

Abstract Submitted
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Refurbishment of the FIR Tangential Interferometer/Polarimeter Diagnostic on NSTX-U¹ CALVIN DOMIER, ROBERT BARCHFELD, CHRISTOPHER MUSCATELLO, NEVILLE LUHMANN, JR., University of California at Davis, ROBERT KAITA, Princeton Plasma Physics Laboratory — The addition of a 2nd neutral beam injector on NSTX during the current shut-down period necessitates reconfiguration of the far-infrared tangential interferometer/polarimeter (FIReTIP) system. During this shut-down period, the laser systems have been returned to UC Davis for laboratory characterization, maintenance, and upgrade. FIReTIP will be reconfigured as a 3-channel system, employed for core density monitoring/feedback control as well as core/edge fluctuation measurements. Besides the spatial rearrangement of the laser system, optics, and electronics, a significant upgrade to FIReTIP involves modification of its constituent Stark laser, in particular, the shape of its waveguide and electrodes. With the new design, simulations indicate improved mode quality and power output which directly translates to improved FIReTIP signal-to-noise ratios.

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