

Abstract Submitted  
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**Performance and Planned Upgrades to the 2-D ECEI Diagnostic on TEXTOR**<sup>1</sup> C.W. DOMIER, N.C. LUHMANN, JR., M. SPILLANE, J. WANG, Z.G. XIA, UC DAVIS, H. PARK, E. MAZZUCATO, PPPL, I.G.J. CLASSEN, M.J. VAN DE POL, A.J.H. DONNE, FOM-INSTITUTE FOR PLASMA PHYSICS RIJNHUIZEN — In collaboration with PPPL and FOM, UC Davis has developed and installed a 128 channel 2-D Electron Cyclotron Emission Imaging (ECEI) instrument on TEXTOR. In its present form, each array element of the 16 channel mixer array measures plasma emission at 8 simultaneous frequencies to form a 16x8 image of the plasma electron temperature distribution. Details regarding the ECEI system design and current status will be presented along with recent TEXTOR plasma data. A planned upgrade in 2006 will increase the plasma coverage from the 16 cm (vertical) x 6 cm (horizontal) to 18 cm x 12 cm. Designs will also be presented of a proposed 576 channel (24x24 image) system which is capable of visualizing temperature fluctuations over an area of 24 cm x 24 cm.

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