

# CORRELATION STUDY OF FLUCTUATIONS OF MAGNETOSHEATH PARAMETERS

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The magnetosheath plays a very important role in the solar wind - magnetosphere interaction because its magnetic field and plasma come into contact with the magnetopause. This region is highly disturbed and the origin and properties of the magnetosheath fluctuations are still poorly understood. Earlier statistical processing of a large amount of magnetosheath observations has shown that magnetosheath magnetic field and plasma flow fluctuations downstream of the quasiparallel shock are much larger than those at the opposite flank. Our study deals with simultaneous observations of several shortly (up to a few  $Re$ ) separated spacecraft in the magnetosheath and compares correlations between the magnetic fields and plasma flows on different spatial scales. As a result, we are finding a correlation length of fluctuations of both quantities in the 0.001-0.25 Hz frequency range and its dependence on the orientation of the magnetosheath flow or magnetic field.