

Electrodynamics of the Poleward Moving Auroral Form

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PMAF (Poleward Moving Auroral Form) is a phenomenon where an arc-like aurora is detached from the dayside auroral oval around the cusp and moves poleward into the polar cap. This phenomenon is considered to relate to the dayside merging and PMAF to be the ionospheric edge of the reconnected flux tube. Due to observational difficulties, however, the electrodynamic of PMAF has not been understood yet. The present study aims at understanding the physical processes of PMAF from an analysis using simultaneous data, combinations of two or three kinds of measurements from EISCAT VHF/ESR radars, ground-based 630.0 nm optical imaging, Polar and DMSP satellites observations.