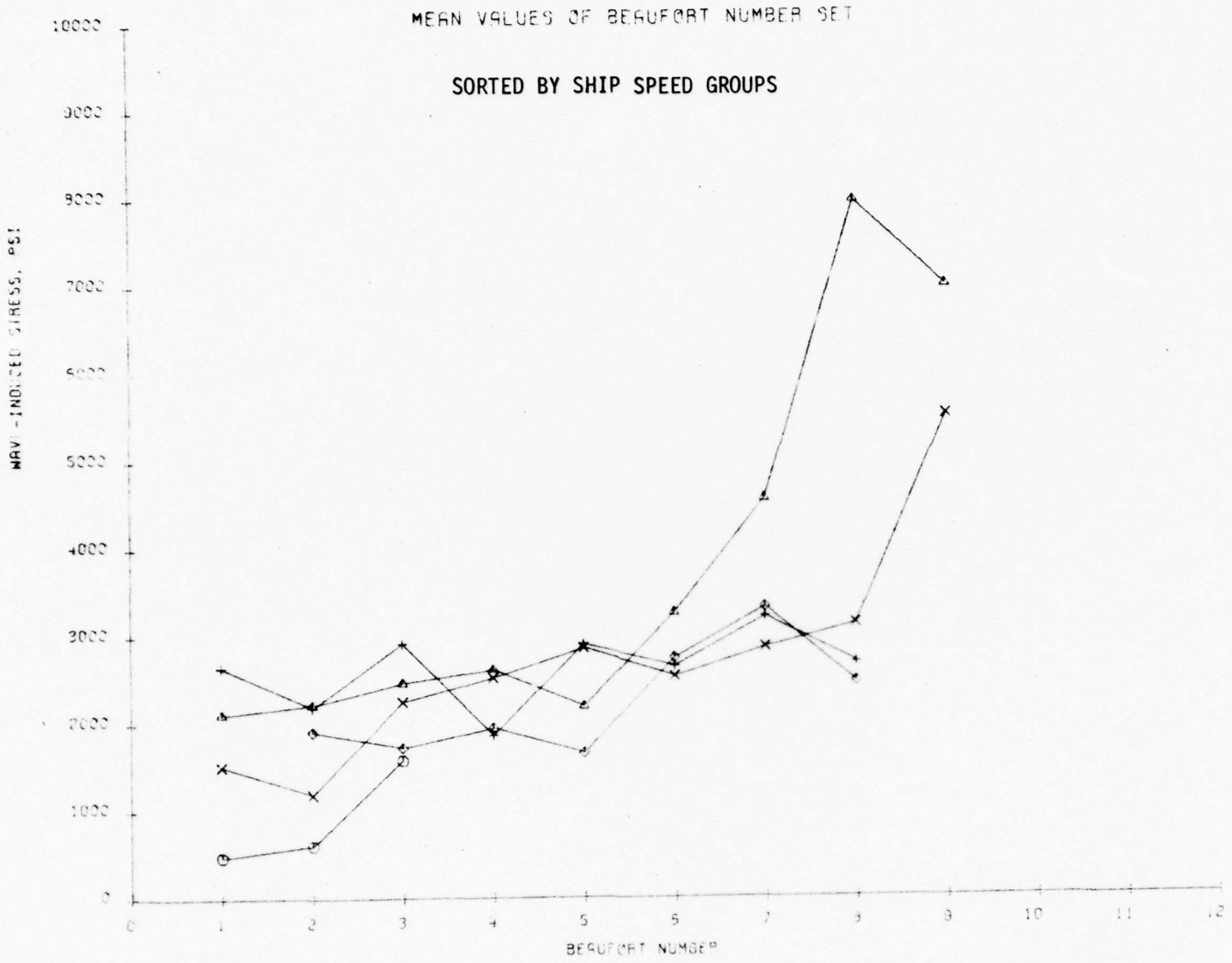

Figure B-9. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

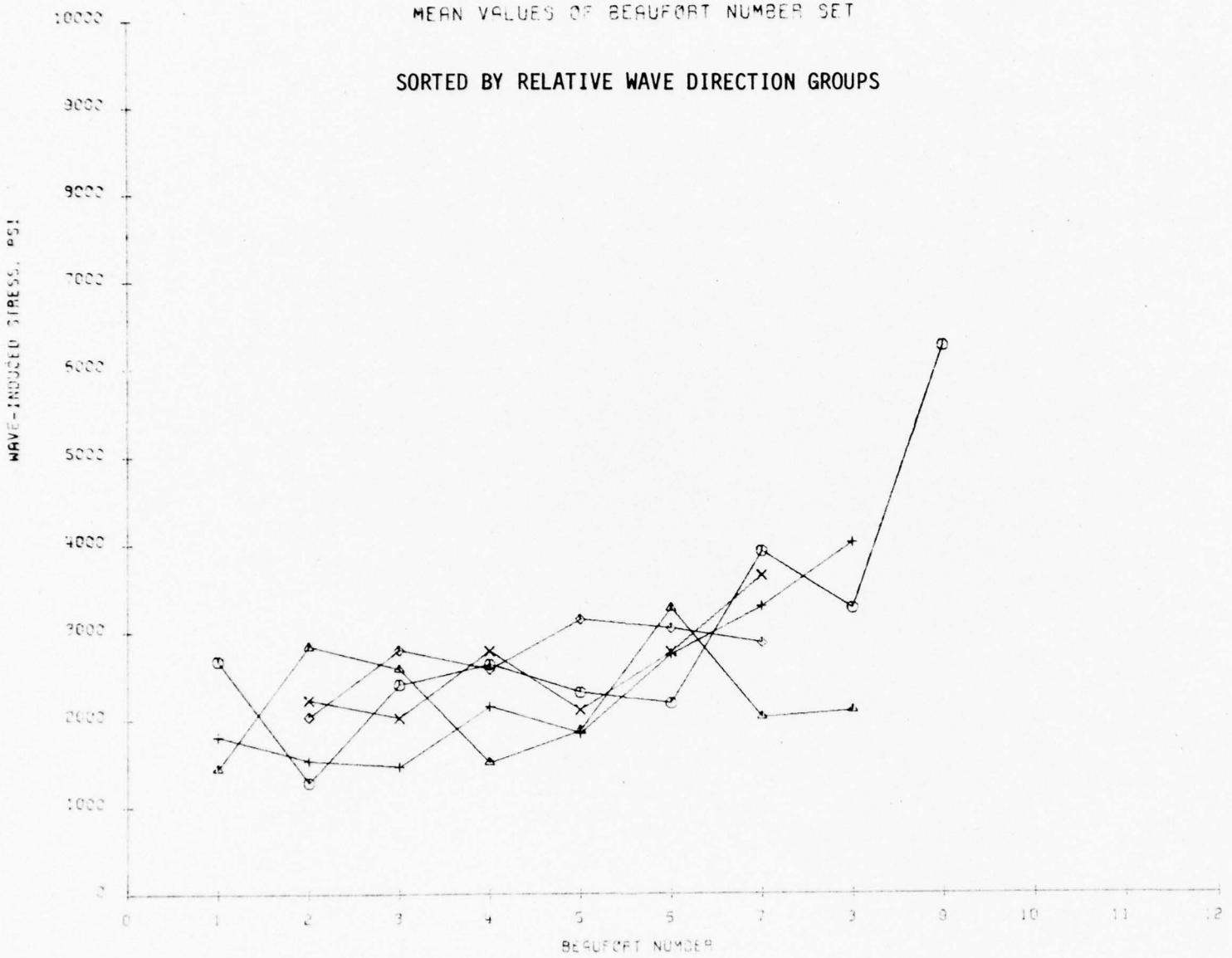

Figure B-10. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

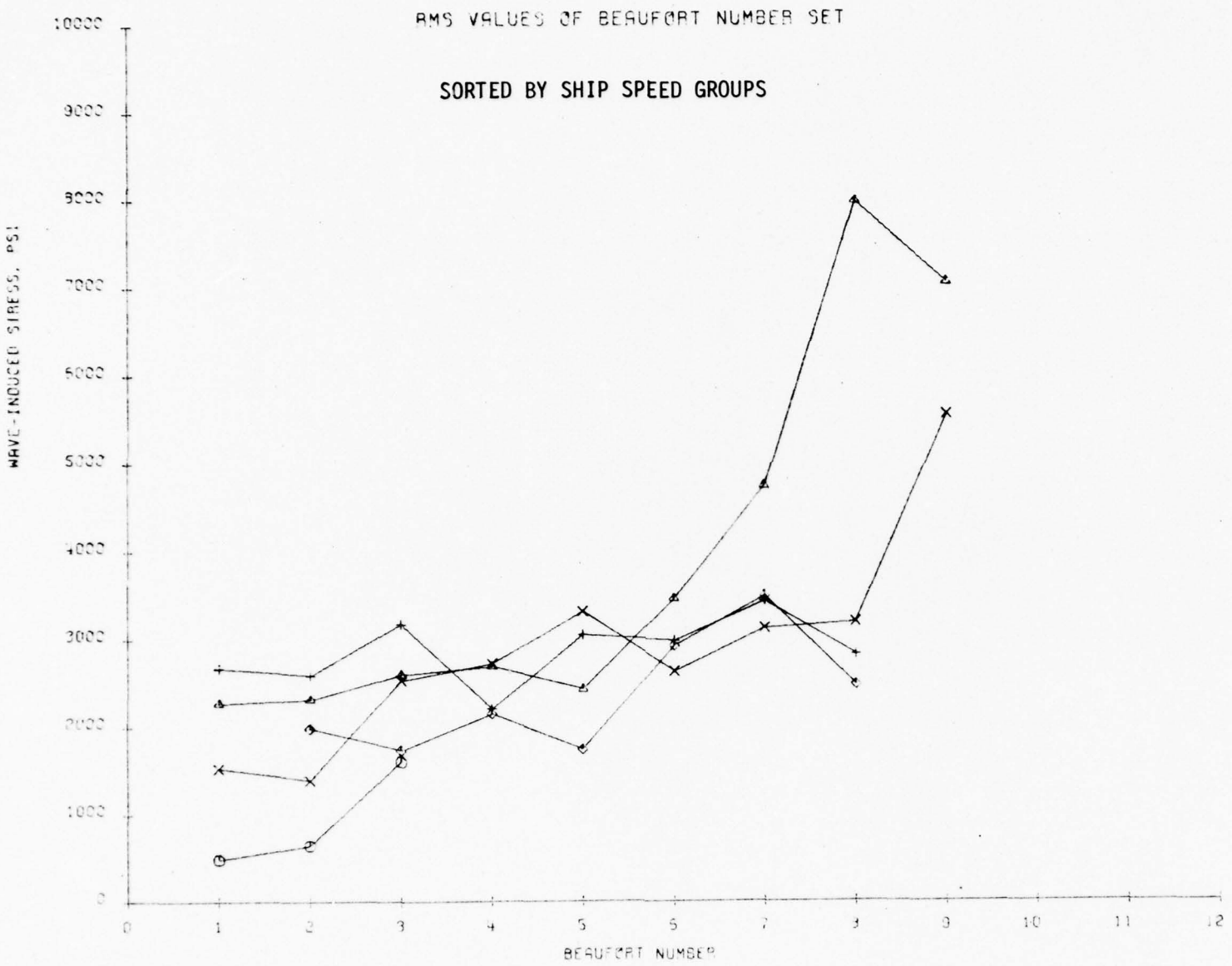

Figure B-11. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

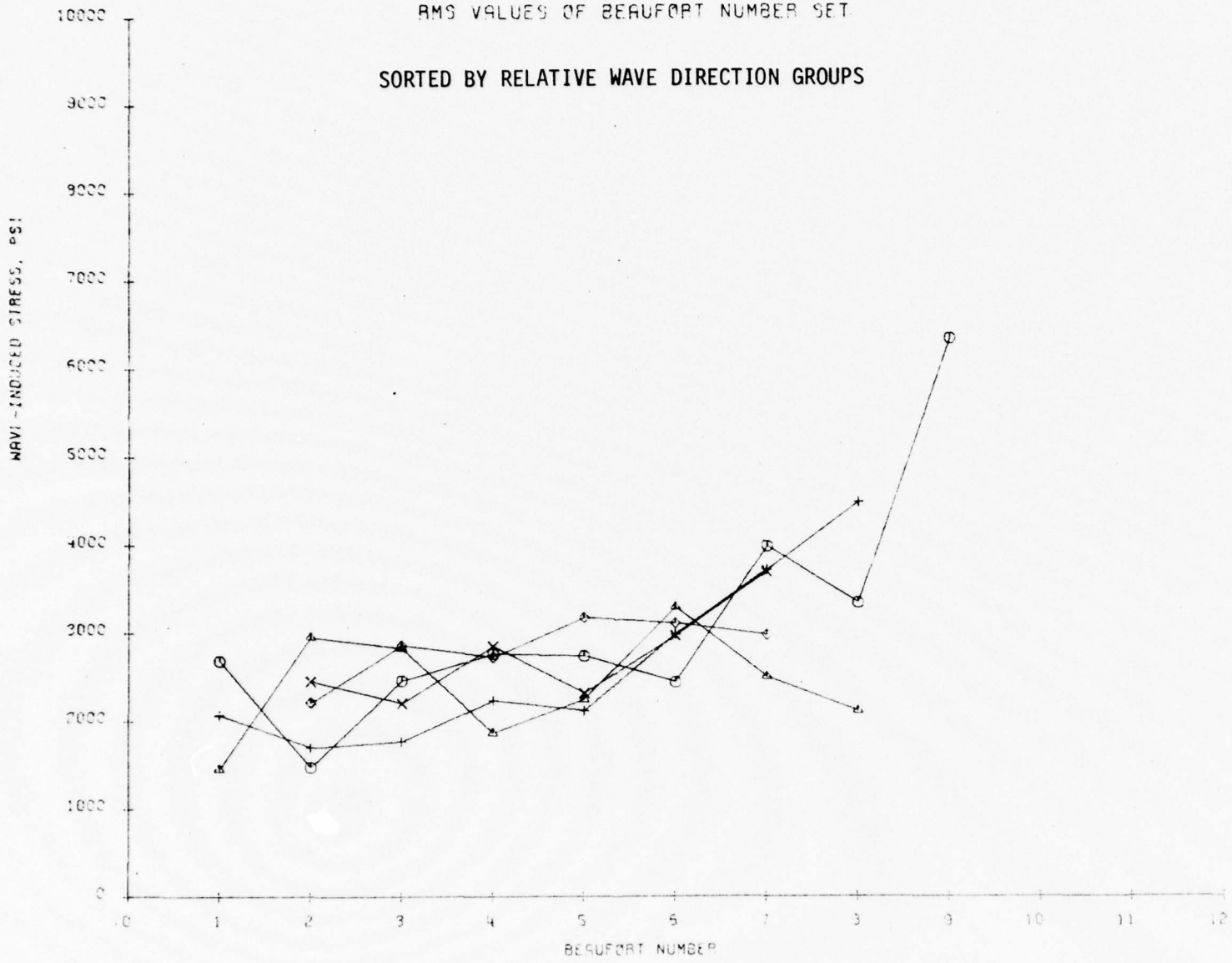

Figure B-12. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

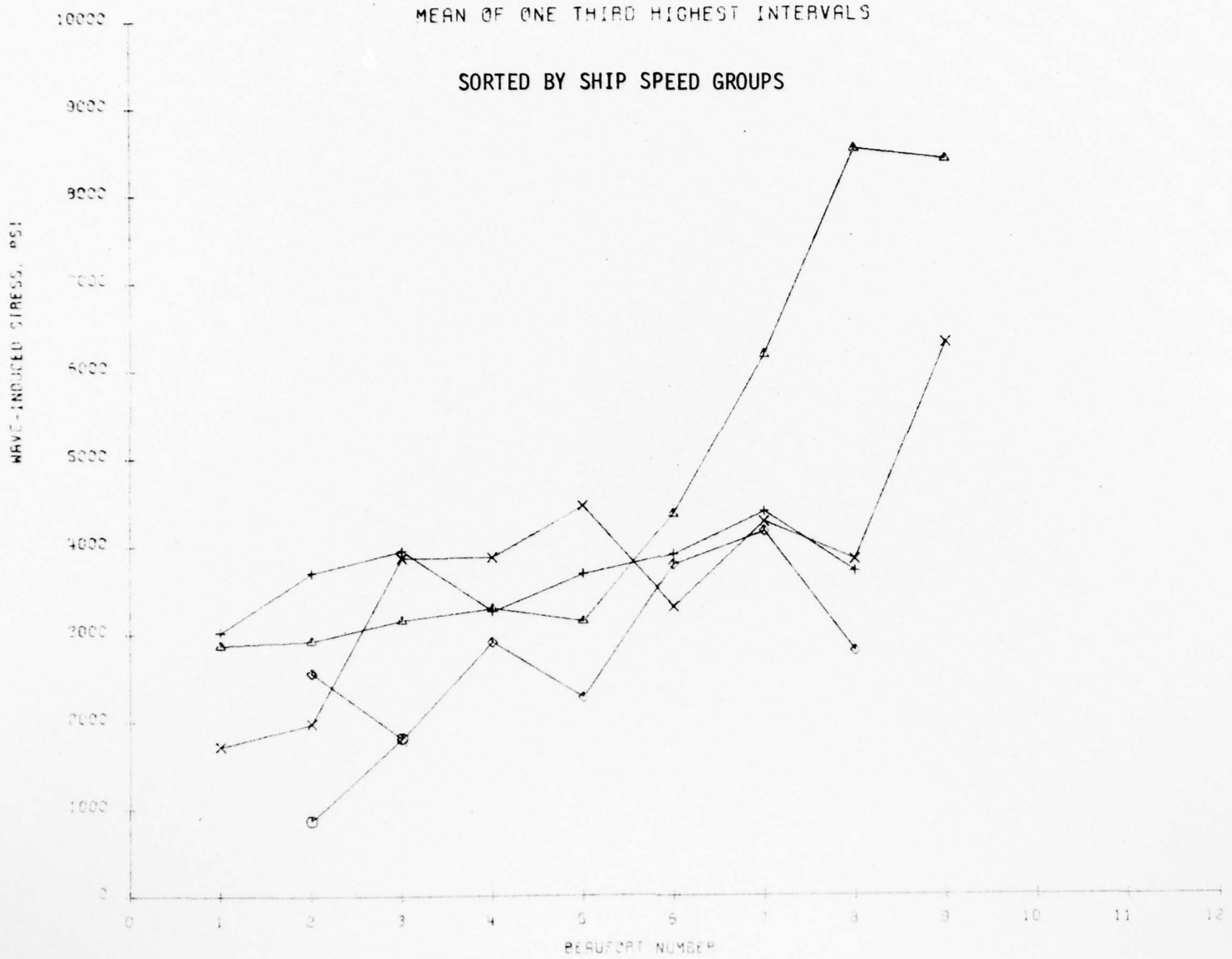

Figure B-13. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

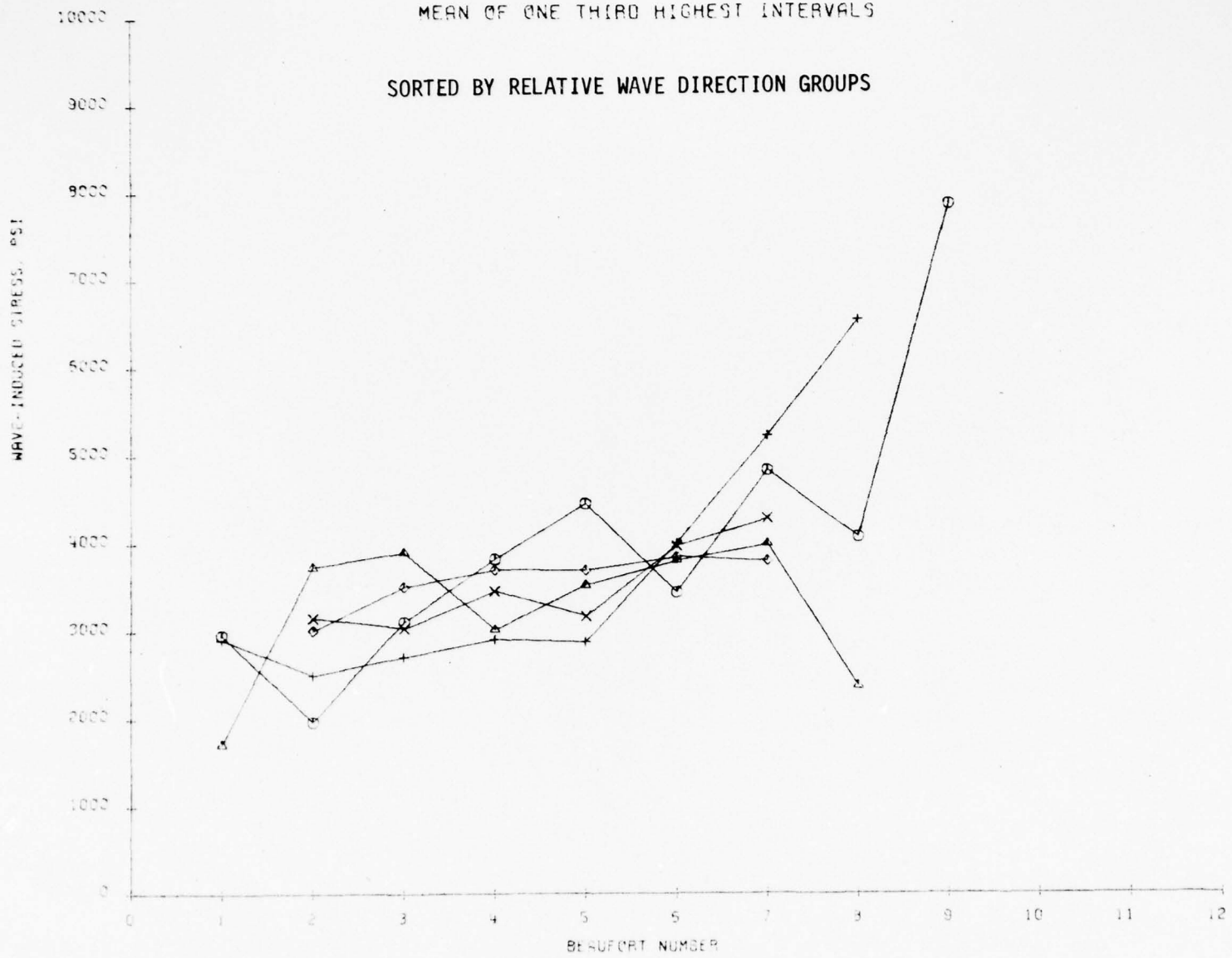

Figure B-14. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

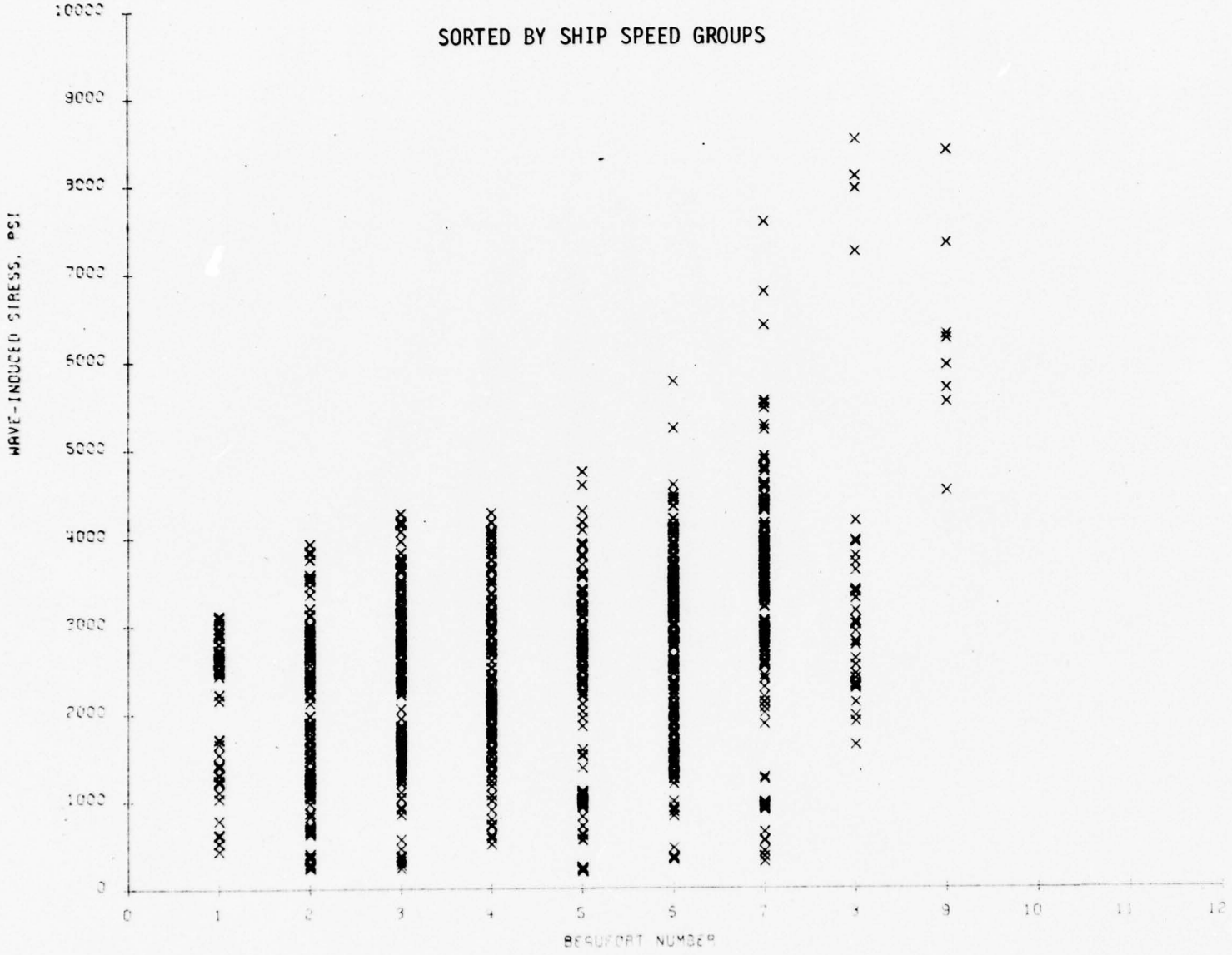

Figure B-15. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

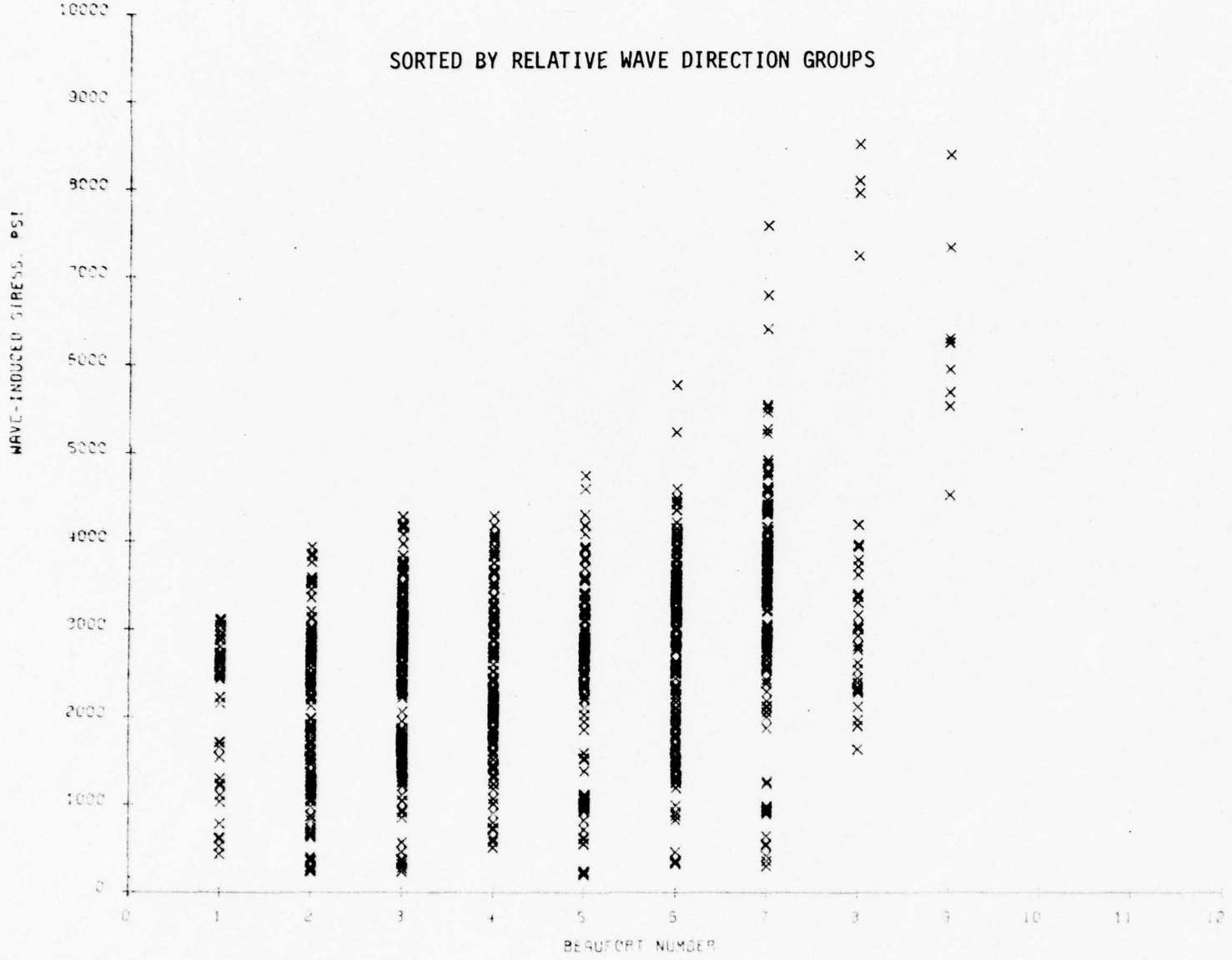

Figure B-16. RMS WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THIRD SEASON

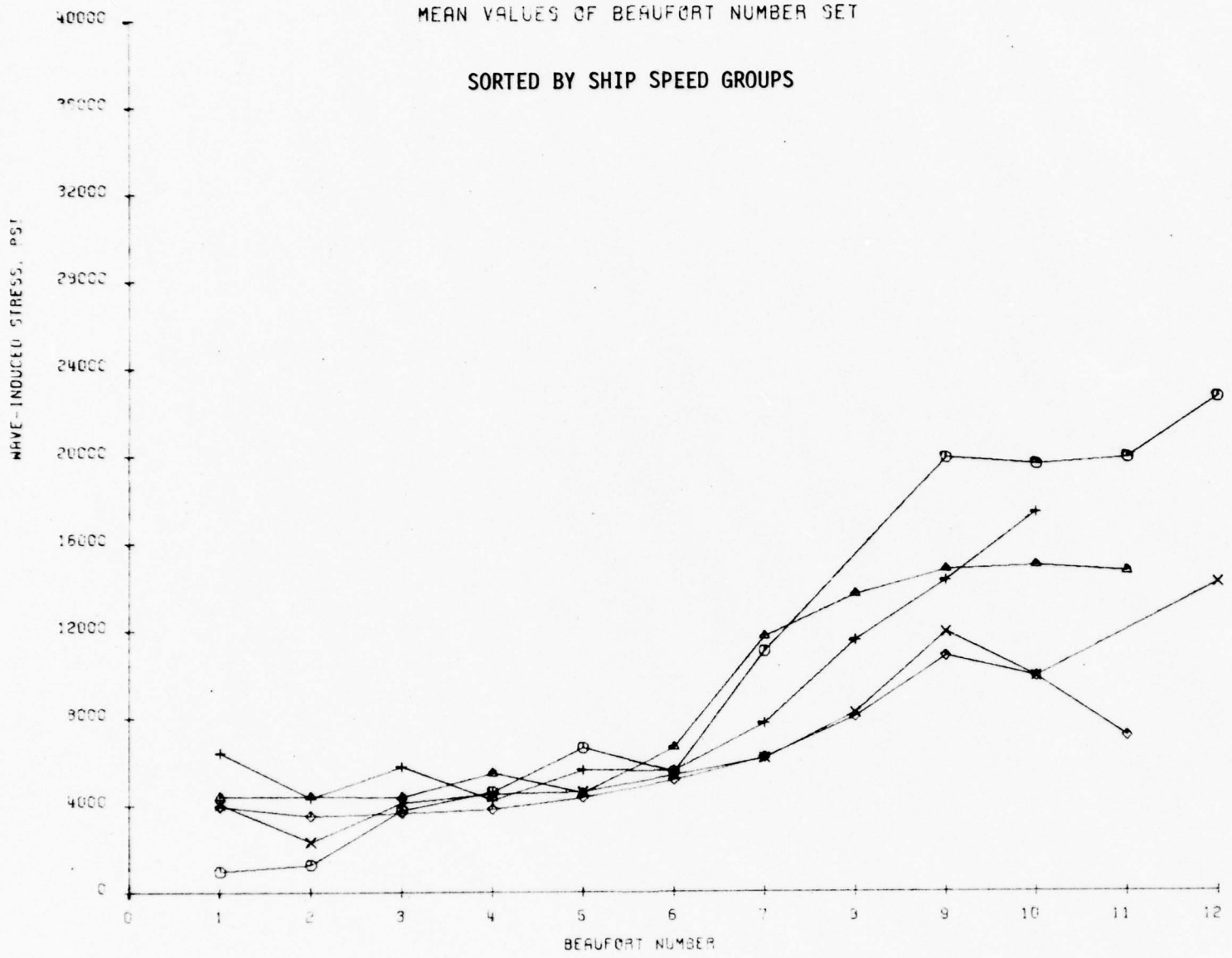

Figure B-17. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

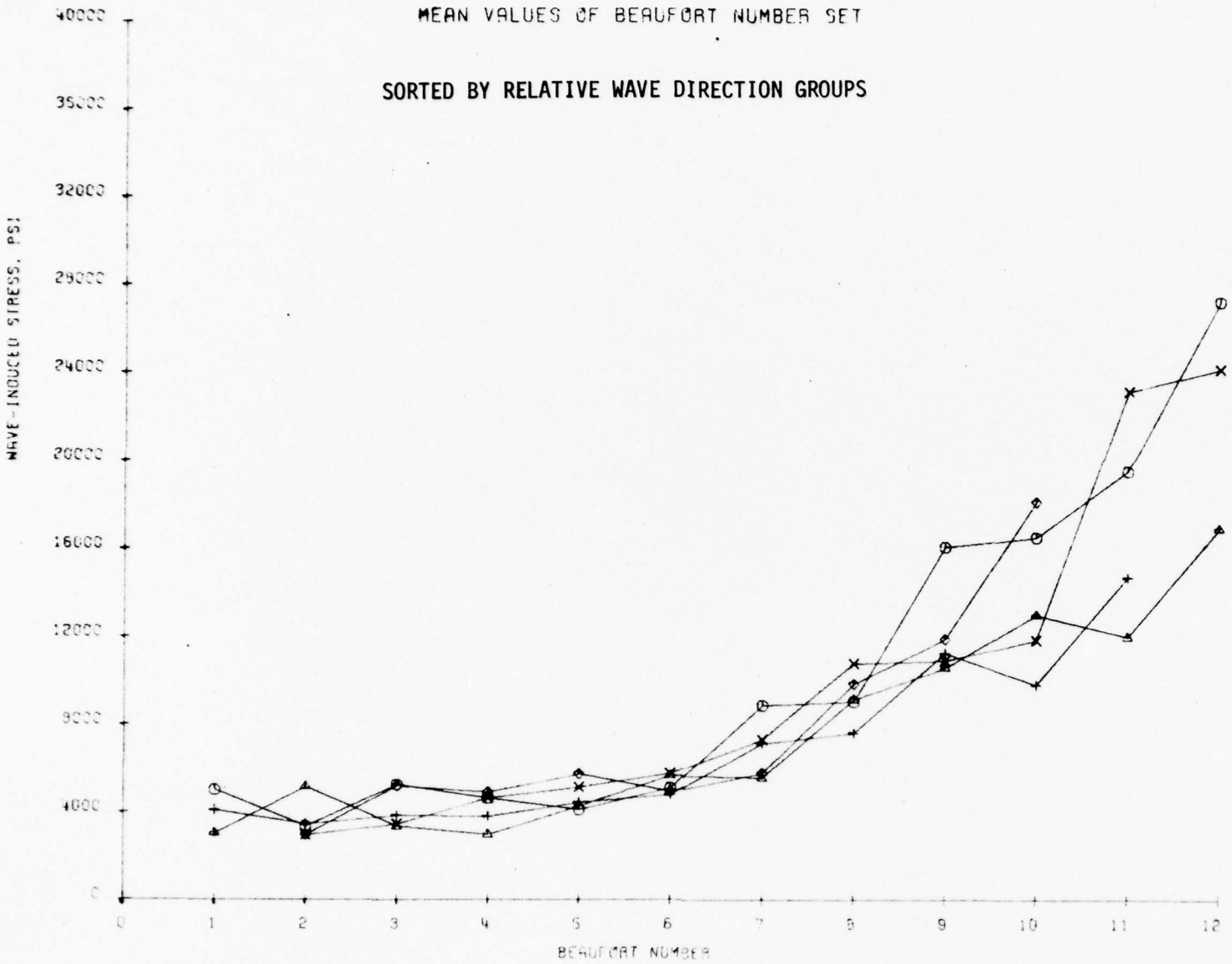

Figure B-18. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

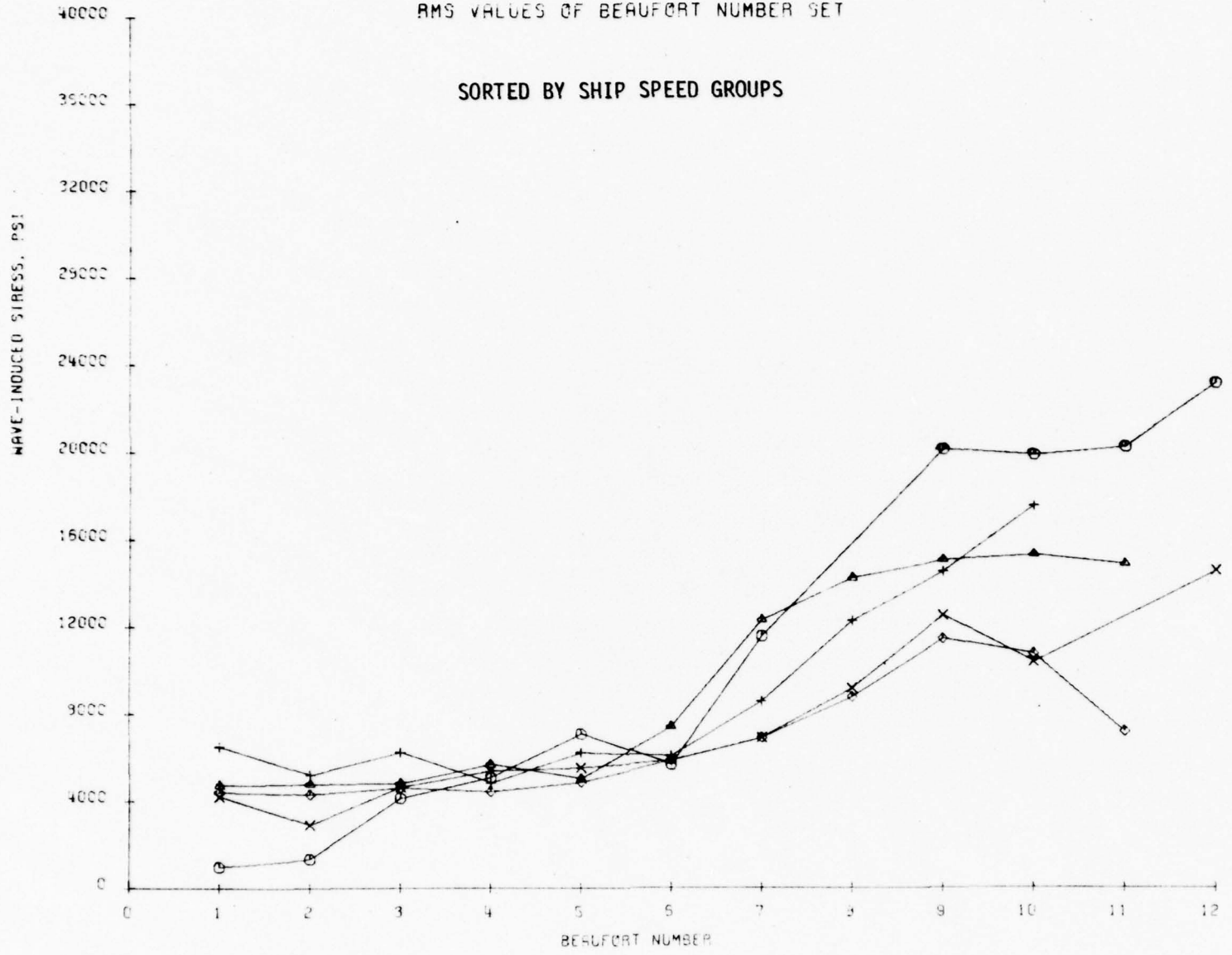

Figure B-19. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

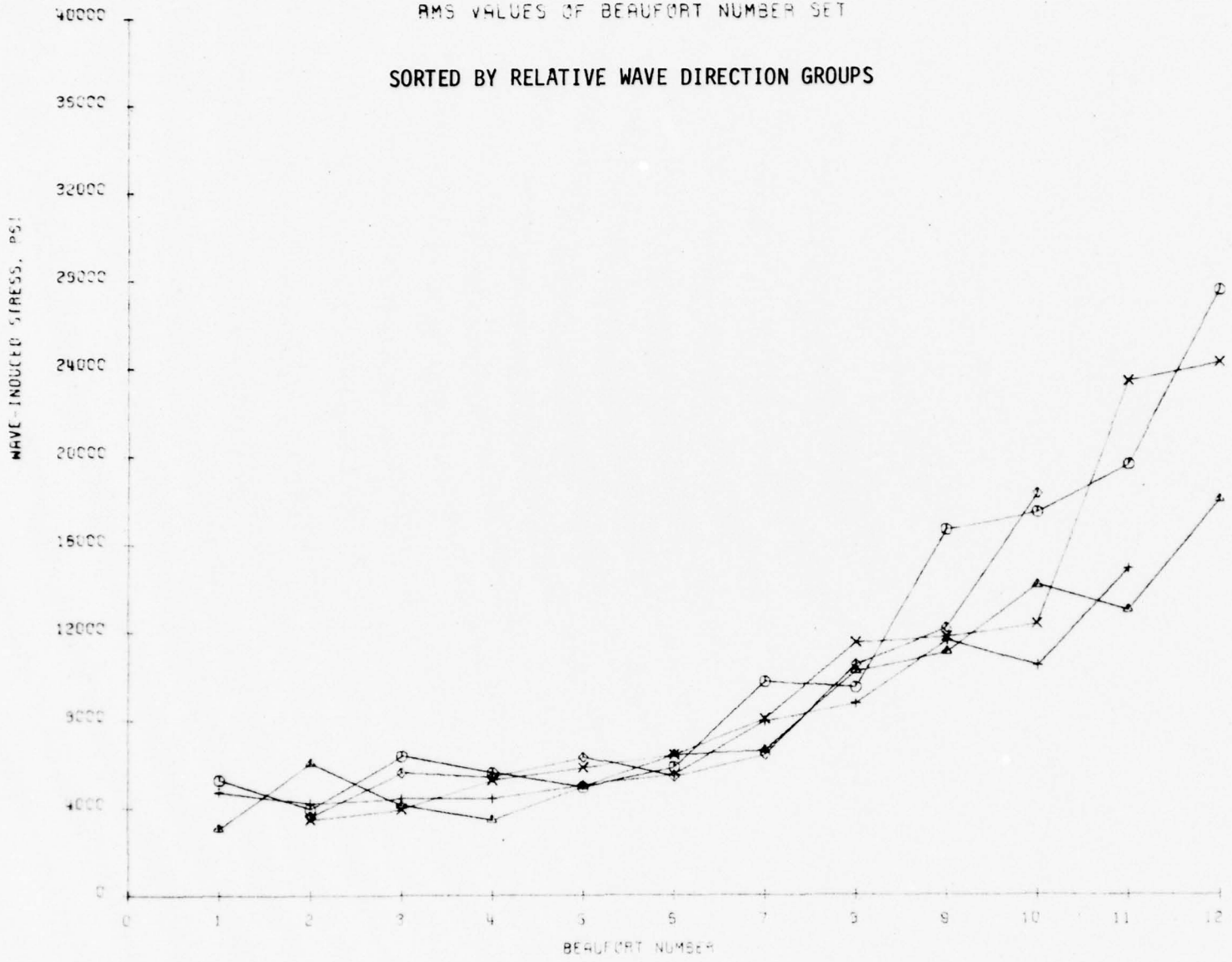

Figure B-20. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

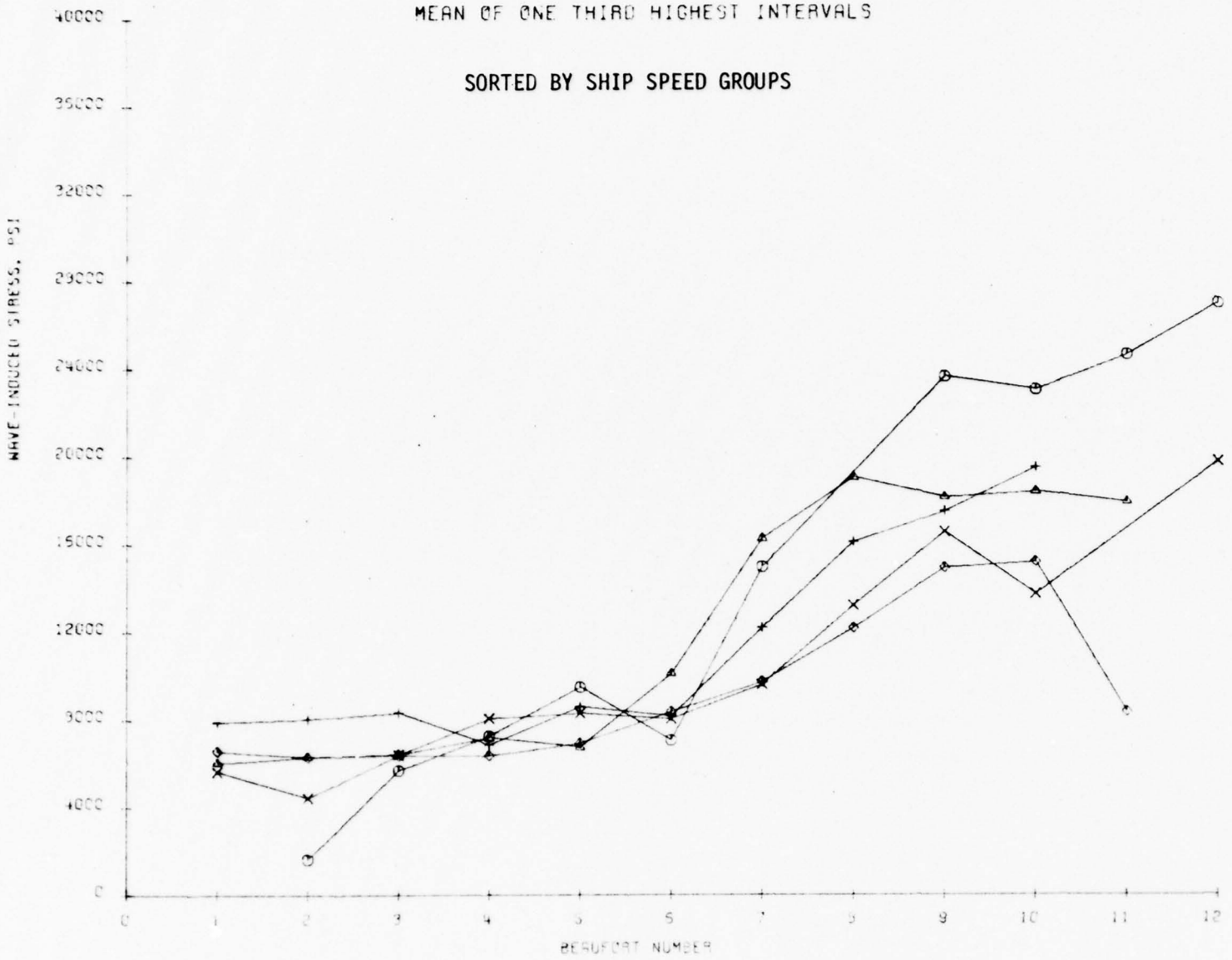

Figure B-21. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

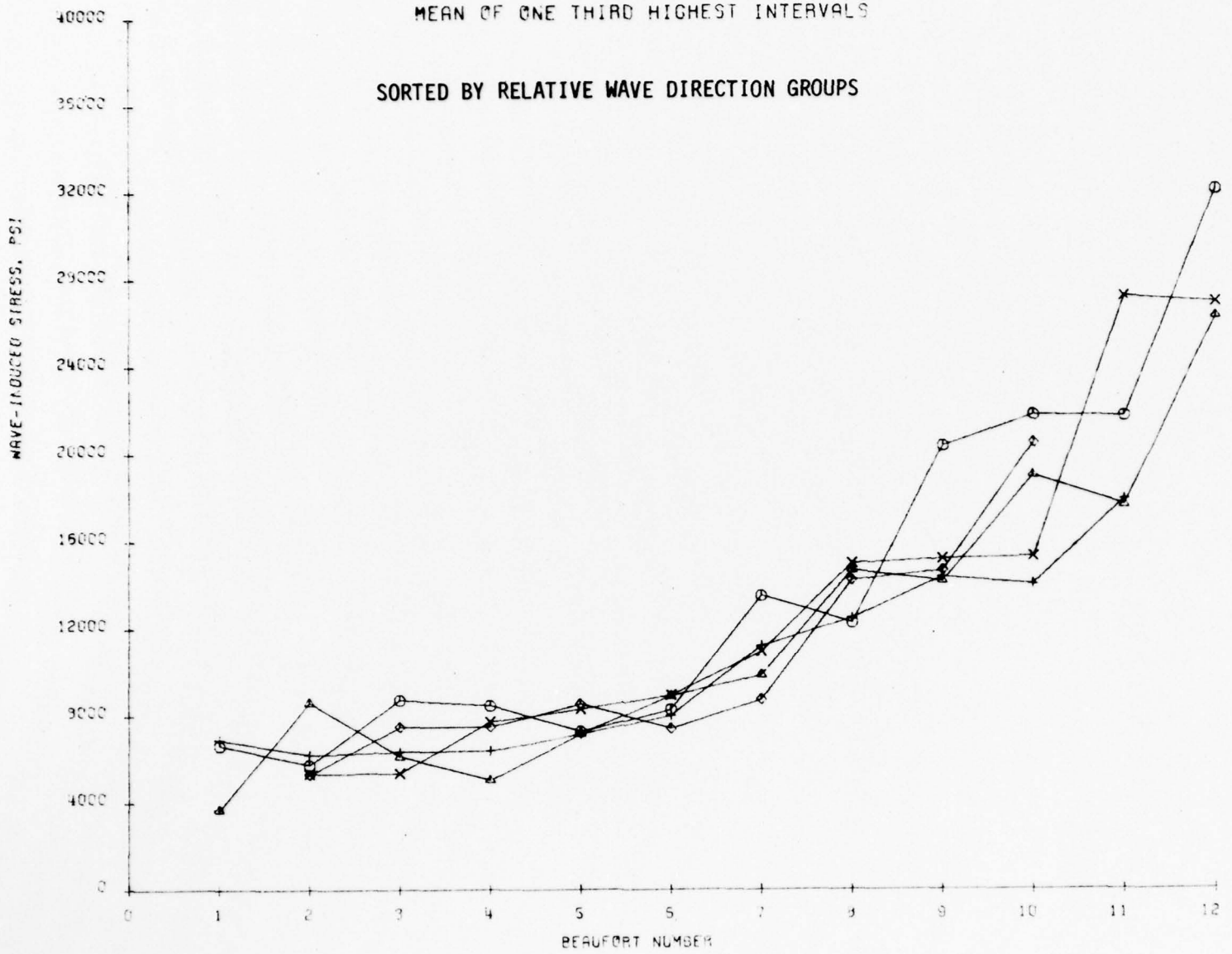

Figure B-22. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

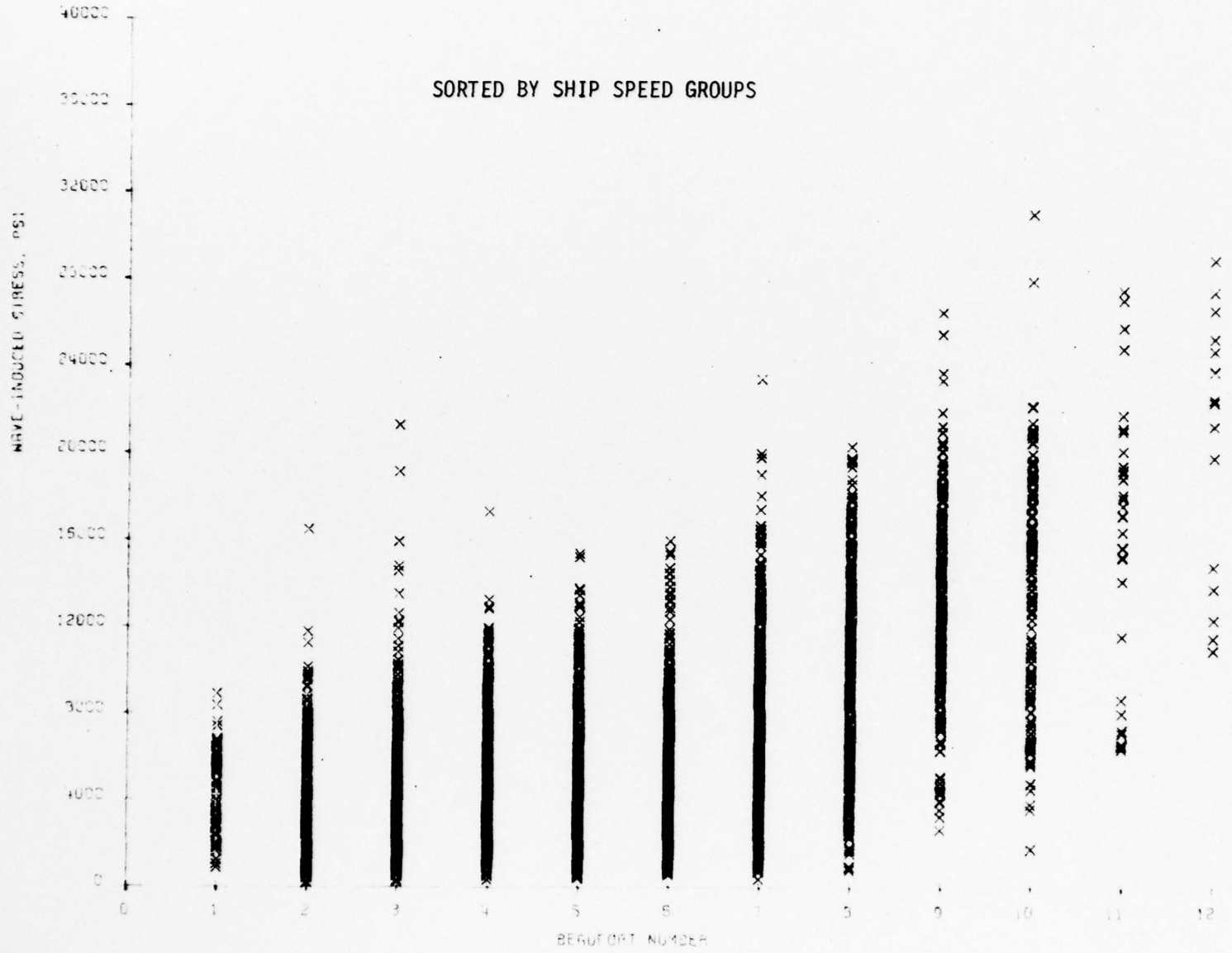

Figure B-23. MAX WAVE-INDUCED MID VERT. BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

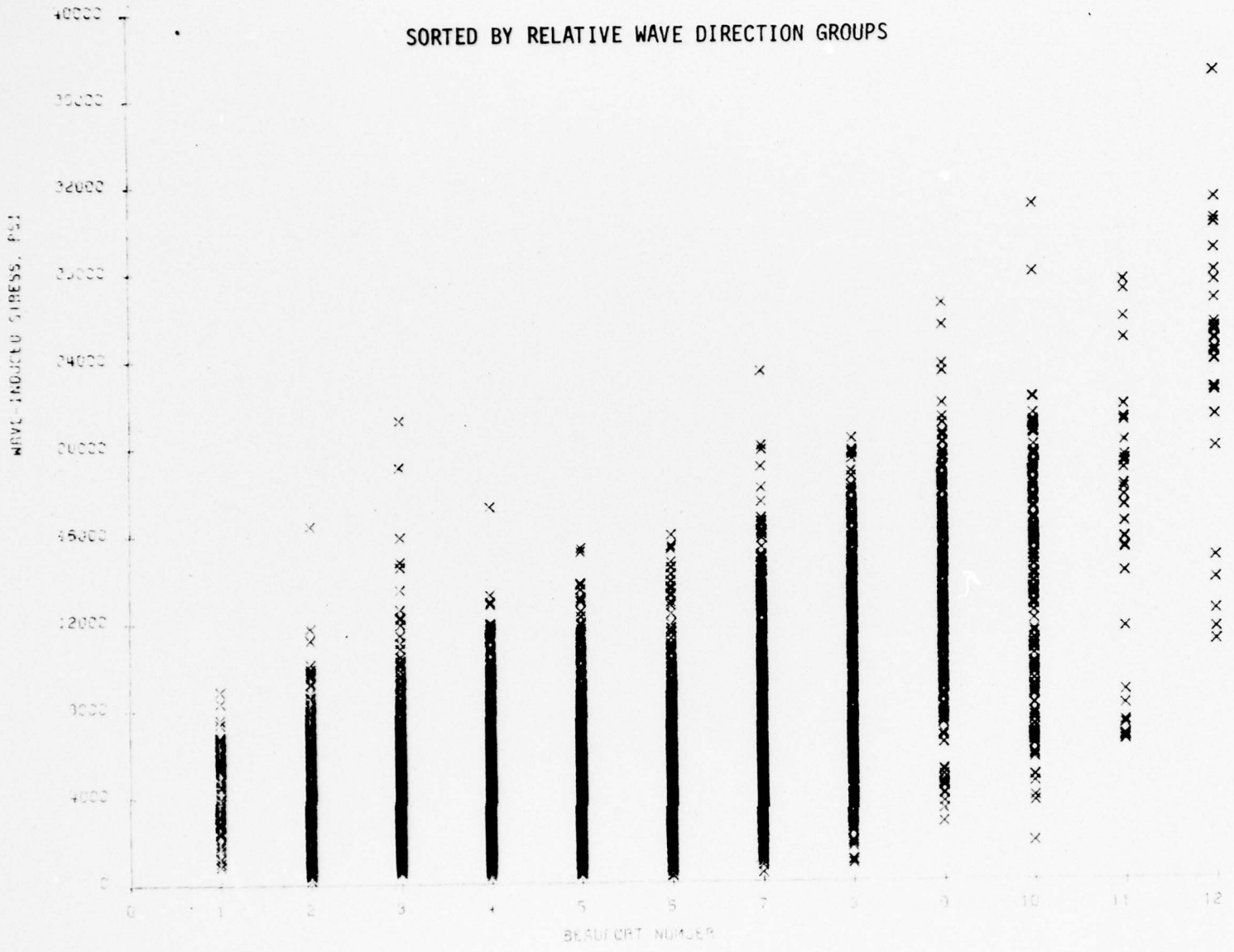

Figure B-24. MAX WAVE-INDUCED MID VERT BENDING STRESS VS BEAUFORT NO.-MCLEAN THREE SEASONS

APPENDIX C

LISTING OF OVERALL MAXIMUM PEAK-TO-PEAK LONGITUDINAL VERTICAL BENDING STRESSES

This appendix contains a listing of maximum peak-to-peak longitudinal vertical bending stress for each digitized interval. The peak-to-peak value is calculated by subtracting the maximum negative excursion from the maximum positive excursion. Since these maxima are not necessarily consecutive, their value does not, in general, correspond to the definition of the maximum peak-to-trough value. A drift in the average value (e.g., diurnal variations) during the interval may be reflected in an increased peak-to-peak value. Each maximum applies only to the 20-minute segment in each interval characterized by the digital record. The interval designation is identical to that used in Appendix A.

SEA LAND MCLEAN 1975 SEASON DIGITAL
VOYAGE NUMBER 60W

MCLEAN21760W00101	06238
MCLEAN21760W00102	04936
MCLEAN21760W00103	06201
MCLEAN21760W00104	06002
MCLEAN21760W00205	05949
MCLEAN21760W00206	05804
MCLEAN21760W00207	05873
MCLEAN21760W00208	06757
MCLEAN21760W00309	06726
MCLEAN21760W00310	04235
MCLEAN21760W00311	07137
MCLEAN21760W00312	06201
MCLEAN21760W00413	05172
MCLEAN21760W00414	06125
MCLEAN21760W00415	05691
MCLEAN21760W00416	04570
MCLEAN21760W00517	04943
MCLEAN21760W00518	04075
MCLEAN21760W00519	03763
MCLEAN21760W00520	04677
MCLEAN21760W00621	03809
MCLEAN21760W00622	04167
MCLEAN21760W00623	04113
MCLEAN21760W00624	04273
MCLEAN21760W00725	03093
MCLEAN21760W00726	03672
MCLEAN21760W00727	04540
MCLEAN21760W00728	05812
MCLEAN21760W00829	10550
MCLEAN21760W00830	09956
MCLEAN21760W00831	07640
MCLEAN21760W00832	13490
MCLEAN21760W00933	10002
MCLEAN21760W00934	09225
MCLEAN21760W00935	13460
MCLEAN21760W00936	09605
MCLEAN21760W01037	08683
MCLEAN21760W01038	09224
MCLEAN21760W01039	08463
MCLEAN21760W01040	08569
MCLEAN21760W01141	09422
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MCLEAN21760W01349	03435
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MCLEAN21760W01352	02917
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MCLEAN21960W01601	06330
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MCLEAN21960W01604	08996
MCLEAN21960W01705	13764
MCLEAN21960W01706	14404
MCLEAN21960W01707	11677
MCLEAN21960W01708	14069
MCLEAN21960W01809	10047
MCLEAN21960W01810	11296
MCLEAN21960W01811	12850
MCLEAN21960W01812	11540
MCLEAN21960W01913	05233
MCLEAN21960W01914	06543
MCLEAN21960W01915	07563
MCLEAN21960W01916	06436
MCLEAN21960W02017	08371
MCLEAN21960W02018	08646
MCLEAN21960W02019	06756
MCLEAN21960W02020	05157
MCLEAN21960W02121	05202
MCLEAN21960W02122	05195
MCLEAN21960W02123	05339
MCLEAN21960W02124	04829
MCLEAN21960W02225	03984
MCLEAN21960W02226	03558
MCLEAN21960W02227	03032
MCLEAN21960W02228	03222
MCLEAN21960W02329	02795
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MCLEAN21960W02436	07899
MCLEAN21960W02537	08250
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MCLEAN21960W02539	09164
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MCLEAN:22160W03208	00913
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MCLEAN:22160W03310	01125
MCLEAN:22160W03311	01080
MCLEAN:22160W03413	01004
MCLEAN:22160W03414	00746
MCLEAN:22160W03415	00882
MCLEAN:22160W03416	00693

VOYAGE NUMBER 61E

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MCLEAN:22361E00208	00972
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MCLEAN:22361E00310	01676
MCLEAN:22361E00311	01816
MCLEAN:22361E00312	01416
MCLEAN:22361E00413	01943
MCLEAN:22361E00414	01802
MCLEAN:22361E00415	02069
MCLEAN:22361E00416	02061
MCLEAN:22361E00517	08074
MCLEAN:22361E00518	05316
MCLEAN:22361E00519	05249
MCLEAN:22361E00520	04389
MCLEAN:22361E00621	06087
MCLEAN:22361E00622	07214
MCLEAN:22361E00623	06028
MCLEAN:22361E00624	06830
MCLEAN:22361E00725	07933
MCLEAN:22361E00726	10224
MCLEAN:22361E00727	07903
MCLEAN:22361E00728	08853
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MCLEAN:22361E00830	06539
MCLEAN:22361E00831	08978
MCLEAN:22361E00832	08170
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MCLEAN:22361E01037	11529
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MCLEAN:22361E01455	09008
MCLEAN:22361E01456	10951
MCLEAN:22361E01557	08645

MCLEAN22361E01558	07733
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MCLEAN22361E01560	09075
MCLEAN22561E01601	08322
MCLEAN22561E01602	08106
MCLEAN22561E01603	10000
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MCLEAN22761E03309	03420
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MCLEAN22761E03312	03494
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MCLEAN22761E03728	03272
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MCLEAN22761E03831	02088
MCLEAN22761E03832	01584
MCLEAN22761E03933	01125
MCLEAN22761E03934	00711
MCLEAN22761E03935	01533
MCLEAN22761E03936	01584

VOYAGE NUMBER 61W

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MCLEAN22961W00103	01175
MCLEAN22961W00104	01903
MCLEAN22961W00205	03048
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MCLEAN22961W00208	03055
MCLEAN22961W00309	03092
MCLEAN22961W00310	04021
MCLEAN22961W00311	04497
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MCLEAN22961W00413	04795
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MCLEAN22961W00725	04282
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MCLEAN22961W01351	05374
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MCLEAN22961W01455	03419
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MCLEAN23161W01805	04064
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13. ABSTRACT

One of the class of eight SL-7 high speed containerships has been extensively instrumented with stress, strain and motion sensors. These have been modified for the Third Season of data acquisition to emphasize measurement of hatch corner and bow sideshell strains. Much of the previous instrumentation inventory, including a wave height radar and Tucker wave meter, has also been employed in the Third Season. This report contains a summary of the recorded data, examples of the analog records, a catalog of the data formats and a listing of the available data intervals. Some analysis of the data is also reported including midship bending stresses encompassing all three data seasons.

Data collection for the third season began with the westbound North Atlantic voyage 59 on January 17, 1975 and terminated with westbound voyage 61 on March 17, 1975.

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14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT

DD FORM 1 NOV 65 1473 (BACK)

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Containership						
Stress						
Wave Measurements						
Acceleration						
Instrumentation						
Slamming						
Ship Motions						

METRIC CONVERSION FACTORS

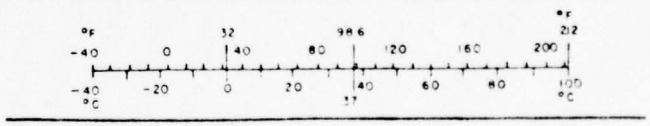
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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