

**R006-07**

**Zoom meeting B : 11/1 AM2 (10:45-12:30)**

**11:15~11:30**

## **Mini-broadband electron precipitation in the cusp for northward IMF**

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We investigated what type of structure of the electron precipitation occurs typically in the cusp for northward IMF by using auroral image data obtained by an all-sky imager on the ground and precipitating particle/magnetic field data obtained by DMSP F16 spacecraft. From five winter seasons we took the DMSP conjugate observations of the cusp with the all-sky imager. The result from the conjugate observations showed that mini-broadband electron precipitations, which are coincident with upward field-aligned currents, occur in the cusp for northward IMF. Those mini-broadband electron precipitations tend to occur in more places within the longitudinal extent of the cusp with an increase in the flux of the less-structured background electron precipitation. The result of the analysis also showed that the background electron precipitation tends to increase its flux as the magnitude of the IMF increases, suggesting that the entry of the background electron is controlled by lobe reconnection. Multiple structures of mini-broadband electron precipitation, embedded in the less-structured background electron precipitation, are typical for the winter-hemisphere cusp for northward IMF. We discuss the generation of the mini-broadband electron precipitation in terms of the flux of the background electron precipitation.