Abstract Submitted
for the DPP05 Meeting of
The American Physical Society

Study of NSTX electron density and magnetic field fluctuations using the FIReTIP system[1] K.C. LEE, C.W. DOMIER, M. JOHNSON, N.C. LUHMANN, JR., UC Davis, H. PARK, E.D. FREDRICKSON, S.A. SABBAGH, S.J. ZWEBEN, Princeton University — The Far Infra Red Tangential Interferometry and Polarimetry (FIReTIP) system on NSTX is capable of simultaneously measuring fluctuations of electron density and magnetic field. Magnetic fields fluctuations ($\tilde{B}$) can be isolated during MHD activity such as internal kinks, since interferometry provides electron density information while polarimetry provides Faraday rotation data along the same beam path. In this paper, a comparison study of the electron density fluctuations with the fluctuations measured by the Gas Puffing Image (GPI) at the boundary plasmas will be discussed. A discussion of the $\tilde{B}$measurements from 3 channels at different tangencies including comparisons with EFIT equilibrium parameters and the structure of MHD modes will be presented.

[1]Supported by U.S. DoE Contracts DE-FG02-99ER54518 and DE-AC02-76CH03073.

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Date submitted: 25 Jul 2005 Electronic form version 1.4