

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Upgrades to and Recommissioning of the C-Mod FIR Polarimeter¹ R. WATTERSON, nextSource-MIT, J.H. IRBY, MIT-PSFC, D. GARNIER, Columbia University, R. VIEIRA, R. LECCACORVI, R. MURRAY, E. MARMAR, MIT-PSFC — The Alcator 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 similar to that proposed for ITER. After a brief discussion of this system, the design of the upgrade as installed on Alcator C-Mod will be presented. The laser table has been relocated from the cell to a shielded and climate controlled location, and improvements have been made to its acoustic isolation. New collimation optics, and an enclosed, humidity controlled beam-line needed to convey the FIR beams across the C-Mod cell, have been designed and installed. Results from phase calibrations and initial testing of the laser system and reference detectors during C-Mod operation will be presented.

¹Supported by USDoE award DE-FC02-99ER54512.

Reich Watterson
nextSource-MIT

Date submitted: 23 Jul 2015

Electronic form version 1.4