

Abstract Submitted
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Transport Characteristics of Modulation Resonant Magnetic Perturbations (M-RMP) in DIII-D H-mode Plasmas¹ W.W. XIAO, UCSD, T.E. EVANS, GA, G.R. TYNAN, UCSD, L. ZENG, UCLA, D.M. ORLOV, R.A. MOYER, UCSD, G.D. WANG, T.L. RHODES, UCLA, UCSD TEAM, GA TEAM, UCLA TEAM — 3D resonant magnetic perturbation (RMP) fields are widely used for the ELM control or mitigation in Tokamaks and stellarators and are being developed as an approach to future burning plasma devices such as ITER. Understanding particle transport is a RMP physics issue. Here, we present a new experimental result of the resonance position of the RMP, which is directly confirmed using induced density perturbation produced by Modulated Resonant Magnetic Perturbations (M-RMP). A comparison study of the resonance locations with fixed q_{95} and with scanning q_{95} is presented in this work. Recent experimental results on the particle transport with M-RMP in DIII-D H-mode plasmas, have been investigated as well. These results show that a strong inward particle pinch exists in pedestal region in M-RMP H-mode plasma.

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