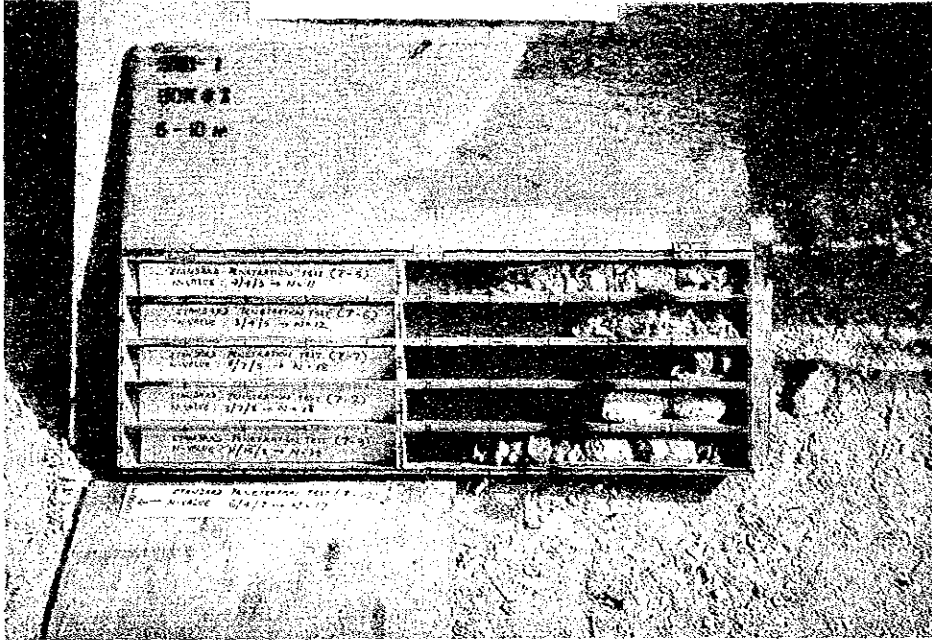




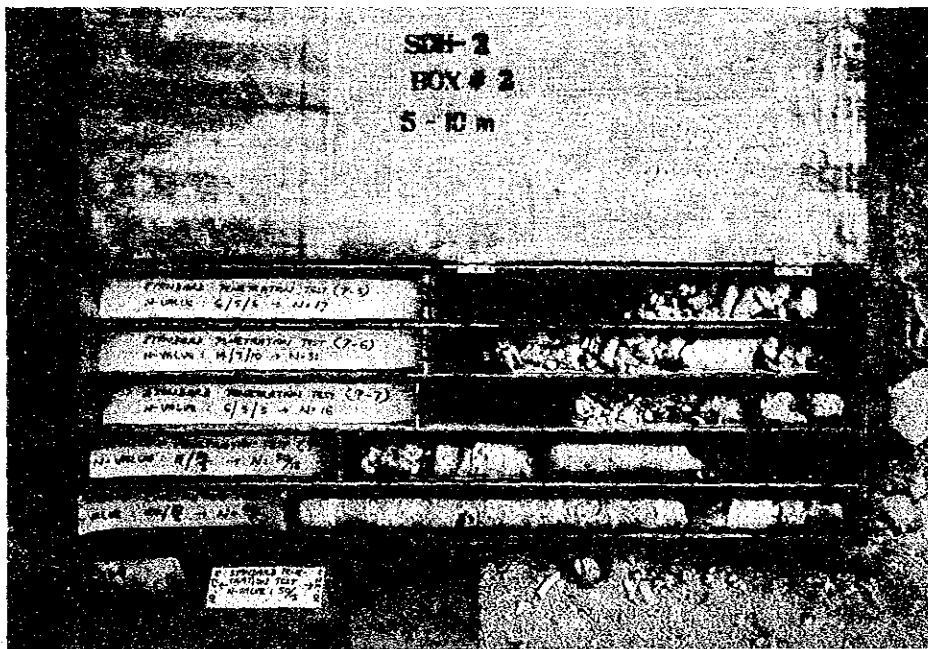
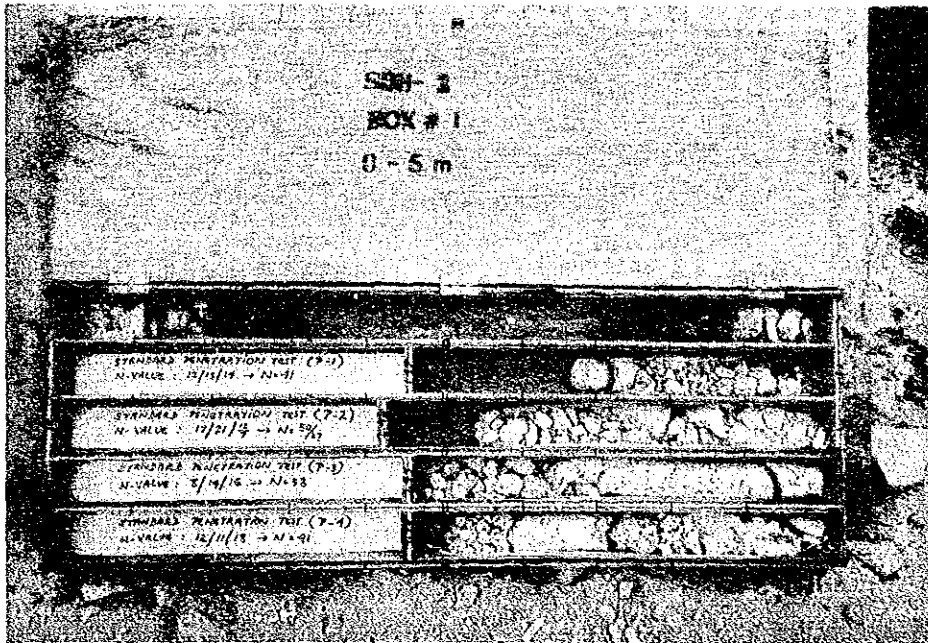
Rock Cores of Borehole SDH-1 (Box No. 1)





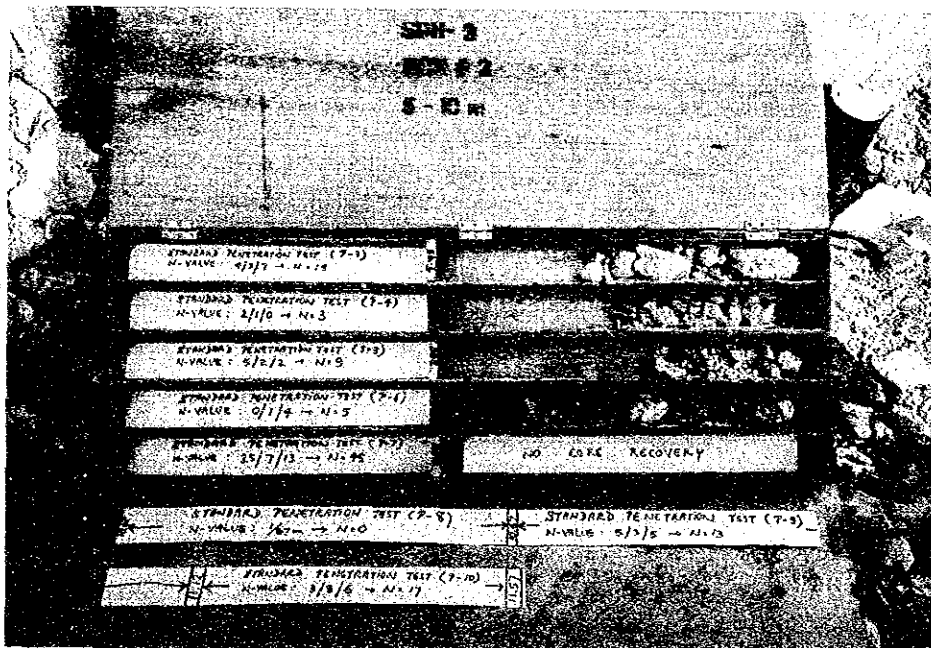
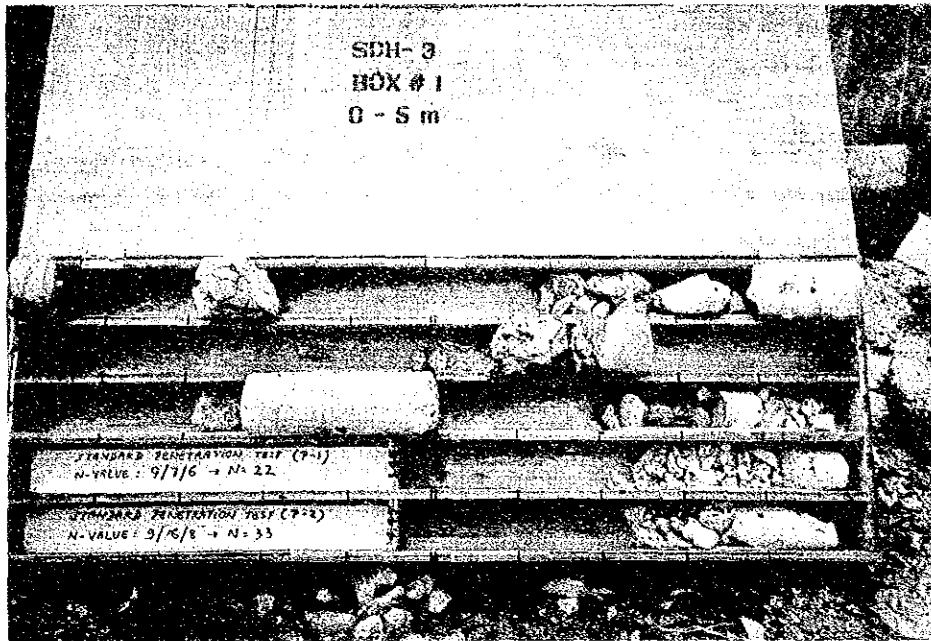
Rock Cores of Borehole SDH-1 (Box No. 2)





Rock Cores of Borehole SDH-2





Rock Cores of Borehole SDH-3





## Chapter 2. Oceanographic Data

### 2.1 Observation on the East, South and West Coasts

Oceanographic survey has been carried out by using the instruments equipped with pressure type wave gage and electromagnetic current meter for the east, south and west coasts of Male' Island (Figure 2.1), respectively. The wave gage can measure wave heights and wave periods, and the current meter can measure a current speed and a current direction. A wave direction can be calculated using the velocity of water particles induced by waves.

#### 2.1.1 Outline of Observations

##### (1) Observation Periods

The observation was conducted during the period from September 22nd to October 2nd on the east coast, from October 2nd to October 10th on the south coast and from October 10th to October 19th on the west coast, respectively. In addition, the instrument was installed at station No. 0 which was located offshore in the southern part of the east coast (refer to Figure 2.1) in order to obtain the long term records for one year.

Table 2.1 Measuring Periods of Wave and Current

STATION	September 1991	October 1991
EAST (No. 1,2,3)	22nd	2nd
SOUTH (No. 1,2,3)		2nd 10th
WEST (No. 1,2,3)		10th 19th
EAST (No. 0)	24th	

(2) Installation of Instrument

The installation methods and the dimensions of wave gage and current meter are displayed in Figure 2.2. Though the instruments of different height were used, the function and accuracy of both instruments were absolutely the same as the other.

The schematic image is given in Figure 2.3. The instrument at Station East No. 0 for long term measuring was set on a concrete base (1.5 m x 1.5 m x 0.4 m). The other instrument for short term measuring was fixed by cubic concrete blocks placed on a metal frame.

(3) Observation Interval

The records of wave and current were measured continuously for 20 minute periods at intervals of two hours at even-numbered time of day. Each value of waves (the height of water surface position) and current components were taken instantaneously at intervals of 0.5 seconds.

(4) Calculation Method

a) Wave Direction

Wave direction ( $\theta$ ) is estimated by using the following equation:

$$\theta = \tan^{-1} \left( \frac{-\eta_p v}{-\eta_p u} \right) \text{-----} (1)$$

Where,  $u$  and  $v$  denote the  $x$  and  $y$  components of current velocity and  $\eta_p$  is the water pressure variation due to the surface fluctuation of water.

b) Wave Height and Wave Period

Wave heights and periods of maximum, 1/10, significant and mean waves are determined by the zero-up crossing method applied to the wave configuration induced from the water pressure variation taken at intervals of 0.5 second. The conversion from a water pressure to a wave height ( $H$ ) is determined by the following equation (2);

$$H = \frac{1}{n_w} a k \times \cosh \frac{2\pi h}{L} \div \cosh \left( \frac{2\pi(h-z)}{L} \right) \text{-----} (2)$$

Where,

L : wave length ( =  $\frac{gt^2}{2\pi} \tanh \frac{2\pi h}{L}$  ),

t : wave period,

n : correcting parameter (=1.3),

w : unit weight of sea water,

a : amplitude of water pressure variation,

k : sensitive constant of wave gage,

g : acceleration due to gravity,

z : vertical special coordinate,

h : water depth of wave gage.

#### c) Current Velocity

Current velocity is determined by the vector calculation method using the x and y component values obtained by the electromagnetic current meter.

#### d) Specification of Instrument

##### 1) Control and CPU Unit

- Observation period 30 days ; 10 min./2 hours
- Observation mode 10 min. & 20 min./1 hour  
10 min. & 20 min./2 hour  
10 min. & 20 min./4 hour  
continuous
- Sampling interval 0.5 second (fixed)
- Accuracy of clock  $\pm 30$  seconds/month
- Synchronizing method Synchronized by sampling pulse

##### 2) Detector Unit and Electromagnetic Sensor

- Measuring range 0 -2.5 m (x,y)
- Measuring accuracy  $\pm 1$  % FS
- Resolution 2 cm

##### 3) Magnet Compass

- Detecting method Magnet compass (clockwise as zero of north)
- Accuracy of magnet  $\pm 5$  °
- Resolution  $\pm 1.4$  °
- Supporting method Gimbal device with fueled oil

- |                           |  |
|---------------------------|--|
| 4) Pressure Detector      |  |
| • Measuring range         | 2 ~ 30 meter   |
| • Measuring accuracy      | ±1 % FS  |
| 5) Memory Cassette        |  |
| • Data memory method      | IC memory cassette                                     |
| • Memory capacity         | 4 mega-byte  |
| • Data processing         | Corresponding to NEC personal computer PC 9800 series. |
| 6) Battery and Power Unit |  |
| • Battery                 | Lythium battery, 6V-30Ah<br>Mountable 2 pc battery     |
| 7) Water-Proof Case       |  |
| • Durable pressure        | 6 km/cm <sup>2</sup>                                   |
| • Material                | SUS - 316  |
| • Weight                  | • Approx. 25 kg  |

#### 2.1.2 Characteristics of Wave and Current

Based on the results derived from the observed data, some characteristics of wave and current at each site (refer to Figure 2.1) will be described in this section. Wind data observed simultaneously in Hulule Island are added to time-series records which are shown as sequence of wave, wind and current.

##### (1) South-East Offshore Point (EAST No. 0 ; Depth D.L. -20 m)

Figure (2.4 to 2.7) represent the time-series records of wave, wind and current, and the distribution of wave height, wave period and current, respectively. A maximum wave height of 2.0 meters was observed on September 30th, 1992. Almost all data, however, show the wave height of 0.5 meter to 1 meter and the wave period of 10 seconds during the above observation period. Most of the waves are incident from the south east (SE). According to the above facts, swells propagating from the Indian Ocean come to Male' Island from the south east with the long period of 10 seconds.

On the other hand, though maximum current speed of 96.7 cm/sec is recognized on January 12th, 1992, the observed current is relatively weak as a whole. The direction of current is classified roughly into a west stream flowing in the west direction and an east stream flowing in the east direction.

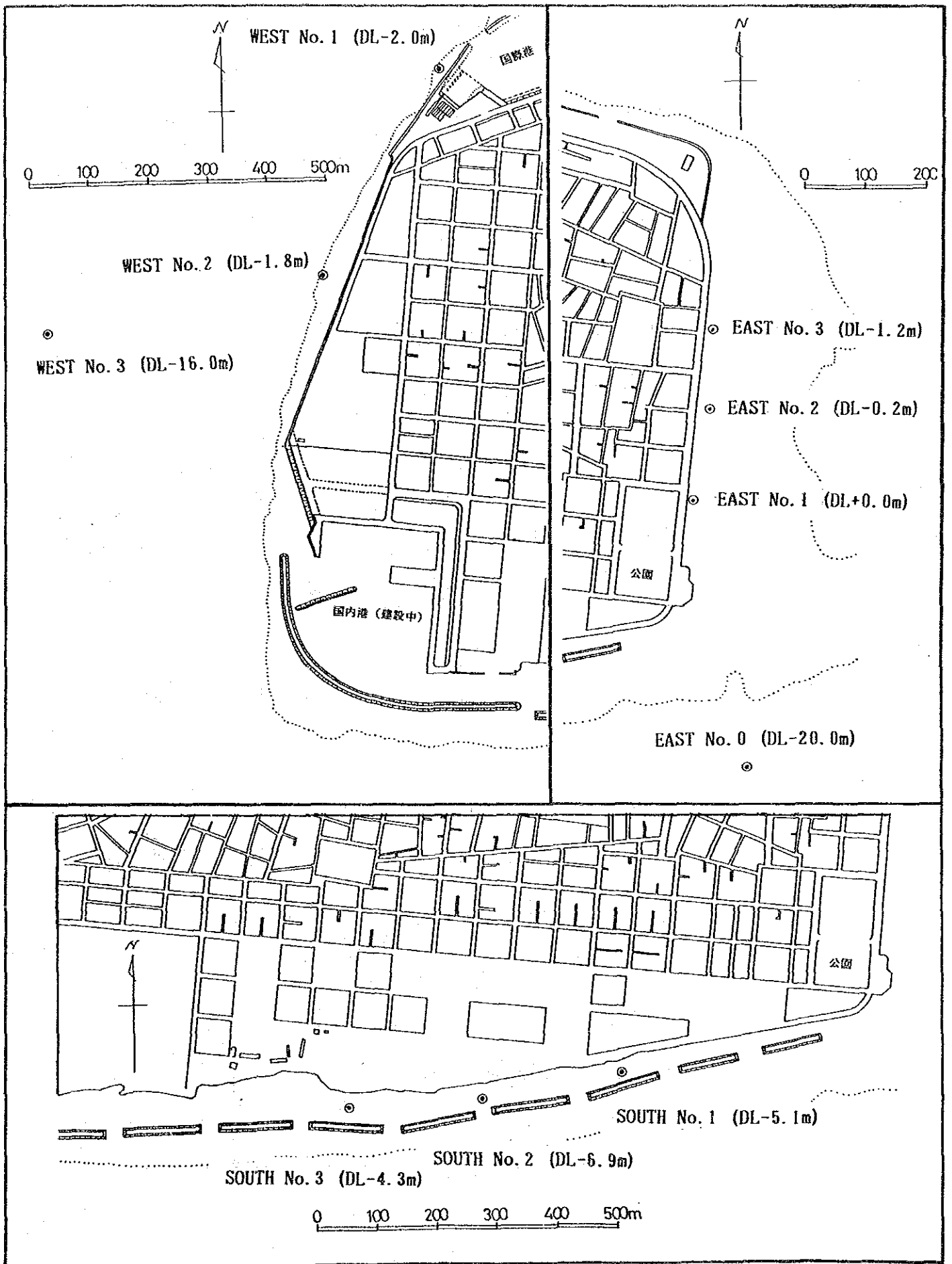


Figure 2.1 Observation Points

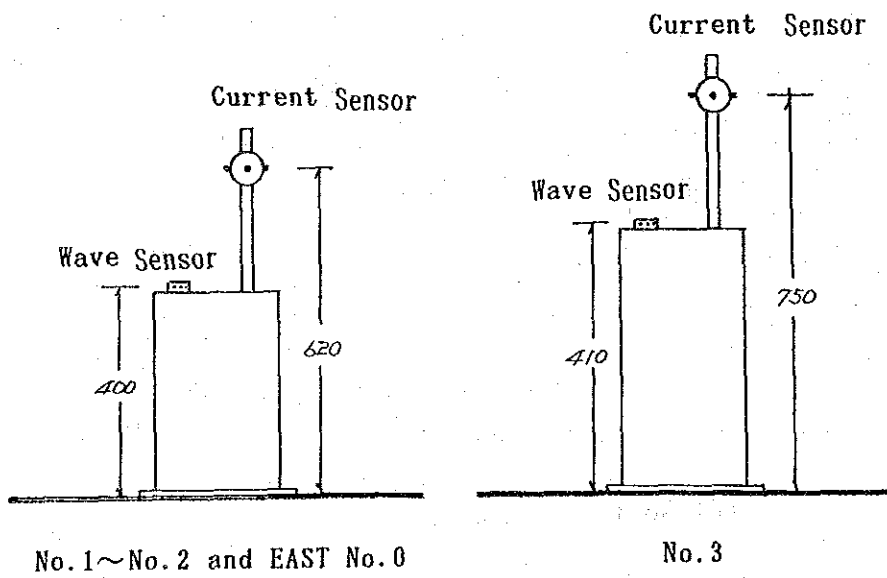
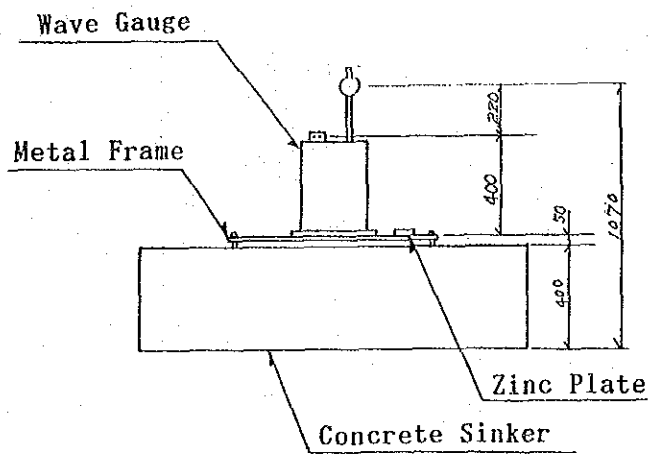
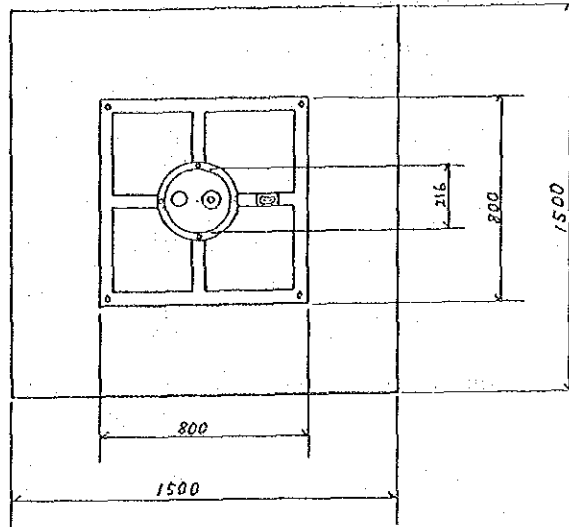
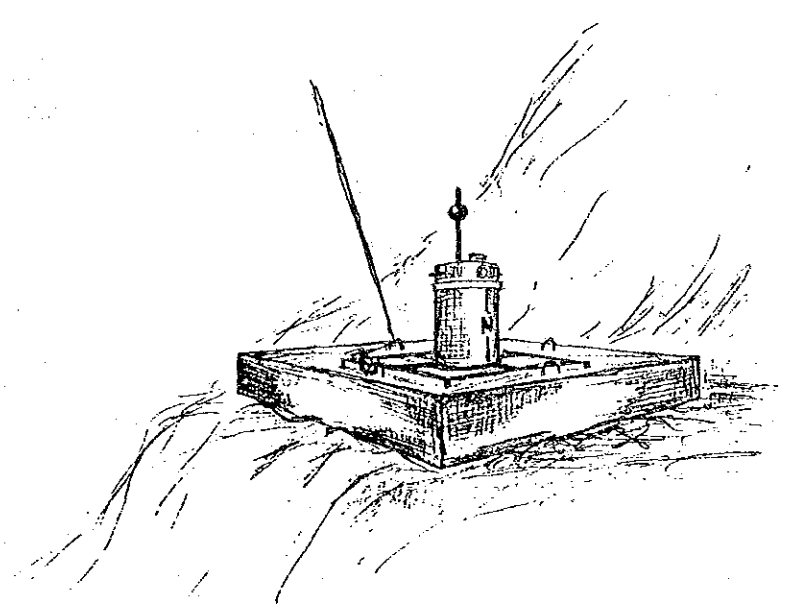
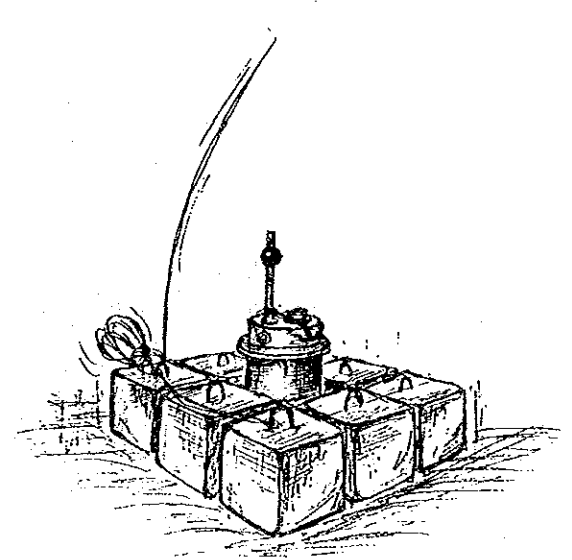


Figure 2.2 Side View of Wave Gauge

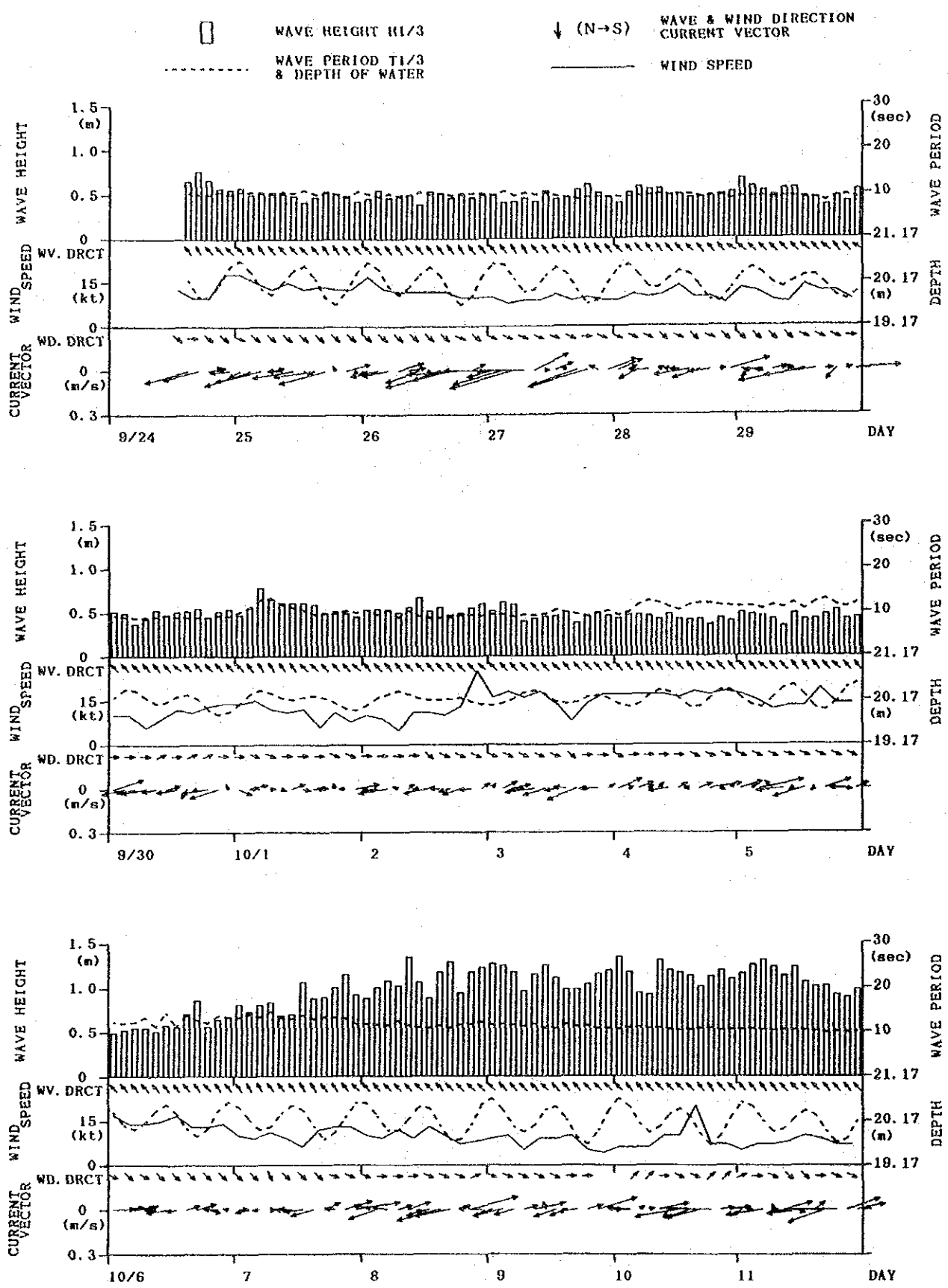


EAST No. 0



EAST, SOUTH, WEST (No. 1~No. 3)

Figure 2.3 Setting Layout of Wave Gauge

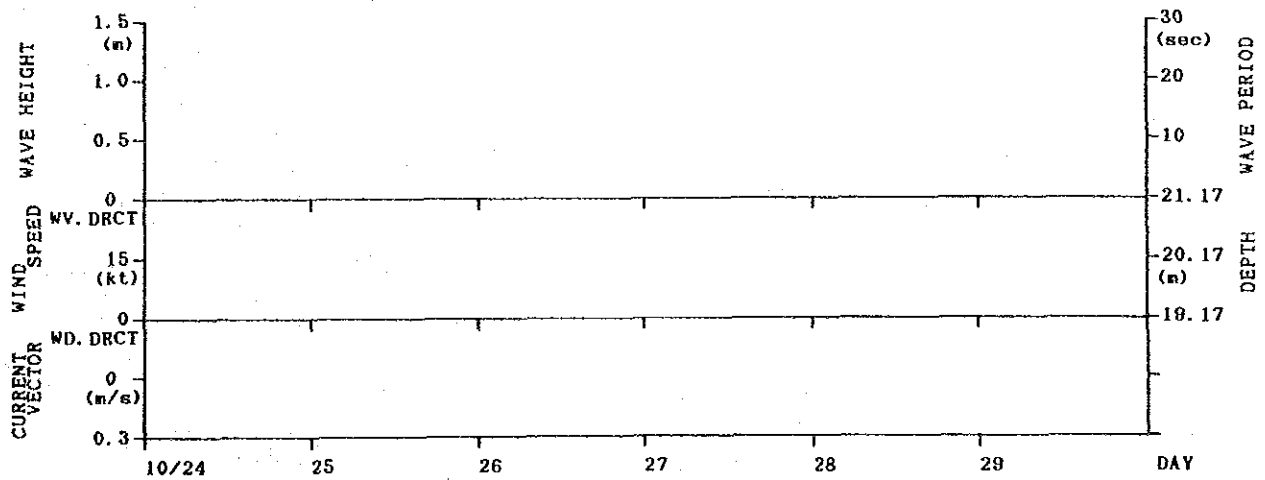
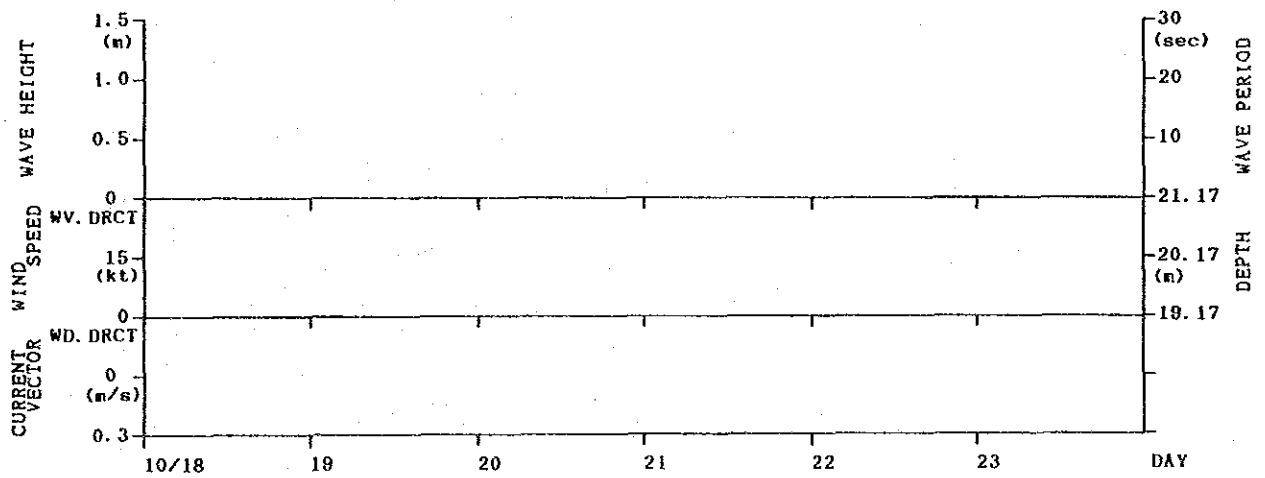
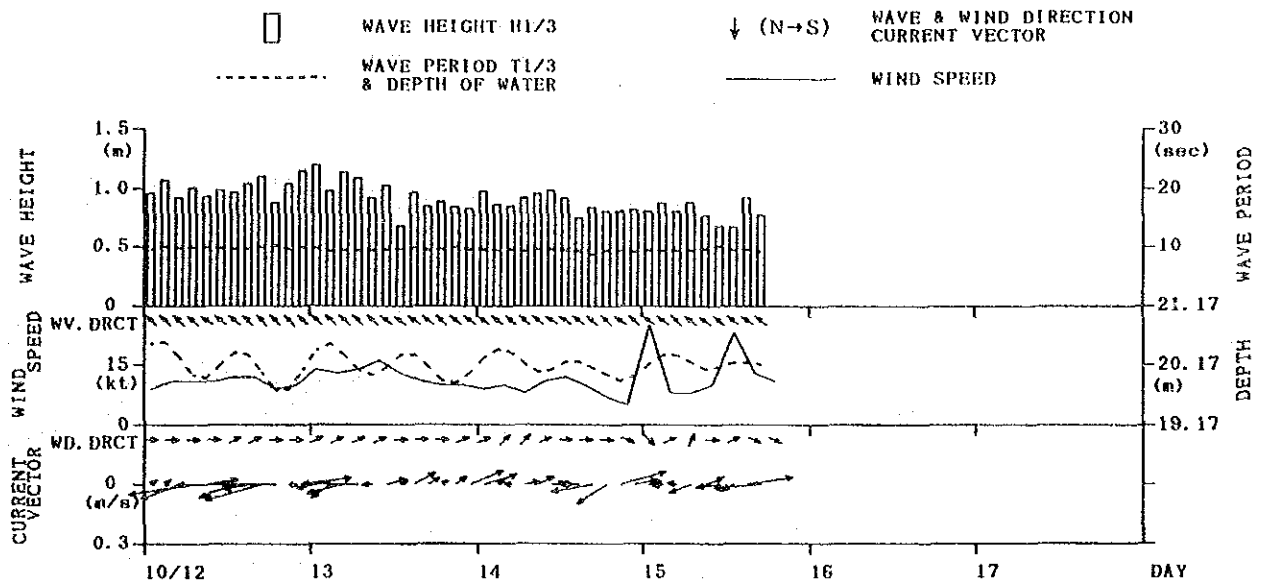


SEP. 24 1991 - OCT. 11 1991

STATION : EAST NO. 0

Figure 2.4(1) SEQUENCE OF WAVE, WIND AND CURRENT.



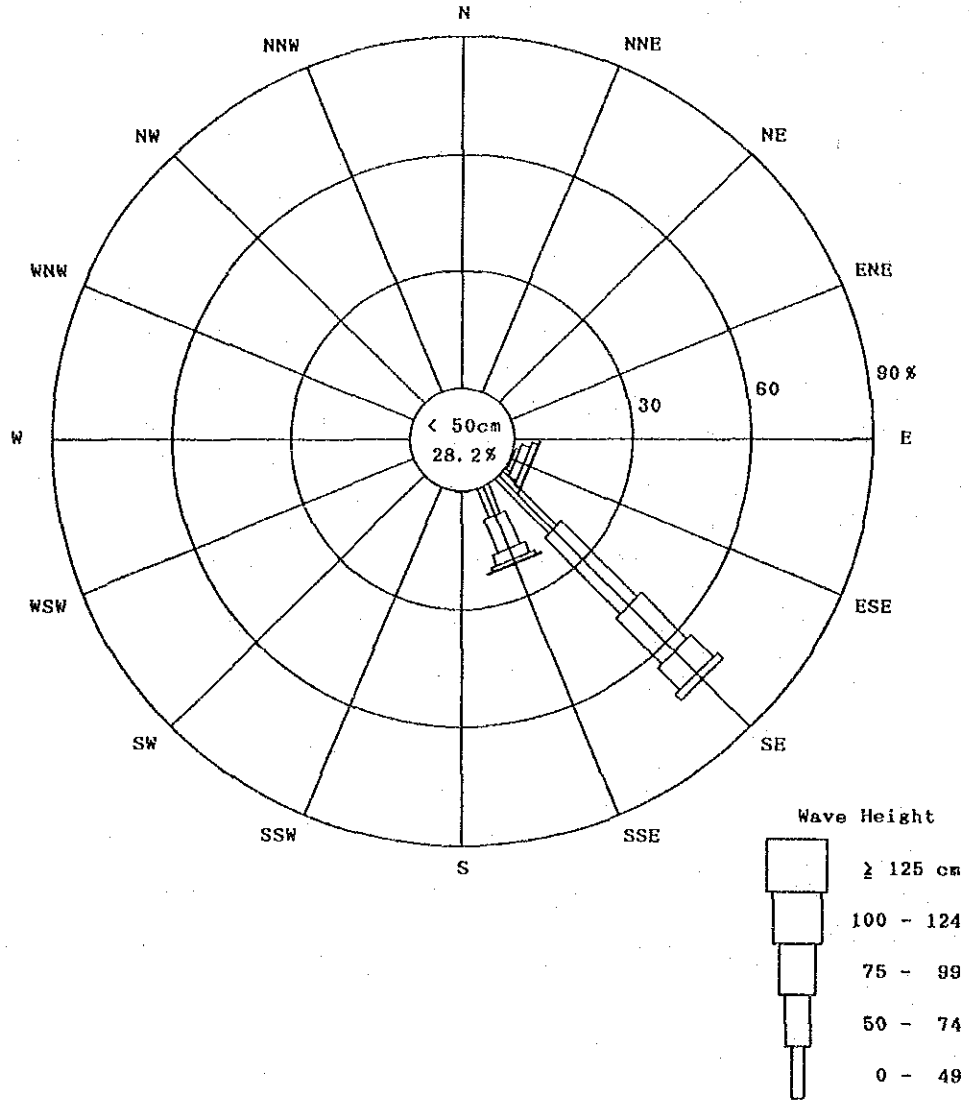


OCT. 12 1991 - OCT. 15 1991

STATION : EAST NO. 0

Figure 2.4(2) SEQUENCE OF WAVE, WIND AND CURRENT

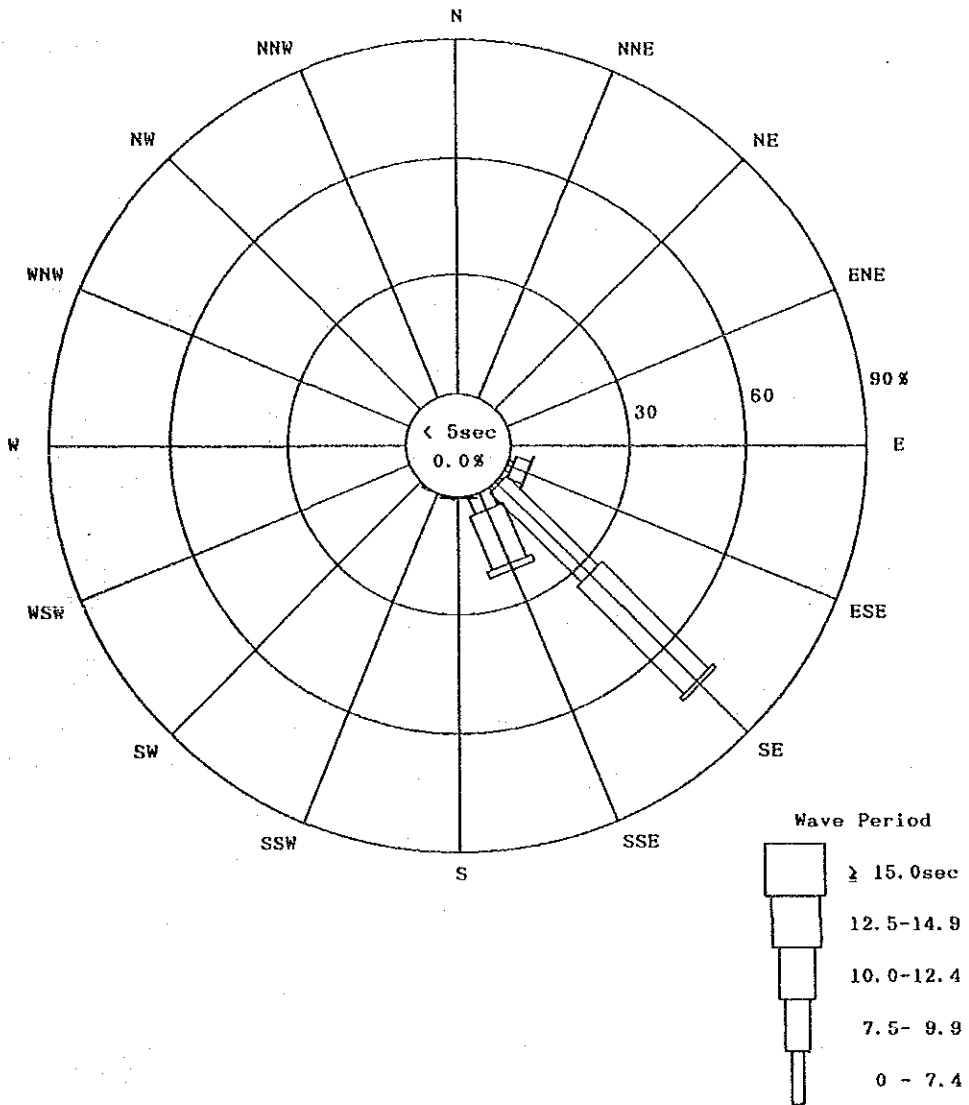
All Terms ( Oct. 1 1991 - Sep. 30 1992 )



Station : East No. 0

Figure 2.5 WAVE HEIGHT ROSE

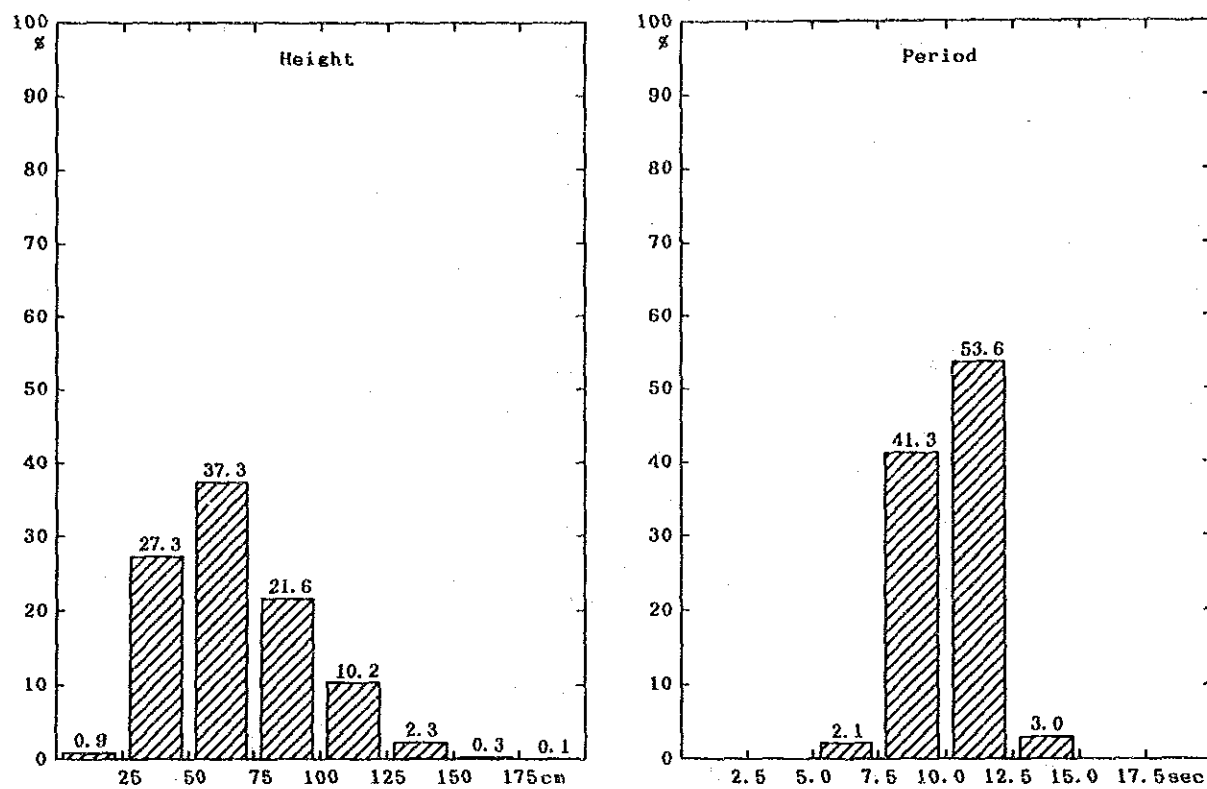
All Terms ( Oct. 1 1991 - Sep. 30 1992 )



Station : East No. 0

Figure 2.6 WAVE PERIOD ROSE

All Terms ( Oct. 1 1991 - Sep.30 1992 )



Station : East No. 0

Figure 2.7 FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

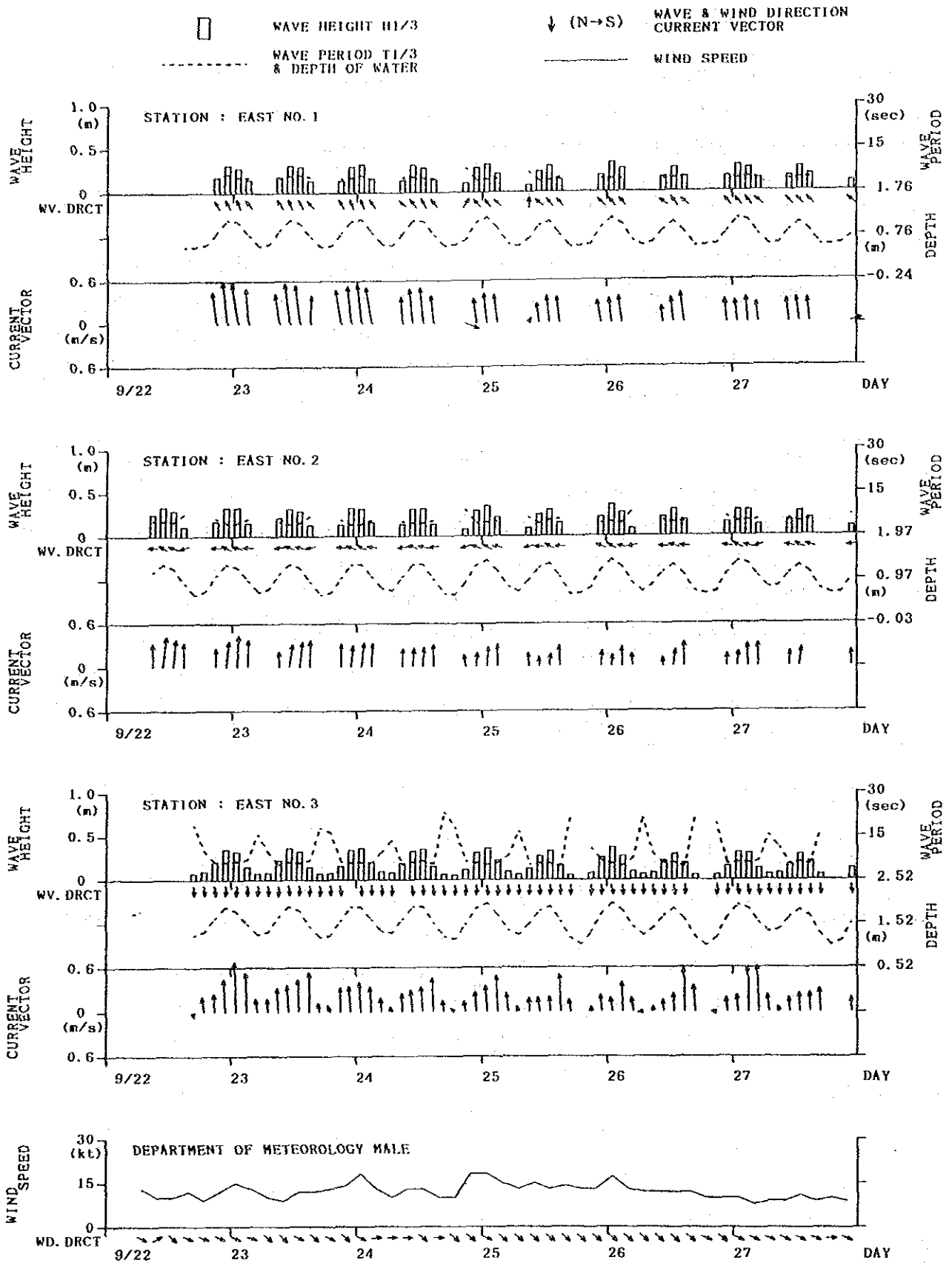
The west stream occurs at the time of ebb stage (falling tide) and the east stream at the time of flood stage (rising tide). Comparing both streams, the velocity of the west stream tends to be stronger than that of the east stream.

(2) East Coast (EAST No. 1 ~ No. 3)

Figures 2.8 to 2.12 represent the distribution of waves and currents based on the observed records on the reef flat on the east coast. The lack of data in Figure 2.8 (1) and 2.8 (2) is due to the exposure of the sensor to the air at the time of low water level. Wave heights on the reef flat are considerably low compared with those of offshore waves due to the wave breaking nearby the reef edge.

Waves observed in this zone are lower than 40 cm in height, and tend to become high in accordance with the rise of sea level. Wave periods also become shorter than offshore ones at East No. 0 due to the wave fission phenomenon nearby the reef edge. It is seen that longer periods on the reef flat than offshore ones are plotted in the figures. But this is owing to the influence of the zero-up crossing method applied to very low waves. On the other hand, the predominant wave direction changes counter-clockwise gradually from the south east (SE) at No. 1 to the north (N) at No. 3. The change of wave direction is due to the wave refraction caused by the change of bottom topography in the nearshore region.

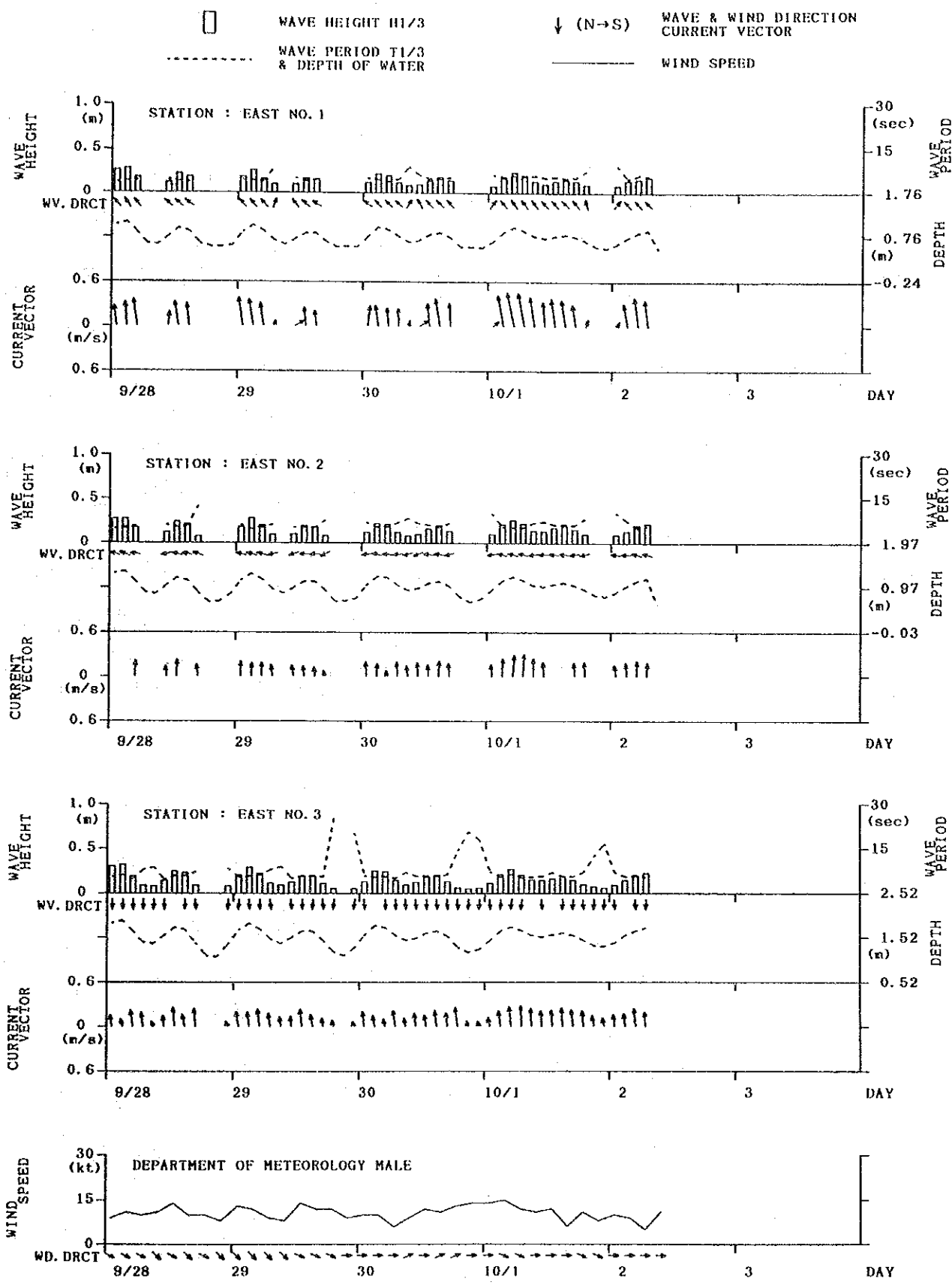
In regard to current, the water flows uniformly in the north direction without the relationship of tide stage at all observation points. The water on the reef flat on the east coast is supposed to flow out of the reef flat into the offshore region through a reef gap at the north side. The current has a tendency to become fast in accordance with the rise of sea level as well as the wave height. The current on the reef flat is estimated to be caused by the water mass brought by an offshore wave action. It is concluded that a predominant current on the reef flat on the east coast is a wave induced current, that is, "nearshore current" in the coastal engineering term.



SEP. 22 1991 - SEP. 27 1991

EAST SIDE

Figure 2.8(1) SEQUENCE OF WAVE, WIND AND CURRENT

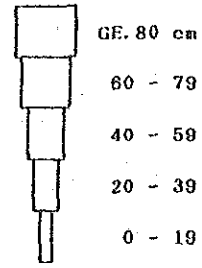
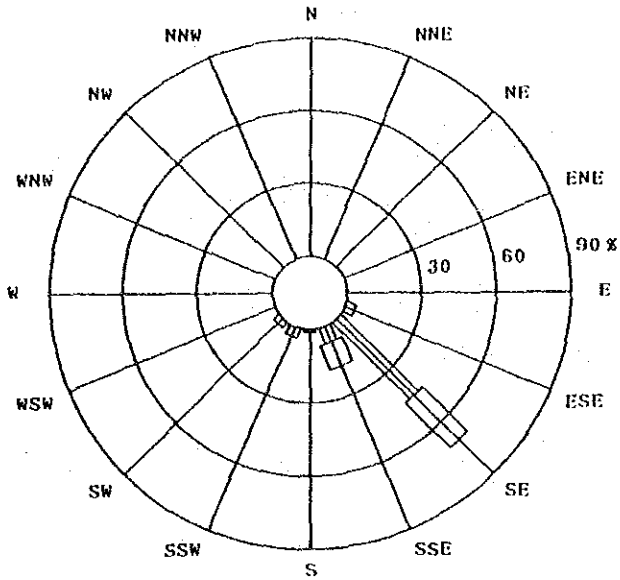


SEP. 28 1991 - OCT. 2 1991

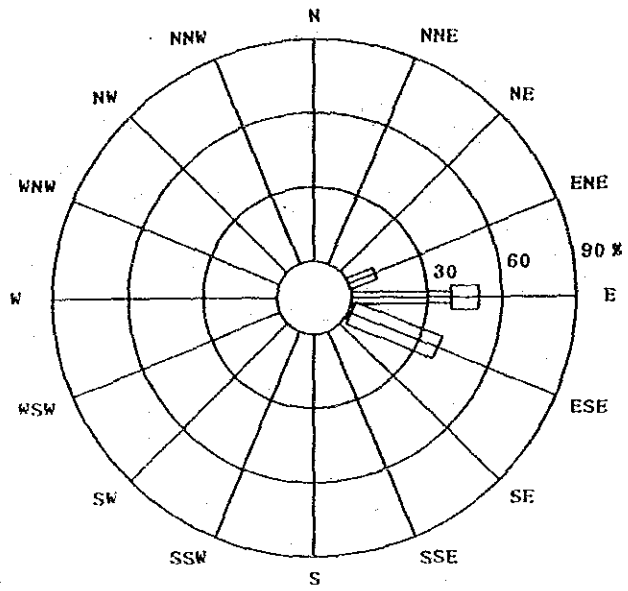
EAST SIDE

Figure 2.8(2) SEQUENCE OF WAVE, WIND AND CURRENT

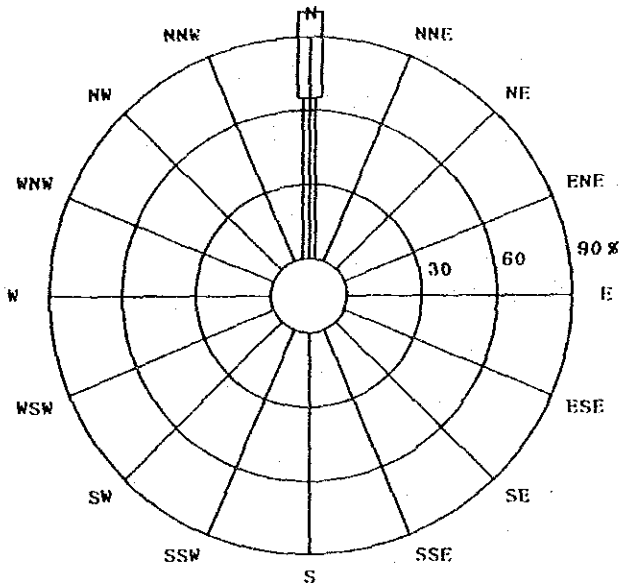
STATION : EAST NO. 1



STATION : EAST NO. 2



STATION : EAST NO. 3



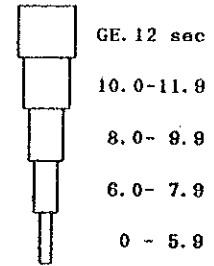
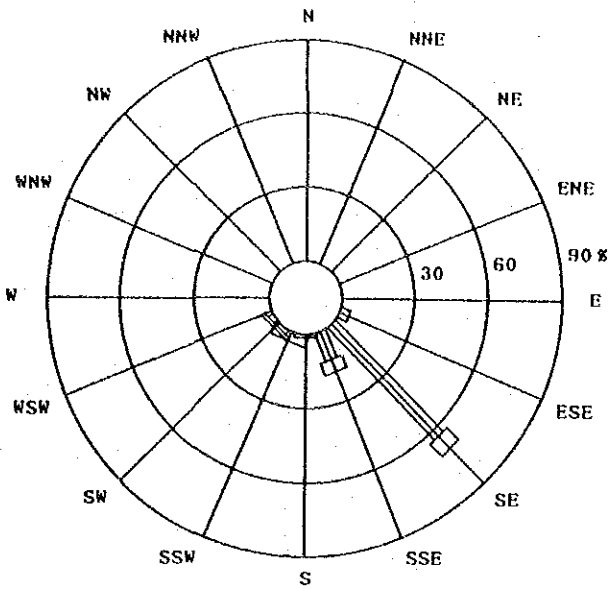
SEP. 22 1991 - OCT. 2 1991

EAST SIDE

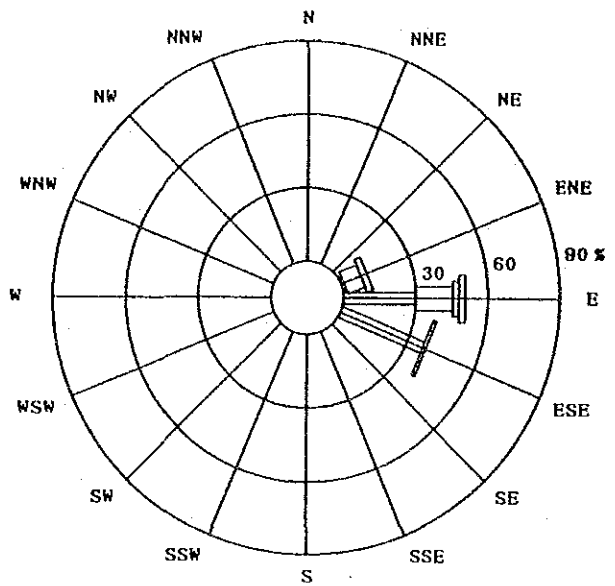
Figure 2.9 WAVE HEIGHT ROSE



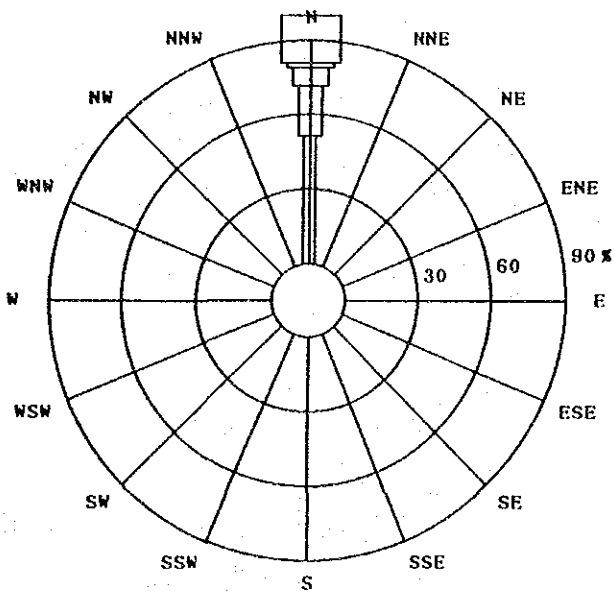
STATION : EAST NO.1



STATION : EAST NO.2



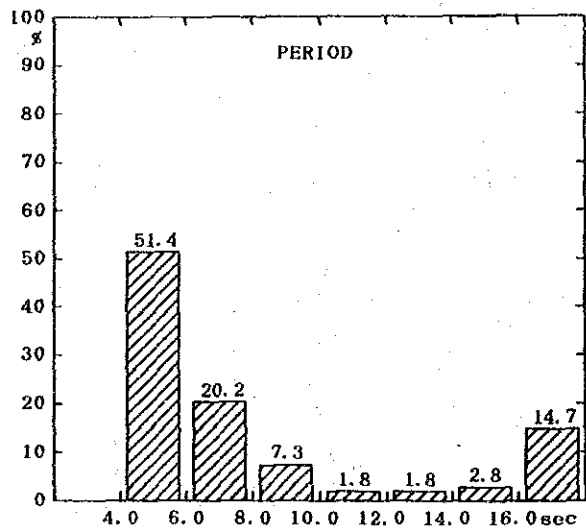
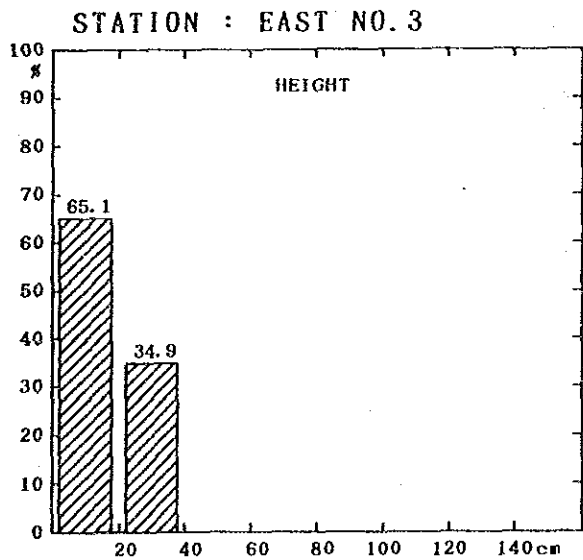
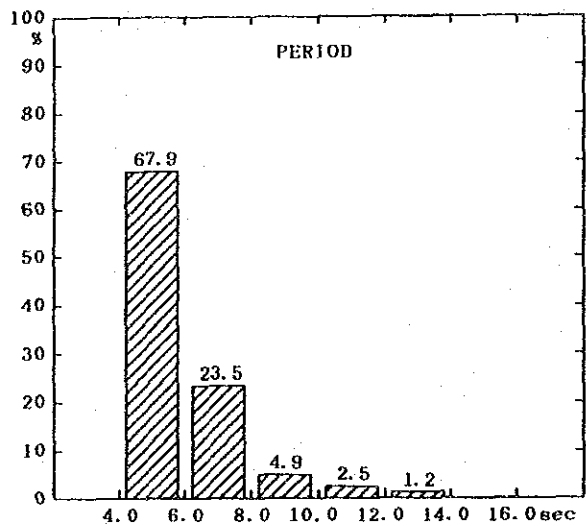
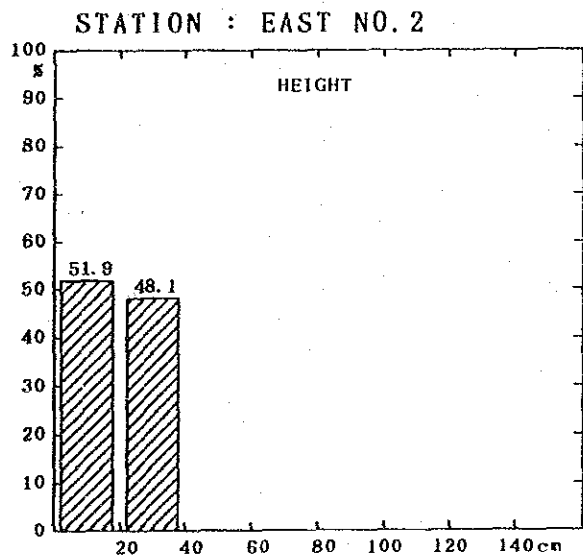
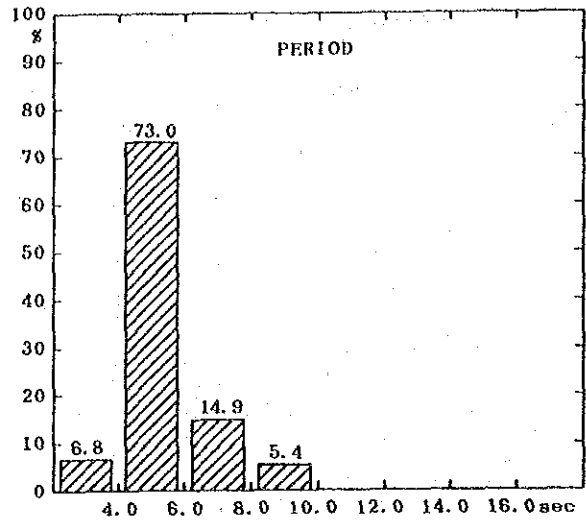
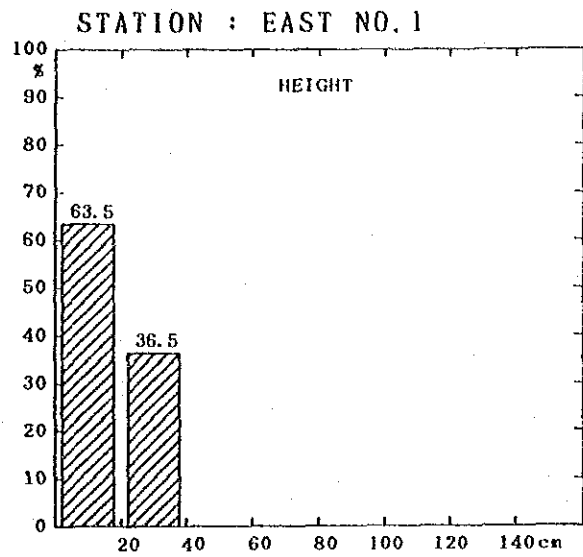
STATION : EAST NO.3



SEP. 22 1991 - OCT. 2 1991

EAST SIDE

Figure 2.10 WAVE PERIOD ROSE



SEP. 22 1991 - OCT. 2 1991

EAST SIDE

Figure 2.11 FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

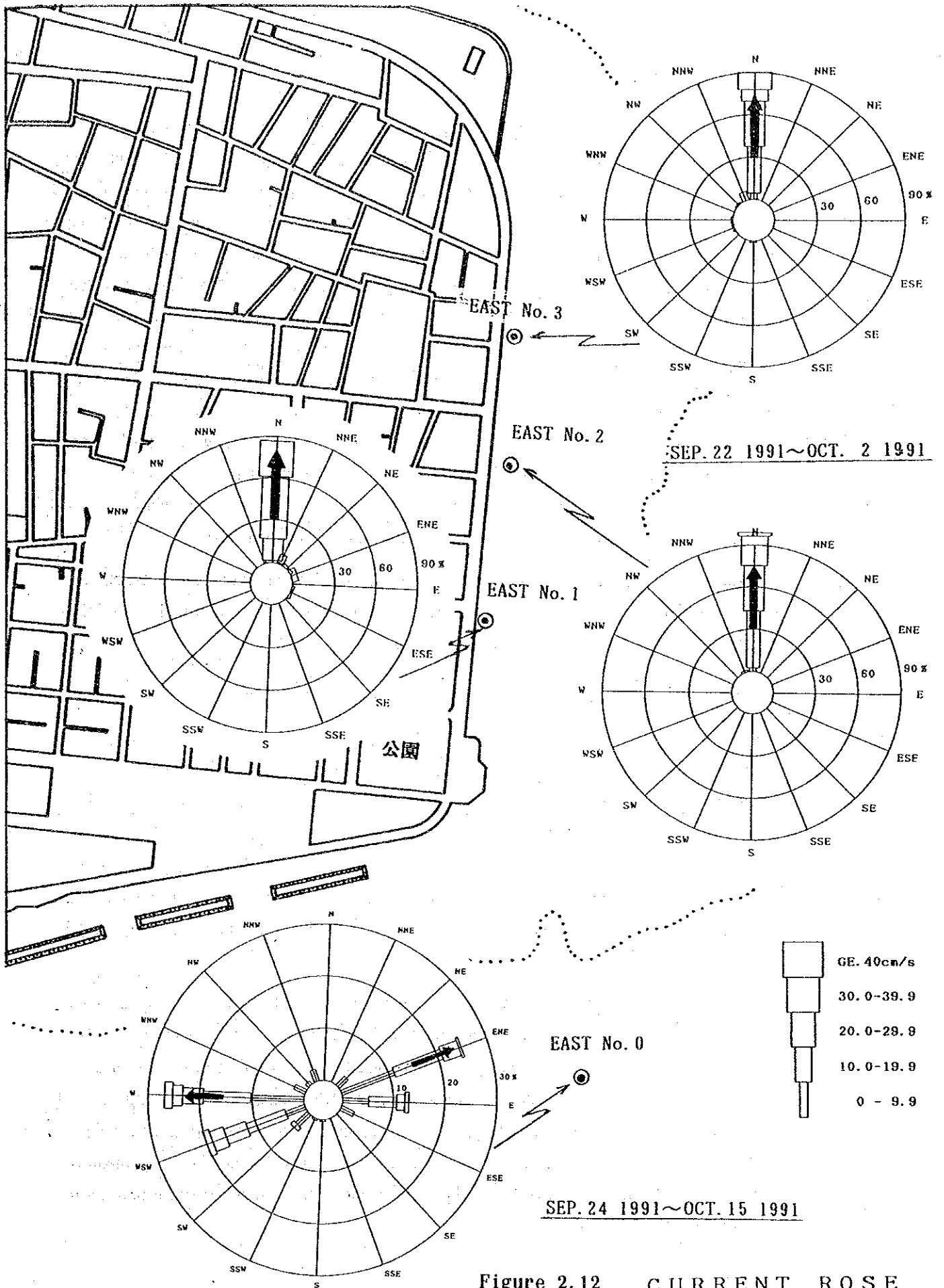


Figure 2.12 CURRENT ROSE

(3) South Coast (South No. 1 ~ No. 3)

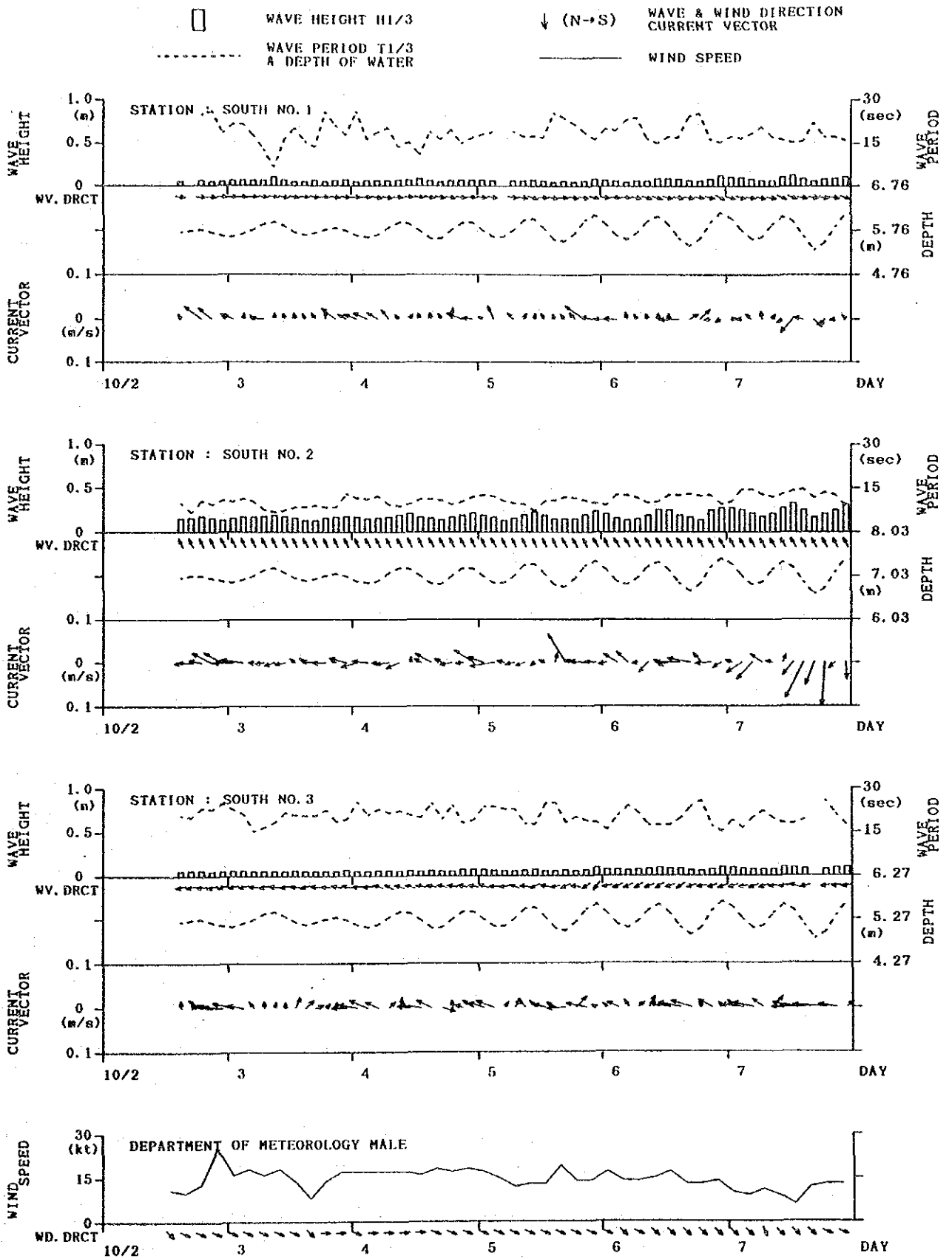
Figures 2.13 (1) to 2.17 represent the distribution of wave and current based on the observed records on the south coast. The waves indicate low heights because the observation points are located inside the detached breakwaters. The station of No. 2 located at the open area of the two breakwaters and the wave heights are 30 cm to 40 cm bigger than those of the other two stations (No. 1 and No. 3) which are sheltered by the breakwater. But the wave height at the station of No. 2 is almost 1/3 of offshore ones (East No. 0). The predominant incident wave comes from the west (W) at the station of No. 1, from the southern south east (SSE) at the station of No. 2, and from the east (E) at the station of No. 3. The waves at No. 1 indicate the diffracted ones incoming from the west opening corner of the breakwater because the waves incoming from the east are very little due to the shallowness at the east corner of the breakwater. On the other hand, the waves at the station of No. 3 behind the breakwater come predominantly from the east (E) because offshore waves propagate from the east direction as seen at the station of No. 2 and No. 0.

The currents observed inside the breakwater indicate relatively weak currents, but the predominant currents flow in the west direction along the dredged channel behind the detached breakwater.

(4) West Coast (West No. 1 ~ No. 3)

Figures 2.18(1) to 2.22 represent the distribution of wave and current based on the observed records on the west coast. The station of No. 1 and No. 2 located near the existing seawall and the station of No. 3 located at the position of 16 meters depth and about 500 meters far from Male' Island. Due to the calm sea condition during the observation period, the observed wave heights are 20 cm to 30 cm. Judging from the long wave period of about 10 seconds and the incident direction from the south at the station of No. 3, the wave is thought to be a refracted and diffracted swell propagating from the Indian Ocean.

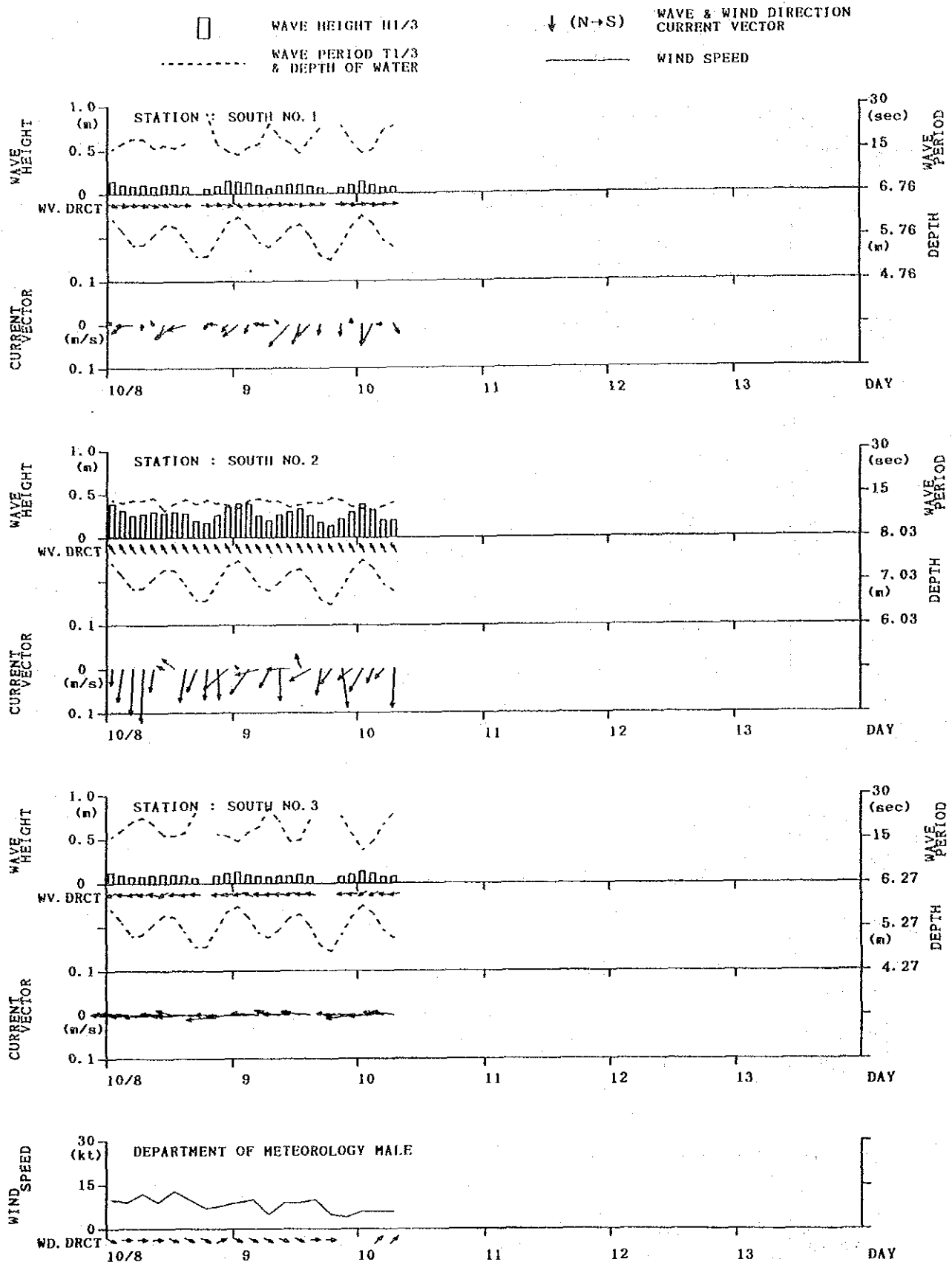
The offshore current on the west coast flows predominantly in the south west (SW). The currents occurred near the seawall, however, are classified roughly into two predominant components; one is the southern south west (SSW) component and the other is the north (N) or the northern north east (NNE) component. The maximum velocity observed during this period is 28.6 cm/sec at No. 1, 24.5 cm/sec at No. 2 and 39.9 cm/sec at No.3. Judging from the vector of current and the fluctuation of sea level, the significant current on the west coast is thought to be not a nearshore current but a tidal current.



OCT. 2 1991 - OCT. 7 1991

SOUTH SIDE

Figure 2.13(1) SEQUENCE OF WAVE, WIND AND CURRENT

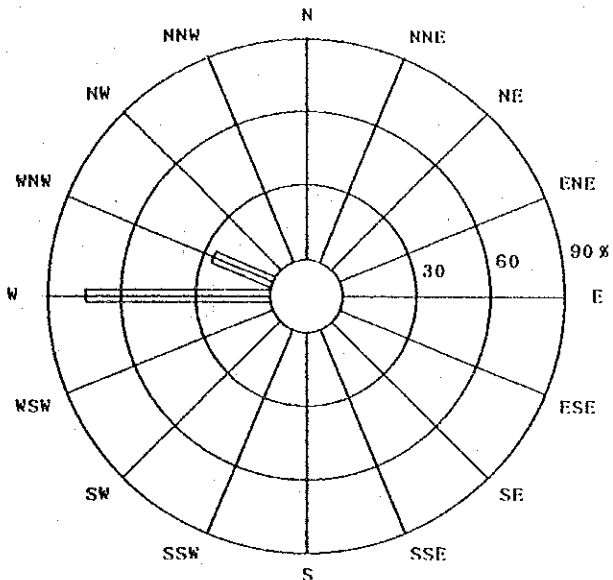


OCT. 8 1991 - OCT. 10 1991

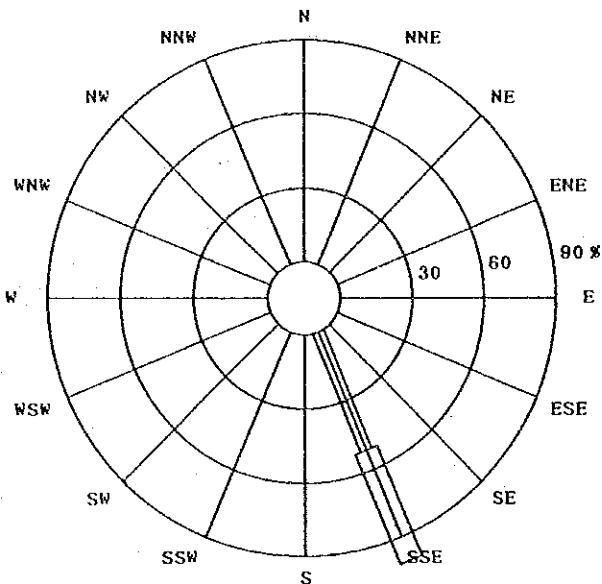
SOUTH SIDE

Figure 2.13(2) SEQUENCE OF WAVE, WIND AND CURRENT

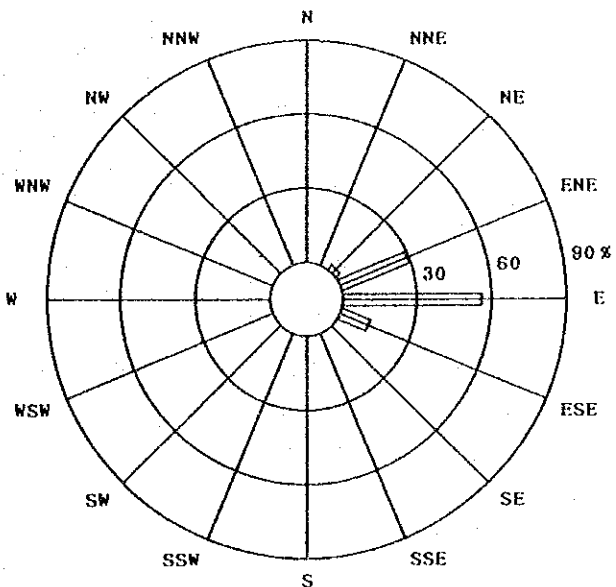
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STATION : SOUTH NO. 2



STATION : SOUTH NO. 3

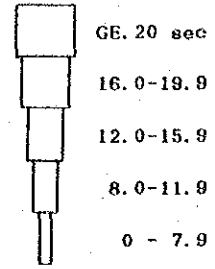
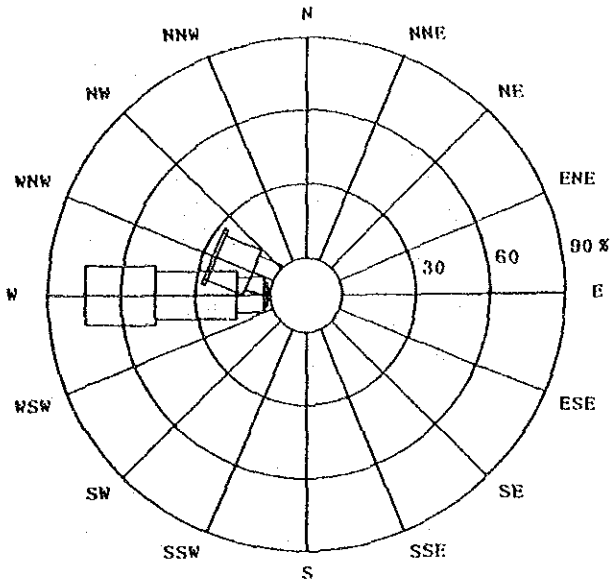


OCT. 2 1991 - OCT. 10 1991

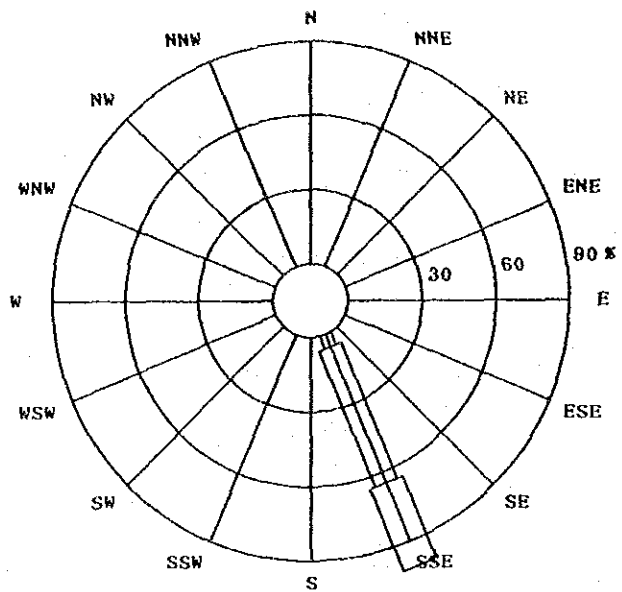
SOUTH SIDE

Figure 2.14 WAVE HEIGHT ROSE

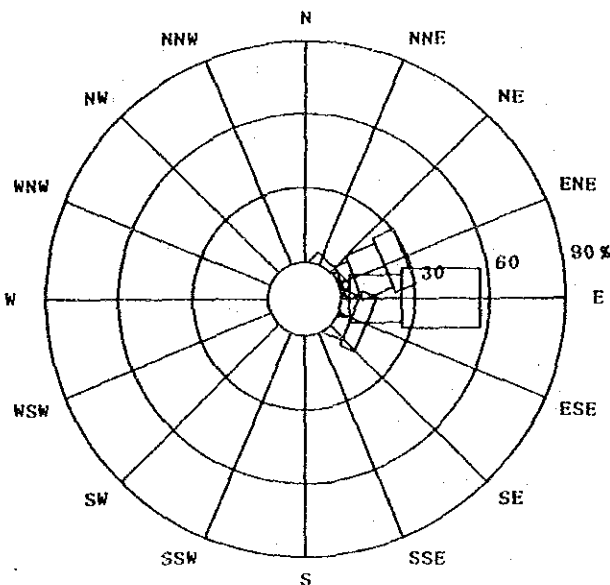
STATION : SOUTH NO.1



STATION : SOUTH NO. 2



STATION : SOUTH NO. 3

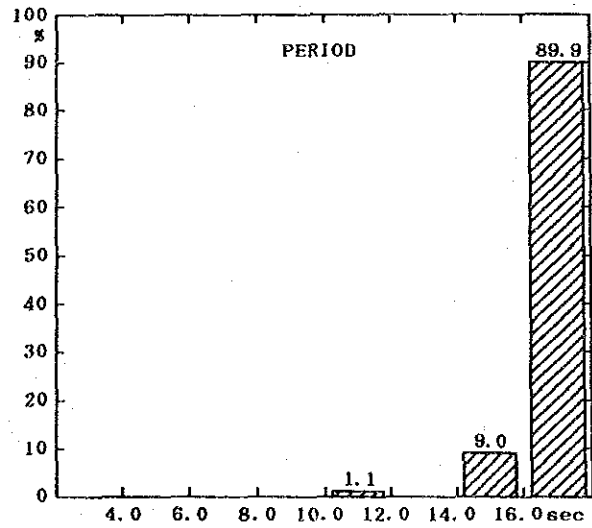
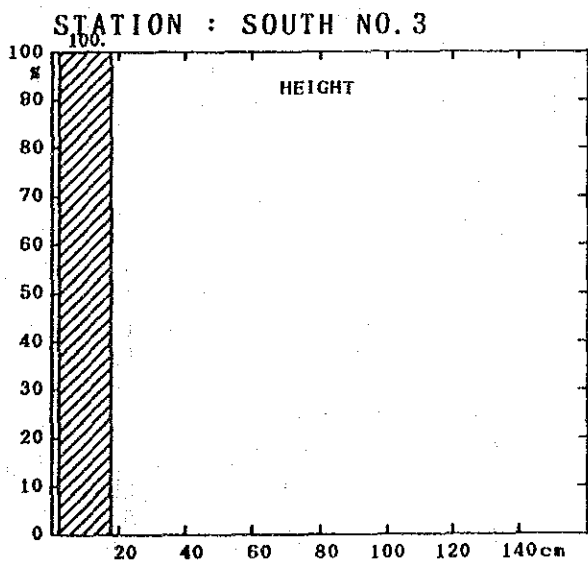
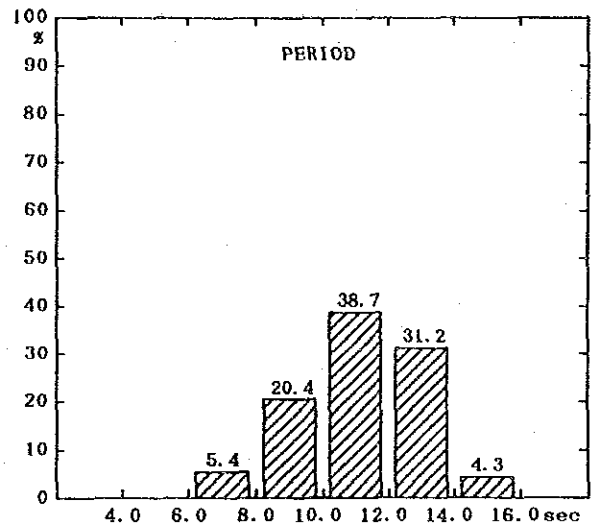
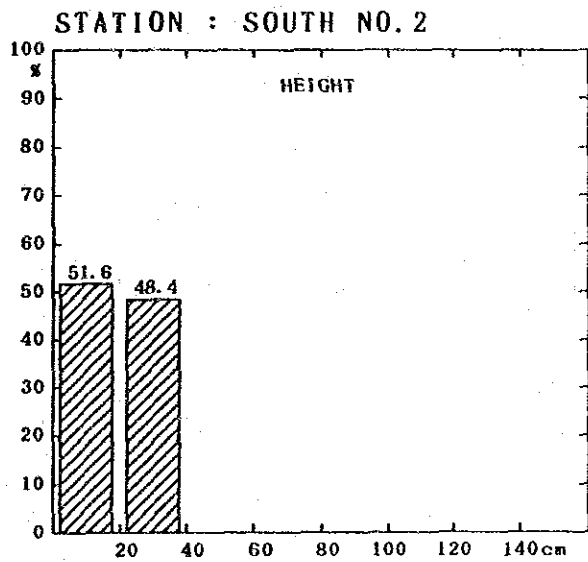
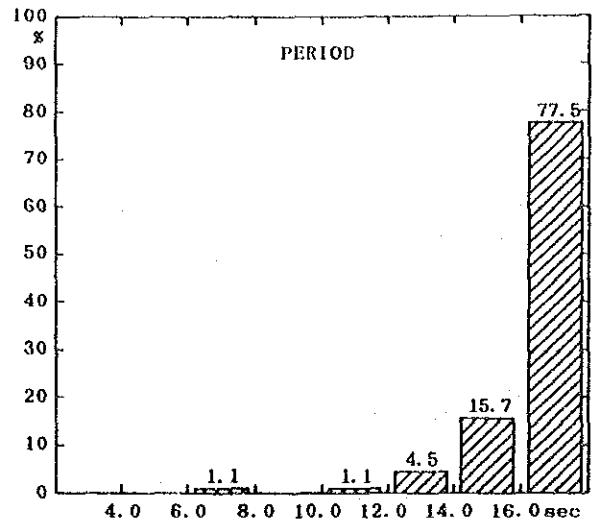
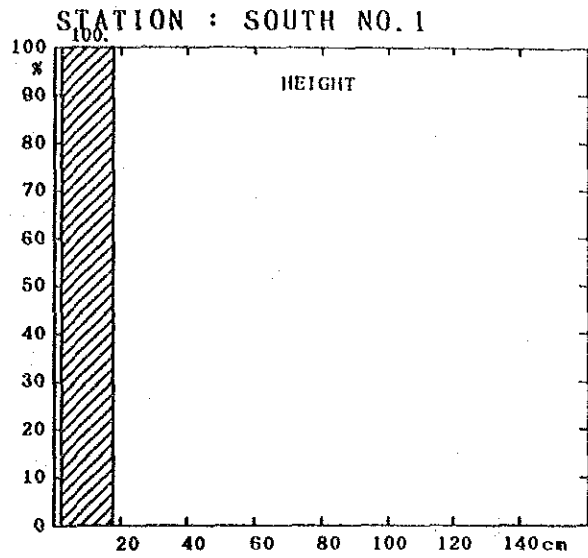


OCT. 2 1991 - OCT. 10 1991

SOUTH SIDE

Figure 2.15 WAVE PERIOD ROSE





OCT. 2 1991 - OCT. 10 1991

SOUTH SIDE

Figure 2.16 FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

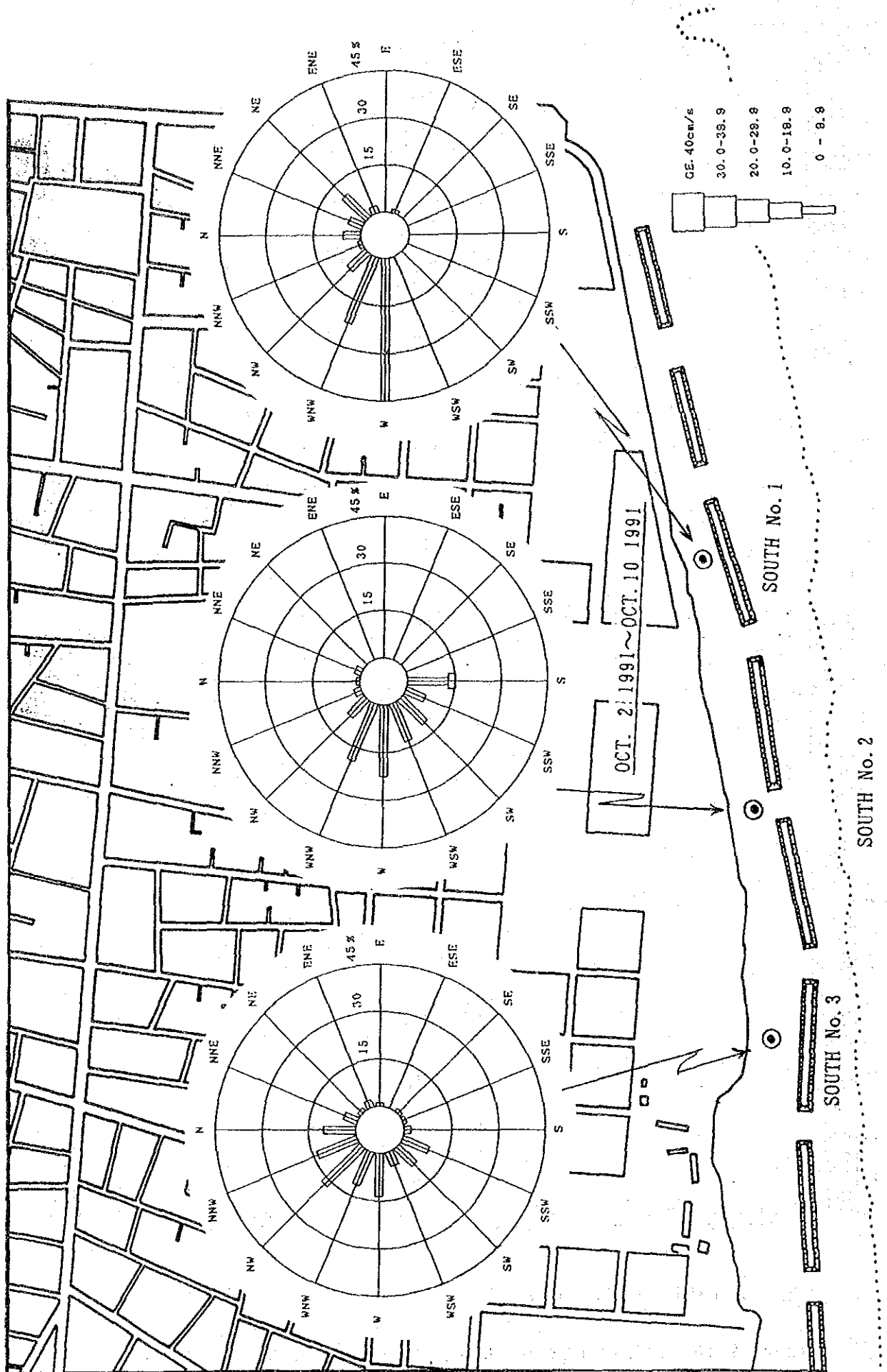
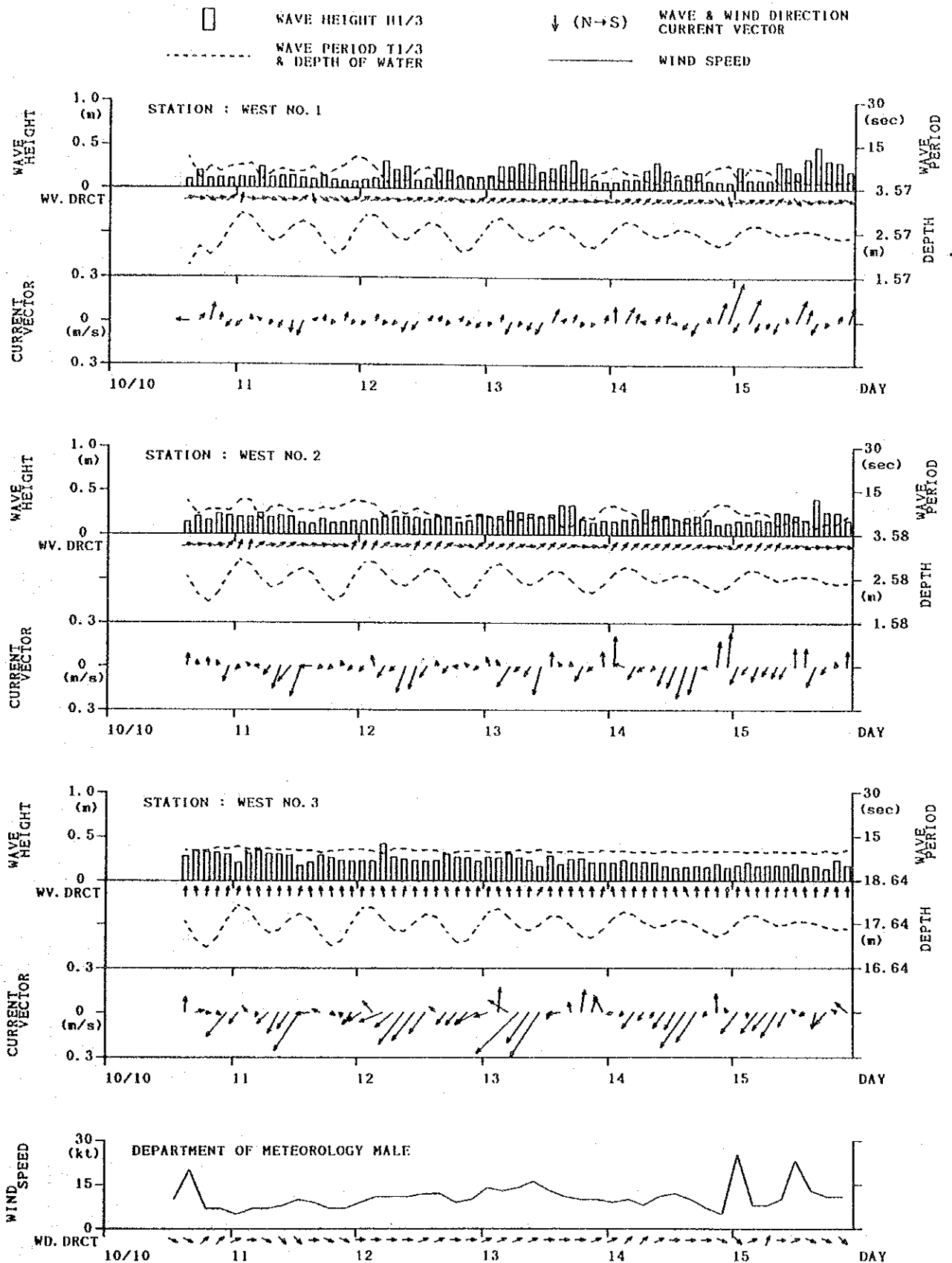


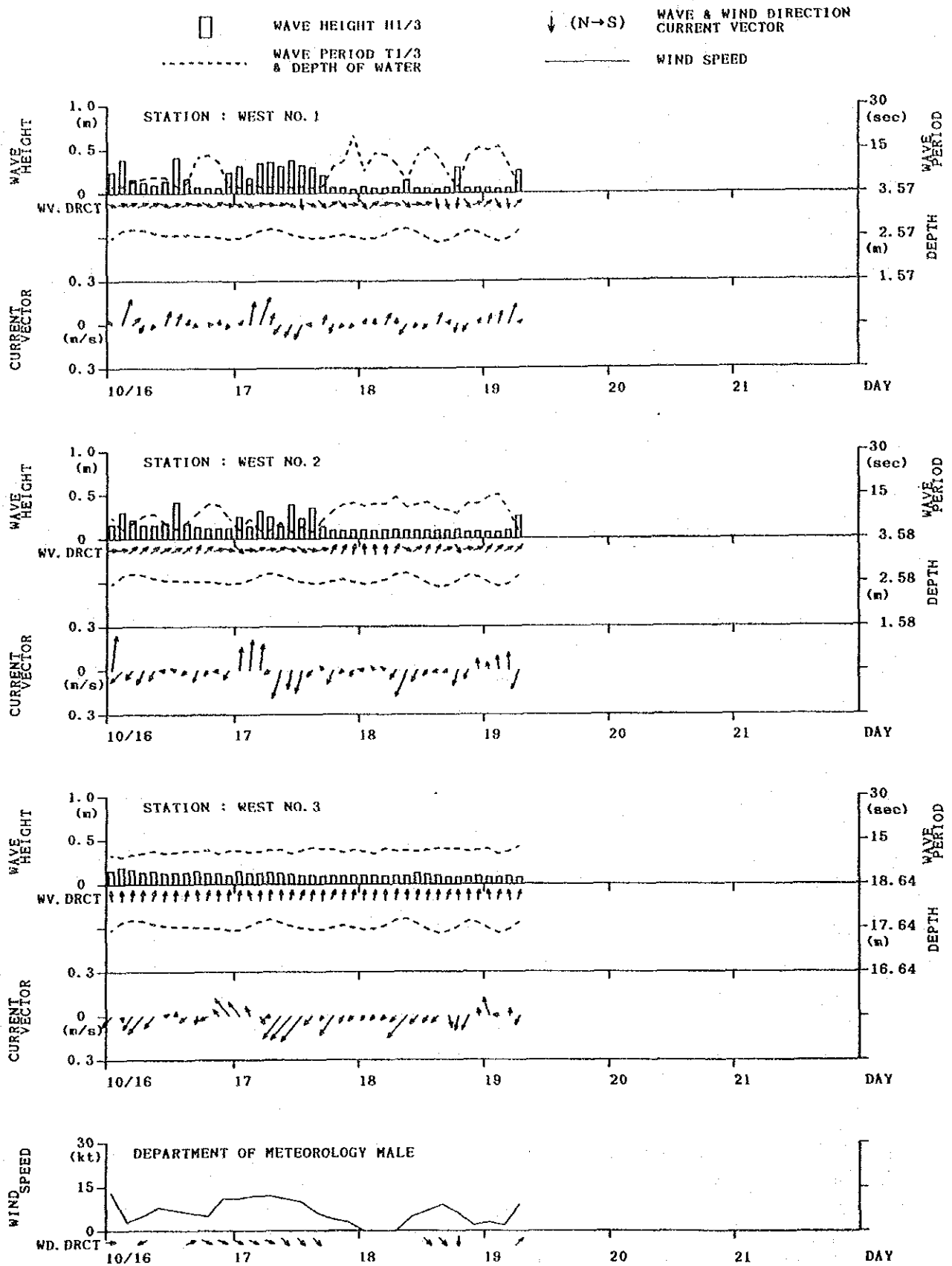
Figure 2.17 CURRENT ROSE  
2 - 26



OCT. 10 1991 - OCT. 15 1991

WEST SIDE

Figure 2.18(1) SEQUENCE OF WAVE, WIND AND CURRENT

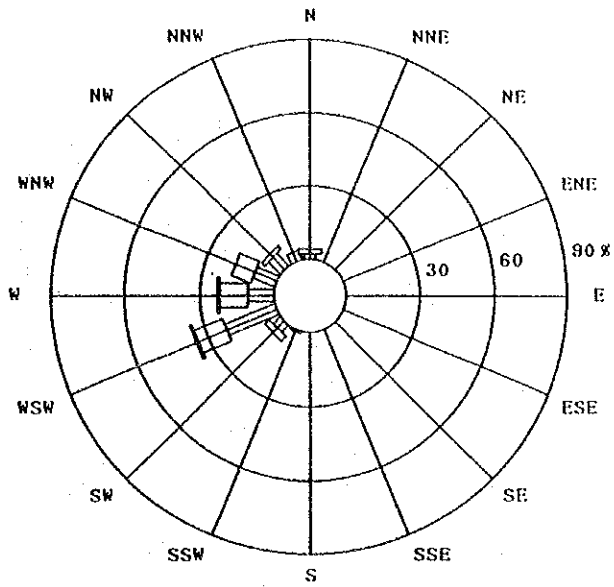


OCT. 16 1991 - OCT. 19 1991

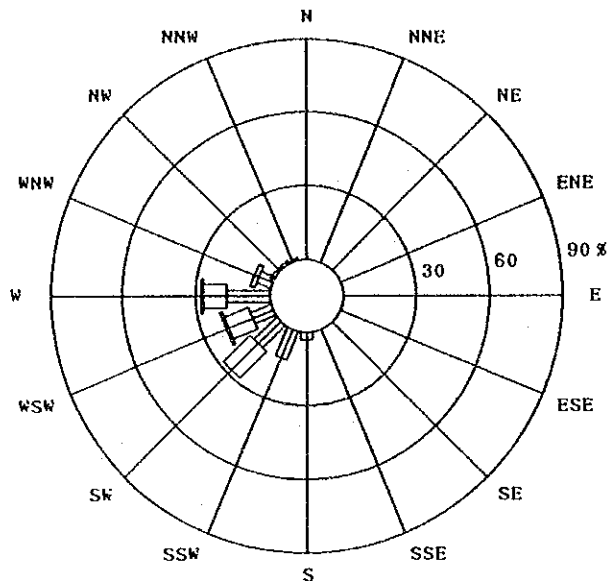
WEST SIDE

Figure 2.18(2) SEQUENCE OF WAVE, WIND AND CURRENT

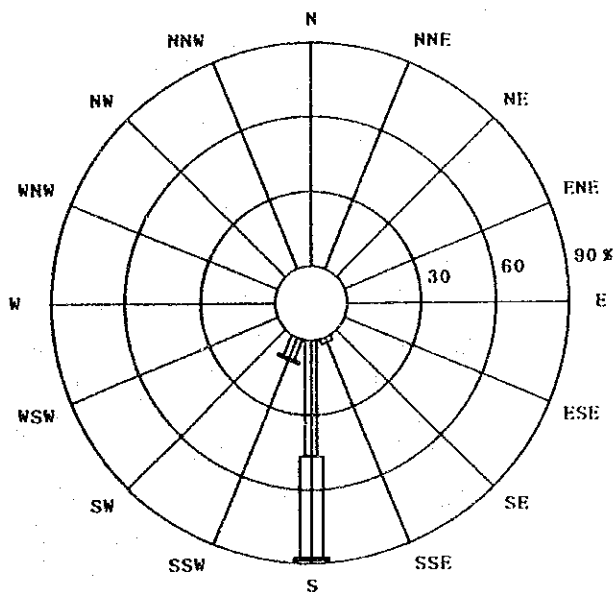
STATION : WEST NO. 1



STATION : WEST NO. 2



STATION : WEST NO. 3

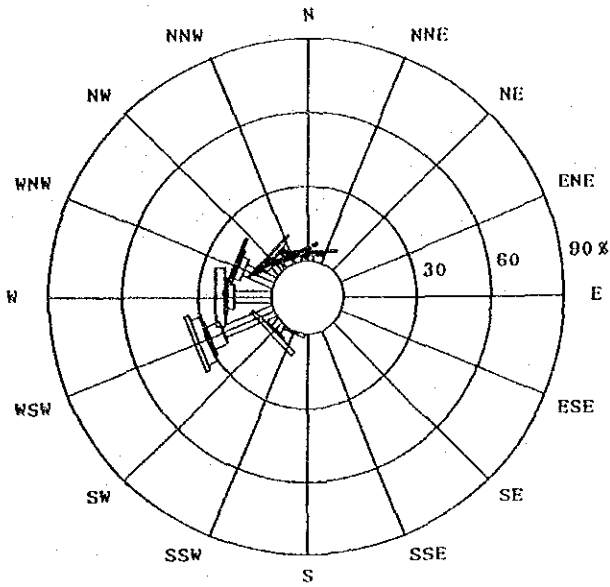


OCT. 10 1991 - OCT. 19 1991

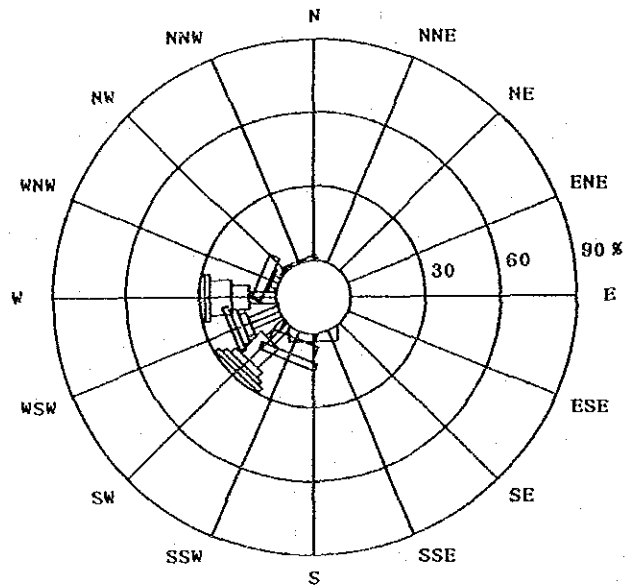
WEST SIDE

Figure 2.19 WAVE HEIGHT ROSE

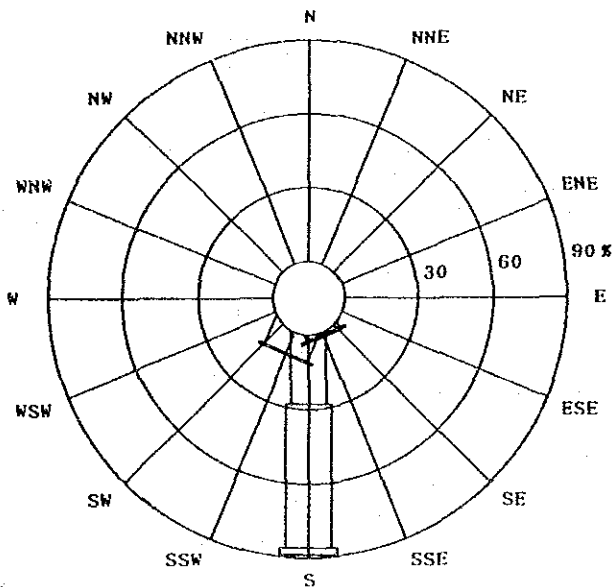
STATION : WEST NO. 1



STATION : WEST NO. 2



STATION : WEST NO. 3

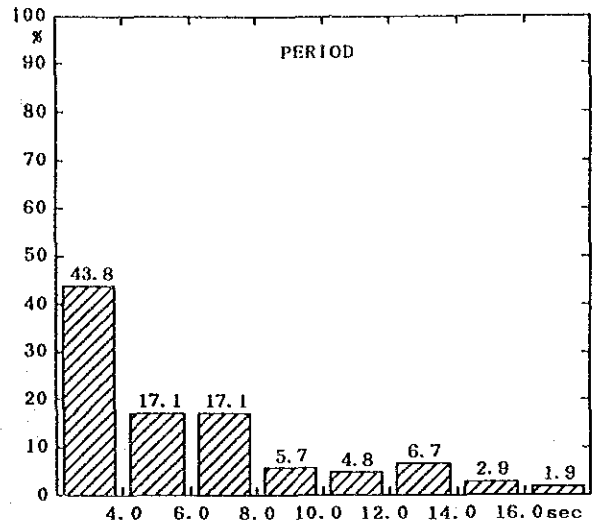
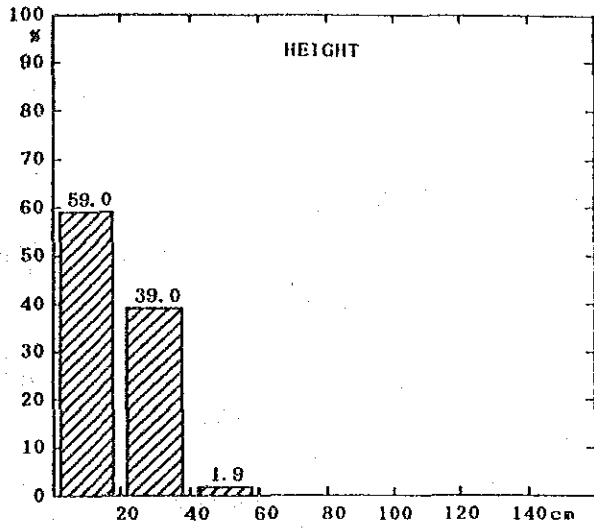


OCT. 10 1991 - OCT. 19 1991

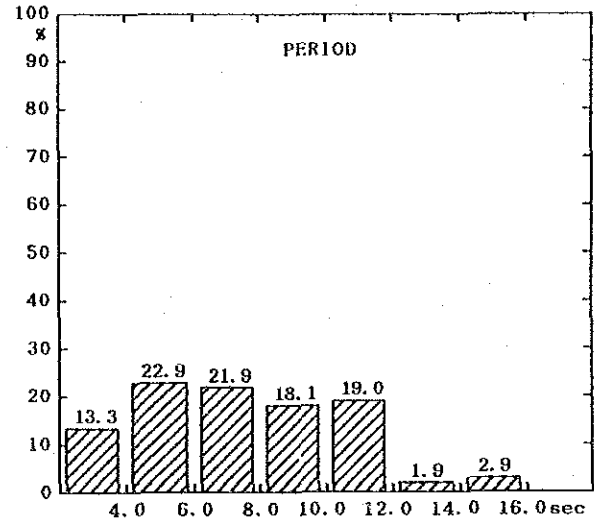
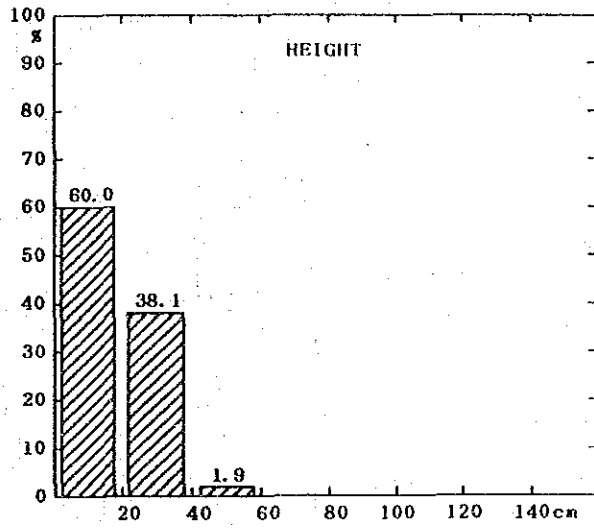
WEST SIDE

Figure 2.20 WAVE PERIOD ROSE

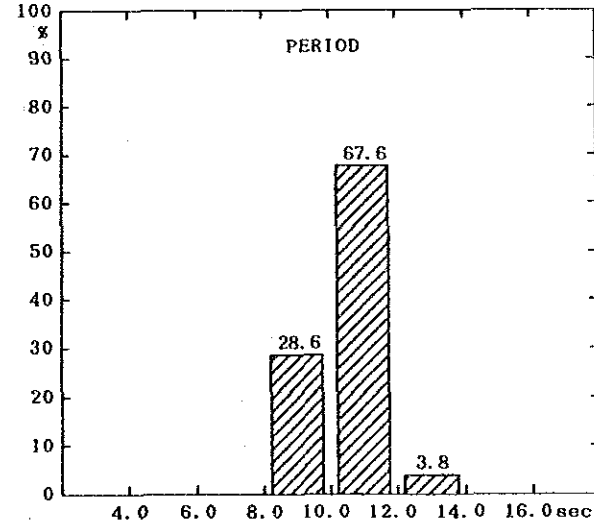
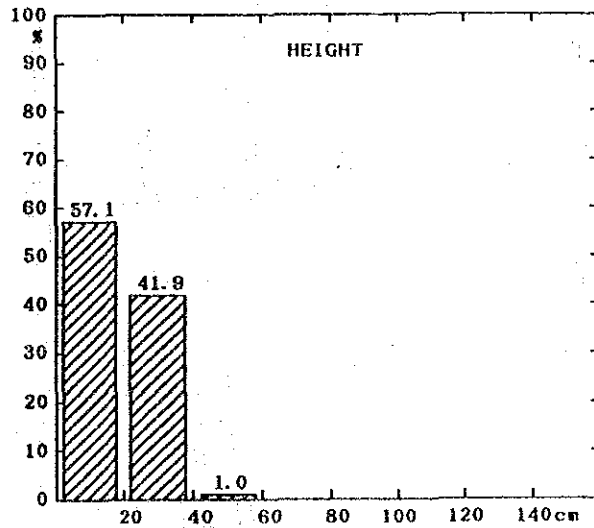
STATION : WEST NO. 1



STATION : WEST NO. 2



STATION : WEST NO. 3



OCT. 10 1991 - OCT. 19 1991

WEST SIDE

Figure 2. 21 FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

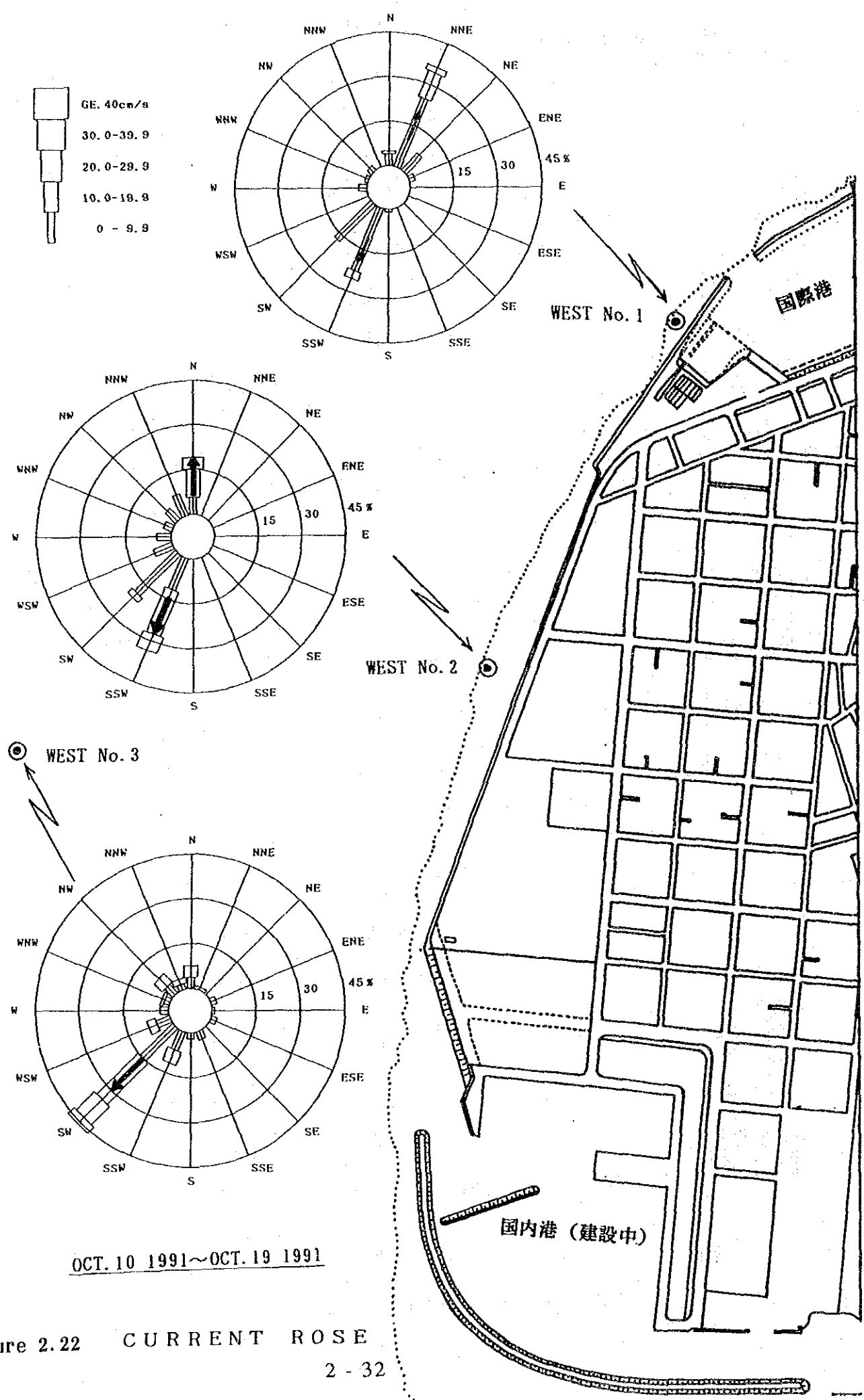


Figure 2.22 CURRENT ROSE  
2 - 32



## TABLE

(Observation Period : September 1991 ~ October 1991)

1. Frequency of Wave Height and Wave Period
2. Frequency of Wave Height and Wave Direction
3. Frequency of Wave Period and Wave Direction
4. Frequency of Current Velocity and Current Direction



FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 2

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	16 19.8	19 23.5	4 4.9	2 2.5	1 1.2	-	-	-	-	42 51.9
20~ 39	-	-	39 48.1	-	-	-	-	-	-	-	-	39 48.1
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	55 67.9	19 23.5	4 4.9	2 2.5	1 1.2	-	-	-	-	81 100.0

NUMBER OF OBTAINED DATA 81 ( 66.9 % )  
NUMBER OF NOT OBTAINED 40

UPPER : NUMBER OF TIMES  
LOWER : ( % )

TABLE FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 3

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	24 22.0	16 14.7	8 7.3	2 1.8	2 1.8	3 2.8	6 5.5	3 2.8	7 6.4	71 65.1
20~ 39	-	-	32 29.4	6 5.5	-	-	-	-	-	-	-	38 34.9
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	56 51.4	22 20.2	8 7.3	2 1.8	2 1.8	3 2.8	6 5.5	3 2.8	7 6.4	109 100.0

NUMBER OF OBTAINED DATA 109 ( 94.0 % )  
NUMBER OF NOT OBTAINED 7

UPPER : NUMBER OF TIMES  
LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

STATION : SOUTH NO. 1

OCT. 2 1991 - OCT. 10 1991

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	-	1.1	-	1.1	4.5	15.7	32.6	15.7	29.2	89
20~ 39	-	-	-	-	-	-	-	-	-	-	-	-
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	1.1	-	1.1	4.5	15.7	32.6	15.7	29.2	100.0

NUMBER OF OBTAINED DATA 89 ( 95.7 % )  
 NUMBER OF NOT OBTAINED 4

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

STATION : SOUTH NO. 2

OCT. 2 1991 - OCT. 10 1991

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	-	4.3	10.8	23.7	12.9	-	-	-	-	51.6
20~ 39	-	-	-	1.1	9.7	15.1	18.3	4.3	-	-	-	48.4
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	5.4	20.4	38.7	31.2	4.3	-	-	-	100.0

NUMBER OF OBTAINED DATA 93 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

OCT. 2 1991 - OCT. 10 1991

STATION : SOUTH NO. 3

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	-	-	-	1.1	-	9.0	20.2	22.5	47.2	89
20~ 39	-	-	-	-	-	-	-	-	-	-	-	-
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	1.1	-	9.0	20.2	22.5	47.2	100.0

NUMBER OF OBTAINED DATA  
NUMBER OF NOT OBTAINED

89 ( 95.7 % )  
4

UPPER : NUMBER OF TIMES  
LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO. 1

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	3	18	18	6	5	7	3	1	1	-	62
20~ 39	-	2.9	17.1	17.1	5.7	4.8	6.7	2.9	1.0	1.0	-	59.0
40~ 59	-	41	-	-	-	-	-	-	-	-	-	41
60~ 79	-	39.0	-	-	-	-	-	-	-	-	-	39.0
80~ 99	-	2	-	-	-	-	-	-	-	-	-	2
100~119	-	1.9	-	-	-	-	-	-	-	-	-	1.9
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	48	18	18	6	5	7	3	1	1	-	105
	-	43.8	17.1	17.1	5.7	4.8	6.7	2.9	1.0	1.0	-	100.0

NUMBER OF OBTAINED DATA  
NUMBER OF NOT OBTAINED

105 ( 100.0 % )  
0

UPPER : NUMBER OF TIMES  
LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO. 2

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	8	14	16	20	2	3	-	-	-	63
20~ 39	-	12	16	13.3	15.2	19.0	1.9	2.9	-	-	-	40
40~ 59	-	11.4	15.2	8.6	2.9	-	-	-	-	-	-	2
60~ 79	-	1.9	-	-	-	-	-	-	-	-	-	1.9
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	14	24	23	19	20	2	3	-	-	-	105
	-	13.3	22.9	21.9	18.1	19.0	1.9	2.9	-	-	-	100.0

NUMBER OF OBTAINED DATA 105 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE PERIOD

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO. 3

PERIOD HEIGHT	~ 1.9	2.0~ 3.9	4.0~ 5.9	6.0~ 7.9	8.0~ 9.9	10.0~ 11.9	12.0~ 13.9	14.0~ 15.9	16.0~ 17.9	18.0~ 19.9	20.0~ sec	TOTAL
~ 19	-	-	-	-	14	42	4	-	-	-	-	60
20~ 39	-	-	-	-	13.3	40.0	3.8	-	-	-	-	57.1
40~ 59	-	-	-	-	15	29	-	-	-	-	-	44
60~ 79	-	-	-	-	14.3	27.6	-	-	-	-	-	41.9
80~ 99	-	-	-	-	1	-	-	-	-	-	-	1
100~119	-	-	-	-	1.0	-	-	-	-	-	-	1.0
120~139	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	30	71	4	-	-	-	-	105
	-	-	-	-	28.6	67.6	3.8	-	-	-	-	100.0

NUMBER OF OBTAINED DATA 105 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE DIRECTION

STATION : EAST NO.0

SEP. 24 1981 - OCT. 15 1981

DIRECT HEIGHT	NNE	N E	ENE	E	ESE	S E	SSE	S	SSW	S W	WSW	W	WNW	N W	MNW	N	TOTAL
~ 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
20~ 39	-	-	-	-	-	2.4	4	-	-	-	-	-	-	-	-	-	2.4
40~ 59	-	-	-	-	0.8	47.2	1.6	-	-	-	-	-	-	-	-	-	126
60~ 79	-	-	-	-	0.4	18	8	-	-	-	-	-	-	-	-	-	25
80~ 99	-	-	-	-	1.2	42	2	-	-	-	-	-	-	-	-	-	47
100~119	-	-	-	-	-	36	1	-	-	-	-	-	-	-	-	-	37
120~139	-	-	-	-	-	14.2	0.4	-	-	-	-	-	-	-	-	-	14.6
140~159	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	13
160~179	-	-	-	-	-	5.1	-	-	-	-	-	-	-	-	-	-	5.1
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	-	6	235	13	-	-	-	-	-	-	-	-	254
TOTAL	-	-	-	-	2.4	92.5	5.1	-	-	-	-	-	-	-	-	-	100.0

UPPER : NUMBER OF TIMES  
LOWER : ( % )

NUMBER OF OBTAINED DATA 254 ( 100.0 % )  
NUMBER OF NOT OBTAINED 0

STATION : EAST NO.1

SEP. 22 1981 - OCT. 2 1981

DIRECT HEIGHT	NNE	N E	ENE	E	ESE	S E	SSE	S	SSW	S W	WSW	W	WNW	N W	MNW	N	TOTAL
~ 19	-	-	-	-	3	33	5	1	3	2	-	-	-	-	-	-	47
20~ 39	-	-	-	-	4.1	44.6	6.8	1.4	4.1	2.7	-	-	-	-	-	-	63.5
40~ 59	-	-	-	-	-	19	8	-	-	-	-	-	-	-	-	-	27
60~ 79	-	-	-	-	-	25.7	10.8	-	-	-	-	-	-	-	-	-	36.5
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~ cm	-	-	-	-	3	52	13	1	3	2	-	-	-	-	-	-	74
TOTAL	-	-	-	-	4.1	70.3	17.6	1.4	4.1	2.7	-	-	-	-	-	-	100.0

UPPER : NUMBER OF TIMES  
LOWER : ( % )

NUMBER OF OBTAINED DATA 74 ( 62.7 % )  
NUMBER OF NOT OBTAINED 44

FREQUENCY OF WAVE HEIGHT AND WAVE DIRECTION

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 2

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 19	-	-	9	32	1	-	-	-	-	-	-	-	-	-	-	-	42
			11.1	39.5	1.2												51.9
20~ 39	-	-	-	9	30	-	-	-	-	-	-	-	-	-	-	-	39
				11.1	37.0												48.1
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100~ 119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~ 139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~ 159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~ 179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~ 199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~ CM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	9	41	31	-	-	-	-	-	-	-	-	-	-	-	81
			11.1	50.6	38.3												100.0

NUMBER OF OBTAINED DATA 81 ( 66.9 % )  
 NUMBER OF NOT OBTAINED 40

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 3

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	71
																65.1	65.1
20~ 39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	38
																34.9	34.9
40~ 59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60~ 79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80~ 99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100~ 119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~ 139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~ 159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~ 179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~ 199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~ CM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	109	109
																100.0	100.0

NUMBER OF OBTAINED DATA 109 ( 94.0 % )  
 NUMBER OF NOT OBTAINED 7

UPPER : NUMBER OF TIMES  
 LOWER : ( % )



FREQUENCY OF WAVE HEIGHT AND WAVE DIRECTION

STATION : SOUTH NO.1

OCT. 2 1991 - OCT.10 1991

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 19	-	-	-	-	-	-	-	-	-	-	-	66	23	-	-	-	89
20~39	-	-	-	-	-	-	-	-	-	-	-	74.2	25.8	-	-	-	100.0
40~59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60~79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80~99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~CM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-	66	23	-	-	-	89
												74.2	25.8				100.0

NUMBER OF OBTAINED DATA 89 ( 95.7 % )  
 NUMBER OF NOT OBTAINED 4

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

OCT. 2 1991 - OCT.10 1991

STATION : SOUTH NO.2

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 19	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-	48
20~39	-	-	-	-	-	-	51.6	-	-	-	-	-	-	-	-	-	51.6
40~59	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-	45
60~79	-	-	-	-	-	-	48.4	-	-	-	-	-	-	-	-	-	48.4
80~99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~CM	-	-	-	-	-	-	93	-	-	-	-	-	-	-	-	-	93
TOTAL	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0

NUMBER OF OBTAINED DATA 93 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE DIRECTION

OCT. 2 1991 - OCT. 10 1991

STATION : SOUTH NO. 3

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 19	-	2.2	29.2	26	50	11	-	-	-	-	-	-	-	-	-	-	89
20~39	-	-	-	-	12.4	-	-	-	-	-	-	-	-	-	-	-	100.0
40~59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60~79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80~99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100~119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~CM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	2.2	29.2	26	50	11	-	-	-	-	-	-	-	-	-	-	89

NUMBER OF OBTAINED DATA 89 ( 95.7 % )  
 NUMBER OF NOT OBTAINED 4

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

OCT. 10 1991 - OCT. 18 1991

STATION : WEST NO. 1

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 19	-	-	-	-	-	-	-	-	1	4	23	11	10	7	4	2	82
20~39	-	-	-	-	-	-	-	-	1.0	3.8	21.9	10.5	9.5	6.7	3.8	1.9	59.0
40~59	-	-	-	-	-	-	-	-	-	2.9	13	12	8	2	-	2	41
60~79	-	-	-	-	-	-	-	-	-	1	1	1	1	1.9	-	1.9	39.0
80~99	-	-	-	-	-	-	-	-	-	1.0	1.0	1.0	-	-	-	-	1.9
100~119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~CM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	1.0	6.7	35.2	22.9	18.1	8.5	3.8	4	105

NUMBER OF OBTAINED DATA 105 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE HEIGHT AND WAVE DIRECTION

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO.2

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	S W	WSW	W	WNW	N W	MNW	N	TOTAL
~ 19	-	-	-	-	-	-	-	3	13	13	9	18	6	-	1	-	63
20~39	-	-	-	-	-	-	-	2.9	12.4	12.4	8.6	17.1	5.7	-	1.0	-	60.0
40~59	-	-	-	-	-	-	-	-	-	16	11	10	2	1	-	-	40
60~79	-	-	-	-	-	-	-	-	-	15.2	10.5	9.5	1.9	1.0	-	-	38.1
80~99	-	-	-	-	-	-	-	-	-	-	1	1.0	-	-	-	-	2
100~119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	2.9	13	29	21	29.6	7.6	1	1.0	1	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % )																	
NUMBER OF NOT OBTAINED 0																	
UPPER : NUMBER OF TIMES																	
LOWER : ( % )																	

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO.3

DIRECT HEIGHT	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	S W	WSW	W	WNW	N W	MNW	N	TOTAL
~ 19	-	-	-	-	-	-	-	2	49	9	-	-	-	-	-	-	60
20~39	-	-	-	-	-	-	-	1.9	46.7	8.6	-	-	-	-	-	-	57.1
40~59	-	-	-	-	-	-	-	-	43	1	-	-	-	-	-	-	44
60~79	-	-	-	-	-	-	-	-	41.0	1.0	-	-	-	-	-	-	41.9
80~99	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
100~119	-	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	1.0
120~139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140~159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160~179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180~199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200~cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	2	83	10	-	-	-	-	-	-	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % )																	
NUMBER OF NOT OBTAINED 0																	
UPPER : NUMBER OF TIMES																	
LOWER : ( % )																	

FREQUENCY OF WAVE PERIOD AND WAVE DIRECTION

SEP. 24 1991 - OCT. 15 1991

STATION : EAST NO. 0

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~ 3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~ 5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.0~ 7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.0~ 9.9	-	-	-	-	6	107	3	-	-	-	-	-	-	-	-	-	116
10.0~ 11.9	-	-	-	-	2.4	42.1	1.2	-	-	-	-	-	-	-	-	-	45.7
12.0~ 13.9	-	-	-	-	-	104	3	-	-	-	-	-	-	-	-	-	107
14.0~ 15.9	-	-	-	-	-	40.9	1.2	-	-	-	-	-	-	-	-	-	42.1
16.0~ 17.9	-	-	-	-	-	22	6	-	-	-	-	-	-	-	-	-	28
18.0~ 19.9	-	-	-	-	-	8.7	2.4	-	-	-	-	-	-	-	-	-	11.0
20.0~ sec	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	3
TOTAL	-	-	-	-	2.4	235	13	-	-	-	-	-	-	-	-	-	254

NUMBER OF OBTAINED DATA 254 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 1

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~ 3.9	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	5
4.0~ 5.9	-	-	-	-	1.4	5.4	-	-	-	-	-	-	-	-	-	-	6.8
6.0~ 7.9	-	-	-	-	2.7	43	9	-	-	-	-	-	-	-	-	-	54
8.0~ 9.9	-	-	-	-	-	5	4	1	-	1	1.4	-	-	-	-	-	11
10.0~ 11.9	-	-	-	-	-	6.8	5.4	1.4	3	1.4	1.4	-	-	-	-	-	14.9
12.0~ 13.9	-	-	-	-	-	-	-	-	4.1	1.4	-	-	-	-	-	-	4
14.0~ 15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.0~ 17.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.0~ 19.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.0~ sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	4.1	52	13	1	3	2.7	2.7	-	-	-	-	-	74

NUMBER OF OBTAINED DATA 74 ( 52.7 % )  
 NUMBER OF NOT OBTAINED 44

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE PERIOD AND WAVE DIRECTION

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO.2

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~ 3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~ 5.9	-	-	1	24	30	-	-	-	-	-	-	-	-	-	-	-	55
6.0~ 7.9	-	-	6	13	37.0	-	-	-	-	-	-	-	-	-	-	-	19
8.0~ 9.9	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	23.5
10.0~ 11.9	-	-	2.5	2	2	-	-	-	-	-	-	-	-	-	-	-	4.9
12.0~ 13.9	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2.5
14.0~ 15.9	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	1
16.0~ 17.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
18.0~ 19.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.0~ sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	9	41	31	-	-	-	-	-	-	-	-	-	-	-	81
NUMBER OF OBTAINED DATA	81 ( 66.9 % )																
NUMBER OF NOT OBTAINED	40																

UPPER : NUMBER OF TIMES  
LOWER : ( % )

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO.3

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~ 3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~ 5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56
6.0~ 7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.4	51.4
8.0~ 9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.2	20.2
10.0~ 11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	7.3
12.0~ 13.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	1.8
14.0~ 15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	1.8
16.0~ 17.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	2.8
18.0~ 19.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	2.8
20.0~ sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	6.4
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	109	109
NUMBER OF OBTAINED DATA	109 ( 94.0 % )																
NUMBER OF NOT OBTAINED	7																

UPPER : NUMBER OF TIMES  
LOWER : ( % )

FREQUENCY OF WAVE PERIOD AND WAVE DIRECTION

STATION : SOUTH NO.1

OCT. 2 1991 - OCT.10 1991

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~ 3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~ 5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.0~ 7.9	-	-	-	-	-	-	-	-	-	-	-	1	1.1	-	-	-	1.1
8.0~ 9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.0~ 11.9	-	-	-	-	-	-	-	-	-	-	-	1	1.1	-	-	-	1.1
12.0~ 13.9	-	-	-	-	-	-	-	-	-	-	-	3	3.4	1	-	-	4
14.0~ 15.9	-	-	-	-	-	-	-	-	-	-	-	7	7.9	1.1	-	-	14
16.0~ 17.9	-	-	-	-	-	-	-	-	-	-	-	18	18.0	13	-	-	29
18.0~ 19.9	-	-	-	-	-	-	-	-	-	-	-	14	14.8	1.1	-	-	14
20.0~ sec	-	-	-	-	-	-	-	-	-	-	-	25	25.1	1	-	-	26
TOTAL	-	-	-	-	-	-	-	-	-	-	-	66	74.2	23	-	-	89

NUMBER OF OBTAINED DATA 89 ( 95.7 % )  
 NUMBER OF NOT OBTAINED 4

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

OCT. 2 1991 - OCT.10 1991

STATION : SOUTH NO.2

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~ 3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~ 5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.0~ 7.9	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	5
8.0~ 9.9	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-	19
10.0~ 11.9	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-	36
12.0~ 13.9	-	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-	29
14.0~ 15.9	-	-	-	-	-	-	31.2	-	-	-	-	-	-	-	-	-	31.2
16.0~ 17.9	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4
18.0~ 19.9	-	-	-	-	-	-	4.3	-	-	-	-	-	-	-	-	-	4.3
20.0~ sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	93	-	-	-	-	-	-	-	-	-	93

NUMBER OF OBTAINED DATA 93 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF WAVE PERIOD AND WAVE DIRECTION

OCT. 2 1991 - OCT. 10 1991

STATION : SOUTH NO.3

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.0~7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.0~9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.0~11.9	-	-	1	1.1	-	-	-	-	-	-	-	-	-	-	-	-	1.1
12.0~13.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.0~15.9	-	-	5	3	3.4	-	-	-	-	-	-	-	-	-	-	-	8
16.0~17.9	-	-	6	10	11.2	2	2.2	-	-	-	-	-	-	-	-	-	18
18.0~19.9	-	2	6	10.1	3	3.4	-	-	-	-	-	-	-	-	-	-	20
20.0~ sec	-	-	8	28	6	6.7	-	-	-	-	-	-	-	-	-	-	42
TOTAL	-	2	26	50	11	12.4	-	-	-	-	-	-	-	-	-	-	88
NUMBER OF OBTAINED DATA 89 ( 95.7 % ) NUMBER OF NOT OBTAINED 4																	

UPPER : NUMBER OF TIMES  
LOWER : ( % )

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO.1

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~3.9	-	-	-	-	-	-	-	-	-	3	16	13	9	3	-	2	46
4.0~5.9	-	-	-	-	-	-	-	-	-	2.9	15.2	12.4	8.6	2.9	-	1.9	43.8
6.0~7.9	-	-	-	-	-	-	-	-	-	1	8	3	5	1	-	-	18
8.0~9.9	-	-	-	-	-	-	-	-	1	1.0	7.6	2.9	4.8	1.0	-	-	17.1
10.0~11.9	-	-	-	-	-	-	-	-	1	1.0	5.7	2.9	2.9	1.9	2	-	17.1
12.0~13.9	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	6
14.0~15.9	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	5
16.0~17.9	-	-	-	-	-	-	-	-	-	1	3.8	3	-	1.0	-	-	4.8
18.0~19.9	-	-	-	-	-	-	-	-	-	1.0	-	2.9	1.0	1.0	-	1.0	6.7
20.0~ sec	-	-	-	-	-	-	-	-	-	1	2	1.9	-	-	-	-	2.9
TOTAL	-	-	-	-	-	-	-	-	1	6.7	38.2	22.9	18.1	8.6	3.8	4	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % ) NUMBER OF NOT OBTAINED 0																	

UPPER : NUMBER OF TIMES  
LOWER : ( % )

FREQUENCY OF WAVE PERIOD AND WAVE DIRECTION

STATION : WEST NO.2

OCT.10 1991 - OCT.19 1991

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~3.9	-	-	-	-	-	-	-	3	2.9	2.9	2.9	5.7	1.0	1.0	-	1	14
4.0~5.9	-	-	-	-	-	-	-	7	10	9.5	4.8	1.9	2	-	-	-	24
6.0~7.9	-	-	-	-	-	-	-	12	11.4	2.3	6.7	1.0	1	-	-	-	23
8.0~9.9	-	-	-	-	-	-	-	3	2.9	2.9	8.6	-	1	-	1.0	-	19
10.0~11.9	-	-	-	-	-	-	-	3	7	2	2	4	-	-	-	-	20
12.0~13.9	-	-	-	-	-	-	-	2.9	6.7	1.9	1.9	3.8	-	-	-	-	19.0
14.0~15.9	-	-	-	-	-	-	-	-	1.9	-	-	-	-	-	-	-	1.9
16.0~17.9	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	3
18.0~19.9	-	-	-	-	-	-	-	-	1.0	1.9	-	-	-	-	-	-	2.9
20.0~sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	3	13	29	21	29	8	1	1	1	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % )																	
NUMBER OF NOT OBTAINED 0																	

UPPER : NUMBER OF TIMES  
LOWER : ( % )

OCT.10 1991 - OCT.19 1991

DIRECT PERIOD	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.0~3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.0~5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.0~7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.0~9.9	-	-	-	-	-	-	-	1	29	27.6	-	-	-	-	-	-	30
10.0~11.9	-	-	-	-	-	-	-	1	61	58.1	8.6	-	-	-	-	-	71
12.0~13.9	-	-	-	-	-	-	-	3	2.9	1.0	3.8	-	-	-	-	-	4
14.0~15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.0~17.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.0~19.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.0~sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	2	93	88.6	9.5	10	-	-	-	-	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % )																	
NUMBER OF NOT OBTAINED 0																	

UPPER : NUMBER OF TIMES  
LOWER : ( % )



FREQUENCY OF CURRENT VELOCITY AND CURRENT DIRECTION

SEP. 24 1991 - OCT. 15 1991

STATION : EAST NO. 0

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	5	2.0	4.3	2.4	0.8	-	0.4	1	6	2	3	6	4	1	5	5	50
5.00~9.99	-	0.4	6.7	2.8	2.0	-	0.4	-	7	2	2.6	7.8	0.8	0.4	0.4	-	64
10.00~14.99	-	-	14	11	-	-	-	-	2	2	5	14	-	-	-	-	46
15.00~19.99	-	-	4.3	1.2	-	-	-	-	15	3	15	3	-	-	-	-	38
20.00~24.99	-	-	2.4	0.8	-	-	-	-	8	4	3.5	4	-	-	-	-	20
25.00~29.99	-	-	1.2	0.8	-	-	-	-	3	6	3.1	1.6	-	-	-	-	7.9
30.00~39.99	-	-	0.4	0.8	-	-	-	-	7	5	1.2	2.4	-	-	-	-	14
40.00~49.99	-	-	-	-	-	-	-	-	2	2	2.8	2.0	-	-	-	-	15
50.00~59.99	-	-	-	-	-	-	-	-	3	2	1.2	0.8	-	-	-	-	5
60.00~69.99	-	-	-	-	-	-	-	-	-	2	-	0.8	-	-	-	-	2
70.00~ cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8
TOTAL	6	2.4	24.8	13.0	2.8	-	0.4	0.4	10	3.8	20.1	28.8	2.4	0.8	2.4	6	254

NUMBER OF OBTAINED DATA 254 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 1

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	3	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
5.00~9.99	2	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
10.00~14.99	-	1.4	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	2
15.00~19.99	-	-	2.7	-	1.4	-	-	-	-	-	-	-	-	-	-	1	4
20.00~24.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5
25.00~29.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	33
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.5	13.5
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.8	10.8
70.00~ cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
TOTAL	5	1.4	4.1	-	1.4	-	-	-	1	3.8	20.1	28.8	2.4	0.8	2.4	6	74

NUMBER OF OBTAINED DATA 74 ( 62.7 % )  
 NUMBER OF NOT OBTAINED 44

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF CURRENT VELOCITY AND CURRENT DIRECTION

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 2

DIRECT VELOCITY	NNE	N E	ENE	E	ESE	S E	SSE	S	SSW	S W	WSW	W	WNW	N W	NNW	N	TOTAL	
~ 4.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5.00~9.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	2.5	3.7	
10.00~14.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6	8.6	
15.00~19.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	28	
20.00~24.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32.1	32.1	
25.00~29.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	15	
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11	
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.6	13.6	
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.0	21.0	
70.00~cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	80	81

NUMBER OF OBTAINED DATA 81 ( 66.9 % )  
 NUMBER OF NOT OBTAINED 40

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

SEP. 22 1991 - OCT. 2 1991

STATION : EAST NO. 3

DIRECT VELOCITY	NNE	N E	ENE	E	ESE	S E	SSE	S	SSW	S W	WSW	W	WNW	N W	NNW	N	TOTAL
~ 4.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.00~9.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	0.8	4.6
10.00~14.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5
15.00~19.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	11
20.00~24.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	10.1
25.00~29.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.1	10.1
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	25
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.9	22.9
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	23
70.00~cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.1	21.1
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.0	11.0

NUMBER OF OBTAINED DATA 109 ( 84.0 % )  
 NUMBER OF NOT OBTAINED 7

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF CURRENT VELOCITY AND CURRENT DIRECTION

STATION : SOUTH NO. 1

OCT. 2 1991 - OCT. 10 1991

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	4	1.1	2.2	1.1	1.1	1.1	1.1	1.1	6	5	4	12	9	15	12	9	83
5.00~9.99	-	-	-	-	-	-	-	1.1	6.7	5.6	4.5	13.5	10.1	16.9	13.5	10.1	93.3
10.00~14.99	-	-	-	-	-	-	-	1.1	2.2	2.2	-	-	1.1	-	-	-	6.7
15.00~19.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.00~24.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.00~29.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70.00~ cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	4	1.1	2.2	1.1	1.1	1.1	1.1	2.2	9.0	7.8	4.5	13.5	11.2	16.9	13.5	10.1	89

NUMBER OF OBTAINED DATA 89 ( 95.7 % )  
 NUMBER OF NOT OBTAINED 4

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

OCT. 2 1991 - OCT. 10 1991

STATION : SOUTH NO. 2

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	2	-	-	-	-	-	-	2.2	2.2	7.5	10.8	17.2	18.3	6.5	1.1	1.1	64
5.00~9.99	-	-	-	-	-	-	-	10	4	3	2	5	1	1	1	-	27
10.00~14.99	-	-	-	-	-	-	-	10.8	4.3	3.2	2.2	5.4	1.1	1.1	1.1	-	29.0
15.00~19.99	-	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2
20.00~24.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.00~29.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70.00~ cm/s	-	-	-	-	-	-	-	14	6	10	12	21	18	7	2	1	93
TOTAL	2	-	-	-	-	-	-	15.1	6.5	10.8	12.9	22.6	18.4	7.5	2.2	1.1	100.0

NUMBER OF OBTAINED DATA 93 ( 100.0 % )  
 NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
 LOWER : ( % )

FREQUENCY OF CURRENT VELOCITY AND CURRENT DIRECTION

OCT. 2 1991 - OCT. 10 1991

STATION : SOUTH NO. 3

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	4	8	2	-	1	-	-	-	-	-	-	16	20	7	1	5	65
	4.5	10.1	2.2	-	1.1	-	-	-	-	-	-	18.0	22.5	7.9	1.1	5.6	73.0
5.00~9.99	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-	24
	-	-	-	-	-	-	-	-	-	-	-	27.0	-	-	-	-	27.0
10.00~14.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.00~19.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.00~24.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.00~29.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70.00~ cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	4	9	2	-	1	-	-	-	-	-	-	40	20	7	1	5	89
	4.5	10.1	2.2	-	1.1	-	-	-	-	-	-	44.9	22.5	7.9	1.1	5.6	100.0

NUMBER OF OBTAINED DATA 89 ( 95.7 % )  
NUMBER OF NOT OBTAINED 4

UPPER : NUMBER OF TIMES  
LOWER : ( % )

OCT. 10 1991 - OCT. 19 1991

STATION : WEST NO. 1

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	3	6	2	-	-	-	-	-	7	14	-	2	1	2	-	4	46
	7.6	5.7	1.9	-	-	-	-	-	6.7	13.3	-	1.9	1.0	1.9	-	3.8	43.8
5.00~9.99	18	2	-	-	-	-	-	-	17	4	-	1	-	-	-	-	40
	17.1	1.9	-	-	-	-	-	-	16.2	3.8	-	1.0	-	-	-	-	41.0
10.00~14.99	5	-	-	-	-	-	-	-	3	-	-	-	-	-	-	1	8
	4.8	-	-	-	-	-	-	-	2.9	-	-	-	-	-	-	1.0	8.6
15.00~19.99	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8
20.00~24.99	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
25.00~29.99	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
30.00~39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70.00~ cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	38	8	2	-	-	-	-	-	27	18	-	3	1	2	-	5	105
	36.2	7.6	1.9	-	-	-	-	-	25.7	17.1	-	2.9	1.0	1.9	-	4.8	100.0

NUMBER OF OBTAINED DATA 105 ( 100.0 % )  
NUMBER OF NOT OBTAINED 0

UPPER : NUMBER OF TIMES  
LOWER : ( % )

FREQUENCY OF CURRENT VELOCITY AND CURRENT DIRECTION

STATION : WEST NO.2

OCT.10 1991 - OCT.19 1991

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	-	-	-	-	-	-	-	-	1	9	6	4	2	5	6	2	35
5.00~9.99	-	-	-	-	-	-	-	-	1	8.6	5.7	3.8	1.9	4.8	5.7	1.9	33.3
10.00~14.99	-	-	-	-	-	-	-	-	10.5	10.5	1.0	1.0	1.0	-	1.9	3.8	29.5
15.00~19.99	-	-	-	-	-	-	-	-	10	1.9	-	-	-	-	-	6.7	18.1
20.00~24.99	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	3	10
25.00~29.99	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	2.9	9.5
30.00~39.99	-	-	-	-	-	-	-	-	5.7	-	-	-	-	-	-	3.8	8.3
40.00~49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50.00~59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.00~69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70.00~ cm/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	35	22	7	5	3	5	8	20	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % )																	
NUMBER OF NOT OBTAINED 0																	
UPPER : NUMBER OF TIMES																	
LOWER : ( % )																	

STATION : WEST NO.3

OCT.10 1991 - OCT.19 1991

DIRECT VELOCITY	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	N	TOTAL
~ 4.99	-	-	-	-	-	-	-	-	4	5	3	1	1	1	1	2	25
5.00~9.99	-	-	-	-	-	-	-	-	3.8	4.8	2.9	1.0	1.0	1.0	1.0	1.9	23.8
10.00~14.99	-	-	-	-	-	-	-	-	2.9	10.5	1.9	1.9	1.0	2.9	1.0	1.9	26.7
15.00~19.99	-	-	-	-	-	-	-	-	4	11	1	-	-	3	2	2	24
20.00~24.99	-	-	-	-	-	-	-	-	1	9	2	-	-	1	1.9	1.9	22.8
25.00~29.99	-	-	-	-	-	-	-	-	1.0	8.6	1.9	-	-	1.0	-	1.9	16
30.00~39.99	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	6
40.00~49.99	-	-	-	-	-	-	-	-	-	5.7	-	-	-	-	-	-	5.7
50.00~59.99	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	3
60.00~69.99	-	-	-	-	-	-	-	-	-	2.9	-	-	-	-	-	-	2.9
70.00~ cm/s	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	3
TOTAL	1	-	-	-	-	-	-	-	12	43	8	3	3	8	4	8	105
NUMBER OF OBTAINED DATA 105 ( 100.0 % )																	
NUMBER OF NOT OBTAINED 0																	
UPPER : NUMBER OF TIMES																	
LOWER : ( % )																	

DAILY REPORT  
OF  
WAVE OBSERVATION

EAST	NO. 1	24th Sep. ~ 15th Oct. 1991
EAST	NO. 1 ~ NO.3	22th Sep. ~ 2nd Oct. 1991
SOUTH	NO. 1 ~ NO.3	2nd Oct. ~ 10th Oct. 1991
WEST	NO. 1 ~ NO.3	10th Oct. ~ 19th Oct. 1991

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.0

SEP. 24 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	***	***	***	***	***	***	***	***	***	***	***	***	***
4	***	***	***	***	***	***	***	***	***	***	***	***	***
6	***	***	***	***	***	***	***	***	***	***	***	***	***
8	***	***	***	***	***	***	***	***	***	***	***	***	***
10	***	***	***	***	***	***	***	***	***	***	***	***	***
12	***	***	***	***	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***	***	***	***	***
16	109	9.9	85	10.2	66	10.4	46	10.9	108	142 (S E)	30.25	255 (WSW)	20.23
18	129	10.0	97	10.3	77	10.1	50	10.4	114	149 (SSE)	24.89	256 (WSW)	19.86
20	102	10.2	82	10.3	67	10.0	44	10.5	113	137 (S E)	11.96	80 ( E )	19.82
22	89	10.7	69	10.7	57	10.7	38	11.1	105	138 (S E)	2.00	345 (NNW)	20.13
24	74	11.3	69	10.1	56	10.1	38	10.6	112	131 (S E)	13.34	265 ( W )	20.54

SEP. 25 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	103	11.0	76	11.1	58	10.8	37	10.9	109	137 (S E)	9.06	240 (WSW)	20.68
4	83	9.6	65	10.3	50	10.5	34	11.3	105	142 (S E)	32.71	252 (WSW)	20.42
6	76	10.3	65	10.5	52	10.3	34	11.0	107	145 (S E)	31.77	257 (WSW)	20.04
8	85	11.2	65	10.2	53	10.3	36	10.8	108	142 (S E)	8.71	78 (ENE)	18.90
10	87	11.9	64	9.9	51	10.7	35	10.4	114	136 (S E)	9.93	271 ( W )	20.17
12	77	10.8	61	10.6	48	10.5	34	10.8	110	137 (S E)	27.23	260 ( W )	20.46
14	58	10.4	54	10.5	42	11.1	28	10.6	111	133 (S E)	6.97	111 (ESE)	20.56
16	71	10.5	59	10.5	48	10.5	33	10.4	114	138 (S E)	27.03	262 ( W )	20.27
18	92	11.2	63	10.6	54	10.5	37	10.8	109	146 (S E)	31.96	254 (WSW)	19.83
20	97	11.0	68	10.1	52	10.3	36	11.1	105	146 (S E)	3.78	327 (NNW)	19.67
22	87	11.2	62	9.2	49	9.5	33	10.2	115	141 (S E)	17.12	75 (ENE)	19.98
24	64	11.0	54	11.0	43	10.8	29	11.1	106	139 (S E)	2.30	216 (S W)	20.41

SEP. 26 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	62	10.0	56	10.4	46	10.3	31	11.6	101	138 (S E)	5.95	246 (WSW)	20.64
4	76	9.8	68	9.0	55	9.6	38	10.2	114	140 (S E)	18.66	238 (WSW)	20.48
6	66	10.6	57	10.3	47	10.2	32	11.0	104	142 (S E)	17.88	258 (WSW)	20.09
8	77	8.8	61	9.6	50	9.6	34	10.7	109	144 (S E)	18.16	74 (ENE)	19.88
10	83	9.5	62	9.6	50	9.8	35	10.4	111	135 (S E)	11.80	81 ( E )	20.06
12	60	10.3	49	10.7	39	10.6	27	11.4	103	140 (S E)	24.32	251 (WSW)	20.35
14	83	10.0	68	10.6	54	10.0	36	11.3	103	140 (S E)	2.37	216 (S W)	20.53
16	83	11.4	70	10.8	52	10.3	36	10.9	105	141 (S E)	19.78	250 (WSW)	20.32
18	67	11.0	58	10.5	47	9.8	32	10.8	110	145 (S E)	45.73	256 (WSW)	19.91
20	67	10.6	59	10.2	50	10.3	35	10.4	113	150 (SSE)	37.33	266 ( W )	19.66
22	68	11.3	57	10.6	47	10.2	32	11.1	106	145 (S E)	10.43	68 (ENE)	18.84
24	98	10.9	62	10.1	49	10.1	33	10.7	109	142 (S E)	3.34	231 (S W)	20.31

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO. 0

SEP. 27 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	70	9.1	60	10.4	50	9.9	34	10.4	113	141 (S E)	17.68	256 (WSW)	20.60
4	56	10.3	49	11.0	41	10.8	30	11.7	100	144 (S E)	34.88	255 (WSW)	20.58
6	57	10.4	51	10.2	42	9.7	30	10.7	110	148 (SSE)	44.60	254 (WSW)	20.26
8	76	8.7	61	10.2	46	10.3	31	10.8	109	149 (SSE)	54.58	270 (W)	19.95
10	61	11.5	50	8.9	42	10.0	30	10.3	114	139 (S E)	25.31	65 (ENE)	20.01
12	80	10.1	67	10.3	54	10.3	37	10.7	109	141 (S E)	3.78	87 (E)	20.31
14	67	9.2	55	9.6	45	9.6	30	10.7	111	139 (S E)	13.21	68 (ENE)	20.50
16	66	8.8	58	8.8	47	9.4	31	10.3	113	138 (S E)	2.05	305 (N W)	20.38
18	86	8.7	71	8.4	55	8.9	37	10.0	118	151 (SSE)	31.61	252 (WSW)	19.99
20	78	8.7	69	9.2	61	9.3	41	8.8	120	149 (SSE)	41.46	254 (WSW)	19.68
22	78	10.2	63	9.2	51	9.3	35	9.8	120	144 (S E)	6.24	293 (WNW)	19.75
24	71	10.4	58	9.6	46	9.3	31	10.6	110	140 (S E)	21.29	71 (ENE)	20.17

SEP. 28 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	62	10.3	51	9.5	40	9.3	27	10.3	112	132 (S E)	18.22	70 (ENE)	20.50
4	79	9.8	62	9.0	51	9.3	35	10.0	116	139 (S E)	6.67	69 (ENE)	20.56
6	92	10.3	70	9.6	58	9.5	39	9.9	119	138 (S E)	15.13	246 (WSW)	20.32
8	77	9.4	70	9.1	55	9.7	35	10.7	110	142 (S E)	12.97	267 (W)	20.06
10	79	10.7	70	10.2	56	10.0	38	10.6	112	139 (S E)	2.62	62 (ENE)	20.04
12	92	9.9	65	9.8	49	9.7	32	11.1	107	135 (S E)	2.80	284 (WNW)	20.24
14	75	10.2	62	10.1	49	9.8	35	10.0	117	134 (S E)	6.60	271 (W)	20.41
16	89	10.2	60	9.8	46	9.8	32	10.5	113	130 (S E)	25.13	261 (W)	20.35
18	69	8.9	56	8.4	47	9.4	33	10.5	114	141 (S E)	19.95	252 (WSW)	20.07
20	66	10.1	58	9.2	47	9.5	33	10.1	117	142 (S E)	15.29	263 (W)	19.76
22	78	9.5	61	9.3	49	9.6	33	10.4	114	142 (S E)	1.86	86 (E)	19.73
24	90	8.9	69	8.6	52	8.8	33	10.5	112	122 (ESE)	27.20	74 (ENE)	20.02

SEP. 29 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	105	9.4	85	9.6	67	9.3	46	10.1	116	126 (S E)	14.87	96 (E)	20.34
4	81	10.2	72	9.1	58	9.3	39	9.8	120	132 (S E)	9.22	231 (S W)	20.49
6	83	9.3	69	8.3	53	9.4	37	9.8	120	132 (S E)	12.59	264 (W)	20.36
8	60	9.6	56	8.5	48	9.2	33	9.6	122	132 (S E)	9.52	80 (E)	20.14
10	77	9.6	64	9.9	55	9.9	38	10.1	115	138 (S E)	6.23	82 (E)	20.04
12	118	8.5	72	9.4	56	9.2	38	10.2	114	132 (S E)	1.89	232 (S W)	20.17
14	65	9.6	53	8.8	44	9.1	30	10.3	114	126 (S E)	45.57	259 (W)	20.29
16	62	9.7	54	9.0	45	8.7	30	10.2	116	131 (S E)	35.11	262 (W)	20.31
18	51	8.5	45	8.8	37	8.3	24	10.2	113	127 (S E)	5.45	87 (E)	20.10
20	80	9.5	60	9.5	47	8.4	31	10.3	114	140 (S E)	10.37	222 (S W)	18.85
22	54	10.5	49	7.8	41	9.6	29	10.7	108	137 (S E)	4.42	68 (ENE)	19.75
24	82	10.8	67	9.1	54	8.0	38	10.1	117	122 (ESE)	30.21	86 (E)	18.92



DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.0

SEP. 30 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	79	11.4	62	8.8	51	9.3	35	10.6	110	136 (S E)	21.46	72 (ENE)	20.22
4	69	8.2	60	8.6	49	8.1	33	10.1	116	136 (S E)	15.23	257 (WSW)	20.42
6	61	9.6	45	7.6	37	8.8	24	10.8	107	137 (S E)	11.94	258 (WSW)	20.40
8	58	10.0	50	8.5	43	8.9	31	10.2	112	140 (S E)	16.28	260 (W)	20.24
10	83	8.1	71	9.2	53	9.0	34	10.2	114	141 (S E)	9.69	260 (W)	20.11
12	80	10.3	61	8.6	48	9.4	33	10.4	113	136 (S E)	10.23	76 (ENE)	20.15
14	90	8.5	64	8.8	51	9.1	35	10.1	116	131 (S E)	14.02	262 (W)	20.28
16	73	10.2	64	9.4	52	8.9	37	9.9	117	139 (S E)	7.48	212 (SSW)	20.31
18	80	9.0	65	8.8	55	8.9	39	10.5	112	140 (S E)	3.85	250 (WSW)	20.21
20	71	11.0	60	7.3	45	8.9	30	10.8	108	137 (S E)	17.58	262 (W)	19.98
22	71	14.5	61	9.3	51	9.3	34	11.3	103	140 (S E)	20.55	252 (WSW)	19.85
24	75	9.1	67	9.2	54	9.2	39	11.4	102	140 (S E)	1.29	332 (NNW)	19.91

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.0

OCT. 1 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	61	9.2	56	9.1	47	10.1	32	11.0	104	140 (S E)	8.79	113 (ESE)	20.10
4	89	10.2	71	10.6	56	11.2	40	11.8	89	144 (S E)	12.95	78 (ENE)	20.32
6	106	14.4	91	12.8	78	12.8	54	13.8	85	151 (SSE)	6.37	276 (W)	20.40
8	93	13.0	81	12.2	65	13.2	44	13.4	87	150 (SSE)	0.91	92 (E)	20.33
10	95	10.0	79	12.0	61	11.7	43	12.2	97	146 (S E)	2.30	108 (ESE)	20.22
12	107	13.5	77	10.4	61	11.1	41	12.1	98	145 (S E)	9.64	58 (ENE)	20.18
14	92	12.7	78	10.3	61	10.5	40	11.6	101	137 (S E)	5.70	103 (ESE)	20.24
16	92	9.9	72	9.8	59	9.5	40	10.9	108	132 (S E)	10.22	86 (E)	20.28
18	67	10.1	59	9.1	49	8.8	34	11.1	106	135 (S E)	5.20	272 (W)	20.23
20	93	11.5	65	9.2	51	9.7	35	10.1	116	139 (S E)	2.31	345 (NNW)	20.12
22	67	12.5	57	11.0	49	10.3	34	10.8	106	138 (S E)	4.41	268 (W)	19.99
24	63	9.8	58	9.3	45	8.9	30	11.1	105	128 (S E)	16.15	79 (E)	19.95

OCT. 2 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	76	9.3	65	9.7	53	10.6	37	11.2	104	142 (S E)	1.90	237 (WSW)	20.05
4	77	11.0	68	9.0	54	9.4	36	10.6	110	139 (S E)	9.74	262 (W)	20.22
6	76	12.0	66	10.7	53	10.5	38	11.0	106	142 (S E)	19.90	260 (W)	20.31
8	80	8.5	61	9.0	50	8.5	34	10.4	112	140 (S E)	0.92	296 (WNW)	20.38
10	86	9.9	68	10.3	56	10.3	39	10.6	110	136 (S E)	5.03	58 (ENE)	20.31
12	112	9.6	88	9.5	67	9.2	44	10.3	115	137 (S E)	3.85	262 (W)	20.21
14	79	8.5	66	8.5	52	8.8	35	10.3	115	137 (S E)	17.86	260 (W)	20.19
16	97	9.6	71	8.7	56	8.8	38	9.6	121	133 (S E)	6.83	273 (W)	20.19
18	66	11.0	57	8.0	47	8.9	33	10.2	115	136 (S E)	7.75	253 (WSW)	20.20
20	77	9.7	61	9.4	49	9.3	35	10.4	112	134 (S E)	12.52	252 (WSW)	20.22
22	84	9.4	71	10.2	55	9.4	39	10.6	111	136 (S E)	8.38	264 (W)	20.15
24	88	9.6	75	9.3	60	8.2	39	9.8	120	132 (S E)	6.74	62 (ENE)	20.08

OCT. 3 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	74	9.5	66	9.0	52	9.6	35	10.7	109	138 (S E)	3.82	36 (N E)	20.05
4	105	10.4	77	8.1	62	8.5	43	10.7	111	138 (S E)	10.93	65 (ENE)	20.11
6	94	9.9	75	8.3	59	9.0	39	10.4	113	134 (S E)	12.38	78 (ENE)	20.20
8	59	9.0	48	9.0	40	8.4	28	11.0	103	131 (S E)	8.14	265 (W)	20.35
10	63	10.9	53	8.5	43	9.5	31	10.7	111	135 (S E)	19.81	262 (W)	20.39
12	72	8.9	58	8.4	45	8.5	32	10.8	108	135 (S E)	15.38	252 (WSW)	20.30
14	75	9.0	57	9.7	46	10.5	32	11.5	102	138 (S E)	7.33	258 (WSW)	20.14
16	81	8.9	61	8.5	50	9.9	34	11.0	107	139 (S E)	8.01	277 (W)	20.10
18	66	10.0	46	9.3	38	8.6	27	11.3	103	138 (S E)	21.47	248 (WSW)	20.12
20	63	9.6	54	9.1	45	9.1	32	10.4	113	131 (S E)	1.64	258 (WSW)	20.24
22	73	12.3	62	9.4	49	9.7	34	10.5	112	136 (S E)	12.67	268 (W)	20.26
24	61	10.4	56	10.9	46	10.2	31	11.6	102	135 (S E)	5.46	63 (ENE)	20.21

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST MO. 0

OCT. 4 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	60	11.1	51	9.8	43	9.3	28	10.7	109	133	(S E)	17.66	70	(ENE)	20.08
4	64	9.7	55	10.2	47	10.0	33	11.6	101	139	(S E)	3.04	81	(E)	20.03
6	71	12.8	58	11.9	47	11.7	30	12.1	96	144	(S E)	11.11	70	(ENE)	20.07
8	62	11.5	56	12.3	46	12.5	31	12.5	93	140	(S E)	2.08	69	(ENE)	20.27
10	67	11.6	58	11.3	42	12.1	29	12.2	86	139	(S E)	4.87	45	(N E)	20.38
12	71	11.2	51	10.3	48	11.2	35	11.2	103	138	(S E)	15.00	262	(W)	20.36
14	65	12.7	51	11.2	42	10.4	30	11.3	103	131	(S E)	6.57	59	(ENE)	20.21
16	67	12.3	53	10.6	41	11.5	28	13.0	90	145	(S E)	2.55	264	(W)	20.02
18	58	10.6	50	11.8	42	12.0	30	11.7	100	137	(S E)	9.38	69	(ENE)	20.01
20	60	12.4	47	12.2	36	12.0	24	13.4	86	131	(S E)	21.78	82	(E)	20.21
22	73	11.4	59	10.5	43	11.4	30	11.8	99	135	(S E)	0.25	114	(ESE)	20.38
24	55	12.7	49	10.1	40	11.3	28	12.1	97	136	(S E)	3.94	50	(N E)	20.38

OCT. 5 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	86	11.8	62	10.4	49	11.2	33	12.1	97	142	(S E)	15.21	74	(ENE)	20.21
4	78	11.4	60	11.3	47	11.3	33	11.4	103	139	(S E)	4.06	65	(ENE)	20.05
6	63	10.0	55	11.1	45	10.6	30	11.2	105	125	(S E)	28.51	79	(E)	20.00
8	57	13.9	42	12.1	42	11.4	30	11.6	101	135	(S E)	7.08	306	(N W)	20.21
10	47	11.0	41	11.0	34	11.0	24	11.8	98	137	(S E)	18.52	264	(W)	20.44
12	66	11.0	58	11.4	48	11.9	33	11.8	100	143	(S E)	4.19	235	(S W)	20.49
14	50	11.6	48	11.0	41	10.5	29	11.2	104	143	(S E)	22.17	254	(WSW)	20.27
16	61	11.1	50	11.7	42	12.1	30	11.8	98	141	(S E)	2.54	229	(S W)	19.99
18	65	10.3	58	11.7	47	12.9	33	12.2	95	134	(S E)	18.31	71	(ENE)	18.93
20	72	12.5	66	11.6	52	11.5	35	12.3	97	129	(S E)	11.59	96	(E)	20.12
22	60	12.0	50	10.4	42	11.0	29	12.2	94	137	(S E)	11.29	267	(W)	20.44
24	61	13.0	52	10.5	44	11.9	31	12.1	96	141	(S E)	8.59	69	(ENE)	20.54

OCT. 6 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	70	13.3	58	12.7	49	12.2	35	12.6	92	136	(S E)	14.80	86	(E)	20.35
4	70	12.1	61	12.7	52	12.1	37	12.9	91	139	(S E)	13.63	81	(E)	20.07
6	76	11.5	67	11.1	55	12.2	39	11.7	101	140	(S E)	13.69	80	(E)	19.97
8	73	10.8	66	13.2	55	13.4	40	12.7	92	139	(S E)	9.77	71	(ENE)	20.13
10	78	12.0	63	11.6	51	11.2	35	12.5	94	139	(S E)	7.51	272	(W)	20.40
12	89	14.5	68	13.4	58	14.4	41	13.7	85	145	(S E)	13.73	262	(W)	20.54
14	80	13.1	66	12.2	56	11.4	41	12.7	93	145	(S E)	7.25	265	(W)	20.34
16	108	12.5	89	12.0	71	13.8	50	12.1	95	143	(S E)	9.53	72	(ENE)	20.00
18	125	13.1	104	12.8	86	12.7	57	12.8	93	146	(S E)	13.69	72	(ENE)	18.81
20	79	10.7	66	11.3	56	12.0	39	12.0	98	133	(S E)	9.39	102	(ESE)	19.89
22	113	12.9	78	13.7	64	13.6	43	13.1	90	147	(SSE)	9.77	274	(W)	20.39
24	104	12.7	81	13.6	67	13.4	47	13.2	89	144	(S E)	2.53	288	(WNW)	20.59

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.0

OCT. 7 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		L/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	115	12.7	89	11.7	81	13.2	55	12.6	94	146 (S E)	6.42	82 ( E )	20.47
4	126	14.1	89	14.7	73	14.0	49	12.9	91	149 (SSE)	9.49	259 ( W )	20.19
6	114	12.7	80	13.2	80	13.2	56	13.9	85	150 (SSE)	5.13	273 ( W )	19.96
8	102	12.6	98	14.0	83	14.5	56	13.9	85	145 (S E)	3.14	90 ( E )	20.03
10	103	12.9	84	14.0	68	13.1	47	13.1	90	143 (S E)	1.01	271 ( W )	20.33
12	103	14.7	87	12.4	70	13.0	48	12.4	96	145 (S E)	8.64	275 ( W )	20.51
14	147	13.9	131	13.4	106	13.7	74	13.8	86	151 (SSE)	12.13	264 ( W )	20.41
16	146	12.1	109	12.1	88	12.9	62	12.8	92	151 (SSE)	15.53	255 (WSW)	20.05
18	145	11.3	109	13.1	89	13.4	61	12.7	93	143 (S E)	12.08	67 (ENE)	19.75
20	141	13.9	118	13.2	100	13.2	69	13.0	91	146 (S E)	6.66	281 ( W )	19.89
22	169	11.6	140	12.0	114	13.1	75	12.6	95	140 (S E)	19.16	72 (ENE)	20.24
24	141	13.1	115	11.4	92	11.8	65	11.5	102	131 (S E)	30.26	81 ( E )	20.56

OCT. 8 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		L/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	127	12.2	109	11.9	88	11.8	62	12.2	97	140 (S E)	4.08	57 (ENE)	20.57
4	161	10.7	122	11.2	100	11.7	69	11.6	102	142 (S E)	20.32	251 (WSW)	20.28
6	188	10.4	134	11.3	107	11.4	72	11.7	101	137 (S E)	23.11	276 ( W )	19.95
8	131	10.7	121	11.9	102	12.4	69	12.4	96	136 (S E)	10.09	74 (ENE)	19.95
10	191	12.0	167	11.5	134	11.5	87	11.9	99	133 (S E)	16.16	72 (ENE)	20.21
12	217	11.2	145	11.3	106	11.0	68	11.2	105	132 (S E)	3.11	176 ( S )	20.47
14	104	13.9	98	11.2	88	11.2	64	11.2	101	132 (S E)	15.63	256 (WSW)	20.44
16	170	13.0	147	10.8	117	11.4	79	11.9	99	138 (S E)	29.89	256 (WSW)	20.08
18	242	11.5	176	10.8	128	10.9	81	11.1	106	134 (S E)	24.90	259 ( W )	19.74
20	131	10.1	114	11.6	94	11.7	64	12.0	98	136 (S E)	7.10	65 (ENE)	19.74
22	186	10.3	150	11.4	117	11.8	77	11.4	104	128 (S E)	32.50	75 (ENE)	20.07
24	213	12.8	163	11.3	122	12.3	80	12.2	96	136 (S E)	15.48	272 ( W )	20.52

OCT. 9 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		L/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	218	12.3	159	11.7	126	11.5	83	11.1	107	136 (S E)	8.71	254 (WSW)	20.66
4	200	13.1	152	12.2	124	11.8	86	11.6	102	138 (S E)	20.56	258 (WSW)	20.39
6	200	12.3	151	11.7	117	11.5	77	11.3	105	139 (S E)	13.62	254 (WSW)	20.04
8	145	10.3	117	11.0	96	11.2	66	11.0	107	136 (S E)	9.71	74 (ENE)	19.91
10	182	11.8	148	11.4	114	11.8	76	12.0	99	138 (S E)	21.43	78 (ENE)	20.07
12	207	11.0	155	11.1	125	10.8	82	11.6	102	132 (S E)	5.21	346 (NNW)	20.41
14	195	10.6	149	10.3	111	10.8	70	11.3	104	138 (S E)	15.48	252 (WSW)	20.48
16	161	10.8	133	11.4	98	11.6	63	11.4	104	143 (S E)	12.07	250 (WSW)	20.20
18	141	11.5	124	10.8	98	11.3	64	11.2	106	140 (S E)	12.62	262 ( W )	19.78
20	155	11.2	136	11.4	104	11.4	67	11.2	106	135 (S E)	10.89	72 (ENE)	19.63
22	178	11.8	144	11.0	115	10.7	80	10.9	108	134 (S E)	27.92	73 (ENE)	19.93
24	198	11.1	146	11.0	119	10.7	81	11.0	108	134 (S E)	9.26	90 ( E )	20.41

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.0

OCT. 10 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	205	10.6	169	10.7	134	10.6	88	11.0	108	133	(S E)	7.89	276	(W)	20.67
4	179	11.1	149	11.1	117	11.0	78	11.1	107	139	(S E)	10.82	272	(W)	20.49
6	130	10.8	111	11.3	84	11.0	63	10.9	107	142	(S E)	1.63	62	(ENE)	20.10
8	140	11.4	114	10.9	92	10.7	63	10.9	109	137	(S E)	3.33	72	(ENE)	19.89
10	217	11.0	169	11.1	130	10.8	88	10.8	109	131	(S E)	20.95	78	(ENE)	20.03
12	171	9.5	146	10.1	119	10.5	83	10.9	108	131	(S E)	7.38	221	(S W)	20.30
14	194	9.8	145	10.5	116	10.3	75	10.7	111	133	(S E)	32.19	261	(W)	20.43
16	188	12.4	136	10.9	113	10.5	74	10.4	114	135	(S E)	17.29	250	(WSW)	20.26
18	148	10.4	125	10.7	101	10.7	68	11.0	107	144	(S E)	25.92	256	(WSW)	19.86
20	181	11.0	146	10.7	112	10.8	73	10.9	109	146	(S E)	31.68	271	(W)	19.62
22	203	10.6	157	10.3	119	10.3	77	10.8	110	136	(S E)	8.98	80	(E)	19.82
24	165	11.3	139	10.3	109	10.4	69	10.7	110	133	(S E)	12.61	81	(E)	20.26

OCT. 11 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	148	9.4	137	10.6	115	10.4	82	10.7	111	141	(S E)	8.14	238	(WSW)	20.58
4	212	10.2	168	10.7	125	10.6	78	11.0	107	140	(S E)	5.76	283	(WNW)	20.49
6	205	10.7	170	10.3	130	10.5	90	10.7	111	144	(S E)	25.84	262	(W)	20.17
8	187	10.8	148	10.5	123	10.3	81	10.4	114	145	(S E)	2.34	336	(NNW)	19.92
10	181	10.7	136	10.7	113	10.4	76	10.5	113	137	(S E)	19.60	76	(ENE)	19.98
12	207	10.3	154	9.8	122	10.3	80	10.1	118	132	(S E)	7.37	108	(ESE)	20.21
14	140	10.1	125	10.5	106	10.3	72	10.5	113	133	(S E)	26.26	264	(W)	20.39
16	185	10.4	129	10.0	101	10.2	67	10.1	116	132	(S E)	8.13	48	(N E)	20.29
18	139	9.5	121	8.9	102	9.8	70	10.0	119	145	(S E)	27.31	252	(WSW)	19.95
20	154	10.5	113	8.6	92	10.1	61	10.5	113	137	(S E)	43.61	269	(W)	19.67
22	126	10.4	105	10.2	89	9.9	61	10.3	114	140	(S E)	23.55	72	(ENE)	19.76
24	128	10.8	117	10.0	98	10.0	68	10.6	112	137	(S E)	18.39	78	(E)	20.17

OCT. 12 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	123	10.0	114	9.1	96	9.5	66	10.5	113	137	(S E)	3.15	55	(N E)	20.52
4	141	9.8	130	9.6	107	10.0	74	10.1	117	136	(S E)	1.80	50	(N E)	20.54
6	123	10.3	109	9.9	82	9.7	64	10.1	117	134	(S E)	20.79	249	(WSW)	20.30
8	148	10.6	125	10.0	101	8.8	69	10.2	115	132	(S E)	33.36	261	(W)	19.99
10	160	9.8	124	8.8	83	8.8	62	10.4	114	128	(S E)	16.32	82	(E)	19.85
12	134	9.2	119	9.1	89	9.7	66	10.3	116	130	(S E)	4.53	77	(ENE)	20.18
14	146	10.7	115	10.0	87	9.6	68	9.9	120	130	(S E)	18.04	251	(WSW)	20.38
16	157	10.4	137	8.4	104	9.6	67	8.9	119	133	(S E)	12.86	258	(W)	20.34
18	179	9.8	143	10.0	113	9.8	72	10.0	118	141	(S E)	30.45	255	(WSW)	20.04
20	141	8.6	110	10.0	88	10.1	62	10.1	119	135	(S E)	50.82	270	(W)	19.74
22	150	10.1	130	8.5	104	8.6	71	9.7	123	140	(S E)	4.54	94	(E)	19.76
24	155	9.6	140	8.9	115	8.8	76	9.9	121	136	(S E)	25.23	83	(E)	20.09

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.0

OCT. 13 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	16DIR	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	203	9.6	164	8.6	120	9.7	76	9.9	119	137	(S E)	10.32	260 (W)	20.42
4	162	9.0	122	8.2	98	9.2	67	9.9	120	136	(S E)	11.90	234 (S W)	20.52
6	214	9.1	150	8.4	114	8.4	71	9.8	121	138	(S E)	19.89	256 (WSW)	20.32
8	145	9.7	134	8.5	109	9.3	68	9.8	121	135	(S E)	29.23	271 (W)	20.08
10	154	9.0	117	9.6	92	9.4	60	10.0	118	138	(S E)	5.36	267 (W)	19.99
12	162	9.6	129	8.7	103	9.5	68	8.7	123	128	(S E)	10.36	75 (ENE)	20.12
14	100	11.5	85	9.9	68	9.6	48	10.1	118	123	(ESE)	4.24	61 (ENE)	20.34
16	149	9.2	117	9.2	97	8.7	68	9.8	120	127	(S E)	12.24	63 (ENE)	20.34
18	132	9.2	111	8.7	85	9.4	54	10.2	116	130	(S E)	6.91	62 (ENE)	20.14
20	129	9.7	110	9.5	89	9.6	61	9.6	124	134	(S E)	2.76	63 (ENE)	19.90
22	138	9.7	98	9.8	84	9.8	57	10.3	115	130	(S E)	6.48	57 (ENE)	19.86
24	118	8.8	104	9.6	83	9.5	52	10.1	118	127	(S E)	18.40	69 (ENE)	20.03

OCT. 14 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	16DIR	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	162	9.3	125	8.9	98	9.5	64	10.1	118	128	(S E)	17.69	75 (ENE)	20.28
4	147	9.2	114	9.6	87	9.3	57	10.0	120	128	(S E)	3.36	59 (ENE)	20.43
6	136	10.5	108	9.3	85	9.3	58	9.8	122	132	(S E)	4.20	275 (W)	20.37
8	144	9.9	121	9.5	92	9.2	59	9.8	125	131	(S E)	8.25	82 (E)	20.18
10	127	9.2	114	9.3	96	9.5	62	9.8	119	128	(S E)	9.22	66 (ENE)	20.05
12	153	9.6	130	9.3	99	9.5	65	9.7	122	119	(ESE)	10.97	89 (E)	20.08
14	139	9.1	114	9.3	92	9.2	61	10.2	117	122	(ESE)	2.11	292 (WNW)	20.21
16	148	9.1	95	8.4	75	9.2	50	9.6	123	137	(S E)	10.44	272 (W)	20.21
18	119	10.2	107	8.6	84	8.6	55	9.7	121	132	(S E)	22.03	260 (W)	20.13
20	145	9.3	104	9.0	81	9.3	53	9.9	120	135	(S E)	18.39	237 (WSW)	20.01
22	135	9.9	102	9.8	81	9.4	54	10.1	118	127	(S E)	23.93	75 (ENE)	19.90
24	103	9.4	97	9.1	82	9.1	57	9.5	125	133	(S E)	12.13	79 (E)	19.98

OCT. 15 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	16DIR	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	145	9.6	103	9.4	81	9.3	55	9.6	124	128	(S E)	6.79	78 (ENE)	20.18
4	138	9.9	113	9.6	88	9.3	58	10.0	118	129	(S E)	5.56	259 (W)	20.33
6	129	8.8	103	9.1	81	9.4	55	10.2	116	135	(S E)	4.98	277 (W)	20.34
8	151	8.6	108	8.7	89	9.3	58	9.9	120	127	(S E)	11.94	249 (WSW)	20.22
10	125	9.1	95	9.4	77	9.6	52	10.4	115	125	(S E)	10.14	70 (ENE)	20.10
12	90	10.1	81	9.8	68	10.1	47	10.2	116	132	(S E)	11.61	263 (W)	20.14
14	107	10.0	87	9.9	67	9.3	46	10.0	117	130	(S E)	6.55	239 (WSW)	20.20
16	134	9.0	116	9.2	93	9.5	62	9.6	123	119	(ESE)	23.75	81 (E)	20.20
18	104	8.4	93	8.6	78	9.1	52	8.8	120	126	(S E)	24.15	265 (W)	20.17
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.1

SEP. 22 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
4	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
6	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
8	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
10	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
12	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
14	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
16	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
18	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	***	
20	***	***	***	***	***	***	***	***	***	*** (***)	*** (***)	0.52	
22	22	7.9	21	4.3	18	5.3	12	4.7	204	151 (SSE)	45.62	0.59	
24	42	11.0	38	7.9	32	6.7	22	5.2	207	153 (SSE)	60.17	1.14	

SEP. 23 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	35	6.9	32	6.9	28	5.3	20	4.7	207	158 (SSE)	57.93	351 ( N )	1.09
4	17	8.1	16	5.6	15	5.3	10	4.6	166	141 (S E)	50.03	355 ( N )	0.80
6	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.53
8	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.61
10	21	4.5	20	4.2	18	5.0	13	4.4	208	146 (S E)	42.20	351 ( N )	0.90
12	41	10.4	37	5.9	31	5.9	22	5.1	206	156 (SSE)	57.18	352 ( N )	1.15
14	38	5.9	35	7.3	30	6.0	20	4.7	233	152 (SSE)	55.08	352 ( N )	1.07
16	18	6.8	17	5.1	14	5.5	10	4.6	186	134 (S E)	39.84	2 ( N )	0.76
18	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.53
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.55
22	17	7.3	16	4.9	14	4.9	10	4.6	172	148 (SSE)	48.14	350 ( N )	0.84
24	37	3.9	36	4.9	30	5.2	20	4.7	217	155 (SSE)	53.04	353 ( N )	1.12

SEP. 24 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	42	8.6	39	5.8	32	5.8	22	4.7	236	155 (SSE)	56.25	353 ( N )	1.15
4	20	3.5	19	5.3	16	4.5	12	4.5	194	147 (SSE)	51.20	350 ( N )	0.86
6	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.58
8	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.56
10	17	8.2	16	6.3	14	5.0	10	4.5	209	131 (S E)	37.63	356 ( N )	0.83
12	41	5.3	37	5.3	31	5.3	21	4.5	244	144 (S E)	48.10	354 ( N )	1.11
14	37	3.8	34	4.1	28	4.9	20	4.5	236	152 (SSE)	50.17	354 ( N )	1.11
16	18	4.2	17	4.0	15	4.6	10	4.1	230	141 (S E)	39.25	354 ( N )	0.79
18	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.55
22	14	9.6	13	5.7	11	8.3	7	7.2	118	209 (SSW)	19.44	113 (ESE)	0.68
24	39	4.3	34	3.3	28	4.0	20	4.2	275	139 (S E)	34.73	353 ( N )	1.08

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.1

SEP. 25 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	43	4.0	38	4.4	32	4.5	22	4.2	271	147 (SSE)	42.34	353 (N)	1.19
4	26	5.5	25	3.7	21	4.4	15	4.1	264	130 (S E)	38.61	352 (N)	0.94
6	***	***	***	***	***	***	***	***	***	***	***	***	0.58
8	***	***	***	***	***	***	***	***	***	***	***	***	0.52
10	10	13.4	10	7.3	8	6.8	6	5.2	153	180 (S)	5.48	27 (NNE)	0.70
12	32	3.3	29	3.2	23	3.7	16	3.6	315	127 (S E)	27.95	353 (N)	0.99
14	37	3.9	34	4.0	29	3.9	20	4.0	283	139 (S E)	37.14	353 (N)	1.08
16	17	6.3	16	7.6	14	4.9	10	4.1	226	138 (S E)	36.54	353 (N)	0.78
18	***	***	***	***	***	***	***	***	***	***	***	***	0.51
20	***	***	***	***	***	***	***	***	***	***	***	***	0.53
22	***	***	***	***	***	***	***	***	***	***	***	***	0.55
24	24	7.7	22	4.8	19	4.4	14	3.7	281	131 (S E)	31.31	350 (N)	0.94

SEP. 26 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	52	3.5	42	3.6	33	4.5	22	4.1	290	141 (S E)	34.00	354 (N)	1.16
4	35	3.2	31	4.2	26	4.0	18	4.1	279	140 (S E)	37.45	352 (N)	1.02
6	***	***	***	***	***	***	***	***	***	***	***	***	0.64
8	***	***	***	***	***	***	***	***	***	***	***	***	0.53
10	***	***	***	***	***	***	***	***	***	***	***	***	0.60
12	22	4.8	19	4.2	17	4.2	12	3.8	278	127 (S E)	22.94	354 (N)	0.87
14	37	8.0	32	3.9	27	4.4	19	4.1	274	143 (S E)	33.82	352 (N)	1.05
16	21	4.0	20	4.9	17	4.8	12	4.1	261	127 (S E)	41.22	352 (N)	0.84
18	***	***	***	***	***	***	***	***	***	***	***	***	0.51
20	***	***	***	***	***	***	***	***	***	***	***	***	0.53
22	***	***	***	***	***	***	***	***	***	***	***	***	0.54
24	22	3.9	20	6.1	17	5.0	11	3.9	272	139 (S E)	31.53	353 (N)	0.83

SEP. 27 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	38	3.5	34	3.4	29	4.3	20	4.1	279	140 (S E)	30.23	352 (N)	1.13
4	32	4.2	30	4.7	26	4.9	18	4.1	271	140 (S E)	35.18	354 (N)	1.09
6	17	3.3	16	3.4	14	4.1	9	3.8	276	128 (S E)	27.72	353 (N)	0.78
8	***	***	***	***	***	***	***	***	***	***	***	***	0.54
10	***	***	***	***	***	***	***	***	***	***	***	***	0.57
12	23	5.9	20	4.4	17	3.8	12	3.6	296	136 (S E)	32.60	352 (N)	0.85
14	37	8.4	33	4.8	27	4.3	18	4.0	281	139 (S E)	34.82	351 (N)	1.03
16	25	3.2	22	5.2	19	4.2	13	3.8	291	132 (S E)	32.91	353 (N)	0.86
18	***	***	***	***	***	***	***	***	***	***	***	***	0.52
20	***	***	***	***	***	***	***	***	***	***	***	***	0.53
22	***	***	***	***	***	***	***	***	***	***	***	***	0.54
24	15	8.6	14	4.3	11	6.2	8	4.6	201	127 (S E)	16.50	73 (ENE)	0.71



DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO. 1

SEP. 28 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	44	3.1	33	3.2	26	3.6	18	3.7	310	139 (S E)	27.34	354 (N)	1.03
4	39	3.7	34	3.6	28	4.0	19	4.0	291	144 (S E)	31.50	356 (N)	1.08
6	24	6.7	22	5.3	18	4.3	12	4.0	285	135 (S E)	36.17	352 (N)	0.85
8	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.81
10	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.59
12	16	4.1	15	5.9	12	4.5	9	4.2	255	125 (S E)	18.65	6 (N)	0.76
14	31	4.2	27	5.1	22	4.0	15	3.9	298	123 (S E)	32.58	351 (N)	0.95
16	26	2.9	23	3.4	19	3.6	13	3.6	318	123 (ESE)	30.00	354 (N)	0.88
18	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.61
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
24	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.57

SEP. 29 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	23	3.4	21	4.1	19	4.5	13	4.1	242	134 (S E)	38.40	352 (N)	0.87
4	33	3.3	30	4.9	26	4.3	17	4.2	269	135 (S E)	35.94	352 (N)	1.02
6	19	4.8	18	4.5	16	4.1	12	3.9	222	139 (S E)	30.59	352 (N)	0.90
8	13	12.4	12	7.9	10	8.7	7	7.1	125	200 (SSW)	3.50	23 (NNE)	0.68
10	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.59
12	14	7.0	13	6.2	10	5.3	7	4.4	208	144 (S E)	14.84	62 (ENE)	0.71
14	23	3.6	20	3.7	17	4.0	12	3.8	289	135 (S E)	24.68	355 (N)	0.84
16	21	6.6	19	4.6	16	4.6	11	3.8	294	120 (ESE)	20.54	355 (N)	0.84
18	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.64
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.55
24	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54

SEP. 30 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG) (16DIR)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	14	6.6	14	7.2	12	5.1	8	4.3	215	120 (ESE)	27.37	7 (N)	0.76
4	30	3.9	26	4.5	22	4.6	15	4.3	258	134 (S E)	28.26	353 (N)	0.97
6	28	3.3	24	3.5	20	4.1	13	3.9	285	131 (S E)	24.78	356 (N)	0.92
8	14	7.6	13	4.3	12	4.8	8	4.2	205	129 (S E)	23.89	359 (N)	0.77
10	13	17.8	11	8.4	9	8.0	6	7.4	120	211 (SSW)	1.48	12 (NNE)	0.65
12	15	6.9	13	5.0	10	6.3	7	4.9	202	134 (SSE)	16.26	62 (ENE)	0.69
14	18	6.3	17	3.5	15	5.0	10	4.0	229	133 (S E)	30.99	354 (N)	0.81
16	22	4.9	22	3.2	19	5.1	13	4.4	219	132 (S E)	37.11	351 (N)	0.85
18	21	9.6	17	4.7	15	5.5	10	4.4	247	137 (S E)	31.18	357 (N)	0.75
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
24	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.52

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.1

OCT. 1 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	10	9.1	8	10.3	8	6.3	6	5.3	119	215 (S W)	11.35	55 (N E)	0.68
4	21	10.0	20	7.0	18	5.6	12	4.5	188	139 (S E)	42.66	350 (N)	0.87
6	32	11.0	28	5.8	24	6.0	16	4.9	211	145 (S E)	46.50	349 (N)	0.97
8	27	8.5	26	6.6	21	5.8	14	4.7	205	143 (S E)	45.44	349 (N)	0.89
10	17	6.0	16	5.6	14	6.0	9	4.9	174	143 (S E)	40.12	351 (N)	0.78
12	12	6.3	12	4.8	11	5.4	8	4.3	159	134 (S E)	33.28	356 (N)	0.73
14	18	6.1	16	7.6	14	5.7	10	4.4	212	137 (S E)	37.28	352 (N)	0.78
16	19	4.0	18	6.8	16	5.2	11	4.4	214	131 (S E)	36.02	352 (N)	0.81
18	18	10.0	16	5.8	14	5.5	9	4.5	248	141 (S E)	29.69	352 (N)	0.76
20	13	13.4	12	5.4	10	7.6	7	5.4	171	167 (SSE)	9.86	19 (NNE)	0.67
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.54
24	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.51

OCT. 2 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG) (16DIR)	
2	11	16.1	10	13.9	9	9.4	6	7.8	103	219 (S W)	2.97	25 (NNE)	0.61
4	19	8.1	17	3.3	15	5.0	10	4.3	249	133 (S E)	30.67	351 (N)	0.75
6	21	10.5	20	7.0	17	6.2	12	4.5	222	139 (S E)	39.01	353 (N)	0.86
8	23	6.0	22	5.1	19	8.0	14	4.9	223	131 (S E)	35.38	352 (N)	0.91
10	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	0.49
12	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
14	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
16	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
18	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
24	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.2

SEP. 22 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	***	***	***	***	***	***	***	***	***	***	***	***	***
4	***	***	***	***	***	***	***	***	***	***	***	***	***
6	***	***	***	***	***	***	***	***	***	***	***	***	***
8	***	***	***	***	***	***	***	***	***	***	***	***	***
10	38	4.6	30	4.7	25	5.4	17	4.7	242	89 (E)	31.77	359 (N)	1.12
12	48	5.5	42	4.8	34	5.3	24	4.4	265	115 (ESE)	42.40	6 (N)	1.33
14	43	5.4	36	5.4	30	5.0	21	4.2	273	109 (ESE)	38.74	4 (N)	1.23
16	18	10.4	14	9.0	11	7.8	8	5.5	185	73 (ENE)	33.32	359 (N)	0.89
18	***	***	***	***	***	***	***	***	***	***	***	***	0.61
20	***	***	***	***	***	***	***	***	***	***	***	***	0.71
22	26	11.2	22	5.7	17	6.1	12	4.8	239	91 (E)	25.99	1 (N)	1.05
24	45	3.5	38	3.7	33	4.6	24	4.2	280	113 (ESE)	36.05	5 (N)	1.32

SEP. 23 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	58	3.4	42	4.2	33	4.5	23	4.2	283	107 (ESE)	43.63	2 (N)	1.26
4	26	11.2	20	5.8	15	5.9	10	4.9	228	91 (E)	37.68	360 (N)	0.86
6	***	***	***	***	***	***	***	***	***	***	***	***	0.68
8	***	***	***	***	***	***	***	***	***	***	***	***	0.76
10	33	5.2	26	4.9	21	4.9	14	4.3	273	92 (E)	21.85	359 (N)	1.09
12	44	4.0	38	3.6	32	4.1	24	4.2	270	109 (ESE)	31.65	7 (N)	1.33
14	44	3.8	36	3.7	29	4.5	21	4.1	285	106 (ESE)	34.52	5 (N)	1.25
16	21	10.7	16	8.1	13	7.0	9	5.4	208	78 (ENE)	36.85	360 (N)	0.93
18	***	***	***	***	***	***	***	***	***	***	***	***	0.63
20	***	***	***	***	***	***	***	***	***	***	***	***	0.68
22	18	6.6	16	4.8	13	5.5	10	4.4	248	87 (E)	31.68	1 (N)	1.00
24	57	3.4	41	3.8	33	4.1	23	3.9	307	111 (ESE)	29.39	5 (N)	1.31

SEP. 24 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	50	3.4	40	3.4	32	4.2	23	4.0	292	116 (ESE)	33.84	6 (N)	1.33
4	26	10.2	20	5.5	16	5.3	11	4.4	252	95 (E)	31.73	2 (N)	1.04
6	***	***	***	***	***	***	***	***	***	***	***	***	0.76
8	***	***	***	***	***	***	***	***	***	***	***	***	0.72
10	22	10.0	18	3.8	14	5.0	10	4.6	247	83 (E)	25.16	360 (N)	1.02
12	48	3.7	39	3.5	31	4.4	22	4.2	286	109 (ESE)	24.60	5 (N)	1.30
14	47	3.9	39	3.7	32	4.4	23	4.1	287	106 (ESE)	26.07	3 (N)	1.31
16	22	8.5	18	5.3	14	5.4	10	4.6	240	86 (E)	30.72	359 (N)	0.88
18	***	***	***	***	***	***	***	***	***	***	***	***	0.64
20	***	***	***	***	***	***	***	***	***	***	***	***	0.62
22	11	10.5	10	10.9	8	9.0	6	6.1	159	73 (ENE)	16.24	354 (N)	0.89
24	58	3.6	37	3.6	30	4.5	21	4.2	283	107 (ESE)	18.94	3 (N)	1.30

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.2

SEP. 25 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	47	3.7	41	4.3	35	4.7	24	4.4	268	118 (ESE)	27.08	3 (N)	1.41
4	31	4.0	26	5.3	22	4.9	15	4.4	264	105 (ESE)	30.13	359 (N)	1.16
6	***	***	***	***	***	***	***	***	***	***	***	***	0.81
8	***	***	***	***	***	***	***	***	***	***	***	***	0.69
10	12	7.7	11	5.6	9	6.3	7	5.6	187	76 (ENE)	19.00	357 (N)	0.84
12	40	3.4	31	4.8	25	4.4	18	4.1	287	98 (E)	13.36	357 (N)	1.24
14	46	7.9	37	4.7	30	5.4	21	4.6	255	114 (ESE)	16.84	4 (N)	1.33
16	18	10.2	17	5.4	15	5.7	11	4.7	235	91 (E)	28.48	357 (N)	1.03
18	***	***	***	***	***	***	***	***	***	***	***	***	0.63
20	***	***	***	***	***	***	***	***	***	***	***	***	0.65
22	***	***	***	***	***	***	***	***	***	***	***	***	0.76
24	33	5.1	27	4.2	22	4.4	15	4.2	277	107 (ESE)	20.88	3 (N)	1.18

SEP. 26 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	63	3.8	44	4.5	36	4.8	25	4.4	272	119 (ESE)	15.66	5 (N)	1.41
4	47	3.6	35	4.0	27	4.3	18	4.2	279	103 (ESE)	27.10	359 (N)	1.26
6	10	13.0	9	7.2	8	8.6	6	6.8	151	74 (ENE)	17.08	355 (N)	0.88
8	***	***	***	***	***	***	***	***	***	***	***	***	0.68
10	***	***	***	***	***	***	***	***	***	***	***	***	0.83
12	33	8.8	26	5.7	22	5.4	15	4.6	254	93 (E)	11.86	355 (N)	1.13
14	42	3.6	35	3.9	30	4.3	21	4.2	284	107 (ESE)	22.47	5 (N)	1.29
16	26	9.0	22	4.6	18	4.6	12	4.1	282	91 (E)	32.92	358 (N)	1.07
18	***	***	***	***	***	***	***	***	***	***	***	***	0.69
20	***	***	***	***	***	***	***	***	***	***	***	***	0.64
22	***	***	***	***	***	***	***	***	***	***	***	***	0.66
24	24	5.7	19	6.9	15	6.3	11	4.8	243	87 (E)	16.64	360 (N)	1.08

SEP. 27 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	41	5.6	35	4.2	29	4.7	21	4.5	262	115 (ESE)	20.03	2 (N)	1.37
4	39	8.0	35	4.5	29	5.1	21	4.7	250	105 (ESE)	30.13	356 (N)	1.33
6	20	7.6	15	5.4	12	5.2	9	4.5	257	79 (E)	31.48	356 (N)	1.02
8	***	***	***	***	***	***	***	***	***	***	***	***	0.77
10	***	***	***	***	***	***	***	***	***	***	***	***	0.80
12	26	5.2	20	6.1	17	5.6	12	4.6	251	99 (E)	20.61	2 (N)	1.09
14	41	5.1	33	4.5	27	4.7	19	4.6	255	115 (ESE)	25.40	4 (N)	1.27
16	32	4.8	23	4.8	18	5.2	13	4.5	253	101 (E)	18.82	0 (N)	1.11
18	***	***	***	***	***	***	***	***	***	***	***	***	0.73
20	***	***	***	***	***	***	***	***	***	***	***	***	0.64
22	***	***	***	***	***	***	***	***	***	***	***	***	0.65
24	14	12.4	11	7.7	10	6.8	7	5.1	201	84 (E)	21.19	358 (N)	0.95

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO. 2

SEP. 28 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	37	4.3	34	4.1	27	4.8	19	4.4	264	104 (ESE)	11.16	0 (N)	1.28
4	42	4.1	33	4.3	27	4.9	19	4.4	266	107 (ESE)	9.62	0 (N)	1.33
6	24	6.0	20	4.7	17	5.5	12	4.6	246	98 (E)	21.68	2 (N)	1.10
8	***	***	***	***	***	***	***	***	***	***	***	***	0.85
10	***	***	***	***	***	***	***	***	***	***	***	***	0.82
12	17	9.0	14	7.8	12	6.0	9	4.7	238	77 (ENE)	14.44	356 (N)	1.01
14	47	5.7	30	4.5	24	5.1	16	4.2	277	104 (ESE)	22.95	3 (N)	1.18
16	34	8.8	25	6.1	21	5.7	14	4.6	252	95 (E)	13.45	0 (N)	1.13
18	10	13.7	9	5.7	7	12.3	6	8.4	115	111 (ESE)	16.65	355 (N)	0.85
20	***	***	***	***	***	***	***	***	***	***	***	***	0.64
22	***	***	***	***	***	***	***	***	***	***	***	***	0.65
24	***	***	***	***	***	***	***	***	***	***	***	***	0.81

SEP. 28 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	29	6.7	24	5.1	18	5.9	12	4.7	246	101 (E)	20.50	1 (N)	1.12
4	43	4.0	35	3.4	28	4.6	20	4.2	282	103 (ESE)	18.52	4 (N)	1.27
6	30	4.6	25	6.0	20	5.2	14	4.4	260	102 (ESE)	19.60	1 (N)	1.15
8	12	6.7	11	5.9	9	6.2	7	5.3	190	79 (E)	15.84	355 (N)	0.93
10	***	***	***	***	***	***	***	***	***	***	***	***	0.83
12	13	10.0	11	5.7	10	5.2	7	4.6	221	72 (ENE)	15.25	353 (N)	0.95
14	31	6.6	24	5.6	19	5.1	13	4.4	266	93 (E)	14.94	355 (N)	1.10
16	26	7.5	21	5.5	17	5.2	12	4.6	247	93 (E)	12.81	357 (N)	1.10
18	11	13.0	10	9.5	8	7.6	6	5.8	179	66 (ENE)	8.31	345 (NNW)	0.90
20	***	***	***	***	***	***	***	***	***	***	***	***	0.65
22	***	***	***	***	***	***	***	***	***	***	***	***	0.66
24	***	***	***	***	***	***	***	***	***	***	***	***	0.72

SEP. 30 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	17	10.5	14	8.8	12	6.7	8	5.0	233	85 (E)	20.31	359 (N)	1.01
4	30	10.2	27	5.3	22	5.4	16	4.6	252	102 (ESE)	17.38	353 (N)	1.21
6	31	5.9	25	5.6	21	5.4	15	4.6	246	95 (E)	7.91	353 (N)	1.19
8	17	12.0	15	8.9	12	6.7	8	5.1	221	85 (E)	19.74	358 (N)	1.02
10	11	14.5	10	8.5	8	8.2	6	6.4	157	79 (E)	15.20	356 (N)	0.90
12	17	13.1	12	9.3	10	6.6	7	5.5	186	72 (ENE)	18.98	359 (N)	0.94
14	21	11.3	19	6.0	16	6.0	12	4.8	234	97 (E)	15.77	358 (N)	1.06
16	30	6.1	24	5.8	20	5.3	14	4.8	240	98 (E)	21.66	358 (N)	1.10
18	18	9.0	15	7.0	13	6.6	9	5.2	212	80 (E)	18.22	358 (N)	1.00
20	***	***	***	***	***	***	***	***	***	***	***	***	0.76
22	***	***	***	***	***	***	***	***	***	***	***	***	0.64
24	***	***	***	***	***	***	***	***	***	***	***	***	0.70

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.2

OCT. 1 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	CURRENT DIRECTION (16DIR)	DEPTH OF WATER (M)
2	19	10.0	13	11.1	10	10.0	7	7.1	147	84	(E)	16.67	358	(N)	0.90
4	36	7.7	26	5.7	21	5.3	14	4.6	252	103	(ESE)	25.12	3	(N)	1.11
6	45	4.0	33	5.0	26	5.1	18	4.4	265	105	(ESE)	28.70	5	(N)	1.20
8	38	8.5	29	5.8	22	5.2	14	4.6	247	104	(ESE)	30.58	3	(N)	1.12
10	24	7.8	18	7.6	14	6.7	10	5.4	213	86	(E)	25.08	1	(N)	1.01
12	23	8.3	17	10.0	13	7.2	9	5.4	205	87	(E)	19.84	358	(N)	0.98
14	25	8.8	22	7.2	17	6.1	11	4.8	240	95	(E)	20.47	0	(N)	1.03
16	31	9.1	24	7.3	19	6.1	13	4.8	246	96	(E)	18.77	0	(N)	1.07
18	27	11.5	19	5.7	15	5.9	10	4.7	247	84	(E)	18.97	358	(N)	1.01
20	14	16.0	12	8.5	10	8.2	7	6.4	166	79	(E)	20.38	358	(N)	0.92
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0.78
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0.75

OCT. 2 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	CURRENT DIRECTION (16DIR)	DEPTH OF WATER (M)
2	11	18.0	10	10.8	9	10.1	6	7.7	127	95	(E)	16.13	354	(N)	0.85
4	18	6.5	16	7.6	13	7.6	9	5.4	201	88	(E)	19.31	359	(N)	1.00
6	34	6.0	27	4.9	20	5.0	14	4.7	249	101	(E)	21.50	1	(N)	1.11
8	34	6.0	27	4.9	22	5.5	15	4.5	260	100	(E)	19.01	2	(N)	1.18
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0.59
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.3

SEP. 22 1991

OBS. TIME	MAX. H (CM)	MAX. T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN H (CM)	MEAN T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	***	***	***	***	***	***	***	***	***	***	***	***	***
4	***	***	***	***	***	***	***	***	***	***	***	***	***
6	***	***	***	***	***	***	***	***	***	***	***	***	***
8	***	***	***	***	***	***	***	***	***	***	***	***	***
10	***	***	***	***	***	***	***	***	***	***	***	***	***
12	***	***	***	***	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***	***	***	***	***
16	***	***	***	***	***	***	***	***	***	***	***	***	***
18	9	25.5	9	14.8	7	18.7	5	13.4	62	358 (N)	1.82	178 (S)	1.25
20	12	8.5	11	13.8	9	9.7	7	8.5	116	358 (N)	20.86	352 (N)	1.33
22	30	7.7	24	5.7	20	5.9	14	5.3	220	358 (N)	24.92	357 (N)	1.63
24	58	8.9	43	5.5	35	5.9	25	5.3	226	2 (N)	44.33	356 (N)	1.89

SEP. 23 1991

OBS. TIME	MAX. H (CM)	MAX. T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN H (CM)	MEAN T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	48	7.4	39	6.3	32	6.3	23	5.6	211	5 (N)	68.20	358 (N)	1.80
4	19	7.9	17	7.3	14	6.7	10	5.8	196	1 (N)	53.57	358 (N)	1.51
6	10	24.0	9	16.6	7	15.6	6	10.6	78	2 (N)	18.58	352 (N)	1.26
8	12	9.8	10	9.4	8	9.3	6	7.3	149	360 (N)	18.97	357 (N)	1.33
10	33	4.2	26	5.3	22	5.2	16	5.0	233	2 (N)	33.06	356 (N)	1.67
12	64	6.5	44	5.6	36	5.8	26	5.2	228	1 (N)	36.84	356 (N)	1.81
14	46	8.9	39	6.1	32	5.7	23	5.3	222	4 (N)	44.53	357 (N)	1.82
16	20	8.2	17	6.6	14	6.4	10	5.5	206	2 (N)	53.63	359 (N)	1.46
18	10	24.2	8	18.1	7	17.7	5	13.1	62	2 (N)	12.40	351 (N)	1.21
20	13	30.0	10	17.9	7	16.1	5	10.7	56	1 (N)	9.82	343 (NNW)	1.25
22	23	8.3	18	6.0	15	6.0	11	5.2	222	356 (N)	32.83	359 (N)	1.57
24	51	9.9	41	4.8	34	5.6	25	5.0	235	0 (N)	35.20	355 (N)	1.89

SEP. 24 1991

OBS. TIME	MAX. H (CM)	MAX. T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN H (CM)	MEAN T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	50	11.6	43	6.4	36	5.8	25	5.2	223	1 (N)	40.33	356 (N)	1.80
4	26	6.2	23	5.9	19	5.5	13	5.0	232	359 (N)	34.51	356 (N)	1.61
6	12	7.8	10	11.9	9	8.5	6	8.2	124	1 (N)	19.09	355 (N)	1.33
8	11	25.5	10	18.8	8	13.4	6	9.7	102	3 (N)	5.07	346 (NNW)	1.30
10	24	4.4	21	4.2	18	5.1	13	4.8	238	0 (N)	25.22	358 (N)	1.60
12	48	5.5	39	4.9	33	5.8	24	5.2	227	359 (N)	29.88	355 (N)	1.89
14	47	6.3	41	6.2	35	6.2	25	5.2	230	360 (N)	33.86	355 (N)	1.89
16	22	4.0	18	4.5	15	5.2	11	5.2	216	357 (N)	45.80	357 (N)	1.54
18	7	17.5	6	25.5	6	23.0	4	14.5	47	359 (N)	15.80	353 (N)	1.21
20	7	23.0	6	22.3	5	18.0	4	15.3	33	3 (N)	2.08	314 (NW)	1.16
22	14	10.4	13	6.4	11	6.0	8	5.6	195	1 (N)	14.98	353 (N)	1.47
24	43	6.1	37	4.5	31	5.4	22	4.9	241	2 (N)	27.22	355 (N)	1.87

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.3

SEP. 25 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG)	
2	51	10.1	43	5.6	36	5.1	26	4.9	243	359 (N)	35.81	356 (N)	1.98
4	33	7.7	27	6.6	22	5.7	16	5.0	235	3 (N)	48.98	357 (N)	1.71
6	12	8.8	10	10.5	9	8.0	6	6.6	157	1 (N)	25.38	354 (N)	1.36
8	10	21.6	8	19.7	6	16.6	5	10.2	85	5 (N)	7.09	337 (NNW)	1.25
10	15	7.4	14	3.9	12	5.0	9	5.1	212	6 (N)	18.73	359 (N)	1.50
12	39	9.6	32	5.9	27	5.5	20	5.2	226	3 (N)	18.69	352 (N)	1.80
14	45	4.2	37	5.1	32	5.3	23	5.0	236	1 (N)	20.21	356 (N)	1.89
16	22	4.6	19	3.9	16	4.4	12	4.8	235	1 (N)	49.94	358 (N)	1.56
18	6	29.3	6	24.0	5	22.0	4	15.4	38	1 (N)	17.20	350 (N)	1.17
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.04
22	10	8.7	9	9.0	7	10.5	5	8.4	104	5 (N)	5.82	364 (N)	1.31
24	45	7.3	30	5.4	25	6.3	17	5.3	222	5 (N)	22.84	355 (N)	1.74

SEP. 26 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG)	
2	49	6.7	43	5.4	37	5.2	26	4.8	242	350 (N)	19.16	352 (N)	1.97
4	45	6.1	34	4.5	27	4.7	19	4.9	242	360 (N)	40.52	357 (N)	1.80
6	13	9.2	11	7.4	9	7.0	5	6.1	176	358 (N)	19.58	353 (N)	1.43
8	10	27.0	8	16.3	6	21.1	5	12.9	45	2 (N)	1.96	255 (WSW)	1.24
10	10	14.0	9	11.1	8	8.7	6	7.6	136	359 (N)	5.64	349 (N)	1.39
12	30	4.8	25	5.4	21	5.4	14	4.9	233	5 (N)	16.55	354 (N)	1.69
14	37	6.1	33	5.6	29	5.7	21	5.0	234	359 (N)	25.29	355 (N)	1.85
16	27	5.6	22	4.5	18	4.3	13	4.5	254	4 (N)	58.73	358 (N)	1.60
18	6	29.3	6	23.7	5	21.5	4	13.8	52	0 (N)	35.75	354 (N)	1.20
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.01
22	8	22.0	6	23.9	5	18.9	4	14.9	27	6 (N)	1.73	378 (W)	1.20
24	20	8.1	18	4.4	15	5.2	11	5.1	221	4 (N)	19.29	352 (N)	1.64

SEP. 27 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG) (16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG)	
2	41	6.5	36	6.1	31	5.7	22	5.4	220	357 (N)	22.67	354 (N)	1.93
4	40	4.6	36	5.9	30	5.6	22	5.0	236	358 (N)	61.07	358 (N)	1.86
6	15	7.3	14	7.6	13	6.2	9	6.1	185	358 (N)	62.21	357 (N)	1.54
8	9	20.5	7	14.3	6	15.2	5	9.7	100	359 (N)	23.21	352 (N)	1.32
10	10	9.4	8	7.2	7	10.8	5	9.1	112	1 (N)	6.10	338 (NNW)	1.37
12	25	6.5	20	4.9	17	5.3	13	5.0	237	1 (N)	19.46	355 (N)	1.65
14	40	7.8	35	5.6	29	5.9	21	4.9	237	1 (N)	25.57	355 (N)	1.83
16	30	5.4	24	5.0	20	5.0	14	4.6	249	2 (N)	26.19	356 (N)	1.67
18	7	21.8	7	13.9	6	16.2	5	11.9	57	360 (N)	31.79	355 (N)	1.26
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.03
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.11
24	16	10.0	14	8.1	12	6.8	9	5.7	195	355 (N)	20.04	355 (N)	1.51



DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.3

SEP. 28 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	43	5.2	37	5.0	30	5.5	21	5.1	230	359 (N)	16.25	352 (N)	1.84
4	47	7.0	39	6.3	32	6.1	23	5.3	220	358 (N)	10.64	349 (N)	1.89
6	28	7.5	23	4.1	19	4.9	14	4.6	248	359 (N)	22.30	353 (N)	1.86
8	12	6.8	10	8.8	9	7.9	6	6.4	160	359 (N)	19.54	354 (N)	1.41
10	9	17.1	8	7.8	8	8.7	6	7.2	139	3 (N)	6.82	344 (NNW)	1.38
12	20	3.4	17	3.1	14	4.4	10	4.7	234	358 (N)	15.23	355 (N)	1.57
14	38	5.3	30	6.1	25	5.9	18	5.2	226	0 (N)	26.26	356 (N)	1.74
16	35	4.5	27	5.2	23	5.6	17	5.0	232	2 (N)	16.94	351 (N)	1.70
18	12	8.4	11	7.3	9	7.0	7	6.6	165	358 (N)	24.48	356 (N)	1.38
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.10
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.09
24	12	8.8	10	9.0	8	8.2	6	7.2	139	3 (N)	3.60	346 (NNW)	1.36

SEP. 29 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	25	4.7	22	4.8	20	5.2	14	5.0	225	3 (N)	20.83	352 (N)	1.68
4	37	7.4	33	6.2	29	5.7	21	4.9	233	358 (N)	19.97	353 (N)	1.83
6	32	8.8	26	6.3	22	6.0	18	5.2	227	1 (N)	24.01	354 (N)	1.71
8	16	8.1	13	7.2	11	7.8	8	6.1	179	355 (N)	18.34	352 (N)	1.48
10	12	10.1	10	11.0	9	8.8	6	7.4	146	0 (N)	13.82	354 (N)	1.38
12	15	4.2	14	4.6	12	4.8	9	5.2	212	356 (N)	13.99	356 (N)	1.51
14	30	7.9	24	6.5	19	5.6	14	5.1	225	359 (N)	24.09	354 (N)	1.66
16	31	7.0	24	5.7	19	5.6	14	5.3	221	2 (N)	16.34	353 (N)	1.66
18	13	7.1	12	4.0	11	5.4	8	5.5	204	358 (N)	11.81	352 (N)	1.45
20	5	29.7	5	29.4	5	25.3	4	17.4	29	6 (N)	9.16	350 (N)	1.19
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	1.10
24	6	25.3	6	20.5	5	20.0	4	13.5	47	6 (N)	5.62	351 (N)	1.27

SEP. 30 1991

OBS. TIME	MAX. WAVE H (CM)	WAVE T (SEC)	1/10 WAVE H (CM)	WAVE T (SEC)	1/3 WAVE H (CM)	WAVE T (SEC)	MEAN WAVE H (CM)	WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	19	11.1	16	4.9	13	5.6	10	5.5	206	357 (N)	20.78	354 (N)	1.56
4	37	9.5	30	5.7	25	5.3	18	5.0	233	0 (N)	15.45	351 (N)	1.77
6	31	6.2	28	4.7	24	5.4	17	4.7	250	1 (N)	10.44	349 (N)	1.74
8	17	8.7	16	3.0	14	4.8	10	5.2	216	359 (N)	22.25	353 (N)	1.57
10	12	7.0	11	8.1	9	6.8	7	6.3	171	357 (N)	11.87	355 (N)	1.46
12	16	7.5	14	5.2	12	5.6	9	5.5	206	358 (N)	18.03	356 (N)	1.50
14	28	7.5	21	6.6	18	5.7	13	5.0	229	360 (N)	16.27	354 (N)	1.52
16	28	8.5	23	6.1	20	5.7	15	5.2	225	359 (N)	21.83	355 (N)	1.66
18	17	7.5	15	6.1	13	6.1	10	5.2	211	359 (N)	18.88	355 (N)	1.55
20	9	20.7	8	8.0	6	14.1	5	10.2	86	358 (N)	26.52	354 (N)	1.30
22	7	17.8	6	23.8	5	20.5	4	15.8	34	3 (N)	8.40	347 (NNW)	1.18
24	7	26.2	7	18.0	6	17.8	5	12.8	68	5 (N)	7.25	349 (N)	1.25

DAILY REPORT OF WAVES OBSERVATION

STATION : EAST NO.3

OCT. 1 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	16	9.3	13	7.3	11	7.0	8	5.8	193	356 (N)	12.44	352 (N)	1.45
4	28	8.9	25	4.4	21	5.2	15	4.9	235	1 (N)	21.34	354 (N)	1.66
6	36	9.0	32	6.1	27	6.2	19	5.2	224	6 (N)	27.22	355 (N)	1.75
8	25	7.0	23	5.4	20	5.1	15	5.0	229	7 (N)	28.18	359 (N)	1.67
10	20	10.0	17	5.9	15	5.3	11	5.4	208	0 (N)	24.86	357 (N)	1.56
12	19	7.4	17	5.0	14	5.4	10	5.3	213	359 (N)	21.48	356 (N)	1.53
14	21	7.7	18	6.2	16	6.8	12	5.5	206	0 (N)	22.14	357 (N)	1.58
16	25	9.0	22	5.0	19	5.5	13	5.2	221	2 (N)	25.41	357 (N)	1.62
18	20	7.0	17	4.5	14	5.5	11	5.1	224	1 (N)	22.94	355 (N)	1.57
20	13	8.6	12	5.7	10	6.8	8	5.5	196	357 (N)	21.33	357 (N)	1.46
22	10	23.0	9	13.6	7	12.2	6	8.7	118	1 (N)	14.92	352 (N)	1.33
24	7	28.0	7	21.4	6	16.5	5	10.9	89	1 (N)	11.78	349 (N)	1.31

OCT. 2 1991

OBS. TIME	MAX. WAVE		1/10 WAVE		1/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)					
2	12	6.8	11	7.4	9	6.8	7	6.4	156	356 (N)	16.61	355 (N)	1.39
4	18	8.8	17	5.6	14	5.4	11	5.3	211	0 (N)	17.72	355 (N)	1.56
6	26	4.5	22	6.5	19	5.9	14	5.6	210	359 (N)	24.81	356 (N)	1.66
8	30	6.0	26	4.6	22	5.3	16	5.0	233	4 (N)	20.10	355 (N)	1.72
10	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
12	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
14	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
16	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
18	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
20	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
22	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***
24	***	***	***	***	***	***	***	***	***	*** (***)	***	*** (***)	***

DAILY REPORT OF WAVES OBSERVATION

STATION : SOUTH NO.1

OCT. 2 1991

OBS. TIME	MAX. WAVE H (CM)	1/10 WAVE H (CM)	1/3 WAVE H (CM)	MEAN WAVE H (CM)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	***	***	***	***	***	*** (***)	***	*** (***)	***
4	***	***	***	***	***	*** (***)	***	*** (***)	***
6	***	***	***	***	***	*** (***)	***	*** (***)	***
8	***	***	***	***	***	*** (***)	***	*** (***)	***
10	***	***	***	***	***	*** (***)	***	*** (***)	***
12	***	***	***	***	***	*** (***)	***	*** (***)	***
14	***	***	***	***	***	*** (***)	***	*** (***)	***
16	6 25.0	6 25.0	5 27.9	5 18.9	14	276 (W)	0.58	328 (N W)	5.71
18	***	***	***	***	***	*** (***)	***	*** (***)	5.74
20	7 28.3	7 27.7	6 24.9	5 17.4	26	272 (W)	4.85	306 (N W)	5.76
22	6 26.0	6 26.0	5 26.0	5 21.4	18	272 (W)	3.92	308 (N W)	5.70
24	5 27.5	5 27.5	5 18.4	4 17.5	17	274 (W)	1.36	59 (ENE)	5.62

OCT. 3 1991

OBS. TIME	MAX. WAVE H (CM)	1/10 WAVE H (CM)	1/3 WAVE H (CM)	MEAN WAVE H (CM)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	6 27.5	6 25.5	6 21.5	5 16.2	38	275 (W)	2.94	289 (WNW)	5.61
4	6 29.8	6 28.4	6 21.5	5 15.7	31	272 (W)	0.89	9 (N)	5.67
6	6 22.0	6 20.3	6 17.5	5 14.2	33	275 (W)	1.16	310 (N W)	5.76
8	7 12.5	7 11.9	6 12.8	5 13.8	37	276 (W)	3.02	273 (W)	5.89
10	14 5.3	14 4.3	10 6.5	7 10.3	83	276 (W)	0.56	360 (N)	5.93
12	9 15.0	7 18.3	6 16.2	5 16.6	31	278 (W)	1.02	343 (NNW)	5.84
14	6 30.0	6 25.7	5 20.1	5 16.6	36	281 (W)	1.10	351 (N)	5.70
16	5 25.5	5 25.3	5 15.6	4 14.1	27	275 (W)	0.91	333 (NNW)	5.65
18	7 11.5	7 11.5	6 13.6	4 18.0	12	277 (W)	1.56	326 (N W)	5.69
20	6 29.5	6 29.5	5 25.9	4 18.9	22	271 (W)	1.75	1 (N)	5.76
22	7 30.0	7 18.3	6 21.1	5 18.0	35	280 (W)	4.04	306 (N W)	5.80
24	9 17.0	8 12.8	7 17.8	5 16.4	51	276 (W)	2.14	297 (WNW)	5.74

OCT. 4 1991

OBS. TIME	MAX. WAVE H (CM)	1/10 WAVE H (CM)	1/3 WAVE H (CM)	MEAN WAVE H (CM)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	5 28.5	5 28.4	5 26.0	5 18.8	26	275 (W)	3.03	290 (WNW)	5.63
4	8 19.0	8 14.3	6 16.4	5 15.8	30	274 (W)	3.44	293 (WNW)	5.59
6	8 17.0	7 20.8	6 18.6	5 16.3	31	281 (W)	2.87	289 (WNW)	5.64
8	7 22.0	7 16.3	6 20.2	5 16.3	47	281 (W)	2.75	321 (N W)	5.82
10	9 12.5	9 10.0	7 13.7	5 14.0	59	275 (W)	1.36	320 (N W)	5.94
12	9 19.5	8 15.8	7 15.4	6 15.4	64	275 (W)	0.65	31 (NNE)	5.80
14	10 18.0	8 12.4	8 10.9	6 13.3	77	276 (W)	1.00	339 (NNW)	5.74
16	8 18.0	7 13.2	6 18.8	5 16.2	42	278 (W)	1.03	347 (NNW)	5.57
18	6 15.0	6 18.0	5 16.3	4 16.0	21	278 (W)	1.38	331 (NNW)	5.57
20	7 28.0	7 27.0	6 19.6	5 17.0	39	282 (WNW)	7 (N)	7 (N)	5.76
22	9 14.5	8 16.3	7 14.9	5 14.3	56	277 (W)	3.70	291 (WNW)	5.92
24	8 16.0	8 15.1	7 17.0	5 16.4	51	272 (W)	2.40	276 (W)	5.93

DAILY REPORT OF WAVES OBSERVATION

STATION : SOUTH NO. 1

OCT. 5 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		L/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)(16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG)	
2	8	16.0	8	15.1	7	18.2	5	15.5	40	277 (W)	1.01	293 (WNW)	5.75
4	9	15.0	8	20.3	6	18.9	5	17.2	34	277 (W)	3.22	338 (NNW)	5.60
6	***	***	***	***	***	***	***	***	***	***	***	***	5.60
8	8	16.0	7	16.5	6	19.0	5	16.5	37	277 (W)	2.00	308 (NW)	5.76
10	7	28.5	7	17.3	6	17.3	5	16.4	30	278 (W)	1.43	23 (NNE)	5.99
12	8	19.2	8	15.9	7	17.6	5	15.7	37	286 (WNW)	1.10	12 (NNE)	6.02
14	8	16.5	7	13.2	6	17.2	5	17.3	38	274 (W)	1.47	332 (NNW)	5.80
16	6	19.5	6	18.5	5	25.6	5	21.6	16	280 (W)	1.03	342 (NNW)	5.56
18	6	26.5	6	26.5	6	24.3	4	20.4	13	275 (W)	1.44	322 (NW)	5.51
20	6	24.5	6	25.5	5	21.9	4	18.2	20	277 (W)	1.89	321 (NW)	5.69
22	8	21.0	8	12.7	6	19.0	5	17.4	35	277 (W)	5.41	303 (WNW)	5.89
24	10	19.5	10	18.3	8	16.3	6	16.2	48	284 (WNW)	3.30	278 (W)	6.09

OCT. 6 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		L/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)(16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG)	
2	9	18.5	8	19.5	7	20.1	5	18.2	45	277 (W)	2.78	268 (W)	5.89
4	6	21.0	6	20.0	6	19.6	5	16.4	32	271 (W)	2.83	271 (W)	5.64
6	6	27.0	6	27.0	5	23.2	4	17.8	17	272 (W)	1.41	346 (NNW)	5.55
8	6	23.5	6	23.5	6	24.3	5	18.5	17	279 (W)	0.80	328 (NNW)	5.70
10	8	17.5	8	12.7	6	16.7	5	16.2	35	284 (WNW)	1.00	340 (NNW)	5.96
12	12	18.5	11	13.7	9	15.1	7	15.6	56	287 (WNW)	0.92	355 (N)	6.08
14	10	29.5	10	21.2	9	17.3	6	15.6	54	283 (WNW)	0.67	355 (N)	5.90
16	10	18.5	9	22.0	8	17.1	6	16.3	36	279 (W)	4.51	268 (W)	5.58
18	10	23.0	10	26.3	7	24.7	5	18.3	25	282 (WNW)	2.39	60 (ENE)	5.40
20	6	28.5	6	28.5	6	25.5	5	19.1	12	276 (W)	3.12	46 (NE)	5.56
22	10	15.0	9	15.9	8	16.6	6	16.3	51	283 (WNW)	1.53	263 (W)	5.94
24	16	16.0	13	15.8	12	15.4	8	15.3	72	287 (WNW)	1.58	246 (WSW)	6.16

OCT. 7 1991

OBS. TIME	MAX. WAVE		L/10 WAVE		L/3 WAVE		MEAN WAVE		NUMBER OF WAVES	WAVE DIRECTION (DEG)(16DIR)	CURRENT VELOCITY		DEPTH OF WATER (M)
	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)	H (CM)	T (SEC)			(CM/S)	(DEG)	
2	13	19.2	12	16.9	11	17.4	8	15.2	66	288 (WNW)	0.34	82 (E)	6.03
4	13	19.5	12	16.5	10	16.8	8	15.0	55	283 (WNW)	0.64	270 (W)	5.76
6	9	29.0	9	24.7	8	18.4	6	15.6	39	280 (W)	1.97	307 (NW)	5.56
8	10	22.0	9	20.0	7	20.6	5	17.3	39	279 (W)	1.92	349 (N)	5.60
10	10	19.5	8	17.1	7	17.4	5	16.3	52	279 (W)	1.34	30 (NNE)	5.90
12	16	18.5	13	16.8	11	16.3	8	15.1	69	297 (WNW)	1.52	242 (WSW)	6.07
14	18	17.3	15	15.0	13	15.4	7	14.5	72	289 (WNW)	4.24	222 (SW)	5.97
16	11	14.0	10	18.1	9	15.8	7	14.5	62	278 (W)	2.29	280 (W)	5.63
18	7	27.0	7	27.0	6	22.0	5	15.7	19	281 (W)	2.51	134 (SE)	5.32
20	9	29.0	9	20.0	8	17.1	6	14.5	30	282 (WNW)	2.01	204 (SSW)	5.47
22	11	14.5	10	15.3	9	17.1	7	15.4	50	278 (W)	0.18	253 (WSW)	5.83
24	15	26.8	14	18.2	11	16.0	8	13.7	69	288 (WNW)	0.98	317 (NW)	6.15

DAILY REPORT OF WAVES OBSERVATION

STATION : SOUTH NO.1

OCT. 8 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	18	19.0	16	15.7	14	15.2	10	13.1	81	286	(WNW)	1.55	305	(N W)	6.16
4	13	27.5	11	21.1	10	17.6	7	15.1	60	282	(WNW)	3.32	234	(S W)	5.88
6	13	20.0	12	16.0	9	19.0	7	16.9	40	274	(W)	3.91	267	(W)	5.58
8	14	18.5	12	14.9	10	18.9	7	17.7	43	280	(W)	1.14	206	(SSW)	5.59
10	12	20.0	11	16.8	9	15.9	7	13.7	61	283	(WNW)	0.67	331	(NNW)	5.82
12	17	29.5	13	18.1	10	16.6	7	14.8	61	287	(WNW)	3.68	210	(SSW)	6.03
14	15	14.5	13	17.3	11	15.7	8	14.3	74	285	(WNW)	5.52	286	(S W)	6.00
16	11	13.3	10	21.5	9	17.5	7	15.7	56	274	(W)	4.38	253	(WSW)	5.59
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	5.32
20	7	27.0	7	27.0	6	27.6	5	21.2	15	272	(W)	1.18	208	(SSW)	5.31
22	10	14.5	9	21.8	9	17.0	6	15.3	38	272	(W)	2.30	283	(WNW)	5.71
24	21	26.5	19	15.4	15	14.7	11	13.3	80	282	(WNW)	2.25	225	(S W)	6.11

OCT. 9 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	18	17.3	16	13.4	14	13.5	10	12.0	90	291	(WNW)	4.44	232	(S W)	6.23
4	18	22.0	17	20.6	13	16.2	9	13.6	75	272	(W)	2.29	208	(SSW)	5.98
6	12	17.5	10	15.8	10	17.2	7	15.4	45	273	(W)	0.44	286	(WNW)	5.65
8	9	25.5	8	27.3	6	24.2	5	18.6	25	276	(W)	2.35	272	(W)	5.54
10	12	16.5	11	22.0	9	18.7	7	15.9	54	273	(W)	1.48	314	(N W)	5.72
12	15	15.0	14	20.5	11	17.8	8	14.6	69	278	(W)	6.88	225	(S W)	5.98
14	15	15.0	13	15.3	11	14.0	8	13.1	81	279	(W)	5.02	201	(SSW)	6.03
16	11	29.5	10	26.1	9	18.9	6	15.4	61	269	(W)	4.31	226	(S W)	5.77
18	9	21.7	9	21.7	7	22.8	5	16.8	18	260	(W)	2.58	195	(SSW)	5.34
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	5.22
22	9	25.5	9	23.0	7	23.5	6	17.8	33	271	(W)	2.99	188	(S)	5.58
24	14	30.0	12	16.8	10	17.9	8	14.5	68	282	(WNW)	0.94	356	(N)	6.01

OCT. 10 1991

OBS. TIME	MAX. WAVE H (CM)	MAX. WAVE T (SEC)	1/10 WAVE H (CM)	1/10 WAVE T (SEC)	1/3 WAVE H (CM)	1/3 WAVE T (SEC)	MEAN WAVE H (CM)	MEAN WAVE T (SEC)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	WAVE DIRECTION (16DIR)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)	
2	23	11.2	17	16.8	14	14.1	10	12.6	88	270	(W)	5.12	182	(S)	6.25
4	13	19.1	12	15.2	10	15.1	7	13.2	73	279	(W)	5.22	208	(SSW)	6.07
6	7	28.0	7	24.8	7	21.8	5	17.5	26	274	(W)	1.41	268	(W)	5.70
8	10	23.5	10	25.3	7	23.3	6	19.6	21	268	(W)	2.65	153	(SSE)	5.53
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

DAILY REPORT OF WAVES OBSERVATION

STATION : SOUTH NO.2

OCT. 2 1991

OBS. TIME	MAX. WAVE H (CM)	1/10 WAVE H (CM)	1/3 WAVE H (CM)	MEAN WAVE H (CM)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	***	***	***	***	***	***	***	***	***
4	***	***	***	***	***	***	***	***	***
6	***	***	***	***	***	***	***	***	***
8	***	***	***	***	***	***	***	***	***
10	***	***	***	***	***	***	***	***	***
12	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***
16	19	17	15	12	118	157 (SSE)	1.58	261 ( W )	6.97
18	21	18	16	13	135	157 (SSE)	3.12	271 ( W )	7.01
20	24	20	18	14	114	156 (SSE)	3.01	282 (WNW)	7.02
22	19	18	16	13	121	157 (SSE)	5.08	286 (WNW)	6.96
24	17	16	14	11	105	154 (SSE)	4.93	299 (WNW)	6.89

OCT. 3 1991

OBS. TIME	MAX. WAVE H (CM)	1/10 WAVE H (CM)	1/3 WAVE H (CM)	MEAN WAVE H (CM)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	22	19	16	12	114	154 (SSE)	4.61	271 ( W )	6.87
4	20	19	17	13	112	156 (SSE)	5.20	278 ( W )	6.94
6	21	20	17	13	120	157 (SSE)	1.02	275 ( W )	7.02
8	22	21	18	13	118	154 (SSE)	2.13	263 ( W )	7.15
10	24	22	19	13	125	157 (SSE)	2.54	252 (WSW)	7.20
12	22	20	18	14	129	155 (SSE)	2.42	258 (WSW)	7.10
14	21	18	16	12	124	156 (SSE)	1.65	307 (N W)	6.97
16	16	15	13	10	111	155 (SSE)	1.87	306 (N W)	6.91
18	16	15	13	10	114	156 (SSE)	3.30	275 ( W )	6.85
20	21	19	16	12	128	156 (SSE)	3.13	270 ( W )	7.03
22	22	20	17	13	115	157 (SSE)	1.81	302 (WNW)	7.07
24	27	22	18	14	108	156 (SSE)	4.07	286 (WNW)	7.01

OCT. 4 1991

OBS. TIME	MAX. WAVE H (CM)	1/10 WAVE H (CM)	1/3 WAVE H (CM)	MEAN WAVE H (CM)	NUMBER OF WAVES	WAVE DIRECTION (DEG)	CURRENT VELOCITY (CM/S)	CURRENT DIRECTION (DEG)	DEPTH OF WATER (M)
2	22	20	17	12	110	155 (SSE)	3.75	254 (WSW)	6.90
4	20	18	15	11	112	154 (SSE)	3.62	278 ( W )	6.85
6	20	18	16	12	98	157 (SSE)	1.60	266 ( W )	6.90
8	21	18	17	13	112	156 (SSE)	3.02	263 ( W )	7.08
10	26	22	20	14	117	153 (SSE)	3.29	246 (WSW)	7.20
12	26	24	21	15	112	156 (SSE)	1.08	8 ( N )	7.17
14	22	20	17	13	107	155 (SSE)	1.75	298 (WNW)	7.01
16	24	20	16	12	101	154 (SSE)	4.12	299 (WNW)	6.84
18	19	17	14	10	92	154 (SSE)	1.82	297 (WNW)	6.83
20	23	20	17	12	109	156 (SSE)	2.84	258 (WSW)	7.02
22	25	22	18	14	108	153 (SSE)	1.73	263 ( W )	7.19
24	27	25	22	16	101	155 (SSE)	5.16	304 (N W)	7.19