

FIELD LINE RESONANCE SIGNATURES ASSOCIATED WITH LOW LATITUDE PC3-4 PULSATIONS

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We have studied the spectral contents and latitudinal structure of magnetic Pc3-4 pulsations on the dayside using data acquired by the Mid-continent Magnetoseismic Chain (McMAC) at $L = 1.46 - 3.40$. We display the magnetometer data in a keogram format and find that the pulsations in the H component consist of oscillations with time-dependent amplitude and period and that these oscillations generally exhibit poleward phase propagation. By spectral analysis of Pc3 and Pc4 pulsation events identified in the keograms we find that the latitude of the amplitude peak depends on the pulsation frequency and that the phase changes by ~ 180 degrees across the amplitude peak, a signature of field line resonance. Occurrence of field line resonance is further confirmed from the fact that the amplitude peak occurs at the latitude where the pulsation frequency matches the fundamental toroidal wave frequency that is determined using the cross phase technique.

field line resonance, McMAC, Pc3-4

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