

March 3, 2003

## **KST UHF operation memorandum for March 3 BY S. Nozawa**

*(Using Netscape might be in trouble on this page.)*

Experiment name: arc1 (normal arc1 with the field-aligned-position:(184.0,77.1, 292.9)

We will make an optical campaign using high resolution aurora cameras and 4-wavelength photometer with EISCAT UHF radar. We strongly hope to use the ARC mode (at field-aligned position) with the UHF radar. Sweden will contribute 8hrs to this campaign. Also Norway will contribute 16hrs. NI(18), SW(8), NO(16)

elan files: arc1-u.elan, arc1-k.elan, arc-s.elan (just use arc1 series)

directory: /kst/exp/arc1-u (arc-k, arc1-s )

Pulse scheme: arc1

Start time: 19:00 UT on March 3, 2003 (in fact, 18:55)

End time: 01:00 UT on March 4, 2003

Participants: Satonori Nozawa, Shuei Tomida, and Maarten Blixt

Before our experiment: ALTA (Vikki Howells/Ivan Finch)

After our experiment: Nothing

VHF is running (ALTA:lt1nw-F2N) until 22:30 UT

Heating is running until 22:12 UT

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Note: (time in UT)

March 3

Cloudy.... Some activities are going on though...

For 19:00-20:30, two groups have a priority 1.

So, we decided to share the data with running arc1-u.

**19:00 START (enablerec; kir enablerec; sod enablerec)**

**The start time at Tromsø is 18:55. Vikki changed the program of the UHF.**

**19:02 rtg at Kiruna on the web is not started.**

**Tried "kir rtg", and it worked!**

19:40 snowing?  
20:45 1314 kW  
22:04 -2 deg C.  
21:34 1347 kW  
22:28 The ionosphere is a bit active, but it is snowing.  
22:30 VHF ends  
22:50 the ionosphere is being disturbed

March 4, 2003

00:12 HP  
00:22 -0.4 deg C  
00:22 1274 kW

**01:00 stopexperiment**

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**Summary:**

**Moderate Tx power (about 1180 - 1350 kW).**

**Tx is stable.**

**Cloudy for all the time (bad..)**  
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**ALTA UK(40), GE(40), SW(20) Mike Kosch**

*UHF*

This is the UHF part of the artificial aurora and Langmuir turbulence experiment. The mode will probably be similar to previous artificial aurora campaigns, namely tau2 on the UHF with a dedicated Langmuir turbulence experiment (developed by Brett Isham) on the VHF and simultaneous heating. This experiment needs good optical conditions, but low geomagnetic activity. It can therefore be treated as an alternative to the CP1-ARC experiment on days when both are scheduled, as conditions for these are mutually exclusive. Because of the requirements on optical conditions, there will almost inevitably be some degree of cancellation.

### *Heating*

This is the heater part of the artificial Langmuir turbulence and aurora experiment, see the notes for the UHF part. This booking supersedes the Swedish "HFoptical" booking, which should be deleted. Note that the Swedish "arcHeating" booking still stands, as this is part of the alternative experiment on natural auroras, which requires more active conditions.

### *VHF*

This is the VHF part of the artificial Langmuir turbulence and aurora experiment, see the notes for the UHF part. Although a four-hour run has been requested, this will be followed by a two-hour run requested by France (FR-AURORA), from 2030-2230, using the same modulation to constitute a six-hour continuous VHF run in compliance with the rules.