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Alan Mullenix* (alan_mullenix@baylor.edu), **P. Jameson Graber**, **Rob Kirby** and **Colin Cotter**. *Mixed finite element methods for a linearized multilayer shallow water model.*

Building on previous work by Cotter, Graber, and Kirby for global tides, we develop a multilayer shallow water model and a finite element method to compute solutions. We establish new energy estimates that rigorously prove there is a unique attracting solution in the long-time limit. (Received September 13, 2019)