

Abstract Submitted
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Geodesic eigenmodes and ion temperature fluctuations in a tokamak¹ A. SMOLYAKOV, S. JANHUNEN, University of Saskatchewan, V. ILGISONIS, National Research Center "Kurchatov Institute" , I. KHALZOV, General Fusion, V. LAKHIN, E. SOROKINA, National Research Center "Kurchatov Institute" — It is shown analytically that in addition to the standard Geodesical Acoustic Modes (GAM) oscillations, there are exist low frequency radially propagating fluctuations of the mean (poloidally averaged) ion temperature. Radial propagation of the ion temperature mode is supported by the ion (radial) heat flux, while the restoring force is created by the radial current due to the ion diamagnetic velocity. The structure of the global GAM and radial propagation is studied numerically with the MHD and gyrokinetic theory.

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