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Logan Stokols* (lstokols@math.utexas.edu). *Surface Quasigeostrophic Equation (SQG) on Bounded Domains.*

The SQG equation on \mathbb{R}^2 was shown in the late '00s to be well posed with smooth solutions. Recently, Constantin and Ignatova proposed a model for SQG on bounded open subsets of \mathbb{R}^2 , defined in terms of the Dirichlet Laplacian. This model is particularly complex because it involves a nonlocal operator on a bounded domain.

We will discuss this model, including existence and interior regularity, and our own recent proof (co-authored with Alexis Vasseur) of continuity at the boundary. (Received September 09, 2019)