

Abstract Submitted
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Modeling Experimental Changes in Particle Transport from Resonant Magnetic Perturbations (RMPs) Using SOLPS5¹ S. MORDIJCK, R.A. MOYER, UCSD, E.J. DOYLE, L. ZENG, L. SCHMITZ, UCLA, E.A. UNTERBERG, N. COMMAUX, ORNL, K. GENTLE, UT-Austin, H. REIMERDES, Columbia U. — We use a modulated gas puff to investigate the changes in particle transport as a result of Resonant Magnetic Perturbations in L- and H-mode discharges on DIII-D. We observed density pump-out for the first time in diverted L-mode discharges on DIII-D. In these L-mode discharges, the gas puff penetration is reduced during the RMP pulse whereas in H-mode the gas puff penetrates into the core in RMP ELM suppressed plasmas. The experimental values for D and V are input to the SOLPS5 code and the resulting density profile is compared to experiments, to validate the experimentally observed changes in particle transport. Finally, we add the neutral source terms to improve the experimental transport analysis.

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