

Medium-scale traveling ionospheric disturbances observed with aGPS network and the MU radar

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To investigate traveling ionospheric disturbances (TIDs), we analyzed total electron content (TEC) obtained from a GPS network in Japan. TIDs propagating south-southeastward with a velocity of about 100 m/s were observed during 1000-1700JST on January 10, 2001. Horizontal wavelength of the TID was 150 km. Simultaneously, the MU radar at Shigaraki detected TIDs as perturbations of the electron density in the F region. Vertical wavelength of the TID observed with the MU radar was 120km. This is consistent with the wavelength estimated from a dispersion relation of atmospheric gravity waves.