



Wave-mode Identification in Kinetic-scale Turbulence in the Solar Wind at Low and High Beta

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We present here an analysis of kinetic-scale electromagnetic fluctuations in the solar wind based on data analysis from Cluster and THEMIS/ARTEMIS spacecraft. We focus on various intervals with low and high beta plasma. We compute parameters such as the electric to magnetic field ratio, the magnetic compressibility, magnetic helicity, and other relevant quantities in order to diagnose the nature of the fluctuations at those scales between the ion and electron cyclotron frequencies, extracting information on the dominant modes composing the fluctuations. We also use the linear Vlasov-Maxwell solver, PLUME, to determine the various relevant modes of the plasma with parameters from the observed solar wind intervals. We discuss the results and the relevant modes as well as the differences between the low and high beta regimes.