

Abstract Submitted
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Using Divertor Strike Point Splitting to Study Plasma Response and Its Sensitivity to Equilibrium Uncertainties¹ ABRAHAM TEKLU, Oregon State University, D.M. ORLOV, R.A. MOYER, I. BYKOV, UCSD, T.E. EVANS, W. WU, G.L. TREVISAN, B.C. LYONS, T. ABRAMS, General Atomics, M.A. MAKOWSKI, C.S. LASNIER, M.E. FENSTERMACHER, LLNL — Resonant magnetic perturbations (RMPs) from 3D coils have been varied to modify the splitting of the divertor strike points in DIII-D. This splitting is imaged in filtered visible and infrared emission from the divertor to determine the particle and heat flux patterns on the target plates. The observed splitting is compared to vacuum and plasma response modeling in discharges where a subset of the RMP coils were ramped to shift the divertor footprints from dominantly $n = 3$ to $n = 2$ pattern. These results will be used to determine if the plasma response model can be validated with the measured splitting. We will also study the sensitivity of the modeled splitting to details of the 2D equilibrium. This RMP ramp technique could be used in ITER to spread out the heat flux while avoiding excessive forces on the RMP coils.

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