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ポスター１：11/4　PM1/PM2（13:45-18:15）

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Overview of the ground-based optical observations during the LAMP rocket experiment in Alaska

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It is widely known that the energy of precipitating electrons causing pulsating aurorae (PsA) is higher than that of typical discrete aurorae. The tail of the energy spectra of PsA sometimes extends to a few tens/hundreds of keV. Such sub-relativistic electron precipitations can be explained by the propagation of chorus waves, which is the agent causing the electron precipitation through the wave-particle interaction, towards higher latitudes (e.g., Miyoshi et al., 2020). To understand the simultaneous precipitation of higher energy electrons during PsA, the LAMP sounding rocket was launched from the Poker Flat Research Range in Alaska on March 5, 2022. During the launch window of the rocket, three high-speed all-sky cameras were operative at three stations immediately below the trajectory of the rocket: Poker Flat, Venetie, and Fort Yukon. The all-sky cameras captured all-sky images with a temporal resolution of 100 Hz (80 Hz for the Fort Yukon case). By using these images, we are able to visualize the spatio-temporal variation of PsA during the entire flight of the rocket. In the presentation, we first introduce the ground-based observation during the entire period of the rocket launch. It is possible to estimate the altitude of aurora in regions where the fields-of-view of multiple cameras overlap. For example, the separation between Poker Flat and Venetie is only ˜100 km; thus, the central altitude of the PsA emission can be estimated in a large area between these two observation sites. When deriving the altitude of PsA emission, we simply applied a cross-correlation analysis to the data obtained from two observations sites. In the presentation, we discuss the temporal variation and spatial distribution of the altitude of PsA emission in comparison with data from particle sensors onboard the rocket.