Simulation Study of EAST Scenarios with the Tokamak Simulation Code

C.E. KESSEL, R.V. BUDNY, W.M. SOLOMON, PPPL, YONG GUO, IPP-CAS, P.T. BONOLI, PSFC-MIT — The EAST experiment has upgraded its heating and current drive systems to allow significant non-inductive current drive. The goal of 100% non-inductive plasma current is being sought with 10 MW of LH, 8 MW of NBI, and 12 MW of ICRF. For 2014, the target is H-mode for 30 s. A series of scenarios are examined for plasma currents of 350, 450, 550, and 650 kA, to examine the H/CD requirements and the rampup plasma strategies. The Tokamak Simulation Code is used with PF coils, structures, and feedback systems for plasma shape position and current. Based on previous EAST discharges that primarily used LH and ICRF, plasma and discharge parameters are determined. Examination of H/CD combinations, and energy transport models are reported.

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