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### **Recent Progress on EAST Superconducting Tokamak**

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EAST is the first fully superconducting tokamak with divertor configurations starting operation since 2006. It has now been upgraded from initial full metal wall to actively cooled graphite plasma facing components (PFC) and bakable to 350 ° C. Stable double null (DN) divertor plasma discharges over 60 seconds have been achieved with the actively cooled graphite PFCs and the new internal divertor cryopump. Plasma current up to 600 kA, electron density  $\sim 5 \times 10^{19} \text{m}^{-3}$ , electron temperature  $\sim 2.5 \text{keV}$  have been obtained with lower hybrid current drive (LHCD) and auxiliary heating. Low loop voltage breakdown at 0.15V/m and plasma ramping rate between 0.1MA/s and 0.5MA/s have been obtained with assistance of LHCD. Various start-up scenarios have been explored for operating PF superconducting coils with a large safety margin. Up to 1.2MW LHCD power has been coupled to both SN (single null) and DN plasmas. Divertor performance under long pulse operating conditions has been assessed for both SN and DN configurations. DN operation led to stronger asymmetry in power loading, favoring the outer divertor. Novel wall conditioning techniques, including RF wall conditioning and high frequency RF wall conditioning in the presence of toroidal magnetic fields have also been successfully tested. The details of these recent advances are presented.