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Atanas Stefanov* (stefanov@ku.edu), Department of Mathematics, 1460, Jayhawk Blvd., Lawrence, KS 66045, and **Iurii Posukhovskiyi**. *On the ground states of the Ostrovskiyi equation and their stability.*

The Ostrovskiyi (Ostrovskiyi-Vakhnenko/short pulse) equations are ubiquitous models in mathematical physics. They describe water waves under the action of a Coriolis force as well as the amplitude of a “short” pulse in an optical fiber.

We rigorously construct ground traveling waves for these models. The existence argument proceeds via the method of compensated compactness, but it requires surprisingly detailed Fourier analysis arguments to rule out the non-triviality of the limits of the minimizing sequences. In addition, we show that the waves are strongly spectrally stable, along with other properties: smoothness with respect to parameters, weak non-degeneracy of the waves etc. (Received September 05, 2018)