

Different behaviors of NmF2 and TEC during initial phase of positive ionospheric storm

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During initial phase of major positive ionospheric storms on November 2001 and November 2004, TEC was observed to increase all over Japan as compared with its normal behavior, while several ionosonde stations observed decrease of NmF2. These phenomena are important for understanding physical processes associated with the regional interactions between the ionosphere and the plasmasphere. In this study, we study the physical mechanisms for the different behaviors of NmF2 and TEC, and also the ambient ionospheric states under which these phenomena are likely to occur.