



Canada's Report

Presented By:

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April 2017

National and international infrastructure networks

- Canadian Network of Northern Research Operators (CNNRO)
- Polar Continental Shelf Program (PCSP)
- POLAR Knowledge Canada
- Marine assets including icebreakers
- Other Arctic initiatives

CNNRO

- Canadian Network of Northern Research Operators (CNNRO)
- ~40 Members
 - ~30 regular members
 - ~ 10 associate members
- ~80 facilities across the Canadian Arctic
- Strategic Plan available at www.cnnro.ca

CNNRO

<http://www.cnnro.ca>

Provides data on all members and their facilities

Includes summaries of resources and contact information

Searchable by map, region, etc.

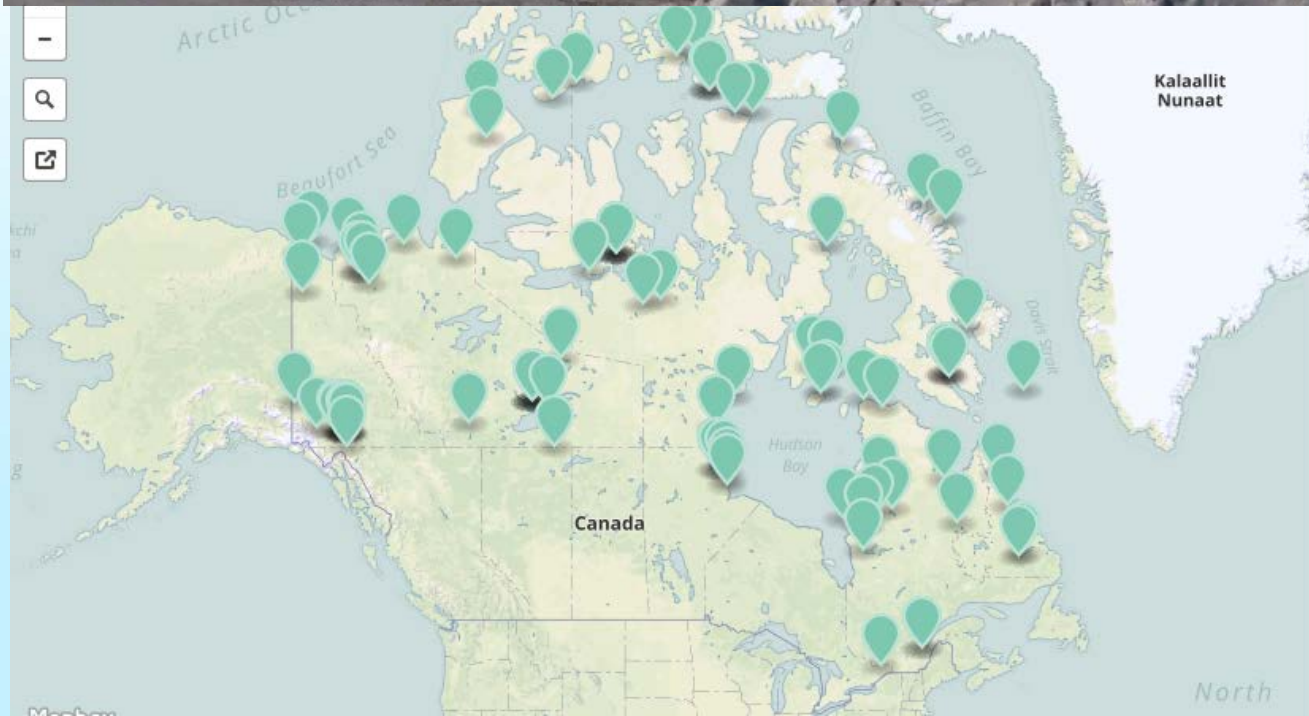


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Churchill Northern Studies Centre

An accessible northern field research station, open year round, situated in the Hudson Bay Lowlands in Manitoba.

[Visit Facility Page](#)



Polar Continental Shelf Program

- Established in 1958, the PCSP has become Canada's centre of excellence for logistics, contributing to the advancement of scientific knowledge of the Canadian landmass and the exercise of Canadian sovereignty in Canada's North.



PCSP Arctic logistics hub in Resolute

Polar Continental Shelf Program

- Highlights from the 2016 field season
 - 145 projects supported
 - New PCSP Arctic Operations Manual
- 2017 Season (so far):
 - 149 projects planned
 - Support for project between German's Federal Institute for Geosciences and Natural Resources (BGR) and the Geological Survey of Canada.
- <https://www.nrcan.gc.ca/the-north/polar-continental-shelf-program>

Polar Knowledge Canada

- Advance knowledge of the Canadian Arctic in order to improve economic opportunities, environmental stewardship and the quality of life of its residents and all other Canadians;
- Promote the development and dissemination of knowledge of the other circumpolar regions, including the Antarctic;
- Strengthen Canada's leadership on Arctic issues; and
- Establish a hub for scientific research in the Canadian Arctic.

Polar Knowledge Canada

- The CHARS campus in Cambridge Bay will be operational in time for Canada's 150th anniversary in 2017.
- POLAR has signed collaboration mechanisms with Japan, Iceland and the USA in 2016.
- POLAR and BAS will be cooperating to conduct a joint research project on snow and ice in and around Cambridge Bay in the first week of April.
- With US and Canadian partners to coordinate the ground observations that will occur in conjunction with the airborne flights and the SAR imaging targets.
- Collaborate with NASA's Arctic-Boreal Vulnerability Experiment (AboVE) in 2017
- <https://www.canada.ca/en/polar-knowledge.html>

JOIS AON BGOS

CCGS Louis S. St-Laurent

Kugluktuk to Canada Basin, returning to Kugluktuk

- 7 September – 2 October, 2017 (25 days – 2 less than in 2016)
- Science team of 35
- CTD/rosette profiling & biogeochemical sampling
- Vertical net tows
- Infill survey using XCTD & UCTD
- Recover & deploy 3 moorings (WHOI)
- Deploy 3-4 ice-tethered profilers
- Deploy 2 ice-based observatories
- Underway measurements – intake at 10m depth
- Ice Observations (ship, ice & helicopter)

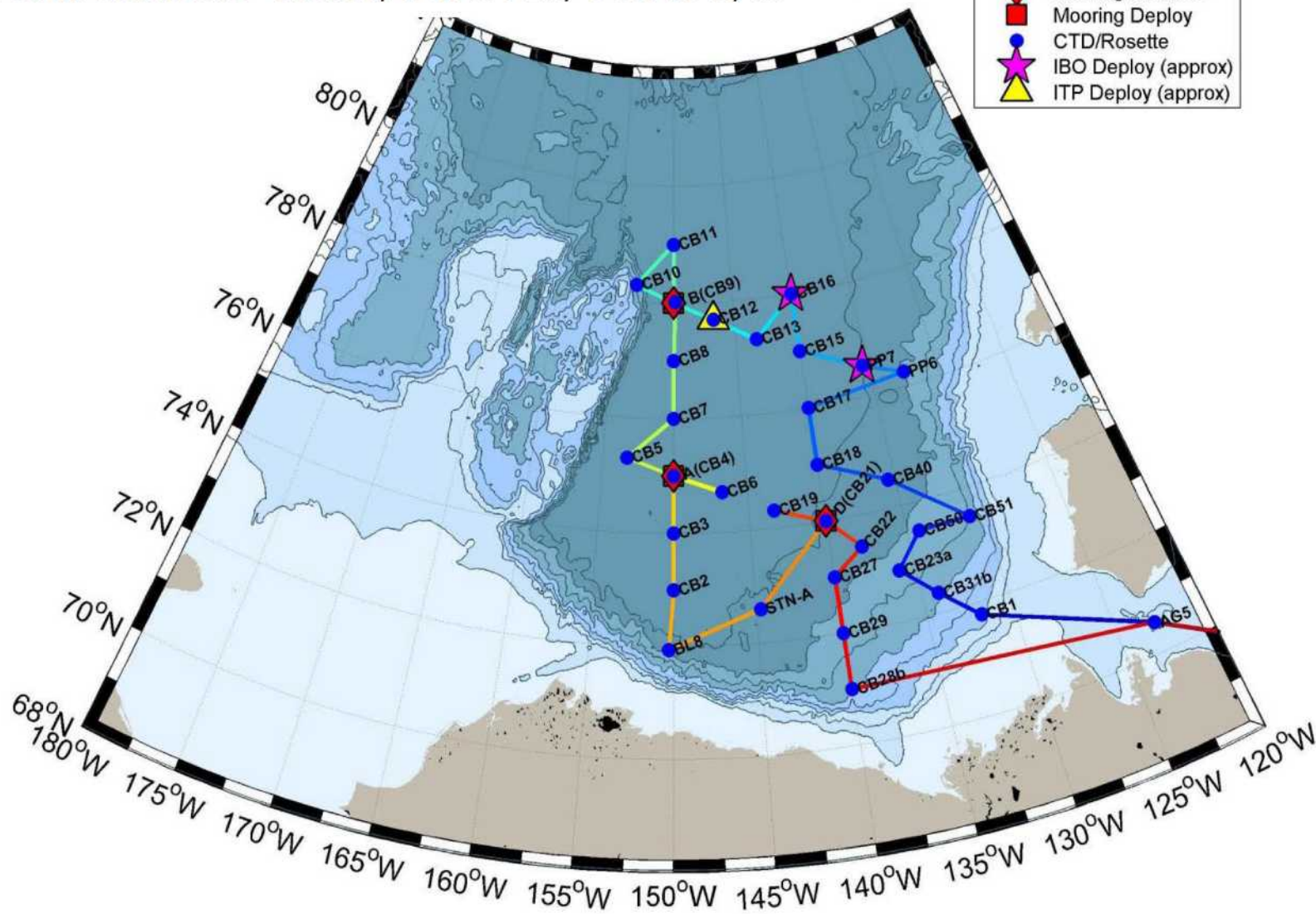


(Photo: Jeffrey Cha)

JOIS AON BGOS

Chief Scientist: Bill Williams

Collaborations: WHOI, JAMSTEC, TUMSAT, ...



CCGS Sir Wilfrid Laurier



Transit to the Arctic across the NE Pacific: C30, DBO



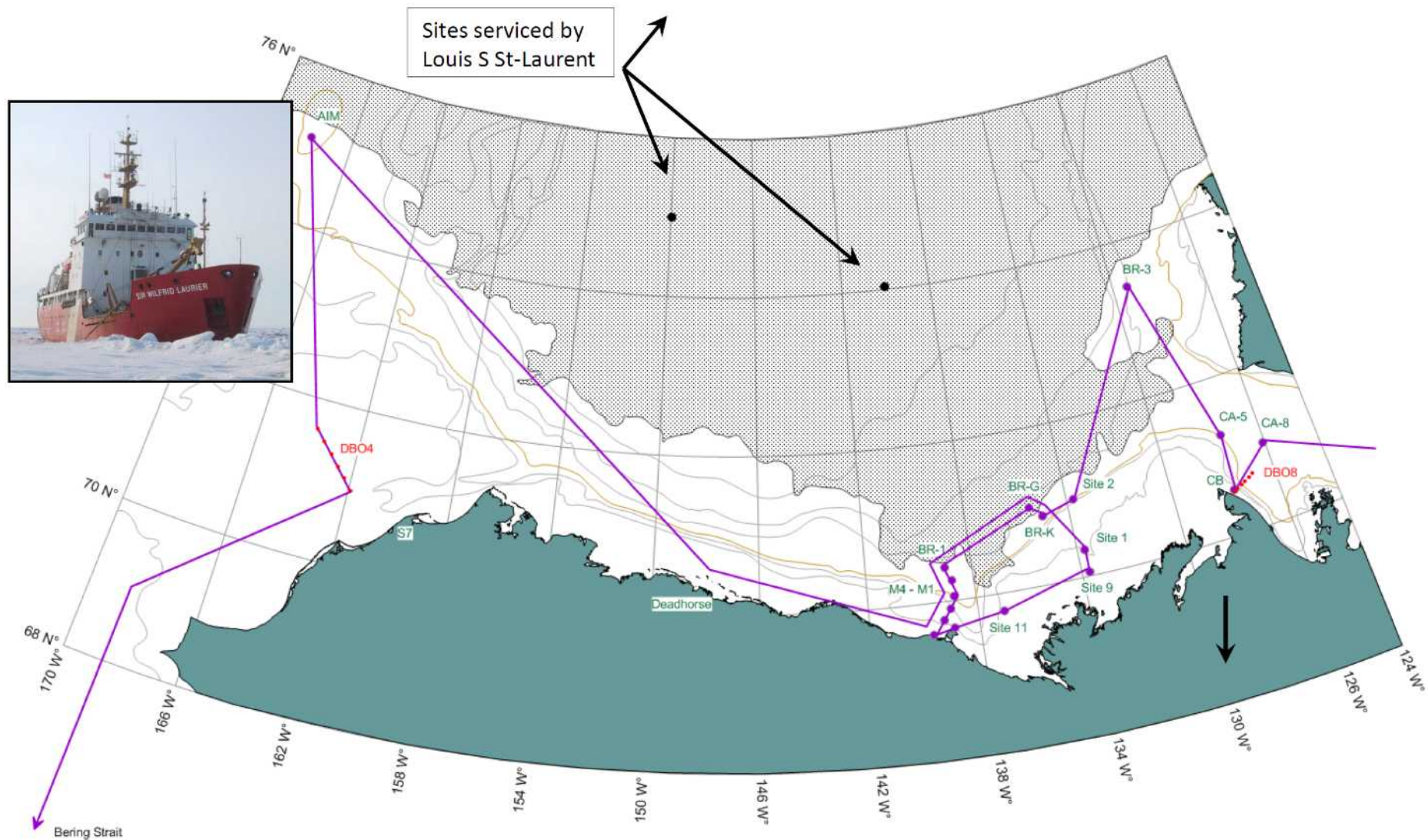
6 days for science, 15 scientists

- U-CTD & X-CTDs during transit
- CTD/Rosette casts across the Gulf of Alaska.
- Underway seawater sampling
- Bird observations
- Deployment of Argo floats

Stop at Dutch Harbor, board 12 scientists for DBO

- Sediment sampling using VanVeen grabs & Happs corer in the Bering & Chukchi Seas
- CTD & geochemical sampling with the rosette
- Plankton samples with vertically towed bongos.

CCGS Sir Wilfrid Laurier servicing long-term observing sites during autumn 2017

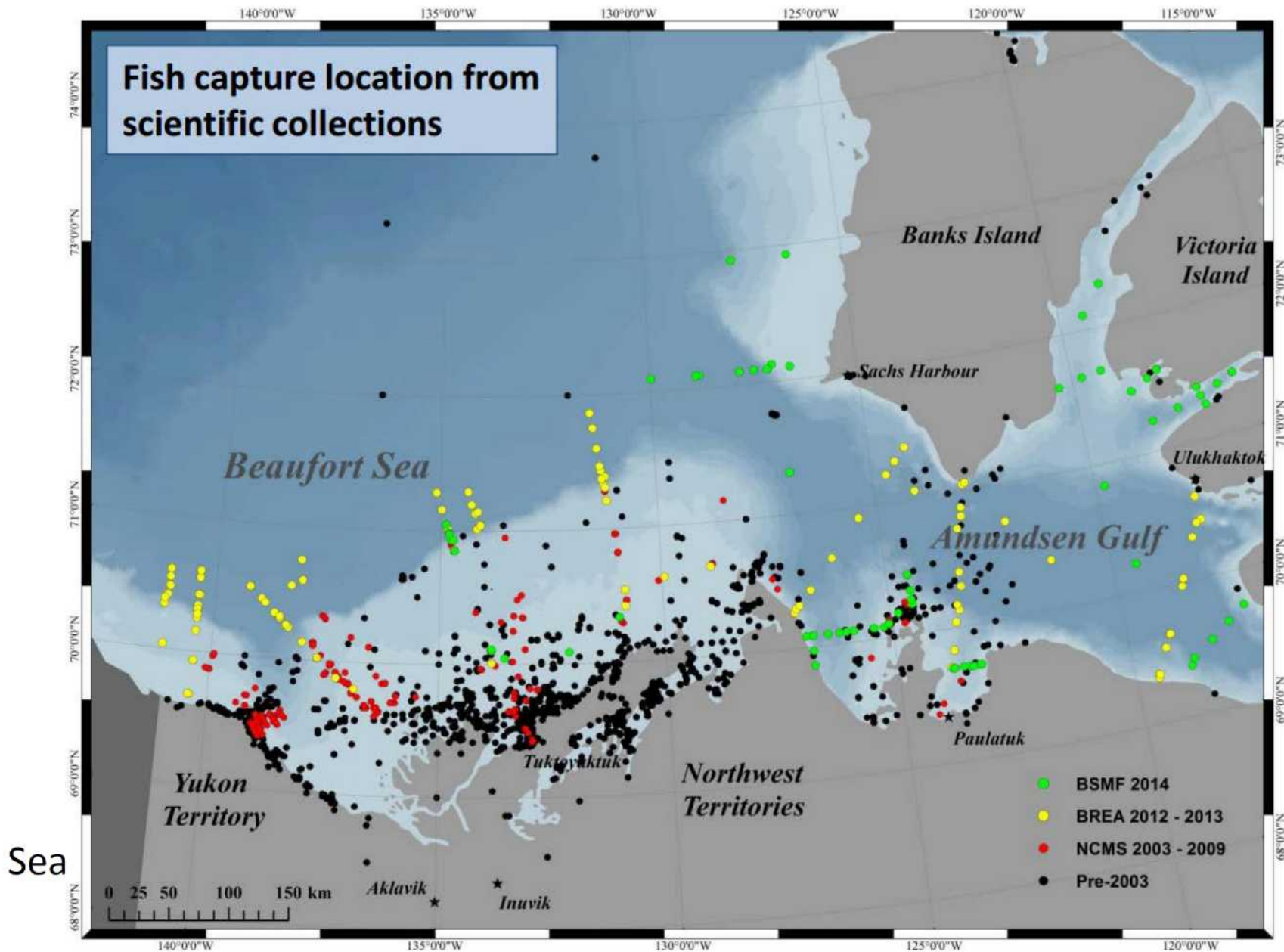


F/V Frosti



41-m commercial fishing trawler

Mid-depth Trawl Surveys of 2012-14 will be repeated in 2017

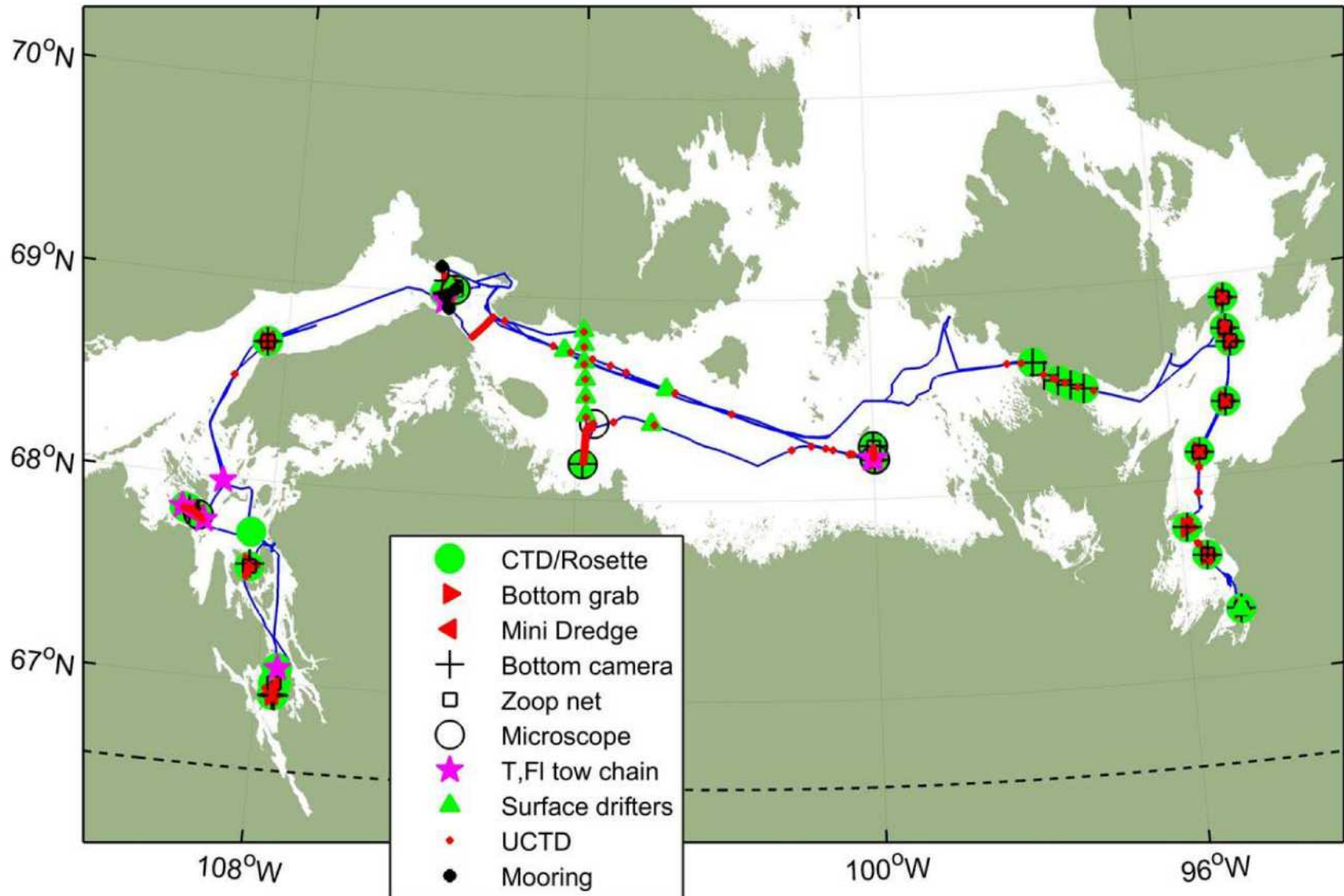


R/V Martin Bergmann

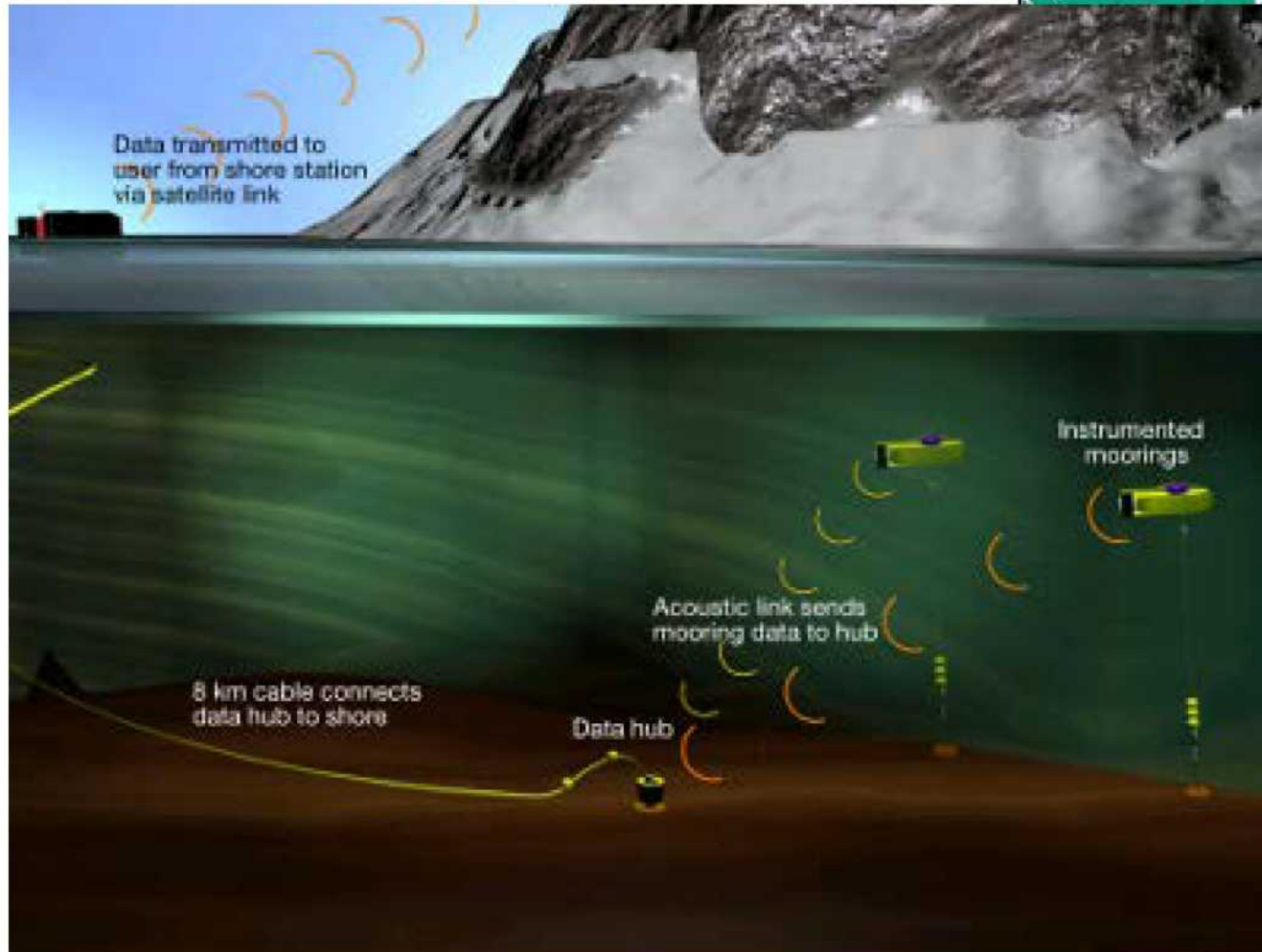
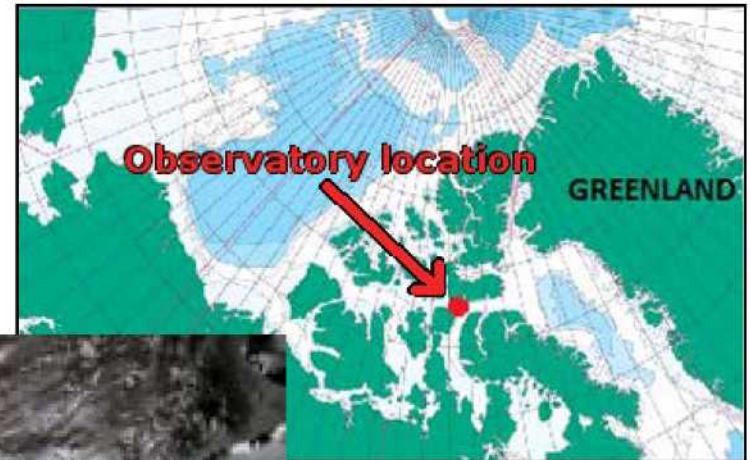


19-m fishing trawler, reconfigured for coastal ocean science, 6 scientists

R/V Martin Bergmann Ecological Survey mid-August to mid-September 2017



Cabled Observatory in the NW Passage



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AMUNDSE



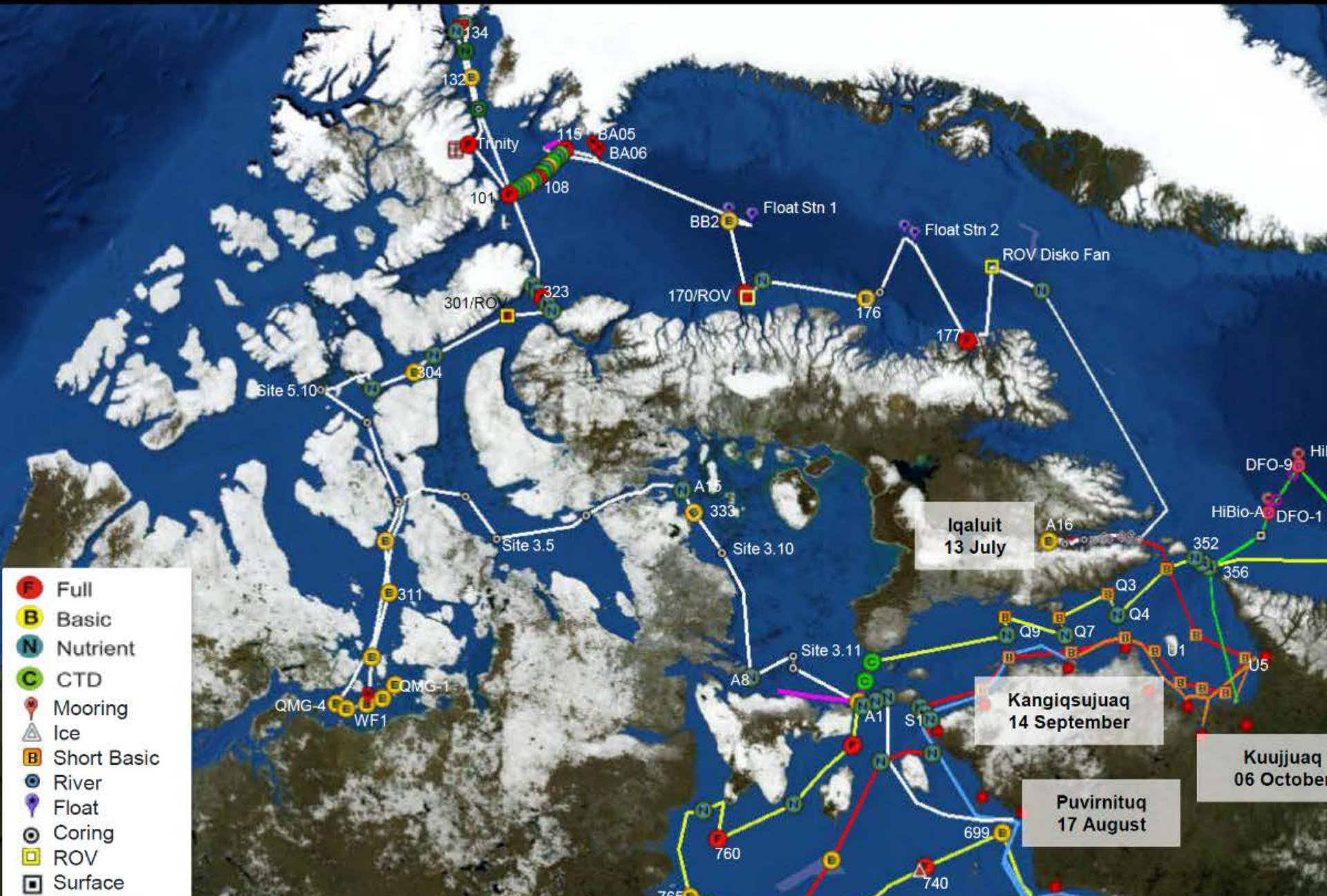
2017 CCGS *Amundsen* Expedition Plan

On 31 May the CCGS Amundsen is scheduled to leave its home port of Quebec City for a 133-day scientific expedition to the Canadian Arctic in support of:

- ArcticNet's marine-based research program
- BaySys program, understanding marine and coastal systems of Hudson Bay
- Nunavik Inuit Health Survey program, the largest ever health study on Nunavimmiut
- Sentinel North's Bright project
- Kitikmeot Marine Region project
- Marine Protected Areas program from Fisheries and Oceans Canada



2017 Amundsen Expedition – Overview



- Full
- Basic
- Nutrient
- CTD
- Mooring
- ▲ Ice
- Short Basic
- River
- Float
- Coring
- ROV
- Surface

Iqaluit
13 July

Kangiqsujaq
14 September

Puvirnituk
17 August

Kuujuaq
06 October

Ship-time application (2018 and beyond)

- Science programs requesting access to the Amundsen are required to submit a formal Ship Time Application.
- Programs submitting a request should have secured or anticipated funding for ship time and have undergone a scientific review process. Programs slated to go through such process are encouraged to contact us to discuss ship time availability and charter rates.
- Supplemental funding by the Amundsen Science Ship Time Fund is available to complete the proposed field program and achieve the needed ship time (up to 40%)



Ship-time application (2018 and beyond)

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AMUNDSEN

- For more information, please visit:

www.amundsen.ulaval.ca

- Or contact:

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Northern Infrastructure Standardization Initiative (NISI)



Canada's North is highly vulnerable to the impacts of climate change. Northern infrastructure can be affected by issues such as permafrost

Presentation on **Northern Infrastructure Standardization**
April 5 in Session S17C.
<https://www.scc.ca/>

Polar Data Catalogue



Welcome to the Polar Data Catalogue

<http://www.polardata.ca>

The Polar Data Catalogue is a database of metadata and data that describes, indexes, and provides access to diverse data sets generated by Arctic and Antarctic researchers. The metadata records follow **ISO 19115** and **Federal Geographic Data Committee (FGDC)** standard formats to provide exchange with other data centres. The records cover a wide range of disciplines from natural sciences and policy, to health and social sciences. The PDC Geospatial Search tool is available to the public and researchers alike and allows searching data using a mapping interface and other parameters.

Please click on the **PDC Search map** below to start searching for datasets or **sign in to the PDC Input application** to contribute metadata or data to the Polar Data Catalogue.

The **PDC Lite Search** is also available for users with limited Internet speed.





Thank you for your attention