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Sakhalin island coastal zone wave dynamics under the ice: in-situ measurements and observed data analysis

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The results of the analysis of sea level fluctuations observation data in the southeast shelf of Sakhalin Island are described. Two autonomous pressure gauges were placed under ice in February, 2007, and were picked up in June, 2007, near the Ostry cape. The collapse depth was about 8 meters, ice thickness was more than 40 cm. Main goal of research was make comparison between under ice wave field and a free surface. Also the fact of full absence of energy in the field of wind waves in a spectrum of fluctuations during ice cover time is presented, but for surge waves peaks on periods about 21 seconds are presented in all cases. Various wave regimes were studied in detail by methods of the spectral analysis. Comparison for spectra with summer season 2006 also was made. Spectra for different weather conditions were provided. Program package for data processing under Matlab environment was also developed. This work was supported by RFBR, grant No 06-05-64087.