

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

ELM Behavior in High- β_p EAST-Demonstration Plasmas on DIII-D¹ G.Q. LI, X.Z. GONG, ASIPP, A.M. GAROFALO, L.L. LAO, O. MENEGHINI, P.B. SNYDER, GA, Q.L. REN, S.Y. DING, W.F. GUO, J.P. QIAN, B.N. WAN, G.S. XU, ASIPP, C.T. HOLCOMB, LLNL, W.M. SOLOMON, PPPL — In the DIII-D high- β_p EAST-demonstration experiment, for several similar discharges when the experimental parameters such as the toroidal magnetic field or ECH power are varied slightly, the changes in ELM frequency response are observed to be much larger. Kinetic EFIT equilibrium reconstructions for these discharges have been performed, which suggest that the ELM frequency changes are likely due to the variations of pedestal width, height, and edge current density. Kinetic profile analyses further indicate that the strong ITB that are located at large minor radii ($\rho=0.6\sim 0.7$) in these discharges are affecting the pedestal structure. The ITB could broaden the pedestal width and decrease the pedestal height, thus changing the ELM frequency and size. With the GATO and ELITE MHD codes, the linear growth rates and mode structures of these ELMs are analyzed. The impact of ITB on the ELMs behavior will be discussed.

¹Work supported by China MOST under 2014GB106001 and 2015GB102001 and US DOE under DE-FC02-04ER54698 and DE-FG03-95ER54309.

A.M. Garofalo
GA

Date submitted: 16 Jul 2015

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