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**Surface Wave Height Measurements
Made Near the Oregon Coast During
August 1972, and July and August 1973**

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SURFACE WAVE HEIGHT MEASUREMENTS MADE NEAR THE OREGON COAST
DURING AUGUST 1972, AND JULY AND AUGUST 1973

David Halpern
Jonathan M. Helseth
James R. Holbrook*
R. Michael Reynolds

Summaries of surface wave height measurements made during August 1972 and during July and August 1973 with a Datawell Waverider buoy moored in 100 m depth off the Oregon coast are presented in computer-generated output as standard statistics, histograms, and spectra.

1. INTRODUCTION

Coastal upwelling is a common seasonal characteristic of eastern boundary currents such as the California Current, the Peru Current and the Canary Current. It is an ascending motion, of some duration and extent, by which water from subsurface layers is brought into the surface layer by processes other than turbulence or diffusion and is removed from the area of upwelling by near-surface horizontal flow.

Progress in ecosystems modelling of coastal upwelling regimes required an elucidation of the interwoven dominant biological, chemical and physical processes. To this end, a multi-institutional program was organized in 1971 by the International Decade of Ocean Exploration (IDOE) Office of the National Science Foundation (NSF). Two pilot observational programs, primarily of physical oceanography, were carried out off the Oregon coast during July and August 1972 (CUE-1), and July and

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August 1973 (CUE-2). Both experiments had similar objectives: (1) to describe the dominant time and space scales of the physical dynamics of the coastal upwelling processes in regions of relatively simple (CUE-2) and more complex (CUE-1) bottom topographies; (2) to test theoretical and conceptual models with sufficient data; (3) to test new instruments and technology; and (4) to coordinate individual projects for the benefit of all.

An important indicator of coastal upwelling is the near-surface off shore transport produced by a northerly wind blowing parallel to a western coastline in the northern hemisphere. During CUE-1 and CUE-2 we installed an instrumented surface float to measure currents in the upper portion of the water column (Halpern et al., 1973 and 1974a). Because of mooring noise (Webster, 1964) and effects of surface waves (Pollard, 1974), the accuracy of near-surface current meter measurements had been questioned. Interpretations of near-surface current meter measurements made beneath surface floats by Briscoe and Hayes (1973), Pollard (1974), Halpern et al., (1974b), and Saunders (1974) encouraged further experiments using current meters beneath surface buoys anchored with a flexible mooring line.

To estimate the magnitude of spurious surface-wave-generated currents introduced into our current measurements, surface-wave measurements were made within 0.25 km of the meteorological-oceanographic buoy. In CUE-1 we called the wave recording site W1; in CUE-2, W2 (fig. 1). Both sites were located in 100 m of water. Station W1 was approximately 18 km from the coast; Station W2 was about 13 km. We intended to record

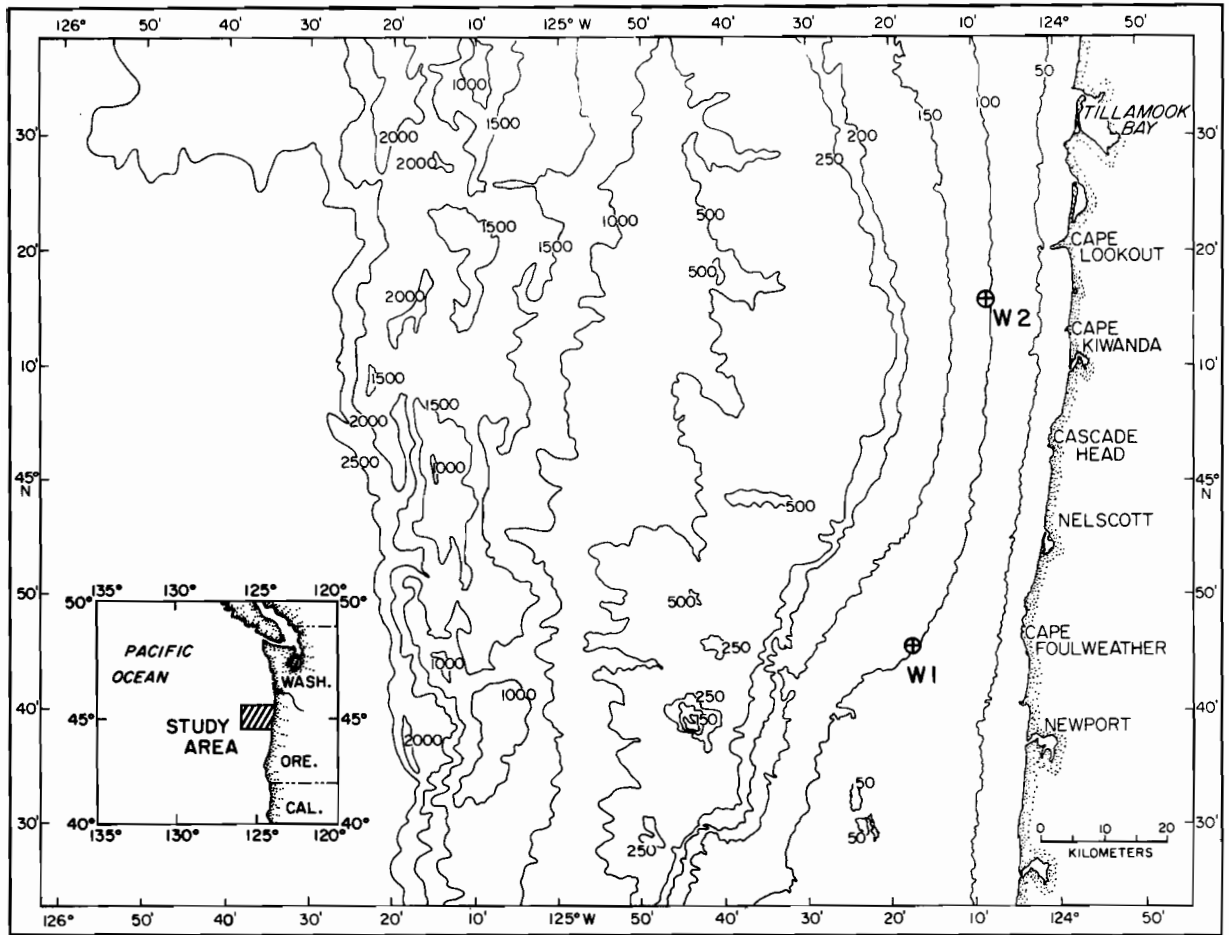


Figure 1. Location chart showing positions of surface-wave measurements during 1972 (W1) and 1973 (W2). Bathymetric contours are in meters.

wave heights for 40-minute periods at 6-hour intervals between 20 August and 28 August 1972, and between 9 July and 27 August 1973. Fig. 2 shows the periods when data were obtained. The largest loss of data was the result of recorder malfunctions.

2. INSTRUMENTATION

Surface-wave amplitudes were measured by a Waverider buoy and Reflok recording system manufactured by Datawell NV, Haarlem, Netherlands. The buoy consisted of a 95-kg, 70-cm diameter stainless steel sphere, an antenna and a flashing light. The Waverider measured vertical accelerations by means of a stabilized accelerometer suspended in a plastic sphere and placed at the bottom of the buoy. The accelerometer was restrained to eliminate errors due to rolling, pitching, and horizontal accelerations. Only vertical accelerations were detected.

The signal from the accelerometer is double integrated electronically, with the integrators designed to eliminate linear trends from a small constant acceleration. The effect of having the linear trends removed is negligible at high frequencies, but is significant at lower frequencies. The low cutoff frequency of the Waverider is 0.03 Hz (cycle per second), with an error in amplitude of 3 per cent at 0.065 Hz. Above 0.70 Hz, errors are produced as the buoy approaches its resonant frequency. The signal from the integrators is transmitted to the receiving

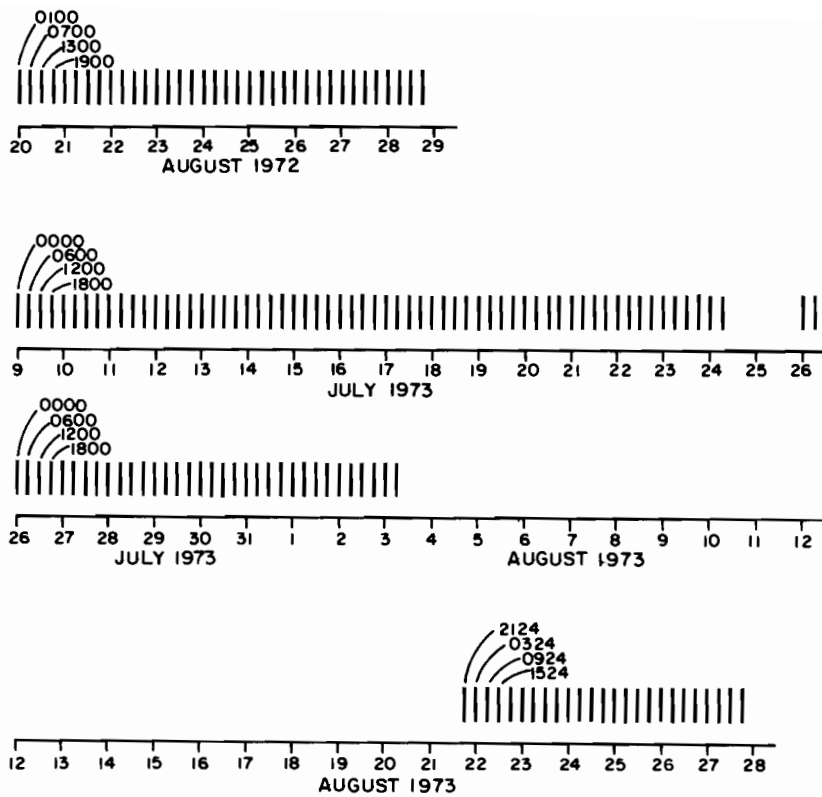


Figure 2. Time-phase diagram showing 40-min periods of surface-wave measurements made during August 1972, and July and August 1973.

unit, which must be within 50 km. The receiving unit consists of a receiver, a clock, a timer, and a strip chart recorder. For CUE-2 a magnetic tape recorder was added to the Reflok recording system.

The buoy was moored in about 100 m of water. The mooring configuration (fig. 3) consisted of 75 m of 1.27-cm braided polypropelene, 2 m of chain, 15 m of rubber cord, 70 m of polypropelene, 50 m of beaded Ulstrom rope, and an anchor consisting of 272 kg of chain. The 2-m length of chain acted as ballast and increased the submerged portion of the buoy, producing a more stable float. The rubber cord acted as a shock absorber. The beading on the Ulstrom rope was made of 20.3-cm pieces or reinforced rubber tubing spaced evenly along the rope to decrease chafing along the bottom.

3. DATA PROCESSING

During August 1972 (CUE-1) the timer and clock were set to record for 40 minutes every 6 hours. The recording times began at 0000, 0600, 1200, and 1800 local time (Pacific Daylight Time = GMT minus 7 Hours) each day. The chart paper moved 1 mm per second. One cm in the vertical on the chart paper corresponded to 1 m of actual wave height. Fig. 4 shows a typical section of the raw data. The length of each chart varied by as much as 4 per cent depending on the time of day. The charts recorded at night were longer than those recorded during the day. Timer and chart speed specifications were for 40 min \pm 10 per cent and 1 mm/sec \pm 1.5 per cent respectively. Several laboratory tests were made to check these specifications. During each test the chart moved

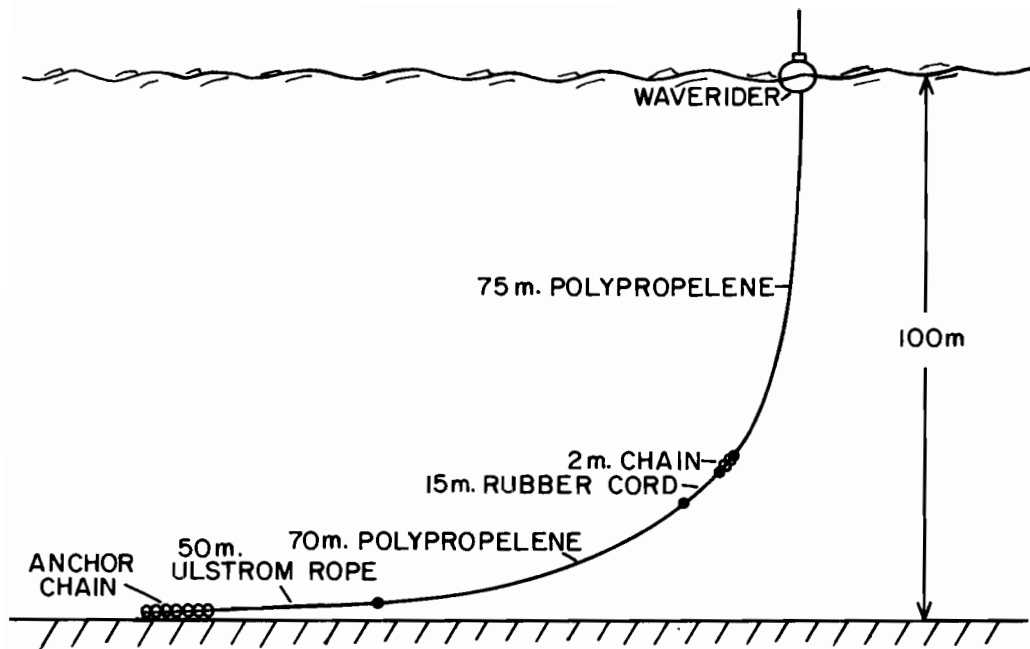


Figure 3. Schematic diagram of Waverider mooring.

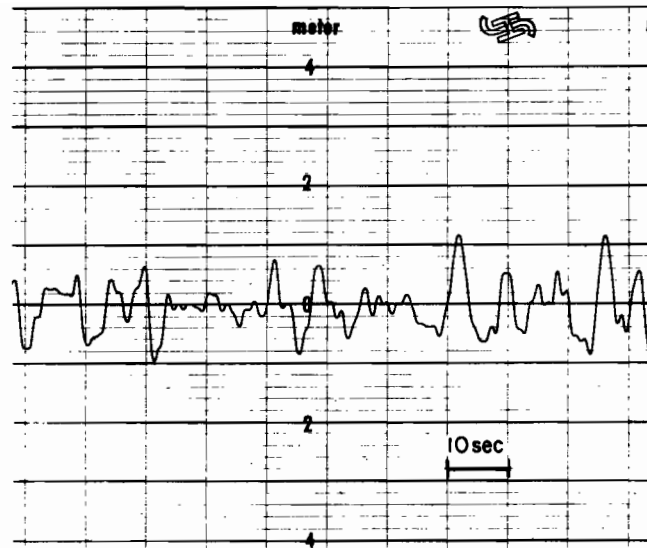


Figure 4. Portion of analog trace of surface heights recorded by Reflok recorder during August 1972.

1 mm/sec; the recorder's timer operated longer than the specified 40 minutes and appeared to fluctuate according to air temperature. From this it was assumed that the chart speed was constant, and the first 40 minutes of the records were used.

The Waverider produced an FM signal such that 259 Hz corresponded to zero wave height. A 1 m displacement was equal to a frequency variation of 1.86 Hz. Because a period counting technique was used to measure the telemetered signal, the ultimate resolution of a 0.5-second sample was .05 cm vertical displacement.

Over the 9-day period in August 1972, a total of 36 charts were recorded. Four of the charts were incomplete due to a malfunction of the pen; the paper advanced the correct distance, but the ink flow failed during part of the 40-minute period. The data were digitized by hand using a Benson-Lehner digitizer. The digitizer was set for a vertical stepping of 0.001 inches, which corresponds to 0.254 cm of actual wave height. The wave height was recorded every 0.01 inches along the chart, which is equivalent to a time interval of 0.254 seconds. The digitized wave heights were recorded on 7-track magnetic tapes compatible with the CDC 6400 used at the University of Washington.

During July and August 1973 (CUE-2) the surface-wave-height data were recorded on a 4-channel magnetic tape cassette at 0.5-second intervals for 40-minute periods every 6 hours. The raw data were translated at PMEL with a SEA-DATA model 12 tape reader and Digi-Data series 1300 tape recorder to a 7-track magnetic tape compatible with the CDC 6400 used at the University of Washington.

4. DATA PRESENTATION

A series of computer programs written in FORTRAN IV and run on the University of Washington CDC 6400 (SCOPE 3.4) processed the data. The output represents a "quick look" data summary plotted on a CALCOMP plotting system.

4.1 Standard Statistics

If x_i represents the 0.254-sec (CUE-1) or 0.5-sec (CUE-2) wave heights, then the mean value, variance, standard deviation, skewness, and kurtosis were computed from:

$$\text{Mean, } \bar{x} = \frac{1}{N} \sum_{i=1}^N x_i$$

$$\text{Variance, } \sigma^2 = \frac{1}{N} \sum_{i=1}^N (x_i - \bar{x})^2$$

$$\text{Standard deviation, } \sigma = \sqrt{\sigma^2}$$

$$\text{Skewness} = \frac{\frac{1}{N} \sum_{i=1}^N x_i^3 - \frac{3}{N} \bar{x} \sum_{i=1}^N x_i^2 + 2\bar{x}^3}{\sigma^3}$$

$$\text{Kurtosis} = \frac{\frac{1}{N} \sum_{i=1}^N x_i^4 - \frac{4}{N} \bar{x} \sum_{i=1}^N x_i^3 - \frac{6}{N} \bar{x}^2 \sum_{i=1}^N x_i^2 + 3\bar{x}^4}{\sigma^4}$$

4.2 Histogram

The wave heights were divided into groups of 5 cm and the frequency distribution was plotted as a histogram.

4.3 Spectrum

The Fourier coefficients of the time series of wave heights

$$X(t) = \sum_{n=1}^{N/2} [A_n \cos(f_n t) - B_n \sin(f_n t)]$$

where: $f_n = \frac{n}{N\Delta t}$ [Hz]

N = number of data values in time series

A_n, B_n = Fourier coefficients normalized by $\frac{2}{N}$ [cm]

$X(t)$ = wave height time series [cm]

Δt = sampling rate or time interval between values [sec]

$t = k\Delta t$, time increment [sec]

k = integer, $1 \leq k \leq N$

n = integer, $1 \leq n \leq N/2$

were computed using Brenner's (1971, personnel communication) fast Fourier transform algorithm. The sum of periodogram values, defined by

$$P_n = (A_n^2 + B_n^2)/2,$$

was equal to the variance of the time series, i.e.,

$$\sum_{n=1}^{N/2} P_n = \frac{1}{N} \sum_{k=1}^N [X(k\Delta t) - \bar{X}]^2$$

Spectral estimates, s_n , which were plotted on a linear-linear scale, were computed from the periodogram values using the perfect Daniell window of variable width (Table 1). For example, spectral estimates with 10 degrees of freedom were equal to the arithmetic means of 5 consecutive nonoverlapping values of P_n . The frequency of each estimate was defined as the mid-frequency of the window. Nearly all the time series

had either 5000 or 5040 data points giving 102 spectral estimates. The 95% confidence limits of the spectral estimates are also given in Table 1.

The estimated value of the wave-height amplitude, c_n (cm), may be computed from the spectral estimate, s_n , by:

$$c_n = (s_n \cdot 2)^{1/2}$$

Table 1. Daniell window widths, corresponding degrees of freedom and 95% confidence limits for each wave-height spectral estimate. (N is number of data points in each time series.)

Daniell width	Range of periodogram values acted on by window	Degrees of freedom of estimate	95% Confidence limits	
			A_1	A_2
5	1-150	10	0.489	3.080
10	151-300	20	0.585	2.085
25	301-800	50	0.701	1.545
50	801-1300	100	0.773	1.348
100	1301-N/2	200	0.830	1.230

5. ACKNOWLEDGEMENTS

We are grateful to Andrew Johnson, Florida State University, for his unselfish help during the August 1972 recording operations at the Marine Science Center at Newport, Oregon. Victor Marchi kindly allowed us free and easy access to his property near Neskowin, Oregon where the recording instrumentation was installed during July and August 1973. We thank James Stephens, Pacific Marine Environmental Laboratory, for his help during the field operations conducted in 1972 and 1973. The procurement advice given by Graham Mathes, Northwest Administrative Service Organization, during the Spring of 1972 was most helpful. We thank Captain Herbert R. Lippold and Captain William D. Barbee and the officers and crew on the NOAA Ship OCEANOGRAPHER for their assistance.

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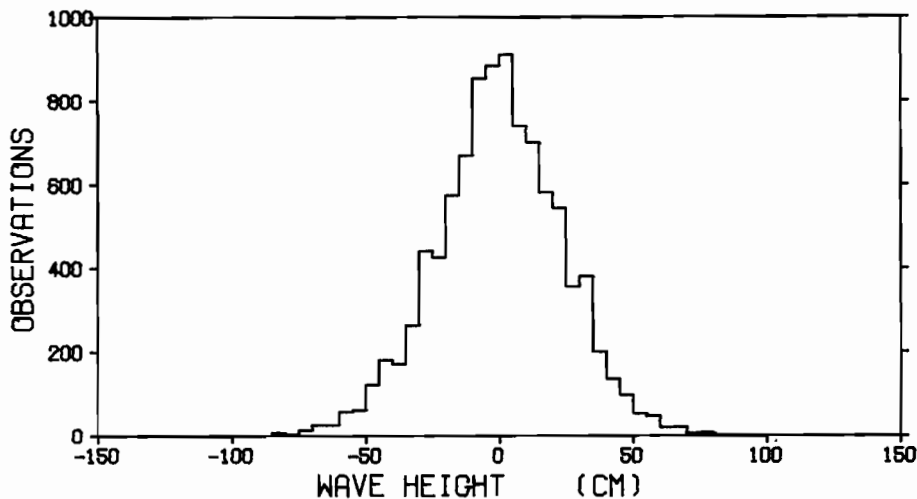
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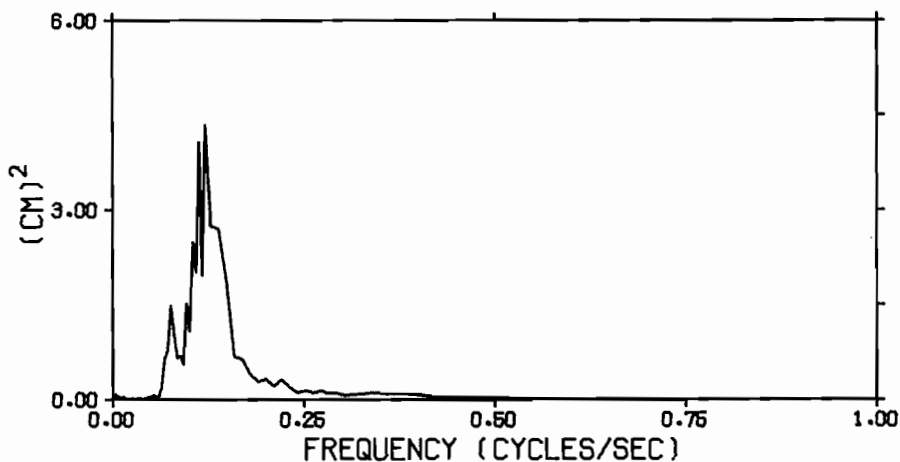
7. COMPILATION OF WAVE HEIGHTS, 20-28 AUGUST 1972

WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 20 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	558.42	23.63	-.04	3.29	88.74	-84.74

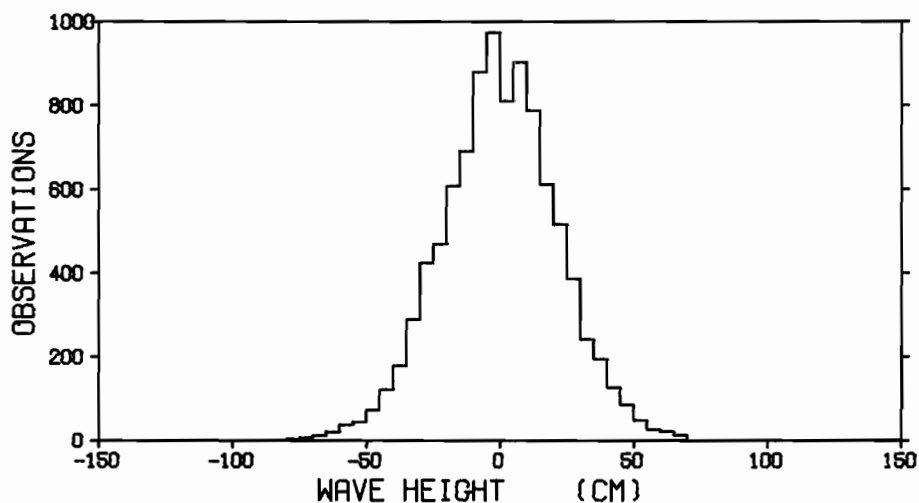


WAVE HEIGHT SPECTRUM.

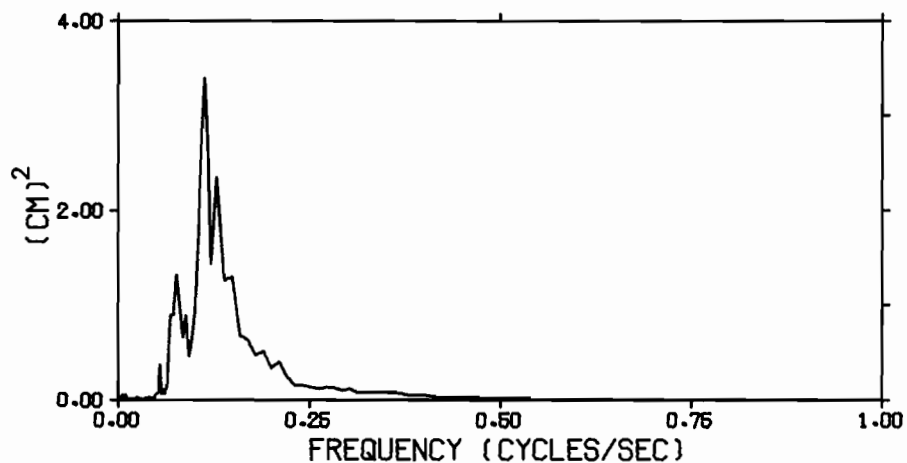


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 20 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	469.15	21.66	-.03	3.15	70.35	-76.47

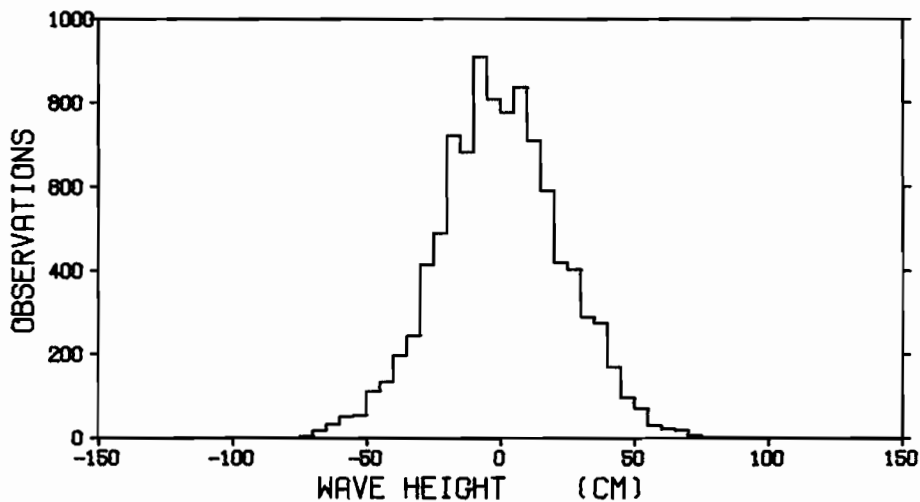


WAVE HEIGHT SPECTRUM.

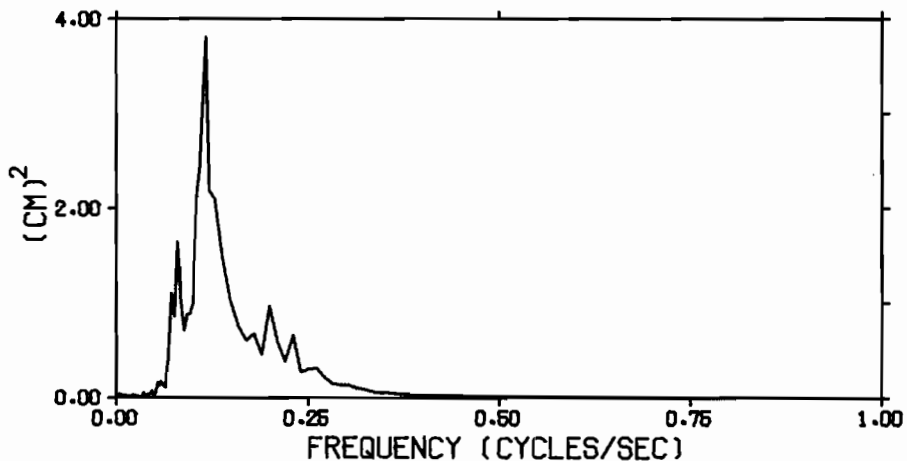


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 20 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	536.89	23.17	.01	3.12	76.38	-101.68

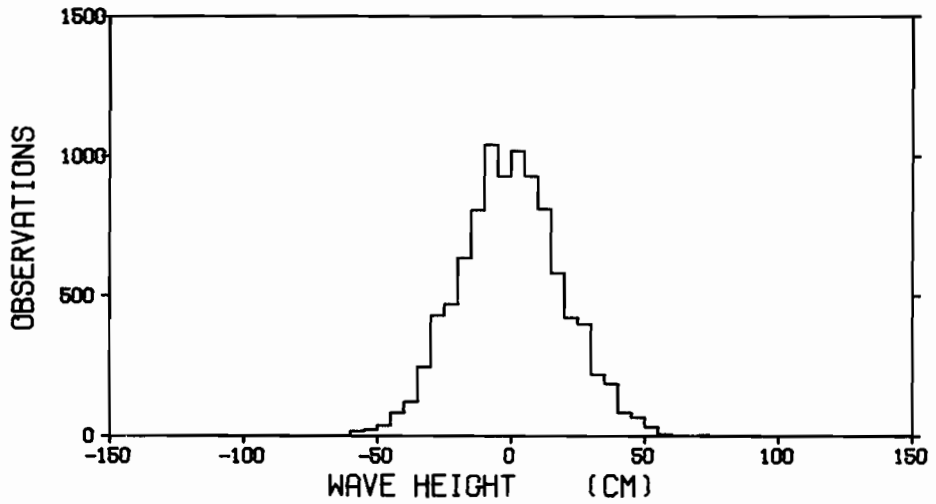


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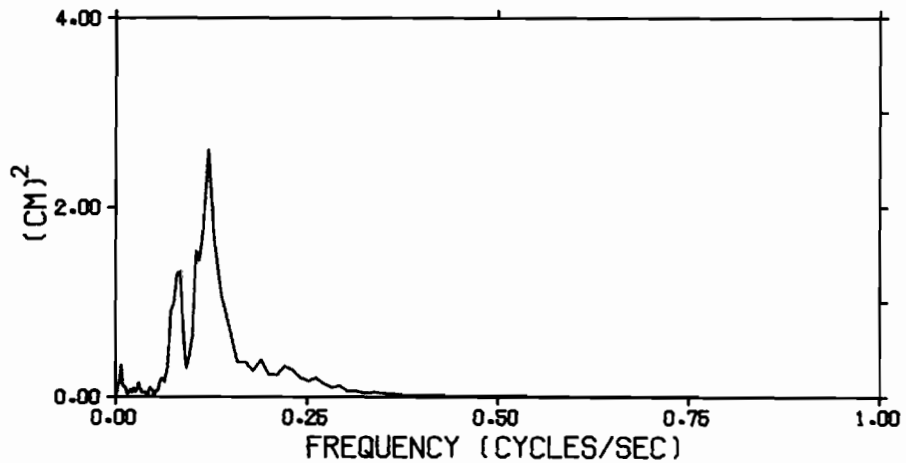


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 20 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	366.12	19.13	.09	2.98	72.28	-59.55

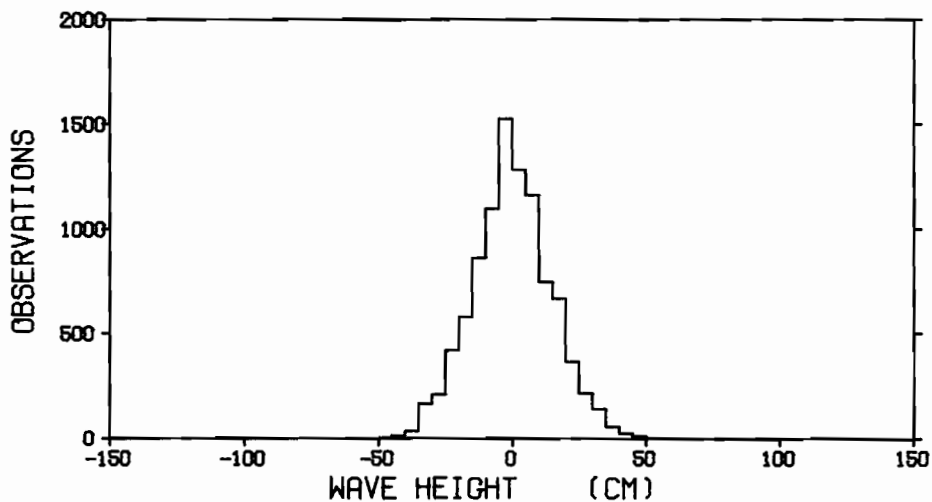


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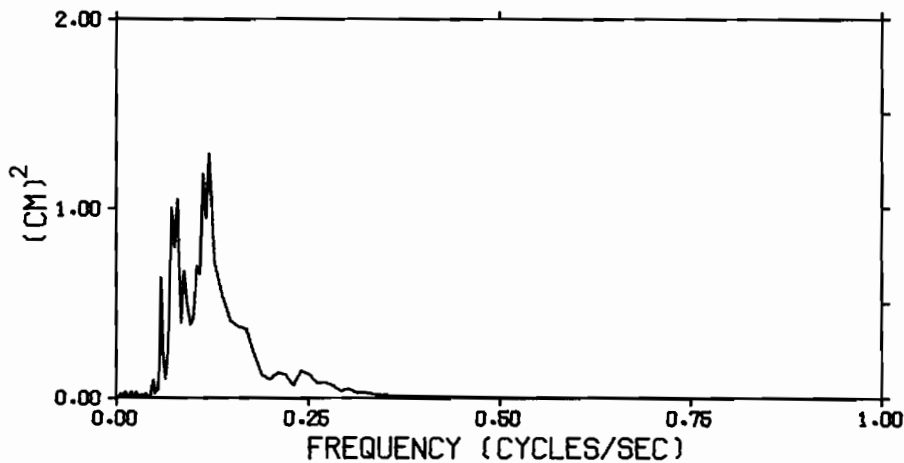


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 21 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	212.53	14.58	.07	3.04	49.91	-46.86

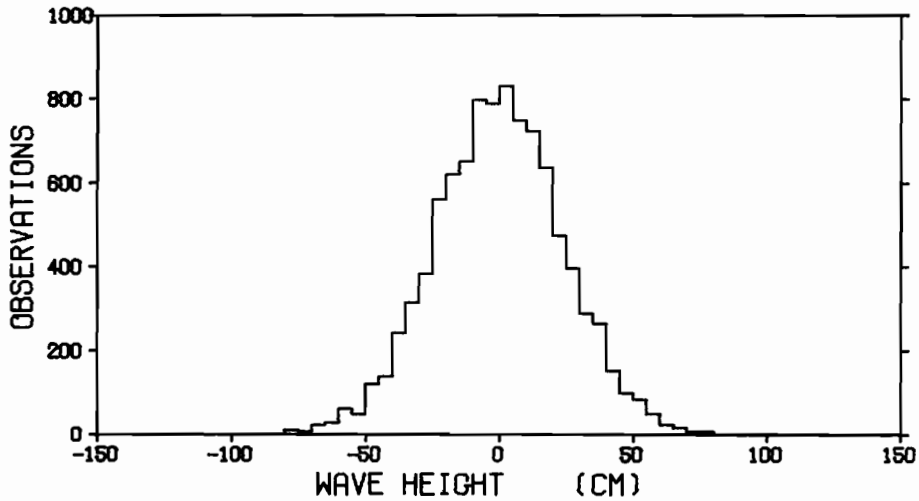


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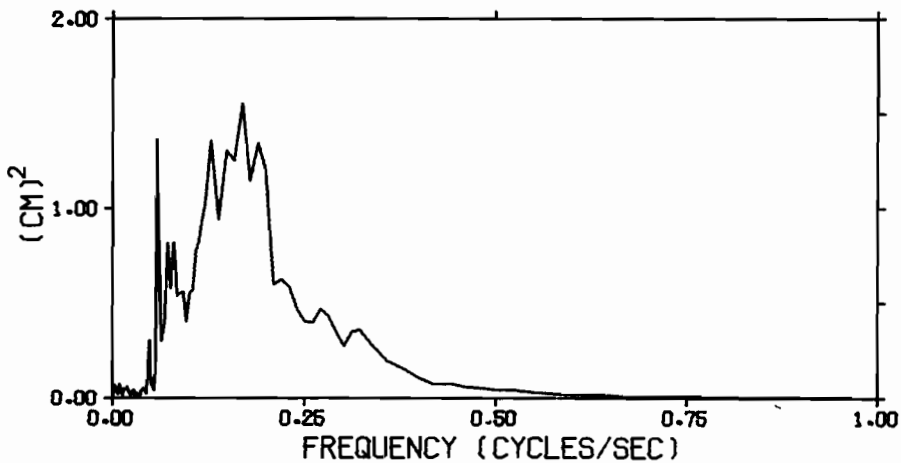


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 21 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	570.67	23.89	.02	3.15	103.93	-81.74

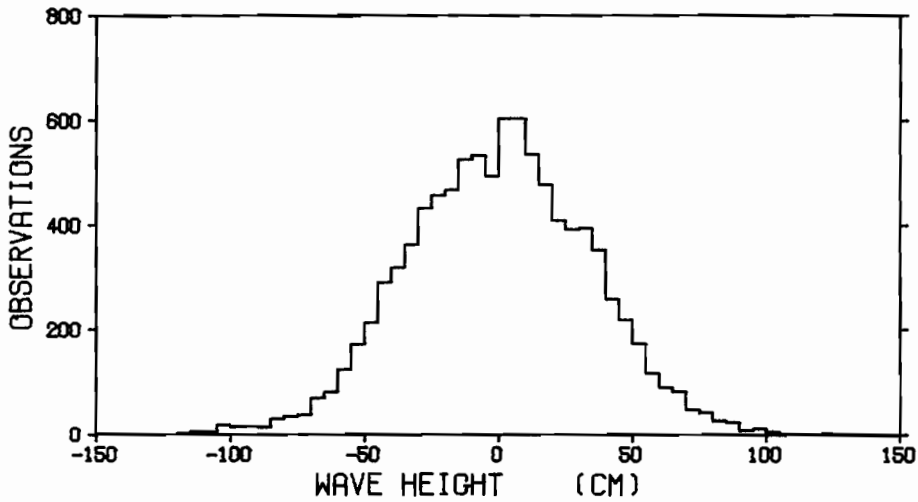


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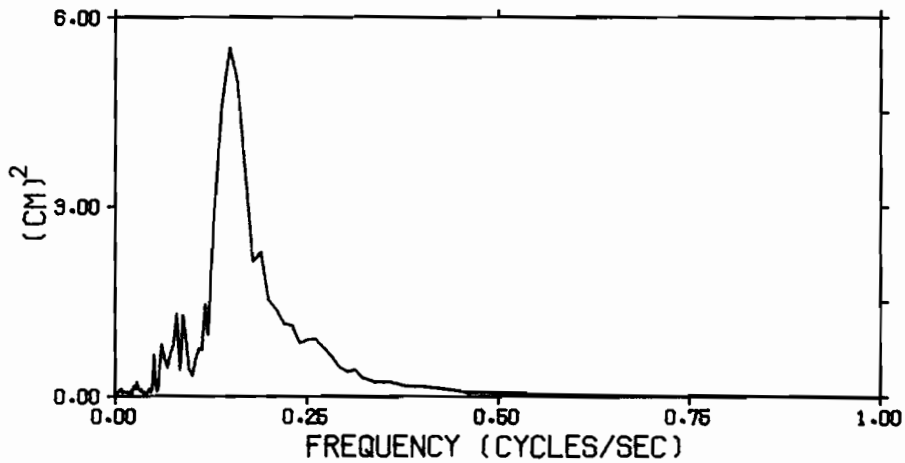


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 21 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.05	1142.48	33.80	-.03	3.07	136.97	-120.59

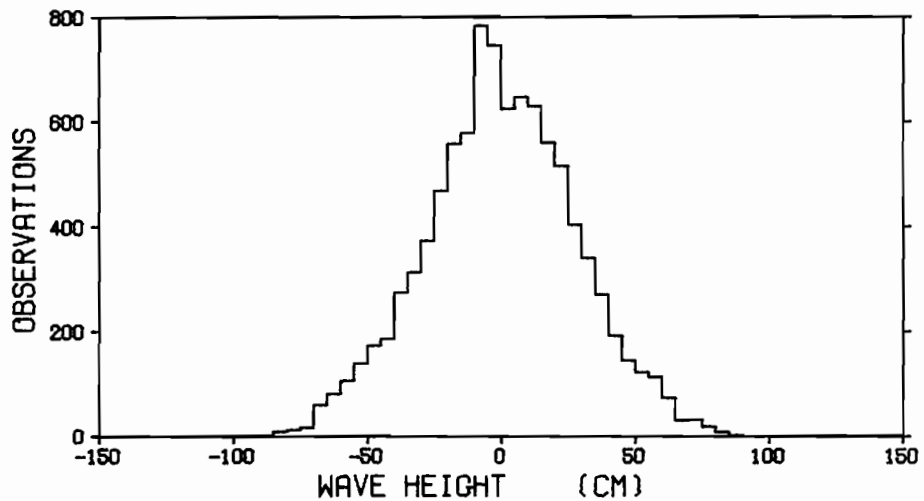


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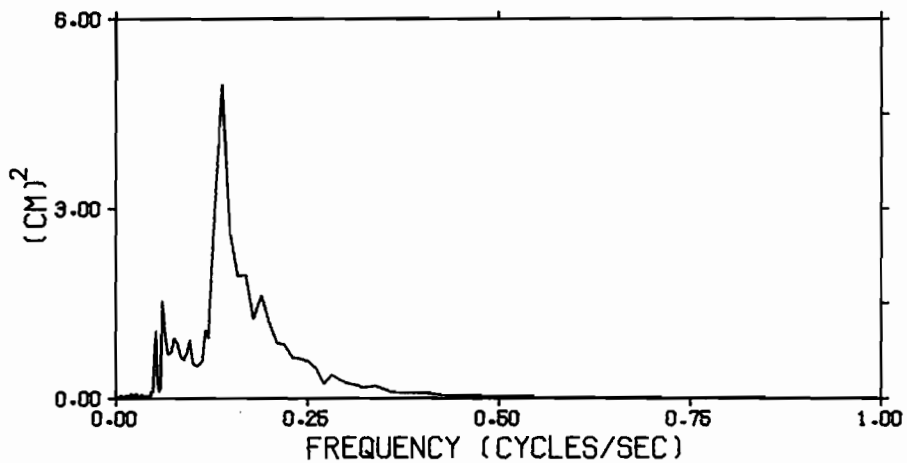


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 21 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	785.83	28.03	-0.01	2.91	86.06	-86.41

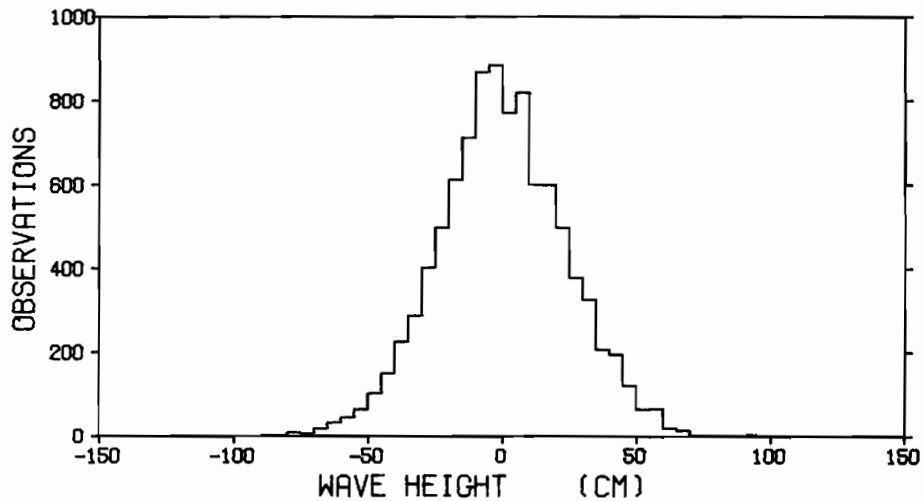


WAVE HEIGHT SPECTRUM.

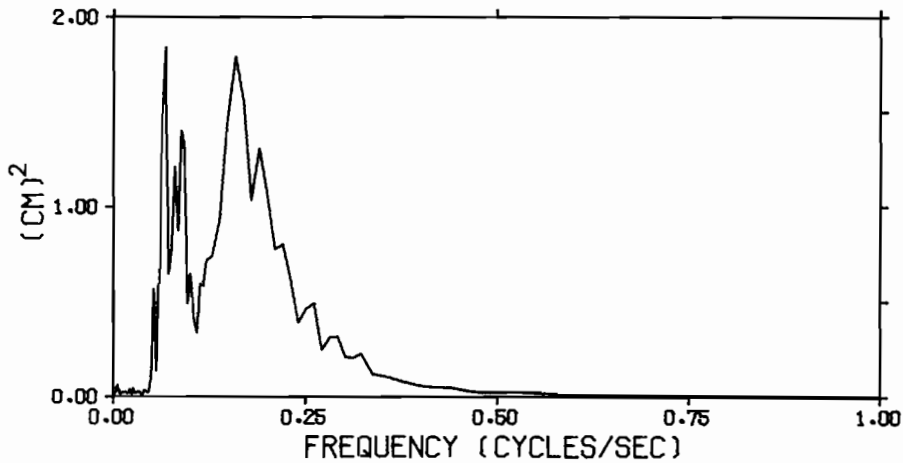


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 22 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	560.75	23.68	.01	3.12	92.12	-85.93

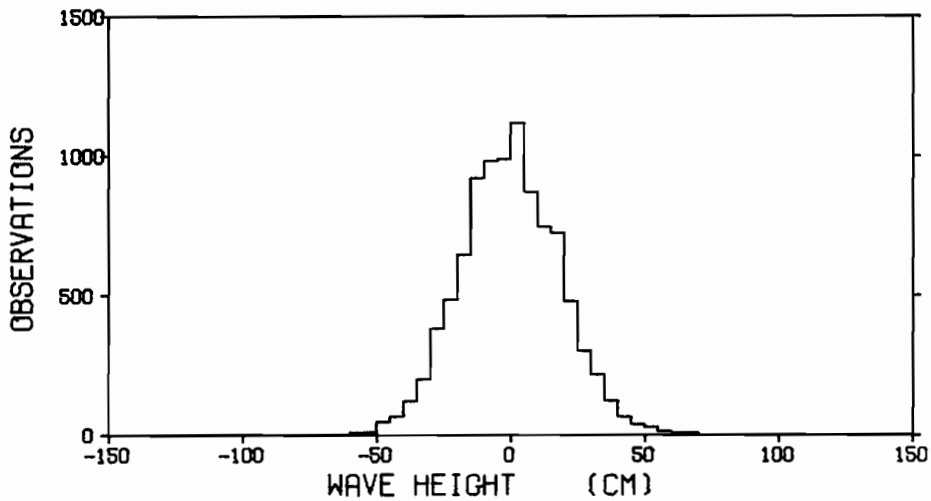


WAVE HEIGHT SPECTRUM.

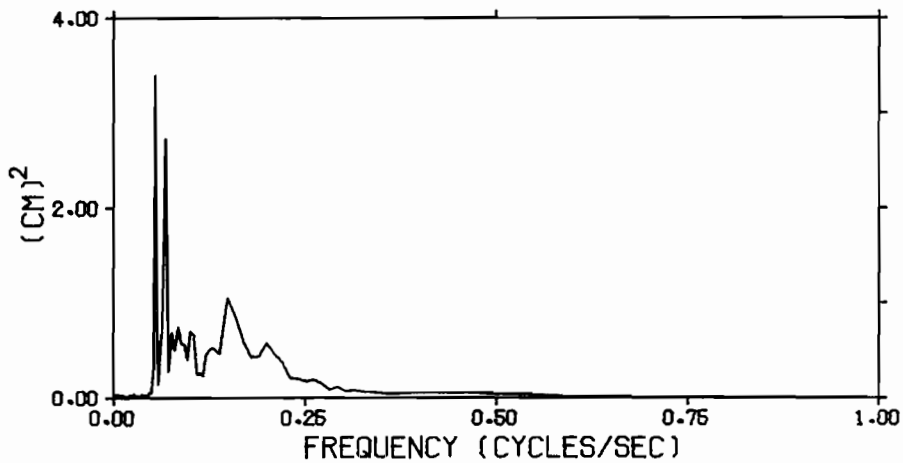


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 22 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.09	339.73	18.43	.11	3.19	80.07	-74.37

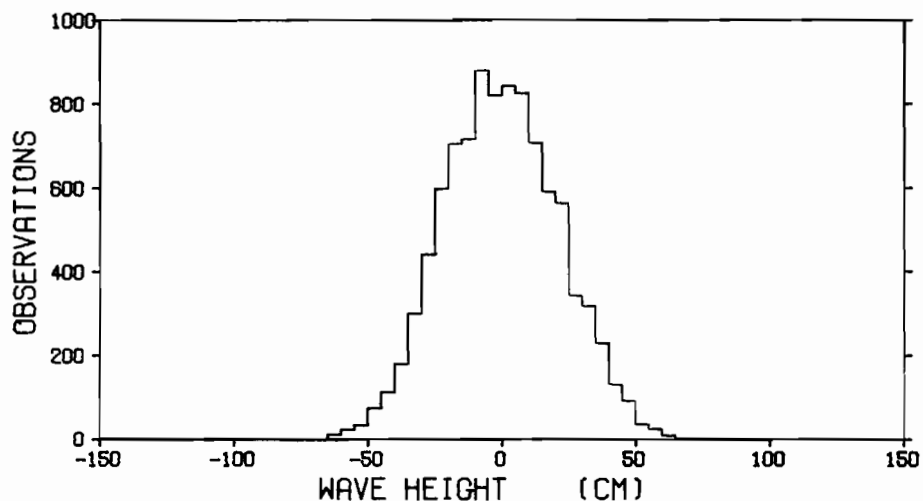


WAVE HEIGHT SPECTRUM.

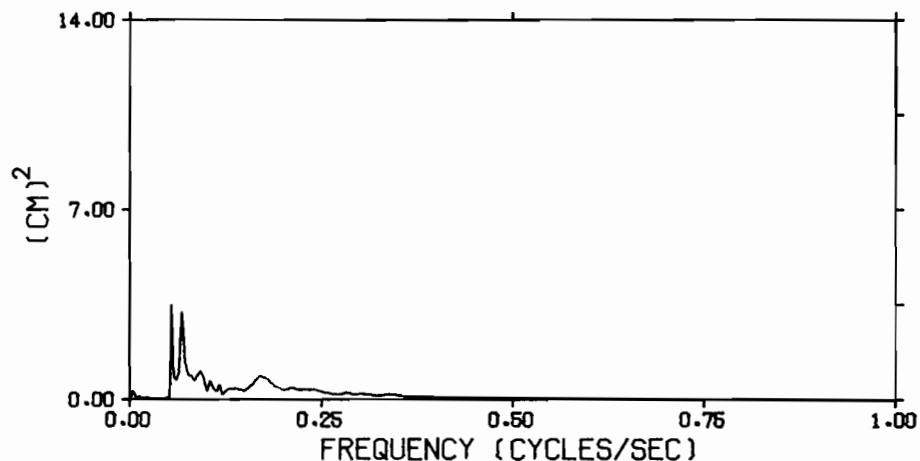


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 22 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.24	452.42	21.27	.06	2.71	62.81	-65.46

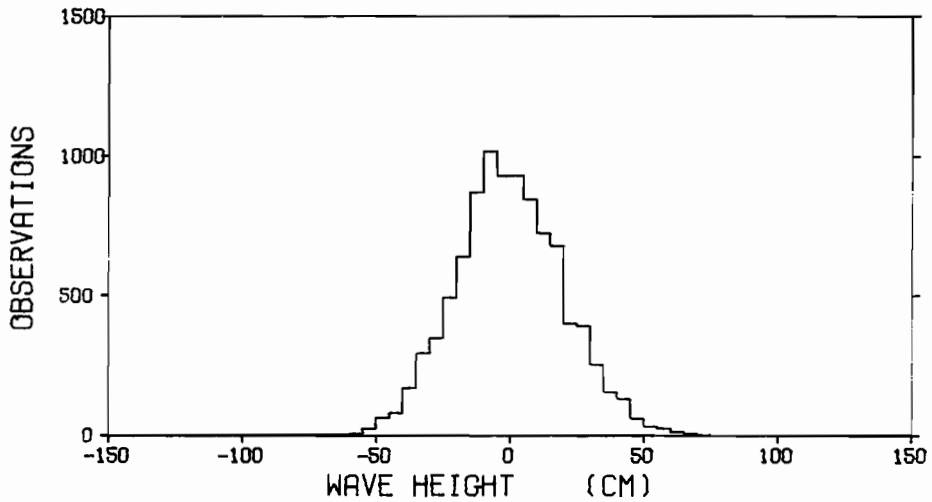


WAVE HEIGHT SPECTRUM.

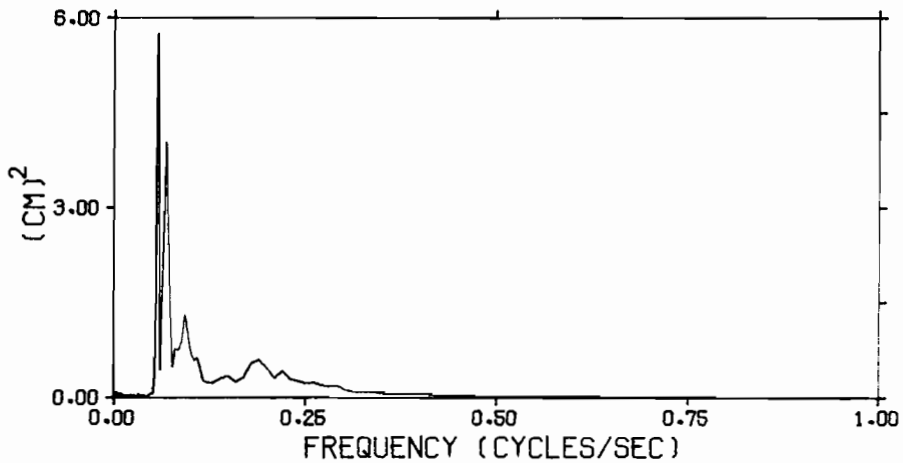


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 22 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	399.21	19.98	.15	3.00	70.76	-65.13

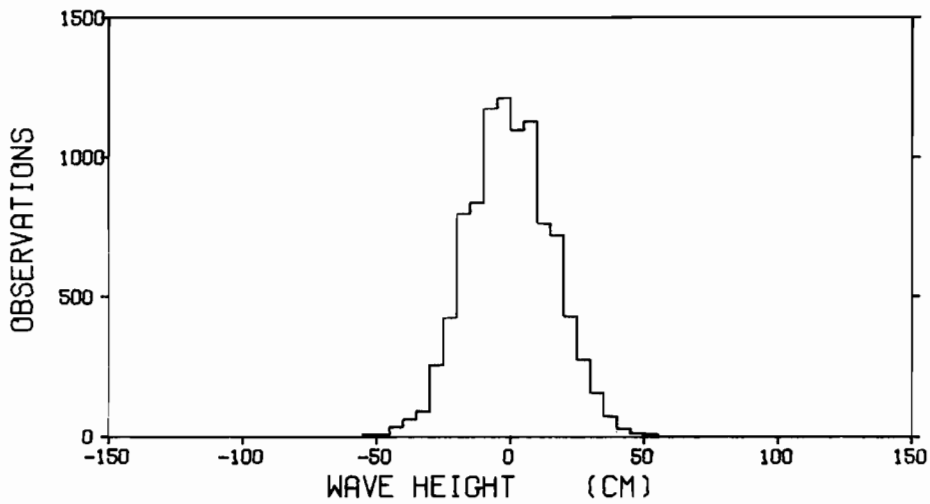


WAVE HEIGHT SPECTRUM.

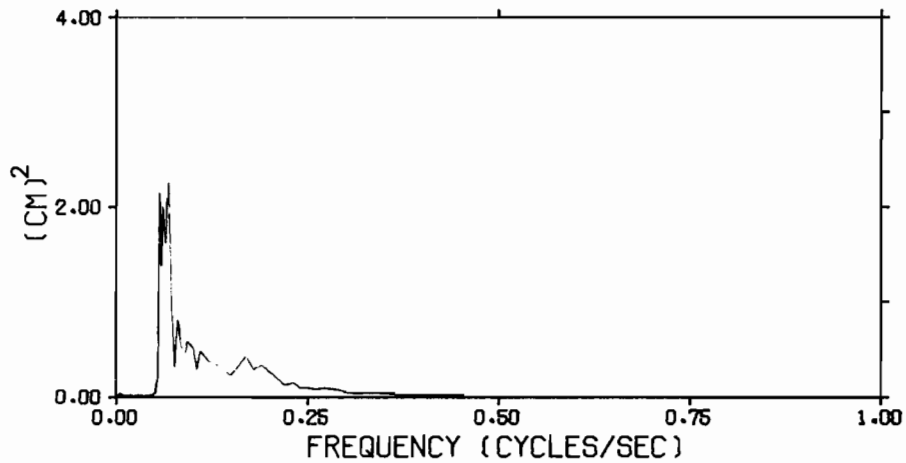


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 23 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	244.96	15.65	.07	3.01	56.84	-63.30

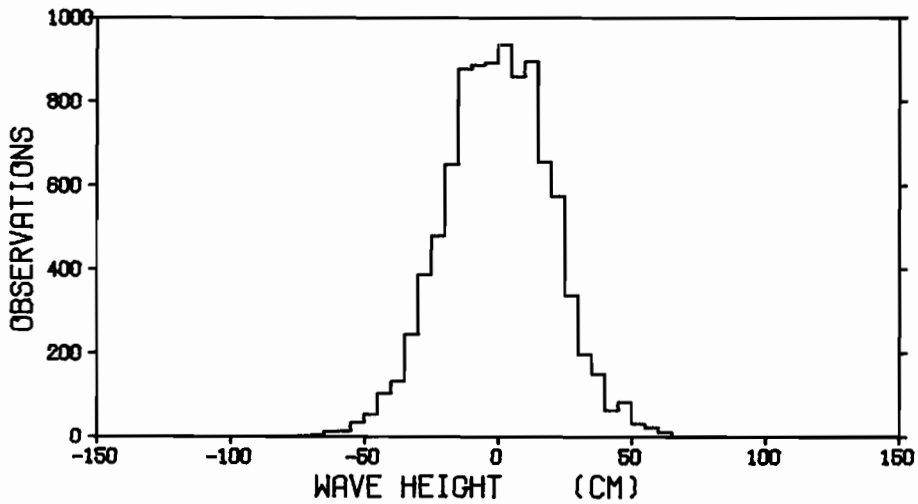


WAVE HEIGHT SPECTRUM.

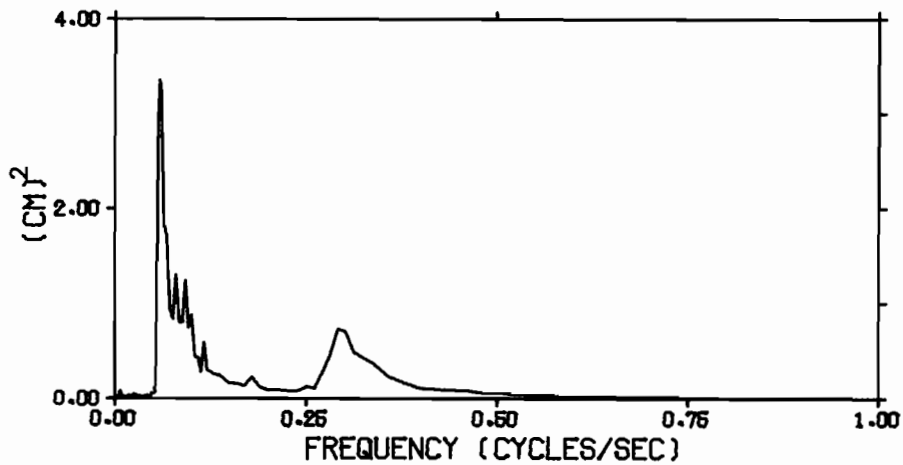


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 23 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	393.68	19.84	-0.01	3.12	71.95	-74.61

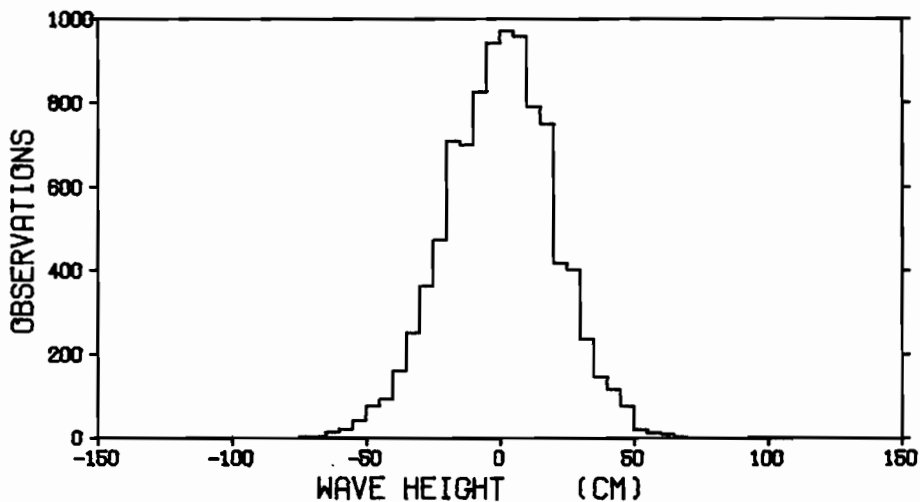


WAVE HEIGHT SPECTRUM.

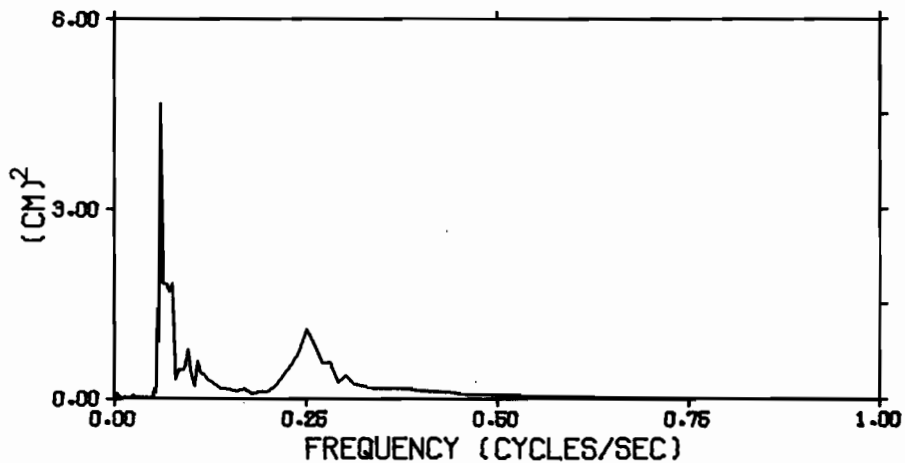


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 23 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.10	408.23	20.20	-.09	3.08	71.04	-72.22

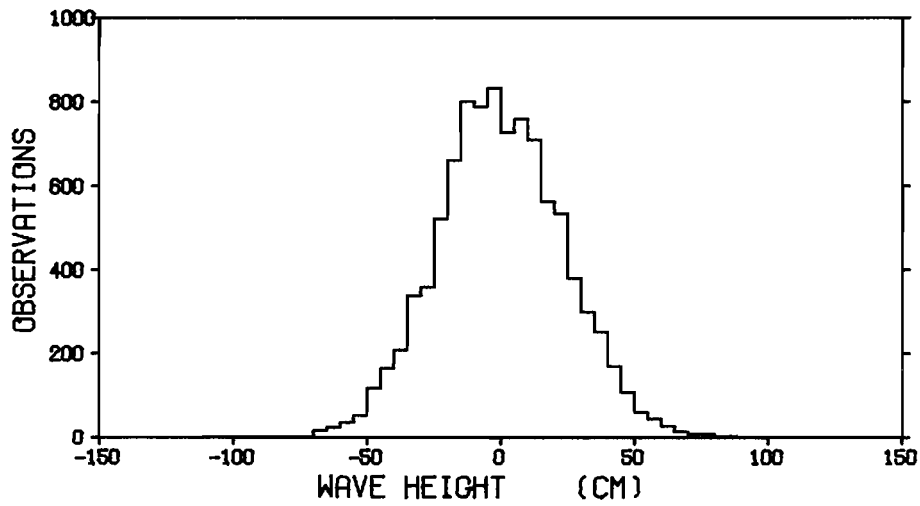


WAVE HEIGHT SPECTRUM.

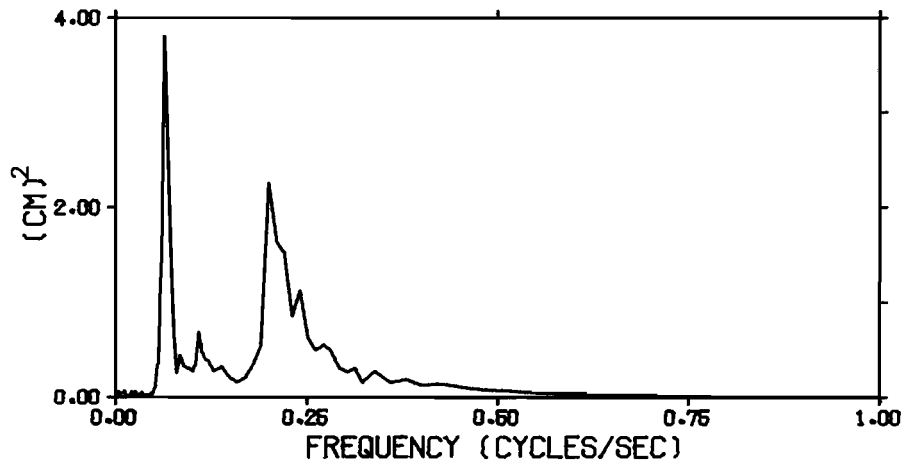


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 23 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	553.82	23.53	.09	3.06	90.12	-86.15

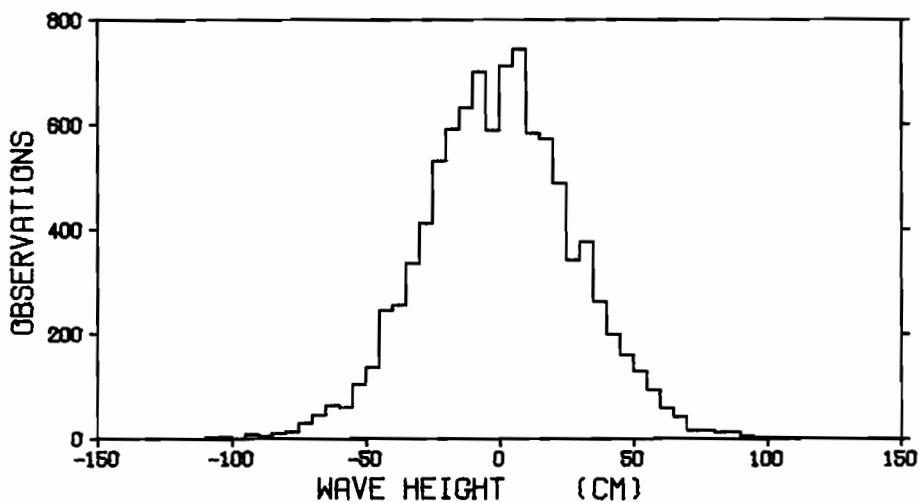


WAVE HEIGHT SPECTRUM.

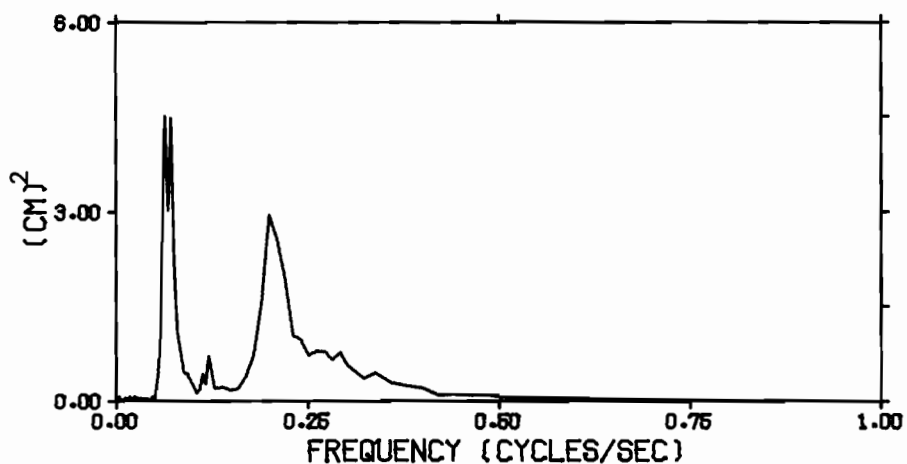


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 24 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	793.94	28.18	.02	3.17	102.70	-105.33

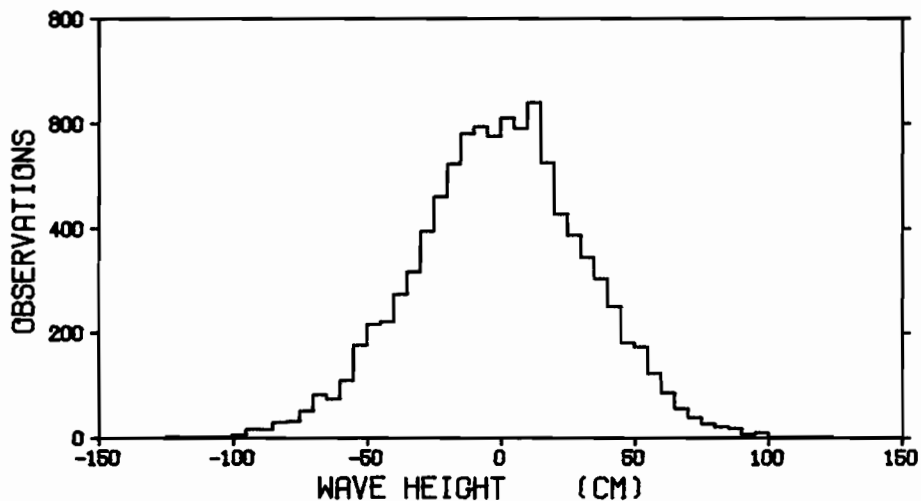


WAVE HEIGHT SPECTRUM.

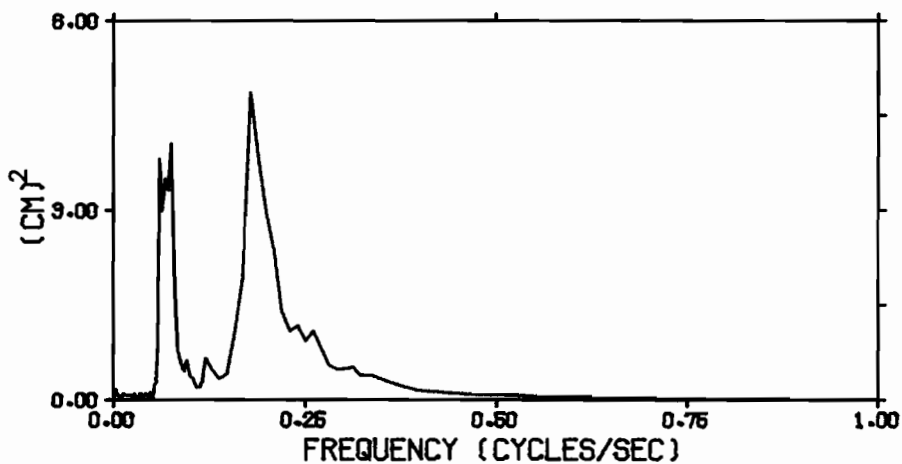


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 24 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-.10	1029.65	32.09	-.04	3.09	117.09	-122.43

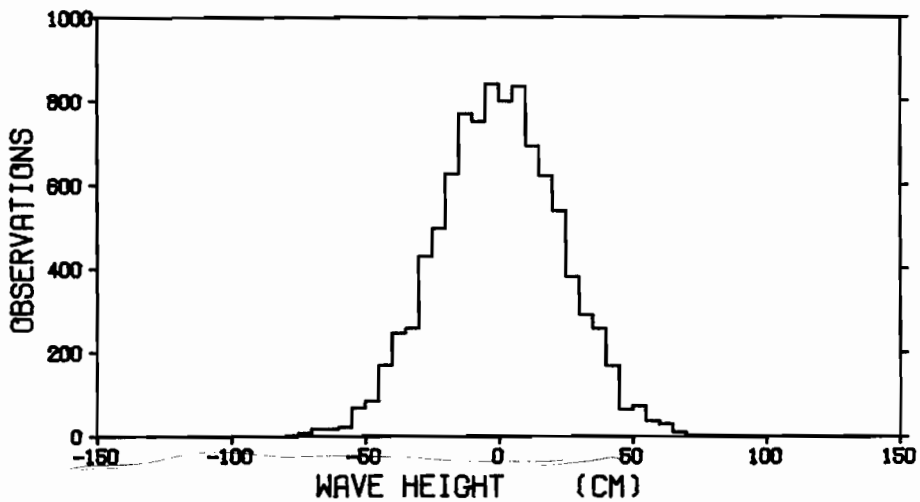


WAVE HEIGHT SPECTRUM.

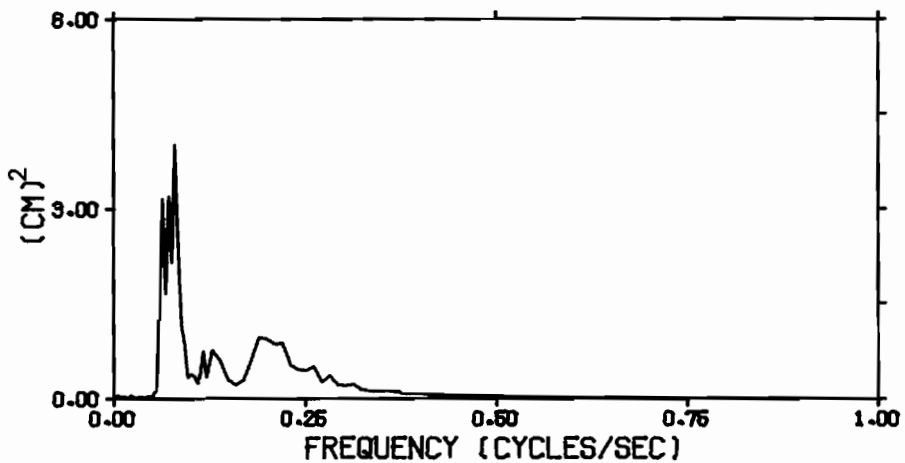


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 24 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	521.02	22.83	-.00	2.90	72.91	-77.71

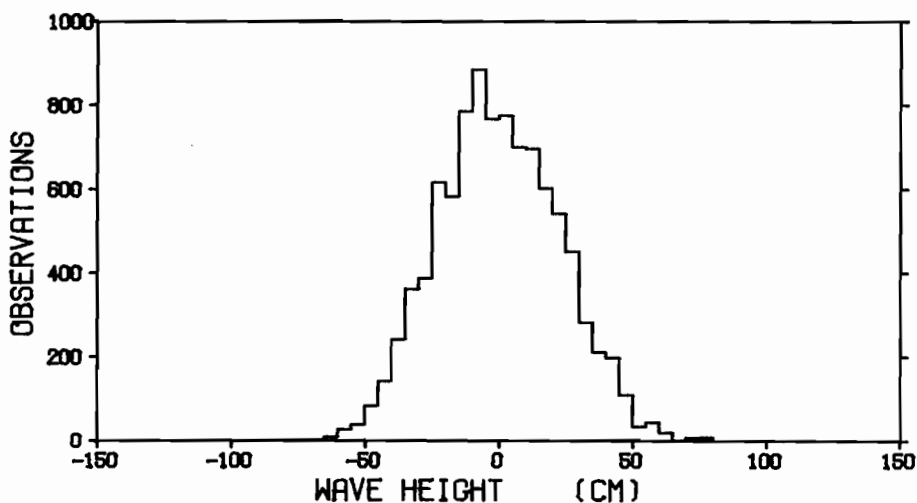


WAVE HEIGHT SPECTRUM.

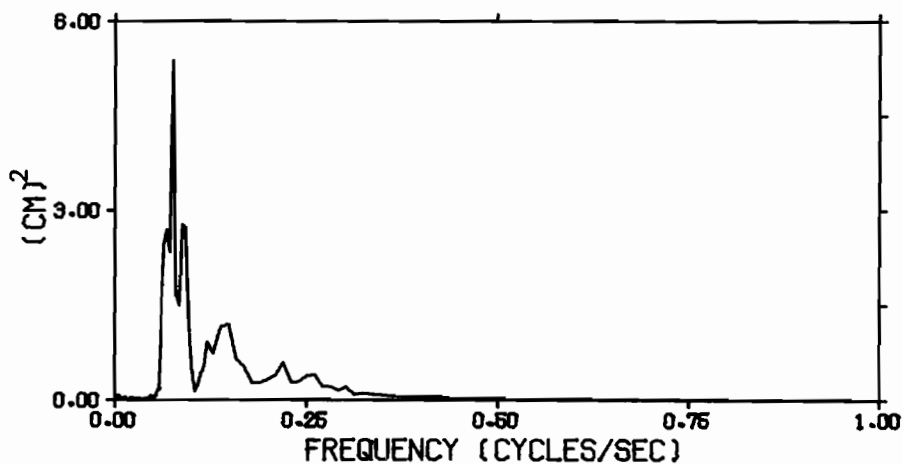


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 24 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	508.31	22.55	.13	2.74	79.97	-70.40

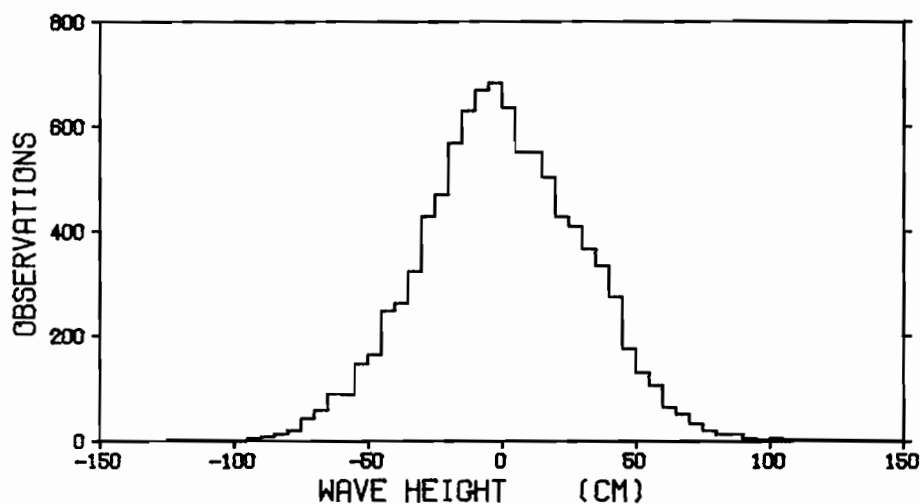


WAVE HEIGHT SPECTRUM.

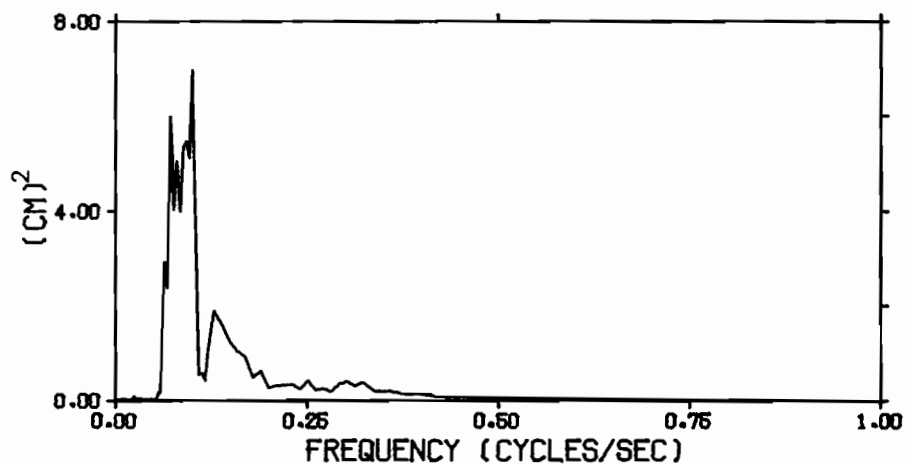


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 25 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.04	915.29	30.25	.02	3.18	123.93	-124.48

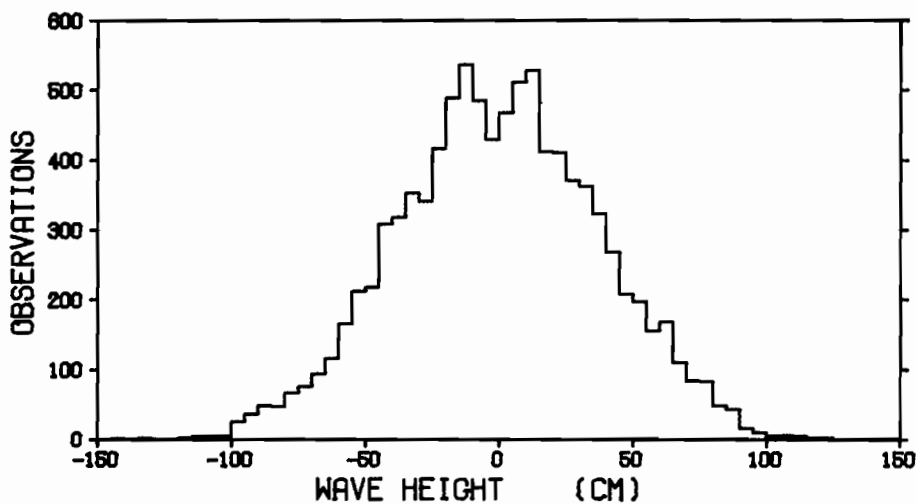


WAVE HEIGHT SPECTRUM.

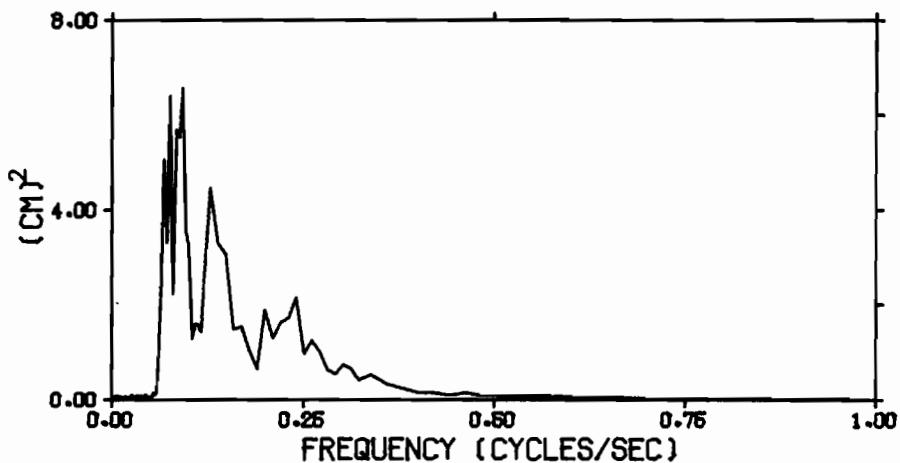


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 25 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	1433.30	37.86	.01	2.85	136.14	-140.21

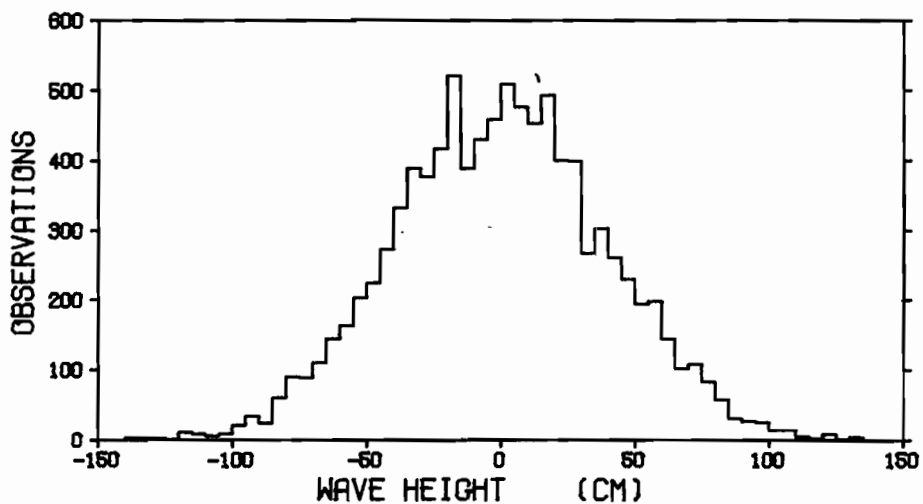


WAVE HEIGHT SPECTRUM.

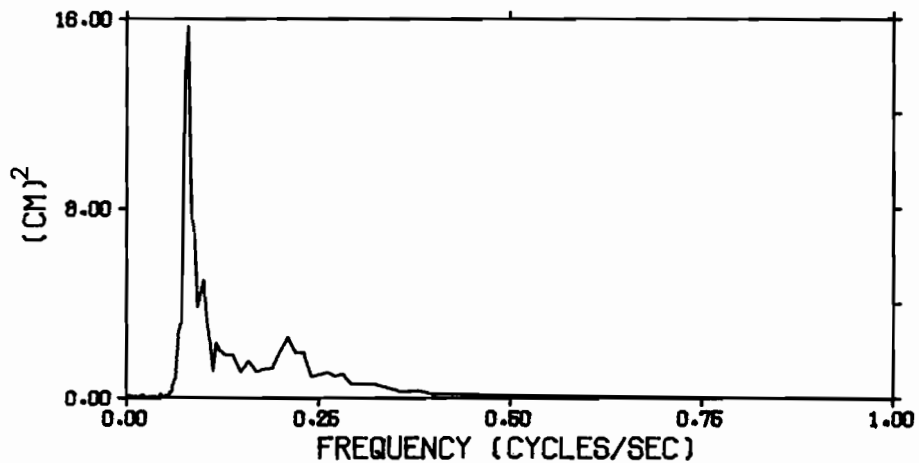


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 25 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.20	1549.62	39.37	.02	2.92	134.78	-137.51

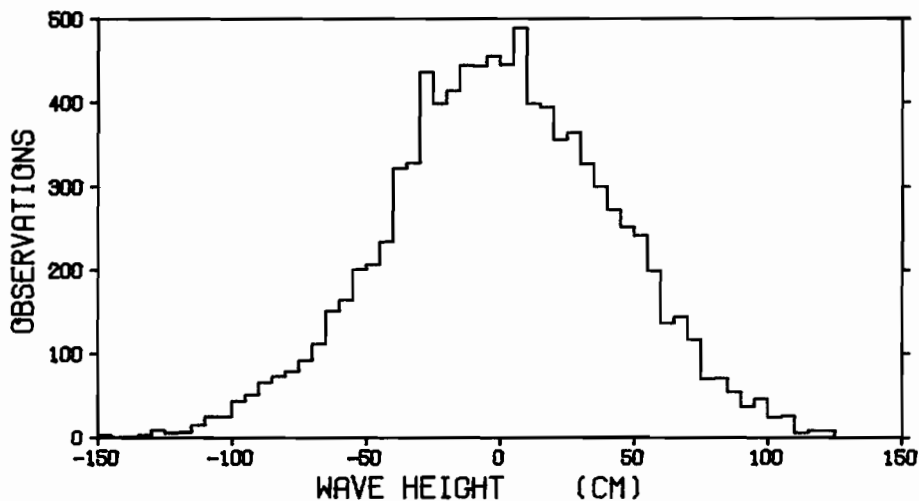


WAVE HEIGHT SPECTRUM.

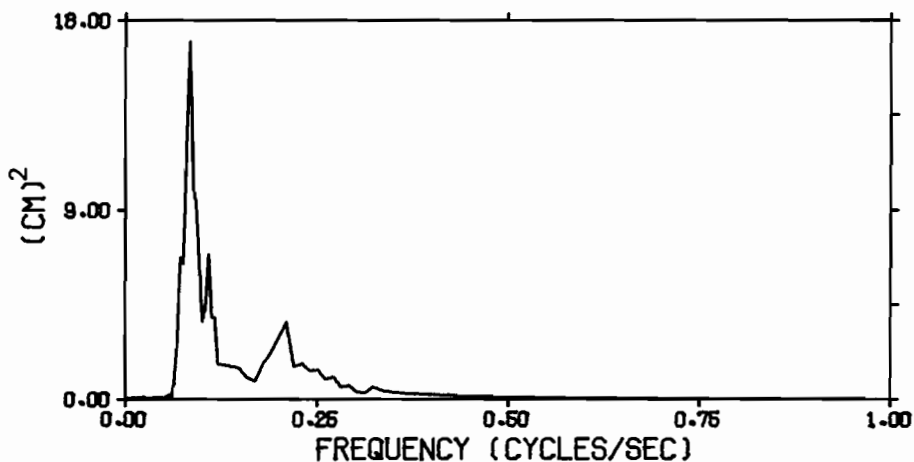


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 25 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	1803.64	42.47	-.08	2.97	123.72	-164.82

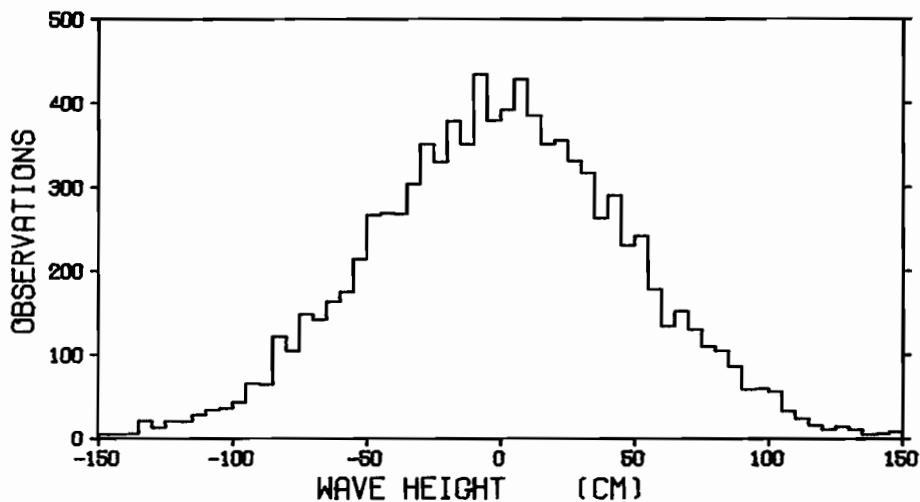


WAVE HEIGHT SPECTRUM.

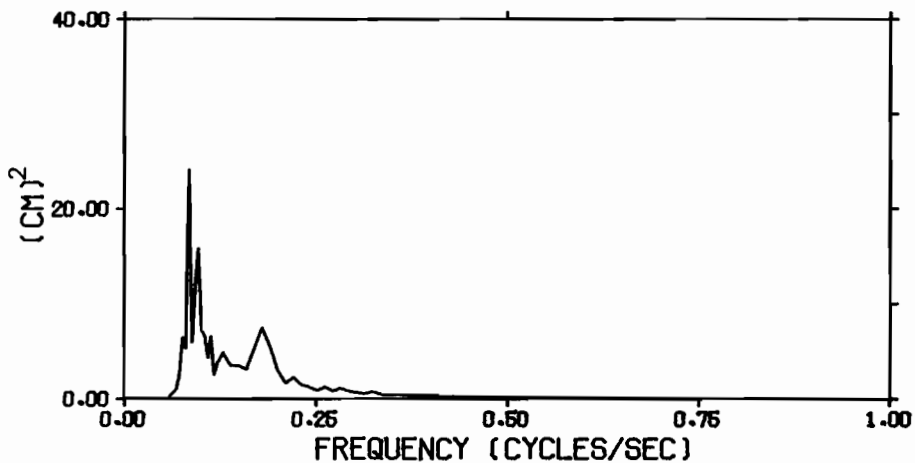


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 26 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	2484.71	49.85	-0.02	3.34	183.62	-208.56

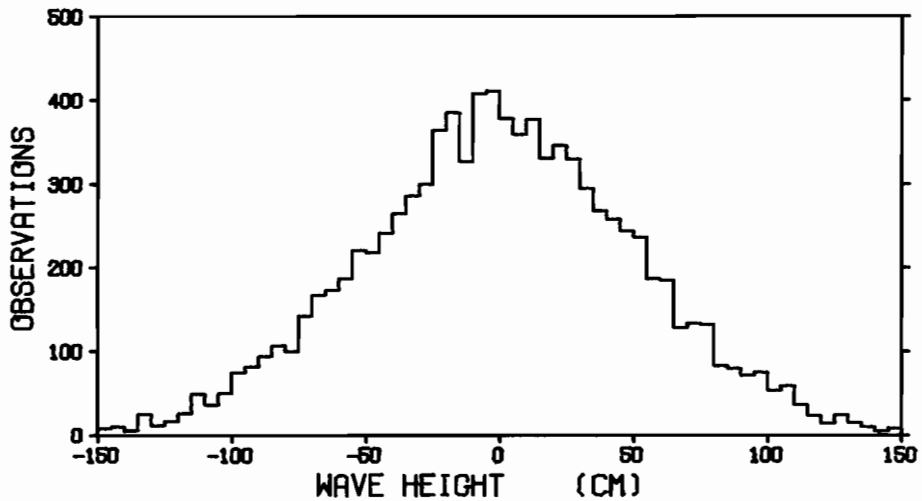


WAVE HEIGHT SPECTRUM.

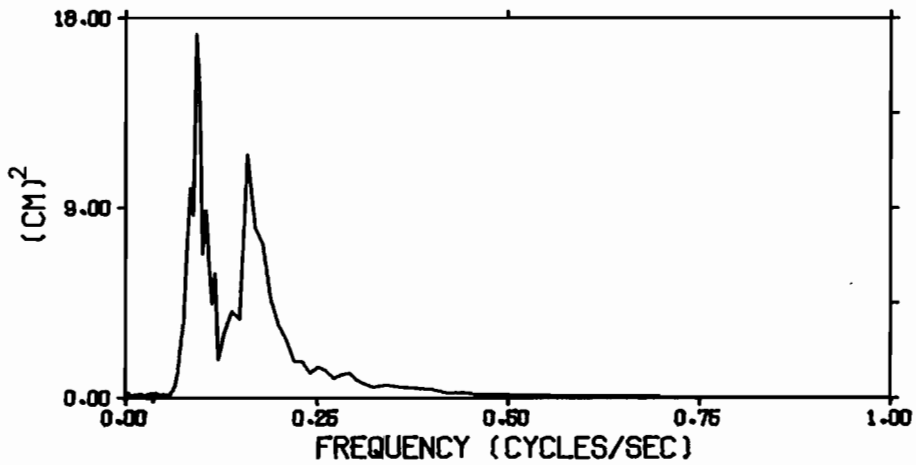


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0700 GMT 26 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
-0.06	2742.59	52.37	-.02	3.19	187.67	-200.44

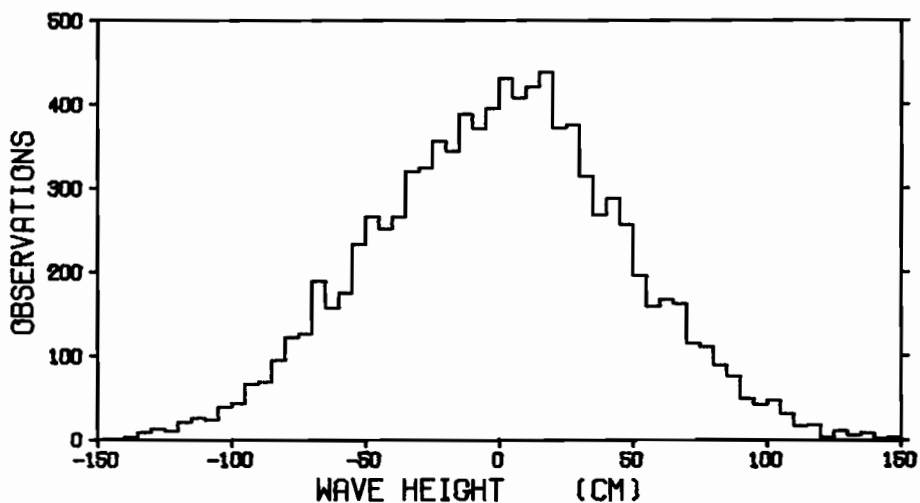


WAVE HEIGHT SPECTRUM.

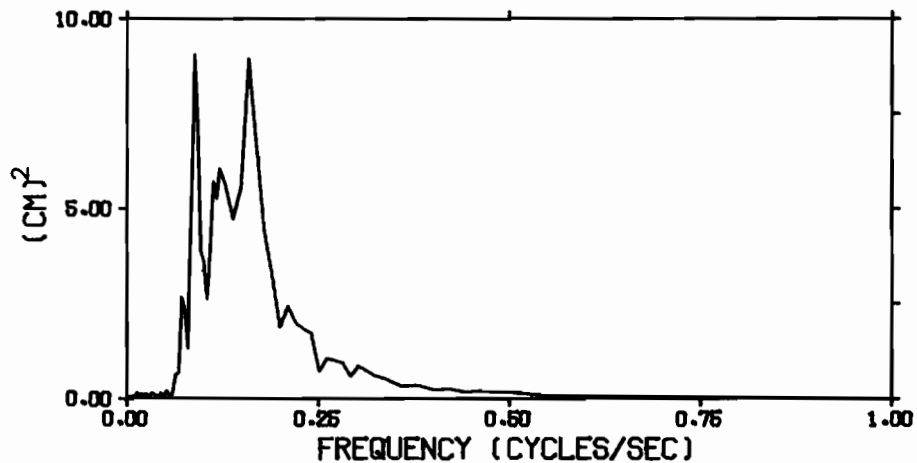


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 26 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.09	2182.90	46.72	.01	2.91	170.31	-145.41

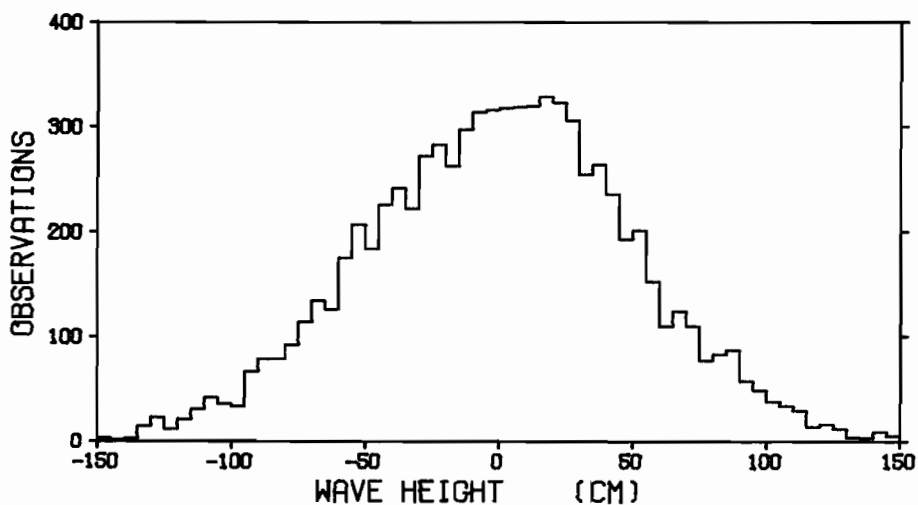


WAVE HEIGHT SPECTRUM.

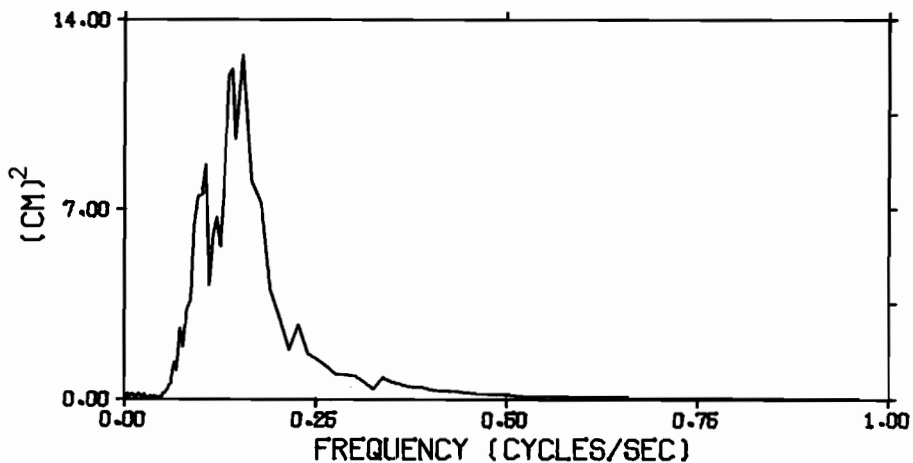


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 8011
 OBSERVATION PERIOD 33.9 MINUTES FROM 1900 GMT 26 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	2485.15	49.85	-.04	2.98	175.78	-176.77

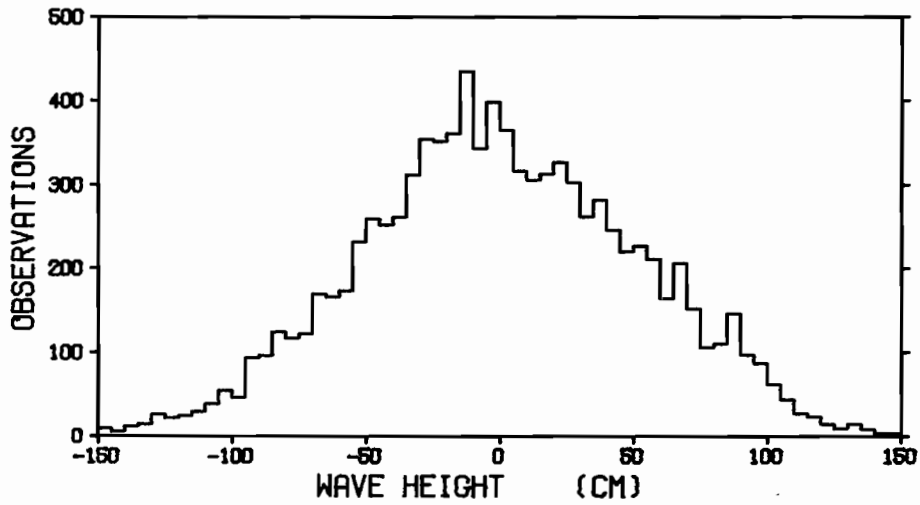


WAVE HEIGHT SPECTRUM.

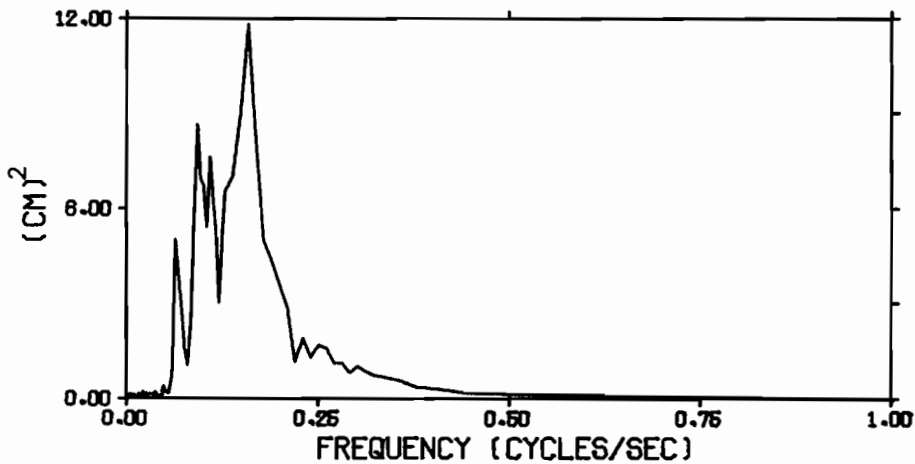


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 27 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	2760.82	52.54	-0.05	3.00	172.85	-218.05

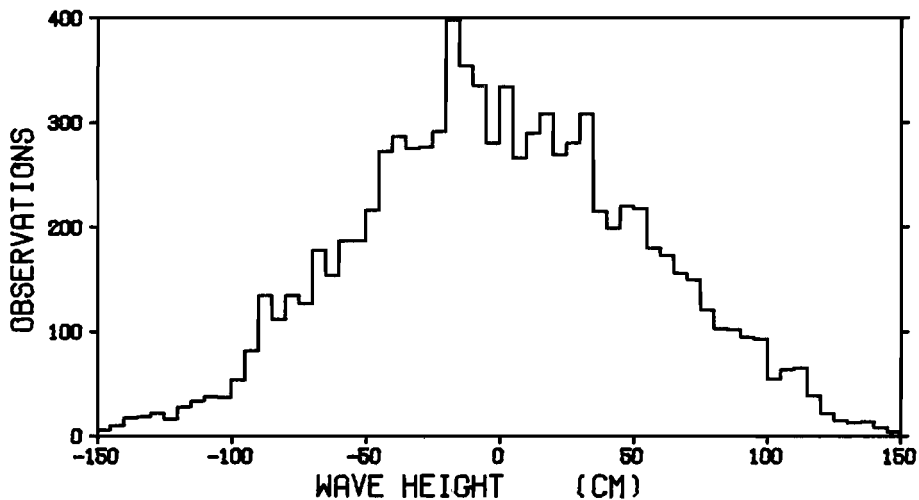


WAVE HEIGHT SPECTRUM.

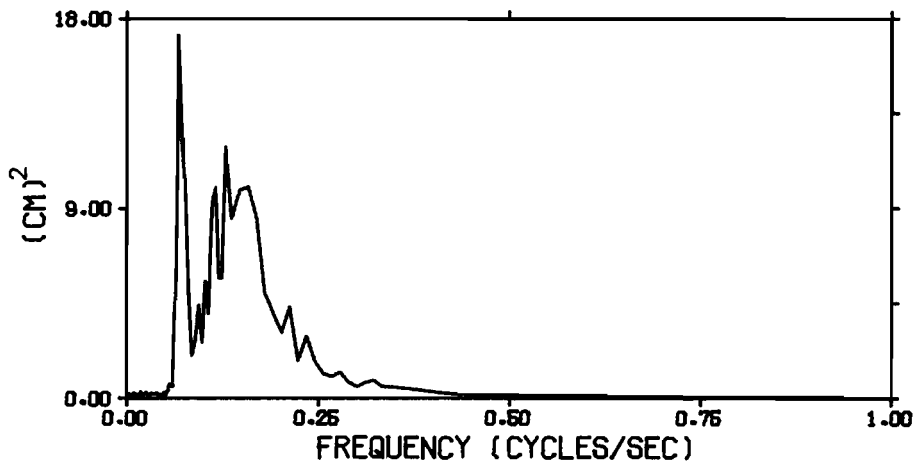


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 8990
 OBSERVATION PERIOD 38.1 MINUTES FROM 0700 GMT 27 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.04	3023.60	54.99	.00	2.89	169.02	-213.76

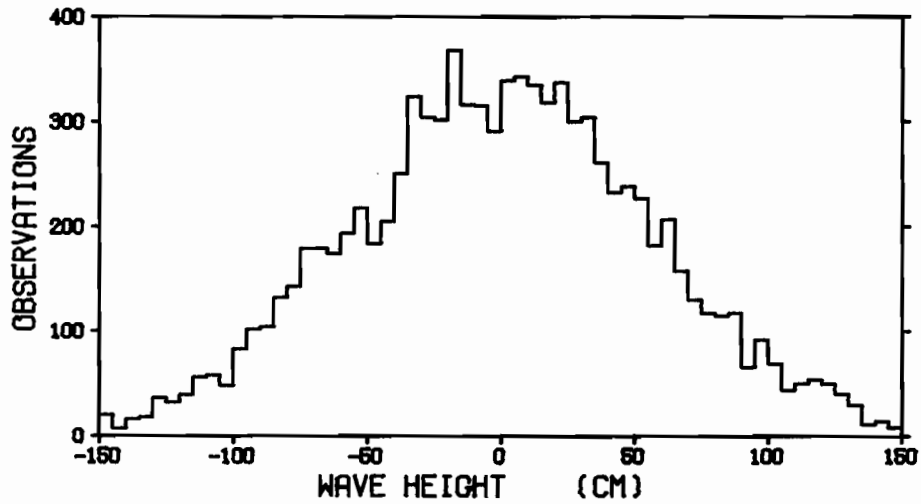


WAVE HEIGHT SPECTRUM.

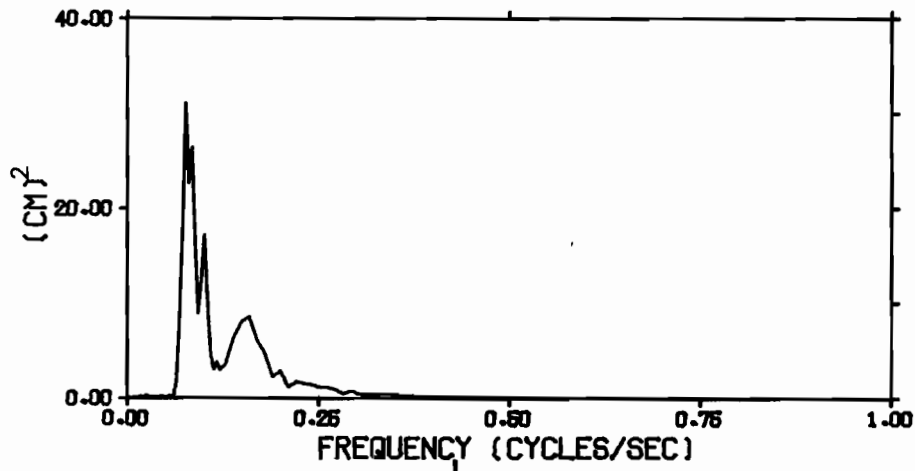


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1300 GMT 27 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.04	3395.60	58.27	-.00	3.12	213.68	-222.44

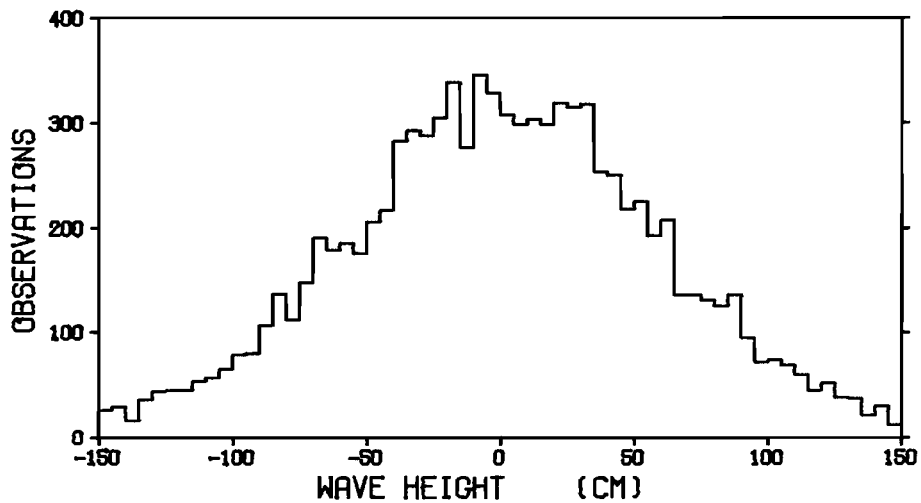


WAVE HEIGHT SPECTRUM.

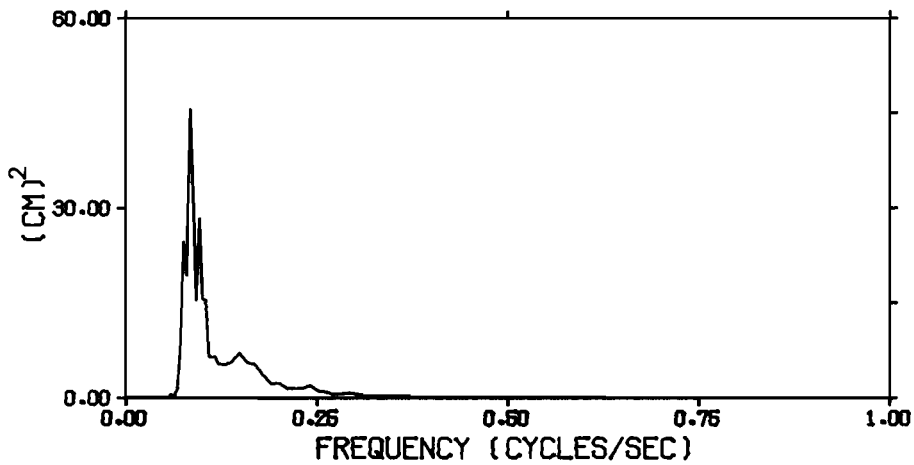


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 27 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	3673.97	60.61	-.10	3.08	205.42	-210.38

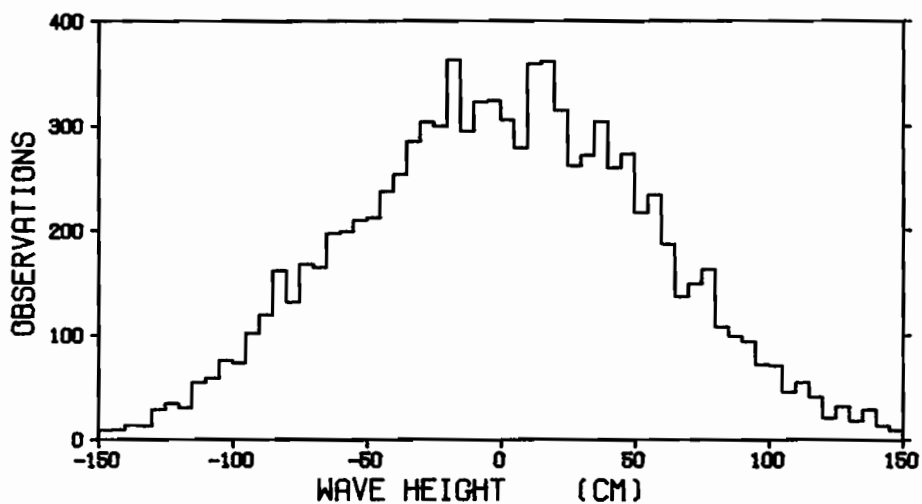


WAVE HEIGHT SPECTRUM.

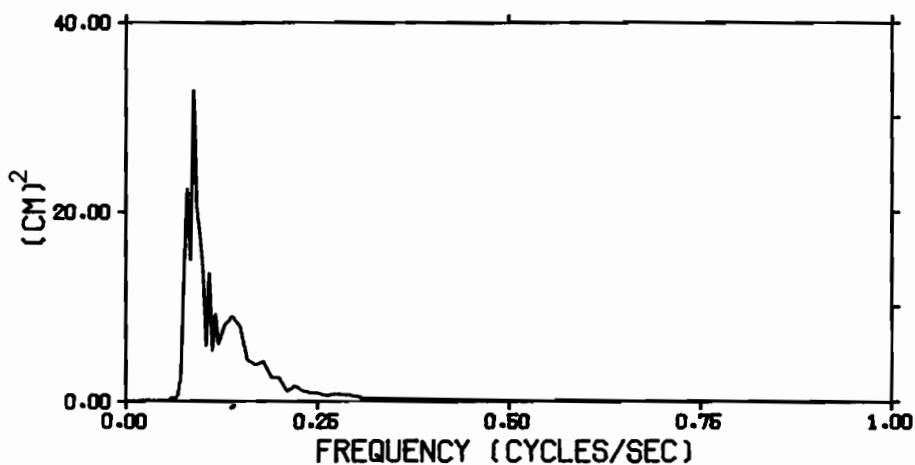


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 0100 GMT 28 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.07	3248.50	57.00	.00	3.15	261.27	-263.75

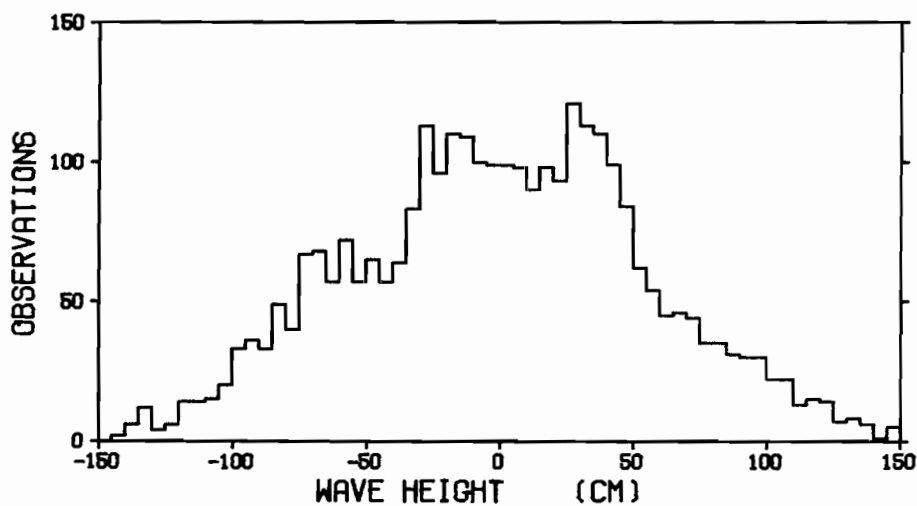


WAVE HEIGHT SPECTRUM.

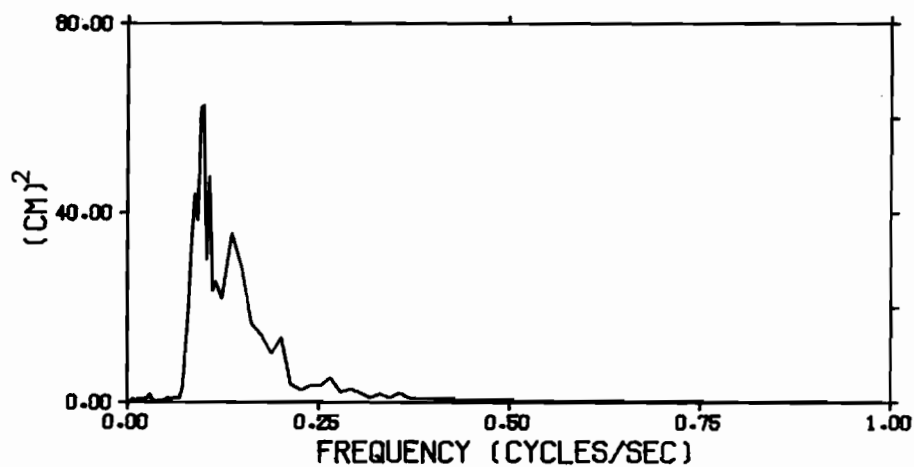


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 3042
 OBSERVATION PERIOD 12.9 MINUTES FROM 0700 GMT 28 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-12	3131.49	55.96	-.03	2.79	157.52	-196.30

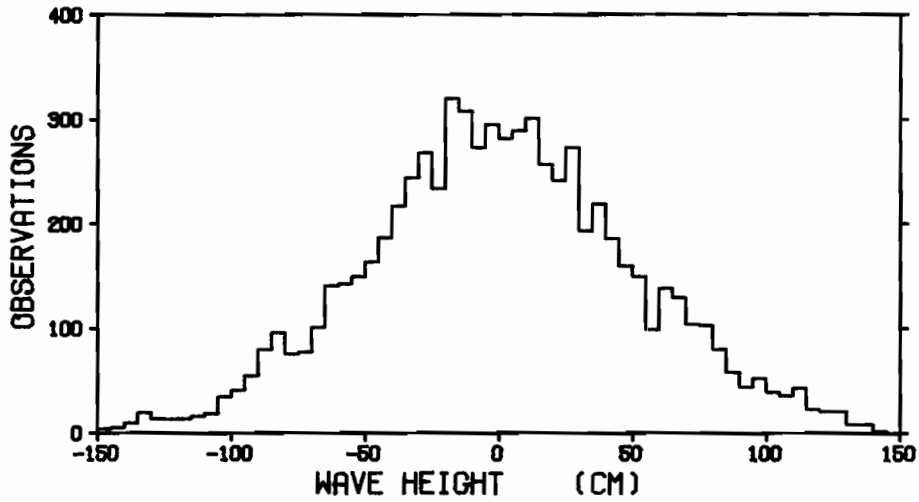


WAVE HEIGHT SPECTRUM.

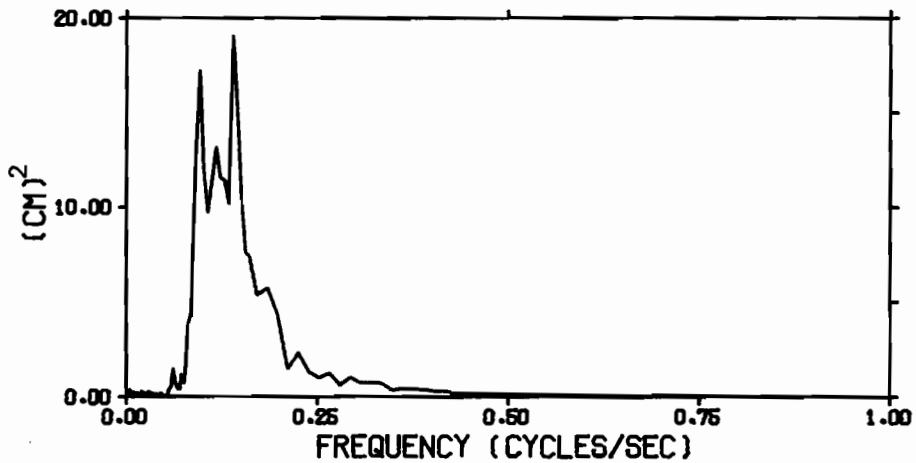


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 7216
 OBSERVATION PERIOD 30.5 MINUTES FROM 1300 GMT 28 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.09	2615.06	51.14	-0.03	3.08	159.88	-169.81

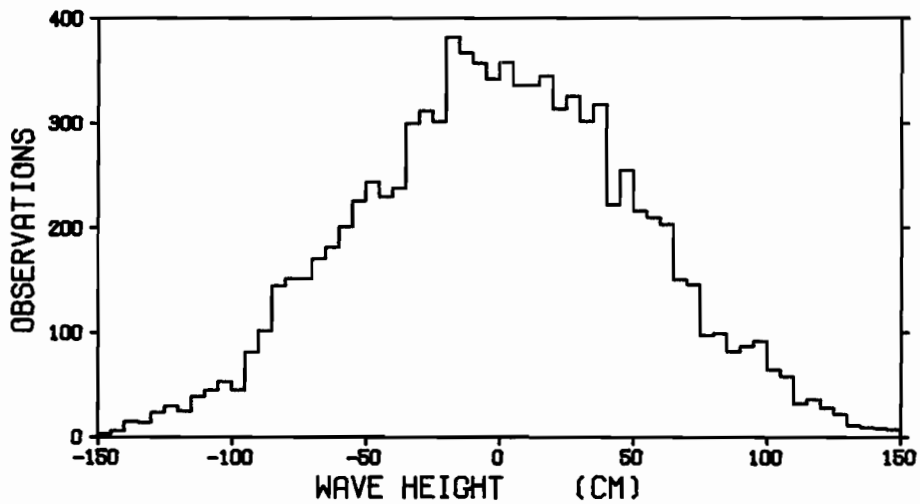


WAVE HEIGHT SPECTRUM.

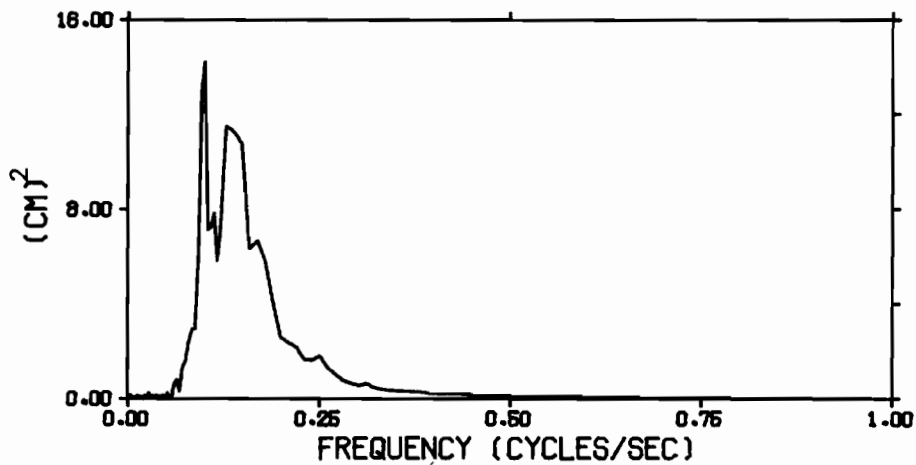


WAVE HEIGHT STATISTICS LAT. 44 45.2N LONG. 124 17.2W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 9600
 OBSERVATION PERIOD 40.6 MINUTES FROM 1900 GMT 28 AUG 72

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	2846.33	53.35	.02	2.93	224.66	-174.38



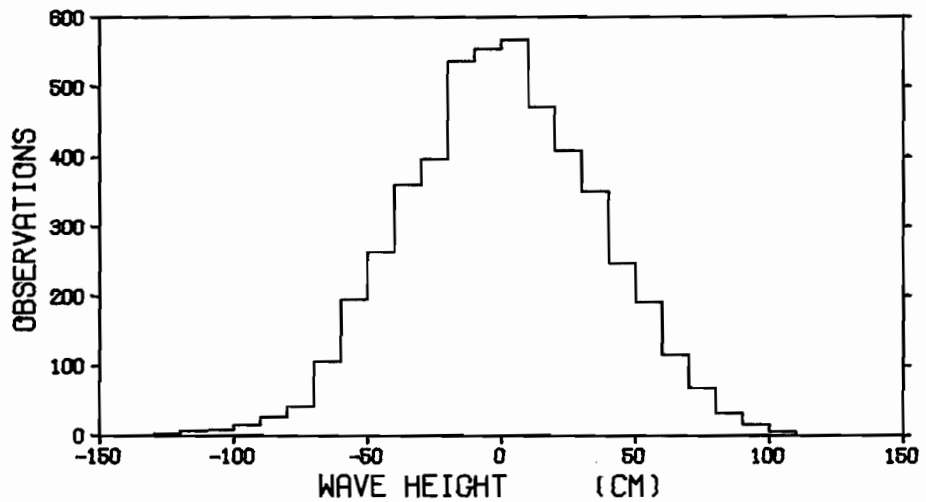
WAVE HEIGHT SPECTRUM.



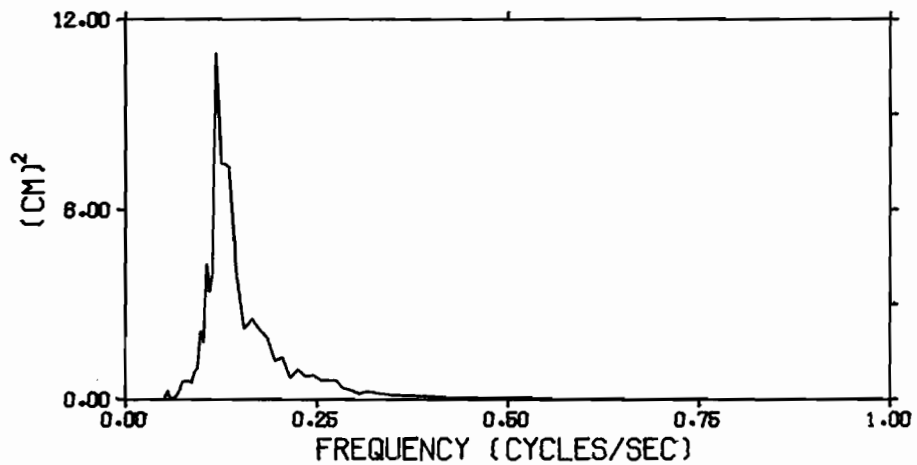
8. COMPILATION OF WAVE HEIGHTS, 9 JULY - 27 AUGUST 1973

WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 9 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	1280.76	35.79	-0.04	2.93	109.31	-137.11

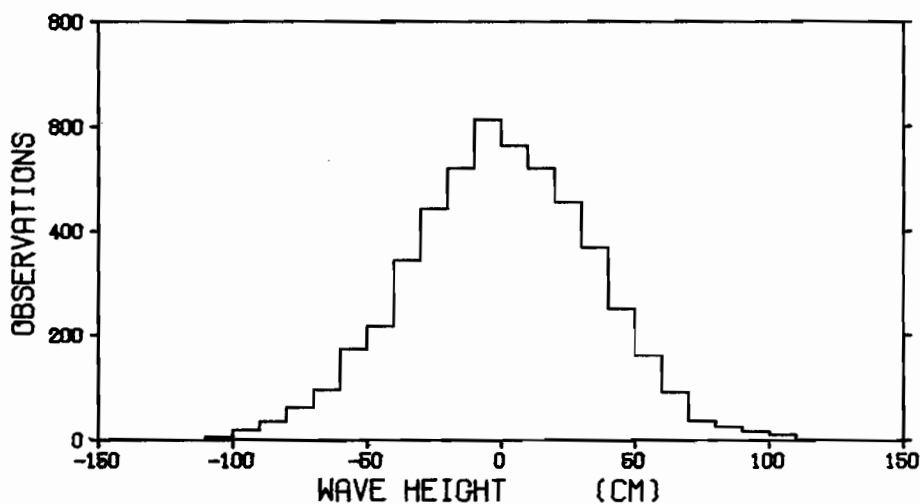


WAVE HEIGHT SPECTRUM.

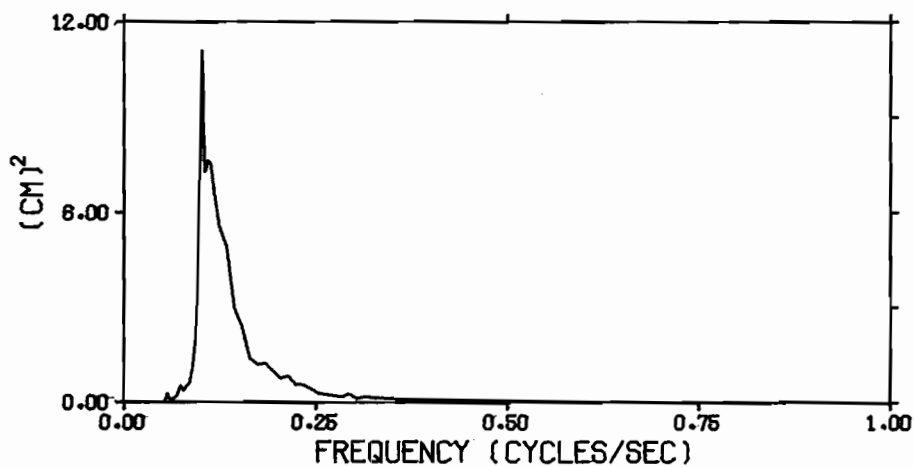


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 9 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1184.54	34.42	-0.03	2.99	111.00	-106.77

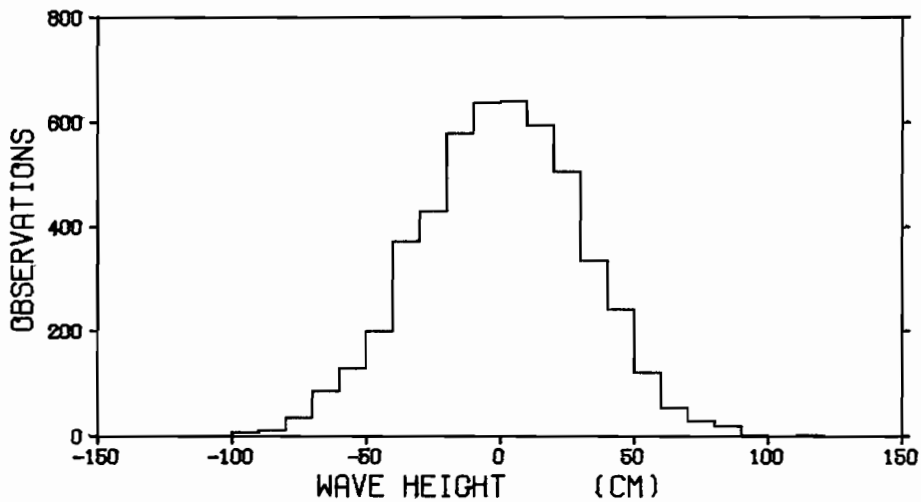


WAVE HEIGHT SPECTRUM.

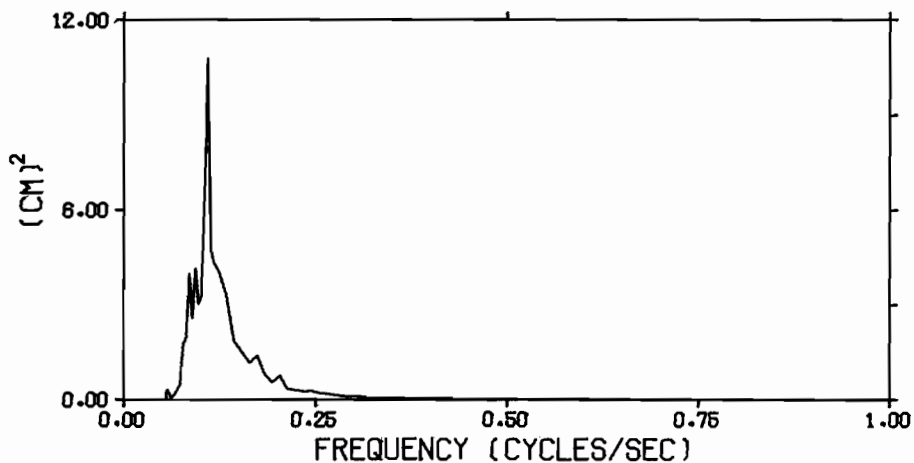


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 9 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	934.79	30.57	-.06	3.06	126.01	-128.84

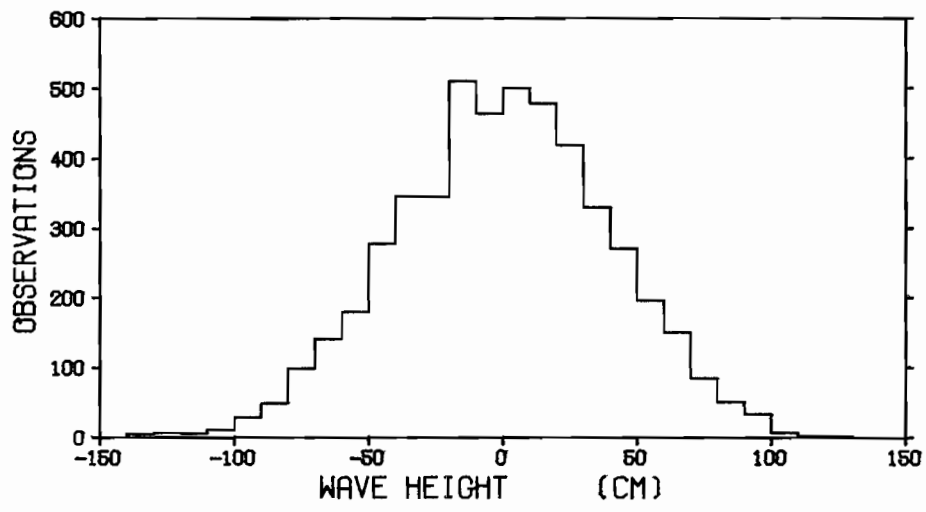


WAVE HEIGHT SPECTRUM.

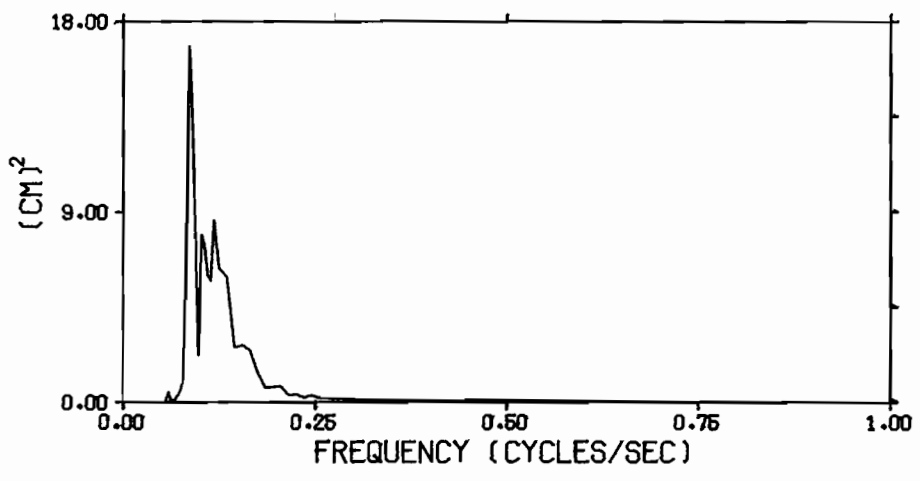


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 1800 GMT 9 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1566.72	39.58	-0.08	2.88	123.43	-136.03

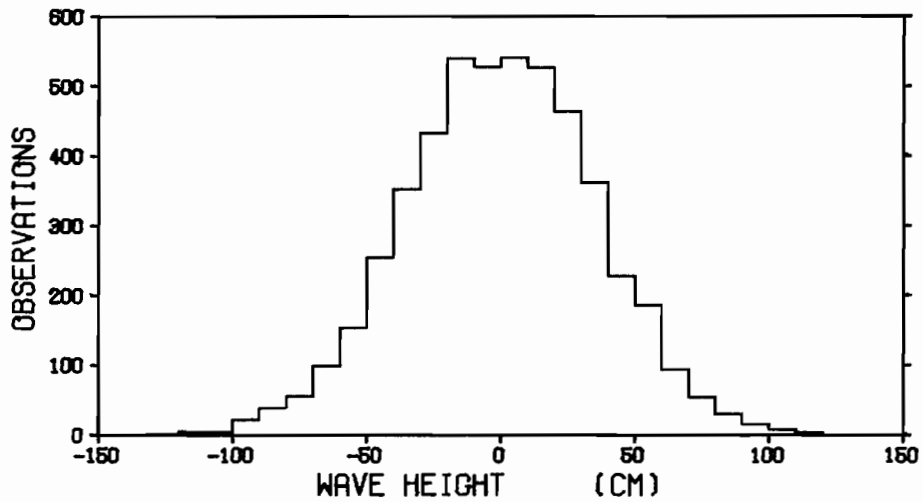


WAVE HEIGHT SPECTRUM.

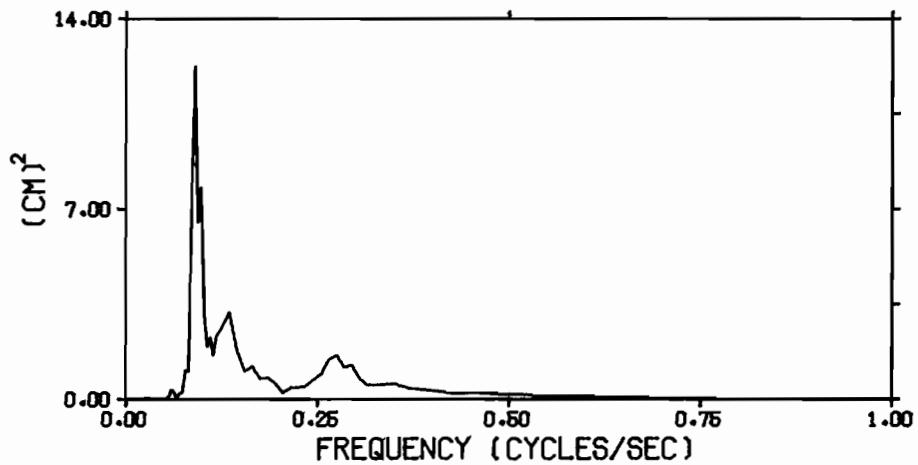


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 10 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	1240.74	35.22	-.04	3.02	118.59	-120.42

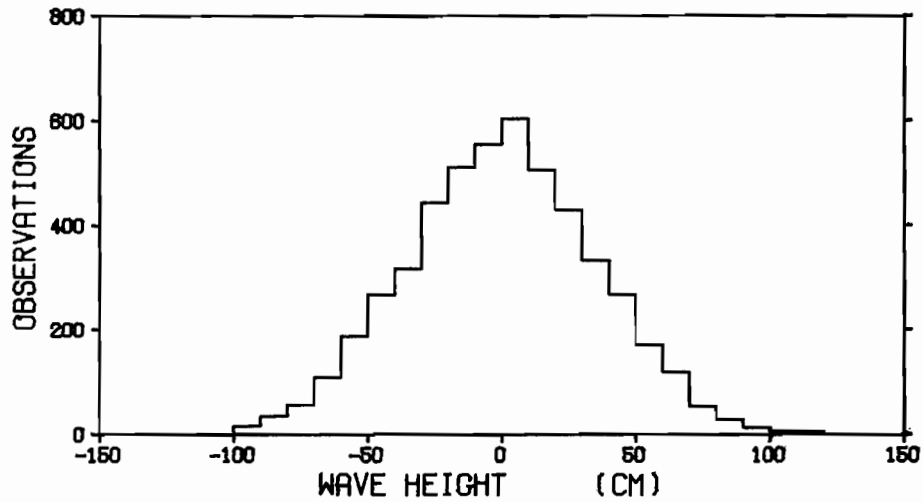


WAVE HEIGHT SPECTRUM:

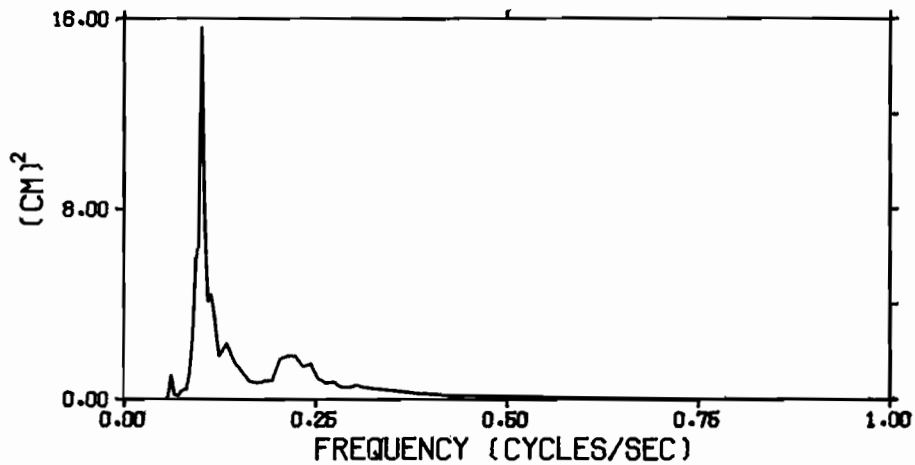


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 10 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1235.19	35.15	.02	2.93	129.67	-135.00

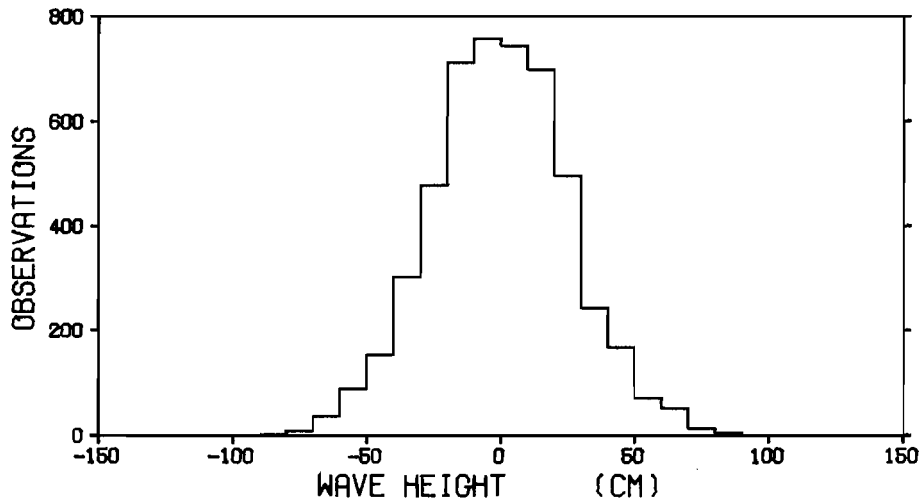


WAVE HEIGHT SPECTRUM.

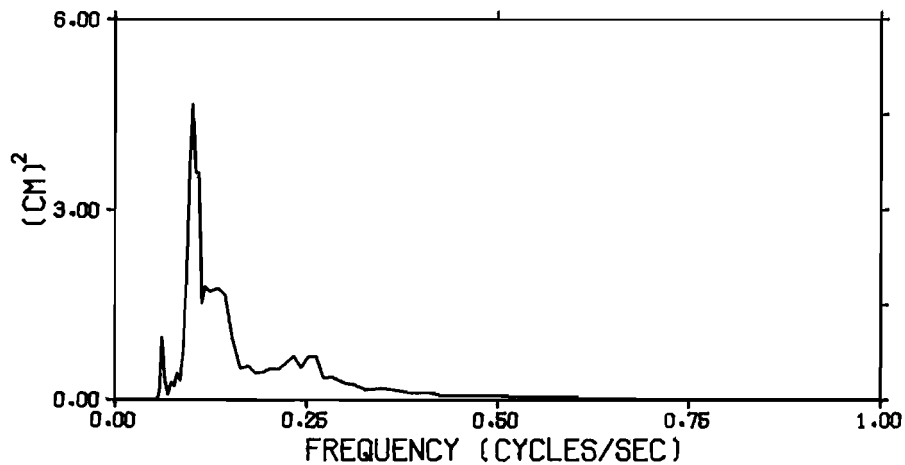


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 10 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.04	652.78	25.55	.07	3.07	88.93	-81.71

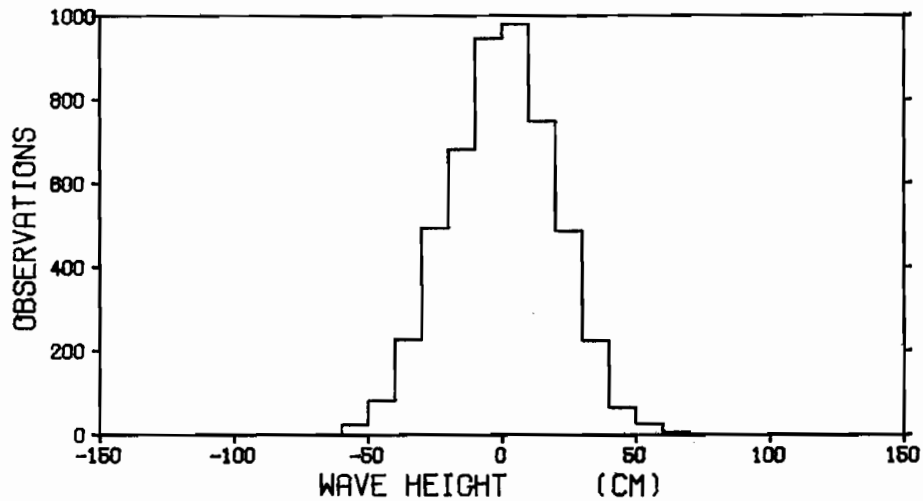


WAVE HEIGHT SPECTRUM.

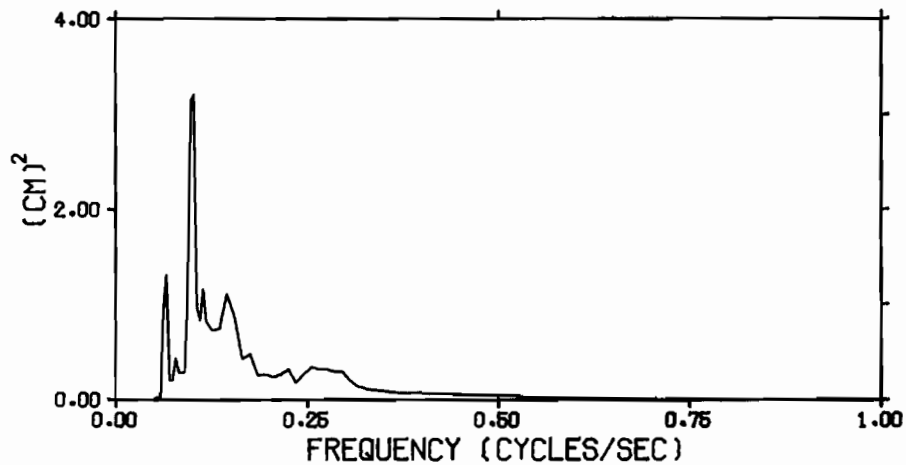


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 1800 GMT 10 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	396.24	19.91	-0.03	2.93	68.28	-73.06

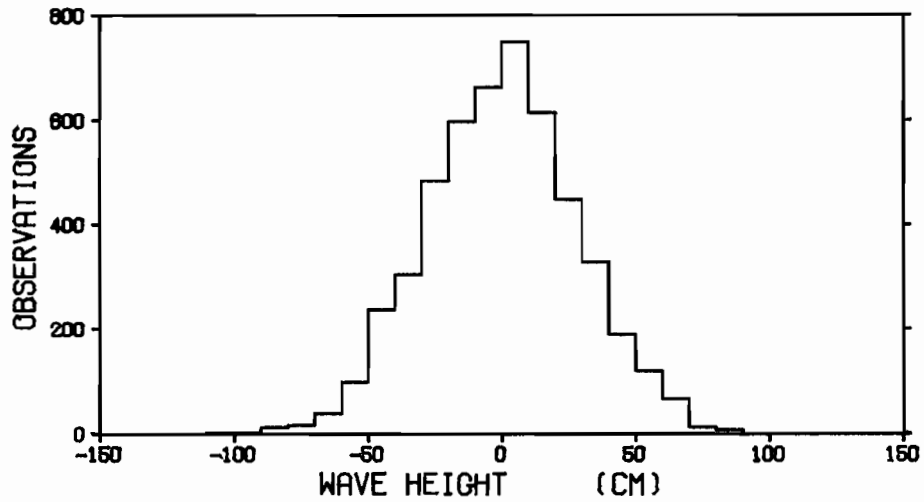


WAVE HEIGHT SPECTRUM.

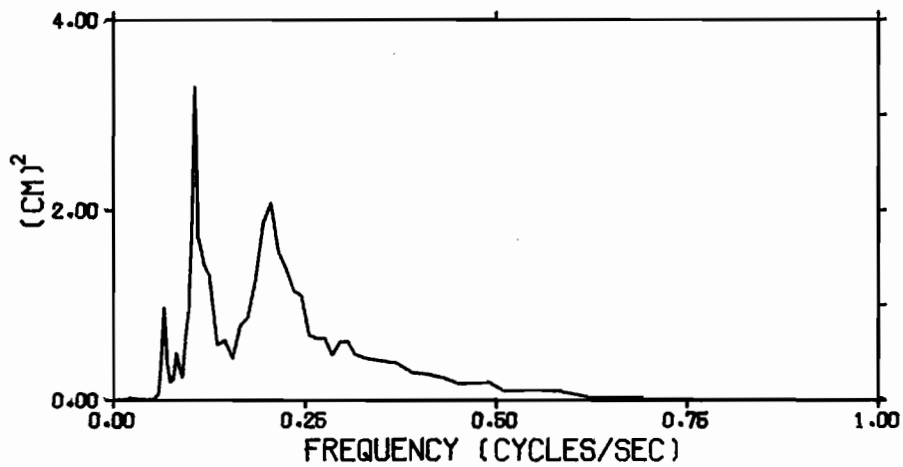


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 11 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-.01	796.08	28.21	-.02	3.03	108.50	-117.72

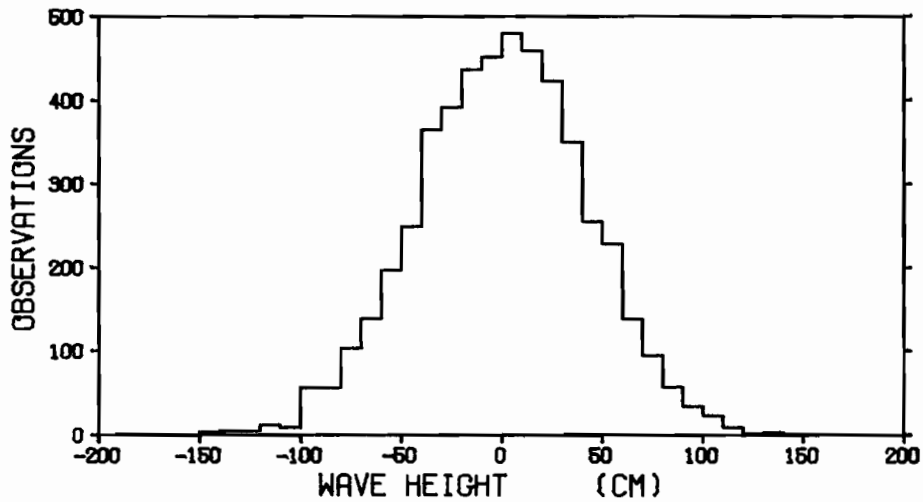


WAVE HEIGHT SPECTRUM.

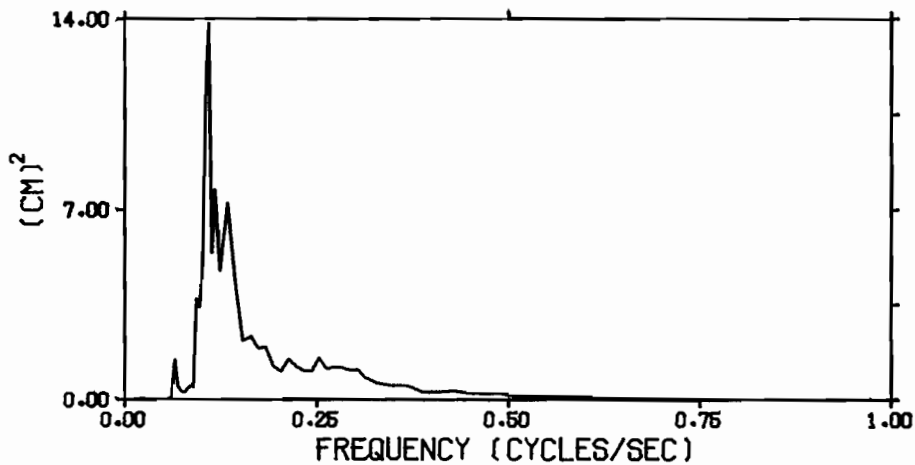


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 11 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1746.78	41.79	-0.09	3.04	141.20	-184.00

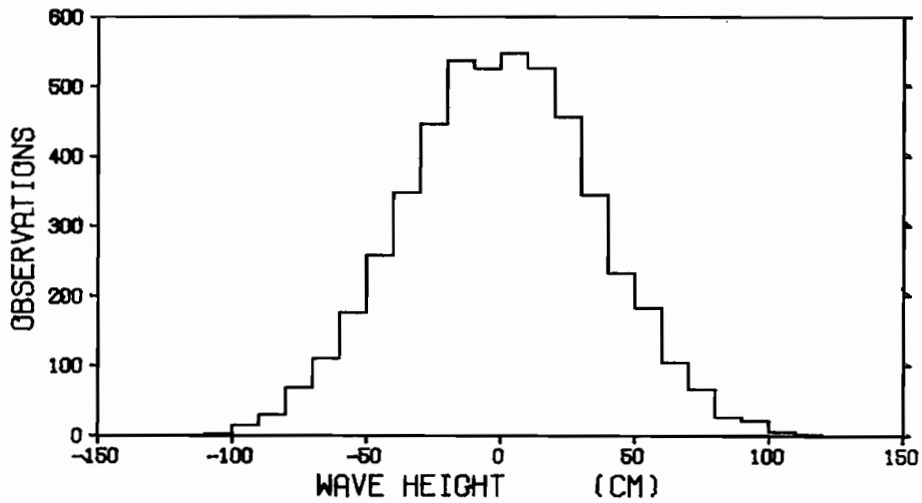


WAVE HEIGHT SPECTRUM.

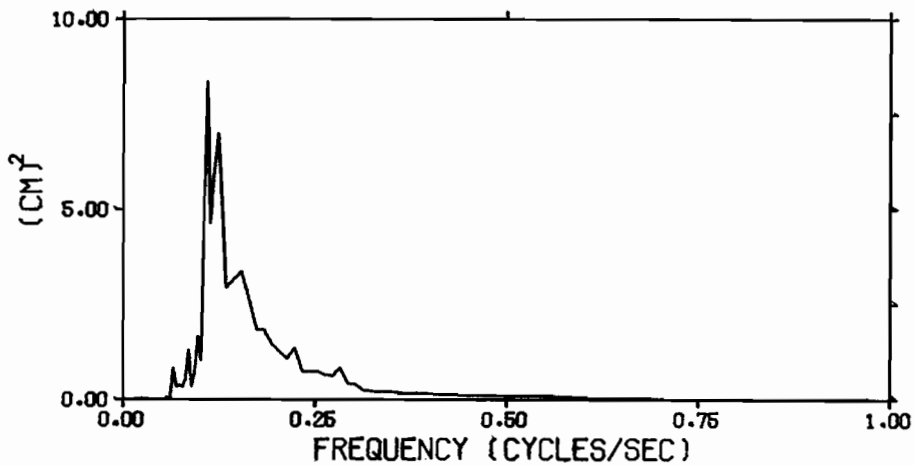


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 11 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	1239.97	35.21	.03	2.83	110.89	-105.93

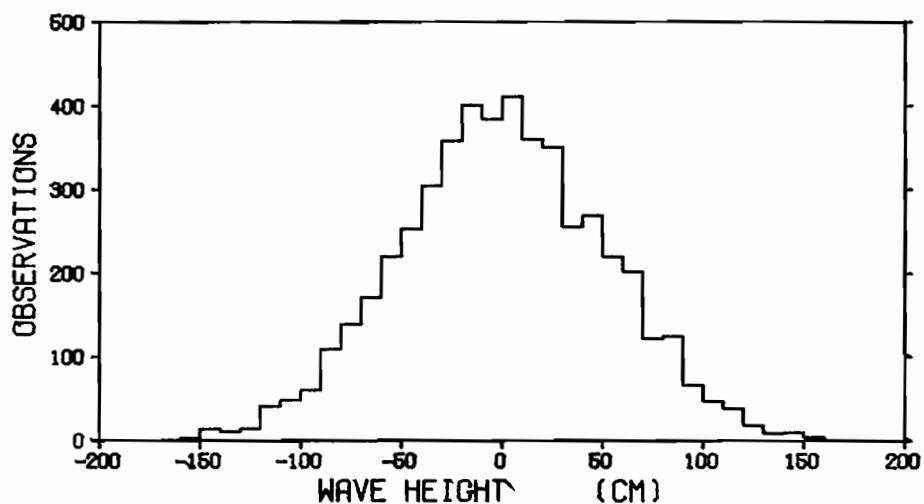


WAVE HEIGHT SPECTRUM.

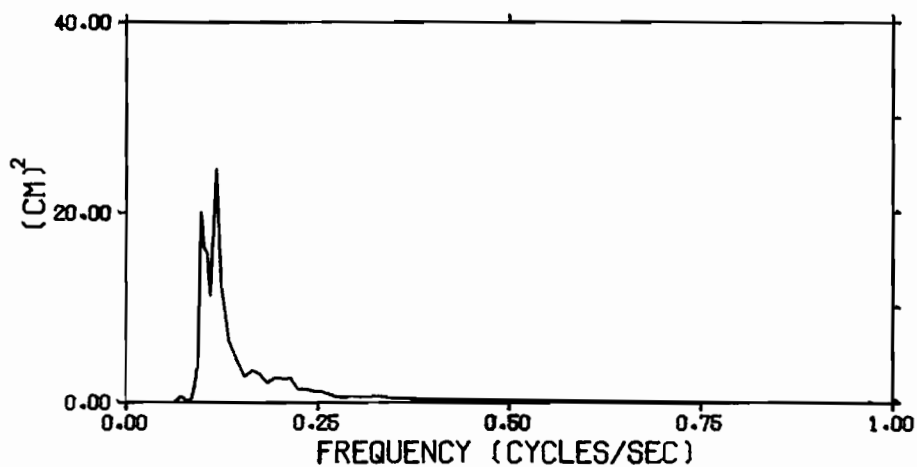


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 11 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	2619.91	51.19	-.00	2.90	164.51	-181.81

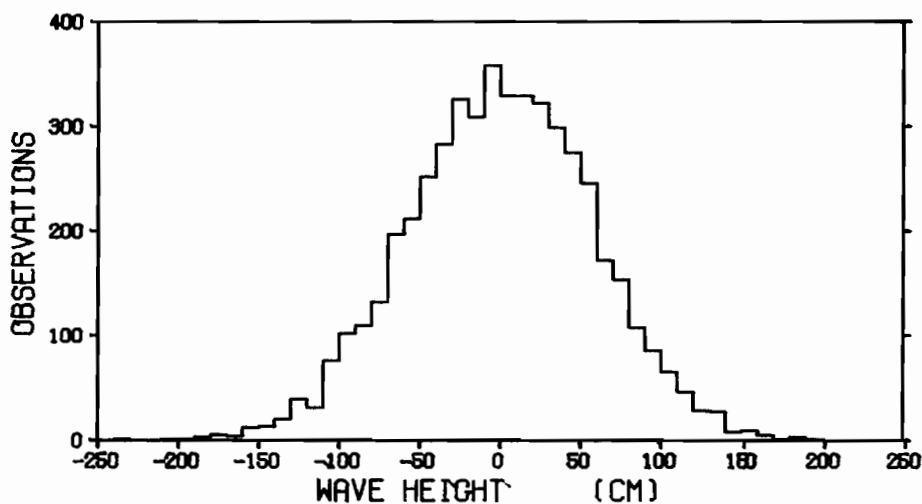


WAVE HEIGHT SPECTRUM.

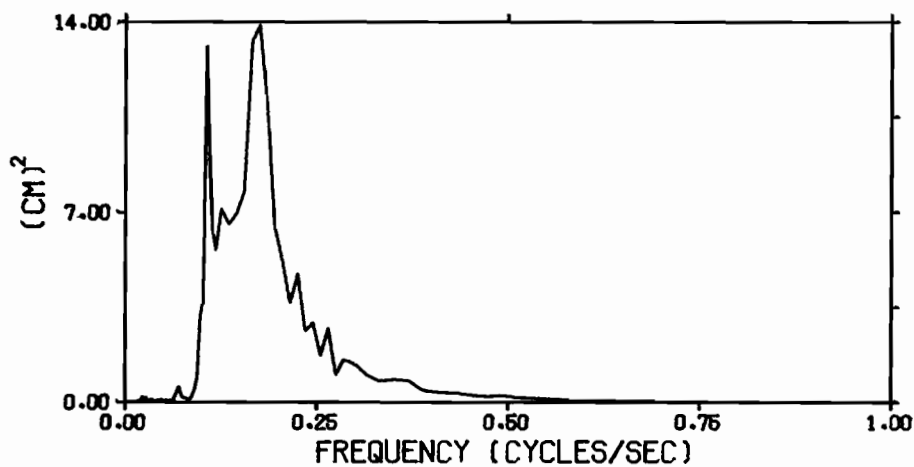


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 12 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	3271.15	57.19	-0.07	2.99	191.26	-239.33

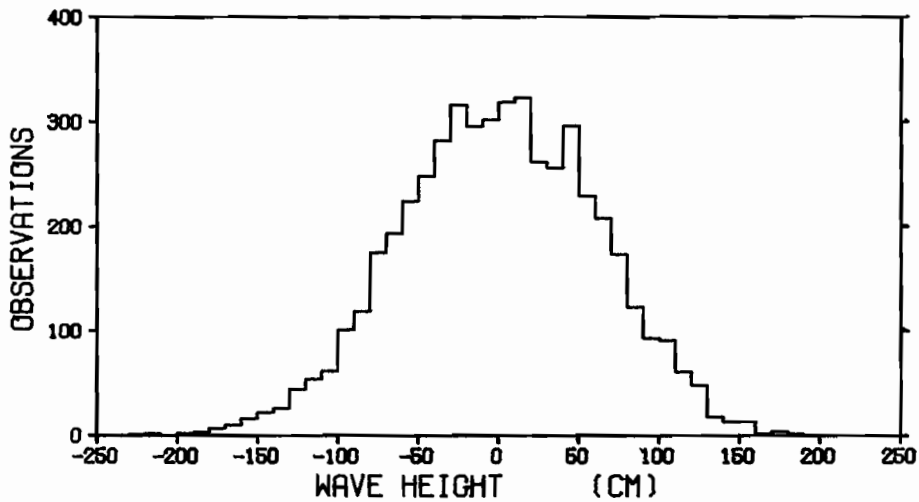


WAVE HEIGHT SPECTRUM.

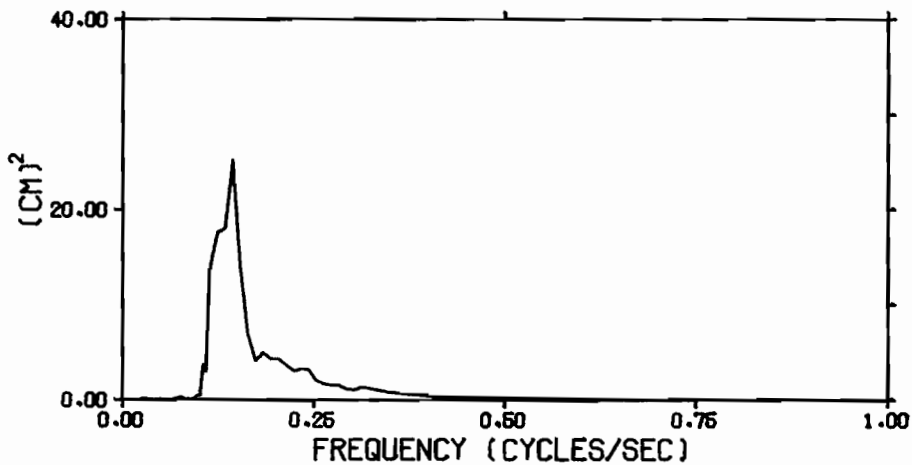


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 12 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	3719.28	60.99	-0.09	2.82	185.73	-226.20

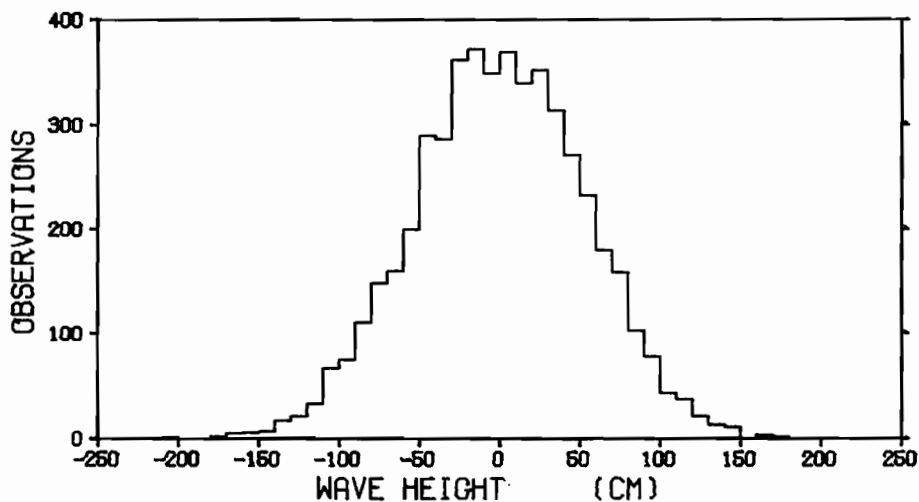


WAVE HEIGHT SPECTRUM.

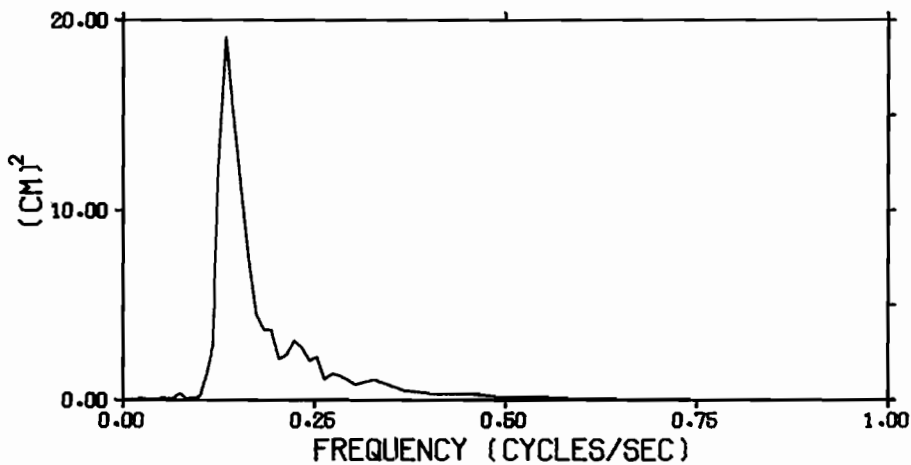


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 12 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
- .03	2799.50	52.91	- .06	2.91	179.99	-202.53

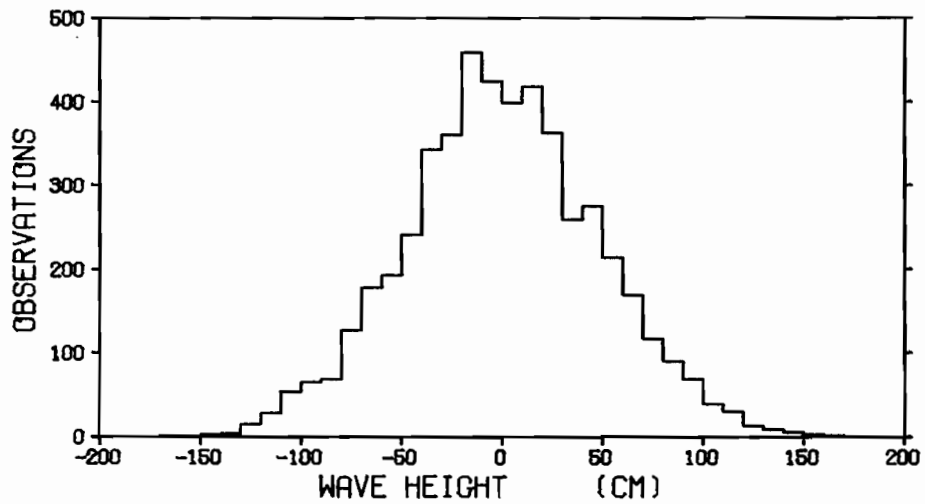


WAVE HEIGHT SPECTRUM.

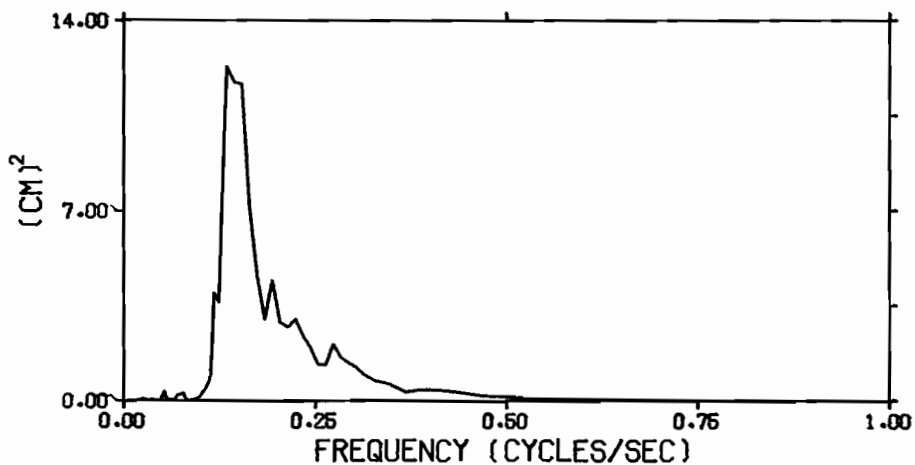


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 12 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.05	2318.90	48.15	.04	3.01	161.52	-165.57

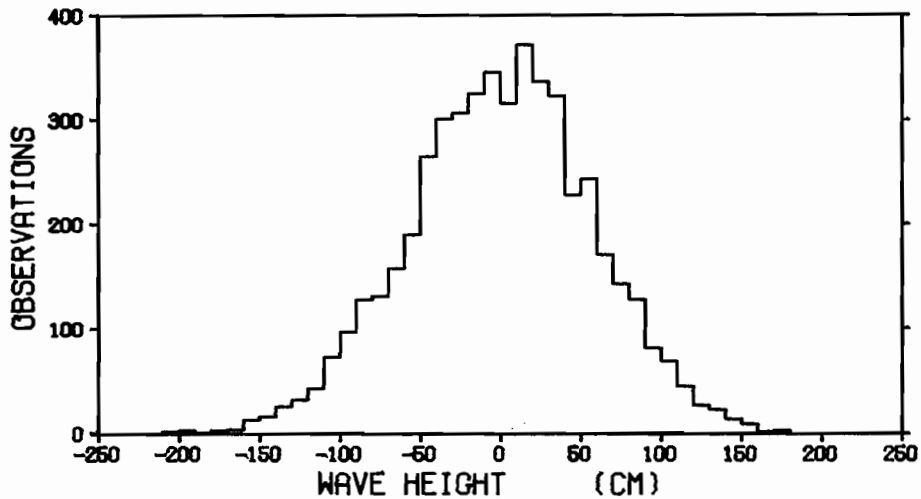


WAVE HEIGHT SPECTRUM.

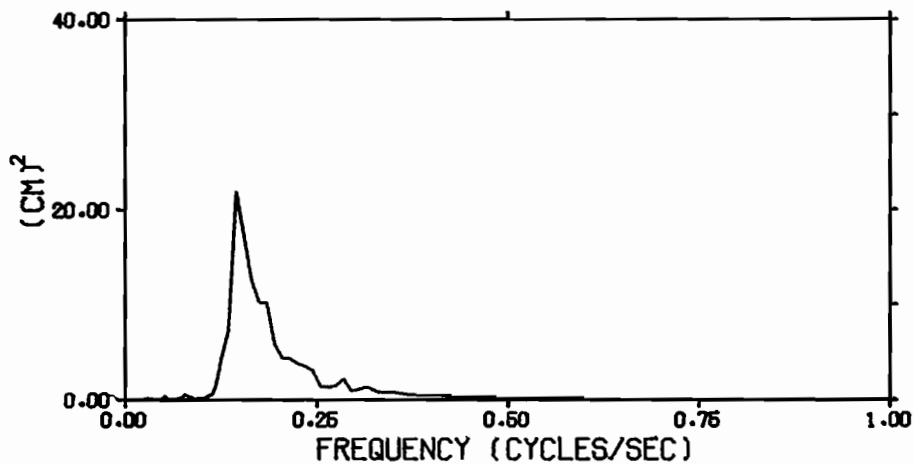


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 13 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	3264.89	57.14	-0.10	2.97	179.77	-206.87

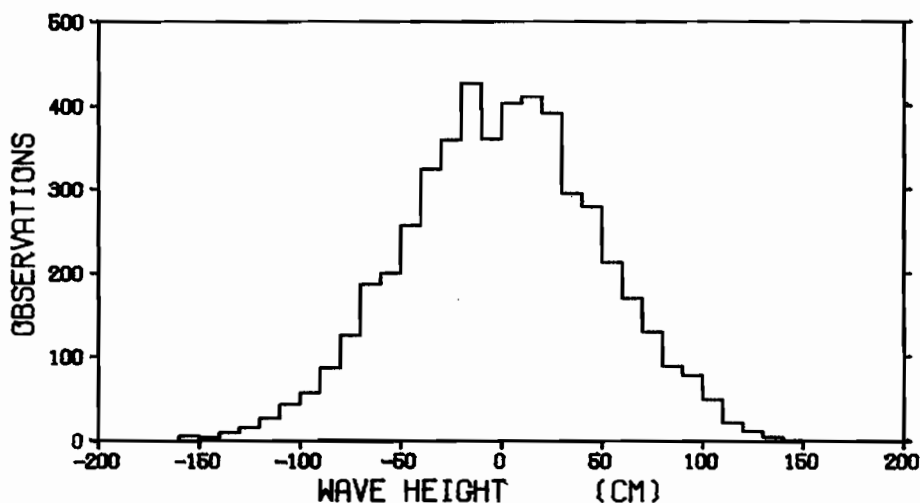


WAVE HEIGHT SPECTRUM.

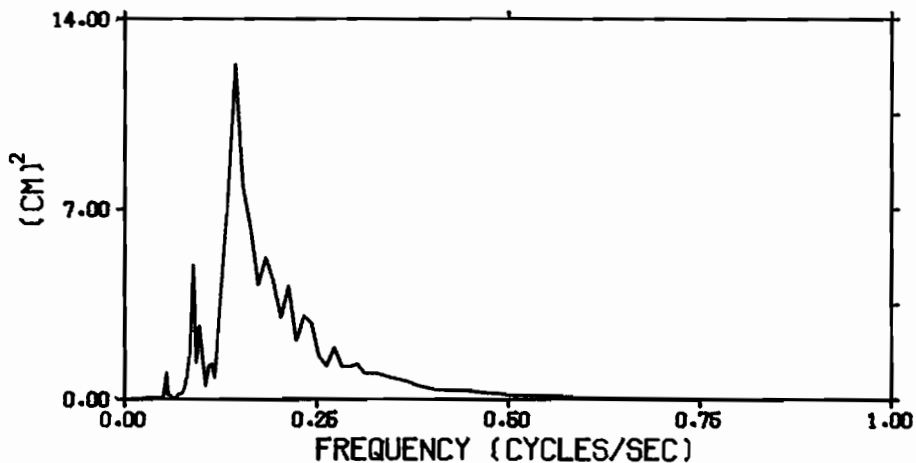


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 13 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.04	2345.49	48.43	-.07	2.88	143.00	-183.46

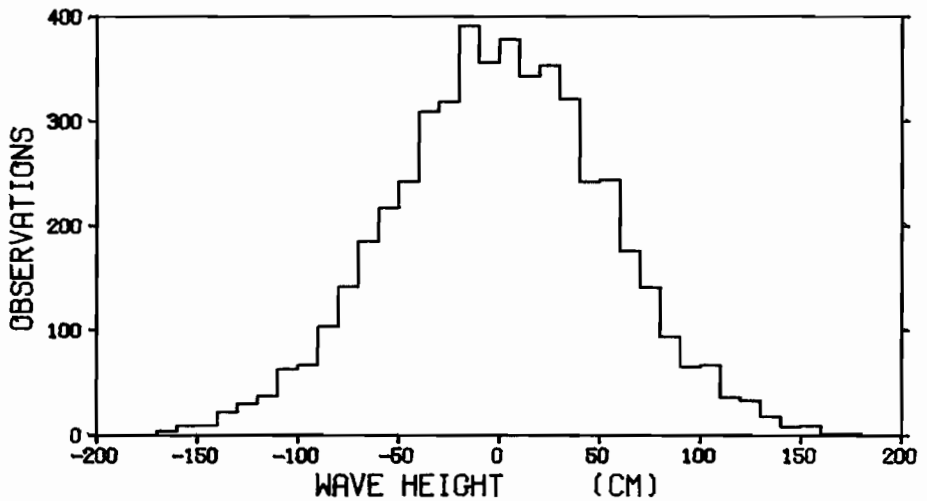


WAVE HEIGHT SPECTRUM.

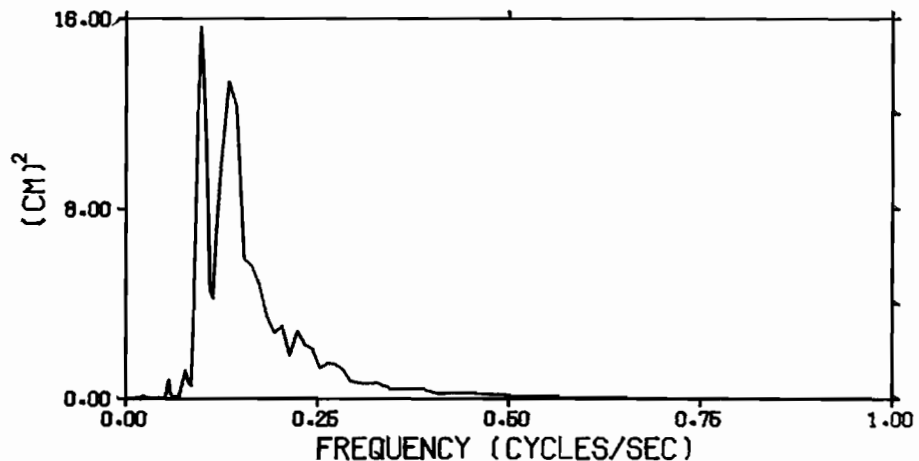


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 13 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	2894.32	53.80	-.02	2.96	174.70	-165.49

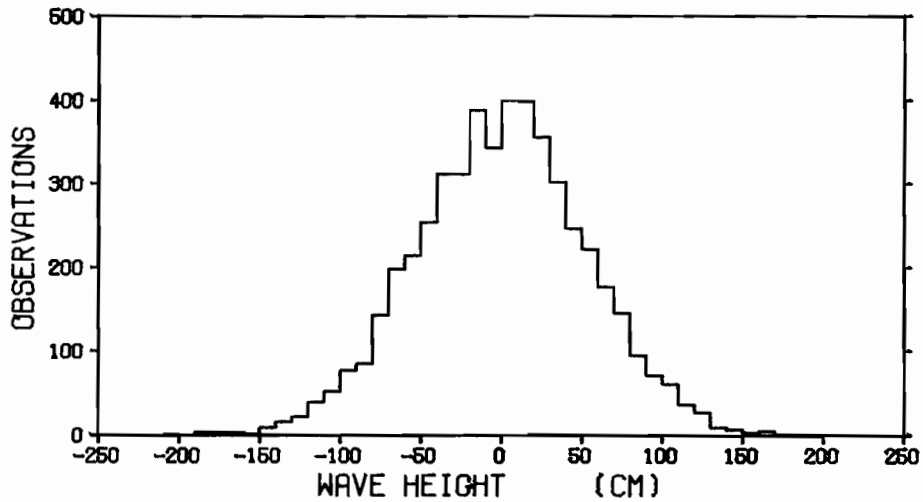


WAVE HEIGHT SPECTRUM.

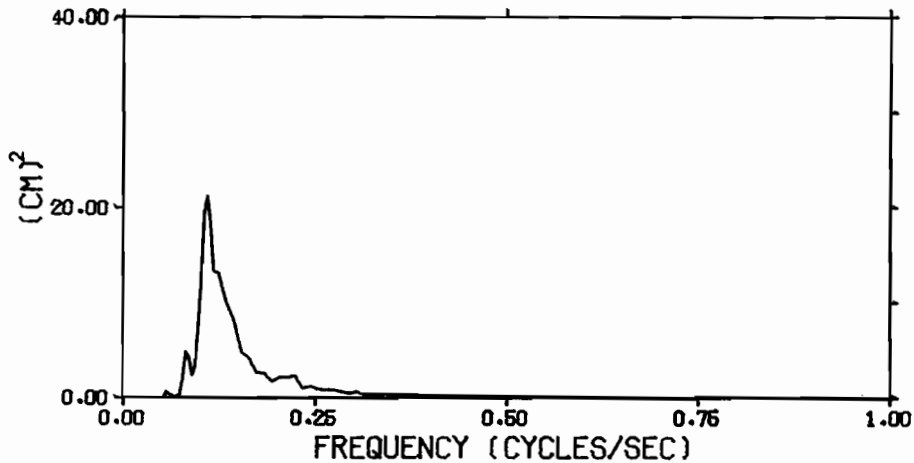


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 13 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	2759.55	52.53	-0.05	3.03	171.08	-202.48

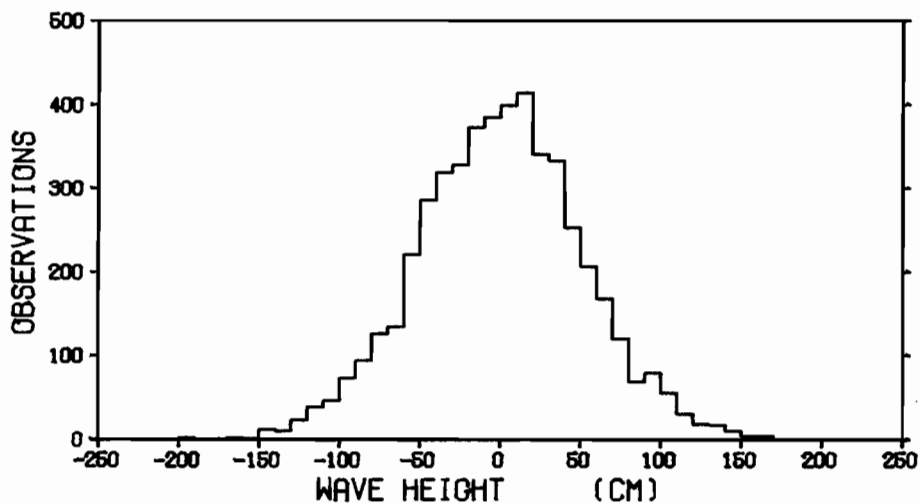


WAVE HEIGHT SPECTRUM.

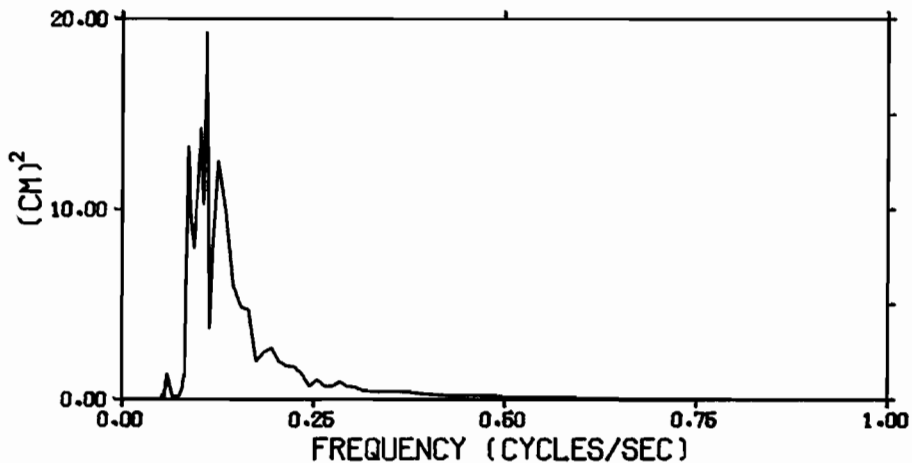


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 14 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.05	2629.75	51.28	.01	3.25	202.15	-221.16

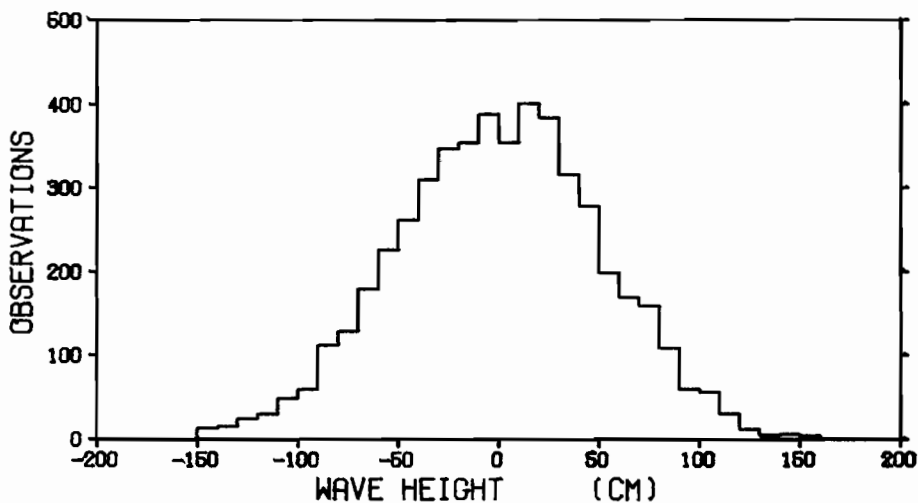


WAVE HEIGHT SPECTRUM.

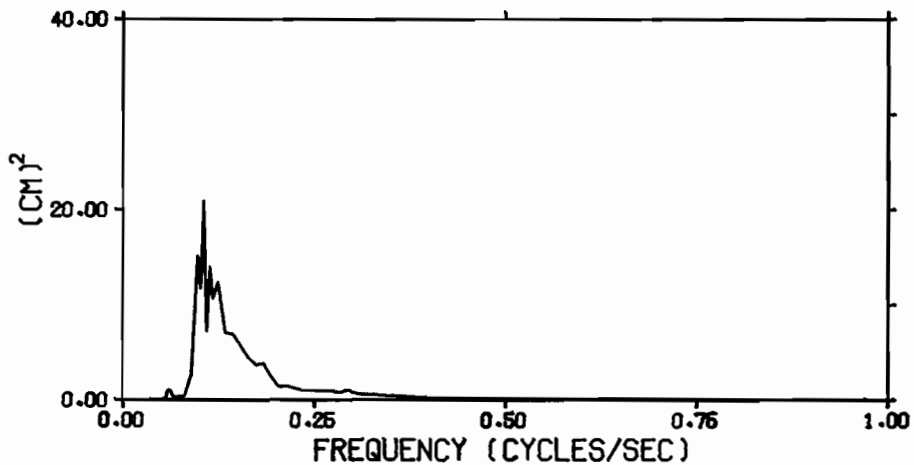


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 14 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.04	2570.29	50.70	-0.05	2.86	171.97	-175.94

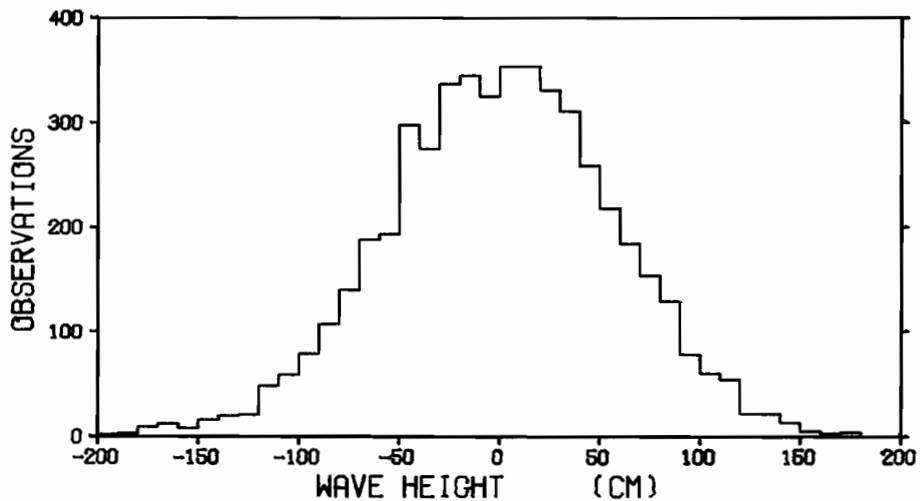


WAVE HEIGHT SPECTRUM.

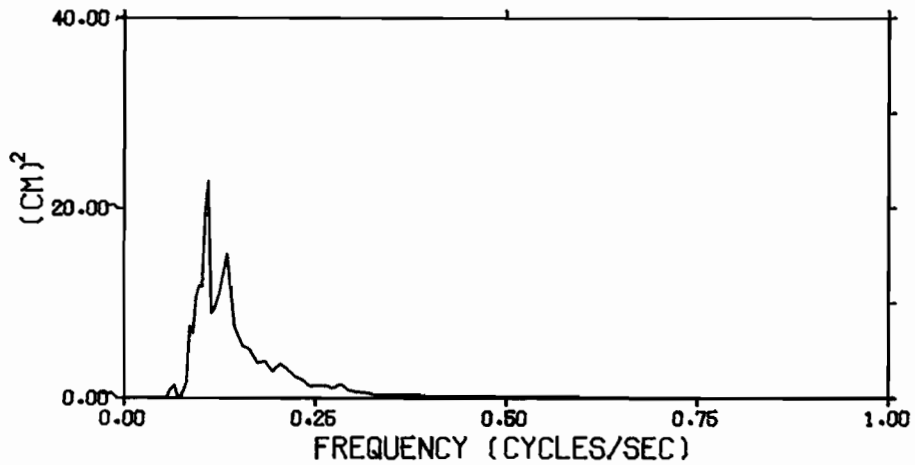


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 14 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	3168.65	56.29	-0.10	3.03	176.66	-192.81

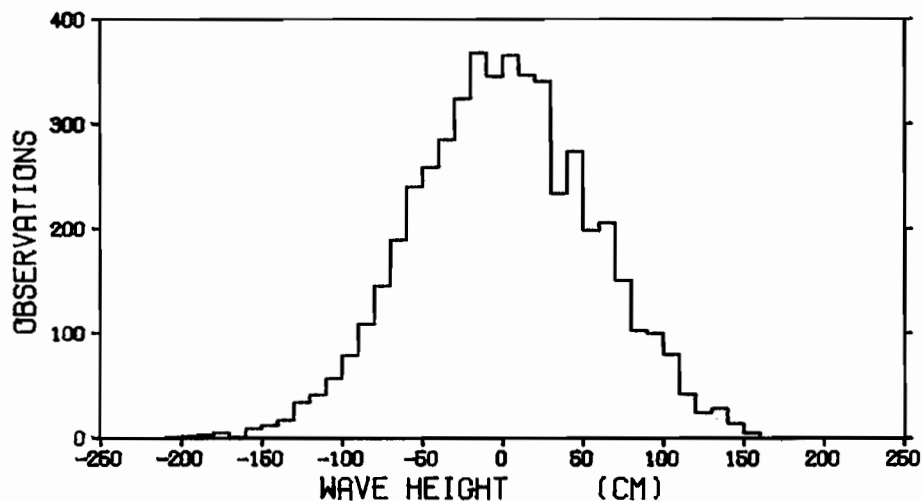


WAVE HEIGHT SPECTRUM.

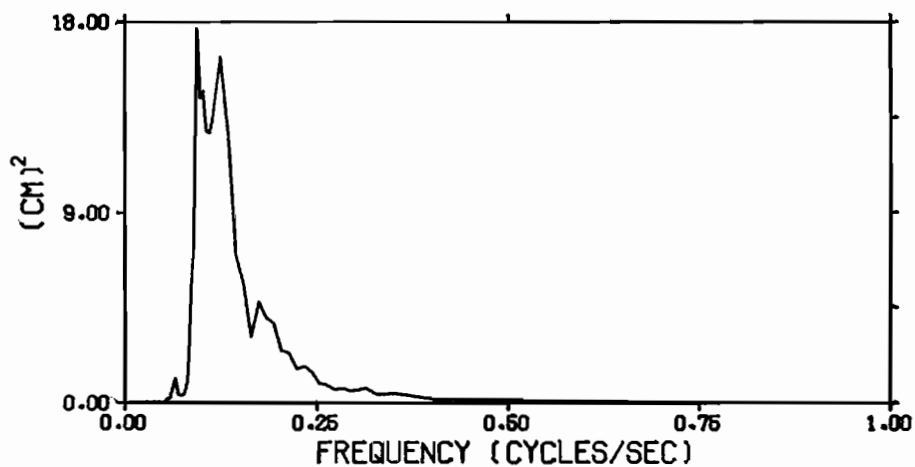


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 14 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	3108.92	55.76	-.04	2.90	159.96	-204.41

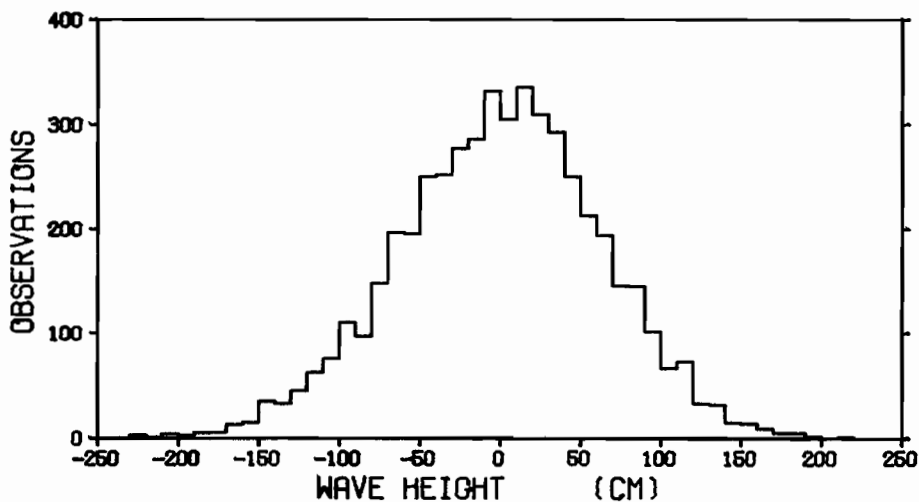


WAVE HEIGHT SPECTRUM.

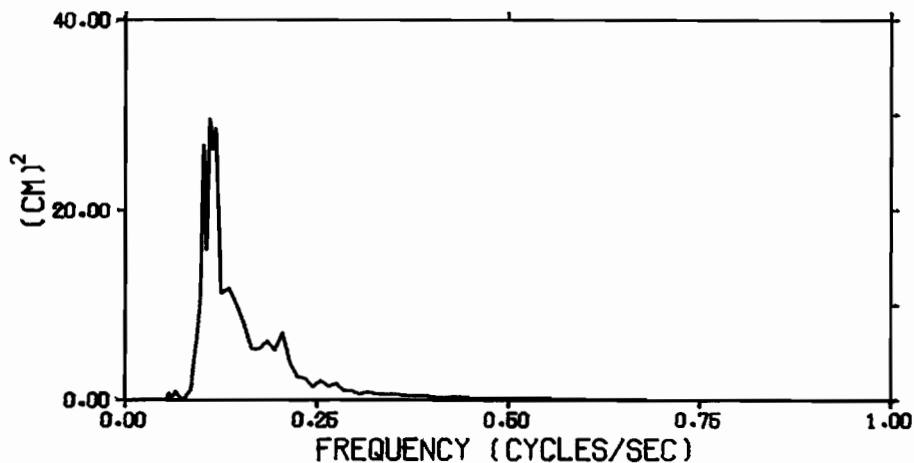


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 15 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	3982.88	63.11	-.10	3.09	251.91	-227.71

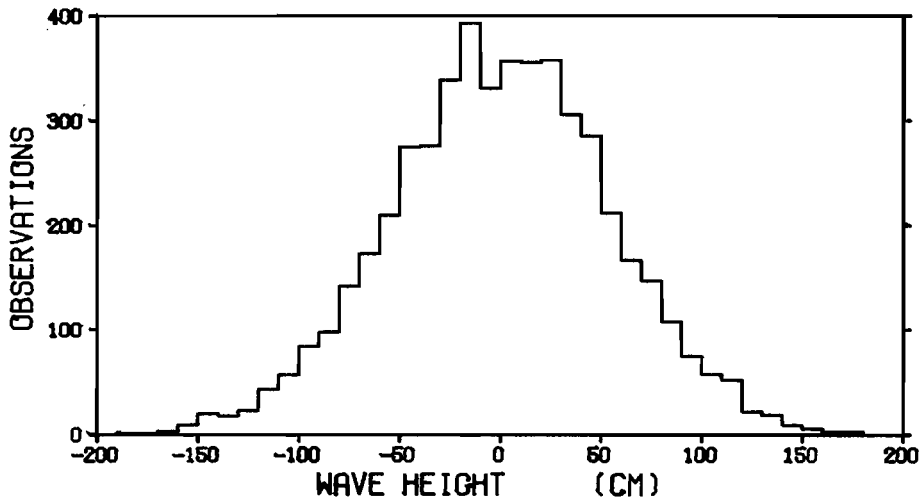


WAVE HEIGHT SPECTRUM.

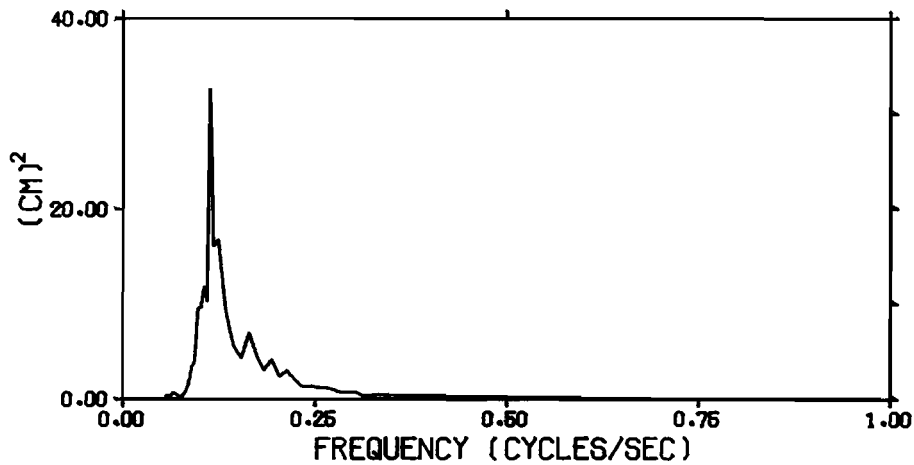


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 15 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.06	2951.78	54.33	-.04	2.97	176.65	-180.30

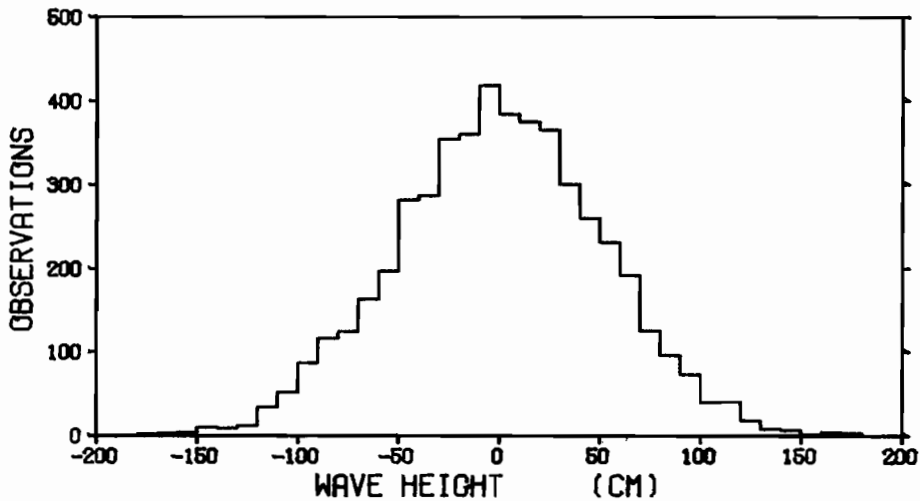


WAVE HEIGHT SPECTRUM.

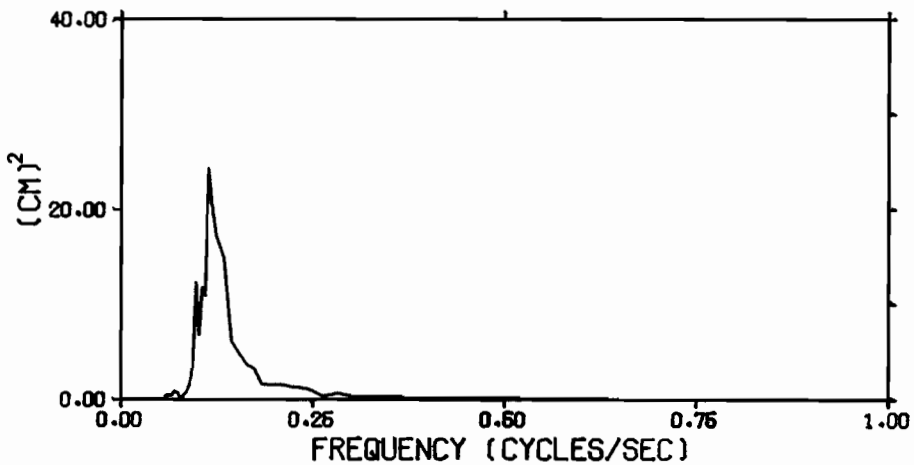


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 15 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.08	2640.11	51.38	-.02	3.03	198.44	-189.19

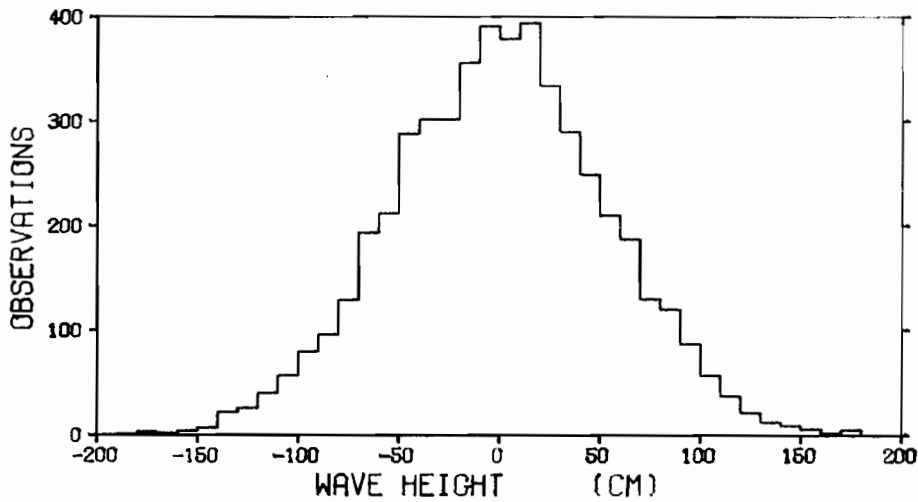


WAVE HEIGHT SPECTRUM.

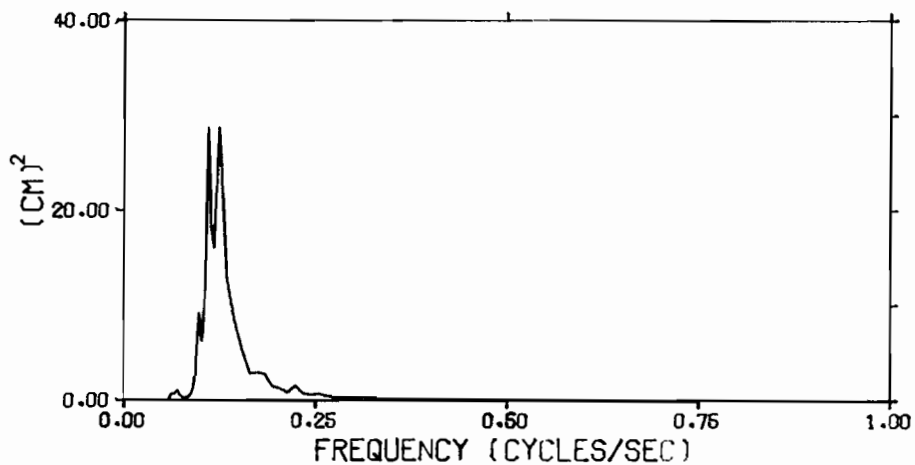


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 15 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.05	2858.61	53.47	-0.01	2.94	174.61	-180.74

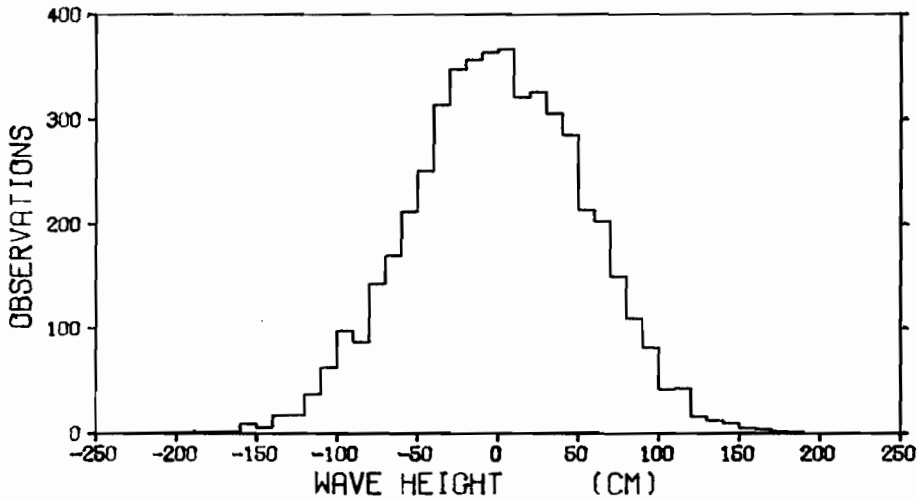


WAVE HEIGHT SPECTRUM.

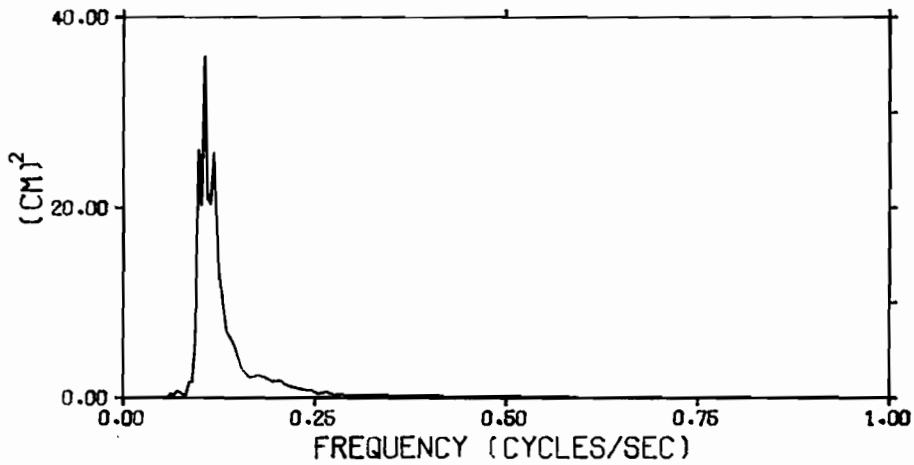


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 16 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	2871.48	53.59	-.04	2.96	186.46	-204.32

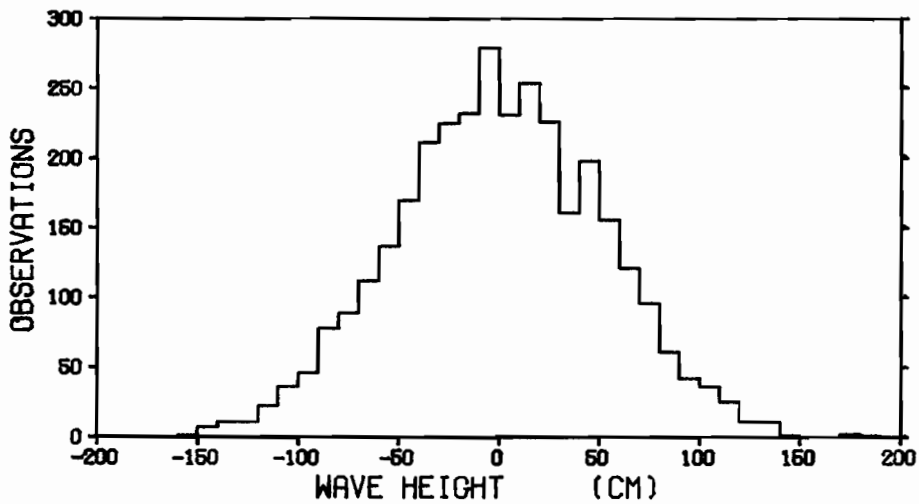


WAVE HEIGHT SPECTRUM.

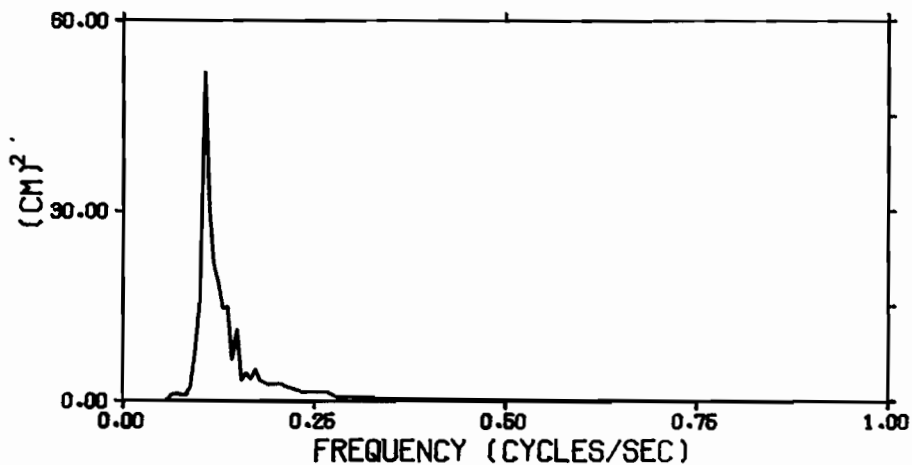


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 3300
 OBSERVATION PERIOD 27.5 MINUTES FROM 0600 GMT 16 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-.01	2653.66	51.51	-.01	2.84	187.68	-153.81

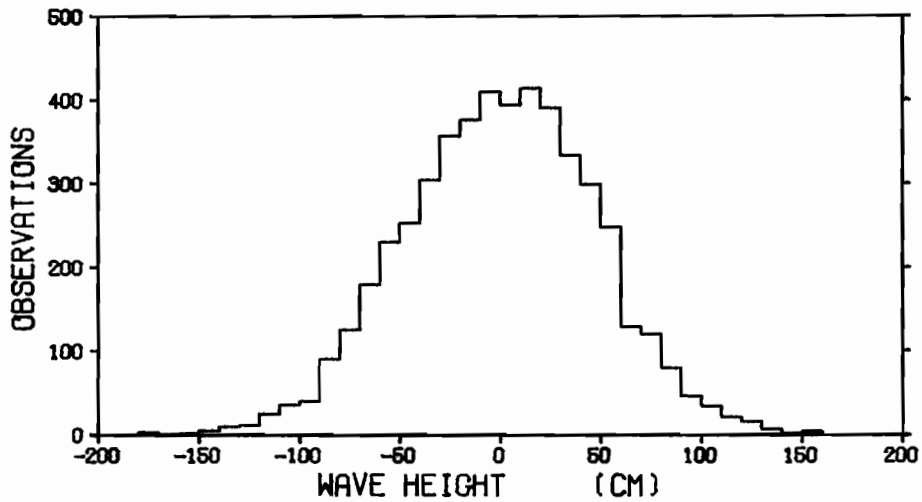


WAVE HEIGHT SPECTRUM.

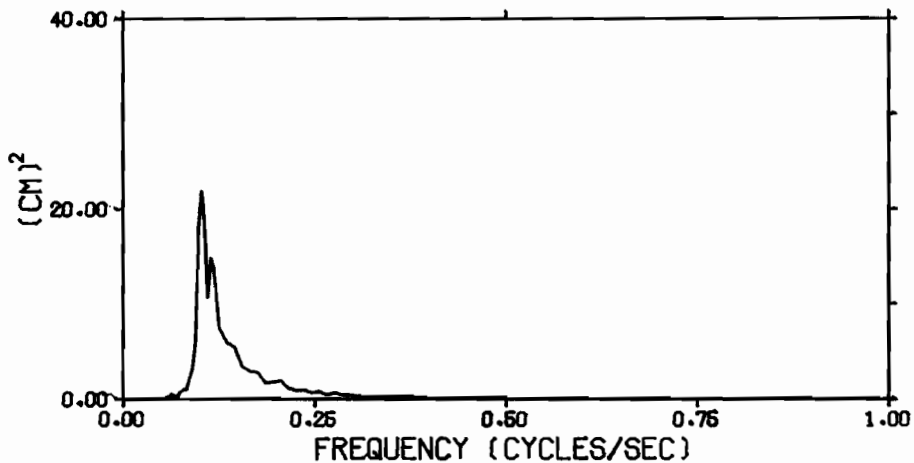


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 18 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
-0.01	2228.38	47.21	-0.06	3.03	159.24	-177.97

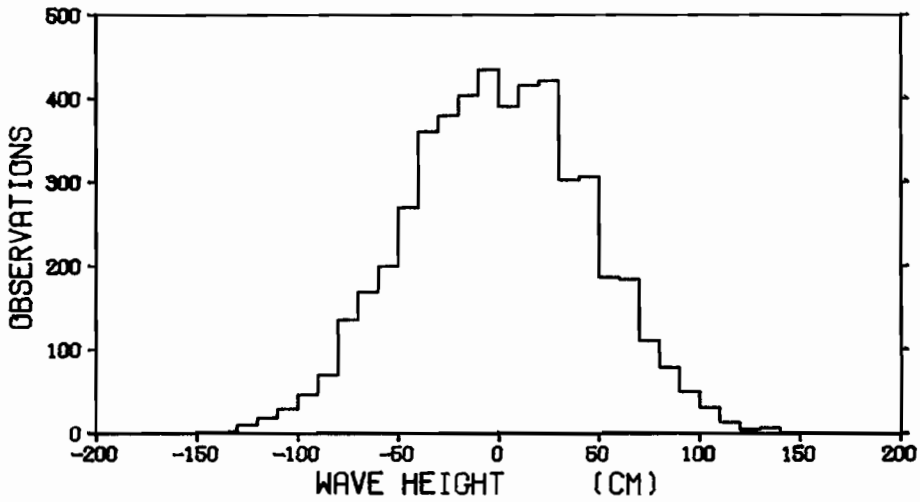


WAVE HEIGHT SPECTRUM.

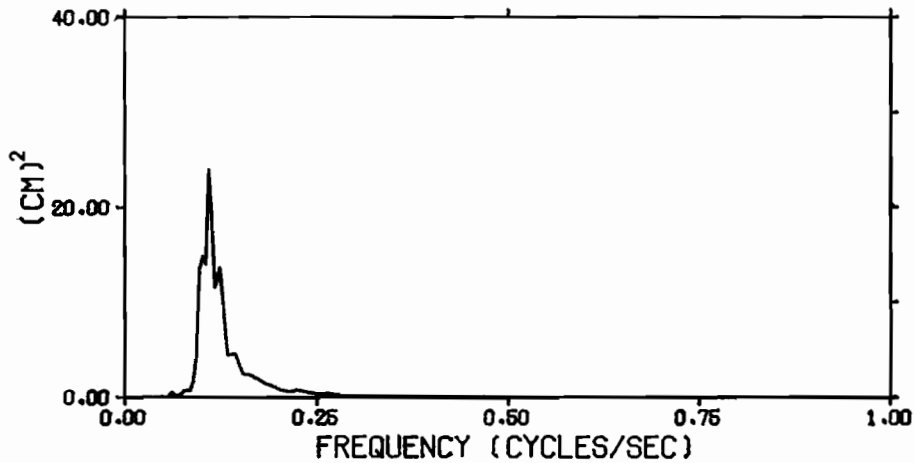


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 18 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	2028.05	45.03	-0.00	2.80	153.70	-144.15

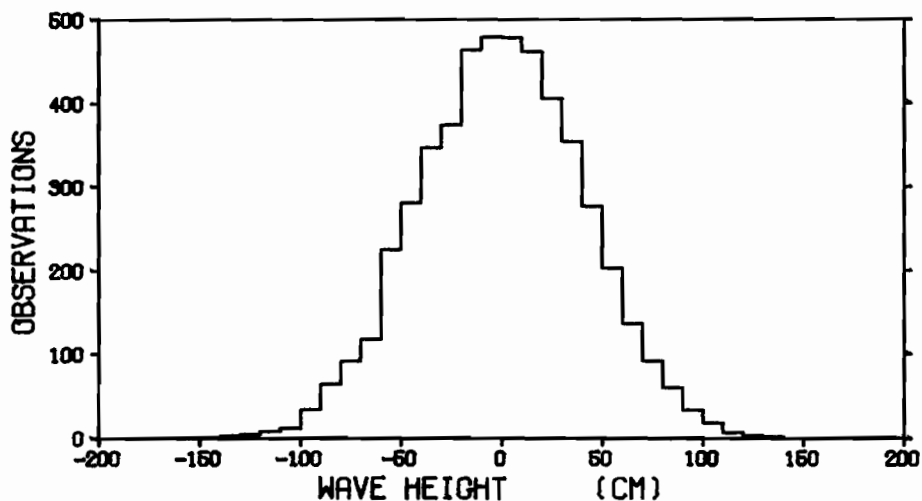


WAVE HEIGHT SPECTRUM.

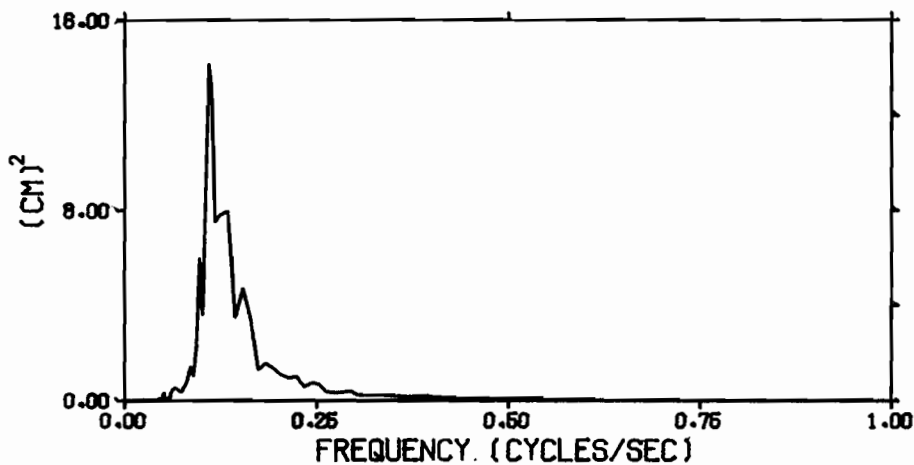


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 18 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	1661.51	40.76	-.04	2.91	132.31	-151.31

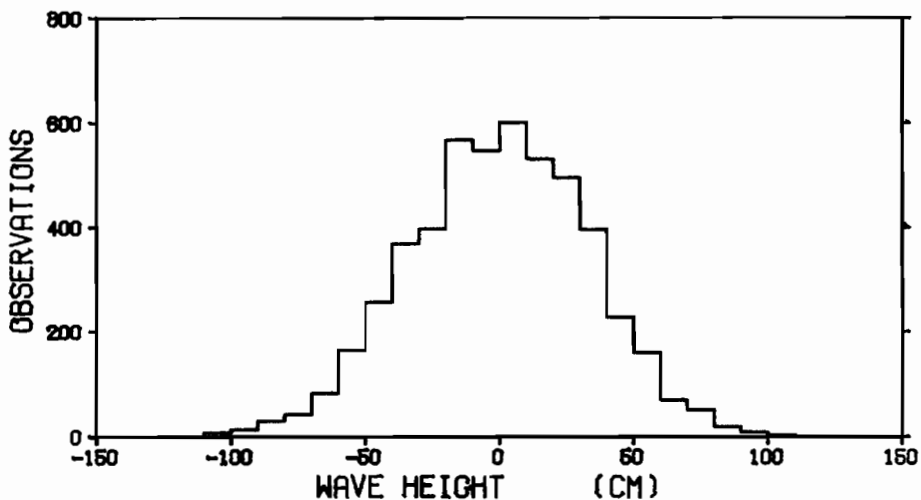


WAVE HEIGHT SPECTRUM.

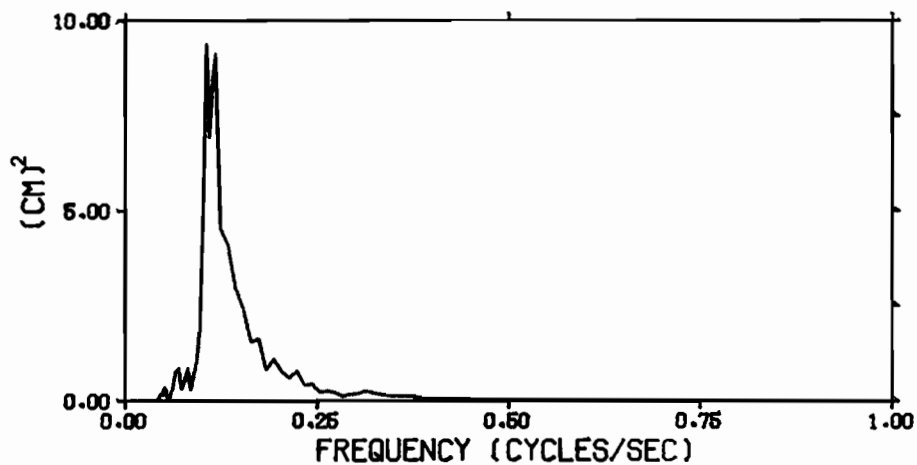


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 18 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.07	1102.40	33.20	-0.08	2.93	113.73	-114.31

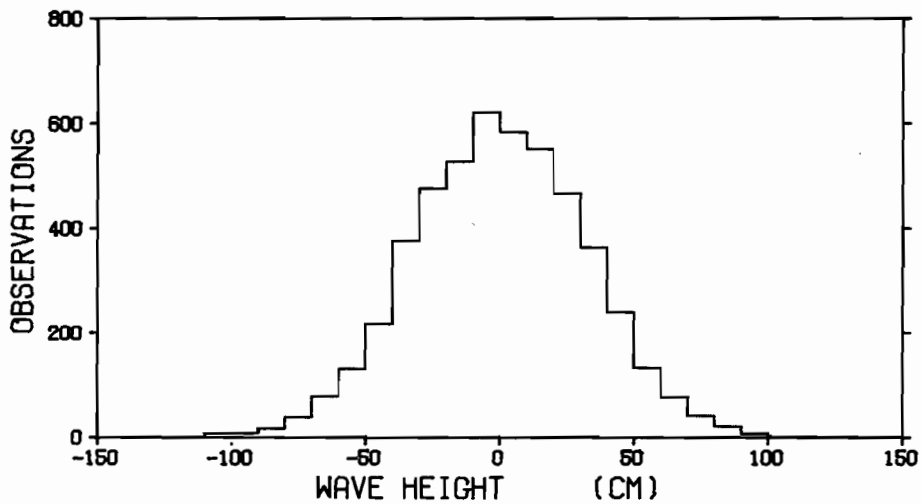


WAVE HEIGHT SPECTRUM.

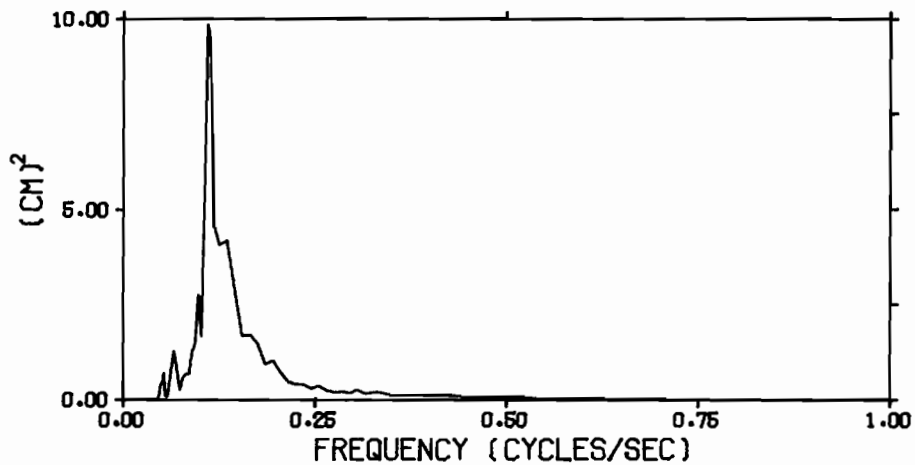


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 19 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1035.74	32.18	-0.04	3.12	121.55	-131.47

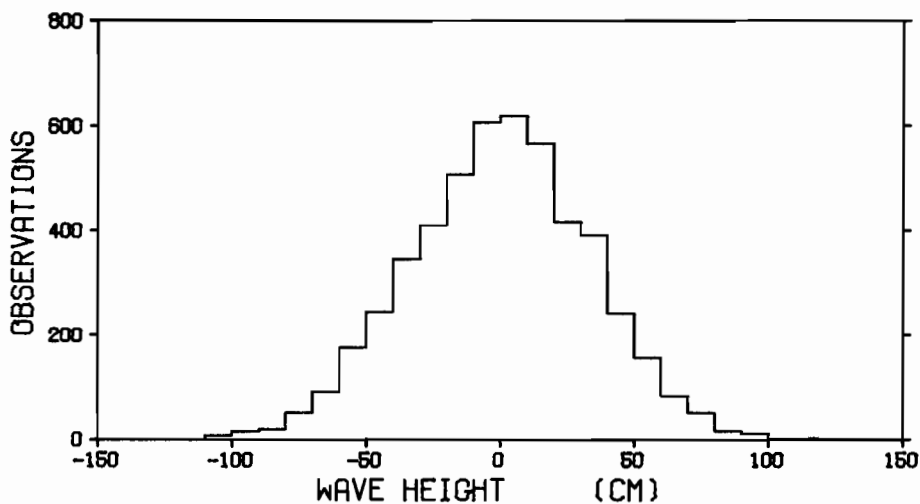


WAVE HEIGHT SPECTRUM.

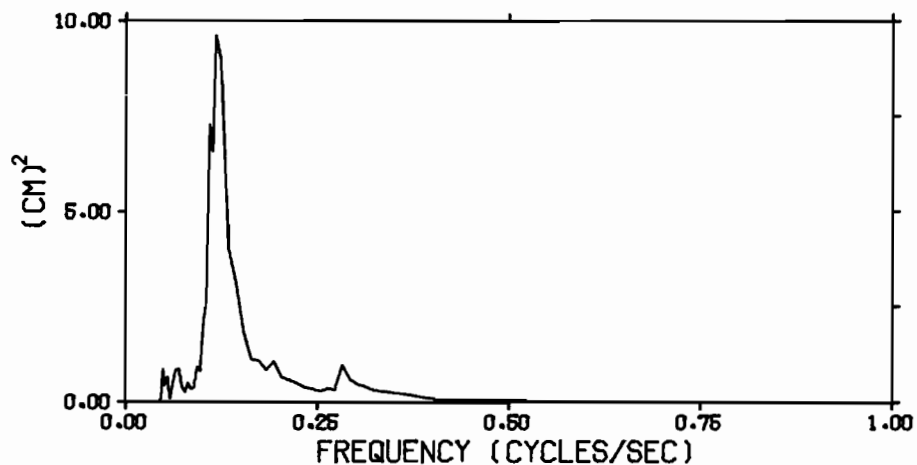


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 19 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	1116.97	33.42	-.06	2.94	112.61	-111.25

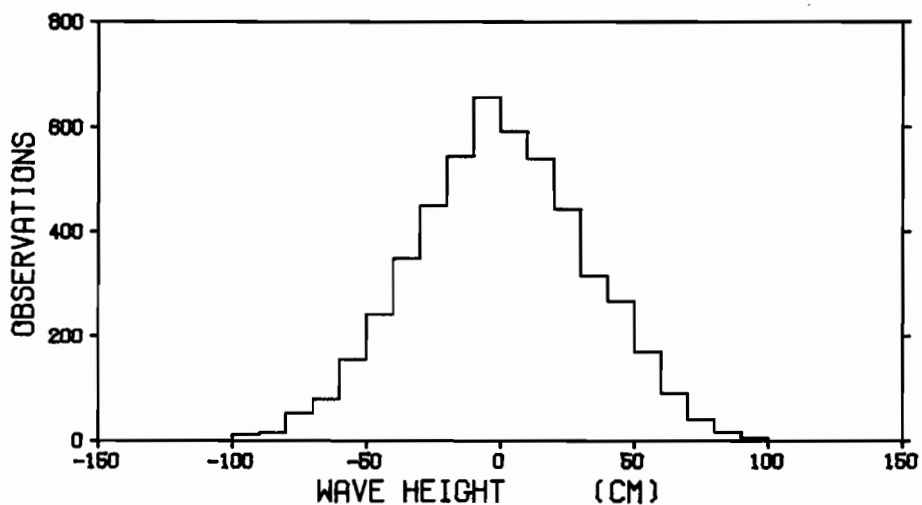


WAVE HEIGHT SPECTRUM.

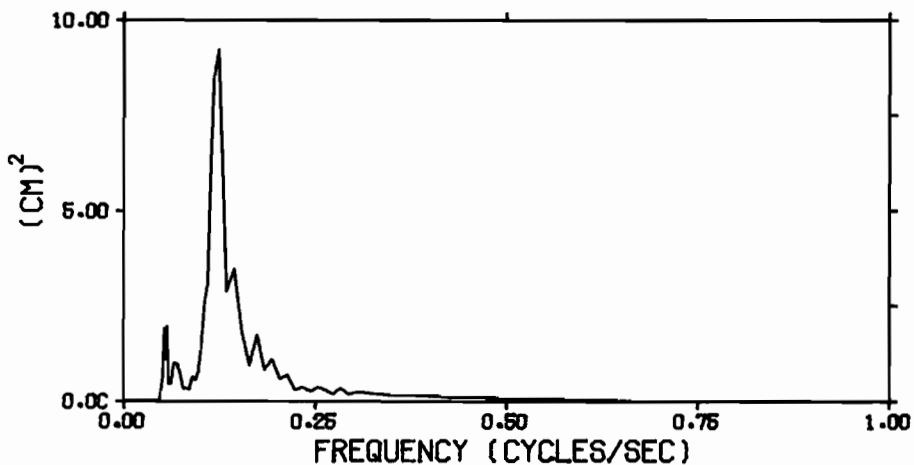


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 19 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-.03	1040.59	32.26	-.02	2.79	97.76	-100.04

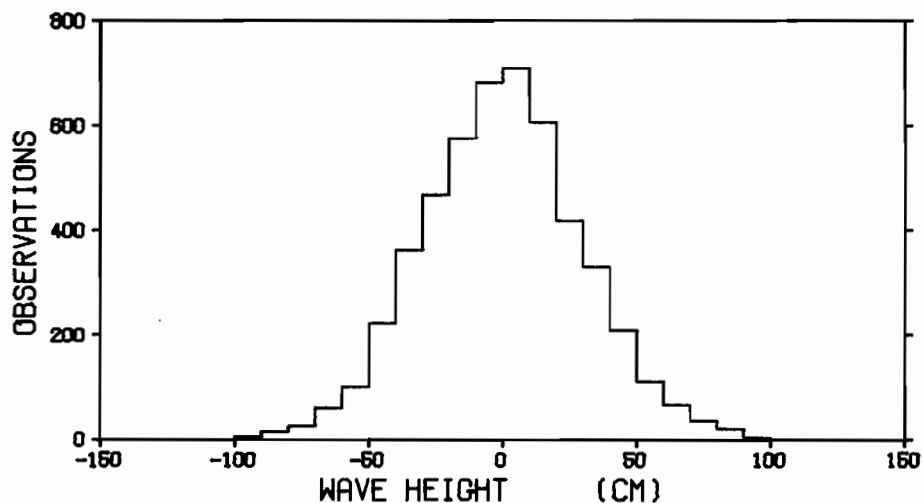


WAVE HEIGHT SPECTRUM.

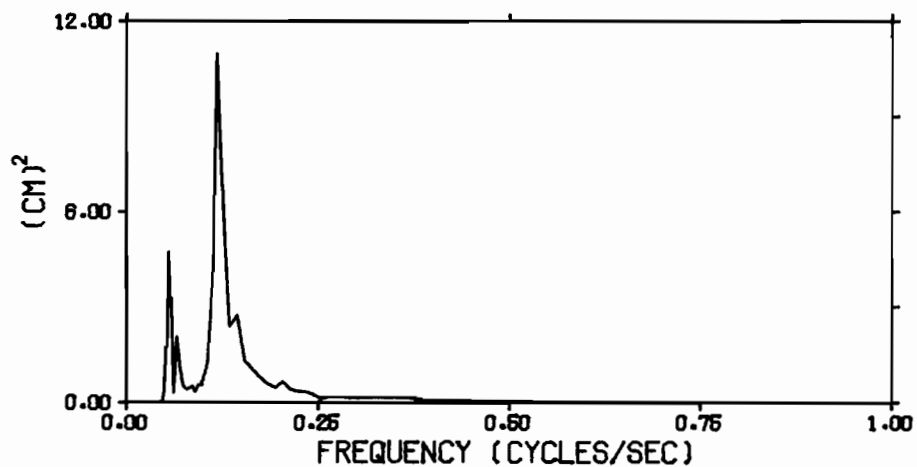


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 19 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-.03	880.28	29.67	.03	3.07	95.83	-102.71

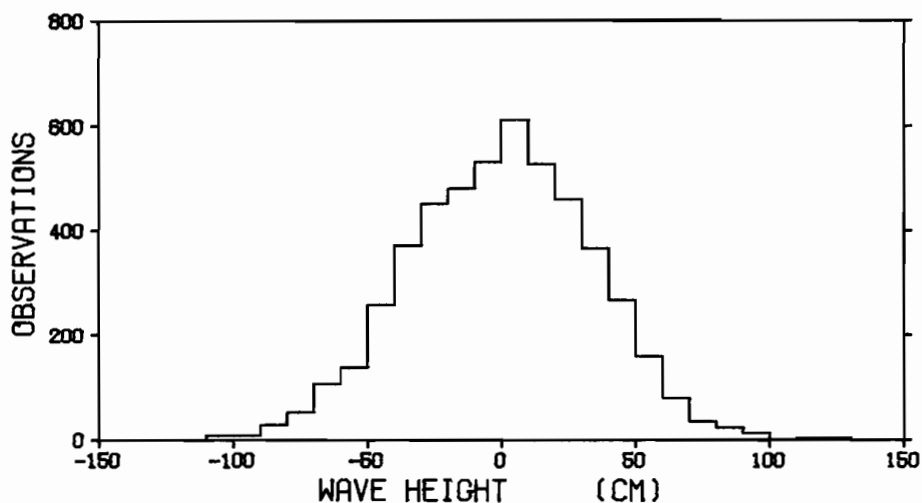


WAVE HEIGHT SPECTRUM.

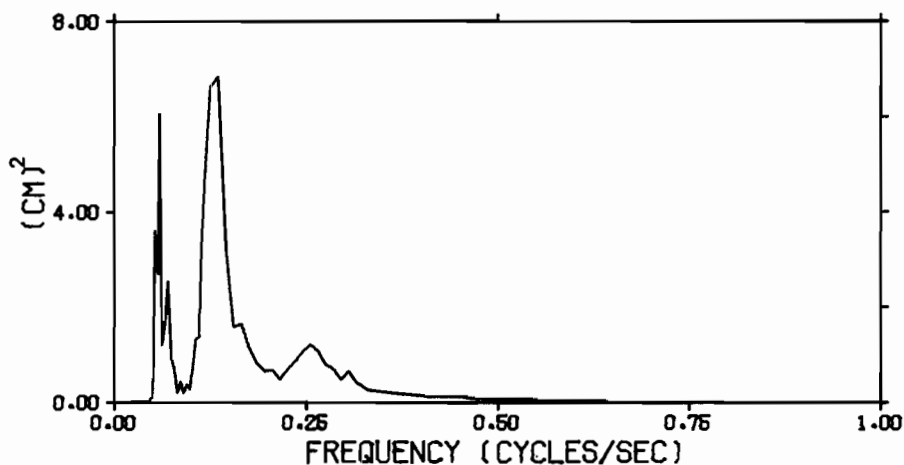


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS - 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 20 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1157.88	34.03	-0.03	3.00	132.22	-128.84

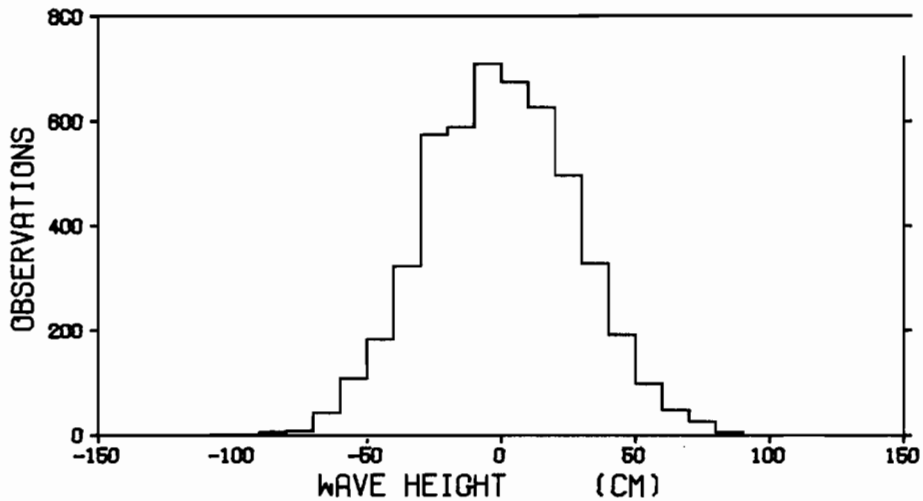


WAVE HEIGHT SPECTRUM.

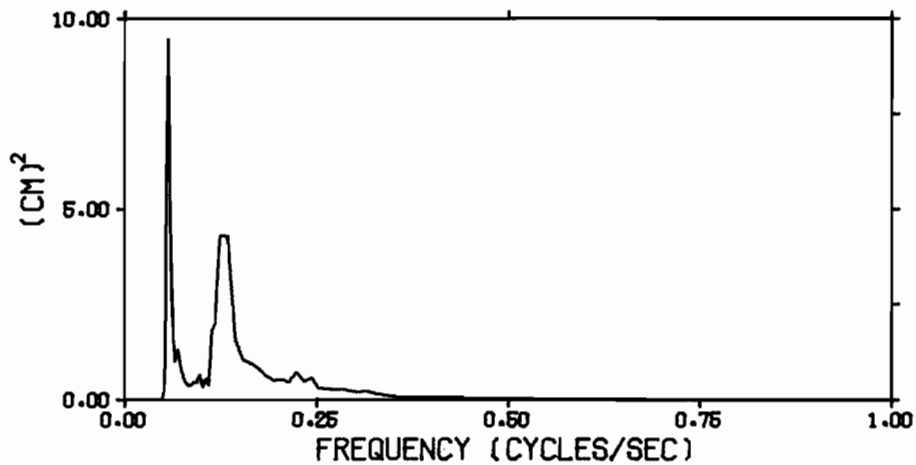


WAVE HEIGHT STATISTICS ' AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 20 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	755.55	27.49	.05	2.87	87.44	-100.74

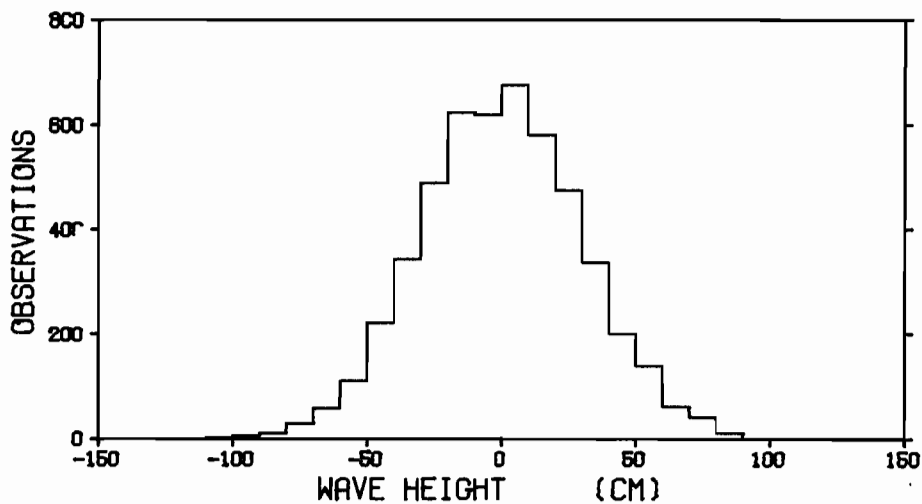


WAVE HEIGHT SPECTRUM.

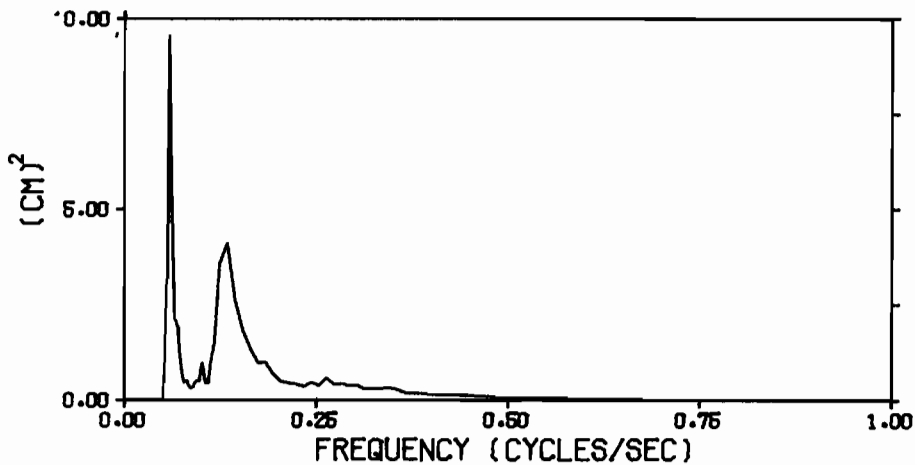


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 20 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	884.75	29.74	.01	2.93	87.49	-107.60

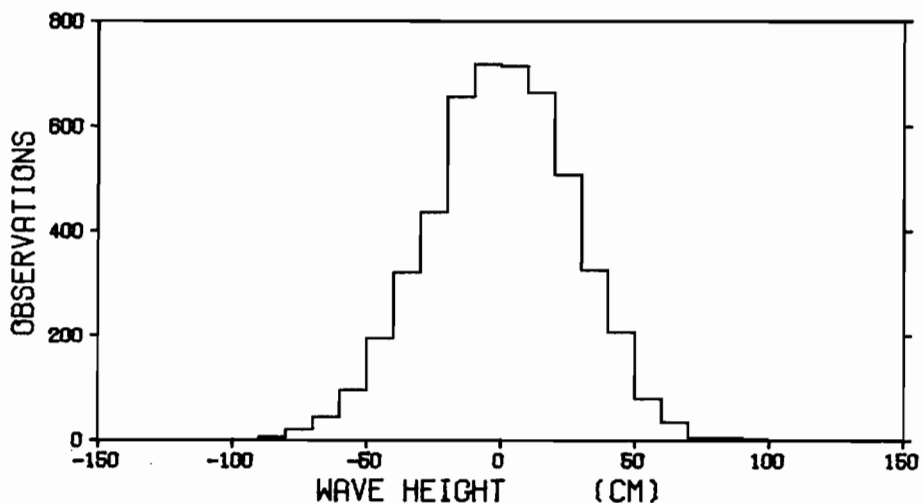


WAVE HEIGHT SPECTRUM.

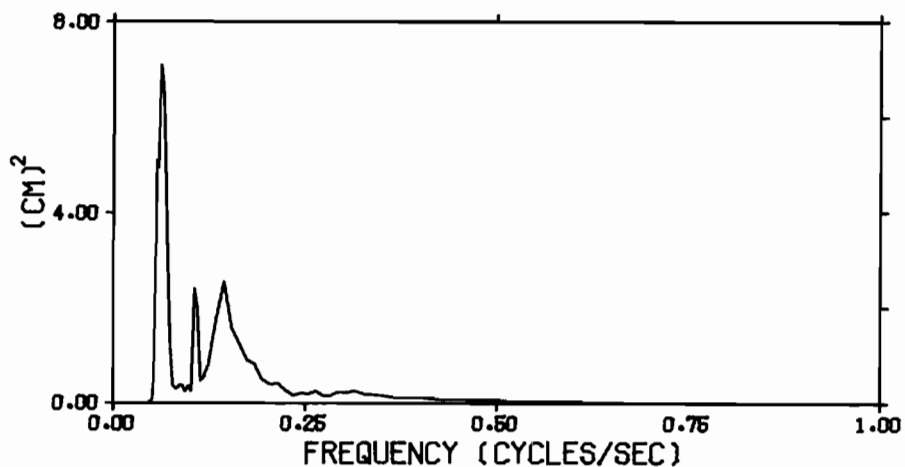


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 20 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	717.48	26.79	-.09	2.93	96.22	-90.89

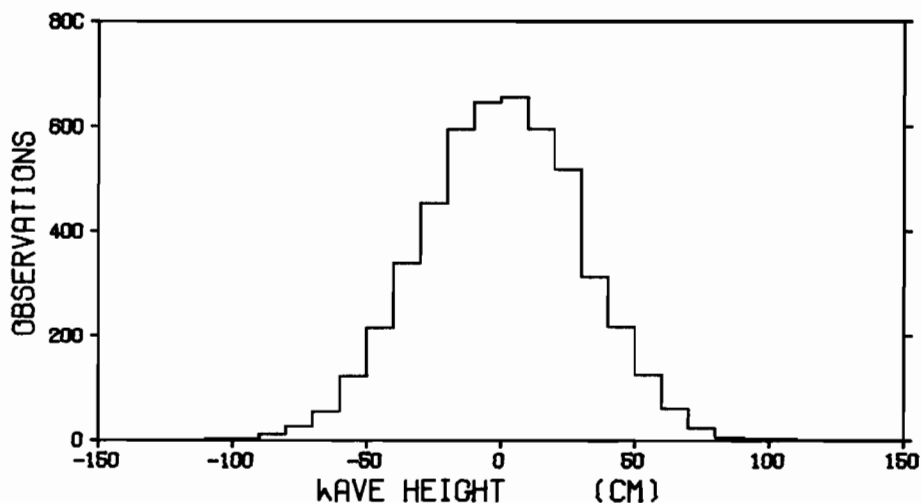


WAVE HEIGHT SPECTRUM.

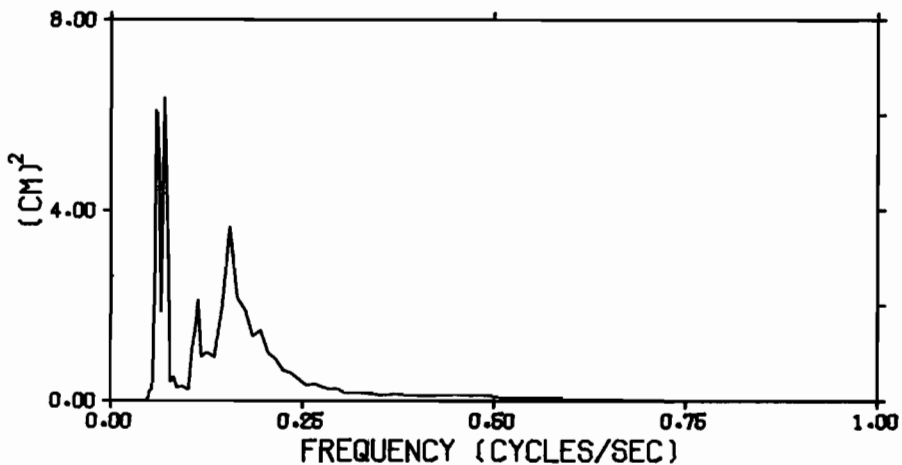


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 21 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	871.21	.9.52	-.04	2.97	108.11	-103.45

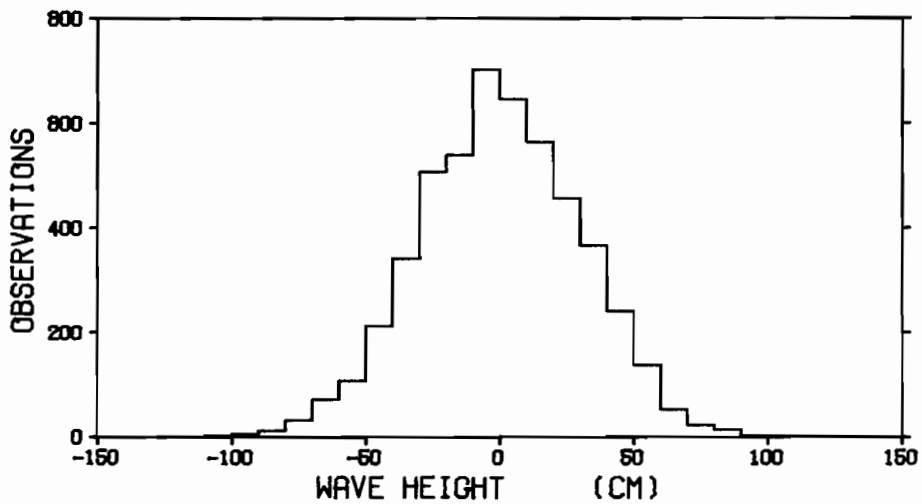


WAVE HEIGHT SPECTRUM.

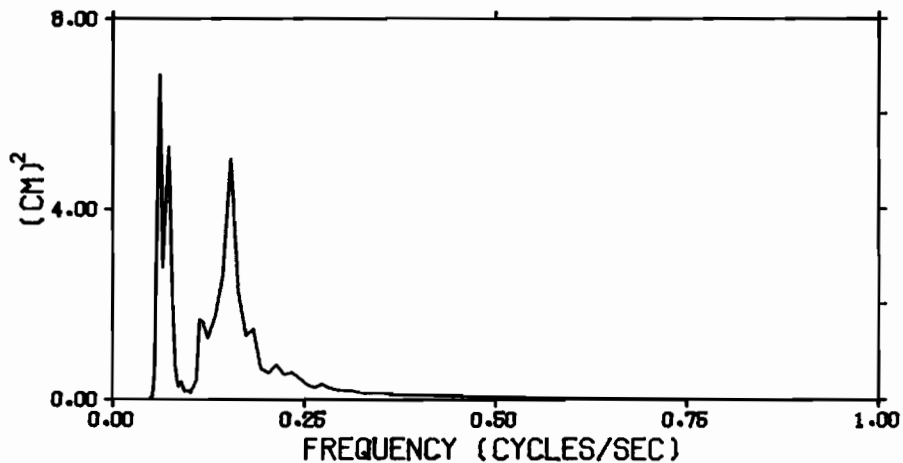


WAVE HEIGHT STATISTICS ' AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 21 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	894.13	29.90	-.06	2.96	90.79	-123.27

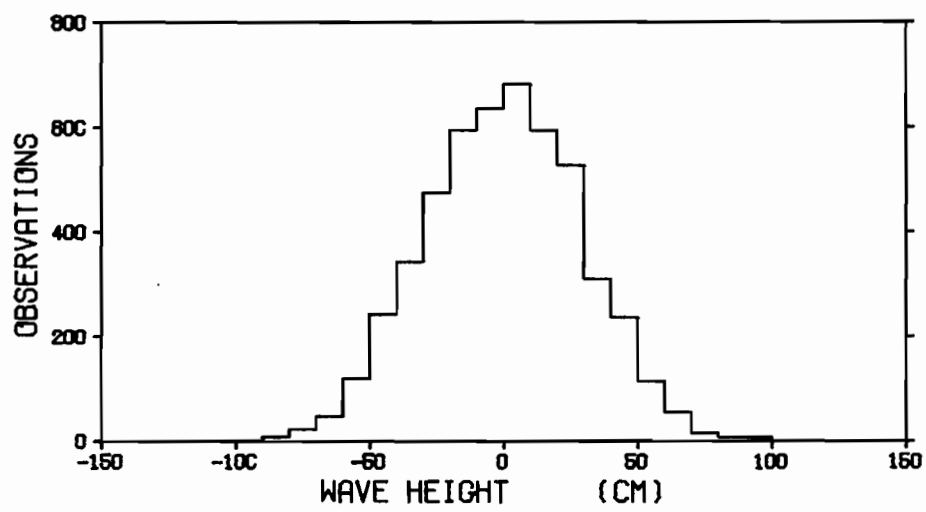


WAVE HEIGHT SPECTRUM.

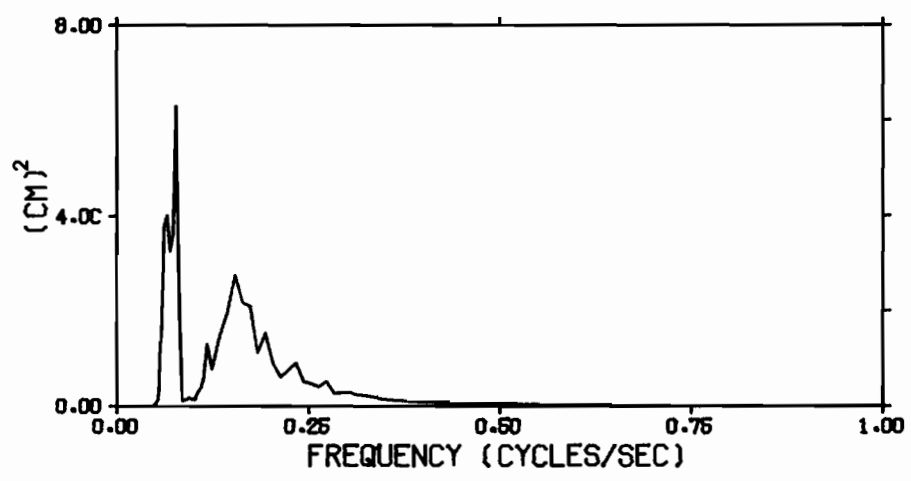


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 21 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	830.30	28.81	-0.01	2.79	95.62	-91.01

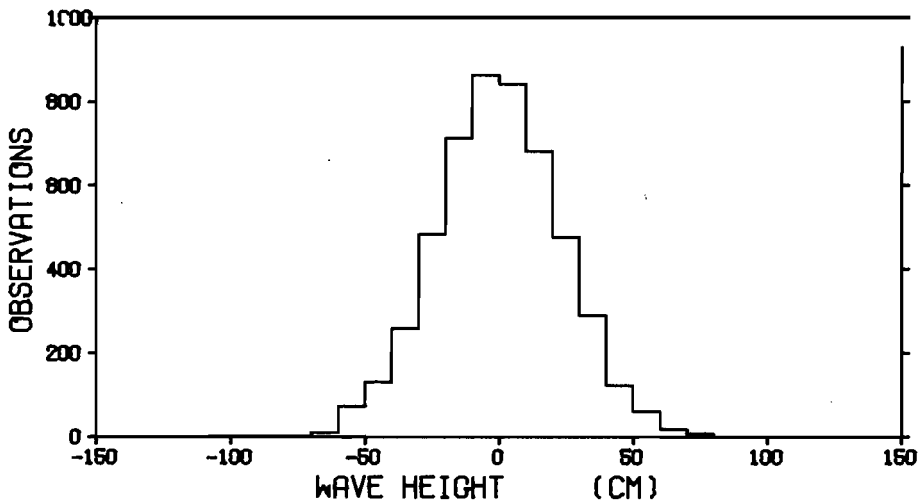


WAVE HEIGHT SPECTRUM.

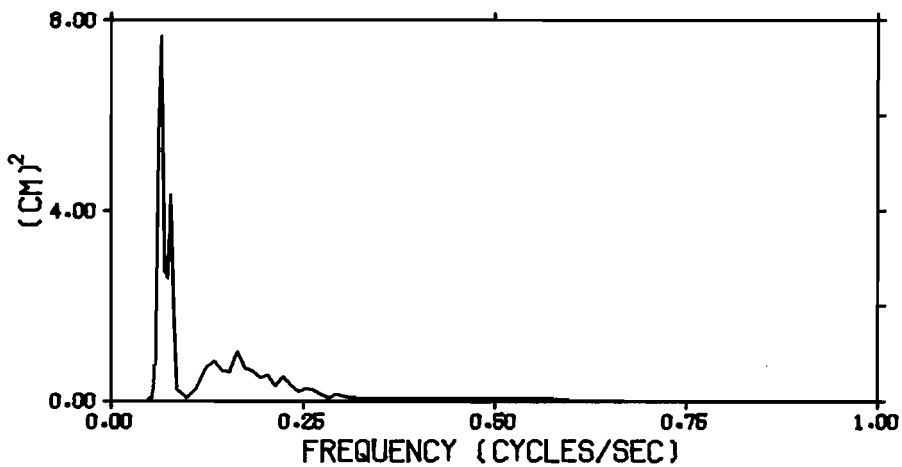


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 21 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
.01	536.44	23.16	-.02	3.11	79.52	-99.00

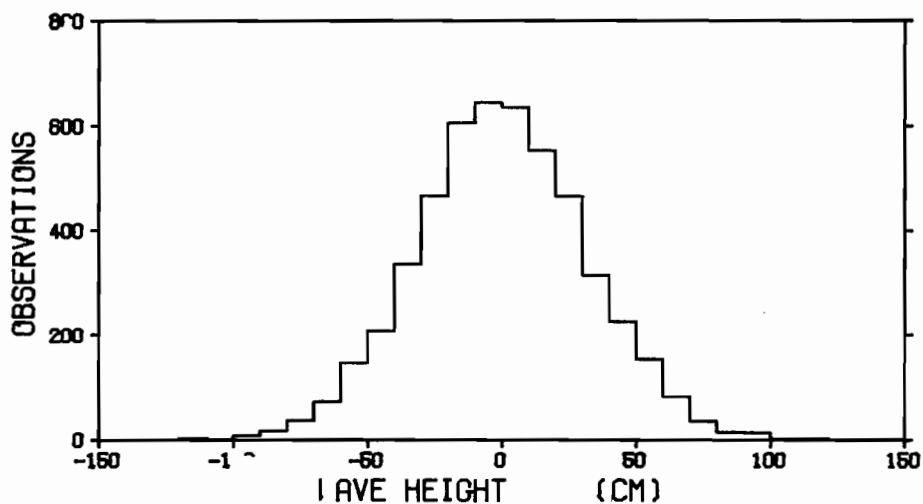


WAVE HEIGHT SPECTRUM.

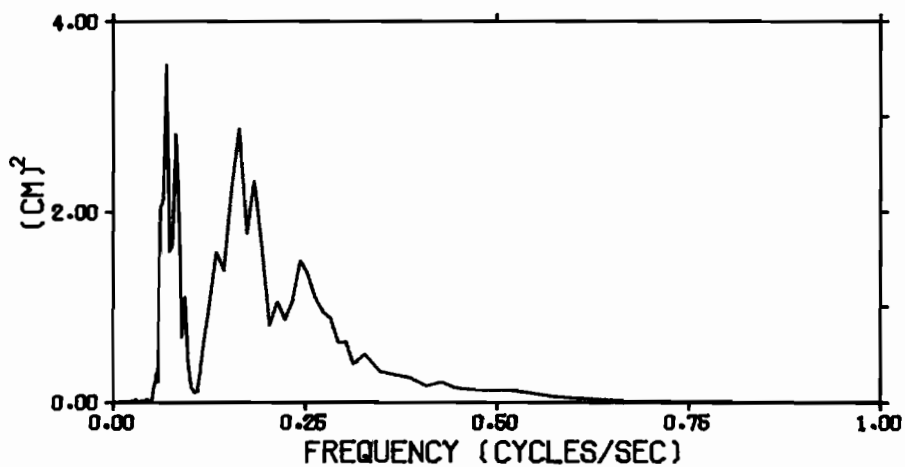


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 22 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.08	987.50	31.42	.04	3.01	105.57	-111.43

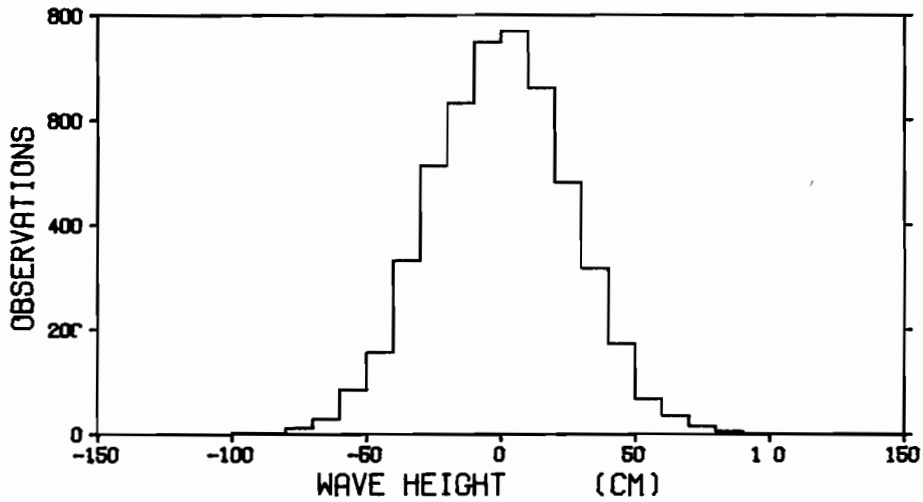


WAVE HEIGHT SPECTRUM.

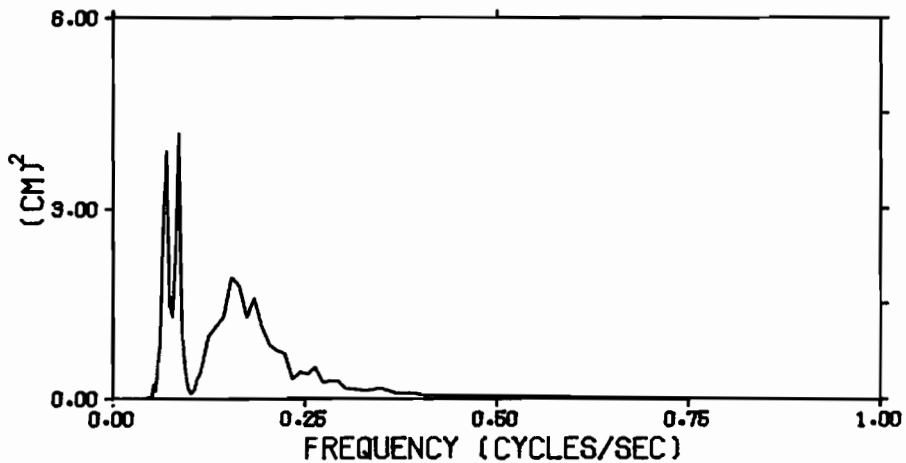


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 22 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	661.83	25.73	.02	3.04	97.69	-96.30

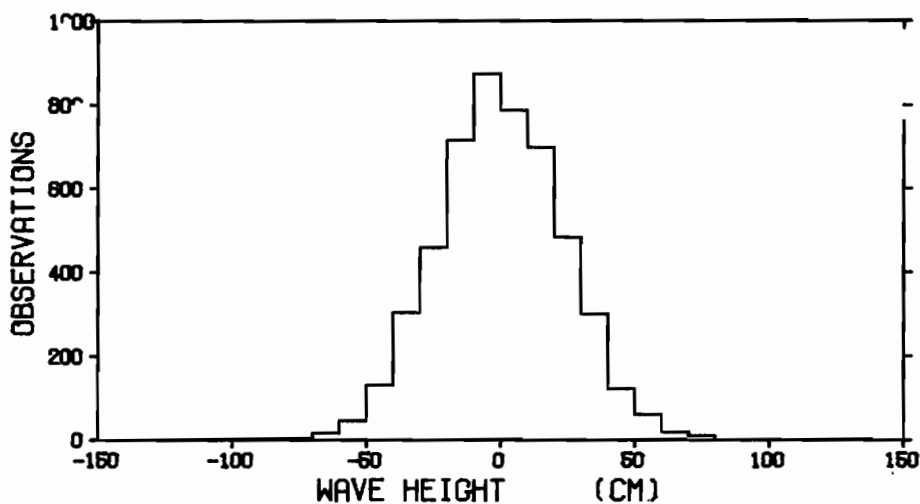


WAVE HEIGHT SPECTRUM.

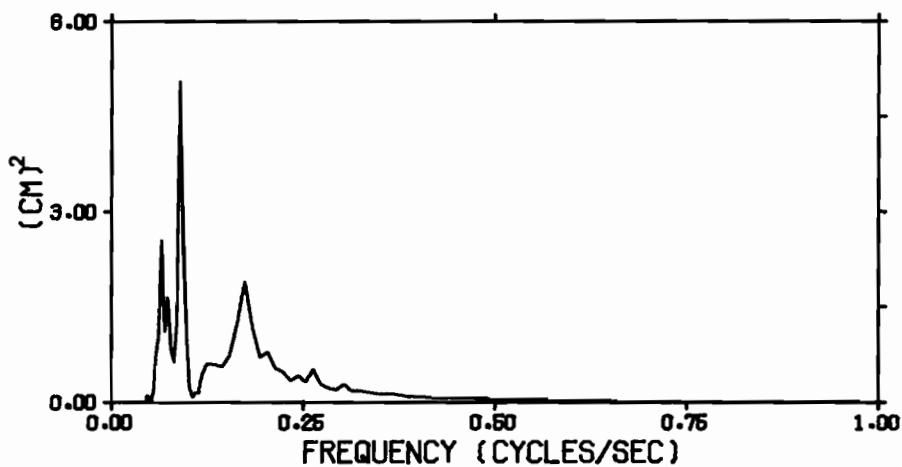


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 22 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	55	.14	23.48	-.02	3.20	78.60 -101.63

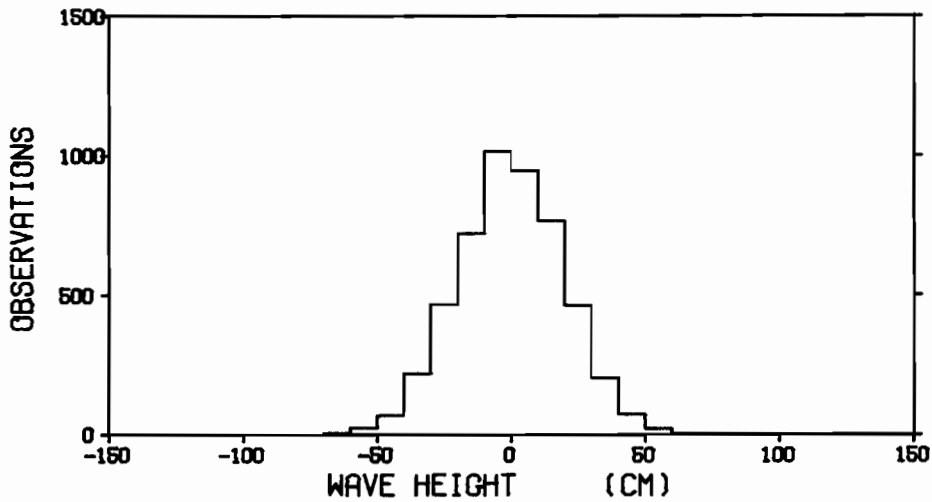


WAVE HEIGHT SPECTRUM.

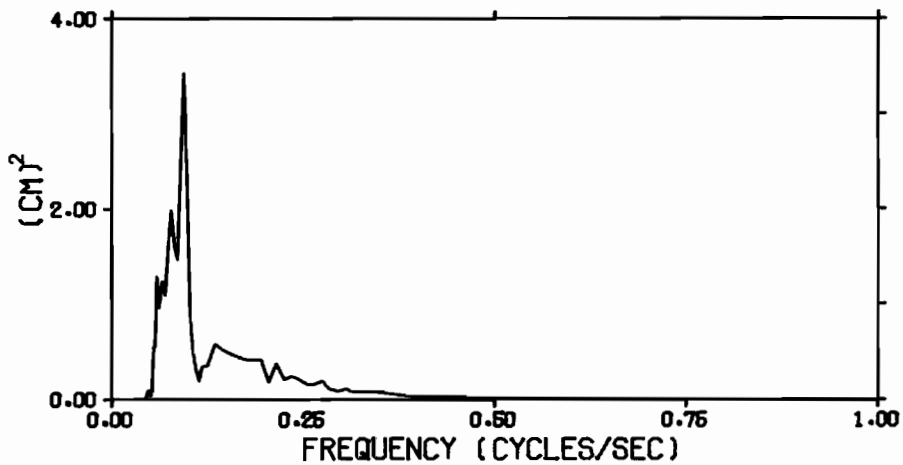


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 23 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	386.32	19.66	.00	2.97	74.26	-69.10

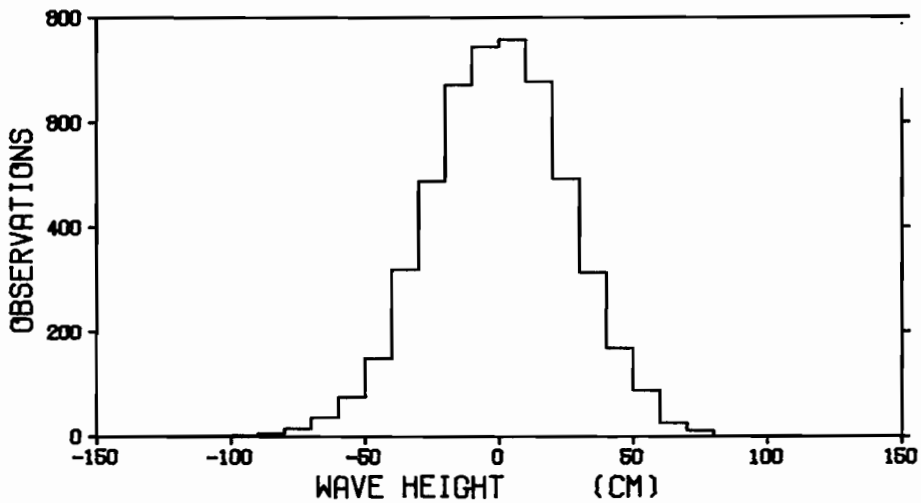


WAVE HEIGHT SPECTRUM.

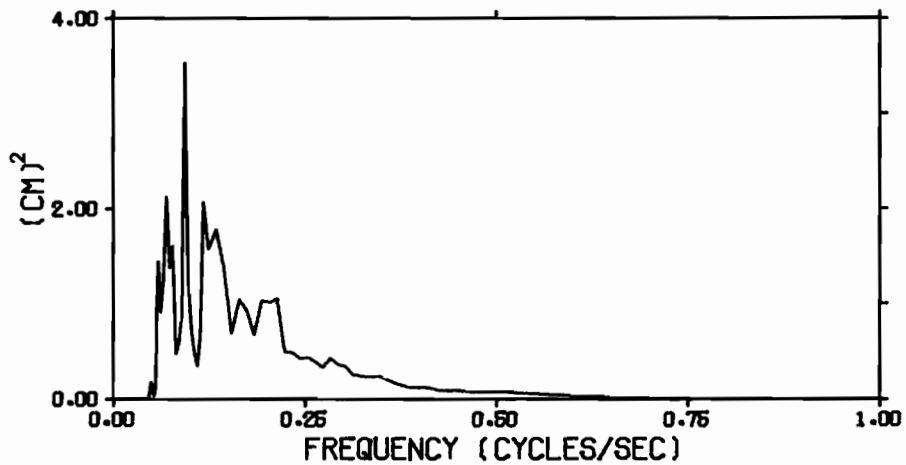


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 23 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	65	25.59	-.07	3.02	79.61	-108.76

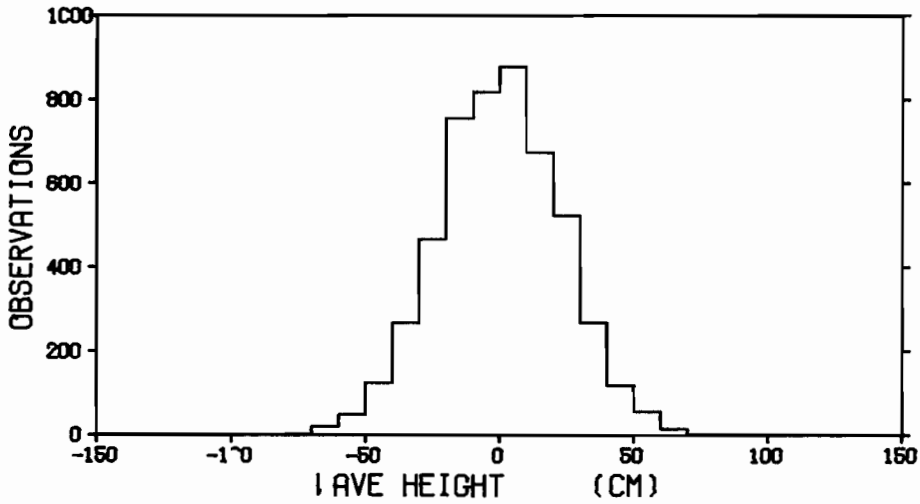


WAVE HEIGHT SPECTRUM.

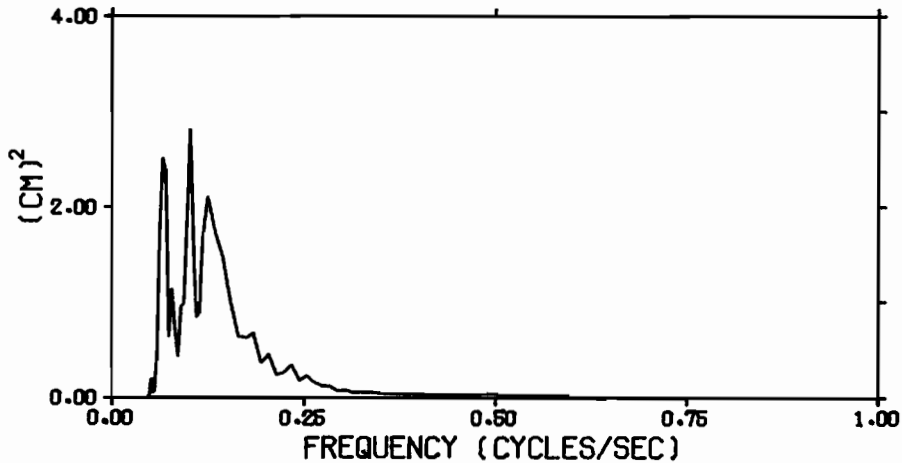


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 2.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 23 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	516.54	22.73	-.03	2.94	70.66	-86.51

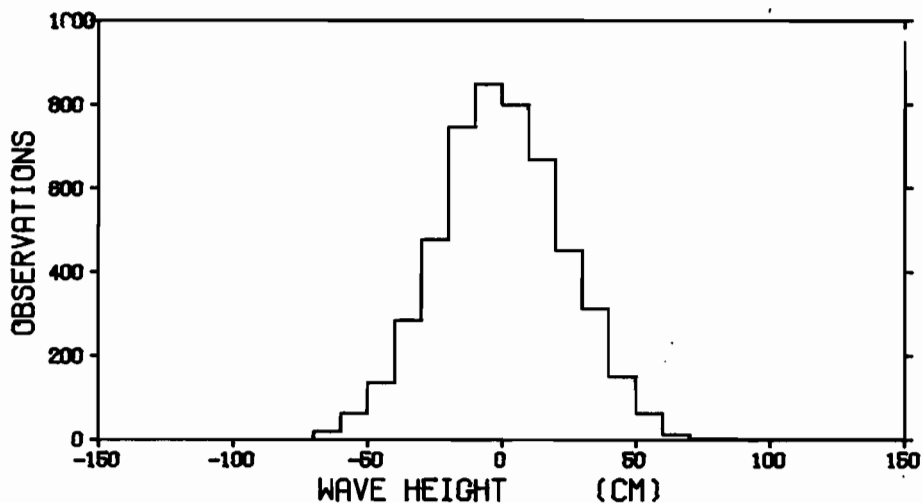


WAVE HEIGHT SPECTRUM.

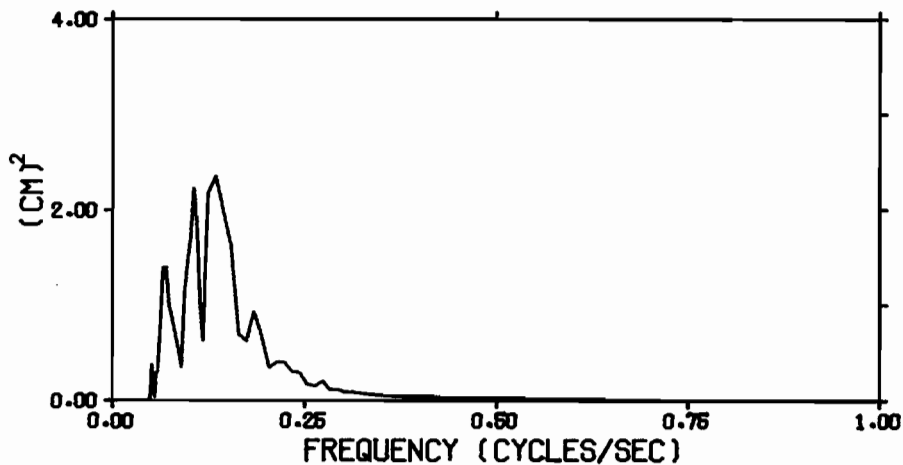


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 23 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
-0.04	541.37	23.27	.02	2.82	80.69	-68.98

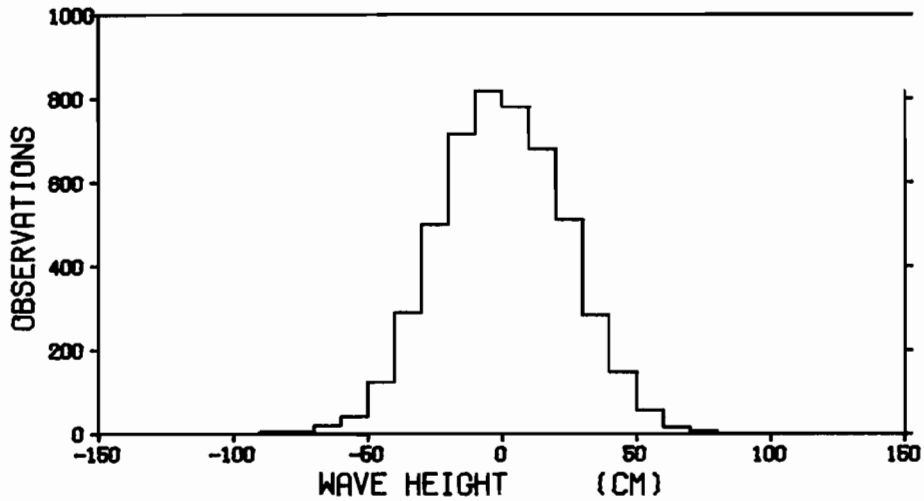


WAVE HEIGHT SPECTRUM.

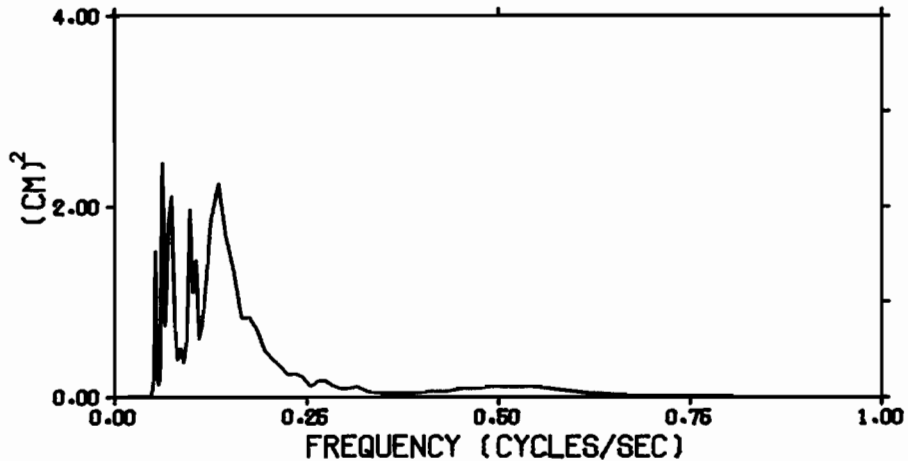


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS - 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 24 JUL .3

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	⟨URT	MAX (CM)	MIN (CM)
.05	545.34	23.35	-.01	3.01	76.50	-98.68

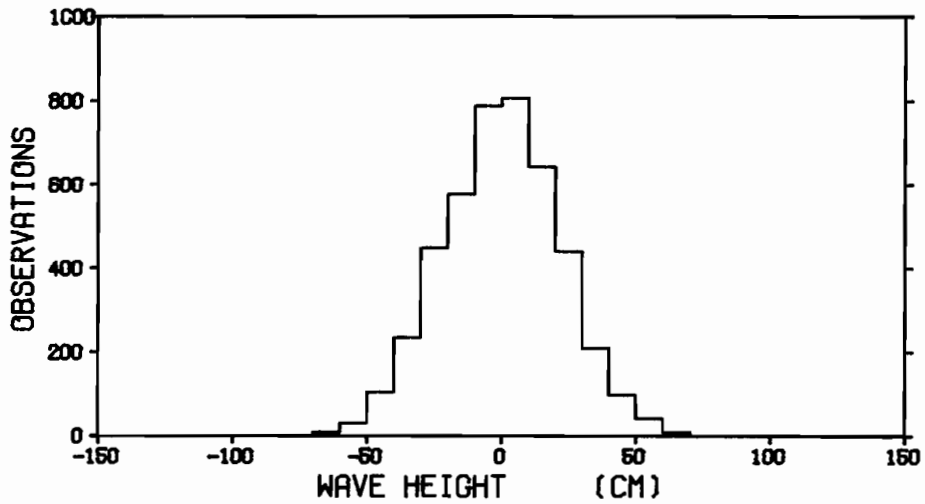


WAVE HEIGHT SPECTRUM.

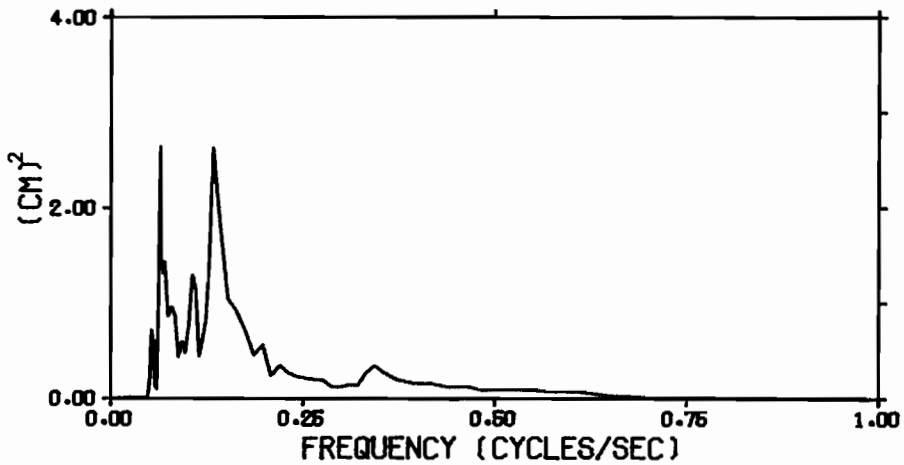


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS - 4440
 OBSERVATION PERIOD 37.0 MINUTES FROM 0600 GMT 24 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.04	471.85	21.72	.01	3.01	91.37	-85.40

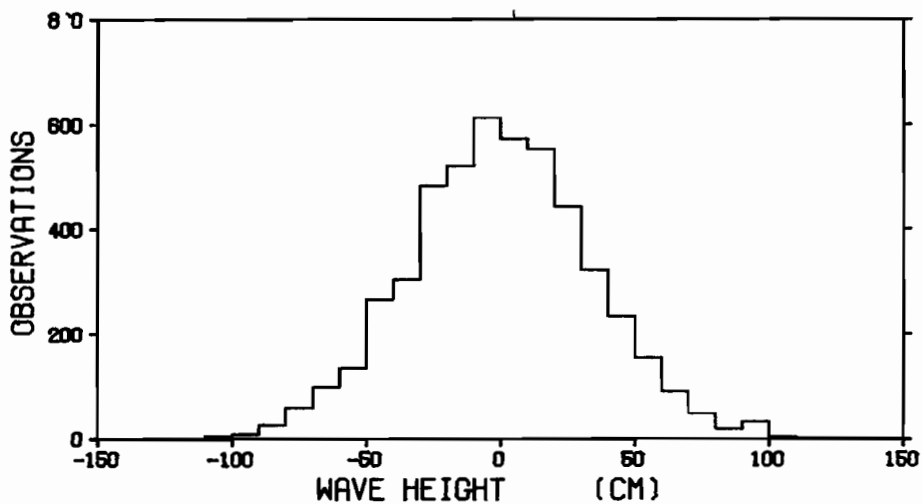


WAVE HEIGHT SPECTRUM.

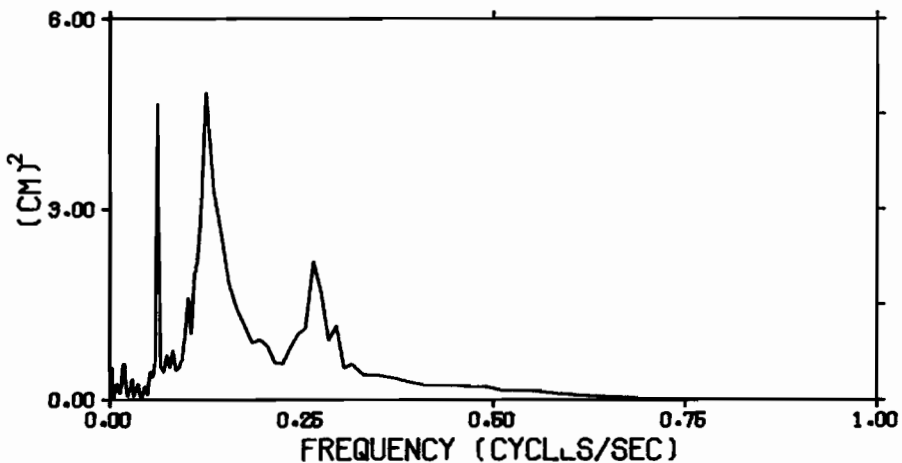


WAVE HEIGHT STATISTICS LAT. 45 5.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 26 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1140.76	33.78	.06	3.06	122.04	-111.23

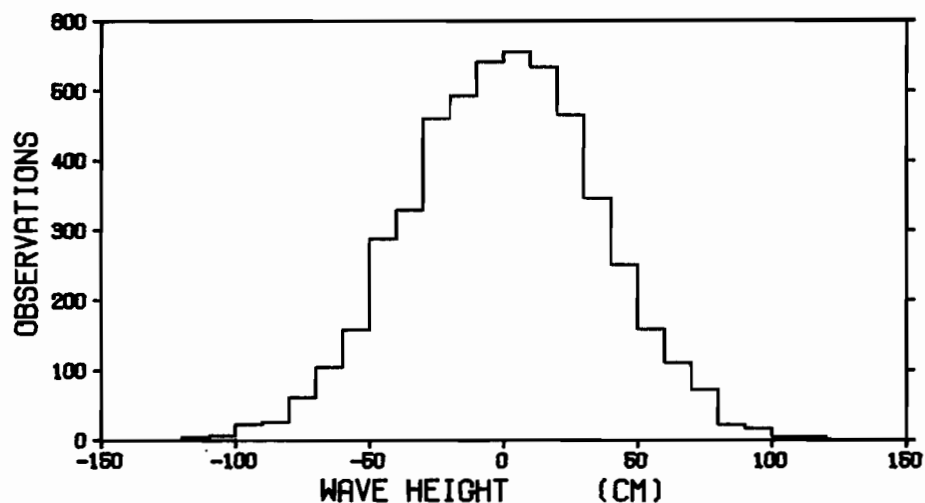


WAVE HEIGHT SPECTRUM.

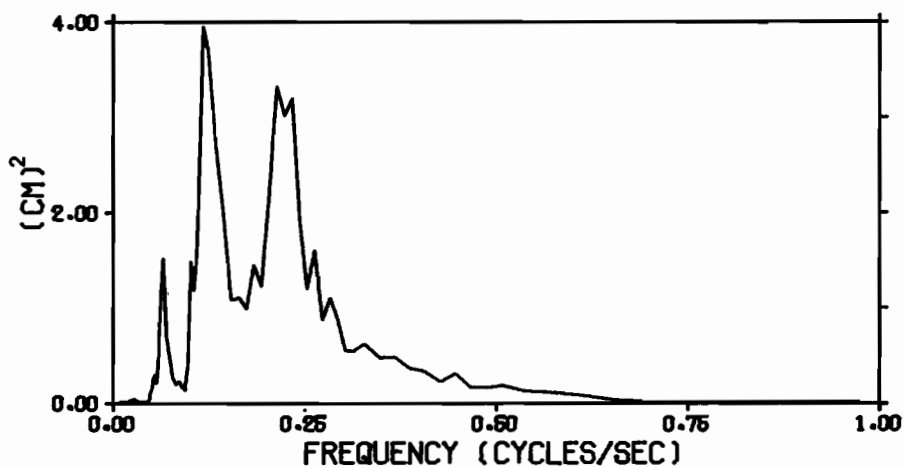


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 26 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1242.81	35.25	-0.00	2.97	127.56	-117.68

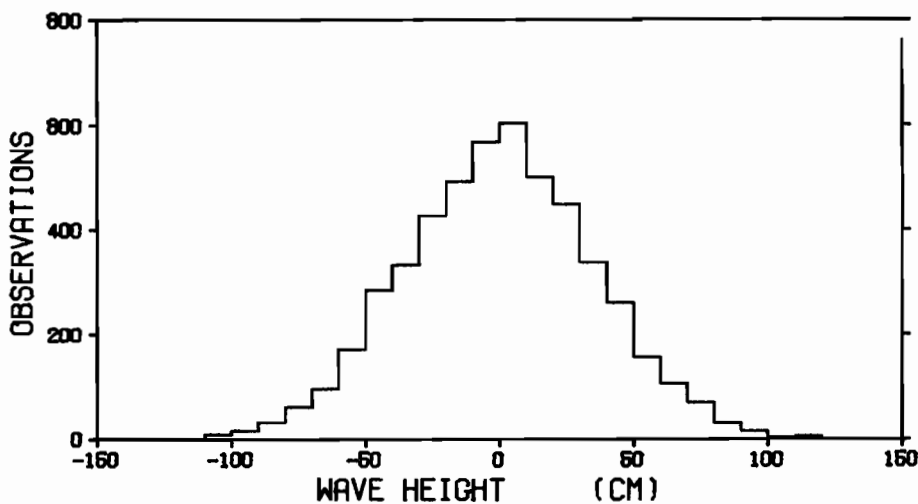


WAVE HEIGHT SPECTRUM.

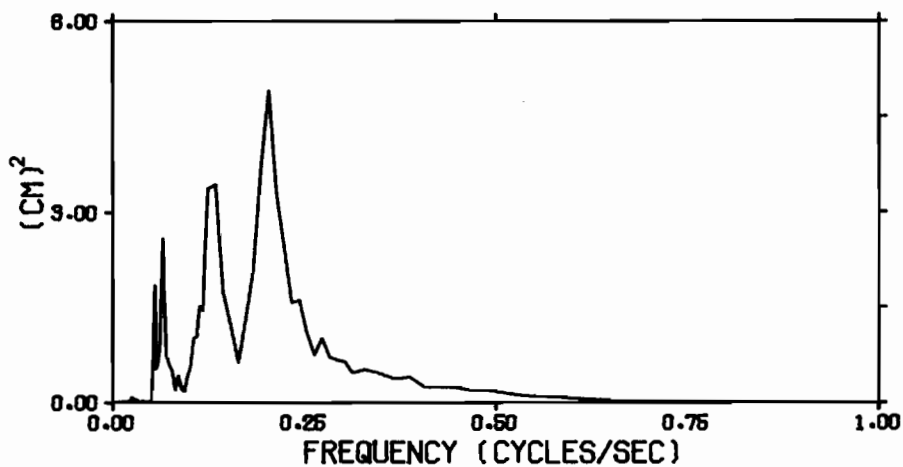


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 26 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	1247.30	35.32	-.02	3.00	116.12	-147.41

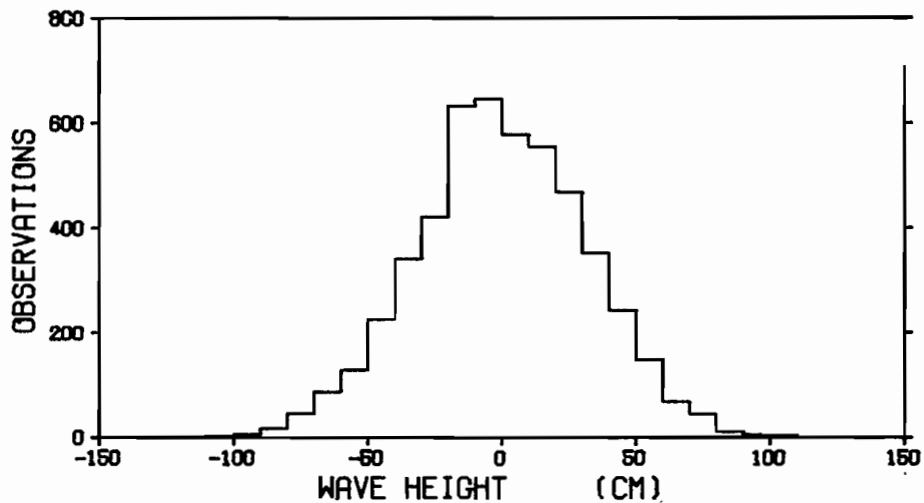


WAVE HEIGHT SPECTRUM.

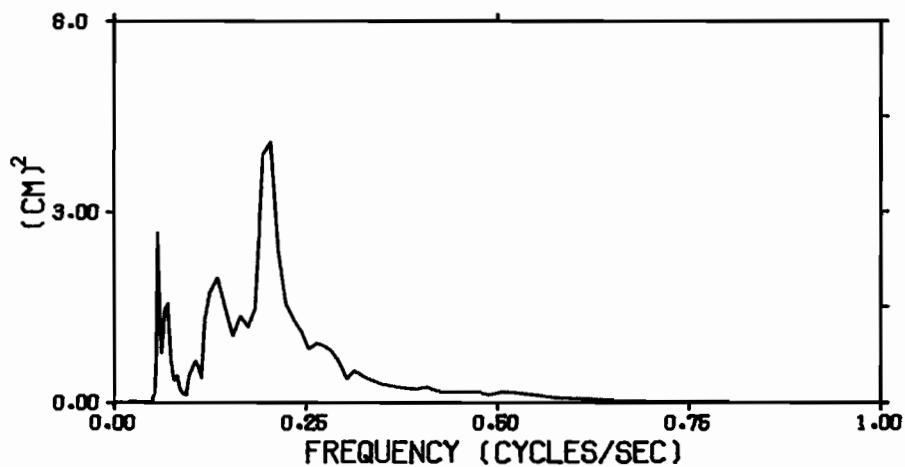


WAVE HEIGHT STATISTICS ' AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 26 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	1005.6	31.70	-.02	2.94	111.03	-118.68

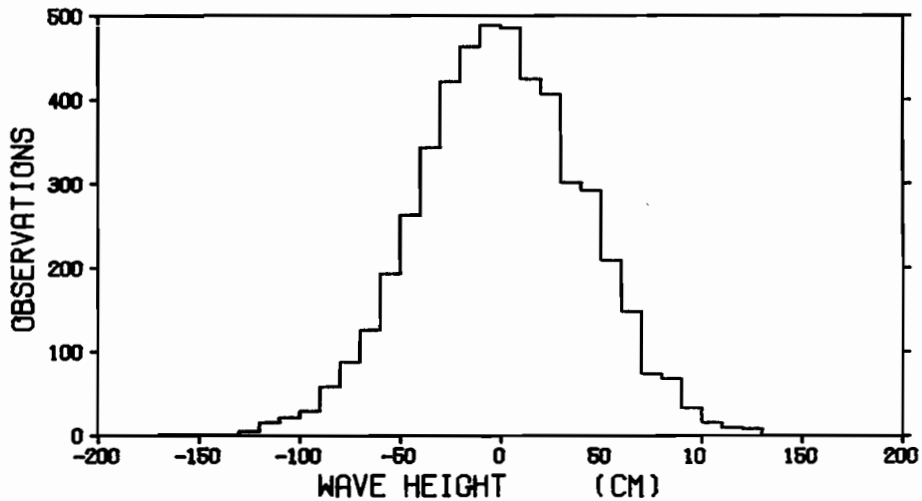


WAVE HEIGHT SPECTRUM.

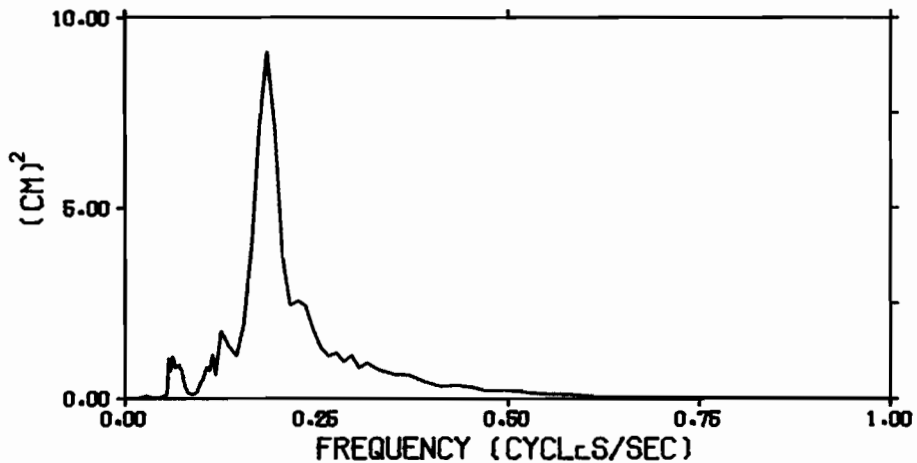


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 27 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	1691.38	41.13	-.02	3.02	129.27	-167.51

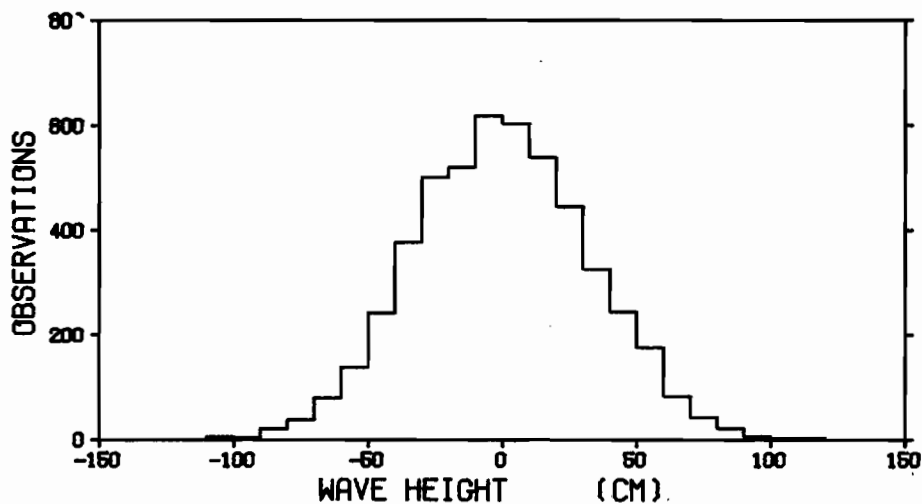


WAVE HEIGHT SPECTRUM.

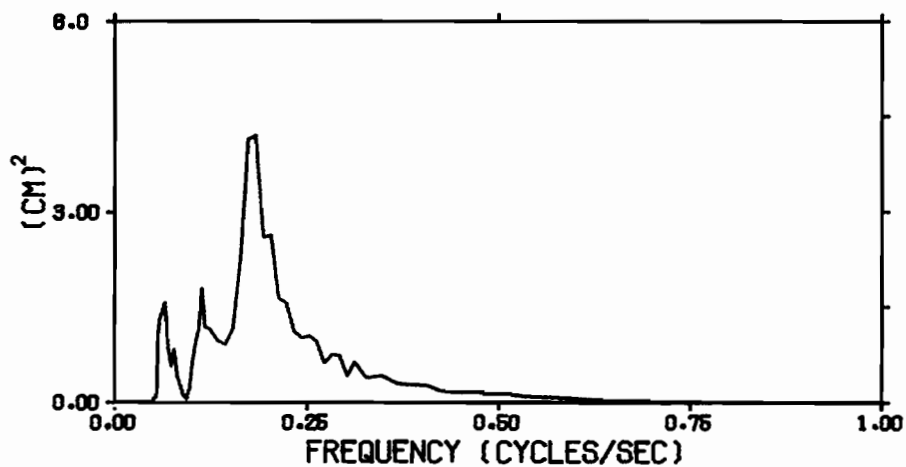


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS - 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 27 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1044.41	32.32	.06	2.93	118.20	-109.28

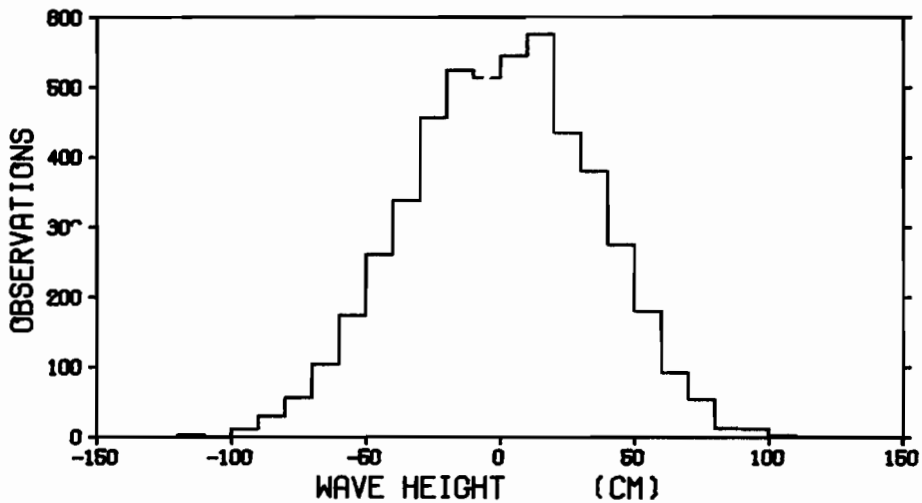


WAVE HEIGHT SPECTRUM.

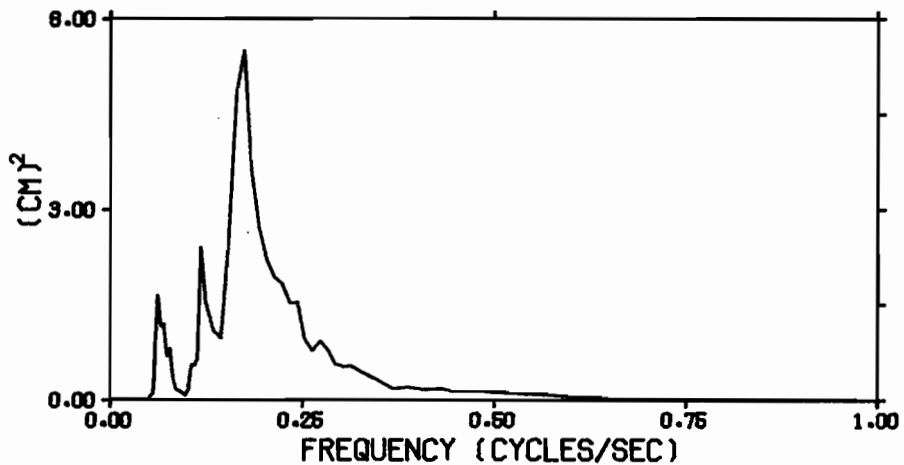


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 7.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 27 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	1165.09	34.	-.06	2.75	125.79	-114.5'

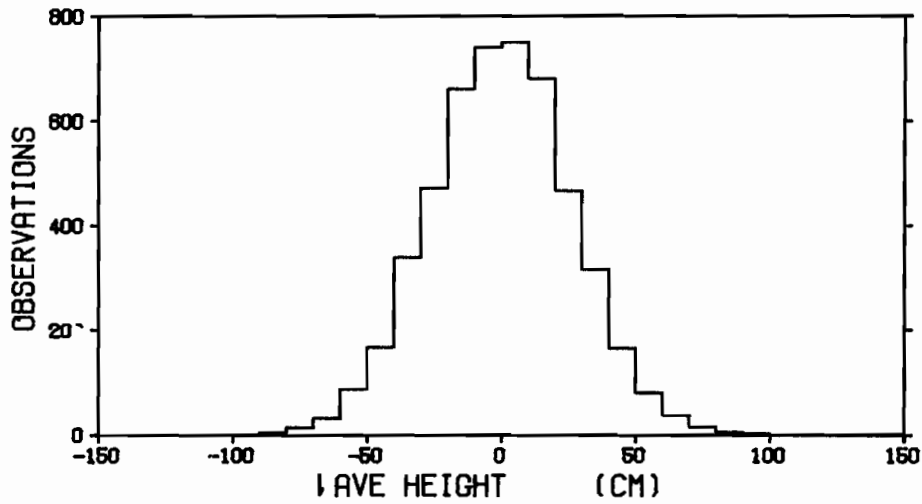


WAVE HEIGHT SPECTRUM.

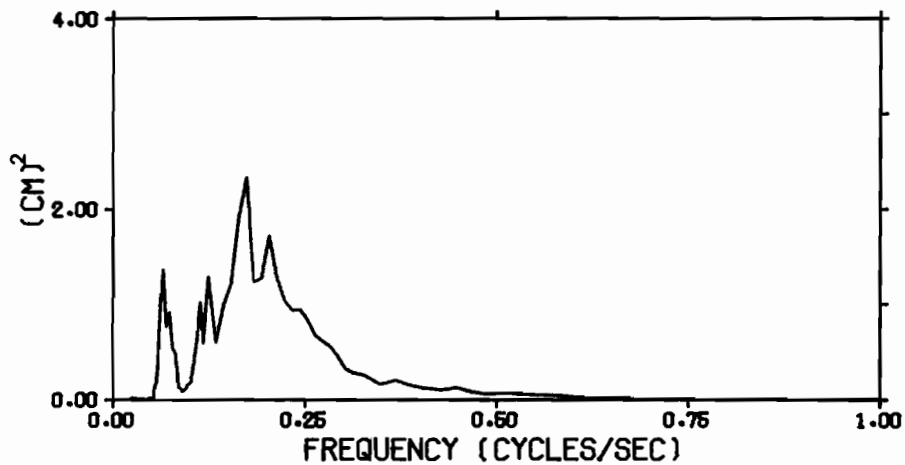


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 27 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
.02	683.23	26.14	.01	3.03	93.01	-89.61

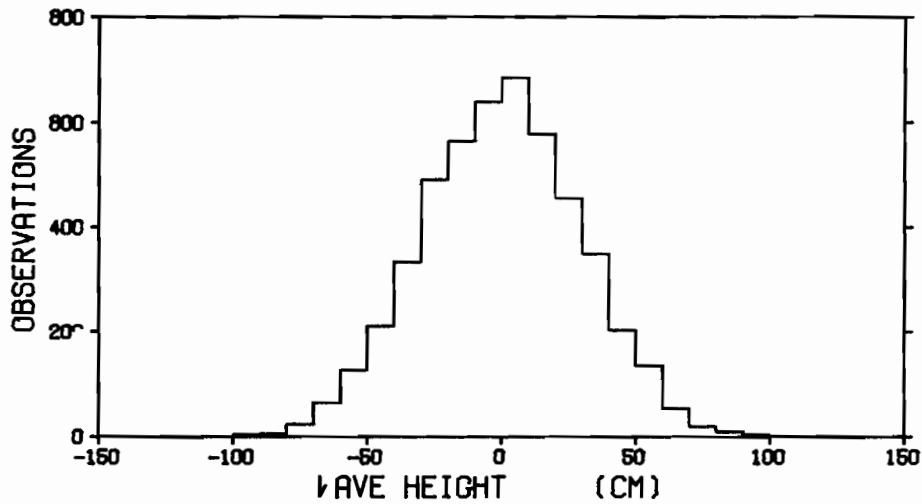


WAVE HEIGHT SPECTRUM.

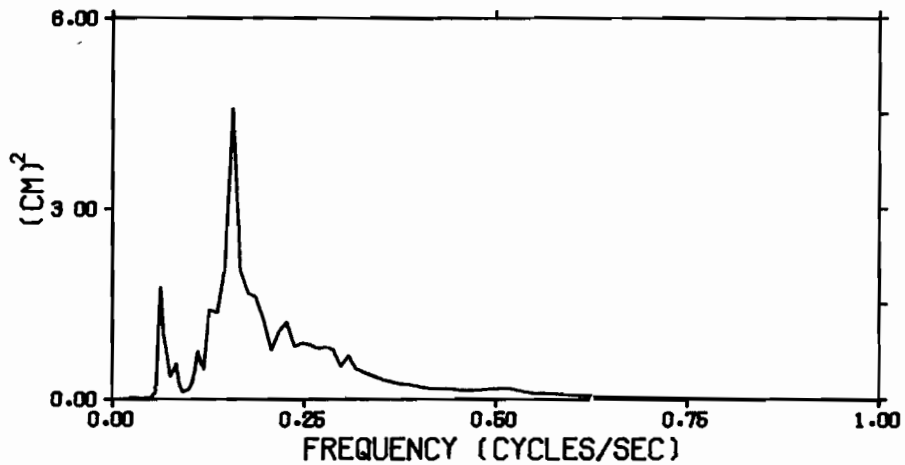


WAVE HEIGHT STATISTICS AT. 45 5.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 496
 OBSERVATION PERIOD 41.3 MINUTES FROM 0000 GMT 28 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
-0.02	861.62	29.35	00	2.86	107.84	-99.16

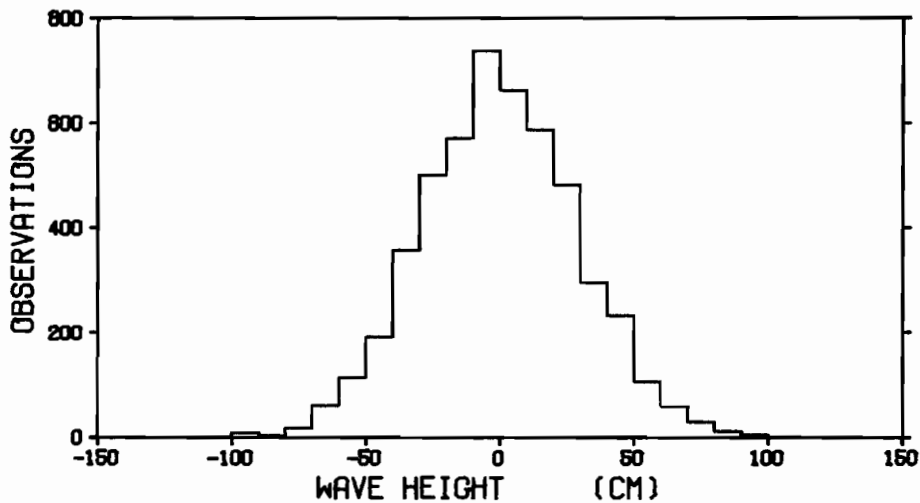


WAVE HEIGHT SPECTRUM.

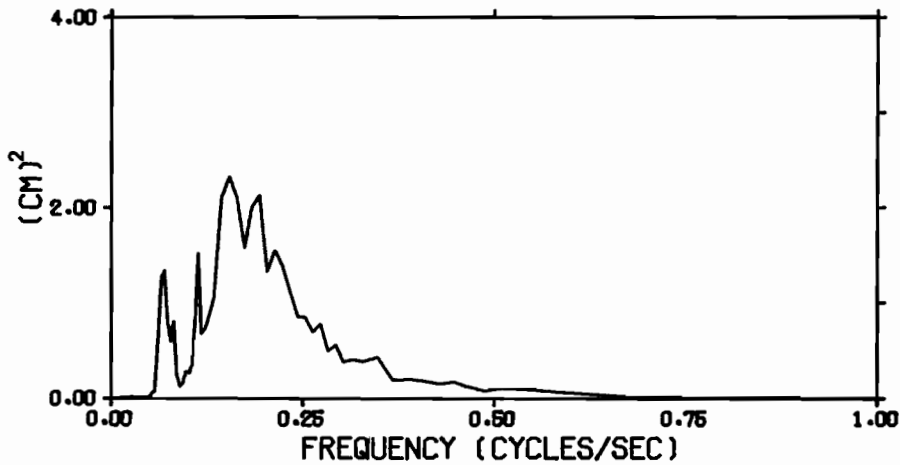


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 28 JUL /3

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
- .00	842.10	29.02	.05	3.00	103.00	-99.76

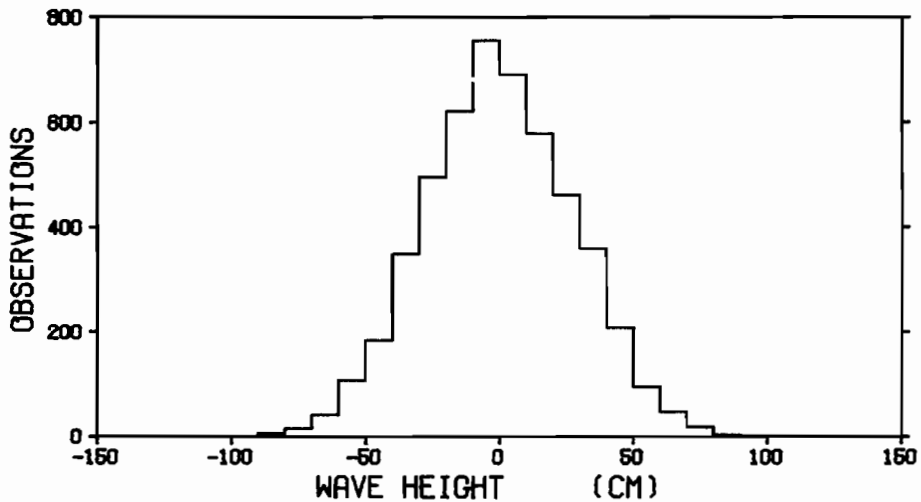


WAVE HEIGHT SPECTRUM.

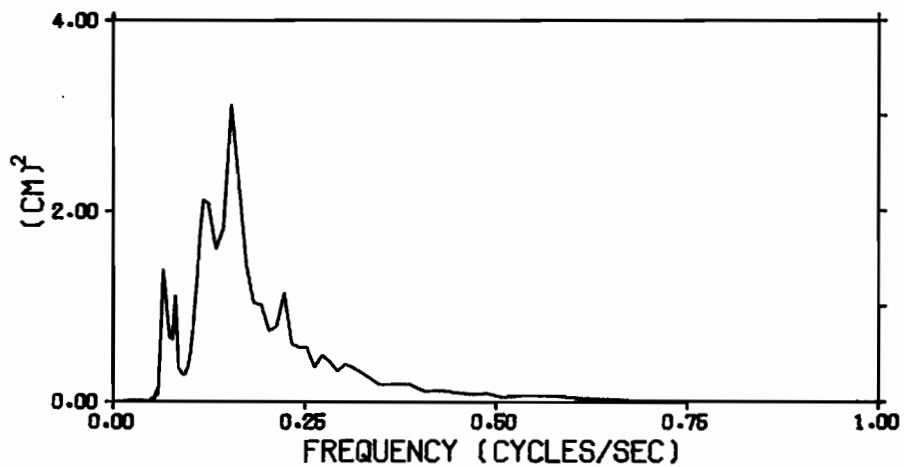


WAVE HEIGHT STATISTICS AT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 28 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	751.14	27.41	.01	2.86	87.88	-111.27

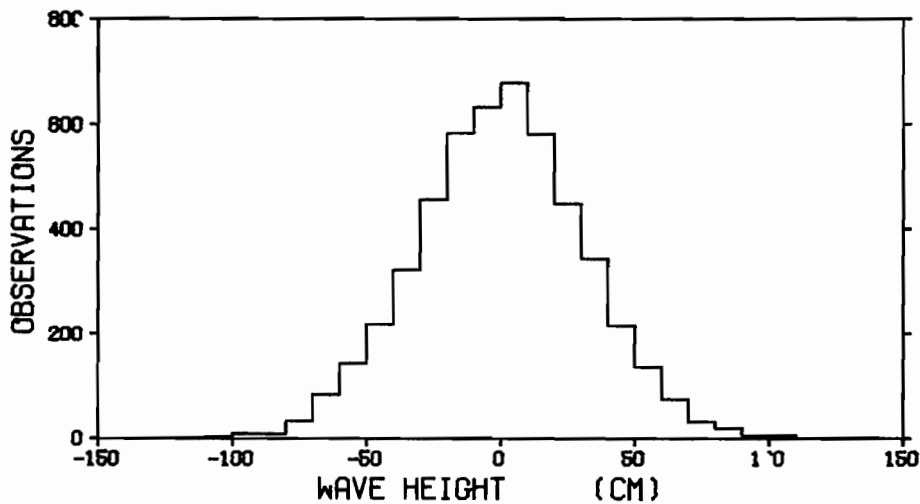


WAVE HEIGHT SPECTRUM.

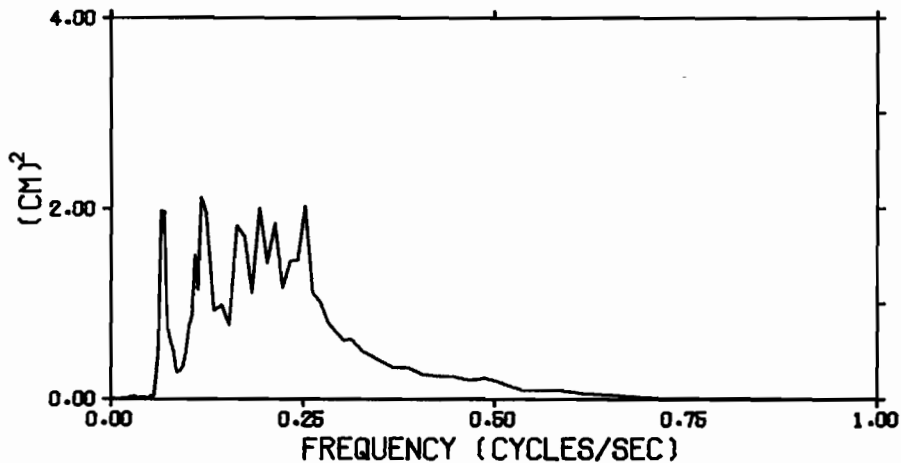


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 28 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	960.35	30.99	.02	3.07	108.76	-120.04

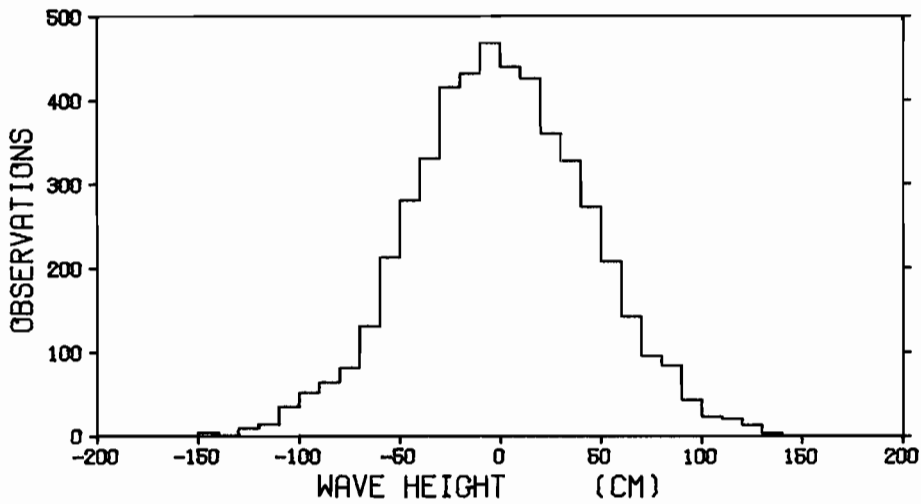


WAVE HEIGHT SPECTRUM.

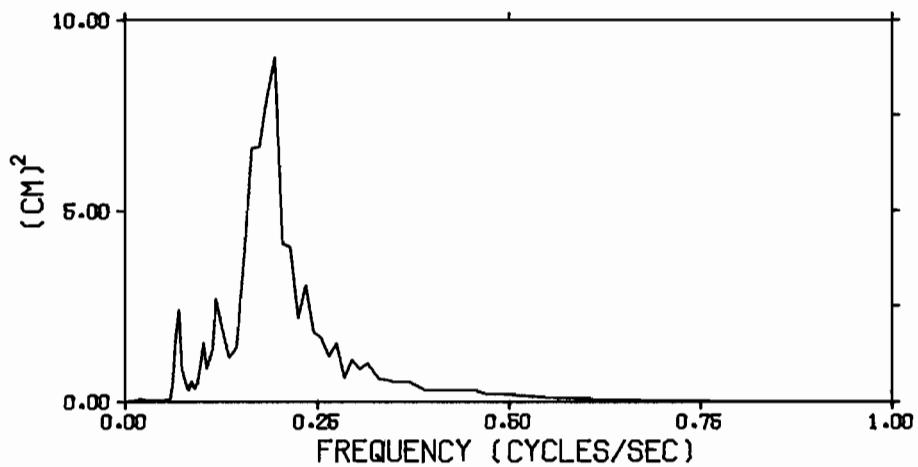


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 29 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1925.23	43.88	.01	3.07	153.96	-182.26

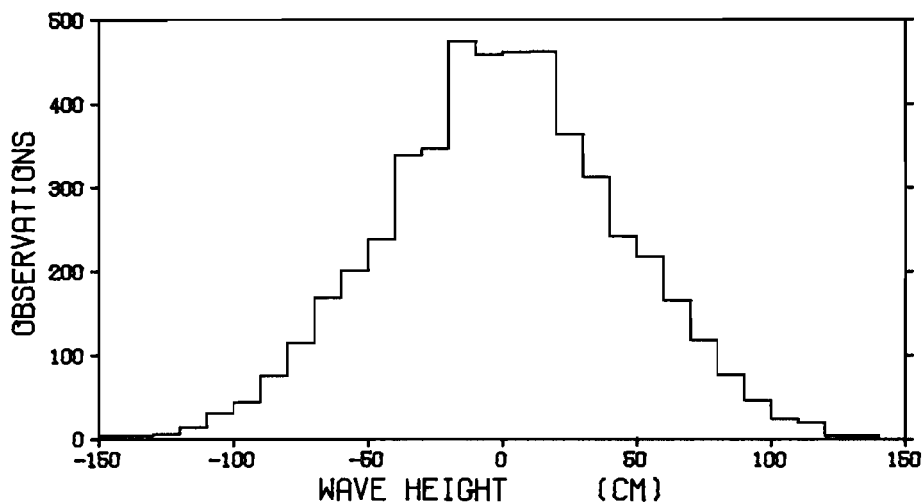


WAVE HEIGHT SPECTRUM.

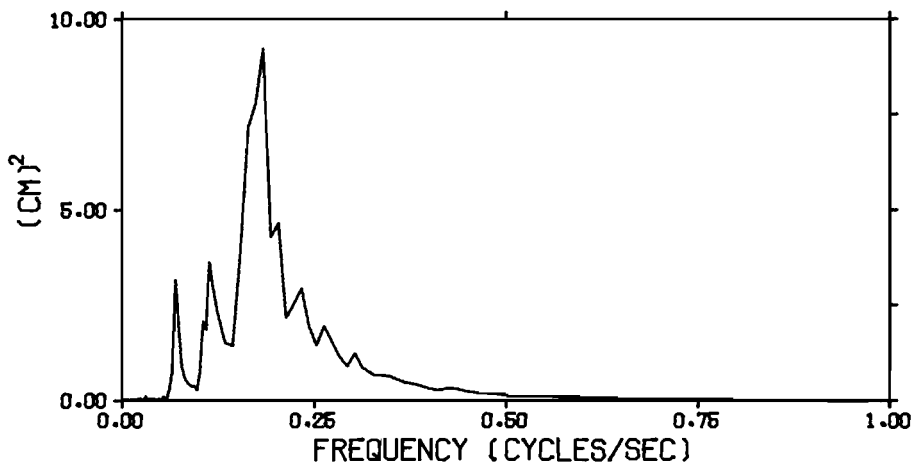


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 29 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1941.87	44.07	-0.02	2.91	138.91	-150.22

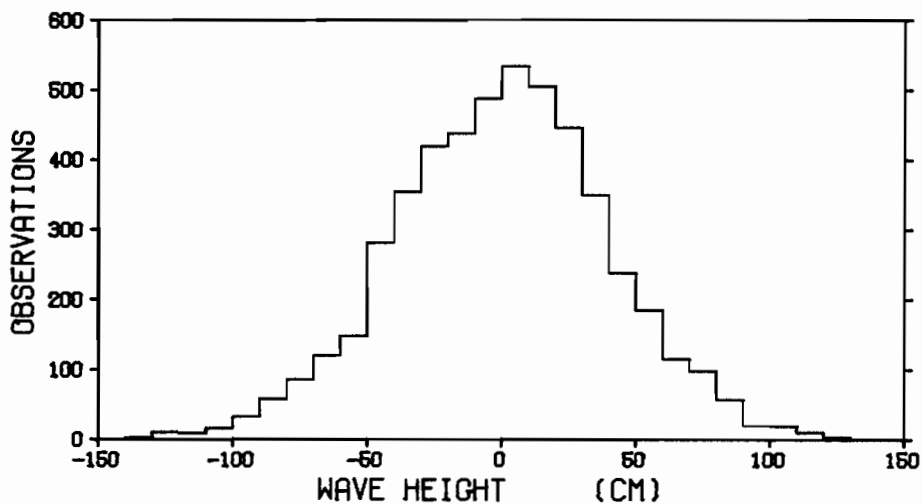


WAVE HEIGHT SPECTRUM.

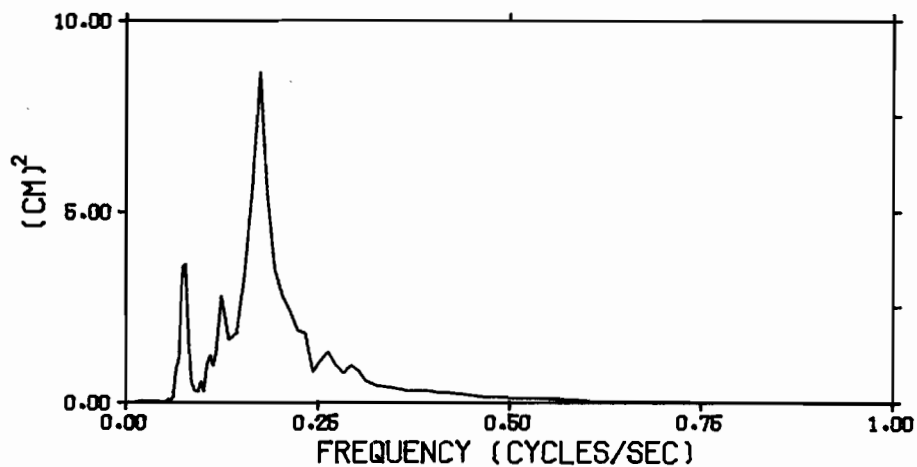


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 29 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	1555.32	39.44	-.07	3.09	125.13	-138.59

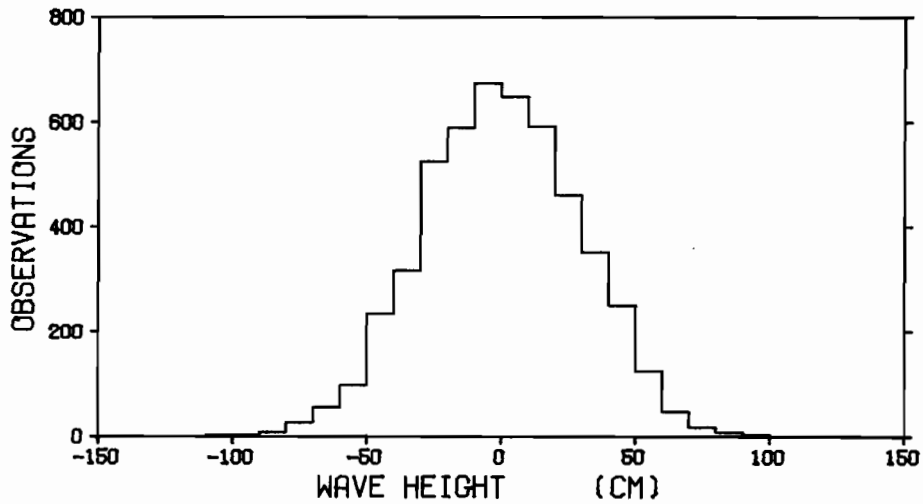


WAVE HEIGHT SPECTRUM.

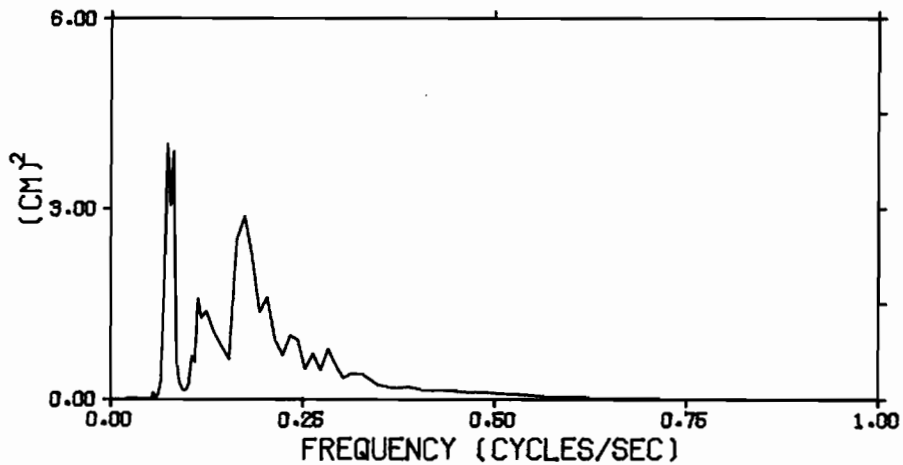


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 29 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	839.57	28.98	-0.00	2.88	103.29	-104.33

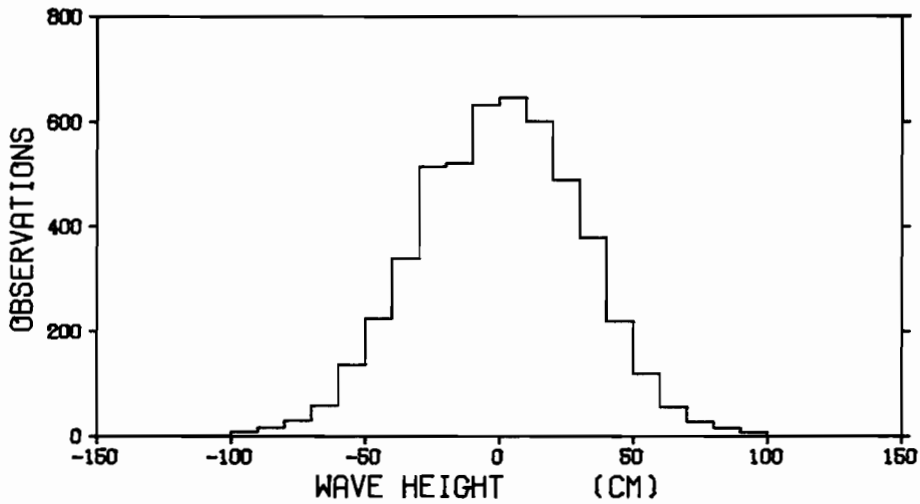


WAVE HEIGHT SPECTRUM.

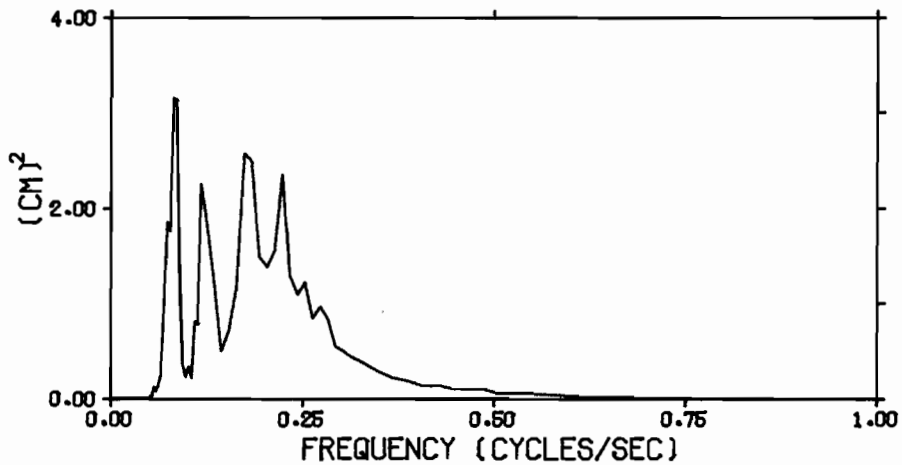


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0000 GMT 30 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	911.76	30.20	-.04	2.96	99.85	-119.21

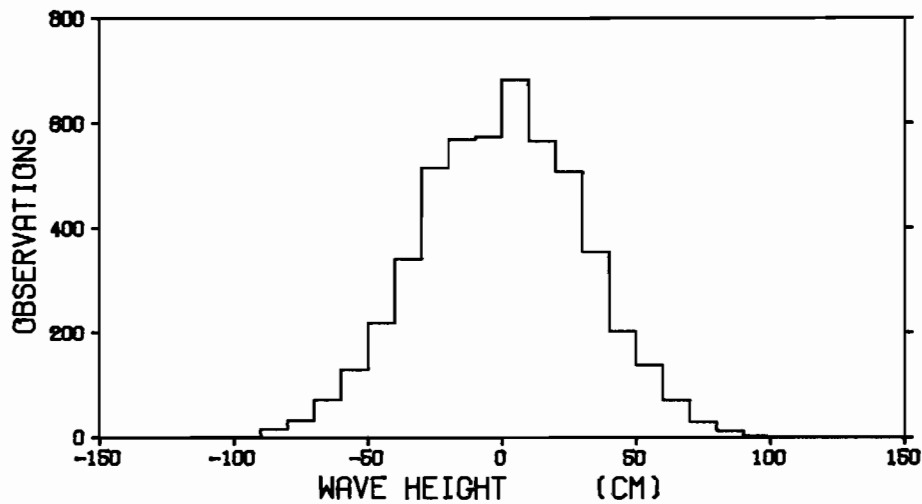


WAVE HEIGHT SPECTRUM.

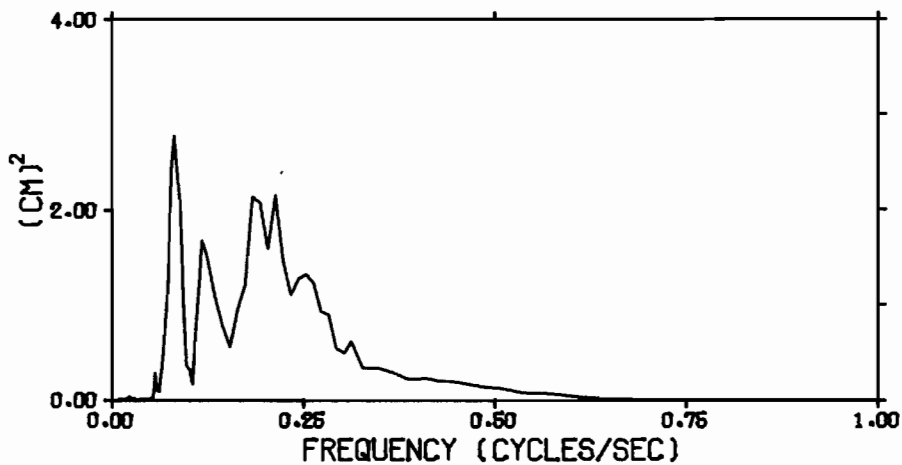


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 30 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	911.89	30.20	-0.01	2.83	104.71	-100.17

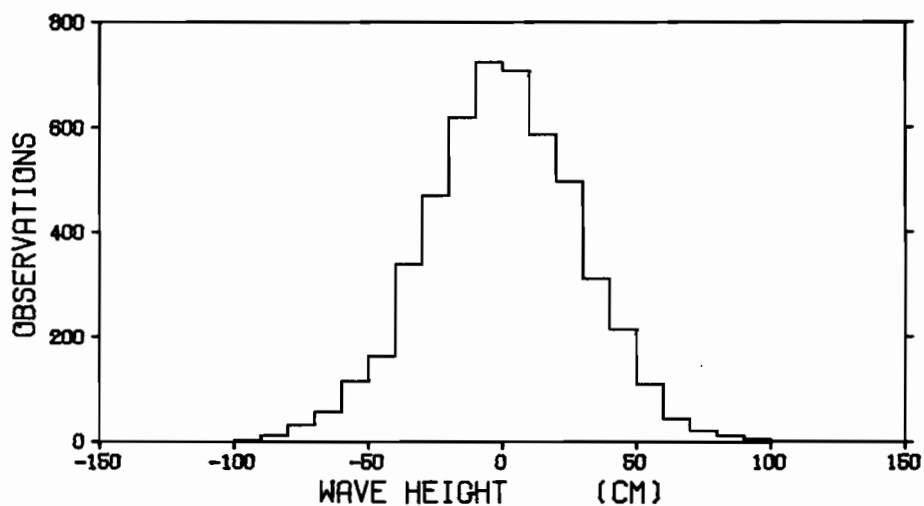


WAVE HEIGHT SPECTRUM.

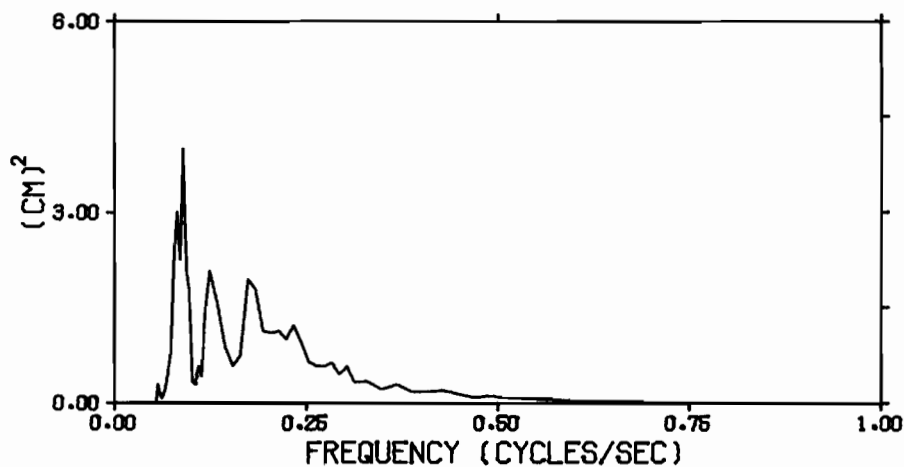


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 30 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	814.30	28.54	-0.01	3.06	101.05	-93.04

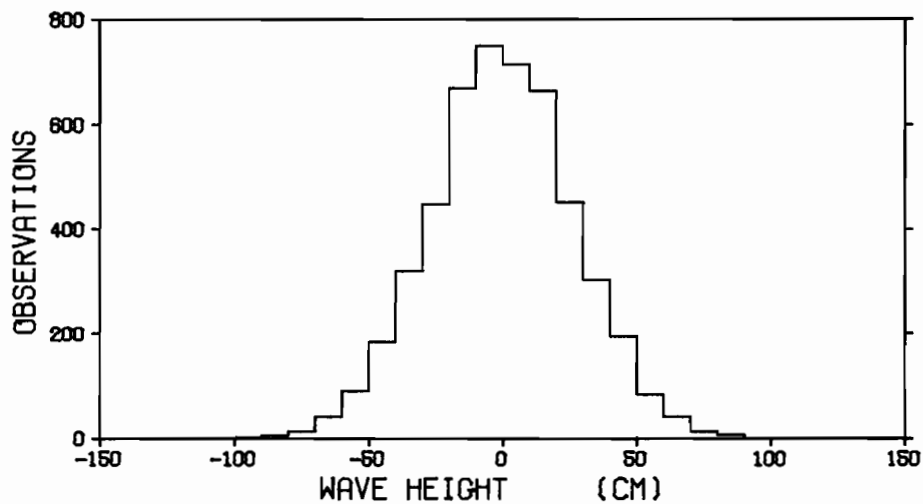


WAVE HEIGHT SPECTRUM.

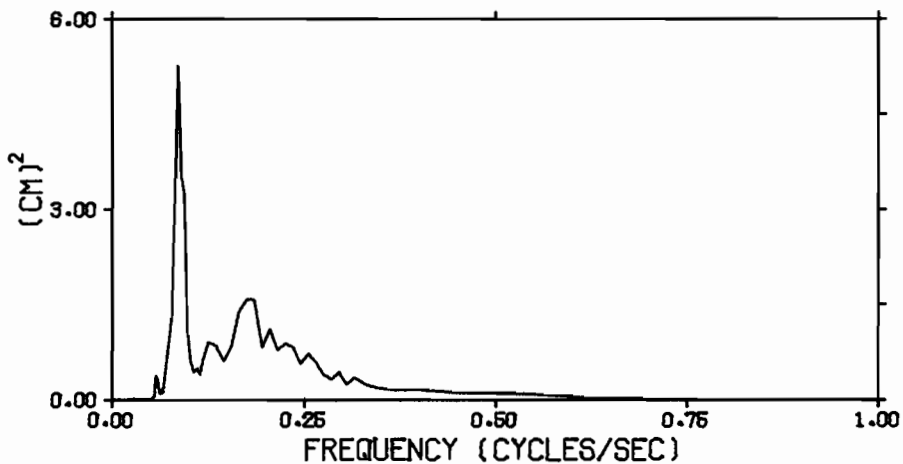


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 1800 GMT 30 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	713.25	26.71	-0.00	3.08	100.39	-104.91

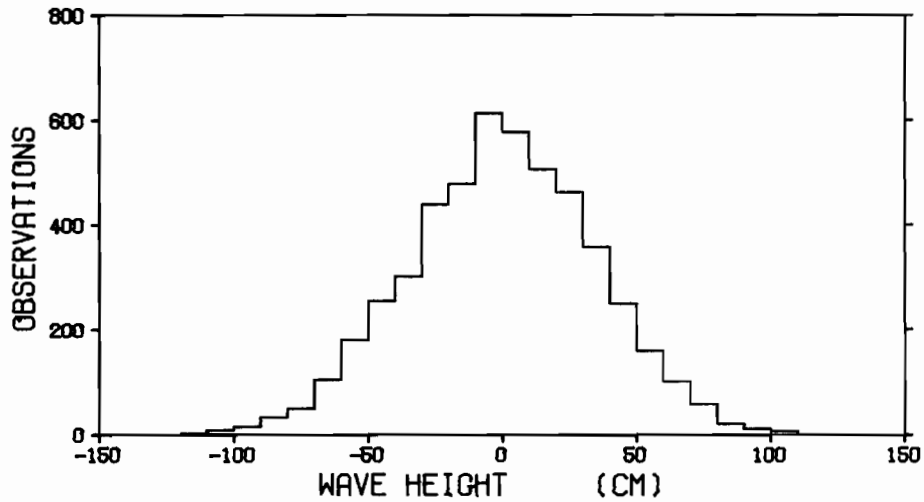


WAVE HEIGHT SPECTRUM.

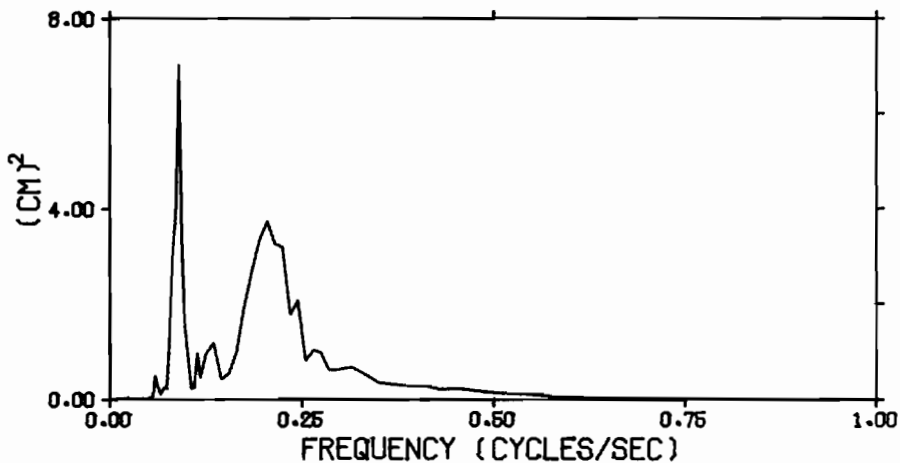


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 31 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1192.18	34.53	-0.07	2.92	102.08	-114.84

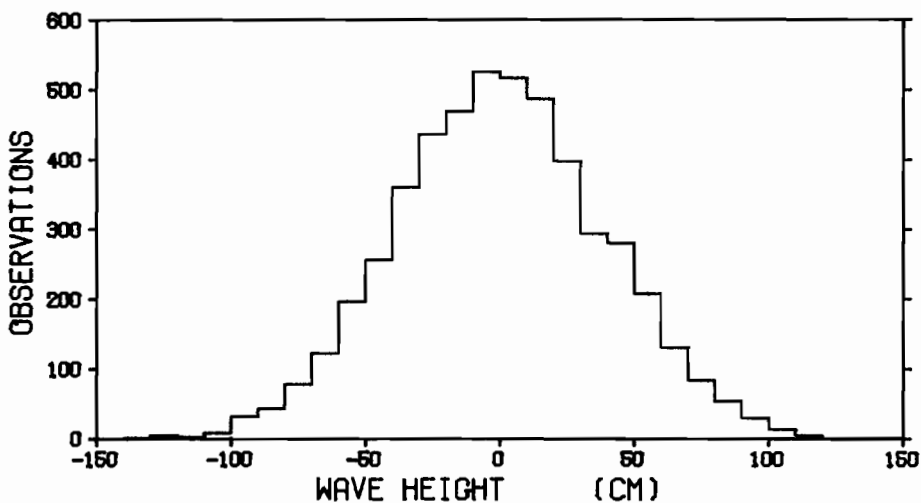


WAVE HEIGHT SPECTRUM.

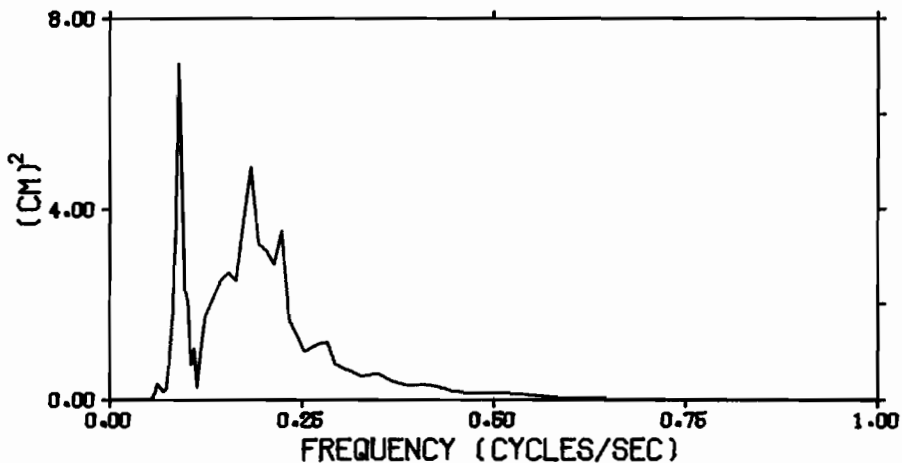


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 31 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.04	1497.45	38.70	.01	2.87	129.46	-135.22

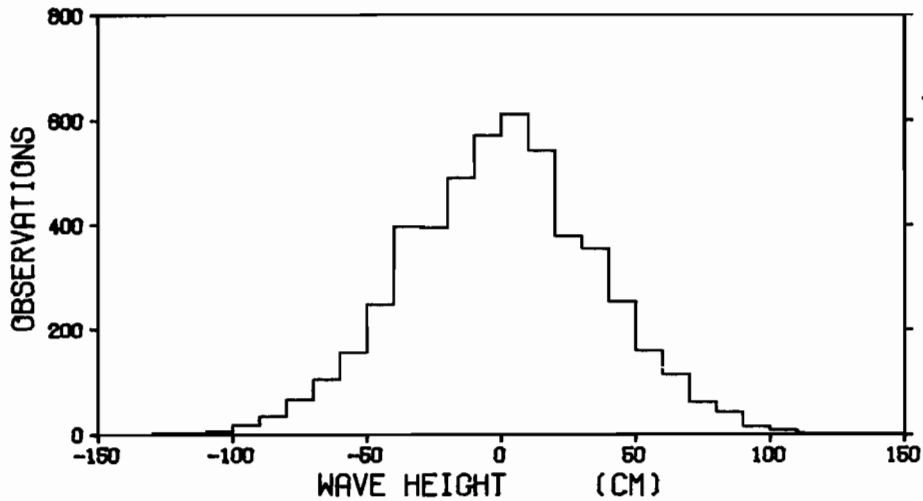


WAVE HEIGHT SPECTRUM.

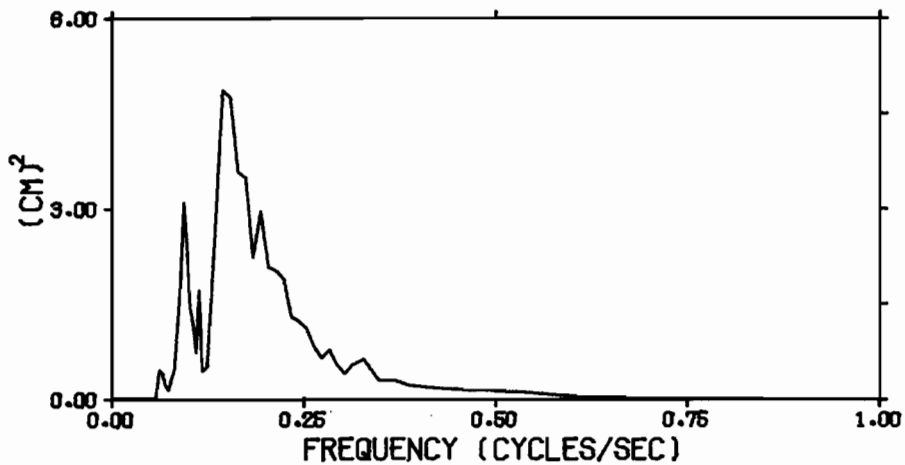


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 31 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	1268.93	35.62	.01	3.02	122.85	-128.71

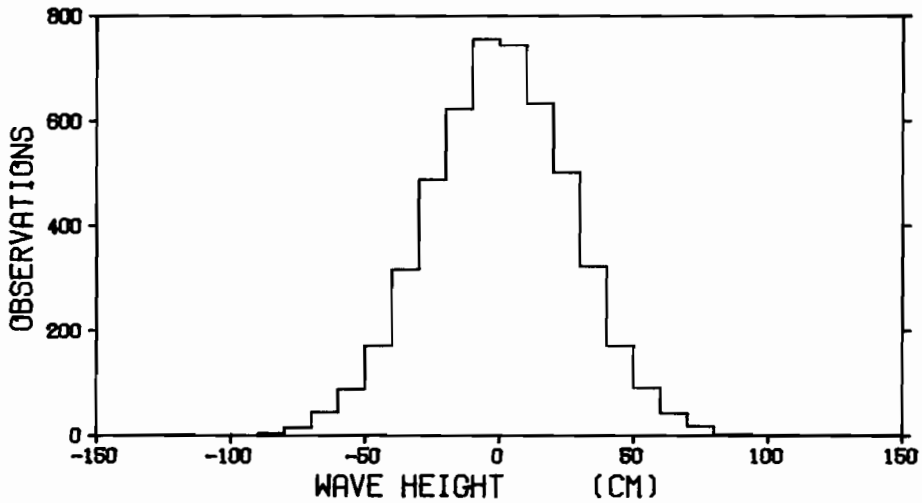


WAVE HEIGHT SPECTRUM.

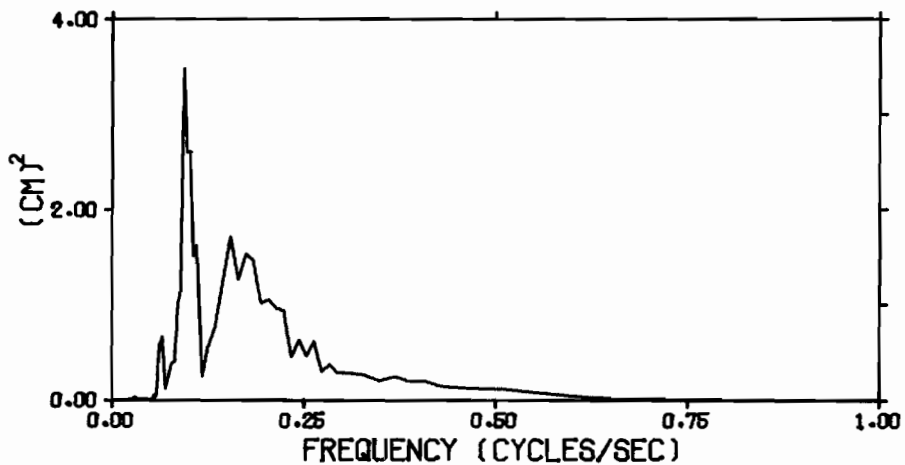


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 31 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.04	696.22	26.39	.01	3.02	93.17	-89.37

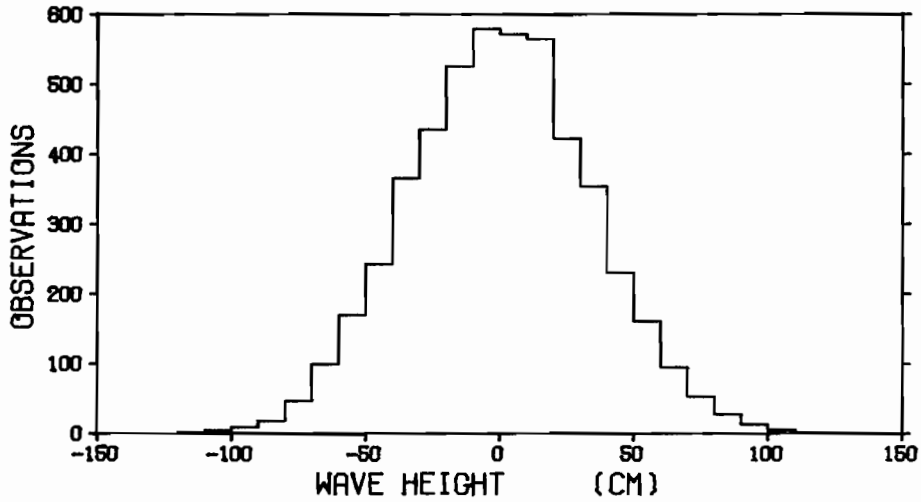


WAVE HEIGHT SPECTRUM.

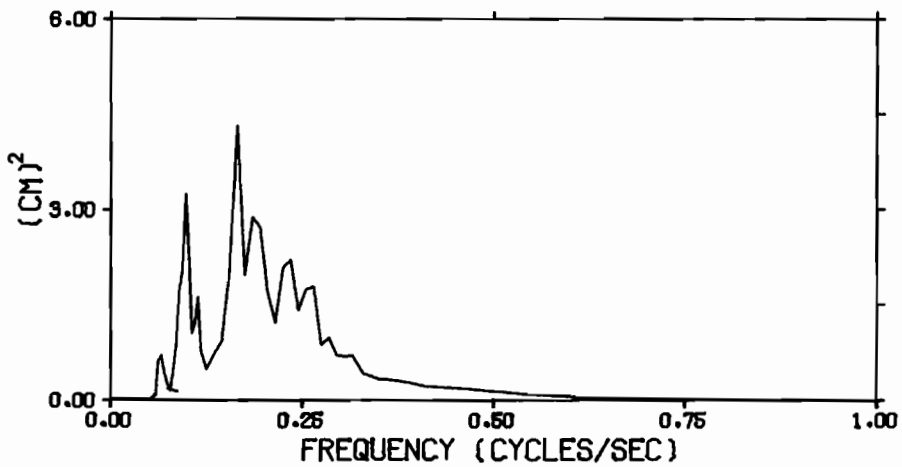


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 1 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	1126.41	33.56	.04	2.89	119.88	-110.29

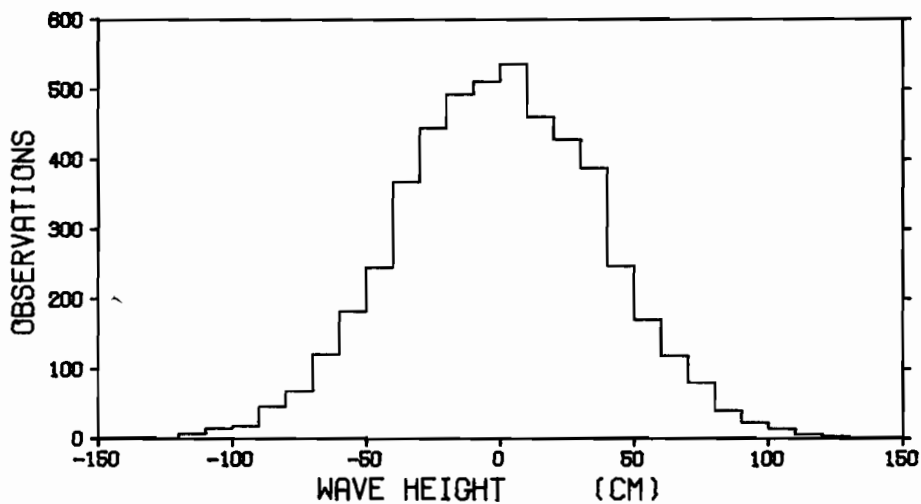


WAVE HEIGHT SPECTRUM.

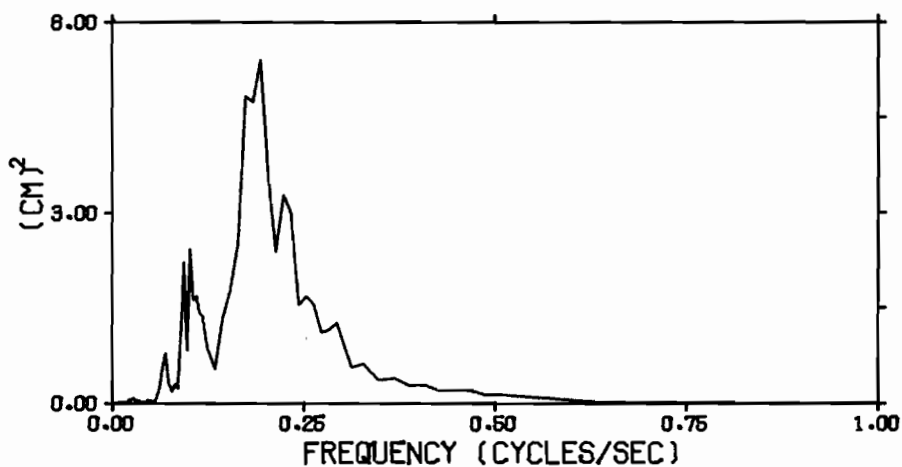


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 1 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	1428.08	37.79	.01	3.06	134.46	-148.48

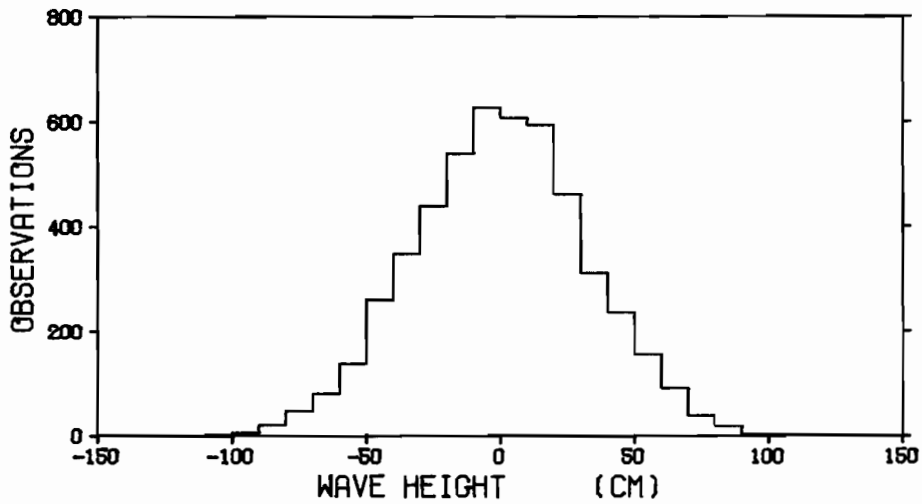


WAVE HEIGHT SPECTRUM.

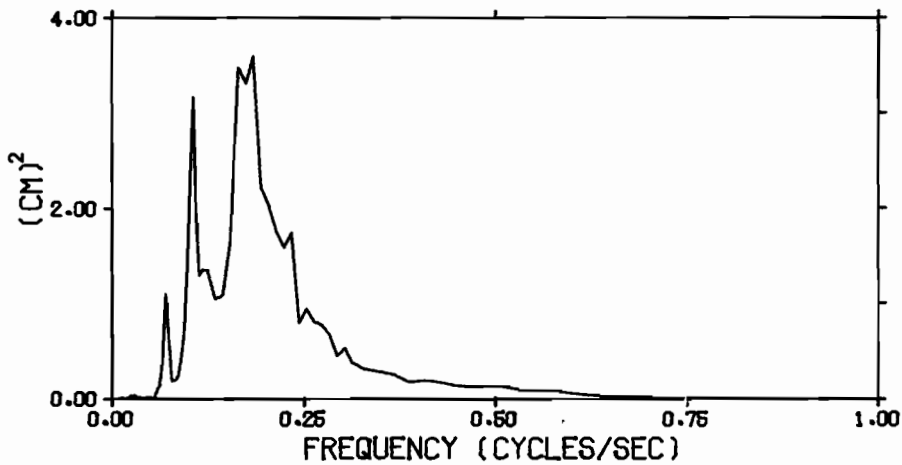


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 1 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	1036.96	32.20	-.02	2.97	122.70	-131.26

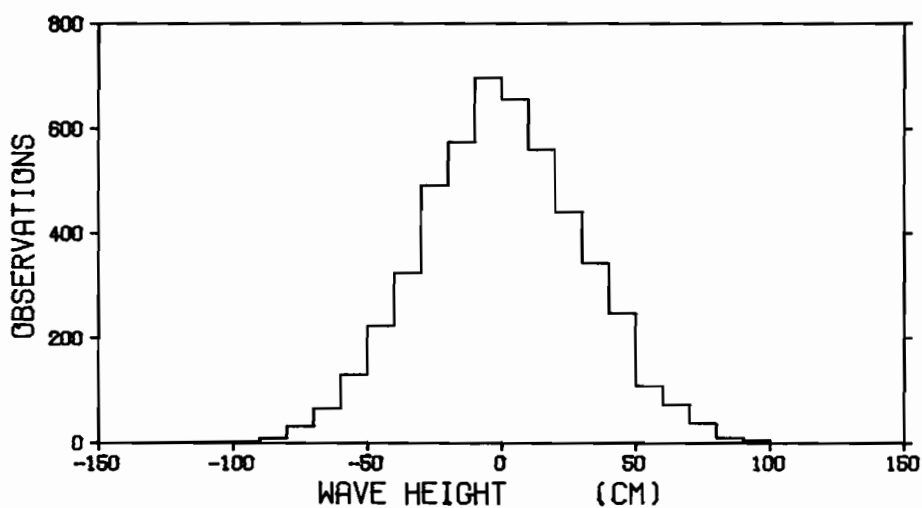


WAVE HEIGHT SPECTRUM.

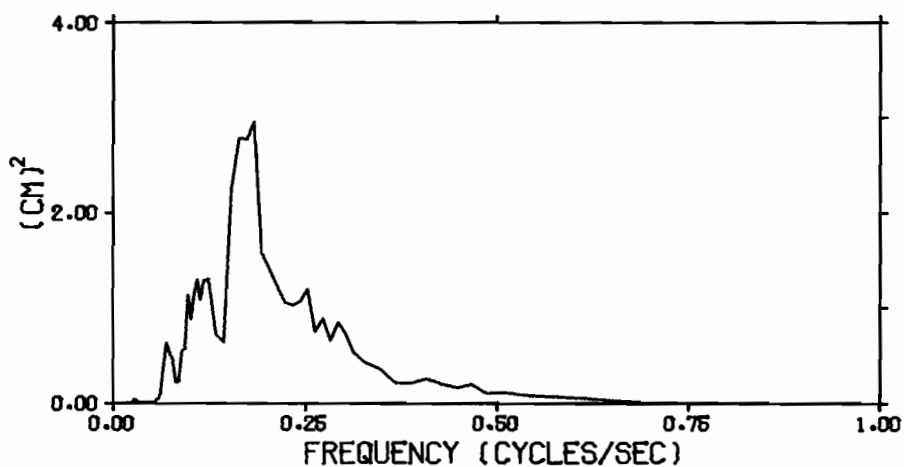


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 1 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	907.94	30.13	.02	2.93	96.43	-122.86

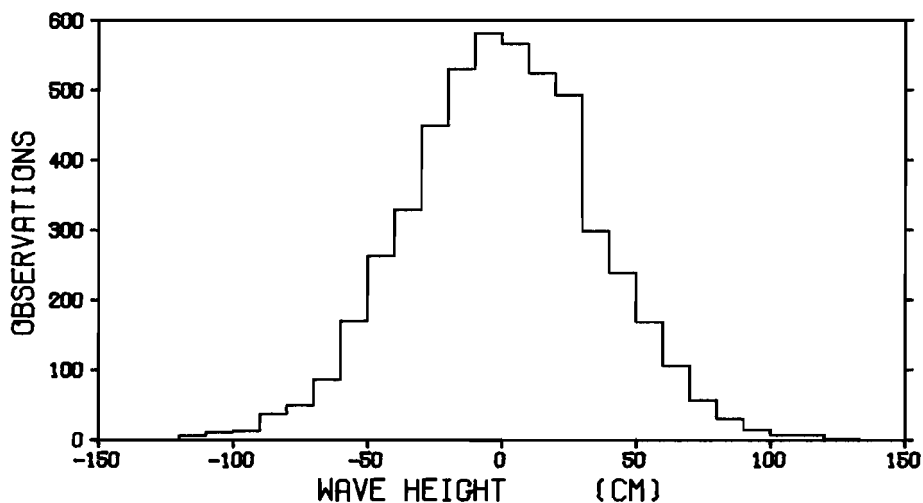


WAVE HEIGHT SPECTRUM.

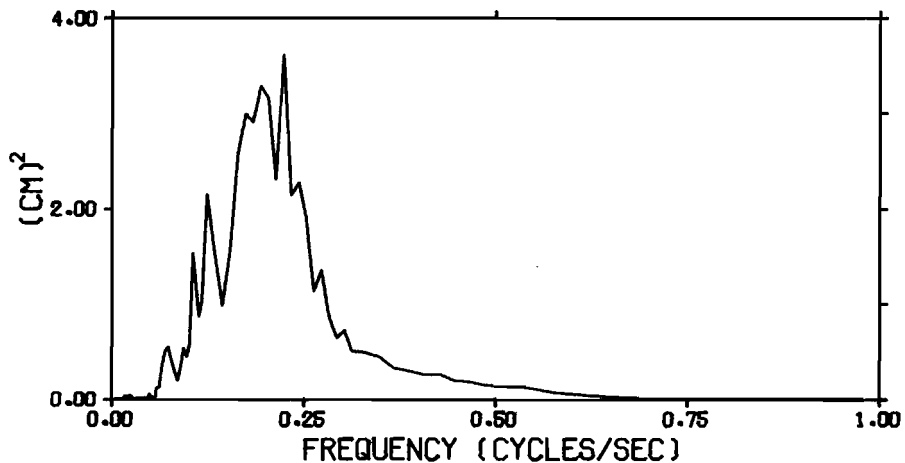


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0000 GMT 2 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1226.50	35.02	-0.01	3.13	124.38	-143.64

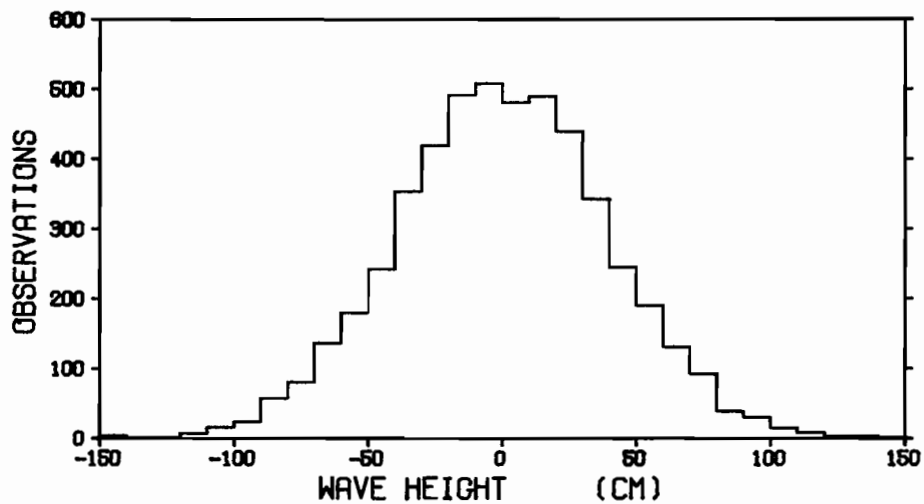


WAVE HEIGHT SPECTRUM.

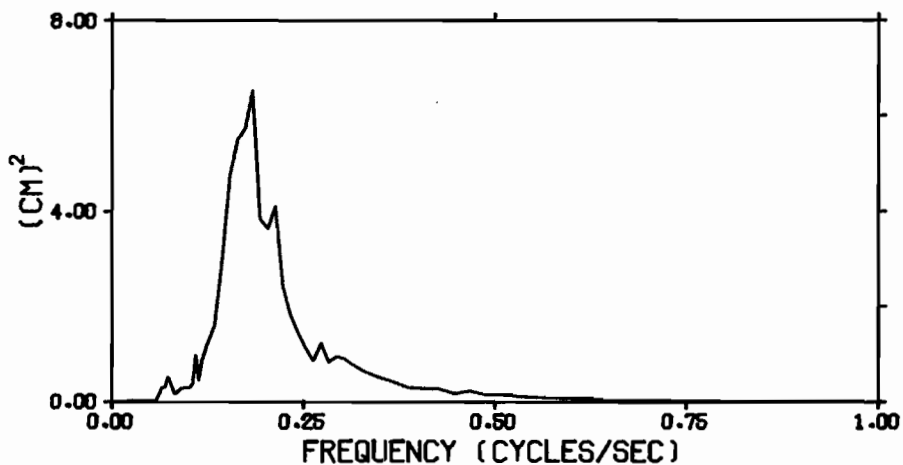


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 2 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1552.77	39.41	-0.02	3.12	147.87	-148.49

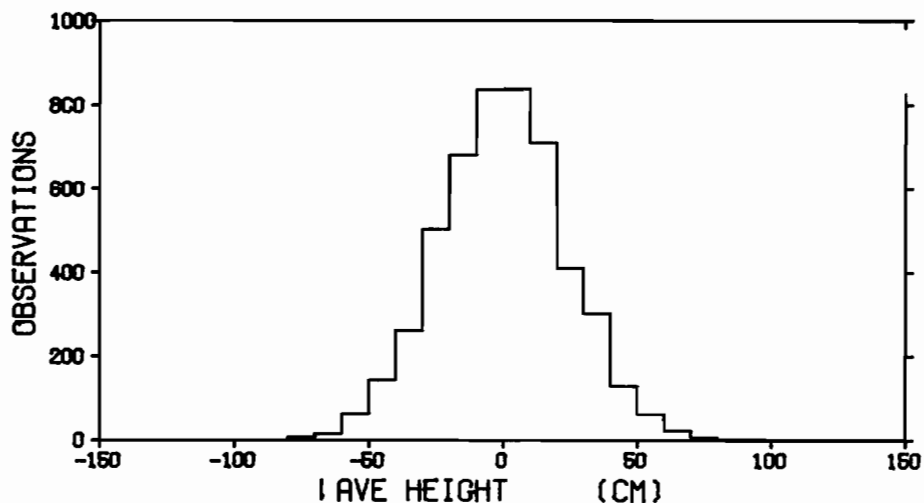


WAVE HEIGHT SPECTRUM.

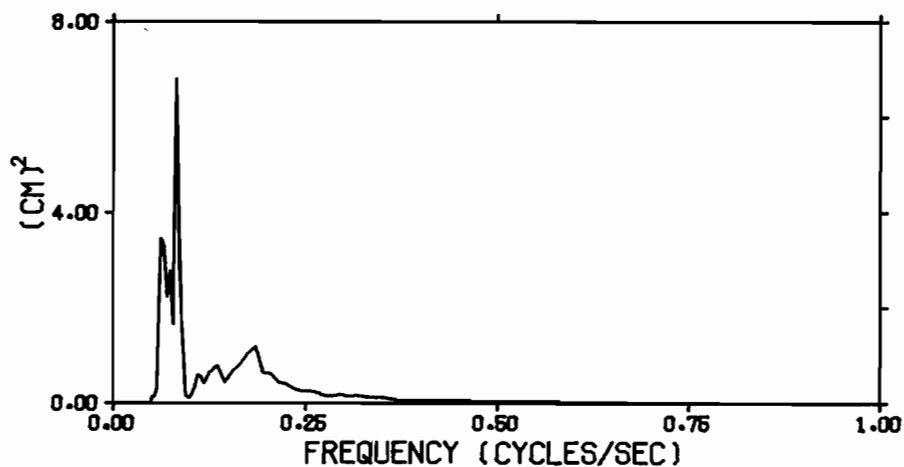


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 22 JUL 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	557.45	23.61	.05	3.05	92.39	-83.54

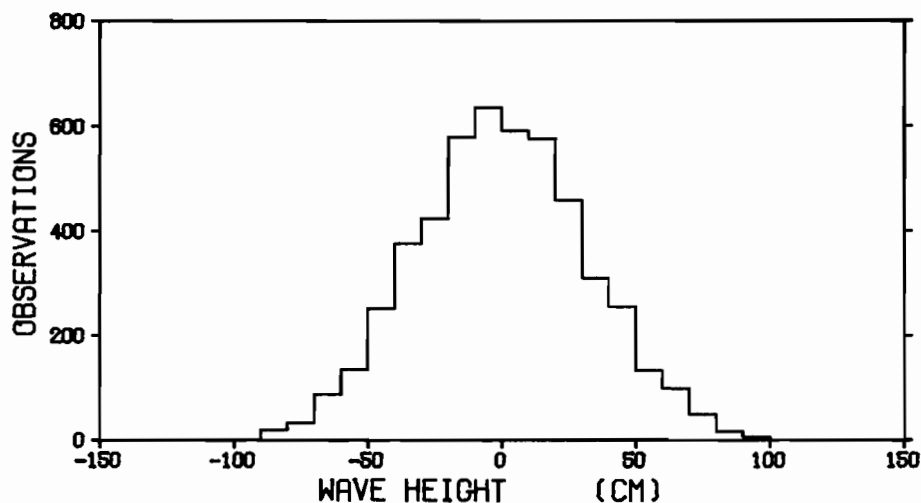


WAVE HEIGHT SPECTRUM.

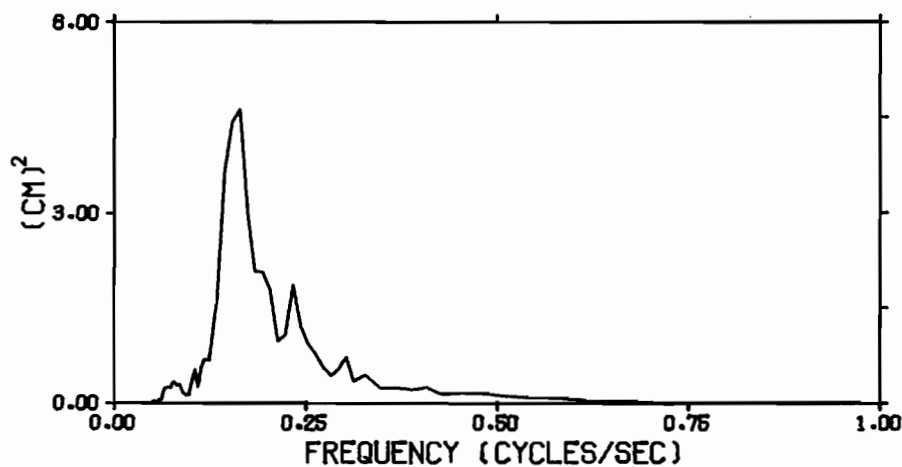


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1200 GMT 2 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1008.80	31.76	.02	2.82	98.95	-113.59

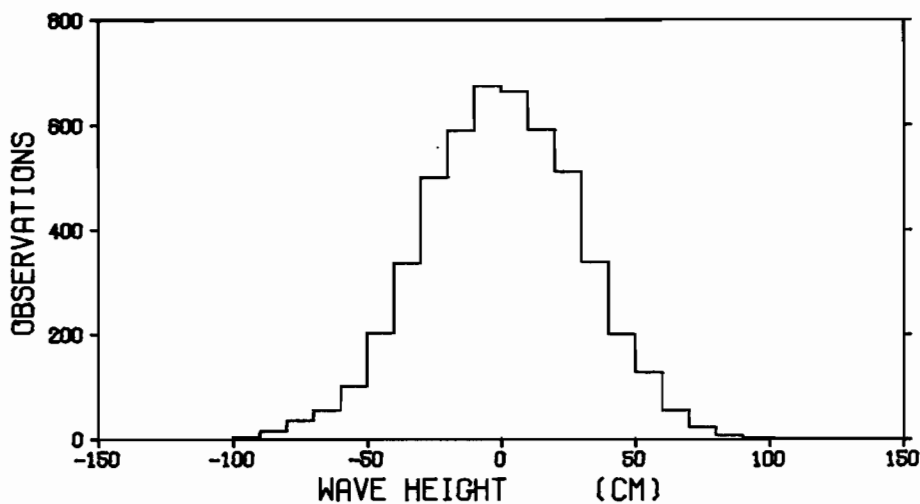


WAVE HEIGHT SPECTRUM.

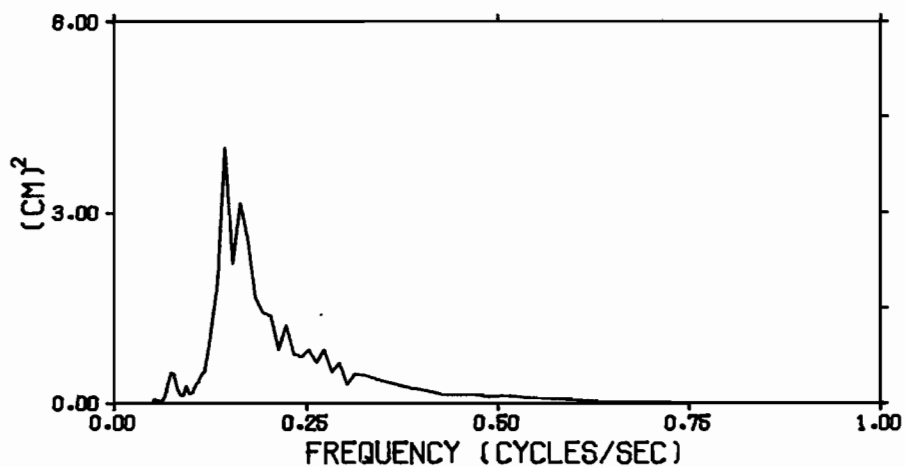


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1800 GMT 2 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	841.75	29.01	-.03	2.97	106.75	-93.39

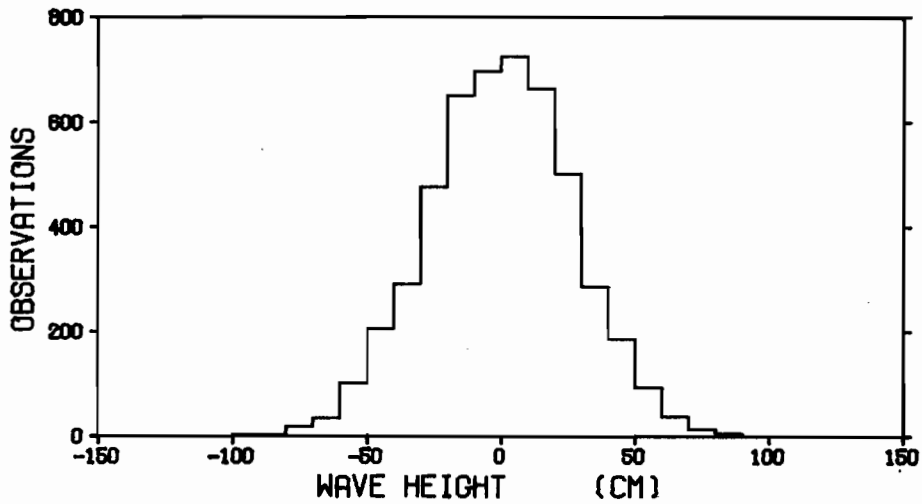


WAVE HEIGHT SPECTRUM.

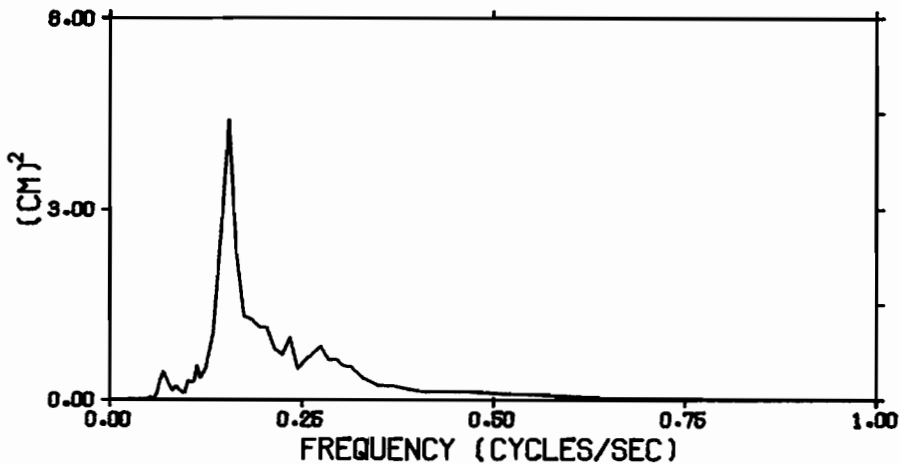


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0000 GMT 3 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.03	718.92	26.81	-0.02	3.03	103.63	-106.23

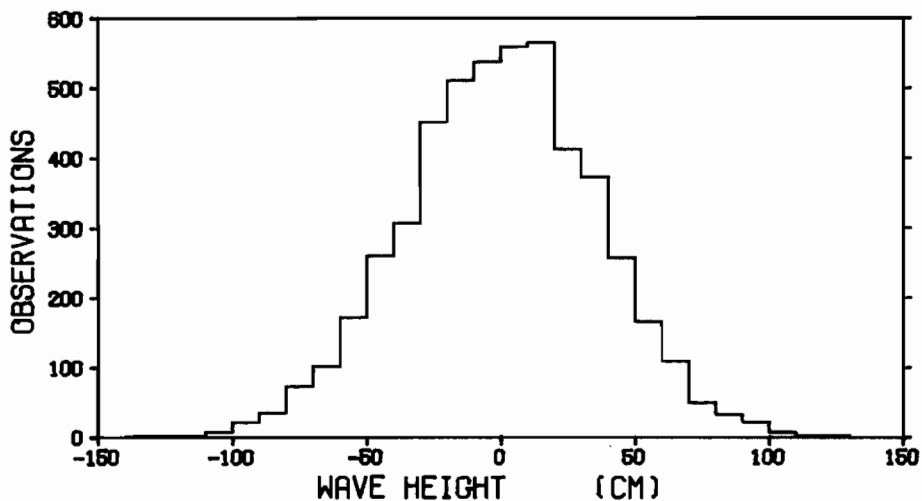


WAVE HEIGHT SPECTRUM.

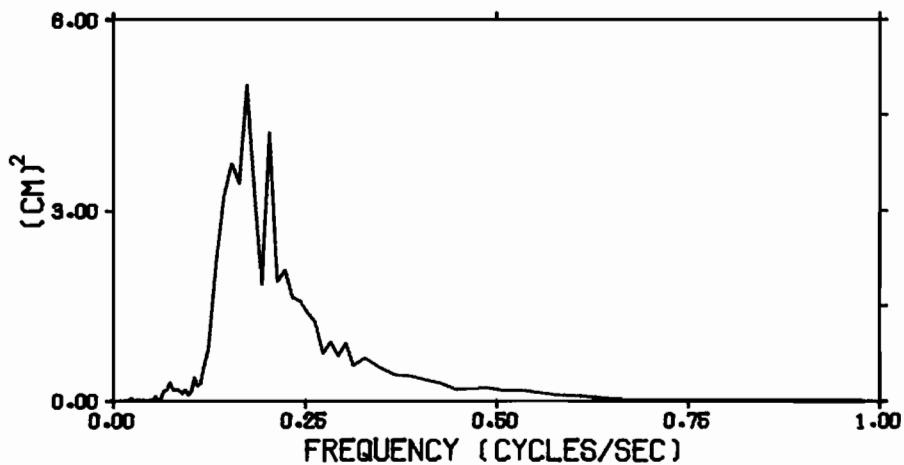


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0600 GMT 3 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1271.09	35.65	-.03	3.04	128.12	-130.92

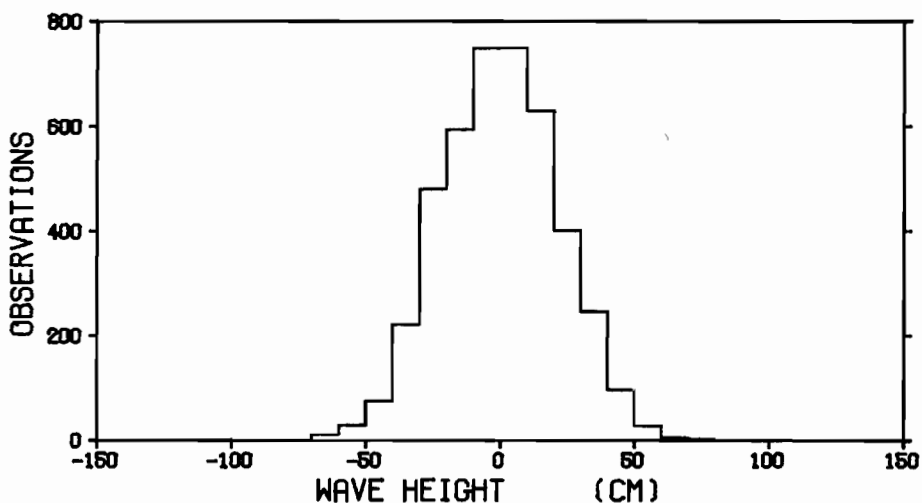


WAVE HEIGHT SPECTRUM.

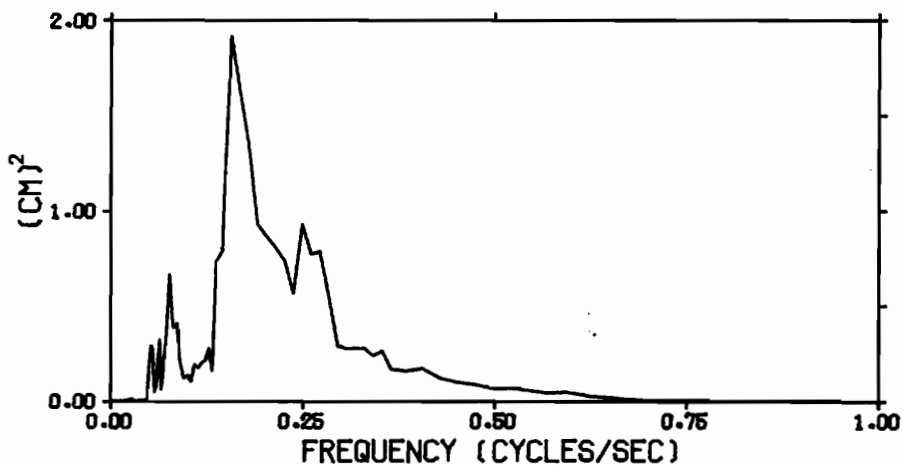


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 4320
 OBSERVATION PERIOD 36.0 MINUTES FROM 2124 GMT 21 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
- .00	463.08	21.52	.03	2.80	73.62	-66.15

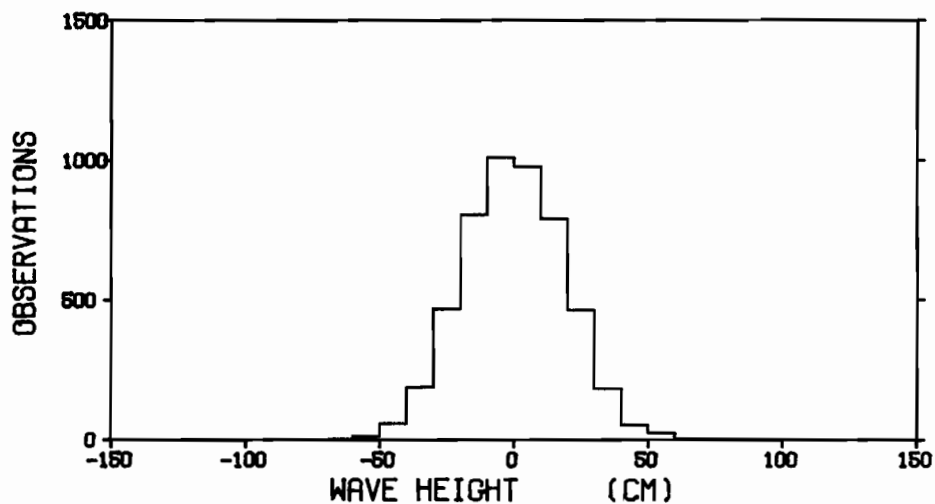


WAVE HEIGHT SPECTRUM.

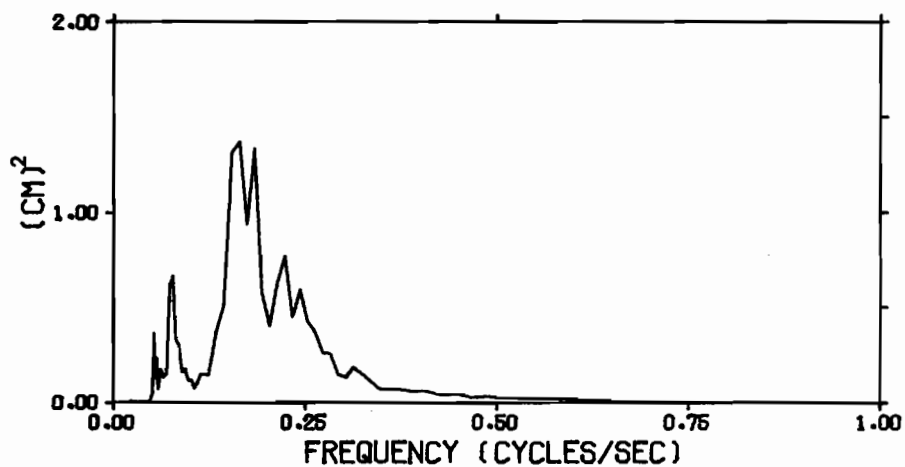


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0324 GMT 22 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	353.71	18.81	.05	2.97	69.86	-65.97

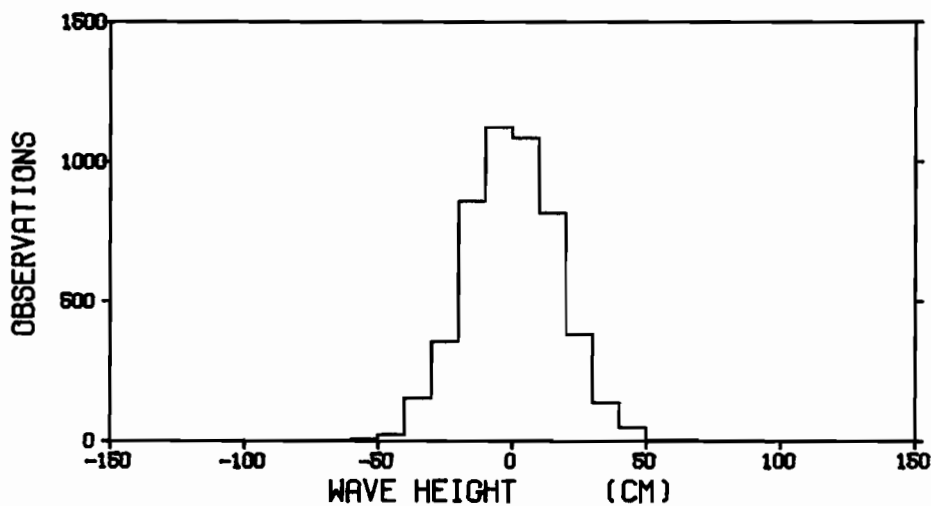


WAVE HEIGHT SPECTRUM.

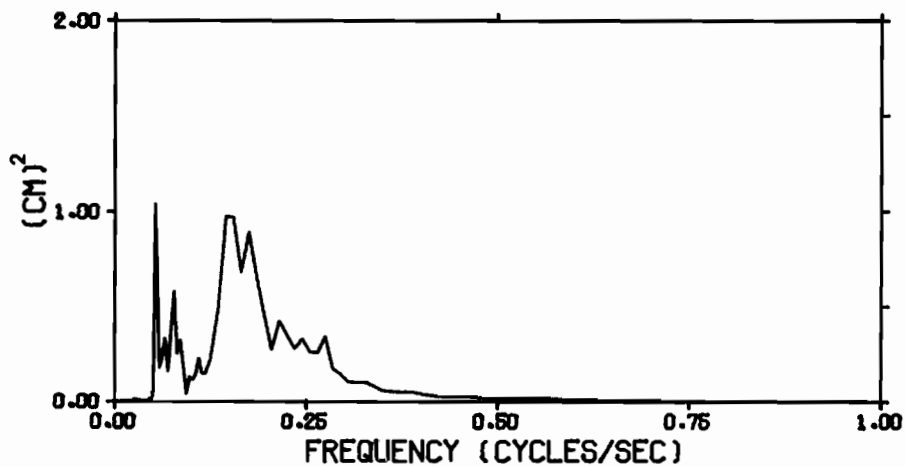


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0924 GMT 22 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	279.68	16.72	.05	3.09	62.12	-63.87

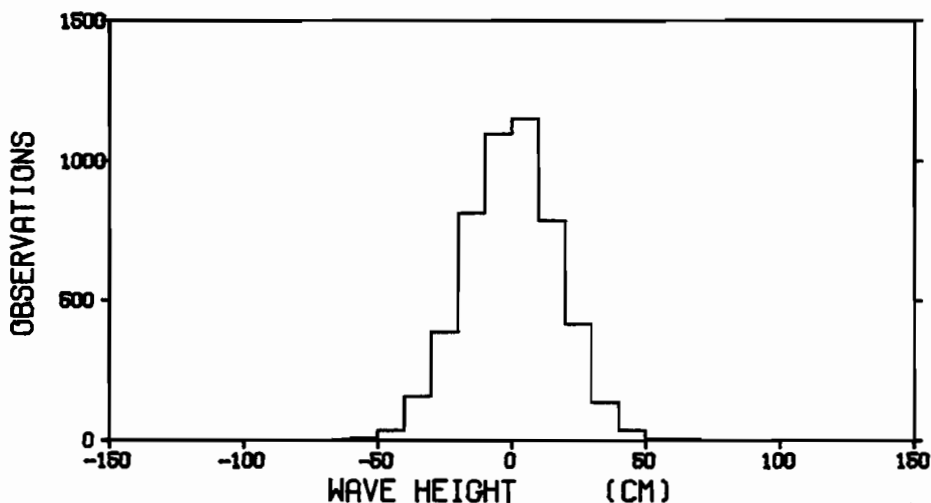


WAVE HEIGHT SPECTRUM.

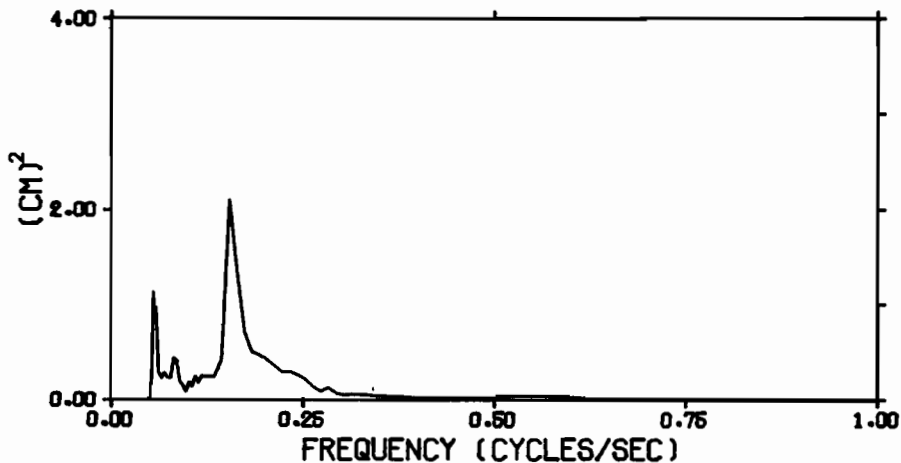


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1524 GMT 22 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	287.94	16.97	-0.03	3.18	68.56	-66.03

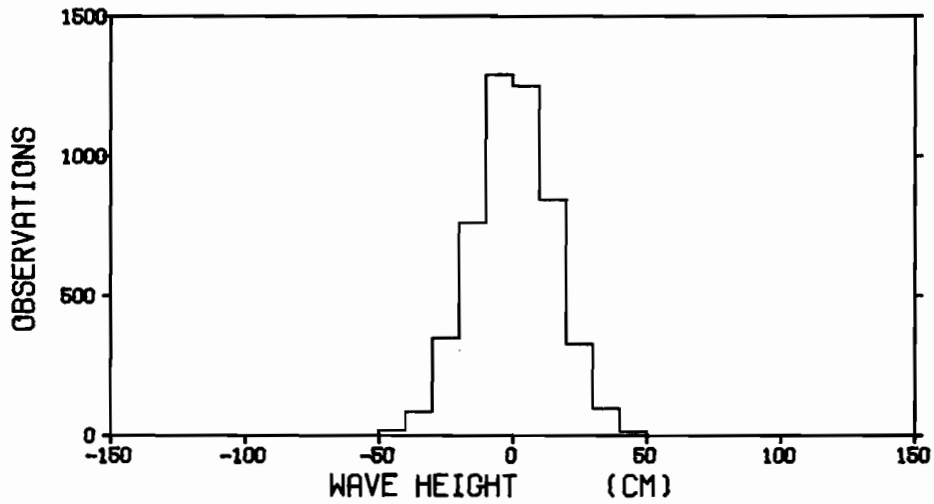


WAVE HEIGHT SPECTRUM.

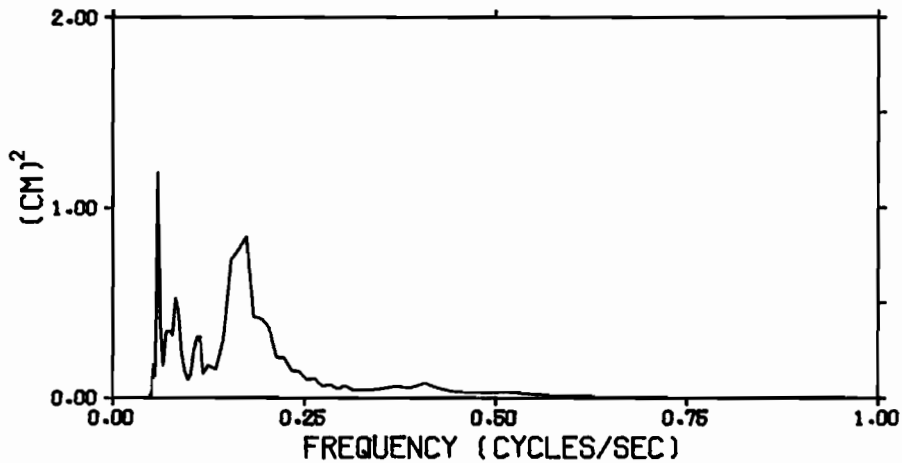


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 2124 GMT 22 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.00	214.70	14.65	-.03	2.97	43.74	-51.57

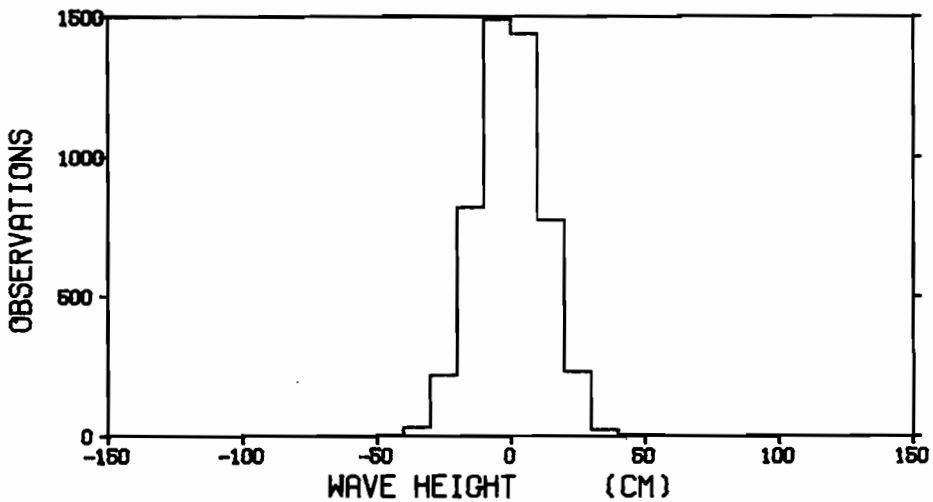


WAVE HEIGHT SPECTRUM.

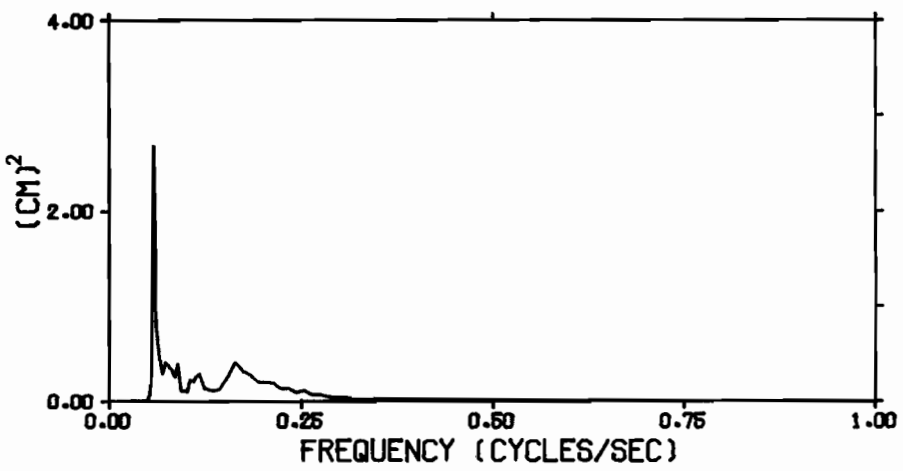


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0324 GMT 23 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	152.28	12.34	.03	3.19	53.08	-48.14

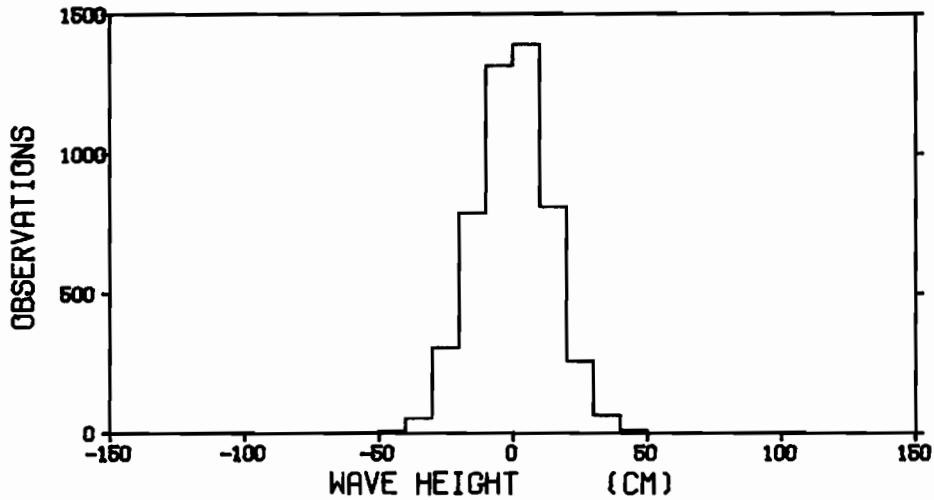


WAVE HEIGHT SPECTRUM.

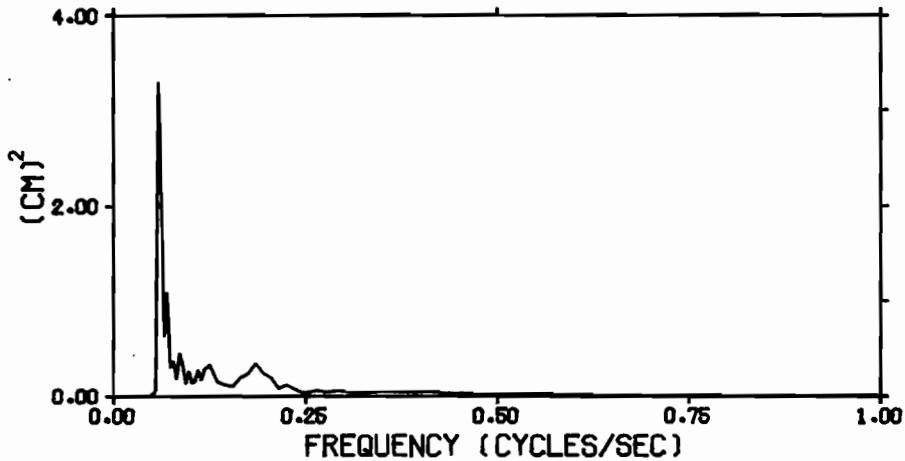


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0924 GMT 23 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	182.55	13.51	.00	2.95	48.44	-46.45

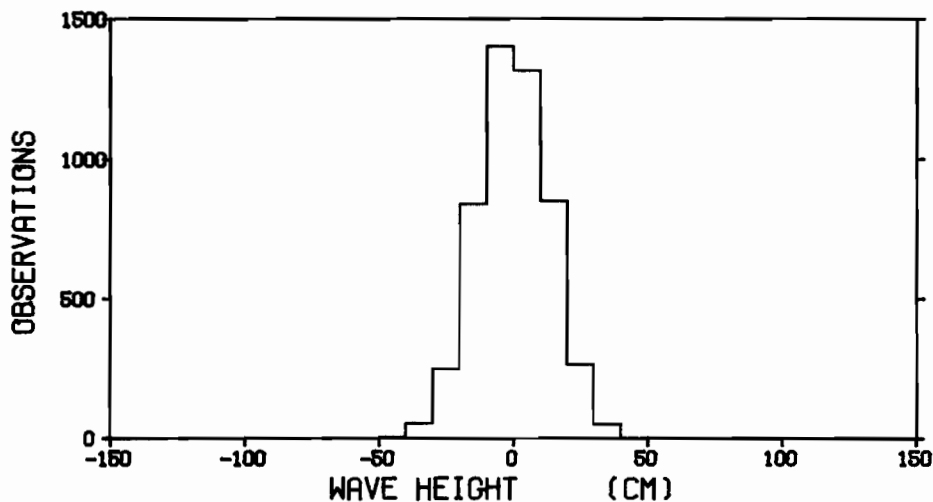


WAVE HEIGHT SPECTRUM.

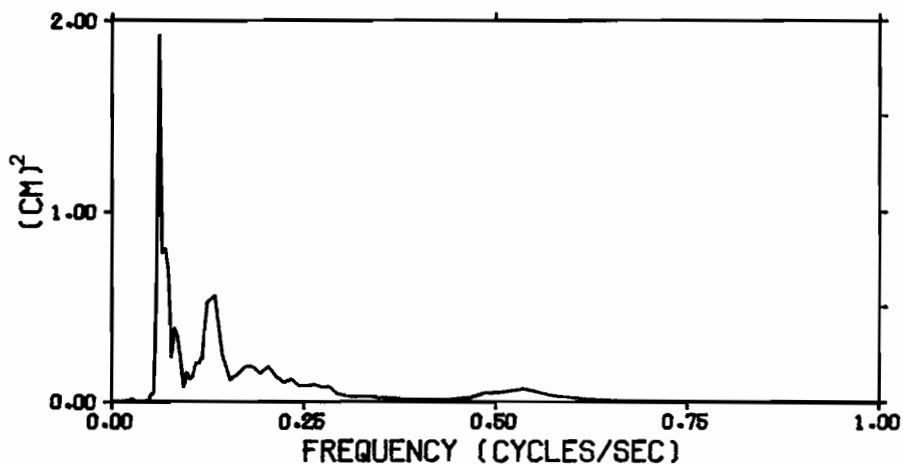


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1524 GMT 23 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.1	174.72	13.22	-0.1	2.86	40.73	-41.72

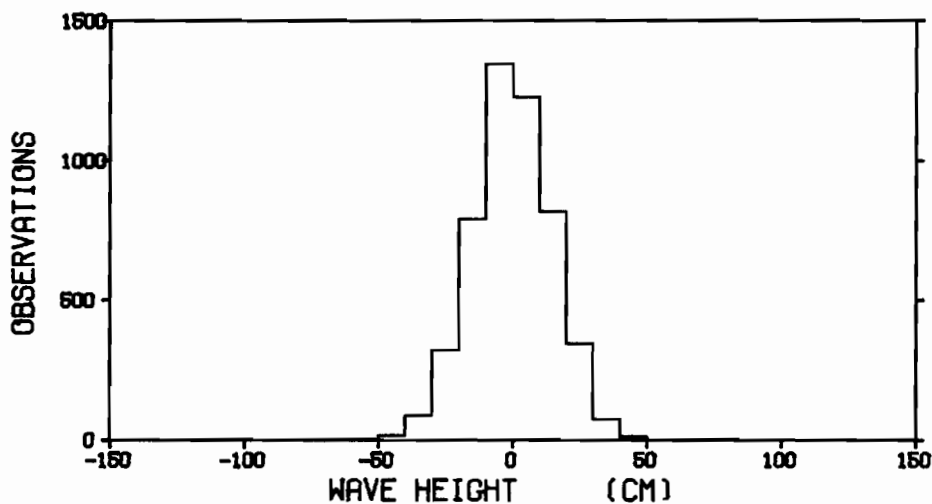


WAVE HEIGHT SPECTRUM.

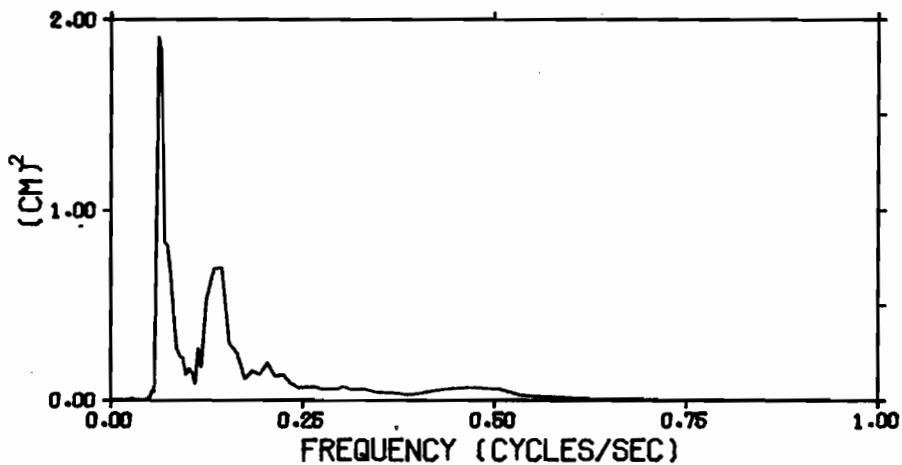


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 2124 GMT 23 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
.00	216.45	14.71	-.04	2.96	58.34	-59.40

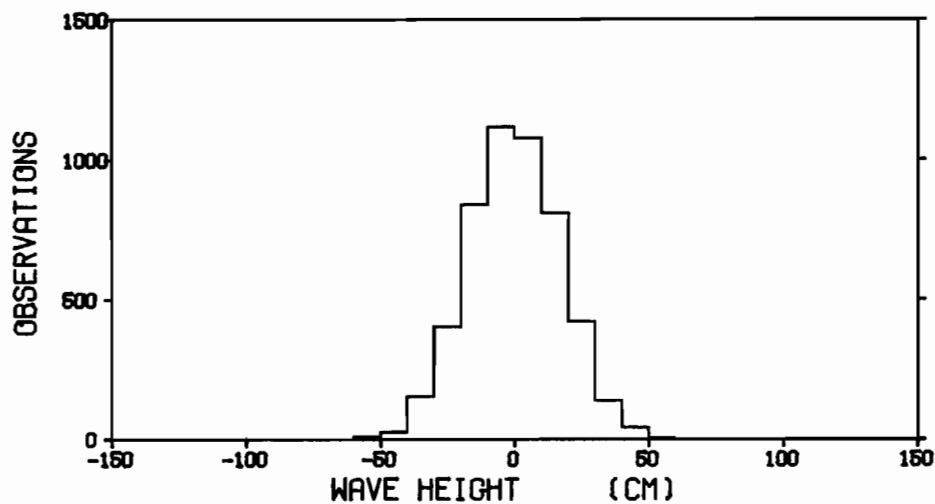


WAVE HEIGHT SPECTRUM.

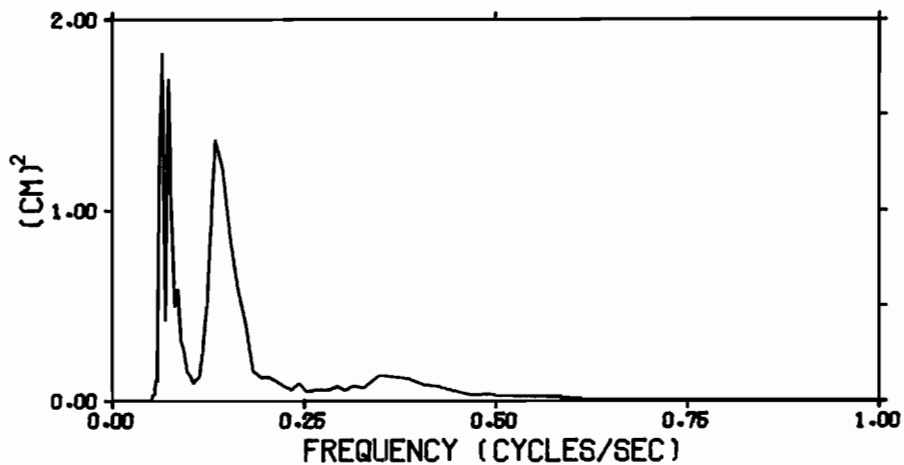


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0324 GMT 24 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
- .00	283.90	16.85	.01	2.91	54.14	-57.65

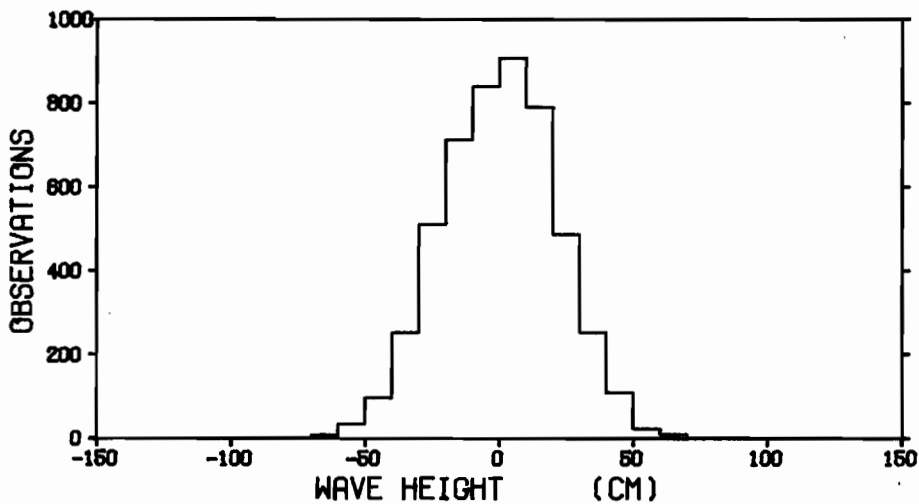


WAVE HEIGHT SPECTRUM.

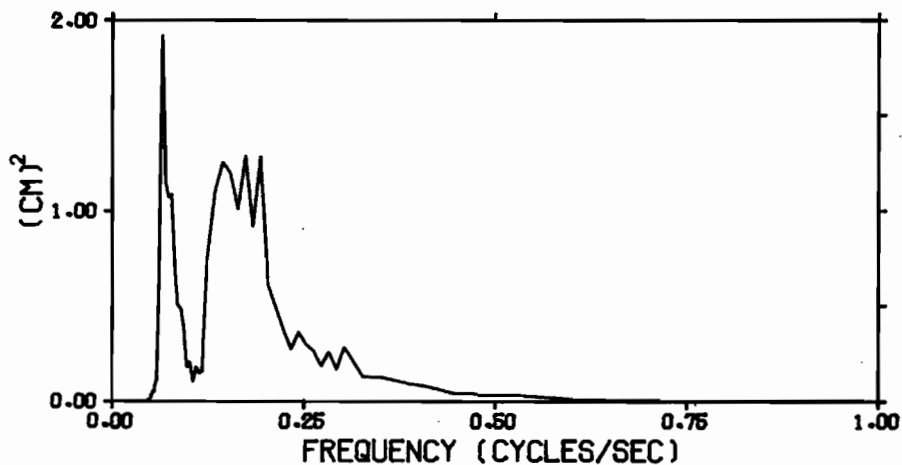


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 0924 GMT 24 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	451.05	21.24	-.01	2.93	80.66	-89.44

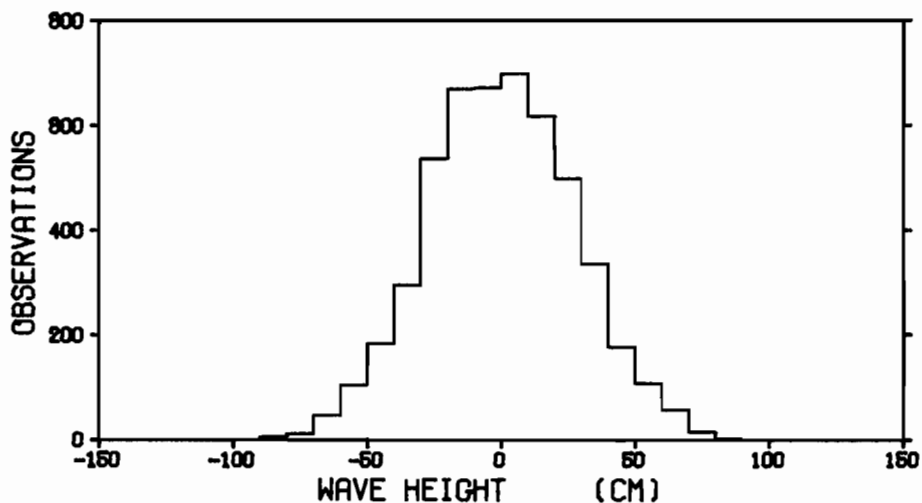


WAVE HEIGHT SPECTRUM.

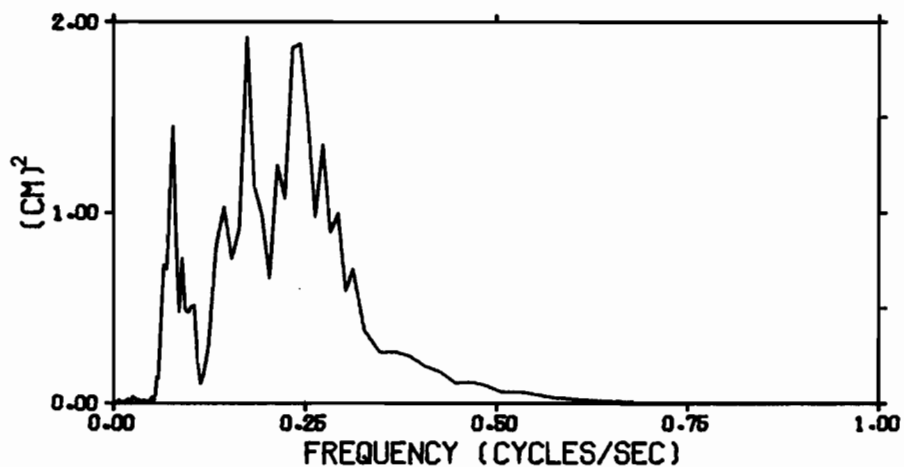


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1524 GMT 24 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	740.25	27.21	.02	2.87	85.54	-90.52

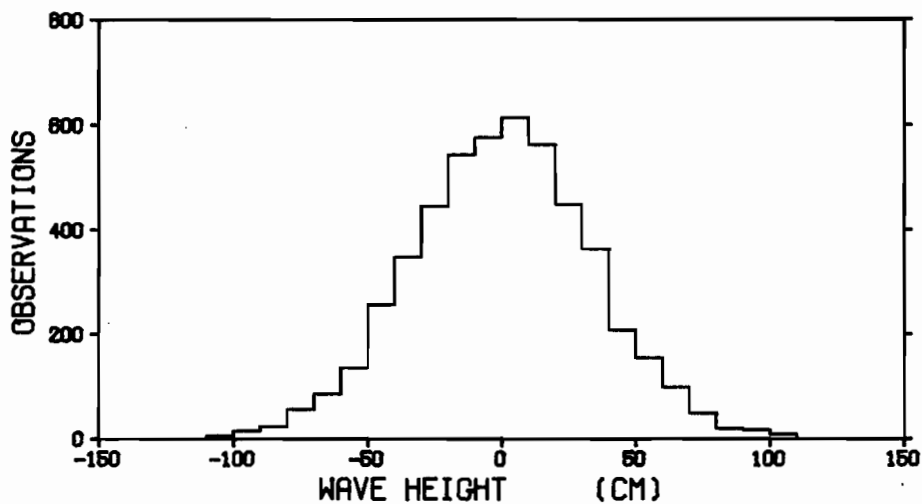


WAVE HEIGHT SPECTRUM.

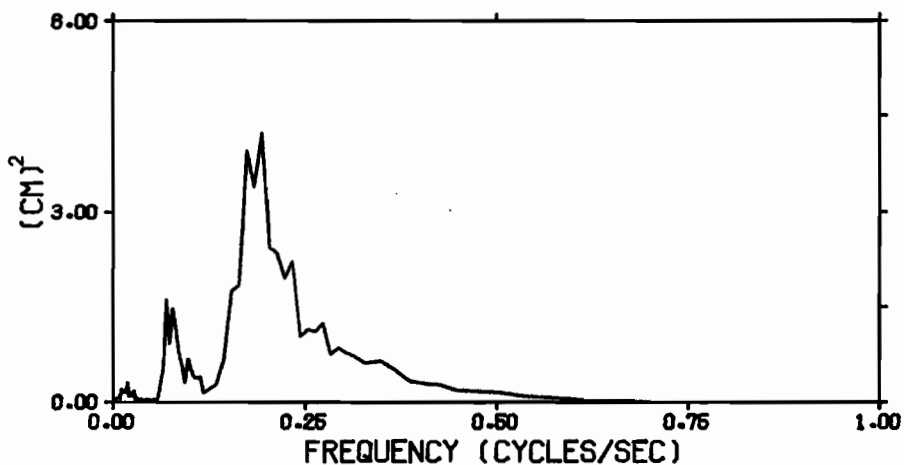


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 2124 GMT 24 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKREW	KURT	MAX (CM)	MIN (CM)
-0.00	1122.45	33.50	.01	3.06	110.16	-120.23

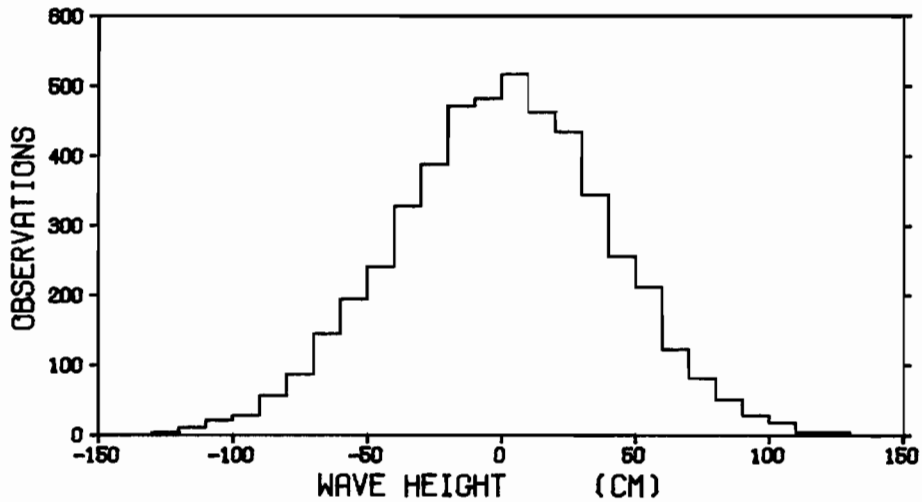


WAVE HEIGHT SPECTRUM.

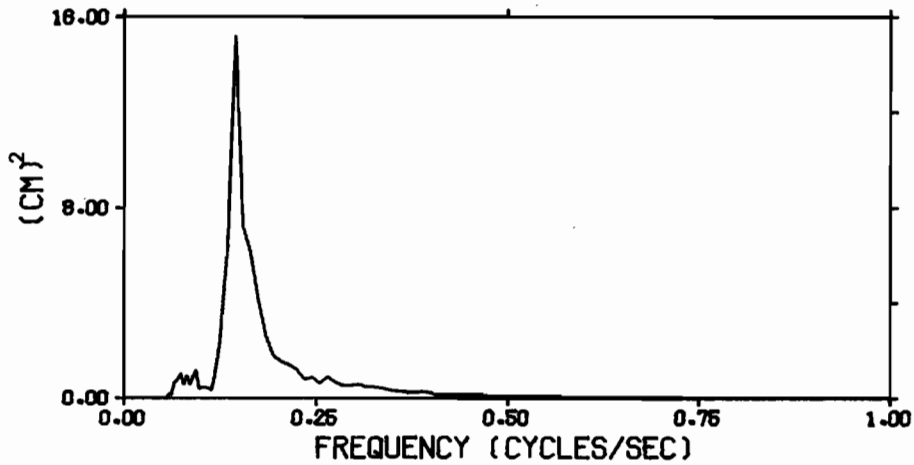


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0324 GMT 25 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1593.26	39.92	-0.06	2.93	127.11	-135.38

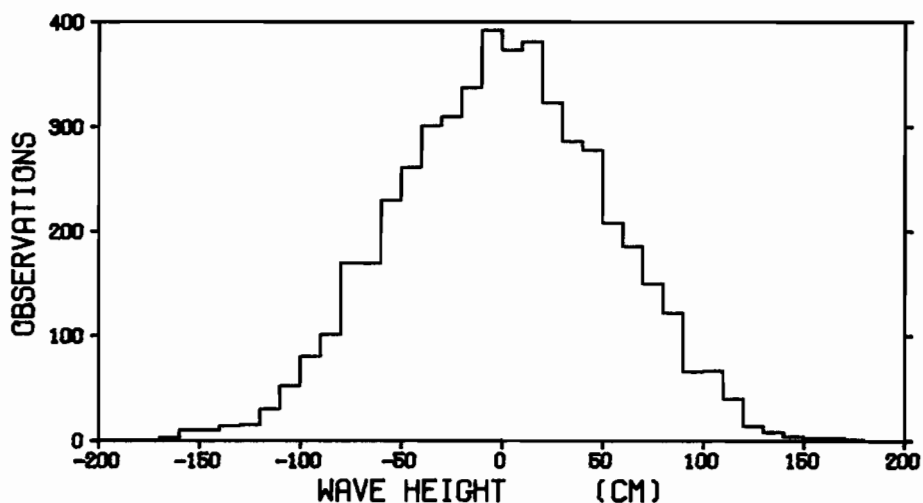


WAVE HEIGHT SPECTRUM.

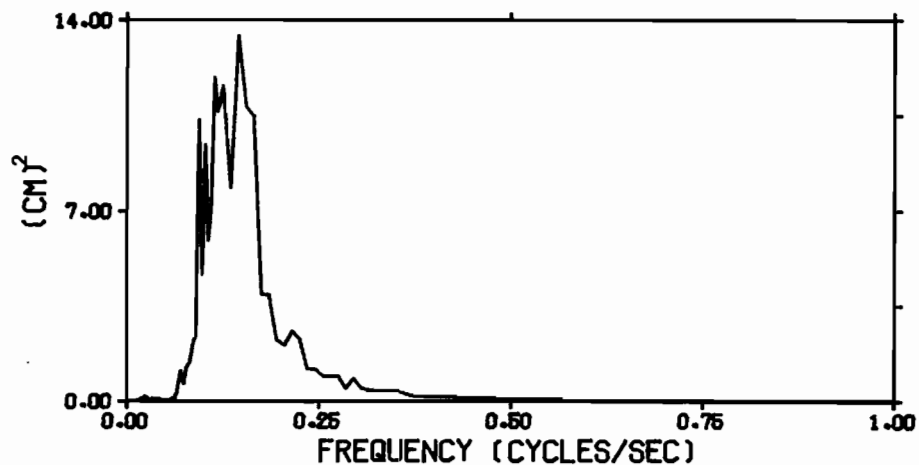


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0924 GMT 25 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	2767.29	52.61	-0.06	2.84	174.33	-182.96

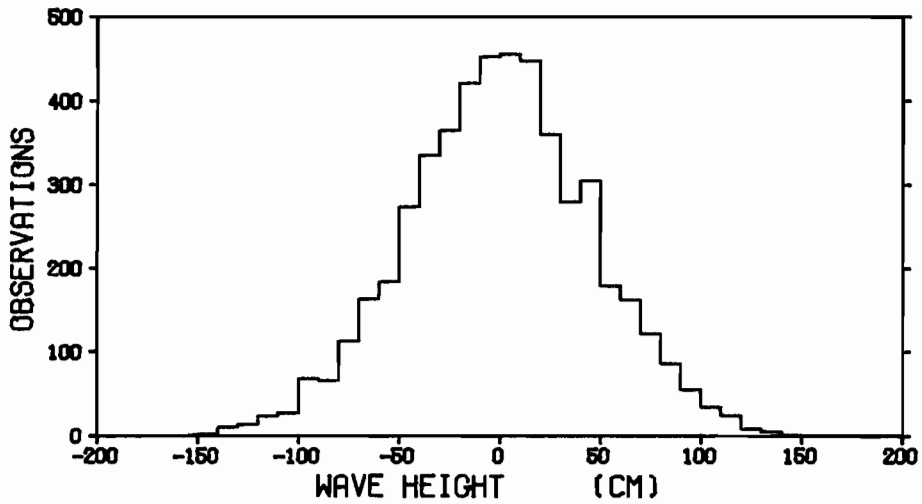


WAVE HEIGHT SPECTRUM.

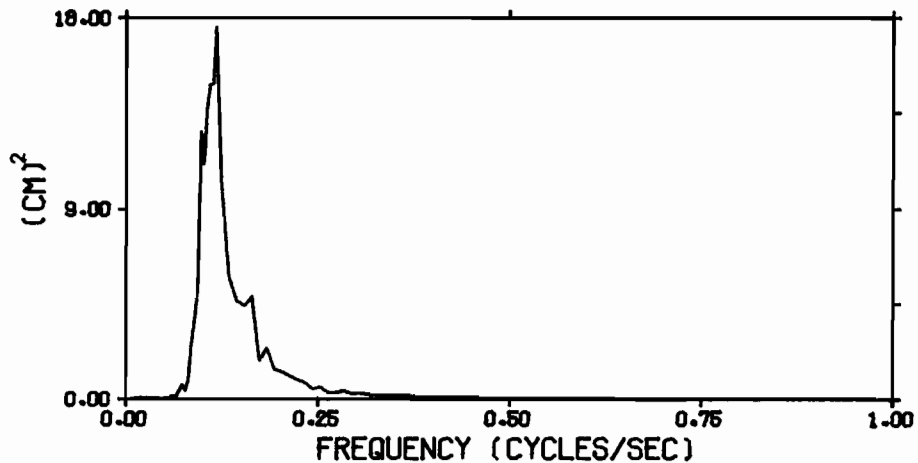


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1524 GMT 25 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	2106.10	45.89	-0.01	3.01	174.93	-152.42

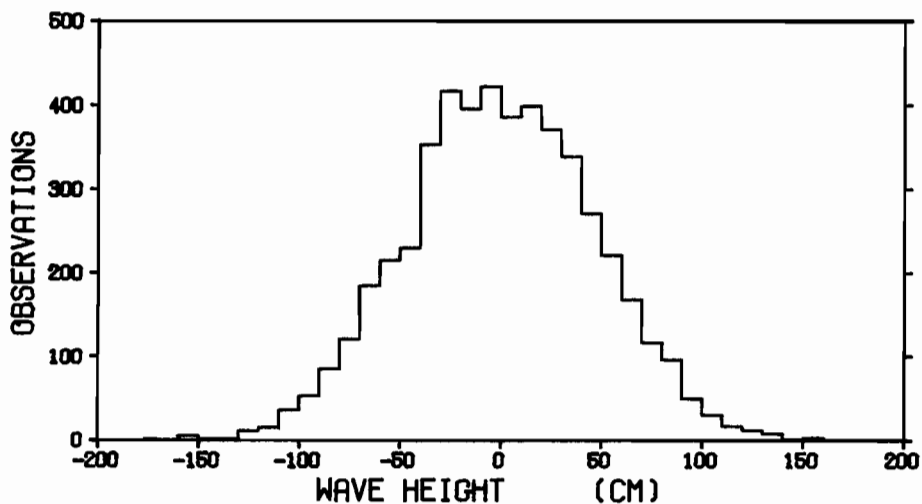


WAVE HEIGHT SPECTRUM.

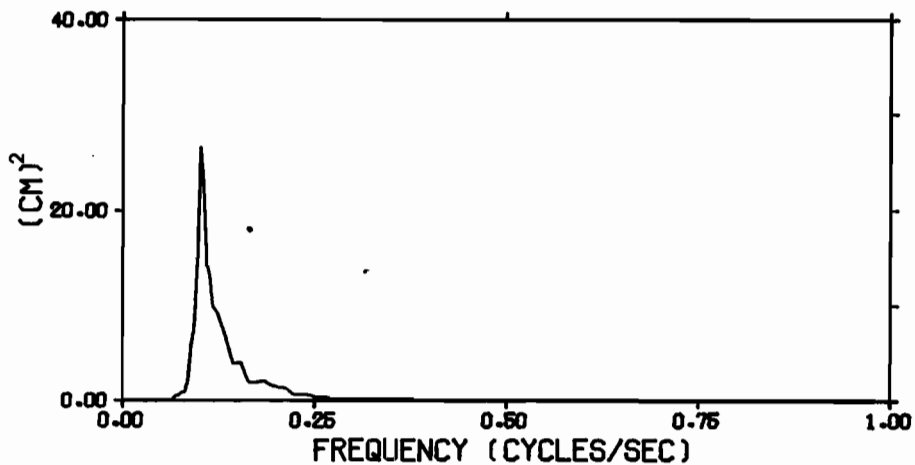


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 2124 GMT 25 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	2170.17	46.59	.02	2.94	171.41	-176.48

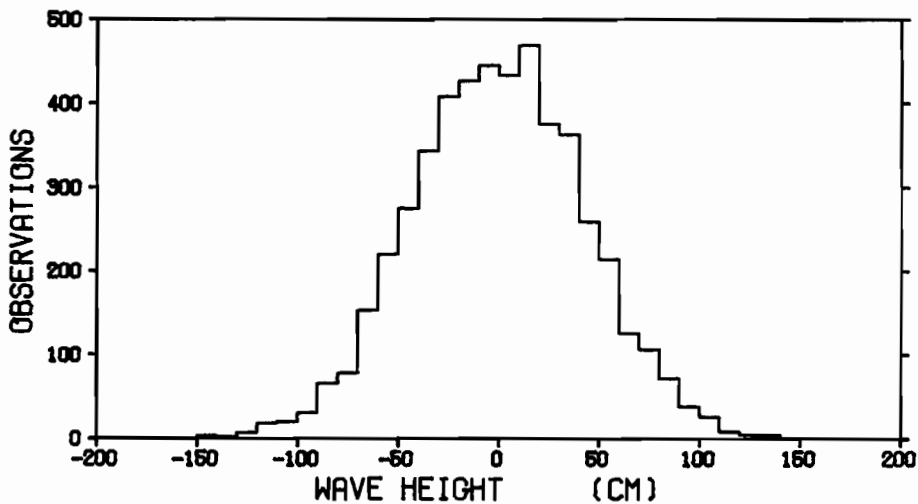


WAVE HEIGHT SPECTRUM.

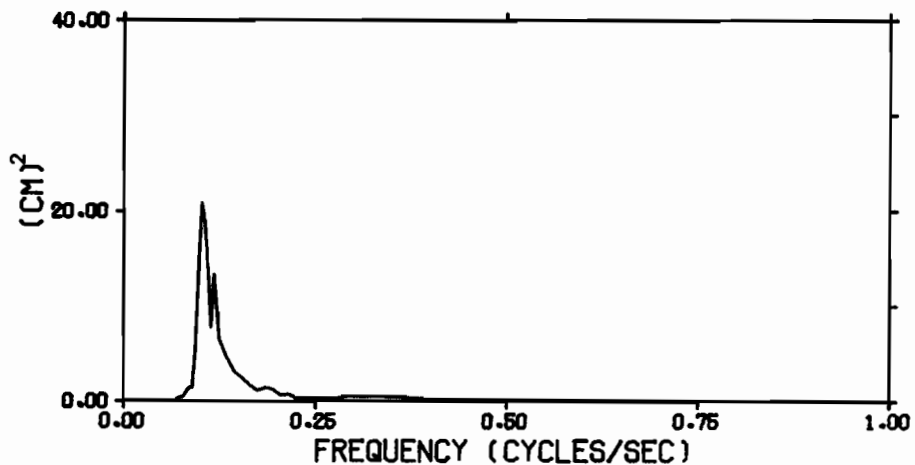


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0324 GMT 26 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.02	1815.06	42.60	-.01	2.95	153.50	-153.33

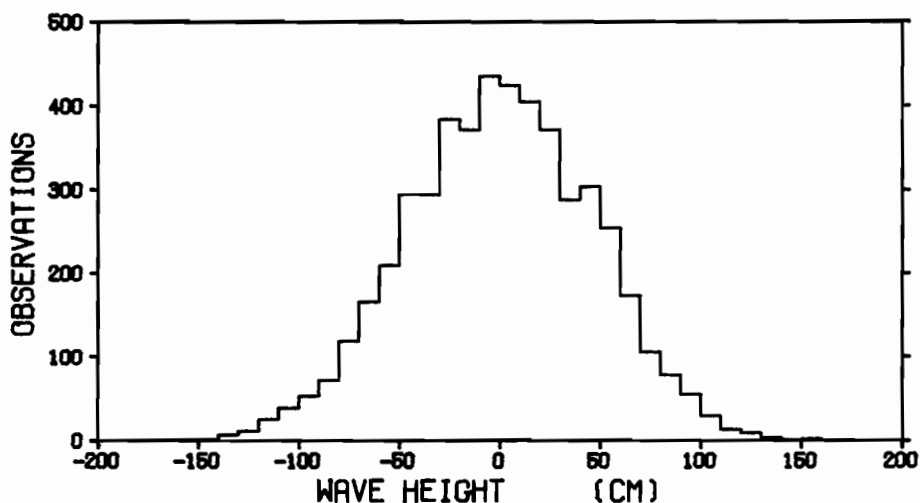


WAVE HEIGHT SPECTRUM.

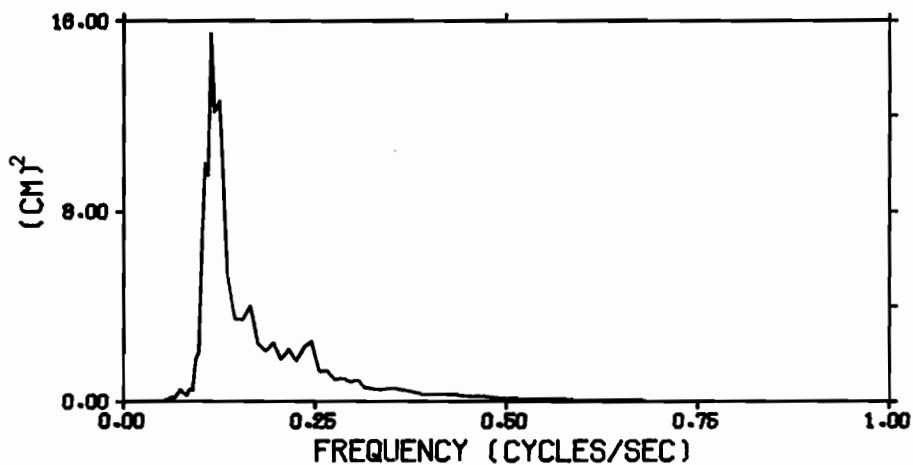


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0924 GMT 26 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.02	2119.31	46.04	-0.07	2.83	157.42	-161.86

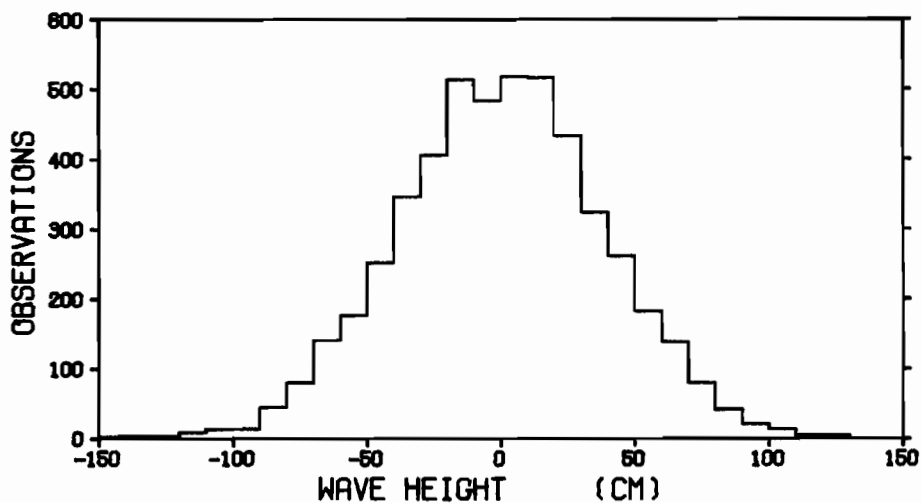


WAVE HEIGHT SPECTRUM.

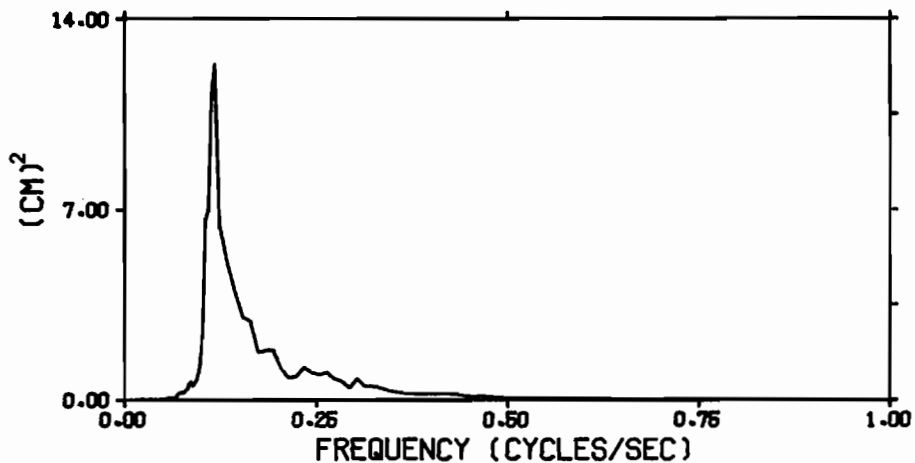


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1524 GMT 26 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	1486.23	38.55	-.07	3.13	124.90	-150.50

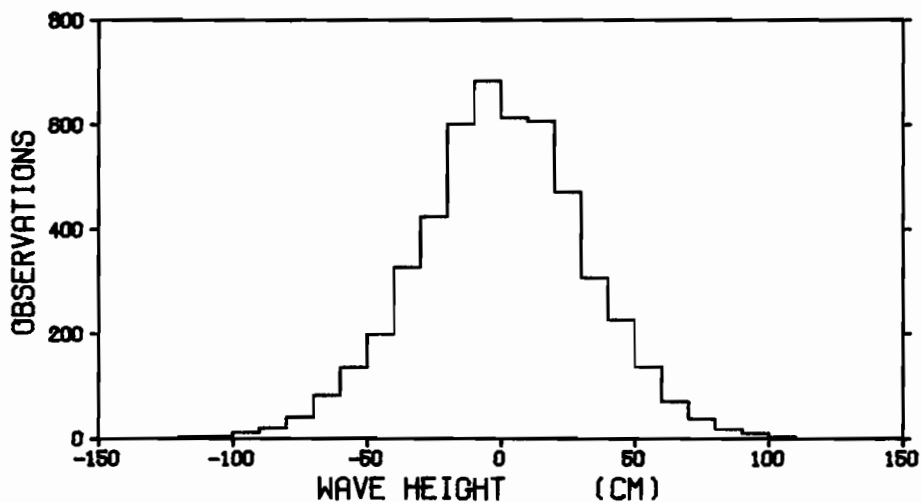


WAVE HEIGHT SPECTRUM.

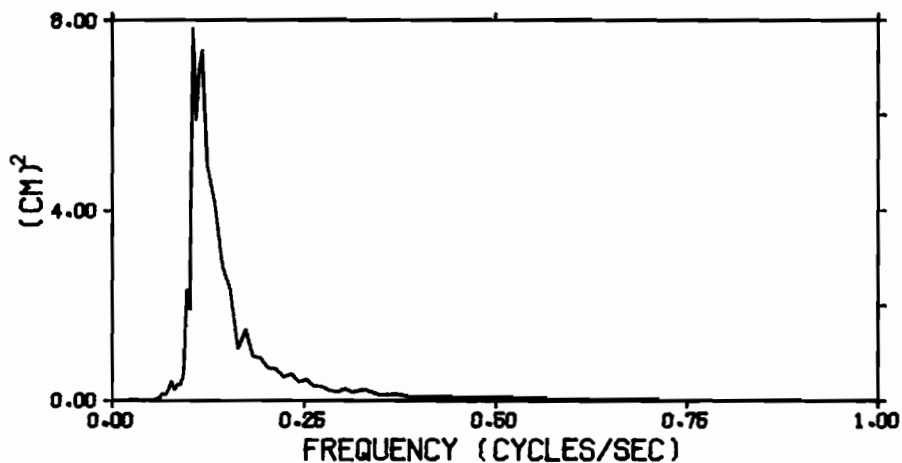


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 2124 GMT 26 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.01	988.56	31.44	-.06	3.26	111.45	-117.83

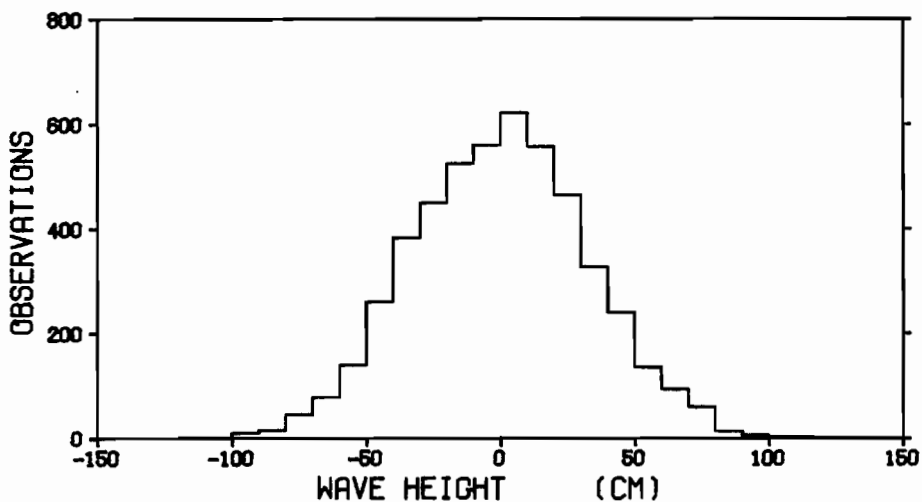


WAVE HEIGHT SPECTRUM.

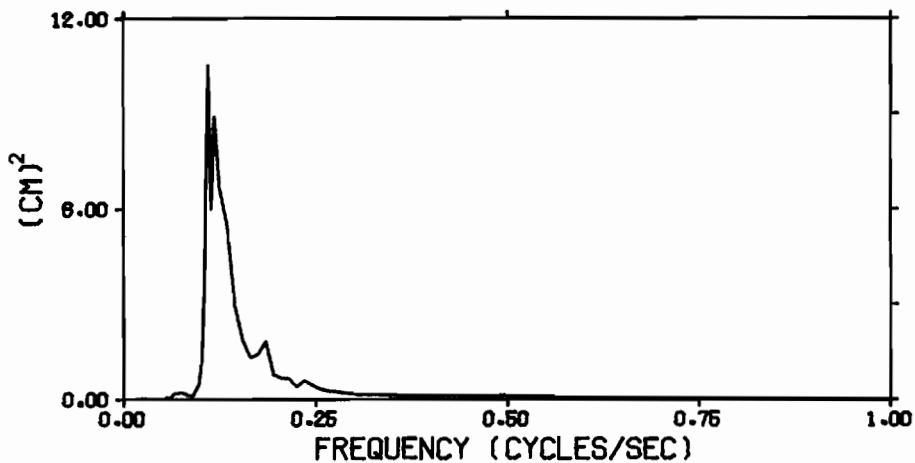


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0324 GMT 27 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	1057.80	32.52	.04	2.90	118.80	-119.81

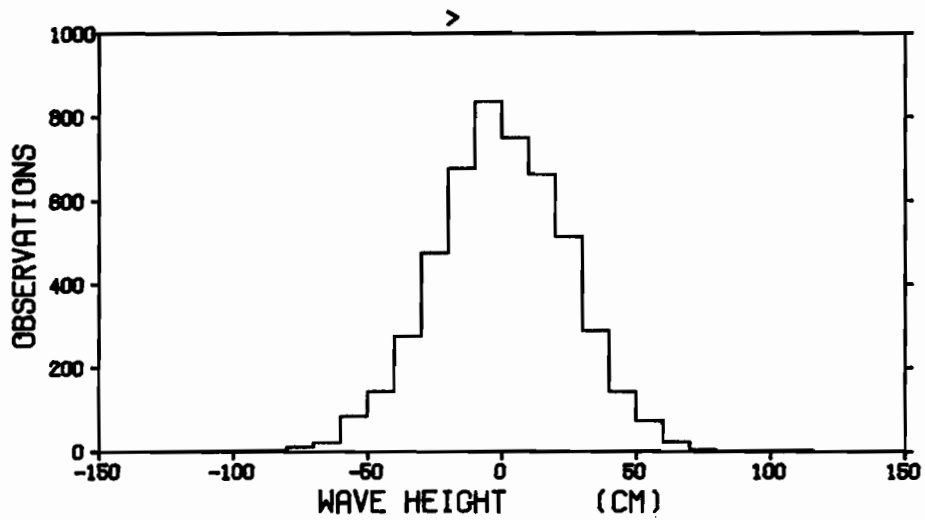


WAVE HEIGHT SPECTRUM.

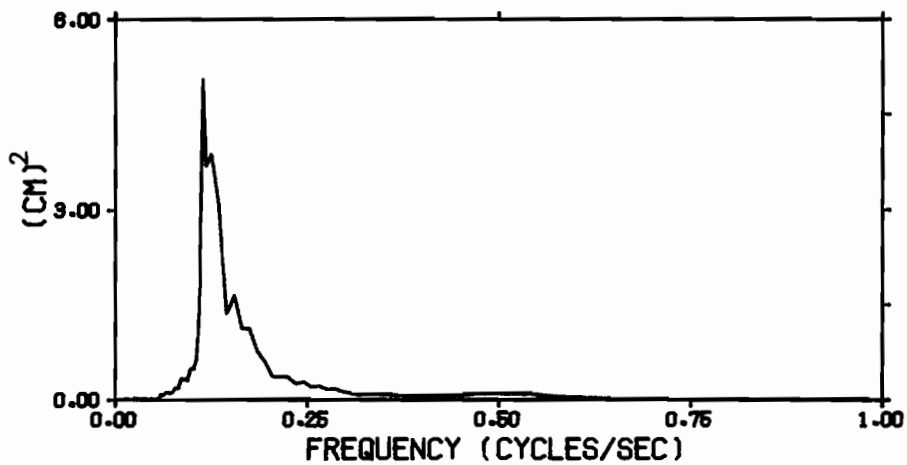


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 0924 GMT 27 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
.03	599.70	24.49	-.05	3.06	99.79	-90.38

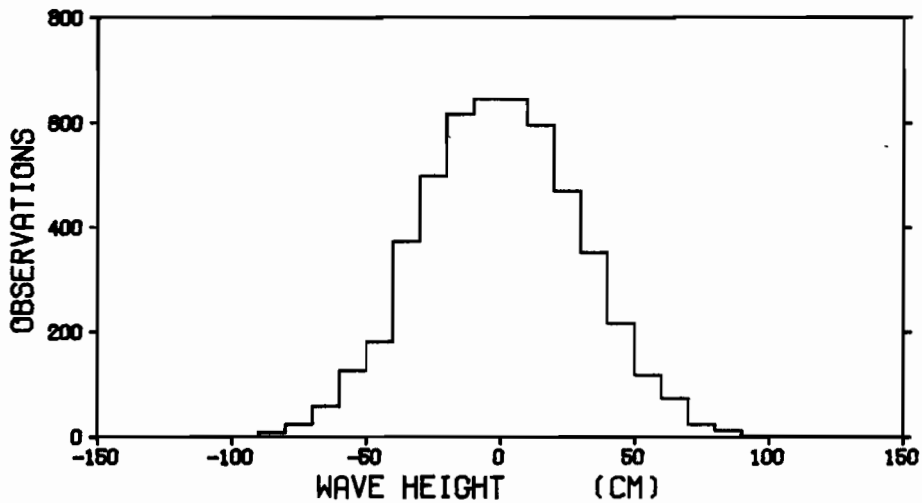


WAVE HEIGHT SPECTRUM.

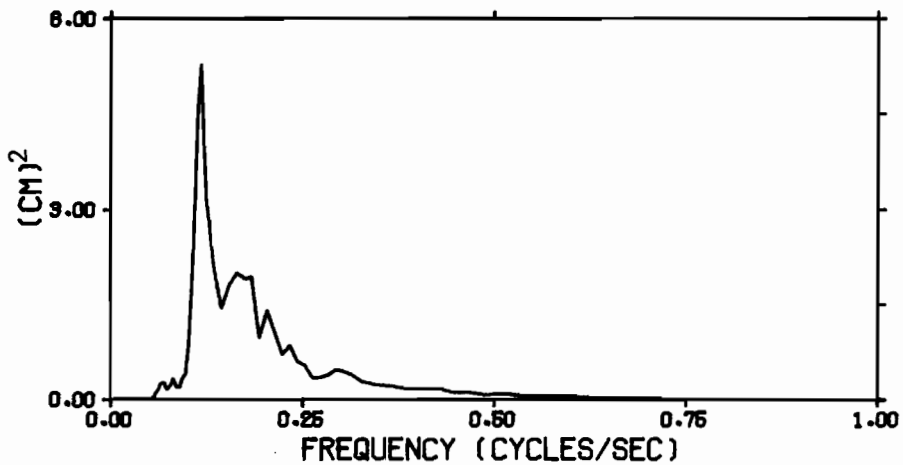


WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5040
 OBSERVATION PERIOD 42.0 MINUTES FROM 1524 GMT 27 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.01	850.92	29.17	.04	2.85	92.68	-104.13

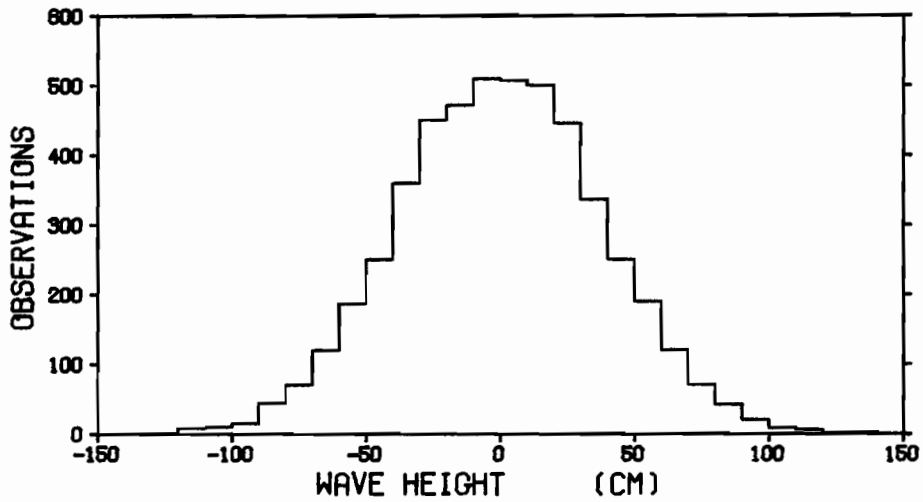


WAVE HEIGHT SPECTRUM.



WAVE HEIGHT STATISTICS LAT. 45 15.8N LONG. 124 07.8W
 HEIGHT 0.0 METERS NUMBER OF OBSERVATIONS = 5000
 OBSERVATION PERIOD 41.7 MINUTES FROM 2124 GMT 27 AUG 73

MEAN (CM)	VARIANCE (CM) ²	ST-DEV (CM)	SKEW	KURT	MAX (CM)	MIN (CM)
-0.00	1392.17	37.31	.02	2.94	135.68	-119.55



WAVE HEIGHT SPECTRUM.

