



The International Polar Year March 1st 2007 – March 1st 2009

Amundsen at
The South Pole



Nansen and
Johansen
are leaving
Fram



The International Polar Year March 1th 2007 – March 1th 2009

The Troll-station
Queen Maud Land



New Ålesund





Local Polar Heroes

Telemark

Olav Bjaaland

Hjalmar Johansen



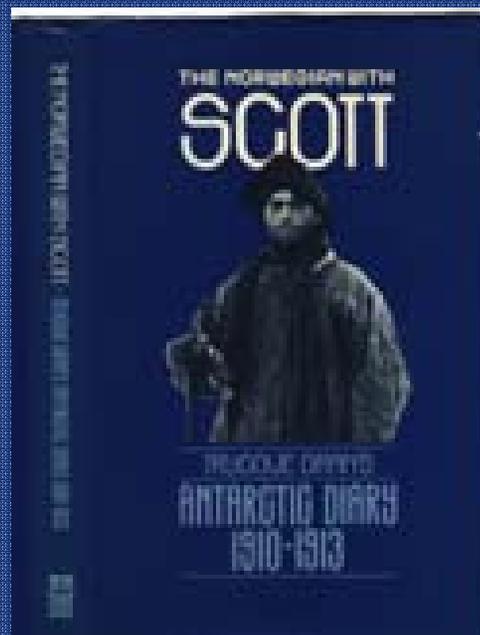


“Tryggve Gran participated in [Scotts South Pole Expedition](#) (1910-13) as ski instructor and was in the group who found Scott and his men frozen to death.”

(Wikipedia)

He played in the first Norwegian national soccer game in 1908

On [July 30, 1914](#), Gran became the first pilot to cross the [North Sea](#)





Participants:

Roald Amundsen

Thorvald Nilsen

Olav Bjaaland

Helmer Hanssen

Sverre Hassel

Oscar Wisting

Andreas Beck

Hjalmar Fredrik Gjertsen

Ludvig Hansen

Fredrik Hjalmar Johansen

Henrik Adolf Lindstrøm

Jacob Nødtvedt

Karenius Olsen

Halvardus Kristensen

Kristian Presterud

Martin Rønne

Jørgen Stubberud

Knut Sundbeck

Alexandr Kutschin

Buenos Aires:

Avmønstret 1911

Alexandr Kutschin

Påmønstret

A. Olsen

F. Steller





The New Polar Hero The Scientist?



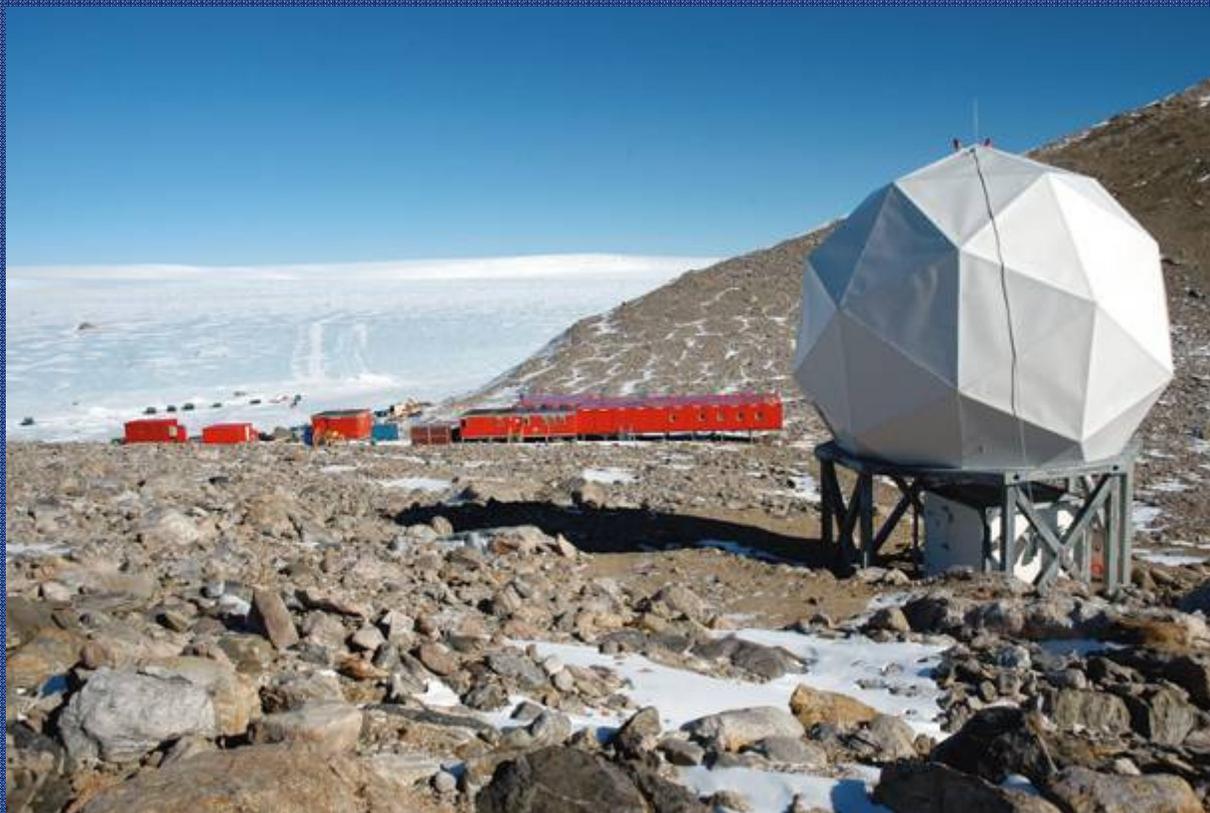


The New Polar Hero The Scientist?





The New Polar Hero
The Scientist?





The New Polar Hero The Scientist?





TARA





International collaboration!

- 60 countries
- 50 000 scientists





Huge Norwegian effort!

- 26 big science projects
- 330 million NOK over the period





Activities

- Teacher workshop at Svalbard 3. – 11. august
- Student projects
- Participating in Science Expeditions (teachers and students)
- International Student Expeditions (Student On Ice?)
- Grants to schools



www.polararet.no





Integrated Arctic Ocean Observing System – IAOOS

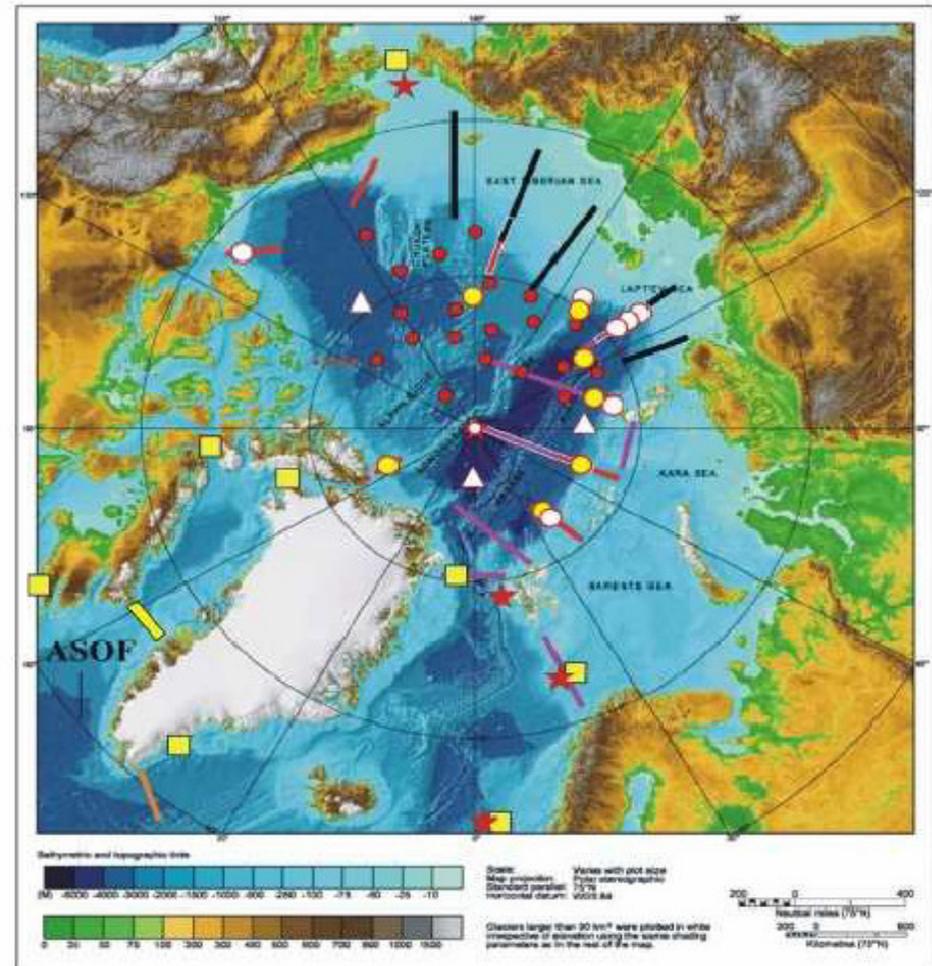
Hovedmål:

Å etablere et overvåkningssystem for Arktis for hav, is og atmosfære som for første gang observerer hele det koplede systemet samtidig

Viktig delmål:

Å fylle geografiske hull i eksisterende dekning, samt utvide eksisterende tidsserier i tid

Prosjektleder Cecilie Mauritzen,
Meteorologisk institutt, Oslo
(cecilie.mauritzen@met.no)



- | | |
|---------------------|-------------------------------|
| ● Ice-tethered buoy | ■ ASOF FW & Transport mooring |
| — US SBE | ★ Benchmark Light mooring |
| — Swedish SBE | △ ULS & BPG mooring |
| — A-W-I SPACE | ○ old } NABOS-type moorings |
| — Greenland SBE | ● new } |



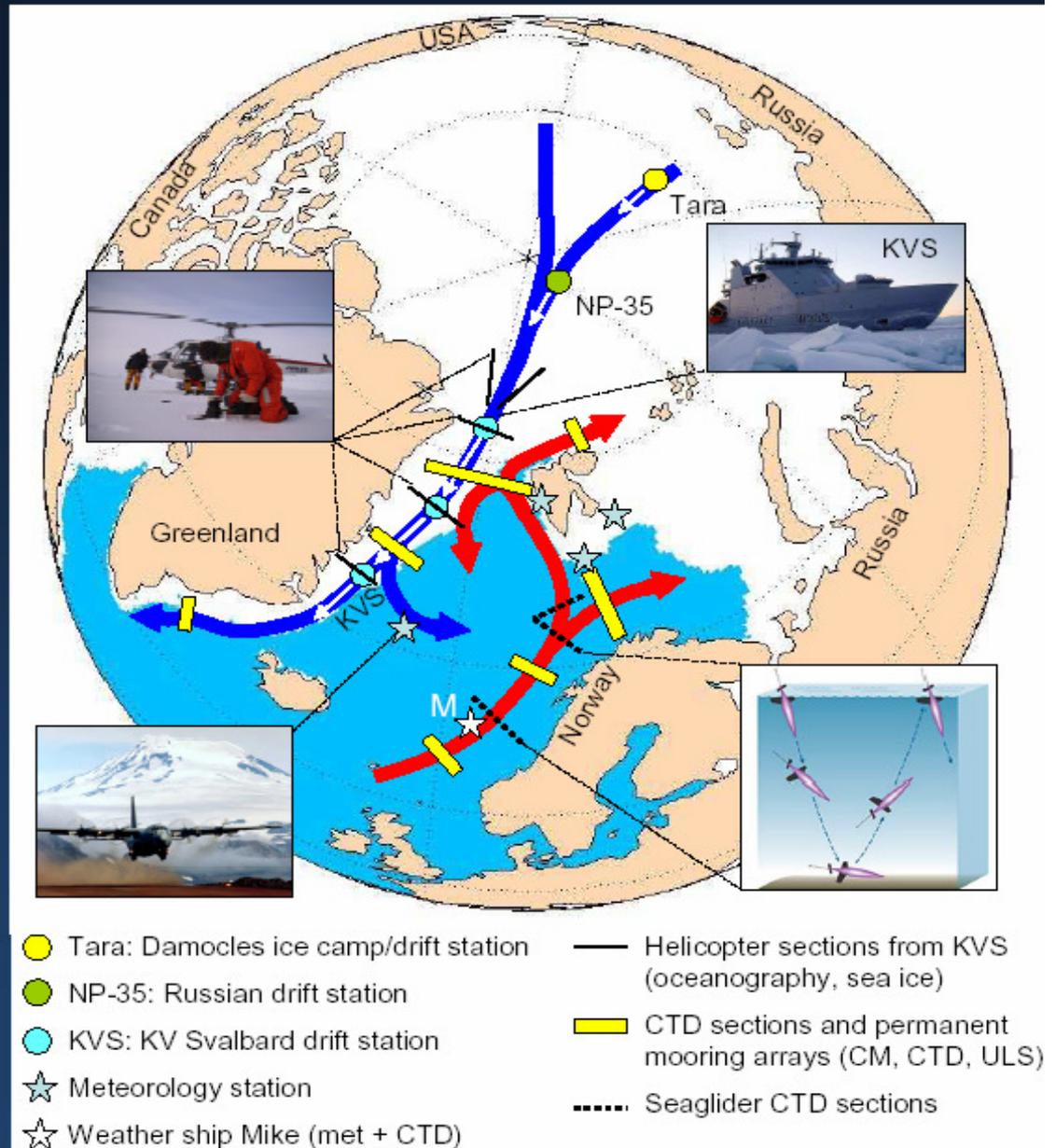
Det norske bidraget til IAOOS: IAOOS-Norway

Deltagere:

Met.no, NP, HI, NFH, UIB, UNIS, Kystvakta

Hovedbidrag til IAOOS:

Gjennom å måle både oppstrøms og nedstrøms av selve polhavet vil iAOOS-Norway lukke sirkelen: Vi dekker innstrømningen samt utstrømningen og hvordan denne kommuniserer med det globale klimasystemet





Norsk-amerikansk travers fra Troll til Sydpolen t/r

Dagleg kontakt med prosjektet

Norsk – amerikansk samarbeid

Kontakt med amerikanske skolar

Mogleg besøk på Troll i februar 2008

Hovedmål:

Mer nøyaktig kvantifisering av endringer i ismassene i Antarktis som følge av klimaendringer og deres betydning for det globale havnivå

Prosjektleder Jan-Gunnar Winther,
Norsk Polarinstitutt, Tromsø
(winther@npolar.no)





Delmål:

- ▶ forstå klimavariabilitet i Dronning Maud Land på tidsskalaer fra år til tusenår
 - ▶ beregne massebalansen i denne sektoren av Antarktis
- 
- A large four-engine propeller aircraft, likely a C-17 Globemaster III, is shown from a low angle on a vast, flat, snowy landscape. The aircraft is facing away from the viewer, and its four propellers are in motion, creating a slight blur. The sky is a clear, pale blue.
- ▶ undersøke påvirkning fra hav og atmosfære på den kjemiske sammensetningen av snø og ismasser
 - ▶ besøke områder undersøkt på 1960-tallet for å detektere mulige endringer og for å etablere et referansedatasett for framtidig forskning



International Student Expeditions

Announcing STUDENTS ON ICE plans for the International Polar Year!!



**STUDENTS ON ICE
IPY EXPEDITIONS
BOOK NOW!**



Students On Ice Expeditions
International Polar Years 2007 to 2009 ...











STUDENTS ON ICE | 12 chemin Fosbery | Chelsea, Quebec | J9B 2G6 | Canada | 1-866-336-6423 | soi@studentsonice.com

STUDENTS ON ICE PLANS FOR INTERNATIONAL POLAR YEAR!

The Students on Ice - International Polar Year Youth Expeditions (2007-09) have been endorsed by the International Polar Year Joint Committee as a prominent and valued component of the IPY program. Students on Ice will be organizing nine special IPY Arctic and Antarctic expeditions between 2007-2009 that will give the once-in-a-lifetime opportunity to over 500 youth to explore the Polar regions!

These unique educational expeditions to the Arctic and Antarctic are for high school and university youth from around the world. Participating youth will travel on the expeditions together with teams of world-leading scientists, experts and educators. The ice-strengthened ship-based expeditions will be unparalleled platforms for Polar and Environmental Education and outreach for the International Polar Year. ([Expedition Details](#))

The SOI-IPY expeditions will:

- provide inspiring, life-changing experiences to youth
- inspire a next generation of Polar researchers and scientists
- raise awareness and understanding about Global environmental issues
- raise awareness internationally about IPY and polar issues
- develop Polar curriculum and resources
- generate media opportunities
- reach thousands of youth around the world via podcasting, rebroadcasting and video conferencing
- serve as a tremendous IPY legacy project

SOI-IPY EXPEDITION SCHEDULE

VISIT US AT STUDENTS ON ICE

ABOUT IPY

STUDENTS ON ICE!

- World pioneer in designing and leading educational youth expeditions to Antarctica and the Arctic
- Over 500 youth taken to the Poles on 12 expeditions since 1990
- Winner of the prestigious Michael J. Smith Award for Science Promotion in Canada
- Special Congressional Recognition from the US Congress for outstanding work with Youth
- Youth from over 25 countries have participated on the SOI expeditions
- Member of the International Association of Antarctica Tour Operators
- World-class team of scientists, experts, and leaders including Dr. Don Walsh (Top 100 Explorers of the Century), Jonathan Shackleton (descendant of Sir Ernest Shackleton), Bill Lishman (Father Goose), and Sheila Watt-Cloutier (recipient of the UMS' Champion of the Earth Award)





Canadian IPY Youth Steering Committee

Z-908 Biological Sciences Building, University of Alberta
Edmonton, Alberta, Canada T6G 2E9
Tel: (780) 492-7245 Fax: (780) 492-0493

Français

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Youth Field Opportunities

Pole to Pole Leadership Institute

Pole to Pole takes youth on expeditions to demonstrate how youth can overcome obstacles, become leaders in their own right, and effect positive global change (www.poletopoleleadership.com)

Churchill Northern Studies Centre

Offers a field-based program for high school students to explore the biomes surrounding Churchill, Manitoba. (www.churchillmb.net/%7Ecnsc/education.html)

Earthwatch Institute

Offers positions for students to partake in field research alongside scientists on a variety of expeditions. Over one hundred expeditions are offered, you just have to search out the polar opportunities! (www.earthwatch.org)

Schools on Board

Offers high school students the chance to partake in field research alongside scientists on the CCGS Amundsen research icebreaker in the Arctic. (www.arcticnet-ulaval.ca/index.php?fa=Education.show&form=10C=1)





International school campaign
Toxic chemicals in local fish



www.sustain.no





BUT.....





www.bancroftarnesenexplore.com





Monitoring the personal UV doses during the BancroftArnesen polar expedition, February-May 2007

Participants: NRPA, Bispbjerg
Hospital, Energinetverket +++



Why bringing personal dosimeters?

- Life in polar regions are exposed to extreme environmental conditions. Studies have shown that UV radiation in these regions is a significant limiting growth factor for several aquatic and terrestrial organisms.
- Variations in UV radiation is strongly linked to global climate changes. The variations are expected to be most significant in polar regions, where organisms are most vulnerable to variations in environmental stress factors.
- UV data is needed for biological and environmental effects studies. However, there are only sparse ground based observations of UV radiation in polar regions. Estimates of ground level UV in polar regions, based on remote observations from satellites are highly uncertain, due to e.g. difficulties in separating cloud and snow effects.
- In order to enhance the understanding of the radiation climate in the Arctic, the Bancroft-Arnesen expedition will bring personal UV dosimeters, monitoring global UV index and doses on their 3 months expedition across the North Pole.
- The extreme environmental conditions will represent big challenges for the equipments for monitoring UV.



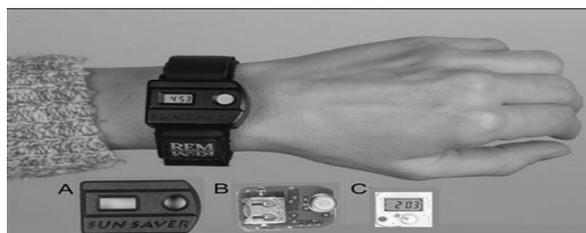


Personal UV dosimeters



Viospore, biological UV dosimeter. Weight 17 gram/dosimeter.

Photo: <http://www.biosense.de/home-e.htm>



Sunsaver, electronic dosimeter (14 gram)

Photo: Bispebjerg Hospital (Copenhagen)



Use of **Viospore** dosimeter in the Arctic

Photo: <http://www.biosense.de/home-e.htm>





- Liv Arnesen with SunSaver and VioSpore dosimeters on her left upper arm



Internet

- www.polararet.no
- www.naturfagsenteret.no
- www.ipy.org

