Abstract Submitted
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US International Stellarator Collaboration[1] D.A. GATES, M. BITTER, PPPL, J. CANIK, ORNL, J. GEIGER, IPP, Greifswald, Germany, M. GOTO, NIFS, Toki, Japan, J.H. HARRIS, ORNL, K.W. HILL, S. LAZERSON, PPPL, J. LORE, ORNL, D. MONTICELLO, PPPL, Y. NARUSHIMA, NIFS, Toki, Japan, G.H. NEILSON, N. PABLANT, N. POMPHREY, A. REIMAN, PPPL, S. SAKAKIBARA, 4, A. SONTAG, ORNL, A. WERNER, R. WOLF, IPP, Greifswald, Germany, G.A. WURDEN, LANL — The US program is using international collaboration to stay at the forefront of experimental stellarator science. The LHD is the premier operating stellarator in the world. The US recently installed an X-ray Imaging Crystal Spectrometer on LHD to aid in the measurement of Ti profiles in difficult plasma regimes - e. g., RF operations, high density, and low density (N. Pablant, this conf.). An effort is underway to develop equilibrium reconstruction for stellarators (S. Lazerson, and A. Sontag this conf.). Results from experiments on the MHD stability of high performance regimes observed on LHD will be presented. The US is also collaborates with W7-X. The collaboration theme on W7-X is divertor heat-flux management. Collaborations on hardware include trim coils, diagnostics (G. Wurden, this conf.), and PFCs (J. Harris, this conf.). Active control that involves real-time equilibrium control and temperature monitoring will be discussed.

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