Abstract Submitted
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Diagnostic and Hardware Upgrades for the US-PRC PMI Collaboration on EAST[1] KEVIN TRITZ, Johns Hopkins University, R. MAINGI, Princeton Plasma Physics Laboratory, D. ANDRUCZYK, University of Illinois - Champaign, J. CANIK, Oak Ridge National Laboratory, Z. WANG, Los Alamos National Laboratory, B. WIRTH, S. ZINKLE, University of Tennessee - Knoxville, K. WOLLER, Massachusetts Institute of Technology, J.S. HU, G.N. LUO, X.Z. GONG, ASIPP, EAST TEAM — Several collaborative diagnostic and hardware upgrades are planned to improve understanding and control of Plasma-Material Interactions on EAST, as part of the US-PRC PMI collaboration. Dual-band thermography adapters, designed by UT-K and ORNL, are being designed for existing IR cameras to improve the accuracy of the divertor heat flux measurements by reducing sensitivity to surface emissivity. These measurements should improve power accounting for EAST discharges, which can show a large gap between input power and divertor exhaust power. MIT is preparing tungsten tiles with fluorine depth markers to measure net erosion of PFC tiles. JHU plans to improve the electronics of the Multi-Energy Soft X-ray diagnostic as well as expand the present edge system to a full core-edge measurement; this will enhance the assessment of the effect of Li injection on tungsten accumulation and transport. In addition to PPPL-developed upgrades to the lithium granule and pellet delivery systems, LANL is assessing core-shell micropellets for pellet ablation analysis. Finally, UIUC and PPPL are developing flowing liquid lithium limiters, both with and without LiMIT tile features, for deployment on EAST.

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