

WAVE DATA COLLECTION KADAVU,FIJI

June 1991 - December 1992

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RAPPORT/REPORT

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Sammendrag/ Abstract

Since June 1991 waves have been recorded south of Kadavu at location 19°18.4'S, 177°57.4'E.

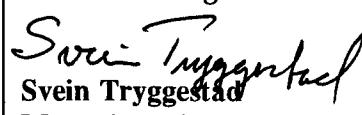
The measurements have been financed by NORAD and carried out by SOPAC, Techsec. OCEANOR was contracted by SOPAC as consultant to assist in the work.

This report presents statistics for wave height, wave periods and wave energy accumulated for 1991 - 1992, and for the year 1992.

Stikkord/Keywords

**Waves
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Managing Director**

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APPENDIX A ACCUMULATED WAVE STATISTICS FOR 1991 - 1992

APPENDIX B WAVE STATISTICS FOR 1992

List of Symbols

Wave Parameters

(Definitions, see section 3.1)

| | |
|--------------|---|
| Hm0(m) | - significant wave height |
| Tp (s) | - peak period |
| Tm-10(s) | - energy wave period |
| Tm02 (s) | - mean wave period |
| J Tot (kW/m) | - total wave power flux |
| JT-60(kW/m) | - mean wave power over time (with records > 60 kW/m rejected) |
| m | - spectral moments, $m_n = \int S(f) f^n df$ |
| S(f)(m's) | - wave spectrum as a function of frequency |

Time

We note that unless specifically stated all times referred to in this report are UTC times (GMT).

Statistical Tables in Appendix A and B

| | |
|---------------|--|
| DATA COVERAGE | Percentage of good quality 3 hourly data samples within observation period |
| CUM PROB. | Cumulative probability distribution |
| MARG.PROB. | Probability distribution |
| AVERAGE | Average value of one parameter (for each class of a second parameter) |
| ST.DEV. | Standard deviation of one parameter (for each class of a second parameter) |

1 Introduction

The wave power data collection programme in the South Pacific started in 1987. The work was initially financed by the Norwegian Agency for Development Cooperation, NORAD and organized through an agreement between the Norwegian Engineering Council on Oceanic Resources, NECOR, and the Norwegian Hydrotechnical Laboratory, NHL a member of the SINTEF Group. In 1990, the Oceanographic Company of Norway A/S, OCEANOR, signed an agreement with NECOR and took over NHL's role in the project. The wave measurement programme provides technical support to the intergovernmental organization SOPAC (South Pacific Applied Geoscience Commission) through its Technical Secretariat (TechSec) in Suva, Fiji.

The wave measurement programme was proposed by NHL in 1985 as the most appropriate continuation of Norwegian NECOR organized assistance to the SOPAC region, following the one-year stay at TechSec in 1984 by one of their oceanographers. After a visit to Norway by Cruz Matos of TechSec, SOPAC endorsed the programme.

A TechSec technician, James Kamsoo, was trained in Norway in 1985. Regretfully he resigned from SOPAC TechSec in January 1989. In 1986 the first two buoys were delivered. After considerable delay the buoys were deployed in April 1987 at Tongatapu, Kingdom of Tonga, and in July 1987 at Rarotonga, Cook Islands, by TechSec. In July 1989 a third wave buoy was delivered and deployed in Western Samoa. Another two buoys were delivered in December 1989. One was deployed in Tonga. In 1990 two more buoys were delivered and deployed off Funafuti in the Tuvalu group and E fate Island in the Vanuatu group (see Fig. 1.1). In June 1991 a Waverider buoy was also deployed south of Kadavu, Fiji.

While TechSec was responsible for deployment and servicing, NHL, and from 1990, OCEANOR, was responsible for procurement and for the data processing and analysis. The data are reported in separate summary reports for each location and year. Data are presented as plots and statistical tables for each year and accumulated years.

As part of the agreement between NECOR and OCEANOR, an engineer from OCEANOR was in 1990 assigned to SOPAC TechSec for 18 months, to take charge of the measurements and training within the wave programme.

In 1992 SOPAC signed a two year contract directly with NORAD and contracted OCEANOR as consultant.

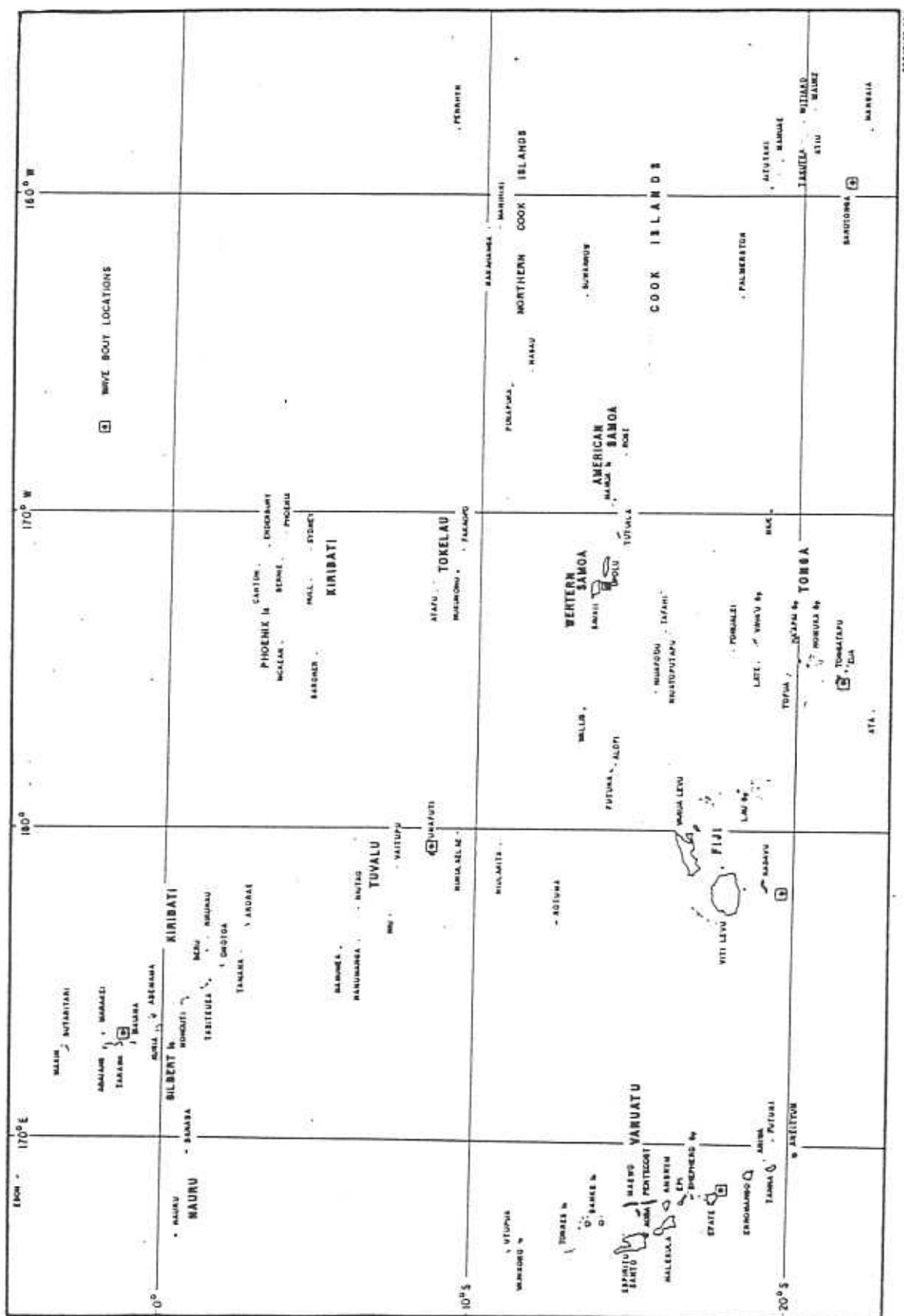


Figure 1.1 Map of the area with measurement sites.

2 Measurement Programme

2.1 Overview of Measurement Sites

The wave measurements started offshore Fiji in 1991. On June 8th a Waverider buoy was moored 9 nautical miles south of Kadavu.

Figure 2.1 shows the measurement position which is $19^{\circ}18.4'S$, $177^{\circ}57.4'E$ in a water depth of 356 m.

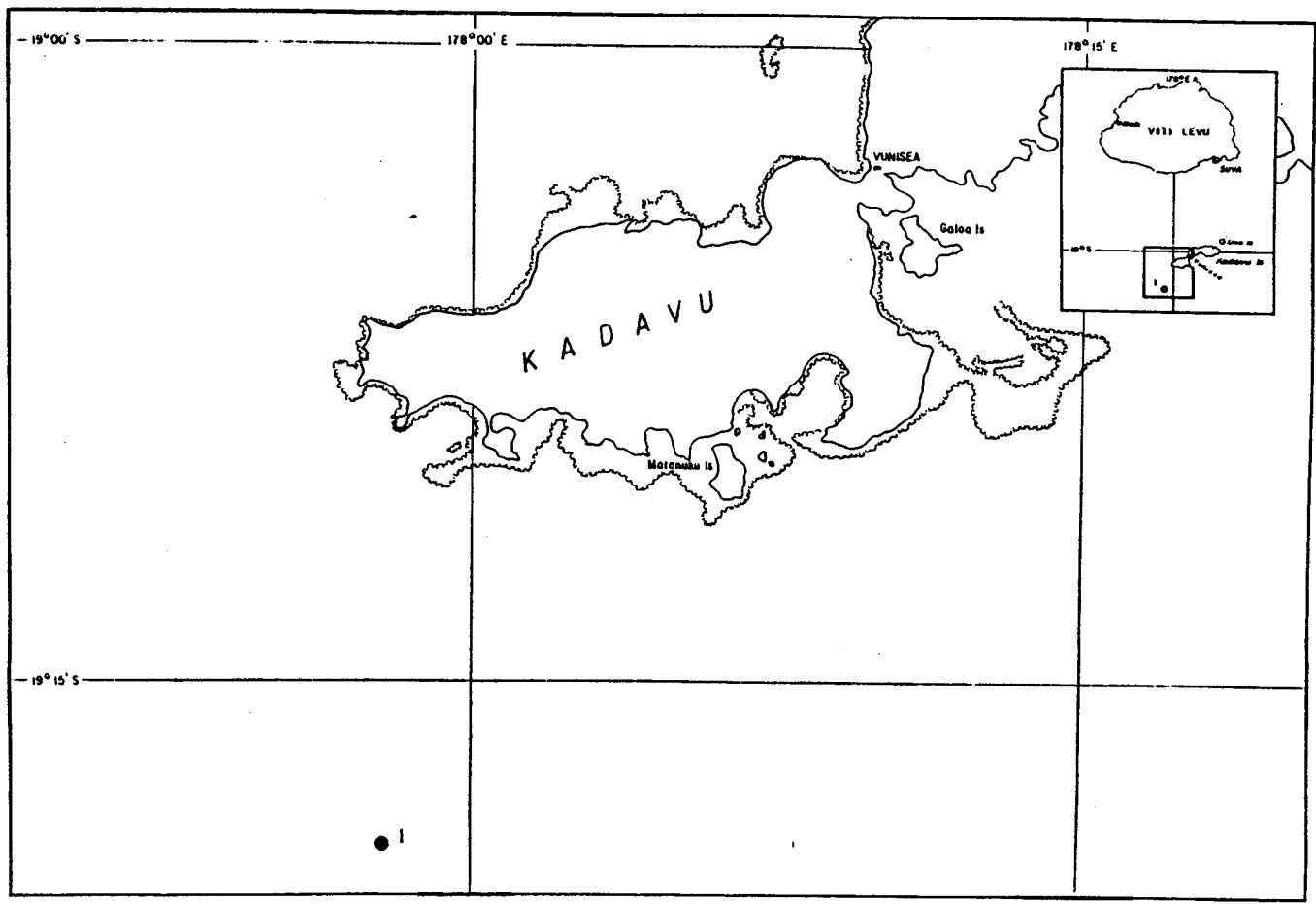


Figure 2.1 Location of the wave buoy south of Kadavu, Fiji.

2.2 Instrumentation System

The instrumentation system consists of 3 main components:

- a) Datawell Waverider buoy
- b) Data processing in the Waverider buoy
- c) Satellite transmission via the Argos system.

2.2.1 DATAWELL WAVERIDER BUOY

The Waverider is a surface-following, spherical buoy with a diameter of 90 cm used to measure wave heights.

The Waverider is manufactured by Datawell b.v. in the Netherlands. The buoy senses the vertical acceleration. This is twice integrated in the buoy in order to give a measure of the water surface elevation.

The Waverider accelerometer is mounted on a stabilized platform having a natural period of 40 seconds and a critical damping of 0.8 for amplitudes larger than 2° . The resulting sensitivity to horizontal accelerations is below 3%.

A brief summary of specifications given by the manufacturer is given below:

| | |
|---|--|
| Wave Height | : Resolution 0.02 m |
| Accelerometer linearity | : Non-linear specification $< 2 \times 10^{-3} \text{ m/s}^2$ for 6 m/s^2 amplitude |
| Horizontal sensitivity | : $< 3\%$ of vertical sensitivity |
| Battery life | : > 16 months |
| Maximum changes during one year: | |
| Sensitivity | : 1% |
| Zero offset | : 1 meter |
| Platform angle | : 1° |

The amplitude and phase transfer functions of the Datawell Waverider, resulting from the double integration of acceleration to heave are shown in Fig. 2.2.

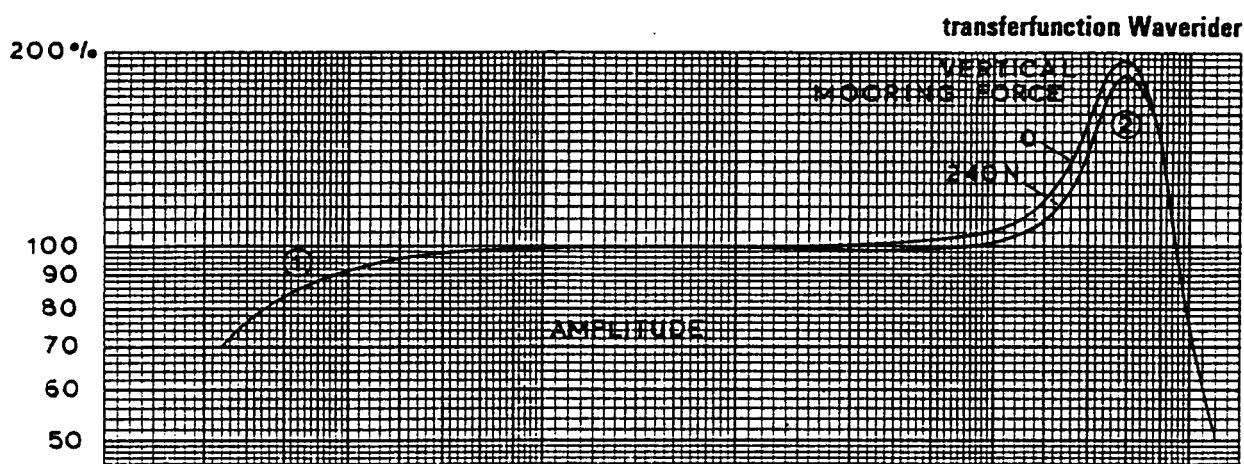


figure 1

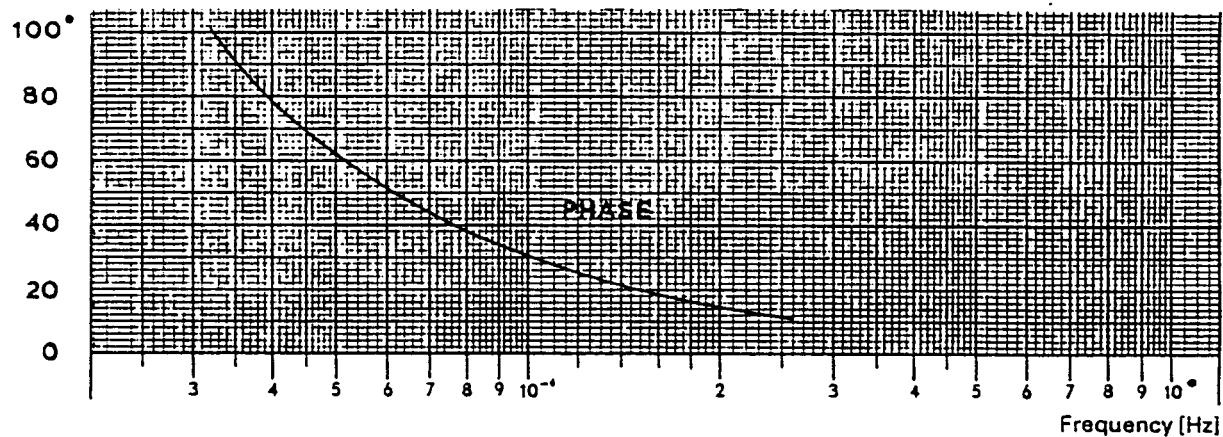


Figure 2.2 Amplitude and phase transfer functions of the Datawell Waverider.

3 Processing of Data

3.1 Data Processing within the Waverider Buoy

The wave buoy is equipped with the ARGOS system for satellite transmission. The buoy has no internal logging of data. The data transmitted are computed from the raw wave measurement time series that are processed internally in the buoy. Two processing systems and three different output formats have been used at different times. The first processing/output system was delivered by OCEANOR. The second processing system and second and third output formats were delivered by Datawell as an integrated part of the Waverider. In the following is given a detailed description of the on-board processing and contents of the Argos message for each configuration. Table 3.1 gives, however, a quick reference to data availability.

Table 3.1 Data availability summary for the Kadavu Waverider.

| Date | ARGOS Version | Buffering | Parameters Available | | | | | Wave Spectra |
|--------------------|------------------|-----------|----------------------|----|-------|------------------|------|--|
| | | | Hm0 | Tp | Tm-10 | J _{Tot} | Tm02 | |
| June 91 - Sept. 91 | OCEANOR | Yes | ✓ | | ✓ | ✓ | | Wave energy flux, J ₁ , ..., J ₈ |
| Nov. 91 - Dec. 91 | Revised Datawell | Yes | ✓ | ✓ | ✓ | ✓ | ✓ | S(f) in 13 variable frequency bands |

3.1.1 DATA PROCESSING - OCEANOR SYSTEM

In the OCEANOR system the following parameters are computed and transmitted to the ARGOS receiving station:

- | | |
|---------|------------------------------|
| Hm0 | Significant wave height (dm) |
| Tm-10 | Wave period (.1 s) |
| S1 - S8 | Scaled wave energy flux |

The wave energy flux J is obtained from S by the following transformation:

$$J = (S/3)^2 \quad (W/m)$$

The raw data sampling procedures within the buoy are

Sampling interval: $\Delta t = 1.0$ s
 Measuring period : $t = 1024$ s, i.e. 17 min 4 s
 Repetition period: $T = 3$ hours

The first step in the internal data processing is a Fourier transform and computation of a raw spectrum from a series of 1024 samples of wave elevation:

$$S_i = .5(a_i^2 + b_i^2), \quad i = 1,512$$

where

S_i = power density spectrum for frequency i
 a_i = cosine Fourier coefficients
 b_i = sine Fourier coefficients
 i = frequency component number

The zeroth and first order moments are computed directly from the raw spectrum

$$m_0 = \sum_{i=1}^{512} S_i$$

$$m_{-1} = \sum_{i=1}^{512} S_i \cdot f_i^{-1}$$

Here

m_0 = zeroth order moment
 m_{-1} = -1st order moment
 f_i = frequency i (Hz)

The significant wave height and energy period are then found from

$$Hm0 = 4\sqrt{m_0}$$

$$Tm-10 = \frac{m_{-1}}{m_0}$$

The wave power flux can then be computed from

$$J_j = c \cdot \sum_{i=i_1}^{i_2} S_i / f_i \quad (\text{kW/m})$$

where

$$c = \rho g^2 / 8\pi = 3.83 \text{ kg/m}\cdot\text{s}^4$$

for the eight period bands T:

| J | i ₁ | i ₂ | T |
|---|----------------|----------------|--------------------------------|
| 1 | 172 | 256 | 4.0 < T ₁ < 6.0 s |
| 2 | 129 | 171 | 6.0 < T ₂ < 8.0 s |
| 3 | 103 | 128 | 8.0 < T ₃ < 10.0 s |
| 4 | 86 | 102 | 10.0 < T ₄ < 12.0 s |
| 5 | 74 | 85 | 12.0 < T ₅ < 14.0 s |
| 6 | 65 | 73 | 14.0 < T ₆ < 16.0 s |
| 7 | 52 | 64 | 16.0 < T ₇ < 20.0 s |
| 8 | 10 | 51 | 20.0 < T ₈ |

In addition to the most recent data set, data sets from the previous and previous but one data cycle (T-3 and T-6 hours) are also transmitted to ensure 100% data recovery.

More details and technical specifications can be found in Kollstad and Carstens (1988).

3.1.2 DATA PROCESSING - DATAWELL SYSTEM

In the following, the parameters which are computed and transmitted to the ARGOS receiving station from the Datawell system are described.

3.1.2.1 Standard Datawell ARGOS Message

Fourier transforms are made of 200 second periods of heave data. The first and the last 25 seconds of the 200 seconds data blocks are tapered (cosine tapering) to minimize leaking of energy to other frequencies. The spectral density is averaged over 8 consecutive 200 seconds data blocks which thus results in spectral estimates with 16 degrees of freedom and a frequency resolution of 0.005 Hz. The spectral density function is compressed for transmission to 28 8-bit numbers.

The spectrum is coded relative to the maximum density (= 1). To attain a sufficiently large range and a practically constant relative resolution the transmitted number G_n is not the relative spectral density S_n itself but:

$$G_n = B \log_{(e)}(1 + CS_n)$$

where $B = 32$ and $C = 2888.24$ are chosen constants.

The sequence of the numbers giving the mean spectral density in an indicated frequency range is given by Table 3.2.

The absolute spectral density function can be obtained from the square root of the zeroth order moment ($\sqrt{m_0}$) which is also given. As G_n is represented as an 8-bit number its range is 0 - 255.

The relative spectral density can then be calculated from

$$S_{rel_n} = (\exp(G_n/32) - 1)/2888.24$$

Therefore, if $G_n = 1$, then $S_{rel_n} = 1.1 \cdot 10^{-5}$ and for $G_n = 255$, $S_{rel_n} = 1.0$.

The zeroth order moment, $\sqrt{m_0}$ is also represented by 8-bits and is decoded as follows:

$$\sqrt{m_0} = 0.16(\exp(G/64) - 1) \text{ m}$$

giving a range of 0 - 8.44 m. The significant wave height,

$$Hm0 = 4\sqrt{m_0}$$

has then a range of 0 - 33.76 m.

As $\sqrt{m_0} = \sqrt{\sum_{n=5}^{23} S_{rel_n} \cdot S_{max} \cdot \Delta f_n}$, where S_{max} is the spectral density at the spectral peak, the spectrum can be retrieved.

In addition, the mean wave frequency,

$$f_z = \sqrt{(m_2/m_0)} = 1/Tm02$$

is given and is determined by the 6 most significant bits of G_3 .

f_z is retrieved from:

$$f_z = 0.32(\exp(z/64) - 1) \text{ Hz}$$

where $z = G^{3/4}$ (= integer $G^{3/4}$).

NB! m₀ and m₂ are the zeroth and second order moments of the spectral density function, and Tm02 is the mean wave period. Finally, battery voltage and status are given as follows.

Battery voltage is determined by the 3 last significant bits of $G_1 = 2(G_1 \bmod 8) + 7$ Volts.

Status is determined by the 2 most significant bits of G_1

$$S = G_1/64 (\text{integer } G_1/64)$$

S should be 0, S = 1 indicates a memory error

Count $C = (G_1 \bmod 64)/8$ indicates the time elapsed in minutes since the new spectrum was valid = 5 * C.

Table 3.2 Construction of the ARGOS satellite message for the standard Datawell ARGOS version of the Waverider.

| Sequence number N of transmitted number $G_{(N)}$ | Gives mean spectral density in frequency range of | $\Delta f_n \times 200$ | Remarks |
|--|---|-------------------------|--------------------------------|
| 1* | not applicable | - | Battery voltage, count, status |
| 2* | not applicable | - | "RMSH" |
| 3* | not applicable | - | Temp. and fz |
| 4* | not applicable | - | |
| 5 | 0.0225 - 0.0275 Hz | 1 | |
| 6 | 0.0275 - 0.0325 Hz | 1 | |
| 7 | 0.0325 - 0.0375 Hz | 1 | |
| 8 | 0.0375 - 0.0425 Hz | 1 | |
| 9 | 0.0425 - 0.0475 Hz | 1 | |
| 10 | 0.0475 - 0.0525 Hz | 1 | |
| 11 | 0.0525 - 0.0575 Hz | 1 | |
| 12 | 0.0575 - 0.0625 Hz | 1 | |
| 13 | 0.0625 - 0.0725 Hz | 2 | |
| 14 | 0.0725 - 0.0825 Hz | 2 | |
| 15 | 0.0825 - 0.0925 Hz | 2 | |
| 16 | 0.0925 - 0.1025 Hz | 2 | |
| 17 | 0.1025 - 0.1125 Hz | 2 | |
| 18 | 0.1125 - 0.1225 Hz | 2 | |
| 19 | 0.1225 - 0.1325 Hz | 2 | |
| 20 | 0.1325 - 0.1425 Hz | 2 | |
| 21 | 0.1425 - 0.1625 Hz | 4 | |
| 22 | 0.1625 - 0.1825 Hz | 4 | |
| 23 | 0.1825 - 0.2025 Hz | 4 | |
| 24 | 0.2025 - 0.2225 Hz | 4 | |
| 25 | 0.2225 - 0.2425 Hz | 4 | |
| 26 | 0.2425 - 0.2625 Hz | 4 | |
| 27 | 0.2625 - 0.2825 Hz | 4 | |
| 28 | 0.2825 - 0.3025 Hz | 4 | |
| 29 | 0.3025 - 0.3825 Hz | 16 | |
| 30 | 0.3825 - 0.4625 Hz | 16 | |
| 31 | 0.4625 - 0.5425 Hz | 16 | |
| 32 | 0.5425 - 0.6225 Hz | 16 | |

* See explanation of $G_{(1)} - G_{(4)}$.

3.1.2.2 Revised Datawell ARGOS Message

The ARGOS message described in section 3.1.2.1 above does not allow for buffering of old data (i.e. transmission of the latest and previous messages). This is essential near the equator due to the relatively poor coverage of the ARGOS system in this error. As a result of this need for improved data recovery, OCEANOR specified a new method of compressing the Waverider spectra allowing also buffering of the previous record (T-3 hours) to be carried out. This method is based on the data compression technique used by Datawell in their Directional Waverider buoy.

From inspection of Table 3.3 one can see that there are basically two wave spectra stored on the ARGOS message together with the 4 wave parameters, /m0, Tm-10, Tp and Tm02.

The most recent spectrum is transferred in bytes 18 - 32 of the 32 byte message whilst the previous spectrum (T-3 hrs) is stored in bytes 2 - 18.

Every three hours one spectrum is calculated and updated for satellite transmission. Every satellite transmission during the next three hours contains:

1. the latest updated spectral density function
2. time elapse between updating and moment of transmission
3. spectral density function which was updated three hours earlier.

For assembly of the message, the frequency range of the spectrum is divided into 13 bands, each containing a certain fraction of the total variance. The square root of the total variance /m0 is given as an eight bit number n, and is decoded from $/m0 = 16(\exp(n/64) - 1)$ cm. Its range is 8.44 m. Knowing the total variance allows the wave spectrum to be computed in the 13 frequency bands from the variable band widths.

The frequency band widths are given as 6 bit numbers $n; = .04(\exp(n/32)-1)$ Hz (B1 up to B14).

Further, the spectral peak, Tp, mean wave period, Tm02, and energy period Tm-10 are given as eight bit numbers, with all wave period parameters retrieved by $T = 400/n$. Time elapsed is a three bit number in byte 17. AT = .5n hours. Battery voltage is a three bit number in byte 17. $V = 7 + 2n$ volts.

Table 3.3 Construction of the ARGOS satellite message for the revised Datawell version of the Waverider.

| Byte n | Bits | | | | | | | | Most significant bit is indicated |
|--------|------|-----|----|-----|---|-------|-----|-----|---------------------------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1 | * | | | | | | | | Checksum |
| 2 | * | | | | | | | | $\sqrt{m_0} = .16(\exp(m/64) - 1)$ cm |
| 3 | * | | | | | | | | Tm-10 = 400/n |
| 4 | * | | | | | | | | T _{peak} = 400/n |
| 5 | * | | | | | | | | Tm02 = 400/n |
| 6 | * | | | F0 | | | * | B1 | |
| 7 | | B1 | | | * | | B2 | | |
| 8 | B2 | | * | | | B3 | | | |
| 9 | * | | | B4 | | | * | B5 | |
| 10 | B5 | | | | * | | B6 | | |
| 11 | B6 | | * | | | | B7 | | |
| 12 | * | | B8 | | | | * | B9 | |
| 13 | | B9 | | | * | | B10 | | |
| 14 | B10 | | * | | | B11 | | | |
| 15 | * | | | B12 | | | * | B13 | |
| 16 | | B13 | | | — | — | — | — | |
| 17 | * | ΔT | | * | | batt. | — | — | |
| 18 | * | | | | | | | | $\sqrt{m_0}$ |
| 19 | * | | | | | | | | Tm-10 |
| 20 | * | | | | | | | | T _p |
| 21 | * | | | | | | | | Tm02 |
| 22 | * | | | F0 | | | * | B1 | B1 contains 1/256 of total variance |
| 23 | | B1 | | | * | | B2 | | B2 contains 1/128 of total variance |
| 24 | | | * | | | B3 | | | B3 contains 1/64 of total variance |
| 25 | * | | | B4 | | | * | B5 | B4 contains 1/32 of total variance |
| 26 | | B5 | | | * | | B6 | | B5 contains 1/16 of total variance |
| 27 | | | * | | | B7 | | | B6 contains 1/8 of total variance |
| 28 | * | | | B8 | | | * | B9 | B7 contains 1/8 of total variance |
| 29 | | B9 | | | * | B10 | | | B8 contains 1/8 of total variance |
| 30 | | | * | B11 | | | | | B9 contains 1/8 of total variance |
| 31 | * | B12 | | | | | * | B13 | B10 contains 1/8 of total variance |
| 32 | | B13 | | | — | — | — | — | B11 contains 1/8 of total variance |
| | | | | | | | | | B12 contains 1/16 of total variance |
| | | | | | | | | | B13 contains 1/32 of total variance |

3.2 Communication with ARGOS

The ARGOS system offers capabilities for satellite based location of fixed and moving platforms, in addition to the collection of environmental data.

ARGOS is the result of a cooperative venture between the Centre National d'Etudes Spatiales (CNES, France), the National Aeronautics and Space Administration (NASA, USA) and the National Oceanic and Atmospheric Administration (NOAA, USA).

The ARGOS onboard package is carried by NOAA satellites. Two space craft in circular, polar orbits (altitude approximately 800 km), are operationally scheduled to provide the ARGOS system with complete global coverage.

User relations and technical and administrative management are handled by CLS/Service Argos in Toulouse, France.

Each time the ARGOS Processing Center receives a telemetered data set, the computer determines the platform location and processes the sensor data for the messages contained in the data set. The two sets of results (location and sensor data) are pooled, then stored on disk.

The disk file contains the most recent and significant message for each platform in the ARGOS system. It is therefore updated each time a new data set is processed. Data are transferred online every day to OCEANOR's VAX computer for control.

The file also contains the complete set of consecutive messages generated by all platforms during the current two-week period. Identical consecutive messages for any given platform in a single satellite pass are replaced by a single message, the last in the series. Each message is also assigned a value called the compression index, stating the number of identical messages received consecutively. The messages are sorted by platform number and in chronological order of satellite reception.

The data is fed into a data bank containing all the results for the current month and the three previous months. Updating is done twice a month. Data for each month are transferred to OCEANOR by magnetic tape for in-house analysis.

The ARGOS system is documented in the "ARGOS User Manual" and the "Guide to the ARGOS System" issued by the ARGOS User Office.

3.3 Inhouse Data Processing

3.3.1 ROUTINE HANDLING PROCEDURE

The ARGOS data are handled in two modes:

1. Daily reception and processing for near real time data from the buoys. These data are transmitted on data line from ARGOS to OCEANOR. To minimize the tele costs a strongly reduced number of messages selected by ARGOS is transmitted (TXC format).
2. Monthly updating of the wave data base by processing all transmitted data since last month. These data are sent to OCEANOR on a monthly backup tape from ARGOS (DS format).

Except for the different ways of data distribution and different format of the raw ARGOS data, the inhouse data processing is exactly the same for the two runs.

3.3.2 GENERAL

The wave analysis is performed internally in the buoys, and the result is stored on a compressed ARGOS message consisting of 32 bytes as described in section 3.1. The transmission rate by the PTT (Platform Transmitter Terminal) in the buoy is once per minute. However, the number of messages distributed by Service ARGOS is reduced by two factors:

1. The polar orbiting satellite is visible from the buoy at irregular intervals. If one divides the day into 3 hourly segments, the satellite will only on average be visible at least once during 6 of these periods at the latitude of Tongatapu. Up to 8 hours of continuous lack of visibility may occur. With 30 minutes sampling rate in the buoy (i.e. wave data updated to the PTT each 1/2 hour) this effect gives maximum 25% data recovery out of all possible 1/2 hourly records, while 75% recovery can be attained if data is updated 3 hourly. Buffering of the previous 3 hourly wave record (i.e. both the latest and the last but one data sets transmitted) increases the data coverage to 98%. The three different data transfer schemes used were described in Section 3.1.
2. Service ARGOS reduces redundant information by extracting one message of each contiguous series of equal PTT transmissions, limited to a period of up to 15 minutes. The number of messages from ARGOS then becomes about 1500 and 500 per month with 30 and 180 minutes sampling, respectively.

The inhouse data processing has two purposes which require slightly different data control procedures. One purpose is to monitor the function and position of the buoy, and the other is to establish the wave data base with quality controlled wave data. It is an inherent problem that errors originating from the satellite transmission may cloud the quality of the buoy data. This problem is solved by a careful setting of error criteria on the first automatic inhouse data control. The buoy function parameters (clock and battery) and the position are next checked. Finally, a manual check of the physical values is undertaken.

3.3.3 PROCEDURE

The data processing is performed as follows:

1. Import of raw ARGOS data

An import module standardises the raw data on the ORKAN file format for compact storage and simple data retrieval.
2. Selection of best sample

A selection module picks out the best set of wave parameters for each sampling period.
3. Bit unpacking

This routine unpacks the information in the ARGOS bitstream into separate computer words.

4. Data control and correction, including

- position check
- missing data
- illegal values
- periods of constant (flat) values,
- spikes
- manual check
- correction by linear interpolation to fill gaps (not carried out on the data reported here)

The error criteria are set for each of the individual wave parameters that are measured.

5. Conversion to physical values.

6. Correction by:

- Removal of periods when the buoy is far out of position or on land.

The data are stored on the ORKAN data base, organized as one separate file for each measuring site. Different buoy versions are handled by the data base. Results from each of the processing steps are also stored on the ORKAN data base to simplify tracing of special events.

4 Accumulated Wave Statistics

In this section are presented wave statistics for Kadavu from the start of measurements in June 1991 to December 1992. A maximum of one measurement each third hour is included in the statistics. For periods where measurements are updated every half hour, the nearest measurement to each synoptic hour (0, 3, 6, ... UTC) is picked out. No interpolation is carried out to fill in gaps due, for example, to poor coverage from the satellite.

4.1 Data Recovery, Average Conditions and Maximum Values

Full wave statistics are presented in Appendix A.

Included are the following:

- Joint frequency of occurrence tables for Hm0 - Tm-10, Hm0 - Tp for all data combined and monthly classes.
- Joint occurrence tables for Hm0 - JT_{Tot} (all data).
- Monthly frequency of occurrence table for JT-60.

The data recovery and mean values of Hm0, Tm-10 and JT-60 are summarised in Table 4.1 for the entire measurement period and the highest measured values for Hm0, Tm-10 and JT_{Tot} are given in Table 4.2 on a monthly basis again for the entire measurement period. In Table 4.3 are given the average wave power (JT-60) for each month to give an indication of the inter-monthly variability in wave power.

Table 4.1 Monthly data recovery and average values for Kadavu, 1991 - 1992.

| Month | Data Recovery | | Mean Values | | |
|-----------|----------------|-----|-------------|-----------|-------------------|
| | No. of records | % | Hm0 (m) | Tm-10 (s) | J _{T-60} |
| January | 240 | 50 | 2.1 | 8.7 | 17.3 |
| February | 229 | 50 | 1.8 | 8.3 | 13.6 |
| March | 242 | 50 | 2.7 | 9.4 | 31.5 |
| April | 237 | 49 | 2.5 | 8.8 | 27.0 |
| May | 247 | 100 | 2.0 | 9.8 | 20.4 |
| June | 420 | 88 | 2.1 | 9.7 | 20.0 |
| July | 486 | 100 | 2.2 | 9.2 | 21.2 |
| August | 491 | 100 | 2.1 | 9.3 | 20.0 |
| September | 407 | 85 | 1.7 | 9.5 | 13.9 |
| October | 247 | 50 | 2.2 | 9.1 | 21.2 |
| November | 336 | 70 | 2.1 | 8.2 | 17.0 |
| December | 399 | 80 | 2.0 | 8.4 | 15.6 |
| Annual | 3 981 | 73 | 2.1 | 9.0 | 19.9 |

Note: J_{T-60} is computed by averaging J_{Tot} over the data class, rejecting high values of J_{Tot} (> 60 kW/m) which would otherwise significantly bias the average conditions.

Table 4.2 Maximum values for each month from June 1991 to December 1992.

| Month (yymm) | Hm0 (m) | Tm-10 (s) | J _{Tot} (kW/m) |
|-----------------|------------|--------------|----------------------------|
| 9106 | 4.1 | 14.1 | 99.0 |
| 9107 | 3.1 | 14.3 | 56.0 |
| 9108 | 3.9 | 12.9 | 63.0 |
| 9109 | 2.4 | 10.8 | 28.0 |
| 9111 | 4.3 | 10.0 | 79.0 |
| 9112 | 2.8 | 11.1 | 36.0 |
| 9201 | 4.9 | 12.9 | 151.4 |
| 9202 | 2.6 | 10.8 | 31.4 |
| 9203 | 4.2 | 14.3 | 91.2 |
| 9204 | 4.6 | 13.8 | 96.7 |
| 9205 | 3.6 | 14.3 | 75.4 |
| 9206 | 4.2 | 12.9 | 99.8 |
| 9207 | 5.2 | 12.9 | 162.1 |
| 9208 | 4.0 | 12.9 | 95.2 |
| 9209 | 2.9 | 10.5 | 50.3 |
| 9210 | 3.2 | 13.3 | 50.2 |
| 9211 | 4.3 | 12.5 | 70.6 |
| 9212 | 7.2 | 11.4 | 214.1 |

Table 4.3 Inter-monthly variation of mean J_{Tot} for all records where $J_{\text{Tot}} < 60 \text{ kW/m}$.

| Month | Mean (kW/m) | No. of Records |
|-------|-------------|----------------|
| 9106 | 21.1 | 185 |
| 9107 | 21.1 | 246 |
| 9108 | 19.0 | 248 |
| 9109 | 12.8 | 164 |
| 9111 | 22.7 | 100 |
| 9112 | 16.4 | 248 |
| 9201 | 17.3 | 228 |
| 9202 | 13.6 | 229 |
| 9203 | 31.5 | 226 |
| 9204 | 27.0 | 219 |
| 9205 | 20.4 | 245 |
| 9206 | 19.1 | 229 |
| 9207 | 21.4 | 225 |
| 9208 | 21.0 | 228 |
| 9209 | 14.7 | 238 |
| 9210 | 21.2 | 247 |
| 9211 | 14.3 | 237 |
| 9212 | 14.6 | 152 |

5 Wave Statistics for 1992

In this section are presented summary wave statistics for Kadavu for 1992 (section 5.1), and information on events which affected the data recovery in 1992 (section 5.2).

5.1 Data Recovery, Average and Maximum Values

Full wave statistics for 1992 are presented in Appendix A, including the following:

- Time series plots for Hm0, Tp, Tm-10 and JTot for each month in 1992.
- Joint frequency of occurrence tables for Hm0 - Tp and Hm0 - Tm-10 for the year as a whole.

Data recovery and mean values are summarised in Table 5.1 for 1992 and the highest measured values for Hm0, Tm-10 and JTot are shown in Table 5.2 on a monthly basis.

Table 5.1 Monthly data recovery and average values for Kadavu, 1992.

| Month | Data Recovery | | Mean Values | | |
|-----------|----------------|-----|-------------|-----------|-------------------|
| | No. of records | % | Hm0 (m) | Tm-10 (s) | J _{T-60} |
| January | 240 | 97 | 2.1 | 8.7 | 17.3 |
| February | 229 | 100 | 1.8 | 8.3 | 13.6 |
| March | 242 | 98 | 2.7 | 9.4 | 31.5 |
| April | 237 | 98 | 2.5 | 8.8 | 27.0 |
| May | 247 | 100 | 2.0 | 9.8 | 20.4 |
| June | 235 | 98 | 2.0 | 9.2 | 19.1 |
| July | 241 | 97 | 2.3 | 9.0 | 21.4 |
| August | 243 | 98 | 2.1 | 9.5 | 21.0 |
| September | 238 | 100 | 1.7 | 9.6 | 14.7 |
| October | 247 | 100 | 2.2 | 9.1 | 21.2 |
| November | 237 | 100 | 1.8 | 8.2 | 14.3 |
| December | 157 | 63 | 1.9 | 8.4 | 14.6 |
| Annual | 2 793 | 96 | 2.1 | 9.0 | 19.6 |

Note: J_{T-60} is computed by averaging J_{Tot} over the data class, rejecting high values of J_{Tot} ($> 60 \text{ kW/m}$) which would otherwise significantly bias the average conditions.

5.2 Events Effecting the Measurements (Log)

The Fiji buoy is located south of Kadavu in position $19^{\circ}18.4'S$, $177^{\circ}57.4'E$ and was deployed there early June 1991.

September 1991

The buoy came adrift 22 September and drifted onshore on the south coast of Kadavu where it was rescued by locals.

November 1991

A new Waverider buoy and mooring was deployed 18 November in the same location as earlier.

January-December 1992

Since redeployment of the wave buoy in November 1991, the data collection is 100% successful until 21 December 1992.

At 21 December 1992 the buoy stopped transmitting. The reason is unknown. The battery voltage was 13 V, and the buoy can be functionally with a battery voltage as low as 7 V.

6 Conclusions

Since measurements started at the new location in June 1991, the highest measured wave occurred in December 1992. The significant wave height (H_{m0}) reached 7.2 m with a period (T_{m-10}) of 11.4 s and a corresponding wave energy of 214.1 kW/m.

So far, on average, the significant wave height (H_{m0}) has been 2.1 m, with an average energy period (T_{m-10}) of 9.0 s and an average wave power of 19.6 kW/m wave crest.

Measurements will continue in 1993.

7 References

ARGOS User Office: ARGOS User Manual.

ARGOS User Office: Guide to the ARGOS System.

Datawell User Manual, Datawell b.v., The Netherlands.

Kollstad, T. and Carstens, T. (1988): Waverider Processor and PTT-system Description. SINTEF Report No. STF60 A88088, Trondheim, Norway.

8 Project Reports

8.1 1990 Annual Reports

Olsen, E., Barstow, S.F. and Selanger, K., 1991: Wave Data Collection, Tongatapu, Kingdom of Tonga, May 1987 - December 1990, OCEANOR Report No. OCN R-91068.

Olsen, E., Barstow, S.F. and Selanger, K., 1991: Wave Data Collection, Rarotonga, Cook Islands, July 1987 - January 1991, OCEANOR Report No. OCN R-91071.

Olsen, E., Barstow, S.F. and Selanger, K., 1991: Wave Data Collection, Western Samoa (Inner), September 1989 - April 1990, OCEANOR Report No. OCN R-91072.

Olsen, E., Barstow, S.F. and Selanger, K., 1991: Wave Data Collection, Funafuti, Tuvalu, May - December 1990, OCEANOR Report No. OCN R-91075.

Olsen, E., Barstow, S.F. and Selanger, K., 1991: Wave Data Collection, Efate, Vanuatu, November-December 1990, OCEANOR Report No. OCN R-91076.

8.2 1991 Annual Reports

Barstow, S.F. and Olsen, E., 1992: Wave Data Collection, Kadavu Fiji, June - December 1991, OCEANOR Report No. OCNR-92088.

Barstow, S.F. and Olsen, E., 1992: Wave Data Collection, Efate, Vanuatu, November 1990 - December 1991, OCEANOR Report No. OCN R-92089.

Barstow, S.F. and Olsen, E., 1992: Wave Data Collection, Tongatapu, Kingdom of Tonga, May 1987 - July 1992, OCEANOR Report No. OCN R-92090.

Barstow, S.F. and Olsen, E., 1992: Wave Data Collection, Funafuti, Tuvalu, May 1990 - December 1991, OCEANOR Report No. OCN R-92091.

Barstow, S.F. and Olsen, E., 1992: Wave Data Collection, Western Samoa (Outer), May 1990 - December 1991, OCEANOR Report No. OCN R-92092.

8.3 1992 Annual Reports

Below are listed the companion reports to the present report, containing annual and accumulated wave statistics for each of the measurement stations in the SOPAC wave measurement programme:

Barstow, S.F. and Olsen, E., 1993: Wave Data Collection, Efate, Vanuatu, November 1990 - February 1993, OCEANOR Report No. OCN R-93074.

Barstow, S.F. and Olsen, E., 1993: Wave Data Collection, Funafuti, Tuvalu, May 1990 - April 1992, OCEANOR Report No. OCN R-93075.

Barstow, S.F. and Olsen, E., 1993: Wave Data Collection, Western Samoa (Outer), May 1990 - July 1992, OCEANOR Report No. OCN R-93076.

Barstow, S.F. and Olsen, E., 1993: Wave Data Collection, Tongatapu, Kingdom of Tonga, May 1987 - July 1992, OCEANOR Report No. OCN R-93077.

8.4 Other Reports

Barstow, S.F., 1992: Report of Visit to SOPAC TechSec as Programme Officer in the Wave Energy Programme, 2nd March - 27th March 1992, OCEANOR Report No. OCN R-92068.

Barstow, S.F., 1990: Wave Data from the Datawell Waverider Buoys offshore Tonga, Rarotonga, Western Samoa and Tuvalu for January - September 1990, Technical Note to SOPAC.

Barstow, S.F. and Patiale, M., 1992: An Appraisal of the Visual Wave Observations at Funafuti, 1984 - 1992, Technical Note.

Torsethaugen, K., 1990: Site Selection Study in the SOPAC Region, NHL Report No. STF60 F90078.

Torsethaugen, K., 1991: Calibration of Hindcast Data in the SOPAC Region, NHL Report No. STF60 F91004.

APPENDIX A

ACCUMULATED WAVE STATISTICS FOR 1991 - 1992

KADAVU

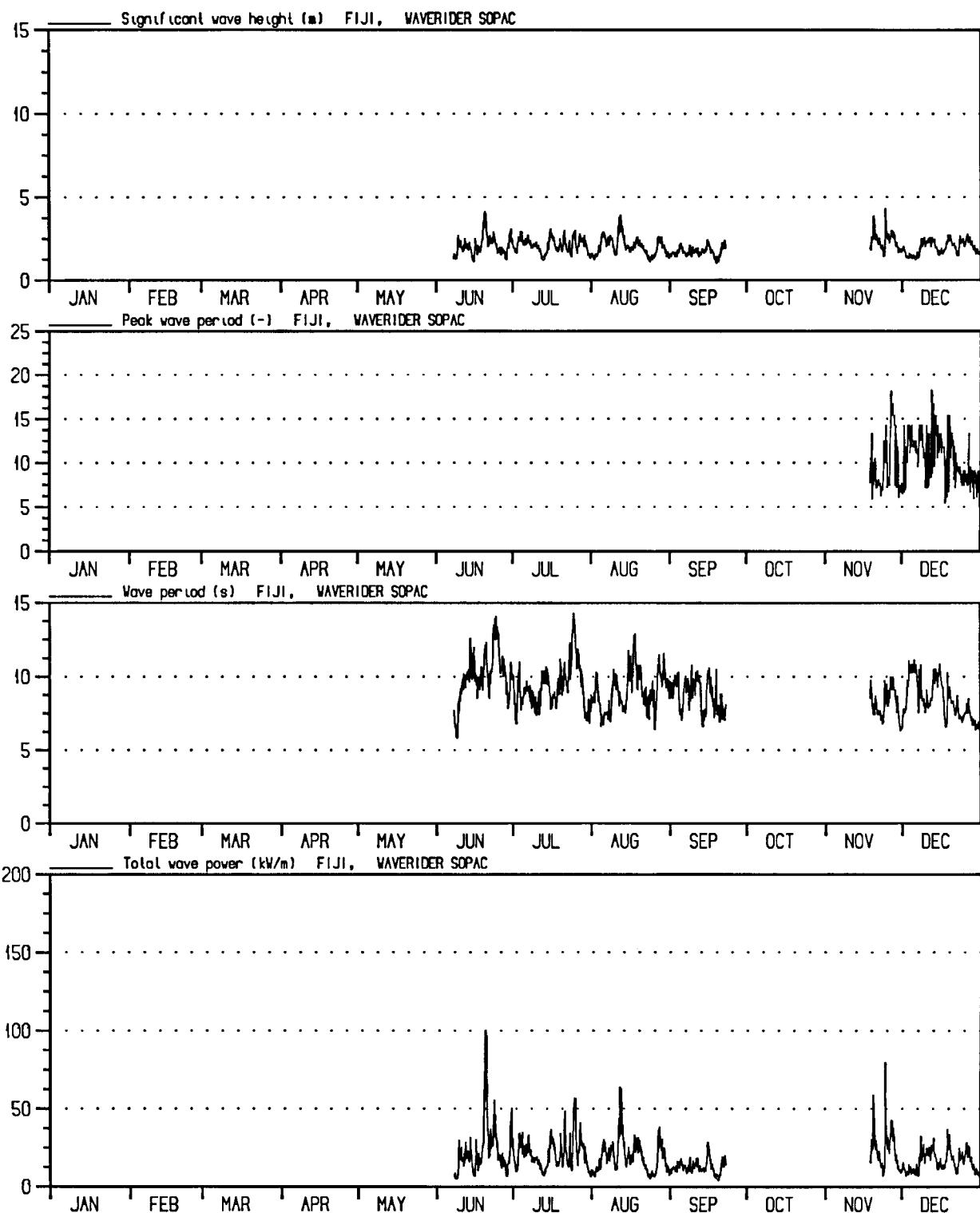
OCEANOR/28400_REP93/KADAVU/93.11.22

The following tables and plots are presented:

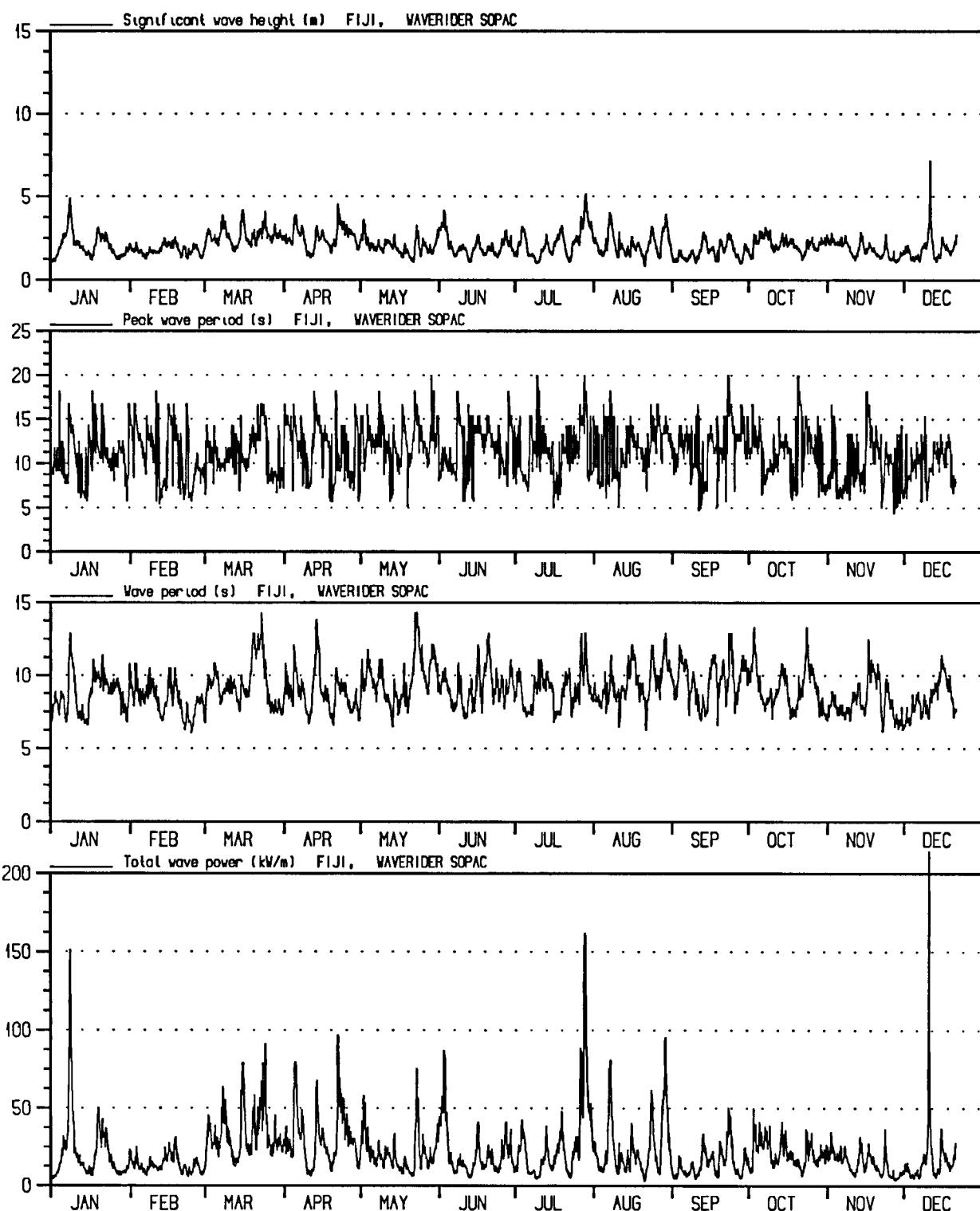
Joint frequency tables (accumulated for all years and 1992). Both monthly and annual tables and plots are presented.

Parameters:
Hm0 - Tm-10
Hm0- Tp
Hm0 - J Tot (Accumulated all years)

Time series plots for all years for Hm0, Tp, Tm-10 and J Tot (when available).



| SOPAC WAVE MEASUREMENTS | | | | INSTRUMENT WAVERIDER |
|-------------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1991.01.01-1991.12.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |



| SOPAC WAVE MEASUREMENTS | | | | INSTRUMENT WAVERIDER |
|-------------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.01.01-1992.12.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
 Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1991.06.07 00:00 - 1992.12.31 23:59

Joint occurrence of:

Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
Tm-10 Wave Period (s) FIJI, WAVERIDER SOPAC

| Measuring depth | : 0.00 m | Water depth | : 356.00 m | Sampling interval | : 3 hours | Period | : 1991.06.07 00:00 - 1992.12.31 23:59 |
|-----------------|-------------|-------------|-------------|-------------------|-------------|-------------|---------------------------------------|
| Hm0 (m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| Tm-10 (s) | / | / | / | / | / | / | / |
| < 5.0 | / | / | / | / | / | / | / |
| 5.0 - 6.0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 6.0 - 7.0 | 37 | 116 | 29 | 7 | 1 | 1 | 1 |
| 7.0 - 8.0 | 1 | 84 | 283 | 115 | 15 | 2 | 1 |
| 8.0 - 9.0 | 2 | 226 | 329 | 164 | 51 | 18 | 4 |
| 9.0 - 10.0 | 1 | 151 | 320 | 272 | 114 | 15 | 7 |
| 10.0 - 11.0 | 1 | 199 | 206 | 195 | 21 | 19 | 7 |
| 11.0 - 12.0 | 1 | 27 | 54 | 58 | 32 | 12 | 5 |
| 12.0 - 13.0 | 2 | 20 | 31 | 25 | 16 | 6 | 4 |
| 13.0 - 14.0 | 1 | 2 | 5 | 19 | 3 | 2 | 2 |
| 14.0 - 15.0 | 14.0 - 15.0 | 14.0 - 15.0 | 14.0 - 15.0 | 14.0 - 15.0 | 14.0 - 15.0 | 14.0 - 15.0 | 14.0 - 15.0 |
| >= 15.0 | / | / | / | / | / | / | / |
| SUM | 0 | 6 | 628 | 1286 | 1225 | 558 | 170 |
| % OF TOTAL | 0.0 | 0.2 | 15.8 | 32.3 | 30.8 | 14.0 | 4.3 |
| SUM ACCUM. | 0 | 6 | 634 | 1920 | 3145 | 3703 | 3973 |
| PROB. | 0.00000 | 0.0015 | 0.1592 | 0.4822 | 0.7898 | 0.9239 | 0.9726 |
| MIN. VALUE | 7.8 | 5.8 | 6.2 | 6.2 | 6.7 | 7.3 | 7.7 |
| MAX. VALUE | 8.9 | 8.9 | 9.0 | 9.3 | 9.7 | 10.0 | 10.3 |
| AVG. VALUE | 11.1 | 12.1 | 13.2 | 14.3 | 14.3 | 14.3 | 12.9 |
| STD. DEV. | 1.34 | 1.23 | 1.39 | 1.38 | 1.64 | 1.56 | 1.31 |

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
 Tp Peak wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
 Water depth : 356.00 m
 Sampling interval: 3 hours
 Period : 1991.06.07 00:00 - 1992.12.31 23:59

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | SUM | % OF TOTAL | SUM ACC. | CUM. PROB. | MIN. | AVE. | MAX. | STD. DEV. | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|-------------|---------------|------|------|------|--------------|--|
| Tp(s) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | | | | | | | | | | |
| < 4.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | | |
| 4.0 - 5.0 | | 2 | 3 | | | | | | | | | | | | | | | 5 | 0.2 | 5 | 0.00159 | 1.2 | 1.5 | 1.8 | 0.24 | |
| 5.0 - 6.0 | 8 | 26 | 13 | 2 | | | | | | | | | | | | | | 49 | 1.6 | 54 | 0.01722 | 1.2 | 1.8 | 2.8 | 0.37 | |
| 6.0 - 7.0 | 7 | 81 | 79 | 14 | 1 | | | | | | | | | | | | | 182 | 5.8 | 236 | 0.07528 | 1.2 | 2.0 | 3.0 | 0.36 | |
| 7.0 - 8.0 | 22 | 65 | 83 | 44 | 9 | 1 | 1 | | | | | | | | | | | 225 | 7.2 | 461 | 0.14705 | 1.2 | 2.2 | 4.0 | 0.53 | |
| 8.0 - 9.0 | 32 | 71 | 75 | 86 | 21 | 9 | 2 | 1 | | | | | | | | | | 297 | 9.5 | 758 | 0.24179 | 1.0 | 2.3 | 4.9 | 0.65 | |
| 9.0 - 10.0 | 3 | 58 | 71 | 72 | 36 | 31 | 7 | 2 | | | | | | | | | | 281 | 9.0 | 1039 | 0.33142 | 0.8 | 2.1 | 7.2 | 0.77 | |
| 10.0 - 11.0 | 1 | 91 | 90 | 100 | 33 | 14 | 8 | 7 | 1 | | | | | | | | | 345 | 11.0 | 1384 | 0.44147 | 1.0 | 2.0 | 4.6 | 0.71 | |
| 11.0 - 12.0 | | 130 | 174 | 173 | 54 | 8 | 6 | 3 | | | | | | | | | | 548 | 17.5 | 1932 | 0.61627 | 1.0 | 1.9 | 4.2 | 0.56 | |
| 12.0 - 13.0 | 1 | 53 | 98 | 102 | 41 | 8 | | | | | | | | | | | | 303 | 9.7 | 2235 | 0.71292 | 1.0 | 2.0 | 3.3 | 0.51 | |
| 13.0 - 14.0 | | 48 | 115 | 82 | 35 | 16 | 5 | 1 | | | | | | | | | | 302 | 9.6 | 2537 | 0.80925 | 1.1 | 2.0 | 4.3 | 0.59 | |
| 14.0 - 15.0 | | 28 | 79 | 64 | 44 | 20 | 12 | 3 | | | | | | | | | | 250 | 8.0 | 2787 | 0.88900 | 1.0 | 2.2 | 4.2 | 0.69 | |
| 15.0 - 16.0 | 1 | 26 | 41 | 67 | 30 | 19 | 6 | 2 | 3 | | | | | | | | | 195 | 6.2 | 2982 | 0.95120 | 1.0 | 2.3 | 4.9 | 0.73 | |
| 16.0 - 17.0 | | 10 | 33 | 22 | 23 | 7 | 3 | 4 | 1 | | | | | | | | | 103 | 3.3 | 3085 | 0.98405 | 1.1 | 2.3 | 5.2 | 0.78 | |
| 17.0 - 18.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 3085 | 0.98405 | | | | | |
| 18.0 - 19.0 | | 7 | 17 | 7 | 3 | | 2 | | 2 | 1 | | | | | | | | 39 | 1.2 | 3124 | 0.99649 | 1.0 | 2.2 | 5.1 | 0.98 | |
| 19.0 - 20.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 3124 | 0.99649 | | | | | |
| 20.0 - 21.0 | | 2 | 3 | 4 | | | | | 1 | | | | | | | | | 10 | 0.3 | 3134 | 0.99968 | 1.0 | 2.3 | 4.8 | 0.99 | |
| >= 21.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 3134 | 0.99968 | | | | | |
| SUM | 0 | 6 | 524 | 967 | 939 | 449 | 154 | 59 | 25 | 8 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 3134 | 100.0 | 3134 | 0.99968 | 0.8 | 2.1 | 7.2 | 0.62 | |
| % OF TOTAL | 0.0 | 0.2 | 16.7 | 30.9 | 30.0 | 14.3 | 4.9 | 1.9 | 0.8 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | | | | | | | |
| SUM ACCUM. | 0 | 6 | 530 | 1497 | 2436 | 2885 | 3039 | 3098 | 3123 | 3131 | 3133 | 3133 | 3133 | 3134 | 3134 | 3134 | 3134 | 3134 | | | | | | | | |
| CUM. PROB. | 0.0000 | 0.0019 | 0.1691 | 0.4775 | 0.7770 | 0.9203 | 0.9694 | 0.9882 | 0.9962 | 0.9987 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9997 | 0.9997 | 0.9997 | 0.99968 | | | | | | | |
| MIN. VALUE | 9.1 | 4.3 | 4.4 | 5.0 | 5.9 | 6.5 | 7.7 | 7.4 | 8.0 | 16.7 | | | | | | | | 9.5 | | | 4.3 | | | | | |
| AVE. VALUE | 11.2 | 11.4 | 11.2 | 11.1 | 11.3 | 11.7 | 12.3 | 12.2 | 15.4 | 17.5 | | | | | | | | 9.5 | | | 11.2 | | | | | |
| MAX. VALUE | 15.4 | 20.0 | 20.0 | 18.2 | 20.0 | 16.7 | 18.2 | 16.7 | 20.0 | 18.2 | | | | | | | | 9.5 | | | 20.0 | | | | | |
| STD. DEV. | 2.21 | 2.47 | 3.04 | 2.85 | 3.05 | 2.82 | 2.89 | 2.82 | 3.82 | 1.00 | | | | | | | | 0.00 | | | 2.89 | | | | | |

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.01.01 00:00 - 1992.01.31 23:59

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.02.01 00:00 - 1992.02.29 23:59

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | SUM | % OF | SUM | CUM. | MIN. | AVE. | MAX. | STD. |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|---------|---------|------|------|------|------|
| Jtot(kW/m) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | TOTAL | ACC. | CUM. PROB. | | | | | DEV. | |
| 0.0 - 5.0 | | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | | |
| 5.0 - 10.0 | | 34 | 20 | | | | | | | | | | | | | | | 54 | 23.6 | 54 | 0.23478 | 1.2 | 1.4 | 1.7 | 0.24 |
| 10.0 - 15.0 | | | 1 | 93 | 6 | | | | | | | | | | | | 100 | 43.7 | 154 | 0.66957 | 1.5 | 1.8 | 2.1 | 0.13 | |
| 15.0 - 20.0 | | | | 24 | 24 | | | | | | | | | | | | 48 | 21.0 | 202 | 0.87826 | 1.8 | 2.0 | 2.3 | 0.25 | |
| 20.0 - 25.0 | | | | | 16 | 1 | | | | | | | | | | | 17 | 7.4 | 219 | 0.95217 | 2.0 | 2.3 | 2.5 | 0.12 | |
| 25.0 - 30.0 | | | | | | 9 | | | | | | | | | | | 9 | 3.9 | 228 | 0.99130 | 2.2 | 2.2 | 2.4 | 0.00 | |
| 30.0 - 35.0 | | | | | | | 1 | | | | | | | | | | 1 | 0.4 | 229 | 0.99565 | 2.6 | 2.6 | 2.6 | 0.00 | |
| >= 35.0 | | | | | | | | | | | | | | | | | 0 | 0.0 | 229 | 0.99565 | | | | | |
| SUM | 0 | 0 | 35 | 137 | 55 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 100.0 | 229 | 0.99565 | 1.2 | 1.8 | 2.6 | 0.28 | |
| % OF TOTAL | 0.0 | 0.0 | 15.3 | 59.8 | 24.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | | | | | | | |
| SUM ACCUM. | 0 | 0 | 35 | 172 | 227 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | | | | | |
| CUM. PROB. | 0.0000 | 0.0000 | 0.1522 | 0.7478 | 0.9870 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | | | | | |
| MIN. VALUE | | | 5.7 | 7.8 | 12.4 | 24.7 | | | | | | | | | | | | | | | 5.7 | | | | |
| AVE. VALUE | | | 7.6 | 12.6 | 20.0 | 27.5 | | | | | | | | | | | | | | | 13.6 | | | | |
| MAX. VALUE | | | 10.9 | 18.6 | 30.0 | 31.4 | | | | | | | | | | | | | | | 31.4 | | | | |
| STD. DEV. | | | 0.83 | 2.83 | 4.46 | 5.00 | | | | | | | | | | | | | | | 5.05 | | | | |

Joint occurrence of:

| | Measuring depth : | 0.00 m | Fiji, WAVERIDER SOPAC |
|--------|-------------------------|---------------------------------|-----------------------|
| | Water depth : | 356.00 m | Fiji, WAVERIDER SOPAC |
| | Sampling interval : | 3 hours | Fiji, WAVERIDER SOPAC |
| Period | Total wave power (kW/m) | HAO significant wave height (m) | HAO |

Joint occurrence of:

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval : 3 hours
Period : 1992.04.01 00:00 - 1992.04.30 23:59
Hn0 : Significant wave height (m)
Wutot : Total wave power (kW/m)

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
 Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
 Water depth : 356.00 m
 Sampling interval: 3 hours
 Period : 1991.06.01 00:00 - 1991.06.30 23:59
 1992.06.01 00:00 - 1992.06.30 23:59

| | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | SUM | % OF TOTAL | SUM ACC. | CUM. PROB. | MIN. | AVE. | MAX. | STD. DEV. | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|-------------|---------------|------|------|------|--------------|--|
| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | | | | | | | | | |
| Jtot(kW/m) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | | | | | | | | | | |
| 0.0 - 5.0 | | | | | | | | | | | | | | | | | | 2 | 0.5 | 2 | 0.00475 | 1.1 | 1.2 | 1.3 | 0.00 | |
| 5.0 - 10.0 | | | | | | | | | | | | | | | | | | 60 | 14.3 | 62 | 0.14727 | 1.1 | 1.3 | 1.6 | 0.19 | |
| 10.0 - 15.0 | | | | | | | | | | | | | | | | | | 95 | 22.6 | 157 | 0.37292 | 1.4 | 1.7 | 2.0 | 0.11 | |
| 15.0 - 20.0 | | | | | | | | | | | | | | | | | | 92 | 21.9 | 249 | 0.59145 | 1.6 | 1.9 | 2.2 | 0.24 | |
| 20.0 - 25.0 | | | | | | | | | | | | | | | | | | 60 | 14.3 | 309 | 0.73397 | 1.8 | 2.2 | 2.5 | 0.21 | |
| 25.0 - 30.0 | | | | | | | | | | | | | | | | | | 32 | 7.6 | 341 | 0.80998 | 2.0 | 2.4 | 2.7 | 0.22 | |
| 30.0 - 35.0 | | | | | | | | | | | | | | | | | | 19 | 4.5 | 360 | 0.85511 | 2.2 | 2.6 | 2.9 | 0.23 | |
| 35.0 - 40.0 | | | | | | | | | | | | | | | | | | 12 | 2.9 | 372 | 0.88361 | 2.6 | 2.8 | 3.0 | 0.14 | |
| 40.0 - 45.0 | | | | | | | | | | | | | | | | | | 17 | 4.0 | 389 | 0.92399 | 2.5 | 2.9 | 3.2 | 0.21 | |
| 45.0 - 50.0 | | | | | | | | | | | | | | | | | | 8 | 1.9 | 397 | 0.94299 | 2.6 | 3.1 | 3.2 | 0.22 | |
| 50.0 - 55.0 | | | | | | | | | | | | | | | | | | 7 | 1.7 | 404 | 0.95962 | 3.1 | 3.2 | 3.3 | 0.00 | |
| 55.0 - 60.0 | | | | | | | | | | | | | | | | | | 2 | 0.5 | 406 | 0.96437 | 2.9 | 3.0 | 3.5 | 0.25 | |
| 60.0 - 65.0 | | | | | | | | | | | | | | | | | | 3 | 0.7 | 409 | 0.97150 | 3.5 | 3.8 | 3.6 | 0.00 | |
| 65.0 - 70.0 | | | | | | | | | | | | | | | | | | 1 | 0.2 | 410 | 0.97387 | 3.5 | 3.8 | 3.5 | 0.00 | |
| 70.0 - 75.0 | | | | | | | | | | | | | | | | | | 2 | 0.5 | 412 | 0.97862 | 3.6 | 3.8 | 3.7 | 0.00 | |
| 75.0 - 80.0 | | | | | | | | | | | | | | | | | | 2 | 0.5 | 414 | 0.98337 | 3.7 | 4.0 | 4.0 | 0.25 | |
| 80.0 - 85.0 | | | | | | | | | | | | | | | | | | 1 | 0.2 | 415 | 0.98575 | 4.0 | 4.2 | 4.0 | 0.00 | |
| 85.0 - 90.0 | | | | | | | | | | | | | | | | | | 2 | 0.5 | 417 | 0.99050 | 3.8 | 4.0 | 4.2 | 0.25 | |
| 90.0 - 95.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 417 | 0.99050 | | | | | |
| 95.0 - 100.0 | | | | | | | | | | | | | | | | | | 3 | 0.7 | 420 | 0.99762 | 4.0 | 4.2 | 4.1 | 0.00 | |
| >= 100.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 420 | 0.99762 | | | | | |
| SUM | 0 | 0 | 56 | 171 | 111 | 49 | 19 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 420 | 100.0 | 420 | 0.99762 | 1.1 | 2.1 | 4.2 | 0.58 | |
| % OF TOTAL | 0.0 | 0.0 | 13.3 | 40.7 | 26.4 | 11.7 | 4.5 | 1.9 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | | | | | | | |
| SUM ACCUM. | 0 | 0 | 56 | 227 | 338 | 387 | 406 | 414 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | | | | | | | | |
| CUM. PROB. | 0.0000 | 0.0000 | 0.1330 | 0.5392 | 0.8029 | 0.9192 | 0.9644 | 0.9834 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.9976 | 0.99762 | | | | | | | |
| MIN. VALUE | 4.9 | 7.9 | 14.7 | 23.0 | 39.4 | 61.1 | 79.3 | | | | | | | | | | | | | 4.9 | | | | | | |
| AVE. VALUE | 7.7 | 14.6 | 22.5 | 36.4 | 48.3 | 70.6 | 90.0 | | | | | | | | | | | | | 21.9 | | | | | | |
| MAX. VALUE | 10.6 | 23.1 | 33.5 | 55.7 | 57.6 | 85.7 | 99.8 | | | | | | | | | | | | | 99.8 | | | | | | |
| STD. DEV. | 1.63 | 3.54 | 4.38 | 6.72 | 4.94 | 8.27 | 8.04 | | | | | | | | | | | | | 15.36 | | | | | | |

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
 Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1991.07.01 00:00 - 1991.07.31 23:59
 : 1992.07.01 00:00 - 1992.07.31 23:59

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
 Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1991.08.01 00:00 - 1991.08.31 23:59
 : 1992.08.01 00:00 - 1992.08.31 23:59

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 8.0 | SUM | % OF TOTAL | SUM ACC. | CUM. | MIN. | AVE. | MAX. | STD. DEV. |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|----------|---------|-------|------|------|-----------|
| Jtot (kW/m) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | | | | | | | | | |
| 0.0 - 5.0 | | 3 | 3 | | | | | | | | | | | | | | | 6 | 1.2 | 6 | 0.01220 | 0.8 | 1.0 | 1.1 | 0.25 |
| 5.0 - 10.0 | | 63 | 17 | | | | | | | | | | | | | | | 80 | 16.3 | 86 | 0.17480 | 1.1 | 1.4 | 1.7 | 0.20 |
| 10.0 - 15.0 | | 1 | 102 | 3 | | | | | | | | | | | | | | 106 | 21.6 | 192 | 0.39024 | 1.5 | 1.8 | 2.1 | 0.10 |
| 15.0 - 20.0 | | 34 | 57 | | | | | | | | | | | | | | | 91 | 18.5 | 283 | 0.57520 | 1.7 | 2.1 | 2.4 | 0.24 |
| 20.0 - 25.0 | | 5 | 55 | 12 | | | | | | | | | | | | | | 72 | 14.7 | 355 | 0.72154 | 1.9 | 2.3 | 2.7 | 0.24 |
| 25.0 - 30.0 | | 34 | 20 | | | | | | | | | | | | | | | 54 | 11.0 | 409 | 0.83130 | 2.1 | 2.4 | 2.9 | 0.24 |
| 30.0 - 35.0 | | 5 | 13 | 1 | | | | | | | | | | | | | | 19 | 3.9 | 428 | 0.86992 | 2.2 | 2.6 | 3.0 | 0.26 |
| 35.0 - 40.0 | | 6 | 4 | | | | | | | | | | | | | | | 10 | 2.0 | 438 | 0.89024 | 2.6 | 3.0 | 3.2 | 0.24 |
| 40.0 - 45.0 | | 9 | 6 | | | | | | | | | | | | | | | 15 | 3.1 | 453 | 0.92073 | 2.6 | 3.0 | 3.3 | 0.24 |
| 45.0 - 50.0 | | 1 | 1 | | | | | | | | | | | | | | | 2 | 0.4 | 455 | 0.92480 | 2.9 | 3.0 | 3.4 | 0.25 |
| 50.0 - 55.0 | | 1 | 7 | | | | | | | | | | | | | | | 8 | 1.6 | 463 | 0.94106 | 3.0 | 3.2 | 3.4 | 0.17 |
| 55.0 - 60.0 | | 6 | | 5 | | | | | | | | | | | | | | 11 | 2.2 | 474 | 0.96341 | 3.1 | 3.5 | 3.7 | 0.25 |
| 60.0 - 65.0 | | 6 | 2 | | | | | | | | | | | | | | | 8 | 1.6 | 482 | 0.97967 | 3.2 | 3.4 | 3.9 | 0.22 |
| 65.0 - 70.0 | | 2 | | | | | | | | | | | | | | | | 2 | 0.4 | 484 | 0.98374 | 3.5 | 3.8 | 3.7 | 0.00 |
| 70.0 - 75.0 | | 1 | | | | | | | | | | | | | | | | 1 | 0.2 | 485 | 0.98577 | 3.7 | 3.8 | 3.7 | 0.00 |
| 75.0 - 80.0 | | 1 | 1 | | | | | | | | | | | | | | | 2 | 0.4 | 487 | 0.98984 | 3.9 | 4.0 | 4.0 | 0.25 |
| 80.0 - 85.0 | | 2 | | | | | | | | | | | | | | | | 2 | 0.4 | 489 | 0.99390 | 3.8 | 3.8 | 3.9 | 0.00 |
| 85.0 - 90.0 | | 1 | | | | | | | | | | | | | | | | 1 | 0.2 | 490 | 0.99593 | 3.7 | 3.8 | 3.7 | 0.00 |
| 90.0 - 95.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 490 | 0.99593 | | | | |
| 95.0 - 100.0 | | | | | | | | | | | | | | | | | | 1 | 0.2 | 491 | 0.99797 | 3.9 | 3.8 | 3.9 | 0.00 |
| >= 100.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 491 | 0.99797 | | | | |
| SUM | 0 | 3 | 67 | 158 | 154 | 62 | 31 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 491 | 100.0 | 491 | 0.99797 | 0.8 | 2.1 | 4.0 | 0.60 |
| % OF TOTAL | 0.0 | 0.6 | 13.6 | 32.2 | 31.4 | 12.6 | 6.3 | 3.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 491 | 100.0 | | | | | | |
| SUM ACCUM. | 0 | 3 | 70 | 228 | 382 | 444 | 475 | 490 | 491 | 491 | 491 | 491 | 491 | 491 | 491 | 491 | 491 | 491 | 491 | 491 | | | | | |
| CUM. PROB. | 0.0000 | 0.0061 | 0.1423 | 0.4634 | 0.7764 | 0.9024 | 0.9654 | 0.9959 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.9980 | 0.99797 | | | | |
| MIN. VALUE | 2.8 | 4.1 | 7.7 | 13.7 | 21.2 | 33.6 | 55.1 | 75.5 | | | | | | | | | | | | | | 2.8 | | | |
| AVE. VALUE | 2.5 | 7.4 | 13.4 | 21.9 | 31.5 | 50.7 | 69.8 | 77.5 | | | | | | | | | | | | | | 21.7 | | | |
| MAX. VALUE | 3.6 | 11.5 | 21.8 | 33.2 | 51.6 | 63.6 | 95.2 | 75.5 | | | | | | | | | | | | | | 95.2 | | | |
| STD. DEV. | 0.00 | 1.21 | 3.24 | 4.43 | 7.30 | 9.12 | 12.50 | 0.00 | | | | | | | | | | | | | | 14.69 | | | |

Joint occurrence of:

Measuring depth : 0.00 m
 Water depth : 356.00 m
 Sampling interval : 3 hours
 Period : 1991.10.01 00:00 - 1991.10.31 23:59
 Hs0 significant wave height (m) FIJI, WAVEIDER SOPAC
 Hs0 Total wave power (Kw/m) FIJI, WAVERIDER SOPAC

Joint occurrence of:

| | Fiji, Waverider SOPAC | |
|---------------------|---------------------------------|-----------------------|
| Hmo | Hmo significant wave height (m) | Fiji, Waverider SOPAC |
| Utot | Total wave power (kW/m) | Fiji, Waverider SOPAC |
| Measuring depth : | 0.00 m | |
| Water depth : | 356.00 m | |
| Sampling interval : | 3 hours | |
| Period : | 1991.11.01 00:00 | - 1991.11.30 23:59 |

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1991.12.01 00:00 - 1991.12.31 23:59
 : 1992.12.01 00:00 - 1992.12.31 23:59

Joint occurrence of:

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
Tm-10 Wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.02.01 00:00 - 1992.02.29 23:59 229 recs.

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= | SUM | % OF | SUM | CUM. | MIN. | AVE. | MAX. | STD. |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|------|------|------|------|
| Tm-10(s) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 7.5 | | TOTAL | ACC. | PROB. | DEV. | | | |
| 4.0 - 5.0 | | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | |
| 5.0 - 6.0 | | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | |
| 6.0 - 7.0 | | | 3 | 25 | 4 | | | | | | | | | | | | 32 | 14.0 | 32 | 0.13913 | 1.5 | 1.8 | 2.1 | 0.23 |
| 7.0 - 8.0 | | | | 7 | 21 | 13 | | | | | | | | | | | 41 | 17.9 | 73 | 0.31739 | 1.2 | 1.8 | 2.4 | 0.34 |
| 8.0 - 9.0 | | | 22 | 60 | 16 | 1 | | | | | | | | | | | 99 | 43.2 | 172 | 0.74783 | 1.3 | 1.7 | 2.5 | 0.33 |
| 9.0 - 10.0 | | | 2 | 26 | 12 | 1 | | | | | | | | | | | 41 | 17.9 | 213 | 0.92609 | 1.2 | 1.9 | 2.6 | 0.30 |
| 10.0 - 11.0 | | | 1 | 5 | 10 | | | | | | | | | | | | 16 | 7.0 | 229 | 0.99565 | 1.5 | 2.0 | 2.4 | 0.30 |
| >= 11.0 | | | | | | | | | | | | | | | | | 0 | 0.0 | 229 | 0.99565 | | | | |
| SUM | 0 | 0 | 35 | 137 | 55 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 100.0 | 229 | 0.99565 | 1.2 | 1.8 | 2.6 | 0.28 |
| % OF TOTAL | 0.0 | 0.0 | 15.3 | 59.8 | 24.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | | | | |
| SUM ACCUM. | 0 | 0 | 35 | 172 | 227 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | | | | |
| CUM. PROB. | 0.0000 | 0.0000 | 0.1522 | 0.7478 | 0.9870 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.99565 | | | | |
| MIN. VALUE | | | 6.1 | 6.2 | 6.2 | 8.0 | | | | | | | | | | | | | | 6.1 | | | | |
| AVE. VALUE | | | 8.2 | 8.2 | 8.7 | 9.0 | | | | | | | | | | | | | | 8.3 | | | | |
| MAX. VALUE | | | 10.0 | 10.8 | 10.8 | 9.8 | | | | | | | | | | | | | | 10.8 | | | | |
| STD. DEV. | | | 0.81 | 1.07 | 1.20 | 0.50 | | | | | | | | | | | | | | 1.06 | | | | |

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
Tm-10 Wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.03.01 00:00 - 1992.03.31 23:59 242 recs.

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= | 7.5 | SUM | % OF | SUM | CUM. | MIN. | AVE. | MAX. | STD. |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|-------|-------|---------|------|------|------|------|
| Tm-10(s) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= | 7.5 | TOTAL | ACC. | PROB. | | | | DEV. | |
| 4.0 - 5.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | |
| 5.0 - 6.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | |
| 6.0 - 7.0 | | | | | | | | | | | | | | | | | | 1 | 0.4 | 1 | 0.00412 | 1.9 | 1.8 | 1.9 | 0.00 |
| 7.0 - 8.0 | | | | | | | | | | | | | | | | | | 33 | 13.6 | 34 | 0.13992 | 1.9 | 2.5 | 3.1 | 0.30 |
| 8.0 - 9.0 | | | | | | | | | | | | | | | | | | 75 | 31.0 | 109 | 0.44856 | 1.9 | 2.7 | 4.0 | 0.55 |
| 9.0 - 10.0 | | | | | | | | | | | | | | | | | | 68 | 28.1 | 177 | 0.72840 | 1.7 | 2.7 | 4.2 | 0.61 |
| 10.0 - 11.0 | | | | | | | | | | | | | | | | | | 26 | 10.7 | 203 | 0.83539 | 1.9 | 2.8 | 4.0 | 0.64 |
| 11.0 - 12.0 | | | | | | | | | | | | | | | | | | 15 | 6.2 | 218 | 0.89712 | 2.0 | 2.5 | 4.1 | 0.51 |
| 12.0 - 13.0 | | | | | | | | | | | | | | | | | | 21 | 8.7 | 239 | 0.98354 | 2.5 | 2.9 | 3.5 | 0.34 |
| 13.0 - 14.0 | | | | | | | | | | | | | | | | | | 2 | 0.8 | 241 | 0.99177 | 2.7 | 2.8 | 2.9 | 0.00 |
| 14.0 - 15.0 | | | | | | | | | | | | | | | | | | 1 | 0.4 | 242 | 0.99588 | 3.1 | 3.2 | 3.1 | 0.00 |
| >= 15.0 | | | | | | | | | | | | | | | | | | 0 | 0.0 | 242 | 0.99588 | | | | |
| SUM | 0 | 0 | 0 | 0 | 16 | 83 | 92 | 31 | 14 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 100.0 | 242 | 0.99588 | 1.7 | 2.7 | 4.2 | 0.49 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 6.6 | 34.3 | 38.0 | 12.8 | 5.8 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | | | | | | |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 16 | 99 | 191 | 222 | 236 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | | | | |
| CUM. PROB. | 0.0000 | 0.0000 | 0.0000 | 0.0658 | 0.4074 | 0.7860 | 0.9136 | 0.9712 | 0.9959 | 0.9959 | 0.9959 | 0.9959 | 0.9959 | 0.9959 | 0.9959 | 0.9959 | 0.9959 | 0.99588 | | | | | | | |
| MIN. VALUE | | | | 6.8 | 7.3 | 7.3 | 7.7 | 8.7 | 8.9 | | | | | | | | | | | | 6.8 | | | | |
| AVE. VALUE | | | | 8.9 | 9.3 | 9.5 | 9.8 | 9.6 | 9.8 | | | | | | | | | | | | 9.4 | | | | |
| MAX. VALUE | | | | 10.8 | 12.5 | 13.8 | 14.3 | 12.9 | 11.1 | | | | | | | | | | | | 14.3 | | | | |
| STD. DEV. | | | | 0.93 | 1.32 | 1.71 | 1.66 | 1.16 | 0.94 | | | | | | | | | | | | 1.50 | | | | |

point occurrence of:

Joint occurrence of:

| Hm0 | Significant wave height (m) | FIJI, FIJI, | WAVERIDER SOPAC WAVERIDER SOPAC |
|--------------------|-------------------------------------|----------------|------------------------------------|
| Tm-10 | Wave period (s) | | |
| Measuring depth : | 0.00 m | | |
| Water depth : | 356.00 m | | |
| Sampling interval: | 3 hours | | |
| Period: | 1992.05.01 00:00 - 1992.05.31 23:59 | 247 recs. | |
| Hm0(m) | 0.0 | 0.5 | |
| Tm-10(s) | / | 1.0 | |
| 4.0 - 5.0 | / | / | |
| 5.0 - 6.0 | / | / | |
| 6.0 - 7.0 | / | 3 | |
| 7.0 - 8.0 | / | 2 | |
| 8.0 - 9.0 | / | 6 | |
| 9.0 - 10.0 | / | 12 | |
| 10.0 - 11.0 | / | 27 | |
| 11.0 - 12.0 | / | 24 | 1 |
| 12.0 - 13.0 | / | 20 | 4 |
| 13.0 - 14.0 | / | 7 | 3 |
| 14.0 - 15.0 | / | 1 | 2 |
| >= 15.0 | / | 1 | 1 |
| SUM | 0 | 0 | |
| % OF TOTAL | 0.0 | 0.0 | |
| SUM. ACCUR. | 0.0 | 0.0 | |
| COR. PROB. | 0.00000 | 0.00000 | |
| MIN. VALUE | 8.3 | 6.9 | |
| AVE. VALUE | 10.0 | 9.5 | |
| MAX. VALUE | 12.1 | 12.1 | |
| STD. DEV. | 1.18 | 1.52 | |

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | >= 7.5 | SUM | % OF TOTAL | SUM | CUM. PROB. | CUM. MIN. | AVE. | MAX. | STD. DEV. | | | | | |
|-------------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|---------|------------|-----------|---------|---------|-----------|--------|--------|--------|--------|--------|
| 4.0 - 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.1 | 0.24 | | | |
| 5.0 - 6.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00016 | 0 | 0.00016 | 0 | 0.00016 | 0 | 2.0 | 0.24 | | | |
| 6.0 - 7.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.24 | 5 | 0.024 | 5 | 0.024 | 5 | 2.4 | 0.24 | | | |
| 7.0 - 8.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.46 | 23 | 0.0274 | 23 | 0.0274 | 23 | 3.3 | 0.46 | | | |
| 8.0 - 9.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 62 | 0.3274 | 62 | 0.3274 | 62 | 3.6 | 0.60 | | | |
| 9.0 - 10.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 61 | 0.5871 | 61 | 0.5871 | 61 | 3.6 | 0.60 | | | |
| 10.0 - 11.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 49 | 0.7629 | 49 | 0.7629 | 49 | 2.8 | 0.60 | | | |
| 11.0 - 12.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 32 | 1.30 | 32 | 1.30 | 32 | 2.8 | 0.60 | | | |
| 12.0 - 13.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 9 | 3.6 | 9 | 3.6 | 9 | 2.8 | 0.60 | | | |
| 13.0 - 14.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 8 | 3.2 | 8 | 3.2 | 8 | 2.5 | 0.60 | | | |
| 14.0 - 15.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 3 | 1.2 | 3 | 1.2 | 3 | 2.9 | 0.60 | | | |
| >= 15.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 | 247 | 0.9597 | 247 | 0.9597 | 247 | 3.3 | 0.60 | | | |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | |
| % OF TOTAL | 0.0 | 0.0 | 10.5 | 40.1 | 36.4 | 8.9 | 3.2 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | | |
| SUM. ACCUR. | 0.0 | 0.0 | 0.26 | 1.25 | 2.15 | 0.237 | 0.245 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.247 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | | |
| COR. PROB. | 0.00000 | 0.00000 | 0.1048 | 0.5040 | 0.8669 | 0.9556 | 0.9879 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 | 0.9960 |
| MIN. VALUE | 8.3 | 6.9 | 6.9 | 6.5 | 8.9 | 8.9 | 8.9 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | | |
| AVE. VALUE | 10.0 | 9.5 | 9.5 | 9.7 | 11.2 | 9.6 | 9.6 | 9.5 | 9.5 | 9.5 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | |
| MAX. VALUE | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | |
| STD. DEV. | 1.18 | 1.52 | 1.48 | 1.81 | 1.81 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 0.00000 | 0 | 0.00000 | 0 | 0.00000 | 0 | 2.8 | 0.60 | | | |

Joint occurrence of:

| Hm0 | Significant wave height (m) | FIJI, Fiji, | WAVERIDER SOPAC WAVERIDER SOPAC |
|--------------------|---|---|---|
| Tm-10 | Wave Period (s) | | |
| Measuring depth : | 0.00 m | | |
| Water depth : | 356.00 m | | |
| Sampling Interval: | 3 hours | | |
| Period : | 1991-06-01 00:00 - 1991-06-30 23:59 | 185 recs. | |
| | 1992-06-01 00:00 - 1992-06-30 23:59 | 235 recs. | |
| Hm0(m) | 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 >7.5 | | |
| Tm-10(s) | / / / / / / / / / / / / / / / / | | |
| 4.0 - 5.0 | / / / / / / / / / / / / / / / / | | |
| 5.0 - 6.0 | 2 / / / / / / / / / / / / / / / / | 0 0.0 | 0.00000 |
| 6.0 - 7.0 | 7 2 / / / / / / / / / / / / / / / | 2 0.5 | 0.00475 |
| 7.0 - 8.0 | 4 7 1 / / / / / / / / / / / / / / | 2 1.1 | 0.02613 |
| 8.0 - 9.0 | 19 37 29 4 / / / / / / / / / / / / | 3 9.3 | 0.11876 |
| 9.0 - 10.0 | 15 38 42 17 9 3 / / / / / / / / / | 9.2 21.9 | 0.37729 |
| 10.0 - 11.0 | 4 45 16 15 7 4 3 / / / / / / / / / | 12.1 28.8 | 0.62470 |
| 11.0 - 12.0 | 4 14 4 5 3 1 1 / / / / / / / / / | 9.4 22.4 | 0.84798 |
| 12.0 - 13.0 | 1 6 11 1 1 1 / / / / / / / / / | 3.0 7.1 | 0.91924 |
| 13.0 - 14.0 | 2 1 6 1 1 1 / / / / / / / / / | 23 5.5 | 0.97387 |
| 14.0 - 15.0 | 1 1 1 1 1 1 / / / / / / / / / | 9 2.1 | 0.99525 |
| >= 15.0 | / / / / / / / / / / / / / / / / | 1 0.2 | 0.99762 |
| SUM | 0 0 56 171 111 49 19 8 / / / / / / / / / / | 0 0.0 | 0.99762 |
| % OF TOTAL | 0.0 0.0 13.3 40.7 26.4 11.7 4.5 1.9 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | 420 100.0 | 420 100.0 |
| SUM ACCUR. | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 0 0.0 | 0.0 |
| CUM. PROB. | 0.00000 0.00000 0.13300 0.53920 0.80290 0.91920 0.96440 0.98340 0.99760 0.99760 0.99760 0.99760 0.99760 0.99760 0.99760 0.99760 | 420 420 420 420 420 420 420 420 420 420 420 420 420 420 420 420 | 420 420 420 420 420 420 420 420 420 420 420 420 420 420 420 420 |
| MIN. VALUE | 5.8 | 7.1 | 10.0 |
| AVE. VALUE | 8.8 | 9.5 | 11.1 |
| MAX. VALUE | 12.0 | 13.2 | 12.3 |
| STD. DEV. | 1.52 | 1.43 | 1.46 |

Joint occurrence of:

| Hm0 Tm-10 | Significant wave height (m) Wave Period (s) | Fiji, Fiji, | WAVERIDER SOPAC WAVERIDER SOPAC |
|--------------------|--|----------------|------------------------------------|
| Measuring depth : | 0.00 m | | |
| Water depth : | 356.00 m | | |
| Sampling interval: | 3 hours | | |
| Period : | 1991.07.01 00:00 - 1991.07.31 23:59 | 245 recs. | |
| | 1992.07.01 00:00 - 1992.07.31 23:59 | 241 recs. | |
| Hm0(m) Tm-10(s) | 0.0 / 0.5 / 1.0 / 1.5 / 2.0 / 2.5 / 3.0 / 3.5 / 4.0 / 4.5 / 5.0 / 5.5 / 6.0 / 6.5 / 7.0 / 7.5 / | | |
| 4.0 - 5.0 | / / / / / / / / / / / / / / / / | 0 | 0.0 |
| 5.0 - 6.0 | / / / / / / / / / / / / / / / / | 0 | 0.0 |
| 6.0 - 7.0 | / / / / / / / / / / / / / / / / | 0 | 0.00000 |
| 7.0 - 8.0 | / / / / / / / / / / / / / / / / | 0 | 0.00000 |
| 8.0 - 9.0 | / / / / / / / / / / / / / / / / | 0 | 0.00000 |
| 9.0 - 10.0 | 1 / / / / / / / / / / / / / / / / | 4 | 0.8 |
| 10.0 - 11.0 | 16 / / / / / / / / / / / / / / / / | 92 | 18.9 |
| 11.0 - 12.0 | 20 / / / / / / / / / / / / / / / / | 96 | 19.713 |
| 12.0 - 13.0 | 23 / / / / / / / / / / / / / / / / | 118 | 24.3 |
| 13.0 - 14.0 | 2 / / / / / / / / / / / / / / / / | 214 | 43.943 |
| 14.0 - 15.0 | 1 / / / / / / / / / / / / / / / / | 155 | 31.9 |
| >= 15.0 | / / / / / / / / / / / / / / / / | 369 | 0.7570 |
| | | 78 | 16.0 |
| | | 19 | 3.9 |
| | | 12 | 2.5 |
| | | 5 | 1.0 |
| | | 3 | 0.6 |
| | | 0 | 0.0 |
| SUM | 0 / 1 / 66 / 116 / 173 / 80 / 34 / 6 / 5 / 3 / 2 / 0 / 0 / 0 / / | 486 | 0.99795 |
| % OF TOTAL | 0.0 / 0.2 / 13.6 / 23.9 / 35.6 / 16.5 / 7.0 / 1.2 / 0.6 / 0.4 / 0.0 / 0.0 / 0.0 / 0.0 / 0.0 / / | 1.0 | 2.2 |
| SUM ACCUR. | 0 / 0.1 / 67 / 183 / 356 / 436 / 470 / 484 / 486 / 486 / 486 / 486 / 486 / 486 / 486 / 486 / / | 0 | 100.0 |
| CUM. PROB. | 0.00000 / 0.0021 / 0.1376 / 0.3758 / 0.7310 / 0.8953 / 0.9651 / 0.9774 / 0.9877 / 0.9938 / 0.9979 / 0.9979 / 0.9979 / 0.9979 / 0.9979 / 0.9979 / / | 0 | 486 |
| MIN. VALUE | 9.1 / 9.3 / 9.5 / 9.7 / 10.1 / 10.3 / 10.5 / 10.7 / 11.1 / 12.1 / 12.5 / 12.9 / 13.3 / 13.7 / 14.1 / 14.3 / / | 6.8 | 9.2 |
| AVE. VALUE | 9.1 / 11.4 / 12.7 / 13.2 / 14.3 / 12.8 / 12.9 / 11.1 / 12.2 / 12.5 / 12.9 / 12.3 / 12.9 / 12.5 / 14.3 / / | 14.3 | 14.3 |
| MAX. VALUE | 0.00 / 1.03 / 1.13 / 1.24 / 1.82 / 1.42 / 1.53 / 0.63 / 0.47 / 0.00 / 0.00 / 0.00 / 0.00 / 0.00 / 0.00 / / | 1.35 | 1.35 |
| STD. DEV. | / / / / / / / / / / / / / / / / | / | / |

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
 Tm-10 Wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1991.08.01 00:00 - 1991.08.31 23:59 248 recs
1992.08.01 00:00 - 1992.08.31 23:59 243 recs

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
 Tm-10 Wave period (s) FIJI, WAVERIDER SOPAC

```

Measuring depth   :      0.00 m
Water depth      :    356.00 m
Sampling interval: 3 hours
Period           : 1991.09.01 00:00 - 1991.09.30 23:59    169 recs
                    1992.09.01 00:00 - 1992.09.30 23:59    238 recs

```

Joint occurrence of:

| Hm0 | Significant wave height (m) | FIJI, FIJI, | WAVERIDER SOPAC WAVERIDER SOPAC |
|--------------------|-------------------------------------|----------------|------------------------------------|
| Tm-10 | Wave Period (s) | | |
| Measuring depth : | 0.00 m | | |
| Water depth : | 356.00 m | | |
| Sampling Interval: | 3 hours | | |
| Period : | 1992.10.01 00:00 - 1992.10.31 23:59 | 247 recs. | |
| Hm0(m) | 0.0 | 0.5 | 1.0 |
| Tm-10(s) | / | / | / |
| 4.0 - 5.0 | / | / | / |
| 5.0 - 6.0 | / | / | / |
| 6.0 - 7.0 | / | / | / |
| 7.0 - 8.0 | / | / | / |
| 8.0 - 9.0 | / | / | / |
| 9.0 - 10.0 | / | / | / |
| 10.0 - 11.0 | / | / | / |
| 11.0 - 12.0 | / | / | / |
| 12.0 - 13.0 | / | / | / |
| 13.0 - 14.0 | / | / | / |
| ≥ 14.0 | / | / | / |
| SUM | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0.0 | 0.0 | 0.0 |
| CUR. PROB. | 0.0000 | 0.0000 | 0.0000 |
| MIN. VALUE | | | |
| AVE. VALUE | | | |
| MAX. VALUE | | | |
| STD. DEV. | | | |

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
 Tm-10 Wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
 Water depth : 356.00 m
 Sampling interval: 3 hours
 Period : 1991.12.01 00:00 - 1991.12.31 23:59 242 recs.
 1992.12.01 00:00 - 1992.12.31 23:59 157 recs.

| | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= 7.5 | SUM | % OF TOTAL | SUM ACC. | CUM. PROB. | MIN. | AVE. | MAX. | STD. DEV. | |
|------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------------|-------------|---------------|---------|------|------|--------------|------|
| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= 7.5 | 0 | 0.0 | 0 | 0.00000 | | | | | |
| Tm-10(s) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= 7.5 | 0 | 0.0 | 0 | 0.00000 | | | | | | |
| | 4.0 - 5.0 | | | | | | | | | | | | | | | | 45 | 11.3 | 45 | 0.11250 | 1.4 | 1.8 | 2.4 | 0.25 | |
| | 5.0 - 6.0 | | | | | | | | | | | | | | | | 112 | 28.1 | 157 | 0.39250 | 1.1 | 2.1 | 4.9 | 0.55 | |
| | 6.0 - 7.0 | | | | | | | | | | | | | | | | 118 | 29.6 | 275 | 0.68750 | 1.1 | 2.0 | 7.2 | 0.76 | |
| | 7.0 - 8.0 | | | | | | | | | | | | | | | | 54 | 13.5 | 329 | 0.82250 | 1.1 | 1.8 | 3.3 | 0.46 | |
| | 8.0 - 9.0 | | | | | | | | | | | | | | | | 63 | 15.8 | 392 | 0.98000 | 1.2 | 1.7 | 2.7 | 0.43 | |
| | 9.0 - 10.0 | | | | | | | | | | | | | | | | 7 | 1.8 | 399 | 0.99750 | 1.3 | 2.0 | 2.6 | 0.59 | |
| | 10.0 - 11.0 | | | | | | | | | | | | | | | | 0 | 0.0 | 399 | 0.99750 | | | | | |
| | 11.0 - 12.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | >= 12.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| SUM | 0 | 0 | 89 | 141 | 130 | 30 | 4 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 399 | 100.0 | 399 | 0.99750 | 1.1 | 1.9 | 7.2 | 0.57 |
| % OF TOTAL | 0.0 | 0.0 | 22.3 | 35.3 | 32.6 | 7.5 | 1.0 | 0.0 | 0.8 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 100.0 | | | | | | | |
| SUM ACCUM. | 0 | 0 | 89 | 230 | 360 | 390 | 394 | 394 | 397 | 397 | 398 | 398 | 398 | 398 | 398 | 399 | 399 | 399 | 399 | 399 | | | | | |
| CUM. PROB. | 0.0000 | 0.0000 | 0.2225 | 0.5750 | 0.9000 | 0.9750 | 0.9850 | 0.9850 | 0.9925 | 0.9950 | 0.9950 | 0.9950 | 0.9950 | 0.9950 | 0.9950 | 0.9975 | 0.99750 | | | | | | | | |
| MIN. VALUE | 6.3 | 6.3 | 6.6 | 7.0 | 7.3 | 7.7 | 7.8 | | | | | | | | | | 8.5 | | 6.3 | | | | | | |
| AVE. VALUE | 9.0 | 8.3 | 8.4 | 8.5 | 8.5 | 8.2 | 7.5 | | | | | | | | | | 8.5 | | 8.4 | | | | | | |
| MAX. VALUE | 11.1 | 11.1 | 11.4 | 11.1 | 9.1 | 8.7 | 7.8 | | | | | | | | | | 8.5 | | 11.4 | | | | | | |
| STD. DEV. | 1.19 | 1.42 | 1.15 | 1.15 | 0.71 | | 0.47 | 0.00 | | | | | | | | | 0.00 | | 1.25 | | | | | | |

Joint occurrence of:

| | Significant wave height (m) | Peak wave period (s) | FIJI, FIJI, | WAVERIDER SOPAC |
|----------------------|-----------------------------|----------------------|-------------|------------------|
| measuring depth : | 0.00 m | | | |
| bottom depth : | 356.00 m | | | |
| recording interval : | 3 hours | | | |
| recording period : | 1992.01.01 00:00 | 00:00 | - | 1992.01.31 23:59 |

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
 Tp Peak wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
 Water depth : 356.00 m
 Sampling interval: 3 hours
 Period : 1992.02.01 00:00 - 1992.02.29 23:59 229 recs.

| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= 7.5 | SUM | % OF TOTAL | SUM ACC. | CUM. PROB. | MIN. | AVE. | MAX. | STD. DEV. |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|-------------|---------------|------|------|------|--------------|
| Tp(s) | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | >= 7.5 | / | / | / | / | / | / | / | / | |
| 4.0 - 5.0 | | | | | | | | | | | | | | | | 0 | 0.0 | 0 | 0.00000 | | | | | |
| 5.0 - 6.0 | | | | | | | | | | | | | | | | 8 | 3.5 | 8 | 0.03478 | 1.5 | 1.8 | 2.0 | 0.25 | |
| 6.0 - 7.0 | | | | | | | | | | | | | | | | 21 | 9.2 | 29 | 0.12609 | 1.5 | 1.8 | 2.2 | 0.15 | |
| 7.0 - 8.0 | | | | | | | | | | | | | | | | 23 | 10.0 | 52 | 0.22609 | 1.4 | 2.0 | 2.4 | 0.29 | |
| 8.0 - 9.0 | | | | | | | | | | | | | | | | 19 | 8.3 | 71 | 0.30870 | 1.3 | 1.9 | 2.5 | 0.42 | |
| 9.0 - 10.0 | | | | | | | | | | | | | | | | 17 | 7.4 | 88 | 0.38261 | 1.3 | 1.5 | 2.0 | 0.30 | |
| 10.0 - 11.0 | | | | | | | | | | | | | | | | 16 | 7.0 | 104 | 0.45217 | 1.3 | 1.7 | 2.1 | 0.37 | |
| 11.0 - 12.0 | | | | | | | | | | | | | | | | 26 | 11.4 | 130 | 0.56522 | 1.4 | 1.7 | 2.2 | 0.22 | |
| 12.0 - 13.0 | | | | | | | | | | | | | | | | 25 | 10.9 | 155 | 0.67391 | 1.3 | 1.8 | 2.6 | 0.24 | |
| 13.0 - 14.0 | | | | | | | | | | | | | | | | 20 | 8.7 | 175 | 0.76087 | 1.5 | 1.8 | 2.3 | 0.22 | |
| 14.0 - 15.0 | | | | | | | | | | | | | | | | 23 | 10.0 | 198 | 0.86087 | 1.2 | 1.8 | 2.4 | 0.36 | |
| 15.0 - 16.0 | | | | | | | | | | | | | | | | 18 | 7.9 | 216 | 0.93913 | 1.4 | 2.1 | 2.4 | 0.34 | |
| 16.0 - 17.0 | | | | | | | | | | | | | | | | 12 | 5.2 | 228 | 0.99130 | 1.4 | 1.8 | 2.3 | 0.32 | |
| 17.0 - 18.0 | | | | | | | | | | | | | | | | 0 | 0.0 | 228 | 0.99130 | | | | | |
| 18.0 - 19.0 | | | | | | | | | | | | | | | | 1 | 0.4 | 229 | 0.99565 | 1.7 | 1.8 | 1.7 | 0.00 | |
| >= 19.0 | | | | | | | | | | | | | | | | 0 | 0.0 | 229 | 0.99565 | | | | | |
| SUM | 0 | 0 | 35 | 137 | 55 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 100.0 | 229 | 0.99565 | 1.2 | 1.8 | 2.6 | 0.28 | |
| % OF TOTAL | 0.0 | 0.0 | 15.3 | 59.8 | 24.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 100.0 | | | | | | |
| SUM ACCUM. | 0 | 0 | 35 | 172 | 227 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | | | | | |
| CUM. PROB. | 0.0000 | 0.0000 | 0.1522 | 0.7478 | 0.9870 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.9957 | 0.99565 | | | | | |
| MIN. VALUE | | | 5.9 | 5.4 | 5.9 | 8.3 | | | | | | | | | | | | | | 5.4 | | | | |
| AVE. VALUE | | | 11.3 | 11.0 | 11.5 | 10.5 | | | | | | | | | | | | | | 11.1 | | | | |
| MAX. VALUE | | | 16.7 | 18.2 | 16.7 | 12.5 | | | | | | | | | | | | | | 18.2 | | | | |
| STD. DEV. | | | 2.77 | 3.15 | 3.58 | 2.00 | | | | | | | | | | | | | | 3.19 | | | | |

Joint occurrence of:

| | Hm0 | Significant wave height (m) | Fiji, | WAVERIDER SOPAC |
|--|--------|-----------------------------|-----------|-----------------|
| | Tp | Peak wave period (s) | Fiji, | WAVERIDER SOPAC |
| Measuring depth : 0.00 m | | | | |
| Water depth : 356.00 m | | | | |
| Sampling Interval: 3 hours | | | | |
| Period: 1992-03-01 00:00 - 1992-03-31 23:59 | | | | |
| | | | 242 recs. | |
| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 |
| Tp(s) | 0.5 | 1.0 | 1.5 | 2.0 |
| / | / | / | / | / |
| 4.0 - 5.0 | | | | |
| 5.0 - 6.0 | | | | |
| 6.0 - 7.0 | | | | |
| 7.0 - 8.0 | | | | |
| 8.0 - 9.0 | | | | |
| 9.0 - 10.0 | | | | |
| 10.0 - 11.0 | | | | |
| 11.0 - 12.0 | | | | |
| 12.0 - 13.0 | | | | |
| 13.0 - 14.0 | | | | |
| 14.0 - 15.0 | | | | |
| 15.0 - 16.0 | | | | |
| 16.0 - 17.0 | | | | |
| >= 17.0 | | | | |
| SUM | 0.0 | 0.0 | 0.0 | 0.0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0.0 | 0.0 | 0.0 | 0.0 |
| CUM. PROB. | 0.0000 | 0.0000 | 0.0000 | 0.0058 |
| MIN. VALUE | 6.5 | 6.5 | 6.7 | 6.7 |
| AVE. VALUE | 10.6 | 10.9 | 11.1 | 11.7 |
| MAX. VALUE | 13.3 | 15.4 | 16.7 | 15.4 |
| STD. DEV. | 1.90 | 1.99 | 2.53 | 2.52 |
| / | / | / | / | / |
| SUM | 1.6 | 9.2 | 31 | 14 |
| % OF TOTAL | 6.6 | 34.3 | 38.0 | 12.8 |
| SUM ACCUM. | 1.6 | 9.9 | 19.1 | 22.2 |
| CUM. PROB. | 0.0000 | 0.0000 | 0.0000 | 0.0058 |
| MIN. VALUE | 6.5 | 6.5 | 6.7 | 6.7 |
| AVE. VALUE | 10.6 | 10.9 | 11.1 | 11.7 |
| MAX. VALUE | 13.3 | 15.4 | 16.7 | 15.4 |
| STD. DEV. | 1.90 | 1.99 | 2.53 | 2.52 |
| / | / | / | / | / |
| SUM | 6 | 5.8 | 2.5 | 0.0 |
| % OF TOTAL | 23.6 | 24.2 | 24.2 | 0.0 |
| SUM ACCUM. | 23.6 | 24.2 | 24.2 | 0.0 |
| CUM. PROB. | 0.9136 | 0.9760 | 0.9760 | 0.0000 |
| MIN. VALUE | 6.5 | 6.5 | 6.7 | 8.7 |
| AVE. VALUE | 10.6 | 10.9 | 11.1 | 11.7 |
| MAX. VALUE | 13.3 | 15.4 | 16.7 | 15.4 |
| STD. DEV. | 1.90 | 1.99 | 2.53 | 2.52 |
| / | / | / | / | / |
| SUM | 14 | 11.7 | 9.5 | 10.0 |
| % OF TOTAL | 50 | 50 | 50 | 50 |
| SUM ACCUM. | 50 | 50 | 50 | 50 |
| CUM. PROB. | 0.9959 | 0.9959 | 0.9959 | 0.9959 |
| MIN. VALUE | 6.5 | 6.5 | 6.7 | 8.7 |
| AVE. VALUE | 11.0 | 11.0 | 11.7 | 12.0 |
| MAX. VALUE | 16.7 | 16.7 | 16.7 | 16.7 |
| STD. DEV. | 2.3 | 2.3 | 2.3 | 2.3 |
| / | / | / | / | / |

Joint occurrence of:

| Hm0 | Significant wave height (m) | FIJI, | WAVERIDER | SOPAC |
|--------------------|-------------------------------------|-----------|-----------|--------|
| Tp | Peak wave period (s) | FIJI, | WAVERIDER | SOPAC |
| Measuring depth : | 0.00 m | | | |
| Water depth : | 356.00 m | | | |
| Sampling interval: | 3 hours | | | |
| Sampling Period: | 1992-04-01 00:00 - 1992-04-30 23:59 | 237 recs. | | |
| Hm0(m) | 0.0 | 0.5 | 1.0 | 1.5 |
| Tp(s) | / | 0.5 | 1.0 | 1.5 |
| 4.0 - 5.0 | / | / | / | / |
| 5.0 - 6.0 | / | 2 | 2 | / |
| 6.0 - 7.0 | / | 12 | 1 | / |
| 7.0 - 8.0 | / | 3 | 7 | 5 |
| 8.0 - 9.0 | / | 2 | 1 | 12 |
| 9.0 - 10.0 | / | 2 | 1 | 1 |
| 10.0 - 11.0 | / | 4 | 1 | 8 |
| 11.0 - 12.0 | / | 5 | 5 | 2 |
| 12.0 - 13.0 | / | 1 | 14 | 4 |
| 13.0 - 14.0 | / | 1 | 3 | 10 |
| 14.0 - 15.0 | / | 1 | 4 | 6 |
| 15.0 - 16.0 | / | 1 | 11 | 9 |
| 16.0 - 17.0 | / | 1 | 13 | 7 |
| 17.0 - 18.0 | / | 1 | 3 | 5 |
| 18.0 - 19.0 | / | 2 | 1 | 2 |
| >= 19.0 | / | / | / | / |
| SUM % OF TOTAL | 0.0 | 0.0 | 12 | / |
| SUM ACCUM. % | 0.0 | 0.0 | 5.1 | 12.2 |
| CUM. PROB. | 0.00000 | 0.00000 | 0.0504 | 0.1723 |
| MIN. VALUE | 7.4 | 5.7 | 5.7 | 5.7 |
| AVE. VALUE | 10.2 | 10.4 | 12.2 | 11.7 |
| MAX. VALUE | 13.3 | 18.2 | 18.2 | 16.7 |
| STD. DEV. | 2.09 | 3.26 | 3.53 | 2.92 |

point occurrence of:

| | mo | Significant wave height (m) | FIJI, | WAVERIDER SOPAC |
|---------------------|----------------------|-----------------------------|-----------------|-----------------|
| P | Peak wave Period (s) | FIJI, | WAVERIDER SOPAC | |
| measuring depth : | 0.00 m | | | |
| water depth : | 356.00 m | | | |
| Sampling Interval : | 3 hours | | | |
| Period : | 1992.05.01 00:00 - | 1992.05.31 23:59 | | |

Joint occurrence of:

| | | Hm0 | Significant wave height (m) | FIJI, FIJI, | WAVERIDER SOPAC WAVERIDER SOPAC |
|---------------------------------|-------------------------------------|----------------------|-----------------------------|----------------|------------------------------------|
| | Tp | Peak wave Period (s) | | | |
| Measuring depth : 0.00 m | | | | | |
| Water depth : | 356.00 m | | | | |
| Sampling interval: | 3 hours | | | | |
| Period : | 1992-06-01 00:00 - 1992-06-30 23:59 | | 235 recs. | | |
| Hm0(m) | 0.0 - 0.5 | 1.0 - 1.5 | 2.0 - 2.5 | 2.5 - 3.0 | 3.0 - 3.5 |
| Tp(s) | 0.5 - 1.0 | / | / | / | / |
| 4.0 - 5.0 | / | / | / | / | / |
| 5.0 - 6.0 | / | 3 | 1 | / | / |
| 6.0 - 7.0 | / | 3 | 1 | / | / |
| 7.0 - 8.0 | 2 | 3 | 1 | / | / |
| 8.0 - 9.0 | 7 | 9 | 2 | 5 | 3 |
| 9.0 - 10.0 | 3 | 8 | 10 | 3 | 6 |
| 10.0 - 11.0 | 3 | 8 | 3 | 4 | 1 |
| 11.0 - 12.0 | 5 | 15 | 4 | 2 | 2 |
| 12.0 - 13.0 | 2 | 13 | 3 | 1 | |
| 13.0 - 14.0 | 1 | 19 | 4 | 2 | |
| 14.0 - 15.0 | 2 | 21 | 6 | 3 | |
| 15.0 - 16.0 | 5 | 9 | 6 | 3 | |
| 16.0 - 17.0 | 1 | 5 | 2 | | |
| 17.0 - 18.0 | 2 | 1 | | | |
| 18.0 - 19.0 | 2 | 1 | | | |
| >= 19.0 | / | / | / | / | / |
| SUM | 0 | 0 | 31 | 112 | 49 |
| % OF TOTAL | 0.0 | 0.0 | 13.2 | 47.7 | 20.9 |
| SUM ACTIM | 0.0 | 0.0 | 31 | 143 | 214 |
| COR. PROB. | 0.0000 | 0.0000 | 0.1314 | 0.6059 | 0.8136 |
| MIN. VALUE | 7.7 | 7.7 | 5.7 | 5.7 | 5.7 |
| AVE. VALUE | 11.4 | 12.4 | 11.9 | 11.6 | 9.8 |
| MAX. VALUE | 16.7 | 18.2 | 18.2 | 15.4 | 11.8 |
| STD. DEV. | 2.77 | 2.84 | 2.86 | 2.56 | 0.94 |

*(This section contains the joint occurrence data for each Hm0 bin and Tp bin. The data is presented in a grid format where each cell contains the count of occurrences. The counts for each Hm0 bin are listed vertically on the left, and the counts for each Tp bin are listed horizontally across the top. The diagonal line from bottom-left to top-right represents the diagonal joint occurrences.)**(This section contains the summary statistics for each Hm0 bin and Tp bin. The statistics are listed in columns: SUM, % OF TOTAL, SUM ACTIM, COR. PROB., MIN. VALUE, AVE. VALUE, MAX. VALUE, and STD. DEV. The data is presented in a grid format where each cell contains the corresponding statistic value. The counts for each Hm0 bin are listed vertically on the left, and the counts for each Tp bin are listed horizontally across the top. The diagonal line from bottom-left to top-right represents the diagonal joint statistics.)*

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
 Tp Peak wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.07.01 00:00 - 1992.07.31 23:59 241 recs.

Joint occurrence of:

| Hm0 Tp | Significant wave height (m) Peak wave period (s) | FIJI, FIJI, | WAVERIDER, WAVERIDER | SOPAC SOPAC |
|--|--|------------------|-------------------------|------------------|
| Measuring depth : Water depth : Sampling interval: Period : | 0.00 m 356.00 m 3 hours 1992-08-01 00:00 - 1992-08-31 23:59 | | | |
| Hm0(m) Tp(s) | 0.0 - 0.5 0.5 - 1.0 | 2.0 2.0 | 2.0 2.5 | 2.5 3.0 |
| | 1.5 1.0 | 3.0 3.5 | 3.5 4.0 | 4.0 4.5 |
| | 2.0 2.0 | 4.5 5.0 | 5.0 5.5 | 5.5 6.0 |
| | 2.5 2.5 | 5.5 6.0 | 6.0 6.5 | 6.5 7.0 |
| | 3.0 3.0 | 7.0 7.5 | 7.5 7.5 | 7.5 7.5 |
| | 3.5 3.5 | | | |
| | 4.0 4.0 | | | |
| | 4.5 4.5 | | | |
| | 5.0 5.0 | | | |
| | 5.5 5.5 | | | |
| | 6.0 6.0 | | | |
| | 6.5 6.5 | | | |
| | 7.0 7.0 | | | |
| | 7.5 7.5 | | | |
| | 8.0 8.0 | | | |
| | 8.5 8.5 | | | |
| | 9.0 9.0 | | | |
| | 9.5 9.5 | | | |
| | 10.0 10.0 | | | |
| | 10.5 10.5 | | | |
| | 11.0 11.0 | | | |
| | 11.5 11.5 | | | |
| | 12.0 12.0 | | | |
| | 12.5 12.5 | | | |
| | 13.0 13.0 | | | |
| | 13.5 13.5 | | | |
| | 14.0 14.0 | | | |
| | 14.5 14.5 | | | |
| | 15.0 15.0 | | | |
| | 15.5 15.5 | | | |
| | 16.0 16.0 | | | |
| | 16.5 16.5 | | | |
| | 17.0 17.0 | | | |
| | 17.5 17.5 | | | |
| | 18.0 18.0 | | | |
| | 18.5 18.5 | | | |
| | 19.0 19.0 | | | |
| SUM | 0 0.0 | 3 1.2 | 32 32.1 | 78 29.6 |
| % OF TOTAL | 0.0 0.0 | 1.2 1.35 | 13.2 11.3 | 29.6 20.9 |
| SUM ACTDM | 0.0 0.0 | 0.3 0.1434 | 0.4631 0.4631 | 1.185 0.7582 |
| CUM. PROB. | 0.0000 0.0000 | 0.0123 0.1434 | 0.9959 0.9959 | 0.9959 0.9959 |
| MIN. VALUE | 9.1 9.8 | 7.4 11.2 | 6.9 11.7 | 7.0 12.0 |
| AVE. VALUE | 10.0 10.0 | 15.4 15.4 | 16.7 16.7 | 13.5 15.4 |
| MAX. VALUE | 10.5 10.5 | 16.0 16.0 | 16.7 16.7 | 14.4 18.2 |
| STD. DEV. | 0.47 0.47 | 2.58 2.58 | 2.00 2.00 | 3.56 2.60 |

Joint occurrence of:

| Significant wave height (m) | | FIJI, FIJI, | | WAVERIDER SOPAC | | WAVERIDER SOPAC | |
|-----------------------------|-------------------------------------|-----------------|----------|-----------------|------------|-------------------|-----------|
| Period | Peak wave period (s) | measuring depth | : 0.00 m | water depth | : 356.00 m | Sampling interval | : 3 hours |
| Period | 1992-09-01 00:00 - 1992-09-30 23:59 | | | | | | 238 recs. |
| Hm0(m) | 0.5 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| Tp(s) | 0.5 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| | / | / | / | / | / | / | / |
| 4.0 - 5.0 | | | | | | | |
| 5.0 - 6.0 | | | | | | | |
| 6.0 - 7.0 | | | | | | | |
| 7.0 - 8.0 | | | | | | | |
| 8.0 - 9.0 | | | | | | | |
| 9.0 - 10.0 | | | | | | | |
| 10.0 - 11.0 | | | | | | | |
| 11.0 - 12.0 | | | | | | | |
| 12.0 - 13.0 | | | | | | | |
| 13.0 - 14.0 | | | | | | | |
| 14.0 - 15.0 | | | | | | | |
| 15.0 - 16.0 | | | | | | | |
| 16.0 - 17.0 | | | | | | | |
| 17.0 - 18.0 | | | | | | | |
| 18.0 - 19.0 | | | | | | | |
| 19.0 - 20.0 | | | | | | | |
| 20.0 - 21.0 | | | | | | | |
| >= 21.0 | | | | | | | |
| | / | / | / | / | / | / | / |
| SUM | 0 | 2 | 97 | 83 | 37 | 19 | / |
| % OF TOTAL | 0.0 | 0.8 | 40.8 | 34.9 | 15.5 | 8.0 | / |
| SUM ACCUM. | 0 | 0 | 2 | 99 | 182 | 238 | 0 |
| SUM. PROB. | 0.00000 | 0.00840 | 0.41020 | 0.76512 | 0.91613 | 0.99588 | 0.99588 |
| MIN. VALUE | 12.5 | 7.7 | 4.7 | 5.7 | 6.7 | | 4.7 |
| AVE. VALUE | 14.0 | 12.2 | 12.0 | 11.2 | 13.6 | | 12.0 |
| MAX. VALUE | 15.4 | 16.7 | 15.4 | 16.7 | 17.0 | | 12.0 |
| STD. DEV. | 1.50 | 1.91 | 2.82 | 3.22 | 5.13 | | 2.85 |
| | / | / | / | / | / | / | / |
| SUM | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 2.1 | 0.6276 | 0.10442 | 0.13389 | 0.19247 | 0.27615 | 0.49372 |
| SUM ACCUM. | 5 | 1.7 | 3.4 | 8 | 14 | 20 | 26 |
| SUM. PROB. | 2.7 | 0.39 | 0.53 | 2.0 | 2.4 | 2.1 | 2.8 |
| MIN. VALUE | 9 | 3.8 | 24 | 32 | 46 | 59 | 10.9 |
| AVE. VALUE | 14 | 5.4 | 1.0 | 1.8 | 1.1 | 1.6 | 1.5 |
| MAX. VALUE | 20 | 8.4 | 66 | 144 | 218 | 312 | 19.3 |
| STD. DEV. | 20 | 8.4 | 118 | 234 | 352 | 522 | 20.3 |
| | / | / | / | / | / | / | / |
| SUM | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 1.7 | 0.51 | 1.0 | 1.6 | 2.1 | 3.3 | 1.0 |
| SUM ACCUM. | 5 | 1.7 | 3.4 | 8 | 14 | 20 | 26 |
| SUM. PROB. | 2.7 | 0.39 | 0.53 | 2.0 | 2.4 | 2.1 | 2.8 |
| MIN. VALUE | 13 | 5.5 | 20 | 33 | 49 | 66 | 10.9 |
| AVE. VALUE | 20 | 8.4 | 223 | 330 | 437 | 532 | 19.3 |
| MAX. VALUE | 29 | 3.8 | 232 | 352 | 472 | 592 | 20.3 |
| STD. DEV. | 29 | 3.8 | 232 | 352 | 472 | 592 | 20.3 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVE. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX. VALUE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STD. DEV. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | / | / | / | / | / | / | / |
| SUM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM. PROB. | 0 | 0 | | | | | |

Joint occurrence of:

| Hm0 | Significant wave height (m) | FIJI, FIJI, | WAVERIDER WAVERIDER | SOPAC SOPAC |
|---------------------------------|-------------------------------------|----------------|------------------------|----------------|
| Tp | Peak wave Period (s) | | | |
| Measuring depth : 0.00 m | | | | |
| Water depth : | 356.00 m | | | |
| Sampling Interval: | 3 hours | | | |
| Period: | 1992.10.01 00:00 - 1992.10.31 23:59 | 247 recs. | | |
| Hm0(m) | 0.0 0.5 1.0 | 1.5 2.0 2.5 | 3.0 3.5 4.0 | 4.5 5.0 5.5 |
| Tp(s) | 0.5 1.0 | 1.5 2.0 | 3.0 3.5 | 4.0 4.5 |
| 4.0 - 5.0 | / / | / / | / / | / / |
| 5.0 - 6.0 | / / | / / | / / | / / |
| 6.0 - 7.0 | / / | / / | / / | / / |
| 7.0 - 8.0 | / / | / / | / / | / / |
| 8.0 - 9.0 | / / | / / | / / | / / |
| 9.0 - 10.0 | / / | / / | / / | / / |
| 10.0 - 11.0 | / / | / / | / / | / / |
| 11.0 - 12.0 | / / | / / | / / | / / |
| 12.0 - 13.0 | / / | / / | / / | / / |
| 13.0 - 14.0 | / / | / / | / / | / / |
| 14.0 - 15.0 | / / | / / | / / | / / |
| 15.0 - 16.0 | / / | / / | / / | / / |
| 16.0 - 17.0 | / / | / / | / / | / / |
| 17.0 - 18.0 | / / | / / | / / | / / |
| 18.0 - 19.0 | / / | / / | / / | / / |
| 19.0 - 20.0 | / / | / / | / / | / / |
| 20.0 - 21.0 | / / | / / | / / | / / |
| >= 21.0 | / / | / / | / / | / / |
| SUM | 0 0 | 20 / | 115 / | 49 / |
| % OF TOTAL | 0.0 0.0 | 8.1 24.3 | 19.8 46.6 | 1.2 0.0 |
| SUM. ACCUM. | 0 0 | 20 0.3226 | 0.3226 0.9839 | 0.9839 0.9960 |
| COR. PROB. | 0.0000 0.0000 | 0.0806 0.3226 | 0.9860 0.9960 | 0.9960 0.9960 |
| MIN. VALUE | 7.4 | 6.5 7.4 | 5.9 6.2 | 7.7 7.8 |
| AVE. VALUE | 12.1 | 12.4 11.0 | 10.8 10.2 | 11.2 11.0 |
| MAX. VALUE | 16.7 | 20.0 15.4 | 15.4 8.7 | 20.0 20.0 |
| STD. DEV. | 2.56 | 3.59 2.58 | 2.71 0.47 | 2.93 2.93 |

Joint occurrence of:

| | Hm0 | Significant wave height (m) | Fiji, | WAVERIDER SOPAC |
|---------------------|-------------------------------------|-----------------------------|--------|-----------------|
| | Tp | Peak wave period (s) | Fiji, | WAVERIDER SOPAC |
| Measuring depth : | 0.00 | | | |
| Water depth : | 356.00 m | | | |
| Sampling Interval : | 3 hours | | | |
| Period : | 1991-11-01 00:00 - 1991-11-30 23:59 | 99 recs. | | |
| | 1992-11-01 00:00 - 1992-11-30 23:59 | 237 recs. | | |
| Hm0 (m) | 0.0 | 0.5 | 1.0 | 1.5 |
| Tp (s) | / | 0.5 | 1.0 | 1.5 |
| | / | / | / | / |
| 4.0 - 5.0 | / | 2 | / | / |
| 5.0 - 6.0 | / | 6 | 4 | 1 |
| 6.0 - 7.0 | / | 4 | 20 | 22 |
| 7.0 - 8.0 | / | 5 | 12 | 26 |
| 8.0 - 9.0 | / | 5 | 6 | 21 |
| 9.0 - 10.0 | / | 6 | 5 | 6 |
| 10.0 - 11.0 | / | 14 | 11 | 5 |
| 11.0 - 12.0 | / | 16 | 13 | 6 |
| 12.0 - 13.0 | / | 16 | 9 | 3 |
| 13.0 - 14.0 | / | 4 | 9 | 3 |
| 14.0 - 15.0 | / | 7 | 6 | 3 |
| 15.0 - 16.0 | / | 8 | 4 | 2 |
| 16.0 - 17.0 | / | 1 | 6 | 5 |
| 17.0 - 18.0 | / | 3 | 2 | 7 |
| 18.0 - 19.0 | / | 2 | 1 | |
| >= 19.0 | / | | | |
| SUM TOTAL | 0 | 0 | 69 | 101 |
| % OF TOTAL | 0.0 | 0.0 | 20.5 | 30.1 |
| SUM ACCUM. | 0 | 0 | 69 | 170 |
| CUM. PROB. | 0.0000 | 0.0000 | 0.2047 | 0.5045 |
| MIN. VALUE | | | 0.8309 | 0.9763 |
| AVE. VALUE | | | 0.9204 | 0.9822 |
| MAX. VALUE | | | 9.9 | 10.1 |
| STD. DEV. | | | 2.48 | 3.25 |

Joint occurrence of:

Joint occurrence of:

Joint occurrence of:

Joint occurrence of:

| Hm0 Tp | Significant wave height (m) Peak wave period (s) | FIJI, FIJI, | WAVERIDER SOPAC WAVERIDER SOPAC |
|--------------------|---|----------------|------------------------------------|
| Measuring depth : | 0.00 m | | |
| Water depth : | 356.00 m | | |
| Sampling interval: | 3 hours | | |
| Period : | 1991.12.01 00:00 - 1991.12.31 23:59 | 242 recs. | |
| | 1992.12.01 00:00 - 1992.12.31 23:59 | 157 recs. | |
| Hm0(m) | 0.0 | 0.5 | 1.0 |
| Tp(s) | / | / | / |
| 4.0 - 5.0 | 1 | 5 | 2 |
| 5.0 - 6.0 | 1 | 13 | 7 |
| 6.0 - 7.0 | 2 | 15 | 8 |
| 7.0 - 8.0 | 2 | 14 | 1 |
| 8.0 - 9.0 | 4 | 22 | 8 |
| 9.0 - 10.0 | 7 | 13 | 3 |
| 10.0 - 11.0 | 21 | 5 | 1 |
| 11.0 - 12.0 | 29 | 17 | 2 |
| 12.0 - 13.0 | 14 | 16 | 13 |
| 13.0 - 14.0 | 6 | 11 | 8 |
| 14.0 - 15.0 | 4 | 7 | 4 |
| 15.0 - 16.0 | 2 | 6 | 1 |
| 16.0 - 17.0 | 2 | | |
| 17.0 - 18.0 | | | |
| 18.0 - 19.0 | | | |
| 19.0 - | | | |
| SUM TOTAL | 0 | 89 | 141 |
| % OF TOTAL | 0.0 | 22.3 | 35.3 |
| SUM ACCUM. | 0.0 | 0.0 | 0.0 |
| COR. PROB. | 0.0000 | 0.0000 | 0.02225 |
| MIN. VALUE | 0.0 | 0.5750 | 0.5750 |
| AVE. VALUE | 5.0 | 5.4 | 5.9 |
| MAX. VALUE | 11.2 | 10.2 | 10.5 |
| STD. DEV. | 1.65 | 2.54 | 2.70 |
| | | | |
| SUM TOTAL | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0.0 | 0.0 | 0.0 |
| COR. PROB. | 0.0000 | 0.0000 | 0.0000 |
| MIN. VALUE | 0.0 | 0.5 | 0.5 |
| AVE. VALUE | 0.5 | 0.6 | 0.6 |
| MAX. VALUE | 0.8 | 0.8 | 0.8 |
| STD. DEV. | 0.00 | 0.00 | 0.00 |
| | | | |
| SUM TOTAL | 0 | 0 | 0 |
| % OF TOTAL | 0.0 | 0.0 | 0.0 |
| SUM ACCUM. | 0.0 | 0.0 | 0.0 |
| COR. PROB. | 0.0000 | 0.0000 | 0.0000 |
| MIN. VALUE | 0.0 | 0.0 | 0.0 |
| AVE. VALUE | 0.0 | 0.0 | 0.0 |
| MAX. VALUE | 0.0 | 0.0 | 0.0 |
| STD. DEV. | 0.00 | 0.00 | 0.00 |

APPENDIX B

WAVE STATISTICS FOR 1992

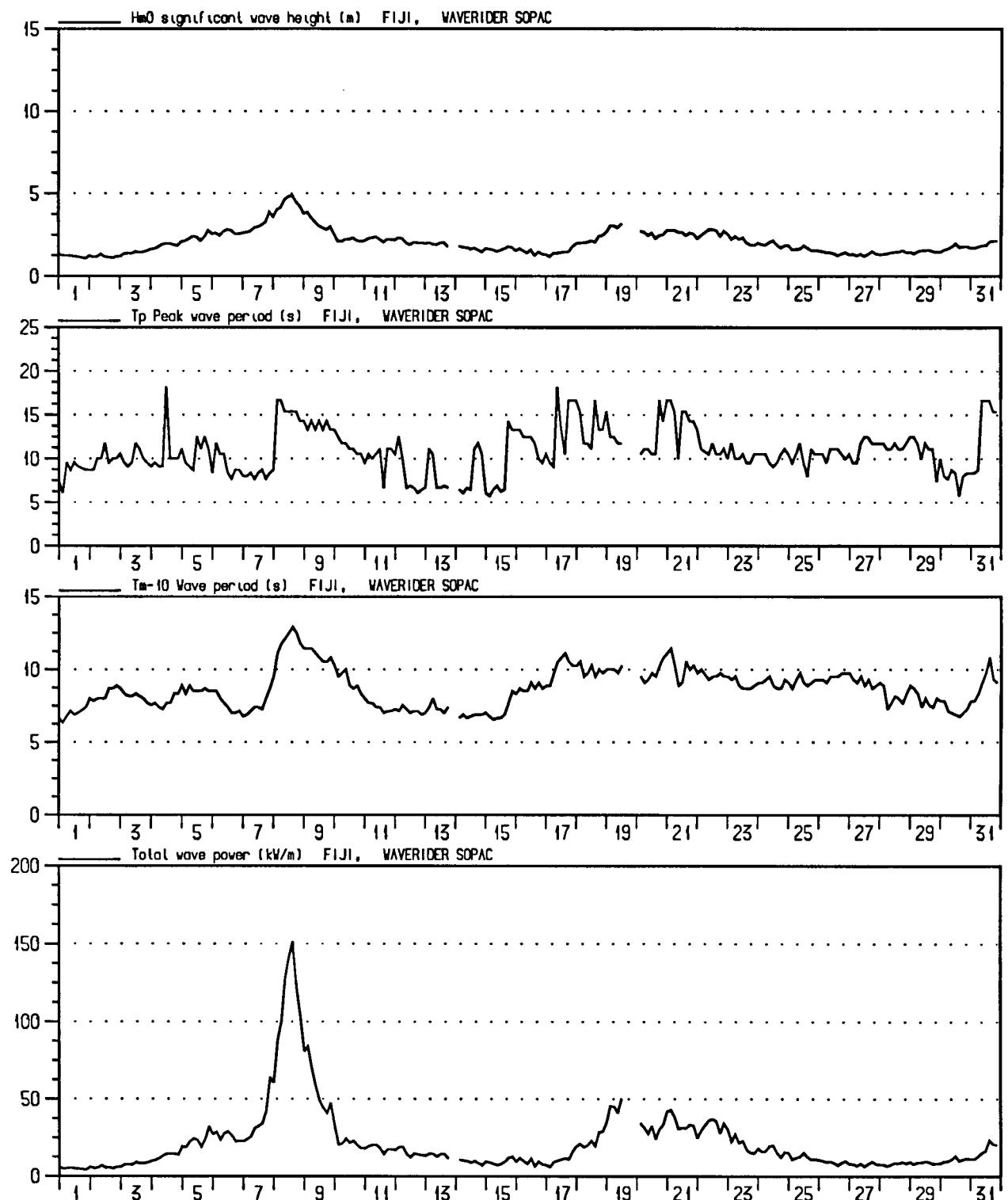
KADAVU

OCEANOR/28400 REP93/KADAVU/esk/93.11.22

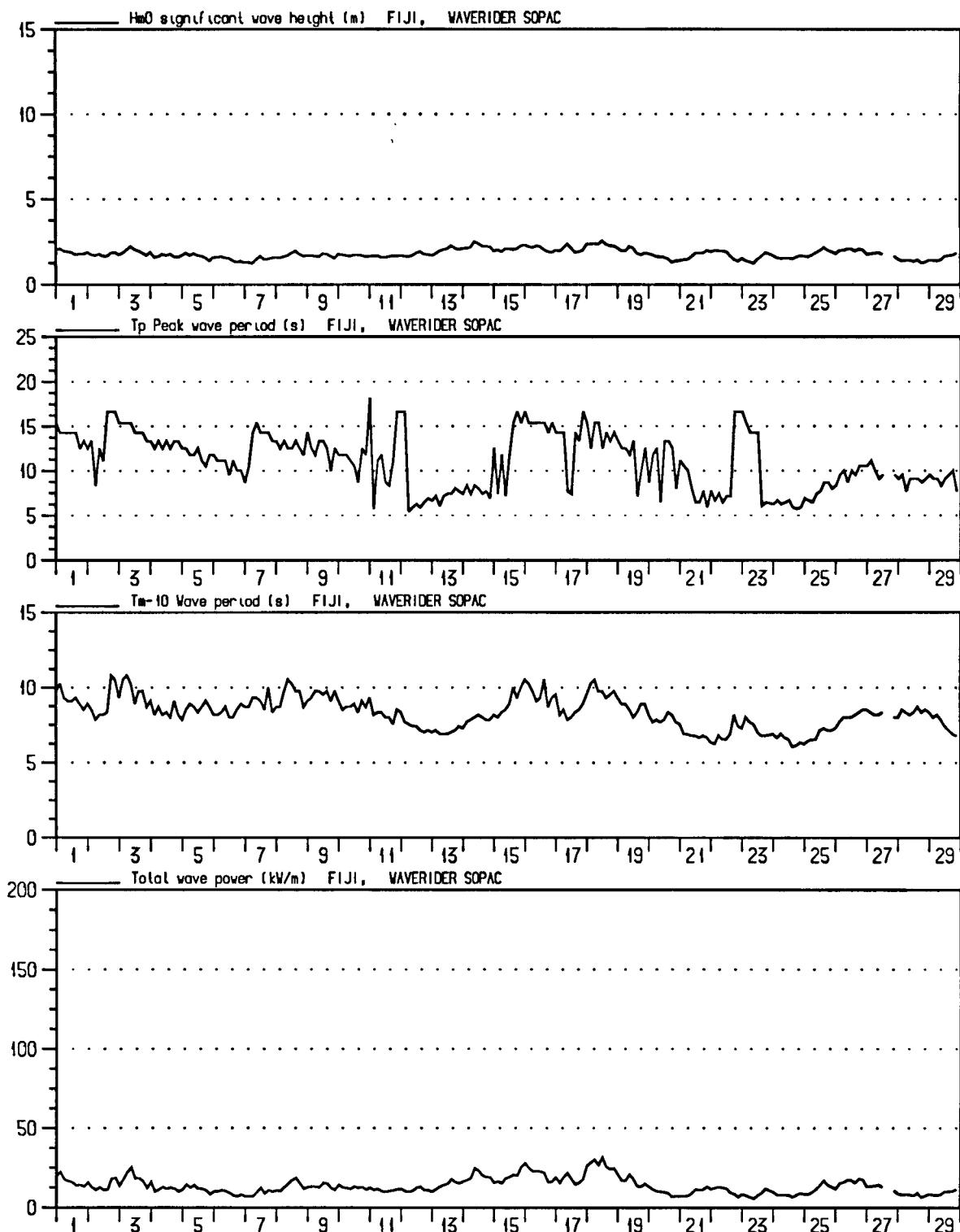
The following plots and tables are presented:

- a) Time series plots of Hm0, Tp, Tm-10 and JTot for each month.
- b) Joint frequency of occurrence tables of

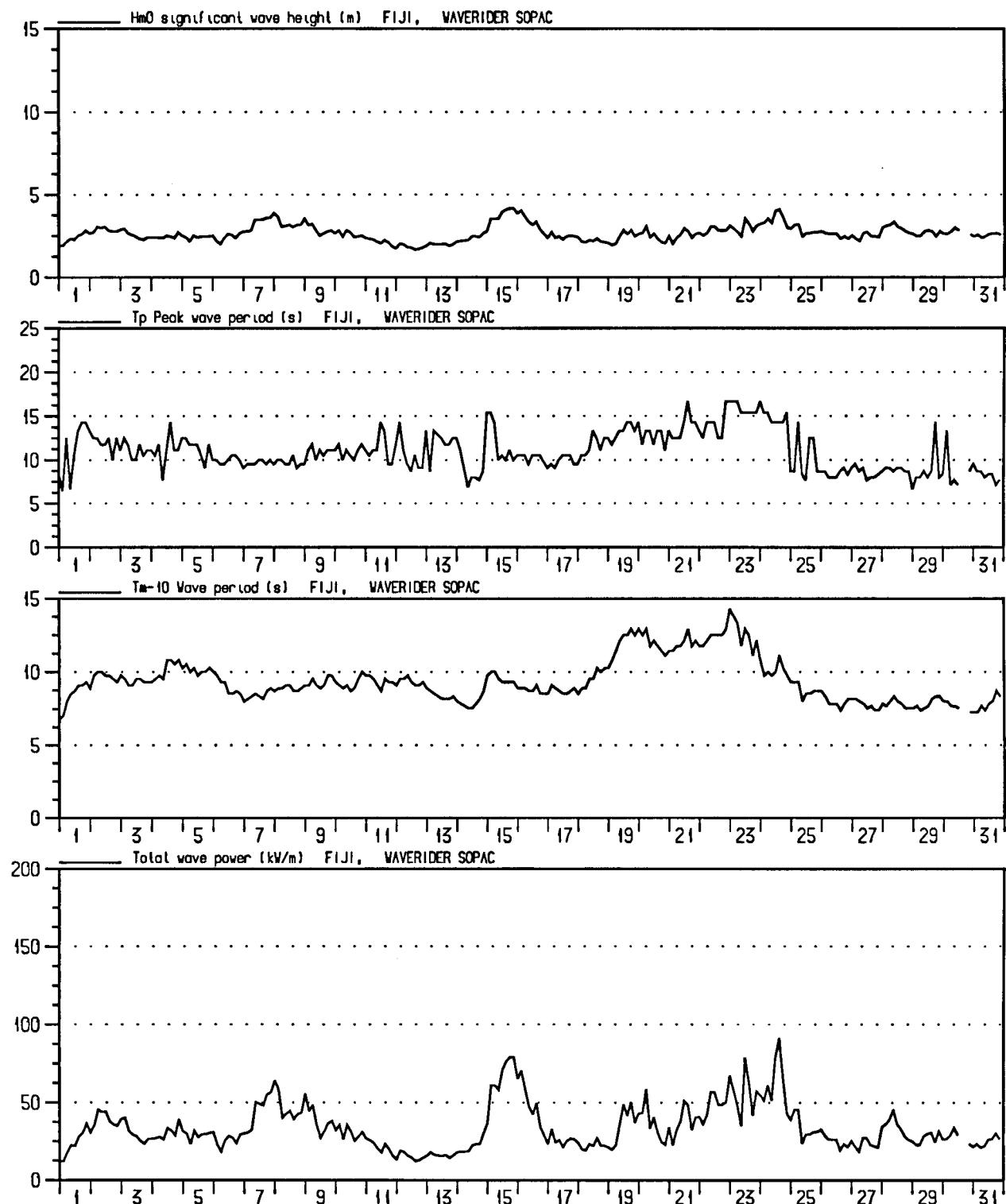
Hm0 - Tp
Hm0 - Tm-10
Hm0 - JTot



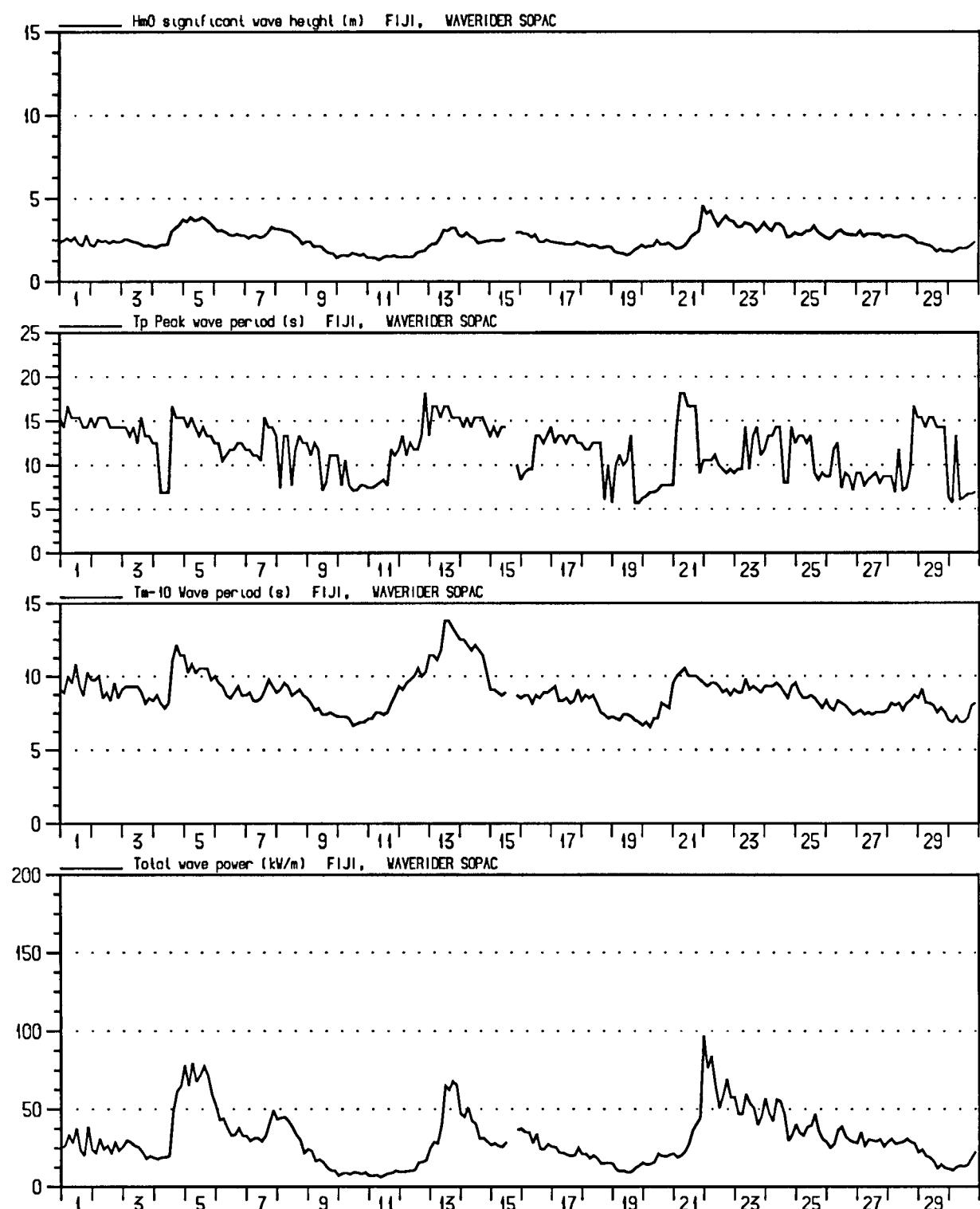
| FIJI | | | | INSTRUMENT WAVERIDER |
|------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.01.01-1992.01.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |



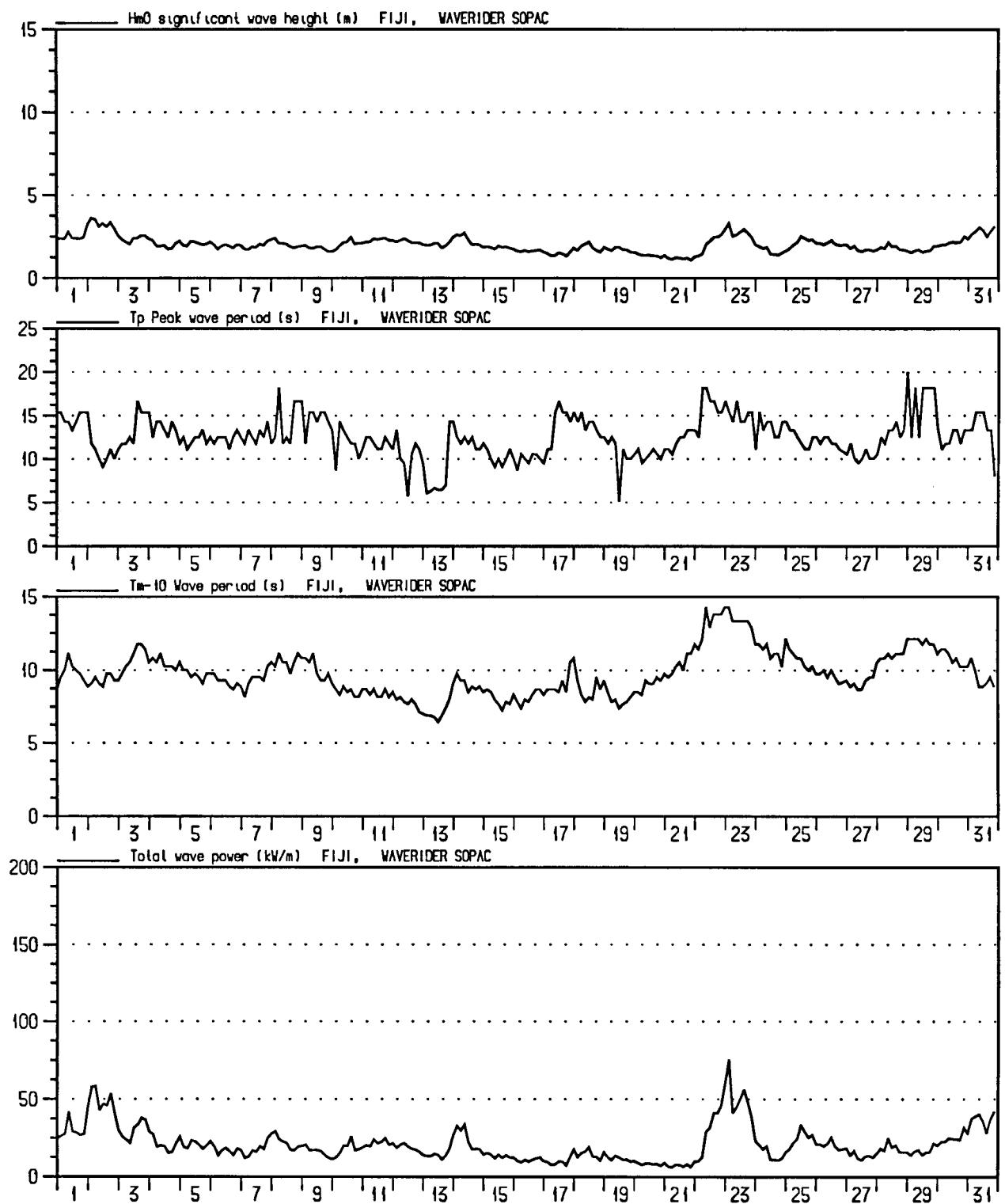
| FIJI | | | | INSTRUMENT WAVERIDER |
|------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.02.01-1992.02.29 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |



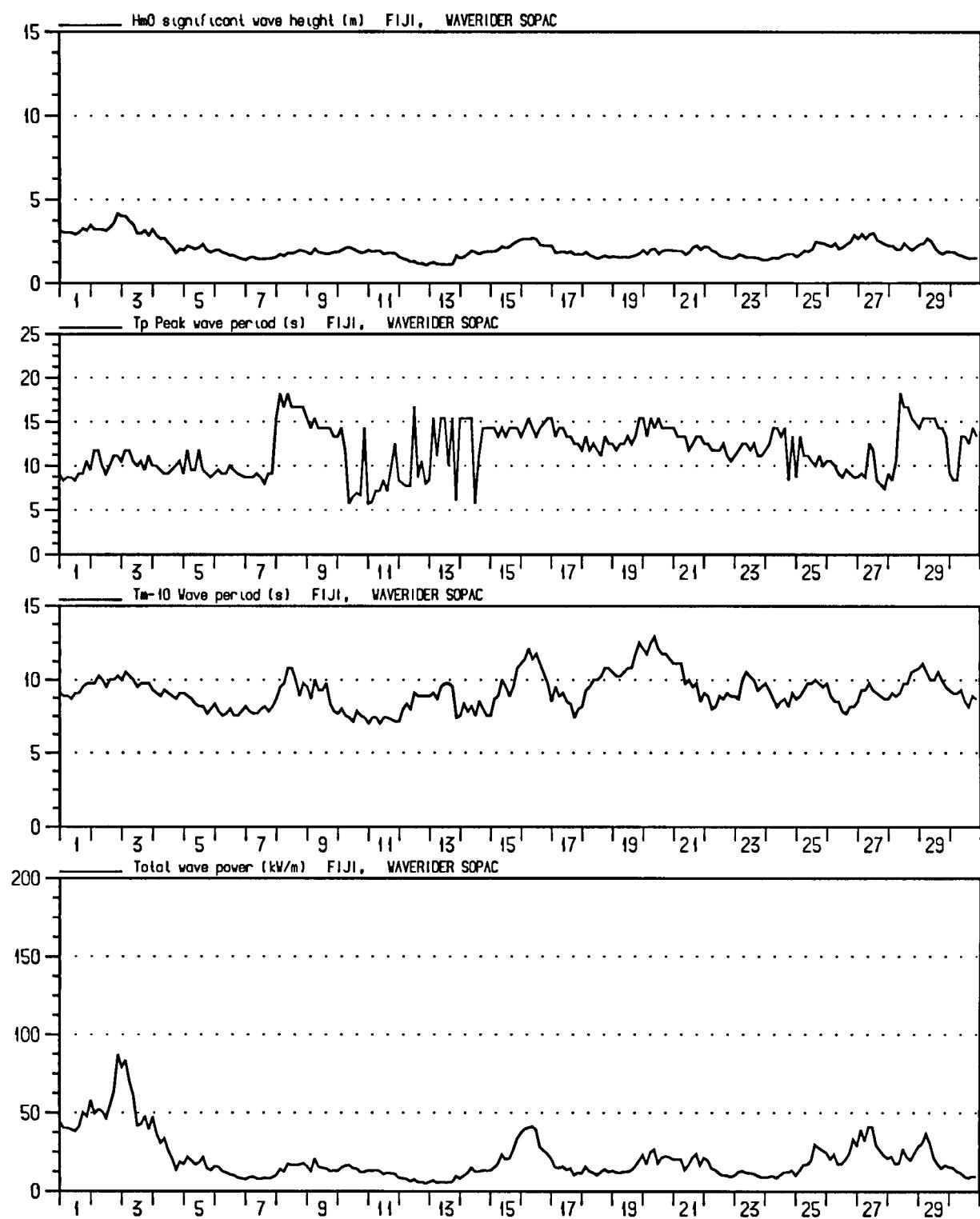
| FIJI | | | | INSTRUMENT WAVERIDER |
|------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.03.01-1992.03.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |



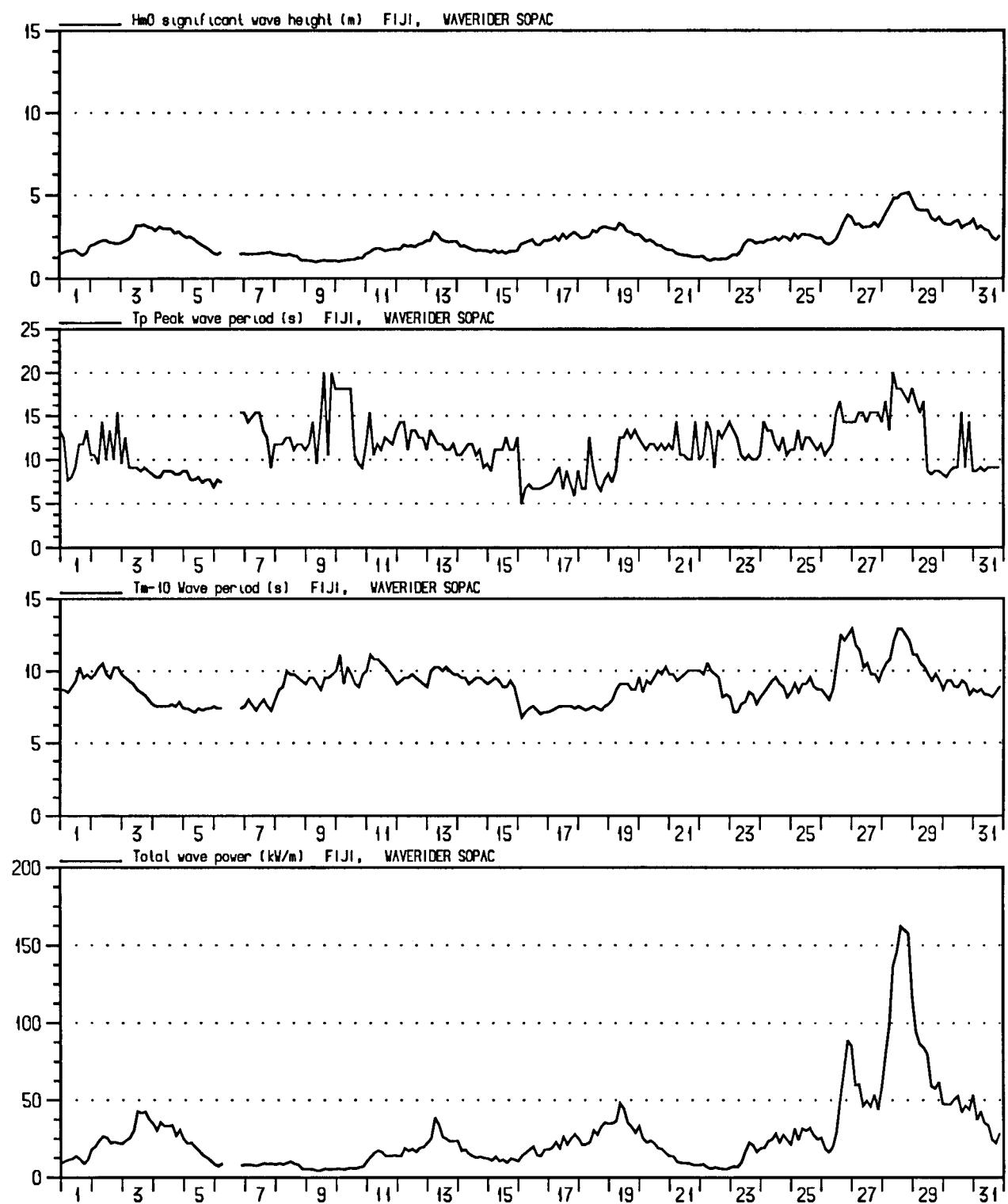
| | | | | |
|------------------|------------------------------------|----------------------|--------------------------|---|
| FIJI | | | | INSTRUMENT WAVERIDER |
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.04.01-1992.04.30 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | PROJECT 28400 | FIGURE 1 | |



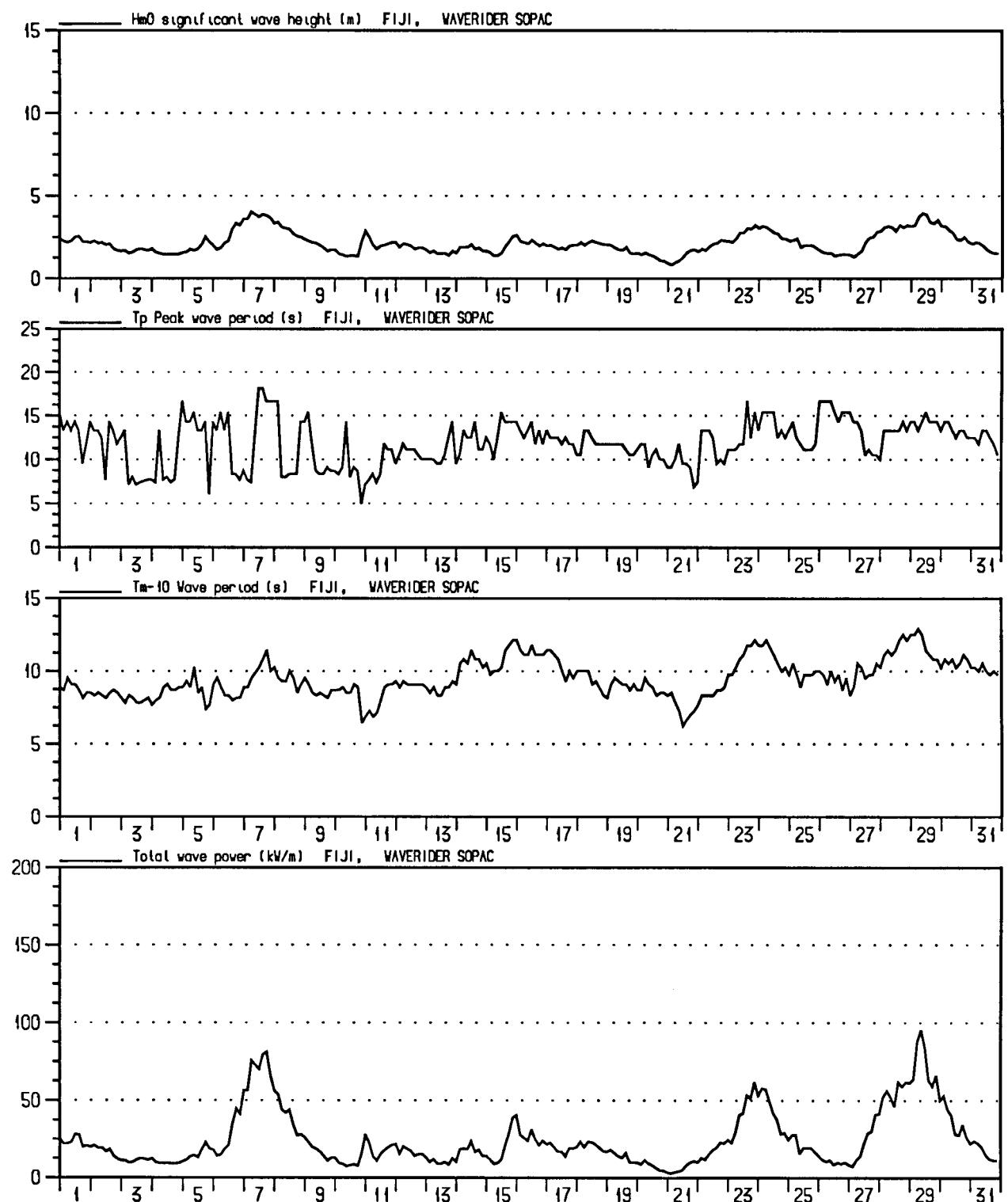
| | | | | |
|------------------|------------------------------------|----------------------|--------------------------|---|
| FIJI | | | | INSTRUMENT WAVERIDER |
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.05.01-1992.05.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | PROJECT 28400 | FIGURE 1 | |



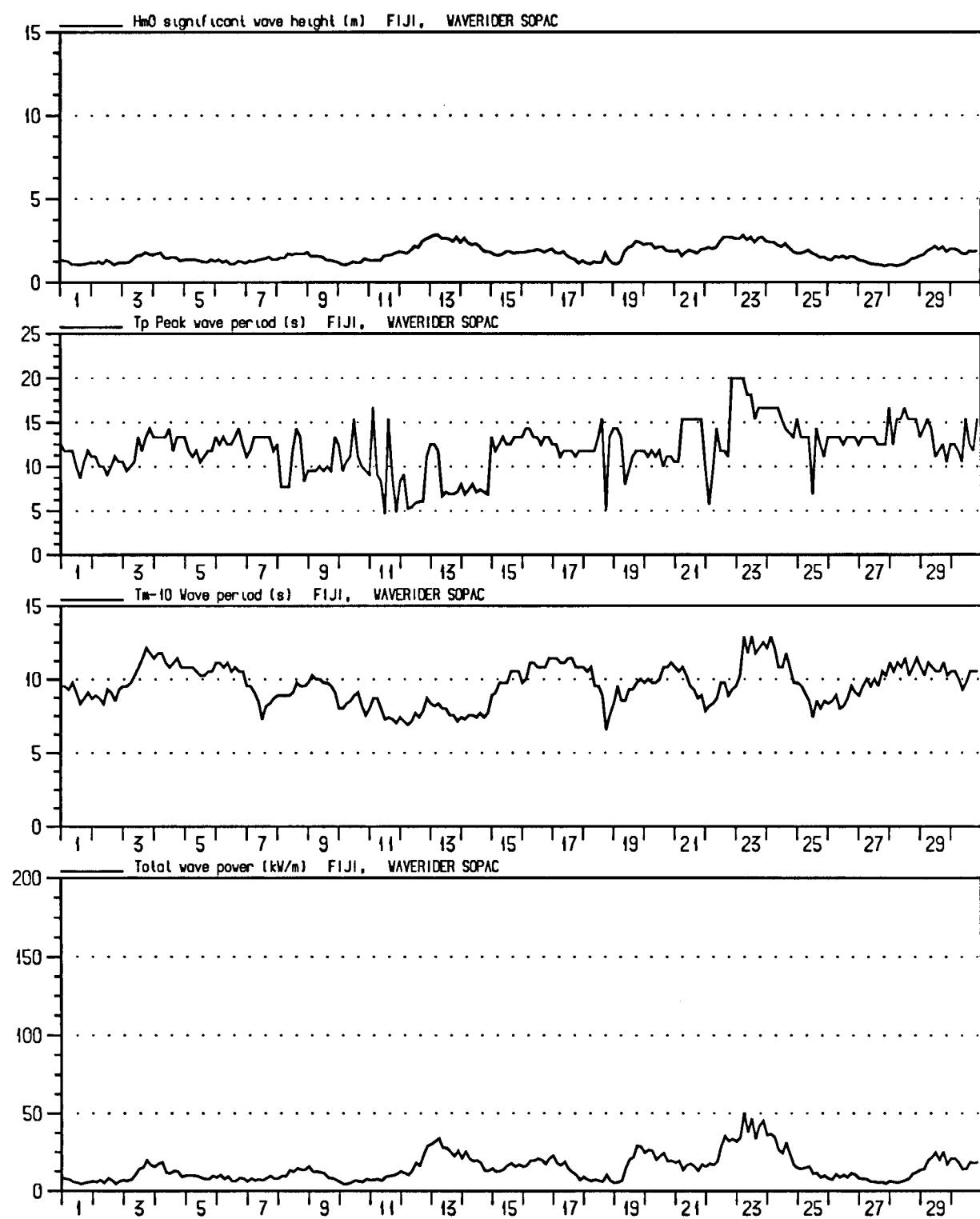
| | | | |
|------------------|------------------------------------|----------------------|--|
| FIJI | | | INSTRUMENT WAVERIDER |
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | PROJECT 28400 | OBSERVATION PERIOD 1992.06.01-1992.06.30 gmt FIGURE 1 |



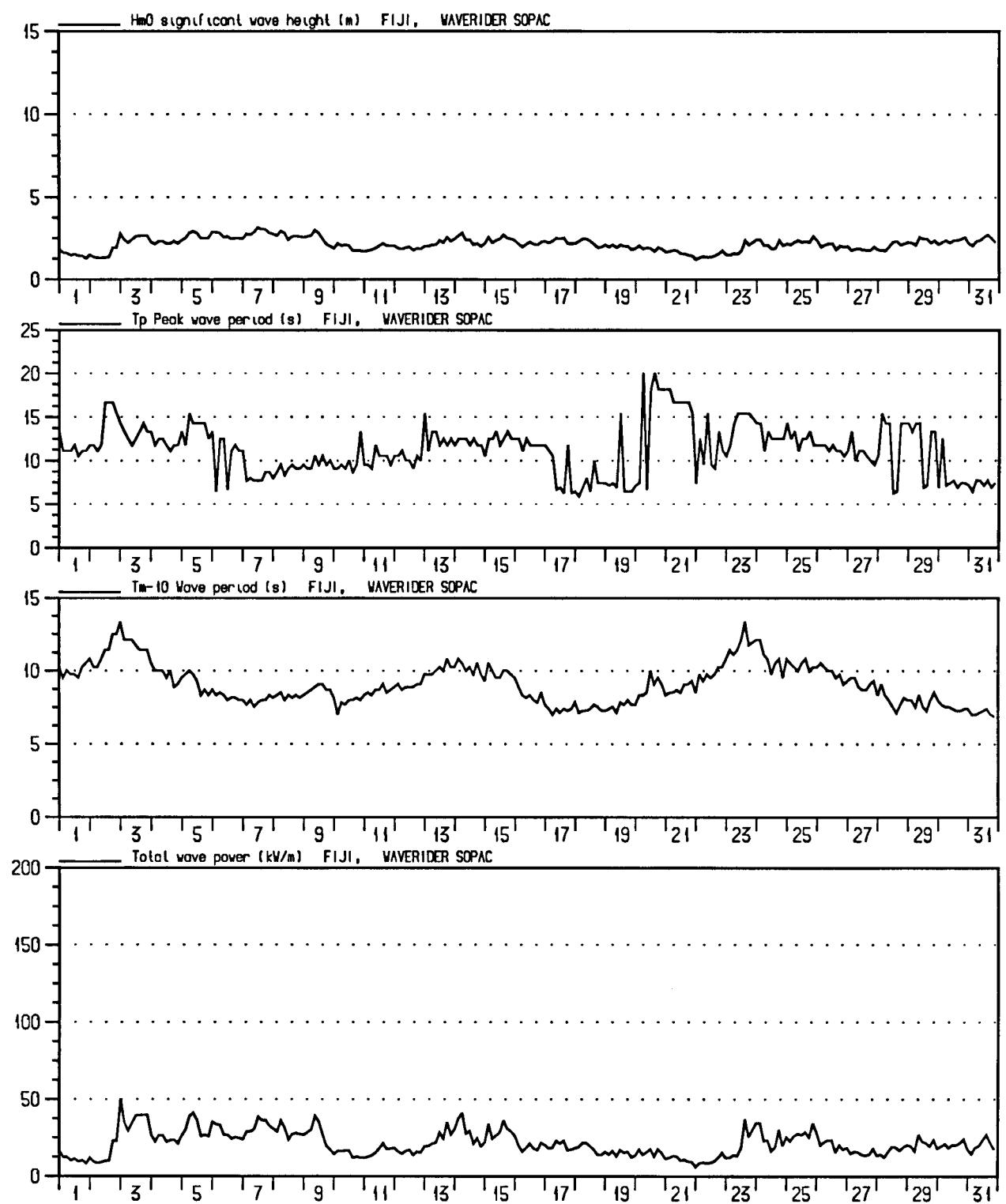
| FIJI | | | | INSTRUMENT WAVERIDER |
|------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.07.01-1992.07.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |



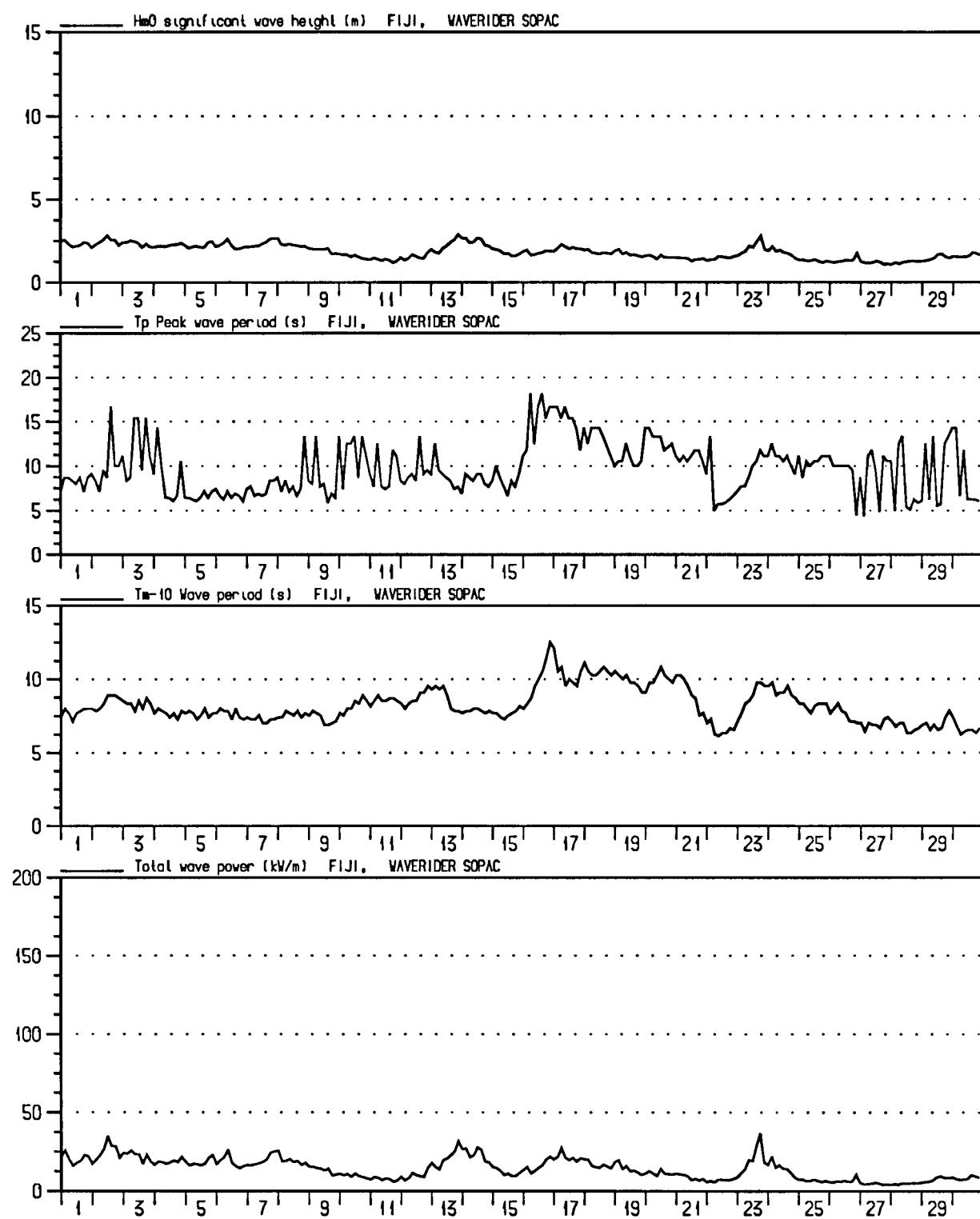
| FIJI | | | | INSTRUMENT WAVERIDER |
|------------------|------------------------------------|----------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.08.01-1992.08.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |



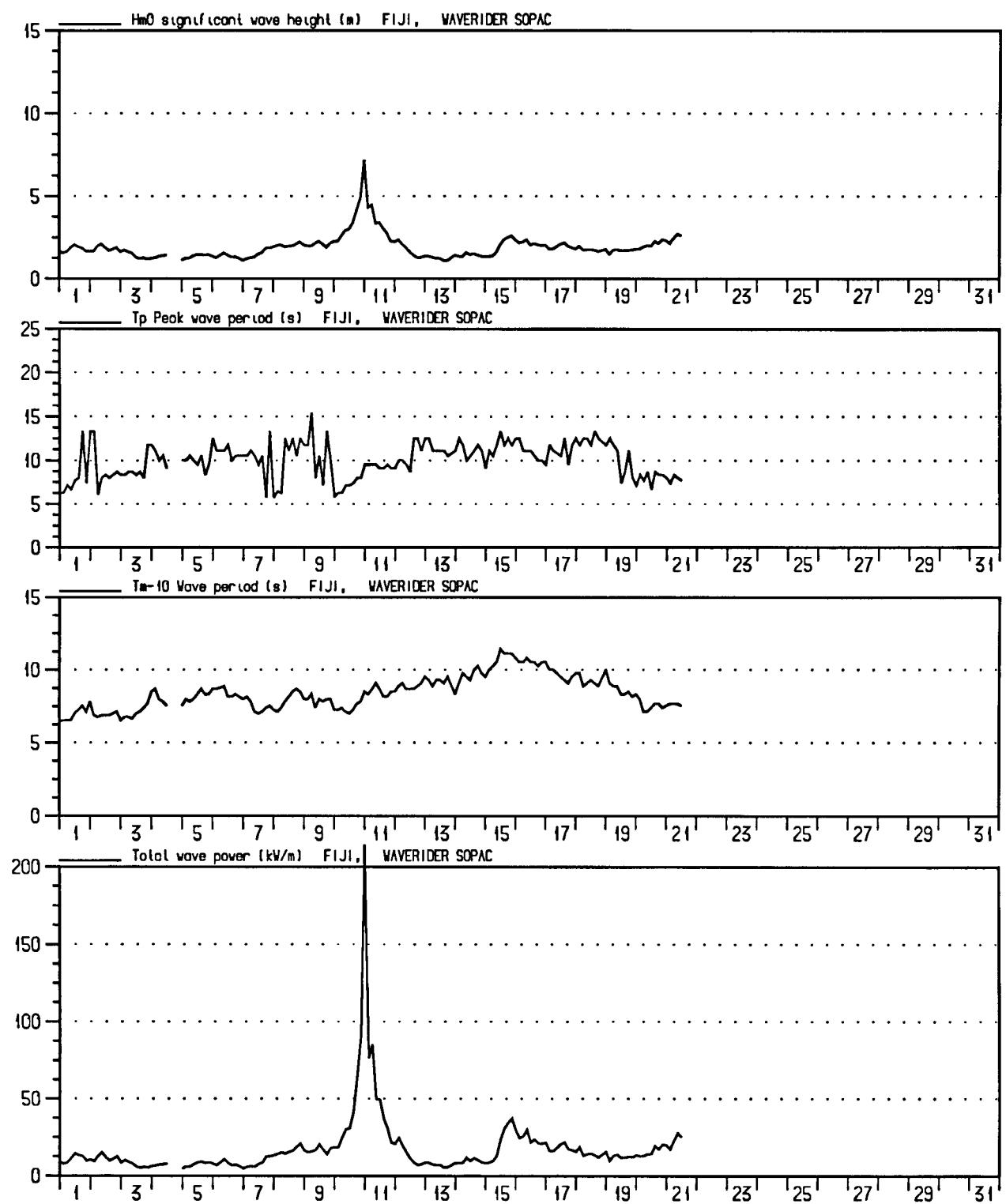
| FIJI | | | | INSTRUMENT WAVERIDER |
|------------------|---------------|------------------------------------|--------------------------|---|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.09.01-1992.09.30 gmt |
| OCEANOR | | OCEANOGRAPHIC COMPANY OF NORWAY | PROJECT 28400 | FIGURE 1 |



| | | | | |
|--|---------------|----------------------|--------------------------|---|
| FIJI | | | | INSTRUMENT WAVERIDER |
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.10.01-1992.10.31 gmt |
| OCEANOR <i>OCEANOGRAPHIC COMPANY OF NORWAY</i> | | PROJECT 28400 | FIGURE 1 | |



| FIJI | | | | | INSTRUMENT WAVERIDER |
|------------------|---------------|--|--------------------------|---|-------------------------|
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.11.01-1992.11.30 gmt | |
| <i>OCEANOR</i> | | <i>OCEANOGRAPHIC COMPANY OF NORWAY</i> | PROJECT 28400 | FIGURE 1 | |



| | | | | |
|------------------|--|----------------------|--------------------------|---|
| FIJI | | | | INSTRUMENT WAVERIDER |
| LOCATION FIJI | STATION 01 | WATER DEPTH 356 m | INSTRUMENT HEIGHT 0 m | OBSERVATION PERIOD 1992.12.01-1992.12.31 gmt |
| OCEANOR | OCEANOGRAPHIC COMPANY OF NORWAY | | PROJECT 28400 | FIGURE 1 |

Joint occurrence of:

Hm0 Hm0 significant wave height (m) FIJI, WAVERIDER SOPAC
Jtot Total wave power (kW/m) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.01.01 00:00 - 1992.12.31 23:59

Joint occurrence of:

H_m0 significant wave height (m) FIJI, WAVERIDER SOPAC
 T_{m-10} Tr-10 Wave period (s) FIJI, WAVERIDER SOPAC

Joint occurrence of:

Hm0 Significant wave height (m) FIJI, WAVERIDER SOPAC
Tp Peak wave period (s) FIJI, WAVERIDER SOPAC

Measuring depth : 0.00 m
Water depth : 356.00 m
Sampling interval: 3 hours
Period : 1992.01.01 00:00 - 1992.12.31 23:59