

CONE ANGLE CONTROL OF GLOBAL PC3 ACTIVITY: A NEW INDEX TO CHARACTERIZE UPSTREAM WAVE RELATED PULSATION ACTIVITY

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The dominant source of dayside pulsations at low-latitudes is inward propagating upstream wave activity. In this region pulsations due to upstream wave are clearly observed on the ground whereas at mid-latitudes they drive field line resonances that makes the wave structure more complex. In a joint Hungarian-US project, 1-Hz data from the USGS, Japanese, and Hungarian pulsation stations are used to examine Pc3 activity at low-latitudes. The Pc3 pulsations due to upstream waves will be used to develop an index for the characterization of the global activity of the upstream wave phenomena. The relationship between the index and cone angle of the interplanetary magnetic field is examined for a correlation with solar and/or magnetospheric activity. The conclusions may be essential to space weather conditions.

ULF waves, geomagnetic indices, upstream waves

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