

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Validation of MMM7.1 and TGLF anomalous transport models for predicting the evolution of Alcator C-Mod temperature profiles¹ A.H. KRITZ, T. RAFIQ, Lehigh University, A.Y. PANKIN, Tech-X Corp., J. HUGHES, M. GREENWALD, PSFC MIT — The Multi-Mode MMM7.1 [T. Rafiq, *et al. Phys. Plasmas*, **20**, 032506, 2013] and the Trapped Gyro-Landau Fluid (TGLF)[G.M. Staebler, *et al., Phys. Plasmas* **14**, 055909, 2007] anomalous transport models are validated employing experimental data for Alcator C-Mod discharges that represent a plasma density scan. The MMM7.1 and the TGLF models compute the anomalous transport driven by the ITG, TEM, ETG, KBM and collisional drift modes. The validation study is carried out with simulations that employ the new numerical solver PT-SOLVER in the PTRANSP code and that utilize Alcator C-Mod experimental boundary and initial conditions. The predicted evolving temperature profiles are compared with corresponding Alcator C-Mod experimental data. The comparison is quantified by calculating the RMS deviations and Offsets.

¹Supported by USDoE FES grants DE-FG02-92ER54141, DE-SC0012174 and C-Mod award DE-FC02-99ER54512.

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Date submitted: 23 Jul 2015

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