



Contribution ID: 255

Type: Oral Presentation

## An investigation into sources of pc5 pulsations during quiet geomagnetic conditions

Thursday, 11 July 2019 11:20 (20 minutes)

Pc5 pulsations are global magneto-hydrodynamic events in the magnetosphere. We investigate quiet-time Pc5 pulsation events and their likely excitation mechanisms using SuperDARN, and Omni and GOES satellite data. With the interplanetary magnetic field (IMF)  $B_z$  northward, we investigate cases where the IMF  $B_y$  component is positive and negative. We investigate the excitation mechanism of the pulsation, determining its qualitative polarization characteristics. A complex demodulation technique is employed to determine the amplitude and phase relationship between field components observed by the radars and other data sets, which gives wave number and phase velocity characteristics of pulsations. We investigate magnetic pulsations in the context of MHD theory, grouping them under various source mechanisms to obtain their statistical occurrence.

**Apply to be considered for a student award (Yes / No)?**

yes

**Level for award (Hons, MSc, PhD, N/A)?**

Msc

**Primary author:** Mr MBANJWA, Njabulo (UKZN)

**Presenter:** Mr MBANJWA, Njabulo (UKZN)

**Session Classification:** Space Science

**Track Classification:** Track D2 - Space Science