

Abstract Submitted  
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**The Role of Geodesic Acoustic Mode on Regulating the Particle Transport in the Edge of HL-2A Tokamak**<sup>1</sup> T. LAN, D.F. KONG, C.X. YU, A.D. LIU, H.L. ZHAO, J.L. XIE, W.D. LIU, USTC, China, L.W. YAN, W.Y. HONG, J.Q. DONG, K.J. ZHAO, J. QIAN, J. CHEN, X.R. DUAN, Y. LIU, SWIP, China — Three sets of Langmuir triple probe arrays separated poloidally are applied to study the transport properties in the edge of HL-2A tokamak. The Geodesic Acoustic Mode (GAM) zonal flow clearly exhibits the intermittent characteristics. The radial particle flux has been studied under different GAMs amplitude levels. The experiment results reveal that the radial particle flux has been suppressed by 13% during the strong GAM bursts case contrasting to weak GAM cases in the frequency range of ambient turbulence. Moreover, the higher of GAM power causes more reducing of radial particle flux. The powers of density fluctuations and coherence between density and potential fluctuations domain most flux reducing, while the cross phase between density and potential fluctuations and power of potential fluctuations contribute few. It indicates that the GAMs may regulate the transport mainly by changing the amplitude of ambient turbulence.

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