



## **MHD properties of plasma fluctuations in different sheaths**

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We analyze high-resolution observations of the magnetic field strength and proton density measured by Voyager 1 and Voyager 2 on their path through the Jupiter's magnetosheath, and Voyager 2 in the heliosheath behind the crossing of the termination shock. We compared observed fluctuations with those measured by Cluster and later by THEMIS in the different locations of the Earth's magnetosheath and with the variations in the sheaths of magnetic clouds registered by Wind at 1 AU. To characterize the type of fluctuations, we investigate their spectral slopes and correlation properties, mainly the cross correlations between the magnetic field and proton density together with an investigation of their dependence on the distance from shocks. We discuss similarities and differences of the fluctuations in these regions on various time scales (from several hours to tens of days) and we survey the problems connected with such analysis.