1037-35-186   **Steve Levandosky*** (`spl@mathcs.holycross.edu`), Mathematics and Computer Science Department, 1 College Street, Worcester, MA 01610. *Solitary Waves of a Fifth-Order KdV Equation.*

We consider the stability of solitary waves of a class of 5th order KdV equations. It is known that their stability is determined by the second derivative of a function of the wave speed $d(c)$. We perform a detailed investigation of the properties of this function, both analytically and numerically. For a class of homogeneous nonlinearities, we precisely determine the regions of wave speeds for which the solitary waves are stable or unstable. (Received February 01, 2008)