

Abstract Submitted
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Effects of Sawtoothing on Peaking of Impurity Profiles in Alcator C-Mod¹ M.W. BROOKMAN, W.L. ROWAN, K.T. LIAO, M.E. AUSTIN, P.E. PHILLIPS, IFS, The University of Texas at Austin, A.E. HUBBARD, R.S. GRANETZ, PSFC, MIT — Sawtoothing has a role in limiting impurity accumulation and might be used to control impurity concentration. In this poster, the effect of sawtoothing on the impurity peaking factor is examined for Alcator C-Mod. Sawtooth parameters are obtained by coherent averaging of Te profile data from the University of Texas's 32-channel electron cyclotron emission (ECE) radiometer; impurity peaking factors for B and He are supplied by active core CXRS. Initial results suggest core impurity peaking factors for B are not strongly dependent on sawtooth period. Sawteeth in soft x-ray emission (SXR) are compared with sawtooth parameters derived from ECE data to investigate the response of heavy impurities to sawtoothing. In early results, discharges have either inverse or normal sawtoothing observed in core SXR. Inverted SXR sawteeth may arise from transport but are more likely due to the atomic physics of the emission. Simulations to verify these assertions for light and heavy impurities are in progress.

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