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Investigation of the Thomson Scattering/ECE discrepancy at high temperature on Alcator C-Mod and DIII-D[1] A.E. WHITE, P. BONOLI, A.E. HUBBARD, J.W. HUGHES, Y. LIN, Y. MA, S.J. WUKITCH, Massachusetts Institute of Technology, M.E. AUSTIN, U. Texas-Austin, B.D. BRAY, C.C. PETTY, R.I. PINSKER, R. PRATER, General Atomics, R.W. HARVEY, CompX
— High temperature plasmas [$T_e(0) > 7$ keV] have been produced with ion cyclotron resonance heating at Alcator C-Mod and with neutral beam and fast wave heating at DIII-D. In optically thick tokamak plasmas, T_e measurements made with Thomson Scattering (TS) and Electron Cyclotron Emission (ECE) diagnostics are typically in excellent agreement. However, past experiments at TFTR and JET have shown the existence of a disagreement between T_e measured by TS and ECE when $T_e \geq 7$ keV, as well as evidence of distortions in the bulk of the electron distribution function. Preliminary results from the DIII-D and C-Mod experiments indicate no such discrepancy between TS and ECE when $T_e(0) > 7$ keV. Comparisons between TS and ECE measurements in high temperature DIII-D and C-Mod plasmas, and comparisons of measured ECE spectra with simulations, will be presented.

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