

Toroidal Rotation in ECH H-Modes in DIII-D*
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Radial profile measurements of toroidal and poloidal velocity have been made in H-mode discharges driven by electron cyclotron heating (ECH), with little/no momentum input. There results a counter (opposite to plasma current) toroidal rotational velocity in the interior half of the discharge, near the magnetic axis (measured by the toroidal flux coordinate). A co rotation is measured in the outer region. The crossover from co to counter takes place spatially in the region of ECH power deposition. However, we have not yet varied the power deposition profile to test if this is a cause. The magnitude of the maximum rotation frequency measured is 1-2 kHz, for both the co and counter regions. For comparison, H-modes arising from Ohmic heating rotate in the co direction across the entire minor radius. The ECH H-modes have long periods free of edge localized modes, and as the density rises in this phase the ECH eventually becomes cut-off from the core region. The counter rotation in the core decays as the ECH power is cut-off from reaching the core. Velocity profiles will be shown.

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