SYNOPTIC VARIATIONS OF THE OCB DURING CIR-DRIVEN EVENTS: ISSUES WITH PC5 PERIODICITIES IN THE SOLAR WIND?

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Synoptic observations of the magnetospheric open-closed field-line boundary [OCB], made by an array of fluxgate magnetometers distributed at high geomagnetic latitudes across Antarctica as part of the PENGUIn-AGO program, were presented in Urban et al. [2011]. Key to that study was the detection, or lack thereof, of Pc5 oscillations on the magnetic field lines. However, a number of observations of Pc5-type frequencies have been observed in the solar wind and question the validity of using synoptic fluxgate observations to determine the OCB. Using ACE data, we show that these discrete periodicities do exist, are likely associated with solar p-modes, and do not impact the results of Urban et al. [2011].

Keywords: open-closed field-line boundary [OCB], Pc5 pulsation at high latitudes, the PENGUIn-AGO program, Pc5-type oscillation in the solar wind, solar p-modes