



The characteristics of Lake Baikal's internal wave spectrum

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Lake Baikal is the most voluminous and deepest (over 1.6 Km) fresh water body on earth holding 80% of the world's fresh water supplies. The lake supports a remarkable biodiversity with a major deep-water fauna composed almost entirely of endemic species. Due to the lake's great depth only the top 250 m are experiencing the direct effects of the wind. The deeper part of the lake is barely stratified and has a constant temperature all year round. A distinct peak is observed in the temperature Fourier spectrum around the inertial frequency almost at all times and at all depths. Here we investigate the particularities of the internal wave spectrum using the wavelet transform. We focus on the inertial frequency band and study the propagation through time and depth. Our goal is to evaluate the importance of the internal oscillations to the mixing and to correlate them to external forcing.