

Abstract Submitted
for the DPP19 Meeting of
The American Physical Society

ELM Suppression by Boron Powder Injection: Analysis of Edge Turbulence¹ AHMED DIALLO, ZHEN SUN, RAJESH MAINGI, Princeton Plasma Physics Laboratory, KEVIN TRITZ, Johns Hopkins University, JIANSHENG HU, YUZHONG QIAN, XIANZU GONG, LING ZHANG, YUMIN WANG, TAO ZHANG, Institute of Plasma Physics, Chinese Academy of Sciences, CHU ZHOU, Department of engineering and Applied Physics, University of Science and Technology of China, RAN CHEN, Institute of Plasma Physics, Chinese Academy of Sciences, EAST TEAM — Type I edge-localized modes (ELMs) in EAST were completely suppressed via boron powder injection into the X-point region of an upper-single null configuration over a wide range of operating conditions ($2.8 < P_{\text{aux}} < 7.1$ MW, $3.8 \times 10^{19} < n_e < 6 \times 10^{19}$ m⁻³, RF-only and RF+NBI heating scenarios). There appears to be a window of edge B concentration for stable long pulse operation. The injection of Boron coincides with the onset on many modes on the magnetic spectrograms showing multiple dependences with line-averaged densities. In this work, we will present analysis of mode localization using the radial density profile measured with O-mode sweeping reflectometry. Finally, initial analysis of power balance will be discussed.

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Date submitted: 28 Jun 2019

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