

Abstract Submitted
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Measurements of Mode Converted ICRF Waves with Phase Contrast Imaging in Alcator C-Mod¹ N. TSUJII, M. PORKOLAB, E.M. EDLUND, L. LIN, Y. LIN, J.C. WRIGHT, S.J. WUKITCH, MIT Plasma Science and Fusion Center — The Phase Contrast Imaging (PCI) system in Alcator C-Mod has been used to measure MHD modes, turbulence and rf waves[1]. Rf waves are measured by adding the optical heterodyne method to the usual homodyne PCI method. In D-3He(-H) plasmas, the mode converted ion cyclotron wave (MC ICW) was observed in correlation to strong plasma flow drive[2]. The MC ICW was in the vicinity of the D-3He hybrid layer, and in good agreement with predictions from TORIC, a 2-D full-wave solver in an axisymmetric plasma[3]. Line-integrated density fluctuations have been synthesized from TORIC simulations, and directly compared with PCI measurements. [1]M. Porkolab et al., IEEE Trans. Plasma Sci., 34, 229 (2006) [2]Y. Lin (Invited talk at this meeting) [3]J.C. Wright, P.T. Bonoli, M. Brambilla et al., Phys. Plasmas, 11, 2473 (2004)

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