

Abstract Submitted
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Sorting Category: 10 (Experimental)

Electron Cyclotron Current Drive on DIII-D: Analyzing the Analysis¹ DAVID SCHUSTER, Brown University, C.C. PETTY, T.C. LUCE, H.E. ST. JOHN, General Atomics, B.W. RICE, Lawrence Livermore National Laboratory — Electron Cyclotron Current Drive (ECCD) can be used to modify the current profile at different locations within the plasma. Previously, the radial profile of ECCD was measured on the DIII-D tokamak using off-axis application and was found to be broader than theoretical predictions. In addition, the magnitude of the experimental ECCD exceeded theoretical estimates. In order to better explain these differences, simulations of the evolution of the poloidal magnetic flux during ECCD will be done using the ONETWO transport code. The simulated data can be propagated forward and backward through the same analysis techniques practiced on the actual experimental data. This process will help reveal any error introduced via approximations made in the analysis, such as the effect of smoothing the constituents of the Grad-Shafranov equation. In addition, the experimental and simulated evolution of motional Stark effect (MSE) polarimetry data during off-axis ECCD will be compared.

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- Prefer Oral Session
 Prefer Poster Session

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Special instructions: Undergraduate poster session, immediately following KS Leuenroth

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