

Abstract Submitted  
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**RF propagation in the turbulent edge plasma**<sup>1</sup> J.R. MYRA, D.A. D'IPPOLITO, Lodestar Research Corp. — Most present day codes treat the propagation of rf through the edge plasma in relatively simple models in which the background plasma is steady state, laminar, and one dimensional (varying only in the flux coordinate). In reality, the edge plasma is strongly turbulent and intermittent in both space and time. As a first approximation, we consider the SOL to consist of a tenuous background plasma upon which denser filamentary field-aligned blobs of plasma are superimposed. Thus the (time and poloidally averaged) mean and local densities are very different. The blobs are regarded as stationary on the rf time-scale. Questions include phenomenology near resonances and cutoffs in intermittent plasmas, wave propagation and evanescence (e.g. when the blob and background are on opposite sides of a cutoff), and scattered power. We begin to address these questions by reporting on the scattering of a fast or slow plane-wave from a field-aligned cylinder of higher density plasma, in the cold plasma model.

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