

Abstract Submitted
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Impurity effect on poloidal potential variation and plasma turbulence in edge pedestal KYUHO KIM, JANGHOON SEO, Korea Advanced Institute of Science and Technology, Daejeon, Korea, S.-H. KU, C.-S. CHANG, M. CHURCHILL, R. HAGER, DAREN STOTLER, PPPL — The poloidal variation of electrostatic potential in the H-mode edge pedestal can be significant, especially in diverted geometry [1,2]. Impurity particles may enhance such a poloidal variation [3]. The total-f gyrokinetic code XGC1 is used to study the impurity effect on poloidal potential variation in diverted magnetic field geometry. Even though the ExB shearing rate is strong in the edge pedestal, residual turbulence can exist [1]. Impurity effect on the residual turbulence will also be reported. Implication to plasma and impurity transport across the separatrix surface and pedestal region will also be discussed.

- [1] C.S. Chang et al., Phys. Plasmas **16**, 056108 (2009)
- [2] M. Churchill, Invited Talk at this conference
- [3] C.S. Chang and R.D. Hazeltine, Nucl. Fusion 20, 1397 (1980)

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