

Study of ionosphere-thermosphere coupling using the SuperDARN Hokkaido radar

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The SuperDARN Hokkaido (East) radar has been operating for more than 6 years, and yielding many new scientific findings. Several of them are related to ionosphere-upper atmosphere coupling such as traveling ionospheric disturbances (TIDs), coseismic ionospheric disturbances and so on. One of the recent topics is the retrieval of neutral wind velocity in the mesosphere and lower thermosphere, using meteor trail echoes. In this paper, latest result of the study of ionosphere-thermosphere coupling using the SuperDARN Hokkaido (East) radar, together with the progress report of the newly funded Hokkaido West radar, will be presented.

Keywords: SuperDARN Hokkaido radar, ionosphere-thermosphere coupling, TID, coseismic disturbance, neutral wind, midlatitude ionosphere