

Statistical study of medium-scale traveling ionospheric disturbances observed with GPS networks in Japan and Southern California

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In our previous study, using GPS data around Southern California, we investigated the occurrence rate and characteristics of MSTIDs (Medium-Scale Traveling Ionospheric Disturbances). The results indicated that there were primary peaks on winter daytime, summer dusk, and summer nighttime. The daytime, dusk and nighttime MSTIDs propagated southeastward, southwestward/northwestward and north-northwestward, respectively. In this study, we analyzed the MSTIDs occurrence rate in Japan statistically. Comparing the occurrence rate and characteristics of MSTIDs observed in Japan with those in Southern California, we discuss mechanisms of MSTIDs.