

Abstract Submitted  
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**Recent Results from the C-Mod Polarimeter**<sup>1</sup> P. XU, J.H. IRBY, MIT-PSFC, W.F. BERGERSON, D.L. BROWER, W.X. DING, UCLA, E.S. MARMAR, MIT-PSFC, L. DELGADO-APARICIO, PPPL, D. ERNST, J.W. HUGHES, R. MUMGAARD, R. PARKER, MIT-PSFC, S. SCOTT, PPPL, S. SHIRAIWA, G.M. WALLACE, A.E. WHITE, S.M. WOLFE, MIT-PSFC — The C-Mod 3 chord FIR polarimeter, with a 2 MHz bandwidth, is capable of responding to both fast changes in the plasma equilibrium and high frequency fluctuations. It operates under ITER-like plasma conditions and magnetic fields, and uses an optical layout and FIR sources very similar to those proposed for the ITER polarimeter. Results from the polarimeter as a function of plasma density and current will be discussed, as well as the effects of lower hybrid power levels, phasing and plasma density on the current drive efficiency. The possible identification of some broadband fluctuations as primarily magnetic in nature, and gyrokinetic simulation results from the modeling of these fluctuations will also be presented. Estimates of the localization of this mode will be described. The polarimeter response to low frequency MHD modes will be compared with results from the Fast Two-Color-Interferometer.

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J.H. Irby  
MIT-PSFC

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