

## Spatial and temporal variation of Sub-Auroral Polarization Streams: Initial results from the SuperDARN HOP radars

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Super Dual Auroral Radar Network (SuperDARN) is a network of HF radars deployed in both hemispheres. The SuperDARN Hokkaido West radar, one of SuperDARN HOKkaido Pair of (HOP) radars, is the newest SuperDARN radar located in Rikubetsu, Hokkaido, Japan, which began its operation in October 2014. Longitudinal coverage of subauroral ionosphere over several hours of magnetic local time by the SuperDARN HOP radars, together with other midlatitude SuperDARN radars, will enable us to study the detailed characteristics of Sub-Auroral Polarization Streams (SAPS), and to find clues to their generation, growth and decay mechanisms. In this paper initial results of the SuperDARN Hokkaido Pair of (HOP) radars observation of SAPS, with focus on the location / timing of SAPS activity relative to geomagnetic activity such as substorms, will be presented.

Keywords: SuperDARN HOP radars, sub-auroral polarization streams, substorm