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**First Measurements of Edge Transport Driven by the Shoelace Antenna on Alcator C-Mod**[1] T. GOLFINOPOULOS, B. LABOMBARD, R.R. PARKER, W.M. BURKE, J.W. HUGHES, D.F. BRUNNER, E.M. DAVIS, P.C. ENNEVER, R.S. GRANETZ, M.J. GREENWALD, J.H. IRBY, R. LECCACORVI, E.S. MARMAR, W.C. PARKIN, M. PORKOLAB, J.L. TERRY, R.F. VIEIRA, S.M. WOLFE, S.J. WUKITCH, MIT PSFC, ALCATOR C-MOD TEAM — The Shoelace antenna is a unique device designed to couple to the Quasi-Coherent Mode (QCM, $k_\perp \sim 1.5$ cm$^{-1}$, $50 < f < 200$ kHz) and Weakly-Coherent Mode (WCM, $k_\perp \sim 1.5$ cm$^{-1}$, $200 < f < 500$ kHz), continuous edge fluctuations that sustain high-performance confinement regimes by exhausting impurities. The antenna is used to explore whether modes like the QCM and WCM may be exploited to actively regulate edge transport. In initial experiments, the antenna excited a resonance at the QCM frequency and phase velocity, but transport measurements were unavailable. A subsequent redesign of the winding pitch allows the antenna to be field-aligned while mapping magnetically to the Mirror Langmuir Probe (MLP) on the last-closed flux surface. This has enabled the first measurements of edge transport induced by the antenna-driven fluctuation, which has been further enhanced by quadrupling the antenna source power.

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