



Tailward Propagation of Pi2 Waves in the Earth's Magnetotail Lobe

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Pi2 waves are an integral part of the substorm process and have been observed on the ground and in space. Using the special ability of Cluster to determine the propagation direction of signals measured in the magnetometer data, it is found that in the lobes of the Earth's magnetotail, for the cases in this study, the Pi2 waves are travelling tailward. The polarization of the waves in the lobes corresponds well with the polarization observed in the highest latitude ground station. The propagation velocity of the Pi2 waves in the lobes is basically Alfvénic.