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Study of low amplitude cosmic ray anisotropy alongwith interplanetary transients

Abstract content

Abstract The present work deals with the study of first three harmonics of low amplitude anisotropic wave trains of cosmic ray intensity over the period 1991-1994 for Deep River neutron monitoring station. It is observed that the diurnal time of maximum remains in the corotational direction; whereas, the time of maximum for both diurnal and semi-diurnal anisotropy has significantly shifted towards later hours as compared to the quiet day annual average for majority of the LAE events. It is noticed that these events are not caused either by the high-speed solar wind streams or by the sources on the Sun responsible for producing these streams; such as, polar coronal holes. The direction of the tri-diurnal anisotropy shows a good negative correlation with Bz component of interplanetary magnetic field. The occurrence of low amplitude events is dominant for positive polarity of Bz. The Disturbance Storm Time index i.e. Dst remains consistently negative only throughout all the low amplitude wave train events.

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

Summary

Reference

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