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Initial Results from the C-Mod Prototype Polarimeter-Interferometer¹ K.R. SMITH, J. IRBY, R. LECCACORVI, E. MARMAR, R. MURRAY, R. VIEIRA — An FIR interferometer-polarimeter system is being developed to measure density and poloidal field profiles and fluctuations in C-Mod. During the last run campaign a CO_2 and HeNe prototype system using a set of retro-reflectors on the inner wall was made operational to determine the level of vibration compensation required, and the noise levels to expect in the experimental environment. Scrape-off layer plasma effects were also evaluated as well as the survivability of the invessel components. A standard two-color system was used for density measurements while two different techniques were used to assess polarization measurement noise levels. Results from these measurements will be discussed as well as the design of the prototype system.

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James Irby MIT PSFC

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