NW Greenland
Hydrographic Survey Past & Future: GO-MARIE Program Phase II

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Our Mission is to Actively Monitor Humanity’s Impact on the Ocean, to better understand the ongoing ocean system processes through dedicated Interdisciplinary Science Field Campaigns

Bathymetry For Science
The Nippon Foundation-GEBCO Seabed 2030 Project

- NF GEBCO Hydrographer Alum Engagement
- 10-year Polar Mapping campaign, 2 Year pilot phase, Phase II 2021 W-NW Greenland, emphasis in coupling physical processes with biological response as controlled by seabed topography
Why map coastal glaciated fjords?

- Ecosystem Services
- Socioeconomical benefits
- Relate hydrographic data with satellite remote sensed data

Seabed bathymetry a 2-fold dominant Control on glaciated fjords systems
NW Greenland Inglefield Bredning Better Resolution BUT

Ultimately data applied to Bedmachinev3 & IBCAO

Figure 2: Detailed map of Inglefield fjord, with NOAA 1 minute resolution bathymetry, showing station location and the depth difference between the bathymetry and the maximum depth of the CTD cast.
Sills influence boundary current role on outlet glaciers & glacial marine ecosystem
Phase II:
NW Greenland

Survey Priorities:

2500km
100 profiling stations

- Non MBES coverage of glacial fjords (Tracy), glacier terminus landward of OMG AirGrav Zone & in transit seaward of OMG AirGrave Zone
- Disko Bay Secondary Channels, unsurveyed areas, circulation models
- Landfast glacier fjords (interdisciplinary research)
- Opportunistic surveys in transit, inlets for refuge and safety of navigation
- Special attention to RDACC Survey Interests, JPL OMG and GINR
R/V Marie Tharp to Disembark & Map the Impossible

• Reinforced steel expedition vessel, 23m, Crew 10.

Hydrographic System Sponsorship!
Onboard ping to grid strategy.

Survey 2500km, 100-130 Profiling stations
Norbit: Prototype 100khz, 200-900m depths, 200-300m swath
• Survey priority site RDACC consensus for Phase II GO-MARIE W-NW 2021-22.
• Collaborative interdisciplinary research interest.

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Thank you!