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L-H Transition and Turbulence Behavior in Ohmic H-modes on NSTX C.E. BUSH, ORNL, S. KUBOTA, UCLA, R. MAQUEDA, Nova Photonics, T. BIEWER, PPPL, J. BOEDO, UCSD, K.C. LEE, UC-Davis, S.J. ZWEBEN, PPPL, R. RAMAN, University of Washington, R. BELL, PPPL, M. BITTER, E. FREDRICKSON, D. GATES, R. KAITA, S. KAYE, H. KUGEL, B. LEBLANC, PPPL, R. MAINGI, ORNL, S. MEDLEY, J. MENARD, L. ROQUEMORE, PPPL, V. SOUKHANOVSKII, LLNL, E. SYNAKOWSKI, PPPL, K. TRITZ, Johns Hopkins University, K.M. WILLIAMS, PPPL, NSTX TEAM — The L-H transition and H-mode behavior and turbulence have been studied in NSTX ohmically heated (OH) plasmas, which offer the advantage of an absence of the NBI sources of particles and momentum. The OH H-modes have density profiles that are peaked in the core, rather than the edge as in NBI-heated H-modes, making the core accessible for turbulence studies using correlation reflectometry. A decrease by more than a factor 2 in the core correlation length across the L-H transition was observed using correlation reflectometry. Concurrently gas-puff imaging (GPI) shows the edge becoming very quiescent as edge turbulent blob activity subsides. No consistent precursor MHD activity to the L-H transition has been observed for OH H-modes in NSTX. However, an edge rotation diagnostic showed the edge electric field becoming more negative up to 20 ms before the transition in several OH H-mode plasmas. Observations of Te, Ti, and Vf before and after the transition and from other diagnostics will be presented in discussions of the physics of NSTX OH H-modes.

C. E. Bush
ORNL

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