

ABSTRACT

The role of $E \times B$ flow shear on confinement enhancement in the DIII-D tokamak [Plasma Phys. and Contrl. Nucl. Fusion Research, 1986 (International Atomic Energy Agency, Vienna, 1987), Vol. 1, p. 159] high internal inductance discharges with high-confinement edge is investigated experimentally using a non-axisymmetric poloidal magnetic field perturbation from an external coil to drag down the plasma toroidal rotation. At similar values of internal inductance, discharges which rotate faster and have a stronger $E \times B$ flow shear have better confinement. These results indicate that $E \times B$ flow shear likely plays an important role in the confinement enhancement of these discharges.

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