

Abstract Submitted
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Sorting Category: 5.1.1.2 (Experimental)

Calibration of a Three Path Thomson System at DIII-D¹ B.D. BRAY, C.L. HSIEH, T.N. CARLSTROM, General Atomics — The DIII-D Thomson system measures electron density and temperature with eight pulsed ND:YAG lasers along three paths through the plasma. Two vertical paths provide measurements in the lower divertor and core of the plasma and a third horizontal laser path was installed in 1999 to extend the measurements to the center of the plasma. The components of the new system must be carefully calibrated so the measurements can be combined into a single profile. A monochromator calibration and opto-electronic calibration measure the absolute sensitivity of the detector system dc and pulsed response, respectively. A Rayleigh scattering calibration and transmission calibrations measure the sensitivity of the system to scattered light. The calibrations are checked by a comparison of overlapping channels in the core system and between the core and horizontal systems. The contributions of the background and scattered light to the systematic and statistical uncertainties of the measurement must be understood to make these channel to channel comparisons.

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Prefer Oral Session
 Prefer Poster Session

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Special instructions: DIII-D Poster Session 2, immediately following DM Thomas

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