

R006-27

Zoom meeting B : 11/2 AM2 (10:45-12:30)  
10:45-11:00

## **A study of longitudinal extent of Pc1 pulsations using six PWING ground stations at subauroral latitudes**

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The ultra-low-frequency (ULF) Pc1 geomagnetic pulsations correspond to the electromagnetic ion cyclotron (EMIC) waves in the magnetosphere, and are excited sporadically in the magnetospheric equatorial plane with the frequency range of 0.2-5 Hz. Pc1/EMIC waves occur as a result of the ion-cyclotron instability. These waves may contribute to loss of the radiation belt electrons in the inner magnetosphere through wave-particle interactions. The previous research on the spatial extent of EMIC waves mainly used only a specific ground station or several ground stations. There are also some researches in global distribution using single satellite rather than through ground stations. However, the instantaneous longitudinal extent of the Pc1 waves has not been fully understood yet. In order to investigate this instantaneous longitudinal extent of the Pc1 waves, in this study, we analyze the magnetic field data obtained at the six stations at Athabasca (54.6N, 246.36E), Kapuskasing (49.39N, 277.81E), Gakona (62.39N, 214.78E), Husafell (64.67N, 338.97E), Zhigansk (66.78N, 123.37E) and Istok (70.03N, 88.01E) for one year from July 2018 to June 2019. The magnetometers at these stations have been deployed and operated by "the study of dynamical variation of Particles and Waves in the Inner magnetosphere using Ground-based network observations (PWING)" project. We will report the occurrence rates and average frequencies of the Pc1/EMIC waves at these stations and discuss the characteristics of the wave appearance including their instantaneous longitudinal extent.