



Contribution ID: 291

Type: Oral Presentation

Statistical analysis of ground level enhancement (GLE) and Forbush decrease (FD) using neutron monitor data covering solar cycle 23 and 24.

Wednesday, 5 July 2023 14:40 (20 minutes)

The main aim of this study is to perform statistical analysis of ground level enhancement (GLE) and forbush decrease (FD) associated with solar events, such as coronal mass ejections (CMEs), solar energetic particles (SEPs) and solar flares. The study will also investigate which of the solar events has the greatest influence in terms of GLEs and FD magnitudes. The period of study covers the solar cycle 23 and 24, 1996-2008 and 2009-2019 respectively. Within these two solar cycles, 18 GLE events were observed by the neutron monitors (NM) world-wide. This study will consider the data from the four NM stations in the southern hemisphere namely; Hermanus, Potchefstroom, Tsumeb and SANA. These solar events will be investigated independently, and the preliminary results will be presented and discussed in this paper.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

MSc

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Session Classification: Astrophysics & Space Science

Track Classification: Track D2 - Space Science