

# **A coordinated Study of Field-aligned Currents and Pc5 Pulsations during Multi-Ejecta on April 7-11, 1997**

A. Bochev (1), D. Teodosiev (2), P. Nenovski (3), V. Pilipenko (4), S. Alex (5) and G. Lakhina (5)

(1) Solar- Terrestrial Influences Laboratory, Bulgarian Academy of Sciences, 3 G. Bonchev, 1113, Sofia, Bulgaria, (2) Space Research Institute, Bulgarian Academy of Sciences, 6 Moskovska str., 1000, Sofia, Bulgaria, (3) Geophysical Institute, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria, (4) Space Research Institute, Moscow 117810, Russia, (5) Indian Institute of Geomagnetism, Mumbai, India

Satellite observations have revealed the complexities associated with the substorm growth phase and the onset period. Processes of energy flux propagation during geomagnetic storms are mainly governed by the convection electric field in the magnetosphere through the merging of field lines. To bring out a comprehensive substorm concept a coordinated study of a few cases of substorm events, field-aligned currents, and associated Pc 5 pulsations is initiated.

Distinct features of multiple substorm triggering by favorable orientation of the interplanetary magnetic field are considered in this study. Sequence of particle dispersions, field-aligned currents, and Pc 5 pulsations at wide latitudinal range and different configuration of auroral oval are observed. Reconnection signatures are sought in order to understand this complexity of plasma, field, and wave features. Data from satellite observations (Interball, Polar, and DMSP) and ground based magnetic data (from Intermagnet chain of observatories at high- and mid-latitudes) are used to achieve a better spatial and temporal resolution.