

Abstract Submitted  
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**Lower Hybrid Current Drive on Alcator C-MOD**<sup>1</sup> J.R. WILSON, S. BERNABEI, J. HOSEA, C.K. PHILLIPS, PPPL, R. PARKER, P.T. BONOLI, A.E. HUBBARD, J. LIPTAC, A.E. SCHMIDT, G. WALLACE, MIT — A Lower Hybrid Current Drive (LHCD) system has been installed on the Alcator C-MOD tokamak at MIT. This system was designed for maximum flexibility in the launched parallel wave-number spectrum. This should allow tailoring of the lower hybrid deposition under a variety of plasma conditions. Initial results from this system will be presented. Power levels up to 800 kW have been injected into the tokamak. The parallel wave number has been varied over a wide range,  $n_{||} \sim 2-4$ . Driven currents up to  $\sim 280$  kA have been inferred from magnetic measurements, in reasonable agreement with modeling. Sawtooth oscillations vanish and central  $q$  is inferred to rise above unity, indicating off-axis CD as expected. Measurements of non-thermal x-ray and electron cyclotron emission confirm the presence of a significant fast electrons population that varies with phase and plasma density. This variation will be compared to that predicted by detailed propagation and absorption codes.

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