

THE “BASTILLE DAY” GLE 14 JULY, 2000 AS OSERVED BY THE WORLDWIDE NEUTRON MONITOR NETWORK

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The GLE of 14.07.2000 observed by the worldwide neutron monitor network has been analyzed along with the asymptotic acceptance cones of these stations calculated with the use of the Tsyganenko 89 magnetospheric model. The calculated asymptotic direction maps correspond to a picture where a maximal increase and fast intensity rise was observed by stations looking along the IMF at the sun through their asymptotic cones (seen at SANA E Apatity, Thule).

The event was superimposed on a disturbed interplanetary background: a strong Forbush decrease was in progress when the GLE began. This last circumstance can be explained by a possible loop-like IMF structure resulting in a significant sunward flux of relativistic solar protons (seen at Terre Adelie, McMurdo, Hobart). It is interesting that at the antipodal station-pairs Apatity and Terre Adelie (or Thule-McMurdo) the counting-rate increase began nearly simultaneously, although at Terre Adelie, in contrast to Apatity, the intensity rise was gradual.

The asymptotic directions were calculated also for a number of stations from the Space Ship Earth (SSE) ring, which were not yet operating during this period, to show the advantages of their locations.