

Abstract Submitted
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Transport Studies in DIII-D with Modulated ECH¹

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PINSKER, R. PRATER, T.L. RHODES, G.M. STAEBLER, L. ZENG,
DIII-D National Fusion Facility — Previous experiments have shown
that testing the dynamic response of a plasma to a modulated heat
source can provide a more sensitive test of transport models than can
a power balance analysis. The T_e profile stiffness can also readily be
probed by scanning the ECH resonance location. Recent experiments
have been performed with up to 2 MW of ECH power modulated at
25 Hz in MHD quiescent, sawtooth-free, L-mode plasmas. Modulations in
 T_e were observed across the plasma with the ECH resonance at $\rho = 0.8$.
Modulations in the amplitude and phase velocity of low-k density fluctu-
ations were also observed near the plasma edge indicating TEM or ITG
mode activity. ETG modes may also play a role in electron transport
as the measured values of R/L_{T_e} are at ($\rho = 0.2-0.6$) or above ($\rho > 0.6$)
calculated critical values. Detailed comparisons with simulations based
on several different transport models will be discussed.

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☒ Prefer Oral Session
☐ Prefer Poster Session

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