

## Gyrokinetic simulations of off-axis minimum- $q$ profile corrugations

R.E. Waltz, M.E. Austin,\* K.H. Burrell, and J. Candy

*General Atomics, P.O. Box 85608, San Diego, California 92186-5608*

*\*University of Texas, Austin, Texas*

Quasi-equilibrium radial *profile corrugations* in the electron temperature gradient are found at lowest order singular surfaces in global gyrokinetic code simulations of both monotonic- $q$  and off-axis minimum- $q$  DIII-D discharges. The profile corrugations in the temperature and density gradients are time-averaged components of zonal flows. The 2/1 electron temperature gradient corrugation is measurably large and appears to trigger an internal transport barrier as the off axis minimum- $q = 2$  surfaces enters the plasma.