Geophysical Research Abstracts, Vol. 9, 06743, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-06743

Turbulence in the Earth's plasma sheet associated with reconnection and bursty bulk flows

Z. Vörös (1,3), R. Nakamura (1), W. Baumjohann (1), A. Runov (1), M. Volwerk (1), Y. Asano (2), D. Jankovičová (3), E. Lucek (4) and B. Klecker (5)

(1) Space Research Institute, Graz, Austria, (2) Tokyo Institute of Technology, Tokyo, Japan, (3) Institute of Atmospheric Physics, Prague, Czech Republic, (4) Imperial College, London, UK, (5) Max-Planck-Institute fuer extraterrestrische Physik, Garching, Germany.

Reconnection-related fast flows in the Earth's plasma sheet can be associated with several accompanying phenomena, such as magnetic field dipolarization, current sheet thinning and turbulence. Statistical analysis of multi-scale properties of turbulence facilitates to understand the interaction of the plasma flow with the dipolar magnetic field and to recognize the remote or nearby temporal and spatial characteristics of reconnection. The main emphasis of this presentation is on studying the specific statistical features of flow-associated fluctuations at different distances from the reconnection site.