Welcome to the ARCUS Annual Meeting!



Connecting Arctic Research Since 1988

Board of Directors Election

- The ARCUS Board has 12 members, plus the President
- The Board is elected by this Council
- The Council shall elect four of the Directors each year
- The Board term is three years, renewable
- Only voting (organizational) members who are current in the payment of dues and Board members may vote
- There was an online balloting November 27-December 11.
 Only the first ballot from each member counts.
- If you have not voted, you should have been handed a ballot. Those online can send their votes by private message through Zoom to Betsy-Turner Bogren.



2017 Board of Directors Nominees

- Igor Appel TAC LLC
- Rasmus Bertelsen UIT: The Arctic University of Norway
- Kaare Erickson UIC Science
- James Hemsath Alaska Industrial Development & Export Authority
- Diane Hirshberg University of Alaska Anchorage
- Liza Jenkins Michigan Tech Research Institute
- Olivia Lee (Incumbent) University of Alaska, Fairbanks
- Caryn Rea ConocoPhillips, Retired
- Nikolay Shiklomanov George Washington University
- Charlene Stern University of Alaska, Fairbanks



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Connecting Arctic Research Since 1988

Understanding the Arctic Requires Connecting Across Boundaries

Sector Boundaries

- Academic
- Government
- Industrial
- Indigenous
- Non-Governmental Organizations
- Public and Society

Geographic Boundaries

- International / Circumpolar (National Boundaries)
- Arctic Residents / Global Population (Regional Perspectives)

Disciplinary

Boundaries

- Physical Science
- Life / Natural
 Science
- Engineering
- Social Science
- Education
- Community Development



Who We Are

- A Consortium of 36 of the leading Arctic research organizations around the U.S. and the world
- A growing association with 91 individual members
- An engaged Board of Directors
- A dedicated team of 15 professionals spread throughout Alaska, D.C., and six other U.S. states
- Many teams of volunteers making things happen
- A grantee of the U.S. National Science Foundation and other agencies
- A not-for-profit charitable 501c(3) organization
- Dedicated to "Connecting Arctic Research" since ARCUS 1988



ARCUS Team



BRANDI AUSTIN Business Manager 2017



TISSA DUNKLEY Accountant 2017



JUDY FAHNESTOCK Project Assistant 2008



BRIT MYERS Project Manager 2015



RONNIE OWENS
Director of Web Development
2004



JOED POLLY Video/Online Media 2001



ZEB POLLY Systems Administrator-2000



ROBERT RICH Executive Director 2015



LISA SHEFFIELD-GUY Project Manager 2015



ASMA SHETHWALA
Executive Administrative
Assistant
2017



STACEY STOUDT
Administrative Assistant
2016



BETSY TURNER-BOGREN Project Manager 2010

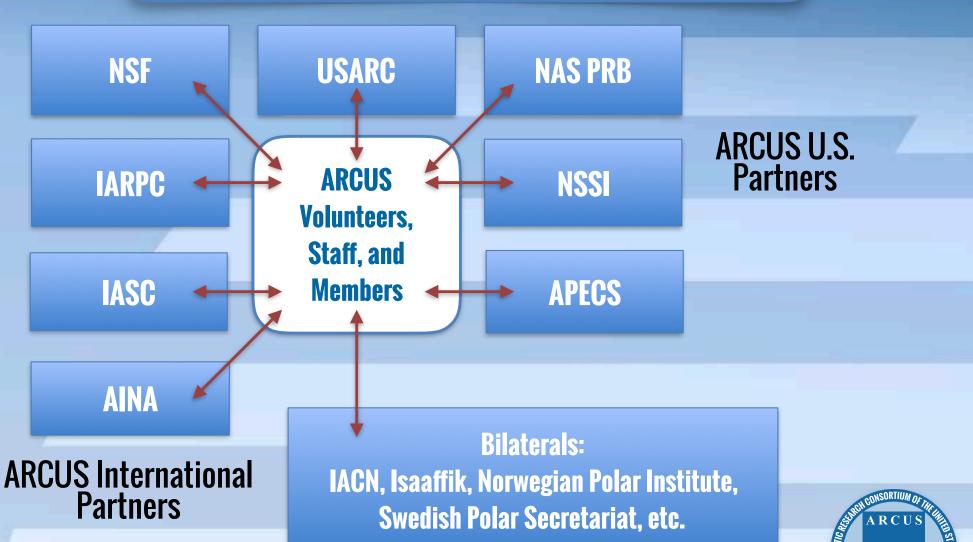


JANET WARBURTON Project Manager 2000



HELEN WIGGINS
Director of Programs
2003

ARCUS Operates in Cooperation With All Other Arctic Research-Related Groups



A R C U S

WWW.ARCUS.ORG

ARCUS Goals

- 1. Clear Identity ARCUS will be known for connecting Arctic research across boundaries.
- 2. Organizational Strength ARCUS will have an engaged, dedicated, and capable board, membership, and staff.
- 3. Fiscal Stability ARCUS will secure diverse funding sources to support a range of programs that advance the mission.
- 4. Impact ARCUS will galvanize the Arctic research community, address stakeholder needs, and raise awareness of the importance and value of Arctic research.

ARCUS ARCTIC RESEARCH CONSORTIUM OF THE UNITED STATES

25 Years of Connecting Arctic Research

VISION

ARCUS envisions strong and productive linkages among international Arctic researchers, educators, communities, and other stakeholders that promote discovery and understanding of the Arctic and inform sound decisions related to the Arctic.

MISSION

Our mission describes the way we serve our members and the Arctic research community: ARCUS is a catalyst for interdisciplinary thinking, acting, and education leading to the development of highly collaborative partnerships.

GOALS

1. Clear Identity

ARCUS is the place where arctic researchers come to develop and manage interdisciplinary collaborative projects.

2. Organizational Strength

ARCUS has a fully committed, strategically focused board and an actively engaged member

3. Fiscal Stabilit

ARCUS enjoys a diverse stream of funding sufficient to support a wide range of programs that advance the mission.

4. Impa

ARCUS galvanizes the Arctic research community, meets stakeholder needs, and raises public awareness of the importance of the Arctic.



CONNECTING THE COMMUN

Arcticinfo
Community job, meeting, and resource announ

Witness the Arctic Publication issued 3 times per year

Publication issued 3 times per year Over 12,000 subscribers

Connects researchers and K-12 teachers for hands on field ex 154 teachers sent to Arctic and Antarctic field sites

Arctic Calendar Community events schedule

d collaborators

MEMBERSHIP

Membership in ARCUS enables you to participate in the world's leading community promoting discovery and understanding of the Arctic and intermines and decirate a

ARCUS members form the core of our extensive network, which enables increased understanding of this critical and dynamic region. Our members include organizations and individuals who are making valuable contributions to Arctic research.

Join ARCUS today in connecting people across boundaries to support communication,

Be a part of our team focused on understanding the changing Arctic.

There are membership opportunities for everyone:

ACADEMIC AND RESEARCH INSTITUTIONS

INDIGENOUS ORGANIZATIONS

CORPORATE ORGANIZATIONS

INDIVIDUALS

Join us today:
www.arcus.org/arcus/member-information



*The work of ARCUS continues to be involuted to in find it prints polepher highly knowledgeable and capabite authorities be involuted to in find it prints polepher highly knowledgeable and capabite authorities be become Members of ARCUS, and all who value actubit in find it prints polepher highly knowledgeable and capabite authorities become Members of ARCUS, and all who value actubit in find it prints polepher highly knowledgeable and capabite authorities. As a Member, you are a part of the world's leading commanly find prints so provide night and provide a micro platform to a state of Alaska Arctic Policy Advisor. As a Member, you are a part of the world's leading commanly find prints so provide night and provide a micro platform to a stockholders. The role could not be members and provide a micro platform to a stockholders. The role could not be members and provide a micro platform to a stockholders. The role could not be members and provide a micro platform to a stockholders. The role could not be members and provide a micro platform to a stockholders. The role could not be members and provide a micro platform to a stockholders. The role could not be members and provide a micro platform to a stockholders. The role could not be members and provided and stockholders. The role could not be members and the stockholders and the stoc

ARCTIC RESEARCH

AND THE

ARCTIC RESEARCH CONSORTIUM OF THE UNITED STATES (ARCUS)

The Arctic is changing rapidly in many ways that will affect people everywhere

- Environmental change will be disruptive: Sea level is rising faster, weather patterns are changing, sea ice is diminishing, permafrost is thawing and releasing greenhouse gases
- · Some changes will provide new opportunities: More shipping, easier access to resources, emerging economic markets
- Strategic issues are arising over resource and routing access, control, and ownership
- $\bullet \ Globalization \ and \ other \ economic \ drivers \ interact \ with \ environmental \ factors$
- Direct impacts upon Arctic residents and ecosystems: permafrost thaw, coastal erosion, resource development, food security

We need Arctic research: To understand and respond to Arctic change

- What changes are occurring, at what rates and extents, and what might happen next?
- What are local, regional, and global impacts of changes?
- · How to mitigate or adapt to negative impacts?
- · How to best take advantage of new opportunities
- · How to pursue sustainable Arctic development: community resilience, infrastructure investment: regulatory policies

ARCUS connects, supports and advances Arctic research

- · Connects Arctic research across boundaries and scales: disciplines, sectors (academic, industry & government), institutions, nations
- Facilitates full partnerships among Indigenous communities, observation initiatives, and knowledge systems in research
- · Communicates Arctic research results to decision makers and the public
- · Inspires the next generation of scientists via educational programs for teachers and students
- · Advocates for Arctic research

Highlights of ARCUS Programs

- Project Office for Study of Environmental Arctic Change (SEARCH)
- Support to Interagency Arctic Research Policy Committee (IARPC)
- PolarTREC (Teachers and Researchers Experimenting and Collaborating)
- Project Office for Sea Ice Prediction Network
- The Arctic in the Classroom
- ArcticInfo, Arctic Calendar, Directory of Arctic Researchers, Internet Media Archive, website
- Arctic Research Community Networking and Events (e.g., Anchorage Arctic Research Day, AGU)
- · Witness the Arctic and Witness Community Highlights e-Newsletters
- Sea Ice for Walrus Outlook
- Fostering Indigenous-Researcher Interactions

ARCUS details

- Small 501(c)(3) not-for-profit member-focused organization
- Members worldwide include more than 35 academic, research, government, corporate, and Indigenous organizations,
- along with a growing number of individuals
- Established in 1988-long track record of success in connecting Arctic research
- Extensive collaboration with other Arctic organizations
- Offices in Fairbanks, Alaska and Washington, DC, with 15 staff nationwide

3535 COLLEGE ROAD - SUITE 101 • FAIRBANKS, ALASKA 99709-3710
Phone: 907.474.1600 • Fax: 907.474.1604 • Emai: 1909/000.000 • Will: 1909/000.000 • Taittie: @AestoReseaso



Broadening the ARCUS Network











Photos by Robert Rich (2017)

 Anchorage Arctic Research Day (would you like to host a similar pop-up event in your city?)





Campaign to Defend Arctic Research





• Arctic Research Community Knowledge Management







• Membership up to 36 organizations and 91 individuals, including corporate, indigenous, and international organizations











AGU vitality and activities











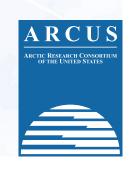
• ARCUSFest - Board-Staff Retreat











Goal 3 - Financial Stability

- Improving bottom line and annual budgeting
- Continued clean audits and great reputation from funders for grant administration



Goal 3 - Financial Stability

 Received Alaska Community Foundation grant to work with Foraker Group on becoming development-ready







Goal 3 - Financial Stability

• Established ARCUS Advisory Council and diversifying the Board

ARCUS Advisory Council



Vera Alexander
University of Alaska,
Fairbanks (retired)



Tom Barry

Arctic Council Conservation of Arctic
Flora and Fauna Working Group



Mark Brzezinski
Makena Capital, LLC



Brian Rogers
University of Alaska,
Fairbanks



Mead Treadwell
PT Capital, LLC



• Fostering research – Arctic Indigenous community interactions: New program, SIWO extension, proposed workshop, web resources



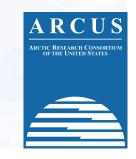




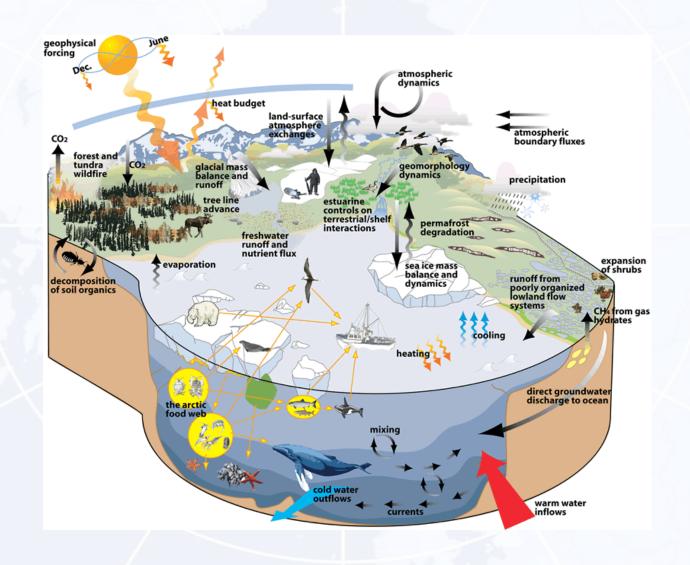








Contributing to synthesis and systems science understanding





• Communicating Arctic research with stakeholders – Seminar series



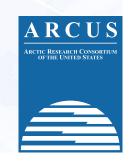












• Promoting education and citizen science partnerships













Your Role

We need YOU be a part of the ARCUS impact:

- 1. Get involved in an ARCUS activities
 - Projects
 - Committees
 - Meetings
 - Social Media
- 2. Become a member <u>and</u> become a supporter
- 3. Tell your colleagues about the importance of ARCUS
- 4. All Organizations and Individuals can join!



See www.arcus.org for more information



Thank You!



John Payne

President (2016-2017) ARCUS Board (2013-2017)





Thank You!



Craig Dorman
ARCUS Board (2014-2017)





Thank You!



Gunnar KnappARCUS Board (2014-2017)





Highlights of ARCUS Finances



Revenue by Source October 2015 - September 2016

The Arctic in the Classroom (2.0%)
ARCUS Unrestricted Funds (1.4%)
NASA (.8%)

SEARCH: 5.4% 12.0%

Sea

NSF PolarTREC: 13.4%

NSF Cooperative Agreement: 65.1%

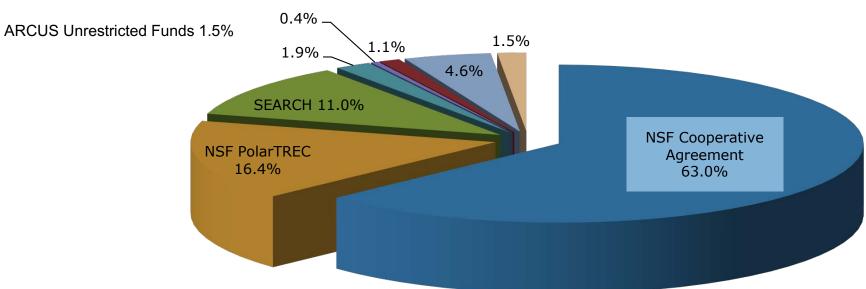
Revenue by Source October 2016 - September 2017

SEA ICE 1.9%

NASA 1.1%

Workshops. 4.65%

The Arctic in the Classroom .4%



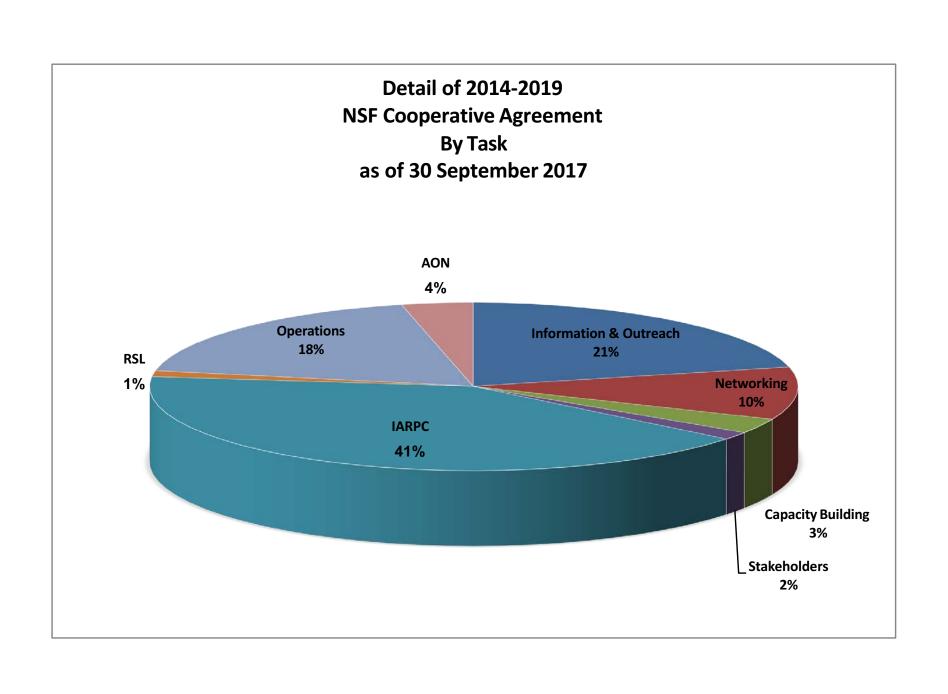
ARCTIC RESEARCH CONSORTIUM OF THE U.S.

Available Funding

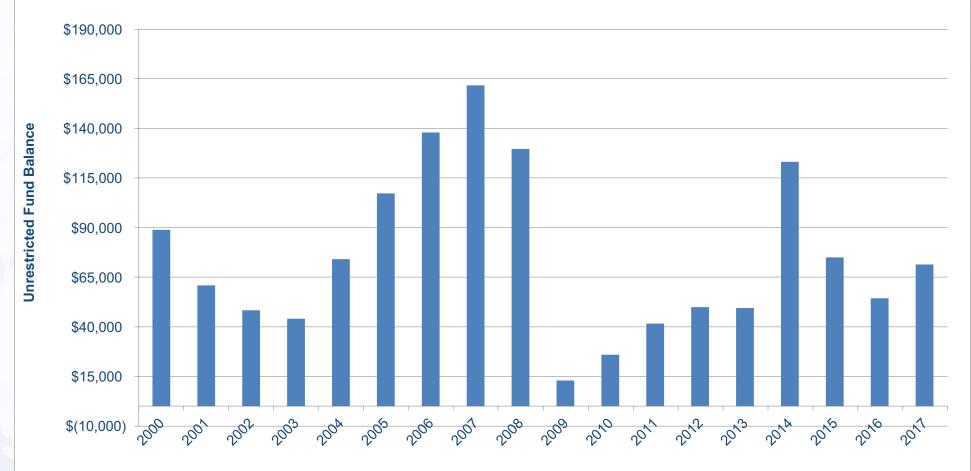
FUNDED:

INCEPTION EXPIRATION

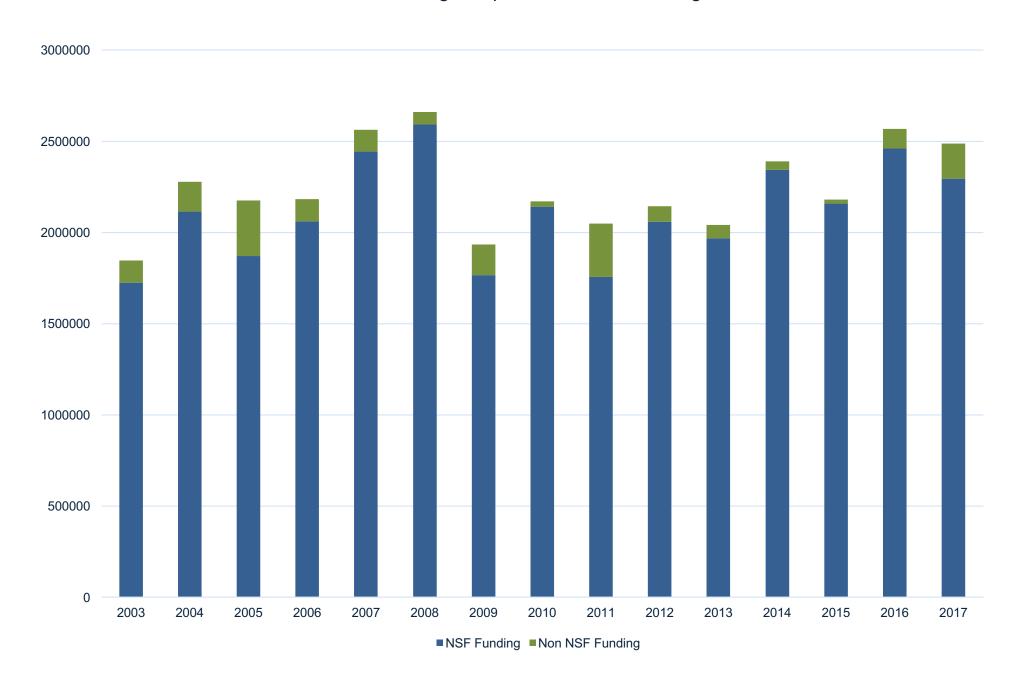
Cooperative Agreement=An Arctic Collaboratory for Education, and Outreach	or Science, \$6,443,557	06/14 & 01/15 & 08/15 & 06/16 & 06/17	06/01/14	05/31/19
SEA ICE=Collaborative Research: An innovative network to improve sea ice prediction in a changing Arctic	\$435,591	06/13	06/15/13	12/31/17
SEARCH=Science Support for the Study of Environmental Arctic Change	\$1,038,525	08/14 & 03/16 & 01/17	08/15/14	07/31/20
PolarTREC	\$449,668	01/17	01/01/17	12/31/17
The Arctic in the Classroom	\$500,000	12/14	01/15	2019+
NASA	\$26,619	02/17	02/17	12/31/17
	\$8,893,960			







NSF Funding compared to TOTAL funding



ARCUS: Connecting Arctic Research Since 1988

What else do you want to know about ARCUS?

How can we help you to connect?

www.arcus.org

ARCUS is a catalyst for interdisciplinary thinking, acting, and education leading to the development of highly collaborative partnerships.





WHY THE ARCTIC?



ICE911'S MISSION – ARCTIC RESTORATION TO STABILIZE WORLD CLIMATE

Reflective ice in the Arctic is crucial to the stability of Earth's climate.

Ice911 Research works to slow and reverse the loss of bright ice.

We work with climate modelers and in the field to develop solutions.

Climate is on the brink of runaway:

Runaway heating in arctic

Methane release

Devastating sea level rise

Our mission is to be ready in time.

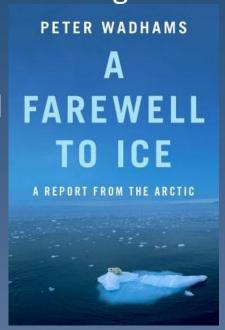


A FAREWELL TO ICE MEANS A CALL TO ARMS IT'S "ALL IN" NOW ON RESTORING THE ARCTIC

I have accepted the request to lead the Arctic Restoration Action Group

We'll help coordinate and evaluate proposed solutions including:

- Ice911 Not only for sea ice but also for Greenland
- Ice thickening
- Marine Cloud Brightening
- Bright water
- •



ARAG is working together worldwide for Arctic Restoration

Healthy Climate Alliance, 300x2050 and more look towards the Arctic





Asiaq

Asiaq from Greenlandic Mythology:

Mistress of the winds and the weather.



KNUD RASMUSSEN

MYTER OG SAGN FRA GRØNLAND

ØSTGRØNLÆNDERE

Bind / ei 2





GYLDENDALSKE BOGHANDEL - NORDISK FORLAG - KJØBENHAVN - KRISTIANIA BERLIN - LONDON - MDCCCCXXI

Asiaq

DER HERSKER OVER VEJRET OG VINDENE

Der var engang en Storfanger, som boede ved Pikiutdleq. Han havde kun eet Barn, en lille Dreng, som alle i Huset var glade og taknemlige for; særlig hans Bedstemoder holdt meget af ham, fordi han var opkaldt efter hendes afdøde

En Dag kom Storfangeren hjem med en Sæl, og da hans Kone skulde ned og flænse den, gav hun sin lille Søn til sin Moder, for at hun kunde passe ham imedens. Bedstemoderen sad nu hos ham og passede paa ham, indtil han begyndte at græde, og han blev ved med at græde saa voldsomt, at hun tilsidst raabte ud til sin Datter:

"Kom op og tag ham lidt! Han bliver ved med at græde,

og jeg kan ikke faa ham til at tie."

Den gamle Bedstemoder var blind, og da der kom nogen ind i Huset til hende, kunde hun ikke se, hvem det var. Hun troede blot, det var hendes Datter, der kom ind og sagde: "Vær saa god, læg ham saa i min Amaut!" Men næppe havde hun gjort det, før hun i det samme mærkede, at Ryggen var hul, der gik ligesom en stor Kløft ned gennem den. Forgæves raabte hun, saa højt hun kunde:

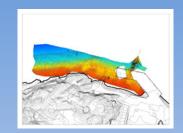
"Jeg er kommen til at lægge ham ned i en fremmed Amaut, og for sent mærkede jeg, at Ryggen var hul paa den, som hentede ham!"

I det samme kom Datteren selv ind for at hente sit lille Barn, men det var forlængst bortført. De søgte og søgte alle Vegne, men fandt det aldrig og sørgede til deres Dages Ende over den lille Dreng, der var bleven stjaalet fra

Land Surveying and Geotechnics

- Digital surface and terrain models
- Bathymetry of lakes and coastal areas
- Maintenance and registration of known points
- Geophysical and geotechnical measurements on land and sea





Climate and hydrology

- Construction of weather and hydrology stations
- Measuring and monitoring of climate parameters and hydrology
- Quality assured series maintained in database
- Statistical analyses
- Assessment of water resources and hydrological modelling





Mapping and remote sensing

- Technical maps of the inhabited areas
- Mapping and classification of the open land



Research topics

Atmosphere

- Climate gradients
- Boundary layer stability
- Energy balance gradients

Water

- Fresh water input to fjords in a changing climate
- GLOFs
- Coastline definition
- Tides, bathymetry, currents, mean sea level.

Snow and Ice

- Mass balance (gradients)
- Superimposed ice
- Rock glacier monitoring
- Advancing ice margin N-GL
- Extreme events (avalanches 2016)

Remote sensing

- Coastal characterisation NE-Greenland
- Walrus population assessment NE-Greenland
- ESA GlobPermafrost (end user)







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