

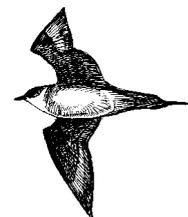
## News from 2000

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# Ny-Ålesund Newsletter



7<sup>th</sup> edition  
Feb 2001

## ROYAL AND LOFTY INAUGURATION OF THE NEW ZEPPELIN STATION

The Crown Prince of Norway honorably opened the new atmospheric research and monitoring station on top of Zeppelin mountain on May 2, 2000. The opening was marked by modern technology unveiling of a web-camera<sup>1</sup> and making available of an official web-page<sup>2</sup> for the the Zeppelin station by the Crown Prince. The Crown Prince expressed great interest in the station and the research performed there.

The building was then formally handed over by Halvor Stormoen of Statsbygg to the Norwegian Minister of Environment Siri Bjerke. The Minister promptly handed the building over to the director of Norwegian Polar Institute Olav Orheim. The Norwegian Polar Institute thus owns and will also manage the station for the users in the scientific community.

The inauguration marked the end of a rapid and admirable building period but also the beginning of a new phase in the research on Zeppelin mountain.

The building was erected both expeditiously and extremely professionally by the Norwegian firm Nilsens Utviklings

Prosjekter AS<sup>3</sup> under the auspices of Statsbygg. Despite some complications (like a cement mixer that blew off the mountain in an unguarded moment and disappeared into oblivion) the fine building was in place on time. The building is with its 130 square meters twice as large, more practical and very much sturdier than the previous shack (erected 1989) that indeed had seen its days. Financing of the new building came from the Norwegian Ministry of Environment with a contribution from the Swedish Knut and Alice Wallenberg Foundation.

The main long-term users of the Zeppelin station are the Norwegian Institute of Air Research (NILU) and the Department of Meteorology at Stockholm University (MISU). The main goals of the long-term programs are monitoring of long-range pollution and climatically active species in the Arctic. NILU as the main user is also the scientifically coordinating institution for the station.

By Kim Holmén

<sup>1</sup> Available at <http://www.misu.su.se/~baseline>

<sup>2</sup> Available at <http://www.nilu.no/niluweb/services/zeppelin>

<sup>3</sup> Available at <http://www.nupas.no>

## NY-ÅLESUND SCIENTIFIC SEMINARS CONTINUE

The National Institute of Polar Research hosted the '2<sup>nd</sup> International symposium on Environmental Research in the Arctic and 5<sup>th</sup> Ny-Ålesund Scientific Seminar' on 23-25 February 2000. The scientific seminar was a great success.

NySMAC wants to thank NIPR and the organizing committee for the very good work that made the Tokyo meeting such a great success. The scientific seminars are of paramount importance for communicating the ongoing research in Ny-Ålesund and for stimulating new contacts and initiatives in research. Hosting such an event is in itself a formidable task. The chairman has received many comments on how well this task was handled by NIPR. A most marvellous meeting indeed.

The success of the scientific seminars are of course mainly a result of the scientific community active in Ny-Ålesund. The grand width and quality of the science in Ny-Ålesund was clear from the fact that there were 152 participants at the seminar giving in total 66 oral presentations and 61 poster presentations. Many of the presentations will soon be available in a printed volume edited by NIPR.

The seminar series will of course continue. The frequency of seminars will be around one every other year covering topics as found relevant by the Ny-Ålesund scientists. A seminar in 2002 in Tromsø is presently being discussed within the subject of 'observing the physical environment' in Ny-Ålesund organised together with Ny-Ålesund LSF.

By Kim Holmén

## News from 2000

### ASTAR'2000

The ASTAR'2000 campaign (Arctic Study of Tropospheric Aerosol and Radiation), a joint German (AWI Potsdam) - Japanese (NIPR Tokyo) campaign with participation from NASA Langley Research Center Hampton, VA (USA), took place from March 12, 2000 till April 24, 2000, with flight operations from March 13 to April 20, 2000.

We performed aircraft measurements with the German Research aircraft POLAR4 of the Alfred Wegener Institute for Polar and Marine Research in the vicinity of Svalbard. Simultaneous ground-based measurements have been performed in Ny-Ålesund. In addition to AWI and NIPR the following institutions contributed to the project: Hokkaido University (Japan), Nagoya University (Japan), Norwegian Polar Institute Tromsø/Longyerabyen (Norway), NILU Kjeller (Norway), MISU Stockholm (Sweden), NOAA-CMDL Boulder, CO (USA) and Max Planck Institute for Aeronomy Kaltenburg-Lindau (Germany). Flight operation and the maintenance of on board instrumentation was realised by Deutsche Luft und Raumfahrt Oberpfaffenhofen/Braunschweig (Germany) and Aerodata Braunschweig (Germany).

The aim of the campaign was to measure aerosol parameters of climate relevance, like extinction and absorption coefficients. During the campaign new systems were used, like ground based Raman-Lidar, Tethered balloon and an absorption photometer, which was installed in the research aircraft. In the first phase of the campaign up to mid April the measurement activities were concentrated in the vicinity of Ny-Ålesund. To the end of the campaign we measured south of Svalbard around 74°N with the aim to carry out comparison measurements with the satellite system

SAGE II (Stratospheric Aerosol and Gas Experiment). For the Arctic spring a set of approximately 15 extinction profiles were collected by the aircraft, covering background and various hazy conditions. Based on these measurements the tropospheric Arctic aerosols and their climate impact will be analysed. The whole data set will be used for climate impact investigation, by using the regional climate model HIRHAM.

*Takashi Yamanouchi (NIPR Tokyo) - Andreas Herber (AWI Potsdam)*

### New European network (ENVINET)

Norwegian Polar Institute organised a large international meeting in Ny-Ålesund in the end of June 2000. 35 scientists from 18 environmental research stations in 13 European countries and representatives from international organisations participated. The meeting was organised in connection with establishment of a new research network financed by the European Union.

ENVINET – European Network for Arctic-Alpine Multidisciplinary Environmental Research – is financed with 5,5 mill. NOK for three years under the ‘Human Potential Programme’ of EU’s 5<sup>th</sup> Framework Programme.

ENVINET is a research infrastructure network focusing on multidisciplinary environmental research in Europe. The network involves representatives from 18 environmental research infrastructures from the European Alps to the Arctic, representatives of their users and representatives from relevant international organizations and networks. The participating infrastructures cover a broad range of environmental sciences primarily within:

- Atmospheric physics and chemistry
- Marine and terrestrial biology.

ENVINET is put together for the main purpose of fostering new cross-discipline and cross-infrastructure collaboration and multidisciplinary merging of environmental research activities. Joint scientific and technical studies are generated under the network in the crossing fields of environmental sciences under the fields of Climate Change, Ozone and UV-radiation, Long Range Transport of Pollutants and Biodiversity. Working groups are established for the purpose of improving the quality of the research by elaborating and exchanging information related to the improvement of data sets, analyses tools, data processing methods, measurement protocols and comparability, quality assurance, instrument inter-comparison and networking, and needs for complementary and cross-disciplinary activities. The network will organise 4 general meetings during the 3 year contract. Exchange of information will be through email and fax, newsletters and Web-pages.

ENVINET will significantly improve the exchange of information and experience among the partners, increase the co-ordination of activities within the network and between the users and the operators, and increase the cross-disciplinary research at and between the network stations. The working groups will prepare physical and biological data within the network that are more homogeneous, compatible and suitable for both atmospheric investigation and biological effect studies and prepare the ground for complementary programs, both on the individual research stations and across the stations. This will enable the scientific user community to access better data and produce higher quality results, which again will be beneficial for the environmental protection agencies and management, improving our ability to better understand and protect the environment and to better assess the effects of global environmental change. The network will be used to promote concerted calls for proposals and research activities related to multidisciplinary environmental research in Arctic – Alpine regions. Towards the end of the activity an assessment of the needs of main cross-discipline and cross-infrastructure challenges in Arctic-Alpine environmental research will be carried out, as a basis for hosting an international workshop.

## A Green Arctic Research Settlement

The last two years Kings Bay AS has emphasized work on the "green" side of Ny-Ålesund management. A waste management plan has been developed, a composting project is running and extensive effort has been put into management of the cruiseship tourists. This year there will be even more green projects run by Kings Bay AS:

### *Waste management in the new Service Building*

Today's system with the waste management in "Servicebygget Recycling Center" is working very well. The presses for the common categories like paper, cardboard, plastic and aluminium, as well as a number of specific compartments, are now in use in the new Service Building. The kitchen staff and all other inhabitants will directly sort and empty their waste in to separate compressors in this special designed waste-room. There are still a few specific compartments in "Snekkasjen Recycling Center". This is in general special waste.

### *Restoration of the vegetation*

The tundra in the centre of Ny-Ålesund has been damaged in previous years due to building activities. Kings Bay AS wants to restore a few of these areas in the vicinity of the new service building. Plants has been collected in Ny-Ålesund in September last year and multiplied at the Biological Climate Laboratory in Tromsø during winter, and it was replanted in July last year. Maybe we will manage to get a greener inner city!

### *Expansion of the nature and heritage trail*

In 1999 a Nature and Heritage Trail was developed. It consists of 18 stops with information on Ny-Ålesund flora, fauna, geography and history, translated into Norwegian, English and German languages. However the trail has been lacking information about the scientific activity going on. This year the scientific stations have consequently been invited to contribute with information about their stations. At the time, five such information boards will be deployed before the cruiseship season starts in mid June.

### *Visitors information campaign*

During the last year, recourses have been put into informing cruiseship tourists about Ny-Ålesund and how to behave in our green settlement. Kings Bay representatives have had meetings with cruiseship agents, and contracts with every single cruiseship have been signed. The contracts claim that the guide on board is obliged to give the information about the "Ny-Ålesund rules " stated in the contract to all the passengers before arrival in Ny-Ålesund (see text box). As a

visual evidence of having received this information, the passengers get a nice sticker to put on their jacket when entering the quay. Posters, overheads and an information folder have also been made. These are distributed to tourist guides on board.



### **Ny-Ålesund rules**

- do not walk anywhere except roads
- respect the fact that all nesting birds are subject to a protection order
- do not go near scientific instruments
- do not throw cigarette ends or other litter on the ground
- respect our cultural landmarks
- do not go into buildings marked "Private - No Admittance"

### **Ny-Ålesund LSF**

30 applications were submitted by the deadline of 8<sup>th</sup> call for proposals for Ny-Ålesund LSF. Final evaluation of the proposals took place at the User Selection Panel meeting in Copenhagen 21-22 November.

Deadline for 9<sup>th</sup> call for proposals was set to 10 February 2001.

### **NySMAC meetings**

**The 13<sup>th</sup> NySMAC meeting** took place at the premises of the Danish Polar Centre in Copenhagen 20-21 November.

**The 14<sup>th</sup> NySMAC meeting** will be held in Ny-Ålesund 3-4 May 2001.

## Ny-Ålesund Diary

May 2001  
14<sup>th</sup> NySMAC meeting

## Calendar of Arctic Meetings

For a comprehensive list of published meetings, look at Survey of Arctic Meetings:  
<http://www.iasc.no/sam.htm>

## Staff News

### AWI:

**Mariele Wolff** will substitute **Andrew Klaas** as station manager in April.

### NySMAC:

**Alfred Wegener Institute (AWI):**  
**Roland Neuber** will substitute **Hartwig Gernandt** in NySMAC

### Norwegian Space Centre (NSC):

**Kjell Boen** of Andoy Rocketrange has replaced Rolf Skatteboe of the Norwegian Space Centre (NSC) as substitute to NySMAC. **Ivar Nyheim** of Andoya is still the Norwegian Space Centre/Andoya Rocketrange member to NySMAC.

## Publications

Eva Fuglei 2000. **Physiological adaptations of the arctic fox to high Arctic conditions.** Dr. scient dissertation, University of Oslo, Norwegian Polar Institute, Norway.

Fuglei, E. and Øritsland, N. A. 1999. **Seasonal trends in body mass, food intake and resting metabolic rate, and induction of metabolic depression in arctic foxes (*Alopex lagopus*) at Svalbard.** Journal of Comparative Physiology B, 169: 361-369.

Lefauconnier, B.; Hangen, J.O.; Ørbæk, J.B.; Melvold, K. and Isaksson, E. 1999. **Glacier balance trends in the Kongsfjorden area, western Spitsbergen, Svalbard, in relation to the climate.** Polar Research, V18 N 2, 307-313.

Pinglot, J.F.; Pourchet, M.; Lefauconnier, B.; Hagen, J.O.; Vaikmae, R. and Kamiyama, K. 1999. **Temporal change of the accumulation in Svalbard glaciers deduced from nuclear tests and Chernobyl reference layers** V18 N 2, 315-321.

### Research in Svalbard 2000

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

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

### The Ny-Ålesund Safety Guide

By Nick Cox, NERC (2<sup>nd</sup> 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.lby.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.

## Contact Addresses

### Alfred Wegener Institute (AWI)

Koldewey Station, 9173 Ny-Ålesund, Norway  
Tel: +47 79 02 71 14  
Fax: +47 79 02 71 32  
E-mail: [manager@awi-koldewey.no](mailto:manager@awi-koldewey.no)  
<http://www.awi-bremerhaven.de>

### Kings Bay AS (KB)

9173 Ny-Ålesund, Norway  
Tel: +47 79 02 71 11  
Fax: +47 79 02 71 13  
E-mail: [direktor@kingsbay.no](mailto:direktor@kingsbay.no)

### National Institute of Polar Research (NIPR)

Rabben, 9173 Ny-Ålesund, Norway  
Tel: +47 79 02 71 07  
Fax: +47 79 02 70 05

### Tokyo address:

National Institute of Polar Research  
1-9-10, Kaga, Itabashi-ku  
Tokyo 173, Japan  
Tel: +81 33962 4742  
Fax: +81 33962 5701  
E-mail: [arctic@nipr.ac.jp](mailto:arctic@nipr.ac.jp)

### Natural Environment Research Council (NERC)

Harland House, 9173 Ny-Ålesund, Norway  
Tel: +47 79 02 70 11  
Fax: +47 79 02 70 22  
E-mail: [nc@bas.ac.uk](mailto:nc@bas.ac.uk)  
<http://www.nerc.ac.uk>

### UK address:

Natural Environment Research Council  
Polaris House  
North Star Avenue  
Swindon, SN2 1EU, UK  
Tel: +44 1793 411 500  
Fax: +44 1793 411 691

### Norwegian Mapping Authority (NMA)

Ny-Ålesund Geodetic Observatory  
9173 Ny-Ålesund, Norway  
Tel: +47 79 02 70 10  
Fax: +47 79 02 71 48  
E-mail: [vlbi@gdiv.statkart.no](mailto:vlbi@gdiv.statkart.no)  
<http://www.statkart.no/skgd/nyaales>

### Norwegian Institute for Air Research (NILU)

The Polar Environmental Centre  
9296 Tromsø, Norway  
Tel: +47 77 75 03 75  
Fax: +47 77 75 03 76  
E-mail: [ivan.c.burkow@nilu.no](mailto:ivan.c.burkow@nilu.no)  
<http://www.nilu.no>

### Consiglio Nazionale delle Ricerche (CNR)

Dirigibile Italia  
9173, Ny-Ålesund, Norway  
Tel: +47 79 02 71 45  
Fax: +47 79 02 71 51  
E-mail: [baseartico@ntserver.iaa.mlib.cnr.it](mailto:baseartico@ntserver.iaa.mlib.cnr.it)  
<http://www.polar.rm.cnr.it>

### Italy address:

CNR-DCAS  
Segreteria Tecnico-Scientifica  
per il Programma Antartide  
Viale Marx 15  
00137 Roma, Italy  
Tel: +39 6 860 90307/508  
Fax: +39 6 860 90360  
E-mail: [morbido@dcas.cnr.it](mailto:morbido@dcas.cnr.it)

### Stockholm University

Dept. of Meteorology (MISU)  
Arrhenius Laboratory  
10691, Sweden  
Tel: +46 8 16 43 52  
Fax: +46 8 15 92 95  
E-mail: [kim@misu.su.se](mailto:kim@misu.su.se)  
<http://www.misu.su.se>

### Norwegian Space Centre (NSC)

SvalRak, Andøya Rocket Range  
PO Box 54, 8480 Andenes, Norway  
Tel: +47 76 14 16 44  
Fax: +47 76 14 18 57  
E-mail: [ivar@rocketrange.no](mailto:ivar@rocketrange.no)  
<http://www.spacecentre.no>

### Norwegian Polar Institute (NP)

Sverdrupstasjonen  
9173 Ny-Ålesund, Norway  
Tel: +47 79 02 71 15  
Fax: +47 79 02 70 02  
E-mail: [npf@nyaal.npolar.no](mailto:npf@nyaal.npolar.no)  
<http://www.npolar.no>

### University of Tromsø (UoT)

Faculty of Science  
9037 Tromsø, Norway  
Tel: +47 77 64 44 24  
Fax: +47 77 64 63 33  
E-mail: [bsolheim@ibg.uit.no](mailto:bsolheim@ibg.uit.no)

### Institut Francais pour la Recherche et la Technologie (IFRTP)

Technopôle Brest-Iroise, BP 75  
29280 Plouzané, France  
Tel: +33 238 056 500  
Fax: +33 298 056 555

### NySMAC

(Ny-Ålesund Science Managers Committee)  
c/o Norwegian Polar Institute Svalbard  
PO Box 505, 9171 Longyearbyen, Norway  
Tel: +47 79 02 26 00  
Fax: +47 79 02 26 04  
E-mail: [nysmac@lby.npolar.no](mailto:nysmac@lby.npolar.no)  
<http://www.npolar.no/nysmac/>

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<sup>1</sup> Available at  
<http://www.misu.su.se/~baseline>

<sup>2</sup> Available at  
[http://www.nilu.no/niluweb/services/z  
eppelin](http://www.nilu.no/niluweb/services/z<br/>eppelin)

<sup>3</sup> Available at <http://www.nupas.no>