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**Gideon Simpson\*** ([simpson@math.toronto.edu](mailto:simpson@math.toronto.edu)), Department of Mathematics, 40 St. George Street, Room 6290, Toronto, ON M4Y 2P8, Canada, and **Michael I Weinstein**. *Solitary Waves in the Earth's Interior and their Stability*.

Solitary waves can be found in models and analog experiments of the Earth's interior. Their stability is a natural property warranting investigation. Unfortunately, the equations in this geophysical setting lack tools such as an inverse scattering transform or a variational formulation. This necessitates less elegant analysis, exposing the limits of known techniques. We prove asymptotic stability of the solitary waves and extend global well-posedness results. Open problems on well-posedness and stability will also be discussed. (Received March 01, 2009)