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Mimi Dai* (mdai@uic.edu). *Stability of Solutions to the Dissipative Quasi-Geostrophic Equation.*

We consider the steady-state Surface Quasi-Geostrophic equation in the whole space \mathbb{R}^2 driven by a forcing function f . The class of source functions f under certain assumptions yield the existence of at least one solution with finite energy (finite L^2 norm). These solutions are unique among all solutions with finite energy. The constructed solutions are also shown to be stable in the following sense: If Θ is such a solution then any viscous, incompressible flow in the whole space, driven by f and starting with finite energy, will return to Θ . (Received September 04, 2013)