Abstract Submitted
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**Investigation of LHCD Deposition Layer by Faraday-Effect Polarimetry on EAST**[1] HUI LIAN, D.L. BROWER, University of California Los Angeles, W.X. DING, University of California Los Angeles, and University of Science and Technology of China, H.Q. LIU, Y.F. WANG, Y.Q. CHU, Y.X. JIE, Institute of Plasma Physics, Chinese Academy of Science — Weak or reversed magnetic shear plasma scenarios with internal transport barriers (ITB) are considered to be prime candidates for steady-state (or long-pulse) high-confinement plasma operation, which can be achieved using an optimized q profile by controlling the heating and current drive systems in tokamaks. Lower Hybrid Current Drive (LHCD) is one of the most effective ways to non-inductively drive the plasma current on EAST. Magnetic equilibrium reconstruction including multi-chord **PO**larimetry-**INT**erferometry (**POINT**) measurement constraints have been used to obtain the current density profile in previous experiments. However, stray light arising from multiple reflections in the optical path can negatively impact Faraday rotation measurements. In the EAST 2019 experiment campaign, a feedback loop between an optical lens and vacuum window was identified and reduced. With improved Faraday rotation measurements, position of LHCD deposition was investigated in detail. Initial results show the LHCD deposition position is around $\langle \rangle$ =0.5 (normalized poloidal flux), which is consistent with the simulation results.

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