

Abstract Submitted  
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**Lower Hybrid Coupling Studies on Alcator C-Mod**<sup>1</sup> G. WALLACE, P. BONOLI, J. LIPTAC, R. PARKER, A. SCHMIDT, MIT PSFC, J.R. WILSON, PPPL — The Alcator C-Mod Lower Hybrid Current Drive experiment launches RF waves at 4.6 GHz into the plasma via 4 rows of 24 phased waveguides. 156 directional couplers in the launcher system measure forward and reflected power in the waveguides. Langmuir probes mounted to the front of the grill monitor density at the plasma edge and act as RF probes for the observation of parametric decay. Measurements of the coupling of lower hybrid waves have been performed at power levels up to 600 kW. Edge density, launched  $n_{||}$  spectrum, and forward power have been scanned. Experimentally observed coupling results will be compared to theoretical predictions from the Brambilla code (M. Brambilla. *Nuc. Fus.*, **16**:47-54, 1976.).

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