

R006-19

Zoom meeting B : 11/1 PM2 (15:45-18:15)

16:30~16:45

Effect of quasi-steady scattering on pulsating aurora

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We have studied non-linear wave-particle interactions caused by chorus waves and electrons using the test particle-simulation, GEMSIS-RBW (Saito+, 2012). Using the GEMSIS-RBW, we have studied wave-particle interaction processes contributing atmospheric burst precipitation of energetic electrons such as microbursts and pulsating aurora. In addition to the burst precipitation, quasi-steady precipitation caused by weak-amplitude waves also occurs in the magnetosphere. The quasi-linear approach using the Fokker-Planck equation has been used as a plausible model in previous research. In order to include such quasi-steady precipitations in GEMSIS-RBW, we develop a quasi-linear wave-particle interaction model by adopting stochastic differential equation (SDE) that are equivalent to the Fokker-Planck equation. In this presentation, we present the effect of quasi-steady precipitation on the electron precipitation for pulsating aurora.