

VARIATIONS OF THE CORRELATION LENGTH OF MAGNETOSHEATH MAGNETIC FIELD FLUCTUATIONS

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The magnetosheath is characterized by a variety of low-frequency fluctuations from different sources. In our previous studies, we analyzed magnetic field fluctuations of multipoint Cluster spacecraft observations near dusk/dawn meridian and we have found that the correlation length of these fluctuations depends on the solar wind speed, on a correlation between IMF and magnetosheath magnetic field fluctuations, and on the amplitude of fluctuations. To precise a penetration of solar wind fluctuations into the magnetosheath as well as to find sources the fluctuations born in the magnetosheath itself, we use different solar wind monitors and different separations between the magnetosheath spacecraft (Cluster, Themis). We discuss the probability of excitation of various wave modes and their influence on the correlation length.

Magnetic field fluctuations, correlation length

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