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P2.141 Design and R&D of the second tungsten divertor of EAST

Tuesday, 18 September 2018 11:00 (2 hours)

The EAST superconducting tokamak upper divertor had been updated to tungsten divertor. Based on the tungsten divertor operation 10MW/m² heat load can be exhausted. Long pules (100s) H mode plasma was obtained. The lower divertor of EAST is still carbon plasma facing material. Upgrade the divertor to tungten the EAST will be full metal first wall with tungten for upper and lower divertor and molybdenum for other first wall. New geometry of lower divertor has bee optimized both for ITER like plasma donfiguration and semi snow-flake plasma configuration. Based on full metal plasma facing materil the EAST is capable of make more contribut for ITER and try to achieve ITER lever (400s) H mode plasma operation. The second tungsten divertor engineering design has been completed and R&D with different fromITER monoblock targets structure is in progress. It is expecte achieve 15-20MW/m² heat load exhaust ability. Tungsten slices brazing technology and tungsten CVD technology is studying for divertor lower heat load area. New NEG pumping system with ZAO gas absorb material is under study to be used for divertor pumping. The tungsten divertor is expect install in EAST from begining of 2019.

Presenter: YAO, Damao (Institute of Plasma Physics Chinese Academy of Sciences) Session Classification: P2