RSPP seminars

Dr Angeline Burrell

University of Texas at Dallas, US

"Seasonal influences on plasma convection at solar maximum"

"Plasma convection over the poles shows the result of direct interactions between the terrestrial atmosphere, magnetosphere, and the sun. The paths that the ionospheric plasma takes in the polar cap form a variety of patterns, which have been shown to depend strongly on the direction of the Interplanetary Magnetic Field (IMF) and the reconnection rate. While the IMF and level of geomagnetic activity clearly alter the plasma convection patterns, the influence of changing solar irradiance is also important. This study investigates the influence of season on plasma convection during quiet geomagnetic periods for southward IMF. Ionospheric convection is mapped using Super Dual Auroral Radar Network (SuperDARN) backscatter and observations of the open-closed field line boundary taken from the Imager for Magnetopause-to-Aurora Global Exploration (IMAGE) Far Ultraviolet (FUV) imagers. The influence of magnetosphere-ionosphere-thermosphere coupling on the temporal variations is explored using complementary data sets".

Wednesday, May 30th at 2 pm in Physics LTB