Geophysical Research Abstracts
Vol. 20, EGU2018-4811-2, 2018
EGU General Assembly 2018

Case Study: Substorm External Triggering Associated with Northward and Southward IMF orientation

Dana Saxonbergova (1), Zoltan Voros (2), and Jan Simkanin (3)

(1) Institute of Atmospheric Physics, Department of Upper Atmosphere, CAS, Praha, Czech Republic (jdanka25@yahoo.com), (2) Space Research Institute, Austrian Academy of Science, Graz, Austria(zoltan.voeroes@oeaw.ac.at), (3) Institute of Geophysics of the CAS, Praha, Czech Republic(jano@ig.cas.cz)

For better understanding the magnetospheric substorm triggering processes in solar wind plasma it is necessary to determine whether substorm onset is always externally triggered by conditions in the interplanetary magnetic field and solar wind plasma or there is set of processes which together also can lead to substorm onsets as alternative mechanism. Such comparisons can be done under different conditions e.g. associated with special northward or southward oriented interplanetary magnetic field conditions. In such cases differences in trigger mechanism can be analysed. We use WIND data for solar wind, POLAR and groundbased data for monitoring polar area processes and GEOTAIL data for analysing distant tail responses to the processes in the solar wind.