

ULF GEOMAGNETIC PULSATIONS AT DIFFERENT LATITUDES IN THE SOUTHERN POLAR CAP

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We present the results of a study aimed to characterize the ULF (1-100 mHz) pulsation activity in the polar cap at two different latitudes. We used magnetic measurements obtained through 2005-2007 in Antarctica, at Dome C (89°S corrected geomagnetic latitude) and at Terra Nova Bay (80°S corrected geomagnetic latitude). The diurnal variation, the seasonal dependence, the relationship with the solar wind speed of the ULF power and the polarization pattern are examined in different frequency bands. The different position of the two stations, with respect to the cusp and closed field lines, is responsible for the observed different pulsation characteristics. The results also indicate a solar wind control of the wave activity as well as a significant role of the ionospheric conditions.

magnetosphere – polar cap – MHD waves

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