



Polarization Status of Magnetic Fluctuations at Proton Scales

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We study the polarization status of magnetic field fluctuations at proton scales looking for possible links between the large-scale and small-scale features of solar wind fluctuations across the frequency break separating fluid and kinetic regimes. The main goal is to correlate the occurrence of proton temperature anisotropy, low proton β_{\parallel} values and, magnetic field fluctuations polarization to the particular state of turbulence found within the inertial range. We found clear correlations between each type of polarization, either left or right, and turbulence status. Moreover, for the first time in literature, we show that left-handed and right handed polarized fluctuations occupy different areas of the temperature anisotropy- β_{\parallel} plot, as expected for Alfvén Ion Cyclotron and Kinetic Alfvén waves, respectively.