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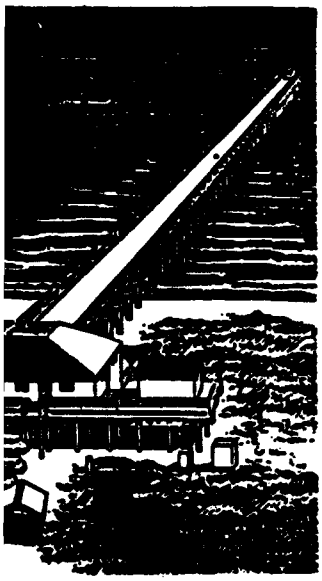

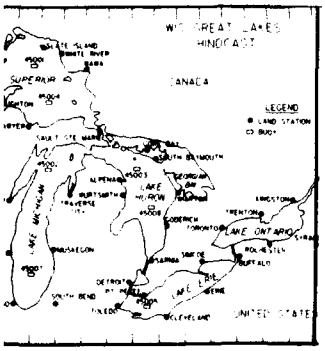

WAVE INFORMATION STUDIES OF US COASTLINES

WIS REPORT 22

HINDCAST WAVE INFORMATION FOR THE GREAT LAKES: LAKE ERIE

by

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Thirty-two years of hindcast wind and wave information is summarized for 53 locations along the shoreline of Lake Erie in four data products: percent occurrence tables, wave rose diagrams, mean and largest wave height and 32-year statistics tables, and return period tables. The procedures used to produce this information are discussed, and examples of verification against measurements are shown.

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PREFACE

The Wave Information Study (WIS) was authorized in December 1976 by Headquarters, US Army Corps of Engineers (HQUSACE). This study is part of the Field Data Collection Program, which is managed by the Coastal Engineering Research Center (CERC), US Army Engineer Waterways Experiment Station (WES). The HQUSACE Technical Monitors for the Field Data Collection Program are Messrs. John H. Lockhart, Jr.; John G. Housley; James E. Crews; and Robert H. Campbell. Mr. J. Michael Hemsley was the former Program Manager, Ms. Carolyn M. Holmes is the present Program Manager, and Dr. Jon M. Hubertz is the WIS Project Leader.

This report is one of five that present the results of wave hindcasts for the Great Lakes. The Great Lakes hindcasts were performed by Mr. David B. Driver, Dr. Hubertz, and Ms. Robin D. Reinhard, assisted by Mr. Alan Cialone, Ms. Robin Hoban, and Mr. Donald E. Eicher, all of the Coastal Oceanography Branch (COB), Research Division (RD), CERC.

The study was conducted under the direct supervision of Dr. Edward F. Thompson, former Chief, COB; Dr. Hubertz, Acting Chief, COB; Dr. Martin C. Miller, Chief, COB; and Mr. H. Lee Butler, Chief, RD, and under the general supervision of Mr. Charles C. Calhoun, Jr., Assistant Chief, CERC, and Dr. James R. Houston, Chief, CERC. The word processing was by Ms. M. Jane Stauble, COB.

COL Larry B. Fulton, EN, is the Commander and Director of WES. Dr. Robert W. Whalin is Technical Director.

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CONVERSION FACTORS, NON-SI TO SI (METRIC) UNITS OF MEASUREMENT

Non-SI units of measurement used in this report can by converted to SI (metric) units as follows:

Multiply	By	To Obtain
degrees (angle)	0.01745329	radians
knots (international)	0.5144444	meters
miles (US statute)	1.609347	kilometers

HINDCAST WAVE INFORMATION FOR THE GREAT LAKES: LAKE ERIE

PART I: INTRODUCTION

1. The primary purpose of this study is to provide an accurate and comprehensive database of information descriptive of the long-term wave climate for the Great Lakes. The goal is to accurately represent mean values of wave parameters such as height, period, and direction. At any station, the hindcast values may at times differ from measured values, but this difference will generally be small and, in the mean, approach zero. It is also expected that the extreme values at any station will accurately represent actual conditions and provide reliable design wave information. This report describes the selection of a grid and hindcast sites, methods used to process and prepare input wind fields, numerical model calibration and verification, and production of a 32-year (1956-1987) hindcast. Information of this nature is essential to the efforts currently being undertaken by both US and Canadian interests in developing workable shoreline management guidelines and navigational aids. Projects benefiting from such information include dredging and dredge disposal, beach nourishment and erosion studies, and the design of coastal structures such as jetties, harbors, revetments, and breakwaters, as well as local projects for improving recreation safety.

2. Prior to 1979, measurements of wave data on the Great Lakes were scarce and quite short in duration. The available data were generally associated with site-specific studies and were usually located nearshore in shallow water. Very few data are available from wave gages, and many of these are in an unanalyzed, analog form. Visual wave observations are available from US Coast Guard stations at several shore locations and from commercial ships for waves offshore.

3. In 1979 the National Data Buoy Center of the National Oceanic and Atmospheric Administration (NOAA) extended their wave measurement program to the Great Lakes, using large, boat-shaped buoys equipped with anemometers, air-water temperature sensors, and vertical accelerometers for wave height measurements. The purpose of this program was to provide a comprehensive set of climatological data for a long period of record from fixed locations in the near coastal and deep ocean areas adjacent to the US mainland. The first two

buoys were installed in northern Lake Michigan and central Lake Superior, respectively. During 1980 and 1981, six additional buoys were deployed: two more in Lake Superior, one in southern Lake Michigan, two in Lake Huron, and one in western Lake Erie. Lake Ontario remains without a buoy.

4. These buoys provide the best long-term wave measurements available for the Great Lakes. Unfortunately, the buoys are removed during the heavy icing season of November to March and are, therefore, subject to miss the winter storms that produce the largest and most destructive waves. Figure 1 shows the location of each of these buoys. Wind and wave information from these buoys were used for calibration and verification of both input wind fields and the numerical wave model.

Previous Studies

5. Prior to this effort, numerical hindcasts of the Great Lakes were conducted by Resio and Vincent (1976a, b, and c; 1977a and b; 1978), hereafter referred to as RV, for the US Army Corps of Engineers (COE) and by a number of Canadian firms for the Ontario Ministry of Natural Resources (1988a, b, and c). The RV study established the hindcast procedure for the Great Lakes that the present study employs, including guidance for the use of measured overland winds to estimate overlake winds. This hindcast was also the first attempt within the COE to use a numerical scheme for wave calculations instead of the standard empirical/analytical approach, such as the Sverdrup-Munk-Bretschneider method (Shore Protection Manual (SPM) 1984). The major differences between RV and the present study are (a) the length of the hindcast period and events hindcast; RV used up to a 69-year record (1907-1975) but only hindcast "storm events," whereas the present study uses a complete 32-year wind record (1956-1987); (b) the present study uses more recent wind information, which, because of improved technology, is of better quality than some of the pre-1950 data; (c) the present study considers the effects of ice cover, whereas the RV study did not, although RV did provide guidance to include ice effects in a probabilistic sense; (d) the present study reflects advances in understanding of the physics involved in wave generation, propagation, and dissipation and employs current techniques to model these processes. The RV classified "storm

events" as days with average wind velocities over the lake of 25 knots* or above, as recorded on the ships' anemometers. Results from RV were tabulated as return period statistics for use in design criteria at hindcast sites along the US coastline. The time series of wind and wave information was not archived.

6. The Canadian hindcasts were developed as part of a Shoreline Management Plan designed to fill the need for a wave climate database for the Great Lakes in Ontario. The approach was similar to that used in the present study. The overlake winds were estimated from several land-based meteorological stations (as per RV), and the presence of ice cover was included. The criterion employed to determine the extent of ice cover is similar to that used for the present study. The Canadian hindcasts produced a wave climate database for stations along the Canadian shoreline that were continuous in time. The time interval of each hindcast varies from 1971-1985 for Lake Erie, 1964-1983 for Lake Ontario, 1962-1970 for Lake Superior, and 1953-1987 for Lake Huron. Lake Michigan was not hindcast. The grid size and number of archived stations are specific for each lake and were selected to provide an accurate representation over the lake with the minimum number of sites. Because of damage during previous storms, shoreline erosion, and existing and proposed developments, these stations were considered priority sites by the Ministry of Natural Resource and Conservation Authority.

Procedure

7. The selection of a grid was based on the grids used previously in the RV study to allow comparison with the present study. A 10-statute-mile square grid covering the entire lake was generated. Most of the nearshore and a few midlake grid points were designated as stations at which all model data would be saved (i.e. save stations) (Figure 2). Based on this grid, a land-water boundary matrix was established (0 = land, 1 = water) for computational purposes. Although the model assumes deep water over the entire grid, bathymetric data were input to limit the wave height to 63 percent of the depth. The measured winds from land stations surrounding each lake were converted to an elevation of 10 m after being adjusted for the effects of air-water

* A table of factors for converting non-SI units of measurement to SI (metric) units is presented on page 3.

temperature differences and the land-water interface. These adjustments are discussed in more detail in the following section. The winds were interpolated over the grid at 3-hr intervals.

8. Measured wave data were obtained from NOAA buoys and the Canadian Marine Environmental Data Service (MEDS). Prior to the development of the full 32-year data set, the model was run for selected periods of time (corresponding to available NOAA and MEDS data), and the results were compared with measured data. Wind speeds were then modified, as necessary, as part of the model calibration process. Verification runs were then made for the entire set of available buoy data. Procedures for and results of model calibration and verification are discussed in more detail in subsequent sections.

9. Two data files were created and saved. One, referred to as the parameter file, contains a single record every 3 hr for 32 years for each station. This record includes station identification and location, wave height, peak spectral period, and average wave direction. The second file contains similar information in addition to the full two-dimensional (frequency and direction) distribution of spectral wave energy. The results of various parameter file analysis, including calculation of percent occurrence tables, mean and maximum monthly values, and return period statistics, are presented for the designated save stations. The location and depth of each station is given in Table 1.

PART II: DETERMINATION OF WIND FIELDS

10. The results of any numerical wave hindcast study depend heavily on the quality of the winds used to drive the model and are, therefore, only as good as the input data. In addition to the quality of the wind data, the length of the historical wind record is an important parameter. The longer the period of time that a particular parameter has been observed, the better are any estimates of statistical properties of that population. The only three sources of data with sufficient length of record for the present hindcast are (a) pressure observations at land stations, (b) synoptic weather maps derived from pressure observations, and (c) wind observations at land stations and on ships.

Source

11. The calculation of winds from pressure observations or fields requires the use of a planetary boundary layer model and some simplifying assumptions. Therefore, it was felt that a more straightforward approach should be used. Ship observations were not included because of the inconsistent nature of these measurements in space and time. The incorporation of this information was seen as too time consuming for the present long-term study. Ship wind speeds were used by RV since they addressed only "storm events," which by nature are short in duration. The wind directions recorded by ships were not used in RV since they were often inconsistent.

12. With these factors in mind, estimation of the wind fields over each of the Great Lakes was accomplished by using the most reliable, long-term, continuous wind observations that were available from both US and Canadian coastal land stations. This approach is limited by the distribution of measurement sites around the lakes, but it is considered to be the best alternative. On the US side, these data generally came from National Weather Service stations located at larger airports near the lakes. The Canadian data, supplied by the Canadian Climate Centre (CCC), came from airports and various other CCC weather stations around the lakes. Figure 3 shows the location of the stations used, and Table 2 provides the period of record available for each station. Buoy-measured winds were not included in the following procedure.

13. The wind data, commonly measured and recorded at hourly intervals, were sampled every 3 hr beginning at 00:00 Greenwich Mean Time (GMT) on 1 January 1956. A 3-hr interval was chosen because of the lack of continuous hourly data. Gaps of short duration were interpolated to provide a continuous time series. All data were then corrected to an elevation of 20 m using the standard 1/7th power law for the wind speed profile (Davenport 1960). This approximation, given by

$$U_{20} = U_z\left(\frac{20}{z}\right)^{\frac{1}{7}} \tag{1}$$

estimates the wind speed U_{20} at 20 m from the observed wind speed U_z at elevation z.

Corrections

14. Corrections for the air-water temperature difference and for the difference in frictional effects between land and water were then applied. These corrections were based on two empirical curves developed by RV (1976c), one relating the overland-overlake wind speed ratio to the air-water temperature difference and one relating overlake wind speed (U_w) to overland wind speed (U_l). The approximation of these curves is given by the following formula derived by Schwab and Morton (1984):

$$U_w = U_l\left(1.2 + \frac{1.85}{U_l}\right)\left[1.0 - \frac{\Delta T}{|\Delta T|}\left(\frac{|\Delta T|}{1920}\right)^{\frac{1}{3}}\right] \tag{2}$$

where U_l is given in meters per second at an elevation of 20 m and the air-water temperature difference ΔT is measured in degrees Celsius. Air-water temperature differences derived from ship observations and classified as a function of month and 10-deg direction intervals (Table 3) were obtained from RV (1976c).

15. Overlake winds were then estimated from the measured overland winds using a weighted inverse distance interpolation routine with an r^{-3} spatial weighting function, where r is the distance from the land station to the overwater grid point of interest. The final correction was an additional application of the 1/7th power law to correct the winds to an elevation of 10 m for input into the wave model.

PART III: WAVE MODEL

16. The wave model used in this study, DWAVE, was developed by Dr. Donald T. Resio of Offshore and Coastal Technologies, Inc. It is described in Resio and Perrie (1989) and in an unpublished contractor's report* available from the Wave Information Study (WIS) Project Office.

17. DWAVE is a FORTRAN computer code that simulates wave growth, dissipation, and propagation in deep water. The modeled spectra are represented as fully two dimensional in discretized frequency and direction bands. Propagation effects and source-sink mechanisms are computed in terms of variations of energy levels in each of these frequency-direction elements. All wave parameters, such as wave height, frequency of the spectral peak, and mean wave direction, are computed from these discrete elements. Figure 4 shows how energy is partitioned in a directional spectrum within DWAVE. As seen there, each frequency-direction increment is envisioned as a "bin," and these "bins" are centered on specified frequencies and directions.

18. The physics embodied in DWAVE represents the state of the art in present understanding of wave generation. It is the first discrete-spectral model to be based on an f^{-4} equilibrium range formulation, as supported by almost all past field experiments (Toba 1978, Forristall 1981, Kahma 1981, Kitaigorodskii 1983). As such, it represents the only model (including the third-generation models under development in Europe) that is consistent with energy conservation in the equilibrium range, as calculable from the complete or reduced Boltzmann integrals. The fetch-growth characteristics of DWAVE are similar to the Joint North Sea Wave Project (JONSWAP) relationships, i.e., wave energy increases linearly with fetch; and the duration-growth characteristics are roughly similar to those of Resio (1981) and the US Navy's Spectral Ocean Wave Model (SOWM).

19. DWAVE will run on computers ranging from desktop microcomputers to supercomputers. Many years of model development have led to an understanding of the "trade-offs" between avoiding unnecessary tedious calculations and maintaining numerical accuracy.

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* D. T. Resio and D. P. Bach, 1989, "Program DWAVE: Global/Regional, Deep-Water Wave Model User's Manual," Offshore and Coastal Technologies, Inc., Vicksburg, MS.

Theoretical Considerations

20. The model is based on the assumption that the wave field on a water body can be represented by a distribution of energy in discrete frequency and direction elements as schematized in Figure 4. The change in energy in each element as a function of time at all specified points on the water body is determined by the radiative transfer equation

$$\frac{\partial E_2(f,\theta)}{\partial t} = \vec{c}_g(f,\theta) \cdot \nabla \vec{E}_2(f,\theta) + \sum_{k=1}^{n} s_k(f,\theta) \tag{3}$$

where E_2 is the two-dimensional spectral energy at frequency f and direction θ. The group velocity is c_g, and S_k represents a number of functions that act as sources or sinks for energy. This equation is solved at each point in a square grid on the water body for successive intervals in time. The wind source term supplies energy to the sea surface and allows the wave spectrum to grow, and the wave-wave interaction term controls development of the spectrum.

21. Hasselmann (1962) derived an equation for four resonantly interacting waves, which he showed to be the lowest order interaction capable of achieving a net transfer of energy among spectral components in a statistically homogeneous wave field. Although Hasselmann et al. (1973, 1976) argued that these wave-wave interactions controlled the shape of a spectrum, they did not pursue the spectral balance responsible for this tendency. Tracy and Resio (1982) showed that a number of exact geometric similarities were exhibited within the collision integrals for wave-wave interactions; however, they made use of these similarities only to improve the efficiency of numerical integration for the full integral. Only recently Kitaigorodskii (1983) demonstrated that inherent in the collision integrals for wave-wave interactions are geometric constraints on the gradient of energy density in the equilibrium range of a spectrum. Kitaigorodskii pointed out the analogue between this "equilibrium" range behavior and the Komolgoroff range in turbulence. Kitaigorodskii's derivation is based solely on dimensional arguments and does not illustrate some of the important geometric scaling aspects inherent in the collision integral. A different derivation, one which follows the scaling aspects of this integral, is offered by Resio (1981).

22. This derivation implies that an equilibrium range in action density in a deepwater wave spectrum is representable as

$$n(\underline{k}) = B'k^{-4} \tag{4}$$

where B' is a constant with units time^{-1} and k is the wave number. Equation 4 is equivalent to that derived by Kitaigorodskii (1983), although the two methods of derivation differ significantly. Figure 5, from numerical calculations using the full collision integral, shows that, in deep water, an equilibrium range with this form does come very close to a constant energy flux equilibrium form. Flux divergence, which would produce steeper equilibrium range slopes, will occur for values of the power of k less than 4; and flux convergence, which would produce shallower equilibrium range slopes, will occur for values of the power of k greater than 4. Thus, there is a strong shape restoring-preserving tendency inherent in these energy fluxes due to wave-wave interactions.

Wave Propagation

23. In DWAVE, each frequency-direction element in the directional wave spectrum is propagated independently, according to an upstream differencing method. This technique is presently employed in the latest third-generation models in Europe. Its advantages in terms of stability, execution time, and set-up simplicity outweigh any gains by using higher order propagation schemes. During the development phase of DWAVE, several higher order propagation schemes were tested in actual wave simulations. Typical differences in spectral energy contents and total energies, under these "real-world" conditions, were typically only a few percent or less.

24. A latitude-longitude grid is used in DWAVE. Propagation along meridians (or components of propagation along meridians) is the equivalent of propagation along great circles. Consequently, there is no curvature away from a straight-line propagation along these axes; however, divergence/convergence effects must be incorporated for meridional propagation. For propagation along latitudes (parallels), there is no divergence/convergence; however, there is an angular curvature that must be considered.

Numerical Simulation of Wave Growth and Dissipation

25. The proper simulation of the physics of energy transfer into and out of each element in the directional spectrum is essential to accurate wave modeling. In DWAVE, the simulated sources and sinks are as follows:

- a. Energy transfer from the atmosphere to the wave field.
- b. Energy transfer among wave frequencies (wave-wave interactions).
- c. Energy transfer from waves to the atmosphere (swell propagating against the wind).
- d. Energy losses due to wave breaking in deep water.

Wind Input

26. The energy input into the spectrum is given by

$$\frac{\partial E_2(f,\theta)}{\partial t} = B(f,\theta)\,E_2(f,\theta) \tag{5}$$

where $B(f,\theta)$ is a function with units of time^{-1} given by

$$B(f,\theta) = z\left(\frac{uf_m}{g}\right) f \cos(\theta_{wv} - \theta_{wd}) \tag{6}$$

where

f = frequency

z = dimensionless constant

u = wind speed

f_m = peak frequency

g = acceleration of gravity

θ_{wv} = wave direction

θ_{wd} = wind direction

The constant z is composed of the drag coefficient, the ratio of air density to water density, and an empirical constant and should have a value between 0.16 and 0.24. The value used in this study is 0.2.

Description of Wave Growth and the Behavior of the Wave-Wave Interaction Source Term

27. From Hasselmann et al. (1973), Mitsuyasu (1968), and others, the following is obtained

$$\hat{E}_0 = J\hat{x} \tag{7}$$

where J is a dimensionless empirical constant. Nondimensional values of energy $\hat{E}_0$ and fetch $\hat{x}$ are given by

$$\hat{E}_0 = E_0 \frac{g^2}{u_*^4} \tag{8}$$

and

$$\hat{x} = \frac{gx}{u_*^2} \tag{9}$$

where

E_0 = total wave energy

u_* = friction velocity

x = fetch

The constant J ranges in value from 1.0×10^{-4} to 1.5×10^{-4}. The value used in this study is 1.28×10^{-4}. Substituting the definitions of $\hat{E}_0$ and $\hat{x}$ into Equation 7 and taking a derivative with respect to distance for the equation, the following is obtained:

$$\frac{\partial E_0}{\partial x} = J\frac{u_*^2}{g} \tag{10}$$

Thus, Equation 10 indicates that the rate of gain of energy with fetch is independent of fetch. Converting to a time rate of growth,

$$\frac{\partial E_0}{\partial t} = \langle c_g \rangle J\frac{u_*^2}{g} \tag{11}$$

where $\langle c_g \rangle$ is an average group velocity such that

$$\langle c_g \rangle = \frac{1}{E_0} \int_0^\infty \int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \vec{E}_2(f,\theta) \cdot \vec{c}_g d\theta df \tag{12}$$

If a parameter, β_1 , is defined such that

$$\beta_1 \, c_{gm} = \langle c_g \rangle \tag{13}$$

where c_{gm} is the group velocity of waves at the spectral peak (i.e., $c_g(f_m)$ where f_m is the frequency of the spectral peak), Equation 11 becomes

$$\frac{\partial E_0}{\partial t} = \beta_1 c_{gm} J \frac{u_*^2}{g} \tag{14}$$

In discrete spectral models, the radiative transfer equation,

$$\frac{\partial E_2(f,\theta)}{\partial t} = \vec{c}_g(f,\theta) \bullet \nabla \vec{E}_2(f,\theta) + \sum_{k=1}^{n} S_k(f,\theta) \tag{15}$$

where $S_k(f,\theta)$ represents energy input or loss at a spectral element with frequency f and direction θ due to the kth source term, is solved at every time step for each water point in the computational grid. In order to estimate important spectral balances and energy exchanges due to nonlinear wave-wave interactions, it is essential to know the location of the spectral peak. In the previous WIS model, as described by Resio (1981), the nonlinear wave-wave interaction source term is treated explicitly. A problem with this approach is that the location of f_m actually evolves during each time step and an explicit treatment which holds it constant over a time step can lead to significant underprediction of wave period.

28. To obtain an implicit representation for nonlinear source terms, begin by expressing the total energy in a spectrum in terms of a set of spectral parameters in a manner consistent with Equation 2.6 of Resio and Perrie (1989),

$$E_0 = \frac{1}{3} \lambda \alpha g (u_*^2 c_m)^{1/3} f_m^{-3} \tag{16}$$

where λ is a constant of proportionality and ranges in value from 1.5 to 2.0 *and* c_m is the phase velocity of the spectral peak. The value used in this study is 1.75. The constant α ranges in value from 0.035 to 0.05. The value used in this study is 0.045. This relationship is appropriate for self-similar spectra with an f^{-4} equilibrium range. As discussed by Resio and

Perrie (1989), spectra of this type can be written in a fashion analogous to the form of the JONSWAP spectrum, i.e.

$$E(f) = \alpha \frac{(u_*^2 c_m)^{\frac{1}{3}} g}{(2\pi)^3} f^{-4} \Psi\left(\frac{f}{f_m}\right) \tag{17}$$

where

$$\psi\left(\frac{f}{f_m}\right) = \gamma^{\exp\left[-\frac{(f-f_m)^2}{2(\sigma f_m)^2}\right]} \quad for\ f \geq f_m \tag{18}$$

or

$$\psi\left(\frac{f}{f_m}\right) = E(f_m) \exp\left[1 - \left(\frac{f}{f_m}\right)^4\right] \quad for\ \ f < f_m \tag{19}$$

and γ and σ are the JONSWAP coefficients. From the form of Equations 17, 18, and 19, it is apparent that the parameter λ is dependent on γ and σ in a fairly nonlinear fashion; however, the actual variability for reasonable values of γ and σ constrain λ to be somewhere between 1.5 and 2.0, so the net effect of variations in γ and σ is not too large. In DWAVE, the value of λ is set at a constant 1.76.

29. Returning to Equation 16 and making use of the deepwater definitions of phase and group velocities, i.e.

$$c = \frac{g}{2\pi f} \quad ; \quad c_g = \frac{g}{4\pi f} \tag{20}$$

gives

$$E_0 = Q_1 f_m^{-10/3} \tag{21}$$

where

$$Q_1 = \frac{\lambda \alpha_*}{3(2\pi)^{10/3}} u_*^{2/3} g^{4/3} \tag{22}$$

and α_* is α divided by the square root of the drag coefficient, and from Equation 14,

$$\frac{\partial E_0}{\partial t} = J\beta_1 \frac{g}{4\pi} \frac{u_*^2}{g} f_m^{-1} \tag{23}$$

If $R = f_m^{-10/3}$, then Equation 23 becomes

$$\frac{\partial Q_1 R}{\partial t} = J\beta_1 \frac{g}{4\pi} \frac{u_*^2}{g} R^{3/10} \tag{24}$$

Separating the variables and integrating yields

$$\frac{10}{7}\left(R^{7/10} - R_0^{7/10}\right) = \frac{J\beta_1}{Q_1 4\pi} u_*^2 (t - t_0) \tag{25}$$

where the subscript "0" refers to initial conditions at time t_0. Rearranging and substituting f_m back into Equation 21 yields

$$f_m^{-7/3} = f_m^{-7/3}\big|_{t_0} + \frac{7}{10} \frac{J\beta_1 u_*^2}{Q_1 4\pi} (t - t_0) \tag{26}$$

If all dimensional quantities are factored out, then the change in f_m over a time step is given as

$$f_m^{-7/3}\big|^{n+1} = f_m^{-7/3}\big|^{n} + \frac{J\beta_1}{\lambda\alpha_*} Q_3 \left(\frac{u_*}{g}\right)^{4/3} (t - t_0) \tag{27}$$

where the superscripts "n" and "$n+1$" refer to time-step counters and

$$Q_3 = \left(\frac{7}{10}\right) \frac{3\,(2\pi)^{10/3}}{4\pi} \tag{28}$$

Thus, the rate of change of f_m can be seen to depend on four parameters, J, λ, α_*, and β_1. Each of these parameters can be defined independently, J and α on an empirical basis and λ and β_1 from numerical constraints.

30. Equation 23 expresses a fundamental law for active wave generation. This can be converted into a nonlinear source term by equating S_{NL} to differences in energy densities

$$S_{NL}(f,\theta) = [\hat{E}(f)|^{n+1} - \hat{E}(f)|^{n}]\Phi(\theta - \theta_0) \tag{29}$$

where $\hat{E}(f)$ is the estimated value of the one-dimensional spectral density $E(f)$, $\Phi(\theta - \theta_0)$ is an angular function, and θ_0 is the mean wave propagation direction. The approach to a fully developed sea can be modeled by introducing a limiting parameter such that

$$T_m|^{n+1} = T_m|^{n} + p\frac{\partial T_M}{\partial t}\Delta t \tag{30}$$

where T_m is the peak period and p is given by

$$p = 1 \text{ if } f_m > f_{PM}$$

$$= 0 \text{ if } f_m \leq f_{PM}$$

and f_{PM} is the "fully" developed peak frequency given by

$$f_{PM} = Z_c \quad g/(2\pi u)$$

where Z_c is a dimensionless empirical constant (taken as 0.9 in DWAVE).

31. Swell decay in this model is based on the concept of energy loss by nonlinear fluxes. In this form, the total energy flux from the "rear-slope" portion of the spectrum is estimated as

$$\Gamma_E = \left[\frac{a_1(2\pi)^9}{g^4}\right]E_0^3 \; f_m^9 \tag{31}$$

where a_1 is a dimensionless empirical constant that ranges in value from 0.35 to 2.0. The value used in this study is 0.40. An explicit scheme is used to estimate the energy loss over the time step, and a part of the energy is redistributed to the forward face. A schematic of S_{NL} is shown in Figure 6 from Resio and Bach.*

32. In summary, DWAVE is a computer code that simulates the growth, propagation, and decay of wave energy as a function of space, time, frequency, and direction. Wave growth occurs through transfer of energy from the wind to the sea surface. Part of this energy results in surface gravity waves. As energy continues to flow into the spectrum, wave-wave interactions transfer energy from the midrange portion of the spectrum to both the forward face and

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* Resio and Bach, op. cit.

high-frequency regions. For constant wind input, eventually an equilibrium of energy versus frequency is reached. Wave energy is propagated in space through time as a function of frequency and direction of each of the discrete energy packets.

PART IV: MODEL CALIBRATION

33. Most numerical wave models require a certain amount of fine-tuning, or calibration, when first applied to a particular area. A model can be calibrated in several ways, including adjustment of certain internal parameters that control processes such as wave growth, propagation, and dissipation; adjustment of external parameters, such as input wind fields; or a combination of both. To determine if, and to what degree, the model used in the present study required calibration, modeled winds and waves taken from the grid point closest to the buoy location were compared with the same buoy-measured parameters for the period June-December 1980. Stated accuracy for the measured parameters is ±0.2 m, or 5 percent, for wave height; ±1.0 sec for spectral peak period; ±1.0 m/sec, or 10 percent, for wind speed; and ±10 deg for wind direction (Gilhousen et al. 1990). Time-series plots and percent distribution histograms of measured (Buoy 45005) versus modeled (WIS Sta 5) wind speed, wave height, and peak spectral wave period were examined. Figure 7a shows that the distribution of wind speed is significantly different, with the buoy exhibiting a larger (21 versus 10) percentage of wind speeds less than 4 m/sec, a considerably lower (39 versus 65) percentage of speeds between 4 and 6 m/sec, and a larger (40 versus 25) percentage of speeds greater than 6 m/sec. The resulting wave height distribution plot (Figure 7b) reflects the differences exhibited by the winds, particularly at the extremes. A difference in the distribution of peak periods is evident (Figure 7c), but not as dramatic.

34. Given the inherent problems in assimilating wind data from irregularly spaced (both spatial and temporal) observations and in determining how best to blend all the available data, it was felt that the input wind field was the most "free" parameter to vary for model calibration. The best approach was determined to be an adjustment to the input (modeled) wind speeds that would force a closer match to the measured wind speed distribution. For Lake Erie, this adjustment took the form:

$$\begin{aligned} y &= 1.53x - 2.44 \quad \text{for} \quad 2\ m/sec < x \le 4m/sec \\ y &= 1.37x - 1.28 \quad \text{for} \quad x > 4m/sec \end{aligned} \tag{32}$$

relating measured (y) and modeled (x) wind speeds. Speeds less than 2 m/sec were changed to 0.5 m/sec. The effect was to re-distribute the

modeled wind speeds, resulting in the distribution shown in Figure 8a. Wind directions were unchanged. This improved agreement (<4 m/sec, 21 versus 21 percent; 4 to 6 m/sec, 39 versus 40 percent; >6 m/sec, 40 versus 39 percent) in wind speeds resulted in the corresponding improvement in the wave height and peak period distributions shown in Figures 8b and 8c. Figures 9a and 9b are examples of time-history comparison plots of wave height and peak period using the adjusted wind speeds as input to the model. Tables 4 and 5 provide the various statistical parameters for all data from 1980. Based on this improved agreement, the above procedure was considered sufficient and was used for the entire 32-year hindcast.

PART V: VERIFICATION

35. An important question to ask in any study involving numerical models, whether used for hindcasting purposes as in the present study or as a forecasting tool, is, "How well does the simulated data reproduce, or predict, what has, or what will, occur?" The ability to answer this question with any degree of confidence depends on the availability and quality of field measurements within the study area. As was pointed out in the introduction, wave height measurements on Lake Erie prior to the installation of the NOAA buoy were scarce. The earliest source of available data is Coastal Engineering Research Center (CERC) gage data obtained during several short-term measurement programs in 1975 and 1976. Unfortunately, the data were so sparse and sporadic that they were deemed unusable for verification purposes.

36. The main source of verification data is the NOAA buoy which, at the time of this study, had provided data for varying portions of 7 years (1980-1986). In an effort to verify both the model and the corrections made to the input wind speeds, a procedure similar to that carried out for the calibration phase was undertaken. All available buoy data, including winds, from 1980 to 1986 were compared, using percent distribution as a guideline, to hindcast data from the same time and place. Figures 10a, b, and c show percent distributions for measured (Buoy 45005) versus modeled (WIS Sta 5) wind speed, wave height, and peak spectral wave period. Agreement between each set of distributions is quite good. The largest difference in wave heights is seen to occur at the 0.15-m range (Figure 10b), where measured exceeds modeled by approximately 9 percent. This difference is most likely the result of larger percent occurrence values for measured wind speeds in the 3- to 5-m/sec range (Figure 10a). Figures 11 and 12 show representative samples of time-history comparison plots. In general the agreement is good, although there seems to be a tendency for the model to underpredict the peaks. Tables 6 and 7 contain the wave height and peak period statistics for the 7-year period. The mean and maximum values agree very well. For comparison purposes, the data shown in Figure 9a have a correlation coefficient of approximately 0.7, similar to that for the entire wave height data set. Peak period is a characteristically unstable parameter, particularly during times of low wave energy, and would be expected to produce rather low correlation.

37. Although the NOAA buoy provided much needed information for the calibration of the winds and the verification of hindcast wave heights and

periods, it provided no information on wave direction. Directional wave measurements on the Great Lakes are rare, making verification of modeled wave direction difficult. Fortunately, a field experiment jointly conducted by NOAA's Great Lakes Environmental Research Laboratory (GLERL) and the University of Michigan during the fall of 1981 provided a small but valuable data set of measured wave parameters, including direction. The data are from a research tower located approximately 6 km off the southeast shoreline of Lake Erie (see Figure 3). Statistics for modeled and measured wave heights and periods are provided in Tables 8 and 9, while Figures 13 through 15 show time-history comparisons and scatterplots for wave height, period, and direction. Table 8 reveals an overestimation of modeled wave heights, although agreement between the maximum modeled and observed wave height is very good. Peak periods show reasonable agreement, exhibiting no real bias. Of particular interest is the information contained in Figure 15c, showing modeled-versus-measured wave directions. All directions are measured clockwise from True North and are "coming from" the stated value. The agreement seems reasonably good for directions greater than 180 deg, but between 0 and 180 deg, there is considerable disagreement. A possible explanation for this result can be found by examining Figures 16 and 17 and by considering the geometry of Lake Erie. Figure 16 is a plot of modeled wind versus modeled wave directions. The results indicate that, in general, the model produces waves moving in the same direction as the wind. A possible exception is seen for wind directions of 180 to 225 deg (offshore), where the corresponding wave directions are often shifted to the 225 to 270-deg band. Figure 17 is a plot of measured wind versus measured wave directions. It agrees reasonably well with Figure 16 for wind directions greater than 180 deg, but rather poorly for wind directions between 90 and 180 deg, where it shows rather large deviations between wind and wave directions. Waves produced under these circumstances are fetch-limited and, according to Donelan (1980), may diverge considerably from the wind direction towards the long fetch direction. For Lake Erie, the maximum fetch directions are east-northeast and west-southwest, directions that seem to be favored in the measured data. This phenomenon may account for the deviations exhibited in Figures 16 and 17. The lack of any deviation for wind directions between 90 and 180 deg in Figure 16 is under investigation, but is most likely the result of the way fetch-limited conditions are handled in the model. In addition, the measured data may reflect bottom effects that are absent from the deepwater model results. The differences exhibited

between Figures 16 and 17, for whatever the reasons, explain the disagreement in Figure 15c for wind directions between 0 and 180 deg.

38. Based on the results of the calibration and verification phases, it is believed that the hindcast data are within the stated accuracy of the measured parameters and therefore represent a reliable estimate of the actual wave conditions.

PART VI: ESTIMATION OF ICE CONCENTRATION

39. Lake Erie, the shallowest of the five Great Lakes with a mean depth of 19 m, can essentially be divided into three basins: the shallow western basin situated west of Point Pelee, the deeper central basin located between Point Pelee and Long Point, and the deepest eastern basin lying east of Long Point. In addition to being the shallowest, Lake Erie also has the smallest volume of all the Great Lakes. The combination of these factors allows the temperature of the lake to respond very quickly to changing atmospheric conditions. During a "normal" Great Lakes winter, the ice cover on Lake Erie generally exceeds 90 percent. One obvious effect of this extensive icing over is a reduction in the size of the lake, resulting in both the elimination of some or all of the 53 stations of interest and a significant change in the open water available for wave generation. The number and location of stations either lost or impacted by the reduced fetch depend on whether it is early, middle, or late winter.

40. Given the high percentage of ice coverage experienced by Lake Erie during a normal winter, any effort to develop a long-term wave database would be incomplete without including the resulting effects. To accomplish this, additional model runs using ice-modified, land-water boundary data were made for the same 32-year period as the open-water hindcast.

41. Land-water matrix modification was made possible by using an extensive, 20-winter, digital data set compiled by the Great Lakes Environmental Laboratory (GLERL) of the NOAA (Assel et al. 1983). This database consists of ice concentration observations, beginning in the winter of 1960 and including all of the Great Lakes, made by both US and Canadian government agencies. The data are partitioned into nine half-month intervals starting with the latter half of December. Ice concentration values are given in increments of 10 percent from 0 (open water) to 100 (total ice cover) for individual grid cells measuring 5 km square.

42. The GLERL analyzed each half-month data set to provide the maximum, minimum, average, median, and modal ice concentrations for each 5-km cell. The median value, which represents an estimate of the 50-percent point of the ice concentration probability distribution, is referred to as the "normal" winter ice concentration. This particular statistical value was chosen because it was "subjectively determined that the median ice concentration patterns provided the most coherent pattern of the progression of ice-cover

formation and decay over the winter season" (Assel et al. 1983). It was decided, therefore, that the GLERL-derived, median ice concentration values for each of the nine half-month time periods would provide the best data for modifying the original land-water boundary matrix.

43. The procedure for incorporating the progression and decay of the time-dependent ice cover was complicated by the fact that different grid cell sizes were used for mapping the ice concentration (5 by 5 km) and for hindcasting the waves (16 by 16 km). To facilitate a direct relationship, ice-concentration values from a block of nine grid cells (three by three) were averaged to produce one value corresponding to a cell that was approximately the same size as a hindcast grid cell. If the ice-concentration value in this larger cell was 50 percent or greater, it was considered, for modeling purposes, to be totally covered, and the corresponding hindcast grid point was changed from a water point to a land point.

44. This procedure resulted in the formation of nine half-month land-water boundary matrices reflecting the various stages of ice-cover development and decay (Figures 18a-i). The hindcast model was then re-run for the 32-year period, using the appropriate matrix for each date. The results were again summarized in the form of percent occurrence tables, mean and maximum monthly values, and return period statistics.*

* Appendices C (Summary Tables, Ice Conditions) and D (Return Period Tables, Ice Conditions) are available for loan by request from the WES Technical Information Center Library or the WIS Project Office, USAE Waterways Experiment Station, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199.

PART VII: EXPLANATION OF SUMMARY TABLES

Percent Occurrence Tables

Description

45. Two types of tables are printed: azimuth tables and tables for all directions. The azimuth tables give the percent occurrence of waves in height and period ranges for specified direction bands at each station. The title of each table provides station identification and azimuth, or midpoint angle for each of the sixteen 22.5-deg direction bands (Table 10). The period ranges were derived from the period ranges available from the WIS hindcast model (Table 11), and the height ranges are in 0.25-m increments. Values in the azimuth tables represent the percentage of the 32-year period during which waves occur from the specified azimuth range for the indicated height and period ranges. The values have been multiplied by 1,000 to allow more accuracy while using less printing space. Summations of period and height ranges are provided in the last column and row of each table. The summations also have been multiplied by 1,000. The last line in each azimuth table contains the following information for the specified azimuth range and station:

- a. The mean wave height H .
- b. The largest H .
- c. The mean spectral peak period T_p .
- d. The number of cases (wave occurrences computed at 3-hr intervals over the length of the hindcast for that direction band).

46. The all-directions table for each station is printed following the 337.5-deg azimuth table for each station. This table gives the percent occurrence of waves within specified height and period ranges coming from all directions. Values in the all-directions table are multiplied by 100. The parameters listed in the last line of the table are derived from all directions for the full 32 years, and the total number of cases (93,504) is the number of cases calculated in the 32 years analyzed.

Use of the tables

47. The tables have been developed to produce the most detailed information available in a summary report.

Example

48. To find the number of hours that waves of 0.50 to 0.74 m and 3.0 to 3.9 sec are expected to occur from the 292.5-deg band at Sta 1 for the 32-year interval, the value read in the table for the specified station, azimuth, height, and period should first be divided by 1,000, which for this example yields 2.483 percent (Appendix A). Then 2.483 is divided by 100 to give the probability (0.02483) and multiplied by the number of hours for the 32-year interval (93,504 cases times 3 hr = 280,512 hr) to yield the number of hours that the specified wave is expected to occur. The simple conversion process is:

$$\frac{\text{Value read in table}}{1{,}000 \times 100} \times \text{number of hours in time interval} = \text{number of hours specified wave is expected to occur}$$

For this example:

$$\frac{2.483}{1{,}000 \times 100} \times 280{,}512 \text{ hr} = 6{,}965 \text{ hr}$$

Wave Rose Diagrams

Description

49. The wave rose diagrams use wave height H and wave direction D and present analyses of the 32 years of hindcast data. The diagrams show the percent occurrence of H ranges from eight (45-deg) direction bands. The percentage of waves occurring from each direction for the specified station is displayed in a triangle at the end of each leg of the diagram.

50. As in most wave rose diagrams, the width of each bar segment indicates the H range, and the length of the bar segment indicates the percent occurrence of waves from the specified direction. The distance between each circle in the diagram is 20 percent. Each leg of the diagram represents 22.5 deg to either side of the primary direction of the leg. For example, the leg to the north represents waves coming from 337.5 deg (NNW) through 0 deg (N) to 22.5 deg (NNE).

Use of the diagrams

51. The diagrams are intended as visual aids and are not appropriate for detailed analyses.

Example

52. The wave rose diagram for Sta 1 (Appendix A) indicates that 10 percent of the waves were from the east, 90-deg band (waves moving east to west), and of the 10 percent, approximately 38 percent were 0.0 to 0.4 m, about 42 percent were 0.5 to 0.9 m, about 18 percent were 1.0 to 1.4 m, etc. The total for each leg is 100 percent for the specified direction.

Mean H, Largest H, and 32-Year Statistics Tables

Description

53. Two tables that summarize the mean and largest H for each month and year are provided for each station (Appendix A). The mean table also provides a mean monthly value and mean yearly value of H. The largest H table provides the largest H hindcast for each month in each year. The 32-year statistics tables provide the following:

a. Mean H.

b. Mean T_p.

c. Most frequent D band.

d. Standard deviation of H.

e. Standard deviation of T_p.

f. Largest H.

g. T_p of largest H.

h. D of largest H.

i. Date and time (GMT) of largest H.

Use of the tables

54. The tables can be used as a quick reference in determining estimates of the wave climate in an area.

Example

55. To determine the mean H at Sta 1 for January 1956, simply read the value in the specified column and row (Appendix A). The mean H for 1956 is given in the MEAN column opposite 1956. The mean H for all January's is given in the MEAN row under JAN. For this example:

a. The mean H for JAN 1956 = 0.5 m.

b. The mean H for 1956 = 0.6 m.

c. The mean H for all JAN's = 0.6 m.

The largest H table can be read in a similar fashion, and by scanning the columns and rows, additional information can be determined:

a. The largest H for JAN 1956 = 1.2 m.

b. The largest H for 1956 = 1.6 m.

c. The largest H for all JAN's = 2.1 m.

Return Period Tables

Description

56. An analysis of extreme storm wave heights was performed for each of the save stations. The procedure, developed by Goda (1988) and currently available in CERC's Automated Coastal Engineering System, fits five candidate probability distributions to a series of ranked extreme wave heights. In the present study, a Fisher-Tippett Type I distribution was chosen because it provided the best overall match to the input data. The 32-year extremal statistic tables (Appendix B) are in the following format:

a. Wave heights for recurrence intervals of 2, 5, 10, 20, and 50 years are listed.

b. The standard error of wave height for the specified return period is included in parentheses next to each wave height estimate.

c. Angle Classes 1, 2, and 3 are defined as viewed by an observer on shore (Figure 19):

(1) Angle Class 1 - Mean wave approach angle greater than 30 deg to right of normal to shore.

(2) Angle Class 2 - Mean wave approach angle within 30 deg to either side of normal to shore.

(3) Angle Class 3 - Mean wave approach angle greater than 30 deg to left of normal to shore.

(4) Angle Class All - includes all directions.

57. Table 12 lists the azimuths of the vectors normal to the shoreline for each station.

Use of the table

58. Estimates of extreme wave heights and their standard errors can simply be read from the table for the desired return period and station. Table 13 provides the factor by which the standard error should be multiplied to obtain bounds for various levels of confidence and the corresponding

probability of exceeding the upper bound. Table 14 can be used to find the probability of one or more waves, or larger waves, of a specified return period occurring within 1, 10, 25, or 50 years.

Example

59. Wave height values for specified return periods are simply read from the table for the desired station. For example, the 50-year maximum for Sta 1, Angle Class 1, is 2.0 m. The 50-year maximum for Sta 1, all directions, is 2.5 m. Table 14 shows that the 2.5-m extreme wave height has a probability of 0.18 of being equaled or exceeded at least once in 10 years.

PART VIII: RESULTS

60. A 32-year time series of historical wave heights, periods, and directions has been developed for Lake Erie using the latest version of CERC's deepwater wave model. The data presented in this report, in the form of graphs and tables, serve to verify the hindcast procedure as well as present a concise and useful summary of a very large data set.

61. Information contained in this report can be quite useful for initial assessments, but users must keep in mind that the results from this hindcast represent deepwater conditions, and, as such, should be used only as approximations to coastal conditions. For detailed coastal wave information, such as that required for the design, construction, operation, and maintenance of coastal structures, one must take advantage of the full two-dimensional spectrum (available on magnetic tape) from the nearest deepwater point and use an appropriate shallow-water wave transformation model to bring the waves to the point of interest.

62. One of the more important parameters reported is the return period wave height. It is often this extreme value that guides the design of many coastal structures, such as selection of the appropriate rock size for a jetty or breakwater. Coastal engineers, both within the COE and in the private sector, responsible for the design of coastal structures on the Great Lakes have relied heavily on the results of RV for estimates of extreme waves. The return period wave heights estimated in this study were compared with those reported in RV. The results, shown in Figures 20a-d and in Table 15, compare the wave heights at co-located stations for return periods of 5, 10, 20, and 50 years, respectively. Each plot shows three distinct regions of varying agreement, roughly corresponding to the three different basins. Sta 47, 1, 2, and 3 are located in the shallow, western basin, where the extreme wave heights estimated in the present study (WIS) are always lower than the RV estimates. Sta 6 through 16, located in the central basin, exhibit the best agreement between two estimates, with the 5- and 10-year WIS values biased slightly high and the 20- and 50-year WIS values biased slightly low. Sta 17 through 25 are, for the most part, located in the eastern basin. It is this region that shows the greatest divergence in extreme wave height estimates, with WIS values exceeding RV values by as much as 1.5 m. It is felt that the WIS estimates are more realistic given the fetch lengths involved and the nature of the storms that pass over the area. As an example, the SPM (1984)

nomograms of deepwater wave height prediction suggest that Sta 20, with an estimated fetch of 240 km to the southwest, could experience a 6.0-m wave given a wind speed of 28 m/sec blowing for approximately 8 hr. This agrees quite well with the WIS estimate of 6.4 m reported for the 50-year return period at Sta 20. Although these curves are for monochromatic wave conditions, they do serve to indicate that the return period wave heights estimated in the present study are realistic and that, perhaps, the RV estimates for these stations are low.

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Table 1

Lake Erie Stations

Station	Latitude,deg N	Longitude,deg W	Depth, m
1	41.73	83.27	5
2	41.73	83.08	9
3	41.73	82.88	9
4	41.58	82.88	6
5	41.73	82.50	9
6	41.43	82.50	10
7	41.58	82.30	12
8	41.58	82.10	15
9	41.58	81.90	17
10	41.58	81.72	14
11	41.73	81.52	17
12	41.87	81.32	20
13	41.87	81.13	17
14	42.02	80.93	22
15	42.02	80.73	19
16	42.02	80.55	13
17	42.15	80.35	20
18	42.30	80.15	25
19	42.30	79.97	30
20	42.45	79.77	45
21	42.45	79.57	30
22	42.58	79.37	30
23	42.58	79.18	16
24	42.73	78.98	12
25	42.73	79.18	20
26	42.73	79.37	26
27	42.73	79.57	23
28	42.73	79.77	30
29	42.73	79.97	15
30	42.73	80.15	10
31	42.58	79.97	48
32	42.45	80.15	41
33	42.45	81.35	19
34	42.45	80.55	16
35	42.45	80.73	19
36	42.58	80.93	15
37	42.58	81.13	15
38	42.58	81.32	11
39	42.45	81.52	18
40	42.30	81.72	20

(Continued)

Table 1 (Concluded)

Station	Latitude, deg N	Longitude, deg W	Depth, m
41	42.15	81.90	17
42	42.15	82.10	20
43	42.02	82.30	17
44	41.87	82.68	10
45	41.87	82.88	10
46	41.87	83.08	8
47	41.87	83.27	6
48	41.87	81.90	23
49	42.15	81.13	22
50	42.30	80.35	14
51	42.58	79.57	43
52	41.87	82.30	14
53	41.73	82.30	16

Table 2

Lake Erie Input Wind Stations

and Period of Record

Station	Period of Record
Buffalo	1956 - 1987
Cleveland	1956 - 1987
Detroit	1956 - 1987
Erie	1956 - 1987
Toledo	1956 - 1987
Point Pelee, Ont.	1975 - 1980 1982 - 1986
Simcoe, Ont.	1962 - 1985

Table 3

Air-Sea Temperature Differences, °C

Dir	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
E	-8.4	-5.3	-1.8	1.5	2.5	2.7	1.6	-1.0	-2.7	-2.6	-3.8	-5.8
	-6.4	-4.6	-1.3	1.2	3.2	2.8	1.2	-0.8	-1.7	-3.3	-2.9	-7.6
	-4.3	-7.8	-2.6	1.1	2.7	3.7	2.4	0.0	-2.5	-3.3	-4.0	-6.9
	-7.0	-5.2	-2.1	1.3	2.9	2.8	0.8	-0.8	-2.3	-2.6	-3.5	-5.7
	-6.9	-5.5	-3.7	1.8	3.0	3.6	0.8	0.2	-2.4	-3.1	-3.0	-7.3
	-7.1	-8.8	-1.7	1.9	3.7	3.8	2.1	0.1	-1.2	-2.9	-2.9	-6.3
	-5.8	-6.8	2.0	1.7	3.4	3.6	1.7	-1.1	-2.5	-1.7	-3.5	-6.1
	-6.3	-3.6	-1.9	2.1	3.4	3.6	1.1	-0.8	-2.2	-2.3	-4.1	-6.3
	-6.4	-2.6	1.3	2.3	3.6	3.7	1.0	-0.6	-1.8	-1.7	-3.6	-6.3
N	-8.6	-3.0	-1.4	1.6	4.3	4.4	1.5	0.6	-1.3	-1.2	-3.5	-5.2
	-6.1	-4.3	0.3	2.7	4.2	4.0	2.6	-0.5	-1.6	-1.1	-3.0	-6.3
	-5.3	-3.0	0.7	2.3	4.0	4.2	2.0	0.6	-0.8	-0.7	-3.3	-5.7
	-3.9	-3.5	-1.0	3.1	3.6	4.7	1.8	-0.5	-1.0	-0.7	-3.0	-5.4
	-5.8	-1.5	2.2	2.4	4.1	4.4	2.9	-0.4	-0.1	0.1	-2.2	-5.4
	-2.9	-2.2	0.1	3.0	4.2	4.5	2.6	0.5	0.0	-0.1	-2.2	-5.2
	-6.3	-2.8	1.1	3.0	4.9	5.2	3.3	0.7	0.9	0.5	-2.4	-3.7
	-5.0	-2.0	1.0	3.0	4.5	5.3	2.5	1.0	0.7	0.6	-1.3	-3.9
	-3.5	-1.9	1.3	3.3	4.3	5.1	2.9	1.5	1.1	0.6	-0.5	-2.3
W	-3.2	-2.1	1.1	2.5	4.2	5.2	3.2	1.9	1.3	0.1	-0.7	-2.9
	-3.4	-2.4	-0.8	3.1	4.3	5.2	2.6	1.8	1.0	0.1	-0.2	-2.9
	-5.1	-1.8	0.6	2.6	4.1	4.3	2.9	1.6	0.1	-0.1	-1.0	-3.7
	-5.1	-1.6	1.7	3.1	4.1	4.8	3.1	1.0	-0.4	-0.9	-2.4	-3.8
	-4.8	-4.3	1.8	2.4	5.0	5.1	2.4	1.1	0.3	-0.8	-2.2	-4.8
	-6.3	-4.0	0.4	2.4	3.9	5.1	2.5	1.7	0.1	-2.2	-2.4	-4.6
	-5.6	-5.7	-0.2	2.2	3.6	5.8	2.4	1.1	-0.9	-1.9	-2.9	-4.3
	-8.4	-6.2	-0.9	3.2	4.3	5.6	2.1	0.9	-1.2	-1.8	-4.1	-6.2
	-9.0	-6.4	-0.6	2.6	4.0	4.4	2.1	0.4	-1.1	-2.6	-5.2	-7.1
S	11.0	-8.0	-1.3	2.3	2.6	4.3	3.2	-0.2	-1.4	-2.9	-5.2	-9.4
	11.3	-7.1	-2.3	1.7	2.9	3.6	3.3	0.3	-1.8	-2.3	-5.4	-8.4
	11.7	-5.9	-2.8	0.1	2.3	3.4	1.9	0.1	-2.1	-3.0	-5.0	-8.2
	11.9	-8.2	-5.1	1.7	2.3	3.4	2.0	-0.3	-2.2	-3.7	-5.1	-7.9
	10.2	-8.6	-3.2	0.8	2.4	2.2	1.2	-0.6	-3.4	-4.0	-5.0	-8.3
	-9.2	-7.6	-3.9	0.6	2.6	3.3	2.2	-1.2	-2.2	-4.2	-4.4	-6.8
	-9.0	-8.2	-3.5	0.4	2.1	2.8	2.4	-0.9	-3.1	-3.8	-4.0	-6.3
	-8.6	-7.1	-2.9	1.0	2.5	2.8	1.2	-1.4	-2.2	-4.1	-4.7	-5.6
	-9.4	-6.4	-3.3	1.0	2.6	2.9	1.6	-0.6	-3.3	-3.9	-4.9	-6.3

Note: Columns represent averages of air-sea temperature differences by month. Rows represent averages of air-sea temperature differences by wind vector direction within 10-deg classes (Class 1 = due east, 10 = due north, 19 = due west, 28 = due south).

Table 4

Wave Height Statistics

Lake Erie 1980

Statistical Parameters	Buoy 45005, m	WIS Sta 5, m
Mean	0.62	0.62
Std dev about mean	0.38	0.36
Maximum value	2.20	2.10
Rmse	0.27	
Correlation coefficient	0.74	
Scatter index	0.43	
Least squares (x = buoy, y = WIS)		
Slope	0.69	
Intercept	0.19	
No. Observations	1,230	

Table 5

Peak Period Statistics

Lake Erie 1980

Statistical Parameters	Buoy 45005, sec	WIS Sta 5, sec
Mean	3.29	3.59
Std dev about mean	0.81	0.77
Maximum value	6.70	7.00
Rmse	0.84	
Correlation coefficient	0.51	
Scatter index	0.26	
Least squares (x = buoy, y = WIS)		
Slope	0.48	
Intercept	2.01	
No. Observations	1,230	

Table 6

Wave Height Statistics

Lake Erie 1980-1986

Statistical Parameters	Buoy 45005, m	WIS Sta 5, m
Mean	0.61	0.63
Std dev about mean	0.44	0.39
Maximum value	3.10	2.80
Rmse	0.32	
Correlation coefficient	0.70	
Scatter index	0.53	
Least squares (x = buoy, y = WIS)		
Slope	0.62	
Intercept	0.25	
No. Observations	9,797	

Table 7

Peak Period Statistics

Lake Erie 1980-1986

Statistical Parameters	Buoy 45005, sec	WIS Sta 5, sec
Mean	3.35	3.69
Std dev about mean	0.89	0.90
Maximum value	7.70	8.00
Rmse	0.92	
Correlation coefficient	0.54	
Scatter index	0.27	
Least squares (x = buoy, y = WIS)		
Slope	0.55	
Intercept	1.85	
No. Observations	9,797	

Table 8

Wave Height Statistics

Lake Erie 1981

Statistical Parameters	Tower, m	WIS Sta 16, m
Mean	0.76	0.93
Std dev about mean	0.53	0.57
Maximum value	2.76	2.90
Rmse	0.41	
Correlation coefficient	0.77	
Scatter index	0.54	
Least squares (x = tower, y = WIS)		
Slope	0.84	
Intercept	0.30	
No. Observations	289	

Table 9

Peak Period Statistics

Lake Erie 1981

Statistical Parameters	Tower, sec	WIS Sta 16, sec
Mean	4.20	4.18
Std dev about mean	1.28	1.31
Maximum value	8.00	7.00
Rmse	1.11	
Correlation coefficient	0.63	
Scatter index	0.26	
Least squares (x = tower, y = WIS)		
Slope	0.64	
Intercept	1.48	
No. Observations	289	

Table 10

Ranges for Direction Intervals in Percent Occurrence Tables

Midband deg	Range deg
0.0	348.75 < D < 11.25
22.5	11.25 < D < 33.75
45.0	33.75 < D < 56.25
67.5	56.25 < D < 78.75
90.0	78.75 < D < 101.25
112.5	101.25 < D < 123.75
135.0	123.75 < D < 146.25
157.5	146.25 < D < 168.75
180.0	168.75 < D < 191.25
202.5	191.25 < D < 213.75
225.0	213.75 < D < 236.25
247.5	236.25 < D < 258.75
270.0	258.75 < D < 281.25
292.5	281.25 < D < 303.75
315.0	303.75 < D < 326.25
337.5	326.25 < D < 348.75

Table 11

Frequency Ranges Used in WIS Hindcast Model

Midband Frequency Hz	Midband Period sec	Band Range Period sec	Grouping for Percent Occurrence Tables sec
0.40	2.5	2.22 < T < 2.78	< 3.0
0.33	3.0	2.78 < T < 3.23	3.0 - 3.9
0.29	3.4	3.23 < T < 3.70	
0.25	4.0	3.70 < T < 4.17	
0.23	4.3	4.17 < T < 4.44	4.0 - 4.9
0.22	4.5	4.44 < T < 4.65	
0.21	4.8	4.65 < T < 4.88	
0.20	5.0	4.88 < T < 5.13	
0.19	5.3	5.13 < T < 5.41	5.0 - 5.9
0.18	5.6	5.41 < T < 5.71	
0.17	5.9	5.71 < T < 6.06	
0.16	6.3	6.06 < T < 6.45	6.0 - 6.9
0.15	6.6	6.45 < T < 6.90	
0.14	7.1	6.90 < T < 7.41	7.0 - 7.9
0.13	7.7	7.41 < T < 8.00	
0.12	8.3	8.00 < T < 8.70	8.0 - 8.9
0.11	9.1	8.70 < T < 9.52	9.0 - 9.9
0.10	10.0	9.52 < T < 10.52	10.0 - 10.9
0.09	11.1	10.52 < T < 11.76	11.0 - longer
0.08	12.5	11.76 < T < 13.24	

Table 12

Azimuths of Vectors Normal to the Shoreline

Station Location	Azimuth	Station Location	Azimuth
1	46	27	174
2	26	28	170
3	32	29	170
4	0	30	180
5	0	31	270
6	0	32	185
7	0	33	196
8	344	34	180
9	11	35	196
10	329	36	180
11	312	37	180
12	333	38	144
13	339	39	136
14	344	40	136
15	340	41	193
16	342	42	154
17	335	43	141
18	327	44	173
19	328	45	170
20	326	46	136
21	324	47	121
22	324	48	312
23	320	49	340
24	328	50	328
25	180	51	320
26	180	52	141
		53	344

Table 13

Confidence Interval Bounds for Extreme Wave Heights

Confidence Level	Bounds Around Wave Height	Probability of Exceeding Upper Bound %
80	+/-1.28	10.0
85	+/-1.44	7.5
90	+/-1.65	5.0
95	+/-1.96	2.5
99	+/-2.58	0.5

Table 14

Probabilities of Extreme Wave Heights*

Return Period years	Probability of Wave Height Being Equaled or Exceeded at Least Once in Given Number of Years			
	1	10	25	50
5	0.20	0.89	>0.99	>0.99
10	0.10	0.65	0.94	>0.99
20	0.05	0.40	0.71	0.90
50	0.02	0.18	0.40	0.61

* From Reich (1983).

Table 15

Return Period Wave Heights from RV and Present Study (P)

Station No.			Return Period, years							
			5		10		20		50	
RV	P	Depth,m	RV	P	RV	P	RV	P	RV	P
1	47	6	3.2	1.8	3.7	1.8	4.2	1.9	4.8	2.0
2	1	5	3.1	2.2	3.7	2.3	4.2	2.4	4.9	2.5
3	2	9	2.9	2.6	3.4	2.7	3.8	2.8	4.4	2.9
4	3	9	3.0	2.6	3.5	2.7	3.9	2.8	4.5	2.9
6	6	10	3.5	3.3	3.9	3.5	4.2	3.6	4.7	3.8
7	7	12	3.4	3.6	3.7	3.7	4.1	3.8	4.7	4.0
8	8	15	3.2	3.9	3.5	4.1	3.8	4.2	4.3	4.4
9	9	17	3.4	4.1	3.9	4.2	4.4	4.3	5.1	4.5
10	10	14	3.9	3.9	4.2	4.0	4.5	4.2	5.0	4.3
11	11	17	3.7	4.2	4.1	4.3	4.5	4.5	5.0	4.7
12	12	20	3.7	4.3	4.0	4.4	4.4	4.6	4.9	4.8
13	13	17	3.9	4.0	4.3	4.1	4.6	4.2	5.1	4.4
14	14	22	4.0	4.4	4.3	4.6	4.7	4.8	5.2	4.9
15	15	19	4.0	4.5	4.4	4.6	4.8	4.8	5.3	5.0
16	16	13	4.1	4.2	4.5	4.3	4.8	4.5	5.4	4.6
17	17	20	4.1	4.9	4.5	5.1	4.9	5.2	5.4	5.5
18	18	25	3.9	5.1	4.2	5.3	4.5	5.5	4.8	5.8
19	19	30	4.0	5.4	4.3	5.7	4.5	5.9	4.9	6.2
20	20	45	4.0	5.6	4.2	5.9	4.5	6.1	4.8	6.4
21	21	30	4.1	5.3	4.4	5.6	4.6	5.8	5.0	6.0
22	22	30	3.4	5.1	3.7	5.3	3.9	5.6	4.3	5.8
23	25	20	3.7	5.3	3.9	5.4	4.2	5.6	4.5	5.9
24	24	12	4.8	4.5	5.3	4.7	5.7	4.8	6.3	5.0

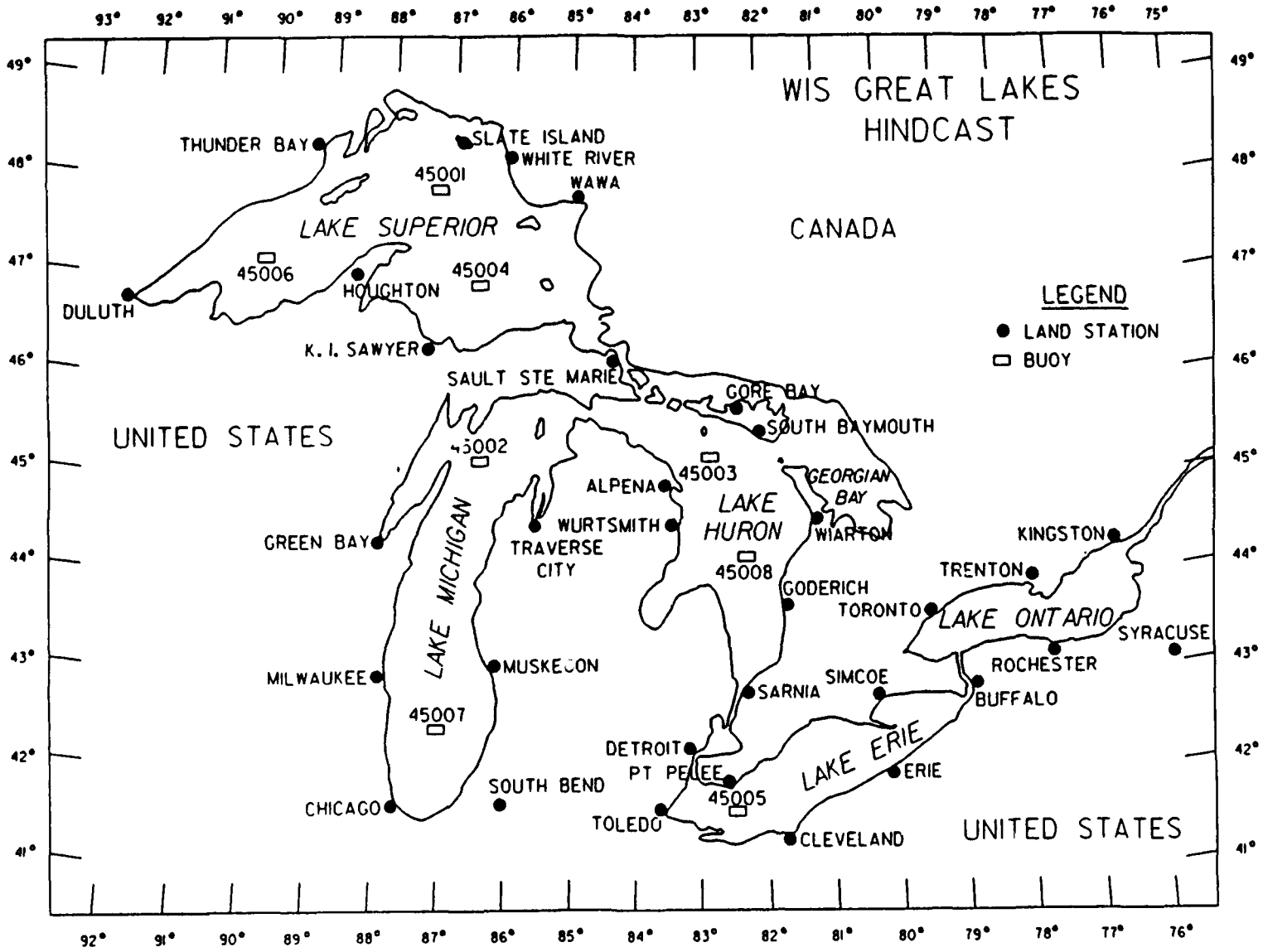


Figure 1. Location map showing placement of NOAA buoys

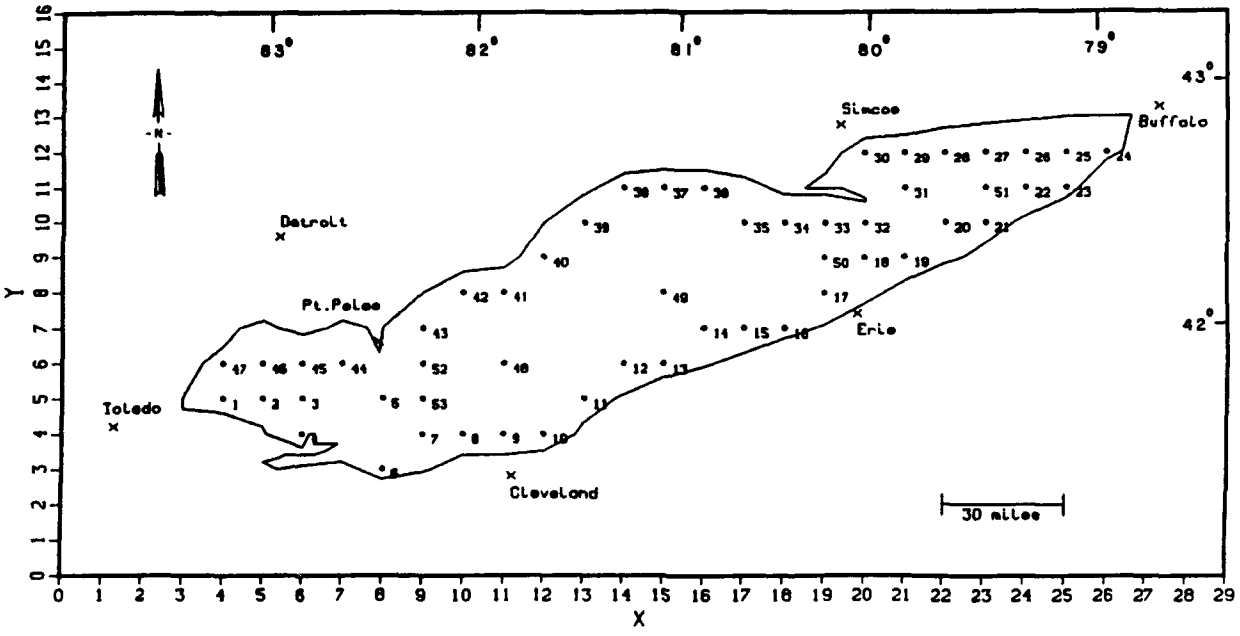


Figure 2. Station location map of lake Erie

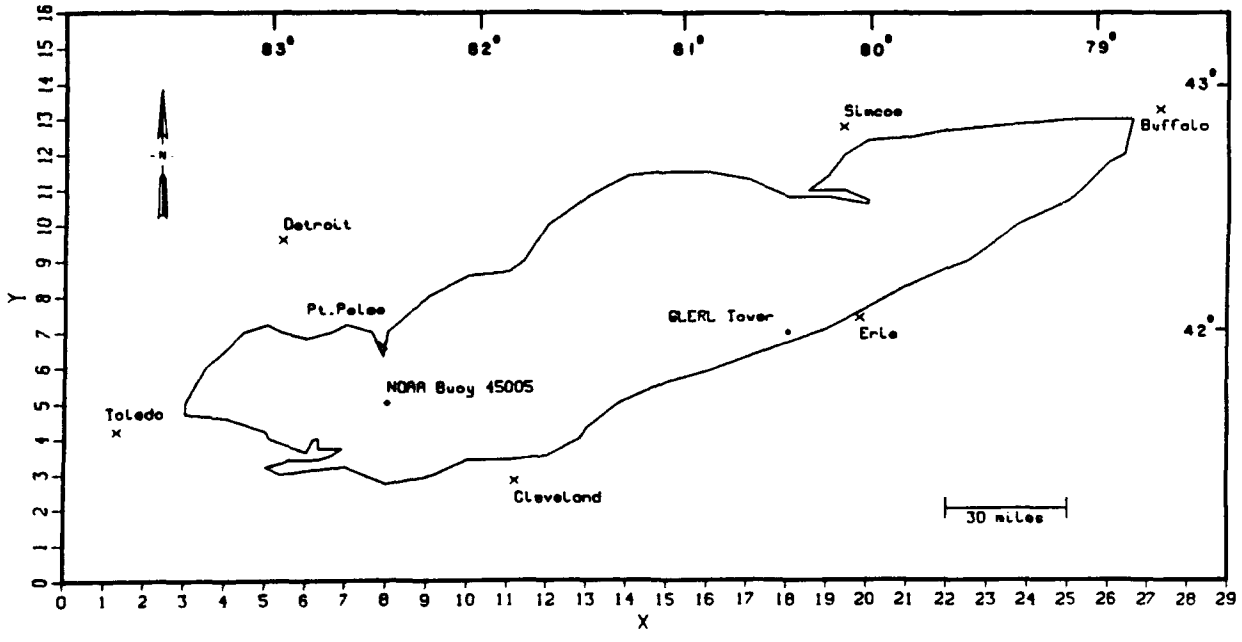


Figure 3. Location of input wind stations listed in Table 2

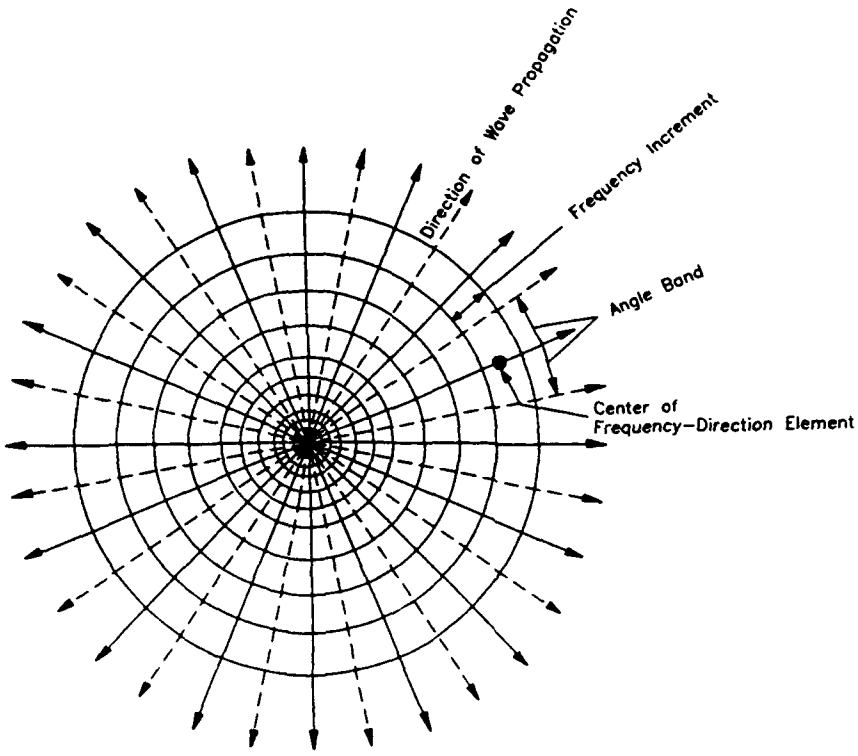


Figure 4. Schematic representation of directional spectrum

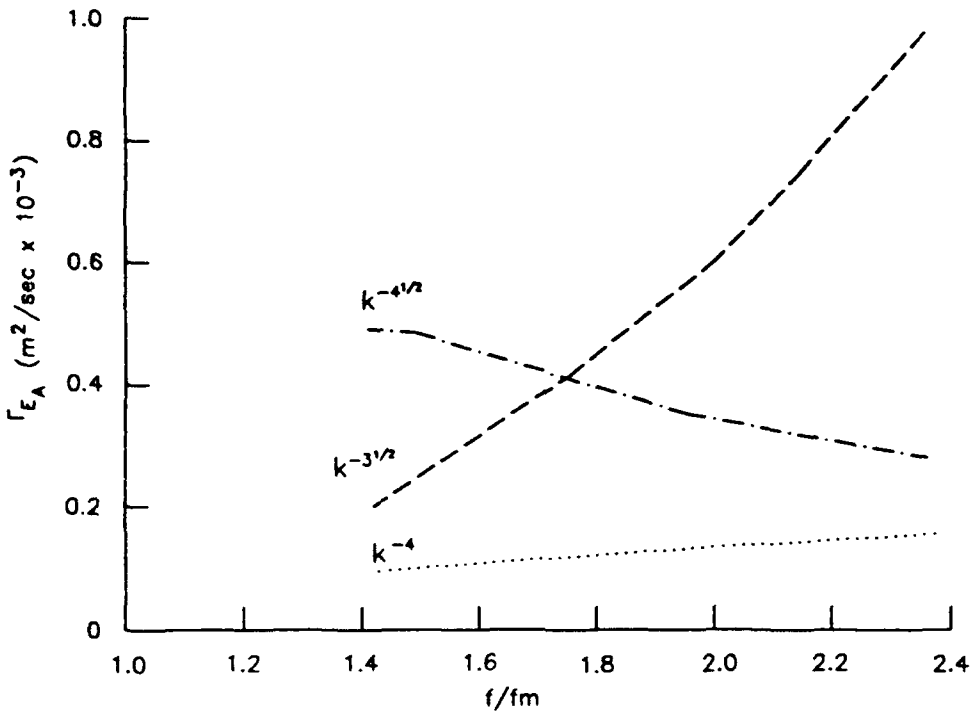


Figure 5. Calculated energy fluxes through the spectrum based on the complex Boltzmann integral

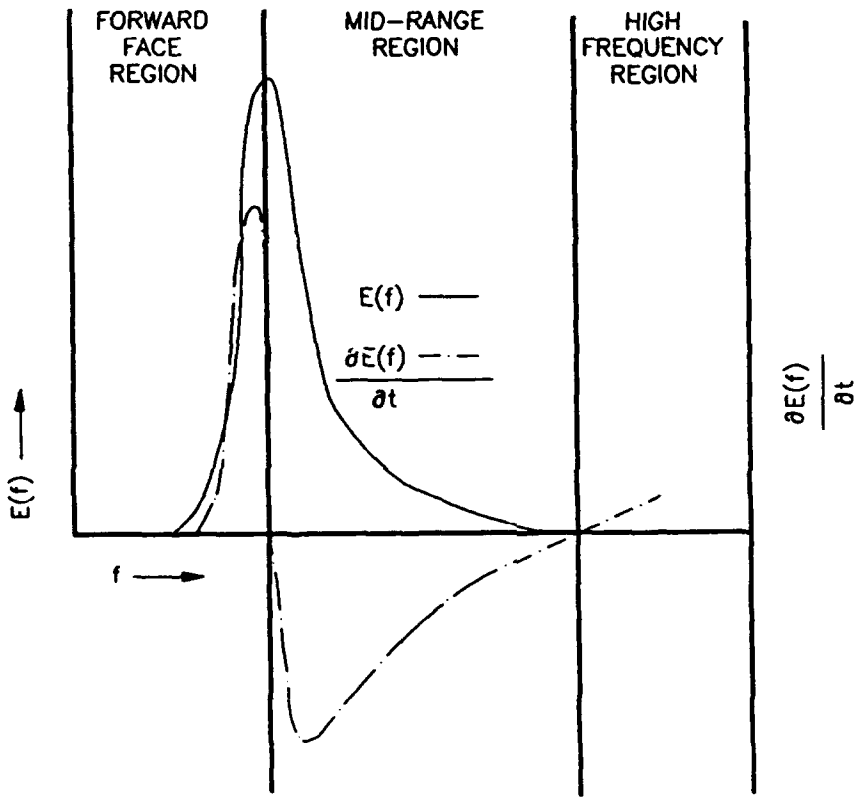
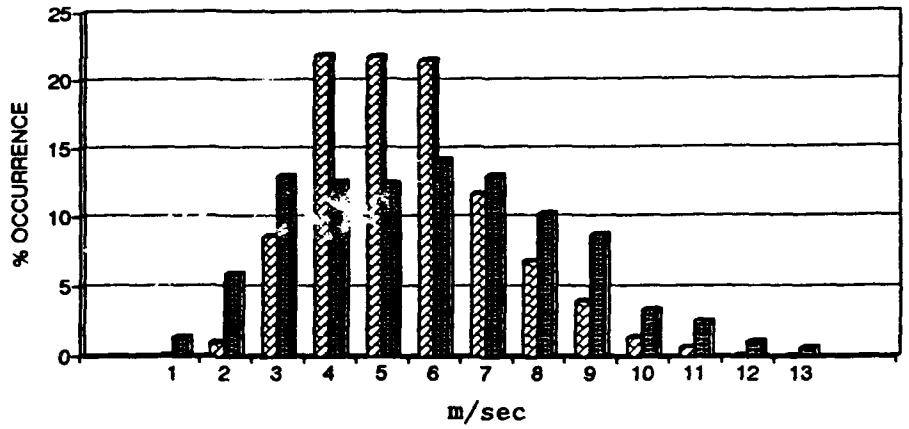
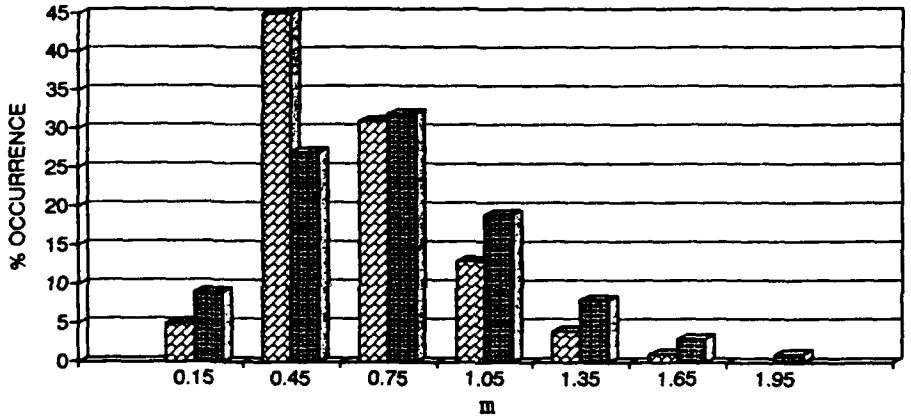


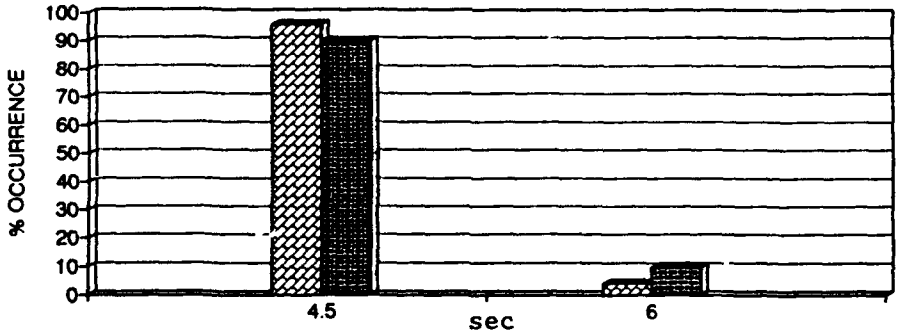
Figure 6. Nonlinear energy transfer as a function of frequency



a. Wind speed



b. Wave height



c. Peak period

WIS STA 5 BUOY 45005

Figure 7. Percent distribution histograms for measured and initial wind speed, wave height, peak period for 1980

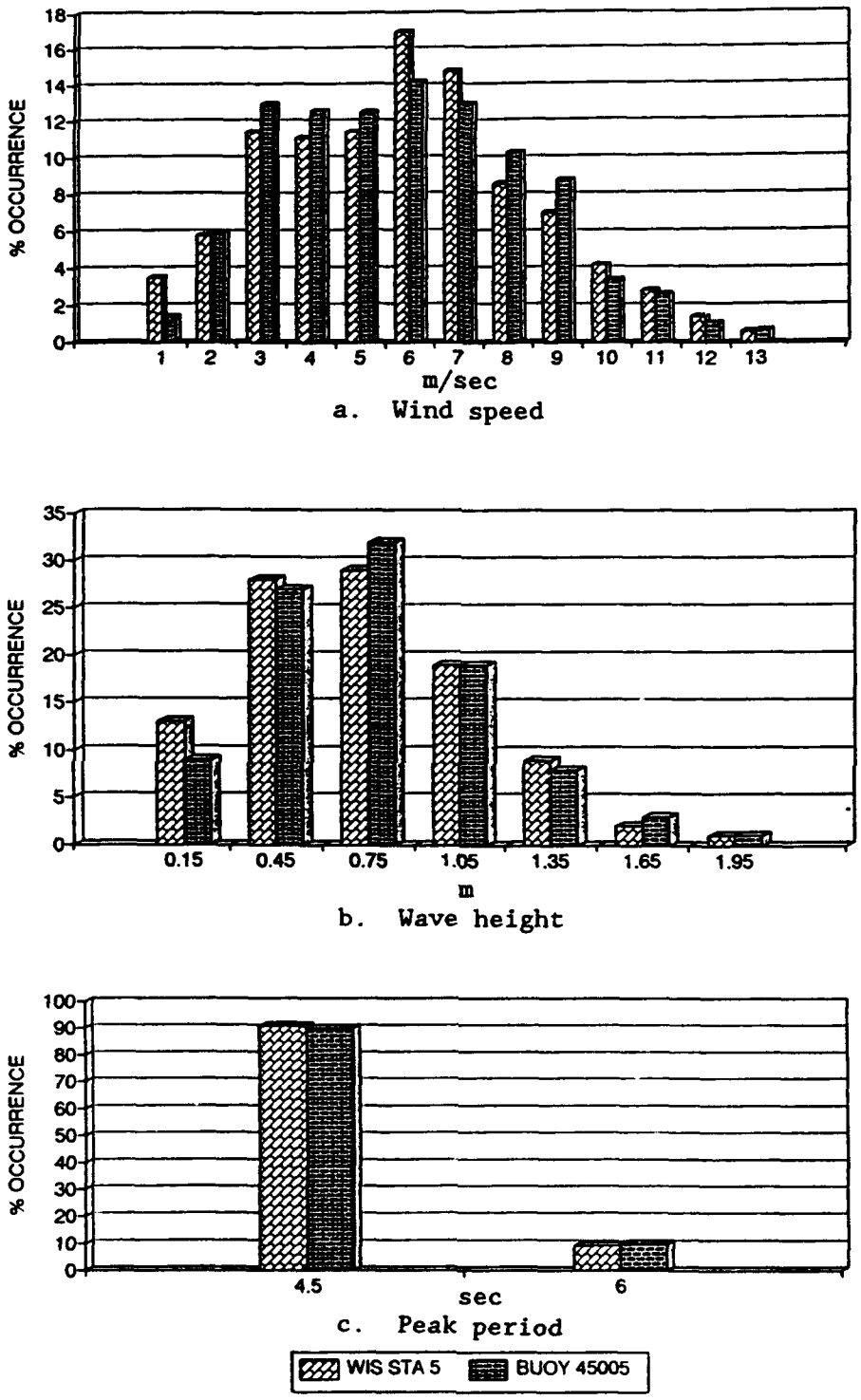
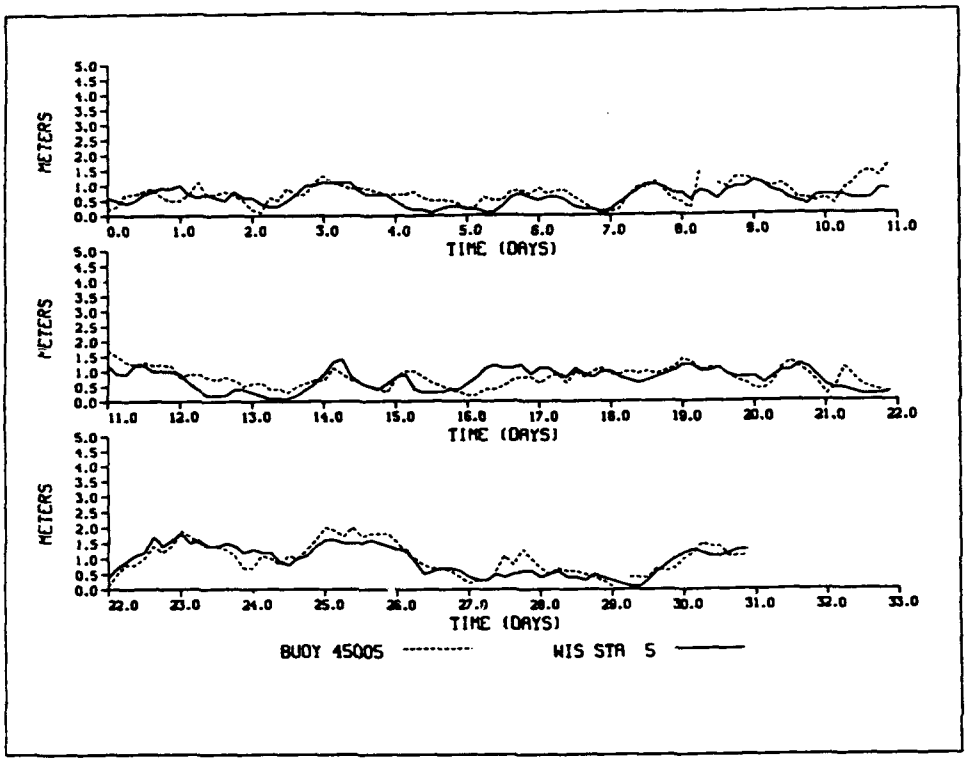
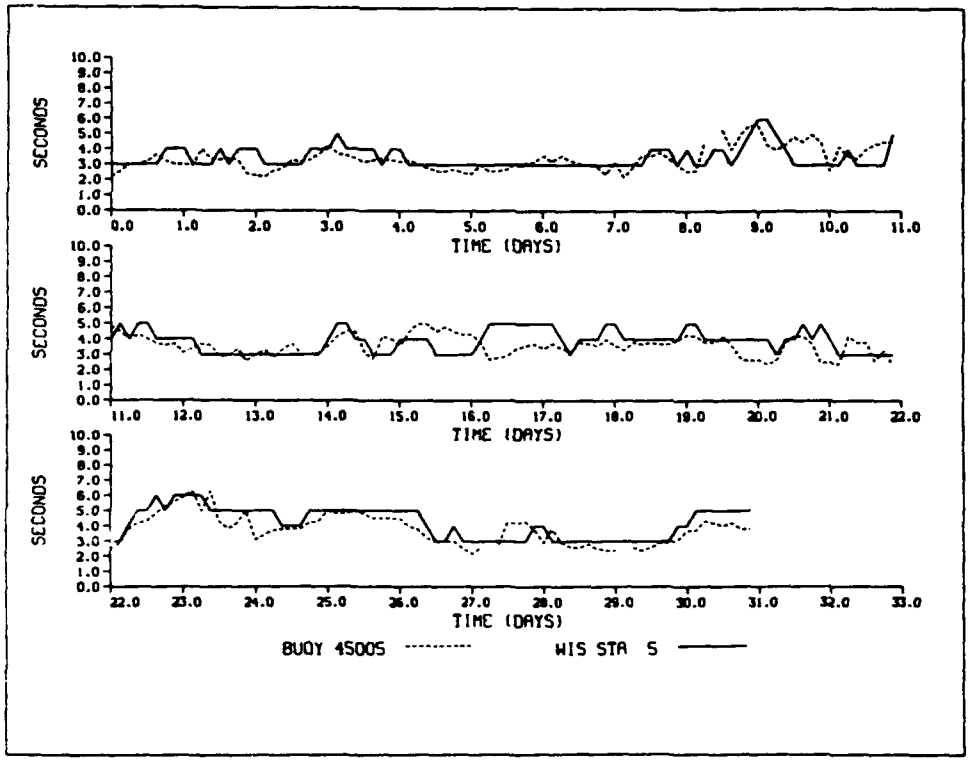


Figure 8. Percent distribution histograms for measured and adjusted wind speed, wave height, peak period for 1980



a. Wave heights



b. Peak periods

Figure 9. Time series comparison plots of measured versus modeled wave heights and peak periods for October 1980

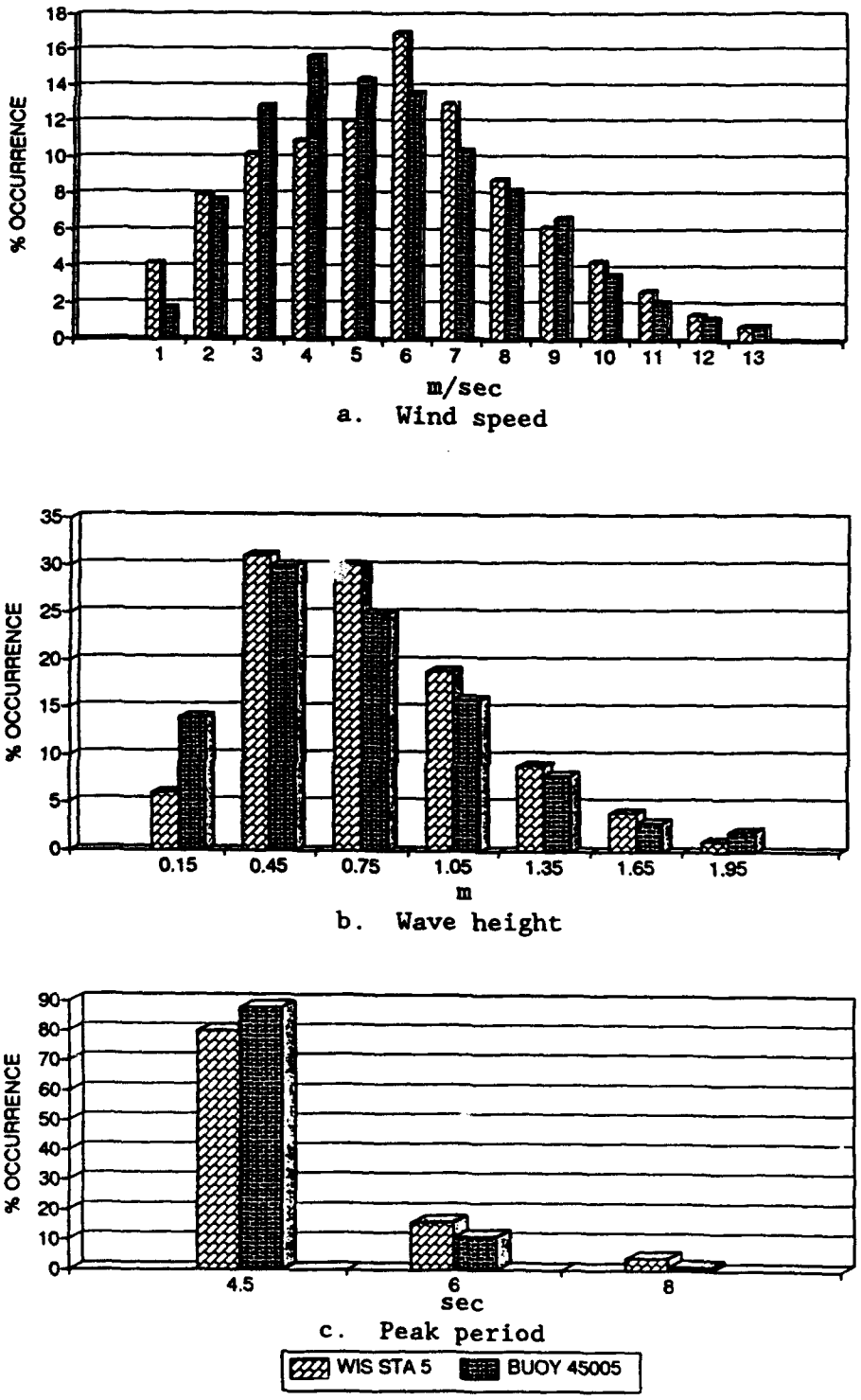
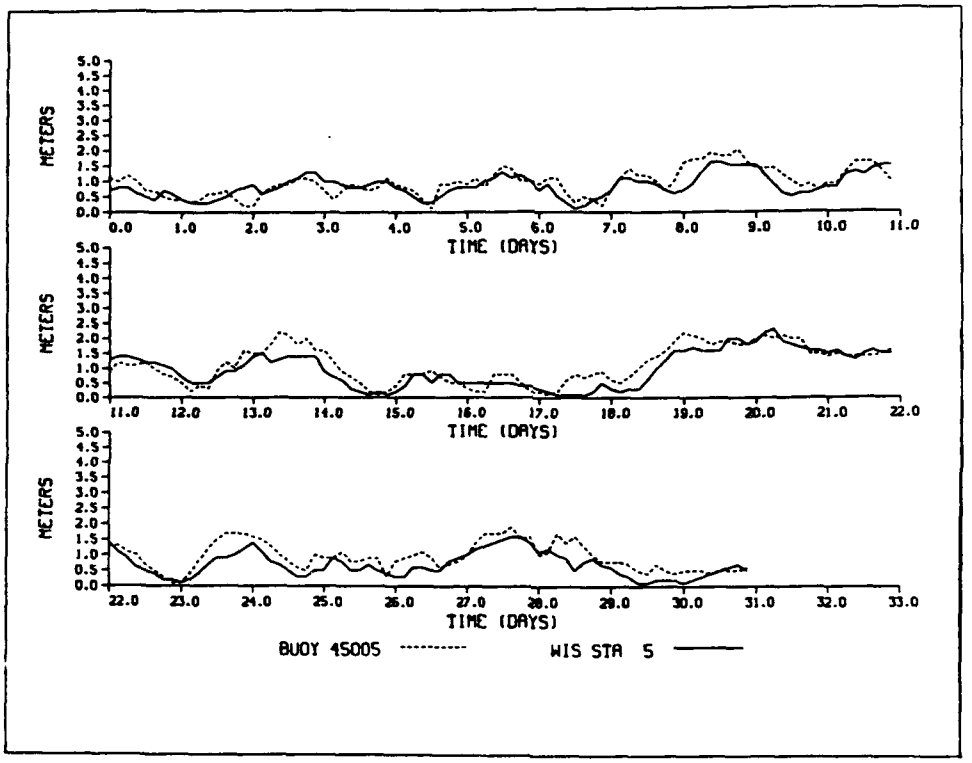
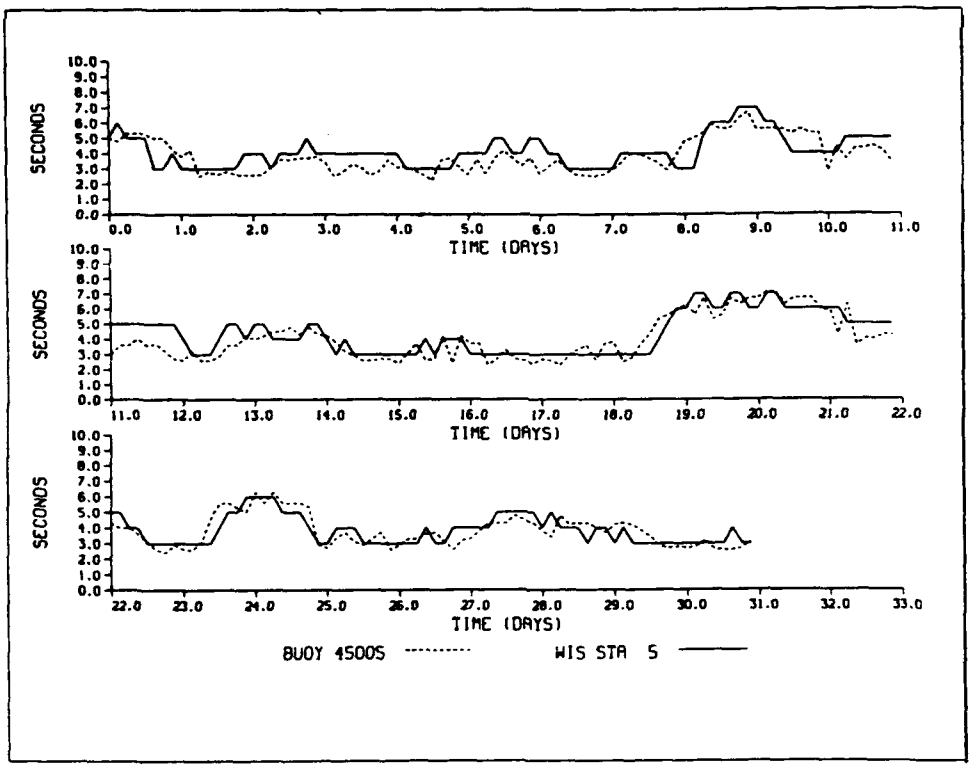


Figure 10. Percent distribution histograms for measured and modeled wind speed, wave height, peak period for 1980 through 1986

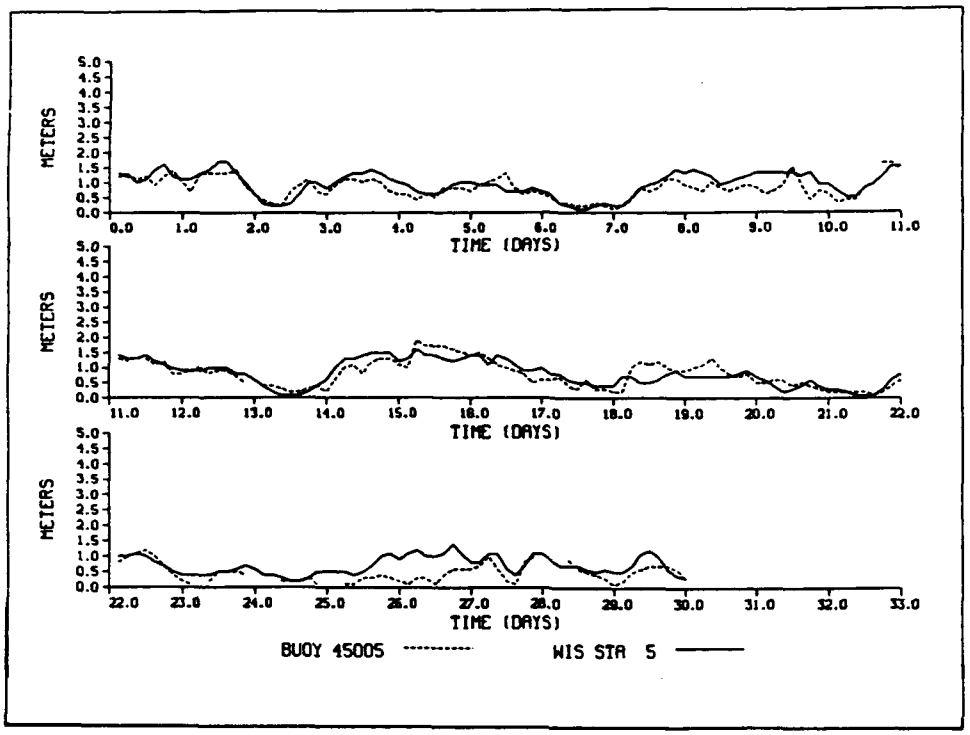


a. Wave heights

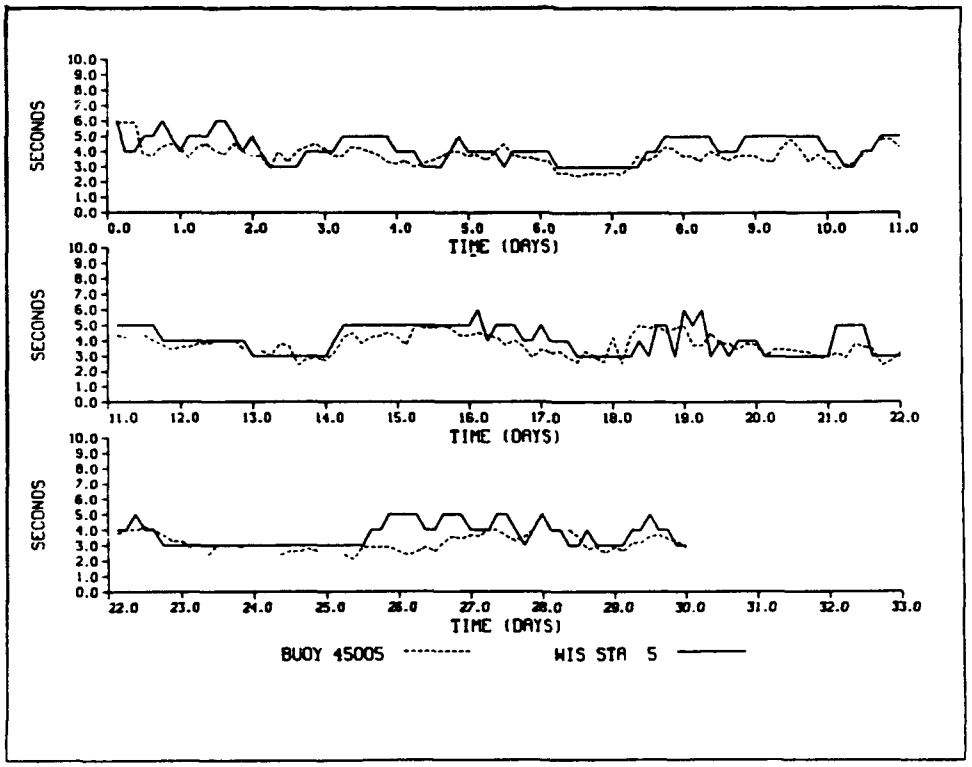


b. Peak periods

Figure 11. Time series comparison plots of measured versus modeled wave heights and peak periods for October 1983

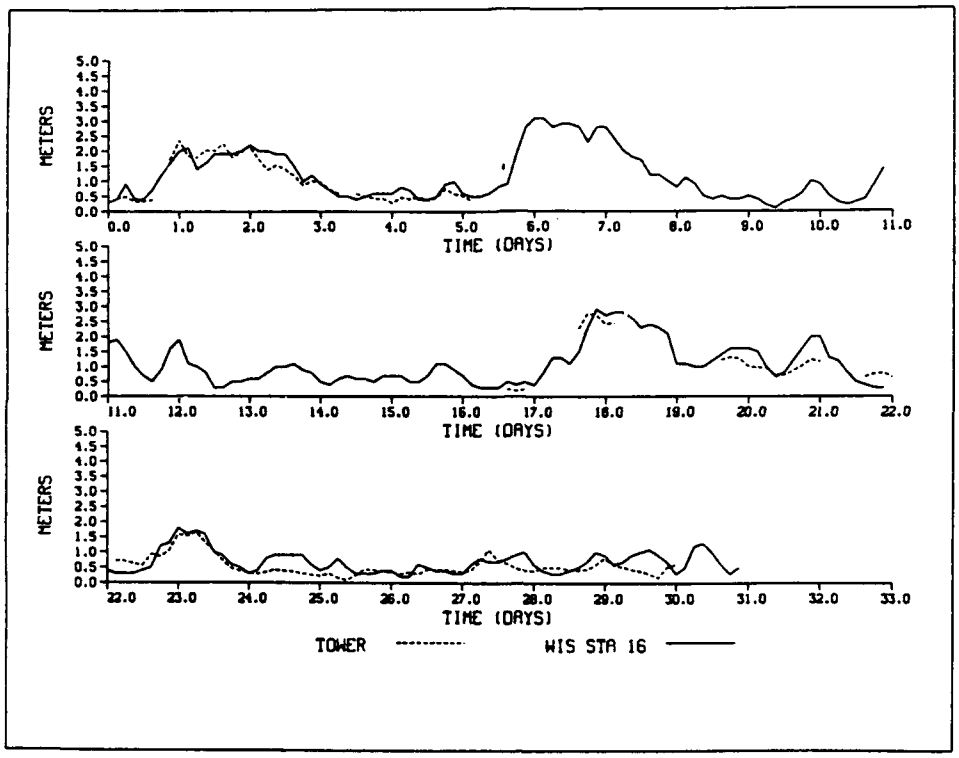


a. Wave heights

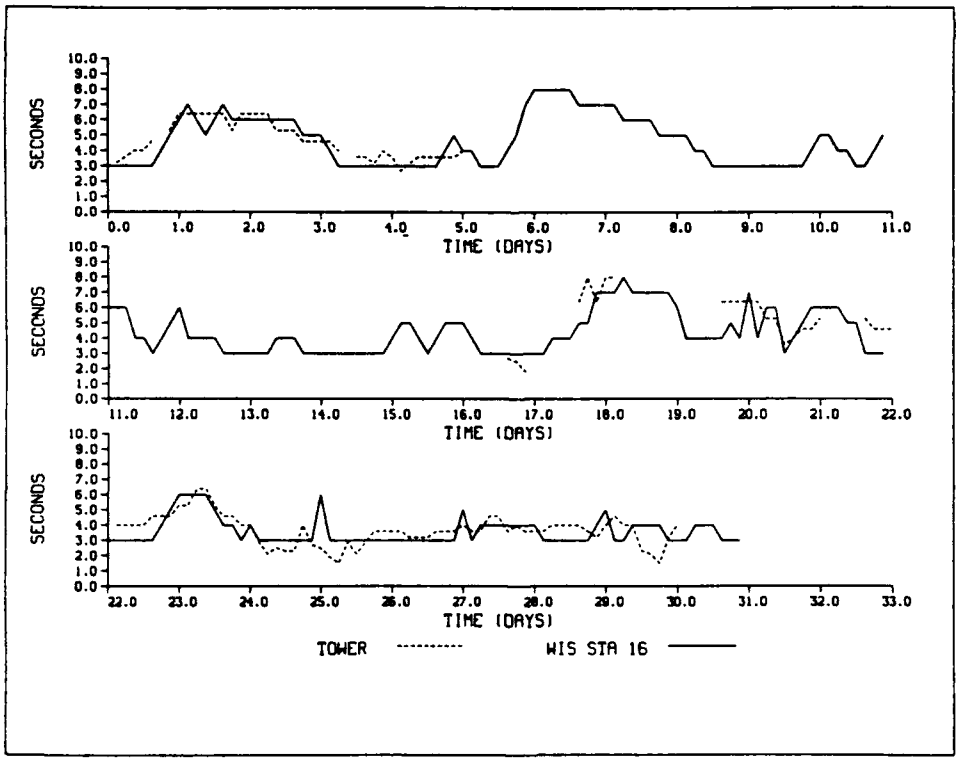


b. Peak periods

Figure 12. Time series comparison plots of measured versus modeled wave heights and peak periods for November 1984

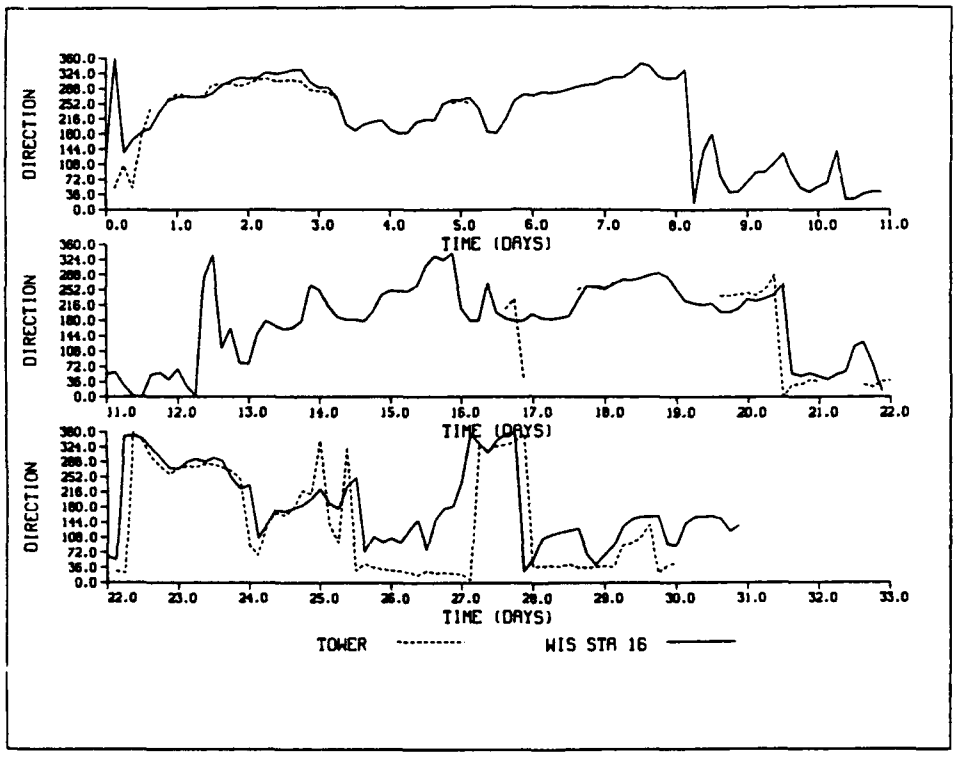


a. Wave heights



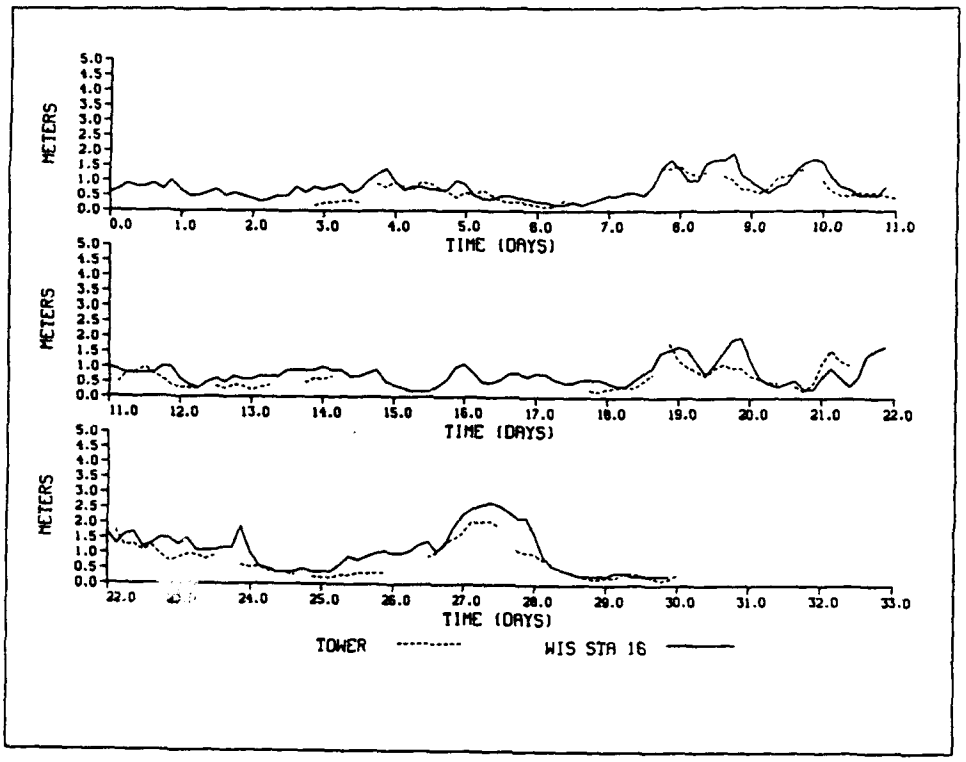
b. Peak periods

Figure 13. Time series comparison plots of measured versus modeled wave heights, peak periods, and wave directions for September 1981 (Continued)

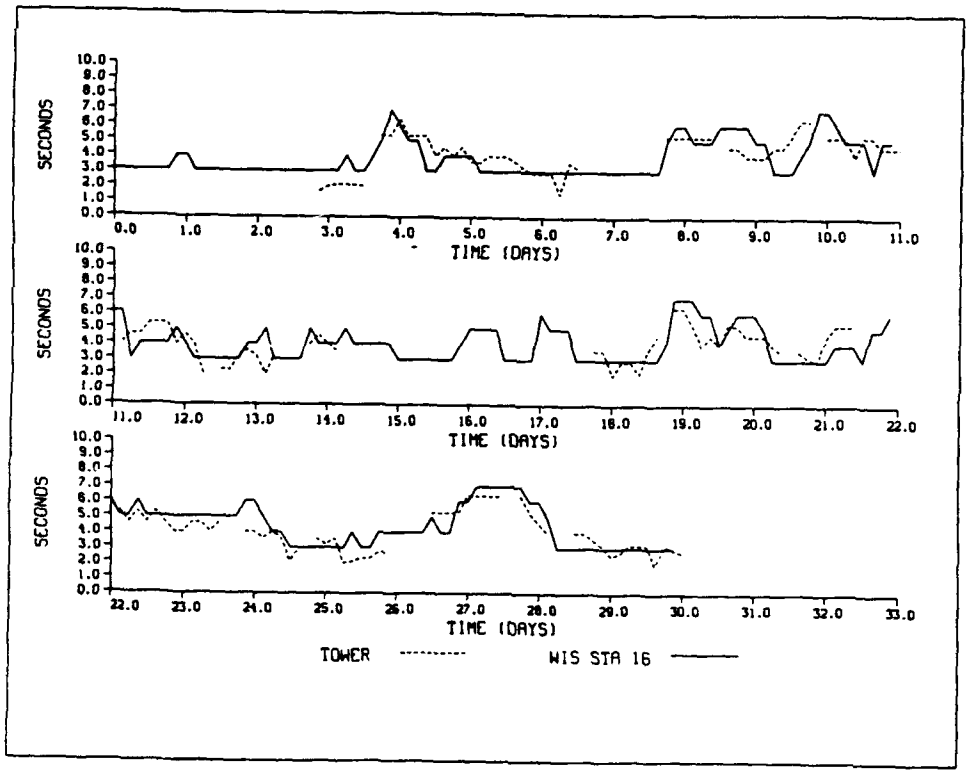


c. Wave directions

Figure 13. (Concluded)

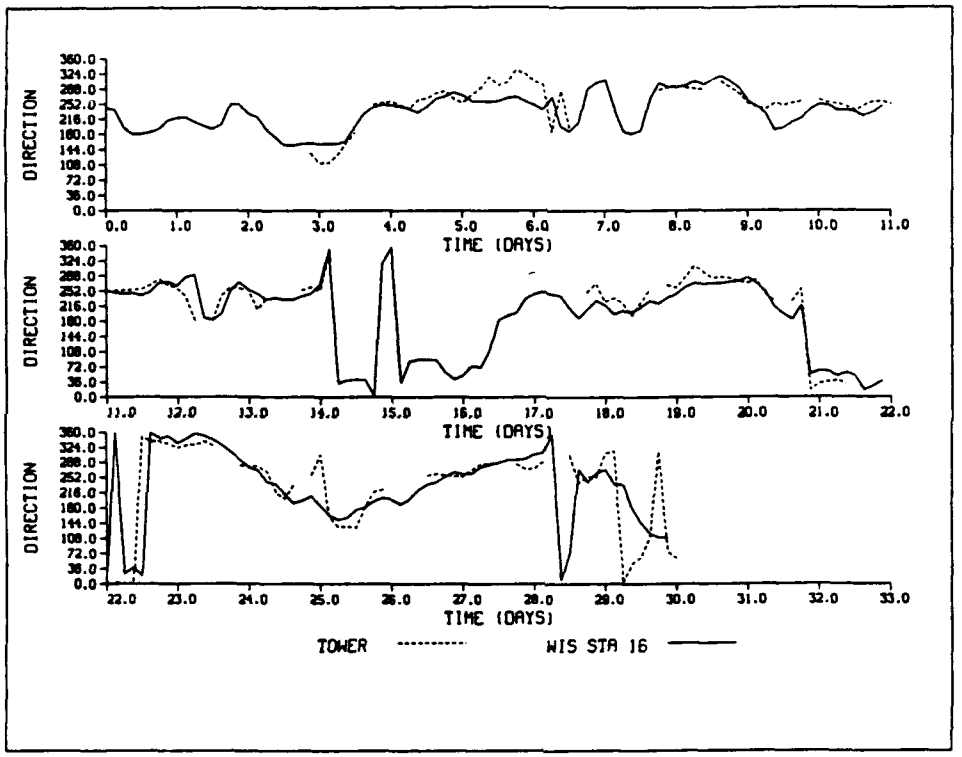


a. Wave heights



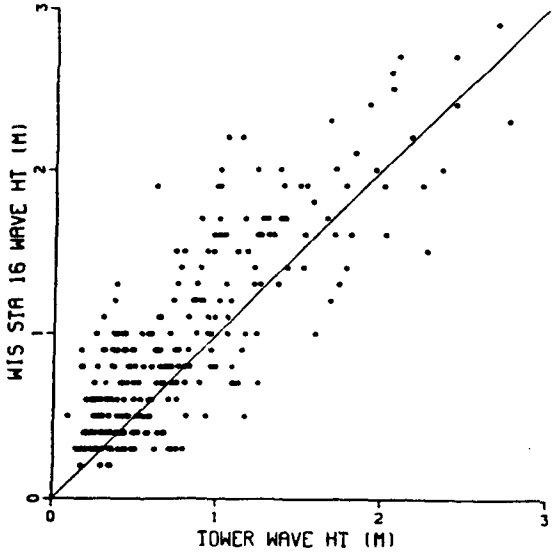
b. Peak periods

Figure 14. Time series comparison plots for measured versus modeled wave heights, peak periods, and wave directions for October 1981 (Continued)

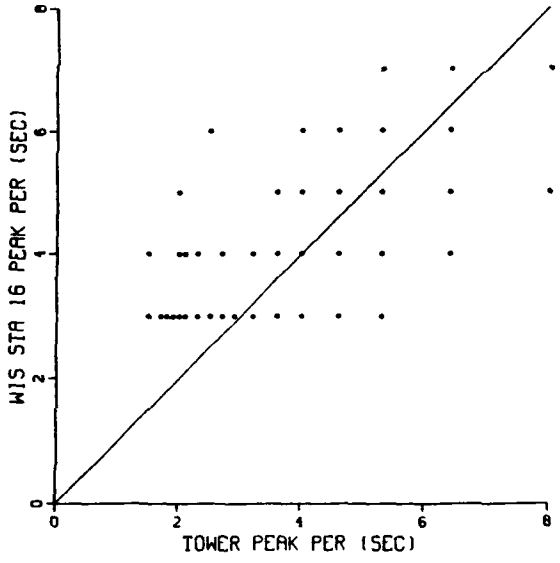


c. Wave directions

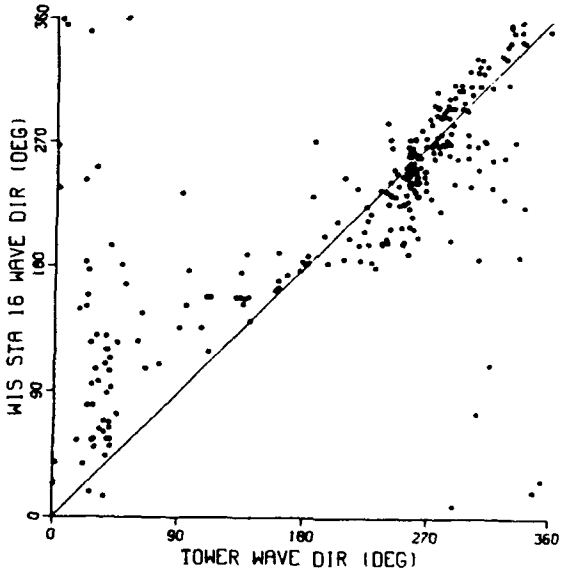
Figure 14. (Concluded)



a. Wave heights



b. Peak periods



c. Wave directions

Figure 15. Scatterplots of measured versus modeled wave heights, peak periods, and wave directions for September-October 1981

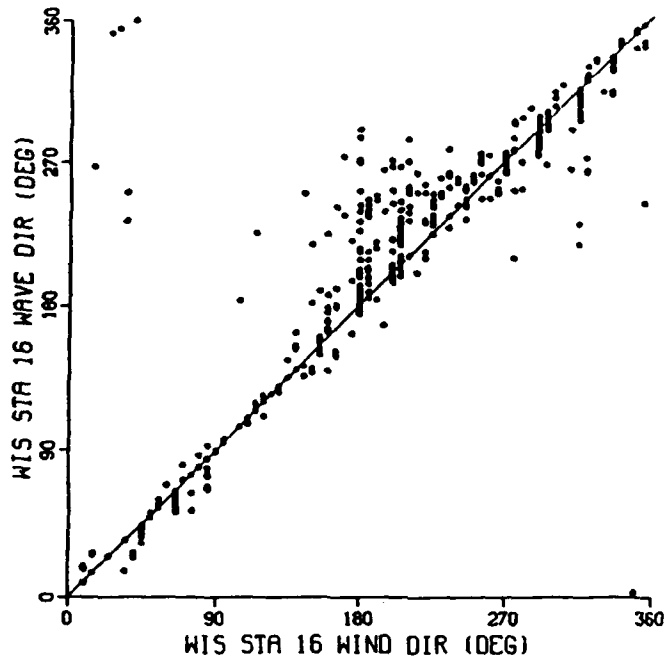


Figure 16. Scatterplot of modeled wind direction versus modeled wave direction for September-October 1981

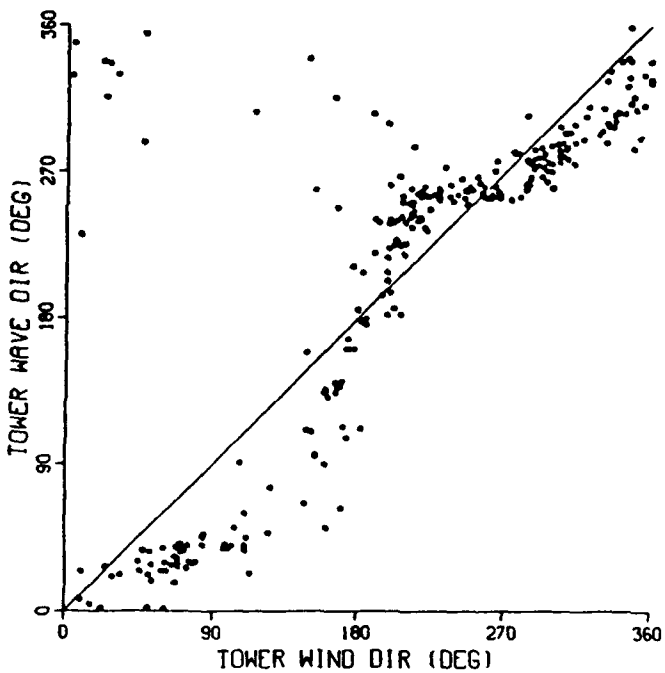
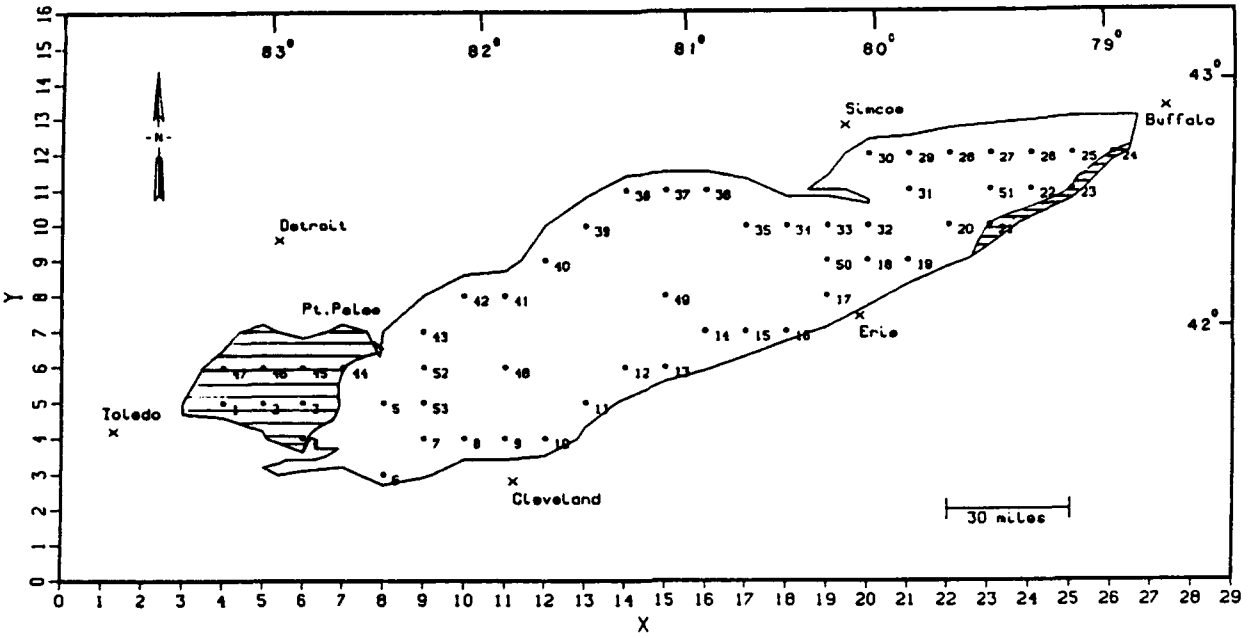
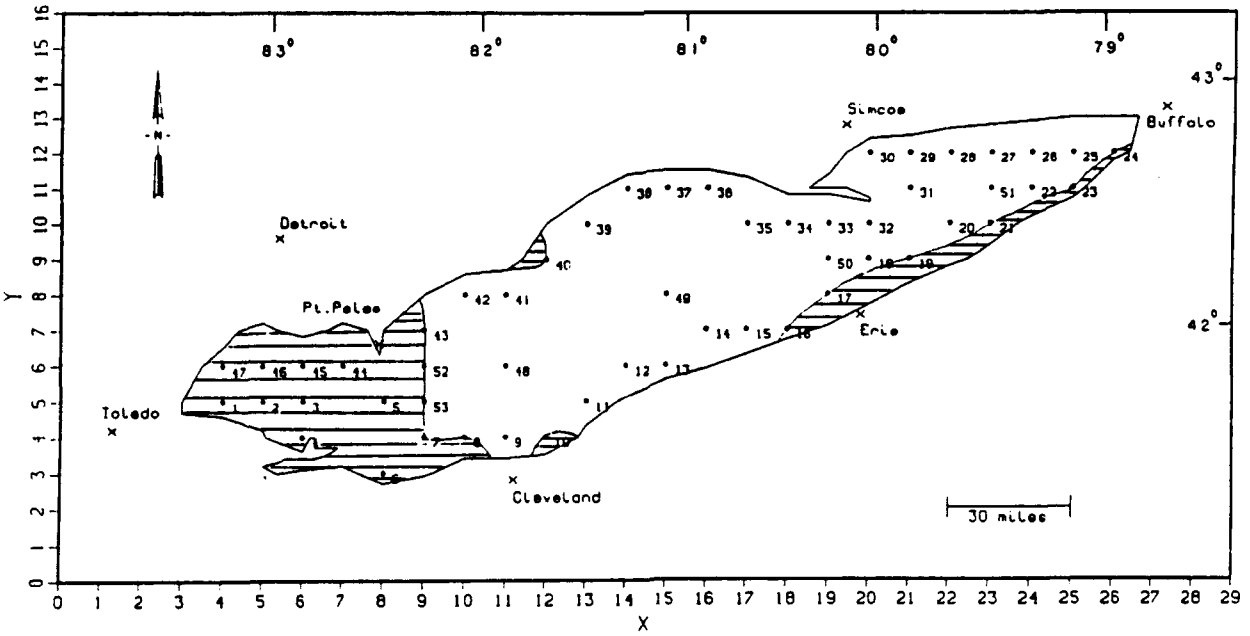


Figure 17. Scatterplot of measured wind direction versus measured wave direction of September-October 1981

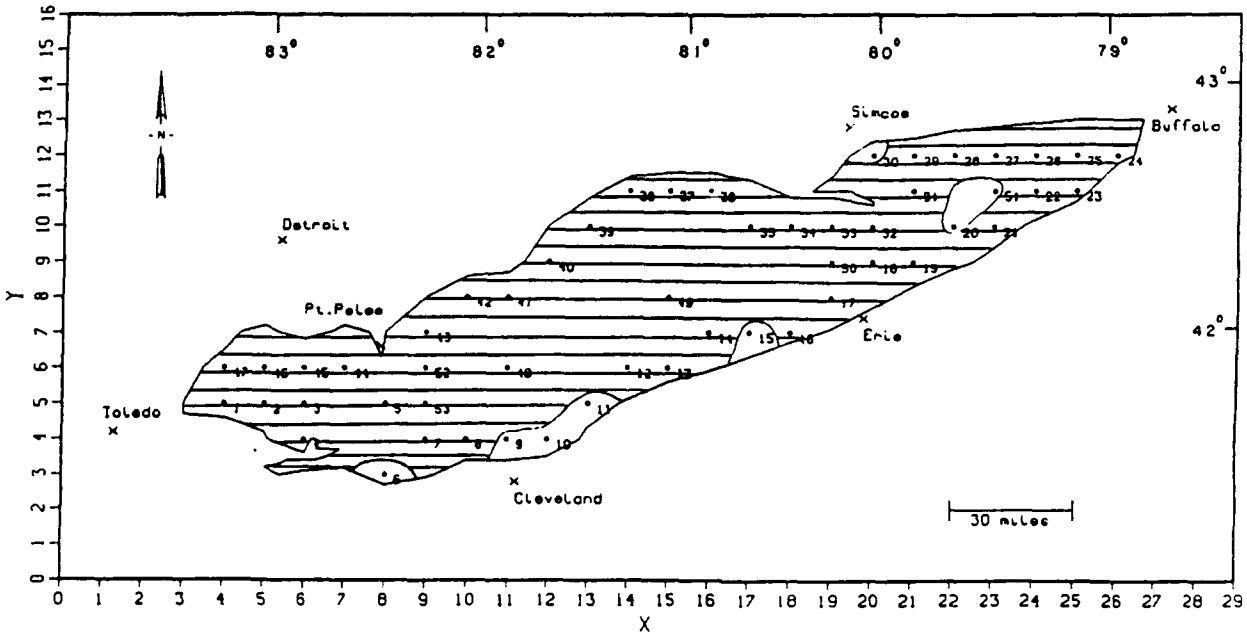


a. 16-31 December

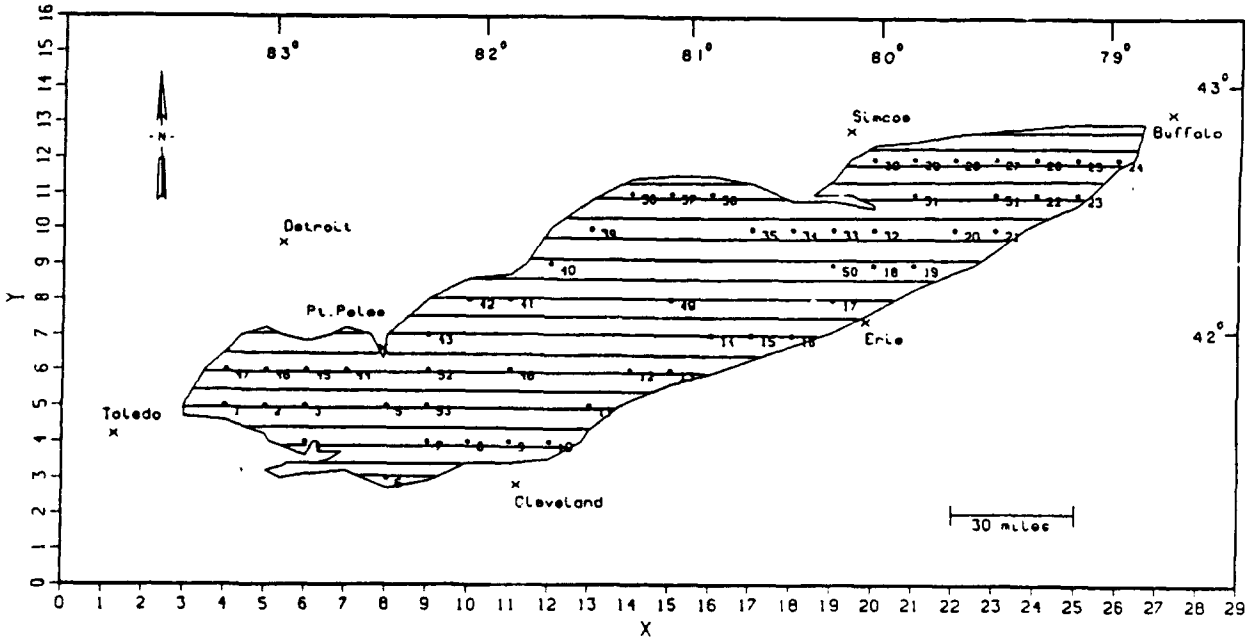


b. 1-15 January

Figure 18. Ice-cover (shaded region) development and decay on Lake Erie for nine half-month periods (Sheet 1 of 5)

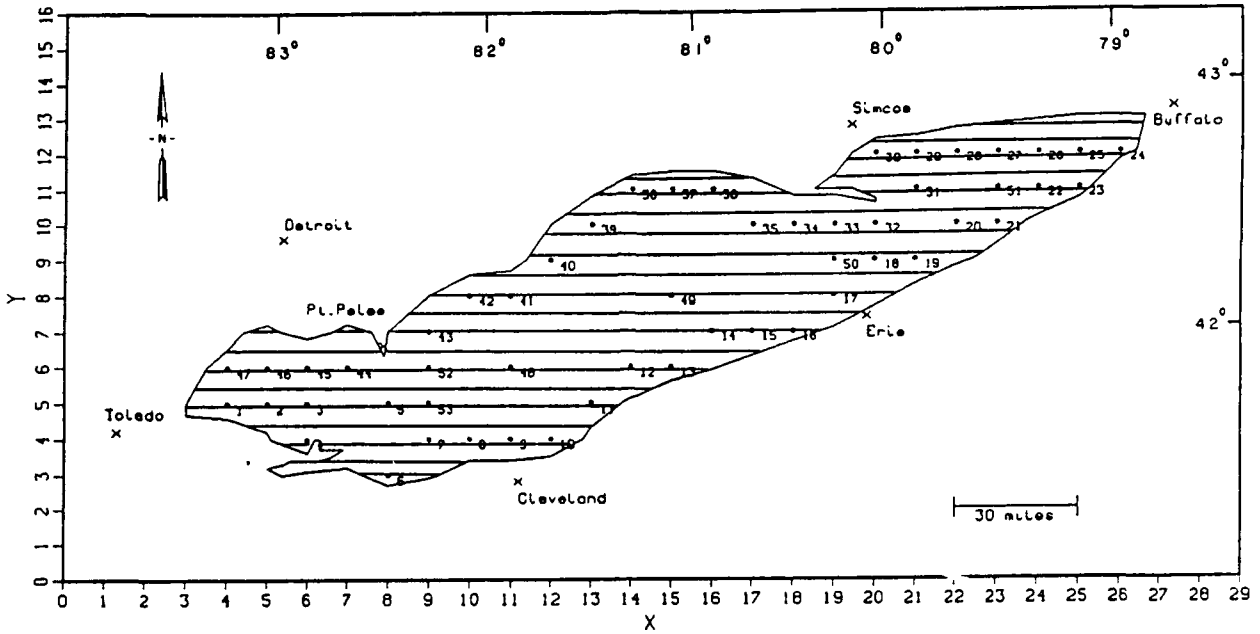


c. 16-31 January

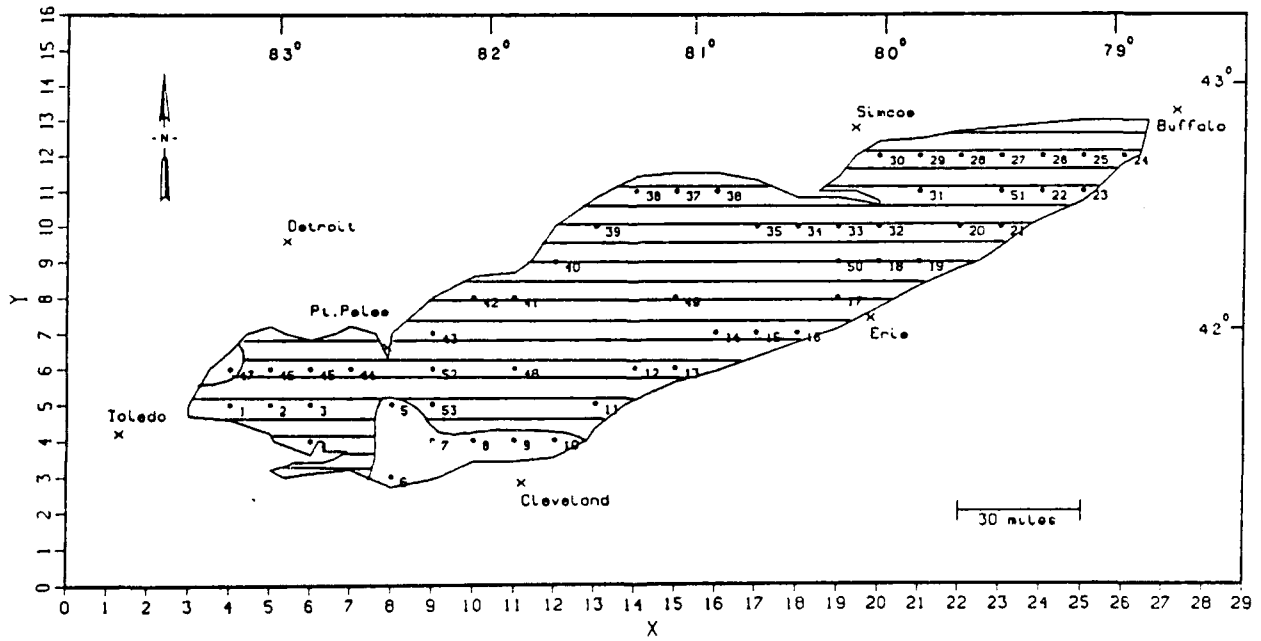


d. 1-15 February

Figure 18. (Sheet 2 of 5)

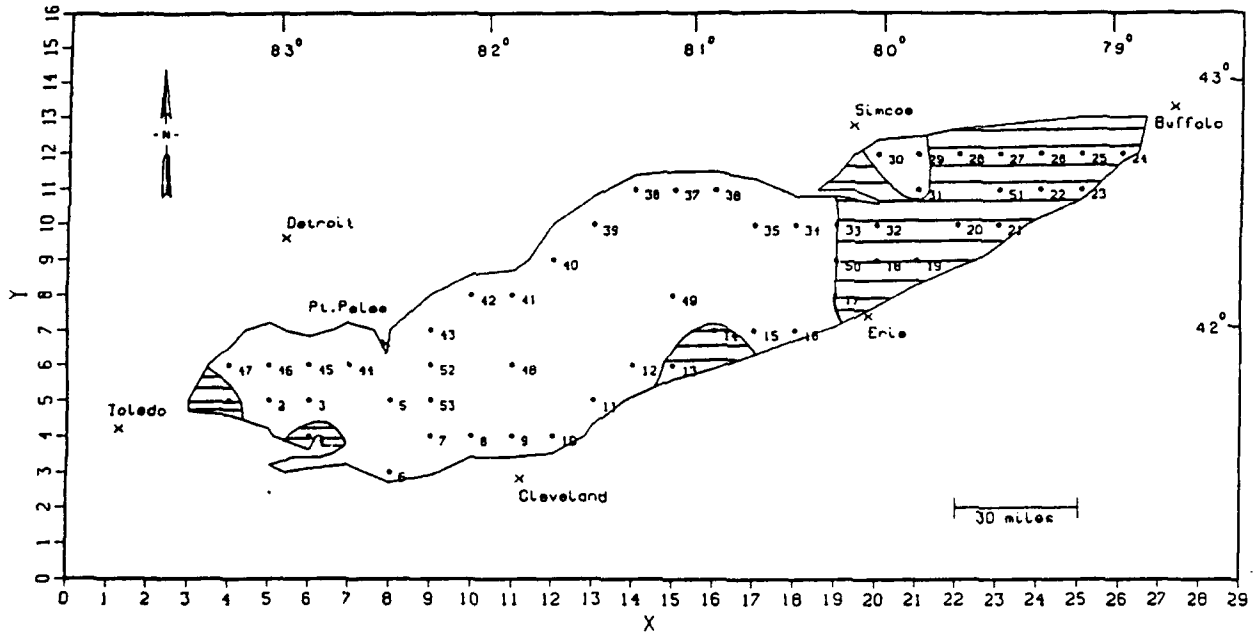


e. 16-28 February

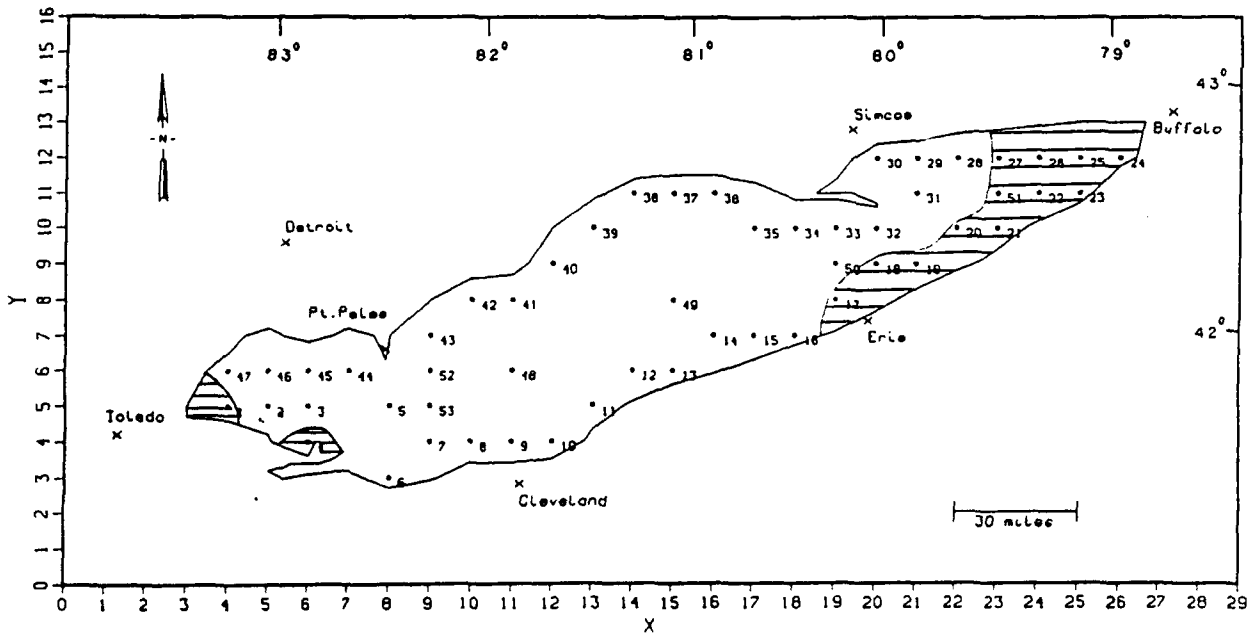


f. 1-15 March

Figure 18. (Sheet 3 of 5)

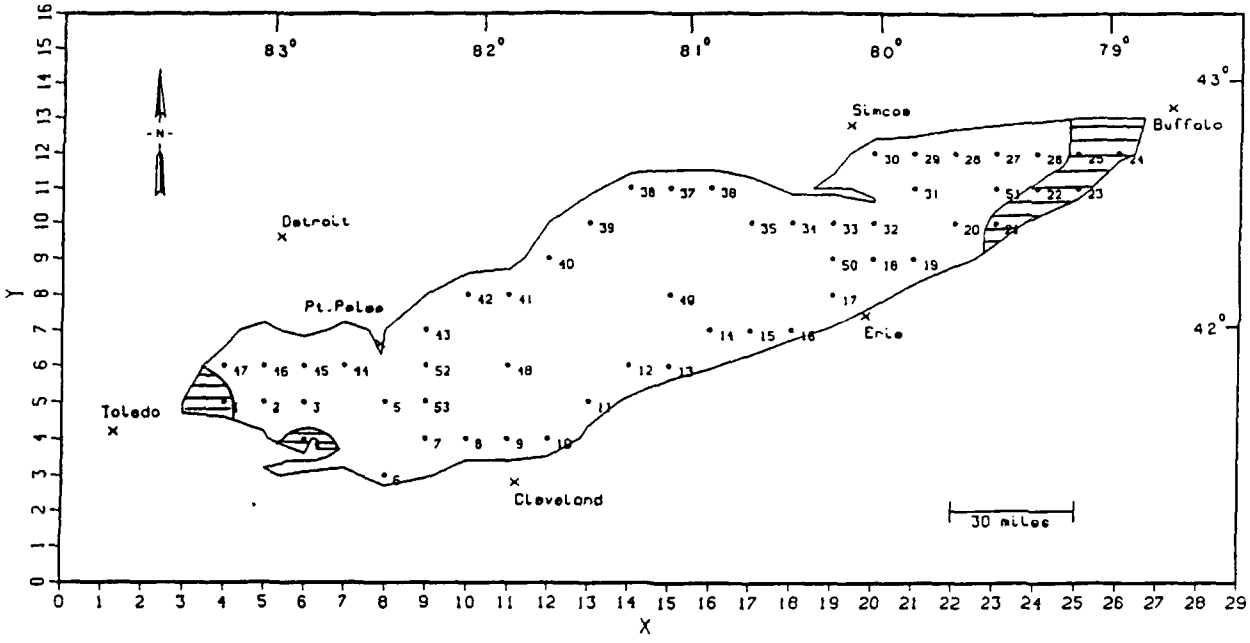


g. 16-31 March



h. 1-15 April

Figure 18. (Sheet 4 of 5)



i. 16-30 April

Figure 18. (Sheet 5 of 5)

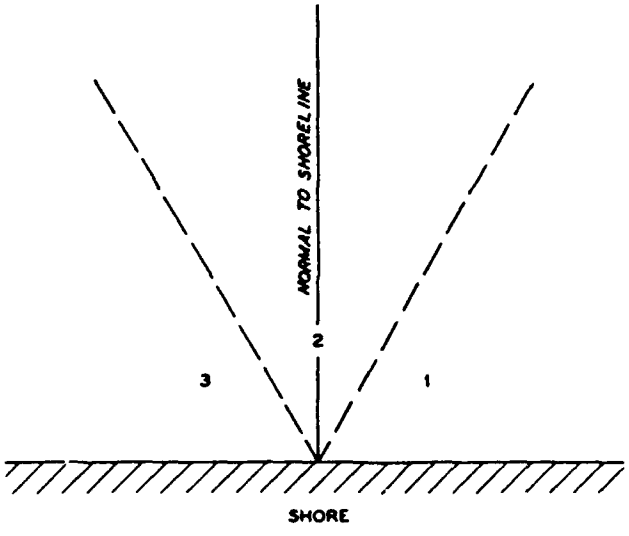
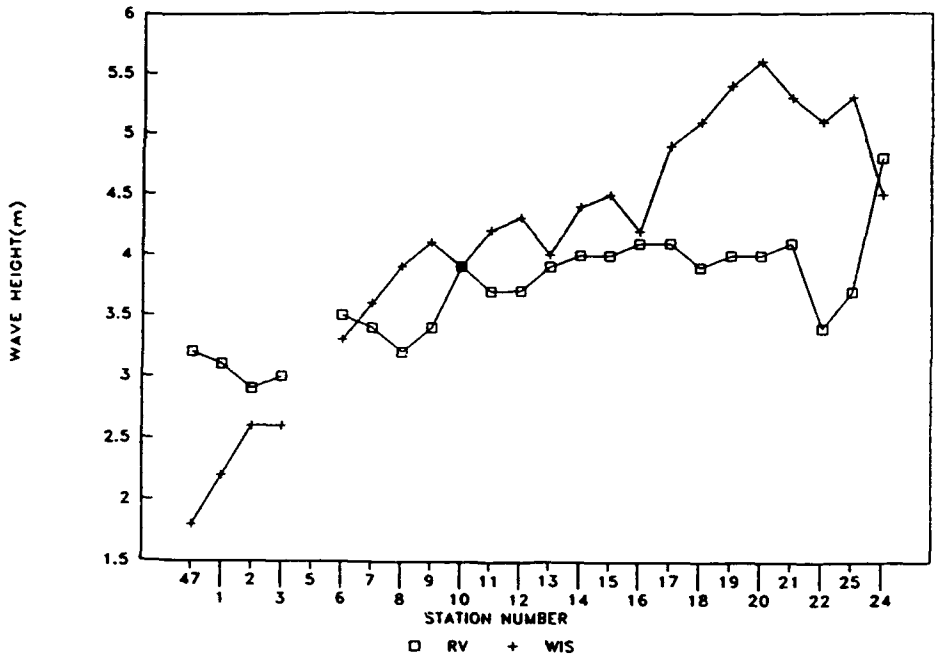
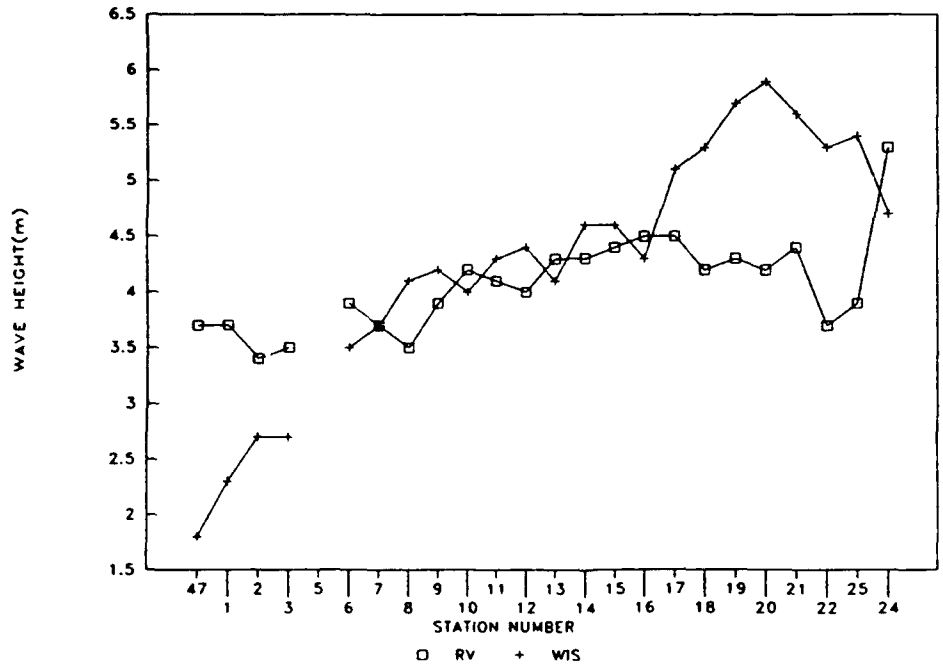


Figure 19. Definition sketch of angle classes

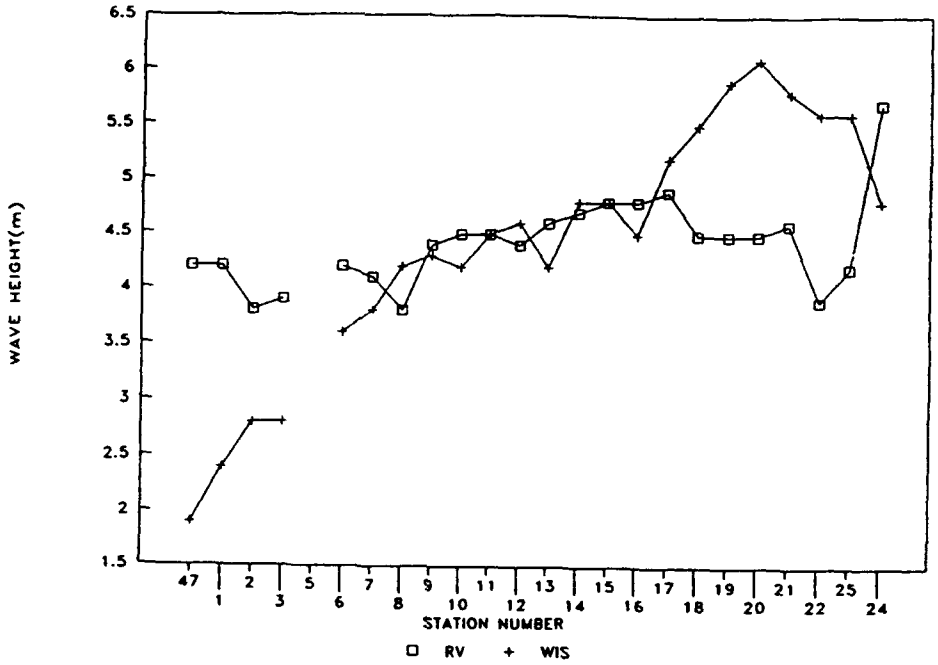


a. 5-year return period

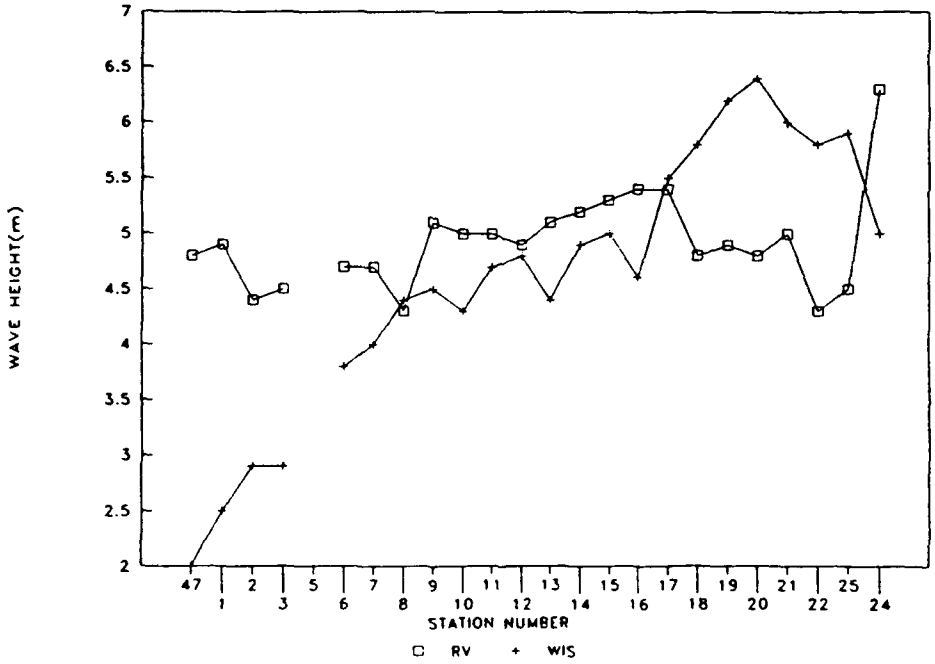


b. 10-year return period

Figure 20. Wave heights for collocated RV and WIS stations for 5-, 10-, 20-, and 50-year return periods (Continued)



c. 20-year return period



d. 50-year return period

Figure 20. (Concluded)

APPENDIX A: SUMMARY TABLES

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	790	62	18	3	.	.	.	.	.	873
0.25-0.49	.	920	126	65	25	.	.	.	.	.	1136
0.50-0.74	.	838	486	244	66	6	.	.	.	.	1640
0.75-0.99	.	33	357	276	57	10	.	.	.	.	733
1.00-1.24	.	.	70	420	171	7	1	.	.	.	669
1.25-1.49	.	.	.	44	111	31	1	.	.	.	187
1.50-1.74	.	.	.	.	36	44	12	.	.	.	92
1.75-1.99	.	.	.	.	.	7	.	.	.	.	7
2.00-2.24	.	.	.	.	.	.	3	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2581	1101	1067	469	105	17	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 4.0 NO. OF CASES= 5006.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	667	48	23	.	.	.	.	.	.	738
0.25-0.49	.	767	112	56	22	.	.	.	.	.	957
0.50-0.74	.	572	241	140	21	4	2	.	.	.	980
0.75-0.99	.	20	168	67	12	.	.	.	.	.	267
1.00-1.24	.	.	31	85	40	.	.	.	.	.	156
1.25-1.49	.	.	.	6	12	2	.	.	.	.	20
1.50-1.74	.	.	.	.	3	1	1	.	.	.	5
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2026	600	377	110	7	3	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.6 NO. OF CASES= 2930.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	890	59	42	4	.	.	.	.	.	995
0.25-0.49	.	1071	121	51	12	1	.	.	.	.	1256
0.50-0.74	.	1074	190	113	11	.	.	.	.	.	1388
0.75-0.99	.	199	183	45	10	.	.	.	.	.	437
1.00-1.24	.	12	75	101	12	1	.	.	.	.	201
1.25-1.49	.	.	1	12	5	2	.	.	.	.	20
1.50-1.74	.	.	.	.	1	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3246	629	364	55	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.4 NO. OF CASES= 4034.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	957	43	27	3	.	.	.	.	.	1030
0.25-0.49	.	1650	95	49	14	.	.	.	.	.	1808
0.50-0.74	.	1619	89	69	17	3	.	.	.	.	1797
0.75-0.99	.	336	82	25	11	.	.	.	.	.	454
1.00-1.24	.	5	54	60	8	.	.	.	.	.	127
1.25-1.49	.	.	.	3	4	1	.	.	.	.	8
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4567	363	233	57	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.4 MEAN TP(SEC)= 3.2 NO. OF CASES= 4895.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	668	47	33	5	.	.	.	.	.	753
0.25-0.49	.	850	69	67	40	1	.	.	.	.	1027
0.50-0.74	.	1377	51	56	53	16	2	.	.	.	1555
0.75-0.99	.	109	534	8	16	23	1	.	.	.	691
1.00-1.24	.	.	344	99	12	33	6	.	.	.	494
1.25-1.49	.	.	.	43	.	6	9	.	.	.	58
1.50-1.74	.	.	.	10	3	.	8	2	.	.	23
1.75-1.99	.	.	.	.	1	.	2	1	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3004	1045	316	130	79	28	3	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.6 NO. OF CASES= 4318.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	566	32	20	4	.	.	.	.	.	622
0.25-0.49	.	668	59	47	24	1	.	.	.	.	799
0.50-0.74	.	821	185	81	49	10	.	.	.	.	1146
0.75-0.99	.	47	308	26	24	19	1	.	.	.	425
1.00-1.24	.	.	118	114	11	36	6	.	.	.	285
1.25-1.49	.	.	1	23	4	8	10	.	.	.	46
1.50-1.74	.	.	.	5	17	2	8	.	.	.	32
1.75-1.99	.	.	.	.	4	.	5	.	.	.	9
2.00-2.24	.	.	.	.	.	1	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2102	703	316	137	77	30	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.7 NO. OF CASES= 3159.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	844	64	32	4	.	.	.	.	.	944
0.25-0.49	.	829	94	69	35	2	.	.	.	.	1029
0.50-0.74	.	872	411	126	101	14	.	.	.	.	1524
0.75-0.99	.	18	590	56	59	19	1	.	.	.	743
1.00-1.24	.	.	185	455	24	45	5	.	.	.	714
1.25-1.49	.	.	.	198	20	24	11	.	.	.	253
1.50-1.74	.	.	.	23	116	13	34	1	.	.	187
1.75-1.99	.	.	.	.	43	2	17	1	.	.	63
2.00-2.24	.	.	.	.	10	8	7	1	.	.	26
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2563	1344	959	412	127	75	3	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 4.0 NO. OF CASES= 5145.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	588	47	23	4	.	.	.	.	.	662
0.25-0.49	.	742	87	64	24	1	.	.	.	.	918
0.50-0.74	.	911	465	174	71	8	.	.	.	.	1629
0.75-0.99	.	33	607	229	60	29	.	.	.	.	958
1.00-1.24	.	.	193	755	97	31	2	.	.	.	1078
1.25-1.49	.	.	.	271	112	26	3	.	.	.	412
1.50-1.74	.	.	.	25	152	23	4	.	.	.	204
1.75-1.99	.	.	.	.	35	6	5	.	.	.	46
2.00-2.24	.	.	.	.	6	8	1	.	.	.	15
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2274	1399	1541	561	132	15	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 4.1 NO. OF CASES= 5552.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1377	90	38	7	.	.	.	.	.	1512
0.25-0.49	.	2273	106	51	5	1	.	.	.	.	2436
0.50-0.74	.	2575	72	75	8	3	.	.	.	.	2733
0.75-0.99	.	709	68	16	14	1	.	.	.	.	808
1.00-1.24	.	1	68	11	16	1	.	.	.	.	97
1.25-1.49	.	.	1	.	.	2	.	.	.	.	3
1.50-1.74	.	.	.	1	.	1	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6935	405	192	50	9	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 7108.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1064	64	28	4	.	.	.	.	.	1160
0.25-0.49	.	1996	48	38	5	1	.	.	.	.	2088
0.50-0.74	.	2994	19	49	8	.	.	.	.	.	3070
0.75-0.99	.	869	548	14	8	.	.	.	.	.	1439
1.00-1.24	.	2	268	7	3	.	.	.	.	.	280
1.25-1.49	.	.	.	8	.	.	.	.	.	.	8
1.50-1.74	.	.	.	4	1	.	.	.	.	.	5
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6925	947	148	30	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 7537.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1300	70	44	7	.	.	.	.	.	1421
0.25-0.49	.	1938	62	42	11	2	.	.	.	.	2055
0.50-0.74	.	3335	8	36	8	1	.	.	.	.	3388
0.75-0.99	.	1133	1095	5	3	.	.	.	.	.	2236
1.00-1.24	.	.	704	38	.	.	.	.	.	.	742
1.25-1.49	.	.	.	75	.	.	.	.	.	.	75
1.50-1.74	.	.	.	22	2	.	.	.	.	.	24
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7706	1939	262	31	3	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 9306.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1112	56	36	8	.	.	.	.	.	1212
0.25-0.49	.	2083	42	28	12	3	.	.	.	.	2168
0.50-0.74	.	3503	5	19	5	4	.	.	.	.	3536
0.75-0.99	.	1552	697	1	7	.	.	.	.	.	2257
1.00-1.24	.	.	683	37	2	.	.	.	.	.	722
1.25-1.49	.	.	17	85	.	.	.	.	.	.	102
1.50-1.74	.	.	.	53	.	.	.	.	.	.	53
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8250	1500	259	35	7	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 9408.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1358	86	52	12	.	.	.	.	.	1508
0.25-0.49	.	2239	32	26	17	2	.	.	.	.	2316
0.50-0.74	.	3210	8	13	8	3	3	.	.	.	3245
0.75-0.99	.	1479	121	1	1	.	.	.	.	.	1602
1.00-1.24	.	.	454	.	.	.	.	.	.	.	454
1.25-1.49	.	.	32	25	.	.	.	.	.	.	57
1.50-1.74	.	.	.	12	.	.	.	.	.	.	12
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8286	733	129	38	5	3	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 8606.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	827	49	45	3	.	.	.	.	.	924
0.25-0.49	.	1579	29	25	21	3	.	.	.	.	1657
0.50-0.74	.	2483	10	16	7	6	.	.	.	.	2522
0.75-0.99	.	1041	285	2	2	1	2	.	.	.	1333
1.00-1.24	.	.	331	8	1	1	.	.	.	.	341
1.25-1.49	.	.	5	19	.	.	.	.	.	.	24
1.50-1.74	.	.	.	9	.	.	.	.	.	.	9
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5930	709	124	34	11	2	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.2 NO. OF CASES= 6378.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	730	53	34	8	.	.	.	.	.	825
0.25-0.49	.	1218	42	39	26	6	.	.	.	.	1331
0.50-0.74	.	2254	13	16	10	9	1	.	.	.	2303
0.75-0.99	.	742	596	1	3	1	2	.	.	.	1345
1.00-1.24	.	.	348	16	1	.	1	.	.	.	366
1.25-1.49	.	.	1	29	.	.	.	.	.	.	30
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4944	1053	137	48	16	4	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.3 NO. OF CASES= 5809.

STATION E01 41.73N 83.27W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

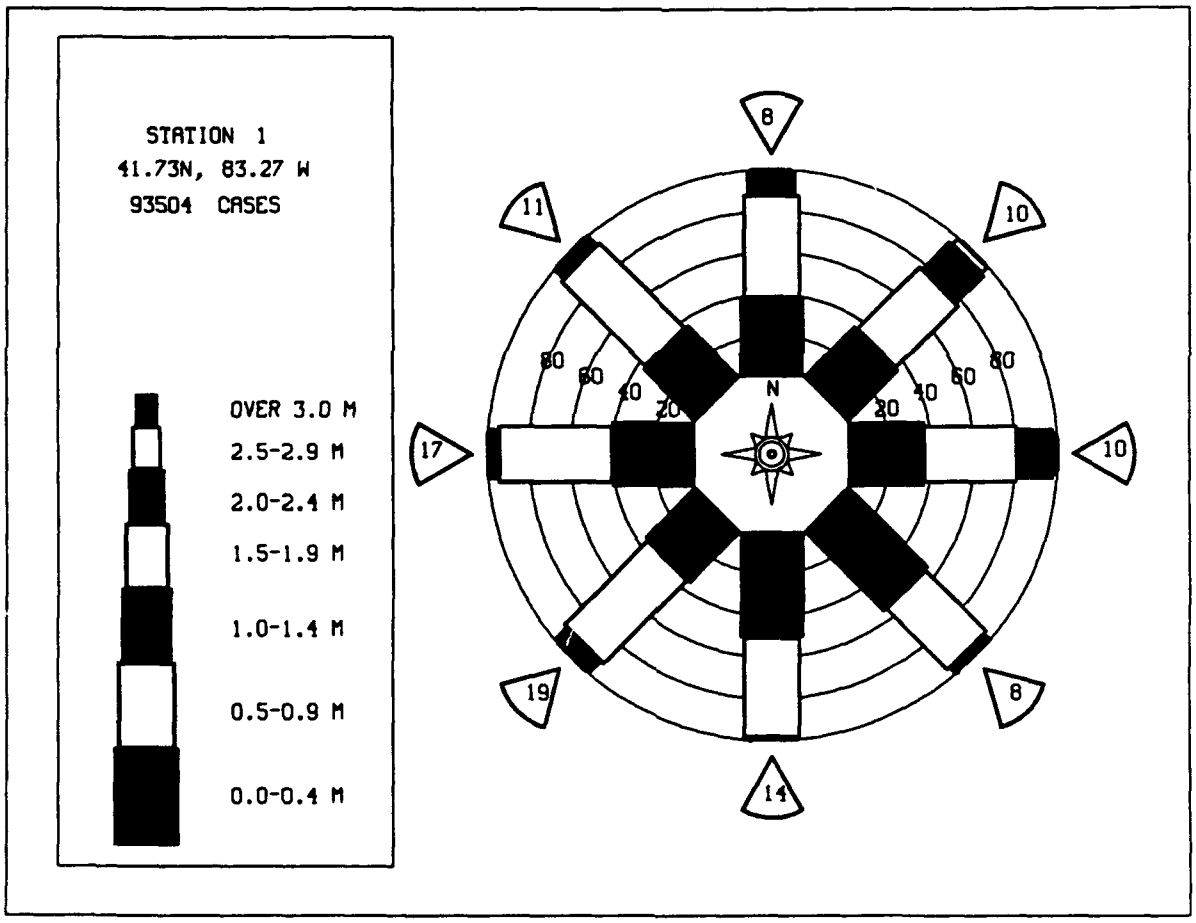
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	530	43	25	8	.	.	.	.	.	606
0.25-0.49	.	836	42	31	31	1	.	.	.	.	941
0.50-0.74	.	1561	51	23	25	8	1	.	.	.	1669
0.75-0.99	.	342	552	1	5	7	.	.	.	.	907
1.00-1.24	.	.	351	91	2	4	3	.	.	.	451
1.25-1.49	.	.	1	22	1	1	.	.	.	.	25
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3269	1040	195	72	21	4	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.4 NO. OF CASES= 4313.

STATION E01 41.73N 83.27W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1427	91	52	6	.	.	.	.	.	1578
0.25-0.49	.	2166	117	75	33	2	.	.	.	.	2393
0.50-0.74	.	3000	231	125	47	10	.	.	.	.	3413
0.75-0.99	.	866	679	78	30	11	.	.	.	.	1664
1.00-1.24	.	2	428	230	40	16	2	.	.	.	718
1.25-1.49	.	.	5	87	27	10	3	.	.	.	132
1.50-1.74	.	.	.	17	33	8	6	.	.	.	64
1.75-1.99	.	.	.	.	8	1	2	.	.	.	11
2.00-2.24	.	.	.	.	1	1	1	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7461	1551	664	227	59	14	0	0	0	

MEAN HS(M)= 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.4 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E01 (41.73N 83.27W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.5	0.5	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6
1957	0.5	0.5	0.7	0.7	0.7	0.5	0.6	0.5	0.6	0.6	0.7	0.7	0.6
1958	0.6	0.6	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.7
1959	0.6	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6
1960	0.5	0.6	0.6	0.7	0.6	0.5	0.4	0.5	0.4	0.5	0.6	0.7	0.6
1961	0.6	0.6	0.8	0.7	0.7	0.5	0.4	0.5	0.5	0.6	0.6	0.7	0.6
1962	0.7	0.7	0.8	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6
1963	0.6	0.6	0.7	0.7	0.6	0.4	0.4	0.5	0.5	0.4	0.6	0.5	0.6
1964	0.7	0.6	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
1965	0.7	0.7	0.7	0.8	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.7
1966	0.6	0.5	0.6	0.7	0.6	0.4	0.5	0.4	0.5	0.6	0.6	0.6	0.6
1967	0.7	0.7	0.6	0.7	0.8	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7
1968	0.6	0.6	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6
1969	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6
1970	0.5	0.6	0.6	0.7	0.6	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.6
1971	0.7	0.8	0.6	0.7	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
1972	0.7	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6
1973	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7
1974	0.6	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.6	0.6
1975	0.6	0.6	0.7	0.7	0.4	0.5	0.3	0.4	0.5	0.6	0.6	0.6	0.6
1976	0.6	0.6	0.7	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.6
1977	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.6	0.6	0.7	0.6
1978	0.7	0.4	0.6	0.7	0.5	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.6
1979	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6
1980	0.6	0.5	0.6	0.6	0.4	0.5	0.3	0.4	0.4	0.5	0.6	0.5	0.5
1981	0.5	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.6
1982	0.7	0.6	0.6	0.7	0.4	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.5
1983	0.5	0.5	0.6	0.7	0.6	0.4	0.4	0.3	0.4	0.6	0.6	0.6	0.6
1984	0.5	0.6	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.6
1985	0.6	0.6	0.7	0.6	0.6	0.5	0.4	0.4	0.5	0.6	0.7	0.6	0.6
1986	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6
1987	0.6	0.7	0.7	0.8	0.6	0.5	0.5	0.6	0.4	0.5	0.7	0.6	0.6
MEAN	0.6	0.6	0.7	0.7	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.6	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E01 (41.73N 83.27W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.2	1.4	1.6	1.4	1.3	1.2	1.3	1.2	1.3	1.4	1.4	1.2
1957	1.3	1.6	1.7	2.2	1.6	1.3	1.6	1.1	1.2	1.3	1.7	1.5
1958	1.2	1.8	1.5	1.7	1.6	1.3	1.3	1.1	1.1	1.2	1.4	1.2
1959	1.4	1.6	1.9	1.4	1.0	1.2	1.2	1.1	1.1	1.2	1.4	1.2
1960	1.2	1.7	1.5	1.5	1.2	1.3	1.4	1.2	0.9	1.2	1.2	1.7
1961	1.3	1.8	1.7	2.1	1.4	1.5	1.2	1.2	1.2	1.2	1.5	1.7
1962	1.5	1.8	1.9	1.5	1.2	1.2	1.5	1.3	1.2	1.2	1.8	1.5
1963	1.4	1.4	1.5	1.6	1.4	1.4	1.1	1.4	1.6	1.2	1.6	1.2
1964	2.1	1.3	1.8	1.5	1.7	1.2	1.3	1.1	1.2	1.2	1.4	1.4
1965	1.9	1.6	1.6	1.6	1.2	1.5	1.1	1.2	1.4	1.4	1.6	1.2
1966	1.5	1.4	1.6	2.0	1.5	1.1	1.5	1.2	1.5	1.2	1.5	1.5
1967	1.5	1.5	1.4	1.5	1.7	1.5	1.1	1.3	1.5	1.4	1.3	1.7
1968	1.5	1.2	1.9	1.6	1.5	1.2	1.0	1.1	1.1	1.2	1.4	1.3
1969	1.1	1.5	1.4	1.9	1.3	1.1	1.3	1.3	1.2	1.1	1.0	1.5
1970	1.1	1.3	1.8	1.7	1.4	1.4	1.2	1.4	1.3	1.3	1.4	1.4
1971	1.8	1.7	1.6	1.7	1.2	1.1	1.1	1.5	1.2	1.1	1.3	1.7
1972	1.6	1.5	1.4	2.0	1.8	1.2	1.1	1.6	1.1	1.0	1.7	1.5
1973	1.5	1.6	1.7	1.7	1.4	0.8	1.4	1.2	1.3	1.3	1.2	1.4
1974	1.3	1.7	1.7	1.9	1.4	1.6	1.7	1.3	1.2	1.1	1.5	1.8
1975	1.5	1.4	2.1	2.0	1.1	1.3	0.9	1.3	2.0	2.2	1.4	1.5
1976	1.4	1.3	1.7	1.8	1.5	1.2	1.2	1.2	1.1	1.0	1.1	1.2
1977	1.8	1.1	1.7	1.5	1.5	1.3	1.5	0.9	1.1	1.4	1.4	1.9
1978	1.9	1.4	2.0	1.6	2.1	1.0	1.5	1.1	1.7	1.2	1.6	1.4
1979	1.1	2.0	1.2	1.7	1.5	1.2	1.0	1.2	1.4	1.2	1.3	1.4
1980	1.4	1.5	1.8	2.2	1.1	1.2	1.1	1.0	0.9	1.4	1.4	1.4
1981	1.2	1.3	1.5	1.6	1.4	1.0	1.3	1.0	1.3	1.3	1.2	1.5
1982	2.1	2.0	1.5	2.2	1.1	1.3	1.0	0.9	1.0	1.3	1.2	1.4
1983	1.4	1.6	1.7	1.9	1.3	1.4	0.9	1.0	1.0	1.7	1.7	1.8
1984	1.3	2.2	2.0	1.7	1.8	1.2	0.9	1.0	1.0	1.3	1.1	1.5
1985	1.3	1.3	1.9	1.5	1.5	1.3	1.0	1.3	1.1	1.6	1.9	1.5
1986	1.2	2.2	1.3	1.3	1.4	1.3	0.8	1.0	1.1	1.2	1.6	1.9
1987	1.5	1.5	1.8	1.9	1.7	1.1	1.1	1.2	1.2	1.1	1.3	1.7

32 YR. STATISTICS FOR WIS STATION E01

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.6
MEAN PEAK WAVE PERIOD	(SECONDS)	3.4
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.3
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.8
LARGEST WAVE HS	(METERS)	2.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	88.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57040412

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	734	60	28	1	.	.	.	.	.	823
0.25-0.49	.	803	55	58	43	2	.	.	.	.	961
0.50-0.74	.	654	310	73	65	18	.	.	.	.	1120
0.75-0.99	.	31	444	5	20	11	3	.	.	.	514
1.00-1.24	.	.	373	214	3	16	1	.	.	.	607
1.25-1.49	.	.	6	226	1	5	2	.	.	.	240
1.50-1.74	.	.	.	111	5	1	7	1	.	.	125
1.75-1.99	.	.	.	9	10	.	3	1	.	.	23
2.00-2.24	.	.	.	.	6	.	.	1	.	.	7
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2222	1248	724	156	53	16	3	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 4150.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	639	62	23	4	.	.	.	.	.	728
0.25-0.49	.	602	81	53	28	.	.	.	.	.	764
0.50-0.74	.	519	266	109	78	13	.	.	.	.	985
0.75-0.99	.	25	282	21	36	14	.	.	.	.	378
1.00-1.24	.	.	213	98	17	36	2	.	.	.	366
1.25-1.49	.	.	4	96	2	9	8	.	.	.	119
1.50-1.74	.	.	.	33	3	4	5	.	.	.	45
1.75-1.99	.	.	.	.	14	.	1	.	.	.	15
2.00-2.24	.	.	.	.	5	.	3	.	.	.	8
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1785	908	433	187	77	19	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.8 NO. OF CASES= 3201.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	902	64	39	4	.	.	.	.	.	1009
0.25-0.49	.	764	89	90	38	.	.	.	.	.	981
0.50-0.74	.	655	380	133	105	11	.	.	.	.	1284
0.75-0.99	.	40	398	91	62	20	.	.	.	.	611
1.00-1.24	.	.	203	329	45	42	5	.	.	.	624
1.25-1.49	.	.	5	274	5	22	6	.	.	.	312
1.50-1.74	.	.	.	176	74	5	13	.	.	.	268
1.75-1.99	.	.	.	4	71	2	9	.	.	.	86
2.00-2.24	.	.	.	.	64	2	10	2	.	.	78
2.25-2.49	.	.	.	.	9	4	1	.	.	.	14
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2361	1139	1136	477	111	44	2	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 4949.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	630	50	36	2	.	.	.	.	.	718
0.25-0.49	.	740	101	65	23	.	.	.	.	.	929
0.50-0.74	.	733	432	178	78	10	.	.	.	.	1431
0.75-0.99	.	51	497	132	87	25	1	.	.	.	793
1.00-1.24	.	.	306	507	78	37	.	.	.	.	928
1.25-1.49	.	.	.	433	14	12	1	.	.	.	460
1.50-1.74	.	.	.	199	110	23	4	.	.	.	336
1.75-1.99	.	.	.	7	83	4	2	.	.	.	96
2.00-2.24	.	.	.	.	57	5	2	.	.	.	64
2.25-2.49	.	.	.	.	3	9	.	.	.	.	12
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2154	1386	1557	535	125	10	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 4.2 NO. OF CASES= 5409.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	821	58	38	.	.	.	.	.	.	917
0.25-0.49	.	833	135	89	33	.	.	.	.	.	1090
0.50-0.74	.	585	398	190	70	8	.	.	.	.	1251
0.75-0.99	.	38	257	144	39	5	.	.	.	.	483
1.00-1.24	.	.	142	280	113	7	.	.	.	.	542
1.25-1.49	.	.	1	109	56	9	1	.	.	.	176
1.50-1.74	.	.	.	33	77	22	1	.	.	.	133
1.75-1.99	.	.	.	.	22	16	2	.	.	.	40
2.00-2.24	.	.	.	.	3	25	.	.	.	.	28
2.25-2.49	.	.	.	.	.	1	1	.	.	.	2
2.50-2.74	.	.	.	.	.	.	2	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2277	991	883	413	93	7	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 4374.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	777	77	26	.	.	.	.	.	.	880
0.25-0.49	.	637	151	53	18	.	.	.	.	.	859
0.50-0.74	.	466	217	155	24	6	.	.	.	.	868
0.75-0.99	.	25	145	73	17	1	.	.	.	.	261
1.00-1.24	.	.	98	66	37	.	.	.	.	.	201
1.25-1.49	.	.	3	28	22	1	.	.	.	.	54
1.50-1.74	.	.	.	6	23	3	.	.	.	.	32
1.75-1.99	.	.	.	.	1	1	.	.	.	.	2
2.00-2.24	.	.	.	.	.	1	1	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1905	691	407	142	13	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.6 NO. OF CASES= 2964.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	989	89	55	3	.	.	.	.	.	1136
0.25-0.49	.	1053	201	84	23	.	.	.	.	.	1361
0.50-0.74	.	958	235	166	29	.	.	.	.	.	1388
0.75-0.99	.	139	322	33	14	.	.	.	.	.	508
1.00-1.24	.	22	278	83	19	1	.	.	.	.	403
1.25-1.49	.	.	4	110	3	1	.	.	.	.	118
1.50-1.74	.	.	.	26	2	.	.	.	.	.	28
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3161	1129	557	93	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 4631.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1043	82	35	2	.	.	.	.	.	1162
0.25-0.49	.	1375	114	49	11	.	.	.	.	.	1549
0.50-0.74	.	1829	91	80	11	2	.	.	.	.	2013
0.75-0.99	.	457	119	12	11	.	.	.	.	.	599
1.00-1.24	.	66	144	48	9	.	.	.	.	.	267
1.25-1.49	.	.	5	23	.	.	.	.	.	.	28
1.50-1.74	.	.	1	12	.	1	.	.	.	.	14
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4770	556	259	45	3	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 5279

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1304	105	37	2	.	.	.	.	.	1448
0.25-0.49	.	1651	118	56	12	1	.	.	.	.	1838
0.50-0.74	.	2081	49	96	9	2	.	.	.	.	2237
0.75-0.99	.	788	11	16	11	1	.	.	.	.	827
1.00-1.24	.	7	144	2	8	.	.	.	.	.	161
1.25-1.49	.	.	9	.	2	.	.	.	.	.	11
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5831	436	208	44	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 6109.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1146	64	31	5	.	.	.	.	.	1246
0.25-0.49	.	1359	56	45	7	.	.	.	.	.	1467
0.50-0.74	.	2427	10	42	5	.	.	.	.	.	2484
0.75-0.99	.	907	121	10	7	.	.	.	.	.	1045
1.00-1.24	.	3	468	.	5	.	.	.	.	.	476
1.25-1.49	.	.	21	2	.	.	.	.	.	.	23
1.50-1.74	.	.	.	5	.	.	.	.	.	.	5
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5842	740	138	29	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 6321.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1365	70	32	2	.	.	.	.	.	1469
0.25-0.49	.	1501	55	40	13	.	.	.	.	.	1609
0.50-0.74	.	3521	8	32	9	3	.	.	.	.	3573
0.75-0.99	.	1547	314	6	3	2	.	.	.	.	1872
1.00-1.24	.	.	1144	.	.	.	.	.	.	.	1144
1.25-1.49	.	.	73	43	.	1	.	.	.	.	117
1.50-1.74	.	.	.	47	.	.	.	.	.	.	47
1.75-1.99	.	.	.	8	.	.	.	.	.	.	8
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7934	1664	213	27	6	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 9215.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1260	42	29	4	.	.	.	.	.	1335
0.25-0.49	.	1615	36	24	7	1	.	.	.	.	1683
0.50-0.74	.	3474	20	17	5	3	.	.	.	.	3519
0.75-0.99	.	1208	891	2	3	.	.	.	.	.	2104
1.00-1.24	.	.	1954	28	2	.	.	.	.	.	1984
1.25-1.49	.	.	97	318	.	.	.	.	.	.	415
1.50-1.74	.	.	.	206	.	.	.	.	.	.	206
1.75-1.99	.	.	.	36	4	.	.	.	.	.	40
2.00-2.24	.	.	.	2	12	.	.	.	.	.	14
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7557	3040	662	38	4	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.4 NO. OF CASES= 10580.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1399	66	31	6	.	.	.	.	.	1502
0.25-0.49	.	1654	27	32	17	2	.	.	.	.	1732
0.50-0.74	.	2203	17	12	5	4	1	.	.	.	2242
0.75-0.99	.	320	1030	.	1	.	.	.	.	.	1351
1.00-1.24	.	.	1781	40	.	.	.	.	.	.	1821
1.25-1.49	.	.	2	539	.	.	.	.	.	.	541
1.50-1.74	.	.	.	233	.	.	.	.	.	.	233
1.75-1.99	.	.	.	34	10	.	.	.	.	.	44
2.00-2.24	.	.	.	.	20	.	.	.	.	.	20
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5576	2923	921	60	6	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.5 NO. OF CASES= 8880.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1015	38	42	5	.	.	.	.	.	1100
0.25-0.49	.	1432	20	24	19	.	.	.	.	.	1495
0.50-0.74	.	1496	119	8	13	5	1	.	.	.	1642
0.75-0.99	.	165	960	.	.	.	.	.	.	.	1125
1.00-1.24	.	.	1292	197	.	.	.	.	.	.	1489
1.25-1.49	.	.	3	528	.	.	.	.	.	.	531
1.50-1.74	.	.	.	179	3	.	.	.	.	.	182
1.75-1.99	.	.	.	5	14	.	.	.	.	.	19
2.00-2.24	.	.	.	.	14	.	.	.	.	.	14
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4108	2432	983	70	5	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.6 NO. OF CASES= 7118.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	799	60	37	2	.	.	.	.	.	898
0.25-0.49	.	1078	35	29	31	2	1	.	.	.	1176
0.50-0.74	.	1057	357	13	18	5	1	.	.	.	1451
0.75-0.99	.	43	938	1	.	1	.	.	.	.	983
1.00-1.24	.	2	753	424	1	1	.	.	.	.	1181
1.25-1.49	.	.	.	531	.	.	.	.	.	.	531
1.50-1.74	.	.	.	154	7	.	.	.	.	.	161
1.75-1.99	.	.	.	1	24	.	.	.	.	.	25
2.00-2.24	.	.	.	.	8	.	.	.	.	.	8
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2979	2143	1190	91	9	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.8 NO. OF CASES= 6009.

STATION E02 41.73N 83.08W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

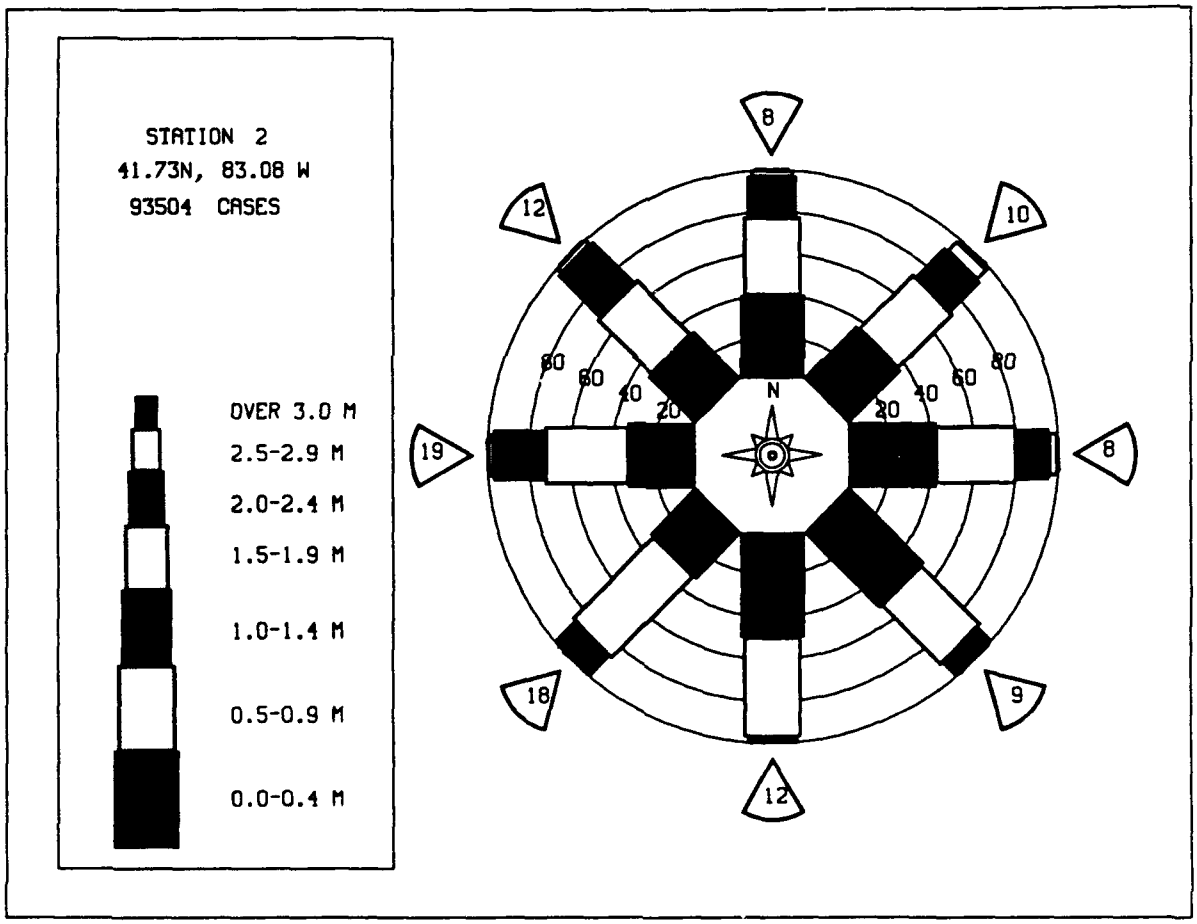
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	597	37	25	2	.	.	.	.	.	661
0.25-0.49	.	717	41	39	21	2	.	.	.	.	820
0.50-0.74	.	703	258	10	24	9	.	.	.	.	1004
0.75-0.99	.	31	640	5	2	5	2	.	.	.	685
1.00-1.24	.	.	601	343	1	3	1	.	.	.	949
1.25-1.49	.	.	.	350	.	.	.	.	.	.	350
1.50-1.74	.	.	.	119	3	1	.	.	.	.	123
1.75-1.99	.	.	.	2	6	.	.	.	.	.	8
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2048	1577	893	61	20	3	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 4315.

STATION E02 41.73N 83.08W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1543	103	55	4	.	.	.	.	.	1705
0.25-0.49	.	1781	132	83	35	1	.	.	.	.	2032
0.50-0.74	.	2336	317	132	55	10	.	.	.	.	2850
0.75-0.99	.	582	738	55	31	8	.	.	.	.	1414
1.00-1.24	.	10	990	266	34	14	.	.	.	.	1314
1.25-1.49	.	.	23	361	10	6	1	.	.	.	401
1.50-1.74	.	.	.	154	31	6	3	.	.	.	194
1.75-1.99	.	.	.	11	26	2	1	.	.	.	40
2.00-2.24	.	.	.	.	19	3	1	.	.	.	23
2.25-2.49	.	.	.	.	1	1	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6252	2303	1117	246	51	6	0	0	0	

MEAN HS(M)= 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.6 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E02 (41.73N 83.08W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.6	0.7	0.8	0.7	0.4	0.6	0.5	0.6	0.7	0.7	0.7	0.7
1957	0.7	0.6	0.8	0.8	0.8	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.7
1958	0.7	0.8	0.8	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.8	0.6	0.8
1959	0.7	0.8	0.8	0.7	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.6	0.6
1960	0.6	0.8	0.7	0.8	0.6	0.6	0.4	0.5	0.5	0.5	0.7	0.8	0.7
1961	0.7	0.6	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.7	0.7	0.8	0.7
1962	0.8	0.8	0.9	0.8	0.7	0.5	0.5	0.4	0.6	0.6	0.5	0.7	0.7
1963	0.6	0.7	0.8	0.7	0.7	0.4	0.5	0.5	0.6	0.5	0.8	0.6	0.7
1964	0.9	0.7	0.8	0.8	0.7	0.6	0.5	0.6	0.6	0.5	0.6	0.7	0.7
1965	0.9	0.8	0.8	0.8	0.6	0.6	0.5	0.5	0.6	0.7	0.8	0.7	0.8
1966	0.8	0.6	0.7	0.8	0.7	0.4	0.5	0.4	0.5	0.7	0.7	0.7	0.7
1967	0.8	0.8	0.7	0.8	0.9	0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.7
1968	0.7	0.8	0.8	0.7	0.7	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.7
1969	0.7	0.7	0.7	0.7	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.7	0.7
1970	0.6	0.7	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.8	0.8	0.7
1971	0.9	0.9	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7
1972	0.8	0.7	0.8	0.8	0.7	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.7
1973	0.8	0.8	0.8	0.8	0.7	0.5	0.6	0.5	0.6	0.6	0.7	0.8	0.7
1974	0.7	0.8	0.8	0.9	0.7	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.7
1975	0.7	0.7	0.8	0.8	0.4	0.5	0.4	0.5	0.5	0.7	0.7	0.7	0.7
1976	0.7	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7
1977	0.7	0.6	0.7	0.6	0.5	0.4	0.5	0.5	0.5	0.7	0.8	0.8	0.7
1978	0.8	0.4	0.6	0.8	0.5	0.4	0.5	0.4	0.5	0.6	0.7	0.8	0.6
1979	0.7	0.8	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.6	0.6	0.7	0.7
1980	0.6	0.6	0.7	0.8	0.4	0.5	0.3	0.4	0.4	0.6	0.7	0.6	0.6
1981	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.6	0.5	0.6	0.6
1982	0.8	0.6	0.7	0.8	0.4	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.6
1983	0.6	0.5	0.6	0.8	0.6	0.4	0.4	0.3	0.5	0.7	0.7	0.8	0.6
1984	0.5	0.6	0.8	0.7	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.6
1985	0.7	0.6	0.8	0.7	0.6	0.5	0.4	0.4	0.5	0.6	0.8	0.7	0.7
1986	0.6	0.6	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.6
1987	0.6	0.7	0.8	0.9	0.6	0.5	0.5	0.6	0.4	0.6	0.8	0.7	0.7
MEAN	0.7	0.7	0.7	0.8	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E02 (41.73N 83.08W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.3	1.6	2.0	1.8	1.5	1.4	1.5	1.4	1.4	1.6	1.7	1.4
1957	1.5	1.8	1.8	2.6	1.8	1.6	1.8	1.3	1.6	1.4	1.8	1.7
1958	1.4	2.2	1.7	2.1	1.9	1.4	1.4	1.6	1.4	1.6	2.0	1.5
1959	1.8	1.7	2.2	1.7	1.1	1.6	1.7	1.2	1.4	1.6	1.6	1.6
1960	1.6	1.9	2.2	1.8	1.6	1.6	1.5	1.2	1.3	1.7	1.6	1.9
1961	1.7	2.1	2.0	2.1	1.6	1.7	1.6	1.4	1.3	1.4	1.7	1.9
1962	1.9	2.0	2.1	1.8	1.6	1.4	1.7	1.5	1.6	1.5	2.1	1.6
1963	1.6	1.6	2.2	2.3	1.8	1.4	1.5	1.7	1.8	1.5	1.9	1.5
1964	2.3	1.4	2.3	1.9	2.2	1.5	1.4	1.4	1.6	1.7	1.5	1.6
1965	2.1	2.0	1.9	2.1	1.6	1.6	1.2	1.6	1.8	2.0	2.1	1.6
1966	2.1	1.5	2.0	2.3	2.1	1.3	1.7	1.4	1.8	1.6	1.8	1.8
1967	1.6	1.7	1.7	2.2	1.9	1.7	1.6	1.4	1.7	1.6	1.5	2.0
1968	1.6	1.6	2.1	1.9	1.6	1.6	1.3	1.4	1.3	1.5	1.6	1.8
1969	1.6	1.5	1.7	2.1	1.7	1.4	1.4	1.4	1.2	1.6	1.3	1.7
1970	1.4	1.6	2.0	2.2	1.6	1.6	1.4	1.6	1.8	1.6	1.8	1.8
1971	2.3	2.1	1.8	2.0	1.5	1.3	1.5	1.7	1.4	1.3	1.7	2.0
1972	2.2	2.0	1.8	2.3	2.0	1.7	1.4	1.7	1.3	1.4	1.9	1.6
1973	1.6	1.8	2.0	2.0	1.5	1.0	1.5	1.4	1.5	1.6	1.7	1.5
1974	1.9	1.9	2.0	2.2	1.6	1.9	1.9	1.6	1.5	1.3	1.8	2.1
1975	1.8	1.6	2.4	2.2	1.4	1.5	1.1	1.5	2.2	2.5	1.8	1.6
1976	1.4	1.5	1.9	2.1	1.6	1.4	1.4	1.5	1.4	1.5	1.3	1.5
1977	2.0	1.4	1.9	1.7	1.8	1.6	1.5	1.0	1.4	1.7	1.6	2.2
1978	2.2	1.6	2.2	2.0	2.4	1.2	1.7	1.2	2.0	1.4	2.1	1.5
1979	1.4	2.2	1.5	2.1	1.9	1.4	1.2	1.4	1.5	1.5	1.5	1.9
1980	1.8	1.8	2.1	2.4	1.3	1.6	1.3	1.2	1.1	1.5	1.6	1.9
1981	1.5	1.5	1.7	1.8	1.7	1.4	1.4	1.1	1.8	1.6	1.5	1.8
1982	2.3	2.3	1.7	2.6	1.3	1.5	1.1	1.2	1.3	1.5	1.3	1.5
1983	1.6	1.8	2.0	2.2	1.7	1.5	1.2	1.2	1.1	1.9	2.0	2.1
1984	1.5	2.4	2.3	2.1	2.1	1.3	1.1	1.2	1.2	1.5	1.4	1.7
1985	1.4	1.4	2.3	1.8	1.6	1.5	1.0	1.4	1.2	1.8	2.1	1.8
1986	1.4	2.4	1.7	1.5	1.6	1.4	1.1	1.2	1.2	1.3	1.8	2.2
1987	1.6	1.9	2.0	2.4	1.9	1.3	1.4	1.6	1.5	1.3	1.5	2.1

32 YR. STATISTICS FOR WIS STATION E02

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.6
MEAN PEAK WAVE PERIOD	(SECONDS)	3.6
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.8
LARGEST WAVE HS	(METERS)	2.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	88.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57040412

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	735	80	34	3	.	.	.	.	.	852
0.25-0.49	.	766	87	82	32	1	.	.	.	.	968
0.50-0.74	.	874	112	84	85	12	.	.	.	.	1167
0.75-0.99	.	275	332	12	22	14	1	.	.	.	656
1.00-1.24	.	.	416	14	5	25	2	.	.	.	462
1.25-1.49	.	.	34	68	4	10	6	.	.	.	122
1.50-1.74	.	.	.	41	.	4	8	1	.	.	54
1.75-1.99	.	.	.	8	.	.	6	.	.	.	14
2.00-2.24	.	.	.	.	3	.	1	3	.	.	7
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2650	1061	343	154	66	24	4	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.6 NO. OF CASES= 4039.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	539	50	17	1	.	.	.	.	.	607
0.25-0.49	.	546	65	79	19	.	.	.	.	.	709
0.50-0.74	.	586	144	100	79	11	.	.	.	.	920
0.75-0.99	.	105	238	29	40	13	.	.	.	.	425
1.00-1.24	.	.	256	40	28	42	2	.	.	.	368
1.25-1.49	.	.	9	49	17	34	4	.	.	.	113
1.50-1.74	.	.	.	34	8	17	8	.	.	.	67
1.75-1.99	.	.	.	6	3	.	9	.	.	.	18
2.00-2.24	.	.	.	.	2	.	7	1	.	.	10
2.25-2.49	.	.	.	.	1	.	1	.	.	.	2
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1776	762	354	199	117	31	1	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.8 NO. OF CASES= 3044.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	836	68	49	3	.	.	.	.	.	956
0.25-0.49	.	699	121	103	22	.	.	.	.	.	945
0.50-0.74	.	704	291	182	128	3	.	.	.	.	1308
0.75-0.99	.	66	516	45	88	14	.	.	.	.	729
1.00-1.24	.	1	578	106	65	50	1	.	.	.	801
1.25-1.49	.	.	45	199	38	50	4	.	.	.	336
1.50-1.74	.	.	.	165	20	74	17	.	.	.	276
1.75-1.99	.	.	.	38	7	24	29	.	.	.	98
2.00-2.24	.	.	.	2	21	2	63	2	.	.	90
2.25-2.49	.	.	.	.	4	.	8	2	.	.	14
2.50-2.74	.	.	.	.	1	.	4	.	.	.	5
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2306	1619	889	397	217	126	4	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 5218.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	626	54	33	.	.	.	.	.	.	713
0.25-0.49	.	696	111	81	24	.	.	.	.	.	912
0.50-0.74	.	700	345	208	89	7	.	.	.	.	1349
0.75-0.99	.	75	444	101	95	18	.	.	.	.	733
1.00-1.24	.	.	452	170	122	39	.	.	.	.	783
1.25-1.49	.	.	37	205	43	28	.	.	.	.	313
1.50-1.74	.	.	.	103	72	29	4	.	.	.	208
1.75-1.99	.	.	.	22	14	24	3	.	.	.	63
2.00-2.24	.	.	.	3	13	11	16	.	.	.	43
2.25-2.49	.	.	.	.	3	.	6	.	.	.	9
2.50-2.74	.	.	.	.	.	.	1	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2097	1443	926	475	156	30	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 4813.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	716	66	41	.	.	.	.	.	.	823
0.25-0.49	.	673	154	112	22	.	.	.	.	.	961
0.50-0.74	.	469	363	199	74	7	.	.	.	.	1112
0.75-0.99	.	28	183	144	31	7	2	.	.	.	395
1.00-1.24	.	.	113	214	81	6	.	.	.	.	414
1.25-1.49	.	.	3	88	44	9	.	.	.	.	144
1.50-1.74	.	.	.	32	67	17	2	.	.	.	118
1.75-1.99	.	.	.	1	17	14	1	.	.	.	33
2.00-2.24	.	.	.	.	6	22	1	.	.	.	29
2.25-2.49	.	.	.	.	.	2	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	2	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1886	882	831	342	84	8	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 3787.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	682	62	24	1	.	.	.	.	.	769
0.25-0.49	.	620	117	69	18	.	.	.	.	.	824
0.50-0.74	.	370	245	140	35	4	.	.	.	.	794
0.75-0.99	.	27	90	137	11	2	.	.	.	.	267
1.00-1.24	.	.	38	118	50	2	.	.	.	.	208
1.25-1.49	.	.	.	35	31	2	.	.	.	.	68
1.50-1.74	.	.	.	7	20	4	.	.	.	.	31
1.75-1.99	.	.	.	.	7	.	.	.	.	.	7
2.00-2.24	.	.	.	.	.	5	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1699	552	530	173	19	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.7 NO. OF CASES= 2791.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1001	109	35	3	.	.	.	.	.	1148
0.25-0.49	.	898	238	90	18	.	.	.	.	.	1244
0.50-0.74	.	1049	328	183	37	1	.	.	.	.	1598
0.75-0.99	.	274	106	225	13	1	.	.	.	.	619
1.00-1.24	.	1	115	207	68	1	.	.	.	.	392
1.25-1.49	.	.	23	6	48	1	.	.	.	.	78
1.50-1.74	.	.	2	2	6	5	.	.	.	.	15
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3223	921	748	193	9	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.6 NO. OF CASES= 4774.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1078	103	37	.	.	.	.	.	.	1218
0.25-0.49	.	1195	141	67	8	.	.	.	.	.	1411
0.50-0.74	.	1470	126	80	14	2	.	.	.	.	1692
0.75-0.99	.	283	319	71	9	1	.	.	.	.	683
1.00-1.24	.	1	392	53	37	1	.	.	.	.	484
1.25-1.49	.	.	26	58	20	.	.	.	.	.	104
1.50-1.74	.	.	2	17	1	2	.	.	.	.	22
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4027	1109	384	89	6	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 5261.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1245	80	38	3	.	.	.	.	.	1366
0.25-0.49	.	1315	88	45	16	1	.	.	.	.	1465
0.50-0.74	.	2145	60	51	12	1	.	.	.	.	2269
0.75-0.99	.	411	818	12	6	.	.	.	.	.	1247
1.00-1.24	.	.	1332	7	4	.	.	.	.	.	1343
1.25-1.49	.	.	5	290	.	.	.	.	.	.	295
1.50-1.74	.	.	.	71	.	.	.	.	.	.	71
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5116	2383	518	42	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 7549.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	940	56	26	2	.	.	.	.	.	1024
0.25-0.49	.	1170	51	39	5	.	.	.	.	.	1265
0.50-0.74	.	2580	18	28	5	.	.	.	.	.	2631
0.75-0.99	.	911	529	5	.	.	.	.	.	.	1445
1.00-1.24	.	.	1073	4	1	1	.	.	.	.	1079
1.25-1.49	.	.	49	114	.	.	.	.	.	.	163
1.50-1.74	.	.	.	47	.	.	.	.	.	.	47
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5601	1776	266	16	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 7170.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1304	47	27	2	.	.	.	.	.	1380
0.25-0.49	.	1356	57	41	8	.	.	.	.	.	1462
0.50-0.74	.	3483	14	17	8	2	.	.	.	.	3524
0.75-0.99	.	1529	493	5	1	.	.	.	.	.	2028
1.00-1.24	.	1	1220	.	.	1	.	.	.	.	1222
1.25-1.49	.	.	111	54	.	.	.	.	.	.	165
1.50-1.74	.	.	.	57	.	.	.	.	.	.	57
1.75-1.99	.	.	.	17	.	.	.	.	.	.	17
2.00-2.24	.	.	.	2	2	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7673	1942	220	21	3	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 9227.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1304	42	24	3	.	.	.	.	.	1373
0.25-0.49	.	1465	24	34	14	.	.	.	.	.	1537
0.50-0.74	.	2587	199	10	12	4	.	.	.	.	2812
0.75-0.99	.	906	900	6	.	2	.	.	.	.	1814
1.00-1.24	.	.	1535	285	.	.	.	.	.	.	1820
1.25-1.49	.	.	94	412	.	.	.	.	.	.	506
1.50-1.74	.	.	.	286	9	.	.	.	.	.	295
1.75-1.99	.	.	.	17	29	.	.	.	.	.	46
2.00-2.24	.	.	.	3	16	.	.	.	.	.	19
2.25-2.49	.	.	.	.	3	1	.	.	.	.	4
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6262	2794	1077	86	8	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.5 NO. OF CASES= 9576.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1469	45	33	2	.	.	.	.	.	1549
0.25-0.49	.	1509	20	35	11	.	.	.	.	.	1575
0.50-0.74	.	1305	644	14	14	5	.	.	.	.	1982
0.75-0.99	.	70	1073	17	.	.	.	.	.	.	1160
1.00-1.24	.	.	922	773	.	.	.	.	.	.	1695
1.25-1.49	.	.	2	915	.	.	.	.	.	.	917
1.50-1.74	.	.	.	525	40	.	.	.	.	.	565
1.75-1.99	.	.	.	5	130	.	.	.	.	.	135
2.00-2.24	.	.	.	.	53	.	.	.	.	.	53
2.25-2.49	.	.	.	.	10	2	.	.	.	.	12
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4353	2706	2317	260	10	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.8 NO. OF CASES= 9032.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1074	28	34	3	.	.	.	.	.	1139
0.25-0.49	.	1279	31	27	17	.	.	.	.	.	1354
0.50-0.74	.	866	652	18	16	1	.	.	.	.	1553
0.75-0.99	.	50	796	28	1	1	.	.	.	.	876
1.00-1.24	.	.	748	702	.	1	.	.	.	.	1451
1.25-1.49	.	.	4	729	.	.	.	.	.	.	733
1.50-1.74	.	.	.	344	49	.	.	.	.	.	393
1.75-1.99	.	.	.	.	52	.	.	.	.	.	52
2.00-2.24	.	.	.	.	24	.	.	.	.	.	24
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	2	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3269	2259	1882	164	5	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 7096.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	731	62	35	1	.	.	.	.	.	829
0.25-0.49	.	962	33	40	26	.	.	.	.	.	1061
0.50-0.74	.	790	583	10	23	4	2	.	.	.	1412
0.75-0.99	.	35	911	4	3	1	.	.	.	.	954
1.00-1.24	.	2	938	494	.	1	2	.	.	.	1437
1.25-1.49	.	.	2	573	.	.	2	.	.	.	577
1.50-1.74	.	.	.	163	6	.	.	.	.	.	169
1.75-1.99	.	.	.	.	32	.	.	.	.	.	32
2.00-2.24	.	.	.	.	9	.	.	.	.	.	9
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2520	2529	1319	100	6	6	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.9 NO. OF CASES= 6069.

STATION E03 41.73N 82.88W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

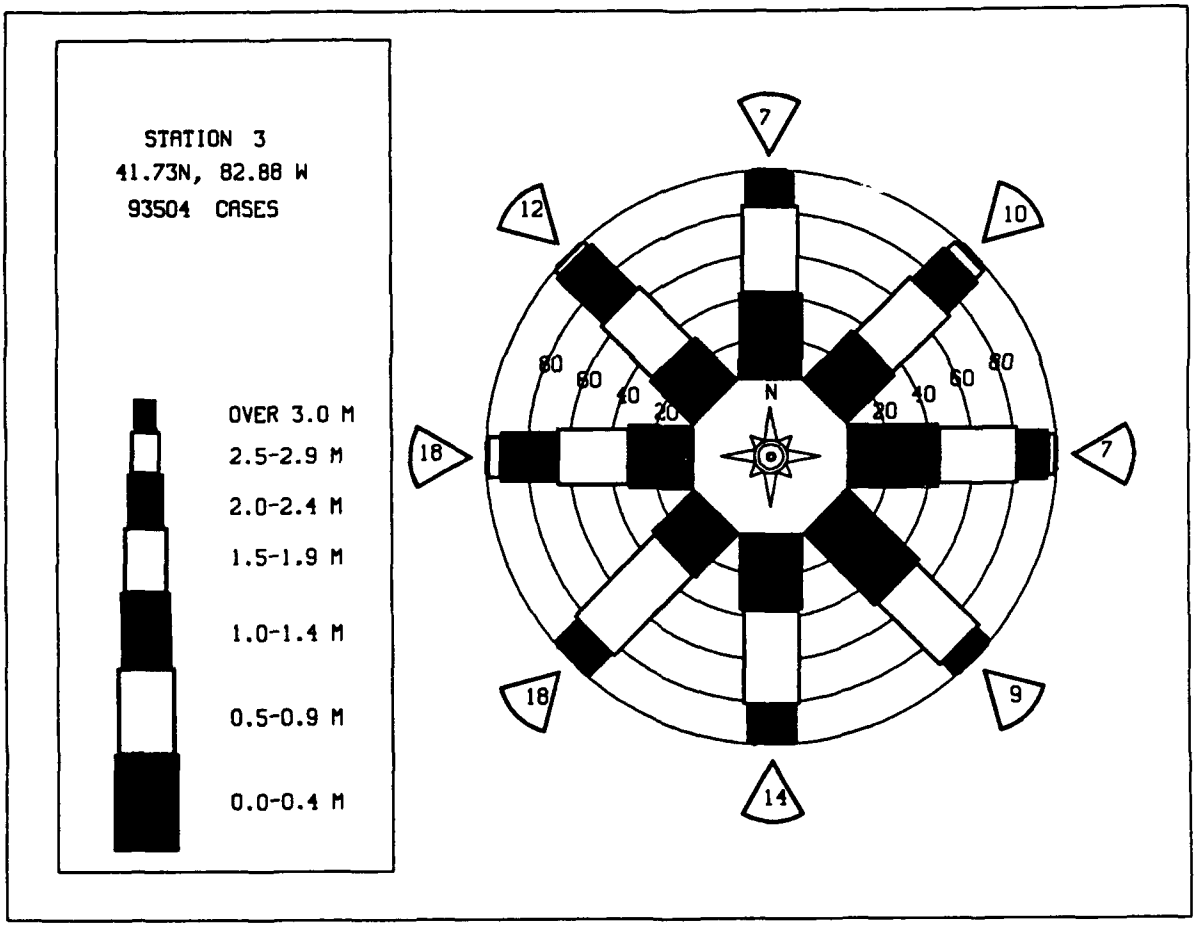
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	533	39	23	1	.	.	.	.	.	596
0.25-0.49	.	621	43	47	18	.	.	.	.	.	729
0.50-0.74	.	687	293	21	45	8	1	.	.	.	1055
0.75-0.99	.	122	545	6	10	9	2	.	.	.	694
1.00-1.24	.	.	567	271	3	8	4	.	.	.	853
1.25-1.49	.	.	16	273	1	1	2	.	.	.	293
1.50-1.74	.	.	.	94	4	.	1	.	.	.	99
1.75-1.99	.	.	.	.	6	.	.	.	.	.	6
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1963	1503	735	89	26	10	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 4058.

STATION E03 41.73N 82.88W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1482	99	51	2	.	.	.	.	.	1634
0.25-0.49	.	1577	138	99	28	.	.	.	.	.	1842
0.50-0.74	.	2067	442	135	68	7	.	.	.	.	2719
0.75-0.99	.	517	830	85	33	8	.	.	.	.	1473
1.00-1.24	.	.	1070	346	46	18	1	.	.	.	1481
1.25-1.49	.	.	46	407	24	13	1	.	.	.	491
1.50-1.74	.	.	.	199	30	15	4	.	.	.	248
1.75-1.99	.	.	.	12	30	6	5	.	.	.	53
2.00-2.24	.	.	.	1	15	4	8	.	.	.	28
2.25-2.49	.	.	.	.	2	.	1	.	.	.	3
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5643	2625	1335	278	71	20	0	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E03 (41.73N 82.88W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.7	0.8	0.8	0.7	0.5	0.6	0.6	0.6	0.7	0.8	0.7	0.7
1957	0.7	0.7	0.8	0.8	0.8	0.6	0.6	0.5	0.6	0.7	0.9	0.9	0.8
1958	0.8	0.9	0.8	0.9	0.8	0.6	0.6	0.6	0.7	0.8	0.9	0.7	0.8
1959	0.8	0.8	0.9	0.8	0.5	0.5	0.4	0.4	0.5	0.6	0.8	0.6	0.7
1960	0.7	0.8	0.7	0.9	0.7	0.6	0.4	0.5	0.5	0.6	0.8	0.9	0.7
1961	0.8	0.6	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.7	0.8	0.9	0.8
1962	0.9	0.9	0.9	0.8	0.7	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7
1963	0.7	0.7	0.8	0.8	0.7	0.4	0.5	0.5	0.6	0.5	0.8	0.7	0.7
1964	0.9	0.7	0.9	0.9	0.7	0.6	0.5	0.6	0.6	0.6	0.7	0.8	0.8
1965	0.9	0.9	0.8	0.8	0.6	0.6	0.5	0.6	0.7	0.8	0.8	0.8	0.8
1966	0.8	0.6	0.8	0.8	0.6	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.7
1967	0.9	0.9	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.7	0.8	0.8	0.8
1968	0.7	0.9	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.6	0.8	0.9	0.8
1969	0.8	0.7	0.8	0.7	0.5	0.6	0.4	0.4	0.5	0.7	0.7	0.8	0.7
1970	0.7	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.7	0.9	0.9	0.8
1971	1.0	1.0	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.6	0.8	0.8	0.8
1972	0.9	0.7	0.8	0.8	0.7	0.7	0.5	0.6	0.6	0.7	0.7	0.7	0.8
1973	0.9	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.8
1974	0.8	0.9	0.9	0.9	0.8	0.7	0.6	0.5	0.7	0.7	0.7	0.7	0.8
1975	0.7	0.7	0.8	0.8	0.5	0.6	0.4	0.5	0.6	0.7	0.7	0.8	0.7
1976	0.8	0.8	0.8	0.8	0.7	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.7
1977	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.8	0.7
1978	0.8	0.4	0.6	0.8	0.5	0.5	0.5	0.4	0.6	0.6	0.7	0.8	0.7
1979	0.7	0.8	0.7	0.7	0.6	0.5	0.4	0.6	0.5	0.7	0.7	0.7	0.7
1980	0.6	0.6	0.8	0.6	0.4	0.5	0.4	0.4	0.4	0.7	0.7	0.7	0.6
1981	0.7	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.7
1982	0.8	0.6	0.7	0.9	0.4	0.5	0.3	0.3	0.4	0.5	0.7	0.7	0.6
1983	0.6	0.5	0.7	0.8	0.7	0.4	0.4	0.4	0.5	0.7	0.7	0.8	0.6
1984	0.5	0.7	0.9	0.7	0.7	0.5	0.4	0.4	0.5	0.5	0.7	0.7	0.6
1985	0.7	0.7	0.9	0.7	0.6	0.5	0.5	0.5	0.5	0.7	0.9	0.8	0.7
1986	0.6	0.6	0.6	0.7	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6
1987	0.7	0.7	0.7	0.8	0.6	0.5	0.5	0.6	0.4	0.6	0.8	0.7	0.7
MEAN	0.8	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.8	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E03 (41.73N 82.88W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.3	1.9	2.4	1.8	1.7	1.7	1.7	1.4	1.5	1.6	1.9	1.5
1957	1.6	1.7	1.9	2.6	1.9	1.9	1.8	1.2	1.7	1.4	2.0	1.6
1958	1.5	2.1	1.8	2.2	1.8	1.5	1.5	1.9	1.6	1.9	2.1	1.8
1959	2.1	1.5	2.2	2.1	1.5	1.4	1.5	1.1	1.4	1.9	1.7	1.5
1960	1.7	1.9	2.1	2.1	1.8	1.9	1.5	1.1	1.4	1.7	1.8	2.0
1961	1.8	2.2	1.8	2.2	1.8	1.7	1.6	1.6	1.5	1.7	1.6	2.1
1962	2.1	2.0	2.2	1.8	1.7	1.4	1.8	1.4	1.6	1.5	2.2	1.9
1963	1.8	1.7	2.3	2.2	1.9	1.6	1.6	1.6	1.8	1.4	1.9	1.7
1964	2.5	1.4	2.4	1.8	2.5	1.8	1.3	1.4	1.9	1.8	1.7	1.7
1965	2.4	1.8	2.0	2.2	1.8	1.6	1.4	1.6	1.8	2.3	2.3	1.5
1966	2.4	1.5	2.2	2.1	2.1	1.4	1.7	1.5	1.8	1.9	1.7	1.8
1967	1.7	1.7	1.6	2.4	1.9	1.8	1.6	1.5	1.8	1.7	1.7	1.9
1968	1.8	1.8	2.1	1.9	1.6	1.8	1.3	1.6	1.4	1.7	1.7	2.1
1969	2.0	1.6	1.9	2.3	1.6	1.6	1.4	1.4	1.3	1.6	1.5	1.8
1970	1.5	1.6	2.1	2.2	1.7	1.6	1.5	1.6	2.0	1.7	1.9	2.1
1971	2.6	2.0	1.8	2.0	1.5	1.4	1.6	1.7	1.4	1.6	1.7	2.1
1972	2.5	2.0	1.9	2.3	2.1	1.9	1.4	1.8	1.3	1.7	1.9	1.8
1973	1.8	1.8	2.0	2.0	1.7	1.2	1.6	1.4	1.5	1.7	2.0	1.6
1974	2.0	1.9	2.0	2.3	1.9	1.9	1.9	1.5	1.7	1.4	1.8	2.2
1975	1.7	1.6	2.4	2.2	1.4	1.5	1.1	1.5	2.2	2.6	1.8	1.6
1976	1.7	1.5	1.9	2.1	1.6	1.3	1.3	1.4	1.4	1.6	1.4	1.5
1977	2.1	1.3	1.9	1.6	1.7	1.5	1.4	1.2	1.5	1.8	1.7	2.2
1978	2.3	1.5	2.2	1.9	2.2	1.2	1.7	1.2	2.2	1.4	2.1	1.6
1979	1.4	2.3	1.6	2.3	1.9	1.4	1.2	1.4	1.5	1.5	1.6	1.8
1980	1.7	1.7	2.1	2.5	1.3	1.5	1.3	1.1	1.3	1.7	1.6	1.8
1981	1.8	1.7	1.7	1.8	1.5	1.6	1.7	1.2	1.9	1.9	1.5	1.7
1982	2.3	2.3	1.7	2.6	1.2	1.4	1.0	1.1	1.3	1.5	1.5	1.5
1983	1.7	1.8	2.0	2.3	1.6	1.5	1.1	1.2	1.3	2.0	2.0	2.3
1984	1.6	2.4	2.2	2.0	2.0	1.2	1.1	1.3	1.4	1.3	1.6	1.7
1985	1.5	1.5	2.3	1.8	1.6	1.6	1.0	1.3	1.4	1.8	2.1	1.8
1986	1.3	2.4	1.7	1.4	1.7	1.4	1.0	1.2	1.3	1.3	1.7	2.2
1987	1.7	2.0	2.0	2.2	1.9	1.3	1.2	1.5	1.5	1.6	1.7	2.2

32 YR. STATISTICS FOR WIS STATION E03

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	3.7
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.9
LARGEST WAVE HS	(METERS)	2.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	88.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57040412

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	860	73	63	8	.	.	.	.	.	1004
0.25-0.49	.	804	21	31	40	2	.	.	.	.	898
0.50-0.74	.	617	397	11	18	14	.	.	.	.	1057
0.75-0.99	.	34	546	33	1	4	.	.	.	.	618
1.00-1.24	.	.	223	371	.	1	.	.	.	.	595
1.25-1.49	.	.	.	160	1	.	.	.	.	.	161
1.50-1.74	.	.	.	39	24	.	.	.	.	.	63
1.75-1.99	.	.	.	.	9	.	.	.	.	.	9
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2315	1260	708	104	21	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.7 NO. OF CASES= 4132.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	804	80	58	8	.	.	.	.	.	950
0.25-0.49	.	643	20	53	40	.	.	.	.	.	756
0.50-0.74	.	524	357	8	37	19	.	.	.	.	945
0.75-0.99	.	19	424	26	5	5	1	.	.	.	480
1.00-1.24	.	.	239	223	.	3	.	.	.	.	465
1.25-1.49	.	.	.	87	1	.	1	.	.	.	89
1.50-1.74	.	.	.	26	9	.	.	.	.	.	35
1.75-1.99	.	.	.	.	4	.	.	.	.	.	4
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1990	1120	481	105	27	2	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.7 NO. OF CASES= 3494.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1124	119	97	9	.	.	.	.	.	1349
0.25-0.49	.	786	59	72	74	1	.	.	.	.	992
0.50-0.74	.	875	324	17	93	14	1	.	.	.	1324
0.75-0.99	.	40	801	5	5	8	.	.	.	.	859
1.00-1.24	.	.	565	416	.	7	1	.	.	.	989
1.25-1.49	.	.	1	317	.	.	1	.	.	.	319
1.50-1.74	.	.	.	147	38	.	1	.	.	.	186
1.75-1.99	.	.	.	.	39	.	.	.	.	.	39
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2825	1869	1071	261	30	4	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 5678.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	836	106	119	5	.	.	.	.	.	1066
0.25-0.49	.	859	64	98	58	2	.	.	.	.	1081
0.50-0.74	.	943	212	40	81	36	.	.	.	.	1312
0.75-0.99	.	162	373	19	20	16	2	.	.	.	592
1.00-1.24	.	21	227	127	13	9	.	.	.	.	397
1.25-1.49	.	.	2	77	3	2	2	.	.	.	86
1.50-1.74	.	.	.	25	9	.	.	.	.	.	34
1.75-1.99	.	.	.	.	4	1	.	.	.	.	5
2.00-2.24	.	.	.	.	.	.	1	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2821	984	505	193	66	5	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.6 NO. OF CASES= 4290.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1058	154	131	19	.	.	.	.	.	1362
0.25-0.49	.	934	67	110	84	6	.	.	.	.	1201
0.50-0.74	.	826	54	37	69	22	.	.	.	.	1008
0.75-0.99	.	182	29	9	9	8	1	.	.	.	238
1.00-1.24	.	17	23	12	6	6	3	.	.	.	67
1.25-1.49	.	.	4	2	.	2	.	.	.	.	8
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3017	331	302	187	44	4	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.4 NO. OF CASES= 3645.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	958	140	93	17	.	.	.	.	.	1208
0.25-0.49	.	752	32	60	52	4	.	.	.	.	900
0.50-0.74	.	668	17	9	20	4	2	.	.	.	720
0.75-0.99	.	101	10	3	1	.	.	.	.	.	115
1.00-1.24	.	6	11	.	.	.	.	.	.	.	17
1.25-1.49	.	.	.	.	.	.	.	.	.	.	0
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2485	210	165	90	8	2	0	0	0	

MEAN HS(M) = 0.3 LARGEST HS(M)= 1.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 2775.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1395	193	132	16	2	.	.	.	.	1738
0.25-0.49	.	817	26	58	51	2	.	.	.	.	954
0.50-0.74	.	1074	5	1	5	6	.	.	.	.	1091
0.75-0.99	.	166	48	.	.	1	.	.	.	.	215
1.00-1.24	.	.	43	.	.	.	.	.	.	.	43
1.25-1.49	.	.	.	.	.	.	.	.	.	.	0
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3452	315	191	72	11	0	0	0	0	

MEAN HS(M) = 0.3 LARGEST HS(M)= 1.2 MEAN TP(SEC)= 3.2 NO. OF CASES= 3786.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1163	106	85	16	.	.	.	.	.	1370
0.25-0.49	.	1236	1	24	16	1	.	.	.	.	1278
0.50-0.74	.	1552	1	.	1	2	.	.	.	.	1556
0.75-0.99	.	258	75	.	1	.	.	.	.	.	334
1.00-1.24	.	.	98	.	.	.	.	.	.	.	98
1.25-1.49	.	.	.	3	.	.	.	.	.	.	3
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4209	281	112	34	3	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.3 MEAN TP(SEC)= 3.1 NO. OF CASES= 4344.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1907	128	111	12	.	.	.	.	.	2158
0.25-0.49	.	2173	7	11	17	2	.	.	.	.	2210
0.50-0.74	.	3211		2	.	.	.	.	.	.	3213
0.75-0.99	.	788	121	.	.	.	.	.	.	.	909
1.00-1.24	.	.	166	.	.	.	.	.	.	.	166
1.25-1.49	.	.	6	.	.	.	.	.	.	.	6
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8079	428	125	29	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 8107.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1613	79	70	8	.	.	.	.	.	1770
0.25-0.49	.	1846	11	10	11	1	.	.	.	.	1879
0.50-0.74	.	3967		.	1	1	.	.	.	.	3969
0.75-0.99	.	1247	380	.	.	.	.	.	.	.	1627
1.00-1.24	.	.	593	.	.	.	.	.	.	.	593
1.25-1.49	.	.	10	23	.	.	.	.	.	.	33
1.50-1.74	.	.	.	12	.	.	.	.	.	.	12
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8673	1073	115	20	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 9250.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1856	75	67	10	.	.	.	.	.	2008
0.25-0.49	.	1337	20	9	14	3	.	.	.	.	1383
0.50-0.74	.	4249	2	.	.	2	.	.	.	.	4253
0.75-0.99	.	1315	616	.	.	.	.	.	.	.	1931
1.00-1.24	.	.	1109	.	.	.	.	.	.	.	1109
1.25-1.49	.	.	33	94	.	.	.	.	.	.	127
1.50-1.74	.	.	.	57	.	.	.	.	.	.	57
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8757	1855	232	25	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 10175.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1503	51	58	7	.	.	.	.	.	1619
0.25-0.49	.	1368	19	6	10	4	.	.	.	.	1407
0.50-0.74	.	2774	7	.	2	2	.	.	.	.	2785
0.75-0.99	.	1118	361	.	.	.	.	.	.	.	1479
1.00-1.24	.	4	913	1	.	.	.	.	.	.	918
1.25-1.49	.	.	47	104	.	.	.	.	.	.	151
1.50-1.74	.	.	1	71	.	.	.	.	.	.	72
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6767	1399	241	19	6	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 7893.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1478	63	59	8	2	.	.	.	.	1610
0.25-0.49	.	1591	40	16	21	3	.	.	.	.	1671
0.50-0.74	.	2158	23	1	2	4	.	.	.	.	2188
0.75-0.99	.	949	77	1	.	.	.	.	.	.	1027
1.00-1.24	.	1	348	.	.	.	.	.	.	.	349
1.25-1.49	.	.	40	1	.	.	.	.	.	.	41
1.50-1.74	.	.	.	18	.	.	.	.	.	.	18
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6177	591	96	31	9	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 6462.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1272	57	45	10	.	.	.	.	.	1384
0.25-0.49	.	1525	75	9	11	.	.	.	.	.	1620
0.50-0.74	.	2024	266	41	3	2	.	.	.	.	2336
0.75-0.99	.	1182	99	60	.	.	2	.	.	.	1343
1.00-1.24	.	125	321	172	7	.	.	.	.	.	625
1.25-1.49	.	.	48	67	12	.	.	.	.	.	127
1.50-1.74	.	.	6	9	33	.	.	.	.	.	48
1.75-1.99	.	.	.	1	3	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6128	872	404	79	2	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 7014.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1073	52	56	14	.	.	.	.	.	1195
0.25-0.49	.	1089	126	13	22	1	1	.	.	.	1252
0.50-0.74	.	1063	871	99	8	2	2	.	.	.	2045
0.75-0.99	.	309	698	534	1	.	.	.	.	.	1542
1.00-1.24	.	37	355	995	8	.	.	.	.	.	1395
1.25-1.49	.	.	8	529	75	.	.	.	.	.	612
1.50-1.74	.	.	1	11	189	.	.	.	.	.	201
1.75-1.99	.	.	.	1	21	2	.	.	.	.	24
2.00-2.24	.	.	.	.	1	7	.	.	.	.	8
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3571	2111	2238	339	12	3	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.9 NO. OF CASES= 7750.

STATION E04 41.58N 82.88W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

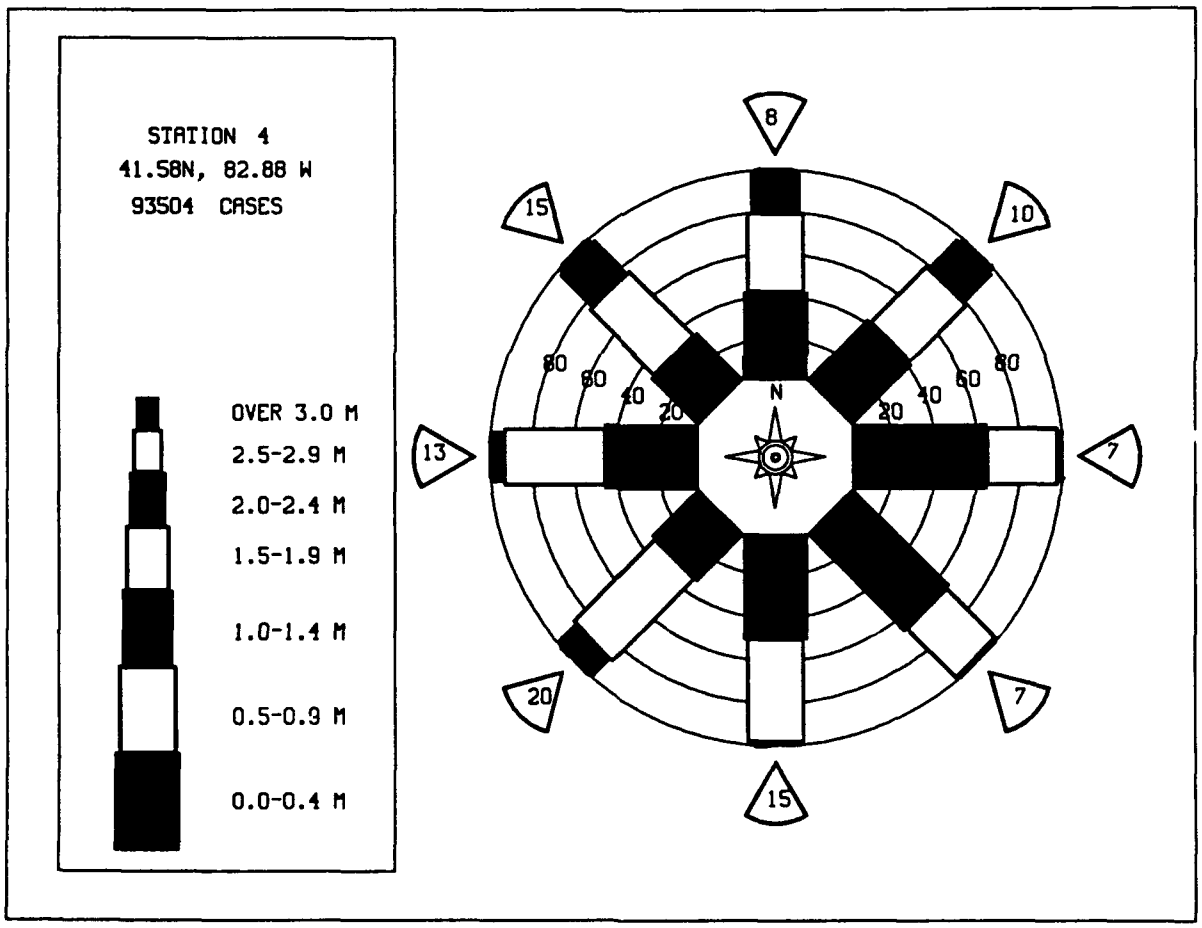
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	711	39	50	7	.	.	.	.	.	807
0.25-0.49	.	686	32	18	27	4	.	.	.	.	767
0.50-0.74	.	559	496	21	4	7	1	.	.	.	1088
0.75-0.99	.	40	567	262	.	.	1	.	.	.	870
1.00-1.24	.	.	178	755	.	1	.	.	.	.	934
1.25-1.49	.	.	.	357	50	.	.	.	.	.	407
1.50-1.74	.	.	.	8	133	.	.	.	.	.	141
1.75-1.99	.	.	.	.	10	1	.	.	.	.	11
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1996	1312	1471	232	13	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 4.0 NO. OF CASES= 4709.

STATION E04 41.58N 82.88W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1961	152	130	18	.	.	.	.	.	2261
0.25-0.49	.	1845	62	60	55	3	.	.	.	.	2025
0.50-0.74	.	2709	303	29	34	14	.	.	.	.	3089
0.75-0.99	.	791	523	95	4	4	.	.	.	.	1417
1.00-1.24	.	21	542	307	3	2	.	.	.	.	875
1.25-1.49	.	.	20	182	14	.	.	.	.	.	216
1.50-1.74	.	.	.	43	43	.	.	.	.	.	86
1.75-1.99	.	.	.	.	9	.	.	.	.	.	9
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7327	1602	846	181	23	0	0	0	0	

MEAN HS(M)= 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E04 (41.58N 82.88W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.6	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6
1957	0.6	0.5	0.7	0.6	0.7	0.5	0.5	0.4	0.5	0.6	0.7	0.7	0.6
1958	0.6	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.7
1959	0.7	0.7	0.7	0.6	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.5	0.6
1960	0.5	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.5	0.7	0.8	0.6
1961	0.6	0.5	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.6	0.6	0.7	0.6
1962	0.7	0.7	0.7	0.7	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6
1963	0.6	0.6	0.7	0.7	0.5	0.3	0.4	0.4	0.4	0.4	0.7	0.5	0.6
1964	0.7	0.6	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.6
1965	0.7	0.7	0.6	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.7	0.7	0.6
1966	0.7	0.5	0.6	0.6	0.6	0.3	0.4	0.4	0.4	0.6	0.6	0.6	0.6
1967	0.7	0.7	0.6	0.7	0.7	0.5	0.4	0.4	0.5	0.6	0.7	0.6	0.6
1968	0.6	0.7	0.7	0.6	0.6	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.6
1969	0.6	0.6	0.6	0.6	0.4	0.5	0.4	0.4	0.4	0.6	0.5	0.7	0.6
1970	0.6	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.7	0.7	0.6
1971	0.8	0.8	0.7	0.7	0.5	0.4	0.4	0.5	0.4	0.4	0.6	0.6	0.6
1972	0.7	0.6	0.7	0.6	0.6	0.6	0.4	0.4	0.5	0.6	0.6	0.6	0.6
1973	0.7	0.6	0.7	0.7	0.6	0.4	0.5	0.4	0.5	0.5	0.7	0.7	0.6
1974	0.6	0.7	0.7	0.8	0.6	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.6
1975	0.6	0.6	0.7	0.7	0.4	0.5	0.3	0.4	0.5	0.6	0.6	0.6	0.6
1976	0.6	0.7	0.7	0.6	0.6	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6
1977	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.6
1978	0.7	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.6
1979	0.6	0.7	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.6
1980	0.5	0.5	0.7	0.5	0.4	0.4	0.3	0.4	0.4	0.6	0.6	0.6	0.5
1981	0.6	0.7	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.6	0.5	0.5	0.6
1982	0.7	0.6	0.6	0.7	0.3	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.5
1983	0.5	0.4	0.6	0.7	0.5	0.3	0.3	0.3	0.4	0.6	0.6	0.7	0.5
1984	0.4	0.6	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.4	0.6	0.6	0.5
1985	0.6	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.7	0.7	0.6
1986	0.6	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
1987	0.5	0.6	0.6	0.7	0.5	0.5	0.4	0.5	0.3	0.5	0.7	0.6	0.6
MEAN	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E04 (41.58N 82.88W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.4	1.3	1.6	1.7	1.5	1.2	1.2	1.2	1.3	1.4	1.3	1.3
1957	1.5	1.4	1.7	1.7	1.5	1.5	1.4	1.2	1.2	1.3	1.6	1.6
1958	1.5	1.7	1.5	1.8	1.6	1.5	1.5	1.2	1.4	1.4	1.7	1.3
1959	1.5	1.4	1.8	1.4	1.2	1.4	1.3	1.1	1.3	1.2	1.5	1.5
1960	1.6	1.6	1.9	1.8	1.3	1.3	1.3	1.1	1.1	1.7	1.4	1.6
1961	1.7	1.6	1.7	1.7	1.4	1.4	1.6	1.2	1.3	1.5	1.4	1.4
1962	1.7	1.8	1.8	1.8	1.3	1.3	1.5	1.3	1.4	1.2	1.9	1.5
1963	1.5	1.5	1.6	1.9	1.9	1.4	1.3	1.6	1.4	1.4	1.7	1.3
1964	1.8	1.3	2.0	1.5	1.7	1.4	1.3	1.4	1.2	1.2	1.4	1.5
1965	1.7	1.8	1.7	1.7	1.2	1.3	1.1	1.6	1.3	1.8	1.9	1.5
1966	1.7	1.3	1.5	1.5	1.8	1.2	1.4	1.3	1.4	1.5	1.7	1.3
1967	1.5	1.5	1.6	1.9	1.6	1.5	1.4	1.3	1.4	1.5	1.5	1.3
1968	1.4	1.5	1.8	1.6	1.3	1.4	1.2	1.2	1.1	1.3	1.3	1.5
1969	1.3	1.4	1.5	1.8	1.3	1.1	1.1	1.2	1.0	1.4	1.4	1.5
1970	1.3	1.6	1.5	1.7	1.4	1.2	1.5	1.2	1.3	1.2	1.5	1.5
1971	1.8	1.8	1.7	1.6	1.5	1.2	1.4	1.3	1.3	1.2	1.8	1.8
1972	1.6	1.9	1.6	1.8	1.6	1.7	1.3	1.5	1.3	1.4	1.6	1.4
1973	1.5	1.5	1.9	1.7	1.4	0.8	1.2	1.3	1.2	1.4	1.5	1.5
1974	1.5	1.6	1.6	1.8	1.5	1.5	1.5	1.2	1.4	1.3	1.7	1.8
1975	1.4	1.4	1.9	2.1	1.3	1.2	0.9	1.2	1.7	2.0	1.6	1.5
1976	1.3	1.3	1.6	1.7	1.5	1.2	1.4	1.2	1.4	1.4	1.4	1.5
1977	1.6	1.3	1.7	1.6	1.5	1.4	1.3	0.9	1.2	1.4	1.6	1.8
1978	1.8	1.4	1.7	1.4	1.6	1.3	1.1	1.2	1.3	1.3	1.4	1.4
1979	1.3	1.8	1.5	2.1	1.8	1.4	1.2	1.4	1.4	1.4	1.5	1.8
1980	1.5	1.6	1.9	1.9	1.2	1.6	1.1	1.1	1.3	1.6	1.3	1.8
1981	1.6	1.4	1.6	1.7	1.5	1.4	1.3	1.1	1.2	1.5	1.6	1.6
1982	1.8	1.8	1.5	2.1	1.0	1.2	1.0	1.2	1.3	1.3	1.3	1.5
1983	1.3	1.4	1.6	2.0	1.6	1.3	1.1	1.1	1.2	1.4	1.6	1.7
1984	1.1	1.9	1.8	1.7	1.6	1.0	1.0	1.2	1.2	1.2	1.4	1.4
1985	1.3	1.3	1.8	1.6	1.5	1.1	1.0	1.0	1.0	1.4	1.6	1.7
1986	1.4	1.9	1.6	1.5	1.4	1.2	0.9	1.1	1.1	1.2	1.4	1.7
1987	1.3	1.7	1.7	2.1	1.5	1.2	1.2	1.2	1.4	1.3	1.5	1.6

32 YR. STATISTICS FOR WIS STATION E04

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.5
MEAN PEAK WAVE PERIOD	(SECONDS)	3.4
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.3
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.7
LARGEST WAVE HS	(METERS)	2.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	7.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	321.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		75040321

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	606	54	18	.	.	.	.	.	.	678
0.25-0.49	.	821	164	104	3	.	.	.	.	.	1092
0.50-0.74	.	745	374	265	108	1	.	.	.	.	1493
0.75-0.99	.	256	84	203	91	12	.	.	.	.	646
1.00-1.24	.	103	35	142	106	48	3	.	.	.	437
1.25-1.49	.	.	29	3	19	29	1	.	.	.	81
1.50-1.74	.	.	9	2	4	19	4	.	.	.	38
1.75-1.99	.	.	.	.	.	2	8	.	.	.	10
2.00-2.24	.	.	.	1	.	.	6	.	.	.	7
2.25-2.49	.	.	.	.	.	.	.	1	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2531	749	738	331	111	22	1	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 4206.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	271	12	5	.	.	.	.	.	.	288
0.25-0.49	.	502	109	44	2	.	.	.	.	.	657
0.50-0.74	.	438	258	209	40	1	.	.	.	.	946
0.75-0.99	.	70	96	133	74	3	.	.	.	.	376
1.00-1.24	.	10	58	94	84	14	.	.	.	.	260
1.25-1.49	.	.	2	29	32	11	.	.	.	.	74
1.50-1.74	.	.	1	12	26	29	4	.	.	.	72
1.75-1.99	.	.	.	1	12	9	6	.	.	.	28
2.00-2.24	.	.	.	.	3	11	3	.	.	.	17
2.25-2.49	.	.	.	.	.	1	3	.	.	.	4
2.50-2.74	.	.	.	.	.	1	6	.	.	.	7
2.75-2.99	.	.	.	.	.	.	2	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1291	536	527	273	80	24	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 2573.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	408	25	6	.	.	.	.	.	.	439
0.25-0.49	.	726	102	56	.	.	.	.	.	.	884
0.50-0.74	.	788	327	271	72	1	.	.	.	.	1459
0.75-0.99	.	171	299	250	115	5	.	.	.	.	840
1.00-1.24	.	2	243	335	233	21	.	.	.	.	834
1.25-1.49	.	.	11	187	124	43	1	.	.	.	366
1.50-1.74	.	.	.	66	209	132	3	.	.	.	410
1.75-1.99	.	.	.	1	78	82	6	.	.	.	167
2.00-2.24	.	.	.	.	9	117	22	.	.	.	148
2.25-2.49	.	.	.	.	.	21	27	.	.	.	48
2.50-2.74	.	.	.	.	.	2	34	.	.	.	36
2.75-2.99	.	.	.	.	.	.	13	.	.	.	13
3.00-3.24	.	.	.	.	.	.	4	1	.	.	5
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2095	1007	1172	840	424	110	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.4 NO. OF CASES= 5299.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	255	12	9	.	.	.	.	.	.	276
0.25-0.49	.	478	67	45	2	.	.	.	.	.	592
0.50-0.74	.	520	319	196	35	.	.	.	.	.	1070
0.75-0.99	.	47	257	207	78	.	.	.	.	.	589
1.00-1.24	.	.	132	313	201	22	1	.	.	.	669
1.25-1.49	.	.	3	174	117	24	1	.	.	.	319
1.50-1.74	.	.	.	41	214	94	1	.	.	.	350
1.75-1.99	.	.	.	.	67	38	3	.	.	.	108
2.00-2.24	.	.	.	.	25	69	13	.	.	.	107
2.25-2.49	.	.	.	.	1	31	29	.	.	.	61
2.50-2.74	.	.	.	.	.	3	56	1	.	.	60
2.75-2.99	.	.	.	.	.	.	10	.	.	.	10
3.00-3.24	.	.	.	.	.	.	3	1	.	.	4
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1300	790	985	740	281	117	2	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.6 NO. OF CASES= 3959.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	279	10	4	.	.	.	.	.	.	293
0.25-0.49	.	462	70	51	1	.	.	.	.	.	584
0.50-0.74	.	345	288	165	36	.	.	.	.	.	834
0.75-0.99	.	33	164	167	45	2	.	.	.	.	411
1.00-1.24	.	.	77	210	63	10	.	.	.	.	360
1.25-1.49	.	.	.	85	42	8	.	.	.	.	135
1.50-1.74	.	.	.	23	95	11	.	.	.	.	129
1.75-1.99	.	.	.	.	34	6	1	.	.	.	41
2.00-2.24	.	.	.	.	14	21	.	.	.	.	35
2.25-2.49	.	.	.	.	.	7	.	.	.	.	7
2.50-2.74	.	.	.	.	.	.	3	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1119	609	705	330	65	4	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.2 NO. OF CASES= 2662.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	296	14	7	.	.	.	.	.	.	317
0.25-0.49	.	429	58	33	1	.	.	.	.	.	521
0.50-0.74	.	378	285	88	27	.	.	.	.	.	778
0.75-0.99	.	25	176	111	25	6	.	.	.	.	343
1.00-1.24	.	.	70	143	21	5	.	.	.	.	239
1.25-1.49	.	.	.	74	31	4	.	.	.	.	109
1.50-1.74	.	.	.	31	53	4	.	.	.	.	88
1.75-1.99	.	.	.	.	26	4	.	.	.	.	30
2.00-2.24	.	.	.	.	7	3	.	.	.	.	10
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1128	603	487	191	26	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.9 NO. OF CASES= 2290.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	678	23	11	.	.	.	.	.	.	712
0.25-0.49	.	1047	88	39	2	.	.	.	.	.	1176
0.50-0.74	.	888	517	101	41	.	.	.	.	.	1547
0.75-0.99	.	42	447	63	20	2	.	.	.	.	574
1.00-1.24	.	.	293	233	7	2	.	.	.	.	535
1.25-1.49	.	.	3	189	2	.	.	.	.	.	194
1.50-1.74	.	.	.	94	32	.	.	.	.	.	126
1.75-1.99	.	.	.	1	20	.	.	.	.	.	21
2.00-2.24	.	.	.	.	8	1	.	.	.	.	9
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2655	1371	731	133	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 4586.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	842	26	11	.	.	.	.	.	.	879
0.25-0.49	.	1533	57	45	2	.	.	.	.	.	1637
0.50-0.74	.	1252	740	65	22	.	.	.	.	.	2079
0.75-0.99	.	59	814	83	11	2	.	.	.	.	969
1.00-1.24	.	.	535	537	.	3	1	.	.	.	1076
1.25-1.49	.	.	1	512	2	1	.	.	.	.	516
1.50-1.74	.	.	.	275	59	.	.	.	.	.	334
1.75-1.99	.	.	.	.	58	.	.	.	.	.	58
2.00-2.24	.	.	.	.	32	.	.	.	.	.	32
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3686	2173	1528	188	6	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 7103.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	998	37	11	2	.	.	.	.	.	1048
0.25-0.49	.	1674	64	36	4	.	.	.	.	.	1798
0.50-0.74	.	1782	889	67	23	.	.	.	.	.	2761
0.75-0.99	.	106	1327	59	4	.	.	.	.	.	1496
1.00-1.24	.	1	1102	1155	1	.	.	.	.	.	2259
1.25-1.49	.	.	6	1364	1	.	.	.	.	.	1371
1.50-1.74	.	.	.	854	130	.	.	.	.	.	984
1.75-1.99	.	.	.	.	213	.	.	.	.	.	213
2.00-2.24	.	.	.	.	79	.	.	.	.	.	79
2.25-2.49	.	.	.	.	5	2	.	.	.	.	7
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4561	3425	3566	462	3	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 4.0 NO. OF CASES= 11249.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	783	29	21	.	.	.	.	.	.	833
0.25-0.49	.	1261	35	36	4	.	.	.	.	.	1336
0.50-0.74	.	1929	196	23	19	.	.	.	.	.	2167
0.75-0.99	.	331	833	10	1	1	.	.	.	.	1176
1.00-1.24	.	.	1028	355	1	2	.	.	.	.	1386
1.25-1.49	.	.	93	603	.	.	.	.	.	.	696
1.50-1.74	.	.	13	478	42	.	1	.	.	.	534
1.75-1.99	.	.	.	25	88	.	.	.	.	.	113
2.00-2.24	.	.	.	4	31	.	.	.	.	.	35
2.25-2.49	.	.	.	.	12	4	.	.	.	.	16
2.50-2.74	.	.	.	.	1	3	.	.	.	.	4
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4304	2227	1555	199	11	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 7771.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	820	52	22	.	.	.	.	.	.	894
0.25-0.49	.	1224	38	68	4	.	.	.	.	.	1334
0.50-0.74	.	2366	237	27	25	1	.	.	.	.	2656
0.75-0.99	.	398	1084	4	11	1	.	.	.	.	1498
1.00-1.24	.	3	1164	552	2	4	.	.	.	.	1725
1.25-1.49	.	.	207	370	.	.	.	.	.	.	577
1.50-1.74	.	.	47	235	8	.	1	.	.	.	291
1.75-1.99	.	.	.	48	11	.	.	.	.	.	59
2.00-2.24	.	.	.	25	5	.	.	.	.	.	30
2.25-2.49	.	.	.	.	3	.	.	.	.	.	3
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4811	2829	1351	72	6	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.6 NO. OF CASES= 8494.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	764	19	12	.	.	.	.	.	.	795
0.25-0.49	.	1195	33	28	3	.	.	.	.	.	1259
0.50-0.74	.	1717	605	26	23	.	.	.	.	.	2371
0.75-0.99	.	203	1445	178	5	1	.	.	.	.	1833
1.00-1.24	.	2	943	1328	13	2	.	.	.	.	2288
1.25-1.49	.	.	103	828	45	.	.	.	.	.	976
1.50-1.74	.	.	37	337	300	1	.	.	.	.	675
1.75-1.99	.	.	.	36	120	.	.	.	.	.	156
2.00-2.24	.	.	.	17	67	8	.	.	.	.	92
2.25-2.49	.	.	.	1	5	11	.	.	.	.	17
2.50-2.74	.	.	.	.	.	3	1	.	.	.	4
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3881	3185	2792	581	28	2	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 9806.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	872	20	7	.	.	.	.	.	.	899
0.25-0.49	.	1430	57	31	6	.	.	.	.	.	1524
0.50-0.74	.	904	997	135	16	1	.	.	.	.	2053
0.75-0.99	.	80	577	394	8	2	.	.	.	.	1061
1.00-1.24	.	.	406	874	49	1	.	.	.	.	1330
1.25-1.49	.	.	9	690	44	.	.	.	.	.	743
1.50-1.74	.	.	.	346	635	.	.	.	.	.	981
1.75-1.99	.	.	.	10	349	.	.	.	.	.	359
2.00-2.24	.	.	.	3	177	44	.	.	.	.	224
2.25-2.49	.	.	.	.	4	31	.	.	.	.	35
2.50-2.74	.	.	.	.	.	21	1	.	.	.	22
2.75-2.99	.	.	.	.	.	1	3	.	.	.	4
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3286	2066	2490	1288	101	5	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 4.2 NO. OF CASES= 8652.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	683	17	1	2	.	.	.	.	.	703
0.25-0.49	.	1124	108	28	4	.	.	.	.	.	1264
0.50-0.74	.	581	763	168	18	1	.	.	.	.	1531
0.75-0.99	.	49	487	254	6	.	.	.	.	.	796
1.00-1.24	.	.	571	496	23	1	.	.	.	.	1091
1.25-1.49	.	.	11	602	25	1	1	.	.	.	640
1.50-1.74	.	.	.	370	300	.	.	.	.	.	670
1.75-1.99	.	.	.	10	156	.	.	.	.	.	166
2.00-2.24	.	.	.	.	68	4	.	.	.	.	72
2.25-2.49	.	.	.	.	1	11	.	.	.	.	12
2.50-2.74	.	.	.	.	.	7	.	.	.	.	7
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2437	1957	1929	603	26	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.1 NO. OF CASES= 6513.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	424	41	22	1	.	.	.	.	.	488
0.25-0.49	.	696	89	64	6	.	.	.	.	.	855
0.50-0.74	.	681	399	60	28	2	.	.	.	.	1170
0.75-0.99	.	60	616	25	5	4	.	.	.	.	710
1.00-1.24	.	3	781	297	5	5	2	.	.	.	1093
1.25-1.49	.	.	5	505	.	1	1	.	.	.	512
1.50-1.74	.	.	.	240	6	.	1	.	.	.	247
1.75-1.99	.	.	.	2	29	.	.	.	.	.	31
2.00-2.24	.	.	.	.	20	.	.	.	.	.	20
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1864	1931	1215	102	12	4	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.9 NO. OF CASES= 4809.

STATION E05 41.73N 82.50W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

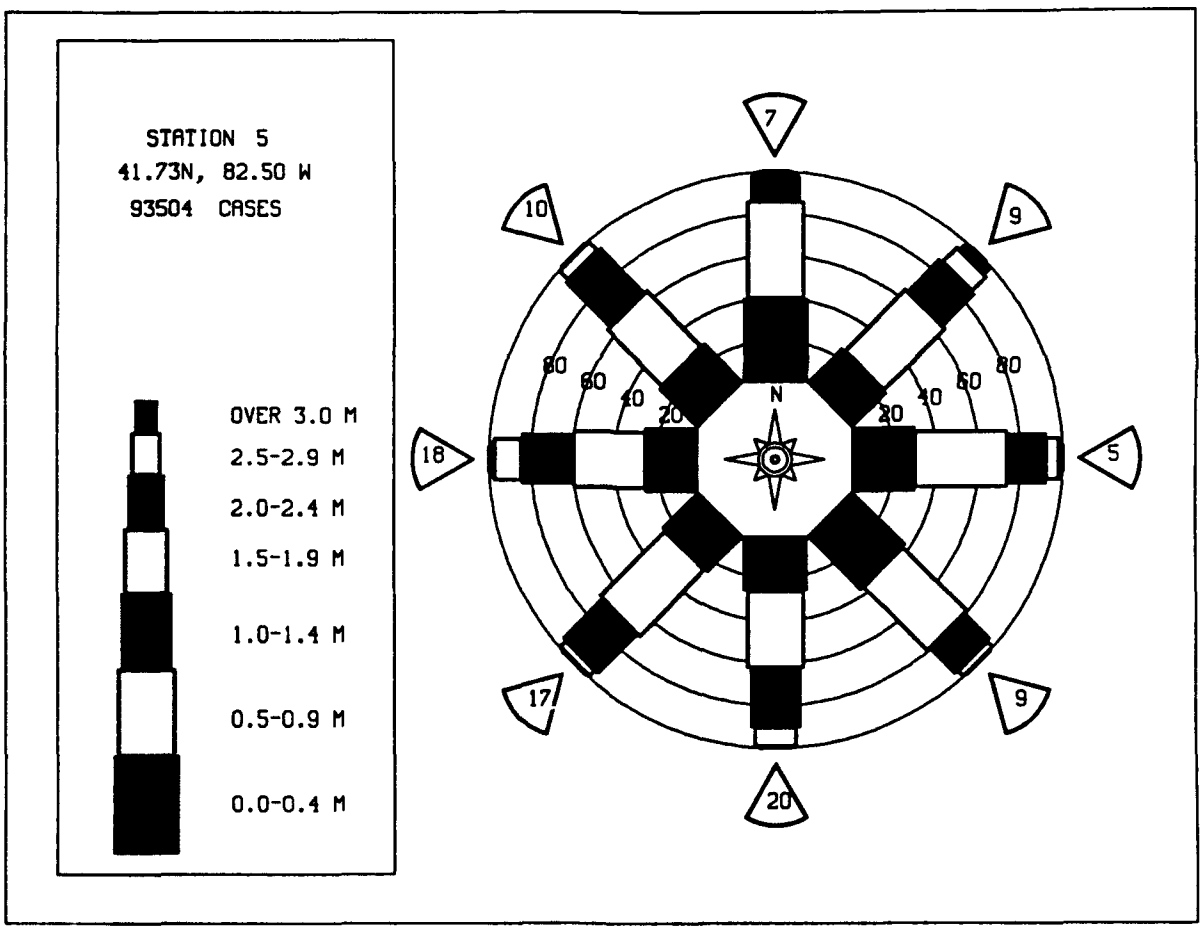
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	346	22	6	.	.	.	.	.	.	374
0.25-0.49	.	542	84	50	5	.	.	.	.	.	681
0.50-0.74	.	685	282	121	68	2	.	.	.	.	1158
0.75-0.99	.	160	313	68	45	13	.	.	.	.	599
1.00-1.24	.	58	374	154	23	28	1	.	.	.	638
1.25-1.49	.	.	18	155	3	16	5	.	.	.	197
1.50-1.74	.	.	.	74	4	10	10	1	.	.	99
1.75-1.99	.	.	.	.	11	.	1	.	.	.	12
2.00-2.24	.	.	.	.	3	.	1	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1791	1093	628	162	69	18	1	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.9 NO. OF CASES= 3532.

STATION E05 41.73N 82.50W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	933	42	18	.	.	.	.	.	.	993
0.25-0.49	.	1515	123	78	5	.	.	.	.	.	1721
0.50-0.74	.	1600	748	199	60	1	.	.	.	.	2608
0.75-0.99	.	209	902	221	55	5	.	.	.	.	1392
1.00-1.24	.	18	781	722	83	17	.	.	.	.	1621
1.25-1.49	.	.	50	637	49	14	1	.	.	.	751
1.50-1.74	.	.	10	348	212	30	2	.	.	.	602
1.75-1.99	.	.	.	13	128	14	2	.	.	.	157
2.00-2.24	.	.	.	5	55	28	4	.	.	.	92
2.25-2.49	.	.	.	.	3	12	6	.	.	.	21
2.50-2.74	.	.	.	.	.	4	10	.	.	.	14
2.75-2.99	.	.	.	.	.	.	2	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4275	2656	2241	650	125	27	0	0	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E05 (41.73N 82.50W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	1.0	1.0	1.0	0.6	0.8	0.7	0.8	0.8	1.0	0.9	0.9
1957	0.9	0.9	1.0	1.0	1.0	0.8	0.8	0.6	0.8	0.8	1.1	1.1	1.0
1958	1.0	1.1	0.9	1.0	1.0	0.8	0.7	0.7	0.8	0.9	1.1	0.9	1.0
1959	1.0	1.0	1.1	0.9	0.6	0.6	0.6	0.6	0.7	0.7	0.9	0.8	0.9
1960	0.8	1.0	0.9	1.2	0.9	0.8	0.6	0.6	0.6	0.7	1.1	1.2	0.9
1961	0.9	0.8	1.1	1.0	0.9	0.7	0.7	0.6	0.7	0.9	1.0	1.1	0.9
1962	1.1	1.1	1.1	1.0	0.9	0.7	0.7	0.6	0.7	0.8	0.7	0.9	0.9
1963	0.8	0.9	1.0	0.9	0.8	0.5	0.7	0.7	0.7	0.6	1.0	0.8	0.9
1964	1.1	0.8	1.0	1.1	0.8	0.7	0.6	0.7	0.7	0.7	0.8	0.9	0.9
1965	1.1	1.0	0.8	1.0	0.7	0.7	0.6	0.7	0.8	0.9	1.0	1.0	0.9
1966	1.0	0.7	0.9	0.9	0.7	0.5	0.7	0.6	0.7	0.9	0.9	0.9	0.8
1967	1.1	1.1	0.8	0.9	1.0	0.7	0.6	0.6	0.6	0.9	1.1	1.0	0.9
1968	0.9	1.0	1.0	0.9	0.9	0.7	0.6	0.6	0.6	0.8	0.9	1.1	0.9
1969	1.1	0.8	0.9	0.9	0.7	0.7	0.5	0.5	0.7	0.9	0.8	0.9	0.9
1970	0.9	1.0	0.8	1.0	0.8	0.7	0.7	0.6	0.8	0.8	1.1	1.1	0.9
1971	1.1	1.2	1.0	0.9	0.7	0.6	0.6	0.6	0.6	0.7	0.9	0.9	0.9
1972	1.1	0.9	1.0	0.9	0.8	0.7	0.6	0.7	0.8	0.8	0.8	0.9	0.9
1973	1.1	0.9	1.0	1.0	0.8	0.7	0.7	0.6	0.6	0.7	1.0	1.0	0.9
1974	0.9	1.1	1.1	1.1	0.9	0.8	0.7	0.6	0.8	0.8	0.9	0.9	1.0
1975	0.8	0.8	0.9	0.9	0.5	0.6	0.4	0.6	0.7	0.8	0.9	0.9	0.8
1976	0.9	0.9	0.9	0.8	0.7	0.6	0.6	0.5	0.7	0.8	0.9	0.8	0.8
1977	0.8	0.7	0.8	0.7	0.6	0.5	0.6	0.6	0.7	0.8	0.9	1.0	0.8
1978	0.9	0.4	0.7	0.8	0.6	0.5	0.6	0.5	0.6	0.7	0.8	0.9	0.7
1979	0.7	0.9	0.8	0.7	0.6	0.6	0.5	0.7	0.6	0.8	0.8	0.8	0.8
1980	0.7	0.7	0.8	0.7	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.8	0.7
1981	0.8	1.1	0.9	1.1	0.7	0.8	0.6	0.7	0.7	0.9	0.7	0.8	0.9
1982	0.9	0.7	0.8	1.0	0.4	0.5	0.4	0.4	0.4	0.6	0.9	0.8	0.7
1983	0.7	0.5	0.7	0.9	0.8	0.4	0.5	0.4	0.6	0.8	0.8	0.9	0.7
1984	0.6	0.8	1.0	0.8	0.7	0.6	0.5	0.4	0.6	0.5	0.8	0.8	0.7
1985	0.8	0.7	0.9	0.7	0.7	0.6	0.5	0.6	0.6	0.7	1.0	0.9	0.8
1986	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7
1987	0.7	0.8	0.8	0.9	0.6	0.6	0.5	0.7	0.5	0.7	0.9	0.9	0.8
MEAN	0.9	0.9	0.9	0.9	0.7	0.6	0.6	0.6	0.7	0.8	0.9	0.9	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E05 (41.73N 82.50W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.8	2.4	3.1	2.3	2.0	2.1	1.8	1.8	1.6	2.0	2.1	2.0
1957	2.0	2.0	2.6	2.8	2.5	2.4	2.1	1.5	2.0	1.9	2.4	2.1
1958	1.9	2.2	2.4	2.3	2.4	1.9	1.9	1.7	1.8	2.2	2.4	2.1
1959	2.1	2.1	2.9	2.6	1.9	1.5	1.7	1.5	1.8	2.0	2.0	1.8
1960	2.0	2.1	2.1	2.4	2.2	2.4	2.0	1.4	1.6	2.0	2.4	2.6
1961	1.9	2.2	2.1	2.6	2.2	2.0	1.8	1.7	2.1	2.1	2.0	2.4
1962	2.4	2.9	3.0	2.1	1.9	2.0	2.2	1.7	2.2	2.0	3.2	2.1
1963	2.2	2.0	2.4	2.6	2.2	1.9	2.0	2.0	2.2	1.7	2.4	1.7
1964	2.7	1.8	2.8	2.2	2.8	2.0	1.8	1.8	2.1	2.0	2.1	2.2
1965	2.6	2.3	2.2	2.4	2.2	1.8	1.5	1.8	2.1	2.5	2.7	1.8
1966	2.6	2.0	2.5	2.2	2.3	1.5	2.3	1.9	1.9	2.2	2.2	2.2
1967	2.2	2.1	1.9	2.9	2.3	2.2	1.8	2.0	2.3	2.3	2.2	2.1
1968	2.2	2.2	2.7	2.2	2.0	1.9	1.5	1.8	1.7	1.9	2.1	2.5
1969	2.4	1.9	2.1	3.0	1.8	1.9	1.6	1.9	1.6	1.8	1.8	2.4
1970	2.0	2.1	2.6	2.8	2.0	2.0	1.7	1.9	2.0	2.0	2.5	2.4
1971	3.0	2.4	2.4	2.6	2.2	1.4	1.8	1.9	1.7	1.9	1.9	2.5
1972	2.9	2.1	2.5	2.7	2.6	1.8	1.5	2.4	1.7	1.9	2.5	2.3
1973	2.0	2.4	2.6	2.6	2.0	1.6	1.8	1.8	1.9	1.8	2.4	2.0
1974	2.5	2.4	2.6	2.8	2.3	2.3	2.3	1.7	2.2	2.1	2.1	2.9
1975	1.8	1.7	3.1	2.8	1.3	1.7	1.2	1.7	2.6	3.0	1.9	1.9
1976	1.8	1.8	2.2	2.6	1.8	1.5	1.5	1.8	1.6	1.7	1.7	1.5
1977	2.5	1.5	2.4	1.8	2.1	1.7	1.5	1.2	1.4	2.0	1.9	2.6
1978	2.7	1.7	2.6	2.0	2.2	1.2	1.7	1.4	2.1	1.6	2.1	1.7
1979	1.5	2.7	2.1	2.3	2.2	1.3	1.2	1.6	1.7	1.8	1.9	1.7
1980	2.0	1.8	2.5	2.7	1.6	1.5	1.5	1.4	1.5	1.8	2.1	2.0
1981	2.1	2.2	2.2	2.4	1.7	1.9	1.8	1.7	1.7	2.2	1.9	1.9
1982	2.7	2.7	1.8	3.2	1.5	1.6	1.2	1.1	1.4	1.9	1.8	1.9
1983	1.9	2.1	2.3	2.8	1.7	1.8	1.2	1.2	1.5	2.3	2.3	2.1
1984	1.7	2.8	2.7	2.2	2.5	1.3	1.3	1.2	1.5	1.5	1.7	1.9
1985	1.6	1.7	2.8	2.0	1.9	1.7	1.4	1.6	1.5	2.1	2.4	2.2
1986	1.7	2.8	1.8	1.6	1.7	1.6	1.2	1.4	1.5	1.5	2.0	2.7
1987	2.1	2.2	2.5	2.9	2.5	1.6	1.2	1.4	1.4	1.6	2.0	2.3

32 YR. STATISTICS FOR WIS STATION E05

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	180.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.0
LARGEST WAVE HS	(METERS)	3.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	50.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		62111012

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	490	19	5	2	.	.	.	.	.	516
0.25-0.49	.	841	85	38	1	.	.	.	.	.	965
0.50-0.74	.	890	350	187	26	1	.	.	.	.	1454
0.75-0.99	.	103	457	91	42	4	.	.	.	.	697
1.00-1.24	.	1	551	185	51	11	.	.	.	.	799
1.25-1.49	.	.	37	380	14	7	1	.	.	.	439
1.50-1.74	.	.	1	243	34	17	2	.	.	.	297
1.75-1.99	.	.	.	22	56	11	2	.	.	.	91
2.00-2.24	.	.	.	.	25	11	9	.	.	.	45
2.25-2.49	.	.	.	.	4	.	3	.	.	.	7
2.50-2.74	.	.	.	.	2	.	1	.	.	.	3
2.75-2.99	.	.	.	.	.	.	1	1	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	2325	1500	1151	257	62	19	2	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 4990.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	360	13	9	1	.	.	.	.	.	383
0.25-0.49	.	552	59	21	1	.	.	.	.	.	633
0.50-0.74	.	624	366	171	14	.	.	.	.	.	1175
0.75-0.99	.	71	313	181	69	2	.	.	.	.	636
1.00-1.24	.	.	286	210	124	5	.	.	.	.	625
1.25-1.49	.	.	5	197	53	24	.	.	.	.	279
1.50-1.74	.	.	.	96	68	48	3	.	.	.	215
1.75-1.99	.	.	.	5	37	18	7	.	.	.	67
2.00-2.24	.	.	.	.	9	18	19	.	.	.	46
2.25-2.49	.	.	.	.	.	9	3	.	.	.	12
2.50-2.74	.	.	.	.	.	4	10	1	.	.	15
2.75-2.99	.	.	.	.	.	.	3	.	.	.	3
3.00-3.24	.	.	.	.	.	.	.	4	.	.	4
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1607	1042	890	376	128	45	5	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.2 NO. OF CASES= 3845.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	395	17	8	.	.	.	.	.	.	420
0.25-0.49	.	762	78	41	.	.	.	.	.	.	881
0.50-0.74	.	730	520	206	48	.	.	.	.	.	1504
0.75-0.99	.	90	379	376	81	5	.	.	.	.	931
1.00-1.24	.	.	314	469	316	14	.	.	.	.	1113
1.25-1.49	.	.	9	311	178	47	.	.	.	.	545
1.50-1.74	.	.	.	162	284	179	5	.	.	.	630
1.75-1.99	.	.	.	4	170	110	19	.	.	.	303
2.00-2.24	.	.	.	.	62	117	93	.	.	.	272
2.25-2.49	.	.	.	.	5	43	42	.	.	.	90
2.50-2.74	.	.	.	.	.	14	75	1	.	.	90
2.75-2.99	.	.	.	.	.	.	24	1	.	.	25
3.00-3.24	.	.	.	.	.	.	14	14	.	.	28
3.25-3.49	.	.	.	.	.	.	1	8	.	.	9
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	1977	1317	1577	1144	529	273	25	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.7 NO. OF CASES= 6418.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	239	4	5	.	.	.	.	.	.	248
0.25-0.49	.	399	42	21	.	.	.	.	.	.	462
0.50-0.74	.	506	235	132	21	.	.	.	.	.	894
0.75-0.99	.	106	202	160	63	1	.	.	.	.	532
1.00-1.24	.	.	165	146	140	8	1	.	.	.	460
1.25-1.49	.	.	18	62	52	27	.	.	.	.	159
1.50-1.74	.	.	1	44	44	38	4	.	.	.	131
1.75-1.99	.	.	.	2	23	13	6	.	.	.	44
2.00-2.24	.	.	.	.	9	11	11	.	.	.	31
2.25-2.49	.	.	.	.	1	7	.	.	.	.	8
2.50-2.74	.	.	.	.	.	.	8	1	.	.	9
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	1	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1250	667	572	353	105	30	2	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 4.2 NO. OF CASES= 2803.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	214	4	1	.	.	.	.	.	.	219
0.25-0.49	.	393	37	35	.	.	.	.	.	.	465
0.50-0.74	.	521	114	135	37	.	.	.	.	.	807
0.75-0.99	.	175	113	77	58	4	.	.	.	.	427
1.00-1.24	.	1	143	40	65	18	1	.	.	.	268
1.25-1.49	.	.	33	27	17	3	.	.	.	.	80
1.50-1.74	.	.	4	32	10	7	4	.	.	.	57
1.75-1.99	.	.	.	6	3	5	1	.	.	.	15
2.00-2.24	.	.	.	1	2	.	2	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	1	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1304	448	354	192	37	9	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.8 NO. OF CASES= 2204.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	220	6	3	.	.	.	.	.	.	229
0.25-0.49	.	495	56	33	1	.	.	.	.	.	585
0.50-0.74	.	701	72	124	31	.	.	.	.	.	928
0.75-0.99	.	163	101	12	28	7	.	.	.	.	311
1.00-1.24	.	1	164	3	14	6	.	.	.	.	188
1.25-1.49	.	.	27	28	.	2	.	.	.	.	57
1.50-1.74	.	.	1	33	.	2	2	.	.	.	38
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1580	427	238	74	17	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.5 NO. OF CASES= 2197.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	505	19	13	.	.	.	.	.	.	537
0.25-0.49	.	1053	96	67	7	.	.	.	.	.	1223
0.50-0.74	.	1534	60	122	48	.	.	.	.	.	1764
0.75-0.99	.	298	187	12	14	7	.	.	.	.	518
1.00-1.24	.	3	269	.	20	3	.	.	.	.	295
1.25-1.49	.	.	44	5	1	6	1	.	.	.	57
1.50-1.74	.	.	4	7	1	.	.	.	.	.	12
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3393	679	226	91	16	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 4132.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	757	39	13	.	.	.	.	.	.	809
0.25-0.49	.	1736	85	73	6	.	.	.	.	.	1900
0.50-0.74	.	2239	31	82	39	.	.	.	.	.	2391
0.75-0.99	.	648	118	2	9	1	.	.	.	.	778
1.00-1.24	.	9	322	2	3	1	.	.	.	.	337
1.25-1.49	.	.	54	7	.	.	1	.	.	.	62
1.50-1.74	.	.	8	19	.	1	.	.	.	.	28
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5389	657	199	57	3	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 5907.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1094	70	25	2	.	.	.	.	.	1191
0.25-0.49	.	2712	121	103	7	.	.	.	.	.	2943
0.50-0.74	.	4667	18	55	33	1	.	.	.	.	4774
0.75-0.99	.	2145	172	1	6	4	.	.	.	.	2328
1.00-1.24	.	4	1003	.	2	2	1	.	.	.	1012
1.25-1.49	.	.	196	.	.	.	.	.	.	.	196
1.50-1.74	.	.	27	42	.	1	.	.	.	.	70
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	10622	1607	229	50	8	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 11713.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	988	58	18	1	.	.	.	.	.	1065
0.25-0.49	.	1823	87	74	4	.	.	.	.	.	1988
0.50-0.74	.	4107	6	47	32	.	.	.	.	.	4192
0.75-0.99	.	1376	589	1	4	1	.	.	.	.	1971
1.00-1.24	.	7	1313	.	1	1	.	.	.	.	1322
1.25-1.49	.	.	295	72	.	1	.	.	.	.	368
1.50-1.74	.	.	9	116	.	.	.	.	.	.	125
1.75-1.99	.	.	.	20	.	.	.	.	.	.	20
2.00-2.24	.	.	.	11	1	.	.	.	.	.	12
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8301	2357	359	44	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.3 NO. OF CASES= 10355.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1098	71	37	2	.	.	.	.	.	1208
0.25-0.49	.	1275	95	68	8	.	.	.	.	.	1446
0.50-0.74	.	3702	12	37	24	.	.	.	.	.	3775
0.75-0.99	.	891	825	.	3	6	.	.	.	.	1725
1.00-1.24	.	1	1595	.	1	3	.	.	.	.	1600
1.25-1.49	.	.	422	113	.	1	.	.	.	.	536
1.50-1.74	.	.	.	226	.	.	.	.	.	.	226
1.75-1.99	.	.	.	62	.	.	.	.	.	.	62
2.00-2.24	.	.	.	20	8	.	.	.	.	.	28
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6967	3020	563	53	10	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 9935.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	621	51	23	3	.	.	.	.	.	698
0.25-0.49	.	1203	82	43	2	.	.	.	.	.	1330
0.50-0.74	.	2768	37	43	22	1	.	.	.	.	2871
0.75-0.99	.	1195	571	5	10	2	.	.	.	.	1783
1.00-1.24	.	12	1396	.	.	2	1	.	.	.	1411
1.25-1.49	.	.	341	68	.	2	.	.	.	.	411
1.50-1.74	.	.	16	176	.	.	.	.	.	.	192
1.75-1.99	.	.	.	45	.	.	.	.	.	.	45
2.00-2.24	.	.	.	19	3	.	.	.	.	.	22
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5799	2494	422	41	7	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.4 NO. OF CASES= 8206.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	540	29	11	1	.	.	.	.	.	581
0.25-0.49	.	1197	64	42	2	.	.	.	.	.	1305
0.50-0.74	.	1951	66	90	22	1	.	.	.	.	2130
0.75-0.99	.	1076	32	37	25	.	.	.	.	.	1170
1.00-1.24	.	7	564	8	29	2	1	.	.	.	611
1.25-1.49	.	.	106	.	1	1	.	.	.	.	108
1.50-1.74	.	.	12	37	.	.	.	.	.	.	49
1.75-1.99	.	.	.	8	.	.	.	.	.	.	8
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4771	873	234	80	4	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 5588.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRLS)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	368	17	8	1	.	.	.	.	.	394
0.25-0.49	.	1148	45	29	2	.	.	.	.	.	1224
0.50-0.74	.	1782	66	98	18	1	.	.	.	.	1965
0.75-0.99	.	919	65	131	44	1	.	.	.	.	1160
1.00-1.24	.	33	386	135	227	4	.	.	.	.	785
1.25-1.49	.	.	88	10	83	6	.	.	.	.	187
1.50-1.74	.	.	17	34	21	4	1	.	.	.	77
1.75-1.99	.	.	.	3	.	1	.	.	.	.	4
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4250	684	451	396	17	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 5436.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	417	19	7	.	.	.	.	.	.	443
0.25-0.49	.	845	58	42	2	.	.	.	.	.	947
0.50-0.74	.	1546	189	112	21	2	.	.	.	.	1870
0.75-0.99	.	539	225	241	25	1	1	.	.	.	1032
1.00-1.24	.	45	448	412	204	5	1	.	.	.	1115
1.25-1.49	.	.	145	83	229	6	.	.	.	.	463
1.50-1.74	.	.	51	55	198	19	2	.	.	.	325
1.75-1.99	.	.	.	16	14	21	.	.	.	.	51
2.00-2.24	.	.	.	5	1	5	1	.	.	.	12
2.25-2.49	.	.	.	1	.	.	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3392	1135	974	695	59	5	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 5869.

STATION E06 41.43N 82.50W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

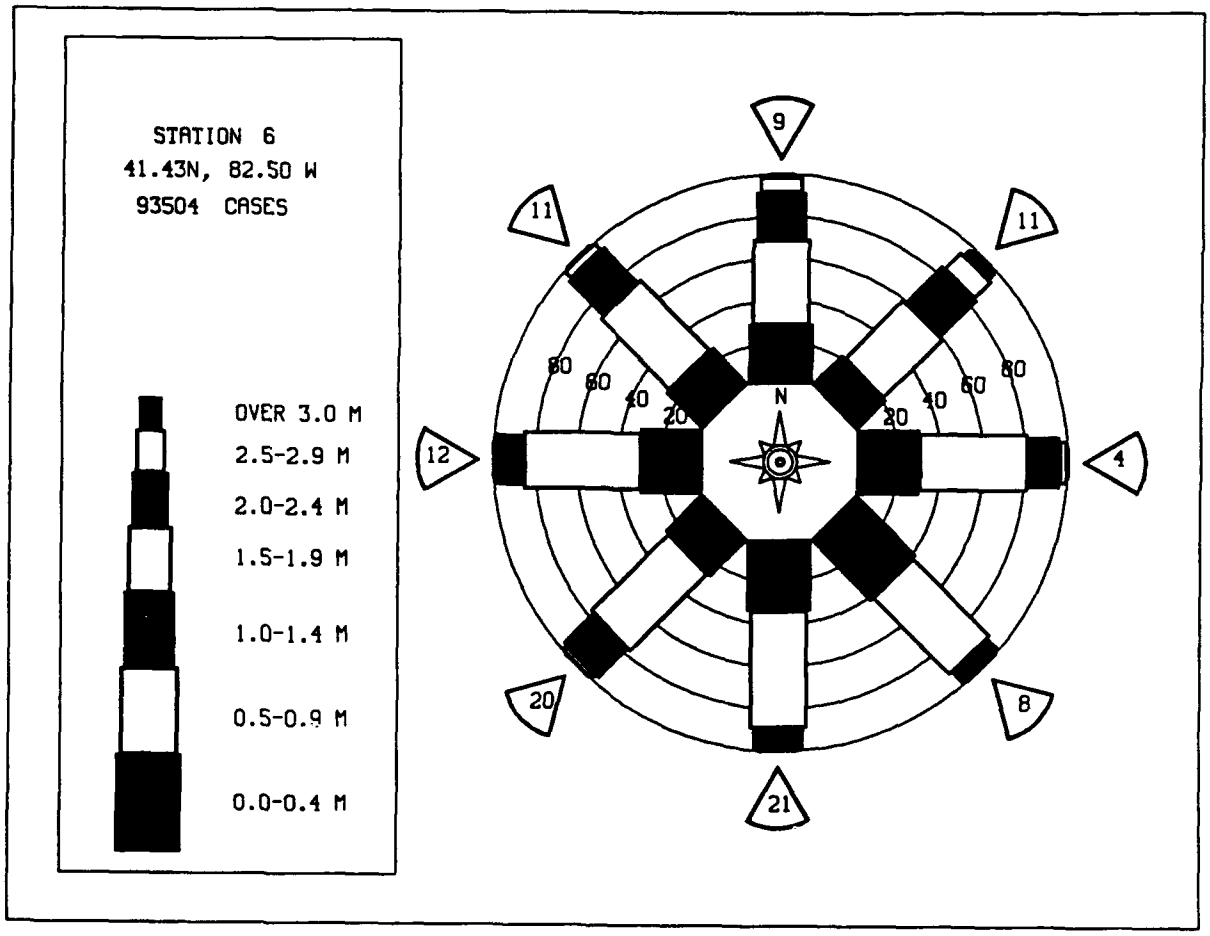
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	409	19	9	1	.	.	.	.	.	438
0.25-0.49	.	608	66	35	1	.	.	.	.	.	710
0.50-0.74	.	816	205	103	23	1	.	.	.	.	1148
0.75-0.99	.	151	290	105	22	4	.	.	.	.	572
1.00-1.24	.	.	273	301	28	4	.	.	.	.	606
1.25-1.49	.	.	17	238	60	2	.	.	.	.	317
1.50-1.74	.	.	1	150	112	4	.	.	.	.	267
1.75-1.99	.	.	.	9	44	6	2	.	.	.	61
2.00-2.24	.	.	.	.	18	9	3	.	.	.	30
2.25-2.49	.	.	.	.	1	5	.	.	.	.	6
2.50-2.74	.	.	.	.	1	2	1	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1984	871	950	311	37	6	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 3905.

STATION E06 41.43N 82.50W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS)										TOTAL
	<3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	
0.00-0.24	.	872	46	20	1	.	.	.	.	.	939
0.25-0.49	.	1705	116	77	4	.	.	.	.	.	1902
0.50-0.74	.	2909	235	175	46	.	.	.	.	.	3365
0.75-0.99	.	995	464	143	51	5	.	.	.	.	1658
1.00-1.24	.	12	920	191	123	9	.	.	.	.	1255
1.25-1.49	.	.	184	160	69	13	.	.	.	.	426
1.50-1.74	.	.	15	148	77	32	2	.	.	.	274
1.75-1.99	.	.	.	21	35	18	3	.	.	.	77
2.00-2.24	.	.	.	6	14	17	14	.	.	.	51
2.25-2.49	.	.	.	.	1	6	4	.	.	.	11
2.50-2.74	.	.	.	.	.	2	9	.	.	.	11
2.75-2.99	.	.	.	.	.	.	2	.	.	.	2
3.00-3.24	.	.	.	.	.	.	1	2	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6493	1980	941	421	102	35	2	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.6 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E06 (41.43N 82.50W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.8	0.9	0.9	0.9	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8
1957	0.8	0.8	0.9	0.9	0.9	0.7	0.7	0.6	0.7	0.8	0.8	0.9	0.9
1958	0.8	1.0	0.9	0.9	0.9	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.9
1959	0.8	0.8	0.9	0.8	0.6	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.7
1960	0.6	0.8	0.8	1.0	0.8	0.7	0.6	0.6	0.6	0.7	0.8	0.9	0.8
1961	0.8	0.8	0.9	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.8	0.9	0.8
1962	0.9	0.9	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8
1963	0.7	0.7	0.8	0.8	0.7	0.5	0.7	0.7	0.6	0.6	0.8	0.6	0.8
1964	0.8	0.6	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8
1965	0.8	0.8	0.7	0.9	0.6	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.8
1966	0.7	0.5	0.8	0.8	0.7	0.5	0.7	0.5	0.6	0.7	0.8	0.7	0.7
1967	0.8	0.9	0.8	0.8	0.9	0.7	0.5	0.6	0.7	0.7	0.8	0.7	0.8
1968	0.7	0.8	0.9	0.7	0.8	0.6	0.6	0.5	0.4	0.6	0.8	0.9	0.8
1969	0.8	0.8	0.8	0.8	0.6	0.7	0.5	0.5	0.6	0.7	0.6	0.8	0.8
1970	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.6	0.8	0.7	0.9	0.8	0.8
1971	0.9	1.0	0.8	0.9	0.7	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8
1972	0.8	0.8	0.9	0.9	0.8	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8
1973	0.8	0.8	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.8	0.9	0.8
1974	0.7	1.0	0.9	1.0	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.8	0.8
1975	0.7	0.7	0.8	0.9	0.5	0.6	0.4	0.5	0.6	0.7	0.7	0.7	0.7
1976	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.6	0.7	0.7	0.7	0.7
1977	0.7	0.7	0.7	0.7	0.8	0.5	0.5	0.5	0.6	0.7	0.8	0.8	0.7
1978	0.8	0.5	0.7	0.8	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.8	0.7
1979	0.7	0.9	0.7	0.7	0.6	0.6	0.5	0.6	0.6	0.7	0.7	0.8	0.7
1980	0.6	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.8	0.7	0.7
1981	0.7	0.8	0.9	0.9	0.8	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.8
1982	0.9	0.8	0.7	1.0	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.7	0.7
1983	0.7	0.5	0.7	0.9	0.7	0.4	0.5	0.4	0.6	0.7	0.7	0.8	0.7
1984	0.6	0.7	1.0	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.7	0.7	0.7
1985	0.7	0.7	0.9	0.7	0.7	0.6	0.5	0.6	0.5	0.6	0.8	0.7	0.7
1986	0.7	0.6	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6
1987	0.6	0.7	0.8	0.9	0.6	0.6	0.5	0.6	0.5	0.6	0.8	0.7	0.7
MEAN	0.8	0.6	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.8	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E06 (41.43N 82.50W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.7	2.1	2.3	2.3	1.9	1.3	1.7	2.0	1.4	1.8	1.6	1.7
1957	2.2	2.1	2.3	3.3	2.8	1.6	2.2	1.8	1.7	2.1	2.0	1.9
1958	1.9	1.9	2.8	2.3	2.7	2.0	1.3	1.6	1.7	1.9	2.1	1.9
1959	1.7	2.2	2.9	2.3	1.5	1.7	1.3	1.3	1.4	1.7	1.6	1.5
1960	1.4	2.2	2.3	1.9	1.8	1.9	2.2	1.3	1.6	1.7	1.9	3.0
1961	1.9	2.3	2.1	2.6	1.9	2.2	1.6	1.5	1.6	1.9	1.7	2.2
1962	2.0	3.3	3.4	2.0	2.0	2.4	2.1	1.7	2.5	1.7	3.5	1.8
1963	2.4	2.1	2.1	1.6	2.5	1.4	1.7	2.0	2.3	1.8	1.8	1.4
1964	3.1	1.9	2.7	2.0	2.2	1.9	2.0	1.4	1.8	1.7	1.9	2.3
1965	3.0	1.7	2.0	2.1	1.4	2.0	1.4	1.5	1.7	1.8	2.1	2.0
1966	1.8	2.1	2.4	2.3	2.2	1.2	2.5	1.8	2.3	1.9	2.5	1.8
1967	2.0	2.3	2.1	1.9	2.6	2.4	1.6	2.3	2.6	1.9	1.9	1.9
1968	2.0	1.9	3.1	2.0	2.1	1.6	1.3	1.5	1.2	1.5	1.7	2.1
1969	1.6	2.0	1.8	3.4	1.7	1.5	1.9	2.2	1.3	1.5	1.7	2.6
1970	1.6	1.9	2.6	2.2	1.8	1.7	1.6	1.6	1.5	1.5	2.0	1.8
1971	1.8	2.2	2.6	2.9	1.8	1.4	1.7	2.1	1.9	1.3	1.8	2.0
1972	2.0	2.6	2.1	3.0	2.8	2.1	1.4	2.7	1.9	1.5	2.6	1.7
1973	1.8	2.7	2.7	2.8	1.6	1.1	2.0	2.1	1.5	1.6	1.6	2.1
1974	1.9	2.7	2.7	3.4	2.3	2.4	2.6	1.5	2.4	1.7	1.9	3.4
1975	1.7	1.9	2.5	2.6	1.4	1.4	1.2	1.8	2.8	3.3	2.3	1.8
1976	2.0	1.8	1.9	2.8	2.0	1.6	1.8	1.7	1.6	1.8	1.5	1.6
1977	2.0	1.6	2.2	1.8	1.8	1.9	1.6	1.1	1.4	1.8	1.9	2.5
1978	2.9	2.1	2.4	2.7	1.8	1.6	1.3	1.6	1.7	1.4	1.9	1.6
1979	1.4	3.1	1.8	2.0	2.8	1.4	1.5	1.9	2.2	1.4	2.0	2.1
1980	1.7	2.0	2.1	2.7	1.9	1.6	1.9	1.2	1.4	1.5	1.6	1.9
1981	2.1	1.7	2.1	2.3	1.9	1.6	2.0	1.8	1.7	1.8	1.8	1.7
1982	2.7	2.5	1.9	3.6	1.3	2.1	1.3	1.4	1.3	1.7	1.8	2.0
1983	1.9	1.8	2.2	3.1	1.9	1.6	1.8	1.7	1.4	2.0	2.0	2.0
1984	1.3	3.2	3.2	2.5	2.3	1.4	1.3	1.6	1.3	1.4	1.5	1.6
1985	1.5	2.0	2.3	2.1	2.0	1.8	1.5	1.9	1.4	1.8	2.3	2.1
1986	1.9	2.6	2.1	2.0	2.0	2.0	1.1	1.7	1.4	1.5	1.9	2.1
1987	1.8	2.3	2.8	3.2	2.8	1.3	1.3	1.4	1.1	1.5	1.8	2.2

32 YR. STATISTICS FOR WIS STATION E06

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	3.6
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	180.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.0
LARGEST WAVE HS	(METERS)	3.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	11.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		82040612

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	312	2	1	1	.	.	.	.	.	316
0.25-0.49	.	722	41	22	1	.	.	.	.	.	786
0.50-0.74	.	852	420	142	17	.	.	.	.	.	1431
0.75-0.99	.	104	483	140	42	.	.	.	.	.	769
1.00-1.24	.	.	366	320	62	9	.	.	.	.	757
1.25-1.49	.	.	10	381	16	9	.	.	.	.	416
1.50-1.74	.	.	.	373	41	10	.	.	.	.	424
1.75-1.99	.	.	.	19	77	2	1	.	.	.	99
2.00-2.24	.	.	.	1	75	8	1	.	.	.	85
2.25-2.49	.	.	.	.	16	8	1	.	.	.	25
2.50-2.74	.	.	.	.	3	4	4	.	.	.	11
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	1	1	1	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	1990	1322	1399	351	54	8	2	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 4808.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	172	4	1	.	.	.	.	.	.	177
0.25-0.49	.	496	24	11	.	.	.	.	.	.	531
0.50-0.74	.	636	409	100	5	.	.	.	.	.	1150
0.75-0.99	.	72	343	219	45	.	.	.	.	.	679
1.00-1.24	.	.	222	355	116	5	.	.	.	.	698
1.25-1.49	.	.	9	193	93	6	.	.	.	.	301
1.50-1.74	.	.	.	136	89	35	1	.	.	.	261
1.75-1.99	.	.	.	4	70	22	1	.	.	.	97
2.00-2.24	.	.	.	.	32	28	8	.	.	.	68
2.25-2.49	.	.	.	.	3	16	4	.	.	.	23
2.50-2.74	.	.	.	.	.	9	14	.	.	.	23
2.75-2.99	.	.	.	.	.	1	6	.	.	.	7
3.00-3.24	.	.	.	.	.	.	4	.	.	.	4
3.25-3.49	.	.	.	.	.	.	2	2	.	.	4
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1376	1011	1019	453	122	40	2	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.3 NO. OF CASES= 3778.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	249	9	1	.	.	.	.	.	.	259
0.25-0.49	.	668	35	13	.	.	.	.	.	.	716
0.50-0.74	.	663	519	156	18	.	.	.	.	.	1356
0.75-0.99	.	110	356	436	45	.	.	.	.	.	947
1.00-1.24	.	.	263	530	254	11	.	.	.	.	1058
1.25-1.49	.	.	3	320	239	13	.	.	.	.	575
1.50-1.74	.	.	.	172	337	113	2	.	.	.	624
1.75-1.99	.	.	.	6	171	131	1	.	.	.	309
2.00-2.24	.	.	.	.	139	194	38	.	.	.	371
2.25-2.49	.	.	.	.	5	98	41	.	.	.	144
2.50-2.74	.	.	.	.	.	50	70	.	.	.	120
2.75-2.99	.	.	.	.	.	1	44	.	.	.	45
3.00-3.24	.	.	.	.	.	1	35	.	.	.	36
3.25-3.49	.	.	.	.	.	.	12	2	.	.	14
3.50+	.	.	.	.	.	.	3	8	.	.	11
TOTAL	0	1690	1185	1634	1208	612	246	10	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.8 NO. OF CASES= 6175.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	119	2	1	.	.	.	.	.	.	122
0.25-0.49	.	344	22	9	.	.	.	.	.	.	375
0.50-0.74	.	419	314	82	7	.	.	.	.	.	822
0.75-0.99	.	38	236	206	26	.	.	.	.	.	506
1.00-1.24	.	.	125	238	144	3	.	.	.	.	510
1.25-1.49	.	.	2	115	80	8	1	.	.	.	206
1.50-1.74	.	.	.	73	99	36	1	.	.	.	209
1.75-1.99	.	.	.	4	51	27	2	.	.	.	84
2.00-2.24	.	.	.	1	31	23	9	.	.	.	64
2.25-2.49	.	.	.	.	3	14	3	.	.	.	20
2.50-2.74	.	.	.	.	.	5	14	.	.	.	19
2.75-2.99	.	.	.	.	.	.	7	.	.	.	7
3.00-3.24	.	.	.	.	.	.	3	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	920	701	729	441	116	40	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.4 NO. OF CASES= 2772.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	100	1	1	.	.	.	.	.	.	102
0.25-0.49	.	326	16	12	.	.	.	.	.	.	354
0.50-0.74	.	406	255	95	13	.	.	.	.	.	769
0.75-0.99	.	33	243	117	43	.	.	.	.	.	436
1.00-1.24	.	1	127	205	59	12	.	.	.	.	404
1.25-1.49	.	.	1	98	26	6	.	.	.	.	131
1.50-1.74	.	.	.	88	24	4	1	.	.	.	117
1.75-1.99	.	.	.	8	33	4	.	.	.	.	45
2.00-2.24	.	.	.	.	32	3	.	.	.	.	35
2.25-2.49	.	.	.	.	5	.	1	.	.	.	6
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	866	643	624	236	31	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.1 NO. OF CASES= 2259.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	125	1	2	.	.	.	.	.	.	128
0.25-0.49	.	393	23	9	.	.	.	.	.	.	425
0.50-0.74	.	550	202	90	7	.	.	.	.	.	849
0.75-0.99	.	66	163	52	34	.	.	.	.	.	315
1.00-1.24	.	.	109	68	11	6	.	.	.	.	194
1.25-1.49	.	.	6	43	5	.	.	.	.	.	54
1.50-1.74	.	.	.	58	14	3	.	.	.	.	75
1.75-1.99	.	.	.	1	19	2	.	.	.	.	22
2.00-2.24	.	.	.	.	11	.	.	.	.	.	11
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1134	504	323	102	11	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 1951.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	268	5	2	.	.	.	.	.	.	275
0.25-0.49	.	841	37	22	1	.	.	.	.	.	901
0.50-0.74	.	1337	171	120	20	.	.	.	.	.	1648
0.75-0.99	.	222	208	38	36	.	.	.	.	.	504
1.00-1.24	.	3	310	56	12	4	.	.	.	.	385
1.25-1.49	.	.	49	39	3	7	.	.	.	.	98
1.50-1.74	.	.	2	29	6	.	.	.	.	.	37
1.75-1.99	.	.	.	4	4	.	.	.	.	.	8
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2671	782	310	83	11	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 3618.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	428	9	2	.	.	.	.	.	.	439
0.25-0.49	.	1266	47	20	1	.	.	.	.	.	1334
0.50-0.74	.	1947	110	85	26	.	.	.	.	.	2168
0.75-0.99	.	399	343	16	22	1	.	.	.	.	781
1.00-1.24	.	.	608	11	5	3	.	.	.	.	627
1.25-1.49	.	.	89	125	.	2	.	.	.	.	216
1.50-1.74	.	.	1	115	.	1	.	.	.	.	117
1.75-1.99	.	.	.	12	.	1	.	.	.	.	13
2.00-2.24	.	.	.	2	4	.	.	.	.	.	6
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4040	1207	388	60	8	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.4 NO. OF CASES= 5343.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	663	18	7	.	.	.	.	.	.	688
0.25-0.49	.	1780	73	33	3	.	.	.	.	.	1889
0.50-0.74	.	2923	81	89	16	.	.	.	.	.	3109
0.75-0.99	.	669	1183	8	9	1	.	.	.	.	1870
1.00-1.24	.	.	2495	4	1	2	.	.	.	.	2502
1.25-1.49	.	.	223	1032	2	.	1	.	.	.	1258
1.50-1.74	.	.	.	873	.	3	.	.	.	.	876
1.75-1.99	.	.	.	154	.	.	.	.	.	.	154
2.00-2.24	.	.	.	12	78	.	.	.	.	.	90
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6035	4073	2212	119	6	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.7 NO. OF CASES= 11648.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	581	14	6	.	.	.	.	.	.	601
0.25-0.49	.	1657	38	34	.	.	.	.	.	.	1729
0.50-0.74	.	2639	300	68	17	.	.	.	.	.	3024
0.75-0.99	.	365	1827	2	9	1	.	.	.	.	2204
1.00-1.24	.	.	2481	334	1	.	.	.	.	.	2816
1.25-1.49	.	.	119	1409	.	.	.	.	.	.	1528
1.50-1.74	.	.	.	1147	.	2	.	.	.	.	1149
1.75-1.99	.	.	.	188	84	.	.	.	.	.	272
2.00-2.24	.	.	.	4	131	.	.	.	.	.	135
2.25-2.49	.	.	.	.	39	.	.	.	.	.	39
2.50-2.74	.	.	.	.	14	1	.	.	.	.	15
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5242	4779	3192	295	11	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.9 NO. OF CASES= 12654.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	577	17	5	1	.	.	.	.	.	600
0.25-0.49	.	1310	49	38	3	.	.	.	.	.	1400
0.50-0.74	.	1653	464	49	13	.	.	.	.	.	2179
0.75-0.99	.	56	1497	2	14	.	.	.	.	.	1569
1.00-1.24	.	.	1309	419	3	4	.	.	.	.	1735
1.25-1.49	.	.	8	1178	.	.	.	.	.	.	1186
1.50-1.74	.	.	.	1215	.	.	1	.	.	.	1216
1.75-1.99	.	.	.	195	206	.	.	.	.	.	401
2.00-2.24	.	.	.	.	237	.	.	.	.	.	237
2.25-2.49	.	.	.	.	68	.	.	.	.	.	68
2.50-2.74	.	.	.	.	44	7	.	.	.	.	51
2.75-2.99	.	.	.	.	.	11	.	.	.	.	11
3.00-3.24	.	.	.	.	.	7	.	.	.	.	7
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	3596	3344	3101	589	31	2	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 9983.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	312	12	3	1	.	.	.	.	.	328
0.25-0.49	.	942	31	19	2	.	.	.	.	.	994
0.50-0.74	.	1435	217	38	10	1	.	.	.	.	1701
0.75-0.99	.	219	879	1	6	1	.	.	.	.	1106
1.00-1.24	.	.	1276	218	4	.	.	.	.	.	1498
1.25-1.49	.	.	151	893	.	.	.	.	.	.	1044
1.50-1.74	.	.	1	930	.	1	1	.	.	.	933
1.75-1.99	.	.	.	164	82	.	.	.	.	.	246
2.00-2.24	.	.	.	11	161	.	.	.	.	.	172
2.25-2.49	.	.	.	.	44	.	.	.	.	.	44
2.50-2.74	.	.	.	.	34	8	.	.	.	.	42
2.75-2.99	.	.	.	.	2	10	.	.	.	.	12
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2908	2567	2277	346	23	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 7606.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	310	7	.	1	.	.	.	.	.	318
0.25-0.49	.	791	19	21	.	.	.	.	.	.	831
0.50-0.74	.	1403	71	31	7	.	.	.	.	.	1512
0.75-0.99	.	457	497	16	7	3	.	.	.	.	980
1.00-1.24	.	.	1117	13	4	1	.	.	.	.	1135
1.25-1.49	.	.	251	322	1	.	.	.	.	.	574
1.50-1.74	.	.	.	416	3	.	1	.	.	.	420
1.75-1.99	.	.	.	84	4	.	.	.	.	.	88
2.00-2.24	.	.	.	22	31	.	.	.	.	.	53
2.25-2.49	.	.	.	.	8	2	.	.	.	.	10
2.50-2.74	.	.	.	.	7	.	.	.	.	.	7
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2861	1962	925	73	6	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 5553.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	264	13	2	.	.	.	.	.	.	279
0.25-0.49	.	795	80	18	.	.	.	.	.	.	893
0.50-0.74	.	1198	271	97	3	.	.	.	.	.	1569
0.75-0.99	.	373	555	116	17	1	.	.	.	.	1062
1.00-1.24	.	2	942	300	37	1	.	.	.	.	1282
1.25-1.49	.	.	243	463	43	.	.	.	.	.	749
1.50-1.74	.	.	7	560	115	2	.	.	.	.	684
1.75-1.99	.	.	.	55	197	1	.	.	.	.	253
2.00-2.24	.	.	.	13	146	.	.	.	.	.	159
2.25-2.49	.	.	.	1	22	1	.	.	.	.	24
2.50-2.74	.	.	.	.	4	12	.	.	.	.	16
2.75-2.99	.	.	.	.	.	7	.	.	.	.	7
3.00-3.24	.	.	.	.	.	.	3	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2632	2111	1625	584	25	3	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.0 NO. OF CASES= 6541.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	202	7	.	.	.	.	.	.	.	209
0.25-0.49	.	682	48	12	1	.	.	.	.	.	743
0.50-0.74	.	696	486	84	10	1	.	.	.	.	1277
0.75-0.99	.	74	462	159	7	.	.	.	.	.	702
1.00-1.24	.	.	357	416	9	3	2	.	.	.	787
1.25-1.49	.	.	11	556	8	3	.	.	.	.	578
1.50-1.74	.	.	.	543	132	.	.	.	.	.	675
1.75-1.99	.	.	.	18	242	.	.	.	.	.	260
2.00-2.24	.	.	.	.	124	.	.	.	.	.	124
2.25-2.49	.	.	.	.	24	2	.	.	.	.	26
2.50-2.74	.	.	.	.	2	12	.	.	.	.	14
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1654	1371	1788	559	24	2	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 5059.

STATION E07 41.58N 82.30W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

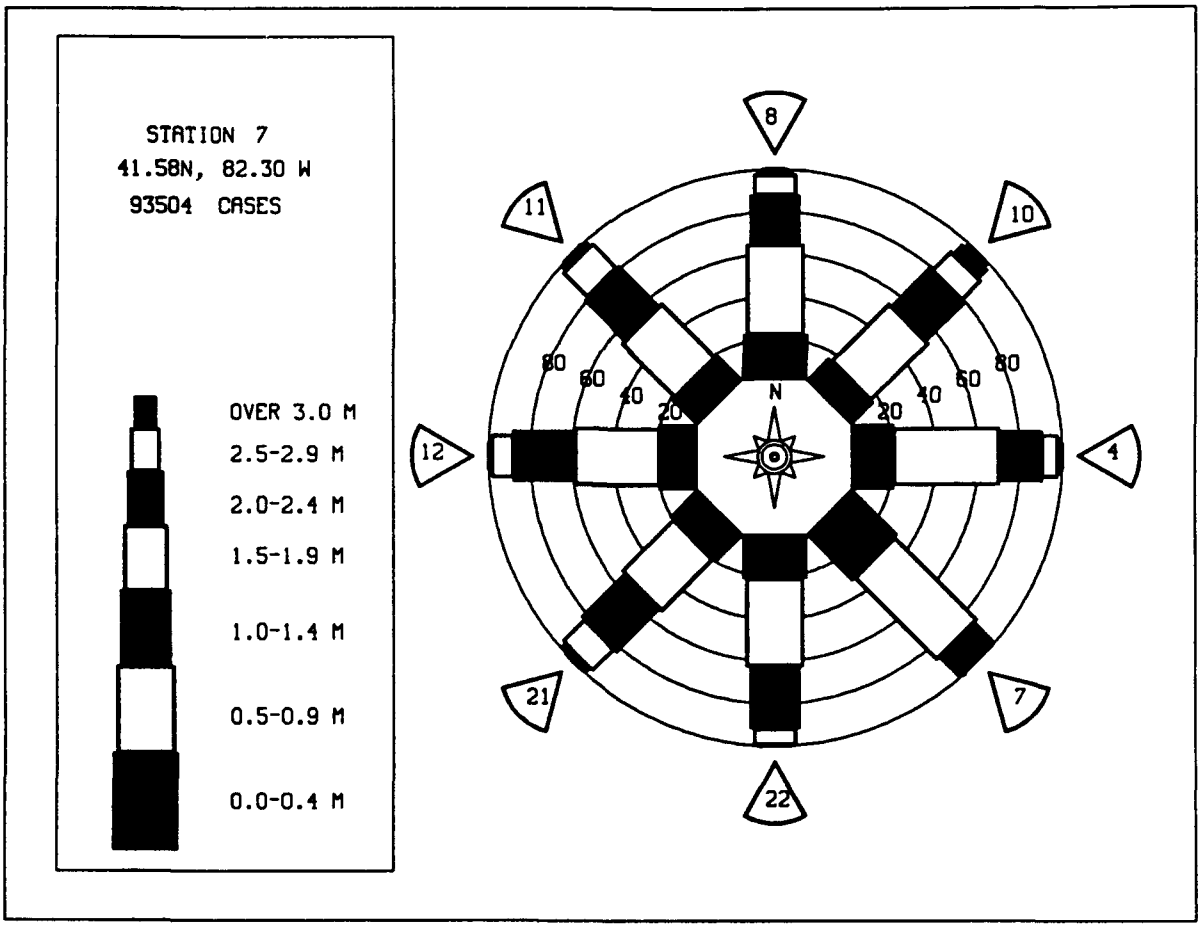
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	201	2	3	.	.	.	.	.	.	206
0.25-0.49	.	509	33	12	.	.	.	.	.	.	554
0.50-0.74	.	688	289	73	14	.	.	.	.	.	1064
0.75-0.99	.	78	331	89	21	4	.	.	.	.	523
1.00-1.24	.	.	375	243	17	2	.	.	.	.	637
1.25-1.49	.	.	23	344	3	4	.	.	.	.	374
1.50-1.74	.	.	.	387	40	4	1	.	.	.	432
1.75-1.99	.	.	.	17	105	.	1	.	.	.	123
2.00-2.24	.	.	.	2	65	1	2	.	.	.	70
2.25-2.49	.	.	.	.	13	.	1	.	.	.	14
2.50-2.74	.	.	.	.	1	2	.	.	.	.	3
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1476	1053	1170	279	20	5	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.1 NO. OF CASES= 3756.

STATION E07 41.58N 82.30W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	488	12	3		.	.	.	.	.	503
0.25-0.49	.	1352	62	31	1	.	.	.	.	.	1446
0.50-0.74	.	1945	458	140	21	.	.	.	.	.	2564
0.75-0.99	.	334	961	162	39	1	.	.	.	.	1497
1.00-1.24	.	.	1248	373	74	7	.	.	.	.	1702
1.25-1.49	.	.	120	751	52	6	.	.	.	.	929
1.50-1.74	.	.	1	712	90	21	.	.	.	.	824
1.75-1.99	.	.	.	93	135	19	.	.	.	.	247
2.00-2.24	.	.	.	7	130	25	5	.	.	.	167
2.25-2.49	.	.	.	.	26	14	5	.	.	.	45
2.50-2.74	.	.	.	.	11	11	10	.	.	.	32
2.75-2.99	.	.	.	.	.	4	5	.	.	.	9
3.00-3.24	.	.	.	.	.	1	4	.	.	.	5
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	4119	2862	2272	579	109	30	1	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E07 (41.58N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.9	1.0	1.1	1.1	1.1	0.7	0.9	0.9	0.8	0.9	1.0	1.0	1.1
1957	1.0	0.9	1.2	1.1	1.1	0.8	0.9	0.8	0.9	1.0	1.1	1.2	1.1
1958	1.1	1.3	1.1	1.1	1.2	0.9	0.8	0.8	0.9	1.0	1.1	0.8	1.1
1959	1.0	1.1	1.2	1.1	0.7	0.7	0.7	0.7	0.8	0.8	1.0	0.8	1.0
1960	0.8	1.1	1.0	1.3	1.0	0.9	0.8	0.7	0.7	0.8	1.1	1.2	1.0
1961	1.0	0.9	1.1	1.1	1.0	0.8	0.8	0.8	0.8	1.0	1.1	1.1	1.1
1962	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.8	0.8	0.8	1.0	1.0
1963	0.9	1.0	1.1	1.1	0.9	0.7	0.8	0.8	0.8	0.7	1.1	0.8	1.0
1964	1.1	0.8	1.1	1.1	0.9	0.8	0.7	0.8	0.8	0.8	0.9	1.0	1.0
1965	1.1	1.0	0.9	1.1	0.8	0.9	0.7	0.8	0.9	1.0	1.0	1.1	1.0
1966	1.0	0.7	1.0	1.0	0.8	0.6	0.8	0.7	0.7	1.0	1.0	1.0	0.9
1967	1.1	1.2	0.9	1.0	1.1	0.8	0.7	0.8	0.8	1.0	1.1	1.0	1.0
1968	0.9	1.1	1.1	1.0	0.9	0.8	0.7	0.7	0.6	0.8	1.0	1.2	1.0
1969	1.0	0.9	1.0	1.0	0.8	0.9	0.7	0.7	0.8	0.9	0.9	1.0	1.0
1970	1.0	1.1	0.9	1.0	0.9	0.8	0.8	0.8	0.8	0.8	1.1	1.1	1.0
1971	1.2	1.2	1.1	1.1	0.9	0.7	0.7	0.8	0.7	0.7	0.9	1.0	1.0
1972	1.1	1.0	1.1	1.1	0.9	0.9	0.7	0.8	0.9	0.9	0.9	0.9	1.0
1973	1.1	1.0	1.1	1.1	0.9	0.7	0.8	0.7	0.7	0.8	1.1	1.1	1.0
1974	0.9	1.2	1.2	1.2	0.9	0.9	0.8	0.8	0.9	0.9	1.0	1.0	1.1
1975	1.0	0.9	1.0	1.0	0.6	0.7	0.5	0.6	0.7	0.9	0.9	0.9	0.9
1976	1.1	1.1	1.1	0.9	0.9	0.7	0.7	0.6	0.8	0.9	0.9	0.9	0.9
1977	1.0	0.9	0.9	0.8	0.7	0.6	0.7	0.7	0.7	0.9	1.0	1.1	0.9
1978	1.1	0.6	0.8	1.0	0.7	0.6	0.7	0.6	0.7	0.8	0.9	1.1	0.9
1979	0.9	1.0	0.9	0.9	0.7	0.7	0.6	0.8	0.7	0.9	0.9	1.0	0.9
1980	0.8	0.8	1.0	0.9	0.6	0.7	0.6	0.7	0.7	0.9	1.0	0.9	0.9
1981	1.0	1.1	1.1	1.2	0.9	0.9	0.8	0.8	0.9	1.0	0.8	0.9	1.0
1982	1.1	0.9	1.0	1.2	0.5	0.7	0.6	0.6	0.6	0.7	1.0	1.0	0.9
1983	0.8	0.7	0.9	1.1	0.9	0.5	0.6	0.6	0.8	0.9	0.9	1.1	0.9
1984	0.8	0.9	1.2	0.9	0.8	0.7	0.6	0.5	0.7	0.6	0.8	0.9	0.9
1985	1.0	0.9	1.1	0.9	0.8	0.7	0.6	0.7	0.7	0.8	1.0	1.0	0.9
1986	0.9	0.8	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.8
1987	0.8	0.8	1.0	1.0	0.7	0.7	0.6	0.8	0.6	0.7	1.0	0.9	0.9
MEAN	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.7	0.8	0.9	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E07 (41.58N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	2.5	2.9	3.1	2.4	1.7	2.3	2.2	1.7	2.0	2.2	2.1
1957	2.4	2.4	2.6	3.5	3.0	2.1	2.5	2.0	2.0	2.3	2.8	2.2
1958	2.2	2.6	2.9	2.6	2.8	2.4	2.1	1.6	2.1	2.1	2.8	2.1
1959	2.3	2.4	3.1	2.9	1.9	1.9	1.9	1.7	1.8	2.3	2.1	2.2
1960	1.9	2.3	2.6	2.5	2.5	2.1	2.3	1.6	1.7	2.2	2.6	3.2
1961	2.1	2.4	2.6	3.1	2.1	2.3	1.9	1.8	2.2	2.5	2.3	2.6
1962	2.8	3.6	3.7	2.7	2.4	2.5	2.3	2.0	2.8	2.3	3.8	2.2
1963	2.7	2.3	2.9	2.5	2.9	1.8	2.0	2.3	2.6	2.1	2.4	1.9
1964	3.3	2.1	3.6	2.6	2.9	2.1	2.3	1.9	2.0	2.3	2.5	2.6
1965	3.1	2.3	2.5	2.3	1.9	2.1	1.8	2.0	2.1	2.4	2.8	2.2
1966	2.4	2.2	2.5	2.4	3.0	1.5	2.7	2.0	2.6	2.1	2.9	2.5
1967	2.2	2.4	2.4	2.5	2.8	2.6	1.8	2.6	2.8	2.7	2.7	2.1
1968	2.3	2.3	3.3	2.6	2.3	1.9	1.8	1.6	1.6	2.2	2.3	2.7
1969	2.2	2.2	2.2	3.7	2.3	2.0	2.1	2.5	1.7	1.8	1.9	2.9
1970	2.2	2.2	2.9	2.7	2.0	1.9	2.1	2.0	1.8	1.7	2.7	2.3
1971	2.6	2.9	2.7	3.1	2.4	1.5	2.0	2.2	2.1	1.8	2.4	2.7
1972	2.6	2.6	2.9	3.1	3.0	2.3	1.7	2.9	2.1	2.0	3.0	2.2
1973	2.3	2.8	2.9	3.1	2.2	1.6	2.1	2.2	2.0	2.3	2.2	2.4
1974	2.9	3.4	2.8	3.5	2.9	2.6	2.7	1.7	2.7	2.2	2.3	3.5
1975	2.5	2.2	2.7	3.1	1.6	2.0	1.7	2.1	2.9	3.6	2.6	2.0
1976	2.3	2.5	2.5	3.1	2.6	1.9	1.7	1.8	2.1	1.9	1.9	1.9
1977	2.2	2.1	2.3	2.1	2.1	1.8	2.2	1.5	2.0	1.9	2.3	2.7
1978	3.1	2.4	2.6	2.9	2.2	1.6	1.5	2.2	1.9	1.9	2.6	2.2
1979	2.0	3.3	2.3	3.2	2.9	1.9	1.8	2.1	2.4	2.0	2.6	2.5
1980	2.4	2.3	2.6	2.9	2.0	1.9	2.1	1.5	1.9	2.4	2.1	2.5
1981	2.6	2.3	2.9	2.8	2.2	2.2	2.3	2.0	2.0	2.5	2.5	2.2
1982	2.9	2.6	2.6	3.9	1.4	2.3	1.5	1.6	1.8	2.3	2.5	2.8
1983	2.0	2.0	2.3	3.3	2.2	1.7	2.0	1.9	1.9	2.2	2.1	2.5
1984	1.6	3.3	3.4	3.0	2.4	1.7	1.5	1.8	1.8	1.5	2.0	2.1
1985	2.0	2.3	2.5	2.7	2.2	2.0	1.6	2.2	1.7	2.3	2.5	2.8
1986	2.1	2.7	2.8	2.3	2.0	2.3	1.4	1.9	1.9	1.8	2.0	2.4
1987	2.0	2.4	3.0	3.5	2.9	1.6	1.6	1.5	1.6	2.0	2.0	3.0

32 YR. STATISTICS FOR WIS STATION E07

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.0
LARGEST WAVE HS	(METERS)	3.9
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	7.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		82040612

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	157	3	.	.	.	.	.	.	.	160
0.25-0.49	.	611	29	20	.	.	.	.	.	.	660
0.50-0.74	.	946	438	109	11	.	.	.	.	.	1504
0.75-0.99	.	113	501	224	25	.	.	.	.	.	863
1.00-1.24	.	.	327	427	50	9	.	.	.	.	813
1.25-1.49	.	.	4	355	32	5	.	.	.	.	396
1.50-1.74	.	.	1	401	135	4	.	.	.	.	541
1.75-1.99	.	.	.	16	229	4	1	.	.	.	250
2.00-2.24	.	.	.	1	144	4	.	.	.	.	149
2.25-2.49	.	.	.	.	44	13	1	.	.	.	58
2.50-2.74	.	.	.	.	6	24	2	.	.	.	32
2.75-2.99	.	.	.	.	.	6	2	.	.	.	8
3.00-3.24	.	.	.	.	.	4	2	1	.	.	7
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	1827	1303	1553	676	73	8	2	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.3 NO. OF CASES= 5104.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	73	2	1	.	.	.	.	.	.	76
0.25-0.49	.	363	13	6	.	.	.	.	.	.	382
0.50-0.74	.	724	420	84	2	.	.	.	.	.	1230
0.75-0.99	.	84	383	224	33	.	.	.	.	.	724
1.00-1.24	.	.	231	386	94	6	.	.	.	.	717
1.25-1.49	.	.	5	227	75	3	.	.	.	.	310
1.50-1.74	.	.	.	173	119	14	1	.	.	.	307
1.75-1.99	.	.	.	7	124	17	.	.	.	.	148
2.00-2.24	.	.	.	.	75	27	5	.	.	.	107
2.25-2.49	.	.	.	.	7	27	2	.	.	.	36
2.50-2.74	.	.	.	.	1	24	9	.	.	.	34
2.75-2.99	.	.	.	.	.	7	6	.	.	.	13
3.00-3.24	.	.	.	.	.	.	9	.	.	.	9
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	3	2	.	.	5
TOTAL	0	1244	1054	1108	530	125	37	2	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.4 NO. OF CASES= 3851.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	151	4	.	.	.	.	.	.	.	155
0.25-0.49	.	601	19	11	.	.	.	.	.	.	631
0.50-0.74	.	688	505	151	11	.	.	.	.	.	1355
0.75-0.99	.	85	417	418	44	1	.	.	.	.	965
1.00-1.24	.	.	288	518	223	19	1	.	.	.	1049
1.25-1.49	.	.	5	297	195	7	.	.	.	.	504
1.50-1.74	.	.	.	275	290	71	2	.	.	.	638
1.75-1.99	.	.	.	12	205	95	.	.	.	.	312
2.00-2.24	.	.	.	.	229	150	18	.	.	.	397
2.25-2.49	.	.	.	.	26	154	20	.	.	.	200
2.50-2.74	.	.	.	.	2	114	40	.	.	.	156
2.75-2.99	.	.	.	.	.	18	54	.	.	.	72
3.00-3.24	.	.	.	.	.	4	52	.	.	.	56
3.25-3.49	.	.	.	.	.	1	21	.	.	.	22
3.50+	.	.	.	.	.	.	21	11	.	.	32
TOTAL	0	1525	1238	1682	1225	634	229	11	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.8 NO. OF CASES= 6140.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	58	1	.	.	.	.	.	.	.	59
0.25-0.49	.	267	19	7	.	.	.	.	.	.	293
0.50-0.74	.	426	257	71	9	.	.	.	.	.	763
0.75-0.99	.	34	239	172	24	.	.	.	.	.	469
1.00-1.24	.	.	187	197	115	3	.	.	.	.	502
1.25-1.49	.	.	5	113	62	10	.	.	.	.	190
1.50-1.74	.	.	.	85	62	23	.	.	.	.	170
1.75-1.99	.	.	.	10	41	20	.	.	.	.	71
2.00-2.24	.	.	.	.	26	14	2	.	.	.	42
2.25-2.49	.	.	.	.	6	6	2	.	.	.	14
2.50-2.74	.	.	.	.	2	10	3	.	.	.	15
2.75-2.99	.	.	.	.	.	.	6	.	.	.	6
3.00-3.24	.	.	.	.	.	1	4	.	.	.	5
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	785	708	655	347	87	18	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.4 NO. OF CASES= 2448.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	74	1	1	.	.	.	.	.	.	76
0.25-0.49	.	332	16	6	.	.	.	.	.	.	354
0.50-0.74	.	486	263	79	14	.	.	.	.	.	842
0.75-0.99	.	33	245	88	34	3	.	.	.	.	403
1.00-1.24	.	.	270	66	45	10	.	.	.	.	391
1.25-1.49	.	.	7	104	17	3	.	.	.	.	131
1.50-1.74	.	.	.	99	11	4	.	.	.	.	114
1.75-1.99	.	.	.	23	12	5	.	.	.	.	40
2.00-2.24	.	.	.	2	17	2	1	.	.	.	22
2.25-2.49	.	.	.	.	4	.	1	.	.	.	5
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	925	802	468	155	29	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 2240.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	88	.	3	.	.	.	.	.	.	91
0.25-0.49	.	413	19	13	.	.	.	.	.	.	445
0.50-0.74	.	594	181	80	10	.	.	.	.	.	865
0.75-0.99	.	60	178	24	19	.	.	.	.	.	281
1.00-1.24	.	1	189	28	11	2	.	.	.	.	231
1.25-1.49	.	.	6	50	2	.	.	.	.	.	58
1.50-1.74	.	.	.	66	2	2	.	.	.	.	70
1.75-1.99	.	.	.	11	5	1	.	.	.	.	17
2.00-2.24	.	.	.	.	11	.	.	.	.	.	11
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1156	573	275	61	6	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.6 NO. OF CASES= 1949.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	214	4	2	.	.	.	.	.	.	220
0.25-0.49	.	867	39	13	.	.	.	.	.	.	919
0.50-0.74	.	1609	117	78	26	.	.	.	.	.	1830
0.75-0.99	.	290	212	21	36	.	.	.	.	.	559
1.00-1.24	.	6	385	20	7	8	.	.	.	.	426
1.25-1.49	.	.	93	.	2	4	.	.	.	.	99
1.50-1.74	.	.	9	43	.	2	.	.	.	.	54
1.75-1.99	.	.	.	6	1	.	.	.	.	.	7
2.00-2.24	.	.	.	3	.	1	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2986	859	186	72	15	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 3862.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	299	7	1	.	.	.	.	.	.	307
0.25-0.49	.	1260	43	28	3	.	.	.	.	.	1334
0.50-0.74	.	2010	57	72	19	.	.	.	.	.	2158
0.75-0.99	.	429	171	14	13	.	.	.	.	.	627
1.00-1.24	.	11	440	5	2	3	.	.	.	.	461
1.25-1.49	.	.	91	4	1	1	.	.	.	.	97
1.50-1.74	.	.	2	73	.	.	.	.	.	.	75
1.75-1.99	.	.	.	12	.	2	.	.	.	.	14
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4009	811	211	40	6	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 4761.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	450	11	2	1	.	.	.	.	.	464
0.25-0.49	.	2030	58	32	1	.	.	.	.	.	2121
0.50-0.74	.	3590	42	91	13	.	.	.	.	.	3736
0.75-0.99	.	2300	7	5	6	.	.	.	.	.	2318
1.00-1.24	.	80	1492	1	3	2	1	.	.	.	1579
1.25-1.49	.	.	350	.	.	1	.	.	.	.	351
1.50-1.74	.	.	64	101	.	.	.	.	.	.	165
1.75-1.99	.	.	.	19	.	.	.	.	.	.	19
2.00-2.24	.	.	.	6	1	.	1	.	.	.	8
2.25-2.49	.	.	.	1	.	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8450	2024	258	25	3	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.2 NO. OF CASES= 10074.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	327	4	2	.	.	.	.	.	.	333
0.25-0.49	.	1737	63	31	2	.	.	.	.	.	1833
0.50-0.74	.	3527	378	63	12	.	.	.	.	.	3980
0.75-0.99	.	1480	557	44	10	3	.	.	.	.	2094
1.00-1.24	.	270	1285	268	2	1	.	.	.	.	1826
1.25-1.49	.	.	328	294	3	.	.	.	.	.	625
1.50-1.74	.	.	75	366	5	2	.	.	.	.	448
1.75-1.99	.	.	.	102	32	.	.	.	.	.	134
2.00-2.24	.	.	.	10	54	.	.	.	.	.	64
2.25-2.49	.	.	.	1	17	.	.	.	.	.	18
2.50-2.74	.	.	.	.	9	.	.	.	.	.	9
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7341	2690	1181	146	9	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 10641.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	355	7	1	.	.	.	.	.	.	363
0.25-0.49	.	1296	64	20	2	.	.	.	.	.	1382
0.50-0.74	.	1972	640	44	13	.	.	.	.	.	2669
0.75-0.99	.	353	1689	31	7	.	.	.	.	.	2080
1.00-1.24	.	57	1592	425	3	4	.	.	.	.	2081
1.25-1.49	.	.	100	984	2	1	.	.	.	.	1087
1.50-1.74	.	.	.	1223	.	.	1	.	.	.	1224
1.75-1.99	.	.	.	364	172	.	.	.	.	.	536
2.00-2.24	.	.	.	27	244	.	.	.	.	.	271
2.25-2.49	.	.	.	.	72	.	.	.	.	.	72
2.50-2.74	.	.	.	.	63	.	.	.	.	.	63
2.75-2.99	.	.	.	.	1	24	.	.	.	.	25
3.00-3.24	.	.	.	.	1	12	.	.	.	.	13
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	.	5	2	.	.	.	7
TOTAL	0	4033	4092	3119	580	49	3	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.0 NO. OF CASES= 11120.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	193	7	1	.	.	.	.	.	.	201
0.25-0.49	.	861	37	13	2	.	.	.	.	.	913
0.50-0.74	.	1119	603	41	9	1	.	.	.	.	1773
0.75-0.99	.	80	1295	24	4	1	.	.	.	.	1404
1.00-1.24	.	.	1218	382	2	1	.	.	.	.	1603
1.25-1.49	.	.	33	1078	.	.	.	.	.	.	1111
1.50-1.74	.	.	1	1514	16	.	.	.	.	.	1531
1.75-1.99	.	.	.	288	267	.	.	.	.	.	555
2.00-2.24	.	.	.	3	410	.	.	.	.	.	413
2.25-2.49	.	.	.	.	128	.	.	.	.	.	128
2.50-2.74	.	.	.	.	89	7	.	.	.	.	96
2.75-2.99	.	.	.	.	2	34	.	.	.	.	36
3.00-3.24	.	.	.	.	.	22	.	.	.	.	22
3.25-3.49	.	.	.	.	.	5	.	.	.	.	5
3.50+	.	.	.	.	.	4	.	.	.	.	4
TOTAL	0	2253	3194	3344	929	75	0	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 9172.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	173	4	.	1	.	.	.	.	.	178
0.25-0.49	.	802	18	6	.	.	.	.	.	.	826
0.50-0.74	.	978	437	32	5	.	.	.	.	.	1452
0.75-0.99	.	52	878	29	2	2	.	.	.	.	963
1.00-1.24	.	.	1009	276	2	1	.	.	.	.	1288
1.25-1.49	.	.	21	849	3	.	.	.	.	.	873
1.50-1.74	.	.	.	970	17	.	.	.	.	.	987
1.75-1.99	.	.	.	244	141	.	.	.	.	.	385
2.00-2.24	.	.	.	4	257	.	.	.	.	.	261
2.25-2.49	.	.	.	.	69	1	.	.	.	.	70
2.50-2.74	.	.	.	.	42	4	.	.	.	.	46
2.75-2.99	.	.	.	.	1	18	.	.	.	.	19
3.00-3.24	.	.	.	.	.	9	1	.	.	.	10
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	2005	2367	2410	540	38	4	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.2 NO. OF CASES= 6897.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	144	10	1	.	.	.	.	.	.	155
0.25-0.49	.	768	51	23	.	.	.	.	.	.	842
0.50-0.74	.	936	539	101	4	.	.	.	.	.	1580
0.75-0.99	.	72	707	108	14	.	.	.	.	.	901
1.00-1.24	.	2	765	398	22	3	.	.	.	.	1190
1.25-1.49	.	.	13	706	26	1	.	.	.	.	746
1.50-1.74	.	.	.	860	87	.	.	.	.	.	947
1.75-1.99	.	.	.	172	197	.	.	.	.	.	369
2.00-2.24	.	.	.	18	229	3	.	.	.	.	250
2.25-2.49	.	.	.	.	50	10	.	.	.	.	60
2.50-2.74	.	.	.	.	27	11	.	.	.	.	38
2.75-2.99	.	.	.	.	6	4	.	.	.	.	10
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	2	2	.	.	.	4
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1922	2085	2387	662	35	4	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.3 NO. OF CASES= 6653.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	96	1	.	1	.	.	.	.	.	98
0.25-0.49	.	534	22	9	.	.	.	.	.	.	565
0.50-0.74	.	744	421	78	3	1	.	.	.	.	1247
0.75-0.99	.	64	578	53	11	.	.	.	.	.	706
1.00-1.24	.	.	577	279	10	4	1	.	.	.	871
1.25-1.49	.	.	22	581	4	1	.	.	.	.	608
1.50-1.74	.	.	.	683	56	.	1	.	.	.	740
1.75-1.99	.	.	.	149	103	1	.	.	.	.	253
2.00-2.24	.	.	.	14	96	.	1	.	.	.	111
2.25-2.49	.	.	.	.	26	.	.	.	.	.	26
2.50-2.74	.	.	.	.	10	1	.	.	.	.	11
2.75-2.99	.	.	.	.	3	.	.	.	.	.	3
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1438	1621	1846	323	10	3	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.2 NO. OF CASES= 4914.

STATION E08 41.58N 82.10W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

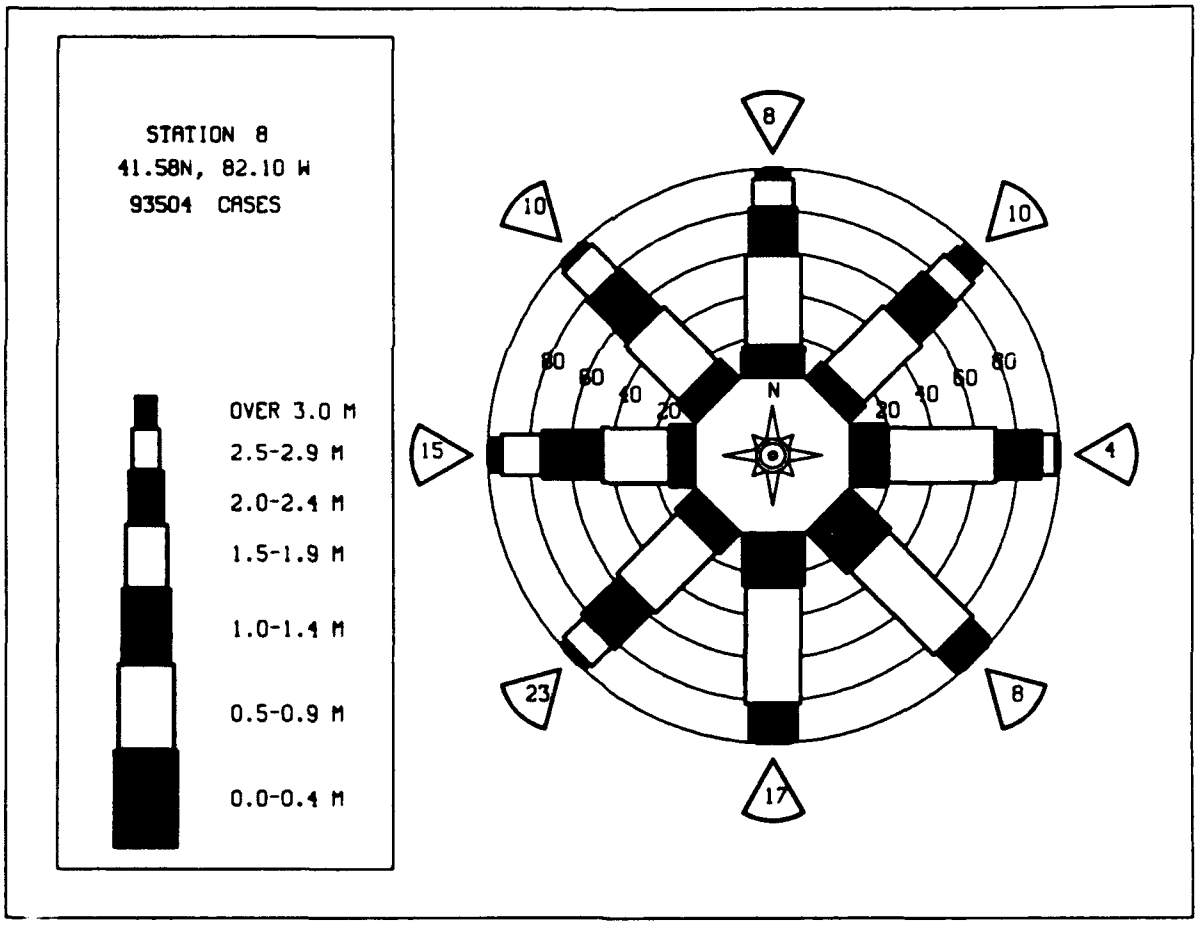
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	85	1	.	.	.	.	.	.	.	86
0.25-0.49	.	449	20	9	.	.	.	.	.	.	478
0.50-0.74	.	716	287	54	12	.	.	.	.	.	1069
0.75-0.99	.	65	398	78	17	1	.	.	.	.	559
1.00-1.24	.	1	359	244	13	3	.	.	.	.	620
1.25-1.49	.	.	11	330	9	3	.	.	.	.	353
1.50-1.74	.	.	.	392	36	4	.	.	.	.	432
1.75-1.99	.	.	.	53	108	1	.	.	.	.	162
2.00-2.24	.	.	.	5	102	.	1	.	.	.	108
2.25-2.49	.	.	.	.	29	.	.	.	.	.	29
2.50-2.74	.	.	.	.	8	7	.	.	.	.	15
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1316	1076	1165	334	26	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.2 NO. OF CASES= 3678.

STATION E08 41.58N 82.10W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	294	7	1	.	.	.	.	.	.	302
0.25-0.49	.	1320	53	25	1	.	.	.	.	.	1399
0.50-0.74	.	2107	559	123	18	.	.	.	.	.	2807
0.75-0.99	.	560	846	156	30	1	.	.	.	.	1593
1.00-1.24	.	43	1062	392	61	8	.	.	.	.	1566
1.25-1.49	.	.	110	597	43	4	.	.	.	.	754
1.50-1.74	.	.	15	733	84	12	.	.	.	.	844
1.75-1.99	.	.	.	149	164	14	.	.	.	.	327
2.00-2.24	.	.	.	9	190	20	2	.	.	.	221
2.25-2.49	.	.	.	.	48	21	2	.	.	.	71
2.50-2.74	.	.	.	.	26	20	5	.	.	.	51
2.75-2.99	.	.	.	.	1	12	6	.	.	.	19
3.00-3.24	.	.	.	.	.	6	6	.	.	.	12
3.25-3.49	.	.	.	.	.	1	2	.	.	.	3
3.50+	.	.	.	.	.	.	3	1	.	.	4
TOTAL	0	4324	2652	2185	666	119	26	1	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E08 (41.58N 82.10W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	1.0	1.0	1.2	1.1	1.1	0.7	0.9	0.8	0.8	0.8	1.0	1.0	1.0
1957	1.0	0.9	1.2	1.1	1.1	0.8	0.9	0.8	0.8	0.9	1.1	1.1	1.1
1958	1.1	1.4	1.1	1.1	1.2	0.9	0.8	0.8	0.9	1.0	1.1	0.9	1.1
1959	1.0	1.0	1.1	1.1	0.7	0.7	0.7	0.7	0.7	0.8	1.0	0.8	0.9
1960	0.8	1.1	1.0	1.3	1.0	0.9	0.8	0.7	0.7	0.8	1.0	1.2	1.0
1961	1.0	0.9	1.1	1.2	1.0	0.8	0.8	0.8	0.7	0.9	1.1	1.1	1.1
1962	1.1	1.2	1.2	1.1	1.0	0.9	0.9	0.7	0.8	0.8	0.8	1.0	1.1
1963	0.9	1.0	1.1	1.1	0.9	0.7	0.9	0.9	0.8	0.7	1.0	0.9	1.0
1964	1.1	0.8	1.1	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0
1965	1.1	1.0	0.9	1.1	0.8	0.9	0.7	0.8	0.8	1.0	1.1	1.0	1.0
1966	1.0	0.7	1.0	1.0	0.8	0.6	0.9	0.7	0.8	0.9	1.0	1.0	0.9
1967	1.1	1.2	1.0	1.0	1.1	0.8	0.7	0.8	0.8	0.9	1.2	1.0	1.0
1968	0.9	1.1	1.1	0.9	1.0	0.8	0.7	0.7	0.5	0.8	1.0	1.2	1.0
1969	1.1	1.0	1.1	1.0	0.8	0.8	0.7	0.7	0.7	0.9	0.9	1.1	1.0
1970	1.0	1.1	1.0	1.1	0.9	0.8	0.7	0.8	0.8	0.8	1.1	1.1	1.0
1971	1.2	1.3	1.1	1.1	0.9	0.7	0.7	0.8	0.7	0.7	0.9	1.0	1.0
1972	1.1	1.0	1.1	1.1	0.9	0.9	0.7	0.8	0.8	0.8	0.9	0.9	1.0
1973	1.1	1.0	1.0	1.1	0.9	0.7	0.8	0.8	0.7	0.8	1.1	1.1	1.0
1974	0.8	1.2	1.2	1.2	0.9	0.9	0.8	0.7	0.9	0.9	1.0	1.0	1.1
1975	1.1	1.0	1.1	1.1	0.7	0.8	0.6	0.7	0.8	0.9	1.0	1.0	1.0
1976	1.2	1.2	1.2	1.0	0.9	0.8	0.8	0.7	0.8	0.9	1.0	0.9	1.0
1977	1.0	1.0	0.9	0.9	0.7	0.7	0.8	0.8	0.8	0.9	1.0	1.2	1.0
1978	1.2	0.7	0.9	1.1	0.8	0.7	0.7	0.7	0.8	0.9	0.9	1.1	1.0
1979	1.0	1.1	1.0	1.0	0.7	0.8	0.7	0.9	0.8	1.0	1.0	1.1	1.0
1980	0.9	0.9	1.1	1.0	0.7	0.7	0.7	0.8	0.8	1.0	1.1	1.0	1.0
1981	1.0	1.1	1.2	1.2	0.9	0.9	0.8	0.6	0.9	1.0	0.9	0.9	1.1
1982	1.2	1.0	1.1	1.4	0.6	0.8	0.7	0.7	0.7	0.8	1.1	1.0	1.0
1983	0.9	0.7	1.0	1.3	1.0	0.6	0.8	0.7	0.9	1.0	1.0	1.2	1.0
1984	0.8	0.9	1.2	1.0	0.9	0.8	0.7	0.6	0.7	0.6	0.9	0.9	0.9
1985	1.0	1.0	1.1	1.0	0.9	0.8	0.7	0.8	0.7	0.8	1.1	1.1	1.0
1986	1.0	0.8	1.0	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.9
1987	0.8	0.8	1.0	1.0	0.7	0.7	0.7	0.8	0.6	0.7	1.0	0.9	0.9
MEAN	1.0	1.0	1.1	1.1	0.9	0.8	0.8	0.8	0.8	0.9	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E08 (41.58N 82.10W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.3	2.8	3.6	3.4	2.4	2.1	2.1	2.3	2.0	2.3	2.3	2.1
1957	2.6	2.6	2.8	3.9	3.3	2.6	2.6	2.2	1.9	2.6	2.7	2.4
1958	2.3	2.5	3.1	2.6	3.0	2.4	2.4	1.8	2.2	2.2	2.7	2.3
1959	2.4	2.6	3.3	3.6	1.7	2.1	1.8	1.9	1.9	2.4	2.0	2.1
1960	2.0	2.5	2.6	2.6	2.7	2.5	2.5	1.6	1.9	2.2	2.8	3.4
1961	2.2	2.6	2.4	3.1	2.4	2.6	2.1	1.9	2.1	2.0	2.6	2.8
1962	3.0	4.0	4.1	3.0	2.6	2.6	2.4	2.1	3.0	2.0	4.2	2.4
1963	2.9	2.5	3.1	2.7	2.9	2.0	2.4	2.6	2.7	2.3	2.3	1.9
1964	3.5	2.3	3.7	2.7	3.3	2.5	2.4	2.0	2.3	2.6	2.7	2.8
1965	3.3	2.3	2.7	2.5	2.2	2.2	1.9	1.9	2.2	2.9	3.1	2.4
1966	2.9	2.3	2.8	2.6	3.3	1.5	2.9	2.3	2.8	2.2	3.1	2.8
1967	2.4	2.6	2.8	2.9	3.0	2.8	2.0	2.7	3.0	3.0	2.8	2.4
1968	2.6	2.3	3.5	2.8	2.5	2.0	1.9	1.8	1.6	2.4	2.4	2.9
1969	2.4	2.6	2.5	4.0	2.1	1.9	2.2	2.7	1.6	1.9	2.1	3.0
1970	2.3	2.4	3.2	3.3	2.3	2.0	2.4	2.2	2.1	1.8	2.8	2.7
1971	3.1	3.1	3.0	3.4	2.1	1.6	2.2	2.3	2.3	2.0	2.3	3.2
1972	3.0	2.6	2.5	3.4	3.3	2.6	1.8	3.2	2.3	2.0	3.2	2.6
1973	2.5	3.0	3.2	3.3	2.0	1.5	2.3	2.6	1.8	2.2	2.6	2.6
1974	2.8	3.8	3.0	3.7	3.0	2.9	2.9	1.8	2.9	2.0	2.4	3.9
1975	3.1	2.6	2.6	3.2	2.0	1.9	1.9	2.3	3.0	3.8	2.9	2.3
1976	2.6	2.8	3.2	3.3	3.1	2.2	1.9	1.9	2.3	2.4	1.9	1.9
1977	2.2	2.5	2.4	2.3	2.4	2.2	2.5	1.7	2.1	2.1	2.3	2.9
1978	3.8	2.8	2.8	3.4	2.6	1.9	1.8	2.6	2.0	2.1	3.0	2.7
1979	2.6	3.6	2.5	3.8	3.1	2.2	2.0	2.6	2.7	2.3	2.9	2.9
1980	3.1	2.7	2.6	3.1	2.4	2.2	2.4	1.9	2.1	3.0	2.3	2.8
1981	2.6	2.5	3.1	3.0	2.4	2.4	2.6	2.2	2.1	2.9	2.7	2.1
1982	3.2	2.8	3.1	4.3	1.4	2.8	1.8	1.9	2.2	2.9	2.9	3.3
1983	2.2	2.0	2.3	3.6	2.7	1.7	2.4	2.2	2.1	2.6	2.3	2.6
1984	1.8	3.7	3.9	3.5	2.6	2.1	2.0	2.1	1.6	1.8	2.2	2.5
1985	2.3	2.8	3.0	2.8	2.7	2.4	2.0	2.5	1.7	2.6	2.6	3.4
1986	2.4	2.8	3.1	2.6	2.1	2.5	1.6	2.2	2.2	2.0	2.3	2.2
1987	2.2	2.7	3.2	3.9	3.0	1.8	1.7	1.6	1.4	2.2	2.1	3.2

32 YR. STATISTICS FOR WIS STATION E08

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.0
LARGEST WAVE HS	(METERS)	4.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	5.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		82040612

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	130	1	.	.	.	.	.	.	.	131
0.25-0.49	.	498	26	18	.	.	.	.	.	.	542
0.50-0.74	.	894	443	100	11	.	.	.	.	.	1448
0.75-0.99	.	135	425	264	19	.	.	.	.	.	843
1.00-1.24	.	.	299	509	34	10	.	.	.	.	852
1.25-1.49	.	.	7	294	40	2	.	.	.	.	343
1.50-1.74	.	.	1	391	159	3	1	.	.	.	555
1.75-1.99	.	.	.	21	245	1	.	.	.	.	267
2.00-2.24	.	.	.	2	186	4	.	.	.	.	192
2.25-2.49	.	.	.	.	59	7	1	.	.	.	67
2.50-2.74	.	.	.	.	11	39	.	.	.	.	50
2.75-2.99	.	.	.	.	.	10	3	.	.	.	13
3.00-3.24	.	.	.	.	.	5	3	.	.	.	8
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	2	2	.	.	5
TOTAL	0	1657	1202	1599	764	82	10	2	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 4986.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	57	1	1	.	.	.	.	.	.	59
0.25-0.49	.	328	12	4	1	.	.	.	.	.	345
0.50-0.74	.	751	444	90	6	.	.	.	.	.	1291
0.75-0.99	.	97	424	220	26	.	.	.	.	.	767
1.00-1.24	.	.	287	366	94	6	.	.	.	.	753
1.25-1.49	.	.	8	240	64	1	.	.	.	.	313
1.50-1.74	.	.	.	195	118	17	1	.	.	.	331
1.75-1.99	.	.	.	5	129	9	.	.	.	.	143
2.00-2.24	.	.	.	1	105	21	2	.	.	.	129
2.25-2.49	.	.	.	.	19	24	.	.	.	.	43
2.50-2.74	.	.	.	.	4	33	4	.	.	.	41
2.75-2.99	.	.	.	.	.	11	3	.	.	.	14
3.00-3.24	.	.	.	.	.	2	12	.	.	.	14
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1233	1176	1122	566	124	28	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.4 NO. OF CASES= 3991.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	136	3	1	.	.	.	.	.	.	140
0.25-0.49	.	500	22	13	2	.	.	.	.	.	537
0.50-0.74	.	644	505	157	13	.	.	.	.	.	1319
0.75-0.99	.	81	462	367	38	2	.	.	.	.	950
1.00-1.24	.	.	309	536	211	12	.	.	.	.	1068
1.25-1.49	.	.	9	289	182	4	.	.	.	.	484
1.50-1.74	.	.	.	291	259	66	.	.	.	.	616
1.75-1.99	.	.	.	26	207	67	2	.	.	.	302
2.00-2.24	.	.	.	.	260	122	10	.	.	.	392
2.25-2.49	.	.	.	.	53	125	4	.	.	.	182
2.50-2.74	.	.	.	.	4	164	11	.	.	.	179
2.75-2.99	.	.	.	.	.	63	17	.	.	.	80
3.00-3.24	.	.	.	.	.	8	55	.	.	.	63
3.25-3.49	.	.	.	.	.	1	21	.	.	.	22
3.50+	.	.	.	.	.	.	34	4	.	.	38
TOTAL	0	1361	1310	1680	1229	634	154	4	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.8 NO. OF CASES= 5981.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	58	1	.	.	.	.	.	.	.	59
0.25-0.49	.	270	23	16	.	.	.	.	.	.	309
0.50-0.74	.	516	182	82	10	.	.	.	.	.	790
0.75-0.99	.	77	213	106	44	.	.	.	.	.	440
1.00-1.24	.	.	206	128	81	8	.	.	.	.	423
1.25-1.49	.	.	14	88	35	13	.	.	.	.	150
1.50-1.74	.	.	.	55	37	8	.	.	.	.	100
1.75-1.99	.	.	.	6	25	16	.	.	.	.	47
2.00-2.24	.	.	.	.	20	9	.	.	.	.	29
2.25-2.49	.	.	.	.	5	7	2	.	.	.	14
2.50-2.74	.	.	.	.	1	6	.	.	.	.	7
2.75-2.99	.	.	.	.	.	6	.	.	.	.	6
3.00-3.24	.	.	.	.	.	1	2	.	.	.	3
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	921	639	481	258	74	5	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.1 NO. OF CASES= 2240.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	69	.	1	.	.	.	.	.	.	70
0.25-0.49	.	333	17	9	.	.	.	.	.	.	359
0.50-0.74	.	639	113	77	17	.	.	.	.	.	846
0.75-0.99	.	196	122	58	29	3	.	.	.	.	408
1.00-1.24	.	.	150	42	39	7	.	.	.	.	238
1.25-1.49	.	.	38	41	10	4	1	.	.	.	94
1.50-1.74	.	.	1	35	11	6	.	.	.	.	53
1.75-1.99	.	.	.	6	2	4	.	.	.	.	12
2.00-2.24	.	.	.	5	2	1	1	.	.	.	9
2.25-2.49	.	.	.	.	.	1	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1237	441	274	111	26	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 1969.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	87	3	3	.	.	.	.	.	.	93
0.25-0.49	.	443	17	14	.	.	.	.	.	.	474
0.50-0.74	.	840	81	56	18	.	.	.	.	.	995
0.75-0.99	.	222	126	13	18	1	.	.	.	.	380
1.00-1.24	.	.	201	10	20	5	.	.	.	.	236
1.25-1.49	.	.	37	47	.	1	.	.	.	.	85
1.50-1.74	.	.	1	48	1	2	.	.	.	.	52
1.75-1.99	.	.	.	12	1	.	.	.	.	.	13
2.00-2.24	.	.	.	1	1	.	1	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1592	466	204	61	9	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 2191.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	211	5	1	.	.	.	.	.	.	217
0.25-0.49	.	826	44	17	.	.	.	.	.	.	887
0.50-0.74	.	1657	54	72	35	.	.	.	.	.	1818
0.75-0.99	.	282	180	16	19	2	.	.	.	.	499
1.00-1.24	.	3	357	4	6	6	1	.	.	.	377
1.25-1.49	.	.	83	8	1	1	.	.	.	.	93
1.50-1.74	.	.	.	42	.	1	.	.	.	.	43
1.75-1.99	.	.	.	8	.	.	.	.	.	.	8
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2979	723	170	61	10	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 3698.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	287	12	1	.	.	.	.	.	.	300
0.25-0.49	.	1208	50	31	3	.	.	.	.	.	1292
0.50-0.74	.	2028	22	60	18	.	.	.	.	.	2128
0.75-0.99	.	434	163	4	4	1	.	.	.	.	606
1.00-1.24	.	10	437	2	1	3	.	.	.	.	453
1.25-1.49	.	.	100	19	.	.	.	.	.	.	119
1.50-1.74	.	.	1	83	.	2	1	.	.	.	87
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	8	.	.	.	.	.	.	8
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3967	785	214	28	6	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 4686.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	391	13	2	1	.	.	.	.	.	407
0.25-0.49	.	2044	56	34	.	.	.	.	.	.	2134
0.50-0.74	.	3758	18	69	13	.	.	.	.	.	3858
0.75-0.99	.	2351	6	2	3	1	.	.	.	.	2363
1.00-1.24	.	12	1659	.	1	2	1	.	.	.	1675
1.25-1.49	.	.	310	.	.	1	.	.	.	.	311
1.50-1.74	.	.	70	97	.	.	.	.	.	.	167
1.75-1.99	.	.	.	34	.	.	1	.	.	.	35
2.00-2.24	.	.	.	8	.	.	.	.	.	.	8
2.25-2.49	.	.	.	1	.	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8556	2132	247	18	4	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.2 NO. OF CASES= 10257.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	270	3	3	.	.	.	.	.	.	276
0.25-0.49	.	1727	34	29	2	.	.	.	.	.	1792
0.50-0.74	.	3214	47	51	8	2	.	.	.	.	3322
0.75-0.99	.	1659	77	11	6	1	.	.	.	.	1754
1.00-1.24	.	125	1208	21	1	1	.	.	.	.	1356
1.25-1.49	.	.	309	2	3	2	.	.	.	.	316
1.50-1.74	.	.	73	95	1	.	.	.	.	.	169
1.75-1.99	.	.	1	48	4	.	.	.	.	.	53
2.00-2.24	.	.	.	20	.	.	.	.	.	.	20
2.25-2.49	.	.	.	6	2	.	.	.	.	.	8
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6995	1752	286	31	6	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 8491.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	306	8	.	.	.	.	.	.	.	314
0.25-0.49	.	1255	59	19	2	.	.	.	.	.	1335
0.50-0.74	.	2917	816	35	6	1	.	.	.	.	3775
0.75-0.99	.	682	1022	181	4	3	.	.	.	.	1892
1.00-1.24	.	94	1066	945	4	.	.	.	.	.	2109
1.25-1.49	.	.	417	430	12	.	.	.	.	.	859
1.50-1.74	.	.	139	480	160	.	1	.	.	.	780
1.75-1.99	.	.	1	102	85	.	.	.	.	.	188
2.00-2.24	.	.	.	84	34	.	.	.	.	.	118
2.25-2.49	.	.	.	18	16	2	.	.	.	.	36
2.50-2.74	.	.	.	9	17	6	.	.	.	.	32
2.75-2.99	.	.	.	.	4	1	.	.	.	.	5
3.00-3.24	.	.	.	.	3	1	.	.	.	.	4
3.25-3.49	.	.	.	.	2	.	1	.	.	.	3
3.50+	.	.	.	.	1	.	.	.	.	.	1
TOTAL	0	5254	3528	2303	350	14	2	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 3.8 NO. OF CASES= 10721.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	186	3	1	.	.	.	.	.	.	190
0.25-0.49	.	883	38	6	1	.	.	.	.	.	928
0.50-0.74	.	1552	907	44	6	.	.	.	.	.	2509
0.75-0.99	.	208	1748	72	8	1	.	.	.	.	2037
1.00-1.24	.	.	929	1372	2	1	.	.	.	.	2304
1.25-1.49	.	.	83	1250	.	.	.	.	.	.	1333
1.50-1.74	.	.	20	1053	150	.	.	.	.	.	1223
1.75-1.99	.	.	.	51	396	.	.	.	.	.	447
2.00-2.24	.	.	.	21	359	.	.	.	.	.	380
2.25-2.49	.	.	.	4	142	3	.	.	.	.	149
2.50-2.74	.	.	.	2	50	39	.	.	.	.	91
2.75-2.99	.	.	.	.	2	27	.	.	.	.	29
3.00-3.24	.	.	.	.	3	19	.	.	.	.	22
3.25-3.49	.	.	.	.	1	6	.	.	.	.	7
3.50+	.	.	.	.	.	1	5	.	.	.	6
TOTAL	0	2829	3728	3876	1120	97	5	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.3 NO. OF CASES= 10913.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	163	4	.	1	.	.	.	.	.	168
0.25-0.49	.	771	26	3	.	.	.	.	.	.	800
0.50-0.74	.	1075	633	53	6	.	.	.	.	.	1767
0.75-0.99	.	106	922	181	2	.	.	.	.	.	1211
1.00-1.24	.	1	591	789	9	1	.	.	.	.	1391
1.25-1.49	.	.	45	745	13	.	.	.	.	.	803
1.50-1.74	.	.	1	1117	66	.	.	.	.	.	1184
1.75-1.99	.	.	.	112	422	1	.	.	.	.	535
2.00-2.24	.	.	.	5	465	1	.	.	.	.	471
2.25-2.49	.	.	.	.	143	5	.	.	.	.	148
2.50-2.74	.	.	.	.	78	36	.	.	.	.	114
2.75-2.99	.	.	.	.	5	42	.	.	.	.	47
3.00-3.24	.	.	.	.	.	22	.	.	.	.	22
3.25-3.49	.	.	.	.	.	9	2	.	.	.	11
3.50+	.	.	.	.	.	2	14	.	.	.	16
TOTAL	0	2116	2222	3005	1210	119	16	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.4 NO. OF CASES= 8140.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	150	4	1	.	.	.	.	.	.	155
0.25-0.49	.	740	44	18	.	.	.	.	.	.	802
0.50-0.74	.	900	629	108	5	.	.	.	.	.	1642
0.75-0.99	.	71	564	270	7	.	.	.	.	.	912
1.00-1.24	.	1	320	635	27	3	.	.	.	.	986
1.25-1.49	.	.	10	542	34	1	.	.	.	.	587
1.50-1.74	.	.	.	746	110	2	.	.	.	.	858
1.75-1.99	.	.	.	79	396	2	.	.	.	.	477
2.00-2.24	.	.	.	.	366	3	.	.	.	.	369
2.25-2.49	.	.	.	.	128	13	.	.	.	.	141
2.50-2.74	.	.	.	.	33	44	.	.	.	.	77
2.75-2.99	.	.	.	.	.	21	.	.	.	.	21
3.00-3.24	.	.	.	.	.	16	.	.	.	.	16
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1862	1571	2399	1106	107	3	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.4 NO. OF CASES= 6605.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	72	.	.	1	.	.	.	.	.	73
0.25-0.49	.	487	18	7	.	.	.	.	.	.	512
0.50-0.74	.	635	490	68	5	.	.	.	.	.	1198
0.75-0.99	.	49	414	212	6	.	.	.	.	.	681
1.00-1.24	.	.	240	459	9	2	1	.	.	.	711
1.25-1.49	.	.	7	428	11	.	.	.	.	.	447
1.50-1.74	.	.	.	683	86	.	1	.	.	.	770
1.75-1.99	.	.	.	35	351	.	.	.	.	.	386
2.00-2.24	.	.	.	1	271	.	.	.	.	.	272
2.25-2.49	.	.	.	.	71	.	.	.	.	.	71
2.50-2.74	.	.	.	.	22	12	.	.	.	.	34
2.75-2.99	.	.	.	.	1	9	.	.	.	.	10
3.00-3.24	.	.	.	.	.	4	1	.	.	.	5
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	1	1	.	.	.	2
TOTAL	0	1243	1169	1894	834	29	4	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.5 NO. OF CASES= 4853.

STATION E09 41.58N 81.90W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

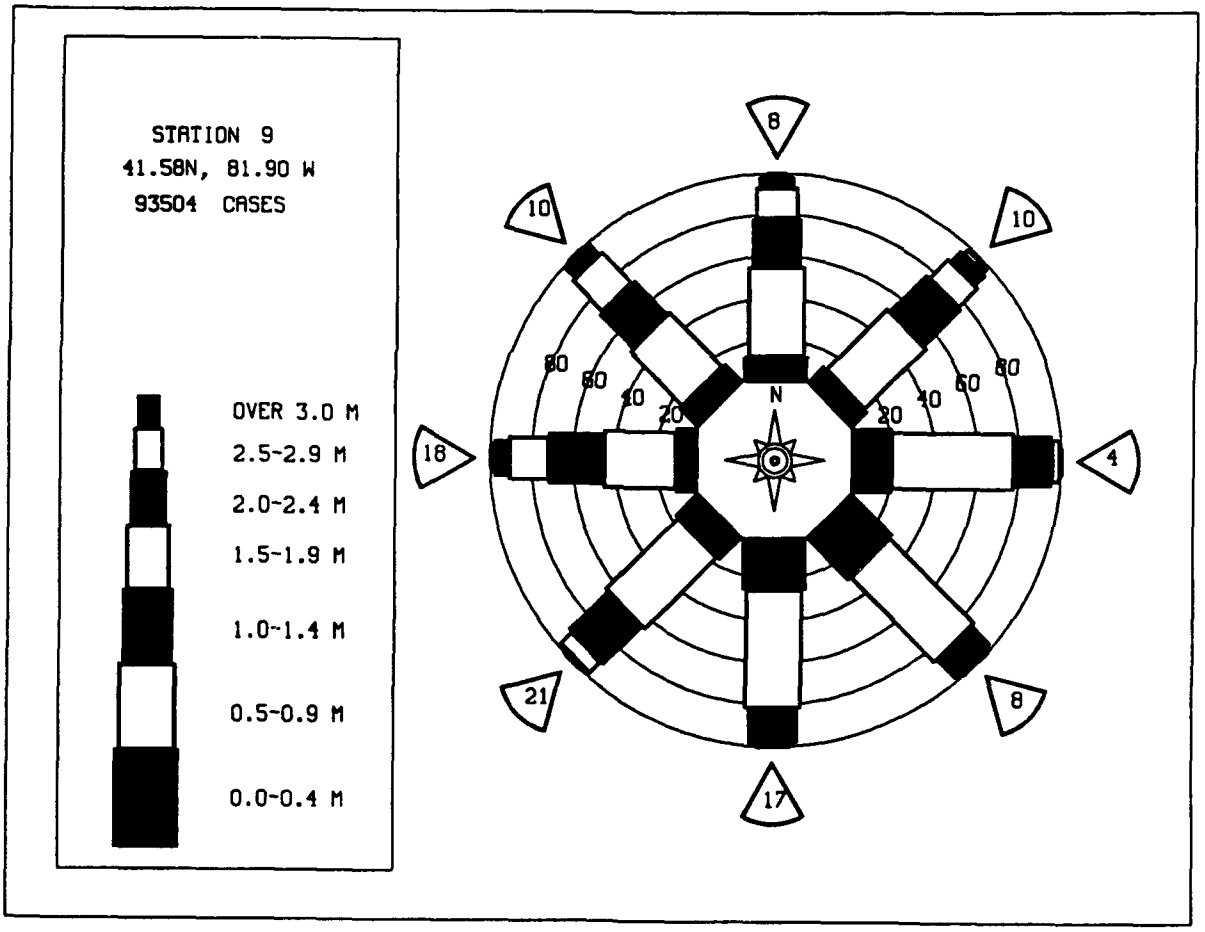
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	63	1	.	.	.	.	.	.	.	64
0.25-0.49	.	383	12	10	1	.	.	.	.	.	406
0.50-0.74	.	613	325	57	4	.	.	.	.	.	999
0.75-0.99	.	65	322	162	12	1	.	.	.	.	562
1.00-1.24	.	1	227	388	13	2	.	.	.	.	631
1.25-1.49	.	.	5	283	16	1	.	.	.	.	305
1.50-1.74	.	.	.	398	97	2	.	.	.	.	497
1.75-1.99	.	.	.	20	236	1	.	.	.	.	257
2.00-2.24	.	.	.	.	186	.	.	.	.	.	186
2.25-2.49	.	.	.	.	70	2	.	.	.	.	72
2.50-2.74	.	.	.	.	18	17	.	.	.	.	35
2.75-2.99	.	.	.	.	.	8	.	.	.	.	8
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	1	2	.	.	.	3
TOTAL	0	1125	892	1318	653	40	2	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.4 NO. OF CASES= 3782.

STATION E09 41.58N 81.90W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	264	6	1	.	.	.	.	.	.	271
0.25-0.49	.	1270	50	25	1	.	.	.	.	.	1346
0.50-0.74	.	2264	571	118	18	.	.	.	.	.	2971
0.75-0.99	.	672	719	214	25	1	.	.	.	.	1631
1.00-1.24	.	24	849	621	55	7	.	.	.	.	1556
1.25-1.49	.	.	148	471	42	3	.	.	.	.	664
1.50-1.74	.	.	30	581	126	11	.	.	.	.	748
1.75-1.99	.	.	.	57	250	10	.	.	.	.	317
2.00-2.24	.	.	.	16	225	16	1	.	.	.	258
2.25-2.49	.	.	.	2	71	19	.	.	.	.	92
2.50-2.74	.	.	.	1	25	40	1	.	.	.	67
2.75-2.99	.	.	.	.	1	20	2	.	.	.	23
3.00-3.24	.	.	.	.	.	8	7	.	.	.	15
3.25-3.49	.	.	.	.	.	2	2	.	.	.	4
3.50+	.	.	.	.	.	.	6	.	.	.	6
TOTAL	0	4494	2373	2107	839	137	19	0	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E09 (41.58N 81.90W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	1.0	1.0	1.2	1.1	1.1	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0
1957	1.0	0.9	1.2	1.1	1.1	0.8	0.9	0.8	0.8	0.9	1.1	1.1	1.1
1958	1.1	1.4	1.2	1.1	1.2	0.9	0.8	0.8	0.9	1.0	1.1	0.9	1.1
1959	1.0	1.1	1.1	1.1	0.7	0.7	0.7	0.7	0.7	0.8	1.0	0.8	0.9
1960	0.8	1.1	1.0	1.3	1.0	0.9	0.8	0.7	0.7	0.8	1.0	1.2	1.0
1961	1.0	0.9	1.1	1.2	1.0	0.8	0.8	0.7	0.7	0.9	1.1	1.1	1.0
1962	1.1	1.2	1.2	1.1	1.0	0.9	0.9	0.7	0.8	0.8	0.8	1.0	1.0
1963	0.9	0.9	1.1	1.1	0.9	0.7	0.9	0.8	0.8	0.7	1.0	0.8	1.0
1964	1.0	0.7	1.1	1.1	0.9	0.8	0.7	0.8	0.8	0.8	0.9	0.9	1.0
1965	1.1	1.0	0.9	1.1	0.8	0.9	0.7	0.8	0.8	1.0	1.1	1.0	1.0
1966	1.1	0.7	1.0	1.0	0.8	0.6	0.8	0.7	0.8	0.9	0.9	1.0	0.9
1967	1.1	1.2	1.0	1.0	1.1	0.8	0.7	0.8	0.8	0.9	1.2	1.0	1.0
1968	0.9	1.2	1.2	0.9	0.9	0.7	0.7	0.7	0.5	0.8	1.0	1.3	1.0
1969	1.1	1.0	1.1	1.0	0.8	0.8	0.7	0.7	0.7	0.9	0.8	1.1	1.0
1970	1.0	1.1	1.0	1.1	0.9	0.8	0.7	0.8	0.8	0.8	1.1	1.1	1.0
1971	1.2	1.2	1.1	1.1	0.9	0.7	0.7	0.8	0.7	0.6	0.9	1.0	1.0
1972	1.1	1.0	1.1	1.1	0.9	0.9	0.7	0.8	0.8	0.8	0.9	0.9	1.0
1973	1.1	1.0	1.0	1.1	0.9	0.7	0.8	0.7	0.7	0.8	1.0	1.1	1.0
1974	0.9	1.2	1.2	1.3	0.9	0.8	0.8	0.7	0.9	0.8	1.0	1.0	1.1
1975	1.1	1.0	1.1	1.2	0.7	0.8	0.6	0.7	0.8	0.9	0.9	1.0	1.0
1976	1.2	1.2	1.2	1.0	1.0	0.8	0.6	0.7	0.9	1.0	1.0	0.9	1.1
1977	1.0	0.9	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.1	1.0
1978	1.2	0.7	0.9	1.2	0.8	0.7	0.7	0.7	0.8	0.9	0.9	1.2	1.0
1979	1.1	1.1	1.0	1.0	0.8	0.8	0.8	0.9	0.8	1.0	1.0	1.1	1.0
1980	1.0	0.9	1.1	1.0	0.8	0.8	0.7	0.8	0.8	1.0	1.1	1.0	1.0
1981	1.0	1.1	1.2	1.2	0.9	0.9	0.8	0.8	0.9	1.0	0.9	0.9	1.1
1982	1.3	1.0	1.1	1.4	0.6	0.8	0.7	0.8	0.7	0.8	1.1	1.0	1.0
1983	1.0	0.8	1.0	1.3	1.0	0.6	0.8	0.7	0.9	1.0	1.0	1.2	1.0
1984	0.9	1.0	1.3	1.0	1.0	0.8	0.7	0.6	0.8	0.6	0.9	1.0	1.0
1985	1.0	1.0	1.2	1.0	0.9	0.9	0.7	0.8	0.7	0.8	1.0	1.1	1.0
1986	1.0	0.9	1.0	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.9
1987	0.8	0.8	1.0	1.0	0.7	0.7	0.7	0.7	0.6	0.7	0.9	0.9	0.9
MEAN	1.0	1.0	1.1	1.1	0.9	0.8	0.8	0.7	0.8	0.9	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E09 (41.58N 81.90W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.3	3.1	4.1	3.1	2.7	2.3	2.3	2.4	2.1	2.3	2.5	2.5
1957	2.7	2.7	2.8	3.9	3.3	2.9	2.7	2.2	2.0	2.7	2.6	2.6
1958	2.5	2.8	3.1	2.9	2.9	2.4	2.7	1.8	2.2	2.5	2.9	2.5
1959	2.4	2.8	3.2	3.3	1.7	2.2	1.6	1.8	1.9	2.2	2.3	2.3
1960	2.2	2.5	2.9	2.9	2.9	2.8	2.6	1.6	2.0	2.4	2.9	3.4
1961	2.3	2.6	2.8	2.9	2.5	2.6	2.3	2.1	1.9	2.2	2.3	2.7
1962	2.4	4.0	4.0	2.9	2.4	2.7	2.5	2.2	3.1	2.1	4.3	2.7
1963	3.0	2.6	3.0	3.0	3.4	2.2	2.5	2.9	2.8	2.4	2.4	2.0
1964	3.5	2.3	3.3	2.6	3.2	2.7	2.6	2.0	2.4	2.5	2.4	2.8
1965	3.3	2.3	2.6	2.8	2.3	2.2	2.1	2.1	2.2	2.9	2.9	2.5
1966	3.3	2.4	3.0	2.7	2.9	1.7	2.9	2.4	3.0	2.5	3.2	2.9
1967	2.7	2.5	2.8	3.3	3.0	2.9	2.1	2.7	2.9	2.8	3.3	2.5
1968	2.7	2.3	3.5	2.6	2.4	2.0	1.8	2.0	1.6	2.6	2.3	2.9
1969	2.7	2.8	2.5	4.1	2.1	1.9	2.1	2.7	1.7	2.0	2.4	3.1
1970	2.5	2.5	3.3	3.6	2.4	2.3	2.3	2.4	2.2	2.0	2.8	3.0
1971	3.4	2.7	3.0	3.4	2.3	1.8	2.3	2.4	2.4	1.8	2.6	3.1
1972	3.4	3.0	2.7	3.4	3.3	2.7	2.0	3.2	2.4	2.1	3.4	3.0
1973	2.3	3.1	3.5	3.4	2.2	1.5	2.3	2.6	1.9	2.2	3.0	2.6
1974	3.1	3.4	3.1	3.8	2.7	2.9	2.9	1.7	2.9	2.1	2.6	4.0
1975	3.4	2.9	2.6	3.8	2.1	2.0	1.7	2.4	3.0	3.9	2.9	2.5
1976	2.9	2.6	3.5	3.4	2.7	2.4	2.1	2.1	2.1	2.8	2.2	2.1
1977	2.3	2.2	2.5	2.6	2.4	2.3	3.1	1.6	2.1	2.3	2.6	3.4
1978	3.7	2.9	2.8	3.5	2.4	1.9	1.7	2.2	2.1	2.2	2.8	3.0
1979	2.9	3.7	2.8	4.2	3.2	2.4	2.2	2.7	2.8	2.5	2.7	2.9
1980	3.8	2.8	3.0	3.2	2.5	2.4	2.4	1.8	2.2	3.4	2.6	3.0
1981	2.9	2.5	2.7	3.0	2.5	2.6	2.6	2.2	2.2	2.8	2.4	2.3
1982	3.3	2.9	3.7	4.5	1.3	2.8	2.0	2.1	2.2	2.6	2.5	2.9
1983	2.2	2.0	2.2	3.7	2.7	1.8	2.4	2.4	2.3	2.6	2.6	2.9
1984	2.1	3.7	4.0	3.2	2.5	2.1	2.1	2.2	1.7	1.8	2.4	2.3
1985	2.4	2.8	3.4	2.8	2.9	2.3	2.1	2.6	2.0	2.2	3.0	3.2
1986	3.0	2.9	3.5	2.8	2.3	2.8	1.5	2.3	2.0	2.0	2.5	1.9
1987	2.5	2.9	3.2	3.8	3.1	1.7	1.7	1.5	1.4	1.9	2.1	2.7

32 YR. STATISTICS FOR WIS STATION E09

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	4.5
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	7.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		82040612

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	131	2	.	.	.	.	.	.	.	133
0.25-0.49	.	543	37	14	1	.	.	.	.	.	595
0.50-0.74	.	824	466	130	17	.	.	.	.	.	1437
0.75-0.99	.	97	433	274	10	3	.	.	.	.	817
1.00-1.24	.	.	265	478	64	4	.	.	.	.	811
1.25-1.49	.	.	3	257	54	.	1	.	.	.	315
1.50-1.74	.	.	1	235	279	4	.	.	.	.	519
1.75-1.99	.	.	.	4	247	2	.	.	.	.	253
2.00-2.24	.	.	.	2	205	16	.	.	.	.	223
2.25-2.49	.	.	.	.	24	48	1	.	.	.	73
2.50-2.74	.	.	.	.	.	48	4	.	.	.	52
2.75-2.99	.	.	.	.	.	11	1	.	.	.	12
3.00-3.24	.	.	.	.	.	3	5	.	.	.	8
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	2	1	.	.	3
TOTAL	0	1595	1207	1394	901	139	15	1	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.4 NO. OF CASES= 4923.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	65	3	.	.	.	.	.	.	.	68
0.25-0.49	.	367	10	9	.	.	.	.	.	.	386
0.50-0.74	.	784	392	131	16	.	.	.	.	.	1323
0.75-0.99	.	96	404	209	27	5	.	.	.	.	741
1.00-1.24	.	.	284	366	82	.	1	.	.	.	733
1.25-1.49	.	.	7	193	55	1	.	.	.	.	256
1.50-1.74	.	.	.	144	147	13	.	.	.	.	304
1.75-1.99	.	.	.	1	146	12	.	.	.	.	159
2.00-2.24	.	.	.	2	95	37	.	.	.	.	134
2.25-2.49	.	.	.	.	7	28	1	.	.	.	36
2.50-2.74	.	.	.	.	1	28	2	.	.	.	31
2.75-2.99	.	.	.	.	.	5	5	.	.	.	10
3.00-3.24	.	.	.	.	.	.	10	.	.	.	10
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1312	1100	1055	576	129	23	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.3 NO. OF CASES= 3940.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	162	4	1	.	.	.	.	.	.	167
0.25-0.49	.	572	44	24	.	.	.	.	.	.	640
0.50-0.74	.	762	481	181	27	2	.	.	.	.	1453
0.75-0.99	.	97	482	294	86	6	.	.	.	.	965
1.00-1.24	.	.	361	506	198	5	.	.	.	.	1070
1.25-1.49	.	.	10	326	101	13	.	.	.	.	450
1.50-1.74	.	.	.	266	242	39	1	.	.	.	548
1.75-1.99	.	.	.	11	237	65	.	.	.	.	313
2.00-2.24	.	.	.	1	219	149	5	.	.	.	374
2.25-2.49	.	.	.	.	27	139	6	.	.	.	172
2.50-2.74	.	.	.	.	2	124	22	.	.	.	148
2.75-2.99	.	.	.	.	.	17	34	.	.	.	51
3.00-3.24	.	.	.	.	.	3	39	.	.	.	42
3.25-3.49	.	.	.	.	.	.	14	.	.	.	14
3.50+	.	.	.	.	.	.	17	7	.	.	24
TOTAL	0	1593	1382	1610	1139	562	138	7	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.7 NO. OF CASES= 6033.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	78	3	2	.	.	.	.	.	.	83
0.25-0.49	.	368	29	21	1	.	.	.	.	.	419
0.50-0.74	.	589	129	78	38	.	.	.	.	.	834
0.75-0.99	.	131	131	57	28	5	.	.	.	.	352
1.00-1.24	.	12	103	84	39	11	.	.	.	.	249
1.25-1.49	.	.	13	35	9	6	.	.	.	.	63
1.50-1.74	.	.	2	23	18	7	.	.	.	.	50
1.75-1.99	.	.	.	2	10	3	1	.	.	.	16
2.00-2.24	.	.	.	.	9	1	.	.	.	.	10
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	2	.	.	.	.	2
2.75-2.99	.	.	.	.	.	1	1	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1178	410	302	152	36	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.8 NO. OF CASES= 1960.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	81	4	1	.	.	.	.	.	.	86
0.25-0.49	.	439	39	14	.	.	.	.	.	.	492
0.50-0.74	.	635	104	114	48	3	.	.	.	.	904
0.75-0.99	.	118	43	47	36	4	.	.	.	.	248
1.00-1.24	.	17	36	25	32	10	1	.	.	.	121
1.25-1.49	.	.	10	2	12	3	1	.	.	.	28
1.50-1.74	.	.	1	.	7	7	.	.	.	.	15
1.75-1.99	.	.	.	.	3	1	.	.	.	.	4
2.00-2.24	.	.	.	1	.	1	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	1	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1290	237	204	138	29	3	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.6 NO. OF CASES= 1789.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	114	6	2	.	.	.	.	.	.	122
0.25-0.49	.	572	48	21	2	.	.	.	.	.	643
0.50-0.74	.	872	62	85	34	1	.	.	.	.	1054
0.75-0.99	.	167	34	12	24	3	.	.	.	.	240
1.00-1.24	.	23	95	5	5	13	.	.	.	.	141
1.25-1.49	.	.	17	.	1	1	1	.	.	.	20
1.50-1.74	.	.	1	8	.	1	.	.	.	.	10
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1748	263	135	66	19	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 2096.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	251	5	3	.	.	.	.	.	.	259
0.25-0.49	.	880	72	34	4	.	.	.	.	.	990
0.50-0.74	.	1360	45	54	27	2	.	.	.	.	1488
0.75-0.99	.	170	134	2	4	2	1	.	.	.	313
1.00-1.24	.	.	218	3	3	1	.	.	.	.	225
1.25-1.49	.	.	45	.	.	.	.	.	.	.	45
1.50-1.74	.	.	.	22	.	.	.	.	.	.	22
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2661	519	121	38	5	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 3136.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	336	17	4	.	.	.	.	.	.	357
0.25-0.49	.	1137	51	34	.	.	.	.	.	.	1222
0.50-0.74	.	1902	22	22	17	.	.	.	.	.	1963
0.75-0.99	.	395	177	2	2	2	.	.	.	.	578
1.00-1.24	.	3	490	.	.	1	.	.	.	.	494
1.25-1.49	.	.	116	4	.	2	.	.	.	.	122
1.50-1.74	.	.	3	83	.	.	.	.	.	.	86
1.75-1.99	.	.	.	11	.	.	.	.	.	.	11
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3773	876	165	20	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 4534.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	414	16	7	1	.	.	.	.	.	438
0.25-0.49	.	2136	49	37	2	.	.	.	.	.	2224
0.50-0.74	.	3897	16	25	7	1	.	.	.	.	3946
0.75-0.99	.	2313	2	1	1	1	1	.	.	.	2319
1.00-1.24	.	3	1702	.	.	.	.	.	.	.	1705
1.25-1.49	.	.	336	.	.	.	.	.	.	.	336
1.50-1.74	.	.	45	117	.	.	.	.	.	.	162
1.75-1.99	.	.	.	19	.	.	.	.	.	.	19
2.00-2.24	.	.	.	6	.	.	.	.	.	.	6
2.25-2.49	.	.	.	1	.	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8763	2166	213	11	2	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.2 NO. OF CASES= 10440.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	322	4	.	.	.	.	.	.	.	326
0.25-0.49	.	1753	25	27	1	.	.	.	.	.	1806
0.50-0.74	.	3344	37	31	6	3	.	.	.	.	3421
0.75-0.99	.	1729	104	.	.	1	.	.	.	.	1834
1.00-1.24	.	45	1371	1	.	1	.	.	.	.	1418
1.25-1.49	.	.	322	4	.	.	.	.	.	.	326
1.50-1.74	.	.	39	132	.	.	.	.	.	.	171
1.75-1.99	.	.	.	43	.	.	.	.	.	.	43
2.00-2.24	.	.	.	17	2	.	.	.	.	.	19
2.25-2.49	.	.	.	1	1	.	.	.	.	.	2
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7193	1902	256	13	5	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 8771.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	308	9	.	.	.	.	.	.	.	317
0.25-0.49	.	1353	52	13	1	.	.	.	.	.	1419
0.50-0.74	.	3471	243	52	6	2	.	.	.	.	3774
0.75-0.99	.	952	462	155	1	.	.	.	.	.	1570
1.00-1.24	.	105	1449	133	17	.	.	.	.	.	1704
1.25-1.49	.	.	596	26	13	.	.	.	.	.	635
1.50-1.74	.	.	99	379	10	.	.	.	.	.	488
1.75-1.99	.	.	.	88	1	1	.	.	.	.	90
2.00-2.24	.	.	.	84	.	.	.	.	.	.	84
2.25-2.49	.	.	.	17	10	.	.	.	.	.	27
2.50-2.74	.	.	.	.	14	.	.	.	.	.	14
2.75-2.99	.	.	.	.	4	.	.	.	.	.	4
3.00-3.24	.	.	.	.	5	.	.	.	.	.	5
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6189	2910	947	82	3	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 9488.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	220	5	2	.	.	.	.	.	.	227
0.25-0.49	.	931	75	5	2	.	.	.	.	.	1013
0.50-0.74	.	2091	1087	63	4	.	.	.	.	.	3245
0.75-0.99	.	744	1069	420	.	.	.	.	.	.	2233
1.00-1.24	.	1	1063	1439	4	1	.	.	.	.	2508
1.25-1.49	.	.	414	711	62	.	.	.	.	.	1187
1.50-1.74	.	.	183	557	326	.	.	.	.	.	1066
1.75-1.99	.	.	.	121	271	1	.	.	.	.	393
2.00-2.24	.	.	.	82	259	9	.	.	.	.	350
2.25-2.49	.	.	.	10	81	48	.	.	.	.	139
2.50-2.74	.	.	.	2	25	73	.	.	.	.	100
2.75-2.99	.	.	.	.	7	16	.	.	.	.	23
3.00-3.24	.	.	.	.	4	19	2	.	.	.	25
3.25-3.49	.	.	.	.	.	1	6	.	.	.	7
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	3987	3896	3412	1045	168	13	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 11724.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	177	3	.	1	.	.	.	.	.	181
0.25-0.49	.	850	36	9	.	.	.	.	.	.	895
0.50-0.74	.	1168	770	100	1	.	.	.	.	.	2039
0.75-0.99	.	140	775	444	4	1	.	.	.	.	1364
1.00-1.24	.	.	557	1013	26	.	.	.	.	.	1596
1.25-1.49	.	.	58	671	77	.	.	.	.	.	806
1.50-1.74	.	.	4	710	419	.	.	.	.	.	1133
1.75-1.99	.	.	.	72	514	6	.	.	.	.	592
2.00-2.24	.	.	.	6	585	7	.	.	.	.	598
2.25-2.49	.	.	.	1	160	65	.	.	.	.	226
2.50-2.74	.	.	.	.	17	130	.	.	.	.	147
2.75-2.99	.	.	.	.	2	54	.	.	.	.	56
3.00-3.24	.	.	.	.	.	28	4	.	.	.	32
3.25-3.49	.	.	.	.	.	1	11	.	.	.	12
3.50+	.	.	.	.	.	.	16	3	.	.	19
TOTAL	0	2335	2203	3026	1806	292	31	3	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.5 NO. OF CASES= 9081.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	159	5	1	.	.	.	.	.	.	165
0.25-0.49	.	822	39	11	.	.	.	.	.	.	872
0.50-0.74	.	895	730	142	4	.	.	.	.	.	1771
0.75-0.99	.	72	447	445	2	2	.	.	.	.	968
1.00-1.24	.	1	286	711	51	.	.	.	.	.	1049
1.25-1.49	.	.	13	388	115	1	.	.	.	.	517
1.50-1.74	.	.	.	434	382	6	.	.	.	.	822
1.75-1.99	.	.	.	18	464	7	.	.	.	.	489
2.00-2.24	.	.	.	1	448	20	.	.	.	.	469
2.25-2.49	.	.	.	.	112	53	1	.	.	.	166
2.50-2.74	.	.	.	.	7	111	1	.	.	.	119
2.75-2.99	.	.	.	.	.	19	1	.	.	.	20
3.00-3.24	.	.	.	.	.	16	5	.	.	.	21
3.25-3.49	.	.	.	.	.	2	4	.	.	.	6
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1949	1520	2151	1585	237	15	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.6 NO. OF CASES= 6986.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	88	2	1	1	.	.	.	.	.	92
0.25-0.49	.	462	14	6	.	.	.	.	.	.	482
0.50-0.74	.	567	529	82	6	.	.	.	.	.	1184
0.75-0.99	.	38	316	347	2	.	.	.	.	.	703
1.00-1.24	.	.	181	503	29	1	.	.	.	.	714
1.25-1.49	.	.	4	264	51	.	.	.	.	.	319
1.50-1.74	.	.	.	254	348	1	.	.	.	.	603
1.75-1.99	.	.	.	7	368	1	.	.	.	.	376
2.00-2.24	.	.	.	.	423	.	.	.	.	.	423
2.25-2.49	.	.	.	.	62	47	.	.	.	.	109
2.50-2.74	.	.	.	.	.	65	.	.	.	.	65
2.75-2.99	.	.	.	.	.	13	1	.	.	.	14
3.00-3.24	.	.	.	.	.	8	2	.	.	.	10
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1155	1046	1464	1290	136	8	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.7 NO. OF CASES= 4782.

STATION E10 41.58N 81.72W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

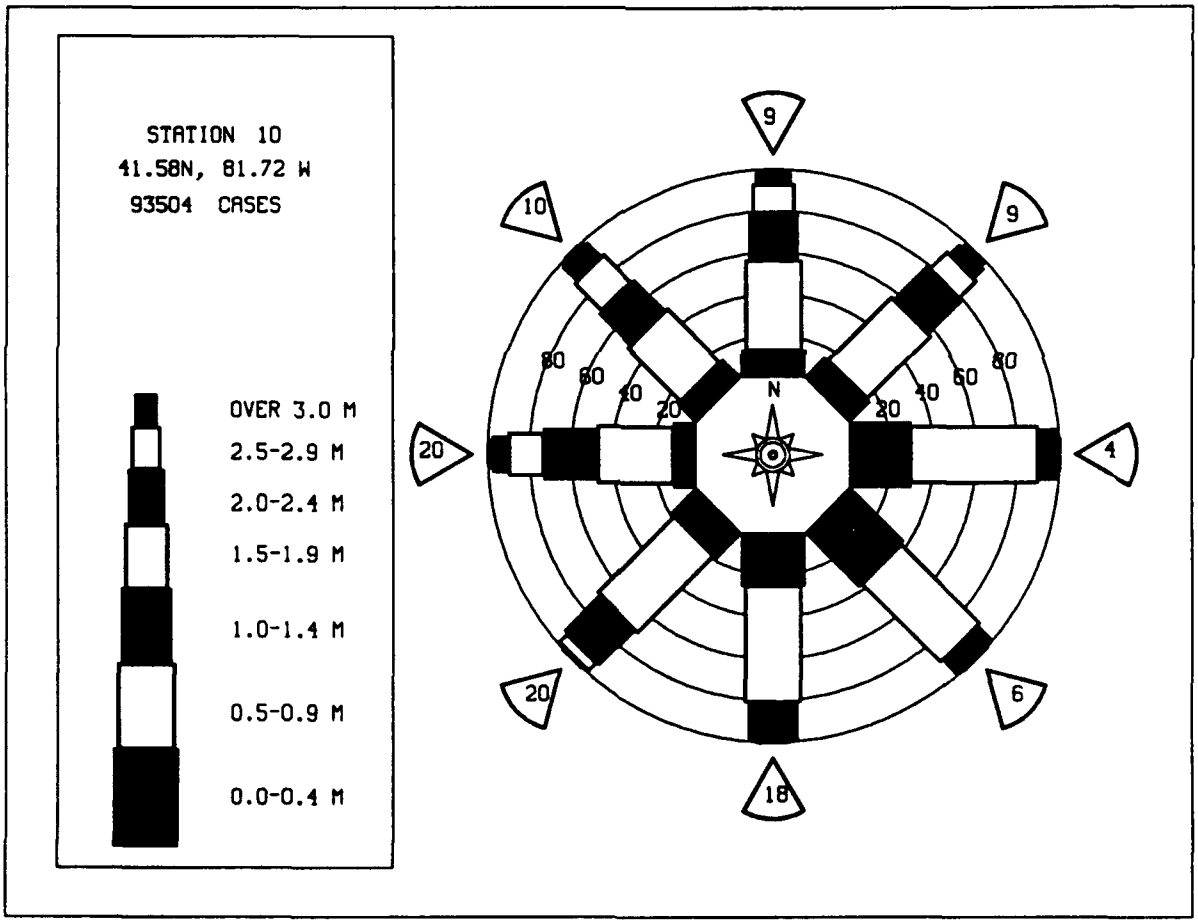
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	68	2	1	.	.	.	.	.	.	71
0.25-0.49	.	368	8	7	.	.	.	.	.	.	383
0.50-0.74	.	543	330	59	4	1	.	.	.	.	937
0.75-0.99	.	50	303	227	5	.	.	.	.	.	585
1.00-1.24	.	.	177	474	33	3	.	.	.	.	687
1.25-1.49	.	.	2	219	42	.	.	.	.	.	263
1.50-1.74	.	.	.	220	244	2	.	.	.	.	466
1.75-1.99	.	.	.	6	295	.	.	.	.	.	301
2.00-2.24	.	.	.	1	225	.	.	.	.	.	226
2.25-2.49	.	.	.	.	56	36	.	.	.	.	92
2.50-2.74	.	.	.	.	3	42	.	.	.	.	45
2.75-2.99	.	.	.	.	.	6	.	.	.	.	6
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	4	.	.	.	4
TOTAL	0	1029	822	1214	907	94	5	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.6 NO. OF CASES= 3821.

STATION E10 41.58N 81.72W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	298	9	2	.	.	.	.	.	.	309
0.25-0.49	.	1356	63	29	1	.	.	.	.	.	1449
0.50-0.74	.	2371	545	135	26	1	.	.	.	.	3078
0.75-0.99	.	731	532	294	23	3	.	.	.	.	1583
1.00-1.24	.	21	864	574	58	5	.	.	.	.	1522
1.25-1.49	.	.	197	310	59	2	.	.	.	.	568
1.50-1.74	.	.	38	359	242	8	.	.	.	.	647
1.75-1.99	.	.	.	41	256	10	.	.	.	.	307
2.00-2.24	.	.	.	21	247	24	.	.	.	.	292
2.25-2.49	.	.	.	3	54	46	1	.	.	.	104
2.50-2.74	.	.	.	.	7	62	2	.	.	.	71
2.75-2.99	.	.	.	.	1	14	4	.	.	.	19
3.00-3.24	.	.	.	.	.	8	6	.	.	.	14
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	5	1	.	.	6
TOTAL	0	4777	2248	1768	974	183	22	1	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E10 (41.58N 81.72W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	1.0	1.0	1.2	1.1	1.0	0.7	0.8	0.8	0.8	0.8	0.9	1.0	1.0
1957	1.0	0.9	1.2	1.1	1.0	0.8	0.9	0.8	0.8	0.9	1.1	1.1	1.1
1958	1.1	1.4	1.1	1.1	1.1	0.8	0.8	0.7	0.8	0.9	1.0	0.9	1.1
1959	1.0	1.1	1.1	1.0	0.6	0.7	0.7	0.7	0.7	0.8	1.0	0.8	0.9
1960	0.8	1.1	1.0	1.3	1.0	0.8	0.8	0.7	0.7	0.8	1.0	1.1	1.0
1961	1.0	0.9	1.1	1.2	1.0	0.8	0.8	0.7	0.7	0.9	1.1	1.1	1.0
1962	1.1	1.2	1.2	1.1	0.9	0.8	0.8	0.7	0.8	0.8	0.7	0.9	1.0
1963	0.8	0.9	1.1	1.1	0.9	0.7	0.8	0.8	0.7	0.7	1.0	0.8	1.0
1964	1.0	0.7	1.1	1.0	0.9	0.8	0.7	0.8	0.8	0.8	0.9	0.9	0.9
1965	1.1	1.0	0.9	1.1	0.8	0.8	0.7	0.7	0.8	1.0	1.1	1.0	1.0
1966	1.1	0.7	1.0	0.9	0.8	0.6	0.8	0.7	0.7	0.9	0.9	1.0	0.9
1967	1.1	1.1	0.9	1.0	1.0	0.8	0.7	0.8	0.8	0.9	1.2	0.9	1.0
1968	0.9	1.2	1.1	0.9	0.9	0.7	0.7	0.7	0.5	0.8	1.0	1.3	1.0
1969	1.1	1.0	1.1	1.0	0.8	0.8	0.6	0.7	0.7	0.9	0.8	1.1	1.0
1970	0.9	1.0	0.9	1.0	0.8	0.8	0.7	0.8	0.8	0.8	1.1	1.1	1.0
1971	1.2	1.2	1.1	1.1	0.8	0.7	0.7	0.7	0.7	0.6	0.9	1.0	1.0
1972	1.1	1.0	1.1	1.1	0.9	0.9	0.7	0.7	0.8	0.8	0.8	0.9	1.0
1973	1.1	1.0	1.0	1.1	0.9	0.7	0.7	0.7	0.7	0.8	1.0	1.0	1.0
1974	0.9	1.1	1.2	1.2	0.9	0.8	0.8	0.7	0.8	0.8	0.9	1.0	1.0
1975	1.1	1.0	1.1	1.2	0.7	0.8	0.6	0.7	0.8	0.9	0.9	1.0	1.0
1976	1.2	1.2	1.2	1.0	0.9	0.8	0.8	0.7	0.8	1.0	1.0	0.9	1.0
1977	1.0	0.9	1.0	0.9	0.7	0.7	0.8	0.7	0.8	0.9	1.0	1.1	1.0
1978	1.2	0.7	0.9	1.1	0.7	0.7	0.7	0.7	0.8	0.8	0.9	1.1	0.9
1979	1.1	1.1	1.0	1.0	0.7	0.8	0.8	0.9	0.8	1.0	1.0	1.1	1.0
1980	1.0	0.9	1.1	1.0	0.8	0.8	0.7	0.8	0.8	1.0	1.1	1.0	1.0
1981	1.0	1.0	1.2	1.2	0.9	0.9	0.8	0.8	0.9	1.0	0.9	0.9	1.0
1982	1.3	1.0	1.1	1.4	0.6	0.8	0.7	0.8	0.7	0.8	1.0	1.0	1.0
1983	1.0	0.7	1.0	1.3	1.0	0.6	0.8	0.7	0.9	0.9	1.0	1.1	1.0
1984	0.9	0.9	1.2	1.0	1.0	0.8	0.7	0.6	0.7	0.6	0.9	1.0	0.9
1985	1.0	1.0	1.1	1.0	0.9	0.9	0.7	0.7	0.7	0.7	1.0	1.1	1.0
1986	1.0	0.8	1.0	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.9
1987	0.8	0.8	0.9	1.0	0.7	0.7	0.6	0.7	0.5	0.7	0.9	0.9	0.8
MEAN	1.0	1.0	1.1	1.1	0.9	0.8	0.7	0.7	0.7	0.8	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E10 (41.58N 81.72W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.3	3.2	4.1	3.0	2.8	2.4	2.3	2.3	2.1	2.3	2.5	2.6
1957	2.6	2.6	2.8	3.7	3.1	3.0	2.5	2.1	2.0	2.5	2.7	2.6
1958	2.6	2.9	2.9	3.0	2.8	2.4	2.7	1.8	2.2	2.5	3.1	2.6
1959	2.5	2.9	3.0	3.4	1.8	2.2	1.6	1.8	2.0	2.2	2.4	2.3
1960	2.3	2.6	3.0	2.9	2.8	2.9	2.4	1.5	1.9	2.6	3.0	3.1
1961	2.4	2.5	2.9	3.0	2.6	2.5	2.4	2.0	2.0	2.3	2.3	2.7
1962	2.5	3.7	3.8	3.0	2.2	2.5	2.4	2.1	2.9	2.3	4.0	2.7
1963	2.9	2.6	2.9	3.1	3.5	2.1	2.5	3.0	2.7	2.4	2.6	2.1
1964	3.3	2.1	3.1	2.7	3.2	2.6	2.5	2.1	2.4	2.5	2.4	2.7
1965	3.1	2.4	2.6	2.9	2.3	2.2	2.2	2.2	2.2	2.9	3.0	2.5
1966	3.2	2.3	3.1	2.5	2.7	1.7	2.8	2.4	2.8	2.4	3.2	3.0
1967	2.8	2.4	2.8	3.4	2.8	2.8	2.1	2.6	2.8	2.7	3.4	2.4
1968	2.7	2.4	3.4	2.6	2.2	2.2	1.8	2.0	1.6	2.6	2.4	3.0
1969	2.8	2.8	2.6	3.8	2.2	2.0	2.0	2.6	1.7	2.2	2.4	2.9
1970	2.4	2.5	3.1	3.7	2.5	2.3	2.3	2.5	2.2	2.1	2.8	3.1
1971	3.5	2.6	2.9	3.2	2.4	1.7	2.3	2.3	2.3	1.8	2.8	3.0
1972	3.5	3.1	2.8	3.3	3.1	2.7	2.0	3.1	2.4	2.3	3.2	3.0
1973	2.4	2.9	3.4	3.2	2.2	1.6	2.3	2.5	1.9	2.3	3.1	2.5
1974	3.2	3.2	3.0	3.8	2.6	2.8	2.7	1.7	2.7	2.2	2.7	3.7
1975	3.6	3.0	2.5	3.9	2.0	2.0	1.6	2.3	2.9	3.8	2.8	2.6
1976	3.0	2.5	3.5	3.0	2.5	2.4	2.0	2.0	2.3	2.9	2.3	2.2
1977	2.4	2.1	2.5	2.7	2.5	2.1	3.1	1.7	2.2	2.4	2.8	3.3
1978	3.7	2.6	2.7	3.3	2.4	1.9	1.8	2.0	1.9	2.3	2.8	3.0
1979	3.0	3.5	2.9	4.1	3.0	2.4	2.2	2.6	2.7	2.5	2.7	3.0
1980	3.9	2.8	3.2	2.9	2.6	2.4	2.3	1.9	2.3	3.4	2.5	3.0
1981	3.0	2.6	2.8	3.0	2.5	2.6	2.6	2.0	2.3	2.8	2.4	2.4
1982	3.3	2.7	3.7	4.2	1.2	2.7	2.1	2.2	2.2	2.4	2.6	2.6
1983	2.3	2.1	2.3	3.5	2.7	1.7	2.2	2.4	2.4	2.5	2.7	3.1
1984	2.3	3.5	3.8	3.1	2.4	2.2	2.2	2.2	1.8	1.7	2.4	2.4
1985	2.3	2.7	3.2	2.7	2.7	2.4	2.2	2.5	1.6	2.1	2.8	3.1
1986	3.1	2.7	3.3	2.7	2.3	2.7	1.6	2.2	1.9	2.2	2.3	2.0
1987	2.6	2.9	3.1	3.6	2.9	1.6	1.7	1.5	1.4	1.7	2.1	2.5

32 YR. STATISTICS FOR WIS STATION E10

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	4.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	6.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		82040612

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	255	3	1	.	.	.	.	.	.	259
0.25-0.49	.	698	36	22	.	.	.	.	.	.	756
0.50-0.74	.	759	422	118	13	.	.	.	.	.	1312
0.75-0.99	.	77	352	218	13	1	.	.	.	.	661
1.00-1.24	.	.	180	356	56	4	.	.	.	.	596
1.25-1.49	.	.	6	205	47	2	2	.	.	.	262
1.50-1.74	.	.	.	234	194	1	.	.	.	.	429
1.75-1.99	.	.	.	5	199	1	.	.	.	.	205
2.00-2.24	.	.	.	1	163	8	.	.	.	.	172
2.25-2.49	.	.	.	.	37	23	.	.	.	.	60
2.50-2.74	.	.	.	.	2	45	1	.	.	.	48
2.75-2.99	.	.	.	.	.	17	1	.	.	.	18
3.00-3.24	.	.	.	.	.	2	2	.	.	.	4
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1789	999	1160	724	104	12	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.3 NO. OF CASES= 4492.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	122	6	4	.	.	.	.	.	.	132
0.25-0.49	.	466	23	9	.	.	.	.	.	.	498
0.50-0.74	.	707	310	134	21	.	.	.	.	.	1172
0.75-0.99	.	85	282	186	26	2	.	.	.	.	581
1.00-1.24	.	2	217	293	84	10	.	.	.	.	606
1.25-1.49	.	.	8	155	43	7	.	.	.	.	213
1.50-1.74	.	.	.	126	143	9	1	.	.	.	279
1.75-1.99	.	.	.	4	111	7	.	.	.	.	122
2.00-2.24	.	.	.	.	81	11	.	.	.	.	92
2.25-2.49	.	.	.	.	13	20	.	.	.	.	33
2.50-2.74	.	.	.	.	.	31	.	.	.	.	31
2.75-2.99	.	.	.	.	.	8	1	.	.	.	9
3.00-3.24	.	.	.	.	.	4	6	.	.	.	10
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1382	846	911	522	109	10	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.3 NO. OF CASES= 3550.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	296	7	4	.	.	.	.	.	.	307
0.25-0.49	.	728	70	31	2	.	.	.	.	.	831
0.50-0.74	.	917	328	209	31	.	.	.	.	.	1485
0.75-0.99	.	126	379	241	74	2	.	.	.	.	822
1.00-1.24	.	.	365	360	194	17	.	.	.	.	936
1.25-1.49	.	.	21	269	103	9	.	.	.	.	402
1.50-1.74	.	.	.	227	238	32	2	.	.	.	499
1.75-1.99	.	.	.	18	203	31	1	.	.	.	253
2.00-2.24	.	.	.	4	229	80	2	.	.	.	315
2.25-2.49	.	.	.	.	35	124	3	.	.	.	162
2.50-2.74	.	.	.	.	6	126	1	.	.	.	133
2.75-2.99	.	.	.	.	.	4	6	.	.	.	50
3.00-3.24	.	.	.	.	.	7	35	.	.	.	42
3.25-3.49	.	.	.	.	.	.	18	.	.	.	18
3.50+	.	.	.	.	.	.	19	2	.	.	21
TOTAL	0	2067	1170	1363	1115	472	87	2	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.5 NO. OF CASES= 5885.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	151	5	3	.	.	.	.	.	.	159
0.25-0.49	.	417	43	22	1	.	.	.	.	.	483
0.50-0.74	.	514	120	87	29	.	.	.	.	.	750
0.75-0.99	.	97	113	82	50	1	.	.	.	.	343
1.00-1.24	.	13	70	99	56	12	.	.	.	.	250
1.25-1.49	.	.	7	38	19	16	1	.	.	.	81
1.50-1.74	.	.	.	28	29	9	.	.	.	.	66
1.75-1.99	.	.	.	.	11	1	.	.	.	.	12
2.00-2.24	.	.	.	.	8	4	.	.	.	.	12
2.25-2.49	.	.	.	.	3	4	.	.	.	.	7
2.50-2.74	.	.	.	.	.	10	.	.	.	.	10
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1192	358	359	206	58	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.9 NO. OF CASES= 2050.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	117	7	1	.	.	.	.	.	.	125
0.25-0.49	.	527	54	24	1	.	.	.	.	.	606
0.50-0.74	.	547	86	142	35	1	.	.	.	.	811
0.75-0.99	.	101	32	62	54	2	.	.	.	.	251
1.00-1.24	.	21	25	22	51	10	.	.	.	.	129
1.25-1.49	.	.	8	1	10	6	.	.	.	.	25
1.50-1.74	.	.	.	1	7	11	.	.	.	.	19
1.75-1.99	.	.	.	1	2	2	1	.	.	.	6
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1313	212	254	160	32	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 1855.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	159	5	1	.	.	.	.	.	.	165
0.25-0.49	.	521	49	25	1	.	.	.	.	.	596
0.50-0.74	.	710	42	112	36	.	.	.	.	.	900
0.75-0.99	.	145	41	18	25	.	.	.	.	.	229
1.00-1.24	.	21	71	5	16	9	.	.	.	.	122
1.25-1.49	.	.	16	.	2	4	.	.	.	.	22
1.50-1.74	.	.	1	7	.	1	1	.	.	.	10
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1556	225	169	80	14	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 1921.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	357	12	3	.	.	.	.	.	.	372
0.25-0.49	.	866	81	51	2	.	.	.	.	.	1000
0.50-0.74	.	1083	32	79	37	2	.	.	.	.	1233
0.75-0.99	.	181	132	3	11	2	.	.	.	.	329
1.00-1.24	.	1	179	1	2	4	1	.	.	.	188
1.25-1.49	.	.	37	5	.	3	.	.	.	.	45
1.50-1.74	.	.	2	14	.	.	.	.	.	.	16
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2488	475	157	52	11	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 2986.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	356	24	3	.	.	.	.	.	.	383
0.25-0.49	.	999	60	35	1	.	.	.	.	.	1095
0.50-0.74	.	1464	26	47	16	.	.	.	.	.	1553
0.75-0.99	.	358	124	3	3	3	.	.	.	.	491
1.00-1.24	.	6	367	.	2	1	.	.	.	.	376
1.25-1.49	.	.	72	7	1	.	.	.	.	.	80
1.50-1.74	.	.	4	47	.	.	1	.	.	.	52
1.75-1.99	.	.	.	7	.	.	.	.	.	.	7
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3183	677	152	23	4	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 3786.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	490	26	5	1	.	.	.	.	.	522
0.25-0.49	.	1548	73	45	1	.	.	.	.	.	1667
0.50-0.74	.	2299	19	49	9	1	.	.	.	.	2377
0.75-0.99	.	1162	6	1	1	1	.	.	.	.	1171
1.00-1.24	.	24	795	.	1	5	.	.	.	.	825
1.25-1.49	.	.	297	.	.	.	.	.	.	.	297
1.50-1.74	.	.	73	62	.	.	.	.	.	.	135
1.75-1.99	.	.	.	11	.	.	1	.	.	.	12
2.00-2.24	.	.	.	4	.	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5523	1289	177	13	7	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.2 NO. OF CASES= 6565.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	454	14	1	.	.	.	.	.	.	469
0.25-0.49	.	1713	63	25	1	.	.	.	.	.	1802
0.50-0.74	.	3727	137	31	12	.	.	.	.	.	3907
0.75-0.99	.	2194	125	21	4	.	.	.	.	.	2344
1.00-1.24	.	604	1090	106	1	1	.	.	.	.	1802
1.25-1.49	.	.	280	145	.	.	.	.	.	.	425
1.50-1.74	.	.	56	220	2	.	.	.	.	.	278
1.75-1.99	.	.	.	79	4	.	.	.	.	.	83
2.00-2.24	.	.	.	10	36	.	.	.	.	.	46
2.25-2.49	.	.	.	2	17	.	.	.	.	.	19
2.50-2.74	.	.	.	.	6	.	.	.	.	.	6
2.75-2.99	.	.	.	.	1	1	.	.	.	.	2
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8692	1765	640	84	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 10469.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	590	18	2	.	.	.	.	.	.	610
0.25-0.49	.	1603	157	37	1	.	.	.	.	.	1798
0.50-0.74	.	2292	905	201	11	1	.	.	.	.	3410
0.75-0.99	.	564	1438	143	12	1	.	.	.	.	2158
1.00-1.24	.	90	1772	376	59	.	.	.	.	.	2297
1.25-1.49	.	.	218	1029	69	.	1	.	.	.	1317
1.50-1.74	.	.	7	1254	25	1	.	.	.	.	1287
1.75-1.99	.	.	.	376	118	.	.	.	.	.	494
2.00-2.24	.	.	.	39	281	3	.	.	.	.	323
2.25-2.49	.	.	.	.	75	1	.	.	.	.	76
2.50-2.74	.	.	.	.	64	1	.	.	.	.	65
2.75-2.99	.	.	.	.	7	12	.	.	.	.	19
3.00-3.24	.	.	.	.	2	20	.	.	.	.	22
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	.	6	2	.	.	.	8
TOTAL	0	5139	4515	3457	724	49	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.0 NO. OF CASES= 13002.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	456	16	1	.	.	.	.	.	.	473
0.25-0.49	.	1250	178	11	1	.	.	.	.	.	1440
0.50-0.74	.	978	1118	385	5	.	.	.	.	.	2486
0.75-0.99	.	80	1041	498	10	1	.	.	.	.	1630
1.00-1.24	.	2	1157	755	140	.	.	.	.	.	2054
1.25-1.49	.	.	93	973	207	2	.	.	.	.	1275
1.50-1.74	.	.	.	1151	470	41	.	.	.	.	1662
1.75-1.99	.	.	.	314	370	71	.	.	.	.	755
2.00-2.24	.	.	.	31	511	128	8	.	.	.	678
2.25-2.49	.	.	.	.	151	121	7	.	.	.	279
2.50-2.74	.	.	.	.	88	126	7	.	.	.	221
2.75-2.99	.	.	.	.	22	74	12	.	.	.	108
3.00-3.24	.	.	.	.	3	48	44	.	.	.	95
3.25-3.49	.	.	.	.	.	7	22	.	.	.	29
3.50+	.	.	.	.	.	5	31	.	1	.	37
TOTAL	0	2766	3603	4119	1978	624	131	0	1	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.6 NO. OF CASES= 12382.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	484	3	2	1	.	.	.	.	.	490
0.25-0.49	.	1286	198	11	1	.	.	.	.	.	1496
0.50-0.74	.	743	1088	418	6	.	.	.	.	.	2255
0.75-0.99	.	59	457	727	19	.	.	.	.	.	1262
1.00-1.24	.	.	282	822	305	1	.	.	.	.	1410
1.25-1.49	.	.	12	386	310	7	.	.	.	.	715
1.50-1.74	.	.	.	469	550	112	.	.	.	.	1131
1.75-1.99	.	.	.	31	440	154	.	.	.	.	625
2.00-2.24	.	.	.	2	516	208	16	.	.	.	742
2.25-2.49	.	.	.	.	120	232	22	.	.	.	374
2.50-2.74	.	.	.	.	24	318	51	.	.	.	393
2.75-2.99	.	.	.	.	1	104	66	.	.	.	171
3.00-3.24	.	.	.	.	.	40	108	.	.	.	148
3.25-3.49	.	.	.	.	.	4	45	1	.	.	50
3.50+	.	.	.	.	.	.	53	9	1	.	63
TOTAL	0	2572	2040	2868	2293	1180	361	10	1	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 4.9 NO. OF CASES= 10609.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	221	14	1	.	.	.	.	.	.	236
0.25-0.49	.	839	85	8	.	.	.	.	.	.	932
0.50-0.74	.	664	774	181	3	.	.	.	.	.	1622
0.75-0.99	.	52	325	491	13	2	.	.	.	.	883
1.00-1.24	.	1	199	585	110	2	.	.	.	.	897
1.25-1.49	.	.	3	252	147	.	.	.	.	.	402
1.50-1.74	.	.	.	274	333	43	.	.	.	.	650
1.75-1.99	.	.	.	9	348	44	.	.	.	.	401
2.00-2.24	.	.	.	.	397	70	4	.	.	.	471
2.25-2.49	.	.	.	.	77	93	5	.	.	.	175
2.50-2.74	.	.	.	.	3	121	14	.	.	.	138
2.75-2.99	.	.	.	.	.	29	16	.	.	.	45
3.00-3.24	.	.	.	.	.	14	24	.	.	.	38
3.25-3.49	.	.	.	.	.	1	13	.	.	.	14
3.50+	.	.	.	.	.	.	13	4	.	.	17
TOTAL	0	1777	1400	1801	1431	419	89	4	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.7 NO. OF CASES= 6493.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	111	3	4	.	.	.	.	.	.	118
0.25-0.49	.	469	27	6	1	.	.	.	.	.	503
0.50-0.74	.	407	397	93	5	.	.	.	.	.	902
0.75-0.99	.	42	228	308	4	1	1	.	.	.	584
1.00-1.24	.	.	112	426	20	3	.	.	.	.	561
1.25-1.49	.	.	2	179	27	1	1	.	.	.	210
1.50-1.74	.	.	1	242	282	1	.	.	.	.	526
1.75-1.99	.	.	.	6	283	.	.	.	.	.	289
2.00-2.24	.	.	.	.	350	.	.	.	.	.	350
2.25-2.49	.	.	.	.	95	20	.	.	.	.	115
2.50-2.74	.	.	.	.	5	47	.	.	.	.	52
2.75-2.99	.	.	.	.	.	14	.	.	.	.	14
3.00-3.24	.	.	.	.	.	7	.	.	.	.	7
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1029	770	1264	1072	94	6	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.6 NO. OF CASES= 3974.

STATION E11 41.73N 81.52W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

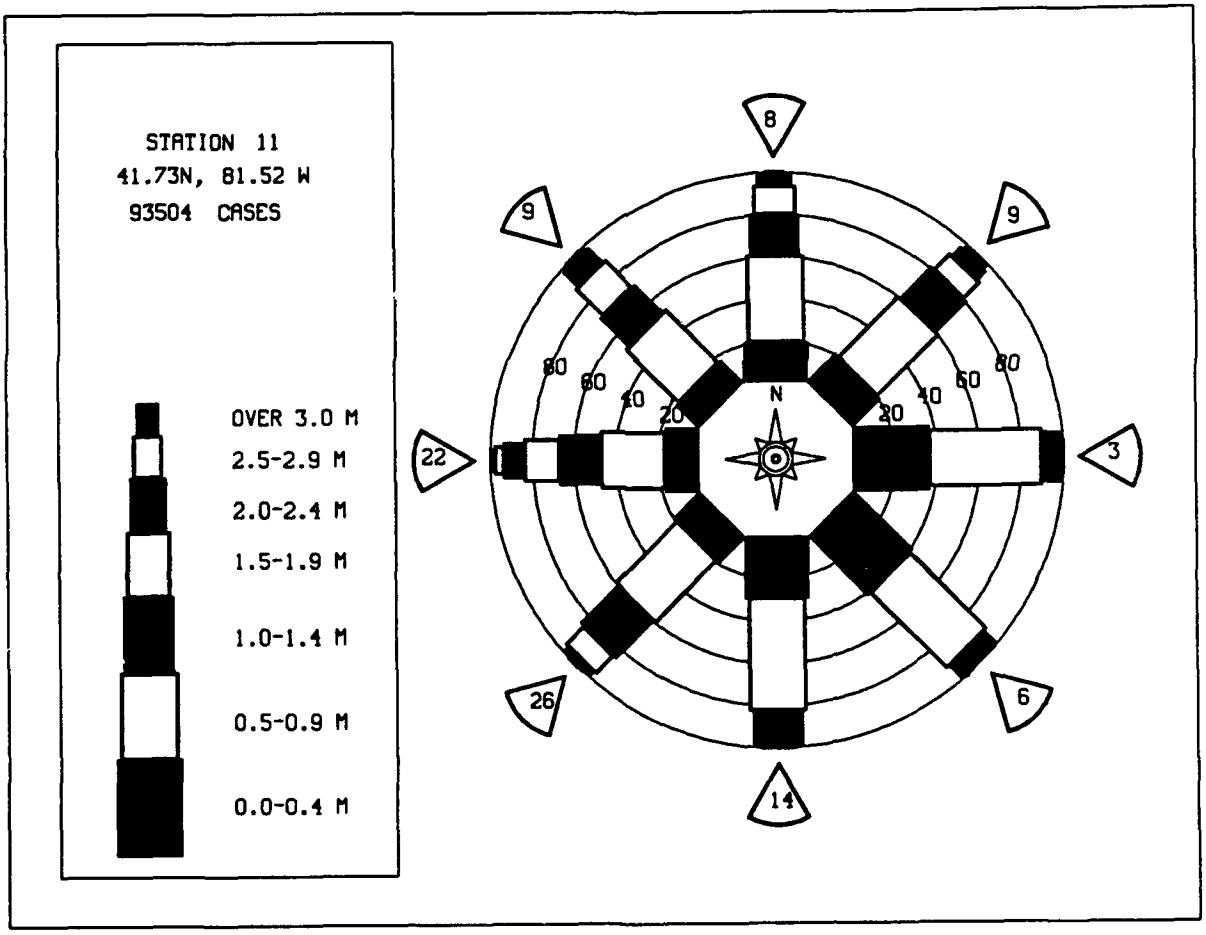
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	122	6	2	1	.	.	.	.	.	131
0.25-0.49	.	366	17	8	1	.	.	.	.	.	392
0.50-0.74	.	463	333	54	3	.	.	.	.	.	853
0.75-0.99	.	43	238	226	10	.	.	.	.	.	517
1.00-1.24	.	.	115	399	29	2	.	.	.	.	545
1.25-1.49	.	.	3	185	33	.	.	.	.	.	221
1.50-1.74	.	.	.	248	191	2	1	.	.	.	442
1.75-1.99	.	.	.	5	264	.	.	.	.	.	269
2.00-2.24	.	.	.	.	210	.	1	.	.	.	211
2.25-2.49	.	.	.	.	67	14	.	.	.	.	81
2.50-2.74	.	.	.	.	1	35	.	.	.	.	36
2.75-2.99	.	.	.	.	.	8	.	.	.	.	8
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	994	712	1127	810	64	5	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.5 NO. OF CASES= 3485.

STATION E11 41.73N 81.52W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	474	17	4	.	.	.	.	.	.	495
0.25-0.49	.	1430	122	37	1	.	.	.	.	.	1590
0.50-0.74	.	1828	614	234	27	.	.	.	.	.	2703
0.75-0.99	.	537	532	323	33	2	.	.	.	.	1427
1.00-1.24	.	78	700	461	113	8	.	.	.	.	1360
1.25-1.49	.	.	108	383	102	5	.	.	.	.	598
1.50-1.74	.	.	14	461	247	26	.	.	.	.	748
1.75-1.99	.	.	.	87	235	31	.	.	.	.	353
2.00-2.24	.	.	.	9	278	51	3	.	.	.	341
2.25-2.49	.	.	.	.	69	65	3	.	.	.	137
2.50-2.74	.	.	.	.	20	86	7	.	.	.	113
2.75-2.99	.	.	.	.	3	31	10	.	.	.	44
3.00-3.24	.	.	.	.	.	14	22	.	.	.	36
3.25-3.49	.	.	.	.	.	1	10	.	.	.	11
3.50+	.	.	.	.	.	1	13	1	.	.	15
TOTAL	0	4347	2107	1989	1128	321	68	1	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E11 (41.73N 81.52W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	1.0	1.0	1.2	1.2	1.1	0.7	0.8	0.8	0.8	0.8	1.1	1.1	1.0
1957	1.1	0.9	1.3	1.1	1.1	0.8	0.9	0.7	0.8	0.9	1.2	1.2	1.0
1958	1.2	1.5	1.1	1.1	1.1	0.9	0.8	0.8	0.9	1.0	1.2	1.0	1.0
1959	1.1	1.1	1.2	1.0	0.6	0.7	0.6	0.7	0.7	0.8	1.1	0.8	0.9
1960	0.9	1.2	1.1	1.4	1.0	0.9	0.7	0.7	0.7	0.8	1.1	1.3	1.0
1961	1.1	0.9	1.2	1.2	1.0	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.0
1962	1.2	1.2	1.2	1.2	1.0	0.8	0.8	0.7	0.8	0.8	0.8	1.1	1.0
1963	1.0	1.0	1.1	1.1	0.9	0.7	0.8	0.8	0.8	0.7	1.2	0.9	0.9
1964	1.2	0.8	1.1	1.1	0.9	0.8	0.7	0.8	0.8	0.9	0.9	1.0	0.9
1965	1.2	1.1	0.9	1.1	0.8	0.8	0.7	0.8	0.8	1.1	1.2	1.1	1.0
1966	1.2	0.7	1.1	1.0	0.8	0.6	0.8	0.7	0.8	1.0	1.0	1.1	0.9
1967	1.2	1.2	1.0	1.1	1.0	0.8	0.7	0.8	0.8	1.0	1.3	1.0	1.0
1968	0.9	1.3	1.2	1.0	0.9	0.8	0.7	0.7	0.5	0.9	1.1	1.4	1.0
1969	1.3	1.0	1.2	1.0	0.8	0.8	0.6	0.7	0.7	1.0	0.9	1.1	0.9
1970	1.1	1.1	1.0	1.1	0.9	0.8	0.8	0.8	0.8	0.8	1.2	1.2	1.0
1971	1.3	1.3	1.2	1.1	0.8	0.7	0.7	0.8	0.7	0.7	1.0	1.1	0.9
1972	1.2	1.1	1.1	1.1	0.8	0.9	0.7	0.8	0.8	0.9	0.9	1.0	0.9
1973	1.2	1.0	1.0	1.2	0.9	0.7	0.8	0.7	0.7	0.8	1.2	1.1	0.9
1974	1.0	1.2	1.2	1.3	1.0	0.9	0.8	0.7	0.9	0.9	1.0	1.1	1.0
1975	1.2	1.0	1.1	1.1	0.6	0.8	0.5	0.6	0.7	0.9	1.0	1.0	0.9
1976	1.3	1.3	1.2	1.0	0.9	0.8	0.8	0.6	0.8	1.0	1.1	1.0	1.0
1977	1.1	1.0	1.0	0.9	0.7	0.7	0.8	0.7	0.8	0.9	1.1	1.2	0.9
1978	1.3	0.7	0.9	1.1	0.7	0.6	0.7	0.6	0.8	0.9	0.9	1.2	0.9
1979	1.1	1.1	1.0	0.9	0.7	0.7	0.7	0.8	0.7	1.0	1.0	1.1	0.9
1980	1.0	0.9	1.1	0.9	0.7	0.7	0.7	0.7	0.8	1.0	1.1	1.0	0.9
1981	1.1	1.1	1.2	1.3	0.8	0.9	0.8	0.8	0.9	1.0	0.9	0.9	1.0
1982	1.3	1.0	1.1	1.4	0.5	0.7	0.6	0.7	0.6	0.8	1.1	1.0	0.9
1983	1.0	0.7	0.9	1.2	0.9	0.5	0.7	0.6	0.8	0.9	1.0	1.2	0.9
1984	0.9	0.9	1.2	0.9	0.9	0.7	0.6	0.5	0.7	0.6	0.9	1.0	0.8
1985	1.1	1.0	1.2	1.0	0.8	0.8	0.6	0.7	0.7	0.8	1.0	1.2	0.9
1986	1.1	0.8	1.0	0.9	0.7	0.7	0.6	0.7	0.7	0.7	0.8	0.7	0.8
1987	0.8	0.8	0.9	1.0	0.7	0.7	0.7	0.8	0.6	0.8	1.0	1.0	0.8
MEAN	1.1	1.0	1.1	1.1	0.9	0.8	0.7	0.7	0.8	0.9	1.0	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E11 (41.73N 81.52W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.3	3.9	5.0	3.5	2.9	3.0	2.4	2.4	2.2	2.6	2.9	2.9
1957	2.6	2.7	3.4	3.8	3.1	3.7	2.5	2.2	2.3	2.3	3.3	3.0
1958	3.2	3.3	3.1	3.5	2.8	2.5	3.1	2.1	2.3	2.9	3.5	3.3
1959	3.2	3.4	3.7	3.8	1.8	2.1	1.9	2.0	1.9	2.8	2.9	2.5
1960	3.0	3.0	3.0	3.7	3.2	3.3	2.5	1.7	2.1	3.2	3.8	3.8
1961	2.4	2.8	3.0	3.9	3.5	2.5	2.8	2.2	2.4	2.8	2.7	3.3
1962	3.0	3.6	3.8	3.3	2.7	2.3	2.4	2.1	2.9	2.7	4.3	3.3
1963	2.9	2.7	3.5	3.7	3.6	2.4	2.6	3.5	2.6	2.4	2.6	2.2
1964	3.8	2.1	4.0	3.0	3.6	2.8	2.5	2.3	2.9	3.0	2.9	3.1
1965	3.7	2.7	3.2	3.4	2.9	2.2	2.2	2.4	2.7	3.5	3.9	2.6
1966	3.5	2.4	3.9	3.1	3.3	1.9	2.7	2.4	2.7	2.8	3.1	3.7
1967	3.5	3.1	2.8	3.9	2.6	2.8	2.6	2.4	2.6	3.2	3.9	2.7
1968	3.3	3.0	3.4	3.1	2.7	2.3	1.8	2.4	2.1	2.8	3.0	3.7
1969	3.3	3.1	2.9	3.9	2.5	2.3	2.1	2.4	1.8	2.8	2.3	2.9
1970	2.5	2.6	3.0	4.4	3.2	2.6	2.5	2.7	2.5	2.5	3.6	3.5
1971	4.2	3.1	3.3	3.2	2.4	1.9	2.5	2.3	2.1	2.0	2.9	3.6
1972	4.4	3.4	3.5	3.3	3.1	2.7	2.3	3.0	2.2	2.5	3.2	3.8
1973	2.8	2.9	3.7	3.2	2.3	1.6	2.3	2.4	2.0	2.3	3.7	2.8
1974	3.6	3.9	3.3	3.8	3.1	2.8	2.7	1.9	2.7	2.5	3.1	3.7
1975	3.6	3.4	2.8	4.0	2.0	2.0	1.9	2.1	2.8	3.6	3.1	3.0
1976	3.1	2.9	3.9	3.0	3.1	2.1	2.0	1.9	2.5	3.0	2.4	2.3
1977	2.8	2.6	2.8	2.9	2.5	2.1	3.3	1.6	2.5	2.4	2.9	3.8
1978	3.8	2.6	2.7	3.6	2.9	1.8	1.8	2.6	1.9	2.3	3.1	3.3
1979	2.8	3.5	2.9	3.8	2.9	2.3	2.0	2.5	2.6	2.4	3.0	3.1
1980	4.0	2.9	3.0	2.8	2.6	2.2	2.0	2.1	2.3	3.0	2.7	3.0
1981	3.1	2.8	3.2	3.2	2.5	2.8	2.5	2.0	2.6	3.4	2.8	2.8
1982	3.8	2.6	4.0	4.1	1.5	2.5	1.9	2.1	2.3	2.9	2.8	3.2
1983	2.4	2.0	2.3	3.3	2.7	1.7	1.9	2.3	2.7	2.6	2.7	3.1
1984	2.1	3.5	3.6	3.6	2.8	2.3	2.3	1.9	1.9	2.0	2.8	2.6
1985	2.5	2.6	3.3	2.9	2.5	2.6	2.2	2.3	1.9	2.6	2.6	3.5
1986	3.1	2.8	3.6	2.6	2.4	2.5	1.6	2.0	2.2	2.1	2.3	2.2
1987	3.1	2.9	3.2	3.7	2.9	2.0	1.8	1.6	1.5	2.2	2.2	3.2

32 YR. STATISTICS FOR WIS STATION E11

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	5.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	257.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		56030821

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	403	10	3	.	.	.	.	.	.	416
0.25-0.49	.	557	66	16	.	.	.	.	.	.	639
0.50-0.74	.	454	330	133	5	.	.	.	.	.	922
0.75-0.99	.	31	161	191	13	.	.	.	.	.	396
1.00-1.24	.	.	106	326	53	1	.	.	.	.	486
1.25-1.49	.	.	2	125	32	1	.	.	.	.	160
1.50-1.74	.	.	.	146	174	2	.	.	.	.	322
1.75-1.99	.	.	.	6	108	1	.	.	.	.	115
2.00-2.24	.	.	.	.	97	6	1	.	.	.	104
2.25-2.49	.	.	.	.	32	9	.	.	.	.	41
2.50-2.74	.	.	.	.	5	22	1	.	.	.	28
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1445	675	946	519	44	3	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.2 NO. OF CASES= 3407.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	365	11	2	.	.	.	.	.	.	378
0.25-0.49	.	555	63	9	.	.	.	.	.	.	627
0.50-0.74	.	536	350	128	2	.	.	.	.	.	1016
0.75-0.99	.	47	193	168	10	.	.	.	.	.	418
1.00-1.24	.	.	116	233	89	.	.	.	.	.	438
1.25-1.49	.	.	3	104	65	4	.	.	.	.	176
1.50-1.74	.	.	.	94	136	12	.	.	.	.	242
1.75-1.99	.	.	.	2	68	11	.	.	.	.	81
2.00-2.24	.	.	.	.	57	5	1	.	.	.	63
2.25-2.49	.	.	.	.	22	17	1	.	.	.	40
2.50-2.74	.	.	.	.	.	23	.	.	.	.	23
2.75-2.99	.	.	.	.	.	10	1	.	.	.	11
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	.	5	.	.	.	5
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1503	736	740	449	86	11	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 3312.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	479	17	3	.	.	.	.	.	.	499
0.25-0.49	.	743	71	18	.	.	.	.	.	.	832
0.50-0.74	.	719	360	162	4	.	.	.	.	.	1245
0.75-0.99	.	75	343	265	37	.	.	.	.	.	720
1.00-1.24	.	1	247	421	195	1	.	.	.	.	865
1.25-1.49	.	.	8	259	187	9	.	.	.	.	463
1.50-1.74	.	.	.	245	347	40	1	.	.	.	633
1.75-1.99	.	.	.	9	236	43	2	.	.	.	290
2.00-2.24	.	.	.	1	268	51	2	.	.	.	322
2.25-2.49	.	.	.	.	68	97	1	.	.	.	166
2.50-2.74	.	.	.	.	6	109	2	.	.	.	117
2.75-2.99	.	.	.	.	.	49	1	.	.	.	50
3.00-3.24	.	.	.	.	.	16	14	.	.	.	30
3.25-3.49	.	.	.	.	.	.	12	.	.	.	12
3.50+	.	.	.	.	.	.	14	.	.	.	14
TOTAL	0	2017	1046	1383	1348	415	49	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.6 NO. OF CASES= 5869.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	335	7	1	.	.	.	.	.	.	343
0.25-0.49	.	447	65	8	.	.	.	.	.	.	520
0.50-0.74	.	393	201	150	4	.	.	.	.	.	748
0.75-0.99	.	32	204	139	41	.	.	.	.	.	416
1.00-1.24	.	.	172	171	133	4	.	.	.	.	480
1.25-1.49	.	.	3	81	83	8	.	.	.	.	175
1.50-1.74	.	.	.	75	91	31	.	.	.	.	197
1.75-1.99	.	.	.	6	29	17	1	.	.	.	53
2.00-2.24	.	.	.	1	37	20	2	.	.	.	60
2.25-2.49	.	.	.	.	6	14	.	.	.	.	20
2.50-2.74	.	.	.	.	1	13	1	.	.	.	15
2.75-2.99	.	.	.	.	.	2	2	.	.	.	4
3.00-3.24	.	.	.	.	.	1	2	.	.	.	3
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1207	652	632	425	110	9	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.2 NO. OF CASES= 2852.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	303	8	.	.	.	.	.	.	.	311
0.25-0.49	.	432	64	12	.	.	.	.	.	.	508
0.50-0.74	.	358	180	149	7	.	.	.	.	.	694
0.75-0.99	.	33	174	66	26	.	.	.	.	.	299
1.00-1.24	.	.	156	41	58	1	.	.	.	.	256
1.25-1.49	.	.	4	54	11	4	.	.	.	.	73
1.50-1.74	.	.	.	38	9	5	.	.	.	.	52
1.75-1.99	.	.	.	3	3	2	1	.	.	.	9
2.00-2.24	.	.	.	3	4	3	1	.	.	.	11
2.25-2.49	.	.	.	.	1	3	.	.	.	.	4
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1126	586	366	119	19	3	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.8 NO. OF CASES= 2087.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	310	7	1	.	.	.	.	.	.	318
0.25-0.49	.	445	45	10	.	.	.	.	.	.	500
0.50-0.74	.	456	105	90	6	.	.	.	.	.	657
0.75-0.99	.	69	117	49	21	.	.	.	.	.	256
1.00-1.24	.	1	111	8	20	1	.	.	.	.	141
1.25-1.49	.	.	13	37	3	4	.	.	.	.	57
1.50-1.74	.	.	2	21	2	1	.	.	.	.	26
1.75-1.99	.	.	.	4	4	1	.	.	.	.	9
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1281	400	220	58	7	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.5 NO. OF CASES= 1850.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	550	12	1	.	.	.	.	.	.	563
0.25-0.49	.	744	91	28	.	.	.	.	.	.	863
0.50-0.74	.	1015	95	121	5	.	.	.	.	.	1236
0.75-0.99	.	304	154	40	25	.	.	.	.	.	523
1.00-1.24	.	10	268	7	11	2	.	.	.	.	298
1.25-1.49	.	.	40	10	.	.	.	.	.	.	50
1.50-1.74	.	.	.	17	1	3	.	.	.	.	21
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2623	660	226	42	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 3337.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	570	11	.	.	.	.	.	.	.	581
0.25-0.49	.	912	75	26	1	.	.	.	.	.	1014
0.50-0.74	.	1227	68	90	6	.	.	.	.	.	1391
0.75-0.99	.	405	94	16	6	1	.	.	.	.	522
1.00-1.24	.	22	279	3	5	4	.	.	.	.	313
1.25-1.49	.	.	58	9	2	2	.	.	.	.	71
1.50-1.74	.	.	8	33	.	.	.	.	.	.	41
1.75-1.99	.	.	.	7	.	.	.	.	.	.	7
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	1	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3136	593	186	20	7	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.3 NO. OF CASES= 3697.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	787	13	2	.	.	.	.	.	.	802
0.25-0.49	.	1446	102	28	.	.	.	.	.	.	1576
0.50-0.74	.	1772	49	78	8	.	.	.	.	.	1907
0.75-0.99	.	838	3	11	9	.	.	.	.	.	861
1.00-1.24	.	104	364	2	7	.	.	.	.	.	477
1.25-1.49	.	.	154	.	1	.	.	.	.	.	155
1.50-1.74	.	.	57	14	.	.	.	.	.	.	71
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	1	.	.	1	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4947	742	140	25	0	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 5485.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	755	28	.	.	.	.	.	.	.	783
0.25-0.49	.	1669	115	39	1	.	.	.	.	.	1824
0.50-0.74	.	3135	161	99	6	.	.	.	.	.	3401
0.75-0.99	.	1948	93	49	18	.	.	.	.	.	2108
1.00-1.24	.	810	819	93	25	1	.	.	.	.	1748
1.25-1.49	.	.	297	77	4	1	.	.	.	.	379
1.50-1.74	.	.	72	108	38	2	.	.	.	.	220
1.75-1.99	.	.	1	18	43	.	.	.	.	.	62
2.00-2.24	.	.	.	10	35	.	.	.	.	.	45
2.25-2.49	.	.	.	.	7	1	.	.	.	.	8
2.50-2.74	.	.	.	.	2	2	.	.	.	.	4
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	8317	1586	493	179	10	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 9909.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1534	60	2	.	.	.	.	.	.	1596
0.25-0.49	.	1794	552	77	.	.	.	.	.	.	2423
0.50-0.74	.	1920	1166	776	25	.	.	.	.	.	3887
0.75-0.99	.	659	909	675	68	.	.	.	.	.	2311
1.00-1.24	.	151	943	1131	189	3	.	.	.	.	2417
1.25-1.49	.	.	186	790	108	7	.	.	.	.	1091
1.50-1.74	.	.	22	1033	249	16	.	.	.	.	1320
1.75-1.99	.	.	.	140	502	5	.	.	.	.	647
2.00-2.24	.	.	.	25	532	3	.	.	.	.	560
2.25-2.49	.	.	.	1	164	1	.	.	.	.	166
2.50-2.74	.	.	.	.	58	39	.	.	.	.	97
2.75-2.99	.	.	.	.	7	35	.	.	.	.	42
3.00-3.24	.	.	.	.	.	22	.	.	.	.	22
3.25-3.49	.	.	.	.	.	12	.	.	.	.	12
3.50+	.	.	.	.	.	3	7	.	.	.	10
TOTAL	0	6058	3838	4650	1902	146	7	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.4 MEAN TP(SEC)= 4.2 NO. OF CASES= 15541.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1074	32	2	.	.	.	.	.	.	1108
0.25-0.49	.	1450	395	31	.	.	.	.	.	.	1876
0.50-0.74	.	697	1285	610	3	.	.	.	.	.	2595
0.75-0.99	.	73	632	792	28	.	.	.	.	.	1525
1.00-1.24	.	1	376	1138	339	.	.	.	.	.	1854
1.25-1.49	.	.	32	670	229	2	.	.	.	.	933
1.50-1.74	.	.	.	882	684	32	1	.	.	.	1599
1.75-1.99	.	.	.	91	776	64	.	.	.	.	931
2.00-2.24	.	.	.	9	927	108	1	.	.	.	1045
2.25-2.49	.	.	.	1	293	140	7	.	.	.	441
2.50-2.74	.	.	.	.	115	278	10	.	.	.	403
2.75-2.99	.	.	.	.	5	131	13	.	.	.	149
3.00-3.24	.	.	.	.	2	98	40	.	.	.	140
3.25-3.49	.	.	.	.	.	20	33	.	.	.	53
3.50+	.	.	.	.	.	5	60	4	1	.	70
TOTAL	0	3295	2752	4226	3401	878	165	4	1	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 4.8 NO. OF CASES= 13784.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	636	14	3	.	.	.	.	.	.	653
0.25-0.49	.	1189	161	22	.	.	.	.	.	.	1372
0.50-0.74	.	610	880	262	3	.	.	.	.	.	1755
0.75-0.99	.	43	358	563	11	1	.	.	.	.	976
1.00-1.24	.	1	194	891	164	1	.	.	.	.	1251
1.25-1.49	.	.	7	299	236	1	.	.	.	.	543
1.50-1.74	.	.	.	376	668	7	.	.	.	.	1051
1.75-1.99	.	.	.	21	450	24	.	.	.	.	495
2.00-2.24	.	.	.	3	611	38	2	.	.	.	654
2.25-2.49	.	.	.	.	187	122	4	.	.	.	313
2.50-2.74	.	.	.	.	12	238	4	.	.	.	254
2.75-2.99	.	.	.	.	.	94	7	.	.	.	101
3.00-3.24	.	.	.	.	.	65	23	.	.	.	88
3.25-3.49	.	.	.	.	.	7	22	.	.	.	29
3.50+	.	.	.	.	.	1	32	3	1	.	37
TOTAL	0	2479	1614	2440	2342	599	94	3	1	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.7 NO. OF CASES= 8969.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	433	7	2	.	.	.	.	.	.	442
0.25-0.49	.	909	104	7	1	.	.	.	.	.	1021
0.50-0.74	.	527	713	160	1	.	.	.	.	.	1401
0.75-0.99	.	48	290	349	5	.	.	.	.	.	692
1.00-1.24	.	.	155	665	50	.	.	.	.	.	870
1.25-1.49	.	.	2	339	77	1	.	.	.	.	419
1.50-1.74	.	.	.	429	275	2	.	.	.	.	706
1.75-1.99	.	.	.	6	357	3	.	.	.	.	366
2.00-2.24	.	.	.	.	377	5	.	.	.	.	382
2.25-2.49	.	.	.	.	88	35	.	.	.	.	123
2.50-2.74	.	.	.	.	12	66	.	.	.	.	78
2.75-2.99	.	.	.	.	.	28	1	.	.	.	29
3.00-3.24	.	.	.	.	.	17	2	.	.	.	19
3.25-3.49	.	.	.	.	.	.	5	.	.	.	5
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1917	1271	1957	1243	157	13	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.5 NO. OF CASES= 6145.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	282	10	3	.	.	.	.	.	.	295
0.25-0.49	.	550	49	13	1	.	.	.	.	.	613
0.50-0.74	.	375	474	98	3	.	.	.	.	.	950
0.75-0.99	.	29	239	217	4	1	.	.	.	.	490
1.00-1.24	.	.	78	504	5	1	.	.	.	.	588
1.25-1.49	.	.	3	366	6	1	.	.	.	.	376
1.50-1.74	.	.	.	517	47	2	.	.	.	.	566
1.75-1.99	.	.	.	3	256	.	.	.	.	.	259
2.00-2.24	.	.	.	.	163	.	1	.	.	.	164
2.25-2.49	.	.	.	.	31	.	.	.	.	.	31
2.50-2.74	.	.	.	.	11	6	.	.	.	.	17
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	1236	853	1721	527	15	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.4 NO. OF CASES= 4083.

STATION E12 41.87N 81.32W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

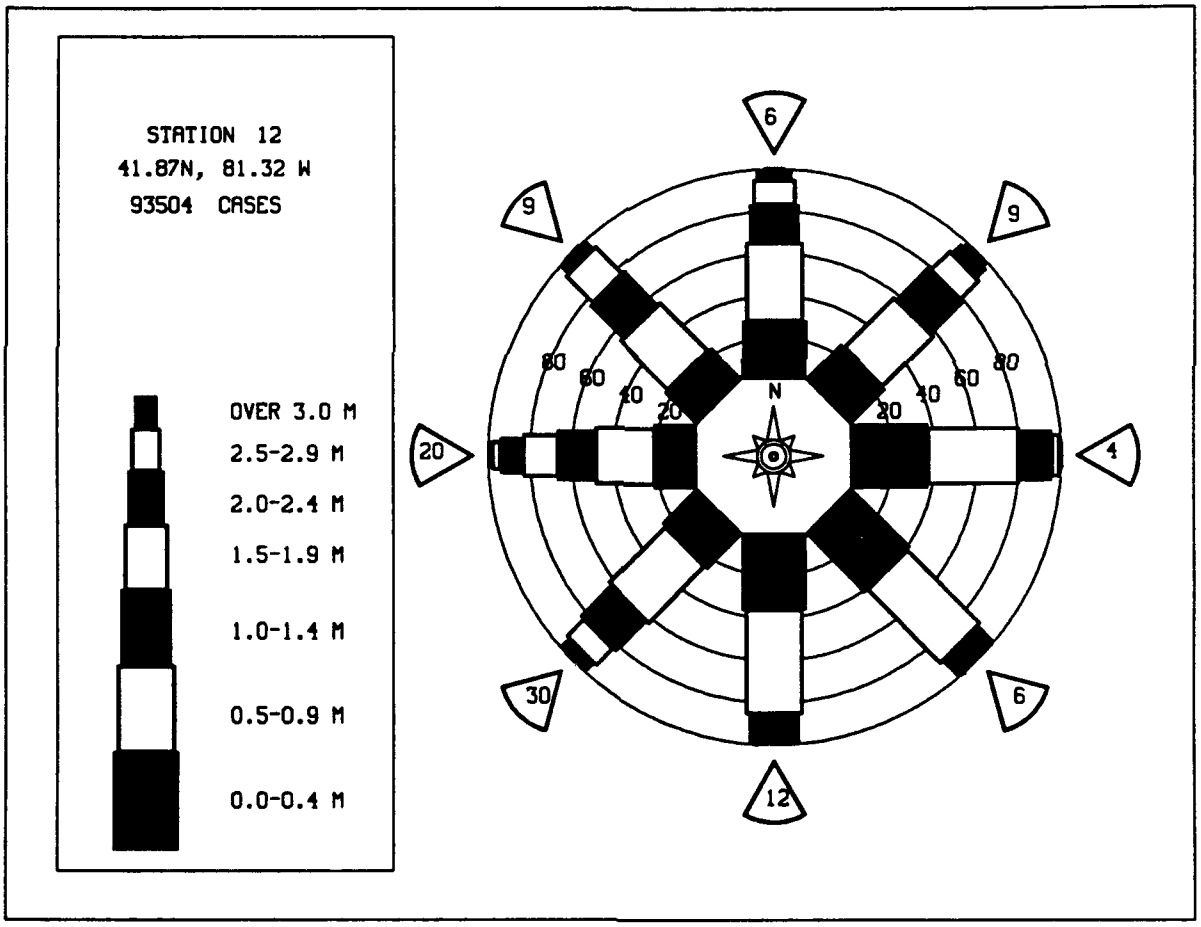
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	267	8	2	.	.	.	.	.	.	277
0.25-0.49	.	412	24	16	1	.	.	.	.	.	453
0.50-0.74	.	358	304	70	4	.	.	.	.	.	736
0.75-0.99	.	27	194	210	4	.	.	.	.	.	435
1.00-1.24	.	.	80	360	26	.	.	.	.	.	466
1.25-1.49	.	.	3	220	32	2	.	.	.	.	257
1.50-1.74	.	.	.	313	110	1	.	.	.	.	424
1.75-1.99	.	.	.	1	150	.	.	.	.	.	151
2.00-2.24	.	.	.	.	128	.	.	.	.	.	128
2.25-2.49	.	.	.	.	34	.	.	.	.	.	34
2.50-2.74	.	.	.	.	8	9	.	.	.	.	17
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1064	613	1192	497	19	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.4 NO. OF CASES= 3177.

STATION E12 41.87N 81.32W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	908	26	2	.	.	.	.	.	.	936
0.25-0.49	.	1426	205	36	.	.	.	.	.	.	1667
0.50-0.74	.	1456	672	318	9	.	.	.	.	.	2455
0.75-0.99	.	466	416	360	33	.	.	.	.	.	1295
1.00-1.24	.	110	446	600	137	2	.	.	.	.	1295
1.25-1.49	.	.	82	344	108	5	.	.	.	.	539
1.50-1.74	.	.	16	434	283	15	.	.	.	.	748
1.75-1.99	.	.	.	32	298	17	.	.	.	.	347
2.00-2.24	.	.	.	5	324	24	1	.	.	.	354
2.25-2.49	.	.	.	.	93	44	1	.	.	.	138
2.50-2.74	.	.	.	.	23	81	1	.	.	.	105
2.75-2.99	.	.	.	.	1	36	2	.	.	.	39
3.00-3.24	.	.	.	.	.	22	8	.	.	.	30
3.25-3.49	.	.	.	.	.	4	8	.	.	.	12
3.50+	.	.	.	.	.	1	12	.	.	.	13
TOTAL	0	4366	1863	2151	1309	251	33	0	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E12 (41.87N 81.32W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.9	1.0	1.1	1.1	1.0	0.7	0.8	0.8	0.8	0.8	1.0	1.1	0.9
1957	1.0	0.9	1.2	1.1	1.1	0.8	0.9	0.7	0.8	0.9	1.3	1.2	1.0
1958	1.1	1.4	1.0	0.9	1.0	0.8	0.7	0.7	0.8	1.0	1.1	0.9	1.0
1959	1.0	1.0	1.1	0.9	0.5	0.5	0.5	0.6	0.6	0.8	1.0	0.8	0.8
1960	0.9	1.2	1.1	1.3	0.9	0.8	0.7	0.7	0.6	0.8	1.1	1.3	0.9
1961	1.1	0.9	1.1	1.1	1.0	0.8	0.7	0.7	0.8	1.0	1.1	1.2	1.0
1962	1.3	1.2	1.1	1.1	0.9	0.7	0.7	0.6	0.7	0.8	0.8	1.1	0.9
1963	1.0	1.0	1.1	1.1	0.9	0.6	0.7	0.8	0.8	0.7	1.2	0.9	0.9
1964	1.2	0.8	1.1	1.1	1.0	0.7	0.7	0.7	0.8	0.8	1.0	1.0	0.9
1965	1.2	1.1	0.9	1.0	0.8	0.8	0.6	0.7	0.8	1.1	1.2	1.1	1.0
1966	1.2	0.7	1.1	1.0	0.8	0.6	0.8	0.7	0.8	1.0	1.0	1.1	0.9
1967	1.3	1.2	0.9	1.0	1.0	0.7	0.6	0.7	0.7	1.0	1.3	1.0	1.0
1968	1.0	1.3	1.1	0.9	0.9	0.7	0.7	0.7	0.6	0.9	1.1	1.3	0.9
1969	1.3	1.0	1.1	1.0	0.7	0.7	0.6	0.6	0.7	1.0	0.9	1.1	0.9
1970	1.0	1.1	0.9	1.1	0.9	0.8	0.7	0.7	0.8	0.8	1.2	1.2	0.9
1971	1.3	1.4	1.2	1.0	0.8	0.6	0.6	0.7	0.6	0.6	1.0	1.1	0.9
1972	1.2	1.0	1.1	1.0	0.8	0.8	0.6	0.7	0.8	0.9	0.9	1.0	0.9
1973	1.3	1.0	1.0	1.2	0.9	0.7	0.8	0.7	0.7	0.8	1.2	1.1	0.9
1974	1.0	1.2	1.2	1.3	0.9	0.8	0.8	0.6	0.8	0.8	1.0	1.1	1.0
1975	1.1	1.0	1.1	1.1	0.5	0.7	0.5	0.5	0.7	0.9	1.0	1.0	0.8
1976	1.2	1.3	1.2	1.0	0.9	0.7	0.7	0.6	0.8	1.0	1.1	1.0	1.0
1977	1.2	1.0	1.0	0.8	0.7	0.6	0.7	0.7	0.7	0.9	1.1	1.3	0.9
1978	1.3	0.6	0.9	1.0	0.7	0.6	0.6	0.6	0.7	0.9	0.9	1.2	0.8
1979	1.1	1.0	1.0	0.9	0.6	0.7	0.6	0.8	0.7	0.9	1.0	1.1	0.9
1980	0.9	0.9	1.0	0.8	0.6	0.6	0.5	0.6	0.7	0.9	1.1	1.0	0.8
1981	1.0	1.1	1.1	1.2	0.7	0.9	0.7	0.7	0.8	1.0	0.9	0.9	0.9
1982	1.3	0.9	1.0	1.3	0.4	0.6	0.5	0.6	0.5	0.7	1.0	1.0	0.8
1983	0.9	0.6	0.8	1.1	0.9	0.4	0.6	0.5	0.7	0.9	1.0	1.3	0.8
1984	0.6	0.9	1.2	0.8	0.9	0.7	0.5	0.4	0.6	0.5	0.9	1.0	0.8
1985	1.1	1.0	1.1	1.0	0.8	0.7	0.6	0.6	0.6	0.8	1.1	1.3	0.9
1986	1.1	0.8	1.0	0.9	0.7	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.8
1987	0.9	0.8	0.9	1.0	0.7	0.7	0.6	0.8	0.5	0.8	1.1	1.1	0.8
MEAN	1.1	1.0	1.1	1.0	0.8	0.7	0.7	0.7	0.7	0.9	1.0	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E12 (41.87N 81.32W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.1	3.4	5.0	3.7	2.9	2.6	2.5	2.2	2.0	2.7	2.9	2.5
1957	2.4	2.6	3.1	3.8	3.0	3.4	2.4	2.2	2.2	2.3	3.6	2.9
1958	3.0	3.0	2.6	3.1	2.6	2.4	2.6	2.0	2.4	2.7	3.2	2.7
1959	2.9	2.8	3.7	4.1	2.0	2.1	2.1	2.1	2.0	3.0	2.3	2.3
1960	2.5	3.1	3.0	3.2	3.1	3.3	2.5	1.7	1.9	2.8	3.2	3.3
1961	2.6	3.0	2.7	3.4	3.0	2.6	2.4	2.1	2.3	2.8	3.0	3.7
1962	3.3	3.6	3.5	3.4	3.1	2.2	2.4	2.0	2.6	2.6	3.8	3.5
1963	2.9	2.6	3.9	3.3	3.1	2.4	2.7	3.1	2.4	2.5	2.6	2.4
1964	4.0	2.3	4.6	3.1	4.1	2.5	2.3	2.4	3.0	2.7	3.1	2.8
1965	3.9	2.9	3.4	3.5	3.0	2.4	2.0	2.3	2.9	3.6	4.1	2.7
1966	3.3	2.4	3.5	3.0	3.8	2.1	2.5	2.3	2.6	2.9	3.4	3.6
1967	3.1	3.2	2.7	3.8	2.6	2.8	2.1	2.2	2.4	3.4	3.4	2.5
1968	3.4	3.0	3.2	3.0	2.6	2.2	2.0	2.4	1.9	2.4	2.8	3.4
1969	3.4	3.0	3.5	4.0	2.6	2.4	2.3	2.2	2.0	2.6	2.4	2.9
1970	2.5	2.6	3.1	4.2	3.1	2.5	2.8	2.7	2.7	2.4	3.8	3.5
1971	4.2	3.4	3.1	3.1	2.7	1.8	2.5	2.1	1.9	2.3	2.6	3.4
1972	4.4	3.7	3.3	3.2	3.2	2.6	2.1	2.8	2.2	2.5	3.2	3.3
1973	3.1	2.6	3.2	3.0	2.6	1.7	2.8	2.4	2.3	2.3	3.3	3.0
1974	3.4	4.0	3.0	3.8	2.9	2.5	2.5	2.2	2.8	2.5	2.9	3.4
1975	3.3	3.6	2.8	4.0	1.6	2.1	2.0	2.0	2.7	3.5	3.4	3.3
1976	3.1	3.2	3.9	2.9	3.6	2.3	2.2	2.0	2.5	3.1	2.4	2.4
1977	2.9	2.8	2.7	3.2	2.5	2.2	3.5	1.9	2.5	2.5	2.5	4.1
1978	4.4	2.3	2.6	3.8	3.0	2.0	1.8	2.8	2.0	2.4	3.3	3.4
1979	2.9	3.4	2.8	4.0	2.8	2.4	1.7	2.2	2.3	2.2	3.4	3.3
1980	3.4	2.4	2.9	2.7	2.2	2.1	1.7	2.0	2.3	3.0	2.7	2.9
1981	3.2	2.8	3.6	3.2	2.3	2.5	2.1	2.0	2.3	3.3	2.9	2.5
1982	4.0	2.9	4.1	4.0	1.6	2.3	2.0	1.8	2.0	2.7	2.8	3.4
1983	2.6	2.2	2.0	3.0	2.5	1.8	1.8	2.1	2.3	3.0	2.6	3.4
1984	2.1	3.3	3.3	3.9	3.2	2.1	2.3	1.6	1.8	2.0	3.0	2.8
1985	2.7	2.5	3.4	3.3	2.2	2.6	2.0	2.0	1.9	2.9	2.5	3.8
1986	3.1	2.8	3.8	2.5	2.3	2.4	1.9	2.0	2.5	2.2	2.6	2.4
1987	2.9	2.8	3.1	3.5	2.7	2.2	1.9	1.9	1.6	2.7	2.4	3.7

32 YR. STATISTICS FOR WIS STATION E12

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	5.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	264.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		56030900

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	457	17	2	.	.	.	.	.	.	476
0.25-0.49	.	522	59	11	.	.	.	.	.	.	592
0.50-0.74	.	303	302	119	2	.	.	.	.	.	726
0.75-0.99	.	34	116	188	9	.	.	.	.	.	347
1.00-1.24	.	.	86	279	71	.	.	.	.	.	437
1.25-1.49	.	.	4	90	53	.	.	.	.	.	147
1.50-1.74	.	.	.	87	144	3	.	.	.	.	234
1.75-1.99	.	.	.	1	82	2	.	.	.	.	85
2.00-2.24	.	.	.	.	73	3	1	.	.	.	77
2.25-2.49	.	.	.	.	16	13	.	.	.	.	29
2.50-2.74	.	.	.	.	1	13	1	.	.	.	15
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1317	584	777	451	35	3	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.2 NO. OF CASES= 2976.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	447	16	3	.	.	.	.	.	.	466
0.25-0.49	.	557	64	17	.	.	.	.	.	.	638
0.50-0.74	.	444	273	128	3	.	.	.	.	.	848
0.75-0.99	.	48	148	159	12	.	.	.	.	.	367
1.00-1.24	.	.	96	201	82	.	.	.	.	.	379
1.25-1.49	.	.	4	97	65	4	.	.	.	.	170
1.50-1.74	.	.	.	58	150	21	1	.	.	.	230
1.75-1.99	.	.	.	3	63	10	1	.	.	.	77
2.00-2.24	.	.	.	.	54	12	2	.	.	.	68
2.25-2.49	.	.	.	.	5	19	3	.	.	.	27
2.50-2.74	.	.	.	.	.	20	1	1	.	.	22
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1496	601	666	434	91	15	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3 9 MEAN TP(SEC)= 4.1 NO. OF CASES= 3102.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	470	11	4	.	.	.	.	.	.	485
0.25-0.49	.	702	86	20	2	.	.	.	.	.	810
0.50-0.74	.	648	380	183	6	.	.	.	.	.	1217
0.75-0.99	.	105	334	279	43	.	.	.	.	.	761
1.00-1.24	.	2	279	398	239	6	.	.	.	.	924
1.25-1.49	.	.	9	288	182	17	.	.	.	.	496
1.50-1.74	.	.	1	235	375	78	2	.	.	.	691
1.75-1.99	.	.	.	16	199	43	3	.	.	.	261
2.00-2.24	.	.	.	2	276	51	5	.	.	.	334
2.25-2.49	.	.	.	.	27	124	2	.	.	.	153
2.50-2.74	.	.	.	.	4	106	2	.	.	.	112
2.75-2.99	.	.	.	.	.	48	3	.	.	.	51
3.00-3.24	.	.	.	.	.	7	28	.	.	.	35
3.25-3.49	.	.	.	.	.	.	7	.	.	.	7
3.50+	.	.	.	.	.	.	10	.	.	.	10
TOTAL	0	1927	1100	1425	1353	480	62	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.6 NO. OF CASES= 5956.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	316	12	4	.	.	.	.	.	.	332
0.25-0.49	.	465	87	26	.	.	.	.	.	.	578
0.50-0.74	.	469	217	187	7	.	.	.	.	.	880
0.75-0.99	.	84	161	150	62	1	.	.	.	.	458
1.00-1.24	.	.	154	126	145	3	.	.	.	.	428
1.25-1.49	.	.	11	55	65	12	.	.	.	.	143
1.50-1.74	.	.	1	38	73	31	2	.	.	.	145
1.75-1.99	.	.	.	1	26	12	.	.	.	.	39
2.00-2.24	.	.	.	.	20	9	5	.	.	.	34
2.25-2.49	.	.	.	.	3	16	1	.	.	.	20
2.50-2.74	.	.	.	.	.	5	.	.	.	.	5
2.75-2.99	.	.	.	.	.	2	2	.	.	.	4
3.00-3.24	.	.	.	.	.	.	3	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1334	643	587	401	91	13	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.1 NO. OF CASES= 2884.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	444	13	2	.	.	.	.	.	.	459
0.25-0.49	.	531	96	40	.	.	.	.	.	.	667
0.50-0.74	.	408	125	174	12	.	.	.	.	.	719
0.75-0.99	.	116	80	64	40	1	.	.	.	.	301
1.00-1.24	.	1	86	20	44	5	.	.	.	.	156
1.25-1.49	.	.	12	8	12	5	.	.	.	.	37
1.50-1.74	.	.	1	3	3	3	.	.	.	.	10
1.75-1.99	.	.	.	1	2	.	.	.	.	.	3
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1500	413	313	113	14	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.6 NO. OF CASES= 2212.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	389	19	3	.	.	.	.	.	.	411
0.25-0.49	.	437	100	27	.	.	.	.	.	.	564
0.50-0.74	.	441	70	114	11	.	.	.	.	.	636
0.75-0.99	.	93	65	25	27	.	.	.	.	.	210
1.00-1.24	.	.	87	7	16	.	.	.	.	.	110
1.25-1.49	.	.	13	6	2	3	.	.	.	.	24
1.50-1.74	.	.	1	5	2	4	.	.	.	.	12
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1360	355	188	58	7	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.5 NO. OF CASES= 1850.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	595	23	1	.	.	.	.	.	.	619
0.25-0.49	.	685	112	41	1	.	.	.	.	.	839
0.50-0.74	.	971	75	97	11	.	.	.	.	.	1154
0.75-0.99	.	282	156	20	22	.	.	.	.	.	480
1.00-1.24	.	2	267	4	6	4	.	.	.	.	283
1.25-1.49	.	.	38	9	2	1	.	.	.	.	50
1.50-1.74	.	.	1	23	1	1	.	.	.	.	26
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2535	672	196	43	6	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 3237.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	583	18	1	.	.	.	.	.	.	602
0.25-0.49	.	959	98	27	2	.	.	.	.	.	1086
0.50-0.74	.	1388	43	64	9	.	.	.	.	.	1504
0.75-0.99	.	572	121	4	7	3	.	.	.	.	707
1.00-1.24	.	7	397		3	2	.	.	.	.	409
1.25-1.49	.	.	86	19	.	.	.	.	.	.	105
1.50-1.74	.	.	8	58	.	.	1	.	.	.	67
1.75-1.99	.	.	.	7	.	.	.	.	.	.	7
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3509	771	183	21	5	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 4209.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	957	35	1	.	.	.	.	.	.	993
0.25-0.49	.	1489	82	32	1	.	.	.	.	.	1604
0.50-0.74	.	2204	36	48	6	.	.	.	.	.	2294
0.75-0.99	.	1387	2	4	4	1	.	.	.	.	1398
1.00-1.24	.	9	688	1	.	.	.	.	.	.	698
1.25-1.49	.	.	179	.	.	.	.	.	.	.	179
1.50-1.74	.	.	38	18	.	.	.	.	.	.	56
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6046	1060	107	11	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 6762.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	828	38	1	.	.	.	.	.	.	867
0.25-0.49	.	1668	60	23	1	.	.	.	.	.	1752
0.50-0.74	.	2804	24	20	5	1	.	.	.	.	2854
0.75-0.99	.	1712	45	.	3	1	.	.	.	.	1761
1.00-1.24	.	148	865	.	3	.	.	.	.	.	1016
1.25-1.49	.	.	190	6	.	1	.	.	.	.	197
1.50-1.74	.	.	27	36	.	1	.	.	.	.	64
1.75-1.99	.	.	.	7	.	.	.	.	.	.	7
2.00-2.24	.	.	.	4	.	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7160	1249	97	12	4	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.2 NO. OF CASES= 7978.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1275	204	22	.	.	.	.	.	.	1501
0.25-0.49	.	1397	423	218	1	.	.	.	.	.	2039
0.50-0.74	.	2532	310	506	58	.	.	.	.	.	3406
0.75-0.99	.	1087	353	500	79	1	.	.	.	.	2020
1.00-1.24	.	116	701	783	219	9	.	.	.	.	1828
1.25-1.49	.	.	212	156	302	7	.	.	.	.	677
1.50-1.74	.	.	60	126	401	6	.	.	.	.	593
1.75-1.99	.	.	1	29	99	14	.	.	.	.	143
2.00-2.24	.	.	.	8	33	31	.	.	.	.	72
2.25-2.49	.	.	.	3	2	13	.	.	.	.	18
2.50-2.74	.	.	.	.	.	8	.	.	.	.	8
2.75-2.99	.	.	.	.	2	.	1	.	.	.	3
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	6407	2264	2351	1196	89	4	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 11530.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1248	57	6	.	.	.	.	.	.	1311
0.25-0.49	.	1310	644	118	1	.	.	.	.	.	2073
0.50-0.74	.	1155	977	952	33	.	.	.	.	.	3117
0.75-0.99	.	225	564	992	102	1	.	.	.	.	1884
1.00-1.24	.	4	344	1679	428	1	.	.	.	.	2456
1.25-1.49	.	.	35	864	483	8	.	.	.	.	1390
1.50-1.74	.	.	9	341	1422	58	.	.	.	.	1830
1.75-1.99	.	.	.	12	710	73	1	.	.	.	796
2.00-2.24	.	.	.	7	505	194	3	.	.	.	709
2.25-2.49	.	.	.	1	63	208	10	.	.	.	282
2.50-2.74	.	.	.	1	14	214	21	.	.	.	250
2.75-2.99	.	.	.	.	2	65	19	.	.	.	86
3.00-3.24	.	.	.	.	1	20	39	1	.	.	61
3.25-3.49	.	.	.	.	.	.	21	.	.	.	21
3.50+	.	.	.	.	.	.	17	4	.	.	21
TOTAL	0	3942	2630	4973	3764	842	131	5	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.4 MEAN TP(SEC)= 4.7 NO. OF CASES= 15250.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	847	28	7	.	.	.	.	.	.	882
0.25-0.49	.	1333	268	31	.	.	.	.	.	.	1632
0.50-0.74	.	652	952	427	3	1	.	.	.	.	2035
0.75-0.99	.	91	397	608	12	.	.	.	.	.	1108
1.00-1.24	.	.	343	870	272	.	.	.	.	.	1485
1.25-1.49	.	.	24	443	281	1	.	.	.	.	749
1.50-1.74	.	.	.	374	866	28	.	.	.	.	1268
1.75-1.99	.	.	.	24	549	55	1	.	.	.	629
2.00-2.24	.	.	.	3	704	118	6	.	.	.	831
2.25-2.49	.	.	.	.	124	260	2	.	.	.	386
2.50-2.74	.	.	.	.	11	302	11	.	.	.	324
2.75-2.99	.	.	.	.	2	127	20	.	.	.	149
3.00-3.24	.	.	.	.	.	43	71	.	.	.	114
3.25-3.49	.	.	.	.	.	.	50	.	.	.	50
3.50+	.	.	.	.	.	.	35	5	1	.	41
TOTAL	0	2923	2012	2787	2824	935	196	5	1	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.6 MEAN TP(SEC)= 4.8 NO. OF CASES= 10946.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	570	11	2	.	.	.	.	.	.	583
0.25-0.49	.	1037	157	13	.	.	.	.	.	.	1207
0.50-0.74	.	522	759	237	1	.	.	.	.	.	1519
0.75-0.99	.	57	255	425	6	.	.	.	.	.	743
1.00-1.24	.	.	170	722	103	2	.	.	.	.	997
1.25-1.49	.	.	2	258	139	.	.	.	.	.	399
1.50-1.74	.	.	1	256	452	6	.	.	.	.	715
1.75-1.99	.	.	.	.	344	22	.	.	.	.	366
2.00-2.24	.	.	.	.	422	38	1	.	.	.	461
2.25-2.49	.	.	.	.	77	95	.	.	.	.	172
2.50-2.74	.	.	.	.	1	102	1	.	.	.	104
2.75-2.99	.	.	.	.	.	33	2	.	.	.	35
3.00-3.24	.	.	.	.	.	14	6	.	.	.	20
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	2186	1355	1913	1545	312	18	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.5 NO. OF CASES= 6868.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	405	10	1	.	.	.	.	.	.	416
0.25-0.49	.	676	87	7	1	.	.	.	.	.	771
0.50-0.74	.	392	522	183	.	.	.	.	.	.	1097
0.75-0.99	.	28	177	359	3	.	.	.	.	.	567
1.00-1.24	.	.	85	591	24	1	.	.	.	.	701
1.25-1.49	.	.	4	206	40	.	.	.	.	.	250
1.50-1.74	.	.	.	235	289	.	1	.	.	.	525
1.75-1.99	.	.	.	.	296	.	.	.	.	.	296
2.00-2.24	.	.	.	.	314	.	.	.	.	.	314
2.25-2.49	.	.	.	.	62	23	.	.	.	.	85
2.50-2.74	.	.	.	.	1	32	.	.	.	.	33
2.75-2.99	.	.	.	.	.	10	.	.	.	.	10
3.00-3.24	.	.	.	.	.	5	.	.	.	.	5
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1501	885	1582	1030	71	5	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.5 NO. OF CASES= 4758.

STATION E13 41.87N 81.13W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

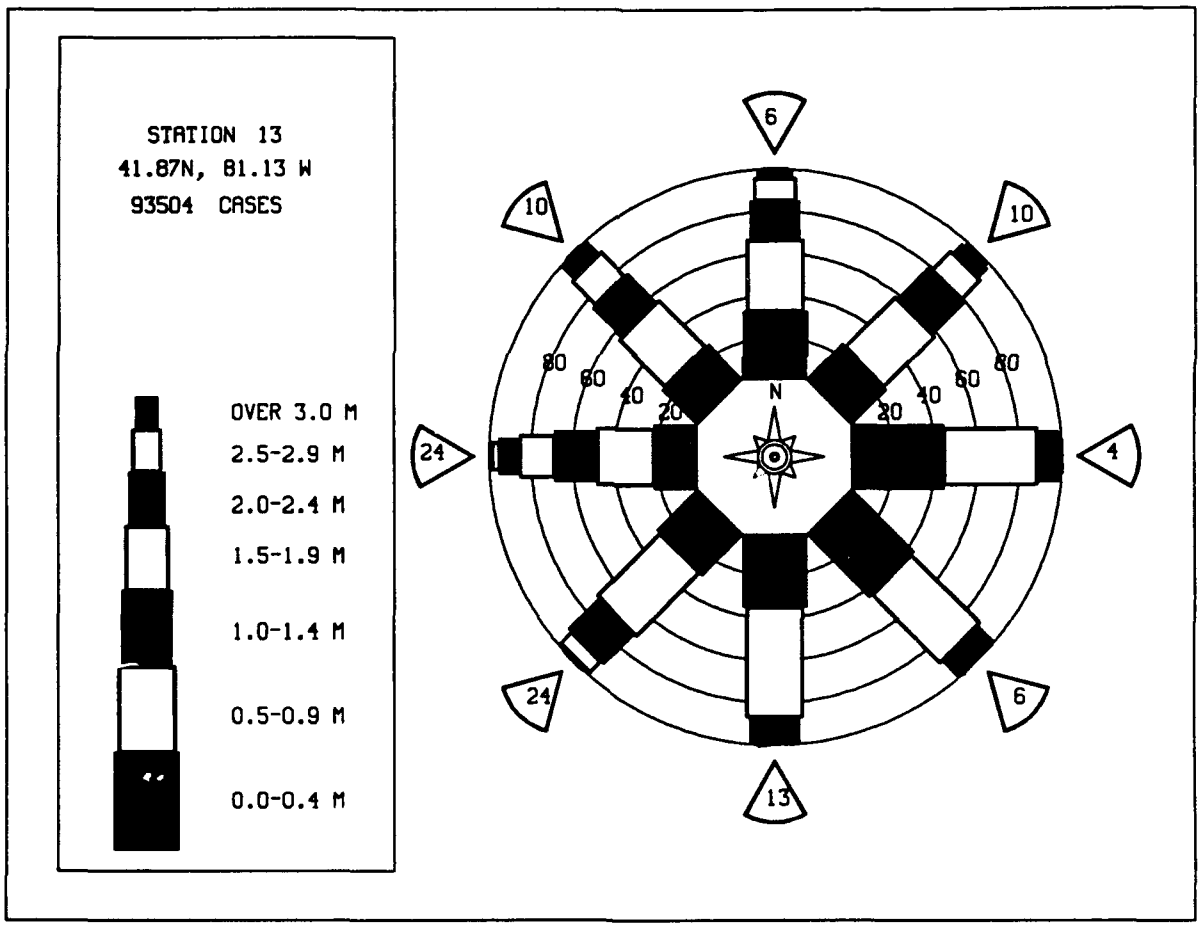
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	313	10	2	.	.	.	.	.	.	325
0.25-0.49	.	329	54	9	.	.	.	.	.	.	392
0.50-0.74	.	286	279	95	.	.	.	.	.	.	660
0.75-0.99	.	23	119	194	2	.	.	.	.	.	338
1.00-1.24	.	.	74	370	35	.	.	.	.	.	479
1.25-1.49	.	.	3	127	44	1	.	.	.	.	175
1.50-1.74	.	.	.	146	236	.	.	.	.	.	382
1.75-1.99	.	.	.	1	183	.	.	.	.	.	184
2.00-2.24	.	.	.	.	167	1	.	.	.	.	168
2.25-2.49	.	.	.	.	31	16	.	.	.	.	47
2.50-2.74	.	.	.	.	.	25	.	.	.	.	25
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	1	1	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	951	539	944	698	48	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.5 NO. OF CASES= 2986.

STATION E13 41.87N 81.13W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1015	53	6	.	.	.	.	.	.	1074
0.25-0.49	.	1410	248	66	1	.	.	.	.	.	1725
0.50-0.74	.	1562	535	354	17	.	.	.	.	.	2468
0.75-0.99	.	595	310	397	44	.	.	.	.	.	1346
1.00-1.24	.	29	472	605	169	3	.	.	.	.	1278
1.25-1.49	.	.	83	263	167	6	.	.	.	.	519
1.50-1.74	.	.	15	204	441	24	.	.	.	.	684
1.75-1.99	.	.	.	11	255	23	.	.	.	.	289
2.00-2.24	.	.	.	2	257	46	2	.	.	.	307
2.25-2.49	.	.	.	.	41	79	1	.	.	.	121
2.50-2.74	.	.	.	.	3	83	3	.	.	.	89
2.75-2.99	.	.	.	.	.	29	4	.	.	.	33
3.00-3.24	.	.	.	.	.	9	15	.	.	.	24
3.25-3.49	.	.	.	.	.	.	8	.	.	.	8
3.50+	.	.	.	.	.	.	7	.	.	.	7
TOTAL	0	4611	1716	1908	1395	302	40	0	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 4.6 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E13 (41.87N 81.13W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.9	1.0	1.0	0.8	0.6	0.7	0.7	0.7	0.8	1.0	0.9	0.8
1957	0.9	0.8	1.2	1.1	1.0	0.8	0.9	0.6	0.8	0.9	1.2	1.2	0.9
1958	1.1	1.3	0.8	0.8	0.9	0.7	0.8	0.6	0.7	0.9	1.0	0.8	0.9
1959	0.9	0.9	1.0	0.8	0.4	0.4	0.4	0.5	0.6	0.7	0.9	0.7	0.7
1960	0.8	1.1	1.0	1.2	0.8	0.8	0.6	0.7	0.6	0.8	1.1	1.2	0.9
1961	1.0	0.8	1.1	1.1	0.9	0.7	0.7	0.7	0.7	1.0	1.1	1.1	0.9
1962	1.2	1.1	1.1	1.1	0.9	0.7	0.7	0.8	0.7	0.8	0.8	1.1	0.9
1963	1.0	1.0	1.1	1.1	0.9	0.5	0.7	0.8	0.8	0.7	1.2	0.9	0.9
1964	1.2	0.8	1.1	1.1	0.9	0.7	0.6	0.7	0.8	0.8	0.9	1.0	0.9
1965	1.2	1.1	0.9	1.0	0.7	0.8	0.6	0.7	0.8	1.1	1.2	1.0	0.9
1966	1.2	0.7	1.0	0.9	0.8	0.5	0.7	0.7	0.8	1.0	1.0	1.1	0.9
1967	1.2	1.2	0.9	1.0	0.9	0.7	0.6	0.7	0.7	0.9	1.3	1.0	0.9
1968	0.9	1.2	1.1	0.9	0.8	0.7	0.6	0.7	0.6	0.9	1.1	1.3	0.9
1969	1.3	0.9	1.1	0.9	0.7	0.7	0.5	0.6	0.7	0.9	0.9	1.1	0.9
1970	1.0	1.1	0.9	1.0	0.8	0.7	0.7	0.7	0.8	0.8	1.1	1.2	0.9
1971	1.3	1.3	1.1	1.0	0.7	0.6	0.6	0.7	0.6	0.6	0.9	1.0	0.9
1972	1.2	1.0	1.0	0.9	0.8	0.7	0.5	0.7	0.7	0.8	0.9	0.9	0.8
1973	1.2	1.0	1.0	1.2	0.9	0.7	0.7	0.6	0.7	0.8	1.2	1.1	0.9
1974	1.0	1.1	1.2	1.2	0.9	0.8	0.7	0.6	0.8	0.8	1.0	1.0	0.9
1975	1.1	1.0	1.1	1.0	0.5	0.7	0.5	0.5	0.7	0.9	1.0	1.0	0.8
1976	1.2	1.2	1.2	1.0	0.9	0.7	0.7	0.6	0.8	0.9	1.1	1.0	0.9
1977	1.2	1.0	0.9	0.8	0.6	0.6	0.7	0.7	0.7	0.9	1.1	1.2	0.9
1978	1.3	0.6	0.8	0.9	0.6	0.5	0.6	0.5	0.7	0.8	0.9	1.2	0.8
1979	1.1	1.0	1.0	0.9	0.6	0.6	0.5	0.7	0.7	0.9	0.9	1.0	0.8
1980	0.9	0.8	0.9	0.8	0.5	0.6	0.5	0.5	0.6	0.9	1.0	0.9	0.8
1981	1.0	1.0	1.1	1.1	0.7	0.8	0.6	0.6	0.8	0.9	0.9	0.9	0.9
1982	1.3	0.9	0.9	1.2	0.4	0.6	0.5	0.5	0.5	0.7	0.9	0.9	0.8
1983	0.9	0.6	0.8	1.0	0.8	0.4	0.5	0.5	0.6	0.8	0.9	1.2	0.7
1984	0.7	0.9	1.1	0.8	0.9	0.6	0.5	0.4	0.6	0.5	0.9	0.9	0.7
1985	1.1	0.9	1.1	1.0	0.7	0.7	0.6	0.6	0.6	0.8	1.1	1.2	0.9
1986	1.0	0.8	0.9	0.9	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8
1987	0.9	0.8	0.9	1.0	0.7	0.7	0.6	0.8	0.5	0.8	1.1	1.0	0.8
MEAN	1.1	1.0	1.0	1.0	0.8	0.7	0.6	0.6	0.7	0.8	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E13 (41.87N 81.13W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.1	3.2	4.6	3.5	2.8	2.4	2.2	2.0	2.0	2.6	2.6	2.4
1957	2.2	2.5	2.9	3.7	2.9	3.3	2.4	2.2	1.9	2.1	3.3	2.8
1958	2.8	2.8	2.4	3.0	2.5	2.2	2.5	1.7	2.1	2.6	3.2	2.6
1959	2.6	2.5	3.4	3.9	1.5	1.7	1.7	1.9	1.8	2.7	2.3	2.3
1960	2.4	2.9	3.0	3.1	2.9	3.1	2.4	1.5	1.9	2.9	3.0	3.3
1961	2.5	2.8	2.6	3.4	3.0	2.5	2.3	2.1	2.3	2.8	2.8	3.7
1962	2.9	3.2	3.2	3.1	2.9	2.3	2.4	2.1	2.6	2.6	3.7	3.3
1963	2.9	2.5	3.6	3.3	3.2	2.3	2.4	2.9	2.4	2.4	2.6	2.3
1964	3.7	2.2	4.0	3.0	3.8	2.5	2.2	2.2	2.8	2.7	2.8	2.8
1965	3.7	2.7	3.2	3.4	2.7	2.4	1.9	2.4	2.8	3.4	3.6	2.5
1966	3.3	2.5	3.5	3.0	3.2	2.0	2.6	2.2	2.6	2.8	2.8	3.4
1967	3.2	3.1	2.7	3.5	2.5	2.7	2.1	2.2	2.1	3.0	3.4	2.4
1968	3.3	2.9	3.1	2.9	2.6	2.2	1.9	2.4	1.7	2.4	2.9	3.4
1969	3.5	3.0	3.3	3.8	2.5	2.3	2.4	2.1	1.9	2.6	2.3	2.9
1970	2.4	2.5	3.0	4.0	2.9	2.4	2.6	2.7	2.7	2.3	3.3	3.5
1971	4.0	2.9	3.2	2.9	2.4	1.9	2.5	2.2	1.7	2.4	2.5	3.3
1972	4.2	3.6	3.0	3.2	2.9	2.7	2.0	2.8	2.2	2.5	3.2	3.2
1973	2.8	2.6	3.1	2.9	2.5	1.7	2.6	2.5	2.2	2.5	3.4	2.7
1974	3.5	3.4	3.0	3.5	2.7	2.4	2.3	2.0	2.6	2.3	2.9	3.3
1975	3.2	3.3	2.7	3.9	1.6	1.8	1.7	1.8	2.8	3.1	3.1	3.3
1976	3.1	2.6	3.6	2.8	2.9	2.3	2.0	2.0	2.5	3.1	2.4	2.3
1977	2.9	2.6	2.7	3.2	2.6	2.1	3.0	1.7	2.4	2.3	2.8	3.5
1978	3.7	2.3	2.6	3.5	2.8	2.0	1.8	2.3	1.7	2.1	3.0	3.4
1979	2.7	3.3	2.8	3.9	2.6	2.1	1.9	2.2	2.2	2.3	2.8	2.7
1980	3.5	2.4	3.0	2.5	2.2	2.3	1.7	1.7	2.1	3.2	2.3	2.8
1981	2.9	2.4	3.1	2.9	2.2	2.4	2.0	1.6	2.3	3.1	2.8	2.5
1982	3.6	2.5	3.9	3.9	1.6	2.1	1.6	1.8	2.0	2.4	2.9	2.8
1983	2.5	2.0	2.1	2.9	2.2	1.9	1.7	2.1	2.1	2.5	2.4	3.4
1984	2.0	3.3	3.2	3.8	3.1	2.0	2.2	1.6	1.9	2.0	2.7	2.6
1985	2.6	2.4	3.3	3.0	2.1	2.5	1.9	2.0	1.8	2.5	2.7	3.6
1986	3.1	2.7	3.6	2.5	2.4	2.3	1.7	2.2	2.0	2.1	2.5	2.4
1987	2.9	2.7	3.1	3.6	2.5	2.1	1.8	1.7	1.7	2.1	2.5	3.1

32 YR. STATISTICS FOR WIS STATION E13

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	4.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	264.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		56030900

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	322	2	.	.	.	.	.	.	.	324
0.25-0.49	.	505	31	2	.	.	.	.	.	.	538
0.50-0.74	.	314	282	45	.	.	.	.	.	.	641
0.75-0.99	.	33	150	137	3	.	.	.	.	.	323
1.00-1.24	.	2	55	223	24	.	.	.	.	.	304
1.25-1.49	.	.	3	102	18	.	.	.	.	.	123
1.50-1.74	.	.	.	164	64	2	.	.	.	.	230
1.75-1.99	.	.	.	1	72	.	.	.	.	.	73
2.00-2.24	.	.	.	.	67	.	.	.	.	.	67
2.25-2.49	.	.	.	.	20	.	.	.	.	.	20
2.50-2.74	.	.	.	.	4	2	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1176	523	674	272	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 2488.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	219	.	.	.	.	.	.	.	.	219
0.25-0.49	.	424	27	3	.	.	.	.	.	.	454
0.50-0.74	.	372	240	47	.	.	.	.	.	.	659
0.75-0.99	.	37	141	158	4	.	.	.	.	.	340
1.00-1.24	.	.	72	168	43	.	.	.	.	.	283
1.25-1.49	.	.	3	84	32	.	.	.	.	.	119
1.50-1.74	.	.	.	70	50	2	.	.	.	.	122
1.75-1.99	.	.	.	1	48	1	.	.	.	.	50
2.00-2.24	.	.	.	.	37	6	.	.	.	.	43
2.25-2.49	.	.	.	.	10	2	.	.	.	.	12
2.50-2.74	.	.	.	.	10	3	.	.	.	.	13
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	1052	483	531	234	20	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 2180.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	342	7	1	.	.	.	.	.	.	350
0.25-0.49	.	710	33	5	.	.	.	.	.	.	748
0.50-0.74	.	721	468	72	.	.	.	.	.	.	1261
0.75-0.99	.	91	362	305	5	.	.	.	.	.	763
1.00-1.24	.	.	301	440	134	.	.	.	.	.	875
1.25-1.49	.	.	13	332	206	3	.	.	.	.	554
1.50-1.74	.	.	.	348	329	12	.	.	.	.	689
1.75-1.99	.	.	.	12	314	36	.	.	.	.	362
2.00-2.24	.	.	.	.	348	48	.	.	.	.	396
2.25-2.49	.	.	.	.	124	32	.	.	.	.	156
2.50-2.74	.	.	.	.	53	106	6	.	.	.	165
2.75-2.99	.	.	.	.	.	48	7	.	.	.	55
3.00-3.24	.	.	.	.	.	24	9	.	.	.	33
3.25-3.49	.	.	.	.	.	18	4	.	.	.	22
3.50+	.	.	.	.	.	2	20	.	.	.	22
TOTAL	0	1864	1184	1515	1513	329	46	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.4 MEAN TP(SEC)= 4.6 NO. OF CASES= 6050.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	209	4	.	.	.	.	.	.	.	213
0.25-0.49	.	540	33	11	.	.	.	.	.	.	584
0.50-0.74	.	582	396	144	.	.	.	.	.	.	1122
0.75-0.99	.	54	262	272	21	.	.	.	.	.	609
1.00-1.24	.	.	194	286	131	.	.	.	.	.	611
1.25-1.49	.	.	2	145	98	5	.	.	.	.	250
1.50-1.74	.	.	.	129	156	16	.	.	.	.	301
1.75-1.99	.	.	.	13	96	25	.	.	.	.	134
2.00-2.24	.	.	.	2	96	40	2	.	.	.	140
2.25-2.49	.	.	.	.	38	33	1	.	.	.	72
2.50-2.74	.	.	.	.	12	36	1	.	.	.	49
2.75-2.99	.	.	.	.	.	21	1	.	.	.	22
3.00-3.24	.	.	.	.	.	6	3	.	.	.	9
3.25-3.49	.	.	.	.	.	9	4	.	.	.	13
3.50+	.	.	.	.	.	1	1	.	.	.	2
TOTAL	0	1385	891	1002	648	192	13	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.4 NO. OF CASES= 3878.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	226	5	1	.	.	.	.	.	.	232
0.25-0.49	.	485	54	14	.	.	.	.	.	.	553
0.50-0.74	.	404	255	127	1	.	.	.	.	.	787
0.75-0.99	.	27	130	110	23	.	.	.	.	.	290
1.00-1.24	.	.	108	42	31	.	.	.	.	.	181
1.25-1.49	.	.	1	53	18	2	.	.	.	.	74
1.50-1.74	.	.	1	20	11	2	.	.	.	.	34
1.75-1.99	.	.	.	2	5	2	.	.	.	.	9
2.00-2.24	.	.	.	.	4	1	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1142	554	369	93	8	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 2035.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	171	2	1	.	.	.	.	.	.	174
0.25-0.49	.	359	40	8	.	.	.	.	.	.	407
0.50-0.74	.	339	119	74	1	.	.	.	.	.	533
0.75-0.99	.	59	101	27	14	.	.	.	.	.	201
1.00-1.24	.	.	119	18	13	.	.	.	.	.	150
1.25-1.49	.	.	5	25	3	.	.	.	.	.	33
1.50-1.74	.	.	.	21	3	1	.	.	.	.	25
1.75-1.99	.	.	.	4	1	2	.	.	.	.	7
2.00-2.24	.	.	.	1	2	2	.	.	.	.	5
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	928	386	179	38	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.6 NO. OF CASES= 1447.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	288	9	1	.	.	.	.	.	.	298
0.25-0.49	.	644	59	18	.	.	.	.	.	.	721
0.50-0.74	.	793	96	90	1	.	.	.	.	.	980
0.75-0.99	.	297	220	25	9	.	.	.	.	.	551
1.00-1.24	.	4	430	12	10	.	.	.	.	.	456
1.25-1.49	.	.	70	35	2	1	.	.	.	.	108
1.50-1.74	.	.	3	63	1	1	.	.	.	.	68
1.75-1.99	.	.	.	13	1	.	.	.	.	.	14
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2026	887	262	24	2	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.5 NO. OF CASES= 3005.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	511	13	.	.	.	.	.	.	.	524
0.25-0.49	.	803	63	16	.	.	.	.	.	.	882
0.50-0.74	.	1067	58	49	2	.	.	.	.	.	1176
0.75-0.99	.	357	366	10	5	.	.	.	.	.	738
1.00-1.24	.	.	837	3	7	1	.	.	.	.	848
1.25-1.49	.	.	136	208	1	.	.	.	.	.	345
1.50-1.74	.	.	1	258	.	.	.	.	.	.	259
1.75-1.99	.	.	.	60	.	.	.	.	.	.	60
2.00-2.24	.	.	.	26	8	.	1	.	.	.	35
2.25-2.49	.	.	.	1	14	.	.	.	.	.	15
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2738	1474	631	38	1	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.6 NO. OF CASES= 4578.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	941	13	.	.	.	.	.	.	.	954
0.25-0.49	.	1264	75	20	.	.	.	.	.	.	1359
0.50-0.74	.	1812	60	45	.	.	.	.	.	.	1917
0.75-0.99	.	386	672	6	3	.	.	.	.	.	1067
1.00-1.24	.	.	1707	3	2	.	.	.	.	.	1712
1.25-1.49	.	.	238	779	.	.	.	.	.	.	1017
1.50-1.74	.	.	.	724	.	.	.	.	.	.	724
1.75-1.99	.	.	.	175	.	.	1	.	.	.	176
2.00-2.24	.	.	.	44	28	.	.	.	.	.	72
2.25-2.49	.	.	.	.	19	.	.	.	.	.	19
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4403	2765	1796	55	0	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 8445.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	861	22	2	.	.	.	.	.	.	885
0.25-0.49	.	1253	60	19	.	.	.	.	.	.	1332
0.50-0.74	.	1962	81	28	2	.	.	.	.	.	2073
0.75-0.99	.	537	826	1	.	.	.	.	.	.	1364
1.00-1.24	.	.	1752	26	3	.	.	.	.	.	1781
1.25-1.49	.	.	312	768	1	1	.	.	.	.	1082
1.50-1.74	.	.	3	820	7	.	.	.	.	.	830
1.75-1.99	.	.	.	191	8	.	.	.	.	.	199
2.00-2.24	.	.	.	51	50	2	.	.	.	.	103
2.25-2.49	.	.	.	.	22	1	.	.	.	.	23
2.50-2.74	.	.	.	.	11	1	.	.	.	.	12
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	4613	3056	1906	105	6	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 9070.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1039	102	3	.	.	.	.	.	.	1144
0.25-0.49	.	1375	541	179	2	.	.	.	.	.	2097
0.50-0.74	.	1316	652	614	59	.	.	.	.	.	2641
0.75-0.99	.	271	960	262	121	.	.	.	.	.	1614
1.00-1.24	.	4	1649	257	214	3	.	.	.	.	2127
1.25-1.49	.	.	259	671	187	9	.	.	.	.	1126
1.50-1.74	.	.	4	787	453	18	.	.	.	.	1262
1.75-1.99	.	.	.	249	353	11	.	.	.	.	613
2.00-2.24	.	.	.	95	364	109	.	.	.	.	568
2.25-2.49	.	.	.	.	55	103	.	.	.	.	158
2.50-2.74	.	.	.	.	20	64	2	.	.	.	86
2.75-2.99	.	.	.	.	11	12	5	.	.	.	28
3.00-3.24	.	.	.	.	4	1	7	.	.	.	12
3.25-3.49	.	.	.	.	1	1	2	.	.	.	4
3.50+	.	.	.	.	.	4	3	1	.	.	8
TOTAL	0	4005	4167	3117	1844	335	19	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 12632.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	804	62	4	.	.	.	.	.	.	870
0.25-0.49	.	1392	418	68	.	.	.	.	.	.	1878
0.50-0.74	.	820	1168	811	12	.	.	.	.	.	2811
0.75-0.99	.	80	575	821	99	.	.	.	.	.	1575
1.00-1.24	.	.	818	814	526	.	.	.	.	.	2158
1.25-1.49	.	.	110	581	483	13	.	.	.	.	1187
1.50-1.74	.	.	1	638	988	80	.	.	.	.	1707
1.75-1.99	.	.	.	103	713	149	.	.	.	.	965
2.00-2.24	.	.	.	7	819	240	12	.	.	.	1078
2.25-2.49	.	.	.	.	179	332	8	.	.	.	519
2.50-2.74	.	.	.	.	39	452	26	1	.	.	518
2.75-2.99	.	.	.	.	3	175	27	.	.	.	205
3.00-3.24	.	.	.	.	.	109	100	1	.	.	210
3.25-3.49	.	.	.	.	.	5	74	1	.	.	80
3.50+	.	.	.	.	.	1	96	14	1	.	112
TOTAL	0	3096	3152	3847	3861	1556	343	17	1	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 4.9 NO. OF CASES= 14863.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	593	14	1	.	.	.	.	.	.	608
0.25-0.49	.	1110	85	16	.	.	.	.	.	.	1211
0.50-0.74	.	638	781	252	2	.	.	.	.	.	1673
0.75-0.99	.	85	387	547	21	.	.	.	.	.	1040
1.00-1.24	.	.	271	689	222	.	.	.	.	.	1182
1.25-1.49	.	.	5	349	260	2	.	.	.	.	616
1.50-1.74	.	.	.	426	750	44	.	.	.	.	1220
1.75-1.99	.	.	.	35	458	91	.	.	.	.	584
2.00-2.24	.	.	.	1	630	131	4	.	.	.	766
2.25-2.49	.	.	.	.	205	236	3	.	.	.	444
2.50-2.74	.	.	.	.	33	376	20	.	.	.	429
2.75-2.99	.	.	.	.	2	171	6	.	.	.	179
3.00-3.24	.	.	.	.	1	100	54	.	.	.	155
3.25-3.49	.	.	.	.	.	12	62	.	.	.	74
3.50+	.	.	.	.	.	3	87	4	.	.	94
TOTAL	0	2426	1543	2316	2584	1166	236	4	0	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.9 NO. OF CASES= 9628.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	478	4	.	.	.	.	.	.	.	482
0.25-0.49	.	884	48	6	.	.	.	.	.	.	938
0.50-0.74	.	541	549	113	.	.	.	.	.	.	1203
0.75-0.99	.	50	262	330	1	.	.	.	.	.	643
1.00-1.24	.	.	162	509	51	.	.	.	.	.	722
1.25-1.49	.	.	4	257	77	.	.	.	.	.	338
1.50-1.74	.	.	.	356	365	3	.	.	.	.	724
1.75-1.99	.	.	.	4	318	10	.	.	.	.	332
2.00-2.24	.	.	.	.	380	21	.	.	.	.	401
2.25-2.49	.	.	.	.	134	62	.	.	.	.	196
2.50-2.74	.	.	.	.	25	98	1	.	.	.	124
2.75-2.99	.	.	.	.	.	49	.	.	.	.	49
3.00-3.24	.	.	.	.	.	20	4	.	.	.	24
3.25-3.49	.	.	.	.	.	6	4	.	.	.	10
3.50+	.	.	.	.	.	.	5	1	.	.	6
TOTAL	0	1953	1029	1575	1351	269	14	1	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.5 NO. OF CASES= 5802.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	339	3	.	.	.	.	.	.	.	342
0.25-0.49	.	603	44	1	.	.	.	.	.	.	648
0.50-0.74	.	482	460	96	.	.	.	.	.	.	1038
0.75-0.99	.	33	224	275	3	.	.	.	.	.	535
1.00-1.24	.	.	114	506	10	.	.	.	.	.	630
1.25-1.49	.	.	2	216	26	1	.	.	.	.	245
1.50-1.74	.	.	.	343	220	.	.	.	.	.	563
1.75-1.99	.	.	.	.	311	.	.	.	.	.	311
2.00-2.24	.	.	.	.	327	.	.	.	.	.	327
2.25-2.49	.	.	.	.	106	1	.	.	.	.	107
2.50-2.74	.	.	.	.	19	38	1	.	.	.	58
2.75-2.99	.	.	.	.	.	22	.	.	.	.	22
3.00-3.24	.	.	.	.	.	9	.	.	.	.	9
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1457	847	1437	1022	73	6	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.5 NO. OF CASES= 4539.

STATION E14 42.02N 80.93W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

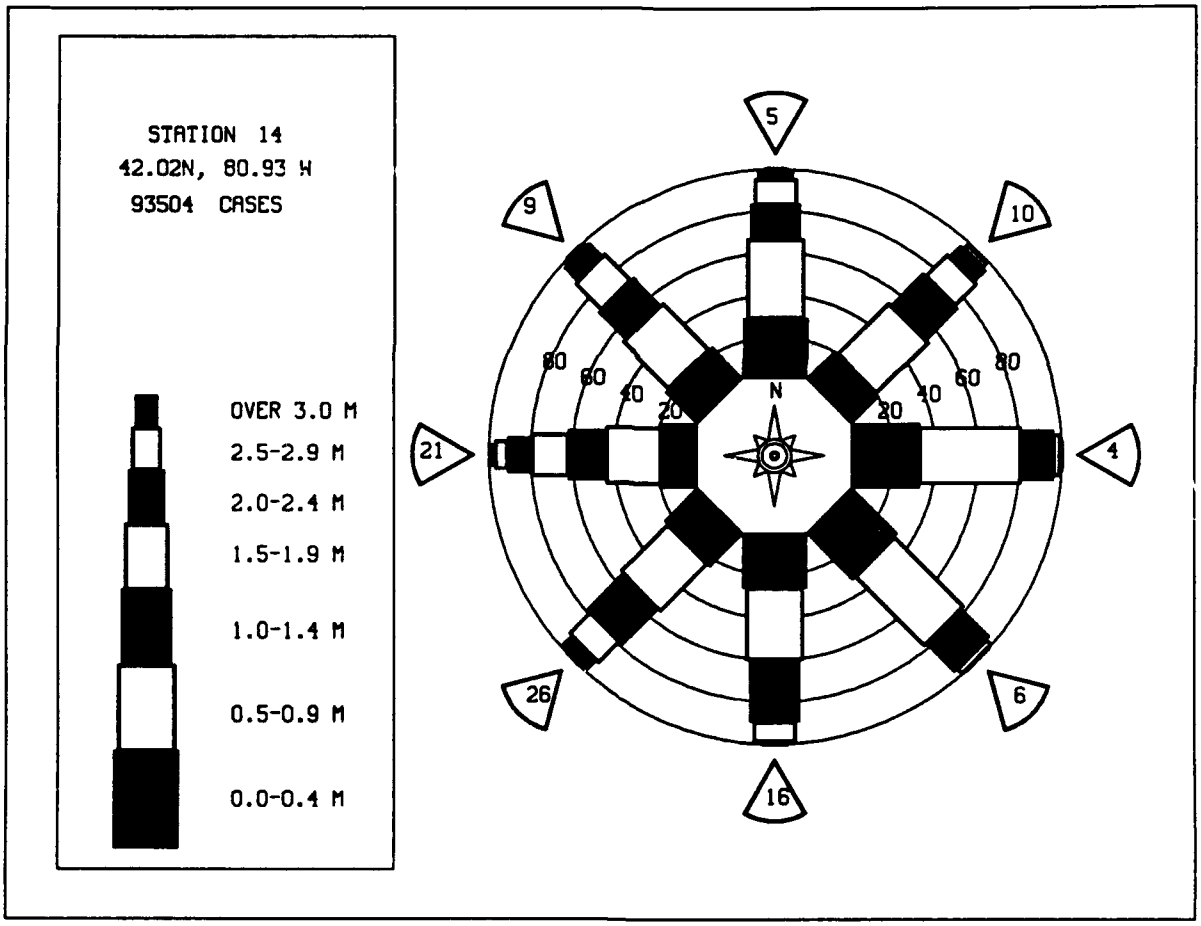
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	237	3	.	.	.	.	.	.	.	240
0.25-0.49	.	332	23	5	.	.	.	.	.	.	360
0.50-0.74	.	299	281	44	.	.	.	.	.	.	624
0.75-0.99	.	14	131	223	2	.	.	.	.	.	370
1.00-1.24	.	.	70	314	16	1	.	.	.	.	401
1.25-1.49	.	.	1	160	18	.	.	.	.	.	179
1.50-1.74	.	.	.	207	164	.	.	.	.	.	371
1.75-1.99	.	.	.	.	203	.	.	.	.	.	203
2.00-2.24	.	.	.	.	203	.	.	.	.	.	203
2.25-2.49	.	.	.	.	49	3	.	.	.	.	52
2.50-2.74	.	.	.	.	8	25	.	.	.	.	33
2.75-2.99	.	.	.	.	.	9	.	.	.	.	9
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	882	509	953	663	44	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.5 NO. OF CASES= 2864.

STATION E14 42.02N 80.93W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	758	27	1	.	.	.	.	.	.	786
0.25-0.49	.	1268	164	39	.	.	.	.	.	.	1471
0.50-0.74	.	1246	595	266	8	.	.	.	.	.	2115
0.75-0.99	.	241	577	351	34	.	.	.	.	.	1203
1.00-1.24	.	1	866	431	144	.	.	.	.	.	1442
1.25-1.49	.	.	117	477	143	3	.	.	.	.	740
1.50-1.74	.	.	1	538	356	18	.	.	.	.	913
1.75-1.99	.	.	.	86	290	33	.	.	.	.	409
2.00-2.24	.	.	.	23	336	60	2	.	.	.	421
2.25-2.49	.	.	.	.	98	80	1	.	.	.	179
2.50-2.74	.	.	.	.	24	120	5	.	.	.	149
2.75-2.99	.	.	.	.	1	51	4	.	.	.	56
3.00-3.24	.	.	.	.	.	27	17	.	.	.	44
3.25-3.49	.	.	.	.	.	5	15	.	.	.	20
3.50+	.	.	.	.	.	1	21	2	.	.	24
TOTAL	0	3514	2347	2212	1434	398	65	2	0	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E14 (42.02N 80.93W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.9	1.0	1.0	0.9	0.7	0.8	0.8	0.8	0.9	1.1	1.0	0.9
1957	1.0	0.9	1.3	1.2	1.1	0.9	1.0	0.8	1.0	1.1	1.5	1.4	1.1
1958	1.2	1.2	0.8	0.8	0.9	0.8	0.6	0.6	0.8	1.0	1.1	0.9	0.9
1959	1.0	0.9	1.0	0.8	0.4	0.4	0.4	0.6	0.7	0.8	0.9	0.7	0.7
1960	0.8	1.3	1.1	1.3	1.0	0.9	0.7	0.8	0.8	0.9	1.3	1.5	1.0
1961	1.2	0.9	1.2	1.2	1.1	0.9	0.8	0.9	0.9	1.2	1.3	1.3	1.1
1962	1.4	1.2	1.1	1.2	1.0	0.8	0.8	0.8	0.9	1.0	1.0	1.3	1.0
1963	1.2	1.2	1.2	1.2	1.0	0.6	0.8	0.9	0.9	0.9	1.5	1.2	1.1
1964	1.4	1.0	1.3	1.3	1.1	0.8	0.7	0.9	1.0	1.0	1.2	1.2	1.1
1965	1.4	1.3	1.0	1.1	0.9	0.9	0.7	0.9	1.0	1.3	1.4	1.2	1.1
1966	1.4	0.8	1.2	1.1	0.9	0.7	0.8	0.8	0.9	1.2	1.2	1.3	1.0
1967	1.5	1.4	1.0	1.2	1.0	0.8	0.6	0.8	0.8	1.1	1.3	1.2	1.1
1968	1.1	1.3	1.2	1.0	1.0	0.8	0.8	0.9	0.8	1.1	1.3	1.5	1.1
1969	1.5	1.0	1.3	1.1	0.9	0.8	0.7	0.7	0.8	1.1	1.2	1.3	1.0
1970	1.1	1.2	1.0	1.2	1.0	0.9	0.8	0.8	1.0	1.0	1.3	1.4	1.0
1971	1.5	1.4	1.3	1.2	0.8	0.7	0.8	0.8	0.7	0.7	1.1	1.2	1.0
1972	1.4	1.1	1.1	1.0	0.8	0.8	0.6	0.8	0.9	1.0	1.0	1.1	1.0
1973	1.4	1.1	1.2	1.4	1.0	0.8	0.9	0.8	0.8	0.9	1.4	1.2	1.1
1974	1.2	1.3	1.3	1.4	1.0	0.9	0.8	0.7	0.9	1.0	1.2	1.2	1.1
1975	1.3	1.1	1.2	1.2	0.6	0.8	0.6	0.6	0.8	1.0	1.2	1.2	1.0
1976	1.4	1.4	1.4	1.2	1.0	0.9	0.8	0.8	0.9	1.1	1.3	1.3	1.1
1977	1.4	1.2	1.1	1.0	0.8	0.7	0.8	0.8	0.8	1.0	1.3	1.4	1.0
1978	1.5	0.6	0.9	1.0	0.8	0.7	0.7	0.6	0.8	1.0	1.1	1.4	0.9
1979	1.3	1.1	1.1	1.0	0.7	0.7	0.6	0.8	0.8	1.1	1.1	1.2	1.0
1980	1.1	0.9	1.0	0.9	0.6	0.7	0.6	0.6	0.8	1.1	1.2	1.1	0.9
1981	1.1	1.1	1.1	1.3	0.7	0.9	0.7	0.7	0.8	1.0	1.0	1.0	1.0
1982	1.5	0.9	1.0	1.3	0.4	0.7	0.5	0.6	0.6	0.8	1.1	1.1	0.9
1983	1.0	0.6	0.9	1.0	0.9	0.5	0.6	0.5	0.7	1.0	1.0	1.3	0.8
1984	0.8	1.0	1.2	0.8	1.0	0.7	0.6	0.5	0.7	0.6	1.1	1.1	0.9
1985	1.3	1.1	1.2	1.1	0.9	0.8	0.7	0.7	0.8	1.0	1.3	1.4	1.0
1986	1.3	0.9	1.2	1.0	0.9	0.9	0.8	0.9	0.9	1.0	1.0	1.0	1.0
1987	1.1	0.9	1.0	1.2	0.9	0.9	0.8	1.0	0.7	1.0	1.3	1.3	1.0
MEAN	1.2	1.1	1.1	1.1	0.9	0.8	0.7	0.8	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E14 (42.02N 80.93W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	3.3	4.7	3.7	2.7	2.9	2.2	2.0	2.1	2.3	2.9	2.5
1957	2.2	2.5	3.1	4.2	2.8	3.3	2.6	2.1	2.3	2.3	3.5	2.8
1958	3.0	2.7	2.3	3.0	2.4	2.3	2.4	1.8	2.2	2.6	3.2	2.8
1959	2.8	2.4	3.6	3.8	1.7	1.7	2.1	1.9	2.1	2.7	2.3	2.2
1960	2.2	3.3	2.9	3.5	2.8	3.5	2.6	1.9	1.9	3.3	3.3	3.5
1961	3.1	3.2	2.5	3.8	3.2	3.0	2.6	2.5	2.6	3.2	3.1	4.1
1962	3.1	3.3	3.2	3.5	3.2	2.4	2.5	2.4	2.9	2.7	3.6	3.7
1963	3.3	2.7	4.0	3.7	3.3	2.2	2.4	3.0	2.6	2.8	3.0	2.8
1964	3.7	2.4	4.5	3.1	4.3	2.7	2.2	2.3	3.0	2.9	3.2	3.2
1965	3.9	2.8	3.5	4.0	2.9	2.4	2.4	2.6	3.0	3.8	4.0	2.8
1966	3.8	2.7	3.7	3.3	3.5	2.3	2.7	2.5	3.0	3.3	3.4	3.6
1967	3.5	3.2	2.8	3.9	2.7	2.8	2.4	2.3	2.5	3.3	3.7	2.7
1968	3.8	3.0	3.4	3.4	2.9	2.6	2.0	2.7	2.2	2.7	3.5	4.0
1969	4.0	2.9	3.5	3.9	2.8	2.4	2.7	2.4	2.4	2.8	2.6	3.4
1970	3.1	2.6	3.6	4.5	2.9	2.8	2.8	2.8	3.3	2.6	3.6	3.6
1971	4.8	3.3	3.5	3.2	2.6	2.2	2.7	2.5	1.8	2.9	2.8	3.3
1972	5.0	4.0	3.2	3.4	3.2	2.9	1.8	2.9	2.1	2.8	3.6	3.8
1973	3.2	2.8	3.4	3.2	2.7	2.1	3.0	2.6	2.6	2.8	3.7	3.0
1974	3.5	3.7	3.2	4.0	3.0	2.8	2.2	2.3	2.9	2.5	3.5	3.5
1975	3.6	3.7	3.0	4.3	1.7	2.2	2.0	2.2	2.9	2.9	3.5	3.7
1976	3.5	3.0	3.8	3.3	3.6	2.6	2.3	2.3	2.8	3.0	2.8	2.8
1977	3.3	2.7	3.1	3.7	2.7	2.5	3.3	2.0	2.6	2.5	3.2	4.0
1978	4.5	2.4	2.8	3.7	3.4	2.8	2.1	2.6	2.0	2.5	3.2	3.8
1979	3.9	3.6	3.0	4.2	2.7	2.4	1.9	2.4	2.2	2.4	3.3	3.0
1980	3.7	2.3	3.4	2.8	2.4	2.8	1.8	1.7	2.4	3.3	2.5	3.3
1981	3.1	2.9	3.6	3.2	2.1	2.5	1.9	1.7	2.5	3.4	3.3	2.4
1982	4.0	2.9	4.4	4.4	2.1	2.1	2.0	1.8	2.0	2.7	2.9	3.4
1983	2.8	2.3	2.1	2.6	2.1	2.1	1.8	2.1	2.2	3.1	2.7	3.8
1984	2.5	3.4	3.2	3.9	3.3	1.9	2.0	1.8	2.0	2.2	3.0	3.1
1985	2.9	2.7	3.6	3.6	2.5	2.4	1.6	2.1	2.0	2.9	2.8	4.1
1986	3.2	2.8	4.0	2.7	2.6	2.6	2.2	2.5	2.5	2.6	3.1	2.8
1987	3.4	2.7	3.3	3.9	2.4	2.3	2.0	2.3	1.9	2.6	2.9	3.8

32 YR. STATISTICS FOR WIS STATION E14

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	5.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	264.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012515

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	171	1	.	.	.	.	.	.	.	172
0.25-0.49	.	547	12	1	.	.	.	.	.	.	560
0.50-0.74	.	493	266	36	.	.	.	.	.	.	795
0.75-0.99	.	41	191	154	2	.	.	.	.	.	388
1.00-1.24	.	.	96	225	16	.	.	.	.	.	337
1.25-1.49	.	.	1	120	17	.	.	.	.	.	138
1.50-1.74	.	.	.	167	77	1	.	.	.	.	245
1.75-1.99	.	.	.	3	105	1	.	.	.	.	109
2.00-2.24	.	.	.	.	87	.	.	.	.	.	87
2.25-2.49	.	.	.	.	16	1	.	.	.	.	17
2.50-2.74	.	.	.	.	2	10	.	.	.	.	12
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1252	567	706	322	14	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.1 NO. OF CASES= 2684.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	101	2	.	.	.	.	.	.	.	103
0.25-0.49	.	355	13	3	.	.	.	.	.	.	371
0.50-0.74	.	464	221	19	1	.	.	.	.	.	705
0.75-0.99	.	43	165	116	4	.	.	.	.	.	328
1.00-1.24	.	.	94	181	29	.	.	.	.	.	304
1.25-1.49	.	.	1	82	31	.	.	.	.	.	114
1.50-1.74	.	.	.	91	63	3	.	.	.	.	157
1.75-1.99	.	.	.	2	45	6	.	.	.	.	53
2.00-2.24	.	.	.	.	38	6	.	.	.	.	44
2.25-2.49	.	.	.	.	3	11	.	.	.	.	14
2.50-2.74	.	.	.	.	1	14	.	.	.	.	15
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	963	496	494	215	46	4	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.1 NO. OF CASES= 2087.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	219	2	.	.	.	.	.	.	.	221
0.25-0.49	.	699	33	10	.	.	.	.	.	.	742
0.50-0.74	.	776	486	96	2	.	.	.	.	.	1360
0.75-0.99	.	111	379	279	11	.	.	.	.	.	780
1.00-1.24	.	.	370	439	166	.	.	.	.	.	975
1.25-1.49	.	.	17	321	185	1	.	.	.	.	524
1.50-1.74	.	.	.	394	421	33	.	.	.	.	848
1.75-1.99	.	.	.	19	249	67	.	.	.	.	335
2.00-2.24	.	.	.	1	281	130	2	.	.	.	414
2.25-2.49	.	.	.	.	55	137	1	.	.	.	193
2.50-2.74	.	.	.	.	3	167	5	.	.	.	175
2.75-2.99	.	.	.	.	.	87	4	.	.	.	91
3.00-3.24	.	.	.	.	.	27	41	.	.	.	68
3.25-3.49	.	.	.	.	.	.	23	.	.	.	23
3.50+	.	.	.	.	.	.	39	2	.	.	41
TOTAL	0	1805	1287	1559	1373	649	115	2	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.8 MEAN TP(SEC)= 4.7 NO. OF CASES= 6365.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	141	4	.	.	.	.	.	.	.	145
0.25-0.49	.	530	26	7	.	.	.	.	.	.	563
0.50-0.74	.	673	320	141	4	.	.	.	.	.	1138
0.75-0.99	.	120	254	218	25	.	.	.	.	.	617
1.00-1.24	.	.	227	252	126	.	.	.	.	.	605
1.25-1.49	.	.	17	128	80	3	.	.	.	.	228
1.50-1.74	.	.	1	95	147	14	.	.	.	.	257
1.75-1.99	.	.	.	8	74	36	.	.	.	.	118
2.00-2.24	.	.	.	2	88	41	1	.	.	.	132
2.25-2.49	.	.	.	.	14	41	1	.	.	.	56
2.50-2.74	.	.	.	.	3	55	3	.	.	.	61
2.75-2.99	.	.	.	.	.	24	2	.	.	.	26
3.00-3.24	.	.	.	.	.	9	7	.	.	.	16
3.25-3.49	.	.	.	.	.	.	8	.	.	.	8
3.50+	.	.	.	.	.	.	14	.	.	.	14
TOTAL	0	1464	849	851	561	223	36	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.3 NO. OF CASES= 3744.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	160	9	1	.	.	.	.	.	.	170
0.25-0.49	.	542	55	18	.	.	.	.	.	.	615
0.50-0.74	.	551	168	146	4	.	.	.	.	.	869
0.75-0.99	.	101	70	73	14	.	.	.	.	.	258
1.00-1.24	.	.	100	42	38	2	.	.	.	.	182
1.25-1.49	.	.	8	7	10	4	.	.	.	.	29
1.50-1.74	.	.	1	3	13	2	.	.	.	.	19
1.75-1.99	.	.	.	2	3	1	.	.	.	.	6
2.00-2.24	.	.	.	.	5	1	.	.	.	.	6
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1354	411	292	87	11	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.6 NO. OF CASES= 2028.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	139	2	.	.	.	.	.	.	.	141
0.25-0.49	.	348	42	17	.	.	.	.	.	.	407
0.50-0.74	.	382	77	54	3	.	.	.	.	.	516
0.75-0.99	.	124	67	23	7	.	.	.	.	.	221
1.00-1.24	.	1	122	9	11	.	.	.	.	.	143
1.25-1.49	.	.	12	12	4	.	.	.	.	.	28
1.50-1.74	.	.	1	16	6	2	.	.	.	.	25
1.75-1.99	.	.	.	1	1	2	.	.	.	.	4
2.00-2.24	.	.	.	1	1	1	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	994	323	133	33	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 1401.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	195	9	.	.	.	.	.	.	.	204
0.25-0.49	.	619	68	7	.	.	.	.	.	.	694
0.50-0.74	.	887	63	63	9	.	.	.	.	.	1022
0.75-0.99	.	331	212	9	5	.	.	.	.	.	557
1.00-1.24	.	3	491	4	8	.	.	.	.	.	506
1.25-1.49	.	.	93	23	2	.	.	.	.	.	118
1.50-1.74	.	.	3	104	1	1	.	.	.	.	109
1.75-1.99	.	.	.	27	.	.	.	.	.	.	27
2.00-2.24	.	.	.	9	.	.	.	.	.	.	9
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2035	939	246	28	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.5 NO. OF CASES= 3049.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	328	8	1	.	.	.	.	.	.	337
0.25-0.49	.	853	54	17	.	.	.	.	.	.	824
0.50-0.74	.	1204	53	59	3	.	.	.	.	.	1319
0.75-0.99	.	684	197	10	5	.	.	.	.	.	896
1.00-1.24	.	28	812	1	8	.	.	.	.	.	849
1.25-1.49	.	.	214	38	.	.	.	.	.	.	252
1.50-1.74	.	.	41	183	.	1	.	.	.	.	225
1.75-1.99	.	.	.	67	.	.	1	.	.	.	68
2.00-2.24	.	.	.	26	.	.	.	.	.	.	26
2.25-2.49	.	.	.	2	3	.	.	.	.	.	5
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3097	1379	404	20	1	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 4596.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	770	22	.	.	.	.	.	.	.	792
0.25-0.49	.	1706	67	35	.	.	.	.	.	.	1808
0.50-0.74	.	2241	38	26	1	.	.	.	.	.	2306
0.75-0.99	.	1714	4	3	3	.	.	.	.	.	1724
1.00-1.24	.	45	1088	2	3	.	.	.	.	.	1138
1.25-1.49	.	.	306	.	.	.	.	.	.	.	306
1.50-1.74	.	.	106	65	.	.	.	.	.	.	171
1.75-1.99	.	.	.	25	.	.	.	.	.	.	25
2.00-2.24	.	.	.	6	.	.	.	.	.	.	6
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6476	1631	162	7	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 7748.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	440	6	.	.	.	.	.	.	.	446
0.25-0.49	.	1445	48	9	.	.	.	.	.	.	1502
0.50-0.74	.	2683	103	21	.	.	.	.	.	.	2807
0.75-0.99	.	1584	163	2	1	.	.	.	.	.	1750
1.00-1.24	.	442	1071	109	.	1	.	.	.	.	1623
1.25-1.49	.	.	411	141	.	.	.	.	.	.	552
1.50-1.74	.	.	70	181	3	1	.	.	.	.	255
1.75-1.99	.	.	1	60	11	.	.	.	.	.	72
2.00-2.24	.	.	.	10	53	.	1	.	.	.	64
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	1	.	.	.	.	.	1
TOTAL	0	6594	1873	533	79	2	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.4 NO. OF CASES= 8505.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	509	95	14	.	.	.	.	.	.	618
0.25-0.49	.	1261	180	178	3	.	.	.	.	.	1622
0.50-0.74	.	2027	371	299	97	.	.	.	.	.	2794
0.75-0.99	.	582	911	91	96	3	.	.	.	.	1683
1.00-1.24	.	170	1515	298	221	12	.	.	.	.	2224
1.25-1.49	.	.	202	809	93	18	.	.	.	.	1122
1.50-1.74	.	.	33	1003	85	42	.	.	.	.	1163
1.75-1.99	.	.	1	413	49	35	.	.	.	.	498
2.00-2.24	.	.	.	98	235	26	1	.	.	.	360
2.25-2.49	.	.	.	.	74	9	2	.	.	.	85
2.50-2.74	.	.	.	.	40	4	2	.	.	.	46
2.75-2.99	.	.	.	.	8	1	.	.	.	.	9
3.00-3.24	.	.	.	.	5	1	1	.	.	.	7
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	2	1	.	.	.	3
TOTAL	0	4557	3308	3203	1006	154	7	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 11459.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	515	52	4	.	.	.	.	.	.	571
0.25-0.49	.	1238	433	125	1	.	.	.	.	.	1797
0.50-0.74	.	1124	822	962	98	.	.	.	.	.	3006
0.75-0.99	.	152	740	558	256	2	.	.	.	.	1708
1.00-1.24	.	7	1069	509	620	23	.	.	.	.	2228
1.25-1.49	.	.	140	695	299	38	.	.	.	.	1172
1.50-1.74	.	.	5	964	579	124	1	.	.	.	1673
1.75-1.99	.	.	.	300	417	131	4	.	.	.	852
2.00-2.24	.	.	.	132	413	340	10	.	.	.	895
2.25-2.49	.	.	.	1	145	225	22	.	.	.	393
2.50-2.74	.	.	.	.	78	242	56	1	.	.	377
2.75-2.99	.	.	.	.	24	89	47	1	.	.	161
3.00-3.24	.	.	.	.	8	41	77	1	.	.	127
3.25-3.49	.	.	.	.	2	8	43	2	.	.	55
3.50+	.	.	.	.	.	5	42	12	.	.	59
TOTAL	0	3036	3261	4250	2940	1268	302	17	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.8 NO. OF CASES= 14117.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	453	2	1	.	.	.	.	.	.	456
0.25-0.49	.	1211	75	9	.	.	.	.	.	.	1295
0.50-0.74	.	948	826	344	2	.	.	.	.	.	2120
0.75-0.99	.	98	425	597	25	.	.	.	.	.	1145
1.00-1.24	.	3	397	781	383	2	.	.	.	.	1566
1.25-1.49	.	.	12	406	293	4	.	.	.	.	715
1.50-1.74	.	.	2	573	676	104	1	.	.	.	1356
1.75-1.99	.	.	.	62	500	118	1	.	.	.	681
2.00-2.24	.	.	.	13	752	218	14	.	.	.	997
2.25-2.49	.	.	.	.	194	267	8	.	.	.	469
2.50-2.74	.	.	.	.	52	488	33	.	.	.	573
2.75-2.99	.	.	.	.	4	227	32	.	.	.	263
3.00-3.24	.	.	.	.	.	96	128	1	.	.	225
3.25-3.49	.	.	.	.	.	9	67	1	.	.	77
3.50+	.	.	.	.	.	6	133	9	1	.	149
TOTAL	0	2713	1739	2786	2881	1539	417	11	1	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 5.0 NO. OF CASES= 11326.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	284	2	.	.	.	.	.	.	.	286
0.25-0.49	.	958	35	4	.	.	.	.	.	.	997
0.50-0.74	.	786	568	129	1	.	.	.	.	.	1484
0.75-0.99	.	89	325	347	4	.	.	.	.	.	765
1.00-1.24	.	1	232	505	84	.	.	.	.	.	822
1.25-1.49	.	.	2	238	86	1	.	.	.	.	327
1.50-1.74	.	.	.	379	414	10	.	.	.	.	803
1.75-1.99	.	.	.	14	407	28	.	.	.	.	449
2.00-2.24	.	.	.	.	539	58	.	.	.	.	597
2.25-2.49	.	.	.	.	154	91	.	.	.	.	245
2.50-2.74	.	.	.	.	14	210	3	.	.	.	227
2.75-2.99	.	.	.	.	.	75	6	.	.	.	81
3.00-3.24	.	.	.	.	.	41	20	.	.	.	61
3.25-3.49	.	.	.	.	.	4	12	.	.	.	16
3.50+	.	.	.	.	.	.	14	3	.	.	17
TOTAL	0	2118	1164	1616	1703	518	55	3	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 4.7 NO. OF CASES= 6730.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	219	2	.	.	.	.	.	.	.	221
0.25-0.49	.	606	28	4	.	.	.	.	.	.	638
0.50-0.74	.	549	428	78	.	.	.	.	.	.	1055
0.75-0.99	.	40	223	290	1	.	.	.	.	.	554
1.00-1.24	.	.	133	436	17	.	.	.	.	.	586
1.25-1.49	.	.	2	217	47	.	.	.	.	.	266
1.50-1.74	.	.	.	351	227	.	1	.	.	.	579
1.75-1.99	.	.	.	5	364	1	.	.	.	.	370
2.00-2.24	.	.	.	.	406	1	.	.	.	.	407
2.25-2.49	.	.	.	.	129	9	.	.	.	.	138
2.50-2.74	.	.	.	.	14	65	.	.	.	.	79
2.75-2.99	.	.	.	.	.	20	.	.	.	.	20
3.00-3.24	.	.	.	.	.	6	.	.	.	.	6
3.25-3.49	.	.	.	.	.	3	1	.	.	.	4
3.50+	.	.	.	.	.	1	4	.	.	.	5
TOTAL	0	1414	816	1381	1205	106	6	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.6 NO. OF CASES= 4621.

STATION E15 42.02N 80.73W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

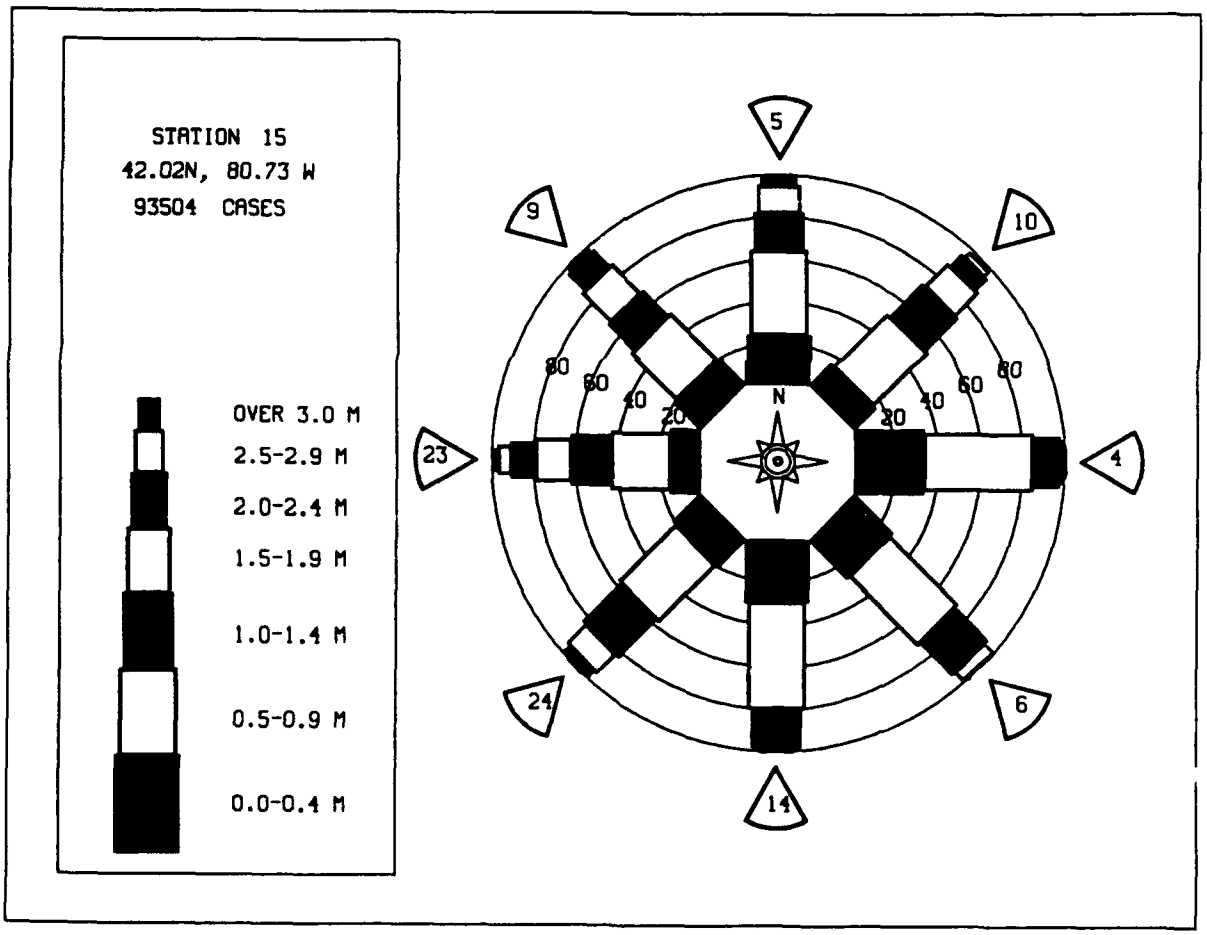
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	155	2	.	.	.	.	.	.	.	157
0.25-0.49	.	387	12	1	.	.	.	.	.	.	400
0.50-0.74	.	397	271	35	.	.	.	.	.	.	703
0.75-0.99	.	19	162	198	1	.	.	.	.	.	380
1.00-1.24	.	.	80	335	17	.	.	.	.	.	432
1.25-1.49	.	.	.	151	27	.	.	.	.	.	178
1.50-1.74	.	.	.	222	155	.	.	.	.	.	377
1.75-1.99	.	.	.	3	226	.	.	.	.	.	229
2.00-2.24	.	.	.	.	258	3	.	.	.	.	261
2.25-2.49	.	.	.	.	53	8	.	.	.	.	61
2.50-2.74	.	.	.	.	7	37	.	.	.	.	44
2.75-2.99	.	.	.	.	.	10	.	.	.	.	10
3.00-3.24	.	.	.	.	.	7	1	.	.	.	8
3.25-3.49	.	.	.	.	.	1	1	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	958	527	945	744	66	2	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.5 NO. OF CASES= 3044.

STATION E15 42.02N 80.73W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	480	22	2	.	.	.	.	.	.	504
0.25-0.49	.	1331	118	45	.	.	.	.	.	.	1495
0.50-0.74	.	1619	508	251	22	.	.	.	.	.	2400
0.75-0.99	.	584	449	297	46	.	.	.	.	.	1376
1.00-1.24	.	71	790	413	175	4	.	.	.	.	1453
1.25-1.49	.	.	144	339	117	7	.	.	.	.	607
1.50-1.74	.	.	26	479	287	34	.	.	.	.	826
1.75-1.99	.	.	.	101	245	42	.	.	.	.	388
2.00-2.24	.	.	.	30	316	82	3	.	.	.	431
2.25-2.49	.	.	.	.	85	80	3	.	.	.	168
2.50-2.74	.	.	.	.	22	129	10	.	.	.	161
2.75-2.99	.	.	.	.	3	54	9	.	.	.	66
3.00-3.24	.	.	.	.	1	23	27	.	.	.	51
3.25-3.49	.	.	.	.	.	2	16	.	.	.	18
3.50+	.	.	.	.	.	1	25	2	.	.	28
TOTAL	0	4085	2058	1957	1319	458	93	2	0	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E15 (42.02N 80.73W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.8	0.9	1.0	0.8	0.6	0.7	0.8	0.7	0.9	1.1	0.9	0.8
1957	0.9	0.8	1.3	1.2	1.1	0.9	1.0	0.8	0.9	1.1	1.4	1.3	1.1
1958	1.1	1.1	0.8	0.8	0.8	0.7	0.6	0.6	0.7	0.9	1.0	0.8	0.8
1959	0.9	0.8	0.9	0.7	0.4	0.4	0.4	0.6	0.7	0.8	0.8	0.6	0.7
1960	0.7	1.2	1.1	1.3	0.9	0.9	0.7	0.8	0.8	0.9	1.2	1.4	1.0
1961	1.1	0.9	1.1	1.1	1.1	0.9	0.8	0.9	0.9	1.2	1.3	1.2	1.1
1962	1.3	1.1	1.1	1.2	1.0	0.8	0.9	0.8	0.9	1.0	1.0	1.3	1.0
1963	1.2	1.1	1.2	1.2	1.0	0.6	0.9	0.9	0.9	0.9	1.5	1.2	1.1
1964	1.4	1.0	1.3	1.4	1.2	0.8	0.8	0.9	1.0	1.0	1.2	1.2	1.1
1965	1.4	1.2	1.0	1.1	0.9	0.9	0.8	0.9	1.0	1.3	1.4	1.2	1.1
1966	1.5	0.8	1.2	1.2	1.0	0.7	0.9	0.8	1.0	1.2	1.2	1.3	1.0
1967	1.5	1.4	1.0	1.2	1.1	0.8	0.7	0.8	0.9	1.1	1.5	1.3	1.1
1968	1.1	1.3	1.2	1.1	1.0	0.8	0.8	0.9	0.8	1.1	1.3	1.5	1.1
1969	1.6	1.0	1.3	1.1	0.9	0.8	0.7	0.7	0.8	1.1	1.2	1.3	1.0
1970	1.1	1.2	1.0	1.2	1.0	0.8	0.8	0.8	1.0	1.0	1.3	1.4	1.0
1971	1.5	1.4	1.3	1.2	0.8	0.7	0.8	0.8	0.7	0.7	1.1	1.2	1.0
1972	1.3	1.1	1.1	1.0	0.9	0.8	0.6	0.6	0.8	1.0	1.0	1.1	1.0
1973	1.4	1.1	1.2	1.4	1.0	0.8	0.9	0.8	0.9	1.0	1.4	1.2	1.1
1974	1.1	1.2	1.3	1.4	1.0	0.8	0.8	0.7	0.9	1.0	1.1	1.2	1.1
1975	1.3	1.1	1.2	1.2	0.6	0.8	0.6	0.6	0.9	1.0	1.1	1.2	1.0
1976	1.4	1.3	1.4	1.2	1.1	0.9	0.9	0.8	1.0	1.1	1.4	1.3	1.2
1977	1.4	1.2	1.1	1.0	0.8	0.8	0.8	0.8	0.9	1.0	1.3	1.3	1.0
1978	1.5	0.7	1.0	1.1	0.8	0.7	0.7	0.6	0.8	1.0	1.1	1.4	0.9
1979	1.3	1.1	1.1	1.0	0.7	0.7	0.7	0.8	0.8	1.1	1.1	1.2	1.0
1980	1.1	1.0	1.0	0.9	0.7	0.7	0.6	0.6	0.8	1.1	1.2	1.1	0.9
1981	1.0	1.1	1.2	1.3	0.7	0.9	0.7	0.7	0.8	1.0	1.0	1.0	1.0
1982	1.5	0.8	1.0	1.3	0.5	0.7	0.6	0.6	0.6	0.8	1.0	1.1	0.9
1983	1.0	0.6	0.9	1.0	0.9	0.5	0.6	0.5	0.7	1.0	1.0	1.3	0.8
1984	0.8	1.0	1.3	0.9	1.0	0.8	0.7	0.6	0.7	0.7	1.1	1.1	0.9
1985	1.3	1.0	1.2	1.2	0.9	0.9	0.8	0.8	0.8	1.0	1.3	1.4	1.1
1986	1.3	0.9	1.1	1.1	0.9	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0
1987	1.1	0.9	1.0	1.2	0.9	0.9	0.8	0.9	0.7	1.0	1.3	1.3	1.0
MEAN	1.2	1.0	1.1	1.1	0.9	0.8	0.7	0.8	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E15 (42.02N 80.73W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.4	3.1	4.1	3.4	2.7	3.3	2.1	2.0	2.0	2.4	3.0	2.4
1957	2.3	2.9	2.9	3.9	3.0	3.3	2.8	2.2	2.4	2.4	3.1	2.8
1958	3.1	2.8	2.4	3.0	2.5	2.2	2.1	1.8	2.0	2.7	3.1	3.0
1959	2.8	2.1	3.2	3.4	1.4	1.4	1.8	1.8	2.2	2.6	2.2	2.2
1960	2.2	3.3	3.2	3.4	2.7	3.5	2.8	2.0	1.8	3.4	3.1	3.3
1961	3.2	3.2	2.5	3.8	3.2	3.0	2.8	2.7	2.7	3.4	3.4	4.1
1962	2.9	3.5	3.4	3.4	3.1	2.5	2.5	2.6	2.9	2.7	3.9	3.5
1963	3.3	2.7	3.7	3.7	3.2	2.5	2.3	2.9	3.0	2.6	3.1	2.9
1964	3.6	2.7	4.1	3.2	4.2	2.6	2.3	2.4	2.8	2.9	3.2	3.2
1965	4.1	2.7	3.5	4.1	2.8	2.5	2.4	2.7	2.8	3.7	4.0	3.1
1966	4.1	2.9	3.7	3.6	3.1	2.4	2.9	2.6	3.2	3.3	3.2	3.5
1967	3.7	3.3	3.0	3.9	2.9	3.0	2.6	2.5	2.5	3.1	3.9	2.9
1968	3.6	3.1	3.6	3.4	3.0	2.7	2.2	2.9	2.5	2.9	3.7	4.1
1969	4.1	3.1	3.5	4.2	2.8	2.5	2.9	2.3	2.6	3.0	2.8	3.6
1970	3.3	2.4	3.4	4.6	2.8	2.8	2.9	2.7	3.2	2.7	3.8	3.7
1971	4.8	2.9	3.4	3.2	2.5	2.3	2.7	2.5	1.7	2.6	2.8	3.2
1972	4.9	4.1	3.3	3.6	3.2	2.8	1.8	3.1	2.2	3.0	3.8	3.8
1973	3.3	3.0	3.8	3.5	2.7	2.3	2.9	2.8	2.7	3.0	3.6	2.9
1974	3.2	3.4	3.3	4.1	3.2	3.0	2.4	2.2	2.9	2.5	3.8	3.7
1975	3.7	3.9	3.0	4.1	2.0	2.4	2.0	2.3	3.0	2.9	3.3	3.8
1976	3.7	2.9	3.5	3.5	3.3	2.8	2.3	2.4	2.9	3.2	2.9	3.2
1977	3.6	2.6	3.3	3.9	2.9	2.7	3.1	2.0	2.6	2.7	3.2	3.6
1978	4.5	2.5	3.1	3.4	3.4	3.9	2.2	2.4	1.9	2.3	3.0	3.9
1979	3.3	3.8	3.0	4.3	2.8	2.3	2.1	2.4	2.4	2.5	2.9	3.2
1980	3.8	2.5	3.6	2.7	2.5	3.1	2.0	2.0	2.4	3.6	2.6	3.7
1981	3.2	2.8	3.2	3.1	2.2	2.4	2.2	1.8	2.7	3.4	3.3	2.3
1982	3.9	2.7	4.3	4.8	2.2	2.4	2.0	1.9	2.1	2.7	2.6	3.4
1983	2.8	2.4	2.4	2.7	2.2	2.3	1.7	2.4	2.2	2.9	2.7	3.7
1984	2.6	3.7	3.4	3.6	3.5	2.1	2.2	2.1	2.0	2.4	2.8	3.2
1985	3.2	3.0	3.6	3.6	2.7	2.6	1.8	2.2	2.2	2.8	3.1	4.1
1986	3.1	3.0	3.7	3.0	2.8	2.8	2.3	2.7	2.6	2.8	3.2	2.7
1987	3.5	2.6	3.5	4.3	2.4	2.2	2.1	2.5	2.3	2.1	3.0	3.6

32 YR. STATISTICS FOR WIS STATION E15

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	4.9
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	269.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012515

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	95	1	.	.	.	.	.	.	.	96
0.25-0.49	.	407	16	4	.	.	.	.	.	.	427
0.50-0.74	.	608	274	41	1	.	.	.	.	.	924
0.75-0.99	.	52	304	96	2	.	.	.	.	.	454
1.00-1.24	.	.	192	259	18	1	.	.	.	.	470
1.25-1.49	.	.	1	181	9	.	.	.	.	.	191
1.50-1.74	.	.	.	226	69	.	.	.	.	.	295
1.75-1.99	.	.	.	5	94	2	.	.	.	.	101
2.00-2.24	.	.	.	.	55	5	.	.	.	.	60
2.25-2.49	.	.	.	.	2	7	.	.	.	.	9
2.50-2.74	.	.	.	.	2	2	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1162	788	812	252	17	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 2845.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	59	2	.	.	.	.	.	.	.	61
0.25-0.49	.	364	14	4	.	.	.	.	.	.	382
0.50-0.74	.	549	208	32	1	.	.	.	.	.	790
0.75-0.99	.	68	280	96	1	.	.	.	.	.	445
1.00-1.24	.	.	197	175	21	.	.	.	.	.	393
1.25-1.49	.	.	4	132	18	.	.	.	.	.	154
1.50-1.74	.	.	.	119	78	2	.	.	.	.	199
1.75-1.99	.	.	.	2	40	3	.	.	.	.	45
2.00-2.24	.	.	.	.	27	9	.	.	.	.	36
2.25-2.49	.	.	.	.	1	12	.	.	.	.	13
2.50-2.74	.	.	.	.	.	16	.	.	.	.	16
2.75-2.99	.	.	.	.	.	1	2	.	.	.	3
3.00-3.24	.	.	.	.	.	.	2	.	.	.	2
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	1	1	.	.	2
TOTAL	0	1040	705	560	187	43	6	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.0 NO. OF CASES= 2389.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	151	8	1	.	.	.	.	.	.	160
0.25-0.49	.	629	48	17	.	.	.	.	.	.	694
0.50-0.74	.	767	439	129	3	.	.	.	.	.	1338
0.75-0.99	.	115	392	286	27	.	.	.	.	.	820
1.00-1.24	.	1	402	515	199	.	.	.	.	.	1117
1.25-1.49	.	.	29	394	125	2	.	.	.	.	550
1.50-1.74	.	.	.	371	489	37	.	.	.	.	897
1.75-1.99	.	.	.	19	328	57	.	.	.	.	404
2.00-2.24	.	.	.	.	322	218	1	.	.	.	541
2.25-2.49	.	.	.	.	24	189	6	.	.	.	219
2.50-2.74	.	.	.	.	3	194	12	.	.	.	209
2.75-2.99	.	.	.	.	.	26	50	.	.	.	76
3.00-3.24	.	.	.	.	.	1	43	.	.	.	44
3.25-3.49	.	.	.	.	.	.	24	.	.	.	24
3.50+	.	.	.	.	.	.	12	2	1	.	15
TOTAL	0	1663	1318	1732	1520	724	148	2	1	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.6 MEAN TP(SEC)= 4.8 NO. OF CASES= 6666.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	129	5	1	.	.	.	.	.	.	135
0.25-0.49	.	592	48	25	.	.	.	.	.	.	665
0.50-0.74	.	684	239	142	9	.	.	.	.	.	1074
0.75-0.99	.	166	154	125	37	.	.	.	.	.	482
1.00-1.24	.	22	127	197	80	4	.	.	.	.	430
1.25-1.49	.	.	10	65	39	3	.	.	.	.	117
1.50-1.74	.	.	4	51	75	12	.	.	.	.	142
1.75-1.99	.	.	.	5	45	12	.	.	.	.	62
2.00-2.24	.	.	.	.	60	42	.	.	.	.	102
2.25-2.49	.	.	.	.	4	37	.	.	.	.	41
2.50-2.74	.	.	.	.	.	23	2	.	.	.	25
2.75-2.99	.	.	.	.	.	2	8	.	.	.	10
3.00-3.24	.	.	.	.	.	.	5	.	.	.	5
3.25-3.49	.	.	.	.	.	.	5	.	.	.	5
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1593	587	611	349	135	21	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 3099.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	180	10	1	.	.	.	.	.	.	191
0.25-0.49	.	567	96	29	1	.	.	.	.	.	693
0.50-0.74	.	458	147	159	17	.	.	.	.	.	781
0.75-0.99	.	80	14	79	39	.	.	.	.	.	212
1.00-1.24	.	13	6	10	26	8	.	.	.	.	63
1.25-1.49	.	.	2	2	13	3	.	.	.	.	20
1.50-1.74	.	.	1	.	2	5	.	.	.	.	8
1.75-1.99	.	.	.	.	.	3	.	.	.	.	3
2.00-2.24	.	.	.	.	.	4	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1298	276	280	98	23	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.6 NO. OF CASES= 1859.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	116	7	1	.	.	.	.	.	.	124
0.25-0.49	.	410	62	31	.	.	.	.	.	.	503
0.50-0.74	.	407	60	78	9	.	.	.	.	.	554
0.75-0.99	.	103	23	16	7	.	.	.	.	.	149
1.00-1.24	.	6	44	5	9	2	.	.	.	.	66
1.25-1.49	.	.	8	.	3	1	.	.	.	.	12
1.50-1.74	.	.	1	1	4	3	.	.	.	.	9
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1042	205	132	32	6	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 1334.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	158	7	1	.	.	.	.	.	.	166
0.25-0.49	.	573	57	19	.	.	.	.	.	.	649
0.50-0.74	.	778	55	52	6	.	.	.	.	.	891
0.75-0.99	.	203	126	8	5	.	.	.	.	.	342
1.00-1.24	.	6	273	1	9	.	.	.	.	.	289
1.25-1.49	.	.	75	13	1	2	.	.	.	.	91
1.50-1.74	.	.	.	47	1	2	.	.	.	.	50
1.75-1.99	.	.	.	17	.	.	.	.	.	.	17
2.00-2.24	.	.	.	9	.	.	.	.	.	.	9
2.25-2.49	.	.	.	.	3	.	.	.	.	.	3
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1718	593	167	26	4	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 2355.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	249	9	2	.	.	.	.	.	.	260
0.25-0.49	.	771	52	23	1	.	.	.	.	.	847
0.50-0.74	.	1236	36	34	4	.	.	.	.	.	1310
0.75-0.99	.	490	291	3	3	.	.	.	.	.	787
1.00-1.24	.	6	1004	.	.	.	.	.	.	.	1010
1.25-1.49	.	.	422	52	.	.	1	.	.	.	475
1.50-1.74	.	.	7	383	.	.	.	.	.	.	390
1.75-1.99	.	.	.	102	.	.	.	.	.	.	102
2.00-2.24	.	.	.	52	1	.	.	.	.	.	53
2.25-2.49	.	.	.	.	10	.	.	.	.	.	10
2.50-2.74	.	.	.	.	5	.	.	.	.	.	5
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2752	1821	651	25	0	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.6 NO. OF CASES= 4919.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	464	11	.	.	.	.	.	.	.	475
0.25-0.49	.	1783	56	28	.	.	.	.	.	.	1867
0.50-0.74	.	3004	13	5	.	.	.	.	.	.	3022
0.75-0.99	.	2295	3	1	1	.	.	.	.	.	2300
1.00-1.24	.	2	1949	.	.	.	.	.	.	.	1951
1.25-1.49	.	.	500	.	.	.	.	.	.	.	500
1.50-1.74	.	.	67	126	.	.	.	.	.	.	193
1.75-1.99	.	.	.	37	.	.	.	.	.	.	37
2.00-2.24	.	.	.	6	.	.	.	.	.	.	6
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7548	2599	203	1	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 9686.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	275	6	.	.	.	.	.	.	.	281
0.25-0.49	.	1397	26	10	.	.	.	.	.	.	1433
0.50-0.74	.	2640	25	8	.	.	.	.	.	.	2673
0.75-0.99	.	1337	80	.	1	.	.	.	.	.	1418
1.00-1.24	.	96	1126	2	1	.	.	.	.	.	1225
1.25-1.49	.	.	356	6	.	.	.	.	.	.	362
1.50-1.74	.	.	64	104	.	2	.	.	.	.	170
1.75-1.99	.	.	.	29	.	.	.	.	.	.	29
2.00-2.24	.	.	.	13	.	.	.	.	.	.	13
2.25-2.49	.	.	.	.	1	1	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	1	.	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5745	1683	172	4	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.3 NO. OF CASES= 7123.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	291	54	24	1	.	.	.	.	.	370
0.25-0.49	.	1057	45	64	5	.	.	.	.	.	1171
0.50-0.74	.	2491	214	93	57	.	.	.	.	.	2855
0.75-0.99	.	918	529	58	66	3	.	.	.	.	1574
1.00-1.24	.	189	1204	478	124	19	.	.	.	.	2014
1.25-1.49	.	.	528	240	52	34	.	.	.	.	854
1.50-1.74	.	.	255	346	103	58	1	.	.	.	763
1.75-1.99	.	.	1	105	51	37	3	.	.	.	197
2.00-2.24	.	.	.	41	16	16	3	.	.	.	76
2.25-2.49	.	.	.	8	5	2	1	.	.	.	16
2.50-2.74	.	.	.	2	5	.	.	.	.	.	7
2.75-2.99	.	.	.	1	.	1	1	.	.	.	3
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	4946	2830	1460	485	172	9	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 3.8 NO. OF CASES= 9277.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	300	65	11	.	.	.	.	.	.	376
0.25-0.49	.	1023	311	198	9	.	.	.	.	.	1541
0.50-0.74	.	1632	689	809	206	1	.	.	.	.	3337
0.75-0.99	.	340	874	418	358	11	.	.	.	.	2001
1.00-1.24	.	17	1014	818	665	59	.	.	.	.	2573
1.25-1.49	.	.	178	675	398	75	.	.	.	.	1326
1.50-1.74	.	.	48	649	718	252	3	.	.	.	1670
1.75-1.99	.	.	.	131	339	279	6	.	.	.	755
2.00-2.24	.	.	.	22	243	367	31	.	.	.	663
2.25-2.49	.	.	.	2	48	161	48	1	.	.	260
2.50-2.74	.	.	.	2	26	134	93	.	.	.	255
2.75-2.99	.	.	.	.	1	22	48	1	.	.	72
3.00-3.24	.	.	.	.	.	9	54	2	.	.	65
3.25-3.49	.	.	.	.	.	.	18	2	.	.	20
3.50+	.	.	.	.	.	.	10	8	.	.	18
TOTAL	0	3312	3179	3735	3011	1370	311	14	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.8 NO. OF CASES= 13985.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	302	1	1	.	.	.	.	.	.	304
0.25-0.49	.	1113	96	10	.	.	.	.	.	.	1219
0.50-0.74	.	1251	897	487	4	.	.	.	.	.	2639
0.75-0.99	.	151	572	687	68	.	.	.	.	.	1478
1.00-1.24	.	3	574	873	530	7	.	.	.	.	1987
1.25-1.49	.	.	56	575	374	13	.	.	.	.	1018
1.50-1.74	.	.	5	616	672	177	2	.	.	.	1472
1.75-1.99	.	.	.	80	582	175	3	.	.	.	840
2.00-2.24	.	.	.	8	681	424	37	.	.	.	1150
2.25-2.49	.	.	.	1	105	393	40	1	.	.	540
2.50-2.74	.	.	.	.	36	488	80	1	.	.	605
2.75-2.99	.	.	.	.	.	96	133	3	.	.	232
3.00-3.24	.	.	.	.	1	31	170	.	.	.	202
3.25-3.49	.	.	.	.	.	6	67	6	.	.	79
3.50+	.	.	.	.	.	.	60	23	4	.	87
TOTAL	0	2820	2201	3338	3053	1810	592	34	4	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 4.8 MEAN TP(SEC)= 5.1 NO. OF CASES= 12974.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	182	1	1	.	.	.	.	.	.	184
0.25-0.49	.	945	33	6	.	.	.	.	.	.	984
0.50-0.74	.	887	630	162	1	.	.	.	.	.	1680
0.75-0.99	.	84	425	370	5	.	.	.	.	.	884
1.00-1.24	.	2	258	576	145	.	.	.	.	.	981
1.25-1.49	.	.	10	278	146	.	.	.	.	.	434
1.50-1.74	.	.	.	265	527	38	.	.	.	.	830
1.75-1.99	.	.	.	10	442	52	.	.	.	.	504
2.00-2.24	.	.	.	.	509	177	6	.	.	.	692
2.25-2.49	.	.	.	.	31	263	6	.	.	.	300
2.50-2.74	.	.	.	.	4	247	17	.	.	.	268
2.75-2.99	.	.	.	.	.	43	38	.	.	.	81
3.00-3.24	.	.	.	.	.	5	52	.	.	.	57
3.25-3.49	.	.	.	.	.	.	10	.	.	.	10
3.50+	.	.	.	.	.	.	13	2	1	.	16
TOTAL	0	2100	1357	1668	1810	825	142	2	1	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.4 MEAN TP(SEC)= 4.8 NO. OF CASES= 7408.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	105	3	.	.	.	.	.	.	.	108
0.25-0.49	.	483	13	6	.	.	.	.	.	.	502
0.50-0.74	.	546	442	69	.	.	.	.	.	.	1057
0.75-0.99	.	36	262	274	.	.	.	.	.	.	572
1.00-1.24	.	1	146	396	63	1	.	.	.	.	607
1.25-1.49	.	.	3	195	72	.	.	.	.	.	270
1.50-1.74	.	.	.	113	405	1	1	.	.	.	520
1.75-1.99	.	.	.	5	319	1	.	.	.	.	325
2.00-2.24	.	.	.	.	426	73	1	.	.	.	500
2.25-2.49	.	.	.	.	21	151	.	.	.	.	172
2.50-2.74	.	.	.	.	2	111	.	.	.	.	113
2.75-2.99	.	.	.	.	.	21	5	.	.	.	26
3.00-3.24	.	.	.	.	.	.	10	.	.	.	10
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1171	869	1058	1308	359	26	0	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.8 NO. OF CASES= 4495.

STATION E16 42.02N 80.55W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

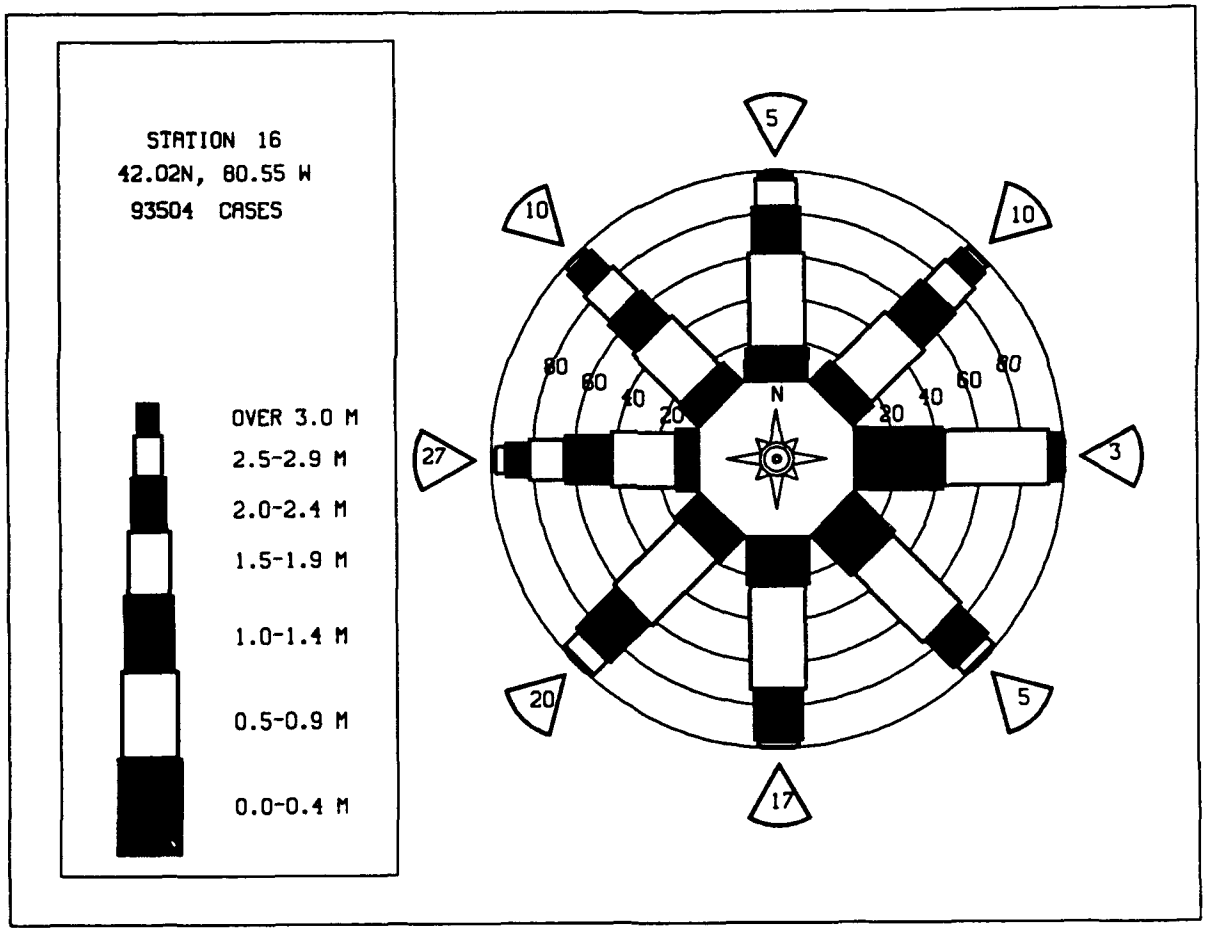
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	63	.	.	.	.	.	.	.	.	63
0.25-0.49	.	350	8	4	.	.	.	.	.	.	362
0.50-0.74	.	529	252	31	1	.	.	.	.	.	813
0.75-0.99	.	42	238	150	1	.	.	.	.	.	431
1.00-1.24	.	.	104	309	27	.	.	.	.	.	440
1.25-1.49	.	.	.	191	28	.	.	.	.	.	219
1.50-1.74	.	.	.	178	219	.	.	.	.	.	397
1.75-1.99	.	.	.	3	209	2	.	.	.	.	214
2.00-2.24	.	.	.	.	212	18	.	.	.	.	230
2.25-2.49	.	.	.	.	7	52	.	.	.	.	59
2.50-2.74	.	.	.	.	.	45	.	.	.	.	45
2.75-2.99	.	.	.	.	.	9	1	.	.	.	10
3.00-3.24	.	.	.	.	.	.	6	.	.	.	6
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	984	602	866	704	126	9	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.5 NO. OF CASES= 3090.

STATION E16 42.02N 80.55W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	312	19	4	.	.	.	.	.	.	335
0.25-0.49	.	1247	98	48	1	.	.	.	.	.	1394
0.50-0.74	.	1847	463	233	32	.	.	.	.	.	2575
0.75-0.99	.	648	457	267	62	1	.	.	.	.	1435
1.00-1.24	.	36	862	462	192	10	.	.	.	.	1562
1.25-1.49	.	.	218	300	128	13	.	.	.	.	659
1.50-1.74	.	.	45	360	336	59	.	.	.	.	800
1.75-1.99	.	.	.	55	245	62	1	.	.	.	363
2.00-2.24	.	.	.	15	255	135	8	.	.	.	413
2.25-2.49	.	.	.	1	26	127	10	.	.	.	164
2.50-2.74	.	.	.	.	8	126	20	.	.	.	154
2.75-2.99	.	.	.	.	.	22	28	.	.	.	50
3.00-3.24	.	.	.	.	.	4	34	.	.	.	38
3.25-3.49	.	.	.	.	.	.	13	.	.	.	13
3.50+	.	.	.	.	.	.	10	3	.	.	13
TOTAL	0	4090	2162	1745	1285	559	124	3	0	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 4.8 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E16 (42.02N 80.55W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.8	0.8	1.0	0.8	0.6	0.7	0.8	0.7	0.9	1.0	0.8	0.8
1957	0.9	0.8	1.2	1.2	1.1	0.9	1.0	0.8	0.9	1.0	1.3	1.3	1.0
1958	1.1	1.0	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.9	0.9	0.7	0.8
1959	0.9	0.7	0.9	0.7	0.4	0.3	0.4	0.6	0.7	0.8	0.8	0.6	0.6
1960	0.7	1.2	1.1	1.2	0.9	0.9	0.8	0.7	0.8	0.9	1.2	1.3	1.0
1961	1.1	0.9	1.1	1.1	1.1	0.9	0.8	0.9	0.9	1.2	1.2	1.1	1.0
1962	1.2	1.1	1.1	1.2	1.0	0.8	0.9	0.8	0.9	1.0	1.0	1.3	1.0
1963	1.2	1.1	1.2	1.2	1.1	0.7	0.9	1.0	1.0	0.9	1.5	1.2	1.1
1964	1.4	1.0	1.3	1.4	1.2	0.9	0.8	1.0	1.0	1.0	1.2	1.2	1.1
1965	1.4	1.2	1.1	1.1	0.9	0.9	0.8	1.0	1.0	1.3	1.4	1.1	1.1
1966	1.4	0.8	1.1	1.1	1.0	0.7	0.9	0.8	1.0	1.2	1.1	1.3	1.1
1967	1.4	1.3	1.0	1.2	1.0	0.9	0.7	0.8	0.9	1.1	1.4	1.2	1.1
1968	1.1	1.3	1.2	1.1	1.0	0.9	0.8	1.0	0.8	1.1	1.3	1.5	1.1
1969	1.5	1.0	1.3	1.1	0.9	0.8	0.8	0.7	0.8	1.1	1.2	1.3	1.0
1970	1.1	1.1	1.0	1.1	1.0	0.8	0.9	0.8	1.0	1.0	1.3	1.3	1.0
1971	1.5	1.3	1.2	1.2	0.8	0.7	0.8	0.9	0.7	0.7	1.1	1.1	1.0
1972	1.3	1.0	1.1	1.0	0.9	0.8	0.6	0.8	0.8	1.0	1.0	1.0	0.9
1973	1.4	1.1	1.2	1.4	1.0	0.8	0.9	0.8	0.9	1.0	1.4	1.2	1.1
1974	1.1	1.2	1.3	1.3	1.0	0.8	0.9	0.7	0.9	1.0	1.1	1.1	1.0
1975	1.2	1.1	1.2	1.2	0.6	0.8	0.7	0.7	0.9	1.0	1.1	1.2	1.0
1976	1.4	1.3	1.4	1.3	1.1	1.0	0.9	0.9	1.0	1.1	1.3	1.3	1.2
1977	1.3	1.1	1.1	1.1	0.9	0.8	0.9	0.9	0.9	1.0	1.3	1.3	1.0
1978	1.4	0.7	1.0	1.1	0.8	0.8	0.7	0.7	0.8	1.0	1.0	1.3	0.9
1979	1.3	1.1	1.1	1.1	0.8	0.8	0.7	0.9	0.8	1.1	1.1	1.2	1.0
1980	1.1	1.0	1.0	0.9	0.8	0.8	0.6	0.7	0.8	1.1	1.2	1.1	0.9
1981	1.0	1.0	1.1	1.3	0.7	0.9	0.7	0.7	0.9	1.0	1.0	1.0	1.0
1982	1.5	0.9	1.0	1.3	0.5	0.7	0.6	0.6	0.7	0.8	1.0	1.1	0.9
1983	1.0	0.7	1.0	1.0	0.9	0.5	0.7	0.6	0.7	1.0	1.0	1.3	0.9
1984	0.9	1.0	1.2	0.9	1.1	0.8	0.7	0.7	0.8	0.7	1.2	1.1	0.9
1985	1.3	1.0	1.2	1.1	0.8	0.9	0.8	0.8	0.9	1.0	1.3	1.4	1.1
1986	1.2	0.9	1.1	1.1	0.9	1.0	0.9	1.0	0.9	1.0	1.0	0.9	1.0
1987	1.1	0.9	1.0	1.1	0.9	0.9	0.8	0.9	0.7	1.0	1.3	1.2	1.0
MEAN	1.2	1.0	1.1	1.1	0.9	0.8	0.8	0.8	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E16 (42.02N 80.55W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.3	2.8	3.8	3.3	2.5	3.1	1.9	1.9	2.0	2.3	2.9	2.2
1957	2.2	2.6	2.7	3.6	2.7	3.0	2.6	2.1	2.3	2.4	2.9	2.6
1958	3.1	2.6	2.3	2.8	2.3	2.0	2.0	1.7	1.9	2.5	3.1	2.8
1959	2.6	1.9	2.9	3.3	1.2	1.2	1.6	1.7	2.2	2.5	2.2	2.3
1960	2.2	3.0	3.0	3.2	2.5	3.2	2.6	1.8	2.0	3.2	2.9	3.1
1961	3.0	2.9	2.4	3.5	3.0	2.9	2.7	2.5	2.5	3.3	3.2	3.8
1962	2.7	3.1	3.0	3.2	3.0	2.5	2.5	2.3	2.7	2.6	3.4	3.3
1963	3.2	2.7	3.6	3.3	3.1	2.5	2.4	2.7	2.7	2.5	3.1	3.0
1964	3.3	2.3	3.7	3.1	3.9	2.6	2.3	2.3	2.7	2.8	3.1	3.1
1965	3.8	2.6	3.3	3.8	2.5	2.3	2.5	2.7	2.6	3.5	3.8	2.9
1966	3.9	2.7	3.3	3.4	2.8	2.3	2.7	2.6	3.1	3.0	2.9	3.7
1967	3.5	3.1	2.9	3.6	2.7	2.9	2.4	2.3	2.5	3.2	3.7	2.7
1968	3.5	3.0	3.4	3.3	2.9	2.5	2.1	2.7	2.5	2.8	3.7	3.8
1969	3.8	3.0	3.1	3.8	2.7	2.4	2.8	2.5	2.4	3.0	2.8	3.3
1970	3.1	2.4	3.1	4.4	2.7	2.6	2.7	2.6	3.0	2.5	3.6	3.5
1971	4.5	2.7	3.2	3.0	2.5	2.4	2.6	2.4	1.9	2.5	2.9	3.1
1972	4.8	3.7	3.1	3.4	3.0	2.7	1.7	2.9	2.2	2.8	3.5	3.4
1973	3.1	2.8	3.2	3.2	2.7	2.3	2.7	2.6	2.6	3.0	3.4	2.7
1974	3.1	3.1	3.1	3.7	2.9	2.8	2.2	2.0	2.8	2.5	3.7	3.5
1975	3.5	3.7	3.1	3.7	1.9	2.3	2.1	2.3	2.8	2.7	3.0	3.6
1976	3.6	2.8	3.6	3.3	2.8	2.8	2.4	2.4	2.8	3.0	2.8	3.2
1977	3.3	2.6	3.2	3.7	2.9	2.6	2.8	2.2	2.6	2.6	3.2	3.2
1978	4.3	2.5	3.0	3.3	3.1	4.3	2.1	2.1	2.0	2.3	2.8	3.7
1979	3.1	3.6	3.0	4.1	2.6	2.3	2.1	2.5	2.3	2.5	2.6	3.2
1980	3.7	2.5	3.5	2.8	2.3	3.0	2.1	1.9	2.4	3.5	2.6	3.5
1981	3.1	2.8	2.9	2.9	2.3	2.4	2.2	2.0	2.7	3.1	3.1	2.3
1982	3.8	2.9	3.9	4.6	2.3	2.3	1.6	2.0	2.1	2.4	2.4	3.1
1983	2.9	2.7	2.5	2.6	2.2	2.2	1.8	2.5	2.2	2.5	2.5	3.4
1984	2.5	3.4	3.2	3.3	3.2	2.1	2.2	2.0	2.0	2.4	2.6	2.8
1985	3.2	2.7	3.5	3.3	2.7	2.5	1.9	2.2	2.2	2.5	3.0	3.7
1986	3.0	2.8	3.4	2.7	2.8	2.6	2.3	2.6	2.6	2.6	3.0	2.5
1987	3.4	2.6	3.3	3.9	2.3	2.2	2.3	2.5	2.2	2.2	3.1	3.2

32 YR. STATISTICS FOR WIS STATION E16

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	4.8
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	271.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012518

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	72	.	.	.	.	.	.	.	.	72
0.25-0.49	.	379	9	2	.	.	.	.	.	.	390
0.50-0.74	.	662	197	25	.	.	.	.	.	.	884
0.75-0.99	.	75	330	52	1	.	.	.	.	.	458
1.00-1.24	.	.	329	95	9	.	.	.	.	.	433
1.25-1.49	.	.	11	227	9	.	.	.	.	.	247
1.50-1.74	.	.	.	207	24	.	.	.	.	.	231
1.75-1.99	.	.	.	33	31	.	.	.	.	.	64
2.00-2.24	.	.	.	2	28	.	.	.	.	.	30
2.25-2.49	.	.	.	.	7	1	.	.	.	.	8
2.50-2.74	.	.	.	.	1	3	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1188	876	643	110	4	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 2649.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	47	1	.	.	.	.	.	.	.	48
0.25-0.49	.	296	12	1	.	.	.	.	.	.	309
0.50-0.74	.	649	147	22	1	.	.	.	.	.	819
0.75-0.99	.	74	309	55	.	.	.	.	.	.	438
1.00-1.24	.	.	303	117	14	.	.	.	.	.	434
1.25-1.49	.	.	4	133	11	.	.	.	.	.	148
1.50-1.74	.	.	.	115	38	1	.	.	.	.	154
1.75-1.99	.	.	.	11	34	.	.	.	.	.	45
2.00-2.24	.	.	.	1	37	1	.	.	.	.	39
2.25-2.49	.	.	.	.	12	4	.	.	.	.	16
2.50-2.74	.	.	.	.	1	12	.	.	.	.	13
2.75-2.99	.	.	.	.	.	5	.	.	.	.	5
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1066	776	455	148	25	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 3.9 NO. OF CASES= 2325.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	116	.	.	.	.	.	.	.	.	116
0.25-0.49	.	544	31	7	.	.	.	.	.	.	582
0.50-0.74	.	744	424	96	.	.	.	.	.	.	1264
0.75-0.99	.	75	432	234	4	.	.	.	.	.	745
1.00-1.24	.	.	413	496	115	.	.	.	.	.	1024
1.25-1.49	.	.	21	377	101	1	.	.	.	.	500
1.50-1.74	.	.	.	451	335	5	.	.	.	.	791
1.75-1.99	.	.	.	40	382	5	.	.	.	.	427
2.00-2.24	.	.	.	.	462	34	.	.	.	.	496
2.25-2.49	.	.	.	.	164	90	.	.	.	.	254
2.50-2.74	.	.	.	.	23	171	.	.	.	.	194
2.75-2.99	.	.	.	.	.	77	.	.	.	.	77
3.00-3.24	.	.	.	.	.	53	14	.	.	.	67
3.25-3.49	.	.	.	.	.	4	13	.	.	.	17
3.50+	.	.	.	.	.	.	33	1	.	.	34
TOTAL	0	1479	1321	1701	1586	440	60	1	0	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.8 NO. OF CASES= 6175.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	89	1	.	.	.	.	.	.	.	90
0.25-0.49	.	517	14	4	.	.	.	.	.	.	535
0.50-0.74	.	703	304	91	2	.	.	.	.	.	1100
0.75-0.99	.	106	302	178	8	.	.	.	.	.	594
1.00-1.24	.	.	256	296	77	.	.	.	.	.	629
1.25-1.49	.	.	38	136	51	1	.	.	.	.	226
1.50-1.74	.	.	1	144	95	8	.	.	.	.	248
1.75-1.99	.	.	.	17	102	14	.	.	.	.	133
2.00-2.24	.	.	.	1	163	9	.	.	.	.	173
2.25-2.49	.	.	.	.	49	21	.	.	.	.	70
2.50-2.74	.	.	.	.	6	58	.	.	.	.	64
2.75-2.99	.	.	.	.	.	32	.	.	.	.	32
3.00-3.24	.	.	.	.	.	10	2	.	.	.	12
3.25-3.49	.	.	.	.	.	1	5	.	.	.	6
3.50+	.	.	.	.	.	.	13	.	.	.	13
TOTAL	0	1415	916	867	553	154	20	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.3 NO. OF CASES= 3688.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	117	3	.	.	.	.	.	.	.	120
0.25-0.49	.	478	25	5	.	.	.	.	.	.	508
0.50-0.74	.	647	180	101	.	.	.	.	.	.	928
0.75-0.99	.	118	79	88	9	.	.	.	.	.	294
1.00-1.24	.	.	118	43	29	.	.	.	.	.	190
1.25-1.49	.	.	10	13	5	3	.	.	.	.	31
1.50-1.74	.	.	1	8	12	.	.	.	.	.	21
1.75-1.99	.	.	.	2	2	1	.	.	.	.	5
2.00-2.24	.	.	.	1	6	.	.	.	.	.	7
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1360	416	261	64	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.6 NO. OF CASES= 1981.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	88	2	.	.	.	.	.	.	.	90
0.25-0.49	.	358	35	7	.	.	.	.	.	.	400
0.50-0.74	.	466	58	44	1	.	.	.	.	.	569
0.75-0.99	.	142	70	17	1	.	.	.	.	.	230
1.00-1.24	.	.	148	10	3	.	.	.	.	.	161
1.25-1.49	.	.	26	17	7	.	.	.	.	.	50
1.50-1.74	.	.	.	20	5	.	.	.	.	.	25
1.75-1.99	.	.	.	3	3	.	.	.	.	.	6
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1054	339	119	20	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 1441.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	110	2	.	.	.	.	.	.	.	112
0.25-0.49	.	499	29	3	.	.	.	.	.	.	531
0.50-0.74	.	934	55	43	1	.	.	.	.	.	1033
0.75-0.99	.	222	224	7	2	.	.	.	.	.	455
1.00-1.24	.	1	468	2	3	.	.	.	.	.	474
1.25-1.49	.	.	142	32	2	.	.	.	.	.	176
1.50-1.74	.	.	1	117	2	1	.	.	.	.	121
1.75-1.99	.	.	.	39	1	1	.	.	.	.	41
2.00-2.24	.	.	.	14	.	1	.	.	.	.	15
2.25-2.49	.	.	.	.	3	.	.	.	.	.	3
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1766	921	257	17	3	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.5 NO. OF CASES= 2781.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	176	2	1	.	.	.	.	.	.	179
0.25-0.49	.	751	33	10	.	.	.	.	.	.	794
0.50-0.74	.	1193	36	18	2	.	.	.	.	.	1249
0.75-0.99	.	380	293	6	2	.	.	.	.	.	681
1.00-1.24	.	7	825	1	.	.	.	.	.	.	833
1.25-1.49	.	.	294	100	.	.	.	.	.	.	394
1.50-1.74	.	.	8	413	.	.	.	.	.	.	421
1.75-1.99	.	.	.	148	.	.	.	.	.	.	148
2.00-2.24	.	.	.	84	.	.	.	.	.	.	84
2.25-2.49	.	.	.	3	12	.	.	.	.	.	15
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	5	.	.	.	.	.	5
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2507	1491	784	26	0	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.7 NO. OF CASES= 4506.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	357	4	.	.	.	.	.	.	.	361
0.25-0.49	.	1532	43	13	.	.	.	.	.	.	1588
0.50-0.74	.	2351	14	9	1	.	.	.	.	.	2375
0.75-0.99	.	1747	28	.	2	.	.	.	.	.	1777
1.00-1.24	.	75	1397	.	2	.	.	.	.	.	1474
1.25-1.49	.	.	609	1	.	.	.	.	.	.	610
1.50-1.74	.	.	159	110	.	.	.	.	.	.	269
1.75-1.99	.	.	.	60	.	.	.	.	.	.	60
2.00-2.24	.	.	.	13	.	.	.	.	.	.	13
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6062	2254	206	5	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 7984.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	218	5	.	.	.	.	.	.	.	223
0.25-0.49	.	1225	27	1	.	.	.	.	.	.	1253
0.50-0.74	.	2844	91	17	.	.	.	.	.	.	2952
0.75-0.99	.	1569	100	5	2	.	.	.	.	.	1676
1.00-1.24	.	487	1202	36	.	.	.	.	.	.	1725
1.25-1.49	.	.	484	34	2	.	.	.	.	.	520
1.50-1.74	.	.	141	106	13	4	.	.	.	.	264
1.75-1.99	.	.	2	56	4	.	.	.	.	.	62
2.00-2.24	.	.	.	22	20	.	.	.	.	.	42
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	6343	2052	277	52	6	0	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 8176.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	252	58	26	1	.	.	.	.	.	337
0.25-0.49	.	951	91	112	11	.	.	.	.	.	1165
0.50-0.74	.	2075	457	286	90	.	.	.	.	.	2908
0.75-0.99	.	656	760	207	104	3	.	.	.	.	1750
1.00-1.24	.	198	1438	484	197	36	.	.	.	.	2353
1.25-1.49	.	.	321	801	209	56	.	.	.	.	1387
1.50-1.74	.	.	44	1140	255	55	5	.	.	.	1499
1.75-1.99	.	.	1	567	112	36	4	.	.	.	720
2.00-2.24	.	.	.	179	334	42	8	.	.	.	563
2.25-2.49	.	.	.	2	135	7	4	.	.	.	148
2.50-2.74	.	.	.	.	77	5	8	.	.	.	90
2.75-2.99	.	.	.	.	18	2	.	.	.	.	20
3.00-3.24	.	.	.	1	8	5	2	.	.	.	16
3.25-3.49	.	.	.	.	.	5	.	.	.	.	5
3.50+	.	.	.	.	.	2	1	.	.	.	3
TOTAL	0	4132	3190	3805	1551	254	32	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.3 NO. OF CASES= 12148.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	271	37	3	.	.	.	.	.	.	311
0.25-0.49	.	1019	283	144	3	.	.	.	.	.	1449
0.50-0.74	.	1120	853	948	144	.	.	.	.	.	3066
0.75-0.99	.	185	604	565	378	5	.	.	.	.	1737
1.00-1.24	.	7	875	573	608	50	.	.	.	.	2113
1.25-1.49	.	.	102	623	282	70	1	.	.	.	1078
1.50-1.74	.	.	6	936	434	177	4	.	.	.	1557
1.75-1.99	.	.	.	332	402	176	14	.	.	.	924
2.00-2.24	.	.	.	141	551	300	34	.	.	.	1026
2.25-2.49	.	.	.	4	226	204	45	1	.	.	480
2.50-2.74	.	.	.	.	121	231	89	.	.	.	441
2.75-2.99	.	.	.	.	29	113	66	1	.	.	209
3.00-3.24	.	.	.	.	13	57	114	4	.	.	188
3.25-3.49	.	.	.	.	5	18	47	2	.	.	72
3.50+	.	.	.	.	1	13	64	27	1	.	106
TOTAL	0	2602	2760	4270	3197	1414	478	35	1	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.8 MEAN TP(SEC)= 5.0 NO. OF CASES= 13825.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	237	2	.	.	.	.	.	.	.	239
0.25-0.49	.	965	44	7	.	.	.	.	.	.	1016
0.50-0.74	.	1033	917	332	6	.	.	.	.	.	2288
0.75-0.99	.	126	519	701	41	.	.	.	.	.	1387
1.00-1.24	.	1	418	890	483	2	.	.	.	.	1794
1.25-1.49	.	.	26	459	405	6	.	.	.	.	896
1.50-1.74	.	.	1	599	590	145	1	.	.	.	1336
1.75-1.99	.	.	.	71	472	168	1	.	.	.	712
2.00-2.24	.	.	.	10	764	221	23	.	.	.	1018
2.25-2.49	.	.	.	.	238	385	24	.	.	.	647
2.50-2.74	.	.	.	.	64	566	49	.	.	.	679
2.75-2.99	.	.	.	.	7	275	70	1	.	.	353
3.00-3.24	.	.	.	.	.	144	202	2	.	.	348
3.25-3.49	.	.	.	.	.	17	122	1	.	.	140
3.50+	.	.	.	.	.	6	224	37	3	.	270
TOTAL	0	2362	1927	3069	3070	1935	716	41	3	0	

MEAN HS(M) = 1.4 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 5.2 NO. OF CASES= 12294.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	146	.	.	.	.	.	.	.	.	146
0.25-0.49	.	792	18	2	.	.	.	.	.	.	812
0.50-0.74	.	764	641	101	.	.	.	.	.	.	1506
0.75-0.99	.	89	378	358	1	.	.	.	.	.	826
1.00-1.24	.	.	268	562	133	.	.	.	.	.	963
1.25-1.49	.	.	4	240	147	1	.	.	.	.	392
1.50-1.74	.	.	.	291	359	22	.	.	.	.	672
1.75-1.99	.	.	.	11	436	41	.	.	.	.	488
2.00-2.24	.	.	.	.	601	71	2	.	.	.	674
2.25-2.49	.	.	.	.	188	140	2	.	.	.	330
2.50-2.74	.	.	.	.	18	294	2	.	.	.	314
2.75-2.99	.	.	.	.	.	95	6	.	.	.	101
3.00-3.24	.	.	.	.	.	64	41	.	.	.	105
3.25-3.49	.	.	.	.	.	3	28	.	.	.	31
3.50+	.	.	.	.	.	.	48	1	1	.	50
TOTAL	0	1791	1309	1565	1883	731	129	1	1	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.8 NO. OF CASES= 6944.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	69	.	.	.	.	.	.	.	.	69
0.25-0.49	.	412	17	1	.	.	.	.	.	.	430
0.50-0.74	.	549	363	53	.	.	.	.	.	.	965
0.75-0.99	.	40	250	188	1	.	.	.	.	.	479
1.00-1.24	.	.	141	348	22	1	.	.	.	.	512
1.25-1.49	.	.	4	194	28	.	.	.	.	.	226
1.50-1.74	.	.	.	219	151	1	.	.	.	.	371
1.75-1.99	.	.	.	9	289	.	.	.	.	.	298
2.00-2.24	.	.	.	1	376	2	.	.	.	.	379
2.25-2.49	.	.	.	.	129	12	.	.	.	.	141
2.50-2.74	.	.	.	.	26	78	.	.	.	.	104
2.75-2.99	.	.	.	.	.	25	.	.	.	.	25
3.00-3.24	.	.	.	.	.	25	.	.	.	.	25
3.25-3.49	.	.	.	.	.	4	1	.	.	.	5
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1070	775	1013	1022	148	6	0	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.6 NO. OF CASES= 3786.

STATION E17 42.15N 80.35W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

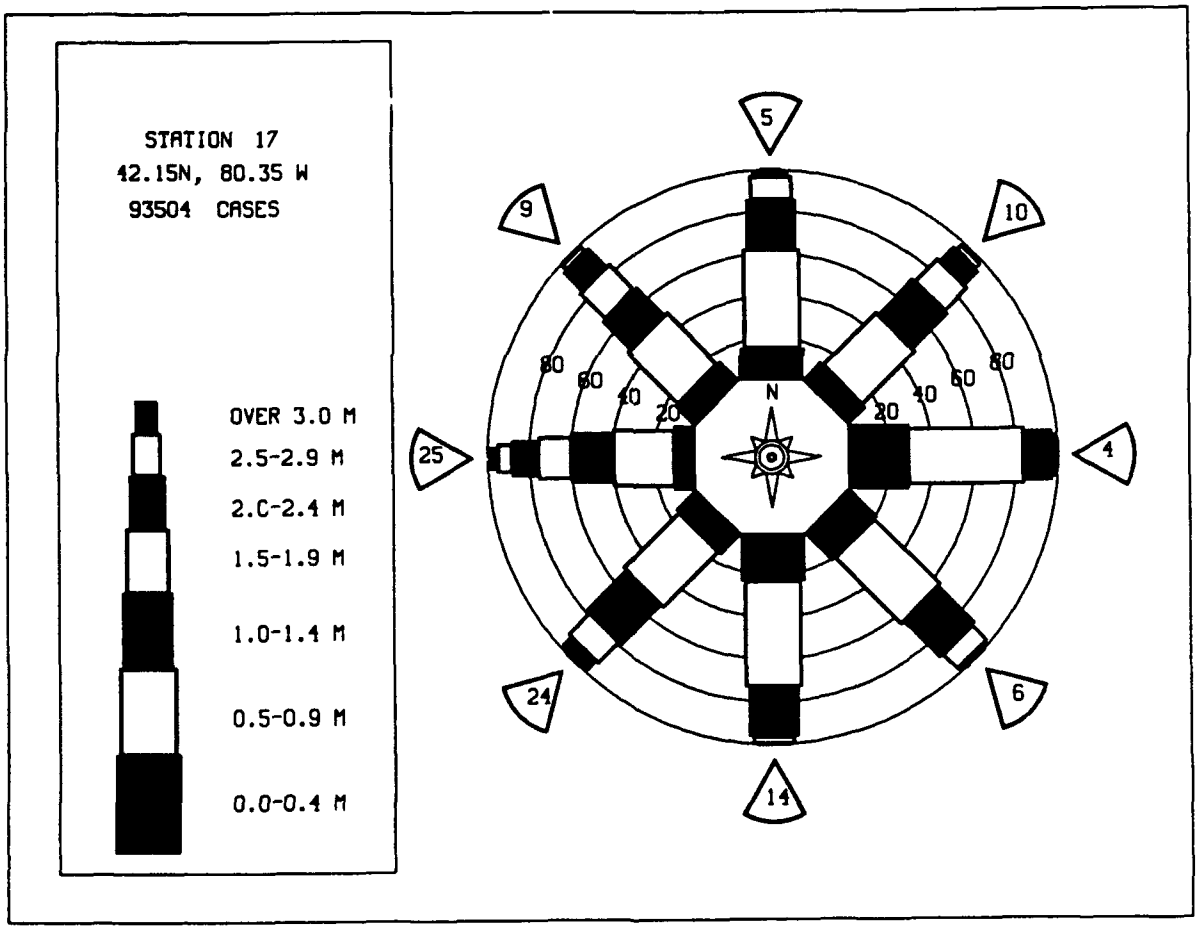
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	48	.	.	.	.	.	.	.	.	48
0.25-0.49	.	297	10	1	.	.	.	.	.	.	308
0.50-0.74	.	570	229	21	.	.	.	.	.	.	820
0.75-0.99	.	48	258	74	2	.	.	.	.	.	382
1.00-1.24	.	.	201	224	6	.	.	.	.	.	431
1.25-1.49	.	.	.	193	9	.	.	.	.	.	202
1.50-1.74	.	.	.	280	73	.	.	.	.	.	353
1.75-1.99	.	.	.	32	149	.	.	.	.	.	181
2.00-2.24	.	.	.	2	154	.	.	.	.	.	156
2.25-2.49	.	.	.	.	48	1	.	.	.	.	49
2.50-2.74	.	.	.	.	9	28	.	.	.	.	37
2.75-2.99	.	.	.	.	.	7	.	.	.	.	7
3.00-3.24	.	.	.	.	.	5	.	.	.	.	5
3.25-3.49	.	.	.	.	.	3	1	.	.	.	4
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	963	698	827	450	44	2	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 2801.

STATION E17 42.15N 80.35W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	242	11	3	.	.	.	.	.	.	256
0.25-0.49	.	1102	73	32	1	.	.	.	.	.	1208
0.50-0.74	.	1731	497	221	25	.	.	.	.	.	2474
0.75-0.99	.	566	496	274	56	.	.	.	.	.	1392
1.00-1.24	.	77	880	418	170	8	.	.	.	.	1553
1.25-1.49	.	.	210	358	127	14	.	.	.	.	709
1.50-1.74	.	.	36	516	239	42	1	.	.	.	834
1.75-1.99	.	.	.	143	242	44	2	.	.	.	431
2.00-2.24	.	.	.	47	350	68	6	.	.	.	471
2.25-2.49	.	.	.	.	122	86	7	.	.	.	215
2.50-2.74	.	.	.	.	36	145	14	.	.	.	195
2.75-2.99	.	.	.	.	6	63	14	.	.	.	83
3.00-3.24	.	.	.	.	2	37	37	.	.	.	76
3.25-3.49	.	.	.	.	.	5	22	.	.	.	27
3.50+	.	.	.	.	.	2	39	6	.	.	47
TOTAL	0	3718	2203	2012	1376	514	142	6	0	0	

MEAN HS(M)= 1.1 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 4.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E17 (42.15N 80.35W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.8	0.8	1.0	0.8	0.6	0.8	0.8	0.8	0.9	1.1	0.8	0.8
1957	0.9	0.8	1.3	1.3	1.1	1.0	1.1	0.8	1.0	1.1	1.4	1.4	1.1
1958	1.1	1.0	0.8	0.8	0.6	0.7	0.6	0.6	0.7	0.8	0.9	0.8	0.8
1959	0.9	0.7	0.9	0.7	0.4	0.3	0.4	0.6	0.7	0.8	0.8	0.6	0.7
1960	0.7	1.3	1.2	1.3	1.0	1.0	0.8	0.8	0.9	1.0	1.3	1.4	1.0
1961	1.2	1.0	1.1	1.2	1.1	1.0	0.9	1.0	1.0	1.3	1.3	1.2	1.1
1962	1.4	1.1	1.2	1.2	1.1	0.9	1.0	0.9	1.0	1.1	1.1	1.4	1.1
1963	1.3	1.2	1.3	1.3	1.1	0.7	1.0	1.0	1.0	1.0	1.6	1.4	1.2
1964	1.5	1.1	1.4	1.5	1.3	0.9	0.9	1.0	1.1	1.1	1.3	1.3	1.2
1965	1.5	1.3	1.1	1.2	1.0	1.0	0.9	1.0	1.0	1.4	1.5	1.3	1.2
1966	1.6	0.9	1.2	1.2	1.1	0.8	1.0	0.9	1.1	1.3	1.2	1.4	1.1
1967	1.6	1.4	1.1	1.3	1.1	0.9	0.7	0.9	0.9	1.2	1.6	1.4	1.2
1968	1.1	1.4	1.2	1.2	1.1	1.0	0.9	1.0	0.9	1.2	1.4	1.6	1.2
1969	1.7	1.0	1.4	1.2	1.0	0.9	0.8	0.8	0.9	1.2	1.3	1.4	1.1
1970	1.2	1.2	1.1	1.3	1.1	0.9	0.9	0.9	1.1	1.1	1.4	1.5	1.1
1971	1.6	1.4	1.3	1.3	0.9	0.8	0.9	0.9	0.7	0.7	1.2	1.2	1.1
1972	1.4	1.1	1.2	1.1	0.9	0.8	0.7	0.9	0.9	1.0	1.1	1.2	1.0
1973	1.5	1.2	1.3	1.5	1.1	0.9	1.0	0.9	1.0	1.1	1.5	1.3	1.2
1974	1.2	1.3	1.4	1.4	1.1	0.9	0.9	0.8	1.0	1.0	1.2	1.3	1.1
1975	1.4	1.2	1.3	1.3	0.7	0.9	0.7	0.7	1.0	1.1	1.2	1.3	1.1
1976	1.6	1.4	1.5	1.4	1.2	1.1	1.0	1.0	1.1	1.2	1.5	1.4	1.3
1977	1.5	1.3	1.2	1.2	0.9	0.9	0.9	1.0	1.0	1.1	1.4	1.5	1.2
1978	1.6	0.7	1.0	1.2	0.9	0.9	0.8	0.7	0.9	1.1	1.2	1.5	1.0
1979	1.5	1.1	1.2	1.2	0.8	0.8	0.8	0.9	0.9	1.2	1.2	1.3	1.1
1980	1.2	1.0	1.1	1.0	0.8	0.8	0.7	0.7	0.9	1.2	1.3	1.2	1.0
1981	1.1	1.1	1.2	1.4	0.8	1.0	0.8	0.8	0.9	1.1	1.1	1.1	1.0
1982	1.6	1.0	1.1	1.4	0.6	0.8	0.7	0.7	0.7	0.8	1.1	1.2	1.0
1983	1.1	0.7	1.0	1.0	0.9	0.6	0.7	0.6	0.8	1.1	1.1	1.4	0.9
1984	1.0	1.1	1.3	1.0	1.2	0.9	0.8	0.7	0.8	0.8	1.2	1.3	1.0
1985	1.5	1.1	1.3	1.3	1.0	1.0	0.9	0.9	0.9	1.1	1.4	1.6	1.2
1986	1.4	1.0	1.2	1.2	1.0	1.0	1.0	1.1	1.0	1.1	1.1	1.0	1.1
1987	1.2	1.0	1.0	1.2	0.9	1.0	0.9	1.0	0.8	1.1	1.4	1.4	1.1
MEAN	1.3	1.1	1.2	1.2	1.0	0.9	0.8	0.9	0.9	1.1	1.3	1.3	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E17 (42.15N 80.35W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.3	2.7	3.6	3.4	2.7	3.3	2.2	2.1	2.0	2.4	3.2	2.4
1957	2.3	2.7	3.0	3.9	2.8	3.5	2.7	2.2	2.5	2.5	3.1	2.9
1958	3.3	2.8	2.4	3.0	2.3	2.0	1.9	1.8	1.9	2.8	3.1	3.0
1959	3.0	1.8	3.0	3.2	1.2	1.1	1.7	2.0	2.3	2.6	2.4	2.4
1960	2.4	3.5	3.2	3.6	2.5	3.6	2.6	2.0	2.1	3.7	3.4	3.3
1961	3.3	3.3	2.4	4.2	3.4	3.1	2.8	2.8	2.9	3.9	3.8	4.2
1962	3.2	3.3	3.1	3.5	3.5	2.7	2.6	2.6	2.7	2.8	3.7	3.7
1963	3.7	3.1	3.8	3.7	3.3	2.7	2.5	2.9	2.9	2.7	3.3	3.3
1964	3.8	2.6	4.4	3.4	4.2	2.7	2.4	2.6	2.9	3.2	3.6	3.5
1965	4.5	2.5	3.8	4.6	2.9	2.7	2.6	2.9	2.7	3.5	4.3	3.0
1966	4.6	2.8	3.8	3.6	3.3	2.6	3.1	2.9	3.6	3.3	3.4	3.9
1967	4.0	3.4	3.1	4.1	3.1	3.0	2.7	2.5	2.6	3.2	4.0	3.0
1968	4.0	3.5	3.5	4.0	3.4	2.7	2.4	3.1	2.9	3.1	4.2	4.3
1969	4.5	3.5	3.6	4.2	3.1	2.6	3.1	2.6	2.8	3.4	3.2	3.6
1970	3.8	2.5	3.5	4.6	2.8	3.0	3.1	3.0	3.5	2.8	4.1	3.9
1971	5.3	3.0	3.4	3.3	2.9	2.6	2.9	2.8	2.0	2.7	3.0	3.5
1972	5.6	3.8	3.4	3.5	3.2	2.5	1.9	3.1	2.3	3.1	3.7	3.9
1973	3.6	2.9	3.6	3.8	3.3	2.5	3.1	2.9	3.0	3.2	3.8	3.1
1974	3.3	3.3	3.5	4.5	3.4	3.2	2.3	2.3	3.1	2.5	4.3	3.7
1975	3.8	4.5	3.7	4.1	2.4	2.7	2.3	2.4	2.9	3.0	3.4	4.3
1976	4.2	3.3	4.0	3.4	3.4	3.0	2.6	2.5	3.1	3.4	3.3	3.9
1977	4.1	2.9	3.7	4.3	2.9	2.9	3.0	2.4	3.0	2.7	3.6	3.6
1978	5.1	2.4	3.6	3.6	3.7	4.7	2.6	2.4	2.1	2.6	3.2	4.2
1979	3.8	3.7	3.3	4.8	2.8	2.6	2.4	2.7	2.6	2.8	2.8	3.5
1980	4.4	3.3	3.9	3.0	2.7	3.4	2.2	2.2	2.6	4.0	2.8	4.2
1981	3.6	3.0	3.2	3.4	2.5	2.6	2.0	2.1	3.0	3.6	3.5	2.5
1982	4.4	3.0	4.8	5.1	2.3	2.4	2.1	1.9	2.4	2.5	2.9	3.8
1983	3.4	2.9	2.7	3.0	2.4	2.3	2.1	2.7	2.3	3.0	2.7	3.8
1984	2.7	3.5	3.3	3.5	3.5	2.1	2.4	1.9	2.3	2.4	3.0	3.2
1985	3.9	2.9	4.1	3.9	2.9	2.8	2.1	2.3	2.5	3.0	3.1	4.1
1986	3.3	2.9	3.6	2.8	3.1	2.7	2.7	2.8	3.0	2.8	3.3	2.6
1987	3.9	2.6	3.5	4.2	2.5	2.3	2.3	2.5	2.5	2.5	3.4	3.7

32 YR. STATISTICS FOR WIS STATION E17

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.1
MEAN PEAK WAVE PERIOD	(SECONDS)	4.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	269.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012518

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	126	.	.	.	.	.	.	.	.	126
0.25-0.49	.	447	9	.	.	.	.	.	.	.	456
0.50-0.74	.	706	79	13	.	.	.	.	.	.	798
0.75-0.99	.	204	168	37	.	.	.	.	.	.	409
1.00-1.24	.	1	317	55	4	.	.	.	.	.	377
1.25-1.49	.	.	88	78	7	.	.	.	.	.	173
1.50-1.74	.	.	2	73	9	.	.	.	.	.	84
1.75-1.99	.	.	.	10	3	.	.	.	.	.	13
2.00-2.24	.	.	.	2	2	.	.	.	.	.	4
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1484	663	268	27	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.5 NO. OF CASES= 2293.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	62	.	.	.	.	.	.	.	.	62
0.25-0.49	.	320	13	1	.	.	.	.	.	.	334
0.50-0.74	.	612	72	16	.	.	.	.	.	.	700
0.75-0.99	.	150	147	41	1	.	.	.	.	.	339
1.00-1.24	.	.	193	85	3	.	.	.	.	.	281
1.25-1.49	.	.	23	68	5	.	.	.	.	.	96
1.50-1.74	.	.	1	72	18	.	.	.	.	.	91
1.75-1.99	.	.	.	1	28	.	.	.	.	.	29
2.00-2.24	.	.	.	.	25	.	.	.	.	.	25
2.25-2.49	.	.	.	.	10	.	.	.	.	.	10
2.50-2.74	.	.	.	.	4	4	.	.	.	.	8
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	1144	449	284	94	8	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 1862.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	171	.	.	.	.	.	.	.	.	171
0.25-0.49	.	704	27	1	.	.	.	.	.	.	732
0.50-0.74	.	931	341	63	.	.	.	.	.	.	1335
0.75-0.99	.	128	433	194	.	.	.	.	.	.	755
1.00-1.24	.	1	460	422	25	.	.	.	.	.	908
1.25-1.49	.	.	13	398	40	.	.	.	.	.	451
1.50-1.74	.	.	1	623	187	1	.	.	.	.	812
1.75-1.99	.	.	.	33	300	3	.	.	.	.	336
2.00-2.24	.	.	.	.	376	3	.	.	.	.	379
2.25-2.49	.	.	.	.	148	5	.	.	.	.	153
2.50-2.74	.	.	.	.	45	70	.	.	.	.	115
2.75-2.99	.	.	.	.	.	44	.	.	.	.	44
3.00-3.24	.	.	.	.	.	29	.	.	.	.	29
3.25-3.49	.	.	.	.	1	12	1	.	.	.	14
3.50+	.	.	.	.	.	4	11	.	.	.	15
TOTAL	0	1935	1275	1734	1122	171	12	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 4.4 NO. OF CASES= 5859.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	127	.	.	.	.	.	.	.	.	127
0.25-0.49	.	510	16	1	.	.	.	.	.	.	527
0.50-0.74	.	685	377	67	.	.	.	.	.	.	1129
0.75-0.99	.	70	334	198	1	.	.	.	.	.	603
1.00-1.24	.	.	325	360	35	.	.	.	.	.	720
1.25-1.49	.	.	7	254	50	.	.	.	.	.	311
1.50-1.74	.	.	.	285	91	2	.	.	.	.	378
1.75-1.99	.	.	.	18	146	10	.	.	.	.	174
2.00-2.24	.	.	.	.	165	8	.	.	.	.	173
2.25-2.49	.	.	.	.	55	14	.	.	.	.	69
2.50-2.74	.	.	.	.	22	48	.	.	.	.	70
2.75-2.99	.	.	.	.	.	16	.	.	.	.	16
3.00-3.24	.	.	.	.	.	19	2	.	.	.	21
3.25-3.49	.	.	.	.	.	4	2	.	.	.	6
3.50+	.	.	.	.	.	2	1	.	.	.	3
TOTAL	0	1392	1059	1183	565	123	5	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 4059.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	174	.	.	.	.	.	.	.	.	174
0.25-0.49	.	526	19	.	.	.	.	.	.	.	545
0.50-0.74	.	486	267	69	1	.	.	.	.	.	823
0.75-0.99	.	42	150	63	2	.	.	.	.	.	257
1.00-1.24	.	.	125	44	11	.	.	.	.	.	180
1.25-1.49	.	.	3	63	8	.	.	.	.	.	74
1.50-1.74	.	.	.	26	10	1	.	.	.	.	37
1.75-1.99	.	.	.	4	4	.	.	.	.	.	8
2.00-2.24	.	.	.	1	6	.	.	.	.	.	7
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1228	564	270	44	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.6 NO. OF CASES= 1980.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	116	.	.	.	.	.	.	.	.	116
0.25-0.49	.	352	17	1	.	.	.	.	.	.	370
0.50-0.74	.	317	95	28	.	.	.	.	.	.	440
0.75-0.99	.	65	103	11	2	.	.	.	.	.	181
1.00-1.24	.	.	130	13	1	.	.	.	.	.	144
1.25-1.49	.	.	8	42	1	.	.	.	.	.	51
1.50-1.74	.	.	.	34	2	.	.	.	.	.	36
1.75-1.99	.	.	.	3	2	.	.	.	.	.	5
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	850	353	132	13	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.5 NO. OF CASES= 1269.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	131	.	.	.	.	.	.	.	.	131
0.25-0.49	.	501	24	1	.	.	.	.	.	.	526
0.50-0.74	.	657	47	29	.	.	.	.	.	.	733
0.75-0.99	.	204	151	8	.	.	.	.	.	.	363
1.00-1.24	.	2	361	9	5	.	.	.	.	.	377
1.25-1.49	.	.	79	29	.	.	.	.	.	.	108
1.50-1.74	.	.	2	68	3	1	.	.	.	.	74
1.75-1.99	.	.	.	22	.	.	.	.	.	.	22
2.00-2.24	.	.	.	11	1	.	.	.	.	.	12
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1495	664	177	14	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.5 NO. OF CASES= 2208.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	242	1	.	.	.	.	.	.	.	243
0.25-0.49	.	722	34	3	.	.	.	.	.	.	759
0.50-0.74	.	992	48	22	.	.	.	.	.	.	1062
0.75-0.99	.	321	341	6	1	.	.	.	.	.	669
1.00-1.24	.	1	860	18	4	.	.	.	.	.	883
1.25-1.49	.	.	242	202	.	.	.	.	.	.	444
1.50-1.74	.	.	3	479	.	.	.	.	.	.	482
1.75-1.99	.	.	.	168	4	.	.	.	.	.	172
2.00-2.24	.	.	.	65	41	.	.	.	.	.	106
2.25-2.49	.	.	.	3	18	.	.	.	.	.	21
2.50-2.74	.	.	.	.	11	.	.	.	.	.	11
2.75-2.99	.	.	.	.	4	.	.	.	.	.	4
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	2	.	.	.	.	2
TOTAL	0	2278	1529	966	83	4	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 4555.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	453	2	.	.	.	.	.	.	.	455
0.25-0.49	.	1294	25	5	.	.	.	.	.	.	1324
0.50-0.74	.	1826	40	18	1	.	.	.	.	.	1885
0.75-0.99	.	402	833	.	.	.	.	.	.	.	1235
1.00-1.24	.	1	1813	14	2	.	.	.	.	.	1830
1.25-1.49	.	.	213	1150	1	.	.	.	.	.	1364
1.50-1.74	.	.	.	1344	.	.	.	.	.	.	1344
1.75-1.99	.	.	.	391	.	.	.	.	.	.	391
2.00-2.24	.	.	.	100	104	.	.	.	.	.	204
2.25-2.49	.	.	.	.	54	.	.	.	.	.	54
2.50-2.74	.	.	.	.	38	.	.	.	.	.	38
2.75-2.99	.	.	.	.	6	.	.	.	.	.	6
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3976	2926	3022	206	0	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.9 NO. OF CASES= 9482.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	339	1	.	.	.	.	.	.	.	340
0.25-0.49	.	1311	23	1	1	.	.	.	.	.	1336
0.50-0.74	.	1967	128	10	1	.	.	.	.	.	2106
0.75-0.99	.	527	924	32	.	.	.	.	.	.	1483
1.00-1.24	.	.	1562	109	.	.	.	.	.	.	1671
1.25-1.49	.	.	224	925	6	.	.	.	.	.	1155
1.50-1.74	.	.	2	1065	34	1	.	.	.	.	1102
1.75-1.99	.	.	.	324	59	4	.	.	.	.	387
2.00-2.24	.	.	.	85	144	11	.	.	.	.	240
2.25-2.49	.	.	.	1	58	5	.	.	.	.	64
2.50-2.74	.	.	.	.	29	2	.	.	.	.	31
2.75-2.99	.	.	.	.	4	3	.	.	.	.	7
3.00-3.24	.	.	.	.	1	1	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	3	2	.	.	.	5
TOTAL	0	4144	2864	2552	337	30	2	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.8 MEAN TP(SEC)= 3.9 NO. OF CASES= 9295.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	396	70	16	1	.	.	.	.	.	483
0.25-0.49	.	1232	156	158	4	.	.	.	.	.	1550
0.50-0.74	.	1338	693	373	82	.	.	.	.	.	2486
0.75-0.99	.	333	765	420	124	3	.	.	.	.	1645
1.00-1.24	.	3	781	790	219	11	.	.	.	.	1804
1.25-1.49	.	.	86	780	134	33	.	.	.	.	1033
1.50-1.74	.	.	5	1350	252	31	1	.	.	.	1639
1.75-1.99	.	.	.	229	702	23	2	.	.	.	956
2.00-2.24	.	.	.	40	981	47	8	.	.	.	1076
2.25-2.49	.	.	.	.	432	20	3	.	.	.	455
2.50-2.74	.	.	.	.	278	39	8	.	.	.	325
2.75-2.99	.	.	.	.	14	60	4	.	.	.	78
3.00-3.24	.	.	.	.	3	64	2	.	.	.	69
3.25-3.49	.	.	.	.	.	17	.	.	.	.	17
3.50+	.	.	.	.	.	17	11	1	.	.	29
TOTAL	0	3302	2556	4156	3226	365	39	1	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.8 MEAN TP(SEC)= 4.6 NO. OF CASES= 12779.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	375	56	6	.	.	.	.	.	.	437
0.25-0.49	.	1210	273	146	4	.	.	.	.	.	1633
0.50-0.74	.	950	1120	1025	146	.	.	.	.	.	3242
0.75-0.99	.	87	491	974	341	2	.	.	.	.	1895
1.00-1.24	.	5	380	914	869	45	.	.	.	.	2213
1.25-1.49	.	.	11	483	529	58	.	.	.	.	1081
1.50-1.74	.	.	1	799	591	190	5	.	.	.	1586
1.75-1.99	.	.	.	133	602	203	10	.	.	.	948
2.00-2.24	.	.	.	13	931	168	49	.	.	.	1131
2.25-2.49	.	.	.	.	356	253	33	.	.	.	642
2.50-2.74	.	.	.	.	217	352	98	1	.	.	668
2.75-2.99	.	.	.	.	28	191	67	1	.	.	287
3.00-3.24	.	.	.	.	7	156	129	5	.	.	297
3.25-3.49	.	.	.	.	.	33	71	5	.	.	109
3.50+	.	.	.	.	.	25	145	47	5	.	222
TOTAL	0	2627	2332	4494	4591	1676	607	59	5	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 5.1 NO. OF CASES= 15353.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	284	3	.	.	.	.	.	.	.	287
0.25-0.49	.	1007	41	6	1	.	.	.	.	.	1055
0.50-0.74	.	871	847	260	13	.	.	.	.	.	1991
0.75-0.99	.	91	411	674	25	1	.	.	.	.	1202
1.00-1.24	.	.	283	871	422	2	.	.	.	.	1578
1.25-1.49	.	.	13	295	417	10	.	.	.	.	735
1.50-1.74	.	.	.	435	694	86	.	.	.	.	1215
1.75-1.99	.	.	.	36	465	187	2	.	.	.	690
2.00-2.24	.	.	.	3	609	179	10	.	.	.	801
2.25-2.49	.	.	.	.	238	360	10	.	.	.	608
2.50-2.74	.	.	.	.	43	587	32	.	.	.	662
2.75-2.99	.	.	.	.	.	302	27	.	.	.	329
3.00-3.24	.	.	.	.	.	260	116	2	.	.	378
3.25-3.49	.	.	.	.	.	26	118	.	.	.	144
3.50+	.	.	.	.	.	4	244	35	2	1	286
TOTAL	0	2253	1598	2580	2927	2004	559	37	2	1	

MEAN HS(M) = 1.4 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 5.2 NO. OF CASES= 11207.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	162	.	.	.	.	.	.	.	.	162
0.25-0.49	.	625	42	.	.	.	.	.	.	.	667
0.50-0.74	.	728	495	112	.	.	.	.	.	.	1335
0.75-0.99	.	71	381	265	1	.	.	.	.	.	718
1.00-1.24	.	1	435	441	90	1	.	.	.	.	968
1.25-1.49	.	.	42	394	93	.	.	.	.	.	529
1.50-1.74	.	.	1	505	359	8	1	.	.	.	874
1.75-1.99	.	.	.	129	281	38	2	.	.	.	450
2.00-2.24	.	.	.	34	322	37	.	.	.	.	393
2.25-2.49	.	.	.	.	104	88	1	.	.	.	193
2.50-2.74	.	.	.	.	26	162	3	.	.	.	191
2.75-2.99	.	.	.	.	3	50	2	.	.	.	55
3.00-3.24	.	.	.	.	3	33	14	.	.	.	50
3.25-3.49	.	.	.	.	.	1	19	.	.	.	20
3.50+	.	.	.	.	.	1	33	2	.	.	36
TOTAL	0	1587	1396	1880	1282	419	75	2	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 4.7 NO. OF CASES= 6227.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	101	1	.	.	.	.	.	.	.	102
0.25-0.49	.	409	21	1	.	.	.	.	.	.	431
0.50-0.74	.	524	192	28	.	.	.	.	.	.	744
0.75-0.99	.	50	282	39	1	.	.	.	.	.	372
1.00-1.24	.	1	314	104	7	1	.	.	.	.	427
1.25-1.49	.	.	38	228	6	.	.	.	.	.	272
1.50-1.74	.	.	1	322	43	1	.	.	.	.	367
1.75-1.99	.	.	.	108	23	2	.	.	.	.	133
2.00-2.24	.	.	.	27	43	1	.	.	.	.	71
2.25-2.49	.	.	.	.	17	3	.	.	.	.	20
2.50-2.74	.	.	.	.	9	3	.	.	.	.	12
2.75-2.99	.	.	.	.	2	1	.	.	.	.	3
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1085	849	857	151	13	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 2776.

STATION E18 42.30N 80.15W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

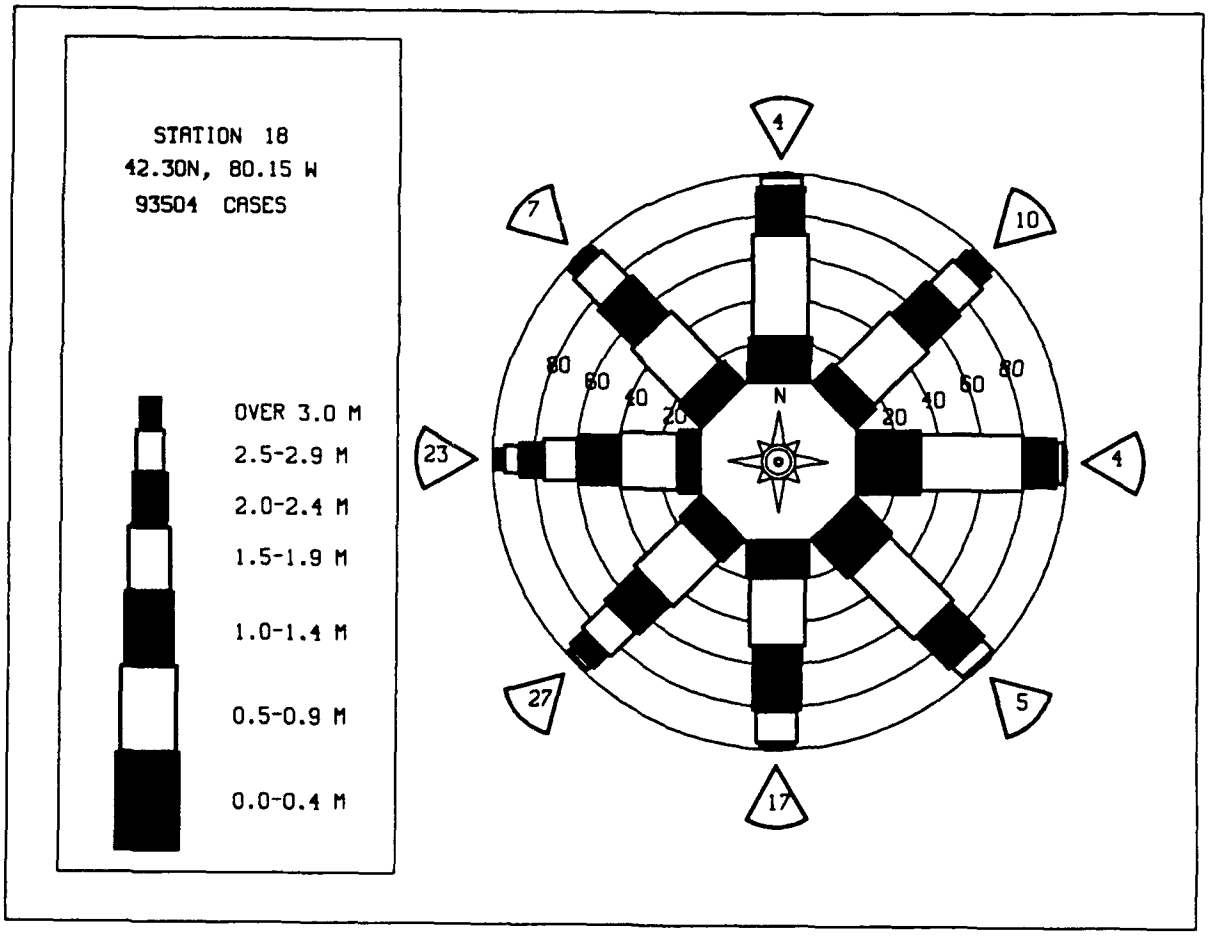
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	87	.	.	.	.	.	.	.	.	87
0.25-0.49	.	310	11	.	.	.	.	.	.	.	321
0.50-0.74	.	575	81	11	.	.	.	.	.	.	667
0.75-0.99	.	116	190	25	1	.	.	.	.	.	332
1.00-1.24	.	.	358	39	2	.	.	.	.	.	399
1.25-1.49	.	.	69	193	7	.	.	.	.	.	269
1.50-1.74	.	.	.	244	3	.	.	.	.	.	247
1.75-1.99	.	.	.	69	1	.	.	.	.	.	70
2.00-2.24	.	.	.	13	22	1	.	.	.	.	36
2.25-2.49	.	.	.	.	8	.	.	.	.	.	8
2.50-2.74	.	.	.	.	9	.	1	.	.	.	10
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1088	709	594	55	1	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.9 NO. OF CASES= 2300.

STATION E18 42.30N 80.15W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	335	13	2	.	.	.	.	.	.	350
0.25-0.49	.	1148	75	32	1	.	.	.	.	.	1256
0.50-0.74	.	1417	492	215	24	.	.	.	.	.	2172
0.75-0.99	.	286	611	299	50	.	.	.	.	.	1246
1.00-1.24	.	1	870	429	170	6	.	.	.	.	1476
1.25-1.49	.	.	116	559	130	10	.	.	.	.	815
1.50-1.74	.	.	2	773	230	32	.	.	.	.	1037
1.75-1.99	.	.	.	168	262	47	1	.	.	.	478
2.00-2.24	.	.	.	39	375	45	6	.	.	.	465
2.25-2.49	.	.	.	.	151	75	4	.	.	.	230
2.50-2.74	.	.	.	.	74	127	14	.	.	.	215
2.75-2.99	.	.	.	.	6	67	10	.	.	.	83
3.00-3.24	.	.	.	.	1	57	26	.	.	.	84
3.25-3.49	.	.	.	.	.	9	21	.	.	.	30
3.50+	.	.	.	.	.	6	45	8	.	.	59
TOTAL	0	3187	2179	2516	1474	481	127	8	0	0	

MEAN HS(M)= 1.1 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 4.4 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E18 (42.30N 80.15W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.6	0.9	1.1	0.8	0.7	0.8	0.9	0.8	1.0	1.1	0.9	0.9
1957	1.0	0.9	1.3	1.3	1.2	1.1	1.1	0.9	1.1	1.1	1.5	1.5	1.2
1958	1.1	1.0	0.7	0.8	0.8	0.8	0.6	0.6	0.7	1.0	1.0	0.8	0.8
1959	1.0	0.7	0.9	0.7	0.4	0.4	0.4	0.6	0.8	0.8	0.9	0.7	0.7
1960	0.7	1.4	1.2	1.4	1.0	1.0	0.9	0.9	0.9	1.0	1.4	1.6	1.1
1961	1.3	1.0	1.2	1.2	1.2	1.1	0.9	1.1	1.1	1.4	1.3	1.4	1.2
1962	1.5	1.2	1.2	1.3	1.1	0.9	1.0	0.9	1.0	1.1	1.1	1.5	1.1
1963	1.4	1.3	1.3	1.3	1.1	0.7	0.9	1.0	1.0	1.0	1.7	1.5	1.2
1964	1.6	1.2	1.5	1.5	1.3	0.9	0.9	1.1	1.1	1.1	1.3	1.4	1.2
1965	1.6	1.4	1.1	1.2	1.0	1.0	0.8	1.0	1.1	1.4	1.5	1.4	1.2
1966	1.6	0.9	1.3	1.2	1.1	0.8	0.9	0.9	1.1	1.4	1.4	1.4	1.2
1967	1.7	1.5	1.1	1.3	1.1	0.9	0.7	0.9	0.9	1.3	1.6	1.4	1.2
1968	1.2	1.4	1.3	1.2	1.1	1.0	0.9	1.0	1.0	1.3	1.5	1.6	1.2
1969	1.8	1.0	1.4	1.2	1.0	0.9	0.8	0.8	1.0	1.3	1.4	1.3	1.1
1970	1.2	1.3	1.1	1.3	1.1	1.0	1.0	0.9	1.1	1.1	1.4	1.5	1.2
1971	1.7	1.5	1.3	1.3	0.9	0.8	0.9	0.9	0.7	0.8	1.2	1.3	1.1
1972	1.6	1.1	1.2	1.1	0.9	0.8	0.7	0.9	0.9	1.1	1.1	1.2	1.0
1973	1.6	1.2	1.3	1.5	1.2	1.0	1.0	0.9	1.0	1.1	1.6	1.3	1.2
1974	1.3	1.3	1.4	1.5	1.2	1.0	0.9	0.8	1.0	1.1	1.3	1.3	1.2
1975	1.5	1.3	1.3	1.2	0.7	1.0	0.7	0.7	1.0	1.2	1.4	1.4	1.1
1976	1.6	1.5	1.6	1.3	1.2	1.1	1.0	0.9	1.1	1.2	1.6	1.5	1.3
1977	1.7	1.4	1.3	1.2	0.9	0.9	0.9	1.0	1.0	1.1	1.4	1.6	1.2
1978	1.7	0.7	1.1	1.2	0.9	0.9	0.8	0.7	0.9	1.2	1.2	1.6	1.1
1979	1.5	1.2	1.3	1.2	0.8	0.9	0.8	0.9	0.9	1.3	1.3	1.4	1.1
1980	1.3	1.0	1.2	1.0	0.8	0.8	0.7	0.7	0.9	1.3	1.3	1.2	1.0
1981	1.1	1.2	1.2	1.4	0.7	1.0	0.7	0.8	0.9	1.1	1.1	1.1	1.0
1982	1.7	1.0	1.1	1.4	0.6	0.8	0.7	0.7	0.7	0.9	1.2	1.3	1.0
1983	1.1	0.7	1.0	1.0	1.0	0.6	0.7	0.6	0.8	1.1	1.1	1.5	0.9
1984	1.0	1.1	1.3	0.9	1.2	0.9	0.8	0.7	0.8	0.8	1.3	1.3	1.0
1985	1.5	1.2	1.4	1.3	1.0	1.0	0.9	0.9	1.0	1.2	1.4	1.7	1.2
1986	1.5	1.0	1.3	1.2	1.1	1.1	1.0	1.1	1.1	1.1	1.2	1.1	1.2
1987	1.3	1.0	1.0	1.2	1.0	1.0	0.9	1.0	0.9	1.2	1.5	1.5	1.1
MEAN	1.4	1.1	1.2	1.2	1.0	0.9	0.8	0.9	0.9	1.1	1.3	1.3	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E18 (42.30N 80.15W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	2.8	3.8	3.5	2.5	3.1	2.5	2.1	2.2	2.5	3.2	2.5
1957	2.4	2.4	3.3	4.0	2.5	3.5	2.9	2.2	2.7	2.6	3.4	2.9
1958	3.2	2.9	2.2	3.1	2.1	2.1	1.7	1.6	2.2	2.8	3.2	2.9
1959	2.9	1.8	3.2	3.3	1.4	1.2	1.9	1.8	2.1	2.8	2.4	2.2
1960	2.4	3.4	3.0	3.9	2.6	3.9	2.4	2.1	2.2	4.0	3.3	3.5
1961	3.4	3.4	2.6	4.5	3.4	3.4	2.7	3.0	3.3	4.2	4.0	4.5
1962	3.3	3.3	3.0	3.8	3.7	2.4	2.7	2.4	2.6	2.7	3.5	3.9
1963	3.7	3.5	3.9	3.9	3.2	2.7	2.7	3.1	3.0	3.1	3.2	3.2
1964	3.8	2.8	4.8	3.4	4.4	2.9	2.4	2.5	3.0	3.4	3.9	3.9
1965	4.6	2.9	4.0	4.7	3.0	2.5	2.7	2.9	2.7	4.1	4.3	3.0
1966	4.9	2.7	3.8	3.2	3.4	2.6	3.4	3.0	3.8	3.4	3.8	4.0
1967	4.0	3.6	3.0	4.0	3.4	2.9	2.8	2.4	2.8	3.3	3.9	3.0
1968	4.4	3.6	3.3	4.2	3.6	2.9	2.6	3.3	3.0	3.2	4.1	4.5
1969	4.7	3.5	3.8	3.8	3.1	2.7	2.8	2.6	3.0	3.3	3.2	3.2
1970	3.6	2.7	3.6	5.0	2.9	3.0	3.4	3.0	3.7	2.9	4.3	3.8
1971	3.5	3.7	3.6	3.5	3.0	2.6	2.7	3.0	2.1	2.7	3.1	3.5
1972	6.1	3.8	3.5	3.7	3.0	2.4	2.1	3.0	2.6	3.3	3.8	4.0
1973	3.6	2.9	3.5	3.9	3.3	2.8	3.2	3.1	3.1	3.3	4.0	3.4
1974	3.7	3.5	3.7	4.8	3.4	3.2	2.3	2.4	3.1	2.5	4.3	3.5
1975	3.8	4.8	3.5	4.6	2.3	2.8	2.6	2.6	2.9	3.2	3.7	4.7
1976	4.1	3.6	4.1	3.3	3.9	3.0	2.7	2.6	3.2	3.4	3.2	3.8
1977	4.4	3.1	3.8	4.5	2.7	3.1	3.3	2.6	3.1	2.8	3.6	3.7
1978	5.8	2.3	3.7	3.7	3.9	3.4	2.9	2.6	2.4	2.7	3.5	4.3
1979	4.0	3.4	3.5	5.0	2.6	2.9	2.4	2.8	2.5	2.9	3.2	3.9
1980	4.7	3.5	4.0	3.2	2.8	3.5	2.2	2.3	2.5	4.3	2.9	4.5
1981	3.3	3.7	3.6	3.7	2.6	2.6	2.1	2.0	3.0	3.7	3.7	2.5
1982	4.6	3.2	5.1	4.7	2.0	2.2	2.2	1.9	2.3	2.7	3.3	4.2
1983	3.7	2.6	2.7	3.1	2.3	2.1	2.2	2.3	2.6	3.3	2.9	4.0
1984	3.0	3.2	3.2	3.7	3.3	2.1	2.4	1.7	2.4	2.4	3.0	3.2
1985	3.8	2.6	3.9	4.3	2.6	3.0	2.0	2.1	2.4	3.4	3.2	4.4
1986	3.5	2.7	3.8	2.7	2.9	2.6	2.8	3.0	3.1	2.9	3.5	2.8
1987	4.0	2.8	3.3	4.1	2.4	2.4	2.4	2.3	2.6	2.7	3.7	4.2

32 YR. STATISTICS FOR WIS STATION E18

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.1
MEAN PEAK WAVE PERIOD	(SECONDS)	4.4
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	11.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	265.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012518

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	150			.	.	.	.	.	.	150
0.25-0.49	.	481	11	1	.	.	.	.	.	.	493
0.50-0.74	.	521	202	10	.	.	.	.	.	.	733
0.75-0.99	.	53	267	55	.	.	.	.	.	.	375
1.00-1.24	.	.	235	146	5	.	.	.	.	.	386
1.25-1.49	.	.	4	174	2	.	.	.	.	.	180
1.50-1.74	.	.	.	234	8	.	.	.	.	.	242
1.75-1.99	.	.	.	17	55	.	.	.	.	.	72
2.00-2.24	.	.	.	.	39	.	.	.	.	.	39
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	1	1	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1205	719	637	116	1	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.9 NO. OF CASES= 2513.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	74			.	.	.	.	.	.	74
0.25-0.49	.	328	6	2	.	.	.	.	.	.	336
0.50-0.74	.	494	151	7	.	.	.	.	.	.	652
0.75-0.99	.	72	179	50	1	.	.	.	.	.	302
1.00-1.24	.	.	180	130	6	.	.	.	.	.	316
1.25-1.49	.	.	5	103	3	.	.	.	.	.	111
1.50-1.74	.	.	.	122	17	.	.	.	.	.	139
1.75-1.99	.	.	.	11	32	.	.	.	.	.	43
2.00-2.24	.	.	.	1	32	.	.	.	.	.	33
2.25-2.49	.	.	.	.	9	.	.	.	.	.	9
2.50-2.74	.	.	.	.	2	6	.	.	.	.	8
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	968	521	426	102	9	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 1906.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	201			.	.	.	.	.	.	201
0.25-0.49	.	765	22	1	.	.	.	.	.	.	788
0.50-0.74	.	919	362	49	.	.	.	.	.	.	1330
0.75-0.99	.	144	463	203	.	.	.	.	.	.	810
1.00-1.24	.	.	473	430	17	.	.	.	.	.	920
1.25-1.49	.	.	18	449	38	.	.	.	.	.	505
1.50-1.74	.	.	.	675	154	.	.	.	.	.	829
1.75-1.99	.	.	.	36	314	1	.	.	.	.	351
2.00-2.24	.	.	.	.	403	2	.	.	.	.	405
2.25-2.49	.	.	.	.	118	5	.	.	.	.	123
2.50-2.74	.	.	.	.	44	77	.	.	.	.	121
2.75-2.99	.	.	.	.	1	44	.	.	.	.	45
3.00-3.24	.	.	.	.	.	32	.	.	.	.	32
3.25-3.49	.	.	.	.	.	14	2	.	.	.	16
3.50+	.	.	.	.	.	6	11	.	.	.	17
TOTAL	0	2029	1338	1843	1089	181	13	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.4 MEAN TP(SEC)= 4.4 NO. OF CASES= 6084.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	149			.	.	.	.	.	.	149
0.25-0.49	.	606	17	2	.	.	.	.	.	.	625
0.50-0.74	.	832	298	57	.	.	.	.	.	.	1187
0.75-0.99	.	136	309	164	1	.	.	.	.	.	610
1.00-1.24	.	.	324	265	33	.	.	.	.	.	622
1.25-1.49	.	.	24	176	36	.	.	.	.	.	236
1.50-1.74	.	.	.	208	70	2	.	.	.	.	280
1.75-1.99	.	.	.	11	110	3	.	.	.	.	124
2.00-2.24	.	.	.	1	132	.	.	.	.	.	133
2.25-2.49	.	.	.	.	59	2	.	.	.	.	61
2.50-2.74	.	.	.	.	14	27	.	.	.	.	41
2.75-2.99	.	.	.	.	1	16	.	.	.	.	17
3.00-3.24	.	.	.	.	.	12	.	.	.	.	12
3.25-3.49	.	.	.	.	.	6	1	.	.	.	7
3.50+	.	.	.	.	.	1	4	.	.	.	5
TOTAL	0	1723	972	884	456	69	5	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 3855.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	222	1	.	.	.	.	.	.	.	223
0.25-0.49	.	596	31	.	.	.	.	.	.	.	627
0.50-0.74	.	602	150	54	.	.	.	.	.	.	806
0.75-0.99	.	89	89	43	4	.	.	.	.	.	225
1.00-1.24	.	.	106	20	8	.	.	.	.	.	134
1.25-1.49	.	.	10	11	10	.	.	.	.	.	31
1.50-1.74	.	.	.	7	2	1	.	.	.	.	10
1.75-1.99	.	.	.	1	3	.	.	.	.	.	4
2.00-2.24	.	.	.	2	2	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1509	387	138	29	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 1940.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	146	.	.	.	.	.	.	.	.	146
0.25-0.49	.	405	21	.	.	.	.	.	.	.	426
0.50-0.74	.	448	45	28	.	.	.	.	.	.	521
0.75-0.99	.	116	75	8	.	.	.	.	.	.	199
1.00-1.24	.	1	130	4	1	.	.	.	.	.	136
1.25-1.49	.	.	21	9	2	.	.	.	.	.	32
1.50-1.74	.	.	1	11	3	.	.	.	.	.	15
1.75-1.99	.	.	.	1	1	.	.	.	.	.	2
2.00-2.24	.	.	.	1	1	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1116	293	62	8	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 1391.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	202	.	.	.	.	.	.	.	.	202
0.25-0.49	.	556	26	2	.	.	.	.	.	.	584
0.50-0.74	.	773	28	25	.	.	.	.	.	.	826
0.75-0.99	.	248	191	7	3	.	.	.	.	.	449
1.00-1.24	.	1	433	4	6	.	.	.	.	.	444
1.25-1.49	.	.	93	29	.	.	.	.	.	.	122
1.50-1.74	.	.	.	95	1	1	.	.	.	.	97
1.75-1.99	.	.	.	26	.	.	.	.	.	.	26
2.00-2.24	.	.	.	13	.	.	.	.	.	.	13
2.25-2.49	.	.	.	1	1	.	.	.	.	.	2
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1780	771	202	15	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.4 NO. OF CASES= 2597.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	301	2	.	.	.	.	.	.	.	303
0.25-0.49	.	691	40	5	.	.	.	.	.	.	736
0.50-0.74	.	993	24	17	.	.	.	.	.	.	1034
0.75-0.99	.	425	242	1	2	.	.	.	.	.	670
1.00-1.24	.	9	770	.	1	.	.	.	.	.	780
1.25-1.49	.	.	228	67	1	.	.	.	.	.	296
1.50-1.74	.	.	27	244	.	.	.	.	.	.	271
1.75-1.99	.	.	.	79	.	.	.	.	.	.	79
2.00-2.24	.	.	.	47	.	.	.	.	.	.	47
2.25-2.49	.	.	.	1	4	.	.	.	.	.	5
2.50-2.74	.	.	.	1	3	.	.	.	.	.	4
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2419	1333	462	12	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.5 NO. OF CASES= 3961.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	513	.	.	.	.	.	.	.	.	513
0.25-0.49	.	1146	34	6	.	.	.	.	.	.	1186
0.50-0.74	.	1652	20	21	1	.	.	.	.	.	1694
0.75-0.99	.	1326	20	3	1	.	.	.	.	.	1350
1.00-1.24	.	91	911	.	2	.	.	.	.	.	1004
1.25-1.49	.	.	356	.	.	.	.	.	.	.	356
1.50-1.74	.	.	111	73	.	.	.	.	.	.	184
1.75-1.99	.	.	.	38	.	.	.	.	.	.	38
2.00-2.24	.	.	.	9	.	.	.	.	.	.	9
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4728	1452	150	4	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 5929.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	365	2	1	.	.	.	.	.	.	368
0.25-0.49	.	1394	25	1	.	.	.	.	.	.	1420
0.50-0.74	.	2925	69	7	.	.	.	.	.	.	3001
0.75-0.99	.	1901	42	10	1	.	.	.	.	.	1954
1.00-1.24	.	644	1136	43	2	.	.	.	.	.	1825
1.25-1.49	.	.	520	41	.	.	.	.	.	.	561
1.50-1.74	.	.	143	121	2	1	.	.	.	.	267
1.75-1.99	.	.	2	58	.	.	.	.	.	.	60
2.00-2.24	.	.	.	20	26	1	.	.	.	.	47
2.25-2.49	.	.	.	.	13	.	.	.	.	.	13
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	1	.	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	1	.	.	.	.	.	1
TOTAL	0	7229	1939	303	47	3	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 8916.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	450	69	36	2	.	.	.	.	.	557
0.25-0.49	.	1284	134	133	12	.	.	.	.	.	1563
0.50-0.74	.	2082	475	368	108	2	.	.	.	.	3035
0.75-0.99	.	765	757	193	150	6	.	.	.	.	1871
1.00-1.24	.	225	1435	289	282	62	.	.	.	.	2293
1.25-1.49	.	.	351	674	209	47	4	.	.	.	1285
1.50-1.74	.	.	38	1188	224	69	10	.	.	.	1529
1.75-1.99	.	.	1	553	90	32	9	.	.	.	685
2.00-2.24	.	.	.	296	270	20	9	.	.	.	595
2.25-2.49	.	.	.	6	135	6	2	.	.	.	149
2.50-2.74	.	.	.	.	74	4	3	.	.	.	81
2.75-2.99	.	.	.	.	21	1	1	.	.	.	23
3.00-3.24	.	.	.	.	14	5	.	.	.	.	19
3.25-3.49	.	.	.	.	2	2	.	.	.	.	4
3.50+	.	.	.	.	.	5	1	.	.	.	6
TOTAL	0	4806	3260	3736	1593	261	39	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.2 NO. OF CASES= 12830.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	532	77	13	.	.	.	.	.	.	622
0.25-0.49	.	1396	407	281	16	.	.	.	.	.	2100
0.50-0.74	.	1039	924	1234	296	2	.	.	.	.	3495
0.75-0.99	.	210	630	666	465	18	.	.	.	.	1989
1.00-1.24	.	4	906	462	700	84	.	.	.	.	2156
1.25-1.49	.	.	108	623	341	99	2	.	.	.	1173
1.50-1.74	.	.	2	925	549	155	12	.	.	.	1643
1.75-1.99	.	.	.	324	428	177	21	.	.	.	950
2.00-2.24	.	.	.	178	552	227	49	.	.	.	1006
2.25-2.49	.	.	.	13	272	176	57	2	.	.	520
2.50-2.74	.	.	.	.	122	224	98	2	.	.	446
2.75-2.99	.	.	.	.	41	89	57	2	.	.	189
3.00-3.24	.	.	.	.	21	78	93	8	.	.	200
3.25-3.49	.	.	.	.	3	27	44	5	.	.	79
3.50+	.	.	.	.	.	22	94	31	6	.	153
TOTAL	0	3181	3054	4719	3806	1378	527	50	6	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.9 NO. OF CASES= 15661.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	424	2	.	.	.	.	.	.	.	26
0.25-0.49	.	1312	100	5	1	.	.	.	.	.	18
0.50-0.74	.	902	1071	527	14	.	.	.	.	.	2514
0.75-0.99	.	106	479	830	54	.	.	.	.	.	1469
1.00-1.24	.	2	387	879	603	3	.	.	.	.	1874
1.25-1.49	.	.	25	411	489	22	.	.	.	.	947
1.50-1.74	.	.	.	598	622	131	.	.	.	.	1351
1.75-1.99	.	.	.	99	414	278	9	.	.	.	800
2.00-2.24	.	.	.	6	612	209	25	.	.	.	852
2.25-2.49	.	.	.	.	233	361	24	.	.	.	618
2.50-2.74	.	.	.	.	90	613	62	1	.	.	766
2.75-2.99	.	.	.	.	14	232	67	1	.	.	314
3.00-3.24	.	.	.	.	2	236	178	1	.	.	417
3.25-3.49	.	.	.	.	.	25	140	3	.	.	168
3.50+	.	.	.	.	.	18	335	54	7	1	415
TOTAL	0	2746	2064	3355	3148	2128	840	60	7	1	

MEAN HS(M) = 1.4 LARGEST HS(M)= 6.3 MEAN TP(SEC)= 5.2 NO. OF CASES= 13441.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	220	.	.	.	.	.	.	.	.	220
0.25-0.49	.	932	43	.	.	.	.	.	.	.	975
0.50-0.74	.	797	553	142	.	.	.	.	.	.	1492
0.75-0.99	.	81	419	297	3	.	.	.	.	.	800
1.00-1.24	.	1	453	455	113	.	.	.	.	.	1022
1.25-1.49	.	.	37	378	139	.	.	.	.	.	554
1.50-1.74	.	.	1	487	343	20	.	.	.	.	851
1.75-1.99	.	.	.	115	236	89	1	.	.	.	441
2.00-2.24	.	.	.	19	289	68	4	.	.	.	380
2.25-2.49	.	.	.	.	73	130	1	.	.	.	204
2.50-2.74	.	.	.	.	23	190	6	.	.	.	219
2.75-2.99	.	.	.	.	2	60	5	.	.	.	67
3.00-3.24	.	.	.	.	2	45	37	1	.	.	85
3.25-3.49	.	.	.	.	.	5	26	.	.	.	31
3.50+	.	.	.	.	.	.	60	3	2	.	65
TOTAL	0	031	1506	1893	1223	607	140	4	2	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.4 MEAN TP(SEC)= 4.6 NO. OF CASES= 6944.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	136	.	.	.	.	.	.	.	.	136
0.25-0.49	.	456	19	2	.	.	.	.	.	.	477
0.50-0.74	.	530	267	12	.	.	.	.	.	.	809
0.75-0.99	.	40	331	50	2	.	.	.	.	.	423
1.00-1.24	.	.	339	127	8	.	.	.	.	.	474
1.25-1.49	.	.	17	288	2	2	.	.	.	.	309
1.50-1.74	.	.	.	396	41	1	.	.	.	.	438
1.75-1.99	.	.	.	124	35	4	1	.	.	.	164
2.00-2.24	.	.	.	12	56	2	.	.	.	.	70
2.25-2.49	.	.	.	.	22	3	.	.	.	.	25
2.50-2.74	.	.	.	.	11	2	.	.	.	.	13
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	1	1	1	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1162	973	1011	179	15	3	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 3138.

STATION E19 42.30N 79.97W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

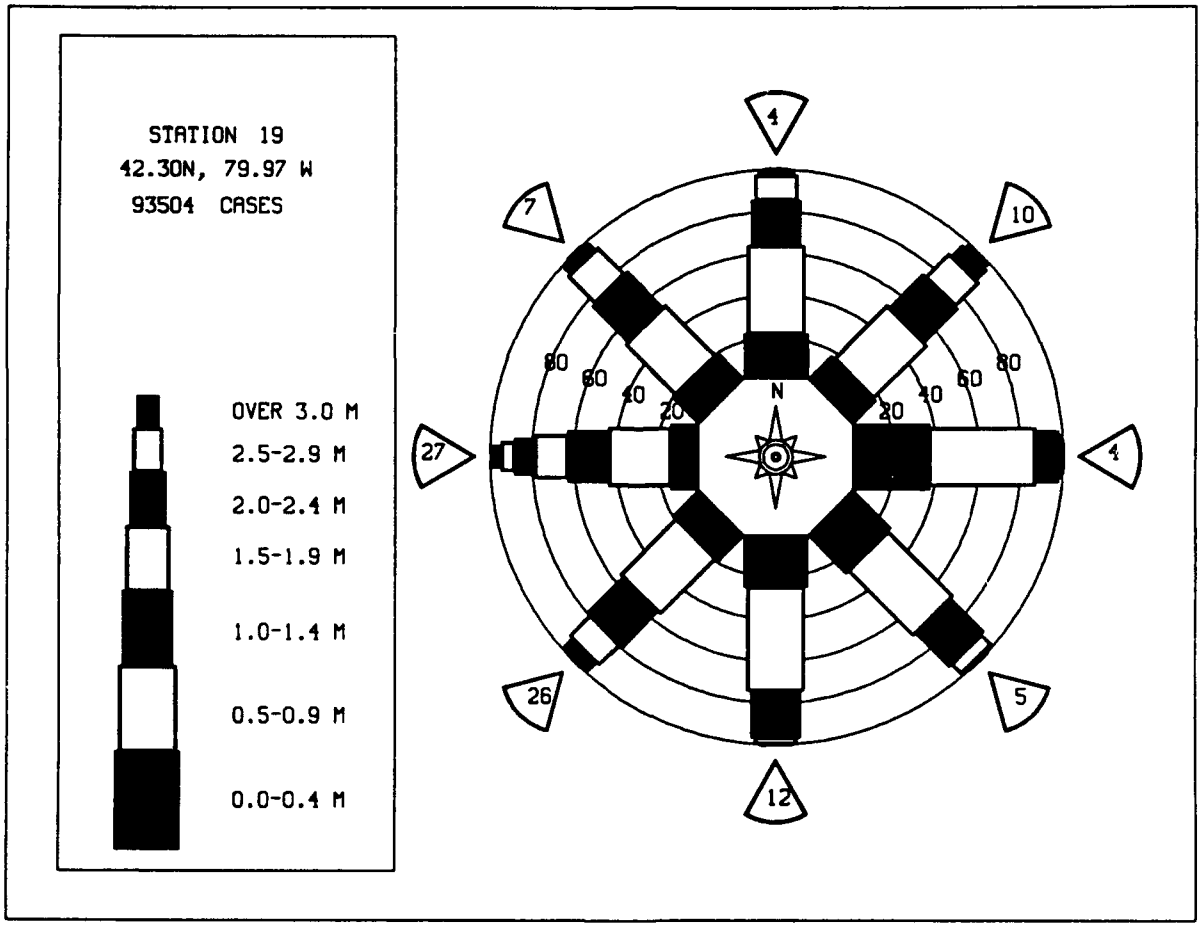
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	100	.	.	.	.	.	.	.	.	100
0.25-0.49	.	308	8	.	.	.	.	.	.	.	316
0.50-0.74	.	439	172	6	.	.	.	.	.	.	617
0.75-0.99	.	40	224	43	1	.	.	.	.	.	308
1.00-1.24	.	.	278	118	1	.	.	.	.	.	397
1.25-1.49	.	.	27	241	1	.	.	.	.	.	269
1.50-1.74	.	.	.	331	11	.	.	.	.	.	342
1.75-1.99	.	.	.	70	39	1	.	.	.	.	110
2.00-2.24	.	.	.	4	63	.	.	.	.	.	67
2.25-2.49	.	.	.	.	16	.	.	.	.	.	16
2.50-2.74	.	.	.	.	11	1	.	.	.	.	12
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	887	709	813	143	2	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 4.1 NO. OF CASES= 2398.

STATION E19 42.30N 79.97W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	419	15	5	.	.	.	.	.	.	439
0.25-0.49	.	1266	95	44	2	.	.	.	.	.	1407
0.50-0.74	.	1595	482	257	42	.	.	.	.	.	2376
0.75-0.99	.	576	472	263	69	2	.	.	.	.	1382
1.00-1.24	.	98	850	337	179	14	.	.	.	.	1478
1.25-1.49	.	.	185	368	127	17	.	.	.	.	697
1.50-1.74	.	.	32	572	205	38	2	.	.	.	849
1.75-1.99	.	.	.	156	176	58	4	.	.	.	394
2.00-2.24	.	.	.	61	248	53	8	.	.	.	370
2.25-2.49	.	.	.	2	96	68	8	.	.	.	174
2.50-2.74	.	.	.	.	40	114	17	.	.	.	171
2.75-2.99	.	.	.	.	8	44	13	.	.	.	65
3.00-3.24	.	.	.	.	4	41	31	1	.	.	77
3.25-3.49	.	.	.	.	.	8	21	.	.	.	29
3.50+	.	.	.	.	.	5	51	8	1	.	65
TOTAL	0	3954	2131	2065	1196	462	155	9	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 6.3 MEAN TP(SEC)= 4.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E19 (42.30N 79.97W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.8	0.8	1.0	0.8	0.6	0.7	0.8	0.7	0.9	1.0	0.8	0.8
1957	0.9	0.8	1.2	1.2	1.1	1.0	1.0	0.8	1.0	1.0	1.4	1.3	1.1
1958	1.1	1.0	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.9	0.9	0.7	0.8
1959	0.9	0.7	0.9	0.7	0.4	0.3	0.4	0.6	0.7	0.8	0.8	0.6	0.6
1960	0.7	1.3	1.2	1.3	0.9	0.9	0.8	0.8	0.8	1.0	1.3	1.4	1.0
1961	1.2	0.9	1.1	1.2	1.1	1.0	0.9	1.0	1.0	1.2	1.3	1.3	1.1
1962	1.4	1.1	1.1	1.2	1.0	0.8	0.9	0.8	0.9	1.0	1.0	1.3	1.1
1963	1.3	1.2	1.3	1.2	1.1	0.7	0.9	1.0	0.9	0.9	1.5	1.3	1.1
1964	1.5	1.1	1.4	1.4	1.2	0.9	0.8	1.0	1.0	1.0	1.2	1.2	1.1
1965	1.5	1.3	1.1	1.1	1.0	0.9	0.8	1.0	1.0	1.3	1.4	1.2	1.1
1966	1.5	0.9	1.2	1.2	1.0	0.7	0.9	0.9	1.0	1.3	1.2	1.4	1.1
1967	1.5	1.4	1.0	1.2	1.0	0.9	0.7	0.8	0.9	1.1	1.5	1.3	1.1
1968	1.1	1.3	1.2	1.1	1.0	0.9	0.8	1.0	0.8	1.1	1.4	1.5	1.1
1969	1.7	1.0	1.3	1.1	1.0	0.8	0.8	0.7	0.9	1.2	1.2	1.2	1.1
1970	1.1	1.2	1.0	1.2	1.0	0.9	0.9	0.8	1.0	1.0	1.3	1.4	1.1
1971	1.6	1.4	1.3	1.2	0.8	0.7	0.8	0.9	0.7	0.7	1.1	1.2	1.0
1972	1.5	1.1	1.1	1.0	0.9	0.8	0.6	0.8	0.8	1.0	1.0	1.1	1.0
1973	1.5	1.1	1.2	1.4	1.1	0.9	0.9	0.8	0.9	1.0	1.5	1.2	1.1
1974	1.2	1.3	1.3	1.4	1.1	0.9	0.9	0.7	0.9	1.0	1.2	1.2	1.1
1975	1.3	1.2	1.3	1.2	0.6	0.9	0.7	0.6	0.9	1.1	1.2	1.3	1.0
1976	1.5	1.4	1.5	1.3	1.2	1.0	0.9	0.9	1.1	1.2	1.5	1.4	1.2
1977	1.6	1.3	1.2	1.1	0.8	0.9	0.9	0.9	0.9	1.0	1.3	1.4	1.1
1978	1.6	0.7	1.0	1.2	0.9	0.8	0.8	0.7	0.8	1.0	1.1	1.5	1.0
1979	1.5	1.1	1.2	1.2	0.8	0.8	0.7	0.9	0.8	1.1	1.1	1.3	1.0
1980	1.3	1.0	1.1	1.0	0.8	0.8	0.6	0.7	0.8	1.2	1.3	1.1	1.0
1981	1.1	1.1	1.1	1.3	0.7	0.9	0.7	0.7	0.8	1.0	1.0	1.0	1.0
1982	1.6	0.9	1.0	1.4	0.5	0.7	0.6	0.6	0.6	0.8	1.0	1.1	0.9
1983	1.0	0.7	1.0	1.0	0.9	0.5	0.7	0.6	0.7	1.0	1.0	1.4	0.9
1984	0.9	1.0	1.3	0.9	1.1	0.8	0.7	0.6	0.7	0.7	1.1	1.2	0.9
1985	1.4	1.1	1.3	1.2	1.0	0.9	0.8	0.8	0.9	1.0	1.3	1.5	1.1
1986	1.4	1.0	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.1
1987	1.2	0.9	1.0	1.2	0.9	1.0	0.9	1.0	0.8	1.0	1.4	1.4	1.0
MEAN	1.3	1.1	1.1	1.2	0.9	0.8	0.8	0.8	0.9	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E19 (42.30N 79.97W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	2.9	3.8	3.3	2.4	3.0	2.3	2.1	2.0	2.5	3.2	2.3
1957	2.4	2.3	3.0	3.8	2.7	3.7	2.9	2.2	2.6	2.4	3.3	3.2
1958	3.1	3.0	2.2	3.0	2.2	2.0	1.7	1.6	2.0	2.9	3.4	3.1
1959	3.1	1.8	2.9	3.1	1.2	1.1	1.7	1.8	2.1	2.5	2.5	2.3
1960	2.5	3.5	3.1	3.6	2.5	3.9	2.4	1.9	2.2	3.9	3.5	3.5
1961	3.4	3.3	2.5	4.8	3.7	3.2	2.6	2.9	3.2	4.3	4.3	4.5
1962	3.2	3.1	2.9	3.7	3.7	2.3	3.0	2.6	2.6	2.7	3.8	3.9
1963	3.9	3.2	3.8	4.1	3.1	2.8	2.7	3.1	2.9	2.9	3.2	3.3
1964	4.1	2.7	4.8	3.7	4.6	2.7	2.2	2.5	2.9	3.4	4.0	4.0
1965	4.8	2.5	4.2	5.0	3.1	2.4	2.9	2.9	2.6	3.9	4.6	3.2
1966	5.3	3.0	4.0	3.3	3.3	2.7	3.2	3.1	3.9	3.6	3.4	4.0
1967	4.3	3.6	3.3	4.2	3.6	2.9	2.9	2.5	2.4	3.1	4.2	3.1
1968	4.3	3.8	3.5	4.6	3.5	3.0	2.3	3.3	3.1	3.4	4.4	4.8
1969	5.0	3.7	3.8	3.9	3.1	2.7	2.8	2.4	2.9	3.5	3.4	3.0
1970	3.8	2.5	3.9	4.9	2.7	3.1	3.5	3.0	3.7	2.9	4.2	4.1
1971	6.1	4.0	3.4	3.5	3.0	2.8	2.7	2.8	1.9	2.8	3.1	3.7
1972	6.3	4.1	3.7	3.6	2.9	2.3	1.9	2.9	2.3	3.3	3.9	4.1
1973	3.9	3.2	3.5	4.2	3.5	2.6	3.2	2.8	3.1	3.5	4.1	3.3
1974	3.4	3.2	4.0	4.6	3.4	3.7	2.2	2.3	3.3	2.4	4.7	3.8
1975	3.8	5.1	3.7	4.8	2.2	2.7	2.7	2.4	3.2	3.0	3.4	5.0
1976	4.6	3.7	4.0	3.2	3.6	2.9	2.5	2.4	3.1	3.5	3.5	4.0
1977	4.4	3.0	4.1	4.8	2.7	3.0	3.0	2.9	3.2	2.6	3.5	3.8
1978	5.7	2.3	3.8	3.7	3.7	3.6	2.8	2.4	2.0	2.7	3.2	4.6
1979	4.2	3.5	3.5	5.5	2.7	3.1	2.5	3.0	2.5	3.1	2.8	3.8
1980	4.6	3.1	4.3	3.4	2.9	3.8	2.2	2.3	2.6	4.7	2.9	4.9
1981	3.6	3.0	3.2	3.5	2.7	2.6	2.0	1.9	3.1	3.7	3.6	2.4
1982	5.0	3.0	5.3	4.5	2.0	2.3	2.1	1.8	2.4	2.5	2.9	4.3
1983	4.0	2.6	2.8	3.1	2.3	2.2	2.1	2.4	2.2	3.0	2.7	4.0
1984	2.8	3.4	3.4	3.6	3.5	2.2	2.6	1.7	2.3	2.4	2.9	3.1
1985	3.9	2.7	4.2	4.3	2.6	2.9	1.9	2.1	2.4	3.0	3.1	4.3
1986	3.6	2.9	3.8	2.7	2.9	2.8	3.0	2.9	3.3	2.9	3.4	2.7
1987	4.3	2.7	3.3	4.1	2.4	2.3	2.3	2.2	2.8	2.8	4.0	4.0

32 YR. STATISTICS FOR WIS STATION E19

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	11.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	268.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012518

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	229			.	.	.	.	.	.	229
0.25-0.49	.	348	12	1	.	.	.	.	.	.	361
0.50-0.74	.	310	173	16	.	.	.	.	.	.	499
0.75-0.99	.	34	213	17	.	.	.	.	.	.	264
1.00-1.24	.	.	231	68	.	.	.	.	.	.	299
1.25-1.49	.	.	3	120	.	.	.	.	.	.	123
1.50-1.74	.	.	.	97	.	.	.	.	.	.	97
1.75-1.99	.	.	.	9	7	.	.	.	.	.	16
2.00-2.24	.	.	.	1	6	.	.	.	.	.	7
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	921	632	329	13	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.7 NO. OF CASES= 1779.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	284			.	.	.	.	.	.	284
0.25-0.49	.	375	16	1	.	.	.	.	.	.	392
0.50-0.74	.	375	199	4	.	.	.	.	.	.	578
0.75-0.99	.	37	181	34	.	.	.	.	.	.	252
1.00-1.24	.	.	162	102	1	.	.	.	.	.	265
1.25-1.49	.	.	4	104	.	.	.	.	.	.	108
1.50-1.74	.	.	.	65	2	.	.	.	.	.	67
1.75-1.99	.	.	.	4	10	.	.	.	.	.	14
2.00-2.24	.	.	.	1	10	.	.	.	.	.	11
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1071	562	315	26	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.6 NO. OF CASES= 1855.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	430	2	.	.	.	.	.	.	.	432
0.25-0.49	.	737	22	.	.	.	.	.	.	.	759
0.50-0.74	.	729	416	33	.	.	.	.	.	.	1178
0.75-0.99	.	114	377	128	1	.	.	.	.	.	620
1.00-1.24	.	.	405	435	3	.	.	.	.	.	843
1.25-1.49	.	.	11	481	5	.	.	.	.	.	497
1.50-1.74	.	.	.	550	39	.	.	.	.	.	589
1.75-1.99	.	.	.	47	196	1	.	.	.	.	244
2.00-2.24	.	.	.	.	159	.	.	.	.	.	159
2.25-2.49	.	.	.	1	64	1	.	.	.	.	66
2.50-2.74	.	.	.	.	33	7	.	.	.	.	40
2.75-2.99	.	.	.	.	.	8	.	.	.	.	8
3.00-3.24	.	.	.	.	.	7	.	.	.	.	7
3.25-3.49	.	.	.	.	.	2	1	.	.	.	3
3.50+	.	.	.	.	.	2	.	.	.	.	2
TOTAL	0	2010	1233	1675	500	28	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 5104.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	440	.	.	.	.	.	.	.	.	440
0.25-0.49	.	819	25	.	.	.	.	.	.	.	844
0.50-0.74	.	814	351	36	.	.	.	.	.	.	1201
0.75-0.99	.	146	345	139	.	.	.	.	.	.	630
1.00-1.24	.	.	317	253	5	.	.	.	.	.	575
1.25-1.49	.	.	28	208	19	.	.	.	.	.	255
1.50-1.74	.	.	.	209	64	.	.	.	.	.	273
1.75-1.99	.	.	.	8	104	.	.	.	.	.	112
2.00-2.24	.	.	.	1	97	3	.	.	.	.	101
2.25-2.49	.	.	.	.	34	.	.	.	.	.	34
2.50-2.74	.	.	.	.	13	12	.	.	.	.	25
2.75-2.99	.	.	.	.	1	3	.	.	.	.	4
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	2219	1066	854	337	21	4	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 4221.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	445	1	.	.	.	.	.	.	.	446
0.25-0.49	.	577	21	2	.	.	.	.	.	.	600
0.50-0.74	.	397	125	36	.	.	.	.	.	.	558
0.75-0.99	.	85	85	40	1	.	.	.	.	.	211
1.00-1.24	.	.	91	23	4	.	.	.	.	.	118
1.25-1.49	.	.	16	9	4	.	.	.	.	.	29
1.50-1.74	.	.	1	9	3	.	.	.	.	.	13
1.75-1.99	.	.	.	1	1	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1504	340	121	13	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 1858.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	345	4	.	.	.	.	.	.	.	349
0.25-0.49	.	383	33	.	.	.	.	.	.	.	416
0.50-0.74	.	363	52	22	.	.	.	.	.	.	437
0.75-0.99	.	97	72	13	1	.	.	.	.	.	183
1.00-1.24	.	2	97	8	4	.	.	.	.	.	111
1.25-1.49	.	.	9	4	1	.	.	.	.	.	14
1.50-1.74	.	.	.	3	1	.	.	.	.	.	4
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1190	267	50	7	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 1423.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	451	2	.	.	.	.	.	.	.	453
0.25-0.49	.	460	40	3	.	.	.	.	.	.	503
0.50-0.74	.	495	26	21	.	.	.	.	.	.	542
0.75-0.99	.	174	108	10	.	.	.	.	.	.	292
1.00-1.24	.	.	174	4	1	.	.	.	.	.	179
1.25-1.49	.	.	20	16	.	.	.	.	.	.	36
1.50-1.74	.	.	.	25	.	.	.	.	.	.	25
1.75-1.99	.	.	.	8	.	.	.	.	.	.	8
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1580	370	89	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 1914.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	373	3	.	.	.	.	.	.	.	376
0.25-0.49	.	498	17	1	.	.	.	.	.	.	516
0.50-0.74	.	869	19	7	.	.	.	.	.	.	895
0.75-0.99	.	311	279	4	1	.	.	.	.	.	595
1.00-1.24	.	.	549	9	1	.	.	.	.	.	559
1.25-1.49	.	.	91	134	.	.	.	.	.	.	225
1.50-1.74	.	.	4	158	.	.	.	.	.	.	162
1.75-1.99	.	.	.	50	1	.	.	.	.	.	51
2.00-2.24	.	.	.	13	27	.	.	.	.	.	40
2.25-2.49	.	.	.	.	10	.	.	.	.	.	10
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2051	962	376	47	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 3222.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	583	2	.	.	.	.	.	.	.	585
0.25-0.49	.	904	9	1	.	.	.	.	.	.	914
0.50-0.74	.	1423	52	5	.	.	.	.	.	.	1480
0.75-0.99	.	290	666	.	1	.	.	.	.	.	957
1.00-1.24	.	.	1360	26	.	.	.	.	.	.	1386
1.25-1.49	.	.	71	675	.	.	.	.	.	.	746
1.50-1.74	.	.	.	474	.	.	.	.	.	.	474
1.75-1.99	.	.	.	131	.	.	.	.	.	.	131
2.00-2.24	.	.	.	31	43	.	.	.	.	.	74
2.25-2.49	.	.	.	.	13	.	.	.	.	.	13
2.50-2.74	.	.	.	.	5	.	.	.	.	.	5
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3200	2160	1343	63	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.7 NO. OF CASES= 6337.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	755	11	1	.	.	.	.	.	.	767
0.25-0.49	.	1356	36	8	.	.	.	.	.	.	1400
0.50-0.74	.	1880	162	31	1	.	.	.	.	.	2074
0.75-0.99	.	490	916	7	.	.	.	.	.	.	1413
1.00-1.24	.	.	1735	37	6	1	.	.	.	.	1779
1.25-1.49	.	.	171	812	2	.	.	.	.	.	985
1.50-1.74	.	.	1	900	8	1	.	.	.	.	910
1.75-1.99	.	.	.	214	19	.	.	.	.	.	233
2.00-2.24	.	.	.	54	72	1	.	.	.	.	127
2.25-2.49	.	.	.	2	29	.	.	.	.	.	31
2.50-2.74	.	.	.	.	16	.	.	.	.	.	16
2.75-2.99	.	.	.	.	1	2	.	.	.	.	3
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	1	.	2
TOTAL	0	4481	3032	2066	155	6	0	0	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 3.8 NO. OF CASES= 9120.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1521	166	44	.	.	.	.	.	.	1731
0.25-0.49	.	1652	363	266	16	.	.	.	.	.	2297
0.50-0.74	.	1472	964	530	121	.	.	.	.	.	3087
0.75-0.99	.	317	832	437	158	6	.	.	.	.	1750
1.00-1.24	.	3	968	813	293	23	.	.	.	.	2100
1.25-1.49	.	.	111	792	242	33	2	.	.	.	1180
1.50-1.74	.	.	7	1157	255	50	3	.	.	.	1472
1.75-1.99	.	.	.	251	464	35	7	.	.	.	757
2.00-2.24	.	.	.	33	745	79	2	.	.	.	859
2.25-2.49	.	.	.	.	273	44	4	.	.	.	321
2.50-2.74	.	.	.	.	228	42	1	.	.	.	271
2.75-2.99	.	.	.	.	32	32	2	.	.	.	66
3.00-3.24	.	.	.	.	4	40	4	.	.	.	48
3.25-3.49	.	.	.	.	.	10	.	.	.	.	10
3.50+	.	.	.	.	.	12	9	1	.	.	22
TOTAL	0	4965	3411	4323	2831	406	34	1	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.7 MEAN TP(SEC)= 4.4 NO. OF CASES= 14956.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1310	157	44	1	.	.	.	.	.	1512
0.25-0.49	.	1743	601	363	14	.	.	.	.	.	2721
0.50-0.74	.	842	1294	1617	311	.	.	.	.	.	4064
0.75-0.99	.	132	530	1136	529	18	.	.	.	.	2345
1.00-1.24	.	2	448	1082	1082	87	1	.	.	.	2702
1.25-1.49	.	.	27	648	660	108	3	.	.	.	1446
1.50-1.74	.	.	.	890	759	285	9	.	.	.	1943
1.75-1.99	.	.	.	167	622	272	20	.	.	.	1081
2.00-2.24	.	.	.	16	915	291	51	.	.	.	1273
2.25-2.49	.	.	.	.	368	280	57	.	.	.	705
2.50-2.74	.	.	.	.	183	448	98	1	.	.	730
2.75-2.99	.	.	.	.	40	209	67	.	.	.	316
3.00-3.24	.	.	.	.	5	187	129	4	.	.	325
3.25-3.49	.	.	.	.	1	40	98	9	.	.	148
3.50+	.	.	.	.	.	27	247	54	9	.	337
TOTAL	0	4029	3057	5963	5490	2252	780	68	9	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.4 MEAN TP(SEC)= 5.1 NO. OF CASES= 20267.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	761	20	8	.	.	.	.	.	.	789
0.25-0.49	.	1120	226	39	3	.	.	.	.	.	1388
0.50-0.74	.	693	788	429	33	.	.	.	.	.	1943
0.75-0.99	.	78	406	586	104	1	.	.	.	.	1175
1.00-1.24	.	2	329	707	434	16	.	.	.	.	1488
1.25-1.49	.	.	25	345	376	32	1	.	.	.	779
1.50-1.74	.	.	3	377	669	141	4	.	.	.	1194
1.75-1.99	.	.	.	38	331	280	3	.	.	.	652
2.00-2.24	.	.	.	5	395	293	20	1	.	.	714
2.25-2.49	.	.	.	.	149	361	38	.	.	.	548
2.50-2.74	.	.	.	.	43	404	40	.	.	.	487
2.75-2.99	.	.	.	.	.	241	86	.	.	.	327
3.00-3.24	.	.	.	.	.	167	142	3	.	.	312
3.25-3.49	.	.	.	.	.	21	111	2	.	.	134
3.50+	.	.	.	.	.	5	296	50	6	.	357
TOTAL	0	2654	1797	2534	2537	1962	741	56	6	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 6.2 MEAN TP(SEC)= 5.2 NO. OF CASES= 11510.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	411	5	1	.	.	.	.	.	.	417
0.25-0.49	.	665	59	.	.	.	.	.	.	.	724
0.50-0.74	.	517	439	62	.	.	.	.	.	.	1018
0.75-0.99	.	55	340	179	3	.	.	.	.	.	577
1.00-1.24	.	1	313	342	45	1	.	.	.	.	702
1.25-1.49	.	.	22	303	47	2	.	.	.	.	374
1.50-1.74	.	.	.	402	113	17	.	.	.	.	532
1.75-1.99	.	.	.	40	157	43	1	.	.	.	241
2.00-2.24	.	.	.	5	167	51	3	.	.	.	226
2.25-2.49	.	.	.	.	41	29	2	.	.	.	72
2.50-2.74	.	.	.	.	29	33	5	.	.	.	67
2.75-2.99	.	.	.	.	2	19	5	.	.	.	26
3.00-3.24	.	.	.	.	.	12	2	.	.	.	14
3.25-3.49	.	.	.	.	.	3	6	.	.	.	9
3.50+	.	.	.	.	.	2	12	1	.	.	15
TOTAL	0	1649	1178	1334	604	212	36	1	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 4706.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	211	3	.	.	.	.	.	.	.	214
0.25-0.49	.	351	27	.	.	.	.	.	.	.	378
0.50-0.74	.	381	270	16	.	.	.	.	.	.	667
0.75-0.99	.	23	234	100	.	.	.	.	.	.	357
1.00-1.24	.	.	135	247	.	.	.	.	.	.	382
1.25-1.49	.	.	.	240	.	.	.	.	.	.	240
1.50-1.74	.	.	.	394	20	.	.	.	.	.	414
1.75-1.99	.	.	.	18	217	.	.	.	.	.	235
2.00-2.24	.	.	.	.	137	.	.	.	.	.	137
2.25-2.49	.	.	.	.	36	.	.	.	.	.	36
2.50-2.74	.	.	.	.	31	6	.	.	.	.	37
2.75-2.99	.	.	.	.	.	14	.	.	.	.	14
3.00-3.24	.	.	.	.	.	9	.	.	.	.	9
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	966	669	1015	441	31	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.3 NO. OF CASES= 2930.

STATION E20 42.45N 79.77W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

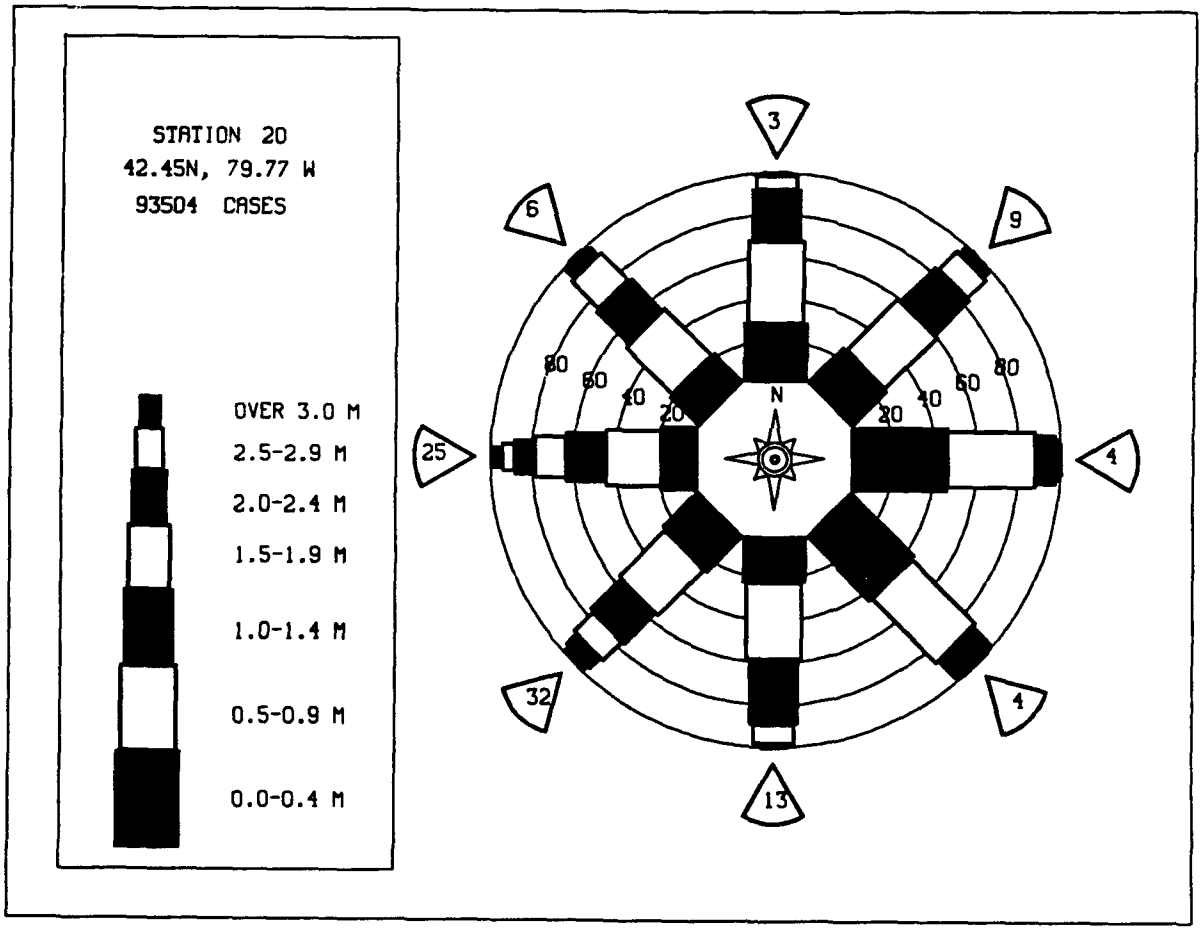
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	148	.	.	.	.	.	.	.	.	148
0.25-0.49	.	232	3	.	.	.	.	.	.	.	235
0.50-0.74	.	304	220	12	.	.	.	.	.	.	536
0.75-0.99	.	13	236	47	.	.	.	.	.	.	296
1.00-1.24	.	.	211	218	.	.	.	.	.	.	429
1.25-1.49	.	.	2	301	.	.	.	.	.	.	303
1.50-1.74	.	.	.	279	7	.	.	.	.	.	286
1.75-1.99	.	.	.	22	106	.	.	.	.	.	128
2.00-2.24	.	.	.	.	62	.	.	.	.	.	62
2.25-2.49	.	.	.	.	9	.	.	.	.	.	9
2.50-2.74	.	.	.	.	8	2	.	.	.	.	10
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	6	.	.	.	.	6
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	697	672	879	192	12	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 2302.

STATION E20 42.45N 79.77W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	8[illegible]0	37	10	.	.	.	.	.	.	917
0.25-0.49	.	1[illegible]	151	68	3	.	.	.	.	.	1444
0.50-0.74	.	1187	555	288	46	.	.	.	.	.	2076
0.75-0.99	.	240	582	288	80	2	.	.	.	.	1192
1.00-1.24	.	1	753	438	188	12	.	.	.	.	1392
1.25-1.49	.	.	61	520	135	17	.	.	.	.	733
1.50-1.74	.	.	1	599	194	49	1	.	.	.	844
1.75-1.99	.	.	.	101	224	63	3	.	.	.	391
2.00-2.24	.	.	.	16	284	71	7	.	.	.	378
2.25-2.49	.	.	.	.	103	71	10	.	.	.	184
2.50-2.74	.	.	.	.	60	95	14	.	.	.	169
2.75-2.99	.	.	.	.	8	53	16	.	.	.	77
3.00-3.24	.	.	.	.	1	43	27	.	.	.	71
3.25-3.49	.	.	.	.	.	8	21	1	.	.	30
3.50+	.	.	.	.	.	5	56	10	1	.	72
TOTAL	0	3520	2140	2328	1326	489	155	11	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 6.2 MEAN TP(SEC)= 4.4 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E20 (42.45N 79.77W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.8	0.9	1.0	0.8	0.7	0.8	0.8	0.8	0.9	1.1	0.9	0.9
1957	1.0	0.8	1.2	1.2	1.1	1.0	1.0	0.8	1.0	1.0	1.5	1.4	1.1
1958	1.1	1.0	0.7	0.7	0.8	0.7	0.5	0.6	0.7	1.0	1.0	0.8	0.8
1959	0.9	0.7	0.9	0.7	0.4	0.4	0.4	0.6	0.7	0.8	0.9	0.7	0.7
1960	0.8	1.4	1.2	1.3	1.0	0.9	0.8	0.8	0.8	1.0	1.4	1.5	1.1
1961	1.2	0.9	1.1	1.1	1.1	1.1	0.9	1.0	1.0	1.3	1.3	1.4	1.1
1962	1.5	1.1	1.0	1.2	1.0	0.7	0.8	0.8	0.9	1.0	0.9	1.3	1.0
1963	1.4	1.3	1.3	1.3	1.0	0.6	0.8	0.9	0.8	0.9	1.5	1.2	1.1
1964	1.6	1.1	1.3	1.3	1.2	0.8	0.7	0.9	0.9	1.0	1.2	1.2	1.1
1965	1.5	1.3	1.0	1.0	0.9	0.9	0.7	0.9	0.9	1.3	1.4	1.2	1.1
1966	1.5	0.8	1.2	1.1	1.0	0.7	0.8	0.8	0.9	1.3	1.2	1.3	1.0
1967	1.5	1.4	0.9	1.2	1.0	0.8	0.6	0.7	0.8	1.1	1.5	1.3	1.1
1968	1.1	1.3	1.2	1.1	0.9	0.8	0.8	0.9	0.8	1.1	1.3	1.4	1.1
1969	1.7	0.9	1.3	1.0	0.9	0.8	0.7	0.7	0.8	1.1	1.2	1.1	1.0
1970	1.1	1.2	1.0	1.2	1.0	0.8	0.8	0.7	0.9	1.0	1.3	1.3	1.0
1971	1.6	1.5	1.3	1.2	0.8	0.7	0.8	0.8	0.7	0.7	1.1	1.2	1.0
1972	1.5	1.1	1.1	0.9	0.8	0.7	0.6	0.8	0.9	1.0	1.0	1.1	1.0
1973	1.6	1.1	1.1	1.4	1.1	0.9	0.9	0.8	0.8	0.9	1.5	1.2	1.1
1974	1.2	1.2	1.3	1.4	1.1	0.9	0.8	0.7	0.9	1.0	1.2	1.2	1.1
1975	1.4	1.1	1.2	1.2	0.6	0.8	0.6	0.6	0.9	1.1	1.3	1.2	1.0
1976	1.5	1.5	1.6	1.3	1.1	0.9	0.9	0.8	1.0	1.1	1.5	1.4	1.2
1977	1.7	1.4	1.3	1.1	0.8	0.8	0.9	0.9	0.9	1.0	1.3	1.5	1.1
1978	1.6	0.7	1.0	1.2	0.9	0.8	0.7	0.6	0.8	1.0	1.1	1.5	1.0
1979	1.4	1.1	1.2	1.1	0.7	0.8	0.6	0.8	0.8	1.1	1.1	1.3	1.0
1980	1.3	1.0	1.1	1.0	0.7	0.7	0.6	0.6	0.8	1.2	1.2	1.1	0.9
1981	1.0	1.1	1.1	1.3	0.6	0.9	0.6	0.6	0.8	0.9	0.9	1.0	0.9
1982	1.6	0.9	1.0	1.4	0.4	0.6	0.5	0.6	0.5	0.7	1.0	1.1	0.9
1983	1.0	0.6	0.8	0.9	0.9	0.4	0.6	0.5	0.7	0.9	0.9	1.3	0.8
1984	0.9	0.9	1.1	0.8	1.0	0.7	0.6	0.5	0.6	0.6	1.1	1.2	0.8
1985	1.3	1.1	1.2	1.2	0.9	0.8	0.7	0.7	0.8	0.9	1.1	1.4	1.0
1986	1.5	0.9	1.3	1.1	1.0	1.0	1.0	1.1	1.0	1.1	1.1	1.1	1.1
1987	1.2	0.9	1.0	1.1	1.0	0.9	0.9	1.0	0.8	1.1	1.4	1.5	1.1
MEAN	1.3	1.1	1.1	1.1	0.9	0.8	0.7	0.7	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E20 (42.45N 79.77W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	3.2	4.1	3.2	2.5	2.5	2.4	2.0	1.9	2.4	3.1	2.6
1957	2.3	2.0	3.3	4.1	2.7	4.0	2.8	1.9	2.7	2.6	3.5	3.2
1958	3.3	2.9	1.9	3.2	2.0	2.2	1.7	1.8	2.3	3.0	3.2	3.2
1959	2.9	1.7	3.1	3.2	1.4	1.2	1.9	1.8	1.9	2.8	2.5	2.4
1960	2.4	3.7	3.0	4.3	2.5	4.2	2.4	2.4	2.2	4.0	3.6	3.6
1961	3.7	3.8	2.8	5.1	3.7	3.7	2.8	3.0	3.4	4.3	4.6	5.0
1962	3.6	3.0	2.5	3.8	3.7	2.2	2.7	2.4	2.8	2.8	3.0	4.3
1963	4.4	3.2	4.1	5.0	3.4	2.7	2.4	3.5	2.8	3.0	3.3	3.4
1964	4.4	3.0	5.3	3.6	4.8	3.1	2.0	2.6	3.3	3.0	3.8	3.8
1965	5.1	2.9	4.1	5.3	3.1	2.4	2.4	2.9	2.8	4.1	4.3	3.2
1966	3.5	2.9	4.2	3.0	3.5	2.8	3.2	2.9	3.8	3.4	3.8	4.0
1967	3.7	4.3	2.6	4.1	3.4	2.4	2.7	1.9	2.8	3.5	3.9	3.3
1968	4.6	4.0	3.4	4.8	3.4	3.1	2.5	3.1	3.0	3.0	4.0	4.8
1969	4.5	3.6	4.1	3.5	2.9	2.8	2.3	2.7	2.8	3.2	3.2	2.9
1970	3.6	2.8	4.3	5.3	2.6	2.7	3.3	2.7	4.0	2.8	4.4	4.0
1971	6.1	4.9	3.7	3.6	3.2	2.4	2.8	2.7	1.9	2.9	3.3	3.7
1972	6.2	4.1	3.8	3.4	2.5	2.3	2.1	2.6	2.8	3.2	3.6	4.2
1973	4.1	3.3	3.7	4.1	3.1	2.4	3.4	2.7	2.9	3.4	4.4	3.5
1974	4.5	3.5	4.1	4.8	3.4	3.5	2.3	2.5	3.2	2.7	4.3	3.5
1975	4.0	5.0	3.8	5.2	2.0	2.6	2.5	2.6	2.7	2.7	3.9	5.4
1976	4.1	4.1	4.2	3.4	4.0	2.5	2.3	2.5	3.1	3.6	3.5	3.9
1977	4.6	3.6	4.0	5.0	2.8	3.1	3.4	2.8	3.1	2.6	3.7	3.7
1978	5.7	2.1	3.8	4.2	3.6	2.4	3.0	2.7	2.1	2.7	3.1	4.2
1979	4.3	3.3	3.6	5.7	2.9	2.8	2.3	3.2	2.6	2.9	3.5	4.2
1980	4.5	2.8	4.0	3.6	2.9	3.1	2.0	2.2	2.4	4.8	2.8	4.9
1981	3.4	3.0	3.8	3.6	2.4	2.6	1.9	1.7	3.0	3.7	3.6	2.3
1982	5.2	3.5	5.3	4.6	1.6	1.8	2.3	1.8	2.1	2.8	3.2	4.8
1983	3.6	2.3	2.4	3.0	2.3	1.9	2.0	2.0	2.1	3.3	2.8	4.0
1984	2.8	2.8	3.7	4.2	3.9	2.2	2.2	1.6	2.4	2.3	2.8	3.1
1985	3.3	2.6	4.2	4.6	2.5	2.9	1.8	2.0	2.3	3.1	3.2	4.4
1986	3.8	2.7	4.4	2.5	3.1	2.7	3.0	3.1	3.5	3.1	3.9	3.0
1987	4.4	3.1	3.6	3.6	2.6	2.6	2.5	2.2	2.5	3.1	4.1	4.4

32 YR. STATISTICS FOR WIS STATION E20

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.4
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	266.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012515

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	308	2	.	.	.	.	.	.	.	310
0.25-0.49	.	34	14	2	.	.	.	.	.	.	345
0.50-0.74	.	293	223	19	.	.	.	.	.	.	535
0.75-0.99	.	21	202	12	.	.	.	.	.	.	235
1.00-1.24	.	.	211	68	.	.	.	.	.	.	279
1.25-1.49	.	.	1	104	.	.	.	.	.	.	105
1.50-1.74	.	.	.	95	2	.	.	.	.	.	97
1.75-1.99	.	.	.	8	6	.	.	.	.	.	14
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	951	653	308	12	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.7 NO. OF CASES= 1806.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	332	6	.	.	.	.	.	.	.	338
0.25-0.49	.	425	22	2	.	.	.	.	.	.	449
0.50-0.74	.	366	205	12	.	.	.	.	.	.	583
0.75-0.99	.	37	196	35	1	.	.	.	.	.	269
1.00-1.24	.	.	174	133	.	.	.	.	.	.	307
1.25-1.49	.	.	3	90	.	.	.	.	.	.	93
1.50-1.74	.	.	.	83	6	.	.	.	.	.	89
1.75-1.99	.	.	.	6	16	.	.	.	.	.	22
2.00-2.24	.	.	.	.	10	.	.	.	.	.	10
2.25-2.49	.	.	.	.	4	.	.	.	.	.	4
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1160	606	361	37	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 2034.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	580	2	1	.	.	.	.	.	.	583
0.25-0.49	.	746	47	.	.	.	.	.	.	.	793
0.50-0.74	.	695	393	20	.	.	.	.	.	.	1108
0.75-0.99	.	140	366	103	.	.	.	.	.	.	609
1.00-1.24	.	.	410	430	1	.	.	.	.	.	841
1.25-1.49	.	.	11	418	.	.	.	.	.	.	429
1.50-1.74	.	.	.	527	33	.	.	.	.	.	560
1.75-1.99	.	.	.	18	188	.	.	.	.	.	206
2.00-2.24	.	.	.	.	148	.	.	.	.	.	148
2.25-2.49	.	.	.	.	57	.	.	.	.	.	57
2.50-2.74	.	.	.	.	28	9	.	.	.	.	37
2.75-2.99	.	.	.	.	.	8	.	.	.	.	8
3.00-3.24	.	.	.	.	.	9	.	.	.	.	9
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2161	1229	1517	455	28	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.1 NO. OF CASES= 5051.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	555	3	.	.	.	.	.	.	.	558
0.25-0.49	.	942	60	4	.	.	.	.	.	.	1006
0.50-0.74	.	827	283	54	.	.	.	.	.	.	1164
0.75-0.99	.	162	249	87	.	.	.	.	.	.	498
1.00-1.24	.	23	193	156	10	.	.	.	.	.	382
1.25-1.49	.	.	6	127	5	.	.	.	.	.	138
1.50-1.74	.	.	.	124	23	.	.	.	.	.	147
1.75-1.99	.	.	.	11	52	.	.	.	.	.	63
2.00-2.24	.	.	.	.	41	.	.	.	.	.	41
2.25-2.49	.	.	.	.	17	1	.	.	.	.	18
2.50-2.74	.	.	.	.	2	1	.	.	.	.	3
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2509	794	563	150	7	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.6 NO. OF CASES= 3772.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	626	8	.	.	.	.	.	.	.	634
0.25-0.49	.	718	70	8	.	.	.	.	.	.	796
0.50-0.74	.	432	134	67	1	.	.	.	.	.	634
0.75-0.99	.	89	6	54	3	.	.	.	.	.	152
1.00-1.24	.	18	8	19	10	.	.	.	.	.	55
1.25-1.49	.	.	4	.	3	.	.	.	.	.	7
1.50-1.74	.	.	1	.	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1883	231	148	17	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 2139.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	509	10	.	.	.	.	.	.	.	519
0.25-0.49	.	463	64	6	.	.	.	.	.	.	533
0.50-0.74	.	460	33	26	2	.	.	.	.	.	521
0.75-0.99	.	104	18	17	1	.	.	.	.	.	140
1.00-1.24	.	5	23	.	1	.	.	.	.	.	29
1.25-1.49	.	.	1	.	1	.	.	.	.	.	2
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1541	149	50	5	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.2 NO. OF CASES= 1637.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	614	22	.	.	.	.	.	.	.	636
0.25-0.49	.	478	43	7	.	.	.	.	.	.	528
0.50-0.74	.	697	7	13	1	.	.	.	.	.	718
0.75-0.99	.	188	101	.	.	.	.	.	.	.	289
1.00-1.24	.	.	121	.	.	.	.	.	.	.	121
1.25-1.49	.	.	17	5	.	.	.	.	.	.	22
1.50-1.74	.	.	.	18	.	.	.	.	.	.	18
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1977	311	43	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.2 NO. OF CASES= 2187.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	480	9	1	.	.	.	.	.	.	490
0.25-0.49	.	416	13	3	.	.	.	.	.	.	432
0.50-0.74	.	891	1	3	1	.	.	.	.	.	896
0.75-0.99	.	334	170	2	.	.	.	.	.	.	506
1.00-1.24	.	1	331	.	.	.	.	.	.	.	332
1.25-1.49	.	.	45	16	.	.	.	.	.	.	61
1.50-1.74	.	.	5	39	.	.	.	.	.	.	44
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2122	574	67	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 2591.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	619	4	.	.	.	.	.	.	.	623
0.25-0.49	.	776	13	2	.	.	.	.	.	.	791
0.50-0.74	.	1373	3	1	.	.	.	.	.	.	1377
0.75-0.99	.	741	13	.	.	.	.	.	.	.	754
1.00-1.24	.	44	268	.	.	.	.	.	.	.	312
1.25-1.49	.	.	93	.	.	.	.	.	.	.	93
1.50-1.74	.	.	20	14	.	.	.	.	.	.	34
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3553	414	23	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.1 NO. OF CASES= 3737.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	690	31	13	.	.	.	.	.	.	734
0.25-0.49	.	1167	31	21	.	.	.	.	.	.	1219
0.50-0.74	.	2660	69	9	2	.	.	.	.	.	2740
0.75-0.99	.	1623	52	8	.	.	.	.	.	.	1683
1.00-1.24	.	449	639	25	.	.	.	.	.	.	1113
1.25-1.49	.	.	318	41	.	.	.	.	.	.	359
1.50-1.74	.	.	83	70	1	1	.	.	.	.	155
1.75-1.99	.	.	1	21	.	.	.	.	.	.	22
2.00-2.24	.	.	.	4	6	.	.	.	.	.	10
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6589	1224	212	10	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.2 NO. OF CASES= 7525.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1604	272	111	4	.	.	.	.	.	1991
0.25-0.49	.	1523	397	226	26	.	.	.	.	.	2172
0.50-0.74	.	2158	491	460	132	4	.	.	.	.	3245
0.75-0.99	.	759	841	164	165	19	.	.	.	.	1948
1.00-1.24	.	238	1586	271	236	56	1	.	.	.	2388
1.25-1.49	.	.	334	686	100	50	4	.	.	.	1174
1.50-1.74	.	.	39	951	108	56	10	.	.	.	1164
1.75-1.99	.	.	1	441	43	40	4	.	.	.	529
2.00-2.24	.	.	.	167	201	40	8	.	.	.	416
2.25-2.49	.	.	.	6	100	11	2	.	.	.	119
2.50-2.74	.	.	.	.	60	5	1	.	.	.	66
2.75-2.99	.	.	.	1	11	.	4	.	.	.	16
3.00-3.24	.	.	.	.	12	.	1	.	.	.	13
3.25-3.49	.	.	.	.	1	.	.	.	.	.	1
3.50+	.	.	.	.	.	1	2	.	1	.	4
TOTAL	0	6282	3961	3484	1199	282	37	0	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 14282.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1800	283	99	4	.	.	.	.	.	2186
0.25-0.49	.	1843	837	607	56	.	.	.	.	.	3343
0.50-0.74	.	1033	1100	1663	468	11	.	.	.	.	4275
0.75-0.99	.	176	729	818	544	27	.	.	.	.	2294
1.00-1.24	.	3	1217	713	896	95	2	.	.	.	2926
1.25-1.49	.	.	166	814	435	130	5	.	.	.	1550
1.50-1.74	.	.	11	1081	718	235	16	.	.	.	2062
1.75-1.99	.	.	.	325	510	233	21	1	.	.	1090
2.00-2.24	.	.	.	166	593	339	45	1	.	.	1144
2.25-2.49	.	.	.	13	235	267	51	1	.	.	567
2.50-2.74	.	.	.	.	143	303	73	.	.	.	519
2.75-2.99	.	.	.	.	29	106	83	1	.	.	219
3.00-3.24	.	.	.	.	20	96	108	2	.	.	226
3.25-3.49	.	.	.	.	2	24	63	.	1	.	90
3.50+	.	.	.	.	2	11	142	42	10	.	207
TOTAL	0	4855	4343	6299	4656	1877	609	48	11	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.8 NO. OF CASES= 21250.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1082	48	13	1	.	.	.	.	.	1144
0.25-0.49	.	1441	349	42	3	.	.	.	.	.	1835
0.50-0.74	.	706	968	739	31	.	.	.	.	.	2444
0.75-0.99	.	87	418	721	156	3	.	.	.	.	1385
1.00-1.24	.	1	379	826	593	13	.	.	.	.	1812
1.25-1.49	.	.	14	434	398	50	1	.	.	.	897
1.50-1.74	.	.	.	518	781	173	3	.	.	.	1475
1.75-1.99	.	.	.	58	388	370	5	.	.	.	821
2.00-2.24	.	.	.	3	507	334	29	2	.	.	875
2.25-2.49	.	.	.	.	197	381	60	.	.	.	638
2.50-2.74	.	.	.	.	72	488	113	.	.	.	673
2.75-2.99	.	.	.	.	4	174	132	1	.	.	311
3.00-3.24	.	.	.	.	1	156	210	4	.	.	371
3.25-3.49	.	.	.	.	.	20	151	1	.	.	172
3.50+	.	.	.	.	.	9	332	77	18	.	436
TOTAL	0	3317	2176	3354	3132	2171	1036	85	18	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.9 MEAN TP(SEC)= 5.1 NO. OF CASES= 14323.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	597	3	.	.	.	.	.	.	.	600
0.25-0.49	.	851	83	5	1	.	.	.	.	.	940
0.50-0.74	.	514	555	118	.	.	.	.	.	.	1187
0.75-0.99	.	50	330	288	7	.	.	.	.	.	675
1.00-1.24	.	.	237	509	55	3	.	.	.	.	804
1.25-1.49	.	.	6	411	60	1	1	.	.	.	479
1.50-1.74	.	.	1	517	160	33	1	.	.	.	712
1.75-1.99	.	.	.	32	264	67	1	.	.	.	364
2.00-2.24	.	.	.	3	217	52	6	.	.	.	278
2.25-2.49	.	.	.	.	60	40	8	1	.	.	109
2.50-2.74	.	.	.	.	37	52	16	.	.	.	105
2.75-2.99	.	.	.	.	.	14	17	.	.	.	31
3.00-3.24	.	.	.	.	.	18	7	.	.	.	25
3.25-3.49	.	.	.	.	.	3	12	.	.	.	15
3.50+	.	.	.	.	.	1	16	3	.	.	20
TOTAL	0	2012	1215	1883	861	284	85	4	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.4 NO. OF CASES= 5949.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	265	5	.	.	.	.	.	.	.	270
0.25-0.49	.	380	17	2	.	.	.	.	.	.	399
0.50-0.74	.	345	305	18	.	.	.	.	.	.	668
0.75-0.99	.	21	229	112	.	.	.	.	.	.	362
1.00-1.24	.	.	111	302	2	.	.	.	.	.	415
1.25-1.49	.	.	.	248	1	.	.	.	.	.	249
1.50-1.74	.	.	.	393	20	.	.	.	.	.	413
1.75-1.99	.	.	.	9	199	.	.	.	.	.	208
2.00-2.24	.	.	.	.	133	1	.	.	.	.	134
2.25-2.49	.	.	.	.	35	.	.	.	.	.	35
2.50-2.74	.	.	.	.	12	9	.	.	.	.	21
2.75-2.99	.	.	.	.	.	10	.	.	.	.	10
3.00-3.24	.	.	.	.	.	6	.	.	.	.	6
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1011	667	1084	402	27	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.3 NO. OF CASES= 2995.

STATION E21 42.45N 79.57W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

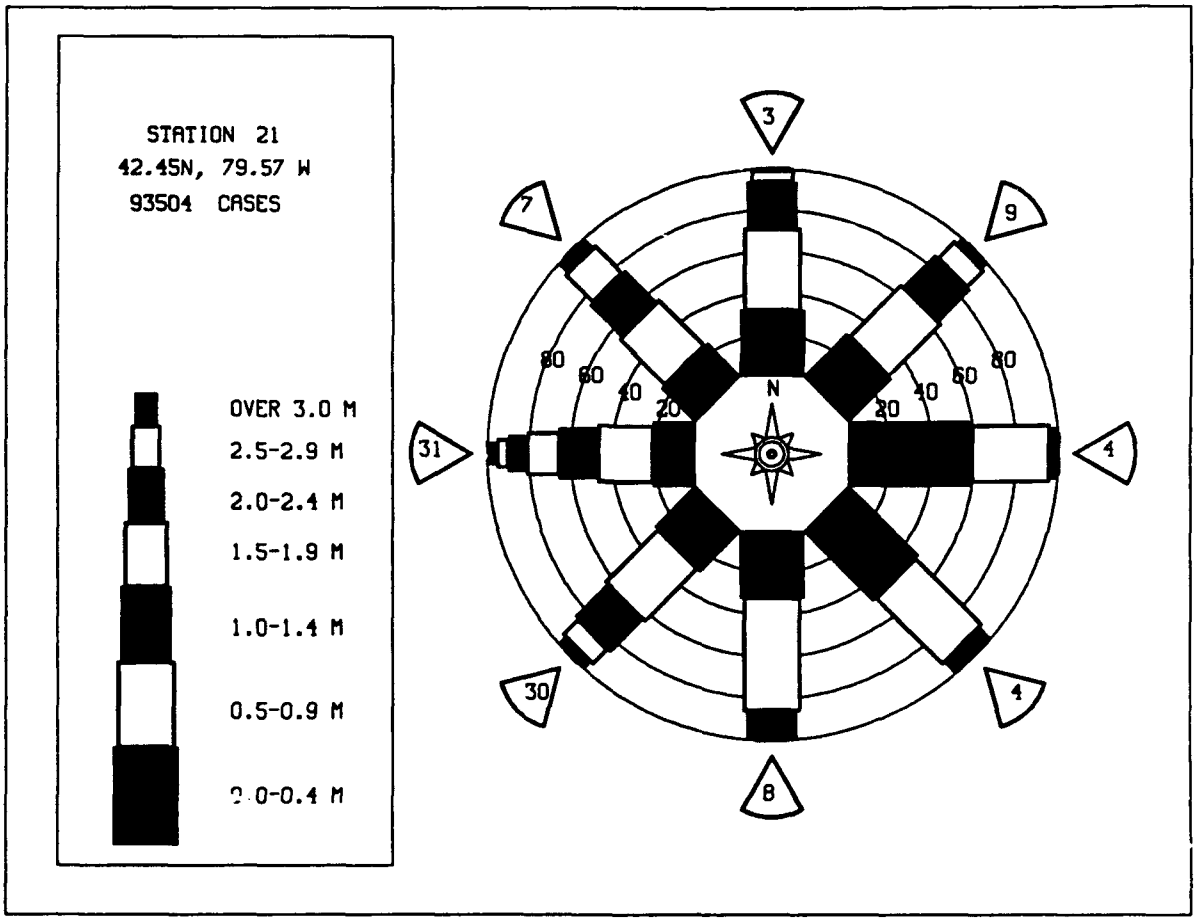
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	171	1	.	.	.	.	.	.	.	172
0.25-0.49	.	236	21	1	.	.	.	.	.	.	258
0.50-0.74	.	287	212	6	.	.	.	.	.	.	505
0.75-0.99	.	19	242	48	.	.	.	.	.	.	309
1.00-1.24	.	.	211	213	.	.	.	.	.	.	424
1.25-1.49	.	.	1	264	.	.	.	.	.	.	265
1.50-1.74	.	.	.	257	8	.	.	.	.	.	265
1.75-1.99	.	.	.	13	96	.	.	.	.	.	109
2.00-2.24	.	.	.	1	41	.	.	.	.	.	42
2.25-2.49	.	.	.	.	10	.	.	.	.	.	10
2.50-2.74	.	.	.	.	5	1	.	.	.	.	6
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	713	688	803	160	6	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 2226.

STATION E21 42.45N 79.57W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1083	71	24	.	.	.	.	.	.	1178
0.25-0.49	.	1274	208	94	8	.	.	.	.	.	1584
0.50-0.74	.	1374	499	323	63	1	.	.	.	.	2260
0.75-0.99	.	455	416	247	87	5	.	.	.	.	1210
1.00-1.24	.	78	612	367	180	16	.	.	.	.	1253
1.25-1.49	.	.	102	366	100	23	1	.	.	.	592
1.50-1.74	.	.	16	469	186	49	3	.	.	.	723
1.75-1.99	.	.	.	95	176	71	3	.	.	.	345
2.00-2.24	.	.	.	34	190	76	9	.	.	.	309
2.25-2.49	.	.	.	2	72	70	12	.	.	.	156
2.50-2.74	.	.	.	.	36	87	20	.	.	.	143
2.75-2.99	.	.	.	.	4	31	23	.	.	.	58
3.00-3.24	.	.	.	.	3	29	32	.	.	.	64
3.25-3.49	.	.	.	.	.	5	22	.	.	.	27
3.50+	.	.	.	.	.	2	49	12	2	.	65
TOTAL	0	4264	1924	2021	1105	465	174	12	2	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 5.9 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E21 (42.45N 79.57W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.8	0.8	0.9	0.7	0.6	0.7	0.7	0.7	0.8	1.0	0.9	0.8
1957	0.9	0.7	1.1	1.0	1.0	0.8	0.8	0.7	0.8	0.9	1.3	1.2	0.9
1958	1.0	1.0	0.6	0.7	0.7	0.7	0.5	0.5	0.6	0.9	0.9	0.7	0.7
1959	0.9	0.7	0.8	0.7	0.4	0.4	0.4	0.6	0.6	0.7	0.8	0.7	0.6
1960	0.8	1.3	1.1	1.2	0.8	0.8	0.7	0.7	0.7	0.9	1.2	1.3	1.0
1961	1.1	0.8	1.0	1.0	1.1	0.9	0.8	0.8	0.9	1.1	1.1	1.2	1.0
1962	1.5	1.0	1.0	1.2	0.8	0.7	0.8	0.7	0.8	0.9	0.8	1.2	0.9
1963	1.3	1.2	1.2	1.2	1.0	0.6	0.8	0.8	0.7	0.8	1.4	1.1	1.0
1964	1.4	1.0	1.2	1.2	1.1	0.8	0.7	0.8	0.8	0.9	1.1	1.1	1.0
1965	1.4	1.2	1.0	0.9	0.9	0.8	0.6	0.8	0.8	1.1	1.3	1.1	1.0
1966	1.4	0.8	1.1	1.0	0.9	0.7	0.8	0.7	0.9	1.2	1.1	1.2	1.0
1967	1.4	1.3	0.8	1.1	0.9	0.7	0.6	0.6	0.7	1.0	1.4	1.2	1.0
1968	1.0	1.3	1.1	1.0	0.8	0.8	0.8	0.8	0.7	1.0	1.2	1.4	1.0
1969	1.6	0.9	1.3	0.9	0.9	0.7	0.6	0.7	0.7	1.0	1.0	1.0	0.9
1970	1.0	1.1	0.9	1.1	0.9	0.8	0.8	0.6	0.8	0.8	1.1	1.1	0.8
1971	1.6	1.4	1.2	1.2	0.7	0.6	0.7	0.8	0.6	0.6	1.0	1.1	1.0
1972	1.5	1.0	1.0	0.8	0.7	0.7	0.6	0.8	0.8	0.9	0.9	1.0	0.9
1973	1.5	1.0	1.0	1.3	1.0	0.9	0.8	0.7	0.8	0.8	1.4	1.1	1.0
1974	1.1	1.1	1.2	1.3	1.0	0.8	0.8	0.6	0.9	0.9	1.1	1.1	1.0
1975	1.3	1.1	1.2	1.1	0.5	0.8	0.6	0.5	0.8	1.0	1.1	1.1	0.9
1976	1.4	1.4	1.4	1.2	1.1	0.8	0.8	0.7	0.9	1.0	1.4	1.3	1.1
1977	1.6	1.3	1.2	1.0	0.7	0.8	0.8	0.8	0.8	0.9	1.2	1.3	1.0
1978	1.5	0.7	0.9	1.1	0.8	0.8	0.7	0.6	0.7	0.9	1.0	1.4	0.9
1979	1.3	1.0	1.1	1.1	0.7	0.7	0.6	0.8	0.7	1.0	1.0	1.2	0.9
1980	1.2	1.0	1.0	0.9	0.7	0.7	0.6	0.6	0.7	1.1	1.1	1.0	0.9
1981	0.9	1.0	1.0	1.1	0.5	0.8	0.5	0.5	0.7	0.8	0.9	0.9	0.8
1982	1.5	0.9	0.9	1.3	0.4	0.6	0.5	0.5	0.5	0.6	0.9	1.0	0.8
1983	0.9	0.6	0.7	0.9	0.8	0.4	0.6	0.5	0.6	0.8	0.9	1.2	0.7
1984	0.8	0.8	1.1	0.7	0.9	0.7	0.6	0.5	0.6	0.5	1.0	1.1	0.8
1985	1.3	1.0	1.2	1.1	0.8	0.8	0.7	0.6	0.7	0.8	1.0	1.3	0.9
1986	1.4	0.8	1.2	1.0	0.9	0.9	0.9	0.9	0.9	0.9	1.0	0.9	1.0
1987	1.1	0.8	0.9	1.0	0.9	0.8	0.8	0.8	0.7	0.9	1.2	1.3	0.9
MEAN	1.2	1.0	1.0	1.0	0.8	0.7	0.7	0.7	0.7	0.9	1.1	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E21 (42.45N 79.57W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	3.2	4.0	3.0	2.5	2.3	2.0	1.9	1.7	2.5	3.1	2.4
1957	2.5	1.8	3.0	3.6	2.7	4.1	2.8	1.7	2.7	2.4	3.2	3.1
1958	3.1	2.9	1.9	3.1	1.9	2.3	1.7	1.7	2.0	3.3	2.9	3.2
1959	3.0	1.7	3.1	3.0	1.2	1.5	1.7	1.7	1.9	2.7	2.5	3.0
1960	2.3	3.5	2.6	3.9	2.5	4.0	2.2	2.2	2.0	3.7	3.6	3.2
1961	3.6	3.5	2.7	4.8	3.6	3.4	2.5	2.8	3.2	4.0	4.0	4.6
1962	3.5	2.7	2.4	3.6	3.4	2.1	2.7	2.3	3.1	2.5	3.2	4.3
1963	4.7	3.3	3.9	4.8	3.3	2.5	2.5	3.6	3.0	2.9	3.1	3.2
1964	4.3	3.1	4.9	3.5	4.5	3.0	2.0	2.7	3.1	3.0	3.6	4.0
1965	4.8	3.3	4.0	4.9	3.0	2.4	2.3	2.9	2.6	3.8	4.1	3.0
1966	5.5	3.5	4.3	3.2	3.2	2.9	3.1	3.1	3.8	3.4	3.5	4.0
1967	4.0	4.2	2.7	4.1	3.5	2.4	2.7	1.9	2.4	3.6	4.1	3.3
1968	4.4	4.0	3.5	4.3	3.3	3.0	2.5	3.1	2.9	3.0	4.0	5.0
1969	4.7	3.7	4.4	3.2	3.1	3.0	2.1	2.7	2.8	3.2	3.0	2.9
1970	3.4	2.6	4.1	4.8	2.6	2.7	3.3	2.5	3.8	2.6	4.1	3.9
1971	3.7	4.5	3.7	3.6	3.0	2.5	2.8	2.7	1.8	2.8	3.2	3.6
1972	5.9	4.0	3.8	3.1	2.6	2.2	2.3	2.5	2.5	3.2	3.3	4.1
1973	4.3	3.3	3.7	4.0	3.1	2.5	3.3	2.4	2.9	3.4	4.2	3.3
1974	4.0	3.5	4.2	4.8	3.2	3.6	2.2	2.3	3.2	2.6	4.2	3.2
1975	3.9	4.8	3.8	5.1	1.8	2.6	2.5	2.3	2.7	2.6	3.9	5.0
1976	4.1	3.9	3.9	3.4	3.6	2.3	2.2	2.4	3.1	3.5	3.5	3.7
1977	4.5	3.3	3.9	4.7	2.8	3.1	3.3	2.7	3.1	2.4	3.5	3.7
1978	5.5	2.0	4.0	3.9	3.4	2.4	2.9	2.4	2.2	2.5	3.1	4.1
1979	4.2	3.6	3.5	5.5	2.7	2.9	2.2	3.3	2.5	3.0	3.5	4.0
1980	4.6	2.9	4.1	3.7	2.7	3.1	2.2	2.1	2.3	4.9	2.6	4.7
1981	3.3	2.8	3.3	3.3	2.4	2.8	1.8	1.7	3.1	3.8	3.6	2.3
1982	5.0	3.2	5.0	4.6	1.6	1.9	2.1	1.9	2.3	2.6	2.7	4.6
1983	3.8	2.3	2.5	3.1	2.4	1.9	1.9	1.9	1.9	3.1	2.9	3.9
1984	2.9	2.5	3.5	4.0	4.1	2.2	2.2	1.7	2.1	2.3	2.7	3.2
1985	3.5	2.4	4.3	4.3	2.3	2.9	1.9	2.2	2.1	2.8	3.3	4.3
1986	3.9	2.6	4.5	2.4	3.2	2.6	2.8	2.9	3.4	2.8	3.7	3.2
1987	4.3	2.9	3.5	3.4	2.6	2.5	2.4	2.1	2.4	2.8	4.0	4.0

32 YR. STATISTICS FOR WIS STATION E21

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE . RIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.9
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	264.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012518

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	258	3	.	.	.	.	.	.	.	261
0.25-0.49	.	515	.	.	.	.	.	.	.	.	515
0.50-0.74	.	645	32	2	.	.	.	.	.	.	679
0.75-0.99	.	146	233	.	.	.	.	.	.	.	379
1.00-1.24	.	.	256	7	.	.	.	.	.	.	263
1.25-1.49	.	.	33	59	.	.	.	.	.	.	92
1.50-1.74	.	.	.	24	.	.	.	.	.	.	24
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1564	557	93	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 2076.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	256	1	.	.	.	.	.	.	.	257
0.25-0.49	.	458	2	.	.	.	.	.	.	.	460
0.50-0.74	.	503	109	.	.	.	.	.	.	.	612
0.75-0.99	.	50	129	3	.	.	.	.	.	.	182
1.00-1.24	.	.	145	21	.	.	.	.	.	.	166
1.25-1.49	.	.	1	45	.	.	.	.	.	.	46
1.50-1.74	.	.	.	22	.	.	.	.	.	.	22
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1267	387	94	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 1641.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	445	1	.	.	.	.	.	.	.	446
0.25-0.49	.	967	1	.	.	.	.	.	.	.	968
0.50-0.74	.	907	329	1	.	.	.	.	.	.	1237
0.75-0.99	.	79	586	5	.	.	.	.	.	.	670
1.00-1.24	.	.	595	114	.	.	.	.	.	.	709
1.25-1.49	.	.	1	317	.	.	.	.	.	.	318
1.50-1.74	.	.	1	242	.	.	.	.	.	.	243
1.75-1.99	.	.	.	50	14	.	.	.	.	.	64
2.00-2.24	.	.	.	.	42	.	.	.	.	.	42
2.25-2.49	.	.	.	.	8	.	.	.	.	.	8
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2398	1514	729	66	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 4410.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	440	.	.	.	.	.	.	.	.	440
0.25-0.49	.	916	1	.	.	.	.	.	.	.	917
0.50-0.74	.	1086	301	2	.	.	.	.	.	.	1389
0.75-0.99	.	145	552	16	.	.	.	.	.	.	713
1.00-1.24	.	.	592	152	.	.	.	.	.	.	744
1.25-1.49	.	.	23	361	.	.	.	.	.	.	384
1.50-1.74	.	.	.	295	3	.	.	.	.	.	298
1.75-1.99	.	.	.	41	20	.	.	.	.	.	61
2.00-2.24	.	.	.	2	33	.	.	.	.	.	35
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	8	.	.	.	.	.	8
2.75-2.99	.	.	.	.	5	.	.	.	.	.	5
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2587	1469	869	75	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 4684.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	489	.	.	.	.	.	.	.	.	489
0.25-0.49	.	975	3	.	.	.	.	.	.	.	978
0.50-0.74	.	1057	67	1	.	.	.	.	.	.	1125
0.75-0.99	.	144	273	3	.	.	.	.	.	.	420
1.00-1.24	.	.	386	13	.	.	.	.	.	.	399
1.25-1.49	.	.	20	98	.	.	.	.	.	.	118
1.50-1.74	.	.	.	37	.	.	.	.	.	.	37
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2665	749	158	2	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 3348.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	383	5	.	.	.	.	.	.	.	388
0.25-0.49	.	597	1	.	.	.	.	.	.	.	598
0.50-0.74	.	704	6	.	.	.	.	.	.	.	710
0.75-0.99	.	71	68	2	.	.	.	.	.	.	141
1.00-1.24	.	.	75	3	.	.	.	.	.	.	78
1.25-1.49	.	.	4	9	.	.	.	.	.	.	13
1.50-1.74	.	.	.	7	.	.	.	.	.	.	7
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1755	159	23	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.1 NO. OF CASES= 1818.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	467	3	.	.	.	.	.	.	.	470
0.25-0.49	.	664	1	.	.	.	.	.	.	.	665
0.50-0.74	.	1045	4	.	.	.	.	.	.	.	1049
0.75-0.99	.	165	85	.	.	.	.	.	.	.	250
1.00-1.24	.	.	87	.	.	.	.	.	.	.	87
1.25-1.49	.	.	6	1	.	.	.	.	.	.	7
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2341	186	3	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 2370.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	496	2	.	.	.	.	.	.	.	498
0.25-0.49	.	744	.	.	.	.	.	.	.	.	744
0.50-0.74	.	1128	1	.	.	.	.	.	.	.	1129
0.75-0.99	.	227	77	.	.	.	.	.	.	.	304
1.00-1.24	.	3	137	.	.	.	.	.	.	.	140
1.25-1.49	.	.	23	6	.	.	.	.	.	.	29
1.50-1.74	.	.	2	8	.	.	.	.	.	.	10
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2598	242	14	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 2673.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	687	4	1	.	.	.	.	.	.	692
0.25-0.49	.	1068	1	.	.	.	.	.	.	.	1069
0.50-0.74	.	1369	6	.	.	.	.	.	.	.	1375
0.75-0.99	.	448	13	.	.	.	.	.	.	.	461
1.00-1.24	.	26	218	.	.	.	.	.	.	.	244
1.25-1.49	.	.	62	.	.	.	.	.	.	.	62
1.50-1.74	.	.	16	12	.	.	.	.	.	.	28
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3598	320	18	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.1 NO. OF CASES= 3686.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	652	48	20	.	.	.	.	.	.	720
0.25-0.49	.	1543	35	36	5	.	.	.	.	.	1619
0.50-0.74	.	2768	111	79	7	.	.	.	.	.	2965
0.75-0.99	.	1135	165	22	8	1	.	.	.	.	1331
1.00-1.24	.	308	592	59	7	1	.	.	.	.	967
1.25-1.49	.	.	218	88	.	.	.	.	.	.	306
1.50-1.74	.	.	68	96	4	.	.	.	.	.	168
1.75-1.99	.	.	1	29	13	.	.	.	.	.	43
2.00-2.24	.	.	.	6	20	.	.	.	.	.	26
2.25-2.49	.	.	.	.	8	.	.	.	.	.	8
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	1	.	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	1	.	.	.	.	.	1
TOTAL	0	6406	1238	436	76	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 7642.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1425	360	136	6	.	.	.	.	.	1927
0.25-0.49	.	1615	488	472	55	.	.	.	.	.	2630
0.50-0.74	.	2441	622	742	343	6	.	.	.	.	4154
0.75-0.99	.	728	1014	344	223	28	.	.	.	.	2337
1.00-1.24	.	202	1301	762	237	53	3	.	.	.	2558
1.25-1.49	.	.	220	958	90	31	2	.	.	.	1301
1.50-1.74	.	.	36	1240	142	41	5	.	.	.	1464
1.75-1.99	.	.	1	247	362	13	2	.	.	.	625
2.00-2.24	.	.	.	51	601	26	2	.	.	.	680
2.25-2.49	.	.	.	4	217	2	1	.	.	.	224
2.50-2.74	.	.	.	.	221	20	2	.	.	.	243
2.75-2.99	.	.	.	.	28	33	5	.	.	.	66
3.00-3.24	.	.	.	.	2	52	2	.	.	.	56
3.25-3.49	.	.	.	.	.	9	.	.	.	.	9
3.50+	.	.	.	.	.	22	5	.	1	.	28
TOTAL	0	6411	4042	4956	2527	336	29	0	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 17136.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1142	322	219	12	.	.	.	.	.	1695
0.25-0.49	.	1301	373	830	171	.	.	.	.	.	2675
0.50-0.74	.	1401	618	673	797	38	.	.	.	.	3527
0.75-0.99	.	211	826	331	339	102	1	.	.	.	1810
1.00-1.24	.	9	1029	1017	339	146	10	.	.	.	2550
1.25-1.49	.	.	64	1392	151	81	14	.	.	.	1702
1.50-1.74	.	.	4	1938	345	71	13	3	.	.	2374
1.75-1.99	.	.	.	541	741	56	7	.	.	.	1345
2.00-2.24	.	.	.	66	1463	79	16	1	.	.	1625
2.25-2.49	.	.	.	1	652	109	7	2	.	.	771
2.50-2.74	.	.	.	.	475	211	17	3	.	.	706
2.75-2.99	.	.	.	.	124	172	20	2	.	.	318
3.00-3.24	.	.	.	.	28	249	42	3	1	.	323
3.25-3.49	.	.	.	.	1	84	42	4	.	.	131
3.50+	.	.	.	.	.	77	172	36	10	.	295
TOTAL	0	4064	3236	7008	5638	1475	361	54	11	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.5 MEAN TP(SEC)= 4.9 NO. OF CASES= 20455.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	656	7	12	6	.	.	.	.	.	681
0.25-0.49	.	1020	19	32	32	.	.	.	.	.	1103
0.50-0.74	.	823	581	65	89	10	.	.	.	.	1568
0.75-0.99	.	102	634	156	42	22	.	.	.	.	956
1.00-1.24	.	2	720	721	37	57	5	.	.	.	1542
1.25-1.49	.	.	20	972	26	18	6	.	.	.	1042
1.50-1.74	.	.	.	1456	115	23	10	.	.	.	1604
1.75-1.99	.	.	.	450	489	6	4	.	.	.	949
2.00-2.24	.	.	.	36	825	20	10	2	.	.	893
2.25-2.49	.	.	.	.	335	12	5	.	.	.	352
2.50-2.74	.	.	.	.	283	37	4	.	.	.	324
2.75-2.99	.	.	.	.	68	26	4	.	.	.	98
3.00-3.24	.	.	.	.	22	78	4	2	.	.	106
3.25-3.49	.	.	.	.	.	36	7	1	.	.	44
3.50+	.	.	.	.	.	39	35	3	.	1	78
TOTAL	0	2603	1981	3900	2369	384	94	8	0	1	

MEAN HS(M) = 1.3 LARGEST HS(M)= 6.0 MEAN TP(SEC)= 4.7 NO. OF CASES= 10629.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	411	.	.	.	.	.	.	.	.	411
0.25-0.49	.	773	18	.	1	.	.	.	.	.	792
0.50-0.74	.	683	444	16	2	.	.	.	.	.	1145
0.75-0.99	.	60	552	80	1	2	.	.	.	.	695
1.00-1.24	.	.	721	380	5	.	.	.	.	.	1106
1.25-1.49	.	.	27	626	5	.	.	.	.	.	658
1.50-1.74	.	.	1	802	42	2	.	.	.	.	847
1.75-1.99	.	.	.	151	154	.	2	.	.	.	307
2.00-2.24	.	.	.	18	224	1	.	.	.	.	243
2.25-2.49	.	.	.	.	65	.	.	.	.	.	65
2.50-2.74	.	.	.	.	42	9	.	.	.	.	51
2.75-2.99	.	.	.	.	7	9	.	.	.	.	16
3.00-3.24	.	.	.	.	1	10	.	.	.	.	11
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	3	2	.	.	.	5
TOTAL	0	1927	1763	2073	549	37	4	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.6 MEAN TP(SEC)= 4.2 NO. OF CASES= 5955.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	249	1	.	.	.	.	.	.	.	250
0.25-0.49	.	408	5	.	.	.	.	.	.	.	413
0.50-0.74	.	451	141	2	.	.	.	.	.	.	594
0.75-0.99	.	29	331	2	.	.	.	.	.	.	362
1.00-1.24	.	.	487	60	.	.	.	.	.	.	547
1.25-1.49	.	.	16	312	.	.	.	.	.	.	328
1.50-1.74	.	.	.	1	2	.	.	.	.	.	303
1.75-1.99	.	.	.	.	8	.	1	.	.	.	77
2.00-2.24	.	.	.	.	33	.	.	.	.	.	33
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	7	.	.	.	.	.	7
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1137	981	745	56	0	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.9 NO. OF CASES= 2738.

STATION E22 42.58N 79.37W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

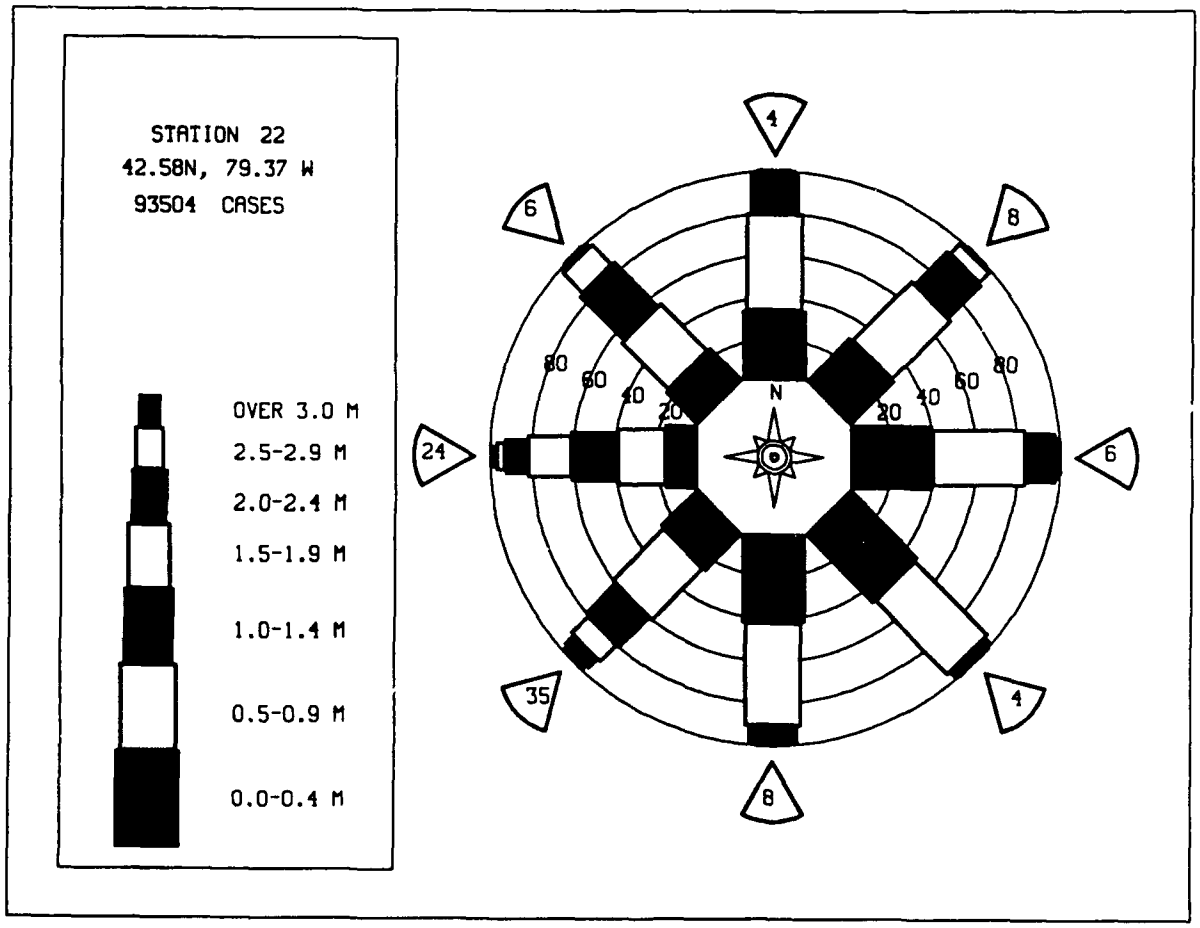
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	190	1	.	.	.	.	.	.	.	191
0.25-0.49	.	340	1	.	.	.	.	.	.	.	341
0.50-0.74	.	497	80	.	.	.	.	.	.	.	577
0.75-0.99	.	80	278	3	.	.	.	.	.	.	361
1.00-1.24	.	.	470	42	.	.	.	.	.	.	512
1.25-1.49	.	.	28	186	.	.	.	.	.	.	214
1.50-1.74	.	.	.	145	.	.	.	.	.	.	145
1.75-1.99	.	.	.	34	4	.	.	.	.	.	38
2.00-2.24	.	.	.	.	12	.	.	.	.	.	12
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1107	858	410	18	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 2243.

STATION E22 42.58N 79.37W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	865	76	39	2	.	.	.	.	.	982
0.25-0.49	.	1391	95	137	26	.	.	.	.	.	1649
0.50-0.74	.	1751	345	158	124	5	.	.	.	.	2383
0.75-0.99	.	382	582	97	61	15	.	.	.	.	1137
1.00-1.24	.	55	782	335	62	25	1	.	.	.	1260
1.25-1.49	.	.	77	543	27	13	2	.	.	.	662
1.50-1.74	.	.	12	663	65	13	2	.	.	.	755
1.75-1.99	.	.	.	162	180	7	1	.	.	.	350
2.00-2.24	.	.	.	18	325	12	2	.	.	.	357
2.25-2.49	.	.	.	.	129	12	1	.	.	.	142
2.50-2.74	.	.	.	.	104	27	2	.	.	.	133
2.75-2.99	.	.	.	.	23	24	2	.	.	.	49
3.00-3.24	.	.	.	.	5	39	4	.	.	.	48
3.25-3.49	.	.	.	.	.	13	5	.	.	.	18
3.50+	.	.	.	.	.	14	21	3	1	.	39
TOTAL	0	4444	1969	2152	1133	219	43	3	1	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 6.0 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E22 (42.58N 79.37W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	0.9	1.0	0.8	0.7	0.8	0.7	0.7	0.7	1.0	0.9	0.8
1957	1.0	0.7	1.0	1.0	0.9	0.8	0.7	0.6	0.7	0.7	1.2	1.1	0.9
1958	1.0	1.0	0.7	0.7	0.7	0.7	0.5	0.6	0.7	0.8	1.0	0.8	0.8
1959	1.0	0.9	0.9	0.8	0.5	0.6	0.5	0.7	0.7	0.8	0.9	0.8	0.7
1960	1.1	1.3	1.1	1.2	0.8	0.8	0.8	0.7	0.6	0.8	1.2	1.3	1.0
1961	1.1	0.8	1.0	1.0	1.1	1.0	0.7	0.8	0.8	1.0	0.9	1.2	1.0
1962	1.4	1.0	0.9	1.2	0.9	0.7	0.7	0.7	0.8	0.8	0.8	1.1	0.9
1963	1.2	1.2	1.2	1.1	1.0	0.6	0.8	0.8	0.7	0.8	1.3	1.0	1.0
1964	1.4	1.0	1.1	1.0	1.1	0.8	0.7	0.8	0.8	0.9	1.1	1.0	1.0
1965	1.3	1.2	0.9	0.8	0.9	0.9	0.7	0.8	0.8	1.1	1.1	1.0	1.0
1966	1.2	0.8	1.1	1.0	1.0	0.8	0.8	0.8	0.9	1.2	1.1	1.2	1.0
1967	1.3	1.4	0.8	1.1	1.0	0.8	0.7	0.7	0.7	1.0	1.2	1.1	1.0
1968	0.9	1.2	1.1	1.1	0.8	0.8	0.9	0.8	0.7	0.9	1.1	1.2	1.0
1969	1.4	0.8	1.2	1.0	0.9	0.8	0.6	0.7	0.8	1.0	1.0	0.9	0.9
1970	0.9	1.1	0.9	1.1	0.9	0.8	0.8	0.7	0.8	0.7	1.0	1.0	0.9
1971	1.4	1.4	1.1	1.1	0.8	0.7	0.9	0.9	0.7	0.7	0.9	1.1	1.0
1972	1.5	1.0	1.0	0.9	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	0.9
1973	1.5	1.0	0.9	1.3	1.0	1.0	0.9	0.7	0.7	0.8	1.3	1.1	1.0
1974	1.2	1.0	1.2	1.4	1.0	0.9	0.9	0.7	0.9	1.0	1.0	1.0	1.0
1975	1.3	1.1	1.1	1.1	0.6	0.8	0.6	0.6	0.8	1.0	1.2	1.0	0.9
1976	1.2	1.4	1.3	1.2	1.0	0.9	0.8	0.7	0.9	0.9	1.3	1.2	1.1
1977	1.6	1.3	1.2	1.0	0.8	0.8	0.9	0.8	0.8	0.9	1.1	1.3	1.1
1978	1.4	0.9	1.0	1.1	0.8	0.8	0.8	0.7	0.8	0.9	1.0	1.3	1.0
1979	1.2	1.0	1.1	1.1	0.7	0.8	0.6	0.8	0.7	1.0	1.0	1.2	0.9
1980	1.2	1.0	1.0	1.0	0.8	0.7	0.7	0.7	0.8	1.0	1.0	1.0	0.9
1981	0.9	0.9	0.9	1.0	0.4	0.7	0.5	0.6	0.7	0.8	0.8	0.8	0.8
1982	1.5	0.9	1.0	1.3	0.4	0.6	0.6	0.6	0.5	0.7	0.9	1.0	0.8
1983	0.9	0.6	0.7	0.9	0.9	0.5	0.8	0.6	0.7	0.9	0.9	1.2	0.8
1984	0.9	0.8	1.0	0.7	1.0	0.7	0.6	0.5	0.6	0.5	1.0	1.1	0.8
1985	1.3	1.1	1.1	1.1	0.8	0.8	0.7	0.6	0.7	0.8	0.9	1.2	0.9
1986	1.3	0.8	1.3	1.0	1.0	0.9	0.8	0.9	0.8	0.9	0.9	1.0	1.0
1987	1.1	0.8	0.8	1.0	0.9	0.8	0.8	0.8	0.7	0.9	1.1	1.3	0.9
MEAN	1.2	1.0	1.0	1.0	0.8	0.8	0.7	0.7	0.8	0.9	1.0	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E22 (42.58N 79.37W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	3.0	4.3	3.3	3.0	2.7	2.1	2.1	1.9	3.1	3.2	2.4
1957	2.4	2.2	3.2	3.9	2.6	4.9	2.7	2.0	2.2	2.3	3.8	2.7
1958	2.6	2.7	2.2	3.1	2.0	2.7	2.2	1.9	2.1	2.5	2.8	2.4
1959	3.5	2.4	3.2	3.4	1.5	1.7	2.1	1.8	2.0	3.1	2.6	2.6
1960	2.9	4.0	2.8	4.3	2.3	4.0	2.9	2.5	2.1	2.5	3.1	3.2
1961	3.5	3.8	3.0	4.7	3.5	3.2	2.2	2.5	2.7	3.2	3.4	4.3
1962	3.5	2.8	2.6	3.5	3.8	2.4	2.4	2.2	2.2	2.7	2.7	3.3
1963	4.6	3.7	4.1	4.6	3.8	2.1	2.7	2.7	2.9	3.7	3.4	3.7
1964	4.1	3.5	5.5	3.5	4.8	3.5	2.0	2.6	3.2	2.3	3.3	2.7
1965	3.8	3.6	4.7	3.7	3.4	2.9	2.1	2.6	3.3	3.6	4.4	3.1
1966	4.5	2.9	3.8	2.5	3.7	2.5	3.1	2.5	3.0	3.1	3.8	3.8
1967	3.4	5.3	2.5	3.7	2.9	2.7	2.4	2.1	2.6	3.4	3.1	3.3
1968	3.4	3.8	3.1	4.8	3.0	2.9	2.4	3.6	2.5	2.7	3.2	4.4
1969	3.7	2.6	4.2	2.9	3.0	3.7	2.3	2.7	2.5	3.1	2.4	2.3
1970	2.6	2.8	4.2	3.7	2.9	2.6	2.4	2.8	2.9	2.3	3.4	2.8
1971	4.2	3.3	4.2	3.1	3.4	2.4	3.5	2.4	2.5	3.4	3.4	4.3
1972	6.0	2.9	3.3	2.5	3.1	2.7	2.7	2.9	3.0	3.1	3.2	3.2
1973	4.0	3.0	3.9	3.6	3.8	2.9	3.9	2.4	2.7	2.7	3.3	3.7
1974	4.6	3.2	3.7	4.5	3.3	4.0	2.7	2.8	3.0	2.8	3.5	2.8
1975	4.4	4.9	3.2	5.5	1.9	2.4	2.3	2.4	2.3	3.0	4.5	3.5
1976	3.2	4.3	3.7	3.8	4.0	2.7	2.4	2.4	2.3	3.7	3.0	3.4
1977	4.0	3.8	3.3	3.9	3.0	2.9	3.7	2.2	2.2	2.5	2.7	4.5
1978	4.0	2.6	3.6	3.1	3.2	2.6	2.6	2.4	2.8	2.3	3.1	3.7
1979	3.3	3.3	3.5	4.1	2.2	2.1	1.7	2.7	3.0	2.9	4.3	3.4
1980	4.3	2.7	2.8	2.9	2.9	2.6	2.2	2.1	2.4	3.6	2.6	3.4
1981	3.1	2.8	3.7	3.0	2.5	2.6	1.6	2.1	3.5	4.3	2.7	2.9
1982	5.2	3.4	5.5	4.6	1.6	1.8	2.3	2.1	2.4	3.1	3.1	5.3
1983	3.0	2.4	2.1	2.8	2.7	2.0	2.1	2.7	2.4	3.6	3.5	4.0
1984	3.4	2.9	4.1	4.7	5.2	2.7	2.2	1.8	2.6	2.6	3.5	3.7
1985	4.4	2.6	3.4	4.7	2.7	2.3	2.2	2.6	2.4	2.9	2.5	4.5
1986	3.8	2.9	4.3	2.8	2.9	2.8	2.5	2.4	2.9	3.5	4.0	3.1
1987	3.6	2.7	3.5	3.2	2.8	2.6	2.2	2.2	2.4	2.4	3.2	4.5

32 YR. STATISTICS FOR WIS STATION E22

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	6.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	265.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012512

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	206	2	.	.	.	.	.	.	.	208
0.25-0.49	.	588	.	.	.	.	.	.	.	.	588
0.50-0.74	.	789	24	.	.	.	.	.	.	.	813
0.75-0.99	.	145	260	2	.	.	.	.	.	.	407
1.00-1.24	.	.	308	6	.	.	.	.	.	.	314
1.25-1.49	.	.	41	73	.	.	.	.	.	.	114
1.50-1.74	.	.	.	36	1	.	.	.	.	.	37
1.75-1.99	.	.	.	3	1	.	.	.	.	.	4
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1728	635	120	3	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 2330.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	156	1	.	.	.	.	.	.	.	157
0.25-0.49	.	481	1	.	.	.	.	.	.	.	482
0.50-0.74	.	657	56	.	.	.	.	.	.	.	713
0.75-0.99	.	75	172	1	.	.	.	.	.	.	248
1.00-1.24	.	.	167	21	.	.	.	.	.	.	188
1.25-1.49	.	.	5	49	.	.	.	.	.	.	54
1.50-1.74	.	.	.	20	.	.	.	.	.	.	20
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1369	402	95	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 1751.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	411	.	1	.	.	.	.	.	.	412
0.25-0.49	.	1051	1	.	.	.	.	.	.	.	1052
0.50-0.74	.	1091	255	1	.	.	.	.	.	.	1347
0.75-0.99	.	62	611	.	.	1	.	.	.	.	674
1.00-1.24	.	.	551	130	.	.	.	.	.	.	681
1.25-1.49	.	.	6	294	.	.	.	.	.	.	300
1.50-1.74	.	.	.	295	.	.	.	.	.	.	295
1.75-1.99	.	.	.	47	36	.	.	.	.	.	83
2.00-2.24	.	.	.	.	33	.	.	.	.	.	33
2.25-2.49	.	.	.	.	9	.	.	.	.	.	9
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2615	1424	768	81	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 4578.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	345	3	1	.	.	.	.	.	.	349
0.25-0.49	.	1044	3	.	.	.	.	.	.	.	1047
0.50-0.74	.	1198	120	.	.	.	.	.	.	.	1318
0.75-0.99	.	280	361	3	.	.	.	.	.	.	644
1.00-1.24	.	17	379	87	.	.	.	.	.	.	483
1.25-1.49	.	.	16	218	.	.	.	.	.	.	234
1.50-1.74	.	.	2	224	.	.	.	.	.	.	226
1.75-1.99	.	.	.	27	23	.	.	.	.	.	50
2.00-2.24	.	.	.	.	29	.	.	.	.	.	29
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	10	.	.	.	.	.	10
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2884	884	560	64	2	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.5 NO. OF CASES= 4118.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	425	6	.	.	.	.	.	.	.	431
0.25-0.49	.	1320	3	.	.	.	.	.	.	.	1323
0.50-0.74	.	1273	72	2	.	.	.	.	.	.	1347
0.75-0.99	.	453	19	8	.	.	.	.	.	.	480
1.00-1.24	.	31	130	8	.	.	.	.	.	.	169
1.25-1.49	.	.	12	1	.	.	.	.	.	.	13
1.50-1.74	.	.	2	3	.	.	.	.	.	.	5
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3502	244	22	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 3530.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	335	2	.	.	.	.	.	.	.	337
0.25-0.49	.	764	.	.	.	.	.	.	.	.	764
0.50-0.74	.	711	7	.	.	.	.	.	.	.	718
0.75-0.99	.	111	18	.	.	.	.	.	.	.	129
1.00-1.24	.	.	34	.	.	.	.	.	.	.	34
1.25-1.49	.	.	5	1	.	.	.	.	.	.	6
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1921	66	2	0	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.0 NO. OF CASES= 1863.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	382	3	.	.	.	.	.	.	.	385
0.25-0.49	.	669	.	.	.	.	.	.	.	.	669
0.50-0.74	.	1044	.	.	.	.	.	.	.	.	1044
0.75-0.99	.	116	66	.	.	.	.	.	.	.	182
1.00-1.24	.	.	70	.	.	.	.	.	.	.	70
1.25-1.49	.	.	4	.	.	.	.	.	.	.	4
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2211	143	1	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 2206.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	332	4	.	.	.	.	.	.	.	336
0.25-0.49	.	813	1	.	.	.	.	.	.	.	814
0.50-0.74	.	1436	1	.	.	.	.	.	.	.	1437
0.75-0.99	.	185	71	.	.	.	.	.	.	.	256
1.00-1.24	.	4	157	.	.	.	.	.	.	.	161
1.25-1.49	.	.	29	7	.	.	.	.	.	.	36
1.50-1.74	.	.	.	9	.	.	.	.	.	.	9
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2770	263	17	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.1 NO. OF CASES= 2857.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	520	2	.	.	.	.	.	.	.	522
0.25-0.49	.	1483	.	.	.	.	.	.	.	.	1483
0.50-0.74	.	1868	.	.	.	.	.	.	.	.	1868
0.75-0.99	.	562	4	.	.	.	.	.	.	.	566
1.00-1.24	.	2	368	.	.	.	.	.	.	.	370
1.25-1.49	.	.	78	.	.	.	.	.	.	.	78
1.50-1.74	.	.	21	24	.	.	.	.	.	.	45
1.75-1.99	.	.	.	11	.	.	.	.	.	.	11
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4435	473	37	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.1 NO. OF CASES= 4629.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	449	16	12	1	.	.	.	.	.	478
0.25-0.49	.	1676	1	7	2	.	.	.	.	.	1686
0.50-0.74	.	2831	2	2	1	.	.	.	.	.	2836
0.75-0.99	.	1052	55	.	1	.	.	.	.	.	1108
1.00-1.24	.	102	648	2	.	.	.	.	.	.	752
1.25-1.49	.	.	218	17	.	.	.	.	.	.	235
1.50-1.74	.	.	31	57	.	.	.	.	.	.	88
1.75-1.99	.	.	.	18	.	.	.	.	.	.	18
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	1	2	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	1	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6110	971	121	10	0	0	0	1	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.2 NO. OF CASES= 6752.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	665	196	102	6	.	.	.	.	.	969
0.25-0.49	.	1630	151	233	39	.	.	.	.	.	2053
0.50-0.74	.	3628	227	286	228	18	.	.	.	.	4387
0.75-0.99	.	1174	599	221	105	23	1	.	.	.	2123
1.00-1.24	.	174	1181	536	116	48	4	.	.	.	2059
1.25-1.49	.	.	419	287	136	27	3	.	.	.	872
1.50-1.74	.	.	102	319	320	32	4	.	.	.	777
1.75-1.99	.	.	.	97	149	7	3	.	.	.	256
2.00-2.24	.	.	.	68	119	25	1	.	.	.	213
2.25-2.49	.	.	.	10	35	20	1	.	.	.	66
2.50-2.74	.	.	.	3	9	31	1	.	.	.	44
2.75-2.99	.	.	.	.	1	11	2	.	.	.	14
3.00-3.24	.	.	.	.	1	6	1	.	.	.	8
3.25-3.49	.	.	.	.	1	.	.	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	7271	2875	2162	1265	248	22	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 3.9 NO. OF CASES= 12969.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	737	243	207	12	.	.	.	.	.	1199
0.25-0.49	.	1345	240	628	190	.	.	.	.	.	2403
0.50-0.74	.	2174	566	430	644	58	.	.	.	.	3872
0.75-0.99	.	561	1002	437	274	93	4	.	.	.	2371
1.00-1.24	.	13	1241	1726	262	93	18	.	.	.	3353
1.25-1.49	.	.	237	1542	209	49	7	.	.	.	2044
1.50-1.74	.	.	49	1542	920	83	10	1	.	.	2605
1.75-1.99	.	.	.	195	1179	69	6	.	.	.	1449
2.00-2.24	.	.	.	64	1245	151	11	.	.	.	1471
2.25-2.49	.	.	.	13	495	130	14	2	.	.	654
2.50-2.74	.	.	.	1	232	322	27	.	.	.	582
2.75-2.99	.	.	.	.	13	173	25	.	.	.	211
3.00-3.24	.	.	.	.	.	142	58	3	.	.	203
3.25-3.49	.	.	.	.	1	38	44	.	.	.	[illegible]
3.50+	.	.	.	.	.	8	108	32	4	.	152
TOTAL	0	4830	3578	6785	5676	1409	332	38	4	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.8 NO. OF CASES= 21211.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	454	6	10	6	.	.	.	.	.	476
0.25-0.49	.	1162	24	19	25	.	.	.	.	.	1230
0.50-0.74	.	964	676	65	62	12	.	.	.	.	1779
0.75-0.99	.	168	727	385	28	28	1	.	.	.	1337
1.00-1.24	.	1	583	994	53	39	6	.	.	.	1676
1.25-1.49	.	.	35	909	99	19	4	.	.	.	1066
1.50-1.74	.	.	2	1362	484	17	5	1	.	.	1871
1.75-1.99	.	.	.	100	1088	20	2	.	.	.	1210
2.00-2.24	.	.	.	4	1346	26	2	.	.	.	1378
2.25-2.49	.	.	.	.	493	64	4	.	.	.	561
2.50-2.74	.	.	.	.	206	278	8	.	.	.	492
2.75-2.99	.	.	.	.	5	191	7	2	.	.	205
3.00-3.24	.	.	.	.	1	132	45	2	.	.	180
3.25-3.49	.	.	.	.	.	47	28	1	.	.	76
3.50+	.	.	.	.	.	5	82	8	3	1	99
TOTAL	0	2749	2053	3848	3896	878	194	14	3	1	

MEAN HS(M) = 1.4 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.9 NO. OF CASES= 12775.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	283	.	.	.	.	.	.	.	.	283
0.25-0.49	.	826	19	.	1	.	.	.	.	.	846
0.50-0.74	.	748	518	18	.	.	.	.	.	.	1284
0.75-0.99	.	70	623	144	2	.	.	.	.	.	839
1.00-1.24	.	.	639	437	17	3	.	.	.	.	1096
1.25-1.49	.	.	22	665	28	1	.	.	.	.	716
1.50-1.74	.	.	.	748	165	1	.	.	.	.	914
1.75-1.99	.	.	.	102	318	1	.	.	.	.	421
2.00-2.24	.	.	.	7	360	3	2	.	.	.	372
2.25-2.49	.	.	.	.	94	13	.	.	.	.	107
2.50-2.74	.	.	.	.	33	48	1	.	.	.	82
2.75-2.99	.	.	.	.	.	32	.	.	.	.	32
3.00-3.24	.	.	.	.	.	17	1	.	.	.	18
3.25-3.49	.	.	.	.	.	1	2	.	.	.	3
3.50+	.	.	.	.	.	.	4	1	.	.	5
TOTAL	0	1927	1821	2121	1018	120	10	1	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.4 NO. OF CASES= 6575.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	148	2	.	.	.	.	.	.	.	150
0.25-0.49	.	453	3	.	.	.	.	.	.	.	456
0.50-0.74	.	470	176	4	.	.	.	.	.	.	650
0.75-0.99	.	38	368	8	.	.	.	.	.	.	414
1.00-1.24	.	.	460	119	.	.	.	.	.	.	579
1.25-1.49	.	.	6	291	.	.	.	.	.	.	297
1.50-1.74	.	.	.	363	4	.	.	.	.	.	367
1.75-1.99	.	.	.	63	34	.	.	.	.	.	97
2.00-2.24	.	.	.	2	45	.	.	.	.	.	47
2.25-2.49	.	.	.	.	10	.	.	.	.	.	10
2.50-2.74	.	.	.	.	6	3	.	.	.	.	9
2.75-2.99	.	.	.	.	3	.	.	.	.	.	3
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1109	1015	850	102	3	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.0 NO. OF CASES= 2890.

STATION E23 42.58N 79.18W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

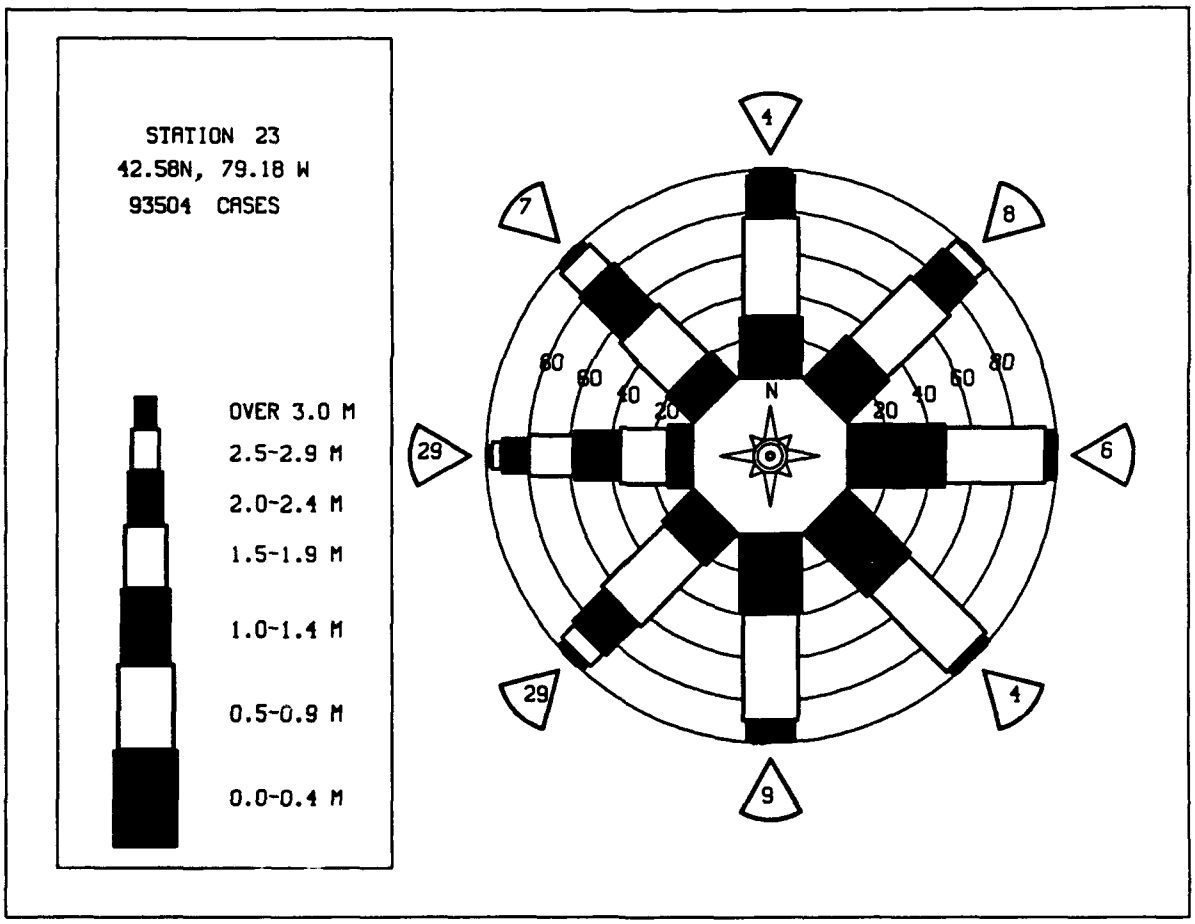
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	120	1	1	.	.	.	.	.	.	122
0.25-0.49	.	339	.	.	.	.	.	.	.	.	339
0.50-0.74	.	606	77	.	.	.	.	.	.	.	683
0.75-0.99	.	75	355	1	.	.	.	.	.	.	431
1.00-1.24	.	.	469	72	.	.	.	.	.	.	541
1.25-1.49	.	.	35	235	1	.	.	.	.	.	271
1.50-1.74	.	.	.	181	.	.	.	.	.	.	181
1.75-1.99	.	.	.	33	11	.	.	.	.	.	44
2.00-2.24	.	.	.	1	19	.	.	.	.	.	20
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1140	937	524	34	0	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 2470.

STATION E23 42.58N 79.18W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	597	49	33	2	.	.	.	.	.	681
0.25-0.49	.	1565	45	88	25	.	.	.	.	.	1723
0.50-0.74	.	2149	278	81	93	8	.	.	.	.	2609
0.75-0.99	.	513	531	121	41	14	.	.	.	.	1220
1.00-1.24	.	34	739	414	44	18	2	.	.	.	1251
1.25-1.49	.	.	117	459	47	9	1	.	.	.	633
1.50-1.74	.	.	21	519	189	13	2	.	.	.	744
1.75-1.99	.	.	.	70	284	9	1	.	.	.	364
2.00-2.24	.	.	.	15	320	20	1	.	.	.	356
2.25-2.49	.	.	.	2	114	22	2	.	.	.	140
2.50-2.74	.	.	.	.	50	68	3	.	.	.	121
2.75-2.99	.	.	.	.	2	41	3	.	.	.	46
3.00-3.24	.	.	.	.	.	29	10	.	.	.	39
3.25-3.49	.	.	.	.	.	8	7	.	.	.	15
3.50+	.	.	.	.	.	1	19	4	.	.	24
TOTAL	0	4858	1780	1802	1211	260	51	4	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E23 (42.58N 79.18W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	0.9	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.9	0.9	0.8
1957	1.0	0.7	1.0	0.9	0.9	0.7	0.7	0.6	0.7	0.7	1.1	1.0	0.8
1958	0.9	1.0	0.7	0.6	0.7	0.7	0.6	0.6	0.7	0.8	1.0	0.8	0.8
1959	1.0	0.9	0.9	0.8	0.6	0.7	0.6	0.7	0.7	0.8	0.9	0.8	0.8
1960	1.2	1.3	1.0	1.1	0.8	0.8	0.8	0.7	0.6	0.8	1.1	1.1	0.9
1961	1.0	0.8	0.9	1.0	1.1	1.0	0.7	0.7	0.7	0.9	0.9	1.2	0.9
1962	1.4	1.0	0.9	1.2	0.9	0.7	0.8	0.7	0.8	0.8	0.7	1.0	0.9
1963	1.2	1.2	1.1	1.1	1.0	0.7	0.8	0.8	0.7	0.8	1.2	1.0	1.0
1964	1.3	1.0	1.1	1.0	1.1	0.8	0.7	0.9	0.8	0.9	1.1	1.0	1.0
1965	1.3	1.2	0.9	0.9	0.9	0.9	0.7	0.8	0.8	1.0	1.0	0.9	1.0
1966	1.2	0.9	1.1	1.0	1.0	0.8	0.9	0.9	0.9	1.1	1.0	1.2	1.0
1967	1.3	1.3	0.8	1.2	1.0	0.8	0.7	0.7	0.8	1.0	1.2	1.1	1.0
1968	0.9	1.2	1.1	1.1	0.9	0.9	0.9	0.8	0.7	0.9	1.1	1.2	1.0
1969	1.4	0.9	1.3	1.0	0.9	0.8	0.7	0.8	0.8	1.0	0.9	0.9	0.9
1970	0.9	1.0	0.9	1.0	0.8	0.8	0.9	0.7	0.8	0.7	0.9	0.9	0.9
1971	1.5	1.3	1.2	1.1	0.8	0.7	0.9	0.9	0.7	0.7	0.9	1.1	1.0
1972	1.5	1.1	1.0	1.0	0.7	0.7	0.8	0.9	0.9	0.9	0.9	1.0	0.9
1973	1.5	0.9	0.9	1.2	1.1	1.0	0.9	0.7	0.8	0.8	1.2	1.0	1.0
1974	1.2	1.0	1.1	1.4	1.0	0.9	0.9	0.7	0.9	0.9	1.0	1.0	1.0
1975	1.3	1.1	1.1	1.1	0.6	0.8	0.7	0.6	0.8	1.0	1.1	0.9	0.9
1976	1.2	1.3	1.3	1.2	1.0	0.8	0.8	0.7	0.9	0.9	1.3	1.2	1.1
1977	1.5	1.3	1.2	1.0	0.8	0.9	1.0	0.8	0.8	0.9	1.1	1.2	1.1
1978	1.4	0.9	1.0	1.2	0.9	0.9	0.8	0.7	0.8	0.9	1.0	1.3	1.0
1979	1.2	1.0	1.1	1.1	0.7	0.8	0.6	0.9	0.8	1.0	1.0	1.2	1.0
1980	1.2	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.8	1.0	1.0	1.0	0.9
1981	0.9	0.9	0.9	0.9	0.5	0.7	0.5	0.6	0.7	0.8	0.8	0.8	0.8
1982	1.5	1.0	1.0	1.3	0.5	0.7	0.7	0.7	0.6	0.7	0.9	0.9	0.9
1983	1.0	0.6	0.7	0.9	0.9	0.5	0.8	0.6	0.7	0.9	0.9	1.2	0.8
1984	0.9	0.8	1.0	0.7	1.0	0.7	0.7	0.6	0.6	0.6	1.0	1.1	0.8
1985	1.3	1.1	1.1	1.1	0.8	0.8	0.8	0.7	0.7	0.8	0.9	1.2	0.9
1986	1.3	0.8	1.2	1.0	0.9	0.8	0.8	0.9	0.8	0.9	0.9	1.0	0.9
1987	1.1	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	1.1	1.2	0.9
MEAN	1.2	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.8	0.9	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E23 (42.58N 79.18W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	3.1	4.0	2.8	2.7	2.4	1.8	1.8	1.9	2.6	2.8	2.1
1957	2.5	1.9	2.8	3.3	2.8	4.2	2.4	1.7	1.9	1.9	3.0	2.3
1958	2.7	2.6	2.2	2.7	1.8	2.3	2.1	1.9	1.7	2.6	2.5	2.4
1959	3.4	2.1	3.2	3.1	1.9	1.8	2.2	1.9	1.8	2.9	2.6	2.7
1960	3.0	3.5	2.7	3.9	2.1	3.7	2.6	2.3	2.4	2.4	2.8	2.7
1961	3.2	3.4	2.6	3.9	3.0	2.8	2.1	2.5	2.5	3.0	3.2	3.9
1962	3.1	2.6	2.3	3.2	3.6	2.2	2.4	2.1	2.4	2.7	2.5	3.7
1963	4.3	3.1	3.6	4.3	3.4	2.2	2.6	2.8	2.8	3.4	3.1	3.4
1964	3.9	3.4	5.0	3.1	4.4	3.4	1.9	2.4	3.0	2.4	3.3	2.7
1965	3.7	3.6	4.2	3.5	2.7	2.8	2.3	2.4	3.0	3.2	3.8	2.6
1966	4.6	3.2	3.6	2.7	3.3	2.6	3.1	2.7	3.0	3.1	3.3	3.5
1967	3.1	4.7	2.6	4.4	2.9	2.6	2.3	2.2	2.3	3.0	2.8	3.1
1968	3.5	3.2	2.9	4.2	3.2	3.1	2.3	3.3	2.9	2.5	3.1	4.0
1969	3.7	2.8	4.2	3.0	3.1	3.1	2.4	2.6	2.9	3.3	2.5	2.6
1970	2.6	2.6	3.8	3.5	2.7	2.5	2.6	2.7	3.1	2.4	3.1	2.6
1971	3.9	4.7	3.7	3.2	3.2	2.3	3.4	2.5	2.4	3.1	3.1	4.0
1972	5.3	3.0	3.2	2.4	3.0	2.5	2.8	3.2	2.8	2.8	2.8	3.4
1973	3.8	2.8	3.7	3.5	3.5	2.8	3.5	2.4	2.5	2.7	3.2	3.4
1974	4.0	2.6	3.6	4.2	3.2	3.6	2.4	2.6	2.8	2.8	3.4	2.8
1975	4.0	4.1	2.7	4.7	1.8	2.2	2.2	2.1	2.3	2.7	4.0	3.8
1976	3.2	3.7	3.9	3.3	3.3	2.2	2.1	2.2	2.3	3.3	2.7	3.0
1977	3.6	3.3	3.0	3.8	2.9	2.9	3.9	2.1	2.3	2.2	2.5	4.2
1978	3.9	2.4	3.3	3.1	2.9	2.3	2.4	2.5	2.6	2.1	3.0	3.4
1979	3.3	2.9	3.5	4.1	2.3	2.0	1.8	2.6	2.6	2.8	4.1	3.1
1980	3.9	2.4	2.7	2.7	2.5	2.5	2.1	2.1	2.7	3.5	2.6	3.3
1981	2.8	2.7	3.1	2.9	2.2	2.7	1.8	2.3	3.4	3.8	3.0	2.7
1982	4.6	2.9	4.8	4.1	1.9	2.0	2.5	2.0	2.7	2.8	2.9	4.6
1983	3.2	2.6	2.3	2.7	2.4	2.3	2.0	2.6	2.2	3.4	3.4	3.6
1984	3.2	2.6	3.7	4.3	4.8	2.5	2.2	1.9	2.4	2.4	3.4	3.5
1985	4.2	2.4	3.1	4.1	2.4	2.6	2.4	2.5	2.2	2.5	2.7	3.8
1986	3.5	2.9	4.3	2.6	3.0	2.7	2.5	2.5	2.7	3.4	3.7	3.0
1987	3.6	2.7	3.3	3.0	2.7	2.4	2.1	2.2	2.6	2.4	3.2	4.0

32 YR. STATISTICS FOR WIS STATION E23

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	5.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	267.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012512

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	206	1	1	.	.	.	.	.	.	208
0.25-0.49	.	655	.	.	.	.	.	.	.	.	655
0.50-0.74	.	845	3	.	.	.	.	.	.	.	848
0.75-0.99	.	266	7	.	.	.	.	.	.	.	273
1.00-1.24	.	6	90	.	.	.	.	.	.	.	96
1.25-1.49	.	.	8	.	.	.	.	.	.	.	8
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1978	109	3	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.1 NO. OF CASES= 1959.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	84	1	.	.	.	.	.	.	.	85
0.25-0.49	.	512	.	.	.	.	.	.	.	.	512
0.50-0.74	.	863	.	.	.	.	.	.	.	.	863
0.75-0.99	.	162	16	.	.	.	.	.	.	.	178
1.00-1.24	.	20	56	1	.	.	.	.	.	.	77
1.25-1.49	.	.	5	.	.	.	.	.	.	.	5
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1641	78	2	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.0 NO. OF CASES= 1612.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	411	.	1	.	.	.	.	.	.	412
0.25-0.49	.	910	.	.	.	.	.	.	.	.	910
0.50-0.74	.	2091	.	.	.	.	.	.	.	.	2091
0.75-0.99	.	325	301	.	.	.	.	.	.	.	626
1.00-1.24	.	.	447	.	.	.	.	.	.	.	447
1.25-1.49	.	.	101	26	.	.	.	.	.	.	127
1.50-1.74	.	.	.	28	.	.	.	.	.	.	28
1.75-1.99	.	.	.	7	.	.	.	.	.	.	7
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3737	849	64	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 4353.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	290	9	1	.	.	.	.	.	.	300
0.25-0.49	.	926	.	.	.	.	.	.	.	.	926
0.50-0.74	.	1778	.	.	.	.	.	.	.	.	1778
0.75-0.99	.	389	229	.	.	.	.	.	.	.	618
1.00-1.24	.	.	517	.	.	.	.	.	.	.	517
1.25-1.49	.	.	78	19	.	.	.	.	.	.	97
1.50-1.74	.	.	1	34	.	.	.	.	.	.	35
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	10	.	.	.	.	.	.	10
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3383	834	67	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 4011.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	363	4	.	.	.	.	.	.	.	367
0.25-0.49	.	1380	.	.	.	.	.	.	.	.	1380
0.50-0.74	.	1624	.	.	.	.	.	.	.	.	1624
0.75-0.99	.	491	8	.	.	.	.	.	.	.	499
1.00-1.24	.	6	186	.	.	.	.	.	.	.	192
1.25-1.49	.	.	21	.	.	.	.	.	.	.	21
1.50-1.74	.	.	1	2	.	.	.	.	.	.	3
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3864	220	3	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.1 NO. OF CASES= 3826.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	240	3	.	.	.	.	.	.	.	243
0.25-0.49	.	744	.	.	.	.	.	.	.	.	744
0.50-0.74	.	819	.	.	.	.	.	.	.	.	819
0.75-0.99	.	121	10	.	.	.	.	.	.	.	131
1.00-1.24	.	1	44	.	.	.	.	.	.	.	45
1.25-1.49	.	.	5	.	.	.	.	.	.	.	5
1.50-1.74	.	.	1	.	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1925	63	0	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.0 NO. OF CASES= 1863.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	242	2	.	.	.	.	.	.	.	244
0.25-0.49	.	604	.	.	.	.	.	.	.	.	604
0.50-0.74	.	1157	.	.	.	.	.	.	.	.	1157
0.75-0.99	.	120	55	.	.	.	.	.	.	.	175
1.00-1.24	.	.	85	.	.	.	.	.	.	.	85
1.25-1.49	.	.	8	1	.	.	.	.	.	.	9
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2123	150	3	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.1 NO. OF CASES= 2132.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	207	3	1	.	.	.	.	.	.	211
0.25-0.49	.	724	.	.	.	.	.	.	.	.	724
0.50-0.74	.	1598	.	.	.	.	.	.	.	.	1598
0.75-0.99	.	188	85	.	.	.	.	.	.	.	273
1.00-1.24	.	3	196	.	.	.	.	.	.	.	199
1.25-1.49	.	.	37	5	.	.	.	.	.	.	42
1.50-1.74	.	.	.	20	.	.	.	.	.	.	20
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2720	321	28	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.1 NO. OF CASES= 2874.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	301	1	.	.	.	.	.	.	.	302
0.25-0.49	.	1345	.	.	.	.	.	.	.	.	1345
0.50-0.74	.	1817	.	.	.	.	.	.	.	.	1817
0.75-0.99	.	470	18	.	.	.	.	.	.	.	488
1.00-1.24	.	10	299	.	.	.	.	.	.	.	309
1.25-1.49	.	.	86	.	.	.	.	.	.	.	86
1.50-1.74	.	.	22	39	.	.	.	.	.	.	61
1.75-1.99	.	.	.	14	.	.	.	.	.	.	14
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3943	426	58	2	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.1 NO. OF CASES= 4147.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	305	7	17	2	.	.	.	.	.	331
0.25-0.49	.	1514	4	9	1	.	.	.	.	.	1528
0.50-0.74	.	3175	131	4	1	.	.	.	.	.	3311
0.75-0.99	.	1002	164	7	2	.	.	.	.	.	1175
1.00-1.24	.	219	604	40	1	.	.	.	.	.	864
1.25-1.49	.	.	217	79	3	1	.	.	.	.	300
1.50-1.74	.	.	79	133	2	1	.	.	.	.	215
1.75-1.99	.	.	.	44	7	.	.	.	.	.	51
2.00-2.24	.	.	.	10	20	.	1	.	.	.	31
2.25-2.49	.	.	.	2	7	.	.	.	.	.	9
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	3	.	.	.	.	.	3
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	1	1	.	.	.	.	2
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	6215	1206	345	54	4	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 3.3 NO. OF CASES= 7328.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	418	142	97	9	.	.	.	.	.	666
0.25-0.49	.	1463	127	257	51	.	.	.	.	.	1898
0.50-0.74	.	2893	650	402	281	13	.	.	.	.	4239
0.75-0.99	.	743	1418	228	149	27	2	.	.	.	2567
1.00-1.24	.	166	1873	424	211	40	5	.	.	.	2719
1.25-1.49	.	.	297	946	191	37	5	.	.	.	1476
1.50-1.74	.	.	50	1141	462	60	8	.	.	.	1721
1.75-1.99	.	.	1	367	301	47	6	.	.	.	722
2.00-2.24	.	.	.	115	429	120	8	.	.	.	672
2.25-2.49	.	.	.	3	105	94	2	.	.	.	204
2.50-2.74	.	.	.	.	110	80	9	.	.	.	199
2.75-2.99	.	.	.	.	26	51	1	.	.	.	78
3.00-3.24	.	.	.	.	3	29	37	1	.	.	70
3.25-3.49	.	.	.	.	.	6	14	.	.	.	20
3.50+	.	.	.	.	.	3	9	1	.	.	13
TOTAL	0	5683	4558	3980	2328	607	106	2	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.3 NO. OF CASES= 16169.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	460	111	135	18	.	.	.	.	.	724
0.25-0.49	.	1329	137	350	161	2	.	.	.	.	1979
0.50-0.74	.	1334	721	344	471	74	.	.	.	.	2944
0.75-0.99	.	211	1006	430	178	96	7	.	.	.	1928
1.00-1.24	.	4	1197	1035	274	68	11	.	.	.	2589
1.25-1.49	.	.	108	1244	314	27	12	1	.	.	1706
1.50-1.74	.	.	6	1331	1160	86	10	1	.	.	2594
1.75-1.99	.	.	.	312	1249	73	9	.	.	.	1643
2.00-2.24	.	.	.	35	1750	306	27	1	.	.	2119
2.25-2.49	.	.	.	.	346	663	13	2	.	.	1024
2.50-2.74	.	.	.	.	87	794	52	3	1	.	937
2.75-2.99	.	.	.	.	17	269	89	1	1	.	377
3.00-3.24	.	.	.	.	1	141	167	6	1	.	316
3.25-3.49	.	.	.	.	.	10	131	5	.	.	146
3.50+	.	.	.	.	.	3	128	75	11	.	217
TOTAL	0	3338	3286	5216	6026	2612	656	95	14	0	

MEAN HS(M) = 1.4 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 5.2 NO. OF CASES= 19897.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	308	6	1	.	.	.	.	.	.	315
0.25-0.49	.	1029	40	8	20	.	.	.	.	.	1097
0.50-0.74	.	1381	703	145	57	27	.	.	.	.	2313
0.75-0.99	.	244	680	511	39	37	3	.	.	.	1514
1.00-1.24	.	10	711	1179	210	48	16	.	.	.	2174
1.25-1.49	.	.	56	706	356	17	4	.	.	.	1139
1.50-1.74	.	.	8	714	1050	49	12	1	.	.	1834
1.75-1.99	.	.	.	35	995	56	5	.	.	.	1091
2.00-2.24	.	.	.	2	1393	330	19	.	.	.	1744
2.25-2.49	.	.	.	1	140	585	6	1	.	.	733
2.50-2.74	.	.	.	.	16	643	23	1	.	.	683
2.75-2.99	.	.	.	.	.	179	75	2	.	.	256
3.00-3.24	.	.	.	.	.	37	178	.	.	.	215
3.25-3.49	.	.	.	.	.	.	100	2	.	.	102
3.50+	.	.	.	.	.	.	94	22	5	1	122
TOTAL	0	2972	2204	3302	4276	2008	535	29	5	1	

MEAN HS(M) = 1.4 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 5.1 NO. OF CASES= 14360.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	159	2	.	.	.	.	.	.	.	161
0.25-0.49	.	666	6	.	.	.	.	.	.	.	672
0.50-0.74	.	1349	115	16	.	.	.	.	.	.	1480
0.75-0.99	.	324	401	59	2	.	.	.	.	.	786
1.00-1.24	.	18	605	178	19	.	.	.	.	.	820
1.25-1.49	.	.	143	206	42	2	.	.	.	.	393
1.50-1.74	.	.	16	223	109	2	.	.	.	.	350
1.75-1.99	.	.	.	24	115	5	1	.	.	.	145
2.00-2.24	.	.	.	5	105	14	.	.	.	.	124
2.25-2.49	.	.	.	1	17	32	.	.	.	.	50
2.50-2.74	.	.	.	.	3	33	.	.	.	.	36
2.75-2.99	.	.	.	.	.	6	1	.	.	.	7
3.00-3.24	.	.	.	.	.	1	9	.	.	.	10
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	2516	1288	712	412	95	16	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 4724.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	89	1	.	.	.	.	.	.	.	90
0.25-0.49	.	362	.	.	.	.	.	.	.	.	362
0.50-0.74	.	918	7	.	.	.	.	.	.	.	925
0.75-0.99	.	205	170	.	.	.	.	.	.	.	375
1.00-1.24	.	3	364	2	.	.	.	.	.	.	369
1.25-1.49	.	.	112	18	.	.	.	.	.	.	130
1.50-1.74	.	.	3	32	.	.	.	.	.	.	35
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	6	.	.	.	.	.	.	6
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1577	657	63	0	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 2153.

STATION E24 42.73N 78.98W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

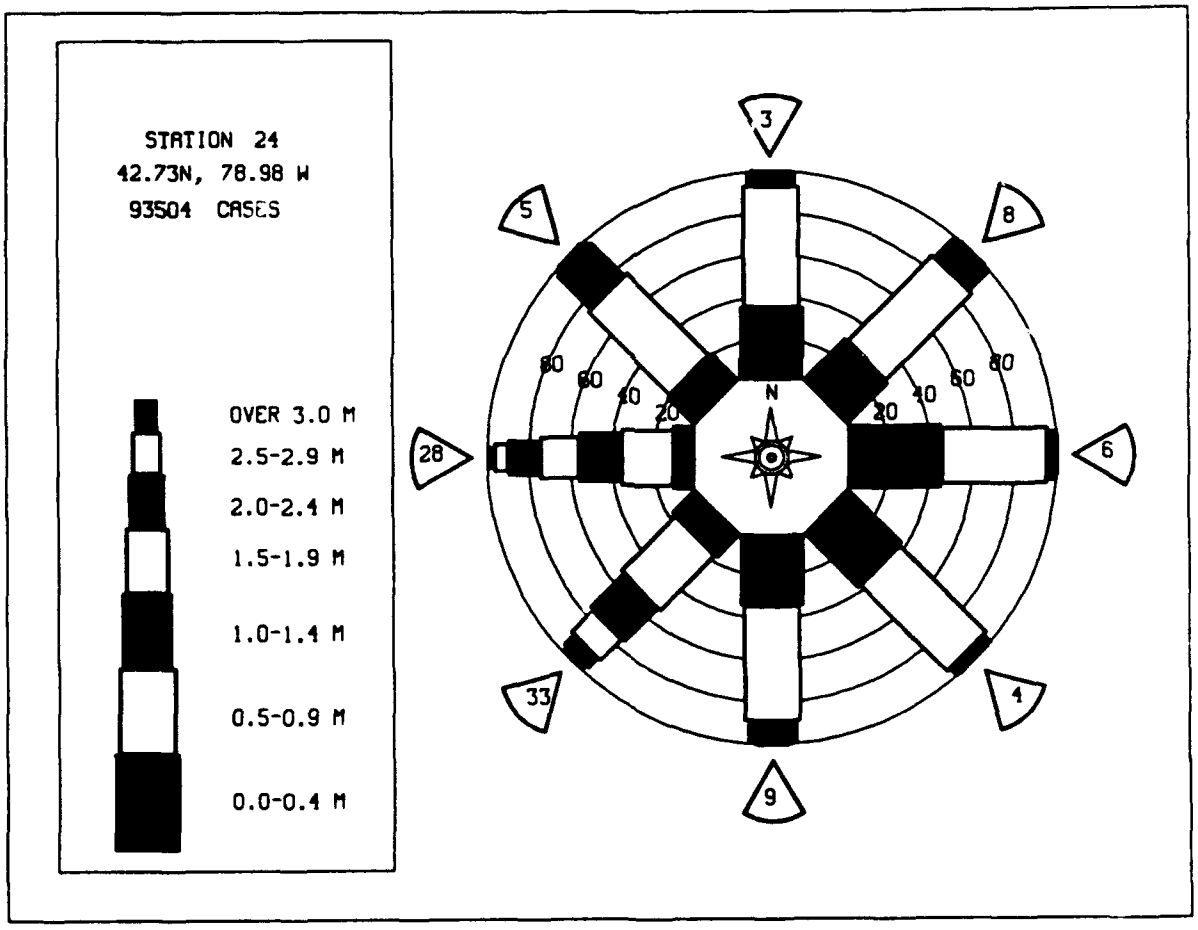
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	91	.	1	.	.	.	.	.	.	92
0.25-0.49	.	342	.	.	.	.	.	.	.	.	342
0.50-0.74	.	881	.	.	.	.	.	.	.	.	881
0.75-0.99	.	298	176	.	.	.	.	.	.	.	474
1.00-1.24	.	.	319	.	.	.	.	.	.	.	319
1.25-1.49	.	.	82	17	.	.	.	.	.	.	99
1.50-1.74	.	.	1	25	.	.	.	.	.	.	26
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1612	578	47	0	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 2096.

STATION E24 42.73N 78.98W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	418	29	25	2	.	.	.	.	.	474
0.25-0.49	.	1451	31	62	23	.	.	.	.	.	1567
0.50-0.74	.	2453	233	91	81	11	.	.	.	.	2869
0.75-0.99	.	556	475	123	37	16	1	.	.	.	1208
1.00-1.24	.	47	760	286	71	15	3	.	.	.	1182
1.25-1.49	.	.	136	327	90	8	2	.	.	.	563
1.50-1.74	.	.	19	373	278	19	3	.	.	.	692
1.75-1.99	.	.	.	82	266	18	2	.	.	.	368
2.00-2.24	.	.	.	19	370	77	5	.	.	.	471
2.25-2.49	.	.	.	.	61	137	2	.	.	.	200
2.50-2.74	.	.	.	.	22	155	8	.	.	.	185
2.75-2.99	.	.	.	.	4	50	16	.	.	.	70
3.00-3.24	.	.	.	.	.	20	39	.	.	.	59
3.25-3.49	.	.	.	.	.	1	25	.	.	.	26
3.50+	.	.	.	.	.	.	23	9	1	.	33
TOTAL	0	4925	1683	1388	1305	527	129	9	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E24 (42.73N 78.98W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	1.0	0.9	1.0	0.9	0.8	0.8	0.8	0.7	0.7	1.0	0.9	0.8
1957	1.1	0.8	1.0	1.0	0.9	0.8	0.7	0.6	0.7	0.6	1.1	1.0	0.9
1958	0.9	1.0	0.6	0.6	0.8	0.7	0.6	0.7	0.8	0.8	1.1	0.9	0.8
1959	1.1	0.9	0.9	0.9	0.7	0.7	0.7	0.8	0.7	0.9	0.9	0.8	0.8
1960	1.3	1.3	1.1	1.2	0.8	0.9	0.8	0.7	0.6	0.8	1.2	1.2	1.0
1961	1.0	0.8	0.9	1.0	1.1	1.1	0.8	0.7	0.8	0.9	0.9	1.2	0.9
1962	1.6	1.0	0.9	1.3	1.0	0.8	0.8	0.8	0.8	0.8	0.7	1.1	1.0
1963	1.3	1.3	1.2	1.2	1.1	0.8	0.9	0.9	0.7	0.8	1.2	1.0	1.0
1964	1.4	1.0	1.1	1.0	1.1	0.9	0.8	0.9	0.8	0.9	1.1	1.0	1.0
1965	1.4	1.3	0.9	0.9	1.0	0.9	0.8	0.9	0.8	1.1	1.0	0.9	1.0
1966	1.2	1.0	1.2	1.1	1.1	0.9	1.0	1.0	0.9	1.3	1.1	1.2	1.1
1967	1.4	1.4	0.8	1.2	1.0	0.9	0.9	0.8	0.9	1.1	1.3	1.2	1.1
1968	0.9	1.3	1.2	1.2	0.9	1.0	1.0	0.9	0.8	1.0	1.1	1.2	1.0
1969	1.5	0.9	1.3	1.0	1.0	0.9	0.8	0.9	0.9	1.0	1.0	0.9	1.0
1970	1.0	1.1	0.9	1.1	0.9	0.9	1.0	0.8	0.8	0.7	0.9	0.9	0.9
1971	1.5	1.4	1.2	1.2	0.9	0.8	1.0	1.0	0.8	0.8	1.0	1.2	1.1
1972	1.7	1.1	1.1	1.0	0.7	0.8	0.9	1.0	0.9	1.0	0.9	1.1	1.0
1973	1.7	0.9	1.0	1.3	1.1	1.1	1.0	0.8	0.8	0.8	1.3	1.0	1.1
1974	1.3	1.0	1.2	1.5	1.1	0.9	1.1	0.8	1.0	1.0	1.0	1.1	1.1
1975	1.4	1.2	1.1	1.0	0.7	0.8	0.8	0.7	0.8	1.0	1.2	0.9	1.0
1976	1.2	1.4	1.3	1.3	1.1	0.9	0.9	0.7	0.9	0.9	1.4	1.3	1.1
1977	1.7	1.4	1.3	1.1	0.9	1.0	1.1	0.9	0.9	1.0	1.1	1.3	1.1
1978	1.4	1.0	1.1	1.2	1.0	1.0	0.9	0.8	0.9	1.0	1.0	1.4	1.0
1979	1.2	0.9	1.2	1.1	0.8	0.9	0.7	1.0	0.8	1.1	1.1	1.3	1.0
1980	1.3	1.1	1.1	1.0	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
1981	0.9	0.9	0.9	0.9	0.5	0.8	0.6	0.7	0.8	0.8	0.9	0.9	0.8
1982	1.5	1.0	1.1	1.4	0.6	0.7	0.8	0.8	0.7	0.8	1.0	1.0	0.9
1983	1.0	0.7	0.7	0.9	1.0	0.6	1.0	0.7	0.9	0.9	0.9	1.3	0.9
1984	1.1	0.9	1.0	0.8	1.1	0.8	0.8	0.7	0.7	0.6	1.0	1.2	0.9
1985	1.4	1.2	1.2	1.1	0.9	0.9	0.9	0.8	0.8	0.9	0.9	1.3	1.0
1986	1.3	0.9	1.3	1.0	1.0	0.8	0.8	0.9	0.8	0.9	0.9	1.1	1.0
1987	1.1	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.9	1.1	1.2	0.9
MEAN	1.3	1.1	1.0	1.1	0.9	0.9	0.9	0.8	0.8	0.9	1.0	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E24 (42.73N 78.98W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	3.3	3.9	3.2	3.0	2.7	2.1	2.1	2.2	3.1	3.1	2.4
1957	2.6	2.2	3.0	3.5	2.9	4.0	2.9	2.0	2.2	2.0	3.4	2.5
1958	2.7	2.6	2.2	2.8	2.1	2.6	2.1	2.2	2.0	2.8	2.9	2.5
1959	3.7	2.4	3.3	3.1	2.2	2.1	2.3	2.0	2.2	3.0	2.8	2.9
1960	3.0	3.7	2.7	3.8	2.3	3.3	2.8	2.5	2.7	2.6	3.1	3.1
1961	3.4	3.6	2.8	3.6	3.2	3.0	2.3	2.6	2.8	2.7	2.7	3.6
1962	3.3	2.8	2.5	3.4	3.5	2.6	2.5	2.5	2.6	2.9	2.7	3.6
1963	4.3	3.2	3.7	4.0	3.7	2.3	2.8	2.9	3.2	3.5	3.3	3.3
1964	4.0	3.4	4.6	3.2	4.3	3.2	2.2	2.6	3.2	2.5	3.4	2.7
1965	3.8	3.7	4.0	3.5	2.9	3.2	2.5	2.6	3.1	3.5	3.8	2.8
1966	4.7	3.5	3.5	3.0	3.6	2.7	3.1	3.0	3.1	3.3	3.5	3.6
1967	3.7	4.9	2.6	4.4	3.2	2.6	2.6	2.5	2.5	3.3	3.0	3.4
1968	3.6	3.3	3.3	3.9	3.1	3.1	2.6	3.4	3.1	2.6	3.2	4.0
1969	3.7	2.9	4.2	3.2	3.2	3.4	2.9	2.8	3.1	3.5	2.8	2.9
1970	2.8	2.9	3.7	3.3	2.6	2.7	3.0	2.8	3.2	2.5	3.0	2.5
1971	4.0	4.6	3.9	3.3	3.2	2.6	3.5	2.8	2.6	3.2	3.2	4.1
1972	5.1	3.1	3.4	2.7	3.2	2.8	2.9	3.2	3.1	3.3	3.0	3.5
1973	3.9	3.0	3.7	3.6	3.3	2.9	3.8	2.4	2.5	2.9	3.3	3.4
1974	4.2	2.8	3.6	4.3	3.0	3.5	2.8	2.6	3.2	2.9	3.4	2.7
1975	3.9	3.8	3.0	4.4	2.1	2.4	2.4	2.3	2.3	3.1	3.9	3.5
1976	3.5	3.9	3.2	3.5	3.5	2.6	2.3	2.5	2.5	3.7	2.9	3.4
1977	4.0	3.8	3.4	3.7	3.1	3.2	4.1	2.3	2.4	2.3	2.7	4.0
1978	3.9	2.5	3.2	3.2	3.0	2.7	2.8	2.7	2.9	2.3	3.2	3.5
1979	3.4	3.1	3.4	4.3	2.5	2.1	1.9	2.8	2.9	2.6	4.1	3.2
1980	3.8	2.8	2.7	2.8	2.8	2.6	2.4	2.2	3.0	3.5	2.5	3.6
1981	3.0	2.7	3.4	3.0	2.4	3.0	1.9	2.4	3.5	3.8	3.2	3.1
1982	4.3	3.2	4.6	4.0	2.2	2.2	2.7	2.4	3.0	3.2	3.3	4.4
1983	3.4	2.7	2.6	3.1	2.6	2.4	2.3	3.1	2.6	3.7	3.5	3.3
1984	3.3	3.0	3.7	4.2	4.8	2.7	2.6	2.2	2.8	2.5	3.4	3.7
1985	3.5	2.9	3.6	4.3	3.0	2.9	2.4	2.9	2.5	2.8	3.0	4.0
1986	3.7	2.9	4.3	2.9	3.2	2.9	2.8	2.6	3.3	3.3	3.4	3.4
1987	3.6	2.8	3.2	3.3	3.1	2.6	2.3	2.4	2.9	2.5	3.4	4.0

32 YR. STATISTICS FOR WIS STATION E24

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.4
LARGEST WAVE HS	(METERS)	5.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	264.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012512

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	160	.	1	.	.	.	.	.	.	161
0.25-0.49	.	628	.	.	.	.	.	.	.	.	628
0.50-0.74	.	799	1	.	.	.	.	.	.	.	800
0.75-0.99	.	288	7	.	.	.	.	.	.	.	295
1.00-1.24	.	5	77	1	.	.	.	.	.	.	83
1.25-1.49	.	.	8	.	.	.	.	.	.	.	8
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1880	93	4	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 1853.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	86	1	.	.	.	.	.	.	.	87
0.25-0.49	.	487	.	.	.	.	.	.	.	.	487
0.50-0.74	.	739	1	.	.	.	.	.	.	.	740
0.75-0.99	.	121	35	.	.	.	.	.	.	.	156
1.00-1.24	.	6	70	2	.	.	.	.	.	.	78
1.25-1.49	.	.	2	1	.	.	.	.	.	.	3
1.50-1.74	.	.	1	1	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1439	110	4	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 1456.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	337	1	.	.	.	.	.	.	.	338
0.25-0.49	.	984	.	.	.	.	.	.	.	.	984
0.50-0.74	.	2072	3	.	.	.	.	.	.	.	2075
0.75-0.99	.	383	310	.	.	.	.	.	.	.	693
1.00-1.24	.	1	425	.	.	.	.	.	.	.	426
1.25-1.49	.	.	79	21	.	.	.	.	.	.	100
1.50-1.74	.	.	.	44	.	.	.	.	.	.	44
1.75-1.99	.	.	.	9	.	.	.	.	.	.	9
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3777	818	77	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 4375.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	248	3	1	.	.	.	.	.	.	252
0.25-0.49	.	792	.	.	.	.	.	.	.	.	792
0.50-0.74	.	1766	6	.	.	.	.	.	.	.	1772
0.75-0.99	.	316	355	.	.	.	.	.	.	.	671
1.00-1.24	.	.	621	9	.	.	.	.	.	.	630
1.25-1.49	.	.	86	106	.	.	.	.	.	.	192
1.50-1.74	.	.	1	85	.	.	.	.	.	.	86
1.75-1.99	.	.	.	17	.	.	.	.	.	.	17
2.00-2.24	.	.	.	11	3	.	.	.	.	.	14
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3122	1072	229	3	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 4145.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	286	5	.	.	.	.	.	.	.	291
0.25-0.49	.	901	.	.	.	.	.	.	.	.	901
0.50-0.74	.	1401	6	.	.	.	.	.	.	.	1407
0.75-0.99	.	237	366	.	.	.	.	.	.	.	603
1.00-1.24	.	.	436	.	.	.	.	.	.	.	436
1.25-1.49	.	.	90	170	.	.	.	.	.	.	260
1.50-1.74	.	.	.	124	.	.	.	.	.	.	124
1.75-1.99	.	.	.	12	.	.	.	.	.	.	12
2.00-2.24	.	.	.	3	1	.	.	.	.	.	4
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2825	903	309	3	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.4 NO. OF CASES= 3783.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	192	1	.	.	.	.	.	.	.	193
0.25-0.49	.	517	.	.	.	.	.	.	.	.	517
0.50-0.74	.	914	.	.	.	.	.	.	.	.	914
0.75-0.99	.	95	89	.	.	.	.	.	.	.	184
1.00-1.24	.	.	117	.	.	.	.	.	.	.	117
1.25-1.49	.	.	16	18	.	.	.	.	.	.	34
1.50-1.74	.	.	.	12	.	.	.	.	.	.	12
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1718	223	34	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.1 NO. OF CASES= 1851.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	224	2	.	.	.	.	.	.	.	226
0.25-0.49	.	596	.	.	.	.	.	.	.	.	596
0.50-0.74	.	1145	.	.	.	.	.	.	.	.	1145
0.75-0.99	.	124	57	.	.	.	.	.	.	.	181
1.00-1.24	.	.	98	.	.	.	.	.	.	.	98
1.25-1.49	.	.	6	.	.	.	.	.	.	.	6
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2089	163	2	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 2111.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	197	2	.	.	.	.	.	.	.	199
0.25-0.49	.	748	.	.	.	.	.	.	.	.	748
0.50-0.74	.	1534	.	.	.	.	.	.	.	.	1534
0.75-0.99	.	223	125	.	.	.	.	.	.	.	348
1.00-1.24	.	.	198	.	.	.	.	.	.	.	198
1.25-1.49	.	.	29	23	.	.	.	.	.	.	52
1.50-1.74	.	.	.	37	.	.	.	.	.	.	37
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2702	354	67	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.2 NO. OF CASES= 2927.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	336	3	.	.	.	.	.	.	.	339
0.25-0.49	.	993	.	.	.	.	.	.	.	.	993
0.50-0.74	.	2312	.	.	.	.	.	.	.	.	2312
0.75-0.99	.	483	393	.	.	.	.	.	.	.	876
1.00-1.24	.	1	645	1	.	.	.	.	.	.	647
1.25-1.49	.	.	91	202	.	.	.	.	.	.	293
1.50-1.74	.	.	.	280	.	.	.	.	.	.	280
1.75-1.99	.	.	.	64	.	.	.	.	.	.	64
2.00-2.24	.	.	.	19	23	.	.	.	.	.	42
2.25-2.49	.	.	.	.	11	.	.	.	.	.	11
2.50-2.74	.	.	.	.	11	.	.	.	.	.	11
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4125	1132	566	46	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 5495.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	367	19	12	.	.	.	.	.	.	398
0.25-0.49	.	1090	35	38	5	.	.	.	.	.	1168
0.50-0.74	.	2660	110	48	14	.	.	.	.	.	2832
0.75-0.99	.	864	850	48	18	.	.	.	.	.	1780
1.00-1.24	.	2	1389	122	9	.	.	.	.	.	1522
1.25-1.49	.	.	237	513	7	.	.	.	.	.	757
1.50-1.74	.	.	7	657	24	.	.	.	.	.	688
1.75-1.99	.	.	.	193	43	2	.	.	.	.	238
2.00-2.24	.	.	.	56	119	.	.	.	.	.	175
2.25-2.49	.	.	.	.	40	.	.	.	.	.	40
2.50-2.74	.	.	.	.	17	11	.	.	.	.	28
2.75-2.99	.	.	.	.	5	9	.	.	.	.	14
3.00-3.24	.	.	.	.	.	5	.	.	.	.	5
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	1	3	.	.	1	.	5
TOTAL	0	4983	2647	1687	302	33	0	0	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 9043.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	536	142	74	4	.	.	.	.	.	756
0.25-0.49	.	1379	273	326	43	.	.	.	.	.	2021
0.50-0.74	.	1918	753	599	260	6	.	.	.	.	3536
0.75-0.99	.	387	1080	532	203	24	.	.	.	.	2226
1.00-1.24	.	6	1222	1011	296	42	5	.	.	.	2582
1.25-1.49	.	.	109	1033	170	28	2	.	.	.	1342
1.50-1.74	.	.	10	1435	372	55	4	.	.	.	1876
1.75-1.99	.	.	.	233	753	26	5	.	.	.	1017
2.00-2.24	.	.	.	31	1084	43	7	.	.	.	1165
2.25-2.49	.	.	.	.	499	53	7	.	.	.	559
2.50-2.74	.	.	.	.	232	257	3	.	.	.	492
2.75-2.99	.	.	.	.	13	194	6	1	.	.	214
3.00-3.24	.	.	.	.	4	178	16	.	.	.	198
3.25-3.49	.	.	.	.	.	71	8	1	.	.	80
3.50+	.	.	.	.	.	18	97	6	.	.	121
TOTAL	0	4226	3589	5274	3933	995	160	8	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 6.0 MEAN TP(SEC)= 4.7 NO. OF CASES= 17030.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	430	94	136	14	.	.	.	.	.	674
0.25-0.49	.	1205	127	392	140	1	.	.	.	.	1865
0.50-0.74	.	1376	648	343	581	60	.	.	.	.	3008
0.75-0.99	.	196	728	407	289	106	4	.	.	.	1730
1.00-1.24	.	2	762	1181	259	139	14	.	.	.	2357
1.25-1.49	.	.	44	958	220	69	19	.	.	.	1310
1.50-1.74	.	.	1	1547	609	74	21	.	.	.	2252
1.75-1.99	.	.	1	172	1267	69	11	2	.	.	1522
2.00-2.24	.	.	.	9	1976	96	18	.	.	.	2099
2.25-2.49	.	.	.	.	994	147	11	1	.	.	1153
2.50-2.74	.	.	.	.	457	787	23	.	.	.	1267
2.75-2.99	.	.	.	.	10	515	14	2	.	.	541
3.00-3.24	.	.	.	.	1	483	78	5	.	.	567
3.25-3.49	.	.	.	.	.	174	89	3	2	.	268
3.50+	.	.	.	.	.	49	410	71	13	1	544
TOTAL	0	3209	2405	5145	6817	2769	712	84	15	1	

MEAN HS(M) = 1.5 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 5.3 NO. OF CASES= 19813.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	290	3	1	2	.	.	.	.	.	296
0.25-0.49	.	934	12	6	9	.	.	.	.	.	961
0.50-0.74	.	1377	424	69	70	17	.	.	.	.	1957
0.75-0.99	.	288	652	290	37	31	.	.	.	.	1298
1.00-1.24	.	19	729	852	62	72	7	.	.	.	1741
1.25-1.49	.	.	65	617	111	39	14	.	.	.	846
1.50-1.74	.	.	13	963	440	22	26	.	.	.	1464
1.75-1.99	.	.	2	104	737	14	11	.	.	.	868
2.00-2.24	.	.	.	9	1178	23	5	1	.	.	1216
2.25-2.49	.	.	.	2	513	54	4	1	.	.	574
2.50-2.74	.	.	.	.	150	356	6	1	.	.	513
2.75-2.99	.	.	.	.	4	199	4	.	.	.	207
3.00-3.24	.	.	.	.	.	182	10	.	.	.	192
3.25-3.49	.	.	.	.	.	64	9	.	.	.	73
3.50+	.	.	.	.	.	12	119	7	1	.	139
TOTAL	0	2908	1900	2913	3313	1085	215	10	1	0	

MEAN HS(M) = 1.4 LARGEST HS(M)= 6.0 MEAN TP(SEC)= 4.9 NO. OF CASES= 11572.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	166	1	.	.	.	.	.	.	.	167
0.25-0.49	.	601	4	.	1	.	.	.	.	.	606
0.50-0.74	.	1288	63	1	1	.	.	.	.	.	1353
0.75-0.99	.	345	309	26	.	.	.	.	.	.	680
1.00-1.24	.	10	613	87	4	.	.	.	.	.	714
1.25-1.49	.	.	141	135	9	2	.	.	.	.	287
1.50-1.74	.	.	11	228	38	1	.	.	.	.	278
1.75-1.99	.	.	.	42	53	1	.	.	.	.	96
2.00-2.24	.	.	.	10	78	2	.	.	.	.	90
2.25-2.49	.	.	.	1	29	2	.	.	.	.	32
2.50-2.74	.	.	.	.	8	13	.	.	.	.	21
2.75-2.99	.	.	.	.	.	5	.	.	.	.	5
3.00-3.24	.	.	.	.	.	6	.	.	.	.	6
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	3	.	.	.	4
TOTAL	0	2410	1142	530	221	33	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 4072.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	111	1	.	.	.	.	.	.	.	112
0.25-0.49	.	339	.	.	.	.	.	.	.	.	339
0.50-0.74	.	803	4	.	.	.	.	.	.	.	807
0.75-0.99	.	210	172	.	.	.	.	.	.	.	382
1.00-1.24	.	3	346	1	.	.	.	.	.	.	350
1.25-1.49	.	.	91	25	.	.	.	.	.	.	116
1.50-1.74	.	.	1	38	.	.	.	.	.	.	39
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1466	615	75	0	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.4 NO. OF CASES= 2021.

STATION E25 42.73N 79.18W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

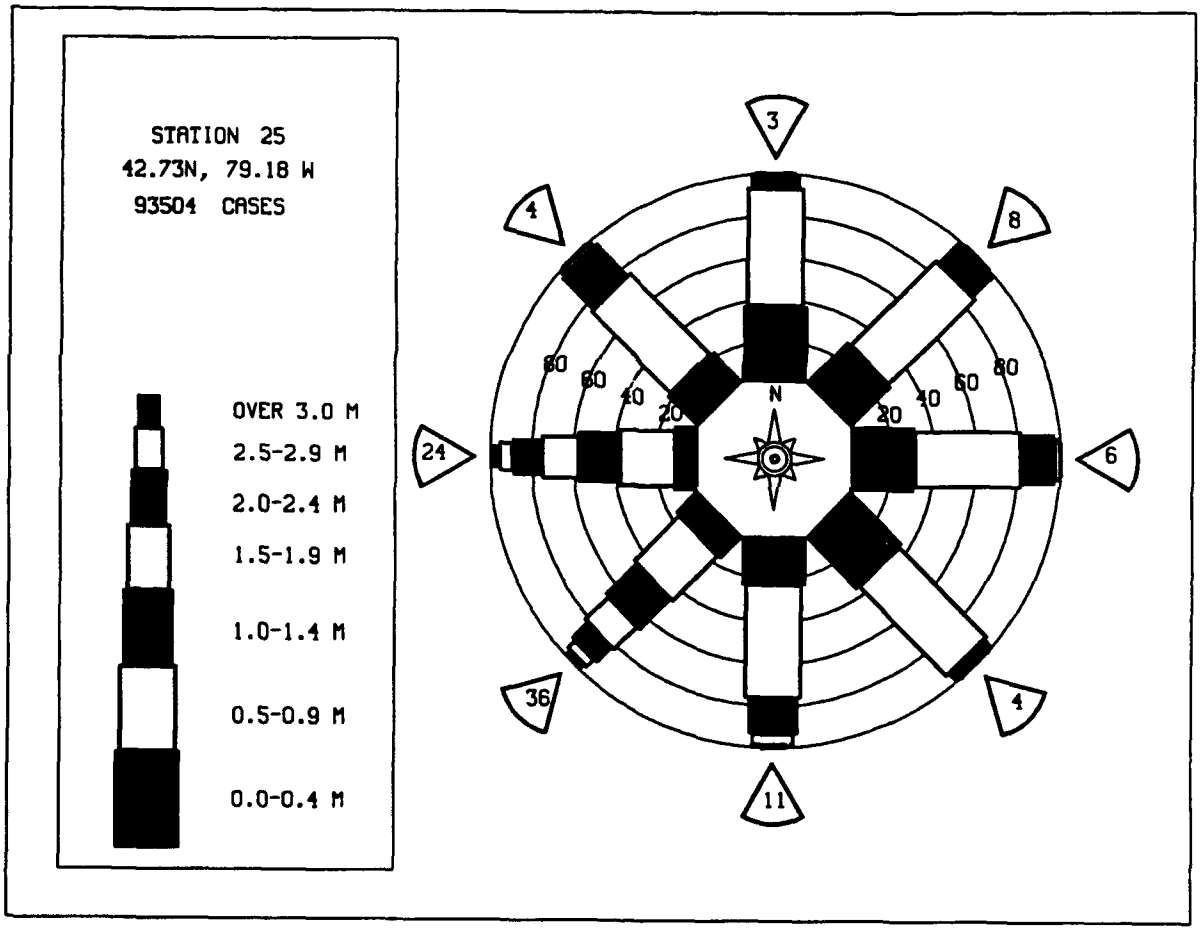
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	98	.	1	.	.	.	.	.	.	99
0.25-0.49	.	389	.	.	.	.	.	.	.	.	389
0.50-0.74	.	799	.	.	.	.	.	.	.	.	799
0.75-0.99	.	320	126	.	.	.	.	.	.	.	446
1.00-1.24	.	4	254	.	.	.	.	.	.	.	258
1.25-1.49	.	.	47	11	.	.	.	.	.	.	58
1.50-1.74	.	.	1	33	.	.	.	.	.	.	34
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1610	428	50	0	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 1957.

STATION E25 42.73N 79.18W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	407	28	22	2	.	.	.	.	.	459
0.25-0.49	.	1259	45	76	19	.	.	.	.	.	1399
0.50-0.74	.	2291	202	106	92	8	.	.	.	.	2699
0.75-0.99	.	488	565	130	54	16	.	.	.	.	1253
1.00-1.24	.	6	801	327	63	25	2	.	.	.	1224
1.25-1.49	.	.	114	383	51	14	3	.	.	.	565
1.50-1.74	.	.	4	549	148	15	5	.	.	.	721
1.75-1.99	.	.	.	86	285	11	2	.	.	.	384
2.00-2.24	.	.	.	16	446	16	3	.	.	.	481
2.25-2.49	.	.	.	.	209	25	2	.	.	.	236
2.50-2.74	.	.	.	.	87	142	3	.	.	.	232
2.75-2.99	.	.	.	.	3	92	2	.	.	.	97
3.00-3.24	.	.	.	.	.	85	10	.	.	.	95
3.25-3.49	.	.	.	.	.	31	10	.	.	.	41
3.50+	.	.	.	.	.	8	63	8	1	.	80
TOTAL	0	4451	1759	1695	1459	488	105	8	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 6.0 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E25 (42.73N 79.18W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	1.0	1.0	1.0	0.9	0.8	0.9	0.8	0.8	0.8	1.1	1.0	0.9
1957	1.2	0.8	1.1	1.0	0.9	0.8	0.8	0.6	0.8	0.7	1.2	1.2	0.9
1958	1.0	1.1	0.8	0.7	0.8	0.8	0.7	0.8	0.9	0.9	1.2	0.9	0.9
1959	1.1	1.0	0.9	0.9	0.7	0.7	0.7	0.8	0.8	0.9	1.0	0.9	0.9
1960	1.4	1.4	1.1	1.4	0.9	0.9	0.9	0.8	0.7	0.9	1.3	1.3	1.1
1961	1.1	0.9	1.0	1.1	1.2	1.2	0.8	0.8	0.8	1.0	0.9	1.3	1.0
1962	1.7	1.1	0.9	1.3	1.0	0.8	0.8	0.8	0.9	0.9	0.8	1.2	1.0
1963	1.4	1.4	1.3	1.2	1.2	0.8	0.9	0.9	0.8	0.9	1.3	1.1	1.1
1964	1.5	1.0	1.2	1.1	1.2	0.9	0.9	1.0	0.9	1.0	1.2	1.1	1.1
1965	1.5	1.4	1.0	0.9	1.1	1.0	0.8	1.0	0.9	1.1	1.2	1.0	1.1
1966	1.3	1.0	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.4	1.2	1.3	1.1
1967	1.5	1.6	0.9	1.2	1.1	1.0	0.9	0.9	0.9	1.2	1.4	1.3	1.2
1968	1.0	1.3	1.2	1.3	1.0	1.0	1.1	1.0	0.8	1.0	1.1	1.3	1.1
1969	1.6	0.9	1.4	1.1	1.1	1.0	0.8	0.9	0.9	1.1	1.1	0.9	1.1
1970	1.1	1.1	1.0	1.2	1.0	0.9	1.0	0.8	0.9	0.8	1.0	1.0	1.0
1971	1.6	1.5	1.2	1.2	0.9	0.8	1.0	1.0	0.9	0.8	1.0	1.3	1.1
1972	1.8	1.2	1.1	1.1	0.8	0.8	0.9	1.0	1.0	1.0	1.0	1.2	1.1
1973	1.8	1.0	1.0	1.4	1.2	1.2	1.0	0.9	0.8	0.9	1.4	1.2	1.1
1974	1.4	1.1	1.2	1.5	1.2	1.0	1.1	0.9	1.1	1.1	1.1	1.1	1.2
1975	1.5	1.3	1.2	1.1	0.8	0.9	0.8	0.7	0.9	1.1	1.3	1.0	1.1
1976	1.3	1.6	1.4	1.3	1.2	1.0	1.0	0.7	1.0	1.0	1.5	1.4	1.2
1977	1.6	1.5	1.4	1.2	0.9	1.0	1.2	1.0	1.0	1.0	1.2	1.4	1.2
1978	1.6	1.1	1.1	1.2	1.0	1.0	1.0	0.9	1.0	1.1	1.1	1.5	1.1
1979	1.3	1.0	1.3	1.2	0.8	0.9	0.8	1.0	0.9	1.2	1.2	1.4	1.1
1980	1.4	1.1	1.1	1.1	1.0	0.9	0.9	0.9	1.0	1.1	1.0	1.1	1.1
1981	1.0	1.0	0.9	1.0	0.5	0.8	0.6	0.7	0.8	0.8	0.9	0.9	0.8
1982	1.6	1.1	1.1	1.5	0.6	0.7	0.8	0.8	0.7	0.8	1.1	1.1	1.0
1983	1.0	0.7	0.7	1.0	1.0	0.7	1.0	0.7	0.9	1.0	1.0	1.3	0.9
1984	1.1	0.9	1.0	0.8	1.2	0.9	0.8	0.7	0.7	0.6	1.1	1.3	0.9
1985	1.5	1.3	1.3	1.2	1.0	1.0	0.9	0.8	0.9	1.0	0.9	1.4	1.1
1986	1.4	0.9	1.4	1.1	1.1	0.9	0.8	0.9	0.9	1.0	1.0	1.2	1.1
1987	1.2	0.8	0.8	1.0	1.0	0.9	1.0	0.9	0.8	0.9	1.2	1.3	1.0
MEAN	1.4	1.1	1.1	1.1	1.0	0.9	0.9	0.9	0.9	1.0	1.1	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E25 (42.73N 79.18W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	3.8	4.3	3.6	3.5	3.1	2.4	2.5	2.4	3.6	3.7	2.7
1957	2.8	2.5	3.5	4.1	3.1	4.9	3.1	2.2	2.4	2.4	4.2	2.9
1958	2.9	2.9	2.3	3.4	2.4	3.0	2.5	2.2	2.4	2.9	3.4	2.7
1959	4.3	2.7	3.7	3.5	2.2	2.0	2.5	2.2	2.5	3.4	3.0	3.2
1960	3.2	4.4	3.1	4.4	2.5	3.8	3.3	2.9	2.6	2.8	3.4	3.6
1961	3.9	4.1	3.2	4.4	3.6	3.4	2.5	2.8	2.9	3.1	3.1	4.1
1962	3.8	3.2	2.8	3.7	4.0	2.9	2.7	2.8	2.7	3.0	3.1	4.1
1963	4.8	3.8	4.3	4.5	4.0	2.5	3.0	3.1	3.3	3.9	3.7	3.8
1964	4.7	3.8	5.3	3.7	4.9	3.7	2.3	2.7	3.6	2.7	3.9	3.0
1965	4.3	4.3	4.6	3.9	3.4	3.6	2.8	2.7	3.6	4.0	4.5	3.3
1966	5.2	3.6	4.0	3.0	4.3	2.8	3.5	3.0	3.2	3.7	4.0	4.1
1967	4.2	6.0	2.9	4.4	3.3	3.0	2.9	2.7	3.4	3.8	3.3	3.8
1968	3.9	3.8	3.8	4.6	3.6	3.5	3.0	3.8	3.1	2.9	3.4	4.6
1969	4.0	3.0	4.7	3.4	3.4	4.1	2.9	3.2	3.1	3.7	2.9	2.9
1970	3.0	3.2	4.4	3.7	3.0	3.2	2.9	3.0	3.3	2.6	3.4	2.8
1971	4.6	5.4	4.3	3.3	3.7	2.6	4.0	2.8	3.0	3.5	3.7	4.8
1972	6.0	3.5	3.8	3.0	3.5	3.2	3.1	3.6	3.5	3.7	3.4	4.0
1973	4.3	3.4	4.2	4.0	3.7	3.3	4.0	2.8	2.9	3.1	3.6	3.8
1974	4.8	3.2	3.8	4.6	3.5	3.9	3.3	3.0	3.5	3.5	3.9	3.1
1975	4.5	4.6	3.5	5.3	2.2	2.7	2.7	2.7	2.7	3.5	4.5	4.1
1976	3.6	4.5	4.4	4.0	4.2	3.0	2.7	2.7	2.6	4.7	3.3	4.1
1977	4.6	3.9	3.8	4.3	3.5	3.3	4.4	2.5	2.6	2.7	3.0	4.5
1978	4.7	2.9	3.6	3.6	3.4	3.1	3.1	2.9	3.1	2.8	3.5	3.9
1979	3.7	3.5	3.6	4.6	2.6	2.2	2.1	3.2	3.3	2.9	4.6	3.7
1980	4.4	3.2	2.9	3.0	3.2	2.7	2.6	2.5	3.0	3.8	2.7	3.7
1981	3.4	2.9	3.9	3.1	2.8	3.0	2.0	2.5	3.8	4.3	3.2	3.3
1982	5.2	3.7	5.3	4.7	2.1	2.3	3.0	2.7	3.1	3.6	3.7	5.3
1983	3.4	3.0	2.8	3.5	3.0	2.5	2.5	3.4	2.6	4.2	3.8	3.7
1984	3.6	3.4	4.3	4.9	5.6	3.0	2.6	2.3	3.1	2.9	3.8	4.0
1985	3.8	3.1	3.8	5.0	3.1	2.9	2.6	3.1	2.7	3.3	3.0	4.5
1986	3.9	3.2	5.0	3.0	3.5	3.2	3.1	2.7	3.3	3.7	3.5	3.8
1987	4.0	3.0	3.5	3.6	3.4	2.9	2.4	2.6	3.1	2.7	3.6	4.5

32 YR. STATISTICS FOR WIS STATION E25

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	236.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		67021609

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	255	.	1	.	.	.	.	.	.	256
0.25-0.49	.	663	.	.	.	.	.	.	.	.	663
0.50-0.74	.	777	6	.	.	.	.	.	.	.	783
0.75-0.99	.	256	16	.	.	.	.	.	.	.	272
1.00-1.24	.	3	64	.	.	.	.	.	.	.	67
1.25-1.49	.	.	3	.	.	.	.	.	.	.	3
1.50-1.74	.	.	1	1	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1954	90	2	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.0 NO. OF CASES= 1916.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	183	1	.	.	.	.	.	.	.	184
0.25-0.49	.	439	.	.	.	.	.	.	.	.	439
0.50-0.74	.	535	1	.	.	.	.	.	.	.	536
0.75-0.99	.	95	36	.	.	.	.	.	.	.	131
1.00-1.24	.	3	39	1	.	.	.	.	.	.	43
1.25-1.49	.	.	2	1	.	.	.	.	.	.	3
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1255	79	4	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 1255.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	397	2	.	.	.	.	.	.	.	399
0.25-0.49	.	1030	.	.	.	.	.	.	.	.	1030
0.50-0.74	.	1786	8	.	.	.	.	.	.	.	1794
0.75-0.99	.	419	274	.	.	.	.	.	.	.	693
1.00-1.24	.	.	396	2	.	.	.	.	.	.	398
1.25-1.49	.	.	58	18	.	.	.	.	.	.	76
1.50-1.74	.	.	1	40	.	.	.	.	.	.	41
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3632	739	63	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 4152.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	340	1	.	.	.	.	.	.	.	341
0.25-0.49	.	887	2	.	.	.	.	.	.	.	889
0.50-0.74	.	1489	143	1	.	.	.	.	.	.	1633
0.75-0.99	.	233	412	6	.	.	.	.	.	.	651
1.00-1.24	.	.	519	97	.	.	.	.	.	.	616
1.25-1.49	.	.	39	172	.	.	.	.	.	.	211
1.50-1.74	.	.	.	191	1	.	.	.	.	.	192
1.75-1.99	.	.	.	26	7	.	.	.	.	.	33
2.00-2.24	.	.	.	.	25	.	.	.	.	.	25
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	6	.	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2949	1116	493	46	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 4313.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	368	4	.	.	.	.	.	.	.	372
0.25-0.49	.	875	.	.	.	.	.	.	.	.	875
0.50-0.74	.	959	330	3	.	.	.	.	.	.	1292
0.75-0.99	.	42	441	12	.	.	.	.	.	.	495
1.00-1.24	.	.	381	125	.	.	.	.	.	.	506
1.25-1.49	.	.	3	276	.	.	.	.	.	.	279
1.50-1.74	.	.	.	234	.	.	.	.	.	.	234
1.75-1.99	.	.	.	36	14	.	.	.	.	.	50
2.00-2.24	.	.	.	.	19	.	.	.	.	.	19
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2244	1159	686	41	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.6 NO. OF CASES= 3871.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	257	3	.	.	.	.	.	.	.	260
0.25-0.49	.	525	.	.	.	.	.	.	.	.	525
0.50-0.74	.	587	152	.	.	.	.	.	.	.	739
0.75-0.99	.	26	172	4	.	.	.	.	.	.	202
1.00-1.24	.	.	114	32	.	.	.	.	.	.	146
1.25-1.49	.	.	.	49	.	.	.	.	.	.	49
1.50-1.74	.	.	.	34	.	.	.	.	.	.	34
1.75-1.99	.	.	.	5	2	.	.	.	.	.	7
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1395	441	124	4	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.4 NO. OF CASES= 1841.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	339	1	.	.	.	.	.	.	.	340
0.25-0.49	.	699	1	.	.	.	.	.	.	.	700
0.50-0.74	.	658	174	.	.	.	.	.	.	.	832
0.75-0.99	.	24	232	.	.	.	.	.	.	.	256
1.00-1.24	.	.	164	25	.	.	.	.	.	.	189
1.25-1.49	.	.	1	58	.	.	.	.	.	.	59
1.50-1.74	.	.	.	31	.	.	.	.	.	.	31
1.75-1.99	.	.	.	4	1	.	.	.	.	.	5
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1720	573	118	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 2260.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	403	1	.	.	.	.	.	.	.	404
0.25-0.49	.	835	.	.	.	.	.	.	.	.	835
0.50-0.74	.	902	145	.	.	.	.	.	.	.	1047
0.75-0.99	.	73	371	.	.	.	.	.	.	.	444
1.00-1.24	.	.	361	22	.	.	.	.	.	.	383
1.25-1.49	.	.	11	117	.	.	.	.	.	.	128
1.50-1.74	.	.	.	90	.	.	.	.	.	.	90
1.75-1.99	.	.	.	22	.	.	.	.	.	.	22
2.00-2.24	.	.	.	4	5	.	.	.	.	.	9
2.25-2.49	.	.	.	.	4	.	.	.	.	.	4
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2213	889	255	9	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.4 NO. OF CASES= 3154.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	575	.	1	.	.	.	.	.	.	576
0.25-0.49	.	1038	.	.	.	.	.	.	.	.	1038
0.50-0.74	.	1689	38	1	.	.	.	.	.	.	1728
0.75-0.99	.	293	429	.	.	.	.	.	.	.	722
1.00-1.24	.	.	608	3	.	.	.	.	.	.	611
1.25-1.49	.	.	82	186	.	.	.	.	.	.	268
1.50-1.74	.	.	.	227	.	.	.	.	.	.	227
1.75-1.99	.	.	.	48	.	.	.	.	.	.	48
2.00-2.24	.	.	.	19	11	.	.	.	.	.	30
2.25-2.49	.	.	.	.	10	.	.	.	.	.	10
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3595	1157	485	25	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 4927.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	607	65	10	.	.	.	.	.	.	682
0.25-0.49	.	1259	128	74	3	.	.	.	.	.	1464
0.50-0.74	.	2213	278	164	12	.	.	.	.	.	2667
0.75-0.99	.	809	817	182	19	.	.	.	.	.	1827
1.00-1.24	.	3	1471	272	43	1	.	.	.	.	1790
1.25-1.49	.	.	310	493	29	1	.	.	.	.	833
1.50-1.74	.	.	19	735	69	4	.	.	.	.	827
1.75-1.99	.	.	.	191	118	3	.	.	.	.	312
2.00-2.24	.	.	.	57	151	10	1	.	.	.	219
2.25-2.49	.	.	.	1	57	10	1	.	.	.	69
2.50-2.74	.	.	.	.	20	23	.	.	.	.	43
2.75-2.99	.	.	.	.	1	16	.	.	.	.	17
3.00-3.24	.	.	.	.	.	10	.	.	.	.	10
3.25-3.49	.	.	.	.	.	2	1	.	.	.	3
3.50+	.	.	.	.	1	2	2	1	.	.	6
TOTAL	0	4891	3088	2179	523	82	5	0	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 3.9 NO. OF CASES= 10089.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1097	251	125	5	.	.	.	.	.	1478
0.25-0.49	.	1652	557	551	66	.	.	.	.	.	2826
0.50-0.74	.	1857	867	930	435	8	.	.	.	.	4097
0.75-0.99	.	330	867	657	298	34	.	.	.	.	2186
1.00-1.24	.	2	1138	1088	443	67	3	.	.	.	2741
1.25-1.49	.	1	98	1011	234	28	5	.	.	.	1377
1.50-1.74	.	.	7	1351	572	66	5	.	.	.	2001
1.75-1.99	.	.	.	209	787	54	2	1	.	.	1053
2.00-2.24	.	.	.	20	1071	72	5	.	.	.	1168
2.25-2.49	.	.	.	.	482	142	5	.	.	.	629
2.50-2.74	.	.	.	.	194	460	4	.	.	.	658
2.75-2.99	.	.	.	.	14	223	4	1	.	.	242
3.00-3.24	.	.	.	.	2	257	12	.	.	.	271
3.25-3.49	.	.	.	.	.	80	23	.	.	.	103
3.50+	.	.	.	.	.	21	147	13	1	.	182
TOTAL	0	4939	3785	5942	4603	1512	215	15	1	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.9 MEAN TP(SEC)= 4.7 NO. OF CASES= 19673.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	700	108	175	24	.	.	.	.	.	1007
0.25-0.49	.	1316	109	387	177	2	.	.	.	.	1991
0.50-0.74	.	1421	528	331	565	67	.	.	.	.	2912
0.75-0.99	.	216	722	340	249	115	4	.	.	.	1646
1.00-1.24	.	6	820	938	240	156	16	.	.	.	2176
1.25-1.49	.	.	40	1017	144	86	22	.	.	.	1309
1.50-1.74	.	.	1	1669	438	80	23	.	.	.	2211
1.75-1.99	.	.	.	283	910	70	9	1	.	.	1273
2.00-2.24	.	.	.	31	1480	102	23	2	.	.	1638
2.25-2.49	.	.	.	2	706	137	13	1	.	.	859
2.50-2.74	.	.	.	.	462	489	18	2	.	.	971
2.75-2.99	.	.	.	.	78	352	17	1	.	.	448
3.00-3.24	.	.	.	.	10	375	47	4	1	.	437
3.25-3.49	.	.	.	.	.	143	89	6	.	.	238
3.50+	.	.	.	.	.	72	392	48	20	.	532
TOTAL	0	3659	2328	5173	5483	2246	673	65	21	0	

MEAN HS(M) = 1.4 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 5.1 NO. OF CASES= 18397.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	485	3	2	.	.	.	.	.	.	490
0.25-0.49	.	994	12	2	14	.	.	.	.	.	1022
0.50-0.74	.	1279	373	36	51	10	.	.	.	.	1749
0.75-0.99	.	289	672	177	29	33	.	.	.	.	1200
1.00-1.24	.	12	765	645	35	54	5	.	.	.	1516
1.25-1.49	.	.	77	739	25	39	11	.	.	.	891
1.50-1.74	.	.	16	1140	204	13	25	.	.	.	1398
1.75-1.99	.	.	1	167	603	3	6	1	.	.	781
2.00-2.24	.	.	.	21	750	6	2	1	.	.	780
2.25-2.49	.	.	.	1	352	8	7	.	.	.	368
2.50-2.74	.	.	.	.	204	66	4	.	.	.	274
2.75-2.99	.	.	.	.	22	87	2	.	.	.	111
3.00-3.24	.	.	.	.	1	72	.	.	.	.	73
3.25-3.49	.	.	.	.	.	31	.	.	.	.	31
3.50+	.	.	.	.	.	29	20	.	.	.	49
TOTAL	0	3059	1919	2930	2290	451	82	2	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 4.6 NO. OF CASES= 10060.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	267	1	.	.	.	.	.	.	.	268
0.25-0.49	.	564	1	.	.	.	.	.	.	.	565
0.50-0.74	.	1194	53	.	.	.	.	.	.	.	1247
0.75-0.99	.	370	326	9	.	.	.	.	.	.	705
1.00-1.24	.	8	577	70	.	.	.	.	.	.	655
1.25-1.49	.	.	126	113	3	.	.	.	.	.	242
1.50-1.74	.	.	12	168	14	.	.	.	.	.	194
1.75-1.99	.	.	.	38	20	.	.	.	.	.	58
2.00-2.24	.	.	.	6	27	1	.	.	.	.	34
2.25-2.49	.	.	.	3	18	.	.	.	.	.	21
2.50-2.74	.	.	.	.	10	3	.	.	.	.	13
2.75-2.99	.	.	.	1	1	3	.	.	.	.	5
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2403	1096	408	93	10	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 3761.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	190	2	.	.	.	.	.	.	.	192
0.25-0.49	.	313	.	.	.	.	.	.	.	.	313
0.50-0.74	.	707	2	.	.	.	.	.	.	.	709
0.75-0.99	.	240	181	1	.	.	.	.	.	.	422
1.00-1.24	.	5	337	1	.	.	.	.	.	.	343
1.25-1.49	.	.	71	21	.	.	.	.	.	.	92
1.50-1.74	.	.	1	23	1	.	.	.	.	.	25
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1455	594	54	1	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 1974.

STATION E26 42.73N 79.37W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

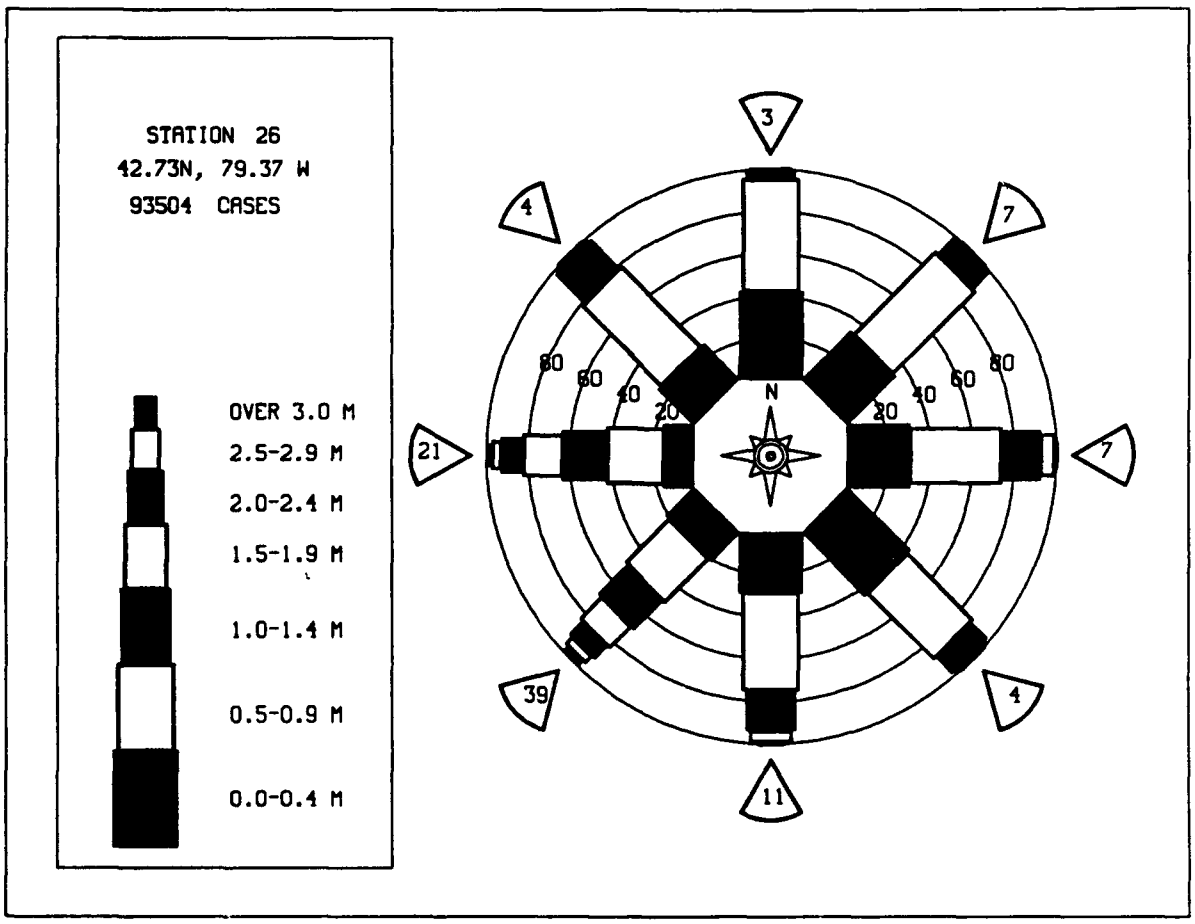
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	174	1	.	.	.	.	.	.	.	175
0.25-0.49	.	398	.	.	.	.	.	.	.	.	398
0.50-0.74	.	742	1	.	.	.	.	.	.	.	743
0.75-0.99	.	300	112	.	.	.	.	.	.	.	412
1.00-1.24	.	1	192	.	.	.	.	.	.	.	193
1.25-1.49	.	.	40	5	.	.	.	.	.	.	45
1.50-1.74	.	.	.	17	.	.	.	.	.	.	17
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1615	346	25	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 1861.

STATION E26 42.73N 79.37W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	664	44	31	2	.	.	.	.	.	741
0.25-0.49	.	1349	81	101	26	.	.	.	.	.	1557
0.50-0.74	.	1880	310	146	106	8	.	.	.	.	2450
0.75-0.99	.	402	608	139	59	18	.	.	.	.	1226
1.00-1.24	.	4	795	332	76	27	2	.	.	.	1236
1.25-1.49	.	.	96	428	43	15	3	.	.	.	585
1.50-1.74	.	.	5	596	130	16	5	.	.	.	752
1.75-1.99	.	.	.	103	246	13	1	.	.	.	363
2.00-2.24	.	.	.	17	354	19	3	.	.	.	393
2.25-2.49	.	.	.	.	164	29	2	.	.	.	195
2.50-2.74	.	.	.	.	90	104	2	.	.	.	196
2.75-2.99	.	.	.	.	11	68	2	.	.	.	81
3.00-3.24	.	.	.	.	1	71	5	.	.	.	77
3.25-3.49	.	.	.	.	.	25	11	.	.	.	36
3.50+	.	.	.	.	.	12	56	6	2	.	76
TOTAL	0	4299	1939	1893	1308	425	92	6	2	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E26 (42.73N 79.37W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	1.0	0.9	1.0	0.9	0.8	0.9	0.8	0.8	0.8	1.1	1.0	0.9
1957	1.1	0.8	1.0	1.0	0.9	0.8	0.8	0.6	0.8	0.7	1.3	1.2	0.9
1958	1.0	1.1	0.6	0.7	0.8	0.7	0.6	0.7	0.8	0.9	1.1	0.9	0.8
1959	1.1	0.9	0.9	0.9	0.6	0.7	0.6	0.8	0.8	0.9	1.0	0.8	0.8
1960	1.3	1.4	1.1	1.4	0.9	0.9	0.9	0.8	0.7	0.9	1.4	1.4	1.1
1961	1.1	0.9	1.0	1.1	1.2	1.2	0.8	0.8	0.9	1.1	1.0	1.4	1.0
1962	1.8	1.0	0.9	1.2	1.0	0.7	0.8	0.7	0.8	0.9	0.7	1.1	1.0
1963	1.3	1.4	1.3	1.1	1.1	0.7	0.8	0.8	0.8	0.8	1.3	1.0	1.0
1964	1.5	1.0	1.1	1.1	1.2	0.9	0.8	0.9	0.9	0.9	1.1	1.1	1.0
1965	1.5	1.3	1.0	0.9	1.0	0.9	0.7	0.9	0.9	1.1	1.2	1.0	1.0
1966	1.2	0.9	1.2	1.1	1.0	0.9	0.9	0.9	0.9	1.3	1.2	1.3	1.1
1967	1.5	1.5	0.9	1.2	1.0	0.9	0.8	0.8	0.8	1.1	1.3	1.2	1.1
1968	0.9	1.2	1.1	1.2	0.9	0.9	0.9	0.9	0.7	1.0	1.1	1.3	1.0
1969	1.5	0.8	1.3	1.0	1.0	0.9	0.7	0.8	0.9	1.1	1.0	0.9	1.0
1970	1.0	1.1	0.9	1.1	0.9	0.8	0.9	0.7	0.8	0.8	1.0	1.1	0.9
1971	1.5	1.5	1.2	1.1	0.9	0.7	0.9	0.9	0.8	0.8	1.0	1.2	1.0
1972	1.7	1.1	1.0	1.0	0.7	0.8	0.8	0.9	1.0	1.0	0.9	1.1	1.0
1973	1.7	1.0	1.0	1.3	1.1	1.1	0.9	0.8	0.8	0.8	1.3	1.1	1.1
1974	1.3	1.0	1.2	1.5	1.1	1.0	1.0	0.8	1.0	1.0	1.1	1.1	1.1
1975	1.5	1.2	1.1	1.0	0.7	0.9	0.7	0.7	0.8	1.1	1.3	1.0	1.0
1976	1.3	1.5	1.4	1.2	1.1	0.9	0.9	0.7	0.9	1.0	1.4	1.3	1.1
1977	1.8	1.5	1.3	1.1	0.8	0.9	1.0	0.9	0.9	1.0	1.2	1.4	1.2
1978	1.5	1.0	1.0	1.1	0.9	0.9	0.9	0.8	0.9	1.0	1.1	1.4	1.1
1979	1.2	1.0	1.2	1.2	0.8	0.9	0.7	0.9	0.8	1.1	1.2	1.3	1.0
1980	1.3	1.1	1.0	1.1	0.9	0.8	0.8	0.8	0.9	1.1	1.0	1.0	1.0
1981	0.9	1.0	0.9	1.0	0.4	0.8	0.5	0.6	0.8	0.8	0.8	0.9	0.8
1982	1.6	1.0	1.0	1.3	0.5	0.6	0.7	0.7	0.6	0.8	1.0	1.0	0.9
1983	1.0	0.6	0.7	0.9	0.9	0.5	0.8	0.6	0.8	0.9	0.9	1.2	0.8
1984	1.0	0.9	1.0	0.8	1.1	0.8	0.7	0.6	0.6	0.6	1.1	1.2	0.9
1985	1.4	1.2	1.2	1.2	0.9	0.8	0.8	0.7	0.8	0.9	0.9	1.3	1.0
1986	1.4	0.9	1.4	1.1	1.1	0.9	0.8	0.9	0.9	1.0	1.0	1.2	1.1
1987	1.1	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.8	1.0	1.2	1.3	1.0
MEAN	1.3	1.1	1.1	1.1	0.9	0.8	0.8	0.8	0.8	0.9	1.1	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E26 (42.73N 79.37W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.1	3.5	4.6	3.6	3.5	3.2	2.6	2.5	2.4	3.8	3.8	2.9
1957	2.7	2.7	3.9	4.6	3.0	4.7	3.2	2.3	2.5	2.6	4.6	3.1
1958	2.7	3.1	2.2	3.4	2.3	2.5	2.4	2.3	2.7	2.9	3.4	2.6
1959	4.2	2.7	3.7	3.7	1.8	1.8	2.4	2.2	2.4	3.6	2.9	3.0
1960	3.1	4.8	3.1	4.8	2.6	4.0	3.6	3.0	2.4	2.9	3.6	3.9
1961	4.0	4.3	3.3	4.6	3.7	3.6	2.7	2.9	3.0	3.3	3.3	4.4
1962	4.0	3.2	2.9	3.9	4.1	3.0	2.9	2.5	2.5	3.2	3.1	3.6
1963	4.7	3.4	4.5	4.4	4.2	2.1	2.8	2.9	3.1	3.8	3.9	3.9
1964	4.4	3.7	5.8	3.7	5.1	3.6	2.2	2.7	3.7	2.7	3.9	3.1
1965	4.0	3.8	4.8	3.9	3.1	3.6	2.6	2.7	3.5	4.3	4.5	3.7
1966	4.7	3.1	4.0	2.8	4.4	2.6	3.3	2.7	3.0	3.8	4.4	4.3
1967	3.9	5.9	2.9	4.1	3.2	2.8	2.6	2.4	3.2	3.9	3.6	3.9
1968	3.7	3.8	3.8	4.7	3.1	3.2	3.0	3.8	2.7	3.0	3.3	4.5
1969	3.7	2.8	4.4	3.5	3.4	3.8	2.5	3.1	2.8	3.6	3.0	2.5
1970	3.1	3.3	4.5	3.9	3.2	2.9	2.7	2.9	3.1	2.5	3.7	2.9
1971	4.5	5.4	4.4	3.4	3.6	2.6	3.9	2.6	2.7	3.1	3.6	4.6
1972	6.1	3.5	4.0	3.0	3.3	3.2	2.8	3.4	3.7	3.7	3.6	3.6
1973	4.4	3.3	4.5	3.8	3.7	3.1	4.1	2.6	2.9	3.0	3.5	3.8
1974	5.0	3.4	3.5	4.7	3.6	4.1	3.4	3.0	3.5	3.5	4.0	3.2
1975	4.5	4.5	3.0	5.8	2.2	2.6	2.6	2.6	2.5	3.5	4.5	3.8
1976	3.1	4.9	4.4	4.0	4.5	3.0	2.7	2.8	2.7	4.3	3.4	4.0
1977	4.7	4.0	3.8	4.1	3.2	3.5	4.3	2.7	2.4	2.8	3.2	4.5
1978	5.3	2.9	3.9	3.4	3.3	3.2	3.2	3.0	3.0	3.0	3.5	4.0
1979	3.7	3.6	4.0	4.4	2.4	2.5	1.9	3.0	3.3	2.9	4.4	3.8
1980	4.3	3.3	3.0	3.2	3.2	2.7	2.5	2.3	2.7	3.8	2.6	3.6
1981	3.4	2.9	4.2	3.0	2.2	3.3	1.7	2.3	3.5	4.2	2.8	3.3
1982	5.4	3.9	5.3	4.7	1.9	2.3	2.7	2.4	2.6	3.7	3.8	5.4
1983	3.2	2.8	2.4	3.0	2.9	2.4	2.6	3.3	2.8	4.3	3.7	3.6
1984	3.6	3.3	4.2	5.1	5.5	2.9	2.3	2.1	3.1	2.9	3.8	3.8
1985	3.9	3.2	3.7	3.4	3.3	2.5	2.4	2.8	2.7	3.3	2.8	4.8
1986	3.8	3.0	4.8	3.1	3.5	3.4	3.0	2.6	3.3	3.8	3.7	3.7
1987	4.0	3.1	3.8	3.8	3.5	3.1	2.5	2.4	2.7	2.7	3.7	4.9

32 YR. STATISTICS FOR WIS STATION E26

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	258.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012512

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	311	.	1	.	.	.	.	.	.	312
0.25-0.49	.	570	1	.	.	.	.	.	.	.	571
0.50-0.74	.	693	12	.	.	.	.	.	.	.	705
0.75-0.99	.	179	17	.	.	.	.	.	.	.	196
1.00-1.24	.	12	36	1	.	.	.	.	.	.	49
1.25-1.49	.	.	1	1	.	.	.	.	.	.	2
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1765	67	3	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.3 MEAN TP(SEC)= 3.0 NO. OF CASES= 1719.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	316	1	.	.	.	.	.	.	.	317
0.25-0.49	.	525	2	.	.	.	.	.	.	.	527
0.50-0.74	.	618	24	2	.	.	.	.	.	.	644
0.75-0.99	.	102	69	2	.	.	.	.	.	.	173
1.00-1.24	.	.	41	3	.	.	.	.	.	.	44
1.25-1.49	.	.	2	4	.	.	.	.	.	.	6
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1561	139	12	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 1605.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	502	2	.	.	.	.	.	.	.	504
0.25-0.49	.	930	.	.	.	.	.	.	.	.	930
0.50-0.74	.	1519	67	3	.	.	.	.	.	.	1589
0.75-0.99	.	391	301	5	.	.	.	.	.	.	697
1.00-1.24	.	.	355	33	.	.	.	.	.	.	388
1.25-1.49	.	.	55	22	1	.	.	.	.	.	78
1.50-1.74	.	.	1	29	1	.	.	.	.	.	31
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	1	2	.	.	.	.	.	3
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3342	781	94	5	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.2 NO. OF CASES= 3954.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	531	2	1	.	.	.	.	.	.	534
0.25-0.49	.	944	1	.	.	.	.	.	.	.	945
0.50-0.74	.	1421	235	3	.	.	.	.	.	.	1659
0.75-0.99	.	259	404	43	.	.	.	.	.	.	706
1.00-1.24	.	.	424	171	3	.	.	.	.	.	598
1.25-1.49	.	.	29	179	1	.	.	.	.	.	209
1.50-1.74	.	.	3	194	16	.	.	.	.	.	213
1.75-1.99	.	.	.	12	38	.	.	.	.	.	50
2.00-2.24	.	.	.	1	40	.	.	.	.	.	41
2.25-2.49	.	.	.	.	8	.	.	.	.	.	8
2.50-2.74	.	.	.	.	6	2	.	.	.	.	8
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3155	1098	604	112	2	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.5 NO. OF CASES= 4658.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	627	1	.	.	.	.	.	.	.	628
0.25-0.49	.	885	1	.	.	.	.	.	.	.	886
0.50-0.74	.	707	371	3	.	.	.	.	.	.	1081
0.75-0.99	.	45	304	103	.	.	.	.	.	.	452
1.00-1.24	.	.	164	279	3	.	.	.	.	.	446
1.25-1.49	.	.	2	171	7	.	.	.	.	.	180
1.50-1.74	.	.	.	165	40	.	.	.	.	.	205
1.75-1.99	.	.	.	1	66	.	.	.	.	.	67
2.00-2.24	.	.	.	.	27	.	.	.	.	.	27
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	1	3	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2264	843	722	150	4	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.7 NO. OF CASES= 3734.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	363	1	.	.	.	.	.	.	.	364
0.25-0.49	.	491	.	.	.	.	.	.	.	.	491
0.50-0.74	.	412	220	.	.	.	.	.	.	.	632
0.75-0.99	.	17	163	27	.	.	.	.	.	.	207
1.00-1.24	.	.	65	62	.	.	.	.	.	.	127
1.25-1.49	.	.	1	33	1	.	.	.	.	.	35
1.50-1.74	.	.	.	25	5	.	.	.	.	.	30
1.75-1.99	.	.	.	.	7	.	.	.	.	.	7
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1283	450	147	17	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 1780.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	394	1	.	.	.	.	.	.	.	395
0.25-0.49	.	580	2	.	.	.	.	.	.	.	582
0.50-0.74	.	526	237	.	.	.	.	.	.	.	763
0.75-0.99	.	28	193	11	.	.	.	.	.	.	232
1.00-1.24	.	.	171	49	.	.	.	.	.	.	220
1.25-1.49	.	.	2	71	.	.	.	.	.	.	73
1.50-1.74	.	.	.	23	.	.	.	.	.	.	23
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1528	606	159	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 2151.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	520	1	.	.	.	.	.	.	.	521
0.25-0.49	.	755	2	.	.	.	.	.	.	.	757
0.50-0.74	.	684	197	1	.	.	.	.	.	.	882
0.75-0.99	.	51	285	4	.	.	.	.	.	.	340
1.00-1.24	.	1	313	47	.	.	.	.	.	.	361
1.25-1.49	.	.	2	93	1	.	.	.	.	.	96
1.50-1.74	.	.	.	83	.	.	.	.	.	.	83
1.75-1.99	.	.	.	10	4	.	.	.	.	.	14
2.00-2.24	.	.	.	1	8	.	.	.	.	.	9
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2011	800	239	15	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 2872.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	735	1	1	.	.	.	.	.	.	737
0.25-0.49	.	1065	8	.	.	.	.	.	.	.	1073
0.50-0.74	.	1093	398	10	1	.	.	.	.	.	1502
0.75-0.99	.	91	582	13	.	.	.	.	.	.	686
1.00-1.24	.	.	541	225	.	.	.	.	.	.	766
1.25-1.49	.	.	12	377	.	.	.	.	.	.	389
1.50-1.74	.	.	.	341	.	.	.	.	.	.	341
1.75-1.99	.	.	.	97	42	.	.	.	.	.	139
2.00-2.24	.	.	.	.	94	.	.	.	.	.	94
2.25-2.49	.	.	.	.	19	.	.	.	.	.	19
2.50-2.74	.	.	.	.	11	.	.	.	.	.	11
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2984	1542	1064	168	3	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 5397.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1187	44	6	.	.	.	.	.	.	1237
0.25-0.49	.	1511	282	58	.	.	.	.	.	.	1851
0.50-0.74	.	1485	915	312	10	.	.	.	.	.	2722
0.75-0.99	.	155	970	318	21	.	.	.	.	.	1464
1.00-1.24	.	3	1114	726	66	1	.	.	.	.	1910
1.25-1.49	.	.	33	996	53	2	.	.	.	.	1084
1.50-1.74	.	.	.	1037	148	8	.	.	.	.	1193
1.75-1.99	.	.	.	276	248	18	.	.	.	.	542
2.00-2.24	.	.	.	2	428	13	.	.	.	.	443
2.25-2.49	.	.	.	.	125	23	.	.	.	.	148
2.50-2.74	.	.	.	.	47	54	.	.	.	.	101
2.75-2.99	.	.	.	.	4	23	.	.	.	.	27
3.00-3.24	.	.	.	.	.	11	5	.	.	.	16
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	1	3	1	1	.	6
TOTAL	0	4341	3358	3731	1150	154	12	1	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 6.3 MEAN TP(SEC)= 4.2 NO. OF CASES= 11936.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1890	404	226	4	.	.	.	.	.	2524
0.25-0.49	.	1765	706	824	136	.	.	.	.	.	3431
0.50-0.74	.	1592	1079	1131	658	35	.	.	.	.	4495
0.75-0.99	.	220	778	721	405	58	1	.	.	.	2183
1.00-1.24	.	4	705	1093	599	86	8	.	.	.	2495
1.25-1.49	.	.	25	811	387	52	4	.	.	.	1279
1.50-1.74	.	.	1	952	867	104	9	.	.	.	1933
1.75-1.99	.	.	.	77	665	147	4	.	.	.	893
2.00-2.24	.	.	.	4	857	161	14	.	.	.	1036
2.25-2.49	.	.	.	.	302	310	10	1	.	.	623
2.50-2.74	.	.	.	.	100	495	21	.	.	.	616
2.75-2.99	.	.	.	.	4	258	11	2	.	.	275
3.00-3.24	.	.	.	.	1	216	95	2	.	.	314
3.25-3.49	.	.	.	.	.	28	100	.	.	.	128
3.50+	.	.	.	.	.	6	157	29	3	.	195
TOTAL	0	5471	3698	5839	4985	1956	434	34	3	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.5 MEAN TP(SEC)= 4.8 NO. OF CASES= 20992.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1009	109	204	51	.	.	.	.	.	1373
0.25-0.49	.	1294	69	266	219	5	.	.	.	.	1853
0.50-0.74	.	1298	574	179	452	75	1	.	.	.	2579
0.75-0.99	.	188	737	188	177	106	8	.	.	.	1404
1.00-1.24	.	4	1023	750	155	148	19	.	.	.	2099
1.25-1.49	.	.	67	1023	104	81	24	1	.	.	1300
1.50-1.74	.	.	1	1485	339	80	19	1	.	.	1925
1.75-1.99	.	.	.	455	460	100	20	2	.	.	1037
2.00-2.24	.	.	.	96	817	112	38	1	.	.	1064
2.25-2.49	.	.	.	.	379	161	18	2	.	.	560
2.50-2.74	.	.	.	.	251	219	55	5	1	.	531
2.75-2.99	.	.	.	.	40	145	35	5	1	.	226
3.00-3.24	.	.	.	.	35	142	98	3	1	.	279
3.25-3.49	.	.	.	.	3	27	86	2	2	.	120
3.50+	.	.	.	.	.	19	192	38	8	.	257
TOTAL	0	3793	2580	4646	3482	1420	613	60	13	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.7 MEAN TP(SEC)= 4.9 NO. OF CASES= 15555.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	719	4	2	.	.	.	.	.	.	725
0.25-0.49	.	983	5	2	5	.	.	.	.	.	995
0.50-0.74	.	1333	373	12	26	11	.	.	.	.	1755
0.75-0.99	.	343	688	95	18	26	3	.	.	.	1173
1.00-1.24	.	18	893	582	10	51	4	.	.	.	1558
1.25-1.49	.	.	97	834	4	26	11	.	.	.	972
1.50-1.74	.	.	19	1193	34	10	17	.	.	.	1273
1.75-1.99	.	.	.	223	360	2	14	.	.	.	599
2.00-2.24	.	.	.	21	451	1	6	.	.	.	479
2.25-2.49	.	.	.	1	150	2	1	1	.	.	155
2.50-2.74	.	.	.	1	117	7	1	.	.	.	126
2.75-2.99	.	.	.	.	13	11	.	.	.	.	24
3.00-3.24	.	.	.	.	2	35	.	.	.	.	37
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	.	9	2	.	.	.	11
TOTAL	0	3396	2079	2966	1190	194	59	1	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.3 NO. OF CASES= 9265.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	408	2	.	.	.	.	.	.	.	410
0.25-0.49	.	680	4	.	.	.	.	.	.	.	684
0.50-0.74	.	1191	49	1	.	.	.	.	.	.	1241
0.75-0.99	.	413	351	4	.	.	.	.	.	.	768
1.00-1.24	.	3	609	51	1	.	.	.	.	.	664
1.25-1.49	.	.	106	95	1	.	.	.	.	.	202
1.50-1.74	.	.	8	151	4	.	.	.	.	.	163
1.75-1.99	.	.	.	28	12	.	.	.	.	.	40
2.00-2.24	.	.	.	7	14	.	.	.	.	.	21
2.25-2.49	.	.	.	1	4	.	.	.	.	.	5
2.50-2.74	.	.	.	.	7	.	.	.	.	.	7
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2695	1129	338	43	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.5 NO. OF CASES= 3946.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	265	1	.	.	.	.	.	.	.	266
0.25-0.49	.	352	.	.	.	.	.	.	.	.	352
0.50-0.74	.	772	4	.	.	.	.	.	.	.	776
0.75-0.99	.	248	170	2	.	.	.	.	.	.	420
1.00-1.24	.	.	317	.	.	.	.	.	.	.	317
1.25-1.49	.	.	54	13	.	.	.	.	.	.	67
1.50-1.74	.	.	.	26	.	.	.	.	.	.	26
1.75-1.99	.	.	.	9	.	.	.	.	.	.	9
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1637	546	51	0	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 2094.

STATION E27 42.73N 79.57W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

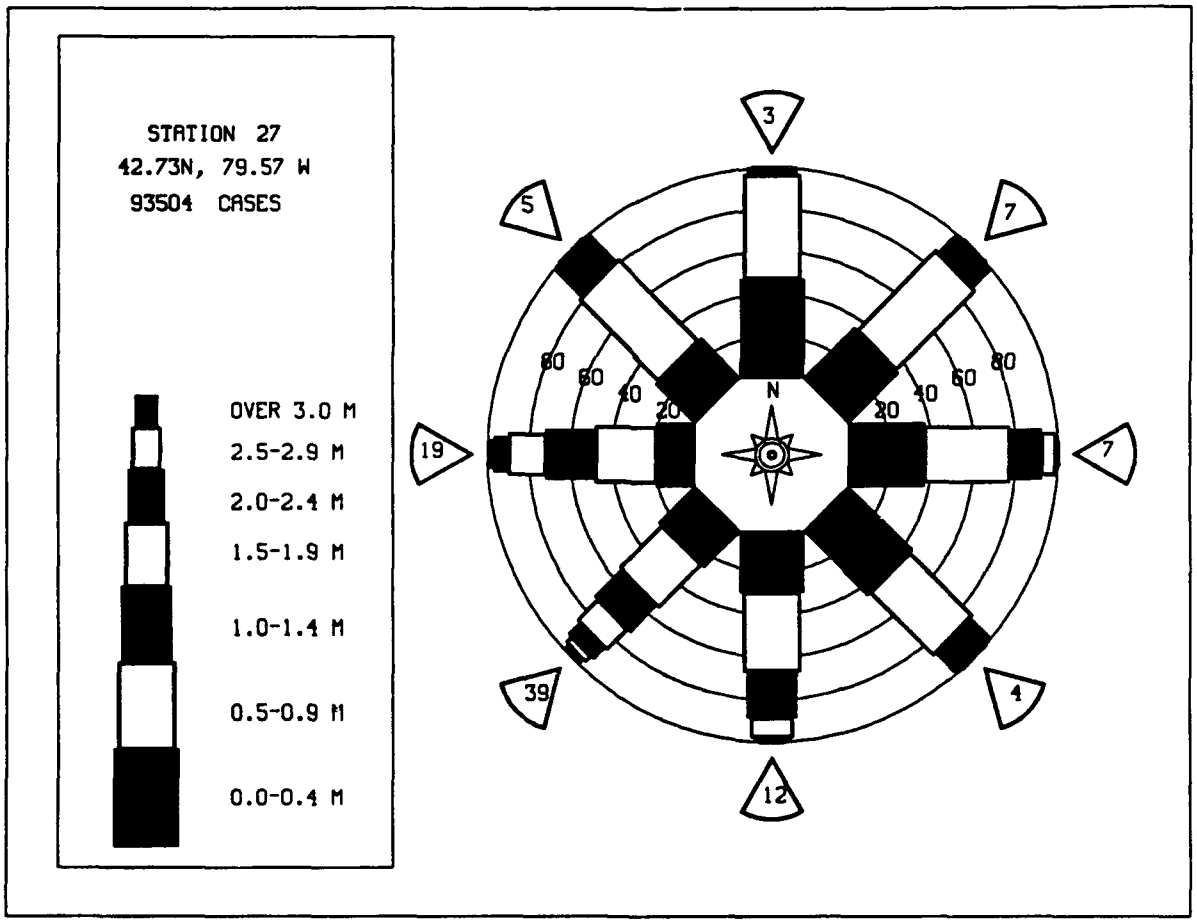
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	233	1	.	.	.	.	.	.	.	234
0.25-0.49	.	381	1	.	.	.	.	.	.	.	382
0.50-0.74	.	718	8	.	.	.	.	.	.	.	726
0.75-0.99	.	312	97	.	.	.	.	.	.	.	409
1.00-1.24	.	7	168	.	.	.	.	.	.	.	175
1.25-1.49	.	.	29	4	.	.	.	.	.	.	33
1.50-1.74	.	.	2	4	.	.	.	.	.	.	6
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1651	306	11	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 1846.

STATION E27 42.73N 79.57W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1001	57	44	5	.	.	.	.	.	1107
0.25-0.49	.	1371	108	115	36	.	.	.	.	.	1630
0.50-0.74	.	1606	476	166	114	12	.	.	.	.	2374
0.75-0.99	.	305	611	154	62	19	1	.	.	.	1152
1.00-1.24	.	5	694	407	83	28	3	.	.	.	1220
1.25-1.49	.	.	52	473	56	16	4	.	.	.	601
1.50-1.74	.	.	3	571	145	20	4	.	.	.	743
1.75-1.99	.	.	.	120	190	26	3	.	.	.	339
2.00-2.24	.	.	.	13	274	28	5	.	.	.	320
2.25-2.49	.	.	.	.	99	49	2	.	.	.	150
2.50-2.74	.	.	.	.	54	78	7	.	.	.	139
2.75-2.99	.	.	.	.	6	44	4	.	.	.	54
3.00-3.24	.	.	.	.	3	40	19	.	.	.	62
3.25-3.49	.	.	.	.	.	6	19	.	.	.	25
3.50+	.	.	.	.	.	3	35	6	1	.	45
TOTAL	0	4288	2001	2063	1127	369	106	6	1	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 6.3 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E27 (42.73N 79.57W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	0.9	1.0	0.9	0.7	0.8	0.8	0.8	0.8	1.1	1.0	0.9
1957	1.1	0.8	1.0	1.0	0.9	0.8	0.7	0.6	0.9	0.8	1.3	1.3	0.9
1958	0.9	1.0	0.6	0.6	0.7	0.7	0.5	0.6	0.8	0.9	1.1	0.8	0.8
1959	1.0	0.8	0.9	0.8	0.5	0.5	0.5	0.7	0.8	0.9	0.9	0.8	0.8
1960	1.1	1.3	1.1	1.3	0.9	0.9	0.8	0.8	0.7	0.9	1.4	1.4	1.1
1961	1.1	0.9	1.0	1.1	1.1	1.1	0.8	0.8	0.9	1.1	1.0	1.3	1.0
1962	1.4	1.0	0.8	1.1	0.9	0.6	0.7	0.7	0.8	0.8	0.7	1.1	0.9
1963	1.2	1.2	1.2	1.1	1.0	0.6	0.7	0.7	0.7	0.8	1.2	1.0	1.0
1964	1.4	1.0	1.1	1.1	1.1	0.8	0.6	0.8	0.8	0.9	1.0	1.0	1.0
1965	1.3	1.2	0.9	0.8	0.9	0.8	0.6	0.8	0.8	1.1	1.1	1.0	1.0
1966	1.1	0.8	1.0	1.0	0.9	0.7	0.7	0.7	0.8	1.2	1.2	1.2	0.9
1967	1.3	1.4	0.8	1.0	0.9	0.7	0.6	0.6	0.7	1.0	1.2	1.1	1.0
1968	0.9	1.1	1.0	1.1	0.8	0.8	0.8	0.7	0.7	0.9	1.0	1.2	0.9
1969	1.4	0.7	1.1	0.9	0.8	0.8	0.6	0.7	0.7	1.0	1.0	0.8	0.9
1970	0.9	1.1	0.9	1.1	0.9	0.8	0.8	0.6	0.8	0.8	1.1	1.1	0.9
1971	1.4	1.4	1.0	1.0	0.8	0.6	0.8	0.8	0.7	0.7	1.0	1.1	1.0
1972	1.5	1.0	0.9	0.9	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	0.9
1973	1.5	1.0	0.9	1.2	1.0	1.0	0.8	0.7	0.7	0.8	1.3	1.1	1.0
1974	1.2	1.0	1.1	1.3	1.0	0.9	0.8	0.7	0.9	0.9	1.0	1.0	1.0
1975	1.3	1.1	1.0	1.0	0.6	0.8	0.6	0.6	0.8	1.0	1.2	1.0	0.9
1976	1.3	1.4	1.4	1.1	1.0	0.8	0.8	0.6	0.8	0.9	1.3	1.3	1.1
1977	1.6	1.4	1.2	1.0	0.7	0.8	0.9	0.8	0.8	0.9	1.2	1.4	1.1
1978	1.4	0.8	0.9	1.0	0.8	0.8	0.8	0.6	0.8	1.0	1.0	1.3	0.9
1979	1.1	1.0	1.1	1.0	0.7	0.8	0.6	0.8	0.7	1.0	1.1	1.2	0.9
1980	1.1	0.9	1.0	0.9	0.7	0.7	0.6	0.7	0.8	1.0	1.0	0.9	0.9
1981	0.9	1.0	0.8	1.0	0.4	0.7	0.4	0.5	0.7	0.7	0.7	0.8	0.7
1982	1.5	0.9	0.9	1.2	0.4	0.5	0.6	0.5	0.5	0.7	0.9	1.0	0.8
1983	0.8	0.5	0.6	0.8	0.8	0.4	0.6	0.5	0.7	0.8	0.8	1.1	0.7
1984	0.8	0.8	0.9	0.7	0.9	0.6	0.5	0.5	0.6	0.5	1.0	1.1	0.7
1985	1.2	1.1	1.1	1.0	0.8	0.7	0.7	0.6	0.7	0.8	0.9	1.2	0.9
1986	1.4	0.8	1.4	1.0	1.0	0.9	0.8	0.9	0.9	1.0	1.0	1.1	1.0
1987	1.1	0.8	0.8	1.0	0.9	0.9	0.9	0.9	0.7	1.0	1.2	1.3	1.0
MEAN	1.2	1.0	1.0	1.0	0.8	0.7	0.7	0.7	0.8	0.9	1.1	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E27 (42.73N 79.57W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.8	4.1	3.3	2.5	3.0	2.6	2.6	2.4	3.4	3.5	2.8
1957	2.5	2.3	3.8	4.6	2.7	3.4	3.0	2.3	2.5	2.7	4.5	3.2
1958	2.6	2.8	2.0	3.4	2.1	2.4	2.1	2.2	2.6	2.5	3.3	2.4
1959	3.7	2.4	3.6	3.3	1.5	1.6	2.4	2.2	2.4	3.1	2.7	2.8
1960	2.9	4.8	3.1	4.6	2.4	4.1	3.4	3.0	2.2	2.8	3.7	4.0
1961	3.5	4.3	3.5	4.3	3.8	3.5	2.6	2.9	3.2	3.2	3.4	4.4
1962	4.0	3.0	3.0	3.9	3.5	2.8	3.0	2.3	2.6	3.2	2.8	3.6
1963	4.2	3.2	4.6	3.6	3.9	1.8	2.2	2.5	3.0	3.7	3.8	3.5
1964	4.5	3.1	5.7	3.5	5.0	3.4	2.1	2.6	3.1	2.4	3.2	3.0
1965	3.9	3.5	4.4	3.9	2.7	3.3	2.2	2.4	3.2	4.0	4.3	3.5
1966	3.8	2.5	3.5	3.0	4.1	2.6	3.2	2.4	2.6	3.3	4.2	4.0
1967	3.6	5.0	2.5	3.9	3.1	2.6	2.6	2.2	3.4	3.7	3.1	3.6
1968	3.2	3.6	3.0	4.4	3.1	3.0	2.7	3.4	2.2	2.8	2.9	4.0
1969	3.3	2.4	3.9	3.2	2.9	3.0	2.5	2.9	2.4	3.1	2.4	2.0
1970	3.0	3.3	4.2	3.7	3.0	2.8	2.8	2.4	3.1	2.3	3.7	3.1
1971	4.2	4.8	4.1	3.4	3.5	2.6	3.5	2.3	2.3	2.7	3.3	4.3
1972	4.5	3.4	3.8	2.5	3.0	2.8	2.7	2.9	3.5	3.6	3.6	3.1
1973	4.1	2.9	4.2	3.4	3.4	3.0	3.6	2.4	3.0	2.7	3.2	3.4
1974	5.0	3.4	3.4	4.0	3.1	3.6	3.0	2.8	3.4	3.2	3.9	3.0
1975	3.9	4.1	2.7	5.1	2.0	2.5	2.7	2.5	2.4	3.1	4.2	4.0
1976	3.0	4.2	4.1	3.7	4.6	3.0	2.6	2.8	2.9	3.7	3.1	3.8
1977	4.4	3.6	3.7	4.3	2.5	2.7	3.8	2.7	2.0	2.8	3.1	4.3
1978	6.3	2.4	3.8	3.4	3.1	2.9	3.0	2.8	2.7	2.8	3.5	3.7
1979	3.4	3.4	3.7	3.8	2.2	2.4	1.6	2.7	3.0	2.7	3.7	3.6
1980	3.7	3.3	2.9	3.2	3.4	2.5	2.2	2.1	2.7	3.5	2.5	3.3
1981	3.3	3.1	4.3	3.0	1.8	2.6	1.4	1.7	3.0	3.6	3.0	3.1
1982	5.1	3.8	4.8	4.2	1.7	1.9	2.4	2.0	1.9	3.2	3.5	4.9
1983	2.7	2.3	1.8	2.4	3.0	1.7	2.5	2.8	2.7	4.0	3.4	3.2
1984	3.1	2.3	3.6	4.8	4.7	2.2	1.8	1.6	2.6	2.9	3.2	3.6
1985	3.3	3.0	3.1	5.2	3.1	2.4	2.1	2.2	2.5	3.1	2.6	4.3
1986	3.8	2.4	4.5	3.0	3.4	3.3	2.6	2.6	3.4	3.6	3.8	3.4
1987	3.3	3.0	3.7	3.8	3.5	3.0	2.3	2.5	2.3	2.5	3.5	4.9

32 YR. STATISTICS FOR WIS STATION E27

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	210.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		78012621

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	474	.	.	.	.	.	.	.	.	474
0.25-0.49	.	688	3	.	.	.	.	.	.	.	691
0.50-0.74	.	721	39	1	.	.	.	.	.	.	761
0.75-0.99	.	175	16	3	.	.	.	.	.	.	194
1.00-1.24	.	5	36	5	.	.	.	.	.	.	46
1.25-1.49	.	.	2	.	.	.	.	.	.	.	2
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2063	96	9	0	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.3 MEAN TP(SEC)= 3.1 NO. OF CASES= 2032.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	407	3	.	.	.	.	.	.	.	410
0.25-0.49	.	674	5	.	.	.	.	.	.	.	679
0.50-0.74	.	725	49	4	.	.	.	.	.	.	778
0.75-0.99	.	129	77	4	.	.	.	.	.	.	210
1.00-1.24	.	3	77	9	.	.	.	.	.	.	89
1.25-1.49	.	.	3	5	1	.	.	.	.	.	9
1.50-1.74	.	.	1	1	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1938	215	23	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 2040.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	586	4	1	.	.	.	.	.	.	591
0.25-0.49	.	980	2	.	.	.	.	.	.	.	982
0.50-0.74	.	1472	126	4	.	.	.	.	.	.	1602
0.75-0.99	.	408	335	20	.	.	.	.	.	.	763
1.00-1.24	.	1	356	73	1	.	.	.	.	.	431
1.25-1.49	.	.	47	49	1	.	.	.	.	.	97
1.50-1.74	.	.	1	39	13	.	.	.	.	.	53
1.75-1.99	.	.	.	3	4	.	.	.	.	.	7
2.00-2.24	.	.	.	1	3	.	.	.	.	.	4
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3447	871	190	24	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.3 NO. OF CASES= 4245.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	507	2	1	.	.	.	.	.	.	510
0.25-0.49	.	989	1	.	.	.	.	.	.	.	990
0.50-0.74	.	1285	302	19	.	.	.	.	.	.	1606
0.75-0.99	.	267	402	82	.	.	.	.	.	.	751
1.00-1.24	.	1	346	272	3	.	.	.	.	.	622
1.25-1.49	.	.	33	170	16	.	.	.	.	.	219
1.50-1.74	.	.	.	150	54	.	.	.	.	.	204
1.75-1.99	.	.	.	9	47	.	.	.	.	.	56
2.00-2.24	.	.	.	1	60	1	.	.	.	.	62
2.25-2.49	.	.	.	.	11	2	.	.	.	.	13
2.50-2.74	.	.	.	.	4	5	.	.	.	.	9
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3049	1086	704	195	8	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.6 NO. OF CASES= 4724.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	485	.	.	.	.	.	.	.	.	485
0.25-0.49	.	777	3	.	.	.	.	.	.	.	780
0.50-0.74	.	598	352	5	.	.	.	.	.	.	955
0.75-0.99	.	34	229	105	.	.	.	.	.	.	368
1.00-1.24	.	.	125	237	12	.	.	.	.	.	374
1.25-1.49	.	.	3	110	22	.	.	.	.	.	135
1.50-1.74	.	.	.	82	64	.	.	.	.	.	146
1.75-1.99	.	.	.	3	37	.	.	.	.	.	40
2.00-2.24	.	.	.	.	33	1	.	.	.	.	34
2.25-2.49	.	.	.	.	7	3	.	.	.	.	10
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1894	712	542	175	9	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 3125.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	322	.	1	.	.	.	.	.	.	323
0.25-0.49	.	444	4	.	.	.	.	.	.	.	448
0.50-0.74	.	332	173	8	.	.	.	.	.	.	513
0.75-0.99	.	14	120	43	.	.	.	.	.	.	177
1.00-1.24	.	.	67	75	1	.	.	.	.	.	143
1.25-1.49	.	.	1	39	4	.	.	.	.	.	44
1.50-1.74	.	.	.	24	9	.	.	.	.	.	33
1.75-1.99	.	.	.	1	9	.	.	.	.	.	10
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1112	365	191	27	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.5 NO. OF CASES= 1595.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	409	1	.	.	.	.	.	.	.	410
0.25-0.49	.	512	3	.	.	.	.	.	.	.	515
0.50-0.74	.	333	177	2	.	.	.	.	.	.	512
0.75-0.99	.	22	130	11	.	.	.	.	.	.	163
1.00-1.24	.	.	127	54	.	.	.	.	.	.	181
1.25-1.49	.	.	1	72	.	.	.	.	.	.	73
1.50-1.74	.	.	.	21	.	.	.	.	.	.	21
1.75-1.99	.	.	.	7	1	.	.	.	.	.	8
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1276	439	167	5	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.4 NO. OF CASES= 1771.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	482	.	.	.	.	.	.	.	.	482
0.25-0.49	.	789	4	.	.	.	.	.	.	.	793
0.50-0.74	.	630	296	4	.	.	.	.	.	.	930
0.75-0.99	.	59	340	22	.	.	.	.	.	.	421
1.00-1.24	.	1	260	166	2	.	.	.	.	.	429
1.25-1.49	.	.	9	173	3	.	.	.	.	.	185
1.50-1.74	.	.	.	112	9	.	.	.	.	.	121
1.75-1.99	.	.	.	23	20	.	.	.	.	.	43
2.00-2.24	.	.	.	.	23	.	.	.	.	.	23
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1961	909	500	63	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 3222.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	870	2	.	.	.	.	.	.	.	872
0.25-0.49	.	1352	19	.	.	.	.	.	.	.	1371
0.50-0.74	.	1147	830	32	.	.	.	.	.	.	2009
0.75-0.99	.	98	728	259	.	.	.	.	.	.	1085
1.00-1.24	.	2	418	724	7	1	.	.	.	.	1152
1.25-1.49	.	.	25	424	23	.	.	.	.	.	472
1.50-1.74	.	.	1	522	113	.	.	.	.	.	636
1.75-1.99	.	.	.	21	267	.	.	.	.	.	288
2.00-2.24	.	.	.	.	245	.	.	.	.	.	245
2.25-2.49	.	.	.	.	81	.	.	.	.	.	81
2.50-2.74	.	.	.	.	38	18	.	.	.	.	56
2.75-2.99	.	.	.	.	.	13	.	.	.	.	13
3.00-3.24	.	.	.	.	.	11	.	.	.	.	11
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	.	1	1	.	.	.	2
TOTAL	0	3469	2023	1982	774	47	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 7770.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1551	28	5	.	.	.	.	.	.	1584
0.25-0.49	.	2180	255	25	3	.	.	.	.	.	2463
0.50-0.74	.	1450	1265	391	10	.	.	.	.	.	3116
0.75-0.99	.	156	796	617	42	.	.	.	.	.	1611
1.00-1.24	.	1	525	1043	168	2	.	.	.	.	1739
1.25-1.49	.	.	20	648	157	2	.	.	.	.	827
1.50-1.74	.	.	1	797	420	18	.	.	.	.	1236
1.75-1.99	.	.	.	53	588	36	.	.	.	.	677
2.00-2.24	.	.	.	.	680	34	.	.	.	.	714
2.25-2.49	.	.	.	.	252	58	4	.	.	.	314
2.50-2.74	.	.	.	.	90	145	12	.	.	.	247
2.75-2.99	.	.	.	.	2	77	6	.	.	.	85
3.00-3.24	.	.	.	.	.	42	7	.	.	.	49
3.25-3.49	.	.	.	.	.	9	18	.	.	.	27
3.50+	.	.	.	.	.	1	22	3	.	1	27
TOTAL	0	5338	2890	3579	2412	424	69	3	0	1	

MEAN HS(M) = 1.0 LARGEST HS(M)= 6.4 MEAN TP(SEC)= 4.3 NO. OF CASES= 13779.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1811	442	388	22	.	.	.	.	.	2663
0.25-0.49	.	1761	582	835	297	2	.	.	.	.	3477
0.50-0.74	.	1527	889	1037	729	93	2	.	.	.	4277
0.75-0.99	.	228	718	616	419	95	5	.	.	.	2082
1.00-1.24	.	7	729	871	642	117	12	.	.	.	2378
1.25-1.49	.	.	65	543	391	65	12	1	.	.	1077
1.50-1.74	.	.	4	671	782	99	29	.	.	.	1585
1.75-1.99	.	.	.	83	380	205	8	1	.	.	677
2.00-2.24	.	.	.	10	540	202	10	3	.	.	765
2.25-2.49	.	.	.	.	188	319	38	2	.	.	547
2.50-2.74	.	.	.	.	72	448	89	2	.	.	611
2.75-2.99	.	.	.	.	4	162	80	3	.	.	249
3.00-3.24	.	.	.	.	.	147	175	6	.	.	328
3.25-3.49	.	.	.	.	.	11	114	5	1	.	131
3.50+	.	.	.	.	.	4	296	66	19	1	386
TOTAL	0	5334	3430	5054	4466	1969	870	89	20	1	

MEAN HS(M) = 1.0 LARGEST HS(M)= 6.3 MEAN TP(SEC)= 4.9 NO. OF CASES= 19882.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	913	60	183	57	.	.	.	.	.	1213
0.25-0.49	.	1248	24	113	188	8	.	.	.	.	1581
0.50-0.74	.	1412	383	55	272	96	2	.	.	.	2220
0.75-0.99	.	196	791	44	77	90	6	.	.	.	1204
1.00-1.24	.	4	1488	232	75	80	22	.	.	.	1901
1.25-1.49	.	.	208	792	60	29	5	.	.	.	1094
1.50-1.74	.	.	3	1102	150	52	32	1	.	.	1340
1.75-1.99	.	.	.	375	47	69	11	1	.	.	503
2.00-2.24	.	.	.	171	228	81	32	2	.	.	514
2.25-2.49	.	.	.	2	106	51	24	5	.	.	188
2.50-2.74	.	.	.	1	89	37	41	3	1	.	172
2.75-2.99	.	.	.	.	14	11	17	3	.	.	45
3.00-3.24	.	.	.	.	10	21	26	5	1	.	63
3.25-3.49	.	.	.	.	.	5	14	3	.	.	22
3.50+	.	.	.	.	.	4	40	16	6	.	66
TOTAL	0	3773	2957	3070	1373	634	272	39	8	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 6.2 MEAN TP(SEC)= 4.4 NO. OF CASES= 11371.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	739	4	4	4	.	.	.	.	.	751
0.25-0.49	.	1059	1	.	8	.	.	.	.	.	1068
0.50-0.74	.	1418	297	2	5	6	1	.	.	.	1729
0.75-0.99	.	341	767	16	2	10	1	.	.	.	1137
1.00-1.24	.	11	1325	253	4	21	6	1	.	.	1621
1.25-1.49	.	.	94	865	2	7	5	.	.	.	973
1.50-1.74	.	.	10	1019	1	.	10	1	.	.	1041
1.75-1.99	.	.	.	305	29	.	2	.	.	.	336
2.00-2.24	.	.	.	58	192	.	.	2	.	.	252
2.25-2.49	.	.	.	1	79	.	.	.	.	.	80
2.50-2.74	.	.	.	.	43	.	.	.	.	.	43
2.75-2.99	.	.	.	.	10	1	.	.	.	.	11
3.00-3.24	.	.	.	.	3	4	.	.	.	.	7
3.25-3.49	.	.	.	.	.	4	.	.	.	.	4
3.50+	.	.	.	.	.	3	.	.	.	.	3
TOTAL	0	3568	2498	2523	382	56	25	4	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 8484.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	545	4	1	.	.	.	.	.	.	550
0.25-0.49	.	818	4	.	.	.	.	.	.	.	822
0.50-0.74	.	1464	43	.	.	.	.	.	.	.	1507
0.75-0.99	.	522	401	3	.	.	.	.	.	.	926
1.00-1.24	.	.	759	41	.	.	.	.	.	.	800
1.25-1.49	.	.	126	135	.	.	.	.	.	.	261
1.50-1.74	.	.	12	168	1	.	.	.	.	.	181
1.75-1.99	.	.	.	45	10	.	.	.	.	.	55
2.00-2.24	.	.	.	6	11	.	.	.	.	.	17
2.25-2.49	.	.	.	1	4	.	.	.	.	.	5
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3349	1349	400	31	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 4806.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	330	1	2	.	.	.	.	.	.	333
0.25-0.49	.	474	3	.	.	.	.	.	.	.	477
0.50-0.74	.	874	7	.	.	.	.	.	.	.	881
0.75-0.99	.	303	227	3	.	.	.	.	.	.	533
1.00-1.24	.	.	351	1	.	.	.	.	.	.	352
1.25-1.49	.	.	57	18	1	.	.	.	.	.	76
1.50-1.74	.	.	.	45	.	.	.	.	.	.	45
1.75-1.99	.	.	.	11	.	.	.	.	.	.	11
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1981	646	81	1	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 2541.

STATION E28 42.73N 79.77W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

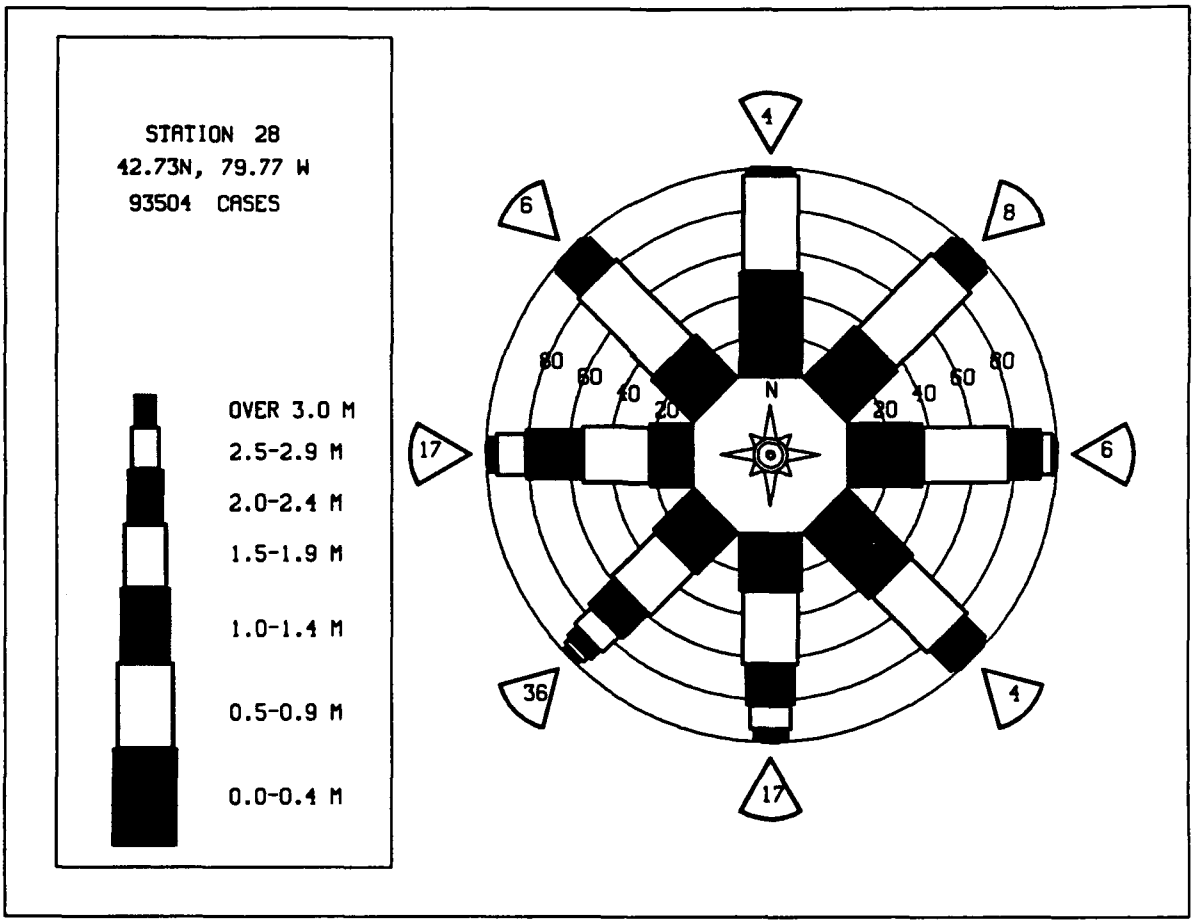
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	320	2	.	.	.	.	.	.	.	322
0.25-0.49	.	414	3	.	.	.	.	.	.	.	417
0.50-0.74	.	844	16	2	.	.	.	.	.	.	862
0.75-0.99	.	290	109	2	.	.	.	.	.	.	401
1.00-1.24	.	6	212	1	.	.	.	.	.	.	219
1.25-1.49	.	.	18	3	.	.	.	.	.	.	21
1.50-1.74	.	.	.	11	.	.	.	.	.	.	11
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1874	360	23	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 2117.

STATION E28 42.73N 79.77W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1075	55	58	8	.	.	.	.	.	1196
0.25-0.49	.	1516	92	97	49	1	.	.	.	.	1755
0.50-0.74	.	1624	525	156	101	19	.	.	.	.	2425
0.75-0.99	.	325	619	185	54	19	1	.	.	.	1203
1.00-1.24	.	4	720	406	91	22	4	.	.	.	1247
1.25-1.49	.	.	71	405	68	10	2	.	.	.	556
1.50-1.74	.	.	3	477	162	17	7	.	.	.	666
1.75-1.99	.	.	.	94	144	31	2	.	.	.	271
2.00-2.24	.	.	.	25	202	31	4	.	.	.	262
2.25-2.49	.	.	.	.	74	43	6	.	.	.	123
2.50-2.74	.	.	.	.	34	65	14	.	.	.	113
2.75-2.99	.	.	.	.	3	26	10	.	.	.	39
3.00-3.24	.	.	.	.	1	23	20	1	.	.	45
3.25-3.49	.	.	.	.	.	3	14	.	.	.	17
3.50+	.	.	.	.	.	1	36	8	2	.	47
TOTAL	0	4544	2085	1903	991	311	120	9	2	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 6.4 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E28 (42.73N 79.77W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.8	0.9	1.1	0.9	0.8
1957	1.0	0.8	1.0	1.1	0.9	0.9	0.7	0.6	0.9	0.8	1.4	1.3	1.0
1958	0.9	0.9	0.5	0.6	0.7	0.6	0.5	0.5	0.7	0.9	1.0	0.8	0.7
1959	0.9	0.7	0.6	0.7	0.4	0.4	0.4	0.6	0.8	0.8	0.8	0.7	0.7
1960	0.9	1.3	1.1	1.3	0.9	0.9	0.8	0.7	0.7	0.9	1.5	1.5	1.0
1961	1.1	0.9	1.0	1.0	1.1	1.1	0.8	0.8	0.9	1.2	1.0	1.3	1.0
1962	1.3	0.9	0.8	1.1	0.9	0.6	0.7	0.7	0.8	0.8	0.8	1.0	0.9
1963	1.2	1.2	1.2	1.1	0.9	0.5	0.7	0.6	0.7	0.7	1.2	1.0	0.9
1964	1.4	0.9	1.1	1.1	1.0	0.7	0.6	0.8	0.8	0.8	1.0	1.0	0.9
1965	1.2	1.2	0.9	0.8	0.8	0.7	0.6	0.7	0.8	1.0	1.1	1.0	0.9
1966	1.0	0.7	0.9	0.9	0.8	0.6	0.6	0.6	0.7	1.1	1.1	1.0	0.9
1967	1.2	1.2	0.8	0.9	0.8	0.6	0.5	0.6	0.6	0.9	1.1	1.0	0.9
1968	0.8	1.0	0.9	1.0	0.8	0.7	0.7	0.7	0.7	0.9	0.9	1.1	0.9
1969	1.2	0.7	1.0	0.8	0.7	0.7	0.6	0.6	0.7	0.9	0.9	0.8	0.8
1970	0.9	1.1	0.8	1.0	0.9	0.7	0.7	0.6	0.8	0.8	1.1	1.0	0.9
1971	1.3	1.4	1.0	1.0	0.8	0.6	0.7	0.8	0.7	0.7	0.9	1.0	0.9
1972	1.4	0.9	0.9	0.8	0.7	0.7	0.7	0.8	0.9	0.9	0.8	1.0	0.9
1973	1.4	0.9	0.9	1.1	1.0	0.9	0.8	0.7	0.7	0.8	1.2	1.0	1.0
1974	1.1	1.0	1.0	1.2	0.9	0.9	0.7	0.7	0.8	0.8	0.8	1.0	0.9
1975	1.2	1.0	1.0	1.0	0.5	0.8	0.6	0.5	0.8	1.0	1.2	1.0	0.9
1976	1.2	1.4	1.4	1.1	1.0	0.8	0.7	0.6	0.8	0.9	1.2	1.2	1.0
1977	1.5	1.3	1.2	1.0	0.6	0.7	0.8	0.7	0.8	0.9	1.1	1.3	1.0
1978	1.3	0.6	0.9	1.0	0.7	0.7	0.7	0.6	0.7	0.9	1.0	1.2	0.9
1979	1.0	0.9	1.1	1.0	0.7	0.8	0.5	0.7	0.7	0.9	1.0	1.1	0.9
1980	1.0	0.8	0.9	0.9	0.7	0.6	0.6	0.6	0.7	1.0	1.0	0.8	0.8
1981	0.8	1.0	0.8	1.0	0.4	0.6	0.4	0.5	0.6	0.6	0.7	0.8	0.7
1982	1.4	0.8	0.8	1.0	0.4	0.5	0.5	0.4	0.4	0.6	0.9	0.9	0.7
1983	0.8	0.5	0.6	0.7	0.7	0.3	0.5	0.4	0.6	0.8	0.7	1.0	0.6
1984	0.7	0.7	0.8	0.6	0.8	0.5	0.5	0.4	0.5	0.5	0.9	1.0	0.7
1985	1.0	1.0	1.0	0.9	0.7	0.6	0.6	0.6	0.6	0.8	0.8	1.1	0.8
1986	1.4	0.8	1.3	0.9	1.0	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.0
1987	1.1	0.8	0.8	1.0	0.9	0.8	0.8	0.9	0.7	1.0	1.3	1.4	0.9
MEAN	1.1	0.9	0.9	1.0	0.8	0.7	0.6	0.6	0.7	0.9	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E28 (42.73N 79.77W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.3	4.2	3.6	2.5	2.0	2.5	2.4	2.3	3.6	3.5	2.9
1957	2.5	2.1	4.0	5.0	2.9	2.8	2.8	2.5	2.7	2.9	4.8	3.5
1958	2.7	3.1	1.7	3.5	1.8	2.5	1.8	2.1	2.6	2.5	3.3	2.3
1959	3.5	2.3	3.7	3.3	1.5	1.4	2.4	2.3	2.3	3.0	2.5	2.8
1960	2.8	4.9	3.3	4.4	2.4	4.3	3.2	3.2	2.3	3.0	4.0	4.2
1961	3.7	4.7	3.7	4.2	3.9	3.7	2.9	3.0	3.4	3.2	3.8	4.8
1962	4.1	3.2	3.1	4.3	3.6	2.7	3.3	2.4	2.6	3.3	2.9	3.6
1963	4.4	3.4	3.2	4.1	4.1	1.7	2.4	2.1	3.1	3.7	3.8	3.4
1964	5.1	3.3	6.3	3.7	5.2	3.2	1.9	2.5	2.8	2.4	3.0	3.1
1965	3.5	3.2	4.6	3.5	2.6	3.1	2.2	2.2	3.0	4.0	4.5	3.8
1966	3.4	2.5	3.2	3.3	3.8	2.6	2.9	2.1	2.4	3.7	4.5	3.5
1967	3.5	4.6	2.3	3.8	3.5	2.2	2.5	1.7	3.5	3.6	3.0	3.5
1968	2.8	3.2	2.7	4.7	3.1	2.5	2.5	3.0	2.1	3.1	2.7	3.8
1969	3.1	2.1	3.5	3.0	2.7	2.8	2.7	3.0	2.3	3.0	2.5	1.8
1970	2.6	3.6	3.8	3.9	3.1	3.0	3.0	2.3	2.9	2.1	4.0	3.4
1971	4.0	5.0	4.2	3.6	3.6	2.6	3.5	2.3	2.1	2.4	2.9	4.1
1972	4.0	3.8	4.3	2.4	3.1	2.4	2.6	2.7	3.8	3.7	3.6	3.2
1973	3.7	2.9	4.2	3.6	3.5	3.1	3.5	2.3	3.0	2.9	3.1	3.6
1974	5.6	3.5	3.7	4.0	3.3	3.2	2.6	2.3	3.4	3.1	4.0	2.9
1975	3.8	4.2	2.6	5.6	1.9	2.5	2.6	2.4	2.3	3.0	4.4	4.2
1976	3.0	4.3	4.1	3.4	5.2	3.5	2.7	2.9	2.6	3.4	3.3	4.4
1977	4.4	3.5	3.9	4.8	2.0	2.6	3.7	2.5	2.2	2.9	3.2	4.2
1978	6.4	2.1	3.8	3.4	3.1	2.9	3.0	3.0	2.7	2.9	3.6	3.7
1979	3.5	3.5	3.7	3.4	2.1	2.4	1.8	2.7	2.7	2.8	3.9	3.8
1980	4.1	3.2	2.7	3.4	3.6	2.3	1.9	2.1	2.9	3.5	2.8	3.2
1981	3.4	3.3	4.9	3.4	1.6	2.0	1.2	1.6	2.8	3.3	3.1	2.6
1982	5.1	4.0	4.6	4.4	1.6	2.0	2.3	1.8	1.5	3.1	3.3	4.7
1983	2.4	2.0	1.8	2.7	3.1	1.3	2.5	2.4	2.4	3.4	3.1	2.9
1984	2.8	2.2	3.2	4.9	3.7	1.9	1.6	1.3	2.1	2.4	3.1	3.9
1985	3.0	2.5	2.8	5.2	3.1	2.1	2.1	1.9	2.3	2.8	2.5	4.0
1986	4.1	2.5	4.3	3.1	3.6	3.4	2.7	2.7	3.6	3.6	4.1	3.5
1987	3.1	2.5	4.0	4.0	3.6	3.2	2.2	2.5	2.2	2.9	3.6	5.5

32 YR. STATISTICS FOR WIS STATION E28

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.4
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	11.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	205.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		78012621

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	541	5	1	.	.	.	.	.	.	547
0.25-0.49	.	863	14	.	.	.	.	.	.	.	877
0.50-0.74	.	854	66	3	.	.	.	.	.	.	923
0.75-0.99	.	236	21	6	.	.	.	.	.	.	263
1.00-1.24	.	6	50	6	.	.	.	.	.	.	62
1.25-1.49	.	.	5	1	.	.	.	.	.	.	6
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2500	161	18	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 2510.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	458	1	2	.	.	.	.	.	.	461
0.25-0.49	.	797	8	.	.	.	.	.	.	.	805
0.50-0.74	.	794	62	10	.	.	.	.	.	.	866
0.75-0.99	.	161	82	11	.	.	.	.	.	.	254
1.00-1.24	.	.	83	16	1	.	.	.	.	.	100
1.25-1.49	.	.	8	5	2	.	.	.	.	.	15
1.50-1.74	.	.	.	.	2	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2210	244	44	5	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 2347.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	608	4	.	.	.	.	.	.	.	612
0.25-0.49	.	1150	12	.	.	.	.	.	.	.	1162
0.50-0.74	.	1583	206	12	.	.	.	.	.	.	1801
0.75-0.99	.	445	352	53	.	.	.	.	.	.	850
1.00-1.24	.	1	440	134	3	.	.	.	.	.	578
1.25-1.49	.	.	63	59	13	.	.	.	.	.	135
1.50-1.74	.	.	4	35	29	.	.	.	.	.	68
1.75-1.99	.	.	.	3	14	.	.	.	.	.	17
2.00-2.24	.	.	.	1	11	.	.	.	.	.	12
2.25-2.49	.	.	.	.	2	1	.	.	.	.	3
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3787	1081	297	72	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.4 NO. OF CASES= 4912.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	441	2	1	.	.	.	.	.	.	444
0.25-0.49	.	984	12	.	.	.	.	.	.	.	996
0.50-0.74	.	1271	348	38	.	.	.	.	.	.	1657
0.75-0.99	.	273	395	137	.	.	.	.	.	.	805
1.00-1.24	.	1	322	272	21	.	.	.	.	.	616
1.25-1.49	.	.	27	168	21	.	.	.	.	.	216
1.50-1.74	.	.	2	121	83	.	.	.	.	.	206
1.75-1.99	.	.	.	7	56	.	.	.	.	.	63
2.00-2.24	.	.	.	2	51	3	.	.	.	.	56
2.25-2.49	.	.	.	.	5	11	.	.	.	.	16
2.50-2.74	.	.	.	.	2	6	.	.	.	.	8
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2970	1108	746	239	21	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.7 NO. OF CASES= 4769.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	363	.	.	.	.	.	.	.	.	363
0.25-0.49	.	636	6	.	.	.	.	.	.	.	642
0.50-0.74	.	585	267	10	.	.	.	.	.	.	862
0.75-0.99	.	37	190	97	.	.	.	.	.	.	324
1.00-1.24	.	.	124	194	10	.	.	.	.	.	328
1.25-1.49	.	.	.	97	21	.	.	.	.	.	118
1.50-1.74	.	.	.	70	62	.	.	.	.	.	132
1.75-1.99	.	.	.	1	34	1	.	.	.	.	36
2.00-2.24	.	.	.	.	29	4	.	.	.	.	33
2.25-2.49	.	.	.	.	6	3	.	.	.	.	9
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	1	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1621	587	469	162	11	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.7 NO. OF CASES= 2674.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	218	.	.	.	.	.	.	.	.	218
0.25-0.49	.	375	7	.	.	.	.	.	.	.	382
0.50-0.74	.	252	118	5	.	.	.	.	.	.	375
0.75-0.99	.	22	82	31	.	.	.	.	.	.	135
1.00-1.24	.	.	51	80	1	.	.	.	.	.	132
1.25-1.49	.	.	.	45	3	.	.	.	.	.	48
1.50-1.74	.	.	.	23	14	.	.	.	.	.	37
1.75-1.99	.	.	.	2	7	.	.	.	.	.	9
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	867	258	186	28	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 1259.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	344	2	.	.	.	.	.	.	.	346
0.25-0.49	.	616	4	.	.	.	.	.	.	.	620
0.50-0.74	.	372	158	12	.	.	.	.	.	.	542
0.75-0.99	.	28	111	47	.	.	.	.	.	.	186
1.00-1.24	.	.	70	103	2	.	.	.	.	.	175
1.25-1.49	.	.	1	72	3	.	.	.	.	.	76
1.50-1.74	.	.	.	45	12	.	.	.	.	.	57
1.75-1.99	.	.	.	2	9	.	.	.	.	.	11
2.00-2.24	.	.	.	.	6	.	.	.	.	.	6
2.25-2.49	.	.	.	.	8	.	.	.	.	.	8
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1360	346	281	40	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.5 NO. OF CASES= 1904.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	613	2	.	.	.	.	.	.	.	615
0.25-0.49	.	1121	16	.	.	.	.	.	.	.	1137
0.50-0.74	.	726	510	22	.	.	.	.	.	.	1258
0.75-0.99	.	53	325	210	.	.	.	.	.	.	588
1.00-1.24	.	1	172	459	7	.	.	.	.	.	639
1.25-1.49	.	.	5	267	45	.	.	.	.	.	317
1.50-1.74	.	.	.	221	111	1	.	.	.	.	333
1.75-1.99	.	.	.	2	99	1	.	.	.	.	102
2.00-2.24	.	.	.	.	98	.	.	.	.	.	98
2.25-2.49	.	.	.	.	23	12	.	.	.	.	35
2.50-2.74	.	.	.	.	4	33	.	.	.	.	37
2.75-2.99	.	.	.	.	.	7	.	.	.	.	7
3.00-3.24	.	.	.	.	.	6	1	.	.	.	7
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2514	1030	1181	387	60	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 3.9 NO. OF CASES= 4848.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	598	1	2	.	.	.	.	.	.	601
0.25-0.49	.	1127	4	.	.	1	.	.	.	.	1132
0.50-0.74	.	1836	20	.	.	.	.	.	.	.	1856
0.75-0.99	.	597	674	1	.	.	.	.	.	.	1272
1.00-1.24	.	2	1535	.	.	.	1	.	.	.	1538
1.25-1.49	.	.	429	394	.	.	.	.	.	.	823
1.50-1.74	.	.	.	475	.	.	.	.	.	.	475
1.75-1.99	.	.	.	115	.	.	.	.	.	.	115
2.00-2.24	.	.	.	45	18	.	.	.	.	.	63
2.25-2.49	.	.	.	.	12	.	.	.	.	.	12
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4160	2663	1032	35	1	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.6 NO. OF CASES= 7389.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	525	5	4	.	.	.	.	.	.	534
0.25-0.49	.	1003	8	.	.	.	.	.	.	.	1011
0.50-0.74	.	1837	13	1	.	.	.	.	.	.	1851
0.75-0.99	.	620	493	1	.	.	.	.	.	.	1114
1.00-1.24	.	4	1026	12	.	.	.	.	.	.	1042
1.25-1.49	.	.	236	144	1	.	.	.	.	.	381
1.50-1.74	.	.	4	223	.	.	.	.	.	.	227
1.75-1.99	.	.	.	41	.	.	.	.	.	.	41
2.00-2.24	.	.	.	13	5	.	.	.	.	.	18
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	6	.	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3989	1785	439	17	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 5834.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	531	3	2	.	.	.	.	.	.	536
0.25-0.49	.	647	1	.	.	.	.	.	.	.	648
0.50-0.74	.	1267	13	.	.	.	.	.	.	.	1280
0.75-0.99	.	388	314	1	.	.	.	.	.	.	703
1.00-1.24	.	.	534	.	.	.	.	.	.	.	534
1.25-1.49	.	.	133	.	1	.	.	.	.	.	134
1.50-1.74	.	.	.	93	.	.	.	.	.	.	93
1.75-1.99	.	.	.	16	.	.	.	.	.	.	16
2.00-2.24	.	.	.	4	.	.	.	.	.	.	4
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2833	998	116	2	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.3 NO. OF CASES= 3697.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	466	3	2	.	.	.	.	.	.	471
0.25-0.49	.	623	8	.	.	.	.	.	.	.	631
0.50-0.74	.	1054	27	2	.	.	.	.	.	.	1083
0.75-0.99	.	375	173	6	.	.	.	.	.	.	554
1.00-1.24	.	1	291	2	.	.	.	.	.	.	294
1.25-1.49	.	.	38	.	.	.	.	.	.	.	38
1.50-1.74	.	.	.	20	.	.	.	.	.	.	20
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2519	540	36	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 2900.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1238	8	.	.	.	.	.	.	.	1246
0.25-0.49	.	2118	39	3	.	.	.	.	.	.	2160
0.50-0.74	.	1534	1201	90	.	.	.	.	.	.	2825
0.75-0.99	.	149	887	416	.	.	.	.	.	.	1452
1.00-1.24	.	1	535	896	16	.	.	.	.	.	1448
1.25-1.49	.	.	35	574	29	.	.	.	.	.	638
1.50-1.74	.	.	.	620	282	.	.	.	.	.	902
1.75-1.99	.	.	.	17	424	1	.	.	.	.	442
2.00-2.24	.	.	.	.	329	1	.	.	.	.	330
2.25-2.49	.	.	.	.	83	5	.	.	.	.	88
2.50-2.74	.	.	.	.	3	44	.	.	.	.	47
2.75-2.99	.	.	.	.	.	10	.	.	.	.	10
3.00-3.24	.	.	.	.	.	5	1	.	.	.	6
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	5040	2705	2616	1166	67	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.0 NO. OF CASES= 10855.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1710	93	12	.	.	.	.	.	.	1815
0.25-0.49	.	2291	535	119	6	.	.	.	.	.	2951
0.50-0.74	.	1650	1165	728	94	3	.	.	.	.	3640
0.75-0.99	.	294	603	765	224	6	.	.	.	.	1892
1.00-1.24	.	16	348	1181	640	42	.	.	.	.	2227
1.25-1.49	.	.	40	586	467	111	.	.	.	.	1204
1.50-1.74	.	.	10	381	745	295	6	.	.	.	1437
1.75-1.99	.	.	.	22	463	193	28	.	.	.	706
2.00-2.24	.	.	.	5	257	174	57	.	.	.	493
2.25-2.49	.	.	.	.	60	60	49	.	.	.	169
2.50-2.74	.	.	.	.	10	34	36	1	.	.	81
2.75-2.99	.	.	.	.	.	8	16	1	.	.	25
3.00-3.24	.	.	.	.	1	3	5	6	.	.	15
3.25-3.49	.	.	.	.	.	.	3	.	1	.	4
3.50+	.	.	.	.	.	.	.	1	.	1	2
TOTAL	0	5961	2794	3799	2967	929	200	9	1	1	

MEAN HS(M) = 0.9 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.4 NO. OF CASES= 15601.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1288	405	506	102	1	.	.	.	.	2302
0.25-0.49	.	1626	211	407	382	33	2	.	.	.	2661
0.50-0.74	.	2631	125	264	365	84	7	.	.	.	3476
0.75-0.99	.	1189	308	156	253	58	4	1	.	.	1969
1.00-1.24	.	72	875	308	541	154	26	1	.	.	1977
1.25-1.49	.	.	291	47	280	217	33	.	.	.	868
1.50-1.74	.	.	87	96	196	329	115	7	1	.	831
1.75-1.99	.	.	.	39	31	118	136	11	1	.	336
2.00-2.24	.	.	.	37	7	63	140	10	3	.	260
2.25-2.49	.	.	.	20	1	9	49	10	2	.	91
2.50-2.74	.	.	.	5	1	3	17	11	3	.	40
2.75-2.99	.	.	.	.	3	2	2	4	2	.	13
3.00-3.24	.	.	.	.	1	.	2	3	.	.	6
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	1	.	.	2
TOTAL	0	6806	2302	1885	2163	1072	533	59	12	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.3 NO. OF CASES= 13895.

STATION E29 42.73N 79.97W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

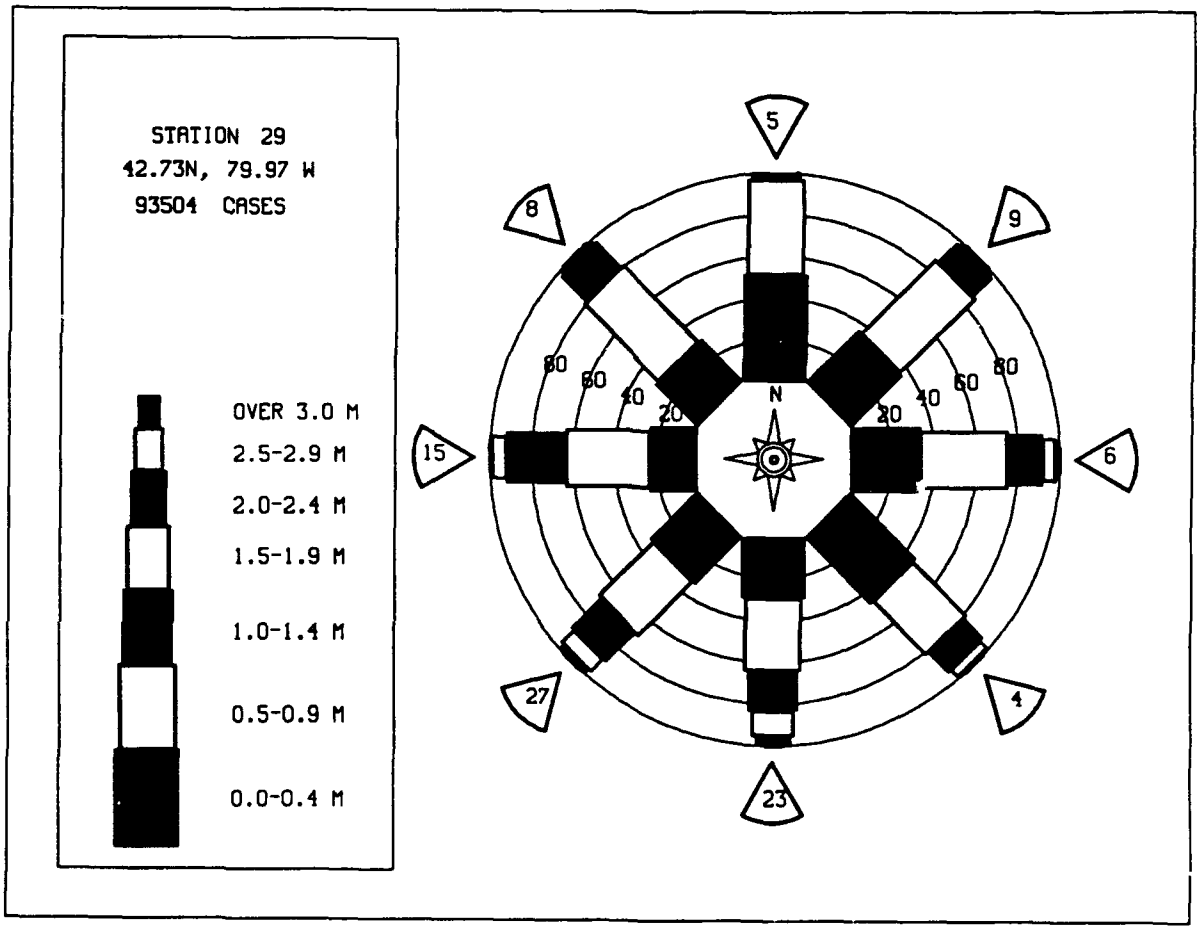
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	726	11	60	62	.	.	.	.	.	859
0.25-0.49	.	1325	1	12	54	24	.	.	.	.	1416
0.50-0.74	.	1923	9	3	21	22	3	.	.	.	1981
0.75-0.99	.	884	697	2	3	8	2	.	.	.	1596
1.00-1.24	.	3	1444	.	1	4	7	.	.	.	1459
1.25-1.49	.	.	463	216	1	1	.	.	.	.	681
1.50-1.74	.	.	20	424	.	9	2	.	.	.	455
1.75-1.99	.	.	.	103	.	2	6	1	.	.	112
2.00-2.24	.	.	.	56	9	.	3	2	.	.	70
2.25-2.49	.	.	.	2	9	.	1	1	.	.	13
2.50-2.74	.	.	.	.	10	.	.	1	.	.	11
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	1	.	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	4861	2645	878	172	71	24	5	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 3.6 NO. OF CASES= 8110.

STATION E29 42.73N 79.97W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1067	54	59	16	.	.	.	.	.	1196
0.25-0.49	.	1730	89	54	44	5	.	.	.	.	1922
0.50-0.74	.	2017	431	120	48	11	1	.	.	.	2628
0.75-0.99	.	575	571	194	48	7	.	.	.	.	1395
1.00-1.24	.	11	790	366	124	20	3	.	.	.	1314
1.25-1.49	.	.	178	268	89	32	3	.	.	.	570
1.50-1.74	.	.	12	285	154	63	12	.	.	.	526
1.75-1.99	.	.	.	37	114	31	17	1	.	.	200
2.00-2.24	.	.	.	17	82	24	20	1	.	.	144
2.25-2.49	.	.	.	2	22	10	9	1	.	.	44
2.50-2.74	.	.	.	.	4	12	5	1	.	.	22
2.75-2.99	.	.	.	.	.	2	1	.	.	.	3
3.00-3.24	.	.	.	.	.	1	1	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5400	2125	1402	745	218	72	4	0	0	

MEAN HS(M)= 0.8 LARGEST H[illegible](M)= 5.1 MEAN TP(SEC)= 3.9 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E29 (42.73N 79.97W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.7	0.7	0.8	0.7	0.6	0.7	0.7	0.7	0.9	1.0	0.8	0.7
1957	0.8	0.7	0.9	0.9	0.8	0.8	0.7	0.6	0.9	0.8	1.2	1.2	0.9
1958	0.8	0.8	0.5	0.6	0.6	0.6	0.4	0.4	0.6	0.8	0.8	0.7	0.6
1959	0.8	0.6	0.7	0.6	0.4	0.3	0.4	0.5	0.7	0.7	0.7	0.6	0.6
1960	0.7	1.0	0.9	1.1	0.9	0.8	0.7	0.7	0.7	0.8	1.2	1.3	0.9
1961	0.9	0.8	0.9	0.9	0.9	0.8	0.7	0.8	0.8	1.1	1.0	1.1	0.9
1962	1.1	0.9	0.8	0.9	0.9	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8
1963	1.0	0.9	1.0	1.0	0.9	0.5	0.6	0.6	0.6	0.7	1.0	0.8	0.8
1964	1.1	0.8	1.0	1.0	0.9	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.8
1965	1.0	1.0	0.8	0.7	0.7	0.7	0.5	0.6	0.7	0.9	0.9	0.9	0.8
1966	0.9	0.6	0.8	0.9	0.7	0.6	0.5	0.6	0.6	0.9	0.9	0.9	0.7
1967	1.0	1.0	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.8	0.9	0.9	0.7
1968	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.8	0.8	0.9	0.7
1969	1.0	0.6	0.8	0.7	0.6	0.6	0.5	0.5	0.6	0.8	0.8	0.7	0.7
1970	0.7	0.9	0.7	0.9	0.8	0.7	0.6	0.5	0.7	0.8	1.0	0.9	0.8
1971	1.1	1.1	0.8	0.9	0.7	0.6	0.7	0.7	0.6	0.6	0.8	0.9	0.8
1972	1.1	0.8	0.8	0.8	0.7	0.7	0.6	0.7	0.8	0.8	0.7	0.9	0.8
1973	1.1	0.8	0.9	1.0	0.9	0.8	0.7	0.6	0.7	0.8	1.0	0.9	0.8
1974	0.9	0.9	0.9	1.0	0.8	0.8	0.6	0.6	0.7	0.7	0.8	0.8	0.8
1975	1.0	0.8	0.9	0.9	0.5	0.7	0.5	0.5	0.7	0.8	1.0	0.9	0.8
1976	1.0	1.1	1.2	0.9	0.9	0.7	0.6	0.5	0.7	0.8	1.0	1.0	0.9
1977	1.1	1.0	1.0	0.9	0.6	0.6	0.7	0.6	0.7	0.8	1.0	1.1	0.8
1978	1.0	0.6	0.8	0.9	0.7	0.7	0.6	0.5	0.7	0.8	0.8	1.0	0.8
1979	0.9	0.9	0.9	0.9	0.7	0.7	0.5	0.6	0.6	0.8	0.8	0.9	0.8
1980	0.9	0.7	0.8	0.8	0.6	0.6	0.5	0.5	0.6	0.8	0.8	0.7	0.7
1981	0.6	0.8	0.7	0.9	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.7	0.6
1982	1.1	0.7	0.6	0.8	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.8	0.6
1983	0.6	0.5	0.5	0.7	0.6	0.3	0.4	0.3	0.5	0.6	0.6	0.8	0.6
1984	0.6	0.6	0.7	0.6	0.7	0.5	0.4	0.4	0.5	0.4	0.8	0.8	0.6
1985	0.8	0.8	0.8	0.7	0.6	0.5	0.6	0.5	0.5	0.7	0.8	0.8	0.7
1986	1.1	0.7	1.1	0.8	0.8	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9
1987	0.9	0.7	0.7	0.9	0.8	0.7	0.7	0.9	0.7	0.9	1.1	1.1	0.8
MEAN	0.9	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.7	0.8	0.9	0.9	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E29 (42.73N 79.97W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	2.1	2.4	2.2	2.4	1.6	2.0	2.1	2.2	2.8	2.4	2.6
1957	2.2	2.3	2.5	2.9	2.8	2.2	2.0	1.9	2.4	2.2	3.3	3.2
1958	2.5	2.0	1.2	2.0	1.6	2.0	1.3	1.9	2.1	2.3	2.0	1.9
1959	2.0	1.6	2.3	1.8	1.2	1.0	1.9	1.4	2.2	2.0	1.7	1.7
1960	1.7	3.0	3.0	3.2	2.7	2.4	2.4	1.9	2.2	2.6	2.7	2.9
1961	2.3	2.7	2.5	2.4	2.2	2.2	1.7	1.7	3.0	2.5	2.9	2.7
1962	2.5	2.3	2.3	2.3	2.3	2.0	2.1	1.9	2.2	2.3	3.0	2.3
1963	2.5	2.9	3.1	2.7	2.3	1.5	1.9	1.8	2.1	2.6	2.8	2.1
1964	3.1	2.5	4.3	2.2	3.0	2.2	1.8	2.0	2.4	2.3	2.6	2.4
1965	2.7	2.6	2.9	2.6	2.0	1.7	2.0	1.6	2.2	2.8	2.4	2.3
1966	2.4	2.2	2.2	3.1	2.4	1.8	1.6	1.5	2.2	2.3	2.5	2.1
1967	2.6	2.8	1.8	2.3	2.4	1.6	1.6	1.5	2.6	2.4	2.4	2.4
1968	2.1	2.3	1.8	3.2	2.0	2.0	2.2	2.0	1.7	2.3	2.3	2.2
1969	2.4	1.6	2.5	2.0	2.0	1.9	2.0	2.3	1.3	2.1	2.1	1.8
1970	2.5	2.6	2.5	2.7	2.2	1.7	1.8	1.5	1.9	1.9	3.2	2.5
1971	3.0	2.9	2.8	2.4	2.2	1.9	2.2	1.7	1.7	2.0	2.2	2.6
1972	3.0	2.4	2.8	2.4	2.2	1.8	1.9	1.9	2.7	2.3	2.5	2.4
1973	2.3	2.2	2.6	2.4	2.3	2.1	2.0	1.5	1.9	2.2	2.2	2.2
1974	3.9	2.1	2.5	2.5	2.0	1.8	1.7	1.6	2.4	2.4	2.2	2.1
1975	2.3	2.8	2.3	2.9	1.6	2.0	1.8	1.6	1.9	2.0	2.9	2.8
1976	2.5	2.8	2.8	2.3	3.2	2.6	1.9	2.0	2.0	2.1	2.5	3.1
1977	2.6	2.2	2.6	2.8	2.0	1.8	2.1	1.9	2.0	2.6	2.3	2.5
1978	5.1	1.4	2.6	2.2	2.3	2.0	1.7	2.7	2.5	2.4	2.6	2.2
1979	2.2	2.5	2.5	2.6	1.5	2.0	1.8	2.2	2.0	2.2	2.5	2.6
1980	3.3	2.2	2.1	2.5	2.4	1.9	1.5	1.5	2.3	2.2	2.2	2.6
1981	2.3	3.1	3.0	2.6	1.4	1.6	1.2	1.5	1.9	2.2	2.4	2.4
1982	3.1	2.4	2.5	2.4	1.5	1.8	1.6	1.4	1.3	2.0	2.4	2.6
1983	2.1	1.8	1.9	2.5	2.2	1.0	1.7	1.4	2.0	1.9	1.7	1.7
1984	1.8	2.0	2.3	2.8	2.1	1.5	1.2	1.0	1.7	1.7	2.3	2.4
1985	2.1	2.0	2.3	2.9	2.0	1.8	2.0	1.8	2.1	1.9	1.8	2.3
1986	2.6	2.1	2.8	2.1	2.2	2.3	1.7	2.1	2.7	2.2	2.3	2.3
1987	2.3	2.1	2.2	2.3	1.9	1.8	1.5	1.9	2.1	2.8	2.5	3.3

32 YR. STATISTICS FOR WIS STATION E29

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	3.9
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	5.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	11.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	197.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		78012621

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	999	5	3	.	.	.	.	.	.	1007
0.25-0.49	.	1299	21	.	.	.	.	.	.	.	1320
0.50-0.74	.	1145	77	8	.	.	.	.	.	.	1230
0.75-0.99	.	286	19	12	.	.	.	.	.	.	317
1.00-1.24	.	8	62	7	2	.	.	.	.	.	79
1.25-1.49	.	.	4	1	1	.	.	.	.	.	6
1.50-1.74	.	.	2	.	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3737	190	31	3	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 3710.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	834	3	.	.	.	.	.	.	.	837
0.25-0.49	.	983	14	.	.	.	.	.	.	.	997
0.50-0.74	.	865	87	17	.	.	.	.	.	.	969
0.75-0.99	.	164	68	32	.	.	.	.	.	.	264
1.00-1.24	.	3	69	23	3	.	.	.	.	.	98
1.25-1.49	.	.	10	4	6	.	.	.	.	.	20
1.50-1.74	.	.	.	.	2	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2849	251	76	11	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 2987.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1052	2	.	.	.	.	.	.	.	1054
0.25-0.49	.	1467	29	.	.	.	.	.	.	.	1496
0.50-0.74	.	1766	257	42	.	.	.	.	.	.	2065
0.75-0.99	.	466	395	101	.	.	.	.	.	.	962
1.00-1.24	.	.	491	157	9	.	.	.	.	.	657
1.25-1.49	.	.	79	57	28	.	.	.	.	.	164
1.50-1.74	.	.	1	26	37	.	.	.	.	.	64
1.75-1.99	.	.	.	3	12	2	.	.	.	.	17
2.00-2.24	.	.	.	3	5	1	.	.	.	.	9
2.25-2.49	.	.	.	.	.	2	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4751	1254	389	91	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.4 NO. OF CASES= 6080.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	744	.	.	.	.	.	.	.	.	744
0.25-0.49	.	1047	37	.	.	.	.	.	.	.	1084
0.50-0.74	.	1351	388	53	.	.	.	.	.	.	1792
0.75-0.99	.	275	397	181	.	.	.	.	.	.	853
1.00-1.24	.	.	340	272	40	.	.	.	.	.	652
1.25-1.49	.	.	27	164	43	.	.	.	.	.	234
1.50-1.74	.	.	1	74	126	3	.	.	.	.	204
1.75-1.99	.	.	.	3	52	3	.	.	.	.	58
2.00-2.24	.	.	.	.	27	20	.	.	.	.	47
2.25-2.49	.	.	.	.	3	9	.	.	.	.	12
2.50-2.74	.	.	.	.	.	2	1	.	.	.	3
2.75-2.99	.	.	.	.	.	1	1	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3417	1190	747	291	38	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 5328.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	612	1	1	.	.	.	.	.	.	614
0.25-0.49	.	781	26	1	.	.	.	.	.	.	808
0.50-0.74	.	596	288	38	.	.	.	.	.	.	922
0.75-0.99	.	52	185	110	1	.	.	.	.	.	348
1.00-1.24	.	.	108	182	18	.	.	.	.	.	308
1.25-1.49	.	.	1	83	33	.	.	.	.	.	117
1.50-1.74	.	.	.	50	67	3	.	.	.	.	120
1.75-1.99	.	.	.	.	25	1	.	.	.	.	26
2.00-2.24	.	.	.	.	14	12	.	.	.	.	26
2.25-2.49	.	.	.	.	.	3	.	.	.	.	3
2.50-2.74	.	.	.	.	.	.	1	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2041	609	465	158	19	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.6 NO. OF CASES= 3089.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	366	.	.	.	.	.	.	.	.	366
0.25-0.49	.	487	22	.	.	.	.	.	.	.	509
0.50-0.74	.	364	164	24	.	.	.	.	.	.	552
0.75-0.99	.	32	116	68	.	.	.	.	.	.	216
1.00-1.24	.	.	65	89	4	.	.	.	.	.	158
1.25-1.49	.	.	.	52	4	.	.	.	.	.	56
1.50-1.74	.	.	.	24	20	.	.	.	.	.	44
1.75-1.99	.	.	.	.	5	.	.	.	.	.	5
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1249	367	257	36	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 1793.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	747	11	.	.	.	.	.	.	.	758
0.25-0.49	.	1013	194	9	.	.	.	.	.	.	1216
0.50-0.74	.	643	280	127	.	.	.	.	.	.	1050
0.75-0.99	.	94	175	97	8	.	.	.	.	.	374
1.00-1.24	.	2	136	143	16	.	.	.	.	.	297
1.25-1.49	.	.	3	110	6	.	.	.	.	.	119
1.50-1.74	.	.	1	71	60	.	.	.	.	.	132
1.75-1.99	.	.	.	.	25	.	.	.	.	.	25
2.00-2.24	.	.	.	.	21	1	.	.	.	.	22
2.25-2.49	.	.	.	.	2	8	.	.	.	.	10
2.50-2.74	.	.	.	.	.	4	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2499	800	557	138	13	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.6 NO. OF CASES= 3758.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1306	139	27	1	.	.	.	.	.	1473
0.25-0.49	.	1876	217	58	4	.	.	.	.	.	2155
0.50-0.74	.	1852	147	188	12	.	.	.	.	.	2199
0.75-0.99	.	722	88	117	47	.	.	.	.	.	974
1.00-1.24	.	258	275	129	136	3	.	.	.	.	801
1.25-1.49	.	.	62	87	28	7	.	.	.	.	184
1.50-1.74	.	.	21	47	66	12	.	.	.	.	146
1.75-1.99	.	.	.	4	47	2	.	.	.	.	53
2.00-2.24	.	.	.	1	28	5	.	.	.	.	34
2.25-2.49	.	.	.	.	2	12	1	.	.	.	15
2.50-2.74	.	.	.	.	.	8	.	.	.	.	8
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6014	949	658	371	50	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 7538.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1348	9	7	.	.	.	.	.	.	1364
0.25-0.49	.	1930	16	2	2	.	.	.	.	.	1950
0.50-0.74	.	2161	36	9	.	.	.	.	.	.	2206
0.75-0.99	.	1052	33	4	1	.	.	.	.	.	1090
1.00-1.24	.	115	468	4	2	.	.	.	.	.	589
1.25-1.49	.	.	117	1	.	.	.	.	.	.	118
1.50-1.74	.	.	19	9	.	.	.	.	.	.	28
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	1	.	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6606	698	40	5	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.1 NO. OF CASES= 6879.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1053	4	.	.	.	.	.	.	.	1057
0.25-0.49	.	1322	10	.	.	.	.	.	.	.	1332
0.50-0.74	.	2126	8	4	.	.	.	.	.	.	2138
0.75-0.99	.	658	440	2	.	.	.	.	.	.	1100
1.00-1.24	.	6	896	1	.	.	.	.	.	.	903
1.25-1.49	.	.	213	37	.	.	.	.	.	.	250
1.50-1.74	.	.	1	80	.	.	.	.	.	.	81
1.75-1.99	.	.	.	11	.	.	.	.	.	.	11
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5165	1572	137	2	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 6437.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1073	9	.	.	.	.	.	.	.	1082
0.25-0.49	.	1284	7	1	.	.	.	.	.	.	1292
0.50-0.74	.	2683	14	4	.	.	.	.	.	.	2701
0.75-0.99	.	847	654	2	.	.	.	.	.	.	1503
1.00-1.24	.	2	1382	.	.	.	.	.	.	.	1384
1.25-1.49	.	.	345	86	.	.	.	.	.	.	431
1.50-1.74	.	.	.	173	.	.	.	.	.	.	173
1.75-1.99	.	.	.	36	.	.	.	.	.	.	36
2.00-2.24	.	.	.	25	7	.	.	.	.	.	32
2.25-2.49	.	.	.	.	4	.	.	.	.	.	4
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5889	2411	327	14	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 8088.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1018	12	1	.	.	.	.	.	.	1031
0.25-0.49	.	1834	9	1	.	.	.	.	.	.	1844
0.50-0.74	.	3177	3	3	.	.	.	.	.	.	3183
0.75-0.99	.	1202	417	1	.	.	.	.	.	.	1620
1.00-1.24	.	36	931	.	.	.	.	.	.	.	967
1.25-1.49	.	.	219	60	.	.	.	.	.	.	279
1.50-1.74	.	.	14	147	.	.	.	.	.	.	161
1.75-1.99	.	.	.	36	.	.	.	.	.	.	36
2.00-2.24	.	.	.	14	4	.	.	.	.	.	18
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7267	1605	263	6	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.2 NO. OF CASES= 8556.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1551	12	2	1	.	.	.	.	.	1566
0.25-0.49	.	2653	16	.	.	.	.	.	.	.	2669
0.50-0.74	.	4063	7	2	.	.	.	.	.	.	4072
0.75-0.99	.	1734	124	.	.	.	.	.	.	.	1858
1.00-1.24	.	1	753	1	1	.	.	.	.	.	756
1.25-1.49	.	.	142	.	1	.	.	.	.	.	143
1.50-1.74	.	.	18	37	.	.	.	.	.	.	56
1.75-1.99	.	.	.	7	.	.	.	.	.	.	7
2.00-2.24	.	.	.	5	.	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	10002	1073	54	3	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.1 NO. OF CASES= 10416.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1332	11	.	.	.	.	.	.	.	1343
0.25-0.49	.	1875	14	1	.	.	.	.	.	.	1890
0.50-0.74	.	2608	7	3	.	.	.	.	.	.	2618
0.75-0.99	.	1131	226	2	.	.	.	.	.	.	1359
1.00-1.24	.	5	622	.	.	.	.	.	.	.	627
1.25-1.49	.	.	141	21	.	.	.	.	.	.	162
1.50-1.74	.	.	6	37	.	.	.	.	.	.	43
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6951	1027	71	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 7535.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1440	3	2	.	.	.	.	.	.	1445
0.25-0.49	.	1241	13	.	.	.	.	.	.	.	1254
0.50-0.74	.	2312	18	2	.	.	.	.	.	.	2332
0.75-0.99	.	605	571	1	.	.	.	.	.	.	1177
1.00-1.24	.	.	870	.	1	.	.	.	.	.	871
1.25-1.49	.	.	204	49	.	.	.	.	.	.	253
1.50-1.74	.	.	.	110	.	.	.	.	.	.	110
1.75-1.99	.	.	.	21	.	.	.	.	.	.	21
2.00-2.24	.	.	.	3	3	.	.	.	.	.	6
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5598	1679	188	5	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 6990.

STATION E30 42.73N 80.15W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

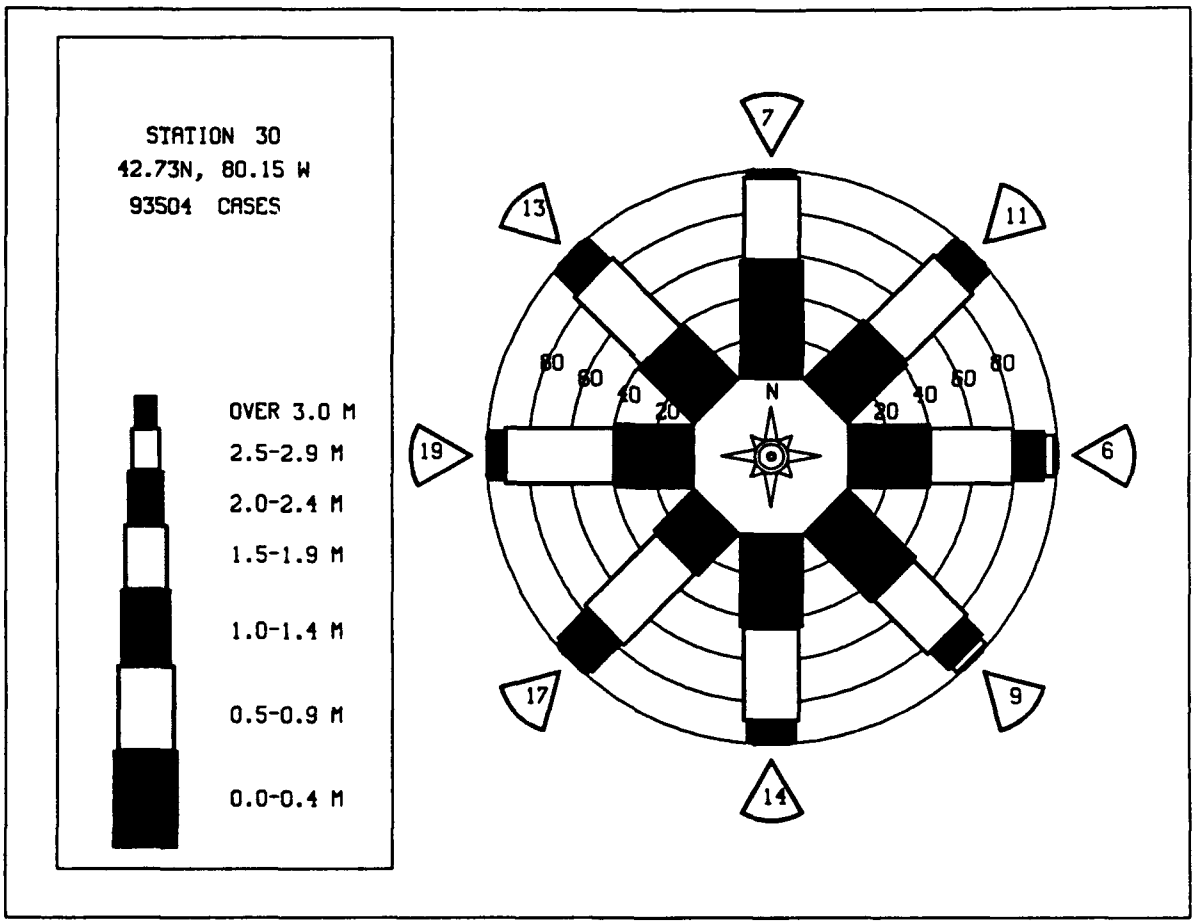
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	976	5	.	.	.	.	.	.	.	981
0.25-0.49	.	1029	14	.	.	.	.	.	.	.	1043
0.50-0.74	.	1412	32	4	.	.	.	.	.	.	1448
0.75-0.99	.	393	251	5	.	.	.	.	.	.	649
1.00-1.24	.	8	388	2	.	.	.	.	.	.	398
1.25-1.49	.	.	56	8	.	.	.	.	.	.	64
1.50-1.74	.	.	.	24	.	.	.	.	.	.	24
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3818	746	48	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 4320.

STATION E30 42.73N 80.15W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1646	23	4	.	.	.	.	.	.	1673
0.25-0.49	.	2213	66	7	.	.	.	.	.	.	2286
0.50-0.74	.	2913	182	53	1	.	.	.	.	.	3149
0.75-0.99	.	972	416	74	5	.	.	.	.	.	1467
1.00-1.24	.	44	786	101	23	.	.	.	.	.	954
1.25-1.49	.	.	162	82	15	.	.	.	.	.	259
1.50-1.74	.	.	8	91	38	1	.	.	.	.	138
1.75-1.99	.	.	.	13	16	.	.	.	.	.	29
2.00-2.24	.	.	.	6	11	4	.	.	.	.	21
2.25-2.49	.	.	.	.	1	3	.	.	.	.	4
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7788	1643	431	110	9	0	0	0	0	

MEAN HS(M)= 0.6 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E30 (42.73N 80.15W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.5	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.5	0.7	0.7	0.6	0.6
1957	0.6	0.5	0.7	0.6	0.7	0.6	0.6	0.5	0.6	0.7	0.9	0.9	0.7
1958	0.7	0.6	0.4	0.5	0.5	0.4	0.3	0.4	0.5	0.6	0.6	0.5	0.5
1959	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.4	0.5	0.6	0.5	0.5	0.4
1960	0.5	0.8	0.8	0.8	0.7	0.6	0.5	0.6	0.6	0.7	0.8	0.9	0.7
1961	0.7	0.6	0.8	0.7	0.7	0.6	0.5	0.6	0.6	0.8	0.8	0.8	0.7
1962	0.8	0.8	0.7	0.8	0.7	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.7
1963	0.7	0.7	0.8	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.6
1964	0.8	0.7	0.8	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
1965	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.6
1966	0.7	0.5	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.6
1967	0.7	0.8	0.6	0.7	0.6	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6
1968	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.5	0.6	0.7	0.6
1969	0.7	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.5
1970	0.5	0.7	0.6	0.8	0.6	0.5	0.5	0.4	0.5	0.6	0.7	0.7	0.6
1971	0.8	0.8	0.7	0.8	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.6
1972	0.8	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.6
1973	0.8	0.7	0.7	0.8	0.7	0.6	0.6	0.5	0.6	0.6	0.7	0.7	0.7
1974	0.6	0.7	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6
1975	0.7	0.6	0.7	0.8	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6
1976	0.8	0.8	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.7	0.7
1977	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.7
1978	0.8	0.5	0.6	0.8	0.6	0.5	0.5	0.4	0.6	0.6	0.6	0.7	0.6
1979	0.6	0.8	0.7	0.8	0.6	0.6	0.4	0.5	0.5	0.5	0.6	0.7	0.6
1980	0.6	0.6	0.7	0.7	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6
1981	0.5	0.6	0.5	0.7	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5
1982	0.6	0.5	0.5	0.6	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5
1983	0.5	0.4	0.4	0.6	0.5	0.3	0.3	0.3	0.4	0.5	0.4	0.5	0.4
1984	0.4	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.4
1985	0.5	0.5	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.5
1986	0.8	0.6	0.8	0.7	0.6	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.7
1987	0.7	0.6	0.6	0.8	0.6	0.5	0.5	0.7	0.5	0.6	0.9	0.8	0.7
MEAN	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E30 (42.73N 80.15W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.7	1.8	1.5	1.5	1.4	1.5	1.8	1.2	1.3	2.7	1.6	1.5
1957	1.2	2.2	2.2	2.5	1.7	1.4	1.2	1.4	1.9	1.4	2.3	2.8
1958	1.5	1.6	1.1	1.6	1.3	1.2	1.0	1.0	1.3	1.6	1.7	1.3
1959	1.9	1.3	1.7	1.6	1.0	0.8	1.1	1.4	1.4	1.8	1.5	1.3
1960	1.6	2.0	2.5	2.5	2.5	1.6	1.7	1.7	2.2	2.5	2.5	1.6
1961	1.6	2.0	2.0	2.3	1.8	1.5	1.2	1.6	2.3	1.8	2.4	2.0
1962	2.4	2.3	2.3	2.0	2.0	1.9	1.8	1.3	1.5	1.7	2.8	2.0
1963	2.0	2.1	2.4	2.6	2.3	1.4	1.5	1.5	1.4	1.7	2.0	2.1
1964	2.4	2.0	3.3	2.0	2.1	1.6	1.4	1.4	1.6	1.3	1.7	1.6
1965	2.4	1.9	2.1	1.9	1.4	1.5	1.1	1.6	1.5	1.7	1.9	1.7
1966	1.7	1.2	1.5	2.9	1.9	1.3	1.4	1.2	1.5	1.6	1.9	1.9
1967	1.9	2.3	1.6	1.8	2.1	1.4	1.0	1.0	1.4	1.7	1.5	2.2
1968	1.5	1.5	1.6	1.7	1.7	2.0	1.1	1.1	1.3	1.4	2.0	1.6
1969	1.7	1.2	1.4	1.6	1.4	1.3	1.7	1.3	1.1	1.3	1.3	1.7
1970	1.6	1.7	2.0	2.2	1.4	1.3	1.4	1.1	1.6	1.8	2.2	2.1
1971	2.2	2.5	2.3	1.9	1.7	1.9	1.5	1.4	1.3	1.5	2.0	2.1
1972	2.2	1.9	2.0	2.3	2.0	1.7	1.5	1.7	1.7	1.7	2.3	2.2
1973	1.6	2.0	2.2	2.3	1.5	1.8	1.4	1.1	1.4	2.0	1.7	1.6
1974	2.9	2.0	2.0	1.8	1.7	1.5	1.2	1.3	1.9	1.5	1.6	1.5
1975	1.8	1.6	2.0	2.0	1.4	1.4	1.4	1.4	1.5	1.6	1.9	1.7
1976	1.9	2.0	1.9	2.1	2.0	1.4	1.4	1.4	1.5	1.4	1.5	2.0
1977	2.2	1.5	2.0	2.1	2.0	1.4	1.6	1.4	1.4	2.4	2.1	2.3
1978	2.6	1.1	2.0	2.0	2.0	1.3	1.3	1.6	2.3	1.5	2.4	1.7
1979	1.6	2.3	1.7	1.9	1.5	1.6	1.2	1.4	1.5	1.4	2.0	1.5
1980	1.9	1.8	1.6	2.3	1.6	1.8	1.2	1.4	1.6	1.8	1.7	2.1
1981	1.6	2.6	2.0	2.2	1.1	1.4	1.2	1.1	1.4	1.4	1.4	1.8
1982	2.2	1.9	1.7	1.9	1.2	1.1	1.2	1.3	1.1	1.3	1.4	1.6
1983	1.5	1.6	1.9	1.9	2.0	0.9	1.2	0.9	1.2	1.3	1.3	1.5
1984	1.1	2.0	1.7	2.2	2.0	1.1	1.0	1.0	1.1	1.3	1.7	1.5
1985	1.5	1.6	2.1	1.6	1.5	1.2	1.2	1.0	1.2	1.4	1.5	1.6
1986	1.7	2.0	1.9	1.9	1.6	1.4	1.1	1.5	1.8	1.5	2.1	1.8
1987	1.7	1.5	1.7	2.0	1.6	1.4	1.2	1.3	1.5	1.6	1.8	2.2

32 YR. STATISTICS FOR WIS STATION E30

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.6
MEAN PEAK WAVE PERIOD	(SECONDS)	3.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	270.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.6
LARGEST WAVE HS	(METERS)	3.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	7.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	241.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	417	5	.	.	.	.	.	.	.	422
0.25-0.49	.	560	9	.	.	.	.	.	.	.	569
0.50-0.74	.	676	65	10	.	.	.	.	.	.	751
0.75-0.99	.	124	202	14	.	.	.	.	.	.	340
1.00-1.24	.	.	273	9	1	.	.	.	.	.	283
1.25-1.49	.	.	26	70	.	.	.	.	.	.	96
1.50-1.74	.	.	.	27	2	.	.	.	.	.	29
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1777	580	133	3	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 2339.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	366	2	.	.	.	.	.	.	.	368
0.25-0.49	.	556	16	.	.	.	.	.	.	.	572
0.50-0.74	.	586	139	10	.	.	.	.	.	.	735
0.75-0.99	.	85	203	29	.	.	.	.	.	.	317
1.00-1.24	.	.	221	35	1	.	.	.	.	.	257
1.25-1.49	.	.	7	49	2	.	.	.	.	.	58
1.50-1.74	.	.	.	39	2	.	.	.	.	.	41
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	1	1	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1593	588	169	6	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 2209.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	571	3	.	.	.	.	.	.	.	574
0.25-0.49	.	976	13	.	.	.	.	.	.	.	989
0.50-0.74	.	850	403	16	.	.	.	.	.	.	1269
0.75-0.99	.	87	526	63	.	.	.	.	.	.	676
1.00-1.24	.	.	747	165	4	.	.	.	.	.	916
1.25-1.49	.	.	12	357	5	.	.	.	.	.	374
1.50-1.74	.	.	.	319	28	.	.	.	.	.	347
1.75-1.99	.	.	.	45	10	.	.	.	.	.	55
2.00-2.24	.	.	.	5	48	1	.	.	.	.	54
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	3	4	.	.	.	.	7
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2484	1704	970	106	6	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 4938.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	396	1	.	.	.	.	.	.	.	397
0.25-0.49	.	832	8	.	.	.	.	.	.	.	840
0.50-0.74	.	734	498	24	.	.	.	.	.	.	1256
0.75-0.99	.	74	390	152	.	.	.	.	.	.	616
1.00-1.24	.	.	429	355	12	.	.	.	.	.	796
1.25-1.49	.	.	4	282	27	.	.	.	.	.	313
1.50-1.74	.	.	.	286	70	.	.	.	.	.	356
1.75-1.99	.	.	.	28	94	1	.	.	.	.	123
2.00-2.24	.	.	.	3	108	2	.	.	.	.	113
2.25-2.49	.	.	.	.	25	11	.	.	.	.	36
2.50-2.74	.	.	.	.	8	19	.	.	.	.	27
2.75-2.99	.	.	.	.	1	7	.	.	.	.	8
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2036	1330	1130	345	45	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.0 NO. OF CASES= 4582.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	408	.	.	.	.	.	.	.	.	408
0.25-0.49	.	680	10	.	.	.	.	.	.	.	690
0.50-0.74	.	460	304	13	.	.	.	.	.	.	777
0.75-0.99	.	23	162	90	.	.	.	.	.	.	275
1.00-1.24	.	.	74	165	6	.	.	.	.	.	245
1.25-1.49	.	.	1	56	8	.	.	.	.	.	65
1.50-1.74	.	.	.	40	39	.	.	.	.	.	79
1.75-1.99	.	.	.	.	16	.	.	.	.	.	16
2.00-2.24	.	.	.	.	22	.	.	.	.	.	22
2.25-2.49	.	.	.	.	2	1	.	.	.	.	3
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1571	551	364	93	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 2423.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	282	.	.	.	.	.	.	.	.	282
0.25-0.49	.	399	2	.	.	.	.	.	.	.	401
0.50-0.74	.	251	148	3	.	.	.	.	.	.	402
0.75-0.99	.	27	83	25	.	.	.	.	.	.	135
1.00-1.24	.	.	78	74	.	.	.	.	.	.	152
1.25-1.49	.	.	1	44	1	.	.	.	.	.	46
1.50-1.74	.	.	.	28	5	.	.	.	.	.	33
1.75-1.99	.	.	.	2	9	.	.	.	.	.	11
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	959	312	176	19	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 1379.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	383	.	.	.	.	.	.	.	.	383
0.25-0.49	.	409	5	.	.	.	.	.	.	.	414
0.50-0.74	.	262	127	3	.	.	.	.	.	.	392
0.75-0.99	.	25	98	23	.	.	.	.	.	.	146
1.00-1.24	.	.	97	69	.	.	.	.	.	.	166
1.25-1.49	.	.	3	83	.	.	.	.	.	.	86
1.50-1.74	.	.	.	54	7	.	.	.	.	.	61
1.75-1.99	.	.	.	7	4	.	.	.	.	.	11
2.00-2.24	.	.	.	.	12	.	.	.	.	.	12
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	5	.	.	.	.	.	5
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1079	330	239	36	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.5 NO. OF CASES= 1583.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	505	5	.	.	.	.	.	.	.	510
0.25-0.49	.	777	12	.	.	.	.	.	.	.	789
0.50-0.74	.	605	319	4	.	.	.	.	.	.	928
0.75-0.99	.	51	335	78	.	.	.	.	.	.	464
1.00-1.24	.	.	251	366	1	.	.	.	.	.	618
1.25-1.49	.	.	5	337	3	.	.	.	.	.	345
1.50-1.74	.	.	.	312	54	.	.	.	.	.	366
1.75-1.99	.	.	.	41	96	.	.	.	.	.	137
2.00-2.24	.	.	.	1	82	.	.	.	.	.	83
2.25-2.49	.	.	.	.	36	.	.	.	.	.	36
2.50-2.74	.	.	.	.	38	1	.	.	.	.	39
2.75-2.99	.	.	.	.	3	4	.	.	.	.	7
3.00-3.24	.	.	.	.	.	8	.	.	.	.	8
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	2	.	.	.	.	2
TOTAL	0	1938	927	1139	313	17	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.0 NO. OF CASES= 4064.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	864	6	1	.	.	.	.	.	.	871
0.25-0.49	.	1379	11	2	.	.	.	.	.	.	1392
0.50-0.74	.	1301	655	14	.	.	.	.	.	.	1970
0.75-0.99	.	112	951	106	1	.	.	.	.	.	1170
1.00-1.24	.	.	684	560	1	.	.	.	.	.	1245
1.25-1.49	.	.	16	681	2	.	.	.	.	.	699
1.50-1.74	.	.	.	845	9	.	.	.	.	.	854
1.75-1.99	.	.	.	111	146	.	.	.	.	.	257
2.00-2.24	.	.	.	1	179	.	.	.	.	.	180
2.25-2.49	.	.	.	.	65	1	.	.	.	.	66
2.50-2.74	.	.	.	.	25	1	.	.	.	.	26
2.75-2.99	.	.	.	.	5	6	.	.	.	.	11
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3656	2323	2321	433	12	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.0 NO. OF CASES= 8189.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1574	27	3	.	.	.	.	.	.	1604
0.25-0.49	.	2382	229	24	1	.	.	.	.	.	2636
0.50-0.74	.	1586	1289	302	9	.	.	.	.	.	3186
0.75-0.99	.	144	936	495	31	.	.	.	.	.	1606
1.00-1.24	.	5	752	881	152	1	.	.	.	.	1791
1.25-1.49	.	.	36	805	136	4	.	.	.	.	981
1.50-1.74	.	.	1	1048	242	17	.	.	.	.	1308
1.75-1.99	.	.	.	192	395	28	.	.	.	.	615
2.00-2.24	.	.	.	11	485	35	.	.	.	.	531
2.25-2.49	.	.	.	.	162	42	1	.	.	.	205
2.50-2.74	.	.	.	.	66	84	4	.	.	.	154
2.75-2.99	.	.	.	.	3	32	8	.	.	.	43
3.00-3.24	.	.	.	.	.	36	17	1	.	.	54
3.25-3.49	.	.	.	.	.	3	12	.	.	.	15
3.50+	.	.	.	.	.	3	13	2	1	.	19
TOTAL	0	5691	3270	3761	1682	285	55	3	1	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 7.0 MEAN TP(SEC)= 4.2 NO. OF CASES= 13811.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1814	609	238	.	.	.	.	.	.	2661
0.25-0.49	.	1589	848	1136	152	.	.	.	.	.	3725
0.50-0.74	.	1248	1035	1504	1021	41	.	.	.	.	4849
0.75-0.99	.	245	581	823	731	129	3	.	.	.	2512
1.00-1.24	.	11	490	912	1114	339	13	.	.	.	2879
1.25-1.49	.	.	45	422	573	260	35	.	.	.	1335
1.50-1.74	.	.	3	535	729	327	74	.	.	.	1668
1.75-1.99	.	.	.	68	365	223	55	3	.	.	714
2.00-2.24	.	.	.	10	482	242	55	5	.	.	794
2.25-2.49	.	.	.	1	152	276	35	5	1	.	470
2.50-2.74	.	.	.	.	71	379	39	4	1	.	494
2.75-2.99	.	.	.	.	11	170	53	4	.	.	238
3.00-3.24	.	.	.	.	.	89	137	2	2	.	230
3.25-3.49	.	.	.	.	.	12	89	2	.	.	103
3.50+	.	.	.	.	.	10	179	45	12	1	247
TOTAL	0	4907	3611	5649	5401	2497	767	70	16	1	

MEAN HS(M) = 1.0 LARGEST HS(M)= 6.7 MEAN TP(SEC)= 5.0 NO. OF CASES= 21465.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	771	150	247	32	.	.	.	.	.	1200
0.25-0.49	.	949	126	368	254	1	.	.	.	.	1698
0.50-0.74	.	1280	125	421	780	102	.	.	.	.	2708
0.75-0.99	.	408	91	258	704	284	5	.	.	.	1750
1.00-1.24	.	132	111	251	779	917	64	.	.	.	2254
1.25-1.49	.	.	36	70	194	622	101	4	.	.	1027
1.50-1.74	.	.	7	80	211	381	280	5	.	.	964
1.75-1.99	.	.	.	16	32	132	142	8	.	.	350
2.00-2.24	.	.	.	2	79	86	132	16	.	.	315
2.25-2.49	.	.	.	.	25	69	52	14	2	.	162
2.50-2.74	.	.	.	.	9	80	26	16	3	.	134
2.75-2.99	.	.	.	.	.	27	39	6	3	.	75
3.00-3.24	.	.	.	.	.	13	36	2	2	.	53
3.25-3.49	.	.	.	.	.	4	34	2	.	.	40
3.50+	.	.	.	.	.	3	60	38	9	.	110
TOTAL	0	3540	646	1713	3119	2721	971	111	19	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 6.2 MEAN TP(SEC)= 5.3 NO. OF CASES= 12036.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	633	6	20	.	.	.	.	.	.	659
0.25-0.49	.	887	10	13	12	.	.	.	.	.	922
0.50-0.74	.	1057	86	17	48	12	.	.	.	.	1220
0.75-0.99	.	444	95	6	39	32	.	.	.	.	616
1.00-1.24	.	129	201	14	43	80	4	.	.	.	471
1.25-1.49	.	.	67	11	6	55	7	.	.	.	146
1.50-1.74	.	.	17	34	5	35	29	1	.	.	121
1.75-1.99	.	.	1	8	.	3	13	1	.	.	26
2.00-2.24	.	.	.	2	1	.	8	1	.	.	12
2.25-2.49	.	.	.	1	.	.	3	.	.	.	4
2.50-2.74	.	.	.	.	.	.	1	1	1	.	3
2.75-2.99	.	.	.	.	.	.	.	1	1	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3150	483	128	154	217	65	5	2	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.6 NO. OF CASES= 3947.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	467	3	2	.	.	.	.	.	.	472
0.25-0.49	.	735	8	.	1	.	.	.	.	.	744
0.50-0.74	.	805	163	2	1	.	.	.	.	.	971
0.75-0.99	.	176	325	8	.	1	.	.	.	.	510
1.00-1.24	.	28	519	69	.	1	.	.	.	.	617
1.25-1.49	.	.	43	207	.	.	1	.	.	.	251
1.50-1.74	.	.	6	269	1	2	.	.	.	.	278
1.75-1.99	.	.	.	56	6	.	1	.	.	.	63
2.00-2.24	.	.	.	18	28	.	.	.	.	.	46
2.25-2.49	.	.	.	1	10	.	.	.	.	.	11
2.50-2.74	.	.	.	.	5	.	.	.	.	.	5
2.75-2.99	.	.	.	.	.	.	.	1	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	2	.	.	.	.	2
TOTAL	0	2211	1067	632	52	6	2	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= [illegible].7 MEAN TP(SEC)= 3.6 NO. OF CASES= 3725.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	412	4	1	.	.	.	.	.	.	417
0.25-0.49	.	647	16	.	.	.	.	.	.	.	663
0.50-0.74	.	561	162	1	.	.	.	.	.	.	724
0.75-0.99	.	47	412	4	.	.	.	.	.	.	463
1.00-1.24	.	.	630	119	.	.	.	.	.	.	749
1.25-1.49	.	.	5	394	.	.	.	.	.	.	399
1.50-1.74	.	.	.	436	.	.	.	.	.	.	436
1.75-1.99	.	.	.	88	26	.	.	.	.	.	114
2.00-2.24	.	.	.	1	79	.	.	.	.	.	80
2.25-2.49	.	.	.	.	23	.	.	.	.	.	23
2.50-2.74	.	.	.	.	17	.	.	.	.	.	17
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1667	1229	1044	146	3	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 3.9 NO. OF CASES= 3832.

STATION E31 42.58N 79.97W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

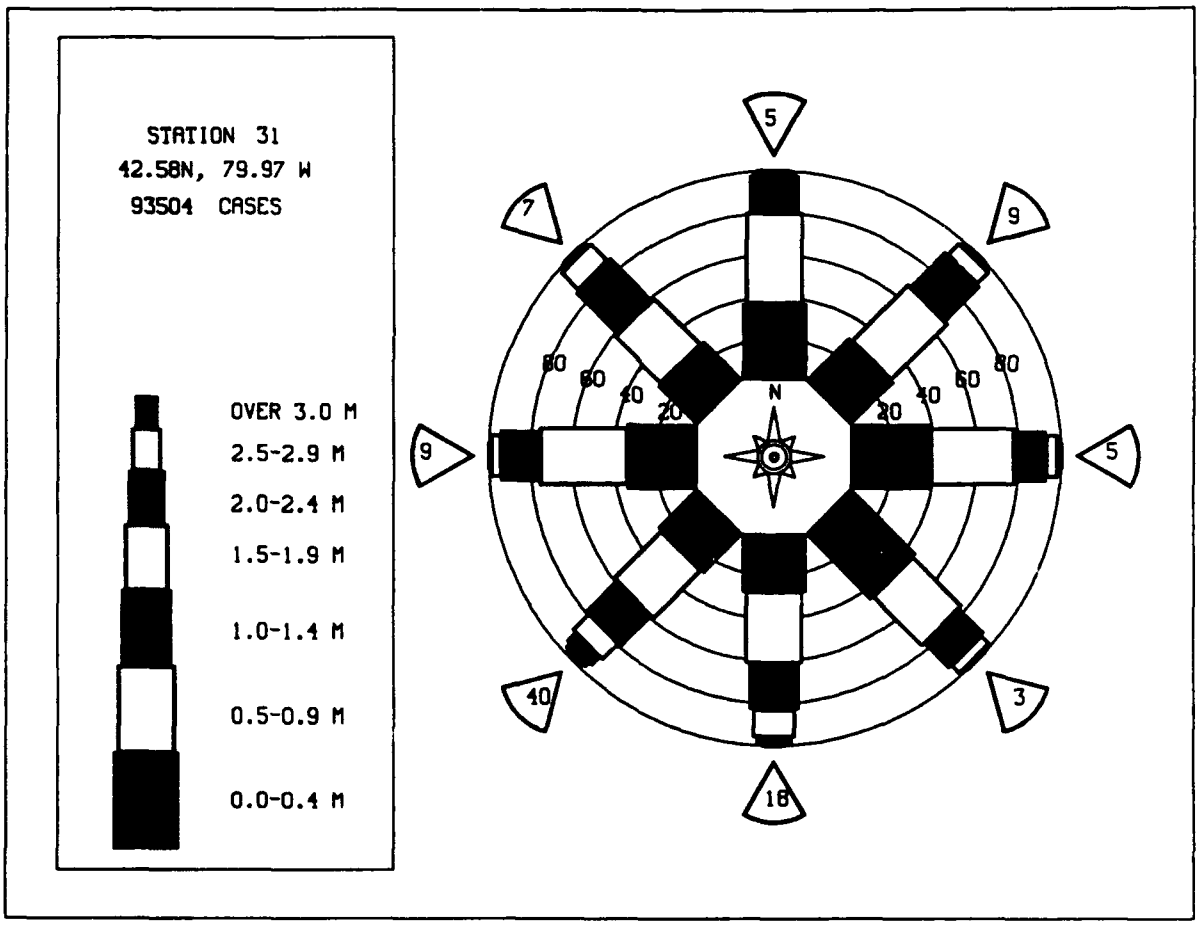
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	320	2	.	.	.	.	.	.	.	322
0.25-0.49	.	465	10	.	.	.	.	.	.	.	475
0.50-0.74	.	618	113	7	.	.	.	.	.	.	738
0.75-0.99	.	73	368	4	.	.	.	.	.	.	445
1.00-1.24	.	.	555	58	.	.	.	.	.	.	613
1.25-1.49	.	.	23	291	.	.	.	.	.	.	314
1.50-1.74	.	.	.	208	.	.	.	.	.	.	208
1.75-1.99	.	.	.	36	1	.	.	.	.	.	37
2.00-2.24	.	.	.	.	16	.	.	.	.	.	16
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	7	.	.	.	.	.	7
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1476	1071	604	29	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 2982.

STATION E31 42.58N 79.97W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1019	8	51	3	.	.	.	.	.	1155
0.25-0.49	.	1422	134	154	42	.	.	.	.	.	1752
0.50-0.74	.	1288	563	235	186	15	.	.	.	.	2287
0.75-0.99	.	215	576	218	150	44	.	.	.	.	1203
1.00-1.24	.	30	612	411	211	133	8	.	.	.	1405
1.25-1.49	.	.	33	416	96	94	14	.	.	.	653
1.50-1.74	.	.	3	456	141	76	38	.	.	.	714
1.75-1.99	.	.	.	71	122	38	21	1	.	.	253
2.00-2.24	.	.	.	5	163	36	19	2	.	.	225
2.25-2.49	.	.	.	.	52	40	9	2	.	.	103
2.50-2.74	.	.	.	.	25	57	7	2	.	.	91
2.75-2.99	.	.	.	.	2	24	10	1	.	.	37
3.00-3.24	.	.	.	.	.	16	19	.	.	.	35
3.25-3.49	.	.	.	.	.	2	13	.	.	.	15
3.50+	.	.	.	.	.	2	25	8	2	.	37
TOTAL	0	3974	2003	2017	1193	577	183	16	2	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 7.0 MEAN TP(SEC)= 4.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E31 (42.58N 79.97W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.8	0.8	0.9	0.8	0.6	0.7	0.8	0.8	0.9	1.1	0.9	0.8
1957	0.9	0.8	1.1	1.1	1.0	0.9	0.8	0.7	1.0	1.0	1.5	1.4	1.0
1958	1.0	0.9	0.8	0.7	0.7	0.6	0.5	0.5	0.7	0.9	0.9	0.7	0.7
1959	0.8	0.7	0.8	0.6	0.4	0.3	0.4	0.6	0.7	0.8	0.8	0.6	0.6
1960	0.7	1.2	1.1	1.3	1.0	0.9	0.7	0.8	0.8	1.0	1.4	1.5	1.0
1961	1.2	1.0	1.1	1.0	1.1	1.1	0.8	0.9	1.0	1.3	1.2	1.3	1.1
1962	1.2	1.0	1.0	1.1	0.9	0.7	0.7	0.7	0.8	0.8	0.8	1.0	0.9
1963	1.1	1.1	1.2	1.2	1.0	0.5	0.7	0.7	0.7	0.8	1.2	1.0	0.9
1964	1.3	1.0	1.1	1.2	1.1	0.7	0.6	0.8	0.8	0.8	1.0	1.0	1.0
1965	1.2	1.2	0.9	0.8	0.8	0.8	0.6	0.7	0.8	1.1	1.1	1.0	0.9
1966	1.0	0.8	0.9	0.9	0.8	0.6	0.6	0.6	0.7	1.1	1.1	1.0	0.8
1967	1.2	1.2	0.8	0.9	0.8	0.7	0.5	0.6	0.7	1.0	1.1	1.0	0.9
1968	0.9	0.9	0.9	1.0	0.8	0.7	0.7	0.6	0.7	0.9	1.0	1.1	0.8
1969	1.2	0.7	0.9	0.9	0.7	0.7	0.6	0.6	0.7	0.9	0.9	0.8	0.8
1970	0.8	1.1	0.8	1.0	0.9	0.7	0.7	0.6	0.8	0.9	1.1	1.0	0.9
1971	1.2	1.4	1.0	1.0	0.8	0.6	0.7	0.7	0.6	0.7	0.9	1.0	0.9
1972	1.2	0.9	0.9	0.8	0.7	0.7	0.6	0.7	0.9	0.9	0.9	0.9	0.8
1973	1.3	0.9	1.0	1.2	0.9	0.9	0.8	0.7	0.7	0.8	1.1	1.1	1.0
1974	1.0	1.0	1.0	1.2	0.9	0.8	0.7	0.6	0.8	0.8	1.0	1.0	0.9
1975	1.1	0.9	1.0	1.1	0.5	0.8	0.5	0.5	0.8	1.0	1.2	1.0	0.8
1976	1.2	1.3	1.4	1.1	1.0	0.8	0.7	0.6	0.8	0.9	1.1	1.2	1.0
1977	1.4	1.2	1.1	1.0	0.7	0.7	0.7	0.7	0.7	0.9	1.1	1.3	1.0
1978	1.3	0.6	0.8	1.0	0.8	0.7	0.7	0.6	0.7	0.9	1.0	1.2	0.8
1979	1.0	1.0	1.0	1.0	0.7	0.7	0.5	0.7	0.7	0.9	1.0	1.1	0.9
1980	1.0	0.8	0.9	0.9	0.6	0.6	0.5	0.5	0.7	0.9	1.0	0.9	0.8
1981	0.8	1.0	0.8	1.1	0.5	0.6	0.4	0.5	0.6	0.7	0.7	0.8	0.7
1982	1.4	0.8	0.8	1.0	0.4	0.5	0.4	0.4	0.4	0.6	0.8	0.9	0.7
1983	0.8	0.5	0.6	0.8	0.7	0.3	0.5	0.4	0.6	0.8	0.8	1.0	0.7
1984	0.7	0.8	0.9	0.7	0.8	0.6	0.4	0.4	0.5	0.5	0.9	1.0	0.7
1985	1.0	0.9	1.0	1.0	0.7	0.6	0.6	0.6	0.6	0.8	0.9	1.1	0.8
1986	1.3	0.8	1.2	1.0	1.0	0.9	0.8	1.0	1.0	1.0	1.1	1.0	1.0
1987	1.0	0.8	0.9	1.1	0.9	0.8	0.8	1.0	0.7	1.0	1.3	1.4	1.0
MEAN	1.1	0.9	0.9	1.0	0.8	0.7	0.6	0.6	0.7	0.9	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E31 (42.58N 79.97W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	1.9	3.9	3.1	2.4	2.1	2.4	2.4	2.2	3.0	3.0	2.8
1957	2.3	2.5	3.8	4.8	3.0	2.5	2.3	2.1	2.9	2.9	4.6	3.5
1958	2.6	2.8	1.6	3.3	1.7	2.1	1.7	1.9	2.8	2.6	3.0	2.0
1959	2.8	2.0	3.6	2.8	1.4	1.1	2.4	2.2	2.3	2.4	2.1	2.3
1960	2.2	4.8	3.4	4.9	2.7	4.2	2.9	2.8	2.3	3.1	3.9	3.9
1961	4.0	4.6	3.4	4.3	3.7	4.0	2.4	2.9	3.4	3.4	3.8	5.1
1962	4.1	3.1	3.0	4.3	3.5	2.5	3.0	2.5	2.7	3.3	3.4	3.6
1963	4.1	3.3	5.2	4.0	4.1	1.9	2.3	2.1	2.9	3.8	3.7	3.4
1964	5.0	3.3	6.7	3.7	5.1	3.1	1.8	2.5	2.8	2.4	3.1	3.0
1965	3.5	3.2	4.9	2.9	2.7	2.8	2.2	2.5	2.9	4.1	4.4	3.6
1966	3.2	2.2	3.0	3.2	3.7	2.5	2.7	2.1	2.3	3.6	4.4	3.4
1967	3.5	4.5	2.3	3.9	3.3	2.0	2.3	1.5	3.4	3.8	2.8	3.2
1968	2.3	3.2	2.6	4.7	3.2	2.5	2.5	2.8	2.3	3.2	2.8	3.6
1969	3.1	1.7	3.5	2.9	2.8	2.7	2.4	2.8	2.2	3.0	2.3	2.0
1970	2.6	3.6	3.7	3.9	3.1	2.7	2.9	2.3	2.7	2.0	4.0	3.2
1971	3.3	4.9	4.0	3.6	3.6	2.3	3.3	2.1	1.8	2.1	2.8	4.2
1972	3.8	3.8	4.0	2.2	2.7	2.2	2.4	2.7	3.6	3.3	3.7	2.9
1973	3.5	2.5	4.0	3.5	3.4	2.8	3.4	2.3	3.0	2.7	3.2	3.7
1974	5.9	3.2	3.6	4.1	3.2	3.0	2.4	2.9	3.2	2.8	3.9	2.7
1975	3.7	4.2	2.5	5.8	2.0	2.8	2.4	2.6	2.2	2.9	4.2	4.2
1976	3.4	4.3	3.8	3.3	5.1	3.2	2.7	2.9	2.6	3.1	3.1	4.3
1977	4.2	3.2	3.8	5.0	2.3	2.5	3.3	2.5	2.1	2.8	3.1	4.2
1978	7.0	1.8	3.8	3.4	2.8	2.6	2.7	3.0	2.5	3.0	3.4	3.5
1979	3.3	3.3	3.6	3.1	2.1	2.5	1.7	2.6	2.6	2.8	3.9	3.6
1980	4.0	3.1	2.6	3.5	3.5	2.5	1.9	2.0	2.7	3.5	2.8	3.0
1981	3.5	3.4	4.8	3.7	1.5	2.0	1.6	1.5	2.6	3.1	3.4	2.4
1982	5.3	3.9	4.9	4.3	1.6	1.8	2.3	1.6	1.5	2.8	3.0	4.8
1983	2.3	1.9	2.2	2.5	2.8	1.4	2.2	2.1	2.3	3.2	2.9	2.8
1984	2.5	2.3	3.0	4.7	2.9	1.7	1.5	1.3	2.0	2.3	3.2	3.7
1985	3.5	2.5	2.8	5.4	3.1	1.9	1.9	1.8	2.3	2.8	2.3	4.2
1986	3.9	2.3	3.8	3.1	3.4	3.2	2.3	2.8	3.7	3.5	4.0	3.3
1987	3.3	2.3	3.7	3.6	3.1	2.9	2.3	2.2	2.2	2.9	3.4	5.4

32 YR. STATISTICS FOR WIS STATION E31

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.4
LARGEST WAVE HS	(METERS)	7.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	204.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		78012621

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	237	.	.	.	.	.	.	.	.	237
0.25-0.49	.	411	29	1	.	.	.	.	.	.	441
0.50-0.74	.	453	90	51	.	.	.	.	.	.	594
0.75-0.99	.	180	21	49	.	.	.	.	.	.	250
1.00-1.24	.	49	38	45	9	.	.	.	.	.	141
1.25-1.49	.	.	9	11	4	.	.	.	.	.	24
1.50-1.74	.	.	.	5	11	.	.	.	.	.	16
1.75-1.99	.	.	.	.	4	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1330	187	162	28	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 1606.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	234	1	.	.	.	.	.	.	.	235
0.25-0.49	.	421	47	.	.	.	.	.	.	.	468
0.50-0.74	.	411	117	29	1	.	.	.	.	.	558
0.75-0.99	.	95	87	38	.	.	.	.	.	.	220
1.00-1.24	.	9	86	60	4	.	.	.	.	.	159
1.25-1.49	.	.	2	41	2	.	.	.	.	.	45
1.50-1.74	.	.	.	40	2	.	.	.	.	.	42
1.75-1.99	.	.	.	2	6	.	.	.	.	.	8
2.00-2.24	.	.	.	1	4	.	.	.	.	.	5
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1170	340	211	23	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 1640.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	401	6	.	.	.	.	.	.	.	407
0.25-0.49	.	713	60	2	.	.	.	.	.	.	775
0.50-0.74	.	716	310	86	.	.	.	.	.	.	1112
0.75-0.99	.	121	348	125	1	.	.	.	.	.	595
1.00-1.24	.	.	363	343	10	.	.	.	.	.	716
1.25-1.49	.	.	11	408	4	.	.	.	.	.	423
1.50-1.74	.	.	1	488	16	1	.	.	.	.	506
1.75-1.99	.	.	.	37	189	.	.	.	.	.	226
2.00-2.24	.	.	.	.	163	4	.	.	.	.	167
2.25-2.49	.	.	.	.	42	6	.	.	.	.	48
2.50-2.74	.	.	.	.	19	4	.	.	.	.	23
2.75-2.99	.	.	.	.	1	6	.	.	.	.	7
3.00-3.24	.	.	.	.	.	8	.	.	.	.	8
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	2	1	.	.	.	3
TOTAL	0	1951	1099	1489	445	32	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 4704.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	420	4	.	.	.	.	.	.	.	424
0.25-0.49	.	717	37	1	.	.	.	.	.	.	755
0.50-0.74	.	630	441	78	.	.	.	.	.	.	1149
0.75-0.99	.	82	376	203	2	.	.	.	.	.	663
1.00-1.24	.	.	226	414	27	.	.	.	.	.	667
1.25-1.49	.	.	4	317	18	.	.	.	.	.	339
1.50-1.74	.	.	.	355	93	.	.	.	.	.	448
1.75-1.99	.	.	.	11	158	1	.	.	.	.	170
2.00-2.24	.	.	.	.	135	2	.	.	.	.	137
2.25-2.49	.	.	.	.	54	9	.	.	.	.	63
2.50-2.74	.	.	.	.	24	28	.	.	.	.	52
2.75-2.99	.	.	.	.	2	10	.	.	.	.	12
3.00-3.24	.	.	.	.	.	7	1	.	.	.	8
3.25-3.49	.	.	.	.	.	2	1	.	.	.	3
3.50+	.	.	.	.	.	1	1	.	.	.	2
TOTAL	0	1849	1088	1379	513	60	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.2 NO. OF CASES= 4588.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	396	1	.	.	.	.	.	.	.	397
0.25-0.49	.	557	49	4	.	.	.	.	.	.	610
0.50-0.74	.	330	232	51	.	.	.	.	.	.	613
0.75-0.99	.	24	155	71	.	.	.	.	.	.	250
1.00-1.24	.	.	60	99	4	.	.	.	.	.	163
1.25-1.49	.	.	1	81	4	.	.	.	.	.	86
1.50-1.74	.	.	.	53	10	.	.	.	.	.	63
1.75-1.99	.	.	.	.	13	.	.	.	.	.	13
2.00-2.24	.	.	.	.	6	.	.	.	.	.	6
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1307	498	359	40	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.6 NO. OF CASES= 2069.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	256	.	.	.	.	.	.	.	.	256
0.25-0.49	.	332	31	3	.	.	.	.	.	.	366
0.50-0.74	.	239	139	24	.	.	.	.	.	.	402
0.75-0.99	.	21	106	33	.	.	.	.	.	.	160
1.00-1.24	.	.	80	64	2	.	.	.	.	.	146
1.25-1.49	.	.	2	64	1	.	.	.	.	.	67
1.50-1.74	.	.	.	43	.	.	.	.	.	.	43
1.75-1.99	.	.	.	3	4	.	.	.	.	.	7
2.00-2.24	.	.	.	.	5	.	.	.	.	.	5
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	848	358	234	13	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 1365.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	260	.	.	.	.	.	.	.	.	260
0.25-0.49	.	406	38	3	.	.	.	.	.	.	447
0.50-0.74	.	406	122	21	.	.	.	.	.	.	549
0.75-0.99	.	37	155	23	.	.	.	.	.	.	215
1.00-1.24	.	.	180	108	3	.	.	.	.	.	291
1.25-1.49	.	.	2	186	.	.	.	.	.	.	188
1.50-1.74	.	.	.	161	.	.	.	.	.	.	161
1.75-1.99	.	.	.	32	19	.	.	.	.	.	51
2.00-2.24	.	.	.	.	38	.	.	.	.	.	38
2.25-2.49	.	.	.	.	12	.	.	.	.	.	12
2.50-2.74	.	.	.	.	14	.	.	.	.	.	14
2.75-2.99	.	.	.	.	5	1	.	.	.	.	6
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1109	497	534	91	5	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 2100.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	408	1	.	.	.	.	.	.	.	409
0.25-0.49	.	670	14	2	.	.	.	.	.	.	686
0.50-0.74	.	628	170	5	.	.	.	.	.	.	803
0.75-0.99	.	55	430	20	.	.	.	.	.	.	505
1.00-1.24	.	.	328	205	.	.	.	.	.	.	533
1.25-1.49	.	.	6	329	1	.	.	.	.	.	336
1.50-1.74	.	.	.	421	6	.	.	.	.	.	427
1.75-1.99	.	.	.	82	84	.	.	.	.	.	166
2.00-2.24	.	.	.	.	133	.	.	.	.	.	133
2.25-2.49	.	.	.	.	52	.	.	.	.	.	52
2.50-2.74	.	.	.	.	38	2	.	.	.	.	40
2.75-2.99	.	.	.	.	7	2	.	.	.	.	9
3.00-3.24	.	.	.	.	.	10	.	.	.	.	10
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	1	2	.	.	.	3
TOTAL	0	1761	949	1064	321	16	2	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.0 NO. OF CASES= 3857.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	837	3	.	.	.	.	.	.	.	840
0.25-0.49	.	1237	29	2	.	.	.	.	.	.	1268
0.50-0.74	.	1334	598	9	1	.	.	.	.	.	1942
0.75-0.99	.	82	947	117	.	.	.	.	.	.	1146
1.00-1.24	.	.	803	648	1	.	.	.	.	.	1452
1.25-1.49	.	.	12	880	2	.	.	.	.	.	894
1.50-1.74	.	.	.	1037	21	.	.	.	.	.	1058
1.75-1.99	.	.	.	190	297	.	.	.	.	.	487
2.00-2.24	.	.	.	.	329	.	.	.	.	.	329
2.25-2.49	.	.	.	.	111	.	.	.	.	.	111
2.50-2.74	.	.	.	.	77	1	.	.	.	.	78
2.75-2.99	.	.	.	.	10	11	.	.	.	.	21
3.00-3.24	.	.	.	.	.	12	.	.	.	.	12
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	3490	2392	2883	849	26	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 9025.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1103	14	3	.	.	.	.	.	.	1120
0.25-0.49	.	1594	81	16	.	.	.	.	.	.	1691
0.50-0.74	.	1514	996	72	3	.	.	.	.	.	2585
0.75-0.99	.	88	1064	244	4	.	.	.	.	.	1400
1.00-1.24	.	.	864	897	32	1	.	.	.	.	1794
1.25-1.49	.	.	11	959	50	.	.	.	.	.	1020
1.50-1.74	.	.	1	1236	159	.	.	.	.	.	1396
1.75-1.99	.	.	.	248	382	12	.	.	.	.	642
2.00-2.24	.	.	.	11	559	7	.	.	.	.	577
2.25-2.49	.	.	.	.	144	33	.	.	.	.	177
2.50-2.74	.	.	.	.	82	42	.	.	.	.	124
2.75-2.99	.	.	.	.	3	35	1	.	.	.	39
3.00-3.24	.	.	.	.	.	40	.	.	.	.	40
3.25-3.49	.	.	.	.	.	1	1	.	.	.	2
3.50+	.	.	.	.	.	1	9	1	.	.	11
TOTAL	0	4299	3031	3686	1418	172	11	1	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 11814.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1390	207	23	1	.	.	.	.	.	1621
0.25-0.49	.	1674	588	305	2	.	.	.	.	.	2569
0.50-0.74	.	1002	1318	992	137	.	.	.	.	.	3449
0.75-0.99	.	121	664	855	244	1	.	.	.	.	1885
1.00-1.24	.	3	403	1183	510	21	.	.	.	.	2120
1.25-1.49	.	.	19	596	480	34	.	.	.	.	1129
1.50-1.74	.	.	.	537	964	94	1	.	.	.	1596
1.75-1.99	.	.	.	53	536	150	2	.	.	.	741
2.00-2.24	.	.	.	7	632	186	18	.	.	.	843
2.25-2.49	.	.	.	.	239	301	4	.	.	.	544
2.50-2.74	.	.	.	.	62	427	7	.	.	.	496
2.75-2.99	.	.	.	.	7	199	5	.	.	.	211
3.00-3.24	.	.	.	.	.	211	17	1	.	.	229
3.25-3.49	.	.	.	.	.	27	38	.	.	.	65
3.50+	.	.	.	.	.	5	96	8	2	.	111
TOTAL	0	4190	3199	4551	3814	1656	188	9	2	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.9 MEAN TP(SEC)= 4.8 NO. OF CASES= 16488.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	764	83	27	.	.	.	.	.	.	874
0.25-0.49	.	1162	316	209	16	.	.	.	.	.	1703
0.50-0.74	.	772	1055	1082	172	2	.	.	.	.	3083
0.75-0.99	.	110	357	1064	347	5	.	.	.	.	1883
1.00-1.24	.	1	341	863	1044	45	.	.	.	.	2294
1.25-1.49	.	.	23	370	772	67	.	.	.	.	1232
1.50-1.74	.	.	1	381	1066	273	7	.	.	.	1728
1.75-1.99	.	.	.	48	496	345	9	.	.	.	898
2.00-2.24	.	.	.	2	613	272	66	.	.	.	953
2.25-2.49	.	.	.	.	209	404	68	.	.	.	681
2.50-2.74	.	.	.	.	39	669	72	1	.	.	781
2.75-2.99	.	.	.	.	1	244	64	2	.	.	311
3.00-3.24	.	.	.	.	.	242	98	.	2	.	342
3.25-3.49	.	.	.	.	.	42	116	9	.	.	167
3.50+	.	.	.	.	.	9	306	69	11	.	395
TOTAL	0	2809	2176	4046	4775	2619	806	81	13	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 5.3 NO. OF CASES= 16224.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	534	13	3	.	.	.	.	.	.	550
0.25-0.49	.	761	168	20	3	.	.	.	.	.	952
0.50-0.74	.	740	681	272	33	.	.	.	.	.	1726
0.75-0.99	.	159	471	458	62	2	.	.	.	.	1152
1.00-1.24	.	17	398	816	391	19	.	.	.	.	1641
1.25-1.49	.	.	39	442	335	12	.	.	.	.	828
1.50-1.74	.	.	4	413	802	64	4	.	.	.	1287
1.75-1.99	.	.	.	33	402	137	.	.	.	.	572
2.00-2.24	.	.	.	10	434	113	14	.	.	.	571
2.25-2.49	.	.	.	.	127	288	9	.	.	.	424
2.50-2.74	.	.	.	.	29	489	18	.	.	.	536
2.75-2.99	.	.	.	.	.	175	9	.	.	.	184
3.00-3.24	.	.	.	.	.	177	42	.	.	.	219
3.25-3.49	.	.	.	.	.	14	56	1	.	.	71
3.50+	.	.	.	.	.	1	145	23	1	.	170
TOTAL	0	2211	1774	2467	2618	1491	297	24	1	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 5.0 NO. OF CASES= 10200.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	333	10	.	.	.	.	.	.	.	343
0.25-0.49	.	467	95	2	.	.	.	.	.	.	564
0.50-0.74	.	774	355	52	4	.	.	.	.	.	1185
0.75-0.99	.	335	291	197	4	.	.	.	.	.	827
1.00-1.24	.	9	345	532	23	2	.	.	.	.	911
1.25-1.49	.	.	127	217	51	.	.	.	.	.	395
1.50-1.74	.	.	38	103	130	4	.	.	.	.	275
1.75-1.99	.	.	.	24	54	3	.	.	.	.	81
2.00-2.24	.	.	.	8	62	19	.	.	.	.	89
2.25-2.49	.	.	.	2	23	11	1	.	.	.	37
2.50-2.74	.	.	.	1	3	31	1	.	.	.	36
2.75-2.99	.	.	.	.	1	5	.	.	.	.	6
3.00-3.24	.	.	.	.	.	9	1	.	.	.	10
3.25-3.49	.	.	.	.	.	3	3	.	.	.	6
3.50+	.	.	.	.	.	.	5	.	.	.	5
TOTAL	0	1918	1261	1138	355	87	11	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 4476.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	163	6	.	.	.	.	.	.	.	169
0.25-0.49	.	303	55	.	.	.	.	.	.	.	358
0.50-0.74	.	537	55	31	1	.	.	.	.	.	624
0.75-0.99	.	179	74	40	1	.	.	.	.	.	294
1.00-1.24	.	9	218	52	.	.	.	.	.	.	279
1.25-1.49	.	.	75	9	3	.	.	.	.	.	87
1.50-1.74	.	.	12	31	3	.	.	.	.	.	46
1.75-1.99	.	.	.	10	2	.	.	.	.	.	12
2.00-2.24	.	.	.	4	.	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1191	495	177	10	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 1762.

STATION E32 42.45N 80.15W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

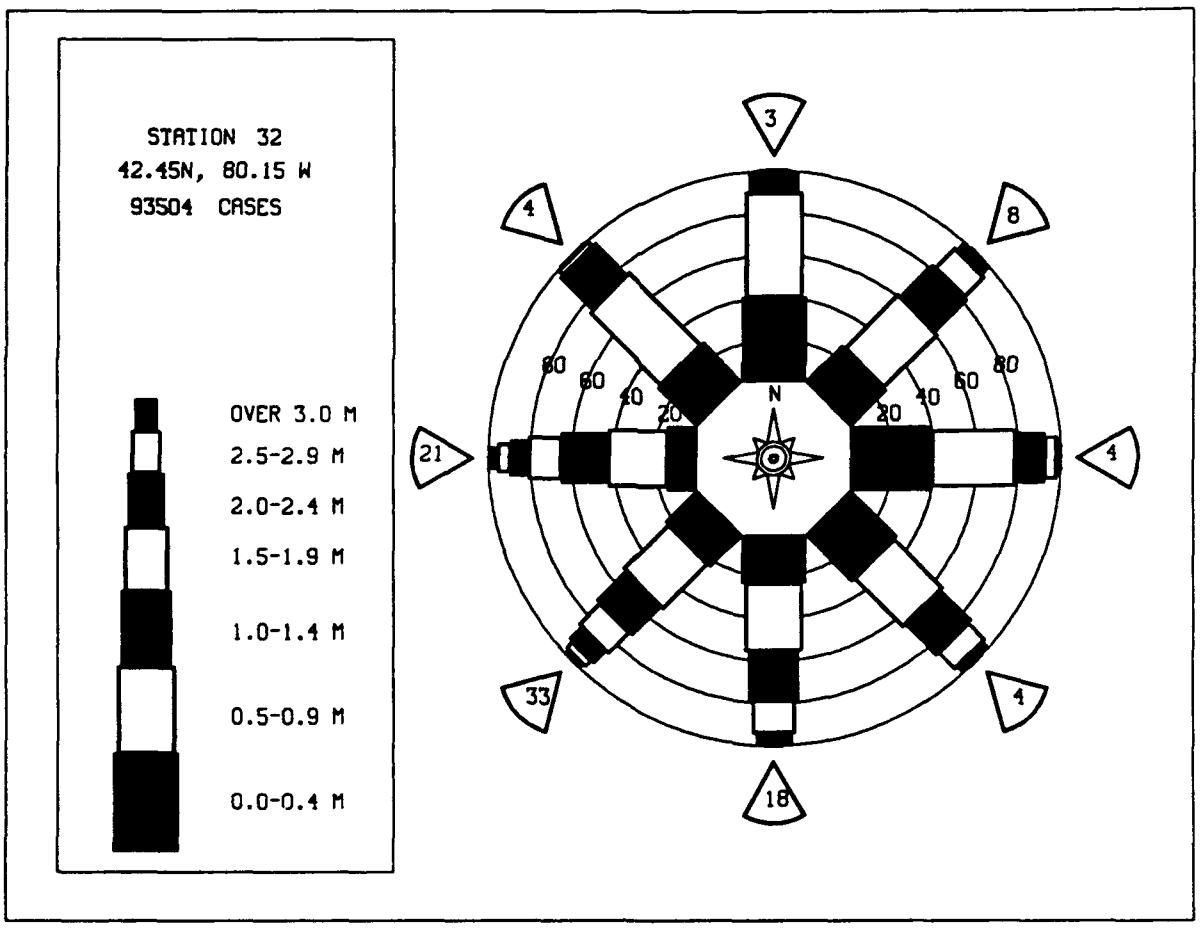
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	149	2	.	.	.	.	.	.	.	151
0.25-0.49	.	349	29	2	.	.	.	.	.	.	380
0.50-0.74	.	542	48	25	.	.	.	.	.	.	615
0.75-0.99	.	222	39	38	.	.	.	.	.	.	299
1.00-1.24	.	19	157	16	3	.	.	.	.	.	195
1.25-1.49	.	.	27	1	1	.	.	.	.	.	29
1.50-1.74	.	.	2	8	1	.	.	.	.	.	11
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1281	304	98	5	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 1586.

STATION E32 42.45N 80.15W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	789	35	5	.	.	.	.	.	.	829
0.25-0.49	.	1178	167	57	2	.	.	.	.	.	1404
0.50-0.74	.	1103	673	288	35	.	.	.	.	.	2099
0.75-0.99	.	191	559	358	66	.	.	.	.	.	1174
1.00-1.24	.	11	489	635	206	8	.	.	.	.	1349
1.25-1.49	.	.	37	491	173	11	.	.	.	.	712
1.50-1.74	.	.	6	532	328	43	1	.	.	.	910
1.75-1.99	.	.	.	78	265	65	1	.	.	.	409
2.00-2.24	.	.	.	4	311	60	9	.	.	.	384
2.25-2.49	.	.	.	.	102	105	8	.	.	.	215
2.50-2.74	.	.	.	.	39	169	9	.	.	.	217
2.75-2.99	.	.	.	.	3	69	8	.	.	.	80
3.00-3.24	.	.	.	.	.	72	16	.	.	.	88
3.25-3.49	.	.	.	.	.	9	21	1	.	.	31
3.50+	.	.	.	.	.	2	56	10	1	.	69
TOTAL	0	3272	1966	2448	1530	613	129	11	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 6.1 MEAN TP(SEC)= 4.5 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E32 (42.45N 80.15W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.9	0.9	1.1	0.8	0.7	0.8	0.9	0.8	1.0	1.2	1.0	0.9
1957	1.0	0.9	1.3	1.3	1.2	1.1	1.0	0.8	1.1	1.1	1.6	1.6	1.2
1958	1.1	1.1	0.7	0.8	0.8	0.8	0.6	0.6	0.7	1.1	1.1	0.8	0.8
1959	1.0	0.8	0.9	0.7	0.4	0.4	0.4	0.6	0.8	0.9	0.9	0.7	0.7
1960	0.7	1.4	1.3	1.5	1.1	1.0	0.9	0.9	0.9	1.1	1.6	1.7	1.2
1961	1.3	1.1	1.2	1.2	1.2	1.2	0.9	1.1	1.2	1.4	1.4	1.5	1.2
1962	1.5	1.1	1.1	1.2	1.1	0.8	0.8	0.8	0.9	1.0	1.0	1.3	1.1
1963	1.4	1.3	1.4	1.2	1.1	0.6	0.8	0.8	0.9	0.9	1.5	1.3	1.1
1964	1.6	1.1	1.4	1.4	1.2	0.8	0.7	0.9	1.0	1.0	1.2	1.3	1.2
1965	1.5	1.4	1.0	1.0	0.9	0.9	0.7	0.9	1.0	1.3	1.4	1.3	1.1
1966	1.4	0.8	1.2	1.1	0.9	0.7	0.8	0.8	0.9	1.3	1.3	1.3	1.0
1967	1.6	1.4	0.9	1.1	1.0	0.8	0.6	0.7	0.8	1.2	1.5	1.3	1.1
1968	1.1	1.3	1.1	1.1	1.0	0.8	0.8	0.8	0.9	1.2	1.3	1.4	1.1
1969	1.7	0.8	1.2	1.0	0.9	0.8	0.7	0.7	0.8	1.2	1.2	1.0	1.0
1970	1.1	1.2	1.0	1.2	1.0	0.9	0.9	0.7	1.0	1.1	1.4	1.3	1.1
1971	1.6	1.5	1.2	1.2	0.8	0.7	0.8	0.8	0.7	0.8	1.1	1.2	1.0
1972	1.8	1.1	1.1	0.9	0.8	0.7	0.6	0.8	0.9	1.0	1.0	1.2	1.0
1973	1.5	1.1	1.2	1.4	1.1	1.0	0.9	0.8	0.9	1.0	1.5	1.2	1.1
1974	1.3	1.2	1.2	1.4	1.1	0.9	0.8	0.7	1.0	1.0	1.2	1.2	1.1
1975	1.4	1.2	1.2	1.0	0.6	0.9	0.7	0.6	0.9	1.1	1.3	1.3	1.0
1976	1.6	1.5	1.6	1.2	1.1	1.0	0.8	0.7	1.0	1.1	1.5	1.4	1.2
1977	1.7	1.4	1.3	1.2	0.7	0.8	0.8	0.9	0.9	1.0	1.4	1.6	1.1
1978	1.6	0.7	1.0	1.1	0.8	0.8	0.7	0.6	0.8	1.1	1.1	1.5	1.0
1979	1.4	1.1	1.2	1.1	0.8	0.8	0.6	0.8	0.8	1.1	1.2	1.3	1.0
1980	1.2	0.9	1.1	1.0	0.7	0.7	0.6	0.6	0.8	1.2	1.2	1.1	0.9
1981	1.0	1.2	1.1	1.3	0.6	0.9	0.6	0.6	0.8	0.9	0.9	1.0	0.9
1982	1.7	0.9	1.0	1.3	0.4	0.6	0.5	0.5	0.6	0.7	1.1	1.2	0.9
1983	1.0	0.6	0.8	0.9	0.9	0.4	0.6	0.5	0.7	1.0	1.0	1.4	0.8
1984	0.9	0.9	1.1	0.8	1.0	0.7	0.6	0.5	0.7	0.6	1.1	1.2	0.8
1985	1.3	1.2	1.2	1.2	0.9	0.8	0.8	0.7	0.8	1.0	1.2	1.5	1.0
1986	1.6	1.0	1.4	1.1	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.2
1987	1.3	1.0	1.0	1.2	1.0	1.0	0.9	1.0	0.9	1.2	1.6	1.5	1.1
MEAN	1.3	1.1	1.1	1.1	0.9	0.8	0.7	0.8	0.9	1.1	1.3	1.3	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E32 (42.45N 80.15W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.8	4.0	3.5	2.5	2.7	2.4	2.5	2.3	3.4	3.0	2.9
1957	2.4	2.3	3.6	4.5	2.9	3.5	2.9	2.0	3.2	3.1	4.1	3.3
1958	3.2	2.7	2.0	3.4	1.9	2.4	1.7	1.9	2.7	3.0	2.9	2.9
1959	2.9	1.9	3.4	3.3	1.6	1.4	2.3	2.1	2.5	2.7	2.5	2.3
1960	2.3	4.2	3.6	4.6	2.8	4.1	2.8	2.6	2.5	3.9	3.5	3.6
1961	4.1	4.4	3.0	5.0	3.5	4.1	2.8	3.2	3.5	4.4	4.4	5.3
1962	3.7	3.5	2.8	4.0	4.0	2.3	2.9	2.5	2.8	3.2	3.5	4.2
1963	4.1	3.8	4.6	4.4	3.7	2.5	2.3	3.2	2.8	3.7	3.8	3.4
1964	4.3	3.2	5.9	3.5	5.0	3.3	1.9	2.5	3.5	3.2	4.2	3.9
1965	4.9	3.1	4.2	4.6	3.1	2.5	2.3	2.9	3.2	4.5	4.5	3.7
1966	4.7	2.5	3.7	2.8	4.0	2.5	3.5	2.6	3.5	3.2	4.2	4.3
1967	3.6	4.4	2.4	4.1	3.4	2.2	2.4	2.0	3.4	3.6	3.4	3.2
1968	4.1	3.5	3.1	4.5	3.5	3.0	2.9	3.1	2.6	3.2	3.6	4.5
1969	4.2	3.1	3.6	3.3	3.0	2.8	2.4	2.9	2.5	2.9	3.1	2.6
1970	3.2	3.2	4.3	5.3	2.7	2.7	3.2	2.7	4.0	2.7	4.8	3.9
1971	5.6	4.4	3.9	3.7	3.4	2.3	3.1	2.6	2.1	3.2	3.2	3.9
1972	6.1	3.9	3.8	3.4	2.8	2.4	2.4	2.9	3.3	3.1	3.6	3.7
1973	3.9	2.8	3.7	3.6	3.1	2.8	3.3	2.7	3.0	3.3	4.1	3.6
1974	5.3	3.7	3.8	4.7	3.2	3.2	2.7	2.7	3.3	2.9	3.9	3.0
1975	4.3	4.3	3.4	5.3	2.0	2.8	2.6	3.0	2.6	3.0	4.1	5.1
1976	4.2	3.8	4.5	3.2	4.8	3.2	2.6	3.0	2.8	3.5	3.2	3.9
1977	4.3	3.3	4.0	4.9	2.5	3.0	3.7	2.7	2.7	3.0	3.5	4.0
1978	6.1	1.9	4.0	4.5	3.7	2.8	3.2	3.2	2.6	2.8	3.3	3.8
1979	3.9	3.3	3.7	5.2	2.5	2.5	2.3	2.9	2.6	3.1	3.8	3.9
1980	4.6	3.1	3.7	3.4	3.2	3.3	2.2	1.9	2.7	3.2	2.7	4.5
1981	3.3	4.0	4.4	4.1	2.3	2.6	1.6	1.7	2.6	3.3	3.5	2.7
1982	5.6	3.8	5.1	4.4	1.6	2.0	2.3	1.5	1.8	2.8	3.5	4.8
1983	3.4	2.5	2.3	2.6	2.7	1.6	2.2	2.1	2.4	3.8	3.0	4.0
1984	3.0	2.8	3.1	4.5	3.3	2.1	2.1	1.4	2.3	2.5	3.1	3.4
1985	3.5	2.9	4.0	5.2	2.7	2.5	1.9	2.1	2.4	3.3	2.8	4.6
1986	4.1	2.5	4.4	2.9	3.0	3.0	2.8	2.9	4.0	3.2	4.2	3.0
1987	4.4	2.7	3.4	3.7	2.7	2.7	2.6	2.5	2.2	3.1	3.7	5.2

32 YR. STATISTICS FOR WIS STATION E32

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.5
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	6.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	264.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012515

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	274	3	1	.	.	.	.	.	.	278
0.25-0.49	.	451	37	3	.	.	.	.	.	.	491
0.50-0.74	.	502	71	67	1	.	.	.	.	.	641
0.75-0.99	.	189	11	39	1	.	.	.	.	.	240
1.00-1.24	.	37	33	48	13	.	.	.	.	.	131
1.25-1.49	.	.	4	5	13	.	.	.	.	.	22
1.50-1.74	.	.	1	.	8	.	.	.	.	.	9
1.75-1.99	.	.	.	.	.	1	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1453	160	163	36	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 1704.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	286	2	.	.	.	.	.	.	.	288
0.25-0.49	.	465	44	8	.	.	.	.	.	.	517
0.50-0.74	.	480	87	47	.	.	.	.	.	.	614
0.75-0.99	.	109	78	67	3	.	.	.	.	.	257
1.00-1.24	.	11	27	126	8	.	.	.	.	.	172
1.25-1.49	.	.	5	20	17	.	.	.	.	.	42
1.50-1.74	.	.	2	.	29	.	.	.	.	.	31
1.75-1.99	.	.	.	1	4	.	.	.	.	.	5
2.00-2.24	.	.	.	.	.	2	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1351	245	269	61	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 1811.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	467	7	.	.	.	.	.	.	.	474
0.25-0.49	.	730	97	4	.	.	.	.	.	.	831
0.50-0.74	.	869	268	124	1	.	.	.	.	.	1262
0.75-0.99	.	229	305	194	.	.	.	.	.	.	728
1.00-1.24	.	.	228	662	21	.	.	.	.	.	911
1.25-1.49	.	.	29	362	53	.	.	.	.	.	444
1.50-1.74	.	.	1	73	315	3	.	.	.	.	392
1.75-1.99	.	.	.	.	105	5	.	.	.	.	110
2.00-2.24	.	.	.	.	48	11	.	.	.	.	59
2.25-2.49	.	.	.	1	9	9	.	.	.	.	19
2.50-2.74	.	.	.	.	.	11	.	.	.	.	11
2.75-2.99	.	.	.	.	.	2	1	.	.	.	3
3.00-3.24	.	.	.	.	.	1	1	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2295	935	1420	552	42	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.1 NO. OF CASES= 4919.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	381	4	.	.	.	.	.	.	.	385
0.25-0.49	.	671	54	4	.	.	.	.	.	.	729
0.50-0.74	.	686	366	91	.	.	.	.	.	.	1143
0.75-0.99	.	121	316	190	2	.	.	.	.	.	629
1.00-1.24	.	1	161	438	29	.	.	.	.	.	629
1.25-1.49	.	.	7	247	39	.	.	.	.	.	293
1.50-1.74	.	.	1	137	171	1	.	.	.	.	310
1.75-1.99	.	.	.	2	112	5	.	.	.	.	119
2.00-2.24	.	.	.	.	78	22	.	.	.	.	100
2.25-2.49	.	.	.	.	13	14	.	.	.	.	27
2.50-2.74	.	.	.	.	3	18	.	.	.	.	21
2.75-2.99	.	.	.	.	.	6	1	.	.	.	7
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1860	909	1109	447	66	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 4121.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	474	7	.	.	.	.	.	.	.	481
0.25-0.49	.	576	56	6	.	.	.	.	.	.	638
0.50-0.74	.	364	236	62	1	.	.	.	.	.	663
0.75-0.99	.	29	135	94	.	.	.	.	.	.	258
1.00-1.24	.	.	62	132	6	.	.	.	.	.	200
1.25-1.49	.	.	1	65	7	.	.	.	.	.	73
1.50-1.74	.	.	.	50	32	.	.	.	.	.	82
1.75-1.99	.	.	.	.	21	.	.	.	.	.	21
2.00-2.24	.	.	.	.	8	1	.	.	.	.	9
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1443	497	409	76	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.6 NO. OF CASES= 2278.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	266	1	.	.	.	.	.	.	.	267
0.25-0.49	.	309	27	8	.	.	.	.	.	.	344
0.50-0.74	.	231	132	28	.	.	.	.	.	.	391
0.75-0.99	.	21	80	45	.	.	.	.	.	.	146
1.00-1.24	.	.	58	87	6	.	.	.	.	.	151
1.25-1.49	.	.	1	56	3	.	.	.	.	.	60
1.50-1.74	.	.	.	35	9	.	.	.	.	.	44
1.75-1.99	.	.	.	3	14	.	.	.	.	.	17
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	827	299	262	36	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.7 NO. OF CASES= 1341.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	296	2	.	.	.	.	.	.	.	298
0.25-0.49	.	418	29	6	.	.	.	.	.	.	453
0.50-0.74	.	305	147	11	.	.	.	.	.	.	463
0.75-0.99	.	25	121	25	.	.	.	.	.	.	171
1.00-1.24	.	.	131	101	1	.	.	.	.	.	233
1.25-1.49	.	.	3	158	1	.	.	.	.	.	162
1.50-1.74	.	.	.	135	16	.	.	.	.	.	151
1.75-1.99	.	.	.	19	21	.	.	.	.	.	40
2.00-2.24	.	.	.	.	40	.	.	.	.	.	40
2.25-2.49	.	.	.	.	7	.	.	.	.	.	7
2.50-2.74	.	.	.	.	10	1	.	.	.	.	11
2.75-2.99	.	.	.	.	1	2	.	.	.	.	3
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1044	433	455	97	6	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 3.8 NO. OF CASES= 1914.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	494	2	.	.	.	.	.	.	.	496
0.25-0.49	.	760	21	2	.	.	.	.	.	.	783
0.50-0.74	.	610	340	11	.	.	.	.	.	.	961
0.75-0.99	.	41	486	73	.	.	.	.	.	.	600
1.00-1.24	.	.	276	571	.	.	.	.	.	.	847
1.25-1.49	.	.	5	460	5	.	.	.	.	.	470
1.50-1.74	.	.	.	482	109	.	.	.	.	.	591
1.75-1.99	.	.	.	51	210	.	.	.	.	.	261
2.00-2.24	.	.	.	.	206	.	.	.	.	.	206
2.25-2.49	.	.	.	.	70	3	.	.	.	.	73
2.50-2.74	.	.	.	.	43	16	.	.	.	.	59
2.75-2.99	.	.	.	.	3	12	.	.	.	.	15
3.00-3.24	.	.	.	.	.	14	.	.	.	.	14
3.25-3.49	.	.	.	.	.	4	.	.	.	.	4
3.50+	.	.	.	.	.	1	1	.	.	.	2
TOTAL	0	1905	1130	1650	646	50	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.2 NO. OF CASES= 5045.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1060	7	.	.	.	.	.	.	.	1067
0.25-0.49	.	1425	19	2	.	.	.	.	.	.	1446
0.50-0.74	.	1273	669	11	2	.	.	.	.	.	1955
0.75-0.99	.	72	919	128	.	.	.	.	.	.	1119
1.00-1.24	.	.	772	614	.	.	.	.	.	.	1386
1.25-1.49	.	.	8	829	1	.	.	.	.	.	838
1.50-1.74	.	.	.	881	37	.	.	.	.	.	918
1.75-1.99	.	.	.	164	222	.	.	.	.	.	386
2.00-2.24	.	.	.	.	260	.	.	.	.	.	260
2.25-2.49	.	.	.	.	82	1	.	.	.	.	83
2.50-2.74	.	.	.	.	42	2	.	.	.	.	44
2.75-2.99	.	.	.	.	7	5	.	.	.	.	12
3.00-3.24	.	.	.	.	.	8	.	.	.	.	8
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3830	2394	2629	653	16	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.0 NO. OF CASES= 8917.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1054	20	2	.	.	.	.	.	.	1076
0.25-0.49	.	1615	111	25	.	.	.	.	.	.	1751
0.50-0.74	.	1358	1054	102	7	.	.	.	.	.	2521
0.75-0.99	.	102	964	352	4	.	.	.	.	.	1422
1.00-1.24	.	3	809	992	47	.	.	.	.	.	1851
1.25-1.49	.	.	19	897	122	2	.	.	.	.	1040
1.50-1.74	.	.	.	1127	285	4	.	.	.	.	1416
1.75-1.99	.	.	.	251	417	13	.	.	.	.	681
2.00-2.24	.	.	.	6	582	31	.	.	.	.	619
2.25-2.49	.	.	.	.	137	44	1	.	.	.	182
2.50-2.74	.	.	.	.	53	78	1	.	.	.	132
2.75-2.99	.	.	.	.	1	51	.	.	.	.	52
3.00-3.24	.	.	.	.	.	12	3	.	.	.	15
3.25-3.49	.	.	.	.	.	1	4	.	.	.	5
3.50+	.	.	.	.	.	1	2	.	1	.	4
TOTAL	0	4132	2977	3754	1655	237	11	0	1	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 11955.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1450	204	20	.	.	.	.	.	.	1674
0.25-0.49	.	1528	734	305	4	.	.	.	.	.	2571
0.50-0.74	.	917	1361	1338	128	.	.	.	.	.	3744
0.75-0.99	.	115	564	991	313	.	.	.	.	.	1983
1.00-1.24	.	2	391	1145	721	19	.	.	.	.	2278
1.25-1.49	.	.	19	448	639	44	.	.	.	.	1150
1.50-1.74	.	.	.	463	957	134	1	.	.	.	1555
1.75-1.99	.	.	.	35	589	166	1	.	.	.	791
2.00-2.24	.	.	.	6	705	264	17	.	.	.	992
2.25-2.49	.	.	.	.	187	306	18	.	.	.	511
2.50-2.74	.	.	.	.	31	402	10	.	.	.	443
2.75-2.99	.	.	.	.	1	180	14	1	.	.	196
3.00-3.24	.	.	.	.	.	114	26	2	.	.	142
3.25-3.49	.	.	.	.	.	7	36	.	.	.	43
3.50+	.	.	.	.	.	2	52	6	.	.	60
TOTAL	0	4012	3273	4751	4275	1638	175	9	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.8 NO. OF CASES= 16976.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	709	87	25	.	.	.	.	.	.	821
0.25-0.49	.	1037	223	189	17	.	.	.	.	.	1466
0.50-0.74	.	734	891	807	154	.	.	.	.	.	2586
0.75-0.99	.	110	365	902	243	4	.	.	.	.	1624
1.00-1.24	.	2	304	873	903	36	.	.	.	.	2118
1.25-1.49	.	.	27	366	654	49	1	.	.	.	1097
1.50-1.74	.	.	1	352	1124	270	5	.	.	.	1752
1.75-1.99	.	.	.	34	574	284	8	.	.	.	900
2.00-2.24	.	.	.	1	736	305	77	.	.	.	1119
2.25-2.49	.	.	.	.	188	382	83	.	.	.	653
2.50-2.74	.	.	.	.	19	541	98	2	.	.	660
2.75-2.99	.	.	.	.	1	209	57	8	.	.	275
3.00-3.24	.	.	.	.	.	142	128	12	2	.	284
3.25-3.49	.	.	.	.	.	11	82	8	.	.	101
3.50+	.	.	.	.	.	3	142	48	6	.	199
TOTAL	0	2592	1898	3549	4613	2236	681	78	8	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 5.3 NO. OF CASES= 14663.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	603	12	2	1	.	.	.	.	.	618
0.25-0.49	.	745	132	20	2	.	.	.	.	.	899
0.50-0.74	.	679	639	170	21	.	.	.	.	.	1509
0.75-0.99	.	97	437	399	41	2	.	.	.	.	976
1.00-1.24	.	4	387	822	235	7	.	.	.	.	1455
1.25-1.49	.	.	23	471	244	5	.	.	.	.	743
1.50-1.74	.	.	2	423	792	42	3	.	.	.	1262
1.75-1.99	.	.	.	24	440	57	.	.	.	.	521
2.00-2.24	.	.	.	.	689	82	16	.	.	.	787
2.25-2.49	.	.	.	.	175	217	8	.	.	.	400
2.50-2.74	.	.	.	.	11	347	11	1	.	.	370
2.75-2.99	.	.	.	.	1	111	10	.	.	.	122
3.00-3.24	.	.	.	.	.	58	29	2	.	.	89
3.25-3.49	.	.	.	.	.	1	29	.	.	.	30
3.50+	.	.	.	.	.	1	52	8	.	.	61
TOTAL	0	2128	1632	2331	2652	930	158	11	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 4.9 NO. OF CASES= 9225.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	373	8	.	.	.	.	.	.	.	381
0.25-0.49	.	551	84	4	.	.	.	.	.	.	639
0.50-0.74	.	719	417	33	3	.	.	.	.	.	1172
0.75-0.99	.	163	544	80	1	.	.	.	.	.	788
1.00-1.24	.	8	408	713	14	1	.	.	.	.	1144
1.25-1.49	.	.	22	470	21	.	.	.	.	.	513
1.50-1.74	.	.	4	290	108	4	.	.	.	.	406
1.75-1.99	.	.	.	19	113	1	.	.	.	.	133
2.00-2.24	.	.	.	1	125	2	.	.	.	.	128
2.25-2.49	.	.	.	.	23	9	1	.	.	.	33
2.50-2.74	.	.	.	.	6	32	.	.	.	.	38
2.75-2.99	.	.	.	.	1	11	1	.	.	.	13
3.00-3.24	.	.	.	.	.	4	1	.	.	.	5
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1814	1487	1610	415	64	4	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.2 NO. OF CASES= 5057.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	225	7	.	.	.	.	.	.	.	232
0.25-0.49	.	314	48	6	.	.	.	.	.	.	368
0.50-0.74	.	479	128	18	.	.	.	.	.	.	625
0.75-0.99	.	148	155	33	1	.	.	.	.	.	337
1.00-1.24	.	1	133	180	2	.	.	.	.	.	316
1.25-1.49	.	.	21	98	.	.	.	.	.	.	119
1.50-1.74	.	.	6	47	14	.	.	.	.	.	67
1.75-1.99	.	.	.	4	11	.	.	.	.	.	15
2.00-2.24	.	.	.	1	10	.	.	.	.	.	11
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1167	498	387	38	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 1964.

STATION E33 42.45N 80.35W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

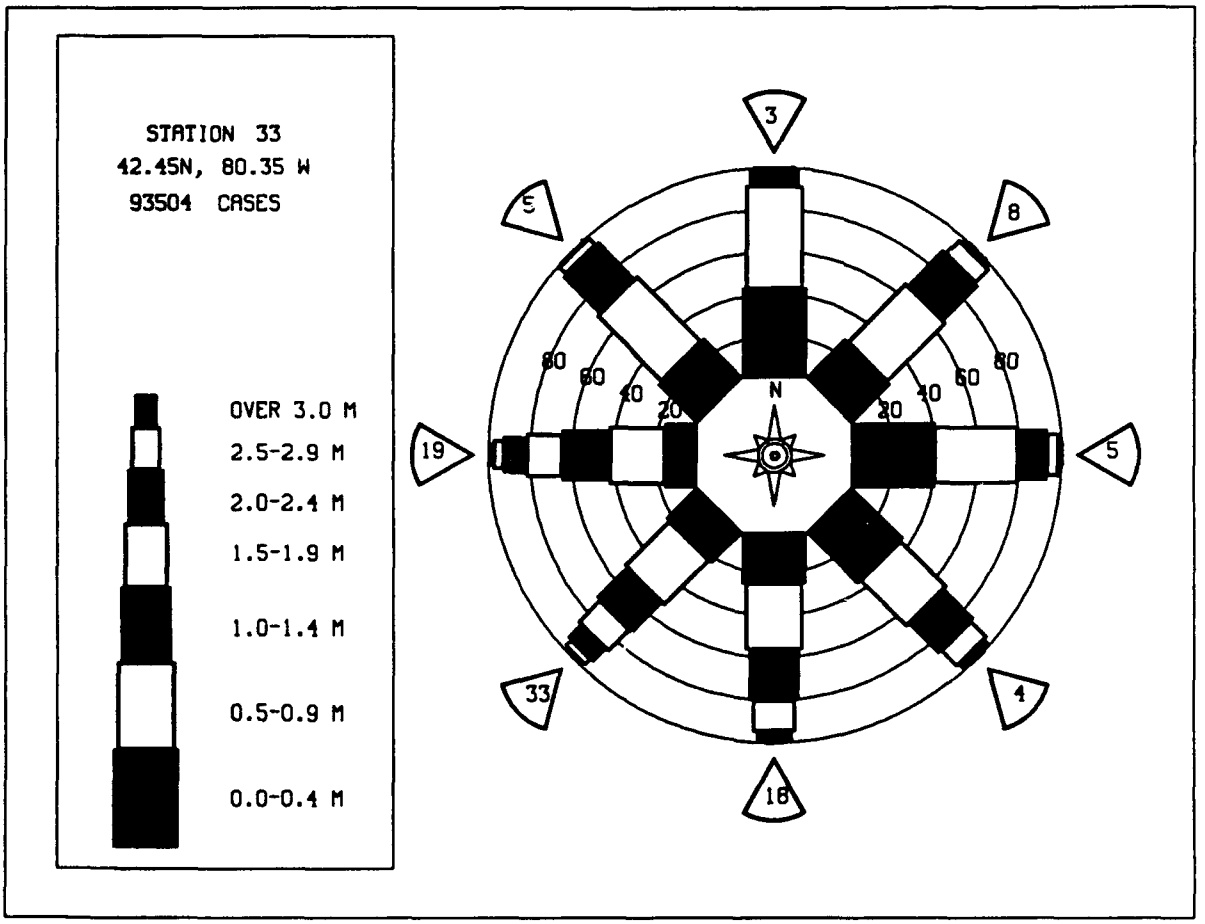
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	181	4	1	.	.	.	.	.	.	186
0.25-0.49	.	353	24	6	.	.	.	.	.	.	383
0.50-0.74	.	544	43	34	1	.	.	.	.	.	622
0.75-0.99	.	198	56	32	2	.	.	.	.	.	288
1.00-1.24	.	7	122	42	1	.	.	.	.	.	172
1.25-1.49	.	.	28	9	1	.	.	.	.	.	38
1.50-1.74	.	.	5	6	3	.	.	.	.	.	14
1.75-1.99	.	.	.	4	1	.	.	.	.	.	5
2.00-2.24	.	.	.	6	.	.	.	.	.	.	6
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1283	282	140	9	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 1614.

STATION E33 42.45N 80.35W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	860	38	5	.	.	.	.	.	.	903
0.25-0.49	.	1195	174	60	2	.	.	.	.	.	1431
0.50-0.74	.	1075	685	296	32	.	.	.	.	.	2088
0.75-0.99	.	177	554	365	61	.	.	.	.	.	1157
1.00-1.24	.	7	431	755	201	6	.	.	.	.	1400
1.25-1.49	.	.	22	496	182	10	.	.	.	.	710
1.50-1.74	.	.	2	450	401	46	.	.	.	.	899
1.75-1.99	.	.	.	61	286	53	.	.	.	.	400
2.00-2.24	.	.	.	2	349	72	11	.	.	.	434
2.25-2.49	.	.	.	.	89	99	11	.	.	.	199
2.50-2.74	.	.	.	.	22	145	12	.	.	.	179
2.75-2.99	.	.	.	.	1	59	8	.	.	.	68
3.00-3.24	.	.	.	.	.	36	19	1	.	.	56
3.25-3.49	.	.	.	.	.	2	15	.	.	.	17
3.50+	.	.	.	.	.	.	25	6	.	.	31
TOTAL	0	3314	1906	2490	1626	528	101	7	0	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 4.5 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E33 (42.45N 81.35W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.8	0.9	1.1	0.8	0.7	0.8	0.9	0.8	1.0	1.2	1.0	0.9
1957	1.0	0.9	1.3	1.3	1.1	1.1	1.0	0.8	1.1	1.1	1.6	1.6	1.2
1958	1.1	1.0	0.7	0.8	0.8	0.8	0.8	0.6	0.7	1.1	1.1	0.9	0.8
1959	1.0	0.8	0.9	0.7	0.4	0.4	0.4	0.6	0.8	0.9	0.9	0.7	0.7
1960	0.7	1.4	1.2	1.4	1.1	1.0	0.9	0.9	0.9	1.0	1.6	1.7	1.1
1961	1.3	1.0	1.2	1.2	1.2	1.1	0.9	1.1	1.1	1.4	1.3	1.4	1.2
1962	1.5	1.1	1.0	1.2	1.0	0.7	0.8	0.8	0.9	1.0	0.9	1.3	1.0
1963	1.3	1.3	1.3	1.2	1.0	0.6	0.8	0.8	0.8	0.9	1.5	1.2	1.1
1964	1.6	1.1	1.3	1.4	1.2	0.8	0.7	0.9	1.0	1.2	1.2	1.3	1.1
1965	1.4	1.4	1.0	1.0	0.8	0.8	0.7	0.9	1.0	1.2	1.4	1.2	1.1
1966	1.3	0.8	1.1	1.1	0.9	0.7	0.7	0.7	0.9	1.3	1.3	1.3	1.0
1967	1.5	1.3	0.9	1.1	0.9	0.8	0.6	0.7	0.7	1.2	1.4	1.3	1.0
1968	1.0	1.2	1.1	1.1	0.9	0.8	0.8	0.8	0.8	1.1	1.2	1.3	1.0
1969	1.6	0.8	1.2	1.0	0.8	0.8	0.7	0.7	0.6	1.1	1.2	1.0	1.0
1970	1.1	1.2	1.0	1.2	1.0	0.8	0.8	0.7	0.9	1.0	1.3	1.3	1.0
1971	1.5	1.5	1.2	1.1	0.8	0.7	0.8	0.8	0.6	0.7	1.1	1.2	1.0
1972	1.5	1.1	1.1	0.9	0.8	0.7	0.6	0.8	0.9	1.0	1.0	1.1	0.9
1973	1.5	1.0	1.1	1.3	1.1	0.9	0.8	0.8	0.8	1.0	1.4	1.2	1.1
1974	1.2	1.2	1.2	1.3	1.0	0.9	0.8	0.7	0.9	0.9	1.1	1.2	1.0
1975	1.4	1.1	1.1	1.0	0.6	0.9	0.6	0.6	0.9	1.1	1.3	1.2	1.0
1976	1.2	1.5	1.6	1.1	1.1	0.9	0.8	0.7	0.9	1.1	1.4	1.4	1.2
1977	1.6	1.3	1.3	1.1	0.7	0.7	0.8	0.9	0.9	1.0	1.3	1.5	1.1
1978	1.5	0.7	1.0	1.1	0.8	0.8	0.7	0.6	0.8	1.0	1.1	1.5	0.9
1979	1.3	1.1	1.2	1.1	0.7	0.8	0.6	0.8	0.8	1.1	1.1	1.3	1.0
1980	1.2	0.9	1.1	0.9	0.7	0.7	0.6	0.6	0.8	1.1	1.2	1.0	0.9
1981	0.9	1.2	1.0	1.3	0.5	0.9	0.6	0.6	0.8	0.9	0.9	1.0	0.9
1982	1.6	0.9	0.9	1.2	0.4	0.6	0.5	0.5	0.5	0.7	1.0	1.1	0.8
1983	0.9	0.6	0.8	0.9	0.9	0.4	0.6	0.4	0.7	0.9	0.9	1.3	0.8
1984	0.8	0.9	1.0	0.8	0.9	0.7	0.6	0.5	0.7	0.6	1.1	1.2	0.8
1985	1.2	1.1	1.2	1.1	0.8	0.8	0.7	0.7	0.8	1.0	1.1	1.4	1.0
1986	1.5	1.0	1.4	1.1	1.1	1.0	1.0	1.1	1.1	1.1	1.2	1.1	1.1
1987	1.2	0.9	1.0	1.1	1.0	1.0	0.9	1.0	0.9	1.2	1.5	1.5	1.1
MEAN	1.3	1.1	1.1	1.1	0.9	0.8	0.7	0.7	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E33 (42.45N 81.35W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.6	3.8	3.5	2.4	2.3	2.7	2.3	2.2	3.2	3.0	2.7
1957	2.3	2.5	3.5	4.3	3.0	3.1	2.6	1.9	2.8	2.9	3.7	3.6
1958	2.8	2.5	1.7	3.0	1.8	2.3	1.7	1.9	2.5	2.8	2.9	2.6
1959	2.7	1.9	3.5	3.1	1.7	1.4	2.2	2.1	2.4	2.5	2.2	2.2
1960	2.1	3.6	3.2	4.2	2.9	3.4	2.6	2.4	2.5	3.3	3.4	3.2
1961	3.7	3.8	2.9	4.2	3.1	3.3	2.5	2.9	3.1	3.7	3.7	4.4
1962	3.4	2.9	2.6	3.6	3.5	2.2	2.7	2.4	2.6	3.0	3.1	3.7
1963	3.5	3.4	4.1	3.8	3.2	2.3	2.3	2.8	2.6	3.3	3.3	3.1
1964	4.1	3.0	5.3	3.2	4.6	2.9	2.0	2.4	3.3	2.9	3.5	3.2
1965	4.1	2.9	3.7	3.9	2.8	2.4	2.1	2.6	2.9	3.8	3.8	3.4
1966	3.9	2.3	3.2	2.7	3.6	2.5	3.1	2.3	3.2	3.1	3.9	3.5
1967	3.4	3.9	2.3	3.3	3.0	1.9	2.2	1.9	3.1	3.2	3.0	3.0
1968	3.6	3.1	2.7	3.9	3.1	2.7	2.6	2.7	2.4	2.9	3.1	3.8
1969	3.5	2.7	3.1	3.0	2.9	2.5	2.1	2.6	2.3	2.7	2.8	2.3
1970	2.7	3.2	3.6	4.3	2.7	2.4	2.9	2.4	3.5	2.5	4.0	3.3
1971	4.6	3.8	3.5	3.4	3.1	2.2	2.8	2.5	2.0	3.0	2.9	3.6
1972	4.9	3.8	3.5	3.0	2.5	2.3	2.3	2.5	3.2	3.0	3.3	3.3
1973	3.8	2.6	3.5	3.1	2.9	2.6	3.0	2.5	2.9	3.0	3.5	3.3
1974	4.7	3.6	3.3	4.0	2.9	2.7	2.5	2.6	3.0	2.7	3.4	2.8
1975	3.6	3.9	2.9	4.5	2.0	2.6	2.3	2.7	2.3	2.7	3.9	4.1
1976	3.6	3.8	3.8	2.9	4.2	3.0	2.5	2.7	2.6	3.1	2.9	3.5
1977	3.6	2.9	3.4	4.1	2.5	2.7	3.7	2.4	2.4	2.7	3.2	3.7
1978	3.6	1.9	3.5	3.8	3.2	2.6	2.9	2.9	2.5	2.7	3.2	3.4
1979	3.3	3.3	3.5	4.2	2.3	2.3	2.1	2.6	2.5	2.9	3.6	3.3
1980	3.5	2.9	3.1	3.1	3.0	2.6	2.1	1.8	2.5	3.5	2.6	3.6
1981	3.1	3.6	4.2	3.4	2.1	2.4	1.5	1.7	2.3	3.0	3.1	2.6
1982	4.6	3.5	4.2	3.9	1.6	2.0	2.2	1.5	1.7	2.7	3.0	4.0
1983	2.9	2.6	2.2	2.6	2.5	1.6	2.1	1.9	2.2	3.3	2.8	3.8
1984	2.7	2.4	2.8	3.9	3.1	1.9	1.9	1.3	2.1	2.5	2.6	3.1
1985	3.1	2.6	3.5	4.4	2.7	2.4	1.9	2.0	2.3	3.0	2.5	3.9
1986	3.6	2.5	3.7	2.9	2.8	2.7	2.6	2.6	3.4	2.9	3.6	3.0
1987	3.6	2.3	3.0	3.2	2.6	2.7	2.3	2.4	2.1	3.0	3.2	4.5

32 YR. STATISTICS FOR WIS STATION E33

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.5
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	205.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MC,DA,HR)		78012621

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	322	7	.	.	.	.	.	.	.	329
0.25-0.49	.	513	41	12	.	.	.	.	.	.	566
0.50-0.74	.	542	88	55	4	.	.	.	.	.	689
0.75-0.99	.	187	35	36	6	.	.	.	.	.	264
1.00-1.24	.	41	39	53	18	.	.	.	.	.	151
1.25-1.49	.	.	4	2	11	.	.	.	.	.	17
1.50-1.74	.	.	.	.	4	2	.	.	.	.	6
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1605	214	158	43	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 1900.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	310	6	.	.	.	.	.	.	.	316
0.25-0.49	.	443	43	9	.	.	.	.	.	.	495
0.50-0.74	.	552	80	66	1	.	.	.	.	.	699
0.75-0.99	.	135	31	75	6	.	.	.	.	.	247
1.00-1.24	.	10	31	80	31	.	.	.	.	.	152
1.25-1.49	.	.	5	3	28	1	.	.	.	.	37
1.50-1.74	.	.	1	3	13	.	.	.	.	.	17
1.75-1.99	.	.	.	.	2	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	1	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1450	197	236	81	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 1848.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	498	18	.	.	.	.	.	.	.	516
0.25-0.49	.	743	86	23	.	.	.	.	.	.	852
0.50-0.74	.	989	212	155	2	.	.	.	.	.	1358
0.75-0.99	.	317	199	267	3	.	.	.	.	.	786
1.00-1.24	.	3	245	616	54	.	.	.	.	.	918
1.25-1.49	.	.	53	110	197	.	.	.	.	.	360
1.50-1.74	.	.	9	25	232	6	.	.	.	.	272
1.75-1.99	.	.	.	2	39	8	.	.	.	.	49
2.00-2.24	.	.	.	1	19	19	.	.	.	.	39
2.25-2.49	.	.	.	.	.	9	.	.	.	.	9
2.50-2.74	.	.	.	.	.	5	2	.	.	.	7
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2550	822	1199	546	47	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 4.0 NO. OF CASES= 4843.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	364	8	.	.	.	.	.	.	.	372
0.25-0.49	.	653	64	9	.	.	.	.	.	.	726
0.50-0.74	.	782	310	121	2	.	.	.	.	.	1215
0.75-0.99	.	179	264	224	3	.	.	.	.	.	670
1.00-1.24	.	.	156	421	51	.	.	.	.	.	628
1.25-1.49	.	.	17	177	77	.	.	.	.	.	271
1.50-1.74	.	.	3	58	188	9	.	.	.	.	258
1.75-1.99	.	.	.	4	78	13	.	.	.	.	95
2.00-2.24	.	.	.	1	45	27	.	.	.	.	73
2.25-2.49	.	.	.	.	3	18	1	.	.	.	22
2.50-2.74	.	.	.	.	.	10	1	.	.	.	11
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1978	822	1015	447	79	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.0 NO. OF CASES= 4074.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	449	6	.	.	.	.	.	.	.	455
0.25-0.49	.	546	58	8	.	.	.	.	.	.	613
0.50-0.74	.	381	260	80	.	.	.	.	.	.	721
0.75-0.99	.	40	148	100	1	.	.	.	.	.	289
1.00-1.24	.	.	66	149	16	.	.	.	.	.	231
1.25-1.49	.	.	1	64	11	.	.	.	.	.	76
1.50-1.74	.	.	.	35	42	1	.	.	.	.	78
1.75-1.99	.	.	.	2	24	.	.	.	.	.	26
2.00-2.24	.	.	.	.	18	1	.	.	.	.	19
2.25-2.49	.	.	.	.	2	1	.	.	.	.	3
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1416	539	439	114	4	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.7 NO. OF CASES= 2359.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	299	1	1	.	.	.	.	.	.	301
0.25-0.49	.	300	27	9	.	.	.	.	.	.	336
0.50-0.74	.	217	135	31	.	.	.	.	.	.	383
0.75-0.99	.	22	95	52	.	.	.	.	.	.	169
1.00-1.24	.	.	47	118	10	.	.	.	.	.	175
1.25-1.49	.	.	1	58	10	.	.	.	.	.	69
1.50-1.74	.	.	.	26	24	.	.	.	.	.	50
1.75-1.99	.	.	.	.	19	.	.	.	.	.	19
2.00-2.24	.	.	.	1	5	.	.	.	.	.	6
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	838	306	296	69	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 1421.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	320	4	.	.	.	.	.	.	.	324
0.25-0.49	.	413	37	4	.	.	.	.	.	.	454
0.50-0.74	.	322	191	14	1	.	.	.	.	.	528
0.75-0.99	.	26	167	48	1	.	.	.	.	.	242
1.00-1.24	.	.	96	199	2	.	.	.	.	.	297
1.25-1.49	.	.	2	128	19	.	.	.	.	.	149
1.50-1.74	.	.	.	97	67	1	.	.	.	.	165
1.75-1.99	.	.	.	7	65	.	.	.	.	.	72
2.00-2.24	.	.	.	.	43	2	.	.	.	.	45
2.25-2.49	.	.	.	.	11	4	.	.	.	.	15
2.50-2.74	.	.	.	.	1	12	.	.	.	.	13
2.75-2.99	.	.	.	.	.	8	.	.	.	.	8
3.00-3.24	.	.	.	.	.	5	.	.	.	.	5
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1081	497	497	210	33	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 2183.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	622	6	.	.	.	.	.	.	.	628
0.25-0.49	.	844	21	5	.	.	.	.	.	.	870
0.50-0.74	.	654	350	12	.	.	.	.	.	.	1016
0.75-0.99	.	47	424	102	.	.	.	.	.	.	573
1.00-1.24	.	.	208	551	6	.	.	.	.	.	765
1.25-1.49	.	.	4	340	40	.	.	.	.	.	384
1.50-1.74	.	.	.	359	183	2	.	.	.	.	544
1.75-1.99	.	.	.	7	241	1	.	.	.	.	249
2.00-2.24	.	.	.	.	232	4	.	.	.	.	236
2.25-2.49	.	.	.	.	75	16	.	.	.	.	91
2.50-2.74	.	.	.	.	17	47	.	.	.	.	64
2.75-2.99	.	.	.	.	.	24	.	.	.	.	24
3.00-3.24	.	.	.	.	.	18	.	.	.	.	18
3.25-3.49	.	.	.	.	.	3	2	.	.	.	5
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	2167	1013	1376	794	115	4	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.2 NO. OF CASES= 51[illegible]7.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1286	22	1	.	.	.	.	.	.	1309
0.25-0.49	.	1652	67	.	.	.	.	.	.	.	1719
0.50-0.74	.	1281	940	36	.	.	.	.	.	.	2257
0.75-0.99	.	69	827	263	1	.	.	.	.	.	1160
1.00-1.24	.	.	403	1128	10	.	.	.	.	.	1541
1.25-1.49	.	.	8	717	56	.	.	.	.	.	781
1.50-1.74	.	.	.	764	305	.	.	.	.	.	1069
1.75-1.99	.	.	.	21	509	.	.	.	.	.	530
2.00-2.24	.	.	.	.	445	2	.	.	.	.	447
2.25-2.49	.	.	.	.	125	11	.	.	.	.	136
2.50-2.74	.	.	.	.	25	71	.	.	.	.	96
2.75-2.99	.	.	.	.	.	21	.	.	.	.	21
3.00-3.24	.	.	.	.	.	14	.	.	.	.	14
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	4288	2267	2930	1476	120	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.2 NO. OF CASES= 10375.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1041	45	3	.	.	.	.	.	.	1089
0.25-0.49	.	1405	181	27	.	.	.	.	.	.	1613
0.50-0.74	.	1057	1140	236	16	.	.	.	.	.	2449
0.75-0.99	.	91	775	519	12	.	.	.	.	.	1397
1.00-1.24	.	4	378	1300	85	.	.	.	.	.	1767
1.25-1.49	.	.	8	712	199	.	.	.	.	.	919
1.50-1.74	.	.	.	744	594	14	.	.	.	.	1352
1.75-1.99	.	.	.	34	729	31	.	.	.	.	794
2.00-2.24	.	.	.	1	736	47	2	.	.	.	786
2.25-2.49	.	.	.	.	235	99	1	.	.	.	335
2.50-2.74	.	.	.	.	25	167	4	.	.	.	196
2.75-2.99	.	.	.	.	1	35	8	.	.	.	44
3.00-3.24	.	.	.	.	.	17	12	.	.	.	29
3.25-3.49	.	.	.	.	.	2	5	.	.	.	7
3.50+	.	.	.	.	.	.	2	1	1	1	5
TOTAL	0	3598	2527	3576	2632	412	34	1	1	1	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.5 MEAN TP(SEC)= 4.5 NO. OF CASES= 11971.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1381	196	24	1	.	.	.	.	.	1602
0.25-0.49	.	1402	803	265	2	.	.	.	.	.	2472
0.50-0.74	.	847	1261	1499	114	.	.	.	.	.	3721
0.75-0.99	.	111	408	1061	329	.	.	.	.	.	1909
1.00-1.24	.	3	302	1061	832	18	.	.	.	.	2216
1.25-1.49	.	.	13	378	682	48	.	.	.	.	1121
1.50-1.74	.	.	1	305	989	217	3	.	.	.	1515
1.75-1.99	.	.	.	21	455	297	4	.	.	.	777
2.00-2.24	.	.	.	3	500	422	52	.	.	.	977
2.25-2.49	.	.	.	.	89	325	64	.	.	.	478
2.50-2.74	.	.	.	.	8	312	85	2	.	.	407
2.75-2.99	.	.	.	.	.	94	105	3	.	.	202
3.00-3.24	.	.	.	.	.	20	121	2	.	.	143
3.25-3.49	.	.	.	.	.	.	44	.	.	.	44
3.50+	.	.	.	.	.	.	40	25	4	.	69
TOTAL	0	3744	2984	4617	4001	1753	518	32	4	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.9 NO. OF CASES= 16528.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	658	91	32	.	.	.	.	.	.	781
0.25-0.49	.	979	141	158	10	.	.	.	.	.	1288
0.50-0.74	.	675	740	601	124	.	.	.	.	.	2140
0.75-0.99	.	97	343	726	171	.	.	.	.	.	1337
1.00-1.24	.	2	295	953	635	23	.	.	.	.	1908
1.25-1.49	.	.	16	373	561	38	1	.	.	.	989
1.50-1.74	.	.	.	388	1009	266	5	.	.	.	1668
1.75-1.99	.	.	.	27	580	274	11	.	.	.	892
2.00-2.24	.	.	.	2	669	346	102	.	.	.	1119
2.25-2.49	.	.	.	.	165	279	141	.	.	.	585
2.50-2.74	.	.	.	.	28	343	146	4	.	.	521
2.75-2.99	.	.	.	.	.	108	135	10	.	.	253
3.00-3.24	.	.	.	.	1	31	154	18	3	.	207
3.25-3.49	.	.	.	.	.	2	78	16	3	.	99
3.50+	.	.	.	.	.	2	58	57	10	.	127
TOTAL	0	2412	1626	3260	3953	1712	831	105	16	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 5.3 NO. OF CASES= 13033.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	639	20	3	1	.	.	.	.	.	663
0.25-0.49	.	789	47	16	3	.	.	.	.	.	855
0.50-0.74	.	605	625	109	16	.	.	.	.	.	1355
0.75-0.99	.	58	350	345	16	2	.	.	.	.	771
1.00-1.24	.	1	347	778	115	3	.	.	.	.	1244
1.25-1.49	.	.	24	423	152	3	1	.	.	.	603
1.50-1.74	.	.	1	429	663	29	1	.	.	.	1123
1.75-1.99	.	.	.	13	568	27	1	.	.	.	609
2.00-2.24	.	.	.	5	727	26	16	.	.	.	774
2.25-2.49	.	.	.	.	143	119	9	.	.	.	271
2.50-2.74	.	.	.	.	14	198	5	1	.	.	218
2.75-2.99	.	.	.	.	.	47	7	3	.	.	57
3.00-3.24	.	.	.	.	.	28	16	1	.	.	45
3.25-3.49	.	.	.	.	.	3	20	2	.	.	25
3.50+	.	.	.	.	.	.	19	3	1	.	23
TOTAL	0	2092	1414	2121	2418	485	95	10	1	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.8 NO. OF CASES= 8096.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	444	13	.	.	.	.	.	.	.	457
0.25-0.49	.	649	47	6	.	.	.	.	.	.	702
0.50-0.74	.	589	434	16	1	.	.	.	.	.	1040
0.75-0.99	.	71	528	67	1	.	.	.	.	.	667
1.00-1.24	.	4	700	298	7	.	.	.	.	.	1009
1.25-1.49	.	.	23	503	5	.	.	.	.	.	531
1.50-1.74	.	.	.	525	64	2	.	.	.	.	591
1.75-1.99	.	.	.	86	111	1	.	.	.	.	198
2.00-2.24	.	.	.	2	147	2	.	.	.	.	151
2.25-2.49	.	.	.	.	41	5	1	.	.	.	47
2.50-2.74	.	.	.	.	11	27	.	.	.	.	38
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1757	1745	1503	388	45	3	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 5100.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	288	8	.	.	.	.	.	.	.	296
0.25-0.49	.	389	51	10	.	.	.	.	.	.	450
0.50-0.74	.	430	149	11	.	.	.	.	.	.	590
0.75-0.99	.	72	274	3	.	.	.	.	.	.	349
1.00-1.24	.	2	391	98	1	.	.	.	.	.	492
1.25-1.49	.	.	3	266	.	.	.	.	.	.	269
1.50-1.74	.	.	1	257	1	.	.	.	.	.	259
1.75-1.99	.	.	.	38	11	.	.	.	.	.	49
2.00-2.24	.	.	.	.	42	.	.	.	.	.	42
2.25-2.49	.	.	.	.	12	.	.	.	.	.	12
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1181	877	683	67	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.9 NO. OF CASES= 2637.

STATION E34 42.45N 80.55W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

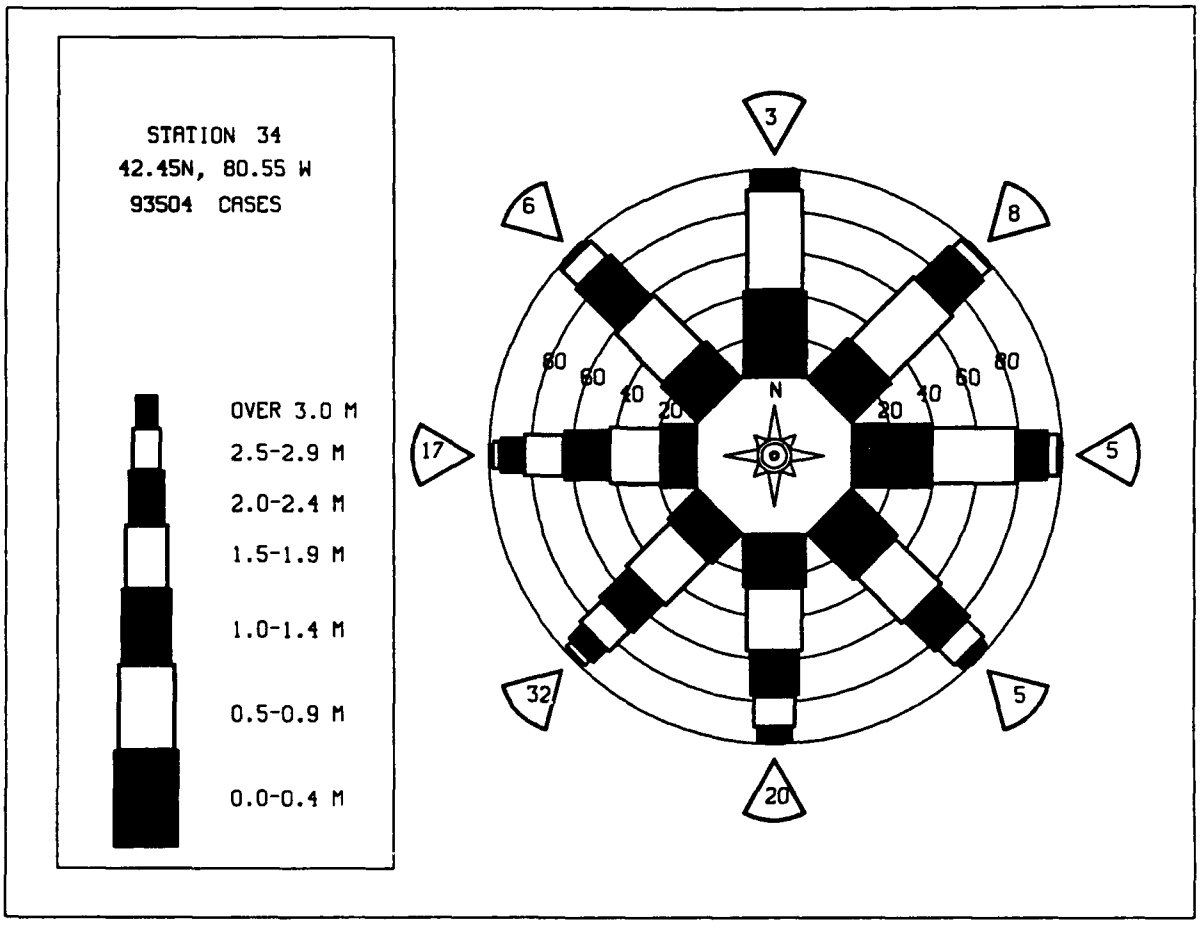
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	223	7	1	.	.	.	.	.	.	231
0.25-0.49	.	352	24	14	.	.	.	.	.	.	390
0.50-0.74	.	501	96	29	.	.	.	.	.	.	626
0.75-0.99	.	152	146	14	3	.	.	.	.	.	315
1.00-1.24	.	26	229	54	1	.	.	.	.	.	310
1.25-1.49	.	.	17	105	.	.	.	.	.	.	122
1.50-1.74	.	.	.	113	.	.	.	.	.	.	113
1.75-1.99	.	.	.	10	4	.	.	.	.	.	14
2.00-2.24	.	.	.	.	8	.	.	.	.	.	8
2.25-2.49	.	.	.	.	4	.	.	.	.	.	4
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1254	519	340	22	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.6 NO. OF CASES= 2009.

STATION E34 42.45N 80.55W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	915	46	6	.	.	.	.	.	.	967
0.25-0.49	.	1207	174	58	1	.	.	.	.	.	1440
0.50-0.74	.	1043	701	307	28	.	.	.	.	.	2079
0.75-0.99	.	168	502	390	55	.	.	.	.	.	1115
1.00-1.24	.	10	393	786	187	4	.	.	.	.	1380
1.25-1.49	.	.	20	436	205	9	.	.	.	.	670
1.50-1.74	.	.	1	413	438	55	.	.	.	.	907
1.75-1.99	.	.	.	27	344	65	1	.	.	.	437
2.00-2.24	.	.	.	1	364	90	17	.	.	.	472
2.25-2.49	.	.	.	.	91	88	21	.	.	.	200
2.50-2.74	.	.	.	.	13	119	24	.	.	.	156
2.75-2.99	.	.	.	.	.	34	25	1	.	.	60
3.00-3.24	.	.	.	.	.	14	30	2	.	.	46
3.25-3.49	.	.	.	.	.	1	15	1	.	.	17
3.50+	.	.	.	.	.	.	12	8	1	.	21
TOTAL	0	3343	1837	2424	1726	479	145	12	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.5 MEAN TP(SEC)= 4.5 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E34 (42.45N 80.55W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	0.9	1.1	0.8	0.7	0.8	0.9	0.9	1.0	1.2	1.0	0.9
1957	1.0	0.9	1.2	1.3	1.1	1.1	1.0	0.8	1.1	1.1	1.6	1.6	1.2
1958	1.1	1.1	0.8	0.8	0.8	0.8	0.6	0.6	0.8	1.1	1.1	0.9	0.8
1959	1.0	0.8	0.9	0.7	0.4	0.4	0.4	0.6	0.8	0.9	0.9	0.7	0.7
1960	0.7	1.3	1.2	1.4	1.1	1.0	0.8	0.9	1.0	1.1	1.6	1.7	1.2
1961	1.3	1.0	1.2	1.2	1.2	1.1	0.9	1.1	1.1	1.4	1.4	1.4	1.2
1962	1.5	1.1	1.0	1.2	1.0	0.7	0.8	0.8	0.9	1.0	0.9	1.3	1.0
1963	1.3	1.2	1.3	1.2	1.0	0.6	0.8	0.8	0.8	0.9	1.5	1.2	1.0
1964	1.5	1.1	1.3	1.4	1.2	0.8	0.7	0.9	1.0	1.0	1.2	1.2	1.1
1965	1.4	1.3	0.9	0.9	0.9	0.8	0.7	0.9	1.0	1.2	1.4	1.2	1.1
1966	1.3	0.8	1.1	1.0	0.9	0.7	0.7	0.7	0.8	1.3	1.3	1.2	1.0
1967	1.5	1.3	0.9	1.1	0.9	0.8	0.6	0.7	0.7	1.2	1.4	1.2	1.0
1968	1.0	1.2	1.1	1.1	0.9	0.8	0.7	0.8	0.8	1.1	1.2	1.3	1.0
1969	1.5	0.8	1.2	0.9	0.8	0.7	0.6	0.7	0.8	1.1	1.1	1.0	0.9
1970	1.1	1.2	0.9	1.1	1.0	0.8	0.8	0.7	0.9	1.0	1.3	1.2	1.0
1971	1.5	1.5	1.1	1.1	0.8	0.7	0.8	0.8	0.6	0.8	1.1	1.2	1.0
1972	1.4	1.1	1.0	0.9	0.8	0.7	0.7	0.8	0.9	1.0	0.9	1.1	0.9
1973	1.5	1.0	1.1	1.3	1.1	0.9	0.8	0.8	0.8	0.9	1.4	1.2	1.1
1974	1.2	1.1	1.2	1.3	1.0	0.9	0.8	0.7	0.9	0.9	1.1	1.1	1.0
1975	1.3	1.1	1.1	1.0	0.6	0.9	0.6	0.6	0.9	1.0	1.3	1.2	1.0
1976	1.4	1.5	1.5	1.1	1.1	0.9	0.8	0.7	0.9	1.0	1.4	1.4	1.1
1977	1.5	1.3	1.2	1.1	0.7	0.7	0.8	0.8	0.9	1.0	1.3	1.5	1.1
1978	1.4	0.6	0.9	1.0	0.8	0.8	0.7	0.6	0.8	1.0	1.1	1.4	0.9
1979	1.3	1.0	1.2	1.1	0.7	0.8	0.6	0.8	0.8	1.1	1.1	1.3	1.0
1980	1.1	0.9	1.0	0.9	0.7	0.7	0.6	0.6	0.8	1.1	1.2	1.0	0.9
1981	0.9	1.2	1.0	1.3	0.5	0.8	0.5	0.6	0.8	0.8	0.9	1.0	0.9
1982	1.5	0.9	0.9	1.2	0.4	0.5	0.5	0.5	0.5	0.7	1.1	1.1	0.8
1983	0.9	0.6	0.7	0.9	0.9	0.4	0.6	0.4	0.7	0.9	0.9	1.2	0.8
1984	0.8	0.9	1.0	0.7	0.9	0.7	0.5	0.5	0.7	0.6	1.1	1.1	0.8
1985	1.2	1.1	1.1	1.1	0.8	0.7	0.7	0.7	0.8	1.0	1.1	1.4	1.0
1986	1.5	0.9	1.4	1.1	1.0	1.0	0.9	1.1	1.1	1.1	1.2	1.1	1.1
1987	1.2	0.9	1.0	1.1	1.0	0.9	0.9	1.0	0.9	1.2	1.5	1.5	1.1
MEAN	1.2	1.1	1.1	1.1	0.9	0.8	0.7	0.7	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E34 (42.45N 80.55W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.1	2.6	3.9	3.4	2.5	2.0	2.6	2.2	2.4	3.5	3.0	2.9
1957	2.3	2.4	3.4	4.3	3.2	2.9	2.3	2.0	2.8	3.0	3.7	3.4
1958	2.6	2.5	1.7	3.0	1.8	2.3	1.7	1.9	2.6	2.8	3.1	2.4
1959	2.7	2.0	3.5	3.2	1.8	1.6	2.3	2.1	2.5	2.4	2.2	2.1
1960	2.1	3.5	3.6	4.1	3.1	3.1	2.7	2.5	2.8	3.1	3.4	3.3
1961	3.6	3.7	2.9	3.9	3.2	3.2	2.4	2.8	3.1	3.5	3.5	4.1
1962	3.3	2.7	2.7	3.6	3.3	2.1	2.6	2.4	2.6	2.8	3.0	3.7
1963	3.5	3.5	4.3	3.7	3.2	2.2	2.2	2.6	2.7	3.3	3.4	2.9
1964	4.2	3.0	5.1	3.2	4.3	2.8	2.1	2.5	3.4	2.9	3.3	3.1
1965	4.0	3.0	3.8	3.7	2.7	2.3	2.1	2.5	2.8	3.6	3.7	3.5
1966	3.4	2.5	2.9	2.8	3.4	2.5	2.9	2.1	2.9	3.2	3.9	3.4
1967	3.4	3.7	2.2	3.3	3.1	2.0	2.3	1.8	3.2	3.2	2.9	2.8
1968	3.4	3.0	2.7	3.8	3.0	2.5	2.6	2.8	2.3	2.9	3.2	3.4
1969	3.5	2.5	3.1	3.1	2.7	2.5	2.2	2.5	2.2	2.8	2.6	2.3
1970	2.5	3.3	3.5	3.9	2.8	2.3	2.8	2.4	3.3	2.6	3.9	3.1
1971	4.1	3.8	3.4	3.3	3.0	2.2	2.9	2.4	1.8	2.9	2.7	3.5
1972	4.6	3.3	3.6	2.9	2.5	2.2	2.4	2.5	3.0	3.1	3.2	3.1
1973	3.6	2.7	3.4	3.1	3.0	2.6	2.9	2.3	2.8	2.8	3.2	3.3
1974	4.7	3.6	3.4	3.9	2.9	2.6	2.4	2.6	2.8	2.7	3.3	2.8
1975	3.3	3.8	2.6	4.4	2.0	2.7	2.3	2.5	2.3	2.6	3.7	3.9
1976	3.4	4.0	3.6	2.8	4.2	3.2	2.5	2.7	2.5	2.8	2.8	3.6
1977	3.6	2.9	3.4	4.0	2.3	2.5	3.7	2.4	2.4	2.8	3.1	3.6
1978	3.5	1.7	3.2	3.6	3.0	2.5	2.4	3.0	2.7	2.8	3.1	3.3
1979	3.1	3.1	3.6	3.8	1.9	2.4	1.9	2.5	2.4	2.8	3.6	3.3
1980	3.5	2.8	2.9	3.0	3.1	2.6	1.9	1.8	2.6	3.2	2.6	3.3
1981	3.0	3.3	4.2	3.2	1.9	2.2	1.4	1.8	2.4	3.0	3.0	2.8
1982	4.7	3.4	4.0	3.7	1.6	2.1	2.0	1.5	1.6	2.7	3.0	3.8
1983	2.5	2.5	2.1	2.7	2.5	1.5	2.2	1.8	2.2	3.4	2.5	3.3
1984	2.7	2.2	2.9	3.9	3.0	1.9	1.7	1.3	2.1	2.5	2.8	3.2
1985	3.0	2.6	3.3	4.3	2.7	2.3	2.1	1.9	2.3	3.1	2.3	3.8
1986	3.4	2.4	3.6	3.0	2.8	2.8	2.2	2.6	3.4	3.0	3.4	3.0
1987	3.3	2.2	2.9	3.1	2.7	2.6	2.2	2.4	2.2	3.2	3.0	4.4

32 YR. STATISTICS FOR WIS STATION E34

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.5
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.5
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	11.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	206.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		78012621

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	361	6	1	.	.	.	.	.	.	368
0.25-0.49	.	481	27	7	.	.	.	.	.	.	515
0.50-0.74	.	606	24	40	4	.	.	.	.	.	674
0.75-0.99	.	117	171	11	4	.	.	.	.	.	303
1.00-1.24	.	.	227	9	6	1	.	.	.	.	243
1.25-1.49	.	.	32	51	3	.	.	.	.	.	86
1.50-1.74	.	.	1	29	2	.	.	.	.	.	32
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1565	488	151	19	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 2089.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	365	12	.	.	.	.	.	.	.	377
0.25-0.49	.	447	34	13	.	.	.	.	.	.	494
0.50-0.74	.	612	45	48	.	.	.	.	.	.	705
0.75-0.99	.	170	101	66	2	.	.	.	.	.	339
1.00-1.24	.	2	117	52	37	.	.	.	.	.	208
1.25-1.49	.	.	25	7	29	.	.	.	.	.	61
1.50-1.74	.	.	3	5	13	2	.	.	.	.	23
1.75-1.99	.	.	.	.	.	1	.	.	.	.	1
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1596	337	192	81	3	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 2076.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	546	19	1	.	.	.	.	.	.	566
0.25-0.49	.	796	67	22	.	.	.	.	.	.	885
0.50-0.74	.	1194	155	141	2	.	.	.	.	.	1492
0.75-0.99	.	476	199	280	7	.	.	.	.	.	962
1.00-1.24	.	11	353	499	110	1	.	.	.	.	974
1.25-1.49	.	.	93	44	250	4	.	.	.	.	391
1.50-1.74	.	.	14	24	156	6	.	.	.	.	200
1.75-1.99	.	.	.	8	36	23	.	.	.	.	67
2.00-2.24	.	.	.	2	7	23	.	.	.	.	32
2.25-2.49	.	.	.	1	.	3	1	.	.	.	5
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3023	900	1022	568	63	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 5229.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	391	5	.	.	.	.	.	.	.	396
0.25-0.49	.	656	57	8	.	.	.	.	.	.	721
0.50-0.74	.	791	254	132	.	.	.	.	.	.	1177
0.75-0.99	.	204	193	221	6	.	.	.	.	.	624
1.00-1.24	.	3	165	294	68	.	.	.	.	.	530
1.25-1.49	.	.	21	122	88	.	.	.	.	.	231
1.50-1.74	.	.	2	64	132	12	.	.	.	.	210
1.75-1.99	.	.	.	8	52	16	.	.	.	.	76
2.00-2.24	.	.	.	3	24	18	.	.	.	.	45
2.25-2.49	.	.	.	1	2	11	1	.	.	.	15
2.50-2.74	.	.	.	.	1	6	2	.	.	.	9
2.75-2.99	.	.	.	.	.	.	1	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2045	697	853	373	63	5	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.9 NO. OF CASES= 3788.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	502	9	1	.	.	.	.	.	.	512
0.25-0.49	.	612	41	4	.	.	.	.	.	.	657
0.50-0.74	.	374	251	77	1	.	.	.	.	.	703
0.75-0.99	.	42	130	115	.	.	.	.	.	.	287
1.00-1.24	.	.	73	134	31	.	.	.	.	.	238
1.25-1.49	.	.	.	54	16	.	.	.	.	.	70
1.50-1.74	.	.	.	25	52	1	.	.	.	.	78
1.75-1.99	.	.	.	3	17	.	.	.	.	.	20
2.00-2.24	.	.	.	.	19	2	.	.	.	.	21
2.25-2.49	.	.	.	.	4	1	.	.	.	.	5
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1530	504	413	140	6	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.7 NO. OF CASES= 2434.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	352	5	.	.	.	.	.	.	.	357
0.25-0.49	.	329	29	6	.	.	.	.	.	.	364
0.50-0.74	.	223	137	36	.	.	.	.	.	.	396
0.75-0.99	.	24	95	60	1	.	.	.	.	.	180
1.00-1.24	.	.	41	124	11	.	.	.	.	.	176
1.25-1.49	.	.	2	56	17	.	.	.	.	.	75
1.50-1.74	.	.	.	21	26	.	.	.	.	.	47
1.75-1.99	.	.	.	3	17	.	.	.	.	.	20
2.00-2.24	.	.	.	.	7	.	.	.	.	.	7
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	928	309	306	79	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.7 NO. OF CASES= 1529.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	417	9	.	.	.	.	.	.	.	426
0.25-0.49	.	476	33	3	.	.	.	.	.	.	512
0.50-0.74	.	322	231	16	1	.	.	.	.	.	570
0.75-0.99	.	24	170	58	1	.	.	.	.	.	253
1.00-1.24	.	.	104	190	2	1	.	.	.	.	297
1.25-1.49	.	.	2	133	14	.	.	.	.	.	150
1.50-1.74	.	.	.	111	77	.	.	.	.	.	188
1.75-1.99	.	.	.	4	63	1	.	.	.	.	68
2.00-2.24	.	.	.	.	55	2	.	.	.	.	57
2.25-2.49	.	.	.	.	16	2	.	.	.	.	18
2.50-2.74	.	.	.	.	5	18	.	.	.	.	23
2.75-2.99	.	.	.	.	.	5	.	.	.	.	5
3.00-3.24	.	.	.	.	.	7	.	.	.	.	7
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1239	550	515	234	37	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 2420.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	864	6	.	.	.	.	.	.	.	870
0.25-0.49	.	988	27	5	.	.	.	.	.	.	1020
0.50-0.74	.	680	529	33	.	.	.	.	.	.	1242
0.75-0.99	.	43	420	173	.	.	.	.	.	.	636
1.00-1.24	.	.	229	633	2	.	.	.	.	.	864
1.25-1.49	.	.	3	379	41	.	.	.	.	.	423
1.50-1.74	.	.	.	393	216	.	.	.	.	.	609
1.75-1.99	.	.	.	14	226	3	.	.	.	.	243
2.00-2.24	.	.	.	1	235	3	.	.	.	.	239
2.25-2.49	.	.	.	.	56	13	.	.	.	.	69
2.50-2.74	.	.	.	.	21	47	.	.	.	.	68
2.75-2.99	.	.	.	.	.	32	.	.	.	.	32
3.00-3.24	.	.	.	.	.	11	.	.	.	.	11
3.25-3.49	.	.	.	.	.	11	2	.	.	.	13
3.50+	.	.	.	.	.	1	2	.	.	.	3
TOTAL	0	2575	1214	1631	797	121	4	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.2 NO. OF CASES= 5943.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1100	3	1	.	.	.	.	.	.	1104
0.25-0.49	.	1436	41	5	.	.	.	.	.	.	1482
0.50-0.74	.	1078	756	45	1	.	.	.	.	.	1880
0.75-0.99	.	90	727	248	4	.	.	.	.	.	1069
1.00-1.24	.	2	359	899	6	.	.	.	.	.	1266
1.25-1.49	.	.	12	556	37	.	.	.	.	.	605
1.50-1.74	.	.	.	685	180	.	.	.	.	.	865
1.75-1.99	.	.	.	25	410	.	.	.	.	.	435
2.00-2.24	.	.	.	2	382	.	.	.	.	.	384
2.25-2.49	.	.	.	.	110	1	.	.	.	.	111
2.50-2.74	.	.	.	.	49	50	.	.	.	.	99
2.75-2.99	.	.	.	.	.	18	.	.	.	.	18
3.00-3.24	.	.	.	.	.	13	.	.	.	.	13
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	3706	1898	2466	1179	84	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 8739.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1130	37	6	1	.	.	.	.	.	1174
0.25-0.49	.	1335	257	44	.	.	.	.	.	.	1636
0.50-0.74	.	1064	996	367	17	.	.	.	.	.	2444
0.75-0.99	.	103	616	619	24	.	.	.	.	.	1362
1.00-1.24	.	4	383	1135	126	1	.	.	.	.	1649
1.25-1.49	.	.	12	628	189	1	.	.	.	.	830
1.50-1.74	.	.	.	753	480	22	.	.	.	.	1255
1.75-1.99	.	.	.	44	649	44	.	.	.	.	737
2.00-2.24	.	.	.	1	743	60	2	.	.	.	806
2.25-2.49	.	.	.	.	241	87	3	.	.	.	331
2.50-2.74	.	.	.	.	53	148	4	.	.	.	205
2.75-2.99	.	.	.	.	2	58	14	.	.	.	74
3.00-3.24	.	.	.	.	.	20	21	.	.	.	41
3.25-3.49	.	.	.	.	.	1	7	.	.	.	8
3.50+	.	.	.	.	.	2	3	1	1	.	7
TOTAL	0	3636	2301	3597	2525	444	54	1	1	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 4.5 NO. OF CASES= 11765.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1560	245	38	.	.	.	.	.	.	1843
0.25-0.49	.	1361	928	293	3	.	.	.	.	.	2585
0.50-0.74	.	808	1309	1617	98	.	.	.	.	.	3832
0.75-0.99	.	125	407	1138	343	2	.	.	.	.	2015
1.00-1.24	.	3	330	990	1004	13	.	.	.	.	2340
1.25-1.49	.	.	11	356	695	43	1	.	.	.	1106
1.50-1.74	.	.	1	332	894	273	1	.	.	.	1501
1.75-1.99	.	.	.	37	392	322	5	.	.	.	756
2.00-2.24	.	.	.	2	453	418	41	.	.	.	914
2.25-2.49	.	.	.	.	115	298	62	.	.	.	475
2.50-2.74	.	.	.	.	23	309	97	.	.	.	429
2.75-2.99	.	.	.	.	.	125	81	1	.	.	207
3.00-3.24	.	.	.	.	1	39	133	1	.	.	174
3.25-3.49	.	.	.	.	.	1	49	.	.	.	50
3.50+	.	.	.	.	.	.	80	31	3	.	114
TOTAL	0	3857	3231	4803	4021	1843	550	33	3	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.5 MEAN TP(SEC)= 4.9 NO. OF CASES= 1,168.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	729	70	26	.	.	.	.	.	.	825
0.25-0.49	.	912	117	122	7	.	.	.	.	.	1158
0.50-0.74	.	726	633	395	93	.	.	.	.	.	1847
0.75-0.99	.	99	391	592	130	.	.	.	.	.	1212
1.00-1.24	.	3	268	948	423	17	.	.	.	.	1659
1.25-1.49	.	.	10	519	391	29	1	.	.	.	950
1.50-1.74	.	.	2	717	687	205	6	.	.	.	1617
1.75-1.99	.	.	.	51	558	237	6	.	.	.	852
2.00-2.24	.	.	.	2	648	279	63	.	.	.	992
2.25-2.49	.	.	.	.	209	177	103	.	.	.	489
2.50-2.74	.	.	.	.	64	266	131	4	.	.	465
2.75-2.99	.	.	.	.	2	112	86	7	.	.	207
3.00-3.24	.	.	.	.	1	48	134	14	2	.	199
3.25-3.49	.	.	.	.	.	5	84	4	1	.	94
3.50+	.	.	.	.	.	.	97	56	7	.	160
TOTAL	0	2469	1491	3372	3213	1375	711	85	10	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.5 MEAN TP(SEC)= 5.2 NO. OF CASES= 11923.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	760	18	2	.	.	.	.	.	.	780
0.25-0.49	.	790	11	4	1	.	.	.	.	.	806
0.50-0.74	.	659	511	50	9	.	.	.	.	.	1229
0.75-0.99	.	68	391	248	6	.	.	.	.	.	713
1.00-1.24	.	.	341	742	28	2	.	.	.	.	1113
1.25-1.49	.	.	18	560	43	6	.	.	.	.	627
1.50-1.74	.	.	.	766	288	14	1	.	.	.	1069
1.75-1.99	.	.	.	24	595	16	.	.	.	.	635
2.00-2.24	.	.	.	3	513	13	9	.	.	.	538
2.25-2.49	.	.	.	.	176	9	3	1	.	.	189
2.50-2.74	.	.	.	.	45	73	2	.	.	.	120
2.75-2.99	.	.	.	.	.	45	4	.	.	.	49
3.00-3.24	.	.	.	.	.	24	5	.	.	.	29
3.25-3.49	.	.	.	.	.	8	7	.	.	.	15
3.50+	.	.	.	.	.	2	13	3	.	.	18
TOTAL	0	2277	1290	2399	1704	212	44	4	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.6 NO. OF CASES= 7436.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	562	10	.	.	.	.	.	.	.	572
0.25-0.49	.	720	7	11	.	.	.	.	.	.	738
0.50-0.74	.	621	444	8	.	.	.	.	.	.	1073
0.75-0.99	.	53	570	51	.	.	.	.	.	.	674
1.00-1.24	.	.	710	293	.	.	.	.	.	.	1003
1.25-1.49	.	.	22	545	3	.	.	.	.	.	570
1.50-1.74	.	.	.	596	26	.	.	.	.	.	622
1.75-1.99	.	.	.	99	91	1	.	.	.	.	191
2.00-2.24	.	.	.	7	129	.	.	.	.	.	136
2.25-2.49	.	.	.	.	35	1	.	.	.	.	36
2.50-2.74	.	.	.	.	18	5	.	.	.	.	23
2.75-2.99	.	.	.	.	1	1	.	.	.	.	2
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1956	1763	1610	303	12	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 5290.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	364	8	1	.	.	.	.	.	.	373
0.25-0.49	.	573	14	12	1	.	.	.	.	.	600
0.50-0.74	.	530	201	9	.	.	.	.	.	.	740
0.75-0.99	.	28	381	2	2	.	.	.	.	.	413
1.00-1.24	.	.	489	94	.	.	.	.	.	.	583
1.25-1.49	.	.	1	314	1	.	.	.	.	.	316
1.50-1.74	.	.	.	280	.	.	.	.	.	.	280
1.75-1.99	.	.	.	50	11	.	.	.	.	.	61
2.00-2.24	.	.	.	.	50	.	.	.	.	.	50
2.25-2.49	.	.	.	.	16	.	.	.	.	.	16
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1495	1094	762	84	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.8 NO. OF CASES= 3221.

STATION E35 42.45N 80.73W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

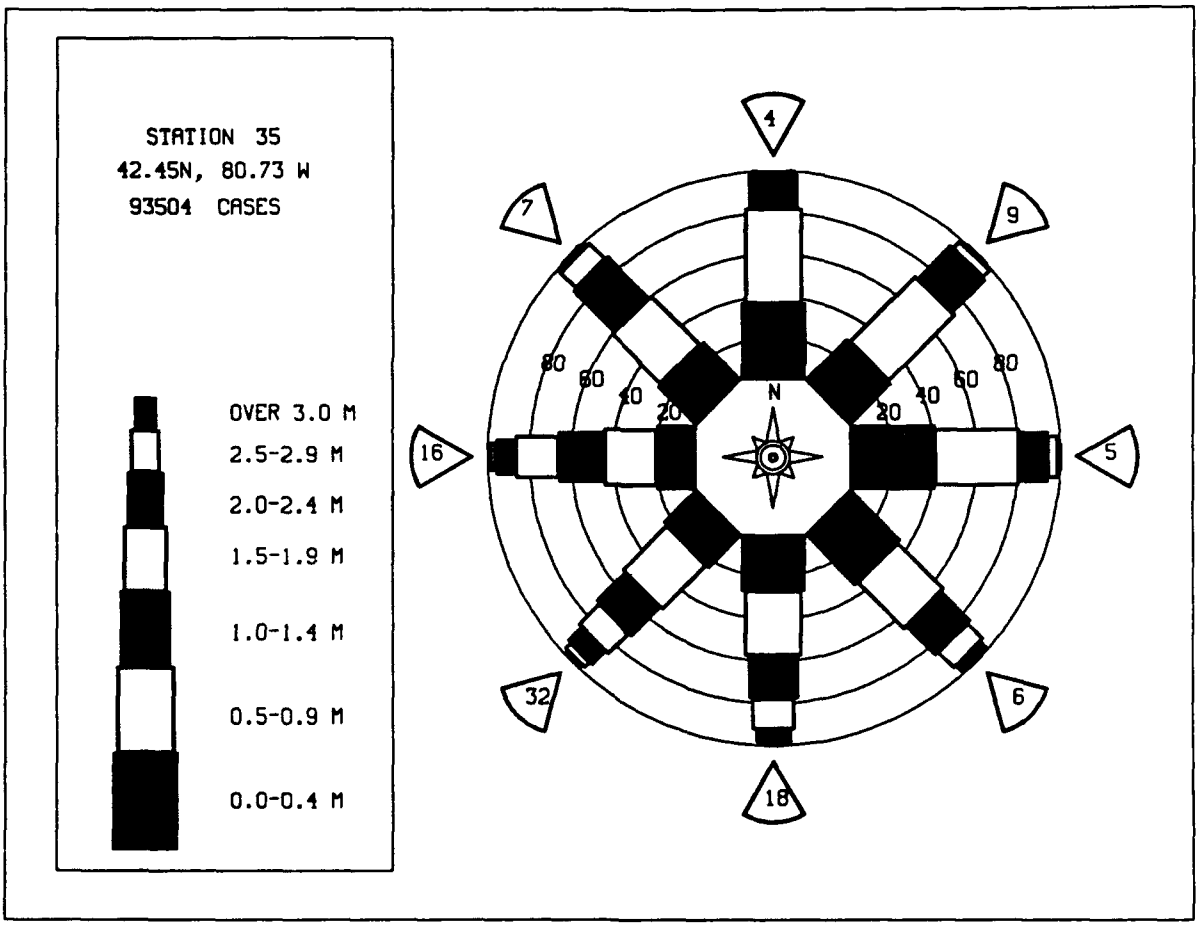
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	281	6	1	.	.	.	.	.	.	288
0.25-0.49	.	348	14	12	.	.	.	.	.	.	374
0.50-0.74	.	583	90	18	.	.	.	.	.	.	691
0.75-0.99	.	74	303	3	.	.	.	.	.	.	380
1.00-1.24	.	.	418	47	1	1	.	.	.	.	467
1.25-1.49	.	.	24	197	.	.	.	.	.	.	221
1.50-1.74	.	.	.	160	.	.	.	.	.	.	160
1.75-1.99	.	.	.	16	2	.	.	.	.	.	18
2.00-2.24	.	.	.	.	7	.	.	.	.	.	7
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1286	855	454	18	1	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 2454.

STATION E35 42.45N 80.73W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1029	47	8	.	.	.	.	.	.	1084
0.25-0.49	.	1226	171	57	1	.	.	.	.	.	1455
0.50-0.74	.	1087	657	303	22	.	.	.	.	.	2069
0.75-0.99	.	174	527	389	53	.	.	.	.	.	1143
1.00-1.24	.	2	461	708	185	3	.	.	.	.	1359
1.25-1.49	.	.	29	453	182	8	.	.	.	.	672
1.50-1.74	.	.	2	496	323	53	.	.	.	.	874
1.75-1.99	.	.	.	39	312	66	1	.	.	.	418
2.00-2.24	.	.	.	2	327	82	11	.	.	.	422
2.25-2.49	.	.	.	.	99	60	17	.	.	.	176
2.50-2.74	.	.	.	.	28	92	23	.	.	.	143
2.75-2.99	.	.	.	.	.	39	18	.	.	.	57
3.00-3.24	.	.	.	.	.	17	29	1	.	.	47
3.25-3.49	.	.	.	.	.	2	15	.	.	.	17
3.50+	.	.	.	.	.	.	19	9	1	.	29
TOTAL	0	3518	1894	2455	1532	422	133	10	1	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.6 MEAN TP(SEC)= 4.4 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E35 (42.45N 80.73W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	0.9	1.0	0.9	0.7	0.8	0.9	0.8	1.0	1.2	1.0	0.9
1957	1.0	0.8	1.2	1.3	1.1	1.1	0.9	0.8	1.1	1.1	1.6	1.6	1.1
1958	1.1	1.1	0.6	0.6	0.6	0.7	0.6	0.6	0.8	1.1	1.1	0.9	0.8
1959	1.0	0.8	0.9	0.7	0.4	0.4	0.4	0.6	0.8	0.9	0.9	0.7	0.7
1960	0.8	1.3	1.2	1.4	1.1	1.0	0.8	0.8	0.9	1.1	1.6	1.7	1.1
1961	1.2	1.0	1.2	1.2	1.1	1.1	0.9	1.0	1.1	1.4	1.3	1.4	1.2
1962	1.5	1.1	1.0	1.2	1.0	0.7	0.8	0.8	0.8	0.9	0.9	1.2	1.0
1963	1.3	1.2	1.3	1.2	1.0	0.5	0.7	0.8	0.8	0.8	1.4	1.2	1.0
1964	1.5	1.1	1.3	1.4	1.2	0.8	0.7	0.9	0.9	0.9	1.2	1.2	1.1
1965	1.4	1.3	0.9	0.9	0.9	0.8	0.6	0.8	0.9	1.2	1.3	1.2	1.0
1966	1.2	0.7	1.1	1.0	0.9	0.6	0.7	0.7	0.8	1.2	1.2	1.2	1.0
1967	1.4	1.3	0.9	1.0	0.9	0.7	0.6	0.6	0.7	1.1	1.3	1.2	1.0
1968	1.0	1.2	1.1	1.0	0.9	0.7	0.7	0.8	0.8	1.1	1.1	1.3	1.0
1969	1.5	0.8	1.1	0.9	0.8	0.7	0.6	0.6	0.7	1.1	1.1	1.0	0.9
1970	1.0	1.2	0.9	1.1	1.0	0.8	0.8	0.6	0.9	1.0	1.3	1.2	1.0
1971	1.5	1.5	1.1	1.1	0.8	0.6	0.8	0.8	0.6	0.7	1.1	1.2	1.0
1972	1.4	1.1	1.0	0.9	0.8	0.7	0.6	0.8	0.9	1.0	0.9	1.1	0.9
1973	1.5	1.0	1.1	1.2	1.1	0.9	0.8	0.7	0.8	0.9	1.4	1.2	1.1
1974	1.2	1.1	1.2	1.3	1.0	0.9	0.7	0.7	0.9	0.9	1.1	1.1	1.0
1975	1.3	1.1	1.1	1.1	0.6	0.8	0.6	0.6	0.8	1.0	1.3	1.2	0.9
1976	1.4	1.4	1.5	1.1	1.0	0.9	0.7	0.7	0.9	1.0	1.3	1.3	1.1
1977	1.5	1.3	1.2	1.0	0.7	0.7	0.8	0.8	0.8	1.0	1.3	1.5	1.1
1978	1.4	0.6	0.9	1.0	0.8	0.7	0.7	0.6	0.8	1.0	1.1	1.4	0.9
1979	1.2	1.0	1.2	1.0	0.7	0.8	0.5	0.7	0.7	1.0	1.1	1.2	0.9
1980	1.1	0.9	1.0	0.9	0.6	0.6	0.5	0.6	0.8	1.1	1.2	1.0	0.9
1981	0.9	1.2	1.0	1.3	0.5	0.8	0.5	0.6	0.7	0.8	0.8	1.0	0.8
1982	1.5	0.8	0.9	1.2	0.4	0.5	0.5	0.5	0.5	0.7	1.0	1.1	0.8
1983	0.9	0.6	0.7	0.9	0.8	0.4	0.6	0.4	0.7	0.9	0.9	1.2	0.7
1984	0.8	0.9	1.0	0.7	0.9	0.6	0.5	0.4	0.6	0.5	1.1	1.1	0.8
1985	1.2	1.1	1.1	1.0	0.8	0.7	0.7	0.6	0.7	0.9	1.1	1.3	0.9
1986	1.4	0.9	1.3	1.0	1.0	0.9	0.9	1.0	1.1	1.1	1.2	1.1	1.1
1987	1.2	0.9	1.0	1.1	1.0	0.9	0.8	1.0	0.8	1.2	1.5	1.5	1.1
MEAN	1.2	1.0	1.1	1.1	0.8	0.7	0.7	0.7	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E35 (42.45N 80.73W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	2.5	4.1	3.7	2.4	1.9	2.4	2.3	2.4	3.6	3.3	2.8
1957	2.3	2.4	3.5	4.5	3.3	2.9	2.2	2.1	2.7	3.0	3.8	3.5
1958	2.6	2.7	1.7	2.9	1.8	2.2	1.8	1.8	2.6	2.8	3.3	2.3
1959	2.9	2.1	3.7	3.4	2.0	1.7	2.4	2.2	2.5	2.4	2.2	2.2
1960	2.1	3.5	3.6	4.2	3.1	3.1	2.6	2.5	2.7	3.1	3.7	3.4
1961	3.7	3.8	3.1	3.9	3.2	3.3	2.3	2.8	3.2	3.4	3.6	4.3
1962	3.5	2.7	2.7	3.8	3.4	2.2	2.6	2.5	2.7	2.9	3.1	3.8
1963	3.6	3.4	4.6	3.7	3.3	2.0	2.3	2.5	2.8	3.4	3.5	3.0
1964	4.4	3.2	5.5	3.3	4.7	2.9	2.1	2.4	3.5	2.9	3.2	3.1
1965	4.2	3.1	3.8	3.8	2.9	2.6	2.2	2.5	2.9	3.8	3.9	3.6
1966	3.5	2.5	3.0	3.0	3.5	2.5	2.9	2.2	2.9	3.4	4.1	3.6
1967	3.5	3.9	2.3	3.4	3.3	2.0	2.2	1.7	3.3	3.3	2.9	2.9
1968	3.4	3.2	2.9	3.9	3.0	2.5	2.5	2.7	2.3	2.9	3.3	3.5
1969	3.6	2.3	3.2	2.8	2.7	2.7	2.2	2.5	2.2	2.9	2.5	2.4
1970	2.5	3.5	3.6	3.7	2.9	2.4	2.9	2.3	3.2	2.6	3.9	3.2
1971	4.1	4.0	3.6	3.5	3.1	2.2	3.1	2.5	2.0	2.8	2.8	3.7
1972	4.5	3.3	3.9	2.9	2.7	2.3	2.3	2.5	3.1	3.3	3.3	3.2
1973	3.8	2.7	3.6	3.3	3.2	2.7	3.0	2.1	2.9	2.8	3.1	3.5
1974	5.0	3.8	3.6	3.7	2.9	2.7	2.5	2.7	2.8	2.8	3.3	3.3
1975	3.6	3.9	2.5	4.6	2.0	2.6	2.2	2.6	2.4	2.6	3.8	4.0
1976	3.4	4.1	3.7	2.9	4.4	3.3	2.6	2.6	2.7	2.9	2.8	3.7
1977	3.7	3.0	3.4	4.2	2.3	2.4	3.9	2.4	2.3	2.8	3.1	3.9
1978	5.6	1.8	3.1	3.7	3.1	2.6	2.5	3.0	2.6	2.8	3.3	3.5
1979	3.1	3.2	3.7	3.9	1.6	2.4	1.9	2.6	2.4	2.9	3.7	3.5
1980	3.8	2.8	2.7	3.1	3.2	2.4	2.0	1.8	2.7	3.3	2.7	3.2
1981	3.1	3.7	4.5	3.5	1.8	2.2	1.5	1.9	2.5	3.2	3.1	2.8
1982	4.8	3.6	4.2	4.1	1.5	2.1	2.0	1.6	1.5	2.8	3.1	4.0
1983	2.7	2.7	2.1	2.6	2.6	1.4	2.3	1.8	2.2	3.5	2.7	3.5
1984	2.9	2.1	3.1	4.1	3.0	1.9	1.6	1.2	2.1	2.6	2.9	3.2
1985	3.0	2.5	3.4	4.3	2.8	2.3	2.1	1.9	2.2	3.3	2.3	3.9
1986	3.5	2.4	3.8	3.0	2.7	2.8	2.2	2.5	3.5	3.0	3.4	3.0
1987	3.2	2.2	2.9	3.0	2.8	2.7	2.2	2.2	2.2	3.2	3.1	4.6

32 YR. STATISTICS FOR WIS STATION E35

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.4
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	205.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		78012621

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	634	35	9	1	.	.	.	.	.	679
0.25-0.49	.	714	2	2	.	.	.	.	.	.	718
0.50-0.74	.	703	.	2	.	.	.	.	.	.	705
0.75-0.99	.	225	.	.	.	.	.	.	.	.	225
1.00-1.24	.	6	38	1	.	.	.	.	.	.	45
1.25-1.49	.	.	2	.	.	.	.	.	.	.	2
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2282	77	14	1	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.3 MEAN TP(SEC)= 3.0 NO. OF CASES= 2224.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	532	40	13	.	.	.	.	.	.	585
0.25-0.49	.	550	5	7	1	.	.	.	.	.	563
0.50-0.74	.	730	.	2	1	.	.	.	.	.	733
0.75-0.99	.	158	47	1	1	.	.	.	.	.	207
1.00-1.24	.	2	80	.	1	.	.	.	.	.	83
1.25-1.49	.	.	5	.	.	.	.	.	.	.	5
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1972	177	23	4	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.4 MEAN TP(SEC)= 3.1 NO. OF CASES= 2040.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	734	48	19	.	.	.	.	.	.	801
0.25-0.49	.	878	26	21	3	.	.	.	.	.	928
0.50-0.74	.	1715	7	9	1	.	.	.	.	.	1732
0.75-0.99	.	534	376	2	.	.	.	.	.	.	912
1.00-1.24	.	.	507	.	.	.	.	.	.	.	507
1.25-1.49	.	.	64	.	1	.	.	.	.	.	65
1.50-1.74	.	.	.	31	1	.	.	.	.	.	32
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3861	1028	87	6	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 4665.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	562	34	12	.	.	.	.	.	.	608
0.25-0.49	.	840	33	26	1	.	.	.	.	.	900
0.50-0.74	.	1481	18	13	3	.	.	.	.	.	1515
0.75-0.99	.	411	320	13	3	.	.	.	.	.	747
1.00-1.24	.	.	483	8	2	.	.	.	.	.	493
1.25-1.49	.	.	81	23	2	.	.	.	.	.	106
1.50-1.74	.	.	1	40	.	.	.	.	.	.	41
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	1	1	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3294	970	142	12	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 4141.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	482	19	9	.	.	.	.	.	.	510
0.25-0.49	.	596	25	14	.	.	.	.	.	.	635
0.50-0.74	.	570	48	31	.	.	.	.	.	.	649
0.75-0.99	.	103	120	40	2	1	.	.	.	.	266
1.00-1.24	.	.	159	22	11	.	.	.	.	.	192
1.25-1.49	.	.	23	13	6	1	.	.	.	.	43
1.50-1.74	.	.	.	10	2	.	.	.	.	.	12
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1751	394	139	21	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.3 NO. OF CASES= 2167.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	319	11	7	.	.	.	.	.	.	337
0.25-0.49	.	302	13	6	1	.	.	.	.	.	322
0.50-0.74	.	211	31	17	.	.	.	.	.	.	259
0.75-0.99	.	44	44	25	1	.	.	.	.	.	114
1.00-1.24	.	.	51	33	10	.	.	.	.	.	94
1.25-1.49	.	.	7	12	8	.	.	.	.	.	27
1.50-1.74	.	.	.	12	11	2	.	.	.	.	25
1.75-1.99	.	.	.	1	4	.	.	.	.	.	5
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	876	157	113	36	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 1119.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	574	18	5	.	.	.	.	.	.	597
0.25-0.49	.	518	80	6	1	.	.	.	.	.	605
0.50-0.74	.	251	239	77	.	.	.	.	.	.	567
0.75-0.99	.	27	90	132	.	.	.	.	.	.	249
1.00-1.24	.	1	66	165	32	.	.	.	.	.	264
1.25-1.49	.	.	3	62	35	.	.	.	.	.	100
1.50-1.74	.	.	.	32	65	1	.	.	.	.	98
1.75-1.99	.	.	.	4	36	2	.	.	.	.	42
2.00-2.24	.	.	.	1	23	7	.	.	.	.	31
2.25-2.49	.	.	.	.	3	5	.	.	.	.	8
2.50-2.74	.	.	.	.	1	7	.	.	.	.	8
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	1	4	.	.	.	5
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1371	496	484	196	27	6	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.9 NO. OF CASES= 2423.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1301	27	3	1	.	.	.	.	.	1332
0.25-0.49	.	1180	111	3	1	.	.	.	.	.	1295
0.50-0.74	.	490	687	116	.	.	.	.	.	.	1293
0.75-0.99	.	73	266	364	.	.	.	.	.	.	703
1.00-1.24	.	.	154	549	66	.	.	.	.	.	769
1.25-1.49	.	.	8	220	132	.	.	.	.	.	360
1.50-1.74	.	.	.	117	310	4	.	.	.	.	431
1.75-1.99	.	.	.	3	170	11	.	.	.	.	184
2.00-2.24	.	.	.	.	126	35	.	.	.	.	161
2.25-2.49	.	.	.	.	11	49	.	.	.	.	60
2.50-2.74	.	.	.	.	1	62	.	.	.	.	63
2.75-2.99	.	.	.	.	.	28	1	.	.	.	29
3.00-3.24	.	.	.	.	.	2	14	.	.	.	16
3.25-3.49	.	.	.	.	.	.	7	.	.	.	7
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	3044	1253	1375	818	191	25	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 6285.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1367	40	4	1	.	.	.	.	.	1412
0.25-0.49	.	1542	106	9	.	.	.	.	.	.	1657
0.50-0.74	.	849	940	176	1	.	.	.	.	.	1966
0.75-0.99	.	114	457	525	2	.	.	.	.	.	1098
1.00-1.24	.	4	288	881	106	.	.	.	.	.	1279
1.25-1.49	.	.	16	407	218	.	.	.	.	.	641
1.50-1.74	.	.	1	317	544	11	.	.	.	.	873
1.75-1.99	.	.	.	9	349	18	.	.	.	.	376
2.00-2.24	.	.	.	1	407	41	1	.	.	.	450
2.25-2.49	.	.	.	.	37	127	.	.	.	.	164
2.50-2.74	.	.	.	.	3	130	.	.	.	.	133
2.75-2.99	.	.	.	.	.	42	2	.	.	.	44
3.00-3.24	.	.	.	.	.	5	11	.	.	.	16
3.25-3.49	.	.	.	.	.	.	6	.	.	.	6
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	3876	1848	2329	1668	374	21	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 9475.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1944	210	35	1	.	.	.	.	.	2190
0.25-0.49	.	1719	852	158	1	.	.	.	.	.	2730
0.50-0.74	.	927	1145	1133	43	.	.	.	.	.	3248
0.75-0.99	.	121	467	937	136	1	.	.	.	.	1662
1.00-1.24	.	7	329	913	525	1	.	.	.	.	1775
1.25-1.49	.	.	16	413	421	13	.	.	.	.	863
1.50-1.74	.	.	2	318	752	89	.	.	.	.	1161
1.75-1.99	.	.	.	23	460	126	1	.	.	.	610
2.00-2.24	.	.	.	2	574	212	17	.	.	.	805
2.25-2.49	.	.	.	.	74	296	19	.	.	.	389
2.50-2.74	.	.	.	.	5	252	27	.	.	.	284
2.75-2.99	.	.	.	.	1	67	40	1	.	.	109
3.00-3.24	.	.	.	.	.	6	35	.	.	.	41
3.25-3.49	.	.	.	.	.	1	12	.	.	.	13
3.50+	.	.	.	.	.	.	3	1	2	.	6
TOTAL	0	4718	3021	3932	2993	1064	154	2	2	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.8 MEAN TP(SEC)= 4.6 NO. OF CASES= 14876.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1459	599	222	3	.	.	.	.	.	2283
0.25-0.49	.	1138	766	643	51	.	.	.	.	.	2598
0.50-0.74	.	952	899	1505	366	4	.	.	.	.	3726
0.75-0.99	.	154	527	823	589	18	.	.	.	.	2111
1.00-1.24	.	4	537	823	993	73	2	.	.	.	2432
1.25-1.49	.	.	54	460	647	130	3	.	.	.	1294
1.50-1.74	.	.	2	425	749	420	11	.	.	.	1607
1.75-1.99	.	.	.	44	347	385	33	.	.	.	809
2.00-2.24	.	.	.	4	353	378	154	.	.	.	889
2.25-2.49	.	.	.	.	51	231	140	.	.	.	422
2.50-2.74	.	.	.	.	17	210	180	7	.	.	414
2.75-2.99	.	.	.	.	1	58	131	7	.	.	197
3.00-3.24	.	.	.	.	.	6	133	12	2	.	153
3.25-3.49	.	.	.	.	.	.	71	11	1	.	83
3.50+	.	.	.	.	.	1	40	58	12	.	111
TOTAL	0	3707	3384	4949	4167	1914	898	95	15	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 5.0 NO. OF CASES= 17916.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	783	37	36	3	.	.	.	.	.	859
0.25-0.49	.	940	20	56	13	.	.	.	.	.	1029
0.50-0.74	.	1067	395	85	70	2	.	.	.	.	1619
0.75-0.99	.	199	750	93	69	4	.	.	.	.	1115
1.00-1.24	.	18	1279	401	179	38	.	.	.	.	1915
1.25-1.49	.	.	111	857	139	36	1	.	.	.	1144
1.50-1.74	.	.	2	911	251	173	8	.	.	.	1345
1.75-1.99	.	.	.	214	158	166	22	.	.	.	560
2.00-2.24	.	.	.	39	232	194	91	2	.	.	558
2.25-2.49	.	.	.	3	71	90	86	1	.	.	251
2.50-2.74	.	.	.	.	20	81	125	10	.	.	236
2.75-2.99	.	.	.	.	3	14	71	3	.	.	91
3.00-3.24	.	.	.	.	1	5	65	12	3	.	86
3.25-3.49	.	.	.	.	.	3	33	6	.	.	42
3.50+	.	.	.	.	.	.	21	29	8	1	59
TOTAL	0	3007	2594	2695	1209	806	523	63	11	1	

MEAN HS(M) = 1.1 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.6 NO. OF CASES= 10227.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	775	10	4	.	.	.	.	.	.	789
0.25-0.49	.	745	.	.	.	.	.	.	.	.	745
0.50-0.74	.	1146	205	3	1	.	.	.	.	.	1355
0.75-0.99	.	297	596	8	.	.	.	.	.	.	901
1.00-1.24	.	4	1041	312	3	.	.	.	.	.	1360
1.25-1.49	.	.	56	713	1	3	.	.	.	.	773
1.50-1.74	.	.	5	687	4	4	.	.	.	.	700
1.75-1.99	.	.	.	140	60	7	2	.	.	.	209
2.00-2.24	.	.	.	4	93	4	1	.	.	.	102
2.25-2.49	.	.	.	.	20	3	.	.	.	.	23
2.50-2.74	.	.	.	.	11	2	1	.	.	.	14
2.75-2.99	.	.	.	.	1	3	1	.	.	.	5
3.00-3.24	.	.	.	.	.	3	1	.	.	.	4
3.25-3.49	.	.	.	.	.	1	.	1	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2967	1913	1871	194	30	6	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.9 NO. OF CASES= 6541.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	658	13	4	1	.	.	.	.	.	676
0.25-0.49	.	645	.	.	.	.	.	.	.	.	645
0.50-0.74	.	1278	16	.	.	.	.	.	.	.	1294
0.75-0.99	.	450	332	1	.	.	.	.	.	.	783
1.00-1.24	.	2	565	36	.	.	.	.	.	.	603
1.25-1.49	.	.	127	74	.	.	.	.	.	.	201
1.50-1.74	.	.	10	131	1	.	.	.	.	.	142
1.75-1.99	.	.	.	27	5	.	.	.	.	.	32
2.00-2.24	.	.	.	5	11	.	.	.	.	.	16
2.25-2.49	.	.	.	.	4	.	.	.	.	.	4
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3033	1063	278	24	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.4 NO. OF CASES= 4122.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	632	17	2	.	.	.	.	.	.	651
0.25-0.49	.	491	1	.	.	.	.	.	.	.	492
0.50-0.74	.	961	1	.	.	.	.	.	.	.	962
0.75-0.99	.	313	263	.	.	.	.	.	.	.	576
1.00-1.24	.	1	367	.	.	.	1	.	.	.	369
1.25-1.49	.	.	63	.	.	.	.	.	.	.	63
1.50-1.74	.	.	1	60	.	.	.	.	.	.	61
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2398	713	67	0	0	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 2977.

STATION E36 42.58N 80.93W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

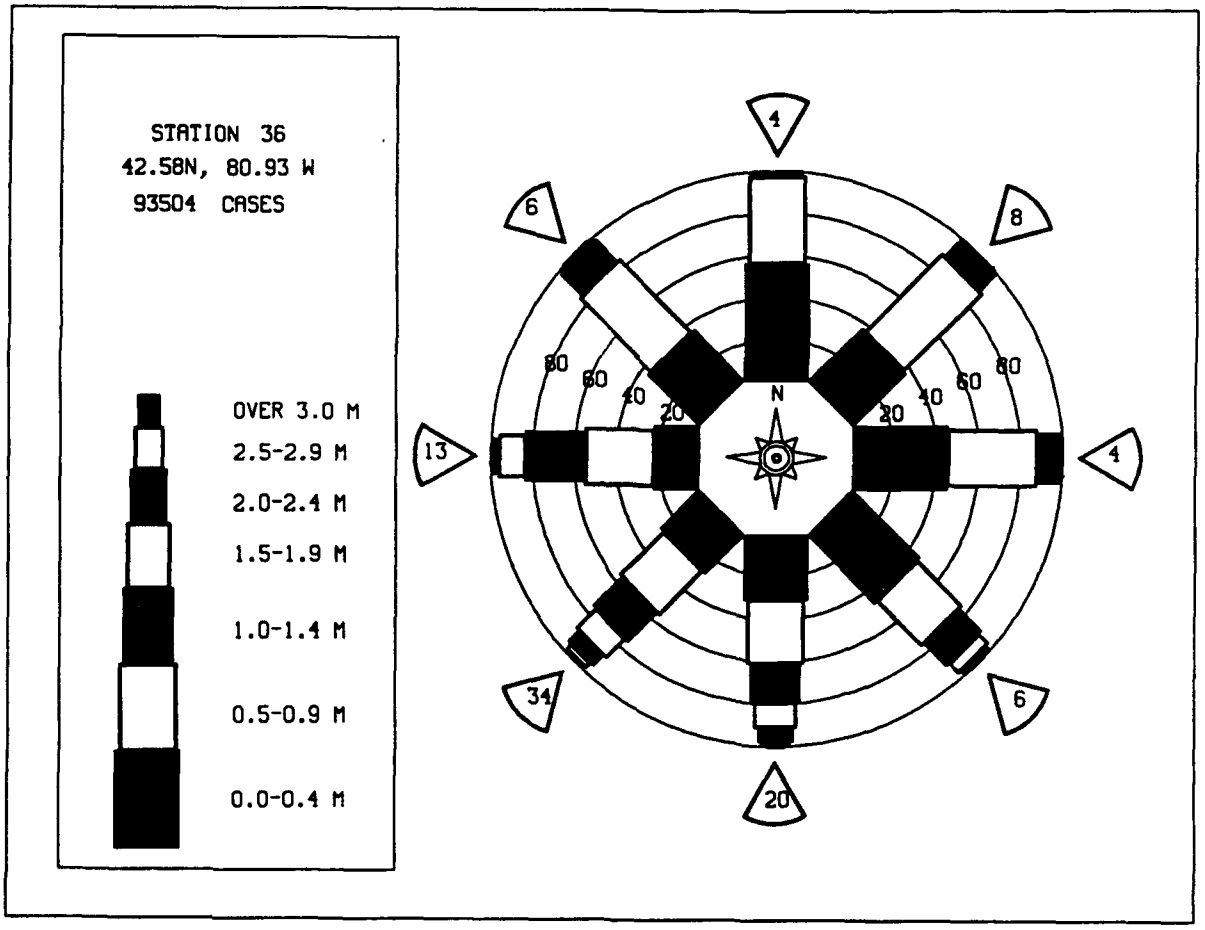
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	487	14	5	.	.	.	.	.	.	506
0.25-0.49	.	452	1	2	.	.	.	.	.	.	455
0.50-0.74	.	845	.	.	.	.	.	.	.	.	845
0.75-0.99	.	290	110	.	.	.	.	.	.	.	400
1.00-1.24	.	3	210	.	.	.	.	.	.	.	213
1.25-1.49	.	.	23	.	.	.	.	.	.	.	23
1.50-1.74	.	.	.	14	.	.	.	.	.	.	14
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2077	358	24	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 2306.

STATION E36 42.58N 80.93W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1325	118	39	1	.	.	.	.	.	1483
0.25-0.49	.	1325	204	95	7	.	.	.	.	.	1631
0.50-0.74	.	1418	463	317	48	.	.	.	.	.	2246
0.75-0.99	.	352	477	296	80	2	.	.	.	.	1207
1.00-1.24	.	5	616	414	193	11	.	.	.	.	1239
1.25-1.49	.	.	66	326	161	18	.	.	.	.	571
1.50-1.74	.	.	2	311	269	70	2	.	.	.	654
1.75-1.99	.	.	.	48	159	71	5	.	.	.	283
2.00-2.24	.	.	.	6	182	87	26	.	.	.	301
2.25-2.49	.	.	.	.	27	80	24	.	.	.	131
2.50-2.74	.	.	.	.	6	74	33	1	.	.	114
2.75-2.99	.	.	.	.	.	22	24	1	.	.	47
3.00-3.24	.	.	.	.	.	2	26	2	.	.	30
3.25-3.49	.	.	.	.	.	.	13	1	.	.	14
3.50+	.	.	.	.	.	.	6	8	2	.	16
TOTAL	0	4425	1946	1852	1133	437	159	13	2	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 5.3 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E36 (42.58N 80.93W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.8	0.8	0.9	0.8	0.6	0.7	0.8	0.7	0.9	1.1	0.9	0.8
1957	1.0	0.8	1.1	1.1	1.0	1.0	0.8	0.6	1.0	1.0	1.5	1.5	1.0
1958	1.0	1.0	0.5	0.7	0.7	0.7	0.5	0.5	0.7	1.0	1.0	0.8	0.8
1959	0.9	0.8	0.9	0.7	0.4	0.3	0.4	0.6	0.7	0.8	0.9	0.6	0.7
1960	0.7	1.1	1.1	1.3	1.0	0.8	0.7	0.7	0.8	0.9	1.5	1.5	1.0
1961	1.1	0.9	1.0	1.0	1.0	1.0	0.8	0.9	1.0	1.2	1.2	1.3	1.0
1962	1.3	0.9	0.9	1.0	0.9	0.6	0.7	0.7	0.7	0.8	0.7	1.1	0.9
1963	1.1	1.1	1.2	1.1	0.9	0.5	0.6	0.6	0.7	0.7	1.2	1.0	0.9
1964	1.3	0.9	1.1	1.2	1.0	0.7	0.6	0.8	0.8	0.8	1.0	1.1	1.0
1965	1.2	1.2	0.8	0.8	0.8	0.7	0.5	0.7	0.8	1.1	1.1	1.1	0.9
1966	1.0	0.7	0.9	0.9	0.7	0.6	0.6	0.6	0.7	1.1	1.1	1.0	0.8
1967	1.2	1.1	0.7	0.9	0.8	0.6	0.5	0.6	0.6	1.0	1.1	1.0	0.8
1968	0.8	1.0	0.9	0.9	0.8	0.6	0.7	0.6	0.7	1.0	0.9	1.1	0.8
1969	1.3	0.6	1.0	0.8	0.7	0.7	0.5	0.6	0.6	0.9	1.0	0.8	0.8
1970	0.9	1.1	0.8	1.0	0.9	0.7	0.7	0.5	0.8	0.9	1.2	1.0	0.9
1971	1.3	1.4	1.0	1.0	0.7	0.6	0.7	0.7	0.6	0.7	1.0	1.0	0.9
1972	1.3	1.0	0.9	0.8	0.7	0.7	0.6	0.7	0.8	0.9	0.8	0.9	0.8
1973	1.4	0.8	0.9	1.0	0.9	0.9	0.7	0.7	0.7	0.8	1.2	1.0	0.9
1974	1.0	1.0	1.0	1.2	0.8	0.9	0.7	0.6	0.8	0.8	1.0	1.0	0.9
1975	1.2	0.9	0.9	0.9	0.5	0.7	0.5	0.5	0.7	0.9	1.2	1.0	0.8
1976	1.2	1.3	1.3	0.9	0.9	0.7	0.6	0.5	0.7	0.9	1.2	1.1	1.0
1977	1.4	1.2	1.1	0.9	0.6	0.6	0.7	0.7	0.7	0.9	1.1	1.3	0.9
1978	1.2	0.6	0.8	0.9	0.7	0.7	0.6	0.5	0.7	0.9	0.9	1.2	0.8
1979	1.0	0.9	1.1	0.8	0.6	0.7	0.5	0.6	0.6	0.9	1.0	1.1	0.8
1980	0.9	0.8	0.9	0.8	0.6	0.6	0.5	0.5	0.7	0.9	1.0	0.8	0.7
1981	0.8	1.1	0.8	1.1	0.5	0.7	0.4	0.5	0.7	0.7	0.7	0.8	0.7
1982	1.3	0.8	0.8	1.0	0.3	0.4	0.4	0.4	0.4	0.6	0.9	1.0	0.7
1983	0.8	0.5	0.6	0.7	0.7	0.3	0.5	0.4	0.6	0.8	0.8	1.1	0.6
1984	0.7	0.8	0.8	0.6	0.7	0.5	0.4	0.4	0.6	0.5	0.9	1.0	0.6
1985	1.0	0.9	1.0	0.9	0.7	0.6	0.6	0.5	0.6	0.8	0.9	1.1	0.8
1986	1.2	0.7	1.1	0.8	0.8	0.7	0.7	0.8	0.9	0.9	1.0	1.0	0.9
1987	1.0	0.7	0.8	0.9	0.8	0.8	0.7	0.9	0.7	1.0	1.3	1.3	0.9
MEAN	1.1	0.9	0.9	0.9	0.7	0.7	0.6	0.6	0.7	0.9	1.0	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E36 (42.58N 80.93W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	2.4	3.7	3.4	2.4	1.9	2.2	2.4	2.4	3.2	2.9	3.0
1957	2.5	2.5	3.4	4.2	3.2	2.4	2.3	2.1	2.6	3.0	3.9	3.6
1958	2.9	2.6	1.5	2.9	1.8	2.1	1.7	1.8	2.4	2.9	3.1	2.3
1959	2.7	2.1	3.7	3.2	2.0	1.7	2.2	2.1	2.3	2.4	2.1	2.2
1960	2.1	3.5	3.4	3.9	3.1	3.2	2.5	2.5	2.8	3.1	3.7	3.4
1961	3.3	3.5	2.9	3.5	3.1	3.1	2.2	2.6	3.3	3.0	3.5	4.0
1962	3.4	2.8	2.7	3.8	3.3	2.2	2.7	2.3	2.8	2.7	3.1	3.6
1963	3.7	3.3	4.3	3.4	3.4	1.7	2.1	2.0	2.8	3.2	3.6	2.8
1964	4.5	3.0	5.3	3.4	4.4	2.9	2.1	2.4	3.2	2.7	3.1	2.7
1965	3.9	3.1	4.0	3.4	2.8	2.5	2.1	2.2	2.8	3.7	3.8	3.4
1966	3.3	2.6	2.9	2.8	3.3	2.4	2.7	1.8	2.5	3.4	3.8	3.3
1967	3.1	3.6	2.2	3.3	3.1	1.8	1.9	1.6	3.2	3.0	2.7	2.6
1968	2.9	3.1	2.7	3.8	2.8	2.5	2.3	2.3	2.1	2.9	3.2	3.3
1969	3.4	1.8	3.0	2.7	2.5	2.8	2.4	2.3	2.1	2.7	2.3	2.1
1970	2.7	3.4	3.3	3.3	3.0	2.4	2.8	2.3	2.9	2.6	3.6	3.2
1971	3.4	4.2	3.6	3.4	3.1	2.4	3.0	2.2	2.2	2.3	2.5	3.7
1972	4.1	3.5	3.9	2.5	2.9	2.3	2.5	2.3	3.1	3.2	3.1	2.8
1973	3.6	2.6	3.5	3.3	3.2	2.6	2.8	2.1	2.8	2.7	3.1	3.4
1974	4.7	3.7	3.4	3.4	2.9	2.6	2.3	2.4	2.8	2.7	3.1	2.3
1975	3.5	3.8	2.3	4.1	1.8	2.5	2.2	2.3	2.3	2.5	3.6	3.8
1976	2.8	3.7	3.3	2.8	4.3	2.9	2.4	2.4	2.8	2.7	2.7	3.7
1977	3.7	3.0	3.3	3.7	1.9	2.4	3.5	2.3	2.2	2.9	2.8	3.6
1978	4.8	2.1	3.0	3.1	2.9	2.6	2.4	2.9	2.7	2.8	3.4	3.3
1979	3.0	3.0	3.3	3.4	1.8	2.3	1.9	2.4	2.3	2.8	3.6	3.5
1980	3.7	2.6	2.5	2.9	3.0	2.0	1.8	1.9	2.7	2.9	2.7	2.7
1981	3.1	3.5	4.1	3.2	1.8	1.9	1.2	1.9	2.3	3.0	2.9	2.8
1982	4.2	3.4	3.7	3.9	1.5	2.1	2.1	1.6	1.4	2.6	3.0	3.6
1983	2.5	2.1	1.9	2.8	2.0	1.1	2.1	1.7	2.2	3.3	2.6	3.1
1984	2.5	2.2	2.8	4.0	2.8	2.0	1.4	1.1	2.0	2.2	2.6	3.1
1985	2.8	2.4	2.8	4.2	2.7	2.1	2.3	2.1	2.2	3.1	2.3	3.6
1986	3.3	2.2	3.7	2.6	2.5	2.3	2.1	2.5	3.3	2.6	3.1	2.8
1987	2.6	2.3	2.8	2.5	2.6	2.7	1.9	2.2	2.3	3.2	2.8	4.4

32 YR. STATISTICS FOR WIS STATION E36

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	232.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	729	26	17	.	.	.	.	.	.	772
0.25-0.49	.	748	3	2	.	.	.	.	.	.	753
0.50-0.74	.	745	2	2	.	.	.	.	.	.	749
0.75-0.99	.	219	2	1	.	.	.	.	.	.	222
1.00-1.24	.	3	41	.	.	.	.	.	.	.	44
1.25-1.49	.	.	2	.	.	.	.	.	.	.	2
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2444	76	22	0	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.3 MEAN TP(SEC)= 3.0 NO. OF CASES= 2381.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	608	34	11	.	.	.	.	.	.	653
0.25-0.49	.	623	14	6	1	.	.	.	.	.	644
0.50-0.74	.	761	6	3	1	.	.	.	.	.	771
0.75-0.99	.	165	47	3	1	.	.	.	.	.	216
1.00-1.24	.	1	83	1	.	.	.	.	.	.	85
1.25-1.49	.	.	5	.	.	.	.	.	.	.	5
1.50-1.74	.	.	1	4	.	.	.	.	.	.	5
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2158	190	28	3	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 2231.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	801	43	25	.	.	.	.	.	.	869
0.25-0.49	.	790	26	20	4	.	.	.	.	.	840
0.50-0.74	.	1581	10	16	4	.	.	.	.	.	1611
0.75-0.99	.	547	343	5	2	.	.	.	.	.	897
1.00-1.24	.	.	439	1	2	.	.	.	.	.	442
1.25-1.49	.	.	54	2	.	.	.	.	.	.	56
1.50-1.74	.	.	2	28	.	1	.	.	.	.	31
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3719	917	98	12	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 4447.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	577	36	11	.	.	.	.	.	.	624
0.25-0.49	.	823	20	23	3	.	.	.	.	.	869
0.50-0.74	.	1372	79	17	2	.	.	.	.	.	1470
0.75-0.99	.	358	374	13	4	.	.	.	.	.	749
1.00-1.24	.	.	423	65	3	.	.	.	.	.	491
1.25-1.49	.	.	40	94	2	.	.	.	.	.	136
1.50-1.74	.	.	2	71	.	.	.	.	.	.	73
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3130	974	300	18	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.4 NO. OF CASES= 4143.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	680	29	6	.	.	.	.	.	.	715
0.25-0.49	.	651	37	20	.	.	.	.	.	.	708
0.50-0.74	.	511	157	38	3	.	.	.	.	.	709
0.75-0.99	.	28	208	38	4	1	.	.	.	.	279
1.00-1.24	.	.	176	85	8	.	.	.	.	.	269
1.25-1.49	.	.	3	75	6	.	.	.	.	.	84
1.50-1.74	.	.	.	42	3	1	.	.	.	.	46
1.75-1.99	.	.	.	4	2	.	.	.	.	.	6
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1870	610	308	29	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 2646.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	445	19	9	.	.	.	.	.	.	473
0.25-0.49	.	324	19	6	3	.	.	.	.	.	352
0.50-0.74	.	209	72	28	2	.	.	.	.	.	311
0.75-0.99	.	16	80	29	2	.	.	.	.	.	127
1.00-1.24	.	.	74	53	12	.	.	.	.	.	139
1.25-1.49	.	.	4	32	13	.	.	.	.	.	49
1.50-1.74	.	.	.	22	18	1	.	.	.	.	41
1.75-1.99	.	.	.	1	4	2	.	.	.	.	7
2.00-2.24	.	.	.	.	1	1	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	994	268	180	55	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 1414.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	691	17	5	.	.	.	.	.	.	713
0.25-0.49	.	585	102	8	.	.	.	.	.	.	695
0.50-0.74	.	278	320	94	.	.	.	.	.	.	692
0.75-0.99	.	25	116	198	2	.	.	.	.	.	341
1.00-1.24	.	.	60	242	33	1	.	.	.	.	336
1.25-1.49	.	.	3	59	54	.	.	.	.	.	116
1.50-1.74	.	.	.	36	98	.	.	.	.	.	134
1.75-1.99	.	.	.	2	43	6	.	.	.	.	51
2.00-2.24	.	.	.	.	23	9	.	.	.	.	32
2.25-2.49	.	.	.	.	1	8	.	.	.	.	9
2.50-2.74	.	.	.	.	1	8	.	.	.	.	9
2.75-2.99	.	.	.	.	.	4	1	.	.	.	5
3.00-3.24	.	.	.	.	.	.	3	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1579	618	644	255	36	4	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 3.9 NO. OF CASES= 2946.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1282	44	4	.	.	.	.	.	.	1330
0.25-0.49	.	1070	176	12	.	.	.	.	.	.	1258
0.50-0.74	.	550	596	165	.	.	.	.	.	.	1311
0.75-0.99	.	64	257	368	.	.	.	.	.	.	689
1.00-1.24	.	.	147	472	82	.	.	.	.	.	701
1.25-1.49	.	.	7	207	177	.	.	.	.	.	391
1.50-1.74	.	.	.	129	284	1	.	.	.	.	414
1.75-1.99	.	.	.	4	146	20	.	.	.	.	170
2.00-2.24	.	.	.	.	111	38	1	.	.	.	150
2.25-2.49	.	.	.	.	13	37	.	.	.	.	50
2.50-2.74	.	.	.	.	1	70	.	.	.	.	71
2.75-2.99	.	.	.	.	.	18	4	.	.	.	22
3.00-3.24	.	.	.	.	.	2	10	.	.	.	12
3.25-3.49	.	.	.	.	.	.	5	.	.	.	5
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	2966	1227	1361	814	186	21	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 6164.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1500	56	8	.	.	.	.	.	.	1564
0.25-0.49	.	1449	155	16	.	.	.	.	.	.	1620
0.50-0.74	.	830	801	226	4	.	.	.	.	.	1861
0.75-0.99	.	99	447	501	9	.	.	.	.	.	1056
1.00-1.24	.	1	328	784	146	1	.	.	.	.	1260
1.25-1.49	.	.	16	357	199	.	.	.	.	.	572
1.50-1.74	.	.	1	280	513	4	.	.	.	.	798
1.75-1.99	.	.	.	14	343	12	.	.	.	.	369
2.00-2.24	.	.	.	1	371	40	.	.	.	.	412
2.25-2.49	.	.	.	.	36	127	.	.	.	.	163
2.50-2.74	.	.	.	.	1	124	.	.	.	.	125
2.75-2.99	.	.	.	.	.	28	1	.	.	.	29
3.00-3.24	.	.	.	.	.	5	8	.	.	.	13
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	3879	1804	2187	1622	341	12	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 9220.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2607	450	80	1	.	.	.	.	.	3138
0.25-0.49	.	1689	1303	374	4	.	.	.	.	.	3370
0.50-0.74	.	889	1052	1689	124	.	.	.	.	.	3754
0.75-0.99	.	128	482	918	316	.	.	.	.	.	1844
1.00-1.24	.	7	349	822	688	16	.	.	.	.	1882
1.25-1.49	.	.	8	409	436	29	1	.	.	.	883
1.50-1.74	.	.	.	345	796	121	.	.	.	.	1262
1.75-1.99	.	.	.	18	439	139	5	.	.	.	601
2.00-2.24	.	.	.	1	549	233	24	.	.	.	807
2.25-2.49	.	.	.	.	65	265	22	.	.	.	352
2.50-2.74	.	.	.	.	5	239	37	1	.	.	282
2.75-2.99	.	.	.	.	.	43	37	1	.	.	81
3.00-3.24	.	.	.	.	.	3	47	.	.	.	50
3.25-3.49	.	.	.	.	.	.	11	.	.	.	11
3.50+	.	.	.	.	.	.	6	1	1	.	8
TOTAL	0	5320	3644	4656	3423	1088	190	3	1	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.6 NO. OF CASES= 17155.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1511	626	341	10	.	.	.	.	.	2488
0.25-0.49	.	1068	521	627	89	.	.	.	.	.	2305
0.50-0.74	.	1229	577	995	404	8	.	.	.	.	3213
0.75-0.99	.	437	590	619	539	26	.	.	.	.	2211
1.00-1.24	.	7	788	797	980	139	5	.	.	.	2716
1.25-1.49	.	.	110	430	543	190	11	.	.	.	1284
1.50-1.74	.	.	14	419	719	502	27	1	.	.	1682
1.75-1.99	.	.	.	43	310	355	48	.	.	.	756
2.00-2.24	.	.	.	4	318	418	117	.	.	.	857
2.25-2.49	.	.	.	.	41	251	121	1	.	.	414
2.50-2.74	.	.	.	.	9	205	182	8	.	.	404
2.75-2.99	.	.	.	.	1	49	139	2	.	.	191
3.00-3.24	.	.	.	.	.	12	154	7	.	.	173
3.25-3.49	.	.	.	.	.	.	74	9	.	.	83
3.50+	.	.	.	.	.	.	51	58	4	.	113
TOTAL	0	4252	3226	4275	3963	2155	929	86	4	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 5.0 NO. OF CASES= 17691.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	856	27	20	1	.	.	.	.	.	904
0.25-0.49	.	830	11	18	7	.	.	.	.	.	866
0.50-0.74	.	1411	27	16	20	2	.	.	.	.	1476
0.75-0.99	.	724	576	32	22	4	.	.	.	.	1358
1.00-1.24	.	9	1275	110	93	26	.	.	.	.	1513
1.25-1.49	.	.	403	195	108	37	2	.	.	.	745
1.50-1.74	.	.	43	399	190	135	13	.	.	.	780
1.75-1.99	.	.	.	95	66	102	17	.	.	.	280
2.00-2.24	.	.	.	42	67	127	56	1	.	.	293
2.25-2.49	.	.	.	.	19	67	52	.	.	.	138
2.50-2.74	.	.	.	.	3	42	52	1	.	.	98
2.75-2.99	.	.	.	.	2	8	32	3	.	.	45
3.00-3.24	.	.	.	.	.	2	40	5	.	.	47
3.25-3.49	.	.	.	.	.	.	20	3	1	.	24
3.50+	.	.	.	.	.	.	7	9	2	.	18
TOTAL	0	3830	2362	927	598	552	291	22	3	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 8051.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	852	18	5	.	.	.	.	.	.	875
0.25-0.49	.	643	1	.	.	.	.	.	.	.	644
0.50-0.74	.	1359	4	1	.	.	.	.	.	.	1364
0.75-0.99	.	436	506	.	.	.	.	.	.	.	942
1.00-1.24	.	3	1179	3	.	1	.	.	.	.	1186
1.25-1.49	.	.	245	207	2	1	.	.	.	.	455
1.50-1.74	.	.	3	217	2	2	.	.	.	.	224
1.75-1.99	.	.	.	44	.	2	.	.	.	.	46
2.00-2.24	.	.	.	14	4	1	.	.	.	.	19
2.25-2.49	.	.	.	.	4	.	.	.	.	.	4
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3293	1956	491	16	7	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.5 NO. OF CASES= 5398.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	655	11	4	1	.	.	.	.	.	671
0.25-0.49	.	552	1	.	.	.	.	.	.	.	553
0.50-0.74	.	1349	2	1	.	.	.	.	.	.	1352
0.75-0.99	.	445	349	1	.	.	.	.	.	.	795
1.00-1.24	.	.	570	9	1	.	.	.	.	.	580
1.25-1.49	.	.	115	31	.	.	.	.	.	.	146
1.50-1.74	.	.	4	82	.	.	.	.	.	.	86
1.75-1.99	.	.	.	17	.	.	.	.	.	.	17
2.00-2.24	.	.	.	3	2	.	.	.	.	.	5
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3001	1052	148	6	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.3 NO. OF CASES= 3941.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	732	19	3	.	.	.	.	.	.	754
0.25-0.49	.	510	3	.	1	.	.	.	.	.	514
0.50-0.74	.	1100	1	1	.	.	.	.	.	.	1102
0.75-0.99	.	302	293	.	.	.	.	.	.	.	595
1.00-1.24	.	2	375	.	.	.	1	.	.	.	378
1.25-1.49	.	.	68	.	.	.	.	.	.	.	68
1.50-1.74	.	.	1	59	.	.	.	.	.	.	60
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2646	760	65	1	0	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 3252.

STATION E37 42.58N 81.13W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

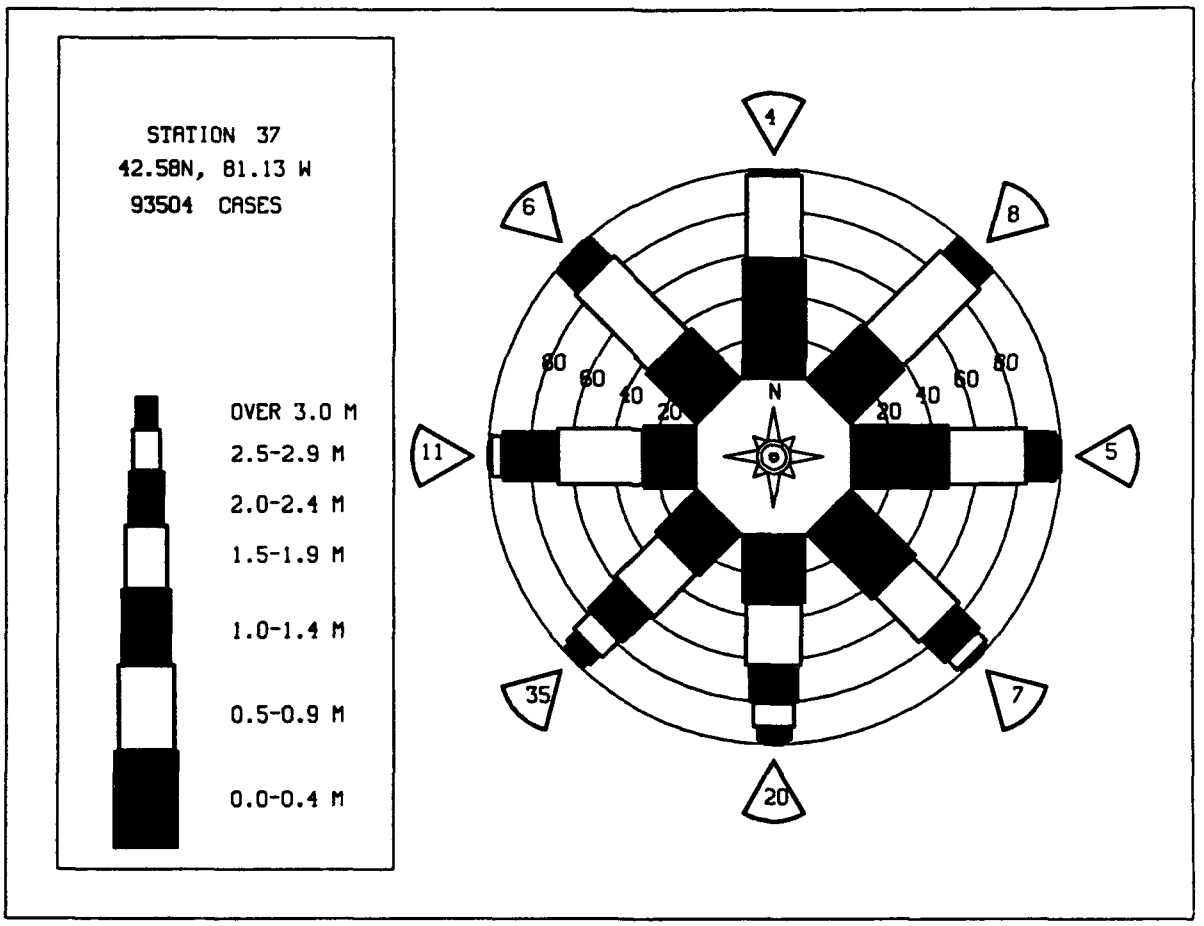
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	521	21	4	.	.	.	.	.	.	546
0.25-0.49	.	509	4	2	1	.	.	.	.	.	516
0.50-0.74	.	871	1	.	.	.	.	.	.	.	872
0.75-0.99	.	291	114	1	.	.	.	.	.	.	406
1.00-1.24	.	1	212	.	.	.	.	.	.	.	213
1.25-1.49	.	.	18	.	.	.	.	.	.	.	18
1.50-1.74	.	.	1	12	.	.	.	.	.	.	13
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2193	371	21	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 2424.

STATION E37 42.58N 81.13W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1505	148	55	1	.	.	.	.	.	1709
0.25-0.49	.	1287	240	113	11	.	.	.	.	.	1651
0.50-0.74	.	1505	371	329	56	1	.	.	.	.	2262
0.75-0.99	.	429	479	273	90	3	.	.	.	.	1274
1.00-1.24	.	3	652	345	205	18	.	.	.	.	1223
1.25-1.49	.	.	110	210	154	25	1	.	.	.	500
1.50-1.74	.	.	7	215	262	77	4	.	.	.	565
1.75-1.99	.	.	.	25	135	64	7	.	.	.	231
2.00-2.24	.	.	.	6	145	86	19	.	.	.	256
2.25-2.49	.	.	.	.	18	75	19	.	.	.	112
2.50-2.74	.	.	.	.	2	69	27	1	.	.	99
2.75-2.99	.	.	.	.	.	15	21	.	.	.	36
3.00-3.24	.	.	.	.	.	2	26	1	.	.	29
3.25-3.49	.	.	.	.	.	.	11	1	.	.	12
3.50+	.	.	.	.	.	.	6	6	.	.	12
TOTAL	0	4729	2007	1571	1079	435	141	9	0	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E37 (42.58N 81.13W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.7	0.8	0.8	0.8	0.5	0.7	0.8	0.7	0.9	1.1	0.9	0.8
1957	0.9	0.7	1.0	1.1	0.9	0.9	0.7	0.6	0.9	0.9	1.4	1.4	0.9
1958	0.9	0.9	0.5	0.6	0.7	0.6	0.5	0.5	0.7	1.0	1.0	0.8	0.7
1959	0.9	0.8	0.9	0.7	0.4	0.3	0.4	0.5	0.7	0.8	0.9	0.6	0.6
1960	0.7	1.0	1.0	1.2	0.9	0.8	0.6	0.7	0.7	0.8	1.4	1.4	0.9
1961	1.1	0.8	1.0	0.9	0.9	0.9	0.7	0.8	0.9	1.1	1.1	1.2	0.9
1962	1.3	0.9	0.9	1.0	0.9	0.6	0.6	0.6	0.7	0.8	0.7	1.0	0.8
1963	1.1	1.1	1.1	1.0	0.8	0.4	0.6	0.6	0.6	0.7	1.2	0.9	0.8
1964	1.3	0.9	1.1	1.2	1.0	0.6	0.6	0.7	0.8	0.8	0.9	1.0	0.9
1965	1.1	1.1	0.8	0.7	0.7	0.7	0.5	0.7	0.8	1.0	1.1	1.1	0.9
1966	0.9	0.6	0.9	0.8	0.7	0.5	0.5	0.5	0.6	1.1	1.1	1.0	0.8
1967	1.2	1.1	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.9	1.1	1.0	0.8
1968	0.8	0.9	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.9	0.9	1.0	0.8
1969	1.2	0.6	0.9	0.8	0.6	0.6	0.5	0.5	0.6	0.9	0.9	0.7	0.7
1970	0.6	1.1	0.7	0.9	0.8	0.7	0.5	0.5	0.8	0.9	1.1	1.0	0.8
1971	1.2	1.3	0.9	0.9	0.7	0.5	0.6	0.7	0.6	0.7	0.9	1.0	0.8
1972	1.2	0.9	0.8	0.7	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.8
1973	1.3	0.8	0.9	1.0	0.9	0.8	0.7	0.6	0.7	0.7	1.1	1.0	0.9
1974	1.0	0.9	0.9	1.1	0.8	0.8	0.6	0.6	0.8	0.8	0.9	0.9	0.9
1975	1.1	0.9	0.8	0.8	0.5	0.7	0.5	0.5	0.7	0.8	1.1	0.9	0.8
1976	1.1	1.2	1.2	0.9	0.6	0.7	0.6	0.5	0.7	0.8	1.1	1.1	0.9
1977	1.3	1.1	1.0	0.9	0.5	0.5	0.6	0.7	0.6	0.8	1.1	1.3	0.9
1978	1.1	0.5	0.7	0.8	0.6	0.6	0.6	0.5	0.6	0.9	0.9	1.1	0.7
1979	0.8	0.8	1.0	0.8	0.5	0.7	0.4	0.6	0.6	0.9	0.9	1.0	0.8
1980	0.9	0.7	0.8	0.7	0.5	0.5	0.4	0.5	0.6	0.8	0.9	0.8	0.7
1981	0.7	1.1	0.8	1.1	0.4	0.6	0.4	0.5	0.6	0.7	0.6	0.8	0.7
1982	1.2	0.7	0.7	0.9	0.3	0.4	0.4	0.4	0.4	0.6	0.9	0.9	0.7
1983	0.7	0.5	0.6	0.7	0.7	0.3	0.5	0.3	0.6	0.8	0.7	1.0	0.6
1984	0.6	0.7	0.7	0.6	0.7	0.5	0.4	0.3	0.5	0.4	0.9	0.9	0.6
1985	1.0	0.9	0.9	0.8	0.6	0.5	0.5	0.5	0.6	0.7	0.9	1.1	0.8
1986	1.1	0.7	1.0	0.7	0.7	0.6	0.6	0.6	0.8	0.8	0.9	0.9	0.8
1987	0.9	0.7	0.8	0.8	0.8	0.7	0.6	0.8	0.7	0.9	1.2	1.2	0.8
MEAN	1.0	0.9	0.9	0.9	0.7	0.6	0.6	0.6	0.7	0.8	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E37 (42.58N 81.13W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.1	2.3	3.6	3.4	2.4	1.6	2.1	2.3	2.3	3.1	2.8	2.9
1957	2.4	2.3	3.4	4.0	3.0	2.2	2.2	2.0	2.5	2.7	3.8	3.4
1958	2.8	2.4	1.4	2.9	1.9	1.9	1.9	2.0	2.4	2.8	3.1	2.3
1959	2.8	2.2	3.8	3.2	2.0	1.7	2.1	2.0	2.3	2.3	2.1	2.3
1960	2.2	3.2	3.2	3.6	3.0	2.8	2.3	2.3	2.7	2.9	3.7	3.3
1961	3.2	3.2	2.8	3.1	2.9	2.8	2.1	2.6	3.1	3.1	3.3	3.9
1962	3.3	2.7	2.7	3.7	3.1	2.1	2.7	2.3	2.7	2.7	2.8	3.5
1963	3.5	3.2	4.4	3.2	3.4	1.5	2.0	1.9	2.8	3.1	3.5	2.8
1964	4.3	2.9	5.2	3.3	4.4	2.9	2.1	2.4	3.2	2.7	3.1	2.8
1965	3.6	3.1	3.8	2.9	2.7	2.5	2.1	2.2	2.8	3.6	3.9	3.4
1966	3.2	2.7	2.9	2.8	3.3	2.3	2.6	1.7	2.4	3.3	3.7	3.2
1967	3.1	3.5	2.2	3.2	2.9	1.6	1.9	1.5	3.2	2.9	2.7	2.8
1968	2.6	3.1	2.7	3.8	2.8	2.5	2.3	2.3	2.1	2.8	3.3	3.3
1969	3.4	1.7	3.0	2.7	2.4	2.8	2.3	2.4	2.0	2.6	2.1	2.2
1970	2.7	3.3	3.2	3.3	2.9	2.4	2.8	2.3	2.9	2.5	3.4	3.3
1971	3.2	4.3	3.5	3.3	3.0	2.1	3.0	2.2	2.0	2.3	2.5	3.7
1972	4.2	3.3	3.8	2.3	2.8	2.3	2.5	2.3	3.1	3.3	3.1	2.9
1973	3.5	2.7	3.5	3.2	3.2	2.4	2.8	2.1	2.7	2.7	2.9	3.4
1974	4.7	3.5	3.4	3.4	2.9	2.6	2.3	2.3	2.7	2.7	3.1	2.3
1975	3.4	3.3	2.1	3.8	1.8	2.4	2.1	2.3	2.3	2.4	3.5	3.6
1976	2.8	3.6	3.3	2.6	4.0	3.0	2.3	2.2	2.6	2.5	2.7	3.4
1977	3.5	2.8	3.1	3.5	1.8	2.2	3.4	2.2	2.2	2.9	2.7	3.5
1978	4.5	1.9	3.0	3.0	2.9	2.5	2.3	2.9	2.5	2.7	3.5	3.3
1979	2.9	3.0	3.1	3.2	1.7	2.1	1.9	2.2	2.3	2.8	3.6	3.4
1980	3.6	2.6	2.6	2.8	3.0	2.0	1.7	1.8	2.5	2.9	2.5	2.5
1981	3.1	3.5	3.9	3.2	1.8	1.9	1.3	1.9	2.2	3.0	2.8	2.8
1982	4.0	3.2	3.6	4.0	1.4	2.1	2.0	1.6	1.3	2.6	2.9	3.5
1983	2.5	2.1	1.8	2.7	2.5	1.1	2.1	1.7	2.2	3.2	2.5	3.1
1984	2.5	2.2	2.9	4.0	2.7	2.0	1.4	1.0	2.0	2.2	2.6	2.9
1985	2.8	2.4	2.7	4.1	2.7	2.0	2.2	2.1	2.1	3.0	2.3	3.7
1986	3.2	2.1	3.5	2.3	2.3	2.1	2.0	2.3	3.1	2.4	3.0	2.6
1987	2.4	2.0	2.5	2.4	2.5	2.6	1.9	2.2	2.1	3.2	2.7	4.3

32 YR. STATISTICS FOR WIS STATION E37

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	230.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	835	41	14	.	.	.	.	.	.	890
0.25-0.49	.	793	6	2	4	.	.	.	.	.	805
0.50-0.74	.	792	3	3	1	.	.	.	.	.	799
0.75-0.99	.	192	3	3	2	.	.	.	.	.	200
1.00-1.24	.	4	37	2	.	.	.	.	.	.	43
1.25-1.49	.	.	1	.	.	.	.	.	.	.	1
1.50-1.74	.	.	.	.	.	.	.	.	.	.	0
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2616	91	24	7	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.3 MEAN TP(SEC)= 3.1 NO. OF CASES= 2566.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	727	36	20	.	.	.	.	.	.	783
0.25-0.49	.	702	13	5	1	.	.	.	.	.	721
0.50-0.74	.	810	12	8	4	.	.	.	.	.	834
0.75-0.99	.	180	55	1	.	.	.	.	.	.	236
1.00-1.24	.	1	74	1	.	.	.	.	.	.	76
1.25-1.49	.	.	8	.	.	.	.	.	.	.	8
1.50-1.74	.	.	.	5	.	1	.	.	.	.	6
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2420	198	40	5	1	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 2499.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	906	45	27	.	.	.	.	.	.	978
0.25-0.49	.	817	22	32	3	.	.	.	.	.	874
0.50-0.74	.	1488	27	14	6	1	.	.	.	.	1536
0.75-0.99	.	527	295	6	3	.	.	.	.	.	831
1.00-1.24	.	3	378	16	2	1	.	.	.	.	400
1.25-1.49	.	.	44	13	.	.	.	.	.	.	57
1.50-1.74	.	.	3	17	.	.	.	.	.	.	20
1.75-1.99	.	.	.	1	1	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3741	814	126	15	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 4403.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	685	36	11	.	.	.	.	.	.	732
0.25-0.49	.	790	18	26	3	.	.	.	.	.	837
0.50-0.74	.	1349	117	22	6	.	.	.	.	.	1494
0.75-0.99	.	322	343	22	1	.	.	.	.	.	688
1.00-1.24	.	.	355	95	7	2	.	.	.	.	459
1.25-1.49	.	.	37	86	1	.	.	.	.	.	124
1.50-1.74	.	.	5	66	14	.	.	.	.	.	85
1.75-1.99	.	.	.	.	11	.	.	.	.	.	11
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3146	911	328	45	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 4155.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	833	35	6	.	.	.	.	.	.	874
0.25-0.49	.	667	39	14	1	.	.	.	.	.	721
0.50-0.74	.	483	229	36	5	.	.	.	.	.	753
0.75-0.99	.	20	196	79	4	.	.	.	.	.	299
1.00-1.24	.	.	111	176	6	.	.	.	.	.	293
1.25-1.49	.	.	.	96	3	.	.	.	.	.	99
1.50-1.74	.	.	.	44	9	.	.	.	.	.	53
1.75-1.99	.	.	.	1	10	.	.	.	.	.	11
2.00-2.24	.	.	.	.	5	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2003	610	452	43	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.5 NO. OF CASES= 2916.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	579	21	5	.	.	.	.	.	.	605
0.25-0.49	.	392	21	9	1	.	.	.	.	.	423
0.50-0.74	.	217	130	33	2	.	.	.	.	.	382
0.75-0.99	.	21	95	74	1	.	.	.	.	.	191
1.00-1.24	.	.	43	96	16	.	.	.	.	.	155
1.25-1.49	.	.	.	50	18	.	.	.	.	.	68
1.50-1.74	.	.	.	22	21	1	.	.	.	.	44
1.75-1.99	.	.	.	.	2	1	.	.	.	.	3
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1209	310	289	64	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.6 NO. OF CASES= 1760.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	808	33	7	1	.	.	.	.	.	849
0.25-0.49	.	633	131	7	.	.	.	.	.	.	771
0.50-0.74	.	300	364	144	.	.	.	.	.	.	808
0.75-0.99	.	24	111	250	1	1	.	.	.	.	387
1.00-1.24	.	1	73	258	66	.	.	.	.	.	398
1.25-1.49	.	.	.	62	82	.	.	.	.	.	144
1.50-1.74	.	.	.	33	115	14	.	.	.	.	162
1.75-1.99	.	.	.	1	27	18	.	.	.	.	46
2.00-2.24	.	.	.	.	10	13	1	.	.	.	24
2.25-2.49	.	.	.	.	.	8	1	.	.	.	9
2.50-2.74	.	.	.	.	.	3	8	.	.	.	11
2.75-2.99	.	.	.	.	.	.	2	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1766	712	762	302	57	12	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 3389.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1263	81	7	.	.	.	.	.	.	1351
0.25-0.49	.	1067	214	22	.	.	.	.	.	.	1303
0.50-0.74	.	579	556	257	1	.	.	.	.	.	1393
0.75-0.99	.	65	254	358	4	.	.	.	.	.	681
1.00-1.24	.	1	142	411	128	.	.	.	.	.	682
1.25-1.49	.	.	3	210	188	.	.	.	.	.	401
1.50-1.74	.	.	.	93	290	17	.	.	.	.	400
1.75-1.99	.	.	.	1	109	32	.	.	.	.	142
2.00-2.24	.	.	.	.	57	70	3	.	.	.	130
2.25-2.49	.	.	.	.	1	54	6	.	.	.	61
2.50-2.74	.	.	.	.	.	26	5	.	.	.	31
2.75-2.99	.	.	.	.	.	1	8	.	.	.	9
3.00-3.24	.	.	.	.	.	.	5	.	.	.	5
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2975	1250	1359	778	200	28	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.1 NO. OF CASES= 6175.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1899	53	6	1	.	.	.	.	.	1965
0.25-0.49	.	1583	266	32	.	.	.	.	.	.	1881
0.50-0.74	.	895	812	427	4	1	.	.	.	.	2139
0.75-0.99	.	114	460	605	22	.	.	.	.	.	1201
1.00-1.24	.	2	344	864	263	.	.	.	.	.	1473
1.25-1.49	.	.	5	388	336	1	.	.	.	.	730
1.50-1.74	.	.	.	224	575	17	.	.	.	.	816
1.75-1.99	.	.	.	3	390	24	.	.	.	.	417
2.00-2.24	.	.	.	.	221	158	.	.	.	.	379
2.25-2.49	.	.	.	.	6	102	2	.	.	.	110
2.50-2.74	.	.	.	.	.	54	3	.	.	.	57
2.75-2.99	.	.	.	.	.	4	4	.	.	.	8
3.00-3.24	.	.	.	.	.	.	2	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4493	1946	2549	1818	361	11	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.3 NO. OF CASES= 10466.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	3150	1019	299	12	.	.	.	.	.	4480
0.25-0.49	.	1587	1405	891	73	1	.	.	.	.	3957
0.50-0.74	.	1022	827	1884	439	9	.	.	.	.	4181
0.75-0.99	.	154	518	685	488	19	.	.	.	.	1864
1.00-1.24	.	10	401	715	759	57	1	.	.	.	1943
1.25-1.49	.	.	13	417	581	81	1	.	.	.	1093
1.50-1.74	.	.	2	256	763	249	8	.	.	.	1278
1.75-1.99	.	.	.	14	474	111	8	.	.	.	607
2.00-2.24	.	.	.	.	324	467	36	.	.	.	827
2.25-2.49	.	.	.	.	6	205	29	1	.	.	241
2.50-2.74	.	.	.	.	1	115	63	1	.	.	180
2.75-2.99	.	.	.	.	.	4	37	.	.	.	41
3.00-3.24	.	.	.	.	.	.	20	1	.	.	21
3.25-3.49	.	.	.	.	.	.	3	3	.	.	6
3.50+	.	.	.	.	.	.	1	2	.	.	3
TOTAL	0	5923	4185	5161	3920	1318	207	8	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.6 NO. OF CASES= 19398.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1386	450	380	31	.	.	.	.	.	2247
0.25-0.49	.	1201	185	391	110	1	.	.	.	.	1888
0.50-0.74	.	2050	366	607	541	26	.	.	.	.	3590
0.75-0.99	.	847	560	404	627	101	5	.	.	.	2344
1.00-1.24	.	245	493	751	830	363	27	1	.	.	2710
1.25-1.49	.	.	71	390	491	280	44	.	.	.	1276
1.50-1.74	.	.	10	269	587	489	86	.	.	.	1441
1.75-1.99	.	.	.	29	264	178	58	1	.	.	530
2.00-2.24	.	.	.	1	147	542	109	1	.	.	800
2.25-2.49	.	.	.	.	21	183	102	4	.	.	310
2.50-2.74	.	.	.	.	2	128	172	5	2	.	309
2.75-2.99	.	.	.	.	.	6	101	3	.	.	110
3.00-3.24	.	.	.	.	.	1	103	9	.	.	113
3.25-3.49	.	.	.	.	.	.	12	13	.	.	25
3.50+	.	.	.	.	.	.	3	9	4	.	16
TOTAL	0	5529	2135	3222	3651	2298	822	46	6	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.9 NO. OF CASES= 16586.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	905	27	12	1	.	.	.	.	.	945
0.25-0.49	.	968	3	4	2	.	.	.	.	.	977
0.50-0.74	.	1699	8	1	2	.	.	.	.	.	1710
0.75-0.99	.	937	27	4	5	4	.	.	.	.	977
1.00-1.24	.	250	251	55	36	17	3	.	.	.	612
1.25-1.49	.	.	87	21	48	7	1	.	.	.	164
1.50-1.74	.	.	36	26	60	38	9	.	.	.	169
1.75-1.99	.	.	.	5	18	12	2	.	.	.	37
2.00-2.24	.	.	.	1	6	60	13	.	.	.	80
2.25-2.49	.	.	.	.	1	9	7	.	.	.	17
2.50-2.74	.	.	.	.	.	13	12	.	.	.	25
2.75-2.99	.	.	.	.	.	.	17	.	.	.	17
3.00-3.24	.	.	.	.	.	.	2	2	.	.	4
3.25-3.49	.	.	.	.	.	.	.	1	.	.	1
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	4759	439	129	179	160	66	4	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 5384.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	833	26	9	.	.	.	.	.	.	868
0.25-0.49	.	780	4	1	.	.	.	.	.	.	785
0.50-0.74	.	1325		1	.	.	.	.	.	.	1326
0.75-0.99	.	713	44	.	.	.	.	.	.	.	757
1.00-1.24	.	22	233	.	.	.	.	.	.	.	255
1.25-1.49	.	.	50	.	.	.	.	.	.	.	50
1.50-1.74	.	.	10	7	.	.	.	.	.	.	17
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3673	367	22	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.1 NO. OF CASES= 3804.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	694	31	9	.	.	.	.	.	.	734
0.25-0.49	.	532	5	1	.	.	.	.	.	.	538
0.50-0.74	.	1326		3	.	.	.	.	.	.	1329
0.75-0.99	.	414	224	.	.	1	.	.	.	.	639
1.00-1.24	.	3	344	.	.	1	.	.	.	.	348
1.25-1.49	.	.	60	13	.	.	.	.	.	.	73
1.50-1.74	.	.	.	14	.	.	.	.	.	.	14
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2969	664	45	0	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 3446.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	810	28	5	.	.	.	.	.	.	843
0.25-0.49	.	528	3	1	.	.	.	.	.	.	532
0.50-0.74	.	1312	6	4	1	1	.	.	.	.	1324
0.75-0.99	.	331	371	.	.	.	.	.	.	.	702
1.00-1.24	.	.	404	.	.	.	.	.	.	.	404
1.25-1.49	.	.	88	11	.	.	.	.	.	.	99
1.50-1.74	.	.	.	34	.	.	.	.	.	.	34
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2981	900	57	1	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 3690.

STATION E38 42.58N 81.32W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

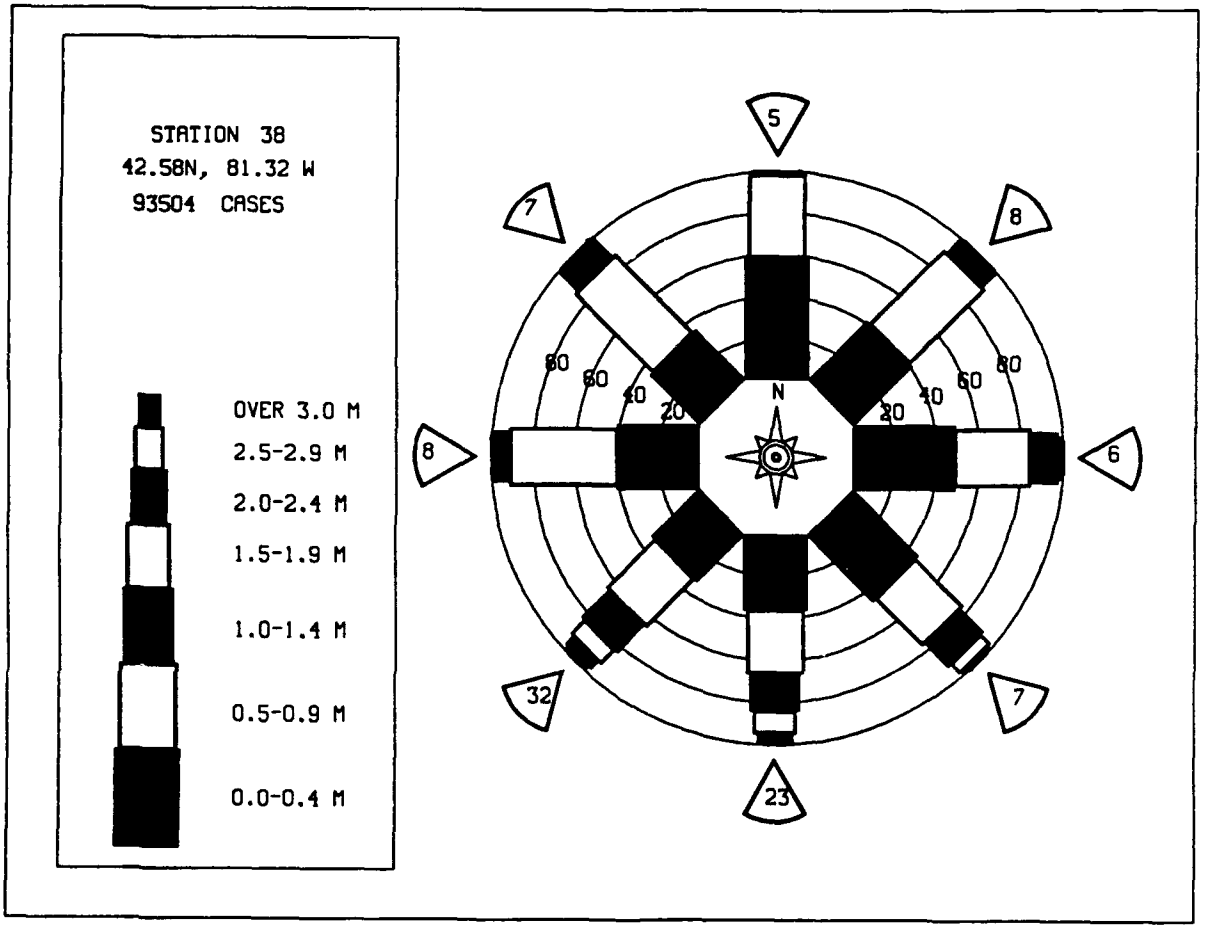
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	598	23	7	.	.	.	.	.	.	628
0.25-0.49	.	606	1	4	1	.	.	.	.	.	612
0.50-0.74	.	1084	3	2	1	.	.	.	.	.	1090
0.75-0.99	.	330	151	1	.	.	.	.	.	.	482
1.00-1.24	.	1	208	.	.	.	.	.	.	.	209
1.25-1.49	.	.	17	6	.	.	.	.	.	.	23
1.50-1.74	.	.	.	13	.	.	.	.	.	.	13
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2619	403	33	2	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.2 NO. OF CASES= 2865.

STATION E38 42.58N 81.32W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1691	199	83	4	.	.	.	.	.	1977
0.25-0.49	.	1365	234	144	20	.	.	.	.	.	1763
0.50-0.74	.	1673	346	345	101	3	.	.	.	.	2468
0.75-0.99	.	499	371	249	116	12	.	.	.	.	1247
1.00-1.24	.	54	389	344	211	44	3	.	.	.	1045
1.25-1.49	.	.	49	176	175	37	4	.	.	.	441
1.50-1.74	.	.	6	113	243	82	10	.	.	.	454
1.75-1.99	.	.	.	6	131	37	6	.	.	.	180
2.00-2.24	.	.	.	.	77	131	16	.	.	.	224
2.25-2.49	.	.	.	.	3	56	14	.	.	.	73
2.50-2.74	.	.	.	.	.	34	26	.	.	.	60
2.75-2.99	.	.	.	.	.	1	17	.	.	.	18
3.00-3.24	.	.	.	.	.	.	13	1	.	.	14
3.25-3.49	.	.	.	.	.	.	1	1	.	.	2
3.50+	.	.	.	.	.	.	.	1	.	.	1
TOTAL	0	5282	1594	1460	1081	437	110	3	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E38 (42.58N 81.32W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.5	0.7	0.7	0.8	0.7	0.5	0.6	0.7	0.7	0.8	1.0	0.8	0.7
1957	0.8	0.7	0.9	0.9	0.8	0.8	0.6	0.5	0.8	0.8	1.3	1.2	0.8
1958	0.8	0.8	0.5	0.6	0.7	0.6	0.5	0.5	0.7	0.9	0.9	0.8	0.7
1959	0.8	0.7	0.8	0.7	0.4	0.3	0.3	0.5	0.7	0.7	0.8	0.6	0.6
1960	0.6	0.9	0.9	1.1	0.8	0.7	0.5	0.6	0.7	0.7	1.3	1.3	0.8
1961	1.0	0.8	0.9	0.8	0.8	0.8	0.6	0.7	0.8	1.0	1.0	1.1	0.8
1962	1.1	0.8	0.8	0.9	0.8	0.6	0.5	0.6	0.6	0.7	0.7	0.9	0.7
1963	0.9	0.9	1.0	0.9	0.8	0.4	0.5	0.5	0.6	0.6	1.0	0.8	0.8
1964	1.1	0.8	0.9	1.1	0.9	0.6	0.5	0.6	0.7	0.7	0.8	0.9	0.8
1965	1.0	1.0	0.7	0.6	0.6	0.6	0.4	0.6	0.8	0.9	0.9	1.0	0.8
1966	0.8	0.6	0.8	0.7	0.6	0.5	0.5	0.5	0.5	1.0	1.0	0.9	0.7
1967	1.0	1.0	0.7	0.7	0.7	0.5	0.4	0.5	0.5	0.9	0.9	0.9	0.7
1968	0.7	0.8	0.8	0.8	0.7	0.5	0.5	0.5	0.6	0.8	0.8	0.9	0.7
1969	1.0	0.5	0.8	0.7	0.5	0.6	0.4	0.4	0.6	0.8	0.8	0.7	0.7
1970	0.7	1.0	0.6	0.8	0.8	0.6	0.6	0.5	0.7	0.8	1.0	0.9	0.8
1971	1.1	1.2	0.8	0.8	0.6	0.5	0.6	0.6	0.5	0.6	0.8	0.9	0.7
1972	1.1	0.8	0.8	0.7	0.6	0.6	0.5	0.6	0.7	0.8	0.7	0.8	0.7
1973	1.2	0.8	0.9	0.9	0.8	0.7	0.6	0.6	0.6	0.7	1.0	1.0	0.8
1974	0.9	0.9	0.9	1.0	0.7	0.8	0.6	0.5	0.8	0.7	0.8	0.8	0.8
1975	1.0	0.8	0.7	0.7	0.4	0.7	0.4	0.4	0.6	0.8	1.0	0.8	0.7
1976	1.0	1.0	1.1	0.7	0.7	0.6	0.5	0.5	0.6	0.7	0.9	0.9	0.8
1977	1.1	1.0	0.9	0.8	0.5	0.5	0.5	0.6	0.6	0.7	1.0	1.2	0.8
1978	0.9	0.5	0.6	0.7	0.6	0.5	0.5	0.4	0.6	0.8	0.8	1.0	0.7
1979	0.8	0.7	0.9	0.7	0.5	0.6	0.4	0.5	0.6	0.8	0.8	0.9	0.7
1980	0.7	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.7	0.8	0.7	0.6
1981	0.7	1.0	0.7	1.0	0.4	0.6	0.4	0.5	0.5	0.6	0.5	0.7	0.6
1982	1.1	0.7	0.7	0.8	0.3	0.4	0.4	0.3	0.4	0.5	0.8	0.8	0.6
1983	0.7	0.4	0.5	0.7	0.6	0.3	0.4	0.3	0.5	0.7	0.7	0.9	0.6
1984	0.6	0.7	0.7	0.5	0.6	0.5	0.4	0.3	0.5	0.4	0.8	0.8	0.6
1985	0.9	0.8	0.9	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.8	1.0	0.7
1986	0.9	0.6	0.9	0.6	0.6	0.5	0.5	0.5	0.7	0.7	0.8	0.8	0.7
1987	0.8	0.6	0.7	0.8	0.7	0.6	0.5	0.7	0.6	0.8	1.1	1.0	0.7
MEAN	0.9	0.8	0.8	0.8	0.6	0.6	0.5	0.5	0.6	0.7	0.9	0.9	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E38 (42.58N 81.32W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.2	2.8	3.1	2.2	1.5	2.0	2.1	2.0	2.8	2.5	2.6
1957	2.1	2.0	3.1	3.3	2.8	1.9	2.0	1.8	2.3	2.4	3.2	3.1
1958	2.5	2.2	1.5	2.8	1.9	1.8	1.8	2.0	2.1	2.5	2.8	2.3
1959	2.7	2.1	3.4	2.8	2.0	1.7	1.9	1.8	2.2	2.1	2.0	2.2
1960	2.1	2.6	2.9	3.2	2.8	2.5	2.1	2.1	2.4	2.8	3.2	2.8
1961	2.8	2.7	2.5	3.0	2.6	2.5	2.0	2.4	2.7	2.8	2.8	3.3
1962	3.0	2.5	2.4	3.1	2.8	2.0	2.1	2.1	2.5	2.4	2.5	3.1
1963	3.0	2.9	3.7	2.9	3.0	1.4	1.9	1.8	2.5	2.8	3.2	2.5
1964	3.7	2.5	4.5	3.0	3.9	2.6	2.0	2.3	2.7	2.4	2.7	2.5
1965	3.0	2.8	3.2	2.4	2.4	2.3	1.9	2.1	2.5	3.2	3.5	3.0
1966	2.8	2.5	2.7	2.5	3.1	2.1	2.4	1.7	2.1	2.7	3.1	3.0
1967	2.8	3.1	2.1	2.6	2.5	1.6	1.8	1.4	2.8	2.7	2.4	2.5
1968	2.1	2.6	2.5	3.3	2.6	2.2	2.1	2.1	1.9	2.5	3.1	2.9
1969	2.9	1.6	2.6	2.4	2.2	2.5	2.0	2.2	1.9	2.4	1.9	2.1
1970	2.4	2.9	2.8	2.9	2.6	2.3	2.5	2.2	2.5	2.5	3.1	2.8
1971	2.9	3.6	3.1	3.0	2.7	1.7	2.5	2.1	1.7	2.1	2.3	3.1
1972	3.7	2.7	3.4	2.0	2.5	2.0	2.1	2.1	2.7	2.8	2.7	2.7
1973	3.2	2.5	3.1	2.7	2.7	2.2	2.5	2.0	2.5	2.4	2.6	3.1
1974	4.1	3.1	3.1	3.0	2.7	2.6	2.1	2.1	2.5	2.4	2.7	2.1
1975	2.9	3.1	2.0	3.1	1.6	2.1	2.0	2.2	2.1	2.2	3.1	3.2
1976	2.4	3.0	2.8	2.3	3.3	2.6	2.1	1.9	2.4	2.1	2.5	2.9
1977	3.0	2.5	2.7	2.8	1.6	2.0	3.0	2.1	2.0	2.7	2.3	3.1
1978	3.7	1.7	2.6	2.6	2.5	2.1	1.9	2.7	2.3	2.5	3.0	2.8
1979	2.5	2.5	2.7	2.4	1.5	1.8	1.6	2.0	2.1	2.5	3.2	3.0
1980	3.1	2.2	2.4	2.5	2.4	1.9	1.2	1.6	2.1	2.5	2.2	2.2
1981	2.6	3.3	3.3	2.9	1.6	1.8	1.3	1.9	1.9	2.7	2.5	2.5
1982	3.5	2.8	3.1	3.6	1.3	2.0	1.9	1.4	1.3	2.3	2.6	3.1
1983	2.1	2.1	1.7	2.4	2.2	1.2	1.7	1.6	2.1	2.8	2.4	2.8
1984	2.2	2.0	2.8	3.4	2.6	1.9	1.4	0.9	1.8	2.0	2.4	2.5
1985	2.5	2.2	2.5	3.4	2.3	2.0	1.9	1.9	2.0	2.7	2.3	3.4
1986	2.7	1.9	3.0	1.9	2.0	1.9	1.6	1.9	2.7	2.1	2.6	2.3
1987	2.2	1.8	2.4	2.1	2.1	2.1	1.7	2.1	1.9	2.8	2.5	3.7

32 YR. STATISTICS FOR WIS STATION E38

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	4.5
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	225.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	752	35	9	.	.	.	.	.	.	796
0.25-0.49	.	787	51	37	.	.	.	.	.	.	875
0.50-0.74	.	817	68	81	13	.	.	.	.	.	979
0.75-0.99	.	239	8	38	39	.	.	.	.	.	324
1.00-1.24	.	24	35	25	37	1	.	.	.	.	122
1.25-1.49	.	.	4	4	11	4	.	.	.	.	23
1.50-1.74	.	.	.	1	2	1	.	.	.	.	4
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	1	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2619	201	195	102	6	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 2931.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	624	43	12	.	.	.	.	.	.	679
0.25-0.49	.	595	54	35	.	.	.	.	.	.	684
0.50-0.74	.	547	80	84	16	.	.	.	.	.	727
0.75-0.99	.	72	113	34	24	1	.	.	.	.	244
1.00-1.24	.	10	115	50	24	.	.	.	.	.	199
1.25-1.49	.	.	4	47	11	.	.	.	.	.	62
1.50-1.74	.	.	.	25	4	6	.	.	.	.	35
1.75-1.99	.	.	.	5	2	3	1	.	.	.	11
2.00-2.24	.	.	.	1	4	.	2	.	.	.	7
2.25-2.49	.	.	.	.	2	.	1	.	.	.	3
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1848	409	293	87	10	4	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.5 NO. OF CASES= 2491.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	847	39	8	.	.	.	.	.	.	894
0.25-0.49	.	722	96	34	2	.	.	.	.	.	854
0.50-0.74	.	624	250	179	8	.	.	.	.	.	1061
0.75-0.99	.	59	408	69	27	.	.	.	.	.	563
1.00-1.24	.	.	573	116	48	.	.	.	.	.	737
1.25-1.49	.	.	33	279	14	2	.	.	.	.	328
1.50-1.74	.	.	.	204	14	6	.	.	.	.	224
1.75-1.99	.	.	.	33	5	2	.	.	.	.	40
2.00-2.24	.	.	.	8	26	5	.	.	.	.	39
2.25-2.49	.	.	.	.	4	1	.	.	.	.	5
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2252	1399	930	148	16	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 4450.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	696	27	9	.	.	.	.	.	.	732
0.25-0.49	.	605	65	28	.	.	.	.	.	.	698
0.50-0.74	.	589	341	178	10	.	.	.	.	.	1118
0.75-0.99	.	32	418	141	29	.	.	.	.	.	620
1.00-1.24	.	.	428	205	82	3	.	.	.	.	718
1.25-1.49	.	.	18	242	39	9	.	.	.	.	308
1.50-1.74	.	.	1	218	57	12	.	.	.	.	288
1.75-1.99	.	.	.	33	38	4	.	.	.	.	75
2.00-2.24	.	.	.	5	42	5	.	.	.	.	52
2.25-2.49	.	.	.	.	7	6	.	.	.	.	13
2.50-2.74	.	.	.	.	.	6	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	2	.	.	.	2
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1922	1298	1059	304	45	3	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 4.0 NO. OF CASES= 4345.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	736	26	5	1	.	.	.	.	.	768
0.25-0.49	.	572	71	23	.	.	.	.	.	.	666
0.50-0.74	.	332	271	127	3	.	.	.	.	.	733
0.75-0.99	.	17	147	161	17	.	.	.	.	.	342
1.00-1.24	.	.	66	182	55	.	.	.	.	.	303
1.25-1.49	.	.	.	55	37	3	.	.	.	.	95
1.50-1.74	.	.	.	37	69	7	.	.	.	.	113
1.75-1.99	.	.	.	.	17	6	.	.	.	.	23
2.00-2.24	.	.	.	.	16	10	3	.	.	.	29
2.25-2.49	.	.	.	.	2	6	1	.	.	.	9
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	2	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1657	581	590	217	36	6	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 2899.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	499	25	5	.	.	.	.	.	.	529
0.25-0.49	.	378	43	14	1	.	.	.	.	.	436
0.50-0.74	.	232	208	89	2	.	.	.	.	.	531
0.75-0.99	.	13	99	134	5	.	.	.	.	.	251
1.00-1.24	.	.	43	141	28	.	.	.	.	.	212
1.25-1.49	.	.	.	27	28	1	.	.	.	.	56
1.50-1.74	.	.	.	17	51	7	.	.	.	.	75
1.75-1.99	.	.	.	.	16	3	.	.	.	.	19
2.00-2.24	.	.	.	.	6	4	.	.	.	.	10
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	2	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1122	418	427	138	17	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 1997.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	700	31	5	.	.	.	.	.	.	736
0.25-0.49	.	637	98	14	1	.	.	.	.	.	750
0.50-0.74	.	333	351	172	.	.	.	.	.	.	856
0.75-0.99	.	24	142	239	9	.	.	.	.	.	414
1.00-1.24	.	.	75	279	83	1	.	.	.	.	438
1.25-1.49	.	.	4	65	91	.	.	.	.	.	160
1.50-1.74	.	.	.	49	140	6	.	.	.	.	195
1.75-1.99	.	.	.	1	43	5	.	.	.	.	49
2.00-2.24	.	.	.	.	36	16	.	.	.	.	52
2.25-2.49	.	.	.	.	.	17	.	.	.	.	17
2.50-2.74	.	.	.	.	.	12	2	.	.	.	14
2.75-2.99	.	.	.	.	.	1	1	.	.	.	2
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1694	701	824	403	59	3	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 4.0 NO. OF CASES= 3457.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1067	37	5	.	.	.	.	.	.	1109
0.25-0.49	.	1003	96	23	.	.	.	.	.	.	1122
0.50-0.74	.	605	527	143	1	.	.	.	.	.	1276
0.75-0.99	.	53	298	269	3	.	.	.	.	.	623
1.00-1.24	.	2	148	427	51	.	.	.	.	.	628
1.25-1.49	.	.	3	165	115	.	.	.	.	.	283
1.50-1.74	.	.	.	110	211	3	.	.	.	.	324
1.75-1.99	.	.	.	5	97	12	.	.	.	.	114
2.00-2.24	.	.	.	.	88	18	.	.	.	.	106
2.25-2.49	.	.	.	.	18	37	.	.	.	.	55
2.50-2.74	.	.	.	.	.	54	.	.	.	.	54
2.75-2.99	.	.	.	.	.	14	.	.	.	.	14
3.00-3.24	.	.	.	.	.	4	4	.	.	.	8
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2730	1109	1147	584	142	8	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.0 NO. OF CASES= 5362.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2088	63	9	1	.	.	.	.	.	2161
0.25-0.49	.	1890	254	17	.	.	.	.	.	.	2161
0.50-0.74	.	1023	1035	393	.	.	.	.	.	.	2451
0.75-0.99	.	99	525	714	6	.	.	.	.	.	1344
1.00-1.24	.	1	340	922	227	.	.	.	.	.	1490
1.25-1.49	.	.	9	407	264	1	.	.	.	.	681
1.50-1.74	.	.	.	280	650	10	.	.	.	.	940
1.75-1.99	.	.	.	11	344	31	.	.	.	.	386
2.00-2.24	.	.	.	.	402	36	.	.	.	.	438
2.25-2.49	.	.	.	.	69	120	1	.	.	.	190
2.50-2.74	.	.	.	.	2	149	.	.	.	.	151
2.75-2.99	.	.	.	.	.	42	1	.	.	.	43
3.00-3.24	.	.	.	.	.	8	8	.	.	.	16
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5101	2226	2753	1965	397	13	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.2 NO. OF CASES= 11661.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	3239	772	214	2	.	.	.	.	.	4227
0.25-0.49	.	1870	1437	598	43	.	.	.	.	.	3948
0.50-0.74	.	1006	1215	1727	248	5	.	.	.	.	4201
0.75-0.99	.	120	595	915	379	4	.	.	.	.	2013
1.00-1.24	.	3	340	803	783	20	.	.	.	.	1949
1.25-1.49	.	.	17	351	427	50	.	.	.	.	845
1.50-1.74	.	.	1	316	994	142	3	.	.	.	1456
1.75-1.99	.	.	.	22	394	146	2	.	.	.	564
2.00-2.24	.	.	.	3	585	267	20	.	.	.	875
2.25-2.49	.	.	.	.	84	269	17	.	.	.	370
2.50-2.74	.	.	.	.	4	279	16	1	.	.	300
2.75-2.99	.	.	.	.	.	89	28	1	.	.	118
3.00-3.24	.	.	.	.	.	20	55	.	.	.	75
3.25-3.49	.	.	.	.	.	1	22	.	.	.	23
3.50+	.	.	.	.	.	.	14	3	.	.	17
TOTAL	0	6238	4377	4949	3943	1292	177	5	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.5 NO. OF CASES= 19640.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1503	463	289	23	.	.	.	.	.	2278
0.25-0.49	.	1119	268	380	62	1	.	.	.	.	1830
0.50-0.74	.	1920	420	729	387	17	.	.	.	.	3473
0.75-0.99	.	594	542	532	577	51	2	.	.	.	2298
1.00-1.24	.	223	470	788	910	265	8	.	.	.	2664
1.25-1.49	.	.	85	344	386	192	22	.	.	.	1029
1.50-1.74	.	.	10	308	848	270	45	.	.	.	1481
1.75-1.99	.	.	.	28	303	227	18	.	.	.	576
2.00-2.24	.	.	.	5	308	374	38	.	.	.	725
2.25-2.49	.	.	.	.	41	302	18	2	.	.	363
2.50-2.74	.	.	.	.	7	291	47	4	1	.	350
2.75-2.99	.	.	.	.	.	143	74	.	.	.	217
3.00-3.24	.	.	.	.	.	17	120	1	1	.	139
3.25-3.49	.	.	.	.	.	.	83	1	.	.	84
3.50+	.	.	.	.	.	.	70	19	2	.	91
TOTAL	0	5359	2258	3403	3852	2150	545	27	4	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.8 NO. OF CASES= 16479.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	736	44	22	.	.	.	.	.	.	802
0.25-0.49	.	913	16	16	.	.	.	.	.	.	945
0.50-0.74	.	1567	17	20	5	1	.	.	.	.	1610
0.75-0.99	.	855	24	12	11	.	.	.	.	.	902
1.00-1.24	.	265	239	65	41	4	.	.	.	.	614
1.25-1.49	.	.	82	3	25	4	.	.	.	.	114
1.50-1.74	.	.	45	13	88	17	1	.	.	.	164
1.75-1.99	.	.	1	6	13	23	.	.	.	.	43
2.00-2.24	.	.	.	4	17	29	4	.	.	.	54
2.25-2.49	.	.	.	.	5	9	5	.	.	.	19
2.50-2.74	.	.	.	.	1	14	7	1	.	.	23
2.75-2.99	.	.	.	.	.	7	6	.	.	.	13
3.00-3.24	.	.	.	.	.	2	2	.	.	.	4
3.25-3.49	.	.	.	.	.	.	5	1	.	.	6
3.50+	.	.	.	.	.	.	3	2	.	.	5
TOTAL	0	4336	468	161	206	110	33	4	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 4993.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	702	28	7	1	.	.	.	.	.	738
0.25-0.49	.	650	23	13	1	.	.	.	.	.	687
0.50-0.74	.	1129	5	23	2	.	.	.	.	.	1159
0.75-0.99	.	530	45	6	2	.	.	.	.	.	583
1.00-1.24	.	27	190	1	1	.	.	.	.	.	219
1.25-1.49	.	.	32	.	.	1	.	.	.	.	33
1.50-1.74	.	.	5	4	1	.	.	.	.	.	10
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3038	328	57	8	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.1 NO. OF CASES= 3218.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	582	22	6	.	.	.	.	.	.	610
0.25-0.49	.	504	16	13	1	.	.	.	.	.	534
0.50-0.74	.	1226	6	20	.	.	.	.	.	.	1252
0.75-0.99	.	366	234	4	4	.	.	.	.	.	608
1.00-1.24	.	9	285	1	1	.	.	.	.	.	296
1.25-1.49	.	.	47	6	.	.	.	.	.	.	53
1.50-1.74	.	.	1	28	.	1	.	.	.	.	30
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2687	611	81	6	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 3175.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	664	37	8	.	.	.	.	.	.	709
0.25-0.49	.	476	17	19	3	.	.	.	.	.	515
0.50-0.74	.	1328	9	25	3	.	.	.	.	.	1365
0.75-0.99	.	344	340	3	2	1	.	.	.	.	690
1.00-1.24	.	1	380	2	5	.	.	.	.	.	388
1.25-1.49	.	.	56	5	2	3	.	.	.	.	66
1.50-1.74	.	.	.	23	.	1	.	.	.	.	24
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2813	839	87	15	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 3523.

STATION E39 42.45N 81.52W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

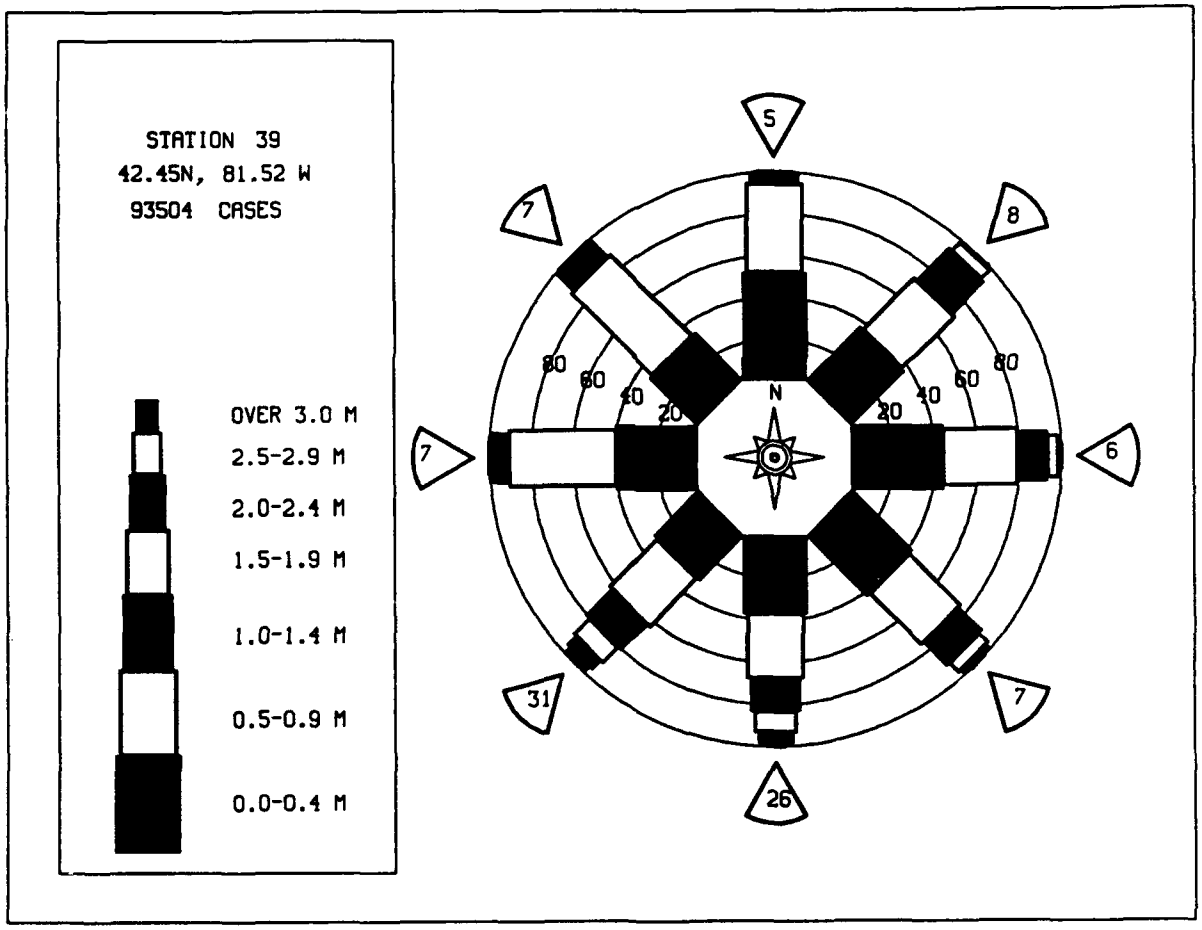
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	535	32	8	.	.	.	.	.	.	575
0.25-0.49	.	556	26	23	.	.	.	.	.	.	605
0.50-0.74	.	1057	10	38	10	.	.	.	.	.	1115
0.75-0.99	.	365	147	7	8	.	.	.	.	.	527
1.00-1.24	.	6	190	2	8	1	.	.	.	.	207
1.25-1.49	.	.	12	8	1	3	.	.	.	.	24
1.50-1.74	.	.	.	18	.	.	.	.	.	.	18
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2519	417	105	27	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 2883.

STATION E39 42.45N 81.52W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1597	173	62	2	.	.	.	.	.	1834
0.25-0.49	.	1328	263	129	11	.	.	.	.	.	1731
0.50-0.74	.	1434	482	403	71	2	.	.	.	.	2392
0.75-0.99	.	379	409	328	114	5	.	.	.	.	1235
1.00-1.24	.	57	392	401	239	29	.	.	.	.	1118
1.25-1.49	.	.	41	201	145	27	2	.	.	.	416
1.50-1.74	.	.	6	165	313	49	5	.	.	.	538
1.75-1.99	.	.	.	15	127	46	2	.	.	.	190
2.00-2.24	.	.	.	2	153	76	6	.	.	.	237
2.25-2.49	.	.	.	.	23	77	4	.	.	.	104
2.50-2.74	.	.	.	.	1	81	7	.	.	.	89
2.75-2.99	.	.	.	.	.	30	11	.	.	.	41
3.00-3.24	.	.	.	.	.	5	19	.	.	.	24
3.25-3.49	.	.	.	.	.	.	11	.	.	.	11
3.50+	.	.	.	.	.	.	8	2	.	.	10
TOTAL	0	4795	1766	1706	1199	427	75	2	0	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E39 (42.45N 81.52W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.7	0.8	0.8	0.8	0.5	0.7	0.7	0.7	0.9	1.1	0.9	0.8
1957	0.9	0.7	1.0	1.0	0.9	0.8	0.7	0.5	0.8	0.9	1.4	1.3	0.9
1958	0.9	0.9	0.8	0.7	0.8	0.7	0.6	0.6	0.7	0.9	1.0	0.8	0.8
1959	0.8	0.8	1.0	0.8	0.5	0.4	0.4	0.5	0.7	0.7	0.9	0.7	0.7
1960	0.7	0.9	0.9	1.2	0.9	0.7	0.5	0.6	0.7	0.7	1.3	1.3	0.9
1961	1.0	0.8	1.0	0.8	0.8	0.8	0.6	0.7	0.8	1.0	1.0	1.2	0.9
1962	1.2	0.9	0.9	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.9	0.8
1963	1.0	1.0	1.1	0.9	0.8	0.4	0.5	0.5	0.7	0.6	1.1	0.8	0.8
1964	1.2	0.8	1.0	1.2	0.9	0.6	0.5	0.7	0.7	0.7	0.9	1.0	0.8
1965	1.0	1.1	0.7	0.7	0.6	0.7	0.4	0.6	0.8	1.0	1.0	1.1	0.8
1966	0.8	0.6	0.9	0.8	0.6	0.5	0.5	0.5	0.5	1.0	1.0	0.9	0.7
1967	1.1	1.1	0.7	0.8	0.7	0.6	0.4	0.5	0.6	0.9	1.0	0.9	0.8
1968	0.8	0.9	0.9	0.8	0.7	0.6	0.6	0.5	0.6	0.8	0.9	1.0	0.8
1969	1.1	0.6	0.8	0.8	0.5	0.6	0.5	0.5	0.6	0.9	0.8	0.8	0.7
1970	0.8	1.0	0.7	0.9	0.8	0.7	0.6	0.5	0.7	0.9	1.1	1.0	0.8
1971	1.2	1.4	0.8	0.8	0.6	0.5	0.6	0.6	0.6	0.6	0.9	0.9	0.8
1972	1.2	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8
1973	1.2	0.9	1.0	1.0	0.8	0.8	0.7	0.6	0.6	0.7	1.0	1.0	0.9
1974	1.0	1.0	0.9	1.1	0.7	0.8	0.6	0.6	0.8	0.8	0.9	0.9	0.8
1975	1.0	0.9	0.8	0.8	0.4	0.7	0.4	0.5	0.6	0.8	1.1	0.9	0.7
1976	1.0	1.0	1.1	0.8	0.7	0.6	0.5	0.5	0.6	0.8	0.9	0.9	0.8
1977	1.1	1.0	0.9	0.8	0.5	0.4	0.6	0.6	0.6	0.8	1.1	1.3	0.8
1978	1.0	0.4	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.8	0.9	1.0	0.7
1979	0.8	0.8	0.9	0.7	0.5	0.6	0.4	0.6	0.6	0.8	0.9	0.9	0.7
1980	0.8	0.7	0.8	0.7	0.4	0.4	0.4	0.4	0.5	0.7	0.9	0.7	0.6
1981	0.7	1.1	0.7	1.0	0.5	0.6	0.4	0.5	0.6	0.7	0.6	0.7	0.7
1982	1.1	0.8	0.7	0.9	0.3	0.4	0.4	0.4	0.4	0.5	0.9	0.9	0.6
1983	0.7	0.5	0.6	0.6	0.7	0.3	0.4	0.3	0.5	0.8	0.8	1.1	0.6
1984	0.6	0.7	0.8	0.6	0.7	0.5	0.4	0.3	0.6	0.5	0.8	0.9	0.6
1985	1.0	0.9	0.9	0.8	0.6	0.5	0.5	0.5	0.6	0.8	1.0	1.1	0.8
1986	0.9	0.7	0.9	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.8	0.8	0.7
1987	0.8	0.7	0.8	0.9	0.7	0.6	0.5	0.7	0.5	0.7	1.1	1.0	0.8
MEAN	0.9	0.8	0.9	0.8	0.7	0.6	0.5	0.5	0.6	0.8	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E39 (42.45N 81.52W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.3	3.4	3.7	2.7	1.7	2.5	2.3	2.1	3.0	3.0	2.8
1957	2.4	2.1	3.6	3.7	2.9	2.1	2.2	2.0	2.7	2.7	3.6	3.3
1958	2.8	2.7	1.7	3.2	2.2	2.2	2.1	2.4	2.5	2.7	3.0	2.6
1959	3.2	2.5	4.1	3.5	2.2	2.0	2.2	1.9	2.5	2.4	2.4	2.5
1960	2.2	2.8	3.0	3.7	2.8	2.9	2.5	2.2	2.5	2.8	3.6	3.1
1961	2.9	3.0	2.9	3.5	2.8	2.8	2.2	2.6	3.0	3.3	3.1	3.8
1962	3.3	2.5	2.6	3.4	3.1	1.8	2.2	2.3	3.1	2.7	2.8	3.4
1963	3.1	3.2	4.2	3.0	3.3	1.4	2.1	1.9	2.6	3.1	3.6	2.6
1964	4.0	2.7	5.1	3.3	4.5	2.9	2.3	2.5	3.1	2.8	3.0	2.9
1965	3.8	3.4	3.5	3.0	2.4	2.4	2.1	2.4	3.1	3.3	4.2	3.4
1966	2.7	2.9	3.2	3.0	3.6	2.3	2.3	1.8	2.3	2.9	3.3	3.4
1967	2.9	3.4	2.5	2.8	2.8	1.7	2.0	1.5	3.1	3.1	2.7	2.9
1968	2.3	3.1	2.9	3.8	3.0	2.5	2.3	2.2	2.1	2.8	3.2	3.2
1969	3.2	1.8	3.2	2.9	2.4	2.9	2.1	2.3	2.2	2.5	2.3	2.3
1970	2.6	3.1	3.3	3.1	2.8	2.7	2.9	2.5	2.8	2.5	3.7	3.1
1971	3.5	4.2	3.5	3.4	3.0	1.7	2.7	2.2	1.7	2.5	2.6	3.5
1972	3.5	2.8	3.9	2.6	2.8	2.1	2.2	2.3	2.9	3.1	2.9	2.7
1973	3.4	2.6	3.5	3.1	3.1	2.5	2.7	2.4	2.9	2.8	3.1	3.4
1974	4.3	3.7	3.6	3.5	3.3	3.1	2.3	2.4	2.8	2.9	2.9	3.0
1975	3.1	3.3	2.7	3.3	1.8	2.4	2.1	2.2	2.4	2.3	3.4	3.5
1976	2.5	3.1	3.2	2.3	3.4	2.7	2.2	2.0	2.3	2.8	2.9	2.9
1977	3.2	2.9	2.8	3.0	1.7	1.8	3.1	2.2	2.3	2.9	2.7	3.6
1978	3.7	1.6	2.9	2.7	2.7	2.0	1.7	2.9	2.4	2.9	3.5	3.0
1979	2.6	2.6	2.9	2.4	1.8	2.1	1.7	2.1	2.1	2.9	3.7	3.2
1980	3.4	2.3	2.5	2.8	2.3	1.8	1.2	1.6	2.3	2.6	2.4	2.4
1981	3.0	3.4	3.7	3.4	1.6	2.0	1.5	1.8	2.1	3.4	2.9	2.7
1982	4.1	2.8	3.2	4.1	1.4	2.3	2.0	1.4	1.4	2.5	2.8	3.5
1983	2.3	2.2	1.8	2.6	2.5	1.3	1.8	1.6	2.3	3.0	2.7	3.1
1984	2.2	2.2	3.4	4.0	2.8	2.1	1.5	0.9	2.1	2.0	2.8	2.8
1985	2.9	2.6	3.0	3.7	2.3	2.2	2.1	2.1	2.3	3.0	2.5	4.0
1986	2.7	2.1	3.0	1.8	2.0	1.9	1.7	1.9	2.8	2.3	2.8	2.6
1987	2.4	1.9	2.4	2.4	2.3	2.3	1.9	2.3	2.0	3.0	2.9	4.1

32 YR. STATISTICS FOR WIS STATION E39

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	222.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	641	39	10	.	.	.	.	.	.	690
0.25-0.49	.	826	88	34	3	.	.	.	.	.	951
0.50-0.74	.	859	84	135	37	.	.	.	.	.	1115
0.75-0.99	.	260	5	69	54	1	.	.	.	.	389
1.00-1.24	.	28	42	42	78	12	.	.	.	.	202
1.25-1.49	.	.	7	9	19	16	.	.	.	.	51
1.50-1.74	.	.	3	1	5	6	2	.	.	.	17
1.75-1.99	.	.	.	.	.	2	.	.	.	.	2
2.00-2.24	.	.	.	.	.	5	2	.	.	.	7
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2614	268	300	196	43	4	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.5 NO. OF CASES= 3217.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	539	27	9	.	.	.	.	.	.	575
0.25-0.49	.	630	75	39	1	.	.	.	.	.	745
0.50-0.74	.	528	110	136	20	.	.	.	.	.	794
0.75-0.99	.	84	72	72	39	.	.	.	.	.	267
1.00-1.24	.	6	31	84	32	2	.	.	.	.	155
1.25-1.49	.	.	3	50	21	2	.	.	.	.	76
1.50-1.74	.	.	.	45	14	5	1	.	.	.	65
1.75-1.99	.	.	.	1	13	3	.	.	.	.	17
2.00-2.24	.	.	.	.	9	.	.	.	.	.	9
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1787	318	436	155	12	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 2547.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	689	25	9	.	.	.	.	.	.	723
0.25-0.49	.	687	121	40	1	.	.	.	.	.	849
0.50-0.74	.	624	259	217	32	.	.	.	.	.	1132
0.75-0.99	.	78	282	149	60	.	.	.	.	.	569
1.00-1.24	.	.	227	312	84	4	.	.	.	.	627
1.25-1.49	.	.	7	265	21	3	.	.	.	.	296
1.50-1.74	.	.	.	305	36	7	.	.	.	.	348
1.75-1.99	.	.	.	12	117	2	.	.	.	.	131
2.00-2.24	.	.	.	.	66	2	.	.	.	.	68
2.25-2.49	.	.	.	.	24	1	.	.	.	.	25
2.50-2.74	.	.	.	.	8	4	.	.	.	.	12
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2078	921	1309	449	26	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.0 NO. OF CASES= 4488.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	560	26	5	1	.	.	.	.	.	592
0.25-0.49	.	532	96	20	.	.	.	.	.	.	648
0.50-0.74	.	518	326	190	18	.	.	.	.	.	1052
0.75-0.99	.	28	257	240	64	.	.	.	.	.	589
1.00-1.24	.	.	189	380	108	11	.	.	.	.	688
1.25-1.49	.	.	2	243	53	8	.	.	.	.	306
1.50-1.74	.	.	.	239	95	21	.	.	.	.	355
1.75-1.99	.	.	.	7	113	4	.	.	.	.	124
2.00-2.24	.	.	.	.	88	8	.	.	.	.	96
2.25-2.49	.	.	.	.	36	10	.	.	.	.	46
2.50-2.74	.	.	.	.	8	7	2	.	.	.	17
2.75-2.99	.	.	.	.	.	5	1	.	.	.	6
3.00-3.24	.	.	.	.	.	.	4	.	.	.	4
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1638	896	1324	584	74	7	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 4245.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	616	31	9	.	.	.	.	.	.	656
0.25-0.49	.	480	103	23	1	.	.	.	.	.	607
0.50-0.74	.	315	240	158	13	.	.	.	.	.	726
0.75-0.99	.	23	127	140	43	.	.	.	.	.	333
1.00-1.24	.	.	56	175	56	.	.	.	.	.	287
1.25-1.49	.	.	.	53	35	4	.	.	.	.	92
1.50-1.74	.	.	.	31	75	6	.	.	.	.	112
1.75-1.99	.	.	.	.	18	8	.	.	.	.	26
2.00-2.24	.	.	.	.	26	11	.	.	.	.	37
2.25-2.49	.	.	.	.	2	11	1	.	.	.	14
2.50-2.74	.	.	.	.	.	6	.	.	.	.	6
2.75-2.99	.	.	.	.	.	2	3	.	.	.	5
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1434	557	589	269	48	5	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.0 NO. OF CASES= 2727.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	507	21	4	.	.	.	.	.	.	532
0.25-0.49	.	361	66	21	.	.	.	.	.	.	448
0.50-0.74	.	238	219	109	8	.	.	.	.	.	574
0.75-0.99	.	16	105	144	11	.	.	.	.	.	276
1.00-1.24	.	.	32	136	39	1	.	.	.	.	208
1.25-1.49	.	.	.	42	39	.	.	.	.	.	81
1.50-1.74	.	.	.	21	57	3	.	.	.	.	81
1.75-1.99	.	.	.	1	17	2	.	.	.	.	20
2.00-2.24	.	.	.	.	12	5	.	.	.	.	17
2.25-2.49	.	.	.	.	1	6	1	.	.	.	8
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1122	443	478	184	20	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 2114.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	599	38	7	.	.	.	.	.	.	644
0.25-0.49	.	602	71	21	1	.	.	.	.	.	695
0.50-0.74	.	406	361	148	7	.	.	.	.	.	922
0.75-0.99	.	33	172	229	13	.	.	.	.	.	447
1.00-1.24	.	1	79	264	59	1	.	.	.	.	404
1.25-1.49	.	.	.	72	70	3	.	.	.	.	145
1.50-1.74	.	.	1	47	134	3	.	.	.	.	185
1.75-1.99	.	.	.	1	42	4	.	.	.	.	47
2.00-2.24	.	.	.	.	59	4	.	.	.	.	63
2.25-2.49	.	.	.	.	11	9	.	.	.	.	20
2.50-2.74	.	.	.	.	.	13	.	.	.	.	13
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1641	722	789	396	38	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 3368.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	934	36	4	.	.	.	.	.	.	974
0.25-0.49	.	1024	81	17	1	.	.	.	.	.	1123
0.50-0.74	.	667	592	113	2	.	.	.	.	.	1374
0.75-0.99	.	60	317	264	5	.	.	.	.	.	646
1.00-1.24	.	.	149	414	55	.	.	.	.	.	618
1.25-1.49	.	.	.	177	85	1	.	.	.	.	263
1.50-1.74	.	.	.	103	182	1	1	.	.	.	287
1.75-1.99	.	.	.	3	86	5	.	.	.	.	94
2.00-2.24	.	.	.	.	106	12	.	.	.	.	118
2.25-2.49	.	.	.	.	33	10	.	.	.	.	43
2.50-2.74	.	.	.	.	1	43	.	.	.	.	44
2.75-2.99	.	.	.	.	.	7	.	.	.	.	7
3.00-3.24	.	.	.	.	.	7	1	.	.	.	8
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2685	1175	1095	556	86	3	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.0 NO. OF CASES= 5252.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2319	99	10	.	.	.	.	.	.	2428
0.25-0.49	.	2388	308	25	3	.	.	.	.	.	2724
0.50-0.74	.	1033	1573	450	4	.	.	.	.	.	3060
0.75-0.99	.	70	613	946	5	.	.	.	.	.	1634
1.00-1.24	.	1	290	1138	283	.	.	.	.	.	1712
1.25-1.49	.	.	10	413	389	.	.	.	.	.	812
1.50-1.74	.	.	.	305	841	8	.	.	.	.	1154
1.75-1.99	.	.	.	11	333	59	.	.	.	.	403
2.00-2.24	.	.	.	.	491	66	2	.	.	.	559
2.25-2.49	.	.	.	.	89	172	.	.	.	.	261
2.50-2.74	.	.	.	.	2	198	.	.	.	.	200
2.75-2.99	.	.	.	.	.	62	.	.	.	.	62
3.00-3.24	.	.	.	.	.	24	14	.	.	.	38
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	5811	2893	3298	2440	589	22	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 14094.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2558	618	111	.	.	.	.	.	.	3287
0.25-0.49	.	1828	1280	387	10	.	.	.	.	.	3505
0.50-0.74	.	940	1347	1449	110	.	.	.	.	.	3846
0.75-0.99	.	91	595	1042	250	3	.	.	.	.	1981
1.00-1.24	.	1	310	974	739	9	.	.	.	.	2033
1.25-1.49	.	.	14	412	472	21	.	.	.	.	919
1.50-1.74	.	.	.	298	1079	108	1	.	.	.	1486
1.75-1.99	.	.	.	17	408	120	3	.	.	.	548
2.00-2.24	.	.	.	3	605	191	7	.	.	.	806
2.25-2.49	.	.	.	.	129	280	8	.	.	.	417
2.50-2.74	.	.	.	.	8	290	10	.	.	.	308
2.75-2.99	.	.	.	.	.	116	12	.	.	.	128
3.00-3.24	.	.	.	.	.	42	35	.	.	.	77
3.25-3.49	.	.	.	.	.	2	19	.	.	.	21
3.50+	.	.	.	.	.	.	33	3	.	.	36
TOTAL	0	5418	4164	4693	3810	1182	128	3	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 4.4 MEAN TP(SEC)= 4.6 NO. OF CASES= 18157.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1424	367	142	6	.	.	.	.	.	1939
0.25-0.49	.	1162	393	309	34	.	.	.	.	.	1898
0.50-0.74	.	1679	673	836	234	3	.	.	.	.	3425
0.75-0.99	.	452	548	870	408	16	.	.	.	.	2294
1.00-1.24	.	166	443	1098	863	134	.	.	.	.	2704
1.25-1.49	.	.	68	331	469	117	6	.	.	.	991
1.50-1.74	.	.	12	346	1047	168	24	.	.	.	1597
1.75-1.99	.	.	.	35	395	95	18	.	.	.	543
2.00-2.24	.	.	.	2	552	203	20	.	.	.	777
2.25-2.49	.	.	.	.	93	286	16	1	.	.	396
2.50-2.74	.	.	.	.	10	348	13	1	1	.	373
2.75-2.99	.	.	.	.	.	152	7	1	.	.	160
3.00-3.24	.	.	.	.	.	74	79	.	.	.	153
3.25-3.49	.	.	.	.	.	.	58	.	.	.	58
3.50+	.	.	.	.	.	.	71	5	1	.	77
TOTAL	0	4883	2504	3969	4111	1596	312	8	2	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.8 NO. OF CASES= 16280.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	590	53	28	1	.	.	.	.	.	672
0.25-0.49	.	859	37	20	3	.	.	.	.	.	919
0.50-0.74	.	1478	41	32	4	.	.	.	.	.	1555
0.75-0.99	.	747	21	45	5	.	.	.	.	.	818
1.00-1.24	.	362	178	91	50	.	.	.	.	.	681
1.25-1.49	.	.	91	9	27	1	.	.	.	.	128
1.50-1.74	.	.	53	13	63	8	.	.	.	.	137
1.75-1.99	.	.	2	9	16	16	.	.	.	.	43
2.00-2.24	.	.	.	1	16	13	2	.	.	.	32
2.25-2.49	.	.	.	.	5	9	4	.	.	.	18
2.50-2.74	.	.	.	.	1	19	2	.	.	.	22
2.75-2.99	.	.	.	.	.	4	2	.	.	.	6
3.00-3.24	.	.	.	.	.	4	7	.	.	.	11
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	6	3	.	.	9
TOTAL	0	4036	476	248	191	74	27	3	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 4.5 MEAN TP(SEC)= 3.4 NO. OF CASES= 4745.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	589	40	8	1	.	.	.	.	.	638
0.25-0.49	.	595	33	13	1	.	.	.	.	.	642
0.50-0.74	.	920	12	26	4	.	.	.	.	.	962
0.75-0.99	.	439	50	7	3	.	.	.	.	.	499
1.00-1.24	.	56	158	2	6	1	.	.	.	.	223
1.25-1.49	.	.	32	.	1	1	.	.	.	.	34
1.50-1.74	.	.	7	6	.	.	.	.	.	.	13
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2599	332	66	16	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 2829.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	473	25	8	.	.	.	.	.	.	506
0.25-0.49	.	490	29	17	2	.	.	.	.	.	538
0.50-0.74	.	1113	7	28	6	1	.	.	.	.	1155
0.75-0.99	.	347	226	6	4	1	.	.	.	.	584
1.00-1.24	.	10	298	3	2	.	.	.	.	.	313
1.25-1.49	.	.	53	3	.	.	.	.	.	.	56
1.50-1.74	.	.	.	25	.	1	.	.	.	.	26
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2433	638	94	14	3	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 2986.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	488	27	13	.	.	.	.	.	.	528
0.25-0.49	.	463	29	18	.	.	.	.	.	.	510
0.50-0.74	.	1357	8	36	13	.	.	.	.	.	1414
0.75-0.99	.	371	331	3	4	.	.	.	.	.	709
1.00-1.24	.	.	394	.	3	4	.	.	.	.	401
1.25-1.49	.	.	43	7	4	1	.	.	.	.	55
1.50-1.74	.	.	.	20	.	.	1	.	.	.	21
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2679	832	99	24	5	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 3413.

STATION E40 42.30N 81.72W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

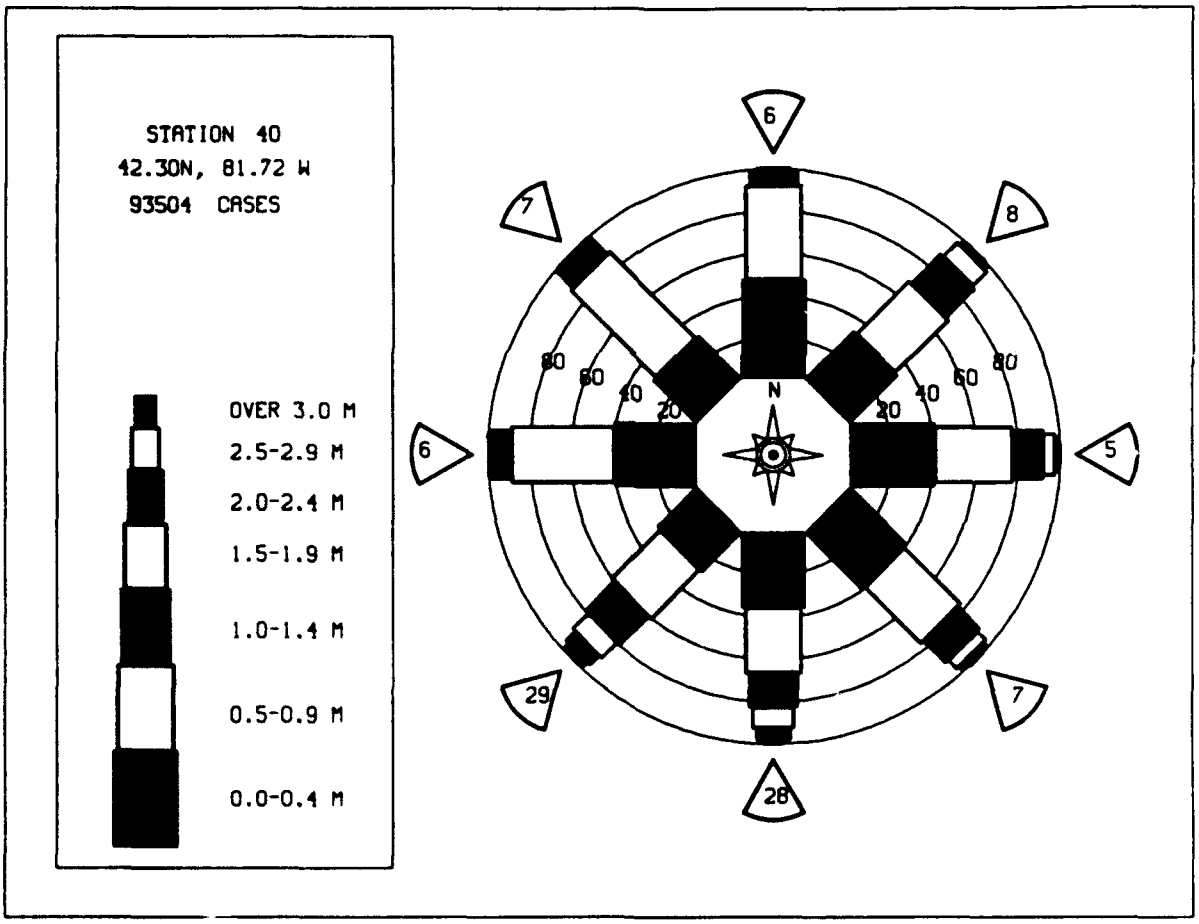
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	450	32	7	.	.	.	.	.	.	489
0.25-0.49	.	585	44	28	4	.	.	.	.	.	661
0.50-0.74	.	1103	22	65	29	.	.	.	.	.	1219
0.75-0.99	.	375	177	14	33	3	.	.	.	.	602
1.00-1.24	.	13	179	1	18	7	.	.	.	.	218
1.25-1.49	.	.	22	3	2	3	.	.	.	.	30
1.50-1.74	.	.	.	19	1	1	2	.	.	.	23
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2526	476	137	87	14	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 3042.

STATION E40 42.30N 81.72W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1398	151	39	.	.	.	.	.	.	1588
0.25-0.49	.	1352	286	103	6	.	.	.	.	.	1747
0.50-0.74	.	1378	588	413	54	.	.	.	.	.	2433
0.75-0.99	.	348	390	424	100	2	.	.	.	.	1264
1.00-1.24	.	64	306	512	248	19	.	.	.	.	1149
1.25-1.49	.	.	35	209	171	18	.	.	.	.	433
1.50-1.74	.	.	7	183	363	35	3	.	.	.	591
1.75-1.99	.	.	.	11	156	32	2	.	.	.	201
2.00-2.24	.	.	.	.	203	52	3	.	.	.	258
2.25-2.49	.	.	.	.	43	79	3	.	.	.	125
2.50-2.74	.	.	.	.	4	93	2	.	.	.	99
2.75-2.99	.	.	.	.	.	35	2	.	.	.	37
3.00-3.24	.	.	.	.	.	15	14	.	.	.	29
3.25-3.49	.	.	.	.	.	.	8	.	.	.	8
3.50+	.	.	.	.	.	.	11	1	.	.	12
TOTAL	0	4540	1763	1894	1348	380	48	1	0	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E40 (42.30N 81.72W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.8	0.9	0.9	0.9	0.5	0.7	0.7	0.7	0.9	1.1	1.0	0.8
1957	0.9	0.8	1.0	1.0	1.0	0.8	0.7	0.5	0.8	0.9	1.4	1.3	0.9
1958	0.9	1.0	0.7	0.8	0.9	0.7	0.6	0.6	0.8	0.9	1.1	0.9	0.8
1959	0.9	0.9	1.0	0.9	0.6	0.5	0.5	0.6	0.7	0.8	0.9	0.7	0.7
1960	0.8	1.0	0.9	1.2	0.9	0.7	0.5	0.7	0.6	0.7	1.4	1.3	0.9
1961	1.0	0.8	1.0	0.9	0.8	0.8	0.6	0.7	0.8	1.0	1.0	1.2	0.9
1962	1.2	1.0	1.0	1.0	0.8	0.6	0.6	0.6	0.7	0.8	0.7	0.9	0.8
1963	1.0	1.0	1.1	0.9	0.8	0.4	0.6	0.6	0.7	0.6	1.1	0.8	0.8
1964	1.2	0.8	1.0	1.2	0.9	0.6	0.5	0.7	0.8	0.7	0.9	1.0	0.9
1965	1.1	1.1	0.8	0.8	0.7	0.7	0.5	0.6	0.9	1.0	1.0	1.1	0.9
1966	0.8	0.6	0.9	0.9	0.6	0.5	0.6	0.5	0.6	1.0	1.1	0.9	0.7
1967	1.1	1.1	0.8	0.8	0.8	0.6	0.5	0.5	0.6	1.0	1.0	1.0	0.8
1968	0.9	0.9	0.9	0.9	0.8	0.6	0.6	0.6	0.6	0.8	0.9	1.1	0.8
1969	1.1	0.6	0.9	0.8	0.6	0.7	0.5	0.5	0.6	0.9	0.9	0.8	0.7
1970	0.9	1.0	0.7	0.9	0.9	0.7	0.6	0.5	0.8	0.9	1.2	1.1	0.8
1971	1.2	1.4	0.9	0.8	0.7	0.5	0.6	0.6	0.6	0.7	0.9	1.0	0.8
1972	1.3	0.9	0.9	0.8	0.8	0.7	0.6	0.7	0.8	0.9	0.9	0.9	0.8
1973	1.2	0.9	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.7	1.0	1.1	0.9
1974	1.0	1.1	1.0	1.1	0.7	0.9	0.6	0.6	0.8	0.8	1.0	1.0	0.9
1975	1.0	0.9	0.8	0.8	0.5	0.7	0.4	0.5	0.6	0.9	1.1	0.9	0.8
1976	1.0	1.0	1.1	0.8	0.7	0.6	0.5	0.5	0.7	0.8	0.9	0.9	0.8
1977	1.1	0.9	0.8	0.8	0.5	0.5	0.6	0.6	0.6	0.8	1.1	1.3	0.8
1978	0.9	0.5	0.7	0.8	0.6	0.5	0.5	0.5	0.7	0.8	0.9	1.1	0.7
1979	0.6	0.9	0.9	0.7	0.5	0.6	0.4	0.6	0.6	0.8	0.9	1.0	0.7
1980	0.8	0.7	0.8	0.7	0.5	0.5	0.4	0.5	0.6	0.7	0.9	0.7	0.6
1981	0.7	1.2	0.8	1.1	0.5	0.7	0.5	0.6	0.6	0.7	0.6	0.7	0.7
1982	1.1	0.8	0.8	0.9	0.4	0.4	0.4	0.4	0.4	0.6	1.0	0.9	0.7
1983	0.7	0.5	0.7	0.8	0.7	0.4	0.5	0.4	0.6	0.9	0.8	1.1	0.7
1984	0.6	0.8	0.9	0.7	0.7	0.6	0.4	0.4	0.6	0.5	0.9	0.9	0.7
1985	1.0	0.9	1.0	0.8	0.7	0.6	0.5	0.6	0.6	0.8	1.0	1.1	0.8
1986	0.8	0.7	0.9	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.8	0.8	0.7
1987	0.7	0.7	0.8	0.9	0.7	0.6	0.5	0.7	0.5	0.7	1.1	1.0	0.8
MEAN	1.0	0.9	0.9	0.9	0.7	0.6	0.5	0.6	0.7	0.8	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E40 (42.30N 81.72W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	2.2	3.6	3.7	2.9	1.7	2.7	2.4	2.1	2.7	3.0	2.9
1957	2.5	2.2	3.8	3.8	3.0	2.1	2.3	2.1	2.7	2.6	3.7	3.2
1958	2.9	2.8	1.9	3.3	2.4	2.5	2.3	2.5	2.7	2.7	3.4	2.9
1959	3.2	2.6	4.3	3.9	2.6	2.3	2.2	2.1	2.7	2.4	2.6	2.7
1960	2.5	2.7	2.9	3.7	2.8	3.0	2.5	2.2	2.4	2.6	3.5	3.0
1961	3.0	2.8	3.0	3.9	2.7	2.6	2.2	2.5	3.1	3.4	3.0	3.7
1962	3.4	2.6	2.8	3.6	2.9	1.8	2.1	2.3	3.0	2.8	2.9	3.3
1963	3.0	3.1	4.0	2.9	3.3	1.4	2.2	2.0	2.3	3.0	3.7	2.6
1964	3.8	2.7	5.0	3.3	4.5	2.8	2.6	2.6	3.0	3.1	3.3	2.9
1965	4.0	3.4	3.4	3.4	3.3	2.4	2.2	2.6	2.9	3.2	4.3	3.3
1966	3.0	3.0	3.5	3.0	3.8	2.3	2.2	1.8	2.2	3.0	3.3	3.4
1967	2.8	3.2	2.5	3.0	2.8	1.9	2.0	1.7	3.0	3.3	2.6	2.7
1968	3.0	3.2	2.9	3.7	2.8	2.5	2.2	2.2	2.1	2.9	3.1	3.1
1969	3.1	1.9	3.3	2.9	2.4	2.9	1.9	2.3	2.1	2.6	2.5	2.2
1970	2.8	2.9	3.5	3.0	2.9	2.7	2.9	2.8	2.7	2.6	3.7	3.1
1971	3.7	3.3	3.4	3.3	3.2	1.8	2.5	2.4	1.7	2.6	2.6	3.8
1972	4.5	2.7	3.9	3.0	2.7	2.4	2.0	2.4	2.8	2.9	2.8	2.7
1973	3.4	2.4	3.3	3.1	3.2	2.4	2.6	2.5	2.9	2.6	2.9	3.3
1974	4.4	4.1	3.5	3.5	3.7	3.1	2.3	2.4	2.8	3.1	2.8	3.1
1975	2.9	3.2	3.1	3.1	1.8	2.5	2.0	2.0	2.3	2.8	3.2	3.3
1976	2.7	3.1	3.0	2.5	3.2	2.5	2.1	2.0	2.4	2.8	2.8	2.6
1977	3.0	2.7	2.7	2.8	1.9	1.9	2.9	2.0	2.3	2.9	2.8	3.5
1978	3.6	1.7	2.8	2.4	2.9	1.7	1.8	2.6	2.4	2.8	3.3	2.9
1979	2.4	2.6	3.0	2.2	1.8	2.0	1.5	2.5	2.1	2.9	3.5	3.0
1980	3.3	2.2	2.4	2.8	2.0	1.7	1.3	1.6	2.1	2.4	2.5	2.4
1981	3.1	3.3	3.8	3.7	1.7	2.3	1.8	2.0	2.4	3.3	2.9	2.7
1982	3.9	2.8	3.0	4.1	1.5	2.3	1.8	1.2	1.6	2.7	2.9	3.4
1983	2.3	2.3	2.2	2.8	2.5	1.6	1.7	1.6	2.4	2.8	2.9	3.0
1984	2.2	2.5	3.6	4.0	2.8	2.0	1.5	1.0	2.2	1.8	2.7	2.7
1985	2.8	2.6	3.1	3.6	2.3	2.3	2.2	2.1	2.2	3.1	2.6	4.0
1986	2.8	2.5	2.6	1.8	1.7	1.7	1.6	1.6	2.6	2.3	2.6	2.6
1987	2.4	1.9	2.3	2.8	2.3	2.3	1.9	2.3	2.0	3.0	3.0	4.0

32 YR. STATISTICS FOR WIS STATION E40

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.0
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	221.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		84030518

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	628	37	16	.	.	.	.	.	.	681
0.25-0.49	.	858	94	56	3	.	.	.	.	.	1011
0.50-0.74	.	947	72	178	53	.	.	.	.	.	1250
0.75-0.99	.	297	17	60	72	2	.	.	.	.	448
1.00-1.24	.	23	51	28	108	22	.	.	.	.	232
1.25-1.49	.	.	10	4	26	17	1	.	.	.	58
1.50-1.74	.	.	5	.	22	11	1	.	.	.	39
1.75-1.99	.	.	1	.	3	2	4	.	.	.	10
2.00-2.24	.	.	.	.	1	4	5	1	.	.	11
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	1	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2753	287	342	288	58	12	1	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.6 NO. OF CASES= 3512.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	396	23	5	.	.	.	.	.	.	424
0.25-0.49	.	586	83	39	2	.	.	.	.	.	710
0.50-0.74	.	563	109	142	20	.	.	.	.	.	834
0.75-0.99	.	100	73	62	58	1	.	.	.	.	294
1.00-1.24	.	7	42	66	66	5	.	.	.	.	186
1.25-1.49	.	.	.	28	26	4	.	.	.	.	58
1.50-1.74	.	.	.	19	28	4	1	.	.	.	52
1.75-1.99	.	.	.	2	22	2	1	.	.	.	27
2.00-2.24	.	.	.	.	10	2	1	.	.	.	13
2.25-2.49	.	.	.	.	2	1	.	.	.	.	3
2.50-2.74	.	.	.	.	.	6	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1652	330	363	234	25	3	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 2451.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	537	31	5	.	.	.	.	.	.	573
0.25-0.49	.	743	108	29	2	.	.	.	.	.	882
0.50-0.74	.	711	235	209	24	.	.	.	.	.	1179
0.75-0.99	.	93	314	177	73	.	.	.	.	.	657
1.00-1.24	.	1	212	276	146	13	.	.	.	.	648
1.25-1.49	.	.	8	177	77	13	.	.	.	.	275
1.50-1.74	.	.	.	161	157	11	.	.	.	.	329
1.75-1.99	.	.	.	5	132	1	.	.	.	.	138
2.00-2.24	.	.	.	.	136	2	.	.	.	.	138
2.25-2.49	.	.	.	.	37	7	.	.	.	.	44
2.50-2.74	.	.	.	.	2	31	.	.	.	.	33
2.75-2.99	.	.	.	.	.	7	.	.	.	.	7
3.00-3.24	.	.	.	.	.	4	1	.	.	.	5
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2085	908	1039	786	89	1	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 4605.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	434	19	4	.	.	.	.	.	.	457
0.25-0.49	.	493	80	33	.	.	.	.	.	.	606
0.50-0.74	.	509	284	197	11	.	.	.	.	.	1001
0.75-0.99	.	39	242	227	58	.	.	.	.	.	566
1.00-1.24	.	.	135	363	161	10	.	.	.	.	669
1.25-1.49	.	.	3	201	101	13	.	.	.	.	318
1.50-1.74	.	.	.	157	188	13	.	.	.	.	358
1.75-1.99	.	.	.	1	117	10	.	.	.	.	128
2.00-2.24	.	.	.	.	130	11	.	.	.	.	141
2.25-2.49	.	.	.	.	42	22	1	.	.	.	65
2.50-2.74	.	.	.	.	1	62	1	1	.	.	65
2.75-2.99	.	.	.	.	.	5	3	.	.	.	8
3.00-3.24	.	.	.	.	.	5	4	.	.	.	9
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1475	763	1183	809	151	9	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.4 NO. OF CASES= 4122.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	440	21	8	.	.	.	.	.	.	469
0.25-0.49	.	470	89	20	.	.	.	.	.	.	579
0.50-0.74	.	332	243	166	4	.	.	.	.	.	745
0.75-0.99	.	25	135	168	37	.	.	.	.	.	365
1.00-1.24	.	.	71	148	66	3	.	.	.	.	288
1.25-1.49	.	.	1	54	37	4	.	.	.	.	96
1.50-1.74	.	.	.	34	84	10	.	.	.	.	128
1.75-1.99	.	.	.	.	24	7	.	.	.	.	31
2.00-2.24	.	.	.	.	24	13	1	.	.	.	38
2.25-2.49	.	.	.	.	3	16	.	.	.	.	19
2.50-2.74	.	.	.	.	1	12	1	.	.	.	14
2.75-2.99	.	.	.	.	.	2	2	.	.	.	4
3.00-3.24	.	.	.	.	.	1	1	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1267	560	598	280	68	5	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 2614.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	406	26	4	.	.	.	.	.	.	436
0.25-0.49	.	336	63	20	1	.	.	.	.	.	420
0.50-0.74	.	252	232	117	9	.	.	.	.	.	610
0.75-0.99	.	19	129	119	18	.	.	.	.	.	285
1.00-1.24	.	.	43	122	40	3	.	.	.	.	208
1.25-1.49	.	.	.	54	24	1	.	.	.	.	79
1.50-1.74	.	.	.	41	62	2	.	.	.	.	105
1.75-1.99	.	.	.	.	19	4	.	.	.	.	23
2.00-2.24	.	.	.	.	14	10	1	.	.	.	25
2.25-2.49	.	.	.	.	.	3	1	.	.	.	4
2.50-2.74	.	.	.	.	.	4	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1013	493	477	187	27	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 4.0 NO. OF CASES= 2069.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	628	32	8	.	.	.	.	.	.	668
0.25-0.49	.	672	101	23	1	.	.	.	.	.	797
0.50-0.74	.	510	392	151	8	.	.	.	.	.	1061
0.75-0.99	.	29	225	187	20	.	.	.	.	.	461
1.00-1.24	.	.	74	263	16	.	.	.	.	.	353
1.25-1.49	.	.	2	160	10	2	.	.	.	.	174
1.50-1.74	.	.	.	105	53	2	.	.	.	.	160
1.75-1.99	.	.	.	1	56	2	.	.	.	.	59
2.00-2.24	.	.	.	.	31	.	.	.	.	.	31
2.25-2.49	.	.	.	.	6	2	.	.	.	.	8
2.50-2.74	.	.	.	.	.	4	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1839	826	898	201	12	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 3543.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	890	39	7	.	.	.	.	.	.	936
0.25-0.49	.	1119	88	24	2	.	.	.	.	.	1233
0.50-0.74	.	782	717	102	3	.	.	.	.	.	1604
0.75-0.99	.	58	421	271	10	.	.	.	.	.	760
1.00-1.24	.	.	151	495	26	1	.	.	.	.	673
1.25-1.49	.	.	.	244	50	4	.	.	.	.	298
1.50-1.74	.	.	.	143	216	1	.	.	.	.	360
1.75-1.99	.	.	.	2	128	3	.	.	.	.	133
2.00-2.24	.	.	.	.	129	4	.	.	.	.	133
2.25-2.49	.	.	.	.	19	18	.	.	.	.	37
2.50-2.74	.	.	.	.	4	27	.	.	.	.	31
2.75-2.99	.	.	.	.	.	7	.	.	.	.	7
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2849	1416	1288	587	65	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 5817.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1896	68	11	.	.	.	.	.	.	1975
0.25-0.49	.	2290	189	22	1	.	.	.	.	.	2502
0.50-0.74	.	1173	1555	268	7	.	.	.	.	.	3003
0.75-0.99	.	60	690	844	8	.	.	.	.	.	1602
1.00-1.24	.	.	286	1263	125	.	.	.	.	.	1674
1.25-1.49	.	.	6	515	223	.	.	.	.	.	744
1.50-1.74	.	.	.	404	757	3	.	.	.	.	1164
1.75-1.99	.	.	.	4	526	8	.	.	.	.	538
2.00-2.24	.	.	.	.	553	16	.	.	.	.	569
2.25-2.49	.	.	.	.	105	81	.	.	.	.	186
2.50-2.74	.	.	.	.	3	124	.	.	.	.	127
2.75-2.99	.	.	.	.	.	36	.	.	.	.	36
3.00-3.24	.	.	.	.	.	8	2	.	.	.	10
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5419	2794	3331	2308	276	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.2 NO. OF CASES= 13227.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1980	249	21	.	.	.	.	.	.	2250
0.25-0.49	.	1865	788	132	.	.	.	.	.	.	2785
0.50-0.74	.	937	1666	870	34	.	.	.	.	.	3507
0.75-0.99	.	81	613	1151	104	.	.	.	.	.	1949
1.00-1.24	.	.	279	1337	518	1	.	.	.	.	2135
1.25-1.49	.	.	6	530	428	.	.	.	.	.	964
1.50-1.74	.	.	.	425	1020	24	.	.	.	.	1469
1.75-1.99	.	.	.	10	716	56	.	.	.	.	782
2.00-2.24	.	.	.	.	817	82	3	.	.	.	902
2.25-2.49	.	.	.	.	158	150	1	.	.	.	309
2.50-2.74	.	.	.	.	6	207	2	.	.	.	215
2.75-2.99	.	.	.	.	.	53	3	.	.	.	56
3.00-3.24	.	.	.	.	.	16	14	.	.	.	30
3.25-3.49	.	.	.	.	.	2	17	.	.	.	19
3.50+	.	.	.	.	.	.	11	.	.	.	11
TOTAL	0	4863	3601	4476	3801	591	51	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.5 NO. OF CASES= 16272.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1346	209	29	1	.	.	.	.	.	1585
0.25-0.49	.	1261	345	130	7	.	.	.	.	.	1743
0.50-0.74	.	1405	933	504	49	.	.	.	.	.	2891
0.75-0.99	.	334	829	781	106	1	.	.	.	.	2051
1.00-1.24	.	8	640	1289	457	4	.	.	.	.	2398
1.25-1.49	.	.	66	593	332	17	.	.	.	.	1008
1.50-1.74	.	.	9	570	1104	48	.	.	.	.	1731
1.75-1.99	.	.	.	23	728	39	8	.	.	.	798
2.00-2.24	.	.	.	3	1030	52	12	.	.	.	1097
2.25-2.49	.	.	.	.	207	187	4	.	.	.	398
2.50-2.74	.	.	.	.	11	318	3	.	.	.	332
2.75-2.99	.	.	.	.	2	100	7	.	.	.	109
3.00-3.24	.	.	.	.	1	60	35	.	.	.	96
3.25-3.49	.	.	.	.	.	.	22	.	.	.	22
3.50+	.	.	.	.	.	.	32	2	.	.	34
TOTAL	0	4354	3031	3922	4035	826	123	2	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.7 NO. OF CASES= 15259.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	653	40	10	.	.	.	.	.	.	703
0.25-0.49	.	853	41	16	2	.	.	.	.	.	912
0.50-0.74	.	1244	93	31	4	.	.	.	.	.	1372
0.75-0.99	.	489	427	39	5	.	.	.	.	.	960
1.00-1.24	.	2	921	110	22	2	.	.	.	.	1057
1.25-1.49	.	.	243	257	19	3	.	.	.	.	522
1.50-1.74	.	.	10	310	47	13	.	.	.	.	380
1.75-1.99	.	.	.	60	25	4	2	.	.	.	91
2.00-2.24	.	.	.	21	37	12	1	.	.	.	71
2.25-2.49	.	.	.	4	17	10	1	.	.	.	32
2.50-2.74	.	.	.	.	8	14	2	.	.	.	24
2.75-2.99	.	.	.	.	1	8	2	1	.	.	12
3.00-3.24	.	.	.	.	.	2	3	.	.	.	5
3.25-3.49	.	.	.	.	.	1	3	.	.	.	4
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	3241	1775	858	187	69	17	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 5768.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	544	24	12	.	.	.	.	.	.	580
0.25-0.49	.	647	36	13	2	.	.	.	.	.	698
0.50-0.74	.	1110	14	29	9	.	.	.	.	.	1162
0.75-0.99	.	312	383	6	5	.	.	.	.	.	706
1.00-1.24	.	1	725	3	7	.	.	.	.	.	736
1.25-1.49	.	.	111	209	.	.	.	.	.	.	320
1.50-1.74	.	.	1	150	.	.	.	.	.	.	151
1.75-1.99	.	.	.	16	.	.	.	.	.	.	16
2.00-2.24	.	.	.	18	6	.	1	.	.	.	25
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2614	1294	456	34	0	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.5 NO. OF CASES= 4124.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	348	17	6	.	.	.	.	.	.	371
0.25-0.49	.	534	22	14	.	.	.	.	.	.	570
0.50-0.74	.	1241	12	18	11	.	.	.	.	.	1282
0.75-0.99	.	439	310	2	6	.	.	.	.	.	757
1.00-1.24	.	2	556	7	3	1	.	.	.	.	569
1.25-1.49	.	.	83	74	.	2	.	.	.	.	159
1.50-1.74	.	.	3	67	.	.	.	.	.	.	70
1.75-1.99	.	.	.	13	.	.	.	.	.	.	13
2.00-2.24	.	.	.	2	2	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2564	1003	203	22	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 3559.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	390	29	11	1	.	.	.	.	.	431
0.25-0.49	.	546	34	29	.	.	.	.	.	.	609
0.50-0.74	.	1403	11	51	11	.	.	.	.	.	1476
0.75-0.99	.	425	310	5	6	2	.	.	.	.	748
1.00-1.24	.	.	406	.	11	2	.	.	.	.	419
1.25-1.49	.	.	49	7	.	2	.	.	.	.	58
1.50-1.74	.	.	.	26	.	3	2	.	.	.	31
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2764	839	135	29	9	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 3543.

STATION E41 42.15N 81.90W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

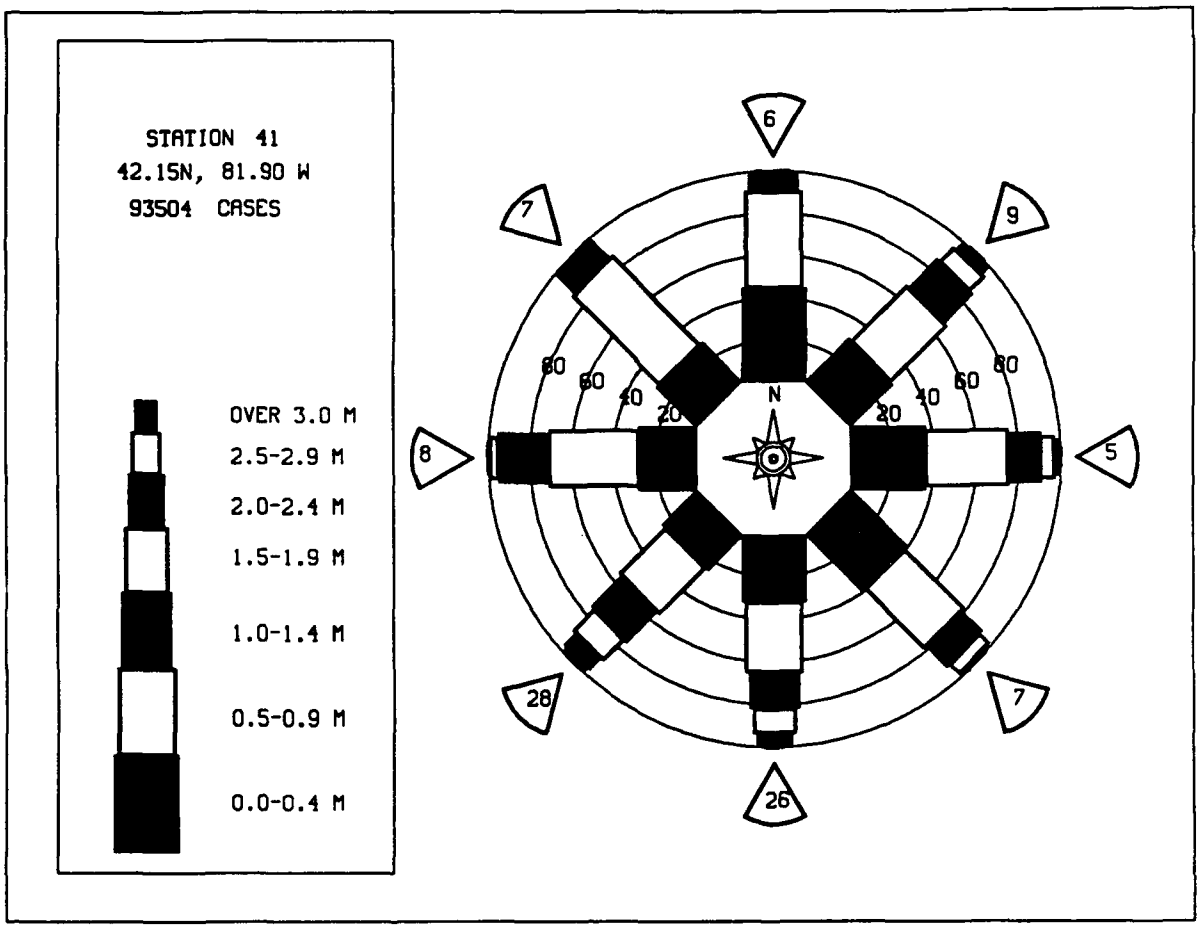
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	360	17	2	.	.	.	.	.	.	379
0.25-0.49	.	543	44	35	3	.	.	.	.	.	625
0.50-0.74	.	1133	20	98	38	2	.	.	.	.	1291
0.75-0.99	.	349	166	21	37	2	.	.	.	.	575
1.00-1.24	.	20	201	1	45	14	1	.	.	.	282
1.25-1.49	.	.	19	2	5	9	.	.	.	.	35
1.50-1.74	.	.	.	16	3	6	5	.	.	.	30
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2405	467	175	131	33	6	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.4 NO. OF CASES= 3019.

STATION E41 42.15N 81.90W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1188	88	16	.	.	.	.	.	.	1292
0.25-0.49	.	1382	221	64	2	.	.	.	.	.	1669
0.50-0.74	.	1425	659	313	30	.	.	.	.	.	2427
0.75-0.99	.	315	529	412	63	.	.	.	.	.	1319
1.00-1.24	.	6	480	577	182	8	.	.	.	.	1253
1.25-1.49	.	.	61	311	136	9	.	.	.	.	517
1.50-1.74	.	.	2	263	374	15	.	.	.	.	654
1.75-1.99	.	.	.	14	250	14	1	.	.	.	279
2.00-2.24	.	.	.	4	292	21	2	.	.	.	319
2.25-2.49	.	.	.	.	60	50	.	.	.	.	110
2.50-2.74	.	.	.	.	4	81	1	.	.	.	86
2.75-2.99	.	.	.	.	.	22	1	.	.	.	23
3.00-3.24	.	.	.	.	.	9	6	.	.	.	15
3.25-3.49	.	.	.	.	.	.	4	.	.	.	4
3.50+	.	.	.	.	.	.	4	.	.	.	4
TOTAL	0	4316	2040	1974	1393	229	19	0	0	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E41 (42.15N 81.90W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	1.0	1.0	1.0	0.6	0.8	0.8	0.8	0.9	1.1	1.0	0.9
1957	1.0	0.9	1.1	1.1	1.0	0.8	0.8	0.6	0.8	0.9	1.4	1.3	1.0
1958	1.0	1.1	0.8	0.9	1.0	0.8	0.7	0.7	0.8	1.0	1.2	1.0	0.9
1959	1.0	1.0	1.1	1.0	0.6	0.5	0.5	0.6	0.7	0.8	1.0	0.8	0.8
1960	0.8	1.0	1.0	1.3	1.0	0.8	0.6	0.7	0.6	0.7	1.9	1.3	0.9
1961	1.1	0.8	1.1	1.0	0.9	0.8	0.7	0.7	0.8	1.0	1.0	1.2	0.9
1962	1.3	1.1	1.0	1.0	0.9	0.7	0.6	0.6	0.7	0.8	0.7	1.0	0.9
1963	1.0	1.0	1.1	0.9	0.8	0.4	0.6	0.6	0.7	0.7	1.1	0.9	0.8
1964	1.2	0.8	1.1	1.2	0.9	0.7	0.6	0.7	0.8	0.8	0.9	1.0	0.9
1965	1.1	1.1	0.8	0.9	0.7	0.8	0.5	0.7	0.9	1.0	1.1	1.2	0.9
1966	0.9	0.7	1.0	0.9	0.7	0.5	0.7	0.6	0.6	1.0	1.1	1.0	0.8
1967	1.2	1.2	0.8	0.9	0.9	0.7	0.5	0.6	0.6	1.0	1.1	1.0	0.9
1968	0.9	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.6	0.9	1.0	1.2	0.8
1969	1.2	0.7	0.9	0.9	0.6	0.8	0.5	0.5	0.7	0.9	0.9	0.9	0.8
1970	0.9	1.0	0.8	1.0	0.9	0.8	0.7	0.6	0.8	0.9	1.2	1.1	0.9
1971	1.3	1.4	1.0	0.9	0.7	0.6	0.6	0.7	0.6	0.7	1.0	1.0	0.9
1972	1.3	1.0	1.0	0.9	0.8	0.7	0.6	0.7	0.8	0.9	0.9	0.9	0.9
1973	1.3	1.0	1.0	1.1	0.9	0.8	0.7	0.6	0.7	0.8	1.1	1.1	0.9
1974	1.0	1.1	1.1	1.2	0.8	0.9	0.7	0.7	0.9	0.9	1.0	1.0	0.9
1975	1.0	0.9	0.9	0.8	0.5	0.7	0.5	0.6	0.7	0.9	1.0	0.9	0.8
1976	1.0	1.0	1.1	0.8	0.7	0.7	0.6	0.5	0.7	0.8	0.9	0.9	0.8
1977	1.0	0.9	0.9	0.8	0.6	0.5	0.6	0.7	0.7	0.9	1.1	1.3	0.8
1978	1.0	0.5	0.7	0.8	0.6	0.5	0.6	0.6	0.7	0.8	0.9	1.1	0.7
1979	0.8	0.9	0.9	0.7	0.6	0.6	0.4	0.7	0.6	0.9	0.9	1.0	0.8
1980	0.7	0.7	0.9	0.8	0.5	0.5	0.4	0.5	0.6	0.8	0.9	0.8	0.7
1981	0.8	1.2	0.9	1.2	0.6	0.8	0.5	0.6	0.7	0.8	0.7	0.8	0.8
1982	1.1	0.8	0.8	1.0	0.4	0.5	0.4	0.4	0.5	0.6	1.0	1.0	0.7
1983	0.7	0.6	0.7	0.9	0.8	0.4	0.5	0.4	0.6	0.9	0.9	1.2	0.7
1984	0.7	0.8	1.0	0.8	0.7	0.6	0.5	0.4	0.6	0.6	0.9	0.9	0.7
1985	1.0	0.9	1.0	0.8	0.7	0.6	0.5	0.6	0.6	0.8	1.1	1.1	0.8
1986	0.8	0.7	0.8	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.8	0.9	0.7
1987	0.8	0.7	0.9	0.9	0.7	0.7	0.5	0.7	0.5	0.7	1.0	1.0	0.8
MEAN	1.0	0.9	0.9	0.9	0.8	0.7	0.6	0.6	0.7	0.8	1.0	1.0	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E41 (42.15N 81.90W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.7	2.4	3.4	3.6	2.6	1.6	2.8	2.3	2.1	2.3	2.8	2.5
1957	2.3	2.0	3.3	3.3	2.8	2.8	2.2	1.9	2.6	2.3	3.4	2.9
1958	2.7	2.9	2.2	2.7	2.6	2.4	2.3	2.3	2.7	2.6	3.3	2.9
1959	3.1	2.6	4.0	3.8	2.7	2.3	2.2	2.0	2.5	2.3	2.5	2.5
1960	2.3	2.5	2.6	3.3	2.9	2.8	2.4	2.0	2.2	2.5	3.3	2.8
1961	2.8	2.9	2.8	3.8	2.5	2.5	2.0	2.3	2.9	3.2	2.8	3.4
1962	3.3	2.9	2.9	3.4	2.7	1.8	2.2	2.2	2.8	2.6	3.1	3.0
1963	2.8	2.6	3.7	2.7	3.0	1.5	2.4	2.1	2.2	2.8	3.4	2.2
1964	3.3	2.5	4.3	3.3	4.1	2.6	2.7	2.4	2.8	2.9	3.0	2.6
1965	3.9	3.2	3.4	3.2	3.1	2.3	2.2	2.5	2.7	3.0	3.9	2.8
1966	2.7	2.7	3.1	2.7	3.7	2.1	2.3	2.1	2.2	2.7	3.2	3.0
1967	2.8	2.8	2.3	2.8	2.6	2.3	2.2	1.8	2.6	3.1	2.3	2.5
1968	2.7	2.9	2.7	3.4	2.7	2.3	2.1	2.0	2.1	2.5	2.9	3.1
1969	2.8	2.0	3.0	3.1	2.5	2.8	1.9	2.1	2.0	2.4	2.4	2.2
1970	2.6	2.8	3.2	2.9	2.6	2.5	2.7	2.6	2.5	2.4	3.4	3.0
1971	3.5	3.9	3.0	3.0	3.1	1.8	2.3	2.3	1.9	2.5	2.5	3.4
1972	3.8	2.5	3.8	2.7	2.7	2.2	2.0	2.4	2.5	2.7	2.6	2.6
1973	3.0	2.4	2.9	3.0	2.9	2.3	2.5	2.3	2.7	2.4	2.7	3.0
1974	3.6	3.9	3.2	3.4	3.8	2.8	2.3	2.3	2.7	2.8	2.5	2.9
1975	2.5	2.7	3.2	2.7	1.6	2.2	1.8	1.6	2.5	3.0	2.8	3.0
1976	2.4	2.7	2.7	2.7	2.8	2.3	1.8	1.6	2.3	2.5	2.4	2.3
1977	2.7	2.4	2.4	2.5	2.1	1.9	2.5	1.7	2.2	2.6	2.4	3.1
1978	3.3	1.9	2.7	2.2	2.8	1.6	2.0	2.3	2.7	2.5	3.0	2.6
1979	2.3	2.7	2.7	2.4	2.0	2.0	1.5	2.3	1.9	2.6	3.1	2.7
1980	2.8	2.2	2.2	3.0	1.8	1.7	1.4	1.5	1.8	2.1	2.4	2.1
1981	2.8	2.9	3.6	3.4	1.6	2.3	1.8	2.2	2.4	3.1	2.7	2.6
1982	3.5	2.5	2.7	3.6	1.5	2.3	1.7	1.2	1.6	2.5	2.6	3.1
1983	2.1	2.2	2.4	2.8	2.3	1.9	1.6	1.5	2.1	2.5	2.7	2.7
1984	1.8	2.7	3.5	3.5	2.6	2.0	1.4	1.1	2.1	1.8	2.5	2.5
1985	2.5	2.3	2.9	3.1	2.0	2.1	1.9	1.8	2.2	2.8	2.5	3.6
1986	2.5	2.7	2.6	1.8	1.8	1.6	1.4	1.6	2.4	2.1	2.2	2.8
1987	2.2	2.1	2.4	2.8	2.3	2.1	2.0	2.1	1.9	2.9	2.7	3.6

32 YR. STATISTICS FOR WIS STATION E41

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	4.3
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	223.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	743	47	14	.	.	.	.	.	.	804
0.25-0.49	.	1013	85	85	5	.	.	.	.	.	1188
0.50-0.74	.	980	56	159	77	.	.	.	.	.	1272
0.75-0.99	.	300	5	41	95	6	.	.	.	.	447
1.00-1.24	.	19	56	13	91	37	.	.	.	.	216
1.25-1.49	.	.	10	.	27	9	3	.	.	.	49
1.50-1.74	.	.	3	.	4	12	6	.	.	.	25
1.75-1.99	.	.	.	1	.	1	6	1	.	.	9
2.00-2.24	.	.	.	.	.	3	2	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3055	262	313	299	68	17	1	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.5 NO. OF CASES= 3769.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	397	34	11	.	.	.	.	.	.	442
0.25-0.49	.	583	69	44	4	.	.	.	.	.	700
0.50-0.74	.	643	89	134	48	.	.	.	.	.	914
0.75-0.99	.	101	32	81	82	5	.	.	.	.	301
1.00-1.24	.	6	19	71	91	13	.	.	.	.	200
1.25-1.49	.	.	5	3	50	12	1	.	.	.	71
1.50-1.74	.	.	.	3	48	4	1	.	.	.	56
1.75-1.99	.	.	.	.	3	6	.	.	.	.	8
2.00-2.24	.	.	.	.	1	8	1	.	.	.	10
2.25-2.49	.	.	.	.	.	3	.	.	.	.	3
2.50-2.74	.	.	.	.	.	1	1	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1730	248	347	327	52	4	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 2547.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	599	37	14	1	.	.	.	.	.	651
0.25-0.49	.	812	137	60	1	.	.	.	.	.	1010
0.50-0.74	.	946	184	222	53	.	.	.	.	.	1415
0.75-0.99	.	210	195	221	90	4	.	.	.	.	720
1.00-1.24	.	.	81	315	181	20	.	.	.	.	597
1.25-1.49	.	.	10	88	145	16	.	.	.	.	259
1.50-1.74	.	.	1	7	226	5	1	.	.	.	240
1.75-1.99	.	.	.	.	72	12	.	.	.	.	84
2.00-2.24	.	.	.	.	20	37	.	.	.	.	57
2.25-2.49	.	.	.	.	.	18	.	.	.	.	18
2.50-2.74	.	.	.	.	.	2	1	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2567	655	927	789	114	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 4743.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	456	20	7	1	.	.	.	.	.	484
0.25-0.49	.	557	90	47	1	.	.	.	.	.	695
0.50-0.74	.	693	266	198	20	.	.	.	.	.	1177
0.75-0.99	.	104	199	219	64	1	.	.	.	.	587
1.00-1.24	.	.	125	342	161	19	.	.	.	.	647
1.25-1.49	.	.	1	162	105	10	.	.	.	.	278
1.50-1.74	.	.	.	55	185	12	.	.	.	.	252
1.75-1.99	.	.	.	.	85	8	1	.	.	.	94
2.00-2.24	.	.	.	.	70	31	.	.	.	.	101
2.25-2.49	.	.	.	.	5	43	2	1	.	.	51
2.50-2.74	.	.	.	.	.	23	4	.	.	.	27
2.75-2.99	.	.	.	.	.	3	3	.	.	.	6
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1810	701	1030	697	150	11	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.3 NO. OF CASES= 4129.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	522	39	10	.	.	.	.	.	.	571
0.25-0.49	.	537	100	45	1	.	.	.	.	.	683
0.50-0.74	.	412	228	214	29	.	.	.	.	.	883
0.75-0.99	.	48	151	158	50	.	.	.	.	.	407
1.00-1.24	.	.	102	134	64	5	.	.	.	.	305
1.25-1.49	.	.	1	64	41	8	.	.	.	.	114
1.50-1.74	.	.	.	41	78	8	.	.	.	.	127
1.75-1.99	.	.	.	2	32	7	.	.	.	.	41
2.00-2.24	.	.	.	.	20	9	1	.	.	.	30
2.25-2.49	.	.	.	.	5	13	.	.	.	.	18
2.50-2.74	.	.	.	.	.	7	2	.	.	.	9
2.75-2.99	.	.	.	.	.	7	1	.	.	.	8
3.00-3.24	.	.	.	.	.	.	2	.	.	.	2
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1519	621	668	320	64	7	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.0 NO. OF CASES= 3009.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	419	28	8	.	.	.	.	.	.	455
0.25-0.49	.	389	62	34	1	.	.	.	.	.	486
0.50-0.74	.	294	218	133	19	.	.	.	.	.	664
0.75-0.99	.	25	124	128	14	.	.	.	.	.	291
1.00-1.24	.	.	47	125	34	2	.	.	.	.	208
1.25-1.49	.	.	.	59	35	4	.	.	.	.	98
1.50-1.74	.	.	.	32	68	4	.	.	.	.	104
1.75-1.99	.	.	.	2	23	6	.	.	.	.	31
2.00-2.24	.	.	.	.	23	6	1	.	.	.	30
2.25-2.49	.	.	.	.	4	7	1	.	.	.	12
2.50-2.74	.	.	.	.	.	5	.	.	.	.	5
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1127	479	521	221	35	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 2241.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	735	45	18	1	.	.	.	.	.	799
0.25-0.49	.	798	129	28	1	.	.	.	.	.	956
0.50-0.74	.	528	422	148	18	.	.	.	.	.	1116
0.75-0.99	.	23	243	190	20	.	.	.	.	.	476
1.00-1.24	.	.	91	287	31	2	.	.	.	.	411
1.25-1.49	.	.	2	91	42	2	.	.	.	.	137
1.50-1.74	.	.	.	54	114	3	.	.	.	.	171
1.75-1.99	.	.	.	1	39	1	.	.	.	.	41
2.00-2.24	.	.	.	.	49	4	.	.	.	.	53
2.25-2.49	.	.	.	.	6	7	.	.	.	.	13
2.50-2.74	.	.	.	.	1	5	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2084	932	817	322	24	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 3922.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1098	74	10	.	.	.	.	.	.	1182
0.25-0.49	.	1483	111	27	1	.	.	.	.	.	1622
0.50-0.74	.	959	935	140	6	.	.	.	.	.	2040
0.75-0.99	.	55	464	436	8	.	.	.	.	.	963
1.00-1.24	.	.	188	618	39	1	.	.	.	.	846
1.25-1.49	.	.	2	216	95	.	.	.	.	.	313
1.50-1.74	.	.	.	130	296	1	.	.	.	.	427
1.75-1.99	.	.	.	1	121	5	.	.	.	.	127
2.00-2.24	.	.	.	.	131	13	.	.	.	.	144
2.25-2.49	.	.	.	.	22	20	.	.	.	.	42
2.50-2.74	.	.	.	.	3	34	.	.	.	.	37
2.75-2.99	.	.	.	.	.	12	.	.	.	.	12
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3595	1774	1578	722	89	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 7267.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2361	210	37	1	.	.	.	.	.	2609
0.25-0.49	.	2623	614	90	2	.	.	.	.	.	3329
0.50-0.74	.	1098	1771	685	9	.	.	.	.	.	3563
0.75-0.99	.	87	664	1075	21	.	.	.	.	.	1847
1.00-1.24	.	3	325	1361	217	.	.	.	.	.	1906
1.25-1.49	.	.	8	550	256	.	.	.	.	.	814
1.50-1.74	.	.	.	484	756	5	.	.	.	.	1245
1.75-1.99	.	.	.	13	520	9	.	.	.	.	542
2.00-2.24	.	.	.	.	550	25	.	.	.	.	575
2.25-2.49	.	.	.	.	132	56	.	.	.	.	188
2.50-2.74	.	.	.	.	6	114	1	.	.	.	121
2.75-2.99	.	.	.	.	.	31	.	.	.	.	31
3.00-3.24	.	.	.	.	.	16	1	.	.	.	17
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6172	3592	4295	2470	256	3	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.2 NO. OF CASES= 15714.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1593	426	99	3	.	.	.	.	.	2121
0.25-0.49	.	1318	801	344	31	1	.	.	.	.	2495
0.50-0.74	.	1208	917	1238	148	.	.	.	.	.	3511
0.75-0.99	.	104	896	796	237	4	.	.	.	.	2037
1.00-1.24	.	2	1321	1035	595	4	.	.	.	.	2957
1.25-1.49	.	.	244	771	458	12	1	.	.	.	1486
1.50-1.74	.	.	1	647	929	37	.	.	.	.	1614
1.75-1.99	.	.	.	143	472	35	.	.	.	.	650
2.00-2.24	.	.	.	42	440	85	1	.	.	.	568
2.25-2.49	.	.	.	.	101	72	2	.	.	.	175
2.50-2.74	.	.	.	.	16	103	4	.	.	.	123
2.75-2.99	.	.	.	.	2	26	4	.	.	.	32
3.00-3.24	.	.	.	.	3	19	6	.	.	.	28
3.25-3.49	.	.	.	.	.	3	8	.	.	.	11
3.50+	.	.	.	.	.	2	7	.	.	.	9
TOTAL	0	4225	4606	5115	3435	403	33	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.5 NO. OF CASES= 16681.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1020	106	38	4	.	.	.	.	.	1168
0.25-0.49	.	1359	154	77	8	.	.	.	.	.	1598
0.50-0.74	.	2195	524	231	63	1	.	.	.	.	3014
0.75-0.99	.	563	826	236	106	3	.	.	.	.	1734
1.00-1.24	.	183	1228	229	274	52	2	.	.	.	1968
1.25-1.49	.	.	197	647	172	47	4	.	.	.	1067
1.50-1.74	.	.	8	903	152	65	11	.	.	.	1139
1.75-1.99	.	.	.	291	35	37	13	.	.	.	376
2.00-2.24	.	.	.	85	170	27	5	.	.	.	287
2.25-2.49	.	.	.	.	70	5	6	.	.	.	81
2.50-2.74	.	.	.	.	52	7	.	.	.	.	59
2.75-2.99	.	.	.	.	17	2	.	.	.	.	19
3.00-3.24	.	.	.	.	7	3	.	.	.	.	10
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	5320	3043	2737	1130	250	41	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.0 NO. OF CASES= 11729.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	612	34	17	.	.	.	.	.	.	663
0.25-0.49	.	882	24	26	2	.	.	.	.	.	934
0.50-0.74	.	1240	14	23	8	1	.	.	.	.	1286
0.75-0.99	.	603	13	4	2	.	.	.	.	.	622
1.00-1.24	.	178	206	1	5	2	.	.	.	.	392
1.25-1.49	.	.	58	.	.	.	1	.	.	.	59
1.50-1.74	.	.	16	6	.	.	1	.	.	.	23
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	3	1	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3515	365	85	18	3	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.2 NO. OF CASES= 3739.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	520	38	13	1	.	.	.	.	.	572
0.25-0.49	.	698	37	21	3	.	.	.	.	.	759
0.50-0.74	.	1075	11	26	9	1	.	.	.	.	1122
0.75-0.99	.	556	23	2	6	.	.	.	.	.	587
1.00-1.24	.	19	164	1	4	1	.	.	.	.	189
1.25-1.49	.	.	29	.	.	.	.	.	.	.	29
1.50-1.74	.	.	16	8	1	.	.	.	.	.	25
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2868	318	74	24	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 3083.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	382	22	14	1	.	.	.	.	.	419
0.25-0.49	.	562	18	26	1	.	.	.	.	.	607
0.50-0.74	.	1067	2	23	13	1	.	.	.	.	1106
0.75-0.99	.	389	194	6	4	.	.	.	.	.	593
1.00-1.24	.	8	312	.	7	1	.	.	.	.	328
1.25-1.49	.	.	45	11	.	.	1	.	.	.	57
1.50-1.74	.	.	3	18	.	.	.	.	.	.	21
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2408	596	100	26	2	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 2940.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	518	34	18	.	.	.	.	.	.	570
0.25-0.49	.	609	33	28	3	.	.	.	.	.	673
0.50-0.74	.	1935	9	24	13	.	.	.	.	.	1981
0.75-0.99	.	514	452	3	12	2	.	.	.	.	983
1.00-1.24	.	.	519	.	8	4	.	.	.	.	531
1.25-1.49	.	.	56	7	.	.	.	.	.	.	63
1.50-1.74	.	.	1	24	.	1	1	.	.	.	27
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	1	.	.	.	1	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3576	1104	108	36	7	1	1	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 4530.

STATION E42 42.15N 82.10W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

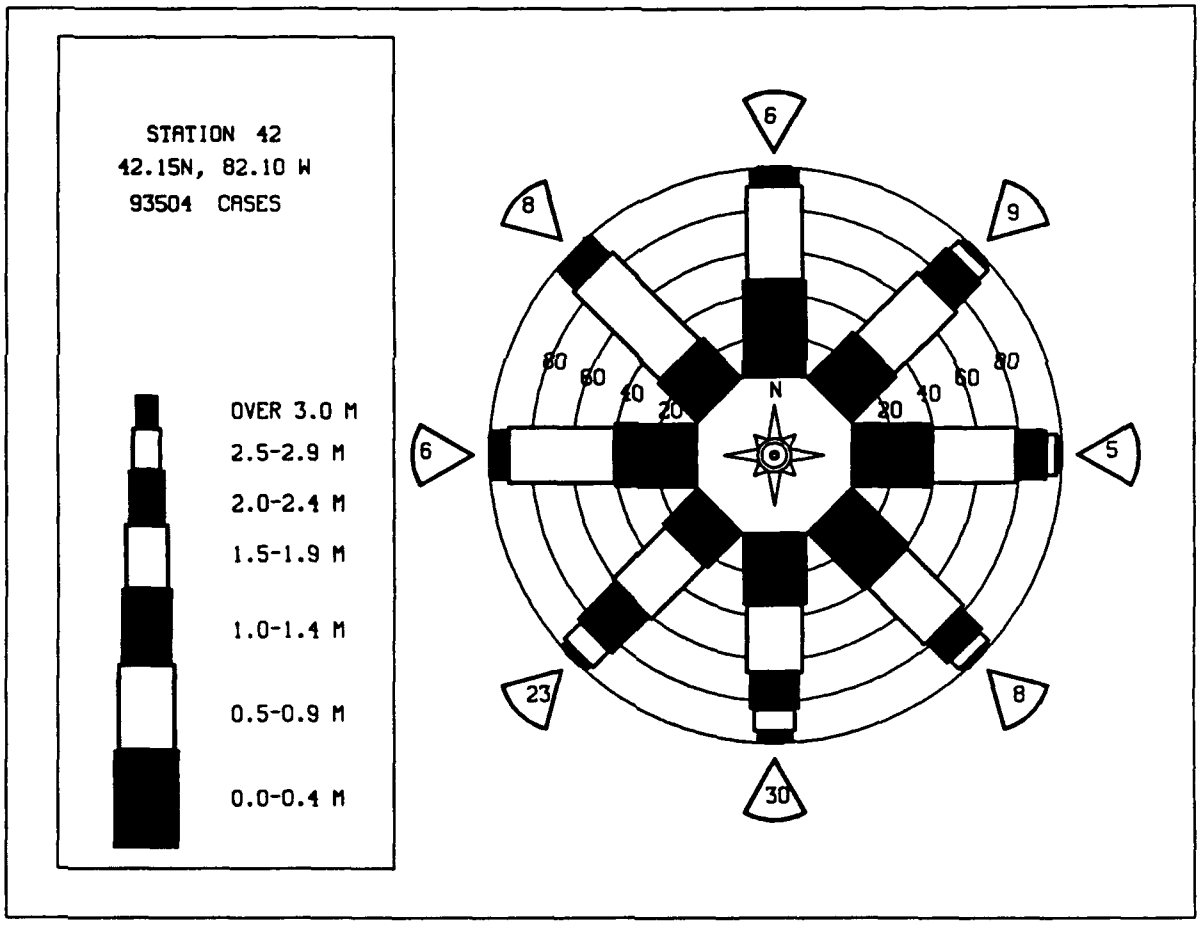
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	406	31	10	.	.	.	.	.	.	447
0.25-0.49	.	634	56	54	6	.	.	.	.	.	750
0.50-0.74	.	1292	17	108	53	2	.	.	.	.	1472
0.75-0.99	.	433	133	7	42	6	.	.	.	.	621
1.00-1.24	.	7	237	1	43	26	1	.	.	.	315
1.25-1.49	.	.	16	6	4	12	2	.	.	.	40
1.50-1.74	.	.	.	29	2	4	5	.	.	.	40
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2772	490	218	150	50	8	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 3461.

STATION E42 42.15N 82.10W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1239	123	34	1	.	.	.	.	.	1397
0.25-0.49	.	1486	252	104	7	.	.	.	.	.	1849
0.50-0.74	.	1657	568	371	59	.	.	.	.	.	2655
0.75-0.99	.	412	462	360	86	3	.	.	.	.	1323
1.00-1.24	.	42	502	453	185	19	.	.	.	.	1201
1.25-1.49	.	.	69	268	143	13	1	.	.	.	494
1.50-1.74	.	.	5	244	286	16	2	.	.	.	553
1.75-1.99	.	.	.	47	140	13	2	.	.	.	202
2.00-2.24	.	.	.	13	147	25	1	.	.	.	186
2.25-2.49	.	.	.	.	34	24	1	.	.	.	59
2.50-2.74	.	.	.	.	7	30	1	.	.	.	38
2.75-2.99	.	.	.	.	1	8	.	.	.	.	9
3.00-3.24	.	.	.	.	1	4	1	.	.	.	6
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4836	1981	1894	1097	155	10	0	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E42 (42.15N 82.10W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.8	0.8	0.9	0.9	0.5	0.7	0.7	0.7	0.8	1.0	0.9	0.8
1957	0.9	0.8	0.9	1.0	0.9	0.8	0.7	0.5	0.8	0.8	1.2	1.2	0.9
1958	0.9	1.0	0.7	0.9	0.9	0.7	0.7	0.7	0.8	0.9	1.1	0.9	0.8
1959	0.8	0.9	1.0	0.9	0.6	0.5	0.5	0.5	0.7	0.7	0.9	0.7	0.7
1960	0.7	0.9	0.8	1.1	0.9	0.7	0.5	0.6	0.6	0.7	1.2	1.2	0.8
1961	0.9	0.7	1.0	0.9	0.8	0.7	0.6	0.6	0.7	0.9	0.9	1.1	0.8
1962	1.1	0.9	0.9	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8
1963	0.9	0.9	1.0	0.8	0.7	0.4	0.6	0.6	0.6	0.6	1.0	0.8	0.7
1964	1.1	0.7	1.0	1.1	0.8	0.6	0.5	0.7	0.7	0.7	0.8	0.9	0.8
1965	1.0	1.0	0.7	0.8	0.6	0.7	0.5	0.6	0.8	0.9	0.9	1.0	0.8
1966	0.8	0.6	0.9	0.8	0.6	0.4	0.6	0.5	0.6	0.9	0.9	0.8	0.7
1967	1.0	1.0	0.7	0.8	0.8	0.6	0.5	0.5	0.6	0.9	1.0	0.9	0.8
1968	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.5	0.6	0.8	0.8	1.0	0.8
1969	1.0	0.6	0.8	0.8	0.5	0.7	0.5	0.5	0.6	0.8	0.8	0.8	0.7
1970	0.8	0.9	0.7	0.9	0.8	0.7	0.6	0.5	0.8	0.8	1.1	1.0	0.8
1971	1.1	1.3	0.8	0.8	0.7	0.5	0.6	0.6	0.6	0.7	0.9	0.9	0.8
1972	1.2	0.9	0.9	0.8	0.8	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8
1973	1.1	0.9	0.9	1.0	0.8	0.7	0.6	0.6	0.6	0.7	1.0	1.0	0.8
1974	0.9	1.0	0.9	1.1	0.8	0.9	0.6	0.6	0.8	0.8	0.9	0.9	0.9
1975	0.8	0.8	0.8	0.8	0.5	0.7	0.5	0.6	0.7	0.8	0.9	0.9	0.7
1976	0.9	0.9	1.0	0.8	0.7	0.6	0.5	0.5	0.7	0.8	0.8	0.8	0.7
1977	0.9	0.8	0.8	0.7	0.6	0.5	0.6	0.7	0.6	0.8	1.0	1.1	0.8
1978	0.8	0.4	0.7	0.8	0.6	0.5	0.6	0.5	0.7	0.8	0.9	1.0	0.7
1979	0.7	0.8	0.8	0.7	0.6	0.6	0.5	0.7	0.6	0.8	0.9	0.9	0.7
1980	0.6	0.6	0.8	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.8	0.7	0.6
1981	0.7	1.1	0.8	1.1	0.6	0.7	0.5	0.6	0.6	0.7	0.6	0.7	0.7
1982	1.0	0.7	0.8	0.9	0.4	0.5	0.4	0.4	0.4	0.5	0.9	0.9	0.6
1983	0.7	0.5	0.7	0.8	0.8	0.4	0.5	0.4	0.6	0.9	0.8	1.0	0.7
1984	0.6	0.8	0.9	0.7	0.7	0.6	0.5	0.4	0.6	0.5	0.9	0.8	0.7
1985	0.8	0.8	0.9	0.7	0.7	0.6	0.5	0.6	0.6	0.8	1.0	1.0	0.7
1986	0.7	0.7	0.8	0.6	0.6	0.5	0.4	0.5	0.6	0.7	0.7	0.8	0.6
1987	0.7	0.7	0.8	0.8	0.6	0.6	0.5	0.7	0.5	0.6	0.9	0.9	0.7
MEAN	0.9	0.8	0.8	0.8	0.7	0.6	0.5	0.6	0.6	0.8	0.9	0.9	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E42 (42.15N 82.10W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.7	2.2	3.3	3.0	2.3	1.5	2.3	2.3	2.0	2.2	2.7	2.5
1957	2.3	1.9	2.9	3.3	2.6	2.0	2.0	1.5	2.6	2.3	3.4	2.9
1958	2.6	2.9	1.9	2.7	2.2	2.1	2.0	2.1	2.3	2.4	3.0	2.8
1959	2.5	2.4	3.8	3.0	2.6	1.8	2.0	2.1	2.5	2.2	2.5	2.3
1960	2.1	2.6	2.6	3.4	2.9	2.8	2.2	1.8	2.2	2.5	2.8	2.5
1961	2.5	2.4	2.8	3.8	2.4	2.0	1.7	1.8	2.8	2.7	2.7	2.7
1962	3.1	2.5	2.7	2.8	2.2	1.7	2.3	2.2	2.8	2.6	2.6	1.9
1963	2.6	2.7	3.0	2.7	2.4	1.5	2.3	1.9	2.2	2.4	3.5	2.0
1964	2.7	2.3	3.8	3.0	3.2	2.3	2.5	2.2	2.8	2.8	2.8	2.4
1965	2.7	3.2	2.7	2.1	2.2	1.9	2.0	2.3	2.6	2.8	3.2	2.5
1966	2.8	2.7	3.0	2.7	3.1	2.1	1.6	1.6	2.1	2.7	2.5	2.4
1967	2.7	2.5	2.1	2.5	2.2	2.0	1.9	1.7	2.2	2.7	2.2	2.4
1968	2.2	2.8	2.3	3.1	2.5	1.9	2.0	1.6	2.1	2.5	2.7	2.9
1969	2.4	1.7	2.8	2.6	2.3	2.8	1.6	1.9	1.6	2.4	2.3	2.0
1970	2.6	2.8	3.0	2.9	2.6	2.5	2.1	2.1	2.5	2.5	3.5	3.0
1971	2.9	3.8	2.4	2.5	2.7	1.7	2.2	2.1	1.9	2.6	2.5	3.4
1972	3.0	2.6	3.3	2.7	2.7	2.2	1.8	2.1	2.3	2.4	2.3	2.5
1973	2.8	2.2	2.9	3.1	2.7	2.2	1.9	2.0	2.6	2.3	2.7	2.7
1974	3.6	3.5	3.2	3.1	3.3	2.7	2.1	2.3	2.3	2.8	2.6	2.9
1975	2.5	2.2	2.8	2.6	1.5	2.2	1.5	1.8	2.3	2.7	2.7	2.5
1976	2.1	2.2	2.4	2.8	2.1	2.4	1.4	1.6	2.0	1.9	2.0	2.0
1977	2.2	1.8	2.1	2.4	1.9	1.5	2.2	1.4	1.8	2.8	2.3	2.7
1978	2.7	1.6	2.5	2.2	3.1	2.2	2.2	1.8	2.9	2.1	3.0	2.2
1979	1.8	2.4	2.8	2.5	1.7	1.6	1.5	1.9	1.6	2.3	2.5	2.2
1980	2.6	1.9	2.0	2.8	1.5	1.5	1.2	1.8	1.6	2.2	2.6	2.0
1981	2.6	2.9	3.0	3.2	1.5	2.1	1.9	2.0	2.4	2.9	2.7	2.4
1982	2.9	2.3	2.3	3.0	1.6	1.9	1.4	1.2	1.5	2.6	2.1	2.4
1983	2.1	2.0	2.1	3.1	2.2	1.6	1.4	1.6	1.9	2.5	2.2	2.8
1984	1.9	2.5	3.1	3.4	2.3	1.6	1.3	1.0	2.1	1.6	2.1	2.6
1985	1.9	2.3	2.5	2.7	1.6	1.7	2.0	1.8	2.0	2.4	2.3	3.0
1986	2.4	2.5	2.1	1.8	1.6	1.5	1.4	1.4	2.3	1.8	2.0	2.5
1987	2.2	1.9	2.1	2.4	1.9	1.6	1.6	1.7	1.7	2.8	2.6	3.1

32 YR. STATISTICS FOR WIS STATION E42

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	3.8
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	197.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		59031518

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	822	49	18	.	.	.	.	.	.	889
0.25-0.49	.	1088	91	87	5	.	.	.	.	.	1271
0.50-0.74	.	1138	57	167	84	.	.	.	.	.	1446
0.75-0.99	.	358	16	31	90	6	.	.	.	.	501
1.00-1.24	.	35	66	19	94	47	2	.	.	.	263
1.25-1.49	.	.	16	2	19	18	2	.	.	.	57
1.50-1.74	.	.	4	2	13	24	3	.	.	.	46
1.75-1.99	.	.	.	.	.	4	7	.	.	.	11
2.00-2.24	.	.	.	1	.	6	3	.	.	.	10
2.25-2.49	.	.	.	.	.	.	2	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3441	299	327	305	105	19	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.5 NO. OF CASES= 4217.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	356	19	16	.	.	.	.	.	.	391
0.25-0.49	.	556	60	33	1	.	.	.	.	.	650
0.50-0.74	.	624	98	122	42	1	.	.	.	.	887
0.75-0.99	.	97	103	38	85	1	.	.	.	.	324
1.00-1.24	.	9	95	25	74	17	.	.	.	.	220
1.25-1.49	.	.	17	17	38	11	.	.	.	.	83
1.50-1.74	.	.	.	6	36	9	3	.	.	.	54
1.75-1.99	.	.	.	2	8	18	.	.	.	.	28
2.00-2.24	.	.	.	.	3	10	1	.	.	.	14
2.25-2.49	.	.	.	.	1	4	.	.	.	.	5
2.50-2.74	.	.	.	.	.	4	1	.	.	.	5
2.75-2.99	.	.	.	.	.	.	2	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1642	392	259	288	75	8	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.8 NO. OF CASES= 2505.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	568	19	8	.	.	.	.	.	.	595
0.25-0.49	.	841	102	64	2	.	.	.	.	.	1009
0.50-0.74	.	838	228	221	55	.	.	.	.	.	1342
0.75-0.99	.	136	345	93	85	2	.	.	.	.	661
1.00-1.24	.	1	381	105	145	16	.	.	.	.	648
1.25-1.49	.	.	37	110	122	9	.	.	.	.	278
1.50-1.74	.	.	.	58	178	23	.	.	.	.	259
1.75-1.99	.	.	.	5	101	19	.	.	.	.	125
2.00-2.24	.	.	.	.	23	82	1	.	.	.	106
2.25-2.49	.	.	.	.	1	36	1	1	.	.	39
2.50-2.74	.	.	.	.	.	27	6	.	.	.	33
2.75-2.99	.	.	.	.	.	.	5	.	.	.	5
3.00-3.24	.	.	.	.	.	.	3	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2384	1112	664	712	214	16	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.1 NO. OF CASES= 4789.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	319	17	6	.	.	.	.	.	.	342
0.25-0.49	.	534	48	36	2	.	.	.	.	.	620
0.50-0.74	.	576	290	161	13	.	.	.	.	.	1040
0.75-0.99	.	58	351	170	78	1	.	.	.	.	658
1.00-1.24	.	.	399	171	163	18	.	.	.	.	751
1.25-1.49	.	.	39	186	121	16	.	.	.	.	362
1.50-1.74	.	.	1	127	213	29	.	.	.	.	370
1.75-1.99	.	.	.	8	103	16	2	.	.	.	129
2.00-2.24	.	.	.	.	81	51	.	.	.	.	132
2.25-2.49	.	.	.	.	9	53	1	.	.	.	63
2.50-2.74	.	.	.	.	4	65	5	.	.	.	74
2.75-2.99	.	.	.	.	.	22	8	.	.	.	30
3.00-3.24	.	.	.	.	.	3	14	.	.	.	17
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1487	1145	865	787	274	30	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.4 NO. OF CASES= 4308.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	534	31	12	.	.	.	.	.	.	577
0.25-0.49	.	534	80	36	1	.	.	.	.	.	651
0.50-0.74	.	406	309	202	26	.	.	.	.	.	943
0.75-0.99	.	27	19	150	52	.	.	.	.	.	420
1.00-1.24	.	.	111	143	77	6	.	.	.	.	337
1.25-1.49	.	.	3	74	32	6	.	.	.	.	115
1.50-1.74	.	.	.	41	71	9	1	.	.	.	122
1.75-1.99	.	.	.	3	35	12	.	.	.	.	50
2.00-2.24	.	.	.	.	27	9	2	.	.	.	38
2.25-2.49	.	.	.	.	4	14	.	.	.	.	18
2.50-2.74	.	.	.	.	.	18	3	.	.	.	21
2.75-2.99	.	.	.	.	.	5	.	.	.	.	5
3.00-3.24	.	.	.	.	.	1	5	.	.	.	6
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1501	725	661	325	80	11	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.0 NO. OF CASES= 3104.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	322	23	2	1	.	.	.	.	.	348
0.25-0.49	.	349	40	22	.	.	.	.	.	.	411
0.50-0.74	.	357	249	88	14	.	.	.	.	.	708
0.75-0.99	.	18	151	130	20	1	.	.	.	.	320
1.00-1.24	.	.	60	122	31	2	.	.	.	.	215
1.25-1.49	.	.	.	51	37	3	.	.	.	.	91
1.50-1.74	.	.	.	34	67	6	.	.	.	.	107
1.75-1.99	.	.	.	3	32	5	.	.	.	.	40
2.00-2.24	.	.	.	.	20	9	1	.	.	.	30
2.25-2.49	.	.	.	.	2	7	2	.	.	.	11
2.50-2.74	.	.	.	.	.	6	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	1	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1046	523	452	224	39	4	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.0 NO. OF CASES= 2153.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	720	43	19	.	.	.	.	.	.	782
0.25-0.49	.	961	84	31	2	.	.	.	.	.	1078
0.50-0.74	.	710	514	122	19	.	.	.	.	.	1365
0.75-0.99	.	36	306	206	21	.	.	.	.	.	569
1.00-1.24	.	.	117	327	31	2	.	.	.	.	477
1.25-1.49	.	.	1	114	49	3	.	.	.	.	167
1.50-1.74	.	.	.	67	137	1	.	.	.	.	205
1.75-1.99	.	.	.	1	59	2	.	.	.	.	62
2.00-2.24	.	.	.	.	65	3	.	.	.	.	68
2.25-2.49	.	.	.	.	5	16	.	.	.	.	21
2.50-2.74	.	.	.	.	1	9	.	.	.	.	10
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2427	1065	887	389	36	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 4504.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1058	35	10	.	.	.	.	.	.	1103
0.25-0.49	.	1655	93	23	3	.	.	.	.	.	1774
0.50-0.74	.	1132	940	96	3	.	.	.	.	.	2171
0.75-0.99	.	63	551	382	8	.	.	.	.	.	1004
1.00-1.24	.	.	229	627	26	.	.	.	.	.	882
1.25-1.49	.	.	1	248	78	.	.	.	.	.	327
1.50-1.74	.	.	.	185	226	1	.	.	.	.	412
1.75-1.99	.	.	.	2	145	3	.	.	.	.	150
2.00-2.24	.	.	.	.	120	7	.	.	.	.	127
2.25-2.49	.	.	.	.	22	18	.	.	.	.	40
2.50-2.74	.	.	.	.	1	27	.	.	.	.	28
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	1	1	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3908	1849	1573	632	61	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.9 NO. OF CASES= 7516.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2251	270	45	1	.	.	.	.	.	2567
0.25-0.49	.	2559	714	122	1	.	.	.	.	.	3396
0.50-0.74	.	1352	2257	575	8	.	.	.	.	.	4192
0.75-0.99	.	133	1032	1225	5	.	.	.	.	.	2395
1.00-1.24	.	2	438	2018	157	.	.	.	.	.	2615
1.25-1.49	.	.	9	828	289	.	.	.	.	.	1126
1.50-1.74	.	.	1	576	996	3	.	.	.	.	1576
1.75-1.99	.	.	.	25	665	9	.	.	.	.	699
2.00-2.24	.	.	.	.	611	20	.	.	.	.	631
2.25-2.49	.	.	.	.	119	75	.	.	.	.	194
2.50-2.74	.	.	.	.	4	118	.	.	.	.	122
2.75-2.99	.	.	.	.	.	22	.	.	.	.	22
3.00-3.24	.	.	.	.	.	13	2	.	.	.	15
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	6297	4721	5414	2856	260	4	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.3 NO. OF CASES= 18300.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1180	208	54	.	.	.	.	.	.	1442
0.25-0.49	.	1237	539	122	3	.	.	.	.	.	1901
0.50-0.74	.	1557	1615	533	14	1	.	.	.	.	3720
0.75-0.99	.	423	1356	968	29	.	.	.	.	.	2776
1.00-1.24	.	11	399	2307	135	.	.	.	.	.	2852
1.25-1.49	.	.	56	702	198	.	.	.	.	.	956
1.50-1.74	.	.	24	248	470	6	.	.	.	.	748
1.75-1.99	.	.	.	20	255	16	.	.	.	.	291
2.00-2.24	.	.	.	8	213	31	.	.	.	.	252
2.25-2.49	.	.	.	.	39	37	.	.	.	.	76
2.50-2.74	.	.	.	1	4	47	.	.	.	.	52
2.75-2.99	.	.	.	.	.	9	2	.	.	.	11
3.00-3.24	.	.	.	.	.	6	4	.	.	.	10
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	4	.	.	.	4
TOTAL	0	4408	4197	4963	1360	153	13	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 14134.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	986	73	16	3	.	.	.	.	.	1078
0.25-0.49	.	1387	97	52	4	.	.	.	.	.	1540
0.50-0.74	.	2643	281	141	34	.	.	.	.	.	3099
0.75-0.99	.	1036	234	254	49	.	.	.	.	.	1573
1.00-1.24	.	131	644	550	201	17	.	.	.	.	1543
1.25-1.49	.	.	299	80	75	23	.	.	.	.	477
1.50-1.74	.	.	102	134	80	22	6	.	.	.	344
1.75-1.99	.	.	2	44	23	2	1	.	.	.	72
2.00-2.24	.	.	.	43	7	2	.	.	.	.	52
2.25-2.49	.	.	.	11	.	.	.	.	.	.	11
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6183	1732	1325	477	66	7	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.6 NO. OF CASES= 9169.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	527	40	18	1	.	.	.	.	.	586
0.25-0.49	.	894	25	20	5	.	.	.	.	.	944
0.50-0.74	.	1158	7	17	14	1	.	.	.	.	1197
0.75-0.99	.	686	1	1	7	.	.	.	.	.	695
1.00-1.24	.	152	249	1	5	2	.	.	.	.	409
1.25-1.49	.	.	63	.	.	.	.	.	.	.	63
1.50-1.74	.	.	17	7	.	.	.	.	.	.	24
1.75-1.99	.	.	.	2	1	.	.	.	.	.	3
2.00-2.24	.	.	.	4	.	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3417	402	70	33	3	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.2 NO. OF CASES= 3678.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	591	37	21	.	.	.	.	.	.	649
0.25-0.49	.	805	37	35	3	.	.	.	.	.	880
0.50-0.74	.	1106	6	23	13	1	.	.	.	.	1149
0.75-0.99	.	632	11	1	8	.	.	.	.	.	652
1.00-1.24	.	10	204	1	2	.	.	.	.	.	217
1.25-1.49	.	.	37	.	1	.	.	.	.	.	38
1.50-1.74	.	.	18	9	.	.	.	.	.	.	27
1.75-1.99	.	.	.	5	.	.	.	.	.	.	5
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3144	350	96	27	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 3392.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	358	20	12	2	.	.	.	.	.	392
0.25-0.49	.	605	14	21	2	.	.	.	.	.	642
0.50-0.74	.	1166	7	11	14	.	.	.	.	.	1198
0.75-0.99	.	499	173	2	4	1	.	.	.	.	679
1.00-1.24	.	7	347	.	3	3	.	.	.	.	360
1.25-1.49	.	.	55	10	.	.	1	.	.	.	66
1.50-1.74	.	.	3	21	.	.	.	.	.	.	24
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2635	619	79	25	4	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 3155.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	613	44	22	2	.	.	.	.	.	681
0.25-0.49	.	812	40	42	8	.	.	.	.	.	902
0.50-0.74	.	2387	8	50	26	.	.	.	.	.	2471
0.75-0.99	.	574	531	5	20	4	.	.	.	.	1134
1.00-1.24	.	2	647	.	8	9	.	.	.	.	666
1.25-1.49	.	.	69	6	3	2	1	.	.	.	81
1.50-1.74	.	.	.	20	.	2	1	.	.	.	23
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4388	1339	146	67	17	2	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 5583.

STATION E43 42.02N 82.30W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

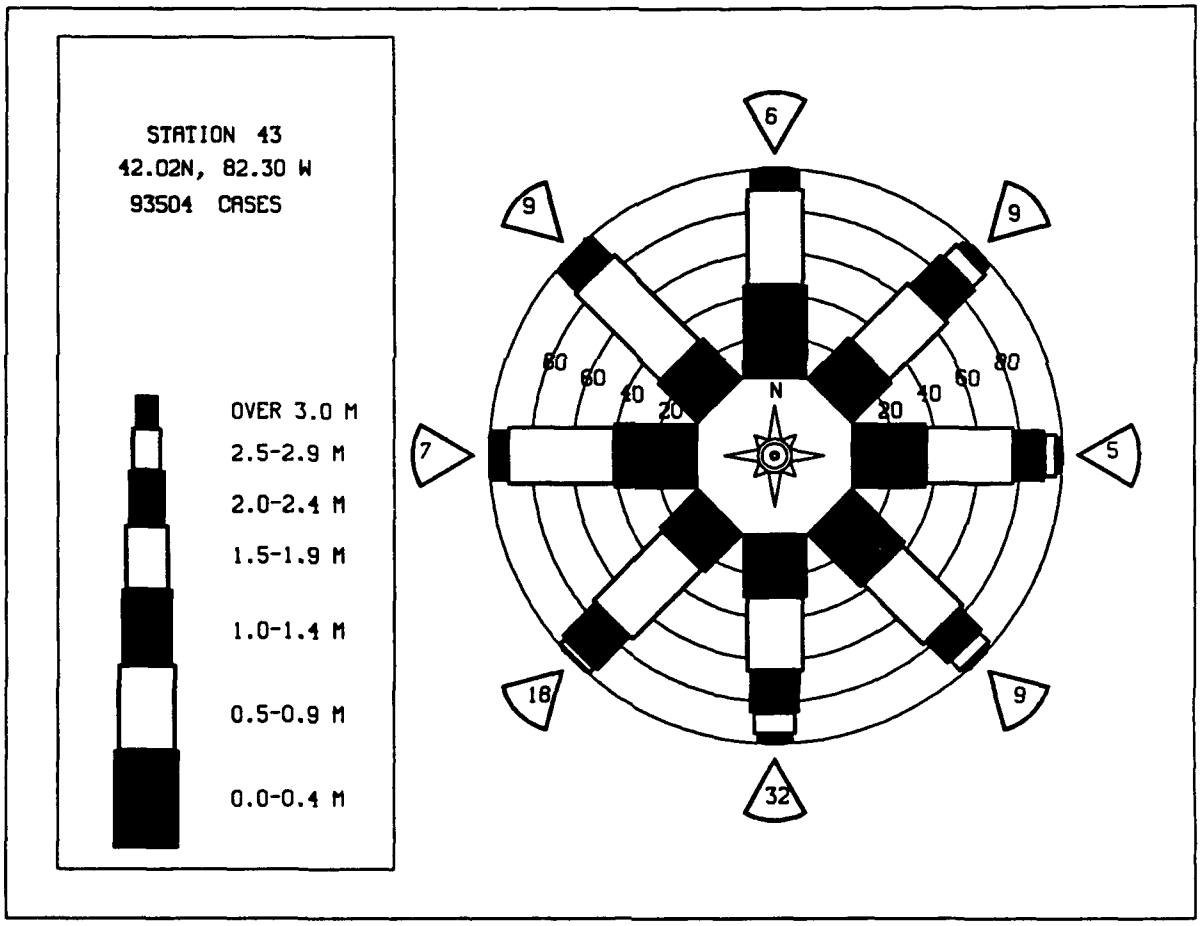
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	334	20	8	.	.	.	.	.	.	362
0.25-0.49	.	555	41	37	7	.	.	.	.	.	640
0.50-0.74	.	982	16	99	51	2	.	.	.	.	1150
0.75-0.99	.	420	120	7	39	6	.	.	.	.	592
1.00-1.24	.	19	238	2	31	27	1	.	.	.	318
1.25-1.49	.	.	40	5	.	14	5	.	.	.	64
1.50-1.74	.	.	1	40	.	7	6	1	.	.	55
1.75-1.99	.	.	.	7	.	1	.	.	.	.	8
2.00-2.24	.	.	.	2	.	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2310	476	207	128	57	12	1	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.5 NO. OF CASES= 2997.

STATION E43 42.02N 82.30W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1154	95	29	1	.	.	.	.	.	1279
0.25-0.49	.	1537	211	79	5	.	.	.	.	.	1832
0.50-0.74	.	1814	688	263	44	.	.	.	.	.	2809
0.75-0.99	.	520	547	366	60	2	.	.	.	.	1495
1.00-1.24	.	38	463	642	118	16	.	.	.	.	1277
1.25-1.49	.	.	74	243	106	10	.	.	.	.	433
1.50-1.74	.	.	17	158	249	14	2	.	.	.	440
1.75-1.99	.	.	.	13	143	11	1	.	.	.	168
2.00-2.24	.	.	.	6	117	23	.	.	.	.	146
2.25-2.49	.	.	.	1	20	26	.	.	.	.	47
2.50-2.74	.	.	.	.	1	32	1	.	.	.	34
2.75-2.99	.	.	.	.	.	6	1	.	.	.	7
3.00-3.24	.	.	.	.	.	2	3	.	.	.	5
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5063	2095	1800	864	142	8	0	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 3.9 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E43 (42.02N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.8	0.9	0.9	0.9	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.8
1957	0.9	0.8	0.9	0.9	0.9	0.8	0.7	0.5	0.8	0.8	1.1	1.1	0.8
1958	0.9	1.0	0.8	0.9	0.9	0.7	0.6	0.7	0.8	0.9	1.0	0.8	0.8
1959	0.8	0.9	1.0	0.9	0.6	0.5	0.5	0.5	0.7	0.7	0.8	0.7	0.7
1960	0.7	0.8	0.8	1.1	0.9	0.7	0.5	0.6	0.6	0.7	1.1	1.1	0.8
1961	0.9	0.7	1.0	0.9	0.8	0.7	0.6	0.6	0.7	0.9	0.9	1.0	0.8
1962	1.0	1.0	1.0	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8
1963	0.8	0.9	0.9	0.8	0.7	0.4	0.6	0.6	0.6	0.6	0.9	0.7	0.7
1964	1.0	0.7	0.9	1.0	0.8	0.6	0.5	0.7	0.7	0.6	0.8	0.9	0.8
1965	0.9	0.9	0.7	0.8	0.6	0.7	0.5	0.6	0.8	0.8	0.9	1.0	0.8
1966	0.8	0.6	0.8	0.8	0.6	0.4	0.6	0.5	0.6	0.9	0.9	0.8	0.7
1967	1.0	1.0	0.8	0.8	0.8	0.6	0.5	0.5	0.6	0.9	0.9	0.9	0.8
1968	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.5	0.6	0.7	0.8	1.0	0.7
1969	0.9	0.7	0.8	0.8	0.6	0.7	0.5	0.5	0.6	0.8	0.8	0.8	0.7
1970	0.8	0.9	0.7	0.9	0.8	0.7	0.6	0.5	0.7	0.8	1.1	1.0	0.8
1971	1.0	1.1	0.8	0.8	0.7	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.8
1972	1.1	0.8	0.9	0.8	0.8	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8
1973	1.0	0.9	1.0	1.0	0.8	0.7	0.6	0.5	0.6	0.7	0.9	1.0	0.8
1974	0.9	1.1	0.9	1.0	0.8	0.8	0.6	0.6	0.8	0.8	0.8	0.9	0.8
1975	0.7	0.7	0.8	0.8	0.5	0.6	0.5	0.6	0.7	0.8	0.9	0.9	0.7
1976	0.8	0.8	0.9	0.8	0.7	0.6	0.5	0.5	0.6	0.7	0.8	0.7	0.7
1977	0.7	0.7	0.8	0.7	0.6	0.5	0.6	0.6	0.6	0.8	1.0	1.0	0.7
1978	0.8	0.4	0.6	0.8	0.7	0.5	0.6	0.5	0.7	0.7	0.9	0.9	0.7
1979	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.7	0.7	0.8	0.8	0.8	0.7
1980	0.6	0.6	0.8	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.7	0.7	0.6
1981	0.7	1.1	0.8	1.0	0.6	0.7	0.5	0.6	0.6	0.7	0.6	0.7	0.7
1982	0.9	0.7	0.7	0.9	0.5	0.5	0.4	0.4	0.4	0.6	0.8	0.8	0.6
1983	0.6	0.6	0.7	0.9	0.8	0.5	0.5	0.4	0.6	0.9	0.8	1.0	0.7
1984	0.5	0.8	1.0	0.8	0.7	0.6	0.5	0.4	0.6	0.6	0.8	0.8	0.7
1985	0.7	0.7	0.9	0.7	0.7	0.6	0.5	0.6	0.6	0.8	1.0	0.8	0.7
1986	0.6	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.6	0.6	0.7	0.7	0.6
1987	0.6	0.7	0.8	0.8	0.6	0.6	0.5	0.7	0.5	0.6	0.9	0.8	0.7
MEAN	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.6	0.6	0.7	0.9	0.9	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E43 (42.02N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.8	2.1	3.1	2.7	2.3	1.5	2.0	2.2	2.0	2.3	2.4	2.5
1957	2.3	2.0	2.3	3.2	2.4	2.0	2.2	1.3	2.6	2.2	3.1	2.8
1958	2.5	2.7	2.2	2.7	2.3	2.0	2.0	2.0	2.2	2.2	2.9	2.6
1959	2.4	2.1	3.6	2.5	2.5	1.5	2.0	2.1	2.5	2.2	2.5	2.1
1960	2.1	2.4	2.6	3.3	2.7	2.7	2.2	1.8	2.2	2.4	2.5	2.4
1961	2.2	2.7	2.8	3.5	2.3	1.9	1.7	1.8	2.6	2.7	2.6	2.6
1962	2.5	2.7	2.9	2.4	2.3	1.7	2.5	2.1	2.6	2.5	3.1	1.8
1963	2.5	2.6	2.5	2.7	1.9	1.5	2.3	1.7	2.1	2.4	3.4	2.0
1964	2.5	2.0	3.1	2.9	2.7	2.3	2.3	2.2	2.7	2.8	2.8	2.4
1965	2.4	3.1	2.4	2.1	2.0	1.8	1.8	2.3	2.6	2.7	2.7	2.1
1966	2.6	2.7	3.0	2.6	2.4	2.0	2.1	1.6	2.1	2.7	2.4	2.2
1967	2.7	2.3	2.1	2.2	2.4	2.3	1.7	1.8	2.1	2.5	2.2	2.3
1968	2.2	2.8	2.6	3.0	2.5	1.9	2.0	1.3	2.1	2.4	2.3	2.8
1969	2.4	1.9	2.7	3.0	2.0	2.6	1.7	1.8	1.5	2.4	2.3	2.2
1970	2.5	2.7	2.5	2.8	2.4	2.3	1.7	1.9	2.4	2.4	3.3	3.0
1971	2.8	3.6	2.3	2.5	2.6	1.5	2.1	1.9	1.9	2.5	2.4	3.5
1972	2.8	2.4	2.9	2.8	2.7	2.1	1.8	2.3	2.3	2.2	2.5	2.6
1973	2.7	2.2	2.8	3.0	2.6	1.9	1.8	1.7	2.6	2.3	2.5	2.6
1974	3.5	3.1	3.1	3.0	3.1	2.6	2.2	2.2	2.2	2.7	2.5	3.0
1975	2.4	1.8	3.2	2.9	1.4	2.1	1.3	2.0	2.7	3.2	2.6	2.2
1976	2.0	2.1	2.5	2.9	2.0	2.1	1.5	1.8	1.8	1.9	2.0	2.0
1977	2.6	1.8	2.4	2.3	2.2	1.7	2.0	1.4	1.6	2.7	2.3	3.1
1978	2.8	1.8	2.8	2.2	3.2	1.5	2.2	1.3	3.0	1.8	2.8	1.9
1979	1.6	2.8	2.5	2.8	2.1	1.6	1.3	1.7	1.8	2.3	2.3	1.7
1980	2.7	2.0	2.4	3.2	1.7	1.5	1.3	1.8	1.4	2.5	2.6	1.7
1981	2.5	2.8	2.4	3.2	1.5	2.0	1.9	1.7	2.4	2.8	2.5	2.2
1982	3.0	2.8	2.4	3.3	1.6	1.6	1.1	1.0	1.5	2.5	2.0	2.1
1983	2.1	2.2	2.5	3.0	2.1	1.9	1.3	1.6	2.0	2.7	2.5	2.8
1984	2.2	2.9	2.8	3.2	2.5	1.6	1.2	1.1	2.0	1.6	2.1	2.3
1985	1.9	2.3	2.9	2.2	1.8	1.7	1.8	1.8	1.9	2.4	2.7	2.3
1986	2.2	2.9	1.8	2.1	1.7	1.5	1.3	1.4	1.9	1.7	2.1	2.9
1987	2.2	2.0	2.4	2.8	2.3	1.5	1.3	1.6	1.6	2.5	2.7	3.0

32 YR. STATISTICS FOR WIS STATION E43

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	3.9
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	180.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	3.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	196.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		59031518

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1038	16	2	2	.	.	.	.	.	1058
0.25-0.49	.	1010	4	.	.	.	.	.	.	.	1014
0.50-0.74	.	1210	10	1	.	.	.	.	.	.	1221
0.75-0.99	.	229	386	.	.	.	.	.	.	.	615
1.00-1.24	.	.	510	.	.	.	.	.	.	.	510
1.25-1.49	.	.	10	77	.	.	.	.	.	.	87
1.50-1.74	.	.	.	45	.	.	.	.	.	.	45
1.75-1.99	.	.	.	7	1	.	.	.	.	.	8
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3487	936	132	6	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 4271.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	659	20	9	2	.	.	.	.	.	690
0.25-0.49	.	637	9	2	.	.	.	.	.	.	648
0.50-0.74	.	1083	6	1	.	.	.	.	.	.	1090
0.75-0.99	.	178	186	1	.	.	.	.	.	.	365
1.00-1.24	.	1	175	1	.	.	.	.	.	.	177
1.25-1.49	.	.	12	11	.	.	.	.	.	.	23
1.50-1.74	.	.	.	9	.	.	.	.	.	.	9
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2558	408	35	2	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 2815.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1157	35	7	1	.	.	.	.	.	1200
0.25-0.49	.	1038	11	6	.	.	.	.	.	.	1055
0.50-0.74	.	2316	.	1	.	.	.	.	.	.	2317
0.75-0.99	.	530	381	.	.	.	.	.	.	.	911
1.00-1.24	.	.	464	1	.	.	.	.	.	.	465
1.25-1.49	.	.	113	33	.	.	.	.	.	.	146
1.50-1.74	.	.	1	69	.	.	.	.	.	.	70
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5041	1005	119	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 5771.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1014	48	10	1	.	.	.	.	.	1073
0.25-0.49	.	915	25	20	1	.	.	.	.	.	961
0.50-0.74	.	1326	9	10	5	1	.	.	.	.	1351
0.75-0.99	.	244	106	1	1	1	.	.	.	.	353
1.00-1.24	.	10	100	1	1	.	.	.	.	.	112
1.25-1.49	.	.	10	3	.	.	.	.	.	.	13
1.50-1.74	.	.	.	3	.	.	.	.	.	.	3
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3509	298	48	9	2	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 3624.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1260	56	13	8	1	.	.	.	.	1338
0.25-0.49	.	1107	67	22	3	.	.	.	.	.	1289
0.50-0.74	.	903	26	39	10	1	1	.	.	.	980
0.75-0.99	.	175	7	18	10	1	.	.	.	.	211
1.00-1.24	.	36	36	1	3	3	.	.	.	.	79
1.25-1.49	.	.	16	.	.	.	.	.	.	.	16
1.50-1.74	.	.	1	.	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3571	209	93	34	6	1	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 3670.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	840	40	9	.	.	.	.	.	.	889
0.25-0.49	.	601	71	8	.	.	.	.	.	.	680
0.50-0.74	.	450	72	38	7	.	.	.	.	.	567
0.75-0.99	.	64	47	40	17	.	.	.	.	.	168
1.00-1.24	.	10	40	24	12	4	.	.	.	.	90
1.25-1.49	.	.	.	20	.	.	.	.	.	.	20
1.50-1.74	.	.	.	6	5	.	.	.	.	.	11
1.75-1.99	.	.	.	.	2	.	.	.	.	.	2
2.00-2.24	.	.	.	.	.	1	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1965	270	145	43	5	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 2280.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1405	78	10	.	.	.	.	.	.	1493
0.25-0.49	.	927	222	29	.	.	.	.	.	.	1178
0.50-0.74	.	651	223	70	1	.	.	.	.	.	945
0.75-0.99	.	89	134	57	.	1	.	.	.	.	261
1.00-1.24	.	2	97	131	6	.	.	.	.	.	236
1.25-1.49	.	.	10	55	3	.	.	.	.	.	68
1.50-1.74	.	.	1	31	20	1	.	.	.	.	53
1.75-1.99	.	.	.	.	9	.	.	.	.	.	9
2.00-2.24	.	.	.	.	1	1	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3054	765	383	40	3	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 3979.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1514	136	10	.	.	.	.	.	.	1660
0.25-0.49	.	1267	245	73	.	.	.	.	.	.	1585
0.50-0.74	.	1242	361	228	3	.	.	.	.	.	1834
0.75-0.99	.	227	532	152	2	.	.	.	.	.	913
1.00-1.24	.	.	410	332	14	.	.	.	.	.	756
1.25-1.49	.	.	11	235	21	.	.	.	.	.	267
1.50-1.74	.	.	.	99	102	.	.	.	.	.	201
1.75-1.99	.	.	.	.	40	.	.	.	.	.	40
2.00-2.24	.	.	.	.	14	3	.	.	.	.	17
2.25-2.49	.	.	.	.	.	1	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4250	1695	1129	196	4	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.6 NO. OF CASES= 6816.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1317	13	1	.	.	.	.	.	.	1331
0.25-0.49	.	1332	23	5	.	.	.	.	.	.	1360
0.50-0.74	.	1918	89	22	2	.	.	.	.	.	2031
0.75-0.99	.	434	733	11	.	.	.	.	.	.	1178
1.00-1.24	.	.	1187	26	4	.	.	.	.	.	1217
1.25-1.49	.	.	106	266	5	.	.	.	.	.	377
1.50-1.74	.	.	.	140	16	.	.	.	.	.	156
1.75-1.99	.	.	.	10	3	.	.	.	.	.	13
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5001	2151	481	31	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 7176.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	956	5	.	.	.	.	.	.	.	961
0.25-0.49	.	1266	6	3	.	.	.	.	.	.	1275
0.50-0.74	.	1474	365	2	.	.	.	.	.	.	1841
0.75-0.99	.	213	1043	9	.	.	.	.	.	.	1265
1.00-1.24	.	.	1330	357	.	.	.	.	.	.	1687
1.25-1.49	.	.	54	574	.	.	.	.	.	.	628
1.50-1.74	.	.	.	237	2	.	.	.	.	.	239
1.75-1.99	.	.	.	14	12	.	.	.	.	.	26
2.00-2.24	.	.	.	.	7	.	.	.	.	.	7
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3909	2803	1196	22	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.7 NO. OF CASES= 7424.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1501	4	1	.	.	.	.	.	.	1506
0.25-0.49	.	1583	9	.	.	.	.	.	.	.	1592
0.50-0.74	.	1628	866	3	1	.	.	.	.	.	2498
0.75-0.99	.	64	1605	12	.	.	.	.	.	.	1681
1.00-1.24	.	.	1634	807	.	.	.	.	.	.	2441
1.25-1.49	.	.	1	1127	.	.	.	.	.	.	1128
1.50-1.74	.	.	.	596	1	.	.	.	.	.	597
1.75-1.99	.	.	.	25	72	.	.	.	.	.	97
2.00-2.24	.	.	.	.	52	.	.	.	.	.	52
2.25-2.49	.	.	.	.	17	.	.	.	.	.	17
2.50-2.74	.	.	.	.	1	3	.	.	.	.	4
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4776	4119	2571	144	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.8 NO. OF CASES= 10868.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1345	4	.	.	.	.	.	.	.	1349
0.25-0.49	.	1678	6	.	.	.	.	.	.	.	1684
0.50-0.74	.	1326	1205	16	.	.	.	.	.	.	2547
0.75-0.99	.	37	1208	223	.	.	.	.	.	.	1468
1.00-1.24	.	.	1021	1157	2	.	.	.	.	.	2180
1.25-1.49	.	.	2	1343	3	.	.	.	.	.	1348
1.50-1.74	.	.	.	838	237	.	.	.	.	.	1075
1.75-1.99	.	.	.	13	258	.	.	.	.	.	271
2.00-2.24	.	.	.	.	139	1	.	.	.	.	140
2.25-2.49	.	.	.	.	17	10	.	.	.	.	27
2.50-2.74	.	.	.	.	2	11	.	.	.	.	13
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4386	3446	3590	658	24	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 4.0 NO. OF CASES= 11326.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1448	3	1	.	.	.	.	.	.	1452
0.25-0.49	.	1427	3	.	.	.	.	.	.	.	1430
0.50-0.74	.	937	832	33	.	.	.	.	.	.	1802
0.75-0.99	.	59	650	273	.	.	.	.	.	.	982
1.00-1.24	.	.	289	941	1	.	.	.	.	.	1301
1.25-1.49	.	.	3	972	2	.	.	.	.	.	977
1.50-1.74	.	.	.	664	404	.	.	.	.	.	1068
1.75-1.99	.	.	.	.	269	.	.	.	.	.	269
2.00-2.24	.	.	.	.	145	3	.	.	.	.	148
2.25-2.49	.	.	.	.	11	20	.	.	.	.	31
2.50-2.74	.	.	.	.	.	22	.	.	.	.	22
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3871	1850	2884	832	47	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 8876.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	850	5	1	.	.	.	.	.	.	856
0.25-0.49	.	1055	3	.	.	.	.	.	.	.	1058
0.50-0.74	.	992	411	4	.	.	.	.	.	.	1407
0.75-0.99	.	73	748	53	.	.	.	.	.	.	874
1.00-1.24	.	.	539	696	.	.	.	.	.	.	1235
1.25-1.49	.	.	11	506	.	.	.	.	.	.	517
1.50-1.74	.	.	4	247	82	.	.	.	.	.	333
1.75-1.99	.	.	.	3	57	.	.	.	.	.	60
2.00-2.24	.	.	.	.	32	.	.	.	.	.	32
2.25-2.49	.	.	.	.	1	3	.	.	.	.	4
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2970	1721	1510	172	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 5971.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	728	6	.	1	.	.	.	.	.	735
0.25-0.49	.	836	3	1	.	.	.	.	.	.	840
0.50-0.74	.	1410	223	1	.	.	.	.	.	.	1634
0.75-0.99	.	285	736	14	.	.	.	.	.	.	1035
1.00-1.24	.	.	553	433	.	.	.	.	.	.	986
1.25-1.49	.	.	60	115	1	.	.	.	.	.	176
1.50-1.74	.	.	13	37	9	.	.	.	.	.	59
1.75-1.99	.	.	.	10	3	.	.	.	.	.	13
2.00-2.24	.	.	.	2	2	.	.	.	.	.	4
2.25-2.49	.	.	.	1	.	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3259	1594	614	16	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.5 NO. OF CASES= 5137.

STATION E44 41.87N 82.68W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

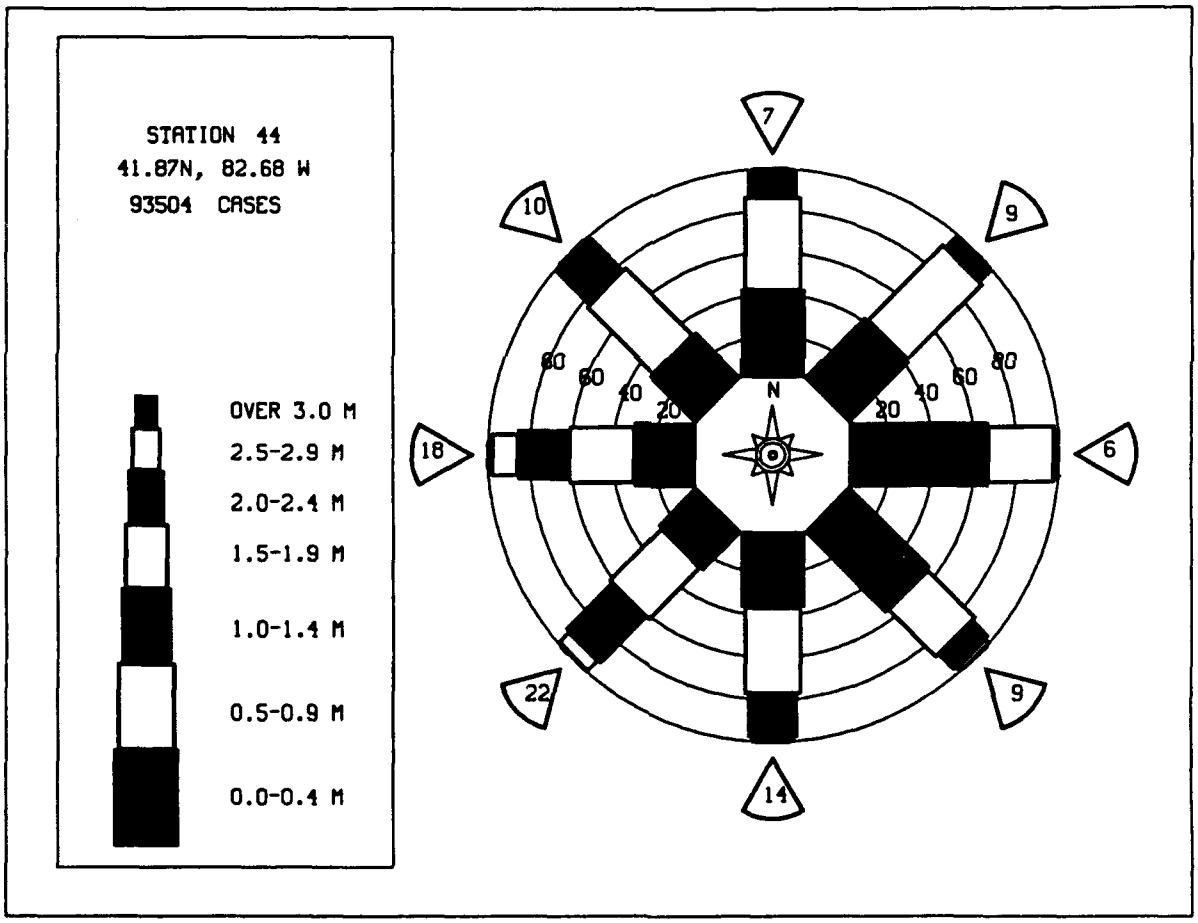
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	628	9	2	.	.	.	.	.	.	639
0.25-0.49	.	638	2	.	.	.	.	.	.	.	640
0.50-0.74	.	1138	41	1	.	.	.	.	.	.	1180
0.75-0.99	.	311	335	7	.	.	.	.	.	.	653
1.00-1.24	.	.	449	57	.	.	.	.	.	.	506
1.25-1.49	.	.	47	40	.	.	.	.	.	.	87
1.50-1.74	.	.	1	28	.	.	.	.	.	.	29
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2715	884	136	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.3 NO. OF CASES= 3500.

STATION E44 41.87N 82.68W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1766	48	8	1	.	.	.	.	.	1823
0.25-0.49	.	1741	71	17	.	.	.	.	.	.	1829
0.50-0.74	.	2001	474	47	3	.	.	.	.	.	2525
0.75-0.99	.	320	884	87	3	.	.	.	.	.	1294
1.00-1.24	.	6	890	496	4	.	.	.	.	.	1396
1.25-1.49	.	.	47	538	3	.	.	.	.	.	588
1.50-1.74	.	.	2	305	88	.	.	.	.	.	395
1.75-1.99	.	.	.	8	73	.	.	.	.	.	81
2.00-2.24	.	.	.	.	39	.	.	.	.	.	39
2.25-2.49	.	.	.	.	4	3	.	.	.	.	7
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5834	2416	1506	218	6	0	0	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.6 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E44 (41.87N 82.68W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.6	0.7	0.7	0.8	0.7	0.5	0.5	0.6	0.6	0.6	0.9	0.8	0.7
1957	0.8	0.6	0.8	0.8	0.7	0.7	0.6	0.4	0.6	0.6	1.0	0.9	0.7
1958	0.8	0.9	0.7	0.7	0.8	0.6	0.6	0.6	0.7	0.8	1.0	0.8	0.7
1959	0.8	0.9	0.8	0.8	0.5	0.4	0.4	0.5	0.6	0.6	0.8	0.6	0.6
1960	0.7	0.8	0.7	0.9	0.7	0.6	0.4	0.4	0.4	0.5	1.0	1.0	0.7
1961	0.8	0.6	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.8	0.8	0.9	0.7
1962	1.0	0.8	0.7	0.8	0.6	0.5	0.4	0.4	0.6	0.6	0.5	0.8	0.6
1963	0.7	0.8	0.8	0.8	0.6	0.4	0.5	0.5	0.5	0.5	0.9	0.7	0.6
1964	1.0	0.7	0.9	0.9	0.8	0.6	0.5	0.6	0.6	0.6	0.8	0.8	0.7
1965	0.9	0.9	0.7	0.7	0.6	0.6	0.4	0.6	0.7	0.8	0.9	0.9	0.7
1966	0.9	0.6	0.8	0.7	0.6	0.4	0.5	0.5	0.5	0.8	0.8	0.8	0.7
1967	0.9	0.9	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.8	0.9	0.8	0.7
1968	0.7	0.9	0.8	0.8	0.7	0.5	0.5	0.5	0.6	0.7	0.8	1.0	0.7
1969	1.0	0.7	0.8	0.7	0.5	0.6	0.4	0.4	0.5	0.7	0.7	0.7	0.6
1970	0.7	0.8	0.6	0.8	0.7	0.6	0.5	0.5	0.6	0.7	0.9	0.9	0.7
1971	1.1	1.1	0.8	0.8	0.6	0.5	0.6	0.6	0.5	0.6	0.8	0.8	0.7
1972	1.0	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.8	0.7
1973	1.0	0.7	0.7	0.8	0.8	0.6	0.6	0.5	0.6	0.6	0.9	0.9	0.7
1974	0.8	0.6	0.8	1.0	0.7	0.7	0.6	0.5	0.7	0.7	0.8	0.8	0.8
1975	0.8	0.7	0.7	0.8	0.5	0.6	0.5	0.5	0.6	0.7	0.9	0.8	0.7
1976	0.8	0.8	0.9	0.8	0.7	0.5	0.6	0.5	0.7	0.8	0.9	0.8	0.7
1977	0.8	0.7	0.8	0.7	0.5	0.5	0.8	0.6	0.6	0.8	0.9	0.9	0.7
1978	0.8	0.4	0.6	0.7	0.5	0.5	0.6	0.5	0.6	0.7	0.8	0.9	0.6
1979	0.6	0.7	0.7	0.7	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.8	0.7
1980	0.6	0.8	0.7	0.7	0.4	0.5	0.4	0.5	0.5	0.7	0.8	0.7	0.6
1981	0.6	0.9	0.7	0.8	0.5	0.6	0.4	0.4	0.5	0.6	0.5	0.6	0.6
1982	0.8	0.6	0.7	0.9	0.4	0.4	0.3	0.3	0.3	0.5	0.8	0.8	0.6
1983	0.6	0.5	0.6	0.7	0.7	0.4	0.5	0.4	0.6	0.7	0.8	0.9	0.6
1984	0.5	0.6	0.8	0.6	0.7	0.5	0.5	0.4	0.5	0.5	0.8	0.8	0.6
1985	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.7
1986	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.6
1987	0.7	0.6	0.6	0.7	0.5	0.5	0.5	0.5	0.4	0.6	0.8	0.8	0.6
MEAN	0.8	0.7	0.7	0.8	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.8	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E44 (41.87N 82.68W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.4	2.1	2.7	2.4	2.0	2.1	2.0	1.4	1.4	1.9	2.3	1.8
1957	1.8	1.6	3.1	2.4	2.1	2.3	2.1	1.4	2.0	1.6	2.3	2.1
1958	1.7	1.9	1.5	2.5	1.9	1.9	1.8	2.2	1.9	2.1	2.4	1.8
1959	2.4	1.8	2.8	2.5	1.6	1.4	1.6	1.4	1.6	2.1	1.8	1.7
1960	1.8	1.9	2.1	2.4	2.1	2.1	1.5	1.3	1.5	1.8	2.1	1.8
1961	2.1	2.0	2.0	2.1	2.1	1.8	1.6	1.8	1.6	1.9	2.0	2.4
1962	2.3	2.0	1.7	2.2	1.8	1.3	1.4	1.6	1.9	1.6	1.9	2.1
1963	1.9	1.9	2.6	2.3	1.9	1.7	1.7	1.5	1.7	1.7	2.3	1.7
1964	2.7	1.6	2.8	2.1	2.8	2.0	1.7	1.6	2.2	2.0	1.9	2.0
1965	2.8	1.9	2.6	2.7	2.1	1.5	1.6	1.6	2.0	2.7	2.7	1.8
1966	2.6	1.6	2.6	2.0	2.7	1.6	1.5	1.7	1.9	2.2	2.0	2.0
1967	2.0	1.8	1.9	2.7	2.0	1.4	1.7	1.4	1.7	1.8	1.9	1.9
1968	2.1	2.0	1.9	2.2	1.9	1.9	1.4	1.8	1.6	1.9	1.9	2.4
1969	2.3	2.0	2.1	1.8	1.9	1.8	1.2	1.5	1.3	1.7	1.6	1.6
1970	1.6	1.6	2.2	2.3	1.9	1.9	1.7	1.8	2.2	1.8	2.2	2.2
1971	2.9	2.7	2.2	2.1	2.0	1.6	1.8	1.5	1.5	1.7	2.0	2.3
1972	2.6	1.8	2.4	1.8	1.9	1.7	1.6	1.6	1.6	1.8	1.6	2.0
1973	2.1	1.7	2.0	1.9	2.0	1.4	1.8	1.6	1.8	1.6	2.2	2.2
1974	2.4	2.2	1.9	2.5	2.2	1.8	1.5	1.7	1.9	1.7	1.9	1.6
1975	1.9	1.9	1.9	2.0	1.3	1.5	1.3	1.3	1.5	1.7	2.1	2.1
1976	1.9	1.8	1.9	1.9	1.8	1.4	1.4	1.2	1.8	1.9	1.7	1.7
1977	1.9	1.6	1.7	1.9	1.6	1.6	1.8	1.3	1.7	2.2	1.7	2.1
1978	2.4	1.3	1.6	1.6	1.6	1.3	1.3	1.5	1.7	1.8	2.1	2.0
1979	1.6	1.7	2.2	2.3	1.9	1.6	1.3	1.7	1.4	1.8	2.0	1.8
1980	2.0	1.6	1.8	1.8	1.4	1.4	1.2	1.5	1.4	1.8	2.0	1.9
1981	1.7	2.0	2.1	2.2	1.3	1.7	1.4	1.3	1.8	2.2	1.7	1.5
1982	2.3	1.6	1.9	2.5	1.0	1.5	1.3	1.3	1.3	1.6	1.7	1.9
1983	1.5	1.4	1.5	2.1	1.8	1.1	1.1	1.4	1.5	2.0	1.9	1.9
1984	1.4	1.8	2.4	2.3	1.9	1.5	1.5	1.0	1.5	1.4	1.8	1.7
1985	1.7	1.5	2.1	2.3	1.4	1.7	1.3	1.2	1.6	1.9	1.8	2.5
1986	1.8	1.6	1.9	1.4	1.7	1.3	1.2	1.2	1.6	1.6	1.7	1.9
1987	1.9	1.9	1.9	2.1	1.6	1.6	1.4	1.4	1.6	1.9	1.6	2.3

32 YR. STATISTICS FOR WIS STATION E44

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	3.6
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.8
LARGEST WAVE HS	(METERS)	3.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	7.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	247.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57031603

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1256	24	14	1	.	.	.	.	.	1295
0.25-0.49	.	1219	13	3	.	.	.	.	.	.	1235
0.50-0.74	.	1428	81	2	1	.	.	.	.	.	1512
0.75-0.99	.	423	45	.	.	.	.	.	.	.	468
1.00-1.24	.	32	89	12	.	.	.	.	.	.	133
1.25-1.49	.	.	13	2	.	.	.	.	.	.	15
1.50-1.74	.	.	4	3	.	.	.	.	.	.	7
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4358	269	36	2	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 4371.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	838	34	6	2	.	.	.	.	.	880
0.25-0.49	.	744	21	3	1	.	.	.	.	.	769
0.50-0.74	.	755	75	.	.	.	.	.	.	.	830
0.75-0.99	.	91	157	.	.	.	.	.	.	.	248
1.00-1.24	.	4	120	40	.	.	.	.	.	.	164
1.25-1.49	.	.	.	34	.	.	.	.	.	.	34
1.50-1.74	.	.	.	11	.	.	.	.	.	.	11
1.75-1.99	.	.	.	.	6	.	.	.	.	.	6
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2432	407	94	12	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.2 NO. OF CASES= 2761.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1239	49	10	2	.	.	.	.	.	1300
0.25-0.49	.	1085	21	13	2	.	.	.	.	.	1121
0.50-0.74	.	1043	145	3	.	1	.	.	.	.	1192
0.75-0.99	.	81	577	.	.	.	.	.	.	.	658
1.00-1.24	.	.	560	212	.	.	.	.	.	.	772
1.25-1.49	.	.	1	256	.	.	.	.	.	.	257
1.50-1.74	.	.	.	155	.	.	.	.	.	.	155
1.75-1.99	.	.	.	1	48	.	.	.	.	.	49
2.00-2.24	.	.	.	.	21	.	.	.	.	.	21
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3448	1353	650	74	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.5 NO. OF CASES= 5175.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	947	27	4	1	.	.	.	.	.	979
0.25-0.49	.	947	41	19	1	.	.	.	.	.	1008
0.50-0.74	.	1051	152	11	2	.	.	.	.	.	1216
0.75-0.99	.	96	568	3	2	1	.	.	.	.	670
1.00-1.24	.	.	510	137	1	.	.	.	.	.	648
1.25-1.49	.	.	8	171	.	.	.	.	.	.	179
1.50-1.74	.	.	.	87	.	.	.	.	.	.	87
1.75-1.99	.	.	.	3	24	.	.	.	.	.	27
2.00-2.24	.	.	.	.	8	.	.	.	.	.	8
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3041	1306	435	40	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.5 NO. OF CASES= 4520.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1220	36	7	4	.	.	.	.	.	1267
0.25-0.49	.	982	72	20	4	1	.	.	.	.	1079
0.50-0.74	.	1037	24	16	2	.	1	.	.	.	1080
0.75-0.99	.	192	239	6	2	.	.	.	.	.	439
1.00-1.24	.	.	270	3	2	1	.	.	.	.	276
1.25-1.49	.	.	16	35	.	.	.	.	.	.	51
1.50-1.74	.	.	.	23	1	.	.	.	.	.	24
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3431	657	111	15	2	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 3951.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	867	33	5	.	.	.	.	.	.	905
0.25-0.49	.	719	66	4	.	.	.	.	.	.	789
0.50-0.74	.	605	105	42	2	.	.	.	.	.	754
0.75-0.99	.	72	130	27	3	.	.	.	.	.	232
1.00-1.24	.	.	129	60	7	.	.	.	.	.	196
1.25-1.49	.	.	17	31	5	.	.	.	.	.	53
1.50-1.74	.	.	.	20	9	.	.	.	.	.	29
1.75-1.99	.	.	.	.	4	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	1	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2263	480	189	30	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 2780.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1361	109	10	.	.	.	.	.	.	1480
0.25-0.49	.	1055	217	50	.	.	.	.	.	.	1322
0.50-0.74	.	732	425	155	3	.	.	.	.	.	1315
0.75-0.99	.	37	280	167	6	.	.	.	.	.	490
1.00-1.24	.	.	126	251	29	.	.	.	.	.	406
1.25-1.49	.	.	1	116	28	.	.	.	.	.	145
1.50-1.74	.	.	.	43	101	1	.	.	.	.	145
1.75-1.99	.	.	.	.	29	1	.	.	.	.	30
2.00-2.24	.	.	.	.	5	2	.	.	.	.	7
2.25-2.49	.	.	.	.	.	1	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3185	1158	792	201	5	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 5005.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1449	106	7	.	.	.	.	.	.	1562
0.25-0.49	.	1306	109	65	.	.	.	.	.	.	1480
0.50-0.74	.	1004	386	120	5	.	.	.	.	.	1515
0.75-0.99	.	44	429	56	7	.	.	.	.	.	536
1.00-1.24	.	.	341	201	13	.	.	.	.	.	555
1.25-1.49	.	.	4	181	17	.	.	.	.	.	202
1.50-1.74	.	.	.	68	45	1	.	.	.	.	114
1.75-1.99	.	.	.	5	20	1	.	.	.	.	26
2.00-2.24	.	.	.	.	6	.	.	.	.	.	6
2.25-2.49	.	.	.	.	.	2	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3803	1375	703	113	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.5 NO. OF CASES= 5620.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1475	16	1	.	.	.	.	.	.	1492
0.25-0.49	.	1351	17	1	.	.	.	.	.	.	1369
0.50-0.74	.	1271	629	5	3	.	.	.	.	.	1908
0.75-0.99	.	67	827	16	.	.	.	.	.	.	910
1.00-1.24	.	.	942	555	1	.	.	.	.	.	1498
1.25-1.49	.	.	1	637	.	.	.	.	.	.	638
1.50-1.74	.	.	.	328	21	.	.	.	.	.	349
1.75-1.99	.	.	.	.	35	.	.	.	.	.	35
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4164	2432	1543	65	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.7 NO. OF CASES= 7678.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1024	4	1	.	.	.	.	.	.	1029
0.25-0.49	.	1362	8	1	.	.	.	.	.	.	1371
0.50-0.74	.	1272	361	2	.	.	.	.	.	.	1635
0.75-0.99	.	79	814	4	.	.	.	.	.	.	897
1.00-1.24	.	.	984	402	.	.	.	.	.	.	1386
1.25-1.49	.	.	3	528	.	.	.	.	.	.	531
1.50-1.74	.	.	.	235	5	.	.	.	.	.	240
1.75-1.99	.	.	.	5	16	.	.	.	.	.	21
2.00-2.24	.	.	.	.	9	.	.	.	.	.	9
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3737	2174	1178	35	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.7 NO. OF CASES= 6669.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1547	12	2	.	.	.	.	.	.	1561
0.25-0.49	.	1663	10	2	.	.	.	.	.	.	1675
0.50-0.74	.	1711	709	5	.	.	.	.	.	.	2425
0.75-0.99	.	71	1413	4	.	.	.	.	.	.	1488
1.00-1.24	.	.	1529	797	.	.	.	.	.	.	2326
1.25-1.49	.	.	1	998	.	.	.	.	.	.	999
1.50-1.74	.	.	.	500	2	.	.	.	.	.	502
1.75-1.99	.	.	.	12	64	.	.	.	.	.	76
2.00-2.24	.	.	.	.	45	.	.	.	.	.	45
2.25-2.49	.	.	.	.	18	.	.	.	.	.	18
2.50-2.74	.	.	.	.	1	4	.	.	.	.	5
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4992	3674	2320	130	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 10407.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1369	5	1	.	.	.	.	.	.	1375
0.25-0.49	.	1597	3	2	.	.	.	.	.	.	1602
0.50-0.74	.	1452	966	5	1	.	.	.	.	.	2424
0.75-0.99	.	49	1311	39	.	.	.	.	.	.	1399
1.00-1.24	.	.	1540	1195	.	.	.	.	.	.	2735
1.25-1.49	.	.	1	1379	.	.	.	.	.	.	1380
1.50-1.74	.	.	.	795	58	.	.	.	.	.	853
1.75-1.99	.	.	.	8	168	.	.	.	.	.	176
2.00-2.24	.	.	.	.	105	.	.	.	.	.	105
2.25-2.49	.	.	.	.	19	1	.	.	.	.	20
2.50-2.74	.	.	.	.	2	5	.	.	.	.	7
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4467	3826	3424	353	6	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 4.0 NO. OF CASES= 11302.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1386	8	1	.	.	.	.	.	.	1395
0.25-0.49	.	1403	7	.	.	.	.	.	.	.	1411
0.50-0.74	.	1119	627	.	.	.	.	.	.	.	1751
0.75-0.99	.	37	839	1	.	.	.	.	.	.	894
1.00-1.24	.	.	941	755	.	.	.	.	.	.	1696
1.25-1.49	.	.	.	926	.	.	.	.	.	.	926
1.50-1.74	.	.	.	624	27	.	.	.	.	.	651
1.75-1.99	.	.	.	2	119	.	.	.	.	.	121
2.00-2.24	.	.	.	.	70	.	.	.	.	.	70
2.25-2.49	.	.	.	.	17	.	.	.	.	.	17
2.50-2.74	.	.	.	.	1	5	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3945	2422	2332	234	5	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 8365.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1018	6	1	.	.	.	.	.	.	1025
0.25-0.49	.	1109	4	1	.	.	.	.	.	.	1114
0.50-0.74	.	855	320	.	.	.	.	.	.	.	1175
0.75-0.99	.	43	634	3	.	.	.	.	.	.	680
1.00-1.24	.	.	748	376	.	.	.	.	.	.	1124
1.25-1.49	.	.	4	494	.	.	.	.	.	.	498
1.50-1.74	.	.	.	237	8	.	.	.	.	.	245
1.75-1.99	.	.	.	5	37	.	.	.	.	.	42
2.00-2.24	.	.	.	.	23	.	.	.	.	.	23
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3025	1716	1117	70	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.7 NO. OF CASES= 5550.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	859	8	.	.	.	.	.	.	.	867
0.25-0.49	.	832	16	1	.	.	.	.	.	.	849
0.50-0.74	.	971	289	1	.	.	.	.	.	.	1261
0.75-0.99	.	52	765	.	.	.	.	.	.	.	817
1.00-1.24	.	.	967	429	.	.	.	.	.	.	1396
1.25-1.49	.	.	1	512	.	.	.	.	.	.	513
1.50-1.74	.	.	.	205	.	.	.	.	.	.	205
1.75-1.99	.	.	.	8	36	.	.	.	.	.	44
2.00-2.24	.	.	.	.	10	.	.	.	.	.	10
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2714	2046	1156	48	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.8 NO. OF CASES= 5584.

STATION E45 41.87N 82.88W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

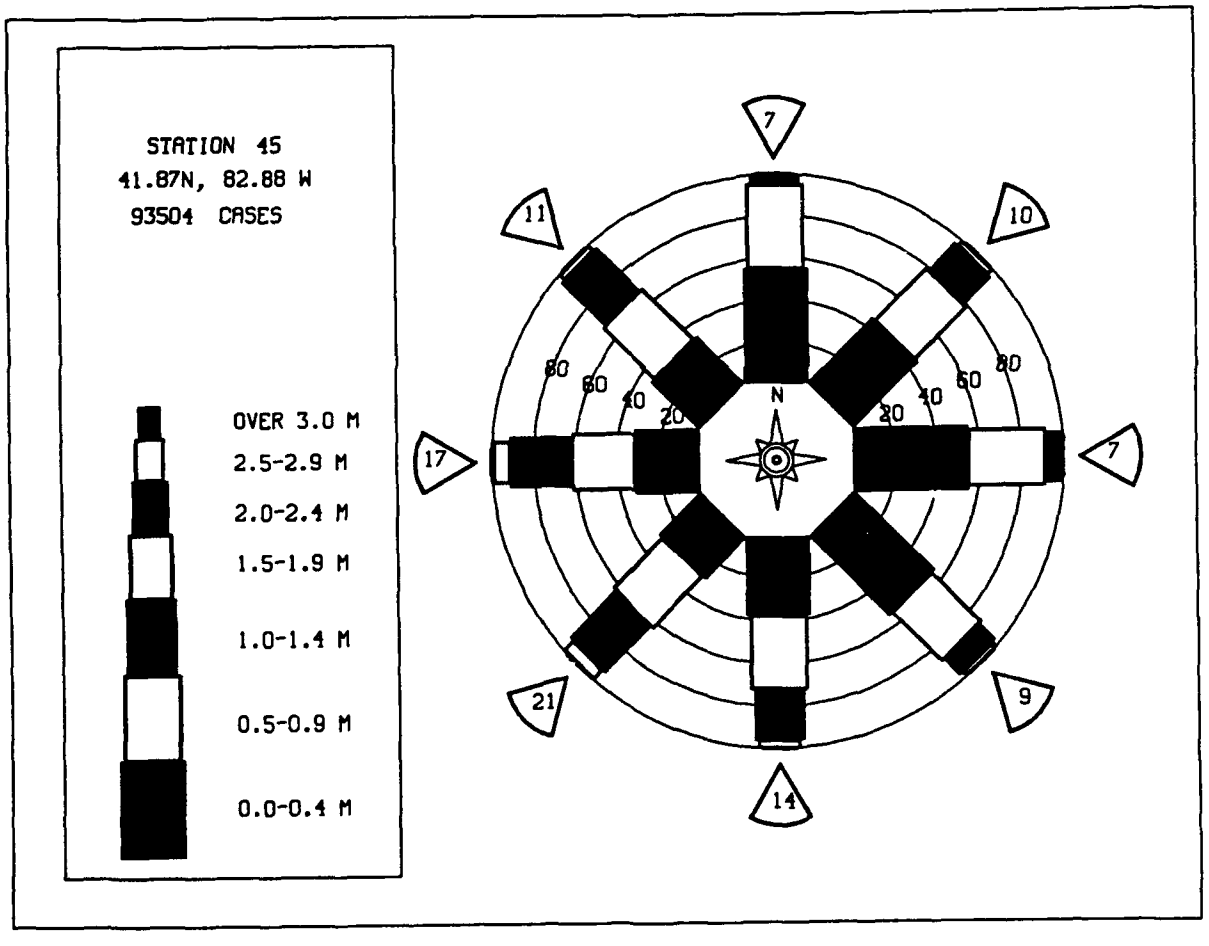
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	762	14	1	1	.	.	.	.	.	778
0.25-0.49	.	787	9	3	.	.	.	.	.	.	799
0.50-0.74	.	953	130	.	1	.	.	.	.	.	1084
0.75-0.99	.	224	361	2	.	.	.	.	.	.	587
1.00-1.24	.	31	404	141	.	.	.	.	.	.	576
1.25-1.49	.	.	4	144	.	.	.	.	.	.	148
1.50-1.74	.	.	.	42	.	.	.	.	.	.	42
1.75-1.99	.	.	.	.	5	.	.	.	.	.	5
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2757	922	333	8	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 3766.

STATION E45 41.87N 82.88W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1862	49	7	1	.	.	.	.	.	1919
0.25-0.49	.	1816	64	19	.	.	.	.	.	.	1899
0.50-0.74	.	1726	543	37	2	.	.	.	.	.	2308
0.75-0.99	.	166	939	34	2	.	.	.	.	.	1141
1.00-1.24	.	6	1020	557	5	.	.	.	.	.	1588
1.25-1.49	.	.	7	644	5	.	.	.	.	.	656
1.50-1.74	.	.	.	338	28	.	.	.	.	.	366
1.75-1.99	.	.	.	5	61	.	.	.	.	.	66
2.00-2.24	.	.	.	.	31	.	.	.	.	.	31
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5576	2622	1641	141	1	0	0	0	0	

MEAN HS(M)= 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.6 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E45 (41.87N 82.88W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.5	0.6	0.7	0.8	0.7	0.4	0.6	0.6	0.6	0.7	0.9	0.8	0.7
1957	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.4	0.6	0.6	1.0	1.0	0.7
1958	0.8	0.9	0.7	0.8	0.8	0.6	0.6	0.6	0.7	0.8	1.0	0.7	0.7
1959	0.8	0.9	0.8	0.8	0.5	0.4	0.4	0.5	0.6	0.6	0.8	0.6	0.6
1960	0.7	0.8	0.7	0.9	0.7	0.6	0.4	0.4	0.5	0.5	1.0	1.0	0.7
1961	0.8	0.6	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.8	0.8	0.9	0.7
1962	1.0	0.8	0.8	0.8	0.6	0.5	0.4	0.4	0.6	0.6	0.5	0.7	0.6
1963	0.7	0.8	0.8	0.8	0.6	0.4	0.5	0.5	0.5	0.5	0.9	0.7	0.6
1964	1.0	0.7	0.9	0.9	0.8	0.6	0.5	0.6	0.6	0.6	0.7	0.8	0.7
1965	0.9	0.9	0.7	0.7	0.6	0.6	0.4	0.5	0.7	0.8	0.9	0.9	0.7
1966	0.8	0.6	0.8	0.8	0.6	0.4	0.5	0.5	0.5	0.8	0.8	0.8	0.7
1967	0.9	0.8	0.6	0.8	0.7	0.5	0.5	0.5	0.5	0.8	0.9	0.8	0.7
1968	0.7	0.8	0.8	0.8	0.7	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.7
1969	0.9	0.7	0.8	0.7	0.5	0.6	0.4	0.4	0.5	0.7	0.7	0.7	0.6
1970	0.7	0.8	0.6	0.8	0.7	0.6	0.5	0.5	0.6	0.7	0.9	0.9	0.7
1971	1.1	1.1	0.8	0.8	0.6	0.5	0.6	0.6	0.6	0.6	0.9	0.8	0.7
1972	1.0	0.6	0.8	0.7	0.7	0.6	0.5	0.6	0.7	0.8	0.7	0.8	0.7
1973	1.0	0.8	0.8	0.9	0.8	0.6	0.6	0.5	0.6	0.6	0.9	0.9	0.7
1974	0.8	0.9	0.9	1.0	0.8	0.8	0.6	0.5	0.7	0.7	0.8	0.8	0.8
1975	0.8	0.8	0.8	0.8	0.5	0.6	0.4	0.5	0.6	0.8	0.9	0.8	0.7
1976	0.8	0.8	0.9	0.8	0.7	0.5	0.5	0.5	0.7	0.7	0.8	0.8	0.7
1977	0.8	0.7	0.8	0.7	0.5	0.5	0.5	0.6	0.6	0.8	0.9	0.8	0.7
1978	0.8	0.4	0.6	0.7	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.6
1979	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.6	0.6	0.8	0.8	0.8	0.7
1980	0.7	0.6	0.7	0.6	0.4	0.5	0.4	0.4	0.4	0.7	0.7	0.7	0.6
1981	0.6	0.9	0.7	0.8	0.5	0.5	0.4	0.4	0.4	0.6	0.5	0.6	0.6
1982	0.9	0.6	0.7	0.8	0.4	0.4	0.3	0.3	0.3	0.5	0.8	0.8	0.6
1983	0.6	0.5	0.6	0.7	0.7	0.4	0.4	0.4	0.5	0.7	0.8	0.9	0.6
1984	0.5	0.7	0.8	0.6	0.7	0.5	0.4	0.4	0.5	0.5	0.8	0.8	0.6
1985	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.7
1986	0.7	0.6	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.6
1987	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.6	0.4	0.6	0.8	0.7	0.6
MEAN	0.8	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.8	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E45 (41.87N 82.88W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.4	2.0	2.4	2.2	1.9	1.8	1.9	1.4	1.6	1.9	2.2	1.9
1957	1.7	1.5	3.5	2.3	1.9	2.0	2.0	1.2	1.9	1.5	2.3	1.9
1958	1.7	2.0	1.4	2.4	1.9	1.7	1.8	2.1	1.7	1.9	2.2	1.7
1959	2.2	1.8	2.7	2.2	1.6	1.4	1.7	1.4	1.5	1.9	1.7	1.6
1960	1.8	1.6	2.1	2.3	1.9	1.9	1.4	1.2	1.4	1.9	1.9	1.6
1961	1.9	1.9	2.0	2.0	1.9	1.6	1.6	1.6	1.7	1.8	1.9	2.1
1962	2.2	1.8	1.6	2.2	1.7	1.3	1.5	1.5	2.0	1.5	2.1	1.9
1963	1.7	1.9	2.6	2.2	2.0	1.5	1.7	1.7	1.6	1.7	2.4	1.7
1964	2.5	1.7	2.7	2.1	2.6	1.8	1.6	1.6	2.1	1.8	1.9	1.8
1965	2.5	1.9	2.4	2.6	1.9	1.4	1.5	1.7	1.9	2.4	2.5	1.7
1966	2.4	1.6	2.4	2.0	2.4	1.4	1.4	1.6	1.9	2.0	1.8	1.8
1967	1.9	1.7	1.7	2.4	1.9	1.4	1.6	1.3	1.6	1.8	1.7	1.9
1968	1.8	1.9	1.7	2.2	1.9	1.8	1.3	1.6	1.5	1.8	1.8	2.1
1969	2.0	1.7	2.1	1.7	1.9	1.6	1.2	1.4	1.3	1.7	1.5	1.5
1970	1.6	1.7	2.2	2.2	1.9	1.7	1.6	1.7	2.0	1.9	2.2	2.1
1971	2.7	2.7	2.3	2.1	2.0	1.5	1.7	1.5	1.5	1.8	1.8	2.4
1972	2.4	2.0	2.3	1.9	1.9	1.8	1.6	1.5	1.6	1.6	1.6	1.8
1973	2.1	1.7	2.1	2.1	1.9	1.4	1.6	1.4	1.7	1.7	2.0	2.1
1974	2.3	2.0	2.1	2.3	2.0	1.9	1.5	1.6	1.7	1.7	1.8	1.6
1975	2.1	2.0	2.1	2.1	1.3	1.6	1.3	1.3	1.9	2.1	2.1	2.1
1976	1.8	1.8	1.9	2.0	1.9	1.5	1.4	1.4	1.7	1.8	1.6	1.6
1977	2.1	1.7	1.9	1.8	1.7	1.5	1.8	1.2	1.6	2.4	1.8	2.1
1978	2.2	1.4	1.9	1.6	1.9	1.2	1.3	1.5	1.6	1.7	2.4	1.8
1979	1.6	1.9	2.1	2.3	1.8	1.4	1.2	1.7	1.4	1.8	2.1	1.7
1980	2.1	1.8	2.0	2.3	1.3	1.5	1.0	1.5	1.3	1.7	2.1	1.8
1981	1.6	1.8	2.0	2.2	1.5	1.5	1.3	1.3	1.8	1.9	1.6	1.5
1982	2.3	2.0	1.9	2.5	1.1	1.4	1.2	1.2	1.2	1.5	1.6	1.9
1983	1.5	1.5	1.8	2.1	1.8	1.4	1.1	1.3	1.4	1.7	1.8	1.9
1984	1.3	2.1	2.2	2.4	1.9	1.4	1.1	1.1	1.5	1.4	1.8	1.8
1985	1.7	1.5	2.1	2.3	1.5	1.6	1.3	1.3	1.5	1.9	1.9	2.4
1986	1.9	2.1	2.0	1.4	1.6	1.4	1.2	1.2	1.6	1.4	1.7	1.9
1987	1.8	1.9	1.7	1.9	1.6	1.5	1.4	1.6	1.5	1.8	1.7	2.3

32 YR. STATISTICS FOR WIS STATION E45

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.7
MEAN PEAK WAVE PERIOD	(SECONDS)	3.6
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.8
LARGEST WAVE HS	(METERS)	3.5
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	245.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57031603

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1167	28	6	2	.	.	.	.	.	1203
0.25-0.49	.	1091	14	5	.	.	.	.	.	.	1110
0.50-0.74	.	1329	11	3	1	.	.	.	.	.	1344
0.75-0.99	.	126	406	.	.	.	.	.	.	.	532
1.00-1.24	.	.	490	27	.	.	.	.	.	.	517
1.25-1.49	.	.	.	80	.	.	.	.	.	.	80
1.50-1.74	.	.	.	20	.	.	.	.	.	.	20
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3713	949	141	6	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 4505.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	999	34	8	3	.	.	.	.	.	1044
0.25-0.49	.	863	12	4	.	.	.	.	.	.	879
0.50-0.74	.	949	83	4	.	.	.	.	.	.	1036
0.75-0.99	.	118	226	9	.	.	.	.	.	.	353
1.00-1.24	.	.	132	62	.	.	.	.	.	.	194
1.25-1.49	.	.	5	13	.	.	.	.	.	.	18
1.50-1.74	.	.	2	4	3	.	.	.	.	.	9
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2929	494	105	6	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 3313.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1253	50	9	2	.	.	.	.	.	1314
0.25-0.49	.	1051	28	17	3	.	.	.	.	.	1099
0.50-0.74	.	1228	209	7	.	1	.	.	.	.	1445
0.75-0.99	.	236	525	3	.	.	.	.	.	.	764
1.00-1.24	.	.	241	355	.	.	.	.	.	.	596
1.25-1.49	.	.	13	122	.	.	.	.	.	.	135
1.50-1.74	.	.	4	29	43	.	.	.	.	.	76
1.75-1.99	.	.	.	.	14	.	.	.	.	.	14
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3768	1070	542	63	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.4 NO. OF CASES= 5101.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	967	25	3	.	.	.	.	.	.	995
0.25-0.49	.	930	31	16	3	.	.	.	.	.	980
0.50-0.74	.	1078	287	10	2	.	.	.	.	.	1377
0.75-0.99	.	103	579	7	3	.	.	.	.	.	692
1.00-1.24	.	.	321	339	.	1	.	.	.	.	661
1.25-1.49	.	.	.	166	.	.	.	.	.	.	166
1.50-1.74	.	.	.	51	28	.	.	.	.	.	79
1.75-1.99	.	.	.	.	12	.	.	.	.	.	12
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3078	1243	592	49	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.5 NO. OF CASES= 4650.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1167	40	4	.	.	.	.	.	.	1211
0.25-0.49	.	1005	43	14	1	.	.	.	.	.	1063
0.50-0.74	.	874	244	19	4	1	.	.	.	.	1142
0.75-0.99	.	29	472	7	3	.	1	.	.	.	512
1.00-1.24	.	.	291	197	1	1	.	.	.	.	490
1.25-1.49	.	.	.	108	1	.	.	.	.	.	109
1.50-1.74	.	.	.	42	4	.	.	.	.	.	46
1.75-1.99	.	.	.	.	4	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3075	1090	391	18	2	1	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 4291.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	965	34	3	.	.	.	.	.	.	1002
0.25-0.49	.	775	65	10	.	.	.	.	.	.	850
0.50-0.74	.	559	245	39	1	.	.	.	.	.	844
0.75-0.99	.	17	202	28	2	.	.	.	.	.	249
1.00-1.24	.	.	125	106	3	.	.	.	.	.	234
1.25-1.49	.	.	.	66	7	.	.	.	.	.	73
1.50-1.74	.	.	.	21	7	.	.	.	.	.	28
1.75-1.99	.	.	.	.	1	1	.	.	.	.	2
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2316	671	273	21	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.4 NO. OF CASES= 3077.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1289	104	17	.	.	.	.	.	.	1410
0.25-0.49	.	1107	152	82	1	.	.	.	.	.	1342
0.50-0.74	.	721	402	167	8	.	.	.	.	.	1298
0.75-0.99	.	48	331	65	14	.	.	.	.	.	458
1.00-1.24	.	1	315	108	28	1	.	.	.	.	453
1.25-1.49	.	.	7	108	39	.	.	.	.	.	154
1.50-1.74	.	.	.	38	34	2	.	.	.	.	74
1.75-1.99	.	.	.	2	2	1	.	.	.	.	5
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3166	1311	587	126	4	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.6 NO. OF CASES= 4868.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1320	97	24	.	.	.	.	.	.	1441
0.25-0.49	.	1345	77	66	2	.	.	.	.	.	1490
0.50-0.74	.	1392	149	43	3	.	.	.	.	.	1587
0.75-0.99	.	291	462	17	5	.	.	.	.	.	775
1.00-1.24	.	.	497	71	8	.	.	.	.	.	576
1.25-1.49	.	.	28	86	3	.	.	.	.	.	117
1.50-1.74	.	.	1	34	6	.	.	.	.	.	41
1.75-1.99	.	.	.	1	2	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4348	1311	342	29	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 5648.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1518	21	.	.	.	.	.	.	.	1539
0.25-0.49	.	1311	38	6	.	.	.	.	.	.	1355
0.50-0.74	.	2036	37	14	1	.	.	.	.	.	2088
0.75-0.99	.	286	720	2	.	.	.	.	.	.	1008
1.00-1.24	.	.	1032	32	.	.	.	.	.	.	1064
1.25-1.49	.	.	3	160	.	.	.	.	.	.	163
1.50-1.74	.	.	.	27	.	.	.	.	.	.	27
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5151	1851	241	3	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 6782.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1194	14	.	.	.	.	.	.	.	1208
0.25-0.49	.	1486	19	3	.	.	.	.	.	.	1508
0.50-0.74	.	1764	216	5	.	.	.	.	.	.	1985
0.75-0.99	.	104	1266	2	.	.	.	.	.	.	1372
1.00-1.24	.	.	1242	520	.	.	.	.	.	.	1762
1.25-1.49	.	.	2	480	.	.	.	.	.	.	482
1.50-1.74	.	.	.	102	9	.	.	.	.	.	111
1.75-1.99	.	.	.	.	7	.	.	.	.	.	7
2.00-2.24	.	.	.	.	5	.	.	.	.	.	5
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4548	2759	1112	21	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.6 NO. OF CASES= 7900.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1560	20	1	.	.	.	.	.	.	1581
0.25-0.49	.	1630	16	3	.	.	.	.	.	.	1649
0.50-0.74	.	1762	410	9	.	.	.	.	.	.	2181
0.75-0.99	.	53	1552	3	.	.	.	.	.	.	1608
1.00-1.24	.	.	1282	1095	.	.	.	.	.	.	2377
1.25-1.49	.	.	2	1012	.	.	.	.	.	.	1014
1.50-1.74	.	.	.	337	42	.	.	.	.	.	379
1.75-1.99	.	.	.	.	55	.	.	.	.	.	55
2.00-2.24	.	.	.	.	43	.	.	.	.	.	43
2.25-2.49	.	.	.	.	5	4	.	.	.	.	9
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5005	3282	2460	145	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 10198.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1288	20	3	.	.	.	.	.	.	1311
0.25-0.49	.	1550	13	3	.	.	.	.	.	.	1566
0.50-0.74	.	2192	165	3	.	.	.	.	.	.	2360
0.75-0.99	.	181	1420	1	1	.	.	.	.	.	1603
1.00-1.24	.	1	1728	511	.	.	.	.	.	.	2240
1.25-1.49	.	.	3	790	.	.	.	.	.	.	793
1.50-1.74	.	.	.	272	26	.	.	.	.	.	298
1.75-1.99	.	.	.	14	62	.	.	.	.	.	76
2.00-2.24	.	.	.	.	45	.	.	.	.	.	45
2.25-2.49	.	.	.	.	4	1	.	.	.	.	5
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5212	3349	1597	138	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 9638.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1330	20	1	.	.	.	.	.	.	1351
0.25-0.49	.	1264	12	8	.	.	.	.	.	.	1284
0.50-0.74	.	2090	7	2	.	.	.	.	.	.	2099
0.75-0.99	.	220	947	.	1	.	.	.	.	.	1168
1.00-1.24	.	.	1575	113	.	.	.	.	.	.	1688
1.25-1.49	.	.	.	392	.	.	.	.	.	.	392
1.50-1.74	.	.	.	166	.	.	.	.	.	.	166
1.75-1.99	.	.	.	13	12	.	.	.	.	.	25
2.00-2.24	.	.	.	.	16	.	.	.	.	.	16
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4904	2561	695	29	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.5 NO. OF CASES= 7665.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1037	13	.	.	.	.	.	.	.	1050
0.25-0.49	.	1155	2	6	.	.	.	.	.	.	1163
0.50-0.74	.	2116	4	.	.	.	.	.	.	.	2120
0.75-0.99	.	625	614	.	.	.	.	.	.	.	1239
1.00-1.24	.	.	926	51	.	.	.	.	.	.	977
1.25-1.49	.	.	19	155	.	.	.	.	.	.	174
1.50-1.74	.	.	1	72	.	.	.	.	.	.	73
1.75-1.99	.	.	.	3	2	.	.	.	.	.	5
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4933	1579	287	6	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.3 NO. OF CASES= 6369.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1042	28	.	.	.	.	.	.	.	1070
0.25-0.49	.	959	19	3	.	.	.	.	.	.	981
0.50-0.74	.	2141	4	2	.	.	.	.	.	.	2147
0.75-0.99	.	801	275	.	.	.	.	.	.	.	1076
1.00-1.24	.	.	420	.	.	.	.	.	.	.	420
1.25-1.49	.	.	33	27	.	.	.	.	.	.	60
1.50-1.74	.	.	.	5	.	.	.	.	.	.	5
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4943	779	37	0	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 5390.

STATION E46 41.87N 83.08W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

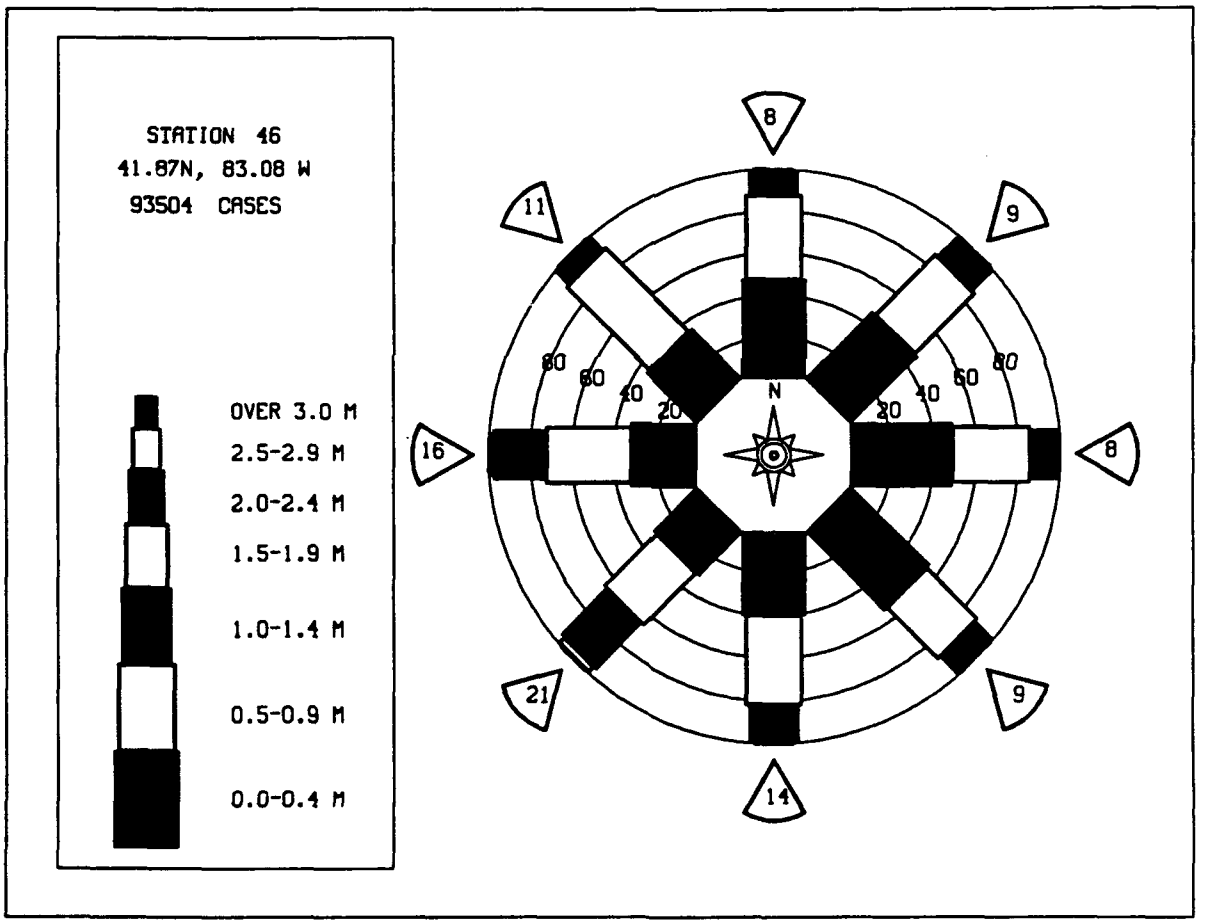
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	806	21	1	1	.	.	.	.	.	829
0.25-0.49	.	767	5	3	.	.	.	.	.	.	775
0.50-0.74	.	1430	6	6	1	.	.	.	.	.	1443
0.75-0.99	.	483	313	.	.	.	.	.	.	.	796
1.00-1.24	.	.	472	19	.	.	.	.	.	.	491
1.25-1.49	.	.	6	35	.	.	.	.	.	.	41
1.50-1.74	.	.	.	12	.	.	.	.	.	.	12
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3486	823	76	2	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.2 NO. OF CASES= 4109.

STATION E46 41.87N 83.08W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1891	57	8	.	.	.	.	.	.	1956
0.25-0.49	.	1829	55	25	1	.	.	.	.	.	1910
0.50-0.74	.	2366	248	34	2	.	.	.	.	.	2650
0.75-0.99	.	372	1031	14	3	.	.	.	.	.	1420
1.00-1.24	.	.	1109	361	4	.	.	.	.	.	1474
1.25-1.49	.	.	12	380	5	.	.	.	.	.	397
1.50-1.74	.	.	.	124	20	.	.	.	.	.	144
1.75-1.99	.	.	.	3	17	.	.	.	.	.	20
2.00-2.24	.	.	.	.	12	.	.	.	.	.	12
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6458	2512	949	64	0	0	0	0	0	

MEAN HS(M)= 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.5 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E46 (41.87N 83.08W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.5	0.6	0.6	0.7	0.7	0.4	0.5	0.5	0.6	0.6	0.8	0.7	0.6
1957	0.7	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.9	0.8	0.7
1958	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.9	0.7	0.7
1959	0.7	0.8	0.8	0.7	0.5	0.4	0.4	0.4	0.6	0.6	0.7	0.6	0.6
1960	0.6	0.7	0.7	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.9	0.9	0.6
1961	0.7	0.6	0.8	0.7	0.7	0.6	0.4	0.5	0.5	0.7	0.7	0.8	0.6
1962	0.9	0.7	0.7	0.8	0.6	0.5	0.4	0.4	0.5	0.6	0.5	0.7	0.6
1963	0.7	0.7	0.7	0.7	0.6	0.4	0.4	0.5	0.5	0.5	0.8	0.7	0.6
1964	0.9	0.6	0.8	0.9	0.8	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
1965	0.8	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.6	0.7	0.8	0.8	0.7
1966	0.7	0.5	0.7	0.7	0.6	0.4	0.5	0.4	0.5	0.7	0.7	0.7	0.6
1967	0.8	0.8	0.6	0.7	0.7	0.5	0.4	0.4	0.5	0.7	0.7	0.7	0.6
1968	0.7	0.7	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.6
1969	0.8	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.6
1970	0.6	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.8	0.8	0.6
1971	0.9	1.0	0.7	0.7	0.6	0.5	0.5	0.6	0.5	0.5	0.8	0.7	0.7
1972	0.9	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.7
1973	0.9	0.7	0.7	0.8	0.7	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.7
1974	0.7	0.8	0.8	0.9	0.7	0.7	0.6	0.5	0.6	0.6	0.7	0.7	0.7
1975	0.8	0.7	0.7	0.7	0.4	0.6	0.4	0.5	0.5	0.7	0.8	0.7	0.6
1976	0.7	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6
1977	0.8	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.5	0.6	0.8	0.8	0.6
1978	0.7	0.4	0.6	0.7	0.5	0.4	0.5	0.4	0.6	0.6	0.7	0.8	0.6
1979	0.6	0.7	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.6
1980	0.6	0.6	0.7	0.6	0.4	0.5	0.3	0.4	0.4	0.6	0.6	0.6	0.5
1981	0.5	0.8	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.5
1982	0.8	0.6	0.6	0.8	0.3	0.4	0.3	0.3	0.3	0.4	0.7	0.7	0.5
1983	0.6	0.4	0.6	0.7	0.6	0.3	0.4	0.3	0.4	0.7	0.7	0.8	0.5
1984	0.5	0.6	0.7	0.6	0.6	0.5	0.4	0.3	0.5	0.5	0.7	0.7	0.6
1985	0.8	0.7	0.8	0.7	0.6	0.5	0.4	0.4	0.5	0.6	0.8	0.8	0.6
1986	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.5
1987	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.6	0.8	0.7	0.6
MEAN	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.6	0.7	0.7	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E46 (41.87N 83.08W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.3	1.7	2.0	2.0	1.7	1.5	1.5	1.3	1.2	1.6	1.9	1.8
1957	1.7	1.5	3.8	2.1	1.6	2.8	1.6	1.1	1.8	1.3	2.2	1.7
1958	1.5	1.7	1.2	2.0	1.5	1.4	1.8	1.7	1.6	1.7	1.9	1.5
1959	1.8	1.7	2.4	1.8	1.4	1.4	1.5	1.3	1.4	1.6	1.4	1.5
1960	1.5	1.6	1.9	2.1	1.6	1.5	1.3	1.2	1.2	1.6	1.7	1.6
1961	1.6	1.8	1.9	1.9	1.6	1.5	1.3	1.4	1.5	1.6	1.6	1.8
1962	2.1	1.5	1.6	2.0	1.4	1.1	1.3	1.5	1.7	1.5	1.9	1.6
1963	1.6	1.6	2.2	1.9	1.6	1.4	1.4	1.3	1.5	1.3	2.3	1.7
1964	2.2	1.5	2.3	2.1	2.3	1.7	1.5	1.4	1.7	1.5	1.8	1.5
1965	2.2	1.7	2.2	2.2	1.7	1.4	1.3	1.4	1.7	2.0	2.1	1.6
1966	2.0	1.4	2.1	1.7	2.0	1.4	1.2	1.3	1.6	1.8	1.5	1.6
1967	1.8	1.6	1.5	2.0	1.9	1.3	1.3	1.2	1.6	1.5	1.4	1.7
1968	1.6	1.6	1.5	2.2	1.7	1.4	1.3	1.3	1.4	1.6	1.7	1.8
1969	1.6	1.4	1.8	1.7	1.7	1.4	1.2	1.3	1.3	1.5	1.3	1.4
1970	1.4	1.5	2.0	1.9	1.8	1.6	1.6	1.5	1.8	1.6	1.9	1.7
1971	2.2	2.4	2.2	1.8	1.8	1.2	1.5	1.4	1.3	1.5	1.5	2.3
1972	2.0	1.5	2.1	1.7	1.7	1.6	1.3	1.3	1.4	1.4	1.5	1.5
1973	2.0	1.5	1.8	1.7	1.7	1.3	1.4	1.2	1.5	1.4	1.8	1.9
1974	2.0	1.7	1.7	2.1	1.8	1.7	1.4	1.5	1.5	1.5	1.6	1.5
1975	1.9	2.0	1.8	2.0	1.3	1.4	1.3	1.3	1.6	1.9	1.9	2.0
1976	1.5	1.6	1.7	1.8	1.8	1.3	1.2	1.3	1.5	1.6	1.5	1.6
1977	1.7	1.4	1.6	1.6	1.4	1.3	1.9	1.3	1.3	1.9	1.7	1.9
1978	1.8	1.3	1.7	1.5	1.9	1.2	1.4	1.6	1.6	1.5	1.9	1.6
1979	1.5	1.6	1.7	1.9	1.6	1.2	1.1	1.5	1.3	1.7	1.9	1.7
1980	1.9	1.5	1.5	2.0	1.2	1.2	0.9	1.3	1.3	1.5	1.8	1.6
1981	1.4	1.6	1.9	2.1	1.2	1.3	1.2	1.1	1.6	1.7	1.5	1.5
1982	2.2	1.7	1.9	2.4	1.1	1.4	1.3	1.1	1.1	1.4	1.5	1.9
1983	1.4	1.4	1.6	1.7	1.4	1.3	1.2	1.1	1.2	1.6	1.6	1.8
1984	1.4	1.9	1.9	2.4	1.6	1.4	1.1	1.0	1.3	1.2	1.5	1.5
1985	1.6	1.4	1.9	2.1	1.6	1.4	1.2	1.1	1.4	1.7	1.7	2.2
1986	1.4	1.8	1.7	1.5	1.4	1.2	1.1	1.0	1.5	1.3	1.5	1.7
1987	1.6	1.5	1.5	2.0	1.6	1.4	1.3	1.4	1.3	1.5	1.4	2.1

32 YR. STATISTICS FOR WIS STATION E46

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.6
MEAN PEAK WAVE PERIOD	(SECONDS)	3.5
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.4
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.7
LARGEST WAVE HS	(METERS)	3.8
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	244.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57031603

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1244	41	9	3	.	.	.	.	.	1297
0.25-0.49	.	1321	20	6	1	.	.	.	.	.	1348
0.50-0.74	.	1378	39	6	1	.	.	.	.	.	1424
0.75-0.99	.	367	51	3	.	.	.	.	.	.	421
1.00-1.24	.	2	72	9	.	.	.	.	.	.	83
1.25-1.49	.	.	1	1	.	.	.	.	.	.	2
1.50-1.74	.	.	.	2	.	.	.	.	.	.	2
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4312	224	36	5	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 4288.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1021	35	5	2	.	.	.	.	.	1063
0.25-0.49	.	1047	24	4	1	.	.	.	.	.	1076
0.50-0.74	.	858	106	6	1	.	.	.	.	.	971
0.75-0.99	.	80	168	5	.	.	.	.	.	.	253
1.00-1.24	.	1	83	42	.	.	.	.	.	.	126
1.25-1.49	.	.	.	17	.	.	.	.	.	.	17
1.50-1.74	.	.	.	1	4	.	.	.	.	.	5
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3007	416	80	8	0	0	0	0	0	

MEAN HS(M) = 0.4 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.2 NO. OF CASES= 3290.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1223	58	8	2	.	.	.	.	.	1291
0.25-0.49	.	1104	29	16	1	.	.	.	.	.	1150
0.50-0.74	.	983	281	11	.	1	.	.	.	.	1276
0.75-0.99	.	43	585	14	1	.	.	.	.	.	643
1.00-1.24	.	.	290	257	.	.	.	.	.	.	547
1.25-1.49	.	.	.	131	1	.	.	.	.	.	132
1.50-1.74	.	.	.	37	12	.	.	.	.	.	49
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3353	1243	474	18	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.4 NO. OF CASES= 4769.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	937	28	3	.	.	.	.	.	.	968
0.25-0.49	.	951	24	9	2	1	.	.	.	.	987
0.50-0.74	.	993	405	21	2	.	.	.	.	.	1421
0.75-0.99	.	28	816	63	1	.	.	.	.	.	908
1.00-1.24	.	.	463	472	1	.	.	.	.	.	936
1.25-1.49	.	.	2	216	10	.	.	.	.	.	228
1.50-1.74	.	.	.	44	28	.	.	.	.	.	72
1.75-1.99	.	.	.	.	4	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2909	1738	828	48	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.6 NO. OF CASES= 5175.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1113	37	5	.	.	.	.	.	.	1155
0.25-0.49	.	1068	49	20	.	.	.	.	.	.	1137
0.50-0.74	.	861	501	37	2	.	.	.	.	.	1401
0.75-0.99	.	29	511	180	2	.	1	.	.	.	723
1.00-1.24	.	.	113	502	5	2	.	.	.	.	622
1.25-1.49	.	.	.	146	24	.	.	.	.	.	170
1.50-1.74	.	.	.	6	55	.	.	.	.	.	61
1.75-1.99	.	.	.	.	3	.	.	.	.	.	3
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3071	1211	896	91	2	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.6 NO. OF CASES= 4939.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	890	40	.	1	.	.	.	.	.	931
0.25-0.49	.	789	44	9	.	.	.	.	.	.	842
0.50-0.74	.	571	344	51	3	.	.	.	.	.	969
0.75-0.99	.	12	208	115	4	.	.	.	.	.	339
1.00-1.24	.	.	31	174	12	.	.	.	.	.	217
1.25-1.49	.	.	.	55	10	.	.	.	.	.	65
1.50-1.74	.	.	.	1	11	1	.	.	.	.	13
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2262	667	405	41	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 3166.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1165	64	28	.	.	.	.	.	.	1257
0.25-0.49	.	1124	75	58	.	.	.	.	.	.	1257
0.50-0.74	.	709	416	95	9	.	.	.	.	.	1229
0.75-0.99	.	42	257	134	17	.	.	.	.	.	450
1.00-1.24	.	1	71	243	25	1	.	.	.	.	341
1.25-1.49	.	.	1	101	20	.	.	.	.	.	122
1.50-1.74	.	.	.	2	35	1	.	.	.	.	38
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3041	884	661	106	2	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 4399.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1391	64	16	1	.	.	.	.	.	1472
0.25-0.49	.	1485	38	28	2	.	.	.	.	.	1553
0.50-0.74	.	1497	136	37	2	.	.	.	.	.	1672
0.75-0.99	.	141	418	25	5	.	.	.	.	.	589
1.00-1.24	.	.	348	119	8	1	.	.	.	.	476
1.25-1.49	.	.	11	67	5	.	.	.	.	.	83
1.50-1.74	.	.	.	5	8	.	.	.	.	.	13
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4514	1015	297	32	1	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.3 NO. OF CASES= 5488.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1687	26	3	.	.	.	.	.	.	1716
0.25-0.49	.	1788	50	11	.	.	.	.	.	.	1849
0.50-0.74	.	2857	51	32	3	.	.	.	.	.	2943
0.75-0.99	.	136	1069	6	.	.	.	.	.	.	1211
1.00-1.24	.	.	916	167	.	.	.	.	.	.	1083
1.25-1.49	.	.	.	83	.	.	.	.	.	.	83
1.50-1.74	.	.	.	11	.	.	.	.	.	.	11
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	6468	2112	313	4	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 NO. OF CASES= 8327.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1377	28	4	.	.	.	.	.	.	1409
0.25-0.49	.	1567	19	9	.	.	.	.	.	.	1595
0.50-0.74	.	3434	21	17	.	.	.	.	.	.	3472
0.75-0.99	.	977	751	2	.	.	.	.	.	.	1730
1.00-1.24	.	.	889	97	.	.	.	.	.	.	986
1.25-1.49	.	.	16	69	.	.	.	.	.	.	85
1.50-1.74	.	.	.	9	1	.	.	.	.	.	10
1.75-1.99	.	.	.	1	3	.	.	.	.	.	4
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7355	1724	208	4	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.9 MEAN TP(SEC)= 3.2 NO. OF CASES= 8695.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1527	40	3	.	.	.	.	.	.	1570
0.25-0.49	.	1413	29	11	1	.	.	.	.	.	1454
0.50-0.74	.	3658	5	11	1	.	.	.	.	.	3675
0.75-0.99	.	1356	603	3	.	.	.	.	.	.	1962
1.00-1.24	.	3	1093	1	.	.	.	.	.	.	1097
1.25-1.49	.	.	14	83	.	.	.	.	.	.	97
1.50-1.74	.	.	.	51	.	.	.	.	.	.	51
1.75-1.99	.	.	.	6	1	.	.	.	.	.	7
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7957	1784	169	3	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.8 MEAN TP(SEC)= 3.2 NO. OF CASES= 9277.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1143	29	5	.	.	.	.	.	.	1177
0.25-0.49	.	1814	17	12	.	.	.	.	.	.	1843
0.50-0.74	.	3279	1	7	3	.	.	.	.	.	3290
0.75-0.99	.	1243	299	.	2	.	.	.	.	.	1544
1.00-1.24	.	6	618	.	.	.	.	.	.	.	624
1.25-1.49	.	.	48	58	.	.	.	.	.	.	106
1.50-1.74	.	.	.	65	.	.	.	.	.	.	65
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7485	1012	147	5	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.2 NO. OF CASES= 8094.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1517	43	5	.	.	.	.	.	.	1565
0.25-0.49	.	1942	22	7	1	.	.	.	.	.	1972
0.50-0.74	.	3106	2	2	1	.	.	.	.	.	3111
0.75-0.99	.	1172	199	.	1	.	.	.	.	.	1372
1.00-1.24	.	.	346	.	.	.	.	.	.	.	346
1.25-1.49	.	.	40	11	.	.	.	.	.	.	51
1.50-1.74	.	.	.	13	.	.	.	.	.	.	13
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7737	652	38	3	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.1 NO. OF CASES= 7890.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1125	26	3	.	.	.	.	.	.	1154
0.25-0.49	.	1305	11	7	.	.	.	.	.	.	1323
0.50-0.74	.	2402	1	5	.	.	.	.	.	.	2408
0.75-0.99	.	913	265	.	.	.	.	.	.	.	1178
1.00-1.24	.	.	365	.	.	.	.	.	.	.	365
1.25-1.49	.	.	19	14	.	.	.	.	.	.	33
1.50-1.74	.	.	.	12	.	.	.	.	.	.	12
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5745	687	41	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.1 NO. OF CASES= 6059.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1157	36	1	.	.	.	.	.	.	1194
0.25-0.49	.	843	23	3	.	.	.	.	.	.	869
0.50-0.74	.	2240	4	4	.	.	.	.	.	.	2248
0.75-0.99	.	699	273	.	.	.	.	.	.	.	972
1.00-1.24	.	.	438	.	.	.	.	.	.	.	438
1.25-1.49	.	.	8	29	.	.	.	.	.	.	37
1.50-1.74	.	.	.	3	.	.	.	.	.	.	3
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4939	782	40	0	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.6 MEAN TP(SEC)= 3.2 NO. OF CASES= 5393.

STATION E47 41.87N 83.27W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

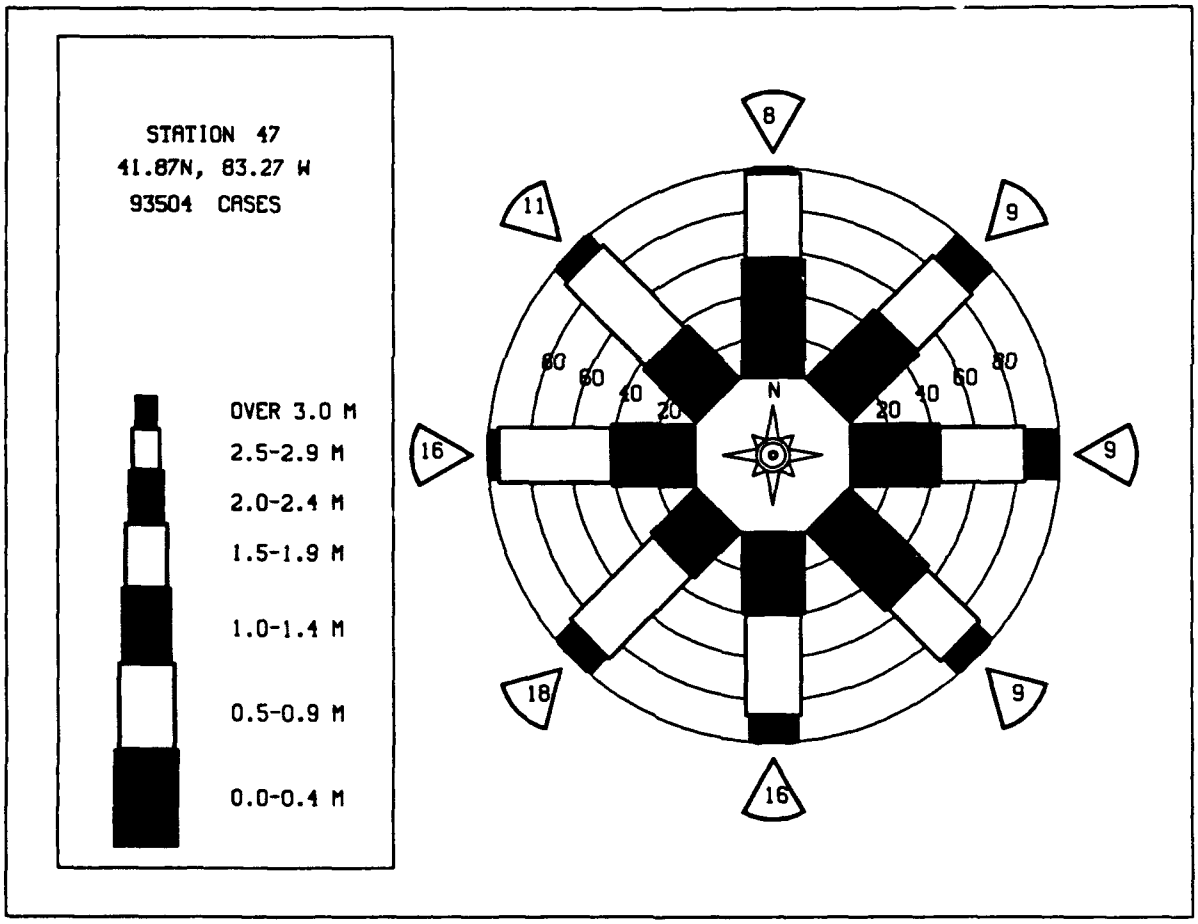
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	918	32	2	.	.	.	.	.	.	952
0.25-0.49	.	918	12	5	1	.	.	.	.	.	936
0.50-0.74	.	1745	7	4	.	.	.	.	.	.	1756
0.75-0.99	.	524	162	1	.	.	.	.	.	.	687
1.00-1.24	.	.	205	2	.	.	.	.	.	.	207
1.25-1.49	.	.	4	2	.	.	.	.	.	.	6
1.50-1.74	.	.	.	1	.	.	.	.	.	.	1
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4105	422	17	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 1.5 MEAN TP(SEC)= 3.1 NO. OF CASES= 4255.

STATION E47 41.87N 83.27W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1944	63	10		.	.	.	.	.	2017
0.25-0.49	.	2048	49	22	1	.	.	.	.	.	2120
0.50-0.74	.	3057	232	35	2	.	.	.	.	.	3326
0.75-0.99	.	777	664	55	3	.	.	.	.	.	1499
1.00-1.24	.	1	634	209	5	.	.	.	.	.	849
1.25-1.49	.	.	16	109	7	.	.	.	.	.	132
1.50-1.74	.	.	.	26	15	.	.	.	.	.	41
1.75-1.99	.	.	.	.	1	.	.	.	.	.	1
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	7827	1658	466	34	0	0	0	0	0	

MEAN HS(M)= 0.5 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E47 (41.87N 83.27W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.4	0.5	0.6	0.6	0.6	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.5
1957	0.6	0.5	0.6	0.6	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.7	0.6
1958	0.6	0.6	0.6	0.7	0.7	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.6
1959	0.6	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.5
1960	0.5	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.5	0.7	0.7	0.5
1961	0.6	0.5	0.7	0.7	0.6	0.5	0.4	0.4	0.5	0.6	0.6	0.7	0.6
1962	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5
1963	0.6	0.6	0.6	0.6	0.6	0.3	0.4	0.4	0.5	0.4	0.7	0.5	0.5
1964	0.7	0.6	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6
1965	0.7	0.7	0.6	0.7	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.7	0.6
1966	0.6	0.5	0.6	0.7	0.6	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.5
1967	0.7	0.7	0.6	0.7	0.7	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.6
1968	0.6	0.6	0.6	0.7	0.6	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.6
1969	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.5
1970	0.5	0.6	0.5	0.7	0.6	0.5	0.4	0.4	0.5	0.6	0.7	0.7	0.6
1971	0.7	0.8	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.7	0.6	0.6
1972	0.7	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
1973	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.7	0.7	0.6
1974	0.6	0.7	0.7	0.8	0.6	0.6	0.5	0.4	0.5	0.5	0.6	0.6	0.6
1975	0.7	0.6	0.6	0.7	0.4	0.5	0.3	0.4	0.5	0.6	0.7	0.6	0.6
1976	0.6	0.7	0.7	0.6	0.6	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6
1977	0.6	0.5	0.6	0.6	0.5	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.5
1978	0.6	0.3	0.5	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5
1979	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.5	0.5	0.5	0.6	0.6	0.5
1980	0.6	0.5	0.6	0.5	0.3	0.4	0.3	0.4	0.4	0.5	0.6	0.5	0.5
1981	0.5	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5
1982	0.7	0.5	0.6	0.7	0.3	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.5
1983	0.5	0.4	0.5	0.6	0.6	0.3	0.3	0.3	0.4	0.6	0.6	0.6	0.5
1984	0.4	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.5	0.4	0.6	0.6	0.5
1985	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.7	0.6	0.6
1986	0.6	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
1987	0.6	0.6	0.6	0.7	0.5	0.5	0.4	0.5	0.4	0.5	0.7	0.6	0.6
MEAN	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.6	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E47 (41.87N 83.27W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.2	1.4	1.4	1.5	1.3	1.2	1.3	1.1	1.2	1.5	1.5	1.3
1957	1.2	1.4	3.7	1.9	1.8	1.3	1.3	1.1	1.4	1.1	1.8	1.5
1958	1.2	1.7	1.3	1.7	1.5	1.2	1.3	1.2	1.2	1.3	1.4	1.1
1959	1.5	1.3	1.9	1.4	1.3	1.0	1.3	1.0	1.1	1.3	1.4	1.2
1960	1.2	1.3	1.6	1.8	1.2	1.2	1.1	1.1	1.1	1.5	1.5	1.4
1961	1.3	1.5	1.5	1.6	1.3	1.2	1.2	1.2	1.3	1.3	1.6	1.4
1962	1.5	1.4	1.4	1.5	1.2	1.1	1.2	1.3	1.2	1.2	1.4	1.3
1963	1.3	1.5	1.6	1.8	1.3	1.4	1.2	1.3	1.3	1.2	1.7	1.2
1964	1.7	1.2	1.7	1.5	1.7	1.4	1.1	1.1	1.4	1.3	1.4	1.2
1965	1.6	1.5	1.7	1.6	1.3	1.3	1.1	1.2	1.5	1.5	1.6	1.2
1966	1.5	1.3	1.6	1.7	1.5	1.1	1.2	1.0	1.4	1.3	1.4	1.4
1967	1.5	1.2	1.2	1.5	1.4	1.3	1.2	1.2	1.3	1.4	1.1	1.5
1968	1.2	1.2	1.5	1.7	1.5	1.2	0.9	1.0	1.4	1.3	1.3	1.3
1969	1.2	1.2	1.3	1.4	1.3	1.1	1.2	1.0	0.9	1.2	1.1	1.3
1970	1.4	1.3	1.5	1.7	1.4	1.3	1.2	1.3	1.3	1.5	1.7	1.4
1971	1.8	1.8	1.5	1.4	1.3	1.1	1.1	1.1	1.1	1.4	1.4	2.1
1972	1.6	1.5	1.6	1.7	1.4	1.2	1.1	1.3	1.2	1.2	1.5	1.4
1973	1.5	1.4	1.4	1.5	1.4	1.1	1.3	1.1	1.3	1.4	1.5	1.5
1974	1.4	1.4	1.6	1.7	1.5	1.3	1.3	1.4	1.1	1.3	1.4	1.5
1975	1.9	1.5	1.6	1.6	1.0	1.3	1.0	1.2	1.5	1.7	1.4	1.5
1976	1.3	1.2	1.4	1.6	1.4	1.2	1.0	1.2	1.0	1.1	1.2	1.3
1977	1.5	1.1	1.5	1.3	1.3	1.1	1.5	1.0	1.0	1.7	1.3	1.6
1978	1.6	1.3	1.5	1.5	1.9	1.0	1.4	1.2	1.6	1.3	1.7	1.3
1979	1.2	1.5	1.5	1.5	1.2	1.1	1.0	1.2	1.1	1.3	1.6	1.2
1980	1.5	1.5	1.5	1.8	1.0	1.2	0.9	1.2	1.0	1.4	1.5	1.3
1981	1.1	1.5	1.5	1.7	1.3	1.0	1.2	0.9	1.3	1.4	1.4	1.5
1982	1.7	1.6	1.4	1.8	1.0	1.0	1.0	0.9	0.9	1.4	1.3	1.4
1983	1.3	1.3	1.5	1.6	1.4	1.2	0.9	1.0	1.0	1.4	1.4	1.6
1984	1.3	1.7	1.6	1.8	1.5	1.2	1.0	0.9	1.3	1.2	1.3	1.2
1985	1.2	1.2	1.7	1.6	1.3	1.2	1.1	1.0	1.2	1.4	1.5	1.6
1986	1.3	1.7	1.4	1.4	1.2	1.2	1.0	1.0	1.1	1.2	1.4	1.5
1987	1.2	1.4	1.6	1.6	1.4	1.1	1.0	1.2	1.1	1.4	1.3	1.7

32 YR. STATISTICS FOR WIS STATION E47

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.5
MEAN PEAK WAVE PERIOD	(SECONDS)	3.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.3
STANDARD DEVIATION OF WAVE TP	(SECONDS)	0.6
LARGEST WAVE HS	(METERS)	3.7
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	241.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		57031603

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	316	11	2	.	.	.	.	.	.	329
0.25-0.49	.	654	34	21	.	.	.	.	.	.	709
0.50-0.74	.	807	296	105	11	.	.	.	.	.	1219
0.75-0.99	.	69	427	62	29	.	.	.	.	.	587
1.00-1.24	.	.	490	117	49	1	.	.	.	.	657
1.25-1.49	.	.	24	296	23	5	.	.	.	.	348
1.50-1.74	.	.	.	228	20	10	.	.	.	.	258
1.75-1.99	.	.	.	51	13	4	.	.	.	.	68
2.00-2.24	.	.	.	11	36	12	2	.	.	.	61
2.25-2.49	.	.	.	.	9	4	.	.	.	.	13
2.50-2.74	.	.	.	.	2	10	1	.	.	.	13
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	3	1	2	.	.	.	6
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1846	1282	893	197	47	6	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 3.9 NO. OF CASES= 4011.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	212	6	3	.	.	.	.	.	.	221
0.25-0.49	.	509	33	9	.	.	.	.	.	.	551
0.50-0.74	.	669	290	97	5	.	.	.	.	.	1061
0.75-0.99	.	45	270	146	20	.	.	.	.	.	481
1.00-1.24	.	.	280	166	111	1	.	.	.	.	558
1.25-1.49	.	.	5	146	47	2	.	.	.	.	200
1.50-1.74	.	.	.	110	78	16	.	.	.	.	204
1.75-1.99	.	.	.	8	37	13	.	.	.	.	58
2.00-2.24	.	.	.	3	29	10	1	.	.	.	43
2.25-2.49	.	.	.	.	8	12	1	.	.	.	21
2.50-2.74	.	.	.	.	1	16	.	.	.	.	17
2.75-2.99	.	.	.	.	.	12	.	.	.	.	12
3.00-3.24	.	.	.	.	.	4	3	.	.	.	7
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1435	884	688	336	86	10	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 3231.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	330	5	3	.	.	.	.	.	.	338
0.25-0.49	.	747	48	13	.	.	.	.	.	.	808
0.50-0.74	.	714	392	156	3	.	.	.	.	.	1265
0.75-0.99	.	81	365	341	36	.	.	.	.	.	823
1.00-1.24	.	1	266	483	196	1	.	.	.	.	947
1.25-1.49	.	.	8	275	173	16	.	.	.	.	472
1.50-1.74	.	.	.	216	330	23	.	.	.	.	569
1.75-1.99	.	.	.	12	199	56	1	.	.	.	268
2.00-2.24	.	.	.	.	223	60	1	.	.	.	284
2.25-2.49	.	.	.	.	54	99	1	.	.	.	154
2.50-2.74	.	.	.	.	4	129	4	.	.	.	137
2.75-2.99	.	.	.	.	.	56	2	.	.	.	58
3.00-3.24	.	.	.	.	.	35	20	.	.	.	55
3.25-3.49	.	.	.	.	.	1	18	.	.	.	19
3.50+	.	.	.	.	.	.	24	.	.	.	24
TOTAL	0	1873	1084	1499	1218	476	71	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.6 NO. OF CASES= 5834.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	247	10	1	.	.	.	.	.	.	258
0.25-0.49	.	397	32	11	.	.	.	.	.	.	440
0.50-0.74	.	424	219	102	2	.	.	.	.	.	747
0.75-0.99	.	44	214	196	20	.	.	.	.	.	474
1.00-1.24	.	.	117	249	117	.	.	.	.	.	483
1.25-1.49	.	.	1	117	91	7	.	.	.	.	216
1.50-1.74	.	.	.	77	140	17	.	.	.	.	234
1.75-1.99	.	.	.	5	69	18	.	.	.	.	92
2.00-2.24	.	.	.	.	59	13	.	.	.	.	72
2.25-2.49	.	.	.	.	17	31	1	.	.	.	49
2.50-2.74	.	.	.	.	3	28	2	.	.	.	33
2.75-2.99	.	.	.	.	.	10	1	.	.	.	11
3.00-3.24	.	.	.	.	.	7	9	.	.	.	16
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	1112	593	758	518	131	16	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.4 NO. OF CASES= 2941.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	238	6	2	.	.	.	.	.	.	246
0.25-0.49	.	410	31	12	.	.	.	.	.	.	453
0.50-0.74	.	326	224	105	1	.	.	.	.	.	656
0.75-0.99	.	23	158	141	27	.	.	.	.	.	349
1.00-1.24	.	.	79	186	79	1	.	.	.	.	345
1.25-1.49	.	.	2	77	31	1	.	.	.	.	111
1.50-1.74	.	.	.	56	43	7	.	.	.	.	106
1.75-1.99	.	.	.	.	48	3	.	.	.	.	51
2.00-2.24	.	.	.	.	43	6	.	.	.	.	49
2.25-2.49	.	.	.	.	13	2	.	.	.	.	15
2.50-2.74	.	.	.	.	3	16	.	.	.	.	19
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	2	3	.	.	.	5
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	997	500	578	288	42	4	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.1 NO. OF CASES= 2265.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	210	4	1	.	.	.	.	.	.	215
0.25-0.49	.	409	36	6	1	.	.	.	.	.	452
0.50-0.74	.	390	198	93	4	.	.	.	.	.	685
0.75-0.99	.	22	142	87	21	.	.	.	.	.	272
1.00-1.24	.	.	97	89	33	.	.	.	.	.	219
1.25-1.49	.	.	.	67	12	3	.	.	.	.	82
1.50-1.74	.	.	.	67	28	2	.	.	.	.	97
1.75-1.99	.	.	.	2	16	1	.	.	.	.	19
2.00-2.24	.	.	.	.	26	1	.	.	.	.	27
2.25-2.49	.	.	.	.	8	3	.	.	.	.	11
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1031	477	412	149	10	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.9 NO. OF CASES= 1955.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	321	10	1	.	.	.	.	.	.	332
0.25-0.49	.	742	32	13	.	.	.	.	.	.	787
0.50-0.74	.	669	311	96	8	.	.	.	.	.	1084
0.75-0.99	.	28	303	53	23	.	.	.	.	.	407
1.00-1.24	.	.	335	94	16	1	.	.	.	.	446
1.25-1.49	.	.	7	176	1	5	.	.	.	.	189
1.50-1.74	.	.	.	126	2	4	.	.	.	.	132
1.75-1.99	.	.	.	16	9	.	.	.	.	.	25
2.00-2.24	.	.	.	1	11	.	.	.	.	.	12
2.25-2.49	.	.	.	.	4	1	.	.	.	.	5
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1760	998	576	75	11	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.7 NO. OF CASES= 3209.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	472	8	1	.	.	.	.	.	.	481
0.25-0.49	.	1109	37	9	.	.	.	.	.	.	1155
0.50-0.74	.	1034	517	87	4	.	.	.	.	.	1642
0.75-0.99	.	55	564	63	21	.	.	.	.	.	703
1.00-1.24	.	.	507	225	8	1	.	.	.	.	741
1.25-1.49	.	.	8	376	.	1	.	.	.	.	385
1.50-1.74	.	.	.	329	6	3	.	.	.	.	338
1.75-1.99	.	.	.	51	79	.	.	.	.	.	130
2.00-2.24	.	.	.	.	67	.	.	.	.	.	67
2.25-2.49	.	.	.	.	26	.	.	.	.	.	26
2.50-2.74	.	.	.	.	12	2	.	.	.	.	14
2.75-2.99	.	.	.	.	1	3	.	.	.	.	4
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2670	1641	1141	224	11	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 5330.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	798	11	5	.	.	.	.	.	.	814
0.25-0.49	.	1606	66	22	1	.	.	.	.	.	1695
0.50-0.74	.	1645	963	88	4	.	.	.	.	.	2700
0.75-0.99	.	64	1080	121	9	.	.	.	.	.	1274
1.00-1.24	.	.	1162	714	4	1	.	.	.	.	1881
1.25-1.49	.	.	4	1266	2	.	.	.	.	.	1272
1.50-1.74	.	.	.	1442	8	3	.	.	.	.	1453
1.75-1.99	.	.	.	275	223	1	.	.	.	.	499
2.00-2.24	.	.	.	1	392	.	.	.	.	.	393
2.25-2.49	.	.	.	.	94	.	1	.	.	.	95
2.50-2.74	.	.	.	.	69	1	.	.	.	.	70
2.75-2.99	.	.	.	.	5	5	.	.	.	.	10
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	4113	3286	3934	811	16	1	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.1 NO. OF CASES= 11385.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	920	16	2	.	.	.	.	.	.	938
0.25-0.49	.	1805	74	19	.	.	.	.	.	.	1898
0.50-0.74	.	1429	1414	142	5	.	.	.	.	.	2990
0.75-0.99	.	51	1143	456	10	.	.	.	.	.	1660
1.00-1.24	.	.	827	1148	55	.	.	.	.	.	2030
1.25-1.49	.	.	6	990	108	.	.	.	.	.	1104
1.50-1.74	.	.	.	1082	383	.	.	.	.	.	1465
1.75-1.99	.	.	.	178	460	.	.	.	.	.	638
2.00-2.24	.	.	.	4	630	5	.	.	.	.	639
2.25-2.49	.	.	.	.	192	20	.	.	.	.	212
2.50-2.74	.	.	.	.	57	112	.	.	.	.	169
2.75-2.99	.	.	.	.	7	52	.	.	.	.	59
3.00-3.24	.	.	.	.	.	27	.	.	.	.	27
3.25-3.49	.	.	.	.	.	7	3	.	.	.	10
3.50+	.	.	.	.	.	2	11	.	.	.	13
TOTAL	0	4205	3480	4021	1907	225	14	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.3 NO. OF CASES= 12970.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	804	20	2	.	.	.	.	.	.	826
0.25-0.49	.	1565	177	23	.	.	.	.	.	.	1765
0.50-0.74	.	1103	1543	232	5	.	.	.	.	.	2883
0.75-0.99	.	52	822	997	12	1	.	.	.	.	1884
1.00-1.24	.	1	302	1559	128	.	.	.	.	.	1990
1.25-1.49	.	.	10	521	205	3	.	.	.	.	739
1.50-1.74	.	.	.	655	956	2	.	.	.	.	1613
1.75-1.99	.	.	.	32	776	2	.	.	.	.	810
2.00-2.24	.	.	.	.	1186	5	.	.	.	.	1191
2.25-2.49	.	.	.	.	464	57	.	.	.	.	521
2.50-2.74	.	.	.	.	59	424	.	.	.	.	483
2.75-2.99	.	.	.	.	5	173	.	.	.	.	178
3.00-3.24	.	.	.	.	.	142	.	.	.	.	142
3.25-3.49	.	.	.	.	.	21	20	.	.	.	41
3.50+	.	.	.	.	.	4	93	3	.	.	100
TOTAL	0	3525	2874	4021	3796	834	113	3	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.7 NO. OF CASES= 14196.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	557	10	2	.	.	.	.	.	.	569
0.25-0.49	.	1001	94	21	1	.	.	.	.	.	1117
0.50-0.74	.	919	770	114	4	.	.	.	.	.	1807
0.75-0.99	.	69	711	309	13	.	.	.	.	.	1102
1.00-1.24	.	.	722	621	57	.	.	.	.	.	1400
1.25-1.49	.	.	41	591	62	.	.	.	.	.	694
1.50-1.74	.	.	.	833	313	5	.	.	.	.	1151
1.75-1.99	.	.	.	231	365	10	.	.	.	.	606
2.00-2.24	.	.	.	83	560	8	1	.	.	.	652
2.25-2.49	.	.	.	.	222	44	.	.	.	.	266
2.50-2.74	.	.	.	.	63	154	1	.	.	.	218
2.75-2.99	.	.	.	.	8	79	1	.	.	.	88
3.00-3.24	.	.	.	.	9	78	10	.	.	.	97
3.25-3.49	.	.	.	.	.	17	14	.	.	.	31
3.50+	.	.	.	.	.	6	41	1	.	.	48
TOTAL	0	2546	2348	2805	1677	401	68	1	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 4.5 NO. OF CASES= 9223.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	375	8	3	1	.	.	.	.	.	387
0.25-0.49	.	713	19	12	1	.	.	.	.	.	745
0.50-0.74	.	653	432	34	4	.	.	.	.	.	1123
0.75-0.99	.	49	524	25	9	.	.	.	.	.	607
1.00-1.24	.	.	635	204	5	.	.	.	.	.	844
1.25-1.49	.	.	11	491	2	.	.	.	.	.	504
1.50-1.74	.	.	.	545	18	.	.	.	.	.	563
1.75-1.99	.	.	.	167	34	1	1	.	.	.	203
2.00-2.24	.	.	.	12	112	.	.	.	.	.	124
2.25-2.49	.	.	.	.	37	1	.	.	.	.	38
2.50-2.74	.	.	.	.	16	2	.	.	.	.	18
2.75-2.99	.	.	.	.	5	2	.	.	.	.	7
3.00-3.24	.	.	.	.	1	2	.	.	.	.	3
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	1	.	.	.	.	1
TOTAL	0	1790	1629	1493	245	11	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 4845.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	264	10	.	.	.	.	.	.	.	274
0.25-0.49	.	707	24	14	.	.	.	.	.	.	745
0.50-0.74	.	649	373	24	.	.	.	.	.	.	1046
0.75-0.99	.	38	485	13	10	.	.	.	.	.	546
1.00-1.24	.	1	613	214	6	2	.	.	.	.	836
1.25-1.49	.	.	7	463	1	3	.	.	.	.	474
1.50-1.74	.	.	.	519	.	1	.	.	.	.	520
1.75-1.99	.	.	.	111	40	.	.	.	.	.	151
2.00-2.24	.	.	.	2	95	.	.	.	.	.	97
2.25-2.49	.	.	.	.	25	.	.	.	.	.	25
2.50-2.74	.	.	.	.	17	.	.	.	.	.	17
2.75-2.99	.	.	.	.	2	3	.	.	.	.	5
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1659	1512	1360	196	9	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 4441.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	241	2	3	.	.	.	.	.	.	246
0.25-0.49	.	565	26	12	1	.	.	.	.	.	604
0.50-0.74	.	582	298	45	3	.	.	.	.	.	928
0.75-0.99	.	41	546	6	12	.	.	.	.	.	605
1.00-1.24	.	.	720	189	10	.	2	.	.	.	921
1.25-1.49	.	.	6	484	1	5	.	.	.	.	496
1.50-1.74	.	.	.	455	.	1	.	.	.	.	456
1.75-1.99	.	.	.	85	6	.	.	.	.	.	91
2.00-2.24	.	.	.	2	50	.	.	.	.	.	52
2.25-2.49	.	.	.	.	6	.	.	.	.	.	6
2.50-2.74	.	.	.	.	5	.	.	.	.	.	5
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1429	1598	1281	96	6	2	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 4139.

STATION E48 41.87N 81.90W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

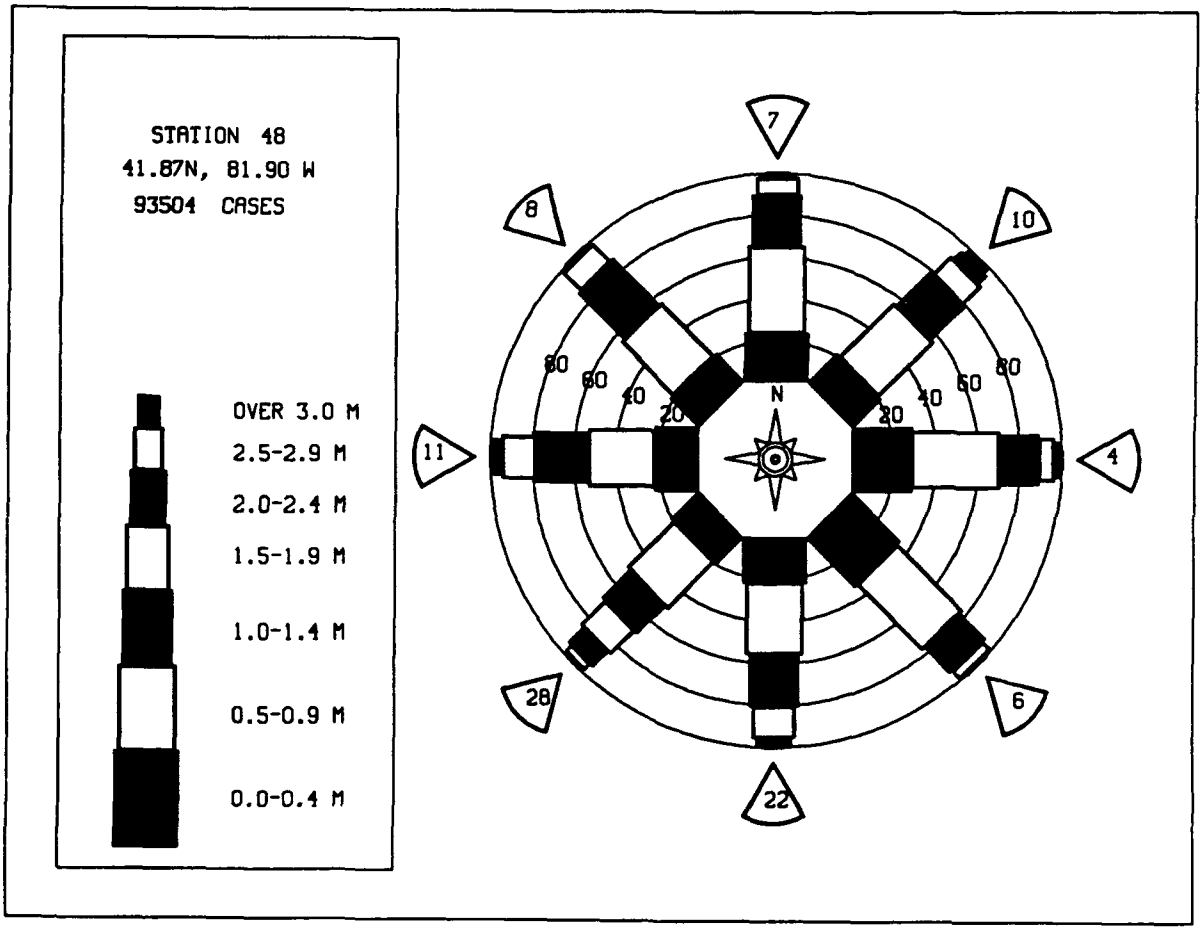
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	207	4	1	.	.	.	.	.	.	212
0.25-0.49	.	425	34	14	.	.	.	.	.	.	473
0.50-0.74	.	611	267	60	8	.	.	.	.	.	946
0.75-0.99	.	44	424	27	18	.	.	.	.	.	513
1.00-1.24	.	1	555	130	25	2	.	.	.	.	713
1.25-1.49	.	.	14	410	4	4	.	.	.	.	432
1.50-1.74	.	.	.	313	5	6	.	.	.	.	324
1.75-1.99	.	.	.	68	20	.	1	.	.	.	89
2.00-2.24	.	.	.	4	34	3	2	.	.	.	43
2.25-2.49	.	.	.	.	7	.	2	.	.	.	9
2.50-2.74	.	.	.	.	3	.	.	.	.	.	3
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1288	1298	1027	126	15	5	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 4.0 NO. OF CASES= 3529.

STATION E48 41.87N 81.90W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	652	14	3	.	.	.	.	.	.	669
0.25-0.49	.	1337	80	24	.	.	.	.	.	.	1441
0.50-0.74	.	1263	851	158	7	.	.	.	.	.	2279
0.75-0.99	.	78	818	305	29	.	.	.	.	.	1230
1.00-1.24	.	.	771	639	90	1	.	.	.	.	1501
1.25-1.49	.	.	16	675	76	5	.	.	.	.	772
1.50-1.74	.	.	.	705	233	10	.	.	.	.	948
1.75-1.99	.	.	.	129	240	11	.	.	.	.	380
2.00-2.24	.	.	.	12	356	12	.	.	.	.	380
2.25-2.49	.	.	.	.	119	27	.	.	.	.	146
2.50-2.74	.	.	.	.	31	89	.	.	.	.	120
2.75-2.99	.	.	.	.	4	40	.	.	.	.	44
3.00-3.24	.	.	.	.	1	30	4	.	.	.	35
3.25-3.49	.	.	.	.	.	5	5	.	.	.	10
3.50+	.	.	.	.	.	1	17	.	.	.	18
TOTAL	0	3330	2550	2650	1186	231	26	0	0	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 4.3 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E48 (41.87N 81.90W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.9	1.1	1.3	1.3	1.2	0.8	1.0	0.9	0.9	1.0	1.2	1.2	1.1
1957	1.1	1.0	1.3	1.3	1.2	1.0	1.0	0.8	1.0	1.0	1.4	1.4	1.1
1958	1.2	1.5	1.1	1.2	1.2	1.0	0.9	0.9	1.0	1.1	1.3	1.1	1.1
1959	1.2	1.2	1.3	1.2	0.8	0.7	0.7	0.7	0.8	1.0	1.2	0.9	1.0
1960	1.0	1.2	1.1	1.3	1.1	0.9	0.8	0.8	0.8	0.9	1.4	1.5	1.1
1961	1.2	1.0	1.3	1.2	1.1	0.9	0.9	0.8	0.9	1.1	1.2	1.4	1.1
1962	1.4	1.3	1.3	1.3	1.1	0.9	0.9	0.8	0.8	0.9	0.9	1.1	1.1
1963	1.1	1.1	1.2	1.2	1.0	0.6	0.9	0.9	0.8	0.8	1.2	1.0	1.0
1964	1.3	0.9	1.2	1.3	1.0	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.0
1965	1.3	1.2	1.0	1.1	0.9	1.0	0.7	0.8	1.0	1.2	1.3	1.3	1.1
1966	1.1	0.7	1.2	1.1	0.8	0.6	0.9	0.7	0.8	1.1	1.2	1.1	0.9
1967	1.3	1.4	1.0	1.1	1.1	0.9	0.7	0.8	0.8	1.1	1.4	1.1	1.1
1968	1.1	1.3	1.2	1.1	1.0	0.8	0.8	0.7	0.6	0.9	1.2	1.4	1.0
1969	1.3	1.0	1.1	1.1	0.8	0.9	0.7	0.7	0.8	1.1	1.0	1.1	1.0
1970	1.1	1.2	1.0	1.2	1.0	0.9	0.8	0.8	0.9	1.0	1.4	1.3	1.1
1971	1.4	1.6	1.2	1.1	0.9	0.7	0.8	0.8	0.8	0.8	1.1	1.2	1.0
1972	1.4	1.2	1.2	1.1	1.0	0.9	0.8	0.9	0.9	1.0	1.0	1.1	1.0
1973	1.4	1.1	1.2	1.3	1.0	0.8	0.9	0.8	0.8	0.9	1.2	1.3	1.0
1974	1.1	1.3	1.3	1.4	1.0	1.0	0.9	0.8	1.0	1.0	1.1	1.1	1.1
1975	1.1	1.0	1.0	1.0	0.6	0.8	0.5	0.6	0.8	1.0	1.1	1.0	0.9
1976	1.2	1.2	1.2	0.9	0.9	0.7	0.7	0.6	0.8	0.9	1.0	1.0	0.9
1977	1.2	1.0	1.0	0.9	0.6	0.6	0.7	0.8	0.8	1.0	1.2	1.4	0.9
1978	1.2	0.6	0.8	1.0	0.7	0.6	0.7	0.6	0.8	0.9	1.0	1.2	0.8
1979	1.0	1.1	1.0	0.9	0.7	0.7	0.6	0.8	0.7	1.0	1.1	1.1	0.9
1980	0.9	0.8	1.0	0.9	0.6	0.6	0.6	0.7	0.7	0.9	1.1	1.0	0.8
1981	1.1	1.4	1.2	1.4	0.9	1.0	0.8	0.9	1.0	1.1	0.9	1.0	1.0
1982	1.3	1.0	1.0	1.3	0.5	0.5	0.5	0.6	0.6	0.7	1.1	1.1	0.9
1983	0.9	0.7	0.8	1.1	1.0	0.5	0.6	0.5	0.8	1.0	1.0	1.3	0.8
1984	0.8	0.9	1.2	0.9	0.9	0.7	0.6	0.5	0.7	0.6	1.0	1.0	0.8
1985	1.1	1.0	1.2	1.0	0.8	0.7	0.6	0.7	0.7	0.8	1.1	1.2	0.9
1986	1.0	0.8	1.0	0.8	0.7	0.7	0.5	0.6	0.7	0.8	0.8	0.8	0.8
1987	0.8	0.9	1.0	1.1	0.8	0.8	0.7	0.8	0.6	0.8	1.1	1.1	0.9
MEAN	1.1	1.1	1.1	1.1	0.9	0.8	0.7	0.7	0.8	0.9	1.1	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E48 (41.87N 81.90W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.2	2.8	5.2	4.4	2.8	2.2	3.2	2.3	2.2	2.5	3.2	2.6
1957	2.6	2.6	3.8	3.9	3.2	3.0	2.6	2.3	2.5	2.4	3.6	2.8
1958	3.0	3.2	3.0	3.0	2.9	2.8	2.5	2.3	2.9	2.9	3.5	2.7
1959	3.4	2.8	4.7	4.5	2.6	2.6	2.5	2.3	2.6	2.9	2.6	2.7
1960	2.6	3.2	3.0	3.4	3.1	2.6	2.8	2.1	2.0	2.3	3.8	3.2
1961	3.0	3.2	2.8	4.0	2.8	2.8	2.3	2.4	2.7	3.5	3.3	3.7
1962	4.1	4.0	3.9	4.0	3.2	2.4	2.5	2.0	3.1	3.0	4.2	3.3
1963	3.3	2.7	4.0	3.1	3.6	1.9	2.8	2.5	2.6	2.6	3.1	2.6
1964	3.6	2.6	5.1	3.6	4.3	2.8	2.7	2.8	3.0	3.1	3.3	2.6
1965	4.0	3.2	3.6	3.1	3.3	2.6	2.2	2.4	3.1	3.3	4.1	3.1
1966	3.1	2.6	3.5	3.0	4.5	2.0	2.7	2.3	2.5	2.9	3.9	3.6
1967	2.7	3.4	2.5	3.2	2.9	3.0	2.4	2.4	2.7	3.8	2.8	2.7
1968	2.9	3.2	3.4	3.8	2.8	2.6	2.2	2.3	2.1	2.9	3.1	3.8
1969	3.1	2.4	3.3	4.2	2.8	2.6	2.3	2.5	2.2	2.6	2.8	2.9
1970	3.0	3.1	3.3	3.5	2.7	2.7	3.1	3.0	2.7	2.2	3.9	3.4
1971	3.6	4.3	3.7	3.8	3.4	2.0	2.4	2.3	2.1	2.6	2.8	3.9
1972	3.9	3.3	3.9	3.4	3.2	2.4	2.2	3.0	2.6	2.5	3.2	2.8
1973	3.3	2.9	3.3	3.3	3.2	1.9	2.5	2.6	2.8	2.1	2.7	3.2
1974	3.5	5.1	3.7	3.7	3.9	2.9	2.8	2.5	2.9	2.9	3.2	3.8
1975	3.1	3.1	3.2	3.[illegible]	1.6	2.4	2.2	2.0	3.1	3.8	3.7	3.0
1976	2.6	3.5	3.4	3.2	3.6	2.5	2.2	1.9	2.5	2.5	2.6	2.5
1977	2.8	2.9	2.7	2.7	2.0	1.9	3.0	2.0	2.5	2.4	2.6	3.5
1978	4.3	2.4	2.8	3.1	3.0	2.1	1.7	2.9	2.6	2.8	3.7	2.9
1979	2.4	3.5	3.0	3.2	2.9	2.5	1.9	2.2	2.3	2.6	3.8	3.5
1980	3.2	2.3	2.5	3.2	2.2	1.7	1.8	1.8	2.4	2.7	2.9	2.5
1981	3.0	3.3	4.3	4.1	2.2	2.5	2.2	2.5	2.7	3.7	3.3	2.6
1982	4.1	3.0	3.5	4.4	1.6	2.8	2.1	1.5	2.0	3.1	3.2	3.9
1983	2.5	2.4	2.3	3.5	2.7	1.8	2.2	1.8	2.2	3.1	2.8	3.1
1984	2.1	3.5	3.7	4.3	3.0	2.3	1.8	1.4	2.0	2.1	2.7	2.9
1985	2.9	3.0	3.6	3.6	2.5	2.5	1.8	1.9	1.9	3.1	2.6	4.2
1986	2.9	3.1	3.3	2.1	2.1	2.1	1.7	1.8	2.5	2.3	2.2	2.7
1987	2.2	2.8	3.2	3.8	3.1	2.3	2.2	2.1	1.9	2.9	2.4	4.1

32 YR. STATISTICS FOR WIS STATION E48

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.3
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.6
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	5.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	245.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		56030821

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	343	5	1	.	.	.	.	.	.	349
0.25-0.49	.	441	54	8	.	.	.	.	.	.	503
0.50-0.74	.	332	269	65	2	.	.	.	.	.	668
0.75-0.99	.	35	179	81	6	.	.	.	.	.	301
1.00-1.24	.	.	87	219	21	1	.	.	.	.	328
1.25-1.49	.	.	1	150	6	.	.	.	.	.	157
1.50-1.74	.	.	.	163	2	2	.	.	.	.	167
1.75-1.99	.	.	.	8	48	1	.	.	.	.	57
2.00-2.24	.	.	.	2	33	1	.	.	.	.	36
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1151	595	697	123	6	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 3.9 NO. OF CASES= 2415.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	389	6	.	.	.	.	.	.	.	395
0.25-0.49	.	482	41	5	.	.	.	.	.	.	528
0.50-0.74	.	356	279	63	.	.	.	.	.	.	698
0.75-0.99	.	37	171	111	7	.	.	.	.	.	326
1.00-1.24	.	1	93	166	34	.	.	.	.	.	294
1.25-1.49	.	.	1	136	17	.	.	.	.	.	154
1.50-1.74	.	.	.	110	28	3	.	.	.	.	141
1.75-1.99	.	.	.	13	37	3	.	.	.	.	53
2.00-2.24	.	.	.	.	34	4	.	.	.	.	38
2.25-2.49	.	.	.	.	6	1	.	.	.	.	7
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1265	591	604	165	14	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.9 NO. OF CASES= 2477.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	502	7	.	.	.	.	.	.	.	509
0.25-0.49	.	716	59	10	.	.	.	.	.	.	785
0.50-0.74	.	621	398	133	1	.	.	.	.	.	1153
0.75-0.99	.	86	333	235	12	.	.	.	.	.	666
1.00-1.24	.	1	259	434	102	.	.	.	.	.	796
1.25-1.49	.	.	8	440	80	3	.	.	.	.	531
1.50-1.74	.	.	.	500	110	6	.	.	.	.	616
1.75-1.99	.	.	.	72	223	22	.	.	.	.	317
2.00-2.24	.	.	.	1	228	27	.	.	.	.	256
2.25-2.49	.	.	.	.	54	11	.	.	.	.	65
2.50-2.74	.	.	.	.	27	7	5	.	.	.	39
2.75-2.99	.	.	.	.	8	11	8	.	.	.	27
3.00-3.24	.	.	.	.	1	12	1	.	.	.	14
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1926	1064	1825	846	101	15	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 5422.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	339	5	.	.	.	.	.	.	.	344
0.25-0.49	.	550	51	5	.	.	.	.	.	.	606
0.50-0.74	.	488	419	143	1	.	.	.	.	.	1051
0.75-0.99	.	56	250	279	11	.	.	.	.	.	596
1.00-1.24	.	.	142	365	120	.	.	.	.	.	627
1.25-1.49	.	.	4	206	97	1	.	.	.	.	308
1.50-1.74	.	.	.	170	167	6	.	.	.	.	343
1.75-1.99	.	.	.	31	111	33	.	.	.	.	175
2.00-2.24	.	.	.	1	108	32	1	.	.	.	142
2.25-2.49	.	.	.	.	32	13	1	.	.	.	46
2.50-2.74	.	.	.	.	12	13	1	.	.	.	26
2.75-2.99	.	.	.	.	1	7	2	.	.	.	10
3.00-3.24	.	.	.	.	.	5	4	.	.	.	9
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1433	871	1200	660	110	10	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.3 NO. OF CASES= 4019.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	346	6	.	.	.	.	.	.	.	352
0.25-0.49	.	526	51	4	.	.	.	.	.	.	581
0.50-0.74	.	303	335	105	1	.	.	.	.	.	744
0.75-0.99	.	14	143	165	8	.	.	.	.	.	330
1.00-1.24	.	.	42	141	48	.	.	.	.	.	231
1.25-1.49	.	.	.	45	27	.	.	.	.	.	72
1.50-1.74	.	.	.	29	38	4	.	.	.	.	71
1.75-1.99	.	.	.	.	16	.	.	.	.	.	16
2.00-2.24	.	.	.	.	10	3	.	.	.	.	13
2.25-2.49	.	.	.	.	2	4	.	.	.	.	6
2.50-2.74	.	.	.	.	.	2	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1189	577	489	150	13	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 2273.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	254	1	.	.	.	.	.	.	.	255
0.25-0.49	.	387	40	7	.	.	.	.	.	.	434
0.50-0.74	.	241	209	66	.	.	.	.	.	.	516
0.75-0.99	.	14	97	81	4	.	.	.	.	.	196
1.00-1.24	.	.	72	75	18	.	.	.	.	.	165
1.25-1.49	.	.	.	64	11	.	.	.	.	.	75
1.50-1.74	.	.	.	40	11	1	.	.	.	.	52
1.75-1.99	.	.	.	.	7	1	.	.	.	.	8
2.00-2.24	.	.	.	.	8	1	.	.	.	.	9
2.25-2.49	.	.	.	.	1	1	.	.	.	.	2
2.50-2.74	.	.	.	.	.	1	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	896	419	333	60	5	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.8 NO. OF CASES= 1612.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	442	2	.	.	.	.	.	.	.	444
0.25-0.49	.	648	63	6	.	.	.	.	.	.	717
0.50-0.74	.	460	347	79	.	.	.	.	.	.	886
0.75-0.99	.	52	269	85	2	.	.	.	.	.	408
1.00-1.24	.	.	237	203	10	.	.	.	.	.	450
1.25-1.49	.	.	1	249	4	.	.	.	.	.	254
1.50-1.74	.	.	.	182	12	.	.	.	.	.	194
1.75-1.99	.	.	.	32	34	.	.	.	.	.	66
2.00-2.24	.	.	.	.	28	.	1	.	.	.	29
2.25-2.49	.	.	.	.	16	.	.	.	.	.	16
2.50-2.74	.	.	.	.	4	1	.	.	.	.	5
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1602	919	836	110	1	1	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 3253.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	652	6	.	.	.	.	.	.	.	658
0.25-0.49	.	860	49	8	.	.	.	.	.	.	917
0.50-0.74	.	730	371	51	.	.	.	.	.	.	1152
0.75-0.99	.	91	424	45	.	.	.	.	.	.	560
1.00-1.24	.	.	544	274	7	.	.	.	.	.	825
1.25-1.49	.	.	7	475	3	.	.	.	.	.	485
1.50-1.74	.	.	.	[illegible]	1	.	.	.	.	.	492
1.75-1.99	.	.	.	85	49	.	.	.	.	.	134
2.00-2.24	.	.	.	.	133	.	.	.	.	.	133
2.25-2.49	.	.	.	.	32	.	.	.	.	.	32
2.50-2.74	.	.	.	.	24	.	.	.	.	.	24
2.75-2.99	.	.	.	.	1	2	.	.	.	.	3
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2333	1401	1428	250	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.9 NO. OF CASES= 5077.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1003	10	.	.	.	.	.	.	.	1013
0.25-0.49	.	1178	68	6	.	.	.	.	.	.	1252
0.50-0.74	.	1073	465	34	.	.	.	.	.	.	1572
0.75-0.99	.	101	585	36	2	.	.	.	.	.	724
1.00-1.24	.	.	857	379	2	.	.	.	.	.	1238
1.25-1.49	.	.	6	787	.	.	.	.	.	.	793
1.50-1.74	.	.	.	887	2	.	.	.	.	.	889
1.75-1.99	.	.	.	174	81	.	.	.	.	.	255
2.00-2.24	.	.	.	.	224	1	.	.	.	.	225
2.25-2.49	.	.	.	.	44	.	.	.	.	.	44
2.50-2.74	.	.	.	.	17	.	.	.	.	.	17
2.75-2.99	.	.	.	.	1	1	.	.	.	.	2
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3355	1991	2303	373	3	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.0 NO. OF CASES= 7513.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1288	39	2	.	.	.	.	.	.	1329
0.25-0.49	.	1362	225	41	.	.	.	.	.	.	1628
0.50-0.74	.	1105	820	250	6	.	.	.	.	.	2181
0.75-0.99	.	91	852	232	11	.	.	.	.	.	1186
1.00-1.24	.	1	1049	634	60	.	.	.	.	.	1744
1.25-1.49	.	.	24	1100	60	1	.	.	.	.	1185
1.50-1.74	.	.	1	1152	152	3	.	.	.	.	1308
1.75-1.99	.	.	.	301	251	7	.	.	.	.	559
2.00-2.24	.	.	.	12	392	19	.	.	.	.	423
2.25-2.49	.	.	.	.	88	25	.	.	.	.	113
2.50-2.74	.	.	.	.	38	41	.	.	.	.	79
2.75-2.99	.	.	.	.	2	18	.	.	.	.	20
3.00-3.24	.	.	.	.	.	10	1	.	.	.	11
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	2	1	.	.	3
TOTAL	0	3847	3010	3724	1060	124	6	1	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 4.2 NO. OF CASES= 11026.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1889	147	12	.	.	.	.	.	.	2048
0.25-0.49	.	1890	840	99	.	.	.	.	.	.	2829
0.50-0.74	.	858	1813	1145	13	.	.	.	.	.	3829
0.75-0.99	.	86	547	1273	96	.	.	.	.	.	2002
1.00-1.24	.	1	318	1340	633	.	.	.	.	.	2292
1.25-1.49	.	.	9	518	556	3	.	.	.	.	1086
1.50-1.74	.	.	.	529	931	79	.	.	.	.	1539
1.75-1.99	.	.	.	39	564	124	.	.	.	.	727
2.00-2.24	.	.	.	2	669	207	1	.	.	.	879
2.25-2.49	.	.	.	.	204	297	9	.	.	.	510
2.50-2.74	.	.	.	.	28	363	6	.	.	.	397
2.75-2.99	.	.	.	.	2	129	8	.	.	.	139
3.00-3.24	.	.	.	.	.	91	38	.	.	.	129
3.25-3.49	.	.	.	.	.	5	32	.	.	.	37
3.50+	.	.	.	.	.	1	58	6	.	.	65
TOTAL	0	4724	3674	4957	3696	1299	152	6	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.7 NO. OF CASES= 17327.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	868	78	10	.	.	.	.	.	.	956
0.25-0.49	.	1125	236	84	1	.	.	.	.	.	1446
0.50-0.74	.	706	888	484	25	.	.	.	.	.	2103
0.75-0.99	.	85	377	718	67	.	.	.	.	.	1247
1.00-1.24	.	1	260	986	376	1	.	.	.	.	1624
1.25-1.49	.	.	14	386	447	9	.	.	.	.	856
1.50-1.74	.	.	1	438	1053	90	.	.	.	.	1582
1.75-1.99	.	.	.	19	559	189	.	.	.	.	767
2.00-2.24	.	.	.	1	752	229	13	.	.	.	995
2.25-2.49	.	.	.	.	235	327	19	.	.	.	581
2.50-2.74	.	.	.	.	36	464	67	1	.	.	568
2.75-2.99	.	.	.	.	.	199	25	.	.	.	224
3.00-3.24	.	.	.	.	.	137	118	2	.	.	257
3.25-3.49	.	.	.	.	.	10	91	1	.	.	102
3.50+	.	.	.	.	.	.	130	26	2	.	158
TOTAL	0	2785	1854	3126	3551	1655	463	30	2	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 5.1 NO. OF CASES= 12614.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	656	17	2	.	.	.	.	.	.	675
0.25-0.49	.	855	39	5	.	.	.	.	.	.	899
0.50-0.74	.	573	543	112	2	.	.	.	.	.	1230
0.75-0.99	.	47	362	310	7	.	.	.	.	.	726
1.00-1.24	.	1	187	688	111	1	.	.	.	.	988
1.25-1.49	.	.	5	363	117	1	.	.	.	.	486
1.50-1.74	.	.	1	553	463	8	.	.	.	.	1025
1.75-1.99	.	.	.	17	417	19	.	.	.	.	453
2.00-2.24	.	.	.	.	525	21	.	.	.	.	546
2.25-2.49	.	.	.	.	194	57	1	.	.	.	252
2.50-2.74	.	.	.	.	36	132	3	.	.	.	171
2.75-2.99	.	.	.	.	1	72	1	.	.	.	74
3.00-3.24	.	.	.	.	.	31	6	.	.	.	37
3.25-3.49	.	.	.	.	.	6	13	.	.	.	19
3.50+	.	.	.	.	.	.	13	.	.	.	13
TOTAL	0	2132	1154	2050	1873	348	37	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.6 NO. OF CASES= 7116.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	457	5	.	.	.	.	.	.	.	462
0.25-0.49	.	744	20	6	.	.	.	.	.	.	770
0.50-0.74	.	464	493	27	1	.	.	.	.	.	985
0.75-0.99	.	47	288	127	1	.	.	.	.	.	463
1.00-1.24	.	1	185	448	5	.	.	.	.	.	639
1.25-1.49	.	.	3	398	8	.	.	.	.	.	409
1.50-1.74	.	.	.	479	68	1	.	.	.	.	548
1.75-1.99	.	.	.	20	202	2	.	.	.	.	224
2.00-2.24	.	.	.	1	170	.	1	.	.	.	172
2.25-2.49	.	.	.	.	32	.	.	.	.	.	32
2.50-2.74	.	.	.	.	18	20	.	.	.	.	38
2.75-2.99	.	.	.	.	.	9	1	.	.	.	10
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1713	994	1506	505	34	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.2 NO. OF CASES= 4455.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	409	8	.	.	.	.	.	.	.	417
0.25-0.49	.	612	43	12	.	.	.	.	.	.	667
0.50-0.74	.	443	506	35	2	.	.	.	.	.	986
0.75-0.99	.	23	325	140	3	.	.	.	.	.	491
1.00-1.24	.	.	133	428	1	.	.	.	.	.	562
1.25-1.49	.	.	1	349	1	.	.	.	.	.	351
1.50-1.74	.	.	.	487	25	1	.	.	.	.	513
1.75-1.99	.	.	.	3	209	.	.	.	.	.	212
2.00-2.24	.	.	.	.	124	.	.	.	.	.	124
2.25-2.49	.	.	.	.	27	.	.	.	.	.	27
2.50-2.74	.	.	.	.	7	6	.	.	.	.	13
2.75-2.99	.	.	.	.	.	4	.	.	.	.	4
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1487	1016	1454	399	16	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.2 NO. OF CASES= 4101.

STATION E49 42.15N 81.13W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

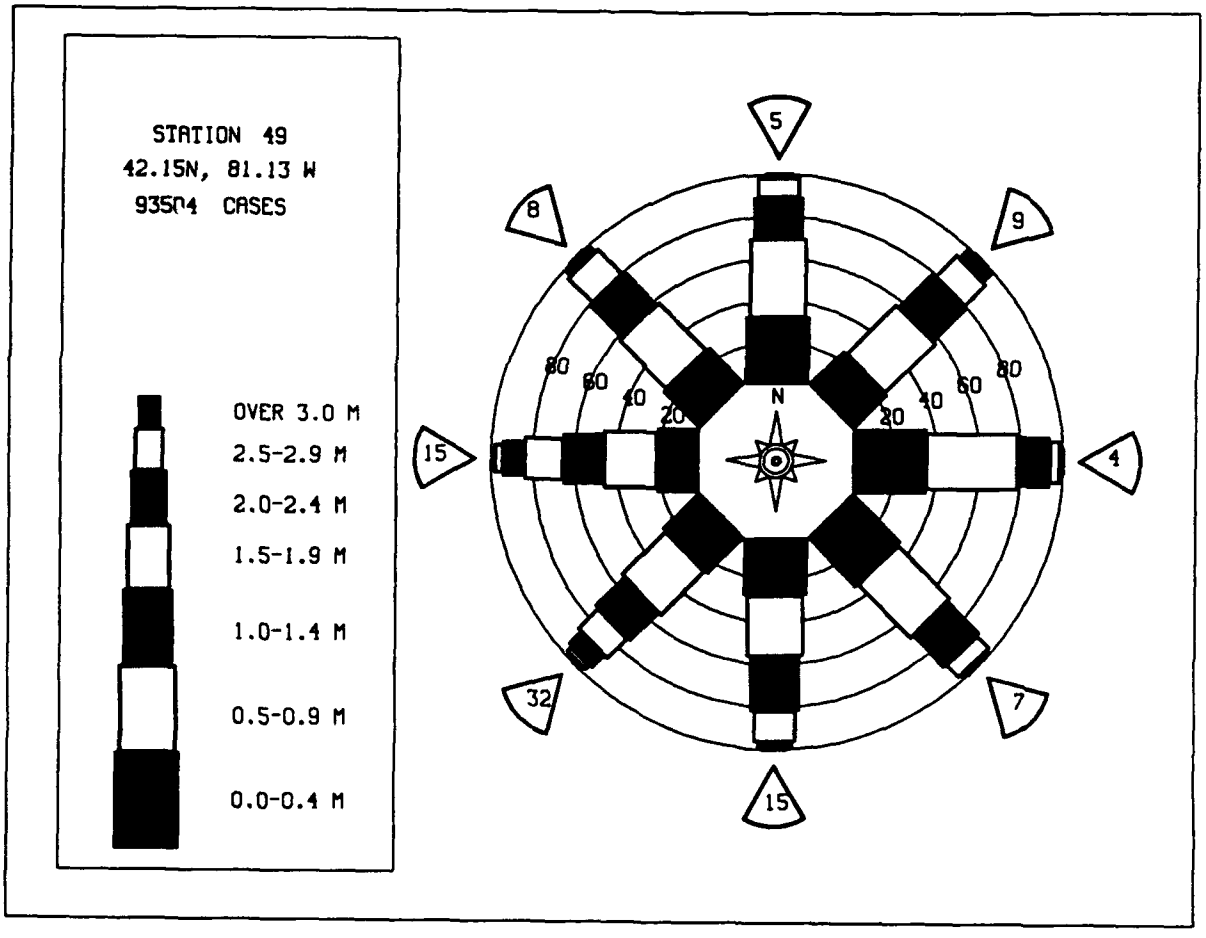
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	293	6	.	.	.	.	.	.	.	299
0.25-0.49	.	345	24	6	.	.	.	.	.	.	375
0.50-0.74	.	285	312	51	.	.	.	.	.	.	648
0.75-0.99	.	13	217	120	2	.	.	.	.	.	352
1.00-1.24	.	.	114	314	4	.	.	.	.	.	432
1.25-1.49	.	.	1	289	.	1	.	.	.	.	291
1.50-1.74	.	.	.	335	24	.	.	.	.	.	359
1.75-1.99	.	.	.	3	135	.	.	.	.	.	138
2.00-2.24	.	.	.	.	65	.	.	.	.	.	65
2.25-2.49	.	.	.	.	14	.	.	.	.	.	14
2.50-2.74	.	.	.	.	9	2	.	.	.	.	11
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	936	674	1118	253	6	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.0 MEAN TP(SEC)= 4.2 NO. OF CASES= 2804.

STATION E49 42.15N 81.13W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1013	35	2	.	.	.	.	.	.	1050
0.25-0.49	.	1272	191	31	.	.	.	.	.	.	1494
0.50-0.74	.	904	847	284	5	.	.	.	.	.	2040
0.75-0.99	.	88	542	404	24	.	.	.	.	.	1058
1.00-1.24	.	.	458	710	155	.	.	.	.	.	1323
1.25-1.49	.	.	8	596	143	2	.	.	.	.	749
1.50-1.74	.	.	.	655	309	20	.	.	.	.	984
1.75-1.99	.	.	.	82	294	40	.	.	.	.	416
2.00-2.24	.	.	.	2	351	54	1	.	.	.	408
2.25-2.49	.	.	.	.	99	74	3	.	.	.	176
2.50-2.74	.	.	.	.	26	105	8	.	.	.	139
2.75-2.99	.	.	.	.	1	45	4	.	.	.	50
3.00-3.24	.	.	.	.	.	30	17	.	.	.	47
3.25-3.49	.	.	.	.	.	2	14	.	.	.	16
3.50+	.	.	.	.	.	.	20	3	.	.	23
TOTAL	0	3277	2081	2766	1407	372	67	3	0	0	

MEAN HS(M)= 1.0 LARGEST HS(M)= 5.1 MEAN TP(SEC)= 4.4 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E49 (42.15N 81.13W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.9	1.0	1.1	0.9	0.7	0.8	0.9	0.8	1.0	1.2	1.1	0.9
1957	1.1	0.9	1.3	1.2	1.1	1.0	0.9	0.7	1.0	1.1	1.5	1.5	1.1
1958	1.2	1.2	0.8	0.8	0.9	0.8	0.6	0.6	0.8	1.1	1.2	0.9	0.9
1959	1.0	0.9	1.1	0.8	0.5	0.4	0.4	0.6	0.7	0.9	1.0	0.8	0.8
1960	0.8	1.3	1.2	1.4	1.0	0.9	0.7	0.8	0.8	0.9	1.4	1.6	1.1
1961	1.2	1.0	1.2	1.2	1.1	0.9	0.8	0.9	1.0	1.2	1.3	1.4	1.1
1962	1.5	1.2	1.1	1.2	1.0	0.7	0.8	0.7	0.8	1.0	0.9	1.3	1.0
1963	1.2	1.2	1.3	1.2	1.0	0.5	0.8	0.8	0.9	0.8	1.4	1.1	1.0
1964	1.5	1.0	1.3	1.4	1.1	0.8	0.7	0.9	1.0	0.9	1.1	1.2	1.1
1965	1.4	1.3	1.0	1.0	0.9	0.9	0.7	0.8	1.0	1.3	1.4	1.3	1.1
1966	1.3	0.8	1.1	1.1	0.9	0.6	0.8	0.7	0.8	1.2	1.2	1.2	1.0
1967	1.5	1.4	1.0	1.1	1.0	0.8	0.6	0.7	0.8	1.2	1.4	1.2	1.0
1968	1.1	1.3	1.2	1.0	0.9	0.8	0.7	0.8	0.7	1.1	1.3	1.4	1.0
1969	1.5	0.9	1.2	1.0	0.8	0.6	0.6	0.6	0.8	1.1	1.1	1.1	1.0
1970	1.1	1.2	0.9	1.1	1.0	0.8	0.8	0.7	0.9	1.0	1.4	1.3	1.0
1971	1.5	1.5	1.2	1.1	0.8	0.6	0.7	0.8	0.7	0.7	1.1	1.2	1.0
1972	1.4	1.1	1.1	0.9	0.8	0.8	0.6	0.8	0.9	1.0	1.0	1.1	1.0
1973	1.5	1.1	1.2	1.3	1.0	0.9	0.8	0.7	0.8	0.9	1.4	1.3	1.1
1974	1.2	1.2	1.3	1.4	1.0	0.9	0.8	0.7	1.0	1.0	1.2	1.2	1.1
1975	1.3	1.1	1.1	1.1	0.5	0.8	0.5	0.6	0.8	1.0	1.2	1.1	0.9
1976	1.4	1.4	1.4	1.1	1.0	0.8	0.7	0.7	0.9	1.0	1.3	1.2	1.1
1977	1.4	1.2	1.1	1.0	0.7	0.7	0.8	0.8	0.8	1.0	1.3	1.5	1.0
1978	1.4	0.6	0.9	1.0	0.7	0.6	0.7	0.6	0.8	1.0	1.1	1.3	0.9
1979	1.2	1.1	1.1	0.9	0.6	0.7	0.5	0.8	0.8	1.0	1.1	1.2	0.9
1980	1.0	0.9	1.0	0.9	0.6	0.6	0.5	0.6	0.7	1.0	1.2	1.0	0.8
1981	1.0	1.2	1.1	1.3	0.6	0.9	0.6	0.7	0.8	1.0	0.9	1.0	0.9
1982	1.5	0.9	1.0	1.2	0.4	0.6	0.5	0.5	0.5	0.7	1.1	1.1	0.8
1983	1.0	0.6	0.8	1.0	0.9	0.4	0.6	0.5	0.7	1.0	1.0	1.3	0.8
1984	0.8	0.9	1.1	0.8	0.9	0.7	0.5	0.5	0.7	0.6	1.1	1.1	0.8
1985	1.3	1.1	1.2	1.1	0.8	0.7	0.7	0.7	0.7	0.9	1.2	1.4	1.0
1986	1.2	0.8	1.1	0.9	0.8	0.8	0.7	0.8	0.9	0.9	1.0	1.0	0.9
1987	1.0	0.9	1.0	1.1	0.8	0.8	0.7	0.9	0.7	1.0	1.3	1.3	1.0
MEAN	1.2	1.1	1.1	1.1	0.8	0.7	0.7	0.7	0.8	1.0	1.2	1.2	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E49 (42.15N 81.13W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.1	2.9	4.7	3.9	2.6	2.4	2.4	1.9	1.9	2.8	3.2	2.5
1957	2.1	2.2	3.5	4.3	2.6	3.6	2.2	2.1	2.4	2.5	3.7	3.1
1958	2.8	3.0	2.0	3.0	2.1	2.3	2.3	2.1	2.5	2.8	3.4	2.5
1959	3.2	2.5	4.0	4.1	2.1	1.9	2.4	2.2	2.0	2.6	2.2	2.3
1960	2.2	3.3	2.8	3.6	2.9	3.3	2.4	2.2	2.2	2.8	3.7	3.1
1961	3.3	3.5	2.8	3.7	3.0	2.8	2.4	2.8	3.0	3.1	3.4	4.0
1962	3.6	3.0	2.8	3.8	3.5	2.0	2.4	2.0	2.9	2.7	3.2	3.7
1963	3.4	3.0	4.3	3.3	3.4	2.3	2.6	2.6	2.5	3.0	3.3	3.0
1964	3.8	3.0	5.1	3.2	4.6	3.0	2.1	2.3	3.2	2.7	3.3	3.3
1965	4.1	3.1	3.4	3.8	3.1	2.4	2.0	2.3	3.0	3.8	4.3	3.3
1966	3.3	2.5	3.3	3.1	4.0	2.1	3.1	2.3	2.6	3.1	3.9	3.9
1967	3.0	3.5	2.3	3.4	2.8	2.2	2.4	1.9	3.0	3.5	3.1	3.0
1968	3.9	3.2	3.1	3.9	3.0	2.5	2.3	2.6	2.2	2.8	3.2	3.6
1969	3.8	2.8	3.4	3.2	2.7	2.5	2.3	2.6	2.6	2.8	2.6	2.8
1970	2.8	3.1	3.8	4.0	2.8	2.6	2.9	2.8	3.1	2.4	3.9	3.4
1971	4.2	3.9	3.8	3.3	3.1	2.1	2.7	2.4	1.6	2.6	2.9	3.7
1972	5.1	3.3	3.7	2.9	2.8	2.7	2.1	2.5	2.6	2.7	3.1	3.2
1973	3.4	2.5	3.2	2.8	3.0	2.3	3.0	2.2	2.8	2.5	3.3	3.5
1974	4.1	4.1	3.3	3.7	3.3	2.6	2.4	2.6	3.0	2.8	3.0	3.6
1975	3.5	3.9	2.9	4.4	1.5	2.4	2.2	2.6	2.4	2.9	3.9	3.7
1976	3.2	3.6	4.0	2.9	4.2	2.9	2.6	2.1	2.6	2.9	2.7	3.0
1977	3.3	3.0	3.2	3.6	2.3	2.5	3.7	2.3	2.6	2.7	3.2	4.3
1978	5.0	2.1	2.9	3.9	3.2	2.9	2.1	3.0	2.2	3.0	3.6	3.3
1979	2.7	3.0	3.2	3.9	2.3	2.4	1.7	2.4	2.4	2.9	3.8	3.6
1980	3.6	2.5	2.9	3.2	2.5	2.3	1.6	1.6	2.6	3.0	2.6	2.8
1981	3.4	3.4	4.3	3.4	1.8	2.4	1.8	1.9	2.5	3.6	3.0	2.5
1982	4.5	3.4	4.4	4.5	1.8	2.5	2.2	1.5	1.9	2.9	3.1	3.9
1983	2.7	2.4	2.0	2.3	2.4	1.8	1.9	1.8	2.2	3.6	2.9	3.7
1984	2.7	2.9	2.9	4.3	3.5	2.1	1.9	1.4	2.2	2.5	3.0	3.0
1985	3.2	2.7	3.5	4.1	2.6	2.5	1.8	1.9	1.9	3.3	2.5	4.3
1986	3.3	2.5	4.0	2.4	2.4	2.4	2.0	2.2	3.0	2.5	3.0	2.8
1987	3.1	2.4	2.9	3.3	2.4	2.5	1.9	2.1	1.8	3.4	2.8	4.4

32 YR. STATISTICS FOR WIS STATION E49

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.0
MEAN PEAK WAVE PERIOD	(SECONDS)	4.4
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	225.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.2
LARGEST WAVE HS	(METERS)	5.1
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	9.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	231.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		64030518

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	165	.	.	.	.	.	.	.	.	165
0.25-0.49	.	482	13	.	.	.	.	.	.	.	495
0.50-0.74	.	696	87	22	.	.	.	.	.	.	805
0.75-0.99	.	193	163	37	.	.	.	.	.	.	393
1.00-1.24	.	.	317	53	11	.	.	.	.	.	381
1.25-1.49	.	.	74	82	3	.	.	.	.	.	159
1.50-1.74	.	.	3	49	13	.	.	.	.	.	65
1.75-1.99	.	.	.	4	8	.	.	.	.	.	12
2.00-2.24	.	.	.	.	3	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1536	657	247	38	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 2327.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	67	.	.	.	.	.	.	.	.	67
0.25-0.49	.	322	11	1	.	.	.	.	.	.	334
0.50-0.74	.	574	78	20	.	.	.	.	.	.	672
0.75-0.99	.	132	137	41	1	.	.	.	.	.	311
1.00-1.24	.	.	199	70	7	.	.	.	.	.	276
1.25-1.49	.	.	20	60	5	.	.	.	.	.	85
1.50-1.74	.	.	.	45	25	.	.	.	.	.	70
1.75-1.99	.	.	.	5	21	.	.	.	.	.	26
2.00-2.24	.	.	.	.	25	.	.	.	.	.	25
2.25-2.49	.	.	.	.	8	1	.	.	.	.	9
2.50-2.74	.	.	.	.	1	1	.	.	.	.	2
2.75-2.99	.	.	.	.	.	1	.	.	.	.	1
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1095	445	242	93	4	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.7 NO. OF CASES= 1769.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	204	1	.	.	.	.	.	.	.	205
0.25-0.49	.	775	33	2	.	.	.	.	.	.	810
0.50-0.74	.	869	309	85	.	.	.	.	.	.	1263
0.75-0.99	.	139	419	202	2	.	.	.	.	.	762
1.00-1.24	.	1	425	385	40	.	.	.	.	.	851
1.25-1.49	.	.	14	432	47	.	.	.	.	.	493
1.50-1.74	.	.	1	474	249	1	.	.	.	.	725
1.75-1.99	.	.	.	13	301	4	.	.	.	.	318
2.00-2.24	.	.	.	1	317	5	1	.	.	.	324
2.25-2.49	.	.	.	.	72	33	.	.	.	.	105
2.50-2.74	.	.	.	.	8	54	.	.	.	.	62
2.75-2.99	.	.	.	.	.	16	2	.	.	.	18
3.00-3.24	.	.	.	.	1	16	3	.	.	.	20
3.25-3.49	.	.	.	.	.	1	2	.	.	.	3
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1988	1202	1594	1037	130	10	0	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.4 NO. OF CASES= 5585.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	137	.	.	.	.	.	.	.	.	137
0.25-0.49	.	541	13	.	.	.	.	.	.	.	554
0.50-0.74	.	697	355	83	.	.	.	.	.	.	1135
0.75-0.99	.	52	358	234	1	.	.	.	.	.	645
1.00-1.24	.	.	265	420	68	.	.	.	.	.	753
1.25-1.49	.	.	4	303	70	.	.	.	.	.	377
1.50-1.74	.	.	.	270	190	7	.	.	.	.	467
1.75-1.99	.	.	.	4	203	17	.	.	.	.	224
2.00-2.24	.	.	.	.	159	25	.	.	.	.	184
2.25-2.49	.	.	.	.	41	37	.	.	.	.	78
2.50-2.74	.	.	.	.	2	41	.	.	.	.	43
2.75-2.99	.	.	.	.	.	17	2	.	.	.	19
3.00-3.24	.	.	.	.	.	6	4	.	.	.	10
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1427	995	1314	734	150	9	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.4 NO. OF CASES= 4340.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	189	.	.	.	.	.	.	.	.	189
0.25-0.49	.	513	13	.	.	.	.	.	.	.	526
0.50-0.74	.	401	318	76	2	.	.	.	.	.	799
0.75-0.99	.	27	151	80	1	.	.	.	.	.	259
1.00-1.24	.	.	69	129	11	.	.	.	.	.	209
1.25-1.49	.	.	.	67	13	1	.	.	.	.	81
1.50-1.74	.	.	.	49	22	1	.	.	.	.	72
1.75-1.99	.	.	.	1	7	.	.	.	.	.	8
2.00-2.24	.	.	.	.	11	.	.	.	.	.	11
2.25-2.49	.	.	.	.	2	3	.	.	.	.	5
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1130	551	404	69	5	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.7 NO. OF CASES= 2028.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	109	.	.	.	.	.	.	.	.	109
0.25-0.49	.	318	19	1	.	.	.	.	.	.	338
0.50-0.74	.	300	143	35	.	.	.	.	.	.	478
0.75-0.99	.	29	120	34	1	.	.	.	.	.	184
1.00-1.24	.	.	93	51	2	.	.	.	.	.	146
1.25-1.49	.	.	2	85	2	.	.	.	.	.	89
1.50-1.74	.	.	.	53	7	.	.	.	.	.	60
1.75-1.99	.	.	.	5	8	1	.	.	.	.	14
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	756	377	264	26	1	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.7 NO. OF CASES= 1339.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	172	1	.	.	.	.	.	.	.	173
0.25-0.49	.	549	26	2	.	.	.	.	.	.	577
0.50-0.74	.	516	163	27	1	.	.	.	.	.	707
0.75-0.99	.	74	155	12	.	.	.	.	.	.	241
1.00-1.24	.	.	234	78	2	.	.	.	.	.	314
1.25-1.49	.	.	4	186	.	.	.	.	.	.	190
1.50-1.74	.	.	.	203	.	.	.	.	.	.	203
1.75-1.99	.	.	.	23	21	.	.	.	.	.	44
2.00-2.24	.	.	.	1	44	1	.	.	.	.	46
2.25-2.49	.	.	.	.	16	.	.	.	.	.	16
2.50-2.74	.	.	.	.	9	2	.	.	.	.	11
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1311	583	532	93	6	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.8 NO. OF CASES= 2370.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	293	1	.	.	.	.	.	.	.	294
0.25-0.49	.	853	22	6	.	.	.	.	.	.	881
0.50-0.74	.	720	165	26	.	.	.	.	.	.	911
0.75-0.99	.	117	401	13	1	.	.	.	.	.	532
1.00-1.24	.	1	649	144	3	.	.	.	.	.	797
1.25-1.49	.	.	29	529	.	.	.	.	.	.	558
1.50-1.74	.	.	.	765	.	.	.	.	.	.	765
1.75-1.99	.	.	.	129	148	.	.	.	.	.	277
2.00-2.24	.	.	.	1	262	.	.	.	.	.	263
2.25-2.49	.	.	.	.	95	.	.	.	.	.	95
2.50-2.74	.	.	.	.	49	10	.	.	.	.	59
2.75-2.99	.	.	.	.	.	17	.	.	.	.	17
3.00-3.24	.	.	.	.	.	7	.	.	.	.	7
3.25-3.49	.	.	.	.	.	3	.	.	.	.	3
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1984	1267	1613	558	37	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 4.2 NO. OF CASES= 5115.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	530	2	.	.	.	.	.	.	.	592
0.25-0.49	.	1389	38	4	.	.	.	.	.	.	1442
0.50-0.74	.	1763	72	22	1	.	.	.	.	.	1858
0.75-0.99	.	322	737	2	.	.	.	.	.	.	1061
1.00-1.24	.	.	1680	23	.	.	.	.	.	.	1703
1.25-1.49	.	.	254	899	.	.	.	.	.	.	1153
1.50-1.74	.	.	.	1070	.	.	.	.	.	.	1070
1.75-1.99	.	.	.	273	.	.	.	.	.	.	273
2.00-2.24	.	.	.	54	97	.	.	.	.	.	151
2.25-2.49	.	.	.	.	40	.	.	.	.	.	40
2.50-2.74	.	.	.	.	13	.	.	.	.	.	13
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4074	2784	2347	151	0	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.8 NO. OF CASES= 8759.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	399	6	.	.	.	.	.	.	.	405
0.25-0.49	.	1320	27	7	.	.	.	.	.	.	1354
0.50-0.74	.	1874	279	22	2	.	.	.	.	.	2177
0.75-0.99	.	535	951	110	1	.	.	.	.	.	1597
1.00-1.24	.	.	1640	256	11	.	.	.	.	.	1907
1.25-1.49	.	.	381	786	18	.	.	.	.	.	1185
1.50-1.74	.	.	9	1070	164	4	.	.	.	.	1247
1.75-1.99	.	.	.	293	171	5	.	.	.	.	469
2.00-2.24	.	.	.	65	231	5	.	.	.	.	301
2.25-2.49	.	.	.	1	54	24	.	.	.	.	79
2.50-2.74	.	.	.	.	19	44	.	.	.	.	63
2.75-2.99	.	.	.	.	1	8	.	.	.	.	9
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	1	.	1	.	.	2
TOTAL	0	4128	3293	2610	672	94	1	1	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 10113.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	594	82	11	.	.	.	.	.	.	687
0.25-0.49	.	1286	312	198	3	.	.	.	.	.	1799
0.50-0.74	.	1278	881	624	109	.	.	.	.	.	2892
0.75-0.99	.	298	704	572	159	.	.	.	.	.	1733
1.00-1.24	.	6	637	916	404	16	.	.	.	.	1979
1.25-1.49	.	.	57	725	216	24	.	.	.	.	1022
1.50-1.74	.	.	9	717	812	72	.	.	.	.	1610
1.75-1.99	.	.	.	97	744	50	2	.	.	.	893
2.00-2.24	.	.	.	6	1163	54	12	.	.	.	1235
2.25-2.49	.	.	.	.	263	214	17	.	.	.	494
2.50-2.74	.	.	.	.	27	317	13	.	.	.	357
2.75-2.99	.	.	.	.	3	86	9	.	.	.	98
3.00-3.24	.	.	.	.	.	48	20	.	.	.	68
3.25-3.49	.	.	.	.	.	1	10	.	.	.	11
3.50+	.	.	.	.	.	.	14	7	.	.	21
TOTAL	0	3462	2682	3866	3903	882	97	7	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.9 MEAN TP(SEC)= 4.8 NO. OF CASES= 13953.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	404	34	5	.	.	.	.	.	.	443
0.25-0.49	.	1165	238	98	2	.	.	.	.	.	1503
0.50-0.74	.	935	1044	909	73	.	.	.	.	.	2961
0.75-0.99	.	95	439	937	240	1	.	.	.	.	1712
1.00-1.24	.	4	351	963	864	24	.	.	.	.	2206
1.25-1.49	.	.	8	480	558	50	.	.	.	.	1096
1.50-1.74	.	.	1	458	957	254	3	.	.	.	1673
1.75-1.99	.	.	.	34	737	222	1	.	.	.	994
2.00-2.24	.	.	.	2	866	312	74	.	.	.	1254
2.25-2.49	.	.	.	.	207	388	71	.	.	.	666
2.50-2.74	.	.	.	.	24	514	111	4	.	.	653
2.75-2.99	.	.	.	.	.	108	113	3	1	.	225
3.00-3.24	.	.	.	.	1	44	182	8	1	.	236
3.25-3.49	.	.	.	.	.	1	79	9	.	.	89
3.50+	.	.	.	.	.	.	63	43	5	.	111
TOTAL	0	2603	2115	3886	4529	1918	697	67	7	0	

MEAN HS(M) = 1.3 LARGEST HS(M)= 4.7 MEAN TP(SEC)= 5.2 NO. OF CASES= 14817.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	303	3	.	.	.	.	.	.	.	306
0.25-0.49	.	916	29	7	1	.	.	.	.	.	953
0.50-0.74	.	796	746	163	10	.	.	.	.	.	1715
0.75-0.99	.	83	349	539	27	.	.	.	.	.	998
1.00-1.24	.	1	253	808	302	3	.	.	.	.	1367
1.25-1.49	.	.	11	313	314	3	.	.	.	.	641
1.50-1.74	.	.	.	284	772	102	.	.	.	.	1158
1.75-1.99	.	.	.	4	589	104	1	.	.	.	698
2.00-2.24	.	.	.	.	707	363	17	.	.	.	1087
2.25-2.49	.	.	.	.	58	448	12	.	.	.	518
2.50-2.74	.	.	.	.	7	525	34	2	.	.	568
2.75-2.99	.	.	.	.	.	112	70	2	.	.	184
3.00-3.24	.	.	.	.	.	22	115	.	.	.	137
3.25-3.49	.	.	.	.	.	.	53	4	.	.	57
3.50+	.	.	.	.	.	.	54	20	2	1	77
TOTAL	0	2099	1391	2118	2787	1682	356	28	2	1	

MEAN HS(M) = 1.4 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 5.2 NO. OF CASES= 9805.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	196	.	.	.	.	.	.	.	.	196
0.25-0.49	.	673	36	1	.	.	.	.	.	.	710
0.50-0.74	.	602	512	102	.	.	.	.	.	.	1216
0.75-0.99	.	62	326	293	1	.	.	.	.	.	682
1.00-1.24	.	1	254	545	52	.	.	.	.	.	852
1.25-1.49	.	.	6	405	75	.	.	.	.	.	486
1.50-1.74	.	.	.	466	351	10	1	.	.	.	828
1.75-1.99	.	.	.	18	460	5	1	.	.	.	484
2.00-2.24	.	.	.	.	403	47	.	.	.	.	450
2.25-2.49	.	.	.	.	69	87	2	.	.	.	158
2.50-2.74	.	.	.	.	14	81	1	.	.	.	96
2.75-2.99	.	.	.	.	.	33	5	.	.	.	38
3.00-3.24	.	.	.	.	.	12	7	.	.	.	19
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	3	1	.	.	4
TOTAL	0	1534	1134	1830	1425	275	23	1	0	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 4.0 MEAN TP(SEC)= 4.7 NO. OF CASES= 5832.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	145	1	.	.	.	.	.	.	.	146
0.25-0.49	.	386	21	1	.	.	.	.	.	.	408
0.50-0.74	.	456	254	33	.	.	.	.	.	.	743
0.75-0.99	.	33	243	86	1	.	.	.	.	.	363
1.00-1.24	.	.	198	222	5	1	.	.	.	.	426
1.25-1.49	.	.	3	255	3	.	.	.	.	.	261
1.50-1.74	.	.	1	357	106	.	.	.	.	.	464
1.75-1.99	.	.	.	8	187	.	.	.	.	.	195
2.00-2.24	.	.	.	.	135	.	.	.	.	.	135
2.25-2.49	.	.	.	.	27	2	.	.	.	.	29
2.50-2.74	.	.	.	.	5	20	.	.	.	.	25
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	1	.	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1020	721	962	469	27	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.3 NO. OF CASES= 3002.

STATION E50 42.30N 80.35W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

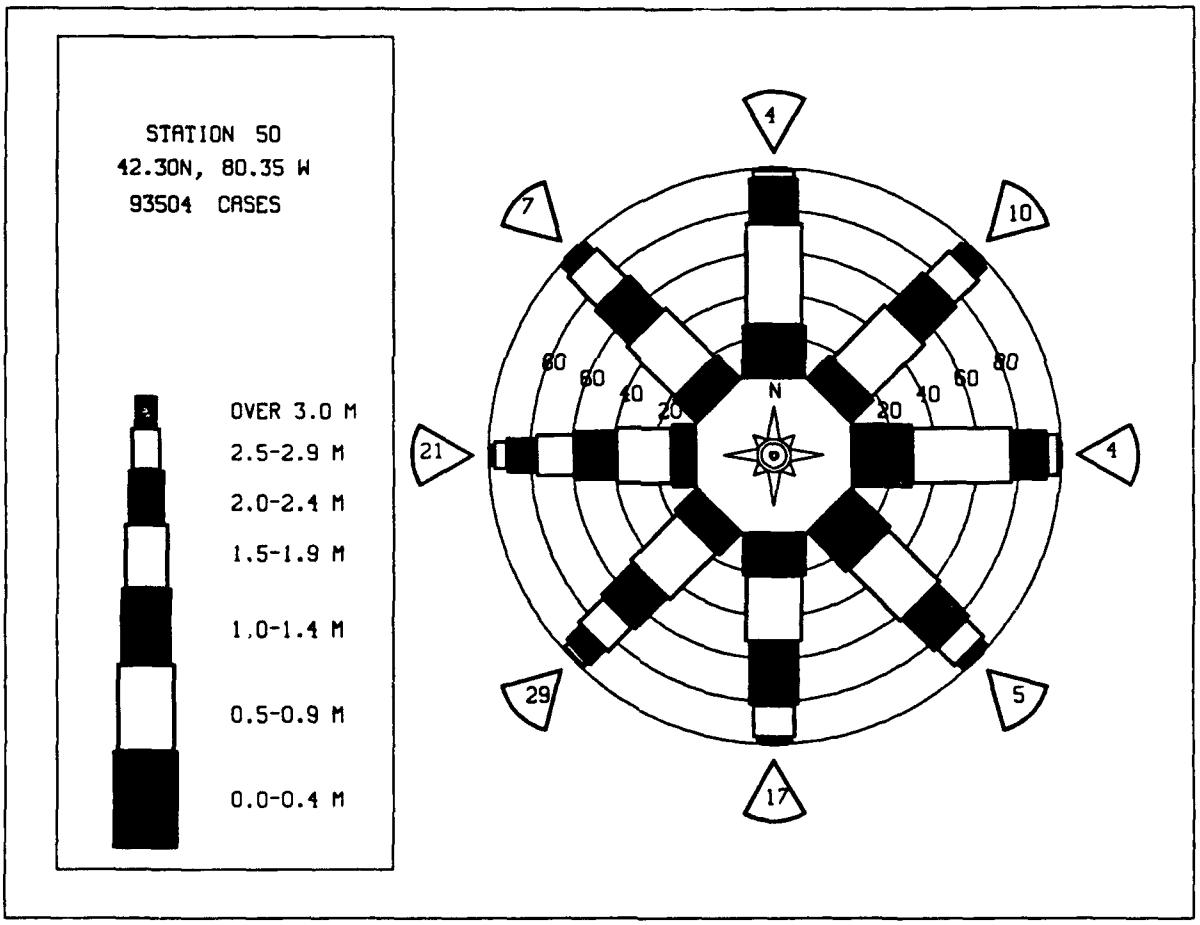
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	122	.	.	.	.	.	.	.	.	122
0.25-0.49	.	332	20	.	.	.	.	.	.	.	352
0.50-0.74	.	513	105	16	.	.	.	.	.	.	634
0.75-0.99	.	110	210	47	1	.	.	.	.	.	368
1.00-1.24	.	.	278	102	4	.	.	.	.	.	384
1.25-1.49	.	.	41	217	2	.	.	.	.	.	260
1.50-1.74	.	.	.	216	29	1	.	.	.	.	246
1.75-1.99	.	.	.	9	73	.	.	.	.	.	82
2.00-2.24	.	.	.	2	35	1	.	.	.	.	38
2.25-2.49	.	.	.	.	6	1	.	.	.	.	7
2.50-2.74	.	.	.	.	2	3	.	.	.	.	5
2.75-2.99	.	.	.	.	.	5	.	.	.	.	5
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1077	654	609	152	11	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.0 NO. OF CASES= 2350.

STATION E50 42.30N 80.35W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	409	13	1	.	.	.	.	.	.	423
0.25-0.49	.	1183	88	33	.	.	.	.	.	.	1304
0.50-0.74	.	1299	551	227	19	.	.	.	.	.	2096
0.75-0.99	.	230	587	324	43	.	.	.	.	.	1184
1.00-1.24	.	1	754	517	179	4	.	.	.	.	1455
1.25-1.49	.	.	91	582	133	7	.	.	.	.	813
1.50-1.74	.	.	2	655	370	45	.	.	.	.	1072
1.75-1.99	.	.	.	92	368	41	.	.	.	.	501
2.00-2.24	.	.	.	13	446	81	10	.	.	.	550
2.25-2.49	.	.	.	.	96	124	10	.	.	.	230
2.50-2.74	.	.	.	.	18	161	16	.	.	.	195
2.75-2.99	.	.	.	.	.	40	20	.	.	.	60
3.00-3.24	.	.	.	.	.	16	33	.	.	.	49
3.25-3.49	.	.	.	.	.	.	15	1	.	.	16
3.50+	.	.	.	.	.	.	13	7	.	.	20
TOTAL	0	3122	2086	2444	1672	519	117	8	0	0	

MEAN HS(M)= 1.1 LARGEST HS(M)= 5.2 MEAN TP(SEC)= 4.5 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E50 (42.30N 80.35W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.8	0.9	0.9	1.1	0.8	0.7	0.8	0.9	0.8	1.0	1.2	0.9	0.9
1957	1.0	0.9	1.3	1.3	1.2	1.1	1.1	0.9	1.1	1.1	1.6	1.5	1.2
1958	1.1	1.1	0.7	0.8	0.8	0.8	0.6	0.6	0.7	1.0	1.0	0.8	0.9
1959	1.0	0.8	0.9	0.7	0.4	0.4	0.4	0.6	0.8	0.9	0.9	0.7	0.7
1960	0.7	1.4	1.2	1.4	1.1	1.0	0.9	0.9	1.0	1.1	1.4	1.6	1.1
1961	1.3	1.0	1.2	1.2	1.2	1.1	0.9	1.1	1.1	1.4	1.4	1.4	1.2
1962	1.5	1.2	1.2	1.2	1.1	0.9	0.9	0.9	1.0	1.1	1.1	1.4	1.1
1963	1.3	1.3	1.3	1.3	1.1	0.7	0.9	1.0	1.0	1.0	1.6	1.4	1.2
1964	1.6	1.2	1.4	1.5	1.3	0.9	0.8	1.1	1.1	1.1	1.3	1.3	1.2
1965	1.5	1.4	1.1	1.1	1.0	1.0	0.8	1.0	1.1	1.4	1.5	1.3	1.2
1966	1.4	0.9	1.2	1.2	1.0	0.8	0.9	0.9	1.0	1.4	1.3	1.4	1.1
1967	1.6	1.4	1.0	1.2	1.1	0.9	0.7	0.8	0.9	1.3	1.6	1.4	1.2
1968	1.2	1.3	1.2	1.2	1.1	0.9	0.9	1.0	0.9	1.3	1.4	1.5	1.1
1969	1.7	0.9	1.3	1.1	1.0	0.8	0.8	0.8	0.9	1.3	1.3	1.3	1.1
1970	1.2	1.3	1.0	1.2	1.1	0.9	0.9	0.8	1.1	1.2	1.4	1.4	1.1
1971	1.6	1.5	1.3	1.2	0.9	0.7	0.9	0.9	0.7	0.8	1.2	1.3	1.1
1972	1.5	1.1	1.2	1.0	0.9	0.8	0.7	0.9	0.9	1.0	1.1	1.2	1.0
1973	1.5	1.1	1.3	1.4	1.2	1.0	0.9	0.9	1.0	1.1	1.5	1.3	1.2
1974	1.3	1.3	1.3	1.4	1.1	1.0	0.9	0.8	1.0	1.0	1.2	1.3	1.1
1975	1.4	1.2	1.3	1.2	0.7	0.9	0.7	0.7	1.0	1.1	1.3	1.3	1.1
1976	1.6	1.5	1.6	1.3	1.2	1.1	1.0	0.9	1.1	1.2	1.5	1.5	1.3
1977	1.6	1.3	1.3	1.2	0.8	0.9	0.9	1.0	1.0	1.1	1.4	1.6	1.2
1978	1.5	0.7	1.0	1.2	0.9	0.8	0.8	0.7	0.9	1.1	1.2	1.5	1.0
1979	1.4	1.1	1.2	1.1	0.8	0.9	0.7	0.9	0.9	1.2	1.2	1.4	1.1
1980	1.2	1.0	1.1	1.0	0.8	0.8	0.7	0.7	0.9	1.2	1.3	1.2	1.0
1981	1.1	1.2	1.2	1.4	0.7	1.0	0.7	0.7	0.9	1.0	1.0	1.1	1.0
1982	1.6	1.0	1.1	1.3	0.5	0.7	0.6	0.6	0.7	0.8	1.1	1.2	1.0
1983	1.1	0.7	1.0	1.0	1.0	0.5	0.7	0.6	0.8	1.1	1.1	1.5	0.9
1984	1.0	1.1	1.2	0.9	1.1	0.8	0.7	0.7	0.8	0.7	1.2	1.3	1.0
1985	1.4	1.2	1.3	1.2	1.0	0.9	0.9	0.9	0.9	1.1	1.4	1.6	1.2
1986	1.5	1.0	1.3	1.2	1.1	1.1	1.0	1.1	1.1	1.2	1.2	1.1	1.2
1987	1.2	1.0	1.1	1.2	1.0	1.0	0.9	1.1	0.9	1.2	1.5	1.5	1.1
MEAN	1.3	1.1	1.2	1.2	1.0	0.9	0.8	0.8	0.9	1.1	1.3	1.3	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E50 (42.30N 80.35W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	2.5	3.7	3.4	2.5	2.8	2.4	2.1	2.1	3.1	2.8	2.4
1957	2.1	2.3	3.3	4.0	2.7	3.0	2.5	2.0	2.6	2.5	3.4	3.1
1958	2.8	2.5	2.1	2.9	2.0	2.1	1.8	1.8	2.3	2.6	2.9	2.5
1959	2.6	1.9	3.3	3.0	1.5	1.3	2.0	1.8	2.0	2.5	2.2	2.1
1960	2.2	3.4	3.1	3.7	2.7	3.3	2.3	2.2	2.4	3.3	3.2	3.0
1961	3.3	3.5	2.6	3.8	2.9	2.9	2.5	2.7	3.0	3.5	3.4	4.0
1962	3.2	3.0	2.8	3.4	3.2	2.3	2.4	2.2	2.5	2.8	3.2	3.5
1963	3.2	3.2	3.8	3.4	2.9	2.3	2.4	2.6	2.7	2.9	3.0	3.0
1964	3.5	2.8	4.7	3.0	4.2	2.8	2.1	2.2	3.0	3.1	3.3	3.3
1965	3.8	2.7	3.4	4.0	2.8	2.2	2.2	2.7	2.8	3.4	3.7	3.1
1966	3.9	2.5	3.2	2.9	3.5	2.4	3.1	2.5	3.1	2.8	3.7	3.8
1967	3.3	3.5	2.6	3.3	2.8	2.5	2.4	2.1	2.8	3.2	3.3	2.8
1968	3.8	3.0	2.9	3.5	3.3	2.7	2.6	2.7	2.5	2.8	3.4	3.7
1969	3.9	2.9	3.3	3.3	2.7	2.4	2.6	2.5	2.6	2.8	2.8	2.9
1970	3.0	2.8	3.4	4.1	2.6	2.6	2.8	2.5	3.4	2.6	3.9	3.4
1971	4.4	3.3	3.4	3.2	2.7	2.3	2.7	2.6	2.0	2.6	2.8	3.4
1972	5.2	3.3	3.0	3.2	2.7	2.2	2.2	2.6	2.6	2.8	3.3	3.2
1973	3.3	2.6	3.1	3.2	2.8	2.4	2.9	2.8	2.7	2.8	3.3	3.0
1974	3.7	3.5	3.1	4.1	3.0	2.7	2.3	2.4	3.0	2.5	3.5	3.2
1975	3.5	3.8	2.9	3.9	2.0	2.5	2.2	2.6	2.5	2.8	3.7	3.9
1976	3.5	3.4	3.6	3.1	3.7	2.6	2.3	2.5	2.8	3.2	2.8	3.2
1977	3.6	2.7	3.2	3.9	2.5	2.8	3.4	2.2	2.7	2.6	3.3	3.7
1978	4.9	2.2	3.3	3.5	3.3	3.1	2.6	2.7	2.5	2.6	3.1	3.6
1979	3.3	3.0	3.2	4.1	2.4	2.5	2.1	2.4	2.3	2.8	3.2	3.2
1980	3.7	3.2	3.3	2.9	2.7	3.1	2.0	2.0	2.3	3.5	2.6	3.6
1981	3.0	3.4	3.6	3.4	2.2	2.4	2.0	1.7	2.5	3.1	3.1	2.4
1982	4.1	3.1	4.1	4.0	1.9	2.0	2.2	1.7	2.0	2.6	3.1	3.7
1983	3.0	3.1	2.6	2.6	2.3	1.9	1.9	2.1	2.4	3.3	2.8	3.9
1984	2.7	2.9	2.7	3.6	3.0	2.1	2.1	1.7	2.4	2.5	3.0	3.2
1985	3.1	2.5	3.4	4.0	2.4	2.7	1.9	2.0	2.2	3.2	2.9	3.9
1986	3.3	2.5	3.5	2.6	2.7	2.5	2.5	2.5	3.1	2.7	3.3	2.7
1987	3.5	2.4	3.0	3.6	2.4	2.5	2.2	2.2	2.3	2.6	3.1	3.9

32 YR. STATISTICS FOR WIS STATION E50

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	1.1
MEAN PEAK WAVE PERIOD	(SECONDS)	4.5
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	11.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	263.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		72012518

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	286	1	.	.	.	.	.	.	.	287
0.25-0.49	.	452	4	.	.	.	.	.	.	.	456
0.50-0.74	.	559	49	2	.	.	.	.	.	.	610
0.75-0.99	.	105	179	10	.	.	.	.	.	.	294
1.00-1.24	.	.	209	9	.	.	.	.	.	.	218
1.25-1.49	.	.	27	44	.	.	.	.	.	.	71
1.50-1.74	.	.	.	22	1	.	.	.	.	.	23
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1402	469	87	1	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 1.7 MEAN TP(SEC)= 3.3 NO. OF CASES= 1839.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	282	.	.	.	.	.	.	.	.	282
0.25-0.49	.	469	3	.	.	.	.	.	.	.	472
0.50-0.74	.	481	133	.	.	.	.	.	.	.	614
0.75-0.99	.	79	171	8	.	.	.	.	.	.	258
1.00-1.24	.	.	157	28	.	.	.	.	.	.	185
1.25-1.49	.	.	8	40	1	1	.	.	.	.	50
1.50-1.74	.	.	.	28	.	.	.	.	.	.	28
1.75-1.99	.	.	.	1	.	.	.	.	.	.	1
2.00-2.24	.	.	.	.	2	.	.	.	.	.	2
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1311	472	105	3	1	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.2 MEAN TP(SEC)= 3.4 NO. OF CASES= 1775.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	540	2	.	.	.	.	.	.	.	542
0.25-0.49	.	842	.	.	.	.	.	.	.	.	842
0.50-0.74	.	771	330	1	.	.	.	.	.	.	1102
0.75-0.99	.	77	530	19	.	.	.	.	.	.	626
1.00-1.24	.	.	633	122	.	.	.	.	.	.	755
1.25-1.49	.	.	5	326	.	.	.	.	.	.	331
1.50-1.74	.	.	.	233	1	.	.	.	.	.	234
1.75-1.99	.	.	.	40	12	.	.	.	.	.	52
2.00-2.24	.	.	.	.	47	.	.	.	.	.	47
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	1	.	.	.	.	.	1
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2230	1500	741	68	0	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 3.7 NO. OF CASES= 4250.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	527	.	.	.	.	.	.	.	.	527
0.25-0.49	.	883	3	.	.	.	.	.	.	.	886
0.50-0.74	.	912	479	3	.	.	.	.	.	.	1394
0.75-0.99	.	63	548	71	.	.	.	.	.	.	682
1.00-1.24	.	.	496	294	1	.	.	.	.	.	791
1.25-1.49	.	.	5	385	4	.	.	.	.	.	394
1.50-1.74	.	.	.	355	23	.	.	.	.	.	378
1.75-1.99	.	.	.	47	69	.	.	.	.	.	116
2.00-2.24	.	.	.	2	72	.	.	.	.	.	74
2.25-2.49	.	.	.	.	16	1	.	.	.	.	17
2.50-2.74	.	.	.	.	5	2	.	.	.	.	7
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	6	.	.	.	.	6
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2385	1531	1157	190	11	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 3.8 NO. OF CASES= 4938.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	635	2	.	.	.	.	.	.	.	637
0.25-0.49	.	826	2	.	.	.	.	.	.	.	828
0.50-0.74	.	604	267	6	.	.	.	.	.	.	877
0.75-0.99	.	38	268	28	.	.	.	.	.	.	334
1.00-1.24	.	.	172	121	1	.	.	.	.	.	294
1.25-1.49	.	.	.	121	1	.	.	.	.	.	122
1.50-1.74	.	.	.	68	1	.	.	.	.	.	69
1.75-1.99	.	.	.	4	3	.	.	.	.	.	7
2.00-2.24	.	.	.	.	4	.	.	.	.	.	4
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	1	.	.	.	.	.	1
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2103	711	348	12	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.5 NO. OF CASES= 2975.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	408	3	.	.	.	.	.	.	.	411
0.25-0.49	.	480	.	.	.	.	.	.	.	.	480
0.50-0.74	.	468	84	2	.	.	.	.	.	.	554
0.75-0.99	.	43	102	6	.	.	.	.	.	.	151
1.00-1.24	.	.	63	18	.	.	.	.	.	.	81
1.25-1.49	.	.	3	24	.	.	.	.	.	.	27
1.50-1.74	.	.	.	16	.	.	.	.	.	.	16
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1399	255	68	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.2 NO. OF CASES= 1616.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	480	5	.	.	.	.	.	.	.	485
0.25-0.49	.	507	2	.	.	.	.	.	.	.	509
0.50-0.74	.	680	19	.	.	.	.	.	.	.	699
0.75-0.99	.	152	80	.	.	.	.	.	.	.	232
1.00-1.24	.	.	78	3	.	.	.	.	.	.	81
1.25-1.49	.	.	9	3	.	.	.	.	.	.	12
1.50-1.74	.	.	1	2	.	.	.	.	.	.	3
1.75-1.99	.	.	.	.	.	.	.	.	.	.	0
2.00-2.24	.	.	.	.	.	.	.	.	.	.	0
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1819	194	8	1	0	0	0	0	0	

MEAN HS(M) = 0.5 LARGEST HS(M)= 2.3 MEAN TP(SEC)= 3.1 NO. OF CASES= 1895.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	405	1	.	.	.	.	.	.	.	406
0.25-0.49	.	588	.	.	.	.	.	.	.	.	588
0.50-0.74	.	900	6	.	.	.	.	.	.	.	906
0.75-0.99	.	252	122	1	.	.	.	.	.	.	375
1.00-1.24	.	.	214	5	.	.	.	.	.	.	219
1.25-1.49	.	.	33	21	.	.	.	.	.	.	54
1.50-1.74	.	.	1	27	.	.	.	.	.	.	28
1.75-1.99	.	.	.	4	.	.	.	.	.	.	4
2.00-2.24	.	.	.	.	1	.	.	.	.	.	1
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2145	377	58	2	0	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.2 NO. OF CASES= 2420.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	642	.	.	.	.	.	.	.	.	642
0.25-0.49	.	787	6	.	.	.	.	.	.	.	793
0.50-0.74	.	1382	14	.	.	.	.	.	.	.	1396
0.75-0.99	.	334	398	1	1	.	.	.	.	.	734
1.00-1.24	.	3	720	4	.	.	.	.	.	.	727
1.25-1.49	.	.	59	221	.	.	.	.	.	.	280
1.50-1.74	.	.	.	226	.	.	.	.	.	.	226
1.75-1.99	.	.	.	55	.	.	.	.	.	.	55
2.00-2.24	.	.	.	17	10	.	.	.	.	.	27
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3148	1197	524	18	0	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.5 NO. OF CASES= 4579.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	991	43	14	.	.	.	.	.	.	1048
0.25-0.49	.	1307	127	38	2	.	.	.	.	.	1474
0.50-0.74	.	1942	263	118	3	.	.	.	.	.	2326
0.75-0.99	.	620	1003	90	4	.	.	.	.	.	1717
1.00-1.24	.	.	1746	157	6	.	.	.	.	.	1909
1.25-1.49	.	.	319	555	17	.	.	.	.	.	891
1.50-1.74	.	.	4	793	22	1	.	.	.	.	820
1.75-1.99	.	.	.	195	56	1	.	.	.	.	252
2.00-2.24	.	.	.	52	82	4	1	.	.	.	139
2.25-2.49	.	.	.	.	40	2	1	.	.	.	43
2.50-2.74	.	.	.	.	10	5	.	.	.	.	15
2.75-2.99	.	.	.	.	3	1	.	.	.	.	4
3.00-3.24	.	.	.	.	.	2	.	.	.	.	2
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	1	.	1	.	.	.	2
TOTAL	0	4860	3505	2012	246	16	3	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 5.0 MEAN TP(SEC)= 3.8 NO. OF CASES= 9965.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	2269	362	115	3	.	.	.	.	.	2749
0.25-0.49	.	1757	898	591	50	.	.	.	.	.	3296
0.50-0.74	.	1449	1149	1178	345	4	.	.	.	.	4125
0.75-0.99	.	290	850	679	357	19	.	.	.	.	2195
1.00-1.24	.	4	976	1101	496	58	.	.	.	.	2635
1.25-1.49	.	.	83	956	313	49	2	.	.	.	1403
1.50-1.74	.	.	5	1146	539	83	6	.	.	.	1779
1.75-1.99	.	.	.	167	577	52	4	.	.	.	800
2.00-2.24	.	.	.	20	794	60	2	.	.	.	876
2.25-2.49	.	.	.	.	403	31	5	.	.	.	439
2.50-2.74	.	.	.	.	193	197	3	.	.	.	393
2.75-2.99	.	.	.	.	6	160	2	.	.	.	168
3.00-3.24	.	.	.	.	2	114	4	1	.	.	121
3.25-3.49	.	.	.	.	.	40	5	1	.	.	46
3.50+	.	.	.	.	.	18	32	.	2	.	52
TOTAL	0	5769	4323	5953	4078	885	65	2	2	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 5.4 MEAN TP(SEC)= 4.5 NO. OF CASES= 19728.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1233	298	203	10	.	.	.	.	.	1744
0.25-0.49	.	1170	424	839	144	.	.	.	.	.	2577
0.50-0.74	.	1026	587	915	808	18	.	.	.	.	3354
0.75-0.99	.	16	674	332	503	85	.	.	.	.	1760
1.00-1.24	.	4	1222	664	557	212	8	.	.	.	2667
1.25-1.49	.	.	234	780	306	209	19	.	.	.	1548
1.50-1.74	.	.	3	1245	682	373	38	1	.	.	2342
1.75-1.99	.	.	.	349	501	312	58	2	.	.	1222
2.00-2.24	.	.	.	130	747	376	159	5	.	.	1417
2.25-2.49	.	.	.	7	394	193	142	4	.	.	740
2.50-2.74	.	.	.	.	242	289	213	11	.	.	755
2.75-2.99	.	.	.	.	18	191	114	14	.	.	337
3.00-3.24	.	.	.	.	16	234	103	11	1	.	365
3.25-3.49	.	.	.	.	2	64	60	8	3	.	137
3.50+	.	.	.	.	.	37	204	65	13	.	319
TOTAL	0	3599	3442	5464	4930	2593	1118	121	17	0	

MEAN HS(M) = 1.2 LARGEST HS(M)= 5.8 MEAN TP(SEC)= 5.2 NO. OF CASES= 19933.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	702	10	10	1	.	.	.	.	.	723
0.25-0.49	.	884	19	37	26	.	.	.	.	.	966
0.50-0.74	.	773	412	45	100	3	.	.	.	.	1333
0.75-0.99	.	84	627	62	44	18	.	.	.	.	835
1.00-1.24	.	.	1004	232	47	57	3	.	.	.	1343
1.25-1.49	.	.	149	659	13	37	2	.	.	.	860
1.50-1.74	.	.	4	898	25	102	22	.	.	.	1051
1.75-1.99	.	.	.	330	36	66	40	1	.	.	473
2.00-2.24	.	.	.	130	139	64	113	1	.	.	447
2.25-2.49	.	.	.	.	72	9	59	1	.	.	141
2.50-2.74	.	.	.	.	51	5	48	5	.	.	109
2.75-2.99	.	.	.	.	18	4	14	.	.	.	36
3.00-3.24	.	.	.	.	5	3	5	4	.	.	17
3.25-3.49	.	.	.	.	2	3	1	1	.	.	7
3.50+	.	.	.	.	.	10	2	3	3	.	18
TOTAL	0	2443	2225	2403	579	381	309	16	3	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.3 MEAN TP(SEC)= 4.4 NO. OF CASES= 7841.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	470	1	.	.	.	.	.	.	.	471
0.25-0.49	.	688	8	.	.	.	.	.	.	.	696
0.50-0.74	.	580	362	5	2	.	.	.	.	.	949
0.75-0.99	.	52	521	48	.	2	.	.	.	.	623
1.00-1.24	.	.	810	249	2	1	.	.	.	.	1062
1.25-1.49	.	.	39	539	.	.	.	.	.	.	578
1.50-1.74	.	.	.	594	7	4	.	.	.	.	605
1.75-1.99	.	.	.	126	38	.	1	.	.	.	165
2.00-2.24	.	.	.	13	113	.	1	.	.	.	127
2.25-2.49	.	.	.	.	29	.	.	.	.	.	29
2.50-2.74	.	.	.	.	20	.	.	.	.	.	20
2.75-2.99	.	.	.	.	5	4	.	.	.	.	9
3.00-3.24	.	.	.	.	1	2	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1790	1741	1574	217	13	3	0	0	0	

MEAN HS(M) = 0.9 LARGEST H 1)= 4.1 MEAN TP(SEC)= 4.1 NO. OF CASES= 5003.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	273	2	.	.	.	.	.	.	.	275
0.25-0.49	.	429	5	.	.	.	.	.	.	.	434
0.50-0.74	.	413	147	3	.	.	.	.	.	.	563
0.75-0.99	.	41	331	2	.	.	.	.	.	.	374
1.00-1.24	.	.	429	66	.	.	.	.	.	.	495
1.25-1.49	.	.	1	258	.	1	.	.	.	.	260
1.50-1.74	.	.	.	297	.	.	.	.	.	.	297
1.75-1.99	.	.	.	50	6	.	.	.	.	.	56
2.00-2.24	.	.	.	1	32	.	.	.	.	.	33
2.25-2.49	.	.	.	.	9	.	.	.	.	.	9
2.50-2.74	.	.	.	.	6	.	.	.	.	.	6
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1156	915	677	53	1	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 2629.

STATION E51 42.58N 79.57W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

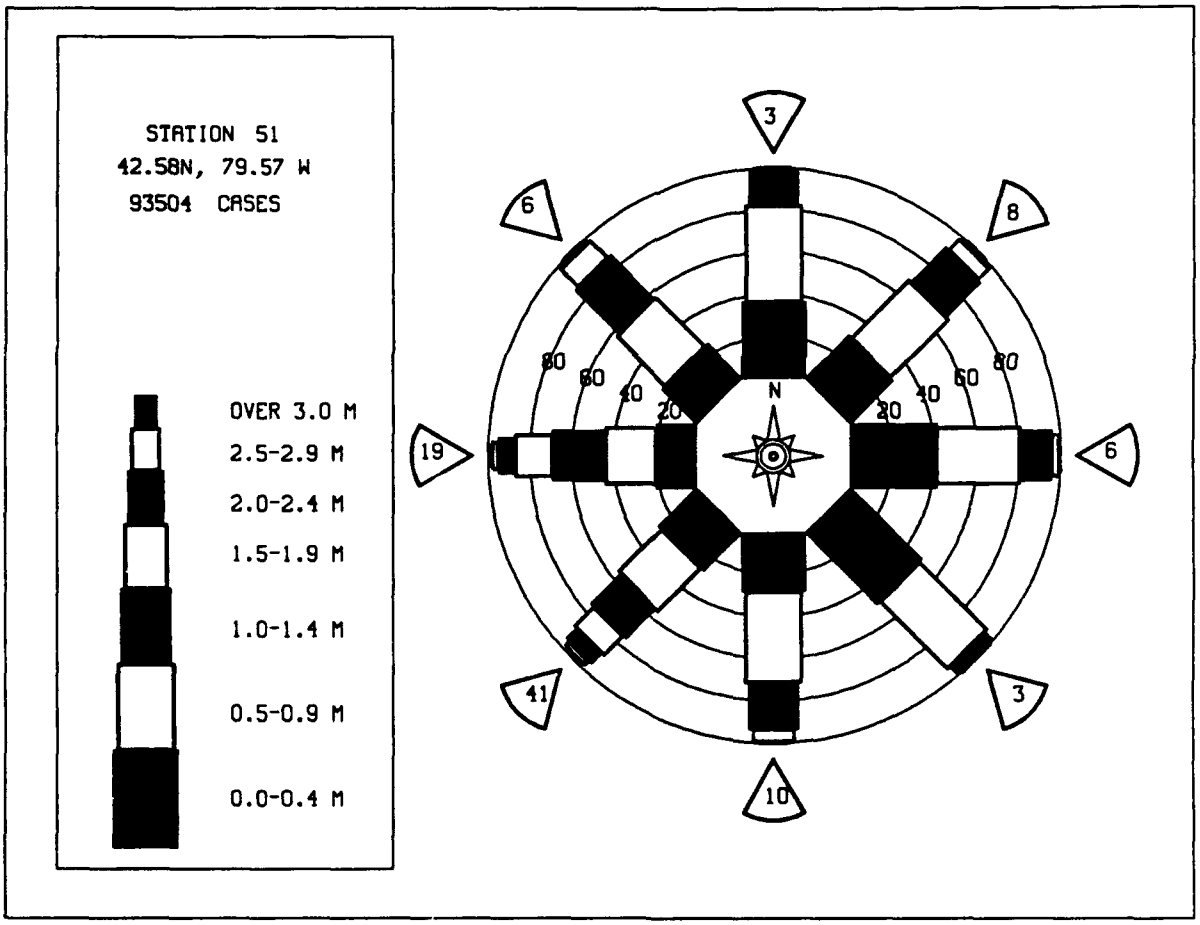
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	218	.	.	.	.	.	.	.	.	218
0.25-0.49	.	267	4	.	.	.	.	.	.	.	271
0.50-0.74	.	491	80	2	.	.	.	.	.	.	573
0.75-0.99	.	85	272	3	.	.	.	.	.	.	360
1.00-1.24	.	.	430	39	.	.	.	.	.	.	469
1.25-1.49	.	.	19	181	.	.	.	.	.	.	200
1.50-1.74	.	.	.	131	.	.	.	.	.	.	131
1.75-1.99	.	.	.	21	1	.	.	.	.	.	22
2.00-2.24	.	.	.	.	6	1	.	.	.	.	7
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1061	805	377	13	1	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 3.7 NO. OF CASES= 2118.

STATION E51 42.58N 79.57W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1036	73	34	1	.	.	.	.	.	1144
0.25-0.49	.	1234	150	150	22	.	.	.	.	.	1556
0.50-0.74	.	1343	438	228	125	2	.	.	.	.	2136
0.75-0.99	.	248	668	136	91	12	.	.	.	.	1155
1.00-1.24	.	1	936	311	111	33	1	.	.	.	1393
1.25-1.49	.	.	99	512	65	29	2	.	.	.	707
1.50-1.74	.	.	1	608	130	56	6	.	.	.	801
1.75-1.99	.	.	.	139	130	43	10	.	.	.	322
2.00-2.24	.	.	.	36	205	50	27	.	.	.	318
2.25-2.49	.	.	.	.	98	23	20	.	.	.	141
2.50-2.74	.	.	.	.	54	50	26	1	.	.	131
2.75-2.99	.	.	.	.	5	36	13	1	.	.	55
3.00-3.24	.	.	.	.	2	36	11	1	.	.	50
3.25-3.49	.	.	.	.	.	10	6	1	.	.	17
3.50+	.	.	.	.	.	6	24	6	1	.	37
TOTAL	0	3862	2365	2154	1039	386	146	10	1	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 5.8 MEAN TP(SEC)= 4.2 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E51 (42.58N 79.57W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.8	0.9	1.0	0.8	0.7	0.8	0.8	0.8	0.8	1.0	1.0	0.8
1957	1.0	0.8	1.1	1.1	1.0	0.8	0.8	0.6	0.9	0.8	1.3	1.3	0.9
1958	1.0	1.0	0.6	0.7	0.7	0.7	0.5	0.6	0.7	0.9	1.0	0.8	0.8
1959	0.9	0.8	0.9	0.8	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.7	0.7
1960	0.9	1.3	1.1	1.3	0.9	0.9	0.8	0.7	0.7	0.9	1.4	1.4	1.0
1961	1.1	0.9	1.0	1.0	1.1	1.1	0.8	0.8	0.9	1.1	1.0	1.3	1.0
1962	1.4	1.0	0.9	1.2	0.9	0.7	0.7	0.7	0.8	0.9	0.8	1.1	0.9
1963	1.3	1.2	1.2	1.1	1.0	0.6	0.7	0.6	0.7	0.8	1.3	1.1	1.0
1964	1.4	1.0	1.2	1.1	1.1	0.8	0.7	0.8	0.8	0.9	1.1	1.1	1.0
1965	1.3	1.2	0.9	0.9	0.9	0.8	0.6	0.8	0.8	1.1	1.2	1.1	1.0
1966	1.2	0.8	1.1	1.0	0.9	0.7	0.7	0.7	0.8	1.2	1.1	1.2	1.0
1967	1.4	1.3	0.8	1.1	0.9	0.7	0.6	0.7	0.7	1.0	1.3	1.1	1.0
1968	0.9	1.2	1.1	1.1	0.8	0.8	0.8	0.8	0.7	1.0	1.1	1.2	0.9
1969	1.4	0.8	1.1	0.9	0.8	0.7	0.6	0.7	0.8	1.0	1.0	0.9	0.9
1970	1.0	1.1	0.9	1.1	0.9	0.8	0.8	0.6	0.8	0.8	1.1	1.1	0.9
1971	1.4	1.4	1.1	1.1	0.8	0.6	0.8	0.8	0.7	0.7	1.0	1.1	1.0
1972	1.5	1.0	1.0	0.9	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	0.9
1973	1.5	1.0	1.0	1.3	1.0	1.0	0.8	0.7	0.8	0.8	1.3	1.1	1.0
1974	1.2	1.1	1.1	1.3	1.0	0.9	0.8	0.7	0.9	0.9	1.1	1.1	1.0
1975	1.3	1.1	1.1	1.1	0.6	0.8	0.6	0.6	0.8	1.0	1.2	1.1	0.9
1976	1.3	1.4	1.4	1.2	1.0	0.9	0.8	0.7	0.9	1.0	1.3	1.3	1.1
1977	1.6	1.4	1.2	1.0	0.7	0.8	0.9	0.8	0.8	0.9	1.2	1.4	1.1
1978	1.5	0.8	0.9	1.1	0.8	0.8	0.8	0.6	0.8	1.0	1.0	1.3	0.9
1979	1.2	1.0	1.1	1.1	0.7	0.8	0.6	0.8	0.7	1.0	1.1	1.2	0.9
1980	1.1	1.0	1.0	0.9	0.7	0.7	0.6	0.6	0.8	1.0	1.1	1.0	0.9
1981	0.9	1.0	0.9	1.1	0.5	0.7	0.5	0.5	0.7	0.8	0.8	0.9	0.8
1982	1.5	0.9	0.9	1.2	0.4	0.6	0.6	0.5	0.5	0.7	0.9	1.0	0.8
1983	0.9	0.6	0.7	0.8	0.8	0.4	0.6	0.5	0.7	0.8	0.9	1.2	0.7
1984	0.8	0.8	1.0	0.7	0.9	0.6	0.6	0.5	0.6	0.5	1.0	1.1	0.8
1985	1.2	1.1	1.1	1.1	0.8	0.7	0.7	0.6	0.7	0.8	0.9	1.3	0.9
1986	1.4	0.8	1.3	1.0	1.0	0.9	0.8	0.9	0.9	1.0	1.0	1.0	1.0
1987	1.1	0.8	0.8	1.0	0.9	0.8	0.8	0.9	0.7	1.0	1.2	1.4	1.0
MEAN	1.2	1.0	1.0	1.0	0.8	0.7	0.7	0.7	0.8	0.9	1.1	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E51 (42.58N 79.57W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.8	2.5	4.3	2.9	2.8	2.7	2.3	2.3	2.0	3.2	3.0	2.5
1957	2.2	2.1	3.4	4.3	2.5	4.5	2.7	2.1	2.4	2.7	4.1	2.9
1958	2.5	2.7	1.9	3.4	1.7	2.3	1.9	1.9	2.4	2.4	2.7	2.4
1959	3.3	2.1	3.3	3.4	1.4	1.4	2.3	2.0	1.9	3.0	2.2	2.4
1960	2.5	4.3	3.1	4.5	2.5	4.3	3.0	2.6	2.2	2.8	3.5	3.5
1961	3.6	4.0	3.1	4.7	3.3	3.5	2.4	2.7	2.9	3.7	3.7	4.6
1962	3.6	2.7	2.8	3.7	3.9	2.5	2.6	2.3	2.5	2.9	2.7	3.4
1963	4.0	3.1	4.4	4.1	3.9	1.9	2.4	2.5	2.8	3.4	3.5	3.5
1964	4.3	3.0	5.7	3.4	5.0	3.3	2.0	2.5	3.2	2.3	3.3	2.8
1965	4.2	3.4	4.5	4.2	2.7	2.9	2.2	2.5	3.2	3.7	4.5	3.3
1966	4.2	2.6	3.6	2.6	3.8	2.3	2.9	2.3	2.8	3.1	4.0	3.8
1967	3.2	4.9	2.3	3.8	2.9	2.4	2.2	1.8	3.0	3.6	2.8	3.3
1968	3.2	3.7	3.2	4.8	3.4	3.0	2.6	3.1	2.2	2.8	3.0	4.2
1969	3.5	2.5	4.2	3.1	2.9	3.3	2.2	2.6	2.5	2.9	2.4	2.1
1970	2.8	3.0	4.4	3.9	3.0	2.6	2.6	2.5	3.1	2.4	3.7	2.9
1971	4.1	5.1	4.1	3.2	3.5	2.5	3.1	2.2	2.2	3.3	3.2	3.9
1972	4.7	3.1	3.5	2.5	2.8	2.6	2.4	2.8	3.3	3.0	3.4	3.0
1973	4.0	2.8	4.0	3.3	3.4	2.7	3.9	2.5	2.9	2.6	3.4	3.6
1974	5.1	3.5	3.2	4.5	3.1	3.9	2.7	2.8	3.3	2.8	3.7	3.1
1975	4.2	5.0	3.0	5.8	1.8	2.5	2.5	2.7	2.3	3.0	4.3	4.0
1976	3.2	4.5	3.8	3.6	4.4	2.8	2.4	2.7	2.5	3.2	2.8	3.6
1977	4.1	3.5	3.4	4.2	2.6	3.0	3.5	2.4	2.2	2.8	3.0	4.3
1978	5.4	2.3	4.0	3.3	3.2	2.6	2.7	2.7	2.6	2.6	3.2	3.6
1979	3.2	3.3	3.7	4.1	2.2	2.3	1.7	2.6	2.9	2.8	3.8	3.5
1980	4.0	2.8	2.8	3.2	3.1	2.6	2.0	1.9	2.4	3.6	2.5	3.4
1981	3.1	2.8	4.1	3.4	1.9	2.8	1.6	1.7	3.1	4.0	2.8	2.7
1982	5.5	3.7	5.3	4.4	1.5	1.7	2.1	1.8	2.0	3.2	3.1	5.2
1983	2.9	2.1	1.9	2.4	2.6	1.7	2.3	2.6	2.3	3.8	3.1	3.7
1984	3.1	2.7	3.9	4.8	4.9	2.2	2.0	1.7	2.7	2.6	3.2	3.3
1985	4.0	2.8	3.2	5.0	2.8	2.2	1.9	2.3	2.3	3.2	2.5	4.7
1986	3.5	2.5	4.3	2.9	3.0	3.0	2.3	2.6	3.4	3.2	3.5	3.0
1987	3.3	2.7	3.3	3.3	3.0	2.8	2.3	2.2	2.1	2.5	3.1	4.9

32 YR. STATISTICS FOR WIS STATION E51

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.2
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	247.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.7
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.3
LARGEST WAVE HS	(METERS)	5.8
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	10.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	242.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		75042000

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	666	36	12	.	.	.	.	.	.	714
0.25-0.49	.	867	85	63	2	.	.	.	.	.	1017
0.50-0.74	.	1110	77	146	39	.	.	.	.	.	1372
0.75-0.99	.	287	281	44	72	1	.	.	.	.	685
1.00-1.24	.	.	518	18	77	10	.	.	.	.	623
1.25-1.49	.	.	74	58	43	20	1	.	.	.	196
1.50-1.74	.	.	3	68	9	25	.	.	.	.	105
1.75-1.99	.	.	.	14	4	7	.	.	.	.	25
2.00-2.24	.	.	.	4	.	12	4	.	.	.	20
2.25-2.49	.	.	.	1	1	1	1	.	.	.	4
2.50-2.74	.	.	.	.	2	2	3	.	.	.	7
2.75-2.99	.	.	.	.	.	.	1	.	.	.	1
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2930	1074	428	249	78	11	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.6 NO. OF CASES= 4476.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	236	2	4	.	.	.	.	.	.	242
0.25-0.49	.	503	35	17	1	.	.	.	.	.	556
0.50-0.74	.	630	187	127	7	.	.	.	.	.	951
0.75-0.99	.	94	204	105	55	1	.	.	.	.	459
1.00-1.24	.	.	161	89	88	4	.	.	.	.	342
1.25-1.49	.	.	22	55	27	9	.	.	.	.	113
1.50-1.74	.	.	1	50	38	16	.	.	.	.	105
1.75-1.99	.	.	.	3	23	13	1	.	.	.	40
2.00-2.24	.	.	.	.	16	12	3	.	.	.	31
2.25-2.49	.	.	.	.	1	10	.	.	.	.	11
2.50-2.74	.	.	.	.	1	7	.	.	.	.	8
2.75-2.99	.	.	.	.	.	2	1	.	.	.	3
3.00-3.24	.	.	.	.	.	.	3	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1463	612	450	257	74	8	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 3.9 NO. OF CASES= 2693.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	370	16	2	.	.	.	.	.	.	388
0.25-0.49	.	752	53	31	1	.	.	.	.	.	837
0.50-0.74	.	768	401	170	17	.	.	.	.	.	1356
0.75-0.99	.	109	438	310	70	.	.	.	.	.	927
1.00-1.24	.	1	349	424	229	7	.	.	.	.	1010
1.25-1.49	.	.	8	235	164	16	1	.	.	.	424
1.50-1.74	.	.	.	176	295	69	1	.	.	.	541
1.75-1.99	.	.	.	5	167	45	.	.	.	.	217
2.00-2.24	.	.	.	.	114	129	1	.	.	.	244
2.25-2.49	.	.	.	.	1	82	4	.	.	.	87
2.50-2.74	.	.	.	.	.	79	7	.	.	.	86
2.75-2.99	.	.	.	.	.	10	19	.	.	.	29
3.00-3.24	.	.	.	.	.	2	18	.	.	.	20
3.25-3.49	.	.	.	.	.	.	8	.	.	.	8
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	2000	1265	1353	1058	439	61	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.5 NO. OF CASES= 5790.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	259	9	4	.	.	.	.	.	.	272
0.25-0.49	.	434	38	14	1	.	.	.	.	.	487
0.50-0.74	.	484	260	139	9	.	.	.	.	.	892
0.75-0.99	.	35	229	208	42	.	.	.	.	.	514
1.00-1.24	.	.	121	262	118	2	.	.	.	.	503
1.25-1.49	.	.	4	146	111	14	.	.	.	.	275
1.50-1.74	.	.	.	68	202	31	1	.	.	.	302
1.75-1.99	.	.	.	1	97	22	.	.	.	.	120
2.00-2.24	.	.	.	.	63	48	4	.	.	.	115
2.25-2.49	.	.	.	.	1	34	3	.	.	.	38
2.50-2.74	.	.	.	.	1	69	10	.	.	.	80
2.75-2.99	.	.	.	.	.	12	25	.	.	.	37
3.00-3.24	.	.	.	.	.	.	31	.	.	.	31
3.25-3.49	.	.	.	.	.	.	5	.	.	.	5
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1212	661	842	645	232	80	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.5 NO. OF CASES= 3450.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	250	12	4	.	.	.	.	.	.	266
0.25-0.49	.	487	51	18	.	.	.	.	.	.	556
0.50-0.74	.	385	257	147	7	.	.	.	.	.	796
0.75-0.99	.	38	165	172	31	.	.	.	.	.	406
1.00-1.24	.	.	84	175	77	2	.	.	.	.	338
1.25-1.49	.	.	.	73	40	4	.	.	.	.	117
1.50-1.74	.	.	.	34	80	7	.	.	.	.	121
1.75-1.99	.	.	.	1	39	7	.	.	.	.	47
2.00-2.24	.	.	.	.	17	18	1	.	.	.	36
2.25-2.49	.	.	.	.	2	14	1	.	.	.	17
2.50-2.74	.	.	.	.	.	16	4	.	.	.	20
2.75-2.99	.	.	.	.	.	2	3	1	.	.	6
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1160	569	624	293	70	10	1	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.3 MEAN TP(SEC)= 4.1 NO. OF CASES= 2562.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	259	9	3	.	.	.	.	.	.	271
0.25-0.49	.	379	34	14	1	.	.	.	.	.	428
0.50-0.74	.	388	235	84	8	.	.	.	.	.	715
0.75-0.99	.	19	128	129	26	.	.	.	.	.	302
1.00-1.24	.	.	58	129	41	2	.	.	.	.	230
1.25-1.49	.	.	.	63	18	5	.	.	.	.	86
1.50-1.74	.	.	.	43	60	6	.	.	.	.	109
1.75-1.99	.	.	.	1	35	4	.	.	.	.	40
2.00-2.24	.	.	.	.	19	10	2	.	.	.	31
2.25-2.49	.	.	.	.	.	10	.	.	.	.	10
2.50-2.74	.	.	.	.	.	3	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1045	464	466	208	40	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.5 MEAN TP(SEC)= 4.0 NO. OF CASES= 2094.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	571	23	10	.	.	.	.	.	.	604
0.25-0.49	.	971	57	25	1	.	.	.	.	.	1054
0.50-0.74	.	826	515	114	16	.	.	.	.	.	1471
0.75-0.99	.	35	347	196	35	.	.	.	.	.	613
1.00-1.24	.	.	146	341	26	5	.	.	.	.	518
1.25-1.49	.	.	2	197	18	2	.	.	.	.	219
1.50-1.74	.	.	.	121	102	2	.	.	.	.	225
1.75-1.99	.	.	.	.	90	2	.	.	.	.	92
2.00-2.24	.	.	.	.	47	.	.	.	.	.	47
2.25-2.49	.	.	.	.	5	1	.	.	.	.	6
2.50-2.74	.	.	.	.	.	5	.	.	.	.	5
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2403	1090	1004	340	17	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 4551.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	860	18	5	.	.	.	.	.	.	883
0.25-0.49	.	1515	53	20	.	.	.	.	.	.	1588
0.50-0.74	.	1199	675	90	8	.	.	.	.	.	1972
0.75-0.99	.	60	620	188	12	.	.	.	.	.	880
1.00-1.24	.	.	254	514	4	2	.	.	.	.	774
1.25-1.49	.	.	3	351	16	.	.	.	.	.	370
1.50-1.74	.	.	.	235	132	2	.	.	.	.	369
1.75-1.99	.	.	.	2	133	.	.	.	.	.	135
2.00-2.24	.	.	.	.	96	1	.	.	.	.	97
2.25-2.49	.	.	.	.	24	.	.	.	.	.	24
2.50-2.74	.	.	.	.	2	10	.	.	.	.	12
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3634	1623	1405	427	17	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.8 MEAN TP(SEC)= 3.8 NO. OF CASES= 6658.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1505	32	13	1	.	.	.	.	.	1551
0.25-0.49	.	2311	178	36	2	.	.	.	.	.	2527
0.50-0.74	.	1475	1780	155	10	.	.	.	.	.	3420
0.75-0.99	.	68	1113	622	6	.	.	.	.	.	1809
1.00-1.24	.	.	429	1531	24	.	.	.	.	.	1984
1.25-1.49	.	.	7	1107	42	.	.	.	.	.	1156
1.50-1.74	.	.	.	1071	471	.	.	.	.	.	1542
1.75-1.99	.	.	.	9	743	1	.	.	.	.	753
2.00-2.24	.	.	.	.	501	.	1	.	.	.	502
2.25-2.49	.	.	.	.	113	10	.	.	.	.	123
2.50-2.74	.	.	.	.	5	59	.	.	.	.	64
2.75-2.99	.	.	.	.	.	9	.	.	.	.	9
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	5359	3539	4544	1918	82	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.2 NO. OF CASES= 14456.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1196	85	18	.	.	.	.	.	.	1299
0.25-0.49	.	1621	380	67	2	.	.	.	.	.	2070
0.50-0.74	.	1259	1678	250	11	.	.	.	.	.	3198
0.75-0.99	.	94	1453	324	11	.	.	.	.	.	1882
1.00-1.24	.	1	1397	890	11	1	.	.	.	.	2300
1.25-1.49	.	.	52	1063	31	1	.	.	.	.	1147
1.50-1.74	.	.	1	899	255	1	.	.	.	.	1156
1.75-1.99	.	.	.	118	334	.	.	.	.	.	452
2.00-2.24	.	.	.	9	320	.	.	.	.	.	329
2.25-2.49	.	.	.	.	77	16	.	.	.	.	93
2.50-2.74	.	.	.	.	19	33	.	.	.	.	52
2.75-2.99	.	.	.	.	.	16	.	.	.	.	16
3.00-3.24	.	.	.	.	.	9	1	.	.	.	10
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	1	1	.	.	.	2
TOTAL	0	4171	5046	3638	1071	78	4	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.1 NO. OF CASES= 13112.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	1053	66	13	1	.	.	.	.	.	1133
0.25-0.49	.	1412	219	58	3	.	.	.	.	.	1692
0.50-0.74	.	1836	971	223	16	.	.	.	.	.	3046
0.75-0.99	.	283	1401	313	52	1	.	.	.	.	2050
1.00-1.24	.	39	1687	801	233	7	.	.	.	.	2787
1.25-1.49	.	.	57	1236	56	20	.	.	.	.	1369
1.50-1.74	.	.	7	1266	31	4	.	.	.	.	1308
1.75-1.99	.	.	.	189	96	.	.	.	.	.	285
2.00-2.24	.	.	.	1	244	3	.	.	.	.	248
2.25-2.49	.	.	.	.	58	9	.	.	.	.	67
2.50-2.74	.	.	.	.	37	9	.	.	.	.	46
2.75-2.99	.	.	.	.	.	5	.	.	.	.	5
3.00-3.24	.	.	.	.	.	4	.	.	.	.	4
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4623	4408	4100	847	62	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.2 MEAN TP(SEC)= 4.1 NO. OF CASES= 13143.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	602	35	16	.	.	.	.	.	.	653
0.25-0.49	.	1037	42	31	3	.	.	.	.	.	1113
0.50-0.74	.	1513	116	82	25	.	.	.	.	.	1738
0.75-0.99	.	667	83	86	95	1	.	.	.	.	932
1.00-1.24	.	353	242	116	191	10	.	.	.	.	912
1.25-1.49	.	.	127	93	31	24	.	.	.	.	275
1.50-1.74	.	.	59	112	47	11	.	.	.	.	229
1.75-1.99	.	.	6	21	57	3	.	.	.	.	87
2.00-2.24	.	.	.	6	63	8	.	.	.	.	77
2.25-2.49	.	.	.	.	18	7	.	.	.	.	25
2.50-2.74	.	.	.	1	5	19	.	.	.	.	25
2.75-2.99	.	.	.	.	.	5	5	.	.	.	10
3.00-3.24	.	.	.	.	.	2	1	.	.	.	3
3.25-3.49	.	.	.	.	.	2	3	.	.	.	5
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4174	710	564	535	92	9	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 3.4 MEAN TP(SEC)= 3.6 NO. OF CASES= 5705.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	405	11	7	.	.	.	.	.	.	423
0.25-0.49	.	748	38	17	5	.	.	.	.	.	808
0.50-0.74	.	1026	14	37	9	.	.	.	.	.	1086
0.75-0.99	.	552	8	2	7	1	.	.	.	.	570
1.00-1.24	.	100	188	.	3	1	.	.	.	.	292
1.25-1.49	.	.	44	.	.	.	.	.	.	.	44
1.50-1.74	.	.	18	8	.	.	.	.	.	.	26
1.75-1.99	.	.	.	6	.	.	.	.	.	.	6
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2831	321	78	24	2	0	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.2 NO. OF CASES= 3055.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	284	19	3	2	.	.	.	.	.	308
0.25-0.49	.	629	24	17	3	.	.	.	.	.	673
0.50-0.74	.	1003	4	25	10	1	.	.	.	.	1043
0.75-0.99	.	286	161	1	10	.	.	.	.	.	458
1.00-1.24	.	11	340	2	6	3	.	.	.	.	362
1.25-1.49	.	.	74	.	.	.	1	.	.	.	75
1.50-1.74	.	.	5	32	1	1	.	.	.	.	39
1.75-1.99	.	.	.	2	.	.	.	.	.	.	2
2.00-2.24	.	.	.	1	.	.	.	.	.	.	1
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2213	627	83	32	5	1	0	0	0	

MEAN HS(M) = 0.6 LARGEST HS(M)= 2.0 MEAN TP(SEC)= 3.3 NO. OF CASES= 2778.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	413	24	12	3	.	.	.	.	.	452
0.25-0.49	.	609	29	41	4	.	.	.	.	.	683
0.50-0.74	.	1395	10	32	13	1	.	.	.	.	1451
0.75-0.99	.	435	385	5	13	.	.	.	.	.	838
1.00-1.24	.	1	567	1	13	7	.	.	.	.	589
1.25-1.49	.	.	104	.	1	3	.	.	.	.	108
1.50-1.74	.	.	1	36	.	.	2	.	.	.	39
1.75-1.99	.	.	.	3	.	.	.	.	.	.	3
2.00-2.24	.	.	.	3	.	.	.	.	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2853	1120	133	47	11	2	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.4 NO. OF CASES= 3908.

STATION E52 41.87N 82.30W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

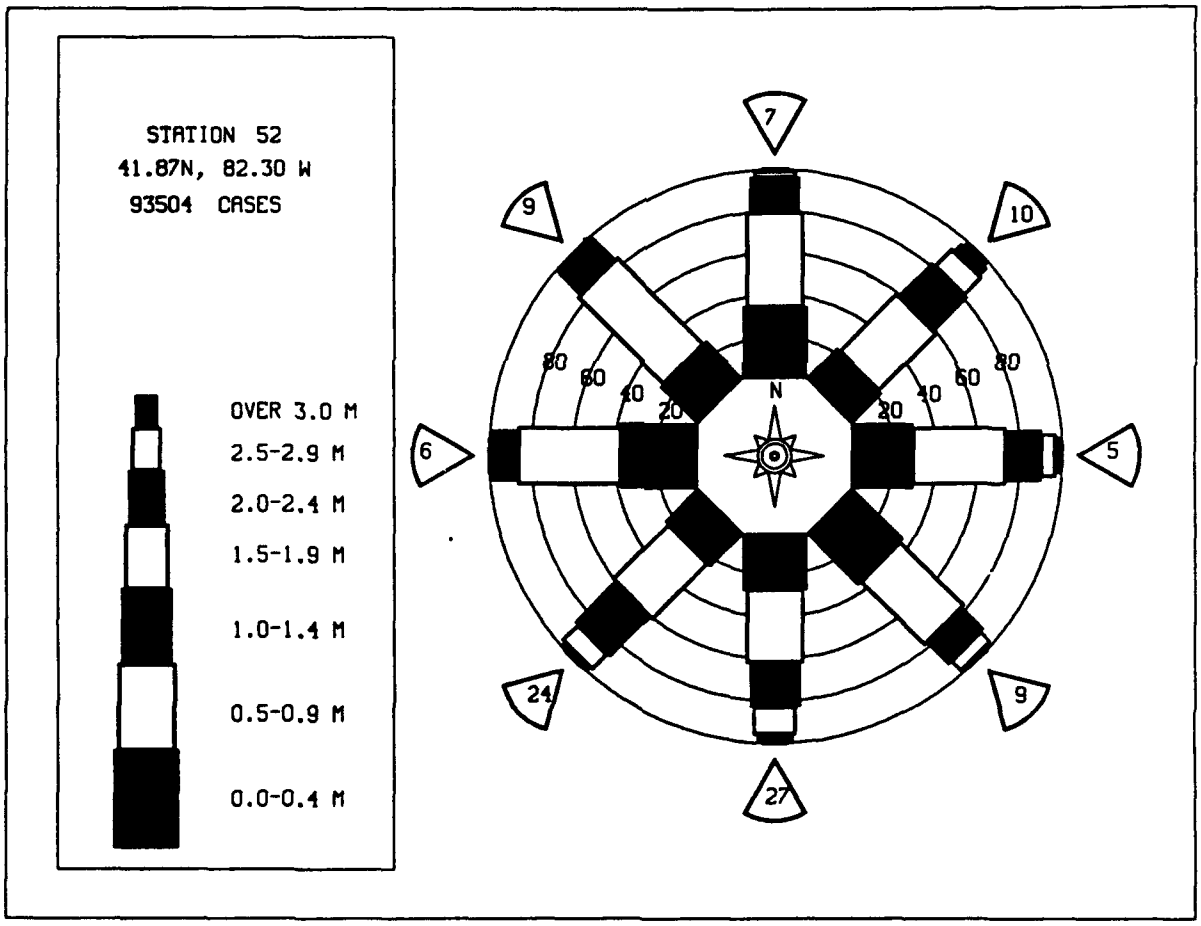
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	360	14	4	.	.	.	.	.	.	378
0.25-0.49	.	753	58	43	2	.	.	.	.	.	856
0.50-0.74	.	1976	17	105	52	.	.	.	.	.	2150
0.75-0.99	.	586	414	25	45	3	.	.	.	.	1073
1.00-1.24	.	3	582	3	34	20	1	.	.	.	643
1.25-1.49	.	.	109	51	5	16	1	.	.	.	182
1.50-1.74	.	.	6	78	2	13	2	.	.	.	101
1.75-1.99	.	.	.	11	2	4	7	.	.	.	24
2.00-2.24	.	.	.	1	.	1	.	1	.	.	3
2.25-2.49	.	.	.	.	.	.	.	.	.	.	0
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	3678	1200	321	142	57	11	1	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.1 MEAN TP(SEC)= 3.5 NO. OF CASES= 5073.

STATION E52 41.87N 82.30W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	929	41	13	.	.	.	.	.	.	983
0.25-0.49	.	1503	138	51	3	.	.	.	.	.	1695
0.50-0.74	.	1728	720	193	26	.	.	.	.	.	2667
0.75-0.99	.	365	743	273	59	.	.	.	.	.	1440
1.00-1.24	.	51	713	530	120	8	.	.	.	.	1422
1.25-1.49	.	.	69	473	60	13	.	.	.	.	615
1.50-1.74	.	.	10	430	173	19	.	.	.	.	632
1.75-1.99	.	.	.	39	182	11	.	.	.	.	232
2.00-2.24	.	.	.	2	150	24	1	.	.	.	177
2.25-2.49	.	.	.	.	30	19	.	.	.	.	49
2.50-2.74	.	.	.	.	7	31	2	.	.	.	40
2.75-2.99	.	.	.	.	.	6	5	.	.	.	11
3.00-3.24	.	.	.	.	.	2	5	.	.	.	7
3.25-3.49	.	.	.	.	.	.	2	.	.	.	2
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4576	2434	2004	810	133	15	0	0	0	

MEAN HS(M)= 0.8 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.0 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E52 (41.87N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.7	0.9	1.0	1.0	1.0	0.6	0.8	0.8	0.8	0.9	1.0	1.0	0.9
1957	0.9	0.9	1.1	1.0	1.0	0.8	0.8	0.6	0.9	0.9	1.2	1.2	0.9
1958	1.0	1.1	0.9	1.0	1.0	0.8	0.7	0.7	0.8	1.0	1.1	0.9	0.9
1959	0.9	1.0	1.1	1.0	0.7	0.6	0.6	0.6	0.7	0.8	0.9	0.8	0.8
1960	0.8	1.0	0.9	1.2	0.9	0.8	0.6	0.7	0.6	0.7	1.2	1.2	0.9
1961	1.0	0.8	1.0	1.0	0.9	0.8	0.7	0.7	0.7	1.0	1.0	1.1	0.9
1962	1.2	1.1	1.1	1.0	0.9	0.7	0.7	0.6	0.7	0.8	0.7	0.9	0.9
1963	0.9	0.9	1.0	0.9	0.8	0.5	0.7	0.7	0.7	0.7	1.0	0.8	0.8
1964	1.1	0.7	1.0	1.1	0.9	0.7	0.6	0.7	0.7	0.7	0.8	1.0	0.8
1965	1.0	1.0	0.8	0.9	0.7	0.8	0.6	0.7	0.9	0.9	1.0	1.1	0.9
1966	0.8	0.6	0.9	0.9	0.7	0.5	0.7	0.6	0.6	0.9	1.0	0.9	0.8
1967	1.0	1.1	0.9	0.9	1.0	0.7	0.5	0.7	0.7	1.0	1.0	1.0	0.9
1968	0.9	0.9	1.0	0.9	0.9	0.7	0.6	0.6	0.6	0.8	0.9	1.1	0.8
1969	1.0	0.8	0.9	0.9	0.6	0.8	0.6	0.6	0.7	0.9	0.8	0.9	0.8
1970	0.9	1.0	0.8	0.9	0.9	0.8	0.7	0.6	0.8	0.9	1.2	1.1	0.9
1971	1.1	1.3	0.9	0.9	0.8	0.6	0.6	0.7	0.7	0.7	0.9	0.9	0.8
1972	1.1	0.9	1.0	1.0	0.9	0.8	0.7	0.7	0.8	0.9	0.9	0.8	0.9
1973	1.1	0.9	1.0	1.1	0.8	0.7	0.7	0.6	0.6	0.7	1.0	1.1	0.9
1974	0.9	1.1	1.1	1.1	0.8	0.9	0.7	0.7	0.8	0.8	0.9	0.9	0.9
1975	0.8	0.8	0.9	0.9	0.5	0.7	0.5	0.6	0.7	0.9	0.9	0.9	0.8
1976	0.9	0.9	1.0	0.9	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8
1977	0.9	0.8	0.8	0.8	0.6	0.5	0.6	0.7	0.7	0.9	1.0	1.1	0.8
1978	0.9	0.5	0.7	0.9	0.7	0.6	0.7	0.6	0.7	0.8	0.9	1.0	0.7
1979	0.7	0.9	0.8	0.8	0.7	0.6	0.5	0.7	0.7	0.8	0.9	0.9	0.7
1980	0.6	0.7	0.9	0.8	0.5	0.6	0.5	0.6	0.6	0.8	0.8	0.8	0.7
1981	0.8	1.2	0.9	1.1	0.7	0.8	0.7	0.7	0.7	0.9	0.7	0.7	0.8
1982	1.0	0.8	0.8	1.0	0.5	0.5	0.4	0.4	0.4	0.6	0.9	0.9	0.7
1983	0.7	0.6	0.7	0.9	0.8	0.5	0.5	0.5	0.6	0.9	0.9	1.0	0.7
1984	0.6	0.8	1.0	0.8	0.7	0.6	0.5	0.4	0.6	0.6	0.8	0.8	0.7
1985	0.8	0.8	1.0	0.8	0.7	0.6	0.5	0.6	0.6	0.8	1.0	0.9	0.8
1986	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.8	0.6
1987	0.7	0.8	0.9	0.9	0.7	0.6	0.6	0.7	0.5	0.7	1.0	0.9	0.7
MEAN	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.6	0.7	0.8	0.9	0.9	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E52 (41.87N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	1.9	2.2	2.9	2.9	2.1	1.7	2.2	2.2	1.8	2.0	2.6	2.3
1957	2.3	2.2	2.6	3.3	2.7	2.4	2.5	1.6	2.5	2.1	3.0	2.6
1958	2.4	2.5	2.6	2.5	2.6	2.3	2.1	1.8	2.4	2.1	2.6	2.5
1959	2.5	2.3	3.6	3.3	2.3	1.9	2.2	2.0	2.2	2.0	2.3	2.0
1960	2.0	2.6	2.4	2.9	2.5	2.5	2.2	1.9	1.9	2.3	2.5	2.8
1961	2.5	2.7	2.6	3.4	2.3	2.3	1.8	1.8	2.6	2.8	2.4	2.9
1962	2.8	3.3	3.3	2.7	2.2	2.1	2.5	2.0	2.5	2.5	3.6	2.7
1963	2.5	2.4	3.0	2.7	2.3	1.4	2.3	1.8	2.3	2.1	3.0	1.8
1964	3.0	2.0	3.5	2.7	3.4	2.1	2.2	2.2	2.5	2.7	2.5	2.3
1965	3.2	2.9	2.6	2.1	2.3	2.0	2.1	2.2	2.3	2.6	3.3	2.4
1966	2.5	2.6	2.9	2.6	2.9	1.8	2.4	1.7	2.2	2.5	2.5	2.3
1967	2.7	2.4	2.2	2.3	2.8	2.5	2.0	2.1	2.3	2.6	2.1	2.5
1968	2.4	2.7	3.0	2.8	2.3	1.9	1.8	1.9	2.0	2.3	2.6	2.6
1969	2.3	2.0	2.7	3.4	2.2	2.4	1.9	2.1	1.6	2.2	2.2	2.5
1970	2.4	2.6	2.7	2.4	2.3	2.1	2.0	2.0	2.2	2.2	3.1	2.8
1971	2.5	3.2	2.6	2.8	2.6	1.6	2.0	2.1	1.8	2.3	2.3	3.1
1972	3.3	2.3	3.4	3.0	2.8	1.9	1.8	2.7	2.1	2.3	2.8	2.6
1973	2.5	2.6	2.9	2.9	2.5	1.9	2.1	2.0	2.4	2.3	2.3	2.5
1974	3.1	3.2	2.9	3.1	2.9	2.6	2.5	2.0	2.4	2.6	2.3	3.2
1975	2.1	2.0	3.5	3.1	1.4	2.0	1.4	1.7	3.0	3.4	2.3	2.3
1976	2.0	2.1	2.7	2.9	2.3	2.0	1.4	1.9	2.0	1.8	1.8	1.8
1977	2.8	1.7	2.7	2.2	2.5	1.9	1.9	1.4	1.6	2.3	2.1	3.2
1978	3.0	1.9	3.0	2.2	2.9	1.4	2.0	1.6	2.7	1.9	2.6	2.0
1979	1.7	3.0	2.2	2.7	2.4	1.5	1.3	1.9	2.1	2.2	2.2	2.0
1980	2.5	2.1	2.7	3.3	1.8	1.3	1.4	1.6	1.5	2.3	2.2	1.8
1981	2.4	2.7	2.7	3.0	1.9	2.0	2.0	1.9	2.1	2.6	2.3	2.3
1982	3.2	3.0	2.2	3.6	1.6	1.8	1.3	1.1	1.6	2.4	2.1	2.3
1983	2.1	2.4	2.7	3.1	2.0	2.1	1.3	1.5	1.8	2.6	2.6	2.6
1984	2.0	3.1	2.9	2.9	2.7	1.6	1.1	1.1	1.9	1.8	1.9	2.4
1985	2.1	2.1	3.2	2.5	2.1	1.6	1.8	1.6	1.7	2.6	2.7	2.7
1986	2.0	3.1	2.1	2.0	1.8	1.7	1.3	1.4	2.0	1.6	2.3	3.0
1987	2.1	2.4	2.7	3.3	2.7	1.8	1.5	1.6	1.8	2.2	2.4	2.9

32 YR. STATISTICS FOR WIS STATION E52

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.8
MEAN PEAK WAVE PERIOD	(SECONDS)	4.0
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	180.0
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	3.6
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	34.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		82040609

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) = 0.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	279	12	3	.	.	.	.	.	.	294
0.25-0.49	.	681	40	31	.	.	.	.	.	.	752
0.50-0.74	.	876	329	155	20	.	.	.	.	.	1380
0.75-0.99	.	99	422	66	64	.	.	.	.	.	651
1.00-1.24	.	.	505	111	63	4	.	.	.	.	683
1.25-1.49	.	.	27	291	16	9	.	.	.	.	343
1.50-1.74	.	.	.	231	10	12	1	.	.	.	254
1.75-1.99	.	.	.	42	10	6	.	.	.	.	58
2.00-2.24	.	.	.	5	33	16	1	.	.	.	55
2.25-2.49	.	.	.	.	10	5	.	.	.	.	15
2.50-2.74	.	.	.	.	4	1	4	.	.	.	9
2.75-2.99	.	.	.	.	2	.	.	.	.	.	2
3.00-3.24	.	.	.	.	.	.	1	.	.	.	1
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	1935	1335	935	232	53	9	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 3.9 NO. OF CASES= 4221.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) = 22.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	183	2	2	.	.	.	.	.	.	187
0.25-0.49	.	419	25	11	.	.	.	.	.	.	455
0.50-0.74	.	601	304	110	9	.	.	.	.	.	1024
0.75-0.99	.	48	263	167	45	1	.	.	.	.	524
1.00-1.24	.	.	255	148	109	7	.	.	.	.	519
1.25-1.49	.	.	8	135	55	6	.	.	.	.	204
1.50-1.74	.	.	.	100	65	22	1	.	.	.	188
1.75-1.99	.	.	.	11	29	22	.	.	.	.	62
2.00-2.24	.	.	.	1	29	14	4	.	.	.	48
2.25-2.49	.	.	.	.	3	18	5	.	.	.	26
2.50-2.74	.	.	.	.	1	17	3	.	.	.	21
2.75-2.99	.	.	.	.	.	3	3	.	.	.	6
3.00-3.24	.	.	.	.	.	1	7	.	.	.	8
3.25-3.49	.	.	.	.	.	.	1	.	.	.	1
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1251	857	685	345	111	26	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 3.5 MEAN TP(SEC)= 4.2 NO. OF CASES= 3080.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) = 45.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	254	6	4	.	.	.	.	.	.	264
0.25-0.49	.	688	42	21	.	.	.	.	.	.	751
0.50-0.74	.	663	500	183	12	.	.	.	.	.	1358
0.75-0.99	.	96	362	360	59	.	.	.	.	.	877
1.00-1.24	.	.	289	504	219	11	.	.	.	.	1023
1.25-1.49	.	.	5	264	183	14	.	.	.	.	466
1.50-1.74	.	.	.	199	311	75	1	.	.	.	586
1.75-1.99	.	.	.	6	168	91	1	.	.	.	266
2.00-2.24	.	.	.	.	172	130	7	.	.	.	309
2.25-2.49	.	.	.	.	18	113	10	.	.	.	141
2.50-2.74	.	.	.	.	.	97	11	.	.	.	108
2.75-2.99	.	.	.	.	.	27	34	.	.	.	61
3.00-3.24	.	.	.	.	.	1	56	.	.	.	57
3.25-3.49	.	.	.	.	.	.	16	.	.	.	16
3.50+	.	.	.	.	.	.	19	1	.	.	20
TOTAL	0	1701	1204	1541	1142	559	155	1	0	0	

MEAN HS(M) = 1.1 LARGEST HS(M)= 4.1 MEAN TP(SEC)= 4.7 NO. OF CASES= 5915.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) = 67.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	181	10	1	.	.	.	.	.	.	192
0.25-0.49	.	385	36	11	1	.	.	.	.	.	433
0.50-0.74	.	422	289	126	11	.	.	.	.	.	848
0.75-0.99	.	33	232	231	34	.	.	.	.	.	530
1.00-1.24	.	.	122	265	131	4	.	.	.	.	522
1.25-1.49	.	.	3	115	95	10	.	.	.	.	223
1.50-1.74	.	.	.	114	135	31	2	.	.	.	282
1.75-1.99	.	.	.	1	68	19	.	.	.	.	88
2.00-2.24	.	.	.	.	51	22	2	.	.	.	75
2.25-2.49	.	.	.	.	10	25	4	.	.	.	39
2.50-2.74	.	.	.	.	2	28	7	.	.	.	37
2.75-2.99	.	.	.	.	.	10	12	.	.	.	22
3.00-3.24	.	.	.	.	.	1	13	.	.	.	14
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	2	.	.	.	2
TOTAL	0	1021	692	864	538	150	45	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.5 NO. OF CASES= 3112.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) = 90.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	255	5	2	.	.	.	.	.	.	262
0.25-0.49	.	436	45	21	.	.	.	.	.	.	502
0.50-0.74	.	319	293	121	12	.	.	.	.	.	745
0.75-0.99	.	28	175	162	36	.	.	.	.	.	401
1.00-1.24	.	.	88	205	66	7	.	.	.	.	366
1.25-1.49	.	.	1	78	32	8	.	.	.	.	119
1.50-1.74	.	.	.	57	43	9	.	.	.	.	109
1.75-1.99	.	.	.	.	45	4	.	.	.	.	49
2.00-2.24	.	.	.	.	38	7	.	.	.	.	45
2.25-2.49	.	.	.	.	11	2	.	.	.	.	13
2.50-2.74	.	.	.	.	5	7	.	.	.	.	12
2.75-2.99	.	.	.	.	.	3	.	.	.	.	3
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1038	607	646	288	47	0	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.9 MEAN TP(SEC)= 4.1 NO. OF CASES= 2471.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =112.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	247	5	2	.	.	.	.	.	.	254
0.25-0.49	.	427	38	12	.	.	.	.	.	.	477
0.50-0.74	.	430	273	101	6	.	.	.	.	.	810
0.75-0.99	.	18	173	86	40	.	.	.	.	.	317
1.00-1.24	.	.	77	128	24	4	.	.	.	.	233
1.25-1.49	.	.	2	81	9	3	.	.	.	.	95
1.50-1.74	.	.	.	70	34	2	.	.	.	.	106
1.75-1.99	.	.	.	2	33	.	.	.	.	.	35
2.00-2.24	.	.	.	.	28	.	.	.	.	.	28
2.25-2.49	.	.	.	.	3	1	.	.	.	.	4
2.50-2.74	.	.	.	.	1	2	.	.	.	.	3
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1122	568	482	178	12	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.9 NO. OF CASES= 2220.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =135.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	367	16	3	.	.	.	.	.	.	386
0.25-0.49	.	837	40	23	.	.	.	.	.	.	900
0.50-0.74	.	896	416	99	19	.	.	.	.	.	1430
0.75-0.99	.	37	453	47	36	.	.	.	.	.	573
1.00-1.24	.	.	402	148	7	5	.	.	.	.	562
1.25-1.49	.	.	10	249	2	2	.	.	.	.	263
1.50-1.74	.	.	.	187	5	2	.	.	.	.	194
1.75-1.99	.	.	.	27	21	.	.	.	.	.	48
2.00-2.24	.	.	.	1	18	1	.	.	.	.	20
2.25-2.49	.	.	.	.	5	.	.	.	.	.	5
2.50-2.74	.	.	.	.	2	.	.	.	.	.	2
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2137	1337	784	115	10	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.6 MEAN TP(SEC)= 3.8 NO. OF CASES= 4108.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =157.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	548	11	2	.	.	.	.	.	.	561
0.25-0.49	.	1235	43	28	.	.	.	.	.	.	1306
0.50-0.74	.	1141	490	97	16	.	.	.	.	.	1744
0.75-0.99	.	64	623	39	23	.	.	.	.	.	749
1.00-1.24	.	.	505	197	4	2	.	.	.	.	708
1.25-1.49	.	.	9	355	.	1	.	.	.	.	365
1.50-1.74	.	.	1	308	4	.	.	.	.	.	313
1.75-1.99	.	.	.	35	47	.	.	.	.	.	82
2.00-2.24	.	.	.	.	49	.	.	.	.	.	49
2.25-2.49	.	.	.	.	11	.	.	.	.	.	11
2.50-2.74	.	.	.	.	4	.	.	.	.	.	4
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2988	1682	1061	158	3	0	0	0	0	

MEAN HS(M) = 0.7 LARGEST HS(M)= 2.7 MEAN TP(SEC)= 3.7 NO. OF CASES= 5520.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =180.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	743	21	5	.	.	.	.	.	.	769
0.25-0.49	.	1609	55	31	2	.	.	.	.	.	1697
0.50-0.74	.	1601	1019	84	7	.	.	.	.	.	2711
0.75-0.99	.	64	1235	124	8	.	.	.	.	.	1431
1.00-1.24	.	.	1284	793	4	1	.	.	.	.	2082
1.25-1.49	.	.	7	1267	4	1	.	.	.	.	1279
1.50-1.74	.	.	.	1456	7	1	.	.	.	.	1464
1.75-1.99	.	.	.	174	288	.	.	.	.	.	462
2.00-2.24	.	.	.	.	305	.	1	.	.	.	306
2.25-2.49	.	.	.	.	71	.	.	.	.	.	71
2.50-2.74	.	.	.	.	42	.	.	.	.	.	42
2.75-2.99	.	.	.	.	.	2	.	.	.	.	2
3.00-3.24	.	.	.	.	.	3	.	.	.	.	3
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	4017	3621	3934	738	8	1	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.1 MEAN TP(SEC)= 4.1 NO. OF CASES= 11530.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =202.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	623	14	9	.	.	.	.	.	.	646
0.25-0.49	.	1425	55	20	1	.	.	.	.	.	1501
0.50-0.74	.	1492	1201	74	16	.	.	.	.	.	2783
0.75-0.99	.	49	1609	79	5	.	.	.	.	.	1742
1.00-1.24	.	.	1522	895	4	2	.	.	.	.	2423
1.25-1.49	.	.	12	1296	.	1	.	.	.	.	1309
1.50-1.74	.	.	.	1402	33	1	.	.	.	.	1436
1.75-1.99	.	.	.	197	302	.	.	.	.	.	499
2.00-2.24	.	.	.	.	346	.	.	.	.	.	346
2.25-2.49	.	.	.	.	69	.	.	.	.	.	69
2.50-2.74	.	.	.	.	43	4	.	.	.	.	47
2.75-2.99	.	.	.	.	4	11	.	.	.	.	15
3.00-3.24	.	.	.	.	.	7	.	.	.	.	7
3.25-3.49	.	.	.	.	.	1	.	.	.	.	1
3.50+	.	.	.	.	.	2	.	.	.	.	2
TOTAL	0	3589	4413	3972	823	29	0	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.6 MEAN TP(SEC)= 4.2 NO. OF CASES= 12007.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =225.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	570	17	2	.	.	.	.	.	.	589
0.25-0.49	.	1227	49	31	3	.	.	.	.	.	1310
0.50-0.74	.	1384	912	60	14	.	.	.	.	.	2370
0.75-0.99	.	51	1464	21	18	1	.	.	.	.	1555
1.00-1.24	.	.	1350	529	6	3	.	.	.	.	1888
1.25-1.49	.	.	8	960	.	2	.	.	.	.	970
1.50-1.74	.	.	.	1147	1	.	.	.	.	.	1148
1.75-1.99	.	.	.	241	124	.	.	.	.	.	365
2.00-2.24	.	.	.	2	208	.	.	.	.	.	210
2.25-2.49	.	.	.	.	72	.	.	.	.	.	72
2.50-2.74	.	.	.	.	65	.	.	.	.	.	65
2.75-2.99	.	.	.	.	5	7	.	.	.	.	12
3.00-3.24	.	.	.	.	.	6	.	.	.	.	6
3.25-3.49	.	.	.	.	.	2	.	.	.	.	2
3.50+	.	.	.	.	.	3	.	.	.	.	3
TOTAL	0	3232	3800	2993	516	24	0	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.7 MEAN TP(SEC)= 4.1 NO. OF CASES= 9891.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =247.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	466	17	2	.	.	.	.	.	.	485
0.25-0.49	.	1028	22	18	1	.	.	.	.	.	1069
0.50-0.74	.	1068	695	48	13	.	.	.	.	.	1824
0.75-0.99	.	52	853	122	8	.	.	.	.	.	1035
1.00-1.24	.	1	870	464	25	1	.	.	.	.	1361
1.25-1.49	.	.	35	725	34	1	.	.	.	.	795
1.50-1.74	.	.	.	839	172	1	.	.	.	.	1012
1.75-1.99	.	.	.	154	256	.	.	.	.	.	410
2.00-2.24	.	.	.	5	356	4	.	.	.	.	365
2.25-2.49	.	.	.	.	108	34	.	.	.	.	142
2.50-2.74	.	.	.	.	29	82	1	.	.	.	112
2.75-2.99	.	.	.	.	3	28	.	.	.	.	31
3.00-3.24	.	.	.	.	.	16	1	.	.	.	17
3.25-3.49	.	.	.	.	.	2	2	.	.	.	4
3.50+	.	.	.	.	.	.	4	.	.	.	4
TOTAL	0	2615	2492	2377	1005	169	8	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.3 NO. OF CASES= 8116.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =270.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	656	9	3	1	.	.	.	.	.	669
0.25-0.49	.	1181	80	16	.	.	.	.	.	.	1277
0.50-0.74	.	827	824	149	8	.	.	.	.	.	1808
0.75-0.99	.	65	483	386	11	1	.	.	.	.	946
1.00-1.24	.	.	352	622	80	.	.	.	.	.	1054
1.25-1.49	.	.	11	372	85	.	.	.	.	.	468
1.50-1.74	.	.	.	427	311	2	.	.	.	.	740
1.75-1.99	.	.	.	33	371	.	.	.	.	.	404
2.00-2.24	.	.	.	1	454	5	.	.	.	.	460
2.25-2.49	.	.	.	.	102	47	.	.	.	.	149
2.50-2.74	.	.	.	.	6	99	.	.	.	.	105
2.75-2.99	.	.	.	.	1	34	.	.	.	.	35
3.00-3.24	.	.	.	.	.	18	11	.	.	.	29
3.25-3.49	.	.	.	.	.	1	5	.	.	.	6
3.50+	.	.	.	.	.	.	4	.	.	.	4
TOTAL	0	2728	1758	2009	1430	207	20	0	0	0	

MEAN HS(M) = 1.0 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.4 NO. OF CASES= 7639.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =292.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	408	11	5	2	.	.	.	.	.	426
0.25-0.49	.	875	105	18	.	.	.	.	.	.	998
0.50-0.74	.	872	509	161	4	.	.	.	.	.	1546
0.75-0.99	.	128	582	216	21	.	.	.	.	.	947
1.00-1.24	.	.	568	624	39	5	.	.	.	.	1236
1.25-1.49	.	.	26	439	44	.	.	.	.	.	509
1.50-1.74	.	.	11	326	148	1	2	.	.	.	488
1.75-1.99	.	.	.	21	165	3	.	.	.	.	189
2.00-2.24	.	.	.	3	159	3	.	.	.	.	165
2.25-2.49	.	.	.	1	35	12	.	.	.	.	48
2.50-2.74	.	.	.	.	4	37	.	.	.	.	41
2.75-2.99	.	.	.	.	.	9	.	.	.	.	9
3.00-3.24	.	.	.	.	.	5	4	.	.	.	9
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	1	.	.	.	1
TOTAL	0	2283	1812	1814	621	75	10	0	0	0	

MEAN HS(M) = 0.9 LARGEST HS(M)= 3.8 MEAN TP(SEC)= 4.2 NO. OF CASES= 6203.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =315.0
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	289	12	2	.	.	.	.	.	.	303
0.25-0.49	.	616	58	25	1	.	.	.	.	.	700
0.50-0.74	.	920	180	64	16	.	.	.	.	.	1180
0.75-0.99	.	231	453	20	12	2	.	.	.	.	718
1.00-1.24	.	4	502	329	14	5	.	.	.	.	854
1.25-1.49	.	.	112	212	3	3	1	.	.	.	331
1.50-1.74	.	.	55	102	4	5	1	.	.	.	167
1.75-1.99	.	.	.	10	5	.	.	.	.	.	15
2.00-2.24	.	.	.	10	3	.	.	.	.	.	13
2.25-2.49	.	.	.	.	2	.	.	.	.	.	2
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	2060	1372	774	60	15	2	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.7 NO. OF CASES= 4019.

STATION E53 41.73N 82.30W AZIMUTH(DEGREES) =337.5
PERCENT OCCURRENCE(X1000) OF HEIGHT AND PERIOD BY DIRECTION

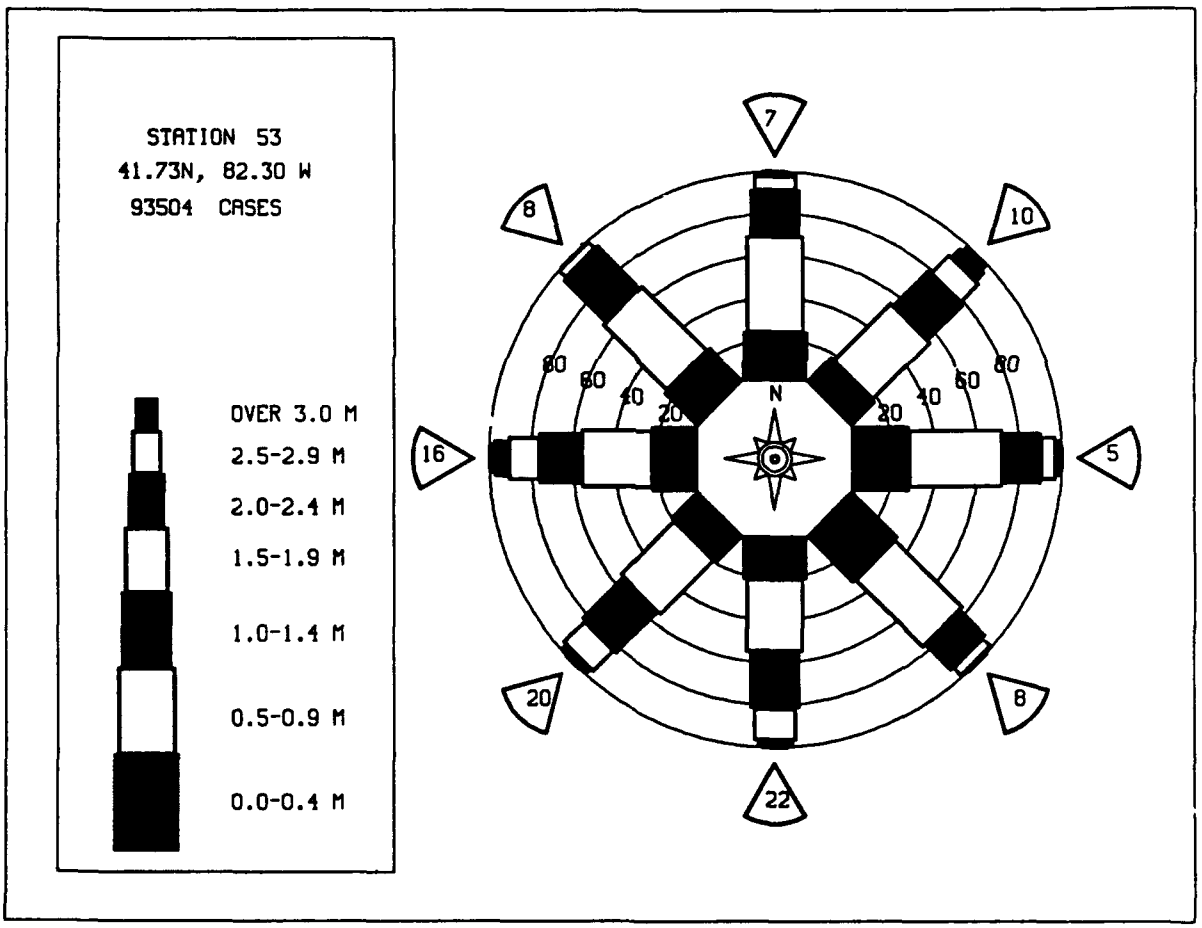
HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	243	7	4	.	.	.	.	.	.	254
0.25-0.49	.	453	52	35	2	.	.	.	.	.	542
0.50-0.74	.	885	134	86	22	.	.	.	.	.	1127
0.75-0.99	.	242	327	25	32	3	.	.	.	.	629
1.00-1.24	.	5	423	161	27	9	.	.	.	.	625
1.25-1.49	.	.	73	171	3	5	.	.	.	.	252
1.50-1.74	.	.	16	150	1	11	2	.	.	.	180
1.75-1.99	.	.	.	29	8	1	3	.	.	.	41
2.00-2.24	.	.	.	7	12	3	2	.	.	.	24
2.25-2.49	.	.	.	.	1	.	.	.	.	.	1
2.50-2.74	.	.	.	.	.	.	.	.	.	.	0
2.75-2.99	.	.	.	.	.	.	.	.	.	.	0
3.00-3.24	.	.	.	.	.	.	.	.	.	.	0
3.25-3.49	.	.	.	.	.	.	.	.	.	.	0
3.50+	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	1828	1032	668	108	32	7	0	0	0	

MEAN HS(M) = 0.8 LARGEST HS(M)= 2.4 MEAN TP(SEC)= 3.8 NO. OF CASES= 3452.

STATION E53 41.73N 82.30W FOR ALL DIRECTIONS
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD FOR ALL DIRECTIONS

HEIGHT(METRES)	PEAK PERIOD(SECONDS) <3.0	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-LONGER	TOTAL
0.00-0.24	.	632	18	5	.	.	.	.	.	.	655
0.25-0.49	.	1352	79	35	1	.	.	.	.	.	1467
0.50-0.74	.	1440	837	172	21	.	.	.	.	.	2470
0.75-0.99	.	131	971	215	45	.	.	.	.	.	1362
1.00-1.24	.	1	912	613	82	7	.	.	.	.	1615
1.25-1.49	.	.	35	701	57	7	.	.	.	.	800
1.50-1.74	.	.	8	712	128	17	1	.	.	.	866
1.75-1.99	.	.	.	99	194	14	.	.	.	.	307
2.00-2.24	.	.	.	3	226	20	1	.	.	.	250
2.25-2.49	.	.	.	.	53	25	2	.	.	.	80
2.50-2.74	.	.	.	.	21	37	2	.	.	.	60
2.75-2.99	.	.	.	.	1	13	5	.	.	.	19
3.00-3.24	.	.	.	.	.	5	9	.	.	.	14
3.25-3.49	.	.	.	.	.	.	3	.	.	.	3
3.50+	.	.	.	.	.	.	3	.	.	.	3
TOTAL	0	3556	2860	2555	829	145	26	0	0	0	

MEAN HS(M)= 0.9 LARGEST HS(M)= 4.2 MEAN TP(SEC)= 4.1 TOTAL CASES= 93504.



MEAN HS(METERS) BY MONTH AND YEAR

WIS STATION E53 (41.73N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1956	0.9	1.0	1.2	1.2	1.1	0.8	0.9	0.9	0.9	0.9	1.1	1.1	1.0
1957	1.1	1.0	1.2	1.2	1.1	0.9	0.9	0.7	0.9	1.0	1.3	1.3	1.1
1958	1.1	1.3	1.1	1.1	1.2	0.9	0.8	0.8	0.9	1.1	1.3	1.0	1.1
1959	1.1	1.1	1.2	1.1	0.8	0.7	0.7	0.7	0.8	0.9	1.1	0.9	0.9
1960	0.9	1.1	1.0	1.4	1.1	0.9	0.7	0.8	0.7	0.8	1.3	1.3	1.0
1961	1.1	1.0	1.2	1.2	1.0	0.9	0.8	0.8	0.8	1.1	1.1	1.3	1.0
1962	1.3	1.3	1.3	1.2	1.0	0.9	0.8	0.7	0.8	0.9	0.8	1.0	1.0
1963	1.0	1.1	1.2	1.1	0.9	0.6	0.8	0.8	0.8	0.7	1.1	0.9	0.9
1964	1.2	0.8	1.2	1.2	1.0	0.8	0.7	0.8	0.9	0.9	1.0	1.1	1.0
1965	1.2	1.1	1.0	1.1	0.8	0.9	0.7	0.8	0.9	1.1	1.2	1.2	1.0
1966	1.1	0.7	1.1	1.0	0.8	0.6	0.8	0.7	0.8	1.0	1.1	1.1	0.9
1967	1.3	1.3	1.0	1.1	1.1	0.8	0.7	0.8	0.8	1.0	1.3	1.1	1.0
1968	1.0	1.2	1.2	1.0	1.0	0.8	0.7	0.7	0.6	0.9	1.1	1.3	1.0
1969	1.3	0.9	1.1	1.0	0.8	0.9	0.7	0.7	0.8	1.0	1.0	1.1	0.9
1970	1.1	1.1	1.0	1.1	1.0	0.9	0.8	0.7	0.9	0.9	1.3	1.3	1.0
1971	1.3	1.4	1.2	1.1	0.9	0.7	0.8	0.8	0.7	0.8	1.0	1.1	1.0
1972	1.3	1.1	1.1	1.1	1.0	0.9	0.7	0.8	0.9	0.9	0.9	1.0	1.0
1973	1.2	1.0	1.1	1.2	1.0	0.8	0.8	0.7	0.7	0.8	1.1	1.2	1.0
1974	1.1	1.3	1.2	1.3	1.0	1.0	0.8	0.8	0.9	0.9	1.0	1.1	1.0
1975	0.9	0.9	1.0	0.9	0.6	0.7	0.5	0.6	0.7	0.8	1.0	0.8	0.8
1976	1.0	1.0	1.1	0.9	0.8	0.7	0.6	0.6	0.7	0.8	0.9	0.9	0.8
1977	0.9	0.8	0.9	0.8	0.7	0.6	0.6	0.7	0.7	0.9	1.0	1.1	0.8
1978	1.0	0.5	0.8	0.9	0.7	0.6	0.6	0.6	0.7	0.8	0.9	1.0	0.8
1979	0.8	1.0	0.9	0.8	0.7	0.7	0.5	0.7	0.7	0.9	0.9	1.0	0.8
1980	0.8	0.7	0.9	0.8	0.6	0.6	0.5	0.6	0.6	0.8	0.9	0.9	0.7
1981	1.0	1.2	1.1	1.3	0.9	0.9	0.8	0.8	0.9	1.0	0.9	0.9	1.0
1982	1.1	0.9	0.9	1.1	0.5	0.6	0.5	0.5	0.5	0.7	1.0	1.0	0.8
1983	0.7	0.6	0.8	1.0	0.9	0.5	0.5	0.5	0.7	0.9	0.9	1.1	0.8
1984	0.7	0.9	1.1	0.9	0.8	0.7	0.5	0.5	0.6	0.6	0.9	0.9	0.7
1985	0.9	0.9	1.1	0.8	0.8	0.7	0.6	0.6	0.6	0.8	1.1	1.0	0.8
1986	0.8	0.7	0.8	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.8	0.8	0.7
1987	0.8	0.8	1.0	1.1	0.8	0.7	0.6	0.8	0.6	0.8	1.0	1.0	0.8
MEAN	1.0	1.0	1.1	1.1	0.9	0.8	0.7	0.7	0.8	0.9	1.0	1.1	

LARGEST HS(METERS) BY MONTH AND YEAR

WIS STATION E53 (41.73N 82.30W)

MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	2.0	3.0	4.2	3.2	2.5	2.6	2.3	2.2	1.8	2.5	2.6	2.4
1957	2.5	2.4	2.8	3.6	3.1	3.1	2.5	1.8	2.3	2.3	3.1	2.4
1958	2.5	2.5	3.0	2.9	2.8	2.6	2.4	1.9	2.4	2.8	3.0	2.6
1959	2.7	2.6	3.6	3.4	2.3	1.9	2.1	1.9	2.1	2.4	2.6	2.2
1960	2.5	2.6	2.6	3.1	2.7	3.0	2.4	1.8	1.8	2.5	3.1	3.2
1961	2.3	2.6	2.4	3.5	2.8	2.3	2.2	1.9	2.6	2.9	2.3	3.0
1962	3.2	3.8	3.7	2.8	2.4	2.5	2.6	1.9	2.8	2.4	4.1	2.7
1963	2.8	2.3	3.2	3.3	2.6	2.4	2.4	2.5	2.6	2.1	2.9	2.0
1964	3.4	2.1	3.7	2.7	3.5	2.4	2.2	2.1	2.6	2.6	2.6	2.5
1965	3.3	2.9	2.6	2.9	2.8	2.2	2.1	2.1	2.5	3.1	3.3	2.4
1966	3.3	2.5	3.2	2.7	3.1	1.8	2.7	2.3	2.5	2.7	2.8	2.8
1967	2.7	2.6	2.3	3.7	3.0	2.8	2.2	2.5	2.7	2.8	3.0	2.4
1968	2.7	2.7	3.3	2.8	2.3	2.2	1.8	2.2	1.9	2.3	2.6	3.1
1969	3.0	2.4	2.7	3.8	2.3	2.3	2.3	2.5	1.7	2.3	2.2	2.8
1970	2.4	2.6	3.0	3.8	2.6	2.4	2.2	2.3	2.2	2.3	3.1	3.1
1971	3.8	3.2	2.9	3.2	2.9	1.7	2.3	2.3	2.1	2.1	2.4	2.9
1972	3.7	2.7	3.3	3.3	3.1	2.2	2.0	3.0	2.0	2.2	3.1	3.0
1973	2.5	2.9	3.1	3.2	2.5	1.8	2.2	2.3	2.2	2.1	3.1	2.4
1974	3.2	3.5	3.0	3.5	3.1	2.8	2.8	1.9	2.7	2.6	2.7	3.7
1975	2.0	2.2	3.5	3.2	1.4	2.0	1.5	1.9	3.1	3.7	2.3	2.2
1976	2.2	2.3	2.3	3.0	2.3	1.7	1.6	1.6	2.0	2.1	2.0	1.8
1977	2.8	1.9	2.5	2.0	2.2	1.9	1.9	1.4	1.8	2.2	2.0	3.2
1978	3.1	2.2	2.9	2.5	2.6	1.5	1.7	1.9	2.3	2.0	2.6	2.0
1979	1.8	3.3	2.4	2.5	2.7	1.6	1.4	1.9	2.0	2.1	2.5	2.3
1980	2.4	2.1	2.8	3.1	2.0	1.4	1.8	1.4	1.6	1.8	2.2	2.4
1981	2.4	2.6	3.0	3.4	2.1	2.2	2.1	2.0	2.1	2.7	2.5	2.3
1982	3.1	3.1	2.4	3.7	1.5	2.0	1.4	1.3	1.6	2.3	2.2	2.5
1983	2.1	2.3	2.7	3.4	2.1	2.0	1.5	1.5	2.0	2.5	2.5	2.3
1984	1.5	3.4	3.3	2.9	2.8	1.7	1.3	1.3	1.7	1.6	1.9	2.3
1985	2.0	2.1	3.1	2.6	1.9	1.9	1.6	1.8	1.7	2.3	2.8	2.8
1986	2.2	3.2	2.2	1.9	2.0	2.0	1.4	1.7	1.9	1.7	2.2	3.0
1987	2.4	2.5	3.0	3.7	3.1	1.9	1.6	1.6	1.6	2.1	2.3	3.1

32 YR. STATISTICS FOR WIS STATION E53

MEAN SIGNIFICANT WAVE HEIGHT	(METERS)	0.9
MEAN PEAK WAVE PERIOD	(SECONDS)	4.1
MOST FREQUENT 22.5 DEGREE (CENTER) DIRECTION BAND . .	(DEGREES)	202.5
STANDARD DEVIATION OF WAVE HS	(METERS)	0.5
STANDARD DEVIATION OF WAVE TP	(SECONDS)	1.1
LARGEST WAVE HS	(METERS)	4.2
WAVE TP ASSOCIATED WITH LARGEST WAVE HS	(SECONDS)	8.0
AVERAGE DIRECTION ASSOCIATED WITH LARGEST WAVE HS . . .	(DEGREES)	253.0
DATE OF LARGEST HS OCCURRENCE IS (YR,MO,DA,HR)		56030821

APPENDIX B: RETURN PERIOD TABLES

Station 1 (41.73N , 83.27W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	1.7(0.02)	2.0(0.02)	1.7(0.03)	2.1(0.03)
5.00	1.8(0.03)	2.1(0.03)	1.8(0.05)	2.2(0.04)
10.00	1.9(0.04)	2.2(0.04)	1.9(0.06)	2.3(0.05)
20.00	1.9(0.04)	2.2(0.05)	2.0(0.07)	2.4(0.06)
50.00	2.0(0.05)	2.3(0.05)	2.1(0.08)	2.5(0.07)

Station 2 (41.73N , 83.08W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.2(0.02)	2.2(0.03)	2.2(0.05)	2.4(0.04)
5.00	2.3(0.03)	2.3(0.04)	2.4(0.07)	2.6(0.06)
10.00	2.4(0.04)	2.4(0.05)	2.5(0.08)	2.7(0.07)
20.00	2.5(0.05)	2.5(0.06)	2.6(0.09)	2.8(0.08)
50.00	2.5(0.06)	2.6(0.07)	2.8(0.11)	2.9(0.10)

Station 3 (41.73N , 82.88W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.1(0.03)	2.3(0.03)	2.3(0.04)	2.5(0.03)
5.00	2.2(0.04)	2.4(0.04)	2.5(0.05)	2.6(0.04)
10.00	2.3(0.04)	2.5(0.04)	2.6(0.06)	2.7(0.05)
20.00	2.4(0.05)	2.5(0.05)	2.7(0.07)	2.8(0.06)
50.00	2.5(0.06)	2.7(0.06)	2.8(0.09)	2.9(0.07)

Station 4 (41.58N , 82.88W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	1.8(0.02)	1.8(0.02)	1.9(0.03)	2.0(0.03)
5.00	1.9(0.03)	1.9(0.03)	2.0(0.04)	2.1(0.04)
10.00	1.9(0.03)	2.0(0.04)	2.1(0.05)	2.1(0.05)
20.00	2.0(0.04)	2.0(0.05)	2.2(0.06)	2.2(0.05)
50.00	2.1(0.05)	2.2(0.06)	2.3(0.07)	2.3(0.06)

Station 5 (41.73N , 82.50W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.8(0.03)	2.2(0.04)	2.6(0.03)	2.9(0.03)
5.00	3.0(0.04)	2.3(0.06)	2.8(0.04)	3.0(0.04)
10.00	3.0(0.05)	2.5(0.07)	2.9(0.05)	3.1(0.05)
20.00	3.1(0.06)	2.6(0.09)	3.0(0.06)	3.2(0.05)
50.00	3.3(0.07)	2.8(0.11)	3.1(0.07)	3.3(0.07)

Station 6 (41.43N , 82.50W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.1(0.04)	2.6(0.05)	2.2(0.03)	3.1(0.04)
5.00	3.3(0.06)	2.8(0.07)	2.3(0.04)	3.3(0.06)
10.00	3.4(0.07)	3.0(0.09)	2.4(0.05)	3.5(0.07)
20.00	3.5(0.09)	3.2(0.10)	2.5(0.06)	3.6(0.08)
50.00	3.7(0.10)	3.4(0.12)	2.6(0.07)	3.8(0.10)

Station 7 (41.58N , 82.30W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.3(0.04)	2.9(0.05)	2.9(0.03)	3.4(0.04)
5.00	3.5(0.06)	3.1(0.07)	3.1(0.05)	3.6(0.06)
10.00	3.6(0.08)	3.3(0.09)	3.2(0.06)	3.7(0.07)
20.00	3.8(0.09)	3.5(0.11)	3.3(0.07)	3.8(0.08)
50.00	4.0(0.11)	3.7(0.13)	3.4(0.08)	4.0(0.10)

Station 8 (41.58N , 82.10W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.6(0.05)	2.9(0.05)	3.3(0.04)	3.7(0.04)
5.00	3.9(0.07)	3.1(0.07)	3.5(0.06)	3.9(0.06)
10.00	4.0(0.09)	3.3(0.09)	3.7(0.07)	4.1(0.08)
20.00	4.2(0.10)	3.5(0.11)	3.8(0.09)	4.2(0.09)
50.00	4.4(0.13)	3.7(0.13)	4.0(0.11)	4.4(0.11)

Station 9 (41.58N , 81.90W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.7(0.06)	3.3(0.06)	3.6(0.05)	3.9(0.04)
5.00	3.9(0.08)	3.6(0.08)	3.8(0.07)	4.1(0.06)
10.00	4.1(0.10)	3.8(0.10)	3.9(0.08)	4.2(0.07)
20.00	4.3(0.12)	3.9(0.12)	4.1(0.09)	4.3(0.09)
50.00	4.5(0.14)	4.2(0.14)	4.3(0.11)	4.5(0.11)

Station 10 (41.58N , 81.72W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.05)	3.0(0.05)	3.5(0.05)	3.7(0.04)
5.00	3.7(0.07)	3.2(0.06)	3.7(0.07)	3.9(0.06)
10.00	3.9(0.09)	3.4(0.08)	3.9(0.08)	4.0(0.07)
20.00	4.1(0.10)	3.5(0.09)	4.1(0.10)	4.2(0.08)
50.00	4.3(0.12)	3.7(0.11)	4.3(0.12)	4.3(0.10)

Station 11 (41.73N , 81.52W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.05)	3.5(0.06)	4.0(0.05)	4.0(0.04)
5.00	3.7(0.07)	3.7(0.08)	4.2(0.07)	4.2(0.06)
10.00	3.9(0.09)	3.9(0.09)	4.3(0.08)	4.3(0.07)
20.00	4.1(0.10)	4.1(0.11)	4.5(0.10)	4.5(0.09)
50.00	4.3(0.12)	4.3(0.13)	4.7(0.12)	4.7(0.11)

Station 12 (41.87N , 81.32W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.4(0.05)	2.7(0.04)	4.1(0.05)	4.1(0.05)
5.00	3.6(0.07)	2.9(0.06)	4.3(0.07)	4.3(0.07)
10.00	3.8(0.08)	3.0(0.07)	4.4(0.09)	4.4(0.08)
20.00	3.9(0.10)	3.1(0.08)	4.6(0.10)	4.6(0.10)
50.00	4.1(0.12)	3.3(0.10)	4.8(0.12)	4.8(0.12)

Station 13 (41.87N , 81.13W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.3(0.05)	2.8(0.04)	3.8(0.04)	3.8(0.04)
5.00	3.5(0.07)	3.0(0.06)	4.0(0.06)	4.0(0.06)
10.00	3.6(0.08)	3.1(0.07)	4.1(0.07)	4.1(0.07)
20.00	3.8(0.09)	3.2(0.08)	4.2(0.09)	4.2(0.08)
50.00	4.0(0.11)	3.4(0.10)	4.4(0.11)	4.4(0.10)

Station 14 (42.02N , 80.93W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.05)	2.9(0.04)	4.2(0.05)	4.2(0.05)
5.00	7(0.07)	3.1(0.06)	4.4(0.07)	4.4(0.07)
10.00	3.8(0.09)	3.2(0.07)	4.6(0.08)	4.6(0.08)
20.00	4.0(0.10)	3.3(0.09)	4.7(0.10)	4.8(0.10)
50.00	4.2(0.12)	3.5(0.10)	4.9(0.12)	4.9(0.12)

Station 15 (42.02N , 80.73W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.7(0.06)	3.0(0.04)	4.2(0.05)	4.3(0.05)
5.00	4.0(0.08)	3.1(0.06)	4.4(0.07)	4.5(0.07)
10.00	4.2(0.09)	3.3(0.07)	4.6(0.08)	4.6(0.08)
20.00	4.3(0.11)	3.4(0.08)	4.7(0.10)	4.8(0.10)
50.00	4.6(0.14)	3.5(0.10)	4.9(0.11)	5.0(0.12)

Station 16 (42.02N , 80.55W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.05)	2.9(0.04)	4.0(0.04)	4.0(0.04)
5.00	3.7(0.07)	3.1(0.06)	4.1(0.06)	4.2(0.06)
10.00	3.8(0.09)	3.2(0.07)	4.3(0.07)	4.3(0.08)
20.00	4.0(0.10)	3.4(0.08)	4.4(0.09)	4.5(0.09)
50.00	4.2(0.13)	3.5(0.10)	4.6(0.10)	4.6(0.11)

Station 17 (42.15N , 80.35W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.7(0.06)	3.1(0.05)	4.6(0.06)	4.6(0.06)
5.00	4.0(0.09)	3.3(0.06)	4.8(0.08)	4.9(0.08)
10.00	4.2(0.11)	3.5(0.08)	5.0(0.10)	5.1(0.10)
20.00	4.4(0.12)	3.6(0.09)	5.2(0.12)	5.2(0.12)
50.00	4.6(0.15)	3.8(0.11)	5.5(0.14)	5.5(0.14)

Station 18 (42.30N , 80.15W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.05)	2.8(0.05)	4.8(0.07)	4.8(0.07)
5.00	3.7(0.07)	3.1(0.07)	5.1(0.09)	5.1(0.09)
10.00	3.9(0.09)	3.2(0.09)	5.3(0.11)	5.3(0.11)
20.00	4.0(0.11)	3.4(0.11)	5.5(0.13)	5.5(0.13)
50.00	4.3(0.13)	3.6(0.13)	5.8(0.16)	5.8(0.16)

Station 19 (42.30N , 79.97W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.06)	2.8(0.06)	5.1(0.07)	5.1(0.07)
5.00	3.8(0.08)	3.1(0.08)	5.4(0.10)	5.4(0.10)
10.00	3.9(0.10)	3.3(0.10)	5.7(0.13)	5.7(0.13)
20.00	4.1(0.11)	3.5(0.12)	5.9(0.15)	5.9(0.15)
50.00	4.3(0.14)	3.7(0.14)	6.2(0.18)	6.2(0.18)

Station 20 (42.45N , 79.77W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.0(0.05)	2.9(0.04)	5.3(0.08)	5.3(0.08)
5.00	3.2(0.08)	3.1(0.06)	5.6(0.11)	5.6(0.11)
10.00	3.4(0.09)	3.2(0.07)	5.9(0.13)	5.9(0.13)
20.00	3.6(0.11)	3.3(0.08)	6.1(0.15)	6.1(0.15)
50.00	3.8(0.13)	3.5(0.10)	6.4(0.18)	6.4(0.18)

Station 21 (42.45N , 79.57W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.8(0.05)	2.8(0.04)	5.1(0.06)	5.1(0.06)
5.00	3.0(0.07)	3.0(0.06)	5.3(0.09)	5.3(0.09)
10.00	3.2(0.08)	3.1(0.07)	5.6(0.11)	5.6(0.11)
20.00	3.3(0.10)	3.3(0.08)	5.8(0.13)	5.8(0.13)
50.00	3.5(0.12)	3.4(0.10)	6.0(0.15)	6.0(0.15)

Station 22 (42.58N , 79.37W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.4(0.04)	2.5(0.04)	4.8(0.07)	4.8(0.07)
5.00	2.6(0.06)	2.6(0.06)	5.1(0.09)	5.1(0.09)
10.00	2.7(0.07)	2.8(0.07)	5.3(0.11)	5.3(0.11)
20.00	2.8(0.09)	2.9(0.09)	5.6(0.13)	5.6(0.13)
50.00	3.0(0.11)	3.1(0.10)	5.8(0.16)	5.8(0.16)

Station 23 (42.58N , 79.18W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.3(0.04)	2.8(0.05)	4.4(0.05)	4.4(0.05)
5.00	2.5(0.06)	3.0(0.07)	4.6(0.07)	4.6(0.07)
10.00	2.7(0.07)	3.2(0.08)	4.8(0.09)	4.8(0.09)
20.00	2.8(0.09)	3.3(0.10)	5.0(0.11)	5.0(0.11)
50.00	3.0(0.10)	3.5(0.12)	5.2(0.13)	5.2(0.13)

Station 24 (42.73N , 78.98W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	1.8(0.03)	1.8(0.03)	4.3(0.05)	4.3(0.05)
5.00	1.9(0.05)	1.9(0.04)	4.5(0.06)	4.5(0.06)
10.00	2.0(0.06)	2.0(0.05)	4.7(0.08)	4.7(0.08)
20.00	2.2(0.07)	2.1(0.06)	4.8(0.09)	4.8(0.09)
50.00	2.3(0.08)	2.2(0.07)	5.0(0.11)	5.0(0.11)

Station 25 (42.73N , 79.18W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	5.0(0.06)	2.7(0.06)	2.0(0.03)	5.0(0.06)
5.00	5.3(0.08)	3.0(0.08)	2.1(0.04)	5.3(0.08)
10.00	5.4(0.10)	3.2(0.10)	2.2(0.05)	5.4(0.10)
20.00	5.6(0.12)	3.3(0.12)	2.3(0.06)	5.6(0.12)
50.00	5.9(0.14)	3.6(0.15)	2.4(0.08)	5.9(0.14)

Station 26 (42.73N , 79.37W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	5.1(0.06)	2.9(0.07)	2.3(0.04)	5.1(0.07)
5.00	5.3(0.09)	3.1(0.10)	2.5(0.06)	5.3(0.09)
10.00	5.5(0.11)	3.3(0.12)	2.6(0.07)	5.6(0.11)
20.00	5.7(0.13)	3.5(0.14)	2.7(0.08)	5.8(0.13)
50.00	6.0(0.16)	3.8(0.17)	2.9(0.10)	6.0(0.16)

Station 27 (42.73N , 79.57W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.8(0.06)	2.7(0.04)	2.3(0.04)	4.8(0.06)
5.00	5.0(0.09)	2.8(0.06)	2.5(0.05)	5.0(0.09)
10.00	5.2(0.11)	3.0(0.07)	2.6(0.06)	5.2(0.11)
20.00	5.4(0.13)	3.1(0.08)	2.7(0.07)	5.4(0.13)
50.00	5.7(0.15)	3.3(0.10)	2.8(0.09)	5.7(0.15)

Station 28 (42.73N , 79.77W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	5.0(0.08)	3.1(0.05)	2.4(0.04)	5.0(0.08)
5.00	5.3(0.10)	3.3(0.06)	2.6(0.05)	5.3(0.10)
10.00	5.6(0.13)	3.4(0.08)	2.7(0.06)	5.6(0.13)
20.00	5.8(0.15)	3.6(0.09)	2.8(0.07)	5.8(0.15)
50.00	6.1(0.18)	3.8(0.11)	2.9(0.09)	6.1(0.18)

Station 29 (42.73N , 79.97W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.1(0.05)	3.0(0.06)	2.4(0.04)	3.3(0.06)
5.00	3.3(0.08)	3.3(0.08)	2.6(0.05)	3.5(0.09)
10.00	3.5(0.09)	3.4(0.10)	2.7(0.06)	3.7(0.11)
20.00	3.6(0.11)	3.6(0.11)	2.8(0.07)	3.9(0.13)
50.00	3.8(0.13)	3.8(0.14)	2.9(0.09)	4.1(0.15)

Station 30 (42.73N , 80.15W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.3(0.04)	2.3(0.05)	2.3(0.03)	2.5(0.03)
5.00	2.4(0.05)	2.5(0.06)	2.5(0.04)	2.7(0.05)
10.00	2.5(0.06)	2.6(0.08)	2.6(0.05)	2.8(0.06)
20.00	2.6(0.08)	2.8(0.09)	2.7(0.06)	2.9(0.07)
50.00	2.8(0.09)	2.9(0.11)	2.8(0.08)	3.0(0.08)

Station 31 (42.58N , 79.97W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.8(0.04)	4.1(0.09)	5.1(0.09)	5.1(0.09)
5.00	3.0(0.06)	4.4(0.13)	5.5(0.13)	5.5(0.13)
10.00	3.1(0.07)	4.7(0.15)	5.8(0.16)	5.8(0.15)
20.00	3.2(0.08)	5.0(0.18)	6.1(0.19)	6.1(0.18)
50.00	3.4(0.10)	5.4(0.22)	6.5(0.23)	6.4(0.22)

Station 32 (42.45N , 80.15W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	5.1(0.06)	3.6(0.07)	3.1(0.05)	5.2(0.07)
5.00	5.3(0.09)	3.9(0.10)	3.3(0.07)	5.5(0.10)
10.00	5.6(0.11)	4.1(0.13)	3.5(0.08)	5.7(0.12)
20.00	5.8(0.13)	4.3(0.15)	3.6(0.10)	5.9(0.14)
50.00	6.0(0.15)	4.6(0.18)	3.8(0.12)	6.2(0.17)

Station 33 (42.45N , 81.35W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.3(0.05)	3.6(0.07)	3.0(0.04)	4.4(0.06)
5.00	4.5(0.07)	3.8(0.09)	3.2(0.06)	4.7(0.08)
10.00	4.7(0.08)	4.0(0.11)	3.3(0.07)	4.8(0.10)
20.00	4.8(0.10)	4.2(0.13)	3.5(0.08)	5.0(0.11)
50.00	5.0(0.12)	4.4(0.16)	3.6(0.10)	5.2(0.14)

Station 34 (42.45N , 80.55W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.2(0.05)	3.3(0.05)	2.8(0.04)	4.3(0.06)
5.00	4.4(0.07)	3.5(0.08)	3.0(0.06)	4.5(0.08)
10.00	4.6(0.09)	3.7(0.09)	3.1(0.08)	4.7(0.10)
20.00	4.8(0.10)	3.8(0.11)	3.2(0.09)	4.9(0.12)
50.00	5.0(0.12)	4.0(0.13)	3.4(0.11)	5.1(0.14)

Station 35 (42.45N , 80.73W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.4(0.05)	3.8(0.07)	3.2(0.05)	4.5(0.06)
5.00	4.6(0.07)	4.1(0.10)	3.4(0.07)	4.7(0.09)
10.00	4.8(0.09)	4.3(0.12)	3.5(0.08)	4.9(0.11)
20.00	4.9(0.11)	4.5(0.14)	3.7(0.10)	5.1(0.13)
50.00	5.2(0.13)	4.8(0.17)	3.9(0.12)	5.4(0.15)

Station 36 (42.58N , 80.93W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.2(0.05)	3.3(0.04)	2.5(0.06)	4.2(0.06)
5.00	4.4(0.08)	3.5(0.06)	2.8(0.08)	4.5(0.08)
10.00	4.6(0.09)	3.7(0.07)	3.0(0.10)	4.7(0.10)
20.00	4.8(0.11)	3.8(0.09)	3.2(0.12)	4.8(0.12)
50.00	5.0(0.13)	4.0(0.11)	3.4(0.15)	5.1(0.14)

Station 37 (42.58N , 81.13W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.1(0.05)	3.3(0.04)	2.4(0.05)	4.1(0.06)
5.00	4.3(0.07)	3.5(0.06)	2.6(0.07)	4.3(0.08)
10.00	4.4(0.09)	3.6(0.07)	2.8(0.08)	4.5(0.09)
20.00	4.6(0.11)	3.7(0.08)	2.9(0.10)	4.7(0.11)
50.00	4.8(0.13)	3.9(0.10)	3.1(0.12)	4.9(0.14)

Station 38 (42.58N , 81.32W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.04)	2.7(0.04)	1.8(0.02)	3.5(0.04)
5.00	3.7(0.06)	2.9(0.05)	1.9(0.03)	3.7(0.06)
10.00	3.8(0.08)	3.0(0.06)	2.0(0.04)	3.8(0.07)
20.00	4.0(0.09)	3.1(0.07)	2.1(0.05)	4.0(0.09)
50.00	4.2(0.11)	3.2(0.09)	2.2(0.06)	4.2(0.11)

Station 39 (42.45N , 81.52W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.0(0.05)	2.8(0.04)	2.5(0.04)	4.0(0.05)
5.00	4.2(0.07)	3.0(0.06)	2.7(0.06)	4.2(0.07)
10.00	4.4(0.09)	3.2(0.07)	2.8(0.07)	4.4(0.09)
20.00	4.5(0.10)	3.3(0.08)	2.9(0.08)	4.5(0.10)
50.00	4.7(0.12)	3.5(0.10)	3.1(0.10)	4.7(0.12)

Station 40 (42.30N , 81.72W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	4.0(0.05)	2.7(0.04)	2.7(0.04)	4.0(0.05)
5.00	4.3(0.07)	2.9(0.05)	2.9(0.05)	4.3(0.07)
10.00	4.4(0.09)	3.0(0.06)	3.0(0.06)	4.4(0.09)
20.00	4.6(0.10)	3.1(0.08)	3.1(0.07)	4.6(0.10)
50.00	4.8(0.12)	3.3(0.09)	3.3(0.09)	4.8(0.12)

Station 41 (42.15N , 81.90W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.05)	3.5(0.05)	2.9(0.03)	3.7(0.04)
5.00	3.7(0.07)	3.8(0.07)	3.0(0.04)	3.9(0.06)
10.00	3.8(0.08)	3.9(0.08)	3.1(0.05)	4.0(0.07)
20.00	4.0(0.09)	4.1(0.10)	3.2(0.06)	4.1(0.09)
50.00	4.2(0.11)	4.3(0.12)	3.3(0.07)	4.3(0.10)

Station 42 (42.15N , 82.10W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.3(0.05)	2.9(0.03)	2.7(0.04)	3.3(0.04)
5.00	3.5(0.06)	3.0(0.04)	2.9(0.05)	3.5(0.06)
10.00	3.7(0.08)	3.1(0.05)	3.0(0.06)	3.6(0.07)
20.00	3.8(0.09)	3.2(0.06)	3.1(0.08)	3.8(0.08)
50.00	4.0(0.11)	3.3(0.07)	3.3(0.09)	3.9(0.10)

Station 43 (42.02N , 82.30W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.1(0.04)	2.6(0.03)	3.0(0.03)	3.2(0.03)
5.00	3.3(0.06)	2.8(0.04)	3.1(0.04)	3.3(0.05)
10.00	3.4(0.07)	2.8(0.05)	3.2(0.05)	3.4(0.06)
20.00	3.5(0.08)	2.9(0.05)	3.3(0.06)	3.5(0.07)
50.00	3.7(0.10)	3.0(0.06)	3.5(0.08)	3.7(0.08)

Station 44 (41.87N , 82.68W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.6(0.03)	2.0(0.02)	1.8(0.03)	2.6(0.03)
5.00	2.7(0.04)	2.1(0.03)	1.9(0.04)	2.7(0.04)
10.00	2.8(0.05)	2.2(0.04)	2.0(0.04)	2.8(0.05)
20.00	2.9(0.06)	2.2(0.05)	2.0(0.05)	2.9(0.06)
50.00	3.0(0.07)	2.3(0.06)	2.2(0.06)	3.0(0.07)

Station 45 (41.87N , 82.88W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.5(0.02)	2.0(0.03)	2.0(0.02)	2.5(0.02)
5.00	2.6(0.03)	2.2(0.04)	2.1(0.03)	2.6(0.03)
10.00	2.6(0.04)	2.2(0.04)	2.2(0.04)	2.6(0.04)
20.00	2.7(0.05)	2.3(0.05)	2.3(0.05)	2.7(0.05)
50.00	2.8(0.06)	2.4(0.06)	2.4(0.06)	2.8(0.06)

Station 46 (41.87N , 83.08W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.2(0.02)	1.7(0.02)	1.8(0.02)	2.2(0.02)
5.00	2.3(0.03)	1.8(0.03)	1.9(0.03)	2.3(0.03)
10.00	2.4(0.04)	1.8(0.03)	1.9(0.03)	2.4(0.04)
20.00	2.4(0.04)	1.9(0.04)	2.0(0.04)	2.4(0.04)
50.00	2.5(0.05)	2.0(0.05)	2.1(0.05)	2.5(0.05)

Station 47 (41.87N , 83.27W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	1.7(0.02)	1.6(0.02)	1.6(0.02)	1.8(0.02)
5.00	1.8(0.03)	1.7(0.03)	1.7(0.02)	1.8(0.02)
10.00	1.8(0.03)	1.7(0.03)	1.8(0.03)	1.9(0.03)
20.00	1.9(0.04)	1.8(0.04)	1.8(0.03)	1.9(0.03)
50.00	2.0(0.05)	1.9(0.05)	1.9(0.04)	2.0(0.04)

Station 48 (41.87N , 81.90W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.6(0.05)	2.6(0.04)	4.2(0.06)	4.3(0.05)
5.00	3.8(0.07)	2.8(0.05)	4.5(0.08)	4.5(0.07)
10.00	4.0(0.08)	2.9(0.07)	4.7(0.10)	4.6(0.09)
20.00	4.1(0.10)	3.0(0.08)	4.8(0.11)	4.8(0.11)
50.00	4.3(0.12)	3.2(0.09)	5.1(0.14)	5.0(0.13)

Station 49 (42.15N , 81.13W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.0(0.04)	2.5(0.04)	4.4(0.05)	4.4(0.05)
5.00	3.2(0.05)	2.7(0.06)	4.6(0.07)	4.6(0.07)
10.00	3.3(0.06)	2.8(0.07)	4.7(0.09)	4.7(0.09)
20.00	3.4(0.08)	3.0(0.08)	4.9(0.10)	4.9(0.10)
50.00	3.6(0.09)	3.1(0.10)	5.1(0.12)	5.1(0.12)

Station 50 (42.30N , 80.35W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.1(0.04)	2.6(0.03)	4.1(0.05)	4.1(0.05)
5.00	3.3(0.06)	2.8(0.04)	4.3(0.07)	4.3(0.07)
10.00	3.4(0.07)	2.8(0.05)	4.5(0.08)	4.5(0.08)
20.00	3.5(0.08)	3.0(0.06)	4.6(0.10)	4.6(0.10)
50.00	3.7(0.10)	3.1(0.08)	4.8(0.12)	4.8(0.12)

Station 51 (42.58N , 79.57W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	2.5(0.05)	2.4(0.04)	4.9(0.07)	4.9(0.07)
5.00	2.7(0.06)	2.6(0.05)	5.2(0.09)	5.2(0.09)
10.00	2.8(0.08)	2.7(0.07)	5.4(0.11)	5.4(0.11)
20.00	3.0(0.09)	2.8(0.08)	5.6(0.14)	5.6(0.14)
50.00	3.2(0.11)	3.0(0.09)	5.9(0.16)	5.9(0.16)

Station 52 (41.87N , 82.30W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.1(0.04)	2.5(0.03)	3.2(0.03)	3.3(0.03)
5.00	3.3(0.05)	2.6(0.04)	3.3(0.05)	3.4(0.04)
10.00	3.4(0.07)	2.7(0.05)	3.5(0.06)	3.5(0.05)
20.00	3.5(0.08)	2.8(0.06)	3.6(0.07)	3.6(0.06)
50.00	3.7(0.09)	2.9(0.07)	3.7(0.08)	3.8(0.08)

Station 53 (41.73N , 82.30W)

Return Period (yr)	Angle Class 1	2	3	All
2.00	3.5(0.04)	2.5(0.05)	3.4(0.04)	3.6(0.04)
5.00	3.6(0.06)	2.7(0.07)	3.6(0.06)	3.8(0.05)
10.00	3.8(0.07)	2.8(0.09)	3.7(0.07)	3.9(0.07)
20.00	3.9(0.08)	3.0(0.10)	3.9(0.09)	4.0(0.08)
50.00	4.1(0.10)	3.2(0.12)	4.0(0.10)	4.2(0.09)