

Characteristics of dayside SAPS structures observed by the SuperDARN Hokkaido radar

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Sub-Auroral Polarization Streams (SAPS) are intense westward ionospheric flows in the subauroral ionosphere, and considered to be generated as a result of magnetosphere-ionosphere coupling during relatively disturbed periods. SAPSs are usually located in the evening to midnight sector, but occasionally it extends to earlier magnetic local times close to local noon. Owing to limitation of the observation techniques, no detailed studies of its local time extent have been made so far. In this study we use the data from the SuperDARN Hokkaido radar, one of the midlatitude SuperDARN radars located at the lowest geomagnetic latitude, to discuss the detailed characteristics of dayside SAPS, with focus on their relation to solar wind and geomagnetic parameters.

Keywords: dayside, SAPS, SuperDARN, Hokkaido radar, magnetosphere, ionosphere