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Brian Pigott (raynorsg@wfu.edu), Winston Salem, NC 27104, and **Sarah Raynor***
(raynorsg@wfu.edu). *Asymptotic Stability of KdV Solitons in Weighted H^s spaces.*

In this work, we consider the stability of solitons for the KdV equation below the energy space, using spatially-exponentially-weighted norms. Using a combination of the I-method and spectral analysis following Pego and Weinstein, we are able to show that, in the exponentially weighted space, the perturbation of a soliton decays exponentially for arbitrarily long times. The finite time restriction is due to a lack of global control of the unweighted perturbation. (Received January 20, 2015)