Geophysical Research Abstracts, Vol. 9, 03401, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-03401


# Two-point observations of magnetosheath fluctuations

**O. Gutynska**, J. Safrankova, Z. Nemecek

Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic
(jana.safrankova@mff.cuni.cz)

The magnetosheath represents an interface preconditioning the solar wind and interplanetary magnetic field prior they hit the magnetopause. Magnetosheath parameters are usually described by gasdynamic or MHD models but these models cannot account for one of the most important sources of magnetosheath fluctuations - the foreshock - and thus, the experimental investigation is necessary. Earlier statistical processing of a large amount of magnetosheath observations has shown that the magnetosehath fluctuations downstream of the quasiparallel shock are much larger than those at the opposite flank. We are comparing observations of two shortly (about 1 RE) separated spacecraft in the magnetosheath. Our study reveals that their observations are usually well correlated on this spatial scale but we have found several intervals when the spacecraft observe completely different plasma and magnetic field profiles. This suggests a presence of a sharp boundary between disturbed and undisturbed magnetosheath flows. We are discussing a possible origin of such boundary.