

Abstract Submitted
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MPTS Operation and Recent Upgrade¹ B.P. LEBLANC, A. DIALLO, G. LABIK, D.R. STEVENS, PPPL — NSTX's Multi-Point Thomson Scattering (MPTS) diagnostic has supported plasma operation for over ten years, during which time a phased implementation has been pursued. The measurements span the horizontal midplane covering around 90 percent of the full-bore confined plasma and the scrape-off layer (SOL). While beginning with one 30-Hz Nd:YAG laser and 10 radial positions, MPTS has operated with a second laser – combined frequency of 60 Hz – and 30 radial positions during the past six years. A recent upgrade brings the total number of radial positions to 42. While most of the 12 new channels are set to improve spatial resolution in the pedestal and internal transport barrier (ITB) regions, a limited number of extra channels have been added to the inner edge and the SOL. Many of the new channels resulted from the splitting of existing fiber bundles, an option that had been left open in MPTS's original design. The 42-channel configuration is planned to begin operation during the 2011 NSTX experimental run. Experimental results will be presented. Future plans for the upcoming NSTX center-stack upgrade will be discussed.

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