Abstract Submitted
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**ELM experimental study on the EAST Tokamak** ZIXI LIU, XIANG GAO, Institute of Plasma Physics, Chinese Academy of Sciences, XUEQIAO XU, Lawrence Livermore National Laboratory, Livermore, JIANGANG LI, Institute of Plasma Physics, Chinese Academy of Sciences, EAST TEAM — Atypical Type III ELM is observed on EAST tokamak. This type of ELM has MHD precursor and high collisionality at the edge, and also the threshold power is close to the scaling law. But the frequency of the ELM does not decrease with the injected power. Power threshold is lower with the molybdenum wall in double null (DN) on EAST. Considering the effects of the plasma surface (S) to the threshold power, Double Null has the lowest power threshold. Better energy confinement has been observed in DN compared to Single-null (SN) at same power loss. But with the same power loss, Upper Single Null (USN) with the grad-B drift pointing backwards the active X-point (favorable direction) on EAST has the lower energy confinement time than Lower Single Null (LSN). Low Hybrid Wave (LHW) can mitigate ELMs. The power deposition should be near the edge in the H-mode phase. Not only the LHW decreases the max gradient of the density in the pedestal region, but also brings the density oscillations. Low X-point configurations in Lower single null have a lower power threshold. The low X-point discharges on EAST is closer to the DN. Approaching to the DN configuration should be the reason of the lower power threshold caused by the lower X-point on EAST.

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