Andrei Tarfulea* (tarfulea@math.princeton.edu), Fine Hall, Washington Road, Princeton, NJ 08544, and Peter Constantin and Vlad Vicol. Long Time Dynamics of the Forced Critical Surface Quasi-geostrophic Equation.

We prove the existence of a compact global attractor in $H^1$ for the dynamics of the forced critical surface quasi-geostrophic equation (SQG) by bounding the solution (after a transient time) independently of the initial data. We also prove the attractor has finite fractal (box-counting) dimension. (Received January 27, 2014)