**R005-07**
**B 会場 ：9/24　PM2 （15:45-18:15）**
**15:45〜16:00**

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# IMF dependence of midnight bifurcation of the thermospheric wind based on nine winter measurements in Tromsoe, Norway

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The ionosphere is partially ionized plasma, but the particle minority of ions plays an important role in controlling dynamics of the thermosphere. Particle collision is the fundamental process for momentum transfer from ionospheric ions to thermospheric neutral particles. The ionospheric plasma flow pattern at high latitudes depends on the direction of the interplanetary magnetic field (IMF), and the pattern may be projected on the thermospheric wind. However, the dependence is not yet well understood. This study derived statistical experimental features regarding the dependence of the thermospheric wind at an F-region altitude, analyzing data for nine winter seasons from a Fabry-Perot interferometer (630 nm) and a Dynasonde in Tromsoe, Norway. The wind pattern around midnight is different from the ionospheric plasma convection, in accordance with the IMF direction. The zonal wind bifurcates immediately before midnight for IMF By$<$0, but for By$>$0, it inverts gradually into the postmidnight sector. Neutral wind streams, originating from higher latitudes, may cause the dependence because of anti-sunward plasma flow distortion in the polar cap. In summary, this study concludes that the zonal wind bifurcation at auroral latitudes is caused by the ion velocity bifurcation, and that advection from the polar cap region affects the wind response time to the ion velocity bifurcation.