

PC 3,4 magnetic pulsations observed simultaneously in the magnetosphere and at multiple ground stations

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Abstract

Periods of magnetic conjugacy between ISEE and the magnetometer array of the Institute for Geological Sciences have been examined to search for the simultaneous occurrence of Pc 3,4 magnetic pulsations. When compressional waves are seen in space, waves are also observed on the ground at the same frequency and with similar waveforms. The wave amplitude on the ground at midlatitudes is similar to that in space at ISEE but at high latitudes the amplitudes are larger than in space. The one occurrence of a purely transverse signal at ISEE was not observed on the ground. These results confirm that Pc 3,4. wave energy is most readily transported through the magnetosphere by compressional fluctuations.