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Exceptionaly Low Amplitude Anisotropic Wave Train Events in Cosmic Ray Intensity

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Abstract: The unusually low amplitude anisotropic wave train events (LAEs) in cosmic ray intensity using the ground-based Deep River neutron monitor data has been studied during the period 1991--94. It has been observed that the phase of the diurnal anisotropy for majority of the LAE events remains in the corotational direction. However, for some of the LAE events the phase of the diurnal anisotropy shifts towards earlier hours. On the other hand, the amplitude of the semi-diurnal anisotropy remains statistically the same whereas, phase shift towards later hours; similar trend has also been found in case of tri-diurnal anisotropy. The interplanetary magnetic field (IMF) and solar wind plasma (SWP) parameters during these LAEs are also investigated.

Key Words: Cosmic ray, diurnal, semi-diurnal and anisotropy

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