

Abstract Submitted
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ITER ECE in Situ Prototype Calibration Source and its Integration into the ITER ECE Diagnostic¹ P.E. PHILLIPS, M.E. AUSTIN, W.L. ROWAN, Fusion Research Center, The Univ. of Texas at Austin, J. BENO, A. OUROUA, CEM-UTA, R.F. ELLIS, Univ. of MD, H.K.B. PANDYA, ITER-India, IPR, A-29, GIDC Electronic, Estate, Sec.25, Gandhinagar-380025 India — A critical component in the ITER ECE diagnostic is an in situ calibration source. The US and India are developing the diagnostic with the US leading in development of the calibration source. The source is a large area (200mm diameter) emitter. It will generate blackbody emission (emissivity > 0.7) for frequencies greater than 120 GHz in the ITER primary vacuum (VQC 1B). The source will operate at temperatures up to 800 °C for calibration runs during maintenance periods. A prototype source has been designed, constructed and tested in vacuum conditions. Results of these tests will be presented, along with a progress report on its integration into the ITER ECE system. Additional challenges of real-world application to J-TEXT and EAST will be presented.

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