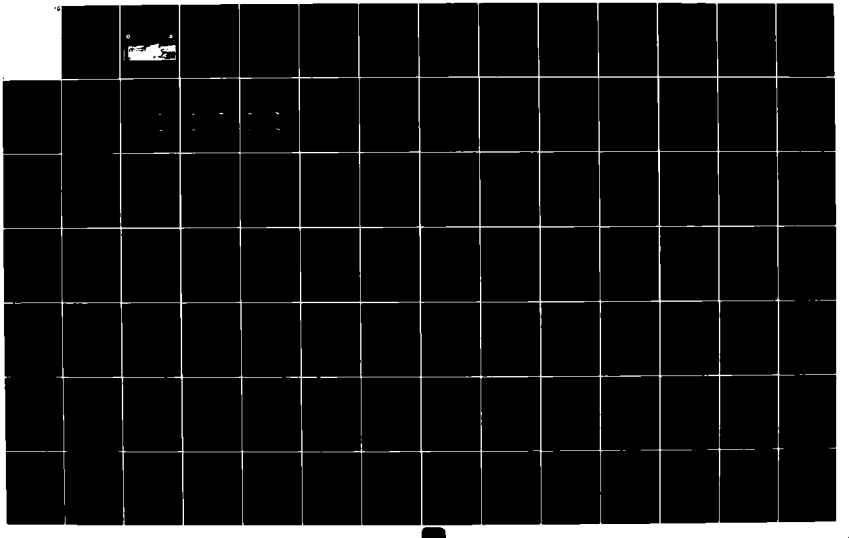
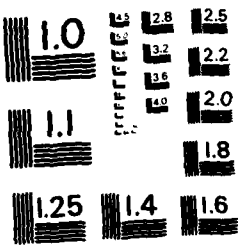
AD A130 647 WIND AND WAVE SUMMARIES FOR SELECTED US COAST GUARD OPERATING AREAS(U) NATIONAL CLIMATIC DATA CENTER ASHEVILLE NC D PASKAUSKY ET AL. APR 83 USCG-D-11-83

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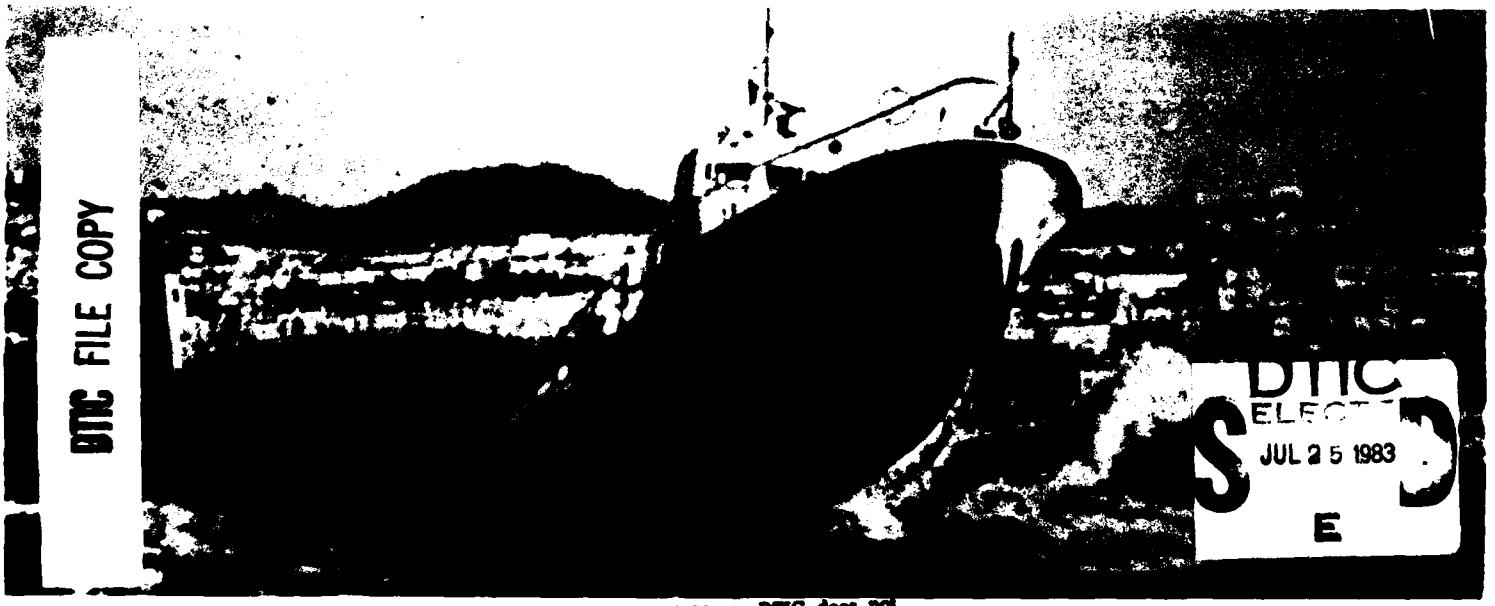
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APRIL 1983

WIND AND WAVE SUMMARIES FOR SELECTED U.S. COAST GUARD OPERATING AREAS

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UNITED STATES COAST GUARD
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WASHINGTON D.C. 20593

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report was prepared to describe the wind and wave conditions that can be expected in U.S. Coast Guard geographical operating areas. The intent is to provide operational program managers a tool to use when considering the potential applications of conventional and advanced marine vehicles (AMVs) to Coast Guard missions. It is also intended to supplement research determining the feasibility of alternate energy sources that involve wind or waves. This work was performed by the National Climatic Data Center under the direction of the U.S. Coast Guard Research and Development Center for the Office of Research and Development.

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METRIC CONVERSION FACTORS

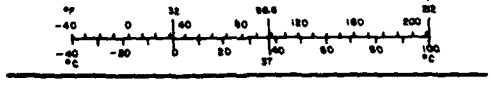
Approximate Conversions to Metric Measures

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



Approximate Conversions from Metric Measures

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



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I. Information for Users

A. Introduction

This report was prepared to describe the wind and wave conditions that can be expected in U.S. Coast Guard geographical operating areas. The intent is to provide operational program managers a tool to use when considering the potential applications of conventional and advanced marine vehicles to Coast Guard missions. It is also intended to supplement research determining the feasibility of alternate energy sources that involve wind or waves. While these data are the most accurate available, the chance occurrence of conditions in excess of conditions reported is possible. This work was performed by the National Climatic Data Center under the direction of the U.S. Coast Guard Research and Development Center for the Office of Research and Development.

B. Data Discussion

Data for this volume were obtained from two sources, NOAA Data Buoys and the Army Corps of Engineers. They are called NOAA Buoy and Army Data, respectively, throughout this document. Figures 1 and 2 show the locations applicable to the data. NOAA Buoy data are in situ measurements and are documented quite thoroughly in the book, Climatic Summaries for NOAA Data Buoys (U.S. Department of Commerce, 1983), and in the report by NOAA/NDBO (1982). Army Data are obtained from hindcast models and are documented in Resio (1981) and U.S. Army (1982). Details relating to each data source are followed by a more general description of the wind and wave data in the following sections.

(1) NOAA Buoy Data

Elements summarized from the NOAA Buoys are:

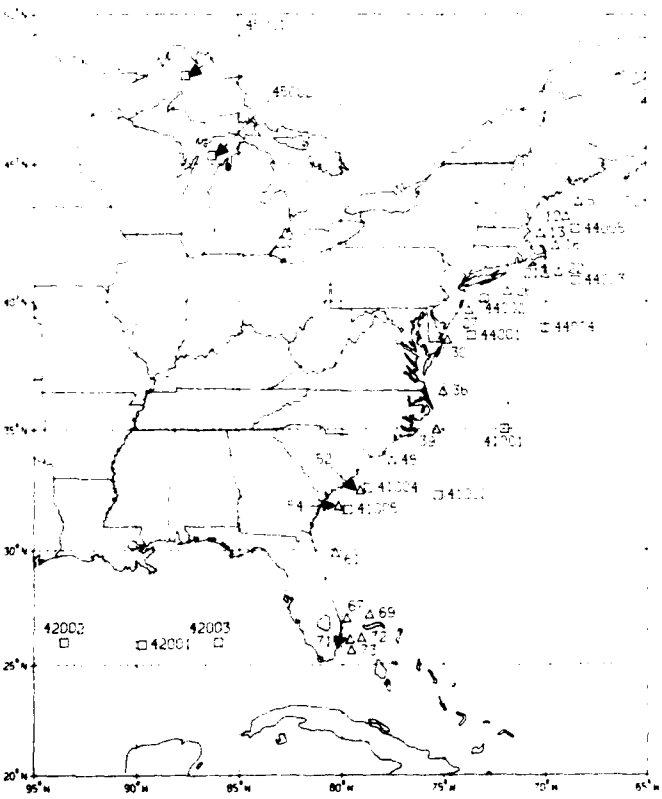
Significant Wave Height: Data are gathered synoptically on a hourly or three hourly basis over a 20-minute interval; the system accuracy is ± 0.5m.

Mean Wave Period: The average period of all waves present during the 20-minute sampling period; accurate to ± one second.

Wind Speed: The average speed during the 8.5-minute sampling period every hour; accurate to ± 1.9 knots or 10%, whichever is greater.

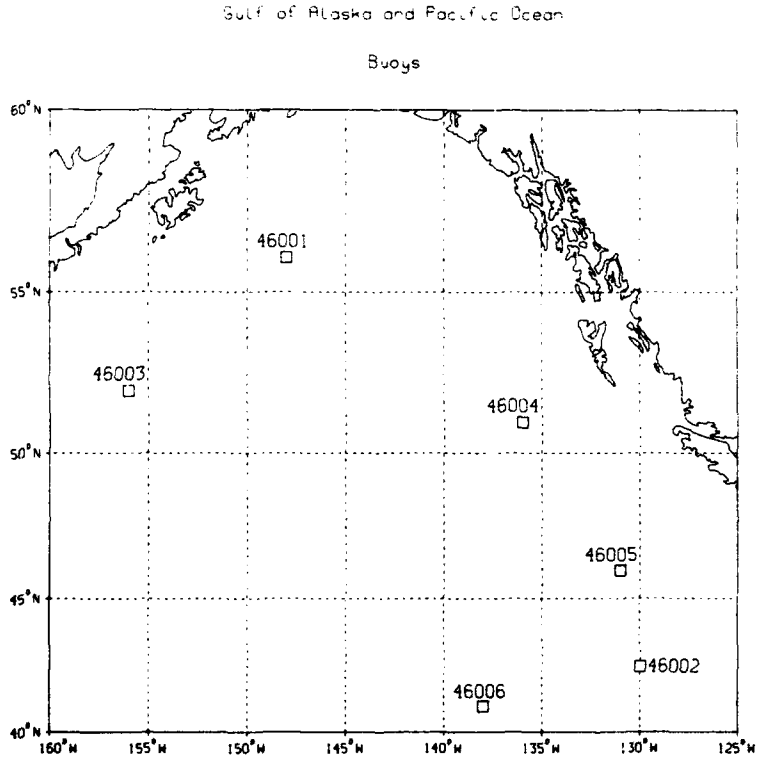
Wind Direction: Sampled over 8.5 minutes every hour; accurate to ± 10 degrees.

Peak Wind Gust: The maximum 4- or 8-second gust during the wind sampling period.



Buoy & WIS Point Locations			water depth meters
Buoy 41001	34.7N	72.6W	4,267
Buoy 41002	32.3N	75.3W	3,744
Buoy 41004	32.5N	79.1W	41
Buoy 41005	31.1N	74.3W	49
Buoy 42001	25.9N	89.7W	3,164
Buoy 42002	26.1N	93.6W	3,683
Buoy 42003	25.9N	85.6W	3,774
Buoy 44004	38.5N	70.6W	4,390
Buoy 44005	43.2N	69.1W	196
Buoy 44007	43.5N	70.1W	44
Buoy 44008	40.5N	69.4W	84
Buoy 44009	38.5N	74.7W	26
Buoy 44011	41.1N	66.6W	4,287
Buoy 44013	42.3N	70.7W	64
Buoy 44014	36.6N	74.8W	46
Buoy 46001	56.3N	148.1W	4,151
Buoy 46002	42.5N	130.5W	3,657
Buoy 46005	46.1N	131.0W	2,853
WIS Point 1	47.09N	68.77W	40
WIS Point 2	43.15N	68.95W	178
WIS Point 3	42.54N	70.13W	149
WIS Point 4	42.11N	69.48W	220
WIS Point 5	41.26N	69.99W	55
WIS Point 6	41.12N	69.35W	73
WIS Point 26	40.39N	71.47W	113
WIS Point 27	39.6MN	73.72W	21
WIS Point 34	38.55N	74.79W	15
WIS Point 36	36.54N	75.02W	31
WIS Point 39	35.12N	75.34W	>1000
WIS Point 48	33.73N	77.54W	68
WIS Point 52	32.51N	79.10W	55
WIS Point 54	31.86N	80.15W	22
WIS Point 61	29.89N	80.31W	46
WIS Point 67	27.07N	79.75W	10
WIS Point 69	27.23N	78.64W	458
WIS Point 71	26.13N	79.58W	100
WIS Point 72	26.20N	79.03W	494
WIS Point 73	25.66N	79.55W	970

Figure 1. NOAA Data Buoy Center (NDBC) and Army Wave Information Study (WIS) data locations for the eastern U.S. Data are catalogued by buoy station numbers (e.g., 41001) or by WIS point numbers.



Buoy locations			Water Depth meters
Buoy 46001	56.3N	147.9W	4133
Buoy 46002	42.5N	130.3W	3294
Buoy 46003	52.0N	156.0W	4484
Buoy 46004	51.0N	136.0W	3929
Buoy 46005	46.0N	131.0W	2835
Buoy 46006	41.0N	138.0W	4169

Figure 2. NOAA Data Buoy Center (NDBC) data locations for the western U.S. Data are catalogued by buoy station numbers (e.g., 46001).

Buoy winds are sampled at a height of 5 or 10 meters. Though the differences between 5 and 10 meters may be small (about 5%; see Dobson, 1981), the adjustment to higher heights may be significant. Pore, Kennedy and May (1981) have found that ship winds in the Great Lakes averaged about 1.5 times the buoy winds, with a root-mean-square difference of 4.8 knots. In that study, the ship winds were measured at about 20m for a sampling period of about one minute, whereas the buoy winds were measured at 5m over 8.5 minutes.

Instrument heights above water for the buoys were:

5m: 41004, 41005, 44001, 44002, 44003, 45001, 45002

5m and 10m mixed: 42001, 42003, 46005

10m: All others in this report.

(2) Army Data (Wave Information Study - WIS)

In response to a requirement for more data in the coastal zone, the U.S. Army produced hindcasts of wave data for each 3-hourly time from 1956 through 1975. A hindcast is an estimation of wave conditions based on foregoing winds. Other influences considered in the model were refraction, diffraction, shoaling, bottom friction, and wave-wave interaction. The winds were estimated on the basis of observed winds and pressure gradient data. Hurricanes were not modeled by the Army Data contained in this report; but non-hurricane conditions, representing the vast majority of the time, were well modeled. Characteristics of the data are as follows:

Significant Wave Height: The root mean square of sea and swell; i.e.,

$$H_s = (H_{sea}^2 + H_{swell}^2)^{1/2}$$

Wave Period: The longer period (of sea or swell) was used to approximate the peak period. Note that this is different from the NOAA Buoy data which shows average, hence usually somewhat shorter, periods.

Wind data were not available from the Army when this report was compiled.

(3) Wave Data. Wave heights in this report are expressed in terms of significant height, H_s, and are considered to be averages of approximately 20 minutes. Significant height is the average height of the highest one-third of all waves present. It can be related to extreme waves (H_e) in the seaway by the relationship

$$H_e = H_s ((\ln N)/2)^{1/2}$$

where N is the number of waves in the record (World Meteorological Organization, 1976). A practical upper limit is approximately

$$H_e \approx 1.8\ H_s \quad \text{(Simpson and Riehl, 1981)}.$$

Maximum wave heights along the West Coast come mostly from winter storms, while for the East Coast, hurricanes and extratropical storms both contribute. Hurricane data are poorly represented in the summaries (not at all in Army Data) because hurricanes are such rare events. Significant wave heights of 10m (33 ft) are not unusual in hurricanes, and an extreme hurricane may generate waves of 15-18m (50 to 60 ft) (Simpson and Riehl, 1981).

Wave periods are average zero upcrossing periods (T_z) for NOAA Buoy data and appropriate peak periods (T_p) for Army data. T_z can be considered an average value, while T_p represents the period of the waves with the greatest energy. Statistically they are related by the approximation

$$T_z \approx 0.75\ T_p$$

though there may be significant excursions from this.

For further details, the reader may wish to consult James (1966, 1969), Thom (1971), and Whitemarsh (1934).

(4) Wind Data and Gusts. Wind directions are in degrees from true North and indicate the direction from which the wind is blowing. Wind speeds are in knots, except for the Cape Canaveral example, which uses meters per second.

The gust factor G is the factor by which a sustained mean wind v over sampling time t must be multiplied to approximate the "instantaneous" peak gust v_p during the time. The general expression is $G = v_p/v$.

In order to show how gust factor can vary with height, Kaufman (1977) has related gust factors for peak gusts at 18.3m elevation at Cape Canaveral, Florida, to the gust factors at other elevations.

The general expressions he used, for arbitrary elevation Z in meters, were:

$$G = 1 + 1/g_o\ (18.3/Z)^P$$

where, at an assumed elevation of 18.3m, for peak wind speed v_p (in mps, measured during an interval of t minutes):

$$P = 0.283 - 0.435 \exp(-0.2 v_p)$$

and

$$g_o = 0.085 (\ln t/10)^2 - 0.329 (\ln t/10) + 1.98 - 1.887 \exp(-0.2 v_p)$$

These approximations are valid for winds over 4 m/s and $t \leq 10$ minutes. The solutions to the above for 10-minute peak winds measured at 18.3m can be approximated by the "Gust Factor" graph in Figure 3.

Scatter diagrams of gust factors for various data buoys are shown in Figure 4. Unlike Figure 3, the wind speed values are 8.5-minute averages in knots. These diagrams were derived from buoy data from January and July 1981 and 1982 for representative locations. The gust factor G was computed from:

G = (peak 4- or 8-second gust) ÷ average speed for 8.5 minutes.

The 4- or 8-second interval is noted on each graph and was measured during the 8.5-minute sampling time. The 4- or 8-second gusts are used because it is impossible to measure an actual "instantaneous" gust. The number of data points for each graph is also indicated by the value of N. Note that the gust factors for high wind speeds tend to stabilize at values between 1.2 and 1.4.

The highest winds along the East and Gulf Coast areas occur during hurricanes. Because of their rarity, hurricane data are represented only spottily in the wind summaries. However, virtually all East and Gulf Coast locations are vulnerable to hurricanes. Gust factors can reach 1.5 around certain types of structures in hurricanes, with averages of 1.3 at the surface and 1.1 to 1.2 aloft (Simpson and Riehl, 1981). Gusts can reach 150 knots, and speeds can rise and fall dramatically with the passage of the eye of the storm. A gust record from Gregory, Texas, during the passage of Hurricane Celia in August 1970 showed gusts to 120 knots followed by a lull of 7 knots in the eye in less than 30 minutes. Within another half hour, gusts were up to 116 knots (Simpson and Riehl, 1981).

Further details on wind data may be obtained from the World Meteorological Organization (1981) and Frost (1982).

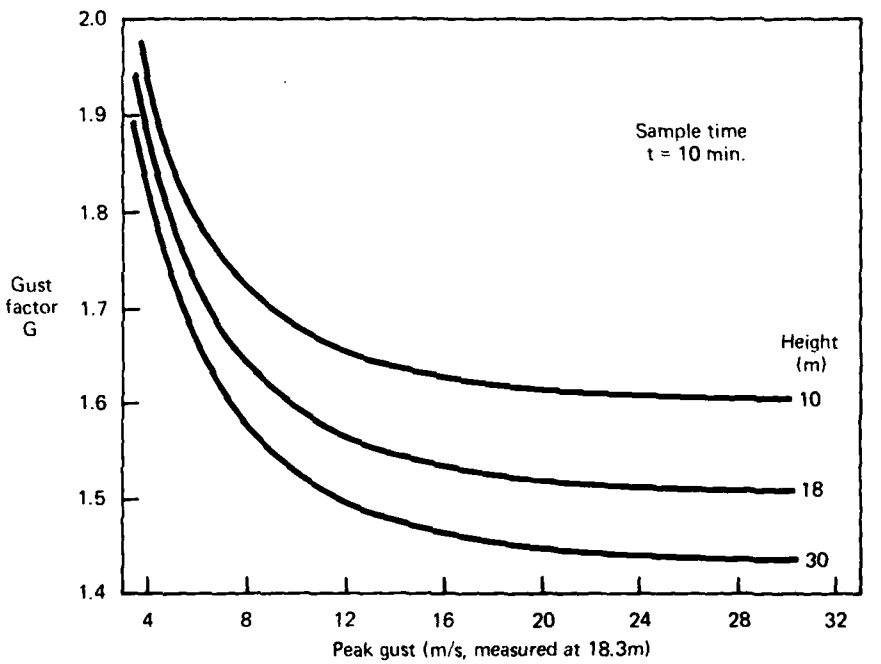


Figure 3. Gust factor as a function of peak wind during a 10-minute interval for various heights (after Kaufman, 1977). Graph developed for Cape Canaveral, Florida. Note that wind speeds are peak gust values expressed in meters per second.

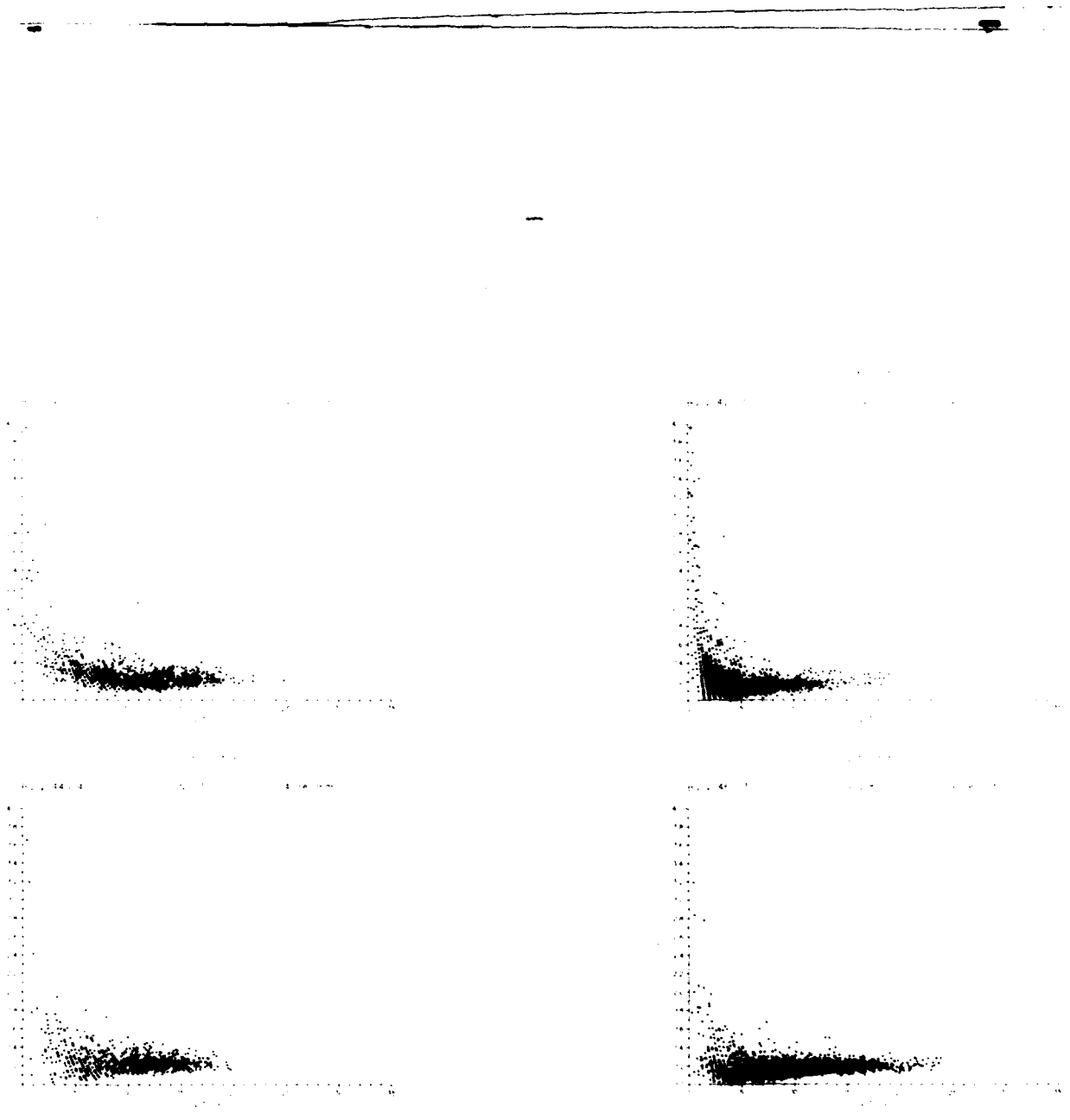


Figure 4. Gust factor graphs for selected NOAA data buoys. Based on January and July data from 1981 and 1982. Wind speeds are 8.5-minute averages in knots.

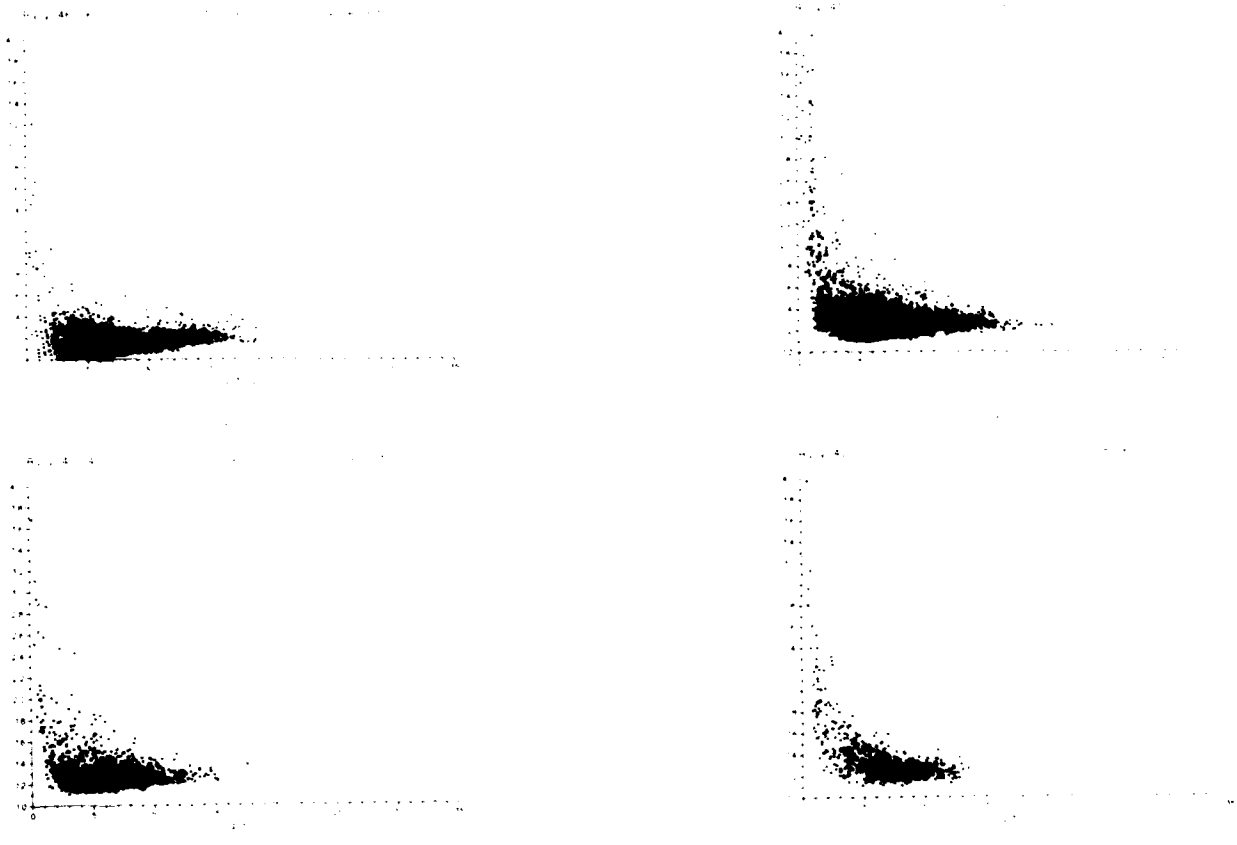


Figure 4 (continued).

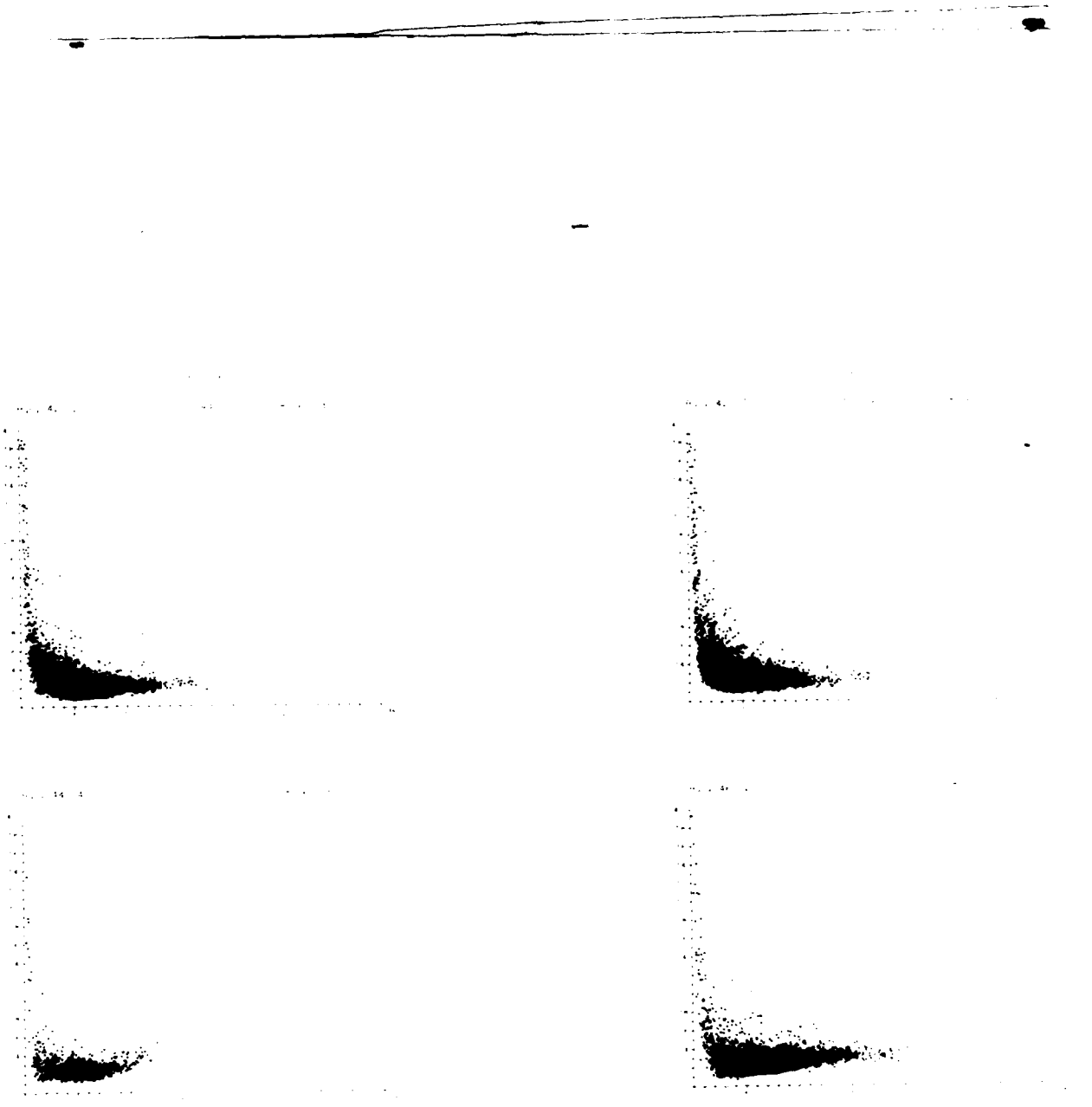
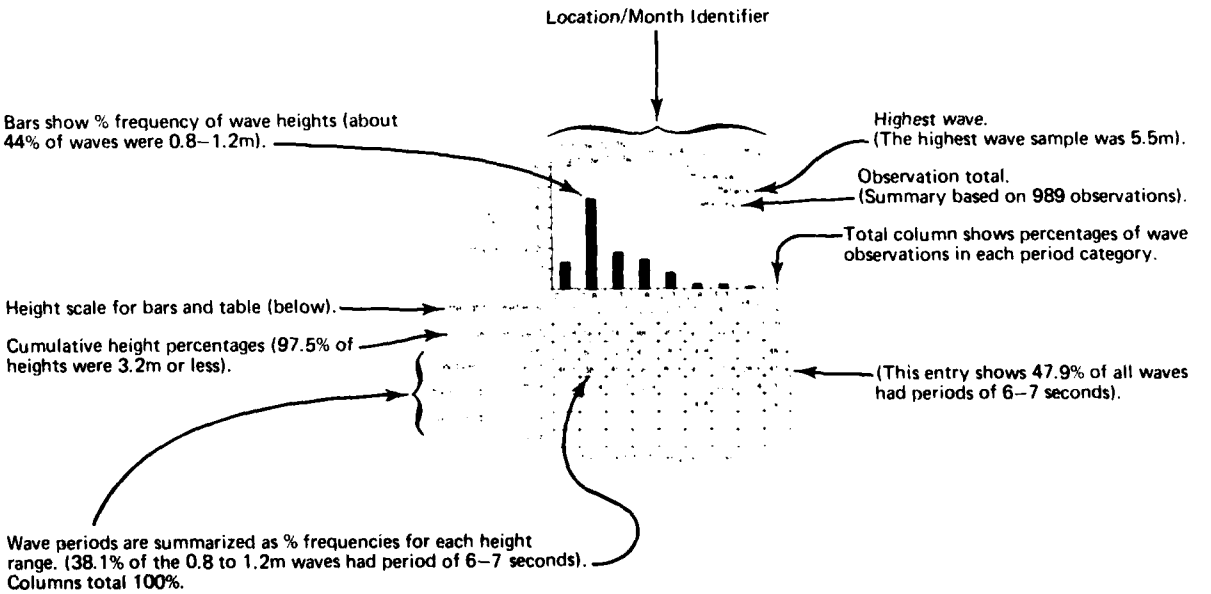


Figure 4 (continued).

C. Data Format Key and Explanations

The following legends explain how to read the individual data graphs.

WAVE HEIGHT/PERIOD (SECTIONS III-A and IV-A)



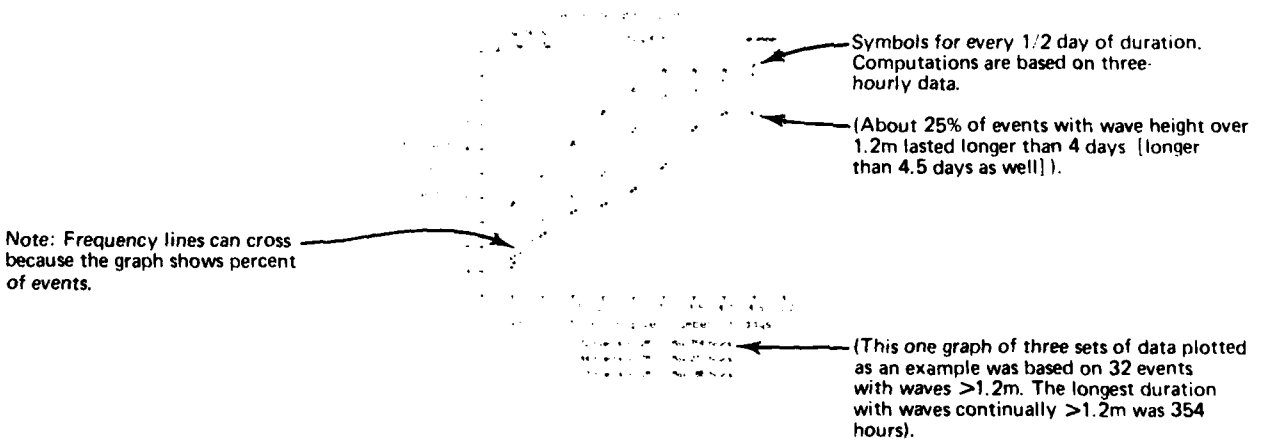
* When shown means data less than 0.05% (i.e., rounds to less than 0.1%). Totals may not add to exactly 100% because of rounding.

WAVE HEIGHT PERSISTENCE (SECTIONS III-B and IV-B)

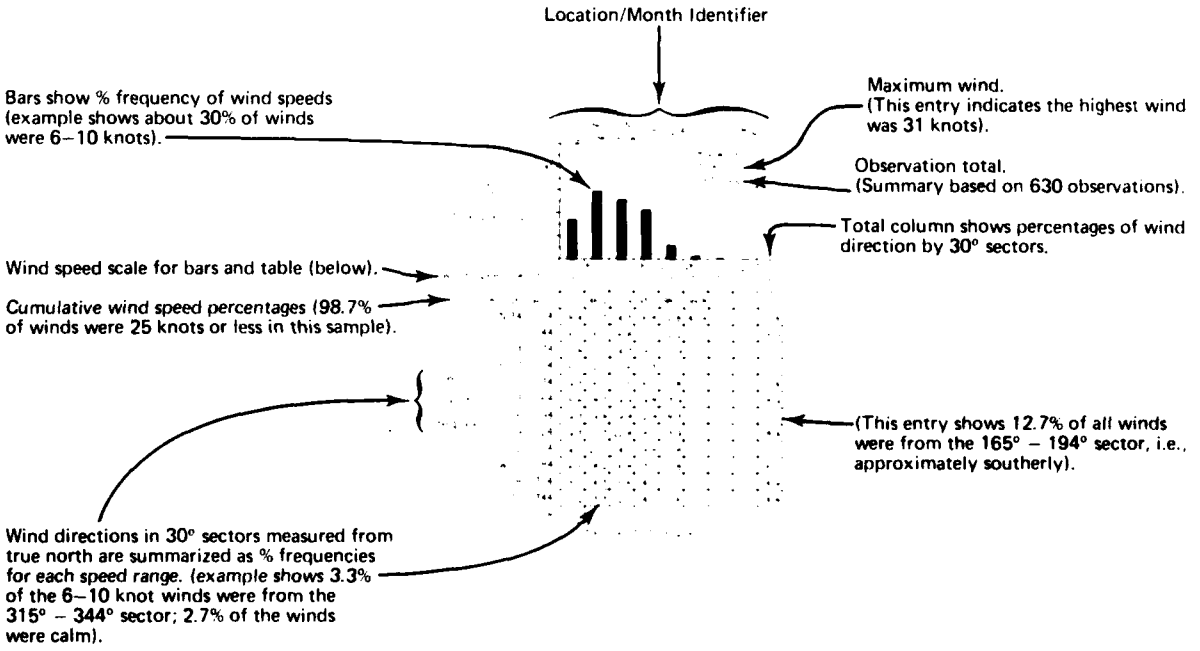
AND WIND SPEED PERSISTENCE (SECTION III-D)

Both data sets use the same format.

The plots show percentages of events with a duration above a given threshold. Note the ordinate is inverted with 100% at the bottom. An event begins with the wave height (or wind speed) rising above the threshold and ends when the value dips to the threshold. A duration is counted as a single event, regardless of its length. Three sets of thresholds are plotted on this example. To get frequency of occurrence, refer to the other data summaries.

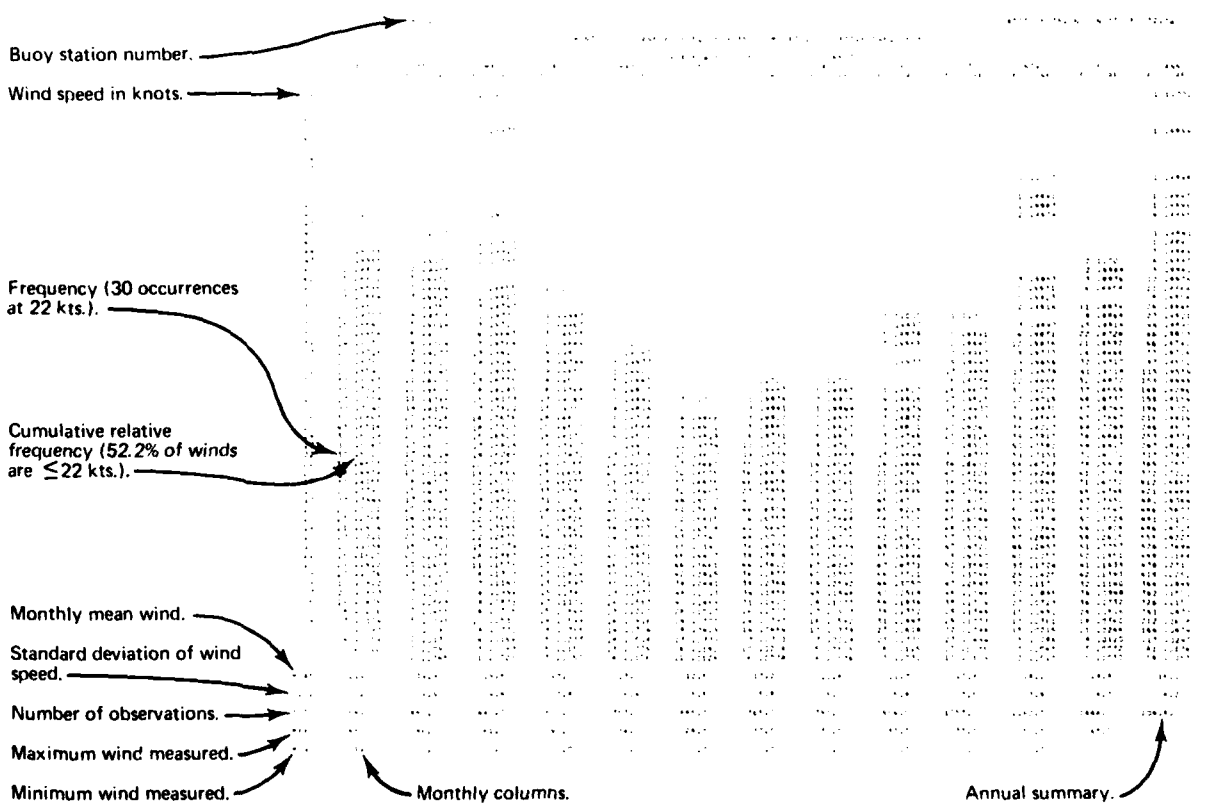


WIND SPEED/DIRECTION (SECTION III-C)



* When shown means data less than 0.05% (i.e., rounds to less than 0.1%). Totals may not add to exactly 100% because of rounding.

WIND SPEED DATA ARRAY (SECTION III-E)



D. References

Dobson, F.W.: "Review of Reference Height and Averaging Time for Surface Wind Measurements at Sea." World Meteorological Organization Marine Meteorology and Related Oceanographic Activities Report No. 3, Geneva, Switzerland, June 1981.

Frost, W. and R.E. Turner: "A Discrete Gust Model for Use in the Design of Wind Energy Conversion Systems," Journal of Applied Meteorology, Vol. 21, p. 770, 1982.

Garstang, Michael, Carl I. Aspliden, Soronadi Nnaji, and Roger A. Pielke: "Coastal Zone Wind Energy, Part I, Synthesis and Results." University of Virginia, Department of Environmental Sciences, Charlottesville, Virginia 22903, January 1978.

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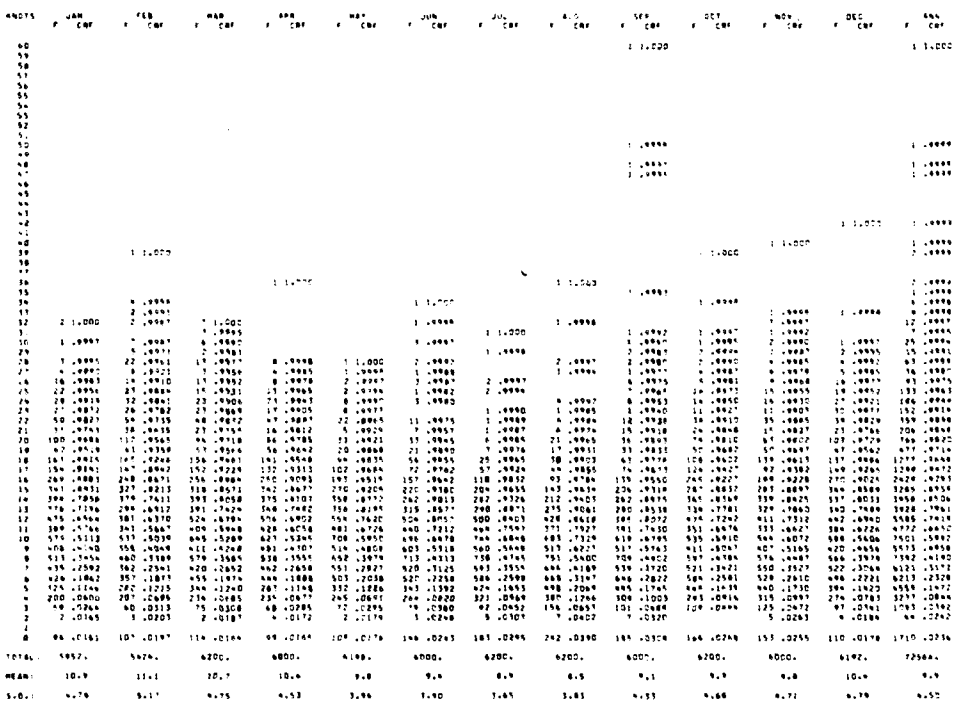
II. Wind Speed Frequency Analysis for Wind Power Applications

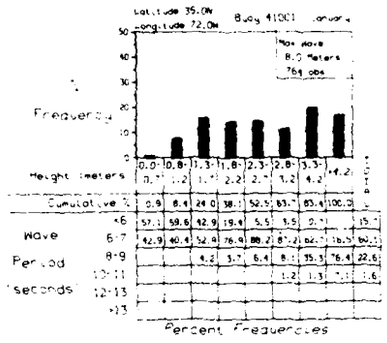
Buoy data can be considered as being representative of open oceanic or extremely exposed coastal locations. Wind data from the Cape Hatteras Weather Service Office for the period 1957-1981 are presented in the following table to represent a somewhat more sheltered coastal location. The wind instrument is nearly one mile inland, separated from the ocean by low dunes and scrub pine. The instrument elevation is about 10m above ground. The format of Table I shows frequencies and cumulative relative frequencies for one-knot intervals. The total number of data points, means, and standard deviations are also shown. The same format is used for the buoy wind speed data arrays (see section I-C).

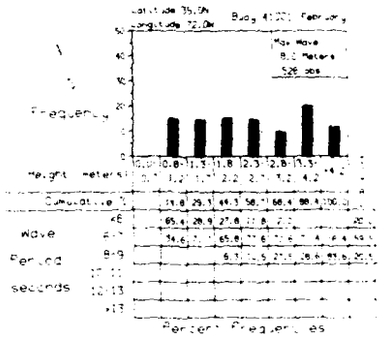
Further details regarding coastal zone wind energy can be obtained from the reports by Garstang, et al., listed in the references.

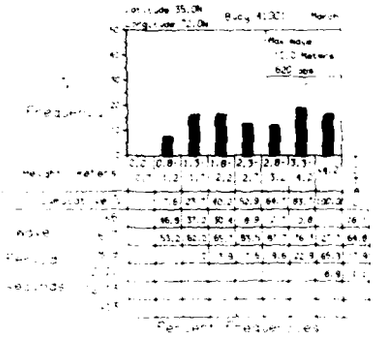
TABLE I

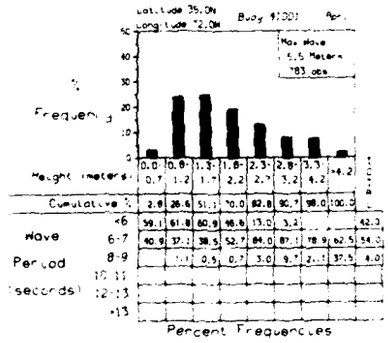
Wind speed Cape Hatteras, North Carolina, 1957-1981.

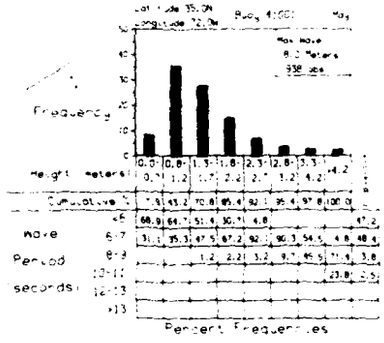


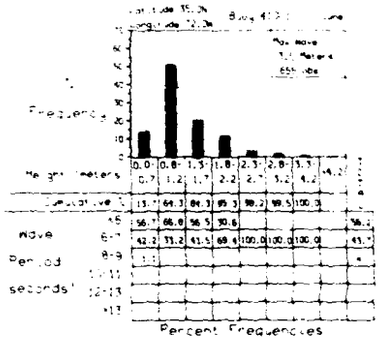

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

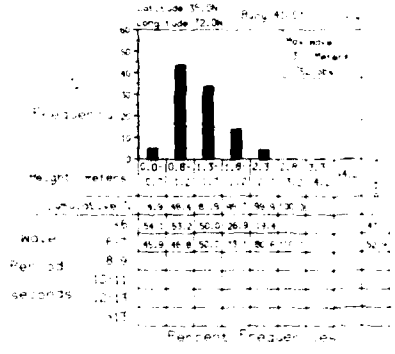

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

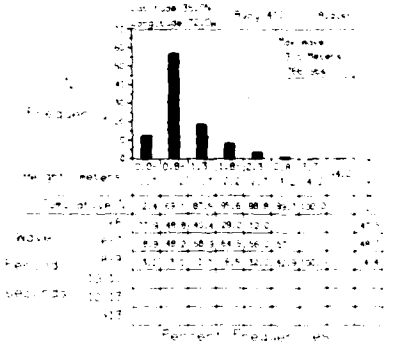

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

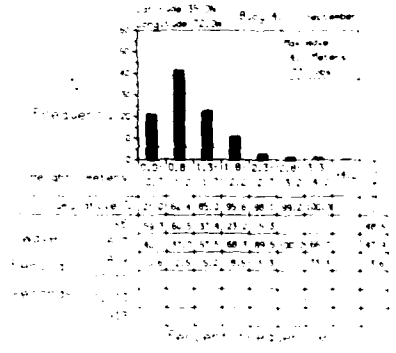

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

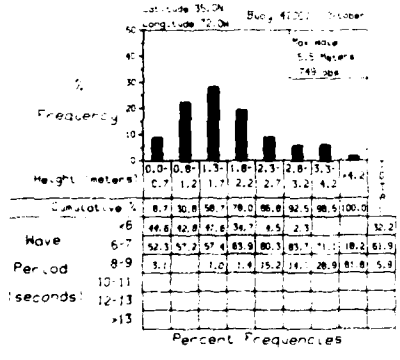

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

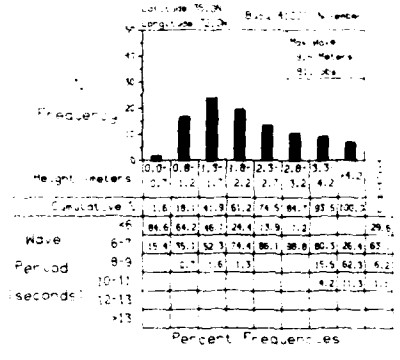

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

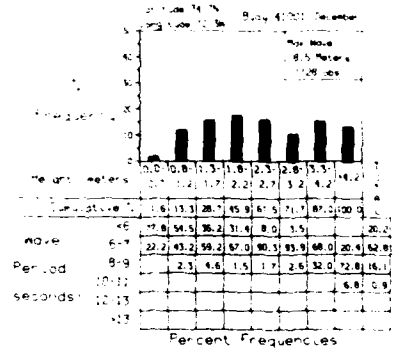


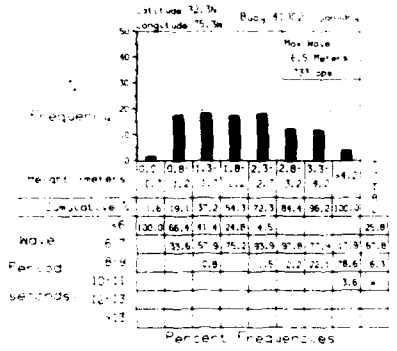


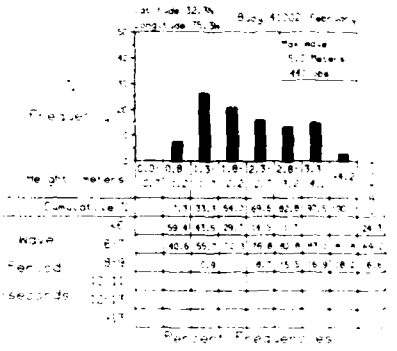


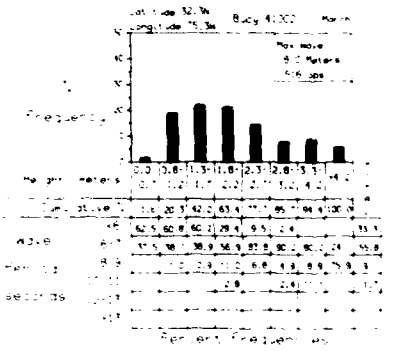

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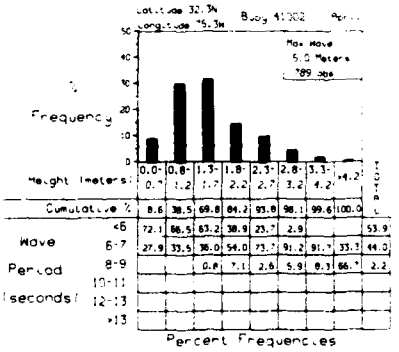

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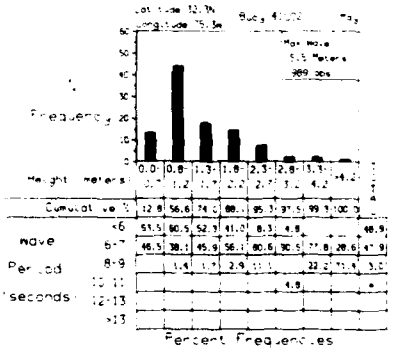

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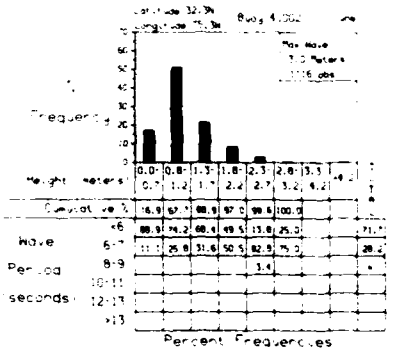


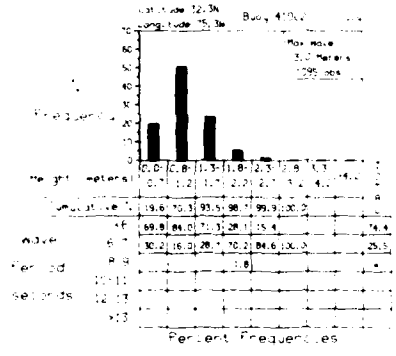


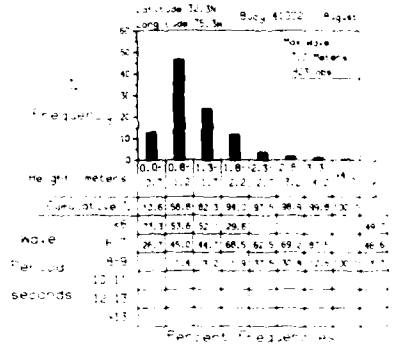


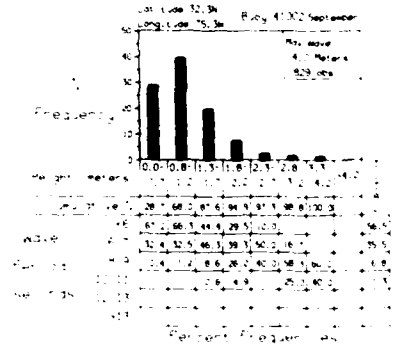


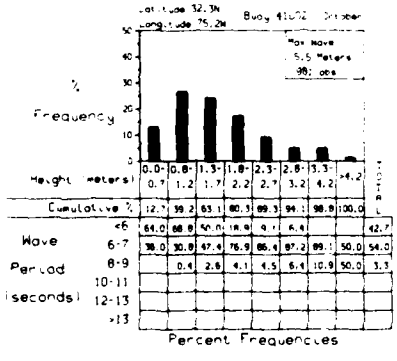


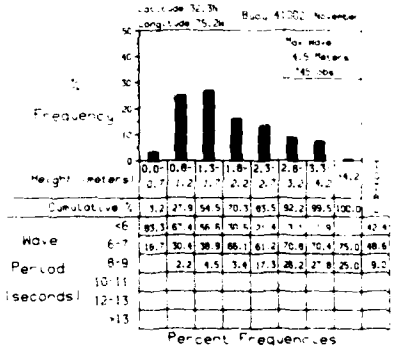


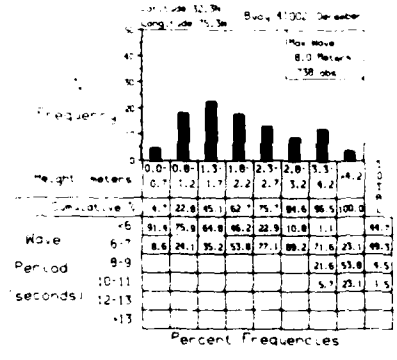


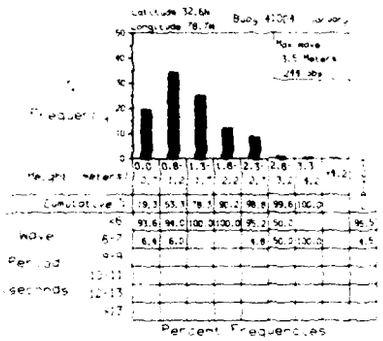


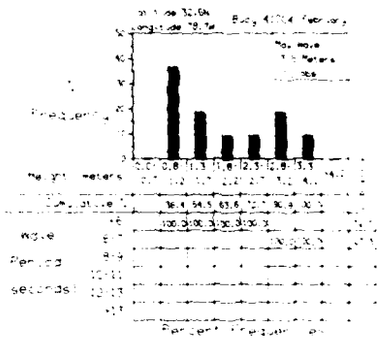








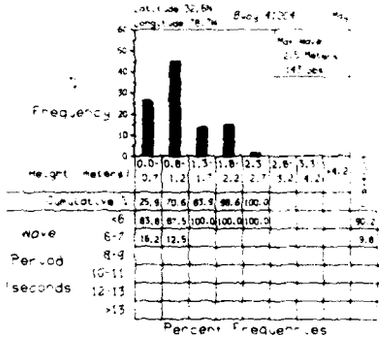


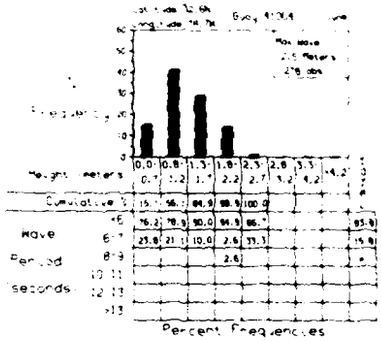


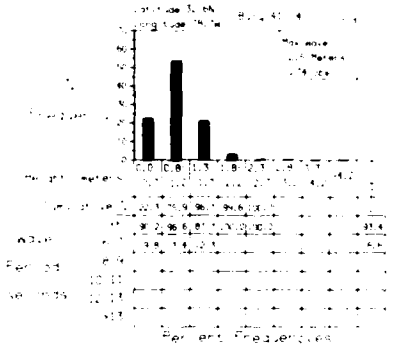
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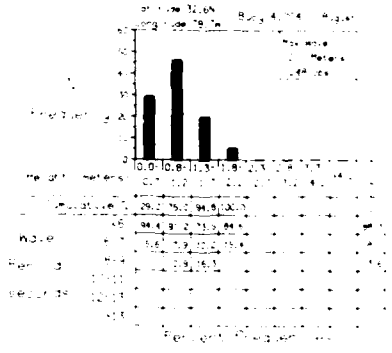
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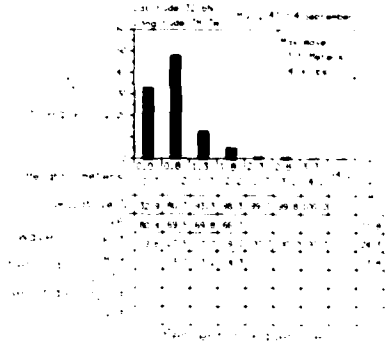
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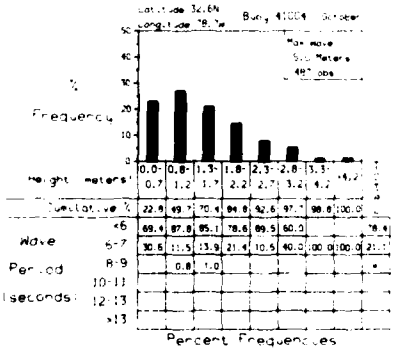


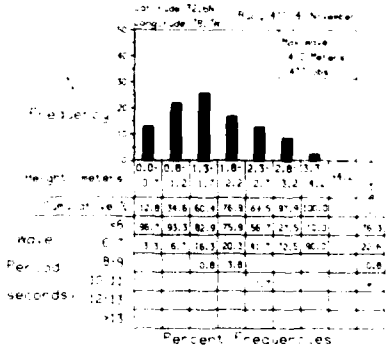


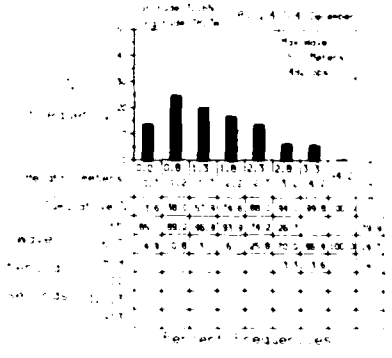


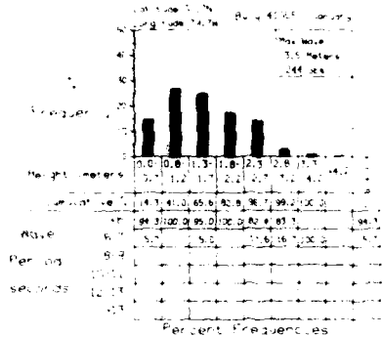


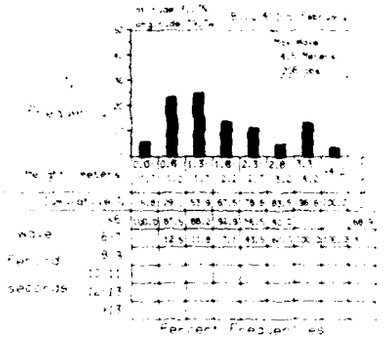


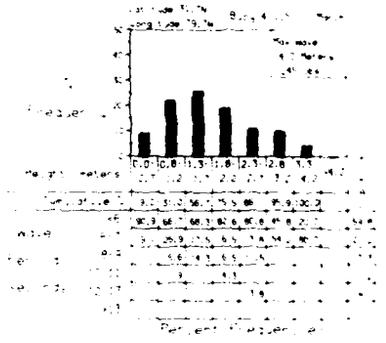

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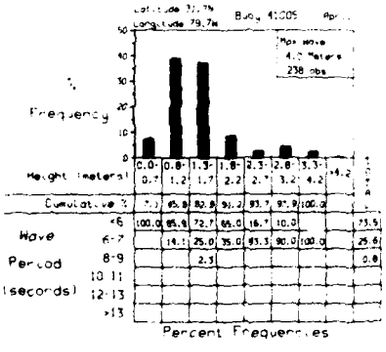

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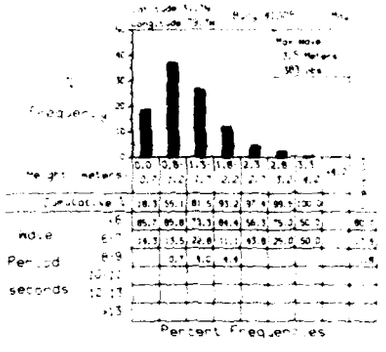


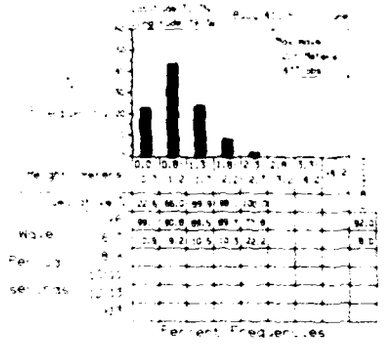


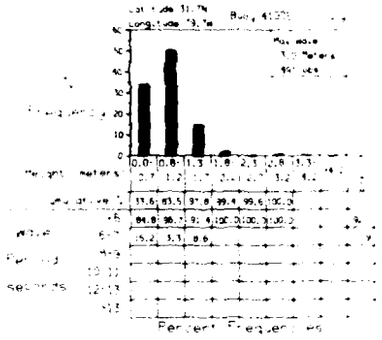


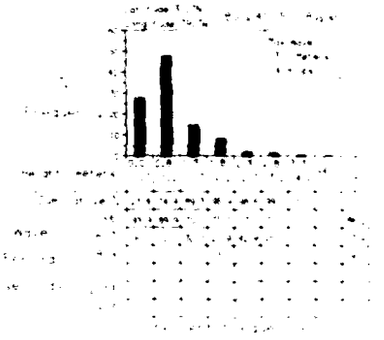


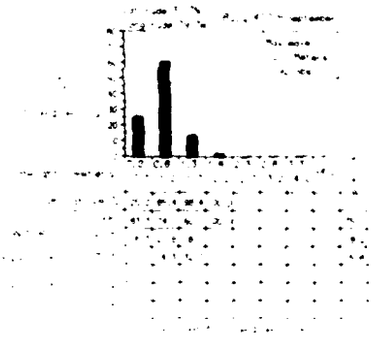

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies


Frequency
Height meters
Cumulative %
Wave Period seconds
Percent Frequencies

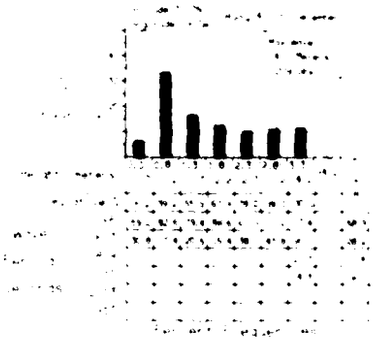

Frequency
Height meters
Cumulative %
Wave Period seconds
Percent Frequencies

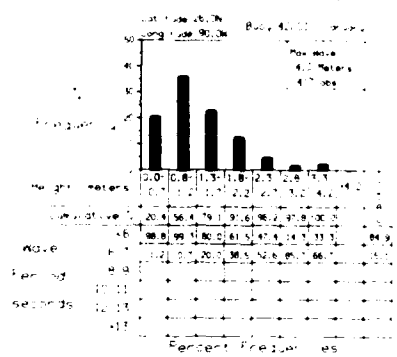


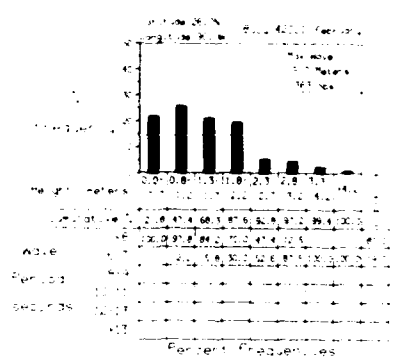


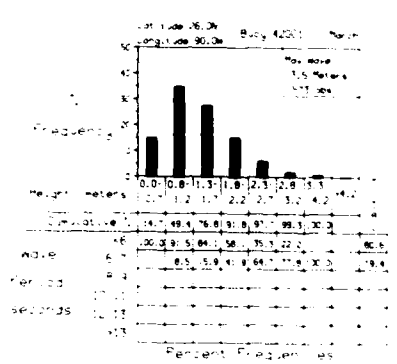


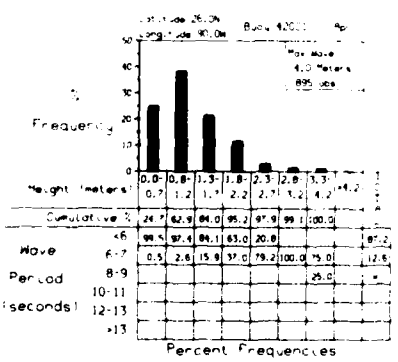
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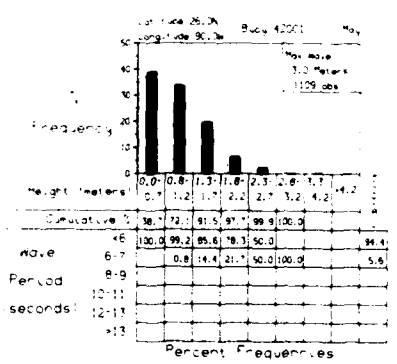


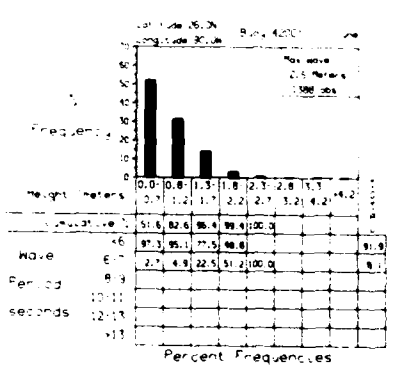


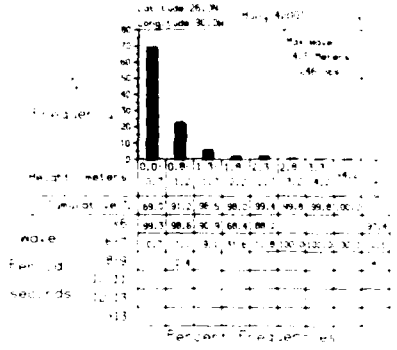


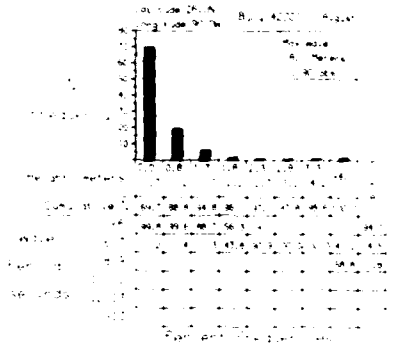


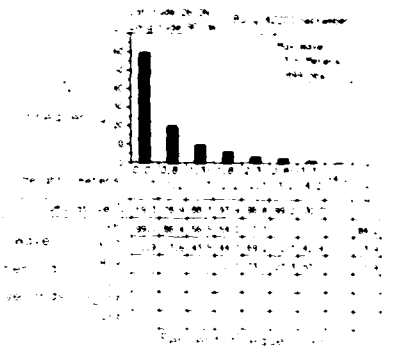


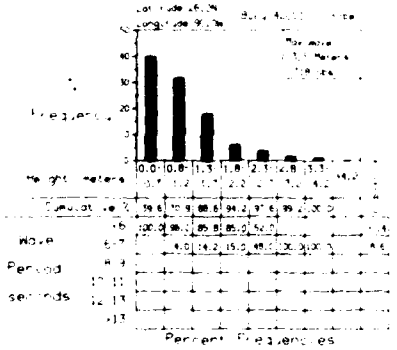


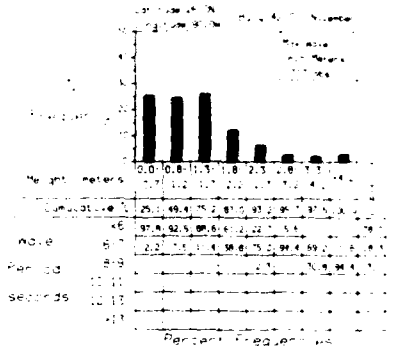


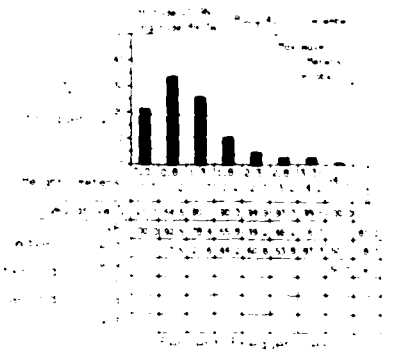


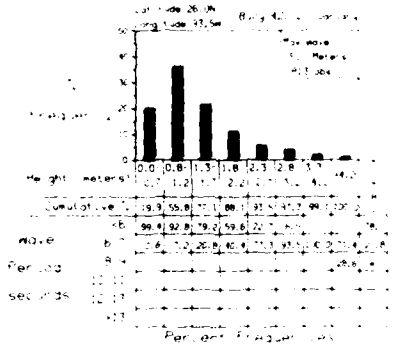


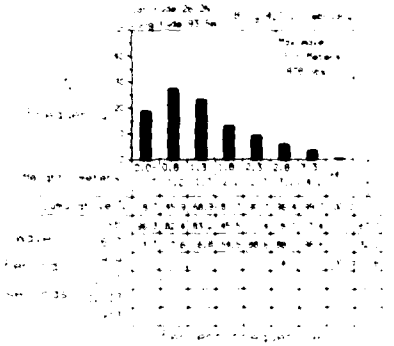


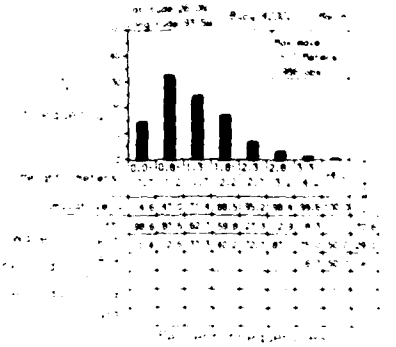


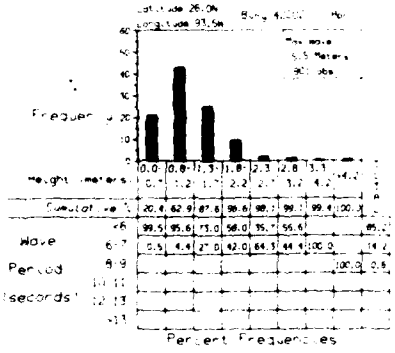


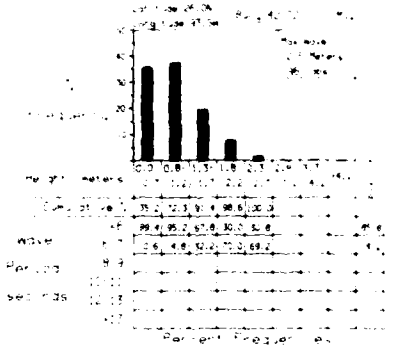


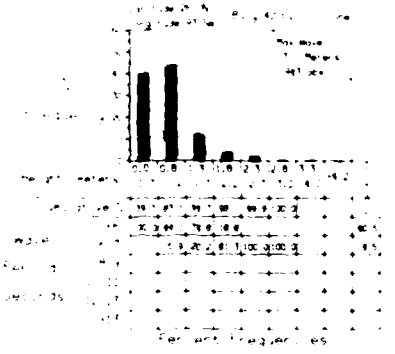


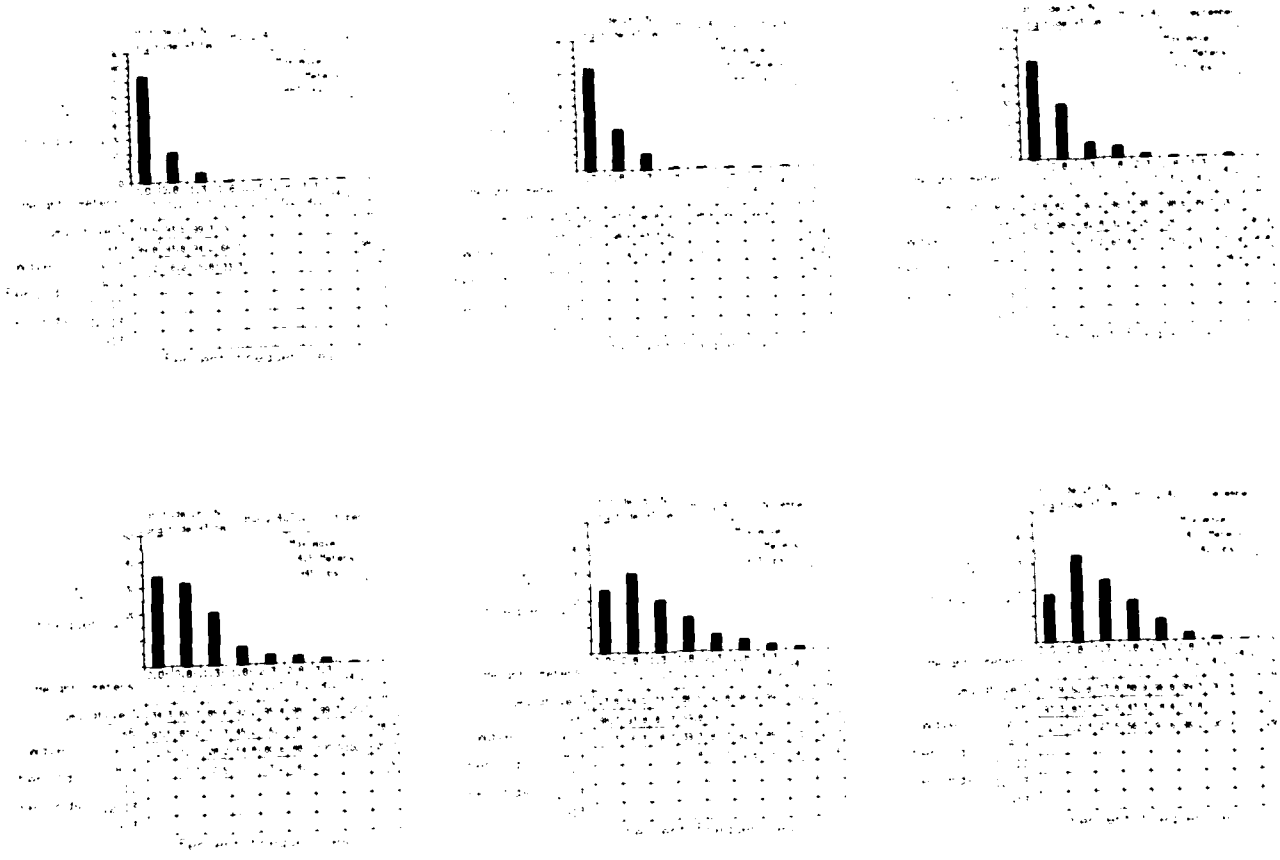


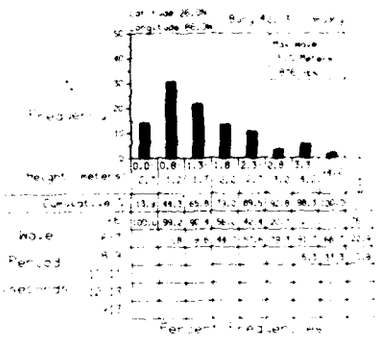


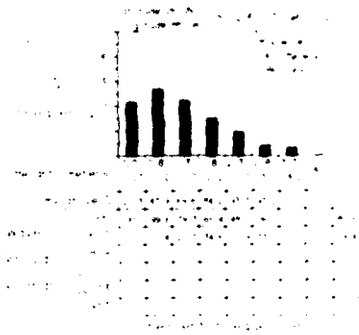


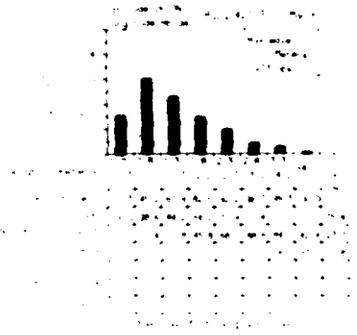


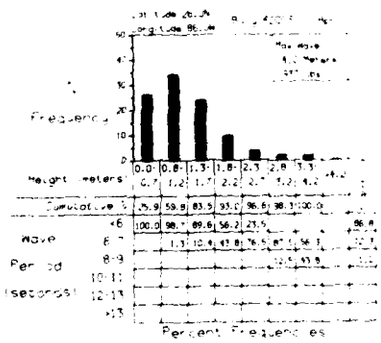


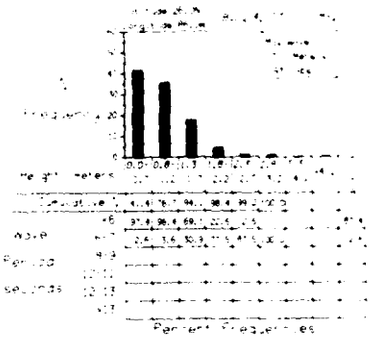


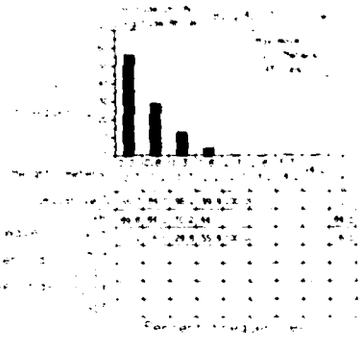


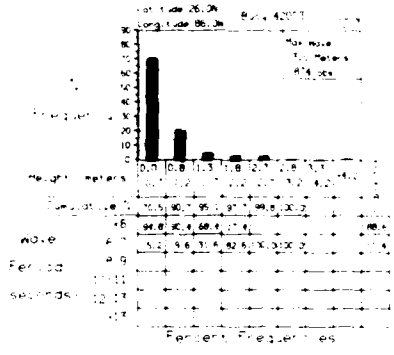


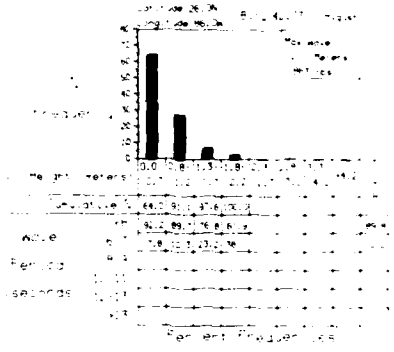


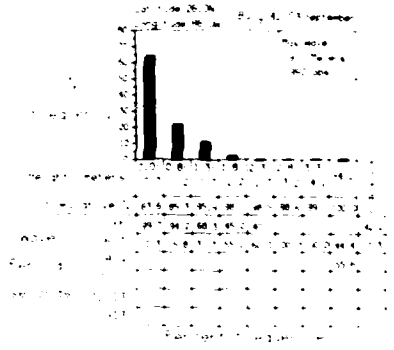


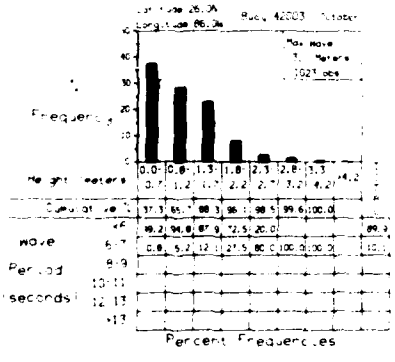


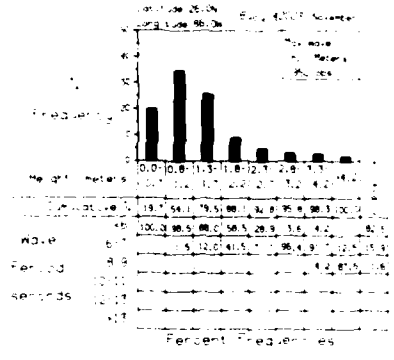


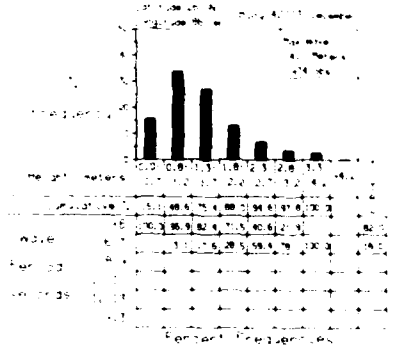

Frequency
Height meters
Wave
Period
seconds
Percent Frequencies

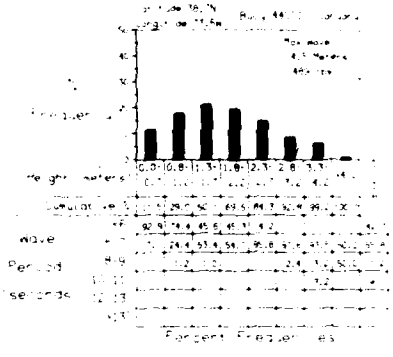

Frequency
Height meters
Wave
Period
seconds
Percent Frequencies

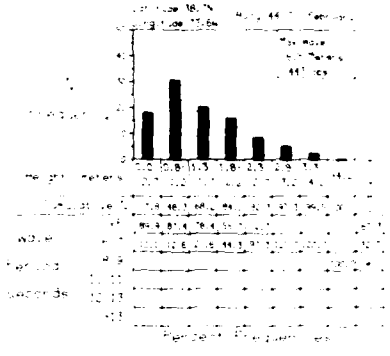

Wave
Period
seconds

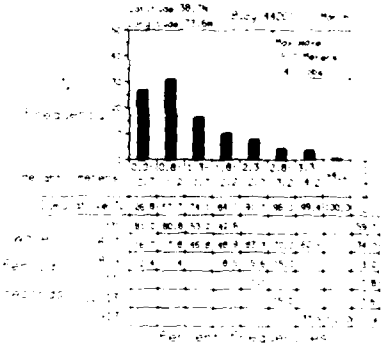

Frequency
Height meters
Wave
Period
seconds
Percent Frequencies

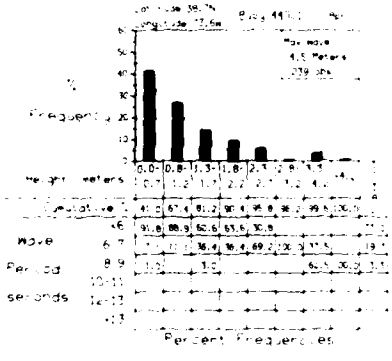

Frequency
Height meters
Wave
Period
seconds
Percent Frequencies

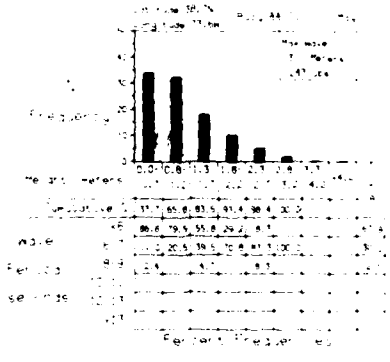

Wave
Period
seconds
Percent Frequencies

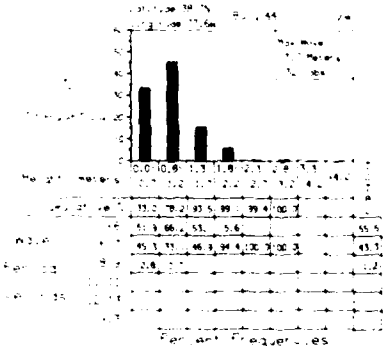


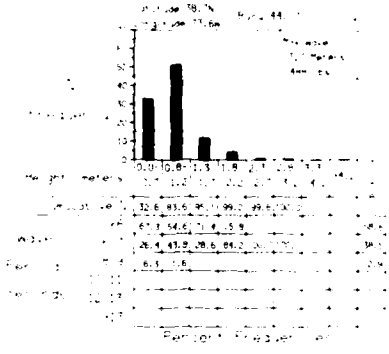


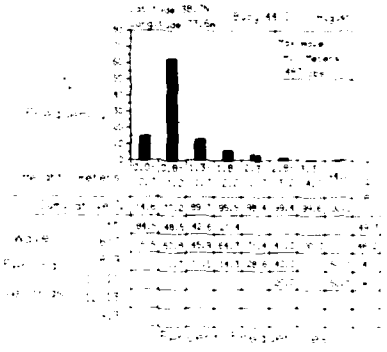


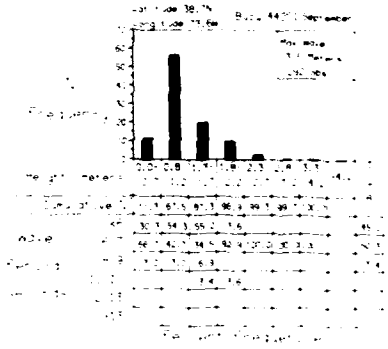


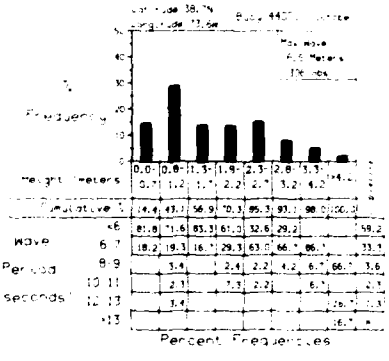


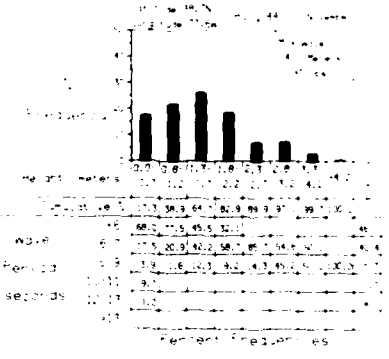


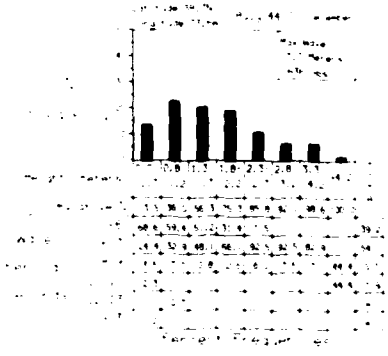







Frequency
Height Meters
Cumulative %
Wave
Period
Seconds
Percent Frequencies


Frequency
Height Meters
Cumulative %
Wave
Period
Seconds
Percent Frequencies



No Data Available for January

No Data Available for February

No Data Available for March

No Data Available for April

No Data Available for May

No Data Available for June

No Data Available for

July

No Data Available for

August

No Data Available for

September

No Data Available for

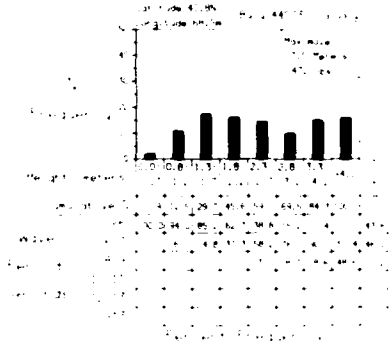
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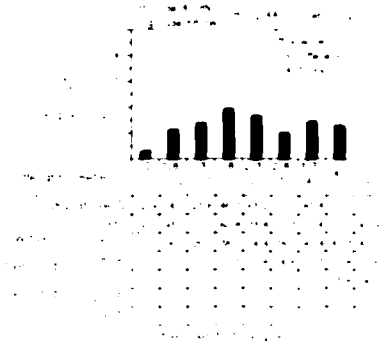
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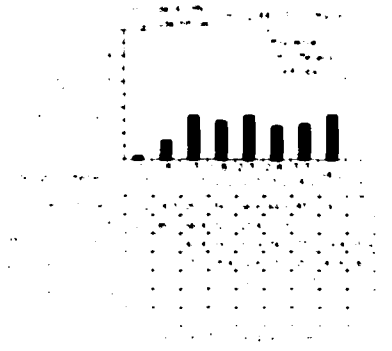
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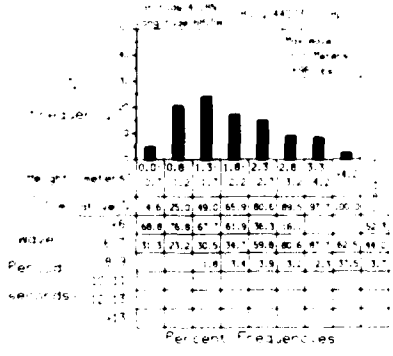
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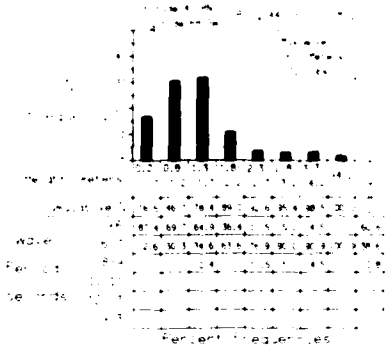
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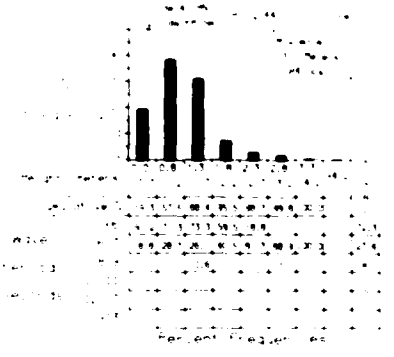


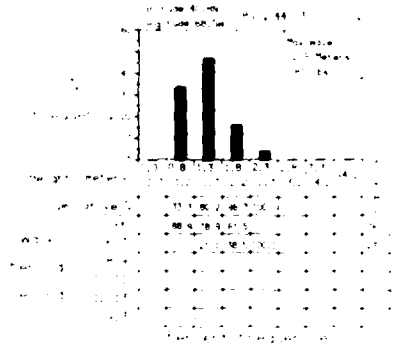


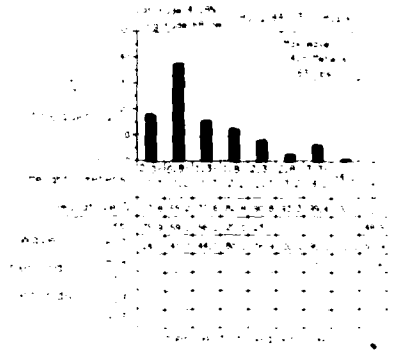


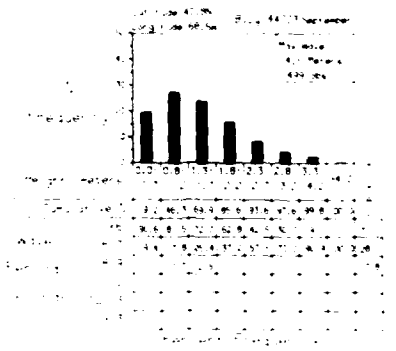

Percent Frequencies

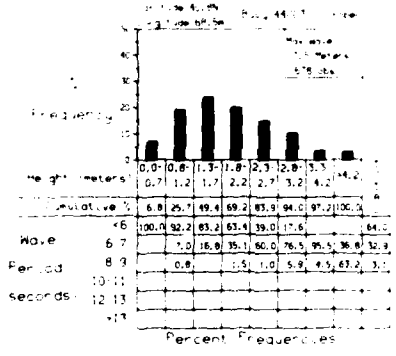

Percent Frequencies

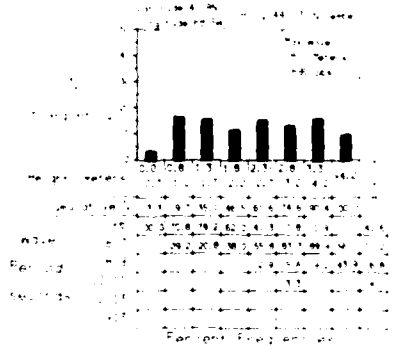

Percent Frequencies

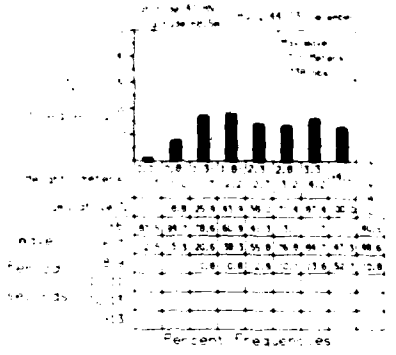


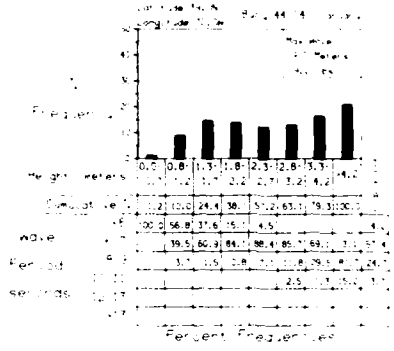


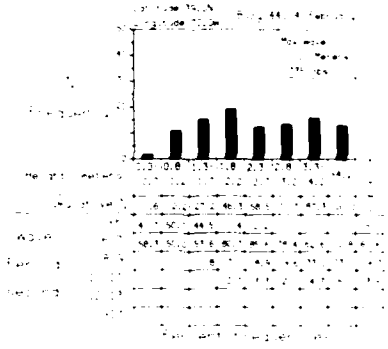


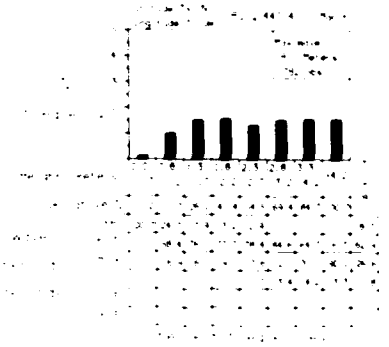

Frequency
Height meters
Cumulative %
Wave Period seconds
Percent Frequencies

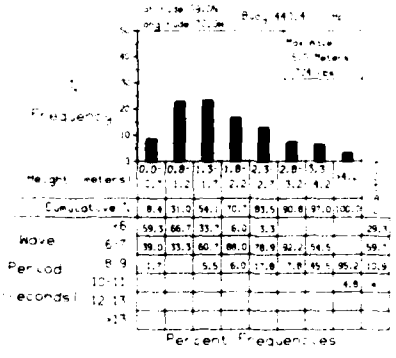


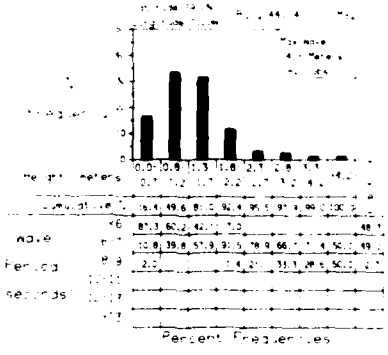

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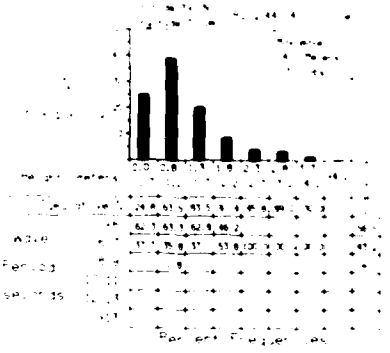


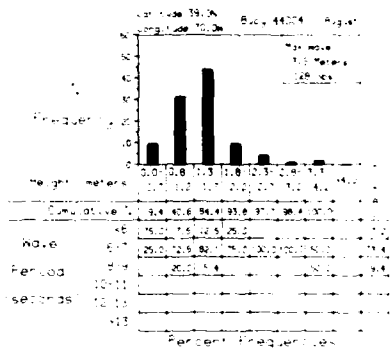


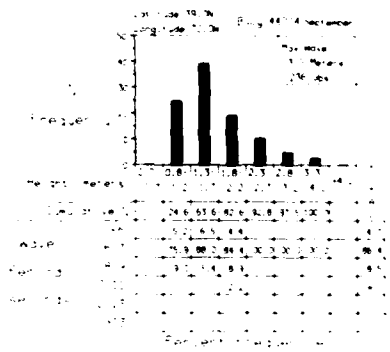


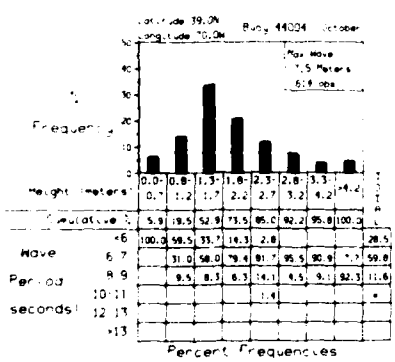


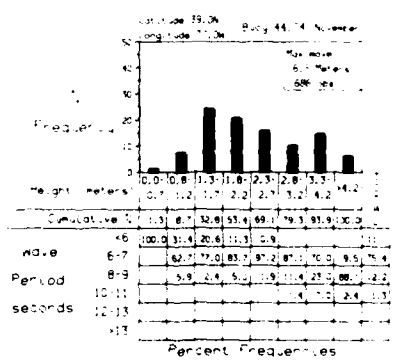


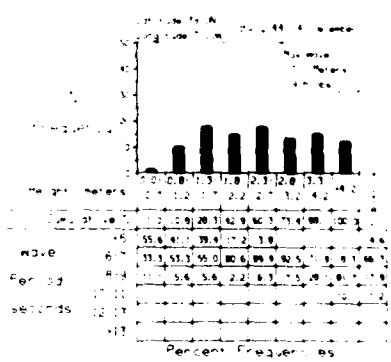


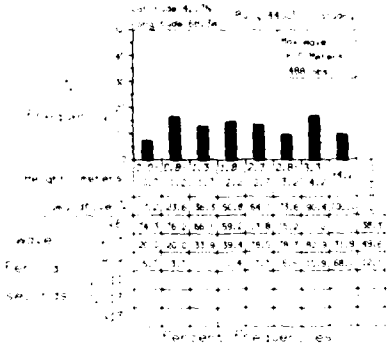


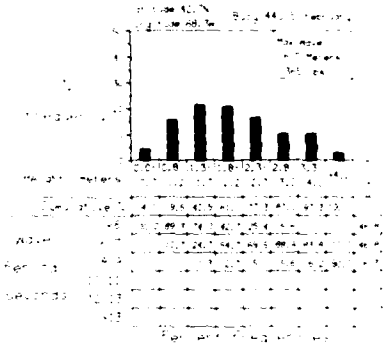


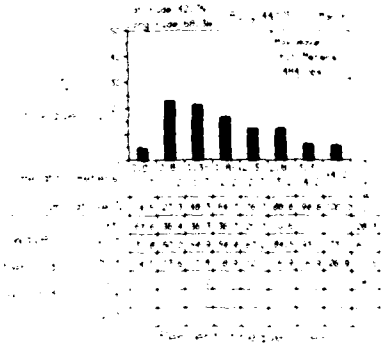


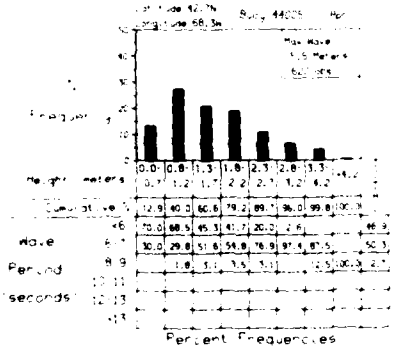


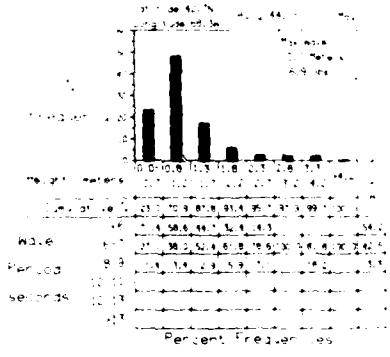


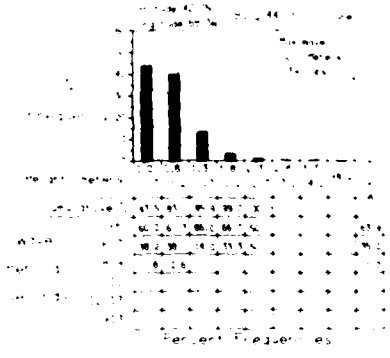


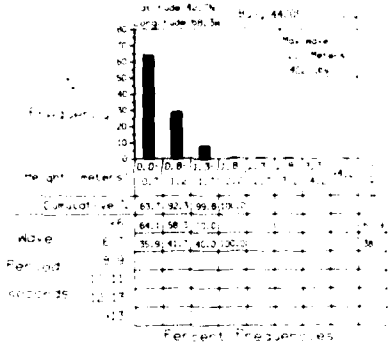


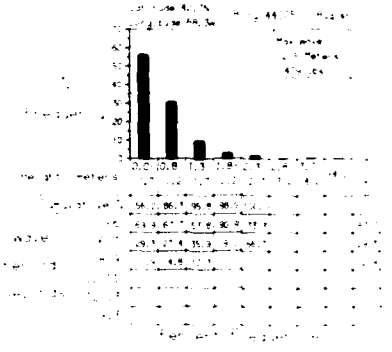


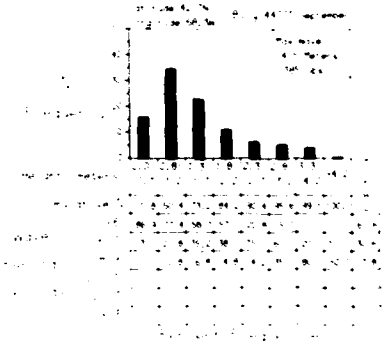

Wave
Period
seconds
Percent Frequencies

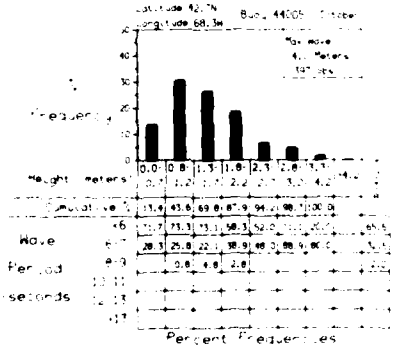

Wave
Period
seconds
Percent Frequencies

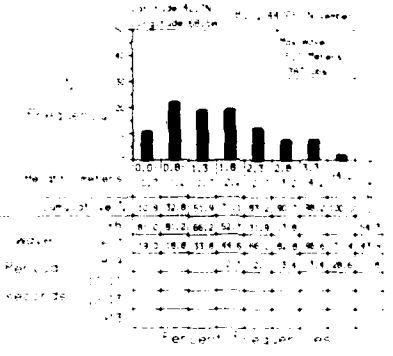

Percent Frequencies

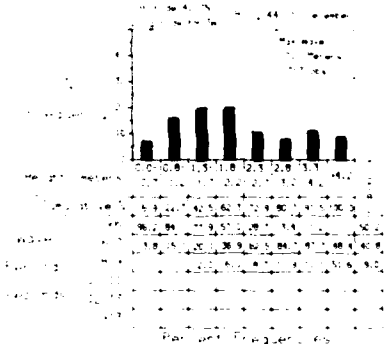


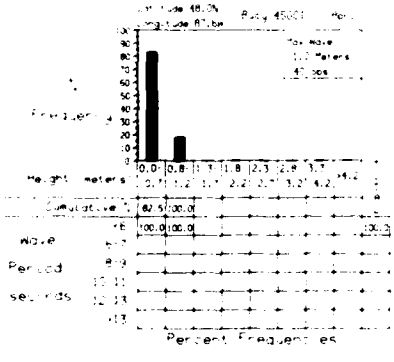


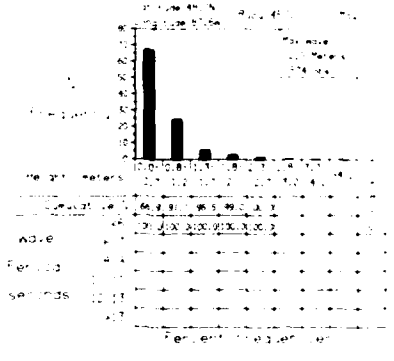


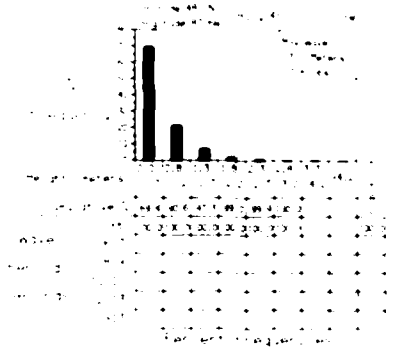


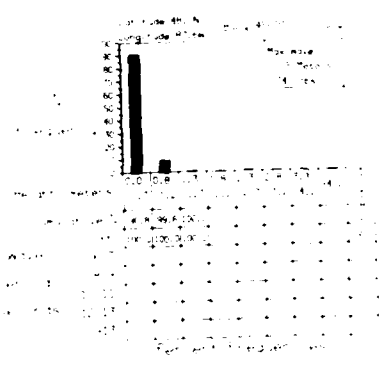


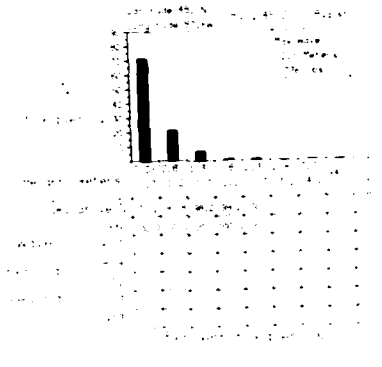


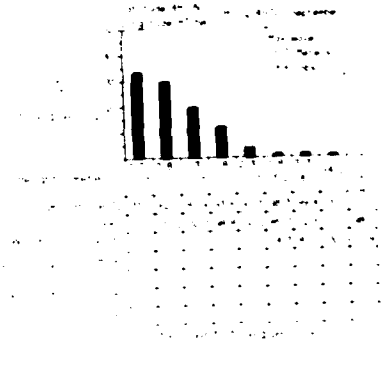

Wave
Period
seconds
Percent Frequencies

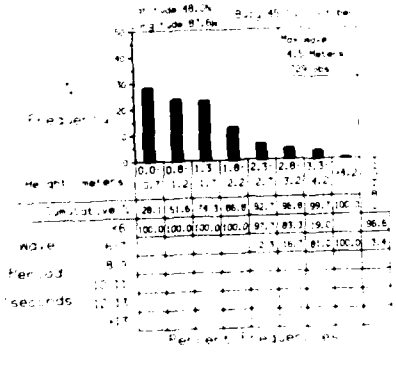

Wave
Period
seconds

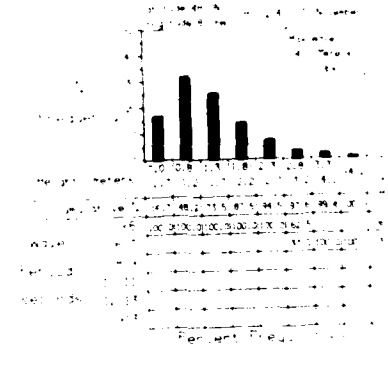

Wave
Period
seconds

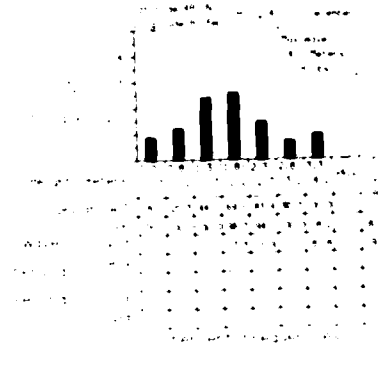


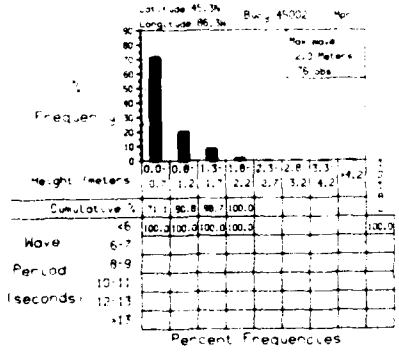


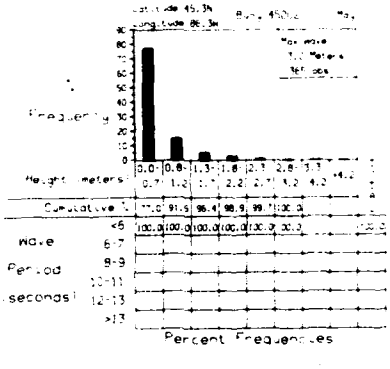


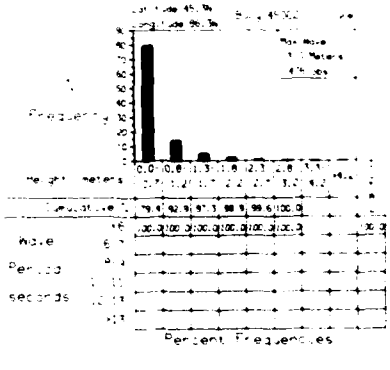


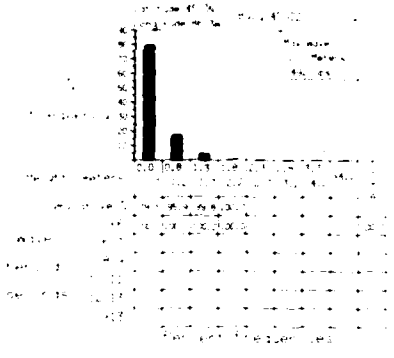


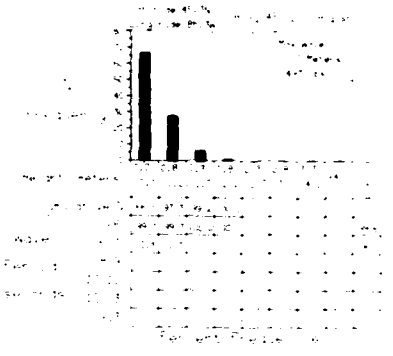


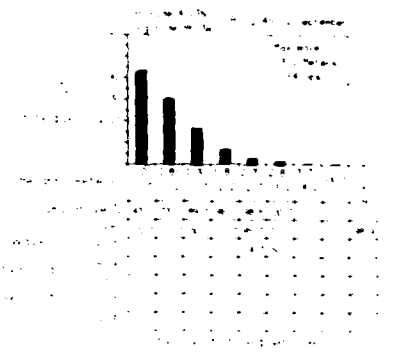

Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
71.1
90.8
98.7
100.0
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

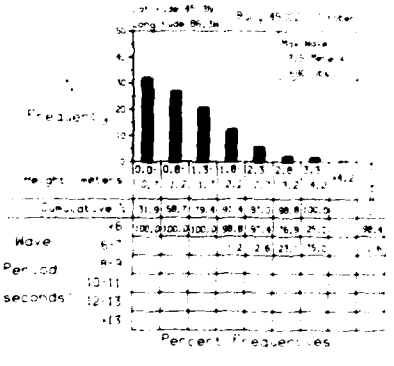

Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
77.0
91.5
98.4
99.9
100.0
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

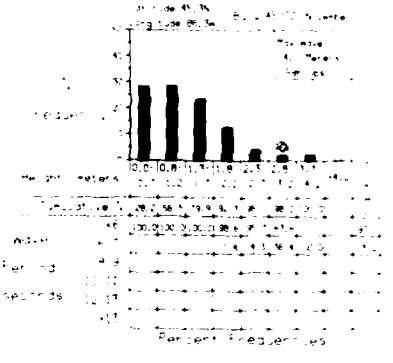

Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

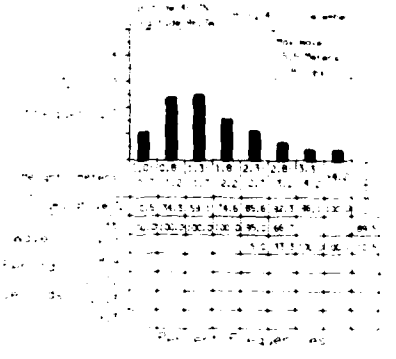


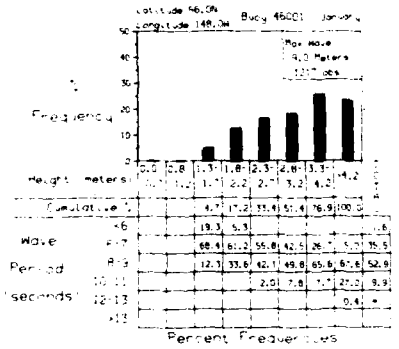


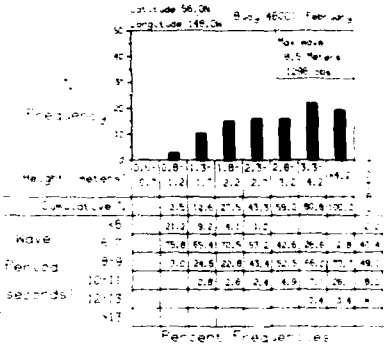


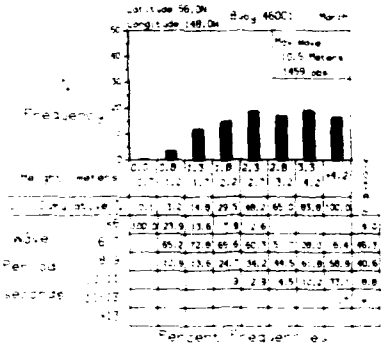

Frequency
Height meters
Wave Period (seconds)
Percent Frequencies

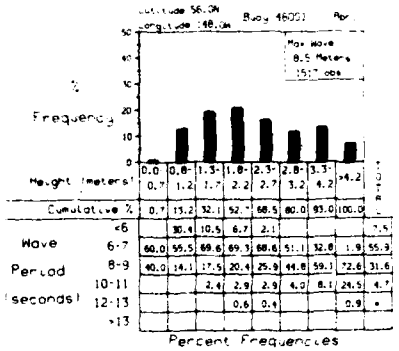

Percent Frequencies

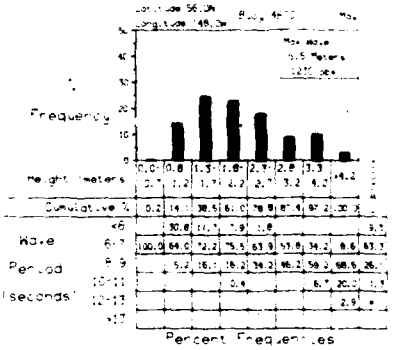


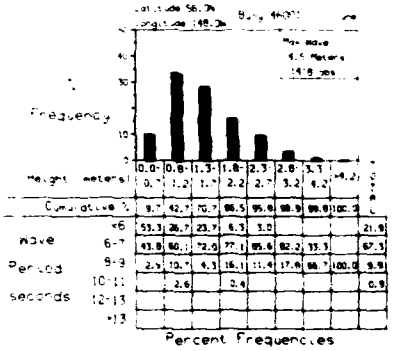

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

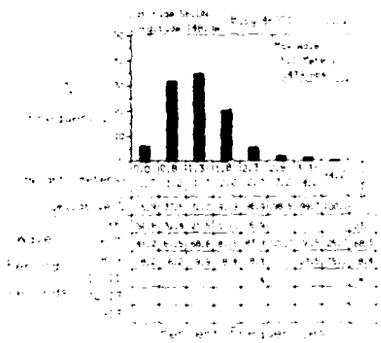

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

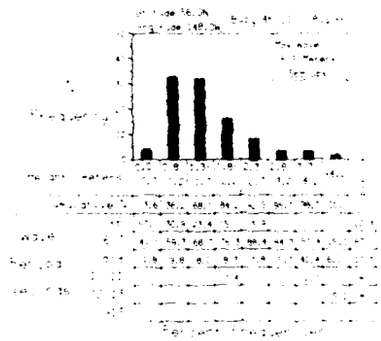

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

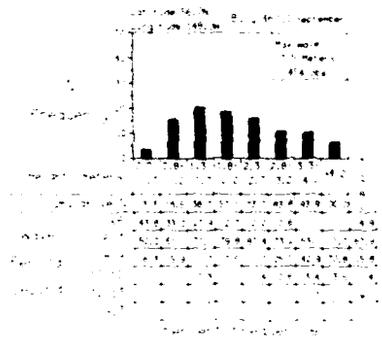

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

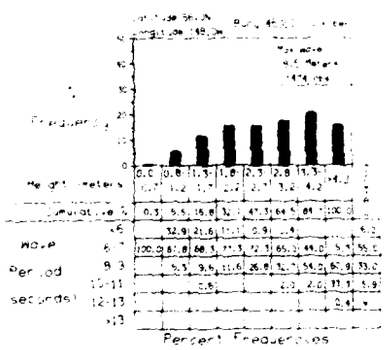

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

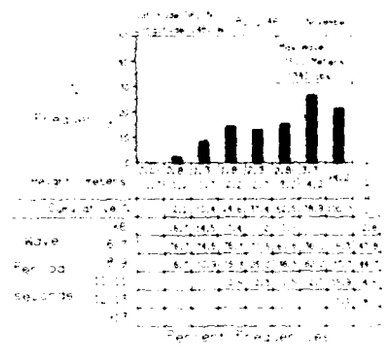

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

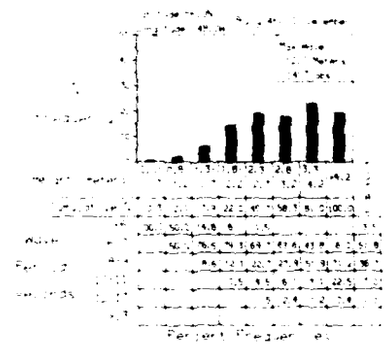


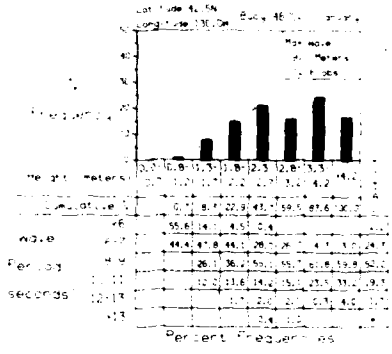


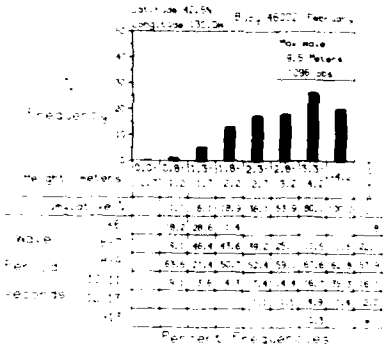


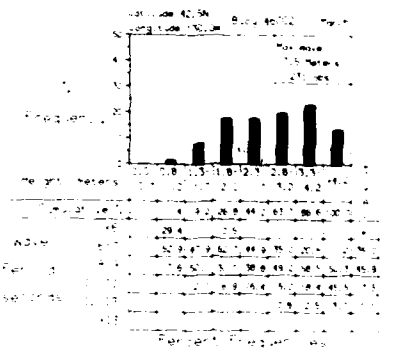

Wave
Period
seconds)
Percent Frequencies

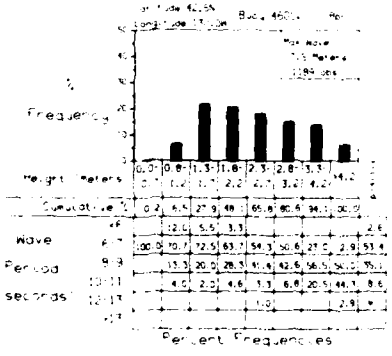


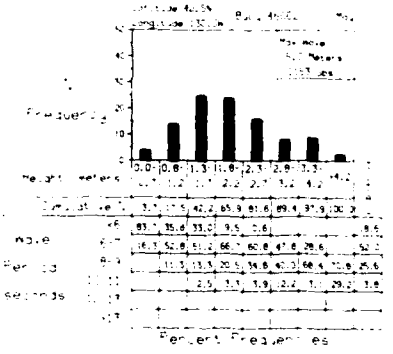


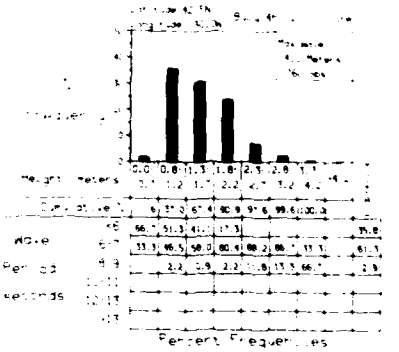

Frequency
Wave
Period
seconds
Percent Frequencies

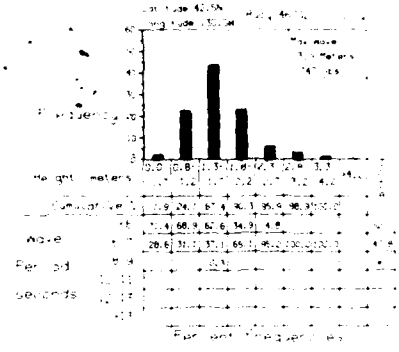

Frequency
Wave
Period
seconds
Percent Frequencies

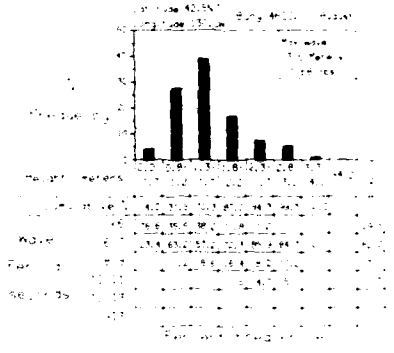

Frequency
Wave
Period
seconds
Percent Frequencies

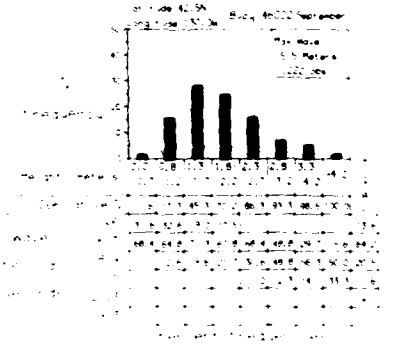

Frequency
Wave
Period
seconds
Percent Frequencies

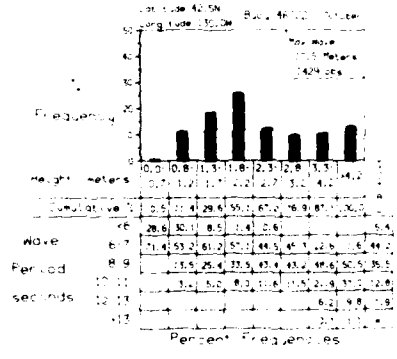

Frequency
Wave
Period
seconds
Percent Frequencies

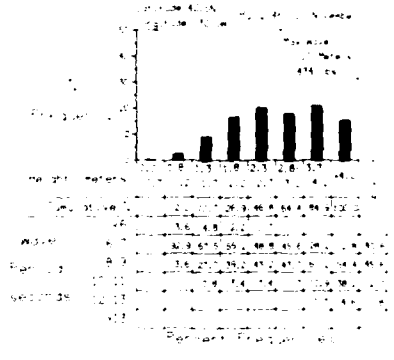

Frequency
Wave
Period
seconds
Percent Frequencies

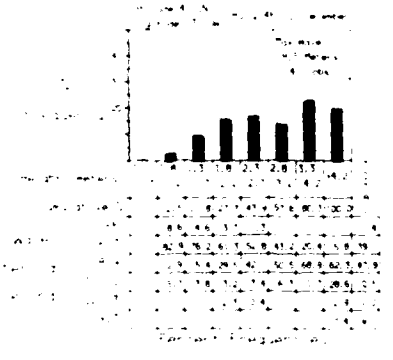


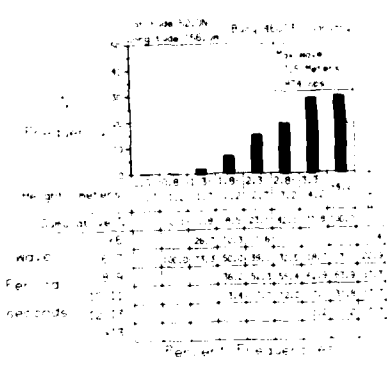


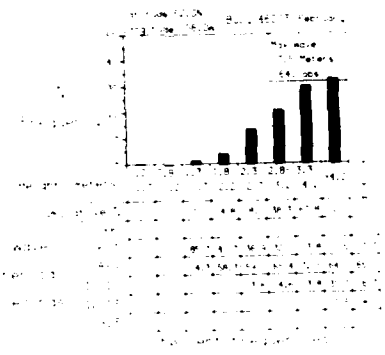


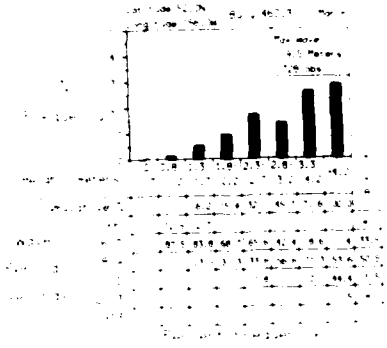


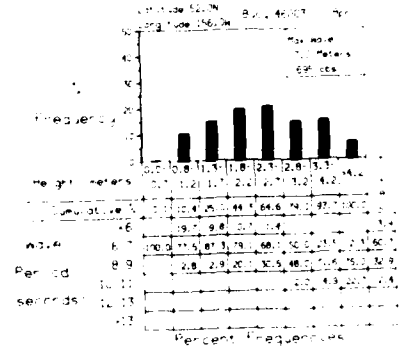


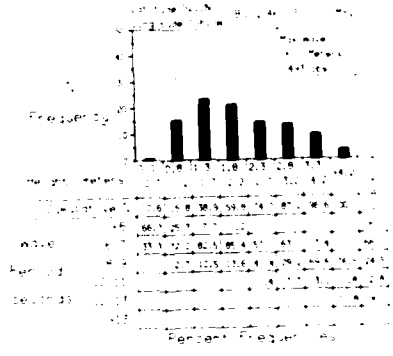


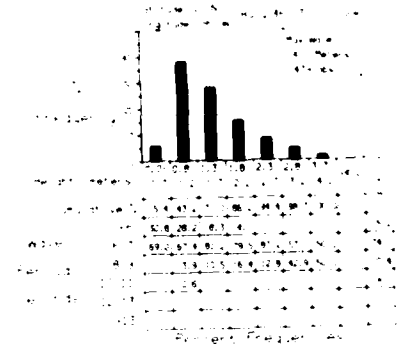


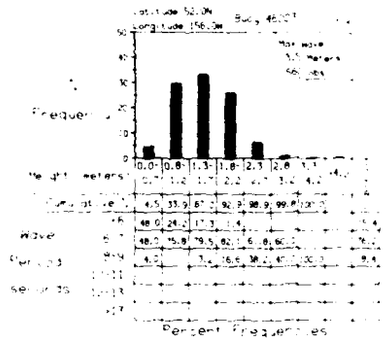


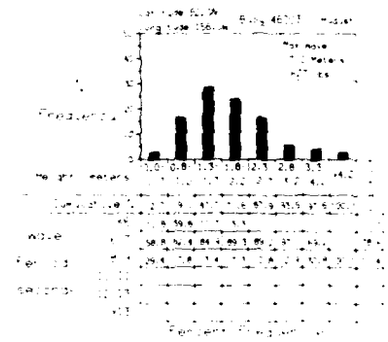


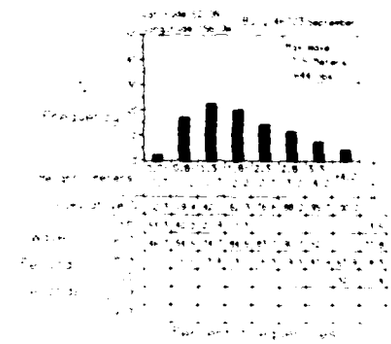


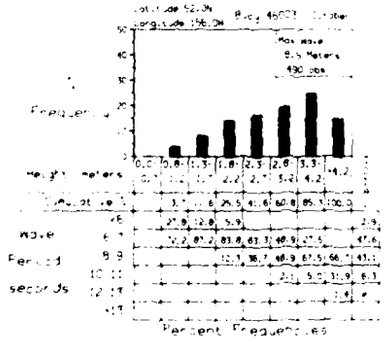


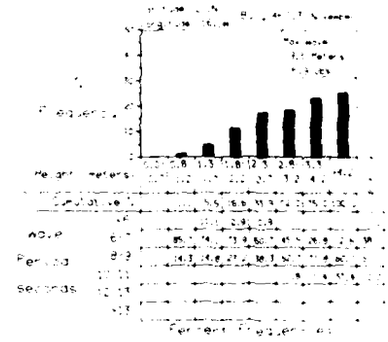


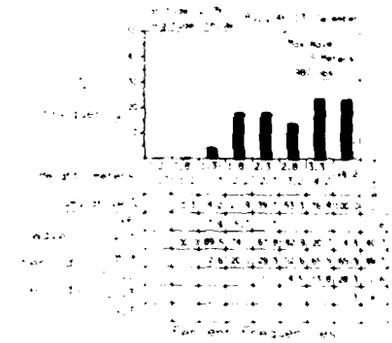


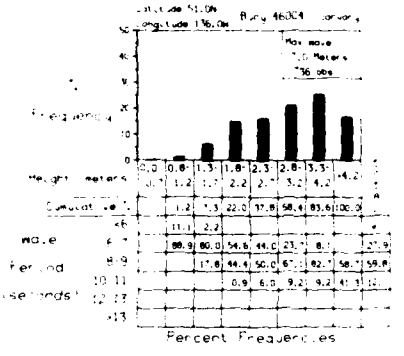


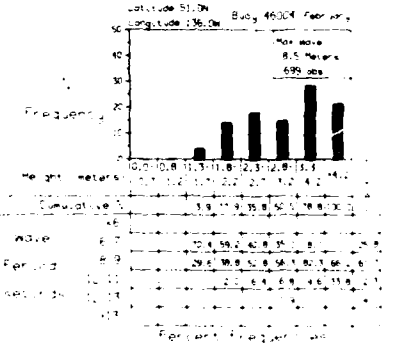


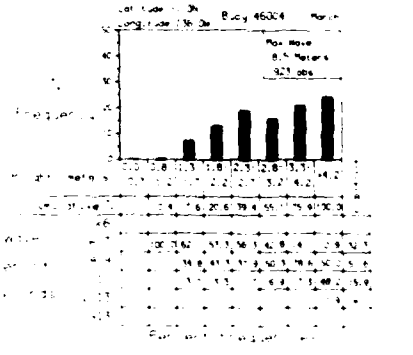


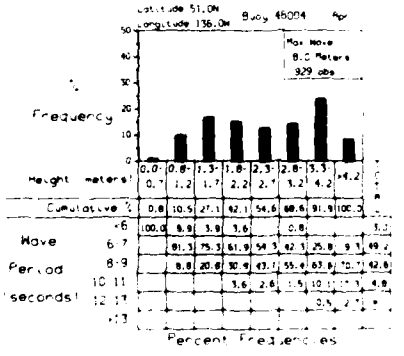


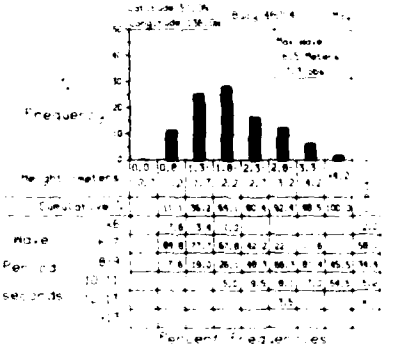


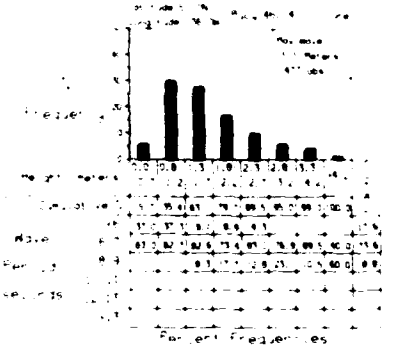

Latitude 51.0N
Longitude 136.0W
Buoy 46004
Max Wave
8.5 Meters
736 obs
Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

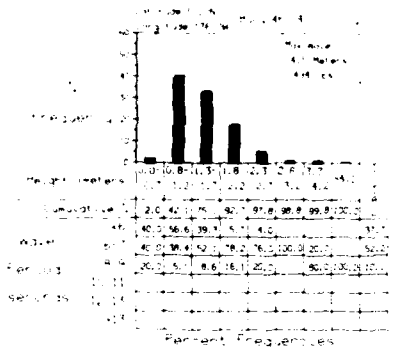

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Buoy 46004
Max Wave
8.5 Meters
699 obs
Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

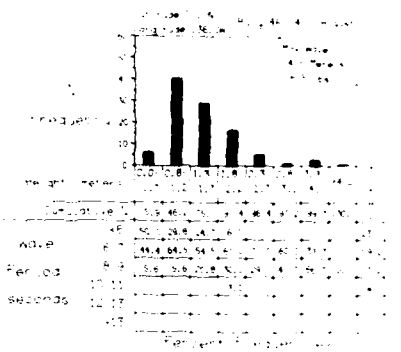

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Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

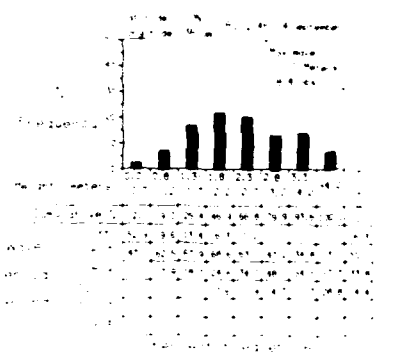

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Max Wave
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929 obs
Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

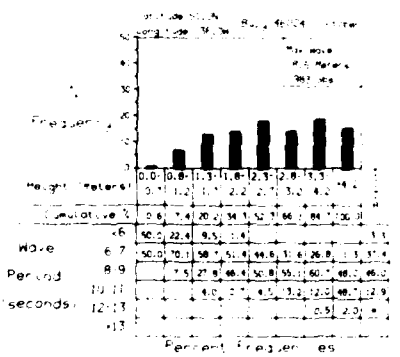

Frequency
Wave
Period
seconds
Percent Frequencies

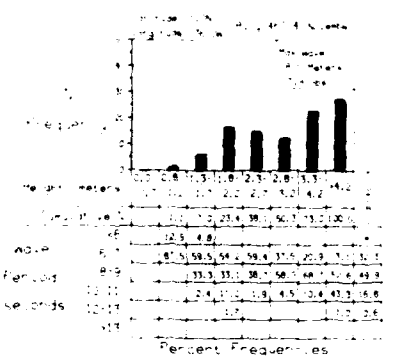

Frequency
Wave
Period
seconds
Percent Frequencies

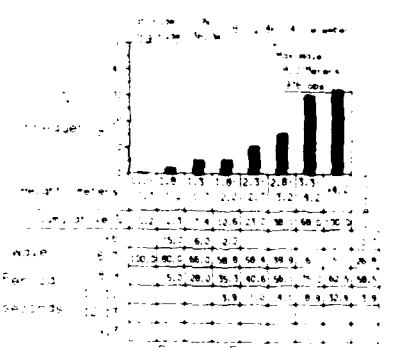


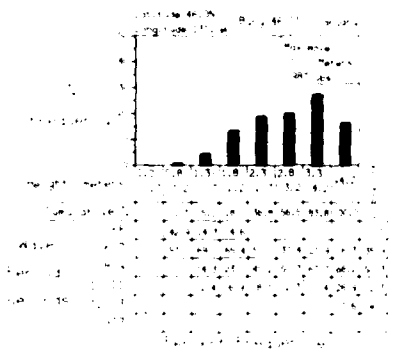


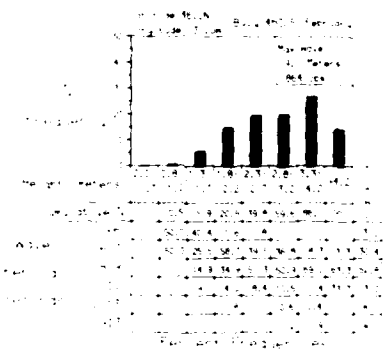


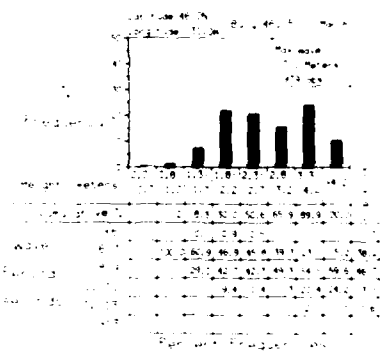


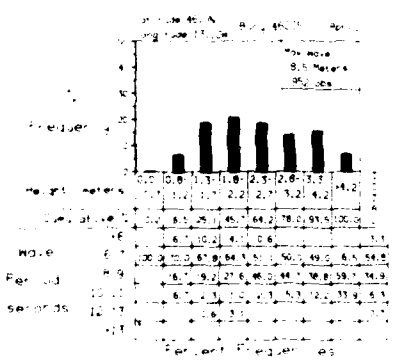


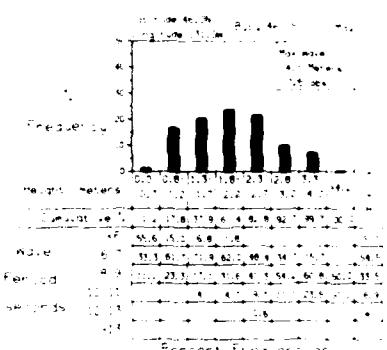


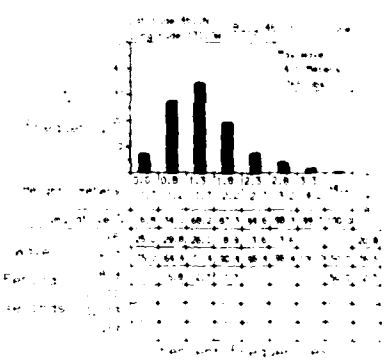


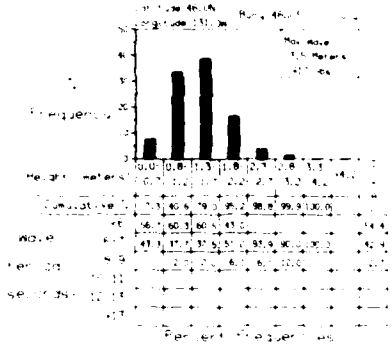


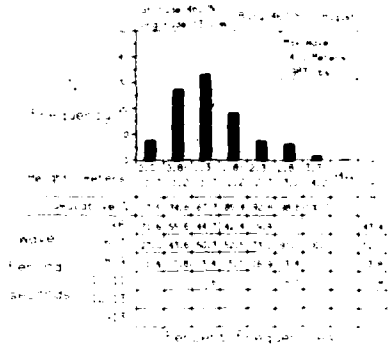


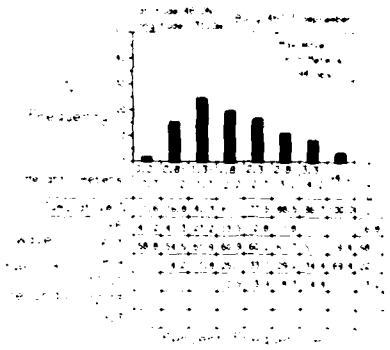


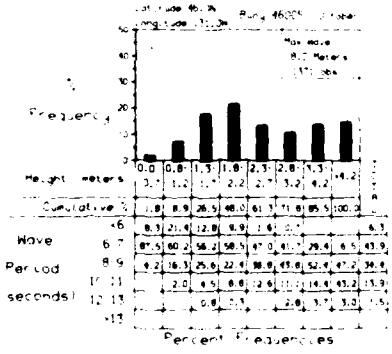


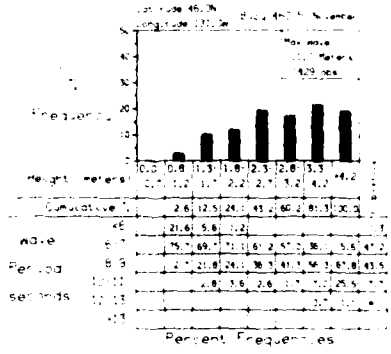


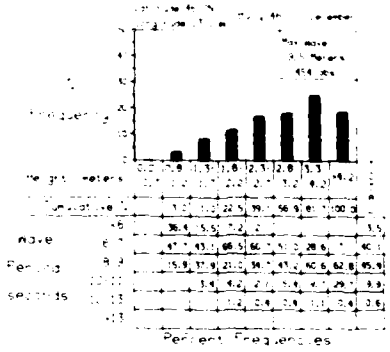


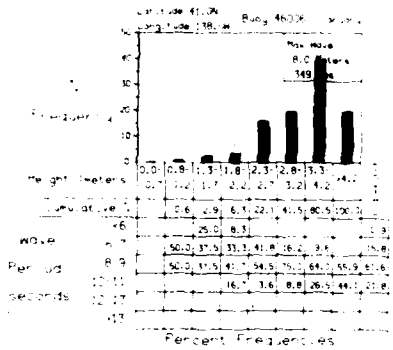


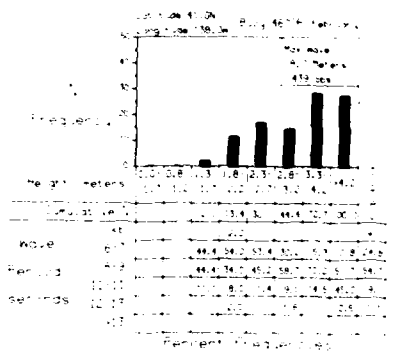


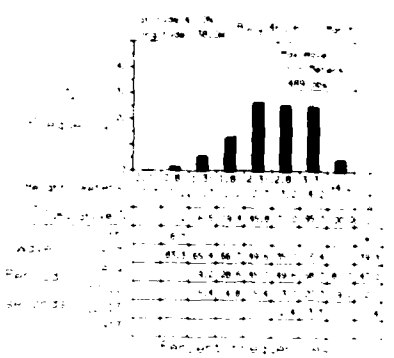


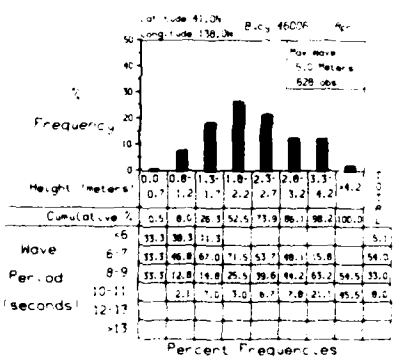


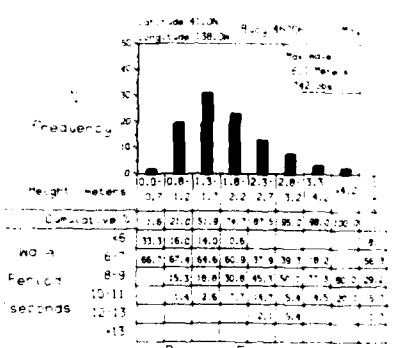


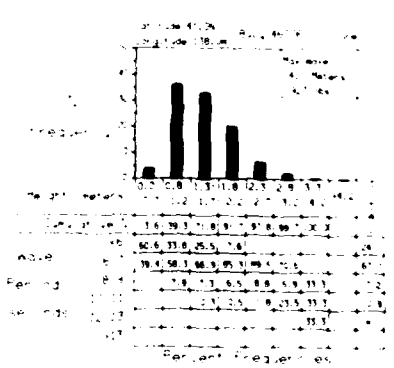

Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

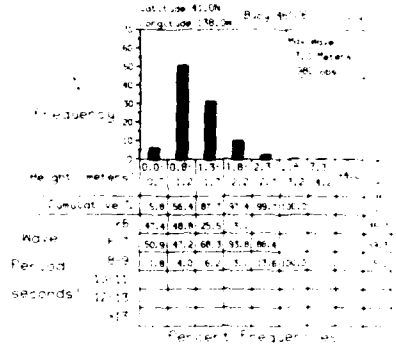

Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

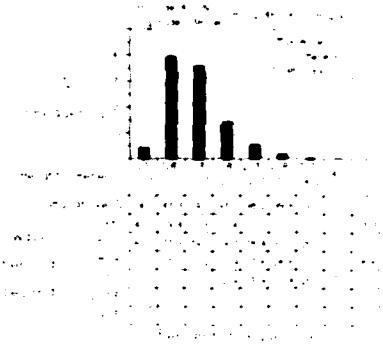

Frequency
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Cumulative %
Wave
Period
(seconds)
Percent Frequencies

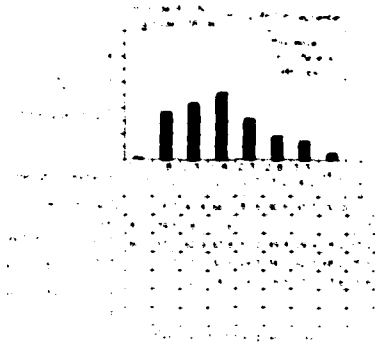

Frequency
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Cumulative %
Wave
Period
(seconds)
Percent Frequencies

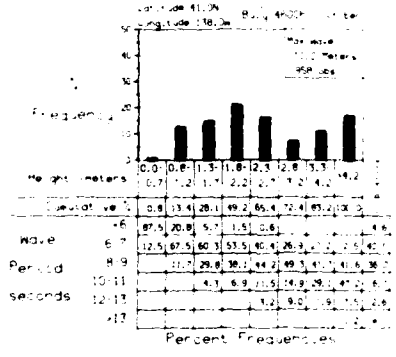

Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

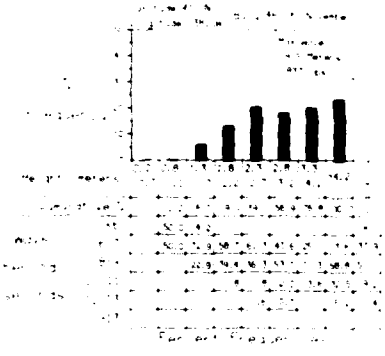

Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

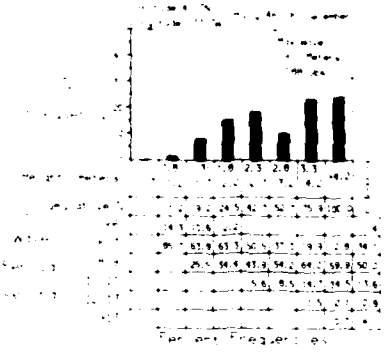

Frequency
Wave
Period
seconds
Percent Frequencies

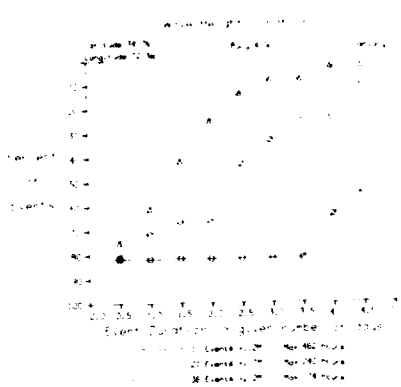


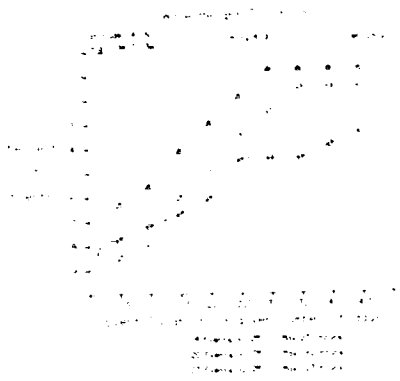


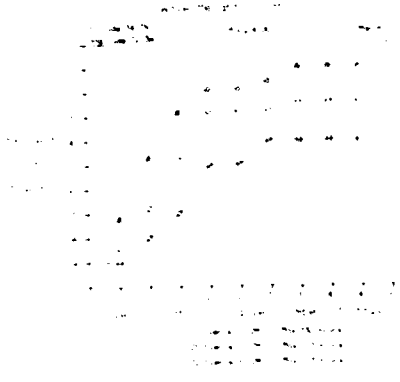

Frequency
Wave
Period
seconds
Percent Frequencies

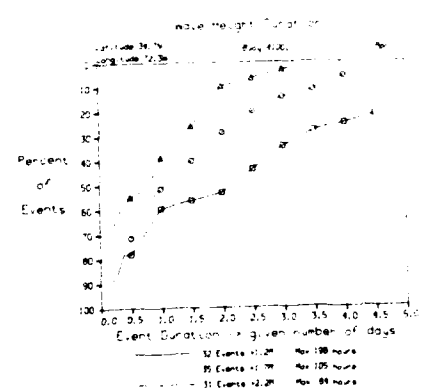


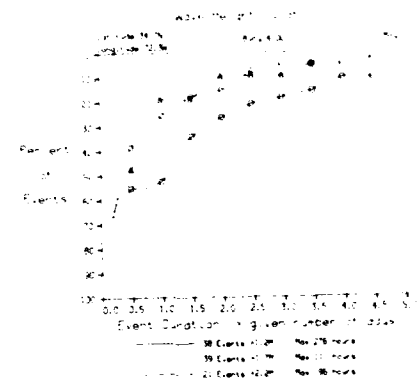


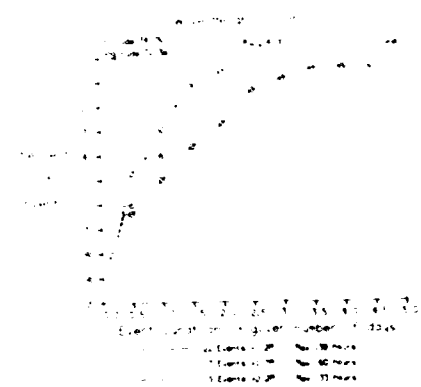


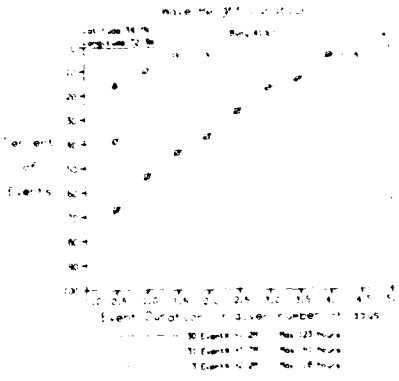


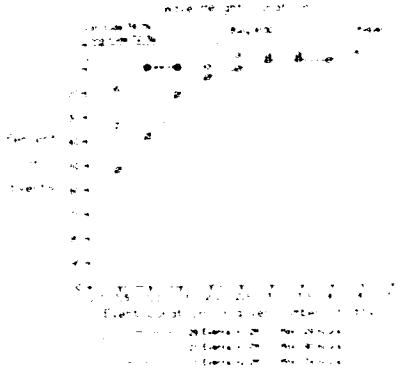


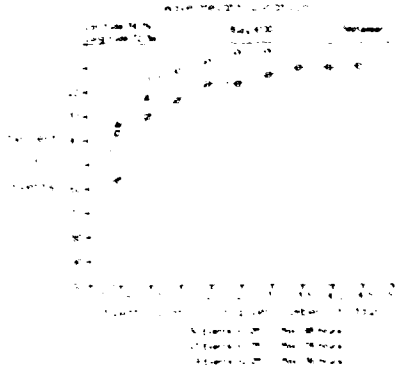

Percent of Events
Event Duration = given number of days

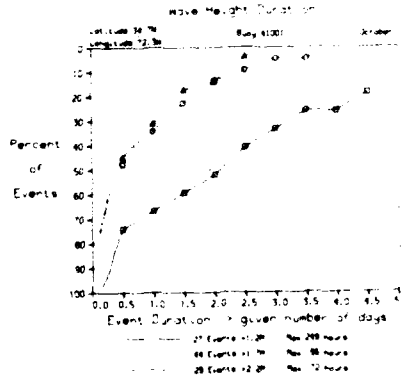


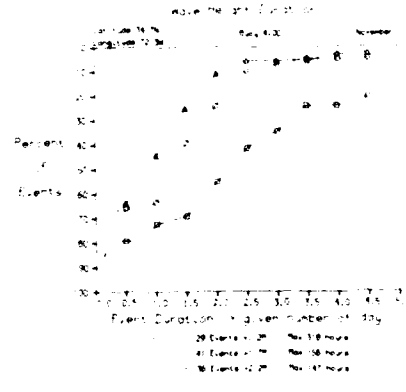


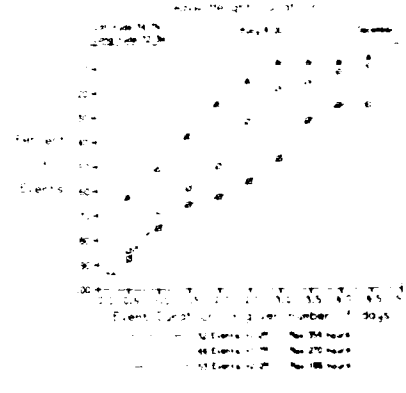


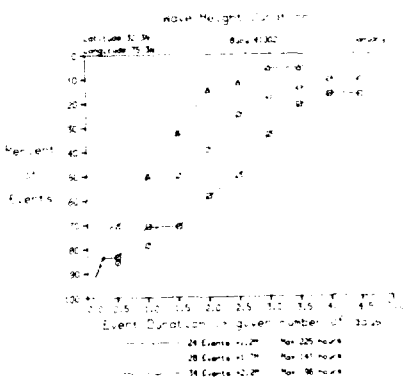


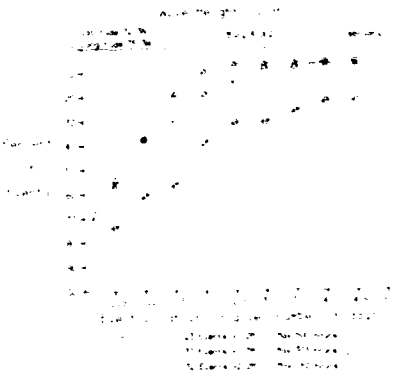


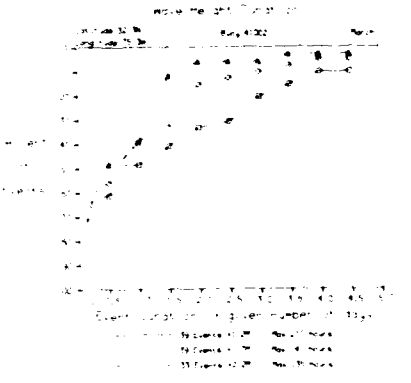


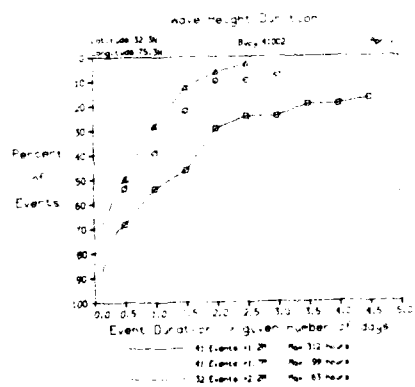


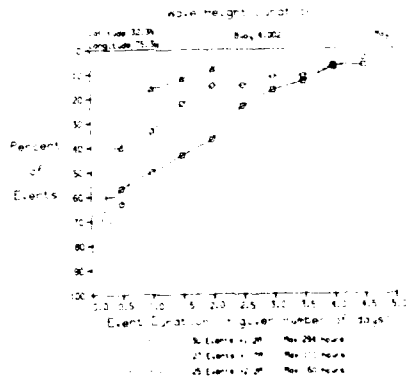


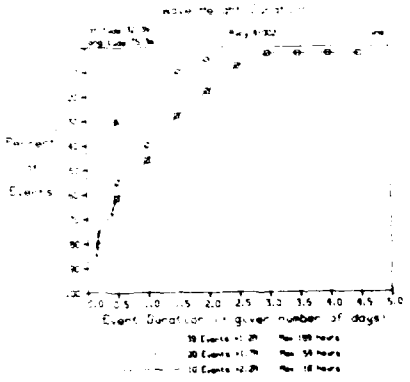


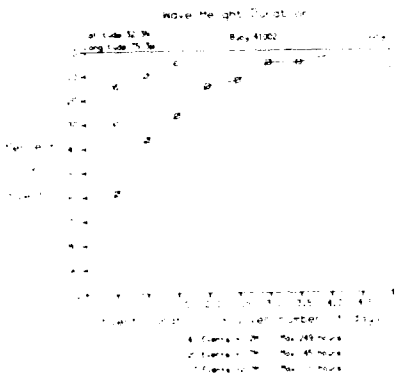


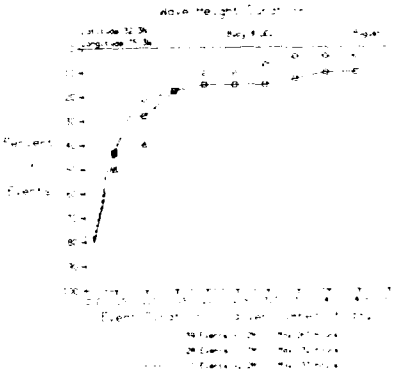


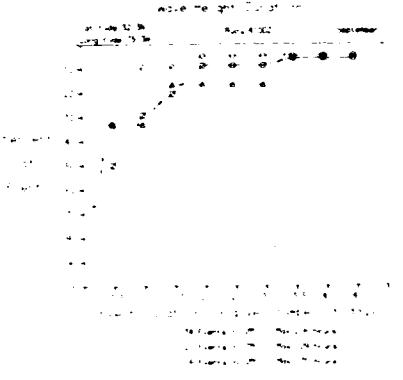


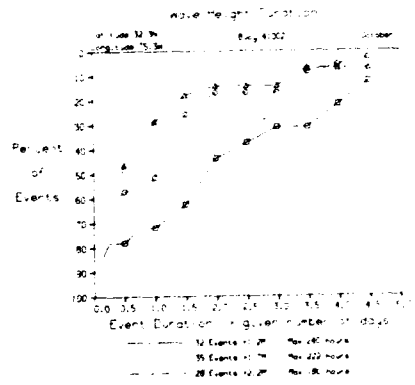


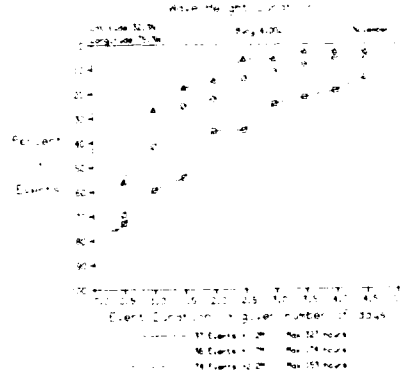


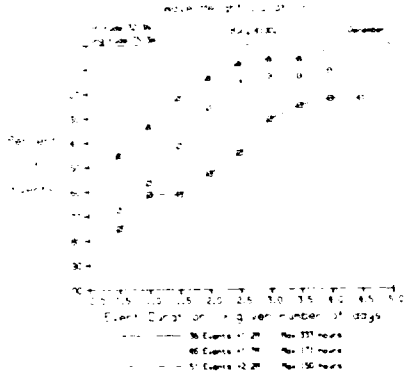


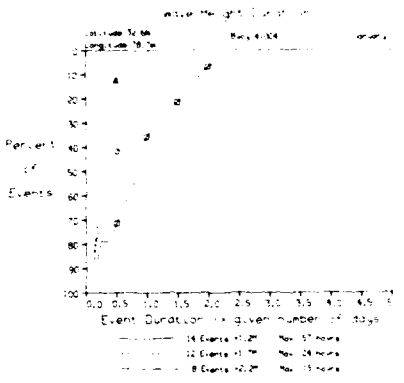


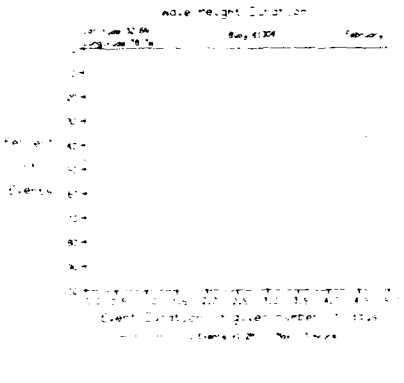



Percent of Events
Event Duration in given number of days







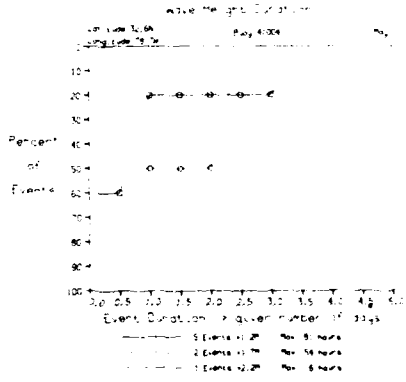


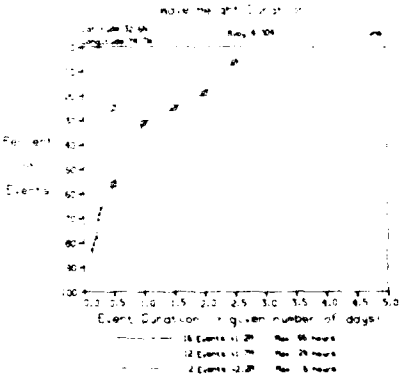
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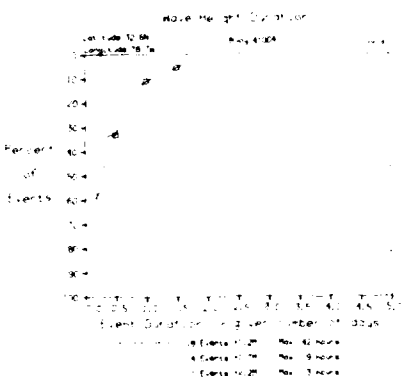
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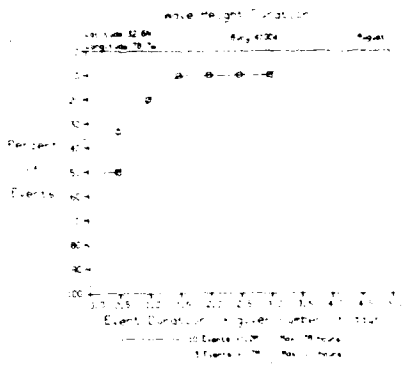
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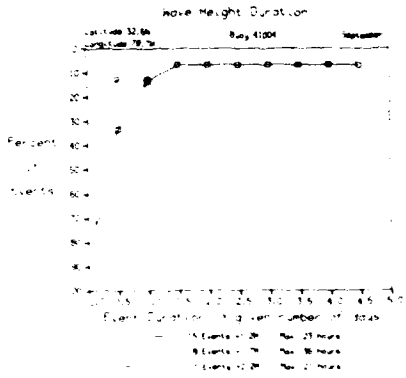
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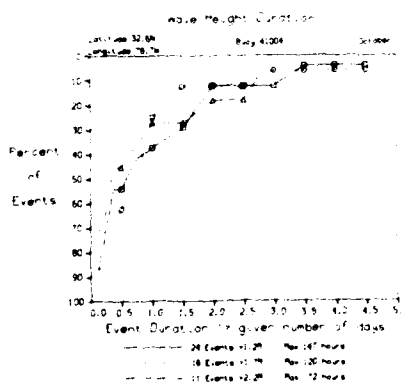


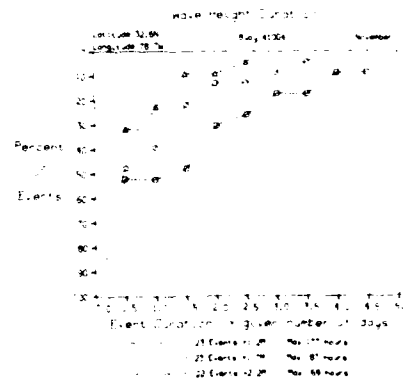


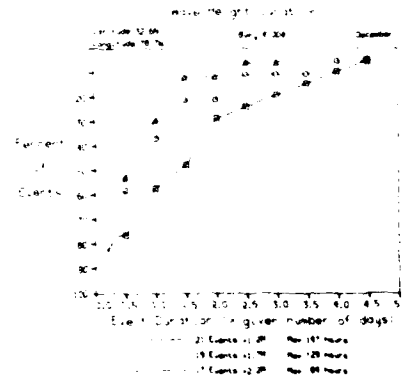

Wave Height Duration
Percent of Events
Event Duration for given number of days

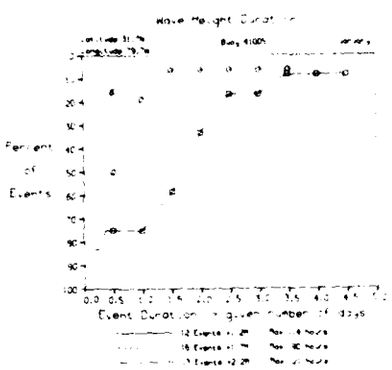

Wave Height Duration
Percent of Events
Event Duration for given number of days

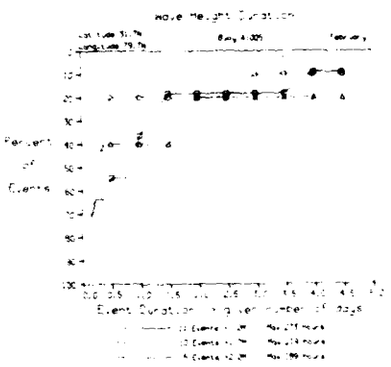

Wave Height Duration
Percent of Events
Event Duration for given number of days

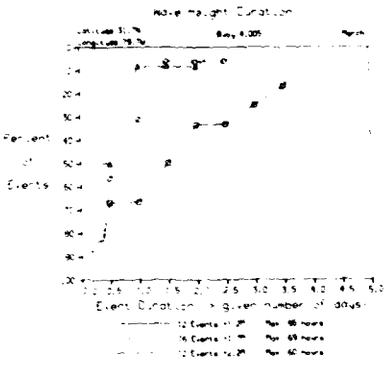

Wave Height Duration
Percent of Events
Event Duration for given number of days

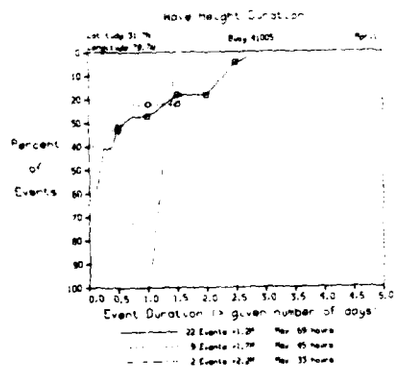

Wave Height Duration
Percent of Events
Event Duration for given number of days

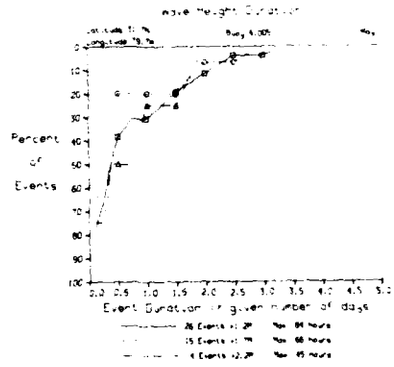

Wave Height Duration
Percent of Events
Event Duration for given number of days

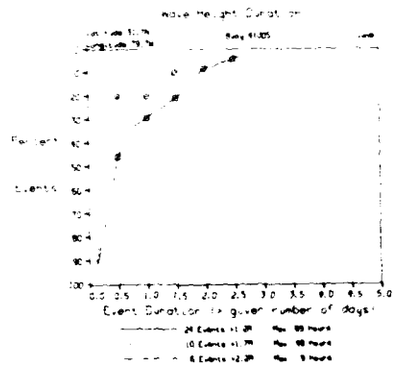


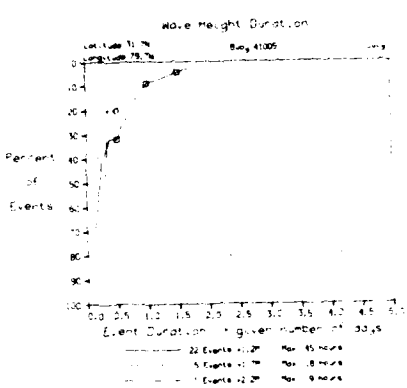


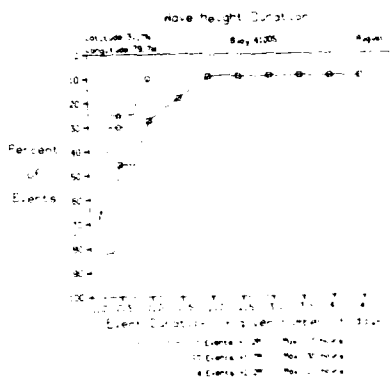


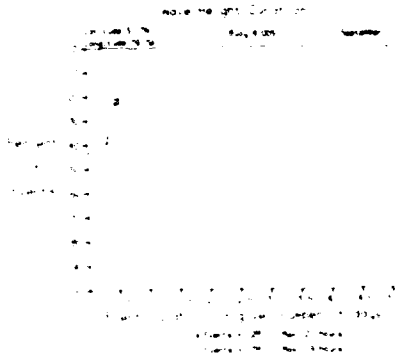






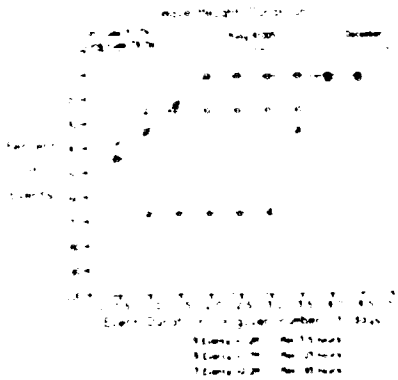


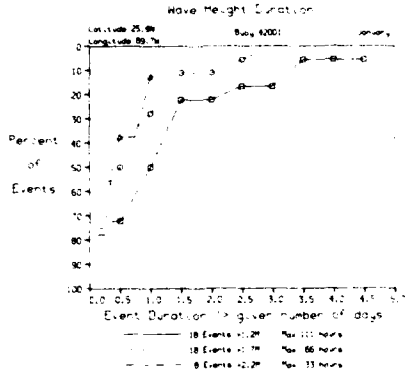


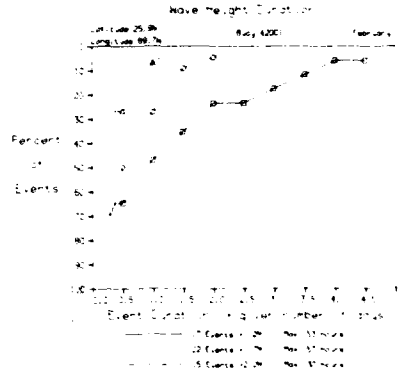


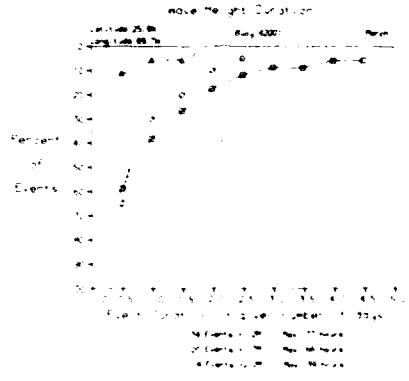
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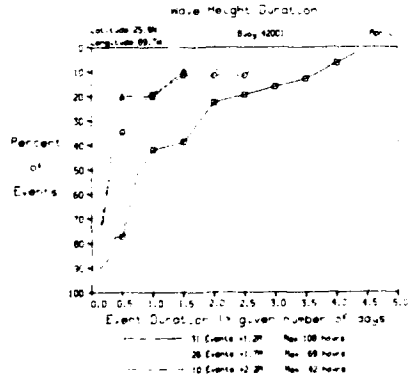
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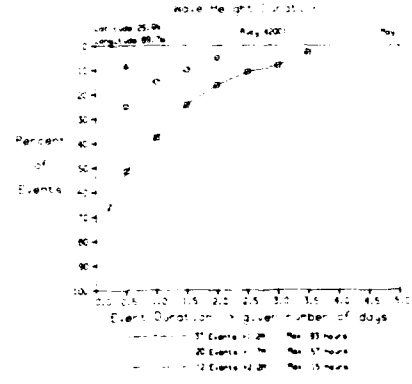


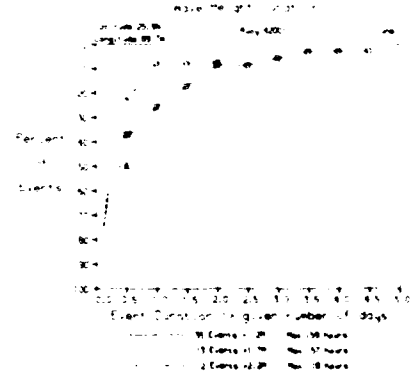

Wave Height Duration
Percent of Events
Event Duration (h) given number of days

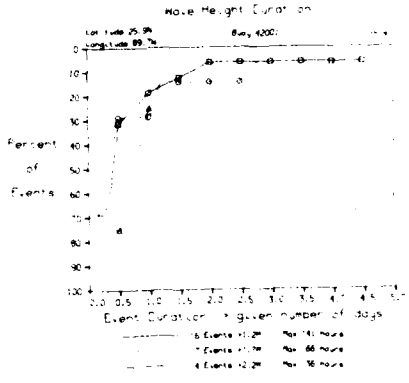

Wave Height Duration
Percent of Events
Event Duration (h) given number of days

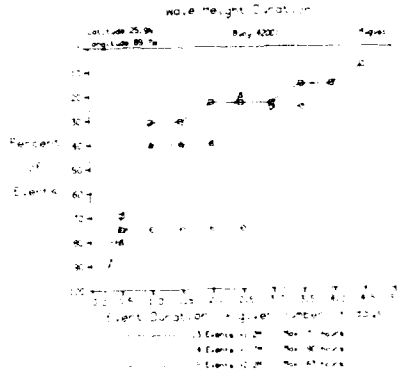

Wave Height Duration
Percent of Events

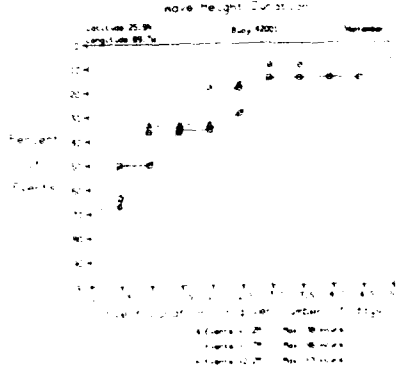

Wave Height Duration
Percent of Events
Event Duration (h) given number of days

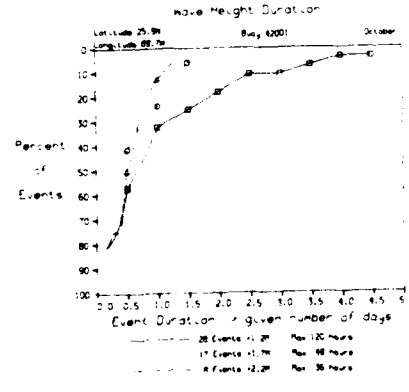

Percent of Events
Event Duration (h) given number of days

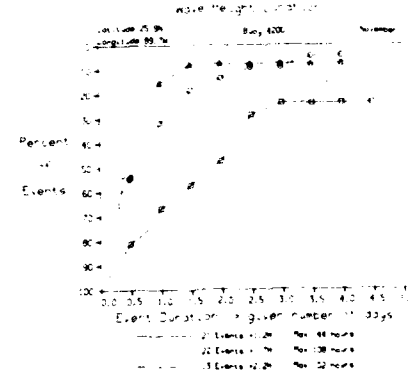

Percent of Events

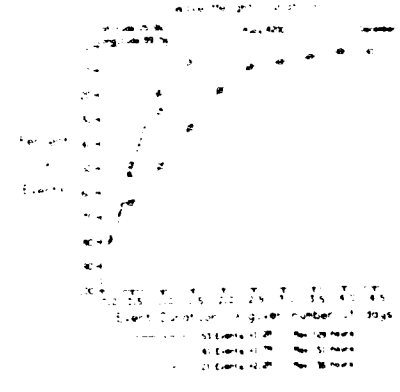

Wave Height Duration
Percent of Events
Event Duration > given number of days

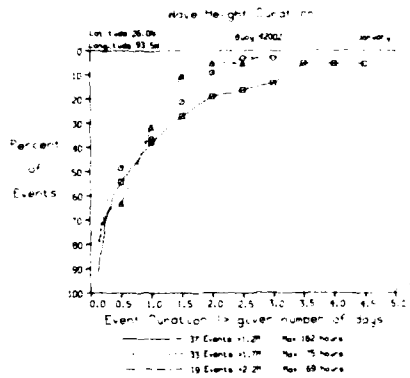

Wave Height Duration
Percent of Events

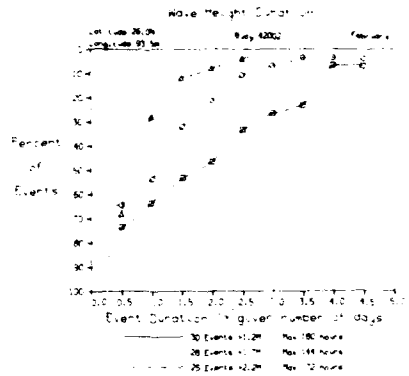

Wave Height Duration

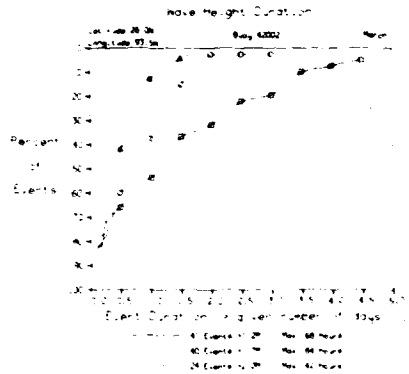

Wave Height Duration
Percent of Events
Event Duration > given number of days

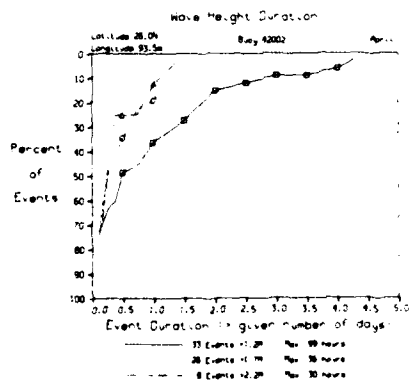

Percent of Events
Event Duration > given number of days

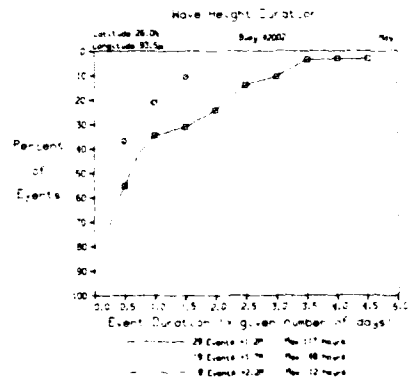


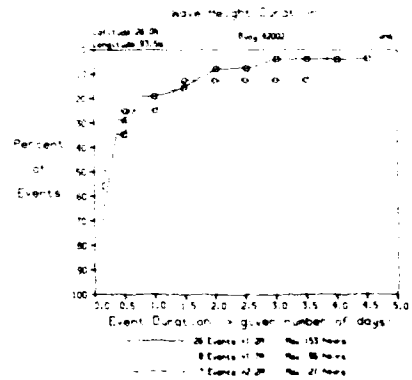

Wave Height Duration
Percent of Events
Event Duration for given number of days

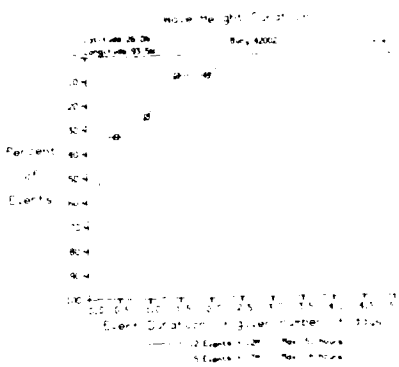

Wave Height Duration
Percent of Events
Event Duration for given number of days

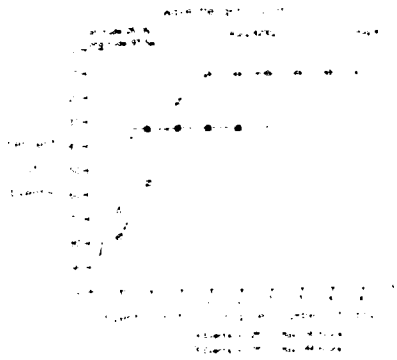

Wave Height Duration
Percent of Events

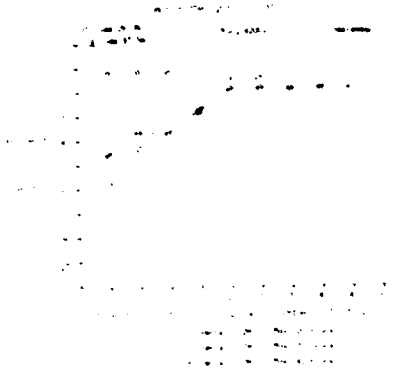

Wave Height Duration
Percent of Events
Event Duration for given number of days

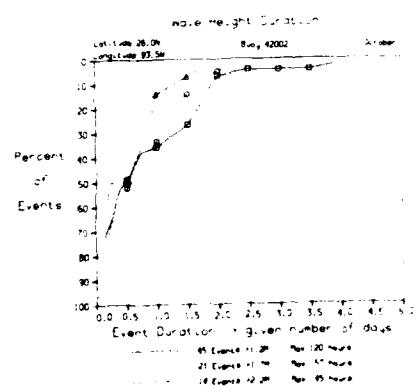

Wave Height Duration
Percent of Events
Event Duration for given number of days

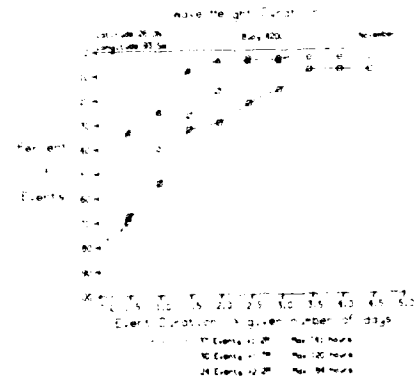

Percent of Events
Event Duration for given number of days

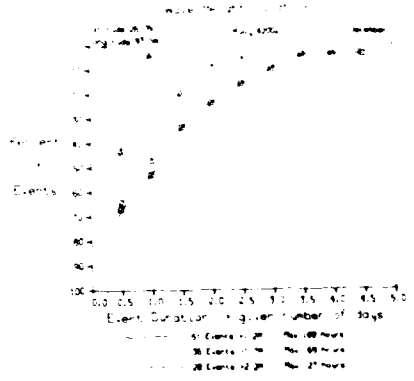


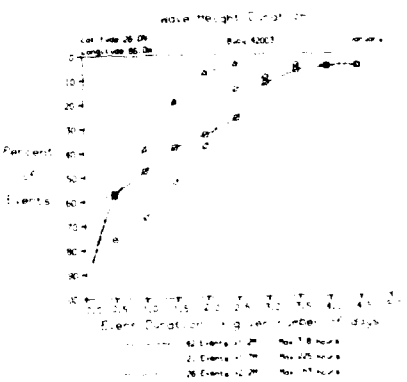


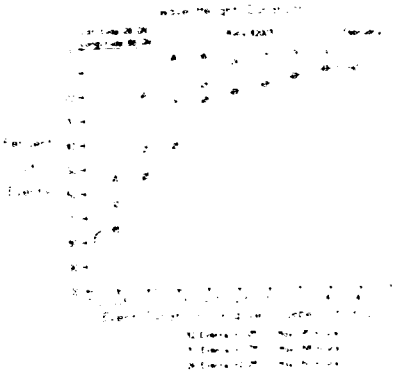


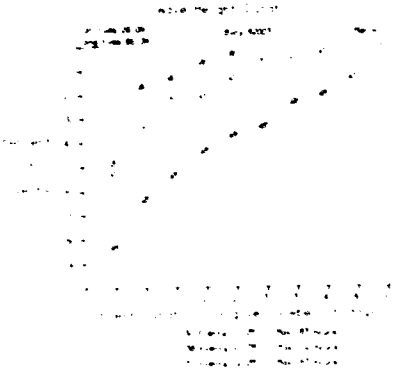

Wave Height Duration
Percent of Events
Event Duration = given number of days

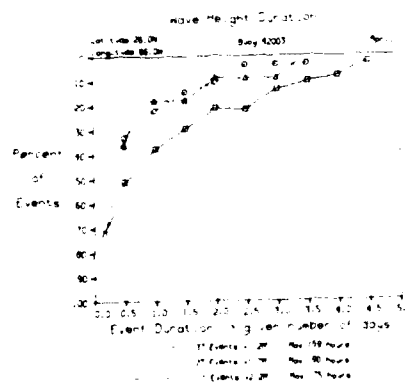

Wave Height Duration
Percent of Events
Event Duration = given number of days

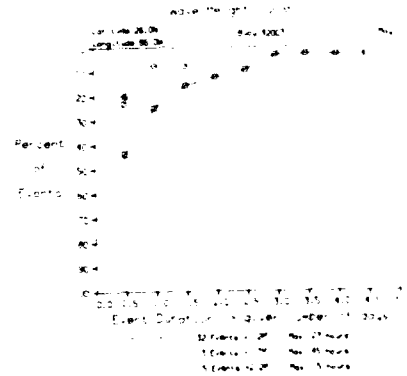

Event Duration = given number of days

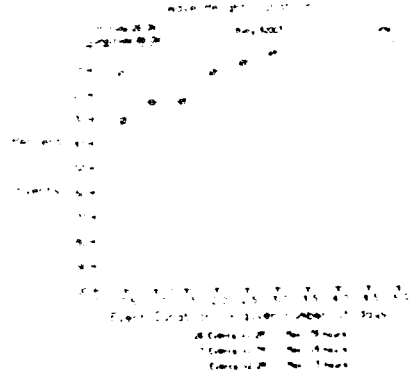

Percent of Events

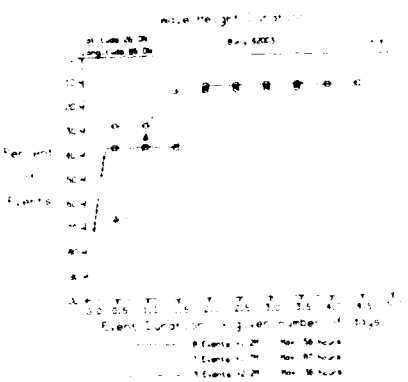

Percent of Events

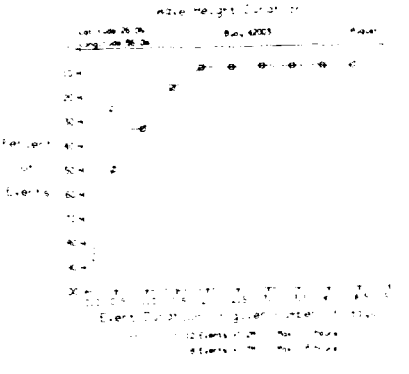


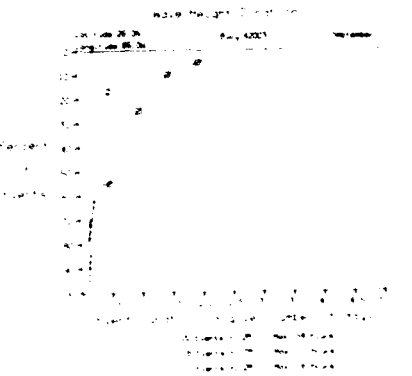

Percent of Events

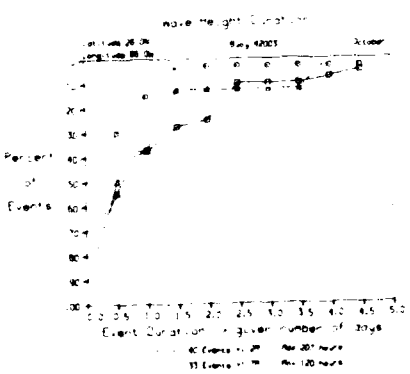

Percent of Events

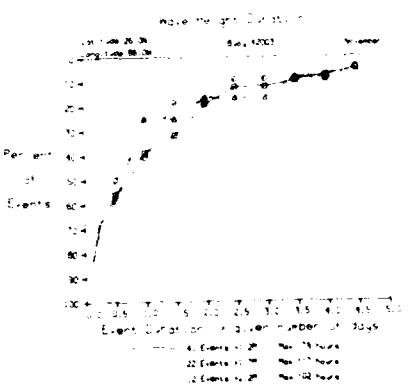


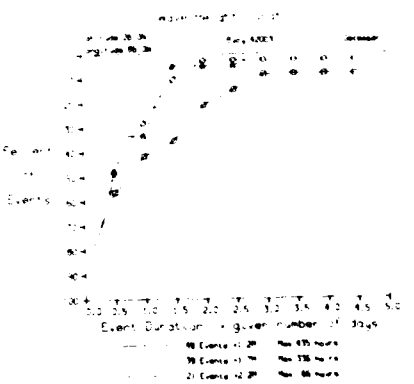


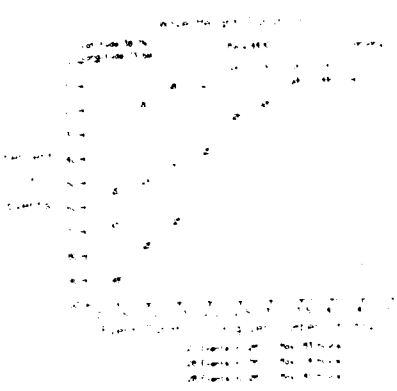


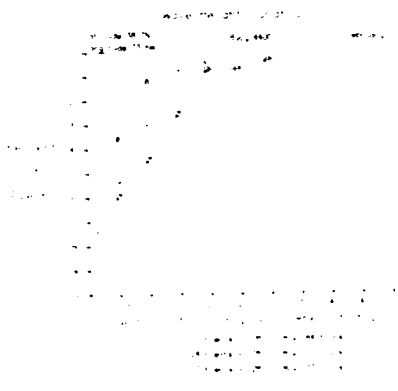




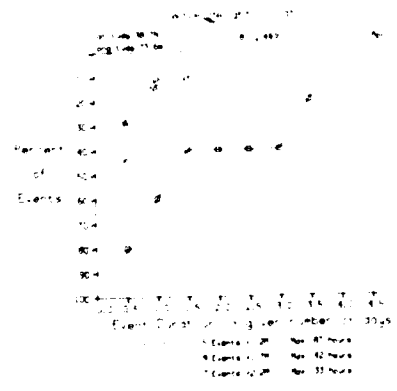


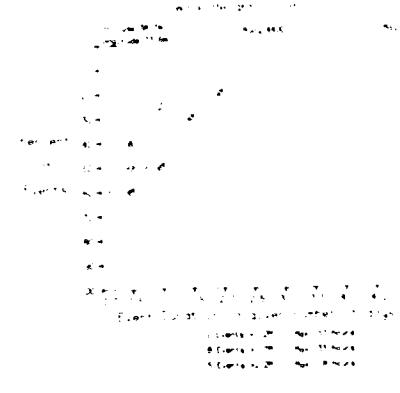




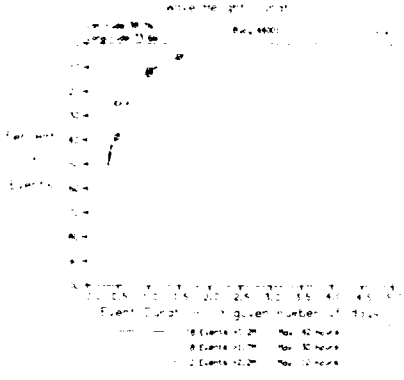


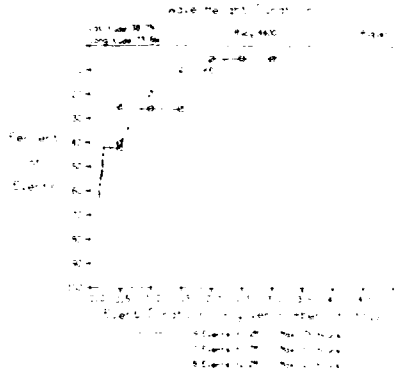




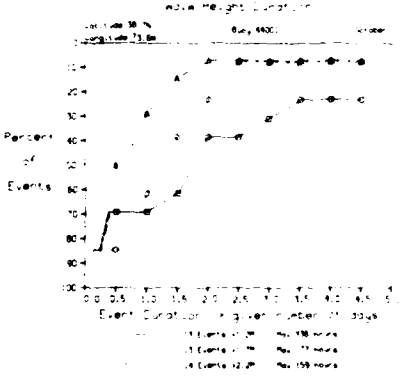


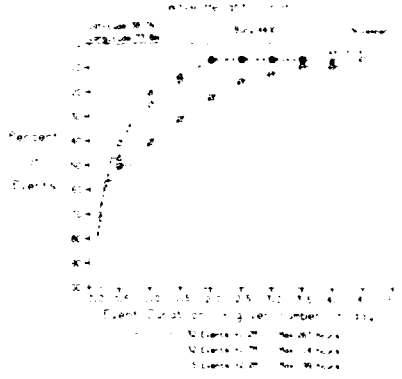


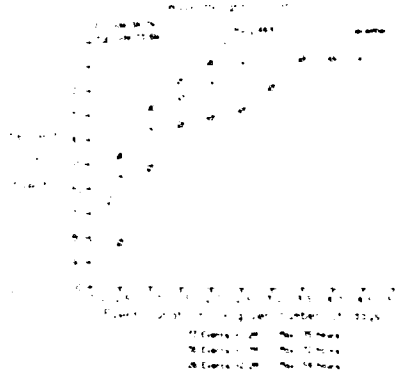


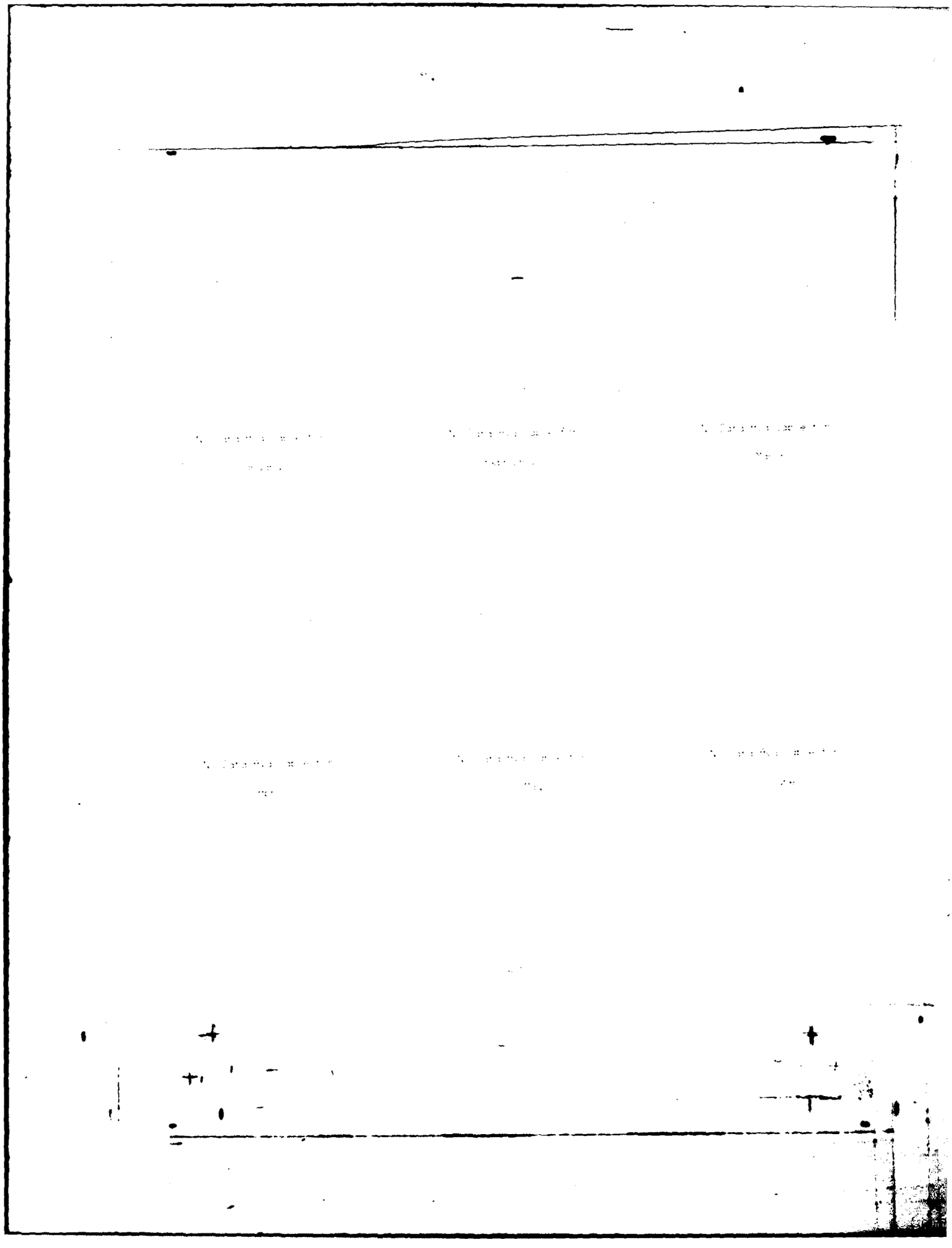












No Data Available for July

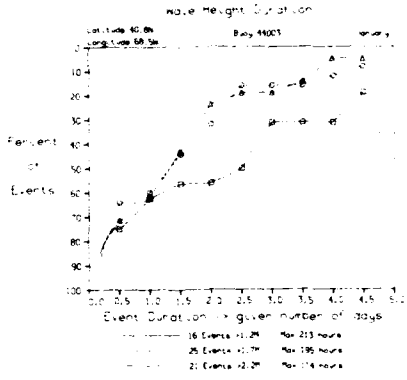
No Data Available for August

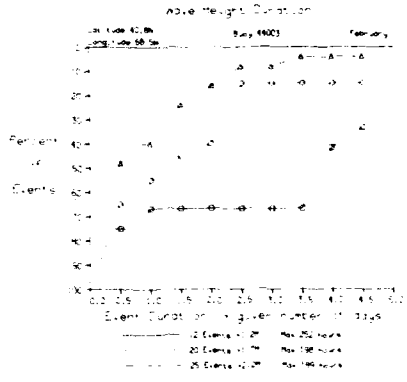
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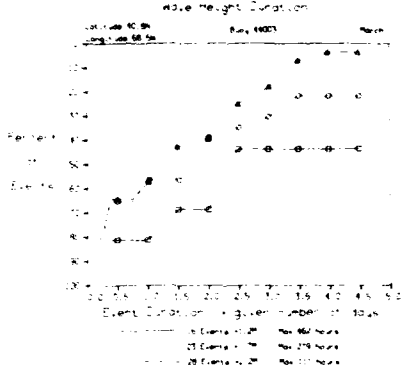
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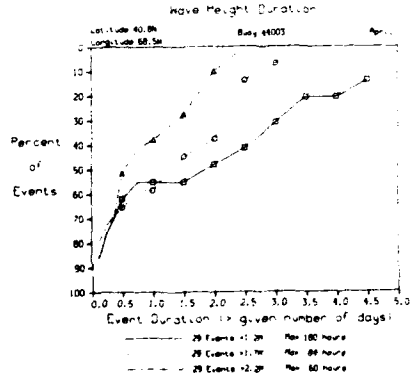
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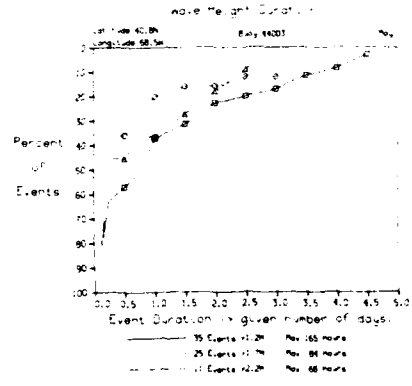
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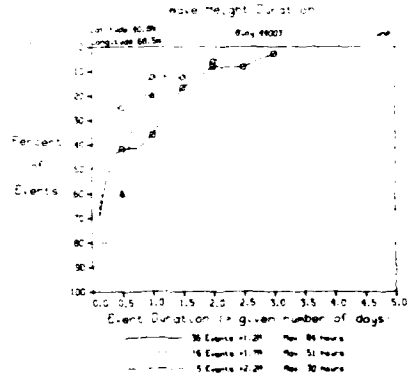

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

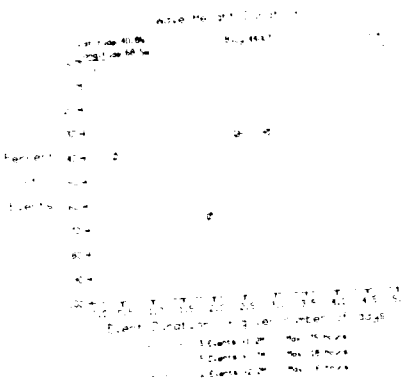

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

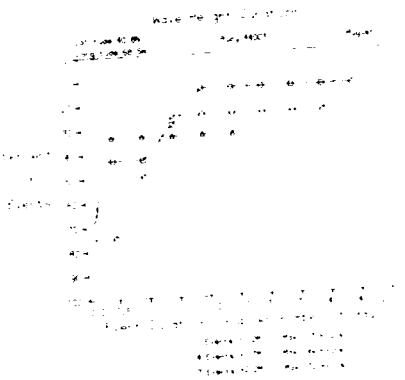

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

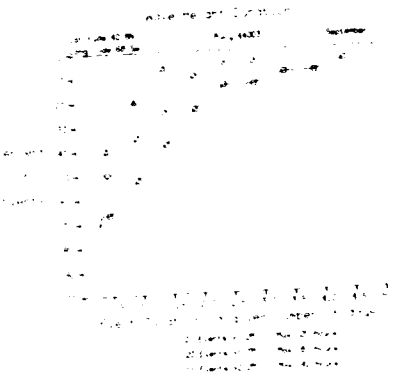

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

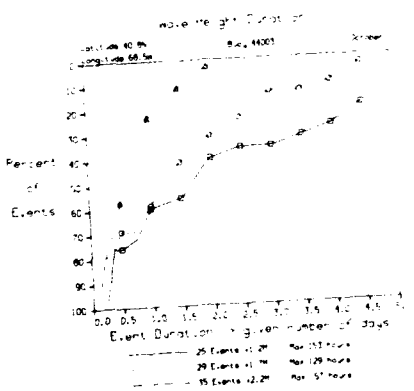

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

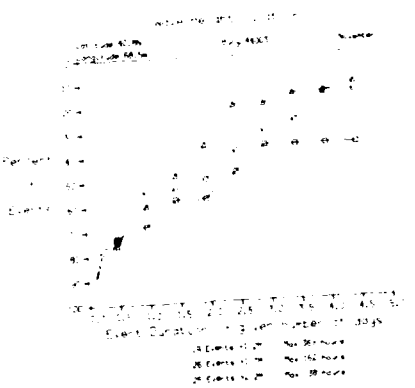

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

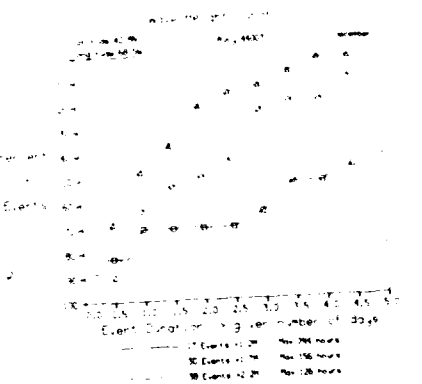


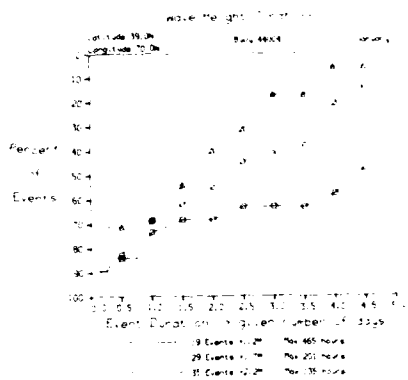


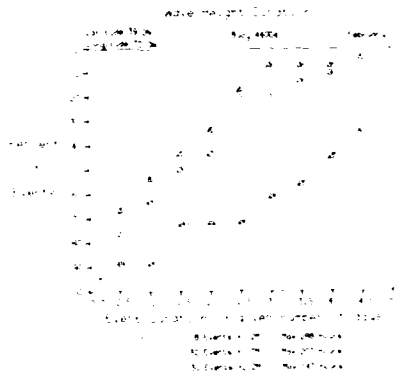


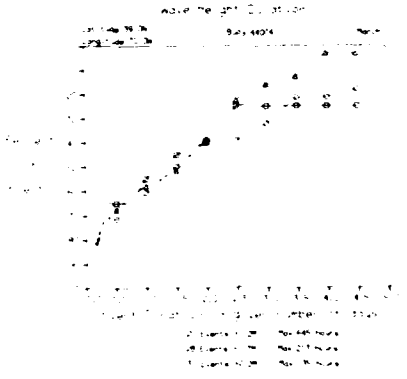

Percent
of
Events
Event Duration

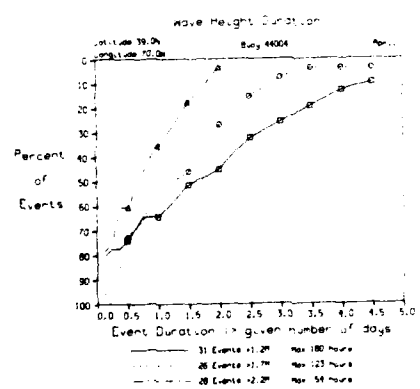


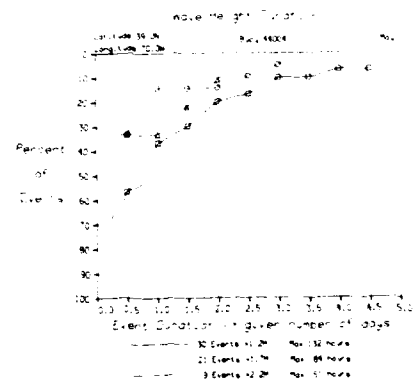


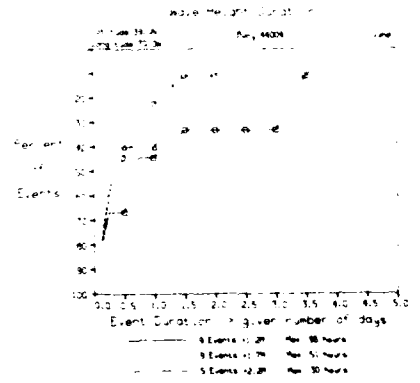






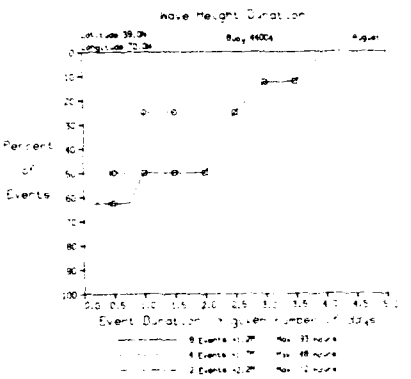

Wave Height Duration
Buoy 44004
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration => given number of days

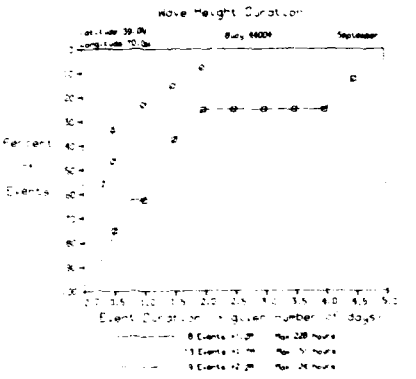


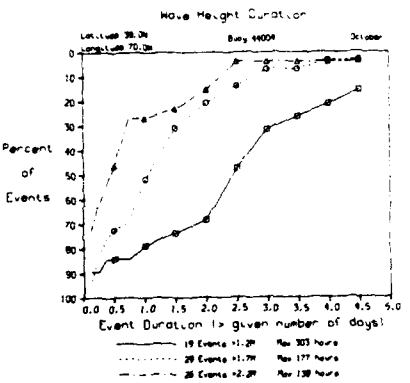


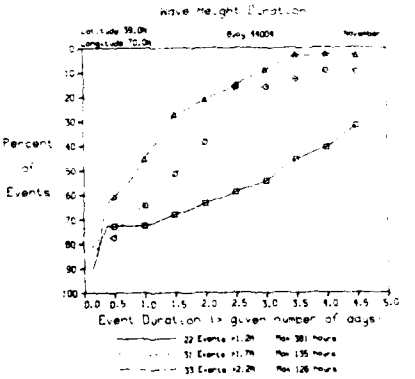
No Data Available for

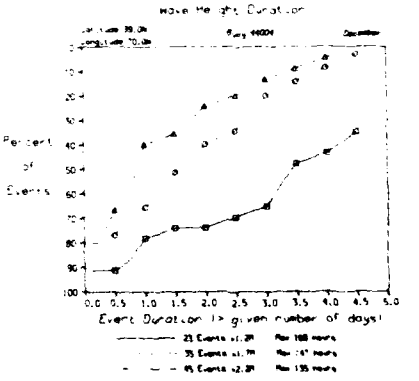
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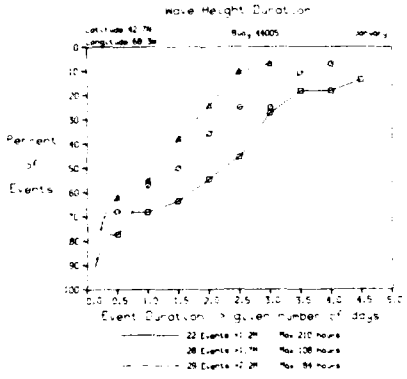


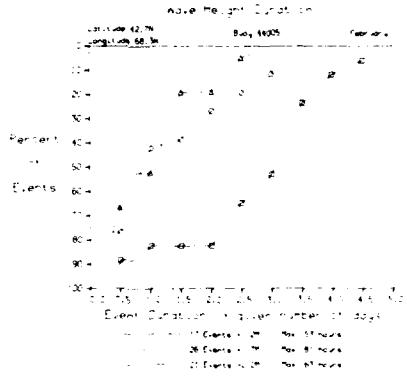


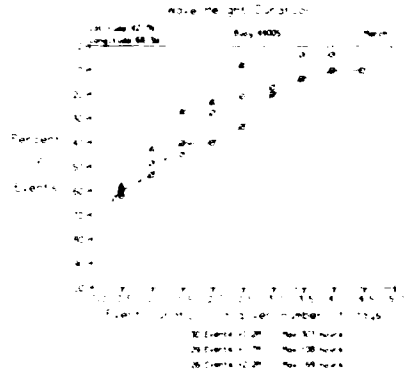


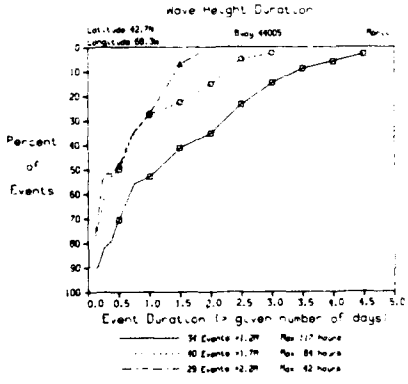


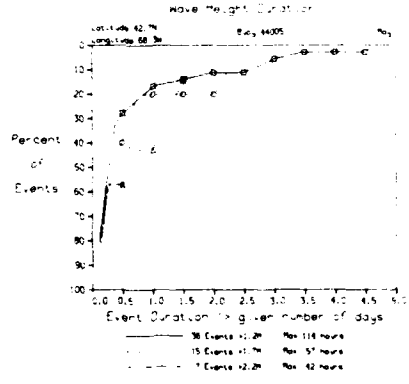


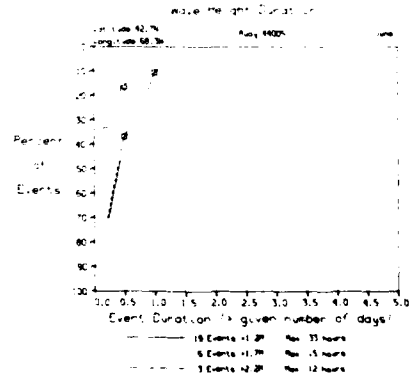

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

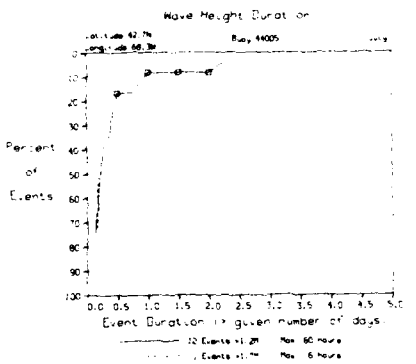

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

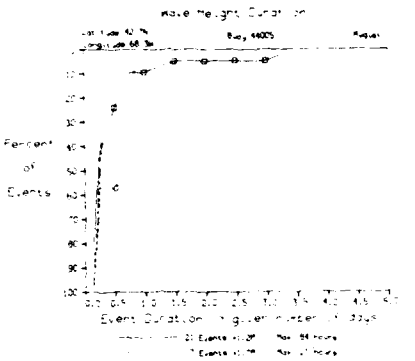

Wave Height Duration
Percent of Events

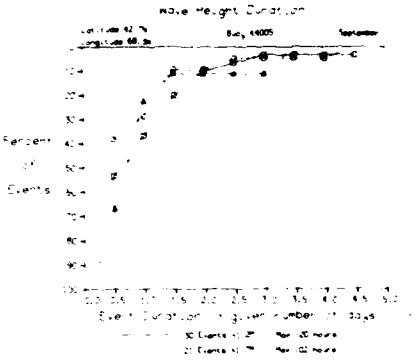

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

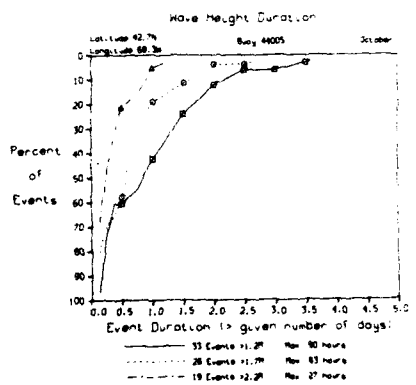

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

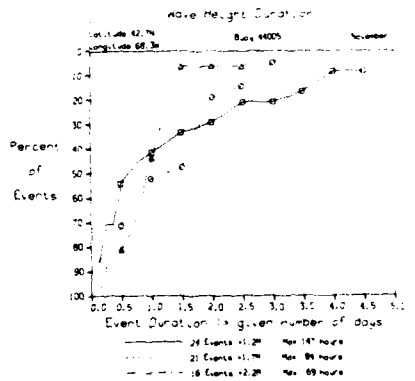

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

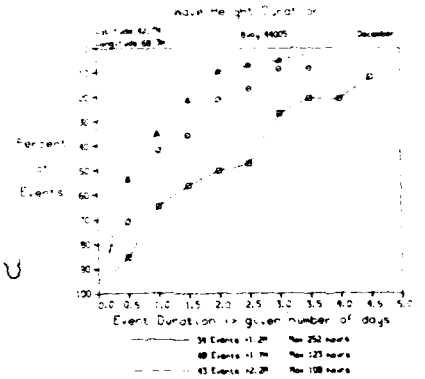

Wave Height Duration
Buoy 44005
Percent of Events
Event Duration (> given number of days)

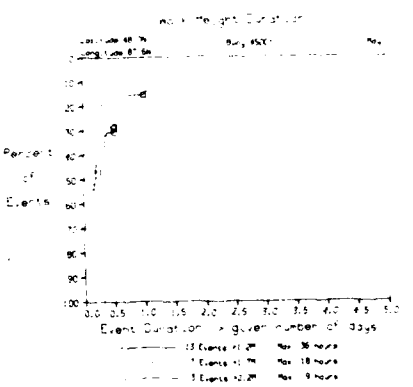

Wave Height Duration
Buoy 44005
Percent of Events
Event Duration (> given number of days)

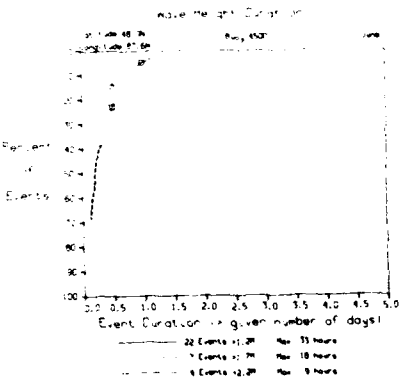

Wave Height Duration
Buoy 44005
Percent of Events
Event Duration (> given number of days)

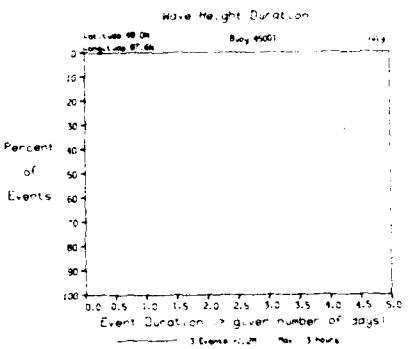

Wave Height Duration
Buoy 44005
October
Percent of Events
Event Duration (> given number of days)

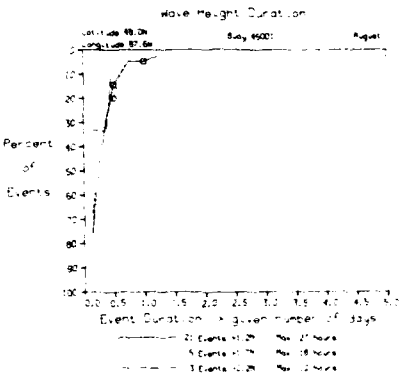

Wave Height Duration
Buoy 44005
November
Percent of Events
Event Duration (> given number of days)

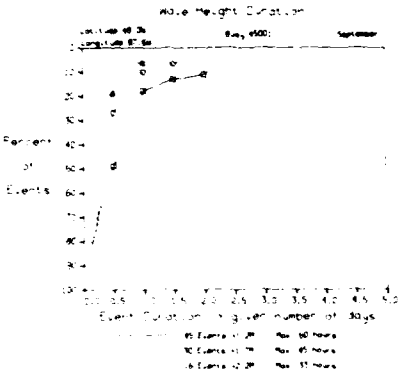

Buoy 44005
December
Percent of Events
Event Duration (> given number of days)

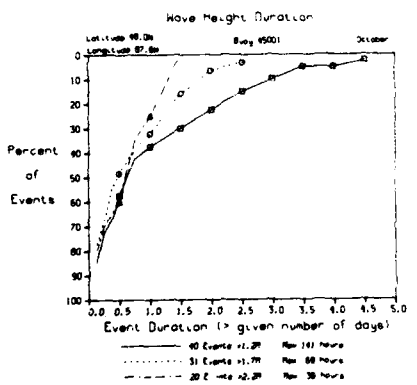

Percent of Events
Event Duration = given number of days
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

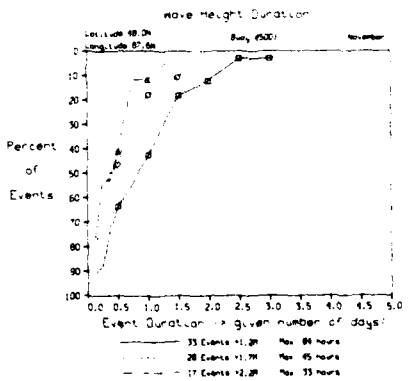

Percent of Events
Event Duration = given number of days
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

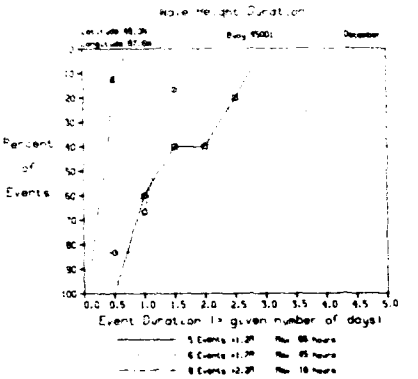

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events


Wave Height Duration
Percent of Events
Event Duration (> given number of days)

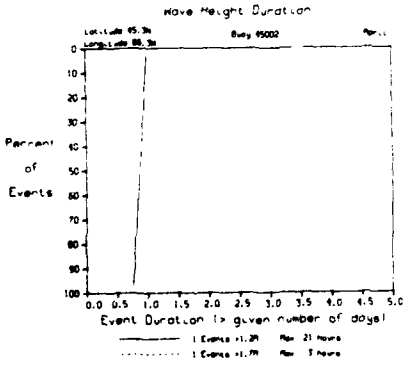

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

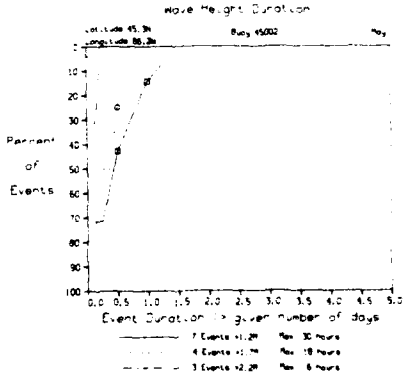

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

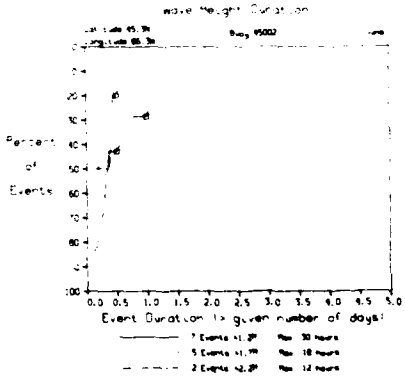
No Data Available for

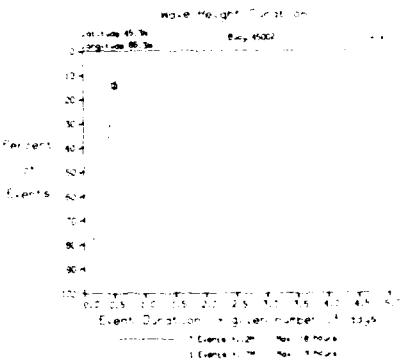
No Data Available for

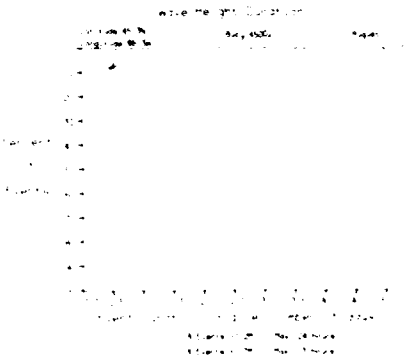
No Data Available for

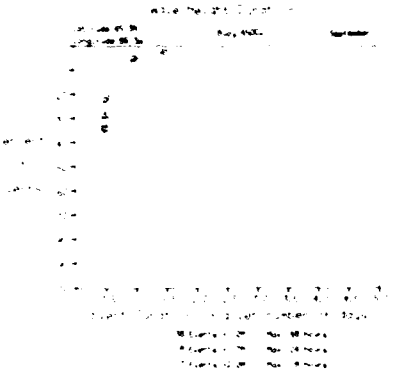


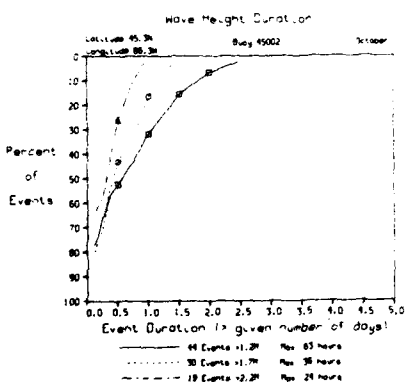


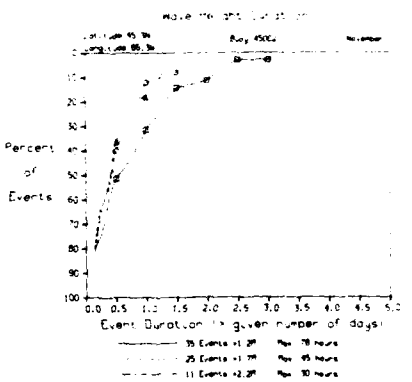


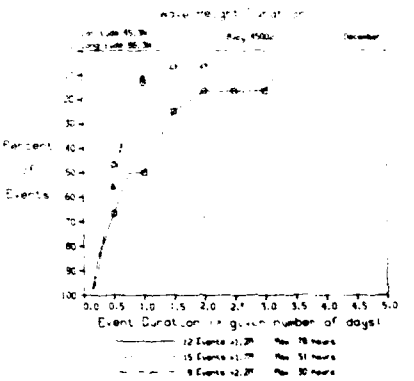


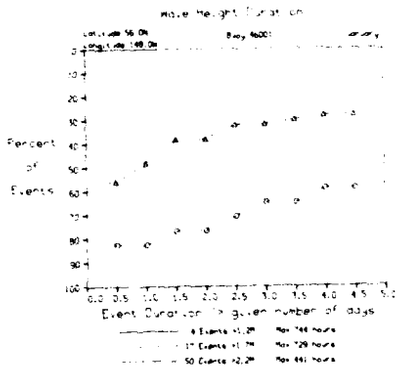


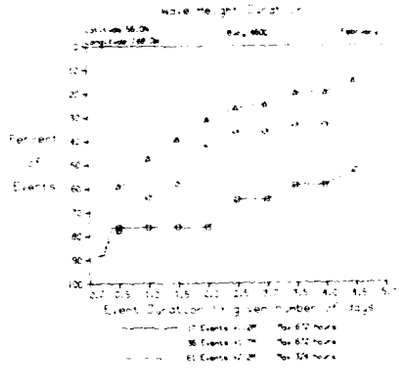


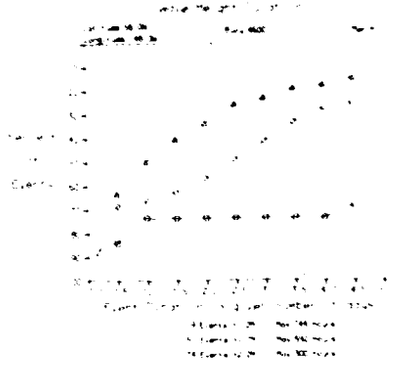

Wave Height Duration
Buoy 45002
October
Percent
of
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

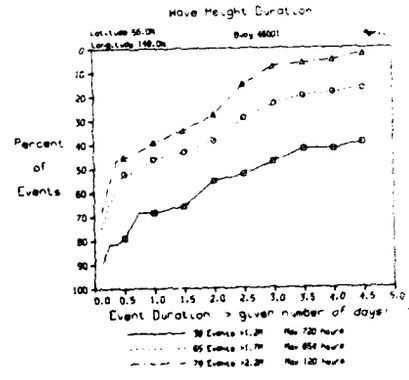

Percent
of
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

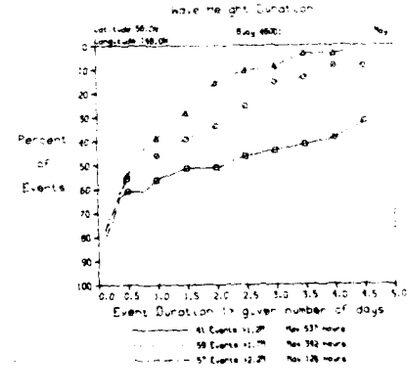

Percent
of
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

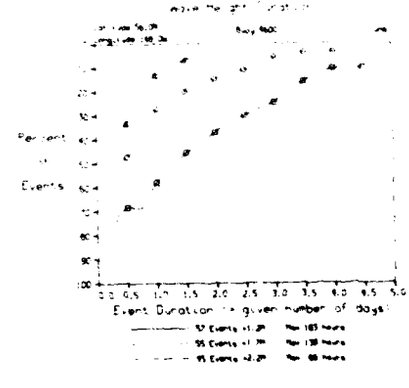

Percent of Events
Event Duration > given number of days

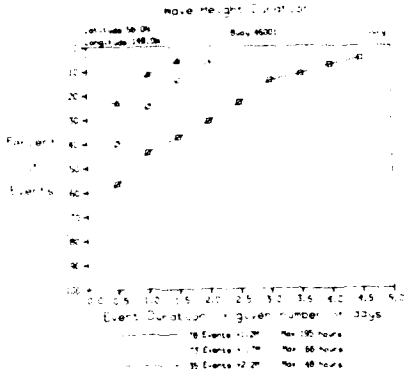

Percent of Events
Event Duration > given number of days

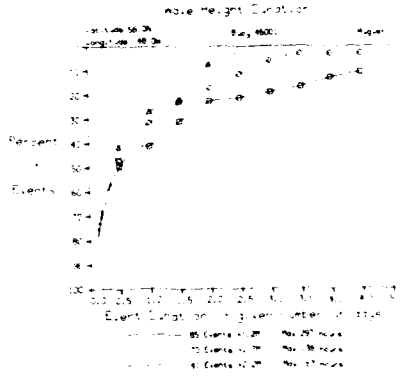


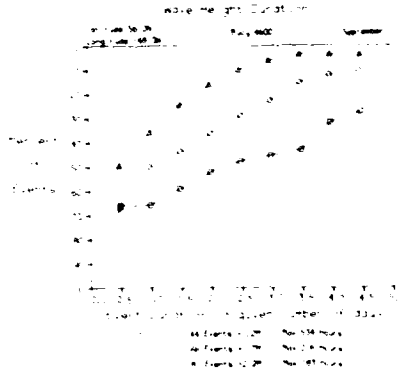

Wave Height Duration
Percent of Events
Event Duration > given number of days

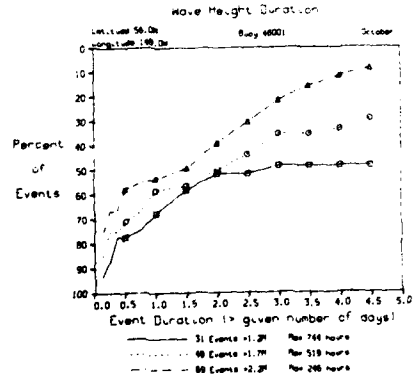

Percent of Events
Event Duration > given number of days

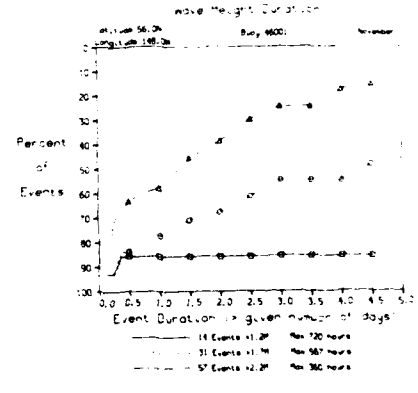

Event Duration > given number of days

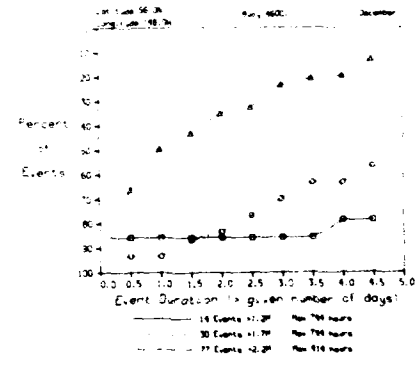

Wave Height Duration
Buoy 46001
Percent of Events
Event Duration (> given number of days)

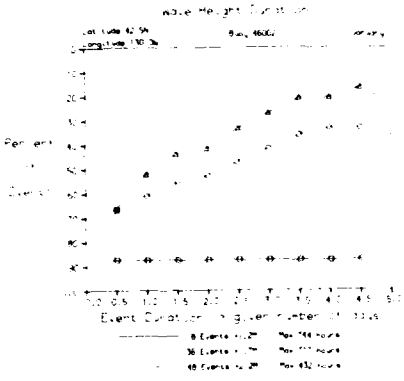

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

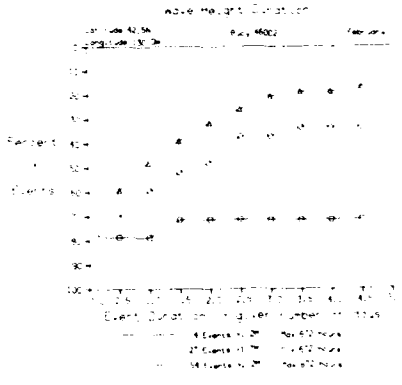

Wave Height Duration

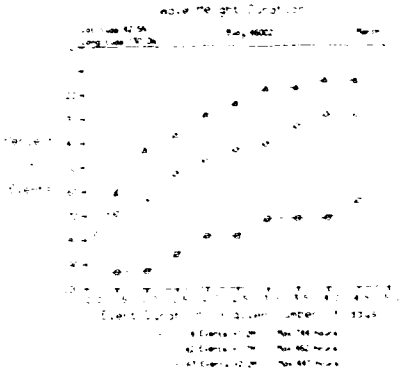

Wave Height Duration
Buoy 46001
October
Percent of Events
Event Duration (> given number of days)

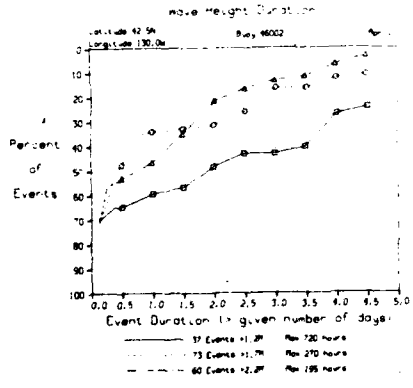

Wave Height Duration
Buoy 46001
Percent of Events
Event Duration (> given number of days)

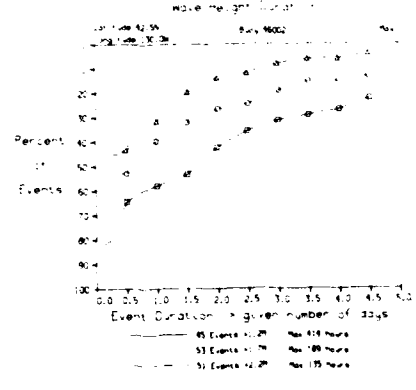

Buoy 46001
Event Duration (> given number of days)

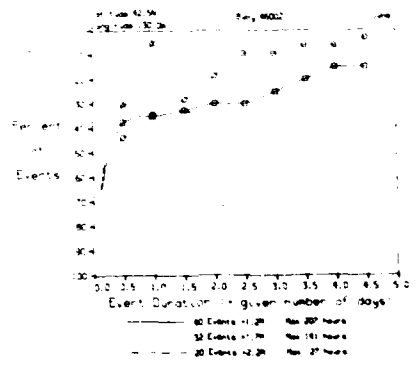






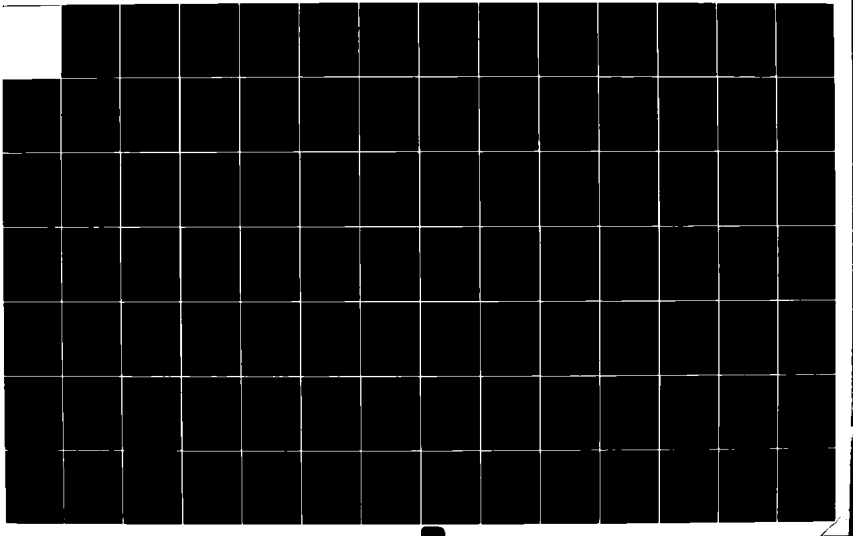

Wave Height Duration
Buoy 46002
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (>) given number of days

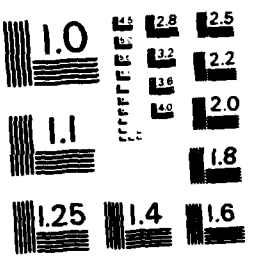




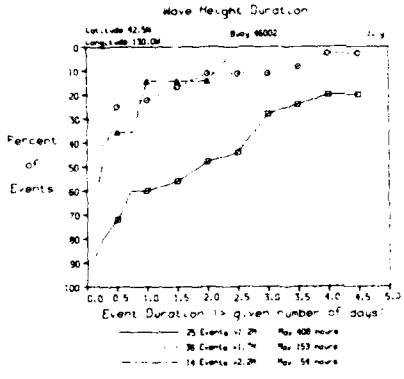
AD A130 647 WIND AND WAVE SUMMARIES FOR SELECTED US COAST GUARD OPERATING AREAS(U) NATIONAL CLIMATIC DATA CENTER ASHEVILLE NC D PASKAUSKY ET AL. APR 83 USCG-D-11-83

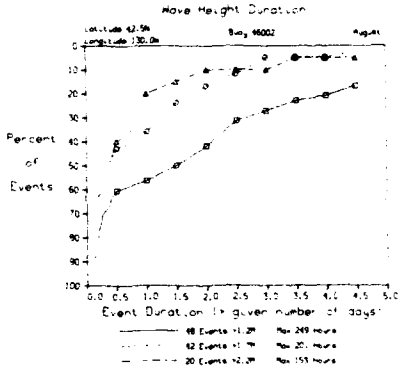
UNCLASSIFIED MIPR-Z70099-2-06128 F/G 5/1 NL

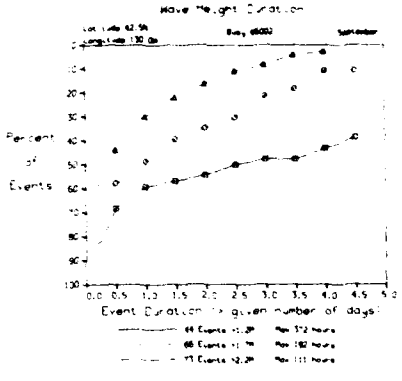


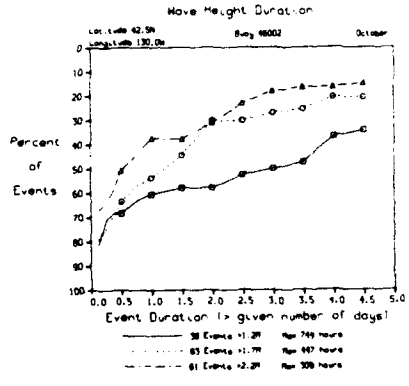


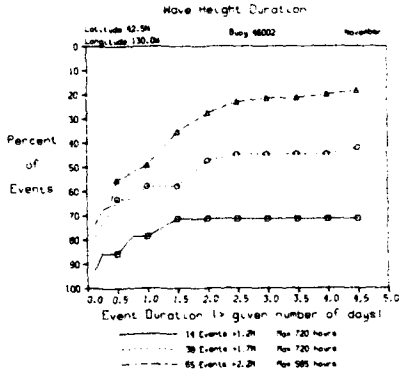
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963

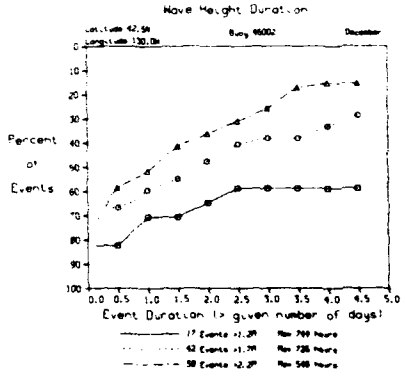

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

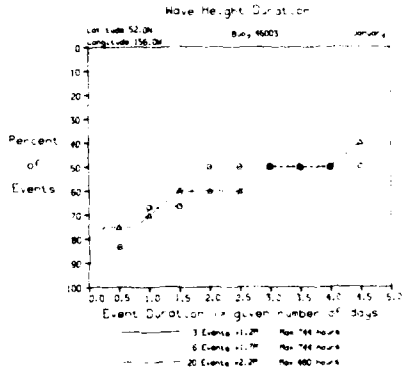

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

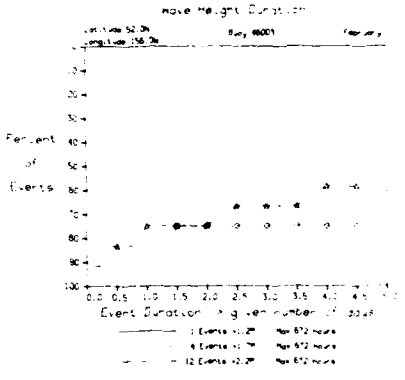

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

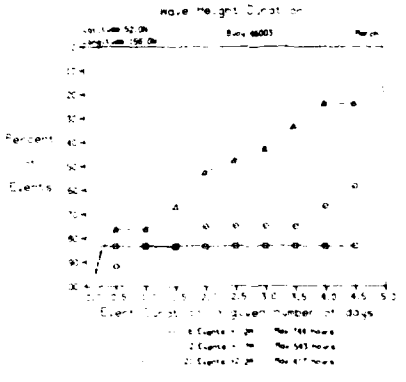

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

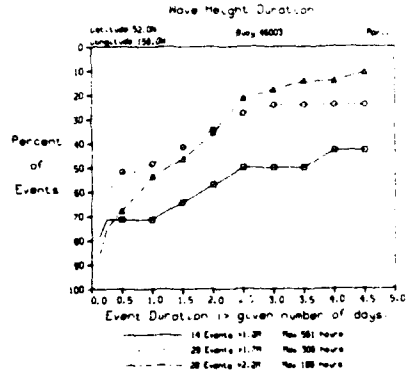

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

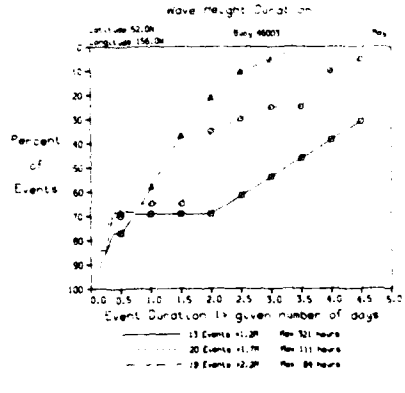

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

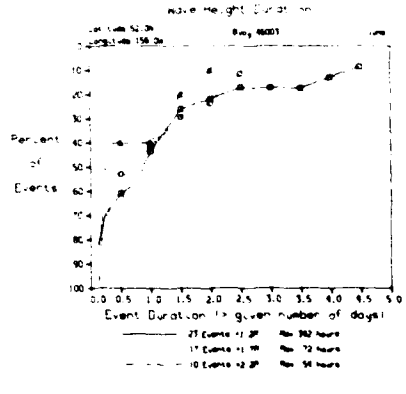

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

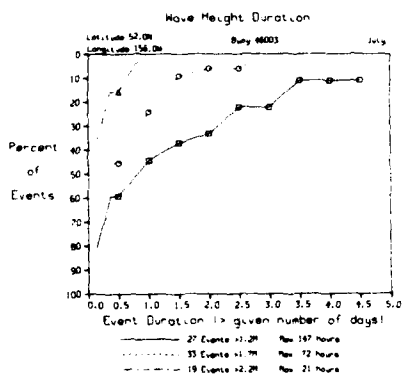

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

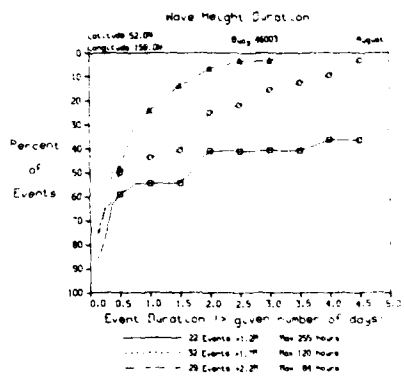

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

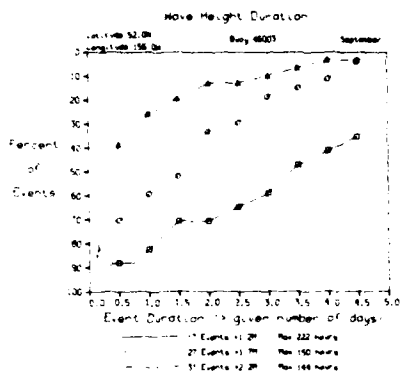

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

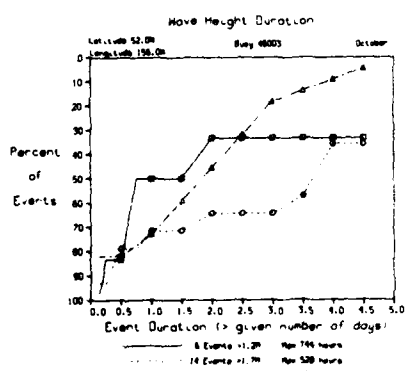

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

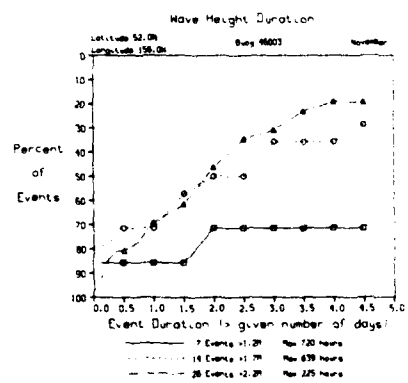

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

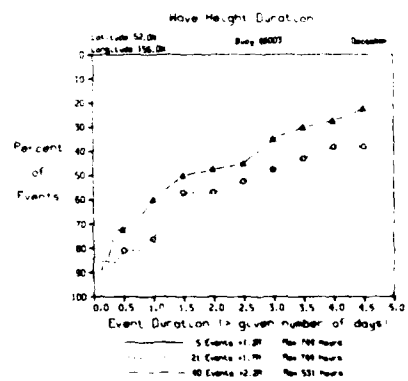

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

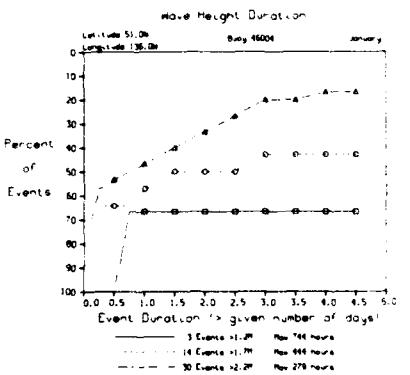

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

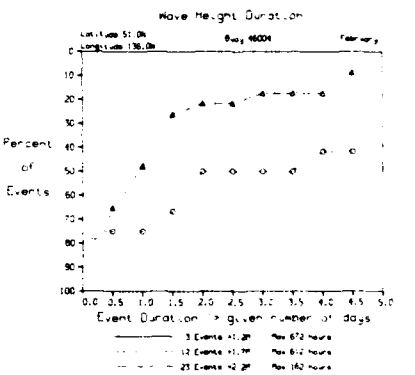

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

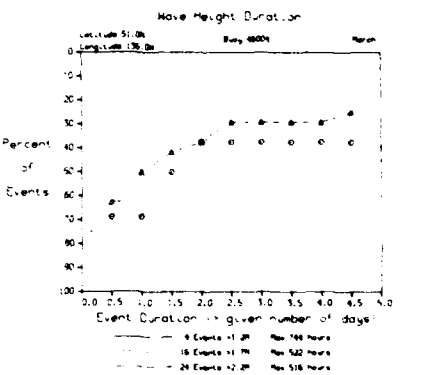

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

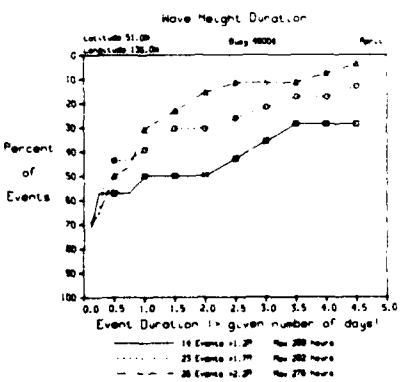

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

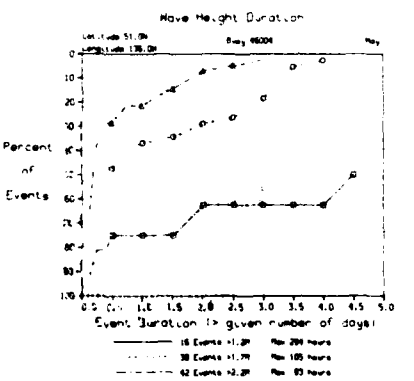

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

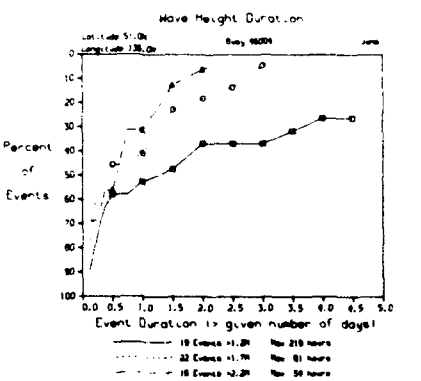

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

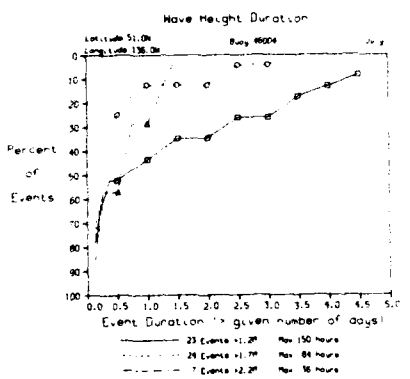

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

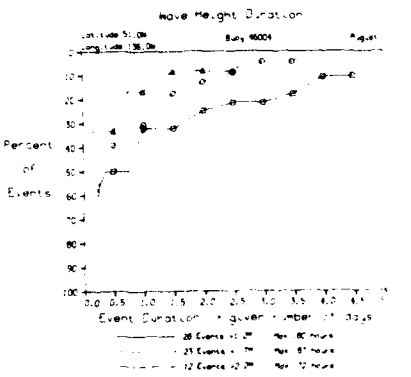

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

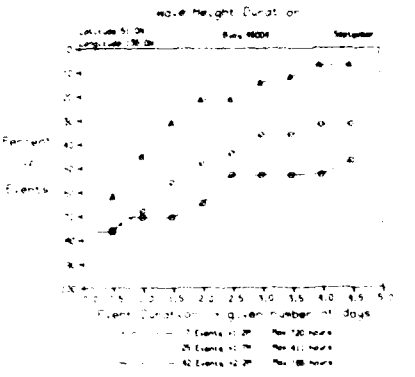

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

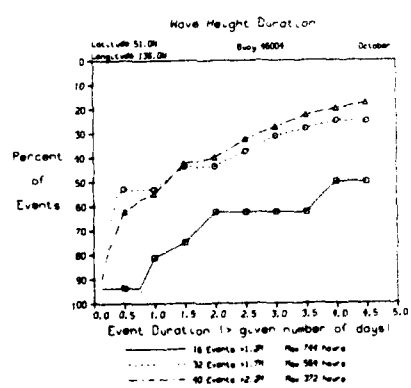

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

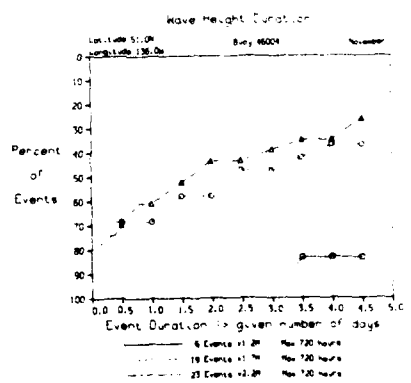

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

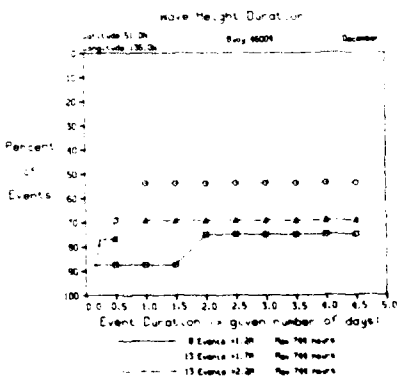

Wave Height Duration
Buoy 46004
Percent of Events
Event Duration (> given number of days)

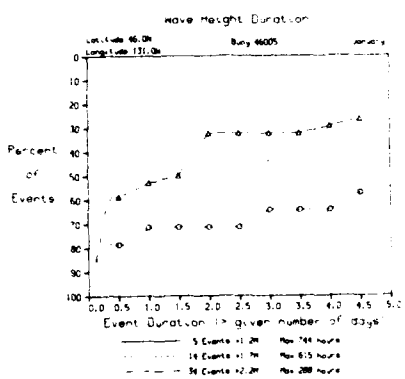

Wave Height Duration
Buoy 46004
Percent of Events
Event Duration (> given number of days)

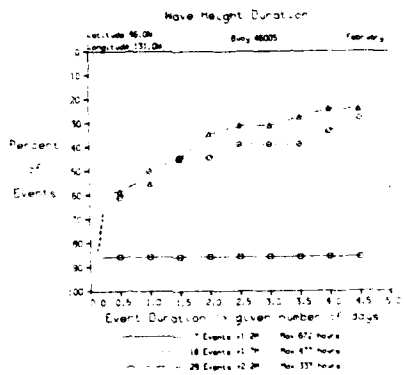

Wave Height Duration
Buoy 46004
Percent of Events
Event Duration (> given number of days)

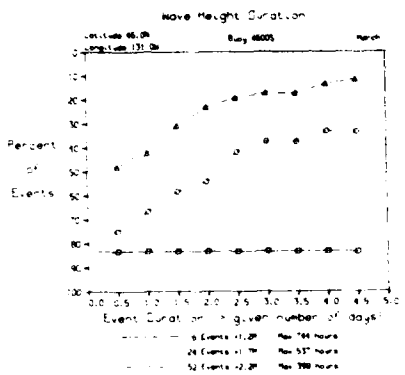

Wave Height Duration
Buoy 46004
October
Percent of Events
Event Duration (> given number of days)

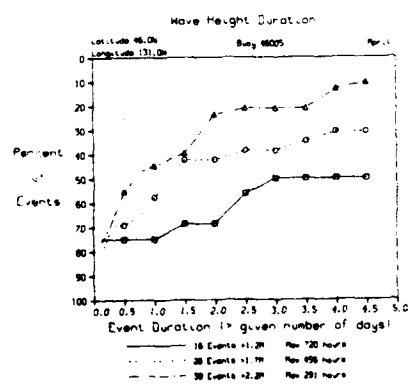

Wave Height Duration
Buoy 46004
Percent of Events
Event Duration (> given number of days)

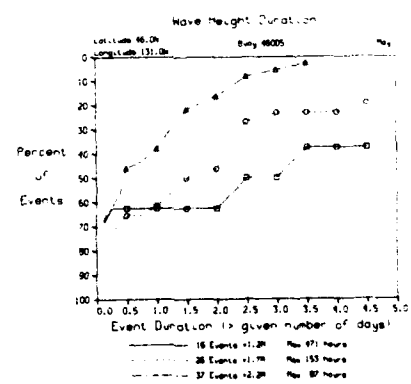

Wave Height Duration
Buoy 46004
Percent of Events
Event Duration (> given number of days)

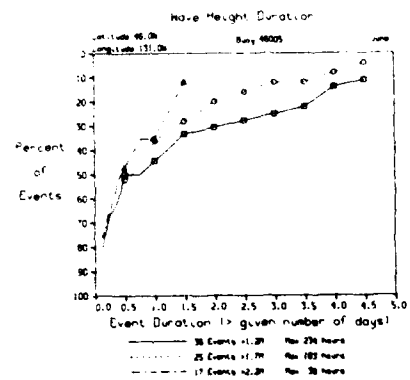

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

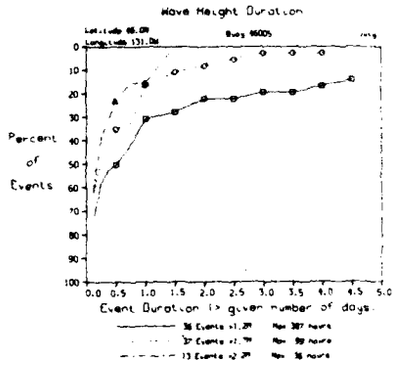

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

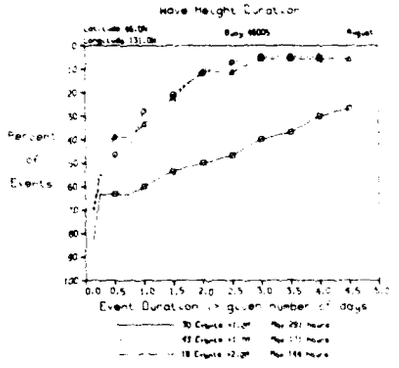

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

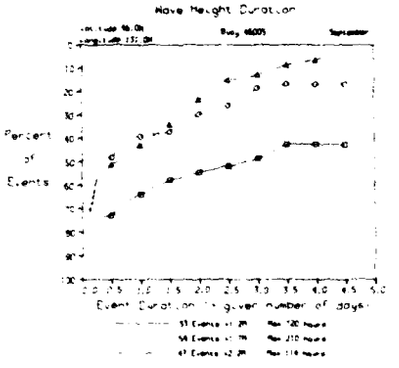

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

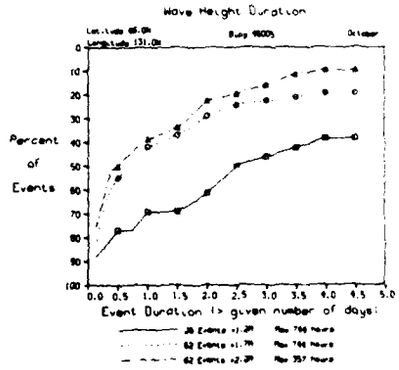

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

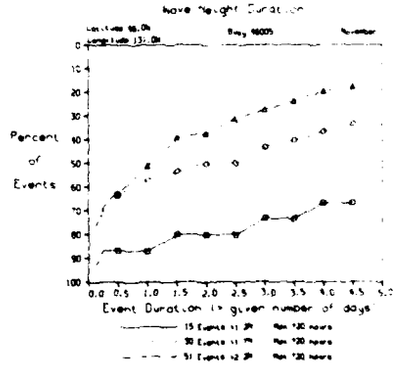

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

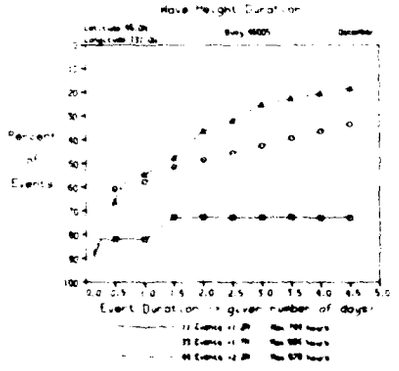

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

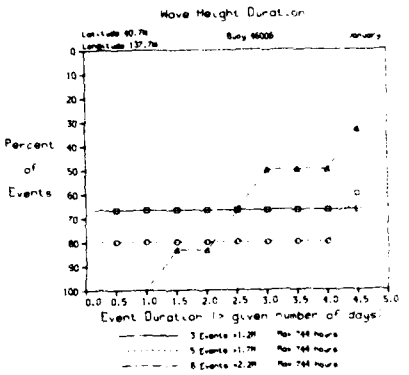

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

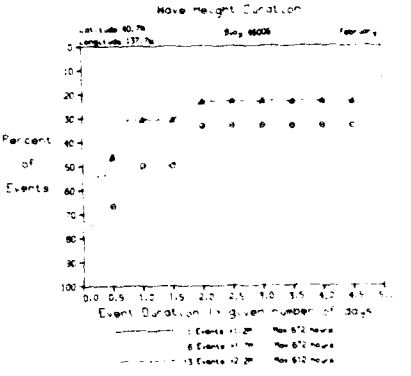

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

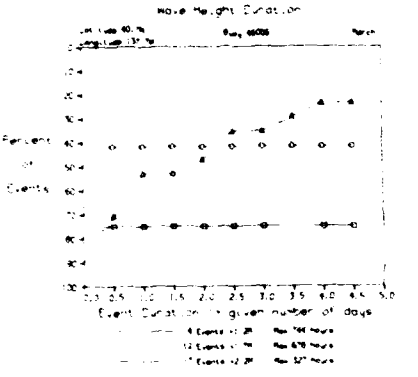

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

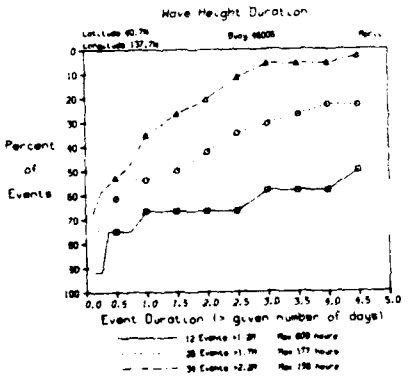

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

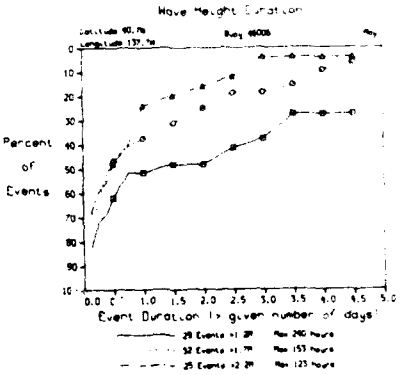

Wave Height Duration
Buoy 46005
Percent of Events
Event Duration (> given number of days)

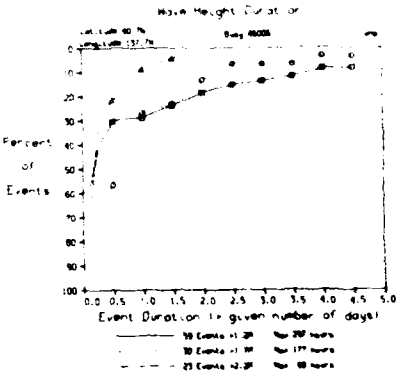

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

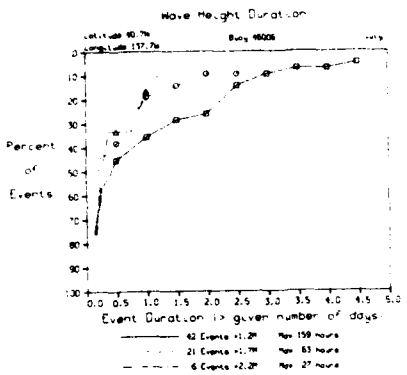

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

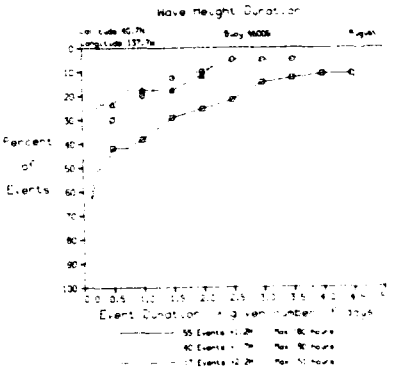

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

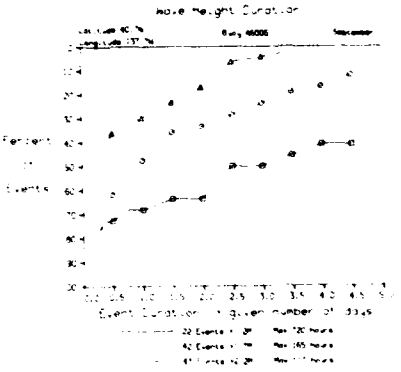

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

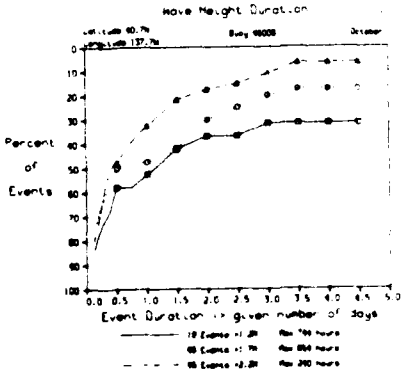

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

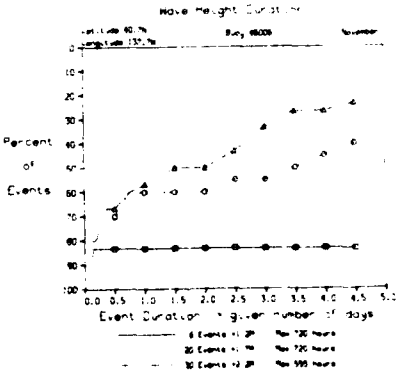

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

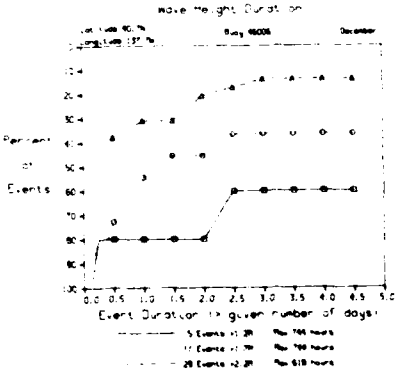

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

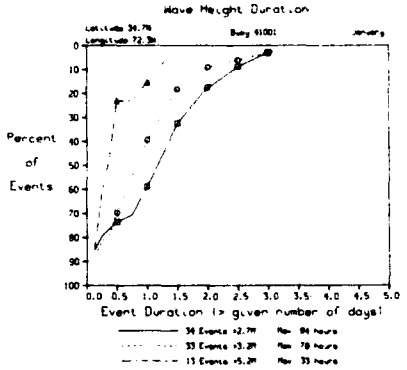

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

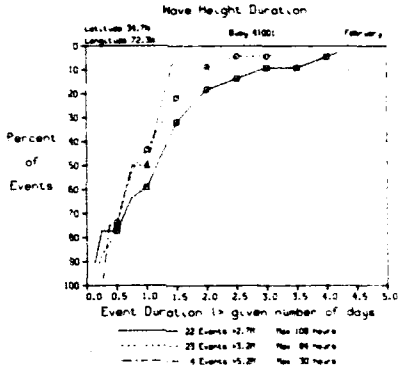

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

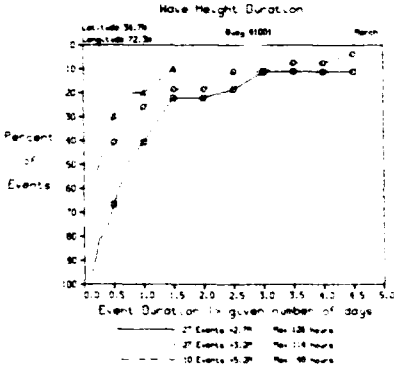

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

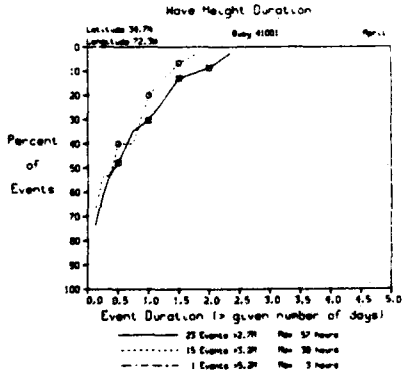

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

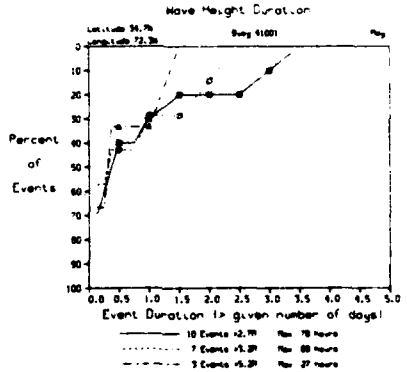

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

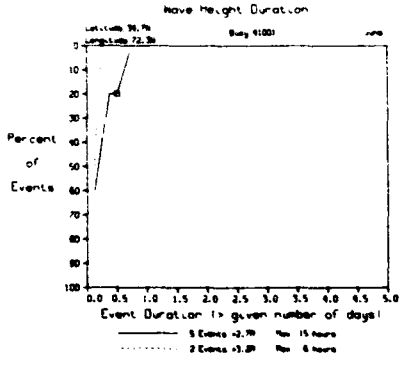

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

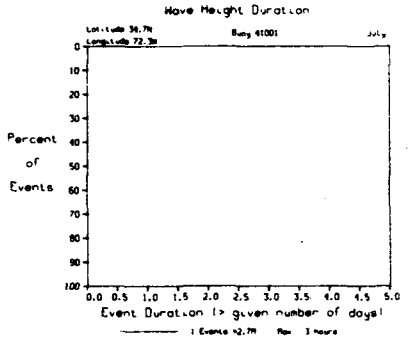

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

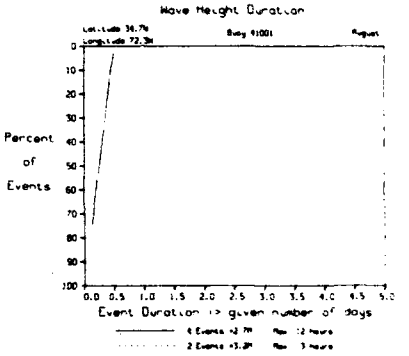

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

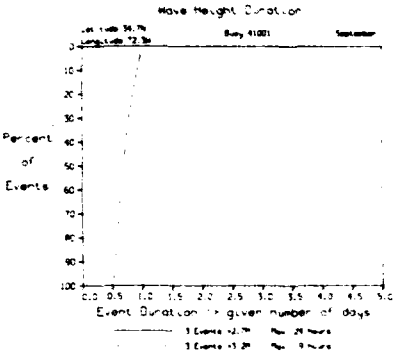

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

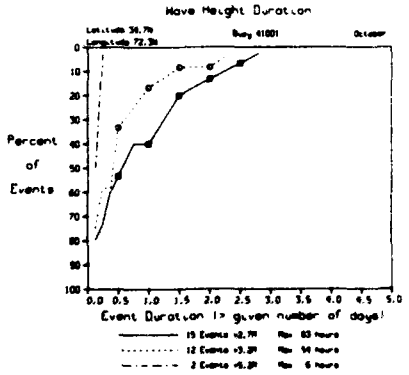

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

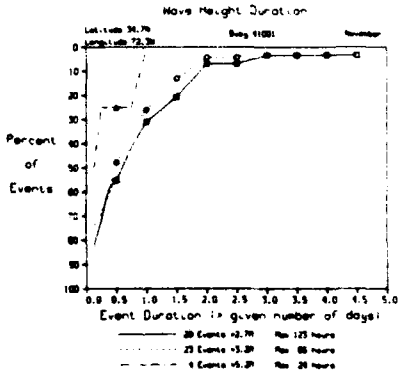

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

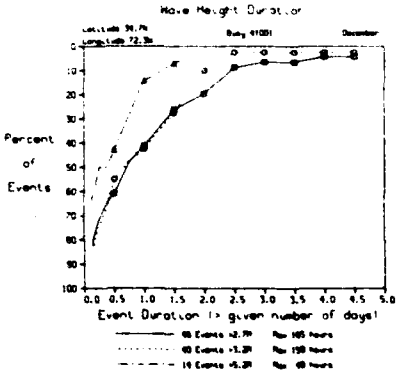

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

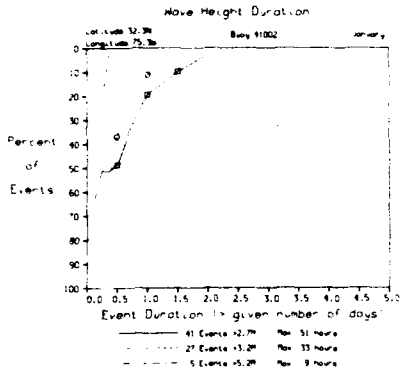

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

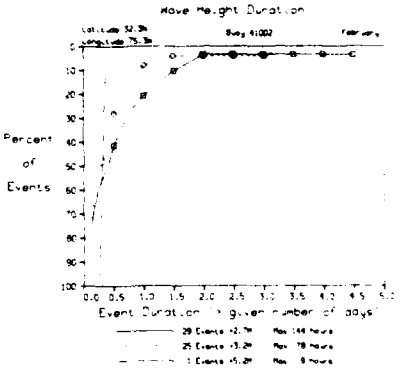

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

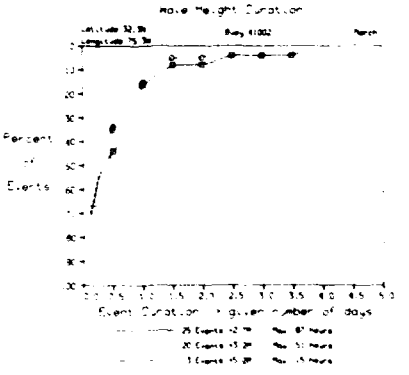

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

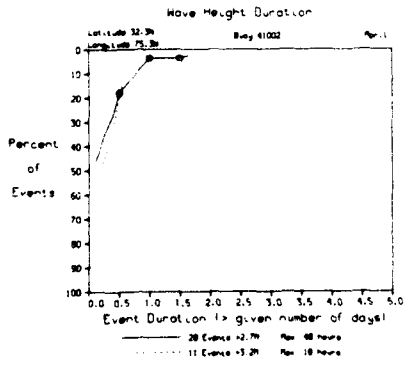

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

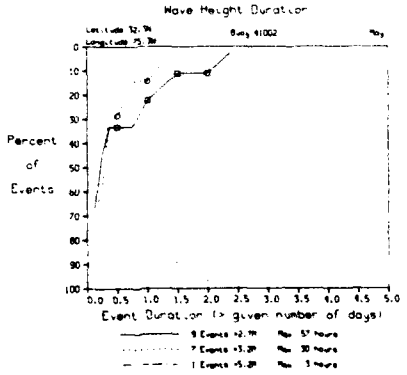

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

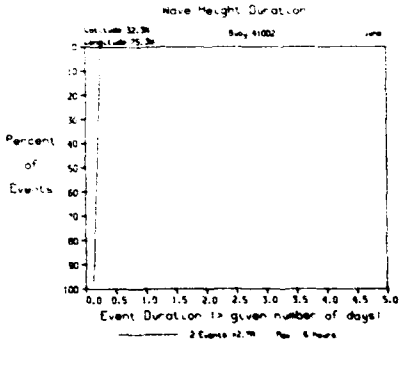

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

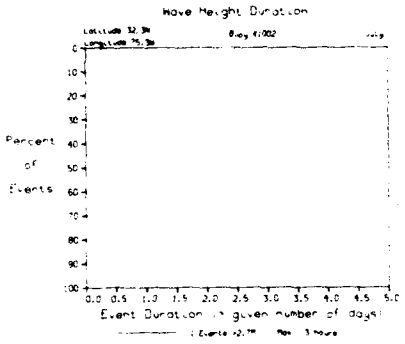

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

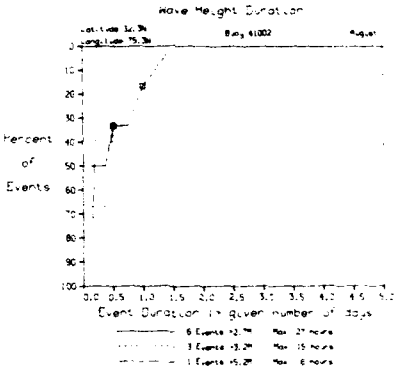

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

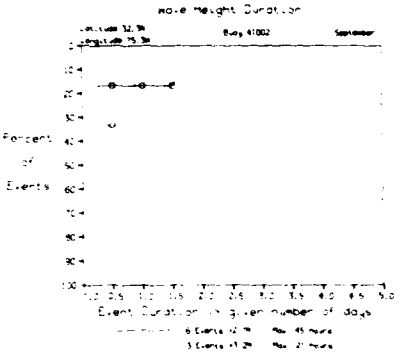

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

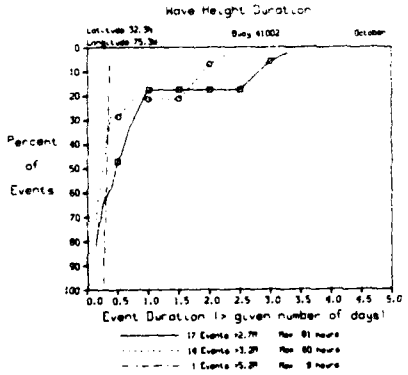

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

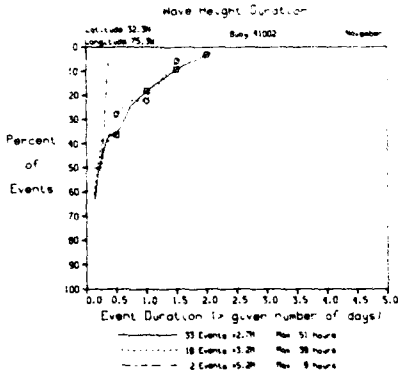

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

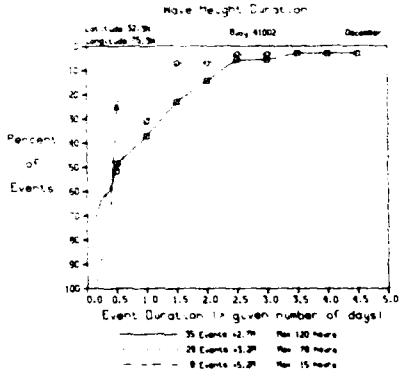

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

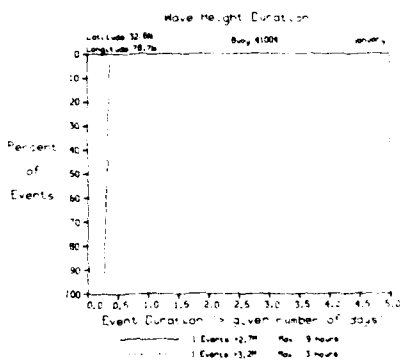

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)



No Occurrences in

February

No Data Available for

March

No Data Available for

April

No Occurrences in

May

No Occurrences in

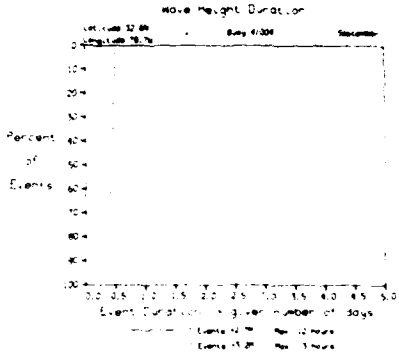
June

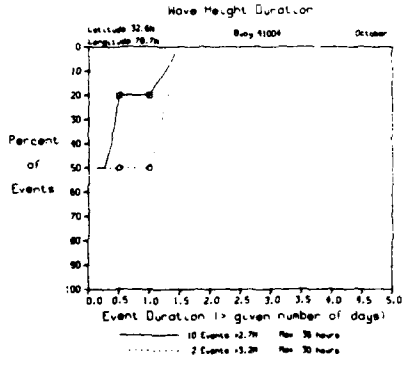
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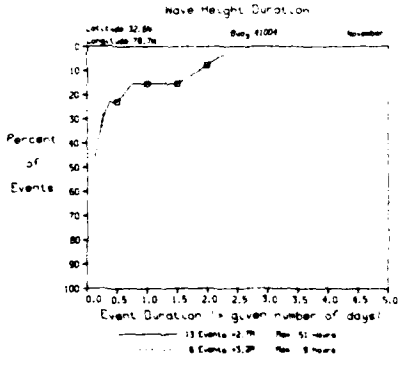
July

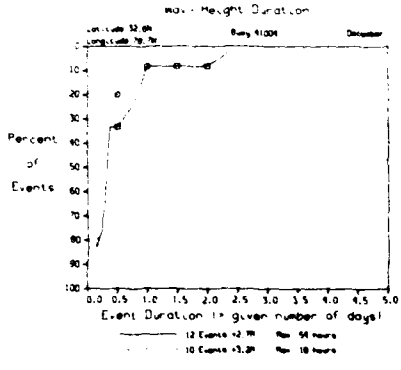
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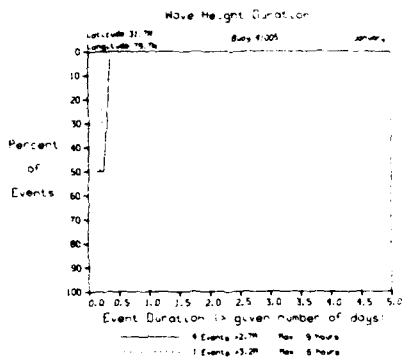
August

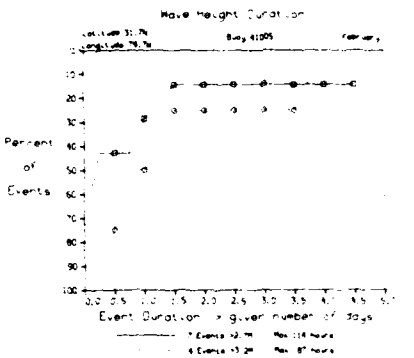


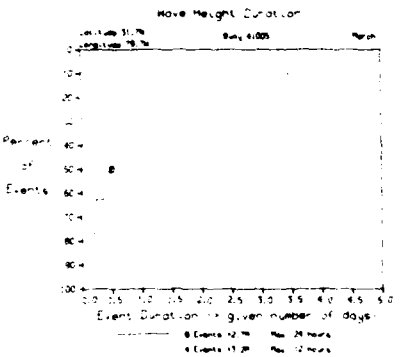


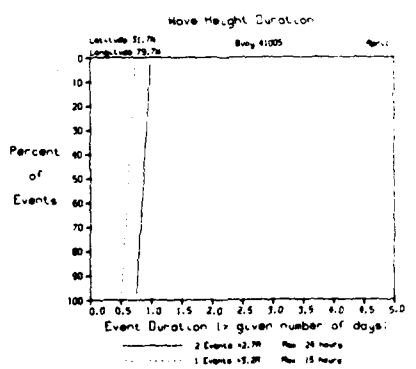


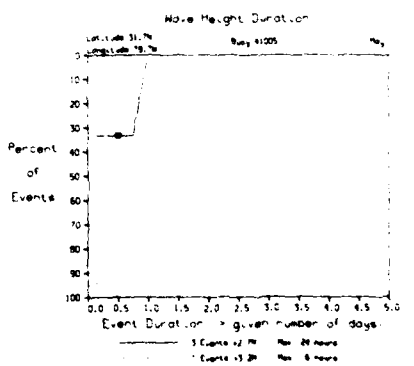




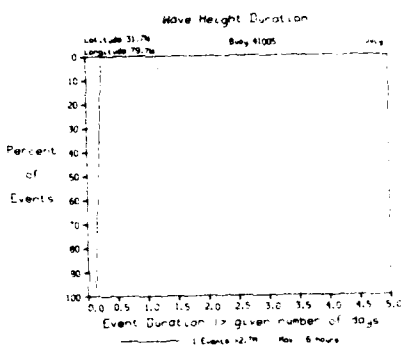


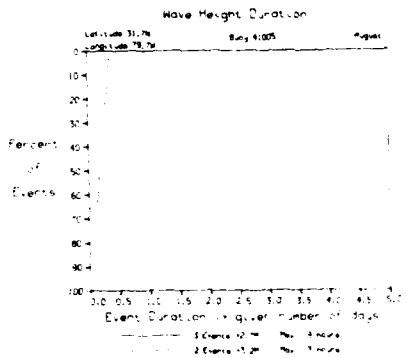






No Occurrences in June





No Occurrences in

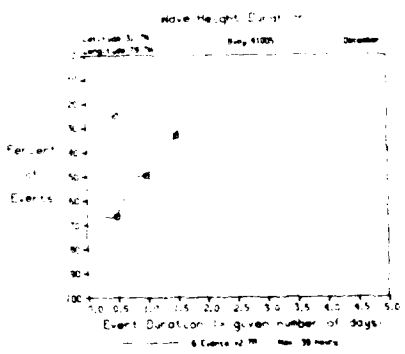
September

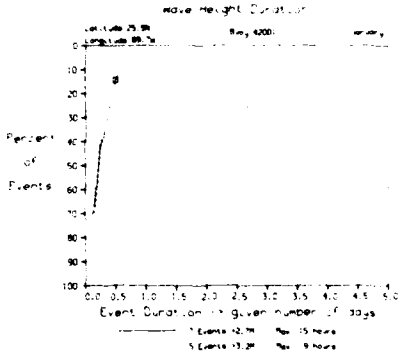
No Data Available for

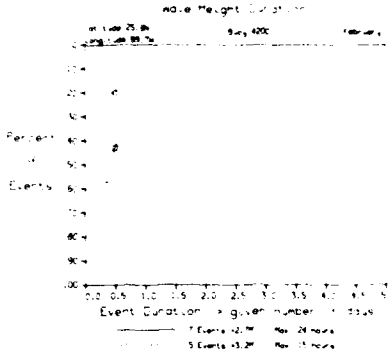
October

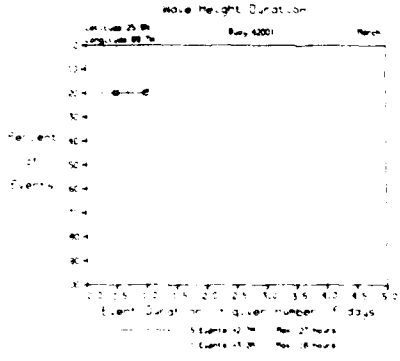
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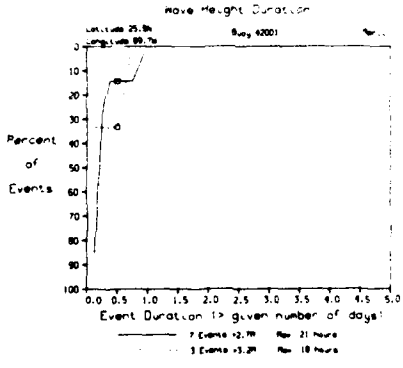
November

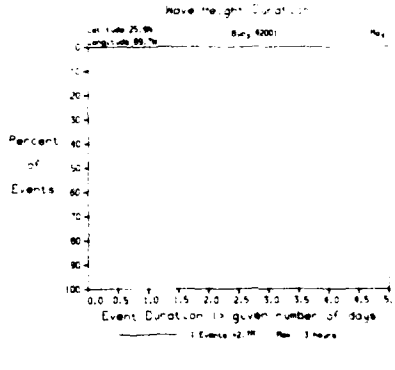


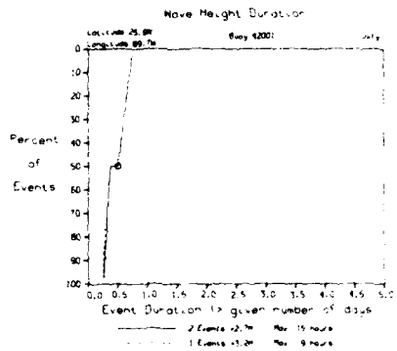

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

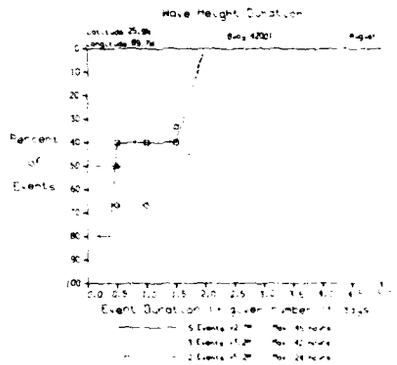

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

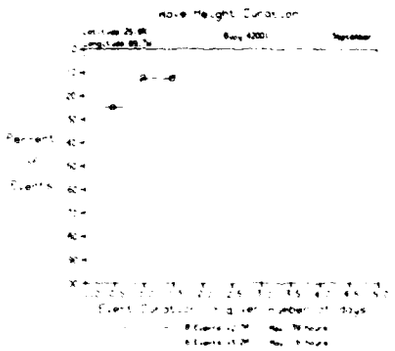

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

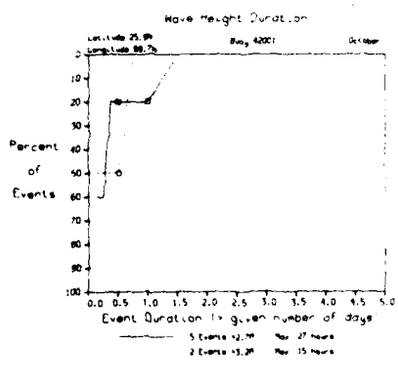

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

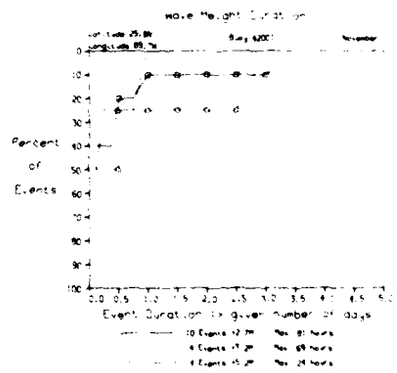

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

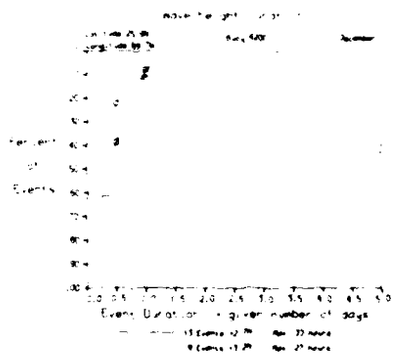

Wave Height Duration
Percent of Events
Event Duration (> given number of days

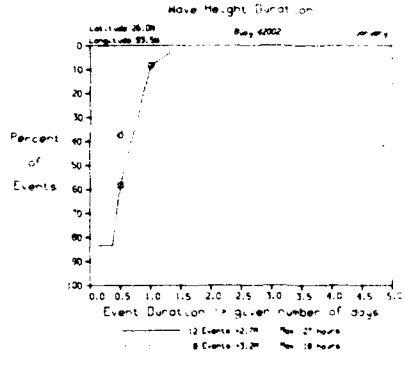

Wave Height Duration
Percent of Events
Event Duration (> given number of days

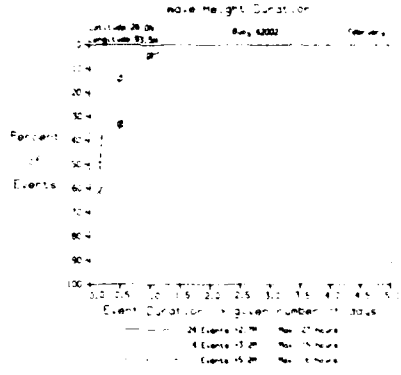

Wave Height Duration
Percent of Events

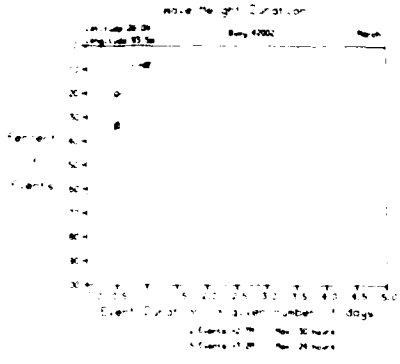

Wave Height Duration
Percent of Events
Event Duration (> given number of days

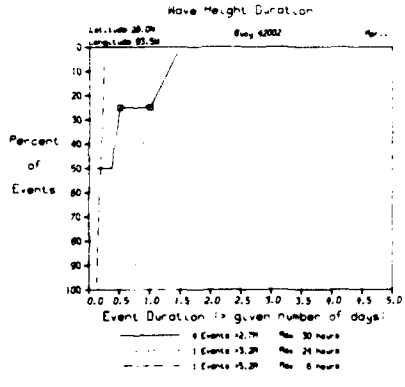

Percent of Events
Event Duration (> given number of days

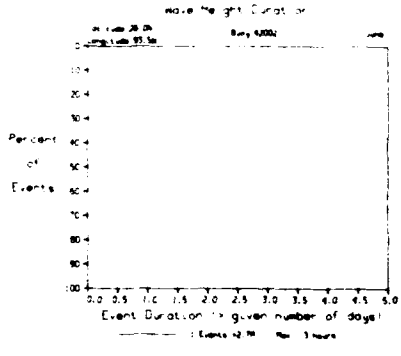

Percent of Events


Wave Height Duration
Percent of Events
Event Duration (+ given number of days)


Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

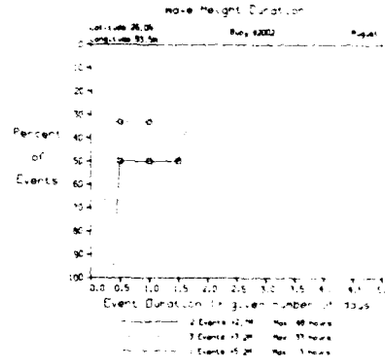

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

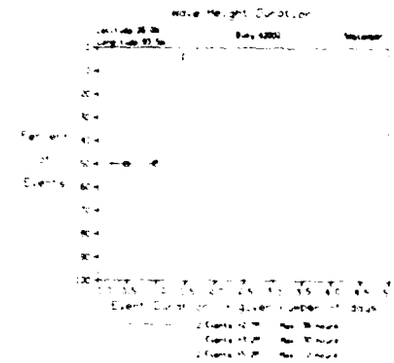

Wave Height Duration
Percent of Events
Event Duration (+ given number of days)

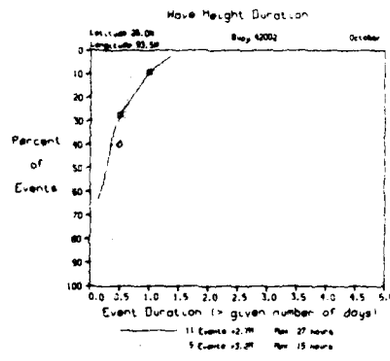

Percent of Events
Event Duration (+ given number of days)

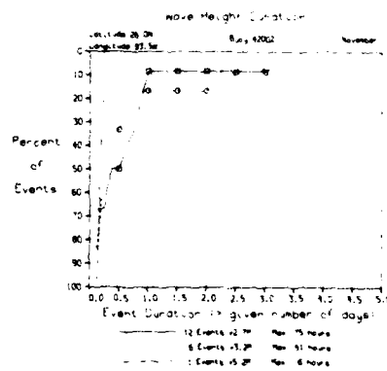
No Occurrences in

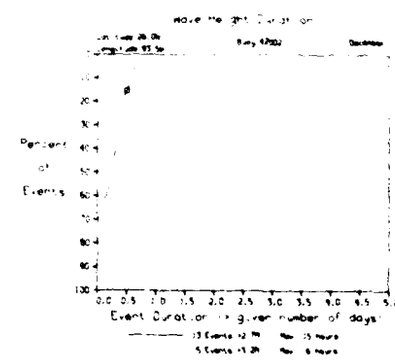
July

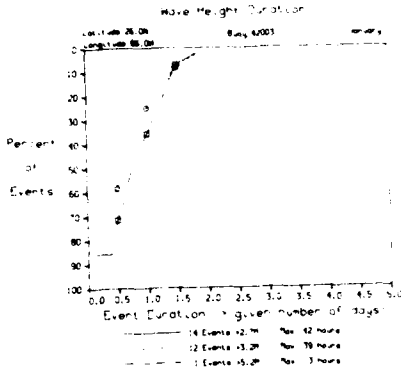


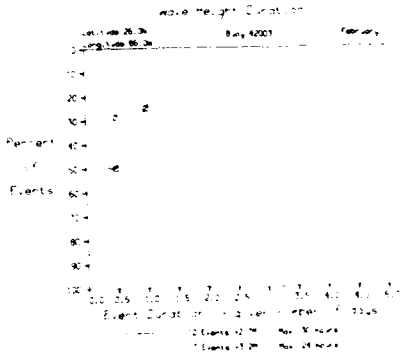


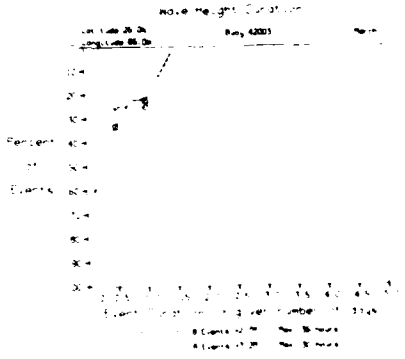


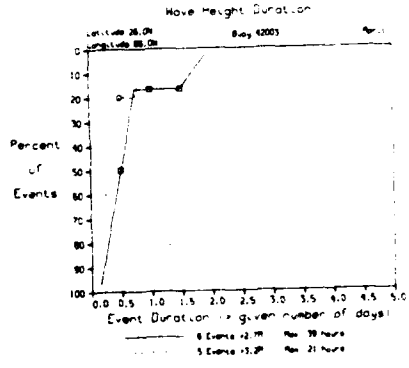


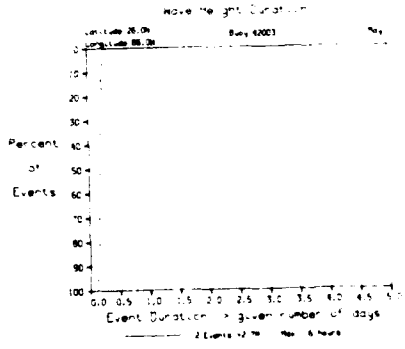


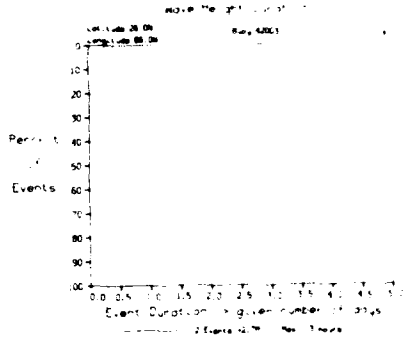

Wave Height Duration
Percent of Events
Event Duration > given number of days

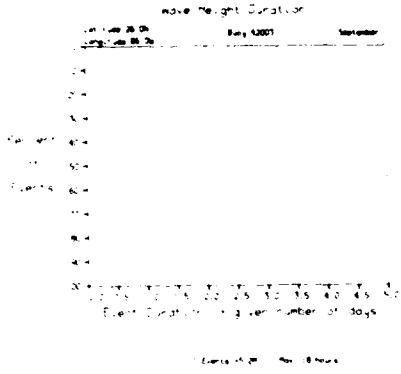

Wave Height Duration
Percent of Events

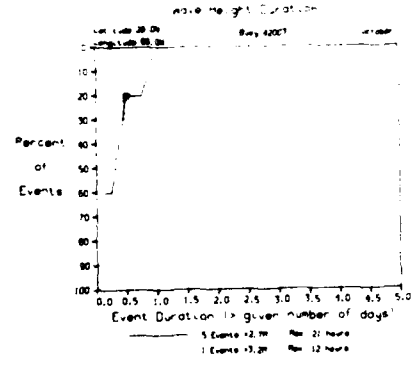

Wave Height Duration
Percent of Events

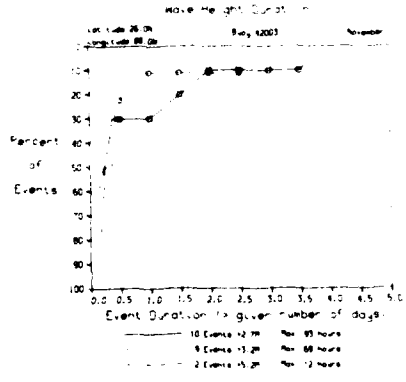

Wave Height Duration
Percent of Events
Event Duration > given number of days

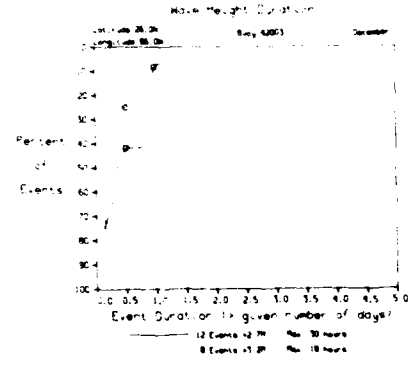

Wave Height Duration
Percent of Events
Event Duration > given number of days

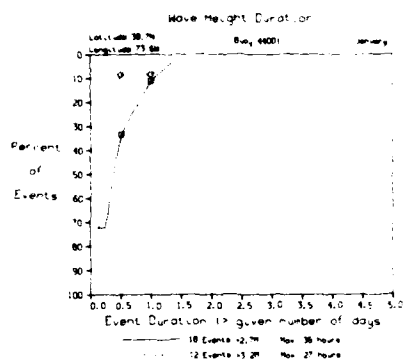


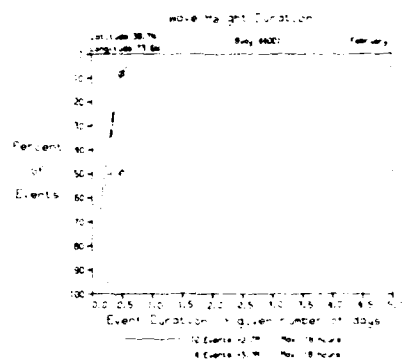


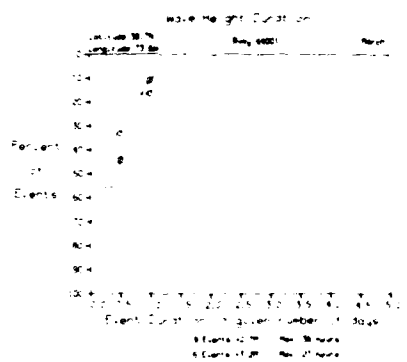

Percent of Events
Event Duration (> given number of days)

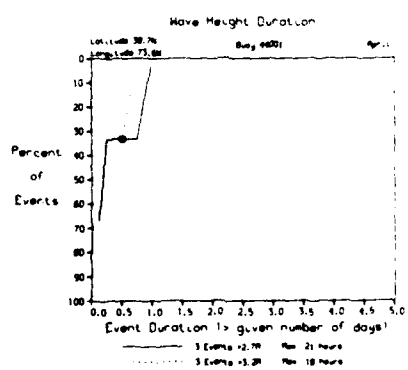

Percent of Events
Event Duration (> given number of days)

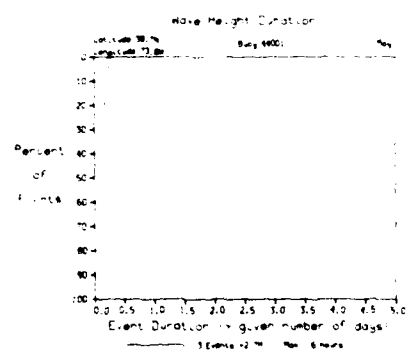

Percent of Events
Event Duration (> given number of days)

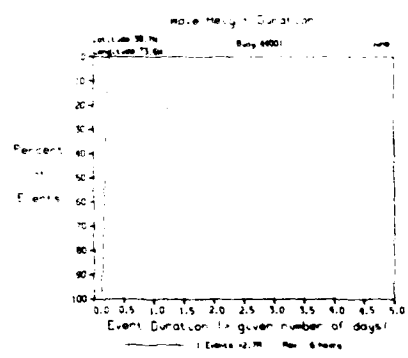

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

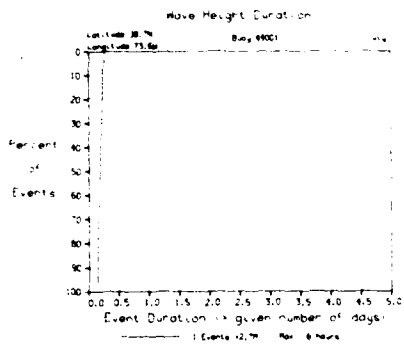

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

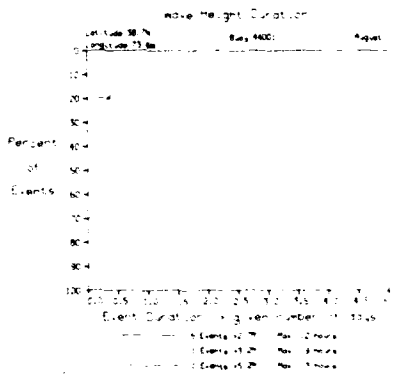

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

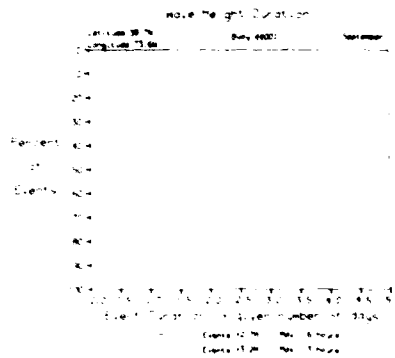

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

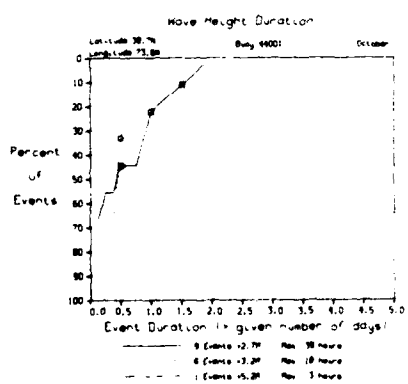

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

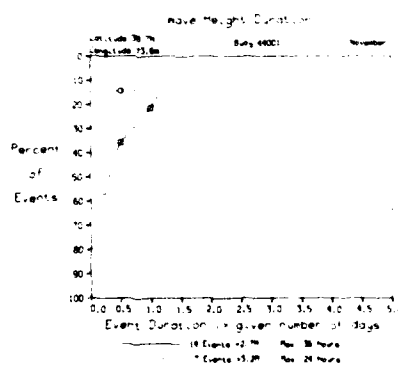

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

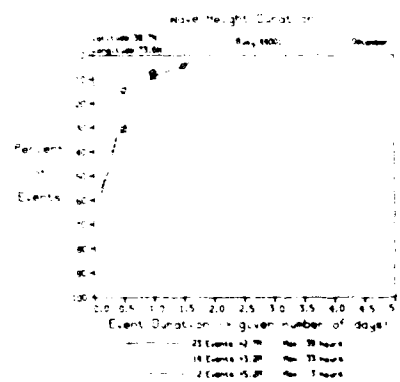

Wave Height Duration
Percent of Events
Event Duration (= given number of days)


Wave Height Duration
Percent of Events


Wave Height Duration
Percent of Events


Wave Height Duration
Percent of Events
Event Duration (= given number of days)


Wave Height Duration
Percent of Events
Event Duration (= given number of days)


Wave Height Duration
Percent of Events
Event Duration (= given number of days)

No Data Available for January

No Data Available for February

No Data Available for March

No Data Available for April

No Data Available for May

No Data Available for June

No Data Available for

July

No Data Available for

August

No Data Available for

September

No Data Available for

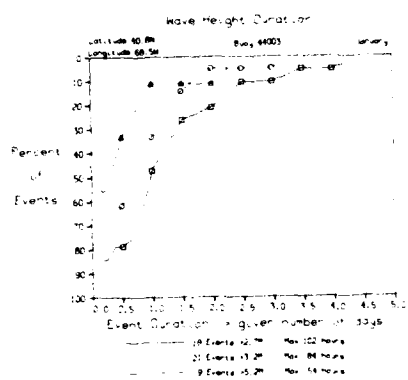
October

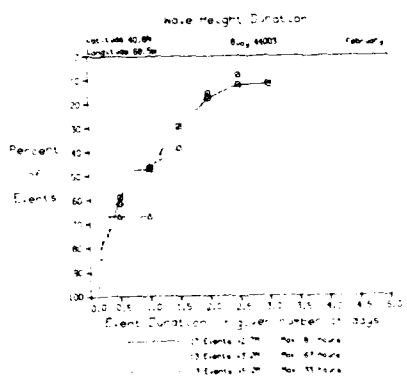
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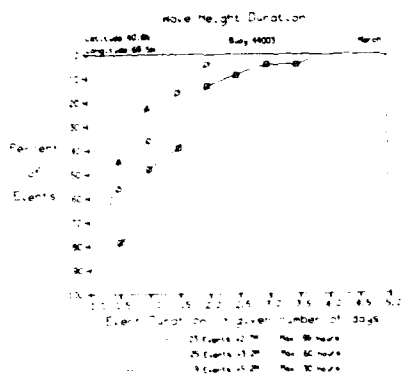
November

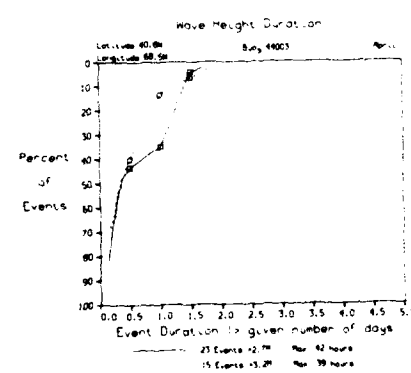
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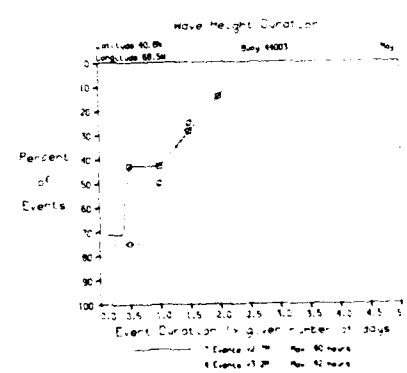
December

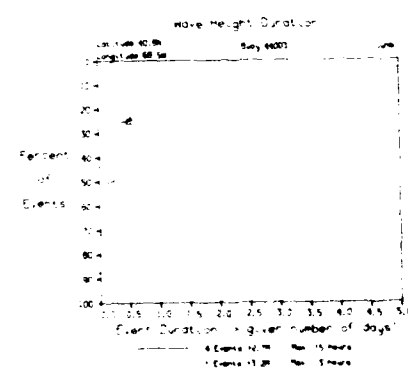

Wave Height Duration
Percent of Events
Event Duration (x given number of days)


Wave Height Duration
Percent of Events
Event Duration (x given number of days)


Wave Height Duration
Percent of Events
Event Duration (x given number of days)

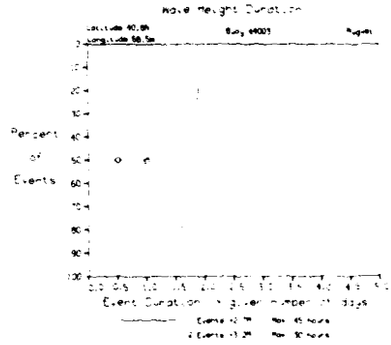

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

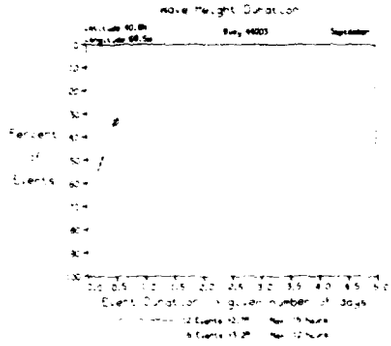

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

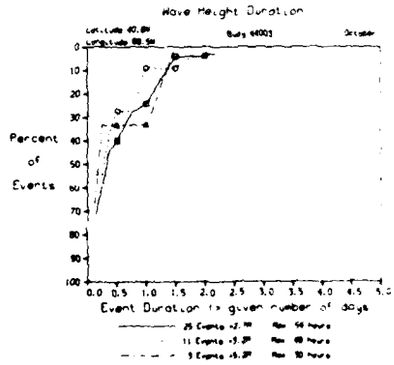

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

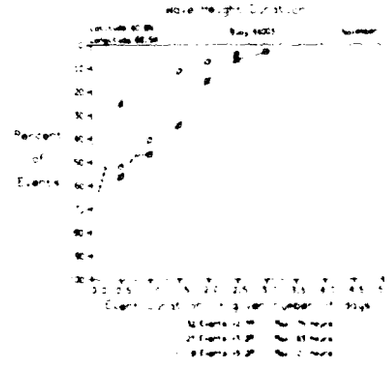
No Occurrences in

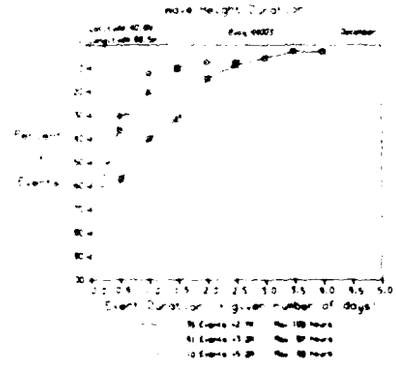
July

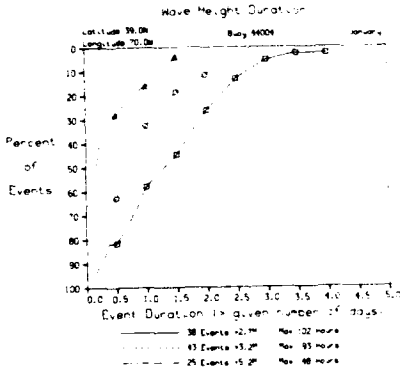


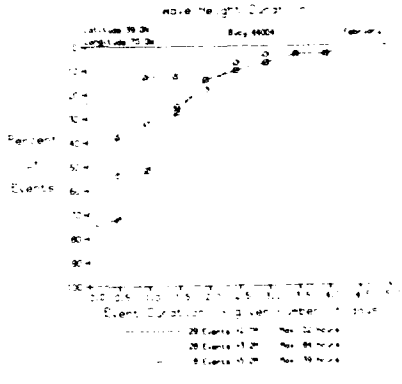


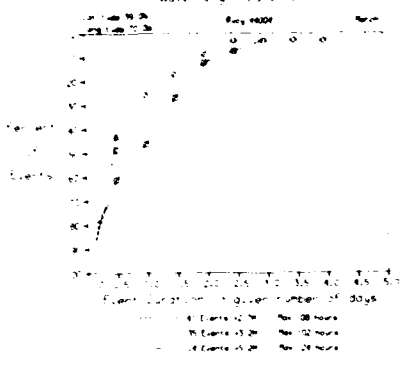


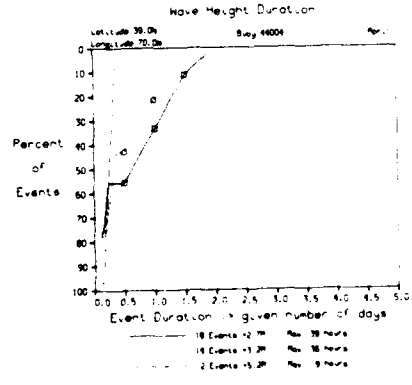


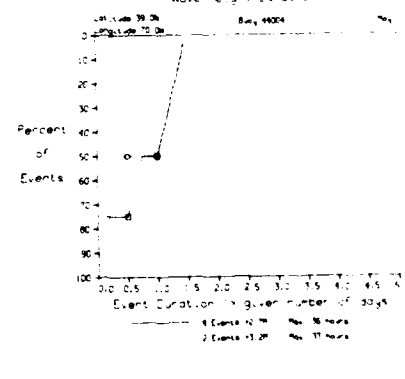


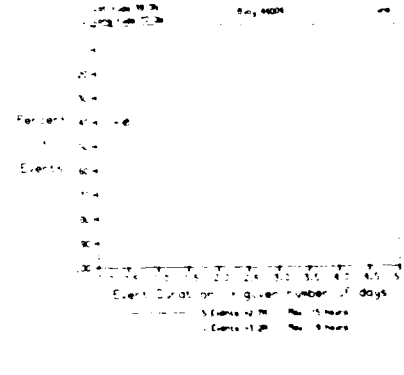

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Percent of Events

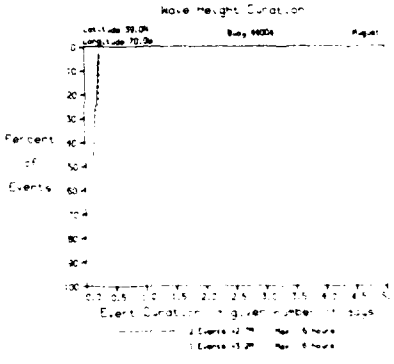


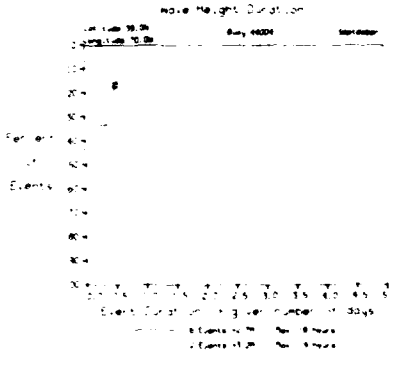

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

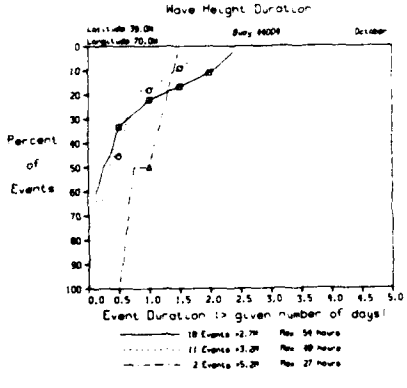

Percent of Events
Event Duration (> given number of days)

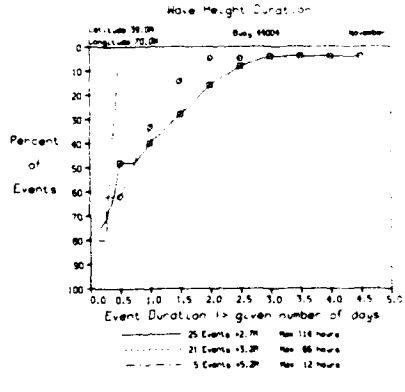


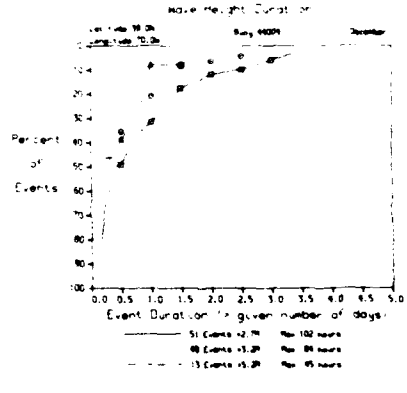
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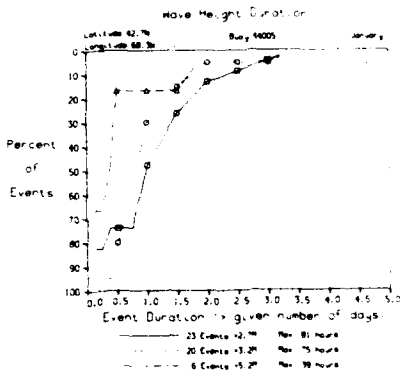


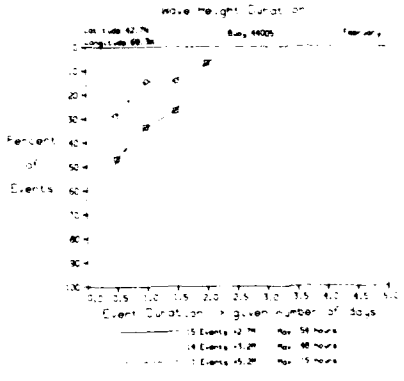


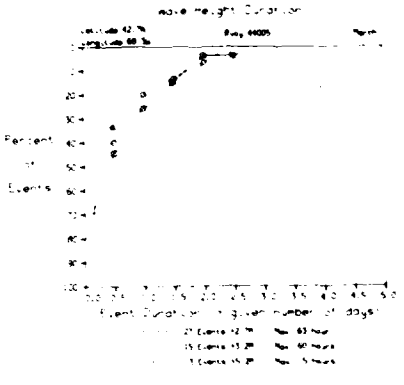


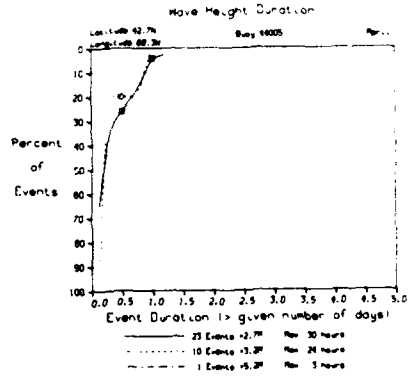


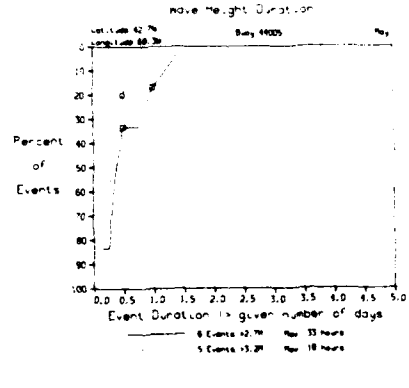






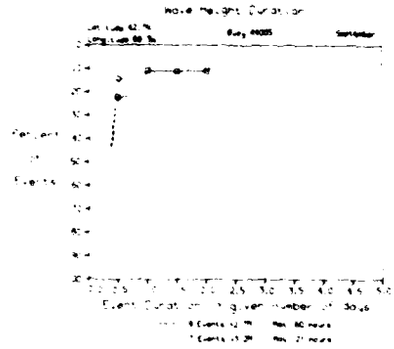


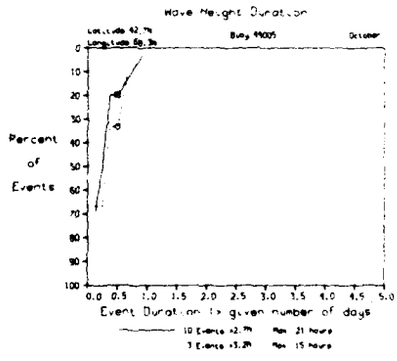


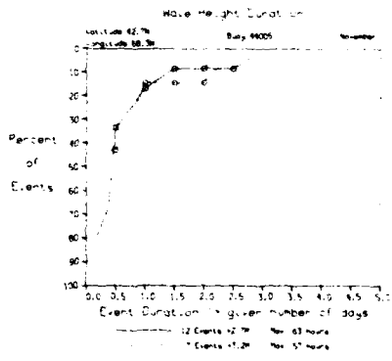


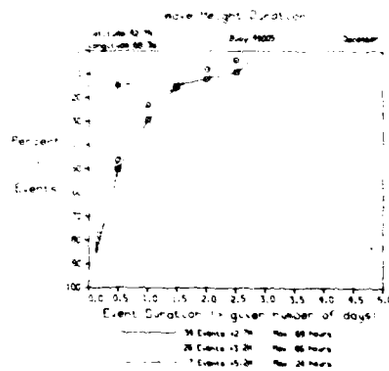
No Occurrences in

June


Wave Height Duration
Percent
of
Events


Wave Height Duration
Buoy 46005
October
Percent
of
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (+ given number of days


Wave Height Duration
Buoy 46005
Percent
of
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (+ given number of days


Wave Height Duration
Buoy 46005
Percent
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (+ given number of days

No Data Available for

January

No Data Available for

February

No Data Available for

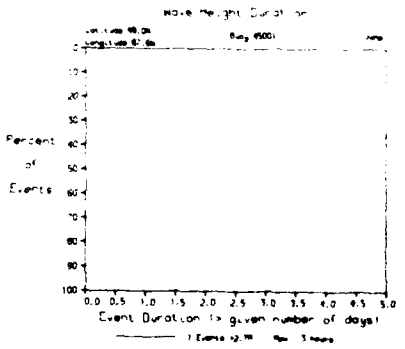
March

No Data Available for

April

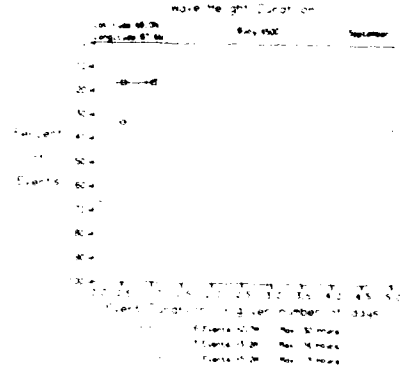
No Occurrences in

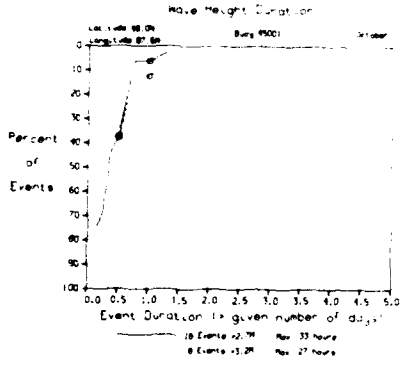
May

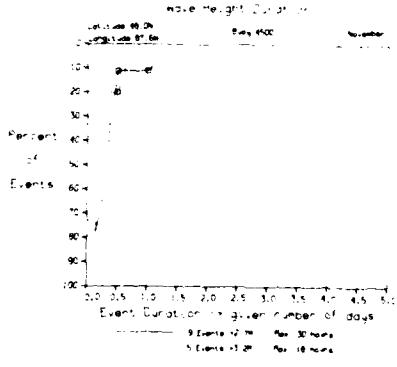


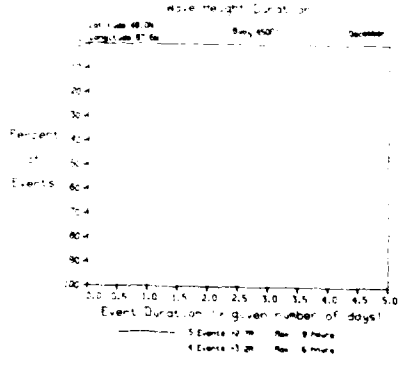
No Occurrences in

July









No Data Available for

January

No Data Available for

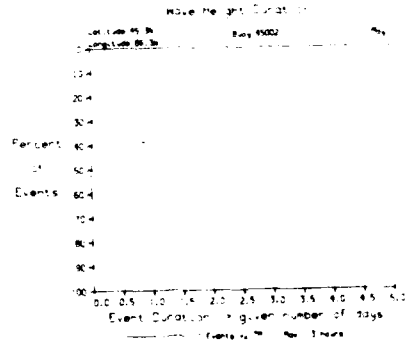
February

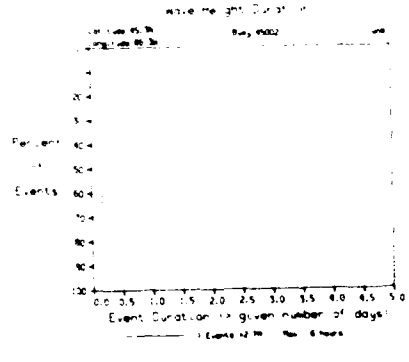
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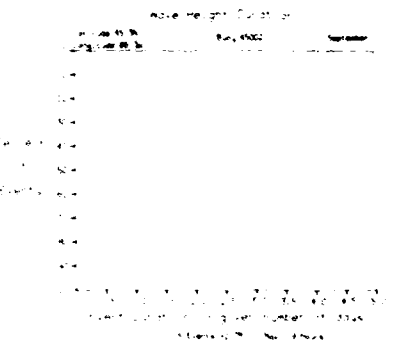
March

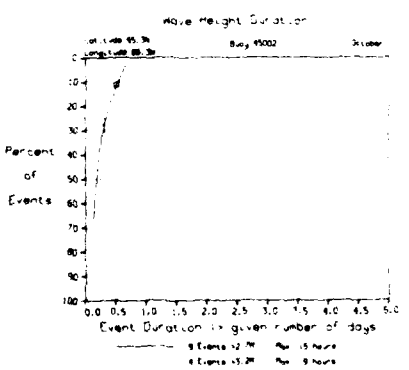
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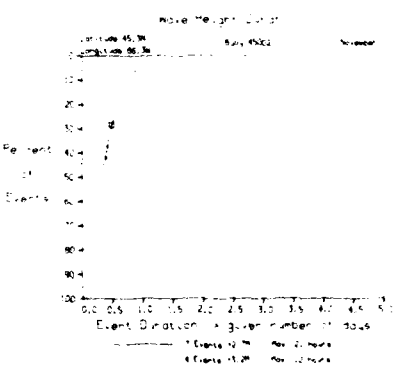
April

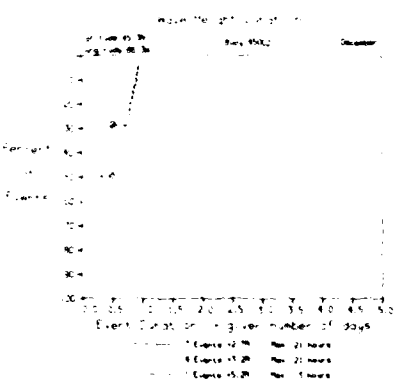


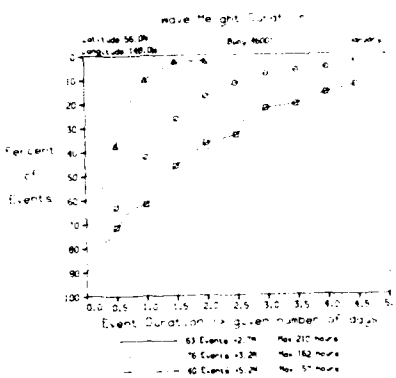


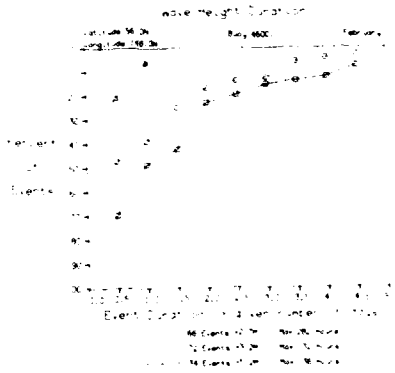


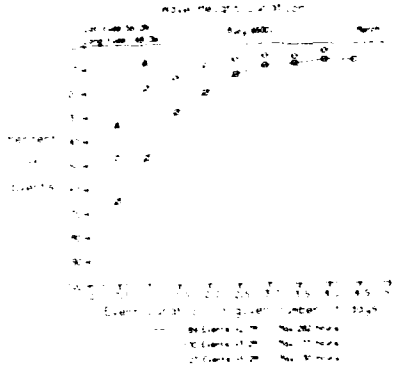

Wave Height Duration
Percent of Events
Event Duration in given number of days

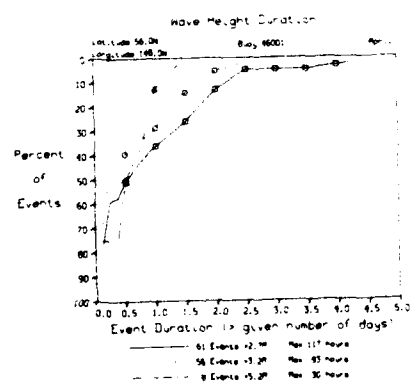

Wave Height Duration
Event Duration in given number of days

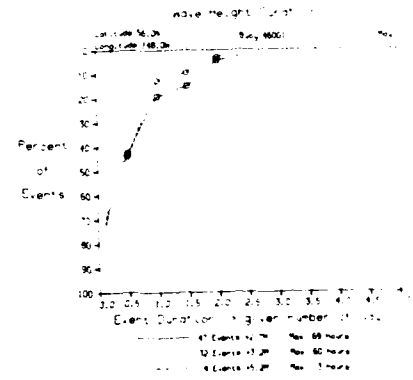

Event Duration in given number of days

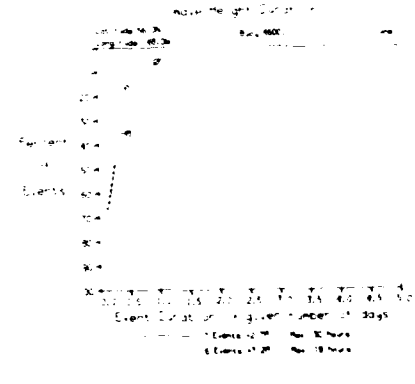


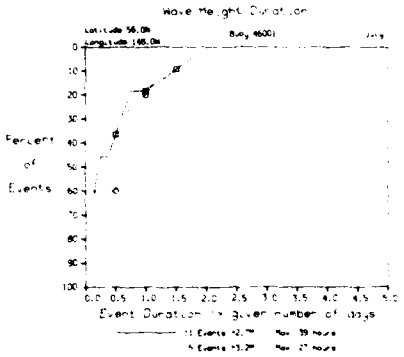


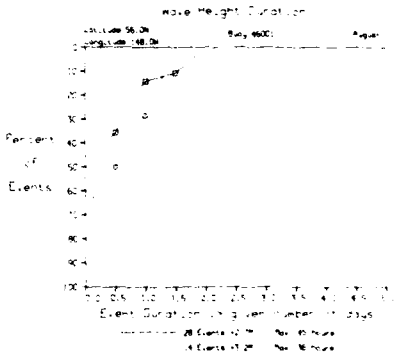


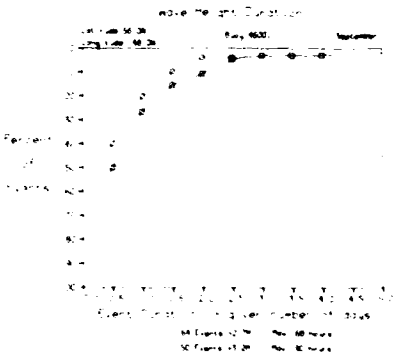

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

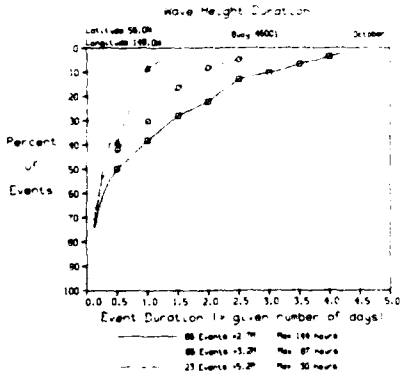


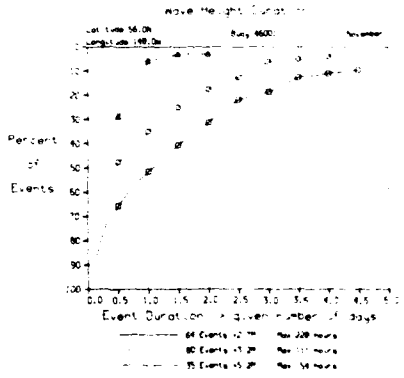


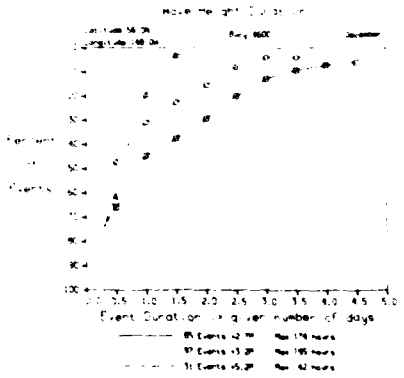

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

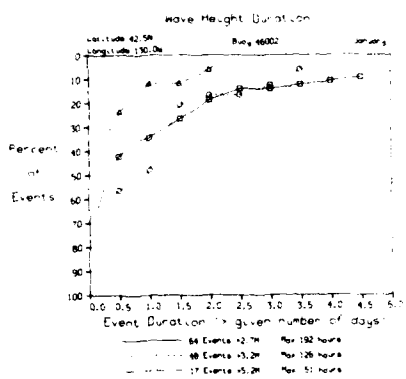

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

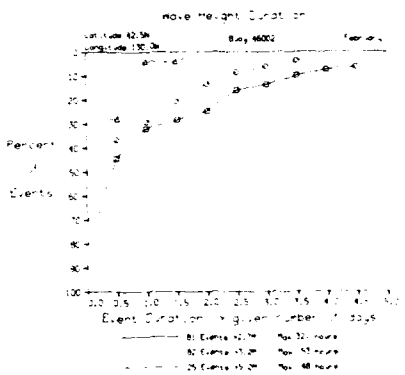

Wave Height Duration
Percent of Events

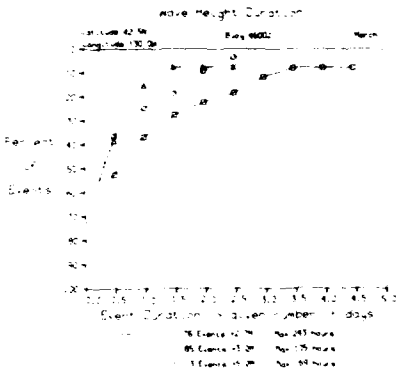

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

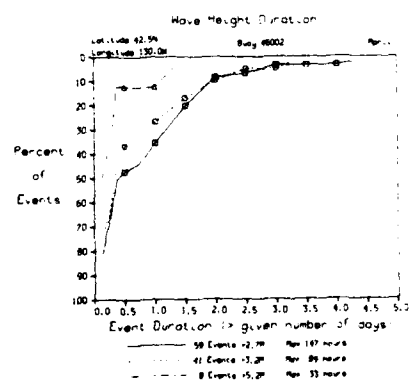

Percent of Events
Event Duration (> given number of days)

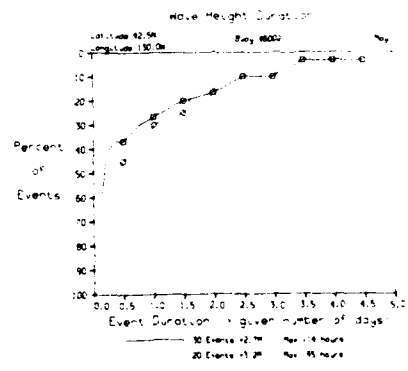

Percent of Events
Event Duration (> given number of days)

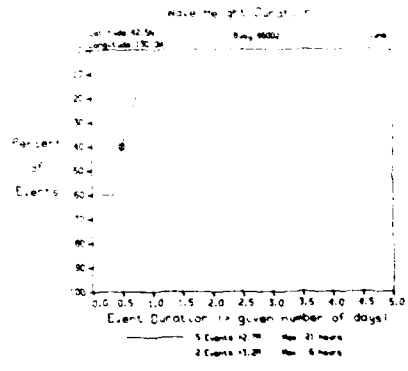

Wave Height Duration
Buoy 46002
Percent of Events
Event Duration (+ given number of days)

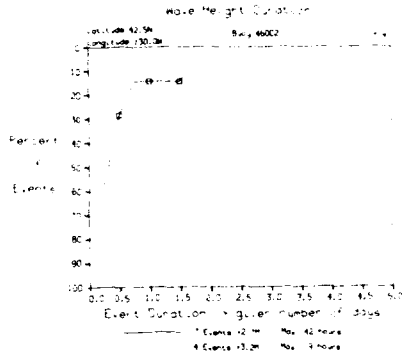

Wave Height Duration
Buoy 46002
Percent of Events
Event Duration (+ given number of days)

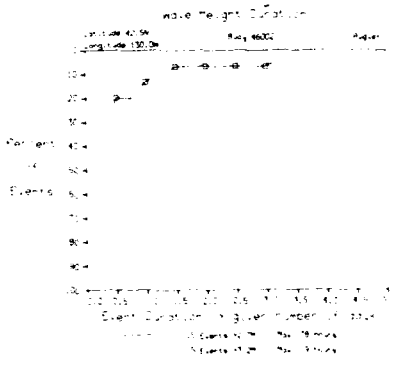

Wave Height Duration
Buoy 46002
Percent of Events
Event Duration (+ given number of days)

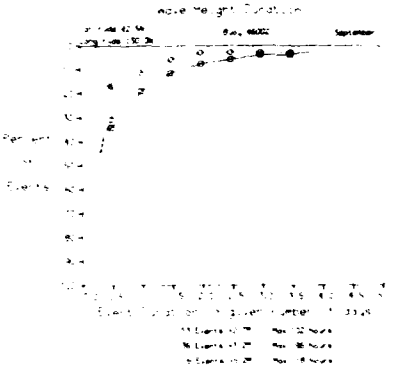

Wave Height Duration
Buoy 46002
Percent of Events
Event Duration (+ given number of days)

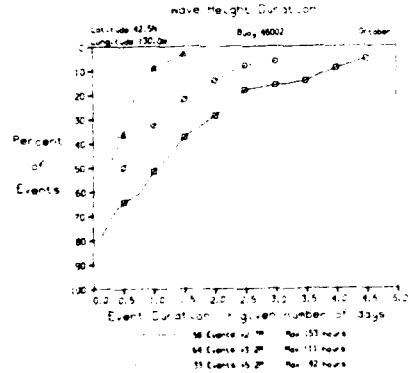

Wave Height Duration
Buoy 46002
Percent of Events
Event Duration (+ given number of days)

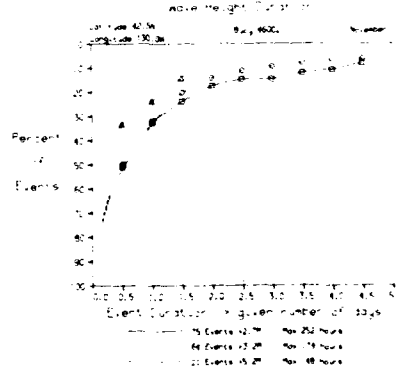

Buoy 46002
Percent of Events
Event Duration (+ given number of days)

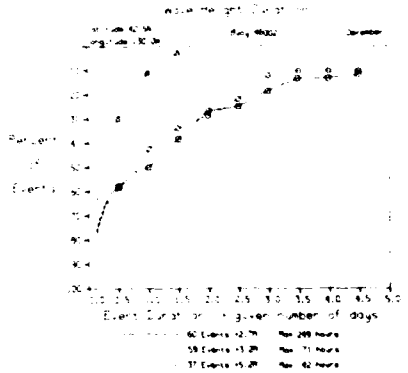

Wave Height Duration
Percent of Events
Event Duration > given number of days

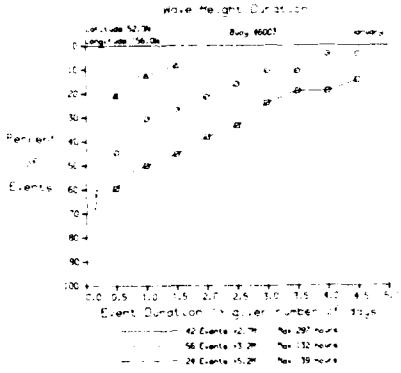

Wave Height Duration
Percent of Events
Event Duration > given number of days

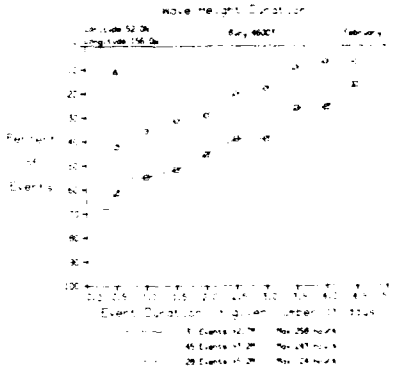

Wave Height Duration
Percent of Events
Event Duration > given number of days

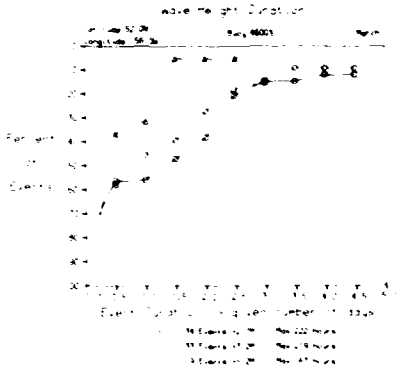

Wave Height Duration
Percent of Events
Event Duration > given number of days

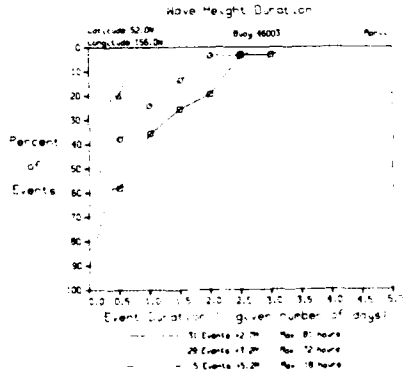

Wave Height Duration
Percent of Events
Event Duration > given number of days

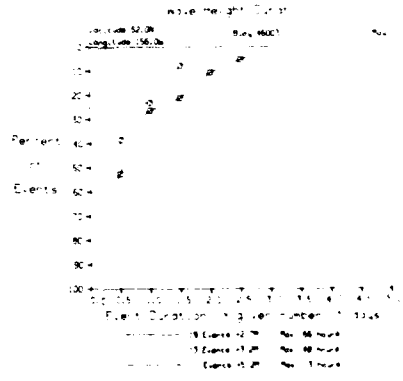

Wave Height Duration
Percent of Events
Event Duration > given number of days

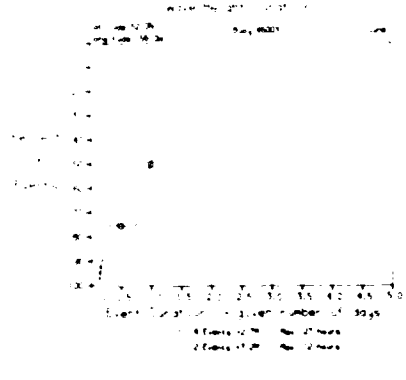

Wave Height Duration
Percent of Events
Event Duration in given number of days

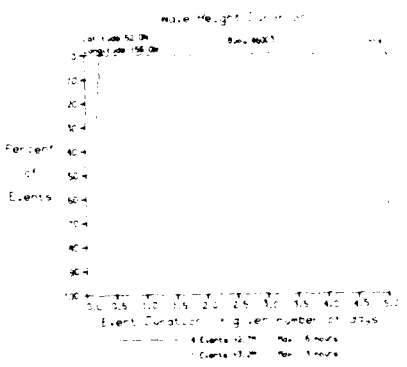

Wave Height Duration
Percent of Events
Event Duration in given number of days

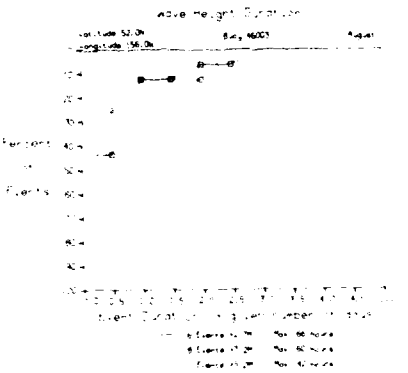

Wave Height Duration
Percent of Events

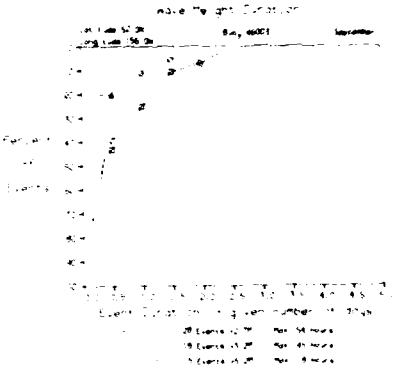

Wave Height Duration
Percent of Events
Event Duration in given number of days

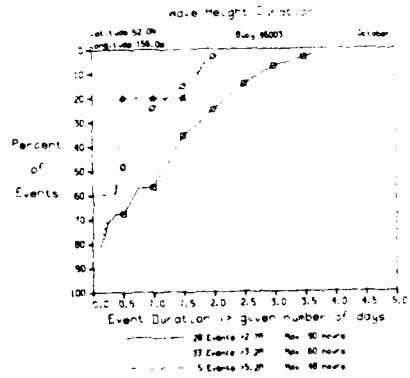

Percent of Events

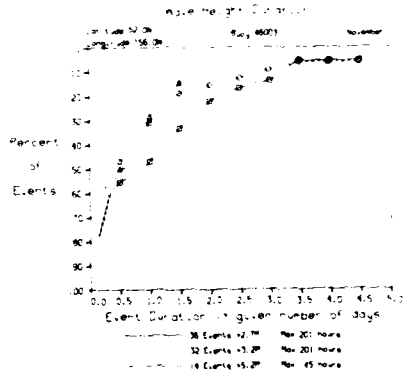


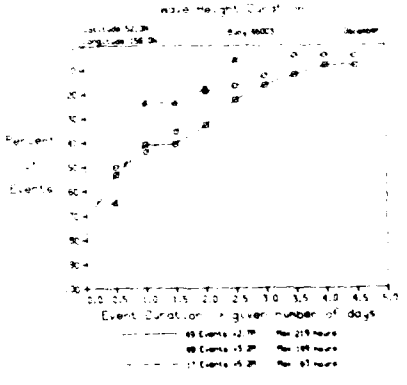


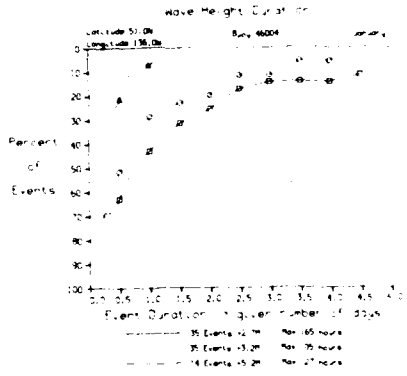


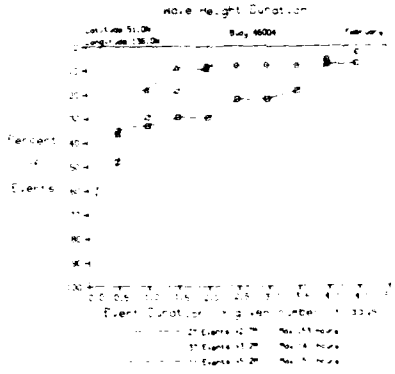


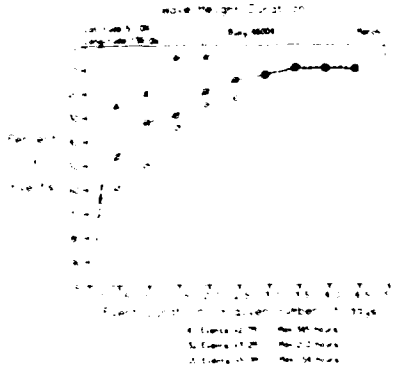

Percent
of
Events

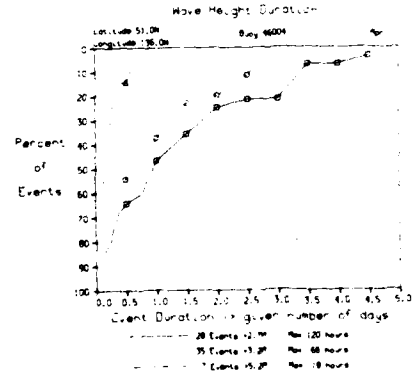

Percent
of
Events

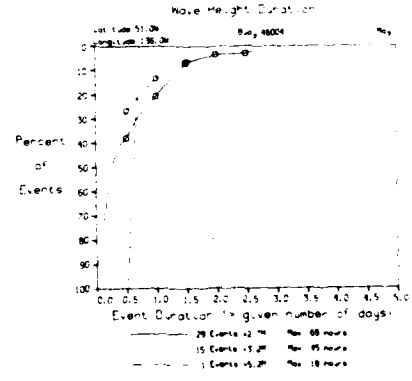

Percent
of
Events

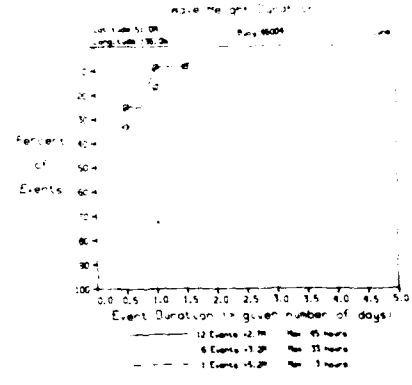

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

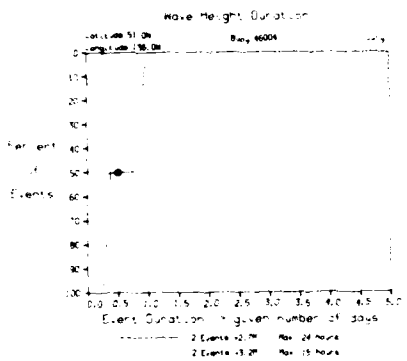

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

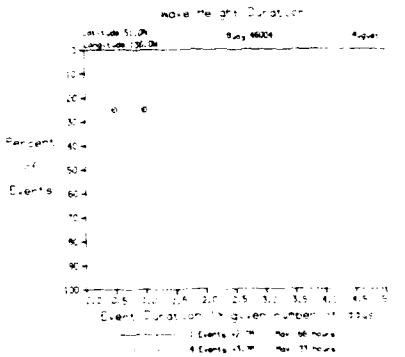

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

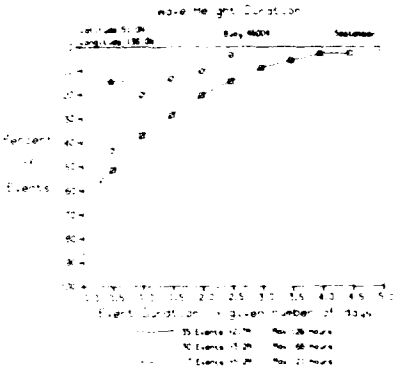

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

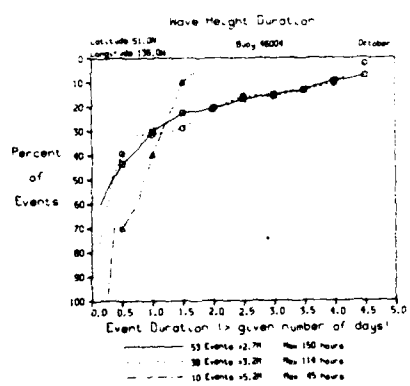

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

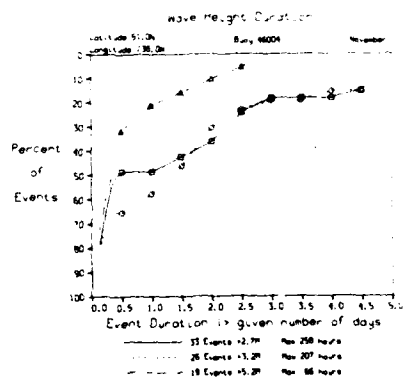

Percent of Events
Event Duration (> given number of days)

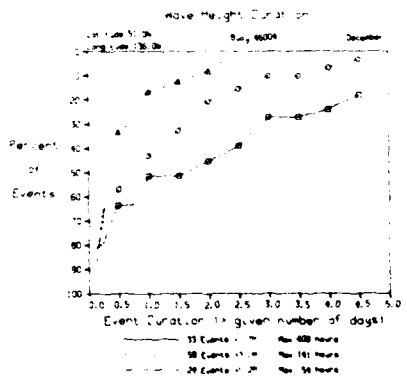

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

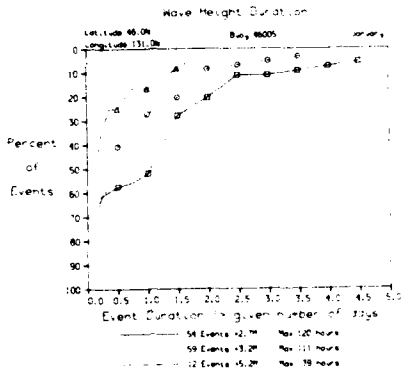

Wave Height Duration
Percent of Events

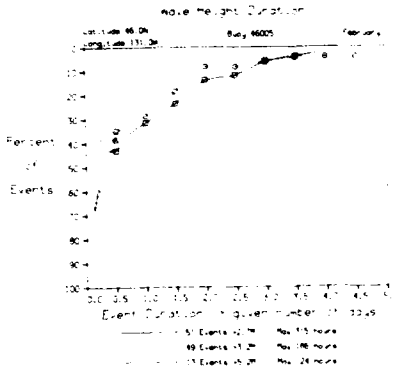

Wave Height Duration
Percent of Events

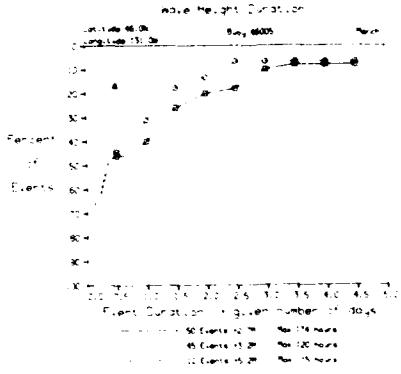

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

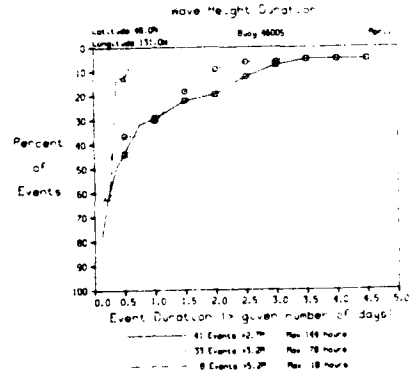

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

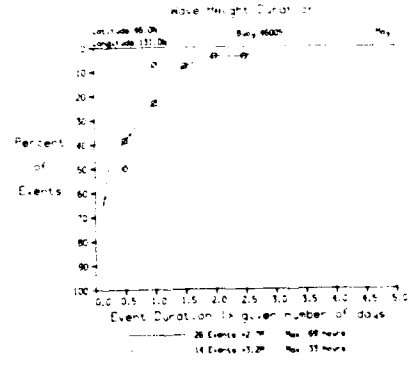

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

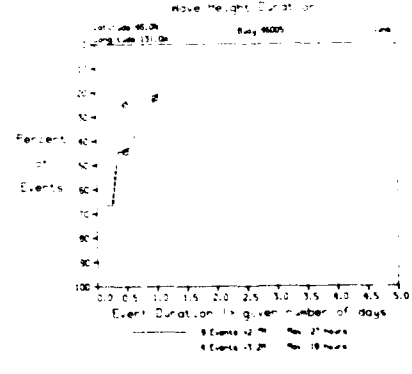

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

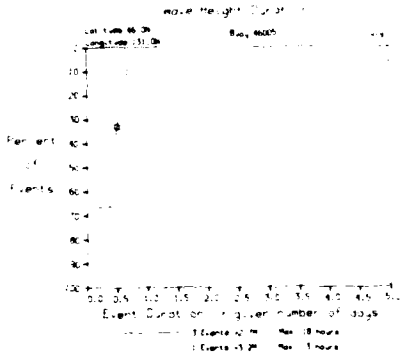

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

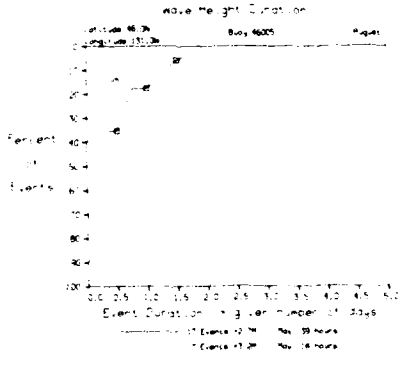

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

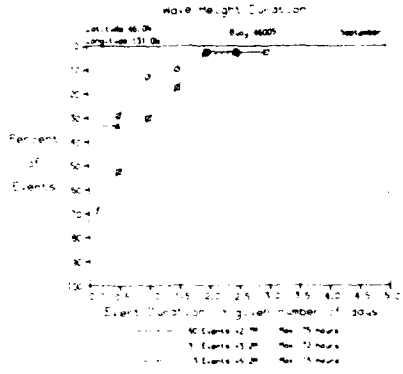

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

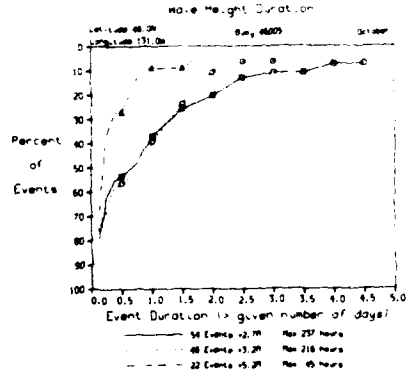

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

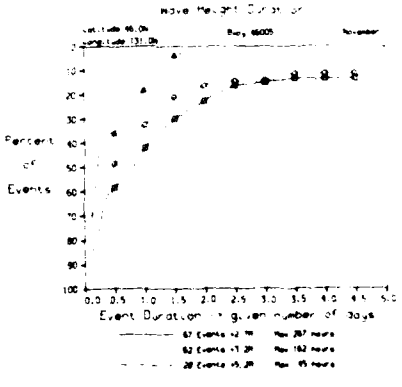

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

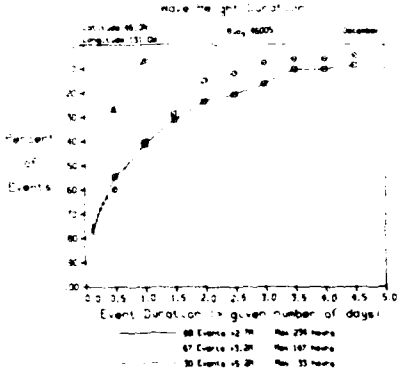


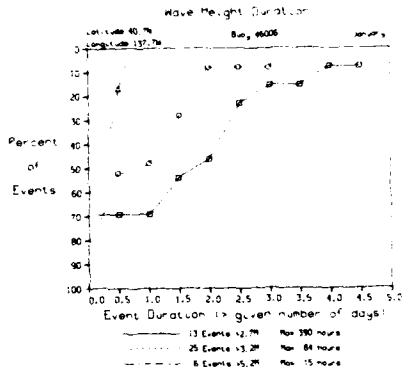


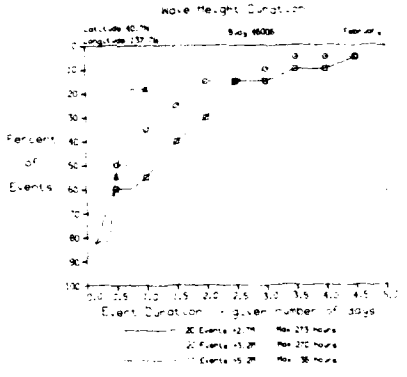


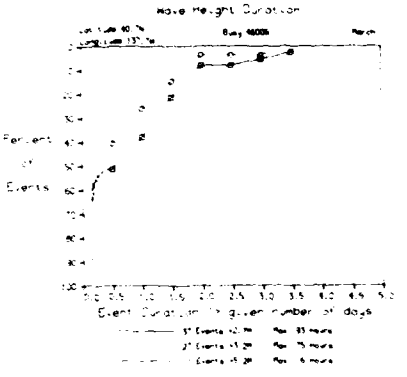

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

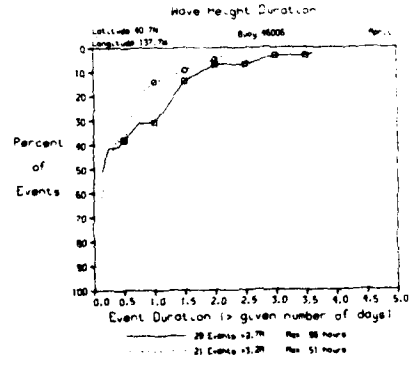


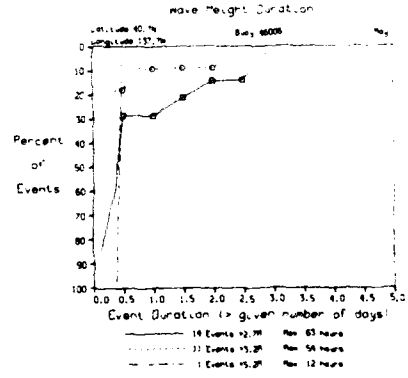


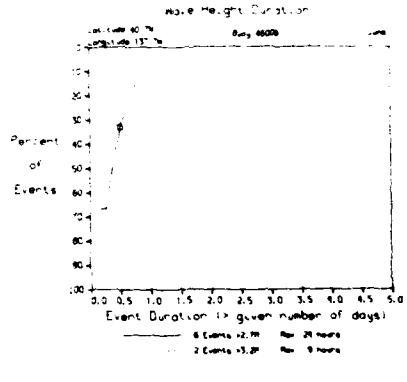

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

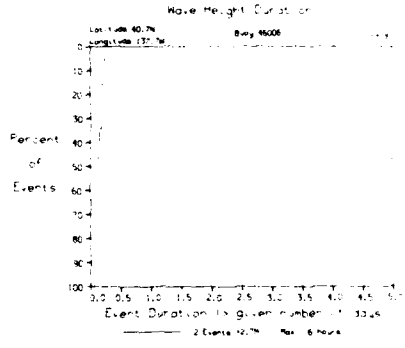

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

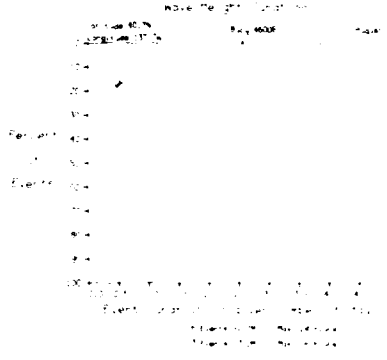

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

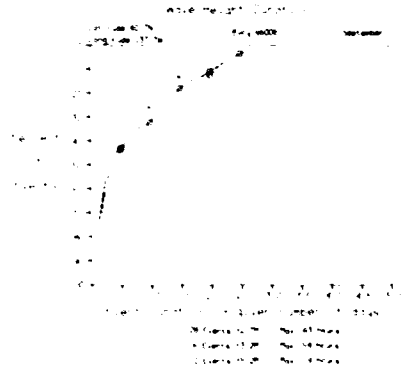

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

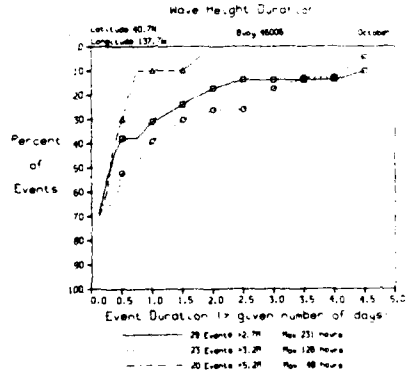

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

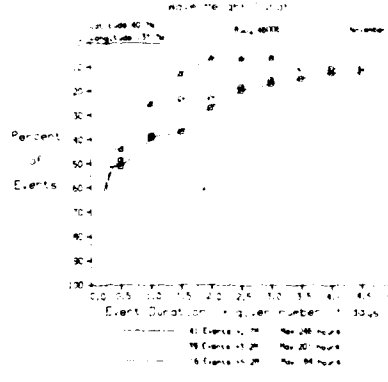

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

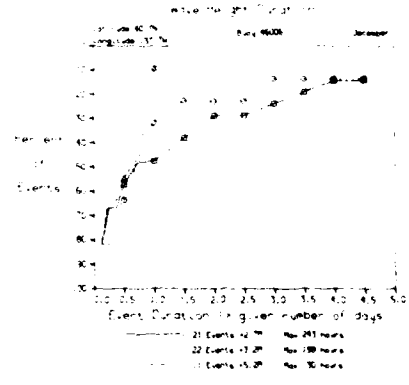

Wave Height Duration
Percent of Events
Event Duration (+ given number of days

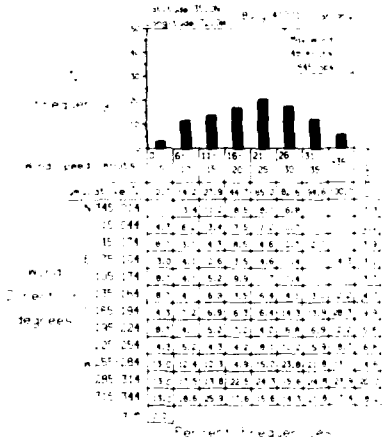


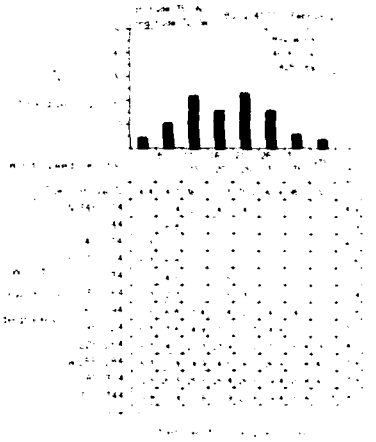


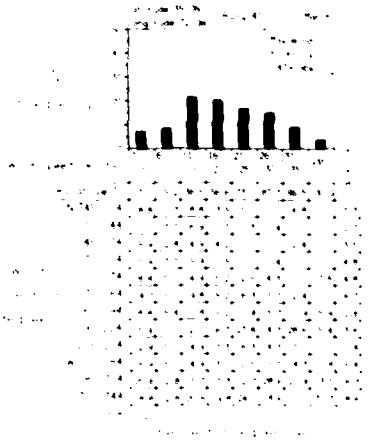

Wave Height Duration
Percent of Events
Event Duration (+ given number of days

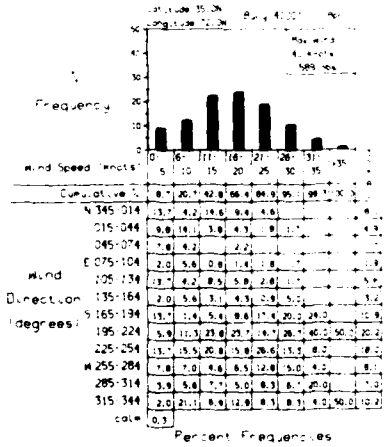


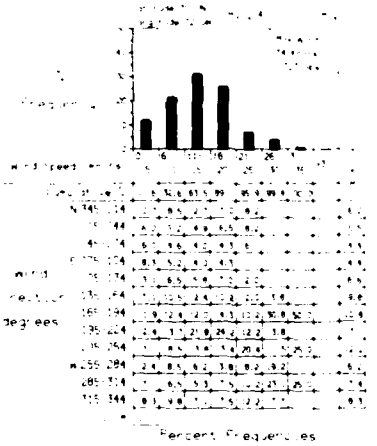


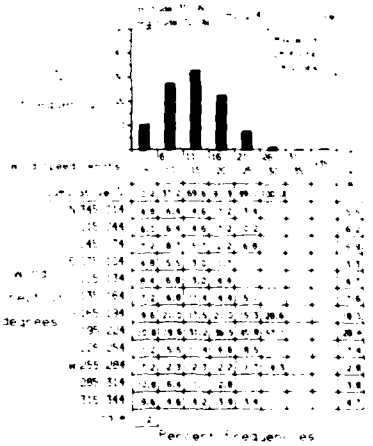


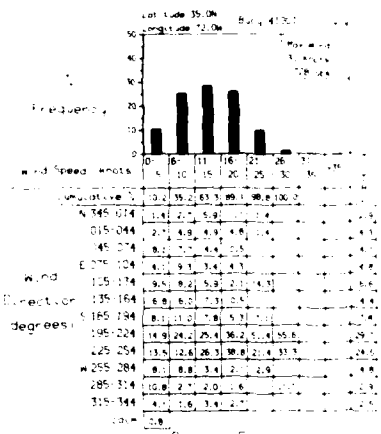


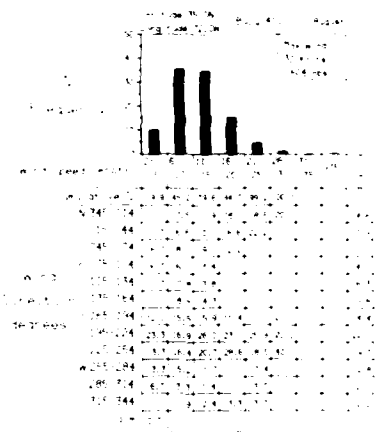


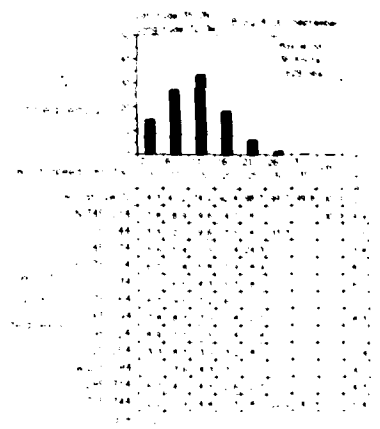

Frequency
Wind Speed knots
Cumulative %
N 345-014
015-044
045-074
E 075-104
105-134
135-164
S 165-194
195-224
225-254
W 255-284
285-314
315-344
calm
Wind Direction (degrees)
Percent Frequencies

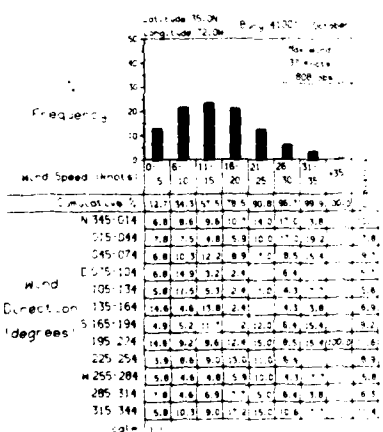

Percent Frequencies

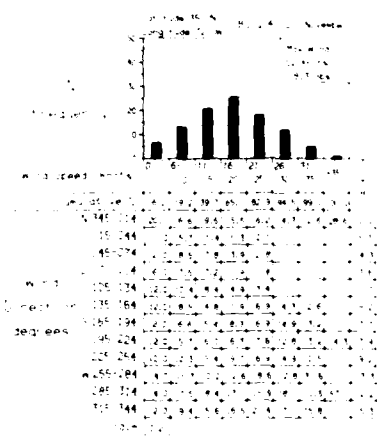

Percent Frequencies

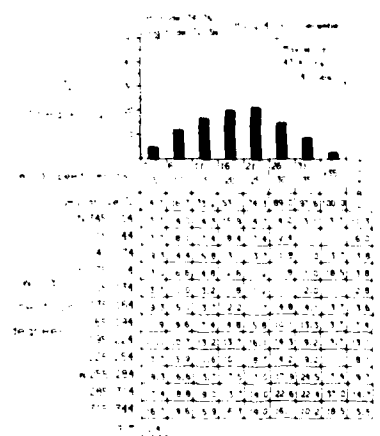

Frequency
Wind Speed (knots)
Cumulative %
N 345-014
015-044
045-074
E 075-104
105-134
135-164
S 165-194
195-224
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W 255-284
285-314
315-344
calm
Wind Direction (degrees)
Percent Frequencies

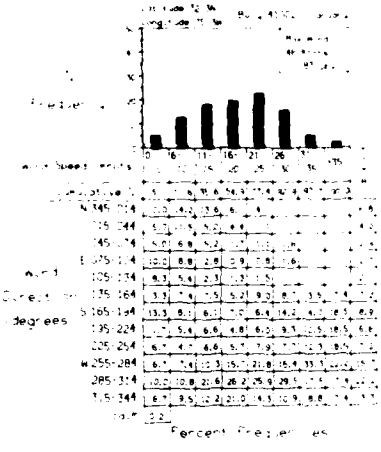


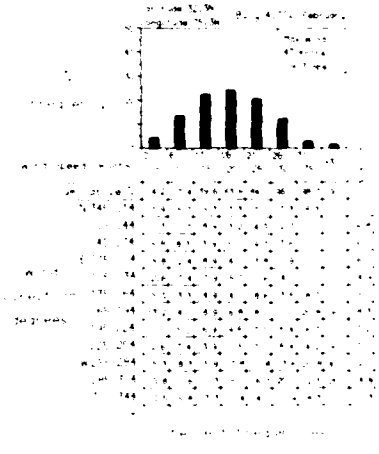


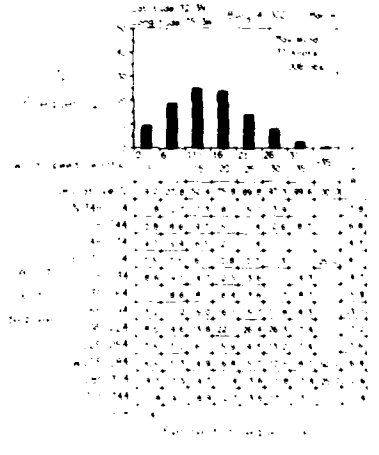

Frequency
Wind Speed (knots)
Cumulative %
N 345-014
015-044
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E 075-104
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W 255-284
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calm
Wind Direction (degrees)
Percent Frequencies

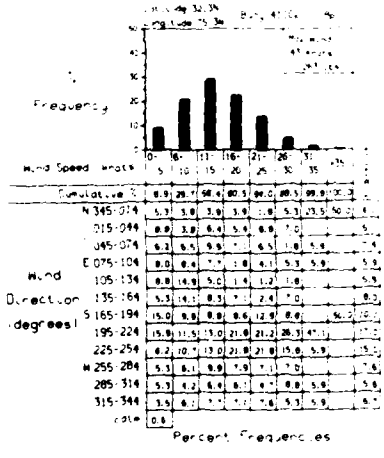


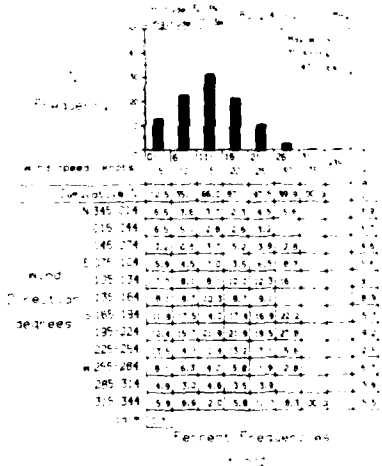


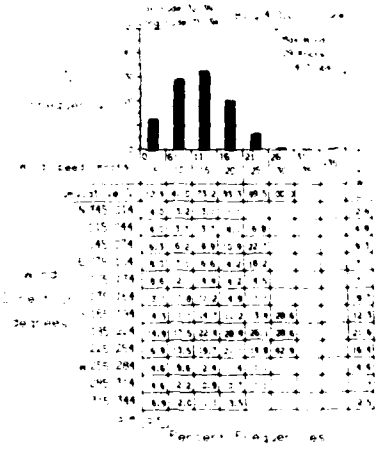


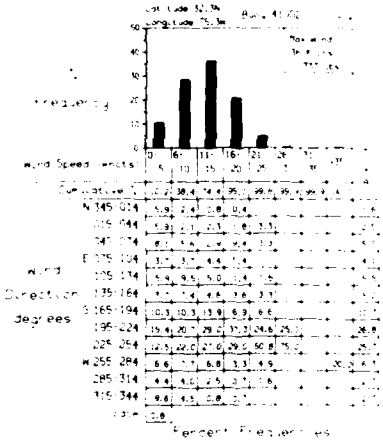


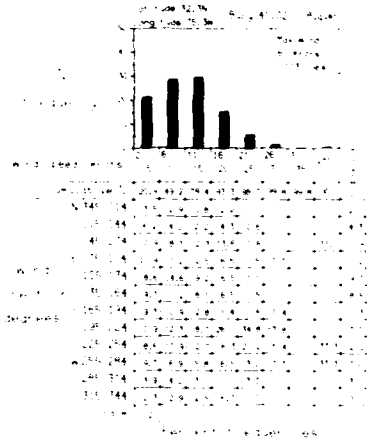


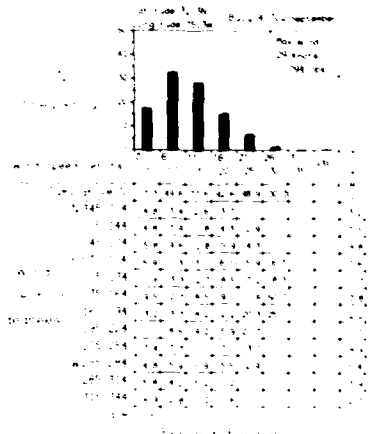


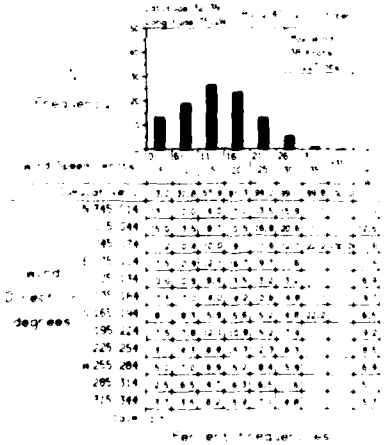


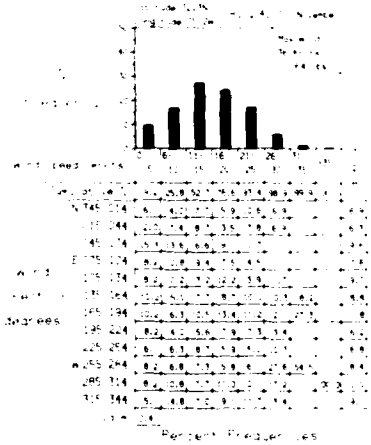


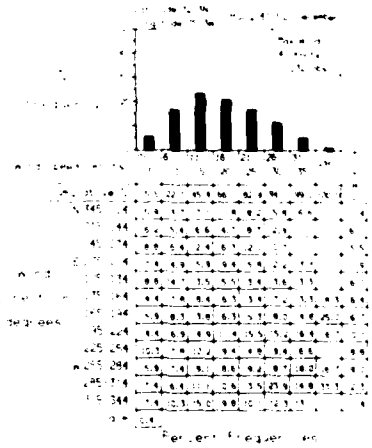


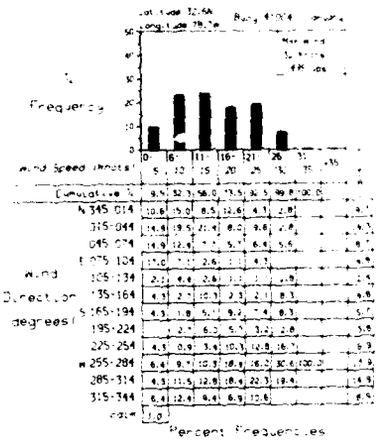




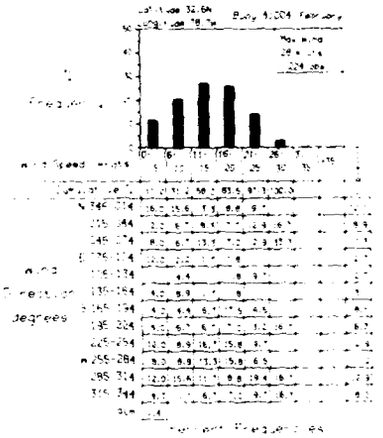




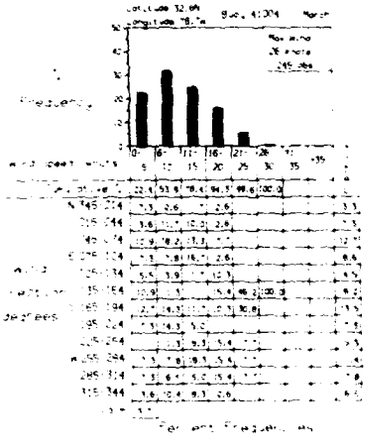




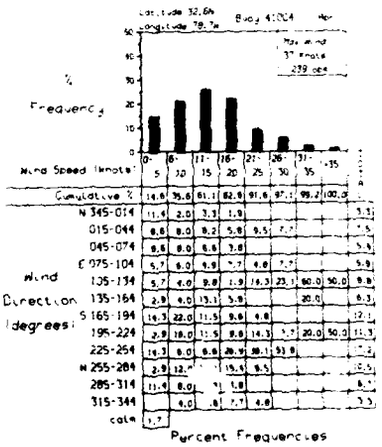
Percent Frequencies



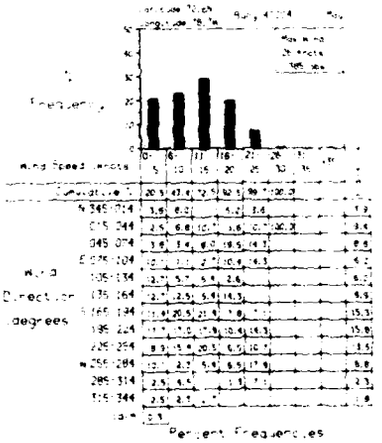
Percent Frequencies



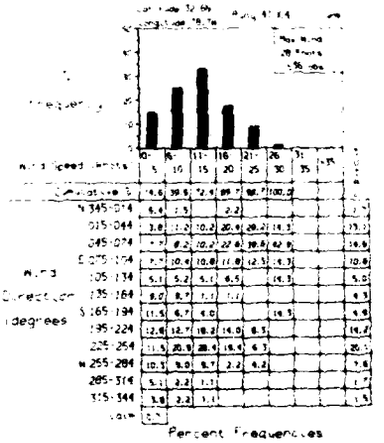
Percent Frequencies



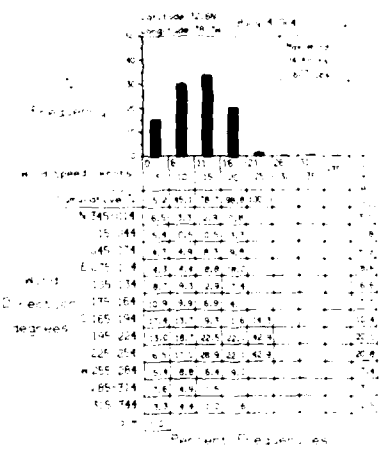
Percent Frequencies

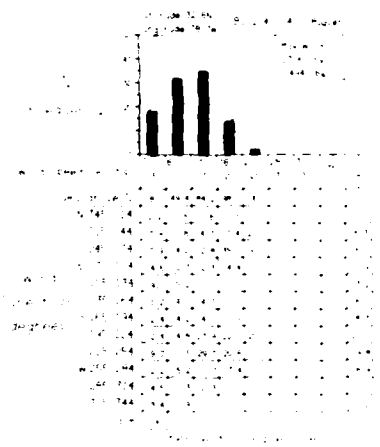


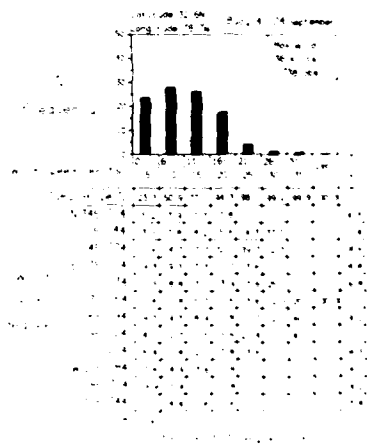
Percent Frequencies

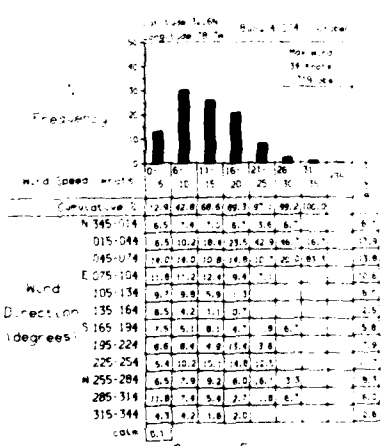


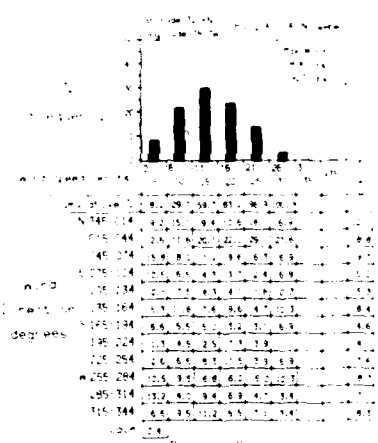
Percent Frequencies

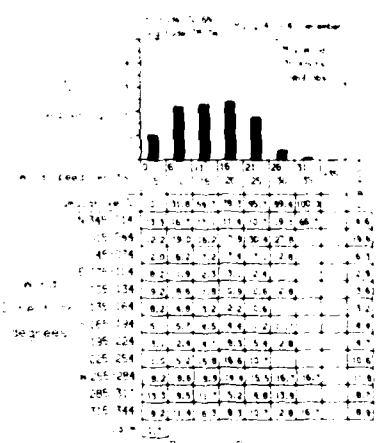


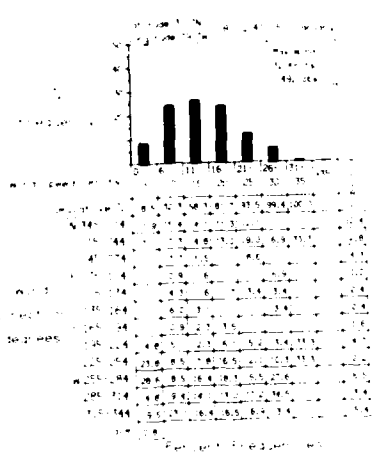


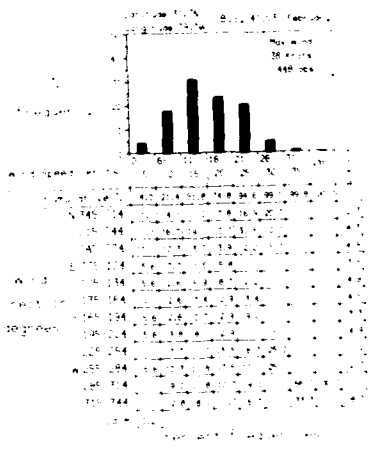


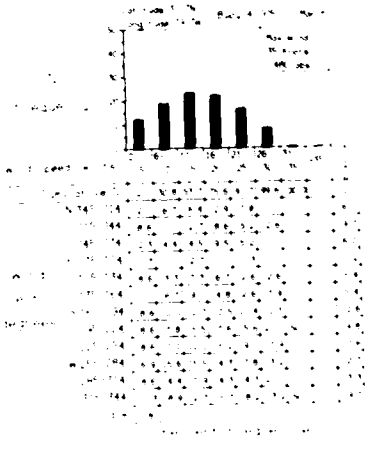

Frequency
Wind Speed mph
Cumulative %
N 345-014
015-044
045-074
E 075-104
105-134
135-164
S 165-194
195-224
225-254
W 255-284
285-314
315-344
calm
Wind Direction (degrees)
Percent Frequencies

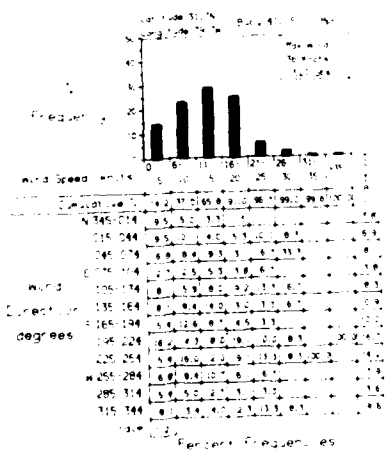


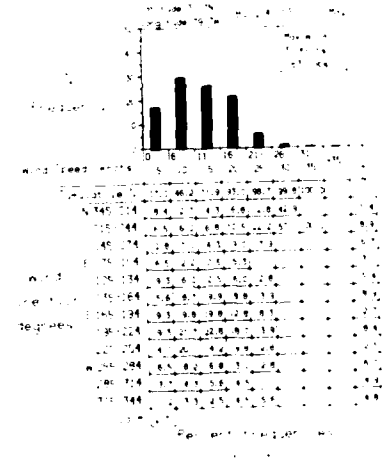


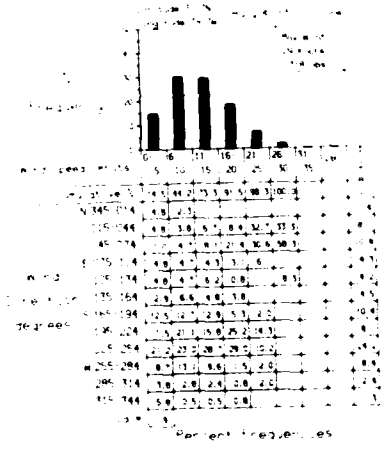


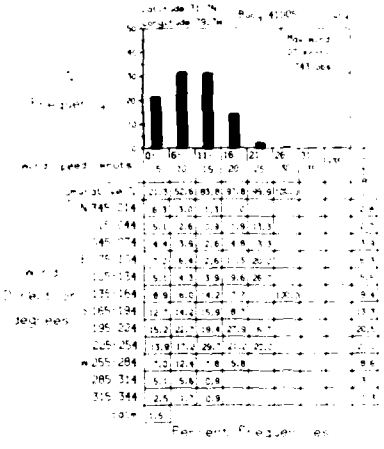


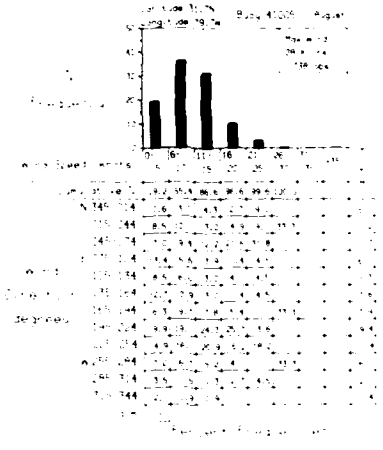


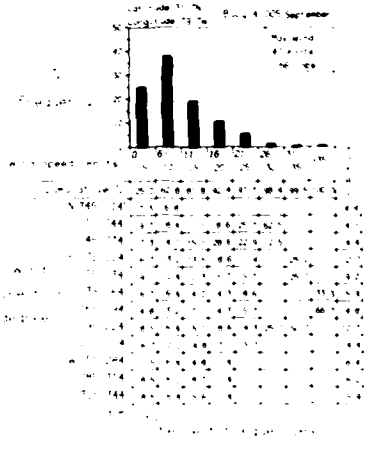


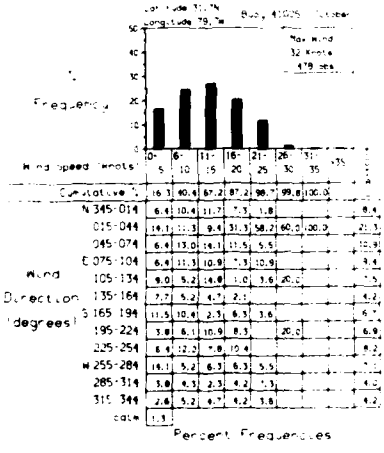


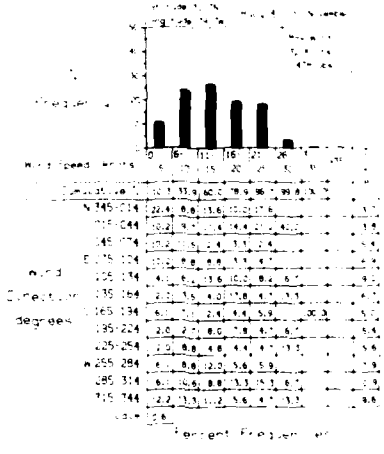


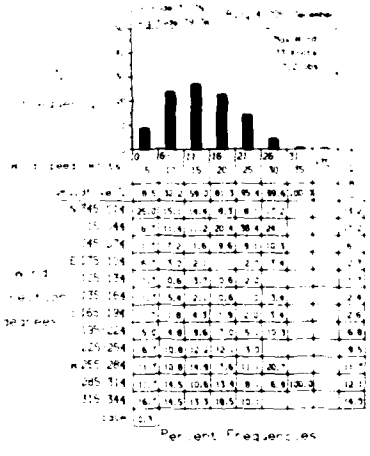


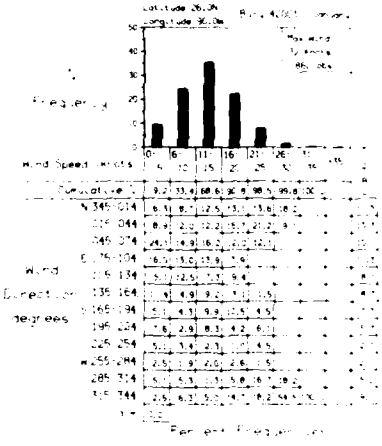


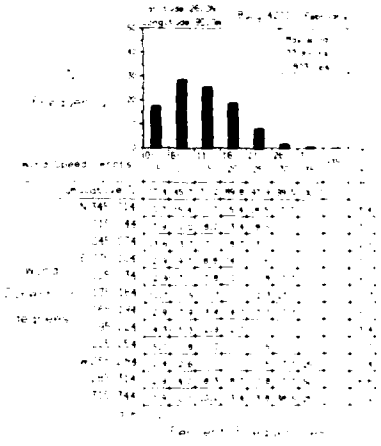


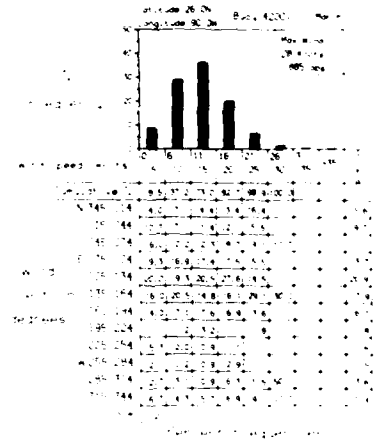

Frequency
Wind speed knots
Cumulative %
N 345-014
015-044
045-074
E 075-104
105-134
135-164
S 165-194
195-224
225-254
W 255-284
285-314
315-344
calm
Wind Direction (degrees)
Percent Frequencies

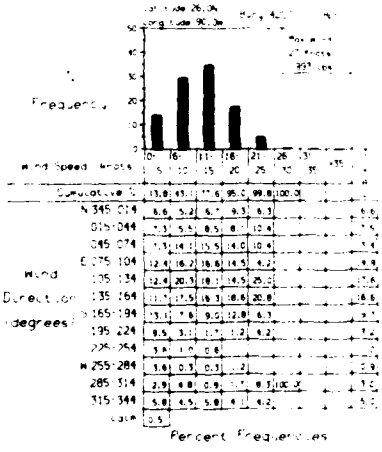


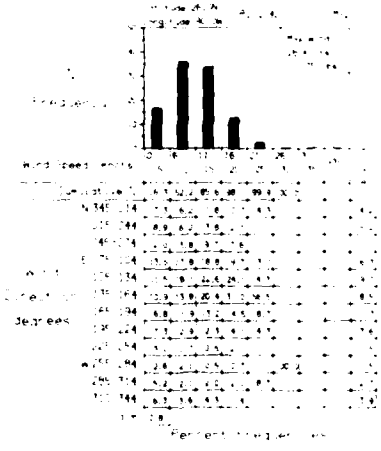


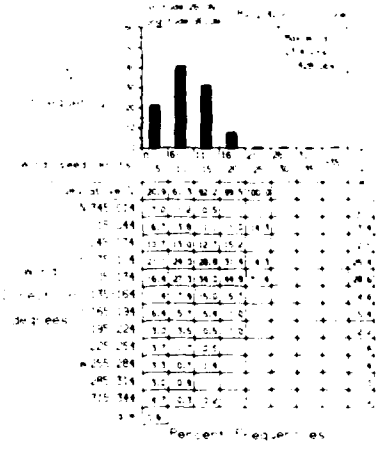


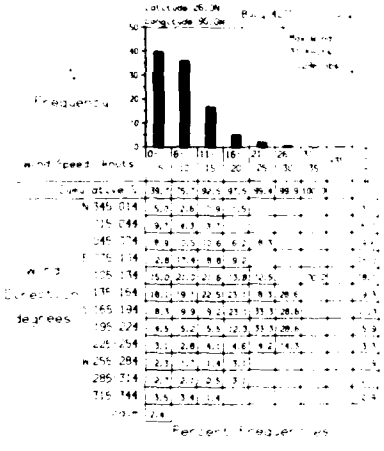


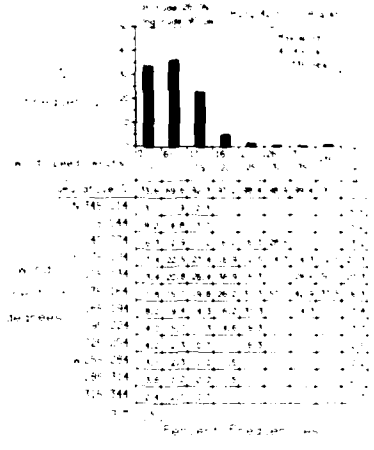


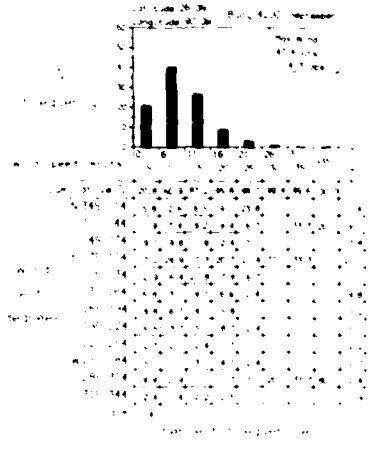


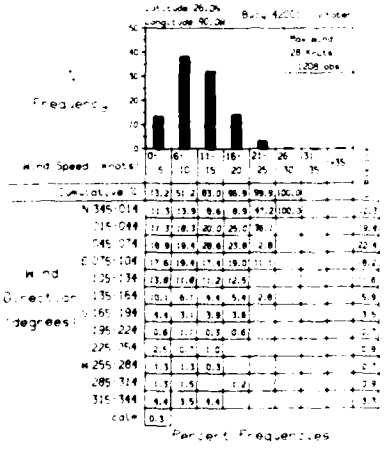


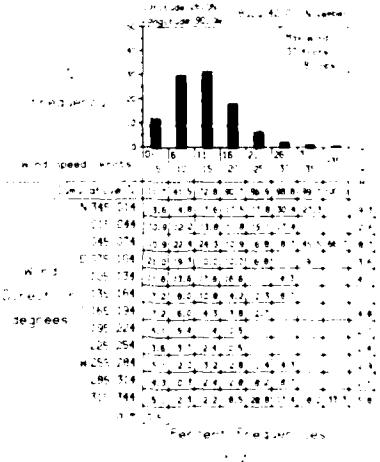


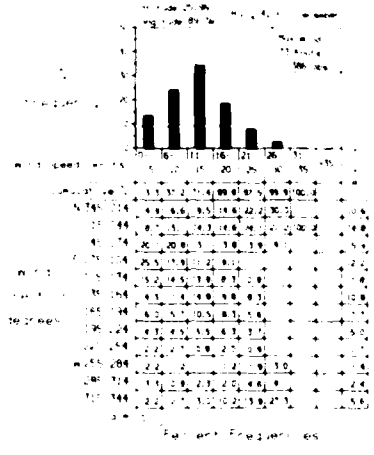


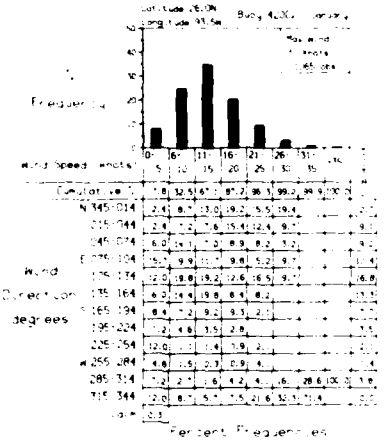


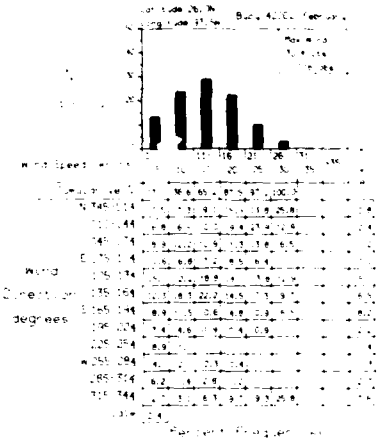


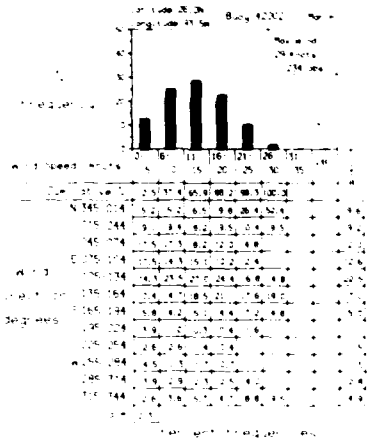


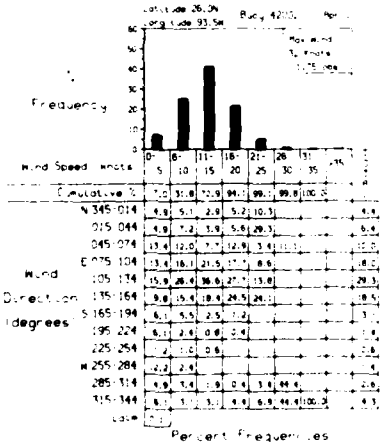


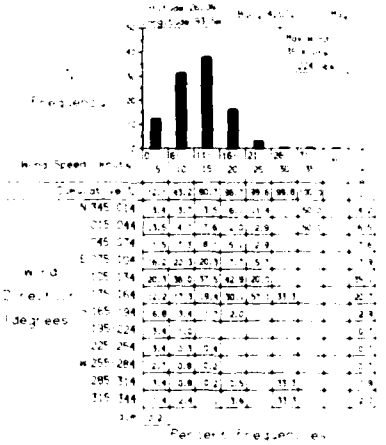


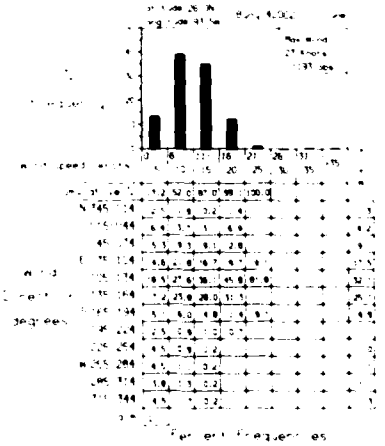

Frequency
Wind Speed knots
Wind Direction (degrees)
Percent Frequencies

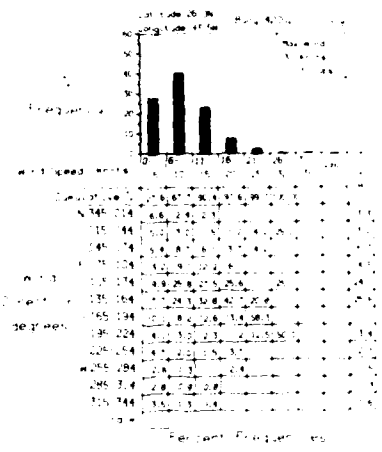

Wind Speed knots
Wind Direction (degrees)
Percent Frequencies

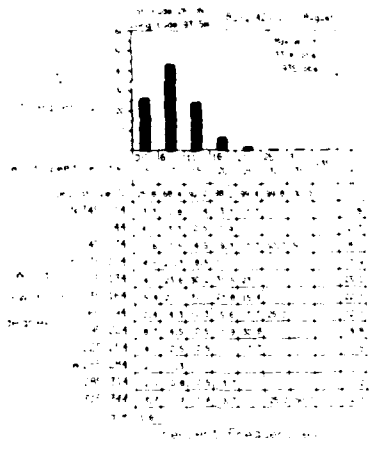

Wind Direction (degrees)
Percent Frequencies

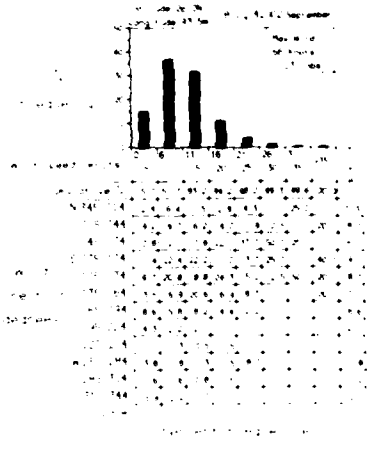

Frequency
Wind Speed knots
Wind Direction (degrees)
Percent Frequencies

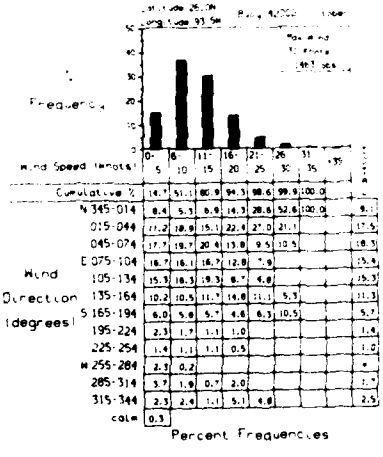

Wind Direction (degrees)
Percent Frequencies

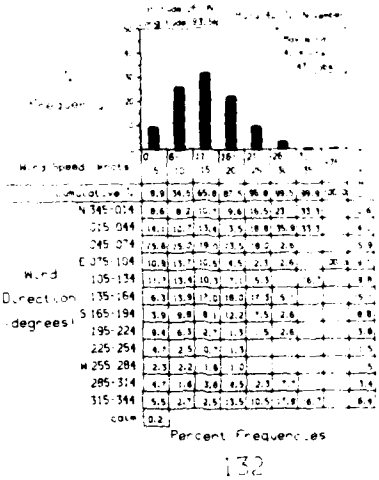

Wind Direction (degrees)
Percent Frequencies

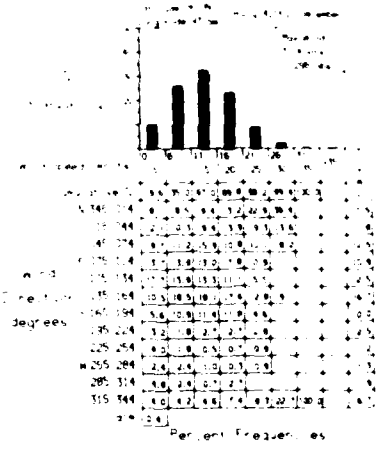


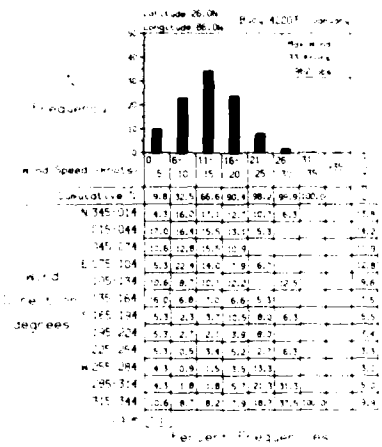


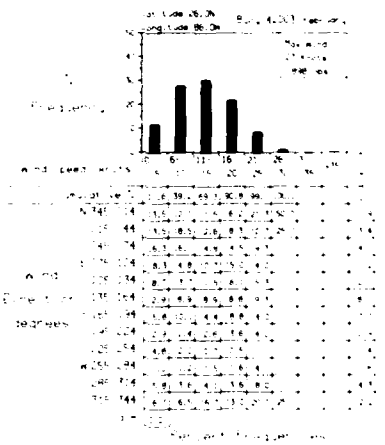


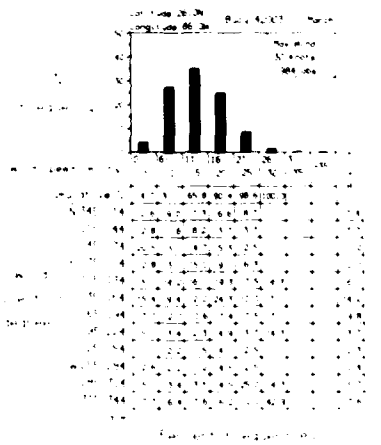

Frequency
Wind Speed (knots)
0-5
6-10
11-15
16-20
21-25
26-30
31-35
>35
Cumulative %
N 345-014
015-044
045-074
E 075-104
105-134
135-164
S 165-194
195-224
225-254
W 255-284
285-314
315-344
calm
Wind Direction (degrees)
Percent Frequencies

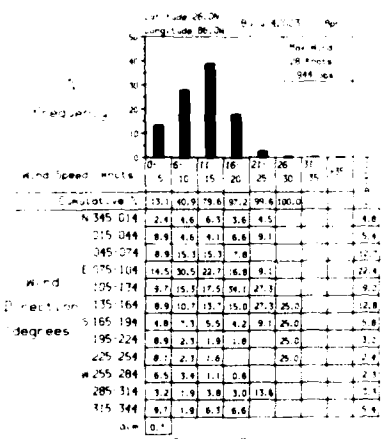

Wind Direction (degrees)
Percent Frequencies

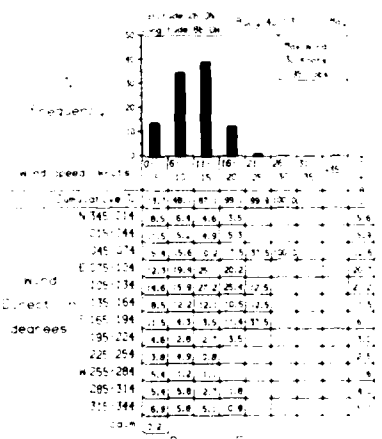

Percent Frequencies

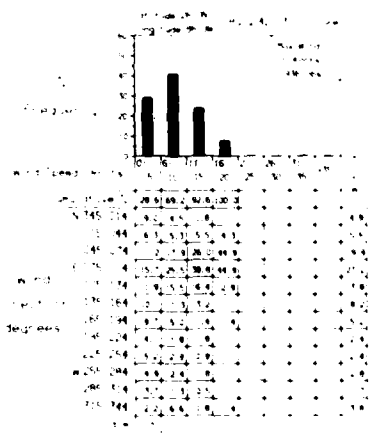


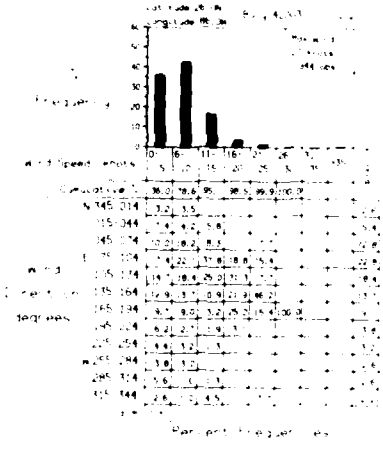


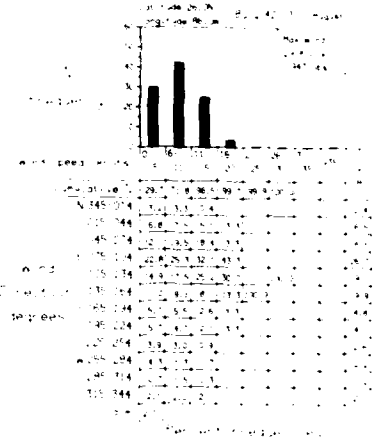


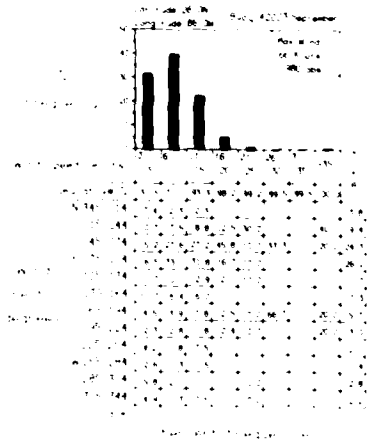


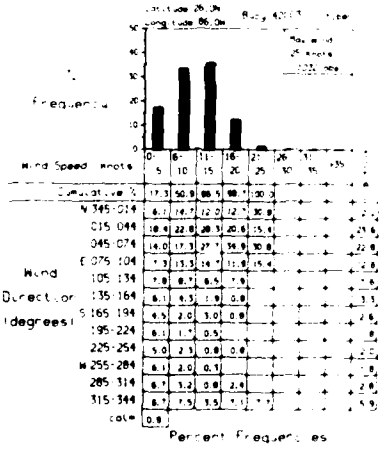


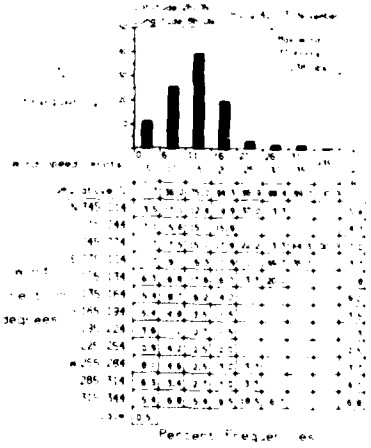


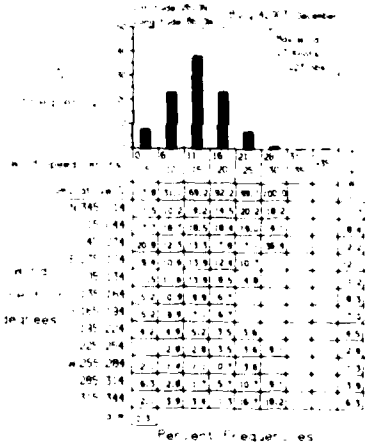


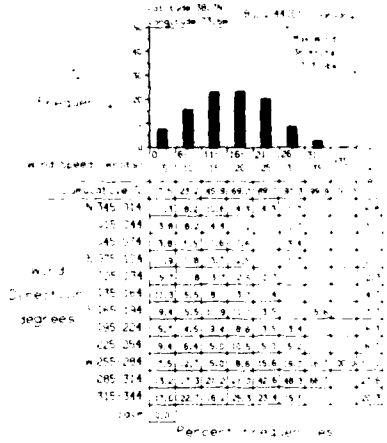


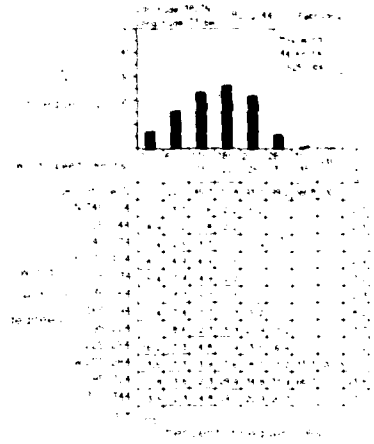


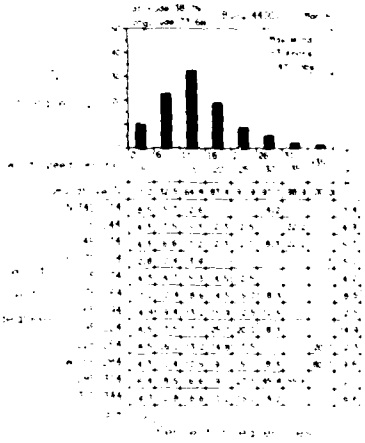

Frequency
Wind Speed knots
5
10
15
20
25
30
35
Cumulative %
17.3
50.8
68.5
88.5
98.1
100.0
N 345-014
015-044
045-074
E 075-104
105-134
Wind
Direction
135-164
S 165-194
(degrees)
195-224
225-254
W 255-284
285-314
315-344
calm
Percent Frequencies

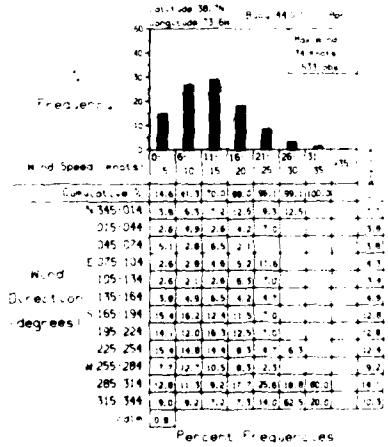


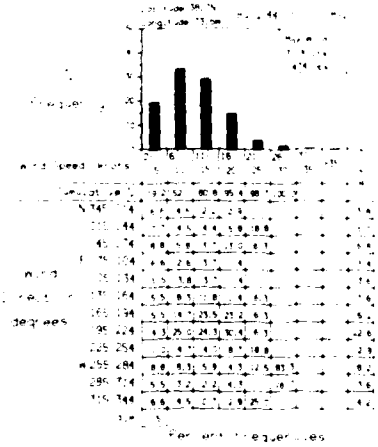


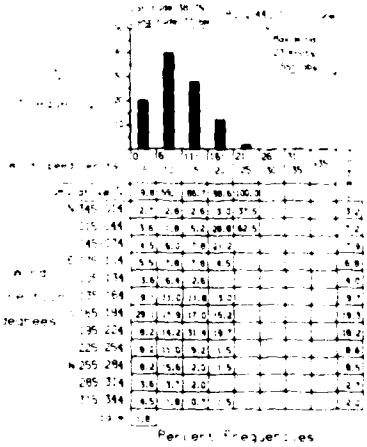


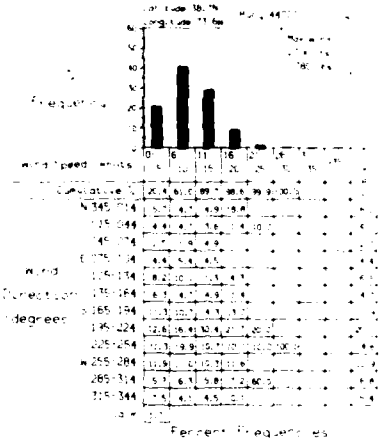


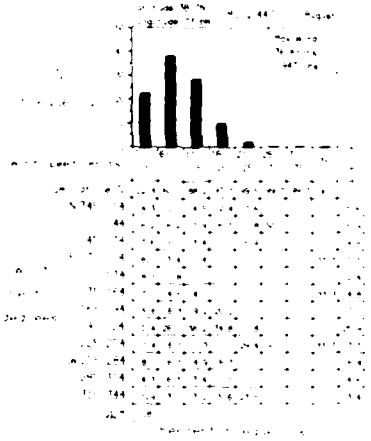


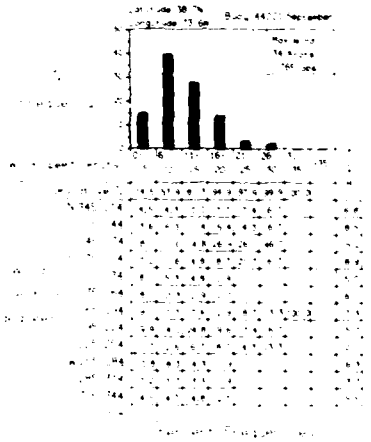


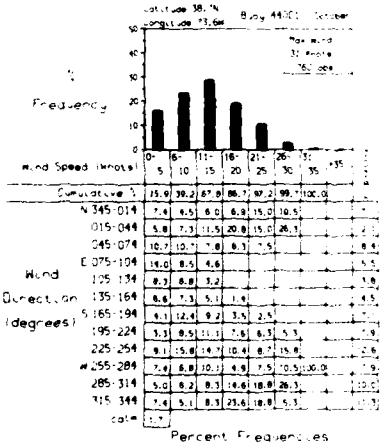


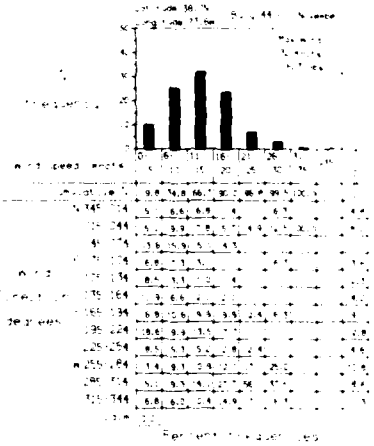


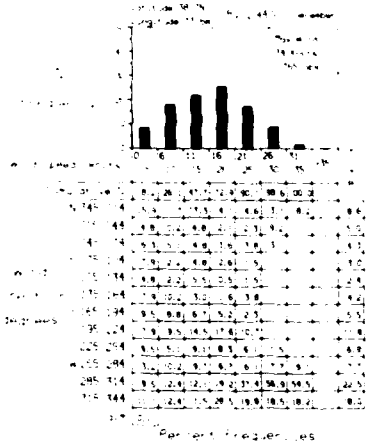


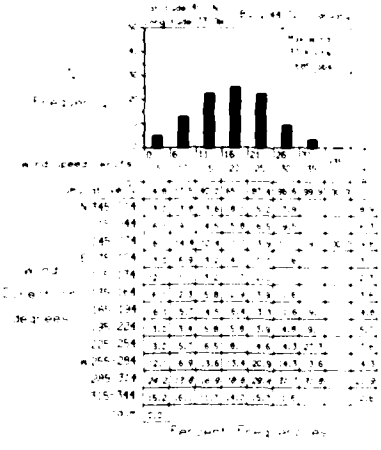


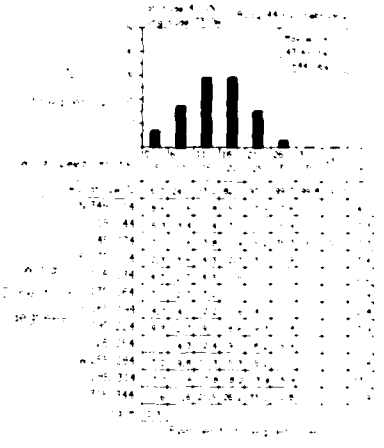


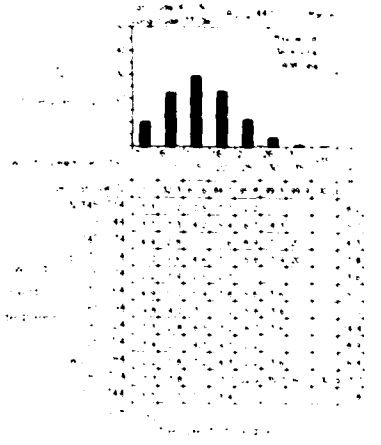

Frequency
Wind Speed (knots)
0-5
6-10
11-15
16-20
21-25
26-30
31-35
>35
Cumulative %
15.0 39.2 67.8 86.7 97.2 99.1 100.0
N 345-014
7.4 6.5 6.0 6.8 15.0 10.5
015-044
5.8 7.3 11.5 20.8 15.0 26.3
045-074
10.7 10.7 7.8 8.3 5.5
E 075-104
14.0 8.5 4.6
105-134
8.3 6.8 3.2
135-164
6.6 7.3 5.1 1.4
S 165-194
9.1 12.4 9.2 3.5 2.4
195-224
5.3 8.5 11.1 7.6 6.3 5.3
225-254
9.1 15.8 14.7 10.4 8.7 15.8
W 255-284
7.4 6.8 10.1 4.9 7.5 10.5 10.0
285-314
5.0 8.2 8.3 14.6 18.8 26.3
315-344
7.4 5.1 8.3 23.6 18.8 5.3
calm
1.7
Wind Direction (degrees)
Percent Frequencies

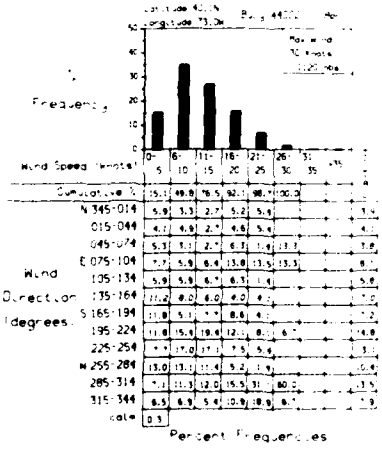


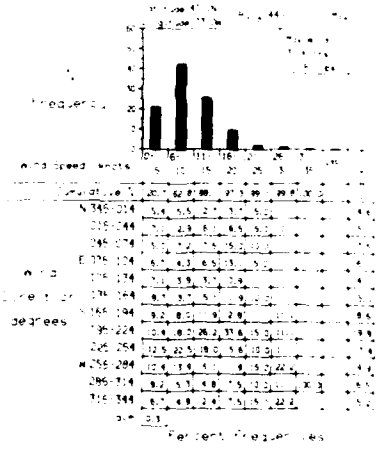


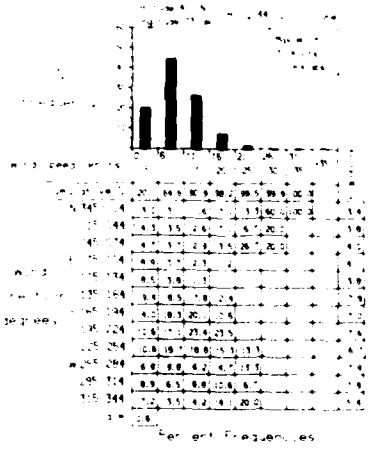


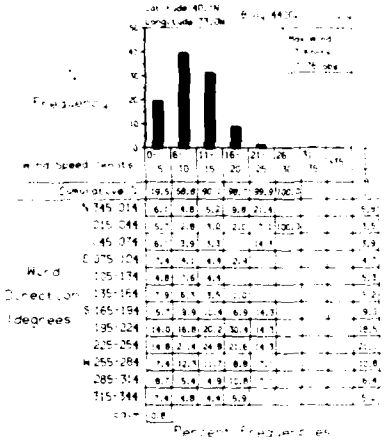


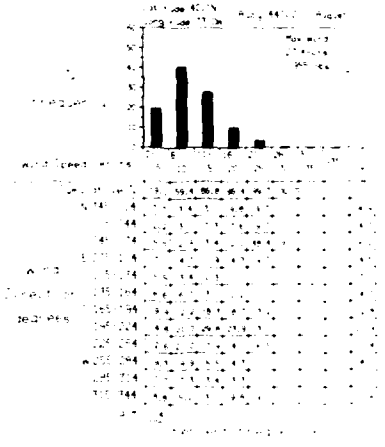


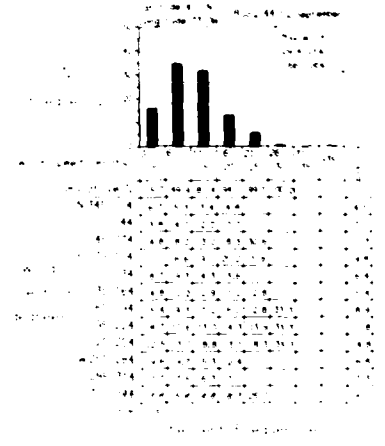


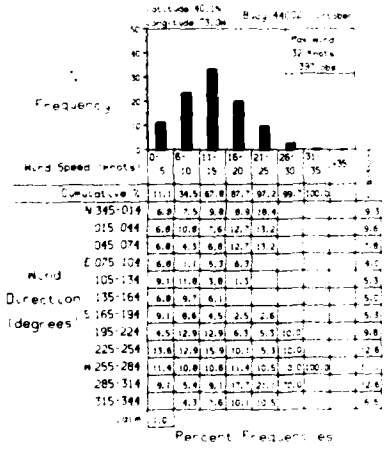


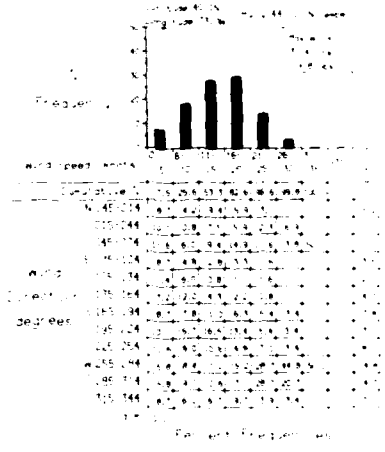


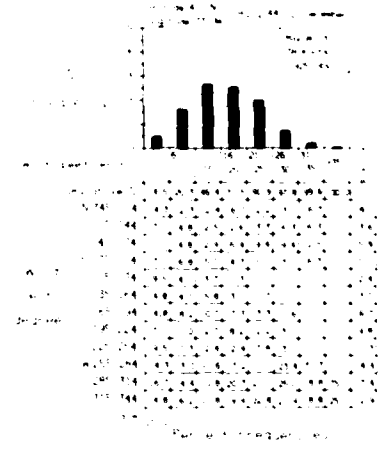

Frequency
Wind Speed (knots)
Wind Direction (degrees)
Percent Frequencies

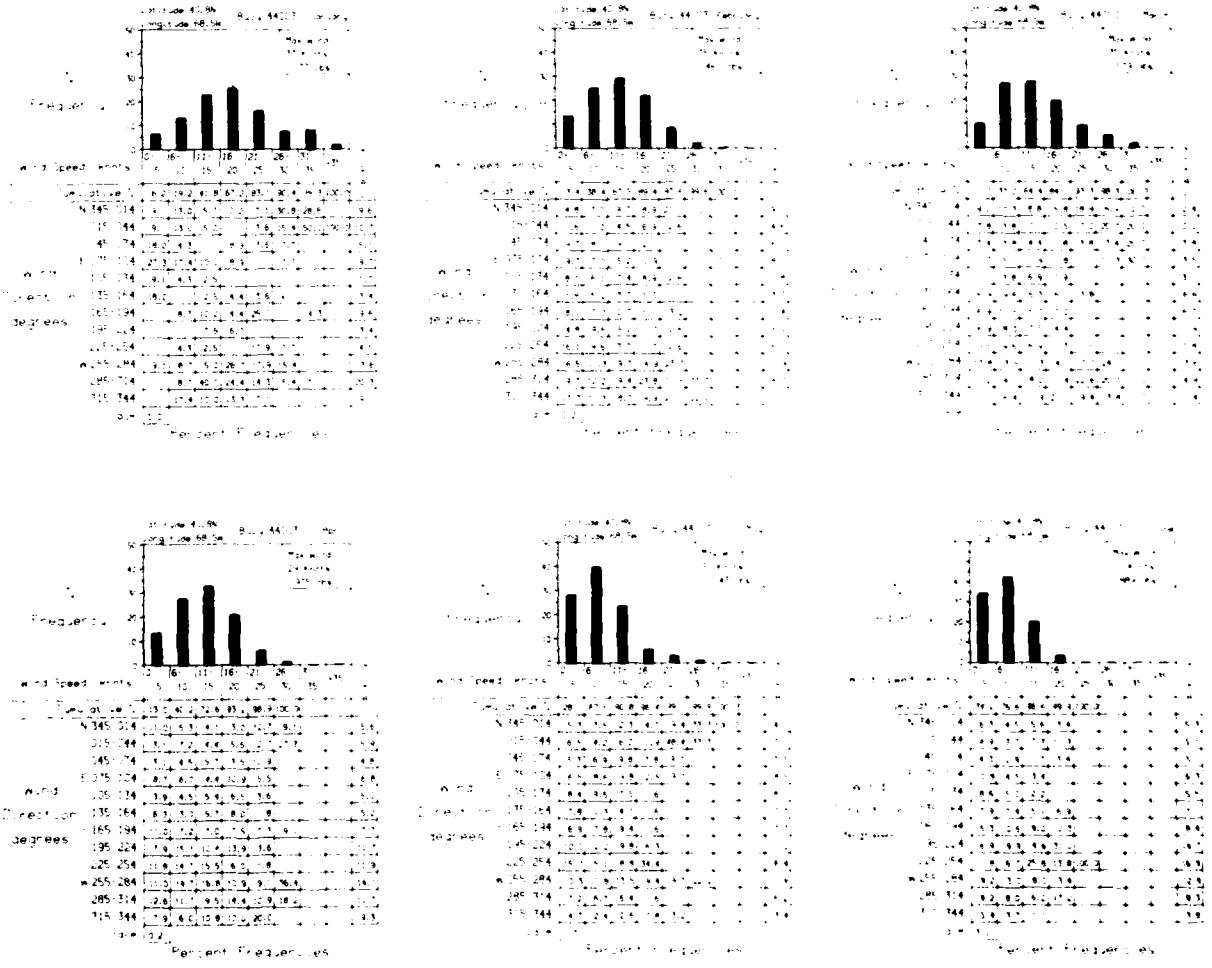

Frequency
Wind Speed (knots)
Wind Direction (degrees)
Percent Frequencies

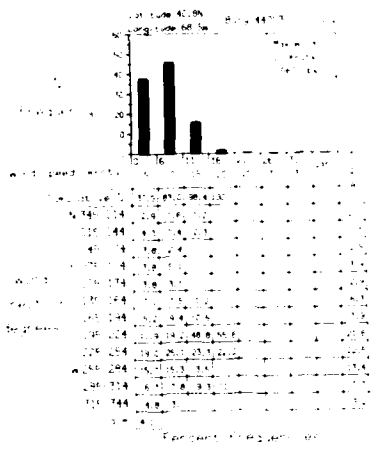

Frequency
Wind Speed (knots)
Wind Direction (degrees)
Percent Frequencies

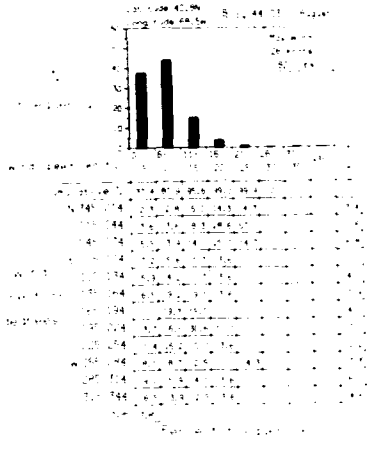

Frequency
Wind Speed (knots)
Wind Direction (degrees)
Percent Frequencies

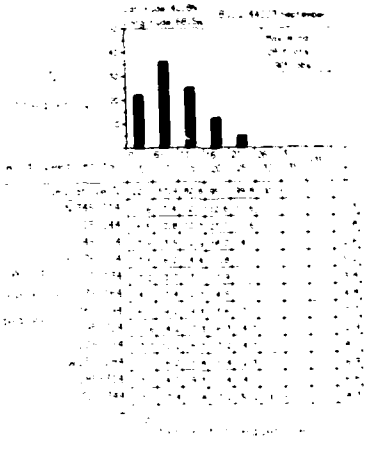

Frequency
Wind Speed (knots)
Wind Direction (degrees)
Percent Frequencies

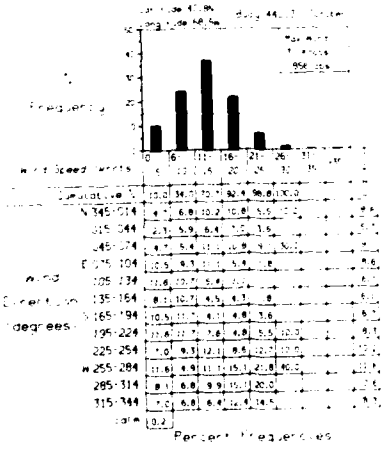

Frequency
Wind Speed (knots)
Wind Direction (degrees)
Percent Frequencies

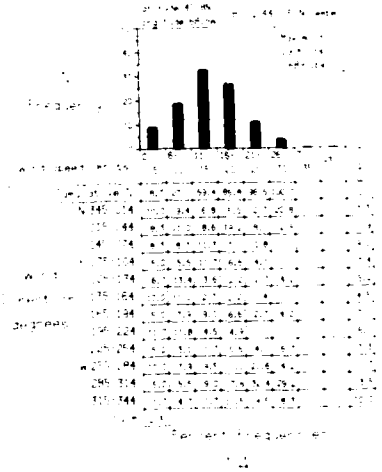


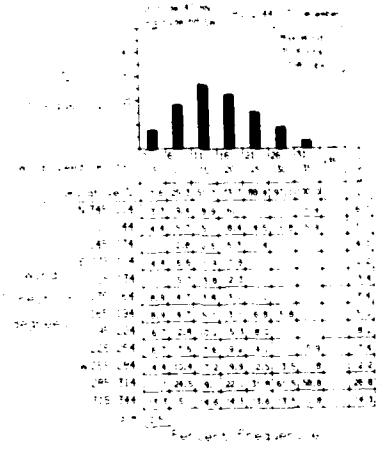


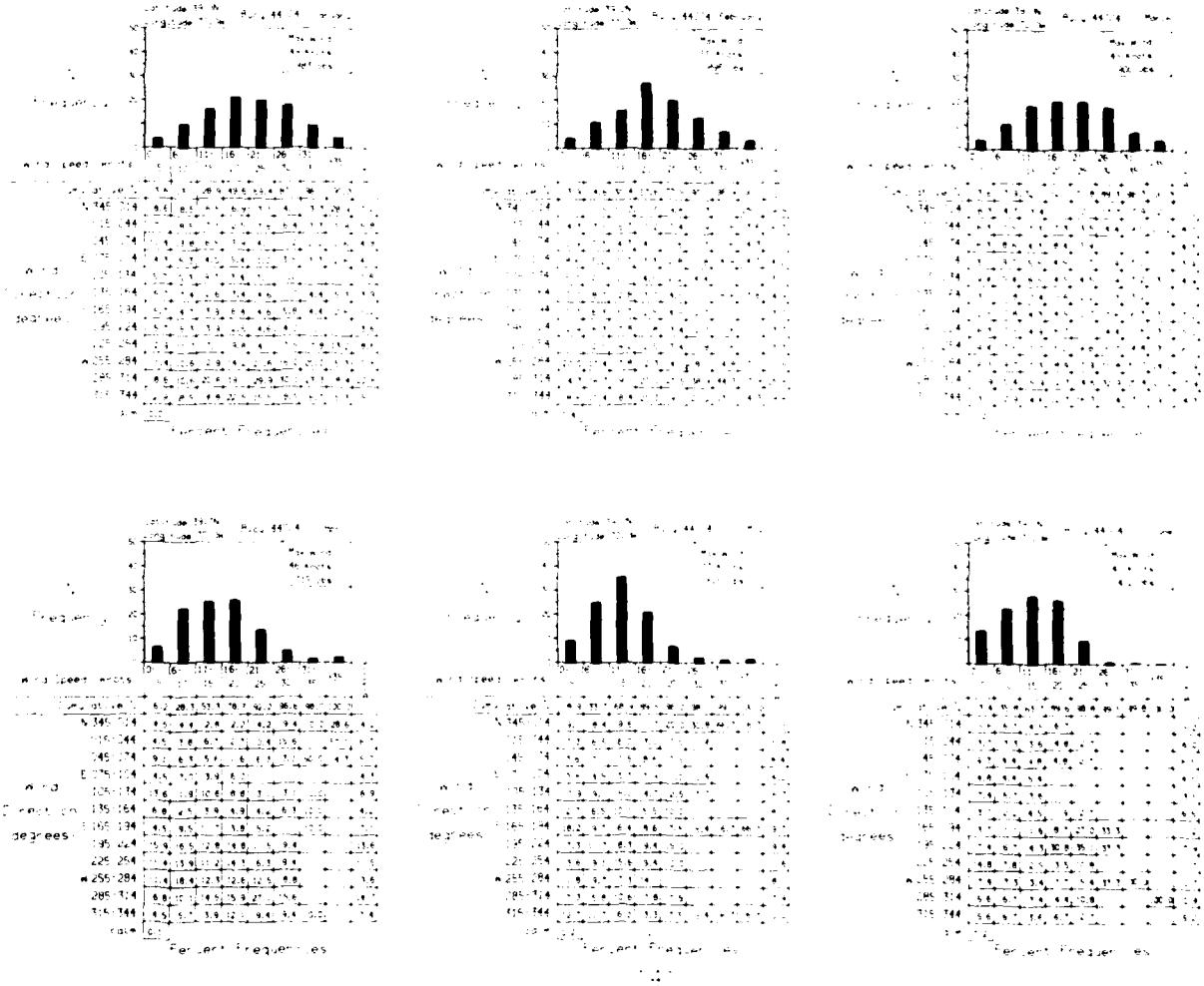


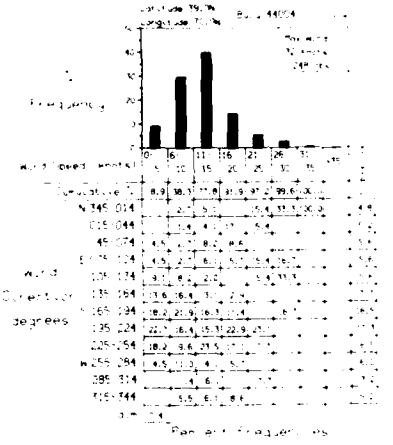


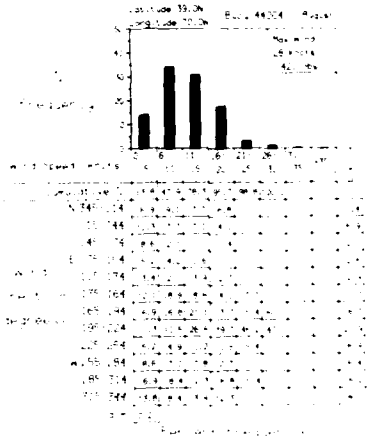


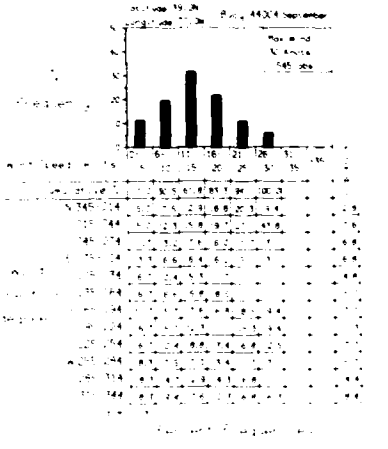


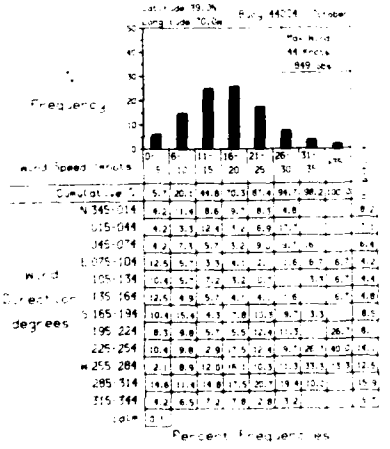


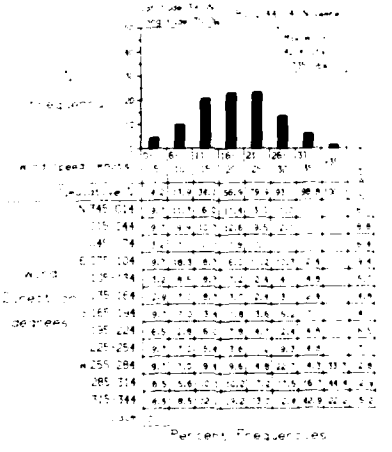


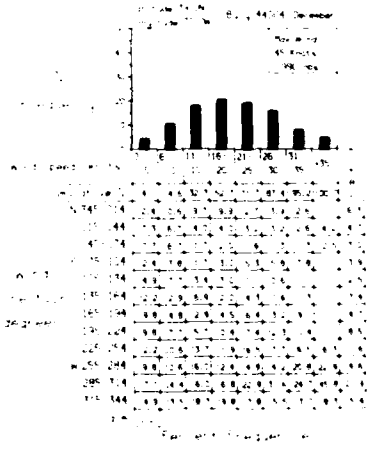


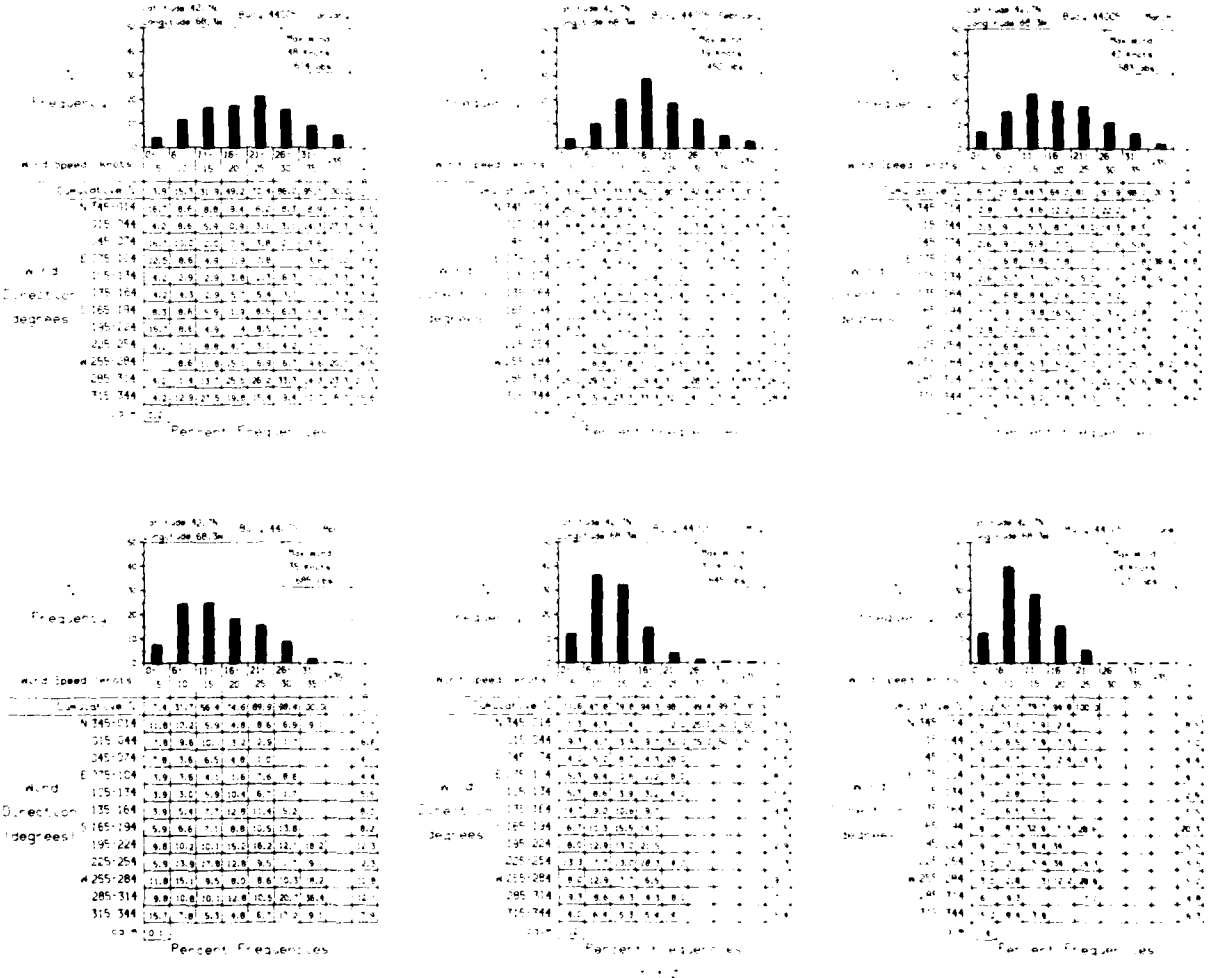


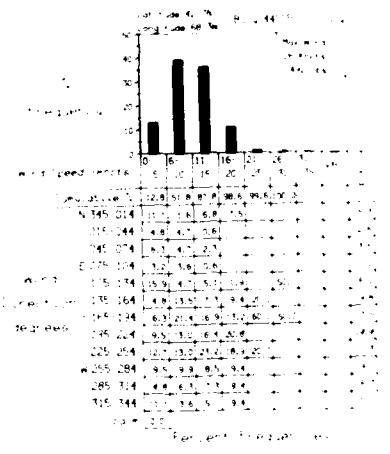


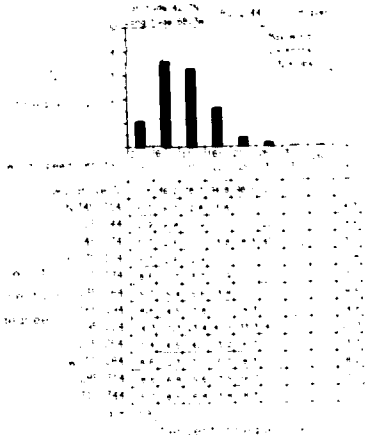


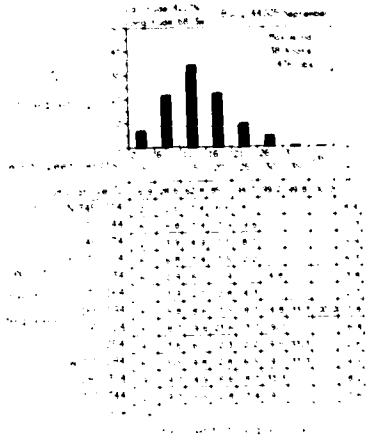


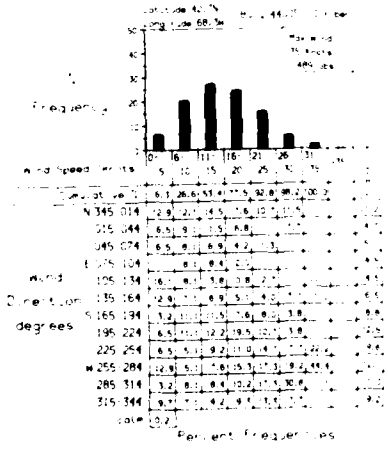


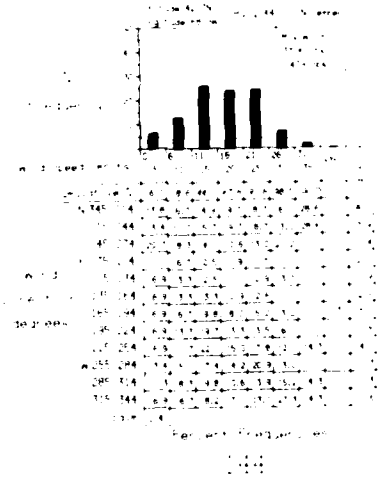


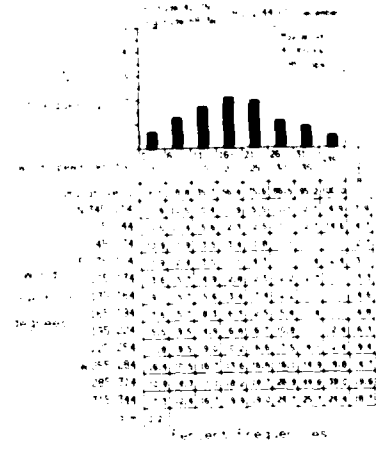


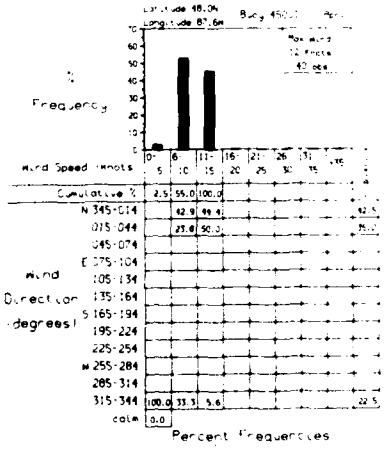


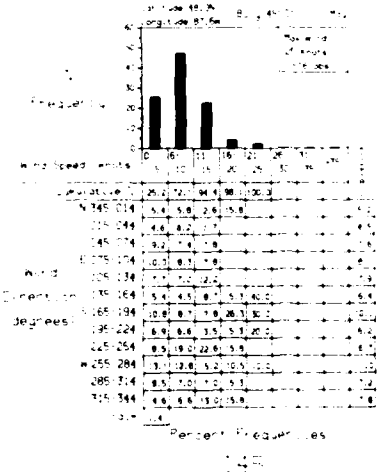


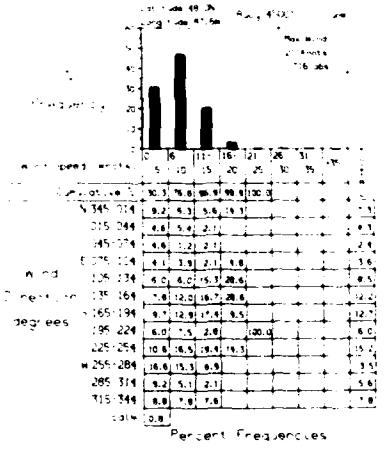


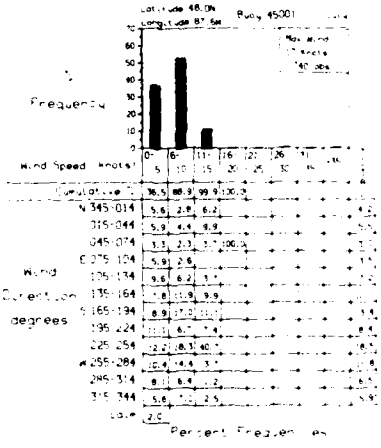


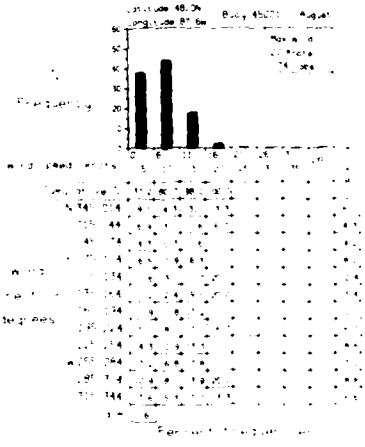


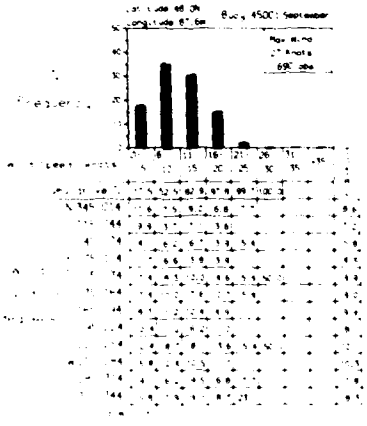

Frequency
Wind Speed knots
Cumulative %
N 345-014
015-044
045-074
E 075-104
105-134
135-164
S 165-194
195-224
225-254
W 255-284
285-314
315-344
calm
Wind Direction degrees
Percent Frequencies

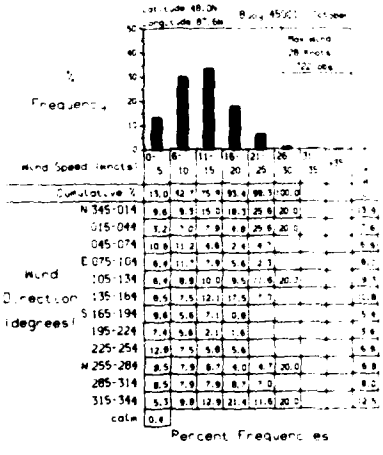

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

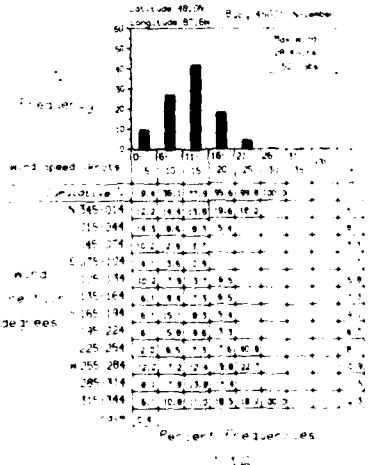

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

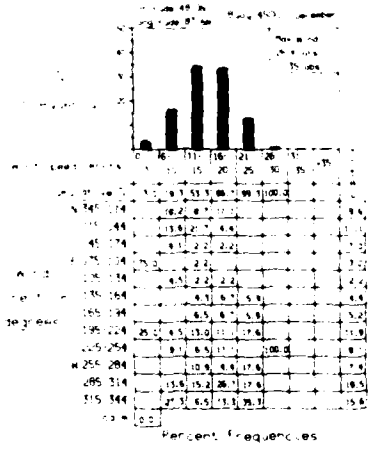


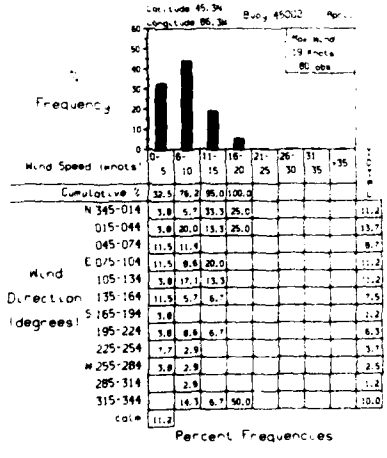


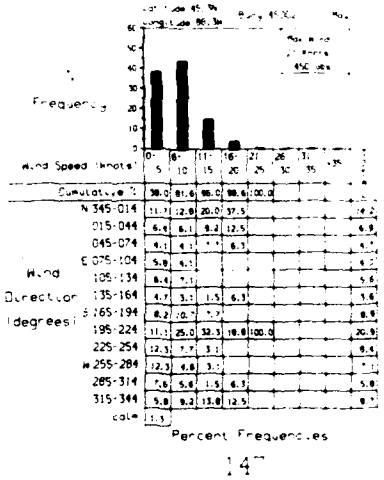


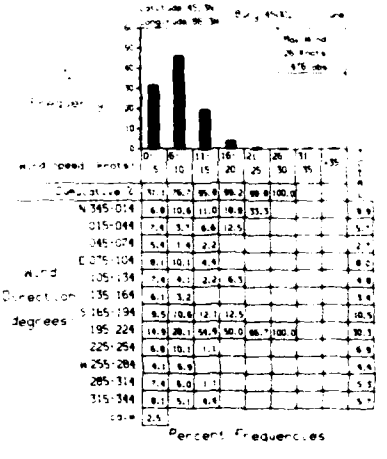


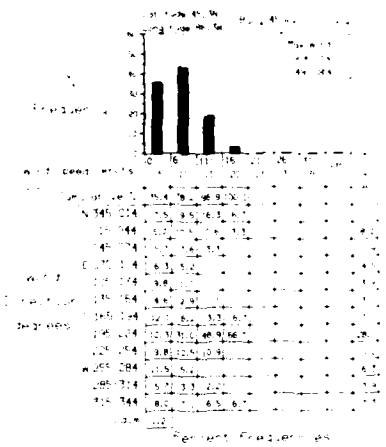


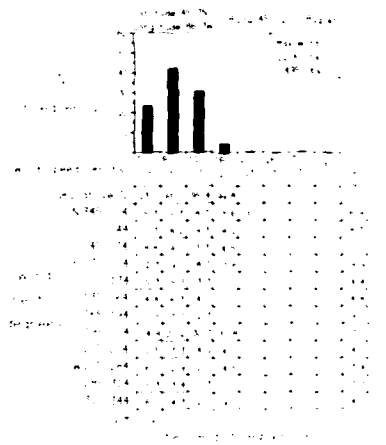


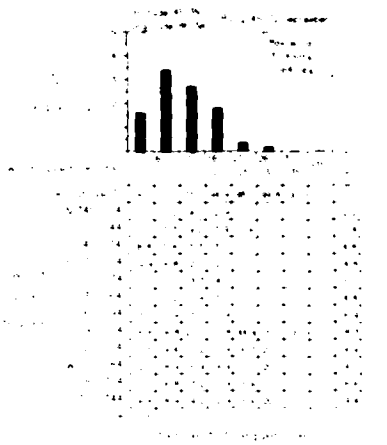

Frequency
Wind Speed (knots)
0-5
6-10
11-15
16-20
21-25
26-30
31-35
>35
Cumulative %
32.5 76.2 95.0 100.0
N 345-014 3.8 6.2 33.3 25.0 11.2
015-044 3.8 30.0 13.3 25.0 13.7
045-074 11.5 11.9 9.7
E 075-104 11.5 9.6 20.0 10.2
105-134 3.8 17.1 13.3 10.2
135-164 11.5 5.7 6.7 7.5
S 165-194 3.8 2.2
195-224 3.8 8.8 6.7 6.3
225-254 7.7 2.9 3.7
W 255-284 3.8 2.9 2.5
285-314 2.9 1.2
315-344 14.3 6.7 50.0 10.0
calm 11.2
Wind Direction (degrees)
Percent Frequencies

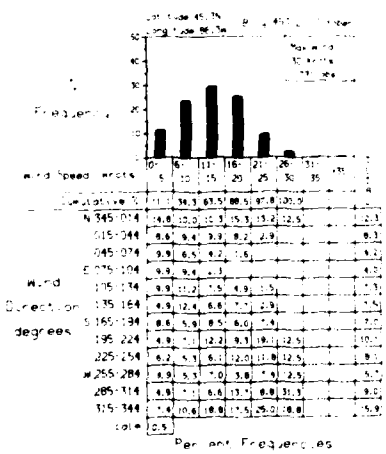

Frequency
Wind Speed (knots)
0-5
6-10
11-15
16-20
21-25
26-30
31-35
>35
Cumulative %
38.0 81.6 95.0 98.6 100.0
N 345-014 11.7 12.8 20.0 37.5 14.2
015-044 6.4 6.1 9.2 12.5 6.9
045-074 6.1 4.3 6.3 4.7
E 075-104 5.8 4.3 4.7
105-134 8.4 7.1 5.6
135-164 4.7 3.1 1.5 6.3 3.6
S 165-194 8.2 10.7 7.7 8.9
195-224 11.1 25.0 32.3 18.8 100.0 20.9
225-254 12.3 7.7 3.1 8.4
W 255-284 12.3 6.8 3.1 7.1
285-314 7.6 5.8 1.5 6.3 5.0
315-344 5.8 9.2 13.8 12.5 8.9
calm 11.5
Wind Direction (degrees)
Percent Frequencies

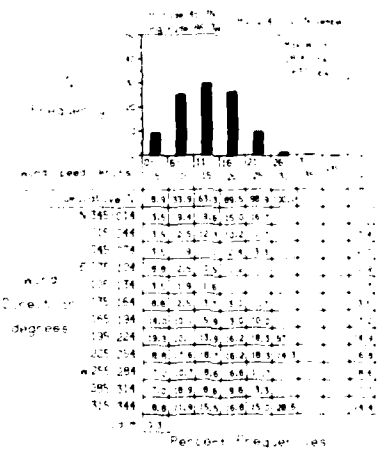

Frequency
Wind Speed (knots)
0-5
6-10
11-15
16-20
21-25
26-30
31-35
>35
Cumulative %
32.1 76.7 95.0 99.2 100.0
N 345-014 6.0 10.6 11.0 10.8 33.3 9.9
015-044 7.9 5.7 6.6 12.5 5.7
045-074 5.4 1.4 2.2 2.7
E 075-104 8.1 10.1 4.4 8.5
105-134 7.6 6.1 2.2 6.3 6.8
135-164 6.1 3.2 3.4
S 165-194 8.5 10.6 12.1 12.5 10.5
195-224 10.9 20.1 54.9 50.0 66.7 100.0 10.3
225-254 6.0 10.1 1.1 6.9
W 255-284 6.1 6.9 6.4
285-314 7.9 6.0 1.1 5.3
315-344 8.1 5.1 6.6 5.7
calm 2.5
Wind Direction (degrees)
Percent Frequencies

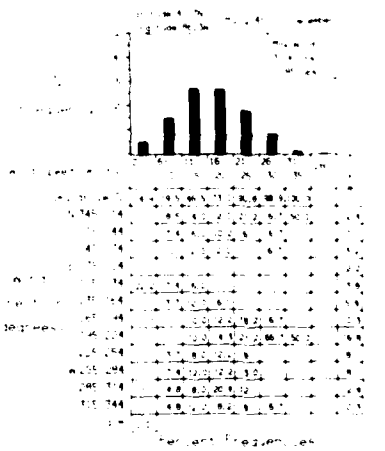


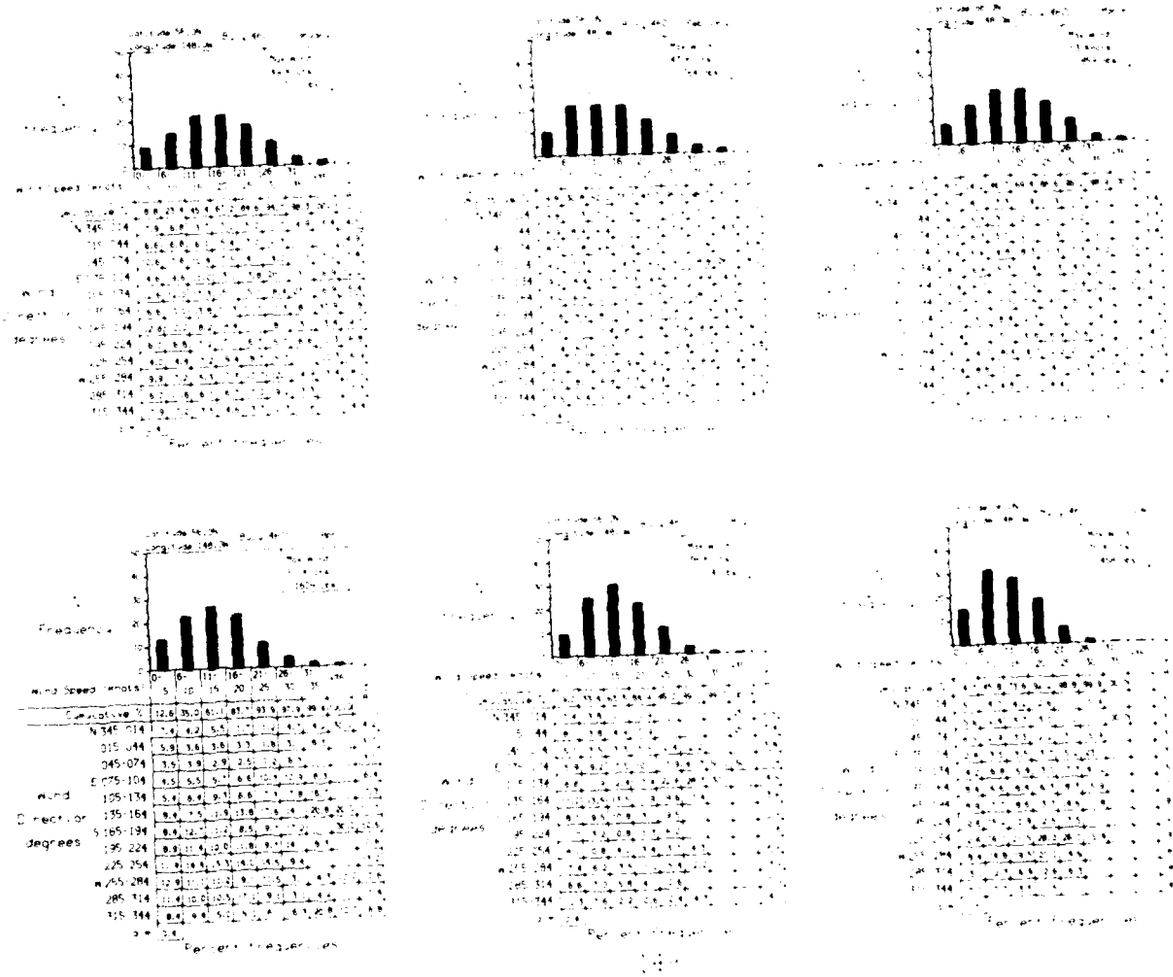


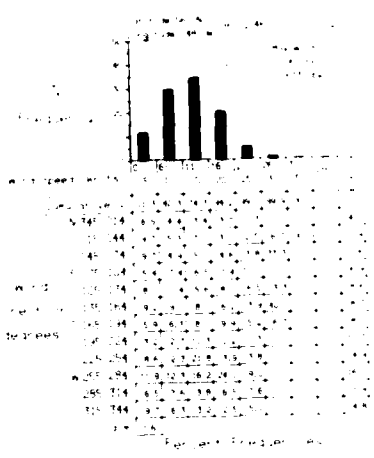


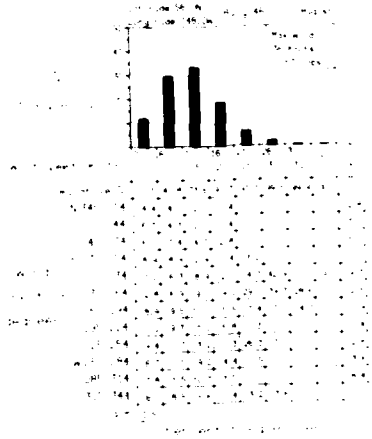


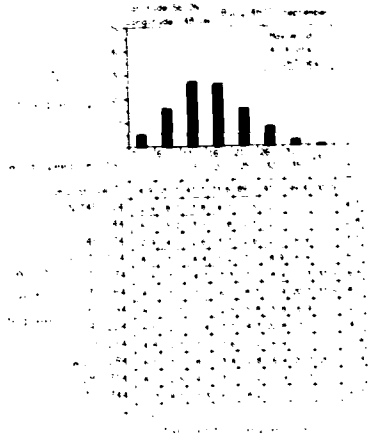


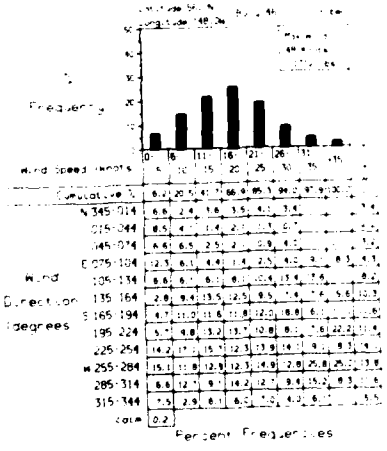


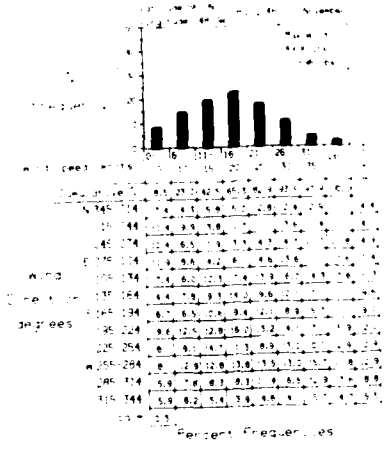


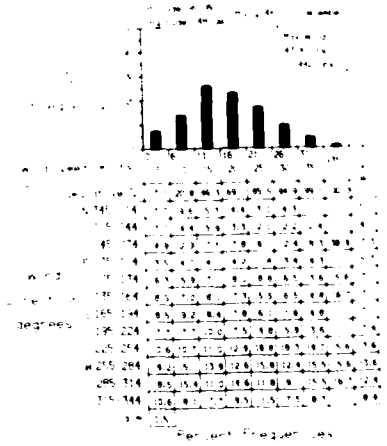


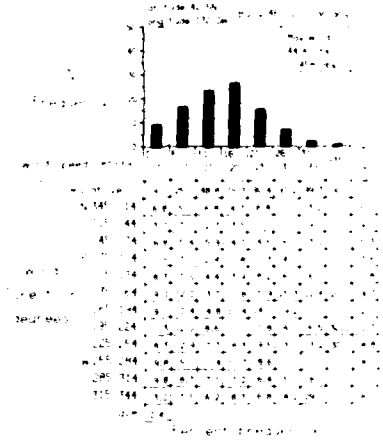


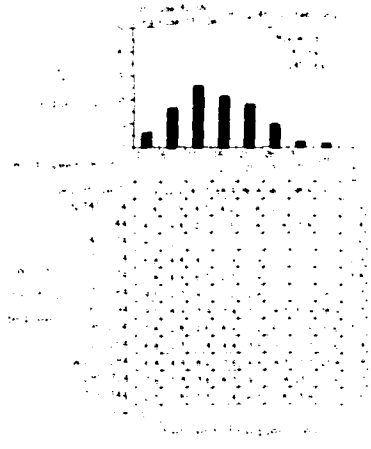


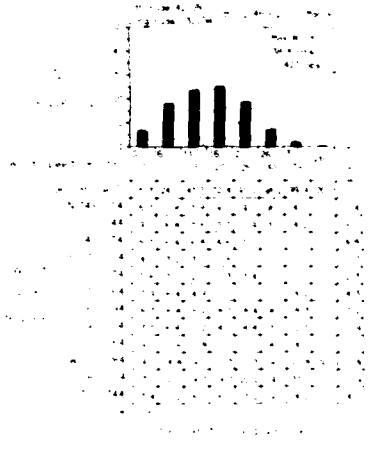

Frequency
Wind speed knots
Wind Direction degrees
Percent Frequencies

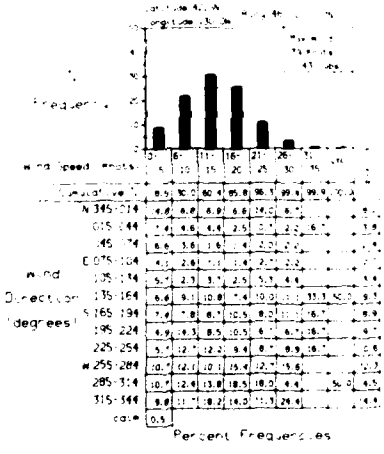

Wind Direction degrees
Percent Frequencies


Percent Frequencies

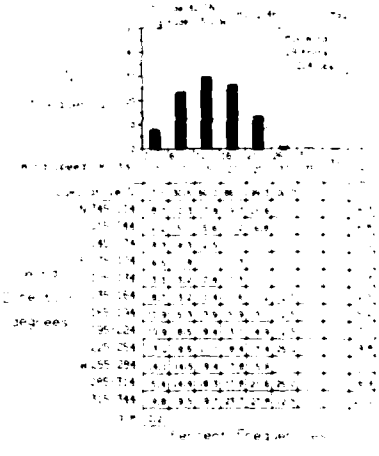


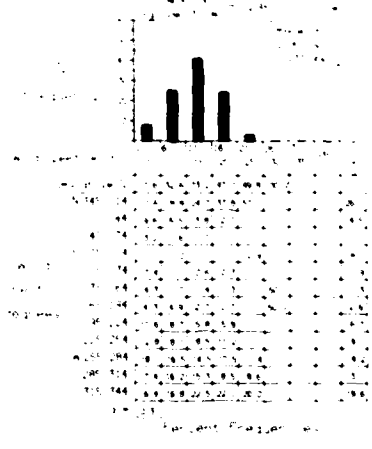


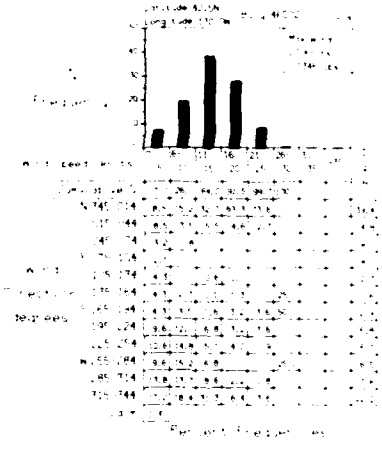


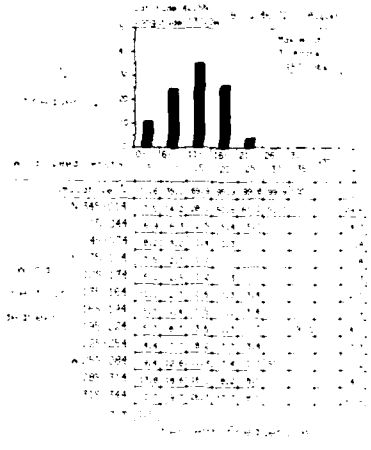


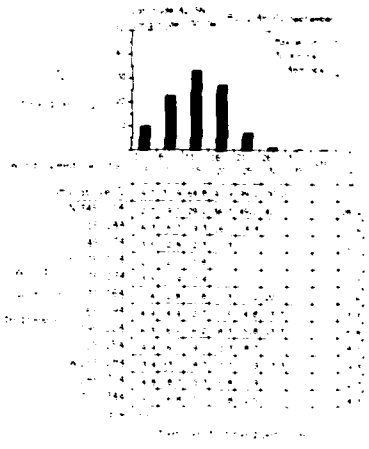
Percent Frequencies

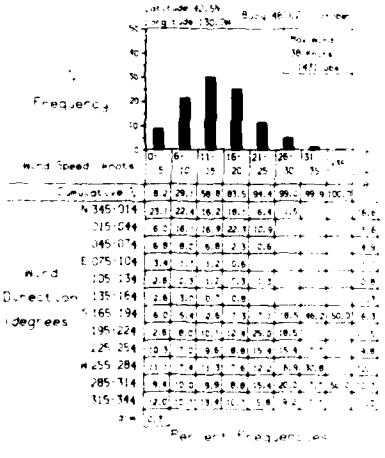


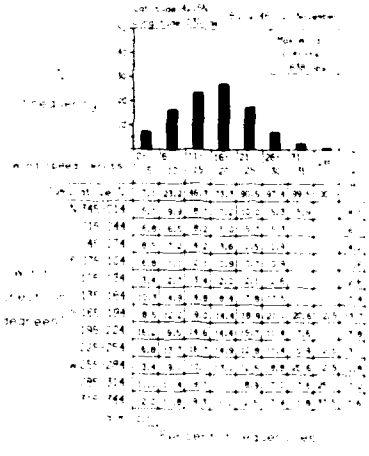


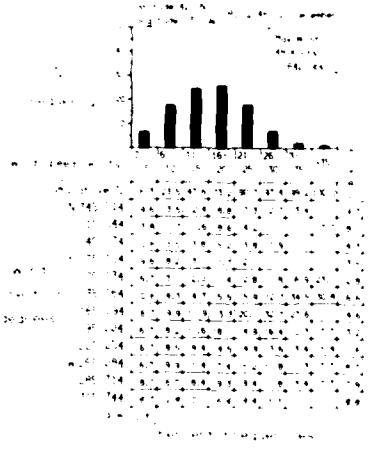


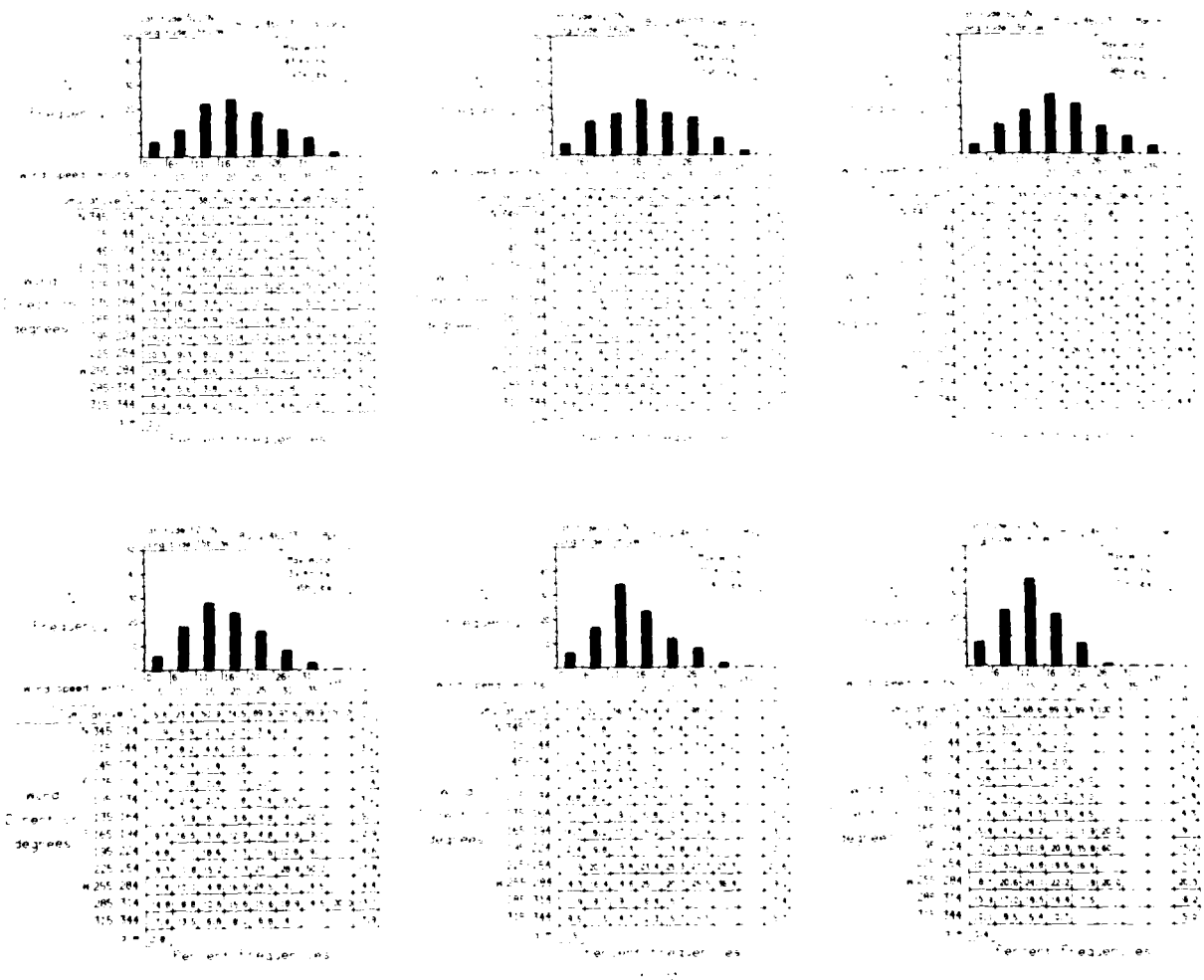


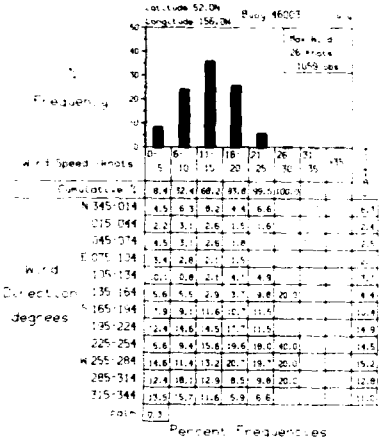


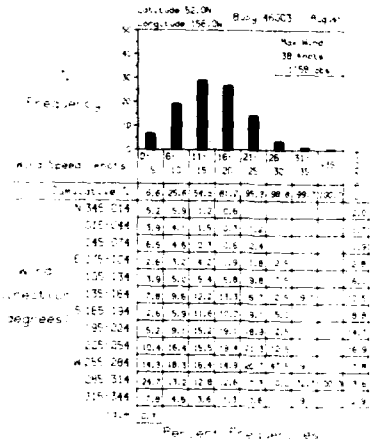

Frequency
Wind Speed knots
0- 6- 11- 16- 21- 26- 31-
5 10 15 20 25 30 35 >35
Cumulative % 8.2 29.1 58.8 81.5 94.4 99.- 99.9 100.0
N 345-014 23.1 22.4 16.2 10.1 6.4 1.7 0.1 6.0
015-044 6.5 10.1 16.8 22.1 10.9 1.6
045-074 6.8 8.0 6.8 2.1 0.6 0.9
E 075-104 3.4 1.7 1.2 0.6
105-134 2.8 1.3 1.2 0.3
Wind 135-164 2.6 3.1 0.7 0.6
Direction S 165-194 6.0 5.4 2.6 1.3 0.7 0.5 46.2 50.0 6.1
(degrees) 195-224 2.8 8.0 10.1 12.8 25.0 10.5
225-254 19.3 7.2 9.6 8.8 15.4 5.4 4.8
W 255-284 7.1 3.6 3.5 5.6 2.4 6.9 30.8
285-314 9.4 12.0 9.9 8.8 15.4 6.0
315-344 2.0 12.5 13.4 10.1 5.8 9.2
Percent Frequencies

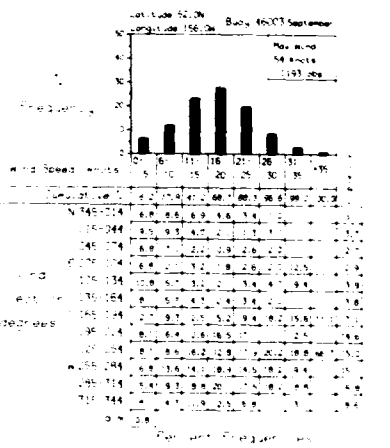


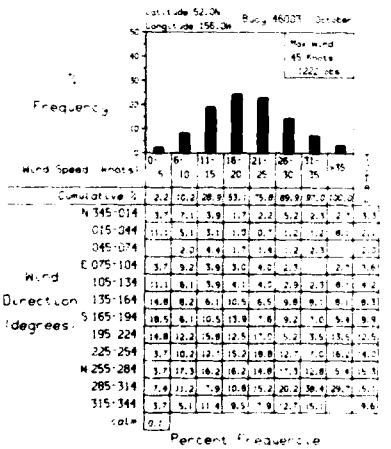


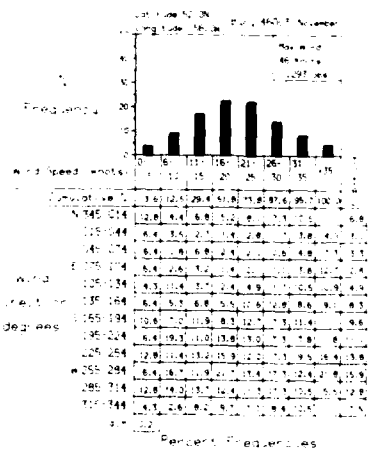


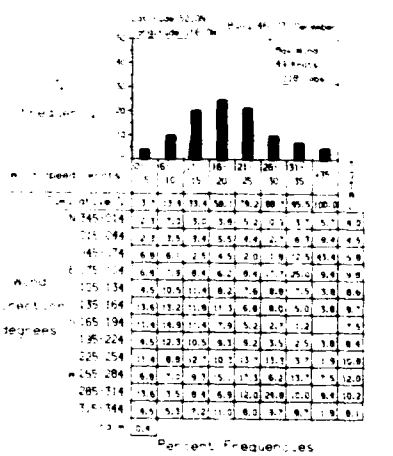

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

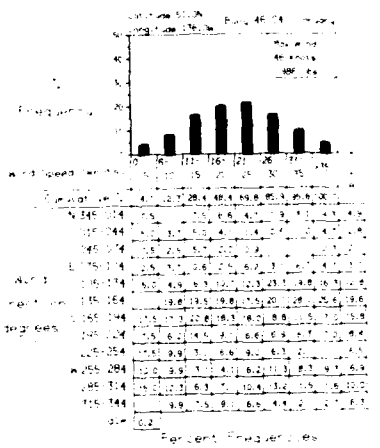

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

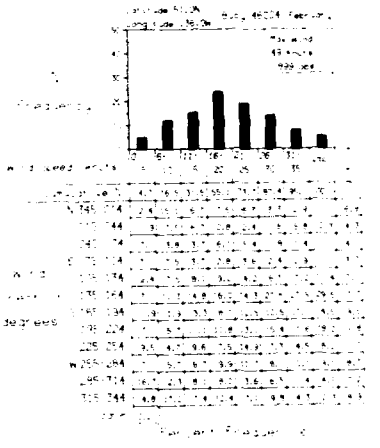

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

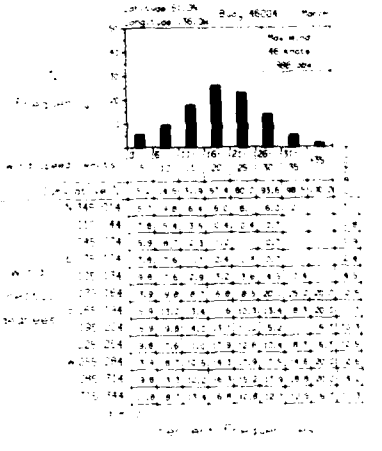

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

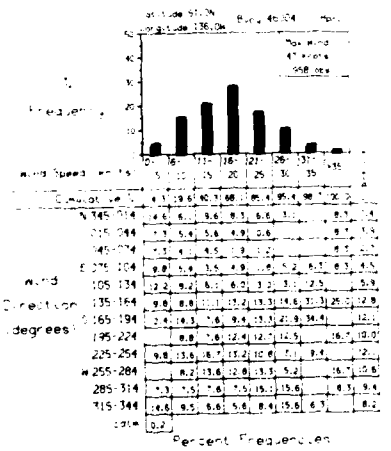

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

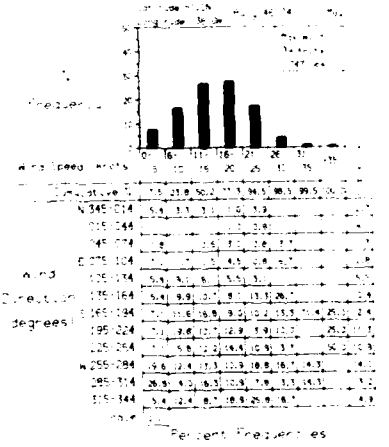

Frequency
Wind Speed knots
Wind Direction degrees
Percent Frequencies

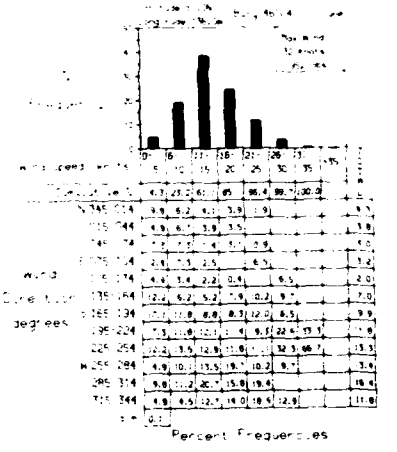


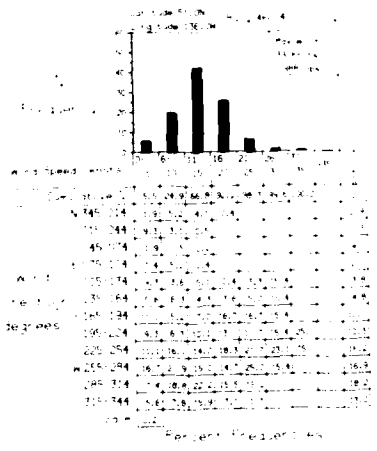


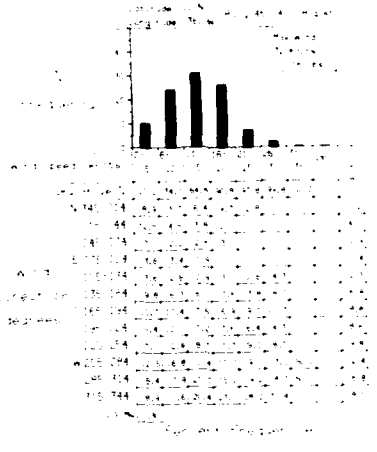


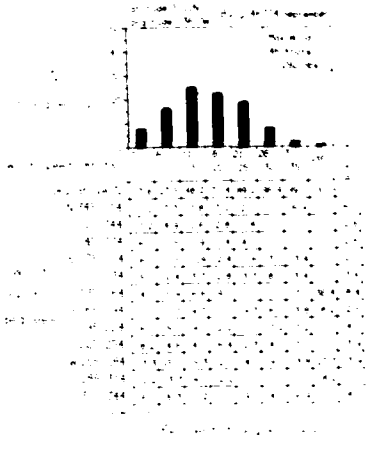


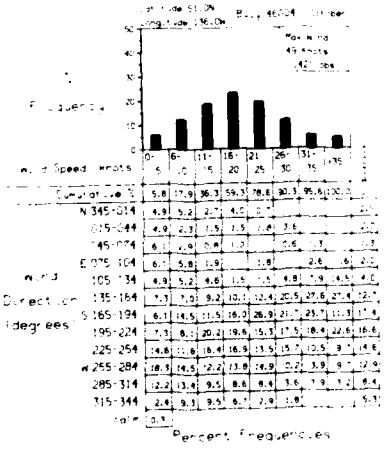


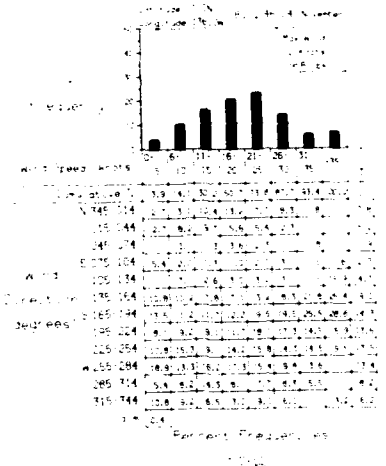


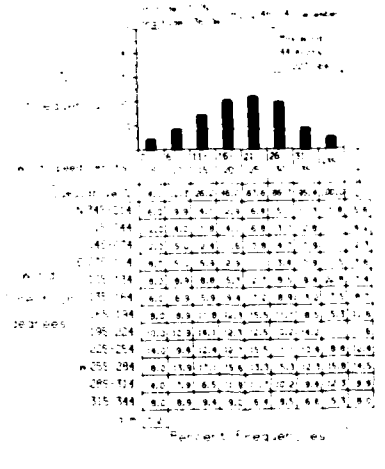


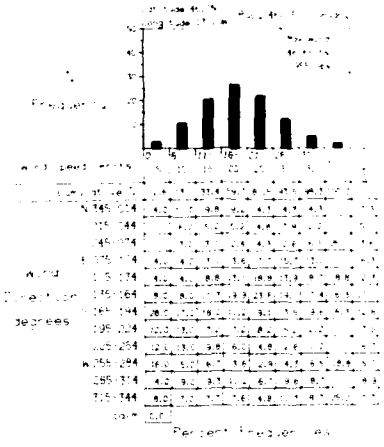


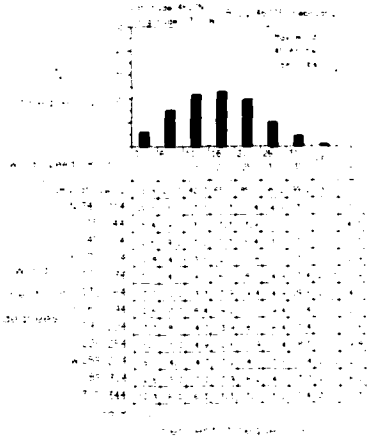


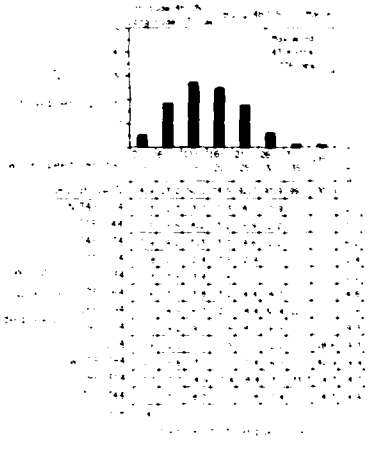


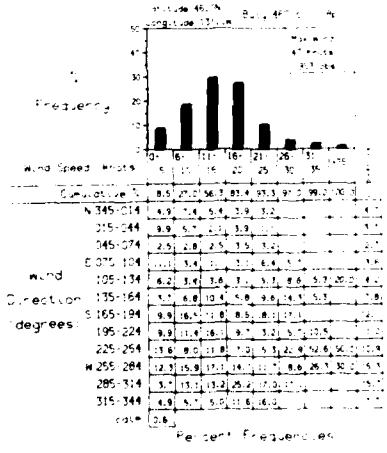


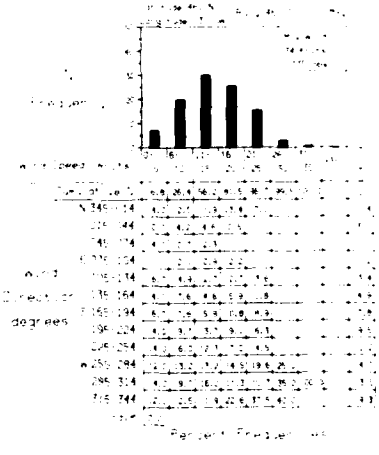


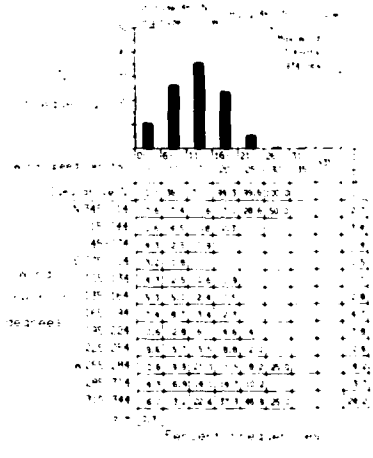

Frequency
Wind Direction degrees
Percent Frequencies

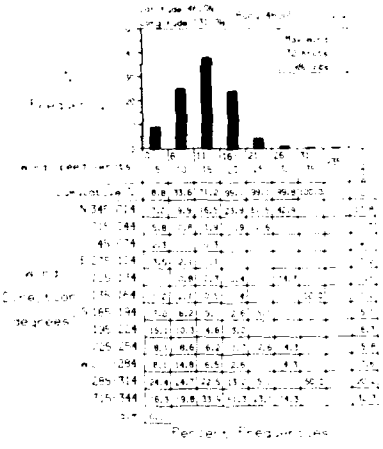


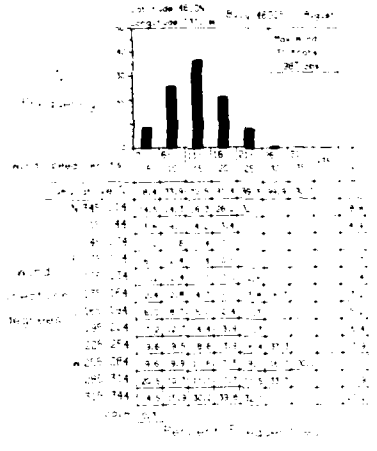


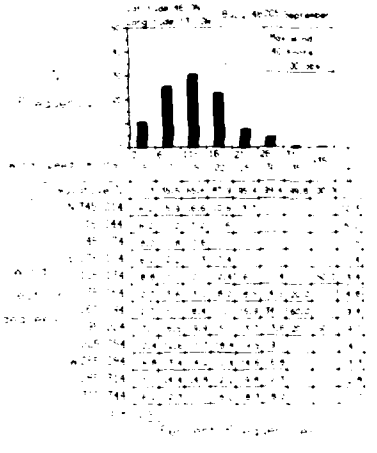

Frequency
Wind Direction degrees
Percent Frequencies

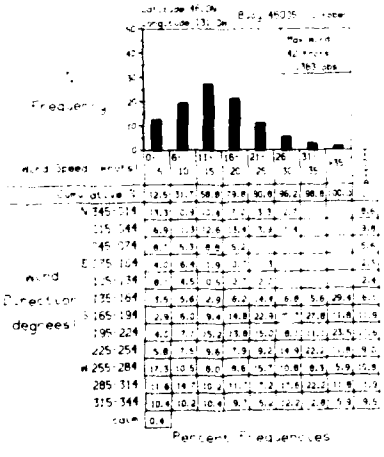


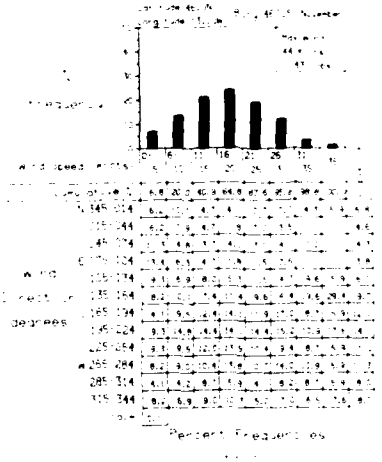


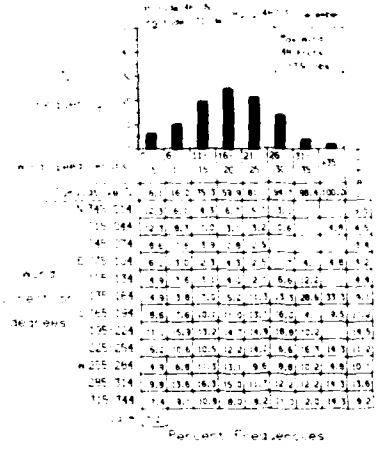


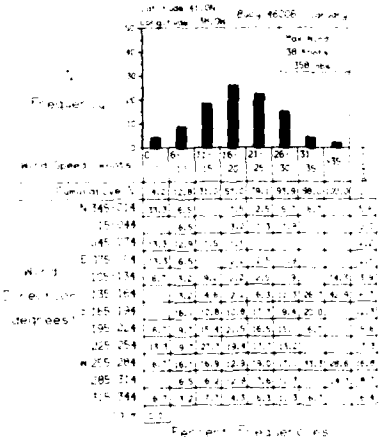


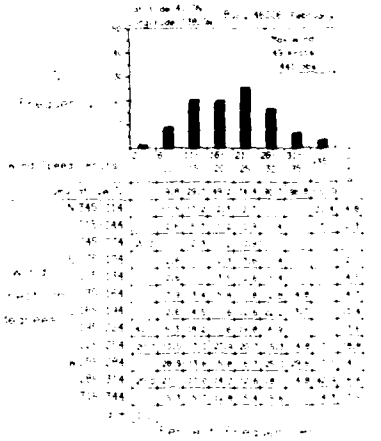


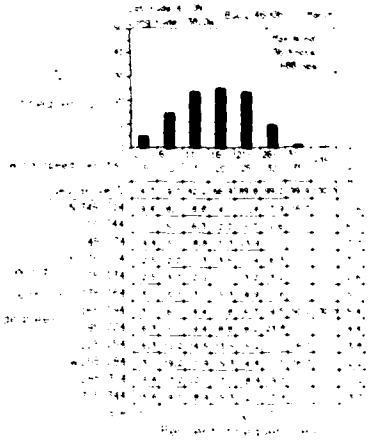

Wind Direction degrees
Percent Frequencies

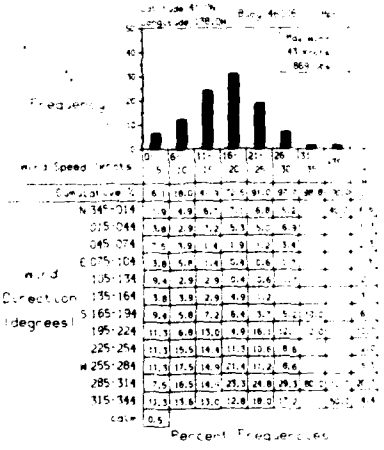

Percent Frequencies

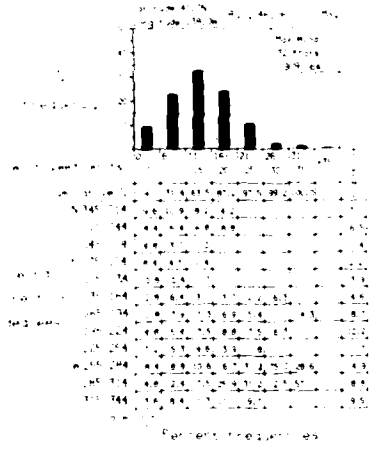

Percent Frequencies

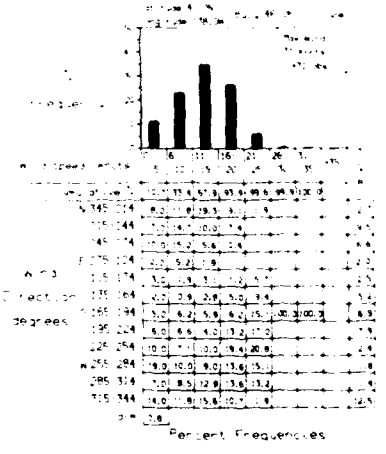


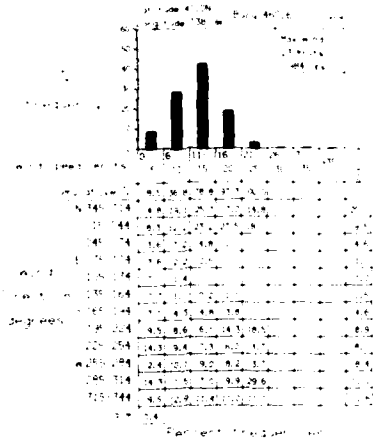


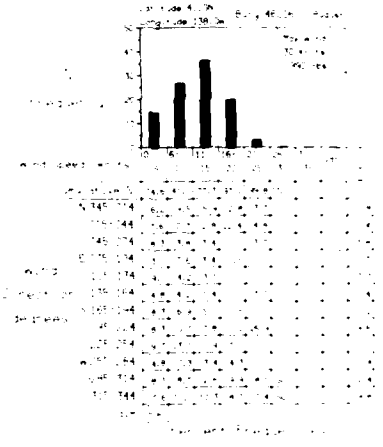


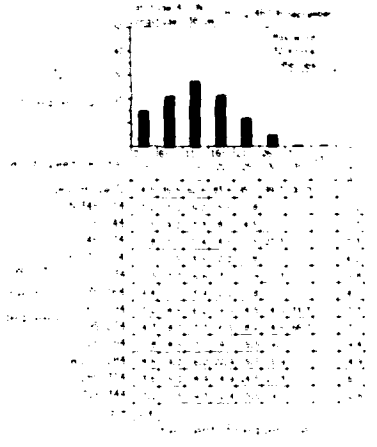


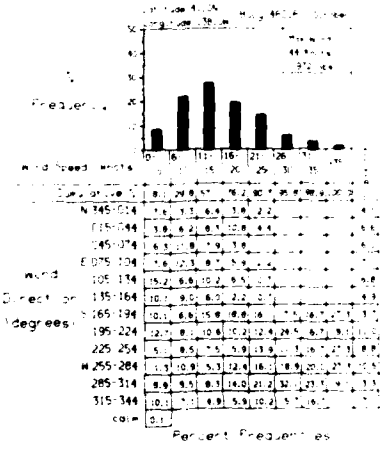


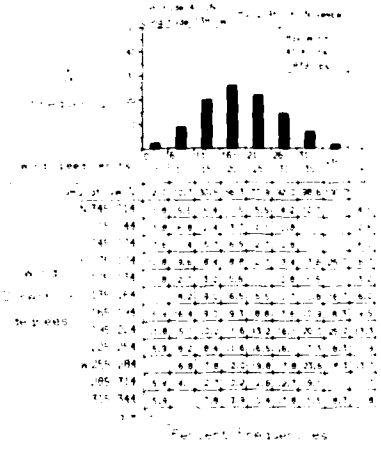


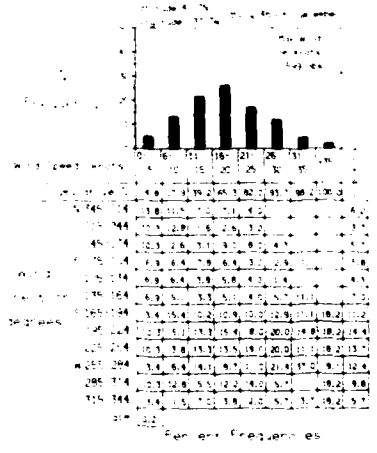






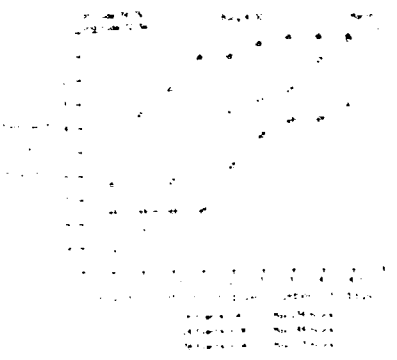


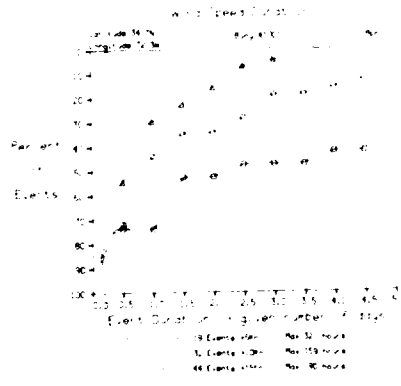


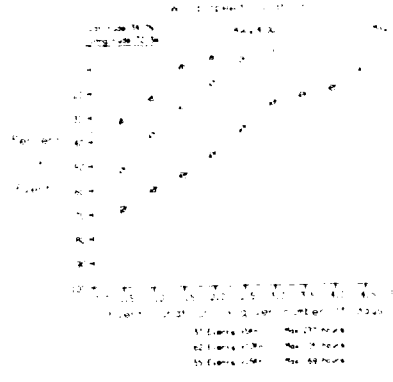


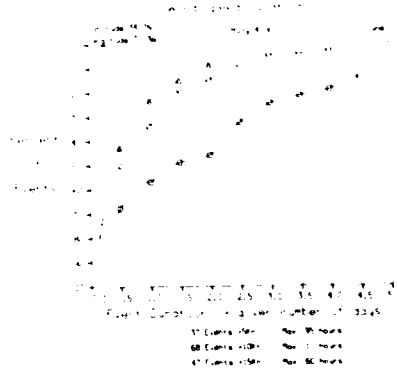


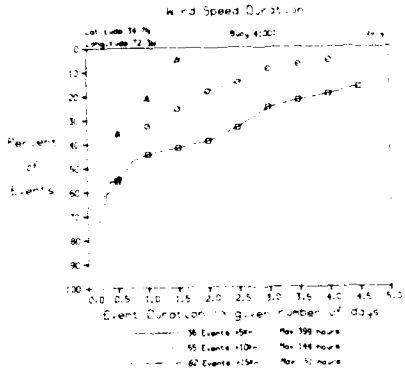


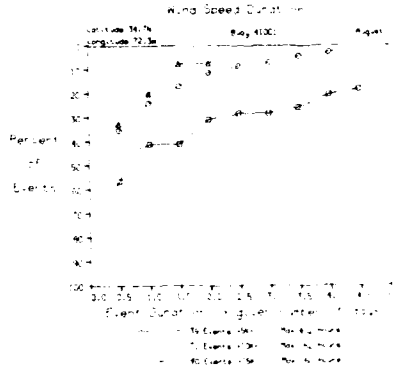


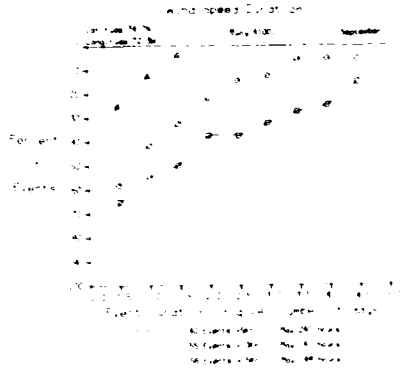


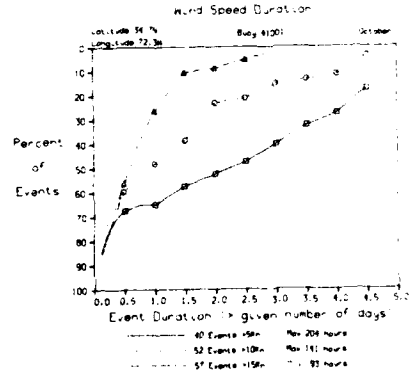


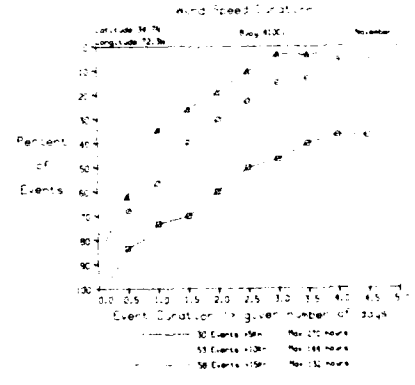


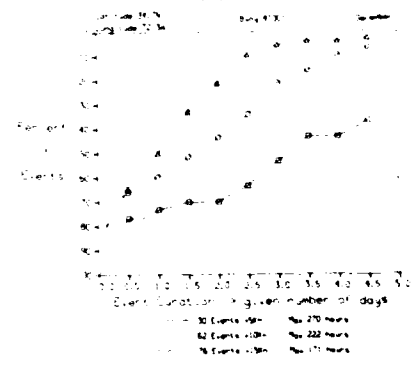

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

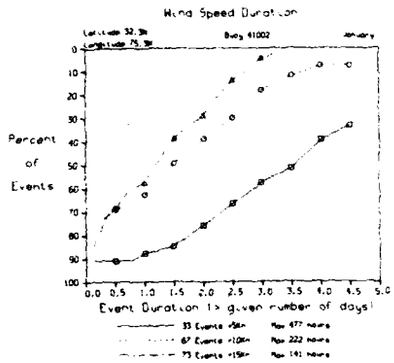

Wind Speed Duration
Percent of Events

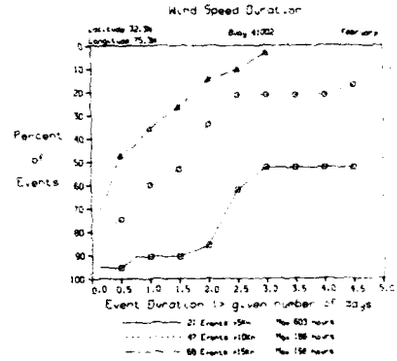

Percent of Events

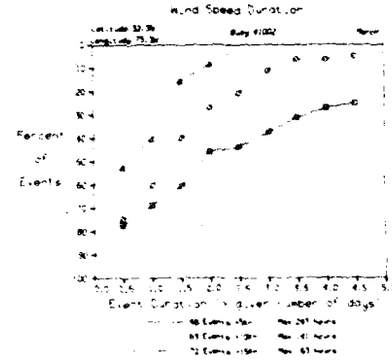

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

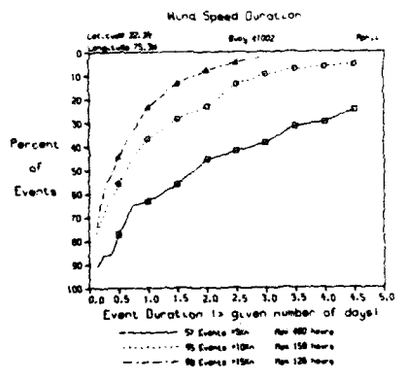

Percent of Events

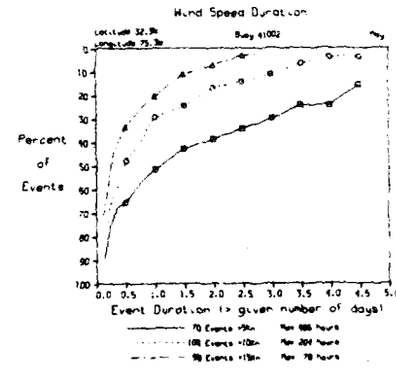

Percent of Events

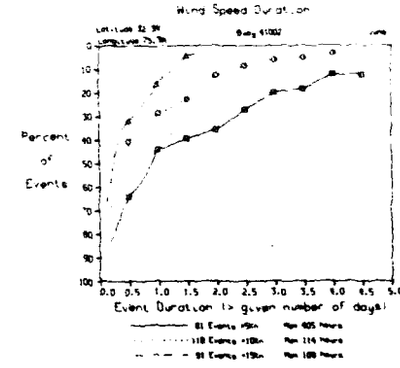

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

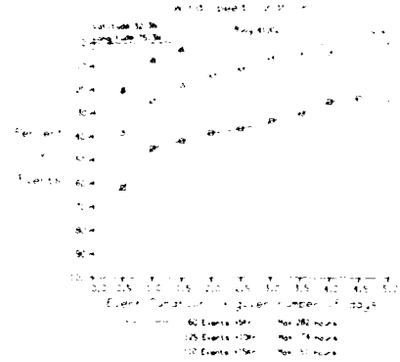

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

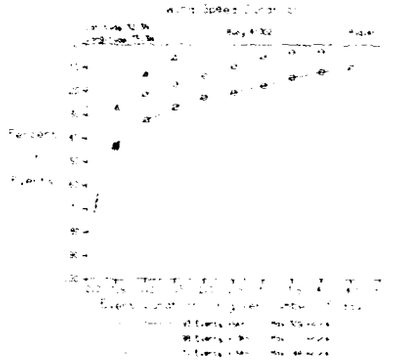

Wind Speed Duration
Percent of Events

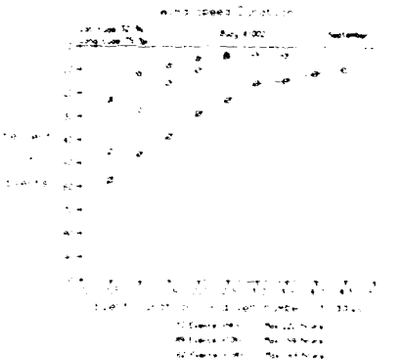

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

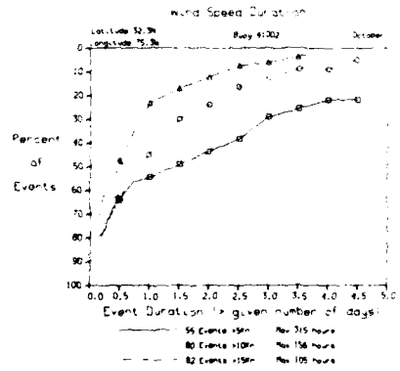

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

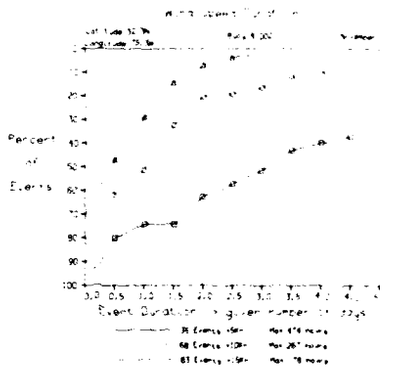

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

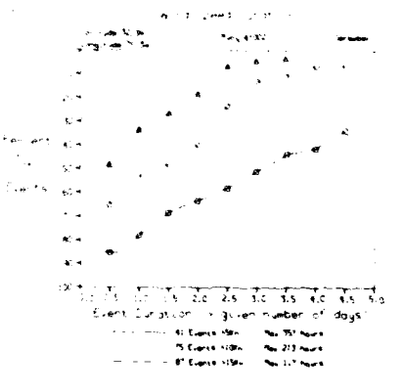


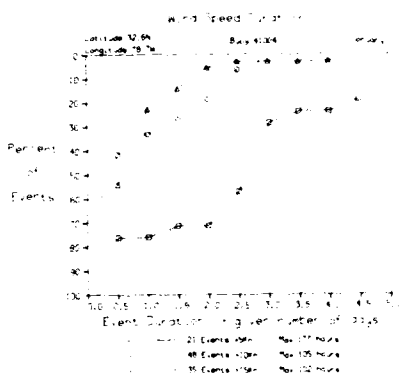


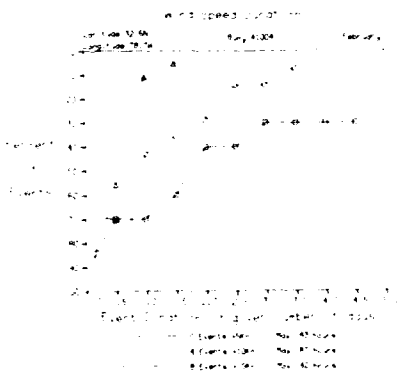


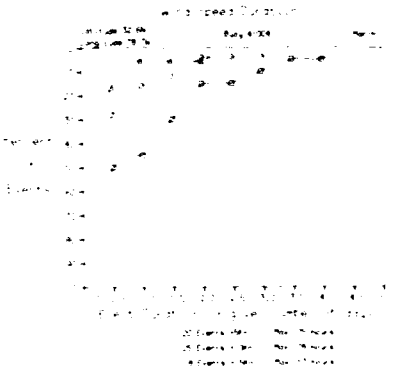

World Speed Duration
Percent of Events
Event Duration > given number of days

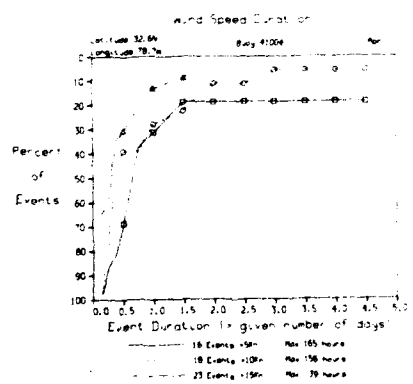


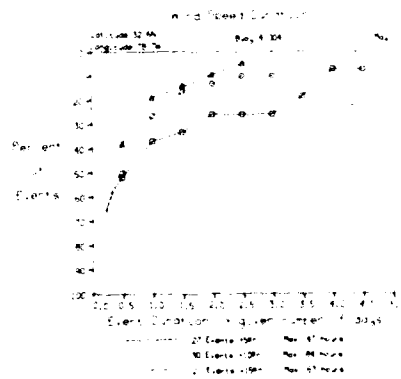


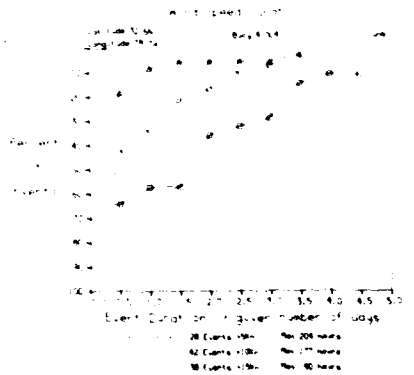


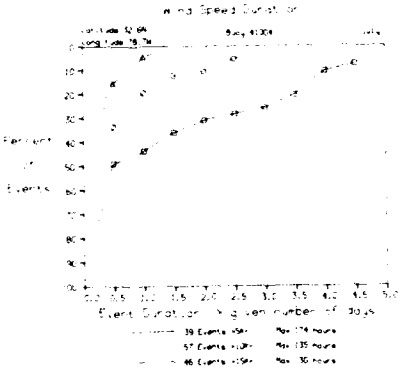


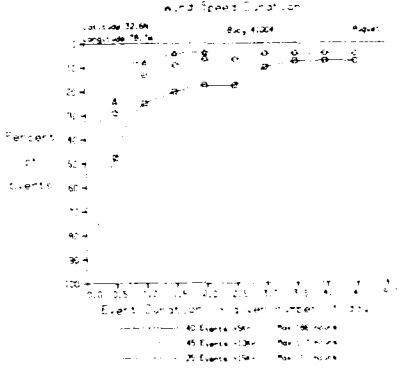


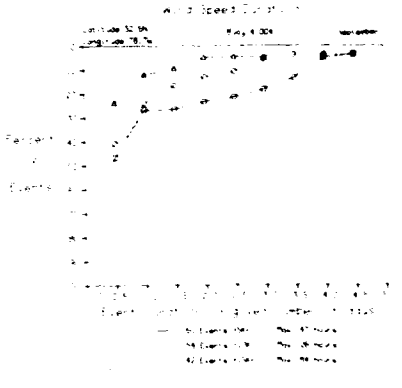

Wind Speed Duration
Percent of Events
Event Duration for given number of days

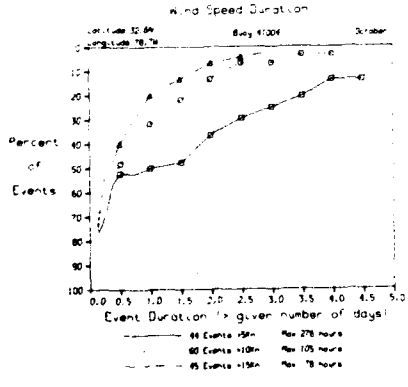


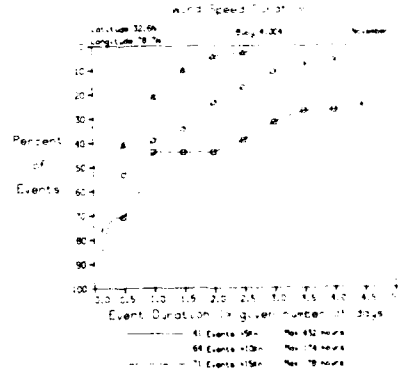


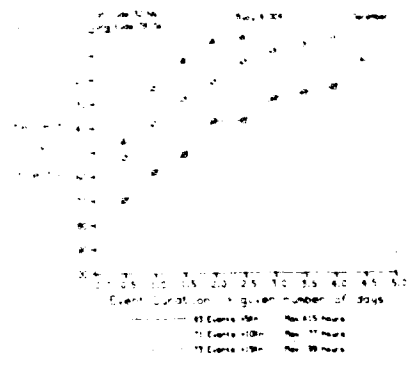


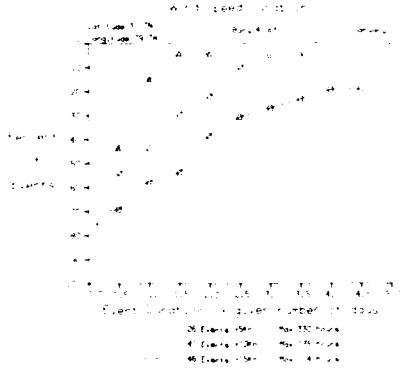


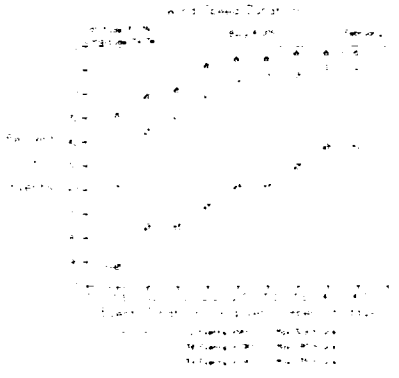


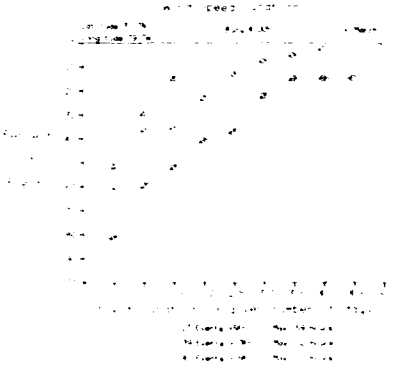

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

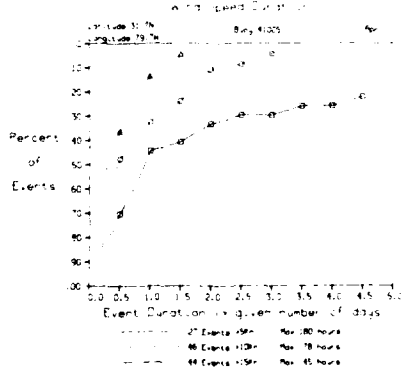


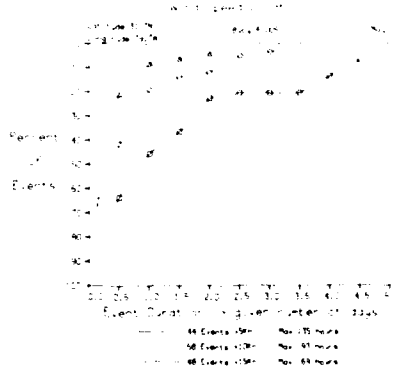


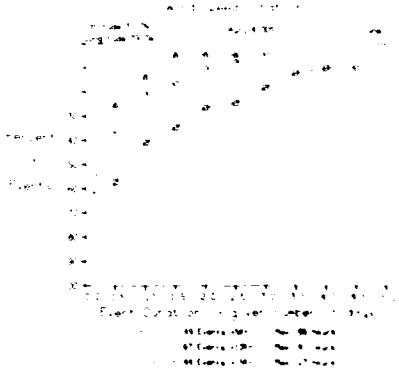







Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration in given number of days

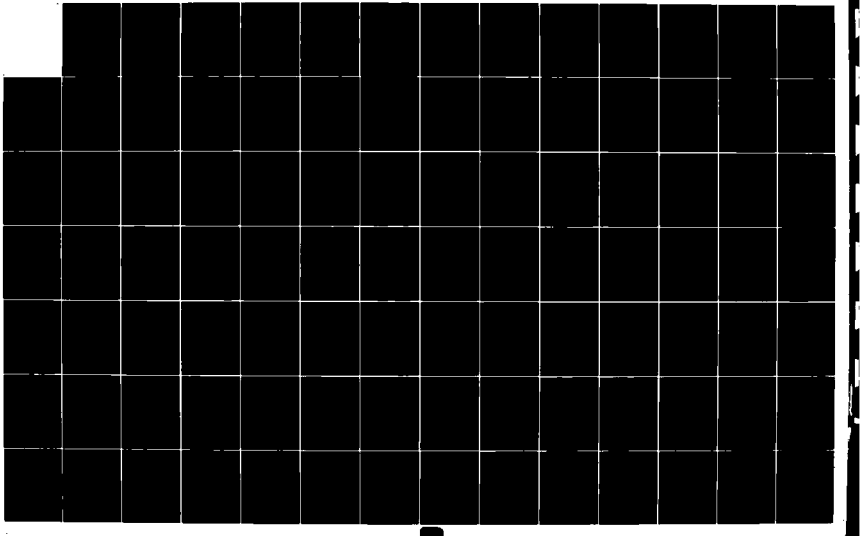


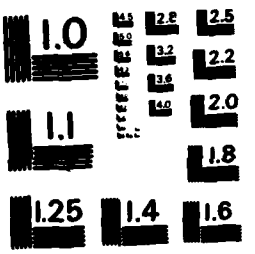


AD-A130 647 WIND AND WAVE SUMMARIES FOR SELECTED US COAST GUARD OPERATING AREAS(U) NATIONAL CLIMATIC DATA CENTER ASHEVILLE NC D PASKAUSKY ET AL. APR 83 USCG-D-11-83

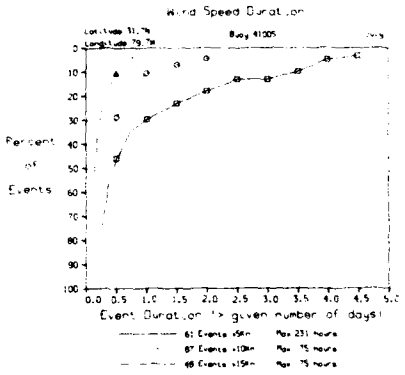
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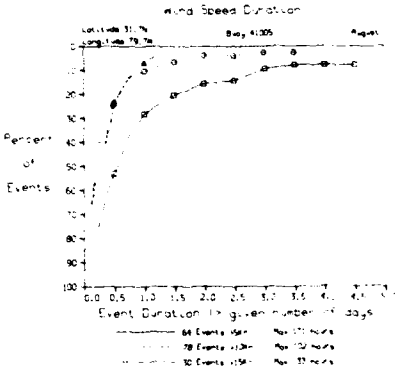
3/5

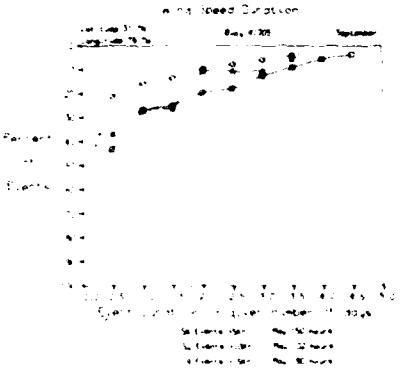


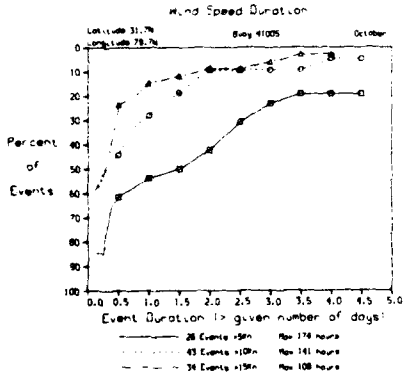


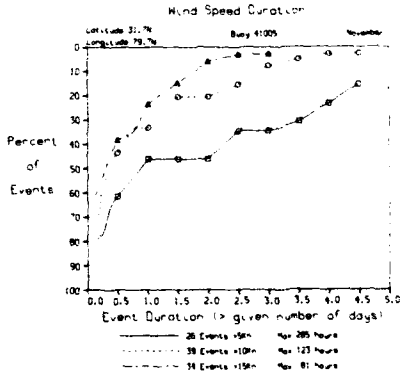
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

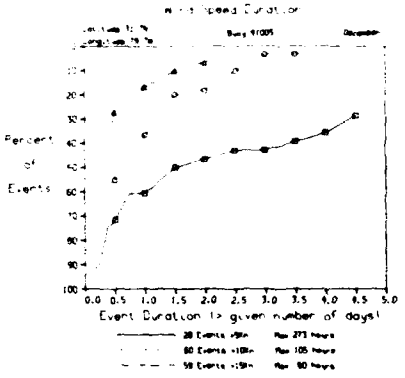

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

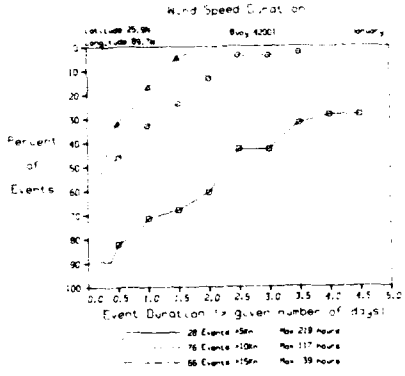

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

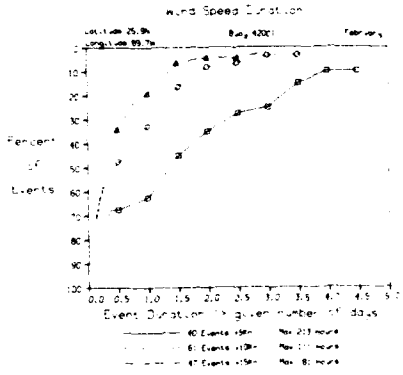

Wind Speed Duration
Percent of Events

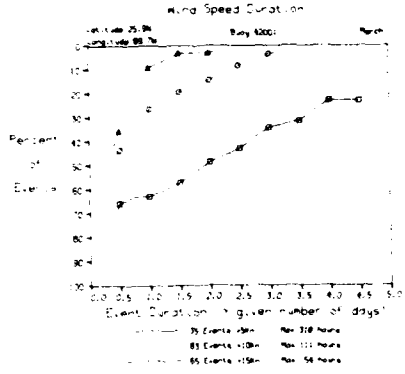

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

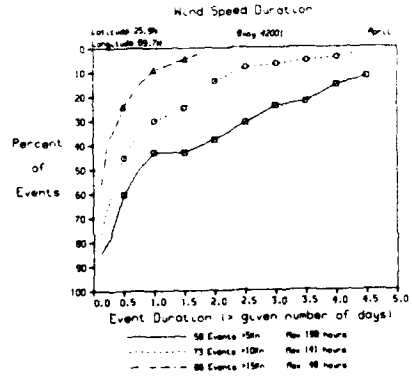

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

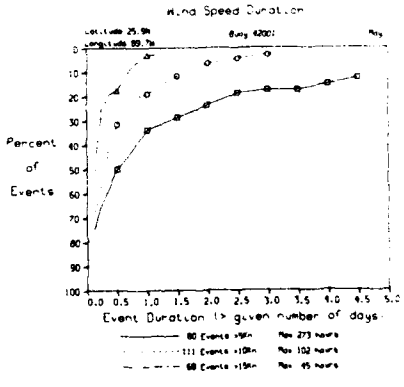

Percent of Events
Event Duration (> given number of days)

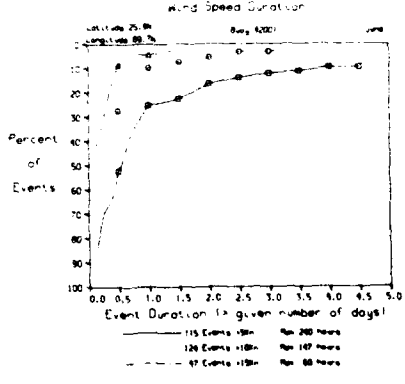

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

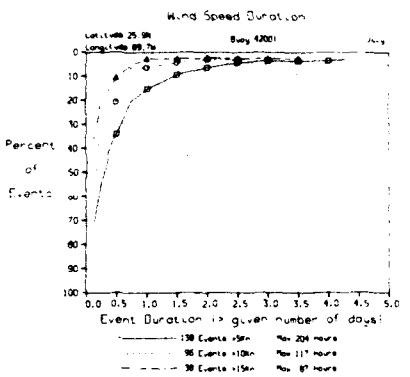

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

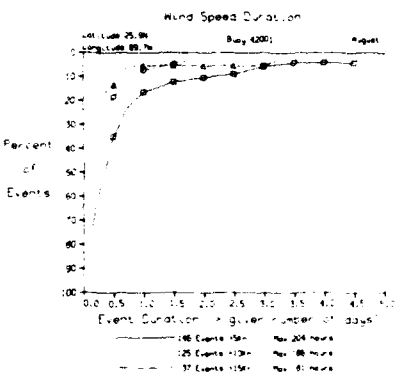

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

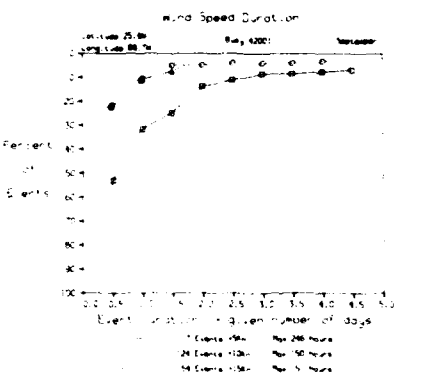

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

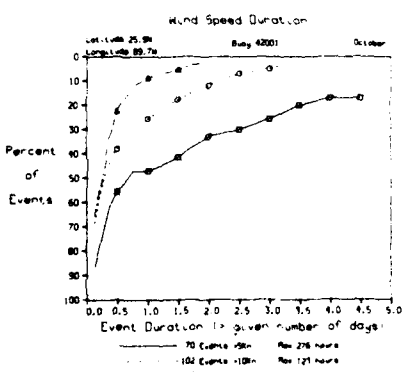

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

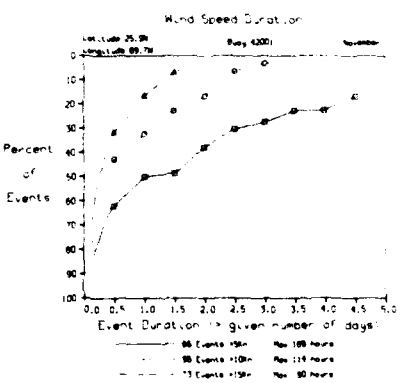

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

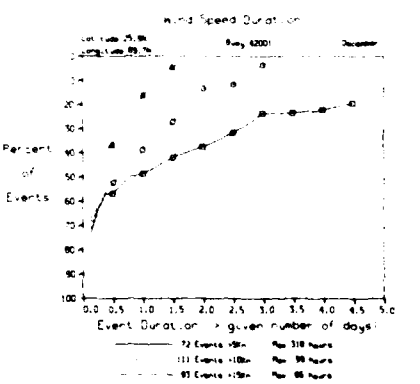

Wind Speed Duration
Buoy 42001
Percent of Events
Event Duration (> given number of days)

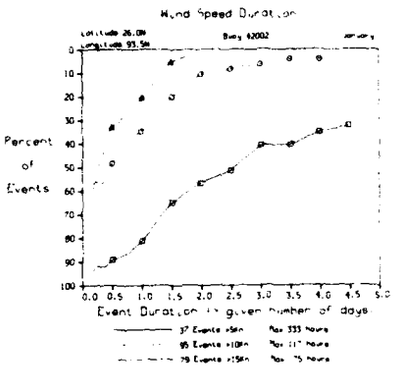

Wind Speed Duration
Buoy 42001
Percent of Events
Event Duration (> given number of days)

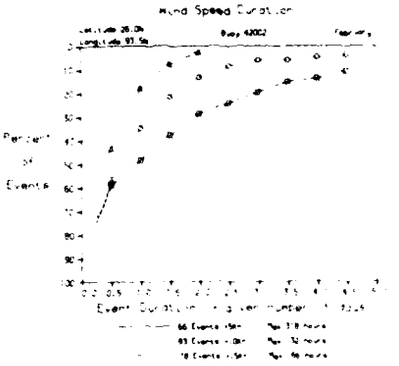

Wind Speed Duration
Buoy 42001
Percent of Events
Event Duration (> given number of days)

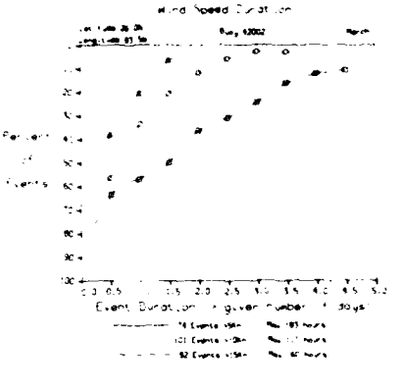

Wind Speed Duration
Buoy 42001
October
Percent of Events
Event Duration (> given number of days)

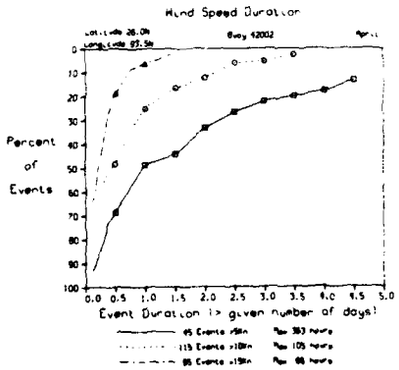

Wind Speed Duration
Buoy 42001
Percent of Events
Event Duration (> given number of days)

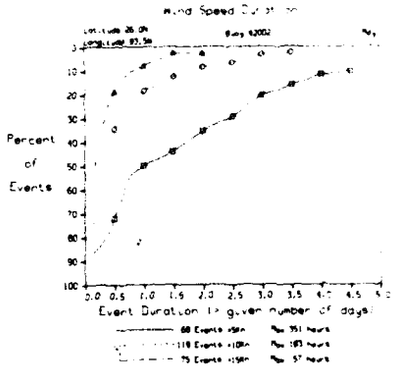

Wind Speed Duration
Buoy 42001
Percent of Events
Event Duration (> given number of days)

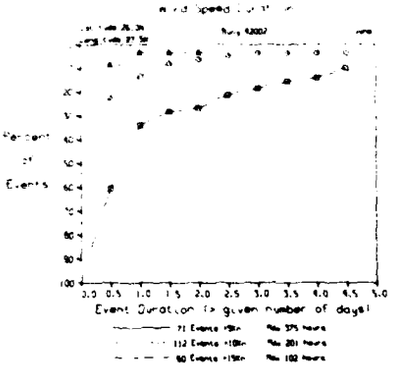

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

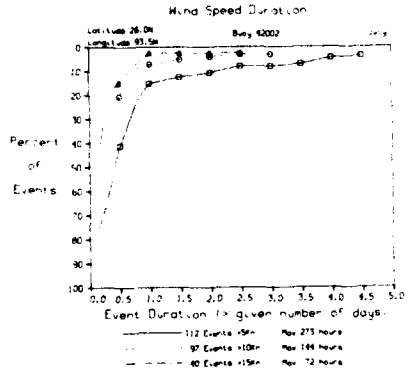

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

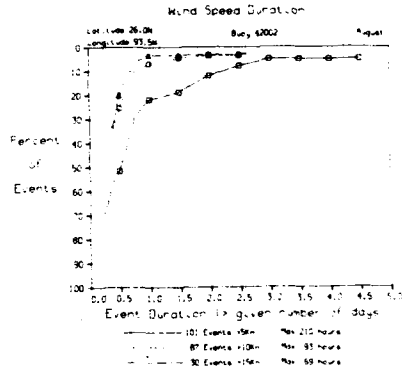

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

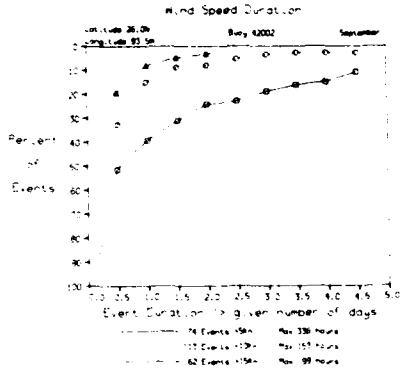

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

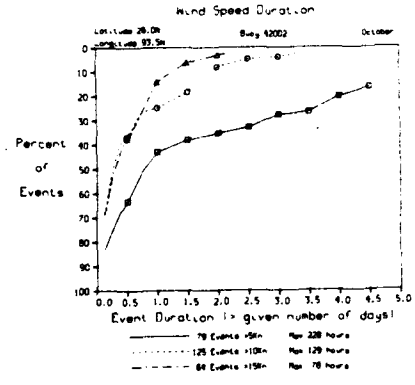

Percent of Events
Event Duration (> given number of days)

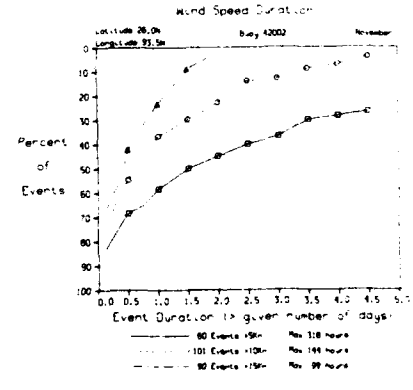

Event Duration (> given number of days)

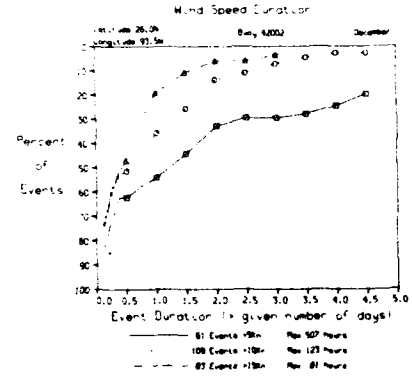

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

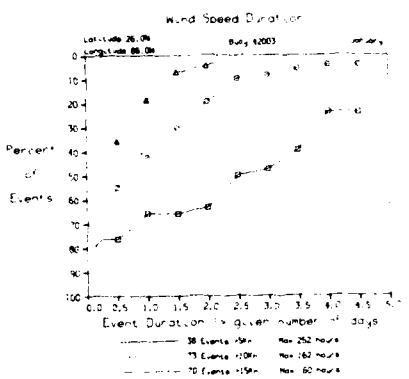

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

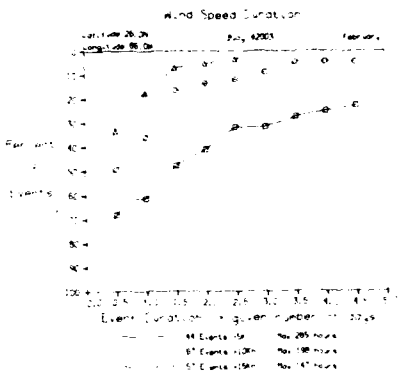

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

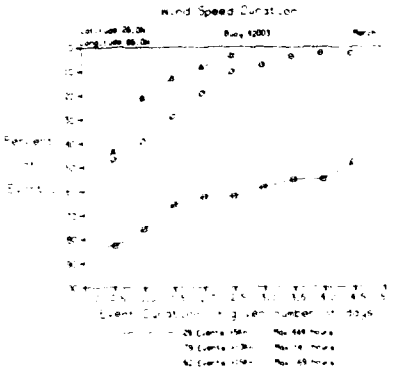

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

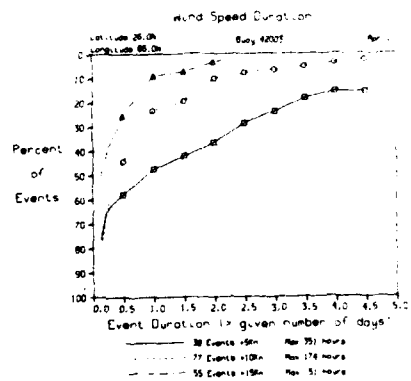

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

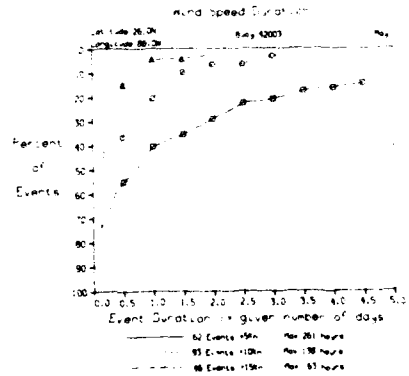

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

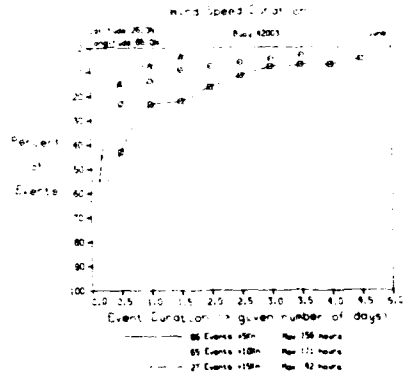

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

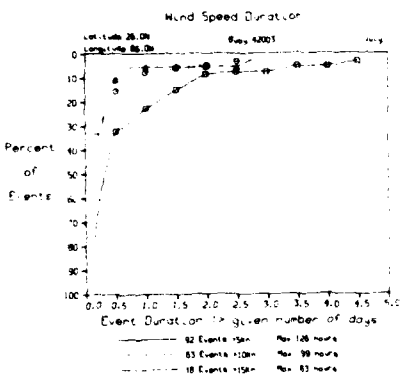

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

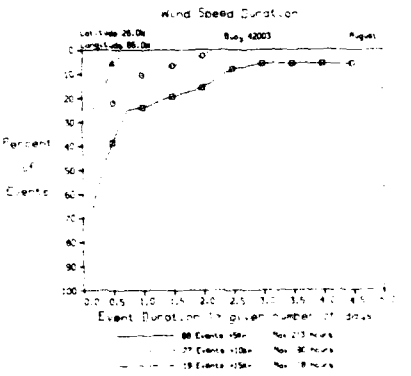

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

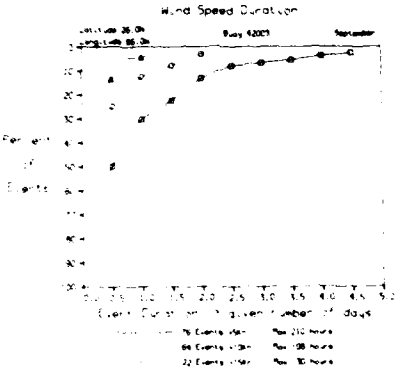

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

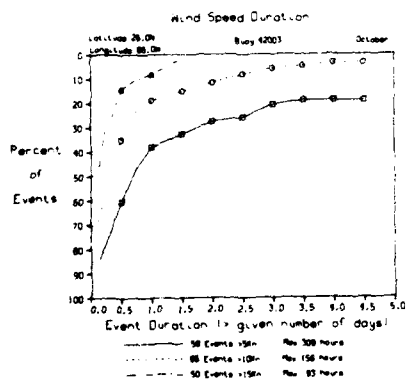

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

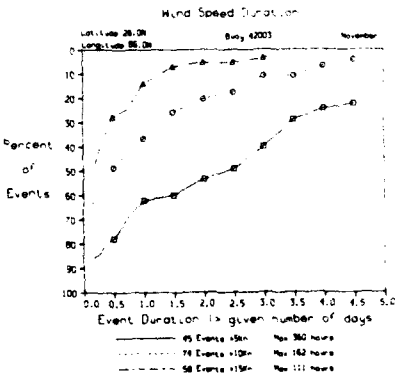

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

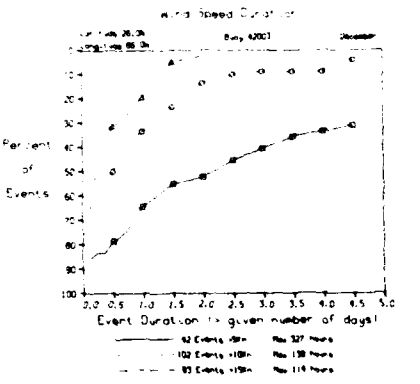

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

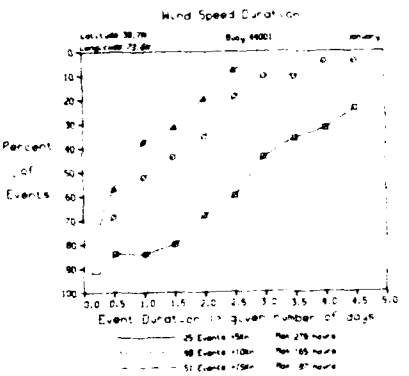

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

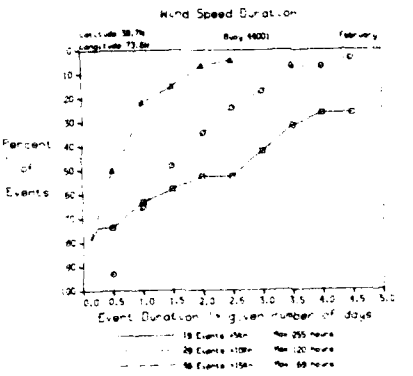

Wind Speed Duration
Event Duration (> given number of days)

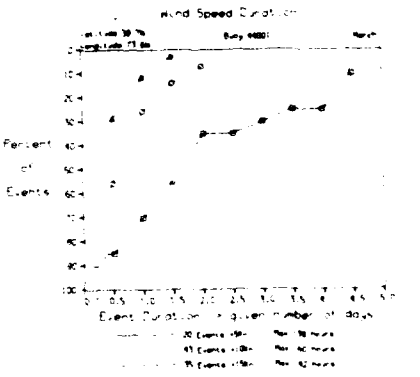

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

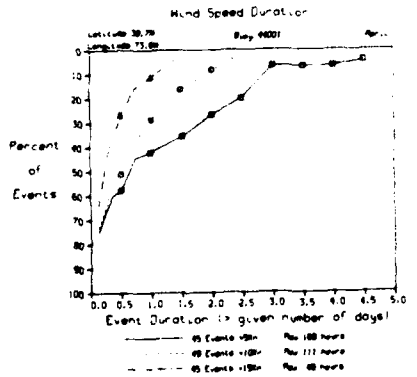

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

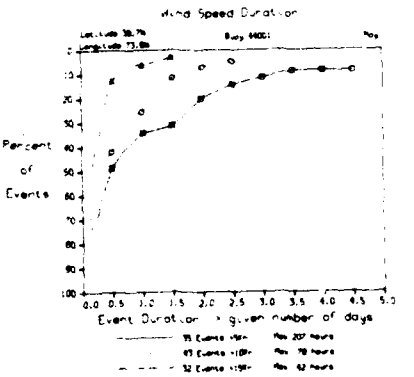

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

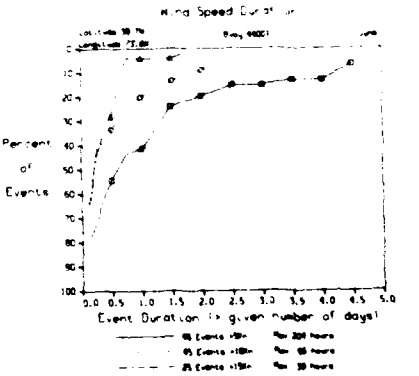

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

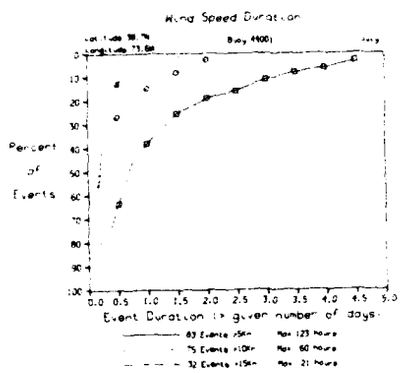

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

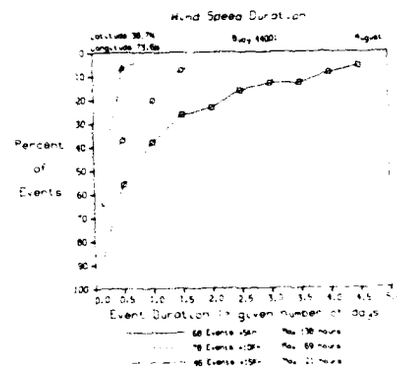

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

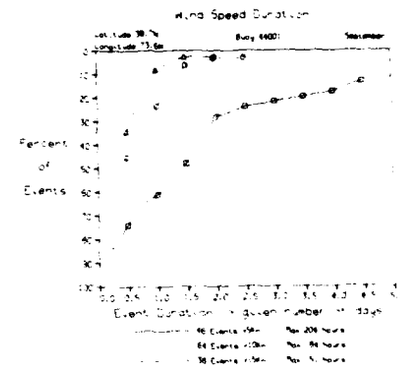

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

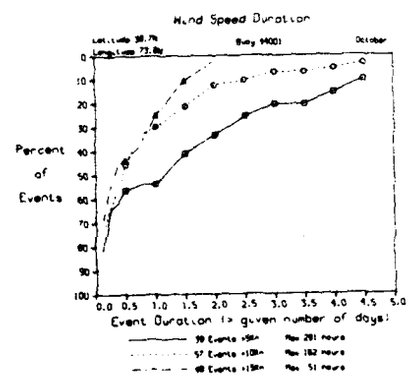

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

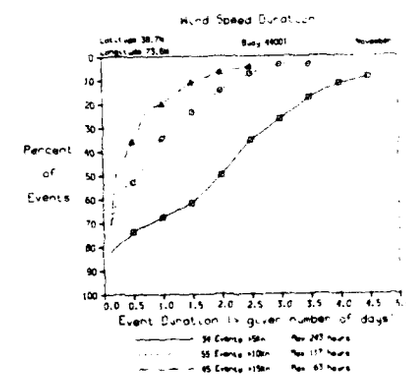

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

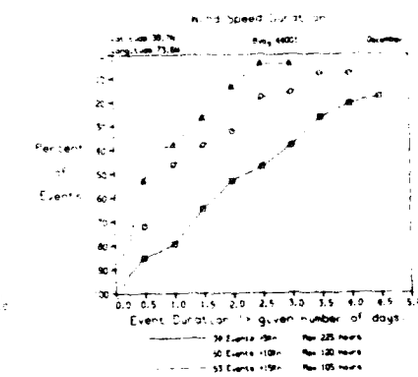

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

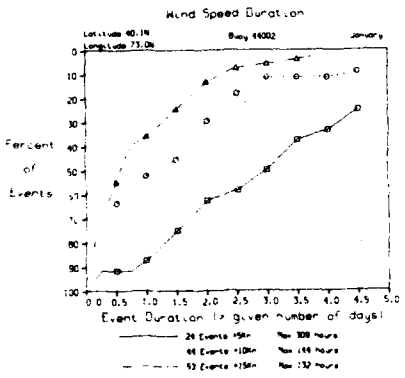

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

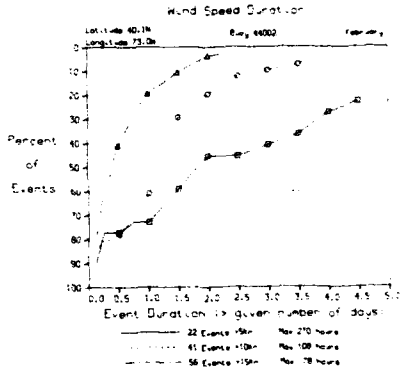

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

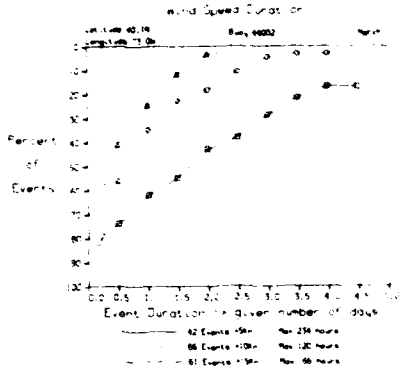

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

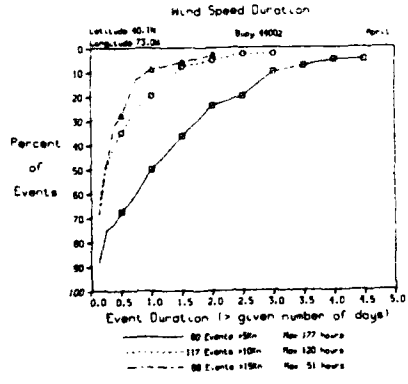

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

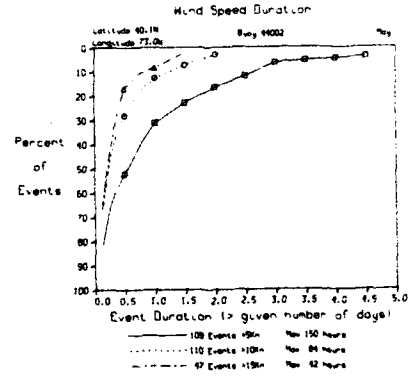

Percent of Events
Event Duration (> given number of days)

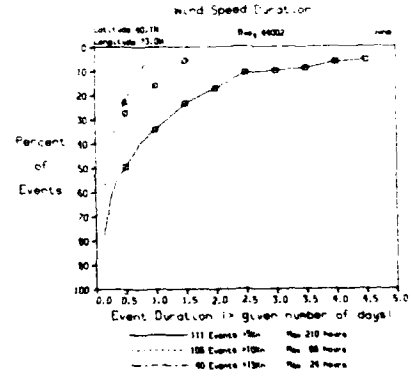

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

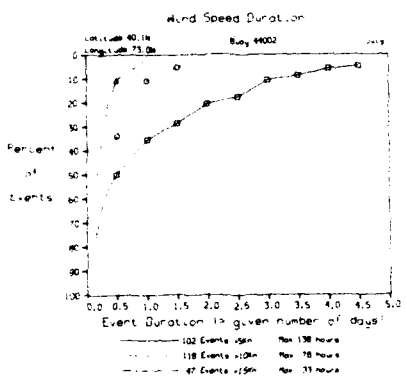

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

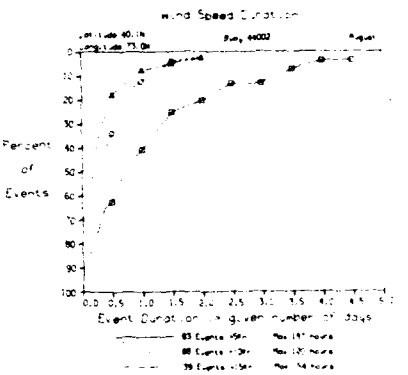

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

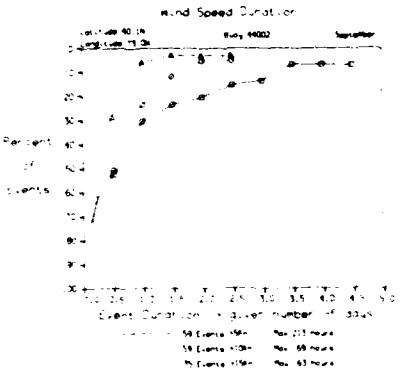

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

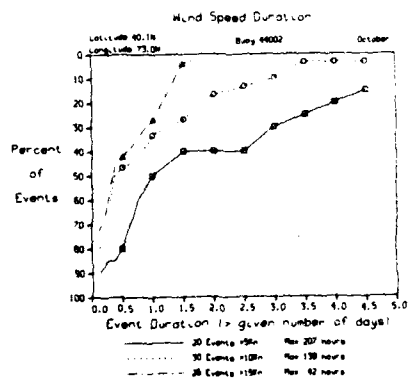

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

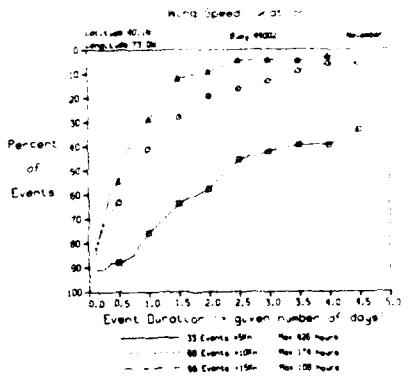

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

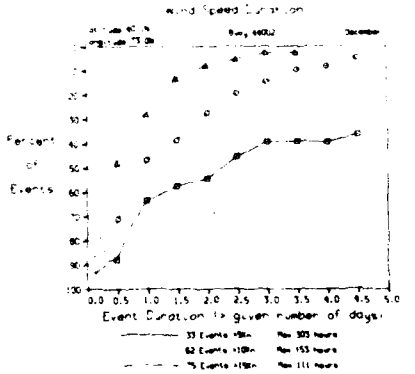

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

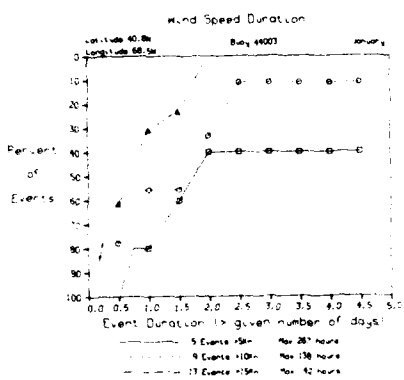

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

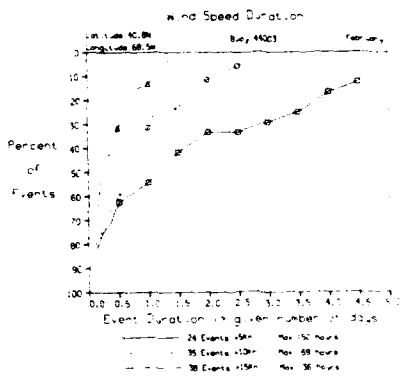

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

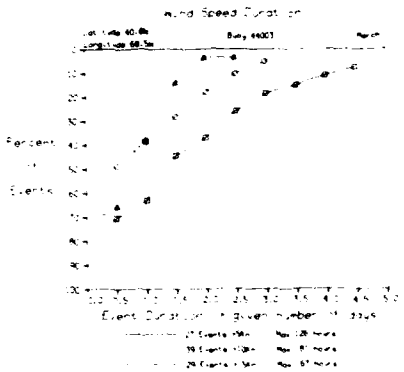

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

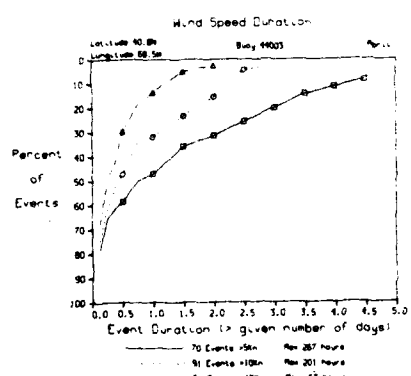

Percent of Events
Event Duration (> given number of days)

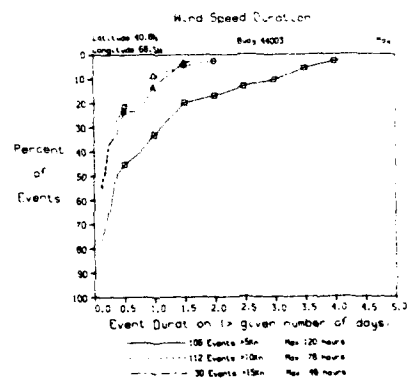

Percent of Events
Event Duration (> given number of days)

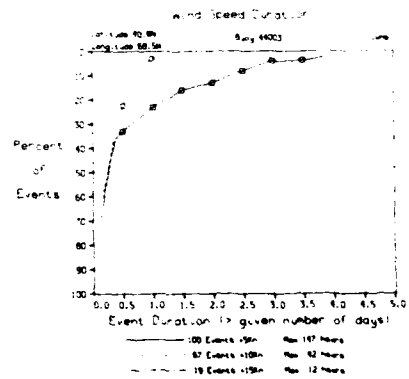

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

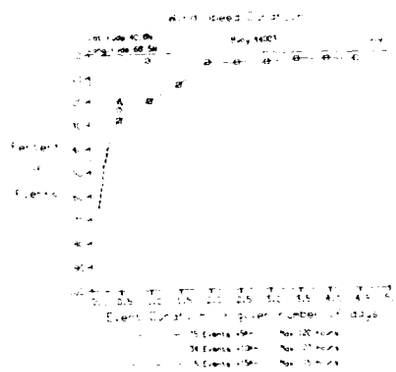

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

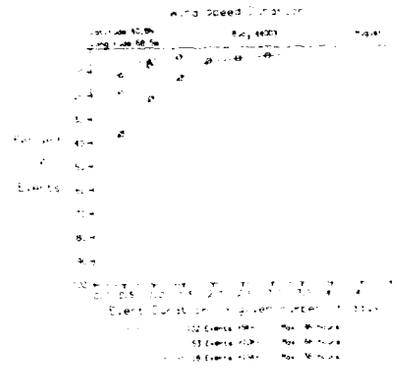

Wind Speed Duration
Percent of Events

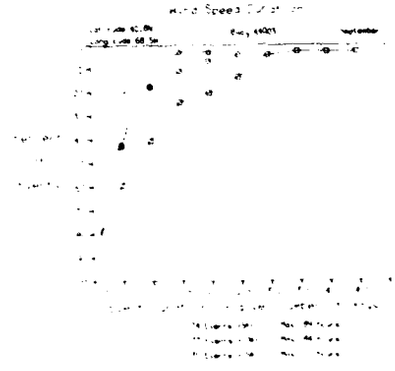

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

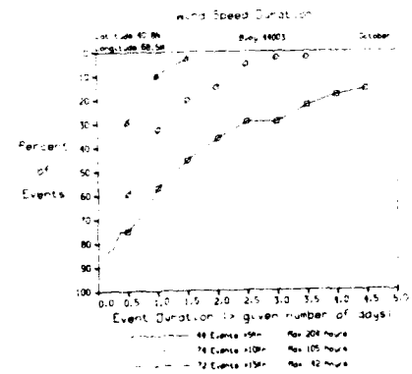

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

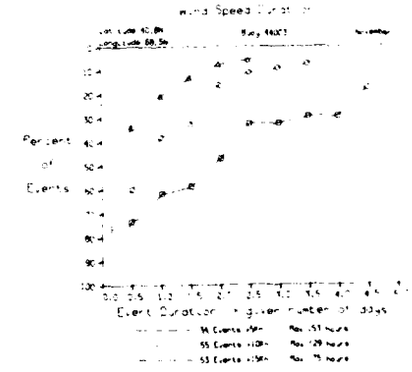

Percent of Events
Event Duration (> given number of days)

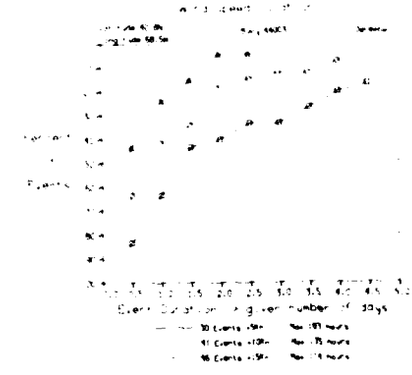


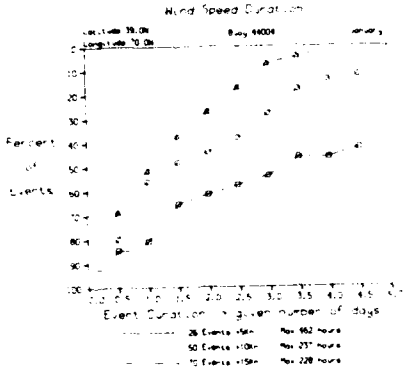


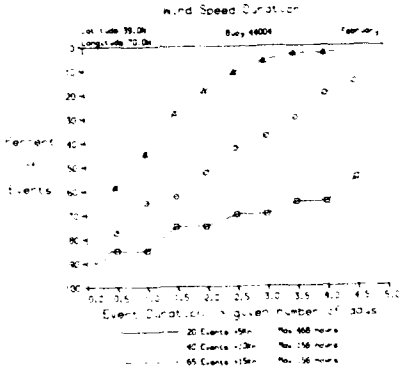


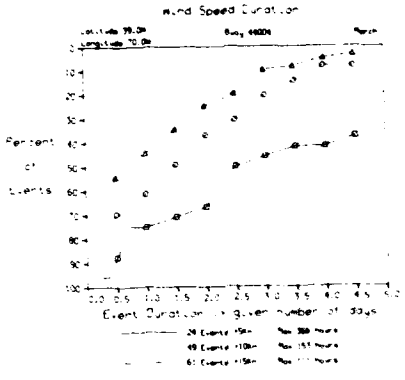

Event Duration in given number of days

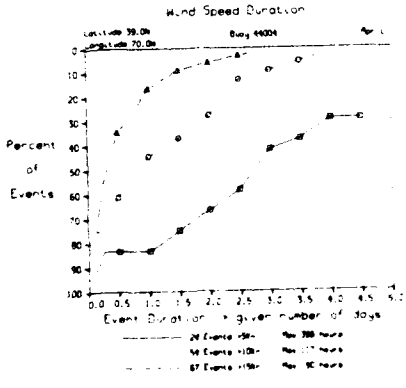


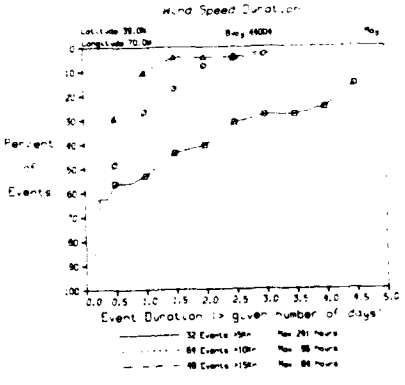


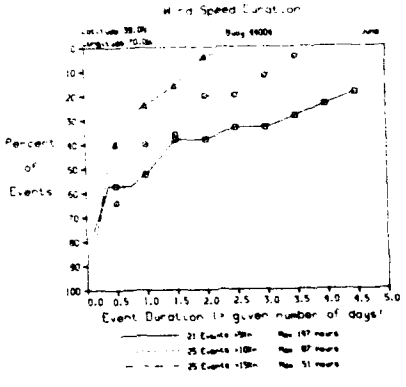

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

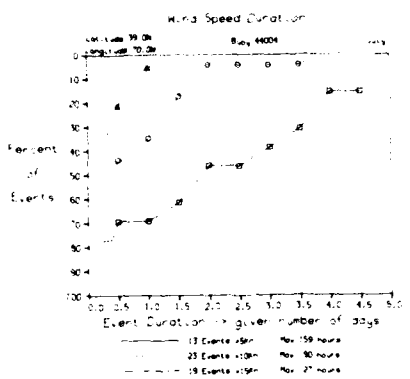

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

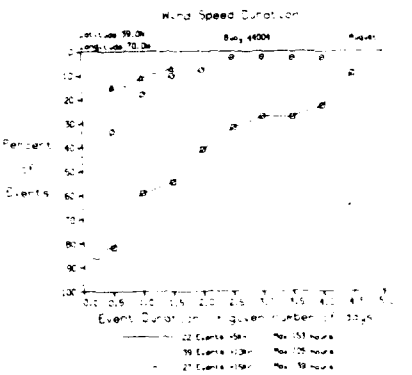

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

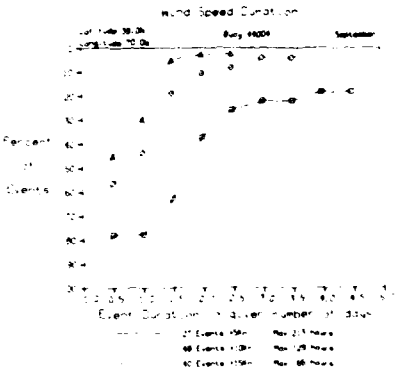

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

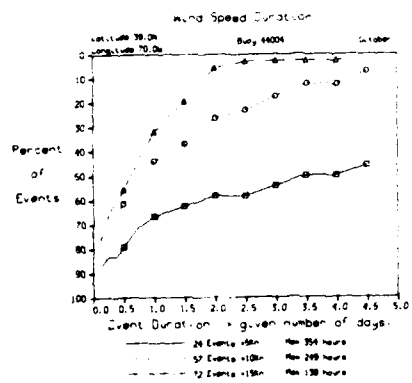

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

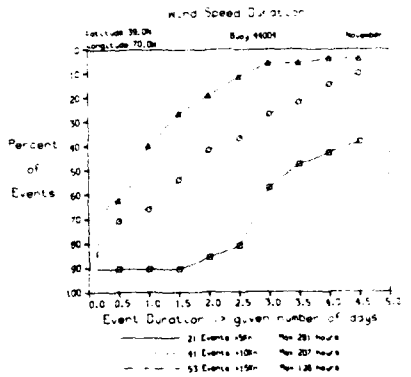

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

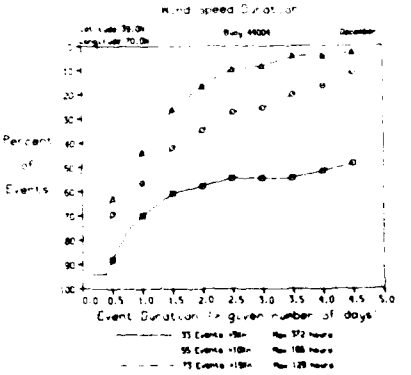

Wind Speed Duration
Percent of Events
Event Duration => given number of days

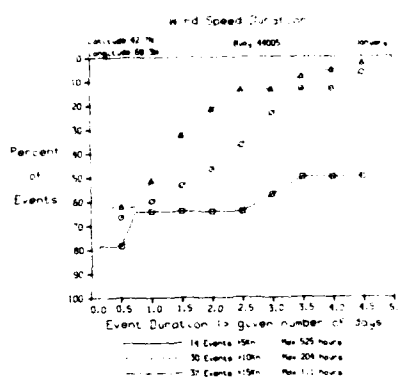

Wind Speed Duration
Percent of Events
Event Duration => given number of days

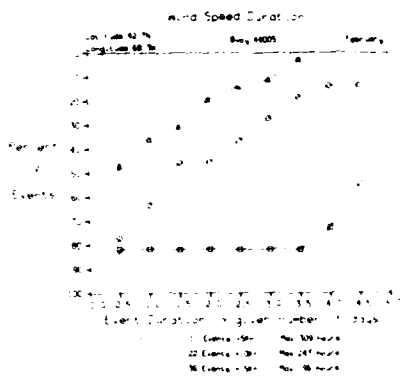

Wind Speed Duration
Percent of Events

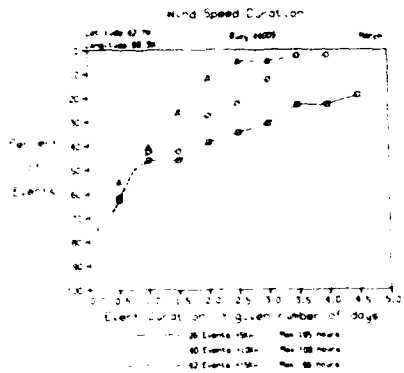

Wind Speed Duration
Percent of Events
Event Duration => given number of days

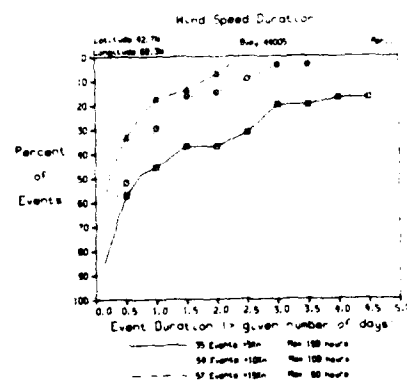

Wind Speed Duration
Percent of Events
Event Duration => given number of days

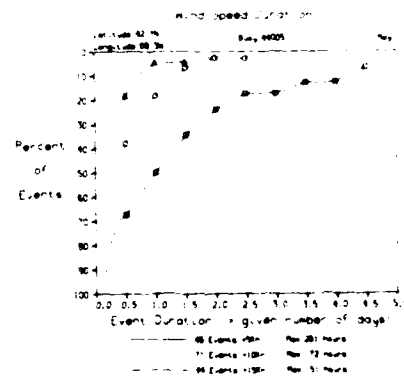

Wind Speed Duration
Percent of Events
Event Duration => given number of days

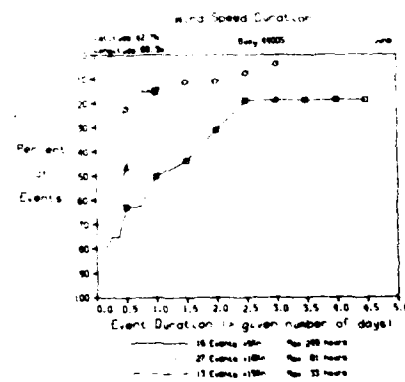

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

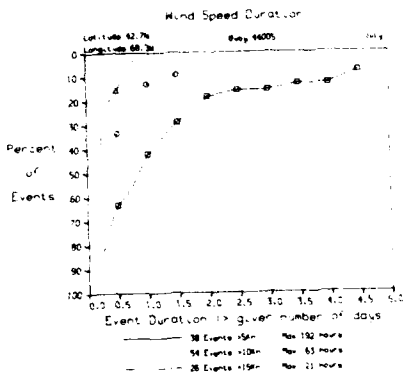

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

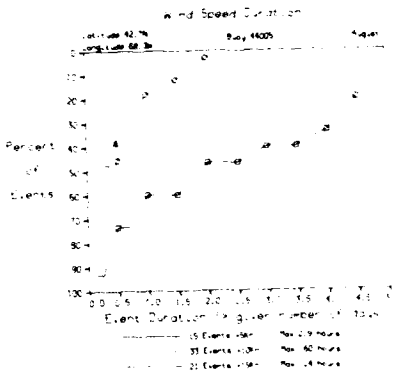

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

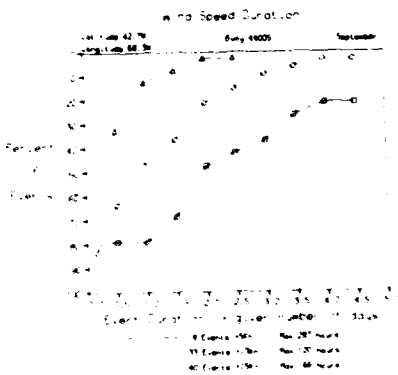

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

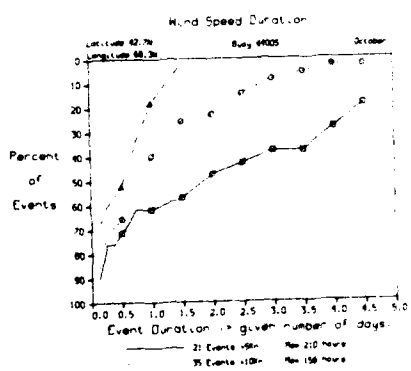

Percent of Events
Event Duration (> given number of days)

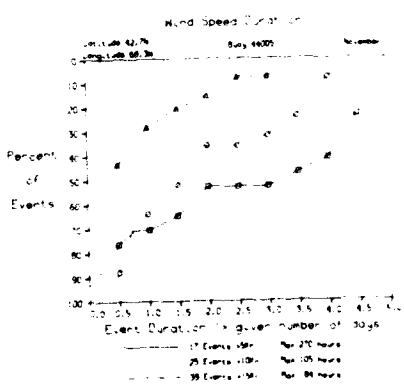

Percent of Events
Event Duration (> given number of days)

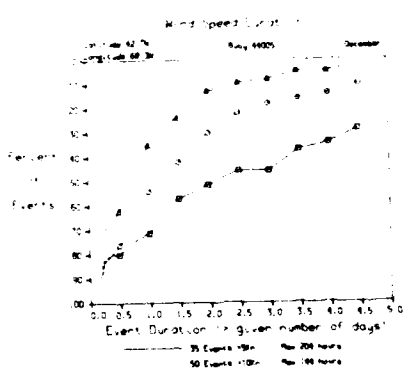

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)


Percent of Events




Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

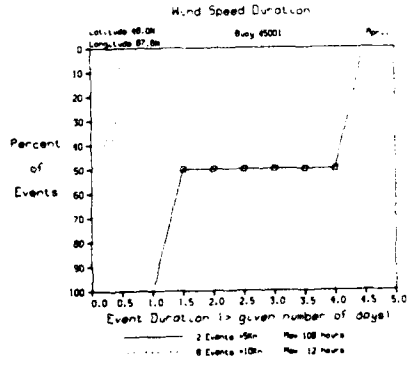

Percent of Events

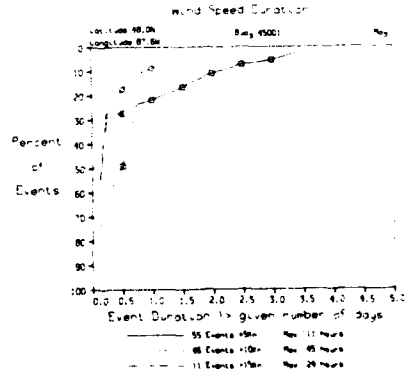


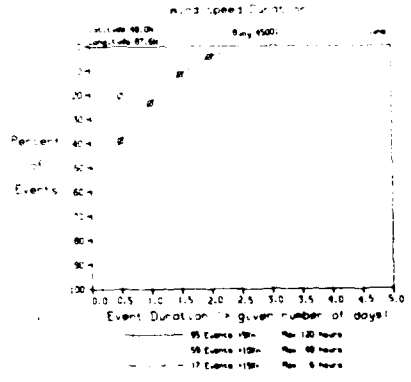
No Data Available for January

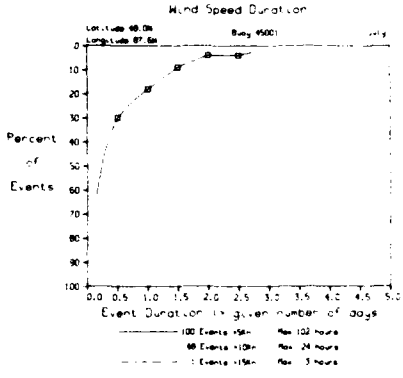
No Data Available for February

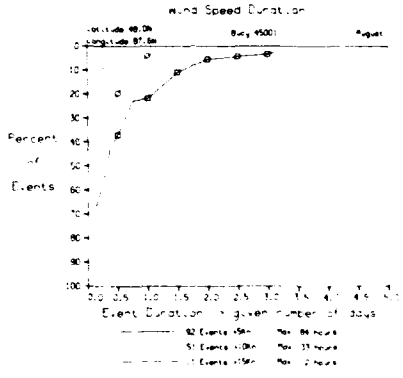
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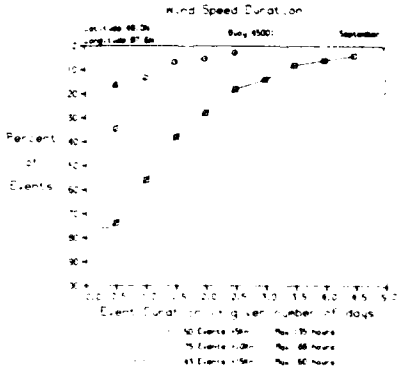


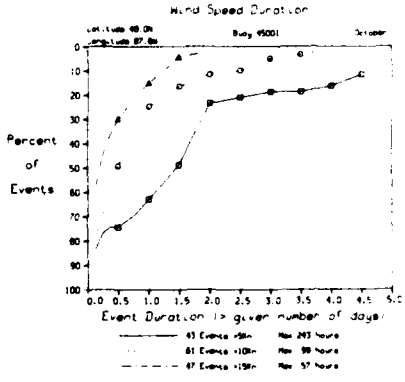


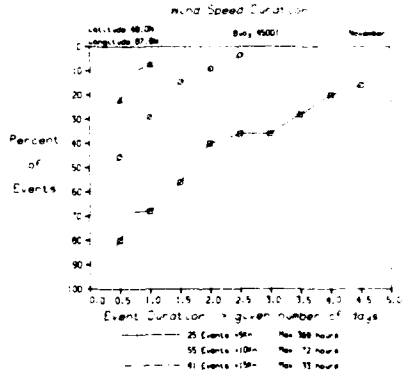


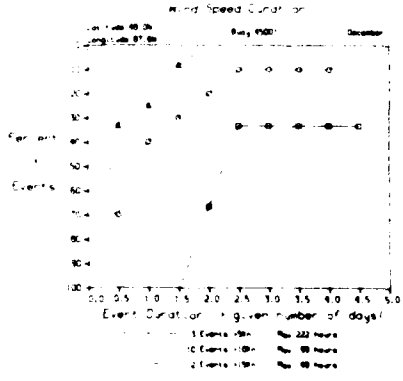

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)


Wind Speed Duration
Percent of Events
Event Duration (> given number of days)


Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

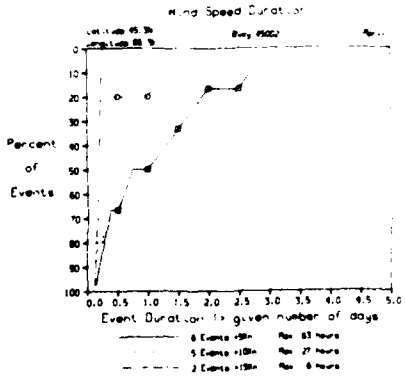

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

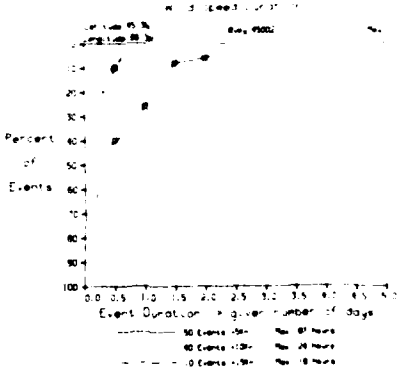

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

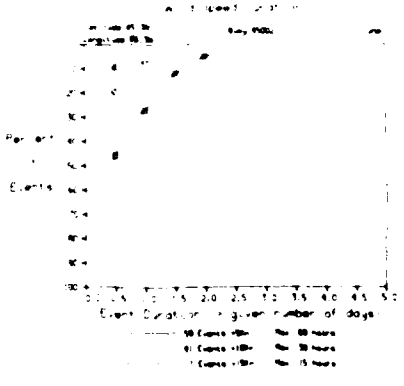

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

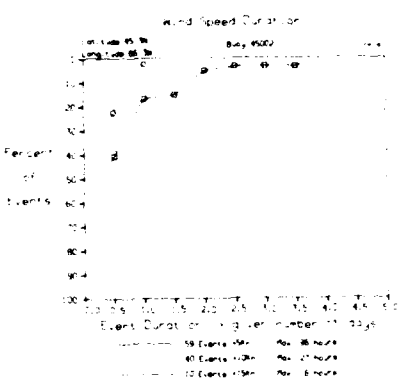
No Data Available for

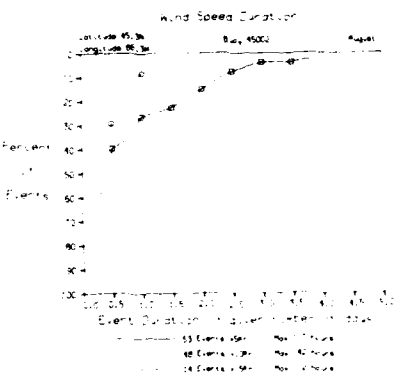
January

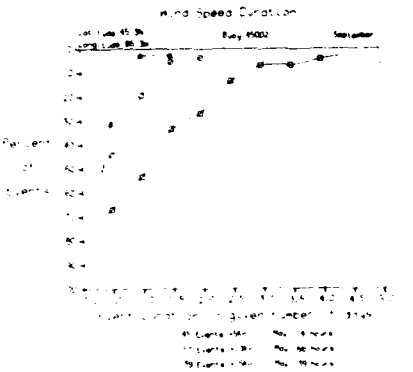


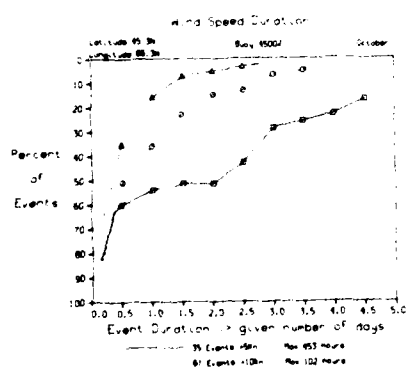


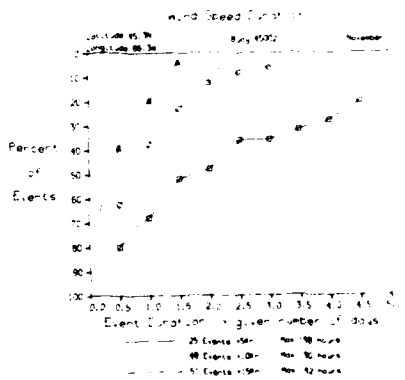


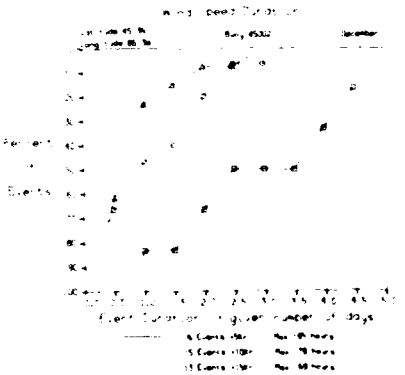

Wind Speed Duration
Percent of Events
Event Duration = given number of days

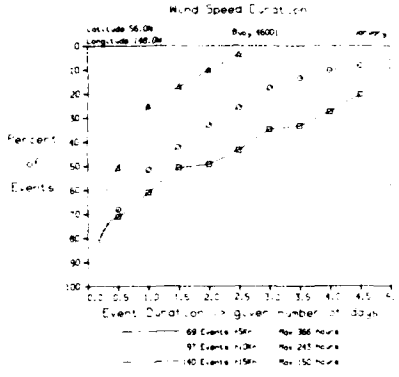

Wind Speed Duration
Percent of Events
Event Duration = given number of days

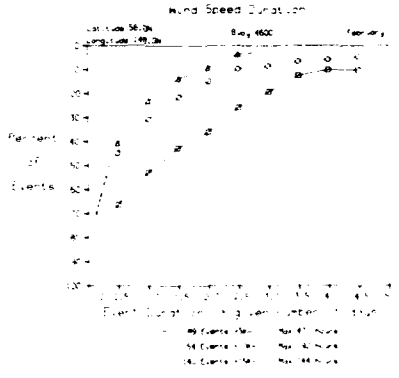

Wind Speed Duration
Percent of Events

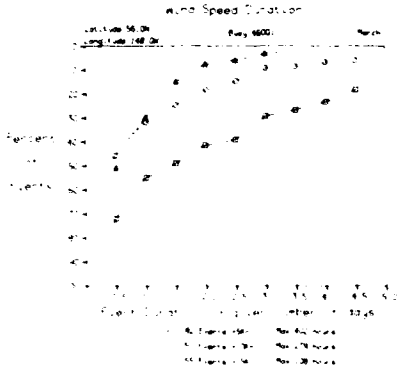

Wind Speed Duration
Percent of Events
Event Duration = given number of days

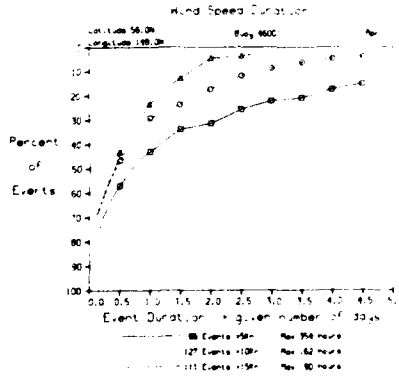

Percent of Events
Event Duration = given number of days

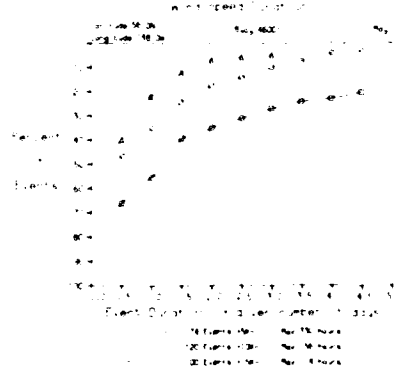

Percent of Events

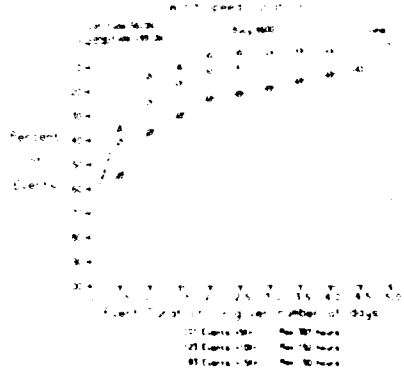

Wind Speed Duration
Percent of Events
Event Duration

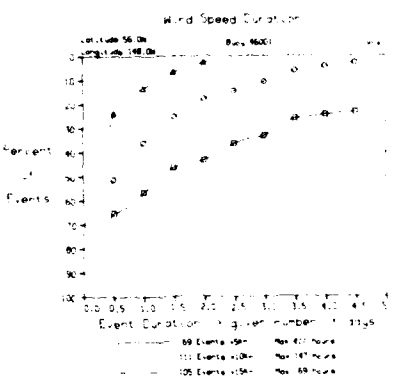

Wind Speed Duration
Percent of Events

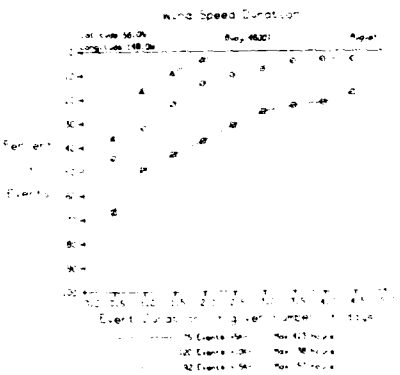

Wind Speed Duration
Percent of Events

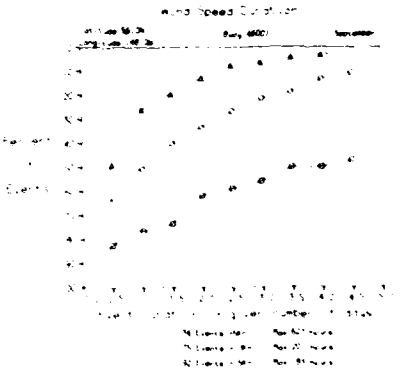

Wind Speed Duration
Percent of Events
Event Duration

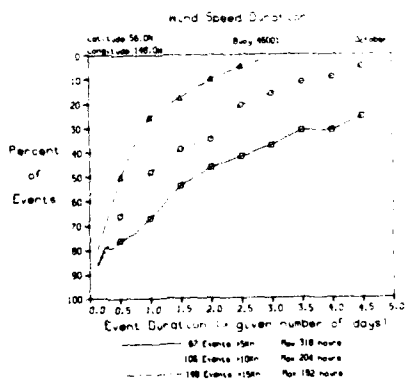

Percent of Events

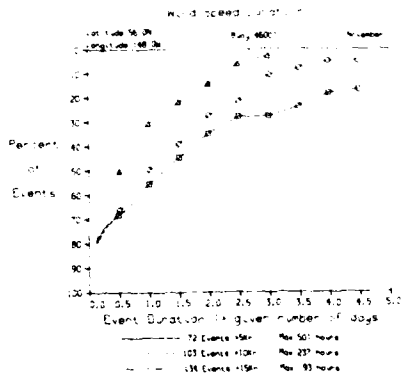

Percent of Events

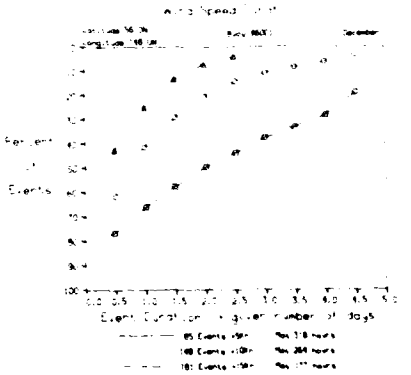

Wind Speed Duration
Percent of Events
Event Duration (a given number of days)

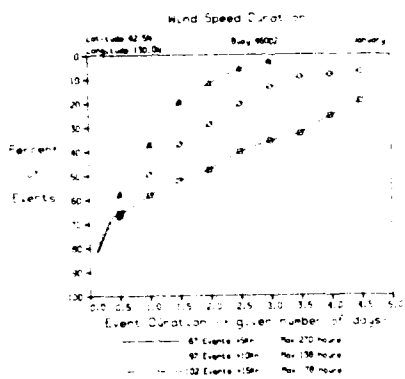

Wind Speed Duration
Percent of Events
Event Duration (a given number of days)

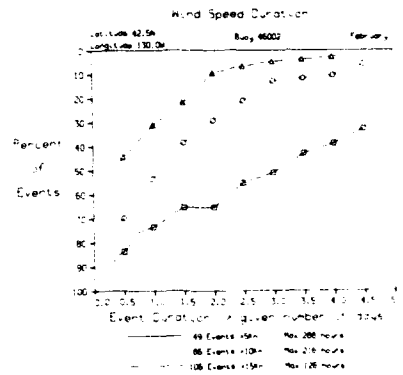

Wind Speed Duration
Percent of Events

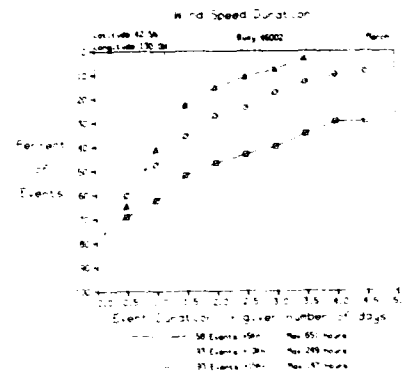

Wind Speed Duration
Percent of Events
Event Duration (a given number of days)

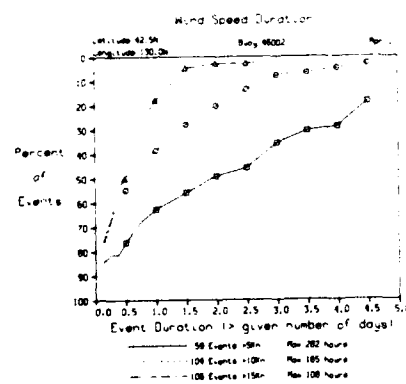

Event Duration (a given number of days)

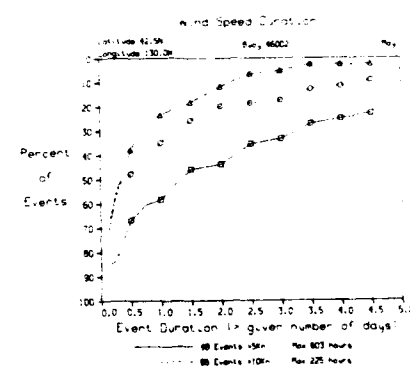

Event Duration (a given number of days)

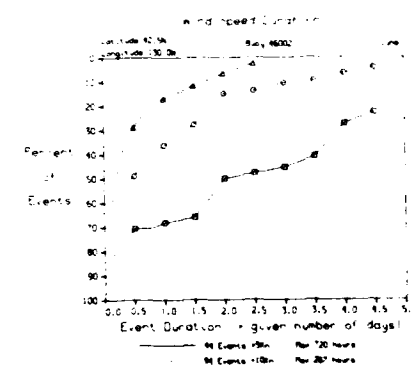

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

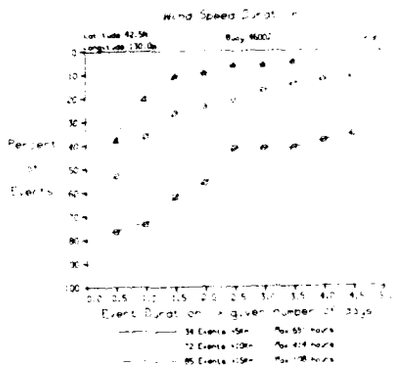

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

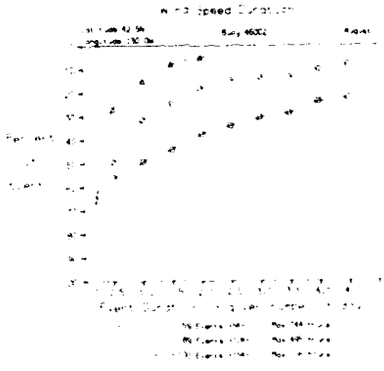

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)


Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

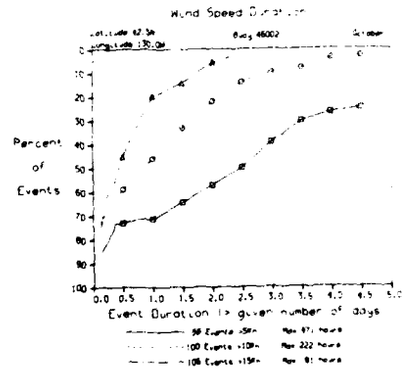

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

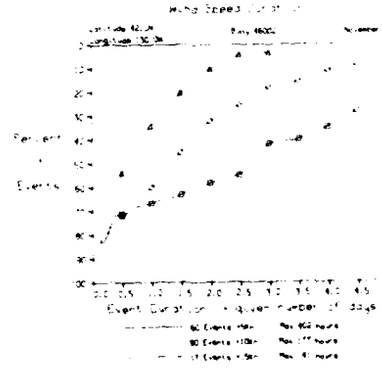

Percent of Events
Event Duration (> given number of days)

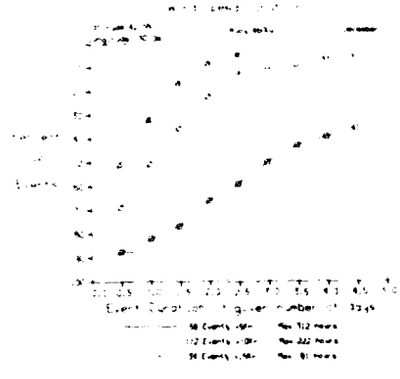


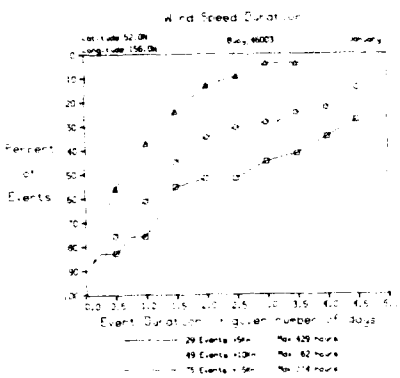


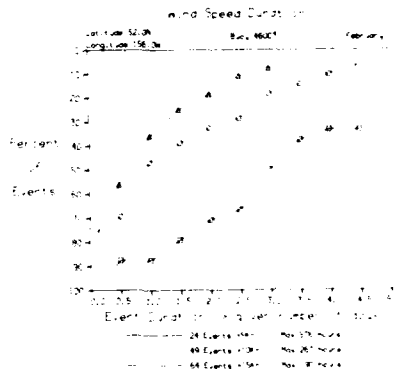


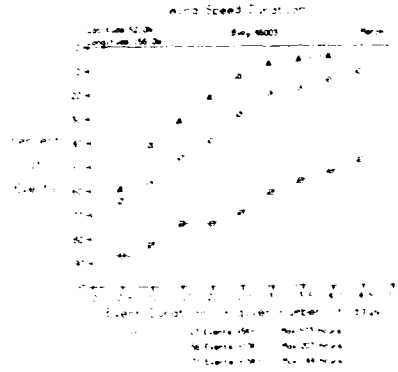

Percent
of
Events

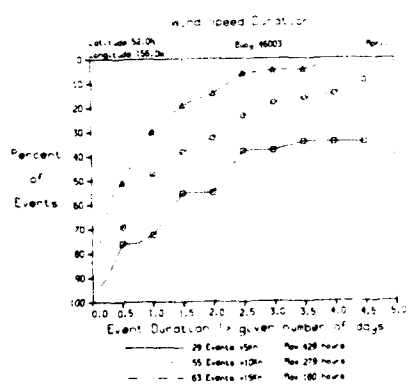


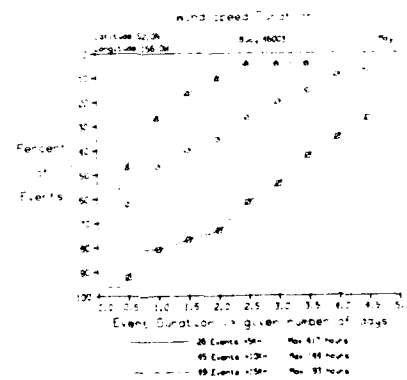


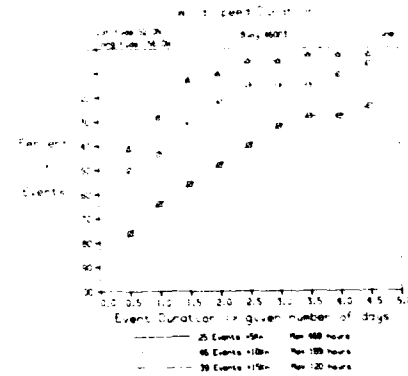

Wind Speed Duration
Percent of Events
Event Duration (x given number of days

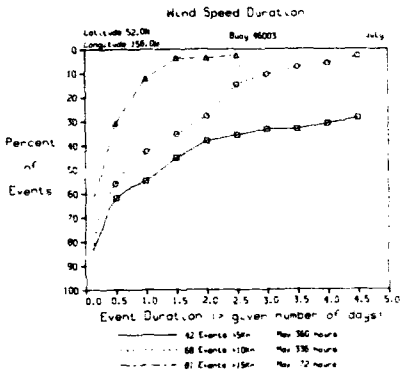

Wind Speed Duration
Percent of Events

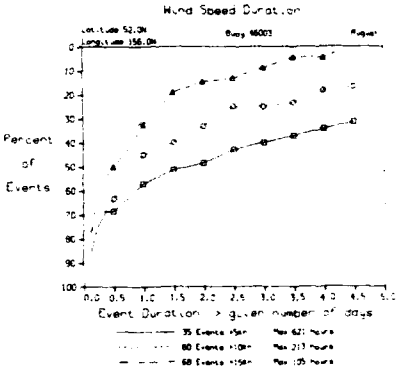

Wind Speed Duration

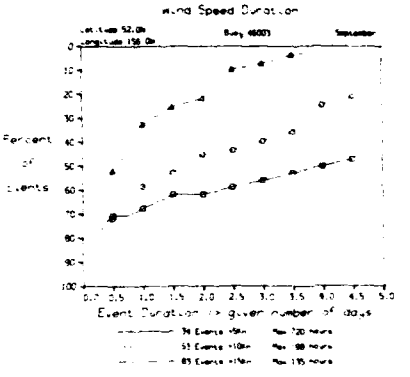

Wind Speed Duration
Percent of Events
Event Duration (x given number of days
29 Events >5kt Max 629 hours
55 Events >10kt Max 279 hours
83 Events >15kt Max 180 hours

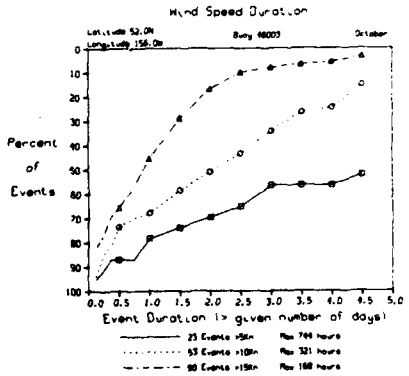

Wind Speed Duration
Percent of Events
Event Duration (x given number of days

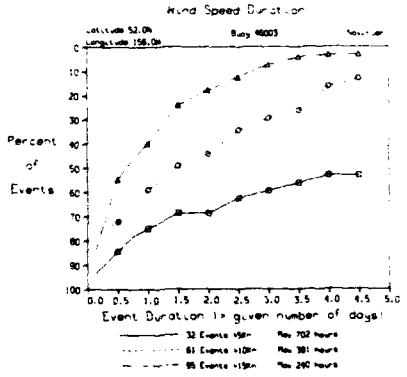

Event Duration (x given number of days

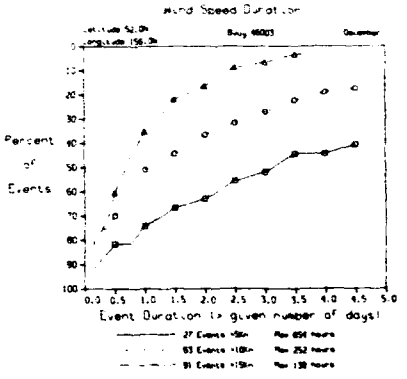

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

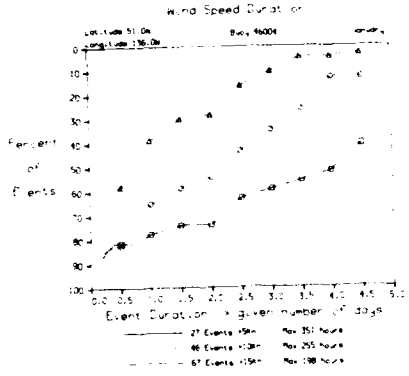

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

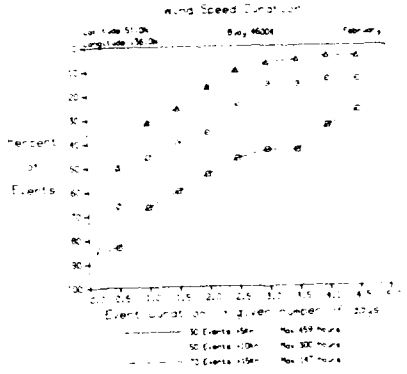

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

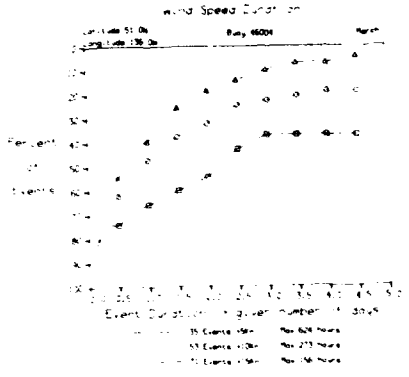

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

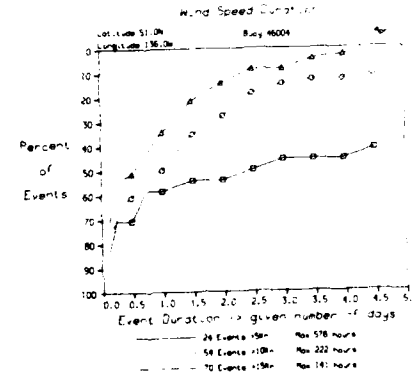

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

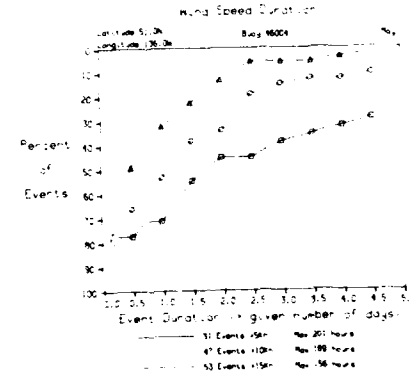

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

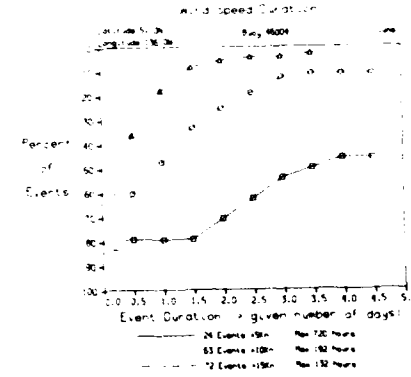

Wind Speed Duration
Buoy 46004
Percent of Events
Event Duration => given number of days
27 Events >5kt Max 351 hours
66 Events >10kt Max 295 hours
67 Events >15kt Max 198 hours

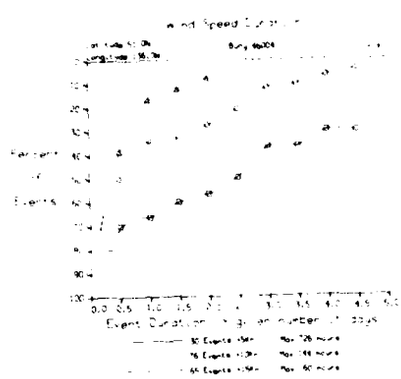

Wind Speed Duration
Buoy 46004
Percent of Events
Event Duration => given number of days
30 Events >5kt Max 459 hours
50 Events >10kt Max 300 hours
72 Events >15kt Max 147 hours


Wind Speed Duration
Buoy 46004
Percent of Events
Event Duration => given number of days
15 Events >5kt Max 628 hours
53 Events >10kt Max 273 hours
71 Events >15kt Max 136 hours

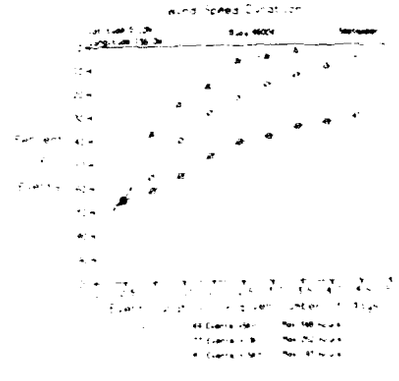

Wind Speed Duration
Buoy 46004
Percent of Events
Event Duration => given number of days
26 Events >5kt Max 578 hours
58 Events >10kt Max 222 hours
70 Events >15kt Max 141 hours

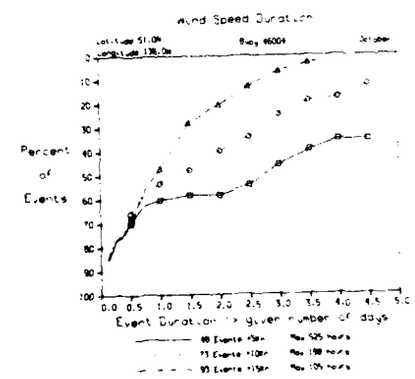

Wind Speed Duration
Buoy 46004
Percent of Events
Event Duration => given number of days
31 Events >5kt Max 261 hours
67 Events >10kt Max 98 hours
53 Events >15kt Max 56 hours

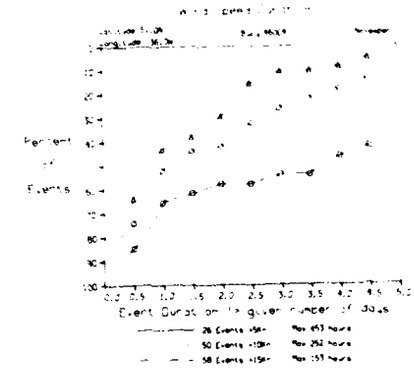

Wind Speed Duration
Buoy 46004
Percent of Events
Event Duration => given number of days
24 Events >5kt Max 720 hours
63 Events >10kt Max 192 hours
72 Events >15kt Max 132 hours

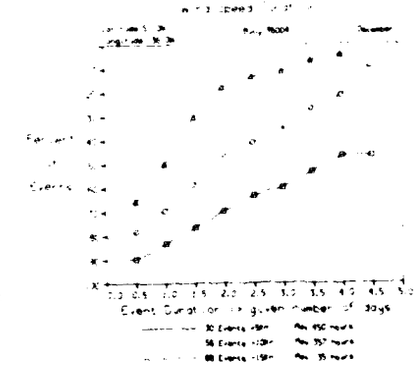


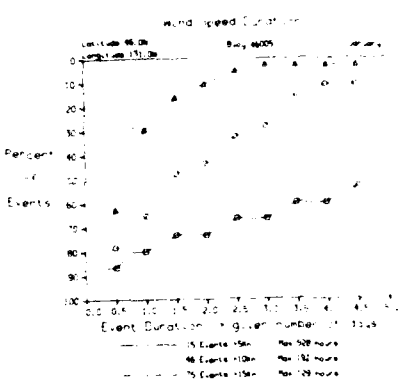


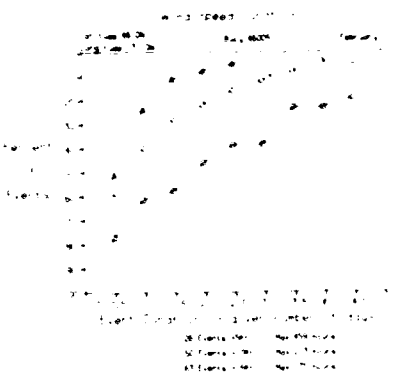


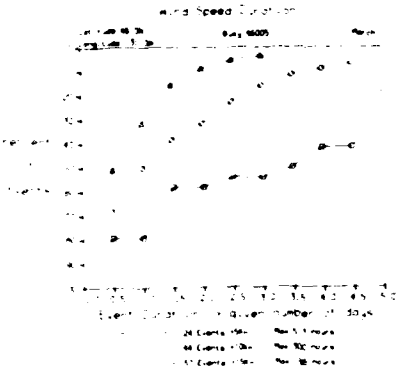

Wind Speed Duration
Percent of Events
Event Duration for given number of days

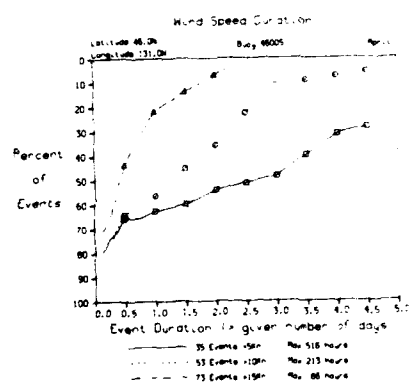


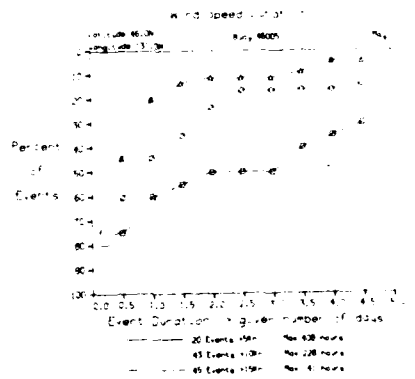


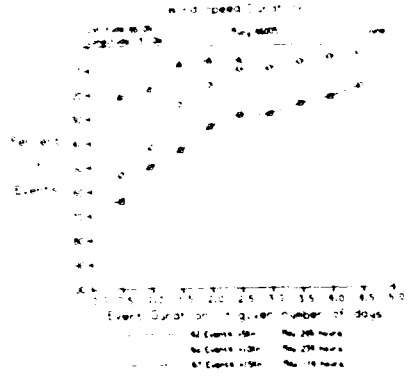


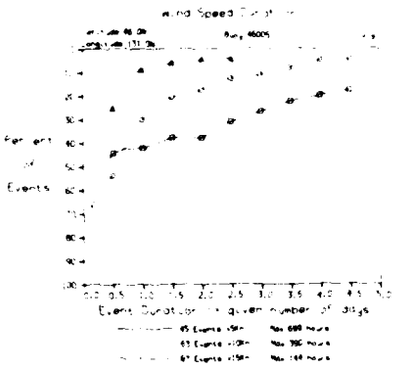


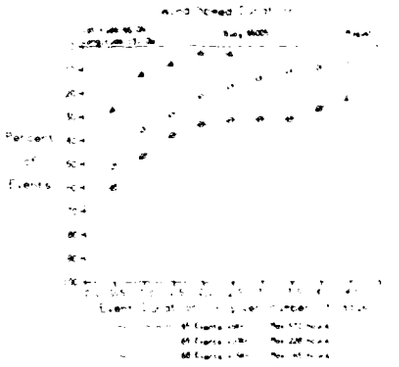


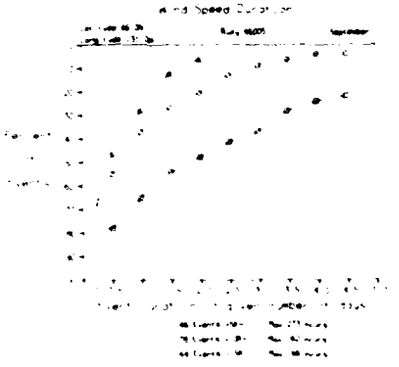

Wind Speed Duration
Percent of Events
Event Duration in given number of days

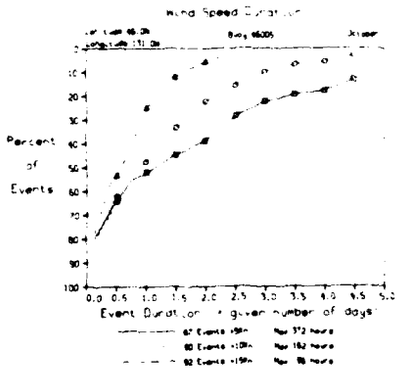


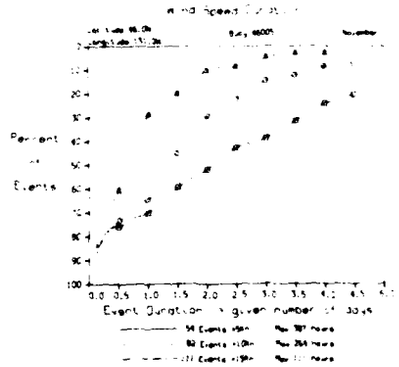


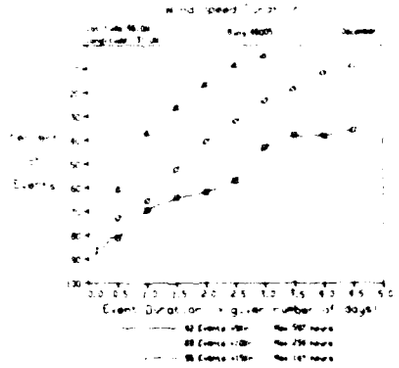


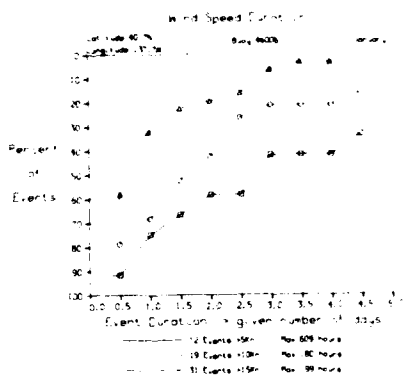


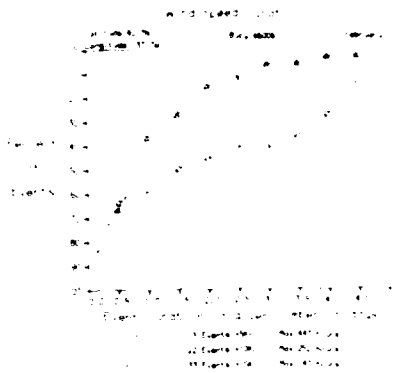


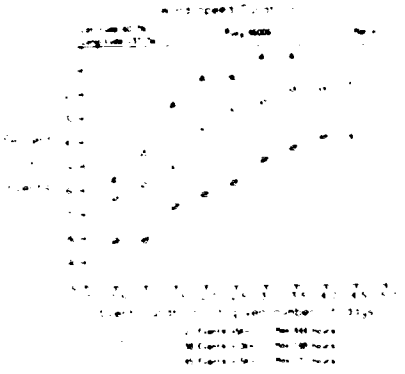


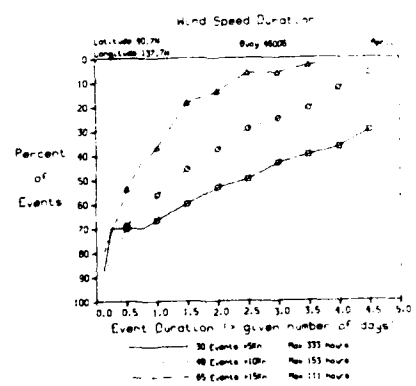


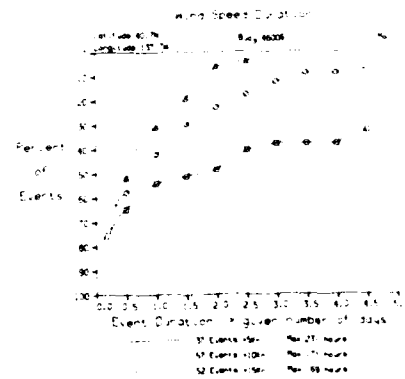


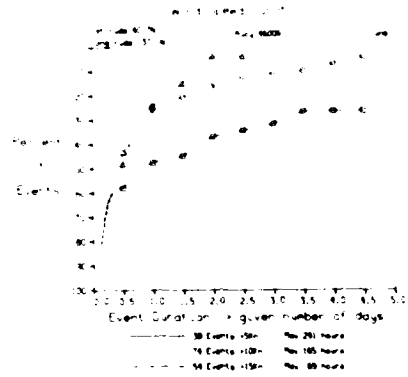


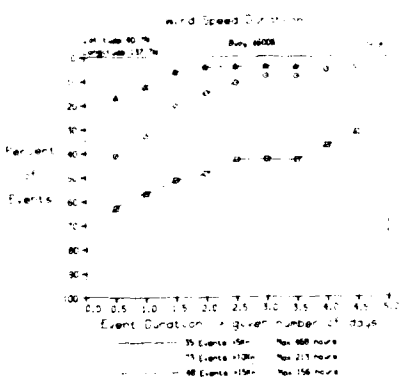


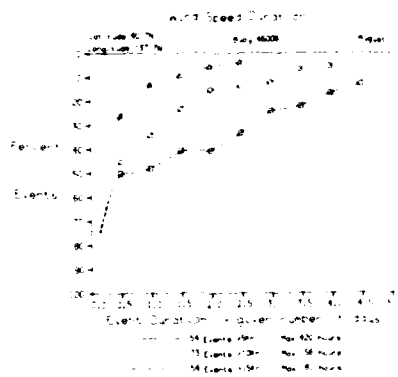


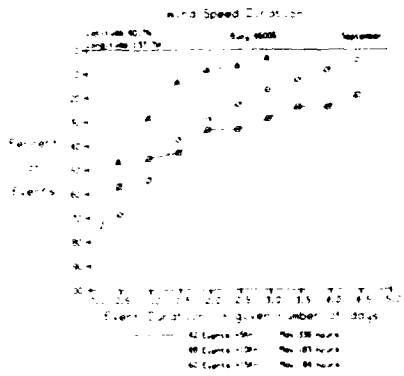

Wind Speed Duration
Percent of Events
Event Duration => given number of days

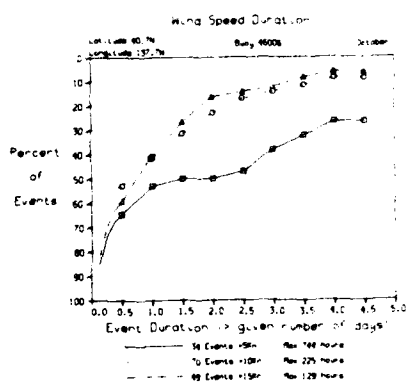


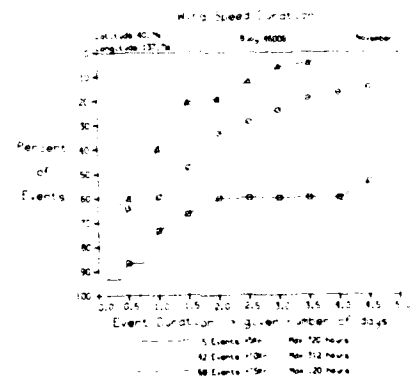


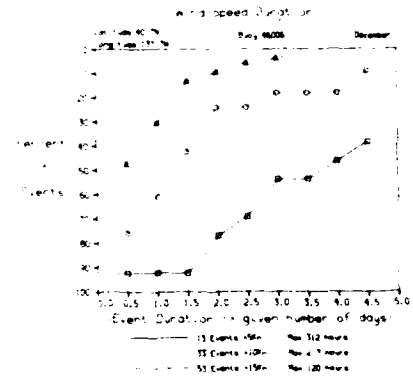


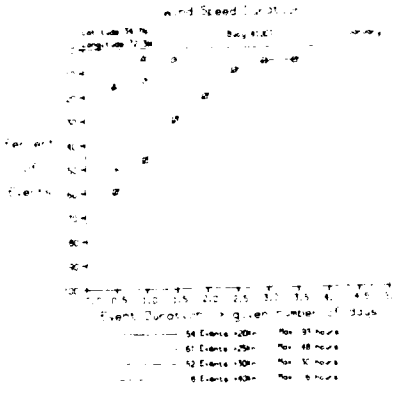


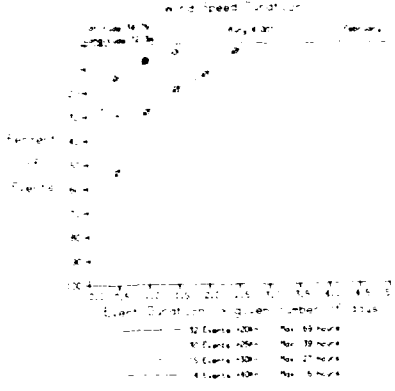



Wind Speed Duration
Percent of Events
Event Duration => given number of days

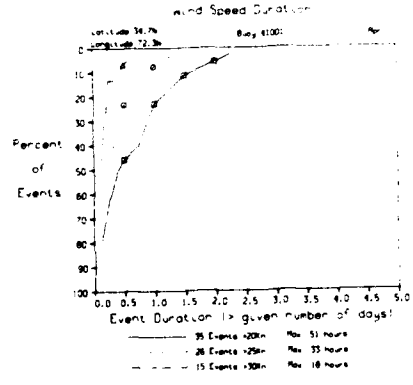


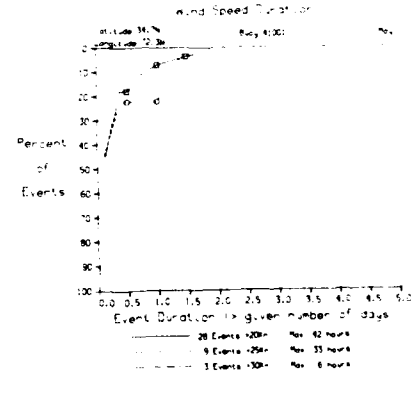


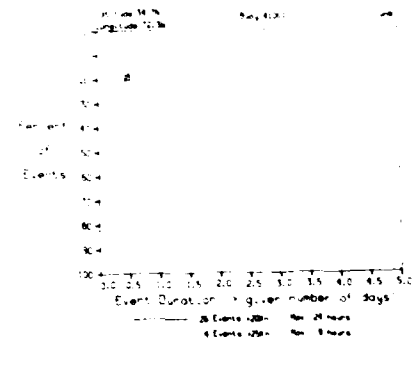


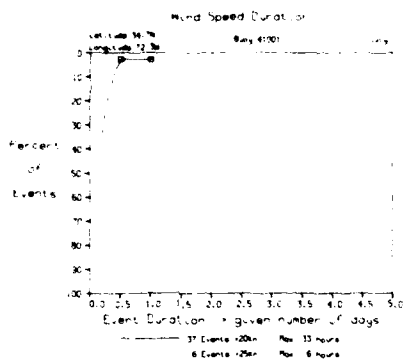


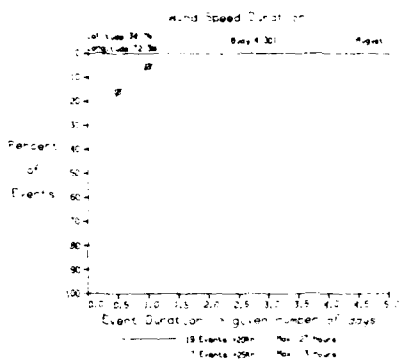


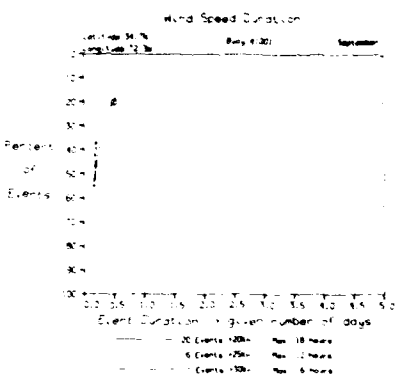

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

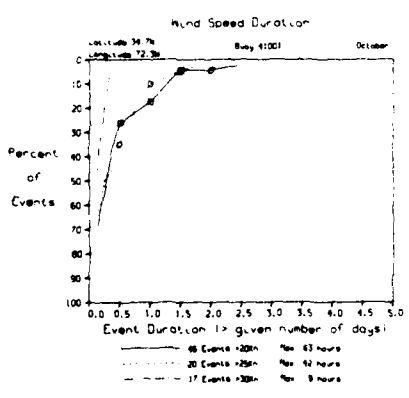

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

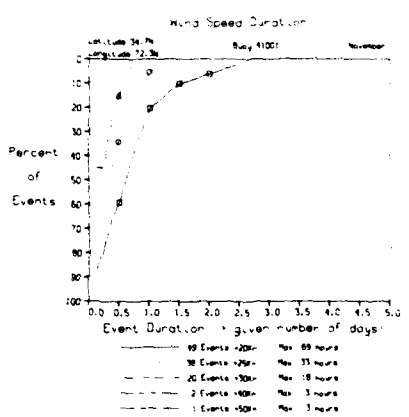


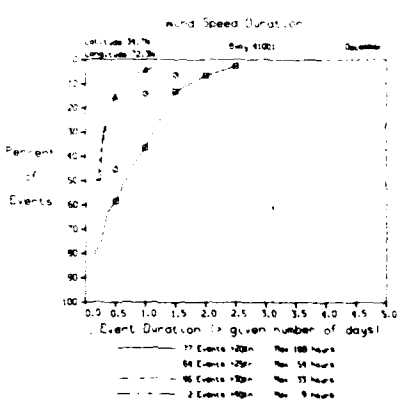

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

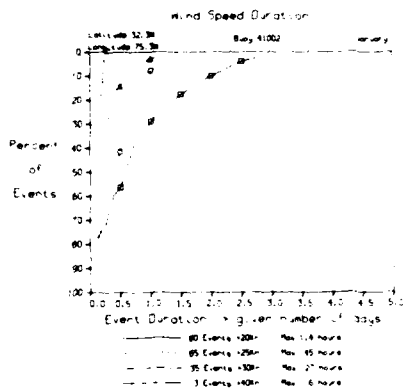

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

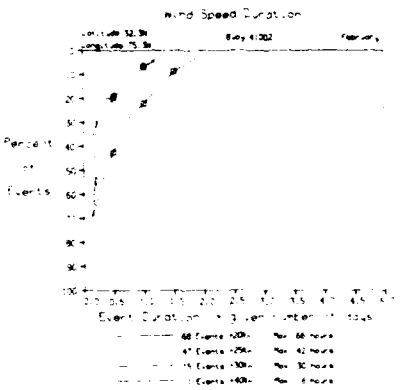

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

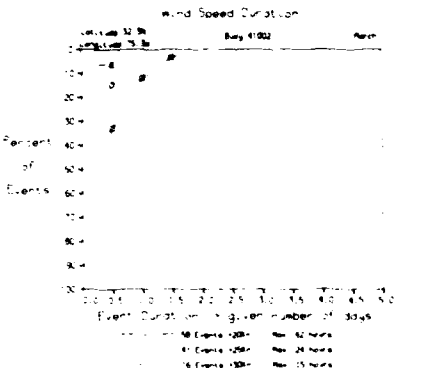

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

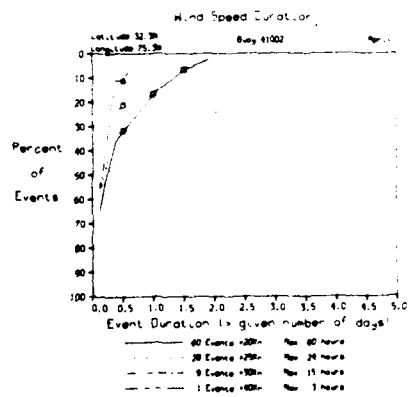

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

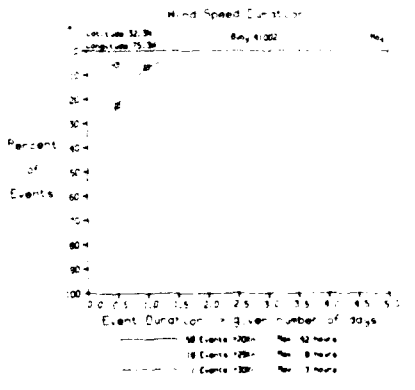

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

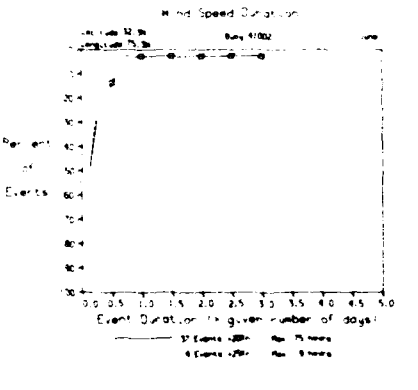

Wind Speed Duration
Percent of Events
Event Duration > given number of days

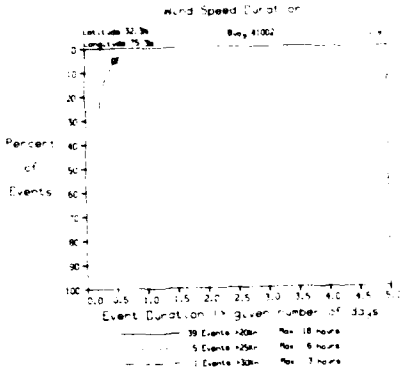

Wind Speed Duration
Percent of Events
Event Duration > given number of days

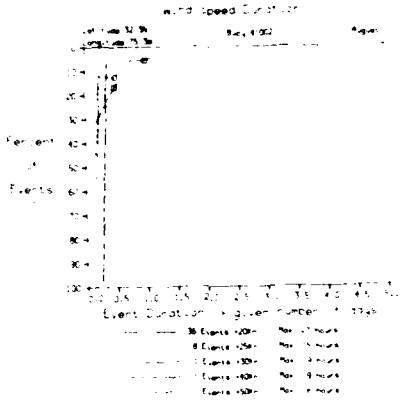

Wind Speed Duration
Percent of Events
Event Duration > given number of days

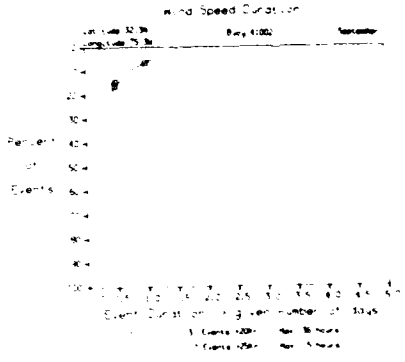

Wind Speed Duration
Percent of Events
Event Duration > given number of days

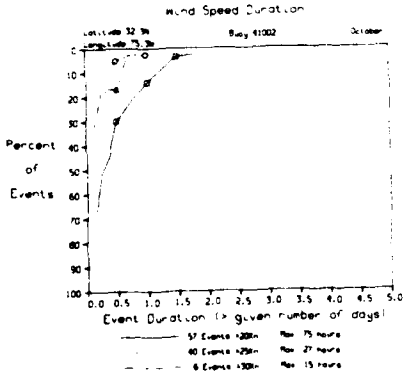

Wind Speed Duration
Percent of Events
Event Duration > given number of days

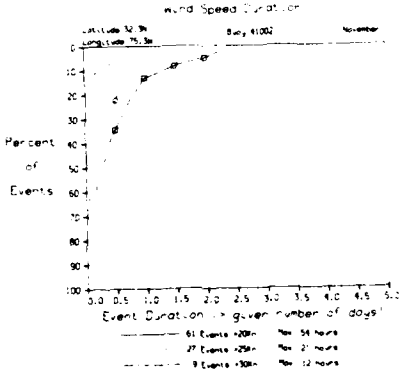

Wind Speed Duration
Percent of Events
Event Duration > given number of days

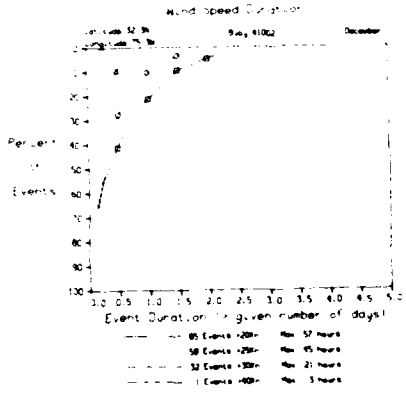

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

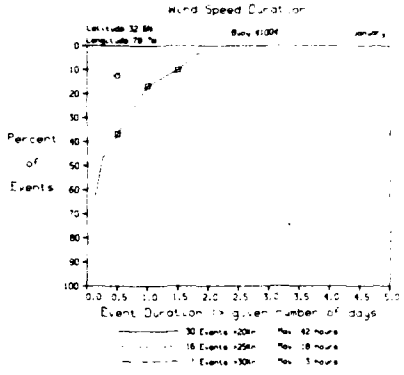

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

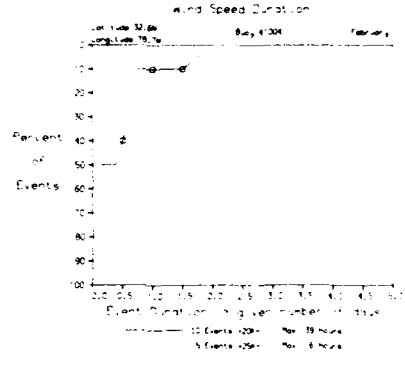

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

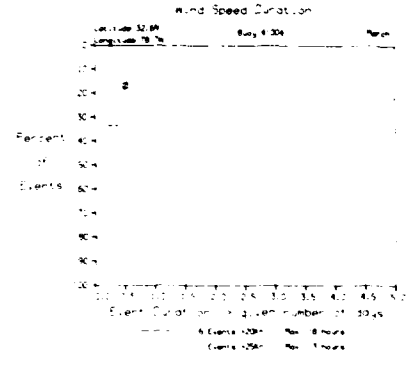

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

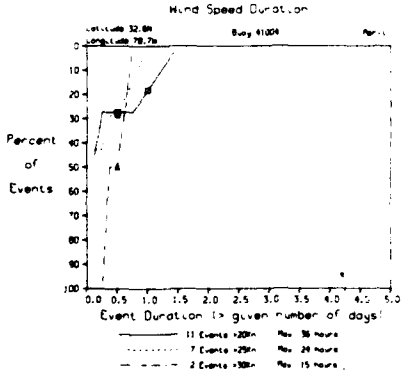

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

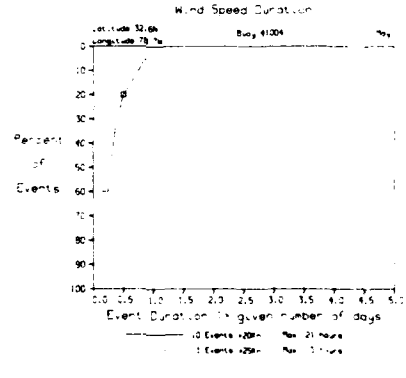

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

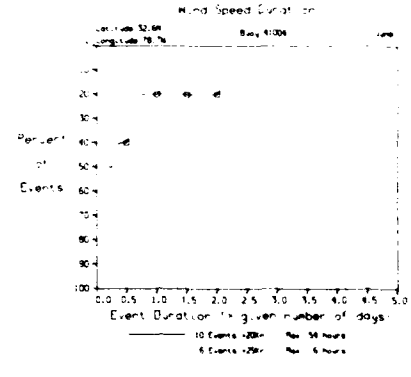

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

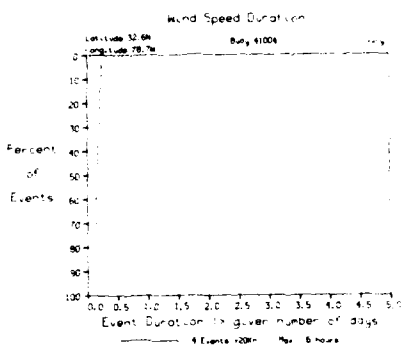

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

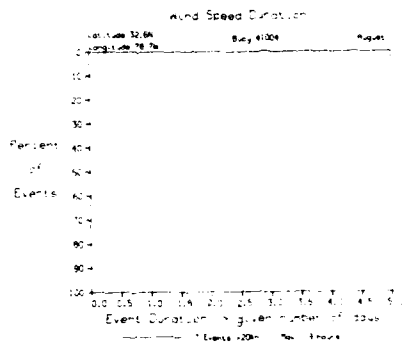

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

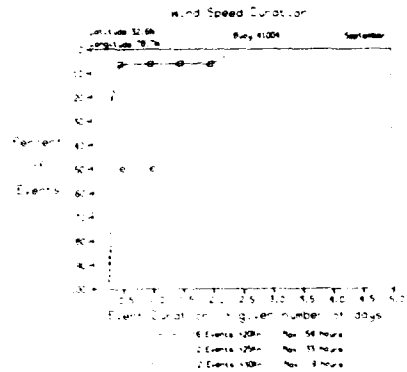

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

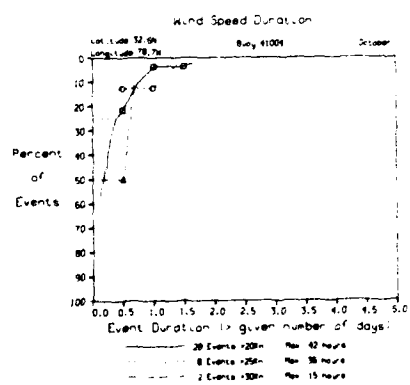

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

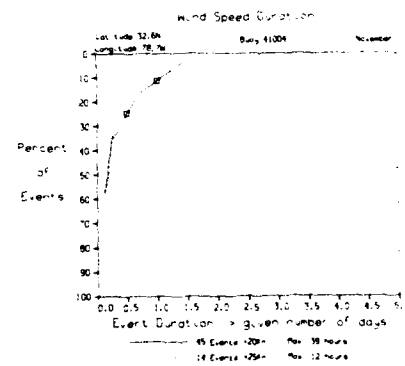

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

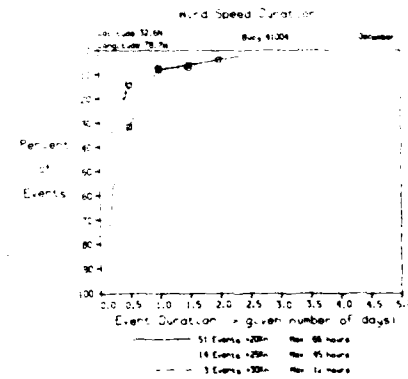

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

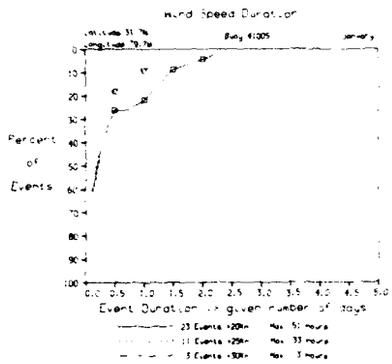

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

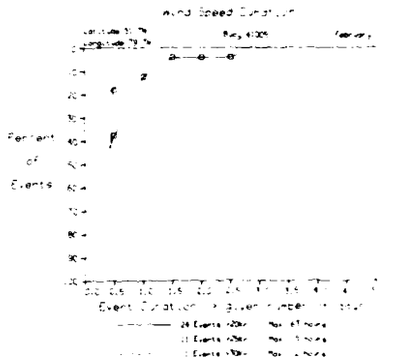

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

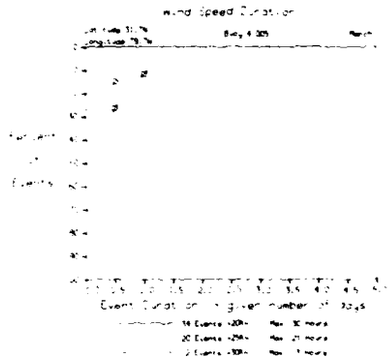

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

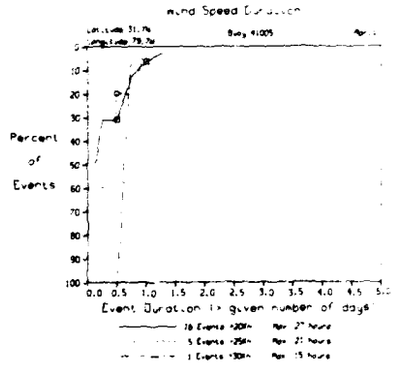

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

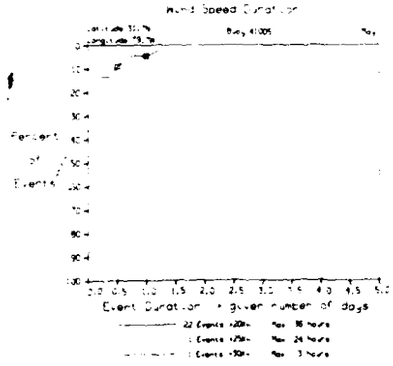

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

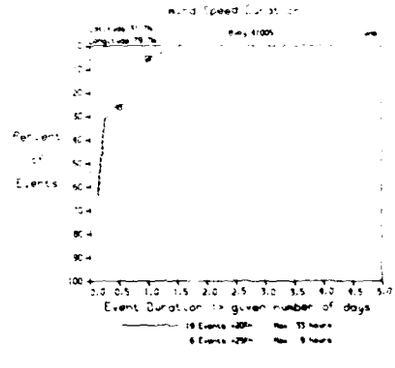

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

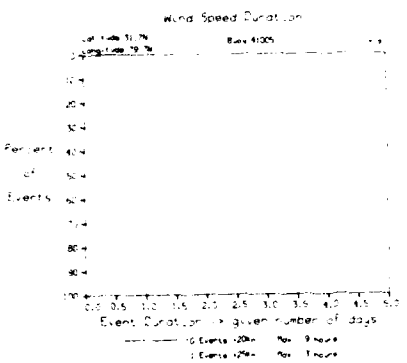

Wind Speed Duration
Percent of Events

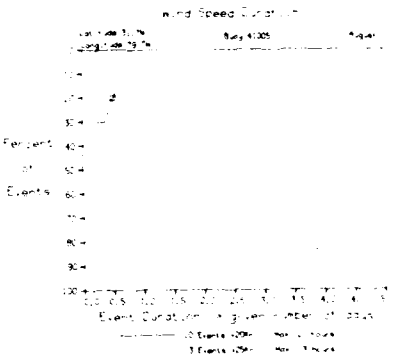

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

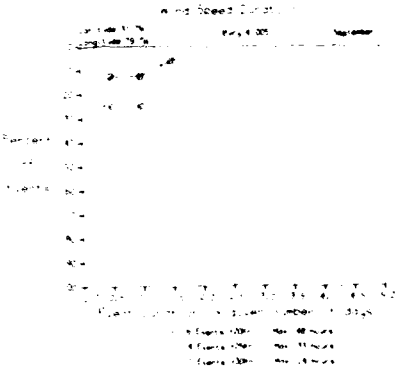

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

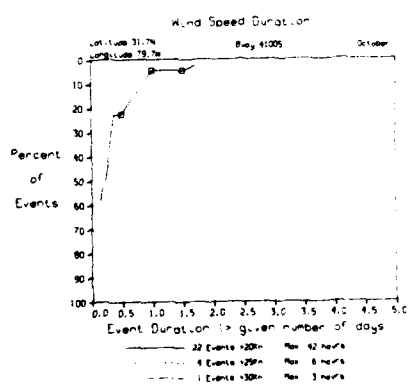

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

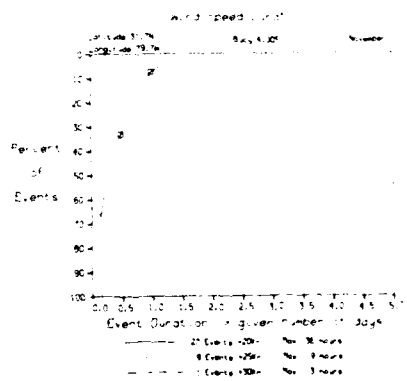

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days

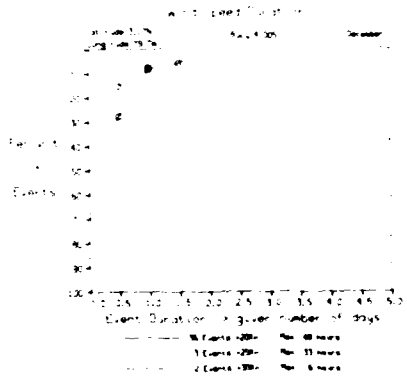

Wind Speed Duration
Percent of Events
Event Duration > given number of days

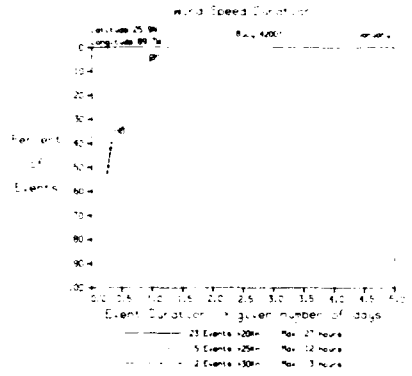

Percent of Events

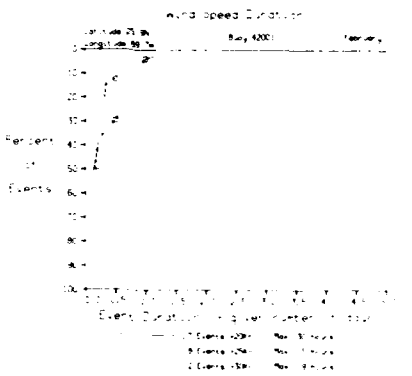

Percent of Events

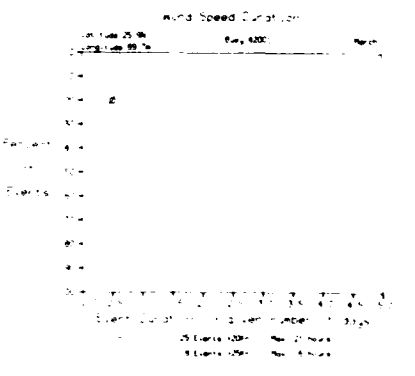

Wind Speed Duration
Percent of Events
Event Duration > given number of days

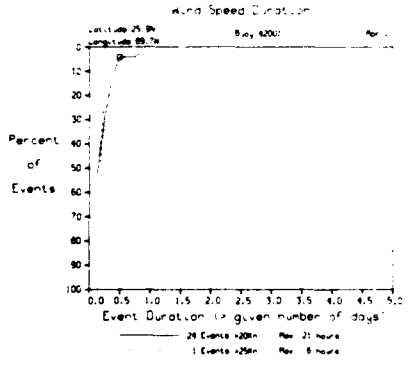

Percent of Events

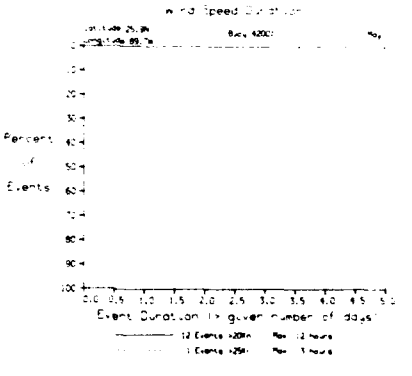

Percent of Events

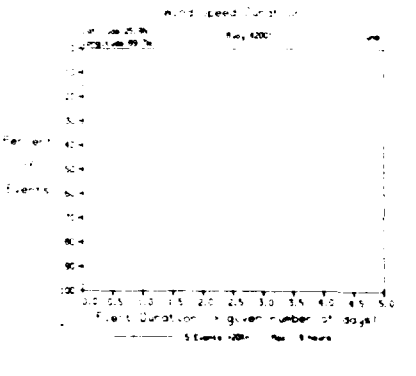

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

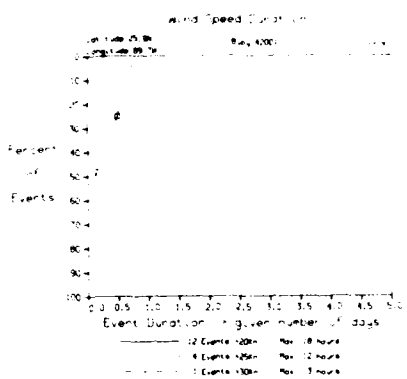

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

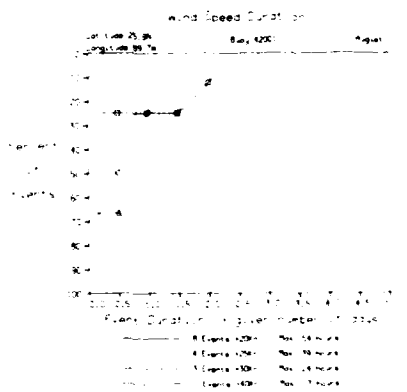

Wind Speed Duration
Percent of Events

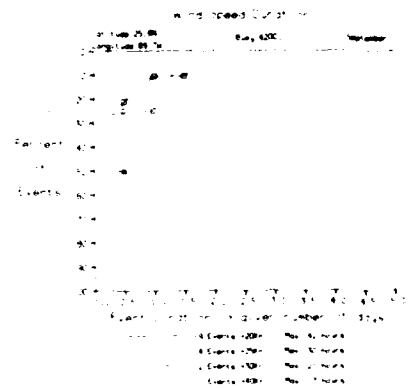

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

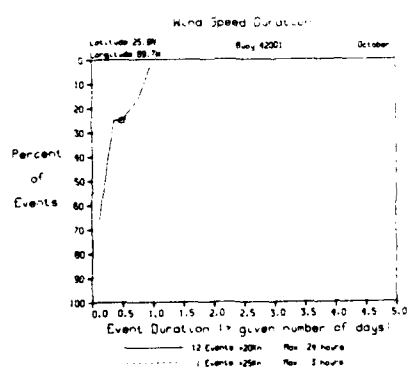

Percent of Events
Event Duration (> given number of days)

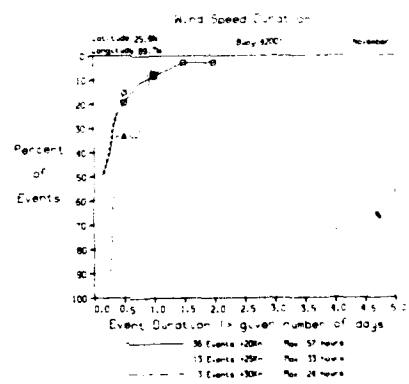

Percent of Events

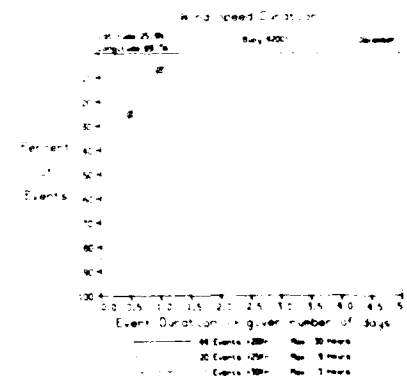


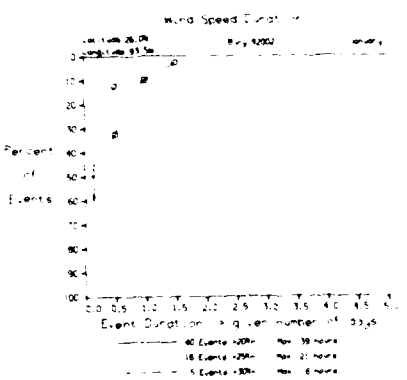


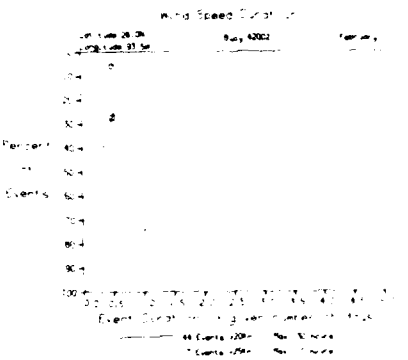


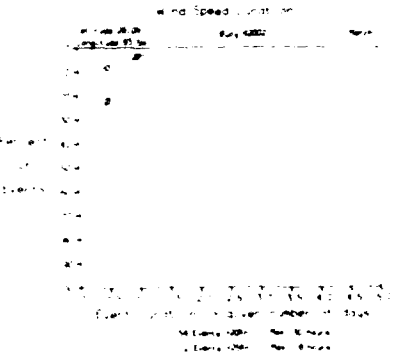

Wind Speed Duration
Percent of Events
Event Duration (+ given number of days)

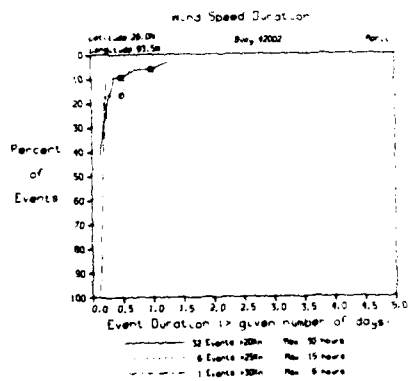


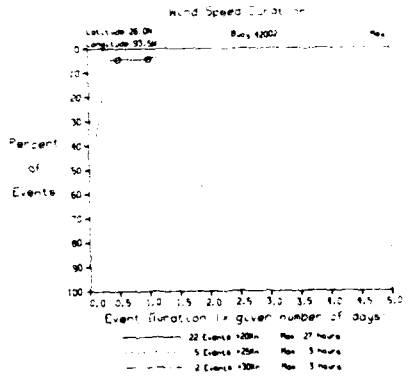


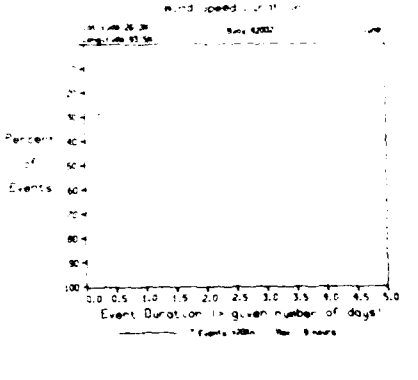


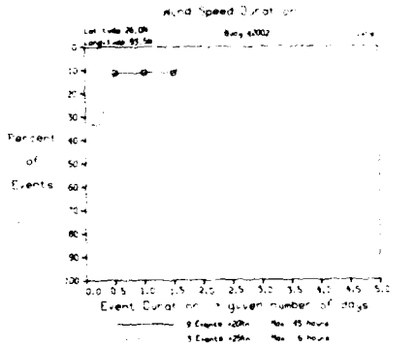


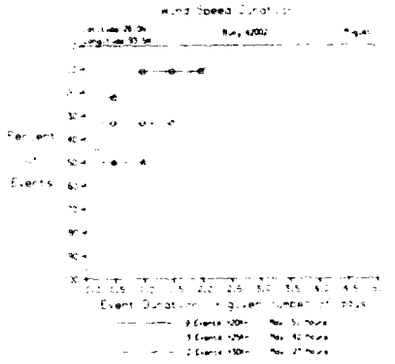


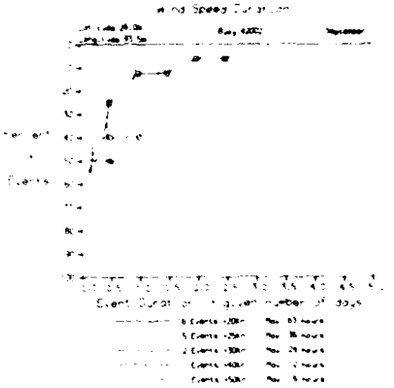

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

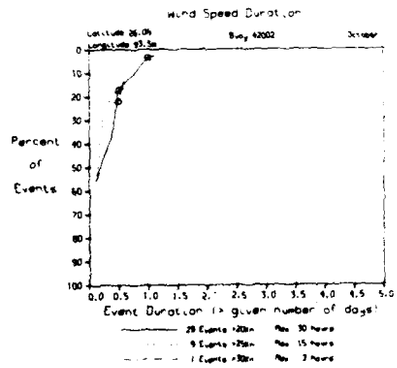

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

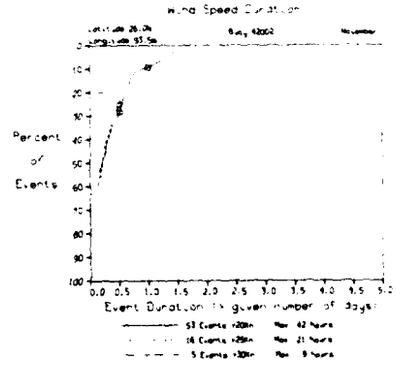

Percent of Events
Event Duration (> given number of days)

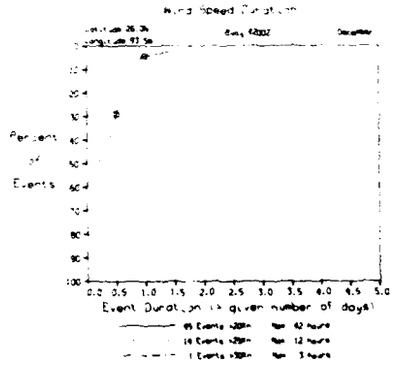

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

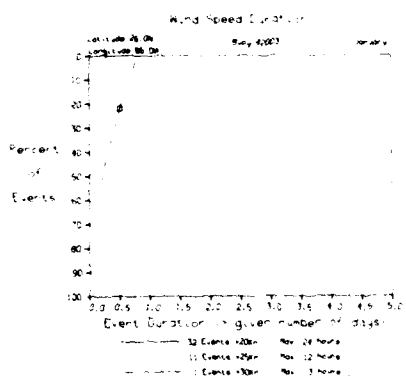

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

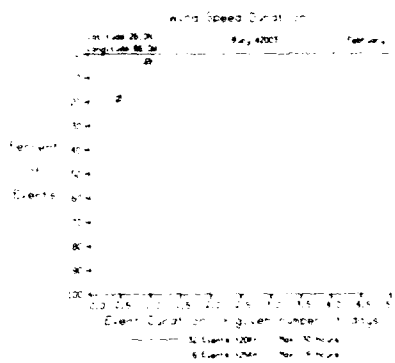

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

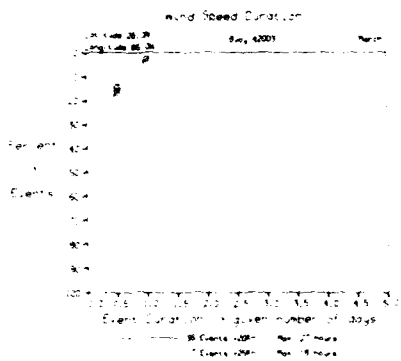

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

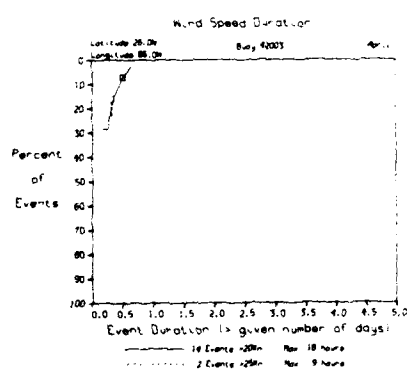

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

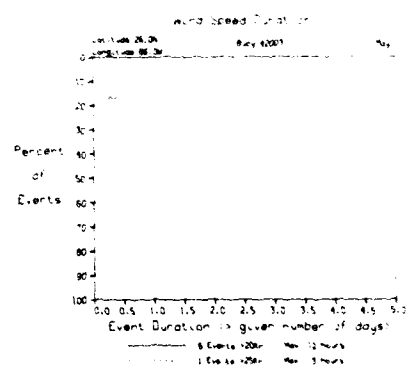

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

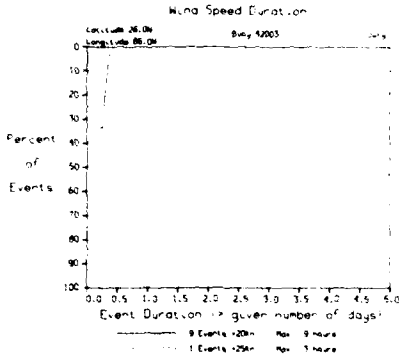

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

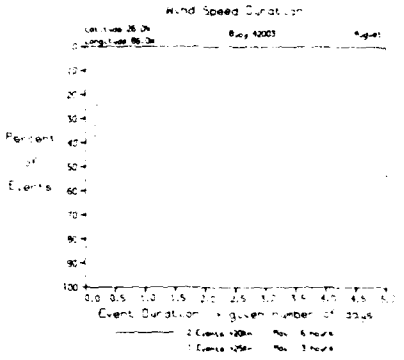

Event Duration (> given number of days)

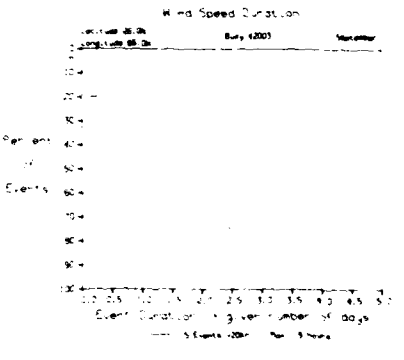

Event Duration (> given number of days)

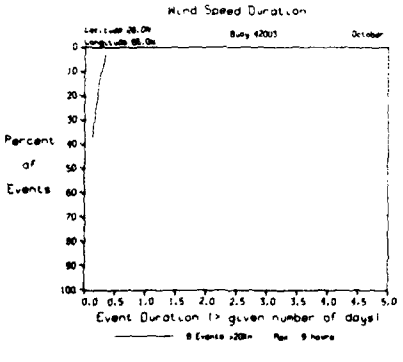

Wind Speed Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

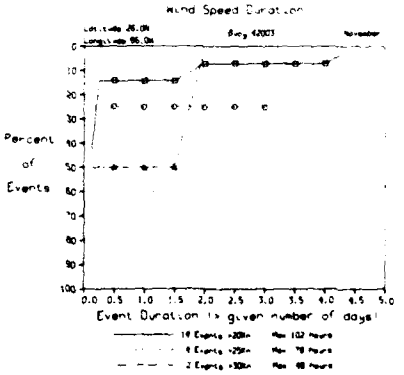

Percent of Events
Event Duration (> given number of days)

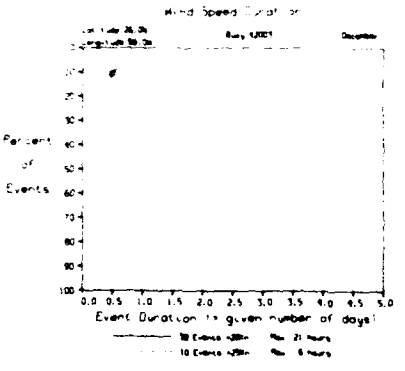

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

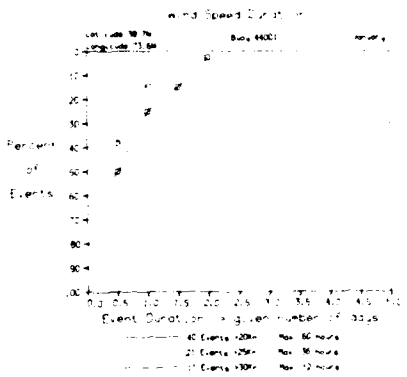

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

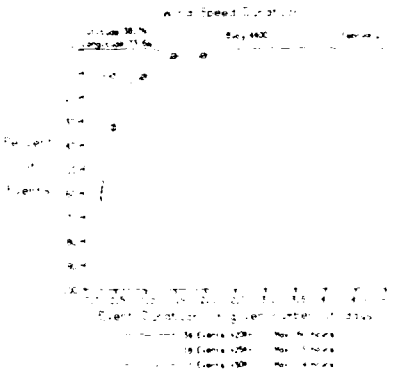

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

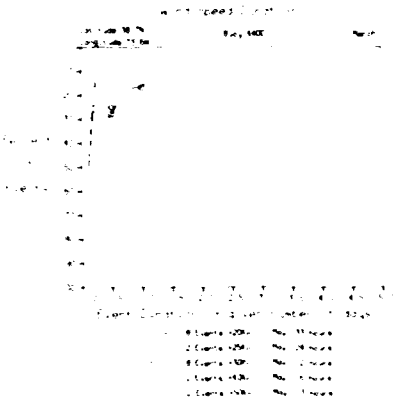

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

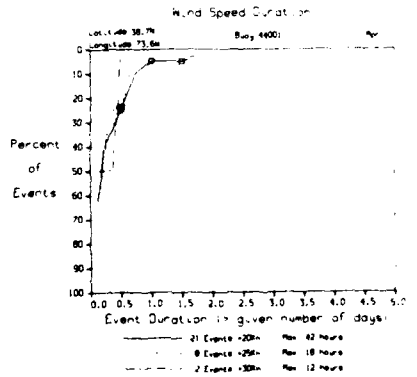

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

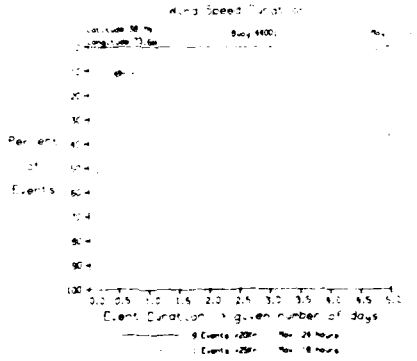

Percent of Events
Event Duration (> given number of days)

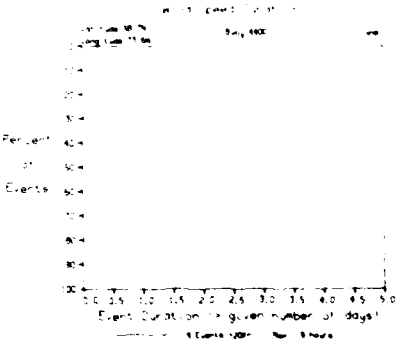


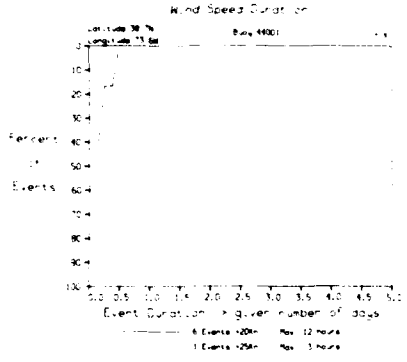


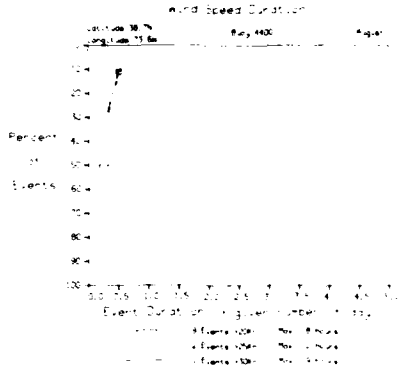


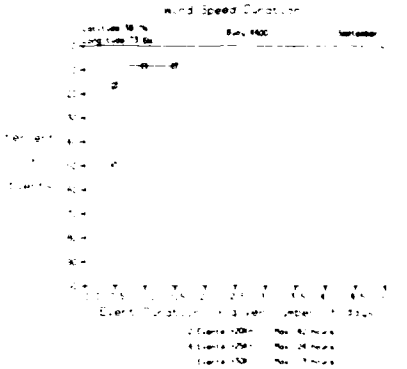

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

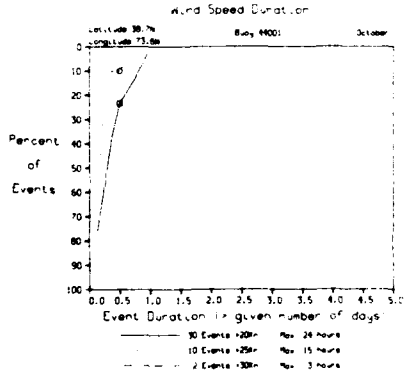


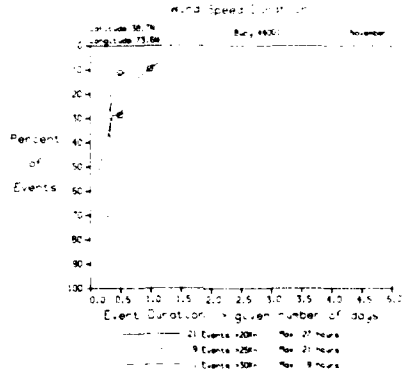


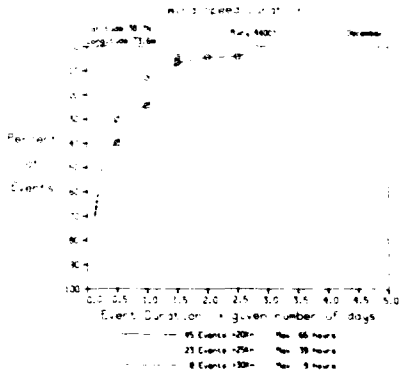

Wind Speed Duration
Percent of Events
Event Duration = given number of days

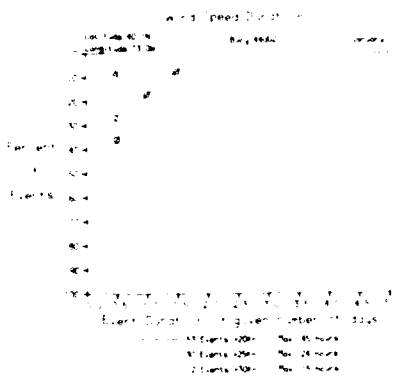

Wind Speed Duration
Percent of Events
Event Duration = given number of days

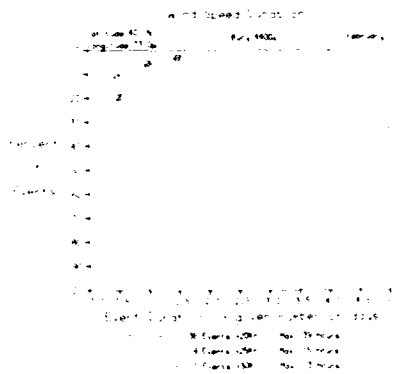

Wind Speed Duration
Event Duration = given number of days

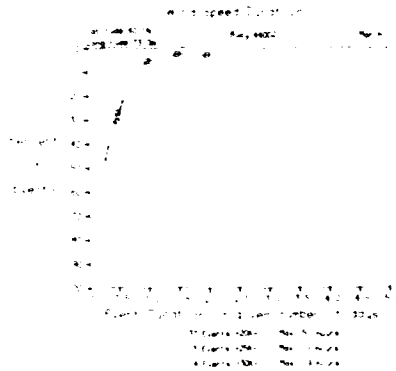

Wind Speed Duration
Percent of Events
Event Duration = given number of days

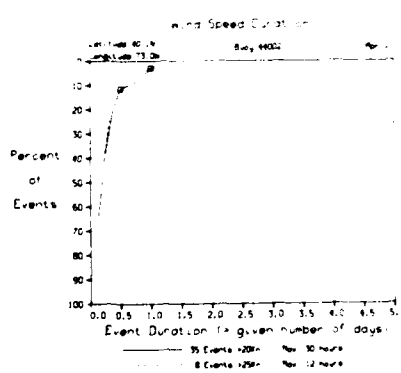

Wind Speed Duration
Percent of Events
Event Duration = given number of days

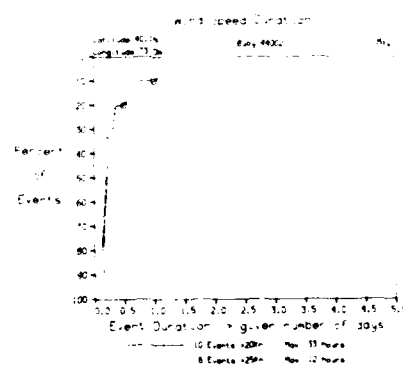

Event Duration = given number of days

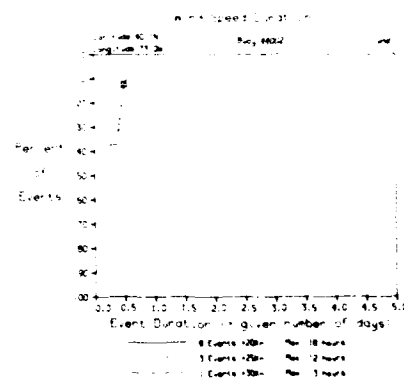


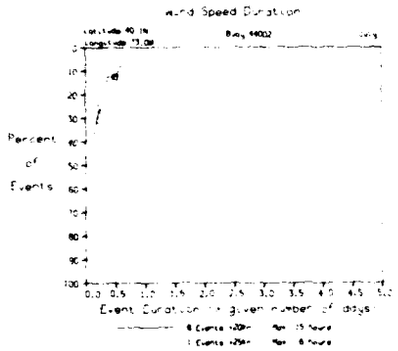


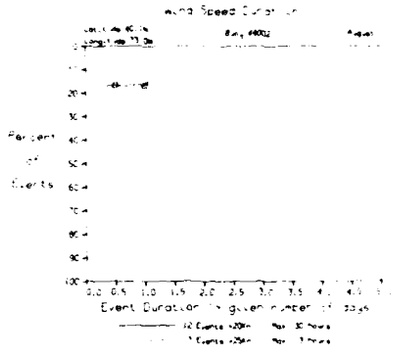


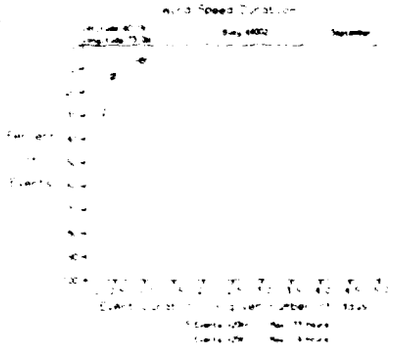

Percent
of
Events
Event Duration for given number of days

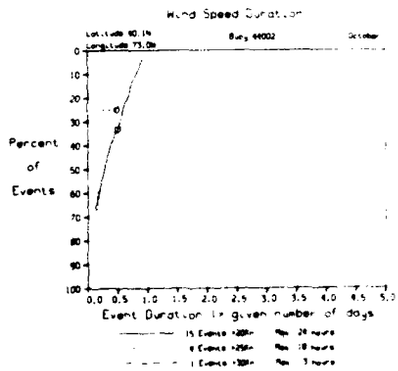

Percent
of
Events
Event Duration for given number of days

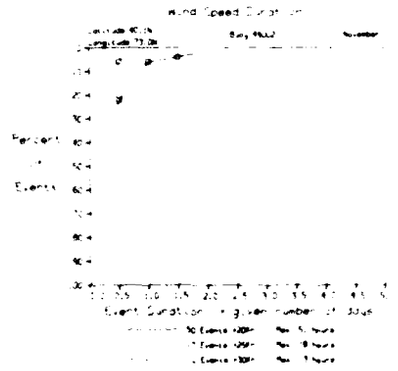

Percent
of
Events
Event Duration for given number of days

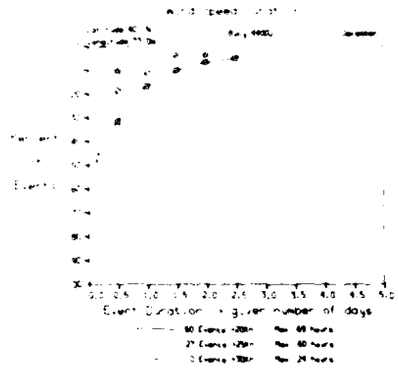

Wind Speed Duration
Percent of Events
Event Duration (= given number of days

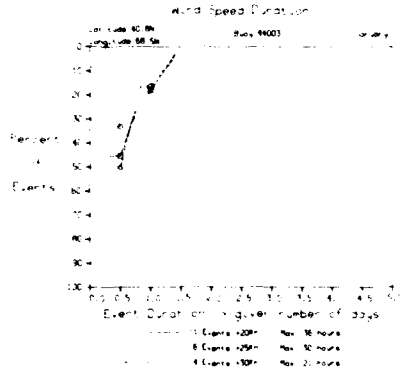

Wind Speed Duration
Percent of Events
Event Duration (= given number of days

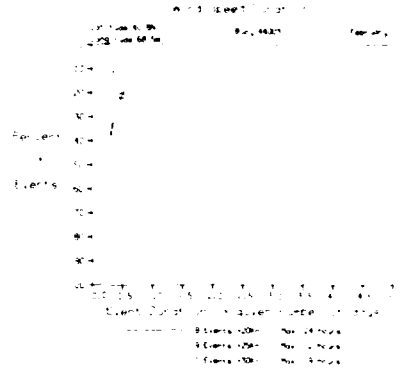

Wind Speed Duration
Percent of Events
Event Duration (= given number of days

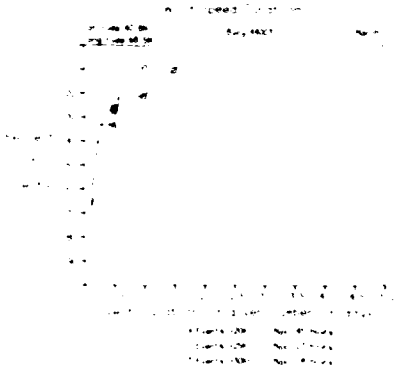

Wind Speed Duration
Percent of Events
Event Duration (= given number of days

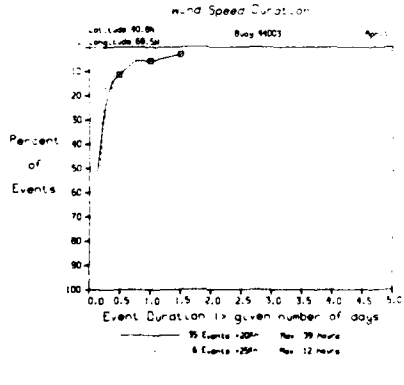

Wind Speed Duration
Percent of Events
Event Duration (= given number of days

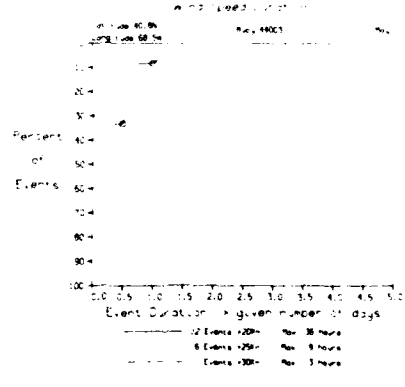

Event Duration (= given number of days

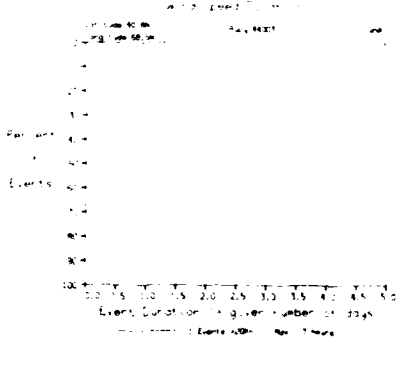

Wind Speed Duration
Percent of Events
Event Duration (x) given number of days

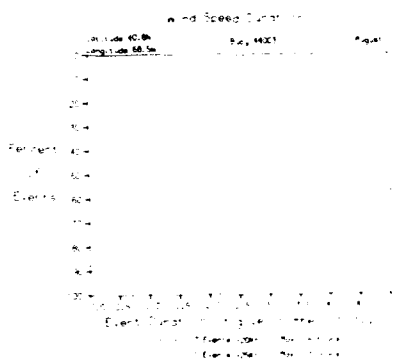

Percent of Events

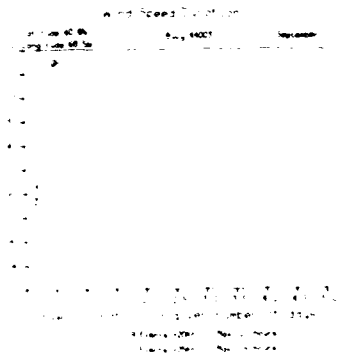

Percent of Events

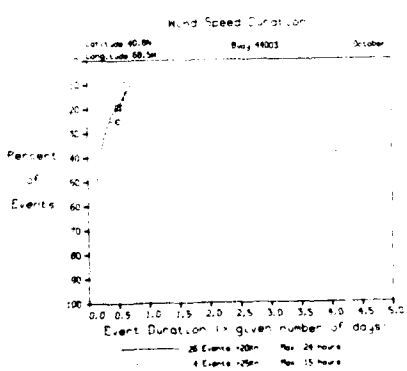

Wind Speed Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (x) given number of days

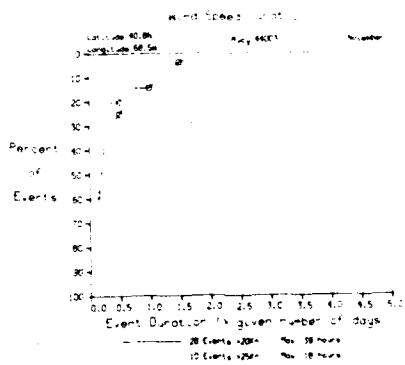

Percent of Events
Event Duration (x) given number of days

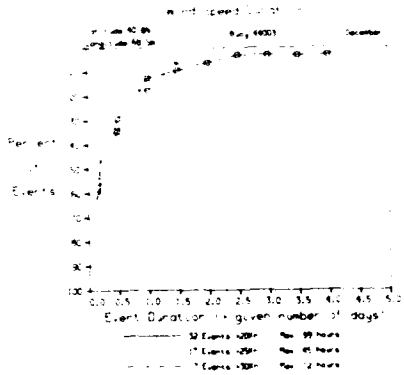

Event Duration (x) given number of days

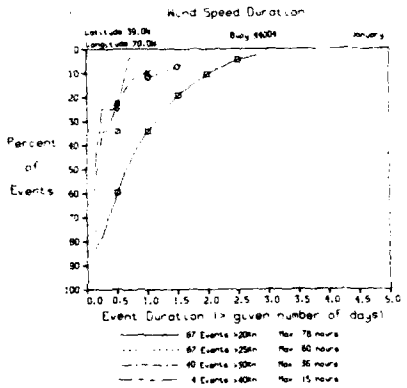


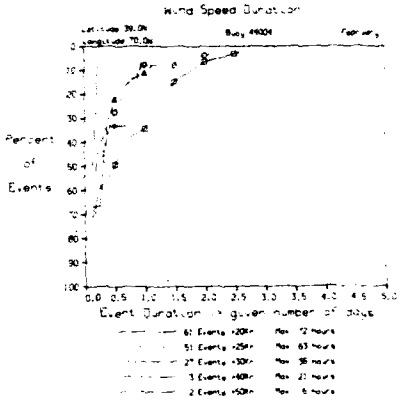


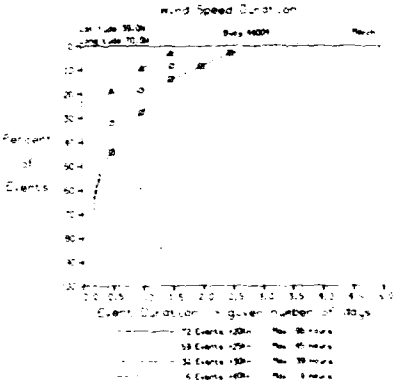

Wind Speed Duration
October
Percent of Events
Event Duration (+ given number of days)
26 Events >20kt Max 24 hours
4 Events >25kt Max 15 hours

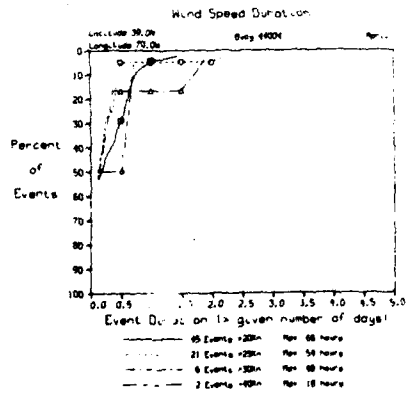

Percent of Events
Event Duration (+ given number of days)
28 Events >20kt Max 58 hours
10 Events >25kt Max 18 hours

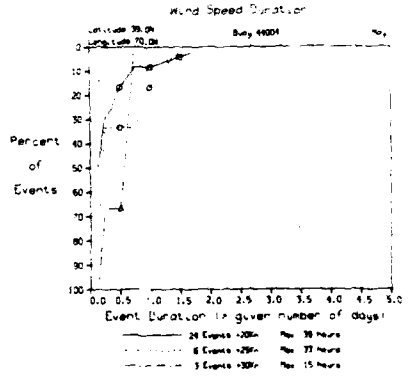

Percent of Events
Event Duration (+ given number of days)

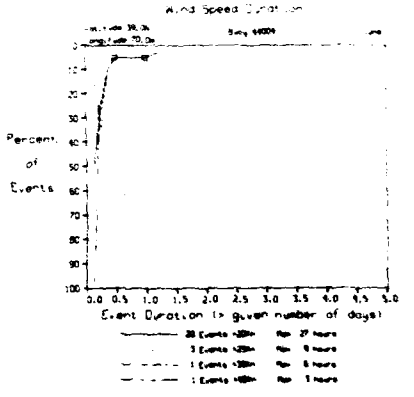

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

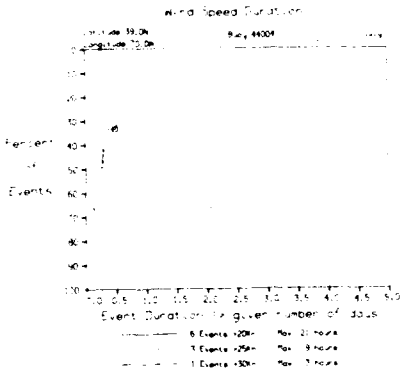

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

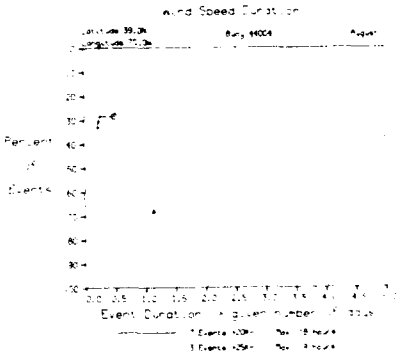

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

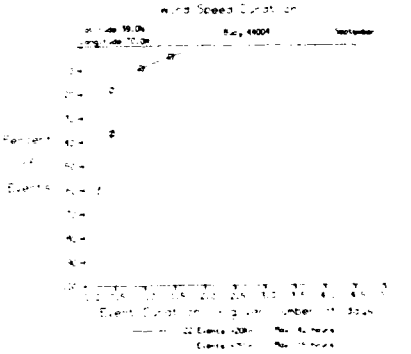

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

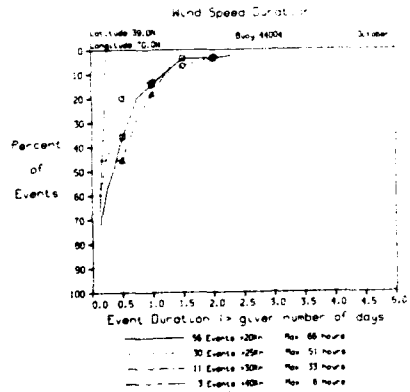

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

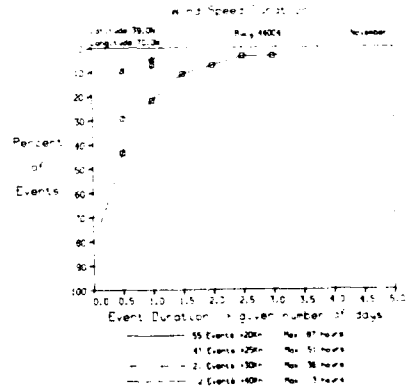

Wind Speed Duration
Percent of Events
Event Duration (> given number of days)

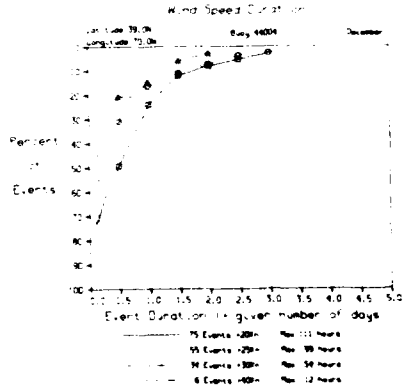

Wind Speed Duration
Buoy 44004
Percent of Events
Event Duration => given number of days

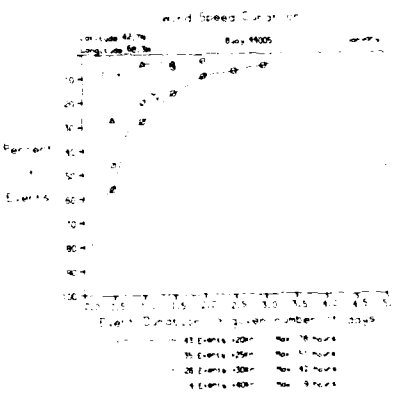

Wind Speed Duration
Buoy 44004
Percent of Events
Event Duration => given number of days

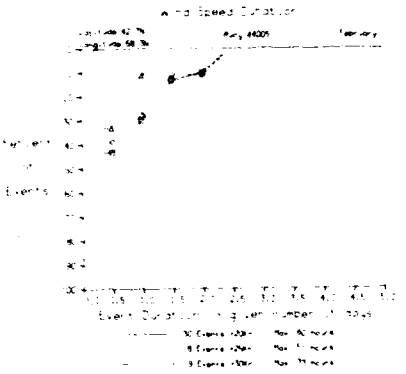

Wind Speed Duration
Buoy 44004
Percent of Events
Event Duration => given number of days

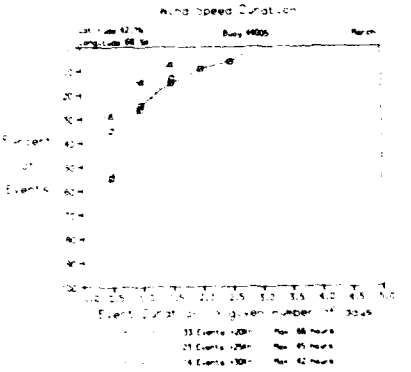

Wind Speed Duration
Buoy 44004
Percent of Events
Event Duration => given number of days
56 Events >20kt Max 66 hours
30 Events >25kt Max 51 hours
11 Events >30kt Max 33 hours
3 Events >40kt Max 8 hours

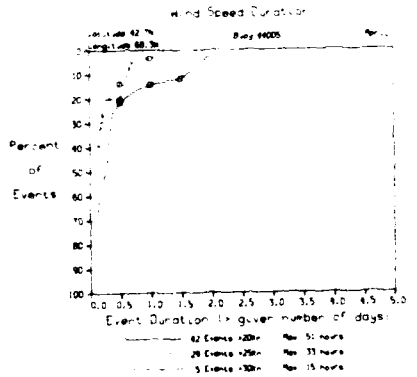

Wind Speed Duration
Buoy 44004
Percent of Events
Event Duration => given number of days
55 Events >20kt Max 87 hours
41 Events >25kt Max 51 hours
2 Events >30kt Max 38 hours
2 Events >40kt Max 7 hours

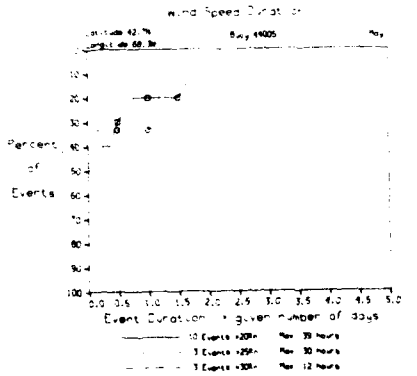

Wind Speed Duration
Buoy 44004
Percent of Events
Event Duration => given number of days
75 Events >20kt Max 111 hours
55 Events >25kt Max 89 hours
19 Events >30kt Max 58 hours
6 Events >40kt Max 12 hours

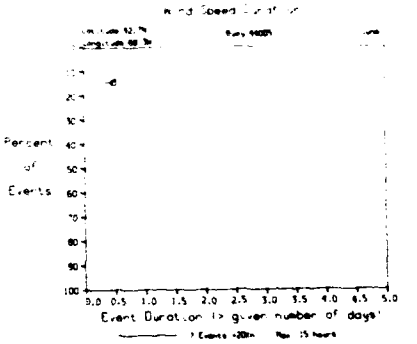


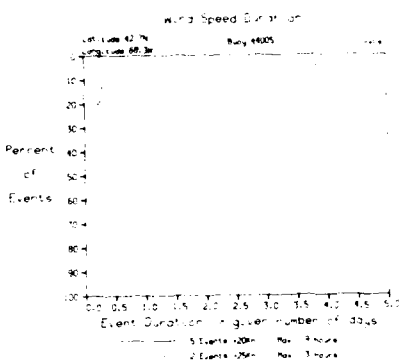


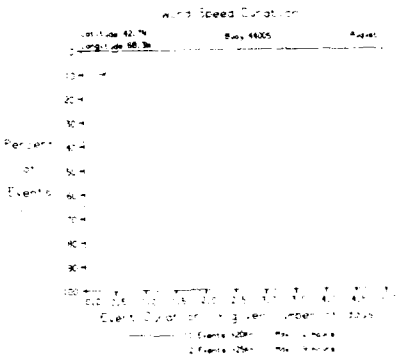


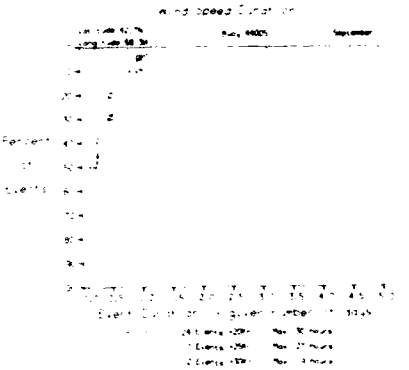


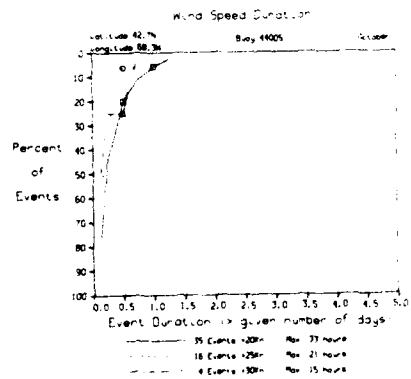


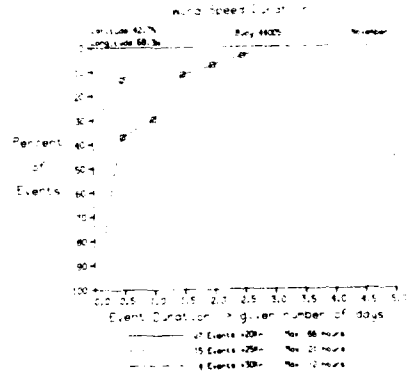


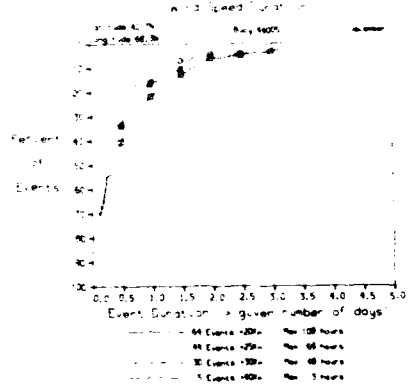

Wind Speed Duration
Buoy 44005
Percent of Events
Event Duration => given number of days


Wind Speed Duration
Percent of Events
Event Duration => given number of days


Percent of Events

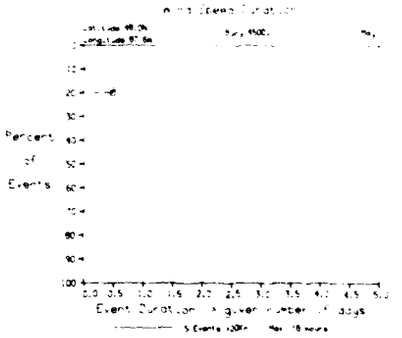

Wind Speed Duration
Buoy 44005
Percent of Events
Event Duration => given number of days

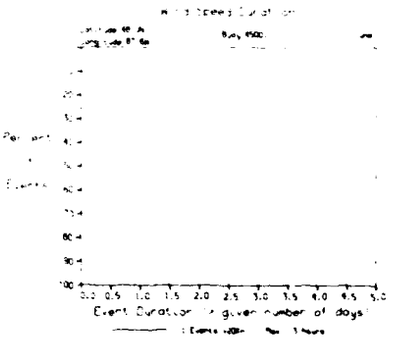

Percent of Events
Event Duration => given number of days

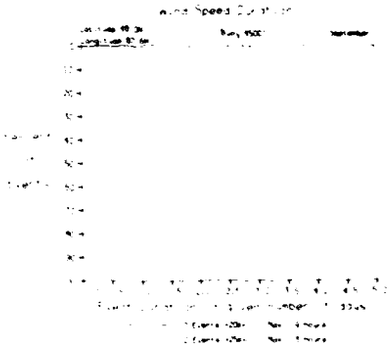

Percent of Events
Event Duration => given number of days

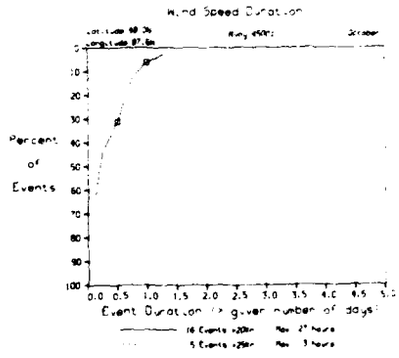
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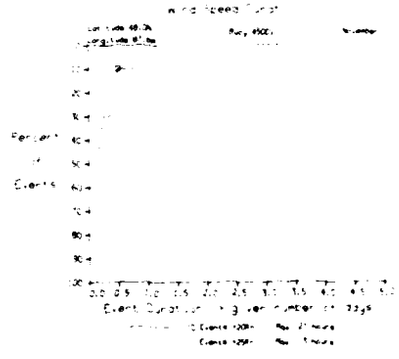
Apr...

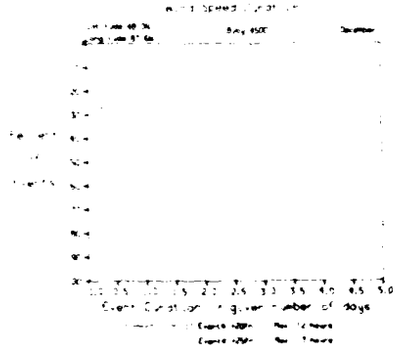







Wind Speed Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (x given number of days)





No Data Available for

January

No Data Available for

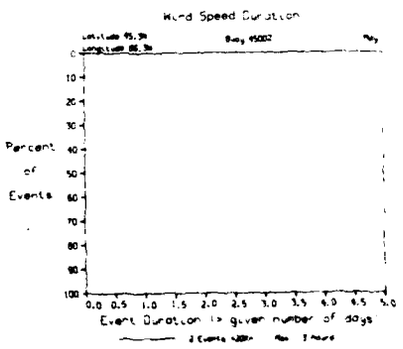
February

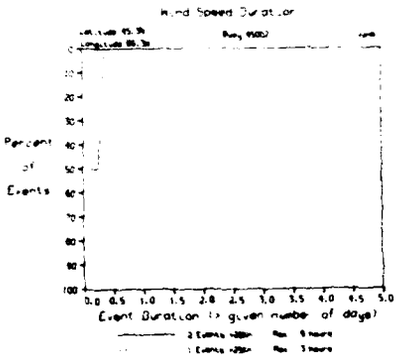
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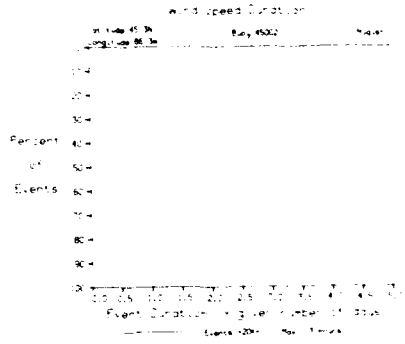
March

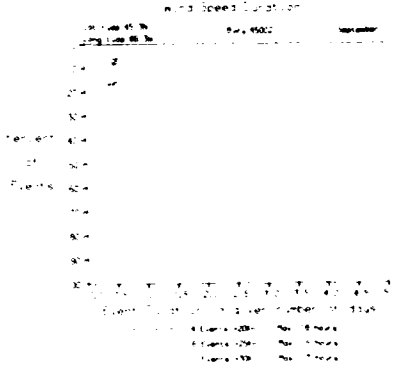
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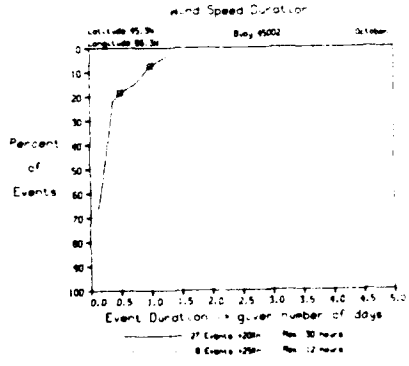
April

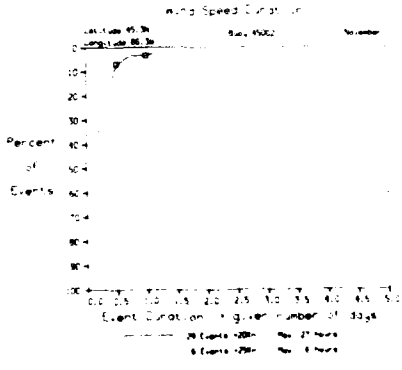


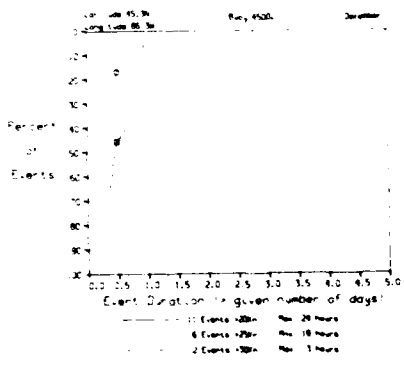


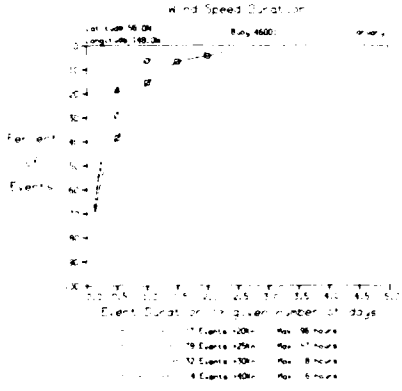

Wind Speed Duration
Percent
of
Events
Event Duration (x given number of days)

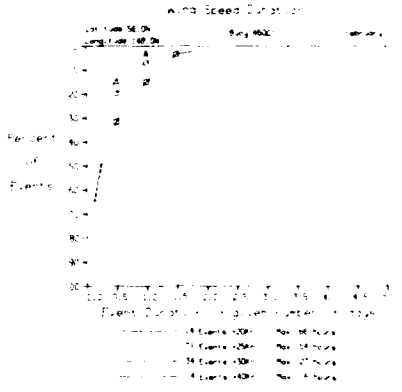

Wind Speed Duration

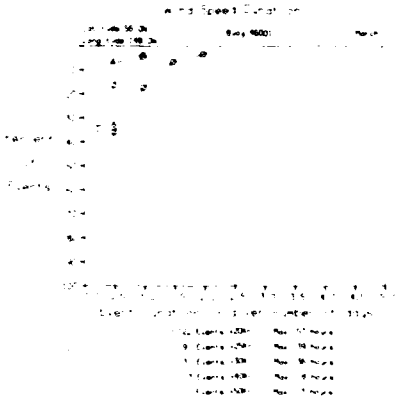

Wind Speed Duration
Percent
of
Events
Event Duration (x given number of days)

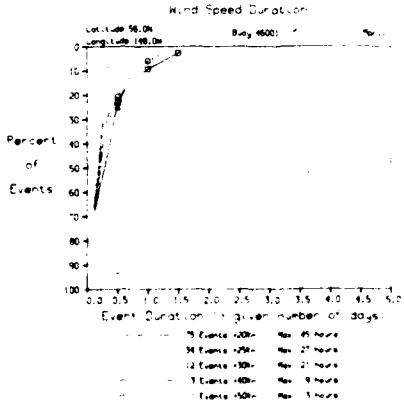

Wind Speed Duration
Percent
of
Events
Event Duration (x given number of days)

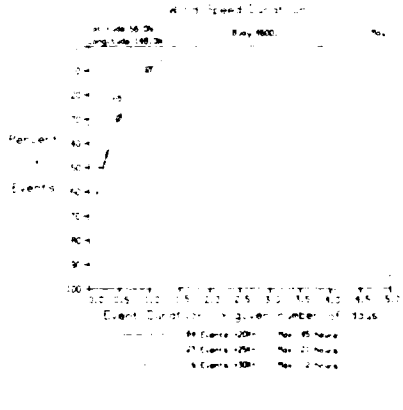

Wind Speed Duration
Percent
of
Events
Event Duration (x given number of days)

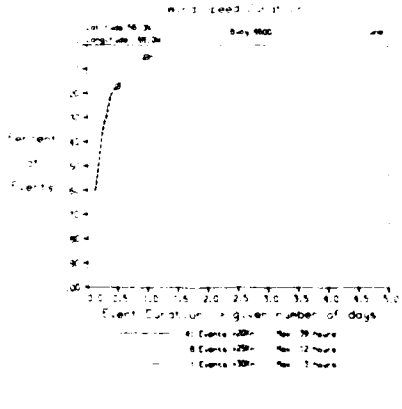


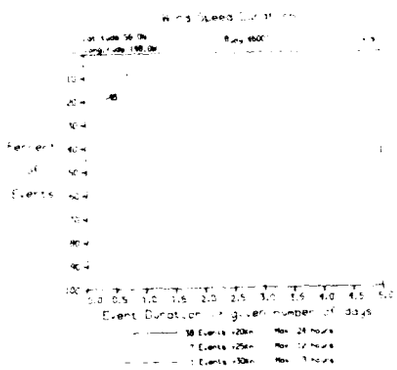


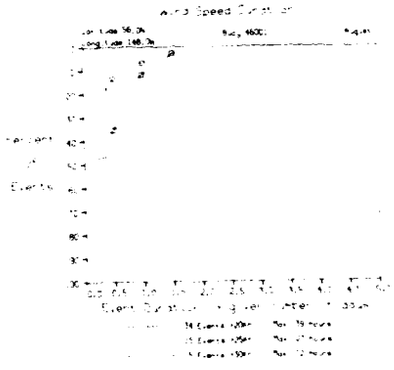


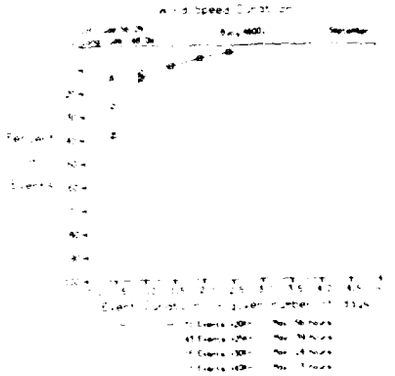

Wind Speed Duration
Percent of Events
Event Duration in given number of days

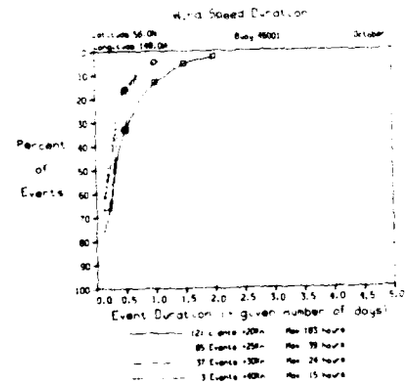


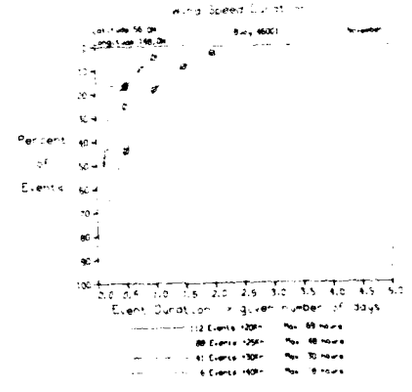


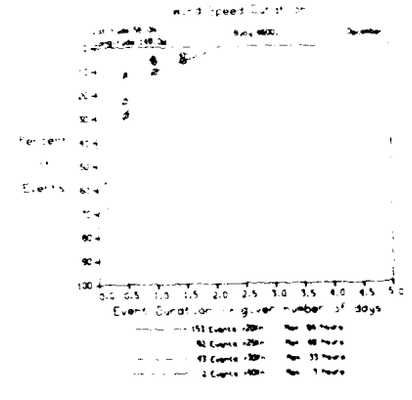


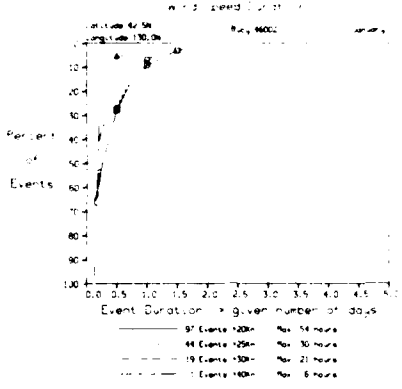


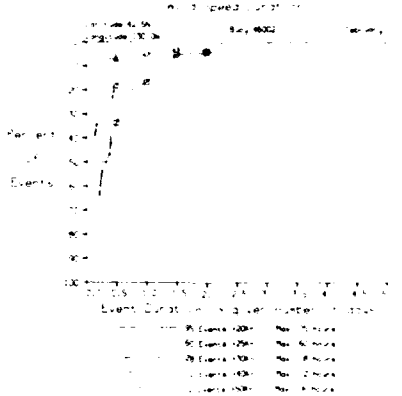


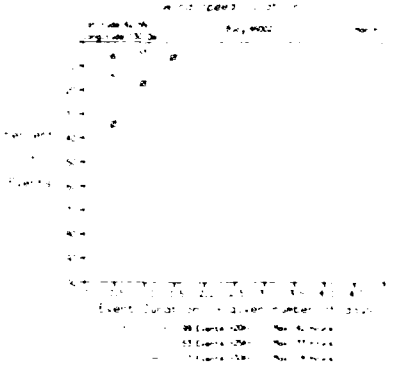

Wind Speed Duration
Percent of Events
Event Duration (= given number of days)

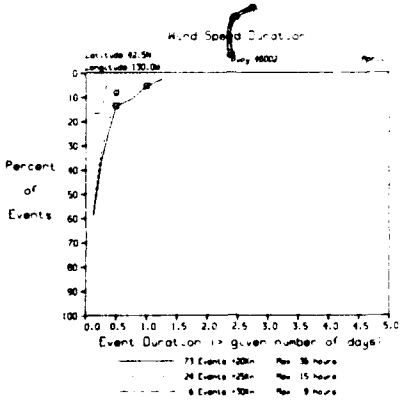


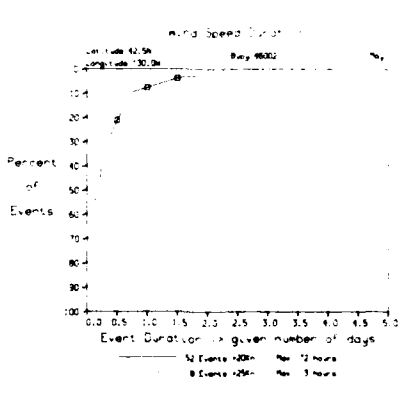


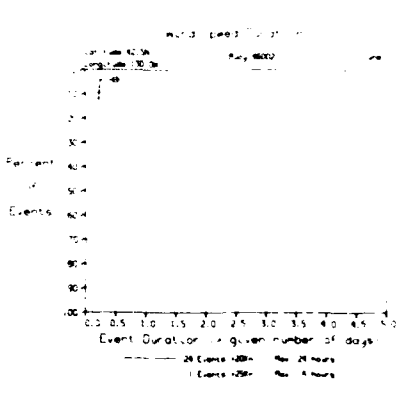

Percent of Events
Event Duration > given number of days

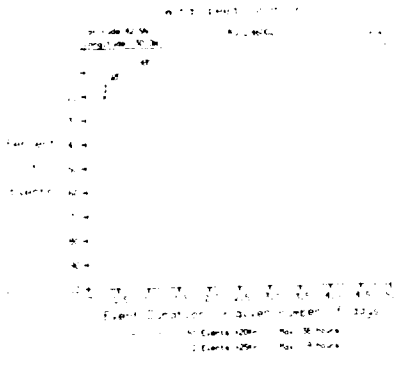

Percent of Events
Event Duration > given number of days

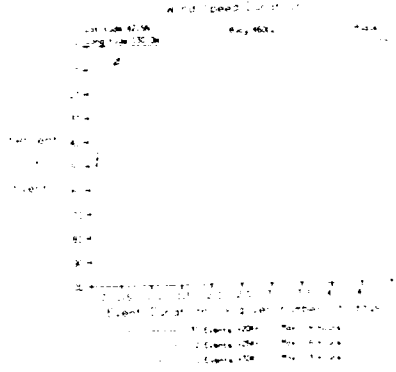

Event Duration > given number of days

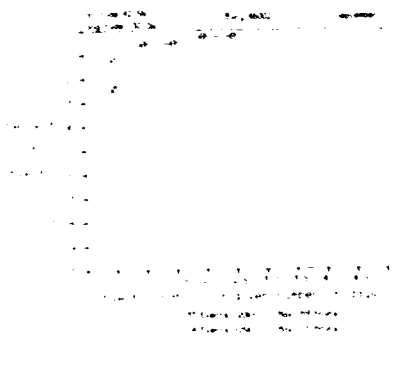

Wind Speed Duration
Percent of Events
Event Duration > given number of days

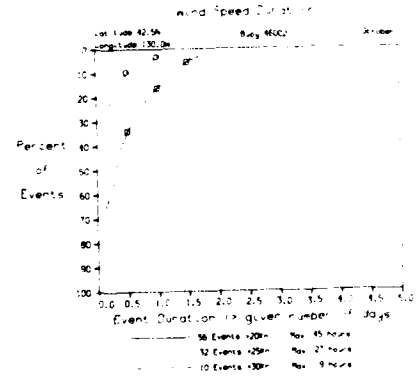

Percent of Events
Event Duration > given number of days

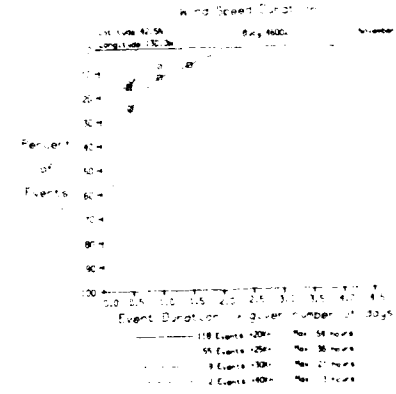

Event Duration > given number of days

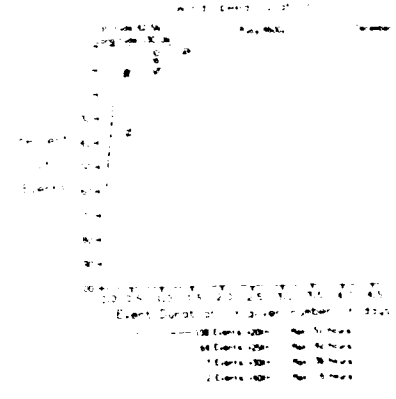


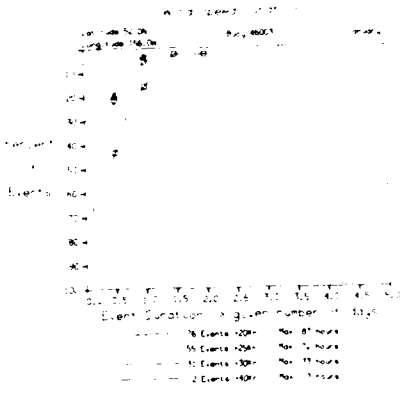


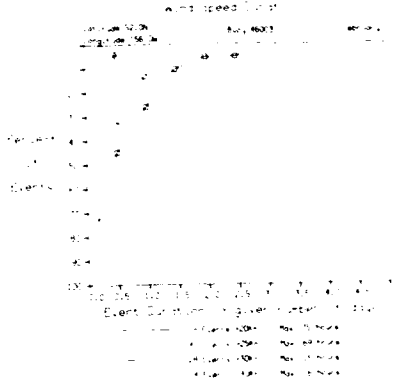


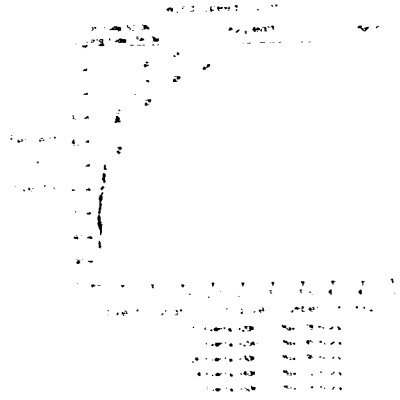

Percent
of
Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

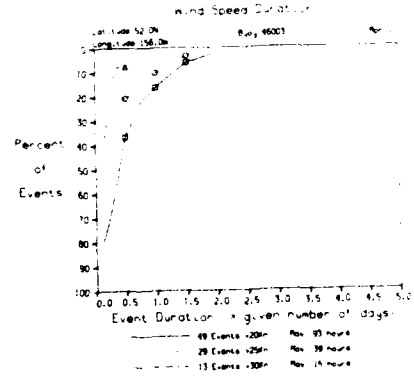

Percent
of
Events
Event Duration (> given number of days)

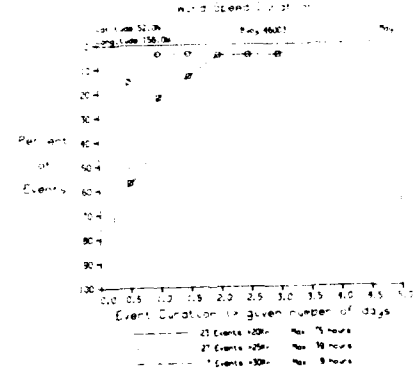

Event Duration (> given number of days)

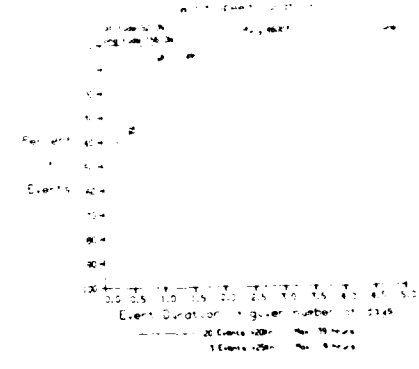


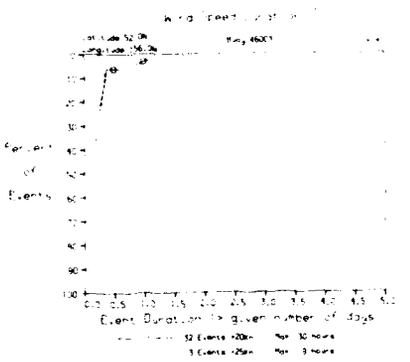


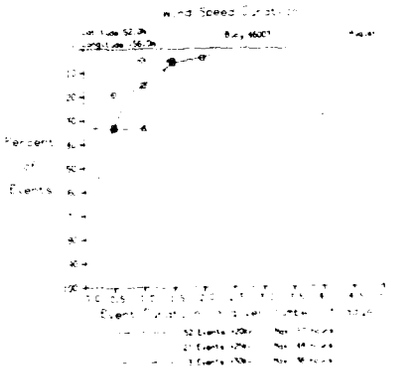


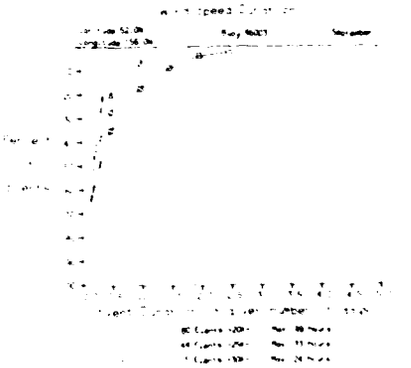

Wind Speed Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (x given number of days

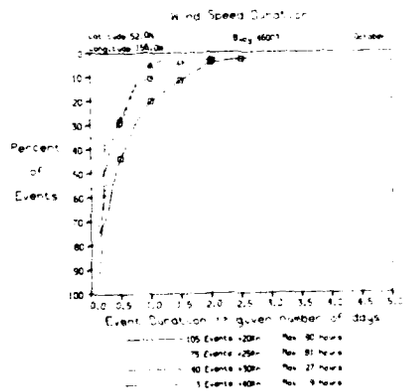


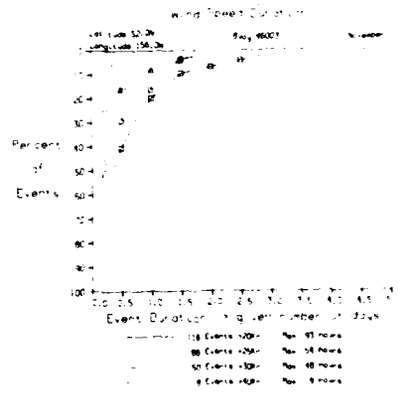


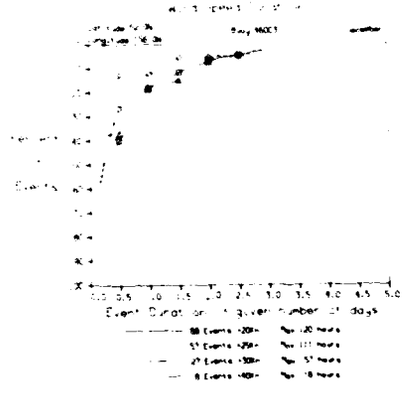


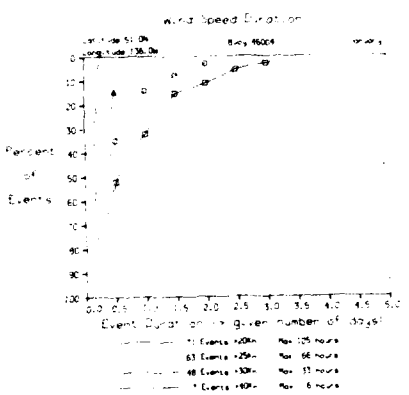


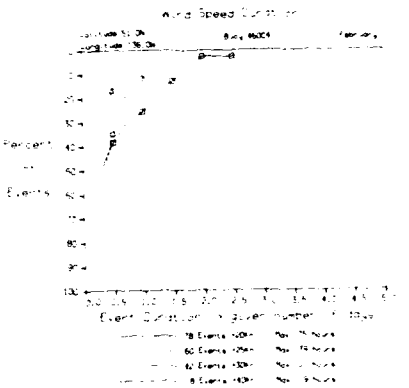


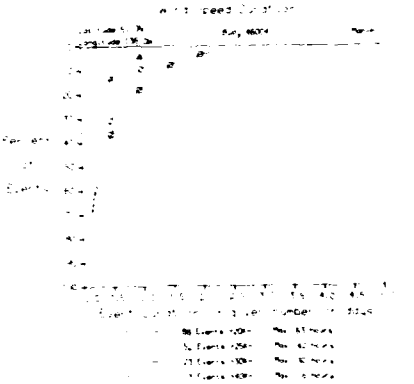


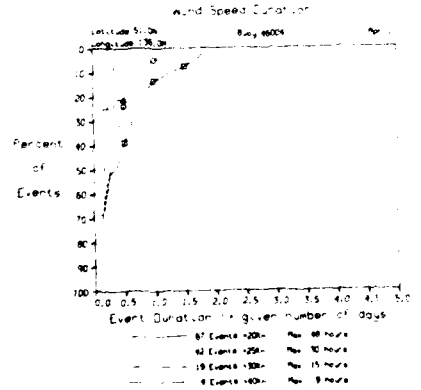


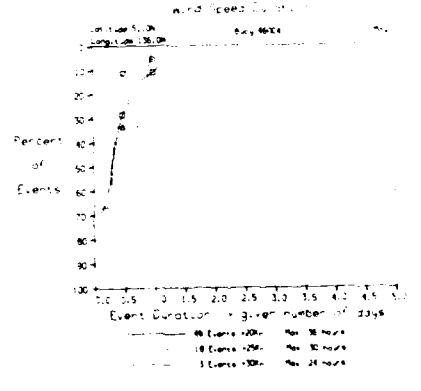


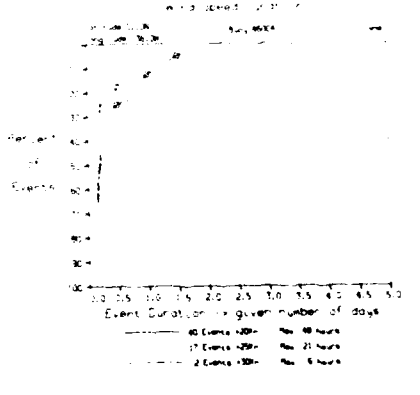

Percent of Events
Event Duration = given number of days

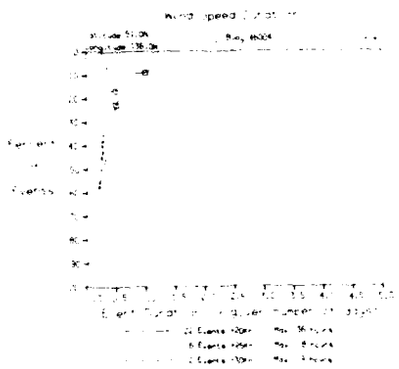

Percent of Events
Event Duration = given number of days

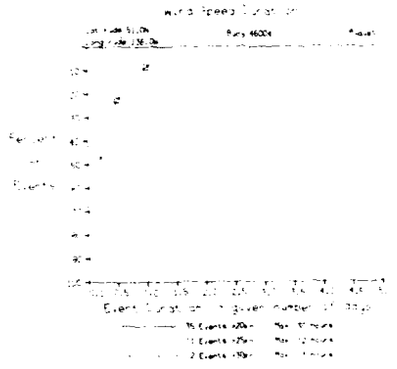

Event Duration = given number of days

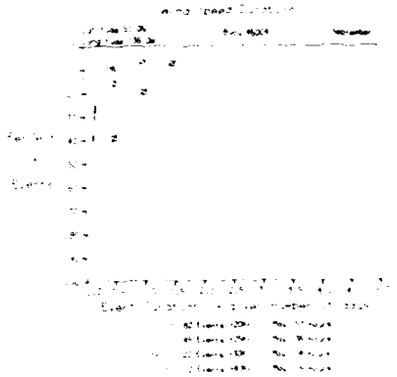

Percent of Events
Event Duration = given number of days

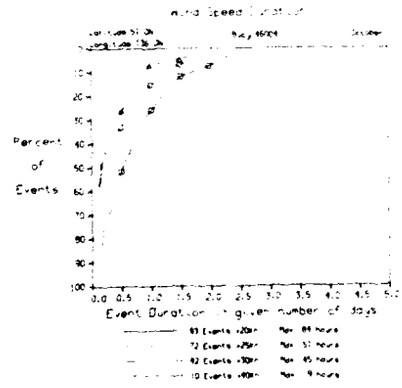

Percent of Events
Event Duration = given number of days

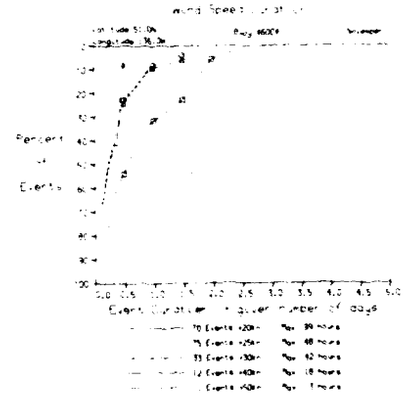

Event Duration = given number of days

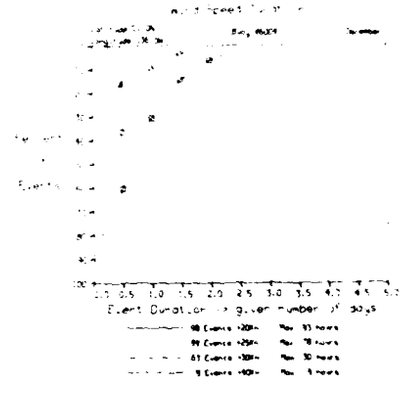


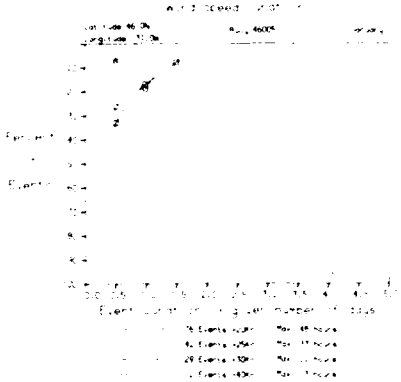


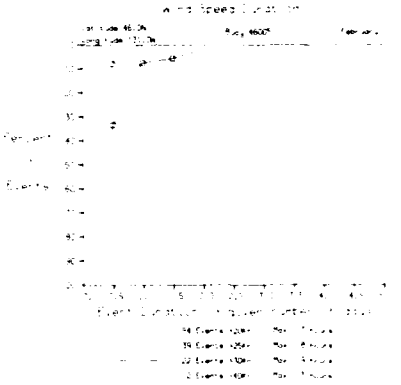


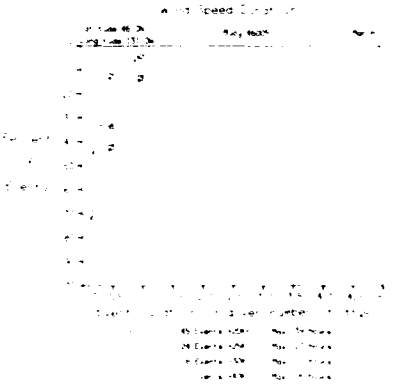


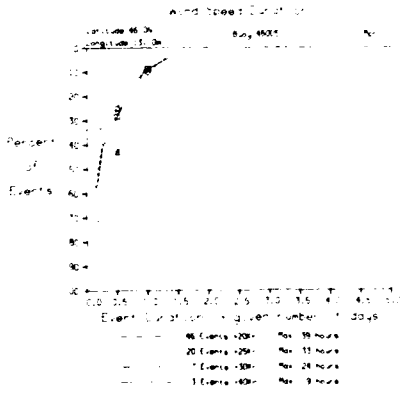


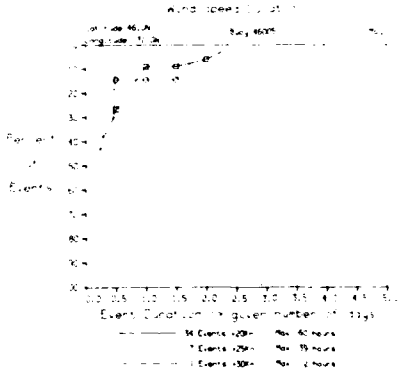


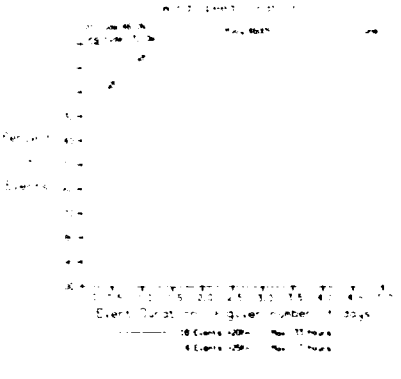


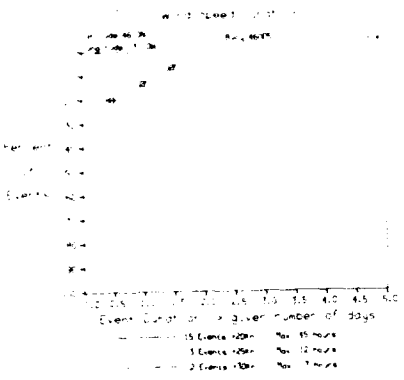


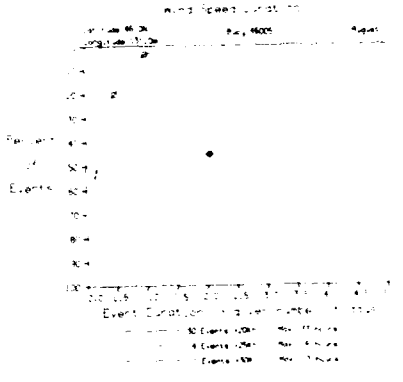


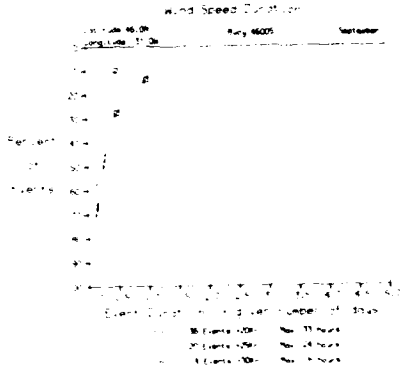


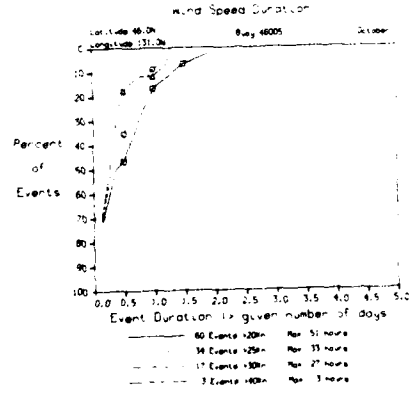


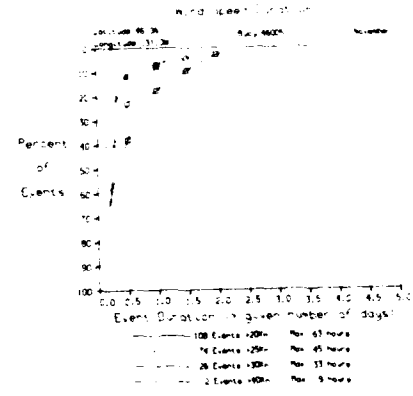


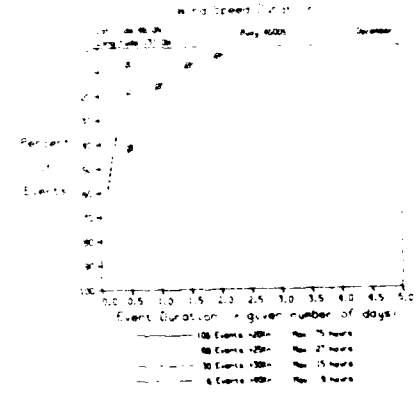


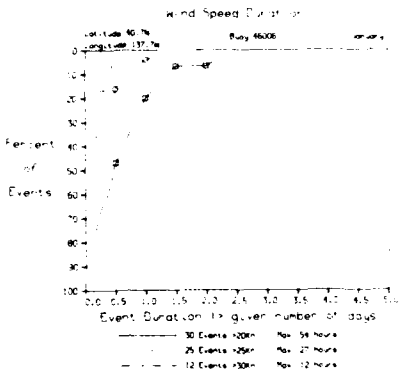


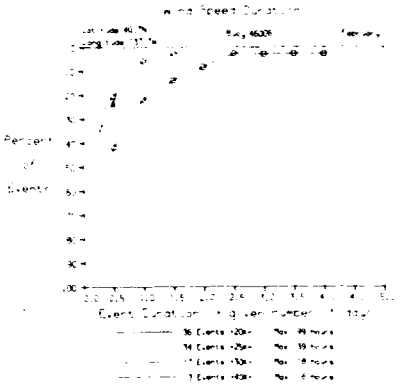


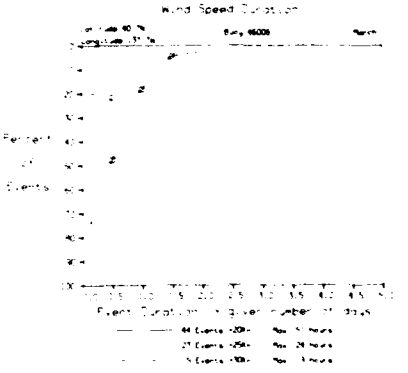

Wind Speed Duration
Percent of Events
Event Duration (x given number of days)

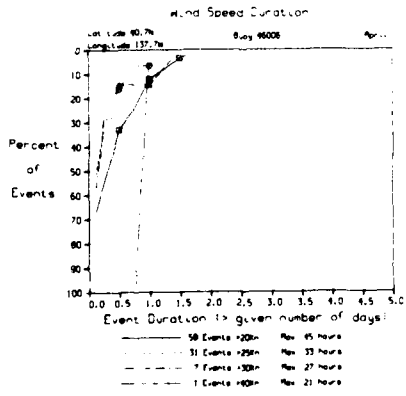


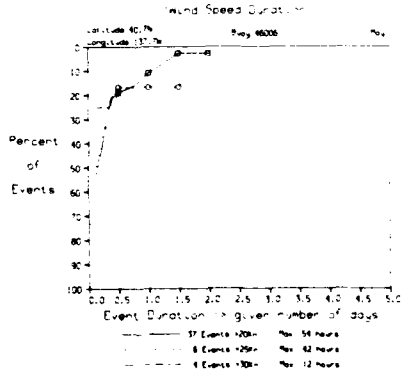


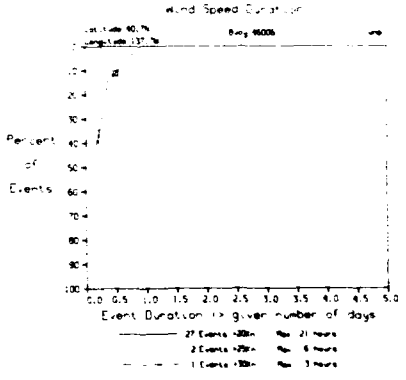

Wind Speed Duration
Percent of Events
Event Duration => given number of days

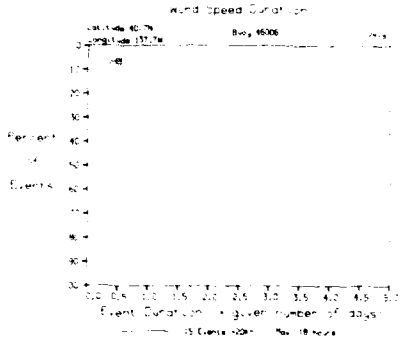

Wind Speed Duration
Percent of Events

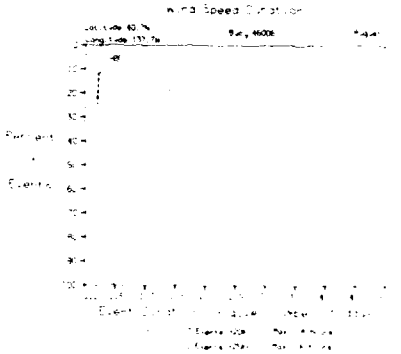

Wind Speed Duration
Percent of Events

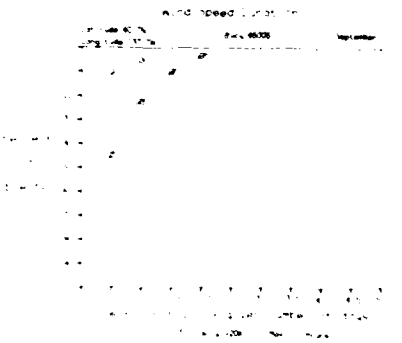

Wind Speed Duration
Percent of Events
Event Duration => given number of days

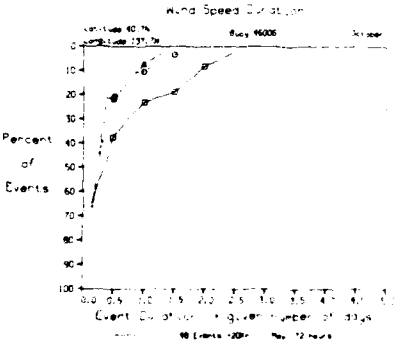

Wind Speed Duration
Percent of Events
Event Duration => given number of days

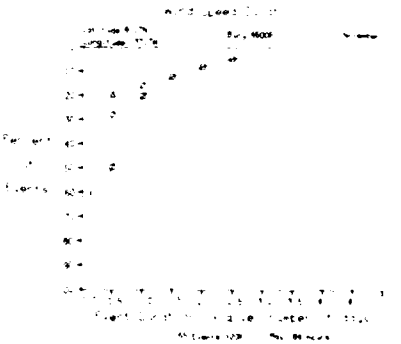

Wind Speed Duration
Percent of Events
Event Duration => given number of days

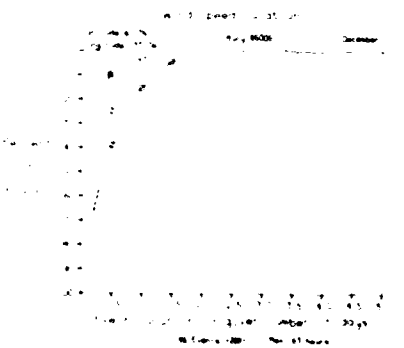

Wind Speed Duration
Percent of Events

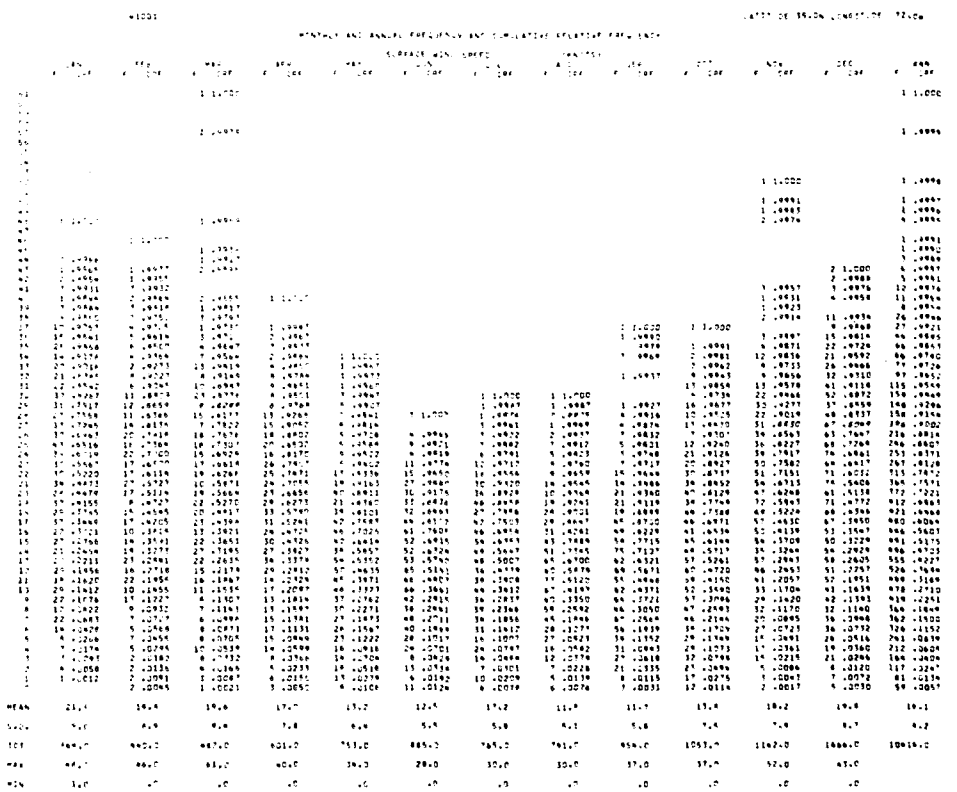

Wind Speed Duration
Percent of Events

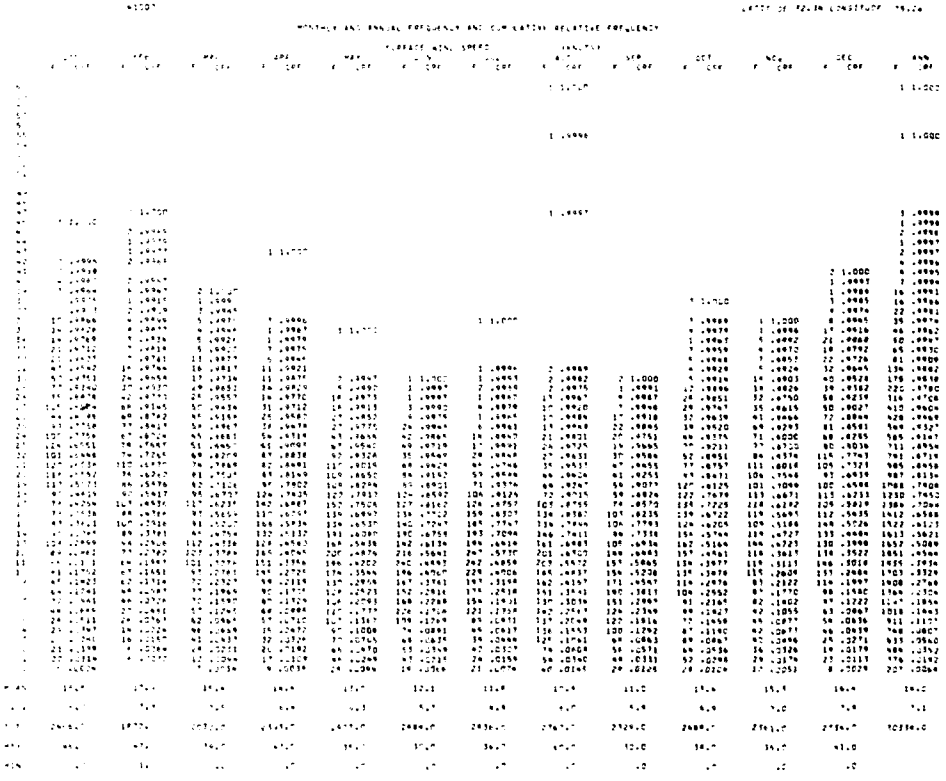

Wind Speed Duration

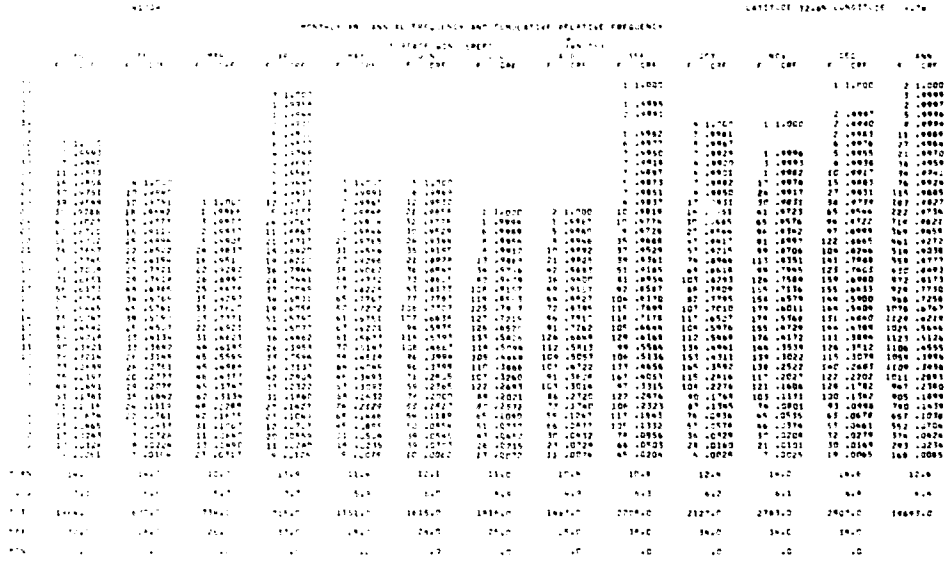

Wind Speed Duration
Percent of Events

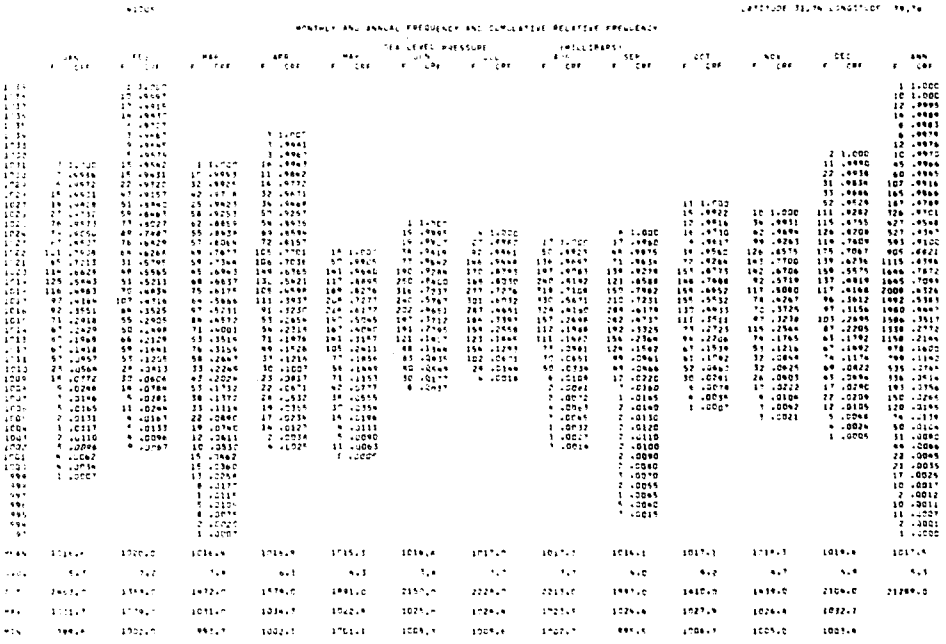

Wind Speed Duration


Wind Speed Duration





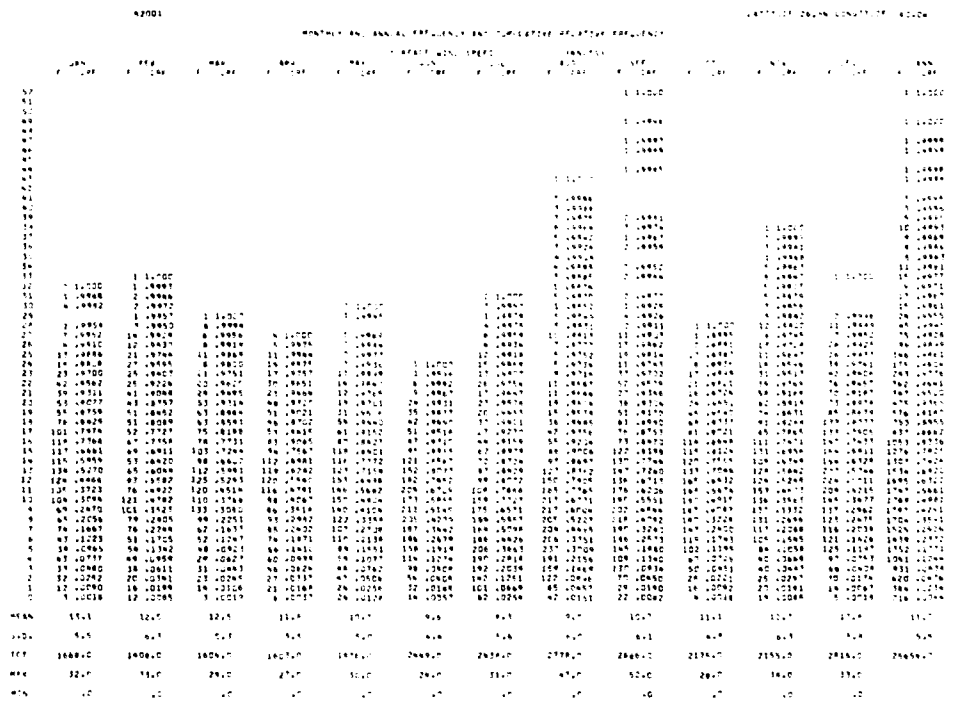


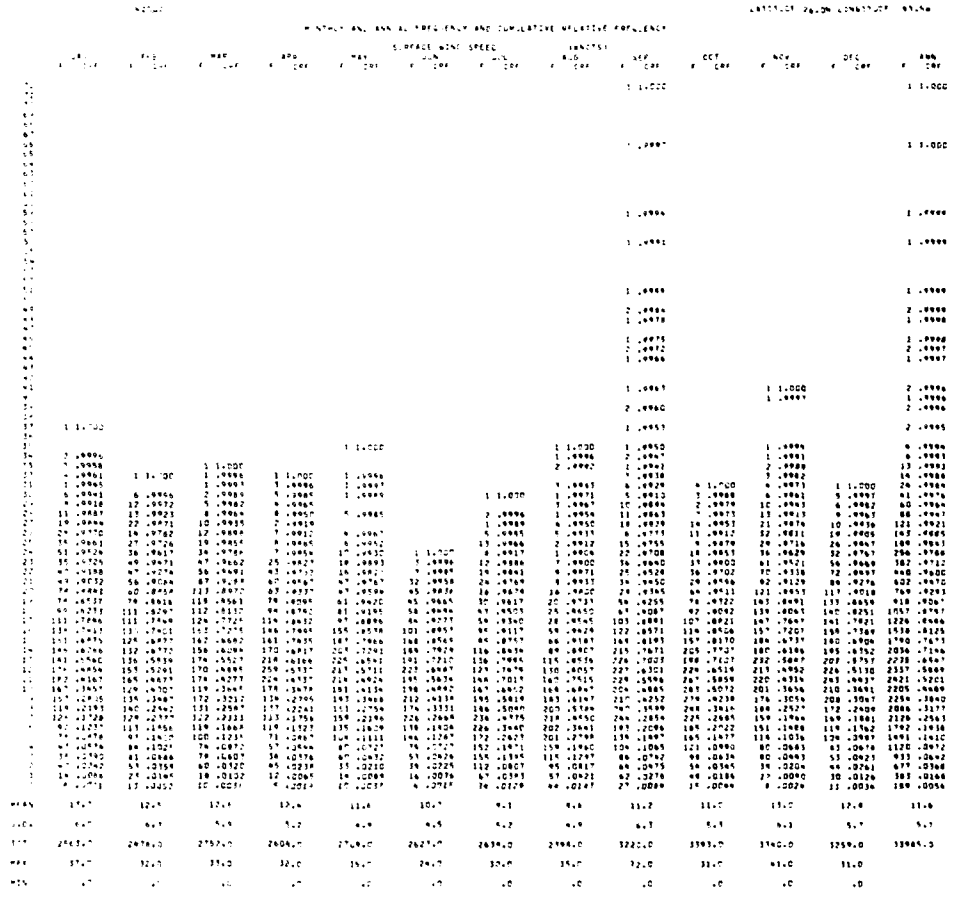


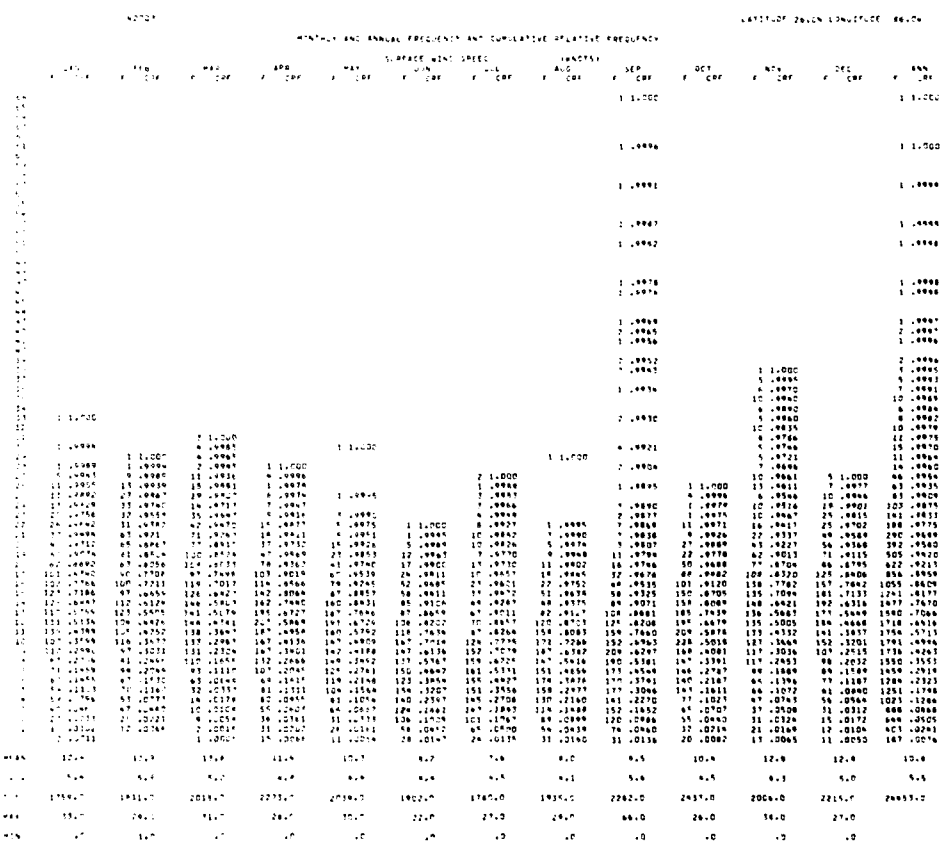
MONTHLY AND ANNUAL FREQUENCY AND CUMULATIVE RELATIVE FREQUENCY

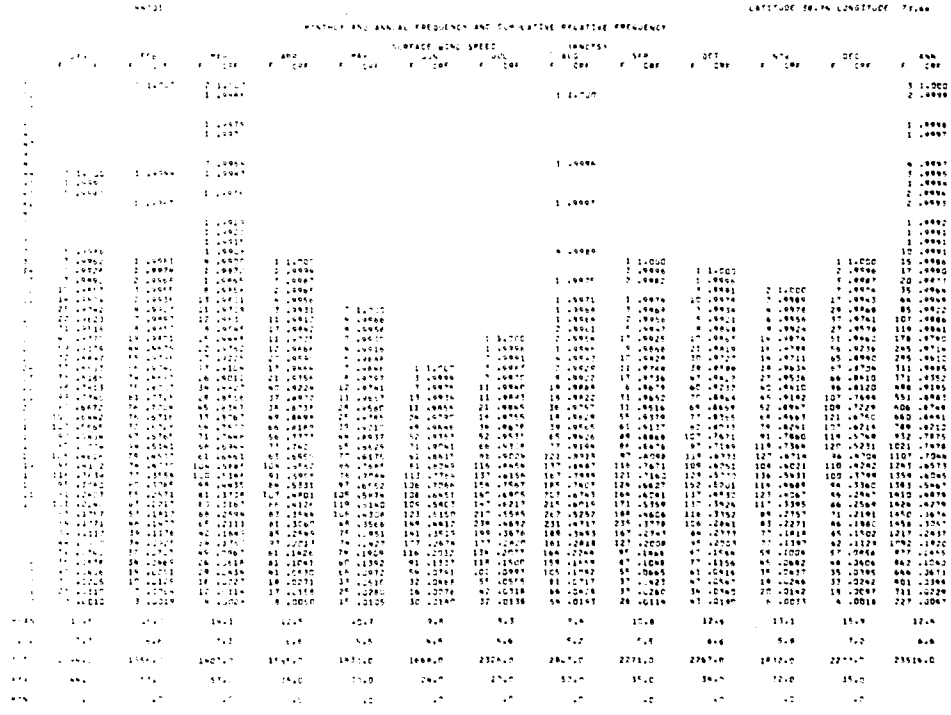
SEA LEVEL PRESSURE (MILLIBARS)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF	F CUF
1		1 1.000											1 1.000
2		15 .9667											16 1.000
3		14 .9015											12 .9995
4		14 .8417											14 .9969
5		7 .8017											8 .9883
6		3 .7668		9 1.000									6 .9874
7		9 .7447		3 .9681									12 .9976
8		4 .7274		3 .9598									10 .9972
9	7 1.000	15 .9942	1 1.000	14 .9867								2 1.000	11 .9990
10	7 .9486	15 .9833	17 .9833	11 .9692								22 .9934	60 .9965
11	4 .9172	22 .9725	32 .9824	16 .9772								31 .9834	107 .9919
12	14 .8823	17 .9557	42 .9719	32 .9673								33 .9684	165 .9866
13	19 .8418	21 .9362	25 .9621	24 .9568								52 .9524	187 .9789
14	21 .7932	18 .9097	58 .9257	57 .9257						11 1.000		111 .9282	324 .9701
15	34 .7573	17 .8727	56 .8715	54 .8715	1 1.000					15 .9922	10 1.000	115 .8755	527 .9548
16	31 .7156	20 .8362	63 .8196	63 .8196	15 .9848					16 .9710	92 .9864	126 .8208	527 .9154
17	41 .6706	26 .7947	57 .7657	72 .8157	16 .9636	1 1.000				4 .9617	98 .9283	119 .7689	503 .8705
18	36 .6277	19 .7567	69 .7301	105 .7701	28 .9419	15 .9688				19 .9542	126 .8571	175 .7067	605 .8227
19	41 .5838	24 .7264	58 .7034	106 .7038	37 .9063	19 .9444	1 1.000			22 .9264	141 .7700	139 .6376	1115 .7796
20	45 .5368	31 .6749	58 .6744	109 .6765	39 .8642	24 .9048	1 .9677	1 1.000		31 .8635	141 .6959	141 .5777	1446 .7072
21	34 .4926	49 .6265	45 .6343	139 .6365	39 .8065	27 .8571	3 .9032	1 .9677		39 .7937	139 .6278	159 .5175	1645 .6272
22	25 .4463	51 .5711	68 .5837	131 .5921	37 .7460	27 .8020	4 .8710	2 .9355		39 .7192	121 .5588	137 .4619	1665 .5389
23	16 .4063	35 .5232	75 .5237	105 .5299	38 .6829	31 .7439	7 .8387	3 .9032		39 .6452	117 .4980	117 .4168	2008 .4726
24	17 .3686	37 .4716	64 .4666	111 .4937	24 .6277	24 .6767	10 .8065	3 .8710		35 .5732	78 .4267	96 .3512	1992 .4081
25	12 .3351	24 .4235	57 .4231	91 .4535	24 .5677	22 .6061	12 .7581	4 .8387		28 .5113	72 .3725	87 .3156	1980 .3447
26	11 .2988	25 .3805	55 .3855	67 .4156	17 .5246	17 .5556	13 .7097	4 .8065		27 .4538	63 .3238	103 .2695	1586 .2911
27	8 .2629	20 .3455	44 .3501	54 .3716	18 .4787	19 .5051	15 .6774	4 .7742		22 .3925	55 .2866	87 .2295	1338 .2472
28	8 .2298	16 .3129	33 .3176	51 .3376	19 .4357	21 .4646	17 .6452	4 .7419		19 .3402	39 .2526	63 .1982	1158 .2104
29	6 .1998	14 .2823	29 .2911	44 .3076	19 .3967	21 .4242	17 .6129	4 .7097		17 .2968	34 .2265	47 .1692	978 .1805
30	6 .1718	13 .2543	26 .2628	39 .2828	18 .3597	19 .3939	17 .5806	4 .6774		15 .2587	29 .2029	34 .1472	798 .1602
31	5 .1457	11 .2285	23 .2374	31 .2614	17 .3256	18 .3636	16 .5484	4 .6452		13 .2251	25 .1812	26 .1314	700 .1392
2010	23 .1200	29 .2013	33 .2096	30 .2407	35 .2969	45 .3535	31 .5161	8 .6290		26 .2043	32 .1621	29 .1122	535 .1254
2009	14 .0772	22 .1604	23 .1813	23 .2013	31 .2553	30 .3131	30 .4677	6 .5968		20 .1741	24 .1303	23 .0944	436 .1014
2054	9 .0398	14 .1286	13 .1532	22 .1671	42 .2177	8 .2727	7 .4194	7 .5645		9 .1516	17 .1022	17 .0780	293 .0796
2041	3 .0146	5 .0781	10 .1272	24 .1532	31 .1955	14 .2424	14 .3871	3 .5323		4 .1135	9 .0804	11 .0609	195 .0564
2042	5 .0165	11 .0794	21 .1116	19 .1315	27 .1756	11 .2222	9 .3548	4 .5000		4 .0969	7 .0642	12 .0485	129 .0395
2043	2 .0133	4 .0521	22 .0980	17 .1239	14 .1599	7 .1919	7 .3226	7 .4677		3 .0818	5 .0501	5 .0368	74 .0319
2044	3 .0117	4 .0133	14 .0327	9 .1111	9 .1440	5 .1717	4 .2903	2 .4355		2 .0728	3 .0421	4 .0324	50 .0214
2045	2 .0110	4 .0094	12 .0611	2 .0934	7 .1040	3 .1515	3 .2581	1 .4032		2 .0638	2 .0340	1 .0204	31 .0182
2021	4 .0094	4 .0797	10 .0533	4 .1021	11 .1053	2 .1313	1 .2258	1 .3871		1 .0614	2 .0118		44 .0264
2051	4 .0067		15 .0762		7 .1007						2 .0090		28 .0045
2052	4 .0056		15 .0380								2 .0060		23 .0035
2053	1 .0007		13 .0254								1 .0030		17 .0025
2054			8 .0127								2 .0055		10 .0017
2055			1 .0013								1 .0065		2 .0012
2056			5 .0190								1 .0042		10 .0011
2057			6 .0076								1 .0019		11 .0007
2058			2 .0025										2 .0001
2059			1 .0006										1 .0000
MEAN	1014.0	1009.0	1016.4	1016.9	1015.3	1018.4	1017.0	1017.0	1016.1	1017.3	1019.3	1019.8	1017.4
STD	5.7	7.2	7.8	6.3	6.3	5.8	5.7	5.7	6.0	6.2	6.7	6.8	6.5
F	2465.0	1999.0	1972.0	1978.0	1981.0	2157.0	2229.0	2217.0	1997.0	1960.0	1939.0	2104.0	21289.0
MAX	1031.0	1030.0	1031.0	1036.0	1042.0	1045.0	1044.0	1045.0	1044.0	1047.0	1044.0	1042.0	
MIN	988.0	1002.0	997.0	1002.0	1001.0	1009.0	1009.0	1007.0	997.0	1006.0	1009.0	1003.0	









[illegible] LATITUDE [illegible] LONGITUDE [illegible]

MONTHLY AND ANNUAL FREQUENCY AND CUMULATIVE RELATIVE FREQUENCY

SURFACE WIND SPEED (KNOTS)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF	F CRF
[illegible]		1 1.000											1 1.000
[illegible]													
[illegible]													
[illegible]		3 .9995											3 1.000
[illegible]		1 .9979											1 .9999
[illegible]	1 1.000											1 1.000	2 .9998
[illegible]	4 .9995											3 .9996	9 .9998
[illegible]	1 .9977		2 1.000									4 .9985	7 .9995
[illegible]	3 .9968											5 .9971	9 .9993
[illegible]	3 .9953											5 .9953	14 .9990
[illegible]	7 .9928		1 .9967									4 .9935	16 .9986
[illegible]	27 .9877	1 .9976	1 .9965		1 1.000					2 1.000	1 1.000	21 .9936	55 .9981
[illegible]	18 .9767	2 .9967	7 .9967	1 1.000	7 .9997	3 1.000					5 .9996	17 .9851	57 .9966
[illegible]	27 .9689	2 .9953	17 .9939	1 .9997	3 .9977	1 .9991			1 1.000	1 .9983	6 .9978	19 .9773	65 .9945
[illegible]	26 .9577	4 .9943	12 .9868	6 .9994	6 .9966	2 .9988			1 .9995	1 .9975	13 .9956	31 .9710	112 .9925
[illegible]	41 .9467	7 .9922	17 .9807	8 .9976	3 .9957	5 .9983	1 1.000		2 .9980	7 .9953	9 .9909	37 .9627	135 .9889
[illegible]	44 .9267	11 .9885	21 .9731	10 .9952	[illegible] .9947	2 .9968	2 .9997	1 1.000		5 .9901	27 .9876	48 .9476	182 .9847
[illegible]	59 .9027	22 .9828	21 .9647	16 .9922	4 .9927	4 .9962	1 .9936	17 .9996	5 .9969	13 .9869	30 .9778	62 .9531	257 .9789
[illegible]	62 .8787	32 .9719	33 .9557	25 .9874	6 .9921	4 .9951	7 .9991	5 .9961	6 .9944	9 .9763	44 .9669	60 .9385	305 .9707
[illegible]	76 .8438	57 .9544	42 .9421	31 .9799	13 .9866	6 .9927	4 .9971	5 .9947	6 .9913	19 .9669	64 .9481	95 .8863	420 .9611
[illegible]	91 .8056	57 .9269	51 .9249	63 .9706	19 .9846	6 .9910	5 .9948	22 .9925	17 .9887	31 .9505	67 .9248	119 .8516	534 .9478
[illegible]	124 .7618	62 .8978	66 .9040	38 .9576	18 .9812	12 .9888	13 .9935	25 .9867	21 .9821	27 .9245	82 .9023	147 .8136	636 .9310
[illegible]	177 .7065	75 .8665	73 .8777	68 .9462	16 .9757	8 .9849	13 .9905	30 .9754	46 .9716	36 .9018	113 .8687	115 .7602	698 .9110
[illegible]	96 .6264	96 .8164	103 .8474	92 .9258	19 .9712	13 .9826	21 .9867	39 .9652	28 .9479	46 .8718	122 .8278	129 .7195	819 .8895
[illegible]	116 .5827	102 .7665	102 .8055	91 .9011	32 .9625	28 .9759	36 .9805	36 .9517	37 .9331	44 .8331	164 .7835	149 .6733	912 .8635
[illegible]	87 .5528	116 .7136	112 .7636	96 .8738	62 .9531	45 .9677	55 .9705	42 .9345	40 .9147	44 .7929	169 .7312	148 .6212	1331 .8345
[illegible]	117 .5118	123 .6541	116 .7177	125 .8468	84 .9350	56 .9546	67 .9562	52 .9236	81 .8938	45 .7559	157 .6716	159 .5679	1159 .8028
[illegible]	97 .4669	113 .5906	110 .6703	135 .8092	104 .9106	63 .9378	109 .9355	89 .9051	83 .8525	65 .7181	196 .6195	164 .5124	1319 .7669
[illegible]	88 .4211	127 .5415	151 .6269	130 .7686	121 .8799	106 .9136	143 .8963	97 .8730	96 .8111	76 .6636	161 .5454	149 .4636	1429 .7245
[illegible]	67 .3777	132 .4752	155 .5631	142 .7296	158 .8439	148 .8828	174 .8626	119 .8390	134 .7621	69 .5982	142 .4922	167 .4363	1527 .6787
[illegible]	104 .3331	120 .4065	165 .4994	169 .6869	154 .7976	176 .8398	246 .8123	155 .7967	129 .7070	70 .5405	177 .4436	147 .3682	1799 .6282
[illegible]	55 .2762	86 .3438	152 .4317	207 .6362	202 .7545	232 .7882	265 .7422	193 .7416	141 .6452	67 .4815	157 .3781	161 .2978	1916 .5717
[illegible]	61 .2219	94 .2989	127 .3701	250 .5739	227 .6937	265 .7217	275 .6707	217 .6729	146 .5712	62 .4253	155 .3216	139 .2473	2035 .5105
[illegible]	[illegible] .1825	84 .2499	114 .3189	235 .4988	252 .6266	307 .6447	258 .5922	257 .5963	173 .4977	37 .3502	128 .2653	123 .1968	2389 .4450
[illegible]	57 .1414	72 .2161	96 .2775	242 .4282	262 .5532	345 .5554	218 .5176	253 .5268	146 .4090	72 .2936	137 .2198	109 .1556	2256 .3707
[illegible]	57 .1159	72 .1765	109 .2418	245 .3615	279 .4726	333 .4630	313 .4715	239 .4170	120 .3348	66 .2332	104 .1725	81 .1101	2017 .3144
[illegible]	52 .0905	60 .1309	107 .1871	232 .2879	307 .3967	286 .3643	297 .3878	240 .3722	112 .2695	46 .1705	78 .1363	59 .0888	1977 .2504
[illegible]	45 .0652	52 .0996	93 .1433	226 .2181	282 .2988	260 .2815	331 .2580	181 .2967	119 .2120	41 .1320	93 .1057	69 .0677	1661 .1915
[illegible]	36 .0477	49 .0776	92 .1057	180 .1569	252 .2162	259 .2081	226 .1936	166 .1824	85 .1536	35 .1062	65 .0735	51 .0531	1493 .1387
[illegible]	27 .0294	31 .0465	63 .0681	135 .1028	199 .1426	171 .1234	162 .1252	129 .1261	83 .1057	27 .0805	69 .0499	33 .0317	1392 .0815
[illegible]	14 .0161	34 .0322	57 .0435	92 .0622	155 .0841	125 .0776	113 .0796	98 .0969	52 .0665	27 .0579	43 .0316	27 .0198	424 .0569
[illegible]	7 .0097	14 .0146	37 .0201	70 .0346	87 .0387	76 .0417	84 .0466	68 .0455	47 .0376	16 .0411	19 .0162	28 .0126	534 .0409
[illegible]	4 .0015	11 .0073	14 .0074	39 .0135	47 .0152	47 .0198	57 .0217	67 .0215	20 .0167	27 .0277	22 .0091	6 .0025	324 .0138
		3 .0016	6 .0021	4 .0019	12 .0035	21 .0061	25 .0072	17 .0065	17 .0081	11 .0097	7 .0011	1 .0004	117 .0038
MEAN	17.7	16.5	15.8	11.7	9.6	9.	9.6	9.9	10.9	13.1	16.6	15.9	12.2
[illegible]	7.7	6.[illegible]	6.5	5.7	5.5	4.5	4.5	4.9	5.2	6.2	6.1	6.7	6.3
TOT	[illegible]	1937.	2637.0	3328.0	3418.0	3619.0	3638.0	2413.0	1959.0	1192.0	2753.0	2777.3	31562.0
MAX	34.0	[illegible]	36.0	31.0	32.0	31.0	28.0	27.0	32.0	32.0	32.0	36.0	
MIN	1.0	.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	

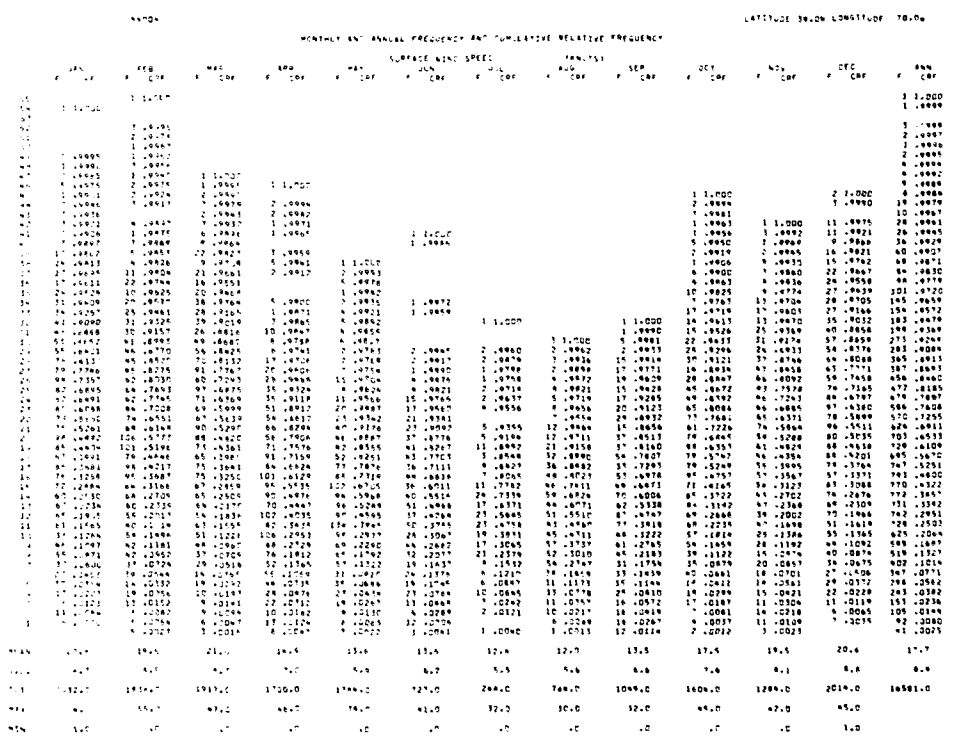
94003

LATITUDE 40.0N LONGITUDE 68.4W

MONTHLY AND ANNUAL FREQUENCY AND CUMULATIVE RELATIVE FREQUENCY

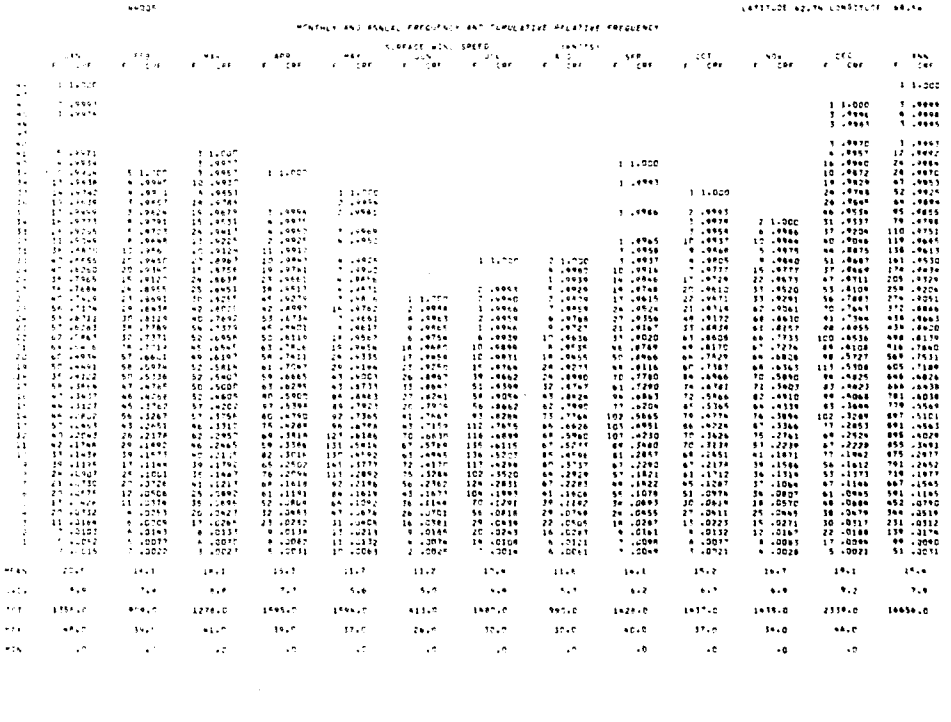
SURFACE WIND SPEED (KNOTS)

	JAN F	JAN CUM F	FEB F	FEB CUM F	MAR F	MAR CUM F	APR F	APR CUM F	MAY F	MAY CUM F	JUN F	JUN CUM F	JUL F	JUL CUM F	AUG F	AUG CUM F	SEP F	SEP CUM F	OCT F	OCT CUM F	NOV F	NOV CUM F	DEC F	DEC CUM F	ANN F	ANN CUM F
40	1	1.000																							1	1.000
39																										
38	1	.9981																							1	1.000
37	1	.9962			1	1.000																			2	.9988
36	4	.9905	2	1.000	1	.9994																	2	1.000	6	.9988
35	5	.9830	1	.9986	6	.9987																	1	.9988	13	.9964
34	7	.9735																					1	.9992	15	.9964
33	6	.9603	2	.9978	8	.9958																	4	.9993	22	.9952
32	7	.9490	2	.9964	9	.9920																	1	.9998	24	.9933
31	11	.9357			6	.9864			2	1.000															22	.9894
30	9	.9169	1	.9944	5	.9806			3	.9993															17	.9791
29	7	.8979	1	.9926	7	.9775	3	1.000	7	.9983													6	.9976	30	.9696
28	5	.8847			12	.9731	1	.9989	6	.9958													7	.9902	32	.9481
27	7	.8752	6	.9920	10	.9656	4	.9979	6	.9938					1	1.000	1	.9989	4	.9929			14	.9823	56	.9298
26	13	.8620	10	.9867	28	.9537	15	.9967	5	.9917					1	.9988	1	.9961	6	.9897			32	.9636	57	.8798
25	21	.8374	15	.9797	25	.9362	20	.9881	17	.9869							4	.9870	12	.9848			22	.9481	57	.8385
24	11	.7977	30	.9662	38	.9094	40	.9722	15	.9841					1	.9992	21	.9841	24	.9621			43	.9175	63	.8043
23	15	.7768	43	.9465	36	.8868	43	.9600	16	.9789					1	.9988	17	.9683	29	.9326			44	.8838	63	.7662
22	26	.7429	27	.9299	56	.8794	46	.9527	19	.9733	1	1.000			1	.9984	34	.9530	41	.9111			53	.8522	59	.7222
21	19	.6938	27	.9103	63	.8396	66	.9367	22	.9671	2	.9998	1	1.000	4	.9965	19	.9674	44	.8948			61	.8085	73	.6725
20	27	.6673	34	.8908	50	.8125	64	.9128	17	.9594	5	.9984	3	.9988	15	.9919	51	.9529	47	.8706			84	.7698	84	.6598
19	23	.6238	43	.8626	61	.7813	95	.8829	19	.9536	9	.9965	3	.9975	15	.9878	64	.9340	89	.8230			94	.8175	77	.6056
18	29	.5803	46	.8315	78	.7431	108	.8491	44	.9470	8	.9922	8	.9948	13	.9821	74	.9085	116	.8667			124	.7687	81	.5529
17	35	.5255	76	.7983	72	.6944	131	.8107	44	.9317	15	.9865	6	.9920	20	.9768	74	.8810	110	.8184			117	.7268	80	.4971
16	24	.4594	86	.7611	80	.6499	149	.7761	51	.9107	36	.9816	7	.9889	31	.9667	72	.8536	155	.7559			131	.6521	66	.4396
15	29	.4160	71	.6804	92	.6119	162	.7317	64	.8971	48	.9651	22	.9852	33	.9561	104	.8264	167	.7134			126	.5947	66	.3906
14	14	.3592	99	.6291	95	.5596	180	.6836	97	.8749	65	.9417	30	.9728	54	.9427	126	.7868	197	.6687			161	.5379	101	.3452
13	16	.3289	94	.5575	78	.4950	165	.5897	134	.8412	107	.9144	53	.9562	58	.9203	137	.7402	182	.5698			152	.4703	100	.3061
12	25	.3025	90	.4985	80	.4467	171	.5306	152	.8010	116	.8636	83	.9235	103	.8967	146	.6894	183	.4876			115	.3568	92	.2635
11	21	.2552	70	.4244	66	.3962	223	.4698	199	.7548	126	.8152	75	.8837	140	.8569	153	.6353	174	.4213			124	.3058	63	.2009
10	25	.2242	73	.3738	81	.3537	170	.3904	199	.6794	116	.7552	103	.8376	127	.8162	179	.5786	161	.3529			96	.2839	81	.1946
9	20	.1969	61	.3225	73	.3031	147	.3249	210	.6214	169	.7038	121	.7727	169	.7626	202	.5122	157	.2681			97	.2345	72	.1502
8	14	.1691	76	.2784	100	.2575	141	.2796	249	.5376	212	.6262	146	.6998	234	.6955	222	.4374	136	.2276			79	.1936	54	.1068
7	10	.0926	50	.2213	91	.1950	128	.2288	265	.4516	195	.5287	169	.6305	269	.34	175	.3551	103	.1742			81	.1555	51	.1190
6	9	.0737	64	.1951	86	.1381	129	.1933	245	.3667	231	.4761	178	.5048	237	.131	179	.2921	97	.1331			65	.1316	46	.0748
5	7	.0567	58	.1788	56	.0969	123	.1577	253	.2821	211	.3598	172	.3939	26	.197	174	.2757	72	.0944			63	.0942	44	.0748
4	17	.0435	53	.0964	29	.0631	84	.0964	216	.1945	191	.2929	156	.2876	221	.0758	144	.1635	59	.0661			37	.0546	37	.0546
3	4	.0208	32	.0586	32	.0650	73	.0625	164	.1196	126	.1569	127	.1911	176	.1613	130	.1067	54	.0637			19	.0377	21	.0336
2	4	.0132	32	.0394	19	.0256	54	.0367	97	.0620	63	.0920	77	.1326	108	.1105	75	.0986	34	.0318			22	.0188	15	.0227
1	3	.0097	23	.0123	18	.0131	39	.0274	57	.0367	55	.0589	43	.0693	75	.0699	44	.0308	22	.0115			12	.0092	11	.0121
0	2	.0038	9	.0029	5	.0019	11	.0039	40	.0170	73	.0416	66	.0396	97	.0194	39	.0145	7	.0028			5	.0026	9	.0095
MEAN	17.6		12.7		14.0		12.2		8.9		7.5		6.8		7.1		10.1		12.6		14.0		15.9		11.0	
S.D.	8.1		6.7		7.0		5.9		5.3		4.1		3.7		4.3		5.5		5.4		4.0		7.7		4.7	
TOT	529.0		1167.0		1400.0		2812.0		2495.0		2175.0		1617.0		2460.0		2698.0		2520.0		2731.0		1744.0		24552.0	
MAX	40.0		36.0		37.0		29.0		31.0		22.0		21.0		27.0		28.0		31.0		29.0		36.0			
MIN	.0		.0		.0		.0		.0		.0		.0		.0		.0		.0		.0		.0			



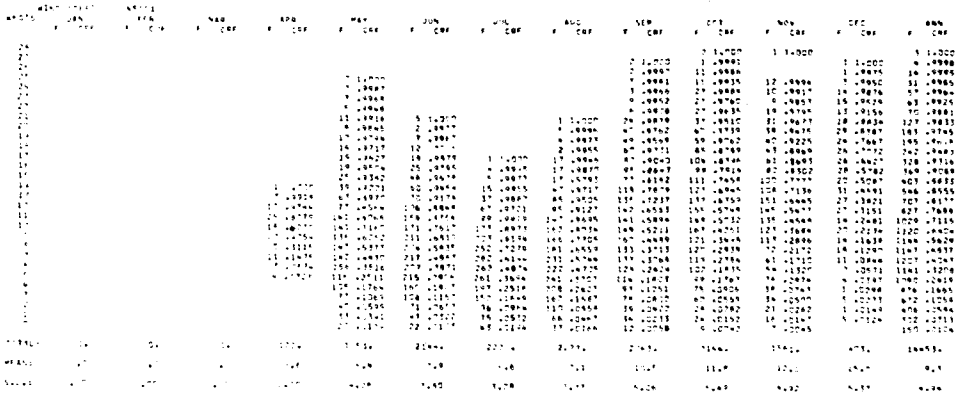
MONTHLY AND ANNUAL FREQUENCY AND CUMULATIVE RELATIVE FREQUENCY

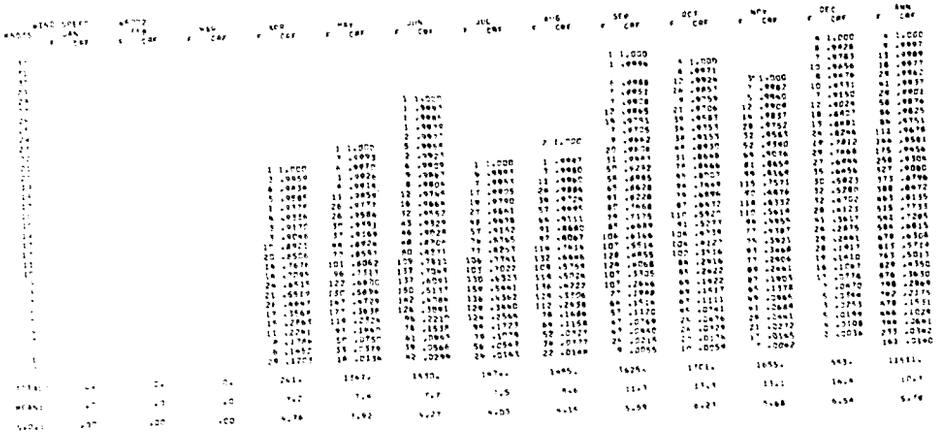
LATITUDE 39.0N LONGITUDE 78.0W

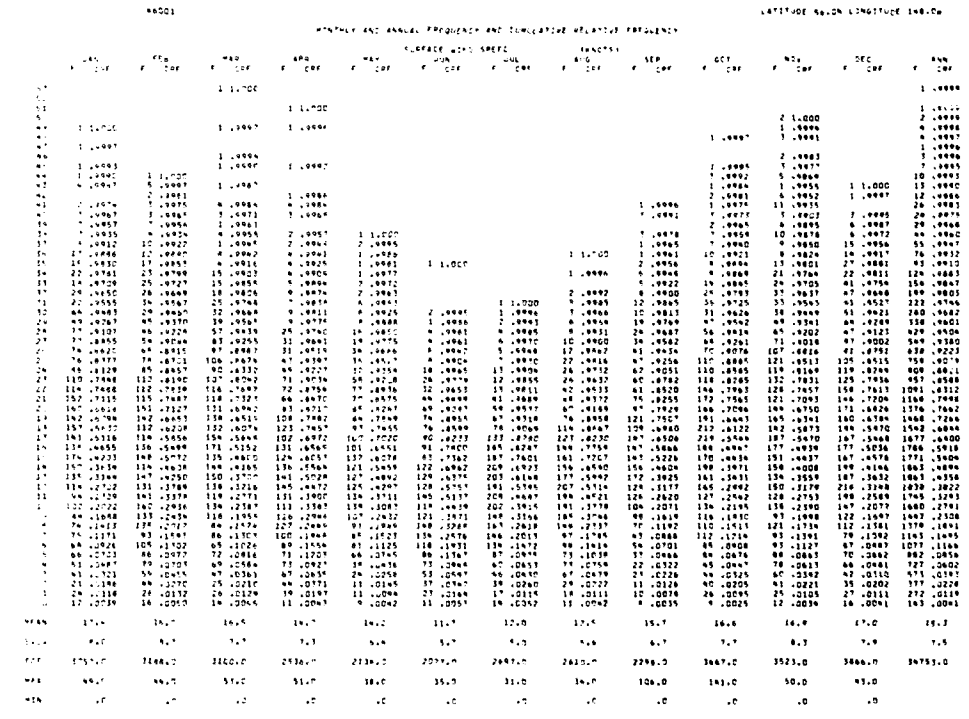


MONTHLY AND ANNUAL FREQUENCY AND CUMULATIVE RELATIVE FREQUENCY

SURFACE WIND SPEED (KNOTS)

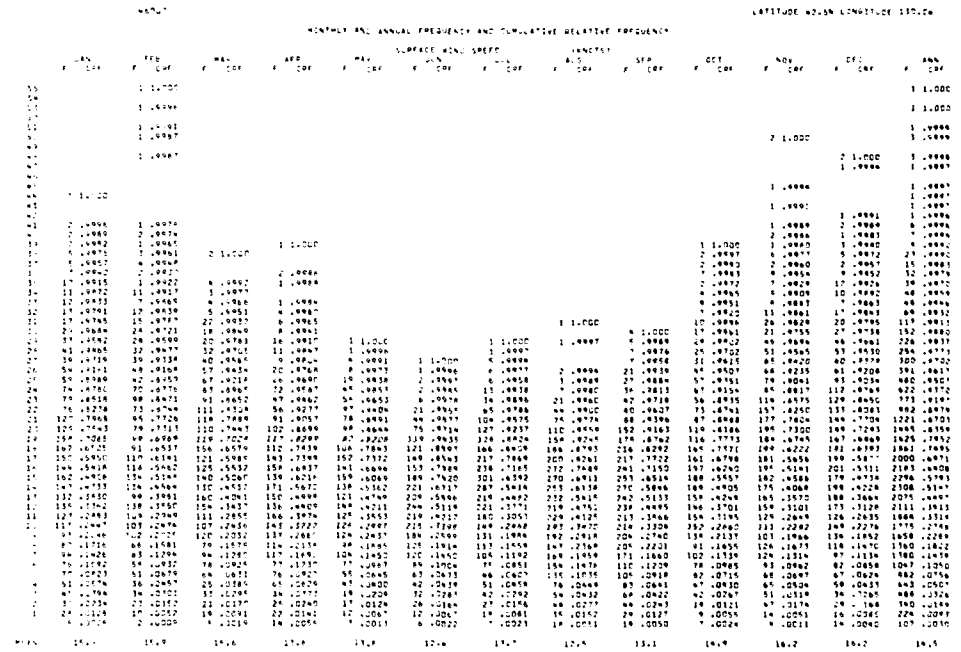


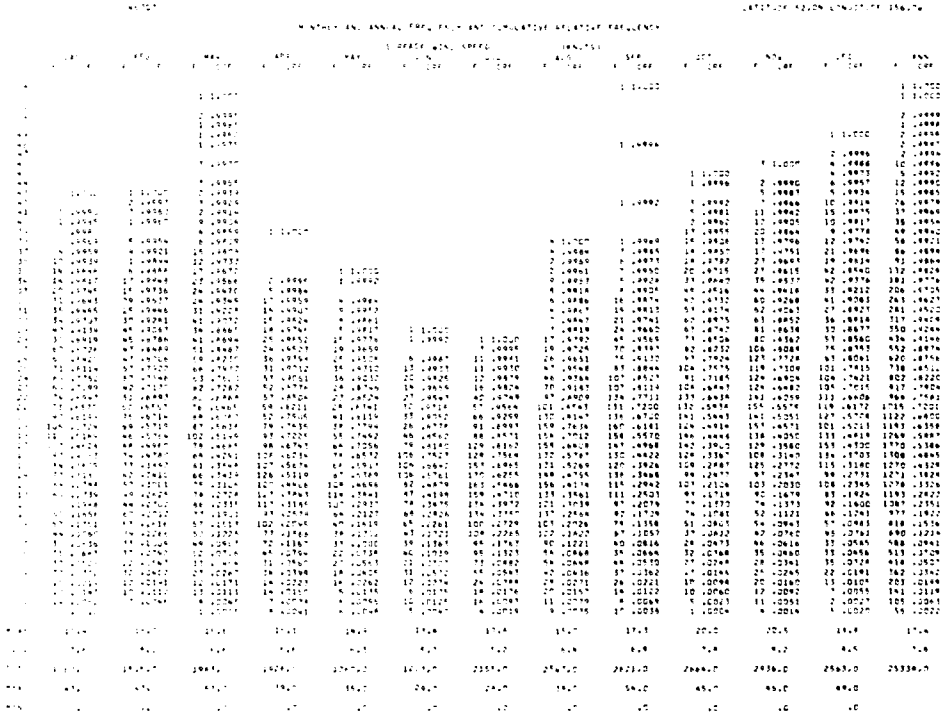


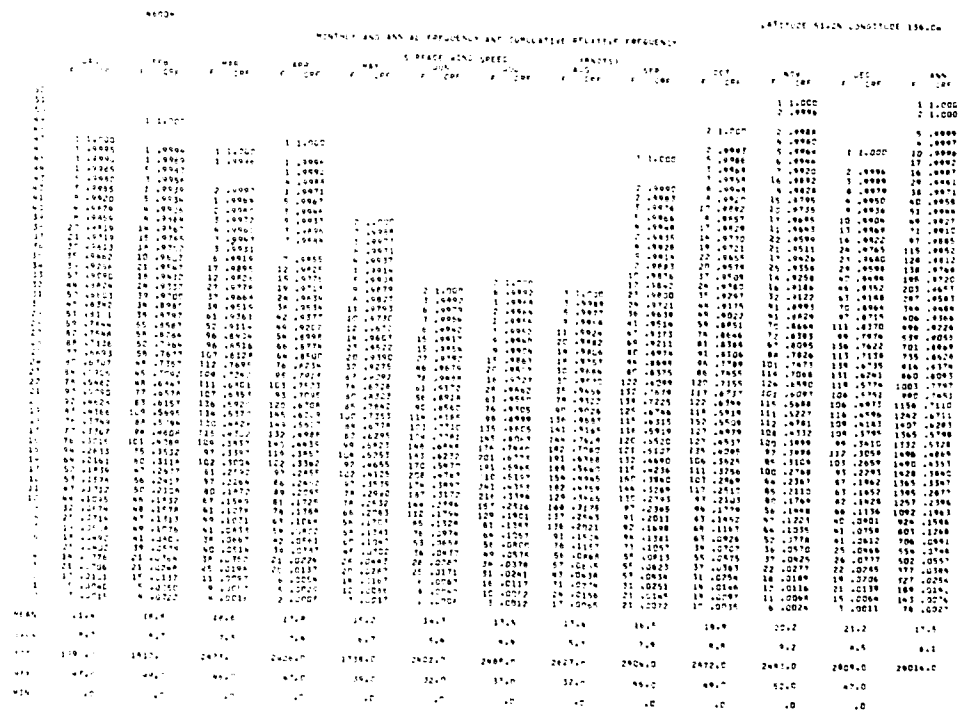


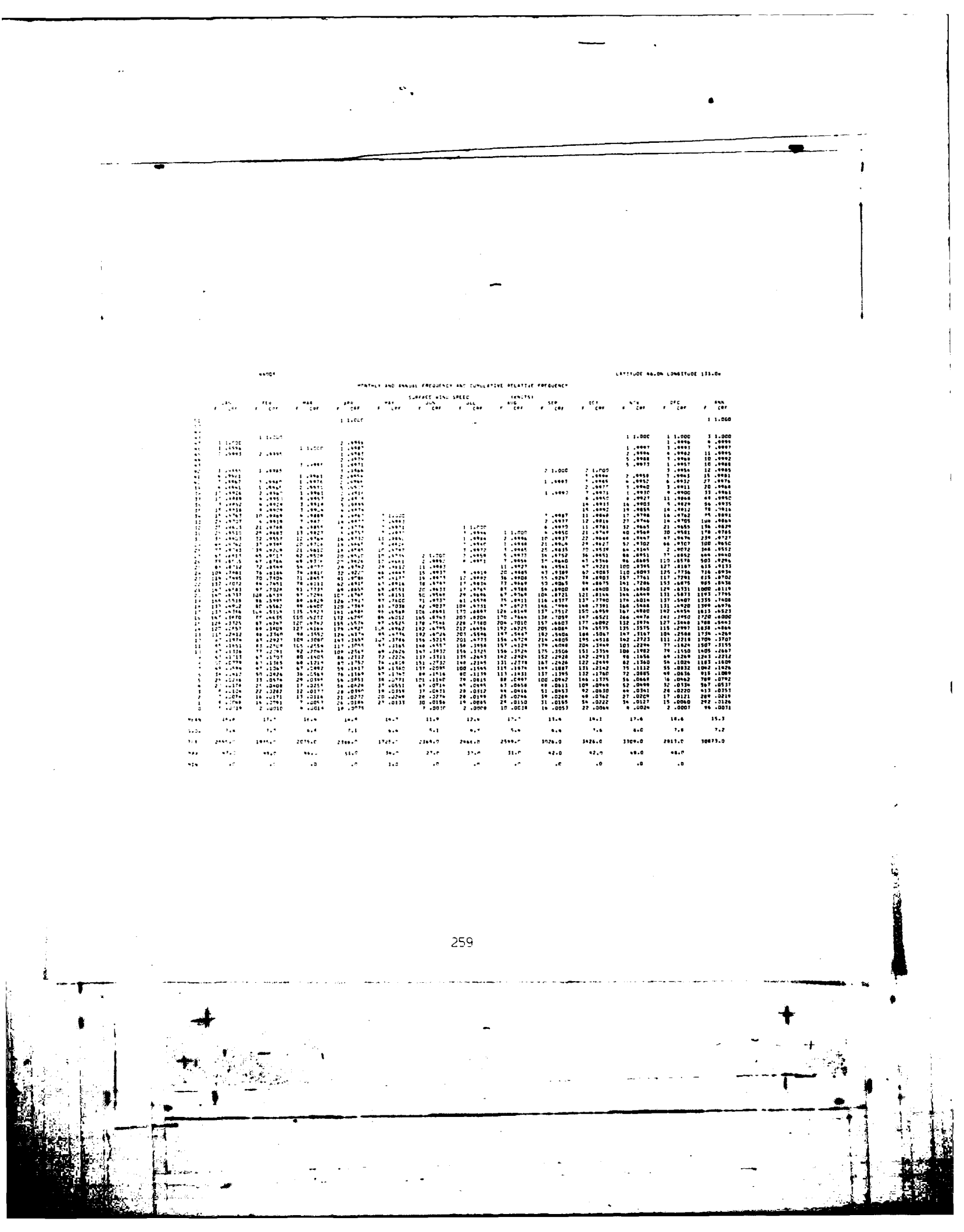
MONTHLY AND ANNUAL FREQUENCY AND CUMULATIVE RELATIVE FREQUENCY

LATITUDE 64.0N LONGITUDE 148.0W

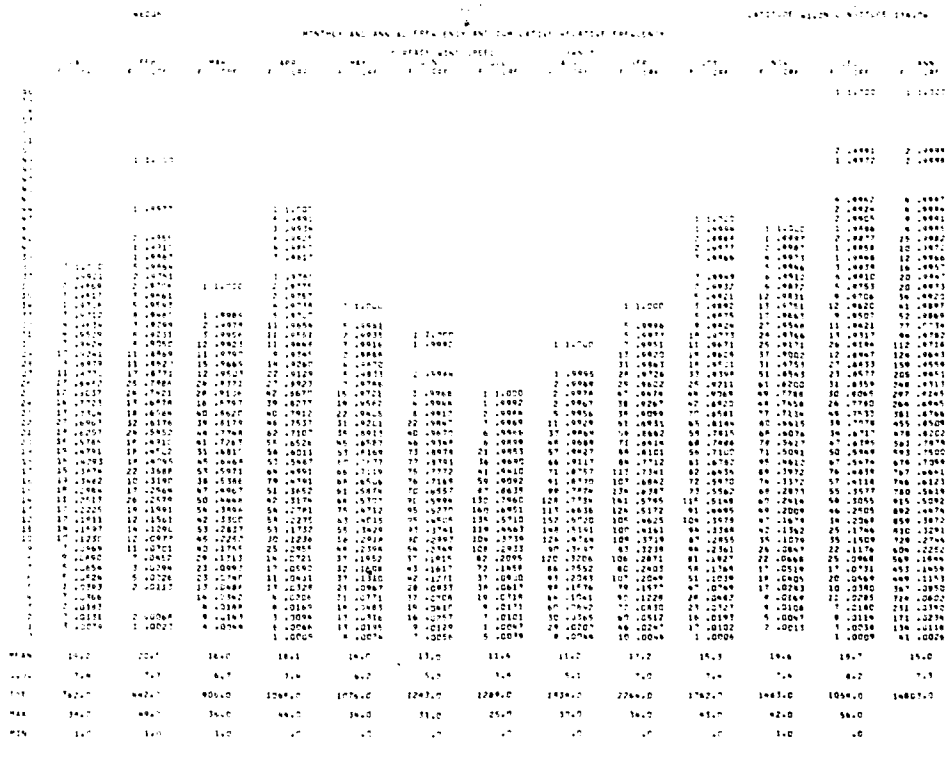


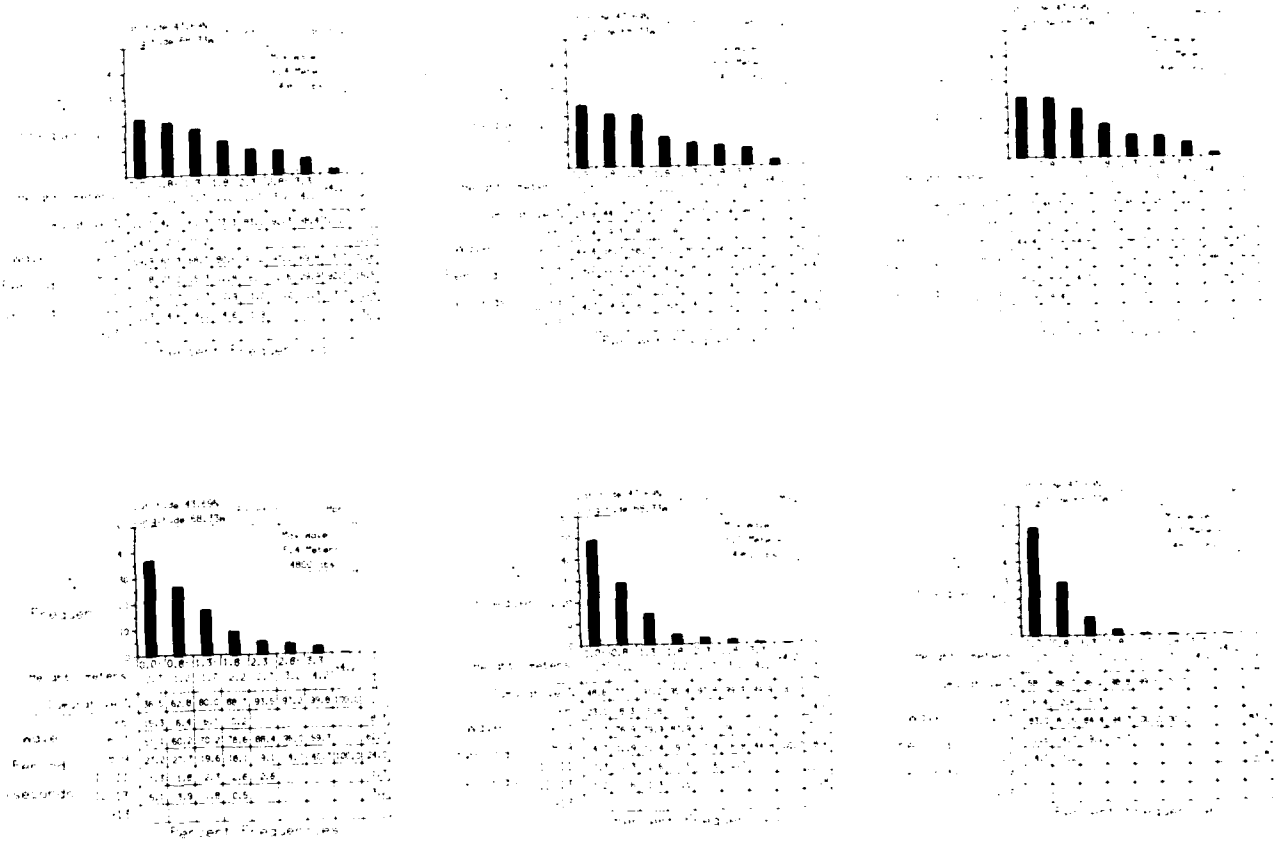


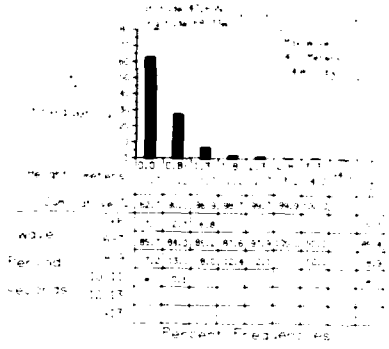


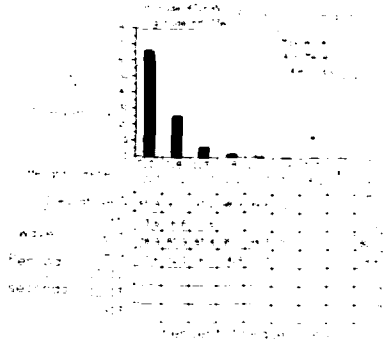


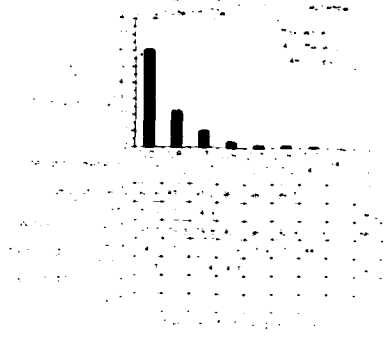
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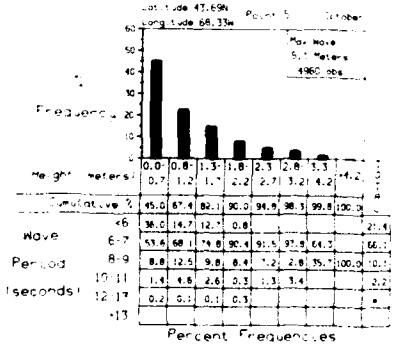


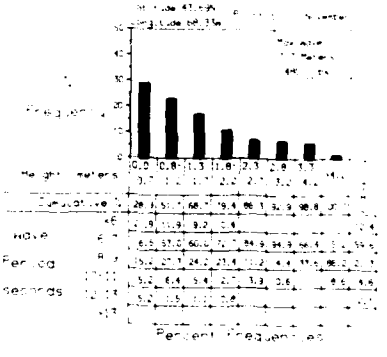


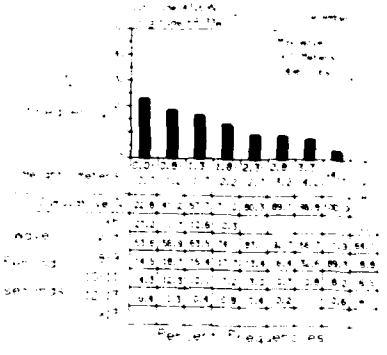


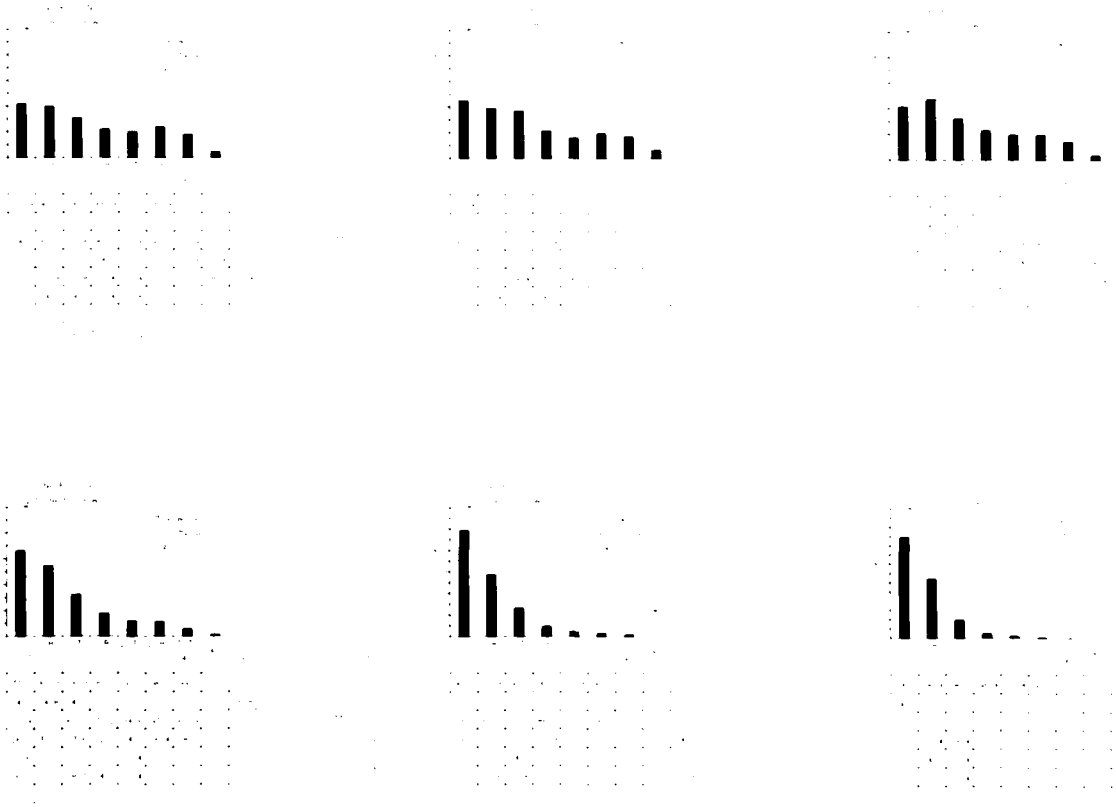





Max Wave
5.1 Meters
4960 obs
Frequency
Height meters
Cumulative %
Wave
Period
(seconds)
Percent Frequencies


Percent Frequencies

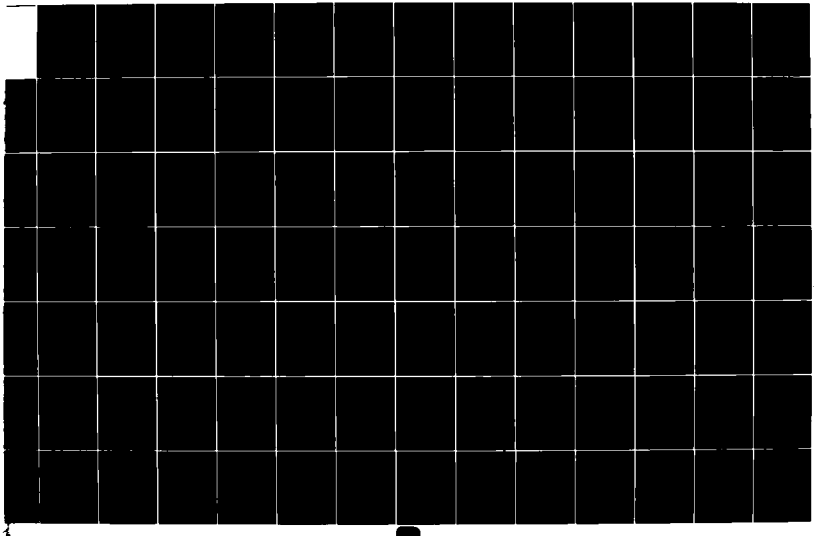

Percent Frequencies

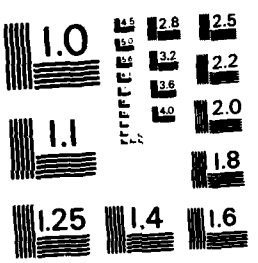


AD-A130 647 WIND AND WAVE SUMMARIES FOR SELECTED US COAST GUARD OPERATING AREAS(U) NATIONAL CLIMATIC DATA CENTER ASHEVILLE NC D PASKAUSKY ET AL. APR 83 USCG-D-11-83

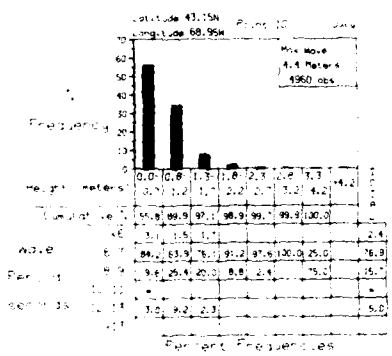
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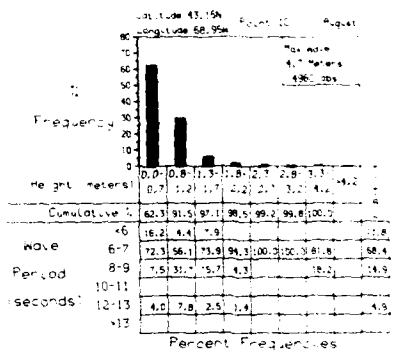
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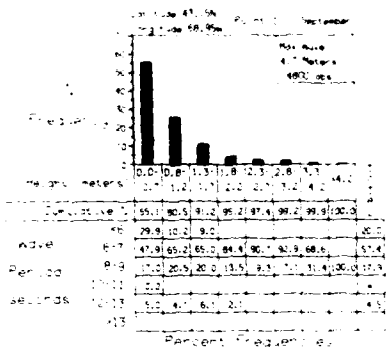


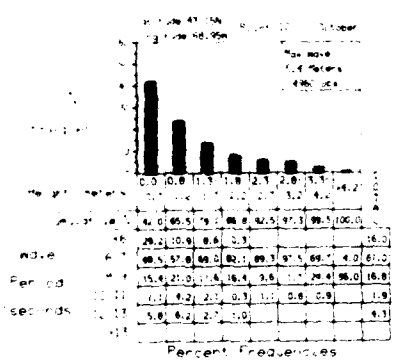


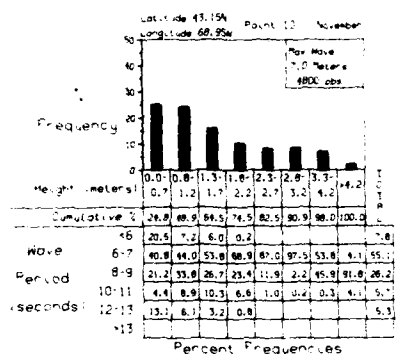
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

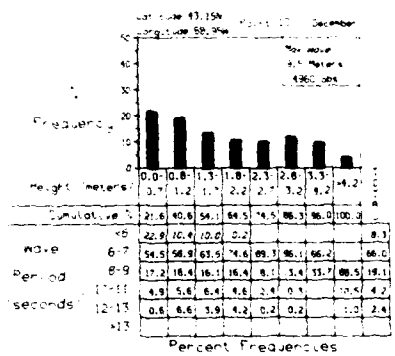


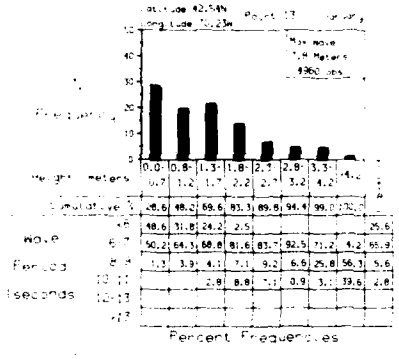


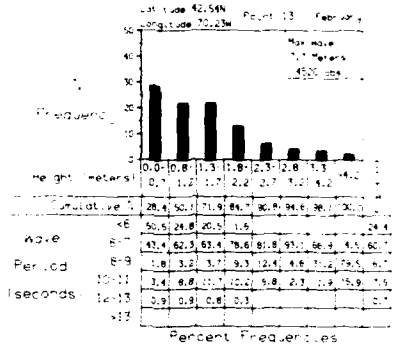


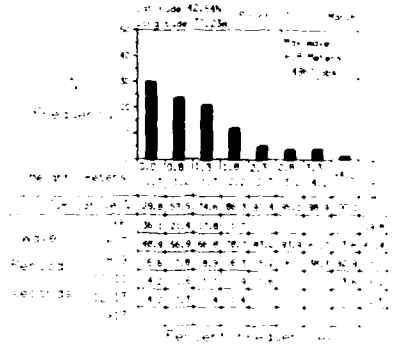


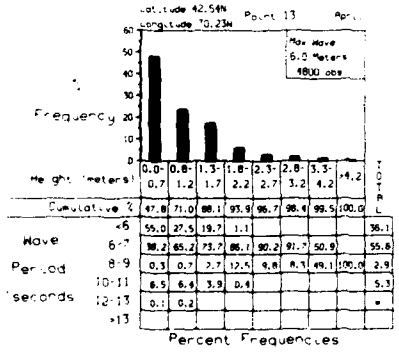


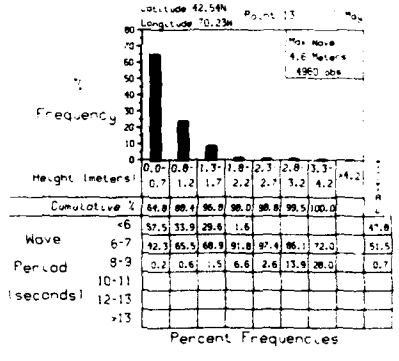


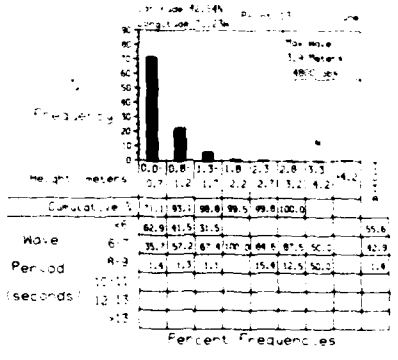

Latitude 42.54N
Longitude 70.23W
Point 13
Max Wave
4960 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

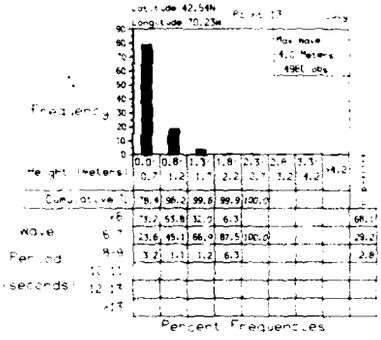

Latitude 42.54N
Longitude 70.23W
Point 13
Max Wave
4920 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

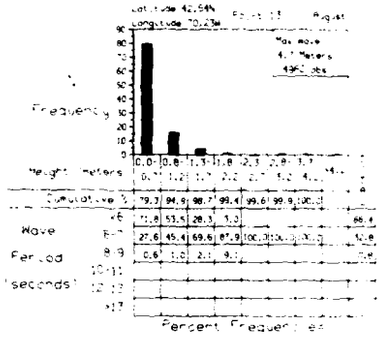

Frequency
Wave
Period

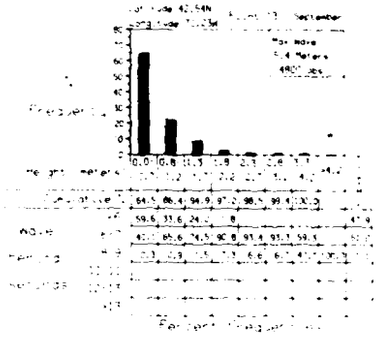

Latitude 42.54N
Longitude 70.23W
Point 13
Max Wave
6.0 Meters
4800 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

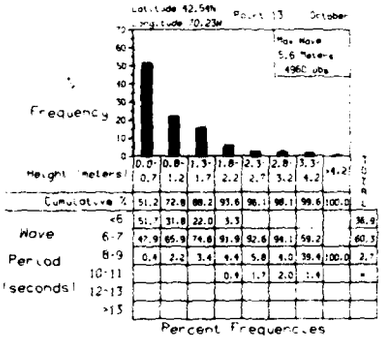

Latitude 42.54N
Longitude 70.23W
Point 13
Max Wave
4.6 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

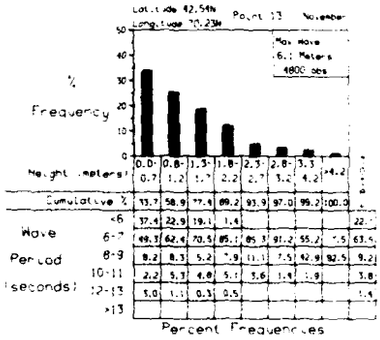

Frequency
Wave
Period

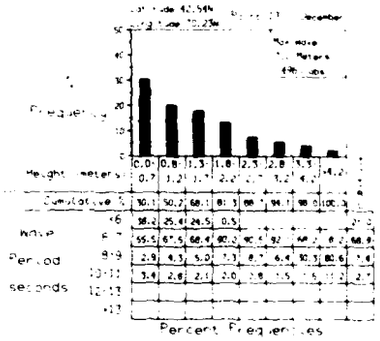

Latitude 42.54N
Longitude 70.23W
Point 13
Max Wave
4.0 Meters
4980 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

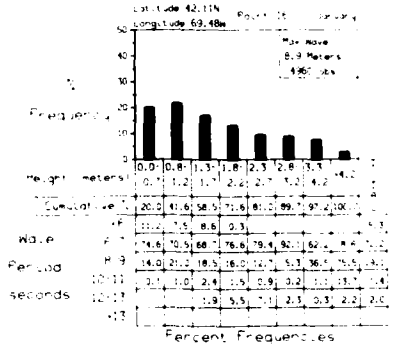

Latitude 42.54N
Longitude 70.23W
Point 13
August
Max Wave
4.7 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

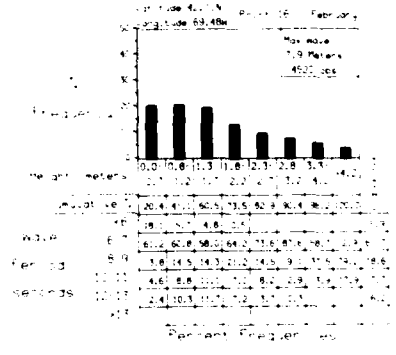

Latitude 42.54N
Longitude 70.23W
Point 13
September
Max Wave
5.4 Meters
4800 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

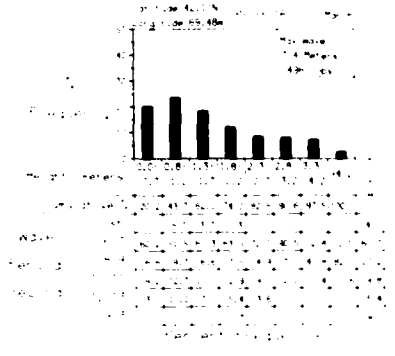

Latitude 42.54N
Longitude 70.23W
Point 13
October
Max Wave
5.6 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

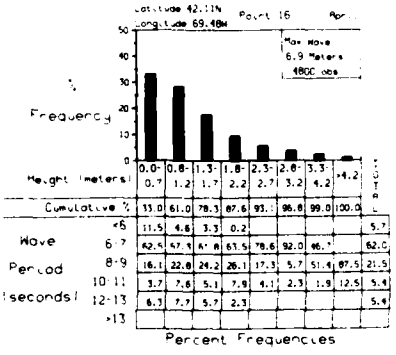

Latitude 42.54N
Longitude 70.23W
Point 13
November
Max Wave
6.1 Meters
4800 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

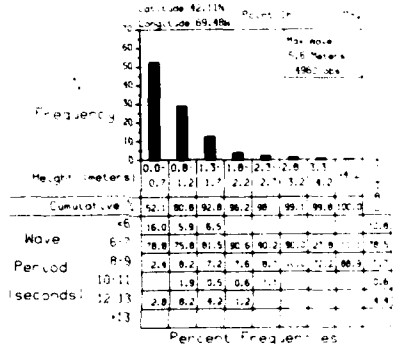

Latitude 42.54N
Point 13
December
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

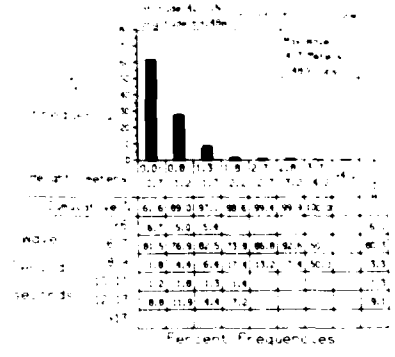

Latitude 42.11N Point 16
Longitude 69.48W
Max Wave
6.9 Meters
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

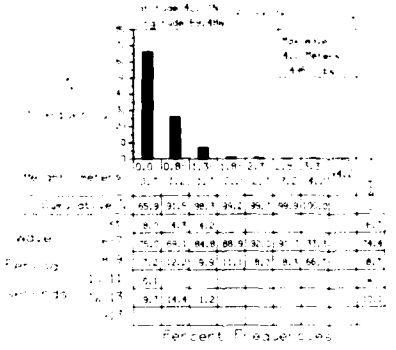

Max Wave
Frequency
Height (meters)
Wave Period (seconds)
Percent Frequencies

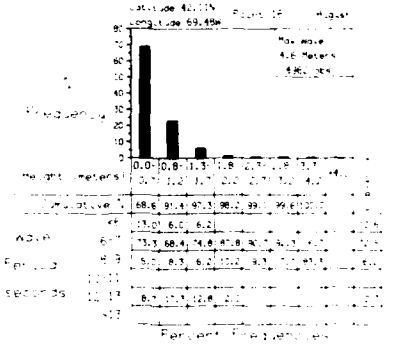

Frequency
Wave Period
Percent Frequencies

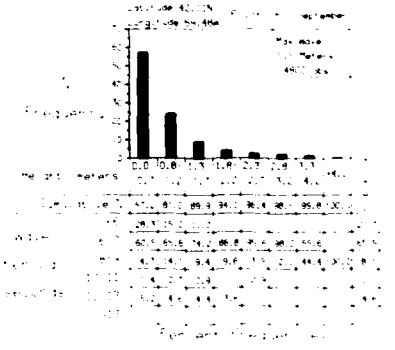

Latitude 42.11N Point 16
Longitude 69.48W
Max Wave
6.9 Meters
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

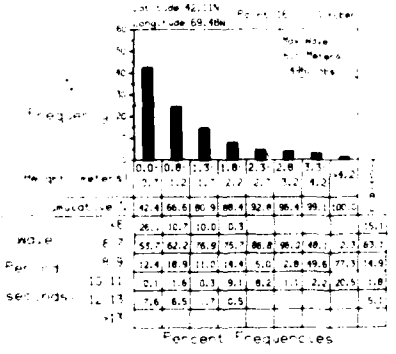

Max Wave
Frequency
Height (meters)
Wave Period (seconds)
Percent Frequencies

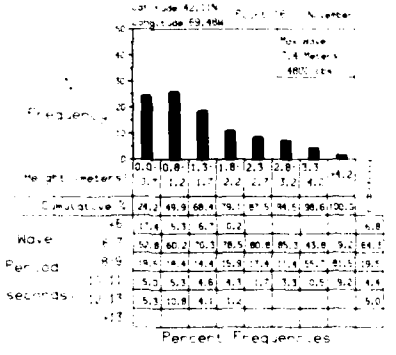

Frequency
Wave Period
Percent Frequencies

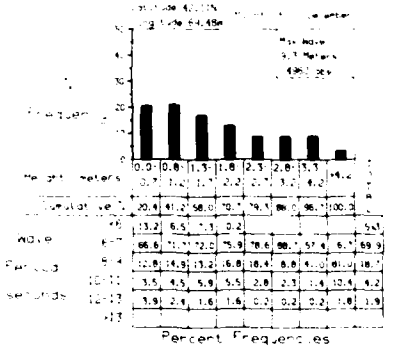


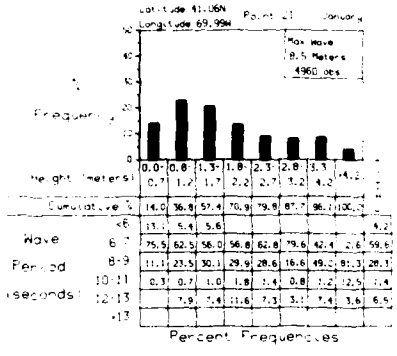


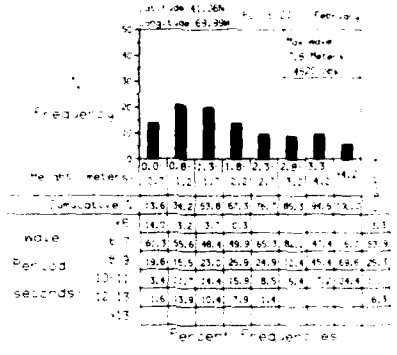


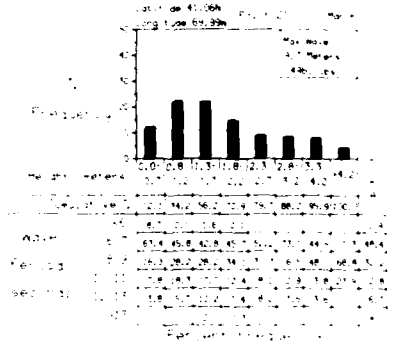


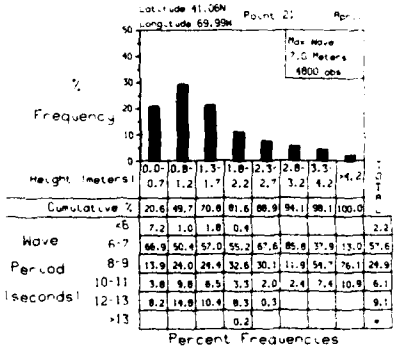


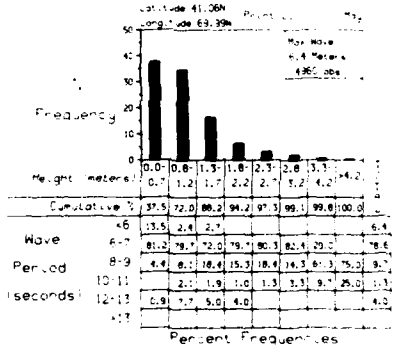


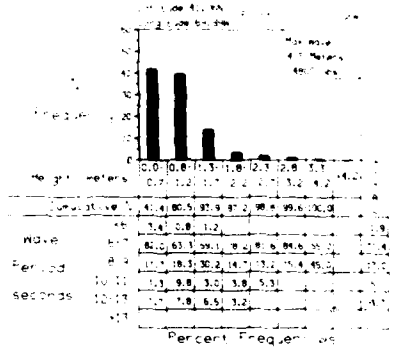

Latitude 41.06N
Longitude 69.99W
Point 21
January
Max Wave
8.5 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
14.0 36.8 57.4 70.9 79.8 87.7 98.1 100.0
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

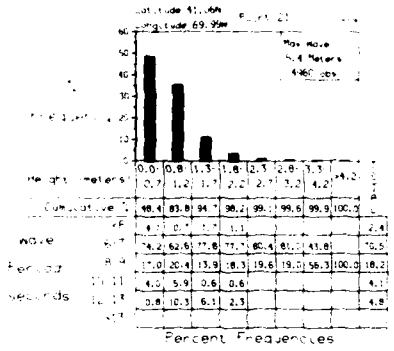

Latitude 41.06N
Longitude 69.99W
Point 21
February
Max Wave
7.5 Meters
4920 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
13.6 34.2 53.8 67.3 76.7 86.1 94.5 100.0
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

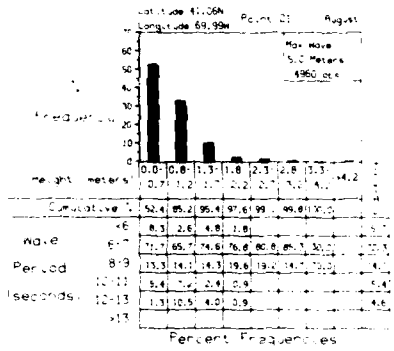

Latitude 41.06N
Longitude 69.99W
Point 21
Max Wave
8.5 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

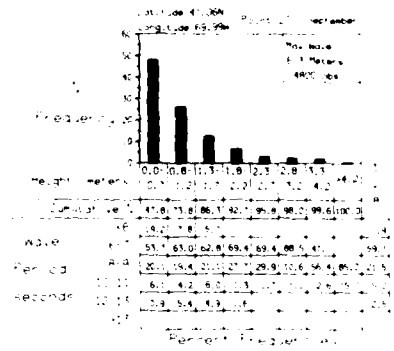

Latitude 41.06N
Longitude 69.99W
Point 21
Max Wave
7.0 Meters
4800 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
20.6 49.7 70.8 81.6 88.9 94.1 98.1 100.0
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

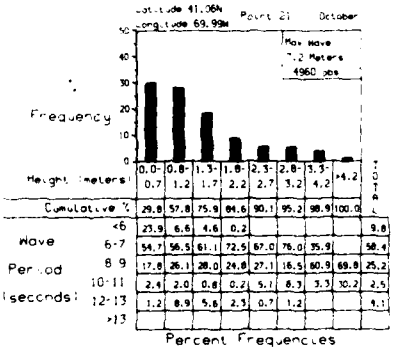

Latitude 41.06N
Longitude 69.99W
Point 21
Max Wave
8.4 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
37.5 72.0 88.2 94.2 97.3 99.1 99.8 100.0
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

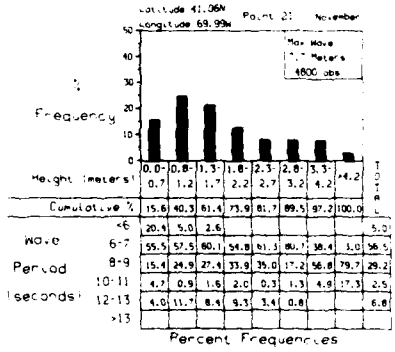

Max Wave
4.7 Meters
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

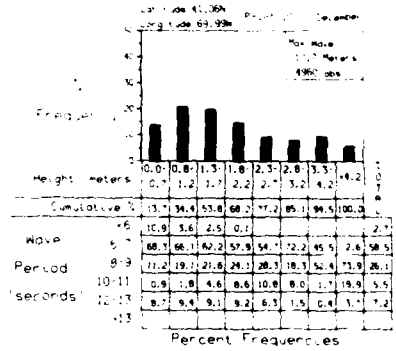

Latitude 41.06N
Longitude 69.99W
Point 21
Max Wave
5.4 Meters
4960 obs.
Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
48.4 83.8 94.7 98.2 99.1 99.6 99.9 100.0
Wave
Period
(seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

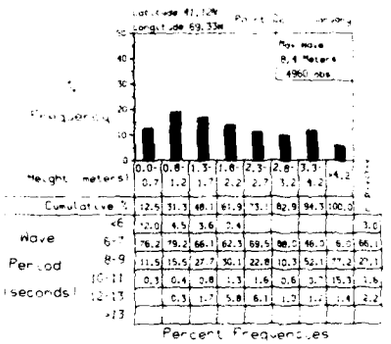

Latitude 41.06N
Longitude 69.99W
Point 21
August
Max Wave
5.0 Meters
4960 obs.
Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
52.4 85.2 95.4 97.6 99 99.6 100.0
Wave
Period
(seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

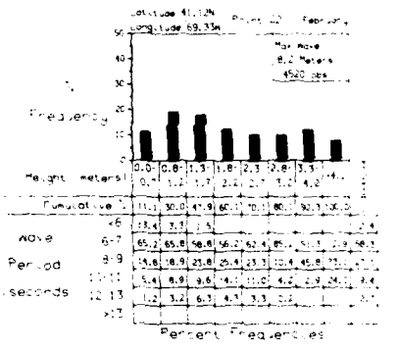

Latitude 41.06N
Longitude 69.99W
Point 21
Max Wave
Meters
4960 obs.
Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
Wave
Period
(seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

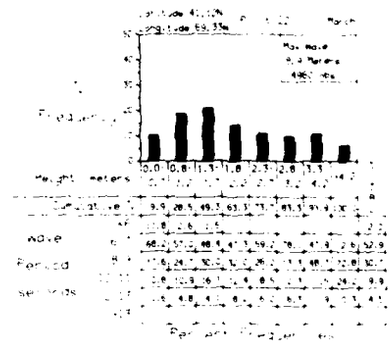

Latitude 41.06N
Longitude 69.99W
Point 21
October
Max Wave
7.2 Meters
4960 obs.
Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
29.8 57.8 75.9 84.6 90.1 95.2 98.9 100.0
Wave
Period
(seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

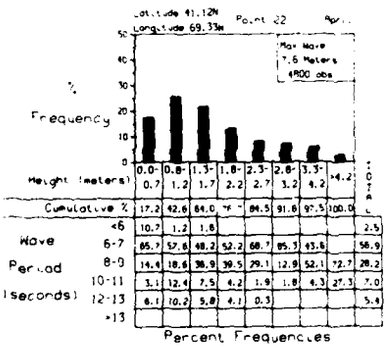

Latitude 41.06N
Longitude 69.99W
Point 21
November
Max Wave
7.1 Meters
4800 obs.
Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
15.6 40.3 61.4 73.9 81.7 89.5 97.2 100.0
Wave
Period
(seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

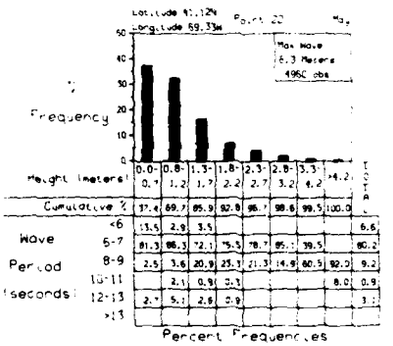

Latitude 41.06N
Longitude 69.99W
Point 21
Max Wave
Meters
4960 obs.
Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
Wave
Period
(seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

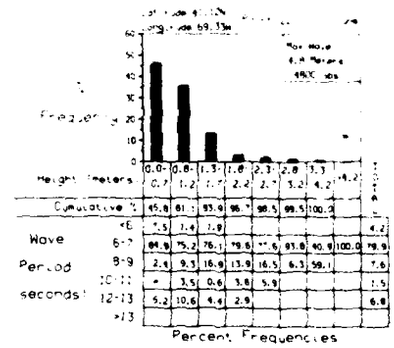


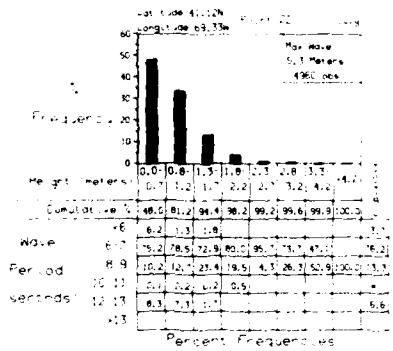


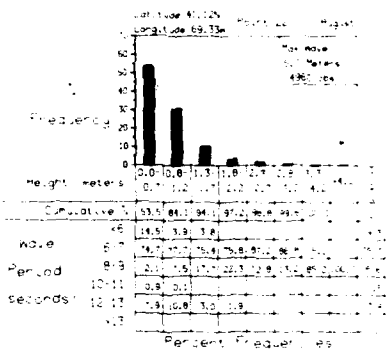


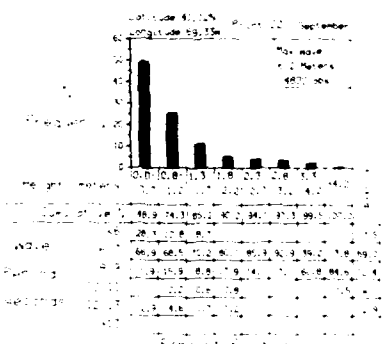


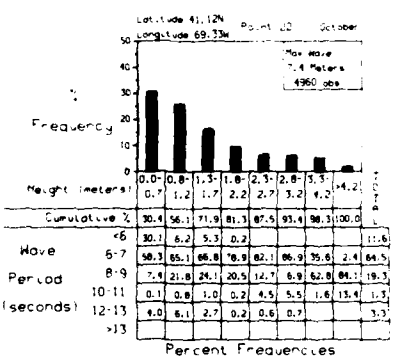


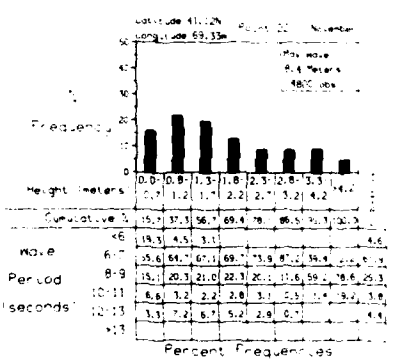


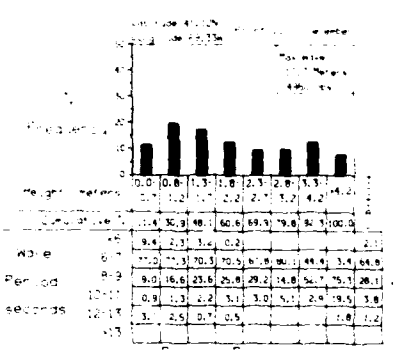


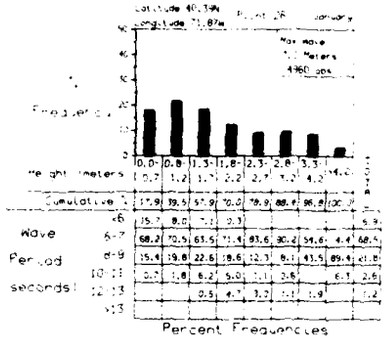


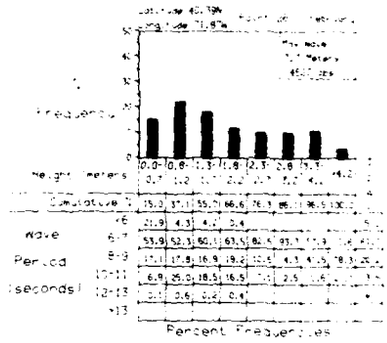


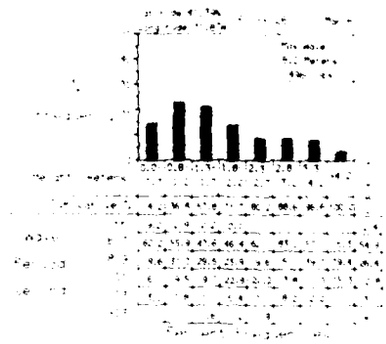


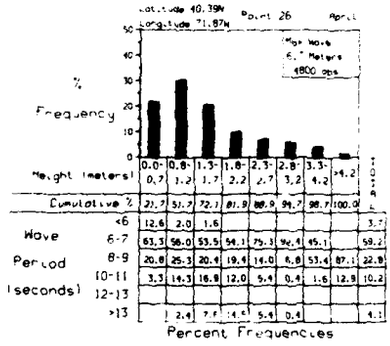


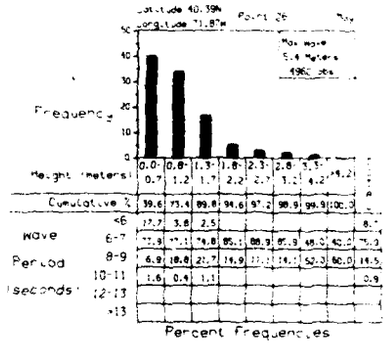


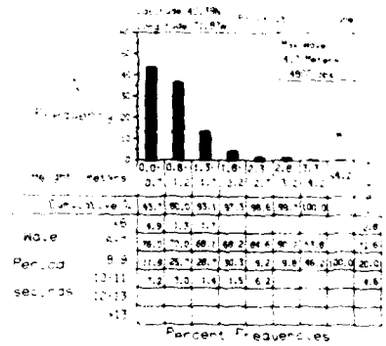


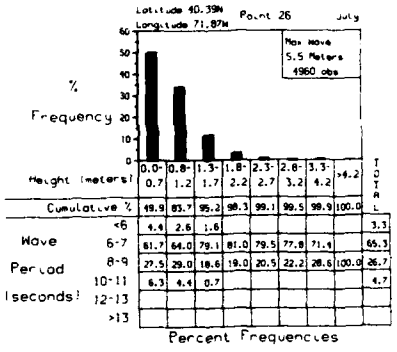


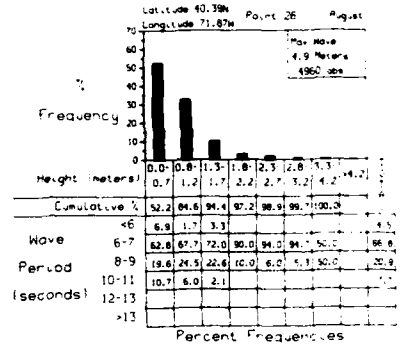


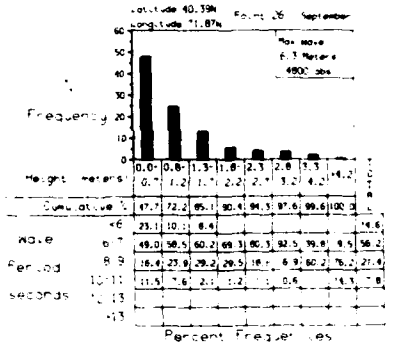


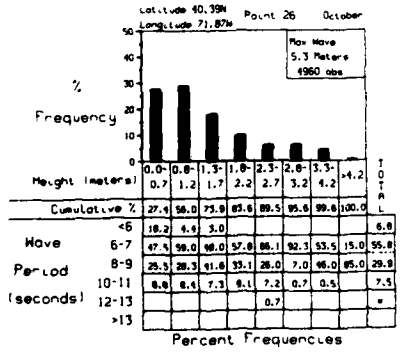


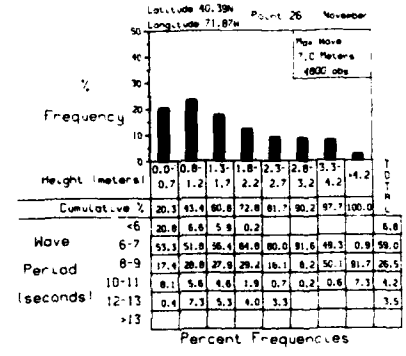


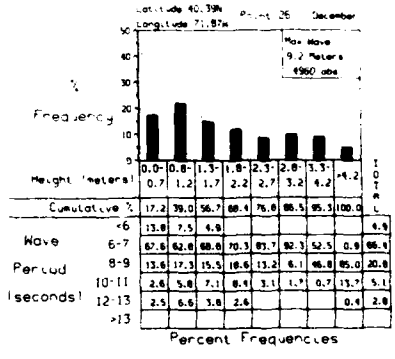

Latitude 40.39N
Longitude 71.87W
Point 26
July
Max Wave
5.5 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
49.9 83.7 95.2 98.3 99.1 99.5 99.9 100.0
Wave Period (seconds)
<6 4.4 2.6 1.6 3.3
6-7 61.7 64.0 79.1 81.0 79.5 77.8 71.4 65.3
8-9 27.5 29.0 18.6 19.0 20.5 22.2 28.6 100.0 26.7
10-11 6.3 4.4 0.7 4.7
12-13
>13
Percent Frequencies

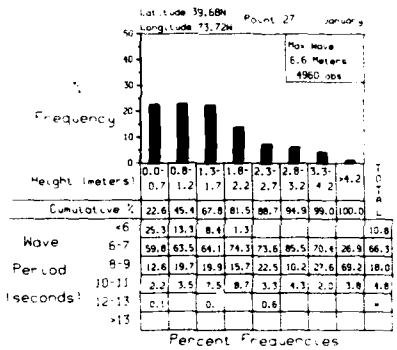

Latitude 40.39N
Longitude 71.87W
Point 26
August
Max Wave
4.9 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
52.2 84.6 94.4 97.2 98.9 99.7 100.0
Wave Period (seconds)
<6 6.9 1.7 3.3 4.5
6-7 62.8 67.7 72.0 90.0 94.0 94.7 50.0 86.8
8-9 19.6 24.5 22.6 10.0 6.0 5.3 50.0 30.9
10-11 10.7 6.0 2.1 7.1
12-13
>13
Percent Frequencies

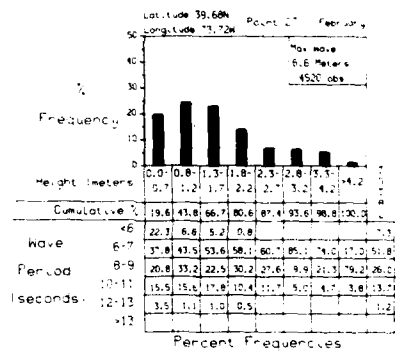

Latitude 40.39N
Longitude 71.87W
Point 26
September
Max Wave
6.1 Meters
4800 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
67.7 72.2 95.1 98.4 99.3 99.6 100.0
Wave Period (seconds)
<6 23.1 10.3 8.4 14.6
6-7 49.0 58.5 60.2 89.3 80.3 92.5 99.8 99.5 56.2
8-9 18.6 23.9 29.2 29.5 18.7 6.9 60.2 76.2 27.4
10-11 11.5 7.6 2.1 1.2 0.6 14.3 8
12-13
>13
Percent Frequencies

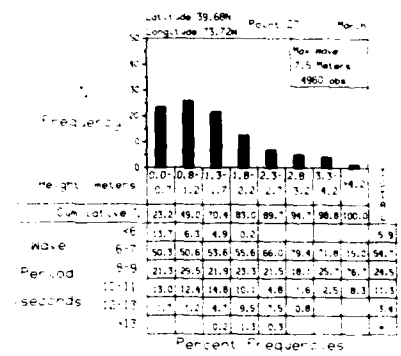

Latitude 40.39N
Longitude 71.87W
Point 26
October
Max Wave
5.3 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
27.4 56.0 73.9 83.6 89.5 95.6 99.6 100.0
Wave Period (seconds)
<6 18.2 9.4 3.0 6.8
6-7 47.9 90.0 98.0 57.8 86.1 92.3 53.5 15.0 55.8
8-9 25.5 28.3 91.8 33.1 28.0 7.0 46.0 85.0 29.9
10-11 8.8 8.4 7.3 9.1 7.2 0.7 0.5 7.5
12-13 0.7 *
>13
Percent Frequencies

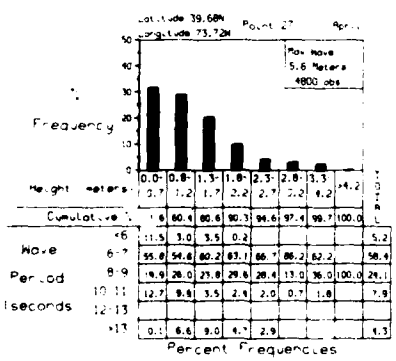

Latitude 40.39N
Longitude 71.87W
Point 26
November
Max Wave
7.0 Meters
4800 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
20.3 43.4 60.8 72.8 81.7 90.2 97.7 100.0
Wave Period (seconds)
<6 20.8 6.6 5.9 0.2 6.8
6-7 53.3 51.8 36.4 84.8 80.0 91.6 49.3 0.9 59.0
8-9 17.4 28.8 27.8 29.4 16.1 8.2 50.1 91.7 26.5
10-11 8.1 5.8 4.8 1.9 0.7 0.2 0.6 7.3 4.2
12-13 0.4 7.3 5.3 4.0 3.3 3.5
>13
Percent Frequencies

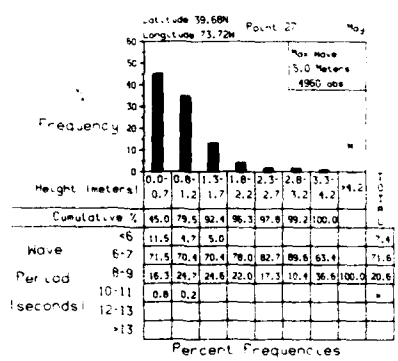

Latitude 40.39N
Longitude 71.87W
Point 26
December
Max Wave
9.2 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
TOTAL
Cumulative %
17.2 39.0 56.7 68.4 76.8 88.5 95.3 100.0
Wave Period (seconds)
<6 13.8 7.5 6.8 6.9
6-7 67.8 62.8 68.8 70.3 83.7 92.3 52.5 0.9 66.9
8-9 13.6 17.3 15.5 18.6 13.2 6.1 46.8 85.0 20.8
10-11 2.6 5.8 7.1 8.4 3.1 1.* 0.7 13.7 5.1
12-13 2.5 6.6 3.8 2.6 0.4 2.8
>13
Percent Frequencies

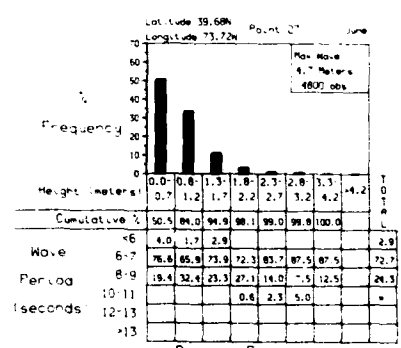

Latitude 39.68N
Longitude 73.72W
Point 27
January
Max Wave
6.6 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

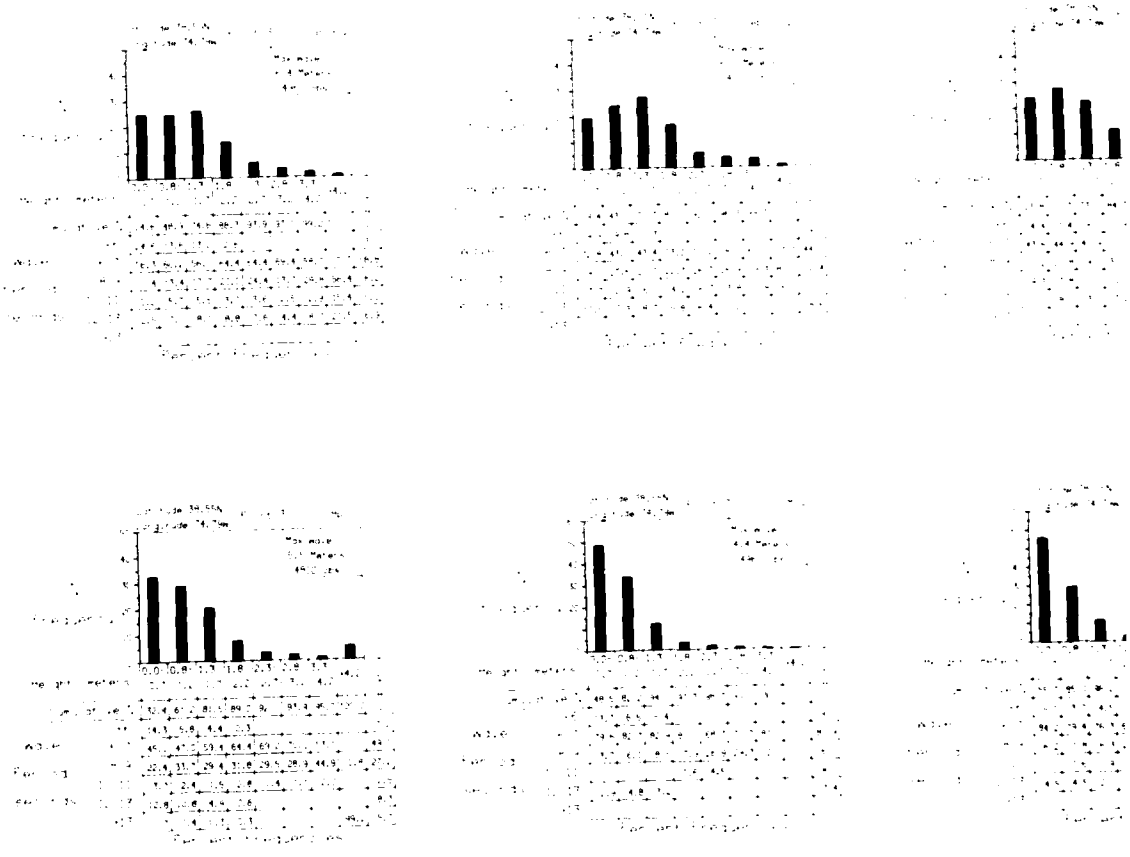

Latitude 39.68N
Longitude 73.72W
Point 27
February
Max Wave
6.6 Meters
4520 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

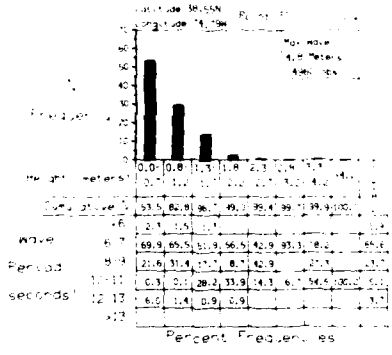

Latitude 39.68N
Longitude 73.72W
Point 27
March
Max Wave
7.5 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

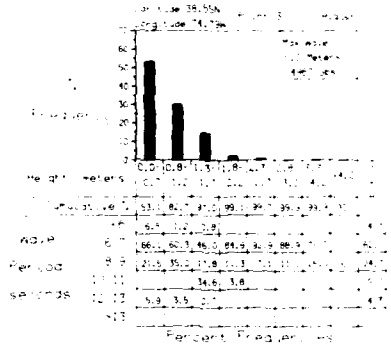

Latitude 39.68N
Longitude 73.72W
Point 27
April
Max Wave
5.6 Meters
4800 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

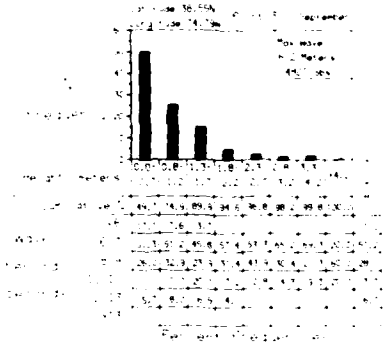

Latitude 39.68N
Longitude 73.72W
Point 27
May
Max Wave
5.0 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

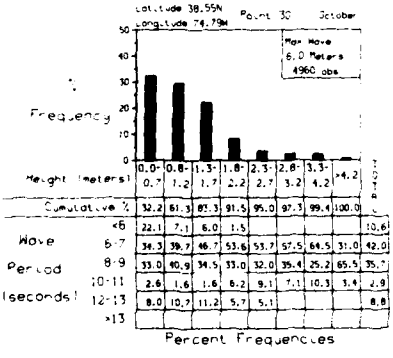

Latitude 39.68N
Longitude 73.72W
Point 27
June
Max Wave
4.7 Meters
4800 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

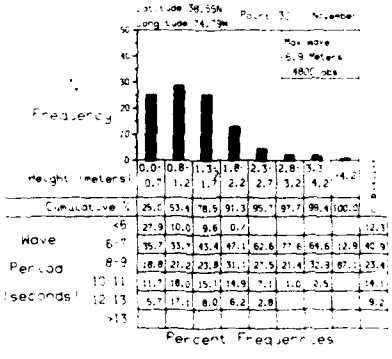


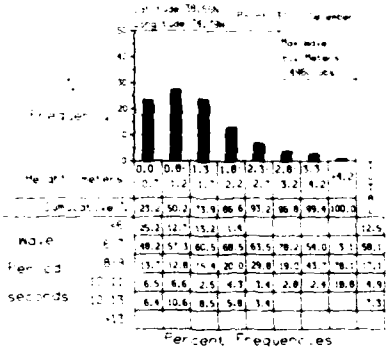

Frequency
Max Wave
6.0 Meters
4960 obs
Percent Frequencies

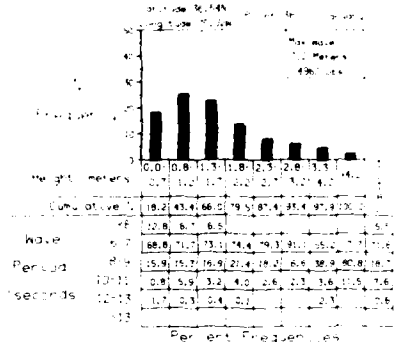

Frequency
Percent Frequencies

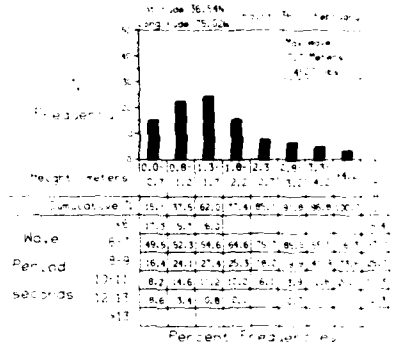

Frequency
Percent Frequencies

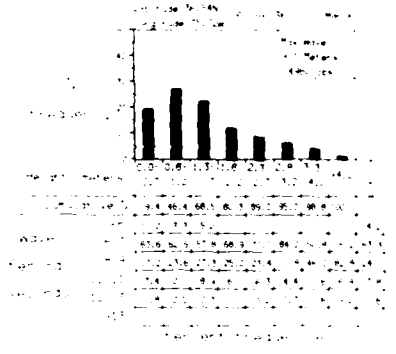

Latitude 38.55N
Longitude 74.79W
Point 30
October
Frequency
Max Wave
6.0 Meters
4960 obs
Percent Frequencies

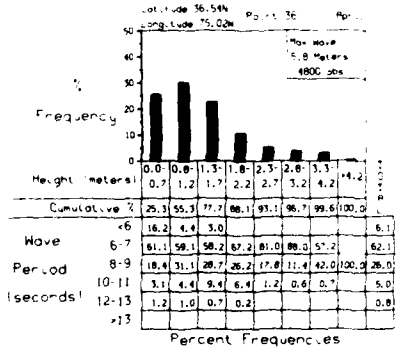

Frequency
Percent Frequencies

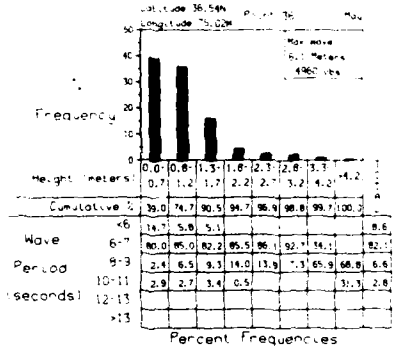

Percent Frequencies

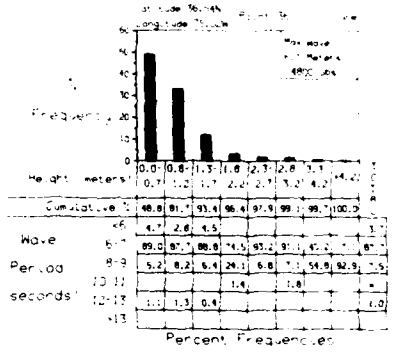


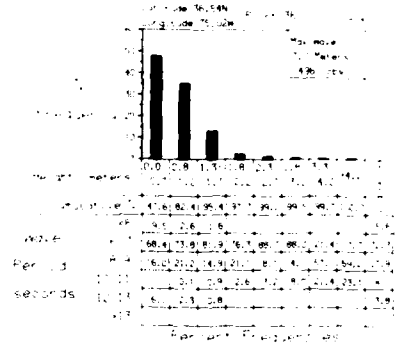


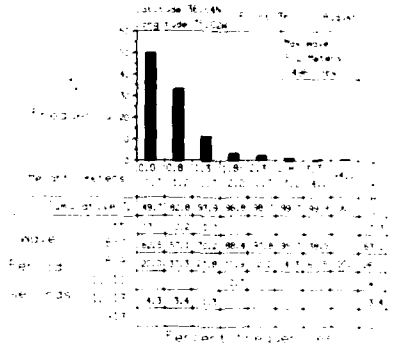


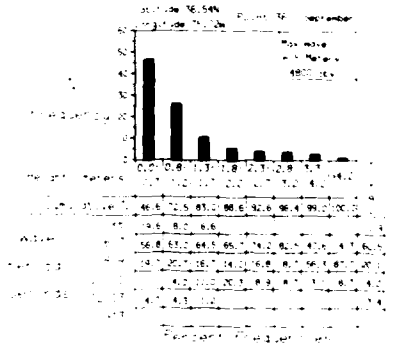


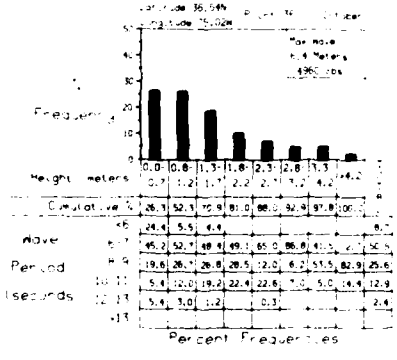


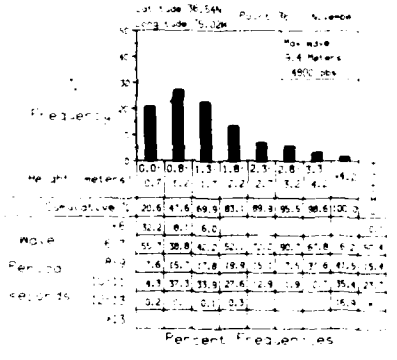


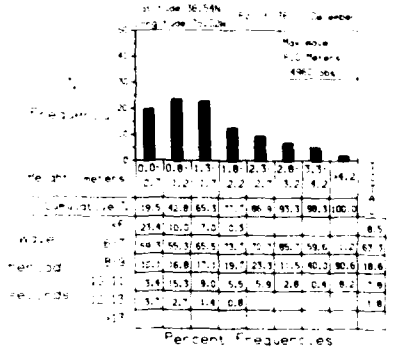


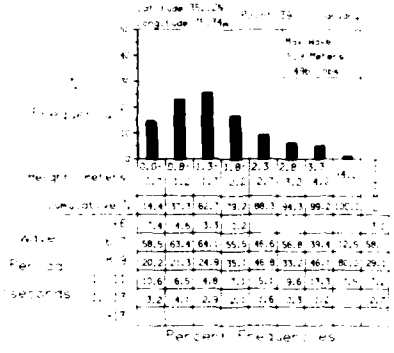


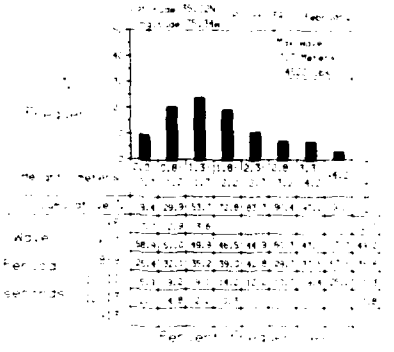


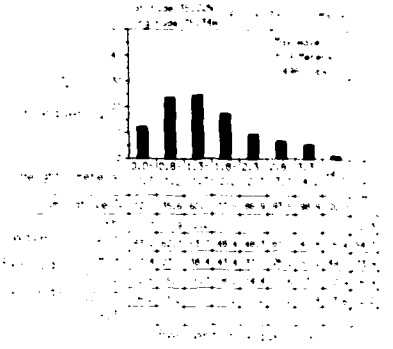


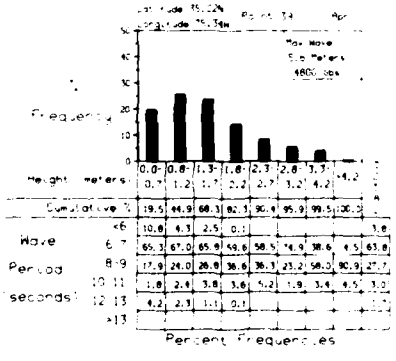


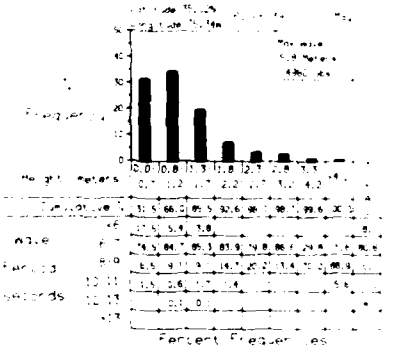


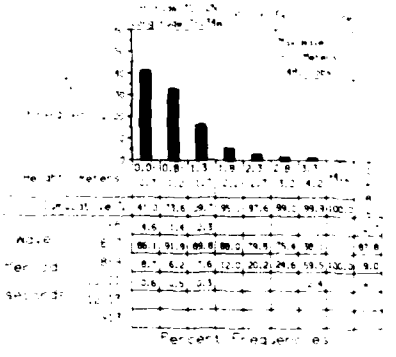


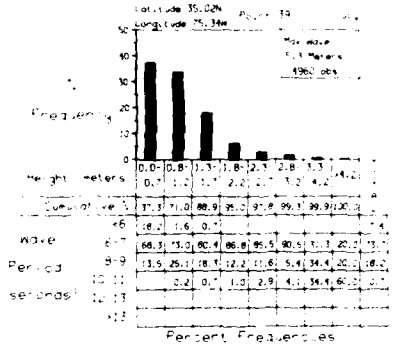


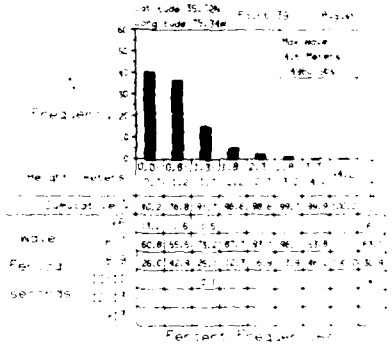


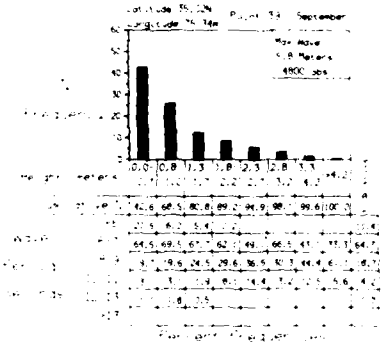


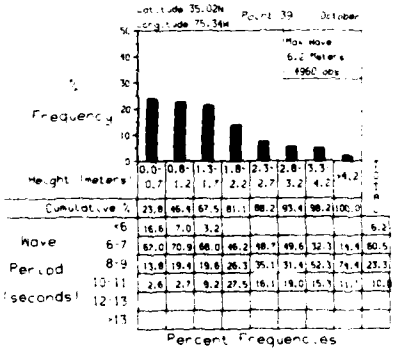


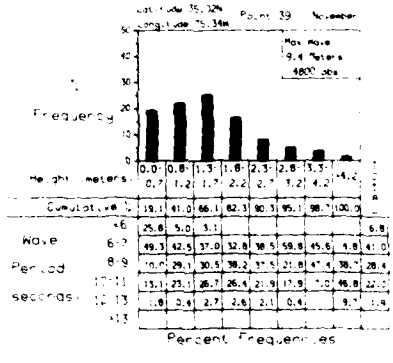


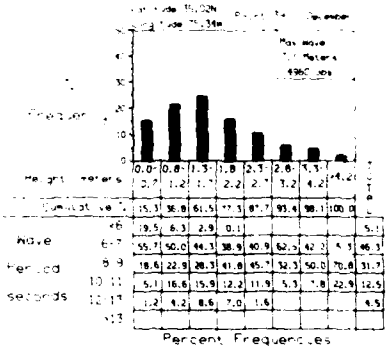


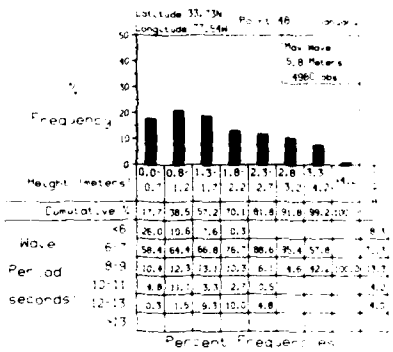


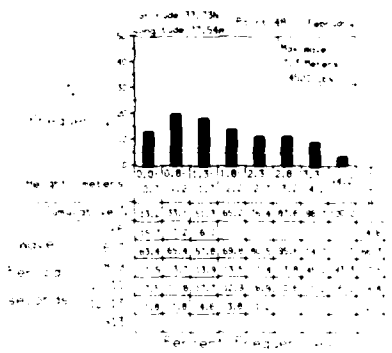


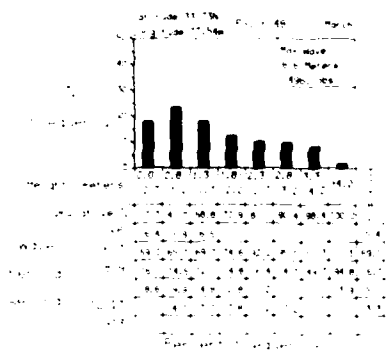


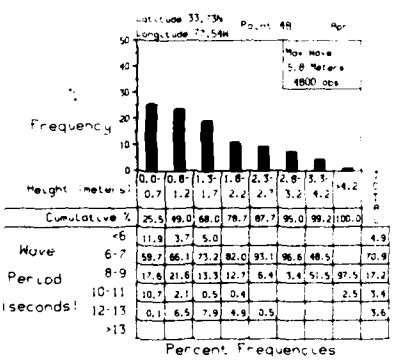


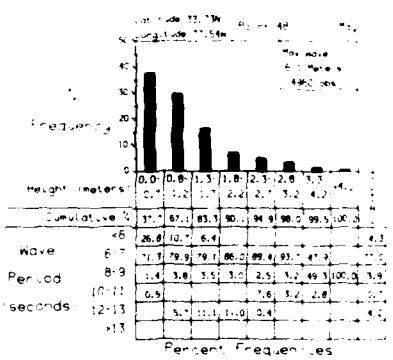


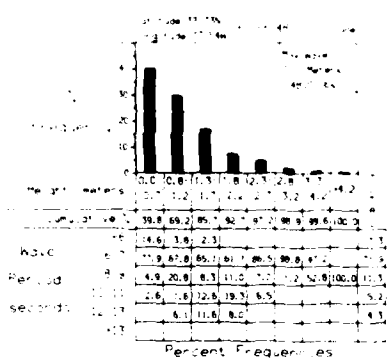

Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

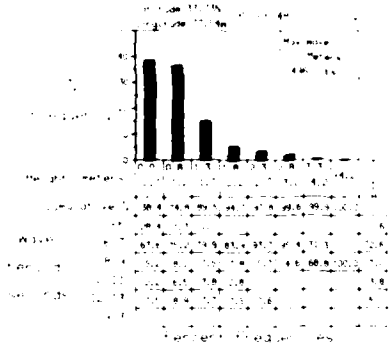

Percent Frequencies

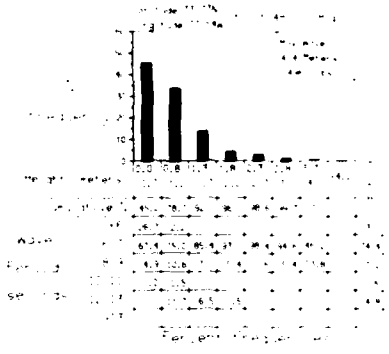


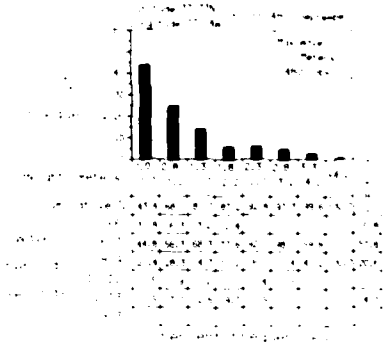

Frequency
Max Wave
5.8 Meters
4800 obs
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

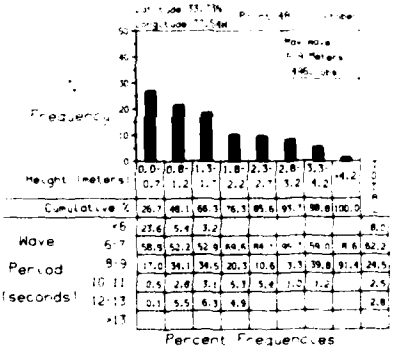

Frequency
Percent Frequencies

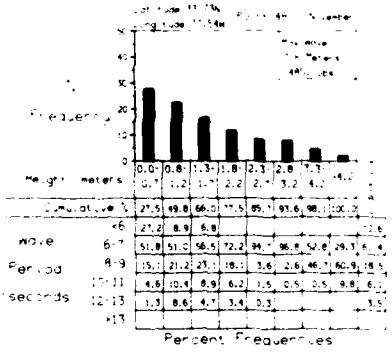

Percent Frequencies

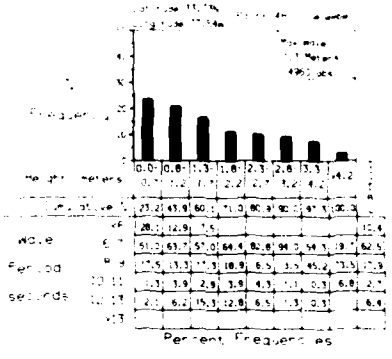


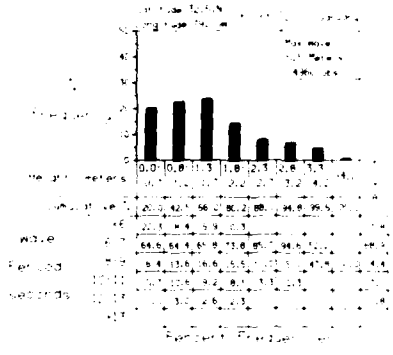


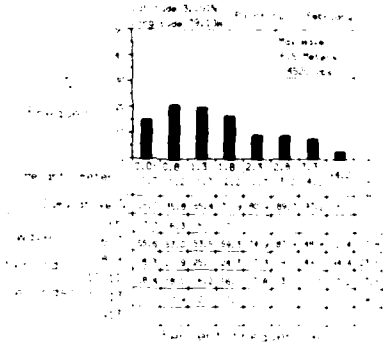


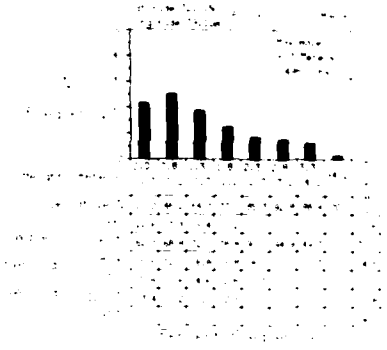

Frequency
Height meters
0.0- 0.8- 1.3- 1.8- 2.3- 2.8- 3.3- >4.2
0.7 1.2 1.7 2.2 2.7 3.2 4.2
Cumulative %
26.7 48.1 66.1 76.3 85.6 91.1 98.8 100.0
Wave
Period
(seconds)
Percent Frequencies

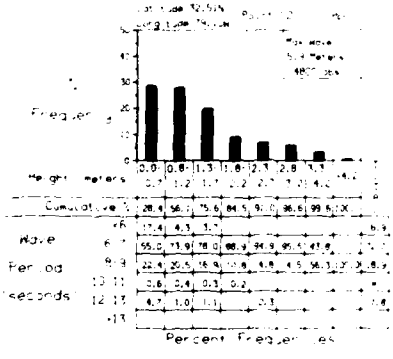

Frequency
Height meters
0.0- 0.8- 1.3- 1.8- 2.3- 2.8- 3.3- >4.2
0.7 1.2 1.7 2.2 2.7 3.2 4.2
Cumulative %
27.5 49.8 66.0 77.5 85.7 93.6 98.1 100.0
Wave
Period
seconds
Percent Frequencies

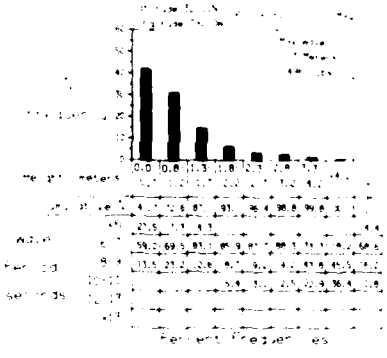

Frequency
Height meters
0.0- 0.8- 1.3- 1.8- 2.3- 2.8- 3.3- >4.2
0.7 1.2 1.7 2.2 2.7 3.2 4.2
Cumulative %
27.2 43.9 60.1 71.0 80.8 92.0 97.5 100.0
Wave
Period
seconds
Percent Frequencies

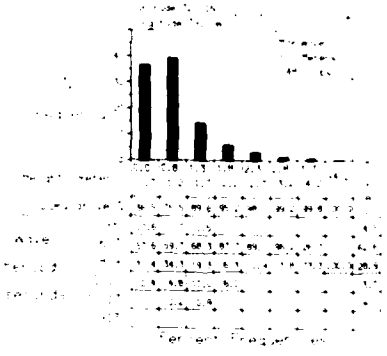


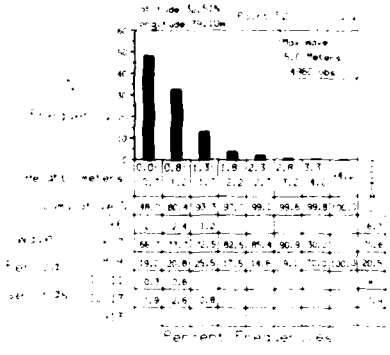


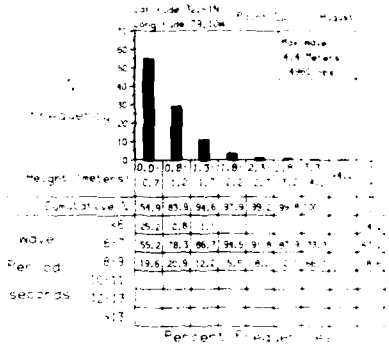


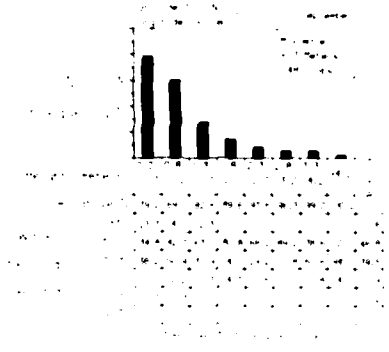

Wave
Period
Seconds
Percent Frequencies

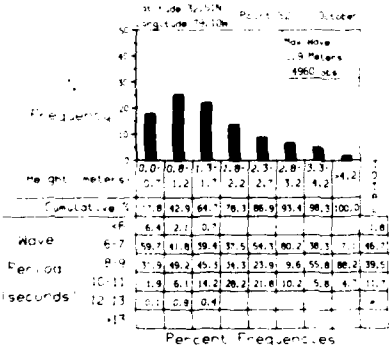


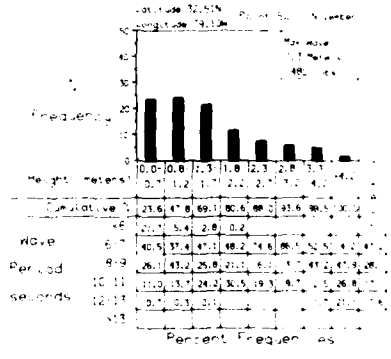


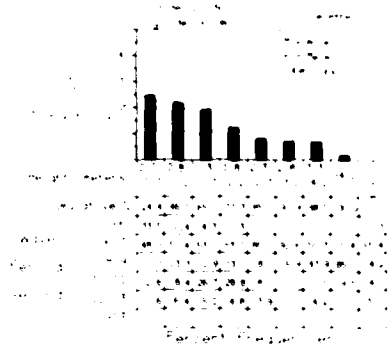


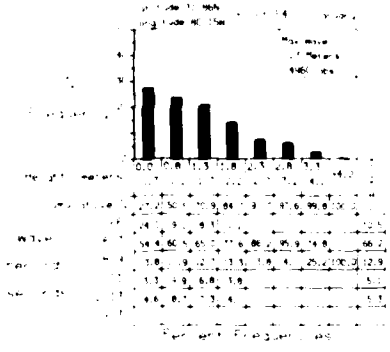


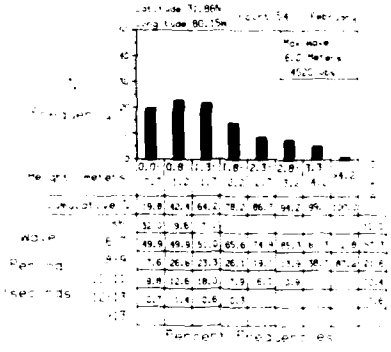


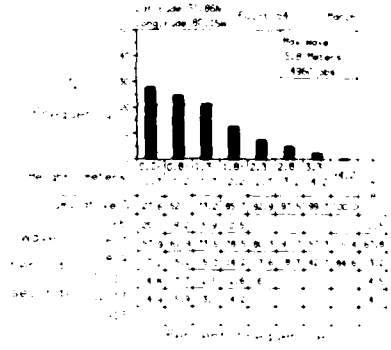


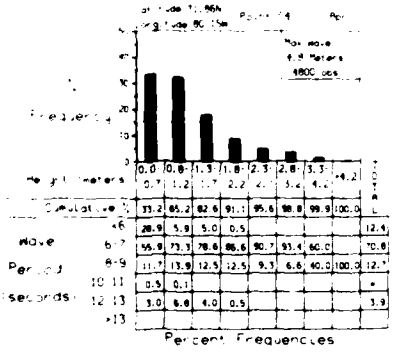


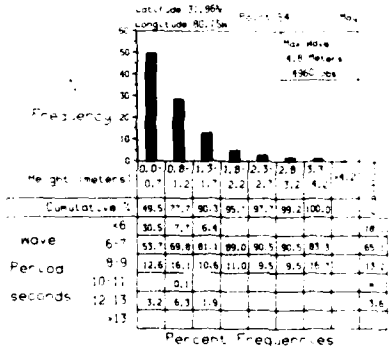


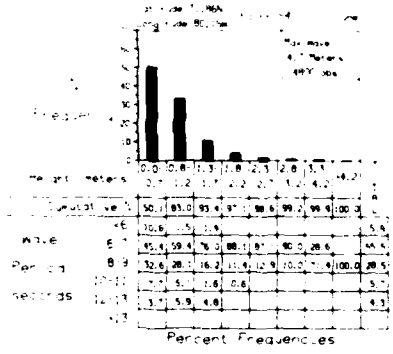


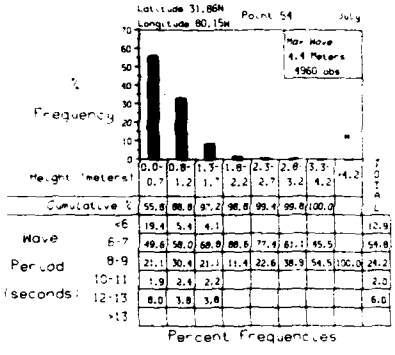


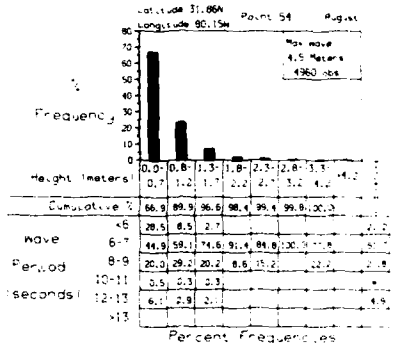


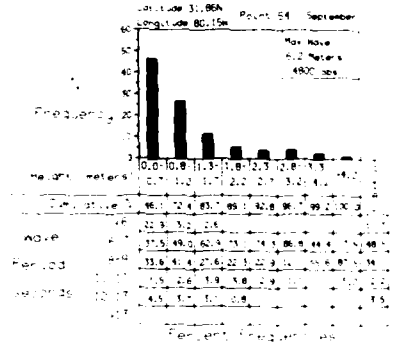


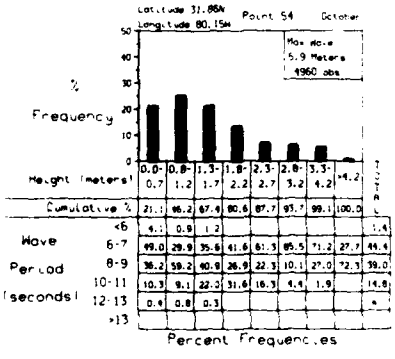


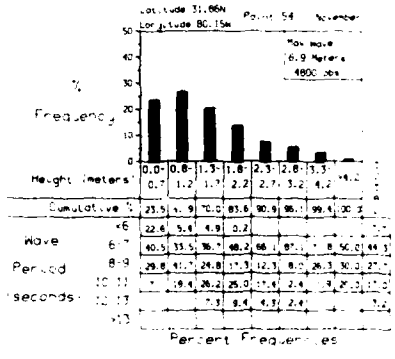


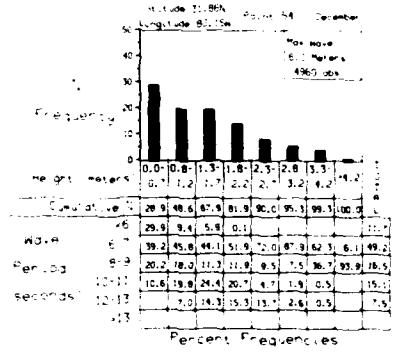

Latitude 31.86N
Longitude 80.15W
Point 54
July
Max Wave
4.4 Meters
4960 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

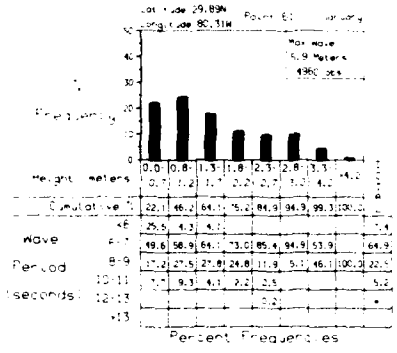

Latitude 31.86N
Longitude 80.15W
Point 54
August
Max Wave
4.9 Meters
4960 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

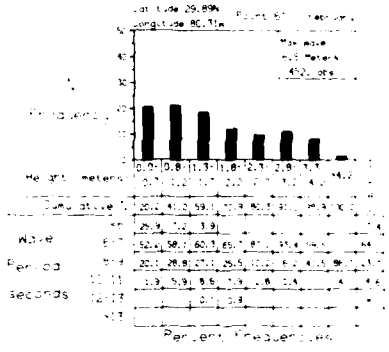

Latitude 31.86N
Longitude 80.15W
Point 54
September
Max Wave
5.2 Meters
4800 obs
% Frequency
Height (meters)
Wave Period (seconds)
Percent Frequencies

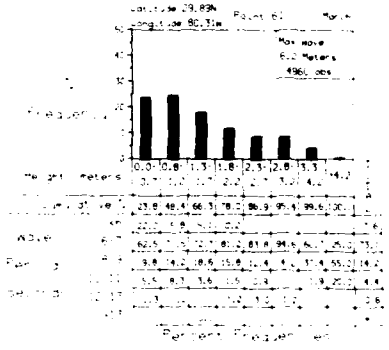

Latitude 31.86N
Longitude 80.15W
Point 54
October
Max Wave
5.9 Meters
4960 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

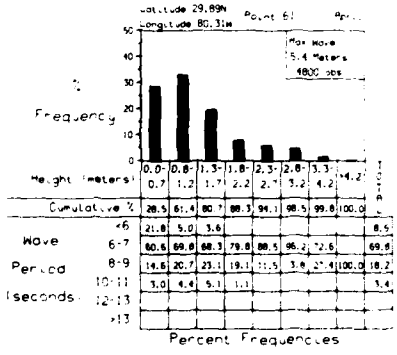

Latitude 31.86N
Longitude 80.15W
Point 54
November
Max Wave
6.9 Meters
4800 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

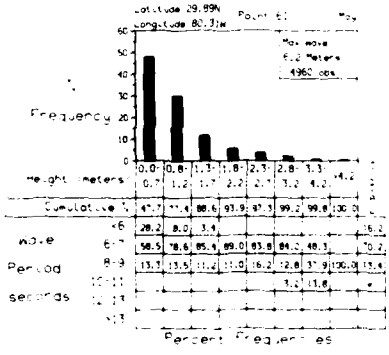

Latitude 31.86N
Longitude 80.15W
Point 54
December
Max Wave
6.0 Meters
4960 obs
% Frequency
Height (meters)
Wave Period (seconds)
Percent Frequencies

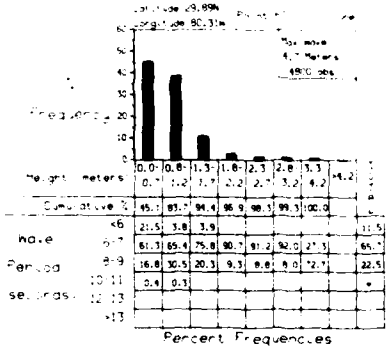

Latitude 29.89N
Longitude 80.31W
Point 61
Max wave
5.9 Meters
4960 obs
Frequency
Height meters
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

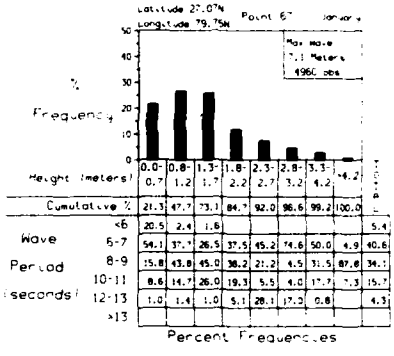

Latitude 29.89N
Longitude 80.31W
Point 61
Max wave
6.0 Meters
4960 obs
Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

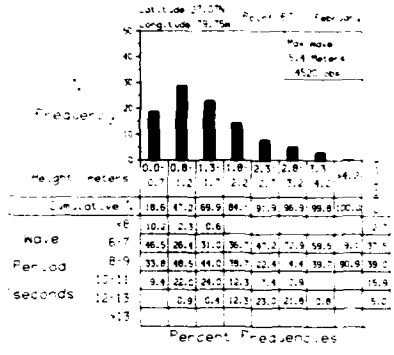

Latitude 29.89N
Longitude 80.31W
Point 61
Max wave
6.2 Meters
4960 obs
Frequency
Height meters
Cumulative %
Wave
Period
Percent Frequencies

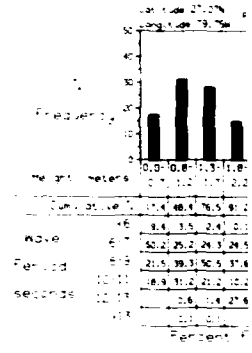

Latitude 29.89N
Longitude 80.31W
Point 61
Max wave
5.4 Meters
4800 obs
Frequency
Height meters
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

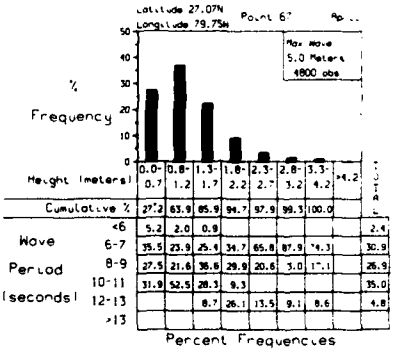

Latitude 29.89N
Longitude 80.31W
Point 61
Max wave
6.2 Meters
4960 obs
Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

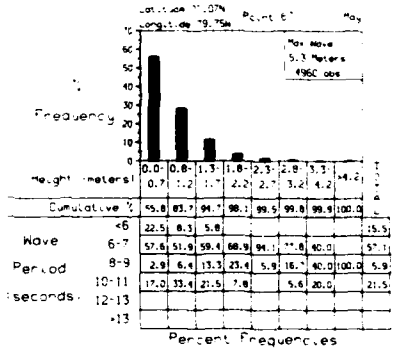

Latitude 29.89N
Longitude 80.31W
Max wave
4.7 Meters
4800 obs
Frequency
Height meters
Cumulative %
Wave
Period
seconds
Percent Frequencies

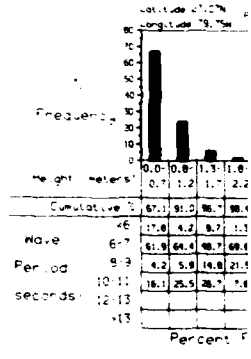

Latitude 27.07N
Longitude 79.75W
Point 67
Max Wave
7.1 Meters
4960 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

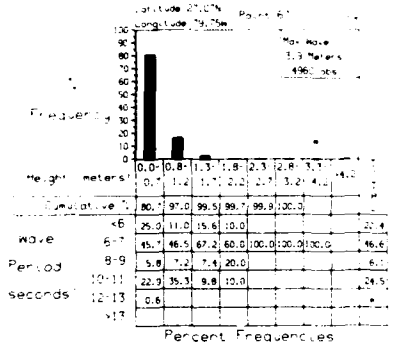

Max Wave
5.4 Meters
% Frequency
Wave Period (seconds)
Percent Frequencies

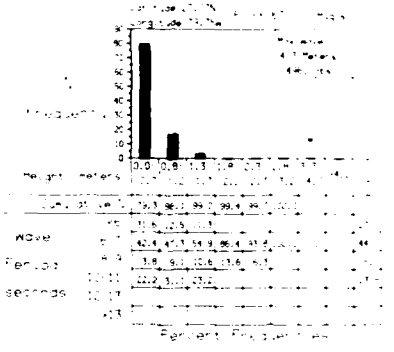

% Frequency
Wave Period (seconds)

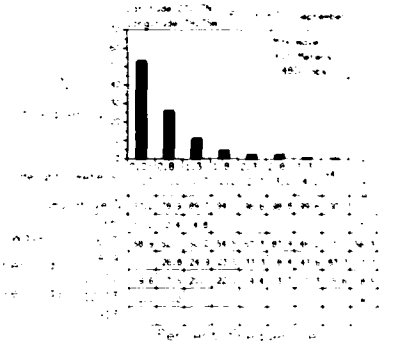

Latitude 27.07N
Longitude 79.75W
Point 67
Max Wave
5.0 Meters
4800 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

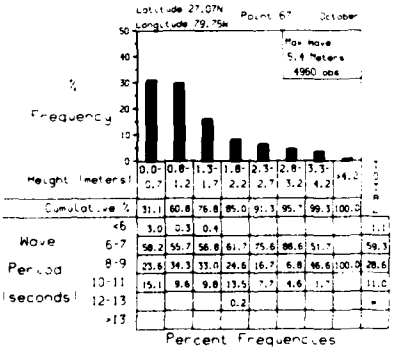

Point 67
Max Wave
5.3 Meters
4960 obs
% Frequency
Wave Period (seconds)
Percent Frequencies

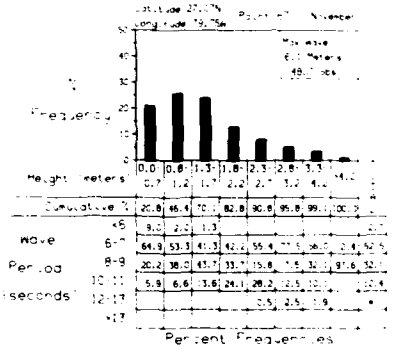

% Frequency
Wave Period (seconds)

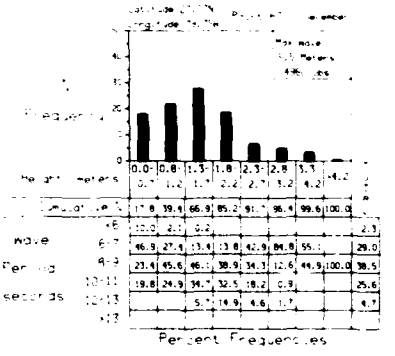

Latitude 27.07N
Longitude 79.75W
Point 67
Max Wave
3.3 Meters
496 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

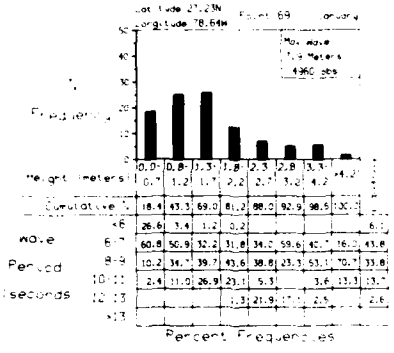

Frequency
Height (meters)
Wave Period (seconds)


Frequency
Wave Period (seconds)


Latitude 27.07N
Longitude 79.75W
Point 67
October
Max Wave
5.4 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

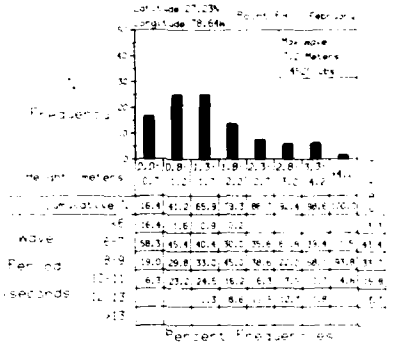

Frequency
Height (meters)
Wave Period (seconds)
Percent Frequencies


Frequency
Wave Period (seconds)
Percent Frequencies



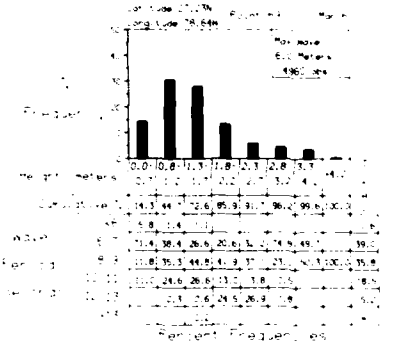
Height (meters)	0.0-0.7	0.8-1.2	1.3-1.7	1.8-2.2	2.3-2.7	2.8-3.2	3.3-4.2	>4.2
Cumulative %	18.4	43.3	69.0	81.2	88.0	92.9	98.5	100.0
<6	26.6	3.4	1.2	0.2				6.1
6-7	60.8	50.9	32.2	31.8	34.2	59.6	42.1	16.2	43.8
8-9	10.2	34.7	39.7	43.6	38.8	23.3	53.1	70.7	33.8
10-11	2.4	11.0	26.9	23.1	5.3		3.6	13.3	13.7
12-13				1.3	21.9	17.1	2.5		2.6
>13									

Percent Frequencies



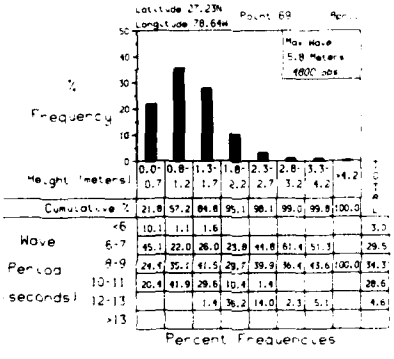
Height (meters)	0.0-0.7	0.8-1.2	1.3-1.7	1.8-2.2	2.3-2.7	2.8-3.2	3.3-4.2	>4.2
Cumulative %	16.4	41.2	65.9	79.3	86.4	96.6	100.0	
<6	26.4	1.6	0.9	0.2				3.1
6-7	58.3	45.4	40.4	30.0	35.6	15.4	41.4
8-9	19.0	29.8	33.0	45.0	18.6	23.1	58.6	33.1
10-11	6.3	23.2	24.5	16.2	6.1	7.7	4.6	15.8
12-13				3.3	8.6	13.5	1.8	5.7
>13								

Percent Frequencies



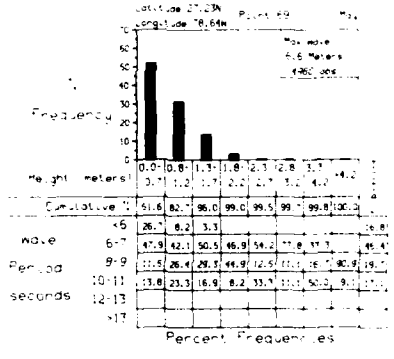
Height (meters)	0.0-0.7	0.8-1.2	1.3-1.7	1.8-2.2	2.3-2.7	2.8-3.2	3.3-4.2	>4.2
Cumulative %	14.3	44	72.6	85.3	91.7	96.2	99.6	100.0
<6	5.8	1.4						
6-7	71.4	58.4	26.6	20.6	5.3	14.9	49.1	39.0
8-9	11.8	35.3	44.8	41.2	17	23	14.3	100.0	35.8
10-11		24.6	26.6	13	3.8	3.6			8.5
12-13		2.3	2.6	24.5	26.9	1.8			5.7
>13									

Percent Frequencies



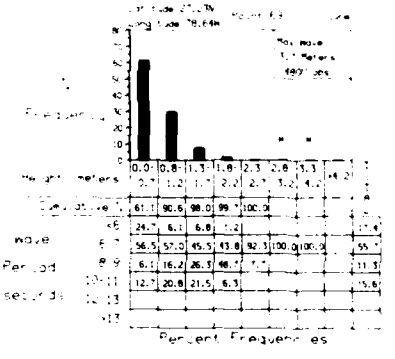
Height (meters)	0.0-0.7	0.8-1.2	1.3-1.7	1.8-2.2	2.3-2.7	2.8-3.2	3.3-4.2	>4.2
Cumulative %	21.8	57.2	84.8	95.1	98.1	99.0	99.8	100.0	
<6	10.1	1.1	1.8					3.0
6-7	45.1	22.0	26.0	23.8	44.8	61.4	51.3		29.5
8-9	24.4	35.7	41.5	29.7	39.9	36.4	43.6	100.0	34.3
10-11	20.4	41.9	29.8	10.4	1.4				28.6
12-13			1.4	36.2	14.0	2.3	5.1		4.6
>13									

Percent Frequencies



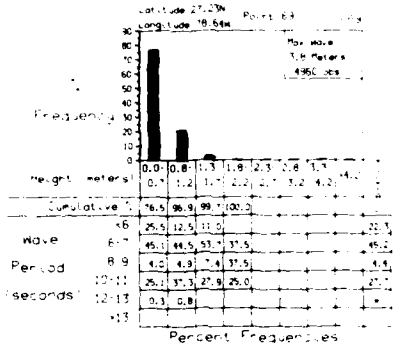
Height (meters)	0.0-0.7	0.8-1.2	1.3-1.7	1.8-2.2	2.3-2.7	2.8-3.2	3.3-4.2	>4.2
Cumulative %	51.6	82.7	96.0	99.0	99.5	99	99.8	100.0	
<6	26.7	8.2	3.3					6.8
6-7	47.9	42.1	50.5	46.9	54.2	77.8	37.5		46.4
8-9	11.5	26.4	29.3	44.9	12.5	11.1	16.7	90.9	19.1
10-11	13.8	23.3	16.9	8.2	33.3	11.1	50.0	9.1	17.7
12-13									
>13									

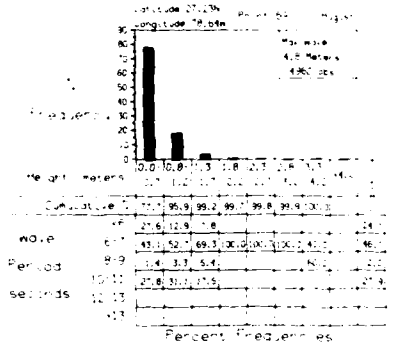
Percent Frequencies

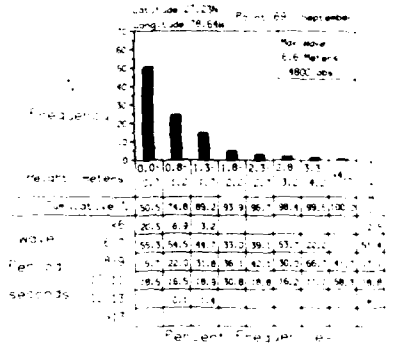


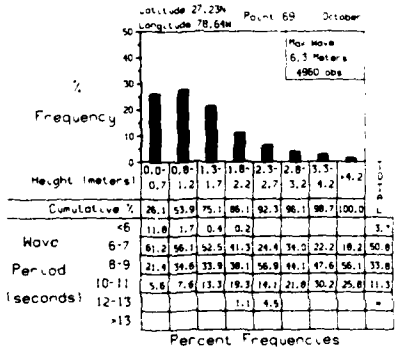
Height (meters)	0.0-0.7	0.8-1.2	1.3-1.7	1.8-2.2	2.3-2.7	2.8-3.2	3.3-4.2	>4.2
Cumulative %	61.1	90.6	98.0	99	100.0			
<6	24.7	6.1	6.8	1.2				17.4
6-7	56.5	57.0	45.5	43.8	92.3	100.0	100.0		55
8-9	6.1	16.2	26.3	48.1					11.3
10-11	12.7	20.8	21.5	6.3					15.6
12-13									
>13									

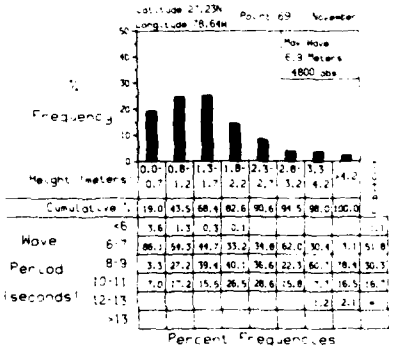
Percent Frequencies

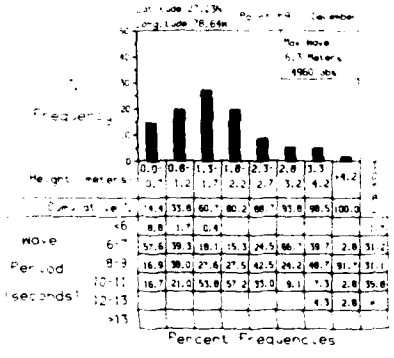

Latitude 27.23N
Point 69
Longitude 78.64W
Max Wave
3.8 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

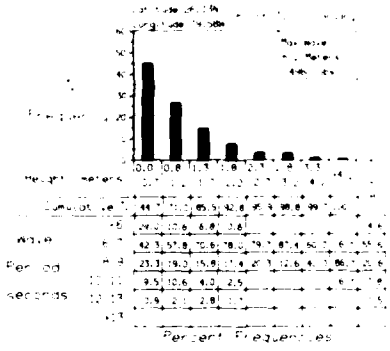

Point 69
Max Wave
4.6 Meters
4960 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

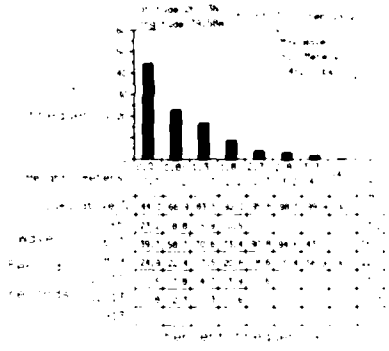

Point 69
Max Wave
6.6 Meters
4800 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

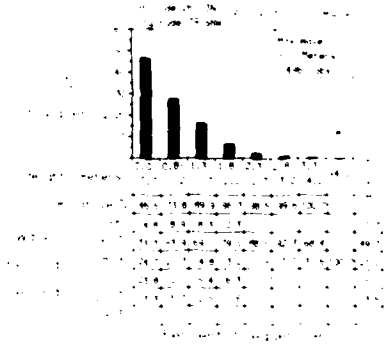

Latitude 27.23N
Point 69
October
Longitude 78.64W
Max Wave
6.3 Meters
4960 obs
% Frequency
Height (meters)
0.0-0.7
0.8-1.2
1.3-1.7
1.8-2.2
2.3-2.7
2.8-3.2
3.3-4.2
>4.2
Cumulative %
Wave Period (seconds)
<6
6-7
8-9
10-11
12-13
>13
Percent Frequencies

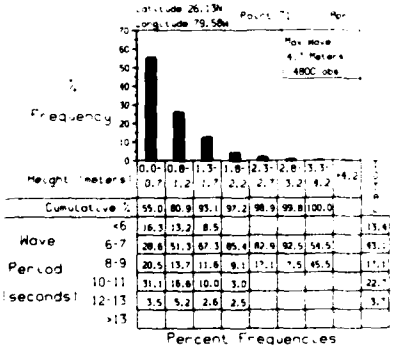

Point 69
Max Wave
6.3 Meters
4800 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

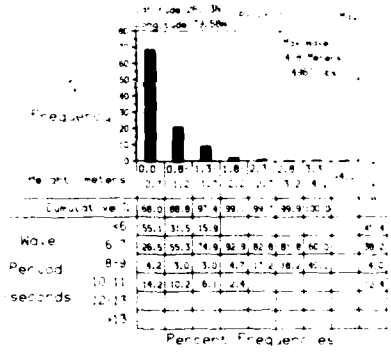

Point 69
Max Wave
6.3 Meters
4960 obs
% Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

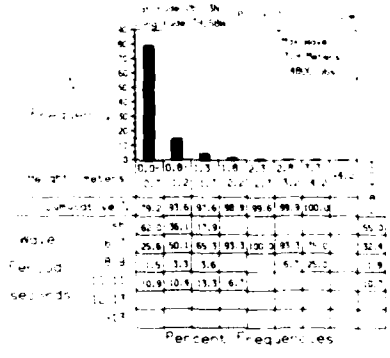


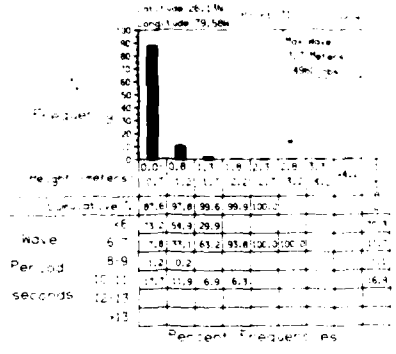


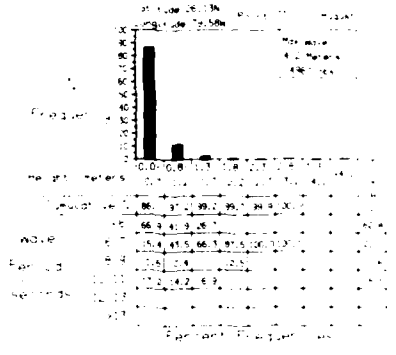


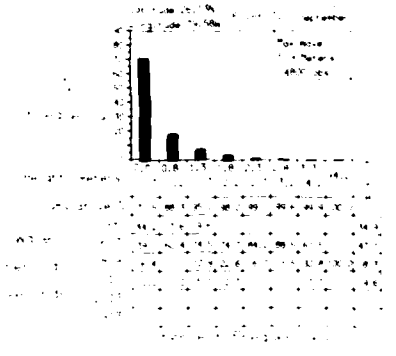

Latitude 26.13N
Longitude 79.58W
Max wave
4.2 Meters
4800 obs
Frequency
Height meters
0.0-0.8 0.8-1.3 1.3-1.8 1.8-2.3 2.3-2.8 2.8-3.3 >4.2
Cumulative % 55.0 80.9 93.1 97.2 98.9 99.8 100.0
Wave Period (seconds)
<6 16.3 13.2 8.5 13.4
6-7 28.8 51.3 67.3 85.4 82.9 92.5 54.5 43.1
8-9 20.5 13.7 11.8 9.1 17.1 7.5 45.5 17.1
10-11 31.1 18.8 10.0 3.0 22.7
12-13 3.5 5.2 2.6 2.5 3.7
>13
Percent Frequencies

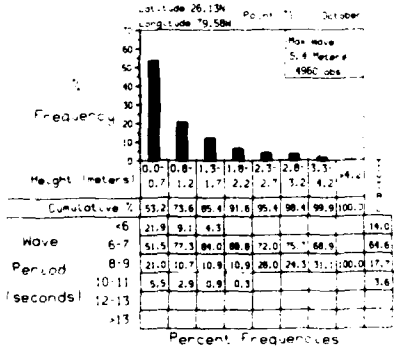


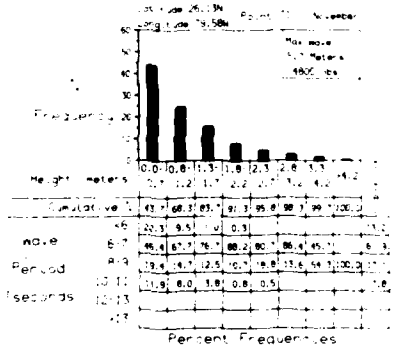


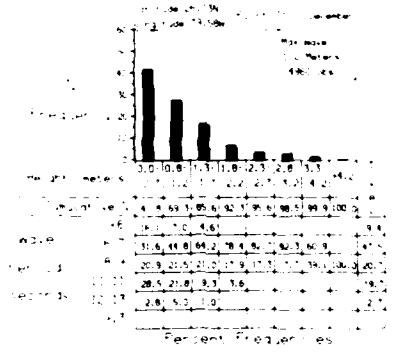


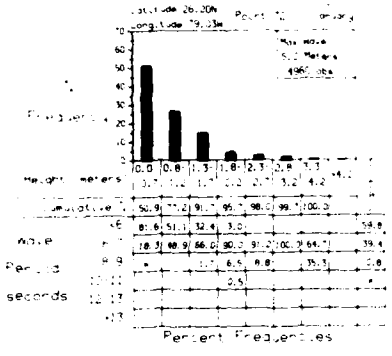


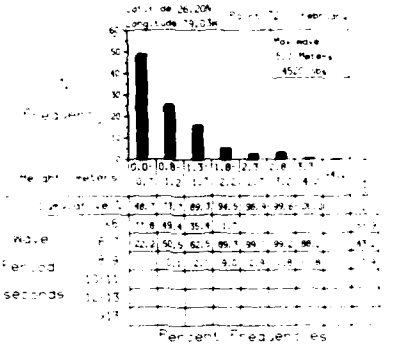


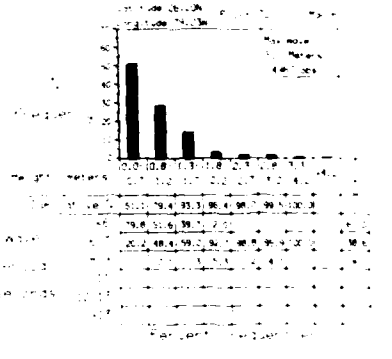

Max wave
5.4 Meters
4960 obs
Frequency
Height (meters)
Cumulative %
Wave
Period
(seconds)
Percent Frequencies

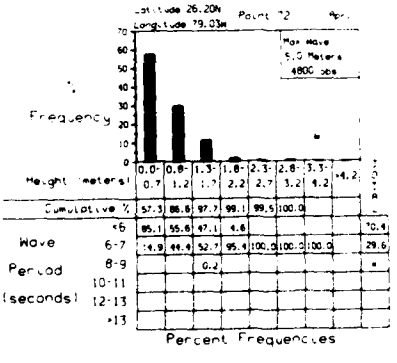

Wave
Period
(seconds)
Percent Frequencies

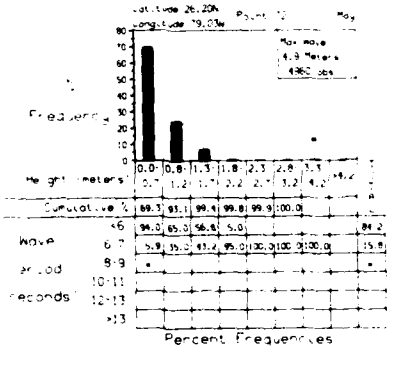

Wave
Period
(seconds)
Percent Frequencies

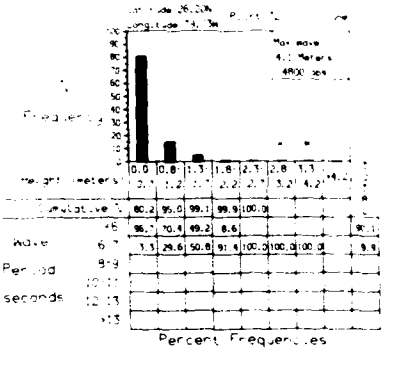


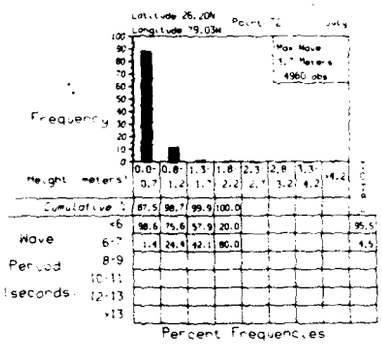


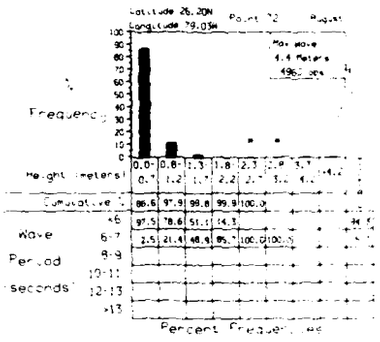


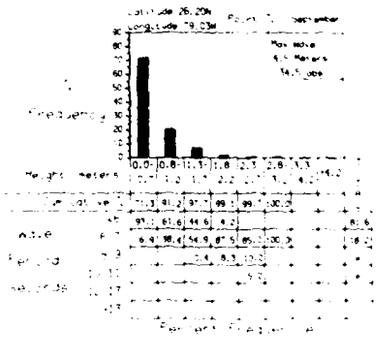


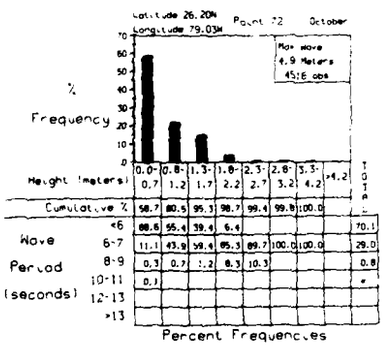


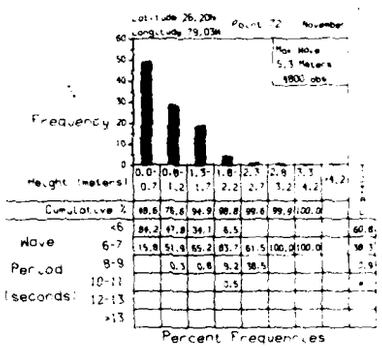


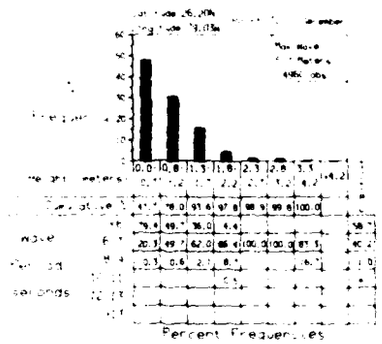

Latitude 26.20N
Longitude 79.03W
Point 72
Max Wave
4960 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

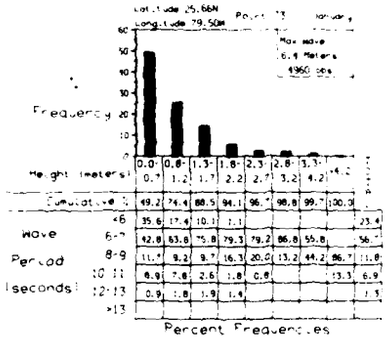

Latitude 26.20N
Longitude 79.03W
Point 72
Max Wave
4960 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

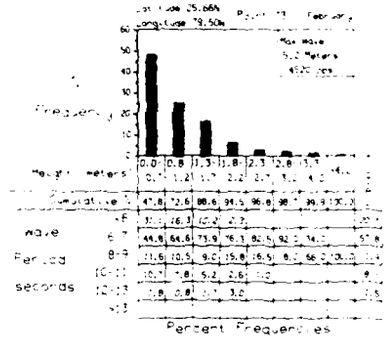

Frequency
Percent Frequencies

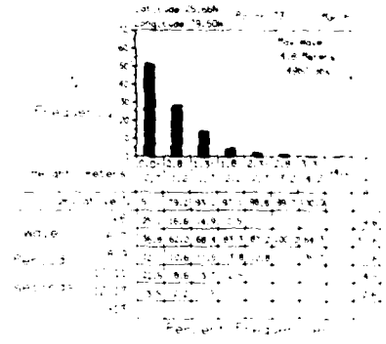

Latitude 26.20N
Longitude 79.03W
Point 72
October
Max Wave
4.9 Meters
4516 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

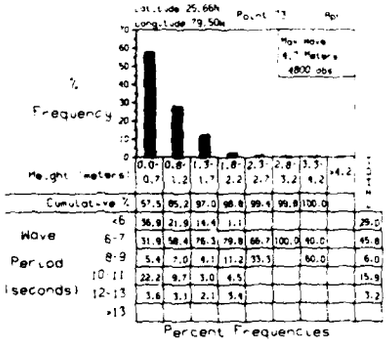

Latitude 26.20N
Longitude 79.03W
Point 72
November
Max Wave
5.3 Meters
4800 obs
Frequency
Height (meters)
Cumulative %
Wave Period (seconds)
Percent Frequencies

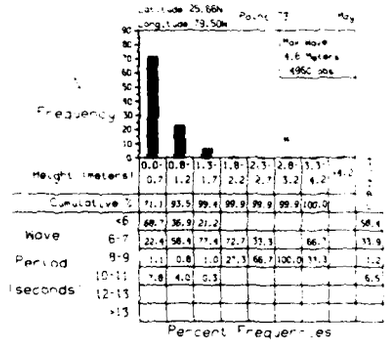

Frequency
Percent Frequencies

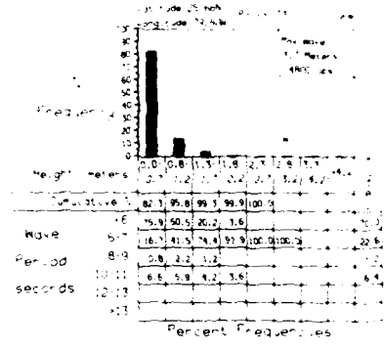


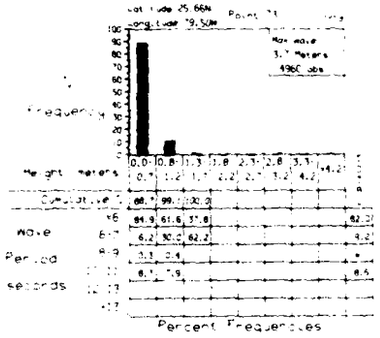


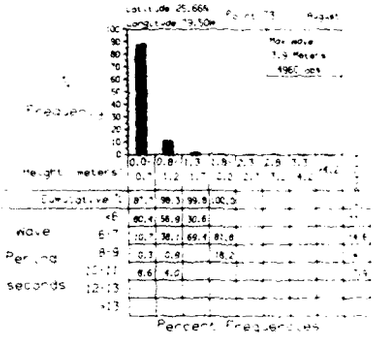


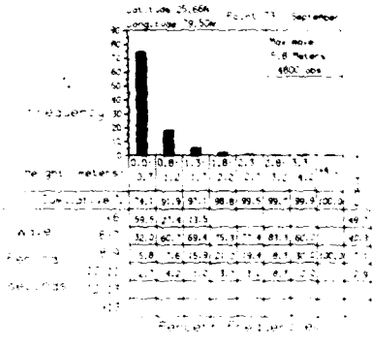


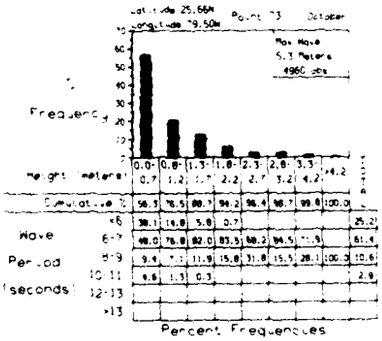


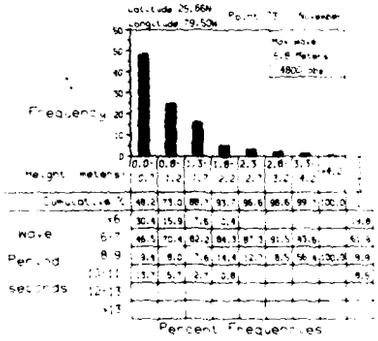


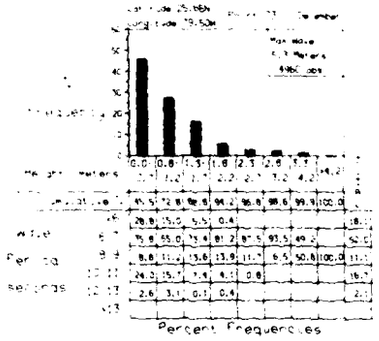


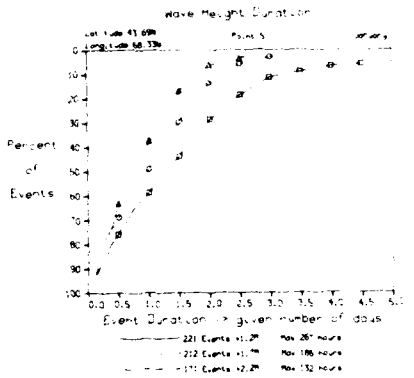


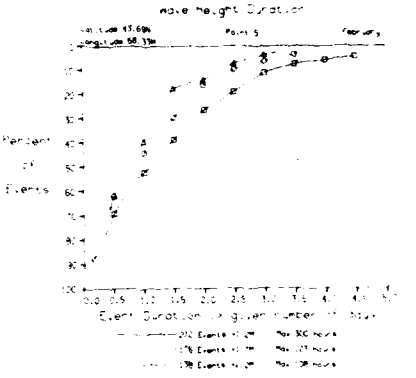


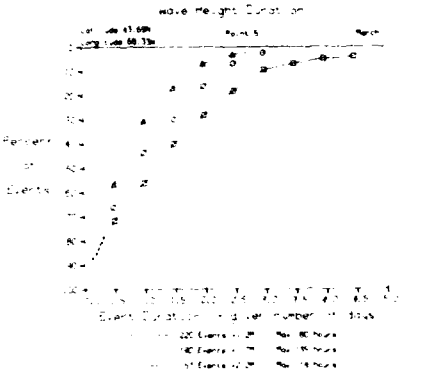


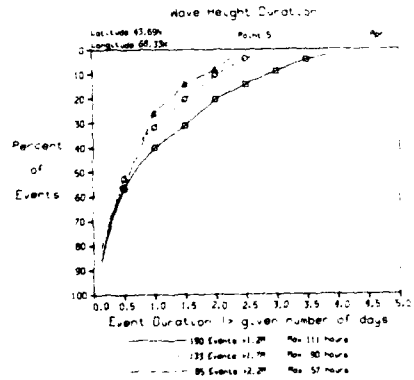


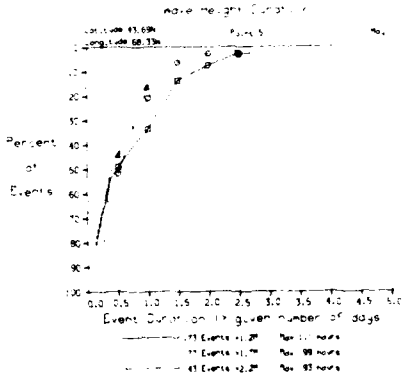


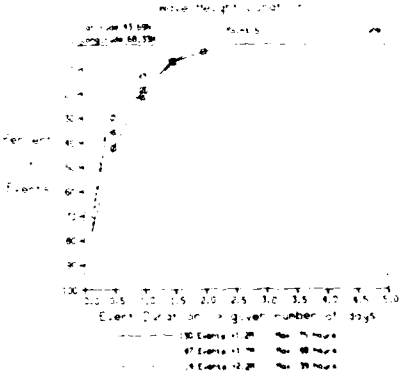

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

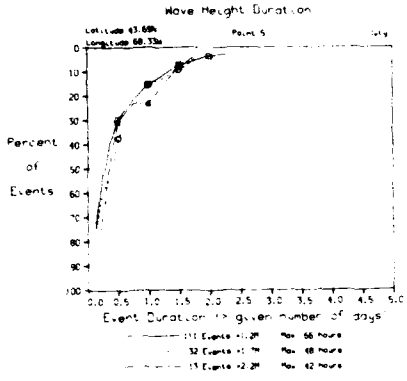

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

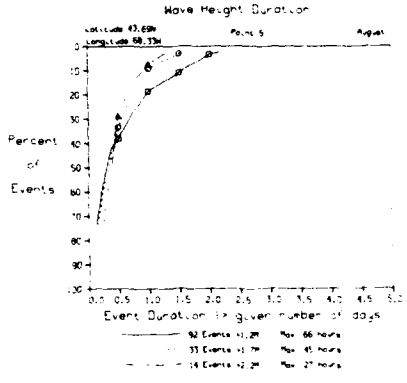

Wave Height Duration
Percent of Events

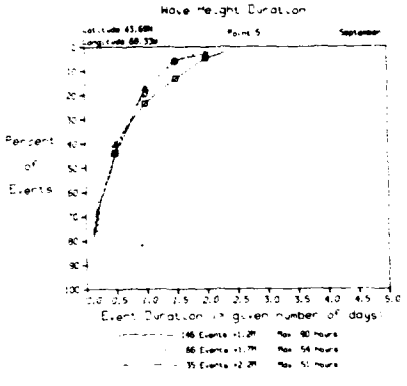

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

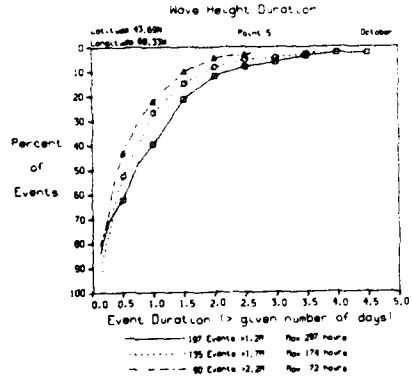

Percent of Events
Event Duration (> given number of days)

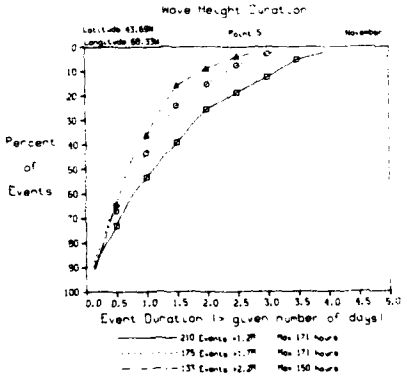

Event Duration (> given number of days)

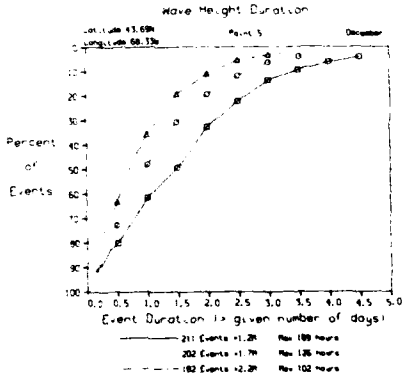

Wave Height Duration
Point 5
Percent of Events
Event Duration (> given number of days)

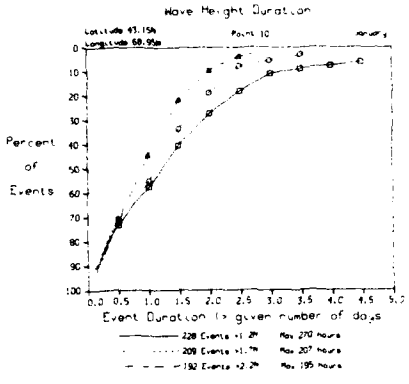

Wave Height Duration
Point 5
Percent of Events
Event Duration (> given number of days)

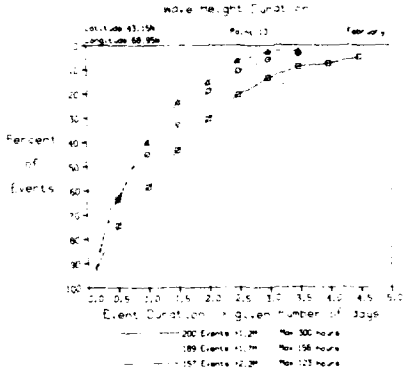

Wave Height Duration
Point 5
Percent of Events
Event Duration (> given number of days)

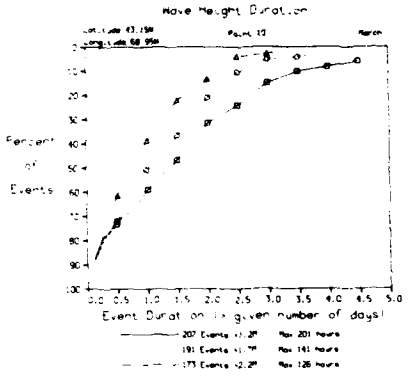

Wave Height Duration
Point 5
Percent of Events
Event Duration (> given number of days)

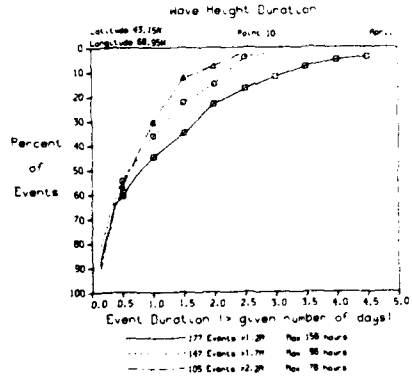

Wave Height Duration
Point 5
Percent of Events
Event Duration (> given number of days)

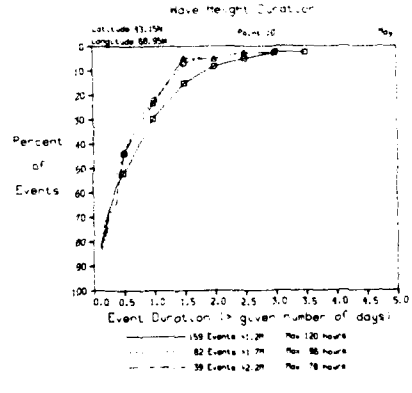

Wave Height Duration
Point 5
Percent of Events
Event Duration (> given number of days)

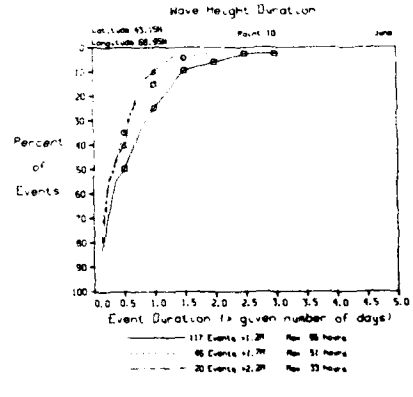

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

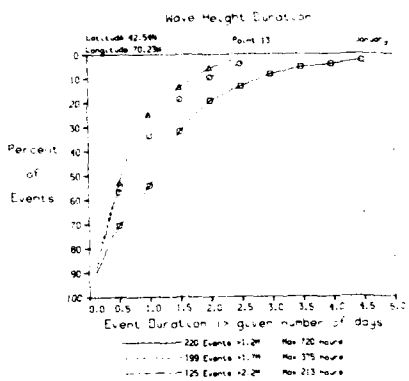

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

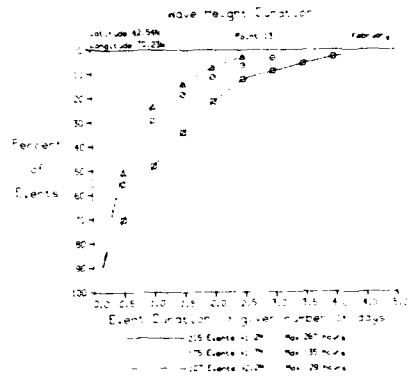

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

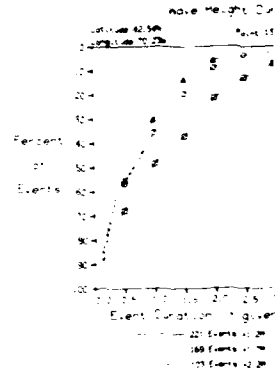

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

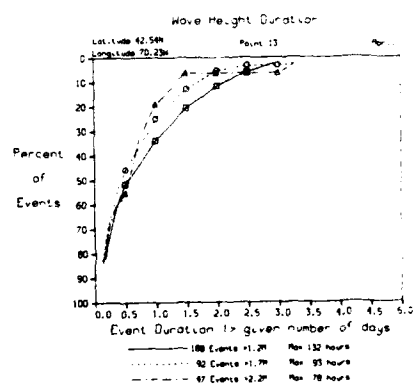

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

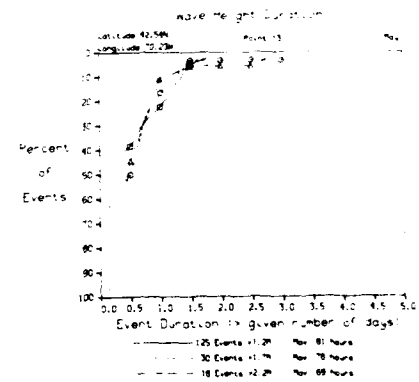

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

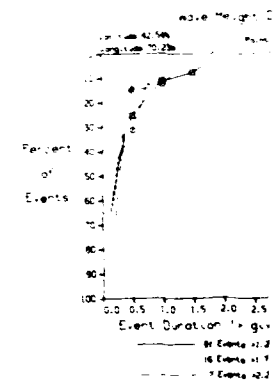

Wave Height Duration
Point 13
Percent of Events
Event Duration (> given number of days)

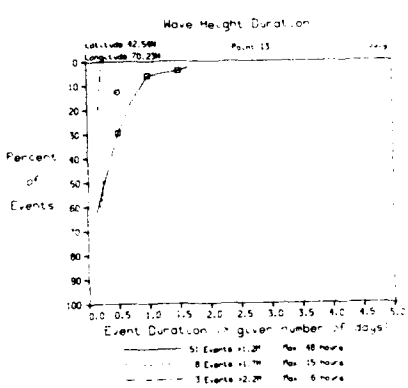

Wave Height Duration
Percent of Events

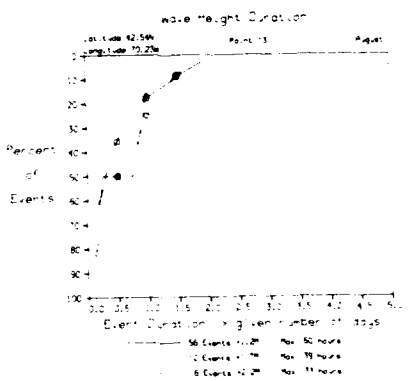

Percent of Events

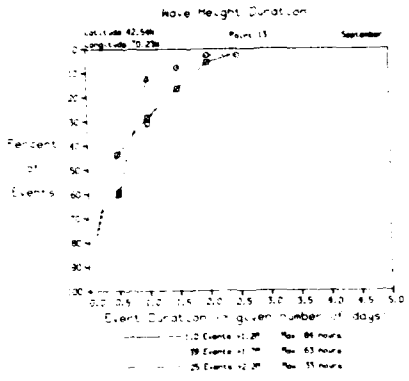

Wave Height Duration
Point 13
Percent of Events
Event Duration (> given number of days)

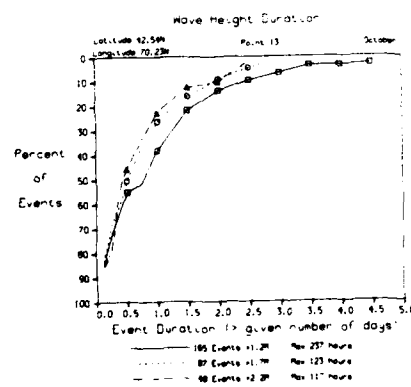

Percent of Events
Event Duration (> given number of days)

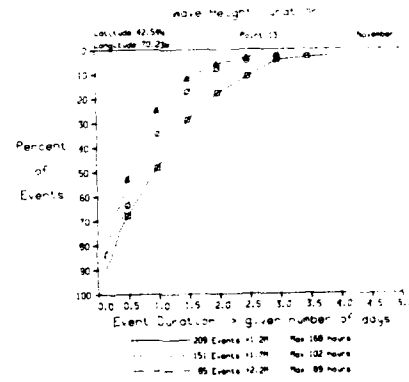

Percent of Events

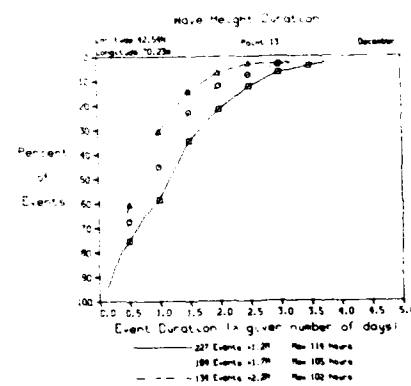

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

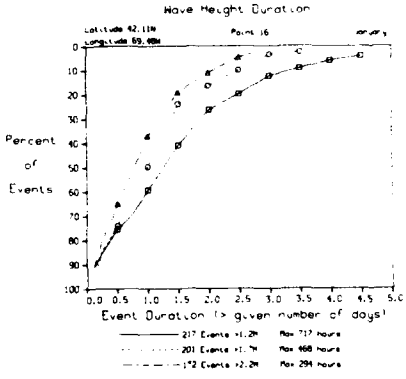

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

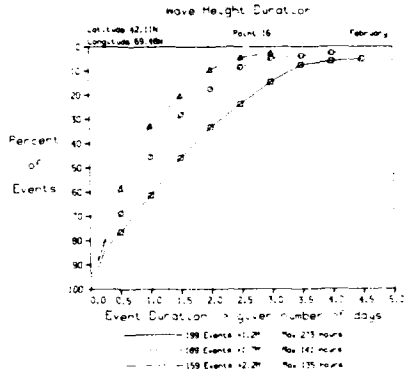

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

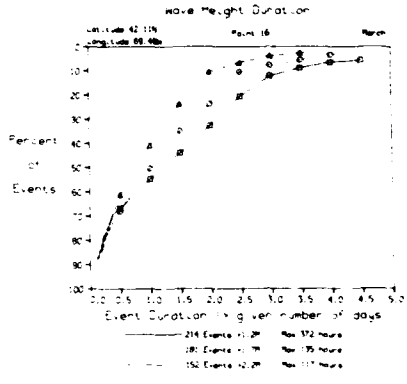

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

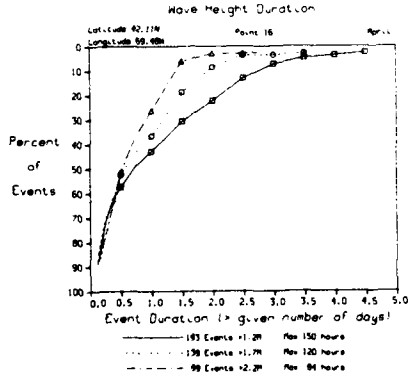

Percent of Events
Event Duration (x given number of days)

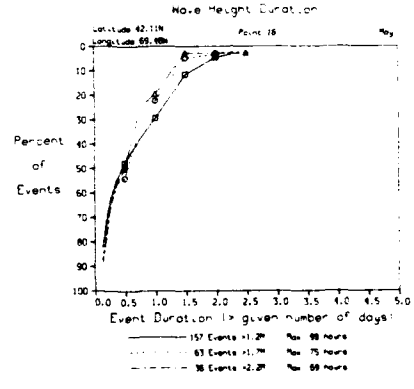

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

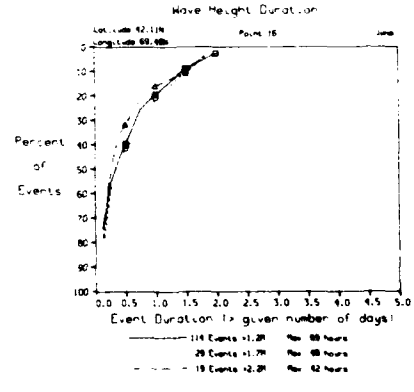

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

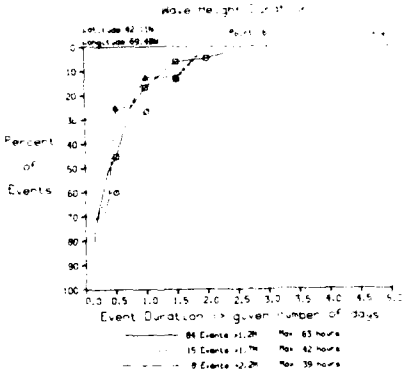

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

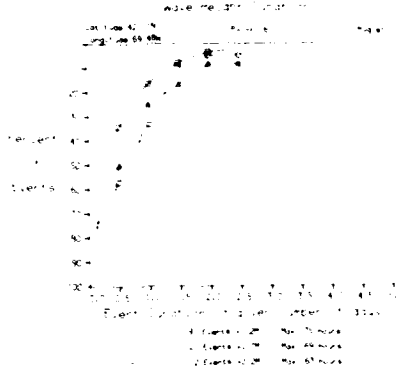

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

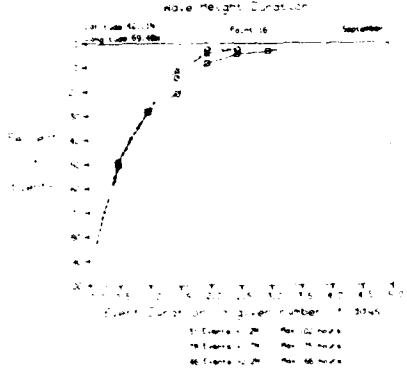

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

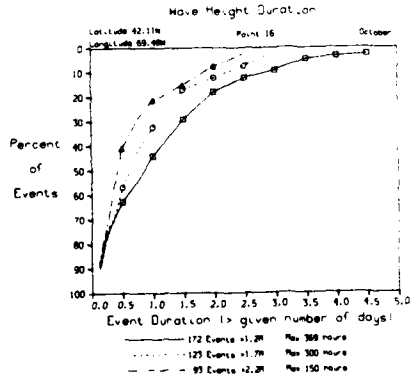

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

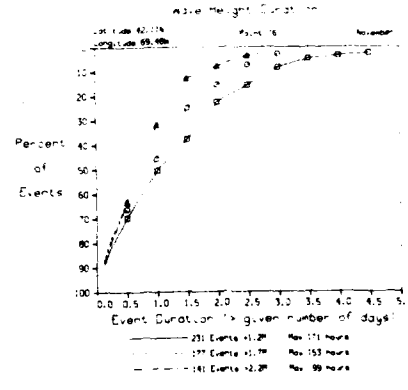

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

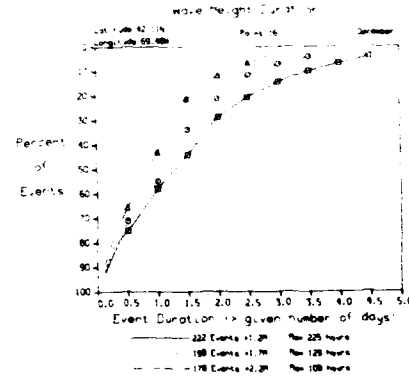

Percent of Events
Event Duration (> given number of days)

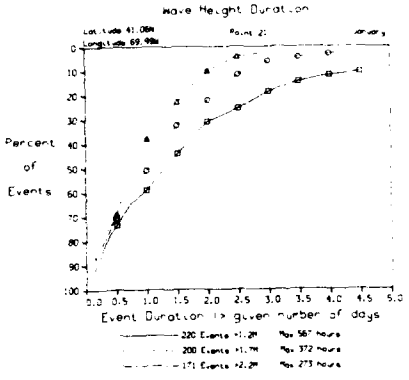

Percent of Events
Event Duration (> given number of days)

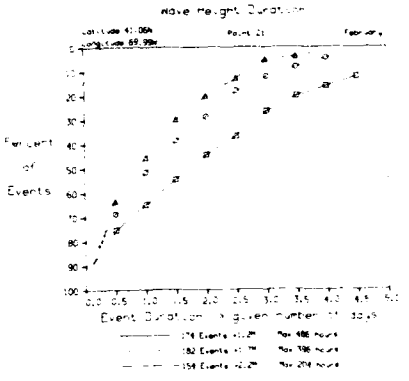

Event Duration (> given number of days)

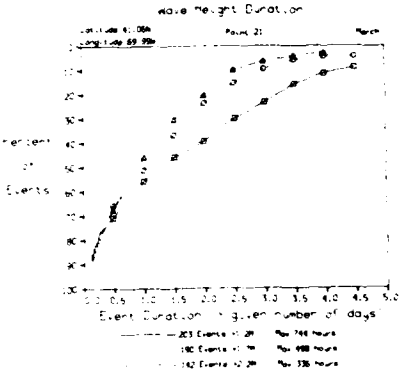

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

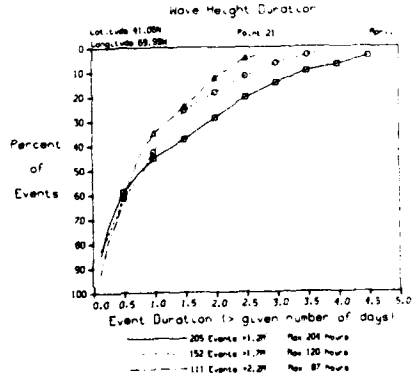

Percent of Events
Event Duration (> given number of days)

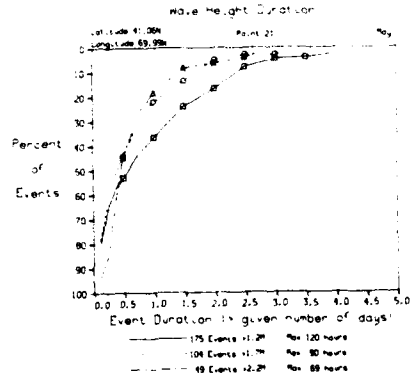

Percent of Events
Event Duration (> given number of days)

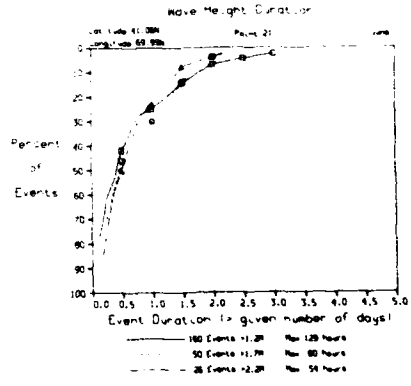

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

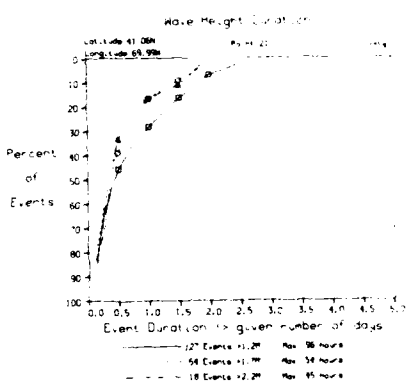

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

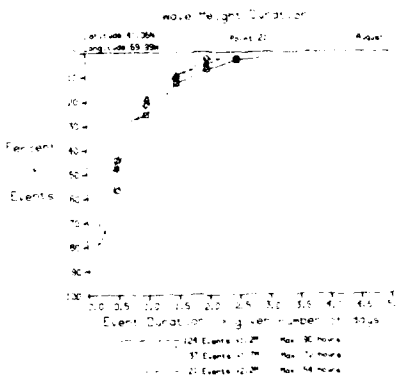

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

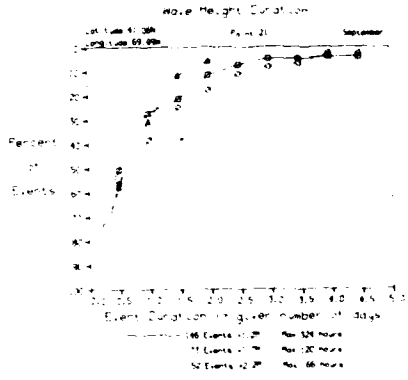

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

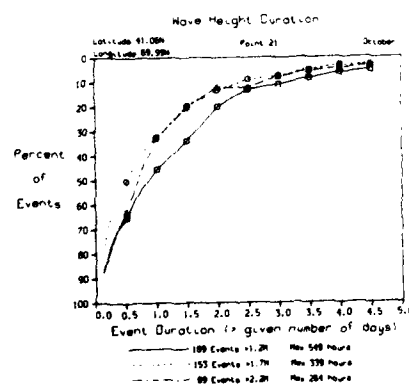

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

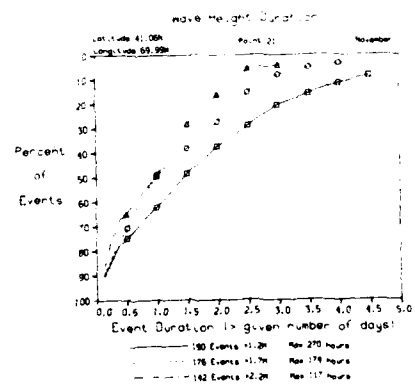

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

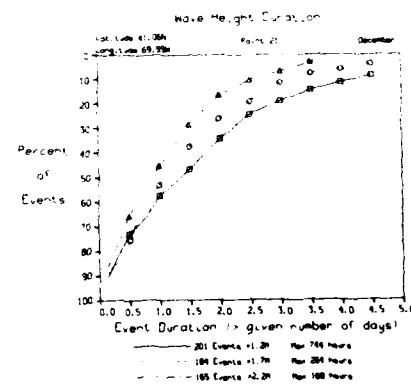

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

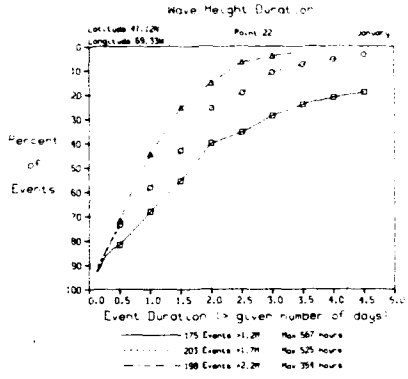

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

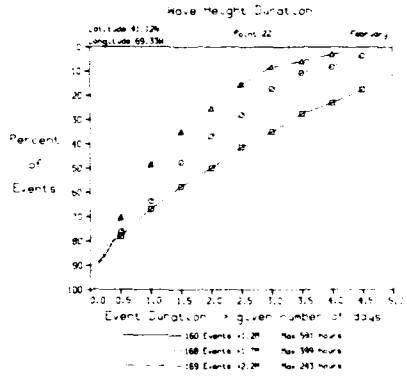

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

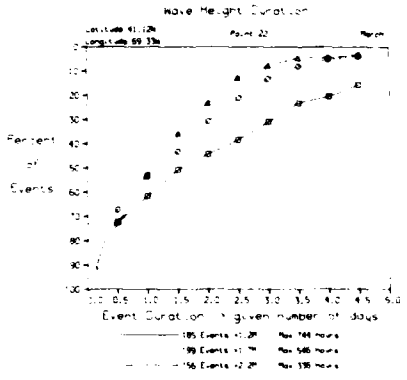

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

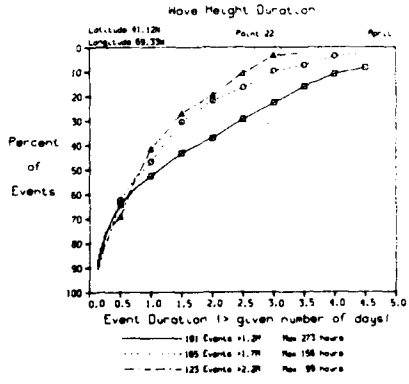

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

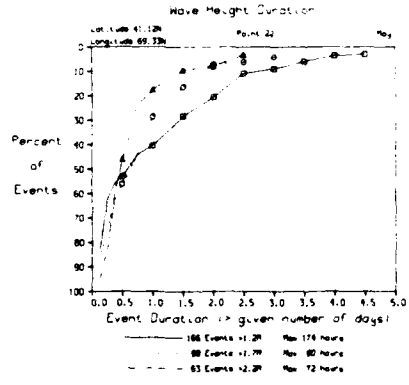

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

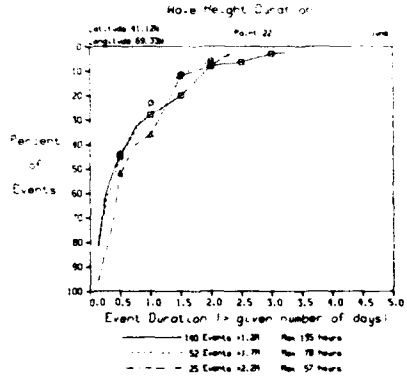

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

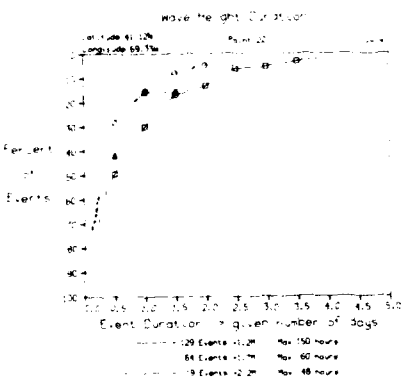

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

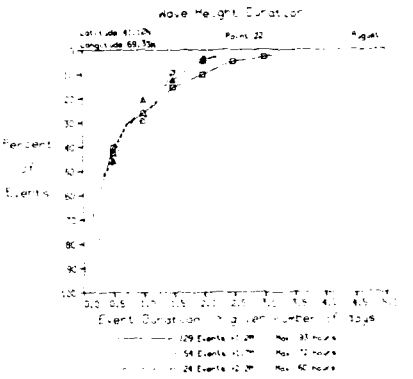

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

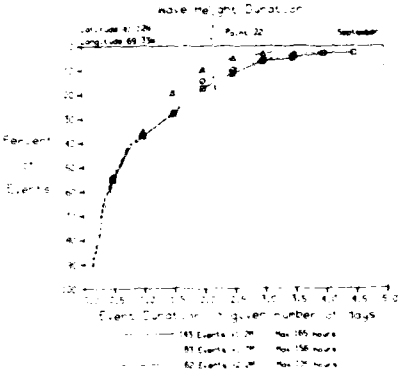

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

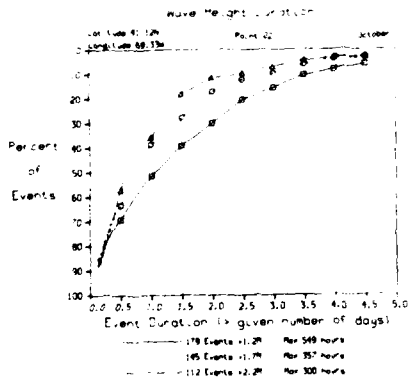

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

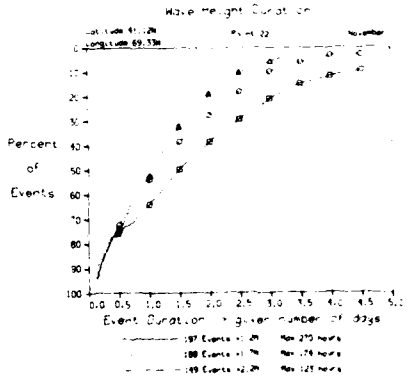

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

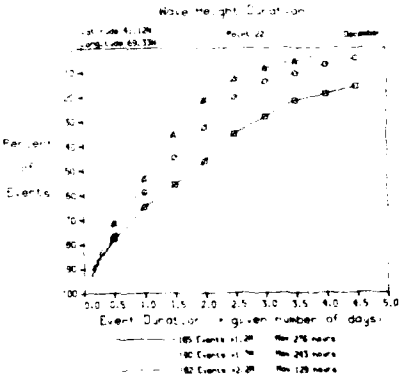

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

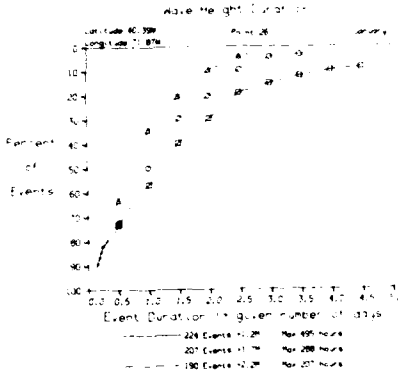

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

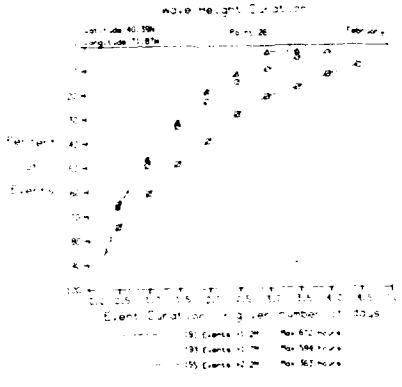

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

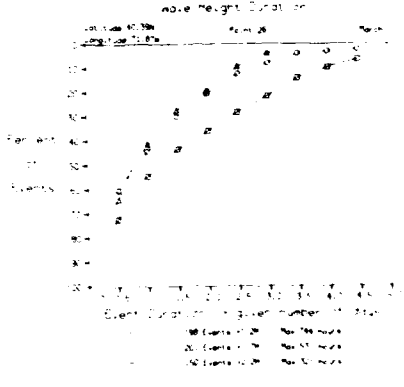

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

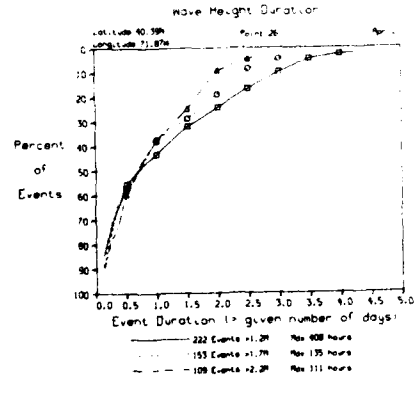

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

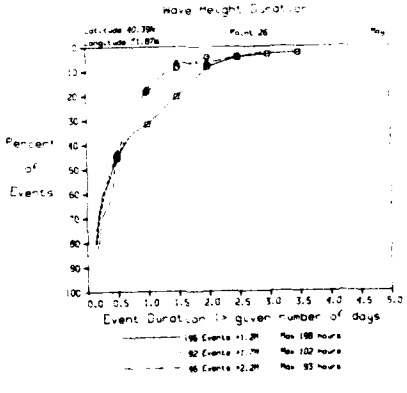

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

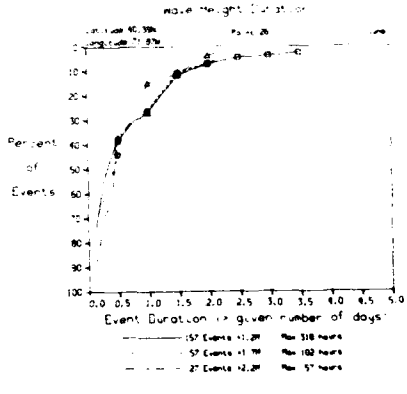


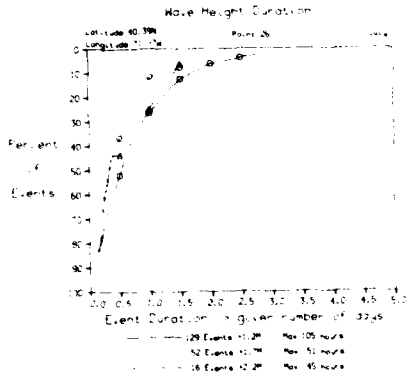


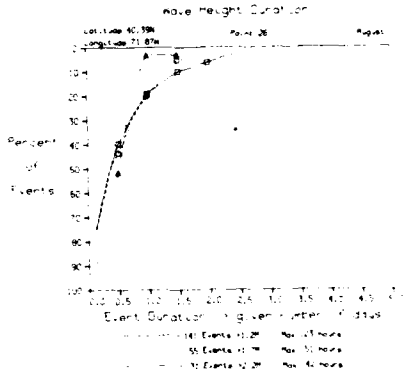


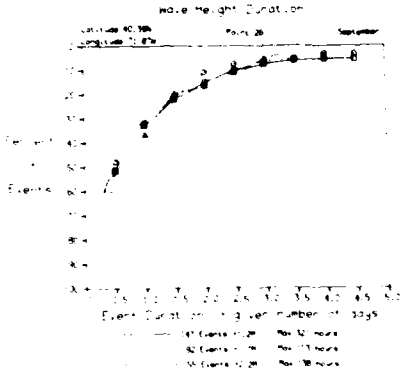

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

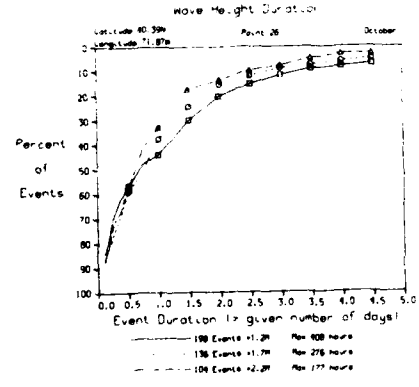

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

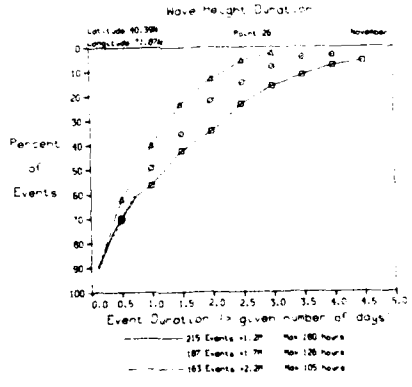

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

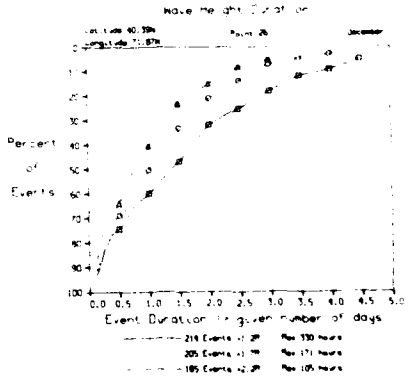

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

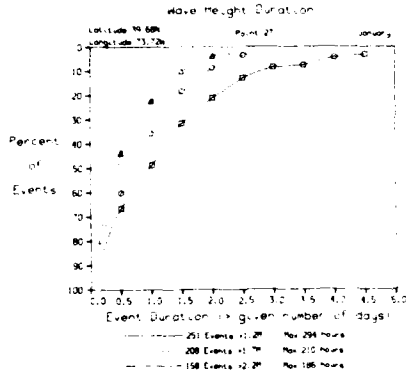

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

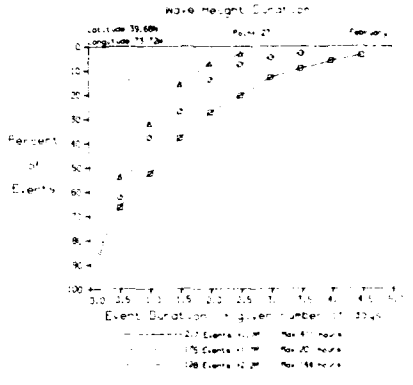

Wave Height Duration
Event Duration (x given number of days)

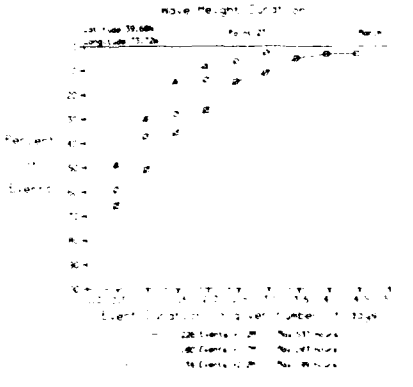

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

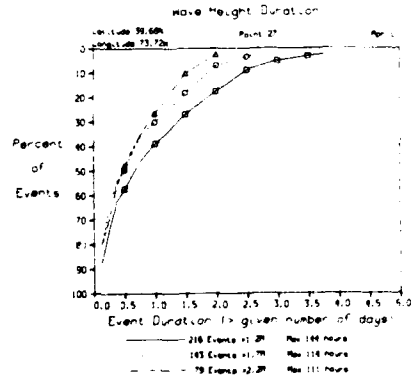

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

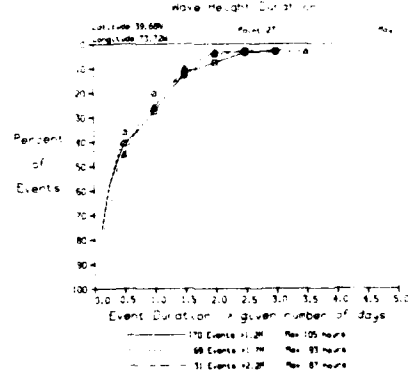

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

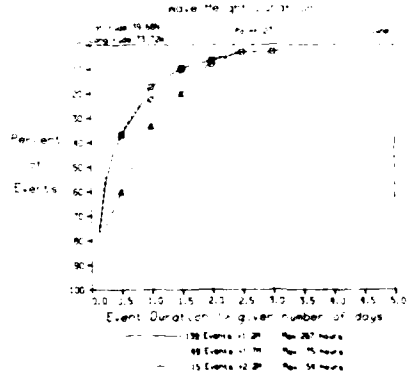

Wave Height Duration
Point 27
January
Percent of Events
Event Duration (> given number of days)

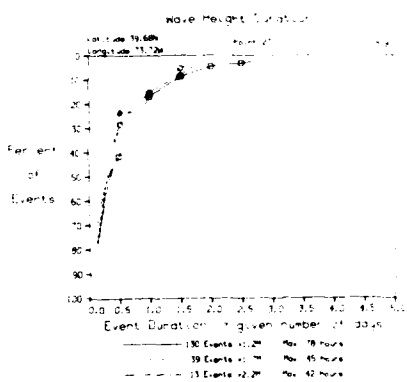

Wave Height Duration
Point 27
February
Percent of Events
Event Duration (> given number of days)

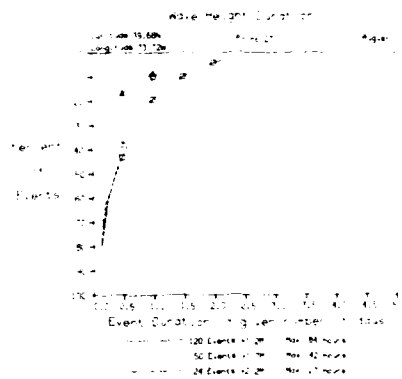

Wave Height Duration
Point 27
Percent of Events

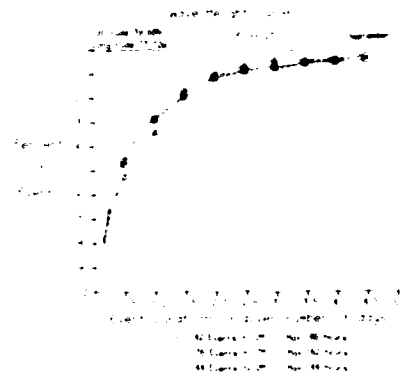

Wave Height Duration
Point 27
Percent of Events
Event Duration (> given number of days)

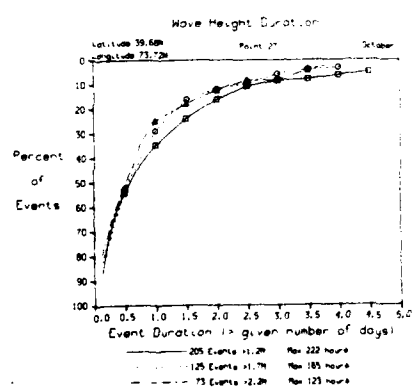

Wave Height Duration
Point 27
Percent of Events
Event Duration (> given number of days)

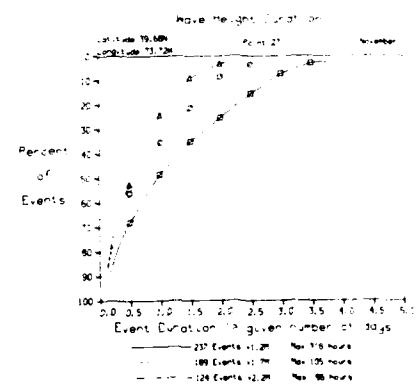

Wave Height Duration
Point 27
Percent of Events
Event Duration (> given number of days)

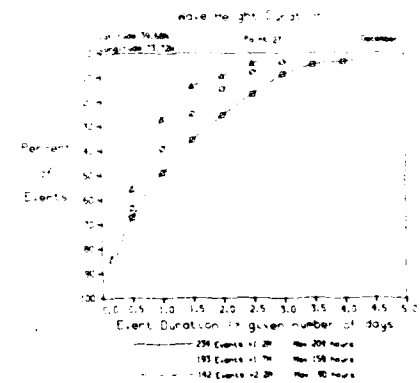


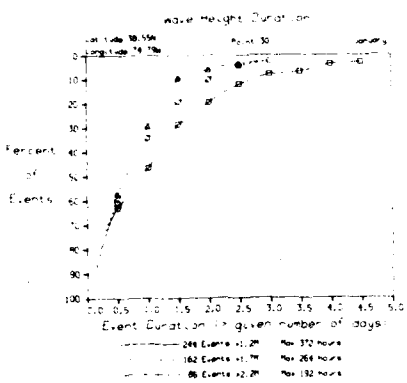


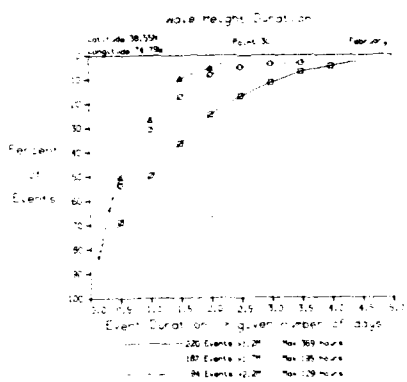


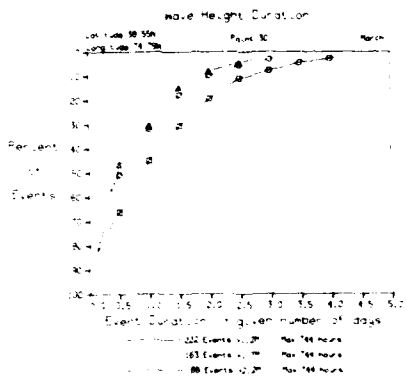

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

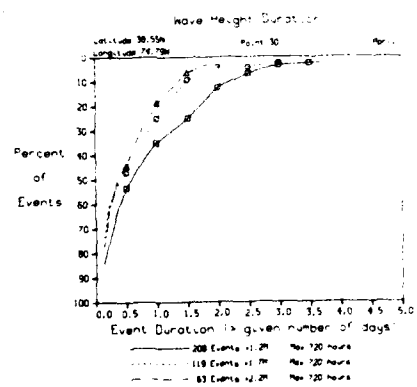


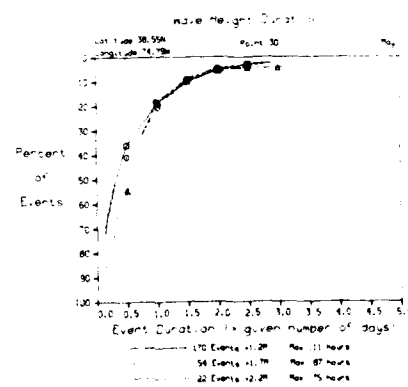


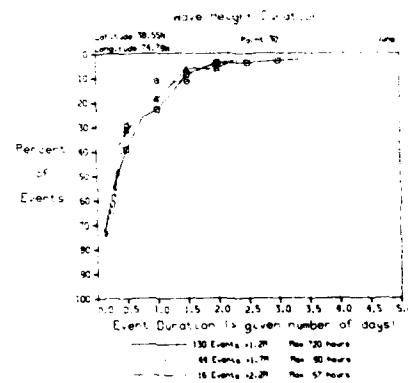

Wave Height Duration
Point 30
Percent of Events
Event Duration (> given number of days)

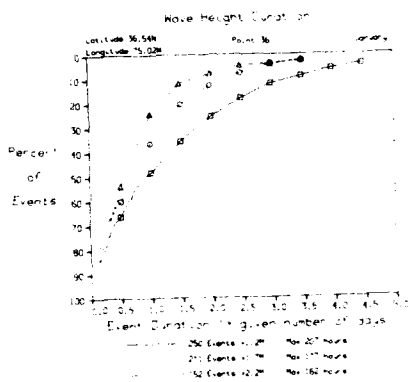

Wave Height Duration
Point 30
Percent of Events
Event Duration (> given number of days)

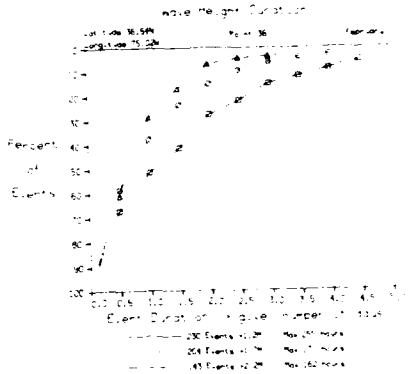

Wave Height Duration
Point 30
Percent of Events
Event Duration (> given number of days)

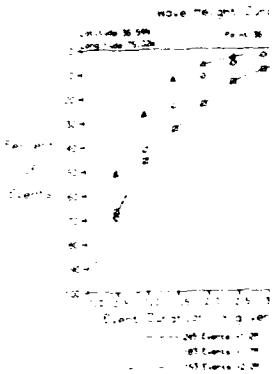

Wave Height Duration
Point 30
Percent of Events
Event Duration (> given number of days)

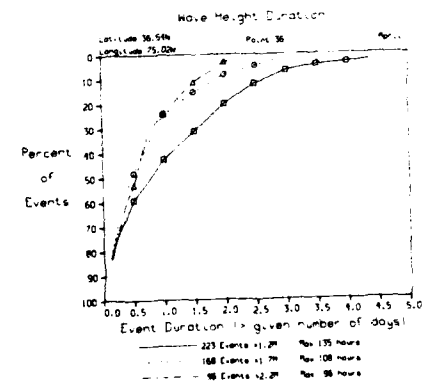

Point 30
Percent of Events
Event Duration (> given number of days)

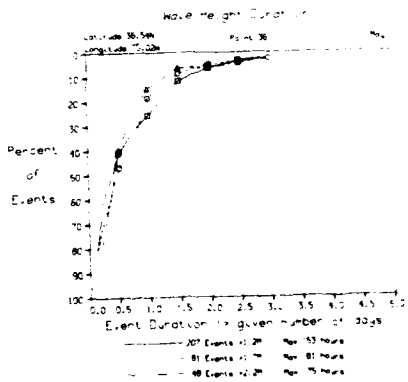

Point 30
Percent of Events
Event Duration (> given number of days)

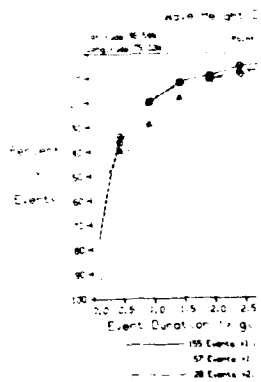

Wave Height Duration
Point 36
Percent of Events
Event Duration (= given number of days)

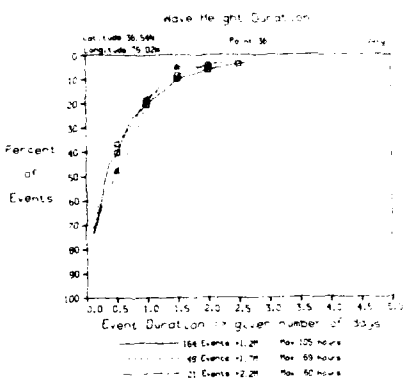

Point 36
Percent of Events

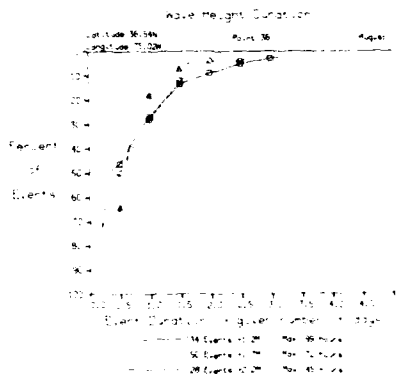

Point 36
Percent of Events

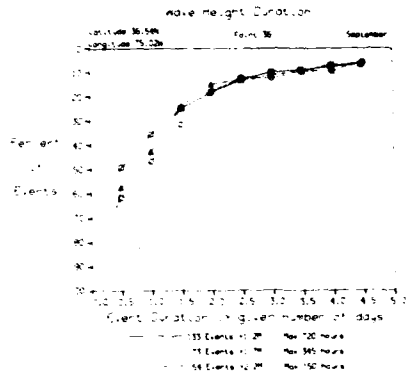

Wave Height Duration
Point 36
Percent of Events
Event Duration (= given number of days)

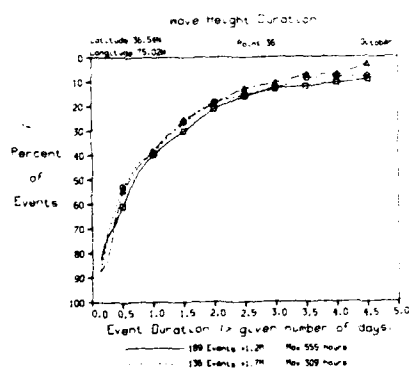

Point 36
Percent of Events
Event Duration (= given number of days)

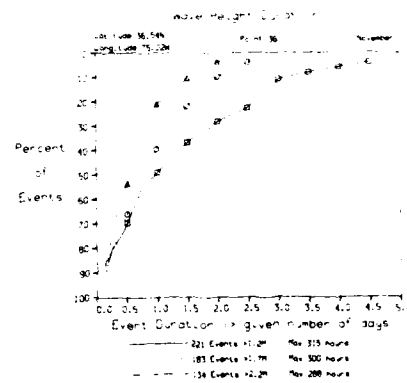

Point 36
Percent of Events

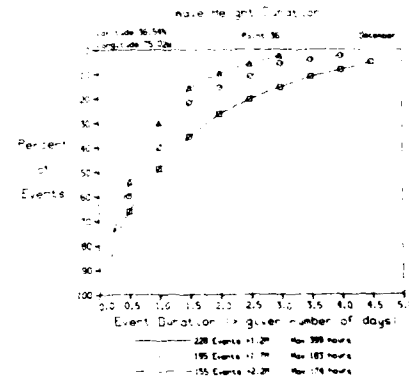

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

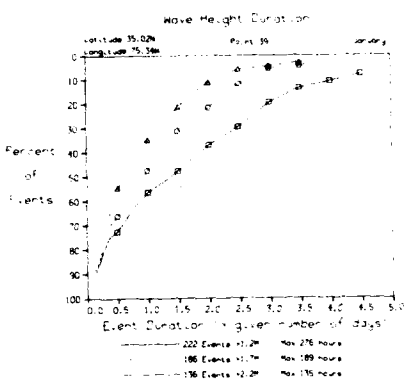

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

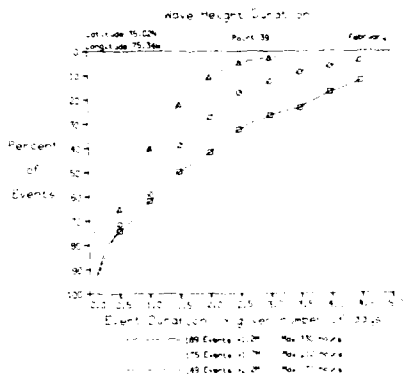

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

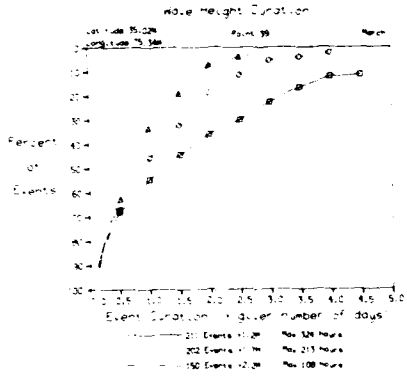

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

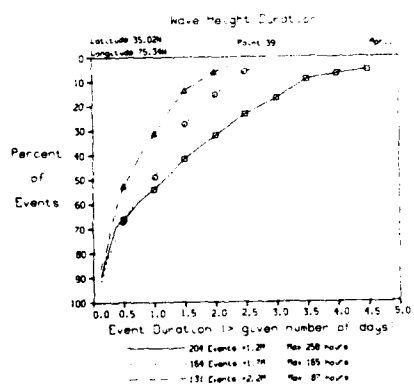

Percent of Events
Event Duration (> given number of days)

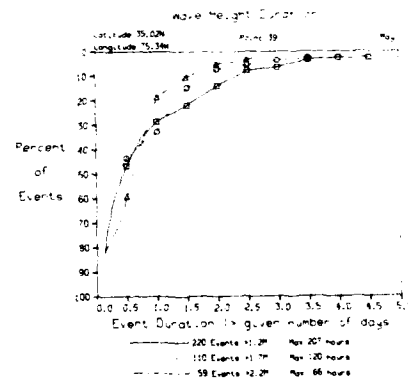

Percent of Events
Event Duration (> given number of days)

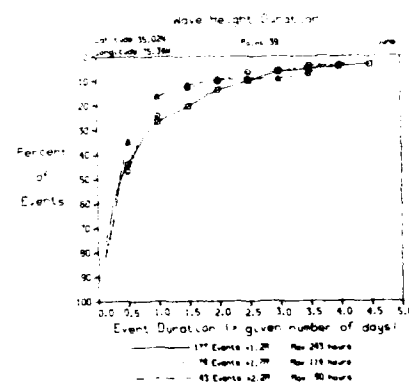

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

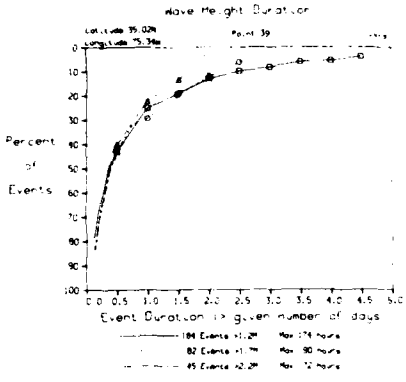

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

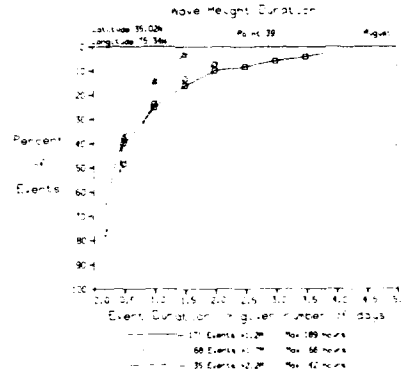

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

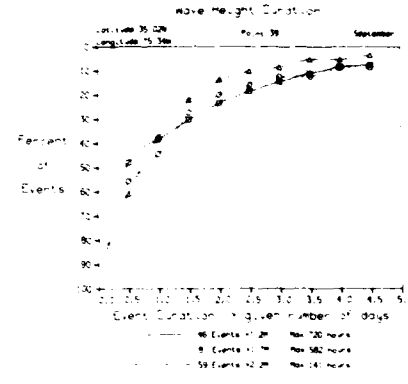

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

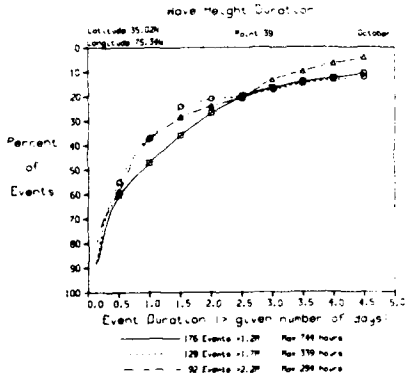

Percent of Events
Event Duration (> given number of days)

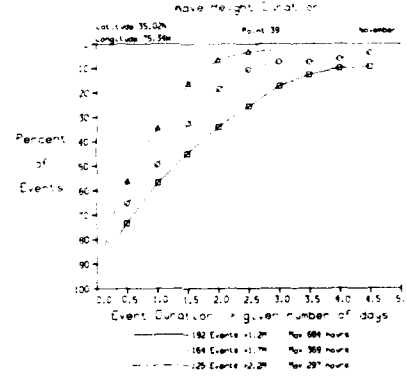

Percent of Events
Event Duration (> given number of days)

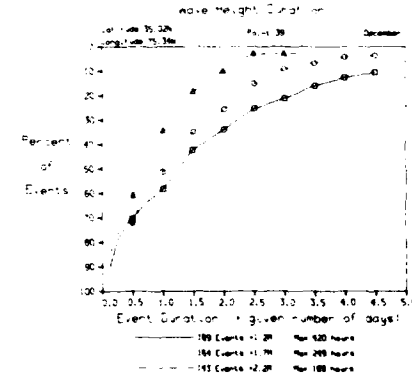

Wave Height Duration
Percent of Events
Event Duration => given number of days

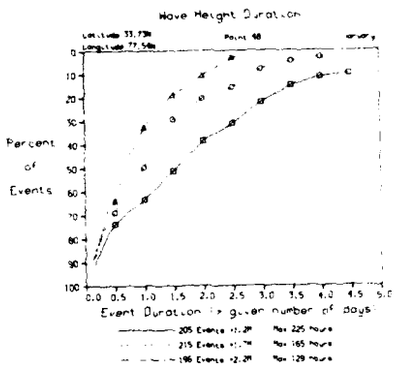

Wave Height Duration
Percent of Events
Event Duration => given number of days

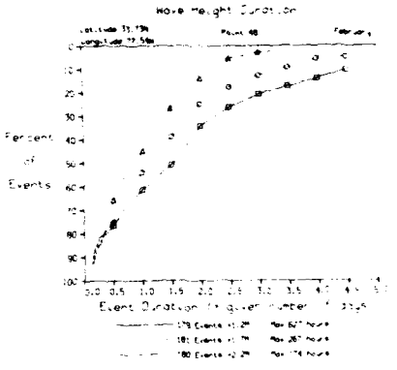

Wave Height Duration
Percent of Events
Event Duration => given number of days

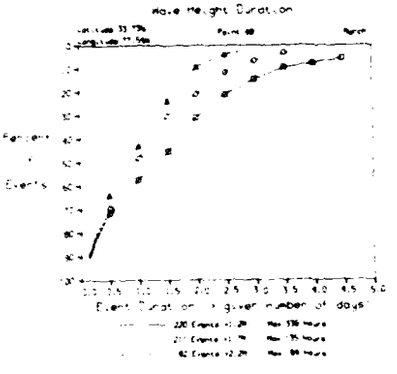

Wave Height Duration
Percent of Events
Event Duration => given number of days

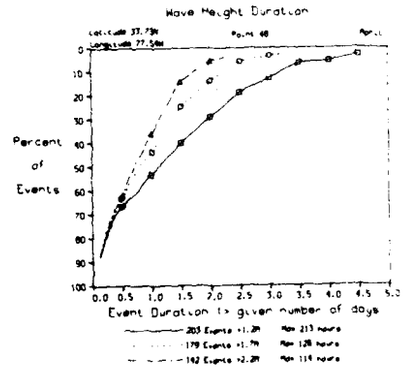

Wave Height Duration
Percent of Events
Event Duration => given number of days

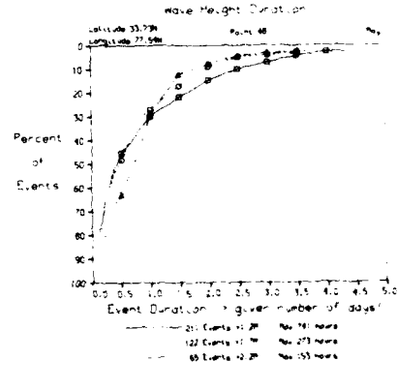

Wave Height Duration
Percent of Events
Event Duration => given number of days

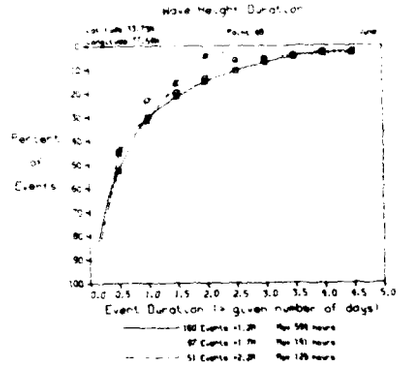

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

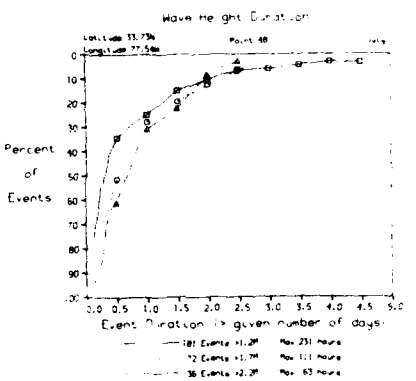

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

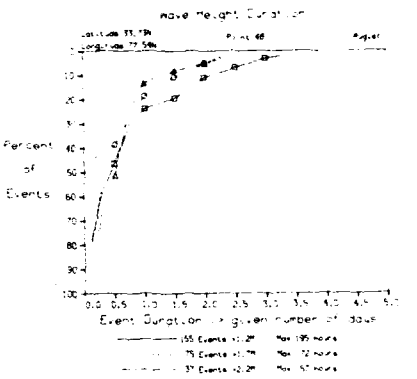

Wave Height Duration
Event Duration (> given number of days)

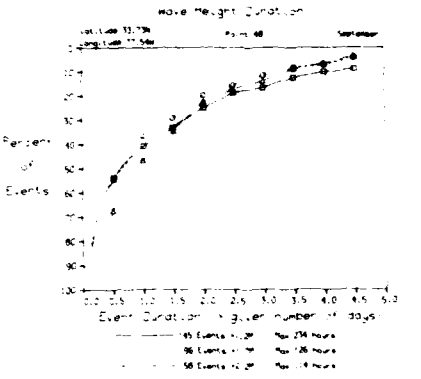

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

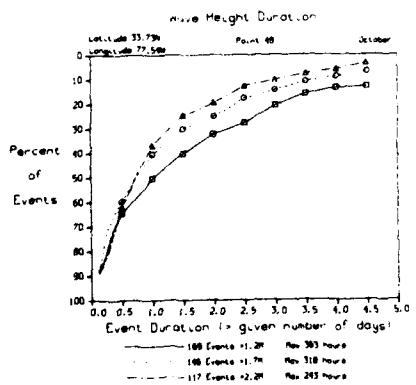

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

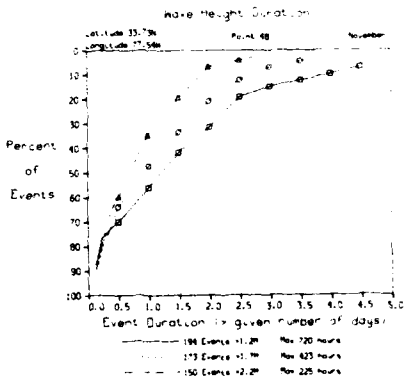

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

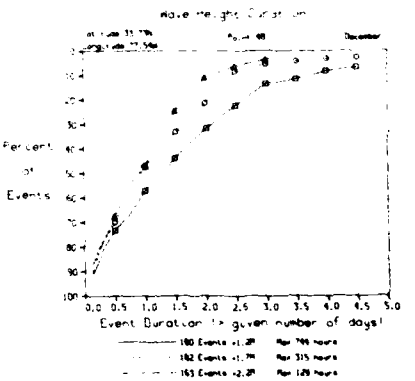

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

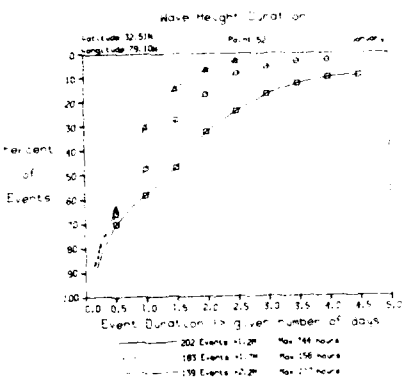

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

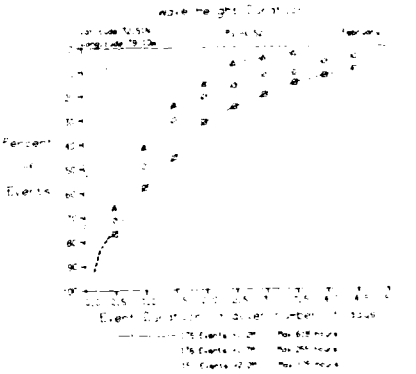

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

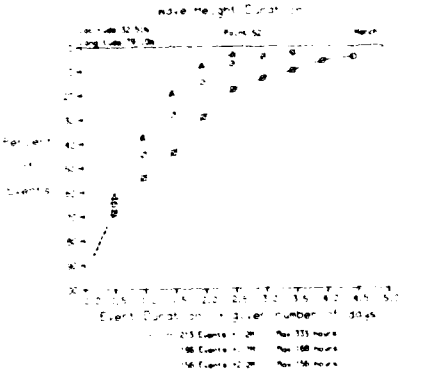

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

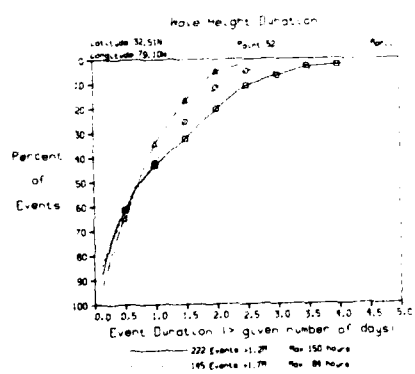

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

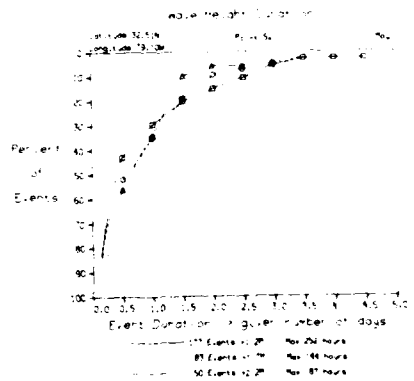

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

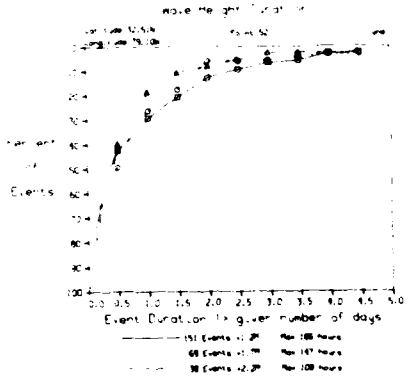

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

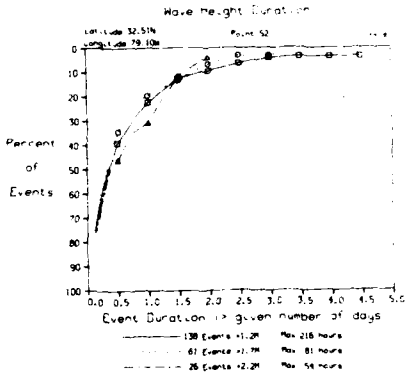

Percent of Events
Event Duration (> given number of days)

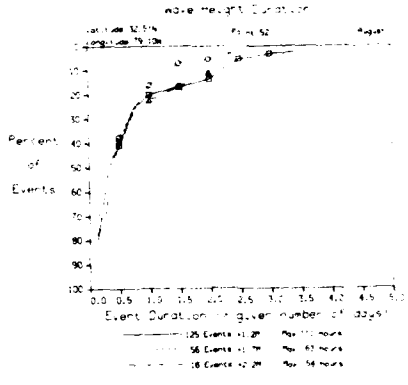

Percent of Events
Event Duration (> given number of days)

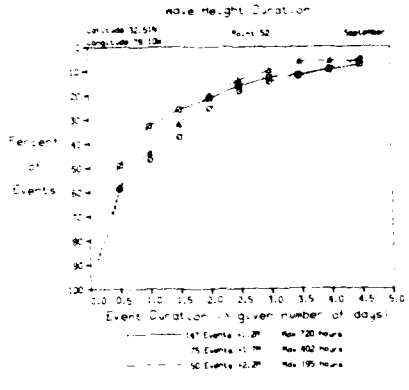

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

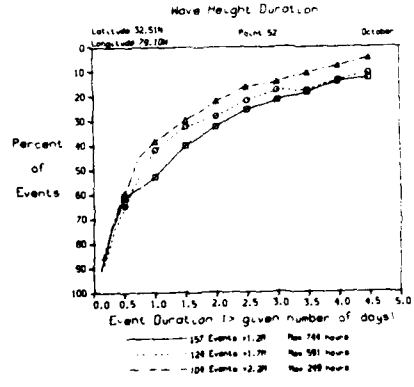

Percent of Events
Event Duration (> given number of days)

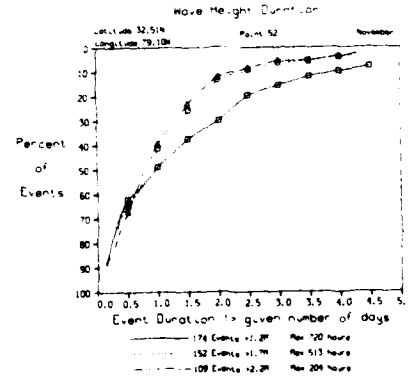

Percent of Events
Event Duration (> given number of days)

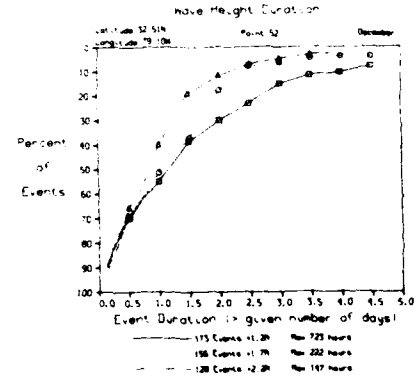

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

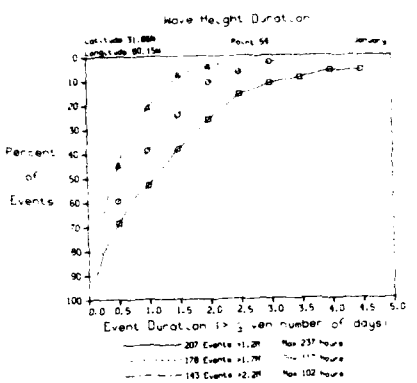

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

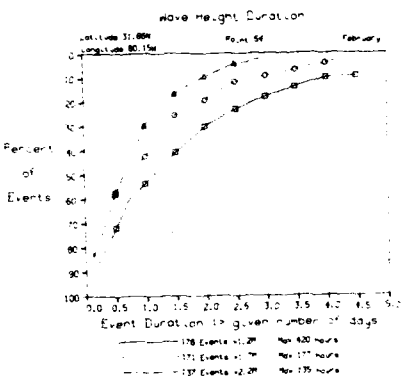

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

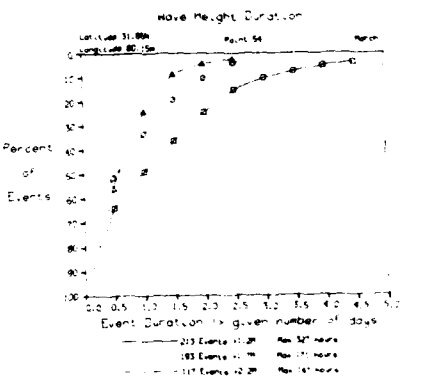

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

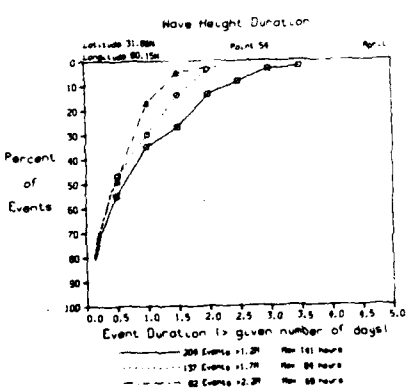

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

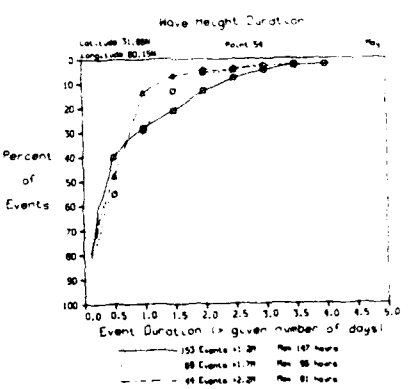

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

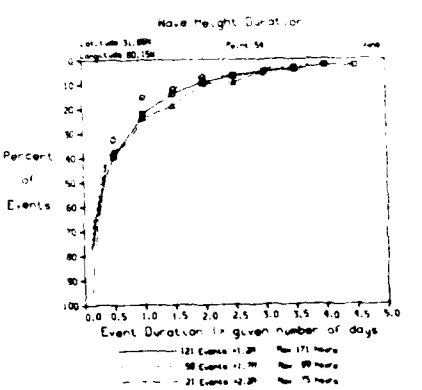

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

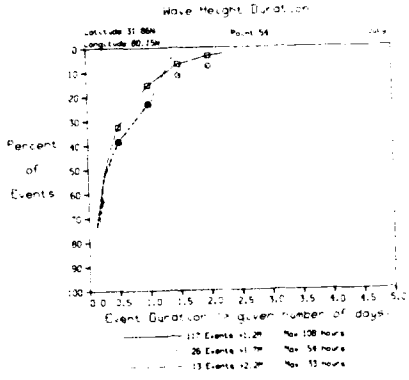

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

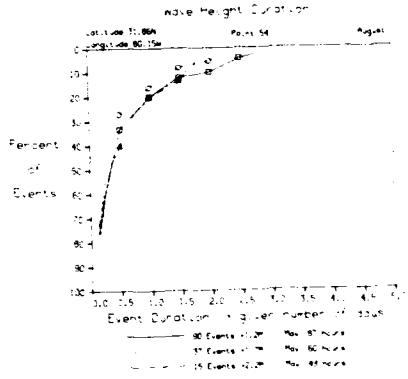

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

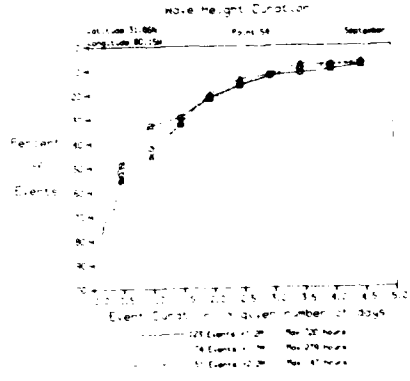

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

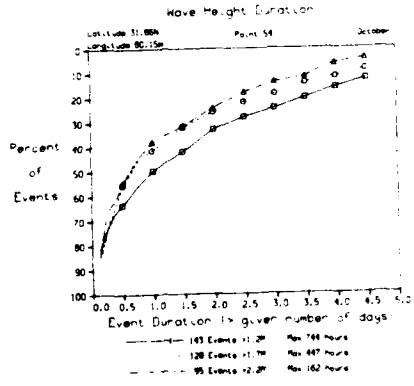

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

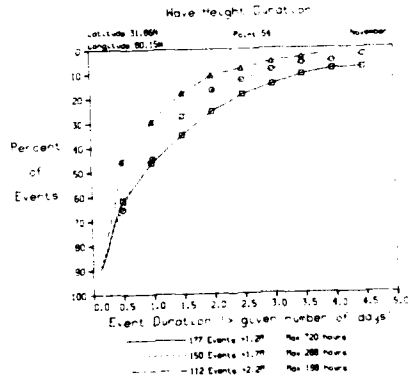

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

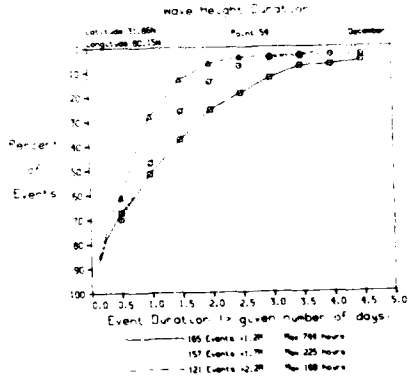

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

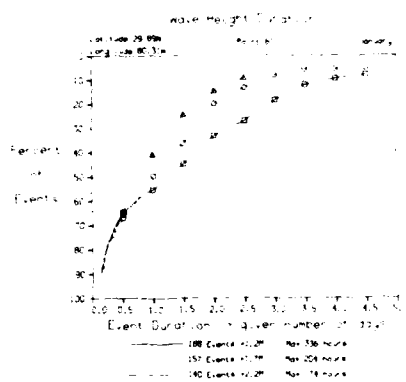

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

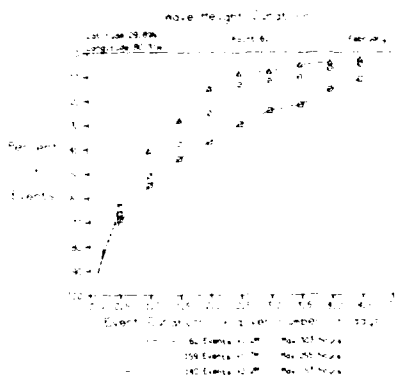

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

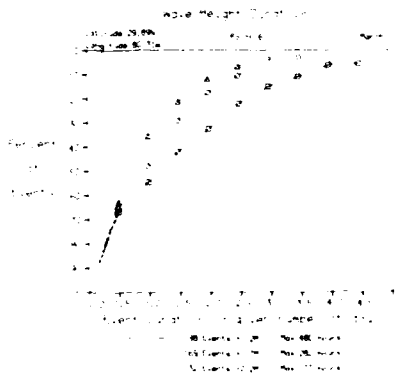

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

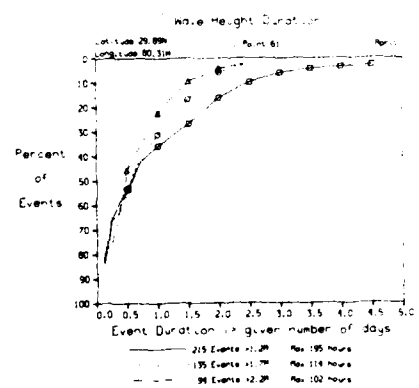

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

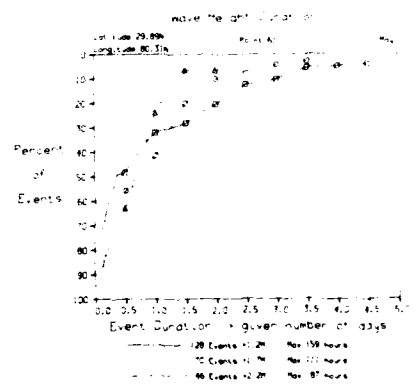

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

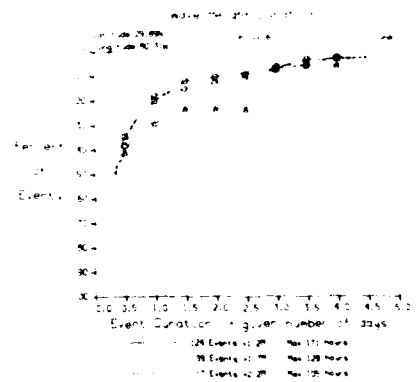


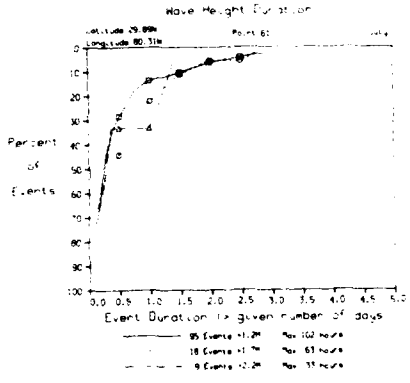


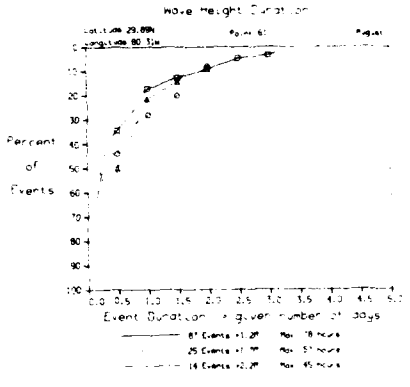


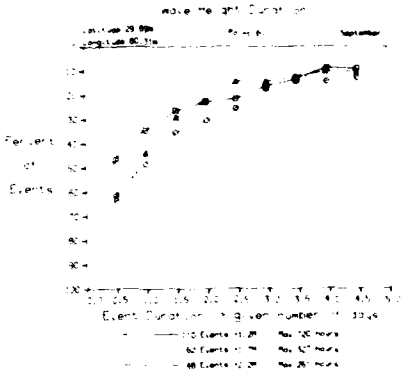

Wave Height Duration
Percent of Events
Event Duration > given number of days

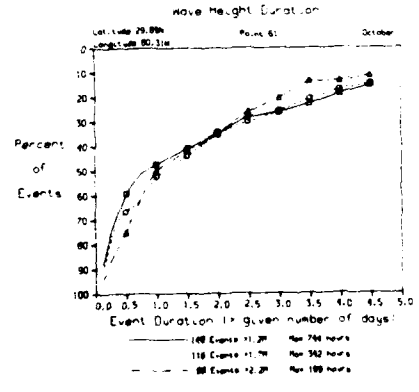


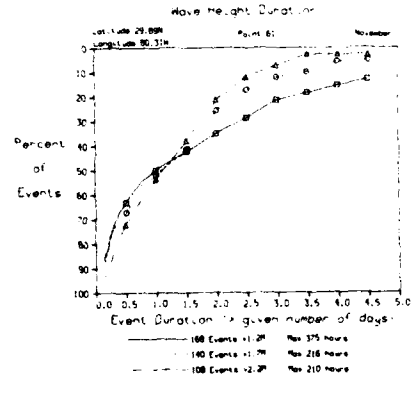


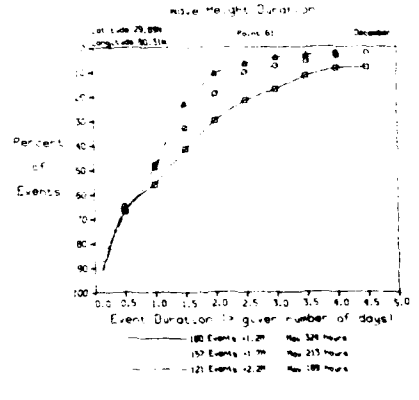

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

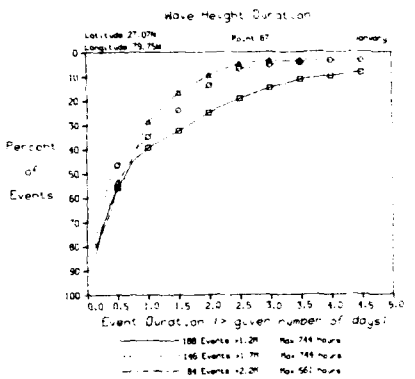

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

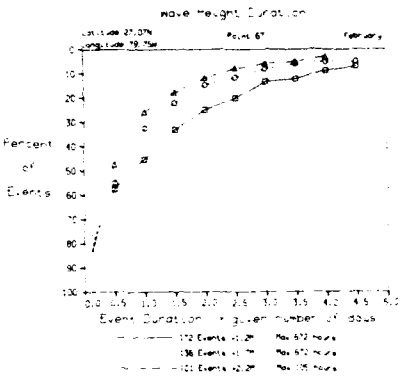

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

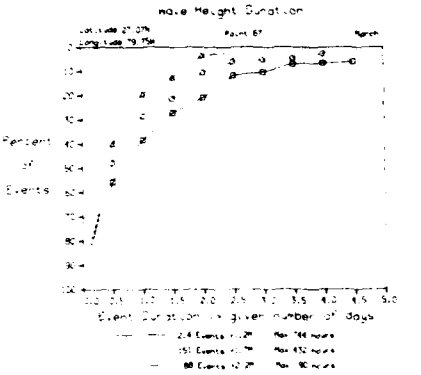

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

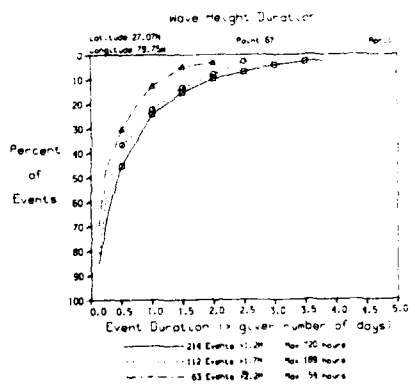

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

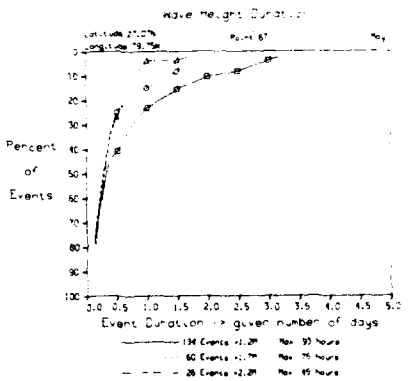

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

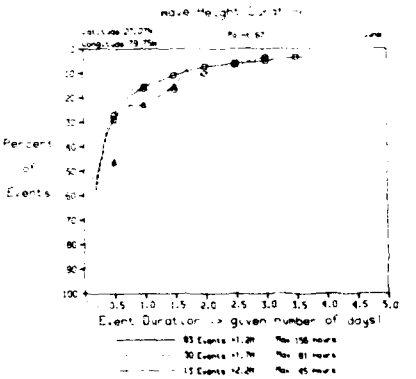

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

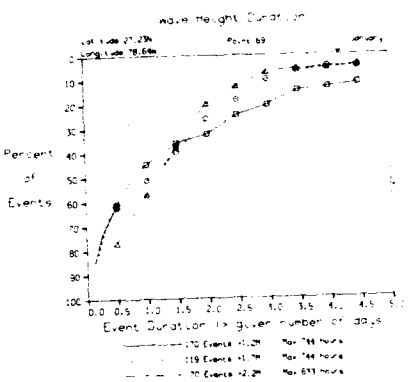

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

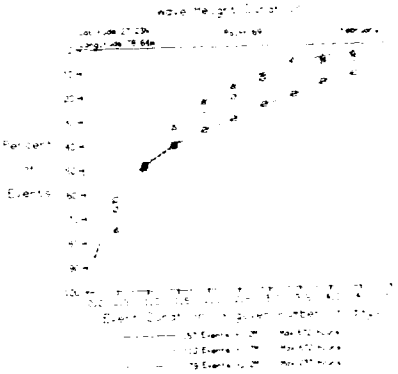

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)

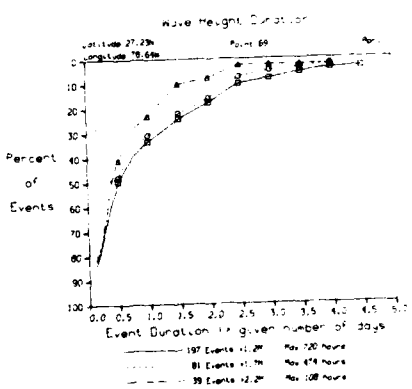

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

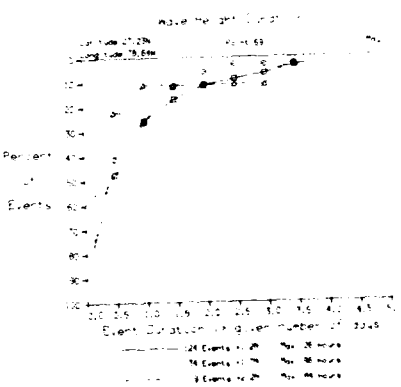

Percent of Events
Event Duration (> given number of days)

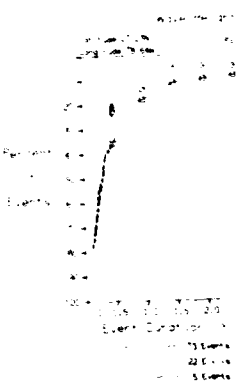

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

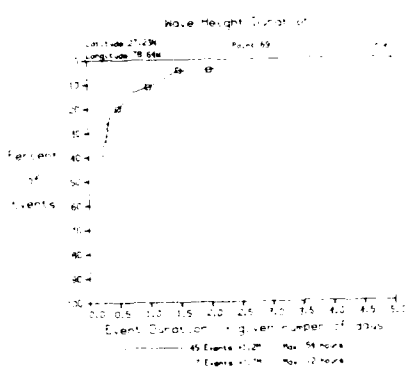


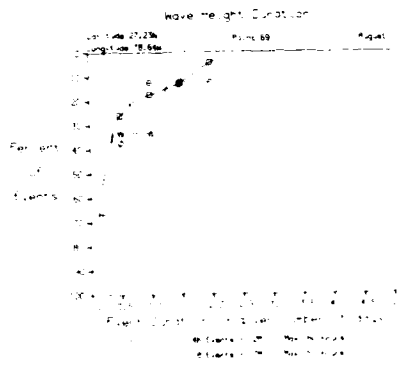


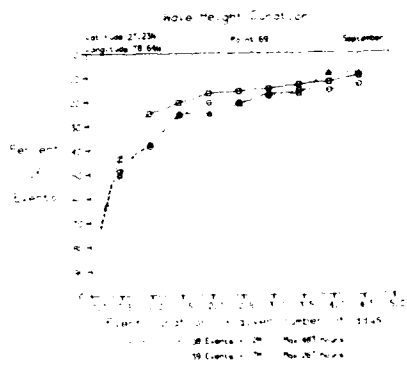

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

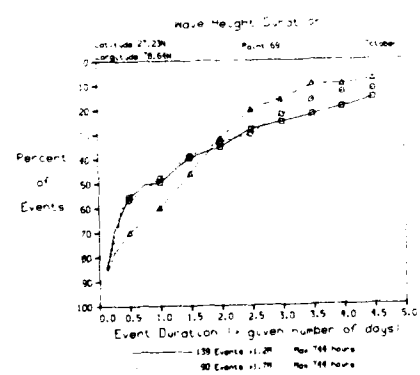


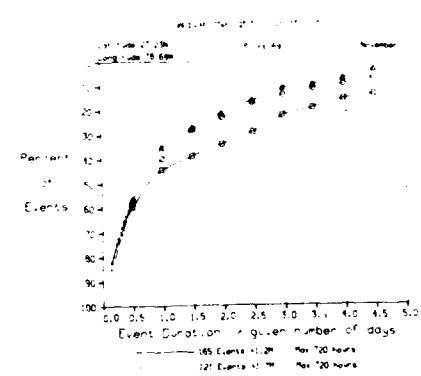


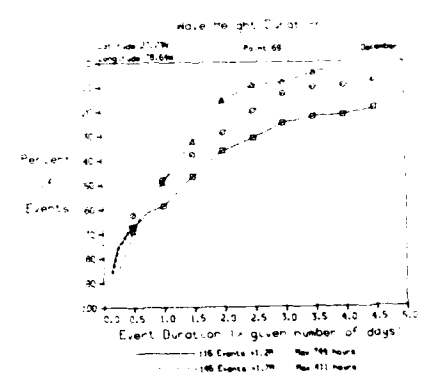


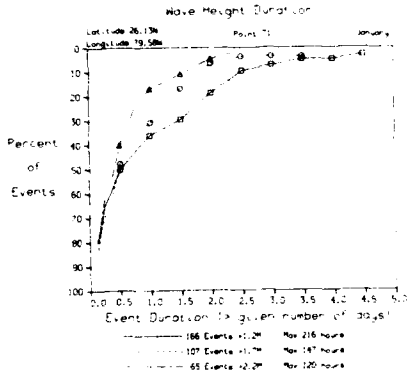


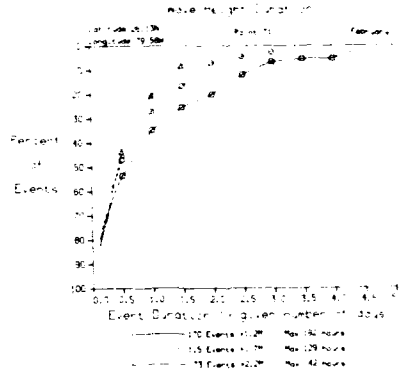


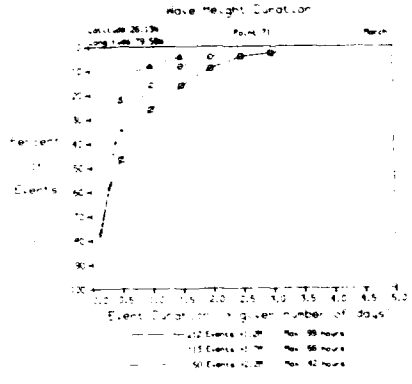

Percent
of
Events
Event Duration for given number of days

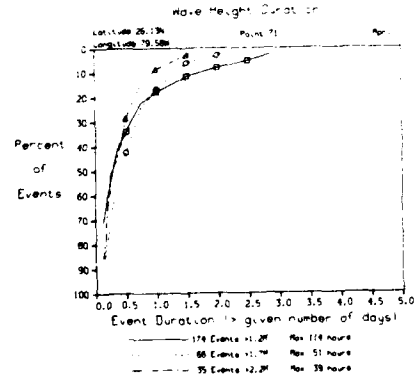

Percent
of
Events
Event Duration for given number of days

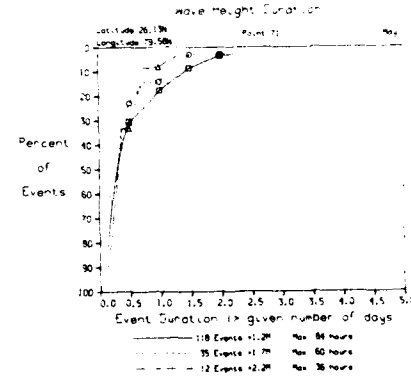

Percent
of
Events
Event Duration for given number of days

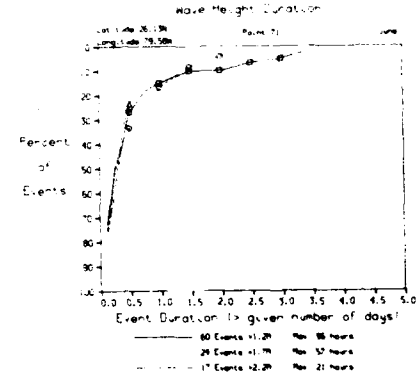

Wave Height Duration
Point 71
January
Percent of Events
Event Duration (> given number of days)

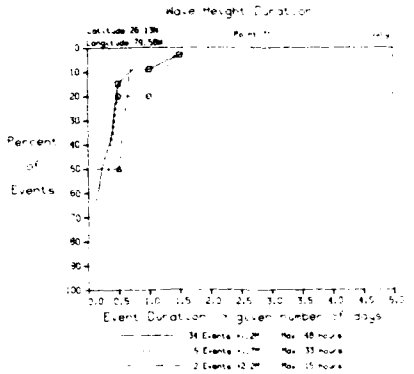

Wave Height Duration
Point 71
Percent of Events
Event Duration (> given number of days)

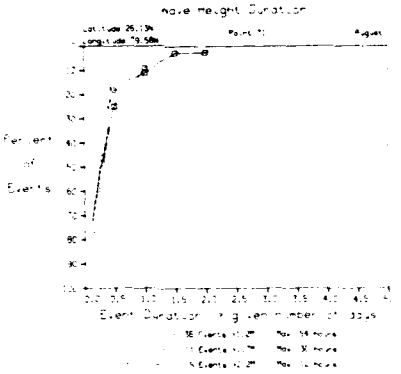

Wave Height Duration
Point 71
Percent of Events
Event Duration (> given number of days)

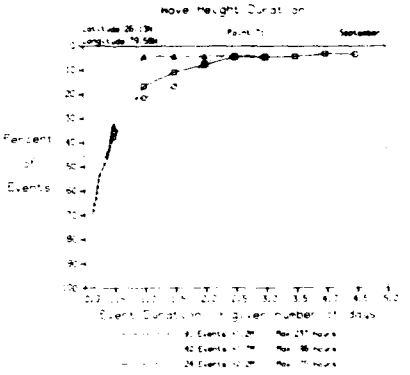

Wave Height Duration
Point 71
Percent of Events
Event Duration (> given number of days)

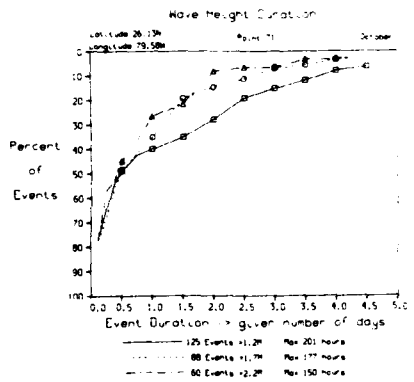

Wave Height Duration
Point 71
Percent of Events
Event Duration (> given number of days)

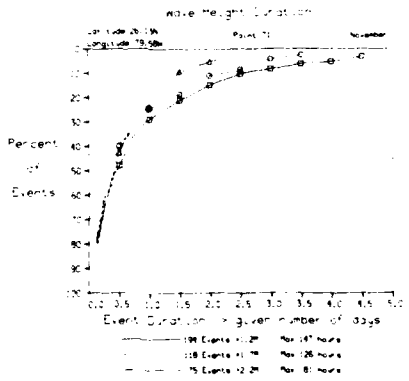

Wave Height Duration
Point 71
Percent of Events
Event Duration (> given number of days)

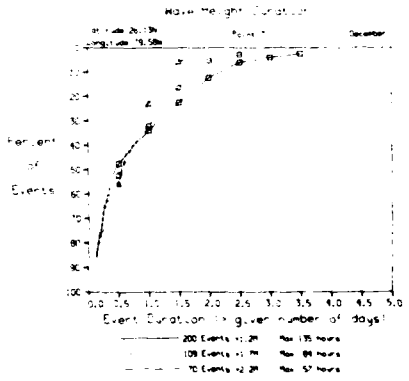

Wave Height Duration
Percent of Events
Event Duration = given number of days

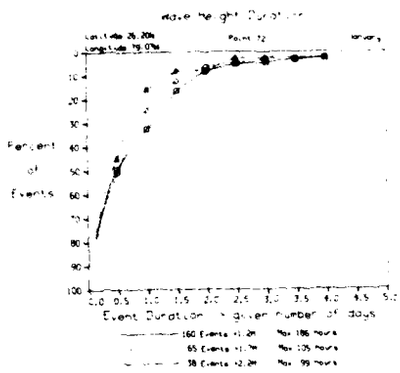

Wave Height Duration
Percent of Events
Event Duration = given number of days

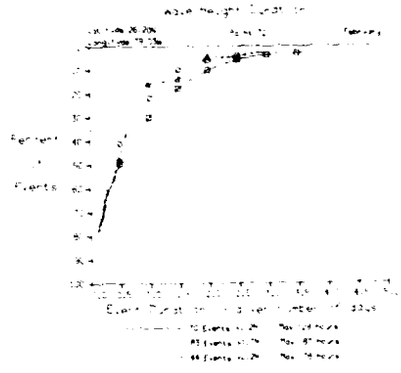

Wave Height Duration
Percent of Events
Event Duration = given number of days

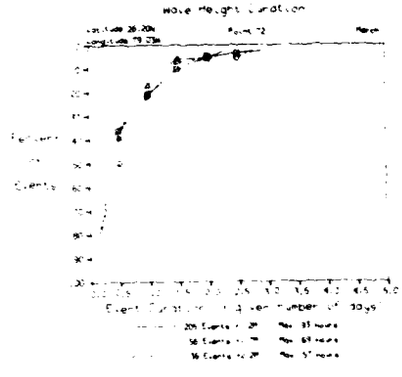

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration = given number of days

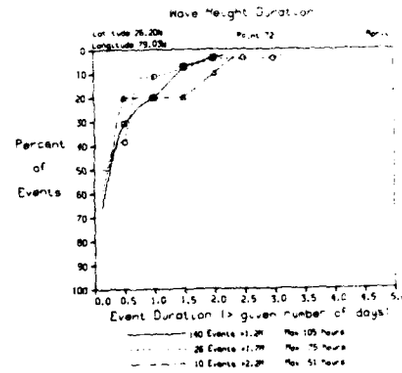

Wave Height Duration
Percent of Events
Event Duration = given number of days

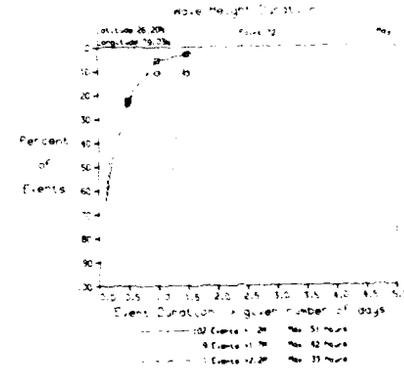

Wave Height Duration
Percent of Events
Event Duration = given number of days

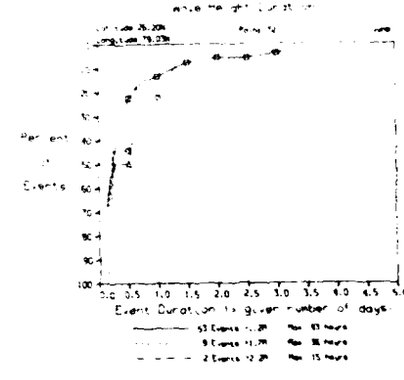

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

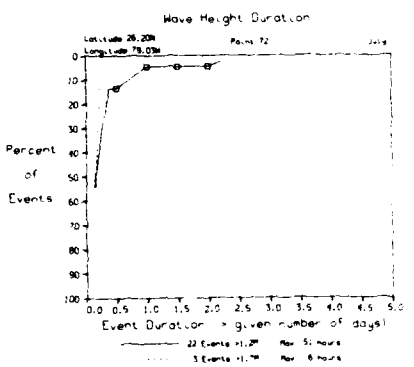

Percent of Events

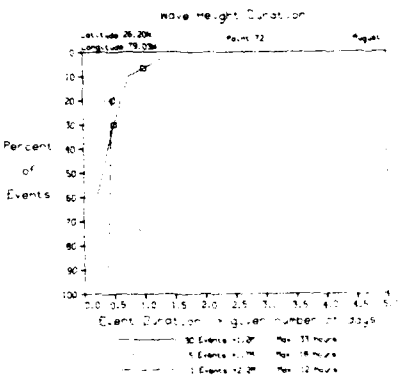

Wave Height Duration
Percent of Events

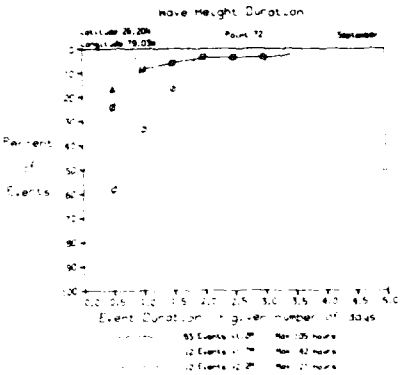

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

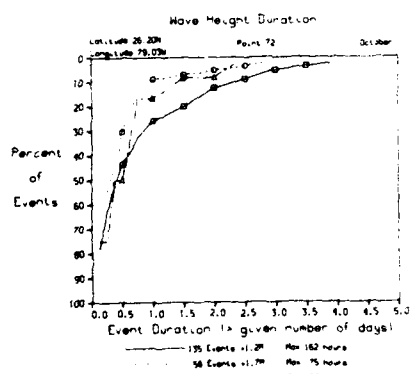

Percent of Events
Event Duration (> given number of days)

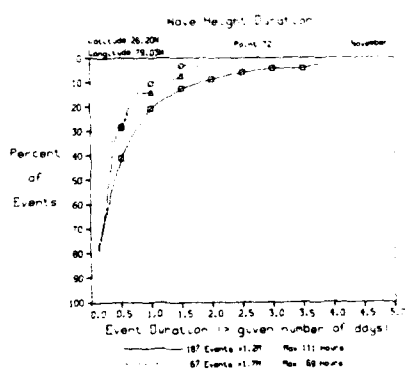

Percent of Events
Event Duration (> given number of days)

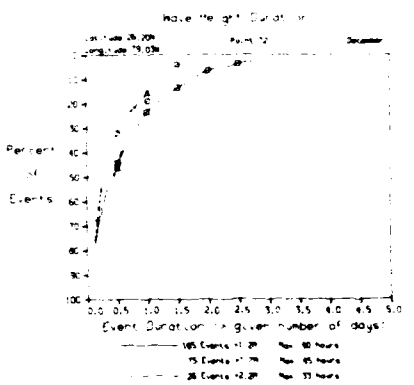

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

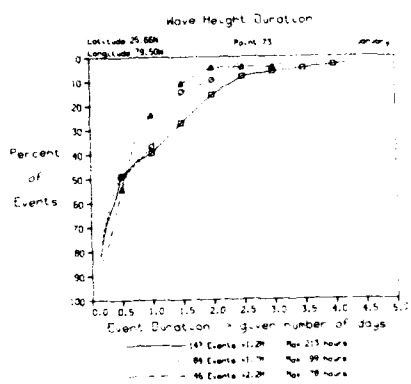

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

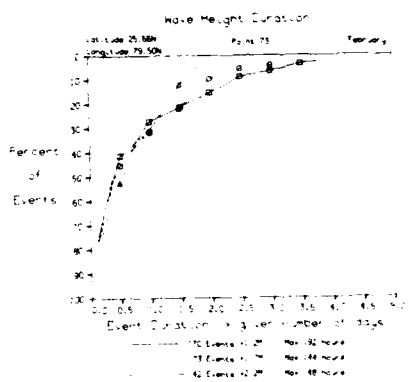

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

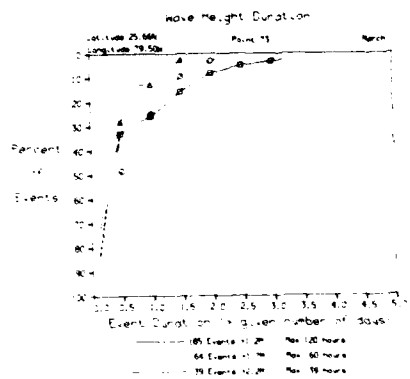

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

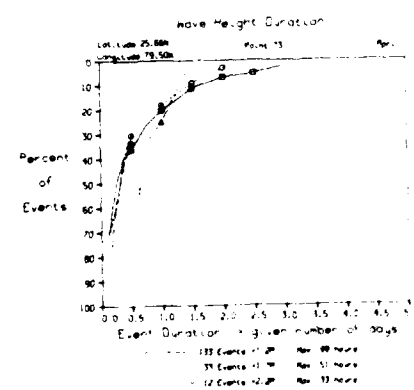

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

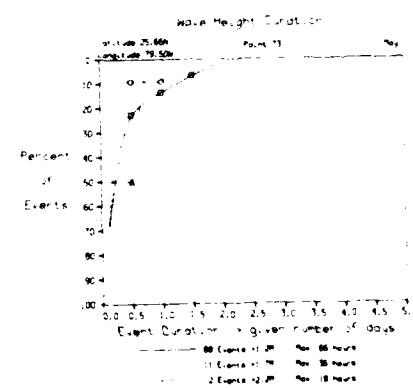

Percent of Events
Event Duration (> given number of days)

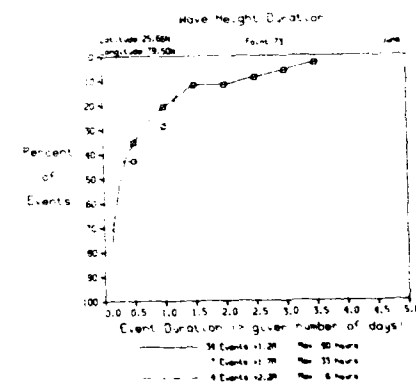

Wave Height Duration
Percent of Events
Event Duration => given number of days

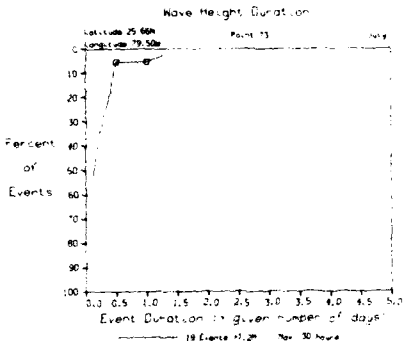

Wave Height Duration
Percent of Events
Event Duration => given number of days

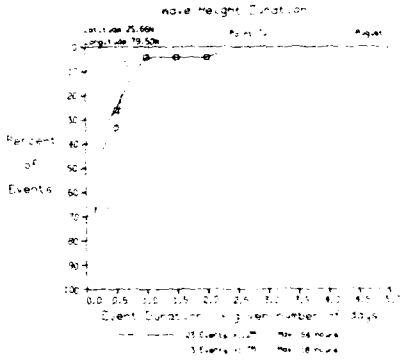

Wave Height Duration
Percent of Events
Event Duration => given number of days

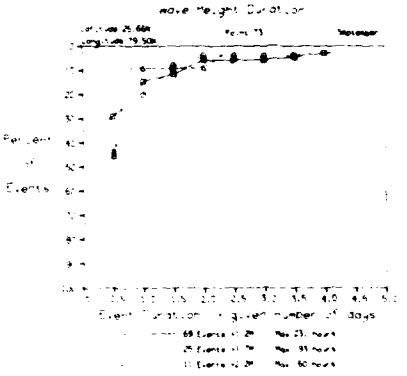

Wave Height Duration
Percent of Events
Event Duration => given number of days

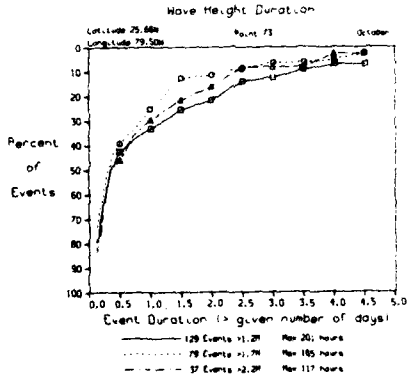

Wave Height Duration
Percent of Events
Event Duration => given number of days

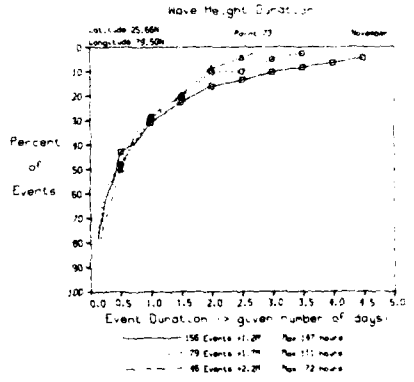

Wave Height Duration
Percent of Events
Event Duration => given number of days

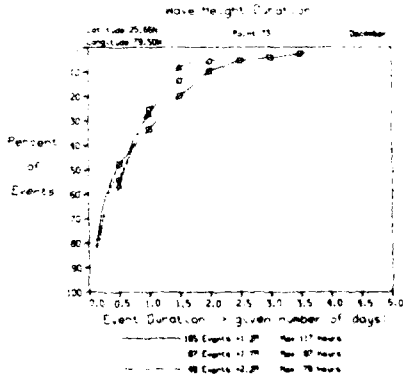

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

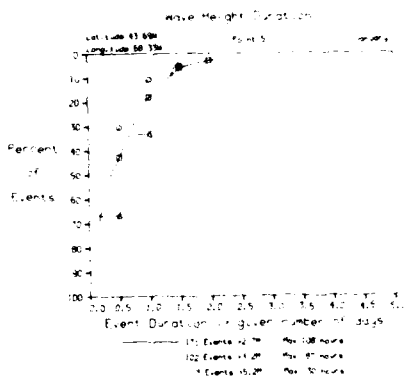

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

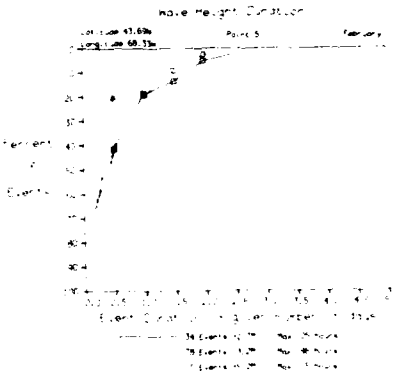

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

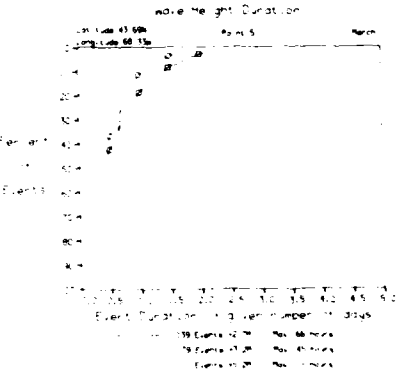

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

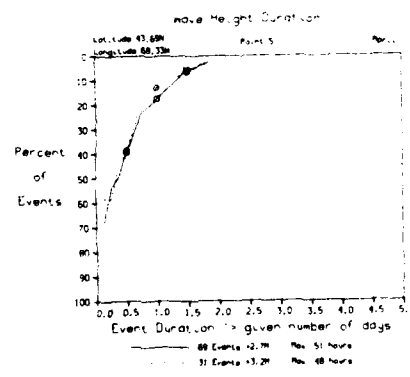

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

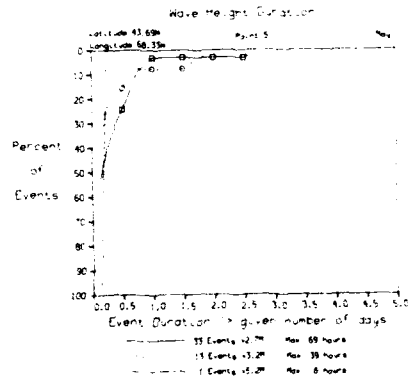

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

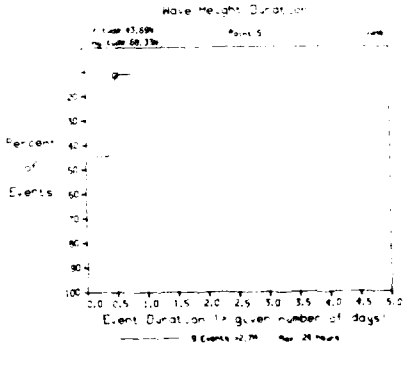

Wave Height Duration
Percent of Events
Event Duration in given number of days

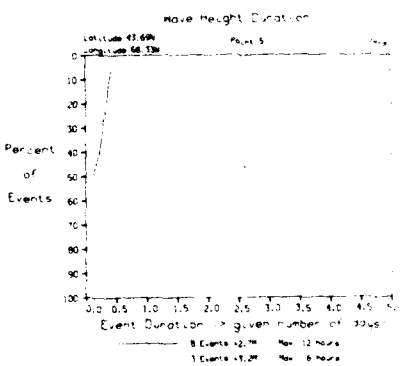

Wave Height Duration
Percent of Events

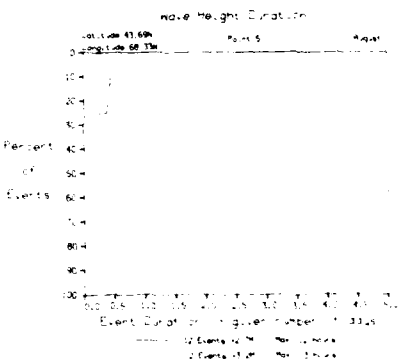

Wave Height Duration
Percent of Events

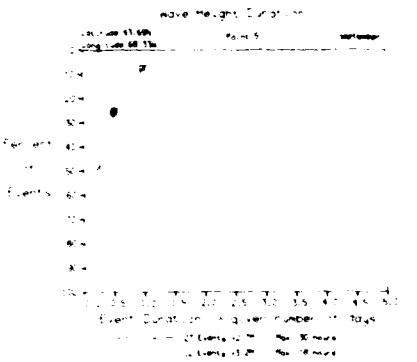

Wave Height Duration
Percent of Events
Event Duration in given number of days

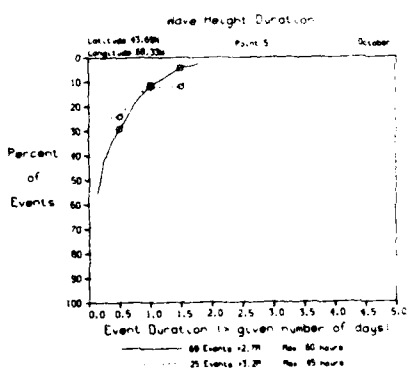

Wave Height Duration
Percent of Events
Event Duration in given number of days

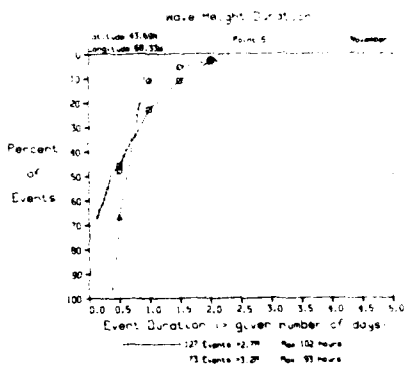

Wave Height Duration
Percent of Events
Event Duration in given number of days

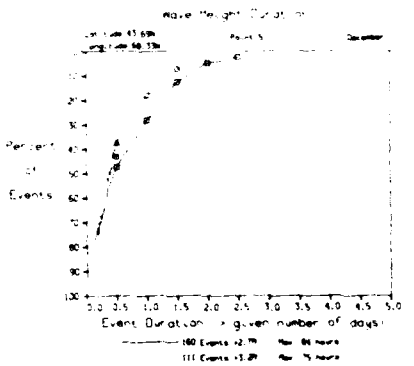

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

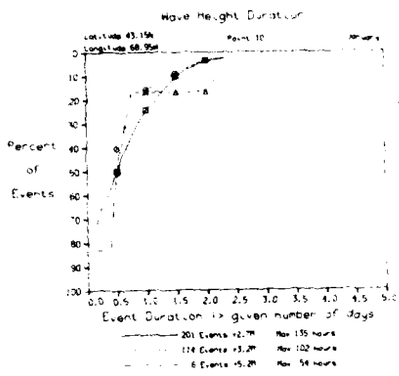

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

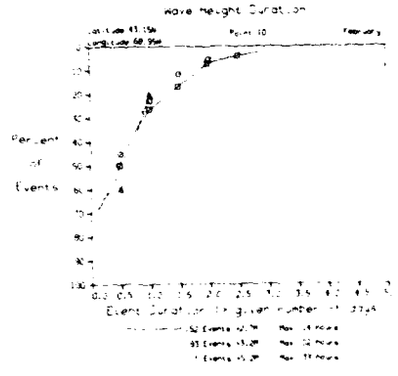

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

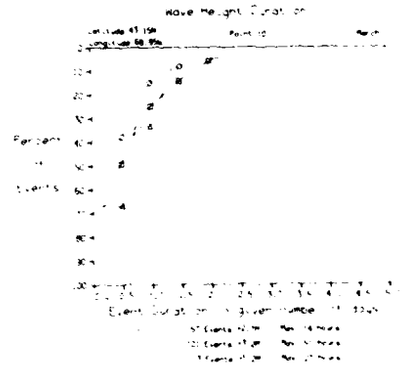

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

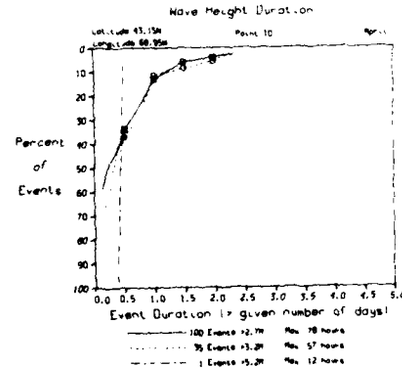

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

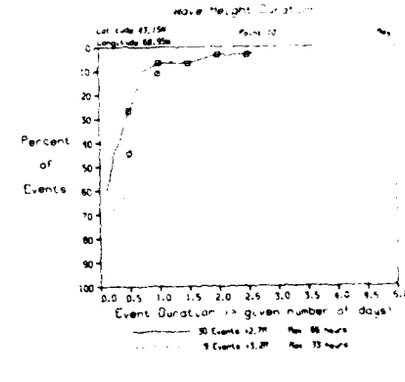

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

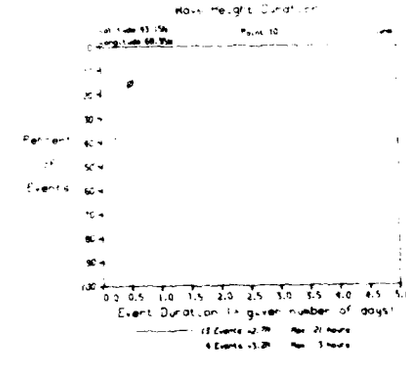

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

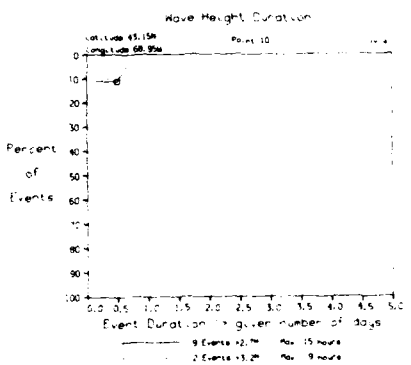

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

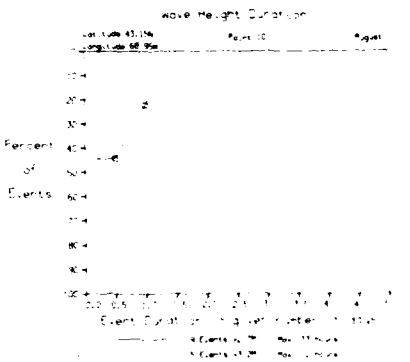

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

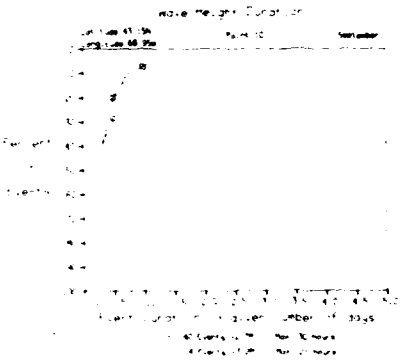

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

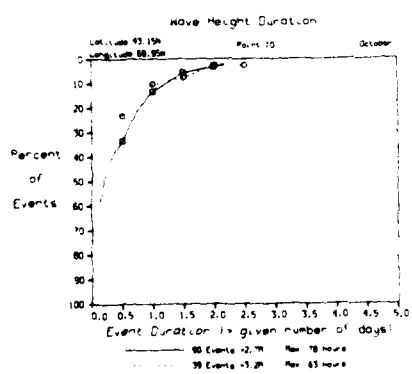

Percent of Events
Event Duration (> given number of days)

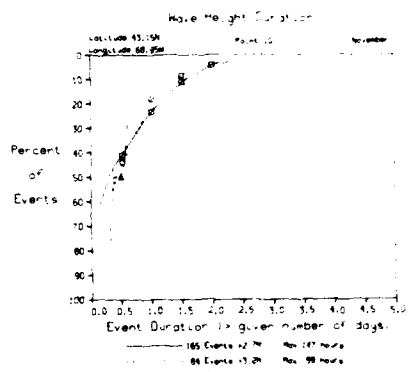

Percent of Events
Event Duration (> given number of days)

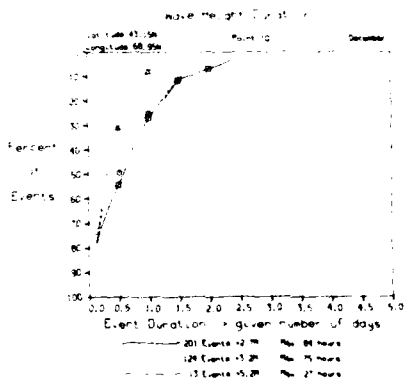

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

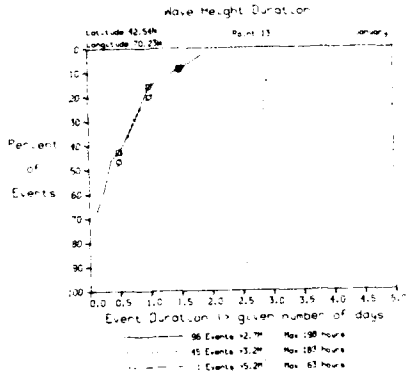

Wave Height Duration
Percent of Events

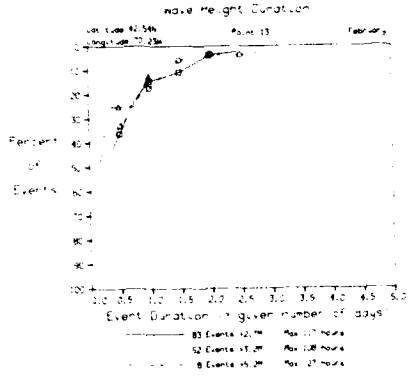

Wave Height Duration

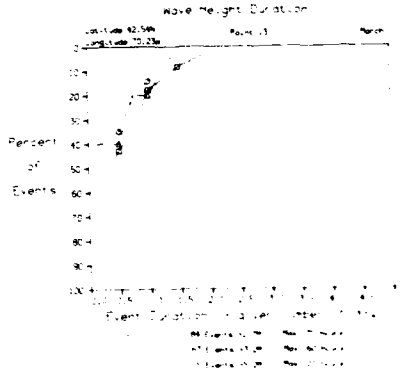

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

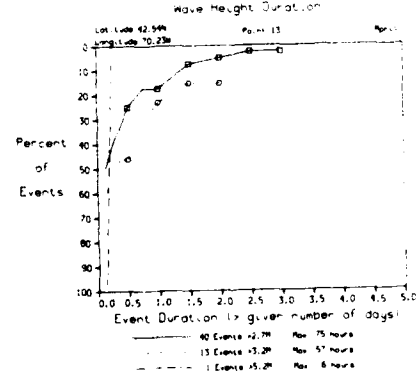

Percent of Events

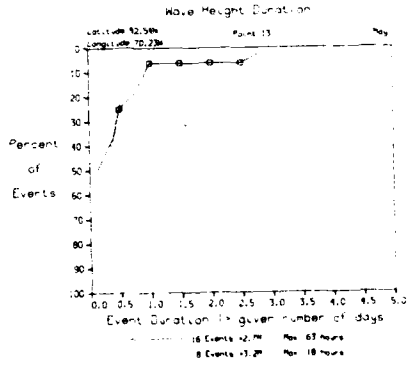

Percent of Events

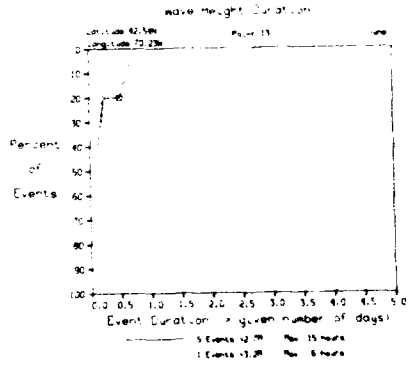

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

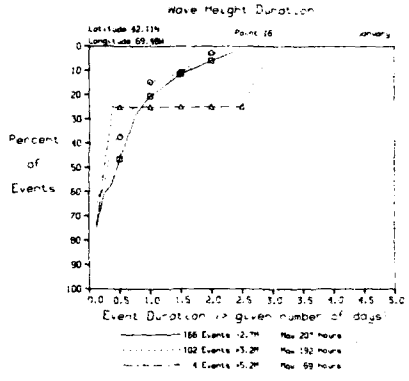

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

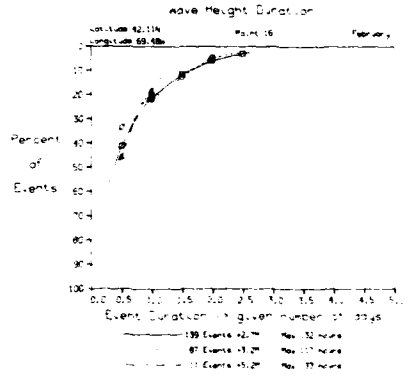

Wave Height Duration
Percent of Events

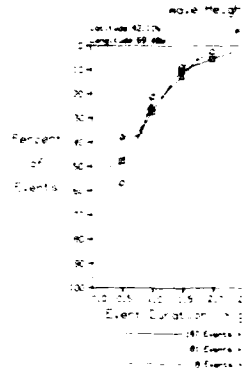

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

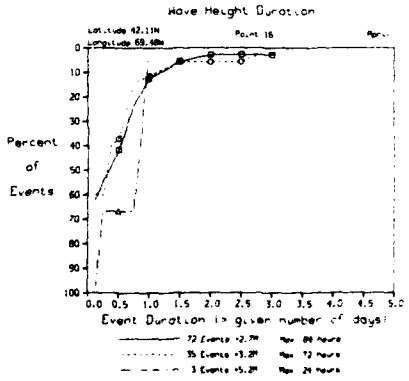

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

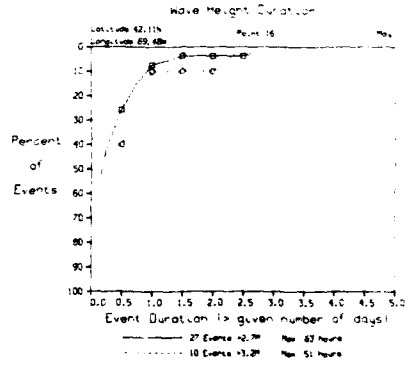

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

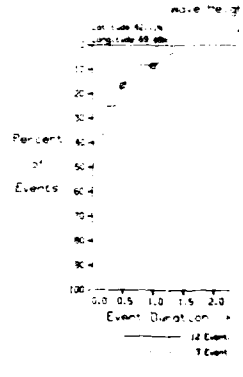

Wave Height Duration
Point 16
Percent of Events
Event Duration (> given number of days)

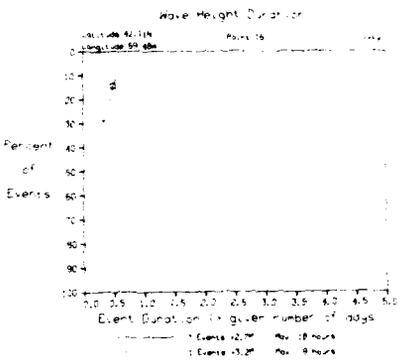

Wave Height Duration
Point 16
Percent of Events
Event Duration (> given number of days)

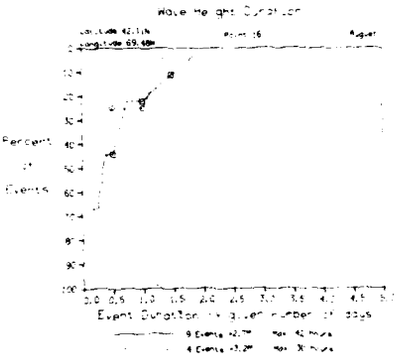

Percent of Events
Event Duration

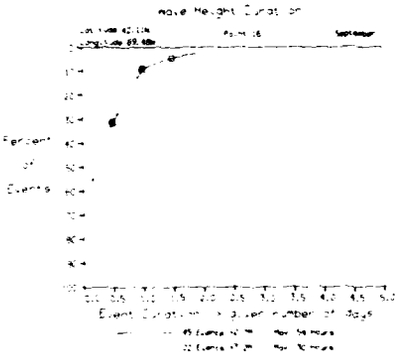

Wave Height Duration
Point 16
Percent of Events
Event Duration (> given number of days)

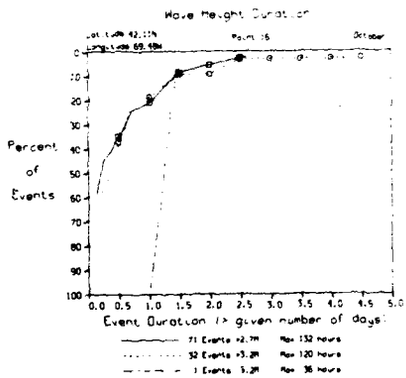

Wave Height Duration
Point 16
Percent of Events
Event Duration (> given number of days)

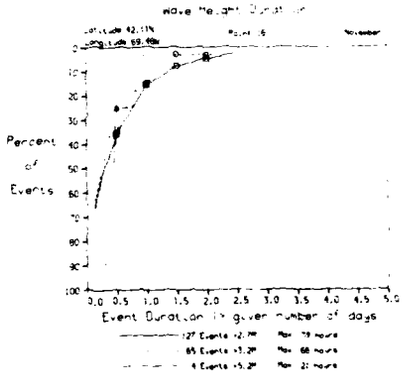

Percent of Events
Event Duration

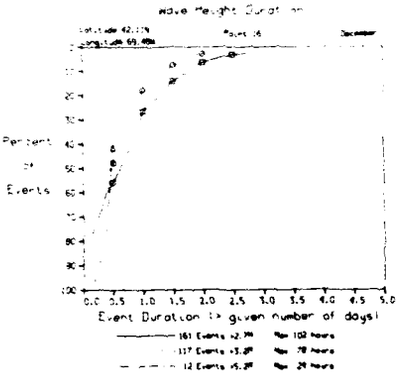

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

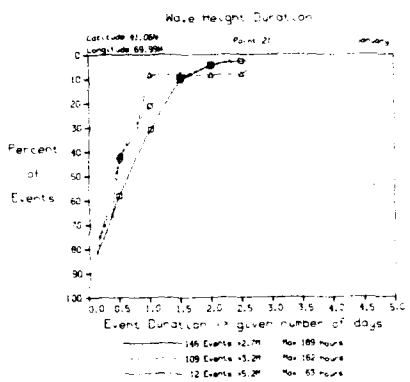

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

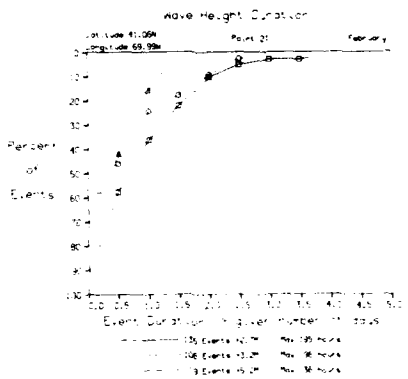

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

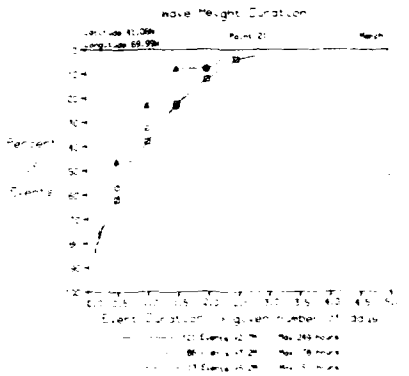

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

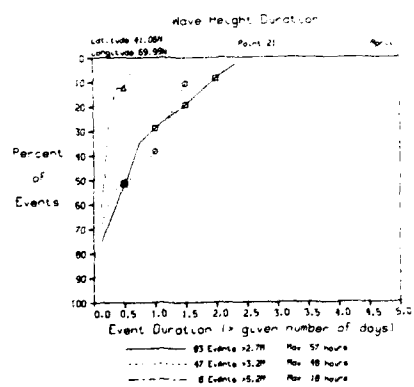

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

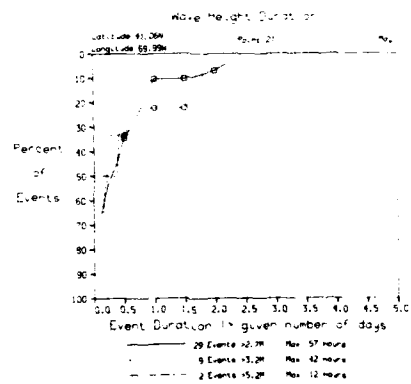

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

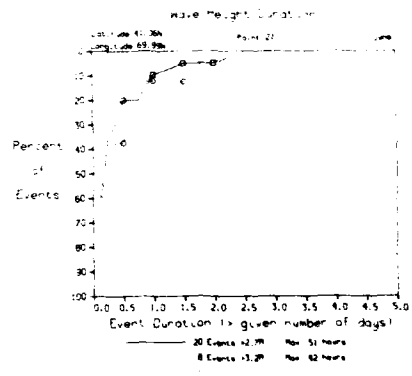

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

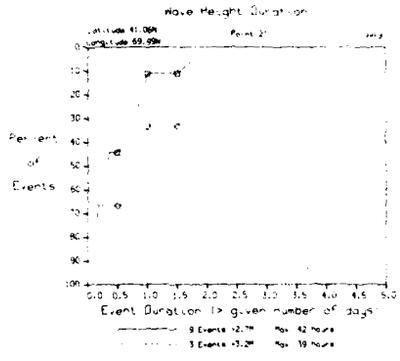

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

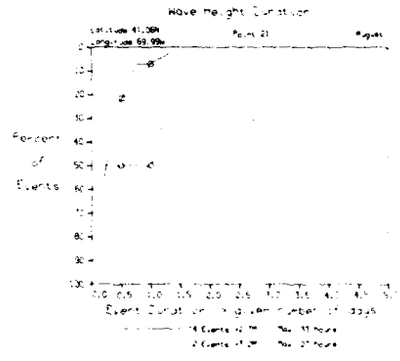

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

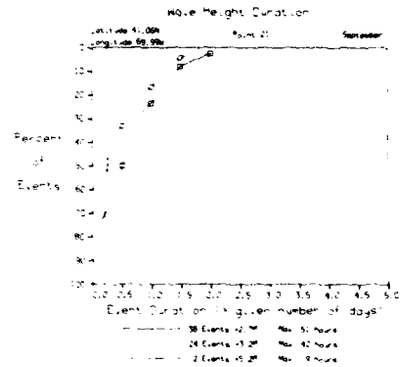

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

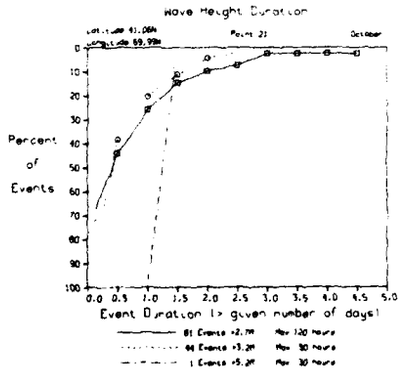

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

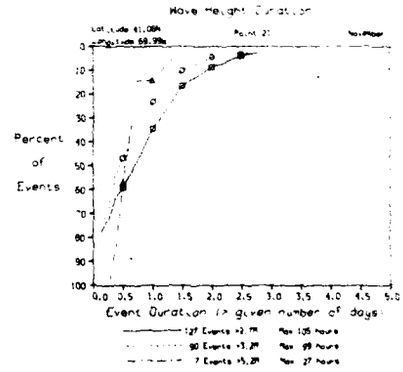

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

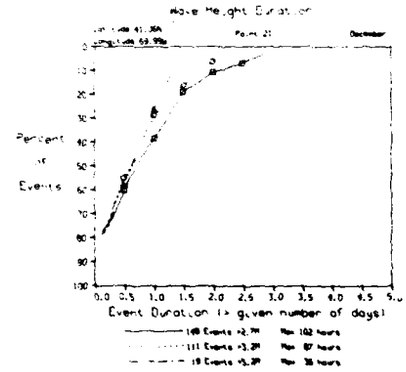

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

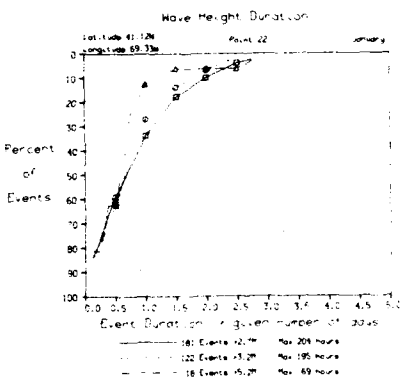

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

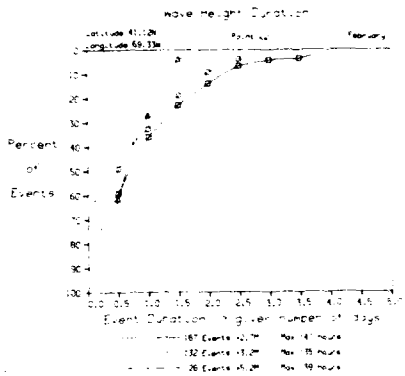

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

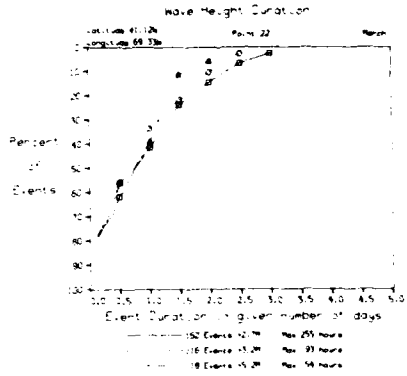

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

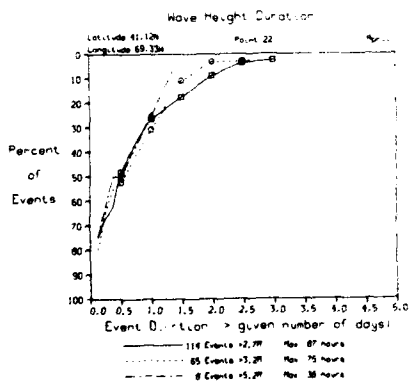

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

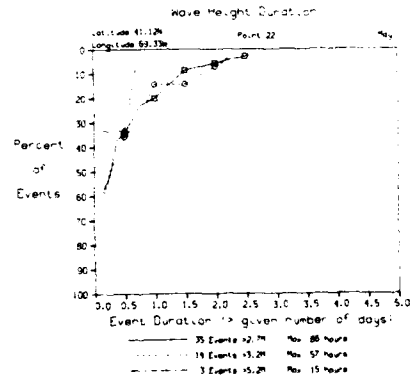

Wave Height Duration
Point 21
Percent of Events
Event Duration (> given number of days)

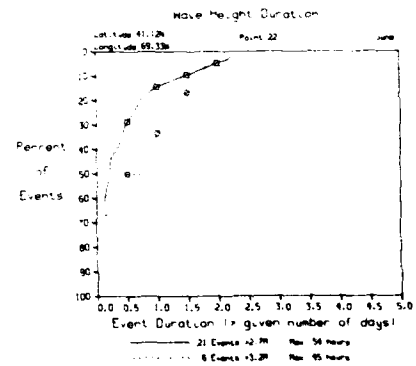

Wave Height Duration
Point 22
Percent of Events
Event Duration > given number of days!

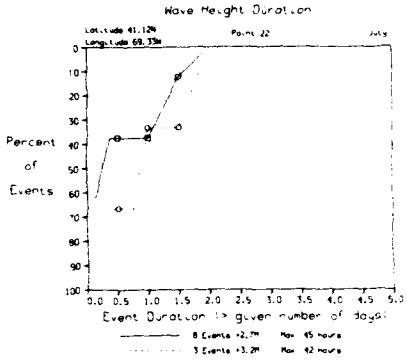

Wave Height Duration
Point 22
Percent of Events
Event Duration > given number of days!

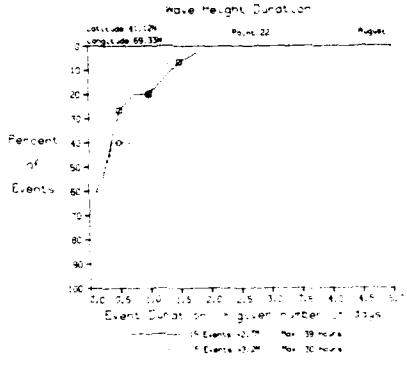

Wave Height Duration
Point 22
Percent of Events
Event Duration > given number of days!

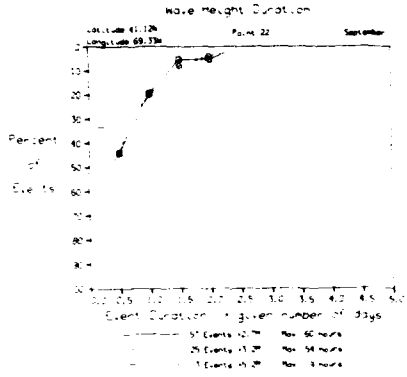

Wave Height Duration
Point 22
Percent of Events
Event Duration > given number of days!

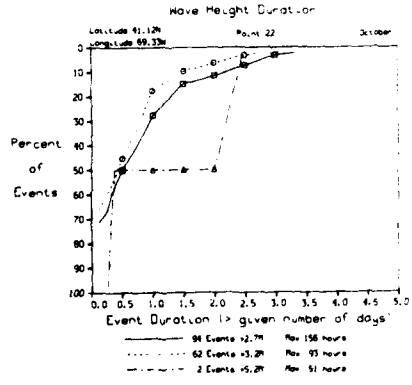

Wave Height Duration
Point 22
Percent of Events
Event Duration > given number of days!

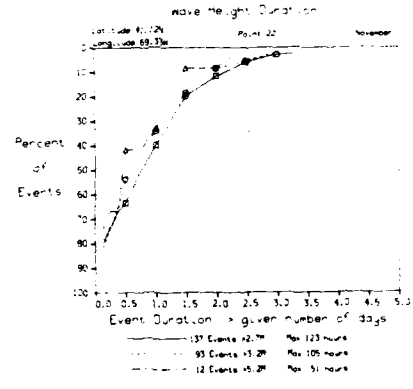

Wave Height Duration
Point 22
Percent of Events
Event Duration > given number of days!

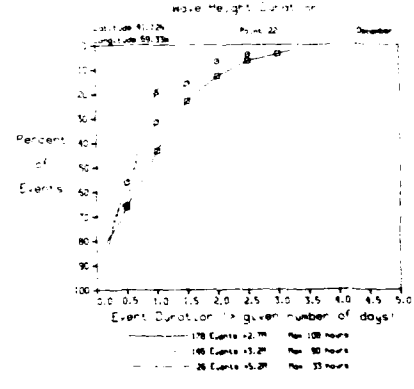

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

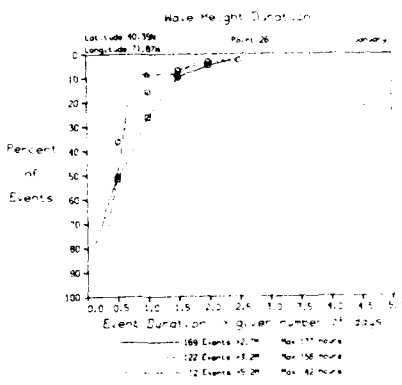

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

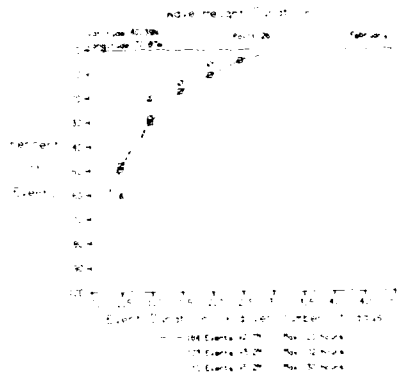

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

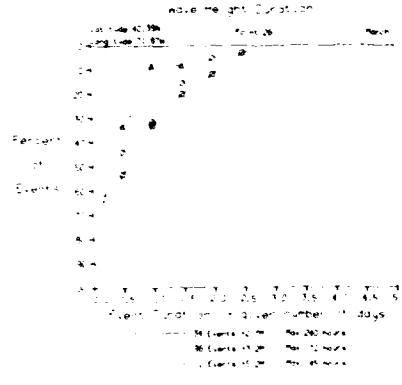

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

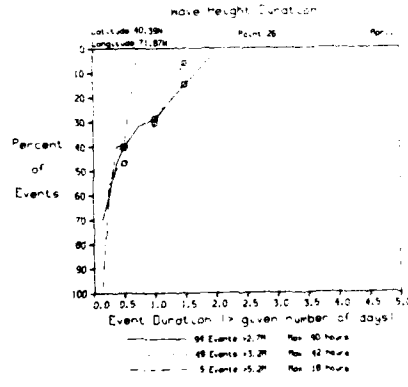

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

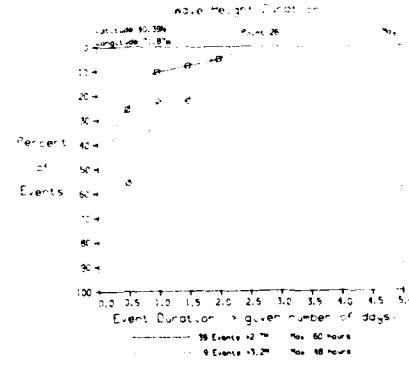

Wave Height Duration
Point 22
Percent of Events
Event Duration (> given number of days)

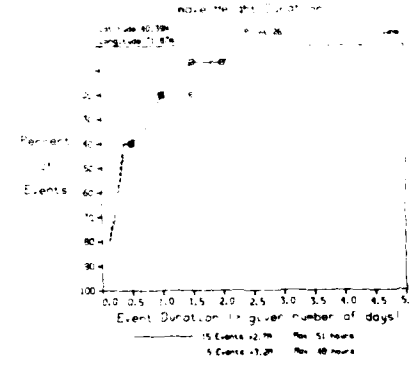

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

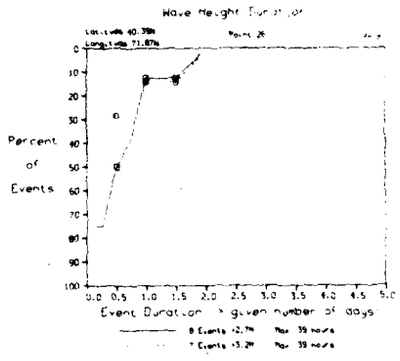

Wave Height Duration

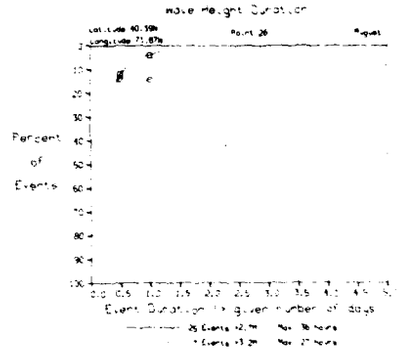

Wave Height Duration

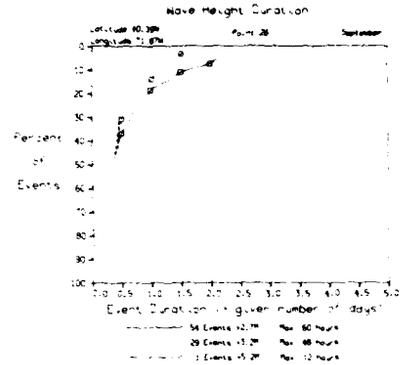

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

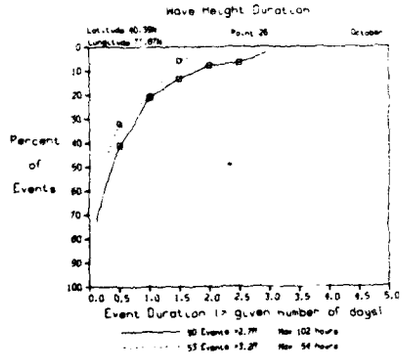

Percent of Events
Event Duration (> given number of days)

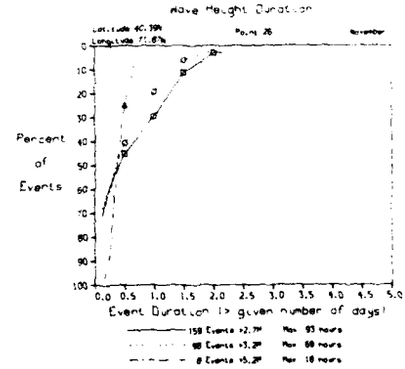

Percent of Events
Event Duration (> given number of days)

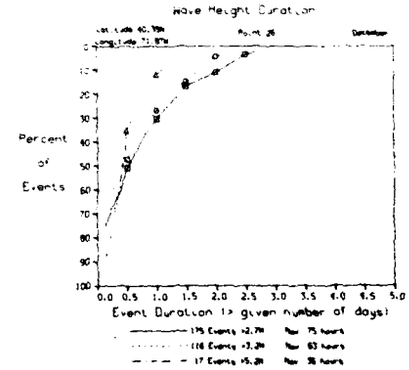

Wave Height Duration
Point 26
Percent
of
Events
Event Duration (> given number of days)

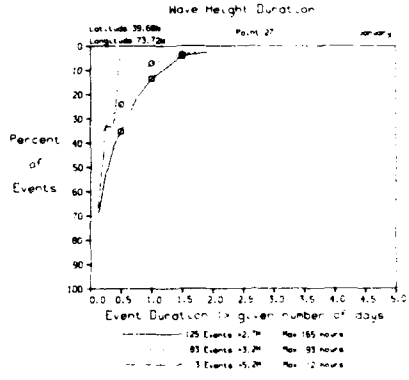

Wave Height Duration
Point 26
Percent
of
Events
Event Duration (> given number of days)

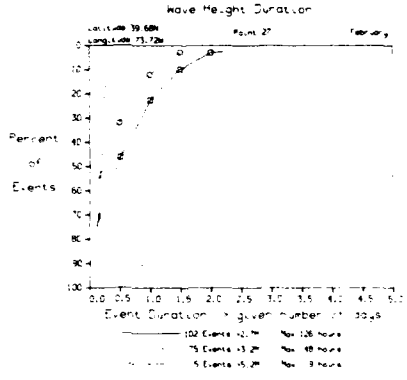

Wave Height Duration
Point 26
Percent
of
Events
Event Duration (> given number of days)

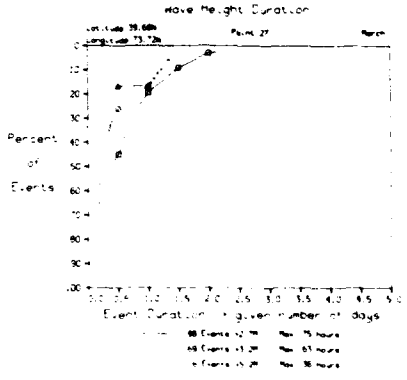

Wave Height Duration
Point 26
Percent
of
Events
Event Duration (> given number of days)

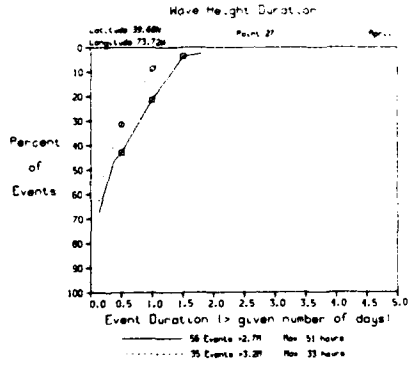

Wave Height Duration
Point 26
Percent
of
Events
Event Duration (> given number of days)

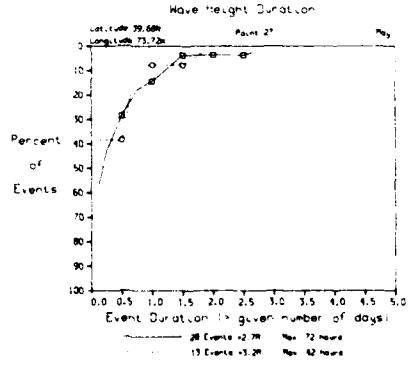

Wave Height Duration
Point 26
Percent
of
Events
Event Duration (> given number of days)

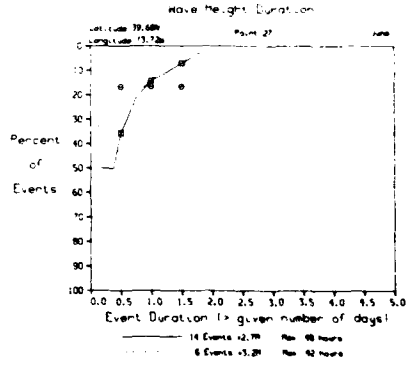

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

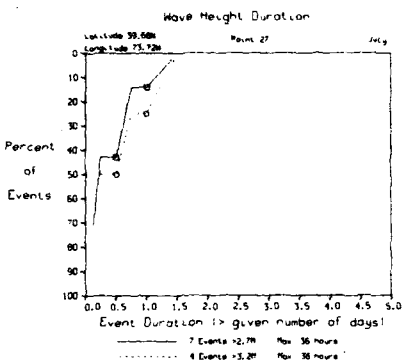

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

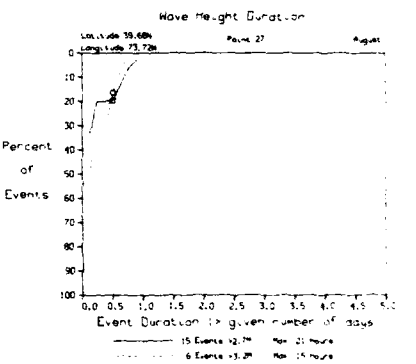

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

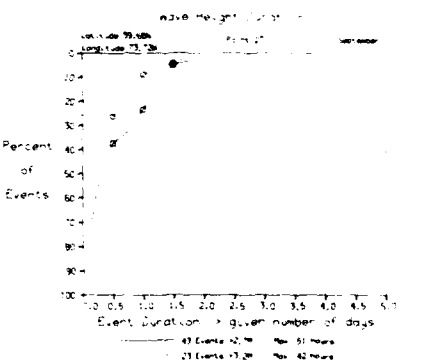

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

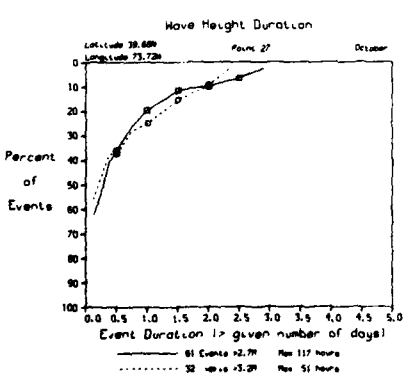

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

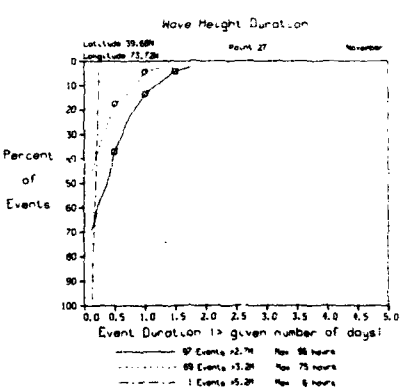

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

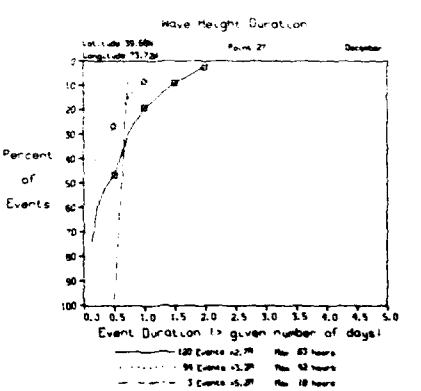

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

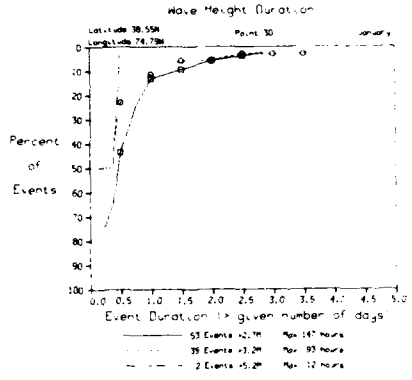

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

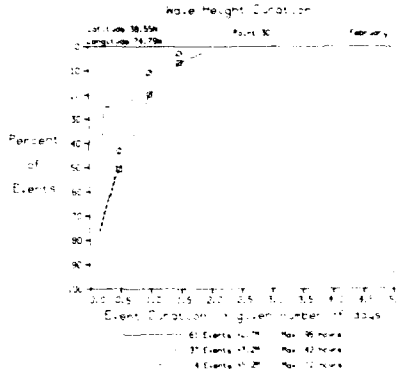

Percent of Events
Event Duration (> given number of days)

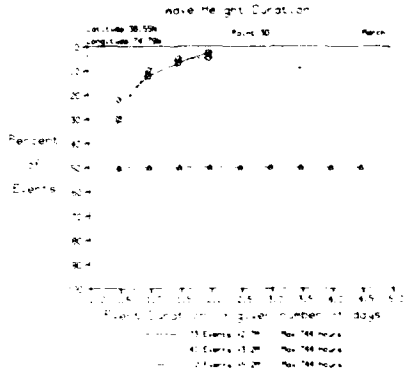

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

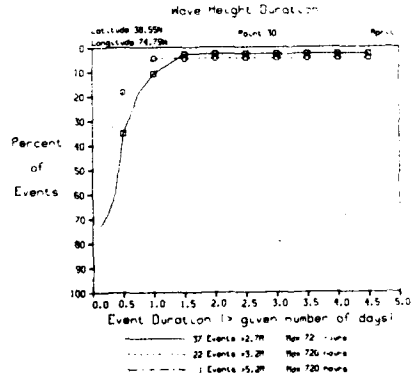

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

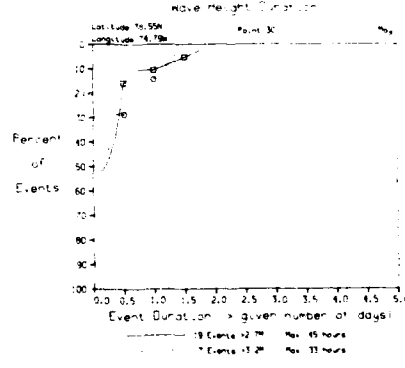

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

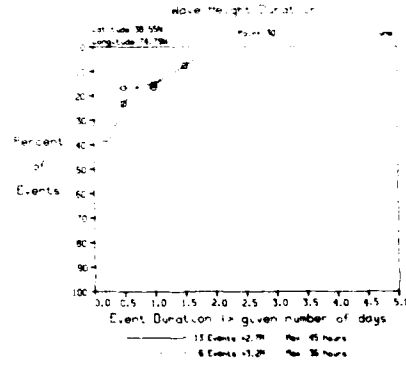

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

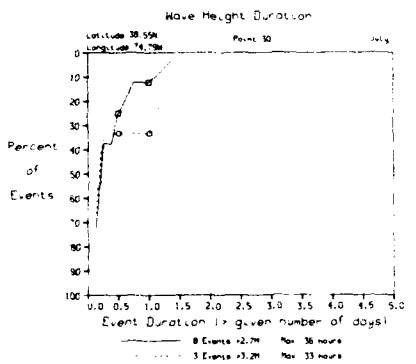

Wave Height Duration
Percent of Events

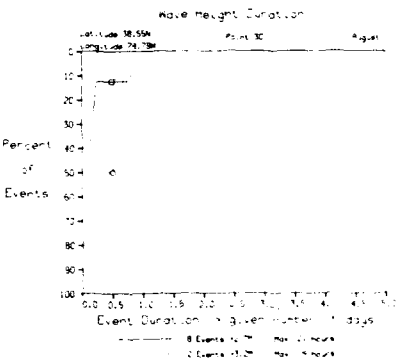

Wave Height Duration
Percent of Events

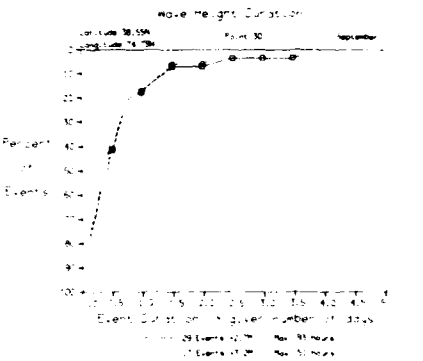

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

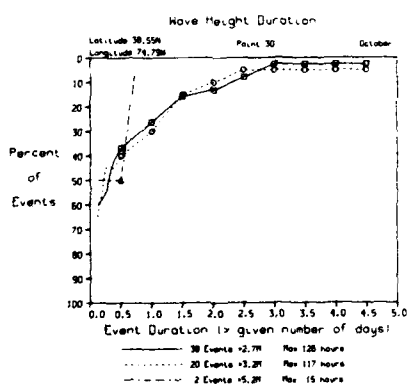

Percent of Events
Event Duration (> given number of days)

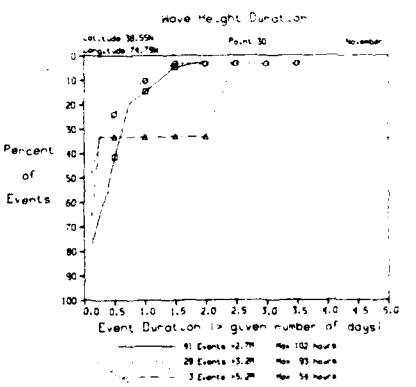

Percent of Events
Event Duration (> given number of days)

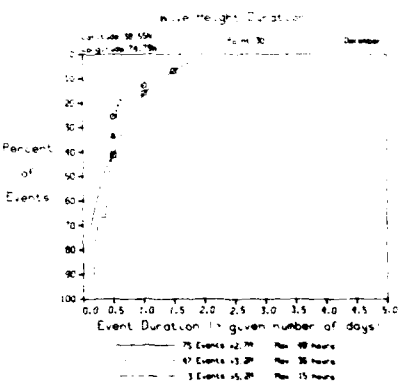

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

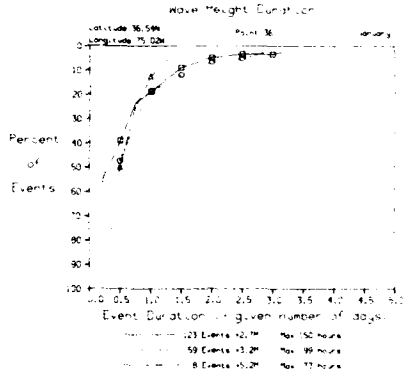

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

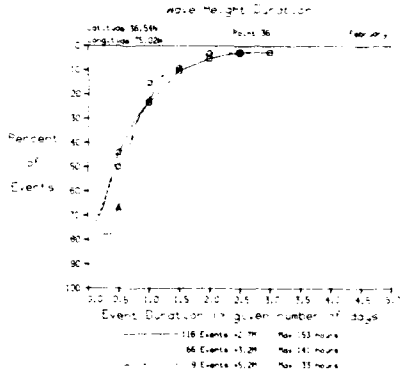

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

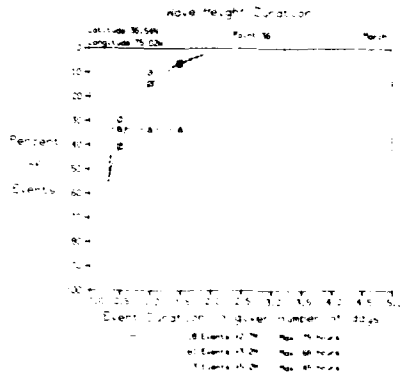

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

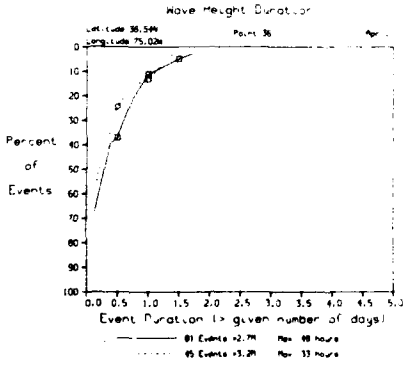

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

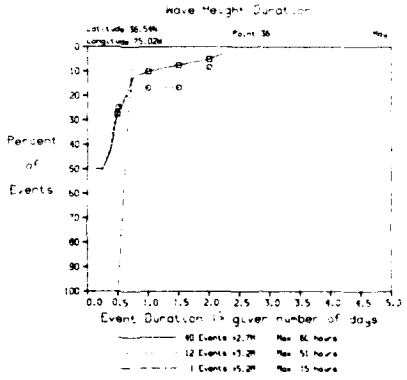

Percent of Events
Event Duration (> given number of days)

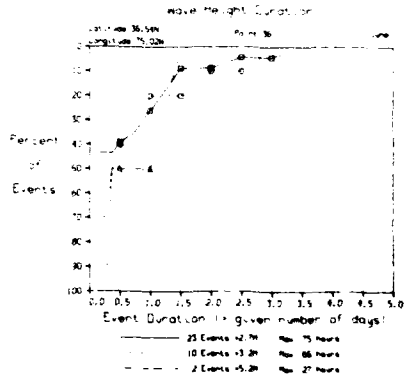

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
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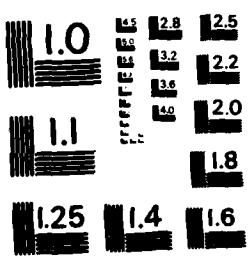

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

AD-A130 647 WIND AND WAVE SUMMARIES FOR SELECTED US COAST GUARD OPERATING AREAS(U) NATIONAL CLIMATIC DATA CENTER ASHEVILLE NC D PASKAUSKY ET AL. APR 83 USCG-D-11-83

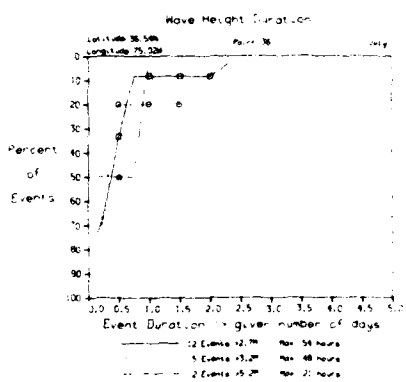
5/5

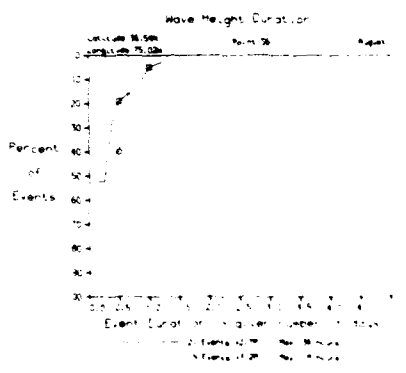
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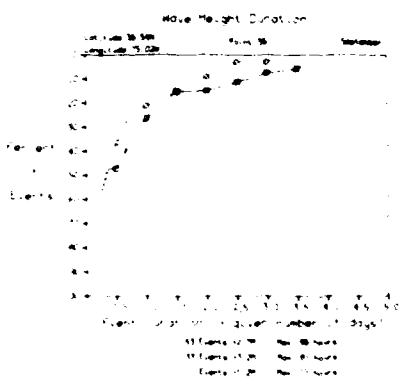


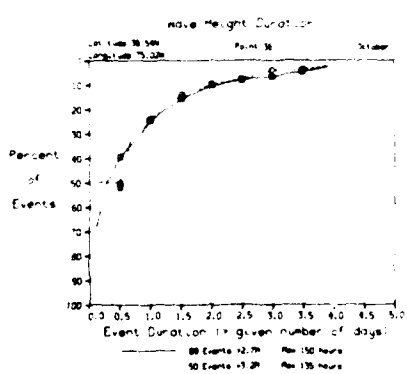


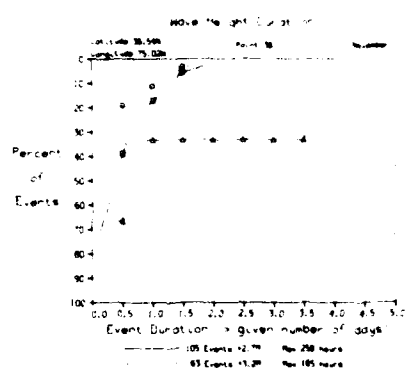
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

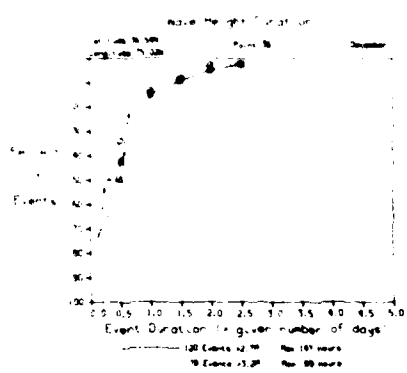

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

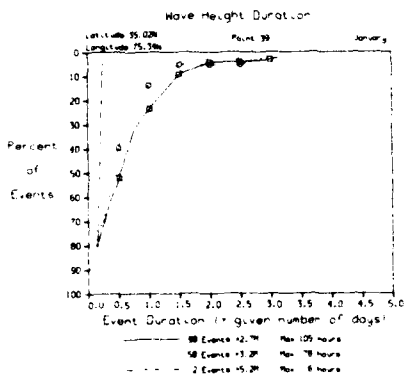

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

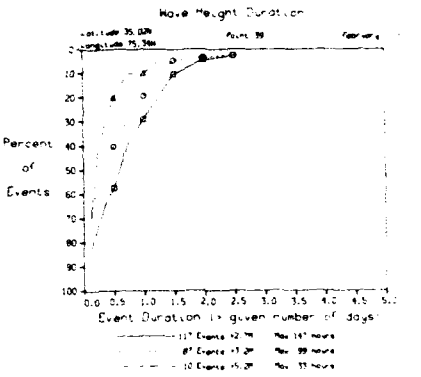

Wave Height Duration
Percent of Events

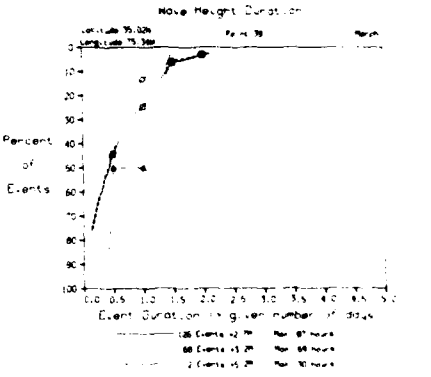

Wave Height Duration
Percent of Events
Event Duration (= given number of days)

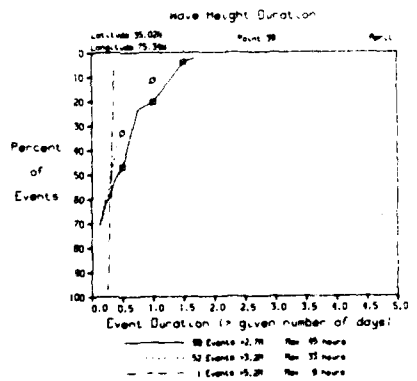

Percent of Events
Event Duration (= given number of days)

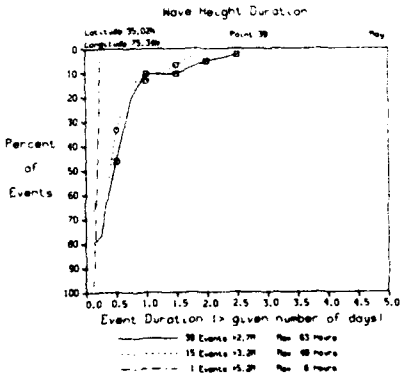

Percent of Events
Event Duration (= given number of days)

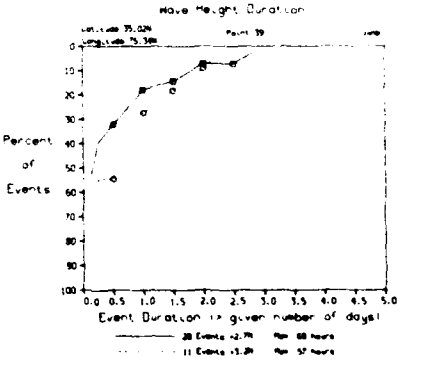

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

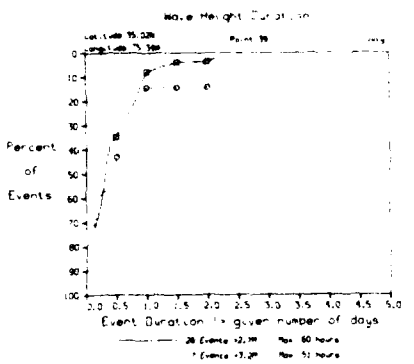

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

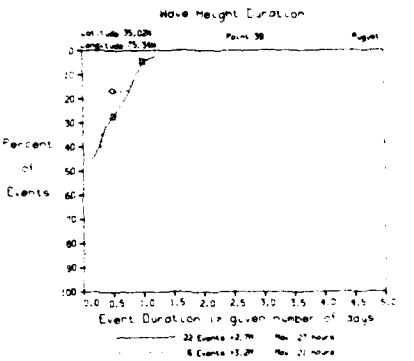

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

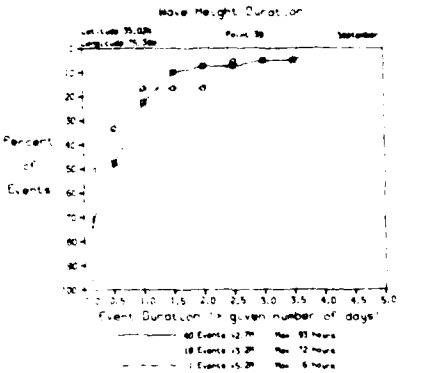

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

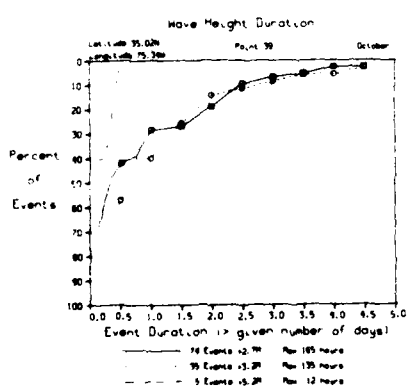

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

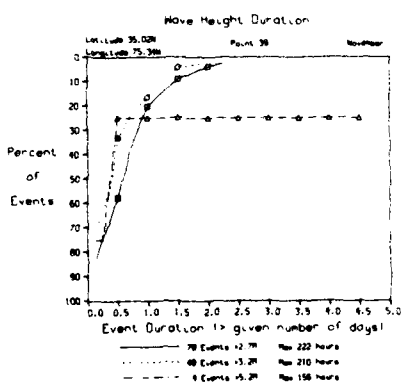

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

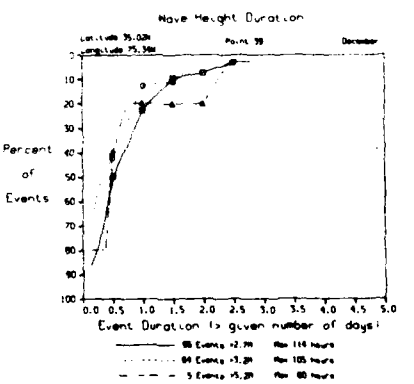

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

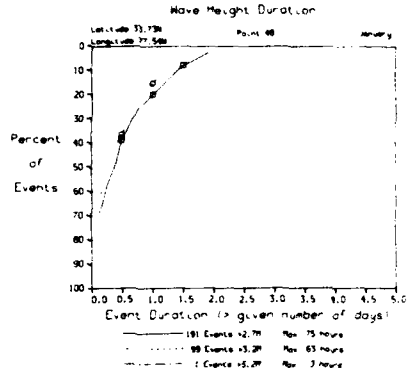

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

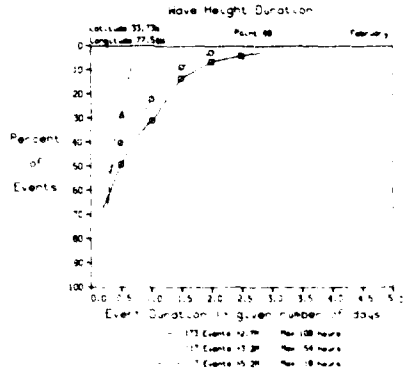

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

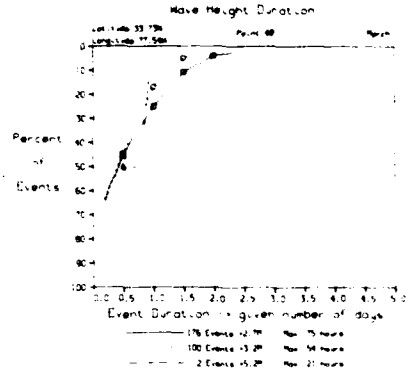

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

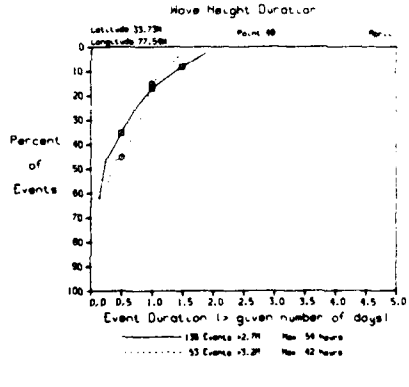

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

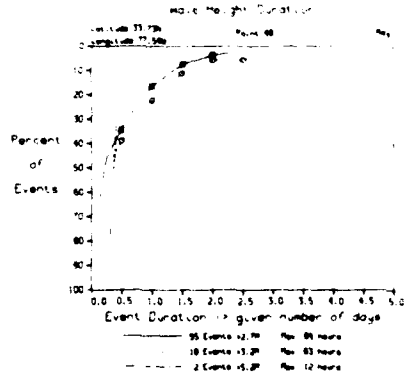

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

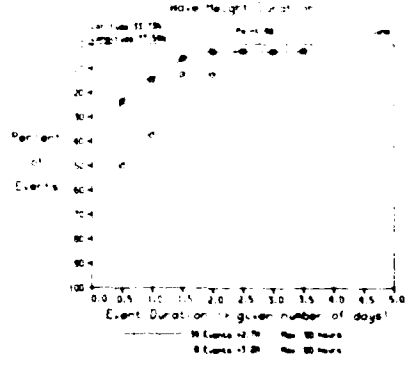

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

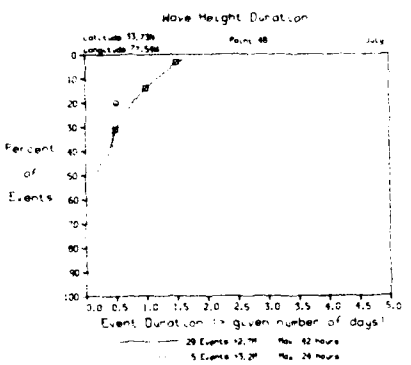

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

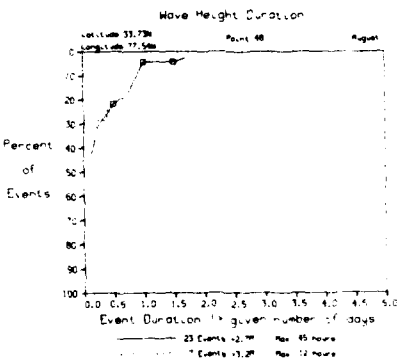

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

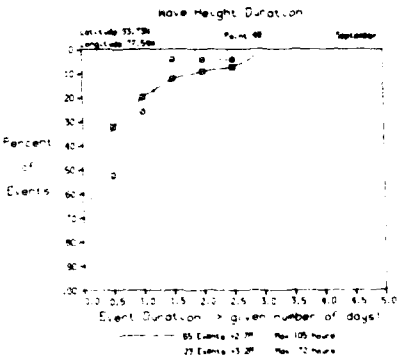

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

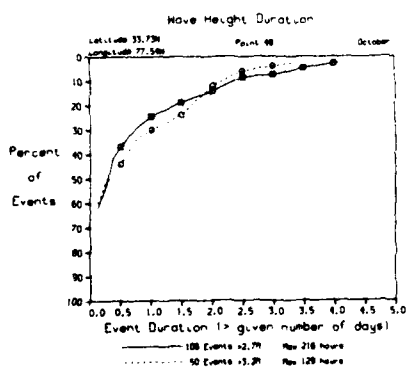

Percent of Events
Event Duration (> given number of days)

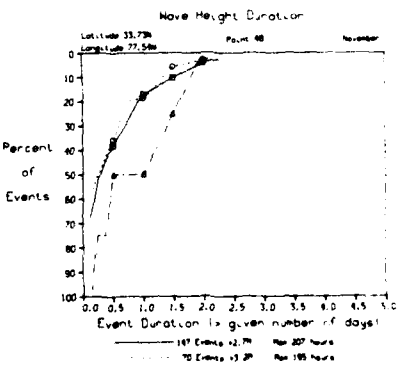

Percent of Events
Event Duration (> given number of days)

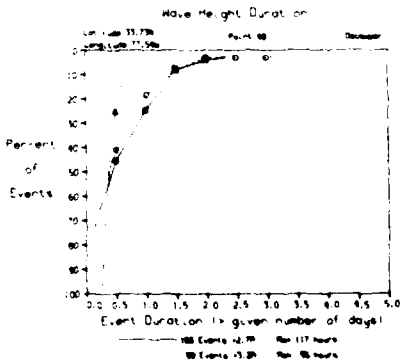

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

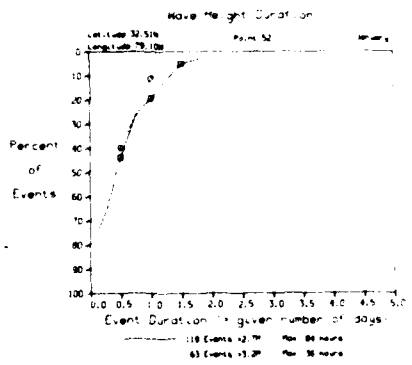

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

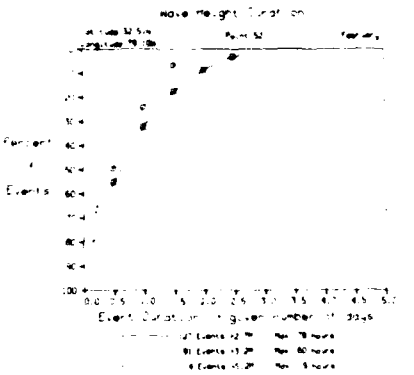

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

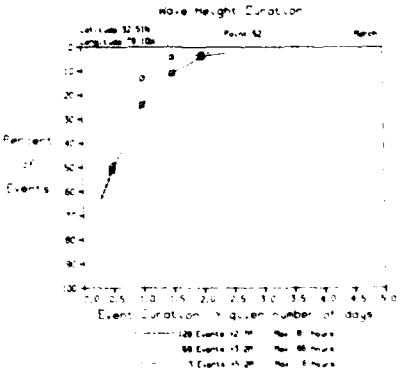

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

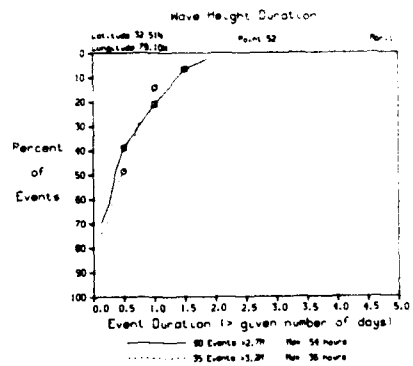

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

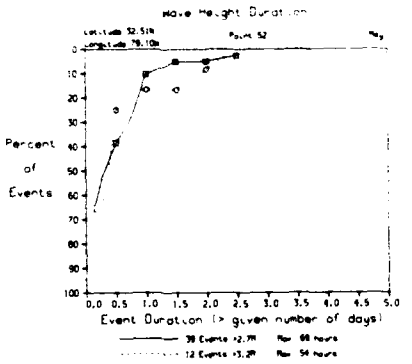

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

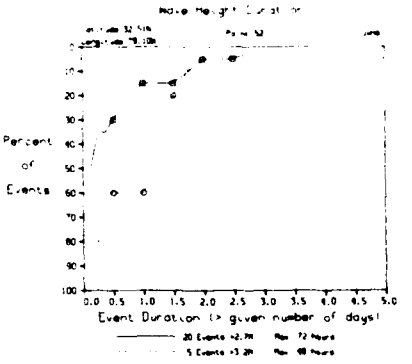

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

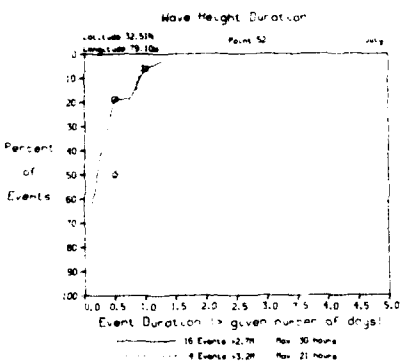

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

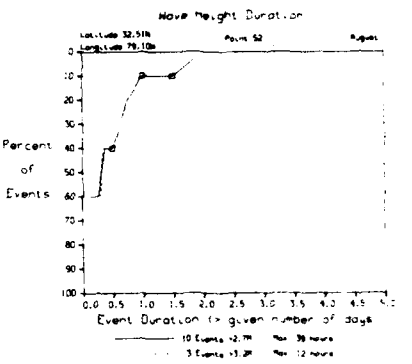

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

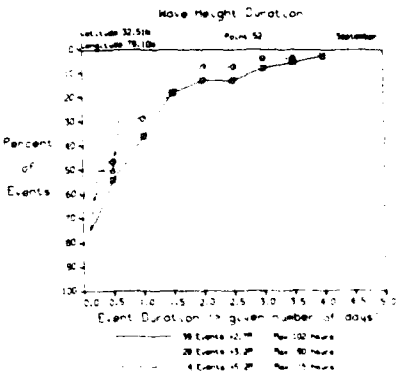

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

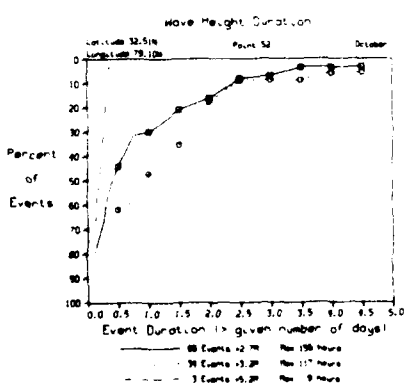

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

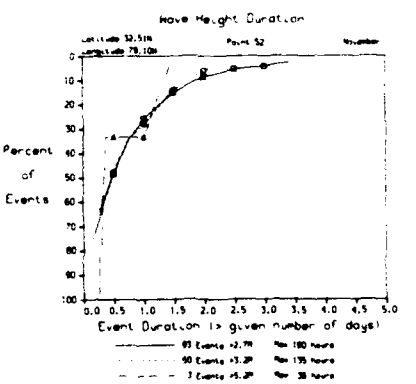

Wave Height Duration
Percent of Events
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Event Duration (> given number of days)

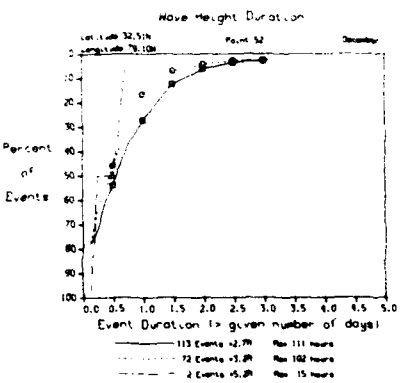

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

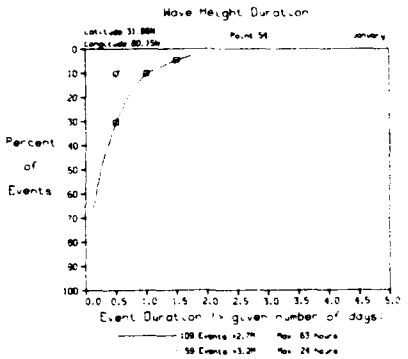

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

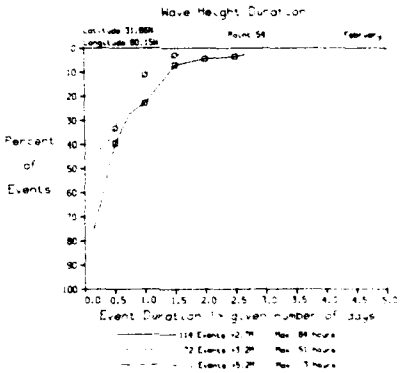

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

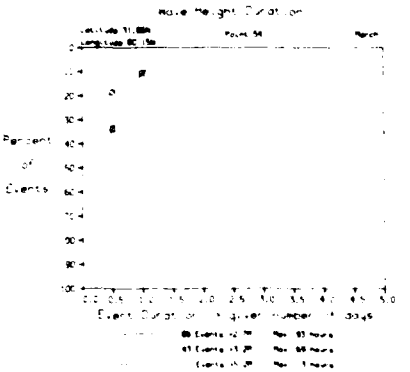

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

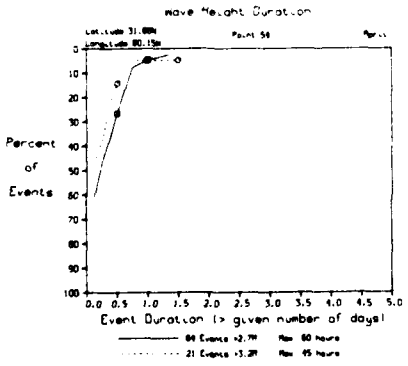

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

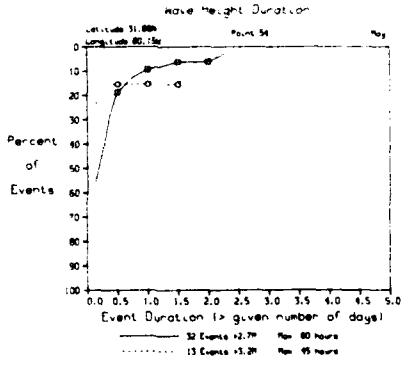

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

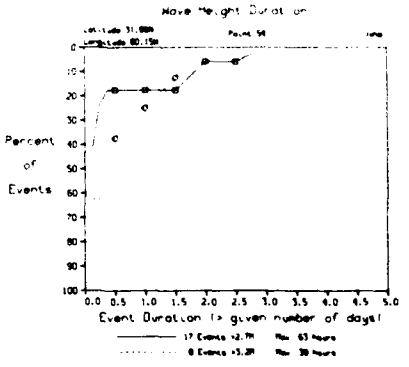

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

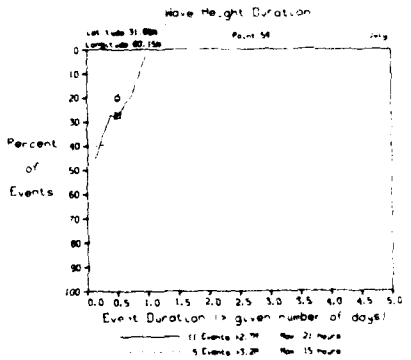

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

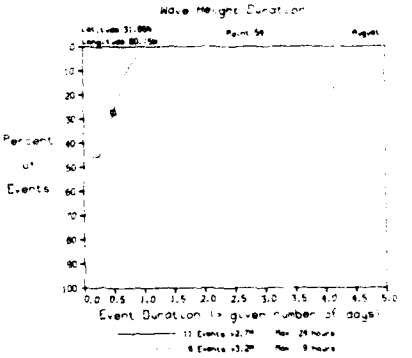

Wave Height Duration
Percent of Events

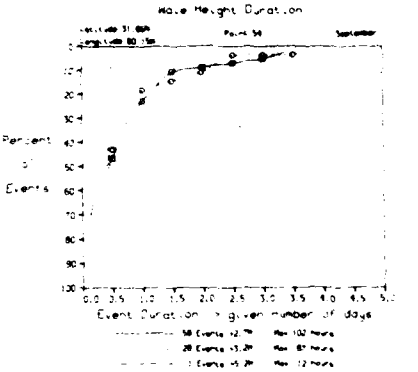

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

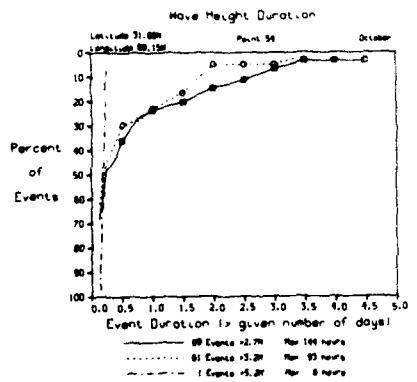

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

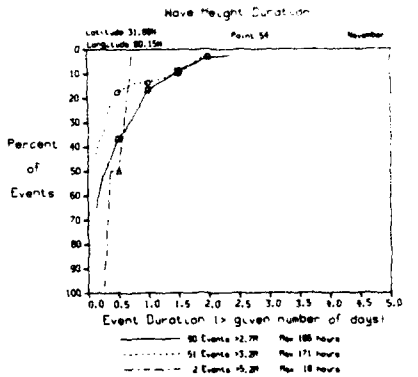

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

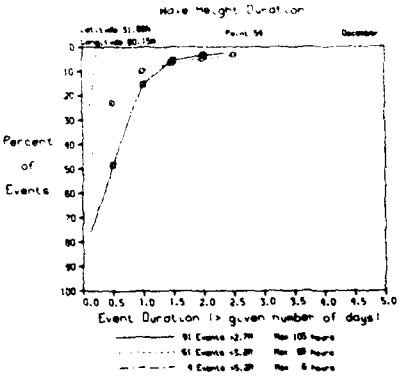

Wave Height Duration
Point 54
Percent of Events
Event Duration (> given number of days)

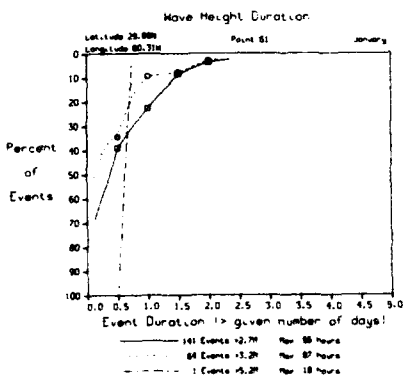

Wave Height Duration
Point 54
Percent of Events
Event Duration (> given number of days)

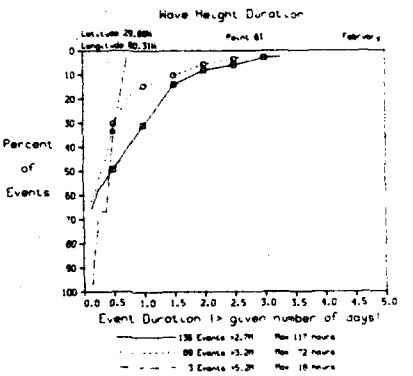

Wave Height Duration
Point 54
Percent of Events
Event Duration (> given number of days)

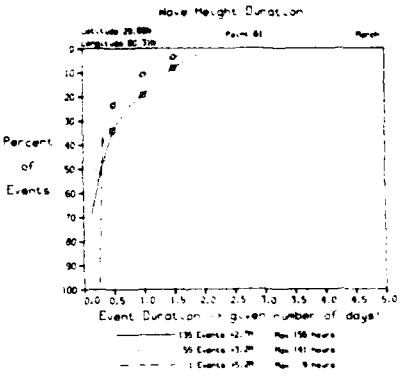

Wave Height Duration
Point 54
Percent of Events
Event Duration (> given number of days)

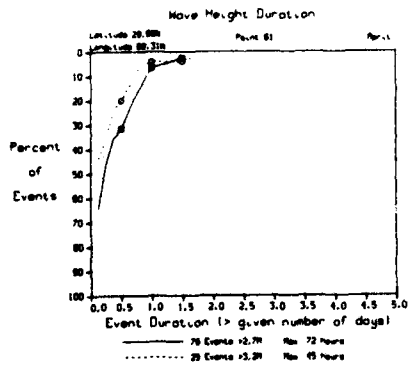

Wave Height Duration
Point 54
Percent of Events
Event Duration (> given number of days)

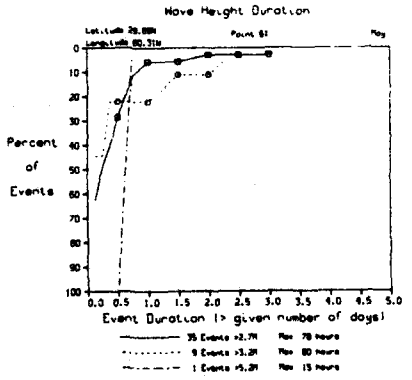

Wave Height Duration
Point 54
Percent of Events
Event Duration (> given number of days)

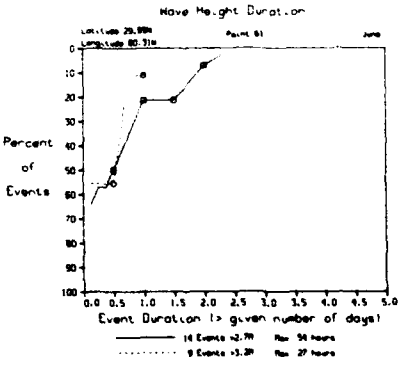

Wave Height Duration
Point 61
Percent of Events
Event Duration (> given number of days)

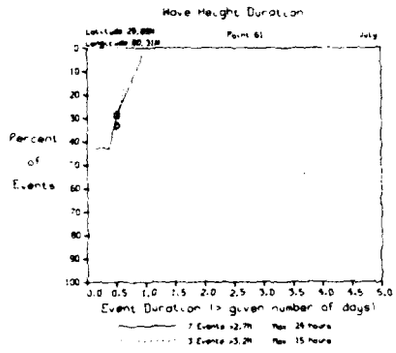

Wave Height Duration
Point 61
Percent of Events
Event Duration (> given number of days)

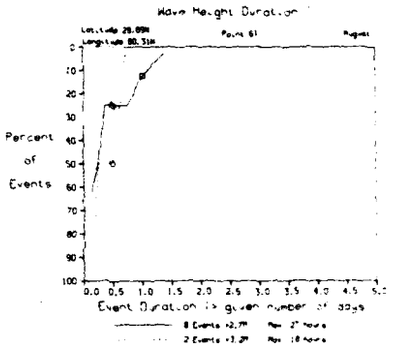

Wave Height Duration
Point 61
Percent of Events
Event Duration (> given number of days)

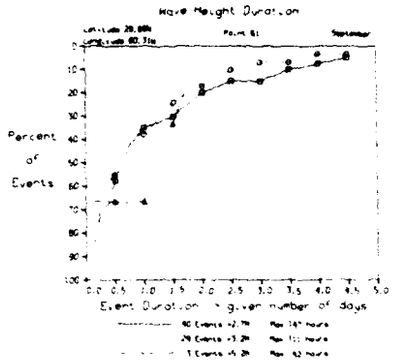

Wave Height Duration
Point 61
Percent of Events
Event Duration (> given number of days)

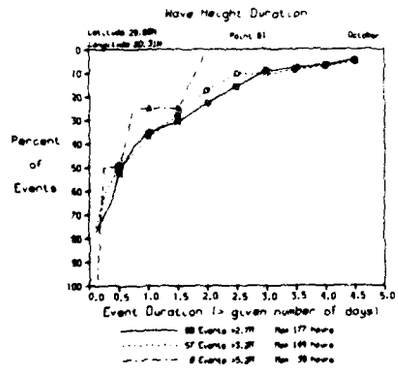

Wave Height Duration
Point 61
Percent of Events
Event Duration (> given number of days)

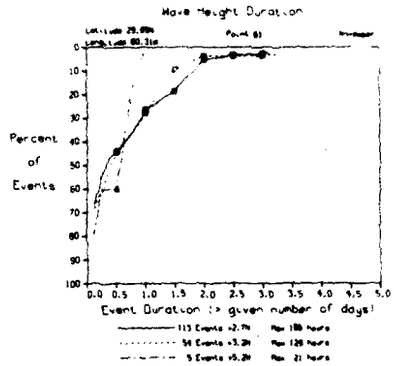

Wave Height Duration
Point 61
Percent of Events
Event Duration (> given number of days)

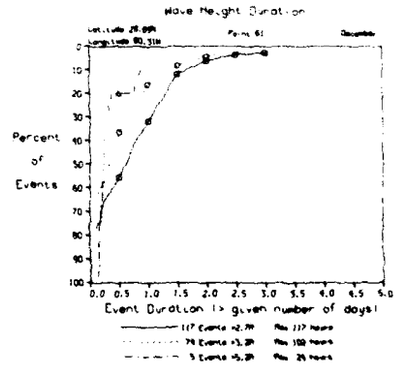

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

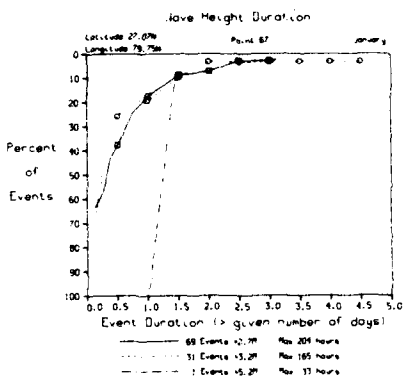

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

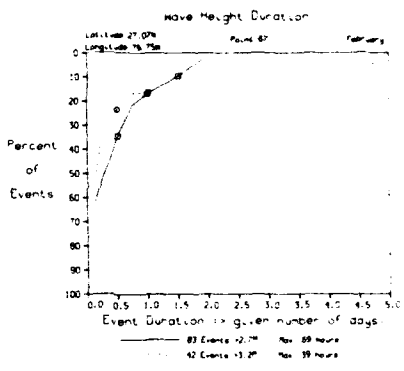

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

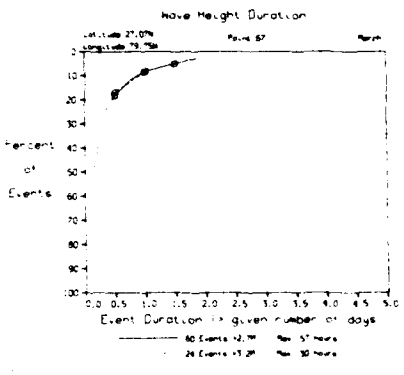

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

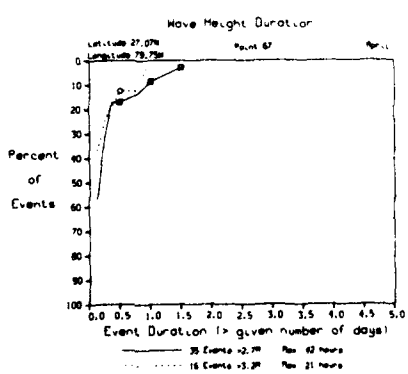

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

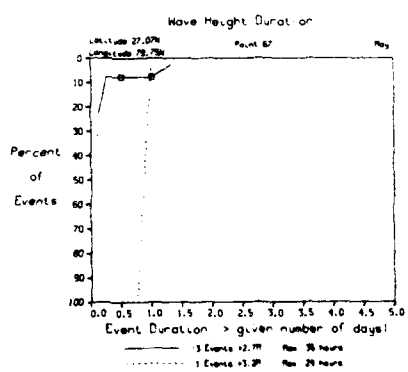

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

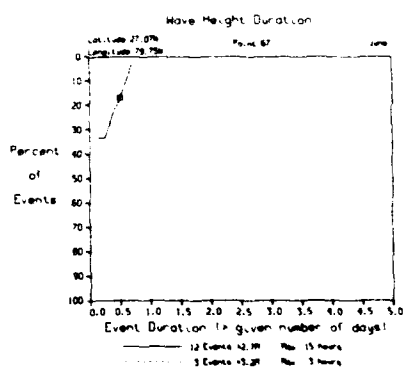

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

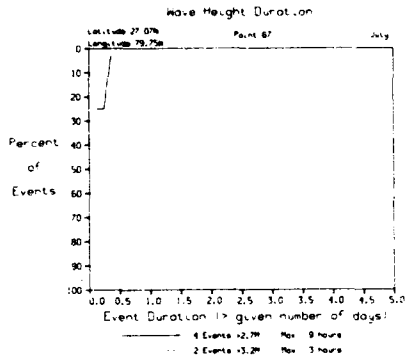

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

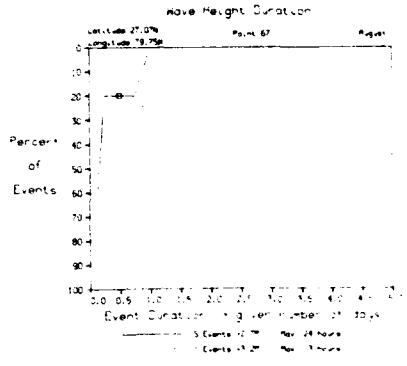

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

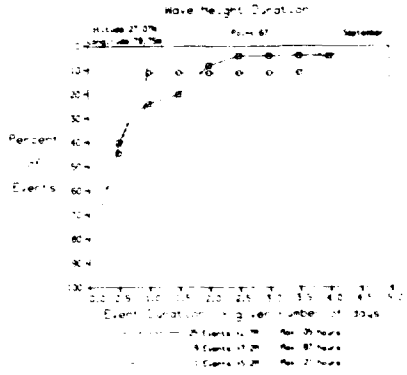

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

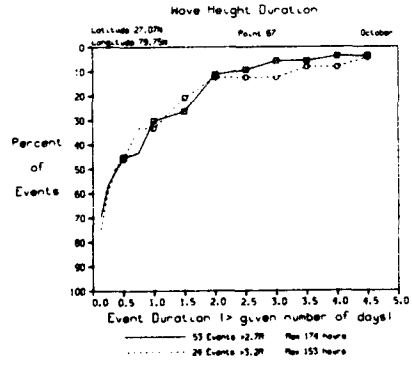

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

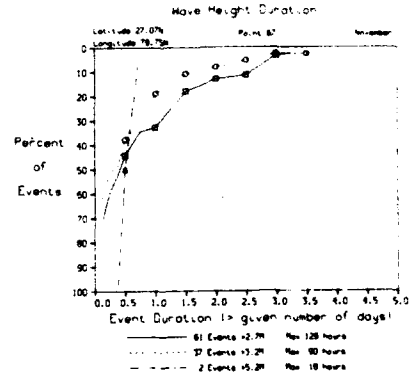

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

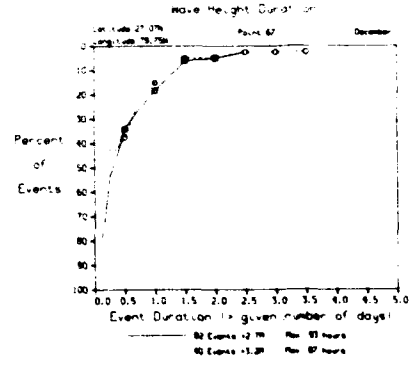

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

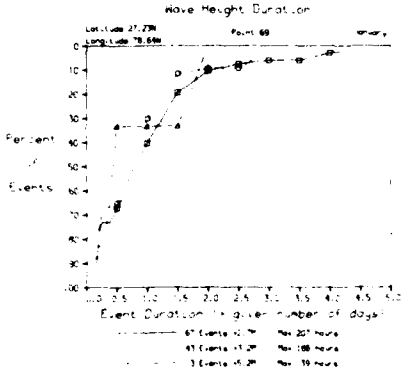

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

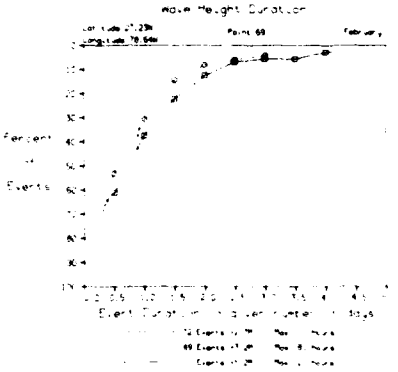

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

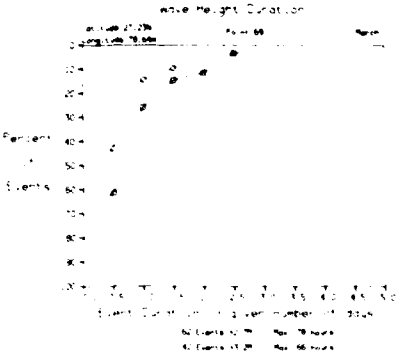

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

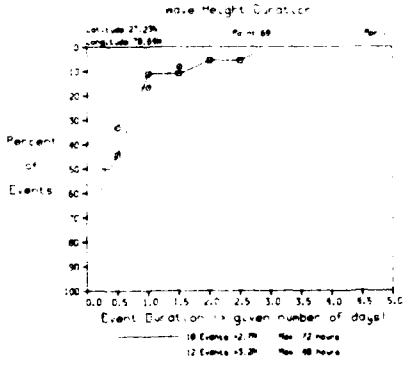

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

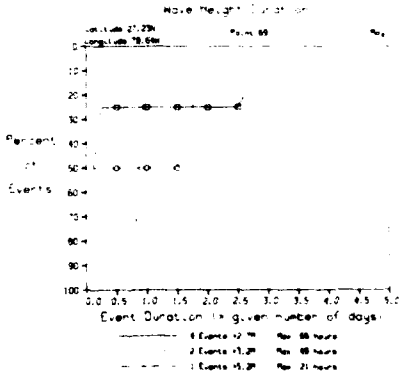

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

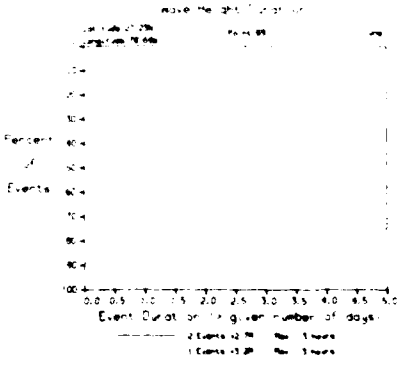

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

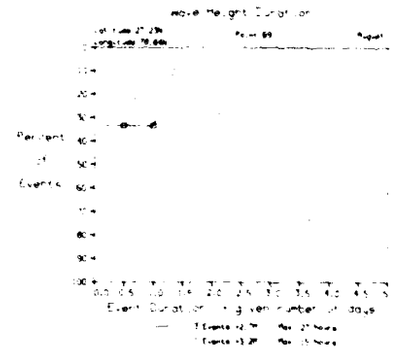

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

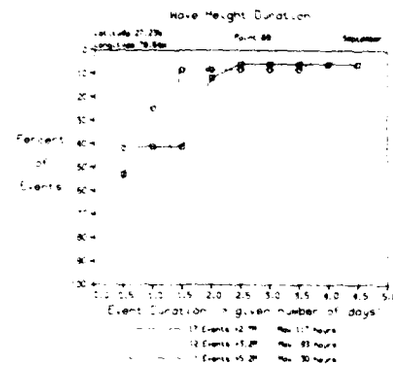

Wave Height Duration
Percent of Events

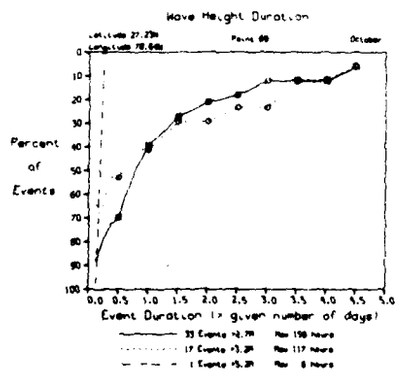

Wave Height Duration
Percent of Events
Event Duration (x given number of days)

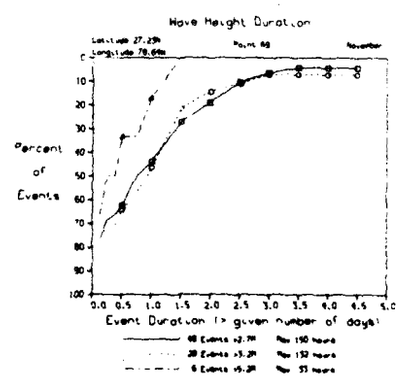

Percent of Events
Event Duration (x given number of days)

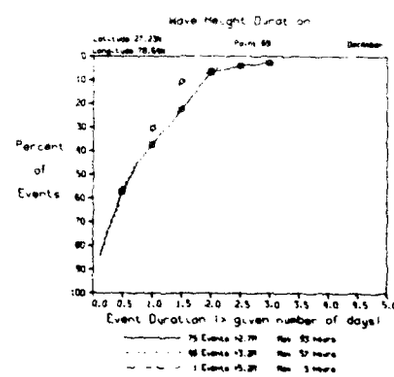

Percent of Events
Event Duration (x given number of days)

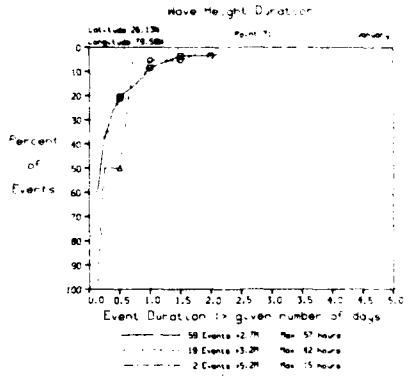

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

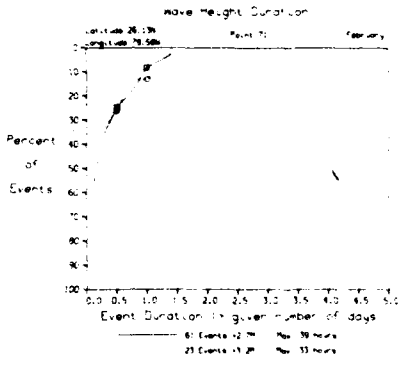

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

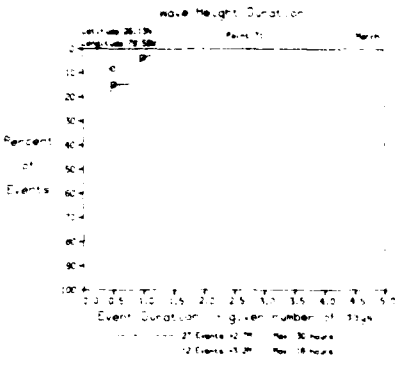

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

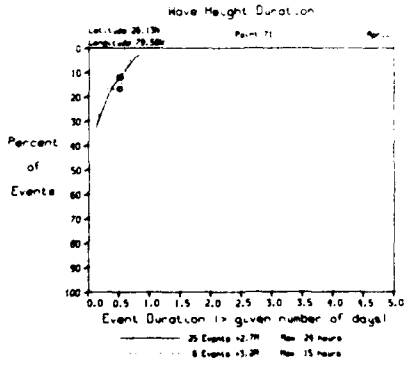

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

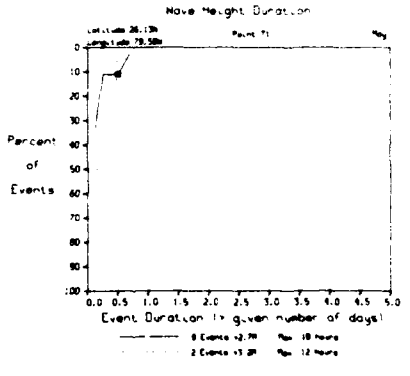

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

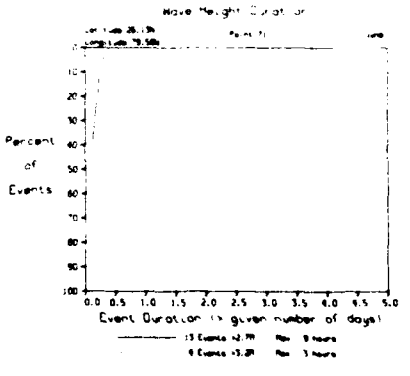

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

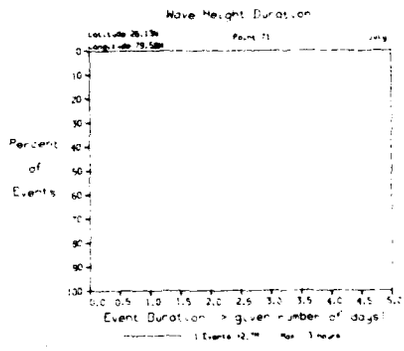

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

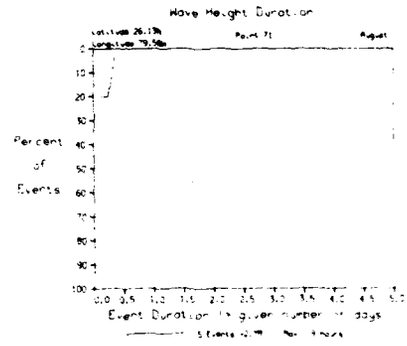

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

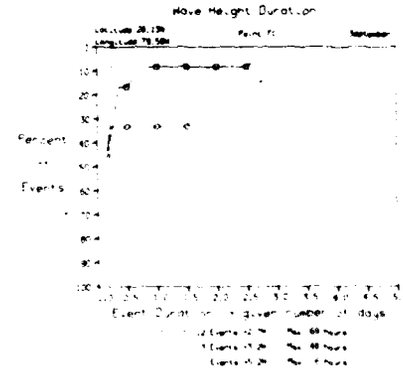

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

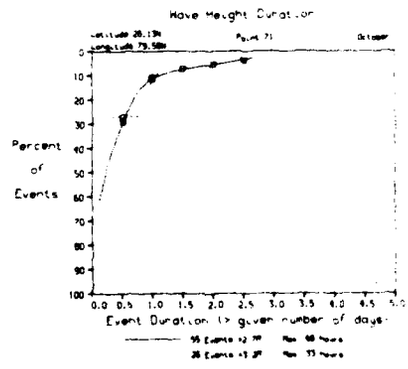

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

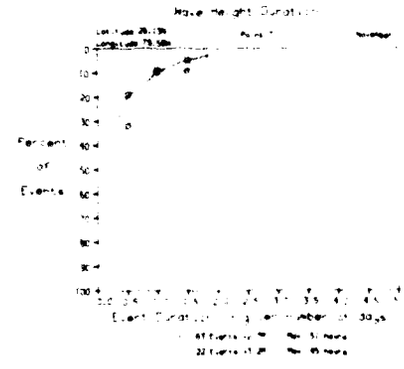

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

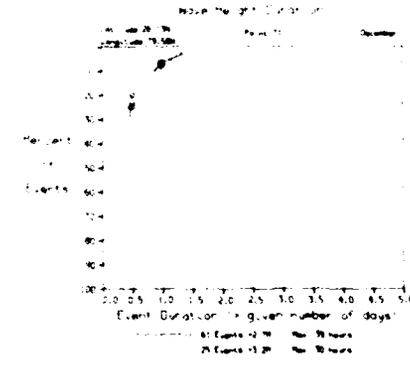

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

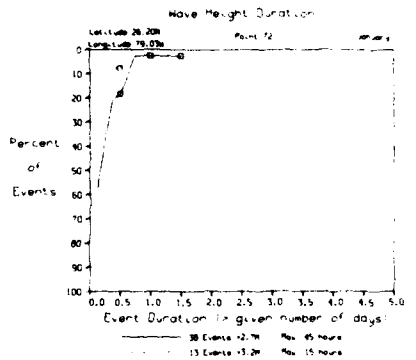

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

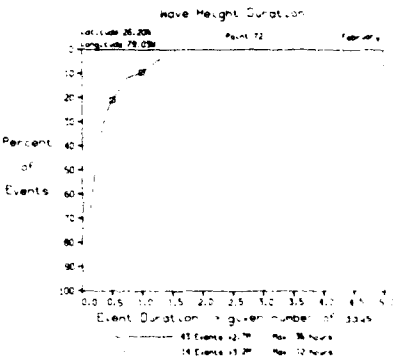

Wave Height Duration
Percent of Events

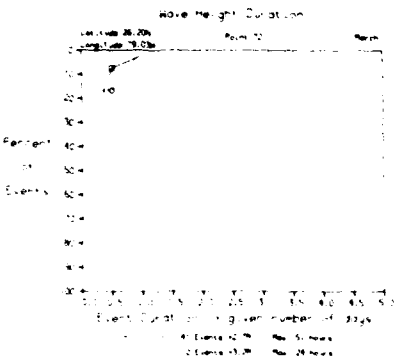

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

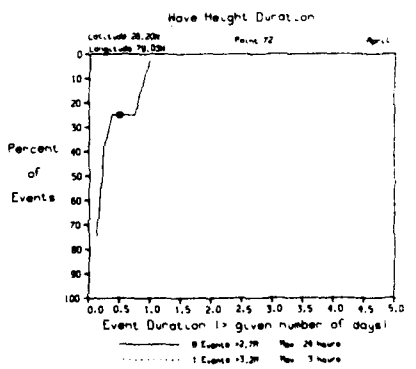

Percent of Events

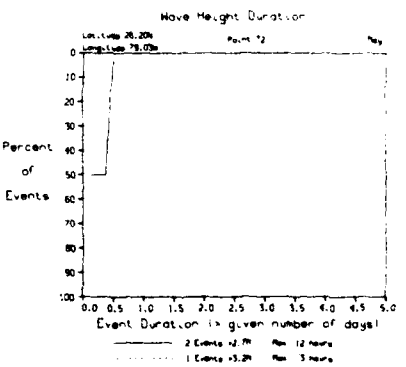

Event Duration (> given number of days)

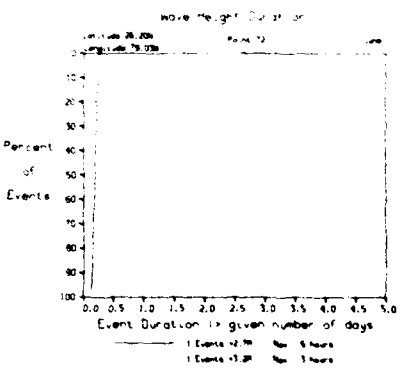

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)

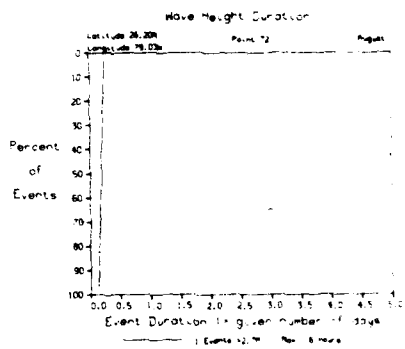

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

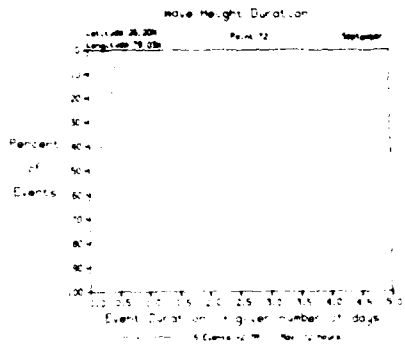

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

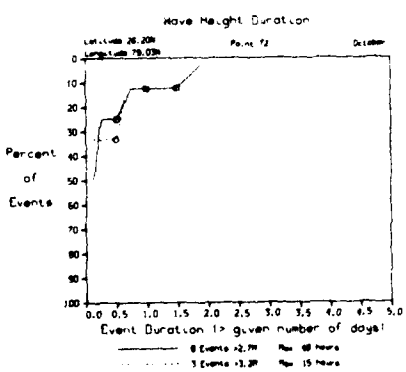

Percent of Events
Event Duration (> given number of days)

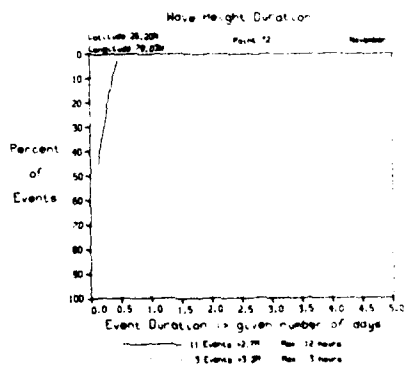
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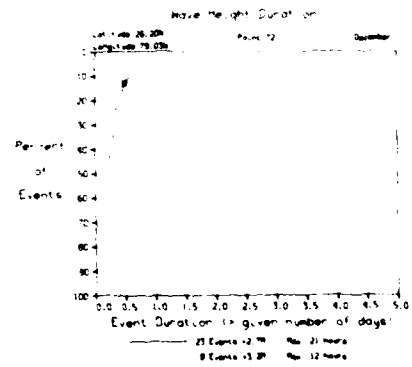
July

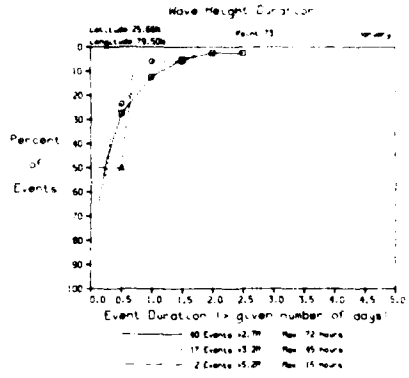


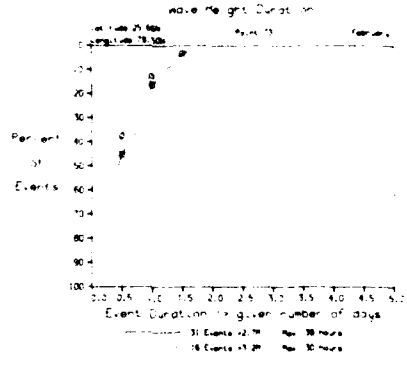


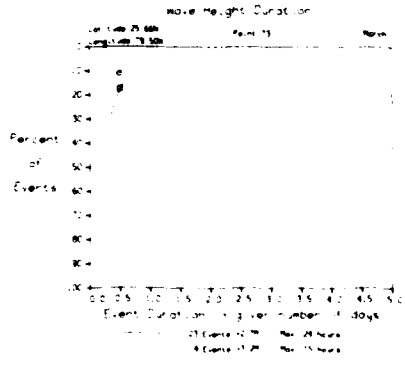


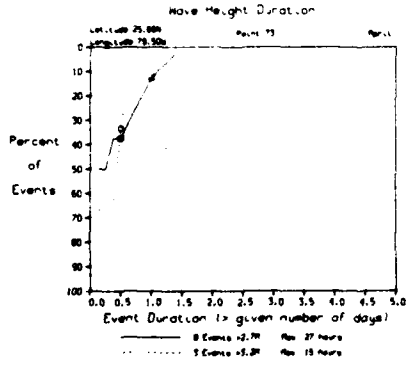


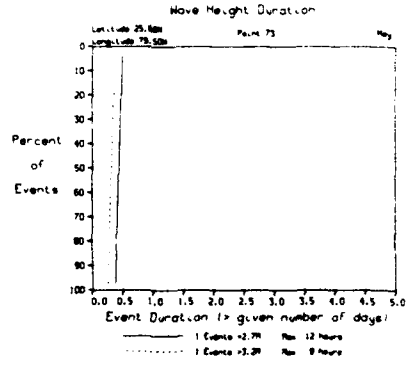


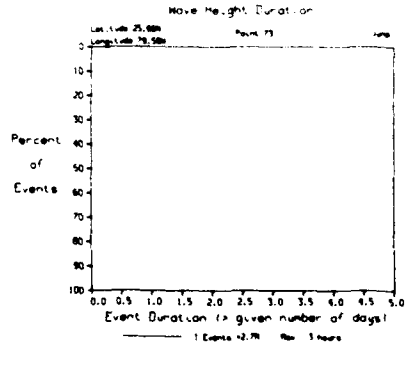

Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)


Wave Height Duration
Percent of Events
Event Duration (> given number of days)

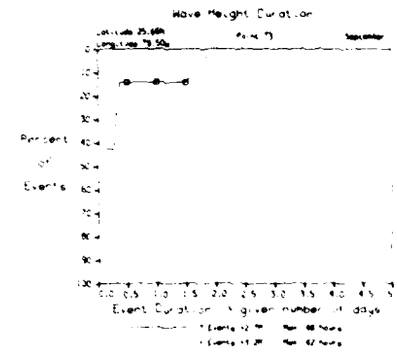

Wave Height Duration
Percent of Events
Event Duration (> given number of days)

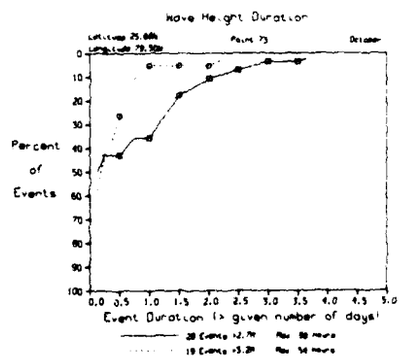
No Occurrences in

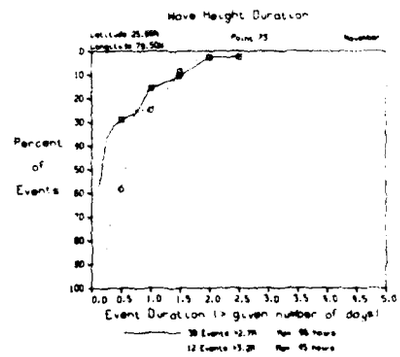
July

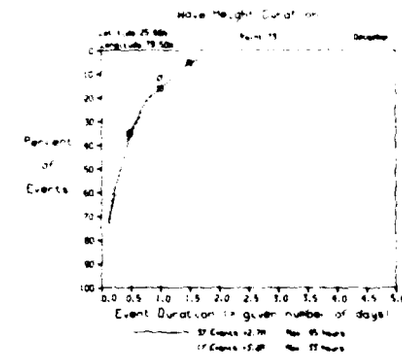
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August









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