パルセーティングオーロラの共役性

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Conjugacy of Pulsating Aurora

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In this talk, first we would like to review the studies on conjugacy of pulsating aurora which have been done so far using Syowa-Iceland conjugate pair station data. Most recent study using the data on September 26, 2003 will be introduced more in detail. For this event, we examined the geomagnetic conjugacy of pulsating auroras using all-sky TV camera data obtained simultaneously at Syowa Station in the Antarctic and at Tjornes in Iceland. In order to exclude the magnetic field mapping problem, we investigated a period during which conjugate points were unambiguously identified from large-scale conjugate auroral structure. The conjugacy of pulsating auroras revealed in this study is summarized as follows. Some pulsating auroras appear in both hemispheres, while others appear only in one hemisphere. Even in the former case, there is little or almost no interhemispheric correlation in the intensity variations. From these observational results and the increasing amount of evidence in past studies, it can be said that the conjugacy of pulsating auroras is frequently very poor.

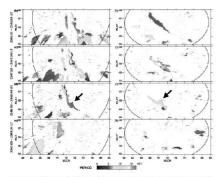


Fig. 1. Temporal variation of distribution of pulsating auroral period in the magnetic coordinate for the September 26, 2003 event at Tjornes in Iceland (left) and Syowa Station in the Antarctic