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Sean Bassler* (basslers@seattleu.edu), basslers@seattleu.edu, and **John Carter**. *The Viscous Dysthe equation with and without surface tension.*

We use the weakly viscous Euler equation to model water waves on infinitely deep water, with gravity, viscosity, and surface tension being the only forces considered. We derive the fourth-order viscous Dysthe equation with surface tension and the fifth-order viscous Dysthe equation without surface tension. We compare predictions from the model including surface tension with measurements from laboratory experiments. (Received February 15, 2017)