



Transient events at the dayside LLBL

O. Tkachenko, J. Safránková, and Z. Němeček

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

Low-latitude boundary layer (LLBL) can be found at low latitudes on magnetospheric flanks but it covers the whole dayside magnetosphere, and thus mediates the transfer of the plasma of solar wind origin across the magnetopause. In spite of its crucial role in the solar wind - magnetosphere coupling, basic LLBL parameters and their relations to upstream conditions are still under debate. The main problem is that this region is highly structured and dynamic and single spacecraft observations cannot resolve spatial and temporal effects.

We analyze in details Themis multipoint observations of one multiple LLBL passage with motivation to determine the source of observed transients. The data are compared with predictions for flux transfer events (FTE), upstream pressure pulses, and surface magnetopause waves. Although these processes exhibit many common signatures, a careful analysis can undoubtedly distinguish among them.