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Stanley Snelson*, Department of Mathematical Sciences, Florida Institute of Technology, 150 W. University Blvd, Melbourne, FL 32901. *Asymptotic stability in the variable-speed ϕ^4 model: odd perturbations.*

We consider the ϕ^4 model in one space dimension with propagation speeds that are small deviations from a constant function. In the constant-speed case, a stationary solution called the kink is known explicitly, and the recent work of Kowalczyk, Martel, and Muñoz established the asymptotic stability of the kink with respect to odd perturbations in the energy space. We show that a stationary kink solution exists also in the case of non-constant propagation speeds, and extend the asymptotic stability result to our setting. This requires an understanding of the spectrum of the linearization around the variable-speed kink. (Received July 30, 2017)