

Abstract Submitted
for the DPP05 Meeting of
The American Physical Society

Plasma Imaging on KSTAR via Simultaneous MIR/ECEI¹ Z. SHEN, C.W. DOMIER, N.C. LUHMANN, JR., J. WANG, H-C. WU, Z.G. XIA, UC Davis, H. PARK, PPPL — A plasma imaging diagnostic is proposed for the KSTAR tokamak to image electron density fluctuations via Microwave Imaging Reflectometry (MIR), and electron temperature profiles and fluctuations via Electron Cyclotron Emission Imaging (ECEI). Both systems will be inherently 2-D in nature, and capable of simultaneously imaging fluctuations over an extended portion of the KSTAR plasma. System details, including preliminary optical and electronics designs, will be presented along with a discussion of a number of implementation options which include plasma coverage, spatial resolution, number of channels (nominal $32 \times 32 = 1024$ for ECEI, $16 \times 16 = 256$ for MIR), tuneable vs. instantaneous RF bandwidths.

¹Supported by U.S. DoE Grant DE-FG02-99ER54531.

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Date submitted: 26 Jul 2005

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