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Time-dependent Radial Transport of Electron Distributions Due to ECCD in DIII-D[1] R.W. HARVEY, A.P. SMIRNOV, CompX, R. PRATER, C.C. PETTY, General Atomics — The radial transport modeling capability in the CQL3D bounce-averaged Fokker-Planck collisional-rf quasilinear code[1] has been greatly improved and the self-consistent time-dependent toroidal electric field added, making the code truly a "Fokker-Planck-Transport" code. The time-dependent, coupled 3D Fokker-Planck equation and the Ampere-Faraday Law equation are solved for the electron distribution, $f\left(u,\theta_u,\rho,t\right)$, and the toroidal loop voltage, $V_{loop}\left(\rho,t\right)$. A fully 3D, time-implicit solution of the FP equation using sparse-matrix methods[2] is coupled to a new iterative toroidal electric field solve. The DIII-D ECH experiment is in an intermediate driven regime with $\tau_{transport} \approx \tau_{slowing}$[3] for the EC driven electrons. Results will be reported for time-evolution of radial profiles of current density, fast electrons, and toroidal loop voltage due to EC heating and current drive in DIII-D. [1] R.W. Harvey and M.G. McCoy, IAEA TCM on Advances in Simulation and Modeling of Thermonuclear Plasmas, Montreal, 1992; USDOC NTIS No. 93002962. [2] Y. Peysson *et al.*, Radio Frequency Power in Plasmas, 15th Topical Conference, Moran, Wyoming (2003). [3] R.W. Harvey *et al.*, Phys. Rev. Lett. 88, 205001 (2002).

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