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発表タイトル	Axisymmetric conductivities of Jupiter's middle- and low-latitude ionosphere		
発表要旨	Ionospheric Hall and Pedersen conductivities are important parameters in determining the electric potential distribution and plasma convection in a magnetosphere-ionosphere system. At Jupiter, meteoric ions deposited by meteoroid ablation are expected to play a major role in the ionospheric conductivities [e.g., Cloutier et al., 1978]. This study evaluates the contribution of meteoric ions to ionospheric conductivities and electric field in the inner magnetosphere. We have developed a meteoroid ablation model, a photochemical model and an ionospheric potential solver. Our simulation results reveal that the largest contributions to the Hall and Pedersen conductivities occur in the meteoric ion layer because of the strong surface magnetic field at Jupiter. The conductance is axisymmetric in the middle and low latitudes because the lifetimes of meteoric ions in the lower ionosphere are sufficiently longer than half a Jovian day. At high latitudes, the conductance is enhanced at dawn side associated with the Region 2-like upward field-aligned current. The dawn-to-dusk electric field is 4 - 27 [mV/m] around Io's orbit. For comparison, we model another case of ionosphere without H^+ and meteoric ions. In this case, the conductance is entirely smaller than the former case, and diminished at night side. The dawn-to-dusk electric field is 45 - 270 [mV/m] around Io's orbit. In order to evaluate the validity of our results, we compare our results to observations. Previous studies showed that dawn-dusk brightness asymmetry in the Io plasma torus and dawnward shift of the position were caused by dawn-to-dusk electric field imposed on the inner magnetosphere [Ip and Goertz, 1983, Barbosa and Kivelson, 1983]. Observations by the Hisaki satellite revealed the existence of dawn-to-		

	dusk electric field of ~4 - 9 [mV/m] around Io’s orbit [Murakami et al., 2016]. Our model results are almost consistent with the Hisaki observations in the case with meteoric ions in the lower ionosphere.
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