

Abstract Submitted
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Progress in the Design and Development of the ITER Low-Field Side Reflectometer (LFSR) System¹ E.J. DOYLE, G. WANG, W.A. PEEBLES, Physics and Astronomy Dept., UCLA, CA 90095, FOR THE US LFSR TEAM — The US has formed a team, comprised of personnel from PPPL, ORNL, GA and UCLA, to develop the LFSR system for ITER. The LFSR system will contribute to the measurement of a number of plasma parameters on ITER, including edge plasma electron density profiles, monitor Edge Localized Modes (ELMs) and L-H transitions, and provide physics measurements relating to high frequency instabilities, plasma flows, and other density transients. An overview of the status of design activities and component testing for the system will be presented. Since the 2011 conceptual design review, the number of microwave transmission lines (TLs) and antennas has been reduced from twelve (12) to seven (7) due to space constraint in the ITER Tokamak Port Plug. This change has required a reconfiguration and recalculation of the performance of the front-end antenna design, which now includes use of monostatic transmission lines and antennas.

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