NISSE Ionospheric Water Experiment  March 12, 2009

Nordic Ionospheric Sounding rocket Seeding Experiment (NISSE)

The Nordic Ionospheric Sounding rocket seeding Experiment (NISSE) will be launched onboard of the REXUS 6 rocket on 10th March 2009 from Esrange, Kiruna.

In the experiment water will be released at about 95 km altitude. The possible impact of the water to the upper atmosphere will be explored by using the powerful EISCAT radar system.
NISSE has a blog on the International Polar Year (IPY) homepage IPY blog

NISSE has been elected as the highlight of the International Polar Year (IPY) homepage IPY page

The water tank and release system construction was completed and a full ground test was carried out. Download the video (3GP format): Water Release Test and see the new pictures of the assembled tank in: NISSE’s Manufacturing News

NISSE’s success story is spread over Finland in the Avaruusluotain! Read the first story: Avaruusluotain

The workshop at the University of Bergen has now manufactured 6 brackets. Next in queue is the explosive valve system

After an interview with Timo Pitkänen, the Kaleva newspaper of Oulu, Finland, published Check it out online: Kaleva news

Timo Pitkänen went to Sodankylä Geophysical Observatory, Finland, to do the SIC modelling for NISSE. The results are very promising! A clear electron density depletion is expected to occur after the water release! For further information on the modelling see: Sodankylä Geophysical Observatory
13 Jun 2008  NISSE press release reaches over 15 online newspapers! Just google "Nordic Ionospheric Sounding rocket Seeding Experiment"

30 Apr 2008  The Finnish national wide radio channel YLE Radio 1 mentions NISSE in their Avaruusradiaattori (Space Radiator). Listen here: YLE Radio

Apr 2008  Dream Team attends the REXUS/BEXUS Student Training Week from 20-26 Apr 2008

4 Apr 2008  Web pages for NISSE launched!

17 Mar 2008  Gisela Baumann joins the Dream Team Dream Team got a new member: Gisela Baumann from University of Helsinki (also at Finnish Meteorological Institute) joins the team

http://www.space.fmi.fi/NISSE/NISSEafterLaunch.html

10 Mar 2008  NISSE selected to fly aboard the REXUS! See: ESA Rexus project
Nordic Ionospheric Sounding rocket Seeding Experiment (NISSE)

One year after lift-off

It is already some way back in the past and the work the team members did for NISSE exponentially decreased. After the launch there was still no end for all the paper work; the team had to do a failure investigation followed by a report. Shortly after the final report was pending to be written for the European Space Agency. Additional outreach was done as well (see Publications). But what about our experiment today? Will NISSE see space for a second time? The payload is still available and in a good condition – so in principle it could fly again. There are even rumours about having a new tank design by A. Søreide: a 50L water tank on its own rocket :-). In any case, if you are interested in joining the team or have questions about the REXUS program, you are very welcome to contact us!

The very last words goes to our faithful readers and our sponsors: A big thank you and bye, bye! Your NISSE team!

This project is supported by:
Nordic Ionospheric Sounding rocket Seeding Experiment (NISSE)

A. Conference proceedings:


B. Publications (Talks):

Talks: (Name of the person giving the talk is underlined)

Hølland, V., G. Mellemstrand, and T. Pitkänen, NISSE - Norwegian ionospheric sounding rocket
seeding experiment, REXUS/BEXUS Selection Workshop, ESA/ESTEC, Noordwijk, Netherlands, Mar 5-6, 2008.


Pitkänen, T., V. Hølland, G. Baumann, and G. Mellemstrand, Nordic ionospheric sounding rocket seeding experiment (NISSE), Introduction seminar talk, SGO, Sodankylä, Finland, Jun 19, 2008.


C. Posters:


D. Publications (Abstracts):

Kauristie, K., O. Amm, L. Juusola, A. Vlasov, N. Partamies, T. Pitkänen, E. Turunen, and R. Vainio, Finnish upper atmospheric and geospace research activities during the 4th Polar International Polar Year, Abstract for the Congress of the international polar year 2007/08, Espoo, Finland, Nov 12-13, 2008 (IPY meeting).


Hølland, V., T. Pitkänen, G. Baumann, G.


E. Non-refereed publications and other:

Baumann, G., First part of the success story of NISSE, Avaruusluotain (Space Probe), 3, 18-19, 2008.

Hølland, V., T. Pitkänen, G. Baumann, and G. Mellemstrand, Series of blog articles about the NISSE project at The International Polar Year 2007-8 (IPY) website IPY, 2008-9:

- NISSE - a student rocket project to study the upper polar atmosphere, Nov 30, 2008, IPY Nov 30
- EISCAT testing for NISSE, Dec 19, 2008, IPY Dec 19
- Two months to the launch!, Jan 22, 2009, IPY Jan 22
- NISSE launch campaign under way!, Mar
Hølland, V. and T. Pitkänen, Secrets of the experiment revealed – part II of the success story of NISSE, Avaruusluotain (Space Probe), 1, 10-12, 2009 (Space Probe).

Hølland, V. and T. Pitkänen, REXUS 6 NISSE Student Experiment Documentation (SED) - Final report, RXBS-09-08-25 SED_vers6.1_NISSE.pdf, 142 pages, Eurolaunch, 2009.


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