



Contribution ID: 194

Type: Oral Presentation

Determining the response of southern hemisphere SuperDARN convection maps to the southward turning of the Interplanetary Magnetic Field.

Monday, 4 July 2022 15:30 (15 minutes)

The Super Dual Auroral Radar Network (SuperDARN) is an international collaboration of High Frequency (HF) radars located in the mid and high-latitude zones of the northern hemispheres and the southern hemispheres. These HF radars operate and transmit signals at a frequency ranging from 8-20 MHz, although in most cases they are operational at frequencies between 10 and 14 MHz. In this study, we determine the response of the southern hemisphere SuperDARN convection maps to sustained changes in the Interplanetary Magnetic Field (IMF) as measured by magnetometers on the ACE satellite during 2011. The focus here was on periods for which the clock angle of the Interplanetary Magnetic Field (IMF) was stable for at least one hour in any quadrant. SuperDARN data from the southern hemisphere was used as results from the northern hemisphere have already appeared in the literature. Cross-correlation was used to determine the time lag between the IMF clock angle and the Cross Polar Cap potential (CPCP) as determined from SuperDARN convection maps.

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

Yes

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

MSc

Primary author: MCHITHAKALI, Aviwe

Presenter: MCHITHAKALI, Aviwe

Session Classification: Space Science

Track Classification: Track D2 - Space Science