**Abstract:**

Tile: SAPS Wave Structures observed by the SuperDARN Hokkaido Pair of radars

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The Super Dual Auroral Radar Network (SuperDARN) is a network of high-frequency (HF) radars located in the high- and mid-latitude regions of both hemispheres that is operated under international cooperation. The network was originally designed for monitoring the dynamics of the ionosphere and upper atmosphere in the high-latitude regions. However, over the last approximately 15 years, SuperDARN has expanded into the mid-latitude regions. With radar coverage that now extends continuously from auroral to sub-auroral and mid-latitudes, a wide variety of new scientific findings have been obtained.

This presentation will be focused on one of these key scientific topics, the dynamics of Sub-Auroral Polarization Streams (SAPS) with Wave Structures. We mainly use the SuperDARN Hokkaido Pair of (HOP) radars, located presently at the lowest geomagnetic latitude among the SuperDARN radars. Using these radars’ data with special operation modes, processed with the new fitting algorithm (fitacf Ver. 3) we have extended coverage of the echo regions and can discuss the detailed characteristics of these wavy flow structures with a period of 1 to 5 minutes, such as wavelength and propagation speed. These parameters provided important information for clarifying their possible generation mechanisms.

**Individual Resume:**

Dr. Nozomu Nishitani is an associate professor of Institute for Space-Earth Environmental Research, Nagoya University. He is a Principal Investigator of the SuperDARN Hokkaido Pair of Radars, and a vice Chair of the SuperDARN Executive Council. His main scientific interest is the dynamics of the ionosphere and the upper atmosphere, such as Sub-Auroral Polarization Streams (SAPS) and Traveling Ionospheric Disturbances (TIDs). Recently he organized a team for writing up a review paper on the mid-latitude SuperDARN, which was published in Progress in Earth and Planetary Science (PEPS) journal earlier this year. He is also a vice Editor-in-chief of the Earth, Planets and Space (EPS) journal.



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