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Qi S. Zhang*, Math. Dept., UCR, Riverside, CA 92521, and **Jenn Burke**, Math. Dept. UC Riverside, Riverside, CA 92521. *A Priori Bounds for the Vorticity of Axis Symmetric Solutions to the Navier-Stokes Equations.*

We obtain a pointwise, a priori bound for the vorticity of axis symmetric solutions to the 3 dimensional Navier-Stokes equations. The bound is in the form of a reciprocal of a power of the distance to the axis of symmetry. It seems to be the first general pointwise upper bound established for the axis symmetric Navier-Stokes equations.

This is a joint work with Jenn Burke. (Received March 02, 2009)