

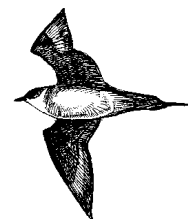
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Ny-Ålesund Newsletter



9th edition
Dec 2001

6TH NY-ÅLESUND INTERNATIONAL SCIENTIFIC SEMINAR: "THE CHANGING PHYSICAL ENVIRONMENT"

The 6th Ny-Ålesund Scientific Seminar, which is initiated each approximately 2nd year by the Ny-Ålesund Scientific Managers Committee (NySMAC), will be organised by the Norwegian Polar Institute in Tromsø during 8–10 October 2002. The title of the workshop will this time be "The Changing Physical Environment". The Ny-Ålesund Large Scale Facility program will be co-sponsoring the meeting.

The Ny-Ålesund Seminar Series are organised for the purpose of bringing together scientists involved in research activities in the Ny-Ålesund area. The main purpose is to increase the transnational collaboration and exchange at this unique Norwegian international research facility on Svalbard. This 6th Ny-Ålesund Seminar is devoted to the physical environment research in Ny-Ålesund.

The seminar will address the broad field of "*Physical environment research in Ny-Ålesund*". It invites the whole physical environment research community of Ny-Ålesund to meet and present recent research results and to exchange information about their research and monitoring activities. The meeting will be organised as a Seminar day 1+2 and a Workshop day 3.

Day 1+2: Presentation and overview of research and

monitoring projects in Ny-Ålesund: Seminar classically divided into sessions, with a combination of keynote speakers (20-30 minutes) and oral paper and poster presentations (5-10 minutes).

Day 3: Identification of observational gaps in Ny-Ålesund: Workshop organised in several thematic sessions with introduction/review talks, short presentations and panel discussions. The scientific themes and sessions will include disciplines under the fields of: Atmospheric Environment, Cryospheric Environment, Solar-Terrestrial Environment, Solid Earth and Marine Environment, Changing Environment and Ecosystem Effects

The First announcement is made available in December 2001 and on the NP home pages at <http://www.npolar.no>. Deadline for short Abstract will be set to 20 May 2002. If you wish to receive the second announcement and more information about the conference, please send the following information to: anne.kibsgaard@npolar.no:

Name (Family name, given names) Institution, Department, Address, Country, Telephone/Fax, Email-address, Title of planned Abstract, Form (Oral, Poster, Exhibition).

AMAP CONFERENCE AND WORKSHOP:

"IMPACTS OF POPs AND MERCURY ON ARCTIC ENVIRONMENTS AND HUMANS"

is scheduled for 21-24 January 2002 at the Polar Environmental Centre, Tromsø, Norway, 21-24 January 2002. The scope of the conference is to present and discuss the latest results regarding biological effects of POPs and mercury on Arctic wildlife and humans. Researchers and scientists involved in research relevant for this topic are invited to participate. At the end of the meeting (i.e.

Thursday 24 January), a concluding workshop will be arranged to address important questions about future research and monitoring needs. The workshop will also assist AMAP to draft the 2002 assessment regarding biological effects. This assessment will be presented to the Ministerial meeting of the Arctic Council in Finland, September 2002.

Status of the New Arctic Marine Laboratory in Ny-Ålesund, Svalbard

(Marine Lab Project Group, Drafted by Haakon Hop, 3 December 2001)

Plans are being developed for establishing a new arctic marine laboratory in Ny-Ålesund on Svalbard. The technical plans for the marine lab have been drafted in an architect report (Sjøberg & Stenberg Architects AS). The total cost of the lab will be in the range of 20 mill NOK (2.5 mill ECU). However, securing full financing is still in progress. Building start will tentatively be in 2002, and completion of the lab will be in 2003. The laboratory will be built by Kings Bay AS and rented out to a consortium of rental shareholders and others when space allows. The participating institutions are currently represented by the Marine Lab Project Group:

Dr. Haakon Hop (Norwegian Polar Institute, Chair);
Dr. Guido di Prisco (Italian National Research Council);
Dr. Hajime Ito (National Polar Institute, Japan);
Dr. Christian Wiencke (Alfred Wegener Institute, Germany);
Simon N. Stephenson (Office of Polar Programs, National Science Foundation, USA);
Dr. Ole Jørgen Lønne (University Courses on Svalbard).

Ny-Ålesund (78° 55' N, 11° 56' E), near Kongsfjorden on Svalbard has been developed as an international research platform. The biological research facilities consist of several laboratories within the field of terrestrial and marine biology. These facilities are now part of a Large Scale Facility (LSF), which was assigned to Ny-Ålesund by the EU Commission in 1995 (and continued to date).

The proposed new marine lab will be a unique laboratory in the Arctic, since it will be:

- the northernmost marine lab in the world (78° 55' N)
- the most accessible marine lab in the Arctic (~6 hours by plane from EU)
- an experimental marine lab of high international standards
- connected to the well established LSF-infrastructure in Ny-Ålesund
- situated near Kongsfjorden, an arctic glacial fjord on Svalbard
- the base for several marine ecological projects conducted in Kongsfjorden
- contributing to Ny-Ålesund as an international research platform

News from the Ny-Ålesund Large Scale Facility program

(Ny-Ålesund LSF, Jon Børre Ørbæk, Longyearbyen 9.12.01)

The Ny-Ålesund Large Scale Facility had its 10th User Selection Panel Meeting during 5 – 6 November 2001. Over 20 new research proposals were submitted to the call of which some obviously have been recruited among the other ENVINET member stations. 9 projects were selected and will receive support under the program for the year 2002 under this selection round. The projects will receive full

reimbursement of their Travel and Subsistence costs for their field campaigns in Ny-Ålesund. We expect that another 4 - 6 projects will receive support for 2002 under our next selection round (11th) with deadline 15 February 2002.

The following international research projects received support under the Ny-Ålesund Large Scale Facility program 10th User Selection and will be hosted by the different research stations under the Ny-Ålesund LSF consortium in 2002:

1. Dr. Christian Haas, Alfred Wegener Institute: The surface energy budget and its impact on superimposed ice formation (SEBISUP).
2. Dr. Kenneth Black, Scottish Association for Marine Science (SAMS): Transport, burial and fluxes of carbon and contaminants in Arctic lake and fjordic sediments.
3. Dr. Peter Convey, British Antarctic Survey: Bipolar investigations of physiological stress susceptibility and responses in microbes and arthropods.
4. Dr. Carlos Jiménez, Universidad de Málaga: Physiological response of growth, photosynthesis and nutrient uptake of marine macrophytes in a CO₂-enriched environment.
5. Prof. Michael Smith, Univ. of Leeds: Remote sensing of the radiative properties of arctic aerosols at solar and thermal infrared wavelengths and retrieval of aerosol microphysical properties.
6. Dr. Tonie van Dam, European Centre for Geodynamics and Seismology: Absolute and relative gravity measurements in Svalbard to investigate Ice-mass changes and to calibrate the superconducting gravimeter.
7. Dr. John Munthe, Swedish Environmental Research Institute: Enhanced deposition of atmospheric mercury during Arctic sunrise – International campaign/intercomparison.
8. Dr. Rüdiger Haas, Onsala Space Observatory: Collocation and stability of tide gauge and Space geodetic observation platforms at Ny-Ålesund.
9. Dr. Paolo Tomasi, Istituto di Tecnologia Informatica Spaziale: Neotectonic geological study and classical geodesy methods applied to active fault monitoring in Ny-Ålesund.

Official opening of the French stations

On the 7th and 8th September the Rabot and Corbel Station were officially opened. The French Ambassador in Norway, the Director of the French Polar Institute, Norwegian officials, local participation from the Governor of Svalbard, Norwegian Polar Institut and a lot of French scientists strongly involved into science in Svalbard were among the invited guests.

Russian and Chinese visits to Ny-Ålesund

The Russian consul, 2 scientists from the Arctic and Antarctic Research Institute in St. Petersburg (AARI) and 4 other Russian scientists and some accompanying persons visited Ny-Ålesund during the 27th of September. The Russian visit was organised on the background of the new Russian plans for increased research activities on Svalbard. The Kings Bay director gave the group a welcome presentation of the international research station of Ny-Ålesund as well as the services provided by the Kings Bay company. The group was then guided through the Sverdrup Station for the specific reason to discuss future collaboration plans.

From China a group of 17 scientists and journalists visited 25-29 October. According to Gao Dengyi, the team head and a scientist from the Chinese Academy of Sciences, the expedition will lead to a three-year comprehensive scientific research project on the climate, environment, resources and life forms in the North Pole area and Svalbard will be used as a base for this work. The visitors were guided around in Ny-Ålesund and visited various stations.

Mercury campaign at Zeppelin

From mid-April to mid-May 2002 there will be arranged an international mercury campaign on Zeppelin with focus on mercury depletion events (MDE) during polar sunrise. The project is funded by the Ny-Ålesund Large Scale Facility (LSF) Program. The main tasks will be on intercomparison of methods (reactive gaseous mercury and particulate mercury), but process studies which will help us address questions concerning the MDE will also be included.

The mapping authority

The VLBI antenna has been scheduled for 94 experiments in 2002. Each experiment lasts 24 hours.

New potential permanent nation in Ny-Ålesund

Dr. Yeadong Kim, Korean Research Council of Public Science and Technology and professor Kwon Byung Park, Korea Ocean Research & Development Institute visited 15-18 October. It is expected that the South Koreans will establish permanent research activities in Ny-Ålesund in 2002.

New publications related to Ny-Ålesund

Bindschadler, R., Dowdeswell, J., Hall, D.K. & Winther, J-G., 2001: Glaciological applications with Landsat-7 imagery: early assessments. *Remote Sensing of Environment* 78 (1-2), 163-179.

Cooper, E.J. & Wookey, P.A., 2001. Field measurements of the growth rates of forage lichens and the implications of grazing by Svalbard reindeer. *Symbiosis* 31:173-186.

Cooper, E.J., Smith, F.M. & Wookey, P.A., 2001. Increased rainfall ameliorates the negative effect of trampling on the growth of High Arctic forage lichens. *Symbiosis* 31:153-171.

Criscuolo F., Gabrielsen G., Gendner J-P., et Le Maho, Y 2000; An automatic weighing system application in a study of the Common Eider *Somateria mollissima* breeding biology. *Alauda* 68 (1) : 59-63.

Criscuolo F., Gauthier Clerc, M. Gabrielsen G. 2001. Brood patch temperature during provocation of incubating Common Eiders in Ny-Ålesund, Svalbard. *Polar. Res.* 20 (1): 115-118.

Criscuolo F., Gauthier Clerc M., Le Maho Y., Zorn T. et Gabrielsen G. 2001. Sleep changes during long term fasting of the incubating Common Eider *Somateria mollissima*. *Ardea*, 89 (3):15-22.

Criscuolo F. in press. Does blood sampling during incubation induce nest desertion in the female Common Eider *Somateria mollissima*? *Marine Ornithology*.

Criscuolo F., Gabrielsen G., Gendner JP et Le Maho Y in press. Incubation behaviour and body mass regulation in Common Eider. *J. Avian Biol.*

Gerland, S., Winther, J-G. & Sand, K., 2001: In-situ snowpack temperature monitoring at an Arctic tundra site: A comparison of manual and automatic measurements. *Memoirs of National Institute of Polar Research Special Issue* 54, 261-269.

Isaksson, E., Pohjola, V, Jauhiainen, T., Moore, J., Pinglot, J-F., Vaikmäe, R., van de Wal, R.S.W., Hagen, J-O., Ivask, J., Karlöf, L., Martma, T., Meijer, H.A.J., Mulvaney, R., Thomassen, M.P.A. Van den Broeke, M. 2001. A new ice core record from Lomonosovfonna, Svalbard: viewing the data between 1920-1997 in relation to present climate and environmental conditions *Journal of Glaciology* 47 (157), 335-345.

König, M., Wadham, J., Winther, J-G., Kohler, J. & Nuttall, A-M., in press: Detection of superimposed ice on the glaciers Kongsvegen and Midre Lovénbreen, Svalbard, using SAR satellite imagery. *Annals of Glaciology* 34,

Laffly D. and Mercier D. 2000, Global change and paraglacial morphodynamic modification in Svalbard, Proc. of the sixth Circumpolar Symposium on Remote Sensing on Polar Environment, Yellowknife, N.W.T., Canada, June 12-14, 19p.

Laffly D. and Mercier D. 2001, Global change and paraglacial morphodynamic modification in Svalbard, *Intern. J. Remote Sensing*, (accepted).

Laffly and Mercier D. 1999 - Reflexions méthodologiques sur les observations de terrain et la télédétection (cartographie des sandurs dans le Baie du Roi, Spitsberg Nord-Occidental), Photo-interpretation, 2, pp. 15-28 et 48-58.

Mercier D., 2001. Le ruissellement au Spitsberg, le monde polaire face aux changements climatiques; Presses Universitaires Blaise Pascal, Clermont Ferrand, Coll. Nature et Societes, 278 p.

Mercier D. 2001 - International Symposium on "Snowmelt erosion and related problems", Oslo, Norway, March 28-30. Invited from U.E.

van der Wal R., Brooker R., Cooper E.J. & Langvatn R., 2001. Differential effects of Svalbard reindeer on High-Arctic lichens: evidence from site comparisons across Spitsbergen. *Journal of Vegetation Science*, in press.

Winther, J-G., Godtlielsen, F., Gerland, S. & Isachsen, P. E., in press.: Surface albedo in Ny-Ålesund, Svalbard: variability and trends during 1981-97. *Global and Planetary Change*.

Winther, J-G., Gerland, S., Ørbæk, J.B., Ivanov, B., Zachek, A.S. & Bezgreshnov, A.M., 2001: Effects on spectral reflectance from snow ageing. *Memoirs of National Institute of Polar Research Special Issue* 54, 193-201.

Calendar of Arctic Meetings

Workshop:

"Corbel Station: non polluting base for atmospheric research in 2005?"

A workshop gathering together key personnel from the Scientific Community interested in the development of Atmospheric Science (for 2004-2005) at the French Station Corbel will take place on May the 14th-15th 2002.

For further information about the environmental / technical specifications of the station Corbel and/or the areas of discussion at the workshop, see the website:

<http://www.ifremer.fr/ifrtp> (news/sc workshop). or contact :

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The 16th NySMAC meeting is scheduled to the Arctic Science Summit Week in Groningen, The Netherlands, 21-26 April 2002

For a comprehensive list of published meetings, look at Survey of Arctic Meetings:

<http://www.iasc.no/sam.htm>

Staff News

Norwegian Polar Institute:

Stefan Claes and **Arne Roy Solås** have terminated their contracts at the Sverdrup Station and **Trond Svenøe** has replaced **Ole E. Jensen** as acting station manager

Norwegian Mapping Authority (NMA):

The change between the rotation groups was done by the 1st of November. The staff now: Sune Elshaug, David C. Holland and Helge Digre.

Publications

Research in Svalbard 2001

A yearly information. Available from Svalbard Science Forum and on <http://www.npolar.no/ris>

Ny-Ålesund - International Research at 79°N
3rd revised edition. By the Norwegian Polar Institute in co-operation with Kings Bay AS.

The Ny-Ålesund Safety Guide

By Nick Cox, NERC (2nd edition 1998)
An introduction to safety in Ny-Ålesund and its surroundings. The guide is obtainable in Ny-Ålesund from Kings Bay AS and Sverdrupstasjonen.

NySMAC Internet Homepage:

<http://www.npolar.no/nysmac/>

As well as a general introduction to Ny-Ålesund and to the work of NySMAC, this site contains the complete contents of the *Ny-Ålesund Newsletter* and links to the home-pages of the NySMAC member institutions.

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Next edition of Ny-Ålesund Newsletter: Spring 2002

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