

Longitudinal Variation and Peak Time of Equatorial Electrojet Current from Ground and Satellite Measurements

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In this study, we presented the variability of equatorial electrojet (EEJ) current examined using data measured by ground stations and satellite magnetometers during quiet days in different solar activity levels. Two main focus here are the EEJ' s longitudinal profile and its peak time. We have evaluated both ground and satellite data using linear regression method before categorized them into different solar activity levels: low, moderate and high. A good agreement of EEJ longitudinal profile between both measurements appear during low solar activity with a high correlation coefficient is observed in the Southeast Asian sector. Apart from that, our analysis demonstrated that the seasonal dependence of EEJ' s peak time reported by previous studies were only reflected at certain longitude sectors.