

PEM022-06

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Multievent analysis of recurrent westward propagation of SAPS/SAID structure observed by the SuperDARN Hokkaido radar

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Multievent analysis is performed for the long-period oscillations of SAPS/SAID structure during 0830-0930 UT on April 23, 2008 and several other periods, observed by the SuperDARN Hokkaido radar. For the 4/34 event, its period, propagation velocity and wavelength are 30 min, 700 m/s and 1200 km respectively. It has similar characteristics to traditional 'giant undulation' (Nishitani et al., GRL, 1994) auroral structures although some of the parameters such as period are slightly different. On the other hand, recently Henderson et al. (JGR, in press) reported IMAGE satellite observation of giant undulation structure whose period is 1100 s (about 20 min), similar to the Hokkaido radar observation. Other examples of Possible generation mechanisms of these SAPS/SAID structures with long-period oscillations will be discussed.

Keywords: SuperDARN, SAPS / SAID, Hokkaido HF radar, inner magnetosphere / subauroral ionosphere, interchange instability, shear instability