Density peaking and turbulent pinch in DIII-D discharges

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Abstract

A study of density peaking and particle flow in low confinement (L-mode) DIII-D discharges [G.R. McKee, C.C. Petty, R.E. Waltz et al., Nucl. Fusion 41, 1235 (2001)], using global gyrokinetic simulations, is presented. It is found that under experimental conditions, in particular when realistic collisionality is included, a turbulent pinch driven by electron temperature and density gradients can occur.

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