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Tam Do* (tamdo@usc.edu). *Vorticity Gradient Growth for the Axisymmetric 3D Euler Equations Without Swirl.*

In the 2D Euler Equations, it is known that the L^∞ norm of the gradient of vorticity can grow at most double exponentially in time. This bound has been proven to be sharp by Kiselev and Sverak on the unit disc. We examine the possibility of gradient growth in the 3D axisymmetric setting for flows without swirl component. (Received September 11, 2017)