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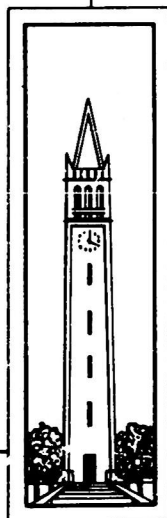
SERIES 3
ISSUE 356

WAVE RESEARCH LABORATORY

SUMMARY OF WAVE DATA
FOR CAPE MENDOCINO, CALIFORNIA

BY
J. W. JOHNSON

NOVEMBER 1953



UNIVERSITY OF CALIFORNIA

University of California
College of Engineering
Submitted under contract N70nr295(28)
with the Office of Naval Research NR 083-008
and the Bureau of Ships, Index No. NE120219-5

Institute of Engineering Research
Waves Research Laboratory
Technical Report

Series 3 Issue 356

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Wave data for the vicinity of Cape Mendocino, California have been compiled both from visual observations and from the hindcasting procedure. The visual observations were made by personnel on the Blunts Reef Lightship (Figure 1). These observations were made every six hours (0430 PST, 1030 PST, 1630 PST, and 2230 PST) and transmitted to the U.S. Weather Bureau in San Francisco, where the wave height, period and direction were entered in code on the charts issued for each of these six hour periods. The weather charts for the three year period for September 1, 1949 through August 31, 1952 were procured and the wave data summarized into the wave roses shown in Figure 2. These diagrams show the percent of time that various wave height and periods occurred during the various months of the year, as averaged from the three years of record. The sum of the bars on each of these roses is equal to 100 percent.

In addition to the Lightship data summarized in Figure 2, wave roses are available for the location offshore in deep water (Latitude 40.0°N, Longitude 125.0°W.) shown in Figure 1. These data, shown in Figure 3, were prepared by the Scripps Institution of Oceanography* by hindcasting from weather charts for the three year period, 1936-1938, inclusive. The diagrams in Figure 3 show the percentage of time that waves of various heights occur during three periods throughout the year -- the "summer" period, the "winter" period, and a "transition" period.

It should be noted that the waves as visually observed at the Lightship, include waves generated by local winds. These local wind waves tend to obscure the long period swell from distant storms. The hindcasting procedure, on the other hand, gives primary attention to the longer period waves. The data in Figure 3, consequently, would tend to show a greater average wave height than would be expected from Figure 2. Although both sets of data are relatively crude compared with data obtained by recording wave gages, the information is the only available for this reach of the California coast, and probably is correct as to general order of magnitude and frequency of occurrence.

* A Statistical Study of Wave Conditions at Five Open Sea Locations along the California Coast, Scripps Institution of Oceanography, Wave Report No. 68, July 1, 1947.

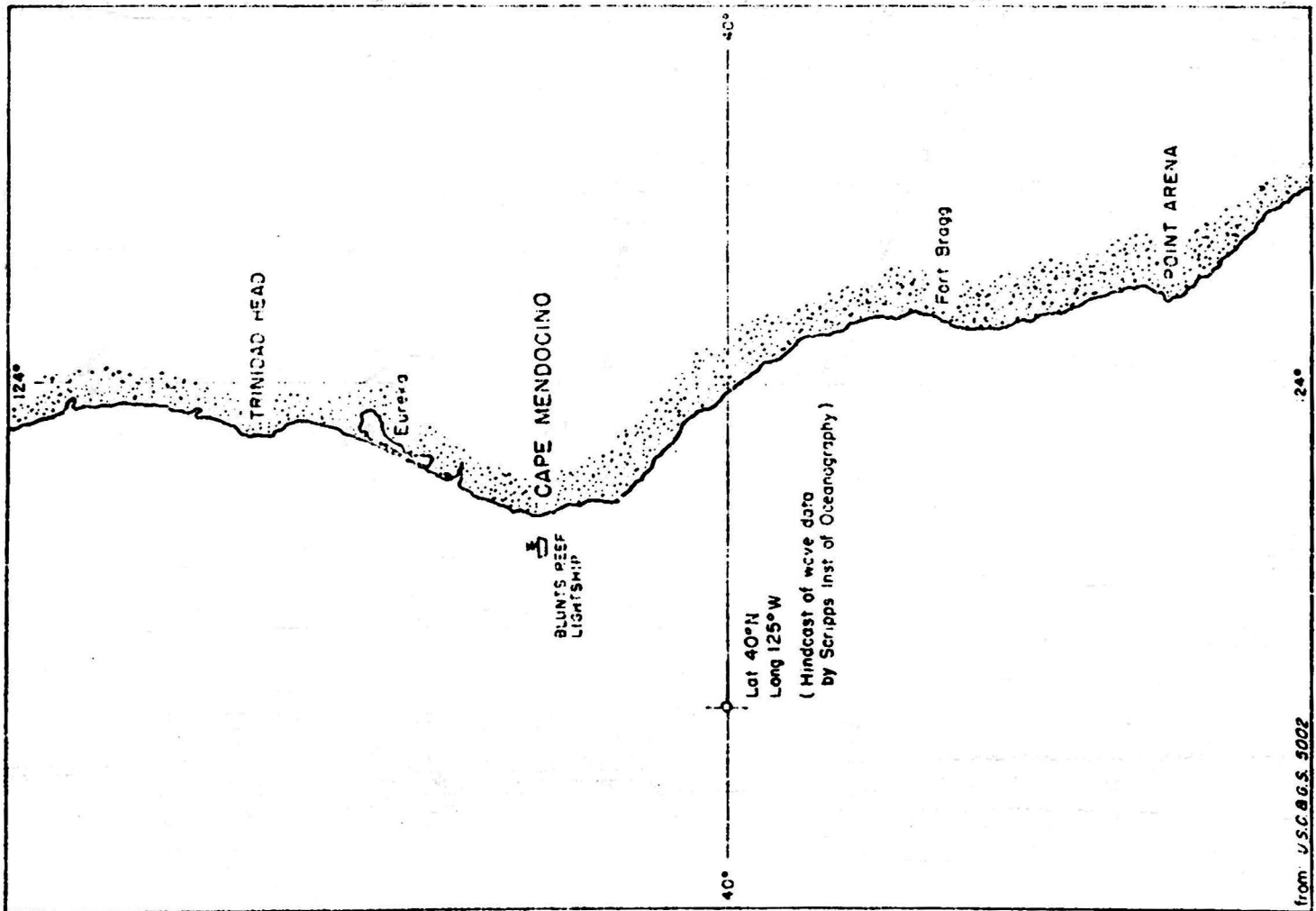
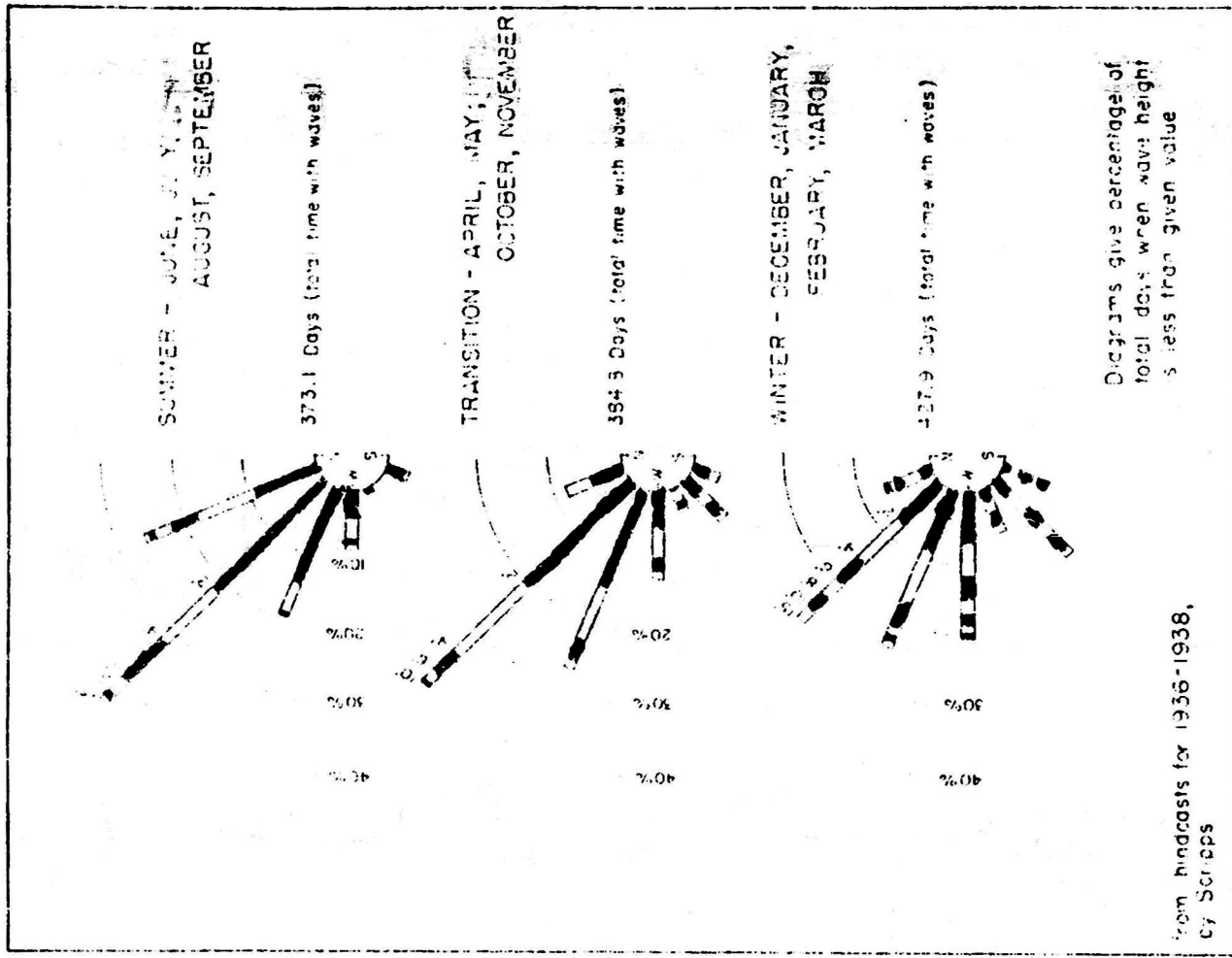


FIGURE 1

VICINITY MAP

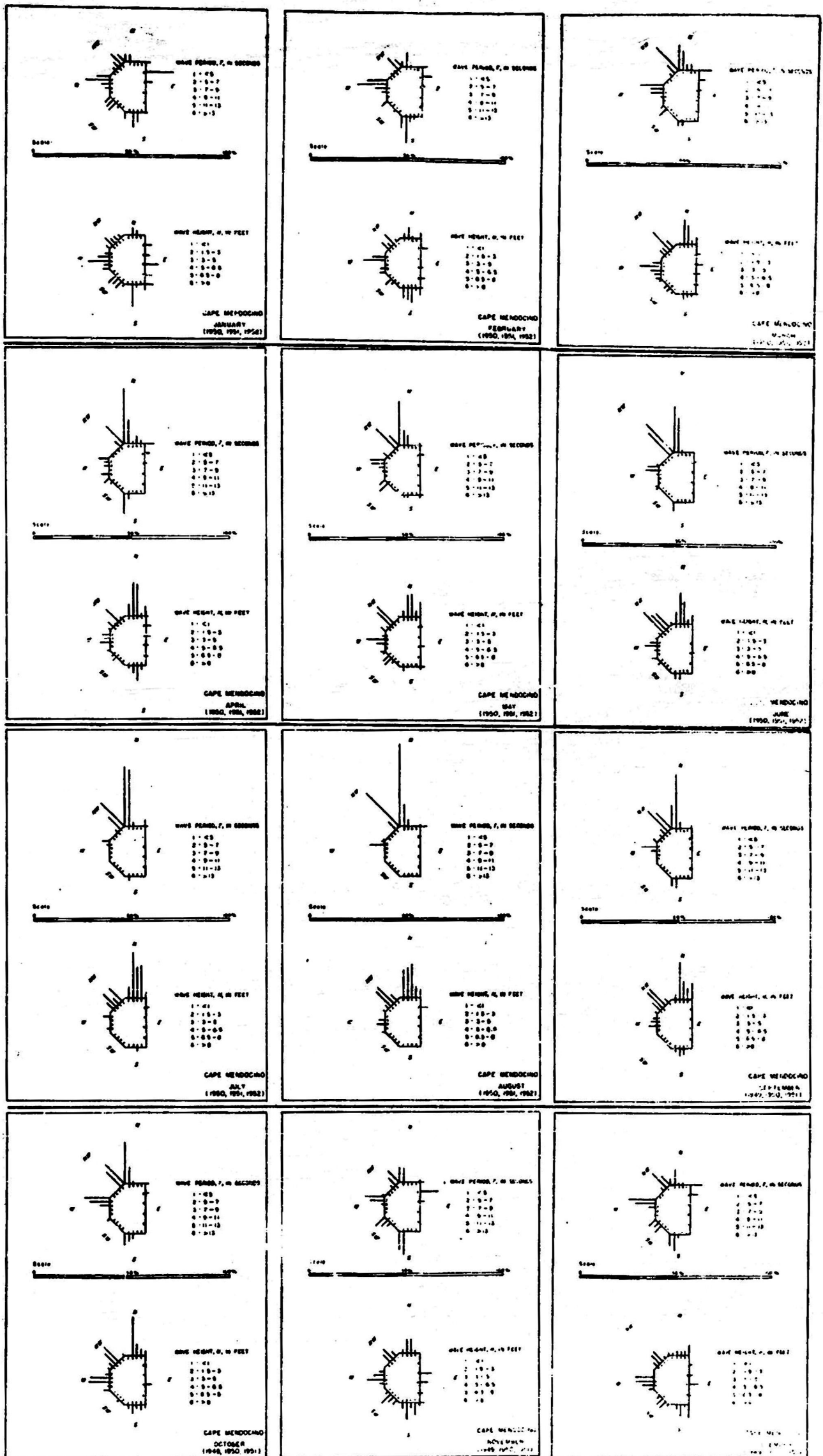
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WAVE ROSES, OFF CAPE MENDOCINO
(Latitude 40°N, Longitude 125°W)

FIGURE 3



WAVE ROSES, BLUNTS REEF LIGHTSHIP

FIGURE 2

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