

## Pulsating auroras observed by a 30-Hz all-sky imager during the THEMIS-ground campaign on January 2008

# Akimitsu Nakajima[1]; Kazuo Shiokawa[1]; Akimasa Ieda[2]; Kaori Sakaguchi[1]; Reiko Nomura[1]; Vassilis Angelopoulos[3]; Erick Donovan[4]; James P. McFadden[5]; Karl-Heinh Fornacon[6]

[1] STELAB, Nagoya Univ.; [2] STEL, Nagoya Univ.; [3] SSL, UC Berkeley; [4] Astronomy and Physics, University of Calgary; [5] SSL, UC Berkeley; [6] Technical Univ. of Braunschweig

We had an auroral observation campaign at Gillam (56.4N, 265.4E) and Fort Smith (60.0N, 248.1E), Canada on January 2-15, 2008, using white-light all-sky imagers (ASIs) (180 degree field of view (FOV)) with a sampling rate of 30 Hz. At ~0840 UT on 8 January, an auroral arc appeared from west in the FOV of ASI at Gillam. After expansion of the aurora, active pulsating aurora was observed over the FOV of ASI during ~0850-0905 UT. Time period of the pulsation were shorter than a few seconds. After the active pulsating aurora, weak auroral pulsations lasted for ~2 h at Gillam. During this pulsating aurora event, footprints of the THEMIS P3 and P4 satellites were located in the FOV of ASI at Gillam. These satellites observed intense bidirectional field-aligned fluxes of higher energy electrons (above ~1 keV) during 0840-0905 UT at ~11 Re in the plasma sheet. Simultaneously, enhanced lower frequency waves (below 100 Hz) were observed by these satellites. Enhancement of whistler wave with frequency of ~1 kHz also lasted during ~0900-1000 UT. Similar THEMIS-ground conjunction events were obtained on 12 and 14 January at Gillam, during which the ASI observed active pulsating auroras. In this presentation, we show overview of ground and satellite observations for these pulsating auroras and discuss formation process of the pulsating aurora.