Suppression of turbulent particle flux during biased rotation in LAPD

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Detailed two-dimensional turbulent correlation measurements have been performed using the high repetition rate (1 Hz) and high reproducibility of LAPD plasmas. In unbiased plasmas, the correlation is localized to around 5 cm radially and a slightly smaller distance azimuthally ($\rho_s \sim 0.5 - 1 \text{ cm}$). During biased rotation, a dramatic increase in the azimuthal correlation is observed, however there is little change in the radial correlation length.

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