Abstract Submitted
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Correlation Reflectometry Results and Analysis on Alcator C-Mod[1] A. DOMINGUEZ, E.S. MARMAR, MIT PSFC, G.J. KRAMER, E.J. VALEO, AND THE ALCATOR C-MOD TEAM — A swept frequency O-mode reflectometry system has been operational on the Alcator C-Mod tokamak since the 2009 campaign. The system has a midplane view of the plasma from the low field side and covers the frequency range of 112GHz-140GHz, corresponding to electron density cutoffs of 1.56-2.43 [$10^{20}m^{-3}$]. In conjunction with two fixed frequency O-mode reflectometry channels at 112GHz and 140GHz, it is possible to determine reflectometry radial decorrelation lengths in the plasma. These lengths can be mapped to the turbulent radial decorrelation lengths with the use of a 2-D synthetic diagnostic code[1]. Results and analysis will be presented for density fluctuations in the radial region inside r/a $\sim$ 0.7.

[1] E.J. Valeo, G.J. Kramer, R. Nazikian, Plasma Phys. Control. Fus. 44 (2002) L1

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Arturo Dominguez
MIT PSFC

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