FILE

INTERNAL DOCUMENT 107

I.O.S.

Technical Advisory Group 2
to the
Wave Energy Steering Committee
Contract E/5A/CON/1516

Selected wave records
and one-dimensional spectra for
St Gowan



NATURAL ENVIRONMENT RESEARCH COUNCIL
INSTITUTE OF OCEANOGRAPHIC SCIENCES

INSTITUTE OF OCEANOGRAPHIC SCIENCES

Wormley, Godalming,
Surrey, GU8 5UB.
(042-879-4141)

(Director: Dr. A. S. Laughton)

Bidston Observatory,
Birkenhead,
Merseyside, L43 7RA.
(051-652-2396)
(Assistant Director: Dr. D. E. Cartwright)

Crossway,
Taunton,
Somerset, TA1 2DW.
(0823-86211)
(Assistant Director: M.J. Tucker)

Technical Advisory Group 2
to the
Wave Energy Steering Committee
Contract E/5A/CON/1516

# Selected wave records and one-dimensional spectra for St Gowan

Internal Document No 107



G N Crisp
Institute of Oceanographic Sciences
Crossway
Taunton
Somerset

September 1980

CONTENTS

## SECTION 1 SELECTION AND PROCESSING OF DATA

### (1) The St Gowan Wave Recorder

The data presented in this report were measured by a Shipborne Wave Recorder (Mk 1) which was mounted upon the St Gowan Light Vessel. The recorder was located to the west of Carmarthen Bay at a position $51^{\circ}30.5'$N, $4^{\circ}59.8'$W. The water depth at this point is approximately 49 m.

Analogue records of sea surface elevation as a function of time are recorded routinely on paper charts. Each record is nominally of 12 minutes duration and records are made every 3 hours.

The data used in this report comprise a subset of the available data and were selected from recordings made between August 1975 and August 1976, and between January 1977 and December 1977. As the Light Vessel remains on station continuously except when recalled for a refit, the instrument can be calibrated only relatively infrequently. Calibrations were carried out in June 1975, September 1976 and November 1979 and the instruments' sensitivity remained stable to within 3% throughout that period. As the instruments' sensitivity is reset at each calibration, no corrections have been applied for such small drifts in sensitivity.

(2) Selection of Records

401 records were selected from the large body of available data, in a fashion designed to ensure that the characteristics of the selected records should reflect the long term conditions at the site. The selection procedure used followed closely the method described by Crabb (1978). The hourly mean wind speed and direction, measured at Milford Haven during the hour prior to each wave record were used to characterise the local meteorological conditions during each wave recording. The selected records were so chosen that the percentage occurrence, classified by speed and direction, of the winds measured locally prior to each recording, matched closely the annual average occurrences classified in the same way. The average annual mean wind speed and direction distributions were obtained using all of the data recorded at Milford Haven between 1970 and 1977. For each class of speed and direction, the selected records were chosen so that the number of records drawn from any one season in the year corresponded as closely as possible to the occurrence of that wind speed and direction classified by season. For this purpose seasons were defined as follows:

| | |
|---|---|
| Spring: | March, April, May |
| Summer: | June, July, Aug |
| Autumn: | Sept, Oct, Nov |
| Winter: | Dec, Jan, Feb |

Each of the selected records was inspected by eye in order to ensure that the record conformed to the known characteristics of such records and to check that the stylographic quality was adequate for semi-automatic digitisation of the record. The distributions of speed and direction derived from the long term data and the selected set are shown in Table 1.

# DISTRIBUTION OF WIND SPEED AND DIRECTION AT MILFORD HAVEN

CALMS 1. 432
1. 496

| DIRECTION (DEGREES) / SPEED (KNOTS) | 350/ 10 | 20/ 40 | 50/ 70 | 80/100 | 110/130 | 140/160 | 170/190 | 200/220 | 230/250 | 260/270 | 290/310 | 320/340 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/ 3 | 1. 096 | 1. 397 | 1. 299 | 1. 257 | 0. 607 | 0. 194 | 0. 402 | 0. 637 | 0. 714 | 0. 664 | 0. 568 | 0. 670 |
| | 0. 998 | 1. 496 | 1. 247 | 1. 247 | 0 499 | 0. 249 | 0. 249 | 0. 748 | 0. 748 | 0. 748 | 0. 499 | 0. 748 |
| 4/ 6 | 1. 871 | 2. 079 | 1. 666 | 1. 361 | 0. 933 | 0. 352 | 0. 512 | 0. 847 | 1. 283 | 1. 158 | 1. 067 | 1. 543 |
| | 1. 995 | 1. 995 | 1. 746 | 1. 247 | 0. 998 | 0. 249 | 0. 499 | 0. 748 | 1. 247 | 1. 247 | 1. 247 | 1. 496 |
| 7/10 | 3. 195 | 3. 381 | 2. 816 | 1. 914 | 2. 196 | 0. 937 | 1. 108 | 1. 901 | 2. 793 | 3. 104 | 2. 719 | 3. 297 |
| | 3. 242 | 3. 242 | 2. 743 | 1. 995 | 2. 244 | 0. 998 | 0. 998 | 1. 995 | 2. 743 | 2. 993 | 2. 743 | 3. 242 |
| 11/16 | 2. 188 | 1. 729 | 1. 021 | 1. 550 | 3. 322 | 1. 979 | 1. 976 | 3. 434 | 5. 299 | 3. 784 | 2. 579 | 2. 725 |
| | 2. 244 | 1. 746 | 0. 998 | 1. 496 | 3. 491 | 1. 995 | 1. 995 | 3. 491 | 5. 237 | 3. 990 | 2. 494 | 2. 743 |
| 17/21 | 0. 264 | 0. 071 | 0. 027 | 0. 246 | 0. 974 | 0. 828 | 0. 740 | 1. 503 | 2. 920 | 0. 965 | 0. 535 | 0. 506 |
| | 0. 249 | 0. 000 | 0. 000 | 0. 249 | 0. 998 | 0. 748 | 0. 748 | 1. 496 | 2. 993 | 0. 998 | 0. 499 | 0. 499 |
| 22/27 | 0. 053 | 0. 007 | 0. 001 | 0. 082 | 0. 288 | 0. 330 | 0. 262 | 0. 569 | 1. 138 | 0. 333 | 0. 078 | 0. 150 |
| | 0. 000 | 0. 000 | 0. 000 | 0. 249 | 0. 249 | 0. 249 | 0. 249 | 0. 499 | 1. 247 | 0. 249 | 0. 000 | 0. 249 |
| 28/33 | 0. 001 | 0. 000 | 0. 000 | 0. 006 | 0. 019 | 0. 043 | 0. 042 | 0. 121 | 0. 184 | 0. 062 | 0. 003 | 0. 024 |
| | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 249 | 0. 249 | 0. 000 | 0. 000 | 0. 000 |
| 34/40 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 001 | 0. 001 | 0. 014 | 0. 040 | 0. 003 | 0. 000 | 0. 000 |
| | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 |
| 41/47 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 007 | 0. 000 | 0. 000 | 0. 000 |
| | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 |
| 48/55 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 001 | 0. 000 | 0. 000 |
| | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 |
| 56/63 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 |
| | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 | 0. 000 |

UPPER FIGURES: PECENTAGE OCCURENCE DERIVED FROM MET DATA
LOWER FIGURES: PECENTAGE OCCURENCE IN SELECTED SET

(3) Digitisation of selected records

The selected records were digitised by the image analysis group in the Department of Nuclear Physics at Oxford University. Each record was photographed on to 70 mm film and the photographic copy digitised using 'PEPR', a computer-controlled, semi-automatic, optical digitising system. The very high resolution of this machine enabled digitisation with an accuracy somewhat better than half the width of the original pen trace. The optical scanning system used, had, however, to distinguish the required pen trace from a background grid printed on each chart. This was achieved successfully for approximately 80% of the records, in the remaining 20% of the records there were small regions of the digital record which corresponded to lines in the background grid, rather than the required pen trace.

Each of the digital records was plotted to the same scale as the original chart, and the two were compared by superimposing the plot upon the original. Where the two did not match, the digital record was edited and the procedure repeated until a good match was achieved. The records were digitised at equal increments along the time axis, corresponding to a sample rate of 2Hz. The vertical resolution of the digital records corresponded to approximately 1 cm elevation of the sea surface. (This is roughly in accordance with the variance of the calmest record in the set (Serial No 11), which in all probability is dominated by instrumental noise originating from the digitisation process.)

(4) Computation of spectra

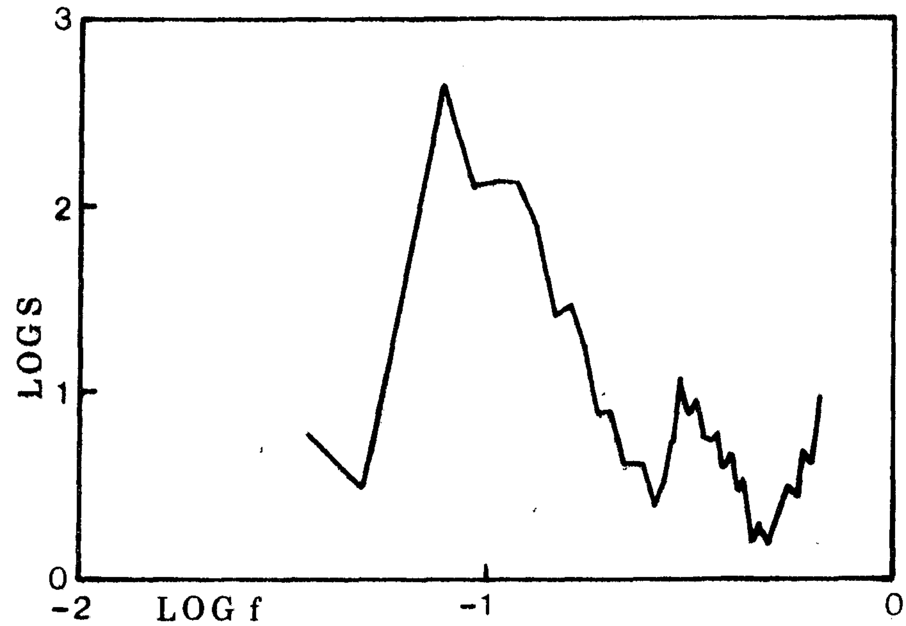
Each of the digital wave records was converted into a corresponding spectrum using a standard Fast Fourier Transform algorithm applied to the whole digital time series. No window function was applied to the time series. The spectral estimates were averaged 7 at a time, rendering smoothed spectra with a frequency resolution of 0.0097 Hz.

Each spectrum was then corrected for the instrument response using the formula

$$S'(f) = S(f).\left(\frac{1}{0.83}\left[1 + 8.8(2\pi f)^2\right]^{3/2} e^{(2\pi f)^2 d/g}\right)^2 \qquad (1)$$

where $d$ was the depth of the pressure unit used in the recorder, $S'(f)$ the corrected spectral estimate and $S(f)$ the uncorrected spectral estimate. The correction formula (1) results in large corrections at high frequency and inspection of the corrected spectra revealed an unreasonable increase in $S'(f)$ at high frequencies, presumably originating from instrumental noise. As, at high frequencies, the form of the spectrum is expected to tend to $S'(f) \propto f^{-5}$ each spectrum was plotted logarithmically and a striaght line of slope -5 fitted to the spectrum at a frequency below that at which unreasonable behaviour was displayed. The higher frequency spectral estimates were then replaced by the value obtained from the extrapolated straight line. This procedure is illustrated in Fig 2a and 2b. The frequency at which the $f^{-5}$ 'tail' was spliced onto the original spectrum was chosen by eye so as to obtain as good a fit as possible to the original spectrum.

a




b

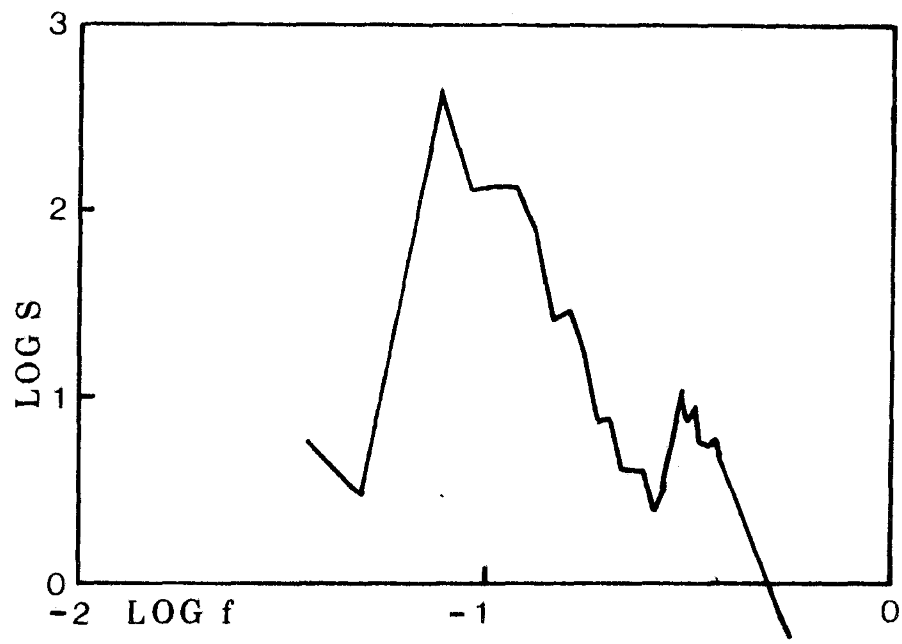



FIGURE 2 2a SHOWS THE EFFECT OF HIGH FREQUENCY NOISE ON THE CORRECTED SPECTRUM
2b SHOWS THE SAME SPECTRUM WITH A "TAIL" $\propto f^{-5}$ FITTED AT HIGH FREQUENCY

(5) Data supplied

The data to which this report refers are supplied separately in computer compatible form. The data comprise 401 digital wave records and 401 corresponding one dimensional spectra. The records were written using Fortran computer programs, using formats specified below.

Wave record format

Data points represents the sea surface elevation in metres measured at 0.5 second intervals. Each wave record consists of 1440 such data points. Wave records are written separately to individual files as follows:

Wave Files - logical record description

Logical record 1 - Alpha-numeric header (20A1, I3) of the form
ST GOWAN WAVERECORD NNN
Logical record 2 - Five integer numbers (5I4) being in order: MMM, a record identifier (MMM = NNN + 100), followed by the year, day number, hour, and minute of the start of the record.
Logical records 3 - 122. Successive data values written (12F6.2). Each record is 72 characters long, padded with space characters, where necessary.

Files are separated by an IBM compatible tape mark (Physical EOF).

Spectra

The spectra calculated as described previously, are written to separate files. Moments of the spectrum are defined as

$$M_n = \int_{f_1}^{f_2} f^n S'(f)\,df$$

$f_1 = 0.0444$ Hz
$f_2 = 0.6569$ Hz

Moments $M_{-2}$ to $M_4$ are included in each file. Each file also contains

(a) Significant wave height, Hs, defined as $4\sqrt{M_o}$

(b) Energy period, $T_e$ defined as $T_e = M_{-1}/M_o$

(c) Goda 1970 peakedness factor, $Q_p$ , defined as $Q_p = \frac{2}{M_o^2}\int_{f_1}^{f_2} f S'^2(f)\,df$

Spectrum files - Logical record description

| | |
|---|---|
| Logical record 1 | Alpha numeric header (16A1, I3) of the form ST GOWAN SPECTRUM MMM, MMM is the spectrum serial number (MMM = NNN + 100) |
| Logical record 2 | Five integers (5I4) being the year, day number, hour and minute of the start of the wave record and a number referring to the spectral component at which a tail of the form $af^{-5}$ has been fitted. |
| Logical record 3 | Significant wave height and energy period (2F6.2) |
| Logical record 4 | Wind direction in degrees, divided by 10 (eg 280 degrees is written as 28), and wind speed in knots. |
| Logical records 5-11 | Spectral moments (E12.6) $M_{-2}$ to $M_4$ |
| Logical record 12 | Goda's QP (E12.6) |
| Logical records 13-76 | Component frequency (Hz) and corresponding spectral density ($m^2$/Hz) each record written (F6.4, 3X, E12.6). |

Each logical record is 21 characters long and is padded with space characters where necessary. Files are separated by an IBM compatible tape mark (Physical EOF).

## (6) Data Organisation

The 401 selected spectra are indexed and plotted below, in an order which is determined by the significant wave height and the energy period associated with each record. The spectra are grouped into classes of Hs, 0.5 m in width and are arranged in descending order of Te within each Hs class. The frequency axis extends to 0.5 Hz in each of the plots and the full scale of the variance axis is indicated in each plot. The index to the spectra includes a brief summary of the characteristics of each spectrum comprising Hs, Te, the wind speed and direction prior to each recording, and the -2 to 4 order spectral moments.

SECTION II DATA CHARACTERISTICS

(1) One dimensional properties

As can be seen from the spectral plots, the diversity of spectral shapes encountered at St Gowan is large and in qualitative agreement with a similar diversity observed at South Uist. However the distribution of the St Gowan spectra amongst Hs classes differs significantly from that observed at South Uist. In the St Gowan spectral set, low values of Hs occur more frequently than at South Uist, indicating that at St Gowan the wave climate is less energetic. This feature of the data is also illustrated in the Hs, Te scatter diagram shown in figure 3.

An estimate of the average annual energy flux has been calculated from the St Gowan spectral set, assuming that the water depth at the recording site is 49 m and taking into account the effect of the variations of group velocity with water depth. The energy flux thus derived is 15.7 Kw/m which is approximately one third of the average annual energy flux estimated at South Uist.

(2) Average Directional Characteristics

The average directional characteristics of the wave climate have been estimated using the measured spectra in conjunction with meteorological data. The method used is described in Appendix I and depends upon the identification of that part of each spectrum which is generated locally and that part of the spectrum which corresponds to energy which has advected from distant wave generating centres. The former part of the spectrum is referred to as wind-sea and the latter part is referred to as swell. In reference 2 a third catagory, called the old wind-sea was included in the model. This was applied to residual energy, generated up-fetch in the local wind field, which advected through the recording station after the local wind had changed. In the present work, the effect of this component has been incorporated into the wind sea portion of the spectrum as described in Appendix 1.

Directional properties were ascribed separately to the wind-sea and swell portions of each spectrum in order to calculate the average energy flux in each direction. In general, the directional properties of any wind-sea are rather broad with energy propagating over a range of directions either side of the mean wind direction. As a simplifying approximation it has been assumed for the present purpose, that

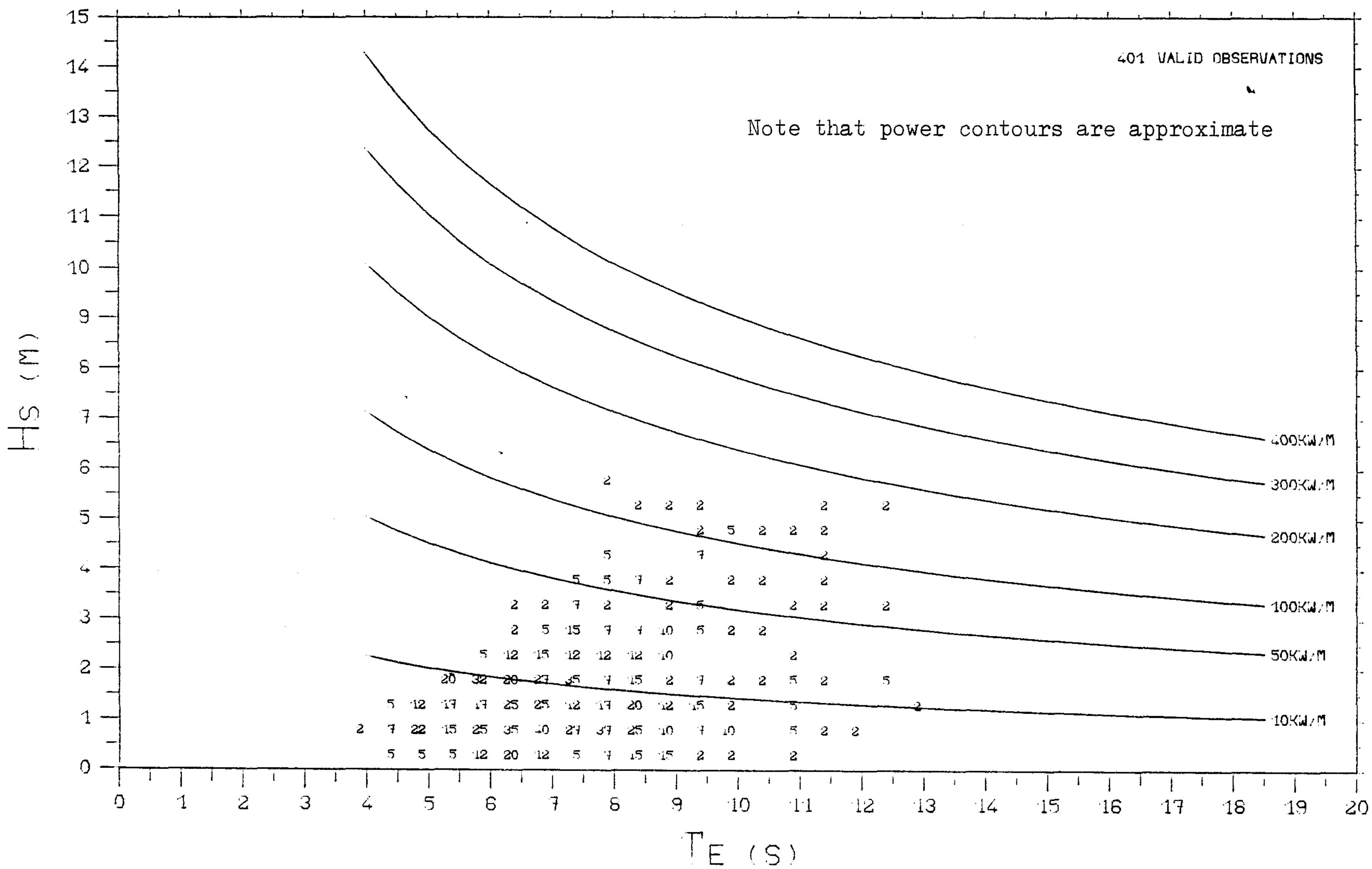



FIGURE 3 SCATTER DIAGRAM OF HS AND TE (PPT)

ST. GOWAN SELECTED SET

for each spectrum, the wind sea energy propagates in the same direction as the generating wind. However, it is expected that the resulting average distribution of energy flux with angle will not be unrealistically narrow, as this distribution has been smoothed by averaging over $30^{\circ}$ sectors.

The energy contained in the swell portion of each spectrum was assumed to have been generated by distant wind fields located in the open Atlantic. As the recording site is exposed to the Atlantic over a relatively narrow range of angles from $210^{\circ}$-$270^{\circ}$, this condition defines the directional properties of the swell energy within reasonably close limits. For the purpose of calculating the average energy flux as a function of direction, no attempt was made to establish the form of the swell distribution with angle within the allowed range of directions. Instead it has been assumed that the swell energy is evenly distributed over angles from $210^{\circ}$-$270^{\circ}$.

The separation of each spectrum into the wind-sea and swell revealed that, of the total average annual energy flux of 15.7 Kw/m, 7.4 Kw/m was contained in the wind-sea portion of the spectra and 8.3 Kw/m was contained in the swell portion. The average directional distribution of energy flux calculated for the set of spectra is shown in figure 4.

The average power fluxes reported here are approximately one third of the energy flux for measurements made at the South Uist offshore buoy. Such a difference in the wave climate at that location and at St Gowan, is thought to arise as a result of a number of factors:

(1) St Gowan is exposed to the open Atlantic over a smaller range of angles than is South Uist, so that it would be expected to receive less swell energy.
(2) The fetch available for wind-sea generation is restricted over a larger range of angles than at South Uist so that the energy in the wind-sea portion of the St Gowan spectra is reduced.
(3) The wind climates at St Gowan and South Uist differ, with the average wind speed at South Uist exceeding that at St Gowan. This can be seen from figure 5 which shows the wind distribution for the two sites, derived from long term measurements.

It is interesting to note that the average annual power flux ascribed to swell at South Uist is 29 Kw/m and this figure is directly comparable with the swell power flux of 8.3 Kw/m reported here. These figures are roughly in proportion

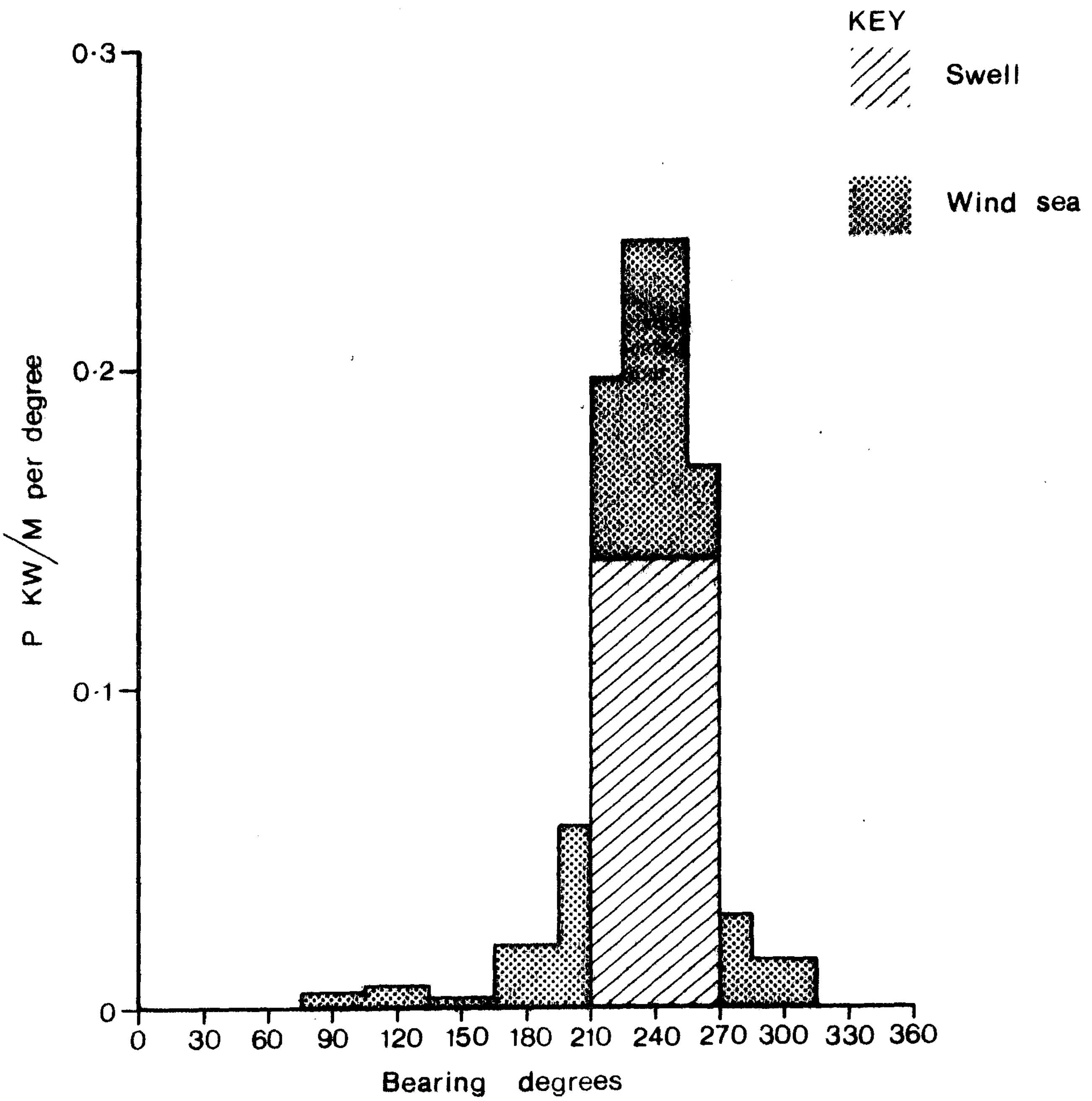



FIGURE 4 AVERAGE ANNUAL ENERGY FLUX AS A FUNCTION OF DIRECTION AT ST GOWAN LIGHT VESSEL

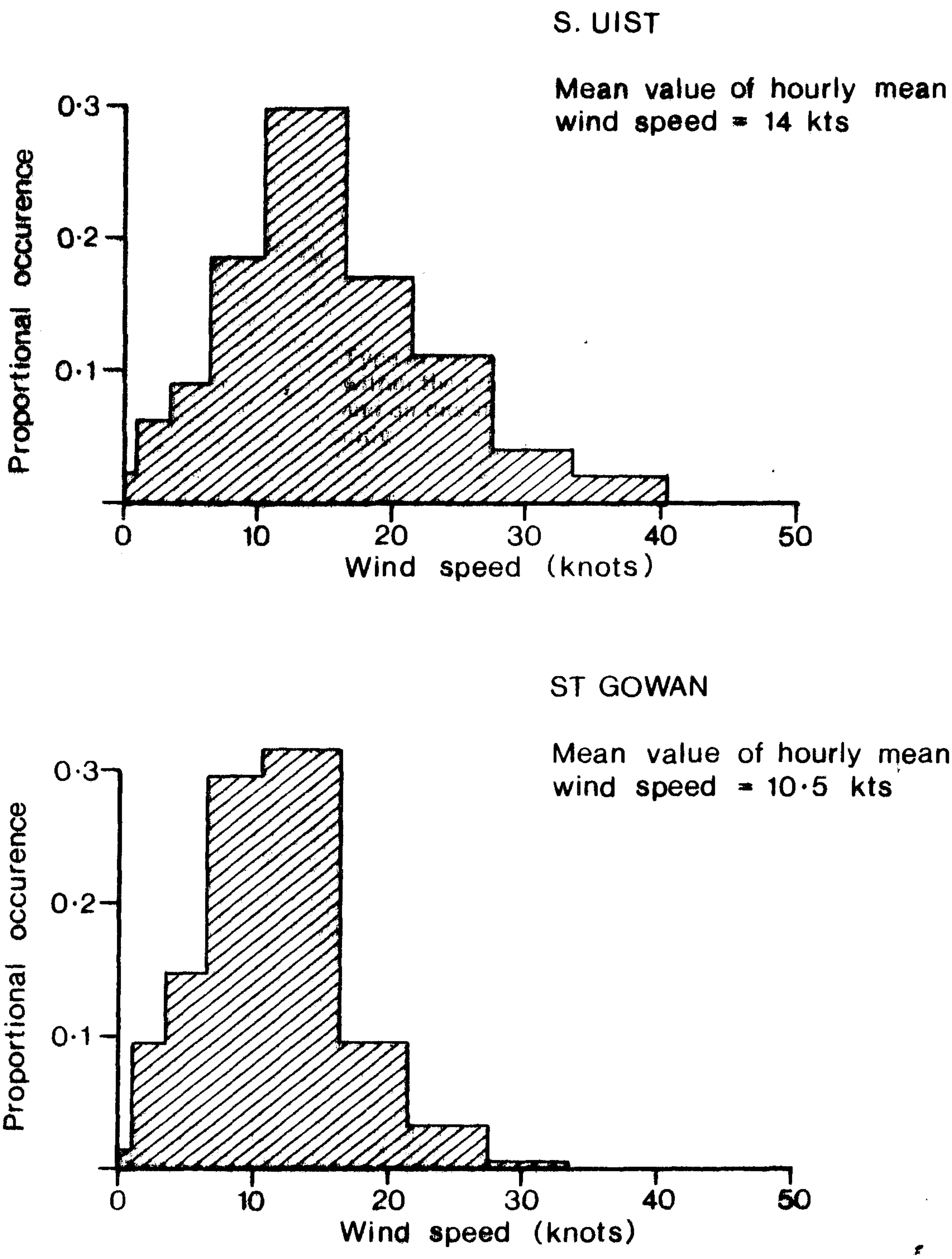



FIGURE 5 WIND SPEED DISTRIBUTIONS AT ST GOWAN AND S UIST

to the exposure for swell at each site. At St Gowan swell can be received over $60^{\circ}$ of angle while at South Uist swell can be received over a range of directions which is $160^{\circ}$ wide. Expressed in terms of power flux per angle of exposure, the swell energy received at the two sites are of comparable magnitudes, with 0.14 Kw/m per degree at St Gowan and 0.18 Kw/m degree at South Uist.

The average wind speeds at the two sites, calculated from long term wind speed and direction data are 14 Knots at South Uist and 10.5 Knots at St Gowan, while the wind-sea contributions to the energy fluxes at the two sites are 19 Kw/m and 8.3 Kw/m respectively. There is some uncertainty as to form of the dependence of average power levels on average wind speed, although Mollison (1977) gives theoretical arguments which suggest that for fully developed seas, the average energy flux should vary as the fifth power of the wind speed. For seas which are not fully developed, the average energy flux is expected to vary more slowly with wind-speed, so that the comparative magnitudes of the average wind-sea energy flux at South Uist and at St Gowan are not unreasonable. A comparison of the wind speeds at the two sites shows that the wind-sea power levels are accounted for if the average energy flux varies as the cube of the average wind speed.

# APPENDIX I METHOD USED TO DETERMINE THE ANGULAR DISTRIBUTION OF WAVE POWER

The method used to determine the directional distribution of wave power from the one dimensional wave measurements, follows closely the method described by Crabb (1979) in so far as the available data at St Gowan allowed. Each spectrum in the set is assumed to be composed of two portions: a high frequency wind sea portion which can be accounted for by the winds measured locally during the 24 hours prior to the wave recording, and a low frequency swell portion which is unrelated to the local wind. It is assumed that wind sea propagates in the direction of the generating wind while the swell energy is assumed to advect from the open Atlantic to the wave recording site. (As the recorder is exposed to the Atlantic over a relatively small range of angles ($210^o$-$270^o$), the latter assumption determines the direction of the swell energy within $60^o$).

Thus, once each spectrum has been separated into wind-sea and swell components, the average distribution of power with angle can be calculated for the set of spectra.

## 1 DISTINGUISHING BETWEEN WIND-SEA AND SWELL

A simple model of the one dimensional spectrum was adopted in which the local wind was assumed to be capable of generating waves with frequencies down to a lower limit, fc. The limiting frequency fc, was determined by the wind's speed, its duration, and the fetch over which it acted. All of the energy associated with waves with frequencies in excess of fc were assumed to have been generated by the local wind while all of the energy associated with lower frequencies than fc, was assumed to have advected from a non-local source.

In order to determine the cut off frequency for each spectrum, the local wind history during the 24 hours previous to each wave recording was used to describe the local wave generating conditions, and a simple empirical model was used to relate these conditions to the generated spectrum.

A number of simple wave forecasting charts and tables which can be used to relate wind and wave conditions, have been investigated by Crabb (1979) who found that a formulation due to Inoue (1967) and reported by Silvester (1974) was best suited to the present application. This formulation was used by the present author for the calculation of fc. The model uses a Pierson-Moskowitz formulation of the spectrum parameterised in terms of wind speed and fetch. It applies under steady generating conditions and gives for the spectral density, $S(f)$,:

$$S(f) = \frac{\alpha g^2}{(2\pi)^4 f^5} e^{-\beta\left(\frac{g}{2\pi u f}\right)^4} \tag{2}$$

Where u is the wind speed and $\alpha$ and $\beta$ depend upon the fetch.
For fully developed seas:

$$\alpha = 0 \cdot 0081$$

$$\beta = 0 \cdot 74$$

Under fetch limited conditions

$$\alpha = 0 \cdot 0081 \left(\frac{F}{F_{FDS}}\right)^{-0 \cdot 194} \tag{3}$$

$$\beta = 0 \cdot 1 \exp\left[(\ln 7 \cdot 4)\left(\frac{F}{F_{FDS}}\right)^{-0 \cdot 284}\right] \tag{4}$$

Where $F_{FDS}$ is the fetch required for fully developed seas to be generated by a wind of speed u.

$$F_{FDS} = 3.19\ U^{1.5}$$

Where $F_{FDS}$ is in Nautical Miles and U in Knots
The peak of the spectrum (2) is given by

$$fm = (0 \cdot 8\beta)^{1/4} \frac{g}{2\pi u} \tag{5}$$

The lowest significant frequency in the spectrum was assumed to be simply related to fm by:

$$fc = k\ fm \tag{6}$$

Where the constant k was determined by comparing fc and fm in those cases where spectra contained in the set were strongly bimodal and fc could therefore be estimated directly from the data.

Once k had been determined in this way, the cut off frequency, fc, was calculated for each spectrum using equations (4) and (6) together with the appropriate wind history. In practice this procedure required two further refinements to allow fc to be calculated in every case. Firstly, the fetches associated with each direction had to be modified so as to take account of the effect of the limited width of the fetch in certain directions. Secondly appropriate fetches had to be ascribed to those conditions where significant changes in wind speed or direction had occurred during the 24 hour period prior to each measurement. Duration limited conditions were treated by selecting an equivalent fetch, so defined that a steady wind blowing over the equivalent fetch would have the same effect as the duration limited wind.

The effective fetch in any direction was calculated as a weighted average of the geometric fetches measured at $6^{\circ}$ intervals up to $42^{\circ}$ either side of that direction. Such a procedure is described in Reference 6 which gives the appropriate weighting factors for each direction, resulting in the formula for the effective fetch:

$$F_{eff} = \frac{\sum_i F(\theta_i) \cos \theta_i}{\sum_i \cos \theta_i} \tag{7}$$

Where $F(\theta_i)$ is the geometric fetch in a direction $\theta_i$ with respect to the direction in which $F_{eff}$ is calculated

Significant variations in wind speed and direction during the 24 hour period prior to each recording were treated by adjusting the fetch to take account of any duration limited portions of the wind history. If the lowest fc thus calculated, corresponded to the segment of the wind history immediately prior to the wave record then no further calculation was necessary. On the other hand, if the lowest value of fc corresponded to generation at some time previous to the wave record, as would occur, for example, when the wind had become calm for some hours prior to the recording, then a second cut-off frequency, fc2 was calculated. fc2 represented the lowest frequency in the old wind-sea spectrum which would not have propagated past the recording site during the time between the generation of the waves and the time at which the recording was made. Thus fc2 was determined by the condition

$$V_g(f_{c2}) = d/t \tag{8}$$

Where Vg (fc2) is the group velocity of waves of frequency fc2, and the fetch associated with the generating conditions which occurred at a time prior to the wave recording.

In those cases where fc2 exceeds fc, the lowest frequency waves, for which fc $<$ f $<$ fc2, will have propagated down the fetch past the wave recorder and the lowest frequency wind-sea waves recorded will be of frequency fc2. If on the other hand fc2 $<$ fc, waves of frequency fc can be detected at the recorder so that fc is the appropriate cut off frequency.

## 2 CALCULATION OF THE AVERAGE DIRECTIONAL DISTRIBUTION OF ENERGY FLUX

Once the wind-sea cut-off frequency had been determined for each spectrum directional properties were ascribed to the wind-sea portion of the spectrum by assuming that all of the energy associated with the wind-sea portion of each spectrum travels in the same direction as the generating wind. (This assumption takes no account of the directional spread about the mean wave direction, but this should not be very important because the annual average distribution of energy flux with angle derived from the data has been smoothed by averaging over $30^{\circ}$ sectors).

The remaining energy in each spectrum is assumed to have been generated by distant generating centres. In order to ascribe directions to the swell wave trains, it is noted that the wave recorder used to make the measurements is exposed to the Atlantic over a relatively narrow range of angles so that the swell portion of each spectrum is assumed to approach from this range of angles. In order to calculate the variation of the average swell energy flux within this allowed range of directions, it would be necessary to use hindcast techniques to identify the swell generating centres for each spectrum. In the absence of this information it has been assumed that the swell energy is, on average, evenly distributed over the range of angles from $210^{\circ}$-$270^{\circ}$.

REFERENCES

CRABB, J A (1978) "Selected wave records and one dimensional spectra for South Uist" IOS Internal Document No 33.

CRABB, J A (1979) "Synthesis of a directional wave climate" Proc of IMA conference on power from Sea Waves, Edinburgh June 1979.

INOUE, T (1967) "On the growth of the spectrum of a wind generated sea according to a modified Miles-Phillips mechanism and its application to wave forecasting" New York University, Physical Sciences Laboratory Report TR-67-5.

SILVESTER, R (1974) p 98 in Coastal Engineering, 1 Amsterdam: Elsevier 457 pp.

Shore Protection Manual (1977) p 8-26 and 3-32 in Shore Protection Manual.

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.44 | 10.73 | 70 | 2 | 0.1410E 01 | 0.1281E 00 | 0.1194E-01 | 0.1191E-02 | 0.1443E-03 | 0.2617E-04 | 0.7539E-05 |
| 2 | 0.43 | 9.78 | 200 | 5 | 0.1136E 01 | 0.1113E 00 | 0.1139E-01 | 0.1266E-02 | 0.1678E-03 | 0.3031E-04 | 0.7927E-05 |
| 3 | 0.27 | 9.08 | 20 | 5 | 0.3981E 00 | 0.4084E-01 | 0.4498E-02 | 0.5501E-03 | 0.7898E-04 | 0.1431E-04 | 0.3460E-05 |
| 4 | 0.26 | 8.98 | 100 | 7 | 0.4179E 00 | 0.3873E-01 | 0.4314E-02 | 0.6412E-03 | 0.1309E-03 | 0.3438E-04 | 0.1087E-04 |
| 5 | 0.42 | 8.93 | 360 | 3 | 0.9165E 00 | 0.9848E-01 | 0.1102E-01 | 0.1306E-02 | 0.1694E-03 | 0.2556E-04 | 0.4922E-05 |
| 6 | 0.12 | 8.79 | 350 | 6 | 0.7563E-01 | 0.8021E-02 | 0.9128E-03 | 0.1131E-03 | 0.1571E-04 | 0.2582E-05 | 0.5432E-06 |
| 7 | 0.18 | 8.74 | 100 | 2 | 0.1542E 00 | 0.1679E-01 | 0.1920E-02 | 0.2354E-03 | 0.3222E-04 | 0.5293E-05 | 0.1144E-05 |
| 8 | 0.40 | 8.65 | 70 | 11 | 0.8563E 00 | 0.8626E-01 | 0.9968E-02 | 0.1511E-02 | 0.3499E-03 | 0.1195E-03 | 0.5072E-04 |
| 9 | 0.40 | 8.60 | 990 | 0 | 0.7776E 00 | 0.8713E-01 | 0.1013E-01 | 0.1234E-02 | 0.1621E-03 | 0.2453E-04 | 0.4785E-05 |
| 10 | 0.31 | 8.48 | 40 | 3 | 0.5168E 00 | 0.5195E-01 | 0.6127E-02 | 0.1078E-02 | 0.3263E-03 | 0.1388E-03 | 0.6735E-04 |
| 11 | 0.02 | 8.34 | 300 | 6 | 0.1299E-02 | 0.1347E-03 | 0.1616E-04 | 0.2308E-05 | 0.4044E-06 | 0.8888E-07 | 0.2467E-07 |
| 12 | 0.46 | 8.33 | 990 | 0 | 0.1061E 01 | 0.1113E 00 | 0.1335E-01 | 0.2046E-02 | 0.4412E-03 | 0.1308E-03 | 0.4807E-04 |
| 13 | 0.25 | 8.18 | 30 | 10 | 0.2745E 00 | 0.3139E-01 | 0.3836E-02 | 0.5155E-03 | 0.8046E-04 | 0.1575E-04 | 0.4091E-05 |
| 14 | 0.43 | 8.14 | 210 | 5 | 0.8131E 00 | 0.9564E-01 | 0.1175E-01 | 0.1515E-02 | 0.2077E-03 | 0.3133E-04 | 0.5583E-05 |
| 15 | 0.32 | 8.04 | 40 | 3 | 0.4456E 00 | 0.5218E-01 | 0.6491E-02 | 0.8675E-03 | 0.1278E-03 | 0.2176E-04 | 0.4606E-05 |
| 16 | 0.36 | 7.93 | 100 | 3 | 0.6366E 00 | 0.6457E-01 | 0.8139E-02 | 0.1379E-02 | 0.3292E-03 | 0.1063E-03 | 0.4204E-04 |
| 17 | 0.36 | 7.56 | 90 | 5 | 0.5589E 00 | 0.6214E-01 | 0.8223E-02 | 0.1393E-02 | 0.3130E-03 | 0.9026E-04 | 0.3137E-04 |
| 18 | 0.32 | 7.54 | 350 | 5 | 0.4329E 00 | 0.4947E-01 | 0.6562E-02 | 0.1113E-02 | 0.2592E-03 | 0.8045E-04 | 0.3039E-04 |
| 19 | 0.31 | 7.37 | 30 | 3 | 0.3476E 00 | 0.4365E-01 | 0.5924E-02 | 0.8632E-03 | 0.1371E-03 | 0.2493E-04 | 0.5659E-05 |
| 20 | 0.20 | 7.28 | 10 | 13 | 0.1547E 00 | 0.1811E-01 | 0.2485E-02 | 0.4073E-03 | 0.8093E-04 | 0.1977E-04 | 0.5944E-05 |
| 21 | 0.21 | 6.99 | 70 | 4 | 0.1592E 00 | 0.1980E-01 | 0.2831E-02 | 0.5113E-03 | 0.1263E-03 | 0.4158E-04 | 0.1656E-04 |
| 22 | 0.41 | 6.94 | 10 | 16 | 0.5609E 00 | 0.7314E-01 | 0.1055E-01 | 0.1849E-02 | 0.4471E-03 | 0.1516E-03 | 0.6440E-04 |
| 23 | 0.38 | 6.82 | 340 | 8 | 0.4447E 00 | 0.6158E-01 | 0.9029E-02 | 0.1438E-02 | 0.2601E-03 | 0.5660E-04 | 0.1552E-04 |
| 24 | 0.25 | 6.73 | 220 | 9 | 0.2087E 00 | 0.2630E-01 | 0.3908E-02 | 0.7451E-03 | 0.1901E-03 | 0.6195E-04 | 0.2383E-04 |
| 25 | 0.47 | 6.52 | 20 | 2 | 0.6455E 00 | 0.9130E-01 | 0.1400E-01 | 0.2373E-02 | 0.4581E-03 | 0.1049E-03 | 0.2933E-04 |
| 26 | 0.46 | 6.43 | 90 | 6 | 0.6807E 00 | 0.8517E-01 | 0.1326E-01 | 0.2782E-02 | 0.7959E-03 | 0.2868E-03 | 0.1192E-03 |
| 27 | 0.22 | 6.38 | 40 | 4 | 0.1587E 00 | 0.2016E-01 | 0.3162E-02 | 0.6277E-03 | 0.1574E-03 | 0.4838E-04 | 0.1752E-04 |
| 28 | 0.21 | 6.33 | 360 | 8 | 0.1304E 00 | 0.1732E-01 | 0.2738E-02 | 0.5451E-03 | 0.1410E-03 | 0.4616E-04 | 0.1794E-04 |
| 29 | 0.24 | 6.18 | 50 | 3 | 0.1720E 00 | 0.2239E-01 | 0.3620E-02 | 0.7628E-03 | 0.2089E-03 | 0.7078E-04 | 0.2793E-04 |
| 30 | 0.22 | 6.11 | 60 | 9 | 0.1398E 00 | 0.1798E-01 | 0.2941E-02 | 0.6579E-03 | 0.1949E-03 | 0.6972E-04 | 0.2813E-04 |
| 31 | 0.48 | 6.10 | 10 | 7 | 0.6262E 00 | 0.8955E-01 | 0.1468E-01 | 0.3068E-02 | 0.8847E-03 | 0.3355E-03 | 0.1497E-03 |
| 32 | 0.36 | 6.09 | 360 | 17 | 0.3647E 00 | 0.4884E-01 | 0.8023E-02 | 0.1726E-02 | 0.4843E-03 | 0.1663E-03 | 0.6560E-04 |
| 33 | 0.25 | 6.08 | 350 | 10 | 0.2083E 00 | 0.2404E-01 | 0.3951E-02 | 0.9664E-03 | 0.3109E-03 | 0.1163E-03 | 0.4781E-04 |
| 34 | 0.21 | 5.99 | 20 | 7 | 0.1259E 00 | 0.1622E-01 | 0.2709E-02 | 0.5910E-03 | 0.1614E-03 | 0.5237E-04 | 0.1945E-04 |
| 35 | 0.42 | 5.74 | 220 | 3 | 0.4412E 00 | 0.6312E-01 | 0.1100E-01 | 0.2450E-02 | 0.6993E-03 | 0.2442E-03 | 0.9861E-04 |
| 36 | 0.42 | 5.71 | 10 | 2 | 0.4112E 00 | 0.6241E-01 | 0.1093E-01 | 0.2261E-02 | 0.5651E-03 | 0.1719E-03 | 0.6229E-04 |
| 37 | 0.45 | 5.61 | 20 | 11 | 0.5134E 00 | 0.7189E-01 | 0.1280E-01 | 0.3046E-02 | 0.9361E-03 | 0.3460E-03 | 0.1454E-03 |
| 38 | 0.39 | 5.52 | 330 | 8 | 0.3356E 00 | 0.5227E-01 | 0.9467E-02 | 0.2162E-02 | 0.6496E-03 | 0.2450E-03 | 0.1067E-03 |
| 39 | 0.26 | 5.42 | 90 | 3 | 0.1666E 00 | 0.2255E-01 | 0.4163E-02 | 0.1111E-02 | 0.3891E-03 | 0.1583E-03 | 0.7016E-04 |
| 40 | 0.43 | 5.15 | 350 | 5 | 0.3711E 00 | 0.5835E-01 | 0.1134E-01 | 0.2906E-02 | 0.9725E-03 | 0.3924E-03 | 0.1769E-03 |
| 41 | 0.47 | 4.90 | 360 | 15 | 0.5017E 00 | 0.6838E-01 | 0.1400E-01 | 0.4258E-02 | 0.1641E-02 | 0.7125E-03 | 0.3321E-03 |
| 42 | 0.35 | 4.81 | 230 | 6 | 0.2241E 00 | 0.3781E-01 | 0.7852E-02 | 0.1939E-02 | 0.5504E-03 | 0.1765E-03 | 0.6346E-04 |
| 43 | 0.39 | 4.36 | 80 | 10 | 0.2308E 00 | 0.4090E-01 | 0.9389E-02 | 0.2659E-02 | 0.8807E-03 | 0.3280E-03 | 0.1341E-03 |
| 44 | 0.44 | 4.34 | 10 | 7 | 0.3082E 00 | 0.5144E-01 | 0.1186E-01 | 0.3669E-02 | 0.1381E-02 | 0.5838E-03 | 0.2659E-03 |

Hs. 0·00 to 0·49 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 0.52 | 11.99 | 70 | 4 | 0.2450E 01 | 0.1989E 00 | 0.1659E-01 | 0.1436E-02 | 0.1318E-03 | 0.1358E-04 | 0.1791E-05 |
| 46 | 0.51 | 11.14 | 110 | 3 | 0.2038E 01 | 0.1786E 00 | 0.1602E-01 | 0.1504E-02 | 0.1574E-03 | 0.2141E-04 | 0.4581E-05 |
| 47 | 0.84 | 10.72 | 180 | 12 | 0.5559E 01 | 0.4726E 00 | 0.4409E-01 | 0.5147E-02 | 0.9178E-03 | 0.2568E-03 | 0.9454E-04 |
| 48 | 0.52 | 10.61 | 10 | 9 | 0.2342E 01 | 0.1776E 00 | 0.1673E-01 | 0.2651E-02 | 0.7901E-03 | 0.3314E-03 | 0.1576E-03 |
| 49 | 0.90 | 9.89 | 340 | 2 | 0.5095E 01 | 0.4952E 00 | 0.5006E-01 | 0.5319E-02 | 0.6065E-03 | 0.7802E-04 | 0.1255E-04 |
| 50 | 0.74 | 9.67 | 150 | 11 | 0.3728E 01 | 0.3354E 00 | 0.3469E-01 | 0.5002E-02 | 0.1198E-02 | 0.4249E-03 | 0.1819E-03 |
| 51 | 0.98 | 9.63 | 330 | 4 | 0.5751E 01 | 0.5742E 00 | 0.5960E-01 | 0.6700E-02 | 0.9109E-03 | 0.1817E-03 | 0.5718E-04 |
| 52 | 0.79 | 9.51 | 90 | 8 | 0.3959E 01 | 0.3706E 00 | 0.3897E-01 | 0.5422E-02 | 0.1178E-02 | 0.3760E-03 | 0.1481E-03 |
| 53 | 0.62 | 9.49 | 100 | 7 | 0.2280E 01 | 0.2299E 00 | 0.2421E-01 | 0.2662E-02 | 0.3066E-03 | 0.3742E-04 | 0.5031E-05 |
| 54 | 0.68 | 9.24 | 50 | 2 | 0.2552E 01 | 0.2677E 00 | 0.2898E-01 | 0.3274E-02 | 0.3949E-03 | 0.5331E-04 | 0.8843E-05 |
| 55 | 0.81 | 9.07 | 350 | 2 | 0.4004E 01 | 0.3754E 00 | 0.4137E-01 | 0.6173E-02 | 0.1383E-02 | 0.4347E-03 | 0.1674E-03 |
| 56 | 0.62 | 8.85 | 320 | 8 | 0.2126E 01 | 0.2143E 00 | 0.2420E-01 | 0.3242E-02 | 0.5767E-03 | 0.1493E-03 | 0.5310E-04 |
| 57 | 0.92 | 8.75 | 90 | 8 | 0.4381E 01 | 0.4605E 00 | 0.5262E-01 | 0.6896E-02 | 0.1135E-02 | 0.2551E-03 | 0.7782E-04 |
| 58 | 0.87 | 8.72 | 80 | 8 | 0.4174E 01 | 0.4128E 00 | 0.4732E-01 | 0.7414E-02 | 0.1798E-02 | 0.6148E-03 | 0.2529E-03 |
| 59 | 0.68 | 8.58 | 340 | 7 | 0.2478E 01 | 0.2486E 00 | 0.2899E-01 | 0.4379E-02 | 0.9400E-03 | 0.2782E-03 | 0.1021E-03 |
| 60 | 0.53 | 8.49 | 250 | 3 | 0.1372E 01 | 0.1501E 00 | 0.1767E-01 | 0.2285E-02 | 0.3333E-03 | 0.5693E-04 | 0.1199E-04 |
| 61 | 0.69 | 8.39 | 360 | 12 | 0.2113E 01 | 0.2468E 00 | 0.2942E-01 | 0.3608E-02 | 0.4639E-03 | 0.6545E-04 | 0.1114E-04 |
| 62 | 0.51 | 8.37 | 990 | 0 | 0.1184E 01 | 0.1336E 00 | 0.1596E-01 | 0.2045E-02 | 0.2867E-03 | 0.4589E-04 | 0.9010E-05 |
| 63 | 0.59 | 8.33 | 50 | 6 | 0.1594E 01 | 0.1837E 00 | 0.2206E-01 | 0.2740E-02 | 0.3516E-03 | 0.4712E-04 | 0.6838E-05 |
| 64 | 0.83 | 8.18 | 360 | 12 | 0.3001E 01 | 0.3496E 00 | 0.4272E-01 | 0.5564E-02 | 0.7931E-03 | 0.1293E-03 | 0.2586E-04 |
| 65 | 0.94 | 8.16 | 10 | 4 | 0.3863E 01 | 0.4523E 00 | 0.5543E-01 | 0.7274E-02 | 0.1071E-02 | 0.1915E-03 | 0.4519E-04 |
| 66 | 0.71 | 8.09 | 110 | 7 | 0.2455E 01 | 0.2542E 00 | 0.3144E-01 | 0.5462E-02 | 0.1457E-02 | 0.5294E-03 | 0.2253E-03 |
| 67 | 0.88 | 8.03 | 110 | 10 | 0.3662E 01 | 0.3905E 00 | 0.4864E-01 | 0.7891E-02 | 0.1787E-02 | 0.5419E-03 | 0.2009E-03 |
| 68 | 0.92 | 8.03 | 10 | 6 | 0.3898E 01 | 0.4234E 00 | 0.5276E-01 | 0.8763E-02 | 0.2249E-02 | 0.8327E-03 | 0.3725E-03 |
| 69 | 0.97 | 8.01 | 130 | 13 | 0.4694E 01 | 0.4734E 00 | 0.5912E-01 | 0.1012E-01 | 0.2407E-02 | 0.7348E-03 | 0.2652E-03 |
| 70 | 0.95 | 7.99 | 160 | 2 | 0.3812E 01 | 0.4482E 00 | 0.5613E-01 | 0.7725E-02 | 0.1231E-02 | 0.2434E-03 | 0.6284E-04 |
| 71 | 0.53 | 7.95 | 220 | 7 | 0.1170E 01 | 0.1382E 00 | 0.1738E-01 | 0.2416E-02 | 0.4020E-03 | 0.8927E-04 | 0.2747E-04 |
| 72 | 0.59 | 7.94 | 40 | 5 | 0.1648E 01 | 0.1743E 00 | 0.2194E-01 | 0.3446E-02 | 0.6875E-03 | 0.1729E-03 | 0.5356E-04 |
| 73 | 0.63 | 7.88 | 100 | 6 | 0.1855E 01 | 0.1958E 00 | 0.2486E-01 | 0.4142E-02 | 0.9385E-03 | 0.2753E-03 | 0.9709E-04 |
| 74 | 0.72 | 7.79 | 120 | 11 | 0.2016E 01 | 0.2512E 00 | 0.3226E-01 | 0.4293E-02 | 0.6003E-03 | 0.9113E-04 | 0.1609E-04 |
| 75 | 0.60 | 7.76 | 130 | 5 | 0.1532E 01 | 0.1748E 00 | 0.2254E-01 | 0.3337E-02 | 0.5830E-03 | 0.1254E-03 | 0.3443E-04 |
| 76 | 0.95 | 7.76 | 360 | 3 | 0.3771E 01 | 0.4372E 00 | 0.5634E-01 | 0.8715E-02 | 0.1769E-02 | 0.4850E-03 | 0.1692E-03 |
| 77 | 0.62 | 7.73 | 360 | 12 | 0.1622E 01 | 0.1842E 00 | 0.2383E-01 | 0.3668E-02 | 0.7042E-03 | 0.1728E-03 | 0.5332E-04 |
| 78 | 0.86 | 7.66 | 320 | 9 | 0.2849E 01 | 0.3509E 00 | 0.4580E-01 | 0.6487E-02 | 0.1037E-02 | 0.1983E-03 | 0.4813E-04 |
| 79 | 0.61 | 7.64 | 180 | 4 | 0.1482E 01 | 0.1752E 00 | 0.2292E-01 | 0.3596E-02 | 0.7560E-03 | 0.2230E-03 | 0.8541E-04 |
| 80 | 0.74 | 7.63 | 70 | 7 | 0.2153E 01 | 0.2620E 00 | 0.3433E-01 | 0.4942E-02 | 0.8091E-03 | 0.1589E-03 | 0.3955E-04 |
| 81 | 0.79 | 7.62 | 330 | 5 | 0.2416E 01 | 0.2999E 00 | 0.3937E-01 | 0.5529E-02 | 0.8702E-03 | 0.1690E-03 | 0.4472E-04 |
| 82 | 0.80 | 7.61 | 80 | 3 | 0.2443E 01 | 0.3034E 00 | 0.3987E-01 | 0.5615E-02 | 0.8720E-03 | 0.1576E-03 | 0.3578E-04 |
| 83 | 0.74 | 7.58 | 990 | 0 | 0.2371E 01 | 0.2617E 00 | 0.3452E-01 | 0.5821E-02 | 0.1311E-02 | 0.3889E-03 | 0.1431E-03 |
| 84 | 0.67 | 7.52 | 240 | 5 | 0.1663E 01 | 0.2122E 00 | 0.2821E-01 | 0.3962E-02 | 0.6039E-03 | 0.1051E-03 | 0.2255E-04 |
| 85 | 0.52 | 7.44 | 170 | 5 | 0.1038E 01 | 0.1244E 00 | 0.1672E-01 | 0.2719E-02 | 0.5666E-03 | 0.1513E-03 | 0.4947E-04 |
| 86 | 0.54 | 7.40 | 80 | 7 | 0.1152E 01 | 0.1352E 00 | 0.1827E-01 | 0.3281E-02 | 0.8582E-03 | 0.3016E-03 | 0.1249E-03 |
| 87 | 0.85 | 7.31 | 10 | 9 | 0.2790E 01 | 0.3335E 00 | 0.4565E-01 | 0.8200E-02 | 0.2154E-02 | 0.7746E-03 | 0.3316E-03 |
| 88 | 0.97 | 7.31 | 20 | 9 | 0.3773E 01 | 0.4338E 00 | 0.5931E-01 | 0.1131E-01 | 0.3274E-02 | 0.1279E-02 | 0.5786E-03 |
| 89 | 0.83 | 7.24 | 10 | 8 | 0.2403E 01 | 0.3138E 00 | 0.4334E-01 | 0.6473E-02 | 0.1088E-02 | 0.2185E-03 | 0.5583E-04 |
| 90 | 0.65 | 7.19 | 340 | 9 | 0.1490E 01 | 0.1915E 00 | 0.2665E-01 | 0.4284E-02 | 0.8741E-03 | 0.2397E-03 | 0.8460E-04 |
| 91 | 0.70 | 7.08 | 330 | 6 | 0.1758E 01 | 0.2198E 00 | 0.3104E-01 | 0.5035E-02 | 0.9631E-03 | 0.2254E-03 | 0.6619E-04 |
| 92 | 0.61 | 7.05 | 20 | 10 | 0.1323E 01 | 0.1616E 00 | 0.2290E-01 | 0.4221E-02 | 0.1087E-02 | 0.3694E-03 | 0.1490E-03 |
| 93 | 0.74 | 7.04 | 290 | 6 | 0.2015E 01 | 0.2387E 00 | 0.3389E-01 | 0.6241E-02 | 0.1528E-02 | 0.4742E-03 | 0.1742E-03 |
| 94 | 0.58 | 7.03 | 80 | 3 | 0.1094E 01 | 0.1485E 00 | 0.2113E-01 | 0.3265E-02 | 0.5877E-03 | 0.1350E-03 | 0.4130E-04 |
| 95 | 0.69 | 7.02 | 30 | 2 | 0.1522E 01 | 0.2061E 00 | 0.2937E-01 | 0.4475E-02 | 0.7521E-03 | 0.1466E-03 | 0.3522E-04 |
| 96 | 0.50 | 6.87 | 50 | 6 | 0.9314E 00 | 0.1065E 00 | 0.1551E-01 | 0.3552E-02 | 0.1263E-02 | 0.5624E-03 | 0.2739E-03 |
| 97 | 0.60 | 6.85 | 40 | 6 | 0.1144E 01 | 0.1565E 00 | 0.2286E-01 | 0.3607E-02 | 0.6313E-03 | 0.1278E-03 | 0.3150E-04 |
| 98 | 0.50 | 6.80 | 120 | 2 | 0.7819E 00 | 0.1079E 00 | 0.1586E-01 | 0.2501E-02 | 0.4349E-03 | 0.8818E-04 | 0.2228E-04 |
| 99 | 0.99 | 6.76 | 230 | 9 | 0.3009E 01 | 0.4138E 00 | 0.6118E-01 | 0.1019E-01 | 0.2040E-02 | 0.5163E-03 | 0.1649E-03 |
| 100 | 0.66 | 6.75 | 320 | 6 | 0.1296E 01 | 0.1827E 00 | 0.2709E-01 | 0.4366E-02 | 0.8145E-03 | 0.1913E-03 | 0.5915E-04 |

Hs. 0·50 to 0·99 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 | 0.60 | 6.74 | 20 | 4 | 0.1083E 01 | 0.1503E 00 | 0.2229E-01 | 0.3652E-02 | 0.7006E-03 | 0.1691E-03 | 0.5290E-04 |
| 102 | 0.70 | 6.74 | 290 | 2 | 0.1538E 01 | 0.2038E 00 | 0.3024E-01 | 0.5290E-02 | 0.1158E-02 | 0.3264E-03 | 0.1147E-03 |
| 103 | 0.60 | 6.69 | 90 | 11 | 0.1128E 01 | 0.1487E 00 | 0.2223E-01 | 0.4008E-02 | 0.9348E-03 | 0.2850E-03 | 0.1067E-03 |
| 104 | 0.71 | 6.66 | 30 | 4 | 0.1589E 01 | 0.2072E 00 | 0.3112E-01 | 0.5545E-02 | 0.1209E-02 | 0.3285E-03 | 0.1098E-03 |
| 105 | 0.93 | 6.66 | 230 | 6 | 0.2617E 01 | 0.3581E 00 | 0.5379E-01 | 0.9241E-02 | 0.1943E-02 | 0.5292E-03 | 0.1848E-03 |
| 106 | 0.96 | 6.61 | 40 | 8 | 0.3067E 01 | 0.3796E 00 | 0.5742E-01 | 0.1173E-01 | 0.3295E-02 | 0.1178E-02 | 0.4916E-03 |
| 107 | 0.67 | 6.56 | 70 | 7 | 0.1394E 01 | 0.1830E 00 | 0.2790E-01 | 0.5131E-02 | 0.1153E-02 | 0.3135E-03 | 0.1013E-03 |
| 108 | 0.50 | 6.55 | 250 | 6 | 0.7056E 00 | 0.1008E 00 | 0.1539E-01 | 0.2579E-02 | 0.4994E-03 | 0.1187E-03 | 0.3575E-04 |
| 109 | 0.76 | 6.55 | 130 | 6 | 0.1754E 01 | 0.2380E 00 | 0.3632E-01 | 0.6346E-02 | 0.1316E-02 | 0.3375E-03 | 0.1085E-03 |
| 110 | 0.55 | 6.52 | 60 | 6 | 0.9664E 00 | 0.1243E 00 | 0.1907E-01 | 0.3823E-02 | 0.1057E-02 | 0.3815E-03 | 0.1625E-03 |
| 111 | 0.69 | 6.50 | 320 | 4 | 0.1428E 01 | 0.1959E 00 | 0.3013E-01 | 0.5520E-02 | 0.1288E-02 | 0.3889E-03 | 0.1444E-03 |
| 112 | 0.92 | 6.47 | 320 | 6 | 0.2732E 01 | 0.3390E 00 | 0.5236E-01 | 0.1113E-01 | 0.3284E-02 | 0.1227E-02 | 0.5274E-03 |
| 113 | 0.50 | 6.45 | 180 | 2 | 0.6730E 00 | 0.9876E-01 | 0.1532E-01 | 0.2558E-02 | 0.4759E-03 | 0.1043E-03 | 0.2841E-04 |
| 114 | 0.79 | 6.39 | 40 | 11 | 0.1822E 01 | 0.2468E 00 | 0.3864E-01 | 0.7564E-02 | 0.1931E-02 | 0.6224E-03 | 0.2369E-03 |
| 115 | 0.90 | 6.38 | 270 | 2 | 0.2268E 01 | 0.3241E 00 | 0.5076E-01 | 0.9188E-02 | 0.2050E-02 | 0.5837E-03 | 0.2062E-03 |
| 116 | 0.68 | 6.37 | 210 | 8 | 0.1264E 01 | 0.1846E 00 | 0.2898E-01 | 0.5049E-02 | 0.1029E-02 | 0.2596E-03 | 0.8238E-04 |
| 117 | 0.82 | 6.35 | 120 | 10 | 0.1855E 01 | 0.2663E 00 | 0.4195E-01 | 0.7668E-02 | 0.1747E-02 | 0.5147E-03 | 0.1890E-03 |
| 118 | 0.59 | 6.32 | 330 | 7 | 0.1032E 01 | 0.1356E 00 | 0.2145E-01 | 0.4162E-02 | 0.9817E-03 | 0.2763E-03 | 0.9126E-04 |
| 119 | 0.65 | 6.31 | 10 | 13 | 0.1293E 01 | 0.1657E 00 | 0.2628E-01 | 0.5779E-02 | 0.1756E-02 | 0.6614E-03 | 0.2813E-03 |
| 120 | 0.73 | 6.30 | 260 | 9 | 0.1604E 01 | 0.2116E 00 | 0.3360E-01 | 0.7000E-02 | 0.1965E-02 | 0.6979E-03 | 0.2882E-03 |
| 121 | 0.95 | 6.16 | 120 | 16 | 0.2544E 01 | 0.3456E 00 | 0.5609E-01 | 0.1070E-01 | 0.2366E-02 | 0.6069E-03 | 0.1833E-03 |
| 122 | 0.98 | 6.08 | 260 | 3 | 0.2402E 01 | 0.3638E 00 | 0.5982E-01 | 0.1108E-01 | 0.2427E-02 | 0.6571E-03 | 0.2205E-03 |
| 123 | 0.63 | 6.07 | 360 | 7 | 0.1095E 01 | 0.1500E 00 | 0.2470E-01 | 0.5462E-02 | 0.1675E-02 | 0.6535E-03 | 0.2929E-03 |
| 124 | 0.79 | 6.07 | 210 | 14 | 0.1566E 01 | 0.2364E 00 | 0.3893E-01 | 0.7131E-02 | 0.1504E-02 | 0.3797E-03 | 0.1171E-03 |
| 125 | 0.67 | 6.04 | 330 | 7 | 0.1104E 01 | 0.1679E 00 | 0.2780E-01 | 0.5240E-02 | 0.1186E-02 | 0.3332E-03 | 0.1147E-03 |
| 126 | 0.83 | 5.96 | 270 | 6 | 0.1841E 01 | 0.2564E 00 | 0.4304E-01 | 0.9080E-02 | 0.2425E-02 | 0.7941E-03 | 0.3038E-03 |
| 127 | 0.52 | 5.95 | 90 | 5 | 0.6872E 00 | 0.9912E-01 | 0.1665E-01 | 0.3548E-02 | 0.1017E-02 | 0.3760E-03 | 0.1631E-03 |
| 128 | 0.57 | 5.92 | 340 | 8 | 0.9125E 00 | 0.1210E 00 | 0.2045E-01 | 0.4750E-02 | 0.1459E-02 | 0.5368E-03 | 0.2211E-03 |
| 129 | 0.52 | 5.81 | 30 | 8 | 0.7295E 00 | 0.9876E-01 | 0.1699E-01 | 0.4020E-02 | 0.1284E-02 | 0.5030E-03 | 0.2226E-03 |
| 130 | 0.81 | 5.80 | 210 | 11 | 0.1504E 01 | 0.2389E 00 | 0.4115E-01 | 0.7892E-02 | 0.1751E-02 | 0.4660E-03 | 0.1501E-03 |
| 131 | 0.50 | 5.73 | 10 | 5 | 0.6458E 00 | 0.8899E-01 | 0.1552E-01 | 0.3569E-02 | 0.1039E-02 | 0.3573E-03 | 0.1382E-03 |
| 132 | 0.61 | 5.63 | 50 | 8 | 0.9761E 00 | 0.1316E 00 | 0.2340E-01 | 0.5408E-02 | 0.1530E-02 | 0.5043E-03 | 0.1881E-03 |
| 133 | 0.84 | 5.59 | 120 | 8 | 0.1963E 01 | 0.2483E 00 | 0.4446E-01 | 0.1145E-01 | 0.3782E-02 | 0.1449E-02 | 0.6122E-03 |
| 134 | 0.64 | 5.58 | 300 | 6 | 0.9155E 00 | 0.1448E 00 | 0.2598E-01 | 0.5306E-02 | 0.1262E-02 | 0.3581E-03 | 0.1216E-03 |
| 135 | 0.65 | 5.58 | 270 | 5 | 0.8944E 00 | 0.1454E 00 | 0.2607E-01 | 0.5264E-02 | 0.1232E-02 | 0.3434E-03 | 0.1148E-03 |
| 136 | 0.94 | 5.42 | 220 | 13 | 0.1785E 01 | 0.3002E 00 | 0.5534E-01 | 0.1141E-01 | 0.2722E-02 | 0.7725E-03 | 0.2621E-03 |
| 137 | 0.93 | 5.38 | 20 | 15 | 0.1872E 01 | 0.2903E 00 | 0.5399E-01 | 0.1247E-01 | 0.3620E-02 | 0.1283E-02 | 0.5272E-03 |
| 138 | 0.94 | 5.35 | 130 | 13 | 0.2082E 01 | 0.2942E 00 | 0.5495E-01 | 0.1376E-01 | 0.4363E-02 | 0.1634E-02 | 0.6886E-03 |
| 139 | 0.87 | 5.25 | 130 | 14 | 0.1483E 01 | 0.2465E 00 | 0.4694E-01 | 0.1020E-01 | 0.2529E-02 | 0.7202E-03 | 0.2372E-03 |
| 140 | 0.77 | 5.19 | 40 | 11 | 0.1247E 01 | 0.1903E 00 | 0.3671E-01 | 0.8499E-02 | 0.2307E-02 | 0.7330E-03 | 0.2713E-03 |
| 141 | 0.62 | 5.13 | 220 | 8 | 0.7027E 00 | 0.1223E 00 | 0.2383E-01 | 0.5303E-02 | 0.1375E-02 | 0.4185E-03 | 0.1483E-03 |
| 142 | 0.83 | 4.91 | 270 | 5 | 0.1140E 01 | 0.2116E 00 | 0.4307E-01 | 0.9693E-02 | 0.2466E-02 | 0.7258E-03 | 0.2496E-03 |
| 143 | 0.95 | 4.85 | 60 | 7 | 0.1589E 01 | 0.2712E 00 | 0.5594E-01 | 0.1344E-01 | 0.3736E-02 | 0.1206E-02 | 0.4490E-03 |
| 144 | 0.83 | 4.82 | 350 | 15 | 0.1213E 01 | 0.2062E 00 | 0.4279E-01 | 0.1076E-01 | 0.3255E-02 | 0.1169E-02 | 0.4842E-03 |
| 145 | 0.53 | 4.79 | 50 | 11 | 0.4837E 00 | 0.8324E-01 | 0.1738E-01 | 0.4393E-02 | 0.1307E-02 | 0.4437E-03 | 0.1680E-03 |
| 146 | 0.85 | 4.69 | 50 | 10 | 0.1162E 01 | 0.2119E 00 | 0.4523E-01 | 0.1099E-01 | 0.3016E-02 | 0.9403E-03 | 0.3342E-03 |
| 147 | 0.57 | 4.60 | 40 | 8 | 0.6207E 00 | 0.9338E-01 | 0.2031E-01 | 0.5994E-02 | 0.2141E-02 | 0.8602E-03 | 0.3750E-03 |
| 148 | 0.81 | 4.59 | 340 | 13 | 0.1037E 01 | 0.1887E 00 | 0.4112E-01 | 0.1073E-01 | 0.3329E-02 | 0.1201E-02 | 0.4894E-03 |
| 149 | 0.83 | 4.59 | 50 | 10 | 0.1202E 01 | 0.1965E 00 | 0.4277E-01 | 0.1193E-01 | 0.4015E-02 | 0.1552E-02 | 0.6668E-03 |
| 150 | 0.78 | 4.58 | 90 | 5 | 0.1084E 01 | 0.1757E 00 | 0.3835E-01 | 0.1117E-01 | 0.4020E-02 | 0.1657E-02 | 0.7462E-03 |
| 151 | 0.73 | 4.12 | 20 | 15 | 0.6570E 00 | 0.1358E 00 | 0.3298E-01 | 0.9248E-02 | 0.2960E-02 | 0.1068E-02 | 0.4276E-03 |
| 152 | 0.59 | 4.03 | 210 | 14 | 0.4226E 00 | 0.8706E-01 | 0.2158E-01 | 0.6237E-02 | 0.2037E-02 | 0.7379E-03 | 0.2931E-03 |
| 153 | 0.71 | 4.03 | 230 | 5 | 0.6107E 00 | 0.1258E 00 | 0.3120E-01 | 0.9072E-02 | 0.3002E-02 | 0.1105E-02 | 0.4461E-03 |
| 154 | 0.94 | 3.72 | 20 | 15 | 0.8631E 00 | 0.2043E 00 | 0.5487E-01 | 0.1651E-01 | 0.5513E-02 | 0.2027E-02 | 0.8147E-03 |

Hs. 0·50 to 0·99 METRES (cont.)

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 155 | 1.30 | 12.68 | 340 | 2 | 0.1780E 02 | 0.1332E 01 | 0.1050E 00 | 0.9123E-02 | 0.9624E-03 | 0.1440E-03 | 0.3348E-04 |
| 156 | 1.42 | 10.82 | 250 | 3 | 0.1541E 02 | 0.1362E 01 | 0.1258E 00 | 0.1238E-01 | 0.1348E-02 | 0.1746E-03 | 0.3038E-04 |
| 157 | 1.34 | 10.68 | 60 | 8 | 0.1478E 02 | 0.1202E 01 | 0.1126E 00 | 0.1479E-01 | 0.3263E-02 | 0.1088E-02 | 0.4468E-03 |
| 158 | 1.44 | 9.68 | 110 | 7 | 0.1337E 02 | 0.1252E 01 | 0.1293E 00 | 0.1525E-01 | 0.2152E-02 | 0.3865E-03 | 0.9344E-04 |
| 159 | 1.01 | 9.43 | 20 | 6 | 0.6440E 01 | 0.5958E 00 | 0.6316E-01 | 0.8715E-02 | 0.1758E-02 | 0.5042E-03 | 0.1824E-03 |
| 160 | 1.41 | 9.43 | 60 | 2 | 0.1171E 02 | 0.1175E 01 | 0.1246E 00 | 0.1438E-01 | 0.1925E-02 | 0.3338E-03 | 0.8266E-04 |
| 161 | 1.20 | 9.36 | 50 | 6 | 0.8743E 01 | 0.8429E 00 | 0.9006E-01 | 0.1137E-01 | 0.1888E-02 | 0.4429E-03 | 0.1405E-03 |
| 162 | 1.27 | 9.31 | 170 | 9 | 0.9701E 01 | 0.9424E 00 | 0.1012E 00 | 0.1328E-01 | 0.2478E-02 | 0.6984E-03 | 0.2649E-03 |
| 163 | 1.04 | 9.25 | 250 | 9 | 0.6052E 01 | 0.6225E 00 | 0.6728E-01 | 0.7973E-02 | 0.1159E-02 | 0.2481E-03 | 0.8252E-04 |
| 164 | 1.42 | 9.17 | 120 | 14 | 0.1395E 02 | 0.1158E 01 | 0.1263E 00 | 0.2024E-01 | 0.4630E-02 | 0.1378E-02 | 0.4994E-03 |
| 165 | 1.47 | 8.82 | 360 | 9 | 0.1179E 02 | 0.1193E 01 | 0.1353E 00 | 0.1880E-01 | 0.3598E-02 | 0.9867E-03 | 0.3547E-03 |
| 166 | 1.16 | 8.76 | 340 | 7 | 0.7302E 01 | 0.7321E 00 | 0.8360E-01 | 0.1183E-01 | 0.2290E-02 | 0.6248E-03 | 0.2224E-03 |
| 167 | 1.41 | 8.66 | 110 | 6 | 0.1017E 02 | 0.1074E 01 | 0.1241E 00 | 0.1660E-01 | 0.2831E-02 | 0.6803E-03 | 0.2282E-03 |
| 168 | 1.16 | 8.59 | 270 | 7 | 0.7006E 01 | 0.7280E 00 | 0.8479E-01 | 0.1167E-01 | 0.2031E-02 | 0.4709E-03 | 0.1439E-03 |
| 169 | 1.29 | 8.54 | 130 | 14 | 0.9045E 01 | 0.8900E 00 | 0.1043E 00 | 0.1624E-01 | 0.3552E-02 | 0.1032E-02 | 0.3640E-03 |
| 170 | 1.36 | 8.48 | 220 | 7 | 0.9035E 01 | 0.9738E 00 | 0.1148E 00 | 0.1548E-01 | 0.2554E-02 | 0.5559E-03 | 0.1627E-03 |
| 171 | 1.08 | 8.47 | 350 | 7 | 0.5596E 01 | 0.6156E 00 | 0.7265E-01 | 0.9545E-02 | 0.1480E-02 | 0.2908E-03 | 0.7535E-04 |
| 172 | 1.35 | 8.46 | 990 | 0 | 0.8489E 01 | 0.9642E 00 | 0.1139E 00 | 0.1442E-01 | 0.2096E-02 | 0.3968E-03 | 0.1083E-03 |
| 173 | 1.06 | 8.45 | 260 | 9 | 0.5532E 01 | 0.5968E 00 | 0.7060E-01 | 0.9507E-02 | 0.1540E-02 | 0.3187E-03 | 0.8647E-04 |
| 174 | 1.43 | 8.26 | 310 | 7 | 0.9564E 01 | 0.1049E 01 | 0.1271E 00 | 0.1811E-01 | 0.3292E-02 | 0.8000E-03 | 0.2523E-03 |
| 175 | 1.21 | 8.18 | 60 | 9 | 0.7080E 01 | 0.7448E 00 | 0.9105E-01 | 0.1441E-01 | 0.3213E-02 | 0.9844E-03 | 0.3763E-03 |
| 176 | 1.33 | 8.18 | 10 | 9 | 0.8479E 01 | 0.9028E 00 | 0.1103E 00 | 0.1699E-01 | 0.3603E-02 | 0.1050E-02 | 0.3856E-03 |
| 177 | 1.34 | 8.14 | 10 | 5 | 0.8103E 01 | 0.9165E 00 | 0.1125E 00 | 0.1532E-01 | 0.2403E-02 | 0.4621E-03 | 0.1159E-03 |
| 178 | 1.25 | 7.90 | 110 | 5 | 0.6403E 01 | 0.7683E 00 | 0.9731E-01 | 0.1346E-01 | 0.2187E-02 | 0.4648E-03 | 0.1374E-03 |
| 179 | 1.21 | 7.84 | 50 | 3 | 0.6498E 01 | 0.7223E 00 | 0.9217E-01 | 0.1419E-01 | 0.2790E-02 | 0.7256E-03 | 0.2432E-03 |
| 180 | 1.03 | 7.81 | 130 | 15 | 0.5846E 01 | 0.5228E 00 | 0.6694E-01 | 0.1366E-01 | 0.3960E-02 | 0.1401E-02 | 0.5611E-03 |
| 181 | 1.41 | 7.73 | 250 | 14 | 0.8966E 01 | 0.9671E 00 | 0.1251E 00 | 0.2050E-01 | 0.4436E-02 | 0.1266E-02 | 0.4530E-03 |
| 182 | 1.48 | 7.69 | 240 | 7 | 0.8502E 01 | 0.1048E 01 | 0.1363E 00 | 0.1912E-01 | 0.3040E-02 | 0.5933E-03 | 0.1533E-03 |
| 183 | 1.46 | 7.57 | 330 | 2 | 0.8078E 01 | 0.1014E 01 | 0.1339E 00 | 0.1918E-01 | 0.3146E-02 | 0.6378E-03 | 0.1692E-03 |
| 184 | 1.02 | 7.56 | 10 | 6 | 0.4107E 01 | 0.4933E 00 | 0.6528E-01 | 0.1007E-01 | 0.1958E-02 | 0.5054E-03 | 0.1694E-03 |
| 185 | 1.46 | 7.39 | 130 | 12 | 0.8156E 01 | 0.9798E 00 | 0.1325E 00 | 0.2163E-01 | 0.4581E-02 | 0.1283E-02 | 0.4506E-03 |
| 186 | 1.49 | 7.38 | 340 | 10 | 0.8271E 01 | 0.1026E 01 | 0.1390E 00 | 0.2098E-01 | 0.3671E-02 | 0.7882E-03 | 0.2166E-03 |
| 187 | 1.17 | 7.26 | 200 | 8 | 0.4832E 01 | 0.6245E 00 | 0.8599E-01 | 0.1292E-01 | 0.2215E-02 | 0.4629E-03 | 0.1245E-03 |
| 188 | 1.00 | 7.12 | 40 | 10 | 0.3480E 01 | 0.4464E 00 | 0.6272E-01 | 0.1069E-01 | 0.2593E-02 | 0.9289E-03 | 0.4251E-03 |
| 189 | 1.44 | 7.04 | 210 | 5 | 0.6841E 01 | 0.9082E 00 | 0.1290E 00 | 0.2023E-01 | 0.3695E-02 | 0.8354E-03 | 0.2416E-03 |
| 190 | 1.08 | 6.99 | 110 | 10 | 0.4471E 01 | 0.5082E 00 | 0.7267E-01 | 0.1377E-01 | 0.3390E-02 | 0.1028E-02 | 0.3670E-03 |
| 191 | 1.18 | 6.95 | 230 | 9 | 0.4718E 01 | 0.6031E 00 | 0.8678E-01 | 0.1457E-01 | 0.2977E-02 | 0.7628E-03 | 0.2436E-03 |
| 192 | 1.34 | 6.87 | 250 | 7 | 0.5616E 01 | 0.7719E 00 | 0.1124E 00 | 0.1805E-01 | 0.3421E-02 | 0.8252E-03 | 0.2592E-03 |
| 193 | 1.44 | 6.87 | 120 | 16 | 0.7107E 01 | 0.8899E 00 | 0.1296E 00 | 0.2311E-01 | 0.5255E-02 | 0.1534E-02 | 0.5533E-03 |
| 194 | 1.49 | 6.78 | 170 | 9 | 0.6900E 01 | 0.9468E 00 | 0.1397E 00 | 0.2276E-01 | 0.4283E-02 | 0.9826E-03 | 0.2846E-03 |
| 195 | 1.02 | 6.71 | 110 | 9 | 0.3504E 01 | 0.4362E 00 | 0.6500E-01 | 0.1301E-01 | 0.3638E-02 | 0.1313E-02 | 0.5536E-03 |
| 196 | 1.19 | 6.65 | 330 | 13 | 0.4370E 01 | 0.5901E 00 | 0.8875E-01 | 0.1502E-01 | 0.2915E-02 | 0.6711E-03 | 0.1891E-03 |
| 197 | 1.33 | 6.65 | 50 | 12 | 0.6533E 01 | 0.7367E 00 | 0.1108E 00 | 0.2277E-01 | 0.6077E-02 | 0.1975E-02 | 0.7460E-03 |
| 198 | 1.00 | 6.62 | 320 | 11 | 0.3035E 01 | 0.4139E 00 | 0.6253E-01 | 0.1105E-01 | 0.2455E-02 | 0.7143E-03 | 0.2637E-03 |
| 199 | 1.27 | 6.59 | 210 | 2 | 0.4824E 01 | 0.6687E 00 | 0.1014E 00 | 0.1761E-01 | 0.3714E-02 | 0.9960E-03 | 0.3366E-03 |
| 200 | 1.22 | 6.49 | 310 | 3 | 0.4527E 01 | 0.6059E 00 | 0.9335E-01 | 0.1735E-01 | 0.4038E-02 | 0.1180E-02 | 0.4187E-03 |
| 201 | 1.37 | 6.46 | 150 | 14 | 0.5662E 01 | 0.7613E 00 | 0.1178E 00 | 0.2176E-01 | 0.4963E-02 | 0.1412E-02 | 0.4894E-03 |
| 202 | 1.12 | 6.41 | 290 | 9 | 0.3553E 01 | 0.5048E 00 | 0.7872E-01 | 0.1403E-01 | 0.3043E-02 | 0.8428E-03 | 0.2947E-03 |
| 203 | 1.15 | 6.34 | 220 | 16 | 0.4222E 01 | 0.5233E 00 | 0.8256E-01 | 0.1678E-01 | 0.4251E-02 | 0.1266E-02 | 0.4509E-03 |
| 204 | 1.20 | 6.26 | 200 | 8 | 0.3910E 01 | 0.5645E 00 | 0.9015E-01 | 0.1636E-01 | 0.3515E-02 | 0.9287E-03 | 0.3046E-03 |
| 205 | 1.04 | 6.12 | 20 | 10 | 0.2933E 01 | 0.4139E 00 | 0.6766E-01 | 0.1406E-01 | 0.3951E-02 | 0.1449E-02 | 0.6297E-03 |
| 206 | 1.39 | 6.11 | 300 | 7 | 0.4873E 01 | 0.7325E 00 | 0.1200E 00 | 0.2170E-01 | 0.4453E-02 | 0.1077E-02 | 0.3164E-03 |
| 207 | 1.20 | 6.06 | 990 | 0 | 0.3598E 01 | 0.5473E 00 | 0.9037E-01 | 0.1665E-01 | 0.3568E-02 | 0.9288E-03 | 0.2985E-03 |
| 208 | 1.10 | 6.05 | 10 | 10 | 0.3134E 01 | 0.4591E 00 | 0.7590E-01 | 0.1455E-01 | 0.3328E-02 | 0.9232E-03 | 0.3088E-03 |
| 209 | 1.28 | 6.05 | 230 | 18 | 0.4444E 01 | 0.6210E 00 | 0.1027E 00 | 0.2047E-01 | 0.4919E-02 | 0.1409E-02 | 0.4737E-03 |
| 210 | 1.35 | 5.97 | 100 | 13 | 0.5061E 01 | 0.6817E 00 | 0.1141E 00 | 0.2396E-01 | 0.6228E-02 | 0.1958E-02 | 0.7243E-03 |

Hs. 1·00 to 1·49 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 211 | 1.06 | 5.87 | 240 | 2 | 0.2521E 01 | 0.4093E 00 | 0.6975E-01 | 0.1273E-01 | 0.2572E-02 | 0.6044E-03 | 0.1724E-03 |
| 212 | 1.46 | 5.80 | 300 | 13 | 0.4795E 01 | 0.7703E 00 | 0.1328E 00 | 0.2511E-01 | 0.5379E-02 | 0.1356E-02 | 0.4125E-03 |
| 213 | 1.21 | 5.68 | 330 | 15 | 0.3378E 01 | 0.5162E 00 | 0.9081E-01 | 0.1903E-01 | 0.4894E-02 | 0.1537E-02 | 0.5726E-03 |
| 214 | 1.11 | 5.65 | 230 | 13 | 0.2976E 01 | 0.4370E 00 | 0.7731E-01 | 0.1681E-01 | 0.4510E-02 | 0.1468E-02 | 0.5618E-03 |
| 215 | 1.41 | 5.58 | 150 | 16 | 0.4145E 01 | 0.6967E 00 | 0.1249E 00 | 0.2449E-01 | 0.5488E-02 | 0.1479E-02 | 0.4910E-03 |
| 216 | 1.39 | 5.55 | 260 | 12 | 0.3885E 01 | 0.6673E 00 | 0.1203E 00 | 0.2319E-01 | 0.4926E-02 | 0.1203E-02 | 0.3509E-03 |
| 217 | 1.37 | 5.48 | 280 | 2 | 0.4004E 01 | 0.6416E 00 | 0.1171E 00 | 0.2495E-01 | 0.6373E-02 | 0.1969E-02 | 0.7220E-03 |
| 218 | 1.20 | 5.44 | 210 | 16 | 0.2956E 01 | 0.4876E 00 | 0.8971E-01 | 0.1897E-01 | 0.4771E-02 | 0.1453E-02 | 0.5285E-03 |
| 219 | 1.29 | 5.37 | 290 | 6 | 0.3275E 01 | 0.5606E 00 | 0.1045E 00 | 0.2144E-01 | 0.4956E-02 | 0.1329E-02 | 0.4214E-03 |
| 220 | 1.08 | 5.33 | 130 | 8 | 0.2413E 01 | 0.3862E 00 | 0.7250E-01 | 0.1580E-01 | 0.3986E-02 | 0.1170E-02 | 0.4003E-03 |
| 221 | 1.46 | 5.29 | 290 | 10 | 0.4128E 01 | 0.7087E 00 | 0.1340E 00 | 0.2797E-01 | 0.6601E-02 | 0.1821E-02 | 0.5988E-03 |
| 222 | 1.10 | 5.09 | 40 | 13 | 0.2409E 01 | 0.3815E 00 | 0.7498E-01 | 0.1840E-01 | 0.5494E-02 | 0.1920E-02 | 0.7581E-03 |
| 223 | 1.32 | 5.01 | 30 | 9 | 0.3214E 01 | 0.5444E 00 | 0.1088E 00 | 0.2483E-01 | 0.6455E-02 | 0.1935E-02 | 0.6742E-03 |
| 224 | 1.35 | 4.97 | 190 | 13 | 0.3071E 01 | 0.5681E 00 | 0.1143E 00 | 0.2546E-01 | 0.6492E-02 | 0.1955E-02 | 0.6992E-03 |
| 225 | 1.38 | 4.90 | 90 | 11 | 0.3237E 01 | 0.5807E 00 | 0.1185E 00 | 0.2792E-01 | 0.7749E-02 | 0.2552E-02 | 0.9796E-03 |
| 226 | 1.17 | 4.89 | 230 | 15 | 0.2370E 01 | 0.4149E 00 | 0.8484E-01 | 0.2098E-01 | 0.6391E-02 | 0.2352E-02 | 0.9993E-03 |
| 227 | 1.26 | 4.83 | 140 | 19 | 0.2746E 01 | 0.4815E 00 | 0.9969E-01 | 0.2396E-01 | 0.6685E-02 | 0.2179E-02 | 0.8249E-03 |
| 228 | 1.06 | 4.79 | 200 | 14 | 0.1897E 01 | 0.3380E 00 | 0.7049E-01 | 0.1735E-01 | 0.5029E-02 | 0.1697E-02 | 0.6531E-03 |
| 229 | 1.38 | 4.40 | 270 | 13 | 0.2543E 01 | 0.5273E 00 | 0.1198E 00 | 0.2995E-01 | 0.8379E-02 | 0.2669E-02 | 0.9735E-03 |
| 230 | 1.10 | 4.22 | 260 | 7 | 0.1492E 01 | 0.3208E 00 | 0.7598E-01 | 0.1997E-01 | 0.5899E-02 | 0.1978E-02 | 0.7512E-03 |

Hs. 1·00 to 1·49 METRES (cont.)

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 231 | 1.93 | 12.46 | 40 | 3 | 0.3810E 02 | 0.2893E 01 | 0.2322E 00 | 0.2126E-01 | 0.2627E-02 | 0.5166E-03 | 0.1525E-03 |
| 232 | 1.73 | 12.01 | 100 | 10 | 0.2972E 02 | 0.2234E 01 | 0.1860E 00 | 0.1960E-01 | 0.3181E-02 | 0.8226E-03 | 0.2866E-03 |
| 233 | 1.99 | 11.43 | 120 | 13 | 0.3636E 02 | 0.2841E 01 | 0.2486E 00 | 0.2724E-01 | 0.4390E-02 | 0.1099E-02 | 0.3771E-03 |
| 234 | 1.76 | 10.84 | 60 | 5 | 0.2420E 02 | 0.2092E 01 | 0.1929E 00 | 0.2031E-01 | 0.2774E-02 | 0.5596E-03 | 0.1639E-03 |
| 235 | 1.96 | 10.77 | 10 | 10 | 0.3007E 02 | 0.2577E 01 | 0.2392E 00 | 0.2530E-01 | 0.3400E-02 | 0.6688E-03 | 0.1959E-03 |
| 236 | 1.73 | 10.37 | 280 | 5 | 0.2201E 02 | 0.1946E 01 | 0.1876E 00 | 0.2159E-01 | 0.3595E-02 | 0.9880E-03 | 0.3878E-03 |
| 237 | 1.59 | 9.88 | 140 | 8 | 0.1694E 02 | 0.1562E 01 | 0.1581E 00 | 0.1932E-01 | 0.3340E-02 | 0.8818E-03 | 0.3174E-03 |
| 238 | 1.81 | 9.26 | 240 | 9 | 0.1989E 02 | 0.1901E 01 | 0.2052E 00 | 0.2600E-01 | 0.4113E-02 | 0.8706E-03 | 0.2507E-03 |
| 239 | 1.71 | 9.22 | 120 | 14 | 0.1848E 02 | 0.1695E 01 | 0.1837E 00 | 0.2742E-01 | 0.6234E-02 | 0.1985E-02 | 0.7683E-03 |
| 240 | 1.75 | 9.14 | 270 | 6 | 0.1799E 02 | 0.1750E 01 | 0.1915E 00 | 0.2514E-01 | 0.4296E-02 | 0.1004E-02 | 0.3116E-03 |
| 241 | 1.72 | 8.73 | 200 | 15 | 0.1618E 02 | 0.1609E 01 | 0.1843E 00 | 0.2579E-01 | 0.4740E-02 | 0.1187E-02 | 0.3891E-03 |
| 242 | 1.59 | 8.38 | 140 | 13 | 0.1292E 02 | 0.1318E 01 | 0.1573E 00 | 0.2377E-01 | 0.4940E-02 | 0.1434E-02 | 0.5369E-03 |
| 243 | 1.75 | 8.27 | 150 | 9 | 0.1481E 02 | 0.1587E 01 | 0.1920E 00 | 0.2829E-01 | 0.5565E-02 | 0.1501E-02 | 0.5201E-03 |
| 244 | 1.91 | 8.27 | 130 | 13 | 0.1699E 02 | 0.1894E 01 | 0.2291E 00 | 0.3192E-01 | 0.5617E-02 | 0.1337E-02 | 0.4206E-03 |
| 245 | 1.60 | 8.26 | 280 | 11 | 0.1208E 02 | 0.1324E 01 | 0.1603E 00 | 0.2273E-01 | 0.4103E-02 | 0.1006E-02 | 0.3296E-03 |
| 246 | 1.98 | 8.25 | 170 | 11 | 0.1782E 02 | 0.2018E 01 | 0.2446E 00 | 0.3327E-01 | 0.5544E-02 | 0.1247E-02 | 0.3843E-03 |
| 247 | 1.57 | 8.06 | 280 | 9 | 0.1110E 02 | 0.1249E 01 | 0.1550E 00 | 0.2185E-01 | 0.3636E-02 | 0.7446E-03 | 0.1935E-03 |
| 248 | 1.52 | 7.58 | 230 | 10 | 0.8701E 01 | 0.1101E 01 | 0.1453E 00 | 0.2037E-01 | 0.3135E-02 | 0.5618E-03 | 0.1266E-03 |
| 249 | 1.93 | 7.58 | 300 | 5 | 0.1561E 02 | 0.1773E 01 | 0.2339E 00 | 0.3718E-01 | 0.7477E-02 | 0.1968E-02 | 0.6630E-03 |
| 250 | 1.63 | 7.56 | 170 | 13 | 0.1019E 02 | 0.1248E 01 | 0.1652E 00 | 0.2509E-01 | 0.4877E-02 | 0.1330E-02 | 0.4905E-03 |
| 251 | 1.93 | 7.49 | 260 | 14 | 0.1497E 02 | 0.1740E 01 | 0.2323E 00 | 0.3628E-01 | 0.6848E-02 | 0.1624E-02 | 0.4907E-03 |
| 252 | 1.52 | 7.48 | 320 | 11 | 0.8764E 01 | 0.1079E 01 | 0.1442E 00 | 0.2176E-01 | 0.3932E-02 | 0.9080E-03 | 0.2727E-03 |
| 253 | 1.66 | 7.40 | 10 | 16 | 0.1083E 02 | 0.1276E 01 | 0.1724E 00 | 0.2931E-01 | 0.6889E-02 | 0.2217E-02 | 0.8841E-03 |
| 254 | 1.54 | 7.37 | 230 | 13 | 0.8935E 01 | 0.1087E 01 | 0.1476E 00 | 0.2400E-01 | 0.5055E-02 | 0.1406E-02 | 0.4893E-03 |
| 255 | 1.84 | 7.37 | 260 | 18 | 0.1289E 02 | 0.1554E 01 | 0.2110E 00 | 0.3277E-01 | 0.6010E-02 | 0.1362E-02 | 0.3930E-03 |
| 256 | 1.57 | 7.33 | 330 | 8 | 0.9454E 01 | 0.1124E 01 | 0.1534E 00 | 0.2542E-01 | 0.5389E-02 | 0.1478E-02 | 0.5036E-03 |
| 257 | 1.74 | 7.32 | 230 | 17 | 0.1099E 02 | 0.1391E 01 | 0.1900E 00 | 0.2912E-01 | 0.5310E-02 | 0.1220E-02 | 0.3603E-03 |
| 258 | 1.96 | 7.30 | 250 | 21 | 0.1470E 02 | 0.1748E 01 | 0.2393E 00 | 0.3894E-01 | 0.7897E-02 | 0.2084E-02 | 0.7095E-03 |
| 259 | 1.74 | 7.27 | 30 | 7 | 0.1044E 02 | 0.1369E 01 | 0.1882E 00 | 0.2761E-01 | 0.4474E-02 | 0.8479E-03 | 0.2015E-03 |
| 260 | 1.91 | 7.25 | 340 | 11 | 0.1413E 02 | 0.1652E 01 | 0.2278E 00 | 0.3951E-01 | 0.9157E-02 | 0.2838E-02 | 0.1096E-02 |
| 261 | 1.94 | 7.25 | 240 | 14 | 0.1344E 02 | 0.1704E 01 | 0.2349E 00 | 0.3658E-01 | 0.6769E-02 | 0.1565E-02 | 0.4605E-03 |
| 262 | 1.67 | 7.08 | 230 | 18 | 0.9464E 01 | 0.1236E 01 | 0.1745E 00 | 0.2725E-01 | 0.4895E-02 | 0.1064E-02 | 0.2914E-03 |
| 263 | 1.55 | 7.06 | 340 | 9 | 0.8022E 01 | 0.1055E 01 | 0.1494E 00 | 0.2343E-01 | 0.4291E-02 | 0.9860E-03 | 0.2950E-03 |
| 264 | 1.77 | 7.01 | 240 | 12 | 0.1023E 02 | 0.1379E 01 | 0.1968E 00 | 0.3053E-01 | 0.5393E-02 | 0.1158E-02 | 0.3188E-03 |
| 265 | 1.63 | 6.97 | 240 | 12 | 0.8614E 01 | 0.1156E 01 | 0.1660E 00 | 0.2627E-01 | 0.4831E-02 | 0.1102E-02 | 0.3240E-03 |
| 266 | 1.82 | 6.97 | 70 | 9 | 0.1043E 02 | 0.1441E 01 | 0.2067E 00 | 0.3119E-01 | 0.5101E-02 | 0.9558E-03 | 0.2217E-03 |
| 267 | 1.78 | 6.91 | 250 | 15 | 0.1047E 02 | 0.1360E 01 | 0.1969E 00 | 0.3350E-01 | 0.7118E-02 | 0.1949E-02 | 0.6697E-03 |
| 268 | 1.58 | 6.90 | 290 | 11 | 0.8800E 01 | 0.1071E 01 | 0.1551E 00 | 0.2752E-01 | 0.6137E-02 | 0.1735E-02 | 0.6058E-03 |
| 269 | 1.54 | 6.72 | 330 | 15 | 0.7448E 01 | 0.9966E 00 | 0.1482E 00 | 0.2530E-01 | 0.5191E-02 | 0.1334E-02 | 0.4303E-03 |
| 270 | 1.54 | 6.71 | 280 | 12 | 0.7207E 01 | 0.9910E 00 | 0.1477E 00 | 0.2498E-01 | 0.5117E-02 | 0.1340E-02 | 0.4467E-03 |
| 271 | 1.85 | 6.65 | 230 | 17 | 0.1061E 02 | 0.1430E 01 | 0.2149E 00 | 0.3714E-01 | 0.7650E-02 | 0.1936E-02 | 0.6063E-03 |
| 272 | 1.89 | 6.64 | 220 | 14 | 0.1044E 02 | 0.1488E 01 | 0.2241E 00 | 0.3629E-01 | 0.6532E-02 | 0.1373E-02 | 0.3554E-03 |
| 273 | 1.92 | 6.62 | 310 | 12 | 0.1124E 02 | 0.1522E 01 | 0.2300E 00 | 0.4019E-01 | 0.8485E-02 | 0.2242E-02 | 0.7395E-03 |
| 274 | 1.59 | 6.55 | 320 | 14 | 0.7973E 01 | 0.1030E 01 | 0.1573E 00 | 0.2995E-01 | 0.7375E-02 | 0.2312E-02 | 0.8740E-03 |
| 275 | 1.68 | 6.52 | 250 | 10 | 0.8450E 01 | 0.1157E 01 | 0.1774E 00 | 0.3142E-01 | 0.6798E-02 | 0.1878E-02 | 0.6557E-03 |
| 276 | 1.74 | 6.36 | 260 | 19 | 0.8806E 01 | 0.1204E 01 | 0.1892E 00 | 0.3560E-01 | 0.8369E-02 | 0.2494E-02 | 0.9115E-03 |
| 277 | 1.89 | 6.33 | 290 | 13 | 0.9768E 01 | 0.1416E 01 | 0.2236E 00 | 0.3884E-01 | 0.7703E-02 | 0.1850E-02 | 0.5613E-03 |
| 278 | 1.58 | 6.32 | 340 | 15 | 0.6728E 01 | 0.9876E 00 | 0.1562E 00 | 0.2736E-01 | 0.5519E-02 | 0.1339E-02 | 0.3996E-03 |
| 279 | 1.54 | 6.31 | 260 | 13 | 0.6169E 01 | 0.9294E 00 | 0.1474E 00 | 0.2504E-01 | 0.4713E-02 | 0.1033E-02 | 0.2775E-03 |
| 280 | 1.83 | 6.30 | 20 | 4 | 0.9144E 01 | 0.1321E 01 | 0.2099E 00 | 0.3833E-01 | 0.8605E-02 | 0.2487E-02 | 0.9041E-03 |
| 281 | 1.93 | 6.30 | 110 | 18 | 0.1095E 02 | 0.1472E 01 | 0.2336E 00 | 0.4318E-01 | 0.9483E-02 | 0.2575E-02 | 0.8747E-03 |
| 282 | 1.98 | 6.10 | 250 | 9 | 0.1019E 02 | 0.1496E 01 | 0.2453E 00 | 0.4753E-01 | 0.1173E-01 | 0.3807E-02 | 0.1542E-02 |
| 283 | 1.89 | 6.07 | 320 | 12 | 0.9771E 01 | 0.1357E 01 | 0.2235E 00 | 0.4543E-01 | 0.1175E-01 | 0.3829E-02 | 0.1498E-02 |
| 284 | 1.78 | 5.95 | 240 | 16 | 0.7348E 01 | 0.1172E 01 | 0.1970E 00 | 0.3556E-01 | 0.7128E-02 | 0.1661E-02 | 0.4685E-03 |
| 285 | 1.71 | 5.93 | 240 | 14 | 0.6952E 01 | 0.1079E 01 | 0.1818E 00 | 0.3441E-01 | 0.7645E-02 | 0.2068E-02 | 0.6838E-03 |
| 286 | 1.61 | 5.92 | 290 | 14 | 0.6138E 01 | 0.9539E 00 | 0.1612E 00 | 0.3002E-01 | 0.6378E-02 | 0.1621E-02 | 0.5064E-03 |

Hs. 1·50 to 1·99 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 287 | 1.90 | 5.87 | 340 | 19 | 0.8431E 01 | 0.1327E 01 | 0.2262E 00 | 0.4318E-01 | 0.9641E-02 | 0.2602E-02 | 0.8503E-03 |
| 288 | 1.50 | 5.86 | 220 | 16 | 0.5474E 01 | 0.8233E 00 | 0.1406E 00 | 0.2771E-01 | 0.6433E-02 | 0.1791E-02 | 0.5979E-03 |
| 289 | 1.99 | 5.86 | 250 | 22 | 0.9589E 01 | 0.1445E 01 | 0.2465E 00 | 0.4887E-01 | 0.1160E-01 | 0.3352E-02 | 0.1165E-02 |
| 290 | 1.53 | 5.85 | 260 | 7 | 0.5543E 01 | 0.8527E 00 | 0.1457E 00 | 0.2876E-01 | 0.6872E-02 | 0.2043E-02 | 0.7429E-03 |
| 291 | 1.54 | 5.82 | 150 | 14 | 0.5674E 01 | 0.8577E 00 | 0.1475E 00 | 0.2934E-01 | 0.6955E-02 | 0.2015E-02 | 0.7109E-03 |
| 292 | 1.66 | 5.81 | 80 | 11 | 0.6928E 01 | 0.9937E 00 | 0.1713E 00 | 0.3569E-01 | 0.9152E-02 | 0.2895E-02 | 0.1100E-02 |
| 293 | 1.82 | 5.81 | 270 | 12 | 0.7329E 01 | 0.1196E 01 | 0.2060E 00 | 0.3831E-01 | 0.8054E-02 | 0.2028E-02 | 0.6344E-03 |
| 294 | 1.78 | 5.78 | 340 | 12 | 0.7500E 01 | 0.1139E 01 | 0.1969E 00 | 0.3993E-01 | 0.9856E-02 | 0.3013E-02 | 0.1115E-02 |
| 295 | 1.57 | 5.74 | 280 | 7 | 0.5361E 01 | 0.8804E 00 | 0.1533E 00 | 0.2909E-01 | 0.6315E-02 | 0.1657E-02 | 0.5390E-03 |
| 296 | 1.51 | 5.51 | 280 | 7 | 0.4589E 01 | 0.7839E 00 | 0.1424E 00 | 0.2833E-01 | 0.6472E-02 | 0.1778E-02 | 0.5961E-03 |
| 297 | 1.74 | 5.49 | 130 | 7 | 0.6110E 01 | 0.1039E 01 | 0.1891E 00 | 0.3751E-01 | 0.8393E-02 | 0.2210E-02 | 0.7039E-03 |
| 298 | 1.67 | 5.47 | 240 | 16 | 0.6496E 01 | 0.9477E 00 | 0.1733E 00 | 0.3947E-01 | 0.1117E-01 | 0.3858E-02 | 0.1560E-02 |
| 299 | 1.59 | 5.35 | 80 | 13 | 0.4937E 01 | 0.8435E 00 | 0.1578E 00 | 0.3277E-01 | 0.7814E-02 | 0.2220E-02 | 0.7599E-03 |
| 300 | 1.88 | 5.33 | 240 | 13 | 0.7059E 01 | 0.1171E 01 | 0.2198E 00 | 0.4803E-01 | 0.1250E-01 | 0.3887E-02 | 0.1417E-02 |
| 301 | 1.79 | 5.18 | 280 | 13 | 0.5983E 01 | 0.1035E 01 | 0.1999E 00 | 0.4323E-01 | 0.1070E-01 | 0.3100E-02 | 0.1060E-02 |
| 302 | 1.61 | 5.16 | 90 | 12 | 0.4924E 01 | 0.8363E 00 | 0.1620E 00 | 0.3613E-01 | 0.9461E-02 | 0.2950E-02 | 0.1085E-02 |
| 303 | 1.63 | 5.10 | 290 | 9 | 0.4722E 01 | 0.8442E 00 | 0.1655E 00 | 0.3623E-01 | 0.9126E-02 | 0.2718E-02 | 0.9604E-03 |
| 304 | 1.55 | 5.00 | 70 | 12 | 0.4410E 01 | 0.7506E 00 | 0.1502E 00 | 0.3523E-01 | 0.9786E-02 | 0.3234E-02 | 0.1250E-02 |

Hs. 1·50 to 1·99 METRES (cont)

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 305 | 2.25 | 10.58 | 20 | 9 | 0.3822E 02 | 0.3353E 01 | 0.3169E 00 | 0.3284E-01 | 0.3864E-02 | 0.5518E-03 | 0.1055E-03 |
| 306 | 2.17 | 8.96 | 240 | 7 | 0.2523E 02 | 0.2625E 01 | 0.2931E 00 | 0.3651E-01 | 0.5486E-02 | 0.1112E-02 | 0.3204E-03 |
| 307 | 2.08 | 8.70 | 250 | 16 | 0.2231E 02 | 0.2344E 01 | 0.2694E 00 | 0.3613E-01 | 0.6234E-02 | 0.1487E-02 | 0.4760E-03 |
| 308 | 2.13 | 8.56 | 180 | 8 | 0.2257E 02 | 0.2424E 01 | 0.2831E 00 | 0.3866E-01 | 0.6894E-02 | 0.1737E-02 | 0.5929E-03 |
| 309 | 2.10 | 8.55 | 160 | 16 | 0.2377E 02 | 0.2353E 01 | 0.2751E 00 | 0.4042E-01 | 0.7815E-02 | 0.1984E-02 | 0.6334E-03 |
| 310 | 2.31 | 8.43 | 150 | 9 | 0.2484E 02 | 0.2799E 01 | 0.3321E 00 | 0.4245E-01 | 0.6128E-02 | 0.1087E-02 | 0.2595E-03 |
| 311 | 2.03 | 8.31 | 250 | 20 | 0.2058E 02 | 0.2135E 01 | 0.2569E 00 | 0.3782E-01 | 0.7182E-02 | 0.1801E-02 | 0.5796E-03 |
| 312 | 2.07 | 8.28 | 220 | 2 | 0.1962E 02 | 0.2221E 01 | 0.2682E 00 | 0.3574E-01 | 0.5595E-02 | 0.1128E-02 | 0.3122E-03 |
| 313 | 2.18 | 8.26 | 300 | 9 | 0.2177E 02 | 0.2452E 01 | 0.2967E 00 | 0.3995E-01 | 0.6359E-02 | 0.1296E-02 | 0.3552E-03 |
| 314 | 2.16 | 8.17 | 180 | 15 | 0.2074E 02 | 0.2379E 01 | 0.2914E 00 | 0.3984E-01 | 0.6622E-02 | 0.1481E-02 | 0.4579E-03 |
| 315 | 2.17 | 7.97 | 190 | 17 | 0.2064E 02 | 0.2339E 01 | 0.2932E 00 | 0.4371E-01 | 0.8446E-02 | 0.2203E-02 | 0.7429E-03 |
| 316 | 2.21 | 7.97 | 180 | 11 | 0.2125E 02 | 0.2428E 01 | 0.3047E 00 | 0.4499E-01 | 0.8606E-02 | 0.2260E-02 | 0.7804E-03 |
| 317 | 2.44 | 7.72 | 180 | 18 | 0.2372E 02 | 0.2866E 01 | 0.3713E 00 | 0.5328E-01 | 0.8950E-02 | 0.1891E-02 | 0.5257E-03 |
| 318 | 2.32 | 7.52 | 200 | 10 | 0.2179E 02 | 0.2528E 01 | 0.3362E 00 | 0.5397E-01 | 0.1112E-01 | 0.3031E-02 | 0.1057E-02 |
| 319 | 2.30 | 7.50 | 300 | 11 | 0.2049E 02 | 0.2490E 01 | 0.3318E 00 | 0.5147E-01 | 0.1013E-01 | 0.2682E-02 | 0.9304E-03 |
| 320 | 2.01 | 7.39 | 310 | 10 | 0.1511E 02 | 0.1867E 01 | 0.2525E 00 | 0.3837E-01 | 0.6860E-02 | 0.1523E-02 | 0.4379E-03 |
| 321 | 2.40 | 7.37 | 140 | 17 | 0.2301E 02 | 0.2647E 01 | 0.3593E 00 | 0.6036E-01 | 0.1321E-01 | 0.3828E-02 | 0.1402E-02 |
| 322 | 2.22 | 7.36 | 220 | 19 | 0.1932E 02 | 0.2269E 01 | 0.3084E 00 | 0.5090E-01 | 0.1064E-01 | 0.2868E-02 | 0.9757E-03 |
| 323 | 2.23 | 7.33 | 260 | 11 | 0.1790E 02 | 0.2278E 01 | 0.3106E 00 | 0.4675E-01 | 0.8176E-02 | 0.1778E-02 | 0.5015E-03 |
| 324 | 2.13 | 7.32 | 220 | 23 | 0.1723E 02 | 0.2068E 01 | 0.2827E 00 | 0.4596E-01 | 0.9248E-02 | 0.2352E-02 | 0.7477E-03 |
| 325 | 2.05 | 6.91 | 220 | 15 | 0.1444E 02 | 0.1820E 01 | 0.2635E 00 | 0.4594E-01 | 0.1012E-01 | 0.2866E-02 | 0.1009E-02 |
| 326 | 2.37 | 6.79 | 200 | 16 | 0.1715E 02 | 0.2374E 01 | 0.3496E 00 | 0.5644E-01 | 0.1057E-01 | 0.2472E-02 | 0.7496E-03 |
| 327 | 2.26 | 6.73 | 210 | 18 | 0.1612E 02 | 0.2147E 01 | 0.3191E 00 | 0.5273E-01 | 0.9806E-02 | 0.2125E-02 | 0.5614E-03 |
| 328 | 2.08 | 6.71 | 110 | 21 | 0.1486E 02 | 0.1815E 01 | 0.2706E 00 | 0.4832E-01 | 0.1025E-01 | 0.2615E-02 | 0.8120E-03 |
| 329 | 2.29 | 6.64 | 270 | 12 | 0.1571E 02 | 0.2172E 01 | 0.3273E 00 | 0.5506E-01 | 0.1079E-01 | 0.2599E-02 | 0.7929E-03 |
| 330 | 2.18 | 6.55 | 270 | 19 | 0.1451E 02 | 0.1945E 01 | 0.2971E 00 | 0.5303E-01 | 0.1140E-01 | 0.3018E-02 | 0.9817E-03 |
| 331 | 2.41 | 6.46 | 230 | 15 | 0.1650E 02 | 0.2339E 01 | 0.3622E 00 | 0.6231E-01 | 0.1237E-01 | 0.2971E-02 | 0.8887E-03 |
| 332 | 2.23 | 6.43 | 250 | 19 | 0.1426E 02 | 0.1997E 01 | 0.3106E 00 | 0.5594E-01 | 0.1230E-01 | 0.3423E-02 | 0.1187E-02 |
| 333 | 2.10 | 6.41 | 130 | 18 | 0.1401E 02 | 0.1759E 01 | 0.2745E 00 | 0.5248E-01 | 0.1213E-01 | 0.3378E-02 | 0.1125E-02 |
| 334 | 2.38 | 6.21 | 120 | 23 | 0.1583E 02 | 0.2190E 01 | 0.3528E 00 | 0.6642E-01 | 0.1493E-01 | 0.4107E-02 | 0.1377E-02 |
| 335 | 2.02 | 6.01 | 220 | 15 | 0.9819E 01 | 0.1532E 01 | 0.2550E 00 | 0.4663E-01 | 0.9827E-02 | 0.2521E-02 | 0.8060E-03 |
| 336 | 2.05 | 5.96 | 310 | 10 | 0.1030E 02 | 0.1568E 01 | 0.2632E 00 | 0.4997E-01 | 0.1118E-01 | 0.3061E-02 | 0.1028E-02 |
| 337 | 2.31 | 5.96 | 300 | 11 | 0.1281E 02 | 0.1989E 01 | 0.3340E 00 | 0.6237E-01 | 0.1354E-01 | 0.3572E-02 | 0.1162E-02 |

Hs. 2·00 to 2·49 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 338 | 2.71 | 10.04 | 110 | 15 | 0.4986E 02 | 0.4610E 01 | 0.4593E 00 | 0.5209E-01 | 0.7466E-02 | 0.1518E-02 | 0.4409E-03 |
| 339 | 2.71 | 9.81 | 270 | 10 | 0.4770E 02 | 0.4492E 01 | 0.4581E 00 | 0.5284E-01 | 0.7347E-02 | 0.1325E-02 | 0.3241E-03 |
| 340 | 2.88 | 9.45 | 180 | 15 | 0.5073E 02 | 0.4892E 01 | 0.5179E 00 | 0.6330E-01 | 0.9644E-02 | 0.1983E-02 | 0.5593E-03 |
| 341 | 2.55 | 9.43 | 60 | 7 | 0.3978E 02 | 0.3844E 01 | 0.4078E 00 | 0.5002E-01 | 0.7687E-02 | 0.1606E-02 | 0 4616E-03 |
| 342 | 2.51 | 8.60 | 300 | 8 | 0.3327E 02 | 0.3388E 01 | 0.3937E 00 | 0.5635E-01 | 0.1078E-01 | 0.2830E-02 | 0.9665E-03 |
| 343 | 2.60 | 8.59 | 230 | 16 | 0.3621E 02 | 0.3637E 01 | 0.4233E 00 | 0.5955E-01 | 0.1057E-01 | 0.2441E-02 | 0.7293E-03 |
| 344 | 2.69 | 8.55 | 160 | 23 | 0.3817E 02 | 0.3879E 01 | 0.4539E 00 | 0.6511E-01 | 0.1217E-01 | 0.3027E-02 | 0.9663E-03 |
| 345 | 2.78 | 8.50 | 290 | 9 | 0.3757E 02 | 0.4099E 01 | 0.4821E 00 | 0.6315E-01 | 0.9816E-02 | 0.1981E-02 | 0.5473E-03 |
| 346 | 2.50 | 8.49 | 160 | 18 | 0.3188E 02 | 0.3327E 01 | 0.3918E 00 | 0.5415E-01 | 0.9209E-02 | 0.2020E-02 | 0.5812E-03 |
| 347 | 2.79 | 8.43 | 280 | 8 | 0.3737E 02 | 0.4091E 01 | 0.4854E 00 | 0.6439E-01 | 0.1008E-01 | 0.2000E-02 | 0.5305E-03 |
| 348 | 2.96 | 8 21 | 270 | 10 | 0.3905E 02 | 0.4482E 01 | 0.5460E 00 | 0.7274E-01 | 0.1117E-01 | 0.2135E-02 | 0.5433E-03 |
| 349 | 2.59 | 7.88 | 340 | 17 | 0.2837E 02 | 0.3290E 01 | 0.4177E 00 | 0.6064E-01 | 0.1073E-01 | 0.2460E-02 | 0.7341E-03 |
| 350 | 2.67 | 7.86 | 220 | 18 | 0.2969E 02 | 0.3512E 01 | 0.4466E 00 | 0.6298E-01 | 0.1044E-01 | 0.2213E-02 | 0.6314E-03 |
| 351 | 2.83 | 7.62 | 160 | 10 | 0.3039E 02 | 0.3811E 01 | 0.5004E 00 | 0.7074E-01 | 0.1137E-01 | 0.2265E-02 | 0.6013E-03 |
| 352 | 2.52 | 7.31 | 230 | 17 | 0.2493E 02 | 0.2895E 01 | 0.3958E 00 | 0.6584E-01 | 0.1370E-01 | 0.3612E-02 | 0.1187E-02 |
| 353 | 2.99 | 7.28 | 240 | 16 | 0.3221E 02 | 0.4062E 01 | 0.5578E 00 | 0.8635E-01 | 0.1588E-01 | 0.3665E-02 | 0.1082E-02 |
| 354 | 2.99 | 7.25 | 280 | 12 | 0.3175E 02 | 0.4064E 01 | 0.5603E 00 | 0.8698E-01 | 0.1626E-01 | 0.3695E-02 | 0.1207E-02 |
| 355 | 2.50 | 7.13 | 270 | 14 | 0.2267E 02 | 0.2791E 01 | 0.3915E 00 | 0.6600E-01 | 0.1417E-01 | 0.3959E-02 | 0.1389E-02 |
| 356 | 2.51 | 7.06 | 200 | 16 | 0.2082E 02 | 0.2787E 01 | 0.3945E 00 | 0.6058E-01 | 0.1057E-01 | 0.2237E-02 | 0.6066E-03 |
| 357 | 2.88 | 7.06 | 120 | 18 | 0.2818E 02 | 0.3663E 01 | 0.5187E 00 | 0.8241E-01 | 0.1545E-01 | 0.3623E-02 | 0.1093E-02 |
| 358 | 2.66 | 6.84 | 290 | 16 | 0.2234E 02 | 0.3032E 01 | 0.4431E 00 | 0.7243E-01 | 0.1404E-01 | 0.3422E-02 | 0.1061E-02 |
| 359 | 2.57 | 6.72 | 240 | 20 | 0.1998E 02 | 0.2772E 01 | 0.4124E 00 | 0.6792E-01 | 0.1307E-01 | 0.3135E-02 | 0.9635E-03 |
| 360 | 2.76 | 6.49 | 210 | 20 | 0.2244E 02 | 0.3094E 01 | 0.4764E 00 | 0.8337E-01 | 0.1737E-01 | 0.4562E-02 | 0.1528E-02 |

Hs. 2·50 to 2·99 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 361 | 3.34 | 12.00 | 170 | 15 | 0.1091E 03 | 0.8381E 01 | 0.6982E 00 | 0.6688E-01 | 0.8177E-02 | 0.1441E-02 | 0.3760E-03 |
| 362 | 3.49 | 11.02 | 20 | 10 | 0.9630E 02 | 0.8388E 01 | 0.7612E 00 | 0.7367E-01 | 0.8005E-02 | 0.1083E-02 | 0.2091E-03 |
| 363 | 3.49 | 10.64 | 270 | 10 | 0.9517E 02 | 0.8091E 01 | 0.7603E 00 | 0.8388E-01 | 0.1198E-01 | 0.2432E-02 | 0.6986E-03 |
| 364 | 3.17 | 9.44 | 140 | 16 | 0.6052E 02 | 0.5915E 01 | 0.6268E 00 | 0.7711E-01 | 0.1235E-01 | 0.2837E-02 | 0.9110E-03 |
| 365 | 3.35 | 9.33 | 250 | 14 | 0.6624E 02 | 0.6540E 01 | 0.7008E 00 | 0.8608E-01 | 0.1329E-01 | 0.2843E-02 | 0.8535E-03 |
| 366 | 3.26 | 8.79 | 230 | 19 | 0.5857E 02 | 0.5833E 01 | 0.6662E 00 | 0.9060E-01 | 0.1566E-01 | 0.3628E-02 | 0.1126E-02 |
| 367 | 3.16 | 7.54 | 250 | 25 | 0.3926E 02 | 0.4698E 01 | 0.6228E 00 | 0.9453E-01 | 0.1732E-01 | 0.4047E-02 | 0.1225E-02 |
| 368 | 3.36 | 7.46 | 290 | 16 | 0.4282E 02 | 0.5261E 01 | 0.7054E 00 | 0.1086E 00 | 0.2075E-01 | 0.5252E-02 | 0.1745E-02 |
| 369 | 3.32 | 7.33 | 230 | 20 | 0.3984E 02 | 0.5045E 01 | 0.6880E 00 | 0.1049E 00 | 0.1903E-01 | 0.4412E-02 | 0.1337E-02 |
| 370 | 3.46 | 7.16 | 230 | 32 | 0.4178E 02 | 0.5360E 01 | 0.7481E 00 | 0.1177E 00 | 0.2211E-01 | 0.5296E-02 | 0.1648E-02 |
| 371 | 3.09 | 6.60 | 270 | 16 | 0.2853E 02 | 0.3929E 01 | 0.5953E 00 | 0.1035E 00 | 0.2200E-01 | 0.6018E-02 | 0.2083E-02 |
| 372 | 3.27 | 6.39 | 330 | 25 | 0.2913E 02 | 0.4271E 01 | 0.6682E 00 | 0.1145E 00 | 0.2243E-01 | 0.5283E-02 | 0.1545E-02 |

Hs. 3·00 to 3·49 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 373 | 3.82 | 11.49 | 150 | 6 | 0.1291E 03 | 0.1050E 02 | 0.9143E 00 | 0.8753E-01 | 0.9704E-02 | 0.1366E-02 | 0.2727E-03 |
| 374 | 3.65 | 10.00 | 240 | 12 | 0.8904E 02 | 0.8306E 01 | 0.8308E 00 | 0.9336E-01 | 0.1284E-01 | 0.2417E-02 | 0.6541E-03 |
| 375 | 3.69 | 9.74 | 250 | 8 | 0.9144E 02 | 0.8266E 01 | 0.8491E 00 | 0.1062E 00 | 0.1775E-01 | 0.4205E-02 | 0.1355E-02 |
| 376 | 3.58 | 8.70 | 180 | 18 | 0.6552E 02 | 0.6953E 01 | 0.7990E 00 | 0.1028E 00 | 0.1578E-01 | 0.3148E-02 | 0.8583E-03 |
| 377 | 3.71 | 8.40 | 210 | 19 | 0.6838E 02 | 0.7224E 01 | 0.8600E 00 | 0.1199E 00 | 0.2064E-01 | 0.4639E-02 | 0.1382E-02 |
| 378 | 3.51 | 8.33 | 240 | 22 | 0.5698E 02 | 0.6409E 01 | 0.7690E 00 | 0.9959E-01 | 0.1432E-01 | 0.2416E-02 | 0.5178E-03 |
| 379 | 3.56 | 8.32 | 260 | 14 | 0.5777E 02 | 0.6574E 01 | 0.7899E 00 | 0.1021E 00 | 0.1474E-01 | 0.2546E-02 | 0.5733E-03 |
| 380 | 3.70 | 7.90 | 310 | 9 | 0.5572E 02 | 0.6747E 01 | 0.8545E 00 | 0.1166E 00 | 0.1819E-01 | 0.3550E-02 | 0.9335E-03 |
| 381 | 3.71 | 7.73 | 260 | 25 | 0.5563E 02 | 0.6659E 01 | 0.8615E 00 | 0.1222E 00 | 0.1969E-01 | 0.3820E-02 | 0.9483E-03 |
| 382 | 3.76 | 7.49 | 280 | 17 | 0.5267E 02 | 0.6606E 01 | 0.8817E 00 | 0.1282E 00 | 0.2117E-01 | 0.4228E-02 | 0.1084E-02 |
| 383 | 3.55 | 7.16 | 300 | 15 | 0.4355E 02 | 0.5630E 01 | 0.7860E 00 | 0.1211E 00 | 0.2154E-01 | 0.4718E-02 | 0.1332E-02 |

Hs. 3·50 to 3·99 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 384 | 4.36 | 11.32 | 160 | 13 | 0.1611E 03 | 0.1342E 02 | 0.1186E 01 | 0.1143E 00 | 0.1263E-01 | 0.1726E-02 | 0.3211E-03 |
| 385 | 4.29 | 9.46 | 270 | 13 | 0.1123E 03 | 0.1090E 02 | 0.1152E 01 | 0.1370E 00 | 0.1922E-01 | 0.3402E-02 | 0.8092E-03 |
| 386 | 4.07 | 9.04 | 310 | 18 | 0.9448E 02 | 0.9350E 01 | 0.1034E 01 | 0.1362E 00 | 0.2341E-01 | 0.5629E-02 | 0.1839E-02 |
| 387 | 4.17 | 9.02 | 190 | 24 | 0.9656E 02 | 0.9783E 01 | 0.1084E 01 | 0.1343E 00 | 0.1928E-01 | 0.3413E-02 | 0.7975E-03 |
| 388 | 4.06 | 7.96 | 220 | 22 | 0.7206E 02 | 0.8200E 01 | 0.1031E 01 | 0.1516E 00 | 0.2857E-01 | 0.7403E-02 | 0.2569E-02 |
| 389 | 4.14 | 7.63 | 80 | 23 | 0.7003E 02 | 0.8175E 01 | 0.1071E 01 | 0.1603E 00 | 0.2891E-01 | 0.6749E-02 | 0.2087E-02 |

Hs. 4·00 to 4·49 METRES

| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 390 | 4.58 | 11.01 | 230 | 19 | 0.1781E 03 | 0.1444E 02 | 0.1311E 01 | 0.1453E 00 | 0.2216E-01 | 0.5001E-02 | 0.1583E-02 |
| 391 | 4.97 | 10.65 | 100 | 20 | 0.1894E 03 | 0.1645E 02 | 0.1545E 01 | 0.1658E 00 | 0.2240E-01 | 0.4212E-02 | 0.1123E-02 |
| 392 | 4.58 | 10.22 | 170 | 9 | 0.1478E 03 | 0.1338E 02 | 0.1309E 01 | 0.1438E 00 | 0.1932E-01 | 0.3638E-02 | 0.1026E-02 |
| 393 | 4.51 | 9.99 | 240 | 14 | 0.1337E 03 | 0.1270E 02 | 0.1271E 01 | 0.1370E 00 | 0.1669E-01 | 0.2537E-02 | 0.5456E-03 |
| 394 | 4.89 | 9.87 | 230 | 24 | 0.1556E 03 | 0.1475E 02 | 0.1495E 01 | 0.1651E 00 | 0.2067E-01 | 0.3170E-02 | 0.6592E-03 |
| 395 | 4.69 | 9.24 | 210 | 18 | 0.1296E 03 | 0.1273E 02 | 0.1377E 01 | 0.1752E 00 | 0.2905E-01 | 0.6864E-02 | 0.2255E-02 |

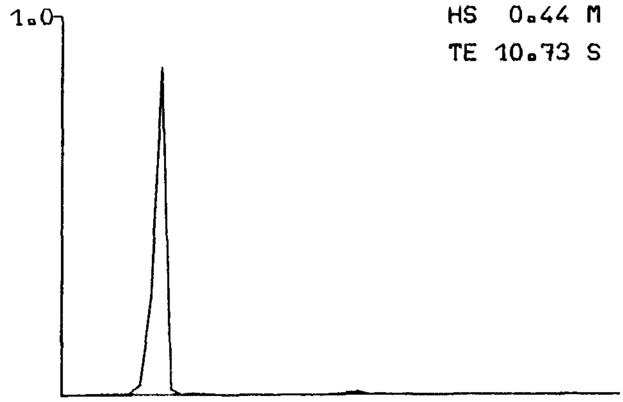
Hs. 4·50 to 4·99 METRES

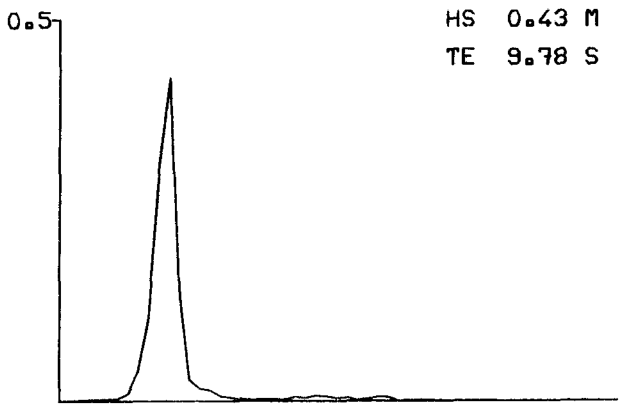
| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 396 | 5. 42 | 12. 06 | 230 | 16 | 0. 2867E 03 | 0. 2217E 02 | 0. 1838E 01 | 0. 1696E 00 | 0. 1843E-01 | 0. 2560E-02 | 0. 4951E-03 |
| 397 | 5. 17 | 11. 15 | 250 | 14 | 0. 2262E 03 | 0. 1860E 02 | 0. 1668E 01 | 0. 1703E 00 | 0. 2114E-01 | 0. 3479E-02 | 0. 8070E-03 |
| 398 | 5. 10 | 9. 10 | 270 | 12 | 0. 1436E 03 | 0. 1478E 02 | 0. 1623E 01 | 0. 1959E 00 | 0. 2751E-01 | 0. 4934E-02 | 0. 1225E-02 |
| 399 | 5. 38 | 8. 53 | 250 | 22 | 0. 1389E 03 | 0. 1547E 02 | 0. 1812E 01 | 0. 2301E 00 | 0. 3379E-01 | 0. 6422E-02 | 0. 1730E-02 |
| 400 | 5. 08 | 8. 36 | 220 | 32 | 0. 1243E 03 | 0. 1349E 02 | 0. 1614E 01 | 0. 2194E 00 | 0. 3562E-01 | 0. 7356E-02 | 0. 2003E-02 |

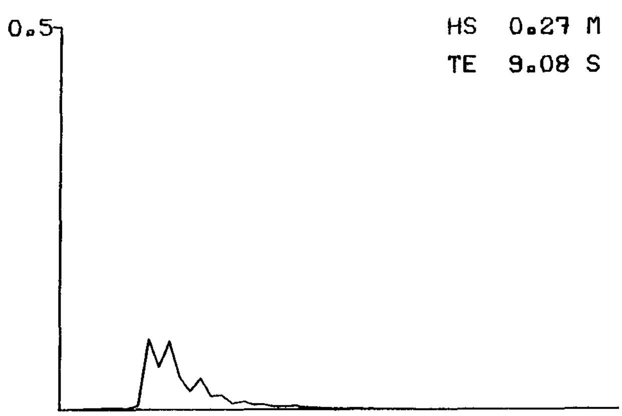
Hs. 5·00 to 5·49 METRES

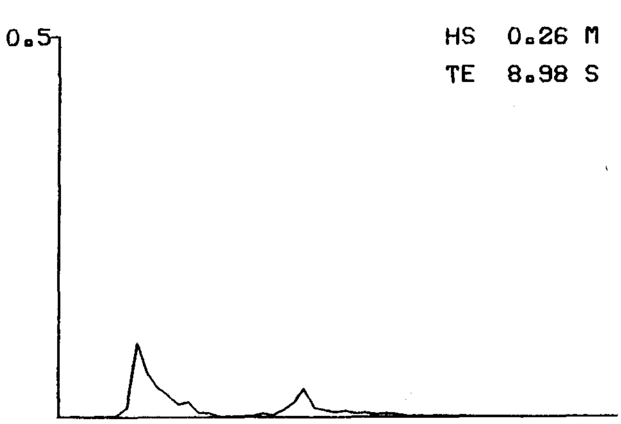
| SERIAL NO. | HS METRES | TE SECS | WIND DIR DEG | WIND SPEED KTS | MOMENT -2 | MOMENT -1 | MOMENT 0 | MOMENT 1 | MOMENT 2 | MOMENT 3 | MOMENT 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 401 | 5.91 | 7.86 | 290 | 20 | 0.1448E 03 | 0.1717E 02 | 0.2184E 01 | 0.3135E 00 | 0.5523E-01 | 0.1295E-01 | 0.4051E-02 |

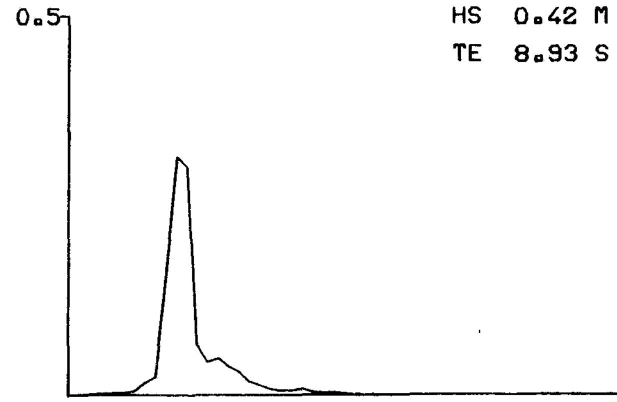
Hs. 5·50 to 5·99 METRES

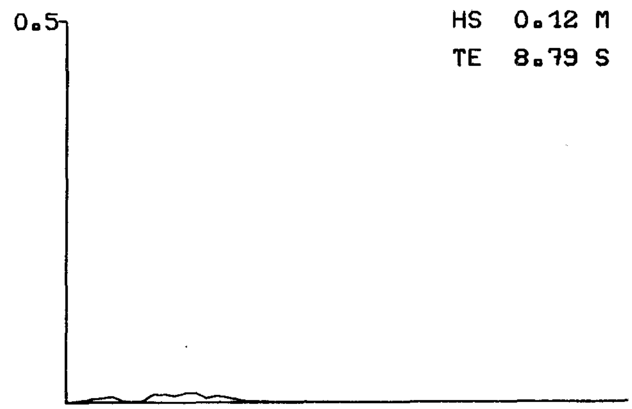

1.0
HS 0.44 M
TE 10.73 S
1

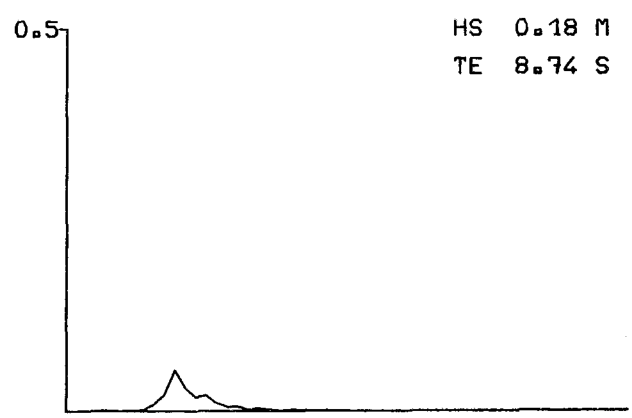

0.5
HS 0.43 M
TE 9.78 S
2

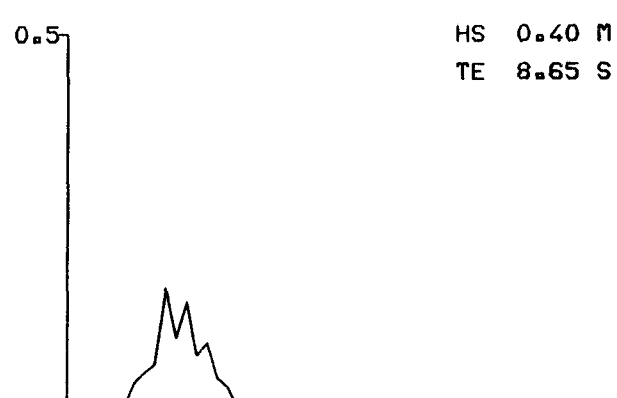

0.5
HS 0.27 M
TE 9.08 S
3

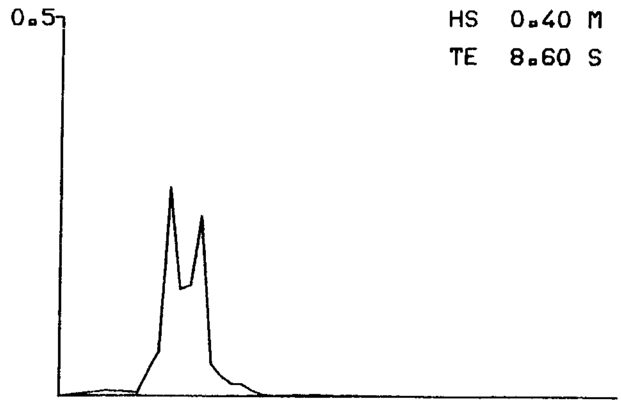

0.5
HS 0.26 M
TE 8.98 S
4


0.5
HS 0.42 M
TE 8.93 S
5

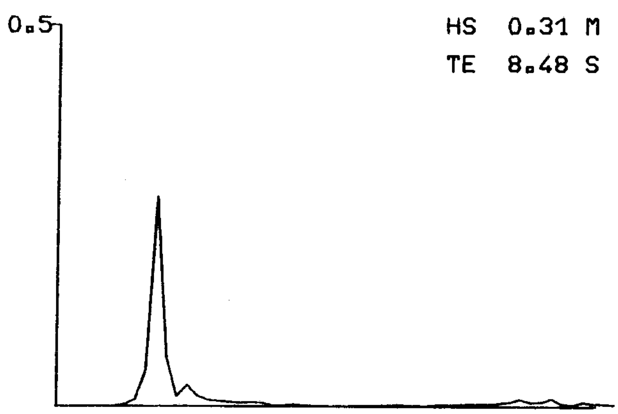

0.5
HS 0.12 M
TE 8.79 S
6


0.5
HS 0.18 M
TE 8.74 S
7

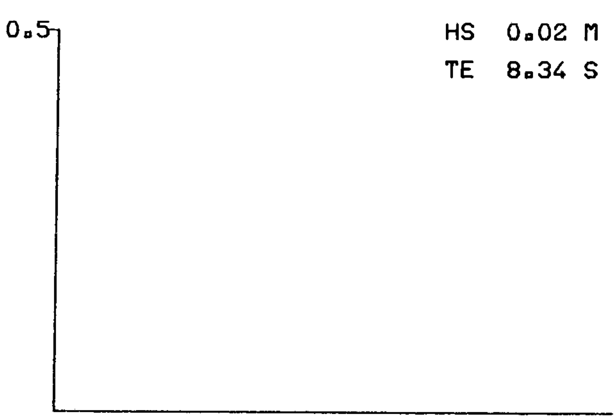

0.5
HS 0.40 M
TE 8.65 S
8



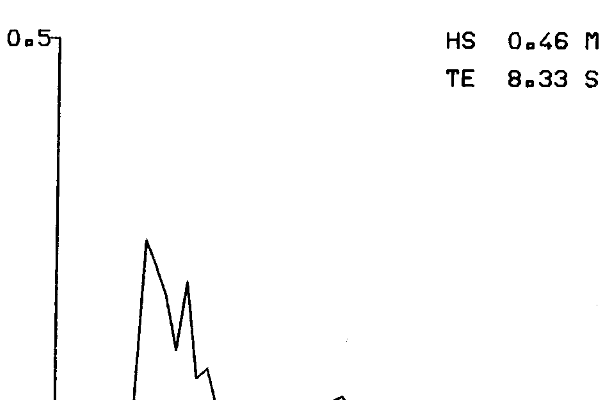

9



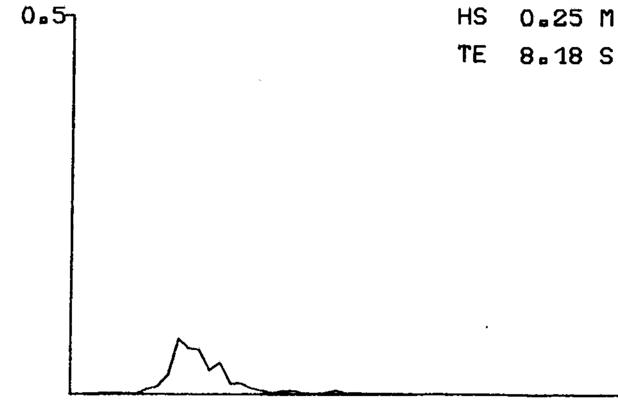

10



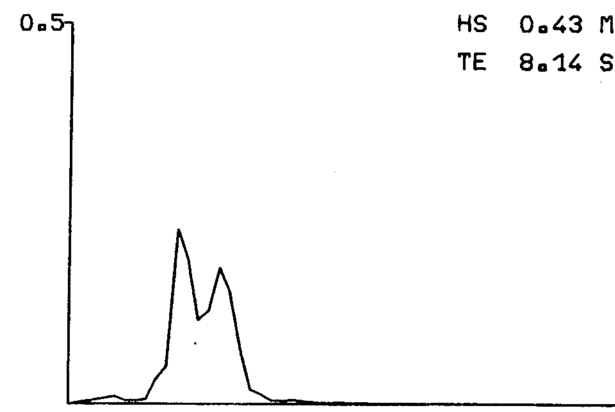

11



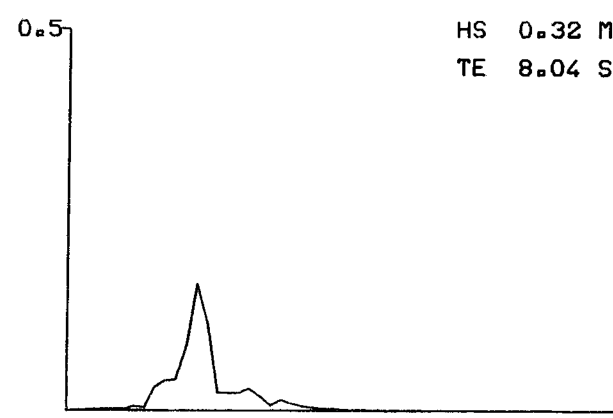

12



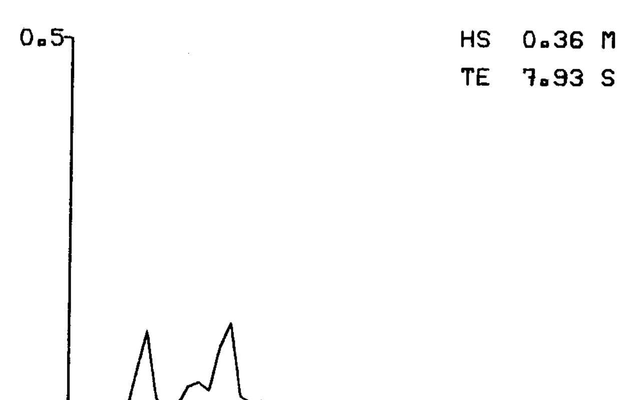

13



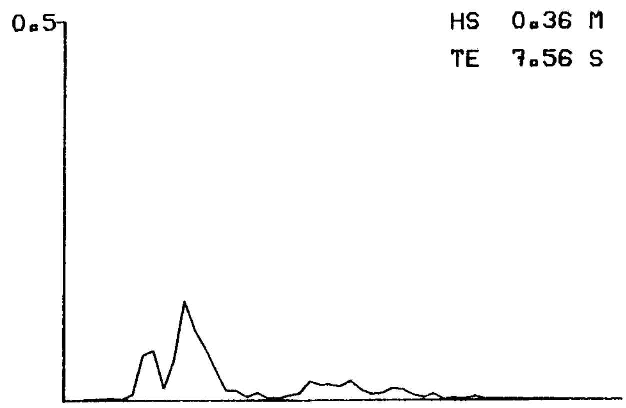

14



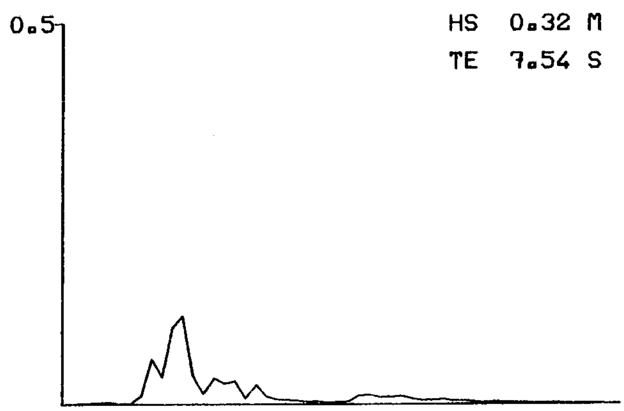

15



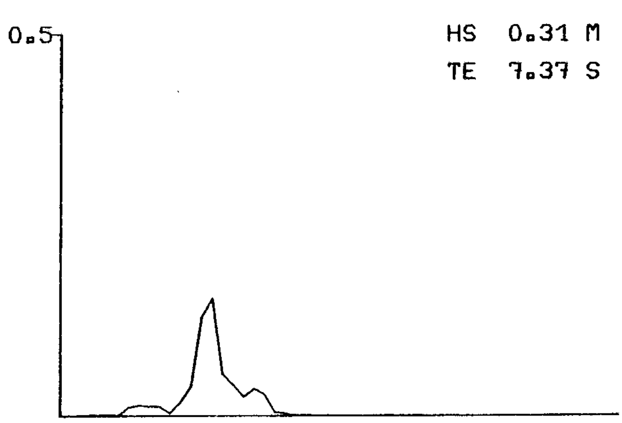

16



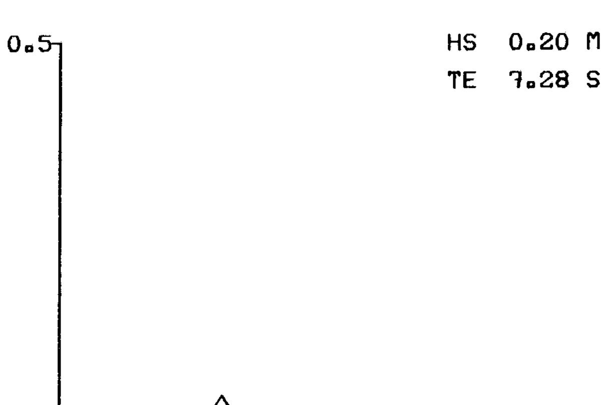

17



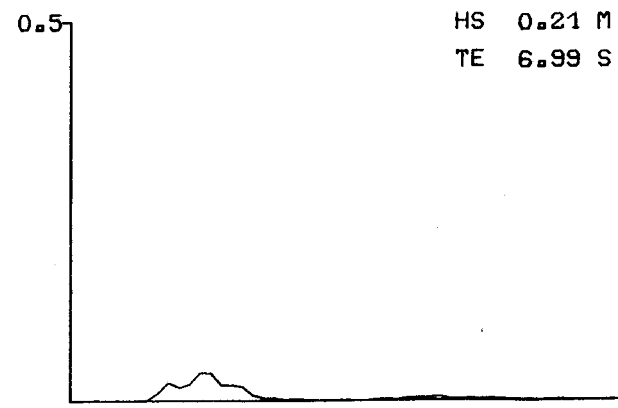

18



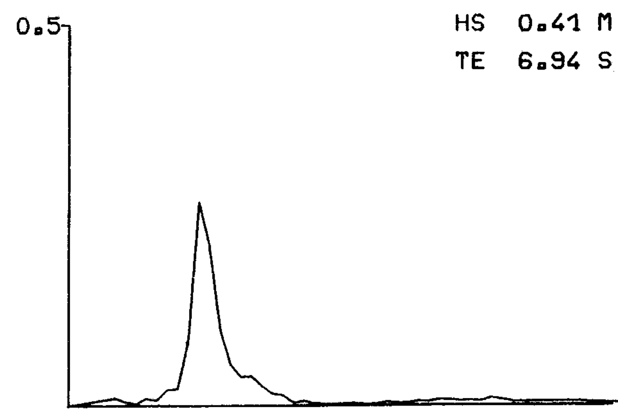

19



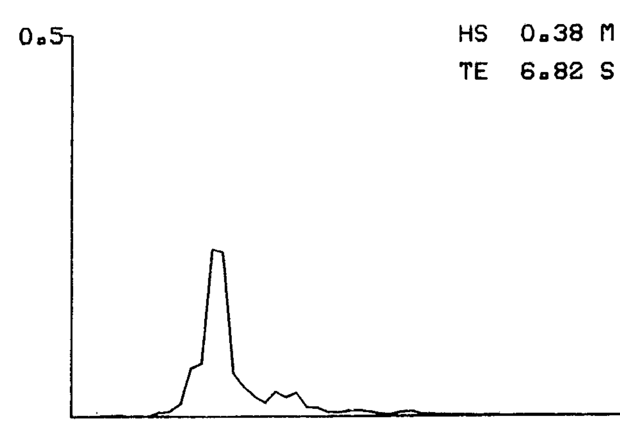

20



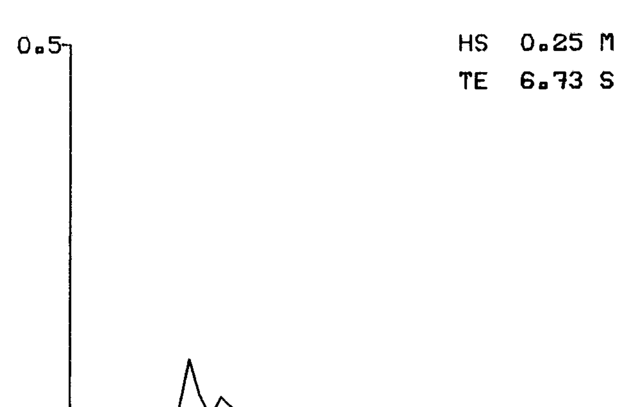

21



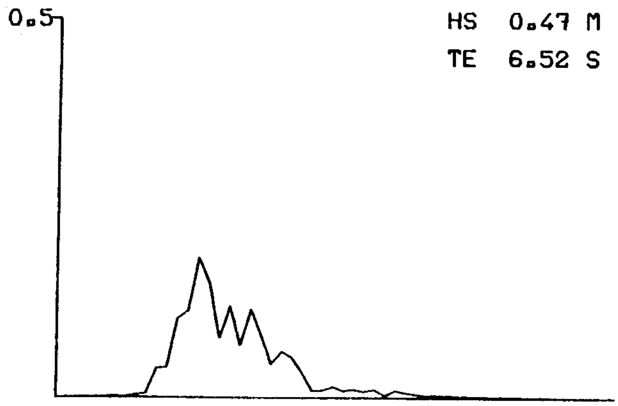

22



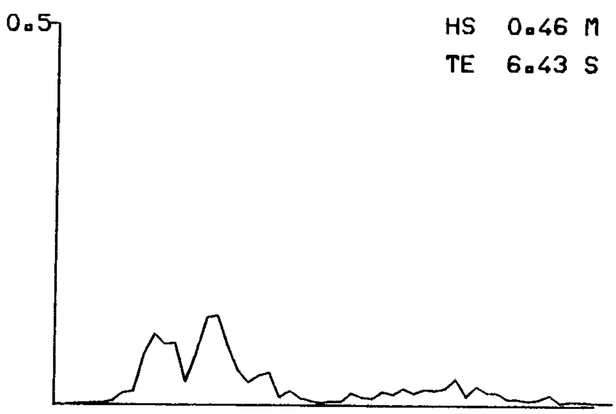

23



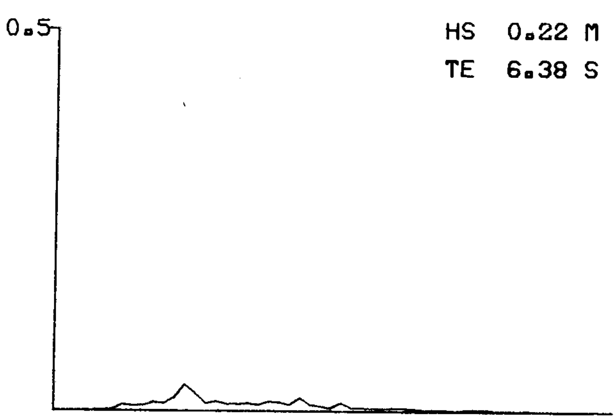

24



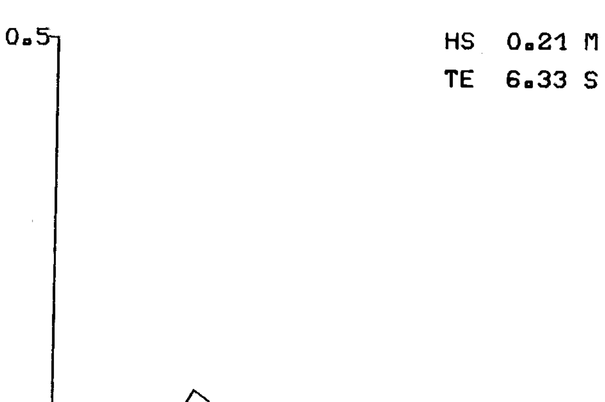

25



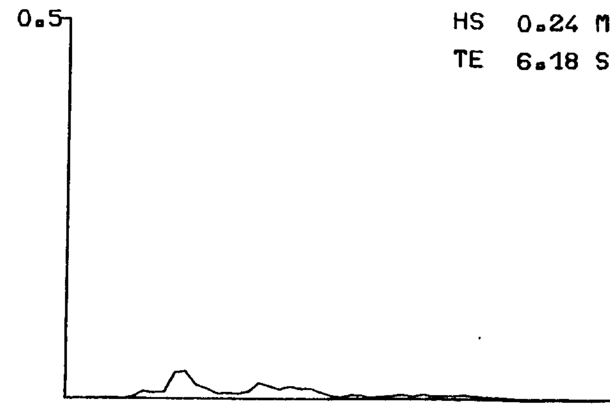

26



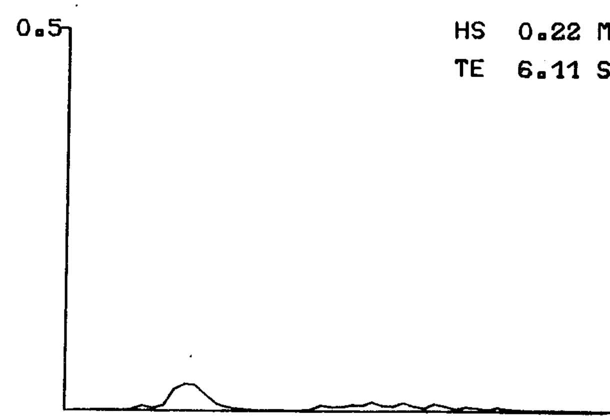

27



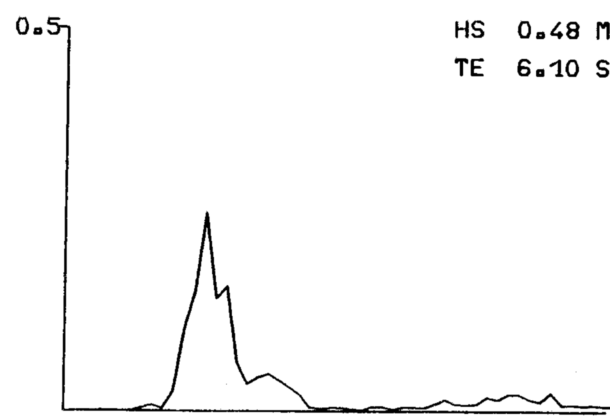

28



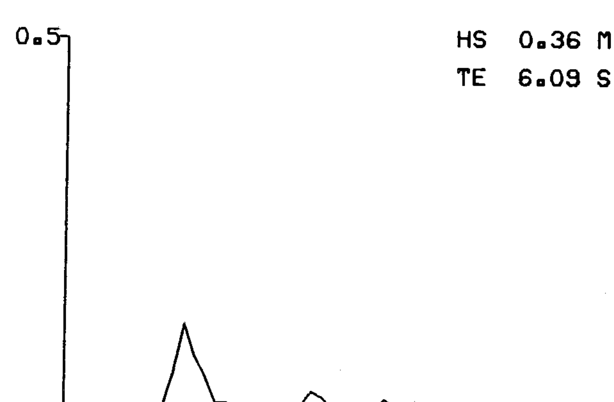

29



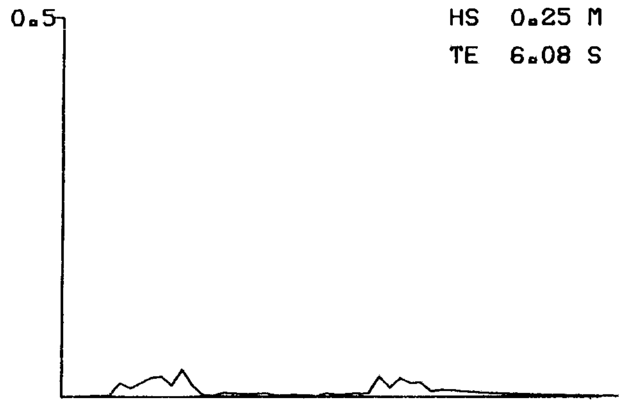

30



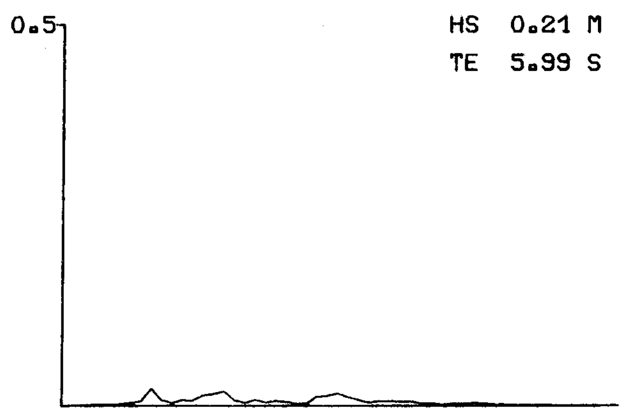

31



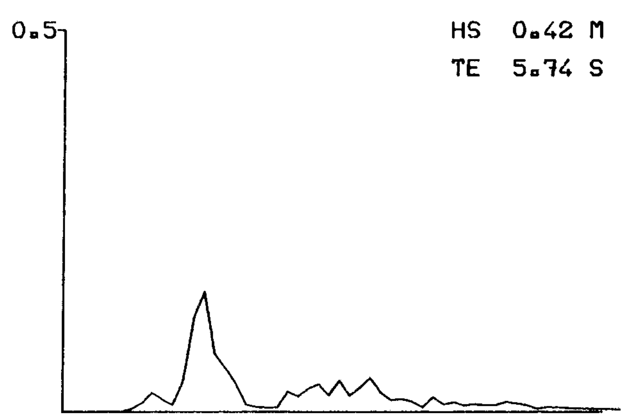

32



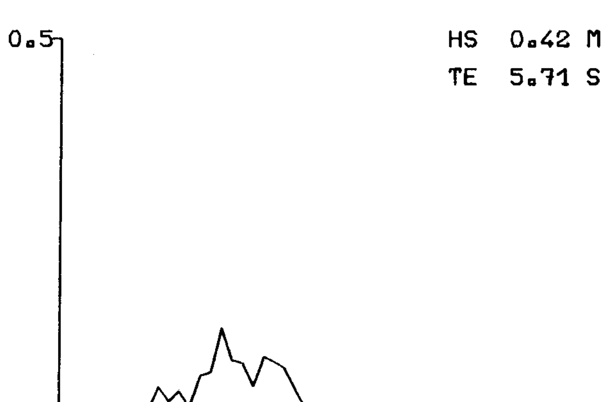

33



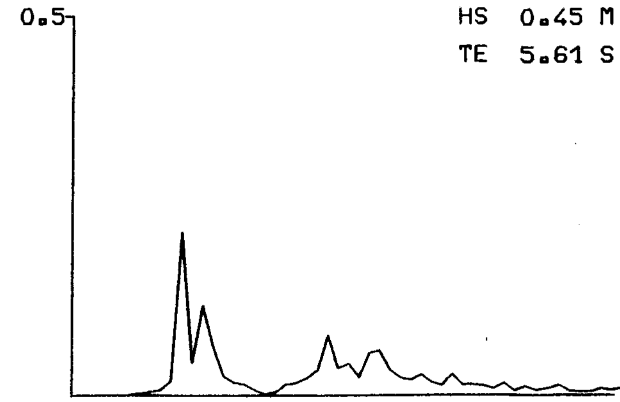

34



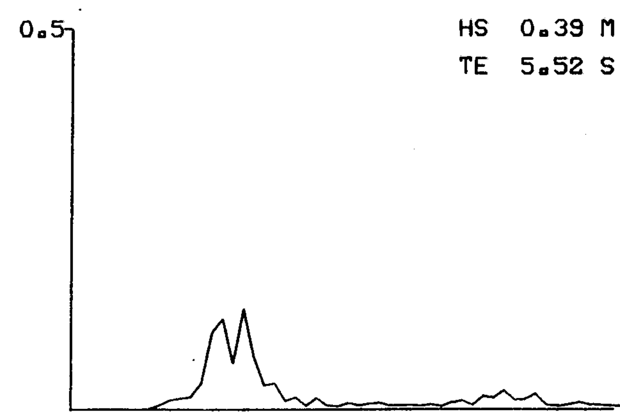

35



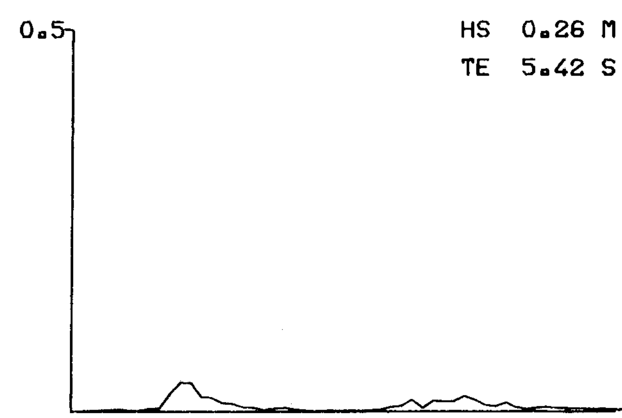

36



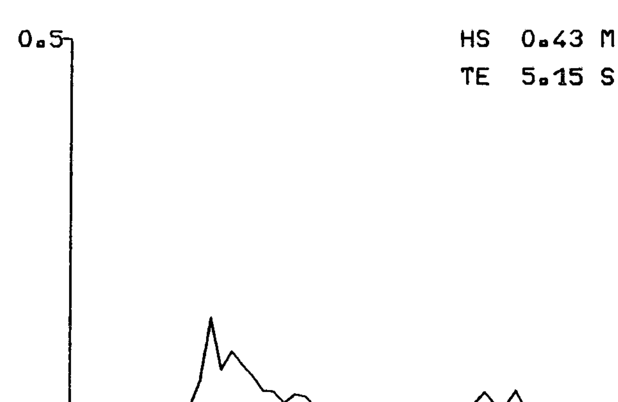

37



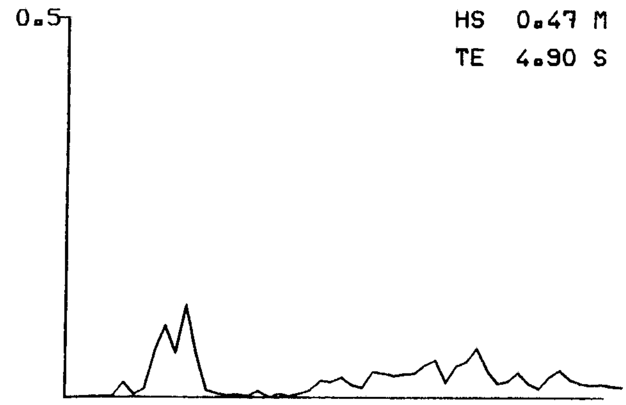

38



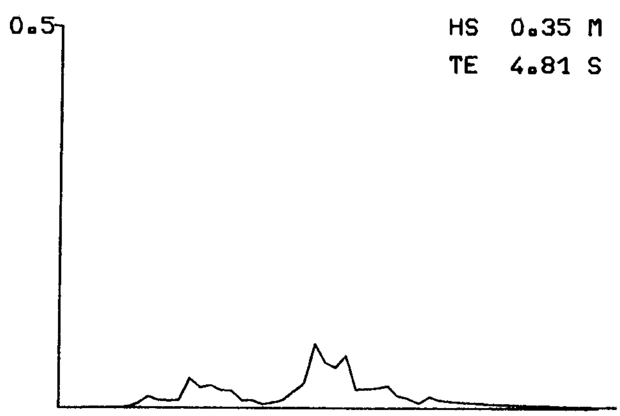

39



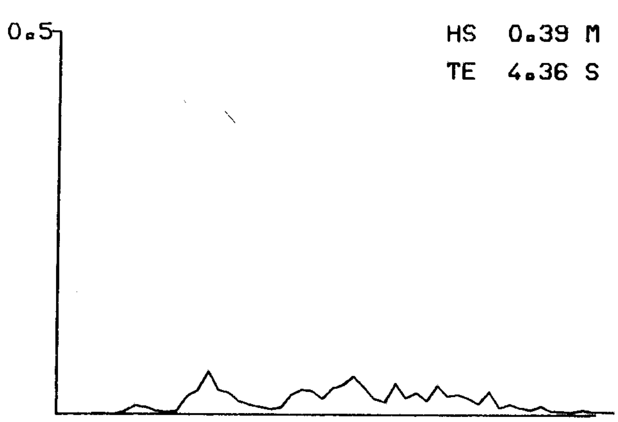

40



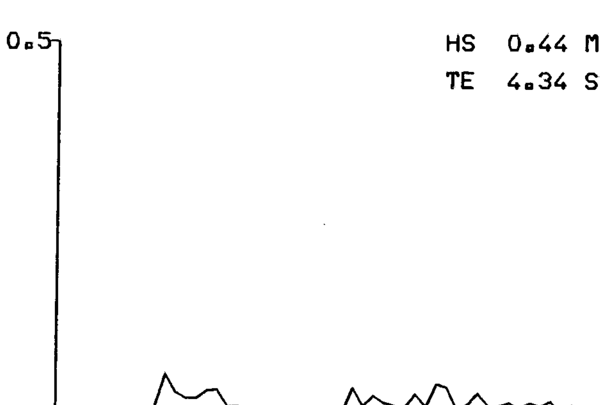

41



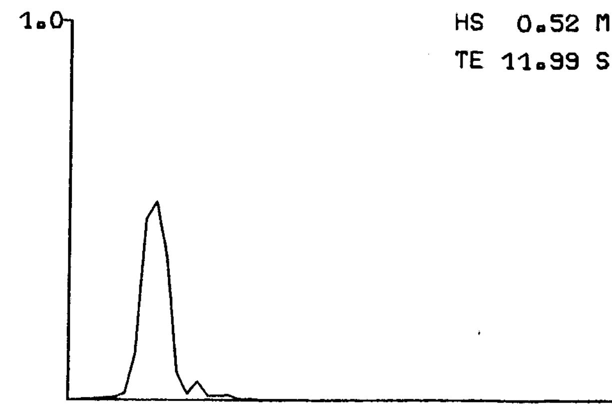

42



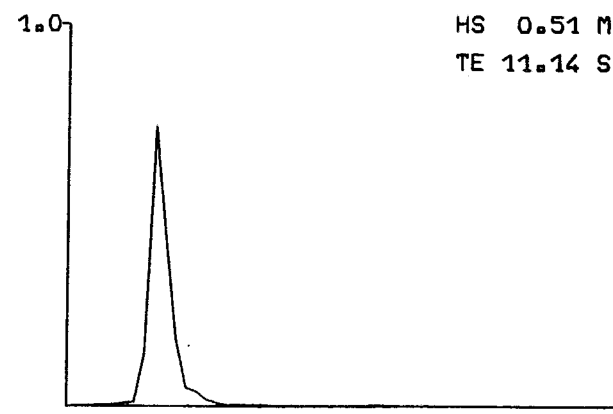

43



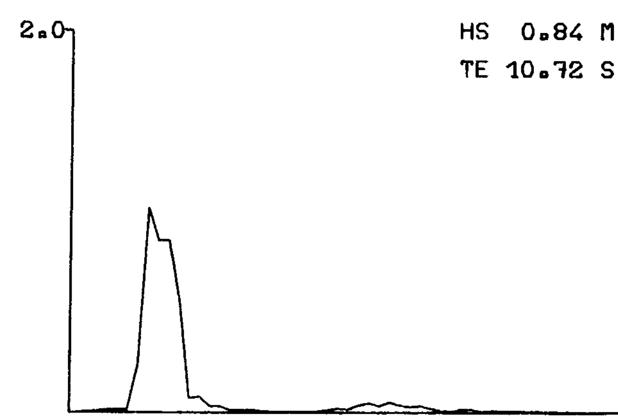

44



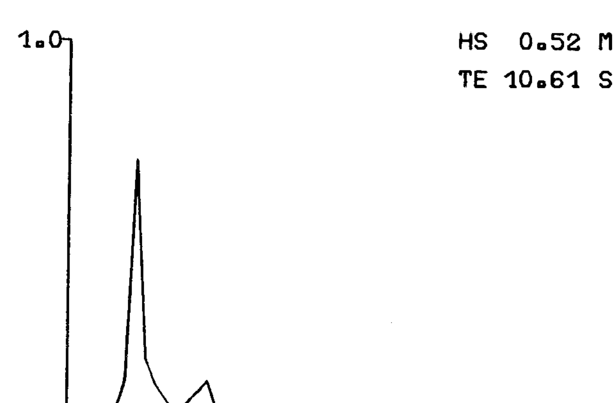

45



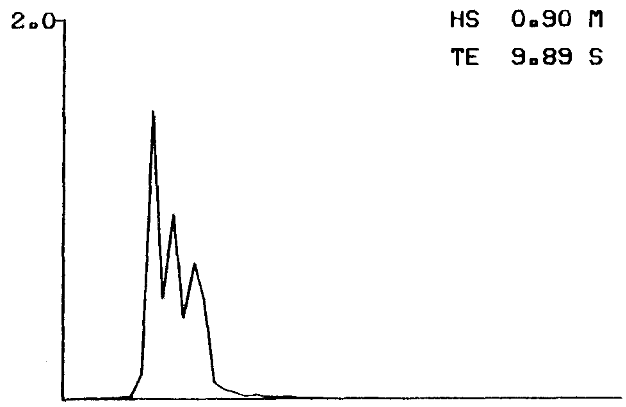

46



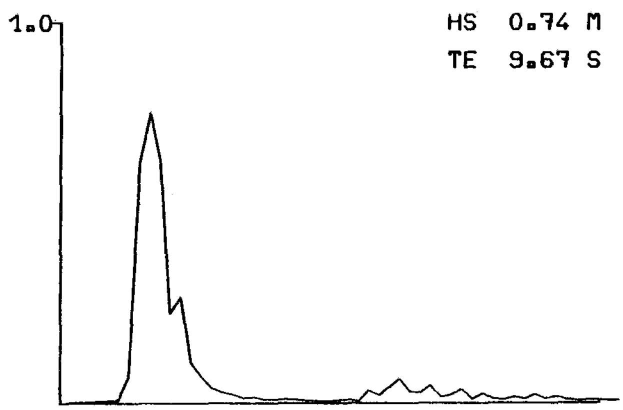

47



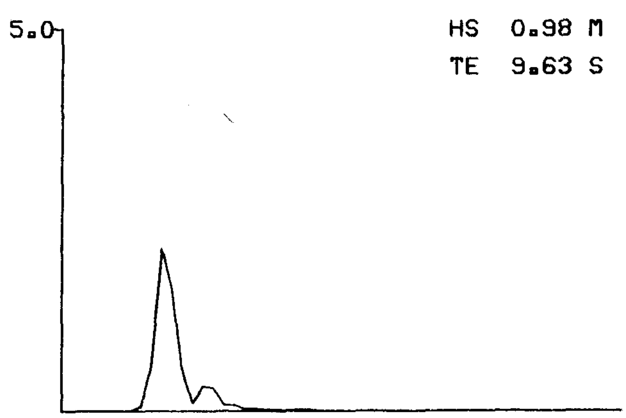

48



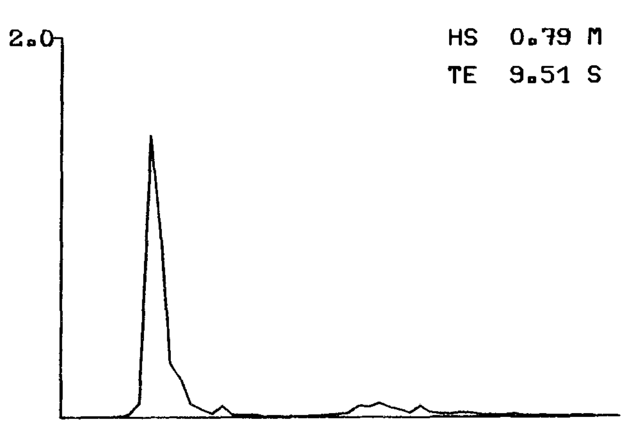

49



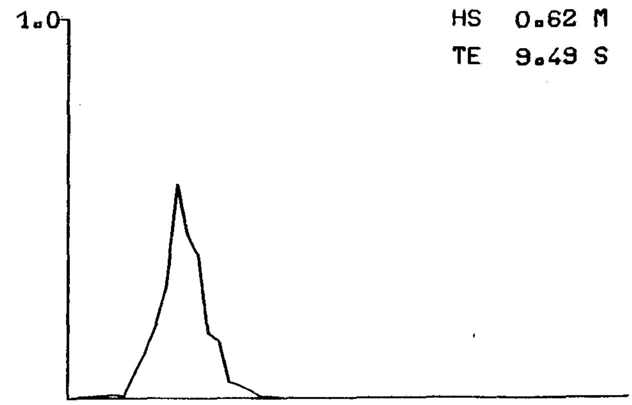

50



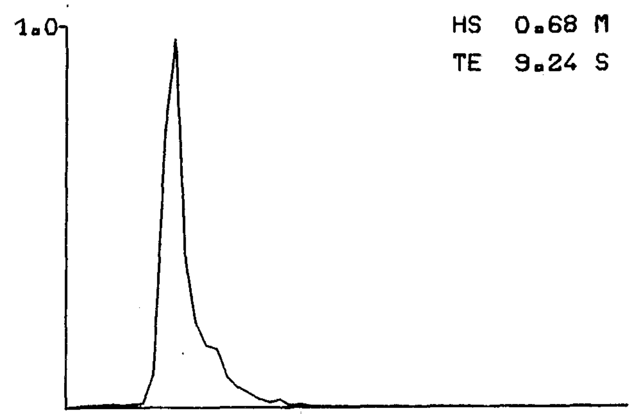

51



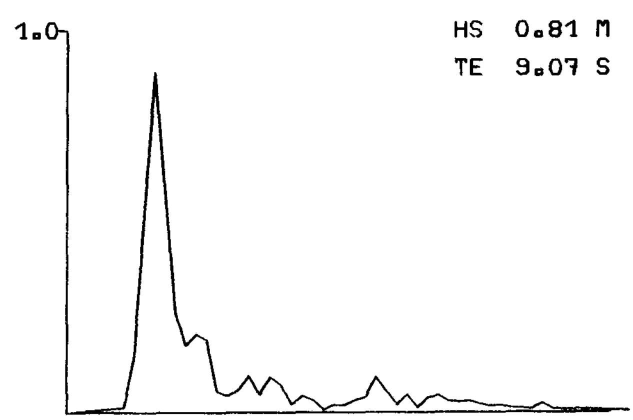

52



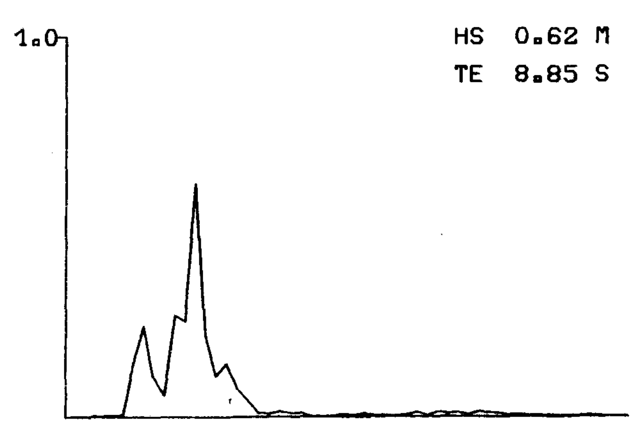

53



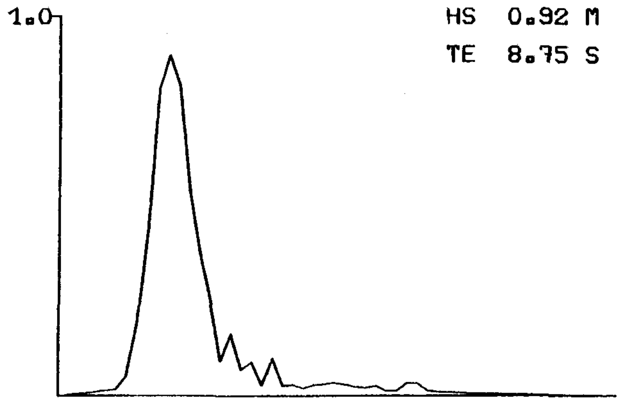

54



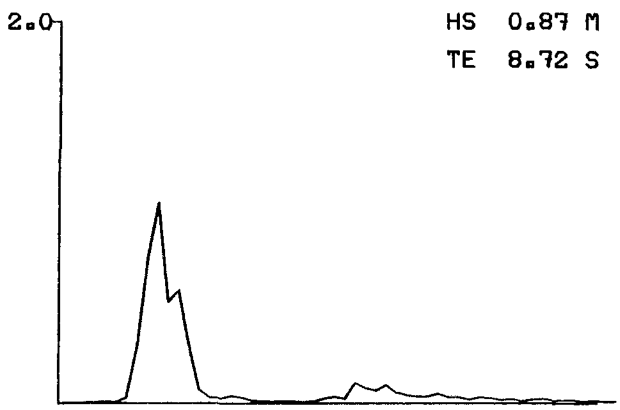

55



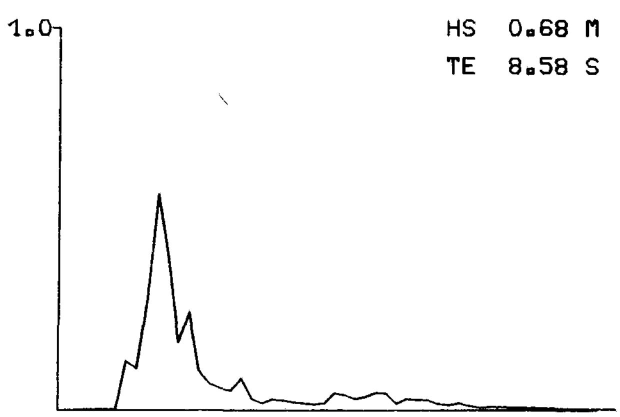

56



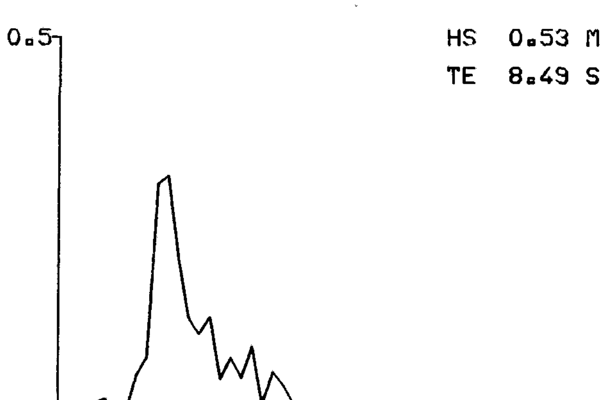

57



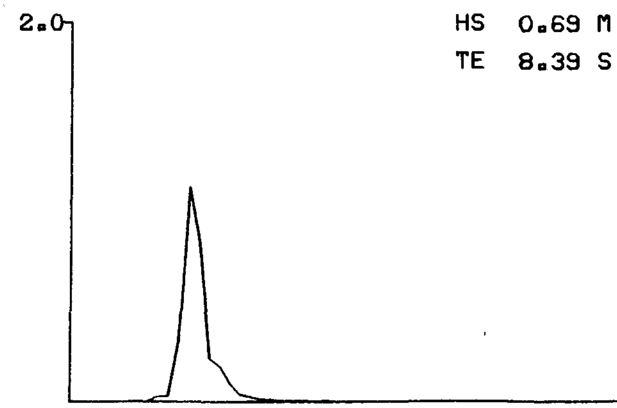

58



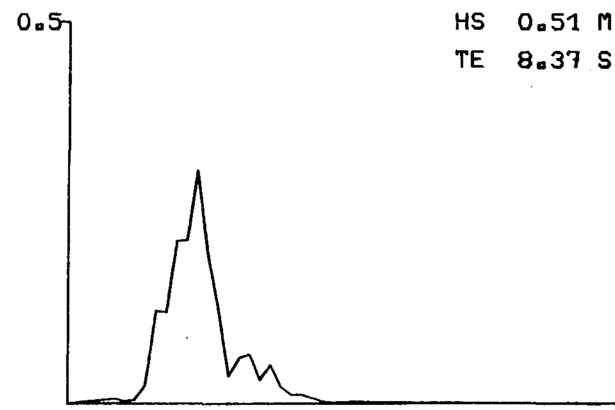

59



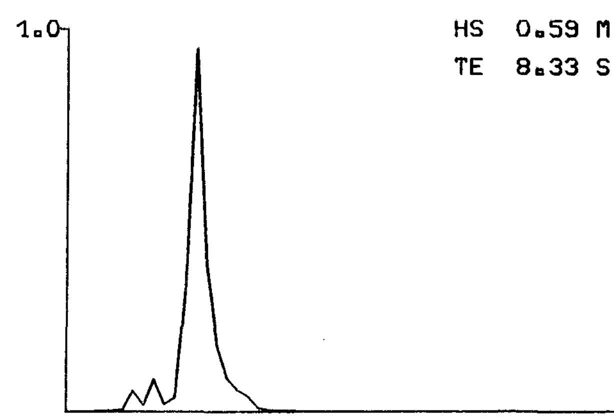

60



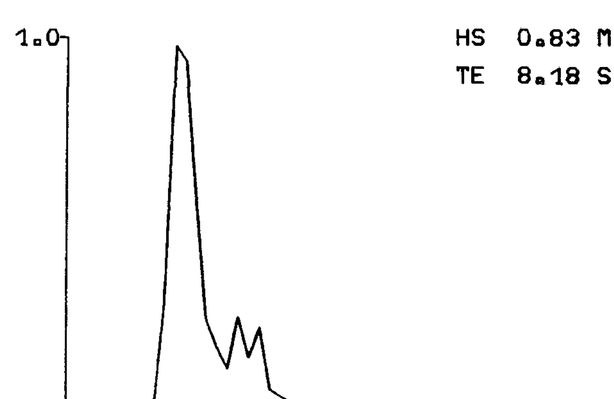

61



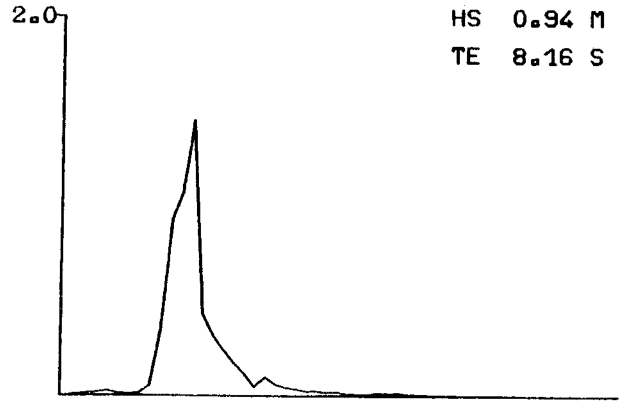

62



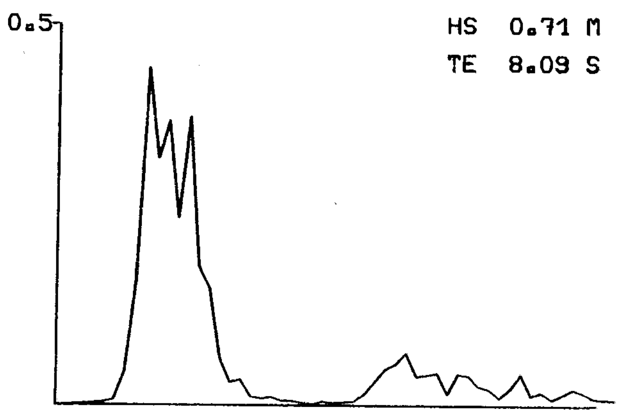

63



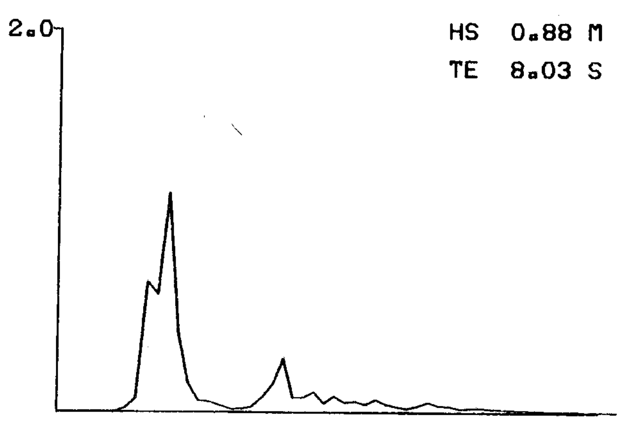

64



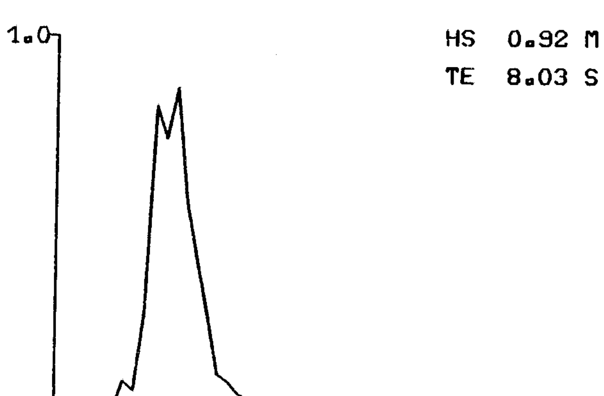
65



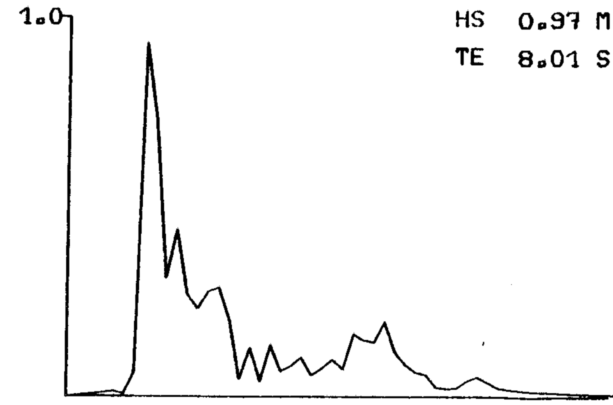
66



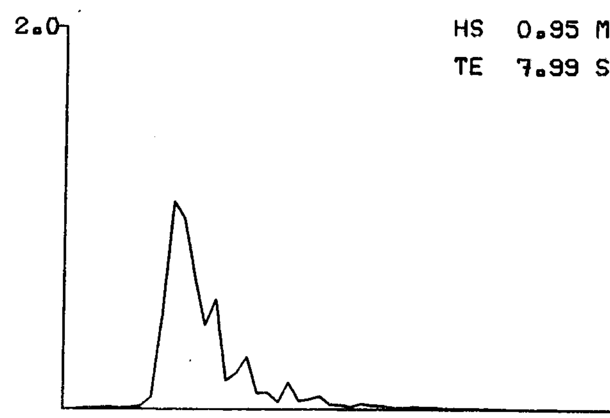
67



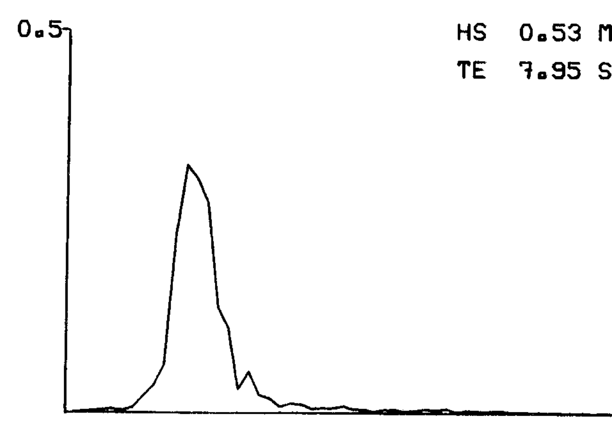
68



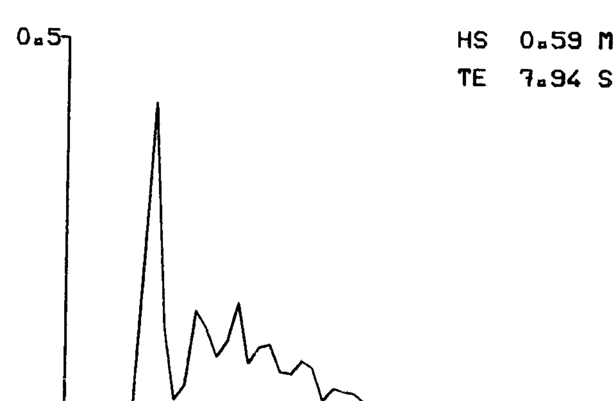
69



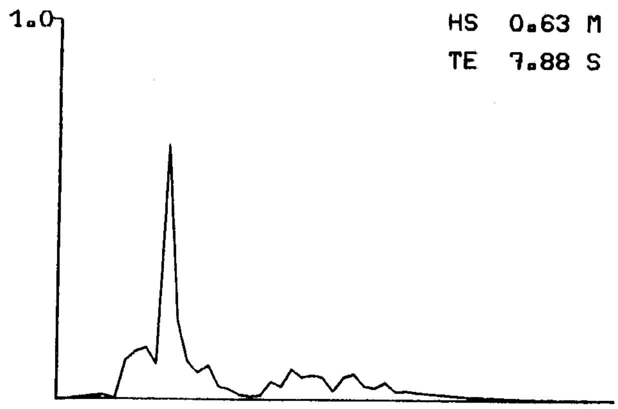
70



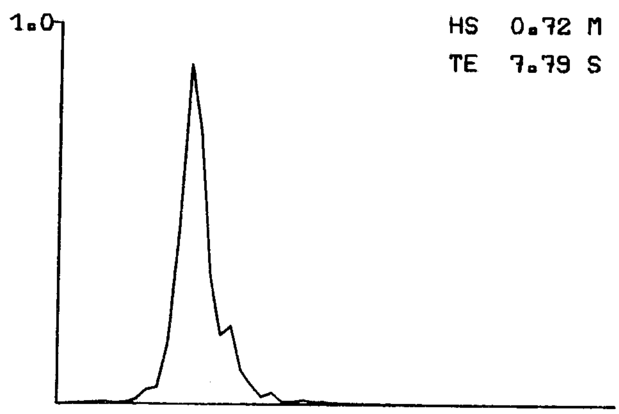
71



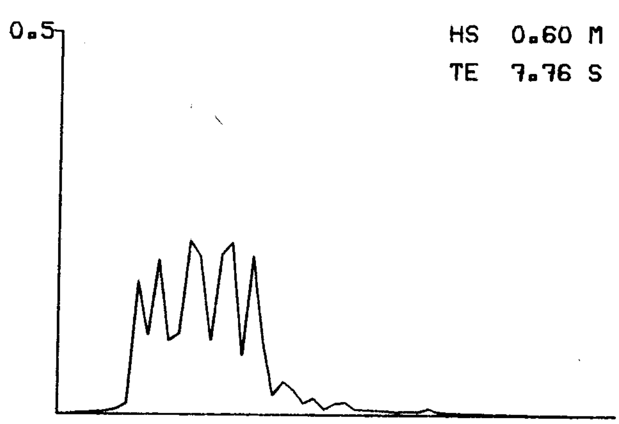
72



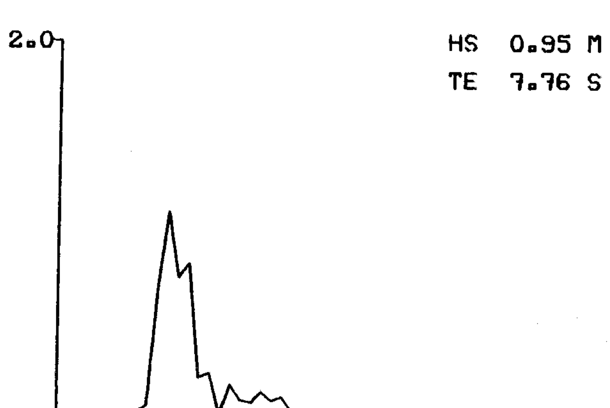

73



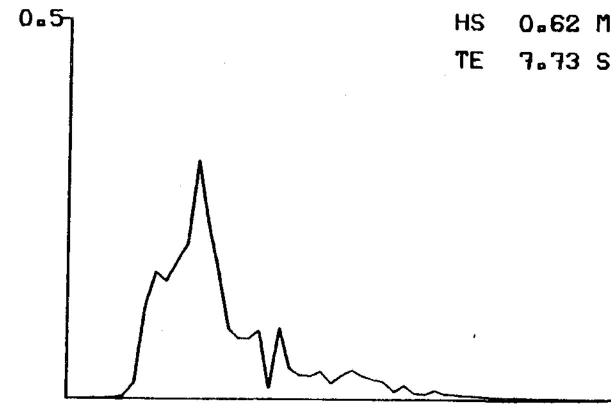

74



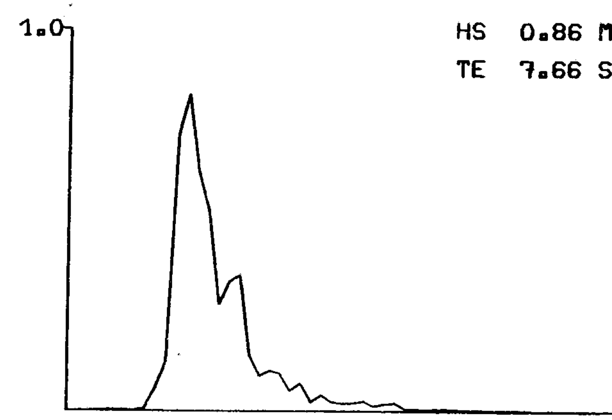

75



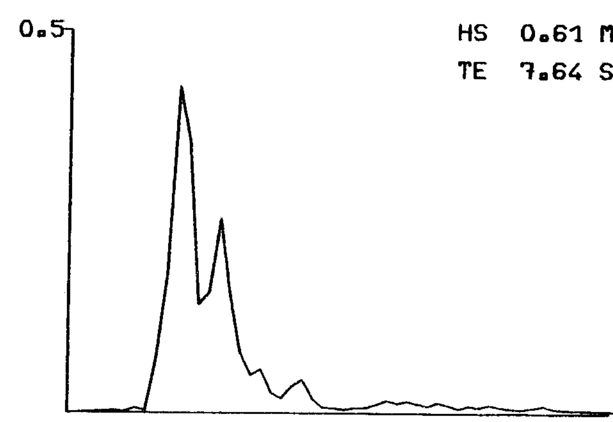

76



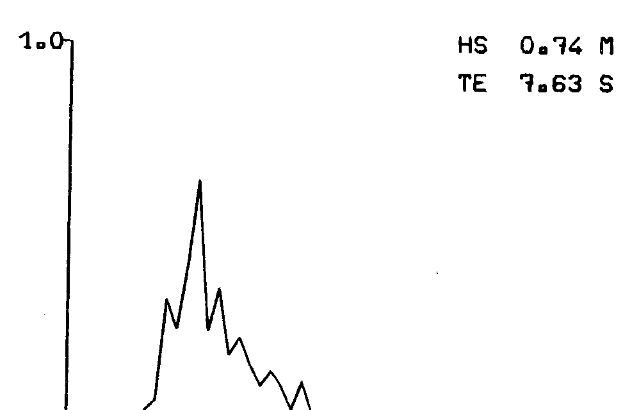

77



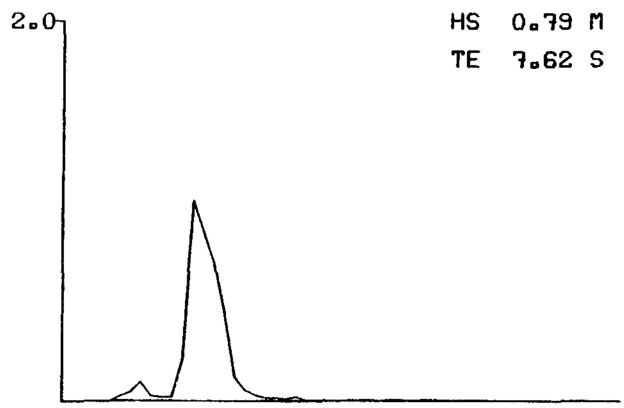

78



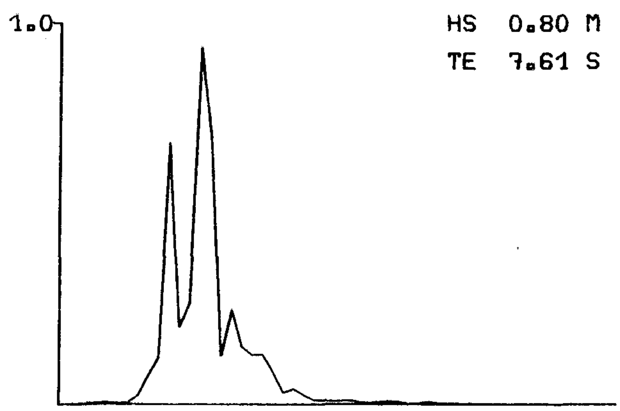

79



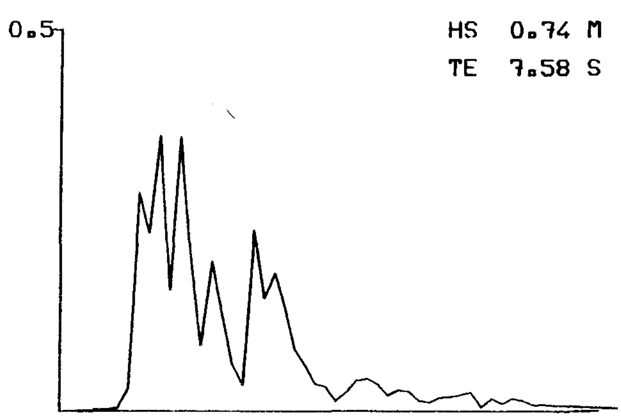

80



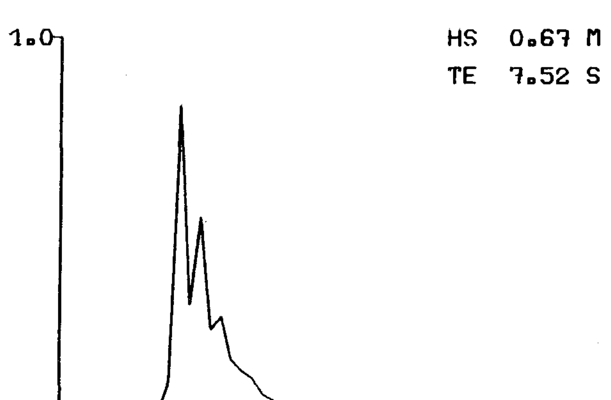

81



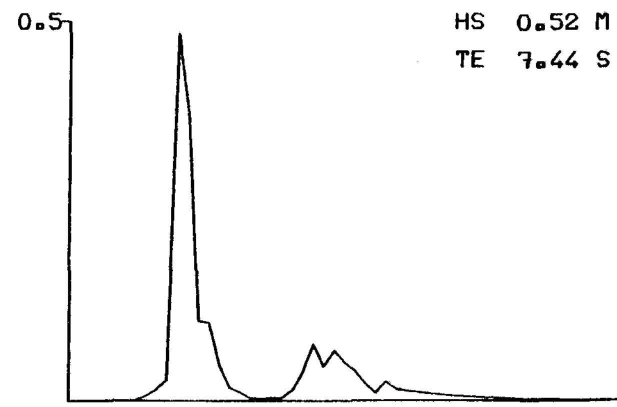

82



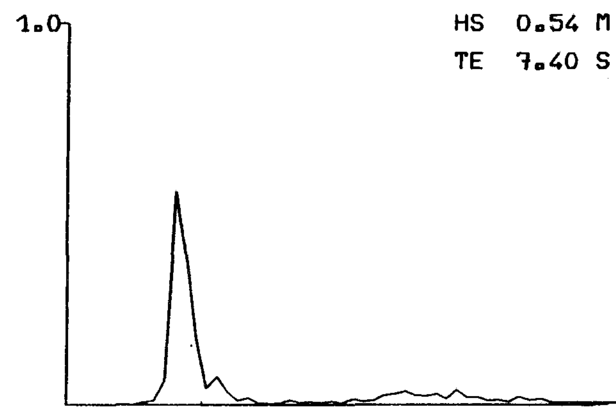

83



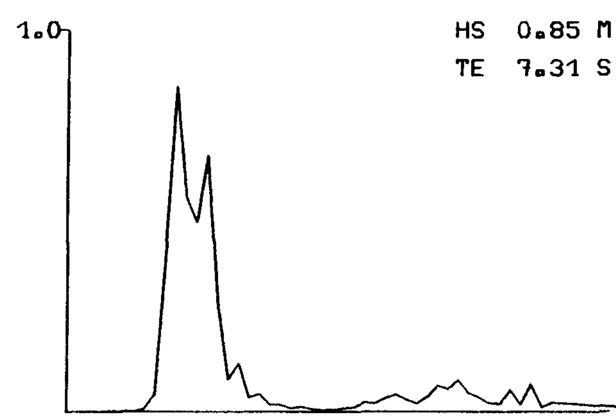

84



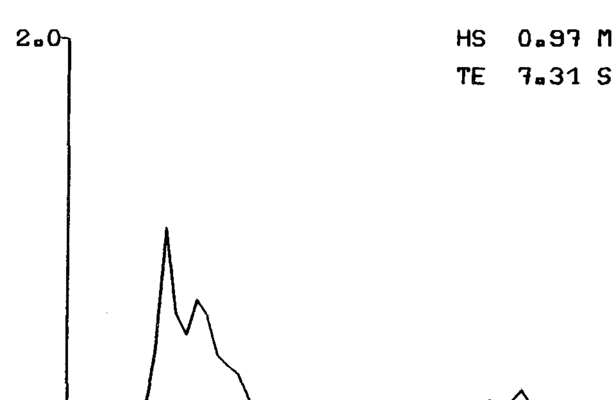

85



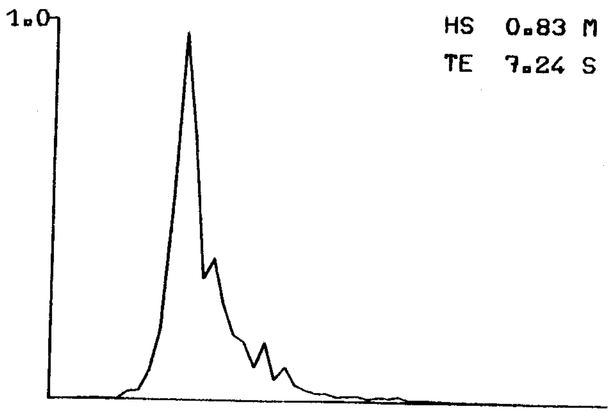

86



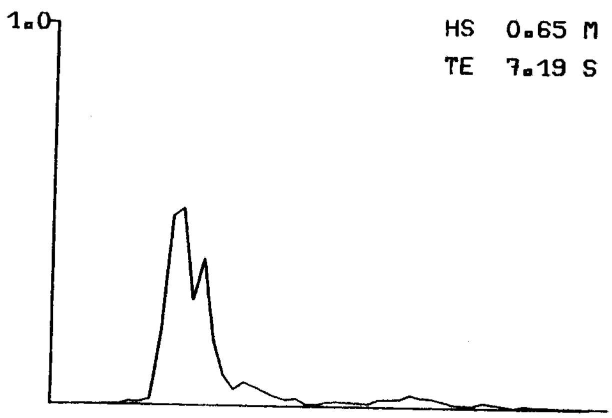

87



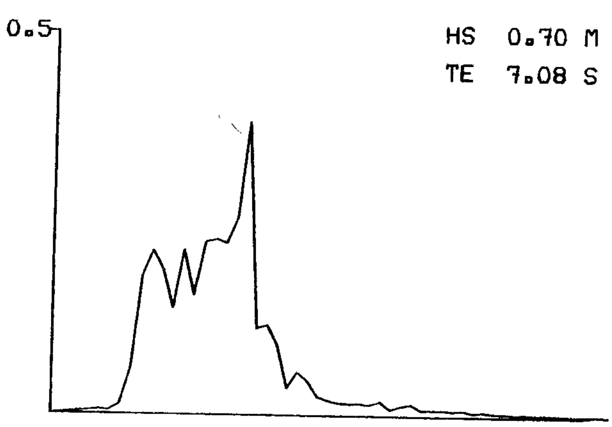

88



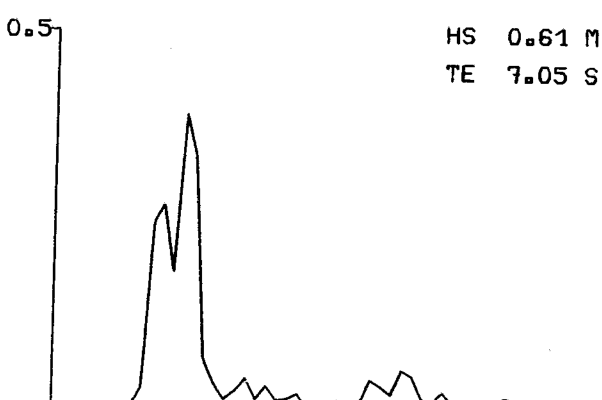

89



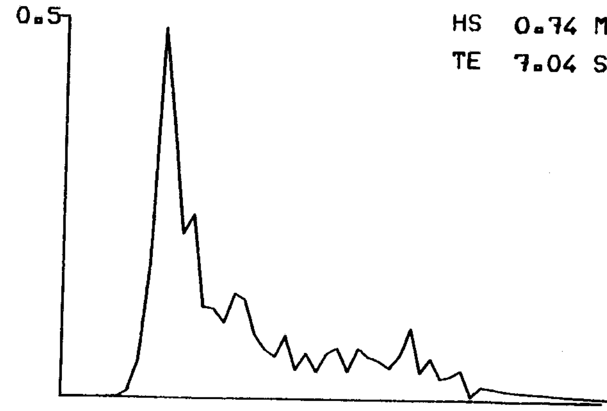

90



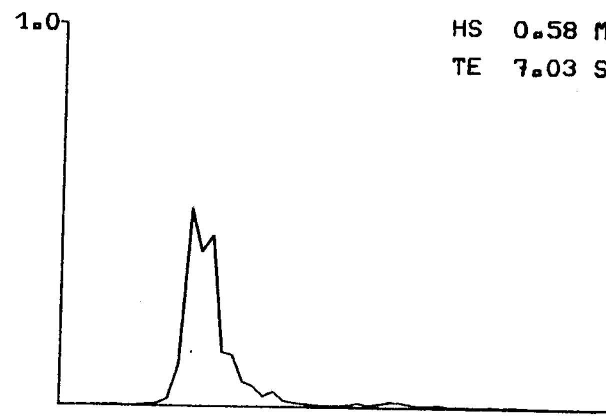

91



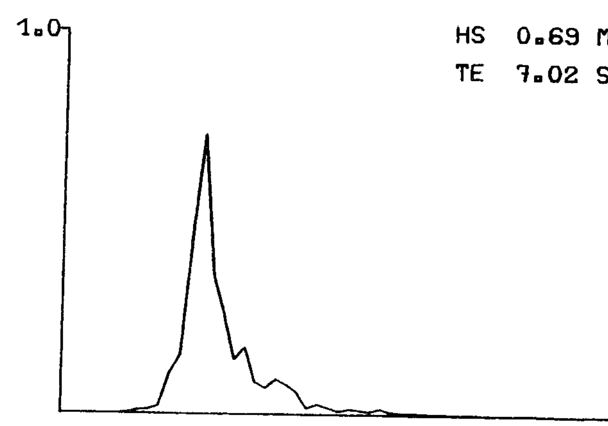

92



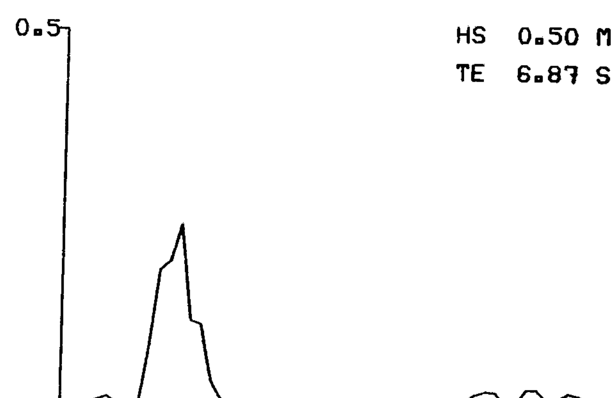

93



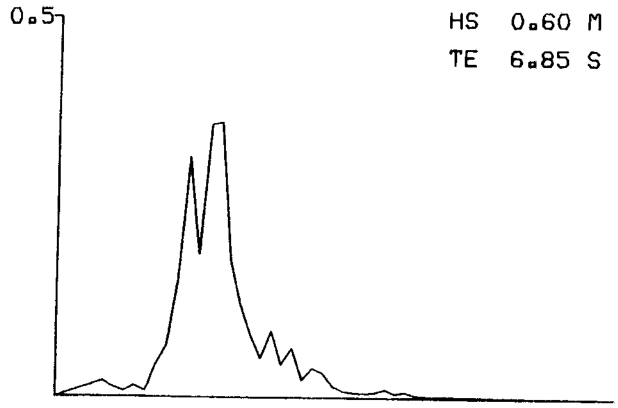

94



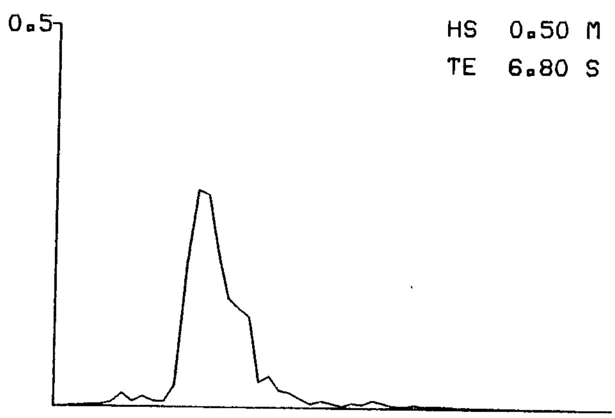

95



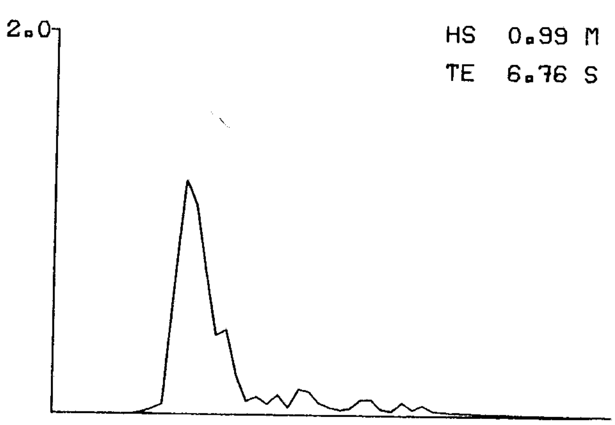

96



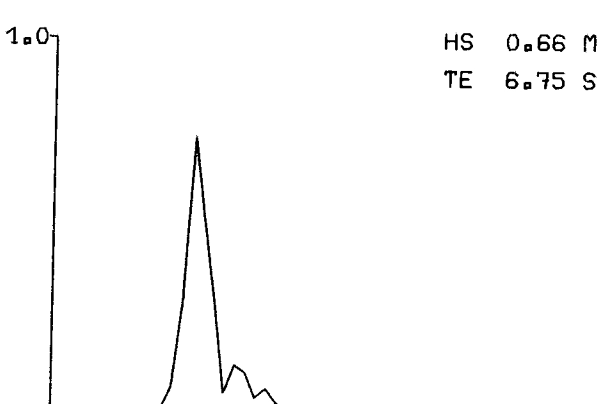

97



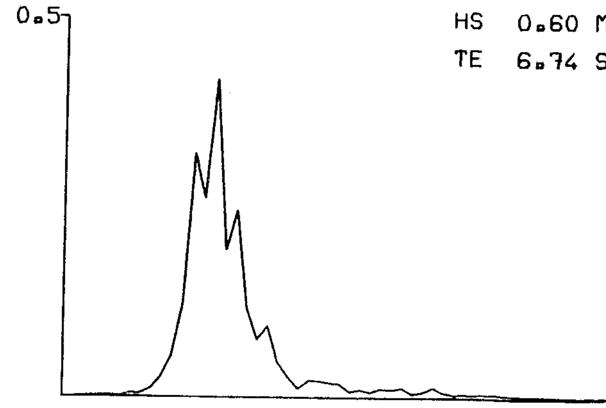

98



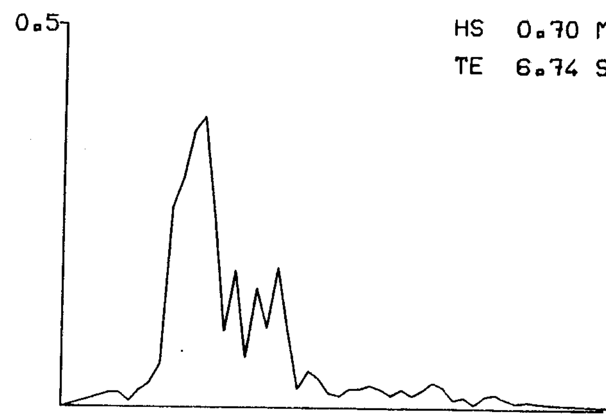

99



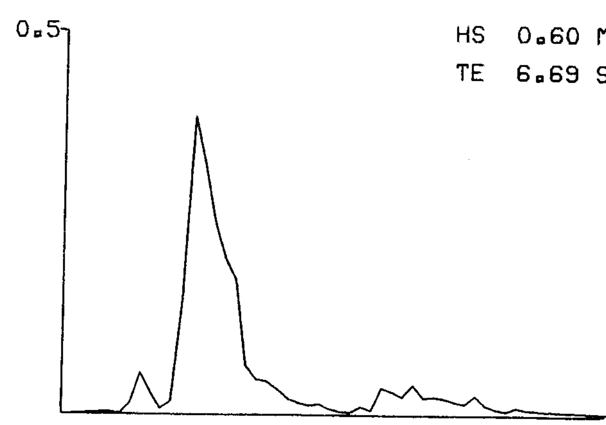

100



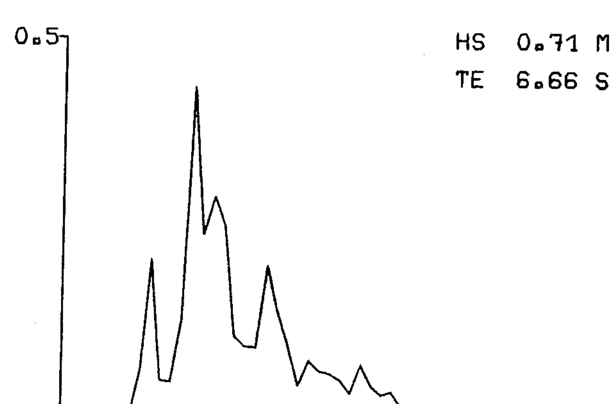

101



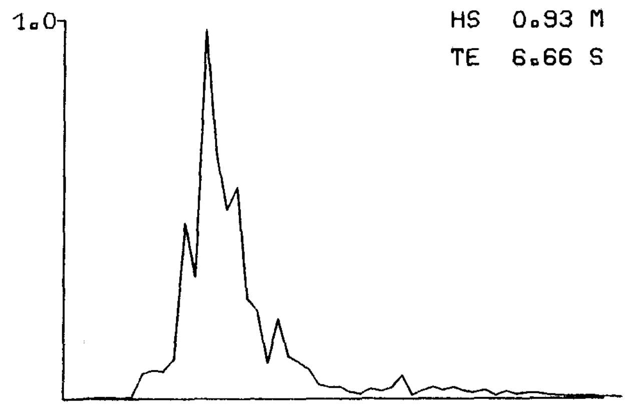

102



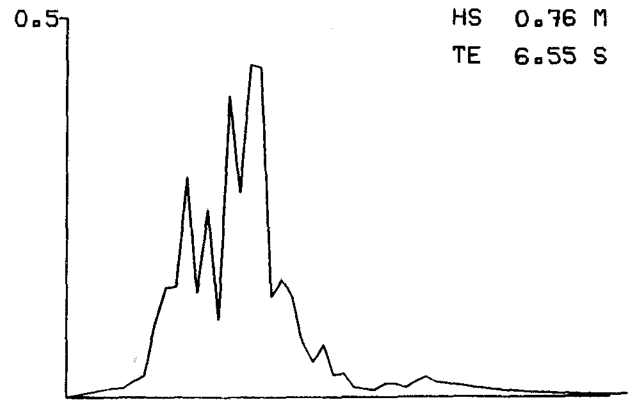

103



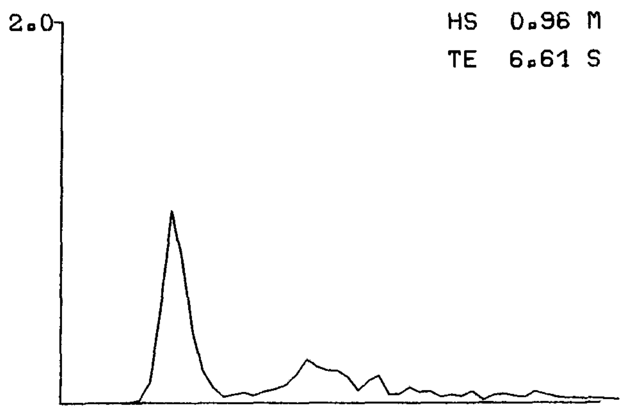

104



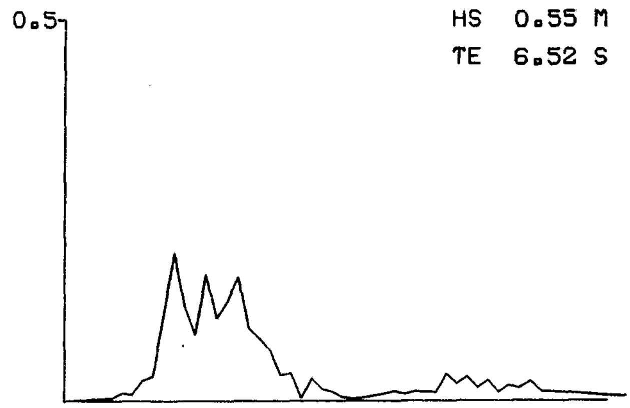

105



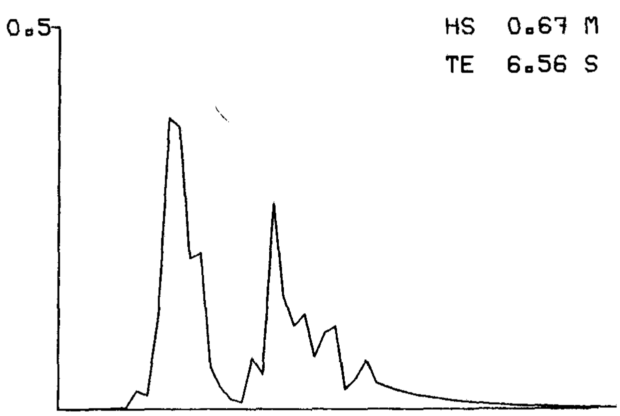

109



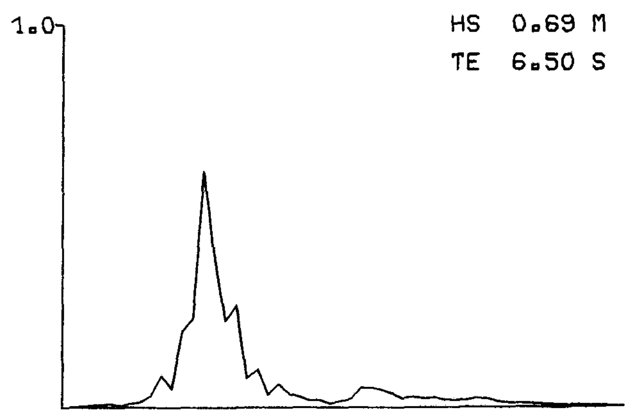

106



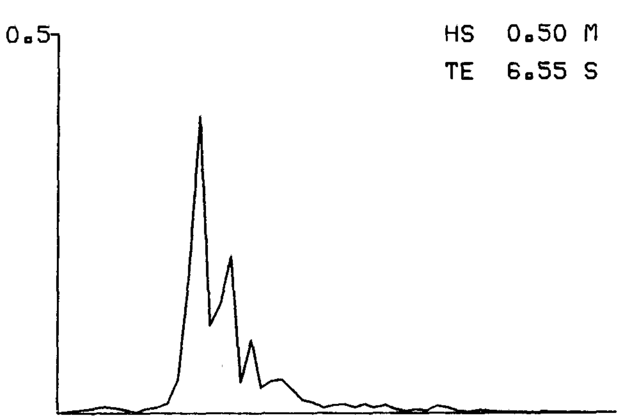

110



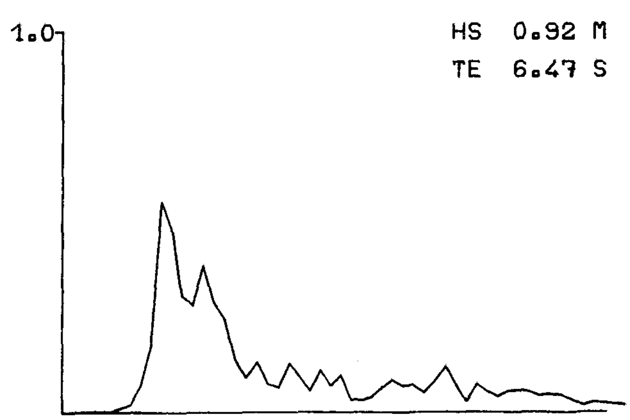

107



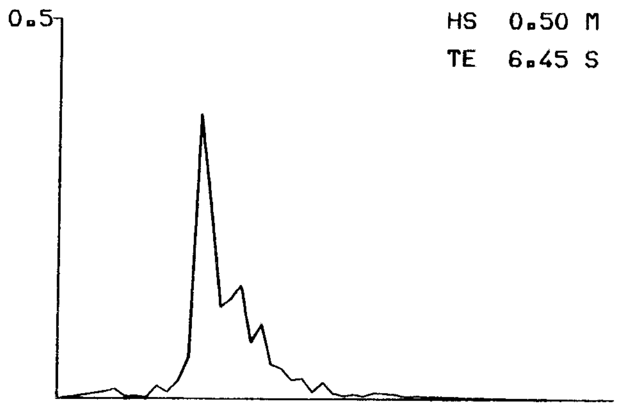

111



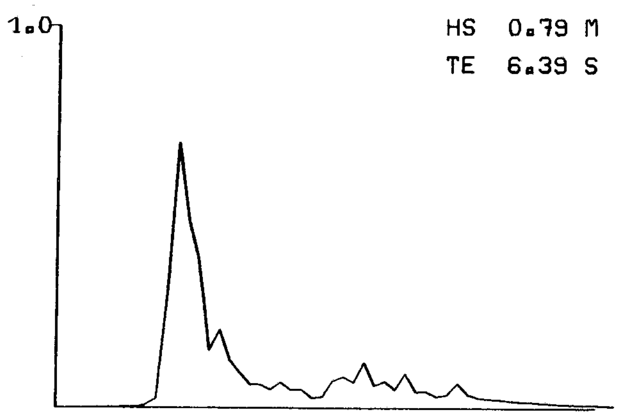

108



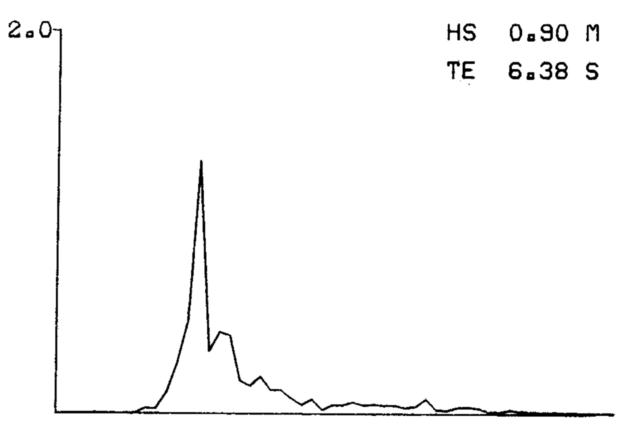

112



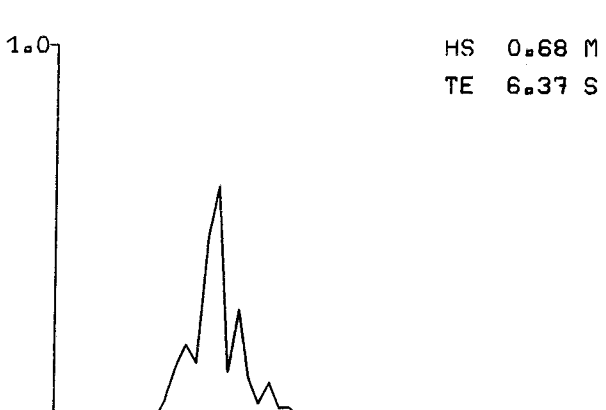

113



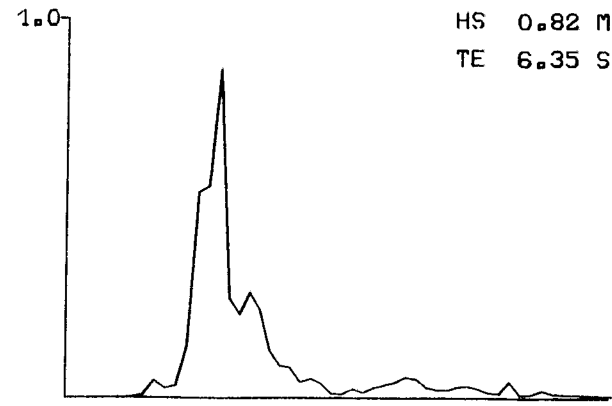

114



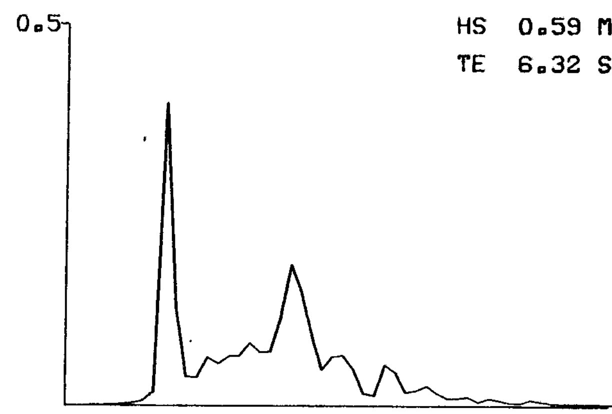

115



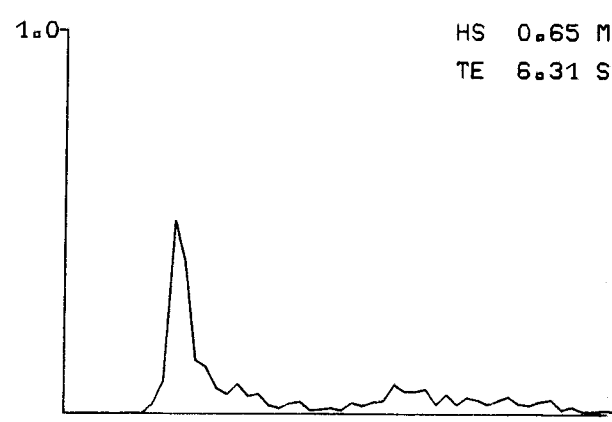

116



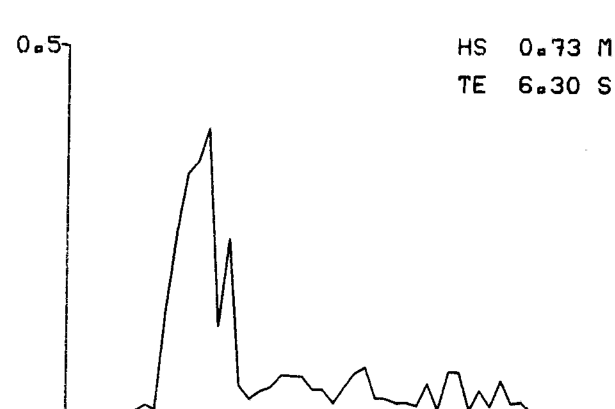

117



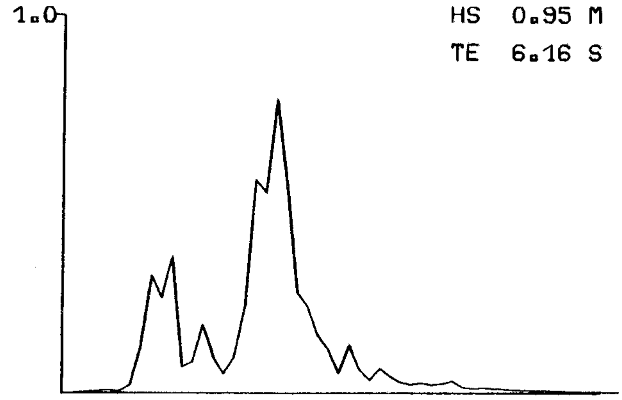

118



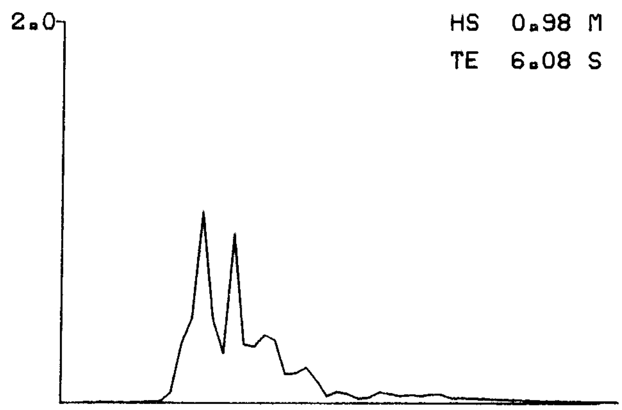

119



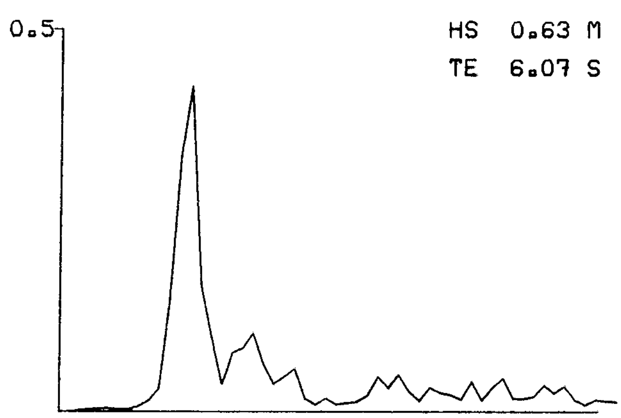

120



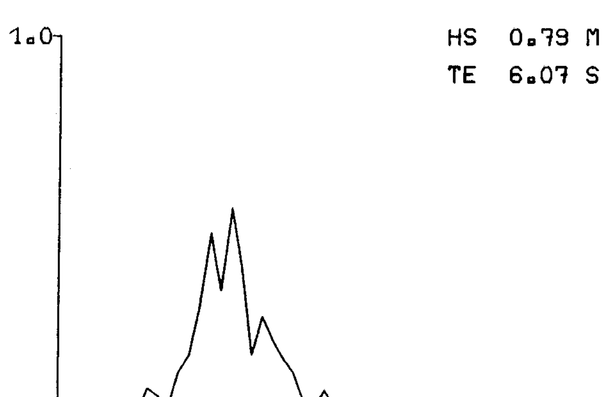

121



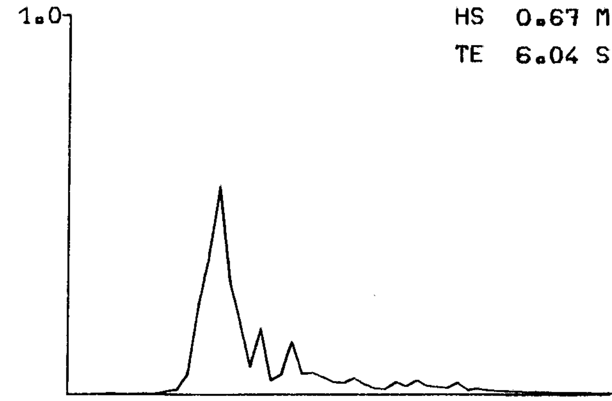

122



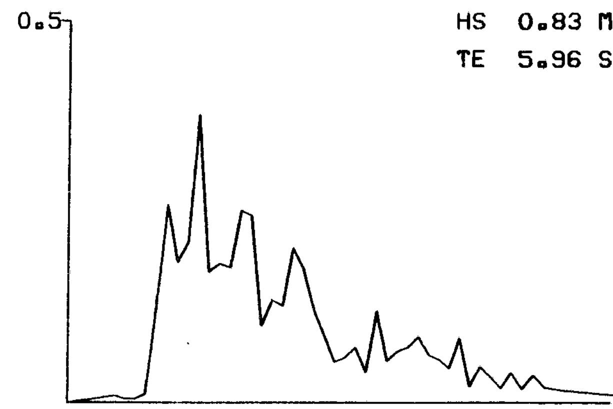

123



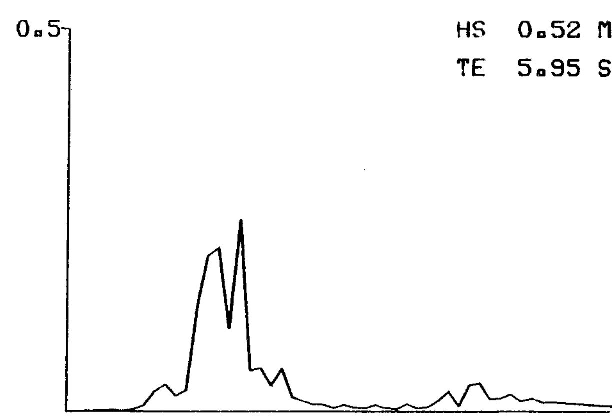

124



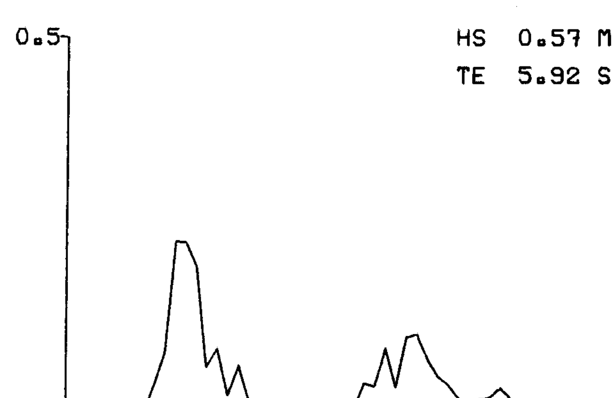

125



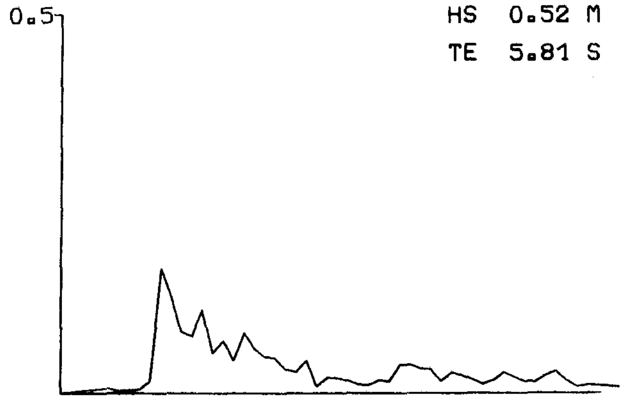

126



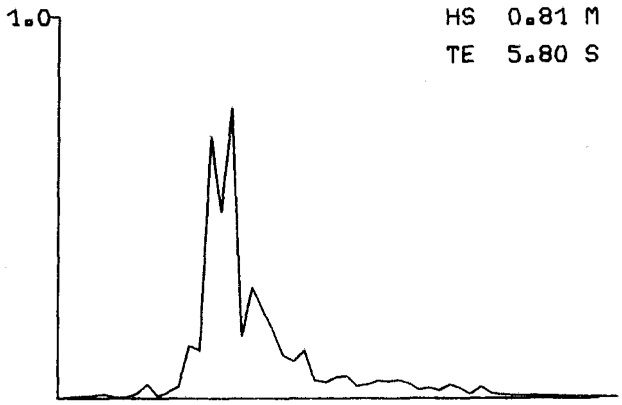

127



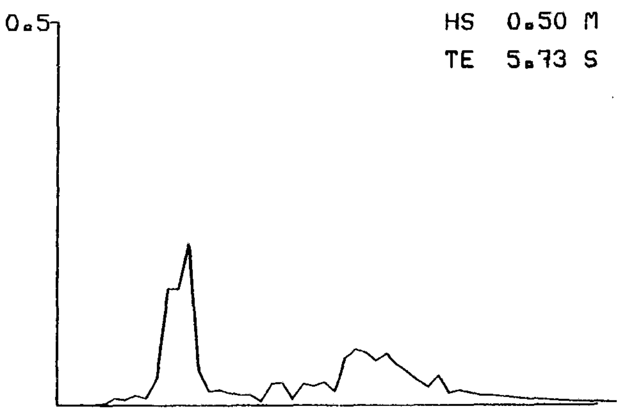

128



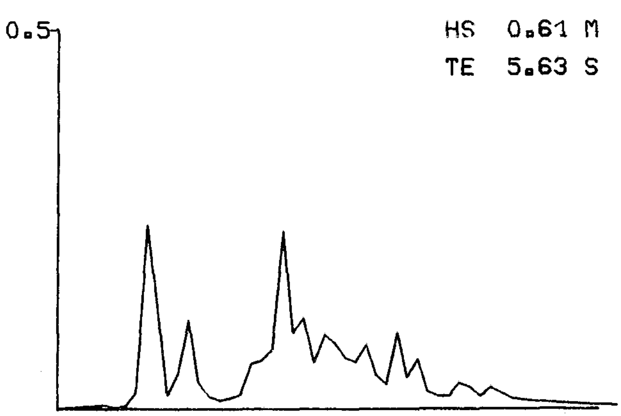

129



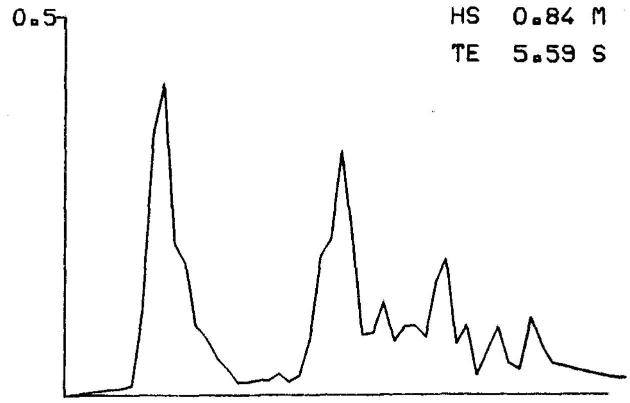

130



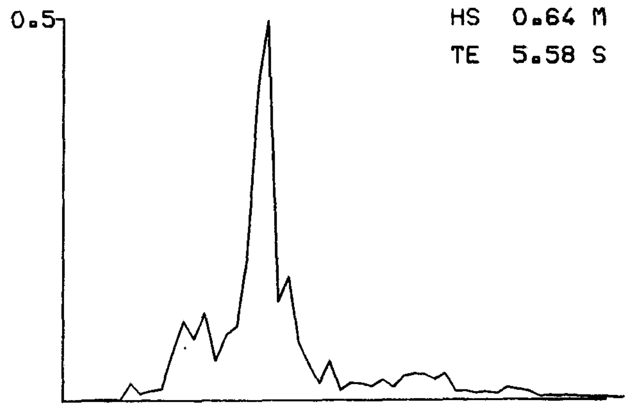

131



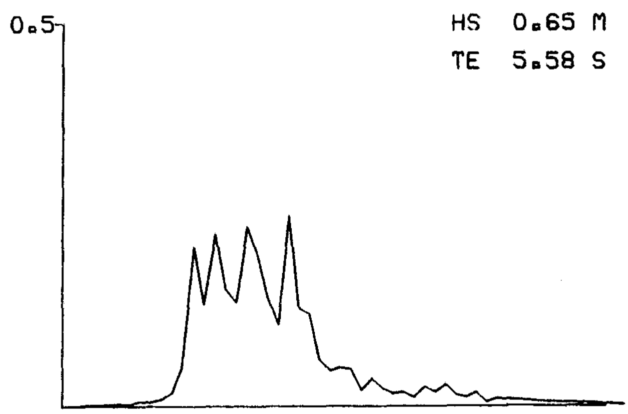

132



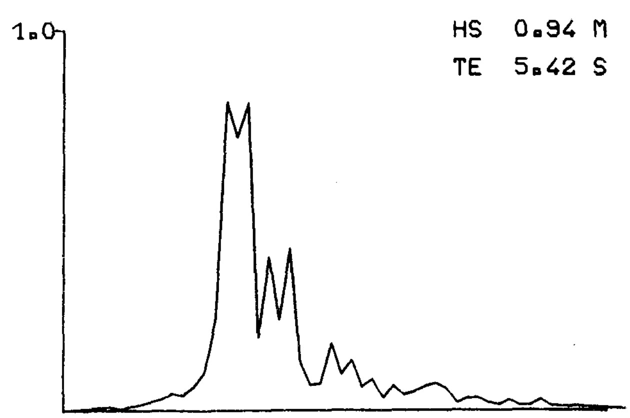

133



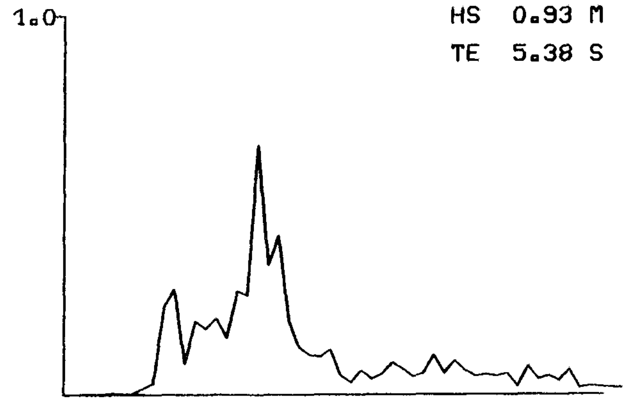

134



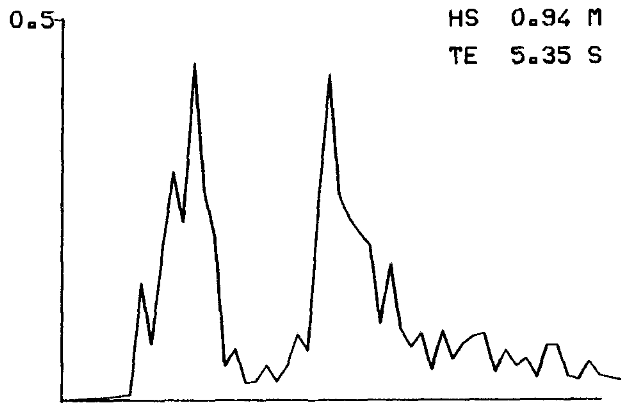

135



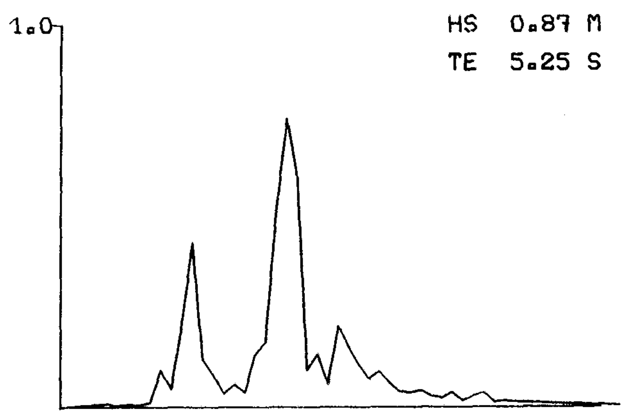

136



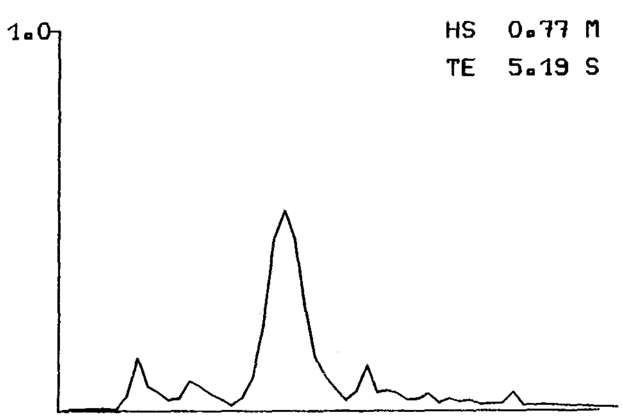

137



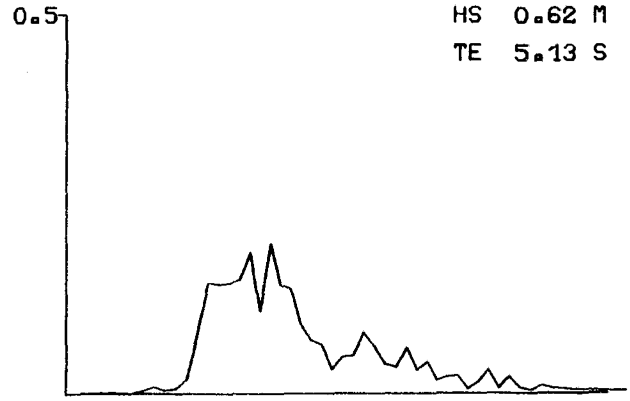

138



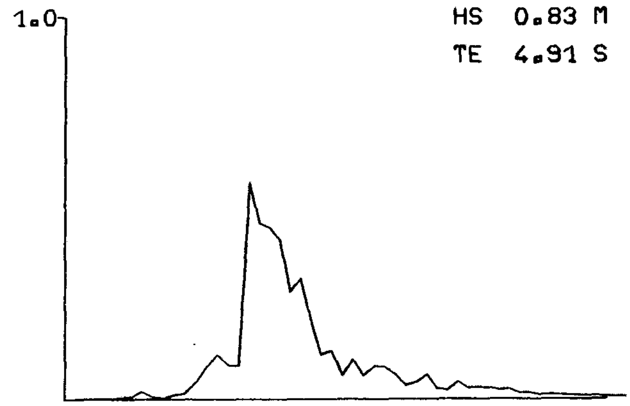

139



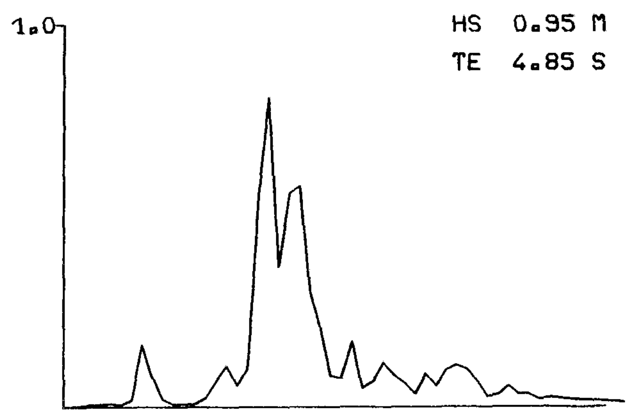

140



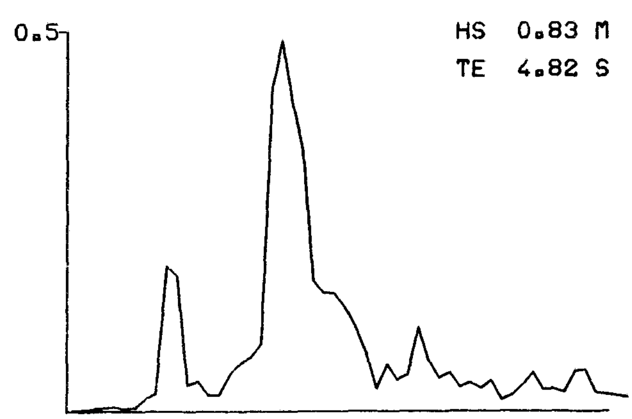

141



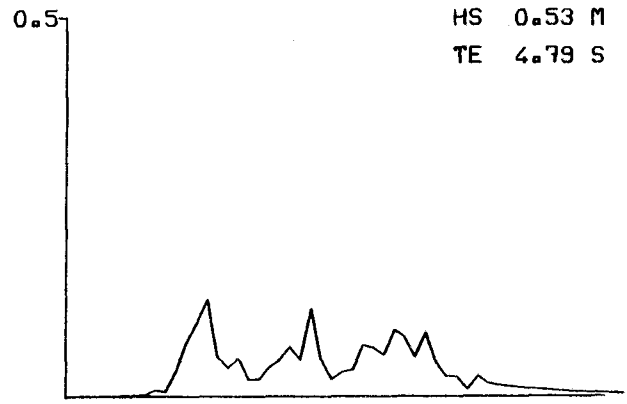

142



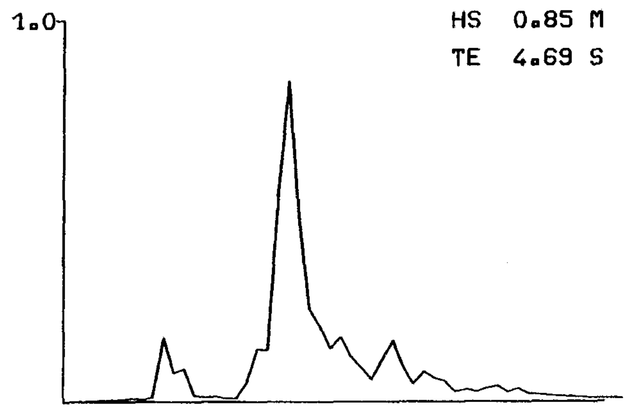

143



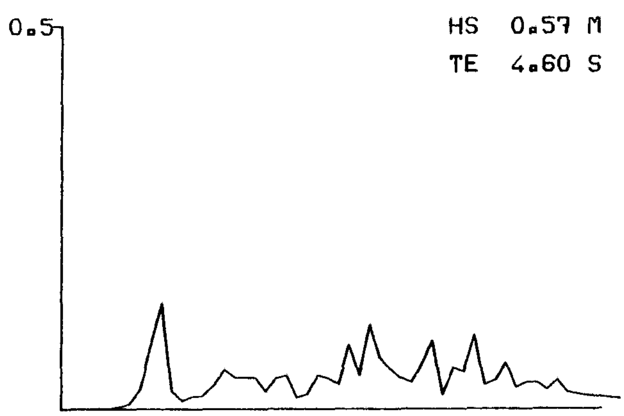

144



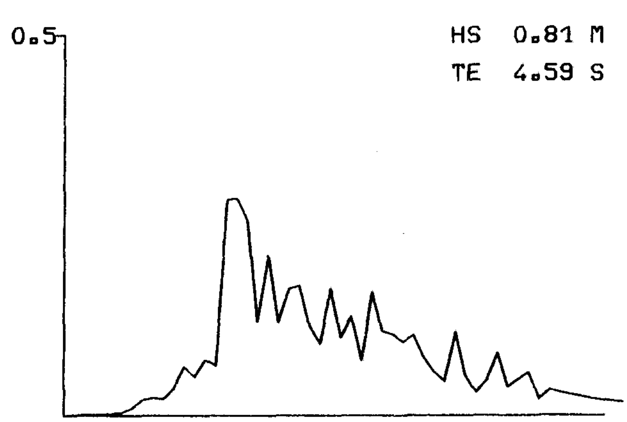

145



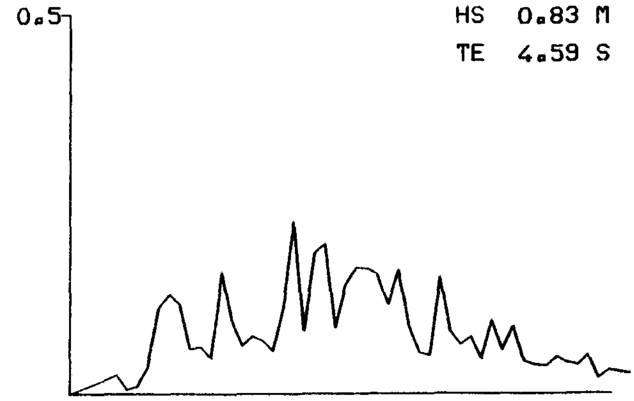

146



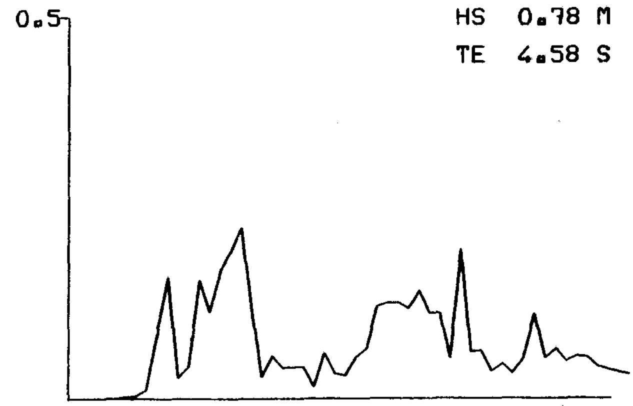

147



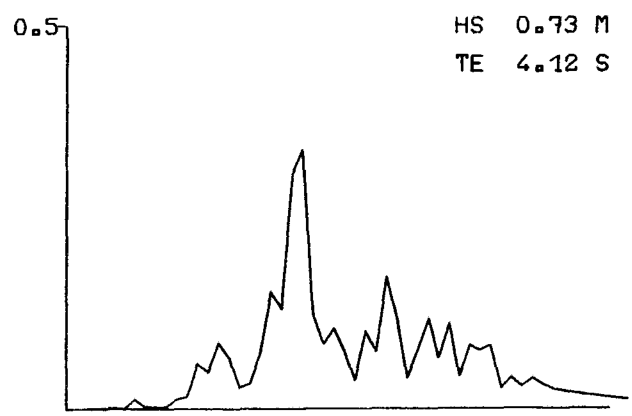

148




149

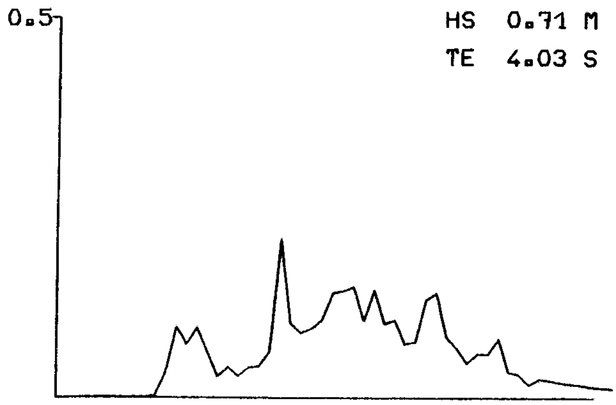



150

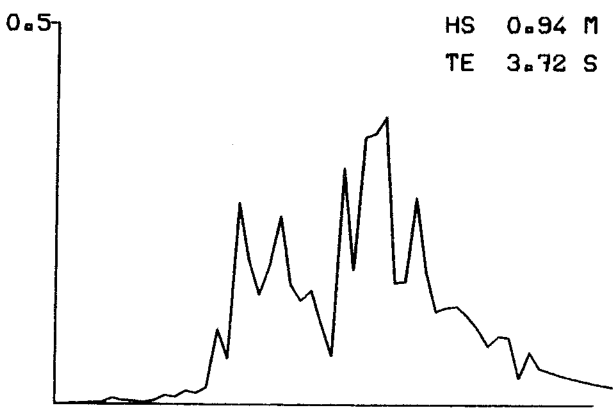



151

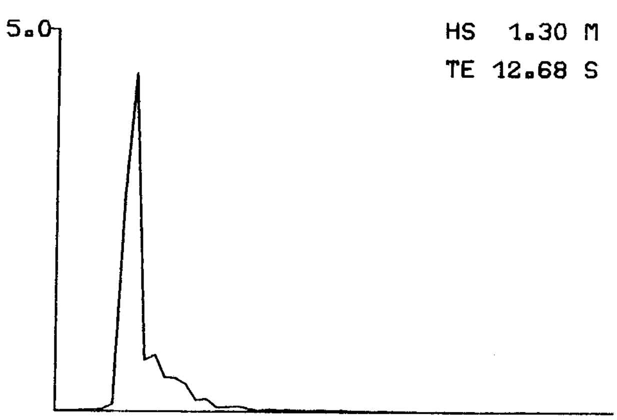

152



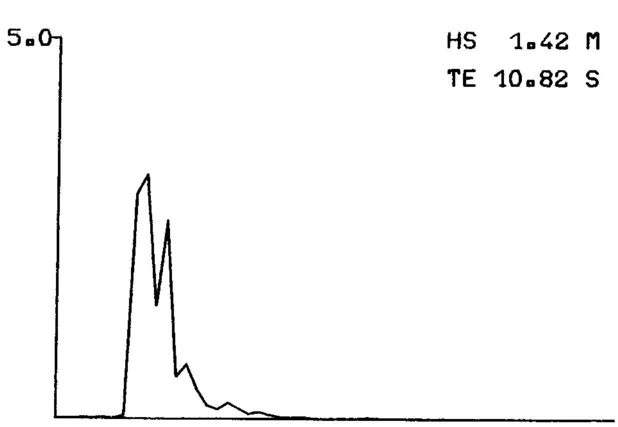

153



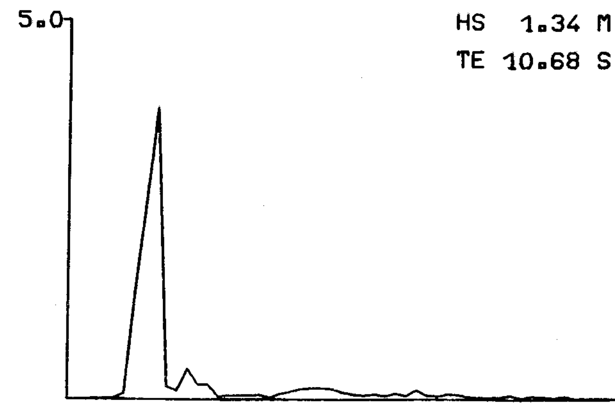

154



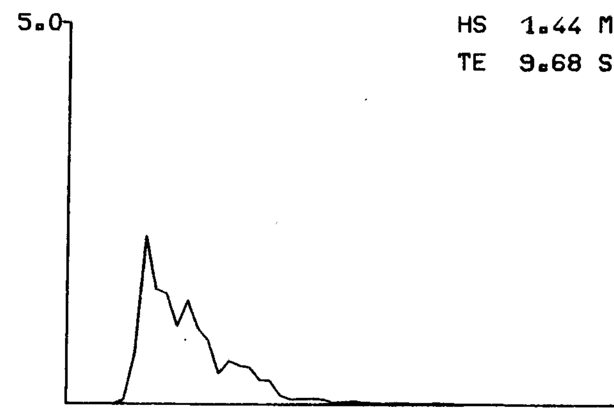

155



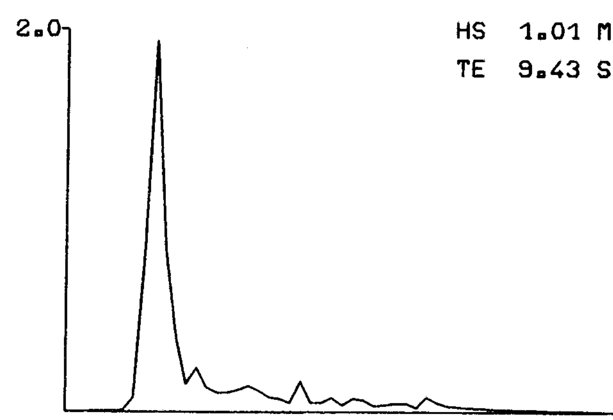

156



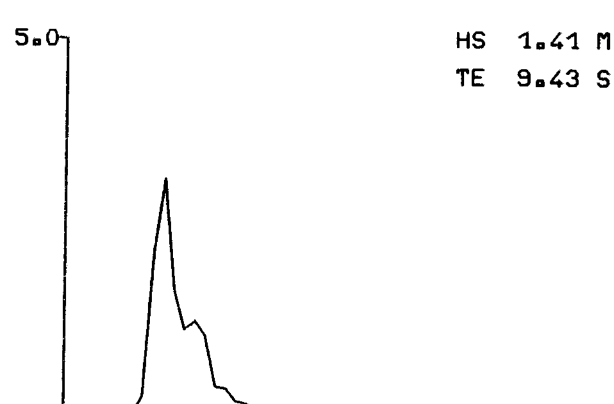

157



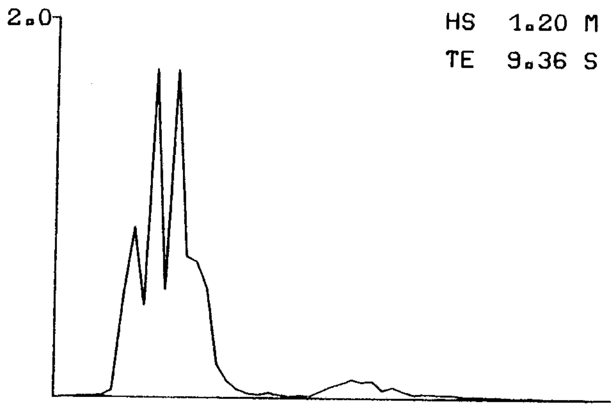

158



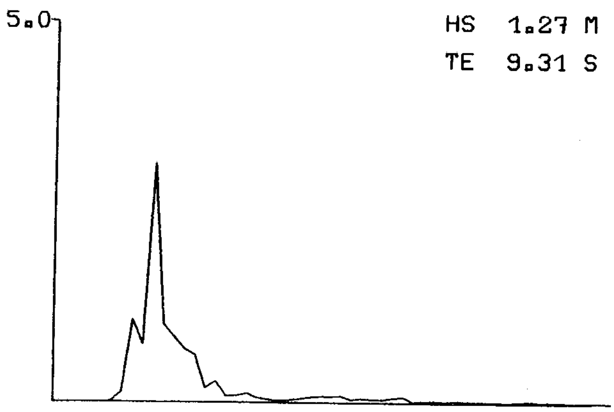

159



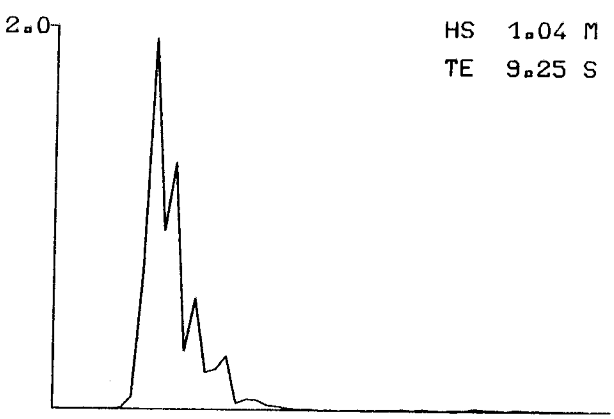

160



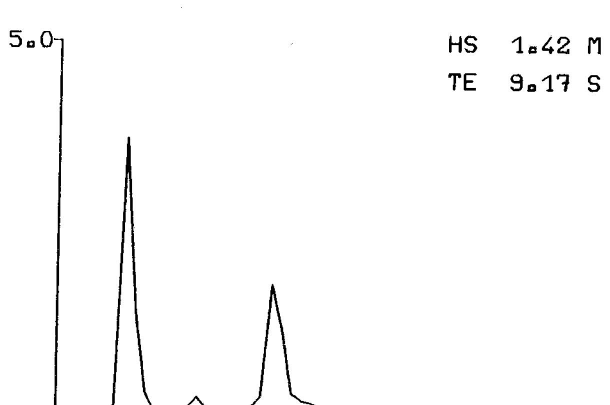

161



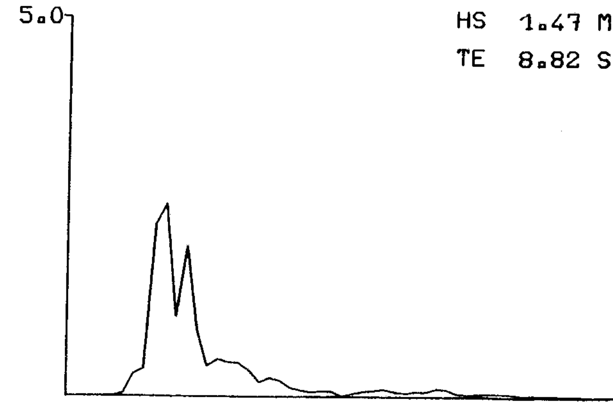

162



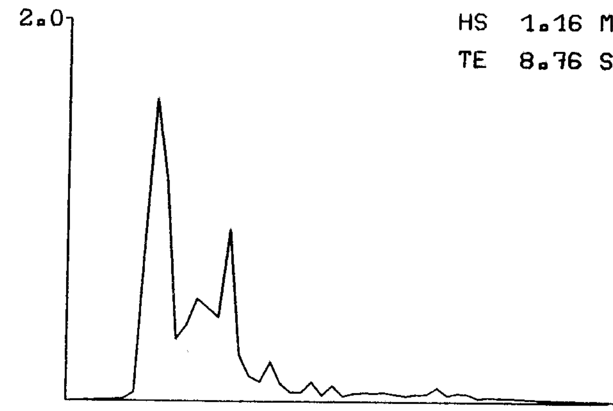

163



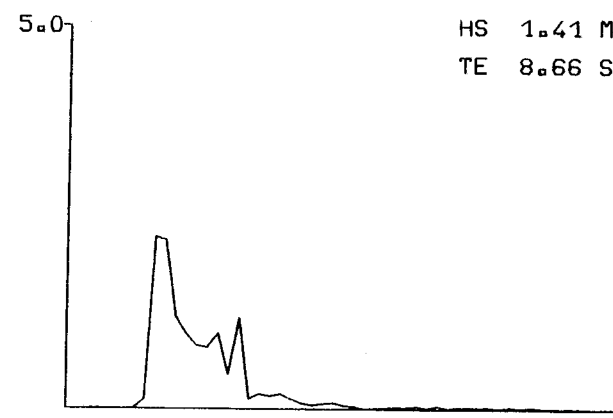

164



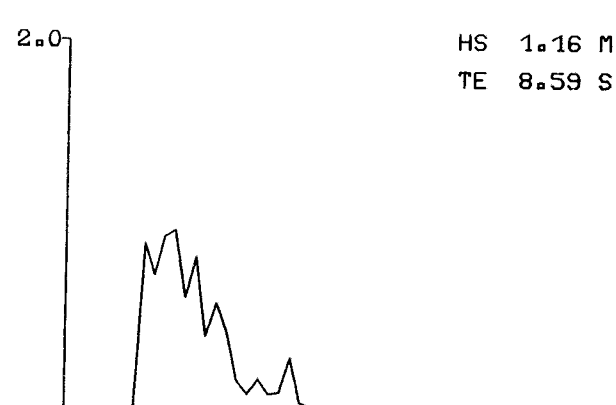

165



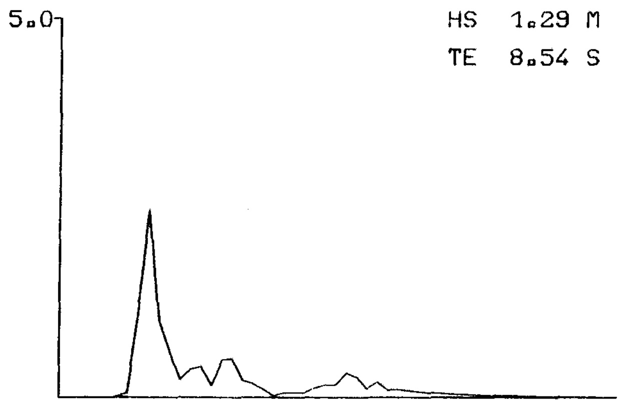

166



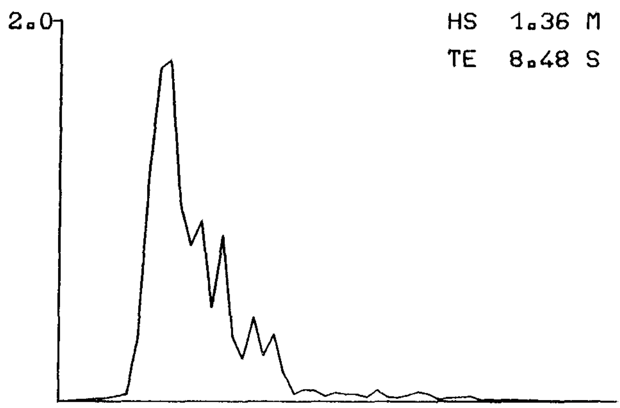

167



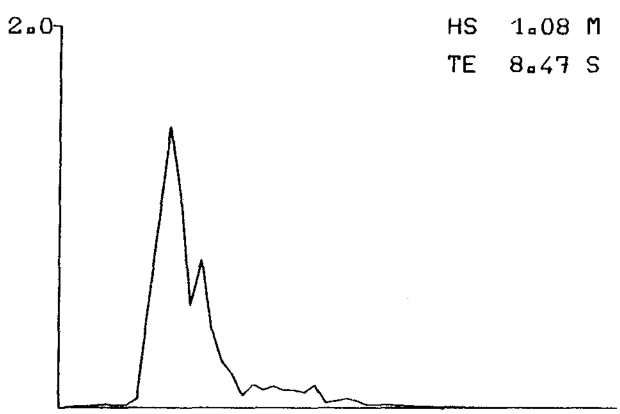

168



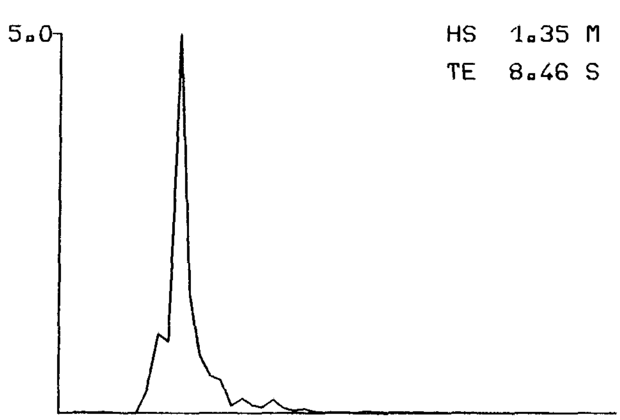

169



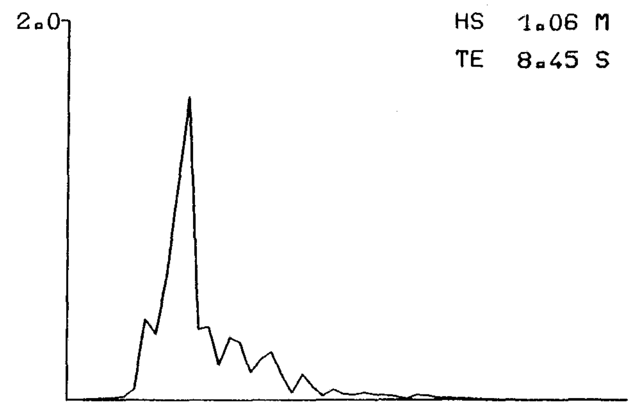

170



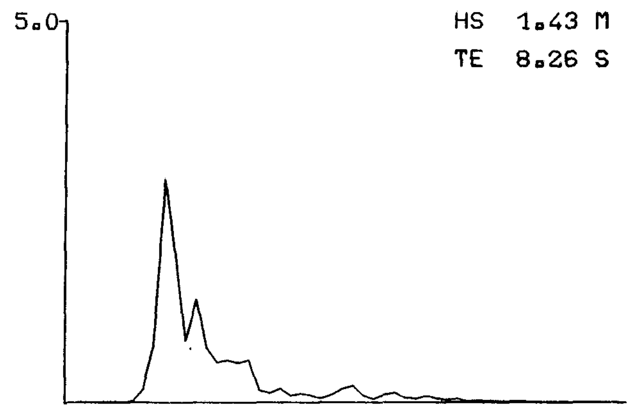

171



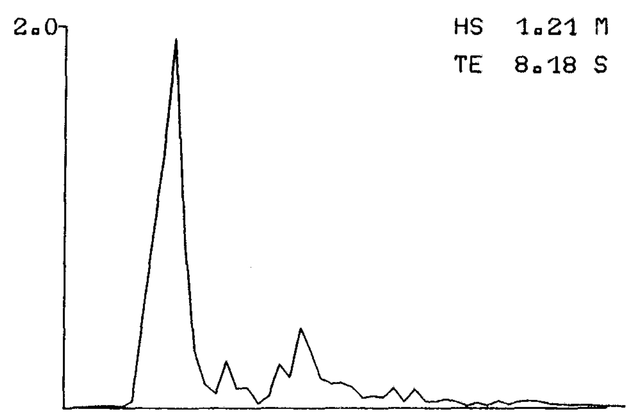

172



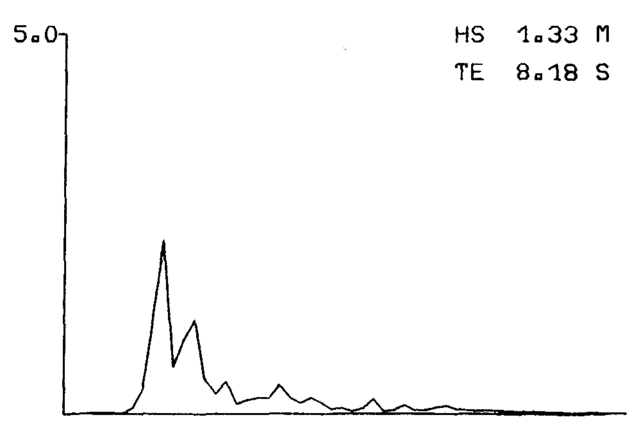

173



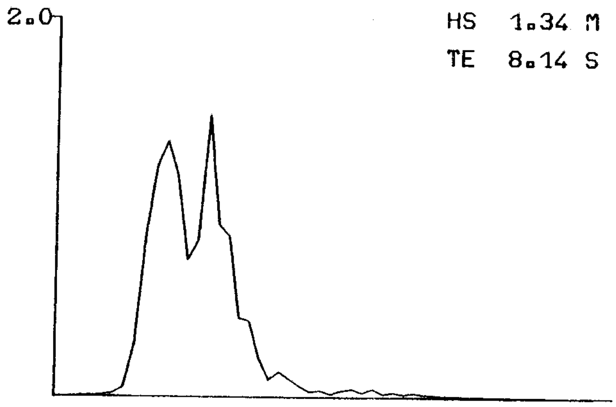

174



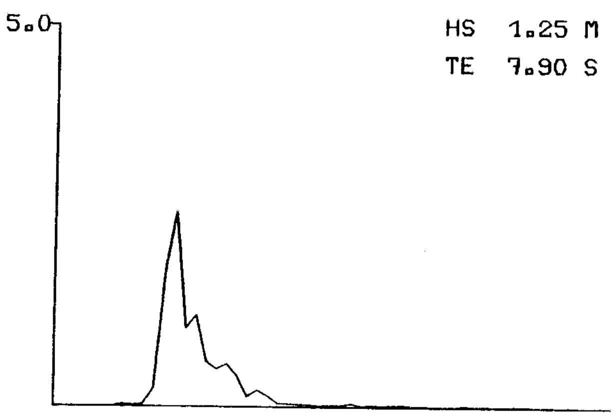

175



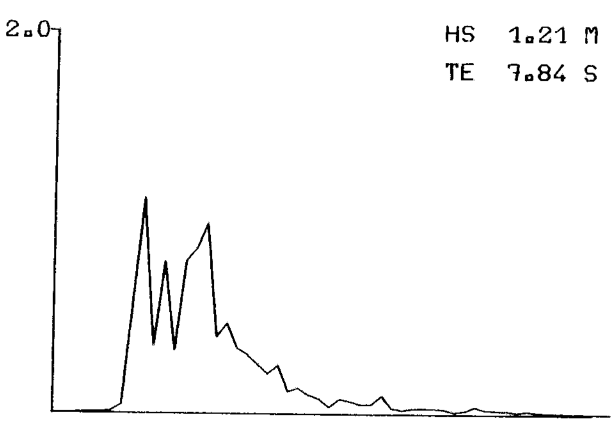

176



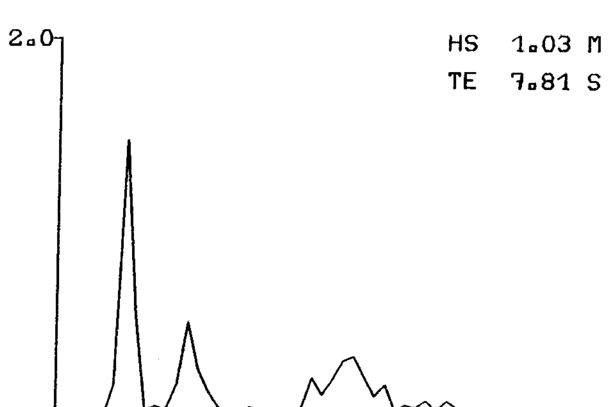

177



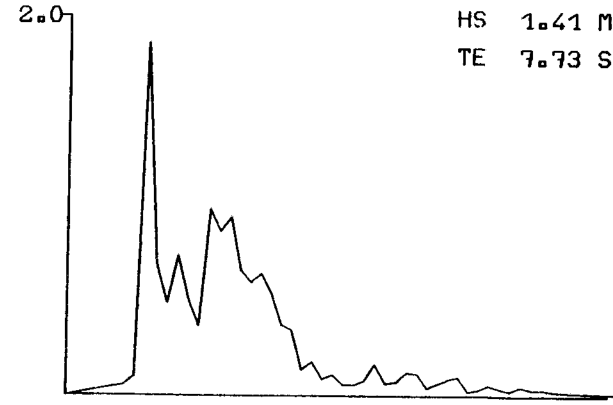

178



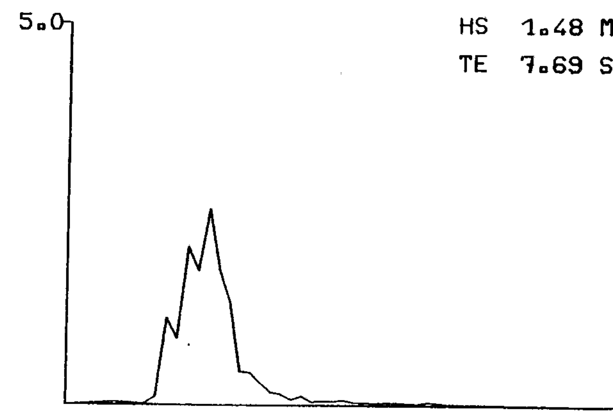

179



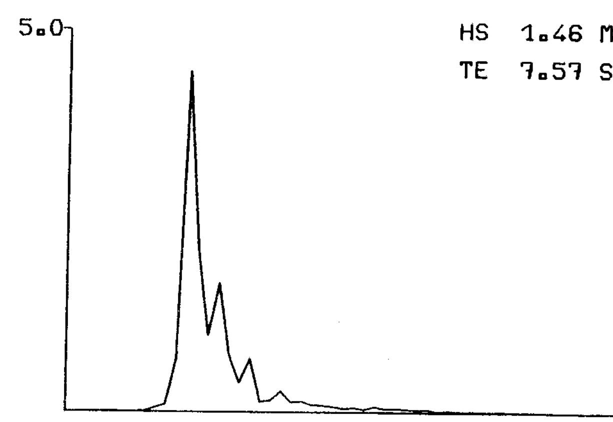

180



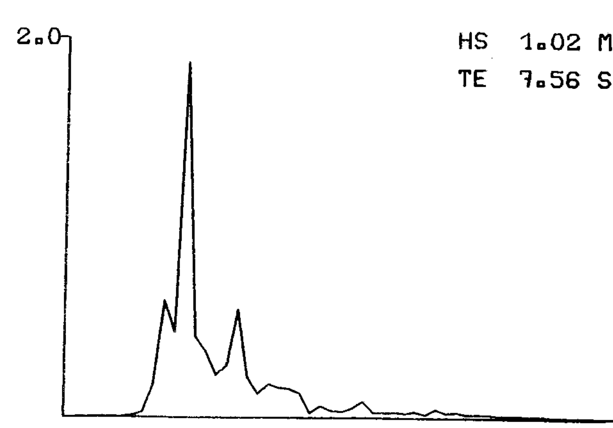

181



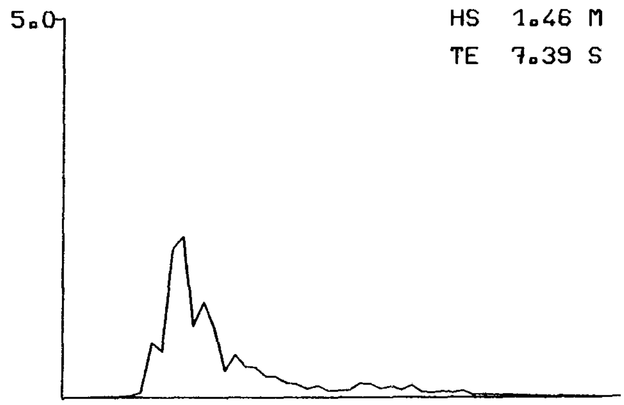

182



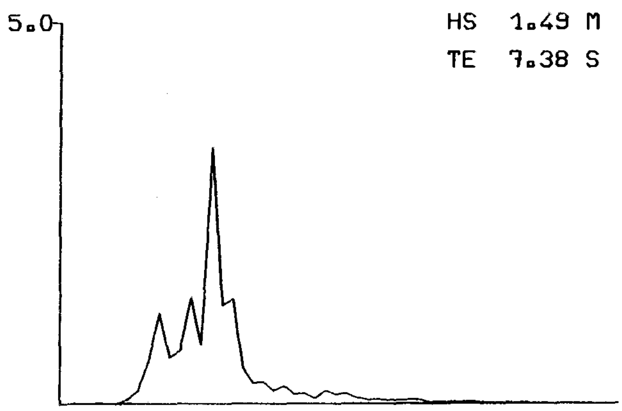

183



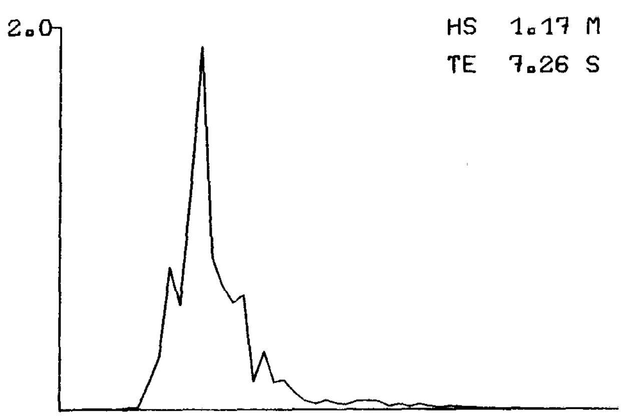

184



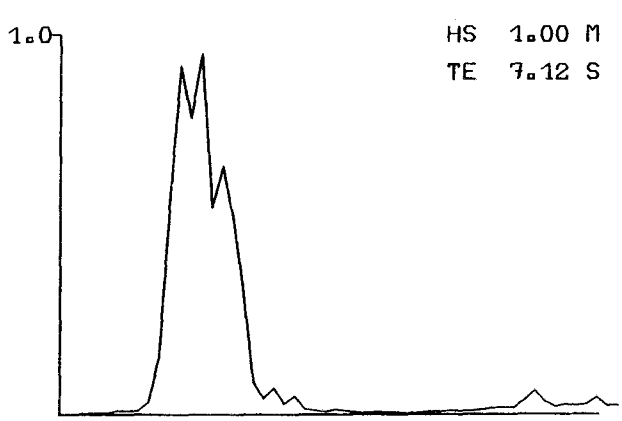

185



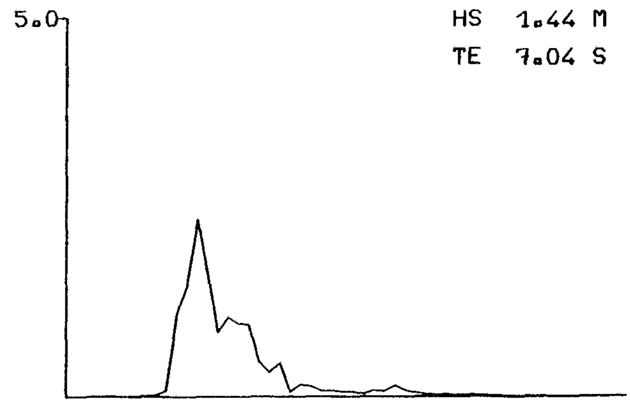

186



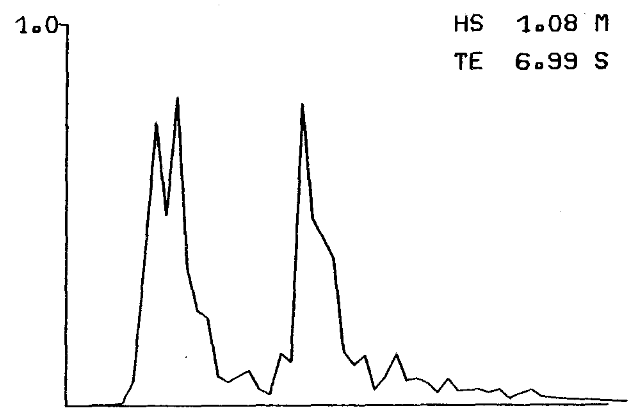

187



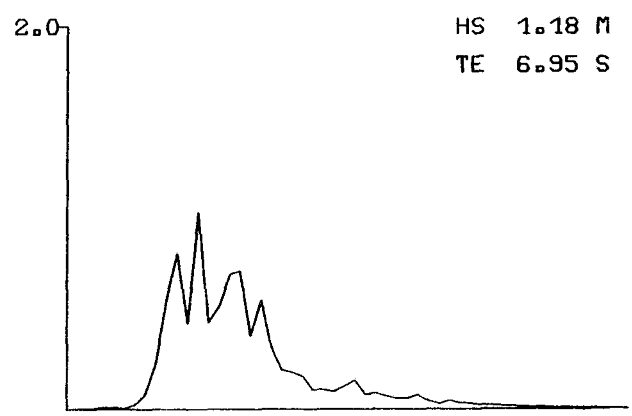

188



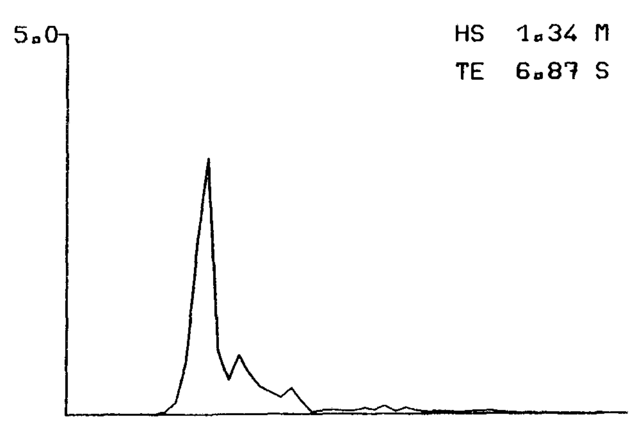

189



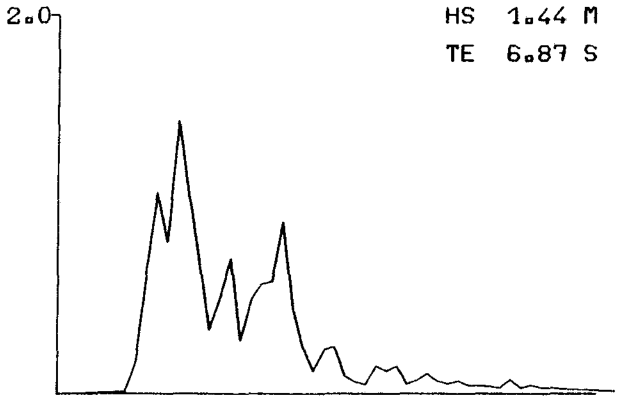

190



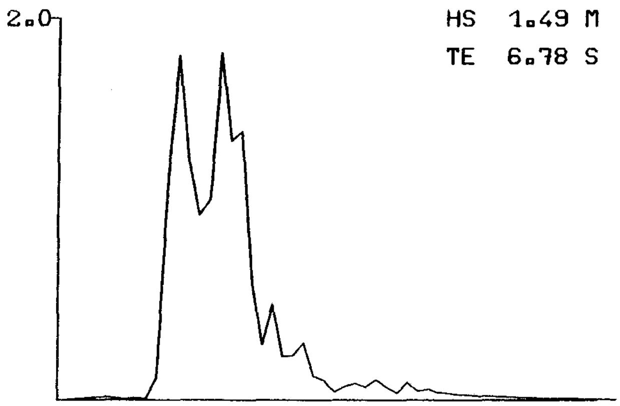

191



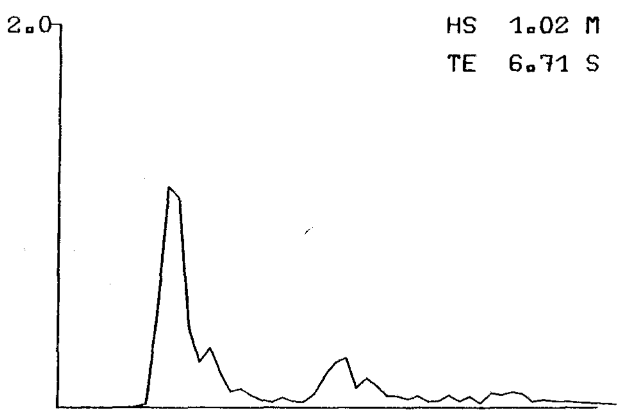

192



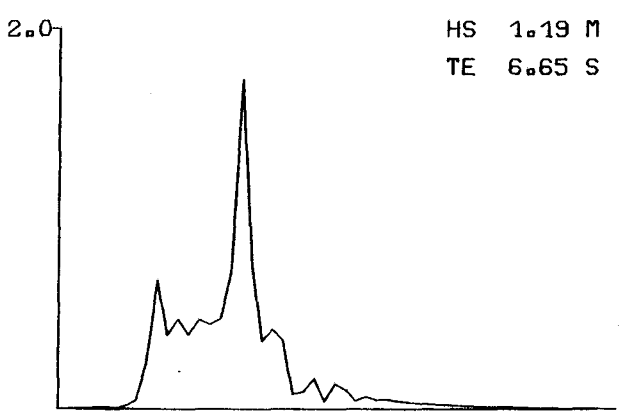

193



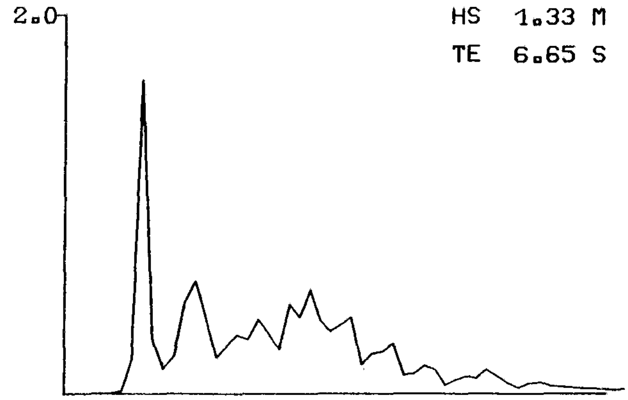

194



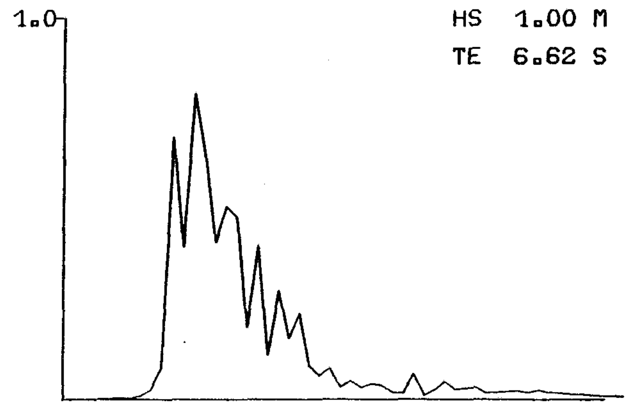

195



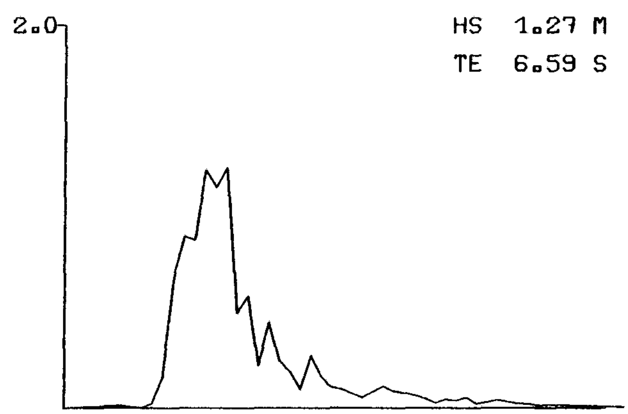

196



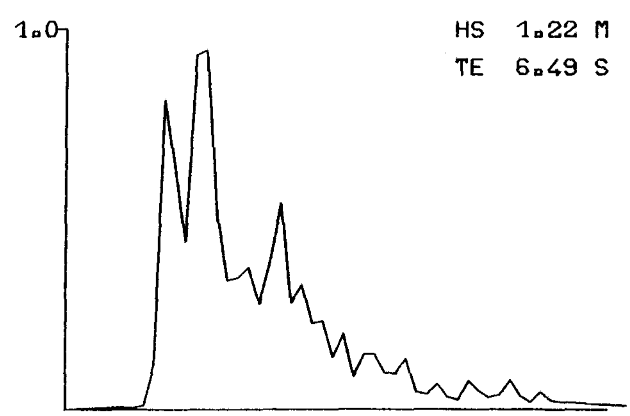

197



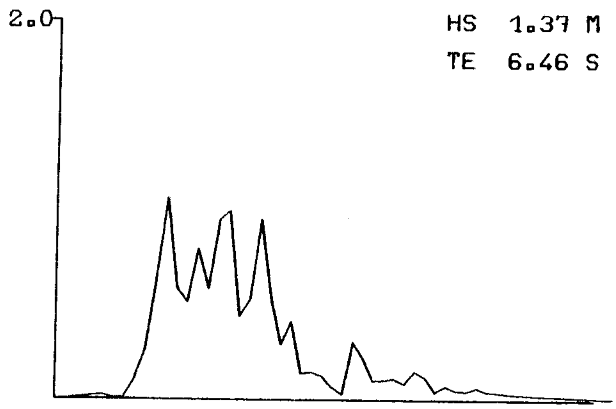

198



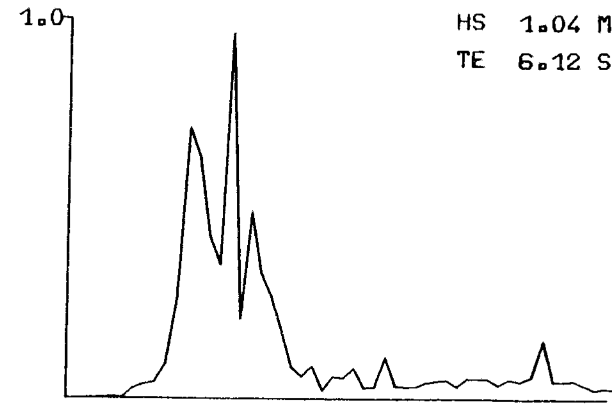

199



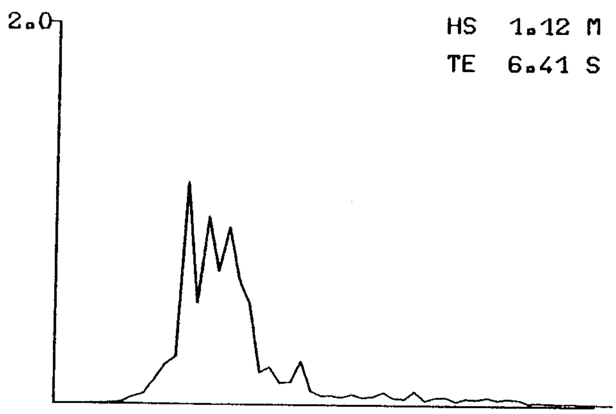

200



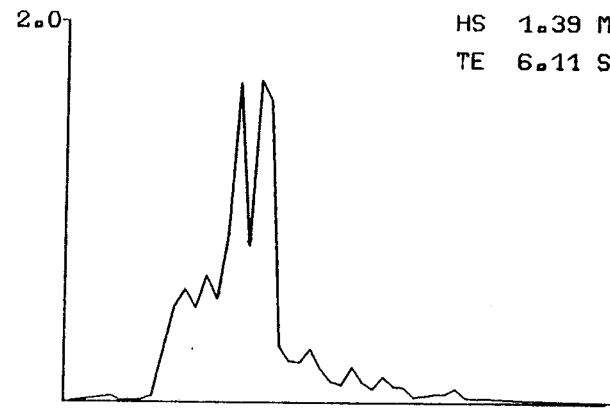

201



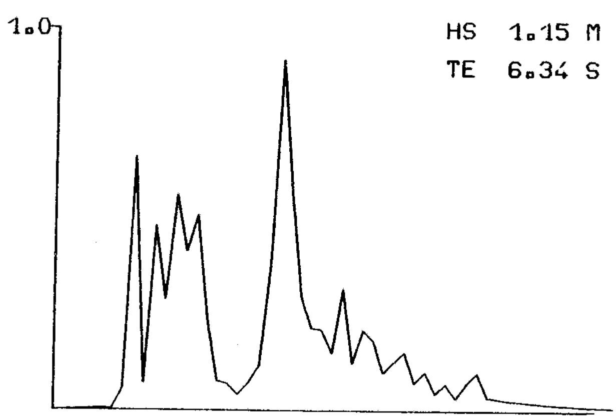

205



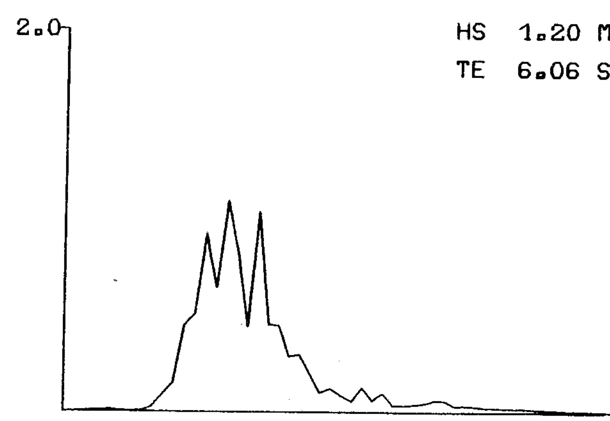

202



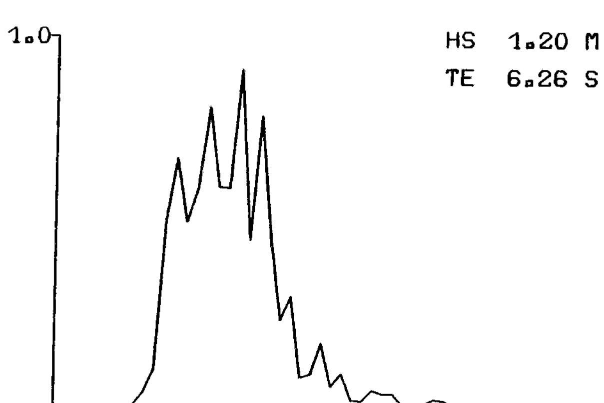

206



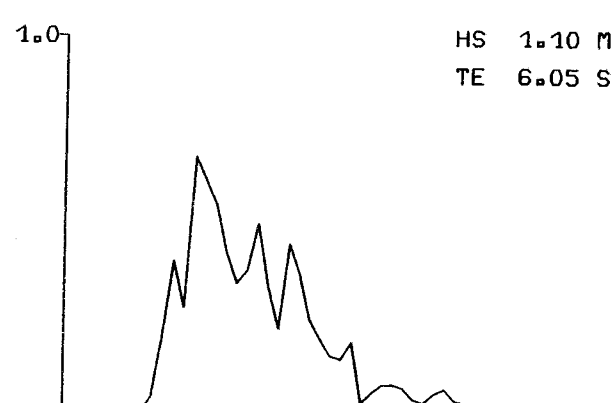

203



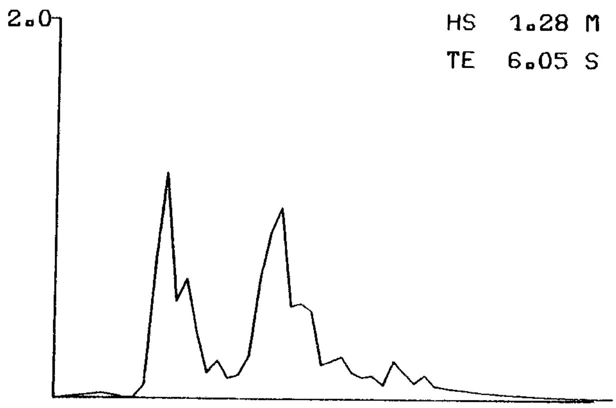

207



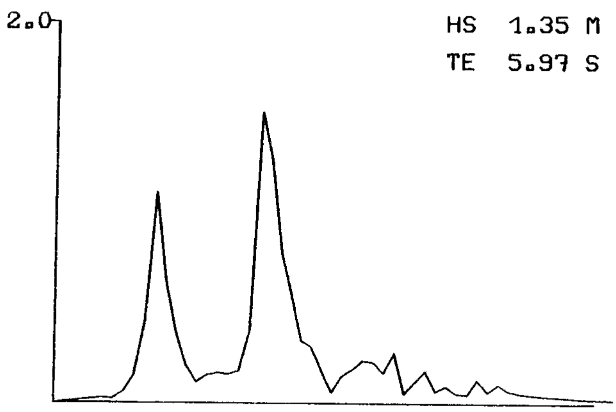

204



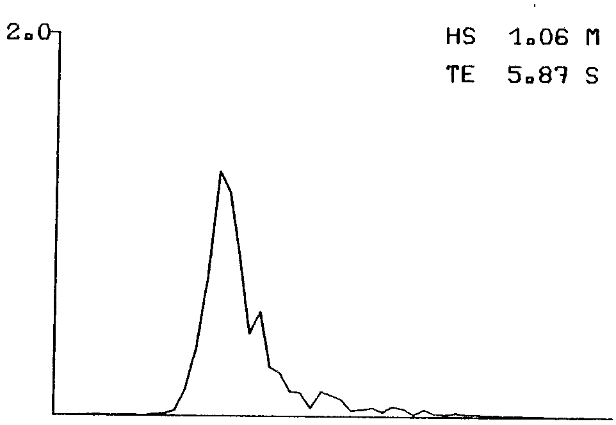

208



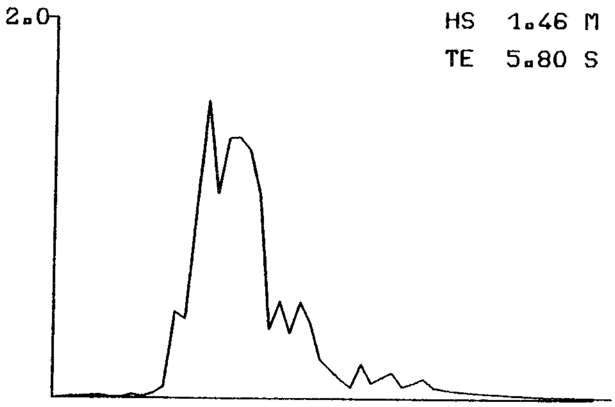

209



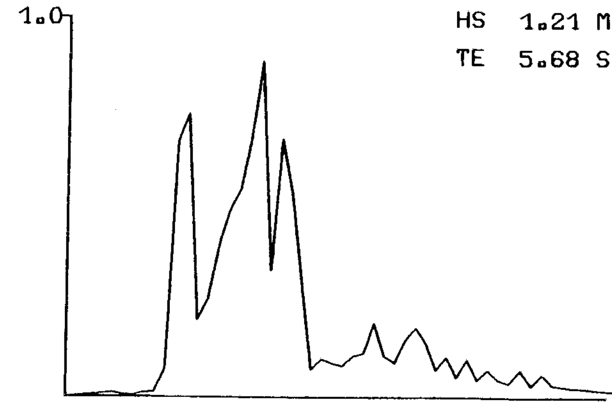

210



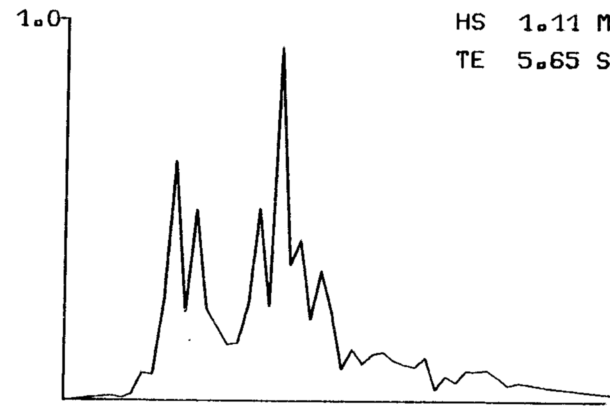

211



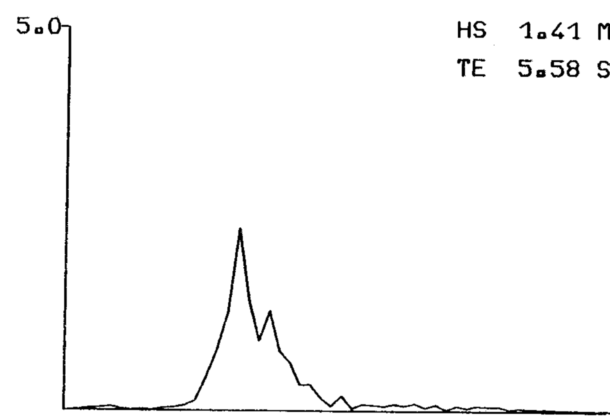

212



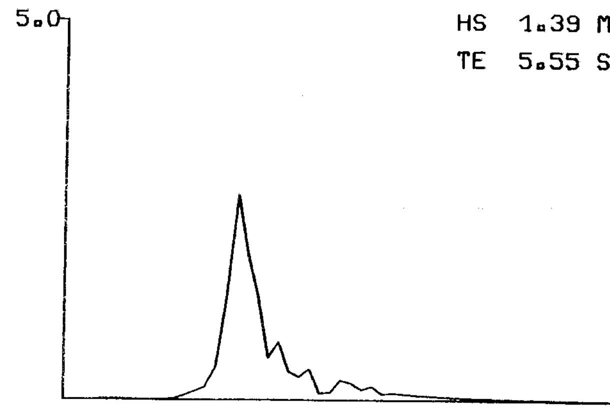

213



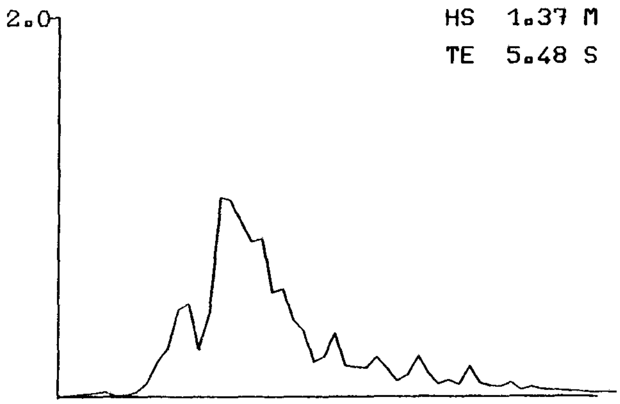

214



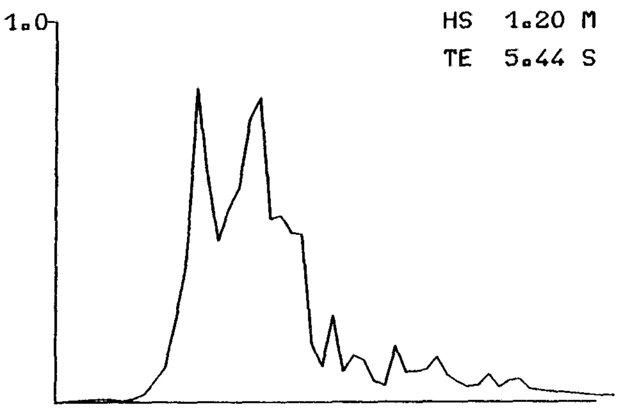

215



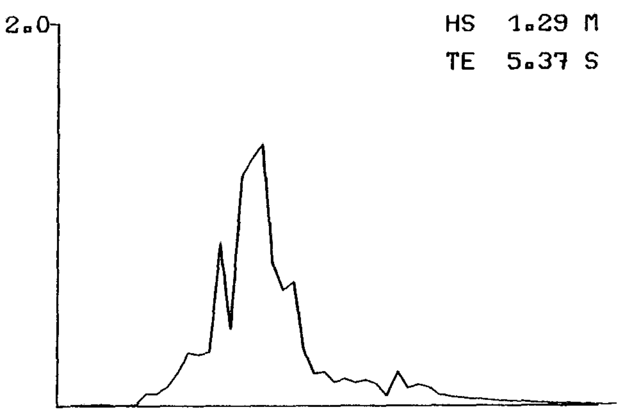

216



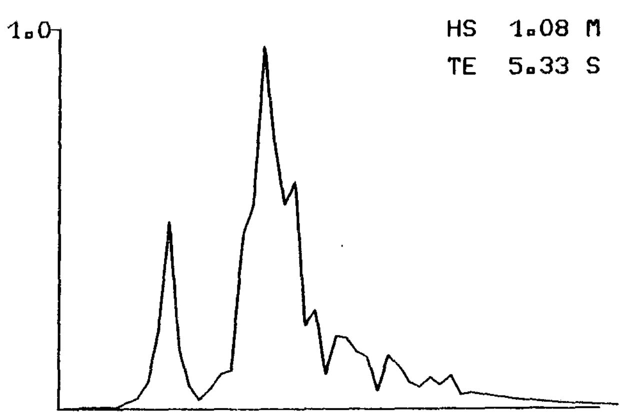

217



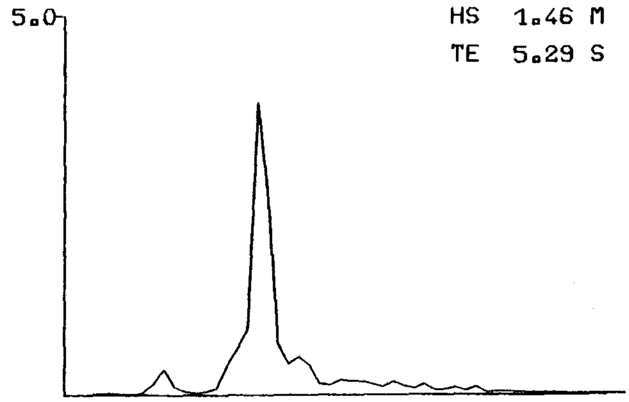

218



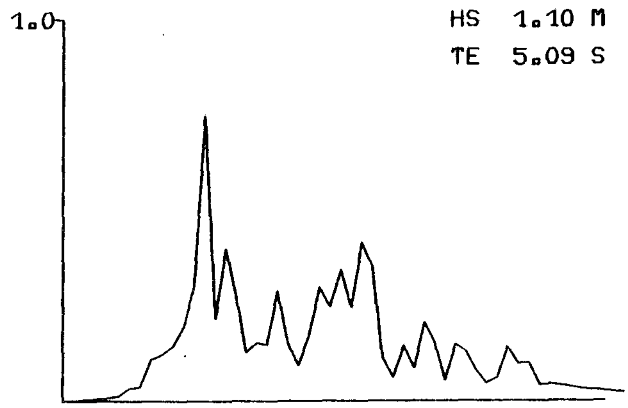

219



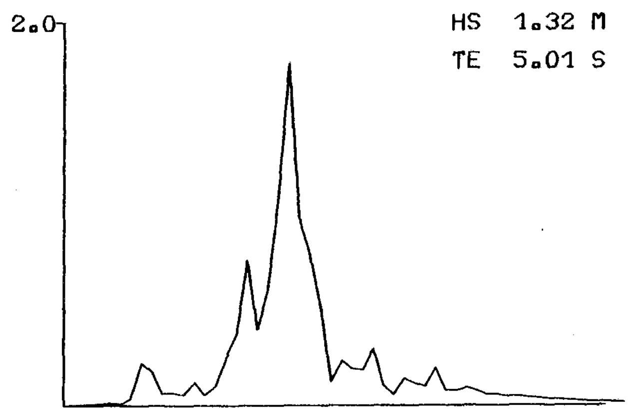

220



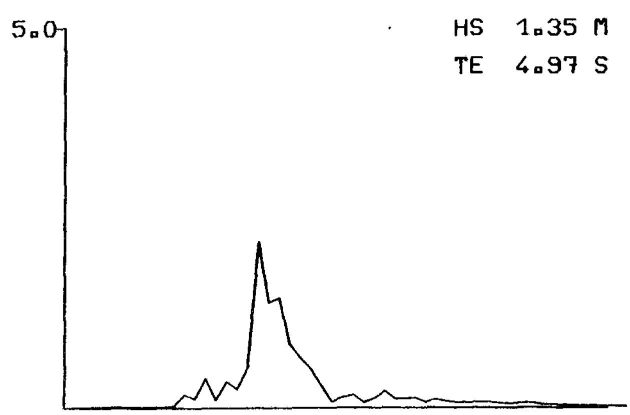

221



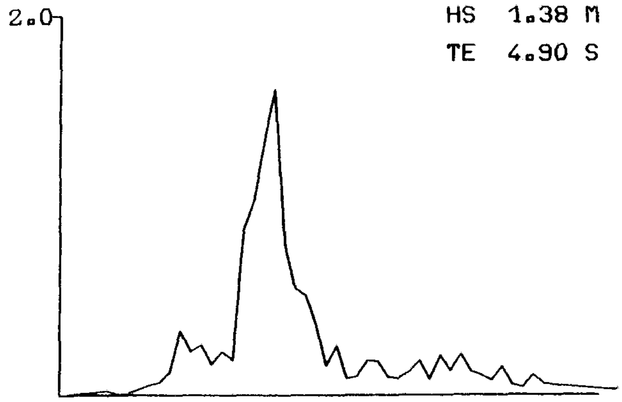

222



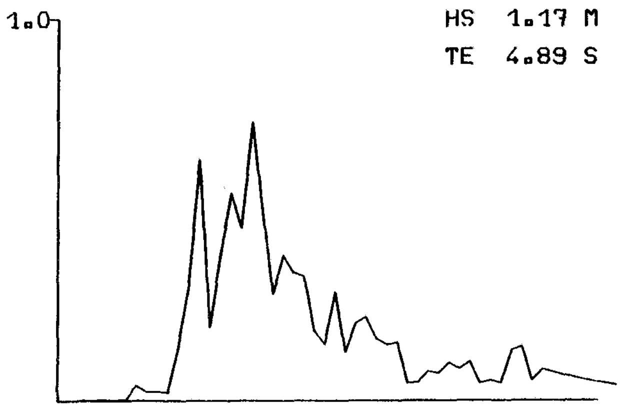

223



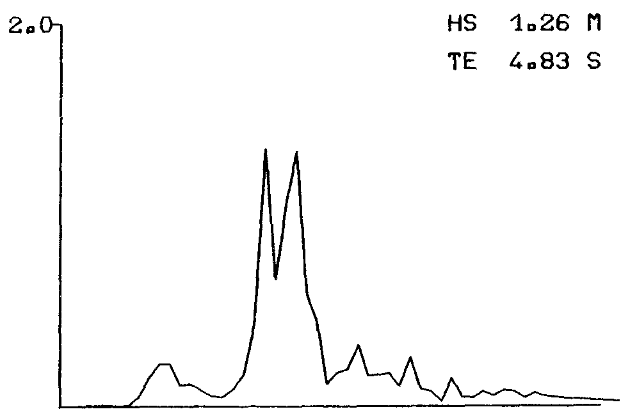

224



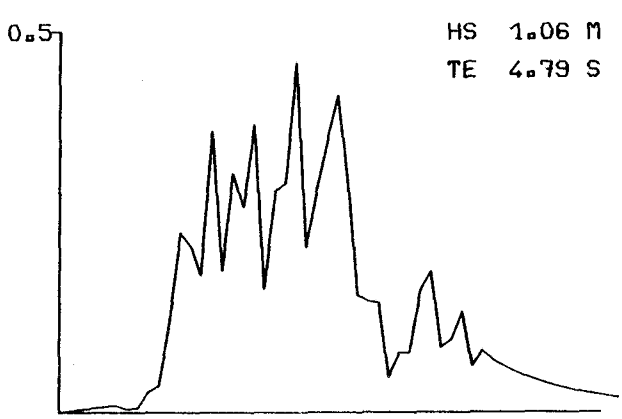

225



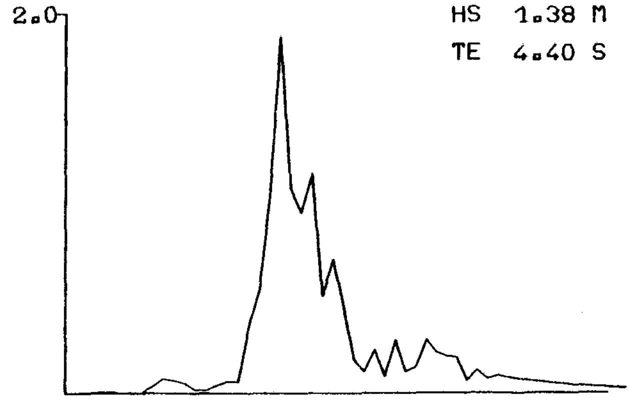

226



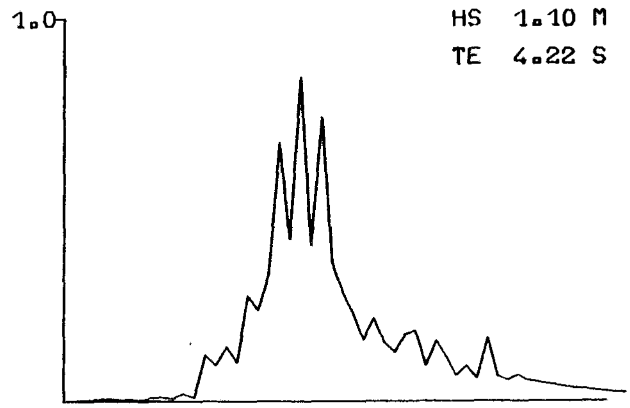

227



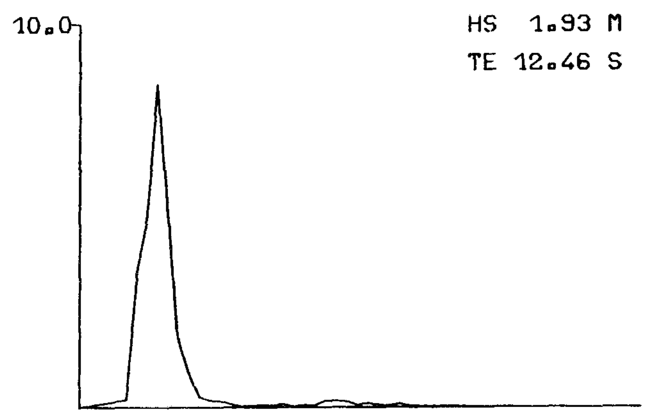

228



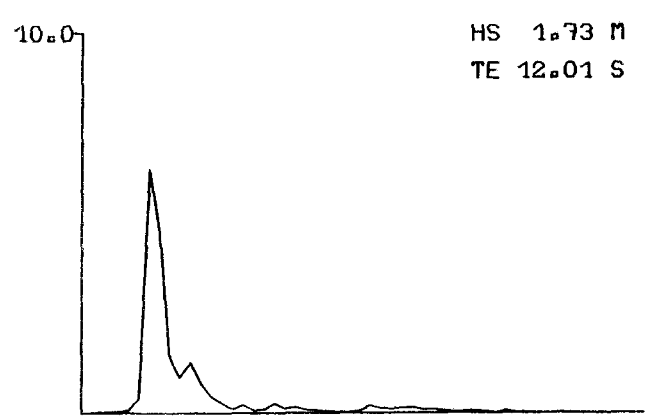

229



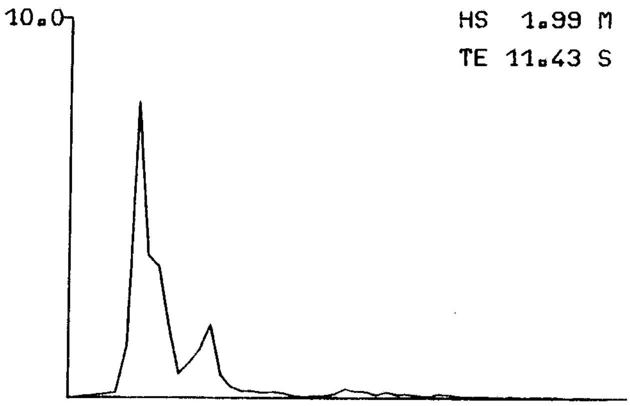

230



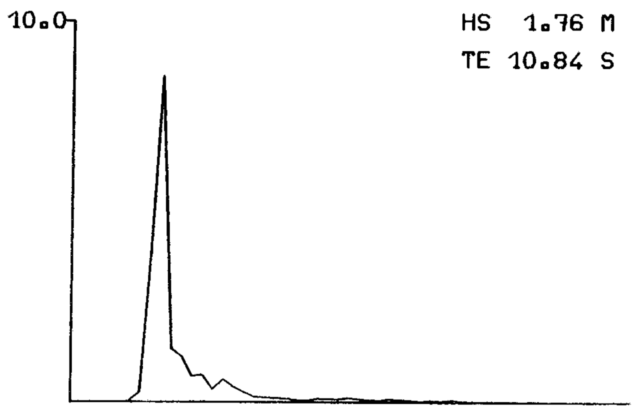

231



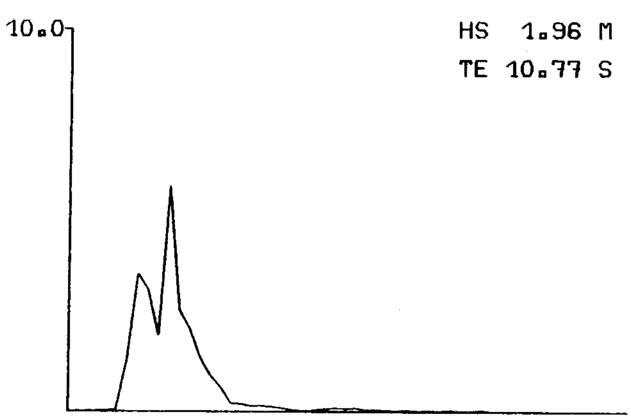

232



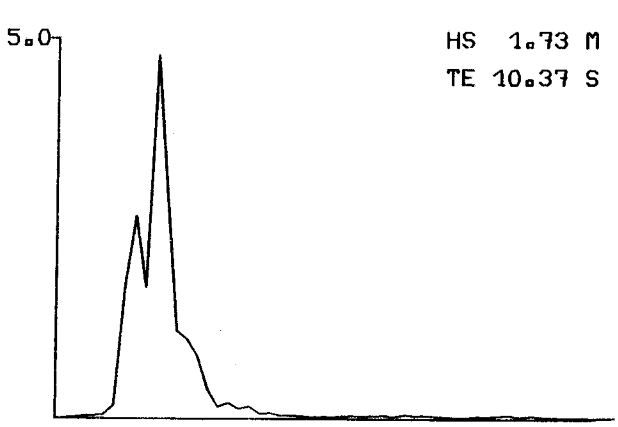

233



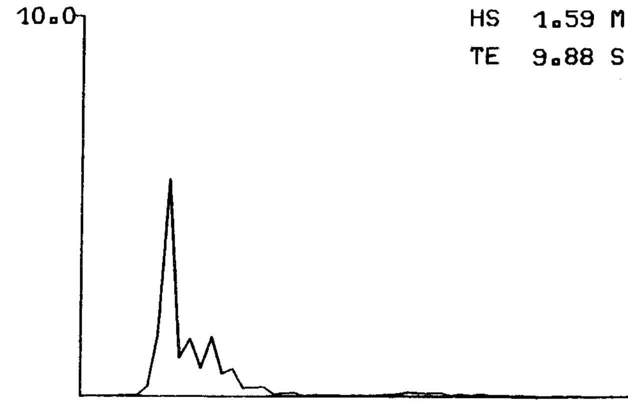

234



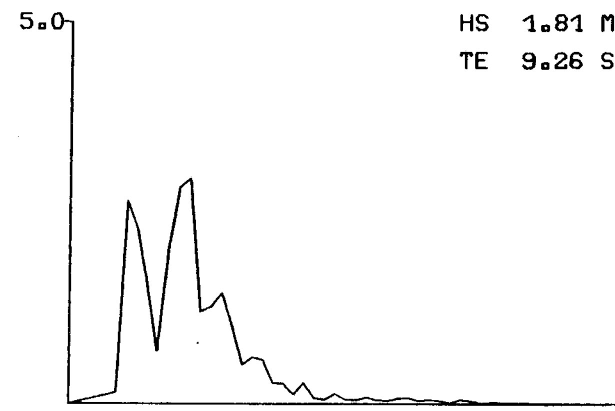

235



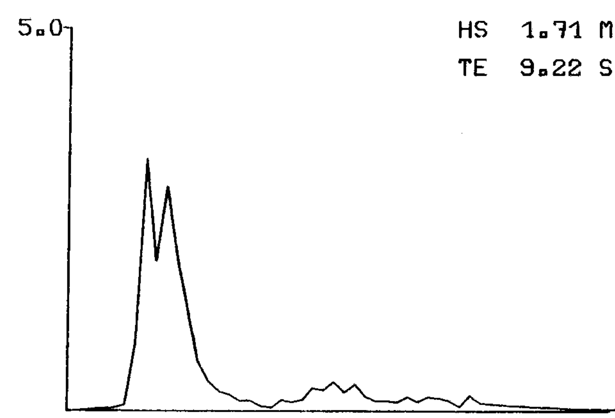

236



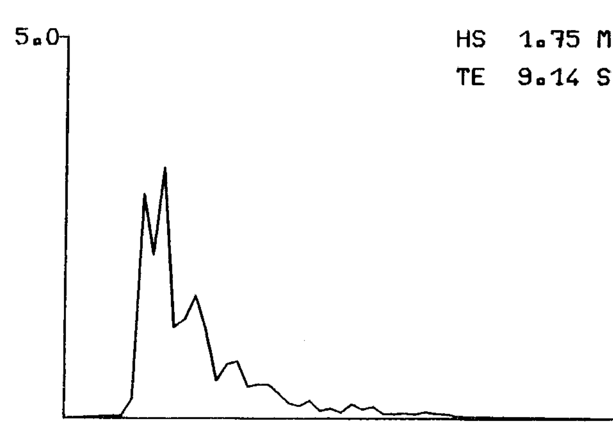

237



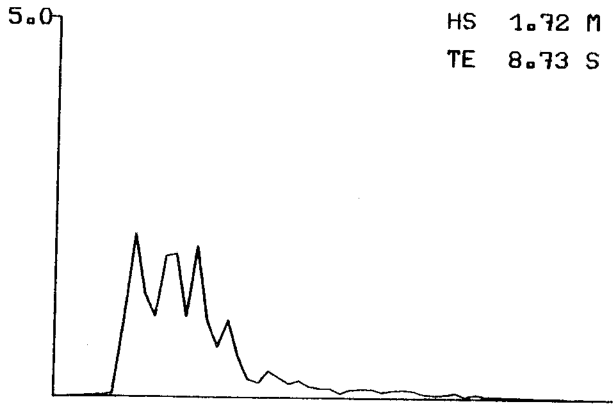

238



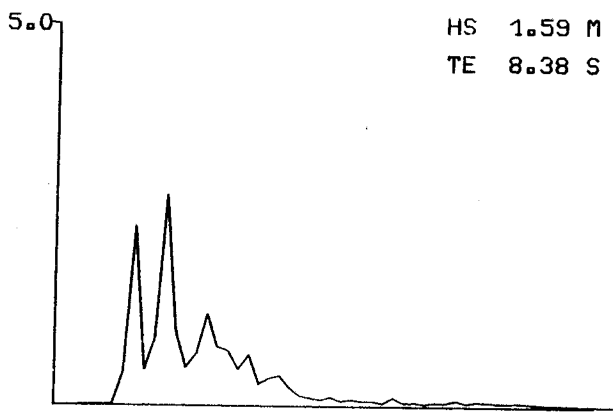

239



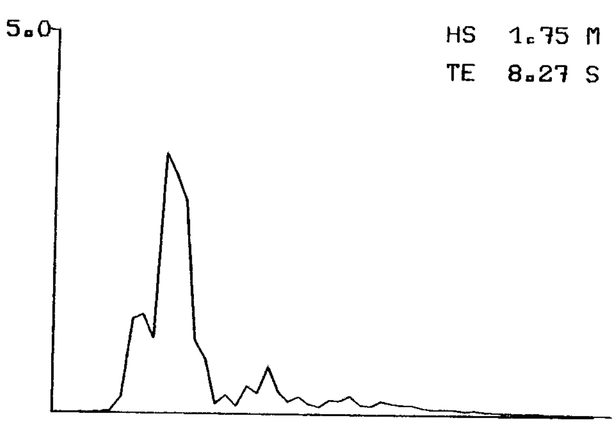

240



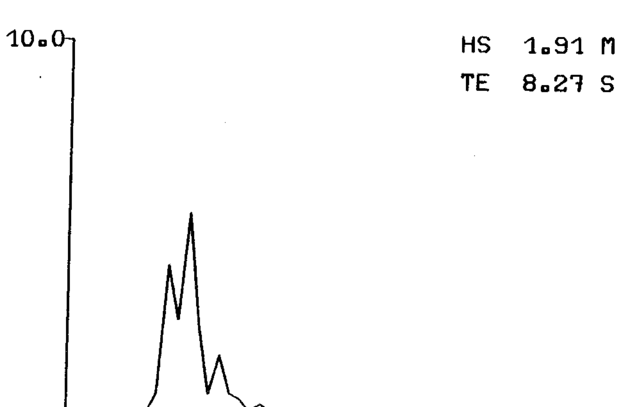

241



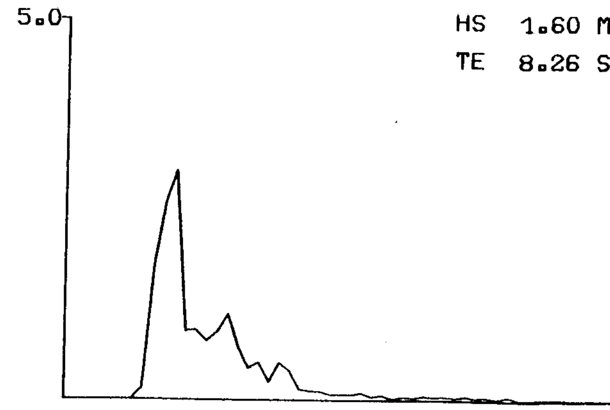

242



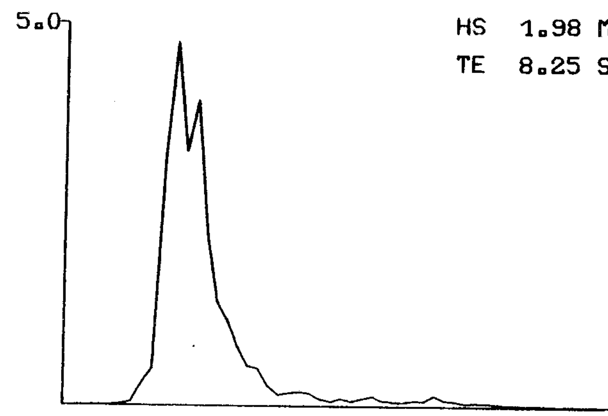

243



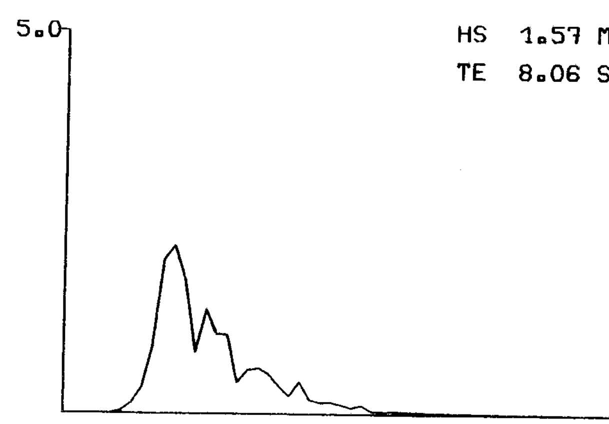

244



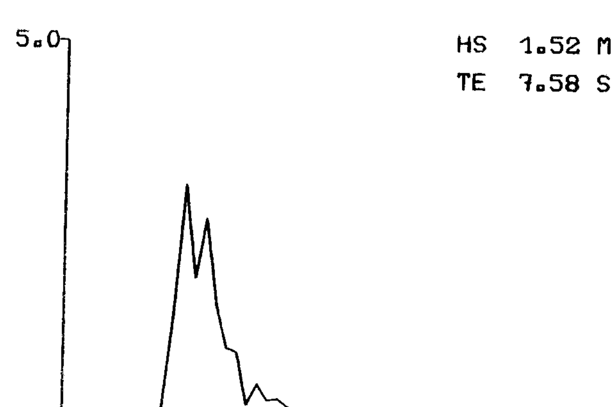

245



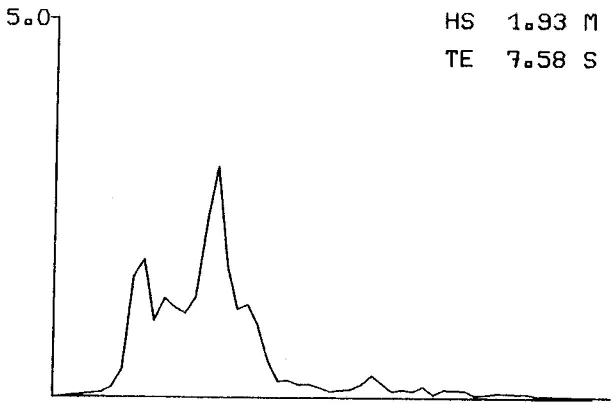

246



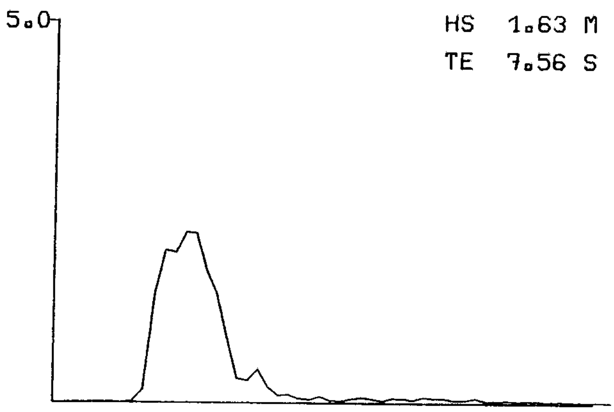

247



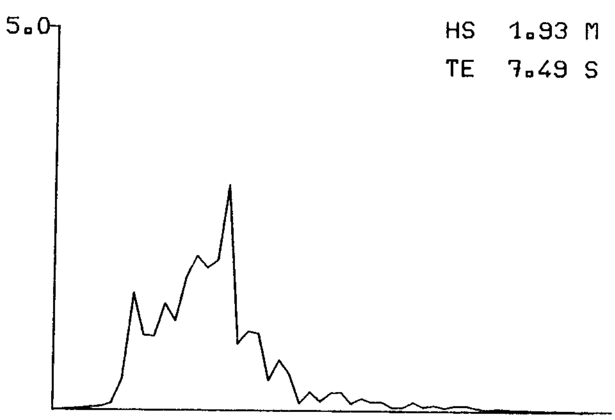

248



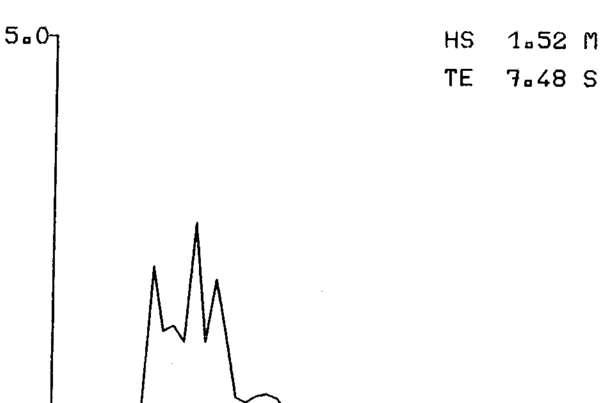

249



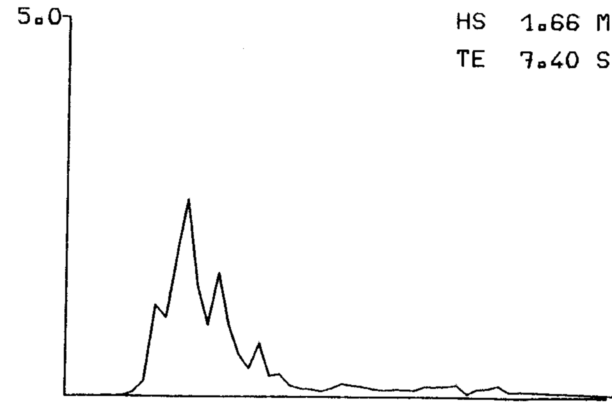

250



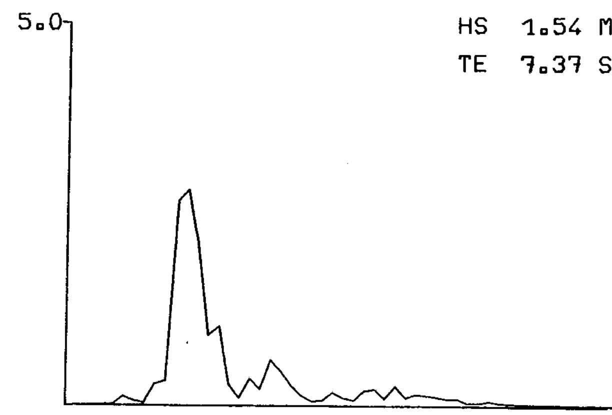

251



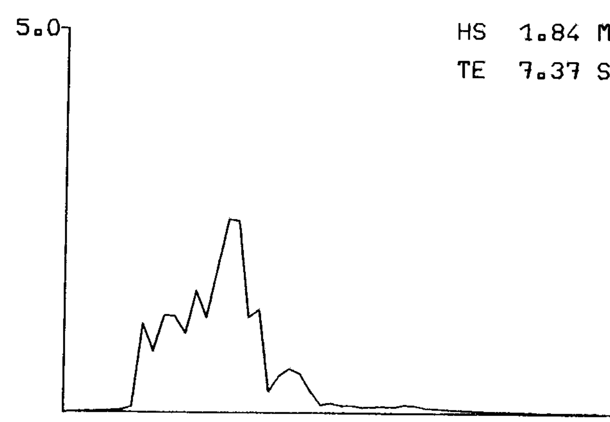

252



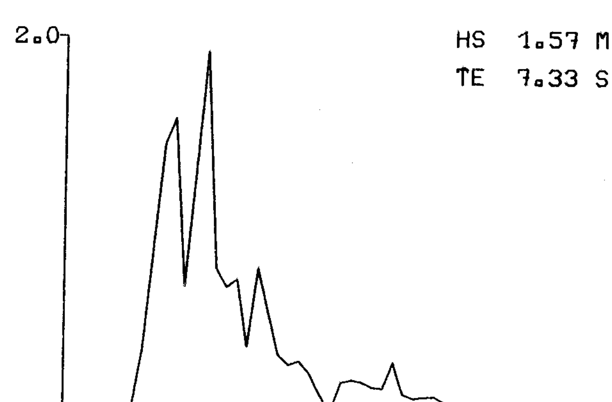

253



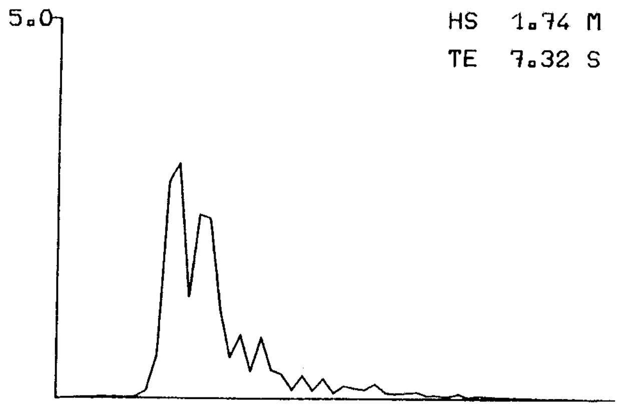

254



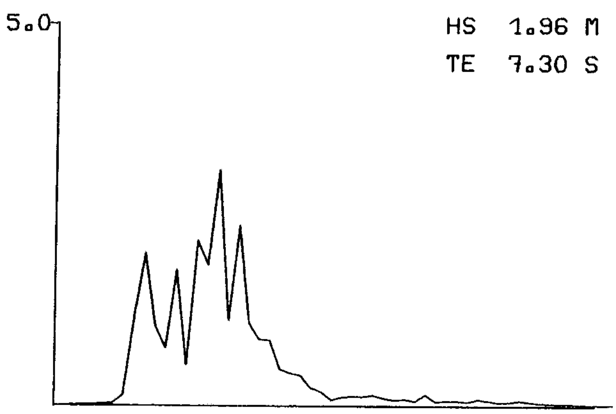

255



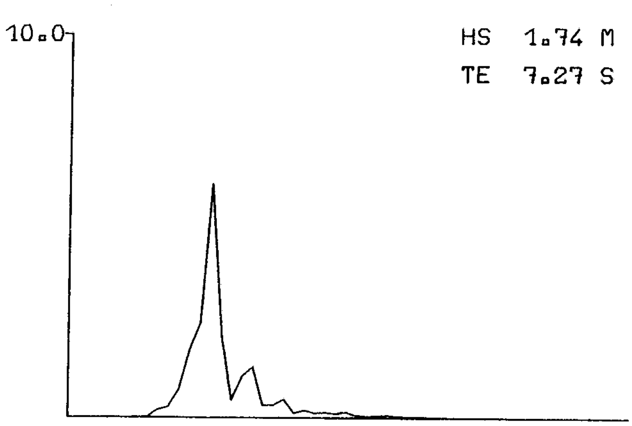

256



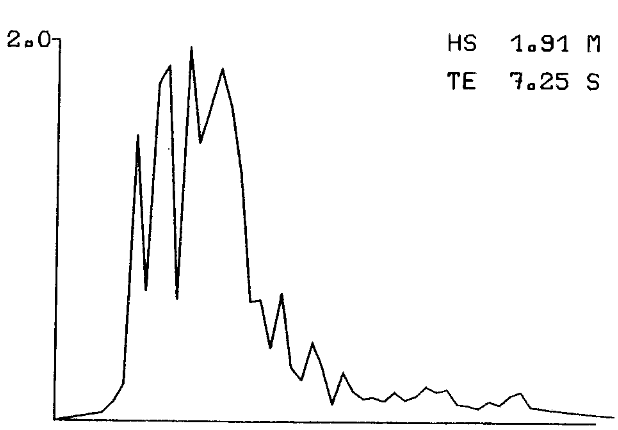

257



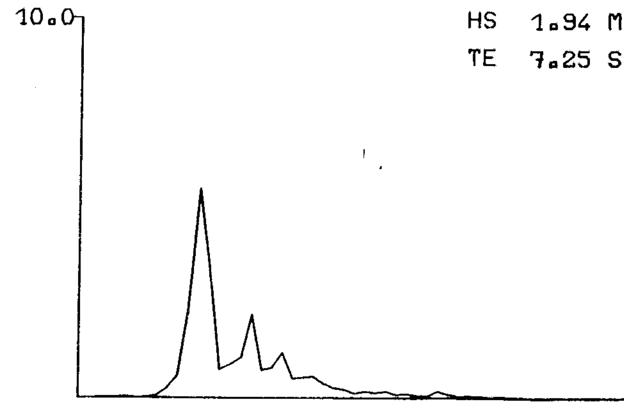

258



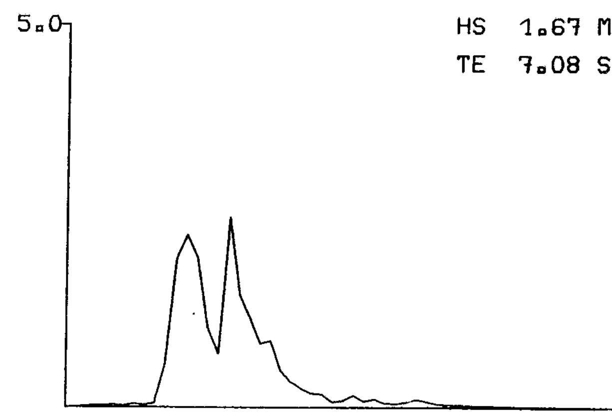

259



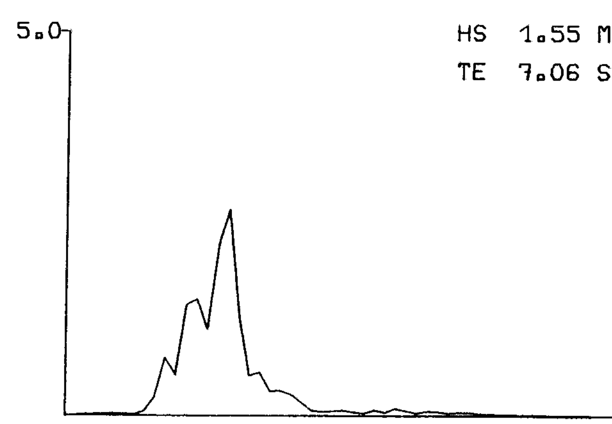

260



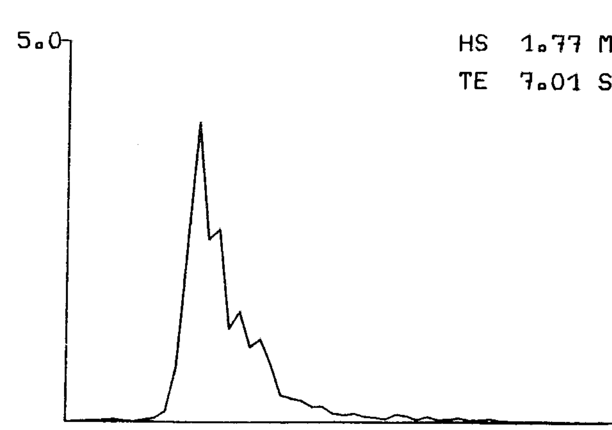

261



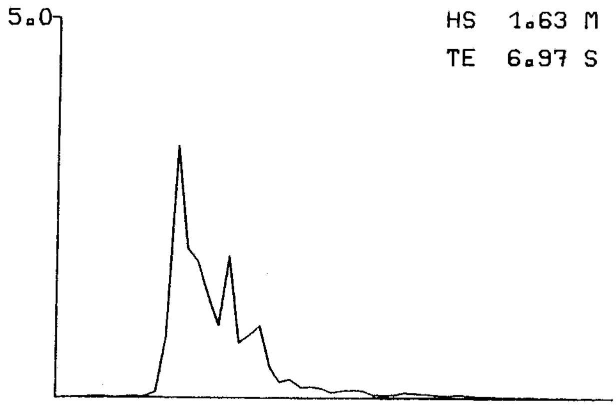

262



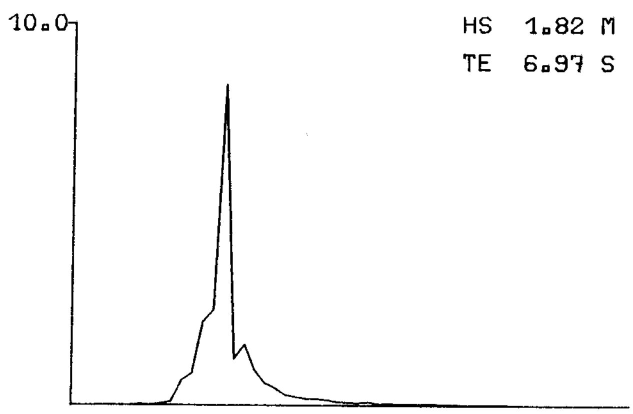

263



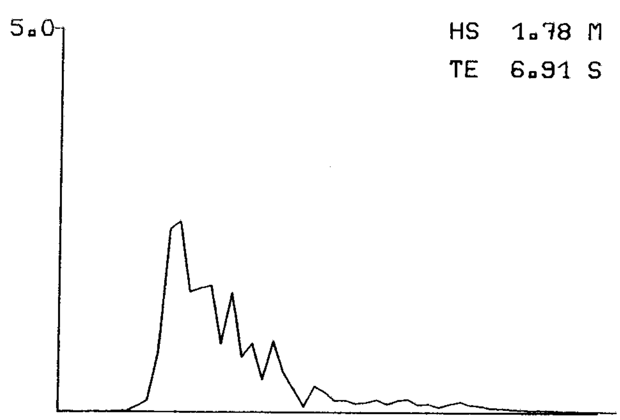

264



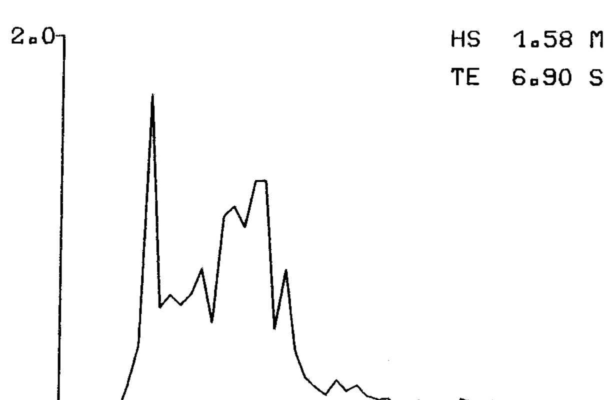

265



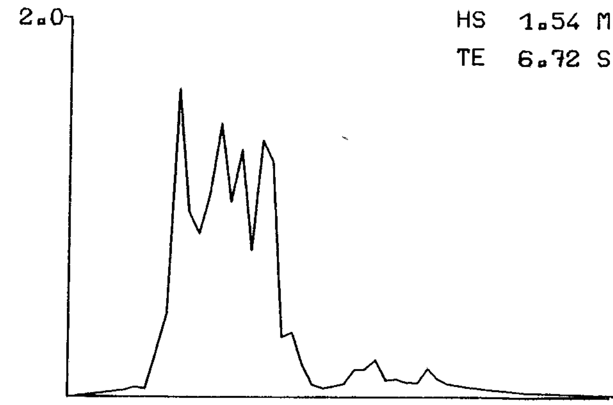

266



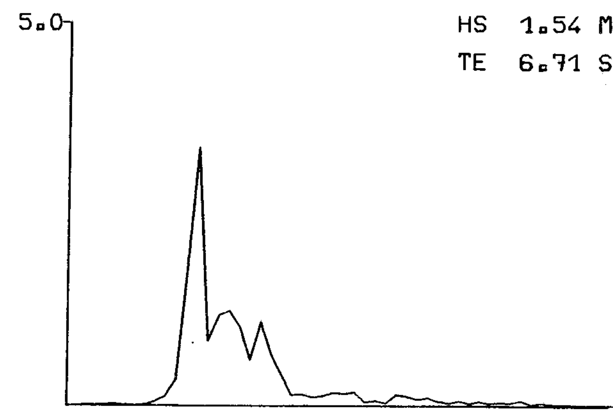

267



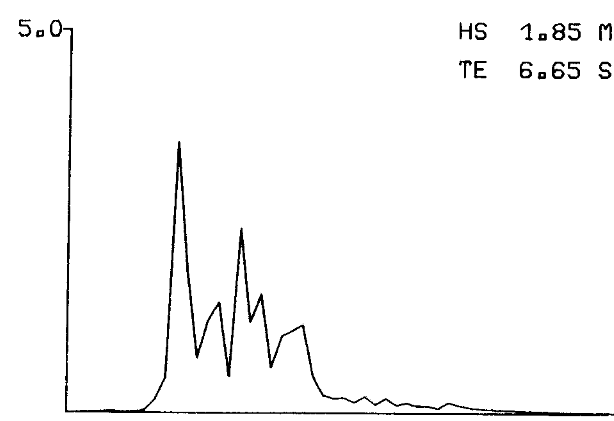

268



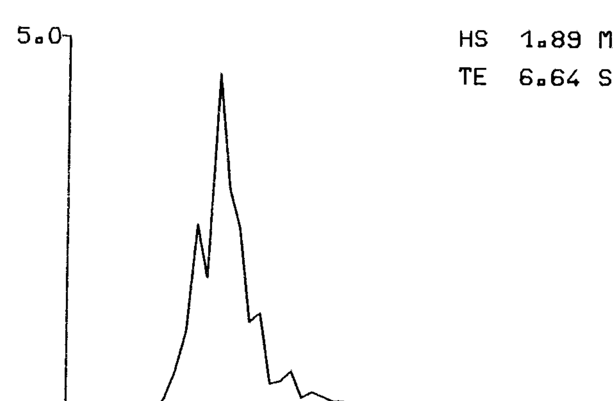

269



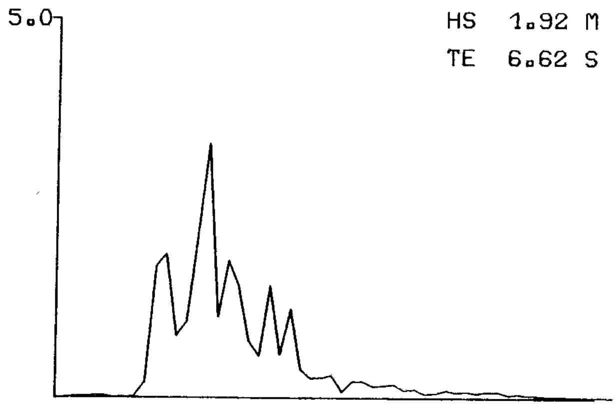

270



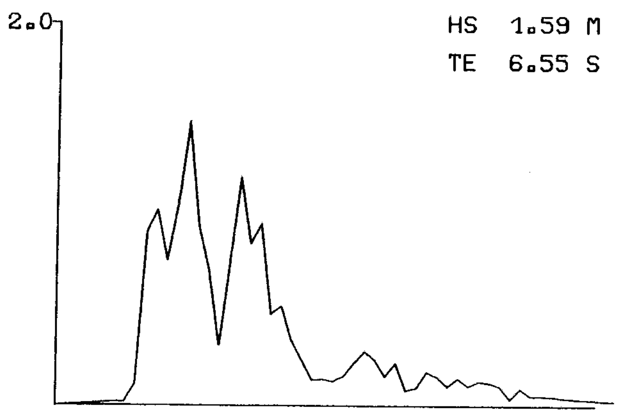

271



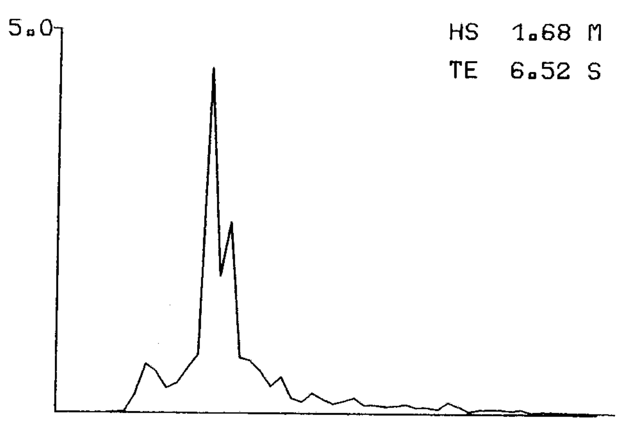

272



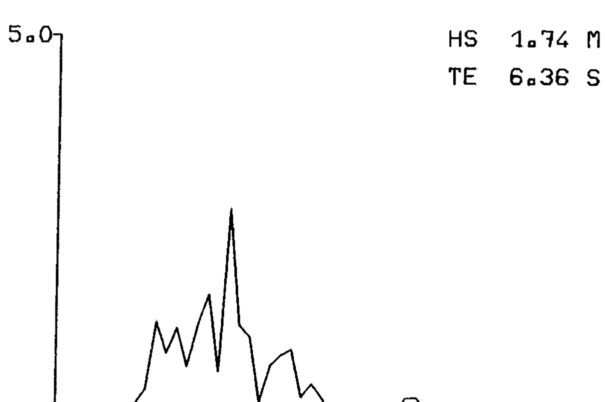

273



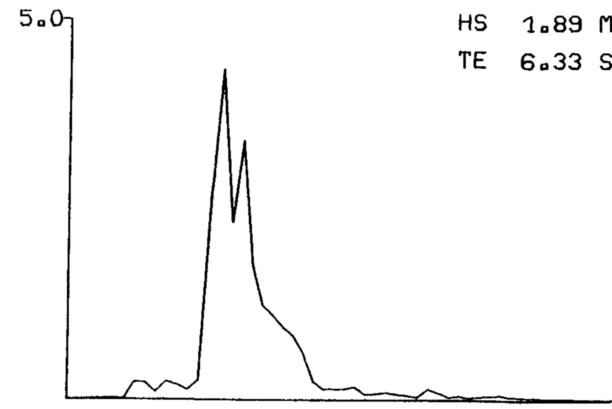

274



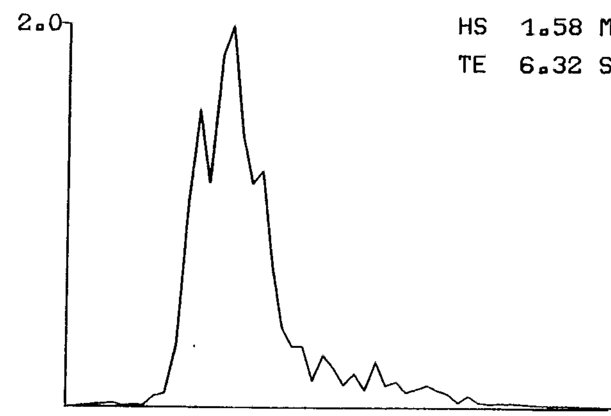

275



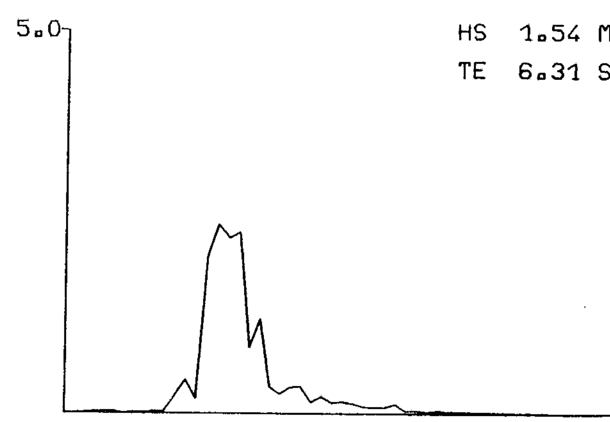

276



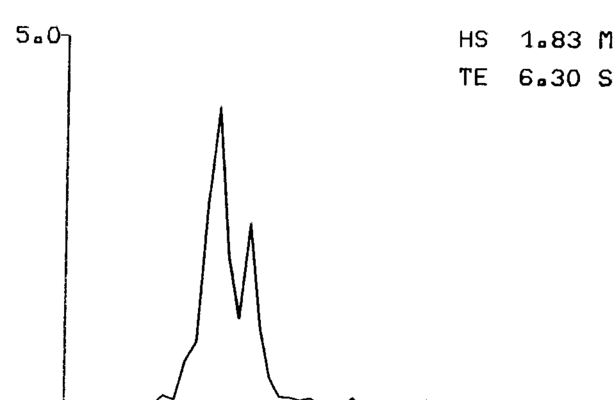

277



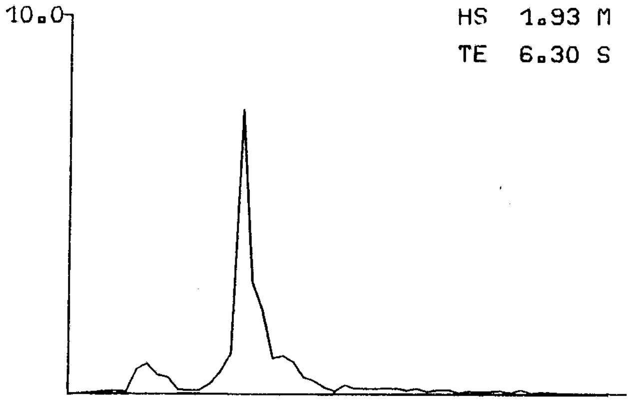

278



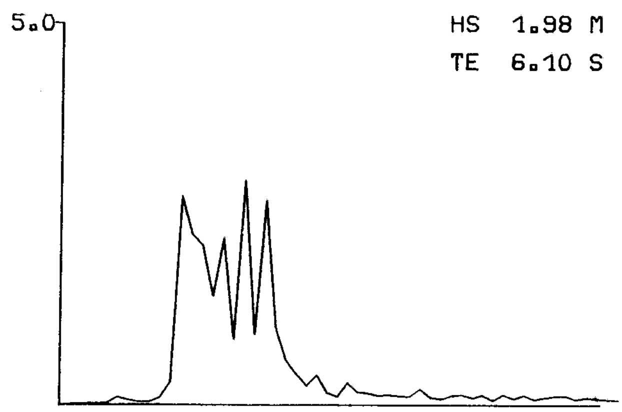

279



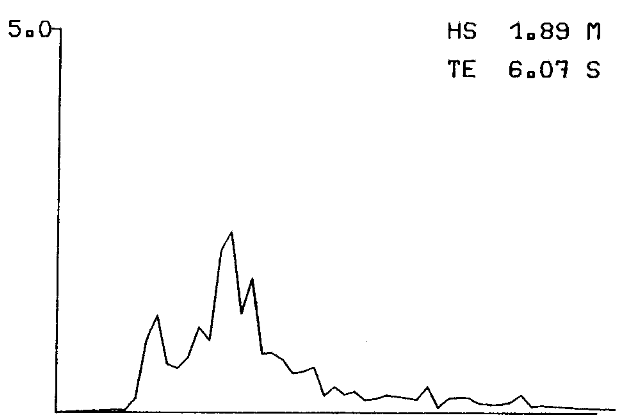

280



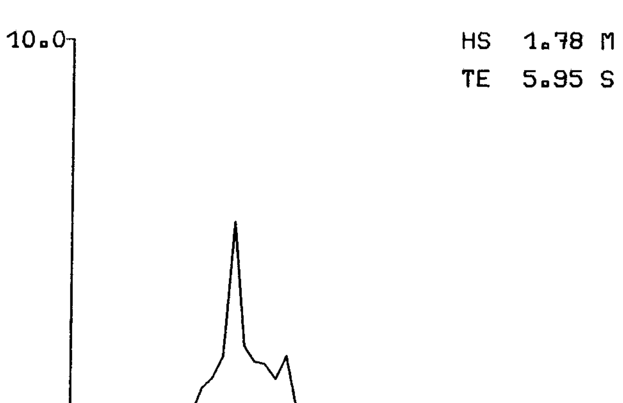

281



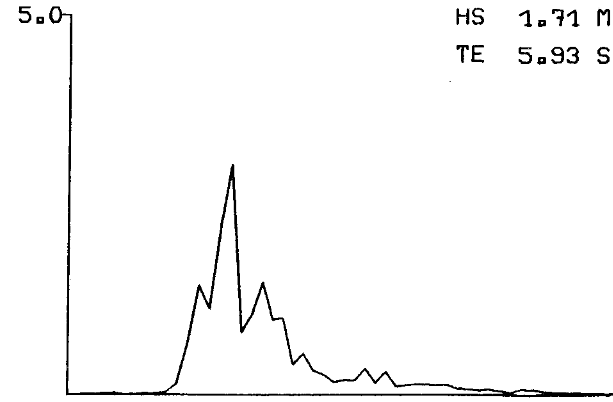

282



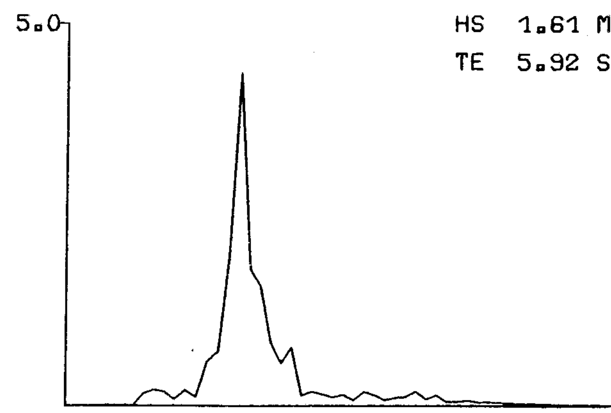

283



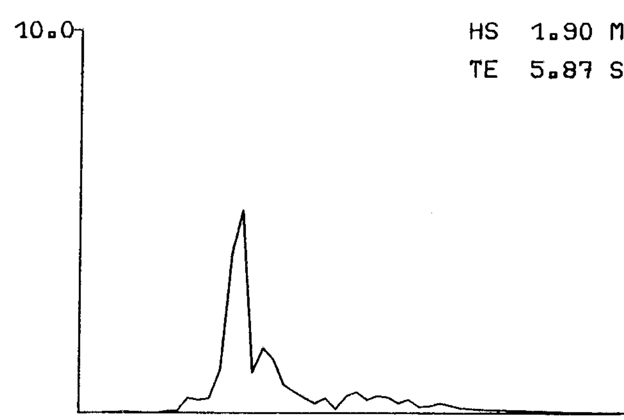

284



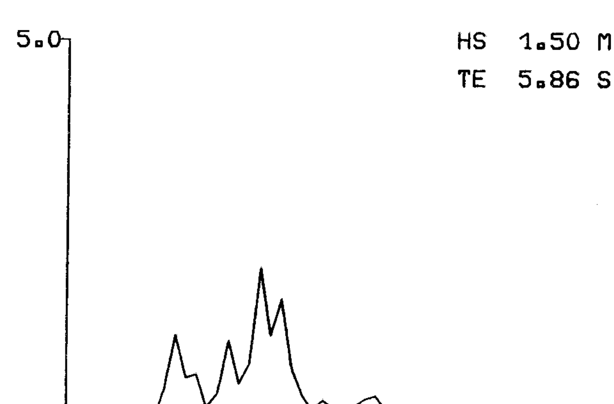

285



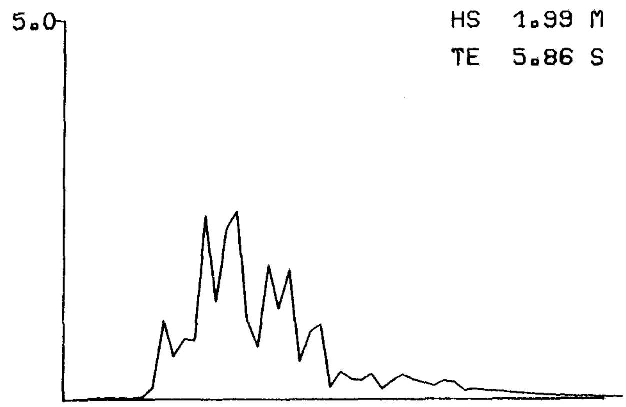

286



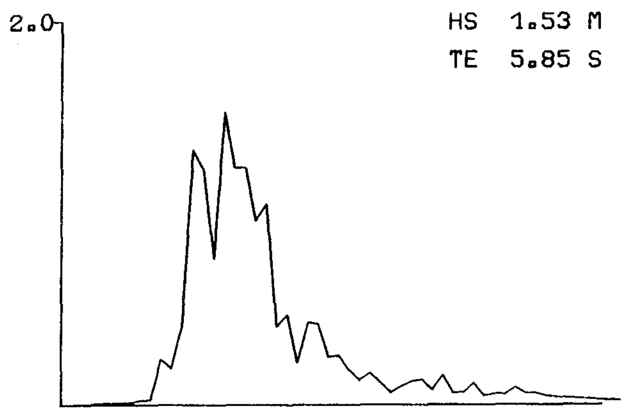

287



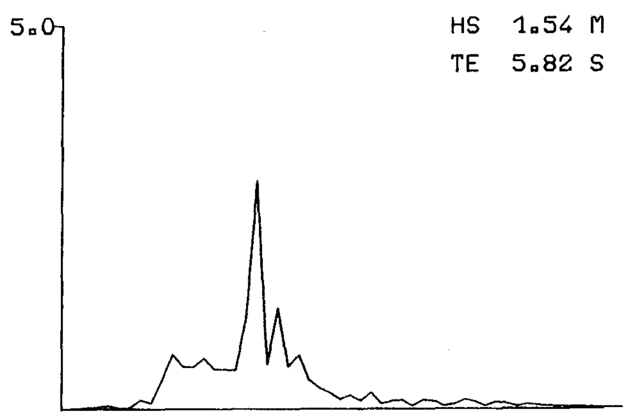

288



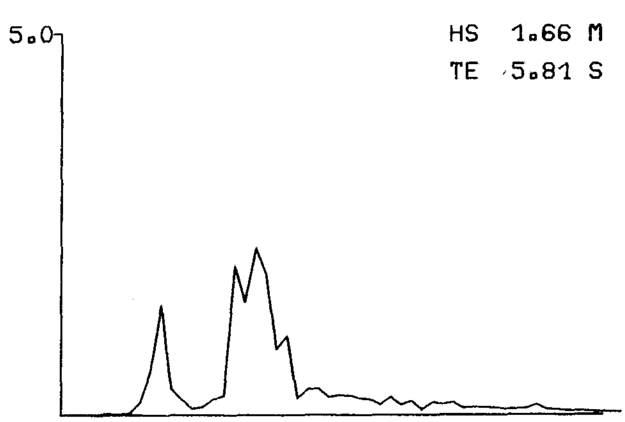
289



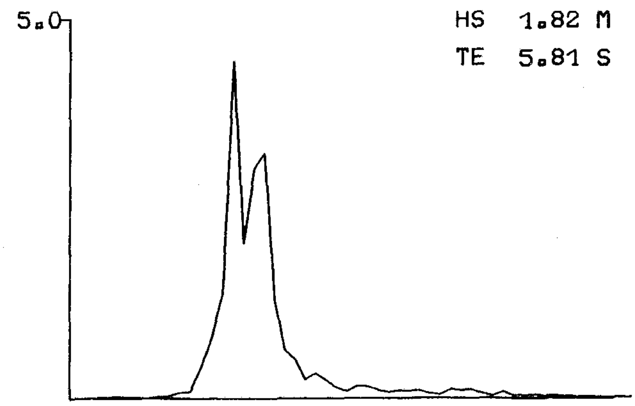
290



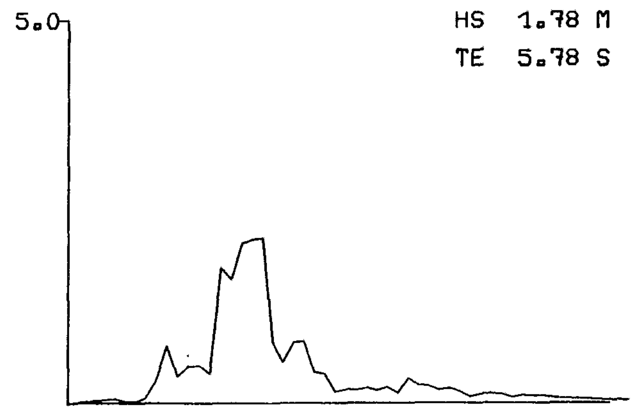
291



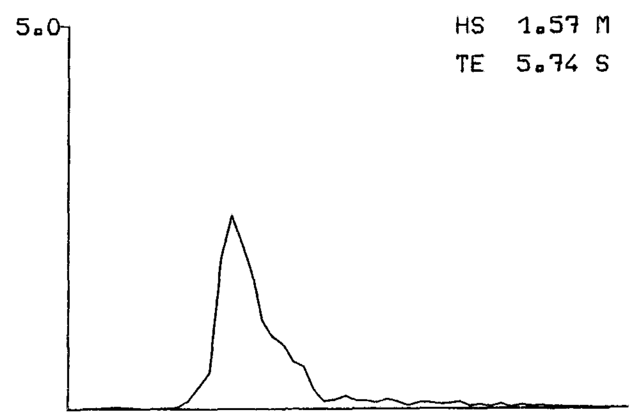
292



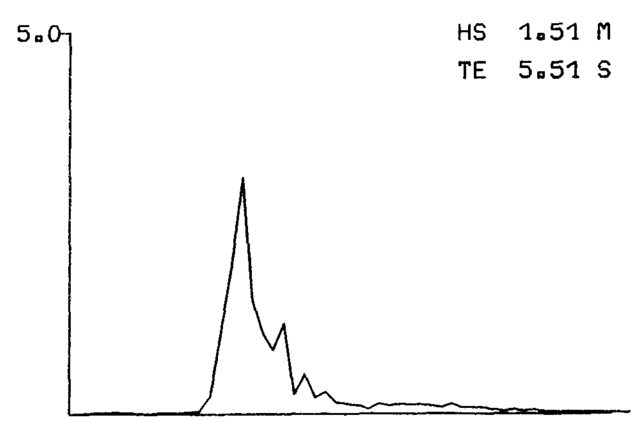
293



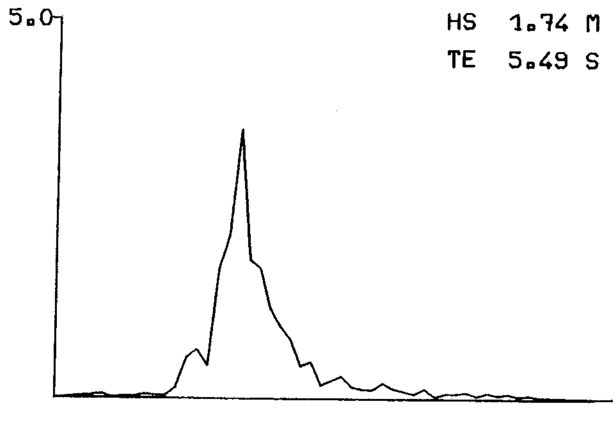
294



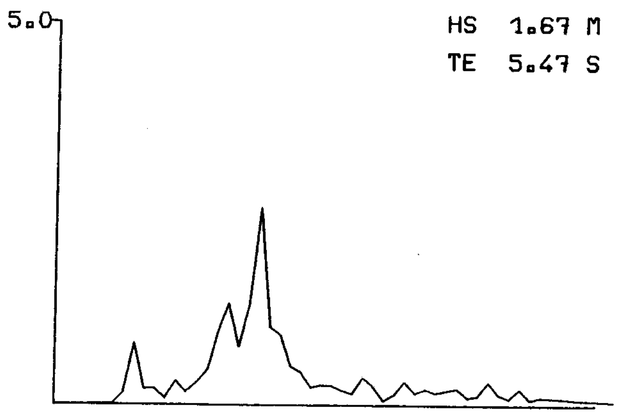
295



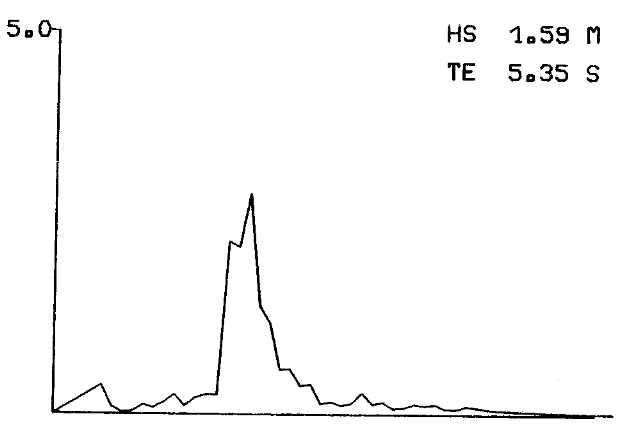
296



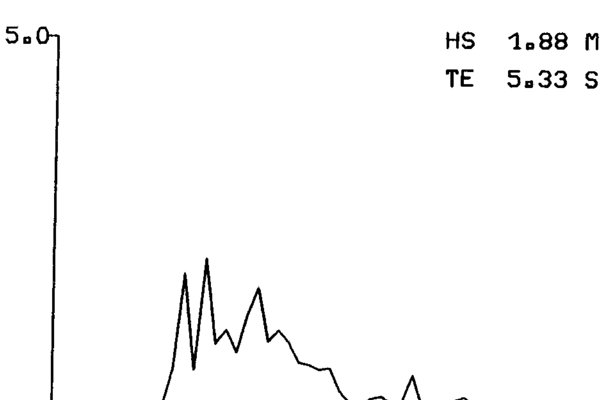

297



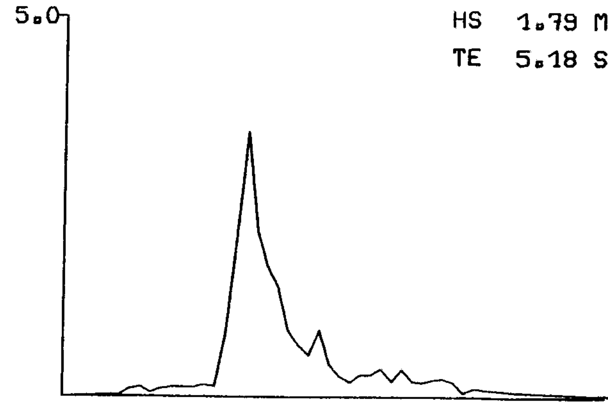

298



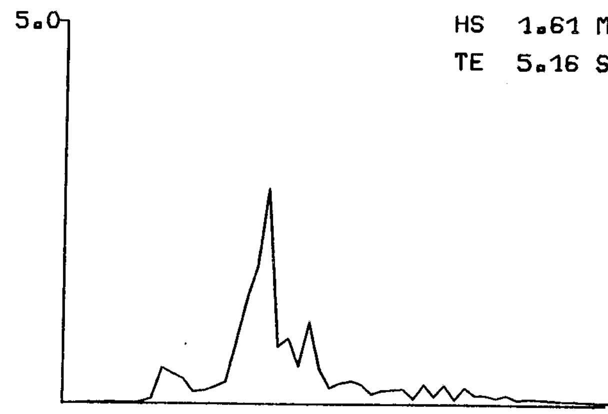

299



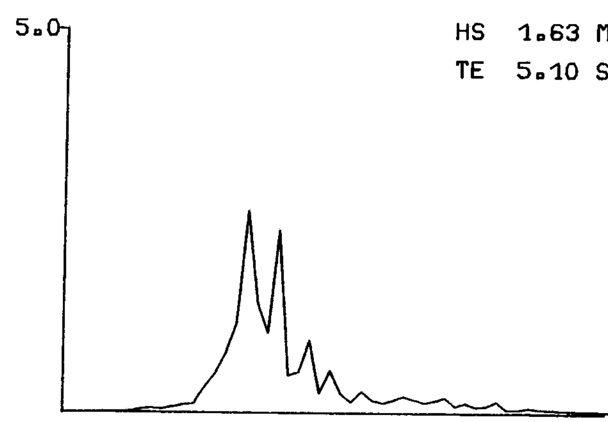

300



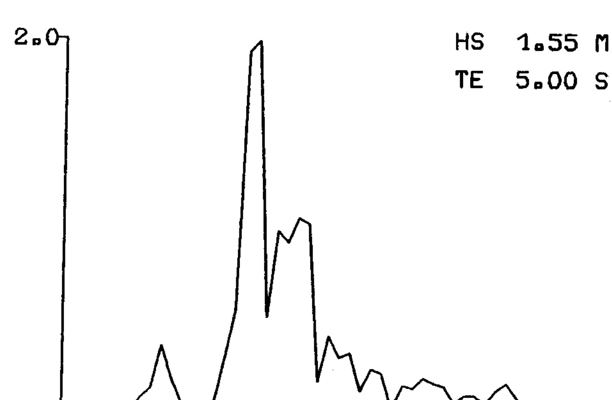

301



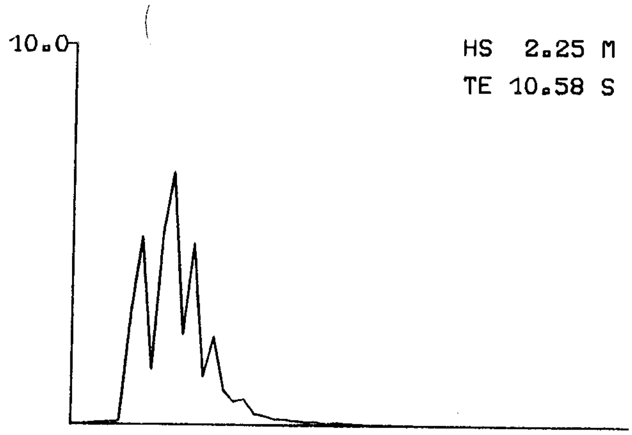

302



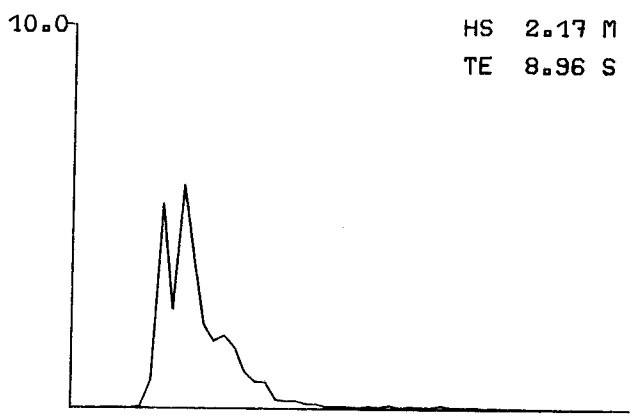

303



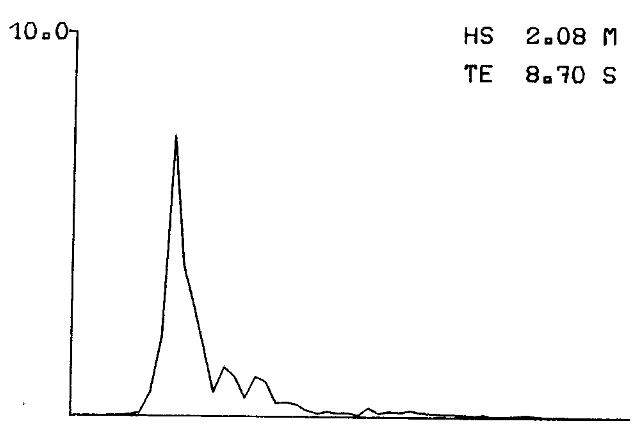

304



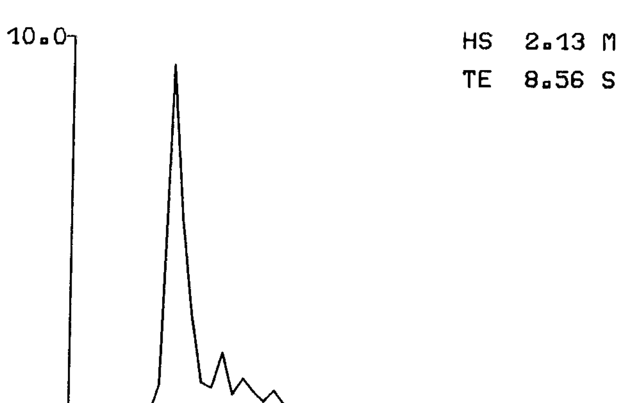
305



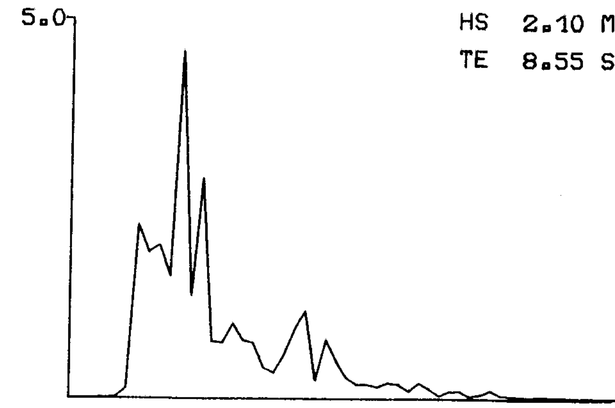
306



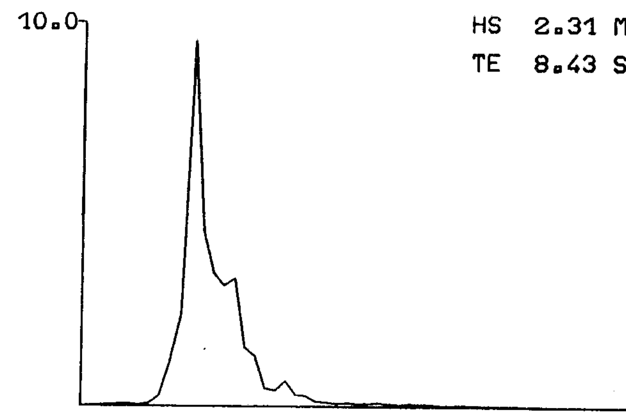
307



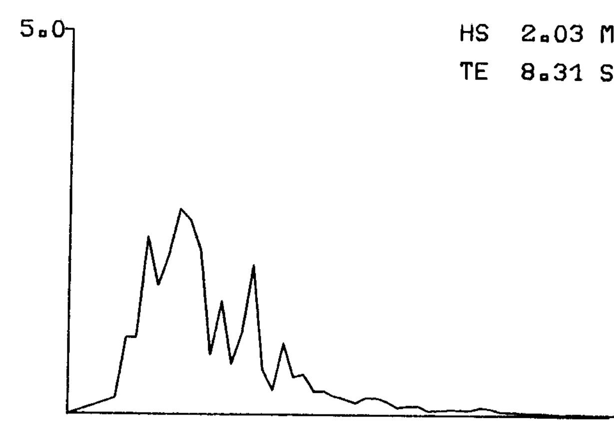
308



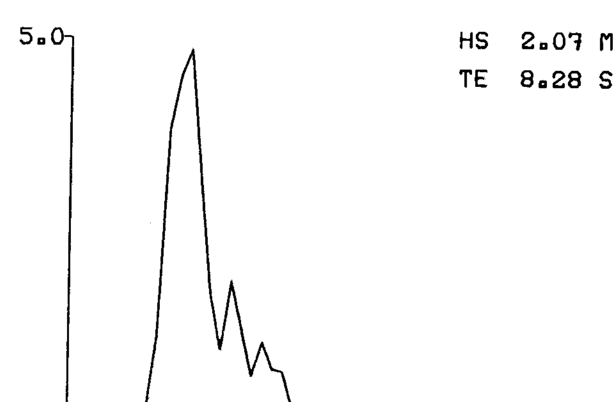
309



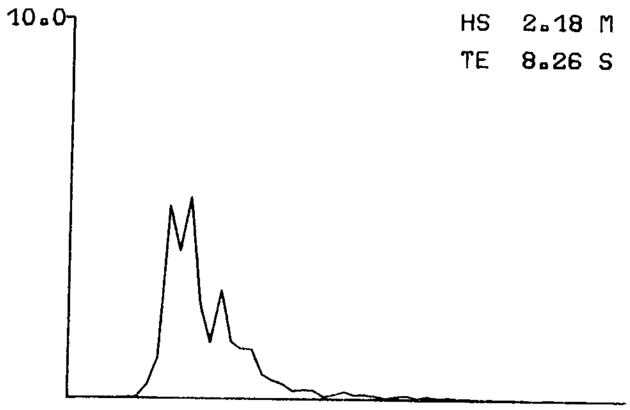
310



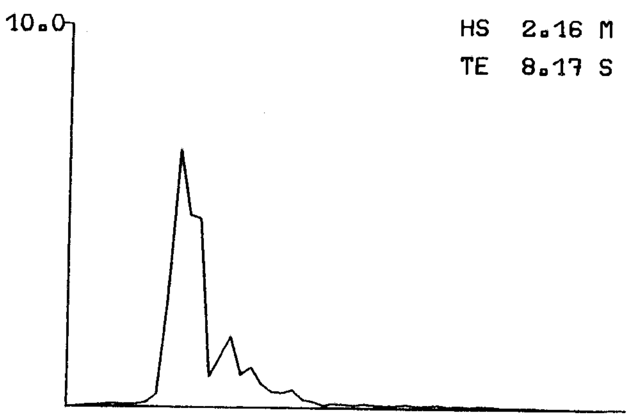
311



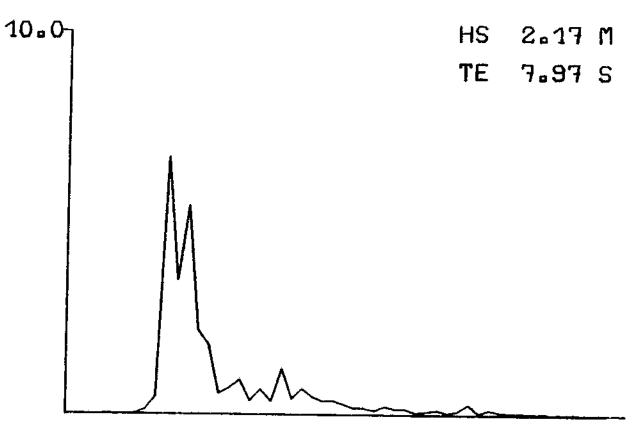
312



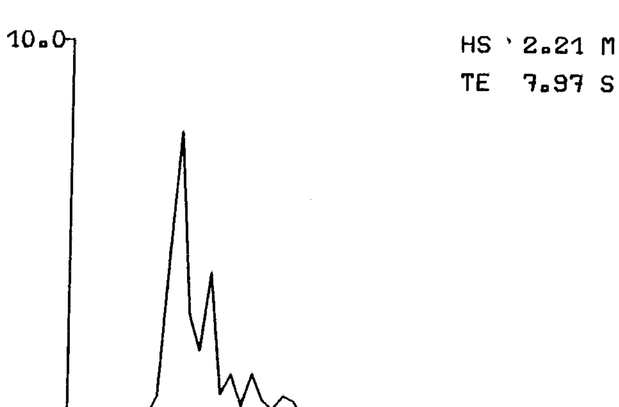

313



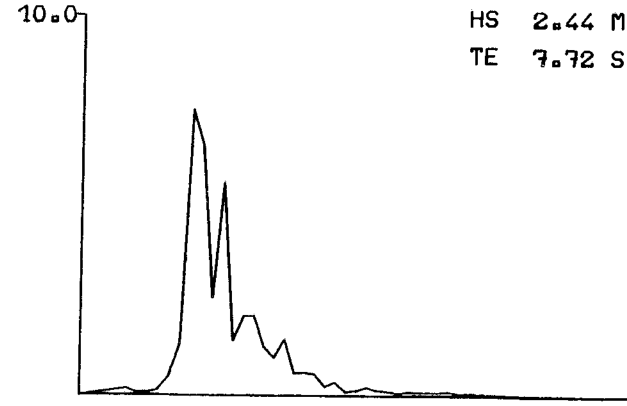

314



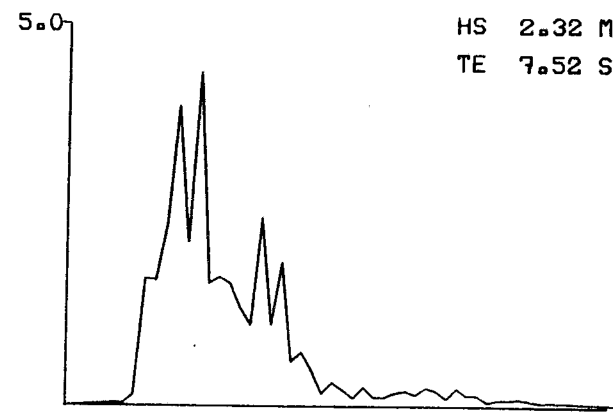

315



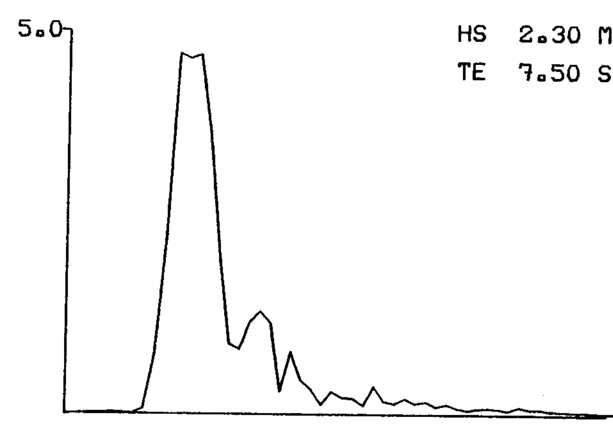

316



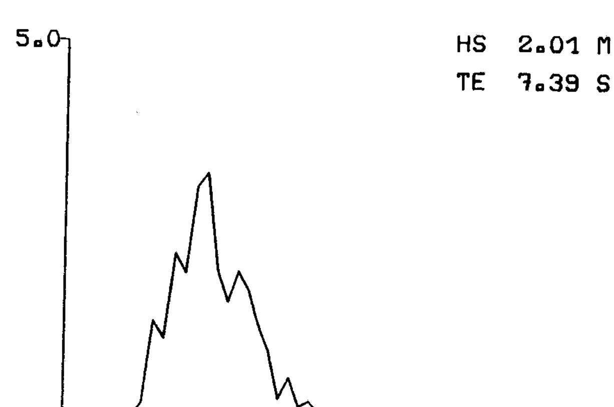

317



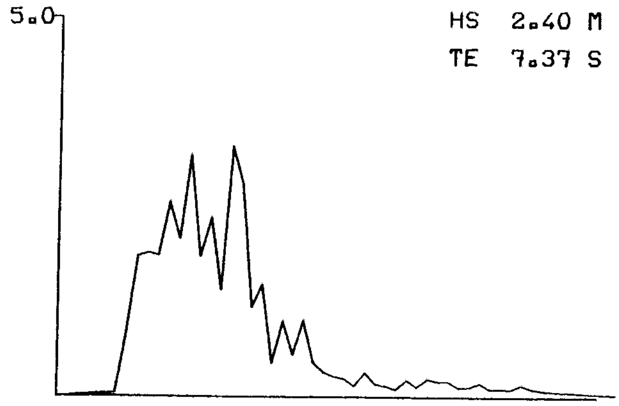

318



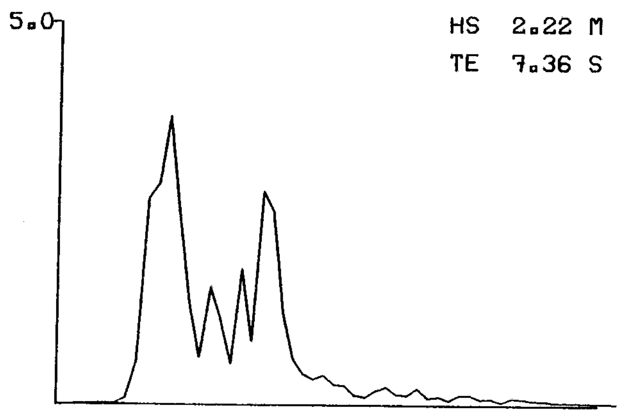

319



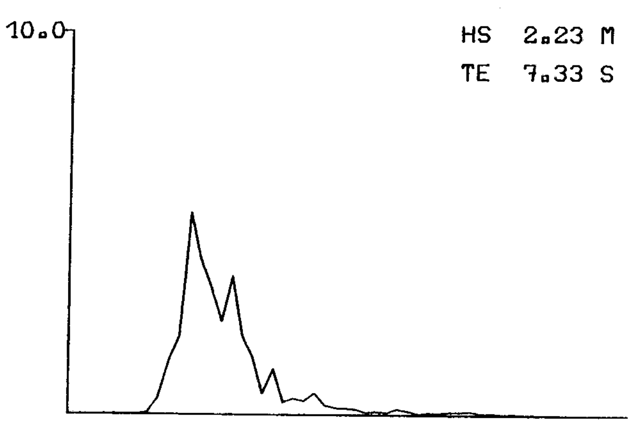

320



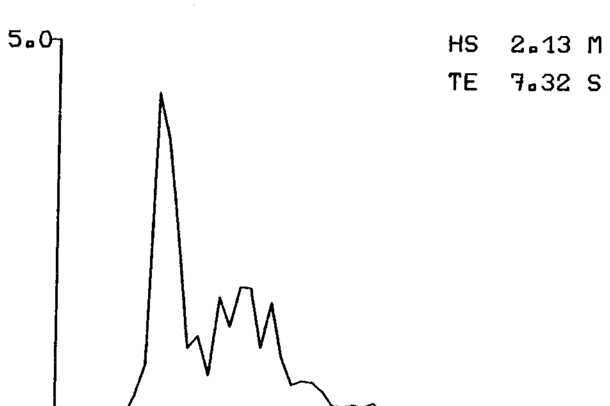
321



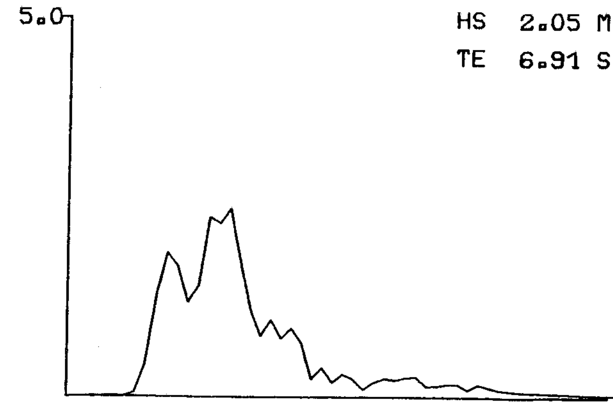
322



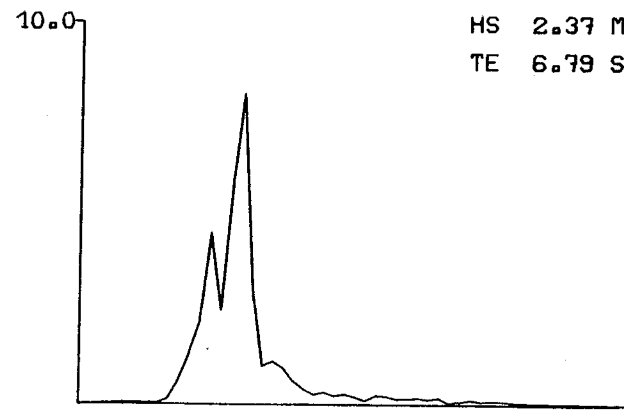
323



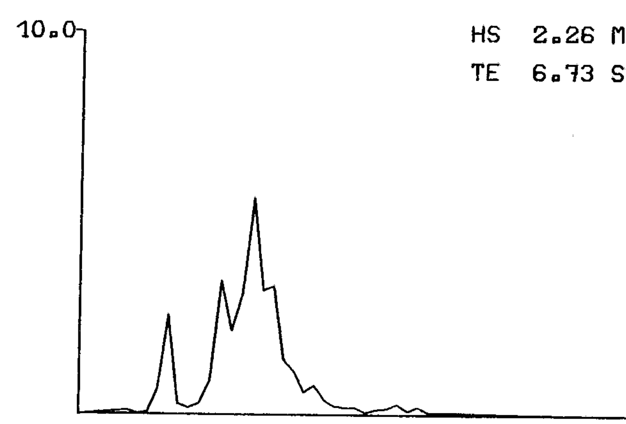
324



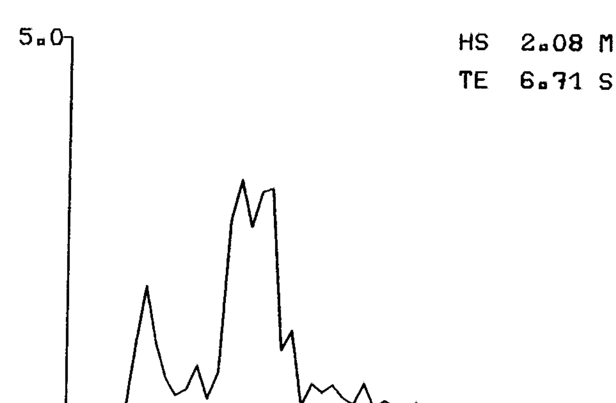
325



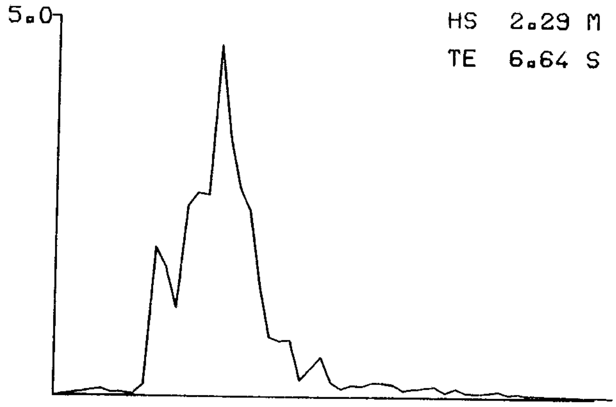
326



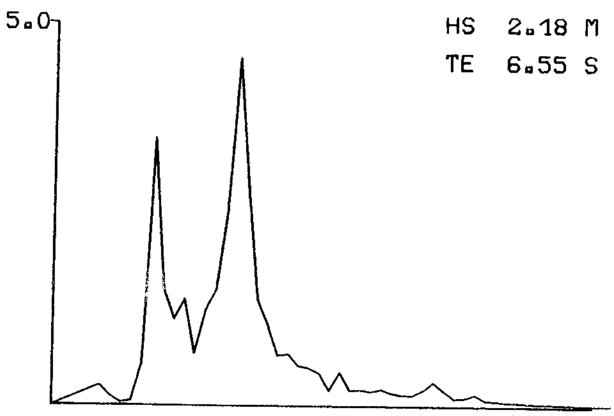
327



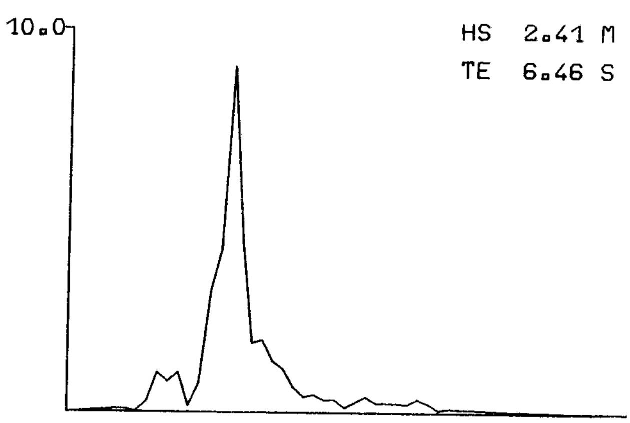
328



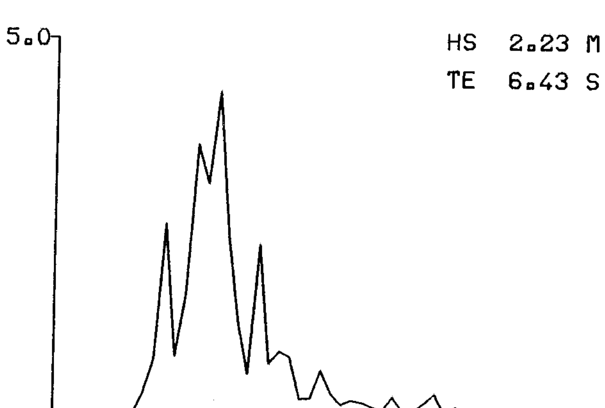

329



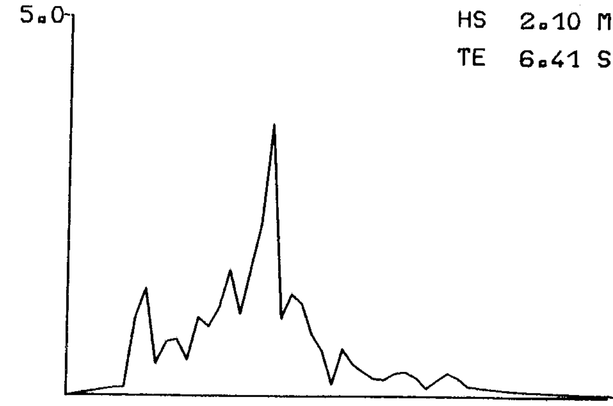

330



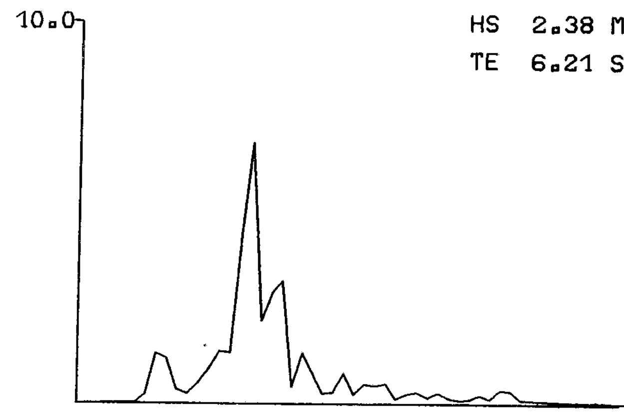

331



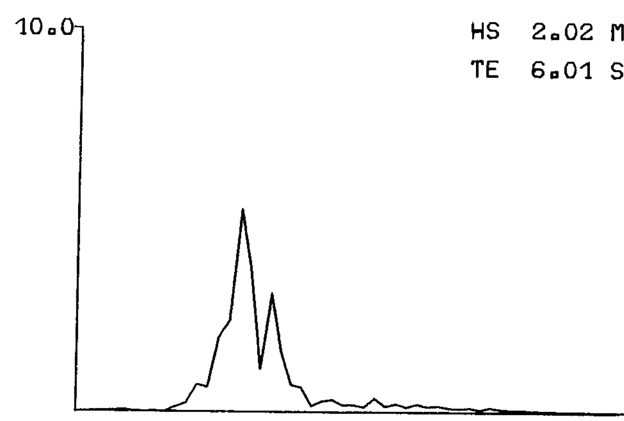

332



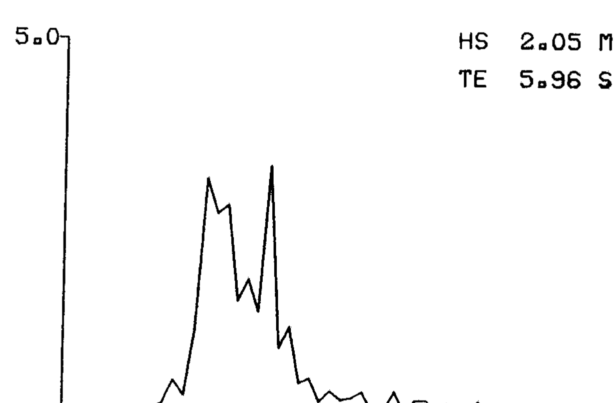

333



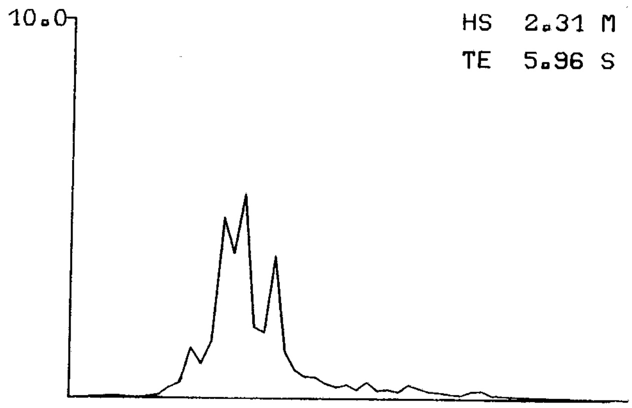

334



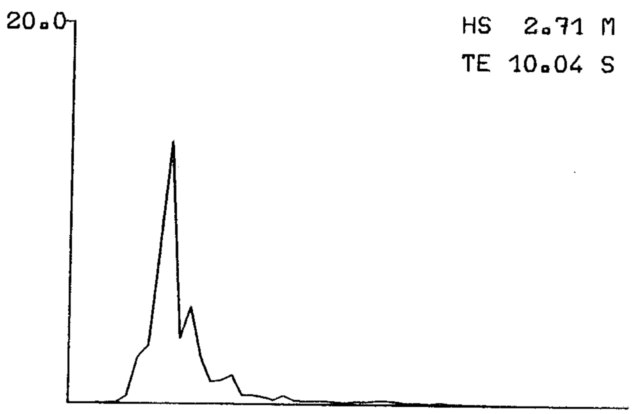

335



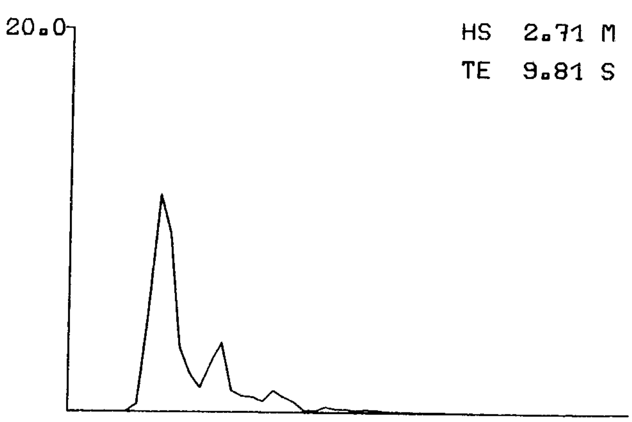

336



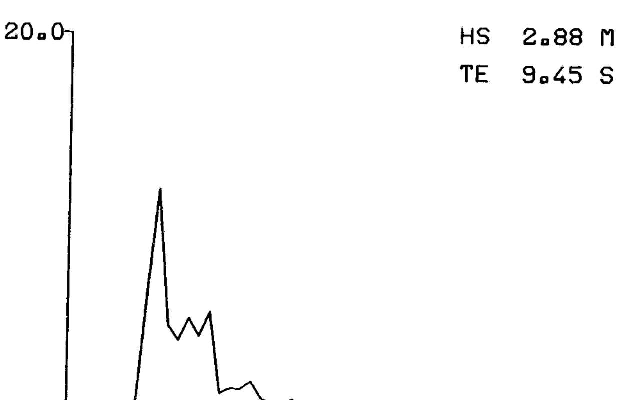

337



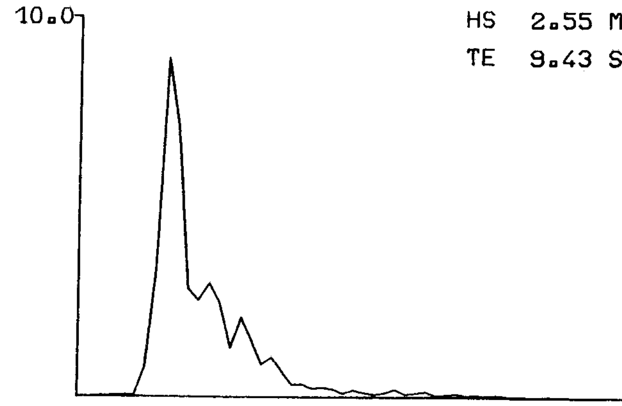

338



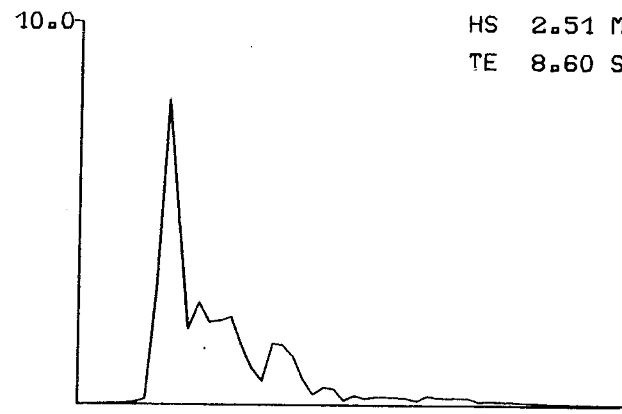

339



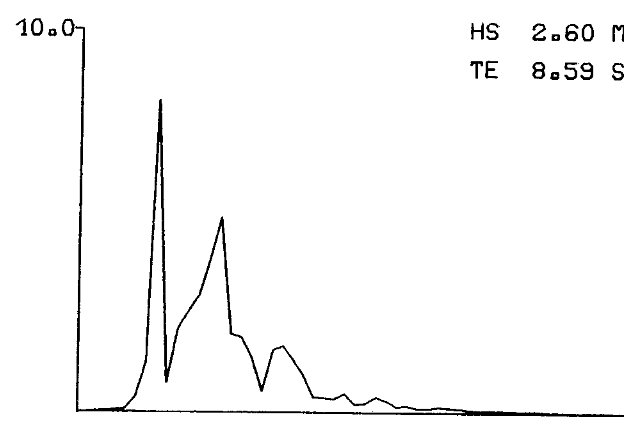

340



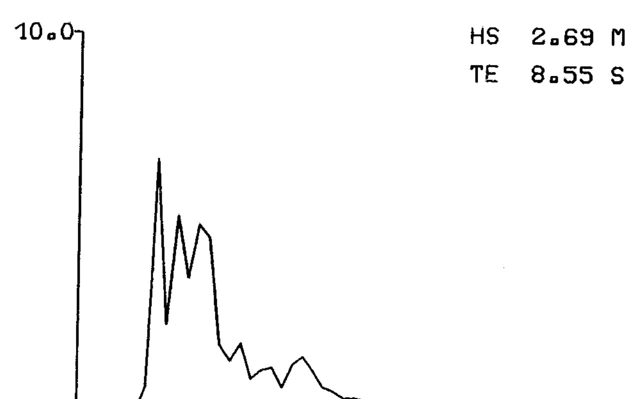

341



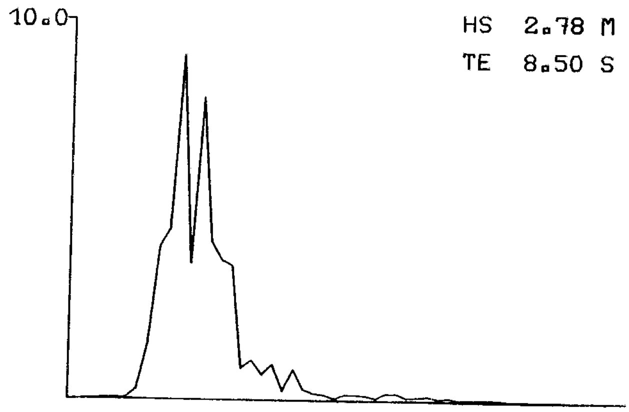

342



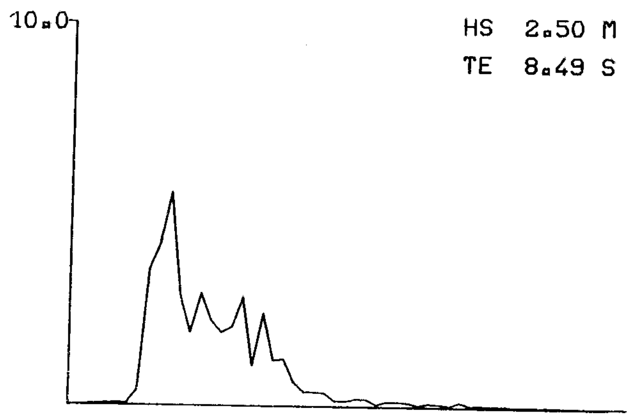

343



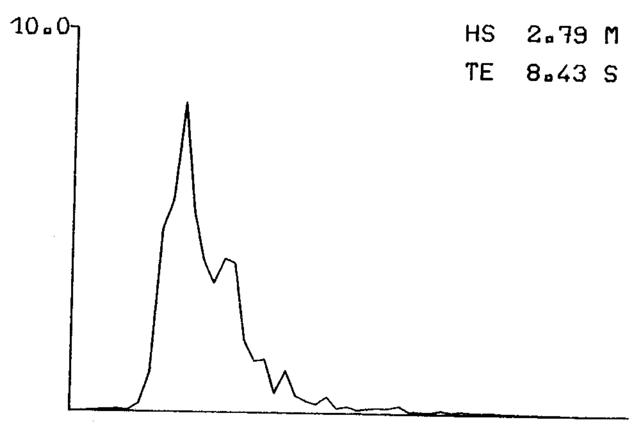

344



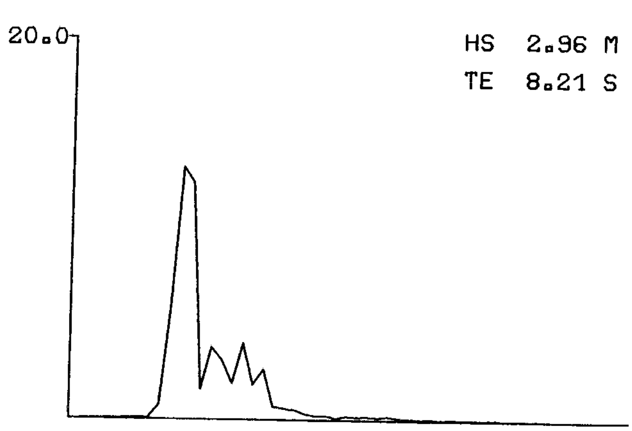

345



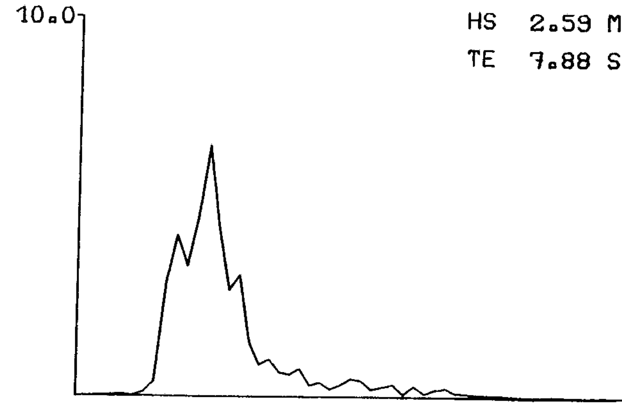

346



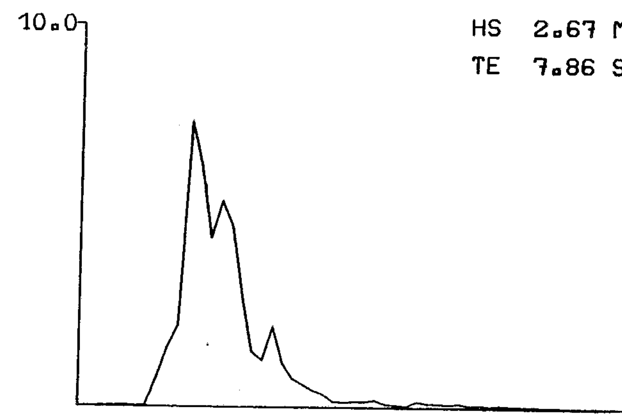

347



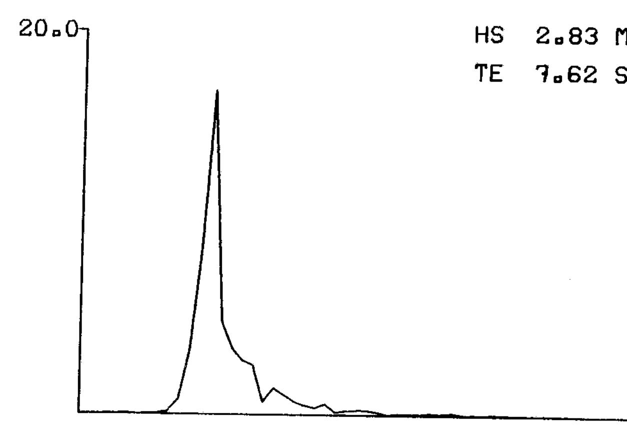

348



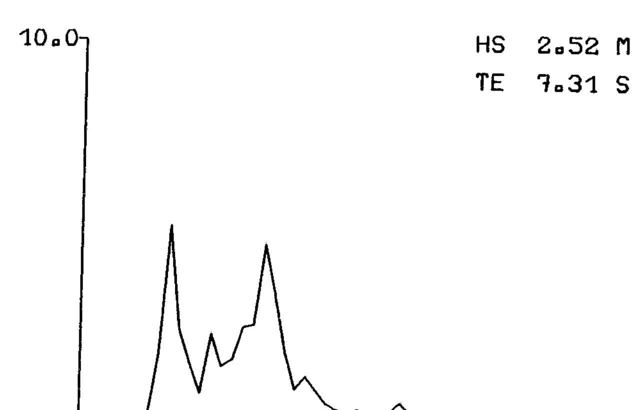

349



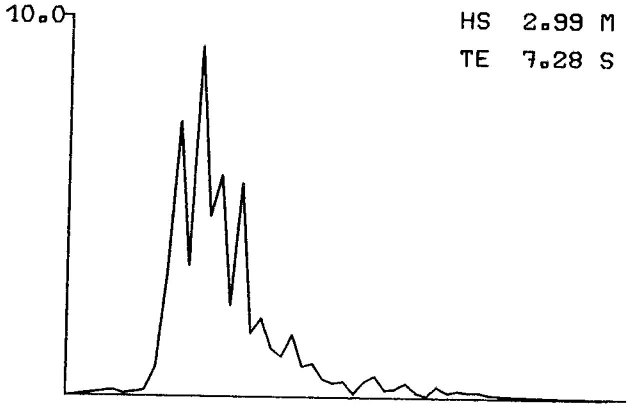

350



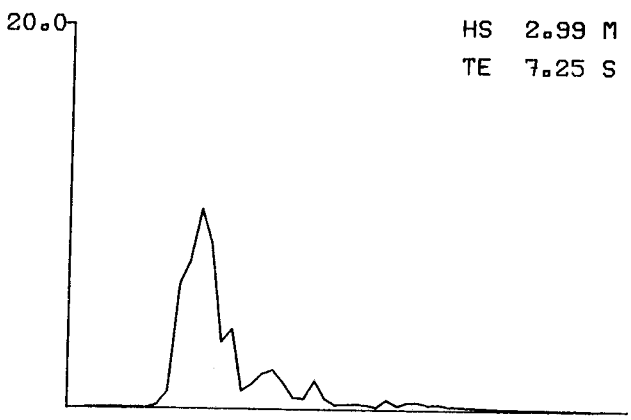

351



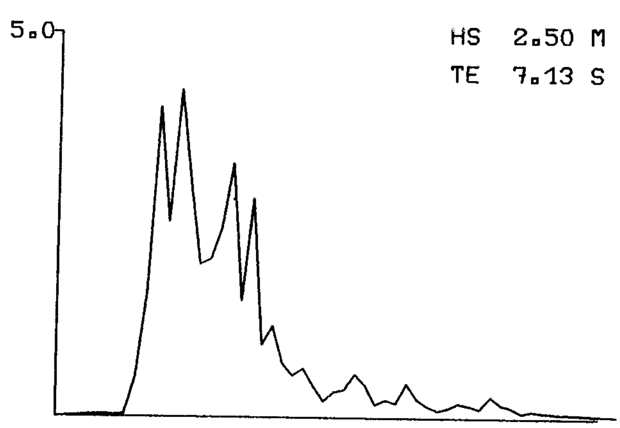

352



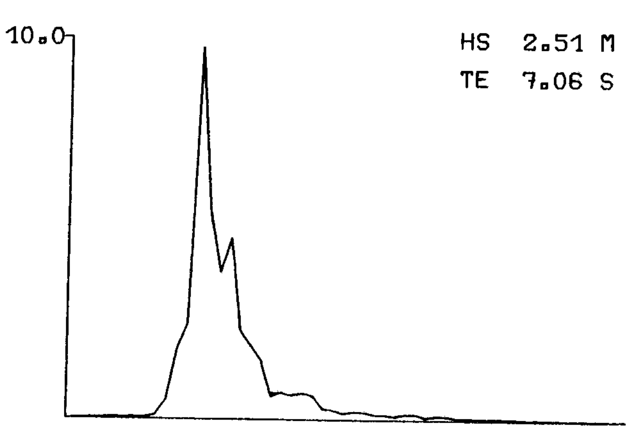

353



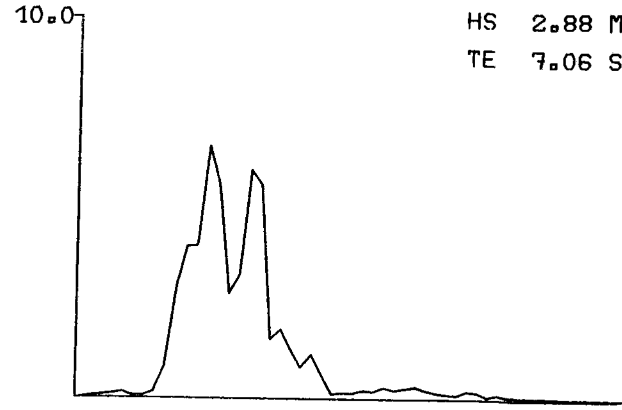

354



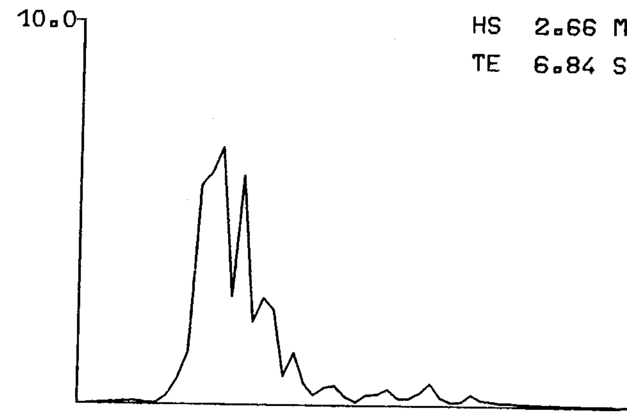

355



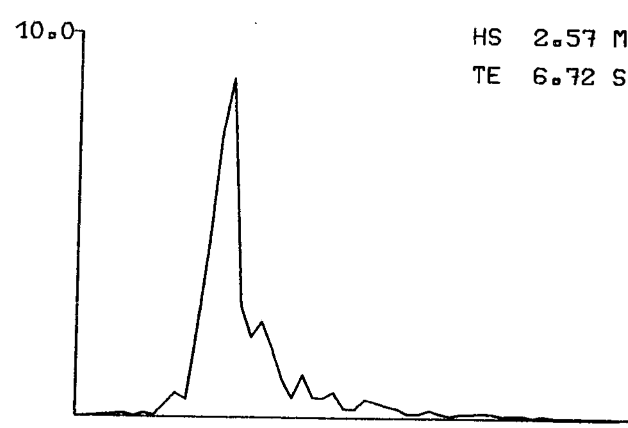

356



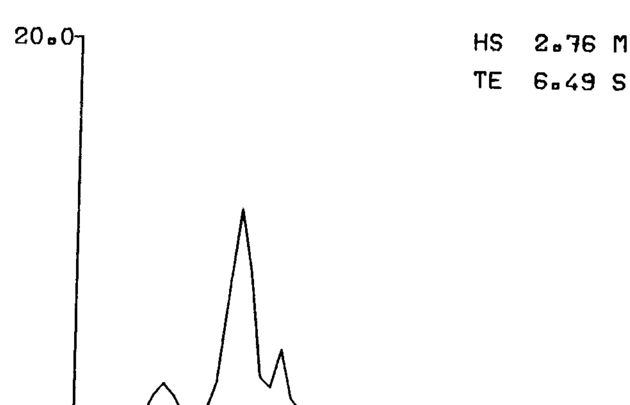

357



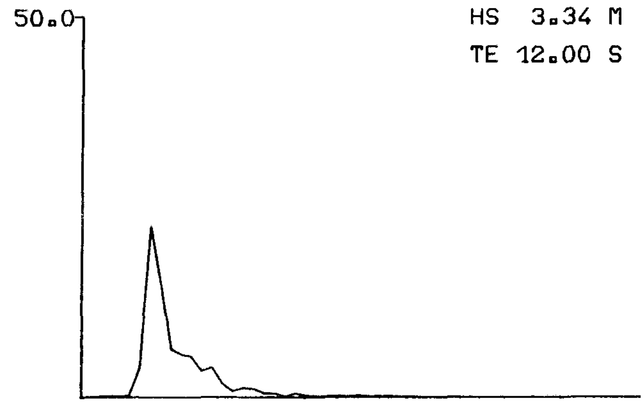

358



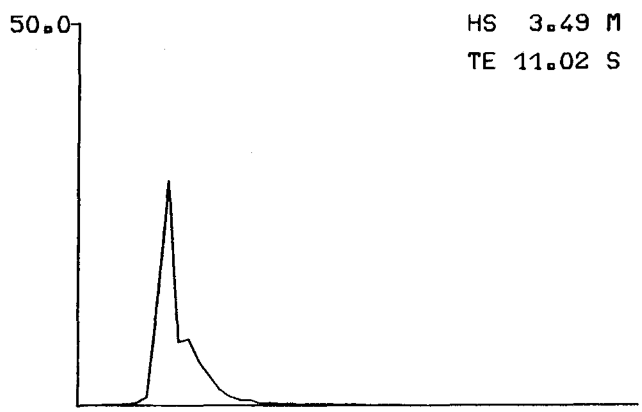

359



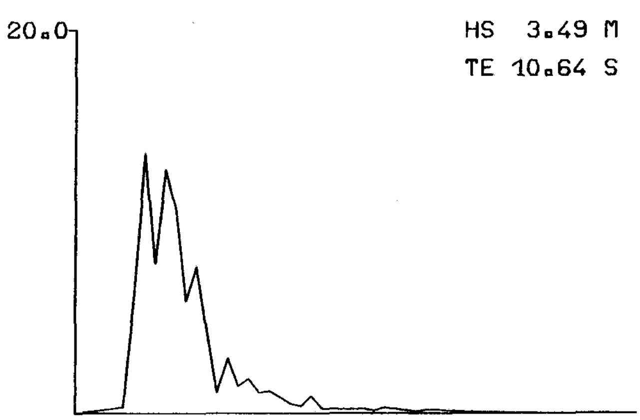

360



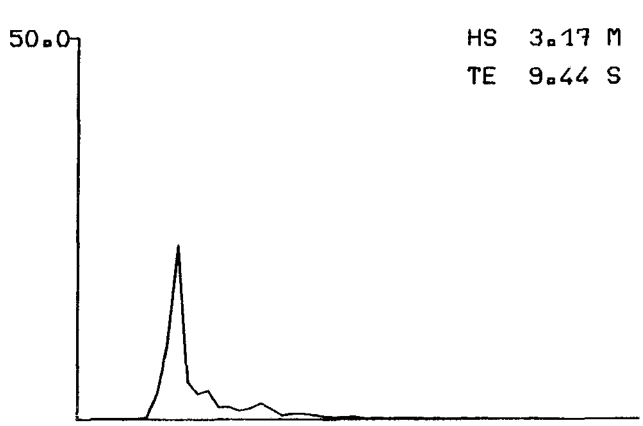

361



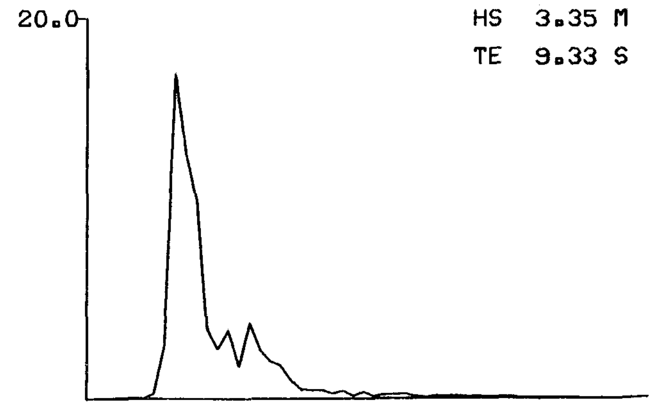

362



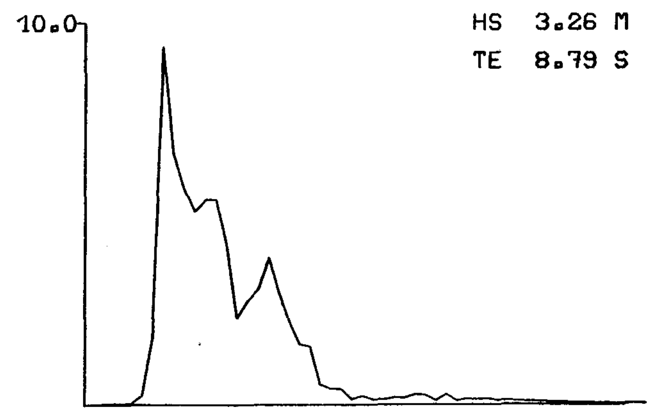

363



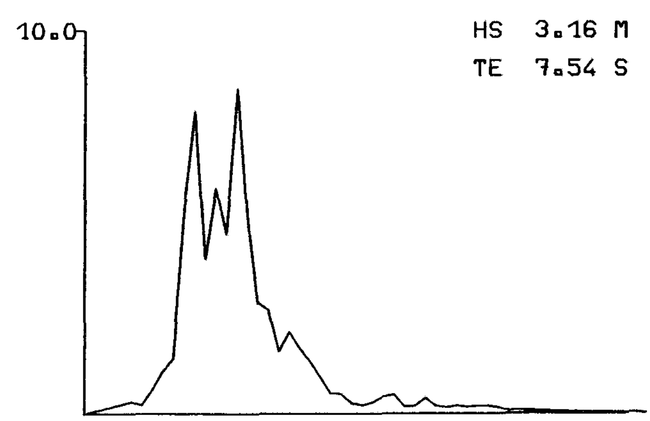

364



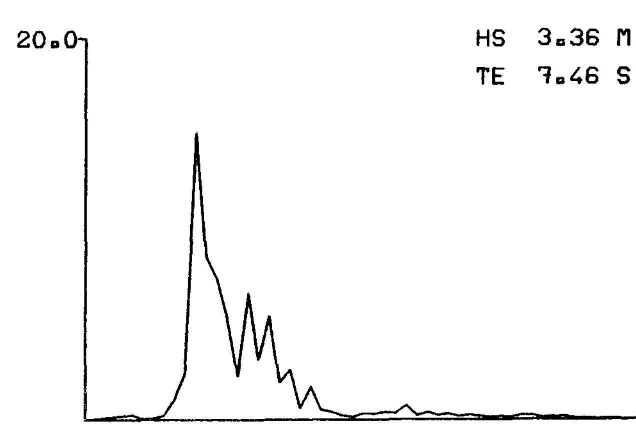

365



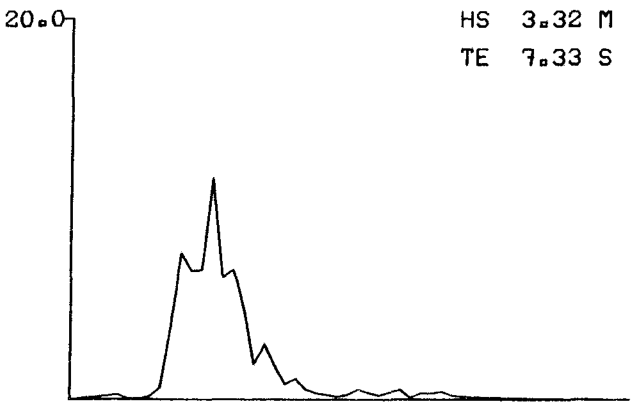

366



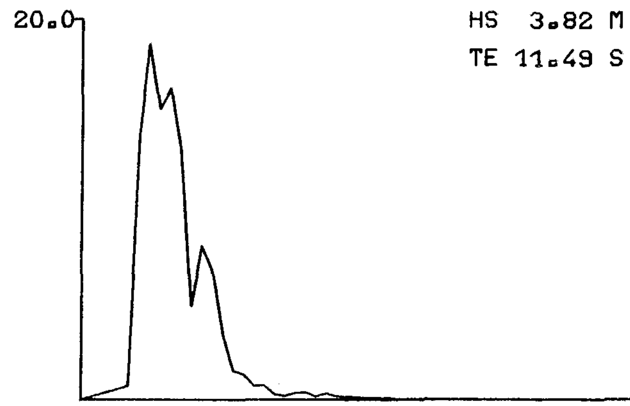

367



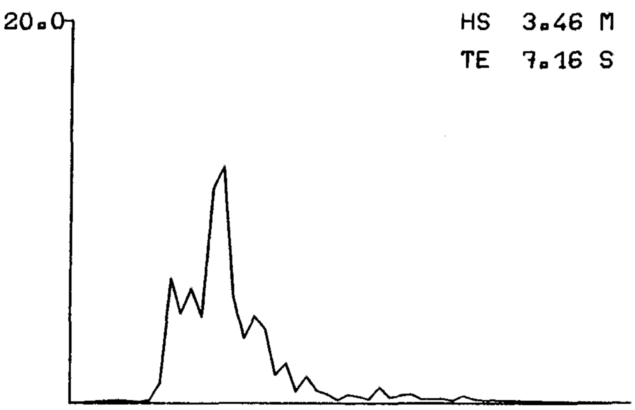

368



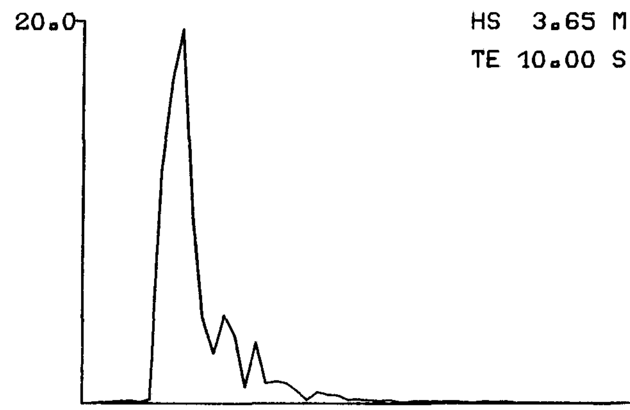
369



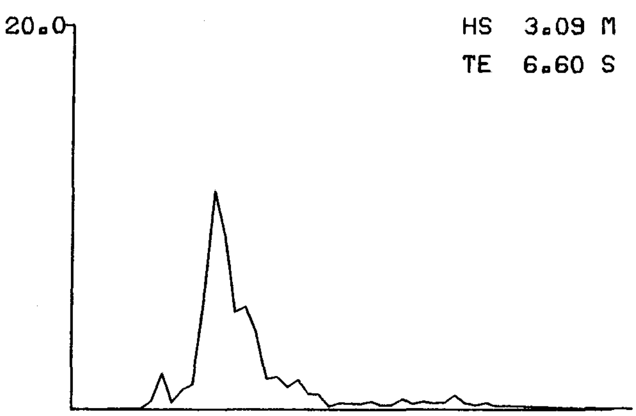
373



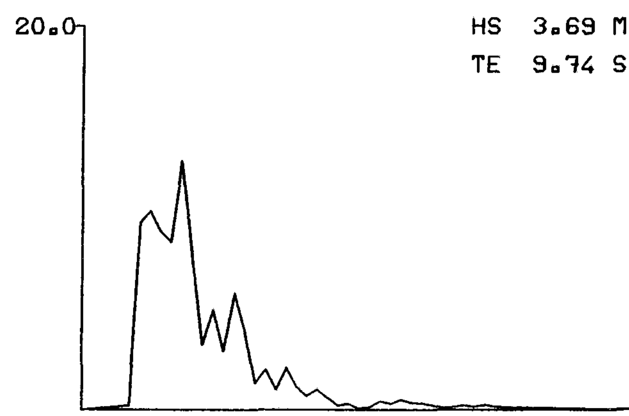
370



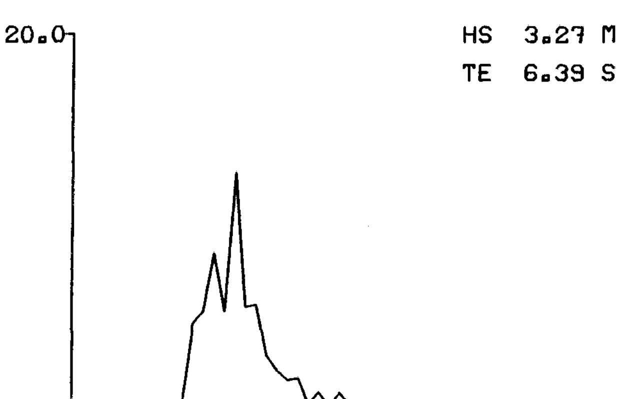
374



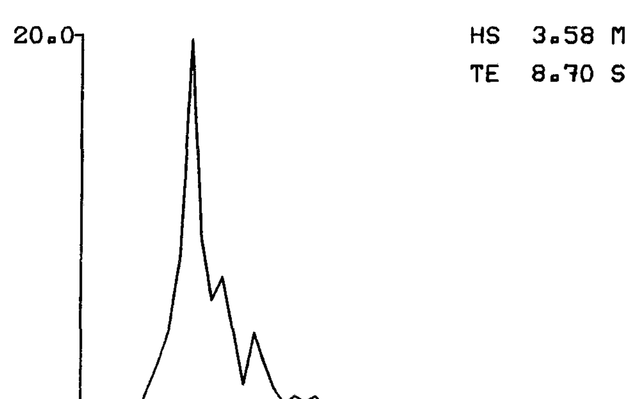
371



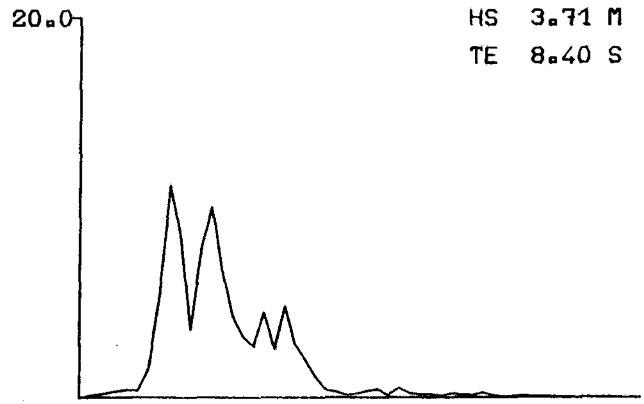
375



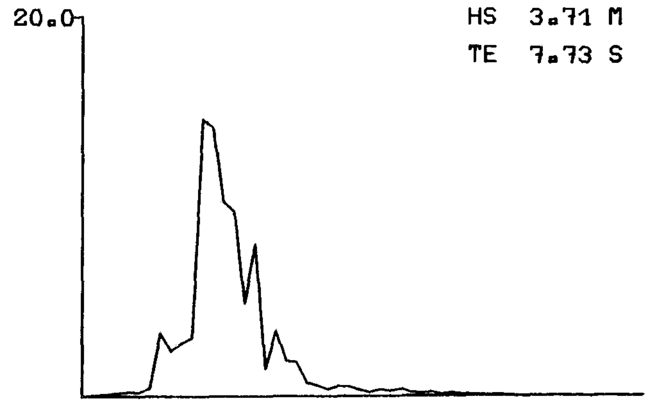
372



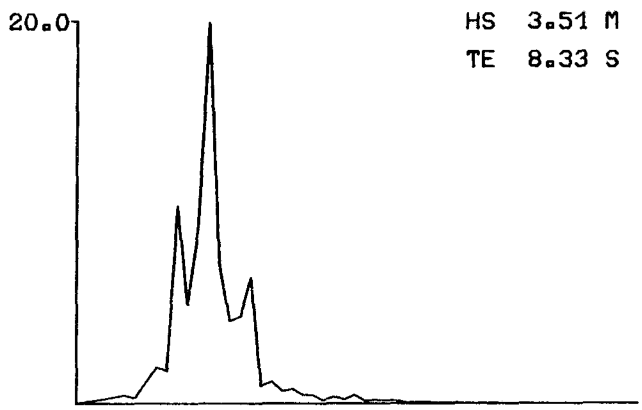
376



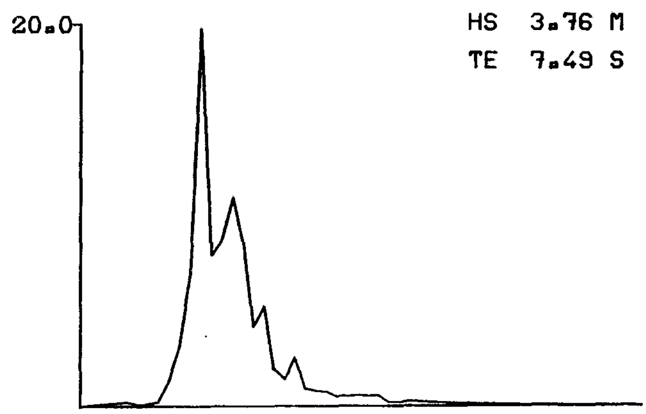

377



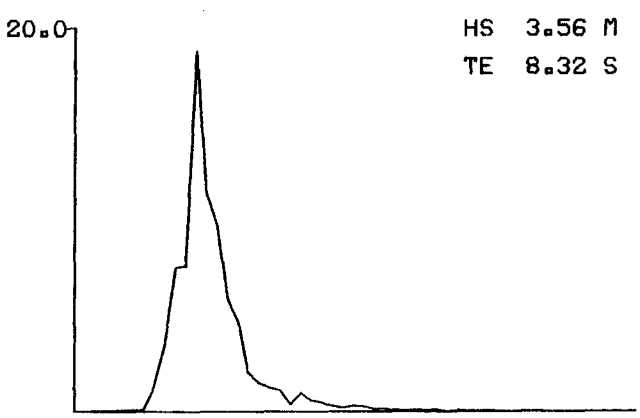

381



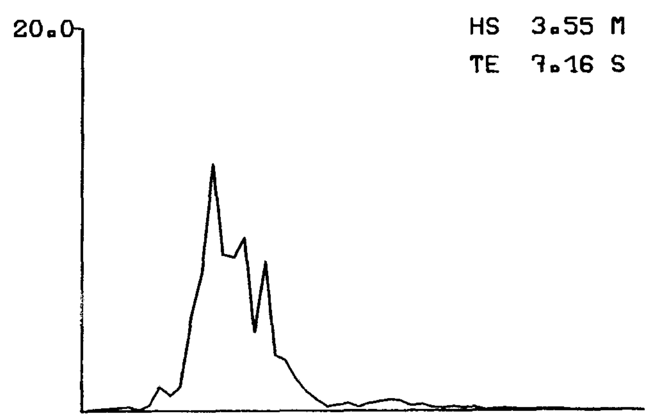

378



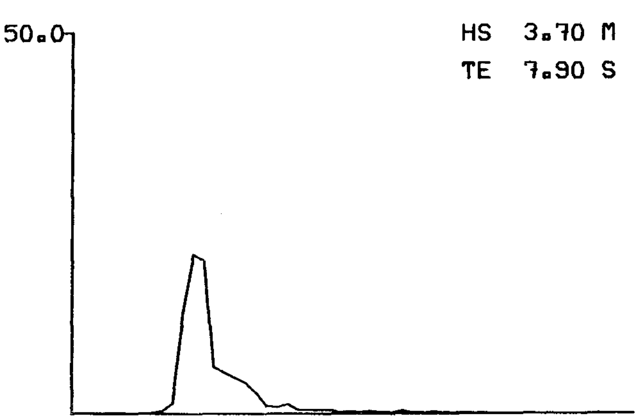

382



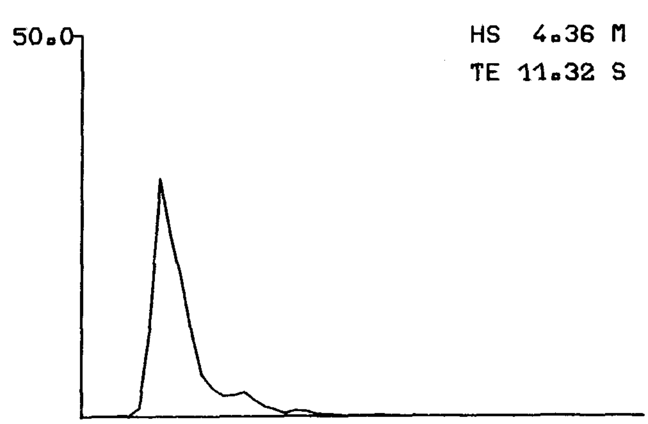

379



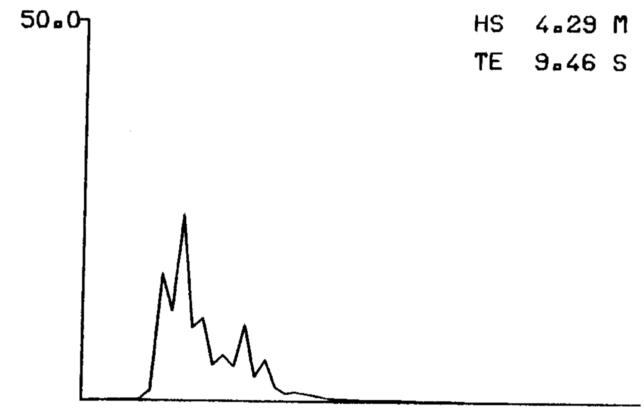

383



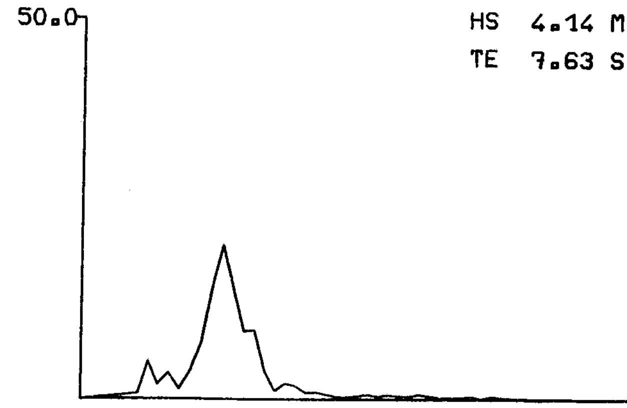

380



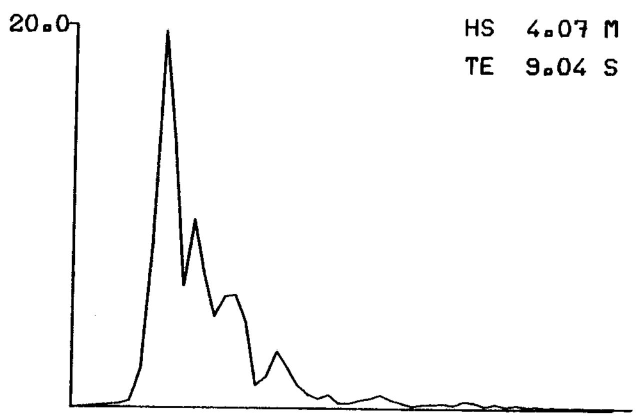

384



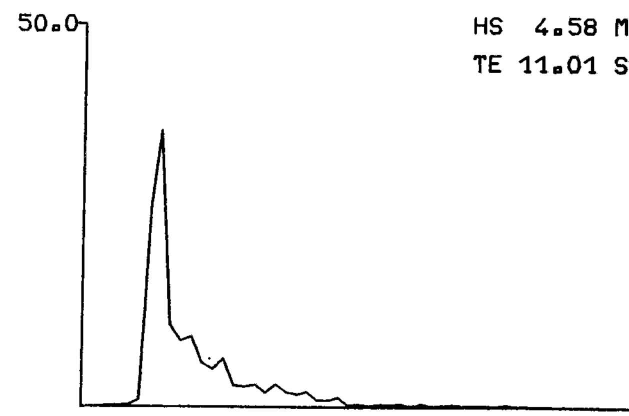

385



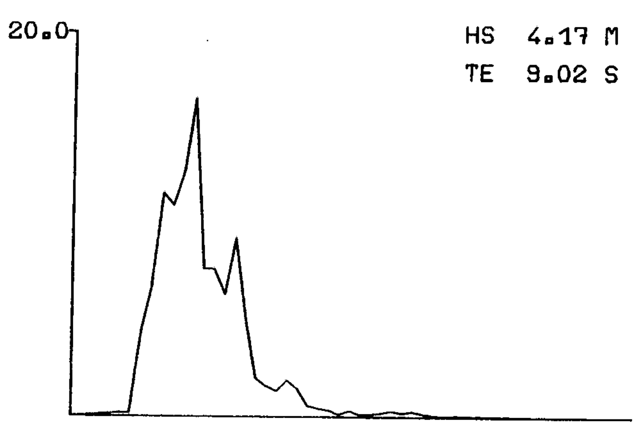

389



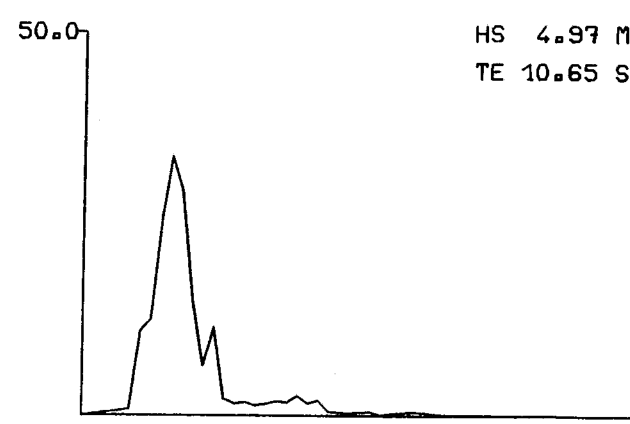

386



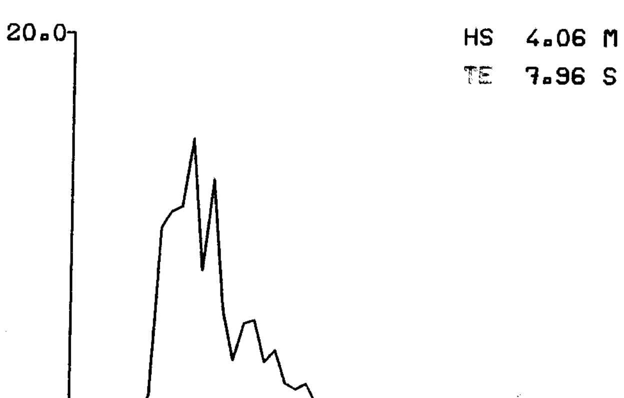

390



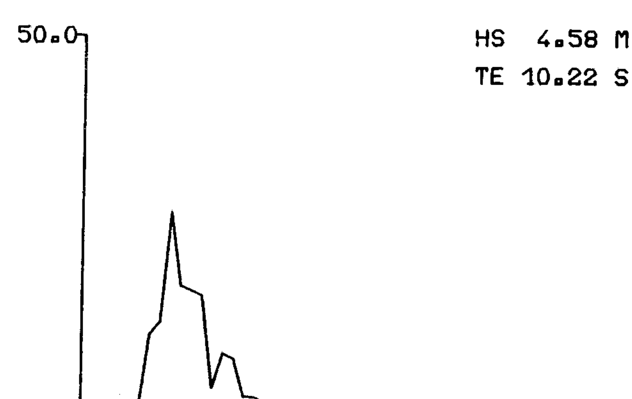

387



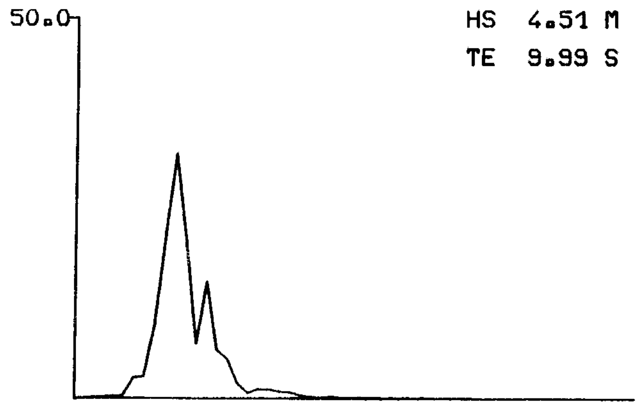

391



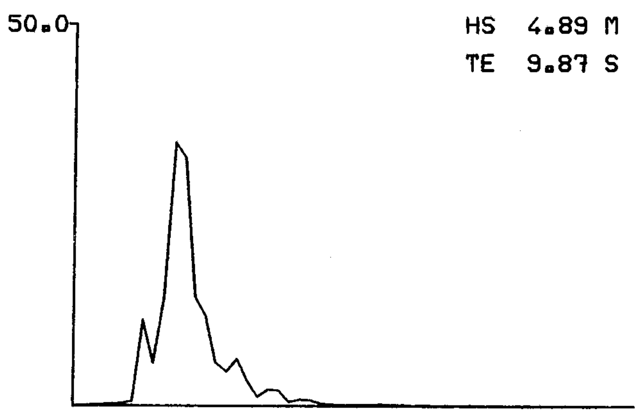

388



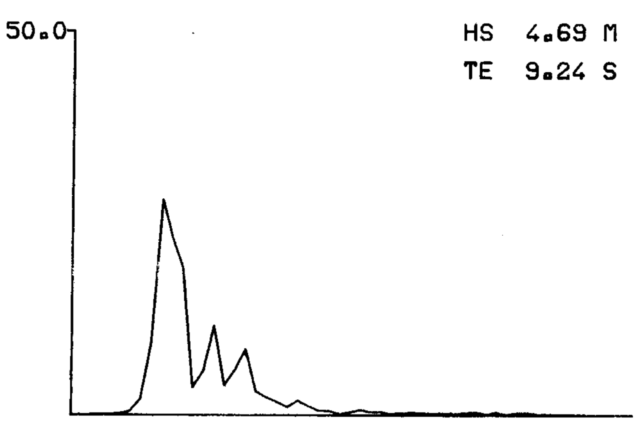

392



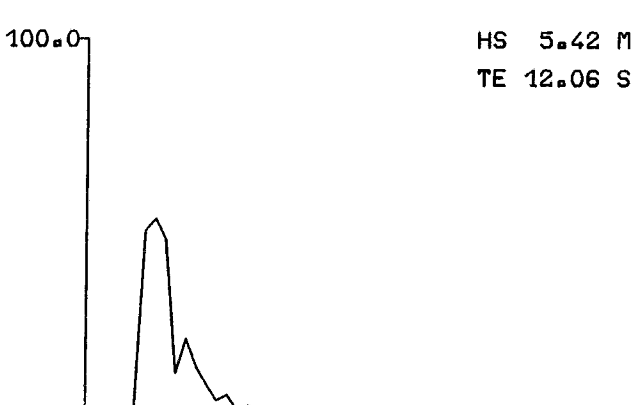

393



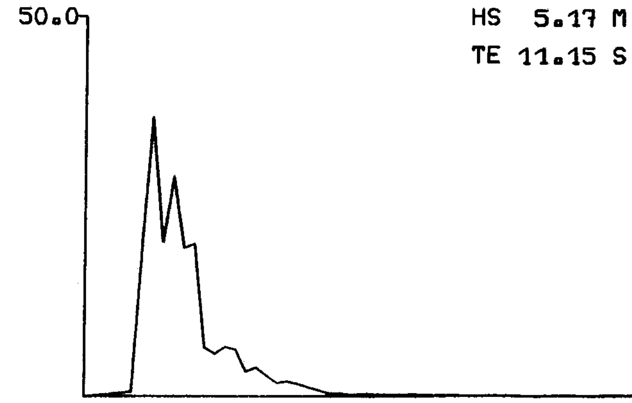

394



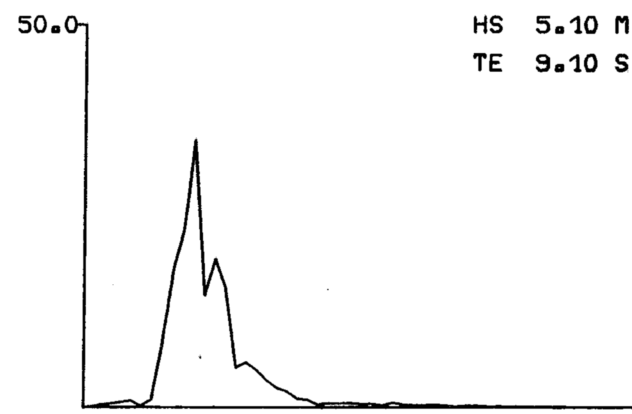

395



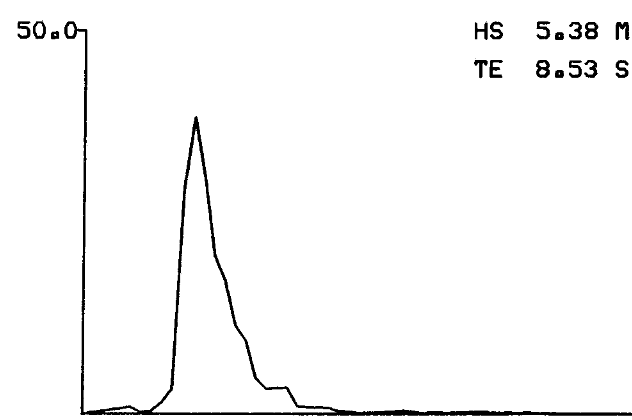

396



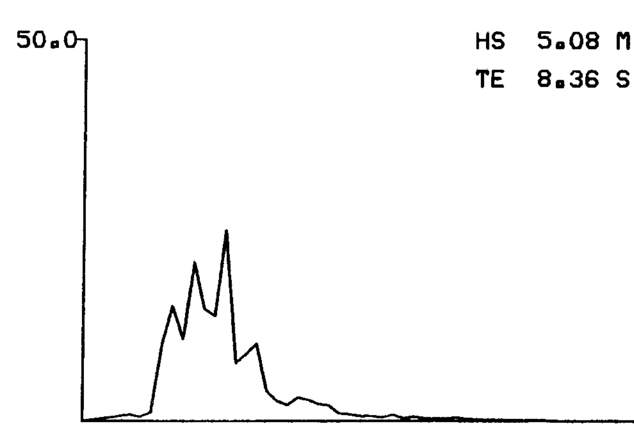

397



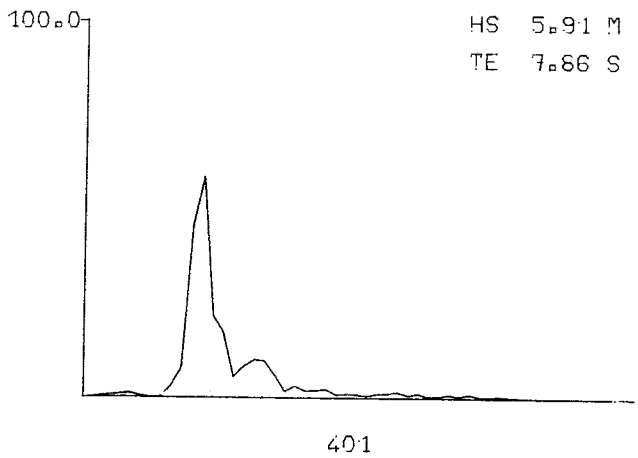

398




399




400


100.0
HS 5.91 M
TE 7.86 S
401