

Abstract Submitted
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Development progress of Correlation ECE and n-T cross-phase angle diagnostics for ASDEX-Upgrade SIMON FREETHY, GARRARD CONWAY, Max Planck Institute for Plasma Physics, 85748 Garching, Germany, IVO CLASSEN, FOM institute DIFFER, 5612 AJ Eindhoven, The Netherlands, ALEX CREELY, ANNE WHITE, Plasma and Science center, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA, TIM HAPPEL, Max Planck Institute for Plasma Physics, 85748 Garching, Germany, BRANKA VANOVAC, FOM institute DIFFER, 5612 AJ Eindhoven, The Netherlands, ASDEX UPGRADE TEAM — Relative turbulent temperature fluctuation amplitudes can be measured using Correlation ECE (CECE). This technique uses two narrow frequency-band radiometer channels, with an equivalent physical spacing within a turbulent radial correlation length. Correlation techniques select the common turbulent fluctuation while suppressing uncorrelated thermal noise. If such a diagnostic views the same part of the plasma as a reflectometer, then the coherence and cross-phase angle between temperature and density fluctuations can be measured. Two 2nd harmonic, X-mode, CECE radiometers have recently been installed on ASDEX Upgrade, one of which shares the quasi-optical steerable antenna of an existing Doppler reflectometer, i.e with a common line of sight of the plasma. We report on the progress of the installation and preliminary data from both systems.

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