



## **Magnetosheath fluctuations: A comparison of low and high latitudes**

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

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

Magnetosheath plasma flow and magnetic field are usually very disturbed. Earlier statistical processing of a large amount of magnetosheath observations has shown that the magnetosheath fluctuations downstream of the quasiparallel shock are much larger than those at the opposite flank. This effect led to the conclusion that the fluctuations were born in the foreshock and blown down through the bow shock. The magnetopause indentation in the cusp region can represent another source of the fluctuations that was not investigated yet. We are comparing observations of the Cluster spacecraft at a vicinity of the low-latitude magnetopause near the dawn-dusk meridian with those made above the cusp with motivation to determine a possible contribution of the magnetopause deformation to magnetosheath fluctuations. Our study reveals that the fluctuations in the high-latitude magnetosheath are generally larger but an ordering of these fluctuations with the interplanetary magnetic field orientation suggests that reconnection can play an important role in their excitation.