1131-35-214 **Tam Do***, 3620 S. Vermont Ave, Los Angeles, CA 90089. *Vorticity Gradient Growth for the Axisymmetric 3D Euler Equations Without Swirl.* Preliminary report.

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 in recent years by Kiselev and Sverak on the unit disc and extended by Xu to bounded domains with symmetry axis. We examine the possibility of gradient growth in the 3D axisymmetric setting in flows without swirl component. (Received July 15, 2017)