

## KST UHF/VHF radars operation memorandum for an experiment on 28-29 November 2011

### [General information]

Experiment name & PI : Pulsating; K. Hosokawa  
Scheduled start/end time : 2011-11-28 20:00 – 2011-11-29 04:00 UT  
Pulse scheme (so-called type if any such as “CP1”) : vertical for VHF  
elan file : /kst/exp/ei/mandas/manda for VHF (F10)

operator(s) : S. Oyama, T. Tsuda  
experiment before us : N/A  
experiment after us : N/A

Recording start at : 20:00 on 28 November 2011 for VHF  
Recording stop at : 03:59:59 on 29 November 2011

### [Weather information]

first snowy then clear sky

### [Heating operation]

no

### [Co-operated instruments]

- Optical instruments at Tromsø
  - STEL: FPI, ASCs (ASC12, Proton), photometer, DC, Lidar
  - NIPR: DC

### [Description of the experiment]

Recent studies using SuperDARN radars have shown intriguing relationships between pulsating aurora and changes in E region auroral backscatter. On the one hand, regular pulsations are associated with periodic changes in echo Doppler shift. On the other, irregular pulsations are associated with a new population of low altitude (D-region) backscatter echoes. We aim to investigate these two phenomena with simultaneous observations of the aurora by several cameras, and electron density measurement by EISCAT radar in Tromsø.

Mandas code will be used for the Tromsø VHF radar observation. We prefer good weather condition for the simultaneous optical observations.

### [Memorandum]

time	comment
19:10	eros on goppi has trouble; so restart eros.
19:22	<b>runexp /kst/exp/ei/mandas/manda lm zenith NI</b>
20:00	<b>enablerec</b>
00:17	<b>stopexperiment</b> because of strange system temperature
00:18	<b>runexp /kst/exp/ei/mandas/manda lm zenith NI</b>
00:19	<b>enablerec</b>
	Data from 23:39 to 00:19 UT may not be available to analyze with GUIDAP. When the engineer restarted the Tx, the duty cycle indicator showed strange number (in excess of ~15%).
03:57	VHF: <b>stopexperiment 03:59:59</b>