

Abstract Submitted  
for the DPP12 Meeting of  
The American Physical Society

**Comparison of the Impurity Sources from Standard and Field-Aligned ICRF antennas in Alcator C-Mod**<sup>1</sup> D.R. MILLER, B. LIPSCHULTZ, M.L. GARRETT, MIT PSFC, A.N. JAMES, LLNL, Y. LIN, M.L. REINKE, S.J. WUKITCH, MIT PSFC — Impurity contamination associated with ICRF heating can limit antenna performance particularly for experiments with high-Z plasma facing components (PFCs). The previous amelioration techniques involve low Z coatings, field aligned Faraday screens and dipole antenna operation. A new field-aligned antenna (FA), where the antenna straps are aligned perpendicular to the total magnetic field, is installed and currently operating. The change in strap orientation is designed to reduce impurity influxes through symmetry to cancel E-parallel along a field line. We have found marked reduction in the antenna limiter (molybdenum) source rates when ICRF heating is performed with the FA antennas versus the standard antennas. When the FA antenna is operated in monopole phase, the limiter impurity source rate is similar to the ST antenna source rate. We will report the latest results and also present data on comparison of antenna types for other impurity influxes – boron (coatings on surfaces) and titanium (coatings on Faraday screens).

<sup>1</sup>Supported by USDoE award DE-FC02-99ER54512.

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Date submitted: 11 Jul 2012

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