

Abstract Submitted
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Heat Transport in Off-axis EC-Heated Discharges in DIII-D¹ M.E. AUSTIN, K.W. GENTLE, U. Texas-Austin, C.C. PETTY, GA, T.L. RHODES, L. SCHMITZ, G. WANG, UCLA — In low-density H-mode discharges in DIII-D, ECH applied off-axis produces electron temperature profiles with strong peaking at the heating location and very slow penetration of heat into the core. This type of discharge is a counter example to the heat-pinch effect normally seen in tokamaks where off-axis heating propagates rapidly to the center. In a recent experiment on DIII-D, the conditions for producing these “bat-eared” T_e profiles were studied. It was observed that H-mode is a necessary condition; L-mode discharges exhibit the classic heat pinch. A region of low transport corresponds to the $q = 1$ surface as verified by the sawtooth inversion radius. Results of transport analysis are presented as well as measurements of n_e and T_e fluctuations.

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