Eu-P007 Time: June 8 17:00-18:30

A statistical study of low-frequency electric field fluctuations over the dayside auroral regions

Wataru Miyake[1], Yumi Hirano[1], Ayako Matsuoka[2], Masataka Ito[3]

[1] CRL, [2] ISAS, [3] Physics, Tokyo Gakugei UNIV.

Low-frequency electric field fluctuations are often observed over the dayside auroral regions. There are two possible origins

of the fluctuations: static structures of field-aligned current and Alfven waves. In either case, the fluctuations reflect an input of energy to the auroral ionosphere. We use EFD data from Exos-D satellite and make a statistical study of the fluctuations including

the dependence on IMF. Our preliminary analysis indicates that a dawn-dusk asymmetry of the intense fluctuations around the cusp

region may be controlled by IMF.

Low-frequency electric field fluctuations are often observed over the dayside auroral regions. There are two possible origins of the fluctuations: static structures of field-aligned current and Alfven waves. In either case, the fluctuations reflect an input of energy to the auroral ionosphere. We use EFD data from Exos-D satellite and make a statistical study of the fluctuations including the dependence on IMF. Our preliminary analysis indicates that a dawn-dusk asymmetry of the intense fluctuations around the cusp region may be controlled by IMF.