Geophysical Research Abstracts
Vol. 16, EGU2014-1347, 2014
EGU General Assembly 2014


# Nonlinear Internal Waves in the Sankhar Lake (Russia)

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Sankhar Lake is located in the centre of Russia. The mean depth is 5 m, and maximal depth is 15 m. It is a stratified lake with maximal buoyancy frequency 0.02 Hz. Density stratification of this lake has been studied in the field survey. These data are used to compute the characteristics of internal waves using the Korteweg-de Vries model. Calculated speed of wave propagation is 0.25 m/s, dispersive parameter is 1.6 m3/s, coefficient of quadratic nonlinearity is – 0.042 1/s, and the coefficient of cubic nonlinear term is -0.014 1/mc. Solitary waves (solitons) have negative polarity and its height can not exceed 2 – 2.5 m.