

Abstract Submitted
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Gyrokinetic Analysis of the Current Ramp Phase of an ITER-like DIII-D Discharge¹ B. BRAVENEC, Fourth State Research, C. HOLLAND, UCSD, G.R. MCKEE, U Wisc. M, J. CANDY, GA, T. GRLEER, Max Planck Institute PP — Being able to predict transport, especially electron, during the current ramp-up phase of a discharge is of great interest, especially for ITER. Here we present results, both linear and nonlinear, from the gyrokinetic codes GYRO, CGYRO, GS2, and GENE (a benchmarking effort) for a DIII-D discharge run with the ITER shape and normalized current, field and ramp rate. Preliminary results at the mid-radius ($r/a = 0.6$) and at the end of the current ramp from GENE are insignificant fluxes while CGYRO predicts only a finite electron energy flux. However, this flux is from fluctuations at the highest poloidal wave numbers of the simulations, implying that valid simulations may need to resolve the electron scales. These results plus linear analysis and nonlinear simulations at other times during the ramp and at other locations in the plasma will be presented.

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