

Multiscale Coupling of Sub-auroral Polarization Streams

*西谷 望¹、堀 智昭¹

*Nozomu Nishitani¹, Tomoaki Hori¹

1. 名古屋大学宇宙地球環境研究所

1. Institute for Space-Earth Environmental Research, Nagoya University

Sub-Auroral Polarization Streams (SAPS) are fast westward flows slightly equatorward of the auroral precipitation boundary, and manifestations of magnetosphere-coupling processes. Recently it was shown that SAPS sometimes contain perturbation in westward speed, typically with temporal scale of a few minutes (e.g., Hori et al., GRL, 2018). However, it has not yet been clear how small the temporal scales of these perturbations can be and how perturbations with different temporal scales are related to each other. In this paper, multiscale coupling of the sub-auroral polarization streams will be studied, using multiple events observed mainly by the SuperDARN Hokkaido East / West radars.

キーワード：スケール間結合、SuperDARN北海道-陸別第一・第二レーダー、サブオーロラ帯高速プラズマ流 (SAPS)

Keywords: multiscale coupling, SuperDARN Hokkaido East / West radars, sub-auroral polarization stream (SAPS)