



Contribution ID : 10

Type : **Poster**

Space radiation storm : associated cosmic ray intensity variation and geomagnetic effects

Abstract content

NOAA satellites and the orbiting Solar and Heliospheric observatory (SOHO) recorded one of the most powerful solar flares of the previous solar cycle 23 on 14 July 2000. This intense X 5 –class flare was erupted from sunspot region 9077 at 1024 UT. Simultaneously the coronagraph on board the SOHO recorded a ‘full-halo’ coronal mass ejection (CME) aimed toward the Earth. As CME’s are gigantic bubbles of electrified gas carrying away as much as 10 billion tons of solar material, such a release of solar particles produced very intense geomagnetic disturbances and further modulates the cosmic ray intensities. In this study an attempt has been made to analyze the influence of this space radiation storm on Earth’s geomagnetic field as well as on the cosmic ray intensity variation. as reflected b a strong Forbush decrease event. We have used the geomagnetic indices Dst, Ap and AE and for cosmic rays the data from Calgary NM 64 (geographic Lat. North 51.08, Long. East 245.87, cut off rigidity 1.09 GV) is used. The study revealed that event is well correlated with the Forbush decrease and producing significant depressions in the geomagnetic indices. We have obtained the encouraging results that are discussed in the detailed paper.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Primary author(s) : Ms. SHARMA, Sonia (School of Studies in Physics, Jiwaji University, Gwalior, M.P. 475 001, INDIA)

Co-author(s) : Dr. KAUSHIK, Subhash Chandra (Department of Physics, Government Autonomous (P.G.) College, Datia 486 661 M.P. INDIA)

Presenter(s) : Ms. SHARMA, Sonia (School of Studies in Physics, Jiwaji University, Gwalior, M.P. 475 001, INDIA)

Session Classification : Posters 1 + Coffee

Track Classification : SH.2.1