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ANALYTICAL INTERPRETATION OF GEOMAGNETIC FIELDANOMALY ALONG THE DIP EQUATOR

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ABSTRACT

The variation of the magnetic H- field in the equatorial electrojet (EEJ) regions along the dip equator have been studied, using five international Quiet Days (IQD's) of each month for the years 2005 to 2007. The hourly mean values were used to study the variations in the component (H) at the equatorial electrojet regions. The results of the analysisrevealed average constant diurnal variations in all, while the amplitude of dH variation peaks during the day at about local noon (12.00h) in all the eight equatorial electrojet regions used. This diurnal variation in H with Sq (H) enhancement in all the eight regions are attributed partly to ionospheric plasma irregularities as well as the enhanced dynamo action in the ionosphere.

KEYWORDS: Magnetic Field, Dip Equator, Equatorial Electroject, Diurnal