

Characteristics of the auroral oval conductance for the northward IMF

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The auroral oval is known to be diminished when IMF is northward. Our purpose is to clarify what level of the conductance is maintained in this situation. Precipitation electron number flux, electric and magnetic field data from DE 2 sixty-four dawn-dusk passes for a stable northward IMF were analyzed. Results of analyses show that the Hall and Pedersen conductance values are generally 1.5 to 3 times as high as the ones from the conductance model in the literature. We discuss how the northward IMF effect can be incorporated in the previous conductance model.

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