

## Disturbances of the Ionosphere Observed by the FMCW Radar

# Kentarou Kitamura[1]; Shinichi Watari[2]; Kenro Nozaki[2]

[1] TCT; [2] NICT

We started the doppler observation for the ionospheric disturbance by using the FMCW radar at INUBO station (35.71N, 140.86E) from March 2007. Using the double-FFT method, the doppler frequency of the ionosphere at the reflection height can be obtained. We analyzed the data which was observed on 25 March, 2007. The doppler frequency continuously decreases from 0.3 to -0.3Hz during 0730-0930UT. During this interval, the solar wind data measured by the ACE spacecraft and the ground magnetic variation data show that the southward component of the IMF caused the magnetic disturbances in the polar cap and the enhancement of the equatorial electrojet at YAP station. These results of the observation indicate that the electric field disturbance, which is imposed on the polar ionosphere and is propagating to the equatorial region, is detected at INUBO station in the middle latitude with the amplitude of approximately 0.4mV/m.