

Initial results from the Hokkaido HF radar observation 2: Ionospheric echoes and magnetic storms

Ryuho Kataoka[1]; Nozomu Nishitani[2]; Takashi Kikuchi[3]; Tadahiko Ogawa[2]; Keisuke Hosokawa[4]; Nozomu Nishitani Hokkaido HF radar group[5]

[1] STEL; [2] STELAB, Nagoya Univ.; [3] STELab; [4] Univ. of Electro-Communications; [5] -

Hokkaido-Rikubetsu HF radar has been observing the mid-latitude ionospheric plasma convection since the beginning of December 2006. We report some initial results about ionospheric echoes and magnetic storms during the whole observation period. So far three major magnetic storms has been observed: Dec 6, 2006 (CIR-driven, -77 nT); Dec 15, 2006 (CME-driven, -187 nT); and Jan 29, 2007 (CIR-driven, -76 nT). Ionospheric echoes are observed over a wide area around the magnetic latitude of 60 degrees during the main phase and/or recovery phase of all of these storms. Even cusp-like echoes are observed in dayside mid-latitude of 60-65 degrees during the storm main phase on Dec 15. It is expected that the unexpected ionospheric echoes might be discovered at even lower latitudes during bigger storms.