**Midlatitude positive bays related to magnetospheric substorms at Panagyurishte station in 2012 – case study**

**L. Raykova1, V. Guineva1, R. Werner1, R. Bojilova2, A. Atanassov1**

1Space Research and Technology Institute (SRTI) – Bulgarian Academy of Sciences, Stara Zagora Department, Bulgaria

2National Institute of Geophysics, Geodesy and Geography (NIGGG) - Bulgarian Academy of Sciences, Sofia, Bulgaria

The positive bays in the X magnetic component at midlatitudes, known as midlatitude positive bays (MPB) are the effect of substorms at midlatitudes. The mechanisms that lead to the occurrence of substorms remain a subject of ongoing scientific debate. In this study, the registered MPB at the Bulgarian magnetic station Panagyurishte (PAG) during 2012 are examined. 2012 is about at the middle of the ascending phase of SC24, and a maximum of the number of detected MPB (a total of 182), related to magnetic substorms, was observed at this year. 18 of the MPB’s, with maximal value greater than 20 nT, are taken as strong. The interplanetary and geomagnetic conditions during these events have been examined. It was found out that all cases with strong MPB happened during geomagnetic storms. The effect of two consecutive substorms on 15 July 2012 at PAG has been studied in detail.