

Spread-F response on geomagnetic storm observed in Hainan

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The response of equatorial ionosphere during geomagnetic storms is one of the important issues related to space weather studies and how they affect the occurrence characteristics of equatorial spread-F is one of the prominent research fields. In this study, we use the data from GPS-4 digisonde in Hainan (magnetic latitude 8.1N), China to investigate the effects of geomagnetic storms on equatorial spread-F. The data is from February 2002 to August 2005. Nine geomagnetic storms are selected to do analysis. The results show that a geomagnetic storm sometimes (e.g. September 7, 2002) seems as an initiator, whereas sometimes (e.g. October 28, 2003) seem as an inhibitor for the generation and development of strong equatorial SF.