

Abstract Submitted  
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**Integrated Plasma Simulation of Lower Hybrid Current Drive in Tokamaks**<sup>1</sup> P.T. BONOLI, J.C. WRIGHT, PSFC-MIT, R.W. HARVEY, CompX, D.B. BATCHELOR, L.A. BERRY, ORNL, C.E. KESSEL, S.C. JARDIN, PPPL, SWIM TEAM — It has been shown in Alcator C-Mod that the onset time for sawteeth can be delayed significantly (up to 0.5 s) relative to ohmically heated plasmas, through the injection of off-axis LH current drive power [1]. We are simulating these experiments using the Integrated Plasma Simulator (IPS) [2], where the driven LH current density profiles are computed using a ray tracing component (GENRAY) and Fokker Planck code (CQL3D) [3] that are run in a tightly coupled time advance. The background plasma is evolved using the TSC transport code with the Porcelli sawtooth model [4]. Predictions of the driven LH current profiles will be compared with simpler “reduced” models for LHCD such as the LSC code which is implemented in TSC and which is also invoked within the IPS.

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- [3] R. W. Harvey and M. G. McCoy, Proc. of the IAEA Tech. Comm. Meeting on Simulation and Modeling of Therm. Plasmas, Montreal, Canada (1992).
- [4] S. C. Jardin *et al*, J. Comp. Phys. **66**, 481 (1986).

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