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Internal Waves in the Black Sea

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The archival data of internal wave observations in the Black Sea during 27th cruise of RV “Professor Kolesnikov” are used to estimate their characteristics (speed of propagation, dispersive and nonlinear parameters, soliton polarity and amplitude, occurrence frequency). The polarity of internal solitons is negative everywhere, their heights do not exceed 2 m. Also the variation of surfactant concentration on the sea surface induced by the internal waves in the Black Sea is computed; this is necessary to determine the “visibility” of internal waves.

Generation of internal waves in the Black Sea is studied numerically within 2D full-nonlinear Euler equations using two types of source: wind stress and tsunami waves. Preliminary results of this study are presented.