

Abstract Submitted
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Implementation and Calibration of the Wide Emission Spectral (WiSE) Diagnostic on DIII-D KATRINA TEO, University of Washington, ADAM MCLEAN, LLNL — The Wide Spectral Emission (WiSE) diagnostic is a set of moderate spectral and temporal resolution spectrometers co-viewing vertically through the plasma, now being installed on the DIII-D fusion device for study of neutral, ion, and molecular emissions. Together, these instruments provide a spectral ‘footprint’ of the tokamak plasma from 185 nm, the deep ultraviolet, up through 5000 nm, the medium wavelength infrared (MWIR). Spectrometers and optics utilized for the WiSE diagnostic have been calibrated for wavelength and absolute intensity using NIST-calibrated light sources. A standalone LabView-based interface employing independent triggering of each device has been implemented and tested. Each spectrometer is paired with a dedicated compact PC for operation and data acquisition. Details of setup and operation of the WiSE diagnostic will be presented, as well as initial analysis of spectra for fuel and impurity species in the plasma.

Katrina Teo
University of Washington

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