

Abstract Submitted
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Introduction of EAST Project — Mission and Progress YUANXI WAN, InS, EAST PROJECT TEAM — **EAST** is an **Experimental Advanced Superconducting Tokamak** approved in 1997. **Main parameters:** $B_t=3.5$ T, $R_0=1.75$ m, $I_p=1$ MA, $a=0.4$ m, $(b/a)=1\sim 2$ with the flexibility of double and single null diverter, $P_{LHCD}=3.5\sim 4$ MW, $P_{ICRH}=3\sim 4$ MW, $P_{ECRH}=0.5$ MW and pulse long will be 1000 s. For the second phase T_c on SC magnet will decrease from 4.2 K to 3.8 K and then $B_t=4.0$ T, $I_p=1.5$ MA, the power for heating and CD will increase further. **Characteristics:** “D” shape TF and both TF and PF are SC; PF coil each has own PS to be able to produce double or single null diverter; The vacuum chamber has double-layer and can be cooling, heating and shielding of neutron; Changeable interior components included in: first wall;diverter; internal feedback control coils and all magnetic measuring systems; CW LHCD, ICRH and NBI in second phase. **Mission:** Investigate 1) both physics and technology bases of SSO advanced tokamak included in: full ST and un-transformer start-up operation; the control technology included avoiding or mitigation of disruption for SSO; CW heating included simulated α particle heating and CW CD; 2) the power and particle handle with diverters under SSO;3) advanced (higher β and τ) model under SSO. **Progress:**1) Final assembly completed at end of 2005. 2) The engineering commissioning has been done successfully at early of 2006. Both TF and PF were cooling down to 4.5-5 K and then charged successfully. 3) The first plasma will be obtained around August–September of 2006. The results will be given.

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