1077-35-1725   **Richard J. Marchand*** (`richard.marchand@sru.edu`), Slippery Rock, PA, **Timothy J. McDevitt**, Elizabethtown, PA , and **Roberto Triggiani**, Charlottesville, VA. *Structural decomposition, spectral analysis, and exponential stability for a third order PDE arising in high-intensity ultrasound.*

We consider a third order (in time) PDE that arises in high-intensity ultrasound. Structural and spectral properties will be established for the model along with precise and explicit energy exponential decay in terms of model parameters. Numerical computations of the associated spectrum confirm the theoretical results. (Received September 20, 2011)