In this paper, we used the GPS TEC data with the duration of 15 months to monitor the statistical properties of medium-scale traveling ionospheric disturbances (MSTIDs) in Central China. The data were observed by a dense distribution of 24 GPS stations in Hubei province. Totally 793 MSTID events were found. 46% of the events occurred in daytime. The occurrence of day-time MSTIDs reached its peak of 40% at 1500 LT. 54% occurred in nighttime, whose occurrence peaked at 0100 LT with the maximum of 60%. Compared to night-time MSTIDs, day-time MSTIDs were characterized by small amplitude (up to 1.5%), shorter time duration (~2.1 hours) and faster phase velocity. The occurrence of day-time MSTIDs peaked around winter solstice. Most of them propagated at the azimuth of 150°-210 °(clockwise from the North). It was found that the propagation of day-time MSTIDs follow the conventional wind-filtering theory. On the other hand, most night-time MSTIDs propagated southwestward with the occurrence peaking at summer solstice. It seemed that wind filtering effects didn’t work on night-time MSTIDs. Further analysis indicated that both day-time and night-time MSTID the occurrence decreased with the increase of Kp index. Possible generation mechanisms of the MSTIDs were discussed on the basis of the observations.