

Abstract Submitted  
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**Investigation of Coaxial Multipactor in the Presence of a Magnetic Field**<sup>1</sup> PAUL SCHMIT<sup>2</sup>, Arizona State University, STEPHEN WUKITCH, G. BECCERA, Y. LIN, A. PARISOT, MIT PSFC — In Alcator C-Mod, ion cyclotron range of frequency heating is the primary auxiliary heating system. One of the keys to successful ICRF heating is the antenna performance, and a number of issues can limit the antenna performance including poor voltage and power handling. On C-Mod, high density discharges can yield neutral pressures at which antenna voltage handling is severely decreased (T. Graves et al., J. Vac. Science Tech. A 24 512, 2006). This neutral pressure limit may be related to phenomena associated with antenna ELM (edge localized mode) interactions. We investigate the influence of the magnetic field on the electron distributions and trajectories for the two primary geometries found in the RF transmission system, coaxial and stripline, via Monte Carlo simulation. We have also expanded the capability of the coaxial multipactor experiment with magnetic field coils for experimental confirmation of the simulation data. Results from the simulations and initial experimental results will be presented.

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