INVESTIGATION OF SEA WAVES AT INFLUENCE OF DEEP CYCLONES

D.P. Kovalev

Institute of Marine Geology and Geophysics, Far Eastern Branch of Russian Academy of Sciences, Yuzhno-Sakhalinsk, Russia

Abstract. Data of full-scale experiments in a coastal zone is analyzed at passage of deep cyclones, the interval of time during three deep cyclones influenced on areas of observation has been chosen. Interest is represented by generation of long-wave processes at passage of cyclones with different meteorological parameters at various directions of the approach to coast. The data of Sakhalin meteorological service for drawing up of a weather conditions maps were used in the paper, the meteorological data received from a digital weather station and also spectral characteristics of a hydrostatic pressure fluctuations (sea level) in points of observation are analyzed. Frequencies of long-wave generation caused by cyclones have been determined. The special attention was given to a range of the periods of swell and waves. Generation of a swell on uncharacteristic frequencies is determined at the approach of a cyclone with the subsequent displacement in the frequency range.

Keywords: wave processes, deep cyclones, swell, waves, resonant frequencies.