

Abstract

Experiments to elucidate the nature of electron thermal transport have been conducted in DIII-D plasmas using modulated off-axis electron-cyclotron heating (ECH). Density fluctuations were measured using beam-emission spectroscopy, microwave reflectometry, and far-infrared scattering. Simulations of the experiment are performed with the gyrokinetic and gyrofluid flux-tube codes GS2¹ and GRYFFIN,² respectively. Comparisons of experiment and simulation results for the fluctuations (amplitude, k-spectra, etc.) and transport fluxes (ion and electron) will be presented for both time-averaged and modulated quantities.

¹ F. Jenko, W. Dorland, M. Kotschenreuther, and B. N. Rogers, Phys. Plasmas 7, 1904 (2000) and refs. therein.

² W. Dorland and G. W. Hammett, Phys. Fluids B 5, 812 (1993); M. A. Beer and G. W. Hammett, Phys. Plasmas 3, 4046 (1996).

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