

Key Issues Towards Long Pulse High β_N Operation on EAST Tokamak Xiang Gao, Yao Yang, Tao Zhang, Haiqing Liu, Tingfeng Ming, Yumin Wang, Long Zeng, Xiang Han, Oing Zang, Yaowei Yu, Guoqiang Li, Defeng Kong, Zixi Liu and the EAST team





- In 2015 campaign, higher normalized beta ($\beta_N = 1.5 \sim 2$) H mode plasmas have been achieved on EAST tokamak. The operational space for high β_N plasma is mainly limited by heating power on EAST. Operational space agreed with the stationary reversed shear discharges which is produced by NBI+LHCD on EAST.
- Key issues towards long pulse high β_N operation on EAST should be considered as follows: (1) Enhancement of NBI and LHW heating power; (2) Improvement of NBI and LHW heating and its control system for long pulse discharges; (3) Control of impurity accumulation and radiation during high power heating; (4) Study of ITB formation, development and its crash; (5) Study of MHD limitation at higher beta operation.
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