



Quasiperiodic oscillations in the LLBL

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The dayside LLBL is an interface mediating solar wind input into the magnetosphere. Since February 2007, this region is monitored by five Themis spacecraft that revealed oscillations of the plasma parameters inside the LLBL as well as quasiperiodic displacements of the whole region with periods ranging from 1 to 10 minutes.

In the present contribution, we analyze observations of the Themis spacecraft and simultaneous observations of four Cluster spacecraft and DMSP satellites whenever available and compare them with ground-based magnetic field measurements. The analysis is supported by Wind and ACE solar wind monitoring. The motivation behind this study is to find probable sources of these oscillations. Considered candidates range from foreshock fluctuations through pulsed reconnection at the magnetopause to resonances of the magnetospheric cavity.