

A COMPARISON OF STORM-WAVE AND TRADEWIND-WAVE ENERGIES
OFF KANEOHE BAY, OAHU, HAWAII

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ABSTRACT

Sea-surface elevations were measured outside the reef protecting Kaneohe Bay, Oahu, Hawaii, from 22 January to 8 August, 1971, in a study of the wave energy associated with storm waves and tradewind waves approaching the Bay. When energy spectra of the storm waves were compared with those of the tradewind waves, it was found that: (1) Strong local tradewinds produce more wave energy than do distant storms in the north or south Pacific. (2) Strong local tradewinds produce twice as much wave energy as do weak local tradewinds. (3) The tradewinds produce more wave energy than do local southerly winds. (4) The effect of Hurricane Denise, which passed southeast of Hawaii, was negligible.